OFFICIAL GAZETTE UNITED STATES PATENT OFFICE

JAN. - FEB. 1962

VOL. 774 - 775

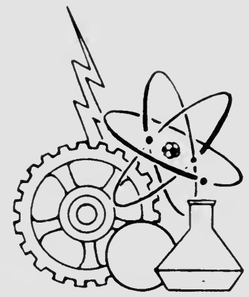
MICRO PHOTO INC.
CLEVELAND, OHIO

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

January 2, 1962 • Volume 774 • Number 1



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of January 2, 1962	1
New Applications Received	1
Notices	
Board of Appeals Decisions Rendered in the Month of November 1961	1
Foreign Patents Received in the Scientific Library as of November 30, 1961	1
Briefs in Appealed Applications	1
Atomic Energy and NASA Cases—Procedure	1
Interferences—When Declared	2
Disclaimers	2
Adverse Decisions in Interferences	2
Condition of Patent Applications	3
Decisions in Patent and Trademark Cases	
Ex parte France, Dolan, Epton and Toffoli	5
Patent Suits	8
Reissue Patents Granted	9
Plant Patents Granted	10
Patents Granted	
General and Mechanical	11
Chemical	136
Electrical	164
Design Patents Granted	204
Index of Patentees	i
Classification of Patents	xix

Trademarks

Issue of January 2, 1962	TM 1
Applications Filed	TM 1
Condition of Trademark Applications	TM 1
Notices	
Trademark Suits	TM 1
Marks	
Marks Published for Opposition (302)	TM 3
Registrations Issued	
Principal Register	TM 27
Supplemental Register	TM 33
Registrations Renewed	TM 37
Registrations Canceled	TM 37
Registrations Amended, Disclaimed, Corrected, etc.	TM 38
Registrations Published Under Sec. 12(c) (22)	TM 39
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of November 1961

Examiner affirmed	361
Examiner affirmed in part	51
Examiner reversed	71
Total	483

Foreign Patents Received in the Scientific Library as of November 30, 1961

Source	Date received	Highest number
Australia:		
(*Abstracts*)	Apr. 18, 1961	63,890
(*Patents*)	Nov. 24, 1961	234,173
Austria	Nov. 14, 1961	217,400
Belgium	Oct. 16, 1961	570,500
Canada	Nov. 24, 1961	631,556
Czechoslovakia	Nov. 15, 1961	99,500
Denmark	Sept. 25, 1961	90,840
East Germany	Nov. 27, 1961	22,300
Egypt	Oct. 11, 1961	2,430
Finland	Nov. 16, 1961	31,555
France:		
(*Patents*)	Nov. 27, 1961	1,264,950
(*Additions*)	Nov. 27, 1961	75,400
Germany:		
(*Auslegeschriften*)	Nov. 1, 1961	1,113,670
(*Patents*)	Sept. 6, 1961	1,097,824
Great Britain	Nov. 27, 1961	882,100
India	Nov. 15, 1961	71,464
Ireland	May 22, 1961	22,700
Italy	June 20, 1961	579,100
Japan	Nov. 2, 1961	17,450/61
Netherlands	Nov. 7, 1961	99,515
Norway	Nov. 3, 1961	98,597
Pakistan	June 9, 1961	108,699
Poland	Nov. 27, 1961	45,174
Rumania	Aug. 10, 1961	41,482
Sweden	Nov. 1, 1961	176,544
Switzerland	Nov. 16, 1961	357,037
U.S.S.R.	Nov. 17, 1961	139,623

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1-10,000
Italy: First 243,000 incomplete
Philippine Republic: Latest 217/1956
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Briefs in Appealed Applications

In view of the heavy backlog confronting the Board of Appeals, consideration is being given to every possibility for simplifying the task of the Board. One suggestion is that the Brief filed in appealed applications contain a description of the pertinent portions of the references without including any argument as to the pertinence of the references. Any argument appellant wishes to advance should be set out in a section of the Brief under the heading "Arguments."

This is the practice which is already being followed in the majority of Briefs. Since this format has proved to be very helpful to the Examiner and the Board of Appeals, it is urged that it be followed in all Briefs.

The publication of this recommended procedure results from an employee suggestion recently approved by the Incentive Awards Committee.

EDWIN L. REYNOLDS,
First Assistant Commissioner.

Nov. 27, 1961

Atomic Energy and NASA Cases—Procedure

Some applications have been received in which attempts have been made to combine statements under section 152 of the Atomic Energy Act as amended (42 U.S.C. 2182), or section 305(c) of the National Aeronautics and Space Act (42 U.S.C. 2457), with the oath of the application, by use of printed oath forms containing very general allegations pertaining to those statutes in addition to the averments required by Rule 65. Such forms have been used indiscriminately by some persons without regard to whether or not the inventions disclosed in the applications have any actual usefulness in the respective fields to which those statutes relate. The practice is objectionable and should be discontinued.

If an applicant has knowledge that an invention is useful in the production or utilization of special nuclear material or atomic energy, or if significant utility in the conduct of aeronautical and space activities, he may submit a sworn statement with the application, containing the information required by the appropriate section of the statutes indicated, or he may wait until such sworn statement is requested. Such statement should, in accordance with Rule 4, be contained in a separate paper and should be directed to the attention of the Patent Security Division. The use of printed forms or the equivalent should be avoided since the respective statutes require full facts. The filing of unrequested statements in applications which are not known to be useful in the fields indicated should be avoided, since this Office is obliged to regard such filing as an indication of actual usefulness in those fields, requiring the expense and delay of forwarding copies of the statement and application to the appropriate agencies.

New Applications Received During November 1961

Patents	7,043
Designs	429
Plant Patents	7
Reissues	21
Total	7,500

Issue

Patents	721—No. 3,015,103 to	No. 3,015,823, incl.
Designs	18—No. 192,004 to	No. 192,021, incl.
Plant Patents	3—No. 2,117 to	No. 2,119, incl.
Reissues	3—No. 25,107 to	No. 25,109, incl.
Total	745	

Interferences—When Declared

While Rule 201(b) permits the declaration of interferences between two or more applications containing common patentable subject matter, when none of the applications are in condition for allowance, that practice should not ordinarily be followed, since it frequently results in interferences which may prove unnecessary or which involve unduly multiplied motions due to the incompleted ex parte prosecution of the applications.

Accordingly, effective immediately, no interference should be declared which does not involve either a patent or an application which, apart from the interference, is in condition for allowance, unless there are unusual circumstances which justify such action, and then only after submission to and approval by a Supervisory Examiner.

DAVID L. LADD,
Nov. 29, 1961. *Commissioner of Patents.*

Disclaimer

2,859,276.—*Joseph J. Saykay*, Sea Cliff, N.Y. APPARATUS FOR KEY OPERATED MECHANISMS. Patent dated Nov. 4, 1958. Disclaimer filed Nov. 13, 1961, by the assignee, *Fairchild Camera and Instrument Corporation*.

Hereby enters this disclaimer to claims 1, 2, 3, and 11 of said patent.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,724,703, C. L. Thomas, Regeneration of platinum-containing catalyst with nitrosyl chloride, decided Oct. 30, 1961, Interference No. 90,649, claim 3.

Pat. 2,776,375, F. P. Keiper, Jr., Pulse system, decided Oct. 20, 1961, Interference No. 89,245, claims 1, 7 and 10.

Pat. 2,776,375, F. P. Keiper, Jr., Pulse system, decided Oct. 20, 1961, Interference No. 89,246, claims 2 and 11.

Pat. 2,792,519, J. R. Pierce, Ribbon helix traveling wave tube, decided Aug. 22, 1961, Interference No. 89,663, claim 3.

Pat. 2,803,619, N. G. Dickmann, Low compression set siloxane elastomers containing a vinyl organo-siloxane, decided Nov. 22, 1961, Interference No. 90,007, claims 1, 2, 3, 4, 5 and 6.

Pat. 2,823,933, C. E. Hickman and A. L. Goldsmith, Refrigerating system and method of making the same, decided Nov. 9, 1961, Interference No. 89,551, claims 1, 2, 4 and 6.

Pat. 2,836,761, G. L. Howitt and A. A. Goldberg, Dynamic convergence apparatus for color television receiver, decided July 31, 1961, Interference No. 90,547, claims 2, 3, 4, 5, 6 and 7.

Pat. 2,862,616, L. Capozzi and P. Kenner, Method of packaging epoxy resins, decided Nov. 6, 1961, Interference No. 91,209, claims 1, 2, 4, 5, 6, 7 and 8.

Pat. 2,881,934, G. L. Rhodes, Safety bottle closure, decided Aug. 22, 1961, Interference No. 91,004, claims 1, 3, 4, and 6.

Pat. 2,889,410, W. Hatton, Party line identification system, decided Nov. 3, 1961, Interference No. 90,690, claims 1, 2, 3, 5, 6, 7, 8, 10, 11 and 12.

Pat. 2,891,128, J. D. Bolesky, Thermostatic controls, decided Oct. 10, 1961, Interference No. 90,989, claims 9 and 10.

Pat. 2,928,875, W. B. Martin and L. R. Swett, Isopropylhydrazine derivatives, decided Oct. 9, 1961, Interference No. 91,387, claims 1, 3, 5, and 6.

Pat. 2,942,760, W. S. Schneider, Dispensing container, decided Oct. 31, 1961, Interference No. 91,827, claims 1, 7 and 10.

Pat. 2,970,370, C. R. Weaver and G. C. Heil, Fabrication of electrical devices, decided Oct. 10, 1961, Interference No. 92,086, claims 1, 2, 3, and 4.

CONDITION OF PATENT APPLICATIONS AS OF OCTOBER 31, 1961

Total number of pending applications (excluding Designs)	197,547
Total number of pending Design applications	5,396
Total number of applications awaiting action (excluding Designs)	94,678
Total number of Design applications awaiting action	1,353
Date of oldest new application	July 26, 1960
Date of oldest amended application	June 20, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	3-29-61	3-27-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	4-11-61	3-30-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	11-10-60	12-1-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-3-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-1-61	2-2-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	4-7-61	4-11-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	4-17-61	4-12-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	12-30-60	2-10-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	12-23-60	12-8-60
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	11-18-60	10-11-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	11-29-60	11-29-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-21-60	10-4-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	5-26-61	5-12-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	11-25-60	10-31-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	9-13-60	11-10-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-1-61	4-12-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	2-2-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-10-61	4-10-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-23-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	4-27-61	5-9-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	4-3-61	4-3-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-1-61	1-9-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-61	1-30-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	11-15-60	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings.	11-28-60	12-9-60
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	4-24-61	4-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	10-27-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-3-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	1-3-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-6-61	3-2-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-2-60	12-23-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	11-14-60	12-22-60
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	11-14-60	11-29-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-9-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	12-27-60	1-6-61
42. (II) CAPELLI, S. W., Electric Signaling (part); Non-linear Reactor Systems	11-3-60	11-1-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	3-3-61	1-12-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	7-26-60	6-20-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	5-8-61	5-3-61
46. (I) WILES, W. O. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-25-60	9-16-60
47. (VI) ARNOLD, F., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-9-61	3-7-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-6-60	8-1-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-3-61	12-23-60
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-23-61	2-13-61
51. (II) WESTBY, O. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	10-7-60	10-3-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-1-61	5-1-61
53. (IV) NINAS, G. A., Rooks and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	2-11-61	3-10-61
54. (II) NILSON, R. O., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	9-7-60	9-13-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-7-60	12-2-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	11-21-60	11-14-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	1-3-61	12-1-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-31-61	4-4-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-14-60	11-10-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	9-19-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	3-27-61	3-27-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-23-60	11-15-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	11-7-60	11-9-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-24-60	9-21-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	10-19-60	10-3-60
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part); Weighing Scales	9-6-60	8-17-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-18-61	2-6-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	12-6-60	12-5-60
81. (III) MONCURE, J. A., Industrial Arts	7-21-61	7-10-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	7-10-61	7-7-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	10-12-60	11-14-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	3-16-61	3-28-61
93. WAHL, R. A., Wire Working	7-14-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-8-61	2-1-61
95. ANGEL, C. D., Metallic Building Structures	1-24-60	1-3-60
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	2-21-61	12-12-60

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during December 1961, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1960*.

Patents.....Numbers 2,364,042 to 2,366,153 inclusive
Plant Patents.....Numbers 647 and 648

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office Before the Board of Appeals

EX PARTE FRANCE, DOLAN, EPTON AND TOFFOLI

Appeal No. 364—45. Decided February 17, 1961

1. DESIGNS—APPLICATION DISCLOSURE—MUST SHOW COMPLETE APPEARANCE.

Rule reiterated that "the clear intent of the design law and the established practice in carrying out that law is to require the design disclosure to depict the configuration and complete appearance [of] an article of manufacture in which the design is embodied."

2. SAME—SAME—SAME—BOUNDS OF ARTICLE MUST BE SHOWN.

"The complete appearance of an article of manufacture includes the bounds of the configuration of the article."

3. SAME—SAME—DRAWING OF AUTOMOBILE TEST TRACK COVERING HAVING INDETERMINATE BOUNDS DOES NOT SHOW ARTICLE OF MANUFACTURE.

Held that the drawing of an application for design patent on an automobile test track covering in which the bounds of the covering are rendered indeterminate by reason of lines indicating cut-away portions, and also by reason of the omission of any indication of horizontal limiting margins, "does not show an article of manufacture."

4. SAME—SAME—DRAWING SHOWING MOVABLE MARKERS NOT AGGREGATIVE.

Held that, even if it be assumed that a design is shown as including movable flags and markers, it is not properly rejected as aggregative because "the design claim would cover the article with the flags and markers positioned in the precise manner actually shown on the drawing."

5. PATENTABILITY—EVIDENCE—ALLOWANCE OF OTHER PATENTS NOT DETERMINATIVE OF PATENTABILITY.

In connection with appellants' reference to the allowance of other design patents *Held* the "proceedings leading to the grant of a patent on another unrelated application cannot be determinative of the present issue."

APPEAL from the Examiner.

AFFIRMED.

Before DUNCOMBE, ASP and MAGIL, *Examiners-in-Chief*

DUNCOMBE, *Examiner-in-Chief*.

This is an appeal from the final rejection of the following claim:

An ornamental design for an automobile test track covering as shown.

The following references are mentioned in the Examiner's answer:

Marshall, 1,625,041, April 19, 1927.
Brown, D. 169,355, April 21, 1953.

The design for which a patent is sought is said to be an automobile test track covering. FIGURE 1 represents a layout of street intersections and curb lines. A street is shown with a center line and indicia representing caution and stop stripes at street intersections. Irregular lines are shown cutting one of the streets transversely at two places. Appellants state in their brief that the purpose of such irregular lines is "to show that more straight sections bearing caution stripes and stop stripes may be used or are intended in the entire test track or course." The layout shown in the drawings is not limited by any longitudinal boundaries. That is to say, viewing FIGURE 1 in the horizontal position there are no upper and lower boundary lines to the layout shown. FIGURE 2 is similar to FIGURE 1 but bears legends explaining the purpose of the various indicia illustrated on FIGURE 1. In their brief appellants state that the cover-

ing is intended to be applied to a roadway, parking lot or other portions of the earth's surface as a guide for a person undergoing driving tests.

The appealed claim stands rejected on the ground that it is not drawn to proper subject matter because the drawing does not show an article of manufacture.

The stated position of the Examiner is that the drawing does not disclose a "covering" because no lines of demarcation are present along the edges to indicate an actual cover. The Examiner points out that a patentable design is inseparable from the object and cannot exist alone merely as a scheme of ornamentation. It is the express opinion of the Examiner that an article of manufacture as contemplated by the statute has not been shown and that instead, appellants are in effect claiming a "layout scheme under the guise of an article of manufacture." The Examiner states that the disclosure of the alleged design is indefinite and aggregative. The Examiner considers the disclosure indefinite in that there are no limiting margins and the portion omitted in the cut-away sections may be either plain or marked like the areas shown. It is the view of the Examiner that the disclosure is aggregative in that it shows the use of movable traffic markers and flags which are not considered by the Examiner to be integral portions of the track. In summary, the Examiner states that appellants are asking for a design patent on an idea for an automobile test track layout and that such layout is the result of functional rather than ornamental considerations and is not an article of manufacture embodying a unitary ornamental design.

Appellants cite numerous design patents and contend that their claimed design is in the same category as the cited designs. Appellants contend that their design is an article of manufacture which may be in the form of a covering of paper, canvas, plastic, etc., to be unfolded or unrolled on the earth's surface for use as a test track. Appellants also state that their design may be the size of a sheet of writing paper for instruction use, or in the form of a roll or made up of numerous panels to be assembled at the place where the driving test is made.

In *Ex parte Salsbury*, 491 O.G. 714, 1938 C.D. 6, it was stated that a design patent should disclose the configuration and complete appearance of the article in which the design is embodied, so fully, clearly and with such certainty as to enable those skilled in the art to make the article without being forced to resort to conjecture. [1] We followed this rule in *Ex parte Sweeney et al.*, 748 O.G. 879, 1959 C.D. 91, in which we held that in our opinion the clear intent of the design law and the established practice in carrying out that law is to require the design disclosure to depict the configuration and complete appearance on an article of manufacture in which the design is embodied. [2] The complete appearance of an article of manufacture includes the bounds of the configuration of the article. In the present case these bounds are rendered indeterminate by reason of the lines indicating cut-away portions, and also by reason of the omission from the drawing of any indication of horizontal limiting margins. [3] We accordingly agree with the Examiner that the drawing does not show an article of manufacture. In our opinion the drawing depicts no more than a proposed layout of streets and traffic intersections on a draftman's drawing board.

[4] We do not adopt the Examiner's view that the disclosure is aggregative. The Examiner's position is based on the assumption that the flags and markers shown in the drawing are movable but even if this assumption is correct the design claim would cover the article with the flags and markers positioned in the precise manner actually shown on the drawing.

Even if the drawing were found to properly disclose an article of manufacture we would agree with the expressed opinion of the Examiner that the design involves functional rather than ornamental features which would bring it within the scope of 35 U.S.C. 171.

We have noted the several design patents submitted with appellants' brief. The Examiner has analyzed the disclosure of each of these patents in his answer. We agree with his conclusion that these patents represent articles having configurations limited by definite bounds and that such patents provide no precedent for allowing the present claim. [5] Moreover, in connection with these patents and others cited by number in appellants' brief, it may be stated that proceedings leading to the grant of a patent on another unrelated application cannot be determinative of the present issues.

Appellants state that the fact that the claimed design is a two-dimensional covering for a flat surface does not detract from its reproducibility as an article of manufacture. We do not controvert this or the further contention that a covering attached to the realty may be considered as an article of manufacture and as such, in proper circumstances, be a subject for a design patent. However, allowance of the appealed claim has not been refused because the depicted design is two-dimensional or because it may be attached to the realty, but rather on the ground that the claimed design is not drawn to proper subject matter since the drawing does not show an article of manufacture.

The Brown and Marshall patents cited in the Examiner's answer were not applied against the appealed claim, but are stated by the Examiner to have been cited merely to give examples of analogous subject matter presented in a form which is acceptable as proper subject matter for a design patent. It is accordingly unnecessary to further refer to these patents.

After careful review of the opposing arguments we are of the opinion that the rejection is without reversible error and should be affirmed.

The decision of the Primary Examiner finally rejecting the appealed claim is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,379,413, T. F. Bradley, Amides of high molecular weight carboxylic acids, **filed** Nov. 8, 1961, D.C., E.D. Ill. (Danville), Doc. 1911–D, *General Mills, Inc.* v. *Cemco, Inc.*

2,381,589, S. A. Hayes, System and apparatus for distributing liquid solutions, **filed** Oct. 23, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1353/61–TC, *Hayes Spray Gun Company* v. *Sears Roebuck & Company.*

2,563,794, Rickes and Wood, Vitamin B_{12}; **2,703,302**, same, Vitamin B_{12}-active composition and process of preparing same, **filed** Mar. 27, 1961, D.C. Del. (Wilmington), Doc. 2318, *Merck & Co., Inc.* v. *Henley & Co., Inc. et al.* Consent judgment; patents held valid; defendants enjoined Nov. 1, 1961.

2,571,927, Neumann and Gottesmann, Electrolytic cell and, in particular, alkaline cell; **2,636,058**, G. Neumann, Gastight storage battery and method of manufacturing same, **filed** Nov. 14, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1764, *Gould-National Batteries, Inc. et al.* v. *Sonotone Corporation et al.* Motion of defendants to transfer cause to D.C., S.D.N.Y. granted Oct. 20, 1961.

2,636,058. (See 2,571,927.)

2,671,515, J. E. Hall, Well bore cleaning scratcher, **filed** Oct. 30, 1961, D.C., W.D. Okla. (Oklahoma City), Doc. 9486, *Trojan, Inc. et al.* v. *Panhandle Enterprises.*

2,680,274, J. M. Bender, Wrist watch bracelet connector, **filed** Nov. 8, 1961, D.C., S.D.N.Y., Doc. 61/3965, *Jacoby-Bender, Inc.* v. *Jacques Kreisler Manufacturing Corporation.*

2,696,633, W. J. Hincks, Hide stripping assembly, **filed** Mar. 19, 1958, D.C., N.D. Ohio (Toledo), Doc. 7966, *The Globe Company et al.* v. *Franz J. Arend, Jr. et al.* Order dismissing cause without prejudice Oct. 26, 1961.

2,703,302. (See 2,563,794.)

2,795,258, Berry and Wells, Bag, **filed** May 4, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–438, *Fashioncraft Products* v. *Montgomery Ward & Co., Inc.* Consent order: injunction granted Nov. 8, 1961.

2,795,677, S. I. Slater, Electrical wiring device, **filed** July 25, 1961, D.C., S.D.N.Y., Doc. 61/2624, *Slater Electric Inc.* v. *General Electric Company.* Cohsent judgment; patent held valid and infringed; defendant enjoined Nov. 6, 1961.

2,798,822, F. G. Carter, Method of forming a surface covering, **filed** Nov. 6, 1961, D.C., S.D. Tex. (Houston), Doc. 13/959, *Ther-mo-Roof, Inc.* v. *Finis G. Carter et al.*

2,803,822, M. M. Doyle, Foundation garment, **filed** Jan. 3, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1, *The H. W. Gossard Co.* v. *J. C. Penny Company.* Patent held invalid Oct. 31, 1961.

2,831,264, I. A. Weaver, Wheel alignment gauge, **filed** Aug. 4, 1961, D.C., S.D. Ill. (Peoria), Doc. P–2450, *Dura Corporation* v. *Bear Manufacturing Company.* Stipulation and order dismissing complaint with prejudice; counterclaim dismissed Nov. 8, 1961.

2,834,587, K. J. Ylinen, Reaction tipe meters, **filed** July 27, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 61c551, *Testo Corporation AB* v. *Jonken Manufacturing Co., Inc.* Consent decree; injunction granted Nov. 8, 1961.

2,846,267, J. W. Fields, Tipping body, **filed** May 27, 1959, D.C., N.D. Ohio (Cleveland), Doc. 35/354, *Anthony Company et al.* v. *The Perfection Steel Body Company.* Claims of patent held invalid; complaint dismissed (notice Nov. 1, 1961).

2,873,866, R. B. Austin, Material handling apparatus, **filed** Nov. 1, 1961, D.C., W.D. Wash. (Seattle), Doc. 5356, *Robert B. Austin et al.* v. *A. J. Cheff Construction Company et al.*

2,884,197, A. Whittell, Jr., Thermostatic flow governor, Suit for Declaratory Judgment, **filed** Oct. 30, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/302, *Raypak Company, Inc.* v. *Amot Controls Corporation et al.*

2,898,843, C. R. Rockriver, Coffee brewer, **filed** Feb. 14, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 155/61–WM, *Coffee Equipment, Inc.* v. *Apco Products Corporation, etc.* Order dismissing complaint without prejudice (notice Oct. 31, 1961).

2,951,260, Harrison and Smucker, Molding mechanism and heating arrangement, **filed** Oct. 31, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1406/61–K, *Crown Machine and Tool Company, Inc.* v. *Bridges Plastic Products, Inc.*

2,841,971, J. J. Bird et al., Compressive stocking, **filed** Nov. 2, 1959, D.C., S.D.N.Y., Doc. 152/209, *Alamance Industries, Inc. et al.* v. *R. H. Macy & Co., Inc.* Dismissal of Sept. 28 vacated Nov. 4, 1961.

2,959,555, Martin and Abel, Copper and iron containing scale removal from ferrous metal, **filed** Oct. 26, 1961, D.C., E.D. La. (New Orleans), Doc. 11/665, *The Dow Chemical Company* v. *Chemical Cleaning, Inc. et al.*

2,965,799, Brooks and Strecker, Fluorescent lamp ballast; **2,965,806**, D. Lovinger, Inductive device, **filed** Nov. 13, 1961, D.C.N.J. (Newark), Doc. 947/61, *General Electric Company* v. *Universal Manufacturing Corporation.*

2,965,806. (See 2,965,799.)

2,971,874, L. E. Canno, Method of making plastic bags, **filed** Nov. 3, 1961, D.C., S.D.N.Y., Doc. 61/3941, *Equitable Paper Bag Co., Inc.* v. *Flexicraft-Wrapture Inc. et al.*

2,979,800, Wilbur and Tone, Pilaster-form and clamp, **filed** Nov. 1, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/306, *Warren D. Wilbur et al.* v. *Superior Concrete Accessories, Inc.*

Re. 24,520, O. Conrad, Self-retaining latch, **filed** Nov. 2, 1961, D.C., S.D. Fla. (Miami), Doc. 11/108–M, *American Screen Products Company* v. *Warren Industries, Inc. et al.*

Des. 151,857, W. G. Pankonin, Design for a wire staple removing tool, **filed** Nov. 17, 1958, Ct. Cls., Doc. 508/58, *Ace Fastener Corporation* v. *The United States of America.* Dismissed Apr. 6, 1960.

Des. 175,389, S. W. Brunner, Portfolio, **filed** Sept. 15, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–862, *Sam W. Brunner* v. *Marlo Plastic Products, Inc.* Complaint and counterclaim dismissed by stipulation Nov. 1, 1961.

Des. 186,573, R. W. Beall, Jr., Vented liquid dispenser; **Des. 187,672**, same, Liquid dispenser, **filed** Nov. 2, 1961, D.C., N.D. Tex. (Lubbock), Doc. 2760, *Richard W. Beall, Jr. et al.* v. *Bennett's Auto Supply.*

Des. 185,693, A. Yukihiro, Photographic exposure meter, **filed** Apr. 26, 1961, D.C., E.D.N.Y. (Brooklyn), Doc. 61–C–298, *Swift & Company, Inc.* v. *Gross & Company.* Consent decree; injunction granted Nov. 8, 1961.

REISSUES

JANUARY 2, 1962

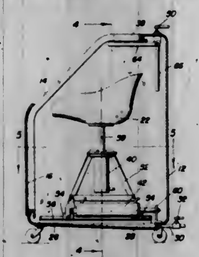
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,107
SHOWER SEAT

Alfred A. Medlock, East Point, Ga., assignor, by mesne assignments, to Safety Bath International, Inc., Atlanta, Ga.

Original No. 2,888,683, dated June 2, 1959, Ser. No. 731,534, Apr. 28, 1958. Application for reissue May 29, 1961, Ser. No. 121,803

10 Claims. (Cl. 4—147)



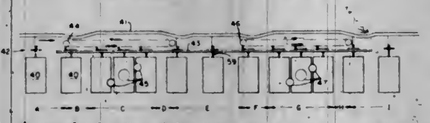
9. A portable shower comprising a cabinet, a seat, seat support means supporting said seat in said cabinet, a first hydraulic cylinder connected to said seat support means for positioning said seat in a first direction, and a second hydraulic cylinder connected to said seat support means for adjusting said seat in a second direction substantially transverse to said first direction, a shower spray disposed in said cabinet for transmitting water to the vicinity of said seat, valving means for introducing water under pressure selectively into said hydraulic cylinders, or to said shower spray.

25,108
APPARATUS FOR AND METHOD OF CONVEYING ARTICLES

James W. Juvinall, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana

Original No. 2,769,728, dated Nov. 6, 1956, Ser. No. 289,333, May 22, 1952. Application for reissue July 1, 1958, Ser. No. 746,060

26 Claims. (Cl. 117—93)



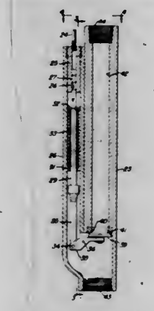
1. A method of coating the sides of a plurality of generally cubically shaped articles as the articles move along a predetermined path comprising supporting the articles in seriatim along a track with adjacent outwardly facing sides of adjacent articles positioned in common planes, said outwardly facing sides of said adjacent articles forming two substantially continuous surfaces to be coated, moving said articles through a first coating zone, spray coating the outwardly facing opposite sides of said articles, uniformly increasing the spacing between adjacent articles, indexing each article approximately 90°, uniformly decreasing the spacing between articles until adjacent outwardly facing sides of the articles form two substantially continuous surfaces to be coated, moving said articles through a second coating zone, and spray coating the outwardly facing opposite sides of said articles.

25,109
SURFACE CONTROLLED SUBSURFACE TUBING PRESSURE SHUT-OFF VALVE

Paul J. Natho, Houston, Tex., assignor to Pan American Petroleum Corporation, a corporation of Delaware

Original No. 2,780,290, dated Feb. 5, 1957, Ser. No. 458,230, Sept. 24, 1954. Application for reissue July 26, 1957, Ser. No. 675,514

5 Claims. (Cl. 166—72)



1. A control valve for use on subsurface tubing and controllable from the surface exterior of said tubing which comprises in combination an elongated housing, tubing threads at both ends of said housing for connecting said housing between spaced lengths of tubing, a flow channel extending substantially the entire length of said housing, the cross-sectional flow area of said channel being approximately equivalent to that of said tubing, a tubular pocket disposed laterally of said flow channel and fixed to the exterior of said housing, an enlargement in said housing below said flow channel providing a communication port between said channel and said tubular pocket, a flapper closure means pivotally mounted within said enlargement and movable across the lower end of said flow channel, longitudinally extending rod means movable within said pocket, a linkage connecting the lower end of said rod means with said pivoted closure means, a plunger means at the upper end of said rod means, *said plunger means and said pocket forming a pressure chamber,* [a sleeve type cylinder threaded into the upper end of said pocket and accommodating said plunger means, spring means below said cylinder and within said pocket, an annular shoulder intermediate the ends of said pocket providing a stop for said spring means, said] spring means normally raising said plunger means in said [sleeve] *pocket* and urging said closure to an open position through said linkage, remotely controlled hydraulic controller means in fluid connection with said [cylinder] *pressure chamber* in said pocket, whereby application of hydraulic pressure to said plunger means compresses said spring and seats said closure in a shut-off position at the lower end of said flow channel, the said remote controller being automatically actuated in response to changes in temperature, pressure and wind velocity at the wellhead.

PLANT PATENTS

JANUARY 2, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,117
CHRYSANTHEMUM PLANT
Lazare Antoine Lamborot, Montceau les Mines, France, assignor to George J. Ball, Inc., West Chicago, Ill., a corporation of Illinois
Filed Mar. 30, 1960, Ser. No. 18,792
1 Claim. (Cl. 47—60)

A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by the very large, closed, high center and strong reddish orange shaded to a slightly redder hue of reddish orange color of its blooms, the very double arrangement of its petals, its shorter, stronger, more uniform length stems, and its better, more compact habit and profuse quantity of blooms.

2,118
CHRYSANTHEMUM PLANT
Lazare Antoine Lamborot, Montceau les Mines, France, assignor to George J. Ball, Inc., West Chicago, Ill., a corporation of Illinois
Filed Mar. 30, 1960, Ser. No. 18,793
1 Claim. (Cl. 47—60)

A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by the very large, more closed center and strong reddish orange tinted with reddish orange color of its blooms, the very double arrangement of its petals, its short, strong stems, and its better habit and profuse blooms.

2,119
CHRYSANTHEMUM PLANT
Lazare Antoine Lamborot, Montceau les Mines, France, assignor to George J. Ball, Inc., West Chicago, Ill., a corporation of Illinois
Filed Mar. 30, 1960, Ser. No. 18,794
1 Claim. (Cl. 47—60)

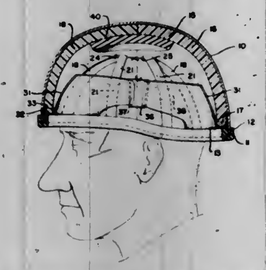
A new and distinct variety of chrysanthemum plant substantially as herein disclosed, characterized as to novelty by the very large blooms of a color between strong purplish pink and a deep purplish pink, the very double arrangement of its petals, the shorter length of stem, more compact habit, more uniform fading of the blooms, and the more nearly simultaneous opening and profuse quantity of blooms.

PATENTS

GRANTED JANUARY 2, 1962

GENERAL AND MECHANICAL

3,015,103
SAFETY HELMET
Ted Zbikowski, Detroit, Mich., assignor to Joseph Buegeleisen Company, Southfield Township, Mich.
Filed May 21, 1959, Ser. No. 814,707
6 Claims. (Cl. 2—3)



1. A safety helmet comprising a thin wall outer shell formed of a hard, rigid material and being shaped to fit over the human head with its wall a distance from the head, and being open at its bottom; a liner, formed of a relatively thick sheet of resilient material, covering and being in face to face contact with the inside wall of the shell and having a continuous bottom edge; the area of the liner which extends from its bottom edge for a substantial distance towards the top of the shell being substantially free of securement to the shell so that it is inwardly moveable, under an applied force, away from contact with the inside wall of the shell and towards the center of the shell; a plurality of head supporting straps, each strap having an outer end secured to the liner at the bottom edge of the liner, with the outer ends of the straps being spaced from one another about the liner bottom edge, and each strap having an inner end, with all of the inner ends converging together and means securing said inner ends together at a location which is near the top of the helmet, but spaced below the liner at the top of the helmet; selected straps being secured to the liner at a point intermediate to their ends, the remainder of the straps being free of securement to the liner, except at their outer ends; a head band formed in two parts, namely, a front part and a rear part, each of the parts having a bottom edge wrapped around and secured to the bottom edge of the liner at the front and rear of the helmet respectively; each part having end portions extending around the sides of the helmet, with the two end portions on each side being adjustably secured to each other, said headband parts loosely overlying the liner and all of the straps, whereby when the inner ends of the straps move towards the top of the helmet under load, they bias the headband to pivot inwardly about its bottom edge to closely and tightly embrace the head of the wearer of the helmet.

3,015,104
CAMOUFLAGE COVER FOR HELMETS
Jean H. Crosson, Natick, and Harry N. Khanbegian, Roslindale, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 28, 1960, Ser. No. 18,205
2 Claims. (Cl. 2—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A camouflage cover for a protective helmet, comprising four similar sections of flexible material having bottom edges and side edge portions, means connecting said side edge portions together in face-to-face relation to provide a generally helmet shaped assembly, said connected side edge portions having substantially long outwardly projecting free edges defined by ragged lines to comprise helmet-profile disguising means in the nature of coarse coxcombs, there being coxcombs extending generally transversely and generally longitudinally of said helmet when said cover is applied thereto, said bottom edges being likewise defined by ragged lines in the nature of coarse coxcombs and extending below said helmet when said cover is applied thereto to provide additional profile-disguising means, and means for securing said cover to said helmet.



3,015,105
SAFETY FACE MASK
Frank J. Rogowski, 4—21 Astoria Blvd., Long Island City, N.Y.
Filed July 19, 1960, Ser. No. 43,909
2 Claims. (Cl. 2—9)



1. A facial mask for protecting the face of a person while being worn, comprising a generally concave semi-rigid shell of transparent material, said shell being shaped to fit the contour of a person's face, said shell being formed with a forwardly extending centrally disposed longitudinal portion defining a channel, said channel adapted to receive a person's nose and providing a passage for air to and from a person's nose and mouth, said channel being open at the bottom of the shell, said shell adapted to extend from the hair line of the wearer down under the chin and from ear to ear, the channel defining portion having opposed generally rectangular side walls and an undulating front wall.

3,015,106
COVERALLS
Henri Van Moer, Malines, Belgium, assignor to S. A. Etablissements Van Moer, Malines, Belgium
Filed Sept. 18, 1958, Ser. No. 761,897
Claims priority, application Belgium July 17, 1958
2 Claims. (Cl. 2—79)

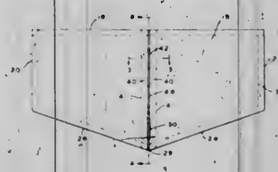
1. In an article of clothing comprising upper, intermediate and lower parts, a pair of front upper sections

each having an integral sleeve portion, a pair of rear upper sections each having an integral sleeve portion and joined together along a vertical line of stitching substantially medially of the upper part of the back of the wearer, said front and rear upper sections having upper and lower edges with the lower edges disposed along a transverse line passing substantially through the armpit areas of said sections, a pair of front intermediate sections each having an upper edge stitched to the lower edge of a respective front upper section and extending downwardly to a lower edge substantially at the waistline of the article of clothing, a rear intermediate section having an upper and lower edge with its upper edge



stitched to the lower edges of said rear upper sections and extending downwardly substantially to the waistline, said front upper and intermediate sections being superposed on said rear upper and intermediate sections respectively and joined together at the upper edges of said front and rear upper sections along a continuous curved seam line extending from the end of one sleeve to the end of the other sleeve, said sections being further joined together along adjacent edges by seam lines extending along the lower edges of the sleeve portions of said upper sections and along the side edges of said intermediate sections, and lower sections stitched to the lower edges of said intermediate sections substantially at the waistline.

3,015,107
FLAP CONSTRUCTION FOR ARTICLES OF CLOTHING
Bernard Lippman, 180 Madison Ave., New York, N.Y.
Filed Apr. 27, 1960, Ser. No. 25,073
6 Claims. (Cl. 2—115)



1. In an article of clothing comprising a body, a pocket on said body, a flap stitched to said body cooperating with said pocket, a securing means on said pocket for selectively retaining said flap in its closed disposition juxtaposed to said pocket, spaced holes in said flap for securing indicia to said flap, and members integral with said flap concealing said holes.

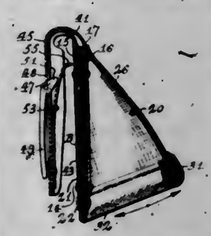
3,015,108
FOLD-UP STYLE SERVICE CAP
Michael P. Carlucci, Natick, Mass., and Ralph W. Persico, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Sept. 21, 1960, Ser. No. 57,588
1 Claim. (Cl. 2—195)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A cap comprising a crown, a side wall, and a visor hingedly secured to said side wall, said side wall having a stiffened and normally upright front section hingedly connected to said visor and to said crown, said crown including outer and liner plies of foldable material and an inner ply of stiffening material, said inner ply comprising two like stiffeners disposed between said outer and liner plies, said stiffeners including parallel juxtaposed straight edges extending transversely of said crown centrally thereof, means securing said juxtaposed edges of



said stiffeners to said liner ply only of said crown whereby to provide an unbroken outer surface on said outer ply of said crown and to conceal said stiffeners from view, said crown being foldable upon itself to locate one stiffener atop the other, and said folded crown as well as said stiffened front section of said side wall and said visor being foldable accordion-wise to reduce said cap to a pocket-sized package.

3,015,109
SUPPORTING DEVICE FOR NETHER-GARMENTS
Eemil L. Aho, 32 1st Ave., Roxboro, Montreal, Canada
Filed Aug. 28, 1958, Ser. No. 757,753
6 Claims. (Cl. 2—302)



1. A garment-supporting device comprising a substantially flat base adapted to be superposed upon the waistband of a garment, a spring assembly secured to the top part of said base and adapted to extend downward and inward toward the wearer, means for restraining the spring assembly from its maximum relaxation position, a plurality of separated hook members extending from the top of the base first outwards and then downwards to form a leg member separate from and substantially parallel to the base, a movable structure on each leg adapted to engage the waistband of the garment lying between the leg and the base, means acting on said movable structure to force it inwards to waistband engaging position and to allow it to be withdrawn outwards to waistband releasing position, the lower end of the spring assembly being padded for bearing against the hip area of the wearer.

3,015,110
PREFABRICATED BATHROOM UNIT
Pierre Tréand, 54 Route de Florissant, Geneva, Switzerland
Filed Jan. 19, 1959, Ser. No. 787,426
Claims priority, application Switzerland Jan. 24, 1958
2 Claims. (Cl. 4—2)

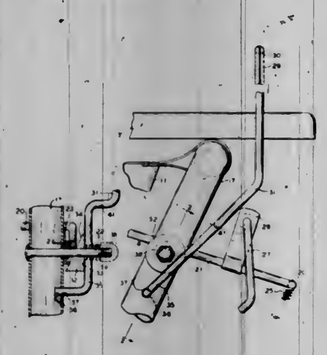
1. A bathroom semi-cubicle comprising a single molded plastic piece containing a bottom having an upper

level and a lower level; four side walls; a rectangular entrance cut-out in one side wall thereof; a recessed bathtub in said upper level of said bottom and disposed along the wall opposite said wall having the rectangular entrance cut-out; a recessed wash basin in said bottom, said wash basin being disposed along one of the two walls perpendicular to said wall having the rectangular entrance cut-out, said wash basin being attached direct-



ly to said bathtub; a recessed toilet in said bottom, said toilet being disposed along the other perpendicular wall; a doorstep disposed at the bottom of said rectangular entrance cut-out, said doorstep projecting above said lower level at the bottom of said semi-cubicle, whereby the doorstep functions as a dam to prevent water spillage from entering other rooms.

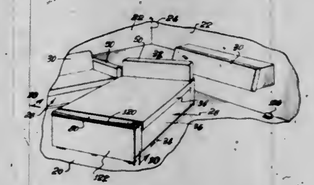
3,015,111
BABY BATH SCREEN GUARD LOCK AND RELEASE
Robert E. Parker, Lacona, N.Y., assignor to Blount-Parker Corporation, Lacona, N.Y.
Filed July 17, 1961, Ser. No. 124,439
6 Claims. (Cl. 4—177)



1. In a folding bath stand including supporting legs and a dressing table selectively movable into a plurality of different positions, pivot pins carried by a pair of said supporting legs, positioning arms for said table carried by said pivot pins, a screen guard selectively movable into a plurality of different positions and adapted to coact with said dressing table when the latter is in use, cam means mounted on said pivot pins, support arms for said screen guard operably connected to said cam means, and means on said support arms engageable with said pair of legs to lock said screen guard in an operative, substantially upright position, said cam means being actuated by said table positioning arms when the table is moved into one of its positions to release said support arm means from locking engagement with said pair of legs.

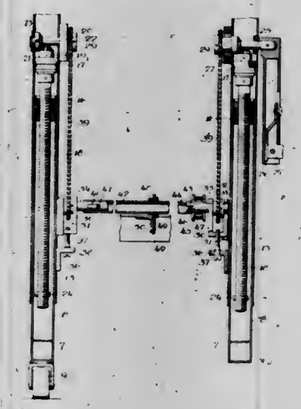
3,015,112
SOFA BED
William P. Wachsman, Beverly Hills, Calif. (9053 Rosewood Ave., Los Angeles 48, Calif.)
Filed June 9, 1958, Ser. No. 740,636
12 Claims. (Cl. 5—8)

2. In a sofa bed, the combination of: a rectangular bed frame; a generally vertical board extending along one end of said bed frame; means mounting said board on said bed frame for movement between an upper, extended position and a lower, retracted position; and means for



moving said board between said extended and retracted positions, including a shaft rotatably mounted on said bed frame and extending from one end of said bed frame to the other end thereof.

3,015,113
ADJUSTABLE BED
Frank S. Wallen, Chicago, Ill., assignor to Superior Sleeprite Corporation, a corporation of Illinois
Filed Dec. 2, 1955, Ser. No. 550,651
1 Claim. (Cl. 5—63)
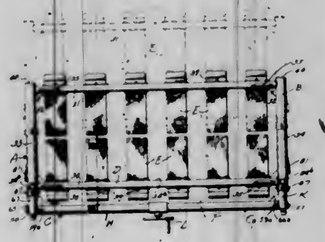


An adjustable bed comprising a head board, a foot board, a centrally disposed pair of vertically telescoping posts secured to each of said boards, and a spring section having each of its ends secured to one of said boards, a nut rigidly secured in one post of each of said pairs of posts, a screw rotatably mounted in said other post of each pair of posts, each of said screws being threaded into one of said nuts, a separate shaft for rotating each of said screws, a handle secured to one of said shafts for rotating it, means interconnecting said shafts, said means including a clutch operable to disengage said other shaft, telescoping posts at each end of said head board and said foot board, and spring means in each of said last mentioned posts to facilitate upward movement of said spring section.

3,015,114
COMBINATION LITTER AND CARRIAGE MEANS THEREFOR

Frederick A. Seib, 435 S. Curson Ave., Apt. 10–L, Los Angeles 36, Calif.

Filed Dec. 29, 1958, Ser. No. 783,307
7 Claims. (Cl. 5—86)

1. In a stretcher construction, the combination of a frame having a patient receiving opening therein and including side rails and end rails, rigid patient supporting arms movably supported by the side rails for transverse sliding thereon into and out of the opening in said frame whereby the frame with the arms extended may be lowered completely over the body of the patient to place the body of the patient within the opening of the frame and the arms then extended beneath the

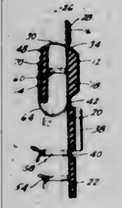


patient for supporting the body of the patient, said arms being provided with pocketed ends at the outer side of at least one of said rails, the pockets opening inwardly towards said rail, and a rolled shroud supported lengthwise in unrollable relation in said pockets for lateral extension over a patient lying in the patient receiving opening of the frame.

3,015,115
BUOYANT DEVICE

Jose Medin, 1511 Westchester Ave., Bronx 72, N.Y.

Filed Apr. 26, 1960, Ser. No. 24,759
3 Claims. (Cl. 9—333)

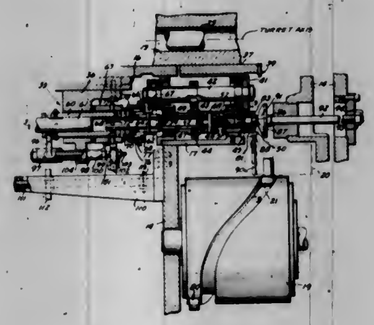


1. A foldable buoyant device for a human being consisting of a continuous flexible fabric having at least six separate floats of buoyant material secured thereto in such relation that one of said floats is adjacent the back of each of the lower legs of said human so that each of said lower legs is free to move independently of one another, one of said floats is adjacent the lower back and thighs of said human, one of said floats is adjacent the back of said human, one of said floats is adjacent the neck and the back of the head of said human, and the last of said floats is adjacent the chest of said human; said neck float being secured to a pivotable partially cut out section of said continuous fabric so that an aperture is present for the wearer's head; and means for tying said continuous device to the body of said human being.

3,015,116
THREADING ATTACHMENT WITH CHANGE SPEED TRANSMISSION FOR REVERSING TOOL SPINDLE ROTATION

Charles A. Pethybridge, New Britain, and Clarence D. Pulsifer, deceased, late of Farmington, Conn., by Marguerite B. Pulsifer, executrix, Farmington, Conn.; said Charles A. Pethybridge and Clarence D. Pulsifer assignors to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Original application Sept. 29, 1954, Ser. No. 459,118, now Patent No. 2,923,015, dated Feb. 2, 1960. Divided and this application Oct. 14, 1959, Ser. No. 846,513
6 Claims. (Cl. 10—138)



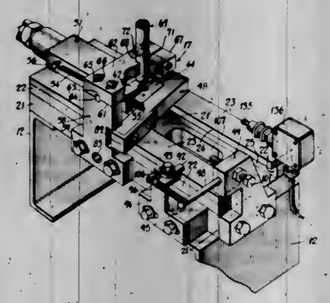
1. In a machine of the character indicated, a work-rotating spindle and a threading spindle on the same axis, drive means connected to rotate both said spindles, feed means including a cam with a dwell and coacting with a reciprocable member for feeding said spindles relatively to each other, the drive connection to one of said spindles including axially spaced high and low speed gears on said one spindle, clutch means carried by said one spindle and shiftable between said gears for selective engagement therewith, spring means carried by said one spindle and continuously urging said clutch means in the direction for engagement with one of said gears to the exclusion of the other, latch means carried by said one spindle for releasably holding said clutch means in engagement with the other of said gears, trip means on said reciprocable member for said latch means, and a trip cam on said first mentioned cam coacting with said trip means to release said latch means during the dwell of said cam.

3,015,117
INSERT TAPPING MACHINE WITH WORK CLAMP MEANS RECIPROCABLE BETWEEN FEED STUD TAPPING STATIONS

Felix W. Braendel, Teaneck, and Robert W. Bosse, North Bergen, N.J., assignors to Groov-Pin Corporation, a corporation of New York

Filed Sept. 6, 1957, Ser. No. 682,494
4 Claims. (Cl. 10—139)

1. Equipment for tapping inserts comprising an insert feeding station, an insert tapping station, a slide member, an insert holder mounted at one end of said slide member, means to reciprocate said slide member to move the holder from said feeding station to said tapping station, said holder comprising a fixed clamp jaw secured to said slide member and a movable clamp jaw pivoted at one end to said slide member and movable toward said fixed clamp jaw to grip an insert positioned therebetween, resilient means reacting against the free end of said pivoted clamp jaw, normally to urge the latter to closed position, said feeding station comprising a vertical tube adapted to carry a plurality of inserts, said tube having a discharge end slightly spaced vertically from the top of said slide member, and a stop member below the discharge end of the tube and spaced therefrom by a distance slightly greater than the length of an insert, means reacting against the free end of the movable clamp jaw when it is at the feeding station to pivot the movable clamp jaw away from the fixed clamp jaw against the tension of said resilient means, whereby the bottommost insert in the tube will be discharged therefrom between said open clamp jaws and rest on said stop, and when said slide member is moved to said tapping station, the resilient means will move the movable clamp jaw toward the fixed clamp jaw to grip the insert, the top



surface of the slide restraining discharge of the inserts remaining in the tube, and means when said slide is moved from said tapping station momentarily to move the movable clamp jaw away from the fixed clamp jaw to release the tapped insert, said means comprising a one-way stop against which the free end of the movable clamp jaw abuts in its reciprocating movement, said stop permitting movement of the free end therepast when said slide member is moved from the feeding to the tapping station and momentarily restraining movement of the free end of the movable clamp jaw therepast when the slide member is moved from the tapping station to the feeding station.

3,015,118
SCOURING PAD HOLDER

William R. Strader, 6609 Kentucky Ave., Pittsburgh 6, Pa.

Filed Mar. 31, 1960, Ser. No. 19,050
5 Claims. (Cl. 15—209)

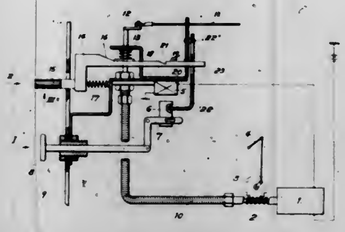


1. A scouring pad holder that comprises a base member, having an opening through its mid-area, handle members pivoted at opposite edges of said opening in relatively opposed relation, the inner ends of the handle members extending inwardly to the plane of said opening and the outer ends of the handle members serving as manipulating and holding elements when perpendicular to the base, and teeth formed on the inner end of each of the handle members and extending at right angles thereto in a generally horizontal direction, when the handle is vertical, whereby when the base member is held on a pad and the outer ends of the handle members raised toward each other about their pivots, the said teeth will penetrate the pad.

3,015,119
COMBINED WINDSHIELD WIPER AND WASHER SWITCH MECHANISM

Paul François Joseph Lamandiere, 81 Blvd. Suchet, Paris 16, France

Filed Feb. 19, 1959, Ser. No. 794,353
Claims priority, application France Feb. 25, 1958
4 Claims. (Cl. 15—250.02)

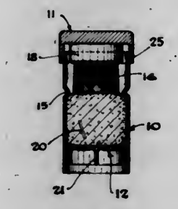


1. A control device for a windshield wiper and washer organization comprising a motor for driving the wiper, starting and stopping means for selectively rendering the motor operative and inoperative, and control means for coupling and uncoupling the washer and the wiper; said control means including a sliding member biased from a position in which the washer is uncoupled from the wiper to normally couple the washer and the wiper, latching means for locking the sliding member in the position in which the washer is uncoupled from the wiper so that only the wiper can be driven by the motor, and a release member which is connected to said starting and stopping means and to said latching means for releasing said latching means to thereby unlock said sliding member when said starting and stopping means is operated.

3,015,120
POLISH CONTAINER

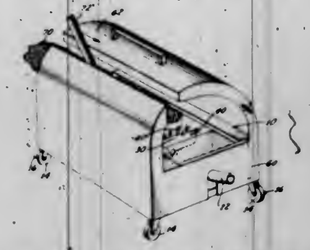
Donald G. Anderson, 129 S. Prospect Ave., Clarendon Hills, Ill.

Filed Jan. 19, 1959, Ser. No. 787,641
2 Claims. (Cl. 15—258)



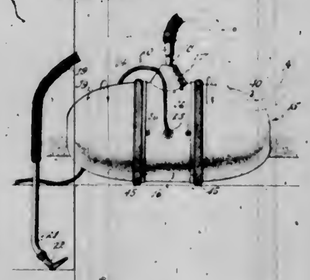
1. A polish kit comprising an elongated hollow container, open at both ends, a constriction in the wall of said container intermediate of said ends, dividing the container into two sections, a closure cap for one end having an applicator member attached to the underside thereof, said applicator member extending to such constriction when the cap is in place, a body of polish material in the other section, a push-pull closure adapted to be inserted in the other end of said container and to be pushed and pulled in said other section, the outer side of said push-pull closure having a web to be grasped by the fingers for pushing the closure against one end of the polish material and for forcing the other end of the polish material against such constriction and in contact with the end of the applicator.

3,015,121
BRUSH CLEANER
William D. Ulrich, North Redondo Beach, Calif., assignor to Futuronic Development Company, Torrance, Calif., a partnership
Filed Mar. 14, 1960, Ser. No. 14,928
2 Claims. (Cl. 15—311)



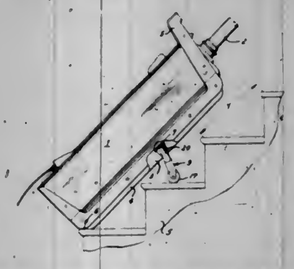
1. Apparatus for cleaning a brush having an elongated handle attached thereto and extending substantially perpendicularly therefrom, and the like, including: a frame member, a pilot table supported on said frame member and providing a surface over which such a brush may be moved and having an opening therein across which the brush passes, means supported on said frame member for forming a chamber below the opening in said surface of said pilot table with said opening extending into said chamber and said chamber having a funnel formed at one end thereof, conduit means extending from said funnel and adapted to be coupled to a source of vacuum pressure for introducing a vacuum pressure into said chamber so as to dispose of foreign particles carried by the brush as the brush is moved over said surface and across said opening, a rotatable cleaning element mounted in said chamber and having radial members extending through said opening in said surface of said pilot table for removing the foreign particles from the brush moved over said surface and across said opening, means for rotatably driving said cleaning element, and a housing supported on said frame member and extending up over said surface of said pilot table, said housing having open ends for permitting the brush to be moved through the apparatus over said surface of said pilot table and having a longitudinal guide slot therein extending between said open ends for receiving the handle of the brush so moved over said surface.

3,015,122
MOBILE ELECTRIC VACUUM CLEANER
Robert E. Cook, Los Angeles, Calif. (1050 Frederick St., Venice, Calif.)
Filed Jan. 4, 1961, Ser. No. 80,648
2 Claims. (Cl. 15—327)



1. In a vacuum cleaner the combination comprising an elongated elliptical shaped casing, said casing including a central cylindrical drum shaped section and outer semi-elliptical shaped end sections, means for rotatably mounting said end sections on said central section, said central section having a suction inlet and a suction hose connected to said inlet, said end sections having outlet openings therein, said central section having an electric cable extending outwardly thereof, said end sections having annular grooves, said central section having a plurality of rotatable wheels mounted thereon and engageable with the grooves in said end sections whereby said end sections are rotatably mounted on said central section, said wheels being journalled on bearing blocks, said central section having slots therein for mounting said bearing blocks and means connected to said bearing blocks and accessible from the exterior of said central section for adjusting said bearing blocks to reciprocate said wheels with regard to the axis of rotation of said central section.

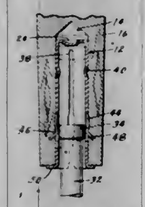
3,015,123
VACUUM CLEANER WITH WHEELED UNDERCARRIAGE
Raymond Descarries, Montreal, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Oct. 16, 1959, Ser. No. 846,918
13 Claims. (Cl. 15—327)



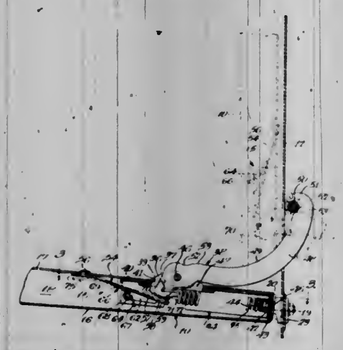
11. In a horizontal tank-type suction cleaner, an elongated casing having an inlet and an outlet at its opposite ends for air adapted to be circulated therethrough, lever means, means for mounting the lever means for pivotal movement at the underside of the casing for pivotal movement about a first axis perpendicular to the longitudinal axis of the cleaner, resilient means for imparting movement to the lever means in a downward path from the underside of the casing in a direction toward the inlet, stop means in the path of movement of the lever means to hold the lever means at a first position in which the lever means projects downward from the underside of the casing, and means for rendering the stop means ineffective to hold the lever means at the first position and for rendering the resilient means operable to impart movement to the lever means in a direction toward the inlet to a second position at the underside of the casing.

3,015,124
CASTER SLEEVE
Raymond Haydock, 6711 Lightfoot Ave., Chicago 46, Ill., assignor to Raymond Haydock, Chicago, Ill., trustee
Filed May 7, 1958, Ser. No. 733,674
2 Claims. (Cl. 16—43)

1. In combination, a caster sleeve and a caster, the caster including a pintle having an enlarged head and the pintle being adapted for insertion in the sleeve, the sleeve being made of a single integral stamping of generally tubular form and having a closed upper end and downwardly and longitudinally extending legs, said upper end having a downwardly extending spherical projection for engagement with the upper end of the pintle when inserted in the sleeve, said legs each being generally semi-cylindrical and having their hollow sides facing each other and defining slits extending from adjacent the closed upper end to and through the lower end whereby the legs are separate and the lower ends thereof are capable of moving toward and from each other, said legs having a normal position in which they diverge downwardly at least slightly and the lower ends thereof are spaced apart at least slightly, said legs having adjacent their upper ends inwardly extending detents for releasably retaining the head of the pintle when the latter is inserted in the sleeve, said legs having opposed downwardly extending tongues struck therefrom, the tongues having pointed free ends extending generally laterally outwardly with their pointed extremities closely adjacent the outer surfaces of the legs, and the tongues having generally inwardly directed butt portions projecting inwardly beyond the inner surfaces of the legs adapted to be driven generally outwardly, the head of the pintle being of a diameter greater than the space between the butt portions and operative for driving the pointed extremities into the material of a furniture leg in which the sleeve is inserted, in response to passage of the head between the butt portions, said legs having outwardly extending flanges at their lower ends for engagement with and supporting the furniture leg in which it is inserted, said flanges having smooth upper surfaces whereby to enable lateral sliding movement of the flanges relative to the furniture leg while in friction engagement therewith.

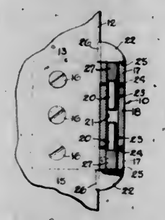


3,015,125
HOME APPLIANCE
John T. Curtis, Hamilton, Ohio, assignor to Whirlpool Corporation, a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,660
4 Claims. (Cl. 16—82)



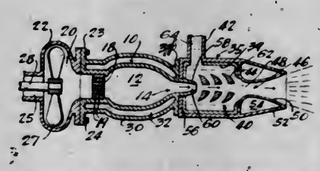
2. In a hinge mechanism adapted to support a member including reaction means, support means, a lever engageable with said reaction means, said member being removably pivotally mounted on said support means and having an interior, means pivotally mounting said lever on said member, and spring means interconnecting said lever and said member for simultaneously biasing said member against said support means and said lever against said reaction means, a control comprising: catch means on said lever in the interior of said member; and stop means movably mounted on the interior of said member, said stop means being accessible exteriorly of said member for selective disassociation from said catch means to permit said biasing and engagement with said catch means to hold said lever against the bias of said spring means and thereby eliminate the bias of said member against said support means for facilitating manual separation of said member from said support means.

3,015,126
HINGE
Axel W. Ahlgren, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Apr. 15, 1960, Ser. No. 22,636
1 Claim. (Cl. 16—168)



A hinge for hanging a door on a frame, said hinge having, in combination, a first leaf member having a flat portion adapted to lie against the frame and an integral knuckle portion formed along a vertical edge of the flat portion, a second leaf member having a flat portion adapted to lie against the door and an integral knuckle portion extending along a vertical edge of the flat portion and interleaved with the knuckle portion on said first leaf member, said two knuckle members having alined vertical holes, a pin projecting into said holes to join said leaf members and having a head abutting against the upper end of one of said knuckles, said head having a vertical side disposed substantially in the plane of the adjacent vertical edges of said flat portions, and a vertical ridge projecting laterally from said side and in between said leaf member, said ridge projecting beyond the adjacent vertical edges of said flat portions and said head being inclined and continuously curved convexly from the upper end of said ridge outwardly and downwardly to the bottom of the head.

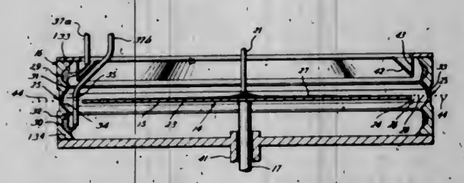
3,015,127
METHOD AND APPARATUS FOR FORMING FIBERS
Charles J. Stalego, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,218
4 Claims. (Cl. 18—2.5)



3. Apparatus of the character disclosed, in combination, a casing defining a combustion chamber arranged to burn a combustible mixture under confined conditions, said casing having a wall formed with a restricted orifice

through which the burned gases from the chamber are projected as a high velocity blast, a hollow member disposed adjacent and forwardly of the casing having a walled tubular portion in registration with said restricted orifice and through which are projected the gases forming the high velocity blast, the wall of said tubular portion being formed with peripherally spaced openings, said member being formed with a chamber entirely surrounding the perforated tubular portion and adapted to contain a supply of heat-softened fiber-forming mineral material, said member being provided with a tubular extension in registration with and forming a continuation of the tubular portion for confining the gases of the blast through a substantial distance from the restricted orifice, the gases of the blast moving at velocities to induce flow of the heat-softened material from the chamber into the gases of the blast and the material attenuated to fibers by the forces of the blast.

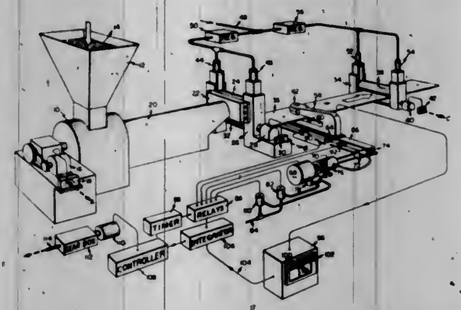
3,015,128
ENCAPSULATING APPARATUS
George R. Somerville, Jr., San Antonio, Tex., assignor to Southwest Research Institute, San Antonio, Tex.
Filed Aug. 18, 1960, Ser. No. 50,508
12 Claims. (Cl. 18—2.6)



1. Centrifugal encapsulating apparatus for encapsulating a filler material in an encapsulating medium comprising, in combination, a rotatable cylinder having a plurality of spaced-apart encapsulating orifices; means for delivering an encapsulating medium to said encapsulating orifices for forming successive films thereacross during rotation of the cylinder; impelling means rotatably mounted in said cylinder having a surface for impelling a filler material unrestrictedly outwardly to a periphery thereof and for trajecting particles of said filler material from random points about said periphery outwardly toward indiscriminate ones of said encapsulating orifices during rotation of the impelling means; means for delivering a filler material to said surface on the impelling means; and means for rotating said cylinder and said impelling means at desired speeds.

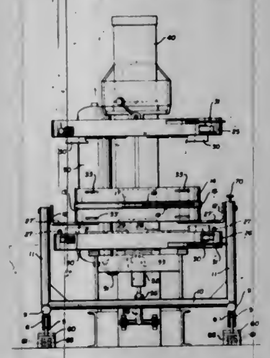
3,015,129
EXTRUSION PROCESS CONTROLS
Willard C. Hays and George I. Doering, Columbus, Ohio, assignors to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Mar. 3, 1958, Ser. No. 718,675
6 Claims. (Cl. 18—12)

1. An apparatus for extruding a uniform-thickness plastic sheet, comprising a sheeting die, pump means for forcing viscous plastic material through said die to form said sheet, take-off means for withdrawing said sheet from said die, a first driving means for said pump means, a second driving means for said take-off means, means for adjusting the ratio of the speeds of said first and second driving means, a source of radiation and a radiation detector, means for mounting said source to direct said radiation into a surface of said sheet, means for mounting said detector in position to intercept modified radiation from said source which emerges from said sheet after interaction therewith, said source and detector mounting means including a frame, a track extending across the width of said sheet, and bearing means for movably supporting said frame on said track, reciprocating means for driving said frame on said track whereby said source and detector are caused to move periodically back and forth across said sheet for scanning the same, means for translating the response of said detector into a signal functional of the thickness of said sheet, integrator means having an input adapted for connection to said signal



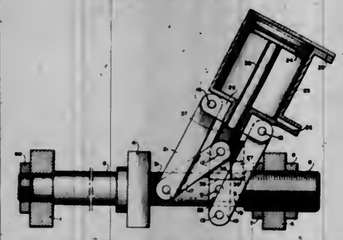
and an output providing an integrated signal representing the average value thereof, controller means energized by a predetermined value of said integrated signal for controlling said speed ratio adjusting means, and switching means responsive to the position of said frame on said track, said switching means including means for connecting said thickness-functional signal to said integrator input during a side-to-side movement of said source and detector across said sheet and means for subsequently connecting said integrated signal to said controller means.

3,015,130
RETREADING EQUIPMENT
Walter P. Voth, Akron, Ohio, assignor to The Akron Standard Mold Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 29, 1959, Ser. No. 843,115
1 Claim. (Cl. 18—18)



In the combination of (1) a press for opening and closing a mold for retreading tires and (2) a dolly supporting the mold, which press includes a lower platen on which the mold is adapted to be supported, with coacting registering means on the press and dolly for registering the lower half of the mold with the mold-engaging means on the lower platen, and a pressure member on the dolly below the lower platen the improvement which comprises a spring-supported platform on which the dolly stands when the mold is above the lower platen and means in the press adapted to press down on the pressure member while the dolly is on said platform.

3,015,131
CLAMPING MECHANISM FOR MOLDING PRESS
Karl Hehl, Lossburg, Wurttemberg, Germany, assignor to Arburg-Feingeratefabrik oHG Hehl & Sohne, Lossburg, Wurttemberg, Germany
Filed June 5, 1959, Ser. No. 818,337
Claims priority, application Germany June 7, 1958
4 Claims. (Cl. 18—30)



1. A power-operated mold clamping mechanism for injection molding comprising, in combination: a clamp device including a stationary platen, parallel guide rods mounted on said platen, a thrust plate secured to said guide rods, a pivot support adjustably mounted on said thrust plate, and a movable platen slidably mounted on and along said guide rods between said stationary platen and said thrust plate; a fluid-actuated power unit including a cylinder, a piston reciprocating therein and a piston rod attached to said piston; and toggle lever linkage means operatively connecting said cylinder and piston rod of said power unit between said thrust plate and said movable platen of said clamp device for moving said movable platen relative to said stationary platen and maintaining said clamp device in a clamping position upon the introduction of a pressure fluid medium into said power unit, said toggle lever linkage means constituting the sole connection between said clamping device and said power unit and allowing the latter to be rocked with respect to the former when said piston is displaced in said cylinder, said toggle lever linkage means having two pivotally connected toggle link means which, when said clamp device is moved out of its clamping position, are folded toward said power unit, the juncture of said toggle link means being connected with said piston rod of said power unit, one of said toggle link means being pivotally connected with said movable platen, and the other of said toggle link means being pivotally connected with said adjustable pivot support of said thrust plate, whereby the minimum distance between said stationary and movable platens of said clamping mechanism may be adjusted.

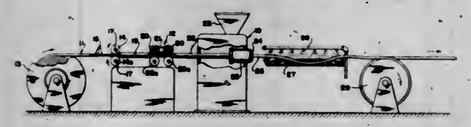
3,015,132
METHOD OF MOLDING PLASTIC ARTICLES
Albert L. Bunting, 24627 Rockford, Dearborn, Mich.
Filed Sept. 22, 1958, Ser. No. 762,496
8 Claims. (Cl. 18—48)

2. The method of molding a body from thermally expandable granules of polystyrene, comprising the steps of coating the thermally expandable granules of polystyrene with fusion-retarding film, feeding said coated granules into a mold cavity, simultaneously agitating and heating the coated granules to expand them and to cause dilution of said fusion-retarding film to a point where it no longer serves to insulate the granules from one another, continuing to heat the expanded granules to fuse them into an integral mass, and cooling said fused mass to provide the molded body.

ERRATUM

For Class 18—59 see:
Patent No. 3,015,356

3,015,133
METHOD OF MAKING JACKETED STRIP-WOUND METAL HOSE
Lyman B. Nichols, Watertown, Conn., assignor to Anaconda American Brass Company, a corporation of Connecticut
Filed Feb. 5, 1959, Ser. No. 792,251
5 Claims. (Cl. 18—59)



1. The method of jacketing strip-wound flexible metal hose having axially interlocking helical convolutions in which each convolution is movable relative to adjoining convolutions axially of the hose through the interlock between a first position in which adjoining convolutions are in direct contact with one another and a second position in which adjoining convolutions are spaced a substantial distance apart, which comprises subjecting the metal hose to an axial force in a direction to maintain the convolutions in said first position while maintaining the axis of the hose substantially straight, advancing the hose while maintaining its axis straight and with its convolutions in said first position by the application of a pushing force thereto, and extruding a jacket of plastic material which is elastic when set about said hose as it is being thus advanced, the linear velocity at which said plastic jacket material is extruded being less than the linear velocity at which the hose is advanced by said pushing force to cause the freshly-extruded plastic jacket to be stretched and necked down about the advancing hose without penetrating between the convolutions thereof, whereby when the jacketed hose is bent adjacent convolutions can move only away from each other on the outside of the bend and wrinkling of the jacket due to movement of convolutions toward each other on the inside of the bend is prevented.

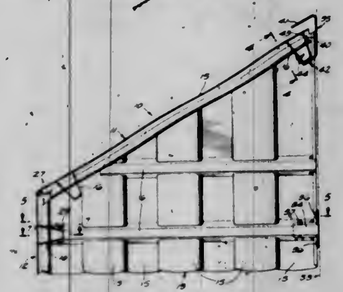
3,015,134
WINDOW PANEL DIVIDER
Romuald Migneault and Fernand W. Migneault, both of 332 St. Andre St., St. Gatineau, Quebec, Canada
Filed Feb. 23, 1960, Ser. No. 10,131
2 Claims. (Cl. 20—52)



1. In a sashless window assembly having a headpiece, a sill, grooves in said headpiece and sill, first and second glass panels each having top and bottom edge portions extending into said grooves and having overlapping side portions in the closed position thereof, said first panel being slidable with respect to said second panel, a panel divider comprising a unitary channel member fixed to each of the top and bottom edge portions of said second panel, each said channel member having a pair of opposed flat legs and a connecting web, each said leg having a free side edge defining a side opening for reception of said second panel, each end of said channel member being open and defined by contiguous end edges of said legs and web, and a tongue integral with said channel mem-

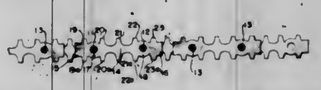
ber and extending from one of said end edges of one of said legs, said tongue being outwardly bowed to provide a convex outer surface thereon, said convex outer surface lying outwardly of the plane of the adjacent side surface of said second panel for engagement by said first panel.

3,015,135
VENTILATED METAL AWNING
Ralph K. Dean, Emil J. Slatkovski, and Herman E. Wegner, Riverside, Calif., assignors, by mesne assignments, to National Distillers and Chemical Corporation, a corporation of Virginia
Filed Oct. 3, 1955, Ser. No. 537,942
1 Claim. (Cl. 20—57.5)



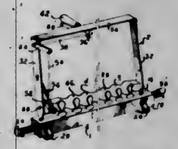
A vertical panel awning comprising a top and sides made up of assemblies of panels and vertically spaced stringers, said panels being in the form of shallow, channel-shaped members having roundly curled edges, and said stringers being in the form of U-shaped channels having the longitudinal edges thereof cut out to form seats for alternately inwardly and outwardly facing panels, one of the lower stringers of each of said sides being attached to the adjacent end of a lower stringer on said top, the curled edge of the outer panel on said top overhanging the upper ends of the side panels and engaging the outer surfaces thereof to hold the said side panels against outward movement, and at least one of the upper stringers of said top abutting against an inner surface of one of the side panels to hold the latter against inward movement.

3,015,136
RESILIENT MAT STRUCTURE
Elmer F. Doe, Pawling, N.Y., assignor to Pawling Rubber Corporation, Pawling, N.Y., a corporation of Delaware
Filed Oct. 17, 1957, Ser. No. 690,778
1 Claim. (Cl. 20—78.6)



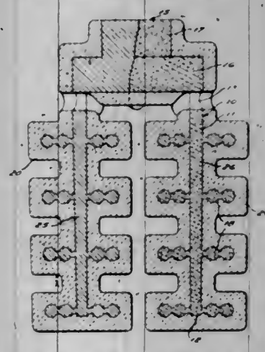
In a mat structure of the type comprising a plurality of links formed of resilient material joined by connecting wires and arranged in staggered relation with links of one longitudinal row partly overlapping links of adjacent longitudinal rows, an improved link of elongate form having a generally horizontal body portion, said body portion having spaced transverse openings therethrough spaced a substantial distance inward, relative to the total length of the body, from its ends, connecting wires extending transversely through said openings to connect links of adjacent rows, the location of said openings in relation to the length of said body being such that the space between links of a longitudinal row is a small fraction of the length of said body, said wires being retained within said link solely by said body portion, a plurality of integral bosses projecting vertically upward and downward from said body portion in areas thereof other than those in substantial vertical alignment with said transverse openings, the upwardly projecting bosses forming supporting surfaces and the downwardly projecting bosses forming base surfaces, at least one of said upwardly projecting bosses and one of said downwardly projecting bosses being positioned in vertical alignment adjacent each side of each of said openings, said last mentioned upwardly and downwardly projecting bosses being spaced apart a distance wider than the diameter of said openings, whereby vertical loads are supported by said bosses along principal axes bypassing said openings.

3,015,137
FISHING SINKER MOLDING APPARATUS
Cyril J. Hoebing, 1619 S. 8th St., Chickasha, Okla.
Filed Sept. 3, 1957, Ser. No. 681,789
5 Claims. (Cl. 22—57)



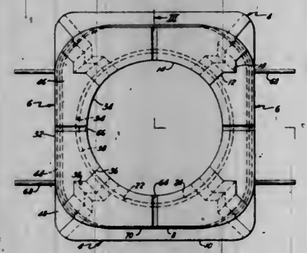
1. A ladle for pouring a plurality of parcels of liquid material, comprising a pair of upright supports, an elongated unitary ladle member pivotally mounted about a longitudinal axis intermediate said upright supports, said ladle member having a plurality of longitudinally aligned recesses formed therein in side by side relation, a transverse bar abridging said upright supports, handle means on said transverse bar for lifting said ladle, resilient means connected to said ladle for normally retaining said ladle in upright position, said ladle supports extending below said ladle a sufficient distance to permit free pivotal action of said ladle on said pivots, and lever and linkage means connected to said ladle for moving said ladle from upright position to pouring position.

3,015,138
SPRUE FORM AND METHOD OF PRECISION CASTING
Claude H. Watts, Lyndhurst, Ohio, assignor to Precision Metalsmiths, Inc.
Filed Mar. 30, 1961, Ser. No. 99,587
6 Claims. (Cl. 22—134)



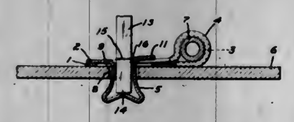
1. In an apparatus for casting of molten metal by the lost pattern process, a gating system comprising a heat disposable sprue and a feeding cup for said sprue, said sprue having closely spaced opposed wall surfaces providing a ratio of surface area to volume in the range of from substantially 2:1 to 10:1, said sprue having a central axis with the wall surfaces spaced from and extending about said axis, one said wall surface thereby being an inner wall surface defining a passageway through said sprue, said passageway having a cross section area of at least one-third the cross section area of the sprue.

3,015,139
SECTIONAL HOT TOP
Edgar Marburg, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 28, 1959, Ser. No. 849,337
6 Claims. (Cl. 22—147)



1. A sectional hot top for a generally rectangular mold comprising a first pair of slabs one located on each of two opposite sides of the mold, a second pair of slabs one located on each of the other sides of the mold, each of said slabs being thinner at its center than at its ends, the inner periphery of each of said slabs being narrower than the outer periphery thereof so that the end faces diverge outwardly from the inner to outer faces, each of the end faces of the first pair of slabs tapering downwardly toward the opposite end face for the majority of its length and then at a greater taper to the bottom thereof, each of said end faces of the second pair of slabs tapering downwardly away from the opposite end face for the majority of its length and then at a greater taper to the bottom thereof, the first taper on the end face of the first slabs being at essentially the same angle as the first taper on the end face of the second slabs and the second taper on the end face of the first slabs being essentially at the same angle as the second taper on the end face of the second slabs, and means for holding the top portions of the slabs together.

3,015,140
TUBING CLIP
Lloyd G. Pender, Sr., Detroit, Mich., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Feb. 27, 1959, Ser. No. 795,985
1 Claim. (Cl. 24—73)



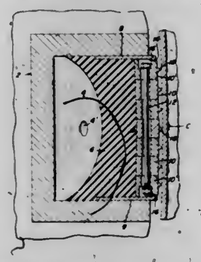
A fastening device of the class described comprising a support engaging apertured base portion, an attaching portion adapted to overlie said base portion and a clamping portion connecting the base and attaching portions and adapted to clamp around an object to be held in place on a support by said fastening device, a W-like shaped rivet portion integral at one end with the attaching portion and adapted to pass through the aperture in said base portion and through an aperture in a support and to be upset to attach the fastening device and clamp an object, said rivet portion being formed from material taken from the attaching portion and clamping portion and leaving a free end of a shape so that at least a portion of the free end overlaps the attaching portion to prevent the free end from passing through a slot in the clamping portion when the rivet portion is upset, and a shouldered portion formed from said attaching portion and lying adjacent to the overlapped portion of the free end of the rivet portion to prevent the free end from moving laterally to any substantial extent when said rivet portion is being upset.

3,015,141
HEAT SEALED FASTENER INSTALLATION
Walter I. Jones, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 29, 1958, Ser. No. 731,759
1 Claim. (Cl. 24—216)



A heat-sealed fastener installation comprising, in combination, a supporting material and a thermoplastic fastening device secured thereto, said fastening device including a generally circular flange portion having a scalloped perimetral edge electronically sealed to one face of said supporting material, the area of union between said flange portion and said supporting material and the free faces of the flange element and the supporting material, in cross-section, defining a plurality of alternate raised and depressed portions, the raised portions of the free faces of said flange portion and said supporting material being in staggered relation to one another.

3,015,142
FRICTION GRIPPING DEVICE
Richard A. Rosanoff, Rosemead, Calif. (16948 E. Pocono, La Puente, Calif.), and Leroy S. Thomas, 1448 W. 111th St., Los Angeles, Calif.
Filed Nov. 14, 1958, Ser. No. 773,885
1 Claim. (Cl. 24—263)



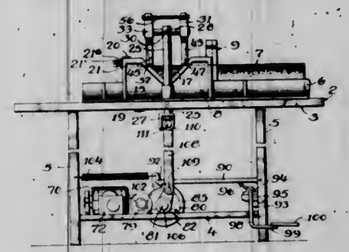
A friction gripping device comprising a chamber for fluid adapted to be disposed circumferentially around an elongated member, said chamber having an open inner side adjacent said member, a contractible wall slidable laterally in said chamber closing said open inner side, end plates bonded to the top and bottom of said wall, respectively, and projecting outwardly of said open inner side of said chamber, a plurality of independent rigid gripping shoes mounted between and confined by said end plates and movable with said wall, said shoes being ar-

ranged in substantially parallel spaced vertical rows disposed circumferentially along said inner wall, the adjacent shoes in each vertical row being separate and movable relative to each other, a bolt extending through oversize holes in the shoes in each row whereby said shoes are retained loosely in substantial axial alignment, said end plates each having a shoulder formed on the projecting portion thereof, and the end shoes in each row adjacent said end plates each being cut away at an outer corner thereof forming a shoulder thereon adapted to engage the shoulder on the end plate adjacent thereto to thereby limit the movement of said end shoes outwardly of said chamber.

3,015,143
MACHINE FOR CUTTING TILE PIPE

Henry E. Lindbloom, Tulsa, Okla., assignor to American-Marietta Company, a corporation of Illinois

Filed Mar. 14, 1957, Ser. No. 646,027
13 Claims. (Cl. 25—107)



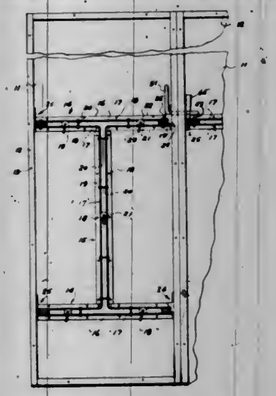
1. A machine for cutting pipe sections of uncured tile which comprises a cutting guide frame adapted to receive and support a pipe section of uncured tile, a pair of vertically movable wire supporting members pivotally mounted above said frame on opposite sides of its longitudinal center and extending transversely of said frame, a pair of cutting wires secured to said supporting members and extending transversely of said guide frame adjacent the upper edge of said frame, and means for moving said supporting members and said cutting wires downwardly simultaneously to cut a pipe section positioned in said guide frame, said cutting frame having longitudinal side walls, each of said side walls having intermediate portions inclined downwardly toward its longitudinal center, each of said cutting wires being engaged by corresponding inclined portions of each side wall for guiding said cutting wires toward each other as they are moved downwardly.

3,015,144
POURING FORM ASSEMBLY WITH INTERLOCK

George E. Leonard, Mount Clemens, Mich.
(7220 Paige, Warren, Mich.)

Filed June 4, 1959, Ser. No. 818,204
2 Claims. (Cl. 25—131)

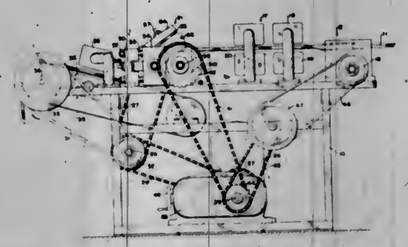
2. A clamping device for securing concrete pouring forms in lateral alignment, each form including upon its exterior outwardly extending frames along its opposite side edges, with the frame of one form in registry with the frame of an adjacent form, an apertured first clamp bracket secured upon the interior of the frame of one form, an opposing apertured second clamp bracket secured upon the interior of the frame of an adjacent form, an upright wedge slidably mounted upon said second bracket, and a rotatable locking arm loosely projected through said brackets and frames operatively engaging said first bracket and rotatable into retaining engagement with said wedge, said wedge adapted to be projected in one direction axially of its length for tightening the interlock between the forms and in the opposite direction for loosening said interlock, said locking arm having an end portion cutaway and flattened arranged on one side of said wedge, said flattened portion having a transverse notch therethrough defining a key outwardly of said notch retainingly engageable with the outer edge of said wedge on rotation of said locking arm, said notch cooperatively receiving said wedge.



3,015,145
METHOD AND APPARATUS FOR TREATING WEB MATERIALS, SUCH AS FABRICS

Eugene Cohn, Great Neck, Frank Catallo, Elmont, and Joseph Cohn, New York, N.Y., assignors to Compax Corp., Woodside, N.Y., a corporation of New York

Filed Feb. 4, 1957, Ser. No. 638,154
8 Claims. (Cl. 26—18.6)



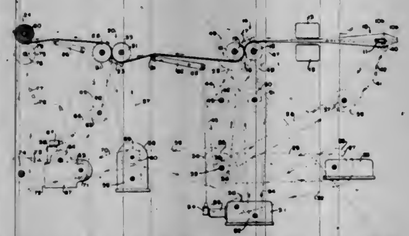
1. The method of compressively treating fibrous web material which comprises feeding said material in a positive manner and at a first predetermined uniform speed substantially to the entry line of a treating zone by closely confining both principal surfaces of said material to a predetermined path during said feeding, discontinuing said positive feeding and said close confining substantially at said entry line, retarding said material to a second predetermined uniform speed at an exit line of said treating zone, whereby said material is caused to decelerate and decrease in length and thereby to increase in thickness in passage through said zone, the increased thickness of said material being substantially greater than that of said predetermined path whereby decelerating portions of said fabric are confined substantially to said treating zone, said predetermined path being of a length several times larger than the length of said treating zone, and subjecting said material to heat and substantial localized pressure at the exit line of said treating zone.

4. Apparatus of the character described, which comprises a feeding roller, means to drive said feeding roller at a first predetermined uniform peripheral speed, a retarding roller, means to drive said retarding roller at a second predetermined uniform peripheral speed, said second peripheral speed being related to and slower than said first peripheral speed, said feeding and retarding rollers being mounted to form a nip and having surface characteristics such that said retarding roller has a more positive grip than said feeding roller on material passing through said nip, a confining shoe positioned adjacent said feeding roller and having an arcuate confining surface extending over a substantial arcuate surface portion of said feeding roller, said feeding roller and said confining surface forming a confined path for the passage of material in positive frictional feeding engagement with said feeding roller, said confining shoe having a terminating edge positioned a predetermined distance from said nip, said predetermined distance being substantially less than the length of said confined path, said feeding roller and the portion of said shoe in the immediate region of said terminating edge forming an entry of a treating zone, said nip forming an exit of said treating zone, said treating zone accommodating substantial increase in the thickness of material emerging from said confined path whereby lengthwise compression of the material is limited to said treating zone, and means to heat said rollers.

3,015,146
METHOD AND APPARATUS FOR COMPACTING WEB MATERIALS, SUCH AS FABRICS

Eugene Cohn, Great Neck, Frank Catallo, Elmont, and Joseph Cohn, New York, N.Y., assignors to Compax Corp., Woodside, N.Y., a corporation of New York

Filed Jan. 8, 1958, Ser. No. 707,803
9 Claims. (Cl. 26—18.6)



1. Apparatus for the forcible compressive shrinkage of tubular knitted fabric in the longitudinal direction comprising a first compressive shrinking station including first feeding and retarding rolls forming a first nip, and a first shoe forming with the first nip a first compressive shrinking zone, a second compressive shrinking station including second feeding and retarding rolls forming a second nip, and a second shoe forming with the second nip a second compressive shrinking zone, means to supply the fabric to the first feeding roll whereby one surface of the fabric contacts the first feeding roll, the second compressive shrinking station being reversely oriented with respect to the first compressive shrinking station whereby the second feeding roll is arranged to contact the other surface of the fabric, means to drive the first feeding and retarding rolls, and adjustable means for driving the second feeding and retarding rolls in predetermined speed relation to the first feeding and retarding rolls whereby said second feeding roll is driven at a peripheral speed greater than that of said first retarding roll to effect controlled lengthening of the fabric traveling between the compressive shrinking stations.

4. The method of forcibly compressively shrinking tubular knitted fabric in the longitudinal direction which comprises spreading the fabric to a controlled predetermined width, steaming the spread fabric, compressively shrinking the fabric longitudinally by acting primarily upon one surface of the fabric to feed the fabric into a first compressive shrinking zone, controllably lengthening the fabric leaving the first compressive shrinking zone, compressively shrinking the thus lengthened fabric longitudinally by acting primarily upon said other surface of the fabric to feed the fabric into a second compressive shrinking zone oriented reversely to said first zone, and conveying the fabric from the second zone.

3,015,147
SLASHER CREEL APPARATUS

William B. Croxton, Gastonia, and Robert J. Holshouser, Mooresville, N.C., assignors to Mooresville Iron Works, Inc., Mooresville, N.C., a corporation of North Carolina

Filed Aug. 16, 1957, Ser. No. 678,479
11 Claims. (Cl. 28—28)

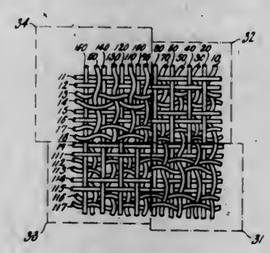


1. A slasher supply creel comprising a frame, a top set of yarn supply beams mounted transversely of said frame and longitudinally spaced from each other, a pair of spaced parallel tracks mounted longitudinally on said frame and spaced beneath the top beams, a plurality of dollies mounted for rolling movement along said tracks, a bottom set of yarn supply beams rotatably mounted at opposite ends on a dolly on each of said tracks, and locking means engageable with each of said dollies and said tracks for preventing rolling movement of the dollies along the tracks.

3,015,148
SPACER FABRICS AND METHOD OF MAKING THEM

Nassib Haddad, Iselin, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

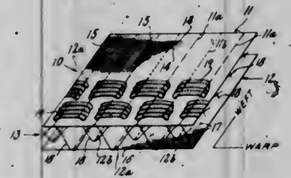
Filed Apr. 23, 1958, Ser. No. 730,358
13 Claims. (Cl. 28—72)



10. The method of producing a fabric which comprises weaving heat shrinkable synthetic warps with alternate monofilament synthetic warps, said monofilament synthetic warps being such that they will be longer by at least 15% of their original length in the fabric than said heat shrinkable synthetic warps after a given shrinking treatment, interlacing heat shrinkable synthetic wefts and additional monofilament synthetic wefts, said monofilament synthetic wefts being such that they will be longer by at least 15% of their original length in the fabric than said heat shrinkable synthetic wefts after said given shrinking treatment, interlacing said warps and said wefts to produce a multiplicity of discrete areas in the fabric

at each of which said monofilament synthetic warps and said monofilament synthetic wefts appear at the same side of the fabric and in which areas substantially all of said monofilament synthetic warps and said monofilament synthetic wefts float over a plurality of said heat shrinkable synthetic wefts and said heat shrinkable synthetic warps respectively, passing said monofilament synthetic warps and said monofilament synthetic wefts to the other side of said heat shrinkable yarns at the boundaries of said discrete areas, and heating the fabric so produced to shrink said heat shrinkable synthetic warps and wefts at least 15% more than said monofilament synthetic warps and wefts to buckle said monofilament synthetic warps and wefts.

3,015,149
COMBINED CARPET AND SPACER FABRIC
Boutwell H. Foster, Maplewood, and Nassib Haddad, Iselin, N.J., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 23, 1958, Ser. No. 730,357
10 Claims. (Cl. 28—78)



1. A fabric for use as upholstery covering, carpeting, and the like, comprising upper and lower plies each composed of longitudinally shrunk strands extending in one direction of said plies and interwoven with strands extending substantially transverse to both said direction and said shrunk strands, an intermediate ply of unshrunk, stiff, corrugated strands extending substantially in said direction and inerwoven alternately with spaced ones of said transverse strands of said upper and lower plies, respectively, and a plurality of unshrunk pile yarn strands interwoven with said transverse strands of said upper ply so as to form in each of said soft strands raised pile-constituting buckles spaced from one another along said direction said upper ply forming the only fabric interconnection between said intermediate ply and said pile yarn strands.

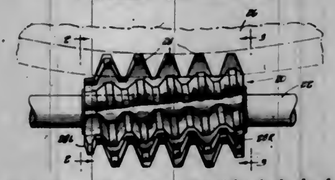
3,015,150
POLYPROPYLENE FISHING ARTICLES
Aldo Flor, Terni, Italy, assignor to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy
No Drawing. Filed Jan. 28, 1958, Ser. No. 711,564
Claims priority, application Italy Feb. 4, 1957
4 Claims. (Cl. 28—81)

1. Fibrous fishing articles made of yarns of fiber-forming polypropylene consisting essentially of isotactic crystalline macromolecules and linear, regular head-to-tail atactic macromolecules, the isotactic macromolecules constituting at least 60% of the polypropylene, said yarns forming the fishing articles being stretched and oriented heat-stabilized yarns having a tenacity of 6.5 g./den. to 7.5 g./den., a ratio of elastically recovered work to deformation work of about 80% at an elongation of 10% and of about 53% at an elongation of 20% and calculated by the formula

$$X = \frac{Lr}{Ld} \cdot 100$$

in which Lr is the elastically recovered work and Ld is the deformation work; a residual strain of from 0.6% up to 2.0% after being subjected to repeated stresses of from 0 to 5.0 g./den. at 50 cycles/minute; an instantaneous elastic recovery of about 50% when the initial elongation is 5% and of about 34% when the initial elongation is 20%; a delayed elastic recovery of about 50% when the initial elongation is 5% and of about 51% when the initial elongation is 20%; and a permanent elongation of about zero when the initial elongation is 5% and of about 15% when the initial elongation is 20%; the mechanical characteristics of the fishing articles being commensurate with those of the polypropylene yarns and being essentially the same when the fishing article is exposed to moisture in use as when the fishing article is stored in dry atmosphere.

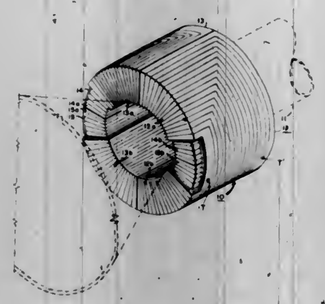
3,015,151
HOB
Wilbur F. Pergande, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Jan. 20, 1959, Ser. No. 787,969
4 Claims. (Cl. 29—103)



1. A hob comprising a rotatable hob body having abrupt ends, a series of hobbing teeth integral with the periphery of said body and being disposed in a generally helical pattern of circumferentially spaced teeth which extends along the full length of the hob body, the individual teeth of said series which are spaced inwardly from the ends of said body being of full size and width and being shaped to define top lands of substantial axial width and sloping side surfaces having a helical lead and extending inwardly from said top lands substantially to the bases of the teeth, said full sized teeth being relieved on opposite sides and at the tops thereof, the individual teeth at opposite ends of said series which are located with reference to said body axially beyond said full size teeth being substantial in number and being individually reduced in width relative to the width of said full size teeth by the axial termination of said body, the sides of said reduced width end teeth opposite from the adjacent end of said body having a sloping helical form conforming to that of corresponding side surfaces of said full size teeth and located in said helical pattern, the sides of said reduced width teeth contiguous to the adjacent end of said body being shaped to define side surfaces which slope outwardly and away from the adjacent body end, said last mentioned sloping tooth surfaces extending radially inward substantially to the bases of the teeth and having inner edges substantially flush with the adjacent end of said body, said last mentioned tooth surfaces having helical forms conforming to that of corresponding side surfaces of the full size teeth, said reduced width teeth being truncated at the tops thereof to define top lands of substantial axial width, and each reduced width tooth being relieved at the top and at opposite sides thereof.

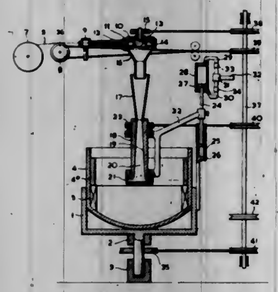
3,015,152
PROCESS OF MANUFACTURING MAGNETIC DEFLECTION YOKES
John Marley, Roslyn Heights, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 23, 1955, Ser. No. 530,029
19 Claims. (Cl. 29—155.57)

1. The method of manufacturing a deflection yoke for a cathode-ray tube comprising: forming on an insulating base an elongated flat coil the turns of which progress continuously between the center and outer regions of the coil; and wrapping the elongated sides of the coil around



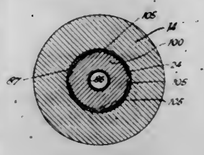
a yoke core wall in such manner that the elongated sides of the coil encircle the core wall to form two deflection windings in different radial quadrants of the core.

3,015,153
METHOD OF MAKING A HEAT REGENERATOR
August Albert Liebe, Eindhoven, Netherlands, assignor to Hartford National Bank and Trust Company, Hartford, Conn., as trustee
Filed Aug. 23, 1956, Ser. No. 605,854
Claims priority, application Netherlands Sept. 8, 1955
3 Claims. (Cl. 29—157.3)



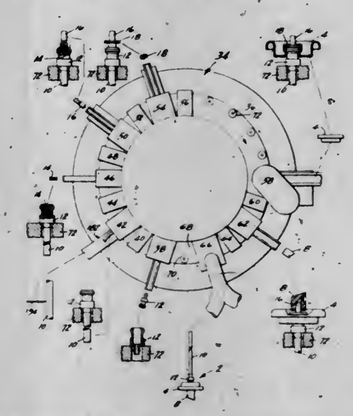
1. A method of manufacturing a heat regenerator provided with regenerator material constituted of metal wire or tape comprising filling the wall of the heat regenerator housing with a layer of resilient wire particles by simultaneously rotating the resilient wire particle supply device at a rate of speed sufficient to deposit a layer of resilient wire particles on said wall of said heat regenerator housing and rotating said housing at such a speed of rotation that the required centrifugal force is developed to provide not only the desired filling factor of the resilient wire particles but to insure the compression thereof, furnishing regenerator material in strip form, cutting said regenerator material into relatively small pieces and supplying the same to said supply device, inserting an annulus member within said compressed resilient wire particles while said housing is being rotated, and thereafter terminating the rotation of said housing whereby said resilient wire particles will expand and secure said annulus member within said housing.

3,015,154
RIBBED EXTRUSION BILLET
Sidley O. Evans, Beaver Falls, Pa., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 15, 1954, Ser. No. 416,310
2 Claims. (Cl. 29—183)



1. An axially pre-compressed and pierced extrudable metal billet having a generally cylindrical cross-section with circumferentially spaced ribs extending longitudinally of its outer surface and of a height and cross-sectional area such that the total volume of the arcuate spaces between said ribs is substantially equal to the volume of lubricant required for continuous lubrication of the outer surface of the billet during the extrusion operation.

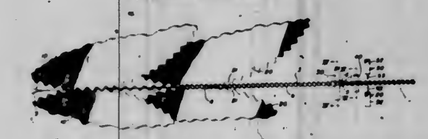
3,015,155
APPARATUS FOR ASSEMBLING AEROSOL VALVES
Frank E. Dobson, Newark, and Theodore J. A. Manvell, Nutley, N.J., assignors, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 16, 1957, Ser. No. 653,083
26 Claims. (Cl. 29—211)



1. An apparatus for assembling aerosol spray valves for containers, comprising a holder for receiving in sequence the individual parts of a said valve, means for moving said holder along a predetermined path and momentarily arresting the same at each of a plurality of sequentially arranged feeding stations adjacent said path for assembling the different parts of said valve, means at a first of said stations operable in response to arrival of the holder thereat for feeding a valve body into said holder, means at a second of said stations operable in response to arrival of the holder thereat for feeding and attaching a tube to one end of said body, means at a third of said stations operable in response to arrival of the holder thereat for feeding a valve spring into the opposite end of said body, means at a fourth of said stations operable in response to arrival of the holder thereat for feeding a valve stem onto said spring, means at a fifth of said sta-

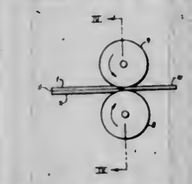
tions operable in response to arrival of the holder thereat for feeding a valve washer onto said stem, means at a sixth of said stations operable in response to arrival of the holder thereat for feeding a valve cap onto said stem and over said valve body, and means operated in time with said last-named means for crimping said cap to said valve body after placement thereover to secure together said assembled valve parts as a unitary valve structure.

3,015,156
METHOD OF MAKING A SHADE SCREEN
Walkley B. Ewing, East Grand Rapids, Mich., assignor to Ewing Development Company, Grand Rapids, Mich., a corporation of Michigan
Filed Apr. 29, 1957, Ser. No. 655,769
4 Claims. (Cl. 29—429)



1. A method of manufacturing screen having warps supporting louver members comprising the steps of: providing at least two warp wires constructed of deformable material in adjacent parallel planes; deforming each of said warp wires into sinuous shapes each having a plurality of waves with peaks; arranging said sinuous shaped warps in adjacent parallel planes out-of-phase with each other in generally peak to peak relationship; providing elongated louver members of greater width than thickness; separating opposite peaks of said warp members a distance greater than the width of said louver members; injecting said louver members between said separated peaks with their widths therebetween; and releasing and closing said peaks on the edges of said louver members to retain the louvers therebetween.

3,015,157
METAL FABRICATION
Richard W. Reynolds, Norwich, and Wallace C. Johnson, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Mar. 10, 1959, Ser. No. 798,398
4 Claims. (Cl. 29—470.9)



1. A method of making pressure welded composite structures comprising forming a pack by superposing two carbon steel sheets; heating said pack to a temperature within the range from about 1400° F. to about 1800° F.; and deforming said pack to effect a reduction of about 10% to 28% in the cross-sectional area of said pack to produce a substantially complete and uniform weld across the adjacent surfaces of said sheets by passing said pack between rolls maintained at a temperature sufficiently below the temperature of said pack to quickly cool the exterior surfaces of said sheets to a temperature which is substantially below the welding temperature of said sheets while maintaining the inner surfaces of said sheets at said welding temperature, said weld being produced without any further thermal or pressure treatment.

3,015,158
ADJUSTABLE SAFETY RAZOR
Joseph Rene Ayotte, 740 N. Oakley Blvd., Chicago 12, Ill.
Filed June 4, 1959, Ser. No. 818,156
4 Claims. (Cl. 30—41)

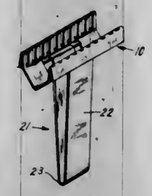


1. A razor comprising in combination means for clamping and holding a razor blade for shaving including a guard plate and a clamping plate, a planar backing surface on said clamping plate for supporting a substantially rigid blade, a laterally extending fulcrum surface across said guard plate facing said backing surface, a stem extending from said clamping plate through said guard plate, a pivotal pin extending laterally substantially parallel to said fulcrum surface and pivotally connecting said stem to said clamping plate, a hollow handle mounted on said guard plate telescopically receiving said stem, a threaded portion on said stem, a flat surfaced shank on said stem adjacent the clamping plate and positioned between the clamping plate and threaded portion, a rotation preventing guide opening in said hollow handle having flat surfaces therein and slidably receiving said shank, a tightening member having a knob and having a hollow barrel end projecting into said hollow handle, a threaded member within said barrel having a threaded opening of reduced diameter threadably receiving said threaded portion of the stem, a fluted extension on said stem extending beyond the threaded portion and smaller than the threaded opening in the barrel to slide therein, an annular guide on said barrel projecting beyond the threaded member for guiding said fluted extension to the threaded opening during assembly, a cap on the fluted extension slidable within the barrel and larger than the threaded opening to limit withdrawal of the stem, said cap having a flanged edge for engaging said threaded member outside of said threads without damaging the threads, a removable plug in the knob of said hollow barrel for attaching said cap to said fluted extension during assembly, a plurality of laterally extending axially separated shearing recesses in said shank for shearing lather on said shank surface, a first pair of split lugs on said clamping plate at one side of said backing surface, a second pair of split lugs on said clamping plate at the other side of said backing surface, an intermediate lug between said split lugs on said backing surface, a flat angled surface on said shank adjacent the pivotal pin for limiting pivotal movement of the clamping plate when said plates are separated, an adjustment screw adjustably threaded through said clamping plate for abutting said guard plate and controlling the adjusted clamping position of said plates, and index means on said clamping plate for indicating the position of said screw.

3,015,159
COMBINED SAFETY RAZOR BLADE AND GUARD ASSEMBLY
John E. De Baun, 335 Marshall St., Ridgewood, N.J.
Filed Aug. 10, 1959, Ser. No. 832,518
1 Claim. (Cl. 30—47)

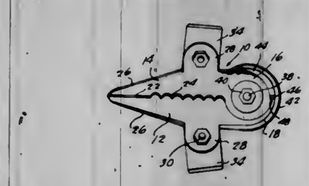
A combined razor blade and guard assembly formed of a sheet of razor blade material having a bend along a center line providing wing formations, each of said wing

formations having a lower wing portion and an upper wing portion bent inwardly and upwardly along a bend line parallel to the center line, said wing formations being cut away to provide a central opening, each of said upper wing portions being folded outwardly and downwardly upon itself and having a cutting razor edge on its end



running parallel to the center line, each of said upper wing portions having vertically-extending parallel openings extending through the bend of the upper wing portion upon itself and providing thereby a series of teeth along the bend of the upper wing portion and said central opening being adapted to receive a detachable razor blade handle.

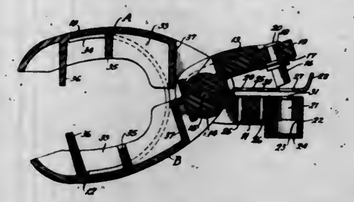
3,015,160
SCISSORS
Jennings E. Fogle, Manteca, Calif., assignor of one-half to Harry C. Fogle, Olton, Okla.
Filed June 3, 1960, Ser. No. 33,707
3 Claims. (Cl. 30—232)



1. A scissors comprising a pair of coextensive flat blades having forward ends and rear ends, said blades being substantially similar in shape and consisting of a first blade and a second blade, said blades having circular rear end portions which are concentrically engaged with each other, a pivot securably traversing said rear end portions at their centers, said blades having longitudinal inner edges, and outer edges, said inner edges consisting of straight outer end portions and scalloped inner end portions, said straight end scalloped portions being of the same lengths, and finger loops secured to the blades and extending laterally outwardly from the outer edges of the blades, the circular rear end portion of said second blade being larger in diameter than the circular end portion of said first blade, a lateral stop fixed to the rear end portion of the second blade in line with its inner edge, the rear end portion of said first blade having a peripheral edge having an extension defining a stop shoulder on line with its inner edge for engagement by said stop only when the blades are in closed relation with their inner edges in shearing relationship.

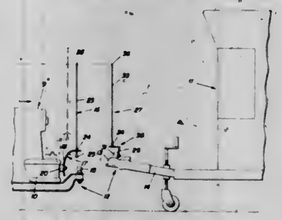
3,015,161
PUNCH DEVICE
Loren H. Semler, Chicago, and Curt E. Nyberg, Skokie, Ill., assignors to Metal Specialties Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 18, 1958, Ser. No. 755,719
4 Claims. (Cl. 30—363)

1. In a punch device having opposed rigid metal punch pin and die elements and handles pivotally connected together, resilient jaws carried by said handle members and supporting said pin and die elements, said jaws being of plastic resin having elasticity whereby said jaws flex under



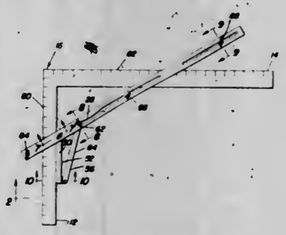
high pressure during a punching action and completely recover their original shape upon the release of said high pressure.

3,015,162
TRAILER COUPLING GUIDE
Herman C. Bohnet, 931 Verlinden Ave., Lansing, Mich.
Filed July 8, 1958, Ser. No. 747,146
3 Claims. (Cl. 33—46)



1. A guide to facilitate coupling a towing vehicle to a trailer, said guide comprising a bracket including a flat, readily bendable ductile bar having longitudinally spaced openings therein, an upstanding sight rod on one end portion of the bar, and means for removably mounting the bracket on a vehicle, said means including a permanent magnet selectively mountable on either side of the bar, a stud on said magnet selectively insertable through the openings, and a retaining nut threaded on the stud for securing the magnet in a longitudinally adjusted position on the bar.

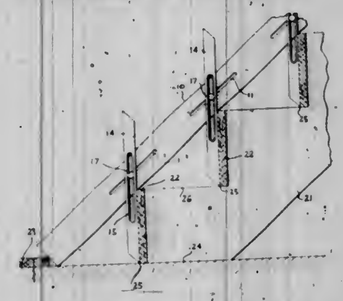
3,015,163
SQUARE ATTACHMENT
Hugh M. Cummings, R.R. 3, Lakewood Drive, Sudbury, Mass.
Filed May 12, 1958, Ser. No. 734,661
3 Claims. (Cl. 33—94)



1. A rafter marking attachment for a carpenter's square comprising, a carpenter's square, a stock slidably mounted diagonally on the square for angular adjustment, a pivoted arm on the stock paralleling an arm of the square slidably engaged longitudinally therewith for

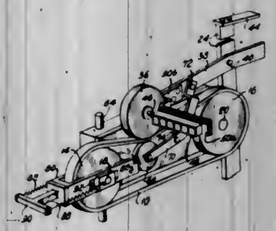
swinging adjustment in response to angular adjustment of the stock thereon, and an adjustable bar having an end pivotally and slidably connected to the stock and its other end pivotally connected to the first named arm for adjustment thereby in response to swinging movement thereof, said bar providing a straight-edge for marking the work.

3,015,164
DEVICES AND METHOD FOR LAYING OUT SKIRTBOARDS
Robert A. Antell, 12 Bell St., Spencer, Mass., assignor of one-third to Frederick G. Antell and of one-third to Raymond E. Antell
Filed Mar. 25, 1959, Ser. No. 801,806
2 Claims. (Cl. 33—102)



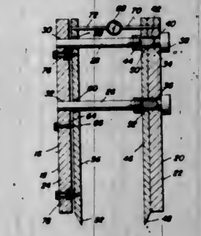
1. A tool for laying out the skirtboards to be fitted with the assembled risers and stringers of a partially completed staircase comprising a single relatively long, slender and straight metallic bar of a fixed length having spaced side walls with flat outer side surfaces in parallel relation with each other and being joined by a base along one of the respective edges of the side surfaces thereof, said base having a flat outer surface in normal relation with the outer surfaces of said side walls thereby giving said bar a U-shaped cross section, said bar being adapted to be placed in a direction lengthwise of said stringers with one of its side walls extending transversely in engagement with the ends of the risers of said staircase to which a skirtboard is to be fitted, said base having a plurality of substantially uniformly spaced longitudinal slots therein equalling in amount the number of risers to which the skirtboard is to be fitted and of a predetermined length in aligned relation with each other, a plurality of relatively short and slender flat metallic strips of predetermined substantially uniform lengths having parallel opposed side edges, one of each of which is to engage the edge surface of a respective riser, and a shouldered longitudinal slot of a predetermined length in the intermediate portions thereof, said strips being equal in number to said spaced longitudinal slots and having opposed terminal ends, one of which is acutely angled relative to and intersects the side edge of said strip which is to engage a respective riser and the other of said ends being acutely angled relative to and intersecting the other of said side edges to form relatively sharp oppositely directed terminal guage points, said flat metallic strips being positioned with a flat side thereof in transverse overlying relation with the flat outer surface of the base and with their shouldered sides of their longitudinal slots being exposed and a bolt extending through each of the slots of said strips and the respective slots in said bar each having an enlarged head straddling the respective slots in said strips and lying within said shoulders, said bolts further having threaded portions of predetermined lengths such as to extend through the respective slots into the space between the side walls and to have their ends lying within the width of said side walls and a nut on each of said threaded portions dimensionally predetermined so that when tightened for securing the strips in fixed adjusted relation with the bar the said nuts will lie entirely within the width of said side walls.

3,015,165
ROLLING CONTACT MEASURING DEVICE
Maurice G. Steele, Rome, N.Y., assignor, by mesne assignments, to Rome Cable Corporation, Rome, N.Y., a corporation of Delaware
Filed Dec. 15, 1959, Ser. No. 859,692
10 Claims. (Cl. 33—134)



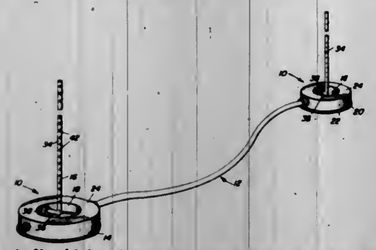
7. Apparatus for measuring a traveling strand comprising, an endless belt for making contact with the traveling strand and arranged to be driven thereby, means coacting with said belt to maintain frictional contact between the strand and said belt, an idler pulley, and means for supporting the idler pulley to ride on the outer surface of said belt, a counter means, and means responsive to the rotation of said idler pulley for actuating said counter means.

3,015,166
MEASURING GAUGE
James E. Brown, 211 College St., Henderson, N.C., assignor of thirty-seven and one-half percent to Spencer H. Ferrell, Durham, and thirty-seven and one-half percent to Florence N. Bailey, Henderson, N.C.
Filed Nov. 24, 1958, Ser. No. 775,777
5 Claims. (Cl. 33—148)



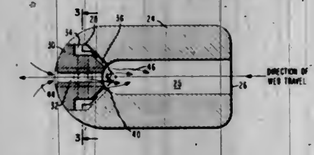
1. A measuring instrument for measuring comparatively inaccessible parts, said instrument comprising a pair of sides, means holding said sides in spatial relationship, a feeler connected with one of said sides, a measuring beam connected with the other of said sides and spaced from said feeler, said measuring beam having a second feeler and cooperating with the first mentioned feeler to constitute a pair thereof, a fulcrum on the other of said sides for said measuring beam and about which said beam is adapted to rock, and an indicator connected between said beam and the first mentioned side to measure the amount of deflection of said beam with respect to the first mentioned feeler, resilient means reacting on said beam to hold said beam in an initial position, said resilient means comprising a pair of springs, means holding said springs captive with respect to said beam and on opposite sides of said fulcrum.

3,015,167
LIQUID LEVEL
James M. Chapman, 108 Ricardo, Wayeross, Ga.
Filed Dec. 18, 1957, Ser. No. 703,573
8 Claims. (Cl. 33—209)



1. A liquid level system comprising at least one pair of hollow liquid containers constituting bases, upwardly extending tubes pivotally connected to said bases for rotation about horizontal axes communicating each container with the atmosphere, a flexible means communicating the interiors of said containers, said system being closed except for said tubes, and containing a sufficient supply of liquid whereby liquid will seek its own level and determine points of identical elevation in each of said tubes.

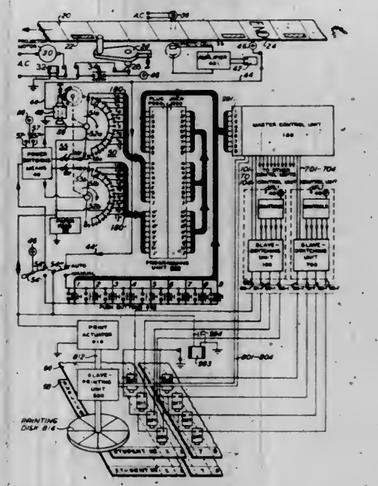
3,015,168
WEB CONDITIONING MACHINE
Oliver D. Johnson, Vestal, and Charles Holovka, Jr., Binghamton, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1959, Ser. No. 862,002
2 Claims. (Cl. 34—156)



1. An apparatus for cooling and removing moisture from a web of steam treated sheet material which comprises, a main body portion having a chamber provided with an entrance opening and an exit opening through which the web that is to be dried and cooled passes, both of said openings being exposed to the atmosphere, an insert mounted in said body portion at said exit opening so as to partially close off said chamber to the atmosphere, a passageway in said insert exposed to the atmosphere and through which said web exits, and a plurality of angularly positioned passageways formed between said insert and said main body and through which high pressure-high velocity air is forced to impinge near the surface of the web material in said chamber, said high pressure-high velocity air creating a low pressure area in said chamber so as to draw in atmospheric air through said exit passageway, the combined high pressure-high velocity air and the atmospheric air contacting the web in said chamber and then exhausting through said entrance opening.

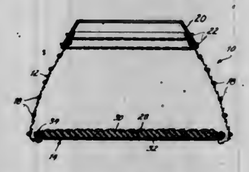
3,015,169
DRIVER TRAINING AND TESTING EQUIPMENT
Conkling Chedister, 330 E. Cedar St., Livingston, N.J., and Ronald K. Chedister, 12 Pine St., Chatham, N.J.
Filed Sept. 13, 1957, Ser. No. 683,814
23 Claims. (Cl. 35—11)

15. Apparatus for training persons in the operation of controls including in combination means for presenting a sequence of stimuli to a group of persons to be trained, recording means, a plurality of stations each having a plurality of control members to be actuated selectively by the persons being trained in response to the stimuli, said recording means including means for separately recording the control operations of each of the persons, control operation sensing means responsive to the operation of the controls, means interconnecting said sensing means and said recording means and actuated by said stimuli presenting means in timed relation



with the stimuli for selecting and connecting certain components of said control operation sensing means at each station with the respective recording means for a limited period whereby the recording means records the person's operation of the controls to which said selected components of said sensing means respond, and means for adapting the apparatus to any desired program of stimuli comprising programming means connected to said selecting and connecting means and having an interchangeable member adapted to permute the interconnection provided by said selecting and connecting means.

3,015,170
ALL PURPOSE SLIPPER
Lewis Kramer, 6723 N. 17th St., Philadelphia, Pa.
Filed June 28, 1960, Ser. No. 39,300
6 Claims. (Cl. 36—9)



1. A slipper comprising a knitted body stitched along one edge of said body to the edge of a laminated sole, said sole comprising a layer of open-cell foam material, a layer of knitted fabric on the uppermost surface of said sole, a layer of rubberized material on the bottom surface of said sole, said layers being fused together, and the thickness of said foam material being substantially greater than the thickness of said rubberized material.

3,015,171
STRETCHABLE SLIPPER CONSTRUCTION
Morris Kaplan, % Sondra Mfg. Co. Inc., 601 N. Jordan St., Allentown, Pa.
Filed Nov. 13, 1959, Ser. No. 852,663
3 Claims. (Cl. 36—9)



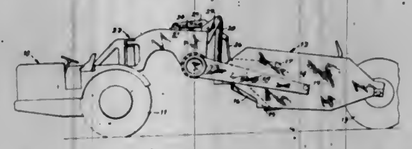
1. A laminated stretchable slipper construction having an upper and having a trilaminate sole and a penta-laminate edge including a central relatively thick polyurethane foam sole, cross grain knitted fabrics enclosing and sandwiching the top and bottom faces of the foam sole, said fabrics and foam sole being centrally stitched together, an elastic narrow heavy rubber strip overlaying the upper peripheral face of the sandwich and inside circular stitching extending through and around said periphery extending around the edges of and being exposed on the outside of the laminate, said circular stitching being enclosed inside of the lower periphery of the upper around the sole and outside circular stitching around the edges of the trilaminate sole and elastic strip and the lower edge of the upper being folded inwardly to be under the edge of the sole and stitched in position thereto.

3,015,172
SNOW AND ICE REMOVAL APPARATUS
Odd Parnas, 3 Verana Ave., Toronto 15, Ontario, Canada
Filed May 31, 1957, Ser. No. 662,834
1 Claim. (Cl. 37—43)



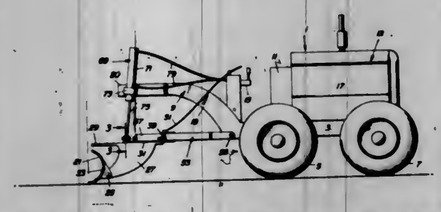
Snow removal apparatus comprising a cylindrical housing having a back wall and open over its entire area at the front, a mobile support, means mounting said housing on said mobile support with the lower portion of the housing in tangential relation to the support surface to be cleared, and an impeller journaled entirely within said housing on an axis of rotation normal to said back wall, said impeller including radially disposed arms for centrifugally discharging snow laterally from said housing, said housing including a fixed, lateral discharge conduit having a lower portion merging tangentially, adjacent the lowermost portion of the periphery of said open front housing and extending upwardly and angularly in a single continuous plane from said lower peripheral portion for receiving centrifugally discharged material from said blower as it passes into the open front of the housing, said lateral discharge conduit having a circumferential inlet extending substantially from said lowermost peripheral portion of said open front housing over an uninterrupted span of more than 90 degrees from said lowermost peripheral portion of said housing, said housing including integral, forwardly projecting extension plates spaced at opposite sides of a vertical plane passing through the axis of rotation of said blower for directing material directly into the open front of the housing over its entire area, said extension plates having a triangular, scoop-like configuration and extending downwardly and forwardly from the open front of said housing, said plates including coplanar lower marginal edges disposed in a plane tangential to the lowermost peripheral portion of said open front housing and spaced on opposite sides of said vertical plane passing through the blower axis of rotation, said extension plates including inclined surface portions oblique to said vertical plane and a plane perpendicular to said vertical plane and passing through said axis of rotation, one of said plates including an outer margin disposed in a plane tangential to one side of said open front housing, the other of said plates including an outer margin parallel to the outer margin of said one of said plates and terminating at the lower terminal end of said discharge conduit, the upper margin of said other plate being integral with and extending the entire length of said discharge conduit, the two extension plates defining from the outer marginal edges a scoop span equal to the diameter of said open front housing plus the length of said lateral discharge conduit.

3,015,173
SHIPPING ACCESSORY FOR TRACTOR DRAWN SCRAPERS
Woodrow P. Kimsey, Lockport, and William J. Ryan, Joliet, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Aug. 29, 1960, Ser. No. 52,408
3 Claims. (Cl. 37—129)



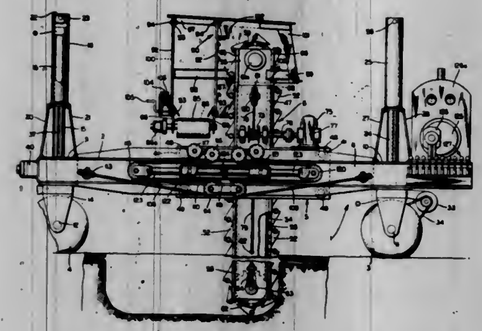
1. In a tractor-scraper combination wherein the scraper has a bowl supported by rearwardly disposed wheels, and draft arms pivoted to opposite sides of the bowl and extending forwardly to a draft assembly and hitch on the tractor whereby the bowl may be raised and lowered by pivotal movement about the axis of said wheels and upon pivotal movement of the draft arms relative to the bowl, and wherein an apron is pivoted to the bowl for swinging movement in a vertical plane to open and close the forward end of the bowl, the improvement which comprises means rigidly connecting the apron to the draft assembly whereby upon removal of the draft arms the bowl can be raised and lowered about the axis of the wheels and upon pivotal movement of the apron relative to the bowl.

3,015,174
MOTOR GRADER
Frank E. Zielinski, 2926 S. 48th Court, Cicero 50, Ill.
Filed Oct. 17, 1958, Ser. No. 767,837
3 Claims. (Cl. 37—156)



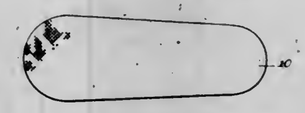
1. In a motor grader, the combination of a wheeled chassis having an upwardly offset and forwardly projecting cantilevered crane arm, a push-pull frame disposed below said crane arm and directly pivoted at its rear end to said chassis for raising and lowering movement only, a forwardly extending shaft secured to the front end of said push-pull frame, a tubular sleeve rotatably positioned on said shaft, means on the shaft preventing longitudinal movement of said sleeve, a first turntable member secured to said sleeve for tilting movement about the axis of said shaft, a second turntable member rotatably connected to the first turntable member for turning movement about an axis perpendicular to said shaft, a scraper blade carried by said second turntable member, a releasable means for locking said second turntable member against rotation relative to the first turntable member, and a pair of hydraulic cylinders mounted at opposite sides of the front end portion of said crane arm, said cylinders including piston rods operatively connected to opposite side portions of said first turntable member whereby to selectively tilt the latter about the axis of said shaft and raise and lower the same about the pivotal connection of said push-pull frame to said chassis and a valve in the driver's compartment of the motor grader for controlling said cylinders.

3,015,175
EXCAVATOR
Robert D. Smith, 1339 Oak St. NW., New Philadelphia, Ohio
Filed July 10, 1959, Ser. No. 826,357
1 Claim. (Cl. 37—192)



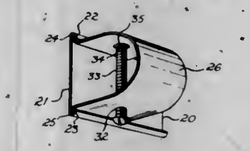
An excavator including a rectangular frame mounted on a pair of low pressure pneumatic tires at each end of the frame, each pair of tires being fixedly mounted on an axle, a yoke journally mounting the ends of each axle, a vertical shaft secured to and extending upwardly from the yoke through an end portion of the frame, a hydraulic cylinder vertically mounted on each end of the frame, the upper end of each shaft having a piston end portion, each shaft extending through the end portion of the frame and into the corresponding hydraulic cylinder, a shaft turning gear mounted in each end portion of the frame and slidably mounted on each shaft, the shaft and turning gear having corresponding key and keyway members, each shaft turning gear being independently operable by a hydraulic motor, a hydraulic traction motor operatively connected to each axle for rotating each pair of tires, each hydraulic traction motor being independently operable, a carriage mounted on the frame, reversible means for moving the carriage and for holding the carriage at a stationary position on the frame, an elongated upright excavator frame mounted for vertical movement on the carriage, a series of spaced excavator buckets mounted on the frame for continuous movement thereon, conveyor belt means for receiving excavated soil from the excavator buckets, and said conveyor belt means being tiltably mounted at the upper end of the excavator frame, whereby excavated soil can be conveyed to either side of the excavator.

3,015,176
SMOOTH SURFACE PRESS PLATE
David A. Freeman, Drake Hotel, 140 E. Walton Place, Chicago, Ill.
Filed May 1, 1956, Ser. No. 581,900
2 Claims. (Cl. 38—66)



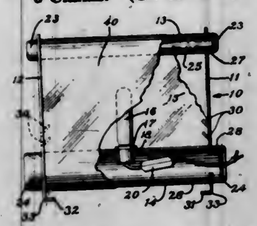
1. A press plate comprising a metal plate having a smooth pressing surface, said metal plate having a large number of small apertures extending therethrough, said apertures being disposed generally uniformly over substantially the entire surface of said plate and being so small and numerous as to have negligible effect upon the pressing surface of said plate and thereby have substantially no visible effect upon a fabric having a surface sheen, said press plate having a surface which is resistant to corrosion, steam and heat, has substantial mechanical strength, and has a surface covering of a plastic.

3,015,177
ADVERTISING DISPLAY ASSEMBLIES
Alfred E. Hembd and Paul E. Hembd, Arlington Heights, Ill. (both of 7738 N. Austin Ave., Skokie, Ill.)
Filed Apr. 15, 1960, Ser. No. 22,563
1 Claim. (Cl. 40—10)



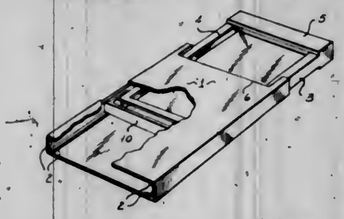
An assembly for exhibiting a display card for use with a price channel having a central body bordered by two parallel inwardly curved edge flanges defining inwardly open opposite parallel grooves comprising; a resilient metal band formed into a bracket of substantially U-shape, said legs having at their ends parallel outwardly turned foot flanges bent into a direction fitting in the parallel grooves of the price channel, said bracket having its legs biased apart by spring action into initial engagement in the grooves of the price channel, one of said legs having a threaded bore therein and the other of said legs having a socket positioned in the inside thereof in vertical alignment with said threaded bore, said bore and said socket being positioned close to but spaced from said foot flanges; an elongated screw bolt having a head, threaded shank and rounded end, said shank being threaded into said bore and the rounded end of said bolt engaging said socket, said bolt extending across the U-bend of said legs and acting transversely to said legs to force said legs apart and force said foot flanges into fixed engagement with the grooves in the price channel and effecting a firm securement of said bracket to the price channel so that said bracket cannot be dislodged except by releasing the pressure exerted on said bracket by said bolt; and means secured to said bracket provided with means for holding a display card.

3,015,178
ADVERTISING DISPLAY
Edward A. Rutkowski, 3077 W. 32nd St., Cleveland 13, Ohio
Filed Oct. 16, 1958, Ser. No. 767,637
6 Claims. (Cl. 40—132)



5. An advertising display comprising, first and second thin upright panels, each of the panels having first and second vertically spaced circular apertures formed therein, first and second sign supporting tubes, each of said tubes including first and second end caps, each of the tubes also including first and second reduced diameter end portions, the first tube ends sized to telescope snugly into said panel first apertures, said second tube ends being sized to telescope snugly into said panel second apertures, said tube ends also being sized to snugly receive and retain one of the end caps, said tubes and panels together forming a dismantleable frame when the first tube ends are positioned in the first panel apertures and the second tube ends are positioned in the second apertures and the end caps are positioned on the tube ends, said panels including feet means to support the frame with the tubes vertically spaced, said panels also having cut out tabs bent when the frame is assembled to extend into the interior of the frame to provide ventilating louvers, a translucent flexible display sheet having a pressure sensitive adhesive at at least one end thereof for removable connection, the sheet being sized to wrap around said tubes and fill the space between said uprights when the device is assembled, the first tube being larger than the second tube and being positioned below the second tube when the device is assembled, a light bulb, a light socket to receive the bulb, flasher means connected to said socket to provide pulsating electrical impulses to said socket and bulb, said first tube having a socket receiving aperture formed therein, the socket being mounted in said aperture, said panels each having a longitudinally extending folding groove formed therein, and said second tube, said sheet, said bulb, said socket, said flasher and said panels when bent along said fold being simultaneously disposable within said first tube for storage and mailing.

3,015,179
PICTURE CONTAINER
Gerard Muller, Bethel, Conn., assignor to Cartier, Inc., New York, N.Y., a corporation of New York
Filed Aug. 12, 1960, Ser. No. 49,197
2 Claims. (Cl. 40—152.1)



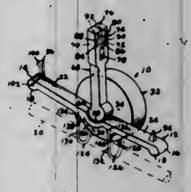
1. A picture container comprising an outer casing open at its forward end and closed at its rear end, a picture slide frame movable through the open end of said casing after the manner of a drawer from a closed position within the casing to an exposed position exteriorly of the casing, a follower pivoted to the inner end of the slide and movable therewith, and stop means on the follower and casing for precluding inadvertent separation of the slide frame and casing.

3,015,180
FLOUNDER GIG
Jessie O. McClure, 881 Phillips Lane, Mobile, Ala.
Filed Aug. 10, 1960, Ser. No. 48,593
3 Claims. (Cl. 43—6)



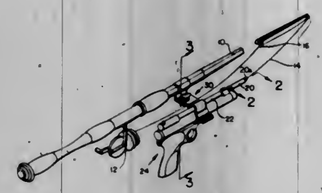
1. A flounder gig comprising, in combination, a bracket, a spear adjustably supported upon one end of said bracket, a lever pivotally carried upon an opposite end of said bracket, said lever being supported for pivotal movement within a single plane lying normal to the longitudinal axis of said spear, a platform at one end of said lever movable into the path of movement of said spear, a latch at the opposite end of said lever for controlling the position of said platform relative to said spear, said bracket comprising a pair of plates, said plates being secured together centrally intermediate the opposite ends thereof, a thumb screw carried by one end of said plates for clamping said spear in an adjusted position therebetween, and said spear comprising an elongated shaft having a handle at one end with a piercing point at the opposite end in the vicinity of said platform.

3,015,181
FISHHOOK SETTING DEVICE
Edward P. O'Donnell, Shawnee, Okla., assignor to Ralph C. Rich, Shawnee, Okla.
Filed Nov. 25, 1959, Ser. No. 855,444
3 Claims. (Cl. 43—15)



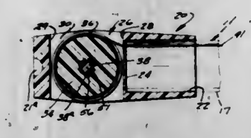
1. A fishhook setting device for a fishing rod shaft, comprising: a longitudinally elongated base bar having forward and rearward ends; a vertical cup-shaped housing fixed to one side of the base bar at the middle thereof, said housing having a bottom wall and a side wall defining an open side of the housing; a combination cover and bearing removably engaged in the open side of the housing, said combination cover and bearing comprising a vertical web spaced from the housing bottom wall and an axial boss having a bearing socket; a stub-shaft having an outer end engaged in the socket of said boss, said bottom wall having an axial journal opening through which said shaft extends; an enlarged head on the end of said shaft remote from its end within the socket, said enlarged head bearing against the exposed side of the housing bottom wall; a radial fishhook setting arm fixed at one end to said enlarged head and having a free end; resilient fishing line clamping jaws formed on the free end of said setting arm; said base bar having an upstanding clamping jaw spreading cam adjacent its rearward end for engagement between and spreading the clamping jaws apart as the setting arm is forcibly rotated from a forward cocked position along the base bar to a rearward position along the base bar, for releasing a fishing line clamped between the jaws; spring means anchored within said housing and connected to said shaft, forward rotation of said setting arm acting to tension said spring means for rotating said setting arm to its rearward position, said setting arm having a lateral trigger detent near its free end; and a trigger pivotally mounted on the base bar adjacent the forward end of the latter for retaining engagement with the trigger detent to hold said setting arm in its forward position, said trigger having an eccentric portion adapted for engagement with a fishing hook equipped part of a fishing line extending from said clamping jaws, whereby pull of a caught fish on the fishing line part pivots said trigger out of engagement with said detent to release the setting arm for rotation rearwardly by said spring means to set the hook in the fish, in advance of release of the fishing line from said clamping jaws by the engagement of said cam therebetween; fishing rod shaft engaging fulcrum means depending from the medial portion of said base bar, the free ends of said base bar having arcuate depending bumper portions normally spaced upwardly from a fishing rod shaft on which said base bar is adapted to be mounted to enable said base bar to rock endwise on the fishing rod shaft and dampen the force applied to the base bar by the rearward rotation of the setting arm; and resilient spring clamp means fixed on the medial portion of said base bar for encircling a rod shaft and attaching said device on the upper side thereof.

3,015,182
POWER CASTING DEVICE
Kenneth W. Tuttle and Paul Gammill, Jr., Santa Cruz, Calif., assignors of one-fifth to Robert H. Darrow, Santa Cruz, Calif.
Filed Sept. 2, 1958, Ser. No. 758,453
1 Claim. (Cl. 43—19)



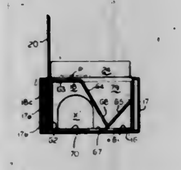
A power casting device associated with a fishing pole and line which comprises a generally cup-shaped projectile adapted for connection to the free end of the fishing line, a gas-propellant gun having a muzzle arranged to releasably mount said projectile, and bracket means mounting said gun on the fishing pole for pivotal adjustment about an axis substantially perpendicular to the longitudinal axis of the fishing pole to thereby enable adjustment of the gun muzzle direction relative to that of the fishing pole.

3,015,183
FISHING LINE RESERVOIR
Albert J. Nowakowski, Toledo, Ohio, assignor to The Still Fish Reel Company, a partnership
Filed May 27, 1959, Ser. No. 816,311
2 Claims. (Cl. 43—20)



1. A fishing line reservoir accessory for a fishing pole having an axial passageway for said line to extend from one end to the other end of said pole, said accessory comprising, (1) a one-piece, molded, plastic shell formed with an axial bore in one end thereof to receive said pole and with a relatively thin rectangular aperture therethrough at the rear of said bore, said shell having an integrally formed, recessed, transverse wall separating the foreward axial bore from the relatively thin rectangular aperture, said bore snugly but slidably receiving the rear end of said pole in abutting relationship with said wall, said aperture extending from one side of said shell to the other side in normal relationship to the axis of said shell, said wall containing a hole connecting said axial bore and said rectangular aperture, (2) a relatively thin, circular, molded plastic reel element having a diameter not greater than the diameter of said shell proximate said aperture, said reel element being snugly but easily rotatably received in said aperture and including a continuous peripheral recess for a supply of line wound therein, (3) a plastic shaft means rotatably mounted in said shell centrally located and normal to said aperture, said shaft engaging and carrying said reel element, one end of said shaft protruding slightly from said shell, and (4) an L-shaped handle engaging said protruding end of said shaft for rotating said reel to wind up line extending through said pole passageway and through said hole in said wall.

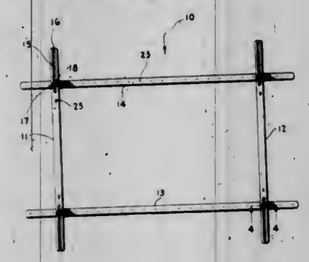
3,015,184
BAIT BOX
Wellington W. Scott and Joseph P. Irvine, Waukegan, Ill., assignors to Arwell Inc., Waukegan, Ill., a corporation of Illinois
Filed Apr. 14, 1958, Ser. No. 728,370
5 Claims. (Cl. 43—131)



1. A disposable rodent feeder comprising a generally box-shaped receptacle and a hopper in said receptacle for gravitationally dispensing particulated rodenticidal composition, said receptacle including a bottom portion, parallel opposed side and end walls and a cover member, said hopper being formed from a unitary blank and having a base engaging the bottom of said receptacle, a wall engaging one wall of said receptacle, a section extending from said wall in spaced parallel relationship to said base, a downwardly inclined section and an upwardly inclined section engaging another wall of said receptacle to provide a V-construction, said downwardly inclined section

having a recess for feeding the particulated matter to said base and said receptacle having entrance openings below said spaced parallel section in back of said V-shaped construction, said receptacle having a double ply front wall with the inner ply defining a plurality of slots, said V-shaped construction having a bipartite formation affording spaced dispensing hopper elements with inner and outer end walls for each of the V-shaped hopper elements, the inner end walls thereof carrying tabs engaging in said slots in said inner ply wall to rigidify the receptacle structure.

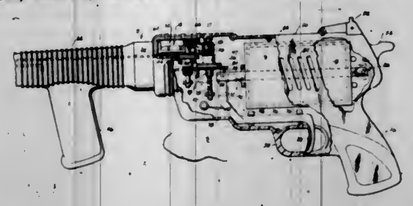
3,015,185
ADJUSTABLE DRYING RACK
Hideo Okunami, 12744 S. Ada St., Chicago, Ill.
Filed Jan. 26, 1959, Ser. No. 788,877
2 Claims. (Cl. 45—24)



1. An adjustable and collapsible drying rack comprising a substantially rectangular frame formed of two pairs of bars, the ends of one pair of said bars being provided with slots for receiving releasable fasteners connectable to the second pair of said bars to permit selective adustment toward and away from each other of the bars comprising the second pair of bars and to enable said frame to be collapsed, a plurality of depending, evenly spaced retaining members anchored in each of said second pair of bars, each of said retaining members in one bar of said second pair of bars being directly opposite a retaining member in the other bar of said second pair of bars thereby forming pairs of said retaining members in spaced relation to one another along the length of said second pair of bars, said retaining members having the shape of hooks the curvilinear portion of each of which lies along the longitudinal axis of the bar in which the said retaining member is anchored, said curvilinear portion of each of said retaining members being adapted to permit ready attachment and detachment of one end of an article to be suspended therefrom for drying and still prevent involuntary dislodgement of the said attached end of said article while drying, and at least two restrictively curved open-end members anchored in the upper portion of each bar of at least one pair of said bars for engaging supporting means for said rack.

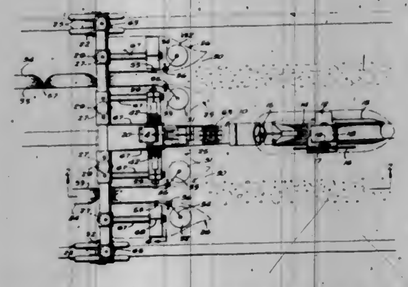
3,015,186
TOY MACHINE GUN
Calvin S. Cook, Erie, Pa., assignor to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Filed Apr. 1, 1960, Ser. No. 19,223
16 Claims. (Cl. 46—175)

1. A toy gun comprising a gun body simulating an automatic clip gun with a magazine slide movable transversely of the gun, noise making means including a hammer, a main spring urging said slide to one end of its travel, gear teeth on said slide forming a rack, a pinion meshing with said rack, a toothed wheel driven by said pinion, said wheel serving to reciprocate the hammer, and a trigger having a part which normally stops rotation of the toothed wheel, whereby the gun may be fired in bursts, said main



spring being energized by moving said slide against the force of said spring.

3,015,187
SUGARCANE TYING MACHINE
Tobias Grether, Rte. 2, Box 182A, Camarillo, Calif.
Filed Aug. 1, 1960, Ser. No. 46,422
9 Claims. (Cl. 47—1)



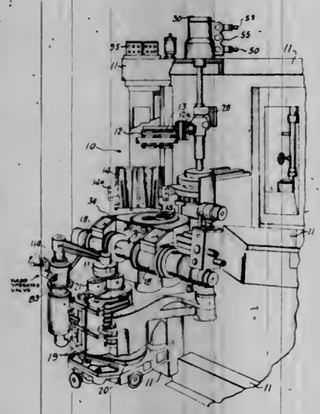
1. A machine for tying vegetation that is in a row comprising a carriage movable lengthwise of the row, means on the carriage for bringing two opposed flexible elements on opposite sides of the row into close proximity with each other at spaced intervals along the length of the row as the carriage proceeds along the row, and fastening means on the carriage for fastening the flexible elements together while they are held in close proximity to each other.

3,015,188
MULCHING MACHINES
Walter J. Reinecker, North Plainfield, N.J. (1231 Martine Ave., Plainfield, N.J.), and David J. Westergard, Tuttle Road, Watchung, N.J.
Filed Sept. 8, 1959, Ser. No. 838,707
16 Claims. (Cl. 47—9)



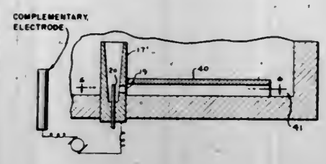
1. In a machine of the class described, the combination with an engine having an extended drive shaft of coaxially-driven components which include an array of beater members of link chain formation, the links of which tend to assume centrifugally held radial directions while revoling about said shaft, yet would be displaced by relatively heavy foreign objects if encountered in a mulching process, a hopper-and-drum housing for receiving mulch material to be thrashed by said beater members, said housing being suitably orificed on its under-side to provide scavenging of said foreign objects and ejection thereof, a pneumatic conveying system having fan blades mounted for rotation on said shaft, and a turret-supported discharge spout through which said mulch material may be expelled when carried into the air stream of said conveying system.

3,015,189
SELECTIVE CONTROL APPARATUS FOR AUTOMATIC GLASS FORMING MACHINE
Russell G. Allen, Boynton Beach, Fla., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Dec. 2, 1957, Ser. No. 700,131
7 Claims. (Cl. 49—19)



1. In a control device for automatic glass forming machinery, the latter having a multiplicity of operating heads, said control having a central timing drum influencing a plurality of timing valves on each said machine head to successively actuate in an automatically controlled and planned sequence the operating machinery elements of each said head for performing glass forming operations, the timing valves for each head being interposed in fluid connections extending between a fluid pressure source and a corresponding fluid motor control for a fluid motor connected to operate individual machinery elements on that machine head, the improvement in said control for selectively removing a machine head individually from automatic sequence to retain the operating machinery elements thereof in an inactive status, said improvement comprising a pilot operated valve for each machine head, said valve including a body, a plurality of valve chambers in said body, each chamber including inlet and outlet ports, said valve being interposed in said fluid connections and between the timing valves and the motor controls, each said fluid connection entering a valve chamber at its inlet port and exiting at its corresponding outlet port, a valve spool in each valve chamber, means operatively connected with each valve spool for normally setting it to connect the said inlet and outlet ports of its valve chamber and shiftable alternatively to disconnect the inlet and outlet ports of its valve chamber and break the said fluid connection therethrough, and means operatively connected to the valve spools and operable, at will, for collectively shifting said spools and disconnecting each said fluid connection through their respective valve chamber, whereby the machinery elements of that machine head are rendered inactive.

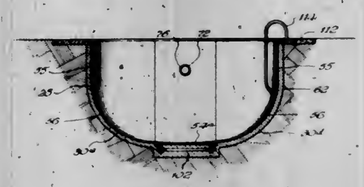
3,015,190
APPARATUS AND METHOD FOR CIRCULATING MOLTEN GLASS
Pierre Arbeit, Paris, France, assignor to Societe Compagnie de Saint-Gobain, Paris, France
Filed Oct. 8, 1953, Ser. No. 384,888
Claims priority, application France Oct. 13, 1952
12 Claims. (Cl. 49—54)



1. A glass furnace comprising an upwardly extending conduit immersed in molten glass in the furnace, port means in said conduit within the furnace to admit said molten glass to the conduit at a lower level, a feeder conduit within the furnace connected to the port means, outlet means in the conduit within the furnace to discharge the molten glass at an upper level, gas admission means opening into said conduit, and means to supply said admission means with gas.

6. The method of generating continuous currents in a pool of molten glass, that comprises forming within said pool of molten glass, and mainly beneath the normal upper surface thereof an upwardly extending column of molten glass isolated from the remainder of the glass in the pool which communicates with the remainder of said pool only at different levels, said isolated column being laterally extended at the lower of said levels, and circulating the glass in said pool by insufflating the said column with a gas.

3,015,191
SWIMMING POOL AND METHOD FOR ERECTING SAME
Leo Lucchesi, Chicago, Ill.
Filed Dec. 27, 1956, Ser. No. 630,844
6 Claims. (Cl. 50—100)

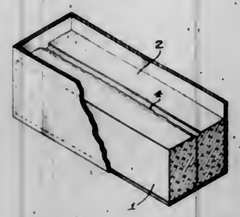


1. A prefabricated swimming pool adapted to be assembled in an excavation, comprising, in combination, a plurality of straight and curved wall members constructed of low strength material and disposed rigidly in relation to each other to form an open bottom enclosure, some of the straight and curved wall members oppositely disposed to each other being shorter than the others, said shorter straight and curved wall members sloping downward and inward toward each other with their edge portions defining an opening therebetween in the bottom of said enclosure, said edge portions having depressed extensions which cooperatively define a bezel, means for maintaining oppositely disposed extensions in a predetermined rigid relation to each other, and a detachable means supported by the depressed extensions and cooperatively defining with the bezel a fluid-tight bottom enclosure to provide access underneath the pool.

3,015,192
BRICK PACKAGE AND METHOD OF MAKING SAME

Owen M. Jones, Seattle, Wash., assignor to Vermiculite Manufacturing Co., Seattle, Wash., a corporation of Washington

Filed Apr. 4, 1955, Ser. No. 499,842
2 Claims. (Cl. 50—103)

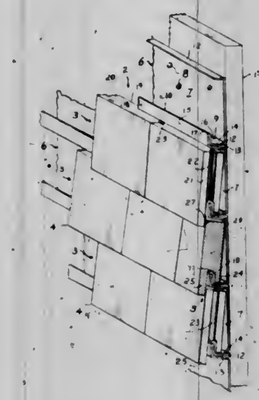


2. A brick package comprising two bricks incorporating heat-expanded micaceous material aggregate and having complemental fractured faces revealing fractured surfaces of such micaceous material, and box means holding said bricks together in immobile relationship with their complemental fractured faces in intimate, contiguous, matching engagement.

3,015,193
SHINGLED TILE BLOCK VENEER WALL

Joseph Amoruso, 140—49 Quincy Ave., Flushing, N.Y.

Filed Oct. 30, 1958, Ser. No. 770,859
1 Claim. (Cl. 50—246)

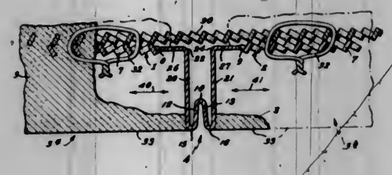


In a tile block and tile block holding unit assembly, a tile block holding unit comprising a vertical back panel adapted to be fastened to a vertical supporting wall, a horizontal shelf coextensive with and extending forwardly from the bottom end of the back panel, the shelf comprising a pair of panels one disposed below the other, the upper of which being integral at its rear end with the back panel, and the lower of which having a forward end unitary with and defining an upstanding lip with a forward end of the upper panel and having its rear end free of the said upper panel, and a tongue panel extending forwardly from the upper end of the back panel adapted to be inserted rearwardly between the upper and underlying panels of a shelf of a similar unit disposed next above; and a tile block received in the holding unit having parallel front and rear faces, a level top face, and a recess extending longitudinally of the bottom end of the block whereby a pair of legs are defined, one spaced by the recess forwardly of the other, the forward leg having a depending dimension substantially twice that of the rear leg, the block having an inclined position in the holding unit wherein the upper rear edge of the block abuts the back panel in close proximity to the upper end of the latter, the lip of the holding unit is freely received in the recess, the rear leg stands upon the upper panel of the shelf adjacent the lip, and the forward leg depends in front of the lip and substantially below the lower panel of the shelf.

3,015,194
BUILDING CONSTRUCTION AND EXPANSION JOINT THEREFOR

Raymond C. Clark, Atherton, Calif., assignor to Penn Metal Company, Inc., Boston, Mass., a corporation of Delaware

Filed June 6, 1955, Ser. No. 513,466
9 Claims. (Cl. 50—346)

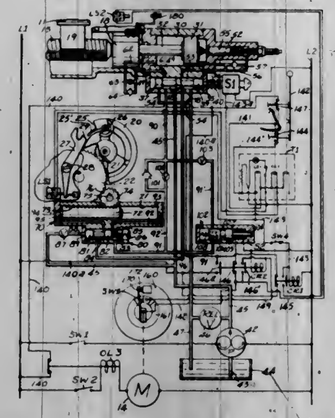


2. In a wall construction, an expansion joint located between and separating a pair of planar sections of plaster mounted on a lathing, said joint comprising an elongated integral strip of resilient sheet material, said strip comprising a pair of spaced, substantially flat inner pleat elements having first end portions closer to the plane of said lathing and opposite end portions further away from the plane of said lathing, an intermediate portion of said strip joining said first end portions along the length of said strip, a pair of outer pleat elements having first end portions closer to the plane of said lathing and opposite end portions further away from the plane of said lathing, said outer pleat elements being spaced outwardly from said inner pleat elements and joined at their said opposite end portions to the said opposite end portions of said inner pleat elements to define a pair of folds along the length of said strip, said intermediate portion being substantially symmetrical about the longitudinal center line thereof, said folds each being spaced substantially equidistantly from the longitudinal center line of said intermediate portion joining said first end portions of the inner pleat elements and a flange extending outwardly from said first end portion of each of said outer pleat elements and defining with said outer pleat element a bend extending along the length of said strip, said folds each being substantially equi-distant from a plane which extends through the longitudinal center line of said intermediate portion joining said first end portions of said inner pleat elements and is perpendicular to the plane through said first end portions of said outer pleat elements, said bends each being substantially equi-distant from said perpendicular plane, the edges of said sections of plaster engaging the outer surfaces of said outer pleat elements and means attaching said flanges to said lathing to provide movement of each flange with its respective plaster section in the direction of the plane of said plaster sections in response to expansion and contraction of said sections in said last mentioned direction, the portions of said lathing to which said flanges are attached being movable in said last mentioned direction relative to each other in response to said expansion and contraction.

3,015,195
TORQUE RESPONSIVE CONTROL FOR A DRIVEN MEANS

William R. Backer, Holden, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Feb. 18, 1960, Ser. No. 9,502
3 Claims. (Cl. 51—165)

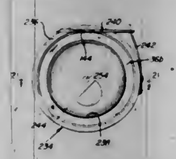


1. A drive system having drive means operable at a variable load level up to a predetermined maximum load, a first driven means, and torque responsive means for interconnecting said drive means and said first driven means, said system including at least one rotatable member, said rotatable member including at least two relatively movable parts, biasing means tending to hold said parts in a first relative position when the torque developed in the rotatable member of the system is of a relatively low value within a predetermined limit at a first relatively lower intermediate load level but being yieldable to accommodate relative movement of said parts to a second relative position when the torque developed attains a higher value above the predetermined limit, a second reversible driven means, and control means responsive to the initial change from the first relative position to the second relative position of said parts to establish a modified operation of a second driven means in the same direction, reversing means actuated at a second relatively higher intermediate load level and operable to reverse the direction of operation of said second driven means, and connecting means operable to bypass said reversing means actuated by operation of said control means.

3,015,196
METHOD OF MAKING SPECTACLE LENSES

David L. Campbell, Reno, Nev.
(318 SW. Washington St., Portland 4, Oreg.)

Filed Dec. 7, 1959, Ser. No. 857,677
16 Claims. (Cl. 51—284)

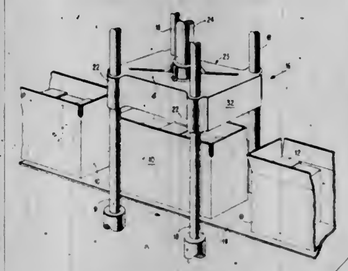


1. In a method of producing a prescription spectacle lens from a spectacle lens blank, the steps which comprise, initially shaping the edge of said lens blank to provide a predetermined periphery on said blank including an index portion having a predetermined relation to selected characteristics of said prescription lens, positioning and holding said blank by said periphery, and shaping a face of said blank to produce a prescription lens surface on said face while thus holding said blank.

3,015,197
CARTON SLITTER AND FORMING MACHINE

Robert N. Eichorn, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 15, 1960, Ser. No. 43,088
7 Claims. (Cl. 53—208)

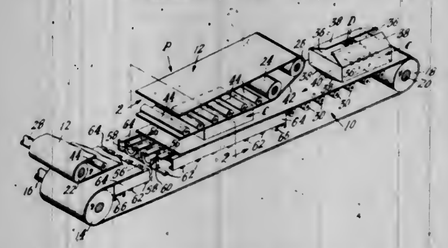


1. In a carton slitting and forming machine for slitting and creasing the flaps of a carton to the height of the articles in a carton comprising a punch assembly, a die assembly, means for lowering the punch and die assemblies together until the punch assembly engages the articles in the carton to establish the depth of the slit and position for creasing, the punch assembly including an expandable forming block and slitting knife assembly, means for expanding the forming block and slitting knife assembly, the die assembly having a creasing frame against which the flaps of the carton are creased by the expandable forming block to the height of the articles in the carton, the slitting knives simultaneously slitting the corners of the flaps to a depth equal to height of the articles in the carton.

3,015,198
MACHINE FOR SEALING CARTONS

Joseph Christian Becker, Lake Bluff, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 26, 1959, Ser. No. 795,741
2 Claims. (Cl. 53—387)



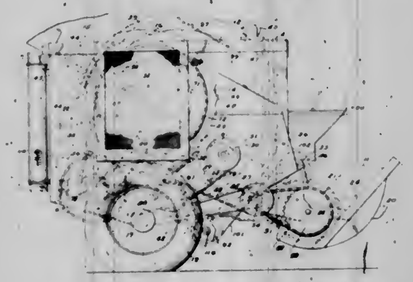
1. Means for adhesively sealing the bottom end of a rectangular fibrous carton filled with upright sheet metal cans of less height than the depth of the carton, comprising a pair of horizontal endless belts disposed in vertically spaced relation for compressing and advancing therebetween a closed carton having inwardly folded outer and inner side and end flaps at its top and bottom ends disposed in overlapping relation with certain of the flaps on

the carton bottom bearing a freshly applied adhesive, back-up means for engaging and yieldably urging the lower flight of the upper belt downwardly against the top surface of said carton to press the latter against the upper flight of the lower belt to maintain all of the carton flaps in closed position, and a plurality of fixed parallel magnetic pole piece strips having magnets for magnetizing the same disposed between the flights of said lower belt for backing up and rigidly supporting the upper flight thereof, said pole pieces exerting magnetic attraction through said upper belt flight upon the can bottoms to urge the cans downwardly with the inner bottom carton flaps to force such flaps against the outer bottom carton flaps to facilitate sealing together of said bottom flaps by and during the setting of said adhesive.

3,015,199
MACHINE FOR COMPRESSING HAY INTO CAKES

Charles E. McKeon, Birmingham, and Clarence B. Richey, Royal Oak, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed Apr. 8, 1959, Ser. No. 804,988
12 Claims. (Cl. 56—1)



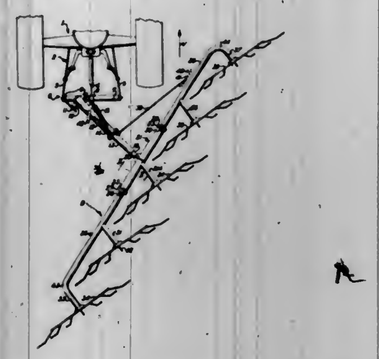
1. In a field pickup hay pelleter, an outer pelleting wheel mounted for rotation on a fixed, generally horizontal axis extending generally transversely to the direction of movement of the pelleter across a field, said outer wheel having a circular rim portion and a pair of radially, inwardly extending side flanges lying in spaced, parallel planes, the rim portion having a smooth, generally cylindrical inner surface extending between the side flanges, an inner pelleting wheel lying in the plane of and inside the outer wheel, mounted for rotation on an axis oscillatable towards the rim portion of the outer wheel and having a rim portion adapted to fit closely between the flanges of the outer wheel, the inner wheel having a peripheral surface confronting the cylindrical surface of the outer wheel and provided with a series of adjacent pockets separated by wedge-like, axially extending portions, the inner wheel being biased toward the outer wheel at a fixed pelleting zone, means for driving both pelleting wheels at substantially the same peripheral velocity, means for picking up a windrow of hay, and means for feeding the hay axially of the wheels into the space between the inner and outer wheels in advance of the pelleting zone.

3,015,200
SIDE-DELIVERY RAKES

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a company of the Netherlands

Filed Mar. 18, 1958, Ser. No. 722,326
Claims priority, application Netherlands Mar. 25, 1957
5 Claims. (Cl. 56—377)

1. Apparatus for displacing material lying on the ground comprising draw means, three frame sections, at least one rake wheel on each section, means connecting said sections together in fixed relation with said rake wheels operatively related for displacing said material, and means on said draw means coupling said sections thereto, said sections being adapted for connection in



end-to-end relation whereby there are two end and one central section, said apparatus being further adapted such that said end sections are connectable directly together in end-to-end relation to make the lateral extent of the apparatus narrower.

3,015,201
SIDE DELIVERY RAKE WITH REVERSIBLE RAKE WHEELS

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company of the Netherlands

Original application Oct. 15, 1953, Ser. No. 386,298, now Patent No. 2,861,412, dated Nov. 25, 1958. Divided and this application Nov. 21, 1958, Ser. No. 775,415
Claims priority, application Netherlands Oct. 17, 1952
5 Claims. (Cl. 56—377)

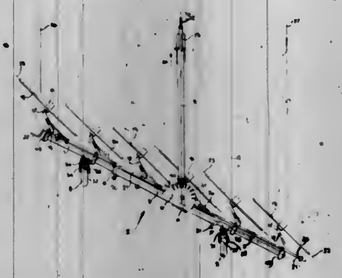


1. A side delivery rake having a line of draft and comprising a mobile frame, draft means pivotally and operatively associated with said frame and extending therefrom generally in the line of draft, at least one supporting wheel operatively associated with said frame for rotation in a plane substantially parallel to the line of draft, and at least two raking wheels operatively associated with said frame in overlapping relation, one of the raking wheels being generally ahead of the other and the other of said raking wheels including a leading portion in back of a portion of said one raking wheel for a side delivery operation, the raking wheels being detachably mounted on said frame whereby said raking wheels can be reversed for a tedding operation.

3,015,202
RUNNING WHEEL STRUCTURE FOR A RAKING DEVICE AND METHODS ASSOCIATED THEREWITH

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company

Original application Oct. 15, 1953, Ser. No. 386,298, now Patent No. 2,861,412, dated Nov. 25, 1958. Divided and this application Nov. 25, 1958, Ser. No. 776,330
Claims priority, application Netherlands Oct. 17, 1952
5 Claims. (Cl. 56—377)

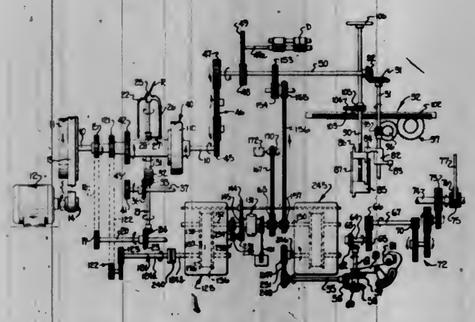


1. A side delivery rake for laterally displacing crop lying on the ground comprising a mobile frame, a plurality of rake wheels arranged in echelon on the frame and oblique to the direction of travel of the latter, the rake wheels being rotated by contact with the ground, two spaced running wheels pivotally mounted on the frame, each of which is adjustable in a horizontal plane, locking means on the frame for each running wheel whereby each running wheel can be locked in one of a plurality of positions relative to said frame, a draw arm pivotally connected to the frame, and means for adjustably locking said draw arm in one of a plurality of different positions relative to said frame.

3,015,203
TORQUE CONTROLLED STRAND TENSIONING SYSTEM AND METHOD

Oernulf E. Heiberg, Charlottesville, Va., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts

Filed Dec. 11, 1959, Ser. No. 859,047
47 Claims. (Cl. 57—93)

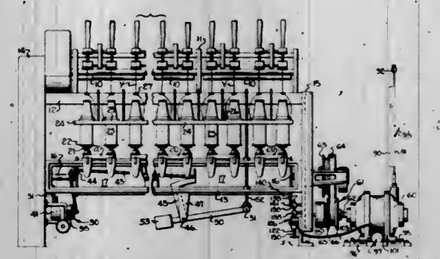


1. A method of controlling the winding speed in a roving frame having rotating flyers for traversing roving onto rotating bobbins which comprises sensing at least a measure of the torque between the flyers and the bobbins, and varying the relative speed between the flyers and the bobbins in response to variations in the torque so sensed.

3,015,204
SPEED CONTROL FOR SPINNING MACHINES AND THE LIKE

John R. Long, Hickory, N.C., assignor to Shuford Mills, Inc., Hickory, N.C., a corporation of North Carolina

Filed Dec. 22, 1959, Ser. No. 861,318
22 Claims. (Cl. 57—98)

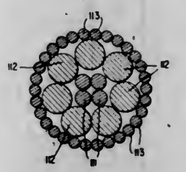


1. A textile machine having spindles and at least one ring rail, means for driving said spindles and continuously reciprocating said rail, fluid-pressure-operated means for regulating the speed of the spindles and the ring rail, a valve adapted to produce variation of pressure in said fluid-pressure-operated means, means controlling the rate, range and extent of pressure variation produced by said valve, means automatically operable at a predetermined interval relative to initiation of each movement of said rail in one direction for opening said valve and being automatically operable at a predetermined interval relative to initiation of movement of said rail in the opposite direction to close said valve, and means for adjusting said automatically operable means independently of said controlling means whereby the intervals at which the opening and closing of said valve occur may be determined independently of the rate, range and extent of speed variation effected by said valve and independently of the location of the ring rail.

3,015,205
AXIAL CARRIER STEEL CABLE WITH A PLURALITY OF WIRES FOR A SUBMARINE CABLE

Roger Massot and Ivan Pierre Eyraud, Lyon, France, assignors to Compagnie Generale d'Electricite, Paris, France

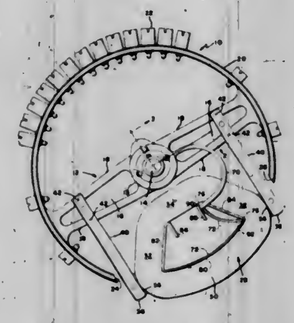
Filed Jan. 16, 1958, Ser. No. 709,257
14 Claims. (Cl. 57—148)



1. A central carrier cable of a plurality of helically wound wires and adapted to support thereon a submarine cable, comprising a first layer of a first predetermined number of helically wound wires each having a first diametric dimension, and at least a second layer of a second predetermined number of helically wound wires each of a second diametric dimension, the helix angle of all of said wires being the same and each wire being contiguous along the periphery thereof to at least two adjacent wires of the same layer, the wires of said first and second layers being wound in opposite directions, said cable providing uniform distribution of

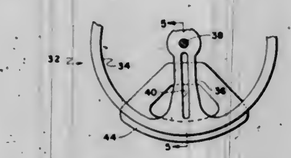
axial cable load on each of said wires at each transverse section of said cable and the sum at each said section of the couples due to said load on said wires being substantially zero whereby the forces tending to twist the cable due to the application of said load are minimized.

3,015,206
ELECTRIC WATCH
Harry S. Detwiler, Lancaster, James H. Reese, Manheim, and Peter J. Seriemitsos, Lancaster, Pa., assignors to The Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Dec. 19, 1958, Ser. No. 781,809
12 Claims. (Cl. 58—28)



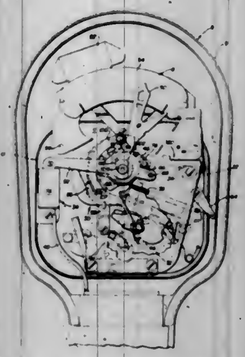
1. In a balance staff-mounted balance wheel and coil assembly for a battery operated electric watch, a balance wheel having a coil supported thereby, a support carried by said balance staff and having contact means thereon, a metallic core within said coil and connected to one terminal thereof, and a resilient connector electrically connecting said contact on said support means to said metal core, said resilient connector terminating in an end portion resiliently locked within said metal core to attach it thereto.

3,015,207
BALANCE WHEEL ASSEMBLY
Helmut Epperlein, Ersingen, near Pforzheim, Germany, assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Jan. 9, 1959, Ser. No. 785,843
2 Claims. (Cl. 58—28)



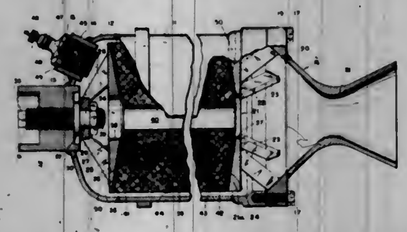
1. A balance wheel and coil assembly comprising a balance wheel having a cross-arm and rim and adapted to be mounted on a balance staff; said cross-arm including a portion having a thickness in the direction of the axis of said staff less than the maximum thickness of said rim in the same direction, said rim being provided with a radial slot in a section thereof, said section including the area where said cross-arm joins said rim, the thickness of said slotted section of said rim and said portion of said cross-arm being substantially equal; and a coil, said coil being received in said slot beneath said rim section and said cross-arm portion.

3,015,208
PARKING METER AND TIME RELEASE MECHANISM THEREFOR
Rollin A. Armer, Berkeley, Calif., assignor, by mesne assignments, to Calpat Products, Inc., a corporation of Nevada
Filed Dec. 8, 1958, Ser. No. 778,907
6 Claims. (Cl. 58—142)



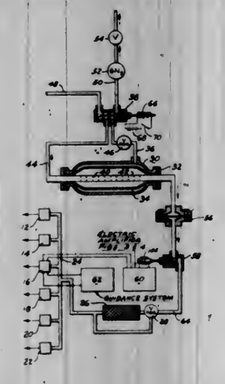
6. A parking meter and time release mechanism therefor comprising, a frame, a drive shaft, a time indicating pointer journalled for rotation concentrically of said shaft for movement between a first position indicating time on the meter and a second time expired position, spring means biasing said pointer to second position, coin controlled means moving said pointer to first position, a ratchet wheel mounted on and for rotation with said shaft, a pawl mounted for joint rotation with said pointer and in a circular orbit about said shaft and releasably engaged with said wheel, a lever pivotally mounted to said frame eccentrically of said shaft and having an actuating portion formed to engage and displace said pawl and being positioned adjacent to and generally conforming in outline to the circular orbit of travel of said pawl, and pneumatic means mounted on said frame and connected to move said lever when energized across said orbit for moving said pawl out of engagement with said ratchet wheel for releasing said pointer for movement to said second position.

3,015,209
MEANS FOR SUPPORTING A PROPELLANT CHARGE IN A ROCKET MOTOR
Richard D. Geckler, Pasadena, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Oct. 20, 1947, Ser. No. 780,965
9 Claims. (Cl. 60—35.6)



1. In combination with a reaction motor comprising a firing chamber and an exhaust nozzle attached to said firing chamber, a press plate secured to said nozzle by a plurality of vanes, a boss symmetrically disposed in the forward end of the firing chamber of said motor, said boss being provided with a threaded bore, an adjusting bolt threaded into said boss, said bolt being provided with a flange and a bearing surface adjoining said flange, a forward press plate, a plurality of vanes secured at one end to said forward press plate and at the other end to an annulus, the opening of said annulus being proportioned to fit snugly the bearing surface of said bolt, and means for securing said annulus on the bearing portion of said bolt.

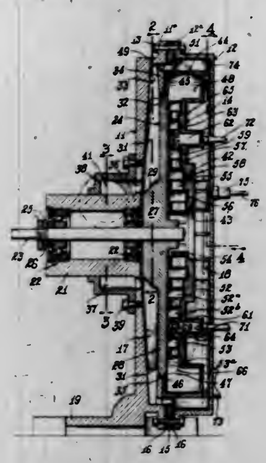
3,015,210
ATTITUDE CONTROL FOR HIGH ALTITUDE MISSILE
John R. Williamson and John R. Doussard, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,883
9 Claims. (Cl. 60—35.54)



1. An attitude control for an aircraft comprising a plurality of nozzles positioned to produce thrust forces for varying the attitude of said aircraft, a source of liquid propellant, means for converting said propellant into a gas having a high kinetic energy level, conduit means for distributing said gas to said nozzles, an electro-responsive device associated with each of said nozzles for controlling flow from the respective nozzles, an electrically actuated valve for controlling the flow of liquid propellant from said source to said converting means, an electrical amplification device including a switching amplifier operatively connected to said valve and means for receiving a plurality of electric input signals and plural supply means for selectively supplying a plurality of output signals so that each output signal selectively energizes one of said electro-responsive devices so that gas flows from its associated nozzle and also energizes said switching amplifier to increase liquid flow past said valve.

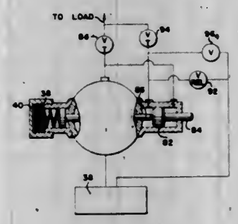
3,015,211
RADIAL TURBINE ENGINE
Earl B. Luttrell, Sandwich, Ill., assignor to Luttrell Engineering Corp., Sandwich, Ill., a corporation of Illinois
Filed Nov. 23, 1959, Ser. No. 854,924
11 Claims. (Cl. 60—39.36)

1. In a high compression supercharged internad combustion turbine engine, a housing having an axial air inlet, a shaft journalled in said housing, an impeller wheel rotatable with said shaft, a stator mounted in said housing and dividing it into an impeller chamber and a free flow air chamber, means on said impeller wheel for pressurizing air entering the air inlet and delivering it into a peripheral collection chamber during rotation of said impeller wheel, passageways in the housing to admit the pressurized air from the collection chamber into the free flow air chamber, an axial air passage in the stator connecting the free flow air chamber with the impeller wheel chamber, complemental means on the impeller wheel and on the stator to pressurize air entering said impeller wheel chamber and directing it in a radial direction, an annular



combustion chamber in said stator and into which the pressurized air is delivered, a fuel injector for delivering fuel to said combustion chamber, an ignitor operable to ignite the fuel-air mixture in said combustion chamber, radial circumferentially inclined nozzles through which high compression gases of combustion are discharged, and power turbine blades on the impeller wheel in the path of gases ejected through said nozzles.

3,015,212
PUMP CONTROL
Frederick G. Krafft, Springfield, and Walter Ernst, Dayton, Ohio, assignors to The Thompson Grinder Company, Springfield, Ohio
Original application June 26, 1957, Ser. No. 668,215, now Patent No. 2,921,439, dated Jan. 19, 1960. Divided and this application Dec. 31, 1959, Ser. No. 863,279
5 Claims. (Cl. 60—52)



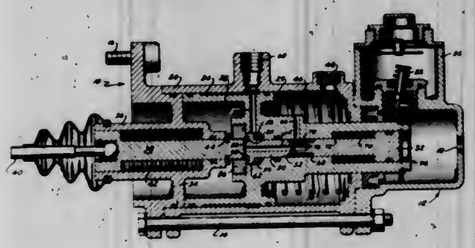
1. In a hydraulic circuit; a variable delivery pump having a shiftable flow control member, a hydraulic motor arranged in series with the pump to receive the entire discharge therefrom, a restrictor between the pump and the motor arranged to pass the entire discharge of the pump, a first fluid operable area pertaining to the flow control member responsive to fluid pressure for urging

the flow control member toward increased stroke position and connected with the downstream side of said restrictor, a second fluid operable area arranged in opposition to said first fluid operable area and connected with the upstream side of said restrictor, there being a choke valve in the connection between the downstream side of said restrictor and said first fluid operable means, and means leading from said connection between the choke valve and the first fluid operable area for exhausting said first fluid operable area.

3,015,213
AIR HYDRAULIC BRAKE ACTUATOR

Darold A. Augustin, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware

Filed Sept. 13, 1957, Ser. No. 683,827
7 Claims. (Cl. 60—54.6)



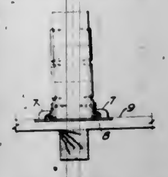
1. An air hydraulic actuator comprising a power cylinder having a piston therein dividing the cylinder into atmospheric and pressure chambers, said piston having a central bore therein, a hydraulic master cylinder positioned at one end of the power cylinder, a hollow sleeve connected with said piston and having an end positioned within the master cylinder, a reaction plunger within said sleeve and having one end thereof positioned in the master cylinder and responsive to master cylinder pressure, passage means in said piston for conducting compressed air to said central bore, means including a valve plunger slideably mounted within said bore and sleeve for controlling the application of compressed air from said bore to said pressure chamber and from the latter to the atmospheric chamber for causing power operation of said piston, sleeve and reaction plunger, said valve plunger having one end positioned adjacent the other end of said reaction plunger, a solid plunger slideably mounted in said power cylinder at the other end thereof and having one end thereof projecting into said bore and being normally spaced from the other end of the valve plunger and manually movable to engage and move the valve plunger, and resilient means for normally separating the adjacent ends of the reaction plunger and the valve control plunger and yieldable in response to a predetermined pressure in the master cylinder to allow said ends to contact each other to conduct the reaction force due to master cylinder pressure to the manually movable plunger.

3,015,214
BILGE BLOCK GEAR FOR DRY DOCKS

Christopher J. Foster, Sands Point, N.Y.
(44 Whitehall St., New York 4, N.Y.)

Filed July 26, 1957, Ser. No. 674,401
1 Claim. (Cl. 61—66)

In a dry dock a bilge block gear, said gear comprising a runner plate flush with the deck for the bilge block, two rows of clips defining the bilge block track by a lateral spacing substantially equal to the width of the block, a pair of angles attached to the lower portion of the bilge block and of a length engaging at all times two of the

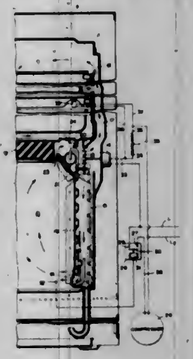


clips on each side of the bilge block, and hauling means attached to the lower portion of the bilge block.

3,015,215
HOME APPLIANCE

Raymond E. Tobey, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware

Filed July 22, 1959, Ser. No. 828,905
8 Claims. (Cl. 62—96)



3. Refrigerating apparatus, comprising: means forming a relatively low temperature first chamber; means forming a relatively high temperature second chamber; means forming a mixing chamber; means for circulating at a selected one of a plurality of volume rates of flow a first air stream in a substantially closed circuit including through the first chamber and a second air stream in a substantially closed circuit including through the second chamber; means directing both air streams through the mixing chamber, said first stream being at a volume rate of flow greater than the volume rate of flow of said second stream; means directing both air streams through the mixing chamber for intermingling therein; and means for cooling said first air stream only at a point downstream from said mixing chamber.

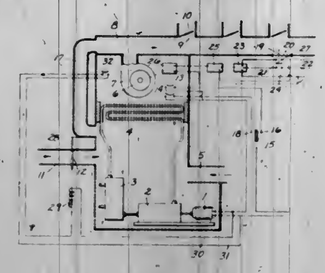
3,015,216
AIR CONDITIONING SYSTEM

Robert C. Coblentz, 1226 W. 9th St., Erie, Pa.

Filed Mar. 25, 1957, Ser. No. 648,307
14 Claims. (Cl. 62—180)

1. In an air conditioning system having a refrigerating unit supplying a cooling heat exchanger, an inlet for return air, an outlet to a room for cooled air, and a fan for drawing air from the inlet over the cooling heat exchanger and discharging cooled air to the room, the combination of thermostat means responsive to the temperature of the cooled air leaving the heat exchanger turning the unit on when the cooled air temperature rises and shutting the unit off when the cooled air temperature

drops, said thermostat means having a plurality of preset operating ranges of higher and lower temperatures, and

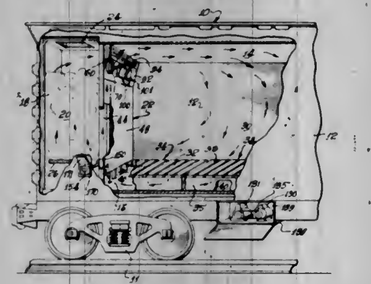


a room air thermostat for shifting the thermostat means to a lower temperature range as the room air temperature increases.

3,015,217
TEMPERATURE REGULATION FOR CARGO CARRIERS AND THE LIKE

Paul K. Beemer, Laguna Beach, and John W. Morris, Whittier, Calif., assignors to Preco Incorporated, Los Angeles, Calif., a corporation of California

Filed Nov. 21, 1958, Ser. No. 775,630
24 Claims. (Cl. 62—186)



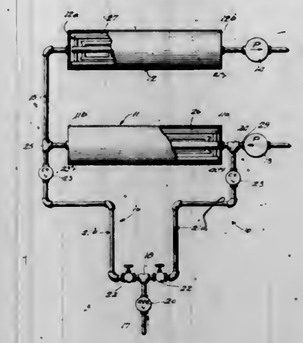
7. In combination with a refrigerator car or the like having an ice bunker and a lading compartment separated by a bulkhead, said bulkhead having an inner face and having a plurality of apertures spaced along the upper edge portion of its inner face, fan means adapted to deliver air streams through the respective apertures in the direction of the lading compartment, and structure forming an air baffle which adjoins the inner face of the bulkhead below the apertures and extends obliquely upward, the upper edge of the baffle being spaced from the car ceiling and forming therewith a passage for air flow into the body of the lading compartment along the car ceiling.

3,015,218
FREEZER APPARATUS

Alden H. Wakeman, Lake Mills, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois

Filed Jan. 23, 1958, Ser. No. 710,792
6 Claims. (Cl. 62—306)

6. A freezer apparatus for ice cream or a like product, comprising a pair of serially connected refrigerated chambers, pump means connected to the intake side of the first of said chambers for impelling the product in substantially one direction and at a substantially constant flow rate through said chambers, means at the outlet of the second of said chambers for maintaining a substantially constant product flow rate from said second chamber, air dilution means connected to the intake sides of both of said chambers for simultaneously introducing air into the product flowing through said pair of chambers,

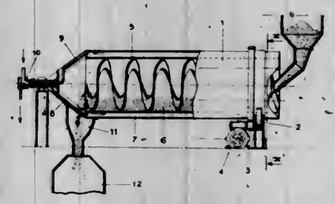


and control means in cooperative engagement with said air dilution means for automatically maintaining a constant rate of flow and pressure of the air simultaneously introduced into the intake sides of both chambers.

3,015,219
APPARATUS FOR COOLING GRANULAR MATERIAL

Charles Veyrie, La Garenne-Colombes, France, assignor to Compagnie Generale d'Electricite, Paris, France, a French corporation

Filed July 22, 1959, Ser. No. 828,782
Claims priority, application France July 22, 1958
2 Claims. (Cl. 62—381)



1. Apparatus for cooling particulate material comprising a rotatable double-walled cylinder having its axis mounted substantially horizontally, means for rotating said cylinder about its axis, the inner wall of said double-walled cylinder defining a chamber through which the material passes, helical conveyor blades within said chamber, means for feeding material to one end of said chamber, said means including a pneumatic conveyor device in which said material is partially cooled and an air separating means, means at the other end of said chamber for the withdrawal of the cooled material, the inner and outer walls of said double-walled cylinder defining therebetween an annular cooling chamber, and means for circulating a cooling medium into and out of said cooling chamber, said last-mentioned means including pipe means mounted to rotate with said double-walled cylinder, and a stationary connecting box in communication with said pipe means.

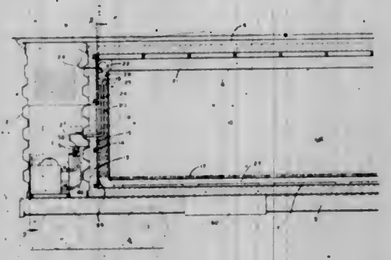
3,015,220
MECHANICALLY REFRIGERATED RAILWAY CAR

Thore M. Elfving, 433 Fairfax Ave., San Mateo, Calif.

Filed Nov. 25, 1955, Ser. No. 549,108
2 Claims. (Cl. 62—435)

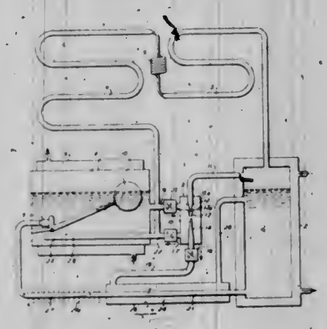
1. In a refrigerated railway car, the combination of a refrigerator car body of heat insulating construction, a

commodity accommodating compartment of substantially airtight construction spaced inwardly from the top, bottom, sides, and ends of the inner insulated surfaces of said car body and forming a substantially airtight envelope about which air may be circulated, the spacing between the top of said envelope being relatively greater than the spacing between the side walls of said envelope to form a plenum, fan means at one end of said plenum for maintaining a forced circulation of cold air thereinto and downwardly along the sides of said envelope, a reinforcing bulkhead extending transversely of said car body and providing a chamber for mechanical refrigeration producing apparatus externally thereof and within the



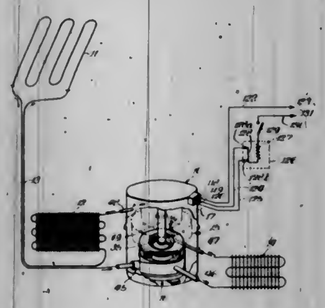
limits of the body, a circulating fluid heat exchanger unit located adjacent the inner side of said bulkhead and occupying the space between the end of said envelope and said bulkhead through which air will be circulated upwardly to said plenum by said fan means, said heat exchanger unit being so constructed and arranged as to form a direct impact resisting bulkhead at the end of said envelope, mechanical refrigeration producing means including a double pipe heat exchanger mounted in the chamber externally of said bulkhead and means for circulating a fluid medium through said first heat exchanger unit and said double pipe heat exchanger, whereby said circulating fluid medium will act to conduct the heat absorbed by said first heat exchanger to the double pipe heat exchanger of the refrigeration producing means.

3,015,221
PUMP IN ABSORPTION REFRIGERATION MACHINE
Frank M. Walker, 3825 NW. 28th St., Oklahoma City, Okla.
Filed Mar. 31, 1958, Ser. No. 725,421
4 Claims. (Cl. 62—487)



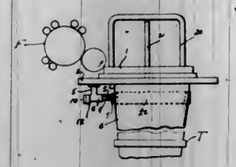
1. In an absorption type refrigeration system, the combination of: a generator having a vapor section and a liquid section, an absorber containing a partially saturated solution, said absorber having a pressure lower than the generator and having an upper end and a lower end, means forming a pump chamber having a first end and a second end, a solution supply conduit communicating with the first end of said pump chamber and the solution in the absorber above the lower end of the absorber to supply solution to said pump chamber, a check valve in said supply conduit preventing flow from said pump chamber therethrough, a jet mounted axially in the first end of said pump chamber and directed toward the second end of said pump chamber, a vapor conduit providing communication between the vapor section of the generator and said jet for jetting vapor from the generator into the first end of said pump chamber toward the second end of said pump chamber at a velocity in accordance with the pressure in the generator, a solution feeding conduit communicating with the second end of said pump chamber and the liquid section of the generator, a check valve in said solution feeding conduit preventing flow from the generator, tapered tube means supported in said pump chamber from around said jet to the second end of said pump chamber in communication with said solution feeding conduit to draw solution from the absorber and pump said solution through said solution feeding conduit into the generator at a predetermined pressure of the generator, and bypass means communicating with said pump chamber in spaced relation from the first end of said pump chamber and with the lower end of the absorber to bypass vapor issuing from said jet at pressures below said predetermined pressure.

3,015,222
REFRIGERANT COMPRESSOR
John M. Wellborn and John A. Kimm, Evansville, Ind., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,174
2 Claims. (Cl. 230—139)



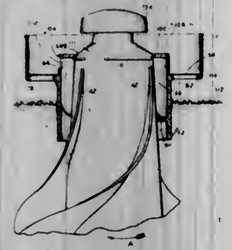
1. In a compressor apparatus, structure comprising: a housing having a first inlet for passing inwardly evaporated refrigerant, a first outlet for delivering outwardly compressed refrigerant for precooling thereof, a second inlet for passing inwardly precooled refrigerant, and a second outlet for passing outwardly the precooled refrigerant; a motor-compressor in said housing and having a bearing; means for conducting evaporated refrigerant to said motor-compressor for compression thereof; means for conducting the compressed refrigerant from the motor-compressor to said first outlet; and means for conducting the precooled refrigerant firstly directly against said bearing to cool the same and then around said motor-compressor to said second outlet.

3,015,223
APPARATUS FOR AND METHOD OF THE HEAT TREATMENT OF THERMOPLASTIC HIGH PILE FABRICS
David Pelton Moore, Marlow, N.H.
Filed May 5, 1959, Ser. No. 811,152
11 Claims. (Cl. 66—147)



11. The method of heat treating the base web of a knitted thermoplastic high pile knitted fabric, comprising knitting such fabric on a rotary cylinder knitting machine, physically contacting the base web of such fabric during the knitting thereof with an electrically heated iron to shrink the base web to hold the pile elements from slipping, and when the machine is at a standstill removing the iron from contact with the base web of the fabric.

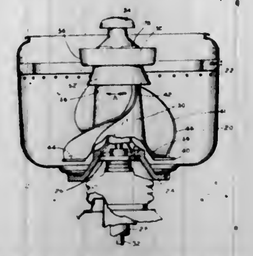
3,015,224
LINT FILTER
Joseph F. Oles, Cincinnati, Ohio, assignor to The Murray Corporation of America, Syracuse, N.Y., a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,429
11 Claims. (Cl. 68—18)



1. A washing machine lint filter comprising a tubular sleeve adapted to be mounted upon the upper end of and in radial spaced relation to the column of an oscillating bladed agitator, said sleeve being of a length to extend below the wash water level and having lengthwise extending internal ribs adapted to engage and form with an agitator column, upwardly extending passages, an annular cup having a lint screen forming a lower wall thereof disposed around the upper end of said sleeve, and ports in said sleeve above the lint screen communicating with said passages.

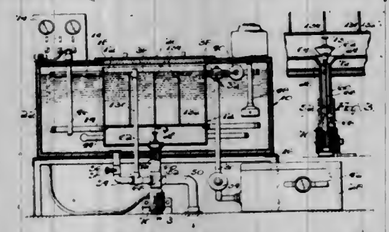
3,015,225
LINT FILTER
Irvin E. McWethy, Syracuse, N.Y., assignor to The Murray Corporation of America, Syracuse, N.Y., a corporation of Delaware
Filed July 18, 1960, Ser. No. 43,421
6 Claims. (Cl. 68—18)

1. A washing machine lint filter for an agitator of the oscillatory vertical axis type having a central column and integral agitator blades, comprising an annular flared skirt adapted to overlie the upper ends of the blades of the agitator, and extend to a point below the normal wash water level, said skirt having an inwardly directed collar adapted to embrace the upper end of the agitator column, and an annular integral cup disposed around the skirt having a lint filtering perforate bottom disposed above the normal wash water level, said collar being upwardly and outwardly notched to receive the upper ends of the blades of the agitator, and said skirt having a discharge



aperture adjacent each notch disposed above the perforate bottom of said cup, and means disposed radially inward of each of said apertures and adapted to abut the agitator column for deflecting wash water upsurging along the agitator column radially outward through said apertures.

3,015,226
CYCLING LEACHING AND EXTRACTION APPARATUS
Richard T. Darby, Prospect St., Sherborn, Mass.; Aaron David Baskin, 3 Lynn St., Natick, Mass.; and Howard C. Lilly, Main St., Sherborn, Mass.
Filed Nov. 23, 1959, Ser. No. 854,987
12 Claims. (Cl. 68—181)
(Granted under Title 35, U.S. Code (1952), sec. 266)

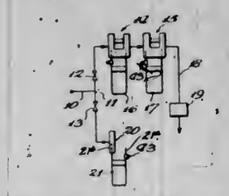


1. A device of the class described comprising fixedly associated inner and outer vessels, fluid-supply means automatically to maintain a predetermined fluid level in said outer vessel, means to admit fluid from said outer vessel to said inner vessel in relatively small uniformly distributed jets of predetermined substantially uniform low velocity whenever the level of the fluid in the inner vessel drops below the level in the outer vessel and cyclically operable means for draining fluid from said inner vessel at a rate greatly in excess of the rate at which fluid is admitted thereto so that the inner vessel can be substantially completely emptied at the same time that fluid is being admitted thereto.

3,015,227
UNION AND GAS CHROMATOGRAPHY COLUMN PORT
Herbert H. Barber, Jr., La Marque, Tex., assignor, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Dec. 6, 1957, Ser. No. 701,094
7 Claims. (Cl. 73—23)

1. In a gas chromatography system including a fluid inlet port communicating with a source of eluting gas, a valve-union device receiving said fluid inlet port and adapted for insertion of a chromatographic column, and

a detector arranged to receive fluids discharged from said valve-union device, the improvement whereby said chromatographic column may be inserted or removed from said valve-union device while assuring flow of eluting gas to the detector whether the chromatographic column is in place or not, which improvement comprises a valve-union device comprising: a first axially elongated valve chamber, the fluid inlet port communicating to said chamber, a chromatographic column receiving port adapted to receive one end of a chromatographic column, said conduit-receiving port communicating at a first portion of said valve chamber, a bypass port at a second portion of said valve chamber, a plug means within said valve chamber axially movable to close said bypass port and permit flow of eluting gas through said conduit-receiving

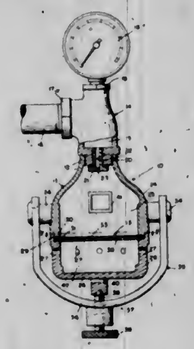


port and into said chromatographic column when a first end of said chromatographic column is inserted, means for urging said plug means to normally close said conduit-receiving port; a second axially elongated valve chamber, an inlet port to said second valve chamber communicating with the bypas port of the first valve chamber, a conduit-receiving port at a first portion of said second valve chamber, an outlet port at a second portion of said second valve chamber, said conduit-receiving port adapted to receive the other end of the chromatographic column, a plug means within said chamber axially movable to close said fluid inlet port and permit flow of fluid from said chromatographic column through said conduit-receiving port and out said outlet port when the other end of said chromatographic column is inserted, and means for urging said plug means to normally close said conduit-receiving port.

3,015,228
AIR QUALITY GAUGE

Cornelius J. Shuttleworth, 14248 Appoline, Detroit 27, Mich., and Thomas A. McConnell, 660 Burroughs, Plymouth, Mich.

Filed Sept. 12, 1955, Ser. No. 533,598
1 Claim. (Cl. 73—29)

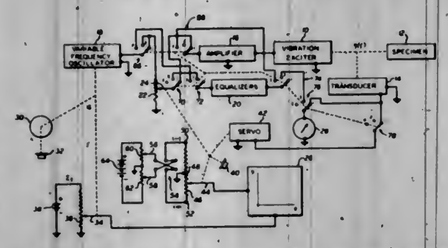


A device for gaging a gas as to matter entrained therein, comprising a housing constituted by a pair of releasably engaged hollow housing members, one of which members partially defines an expansion chamber of substantial volume provided with an intake plenum member adapted to receive said gas and having a pressure gauge in communication with its interior, the other housing member partially defining an exhaust space, means providing a metering orifice of restricted flow capacity communicating the interior of said plenum member with said expansion chamber, a gas-permeable membrane having means supporting the same in exposed relation to said expansion chamber between the latter and said exhaust space, so as to be penetrated by gas expanding in the expansion chamber, said supporting means including a perforated plate against which said membrane rests, said plate being releasably clamped between said housing members to enable quick removal of said membrane for inspection.

3,015,229
APPARATUS FOR USE IN A VIBRATION TESTING SYSTEM

Charles E. Maki, Short Beach, Conn., assignor, by mesne assignments, to Textron Electronics, Inc., a corporation of Rhode Island

Filed Mar. 10, 1958, Ser. No. 720,105
10 Claims. (Cl. 73—71.6)



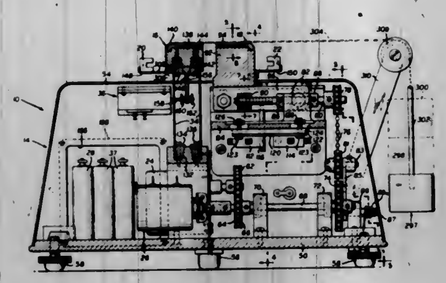
9. Apparatus for use in adjusting the equalizer means in a vibration testing system such that its gain-frequency characteristic is the inverse of a pre-recorded gain-frequency characteristic comprising in combination with equalizer means; a variable frequency oscillator; means coupled thereto for varying the frequency of said oscillator throughout a given range; means for providing a first signal as a function of the frequency of said oscillator; an adjustable gain component; means coupled to said gain component for adjusting the gain thereof; means for providing a second signal as a direct logarithmic function of the gain of said gain component; an X—Y recorder with said pre-recorded characteristic displayed thereon; means coupling said signals to the recorder to control each the appropriate coordinate corresponding to the pre-recorded characteristic; a signal measuring device; and means coupling said signal measuring device to an output of the oscillator through said equalizer means and gain component in series.

3,015,230
WET WEB TENSILE TESTER

David Noel Obenshain, Lake, Md., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

Filed Nov. 5, 1957, Ser. No. 694,558
8 Claims. (Cl. 73—89)

1. A measuring instrument for determining the tensile strength of weak webs and the relation of tension to the stretch thereof comprising, in combination, a pair of relatively movable sample supports, each support having a plane vertical face against which a sample end is clamped, a rounded snubbing corner around which the sample is wrapped and with which the sample is continuously engaged, and a horizontal supporting face having alternate ridges and grooves which extend in the direction of relative movement of the supports and terminate at the snubbing corners so that a stretchable sample area of predetermined length is defined which is

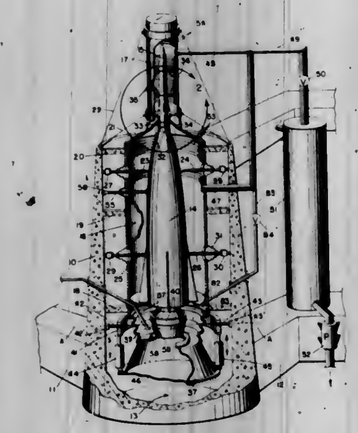


coterminous with the outer ends of the ridges and grooves, and means responsive to movements of the supports for indicating coordinately the tension and stretch of the sample.

3,015,231
MISSILE FLIGHT SIMULATION SYSTEM

Joseph F. Ganahl, Santa Ana, Calif., assignor to Aeroscience, Inc., a corporation of California

Filed Sept. 8, 1958, Ser. No. 759,586
11 Claims. (Cl. 73—116)



1. A flight simulation system for testing a missile engine, comprising, in combination: a fixed support connected to said engine; a shroud dimensioned to surround said engine, said shroud including flexible wall means terminating in an exhaust cowling, said exhaust cowling having an exhaust exit opening; extension and tilt means connected to said cowling for varying the distance and angular alignment of said opening with respect to the exhaust of said engine; and control means responsive to changes in the thrust of said engine connected to said extension and tilt means for maintaining said opening at a desired spacing from and in axial alignment with the exhaust gases from said engine whereby exhaust gases passing through said opening and out said cowling maintain a partial vacuum in said shroud to simulate a given altitude.

3,015,232
FLOW CELL

Nathan Schnoll, Englewood, N.J., assignor to Flow Measurements Corporation, Kensington, Md., a corporation of Maryland

Filed Oct. 2, 1957, Ser. No. 687,739
2 Claims. (Cl. 73—204)

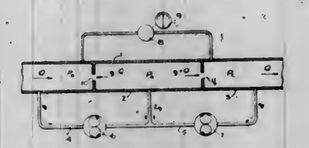


2. A flow cell for measuring the flow of a fluid, comprising a pipe through which the fluid to be measured is adapted to flow, a pair of temperature sensitive resistance detectors in thermal contact with the pipe and arranged to be responsive to the temperature of the fluid flowing through the pipe, both said temperature sensitive detectors being positioned to measure the temperature difference between two points in a plane normal to the longitudinal axis of the pipe at points between which the undesired temperature gradients are zero, whereby one detector is the same proportionate distance from the ends of the pipe as the other detector, and a heater in thermal contact with said pipe but thermally closer to one of said detectors than the other, the temperature sensitive detectors being wires wound as coils, and the heater being also a coil, all coils being wound flat and secured to the outside of said pipe.

3,015,233
MASS FLOWMETER

Frederick Ryder, Lynbrook, and Bernard Fishman, New York, N.Y., assignors to Simmonds Aerocessories, Inc., Tarrytown, N.Y., a corporation of New York

Filed July 22, 1958, Ser. No. 750,220
4 Claims. (Cl. 73—205)



1. A mass flowmeter adapted to measure the mass flow rate of liquid passing therethrough comprising a conduit having two orifices with like cross-sectional areas smaller than the cross-sectional area of said conduit in series, means for recirculating constant volumetric flow through the first orifice so that this recirculating flow is additive to the input flow being measured, and means for recirculating a like constant volumetric flow through the second orifice so that this recirculating flow is subtractive from the input flow being measured; each of these recirculating flows to be larger than the input flow being measured and means for measuring the pressure differential across the said orifices.

3,015,234
BIMETALLIC MOUNTING

Redwood L. Springfield, % Gay Sales Co., Associates, 420 Sul Ross St., Houston 19, Tex.

Filed Apr. 14, 1958, Ser. No. 728,452
8 Claims. (Cl. 73—339)

1. In the measurement of internal temperatures of a heated chamber having a port in its wall, the combina-

tion of a temperature sensitive means; means for enclosing such temperature sensitive means and for inserting said temperature sensitive means into the interior of the heated chamber comprising a hollow, elongated body of heat conductive material closed at one end and adapted to be inserted into the interior of the heated chamber through said port; means for supporting said temperature sensitive means within said enclosing means and for effecting and maintaining forcible contact between the last said means in the presence of temperatures of a selected range com-



prising an elongated supporting body smaller than and adapted to be disposed within said enclosing body, and at least one bimetallic strip fixedly attached at one end to said supporting body, said temperature sensitive means being disposed on the outer side of said strip facing the wall of said enclosing body, whereby the presence of temperatures of said selected range causes said strips to flex outwardly, bringing said temperature sensitive means into forcible contact with the wall of said enclosing body; and means communicating between said temperature sensitive means and an external temperature responding means.

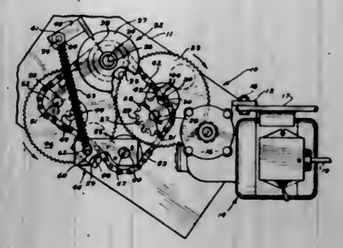
3,015,235
ADJUSTABLE THERMOSTAT
Louis J. Siri, South Bend, Ind., assignor to Penn Controls, Inc., Goshen, Ind., a corporation
Filed Apr. 8, 1959, Ser. No. 804,971
4 Claims. (Cl. 73—363.1)



1. A temperature responsive device comprising a first elongated element having a relatively high thermal coefficient of expansion, a second elongated element having a lower thermal coefficient of expansion, said elements being disposed in overlying relation having each end of said first element rigidly joined to the correspondingly positioned end of said second element, one end of the composite structure thereby formed being supported in cantilever fashion and the other end being adapted for operation of an electrical switching means, and an adjusting screw threaded through said first element intermediate the end of the element and bearing against said second edement, whereby said elements may be adjustably spaced to vary the relative magnitude of the force and deflection components of the energy output of said device resulting from a predetermined change in temperature of said elements.

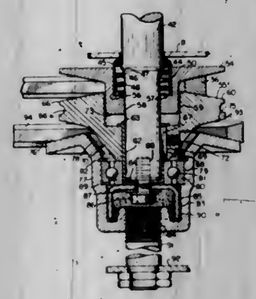
3,015,236
DRIVE MECHANISM WITH CONTINUOUS INPUT AND INTERMITTENT OUTPUT
James W. Toensing, Minneapolis, Minn., assignor to Remmele Engineering, Inc., St. Paul, Minn., a corporation of Minnesota
Filed Mar. 14, 1960, Ser. No. 14,654
10 Claims. (Cl. 74—84)

1. In a mechanism for producing intermittent rotary motion, a constant speed input drive element mounted for rotation upon a fixed axis, a sprocket rigidly secured in parallel relation to said input drive element and having its effective circumference precisely intersecting the projected axis of said input drive element, an intermittently rotated output member having a sprocket mounted
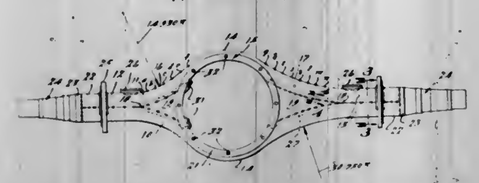


for rotation upon a fixed axis lying in spaced parallel relation to that of said input drive element, a flexible endless driving chain trained about said sprockets, and means in engagement with said flexible endless drive chain for maintaining the latter in taut condition.

3,015,237
VARIABLE SPEED DRIVE
Orly Musgrave, 1731 Audubon Park Drive, Springfield, Ohio
Filed Mar. 5, 1959, Ser. No. 797,401
3 Claims. (Cl. 74—230.17)



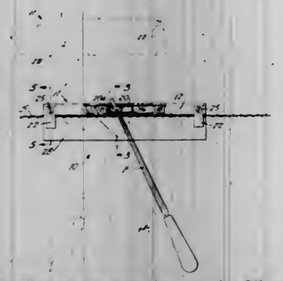
1. In combination, in power transmission mechanism, a power shaft, and axially disposed on the power shaft a V-belt pulley, said pulley having a first flange fixed on the said power shaft for rotation with the power shaft and a second complementary flange which is axially movable along the power shaft, an axial non-circular boss of said second flange extending into an axial recess of said first flange forming a power transmitting connection between the flanges, said second flange having a cylindrical bore and an abutment terminating said bore, a coil spring disposed around said power shaft and having a first end engaged against said abutment, a shoulder on said shaft, a cap having a re-entrant portion fitted over said shaft with said re-entrant portion retained by said shoulder, a second end of said coil spring engaged against said cap, and a skirt portion of said cap extending into the cylindrical bore of said second flange in sliding engagement with the flange forming a guide and bearing for the flange.

3,015,238
AXLE HOUSING
Richard J. Williams, Birmingham, Mich., assignor, by mesne assignments, to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 10, 1959, Ser. No. 858,722
9 Claims. (Cl. 74—607)



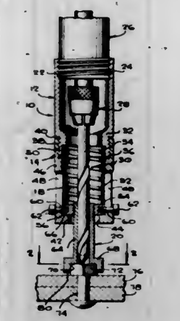
1. An axle housing made from sheet material to have a banjo portion offset from the center between the ends of the housing to have a short portion and a long portion at opposite sides of the banjo portion, and an arcuate throat section extending from each side of the banjo portion, the throat section on the short end portion being struck on a smaller radius than the throat section on the long portion.

3,015,239
SHARPENING AND FILING APPARATUS FOR SERRATED CUTTING EDGES
William F. Just, 3860 Region Ave., Robbinsdale, Minn.
Filed Sept. 12, 1960, Ser. No. 55,250
8 Claims. (Cl. 76—36)



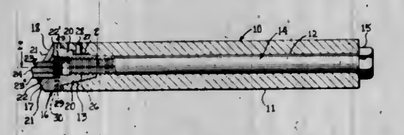
1. A saw filing apparatus for use in filing saws comprising an elongate channel-shaped file holder including a bight portion having a pair of spaced apart legs depending therefrom, a plurality of longitudinally spaced, triangular-shaped apertures formed in each of said legs and being arranged in sets of opposed pairs, the apertures of each pair being of substantially identical shape and size and being slightly longitudinally offset with respect to each other to permit an elongate file of triangular cross-sectional shape to be positioned within a pair of said apertures with the longitudinal axis of the file being disposed in angulated relation with respect to the longitudinal axis of the elongate channel-shaped file holder, the apertures of one pair in one of said sets being longitudinally offset oppositely of the other pair of apertures in said one set whereby a file may be selectively positioned within each pair of apertures of each set for accurately sharpening oppositely angled teeth of a saw, releasable retaining means cooperating with said apertures for retaining a file in snug-fitting relation within a pair of said apertures, and a pair of yieldable positioning members positioned at opposite ends of said elongate file holder and extending laterally from one leg thereof for engaging the uppermost surfaces of the saw teeth of a saw and cooperating with said apertures for correctly positioning a file carried by said file holder in proper angulated relation with respect to the saw teeth.

3,015,240
DRILL ATTACHMENT
Carl D. Hodnett, Rte. 3, Box 252, Goldsboro, N.C.
Filed Oct. 23, 1959, Ser. No. 848,347
2 Claims. (Cl. 77—55)



1. In combination, a drill having a casing, a rotary chuck mounted on the casing and depending below the lower end of the casing, a drill bit chucked in the chuck and extending downwardly therefrom; a tubular barrel secured on the lower end of the drill case and extending downwardly therefrom, said barrel having a lower end wall having an axial opening larger in diameter than the drill bit, a ring sliding within the barrel above said lower end wall, the barrel having a side wall formed with closed vertical slots, studs on the slide ring extending out through and sliding in related slots, a helical compression spring within the barrel surrounding and out of contact with the drill bit, said spring being compressed between said ring and an upper part of the barrel, said ring having a central opening for attachment of an implement thereto, said barrel comprising an upper barrel section and a lower barrel section having an upper end removably and non-rotatably connected with the lower end of the upper barrel section, the upper barrel section being threaded on the drill casing and the lower barrel section being threaded on the upper barrel section.

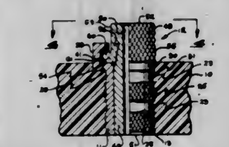
3,015,241
BORING BARS
Ignatius Konwal, 335 Parkview Ave., Elmhurst, Ill.
Filed Nov. 17, 1958, Ser. No. 774,408
1 Claim. (Cl. 77—58)



A boring tool comprising an elongated bar having a bore formed longitudinally therein, said bore opening at one end into a frusto-conically shaped socket, a bit holder comprising two parts arranged in confronting relation with respect to each other and provided in their confronting surfaces with a recess, said bit holder providing a shank shaped to conform to and fitting into said socket, said shank having a threaded opening formed longitudinally therein in alignment with said bore, a draw bolt having a head at one end portion adapted for bearing engagement with said bar and having an opposite end portion threaded for threaded engagement into an opening of said shank, a cutter bit assembly mounted in said recess and comprising a chip deflector and a shim and a cutter bit disposed between said chip

deflector and said shim, said bit holder parts having formed in their confronting faces aligned openings transversely of and offset with respect to said recess, and a coil spring mounted in said aligned openings of said bit holder parts and frictionally engaging said parts to yieldably hold said parts together with the cutter bit assembly in said recess when said bit holder is detached from said bolt and removed from said socket of said bar.
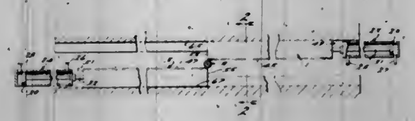
3,015,242
LINER BUSHINGS FOR SLIP RENEWABLE TOOL GUIDE BUSHINGS
Robert H. Armacost, Los Angeles, Calif., assignor to American Drill Bushing Co., Los Angeles, Calif., a corporation of California
Filed Nov. 13, 1959, Ser. No. 852,885
6 Claims. (Cl. 77—62)



1. A jig comprising a plate having parallel top and bottom surfaces and a hole extending therethrough, a liner bushing secured in said hole and having an uninterrupted cylinder inside wall defining an open-end bore extending therethrough and having a top annular end surface and a bottom annular end surface defining the end openings respectively of said bore, the bushing being arranged in the plate with said top annular end surface lying in the plane of said top surface of the plate, said bushing having an external flange portion extending only partially circumferentially thereof and radially outwardly therefrom with one surface of said flange portion being in the plane of said top end surface, said flange portion having end surfaces defining the circumferential extent thereof, the plate having a recess formed therein for accommodating said flange portion, said end surfaces of the flange portion being in abutment with complementary surfaces of said plate recess for preventing turning of the liner bushing in the plate, a locking member extending upwardly from said flange portion and being spaced radially from said inside wall, and having an inside surface spaced uniformly radially outward from said inside wall, said inside surface being the bottom surface of a groove formed in said locking member and facing radially inward of said liner bushing and extending throughout the circumferential dimension of said locking member thereby to define a tongue extending radially inward from said inside surface, said head portion of the tool guide bushing having a recess formed in the outside surface thereof and extending throughout the axial extent of the head portion for accommodating relative axial movement of said tongue and the head portion, the head portion having a circumferentially extending recess formed therein of limited circumferential extent and open to said axially extending recess thereby to define a surface for abutment against the said tongue for limiting rotation of the tool guide bushing in the liner bushing.

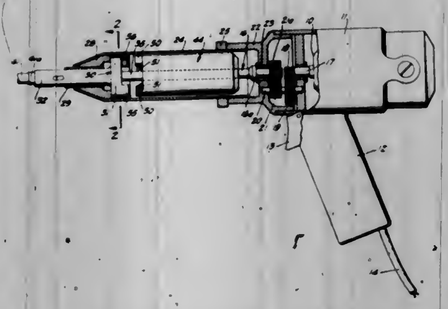
3,015,243
TOOL FOR PRESSURE FORMING TOOTHED ELEMENTS
Joseph C. Drader, Ormond Beach, Fla., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware
Filed Jan. 6, 1958, Ser. No. 707,244
1 Claim. (Cl. 80—20)

A tool for pressure forming teeth on the periphery of a cylindrical workpiece, said tool being provided with a working face having teeth thereon and including a leading tooth and a trailing tooth, a first multiplicity of said teeth between said leading tooth and said trailing tooth being fully conjugate to the teeth to be formed on said workpiece and having a pitch line, the circular pitch of said first multiplicity of teeth measured on said pitch line being equal to the distance, measured on a circle having a diameter D_1, between corresponding points on said circle of adjacent workpiece teeth where D_1 is the diameter of a circle which encompasses a cross sectional area of the interdental space between the teeth of the



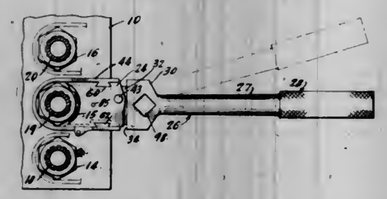
workpiece equal to the cross sectional area of the portions of the teeth of the workpiece outside the circle, the tips of said first multiplicity of teeth being equally spaced from said pitch line, the pressure angle of the teeth in said first multiplicity being the angle whose cosine is D/D_1 multiplied by the cosine of the pressure angle at the pitch diameter D of the teeth of the workpiece, and a second multiplicity of teeth between said first multiplicity of teeth and said leading tooth being formed so that the tips thereof lie on a line which slopes toward said leading tooth so as to intersect an extension of said pitch line adjacent said leading tooth.

3,015,244
ROTARY IMPACT HAMMER
John P. Newman, 821 S. Raymond Ave., Alhambra, Calif.
Filed Apr. 19, 1956, Ser. No. 579,231
8 Claims. (Cl. 81—52.3)



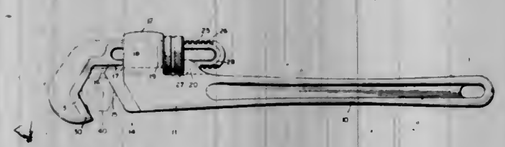
1. In an impact hammer, the combination of a drive shaft, an anvil member mounted coaxially on the drive shaft for rotational and longitudinal movement with respect thereto, power means for rotating the drive shaft, a hammer member rotatably mounted coaxially of the drive shaft, a cylindrical resilient driving member adapted to rotate the hammer member and driven from the drive shaft, cooperating means on said hammer member and other means on said anvil member for releasable engagement therebetween, said means including cam surfaces arranged to impart both rotational and longitudinal motion to said anvil member, brake means operably connected to said anvil member for limiting the speed of rotation of said anvil member, means for connecting one end of the resilient driving member to the drive shaft, and means for connecting the other end of the resilient driving member to the hammer member so that upon relative roational movement between the hammer member and the drive shaft the resilient driving member is twisted and thereby elongated to move the hammer member out of engagement with the anvil member.

3,015,245
HANDLE-LEVER GRIP, SLIDABLE JAW WRENCH
Clarence L. Dracka, Port Clinton, Ohio, assignor to Port Clinton Manufacturing Company, Port Clinton, Ohio, a corporation of Ohio
Filed Jan. 27, 1960, Ser. No. 4,996
7 Claims. (Cl. 81—126)



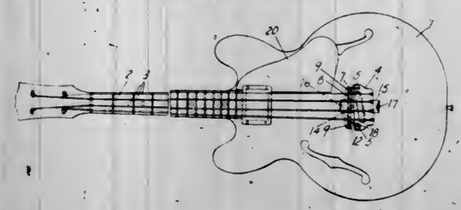
1. A ratchet wrench including, in combination, a body member, a handle member pivotally joined with the body member, an element slidably mounted within an opening in the body member and formed with a plurality of angularly arranged facets adapted for engagement with a polygonally shaped fitting, a U-shaped element, means providing slidable interconnection between said body member and U-shaped element whereby said member and element may be readily engaged and disengaged, abutment surfaces formed on said handle member and said slidable element arranged to impart movement to said slidable element relative to the body member upon relative pivotal movement between said handle and body members to provide a ratcheting action between the elements and the polygonally shaped fitting.

3,015,246
SLIDABLE OUTER JAW WRENCH
Walter Buyer, North Olmsted, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio, a corporation of Ohio
Filed May 15, 1959, Ser. No. 813,593
5 Claims. (Cl. 81—167)



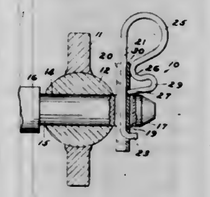
1. A wrench for engaging a hexagonal article including a handle having a housing with a hook jaw receiving recess through the housing at an angle to the handle and a hook jaw adjustably carried therein, a heel jaw carried by the handle housing at an angle relative to a longitudinal center line of the handle and so disposed that all thrust is into the housing, said hook jaw having a pair of article engaging faces including an outer face which is disposed parallel to the face on the heel jaw and an inner face which is disposed at an angle to the outer face, said outer face being substantially as long as the face on the heel jaw.

3,015,247
MUTE MEANS FOR STRING MUSICAL INSTRUMENTS
Larry P. Allers, Kalamazoo, Mich., assignor to Gibson, Inc., Kalamazoo, Mich.
Filed Apr. 20, 1960, Ser. No. 23,411
5 Claims. (Cl. 84—273)



1. A musical instrument of the class described comprising a body and strings, a combined bridge and tail member supportedly mounted on said body in vertically spaced relation thereto and forwardly spaced from its inner end, a mute base plate mounted on said body and having a portion thereof disposed below said bridge and tailpiece and having a slideway thereon and a portion projecting forwardly of said bridge and tailpiece, a mute member of upwardly facing channel section having a springably resilient facing therein disposed below and transversely of the strings and supportedly mounted on said base plate for vertical reciprocating adjustment at the front of and adjacent to said bridge and tailpiece, and an actuating member for said mute member slidably adjustable on said base plate and having a longitudinal slot therein coacting with said slideway on said base plate for frictionally retaining said actuating member in its adjusted positions, said actuating member having an upwardly projecting cam at its forward end coacting with said mute member and an upwardly projecting finger piece disposed rearwardly of said bridge and tailpiece member.

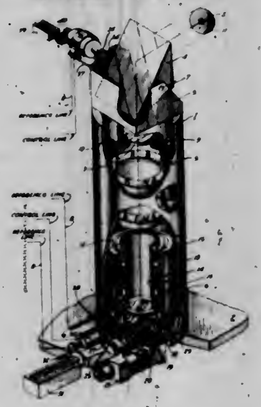
3,015,248
LINCH PIN WITH SPRING RETAINER MEANS
William G. Spurlin, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 7, 1958, Ser. No. 733,564
2 Claims. (Cl. 85—8.3)



1. A linch pin, comprising an elongated hollow linch pin body having a laterally extending hole adjacent one end and a second hole spaced from the first hole towards the other end of the body, said holes being aligned longitudinally of the body, and a springy wide-like retainer having a substantially straight part extending longitudinally within the body along the wall thereof and having a first terminal portion extending through the hole in the body and projecting laterally a short distance beyond the outer surface of the body, the retainer projecting a substantial distance beyond the other end of the body in a laterally extending open loop shaped to receive the index finger of an operator and lying generally in the

plane of said first terminal portion, the end of said loop resiliently bearing against the outside of the body adjacent said other end and substantially in longitudinal alignment with said holes and urging the retainer against the inner wall of the body adjacent the hole, and said retainer having a second terminal portion extending from the loop and terminating in a portion generally perpendicular to the linch pin body and spaced from said first terminal portion, said perpendicular portion having its end received within the second hole in the body and lying in a common plane with the portion of the retainer extending within the body, the first terminal portion of the retainer being withdrawn in the hole in the body upon rocking the retainer against its bias.

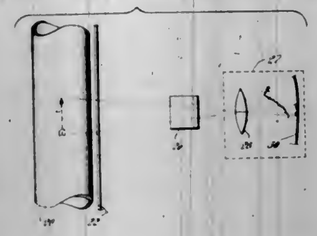
3,015,249
TRACKING TELESCOPE
Philip H. Taylor, Los Angeles, Calif., assignor to Northrop Corporation, Hawthorne, Calif., a corporation of California
Filed Mar. 14, 1949, Ser. No. 81,224
18 Claims. (Cl. 88—1)



1. An optical tracking system comprising a telescope mounted to be rotatable about an axis parallel to, but not coincident with, its optical axis, a bracket fixed on the upper end of said telescope, a reflecting prism pivoted in said bracket over the opening of said telescope, said prism receiving and deviating the image of an interesting star in the field of view into said telescope, said prism facing in a direction such that the line of sight from said star to said prism and thence into said telescope intersects and crosses the extended center line of said axis of rotation, and rotatable light-chopping means located in the focal plane of said telescope and arranged to form image light signals as said light-chopping means is rotated at a reference frequency, for indicating the direction of departure of said image from the center of said field of view, said tracking system being adapted to be installed within a structure having a window positioned across the field of view of said telescope and prism, with the center of said window substantially coincident with a point on said extended center line.

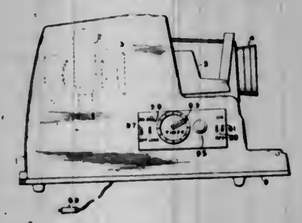
3,015,250
SPECTROGRAPH
Richard J. Rosa, Reading, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 24, 1958, Ser. No. 776,157
5 Claims. (Cl. 88—14)

1. A spectrographic instrument for obtaining a spectrogram of a rapidly moving, luminous object comprising, in combination: slit means through which light from said luminous object propagates; light-dispersing means in the path of the light from said slit means for spectrally dispersing said light; means for focusing said dispersed light into an image; and film-bearing means disposing a



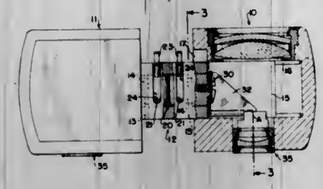
photographic film at the image plane of said focusing means, said film-bearing means being arranged to move said film at substantially the same speed as the movement of said image parallel to the direction of travel of said image, said image being maintained upon the same area of said film for the duration of the exposure time.

3,015,251
POWERIZED AUTOMATIC SLIDE PROJECTOR
David Pollan, Jackson Heights, N.Y., assignor to Viewlex, Inc., Holbrook, N.Y.
Continuation of application Ser. No. 554,438, Dec. 21, 1955. This application Dec. 22, 1958, Ser. No. 782,217
2 Claims. (Cl. 88—28)



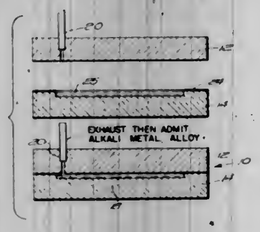
1. Control means for a power driven removable magazine slide projector of the type wherein the magazine moves linearly parallel the optical axis of said projector comprising a uni-directional motor; means connected to said motor to horizontally move said slides to and from said magazine; said slide moving means comprising a horizontally slidable push and return member mounted in said projector adapted to extend through said magazine to push a slide; a rotary to reciprocating motion converting linkage connecting said slidable member to said motor; and electrical circuit means comprising first and second switches positioned to be actuated by said linkage at each end of its reciprocating cycle; said first switch being connected and adapted to stop said push and return member in an inner viewing position; and said second switch being connected and adapted to stop said push and return member in an outer load position so that said push and return member will not interfere with axial movement of said magazine; said switches being connected in series with each other, said motor, and a source of power; a manual pushbutton switch being connected in parallel with said first switch, a control switch means having run and load positions, said control switch means being connected in the circuit so as to short circuit said second switch when in the run position and to short circuit said first switch and said manual pushbutton switch when in the load position.

3,015,252
BINOCULAR TELESCOPE FOCUSING MEANS
Robert W. Dowling, New York, N.Y., and Lorenzo del Riccio, Los Angeles, Calif., assignors to D & D Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 28, 1960, Ser. No. 5,175
6 Claims. (Cl. 88—34)



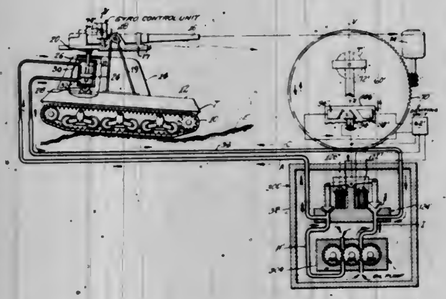
1. A binocular telescope comprising a pair of ocular-objective lens combinations, a casing for each of said lens combinations mounting the lenses of a combination in spaced relation, one of the lenses in each combination being adjustable along its optical axis, a unitary support member disposed transversely of the optical axes and engaging said casings, at least one of said casings being slidable on said support member to provide interpupillary distance accommodation when said casings are mutually separated for use and to provide for mutual movement of said casings to closed positions, individual lens system focusing means carried by said support member and extending into the casings, said focusing means comprising separately rotatable shaft means journalled by the support, means for rotating said shaft means, said shaft means having eccentric portions exposed in said casings, and connector elements carried by said support and transversely slidably engaging portions of said movable lenses of the combination in all positions of said casings, said connector elements also engaging said eccentric portions of said shafts, said shafts having rotative freedom relative to said elements to cause translation of said elements and movable lenses along said optical axes when said shaft means is rotated.

3,015,253
ALKALI METAL ULTRAVIOLET FILTER
William T. Foreman, Lexington, Mass., and Charles H. Shaw, Worthington, Ohio, assignors to Baird-Atomic, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed July 20, 1959, Ser. No. 837,311
1 Claim. (Cl. 88—106)



A high pass optical filter that is transparent in the ultraviolet with a high rejection ratio is the visible and infrared, said filter comprising a pair of fused quartz slabs each having opposed inner and outer faces, each of said slabs being of the order of one centimeter thick, the inner face of one of said slabs being provided with an outer peripheral rim portion and an inner uniformly etched out portion, said rim portion presenting a face that is optically flat, said etched out portion presenting a face that is optically flat, the inner face of the other of said slabs and the outer faces of said slabs being optically flat, said rim portion being fused to the rim portion of the inner face of said other slab, said etched out portion being spaced in parallelism from the portion of the inner face of said other slab with which it is in registration, the distance between said etched out portion and said inner face of said other slab being at most one micron, said etched out portion and said inner face of said other slab defining therebetween a hermetic chamber, and a mixture of sodium and potassium within said chamber.

3,015,254
STABILIZED CONTROL MECHANISM FOR A GUN MOUNTED ON A TURRET
Ward Leathers and George S. Di Monico, Brooklyn, and Lawrence Bruehl, New York, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 29, 1945, Ser. No. 638,394
3 Claims. (Cl. 89—41)

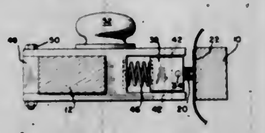


1. The combination with a tank having a hull, a rotatable turret mounted on the hull and capable of turning movements in azimuth relative to the hull in opposite directions, of stabilizing mechanism for said turret comprising gyroscopic means mounted on the turret and establishing a fixed reference line in space, a turn-table rotatably mounted on the turret and normally fixed relative thereto, said turn-table establishing an auxiliary line of reference normally in coincidence with said fixed reference line, said turn-table normally following the involuntary movements of the hull and consequently of the turret upon changes in direction of the heading of the hull so as to establish angular displacement between said auxiliary reference line and said fixed reference line, a commander's control station and manually controlled means operable thereat for voluntarily rotating said turn-table relative to the turret to cause angular displacement between said reference lines, a gunner's control station and manually controlled means operable thereat for similarly rotating the turn-table, means operable when said turn-table becomes angularly displaced from its normal position thus causing displacement between said reference lines for applying torque to the turret in a degree sufficient to move the same at a predetermined rate of speed in such direction as to restore the turn-table to its normal position and reestablish coincidence between said reference lines, means operable when the extent of such displacement between said reference lines reaches a predetermined degree for applying an increased amount of torque to the turret to restore the same to its normal position at an increased rate of speed, and means operable when the extent of displacement between said reference lines reached a predetermined maximum for rendering both of said manually controlled means inoperative.

3,015,255
SPLICING SYSTEM

Frederick Joseph Barnes, Henrico County, Va., and William John Neuhauser, Jefferson County, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed Aug. 8, 1958, Ser. No. 753,980
4 Claims. (Cl. 93—1.1)

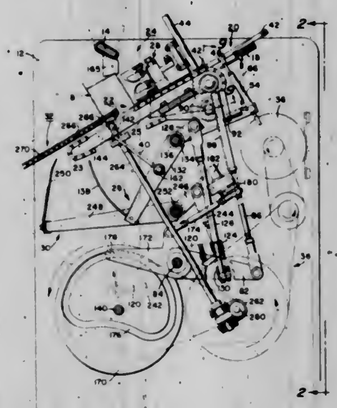


1. Apparatus for joining overlapping ends of aluminum foil strip, comprising means presenting an anvil surface on which the overlapped foil ends can rest, guide means extending parallel to said anvil surface, a knurled roller adapted to roll against the overlapped foil ends on said anvil surface, a carriage mounted for movement along said guide means, means mounting the knurled roller on the carriage for free tilting movement of its rotational axis in a plane through said axis normal to the line of travel of said carriage whereby substantially uniform pressure is achieved between the roller and the foil, and means resiliently urging the knurled roller toward the anvil surface as the roller rolls against the overlapped foil resting on the anvil surface.

3,015,256
MACHINE FOR FORMING CARTONS

Wolfgang B. Fahrenbach, Oakland, Calif., and Fred E. Helmick, Alameda, Calif. (381 Felton Drive, Menlo Park, Calif.); said Fahrenbach assignor to said Helmick

Filed July 27, 1959, Ser. No. 829,661
8 Claims. (Cl. 93—37)

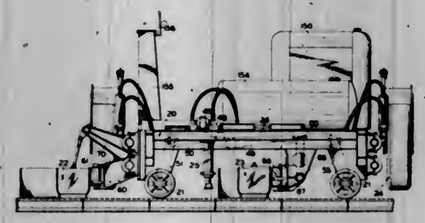


1. In a carton folding machine: a feeding station including guide means forming a hopper and means to positively grasp a forward portion of a carton blank in lowermost position within the hopper to deflect the same below the plane of said guide means; feed conveyor means movable in response to an intermittent motion mechanism to pull one carton at a time from said hopper, said feed conveyor means including projections adapted to engage the forward portion of the carton blank in said downwardly deflected position; a carton folding station adapted to intermittently receive said cartons and to fold the same into a partitioned carton; and endless discharge conveyor means including a projection adapted to engage upthrust forward end portions of said folded cartons to positively pull one carton at a time from said folding station; whereby successive straight-through feeding of carton blanks and discharge of folded cartons is positively achieved with a minimum possibility of jamming of the machine.

3,015,257
HYDRAULICALLY OPERATED PAVEMENT FINISHING MACHINE

John H. Apel and Robert J. Beeson, Columbus, Ohio, assignors to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio

Filed July 24, 1957, Ser. No. 673,943
5 Claims. (Cl. 94—45)



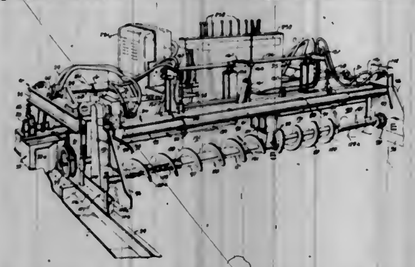
1. A pavement material working machine comprising a frame, traction means for supporting the frame for movement longitudinally along pavement material so as to work the material, said frame including a main central section and a side section at each side thereof, means between each side section and the central section for connecting them together for lateral extension and retraction of the side section relative to the central section, a screed support carried by said frame, said screed support being pivoted to the said central frame section for movement about a vertical axis, interconnecting guide and support portions carried by the screed support and each side frame section, respectively, the guide and support portion carried by the screed support being connected thereto for movement laterally of the central frame section in accordance with lateral extension and retraction of the cooperating side frame section, said means for connecting the frame sections together comprising telescoping frame members, said main screed support comprising a main central portion having telescoping end portions, said main central portion being pivoted to said main frame section at said vertical axis, said guide and support portions being carried by the side frame sections and the cooperating end portions of the screed support, said telescoping end portions of the screed support carrying thrust rollers which are mounted on vertical axes and which engage the rear side of the screed to take the thrust exerted against the screed, said thrust rollers being carried by support brackets for rotation about said vertical axes, said brackets carrying said guide portions which are in the form of guide members that operate in arcuate guide slots on guide members carried by said frame side sections.

3,015,258
PAVING MATERIAL SPREADER

John H. Apel, Columbus, and Robert J. Beeson, Hilliards, Ohio, assignors to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio

Filed Nov. 27, 1959, Ser. No. 855,628
14 Claims. (Cl. 94—46)

1. A spreading machine for spreading paving material or the like deposited on a surface to be covered and through which the machine is adapted to advance comprising a truck unit having trucks at each side and a telescoping frame connected between said trucks for variations in the transverse spacing thereof, a conveyer spreading unit supported on the truck unit for spreading the material transversely of the machine, said conveyer spreading unit being of the screw type and having telescoping sections between outer supports for expansion

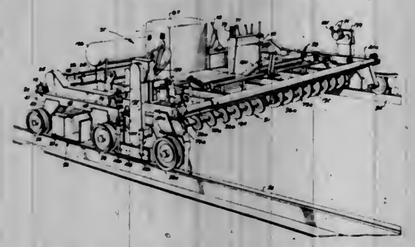


and retraction of the conveyer transversely, said sections being exposed so that they will engage the material as the machine advances and will spread it laterally over said surface, means for connecting the units together for simultaneous expansion and retraction, and interfitting slide members and vertical guideways between said trucks and said outer supports which permit relative vertical movement and prevent relative transverse movement.

3,015,259
PAVING MATERIAL SPREADER

John H. Apel, Columbus, and Robert J. Beeson, Hilliards, Ohio, assignors to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio

Filed Jan. 26, 1960, Ser. No. 4,642
12 Claims. (Cl. 94—46)

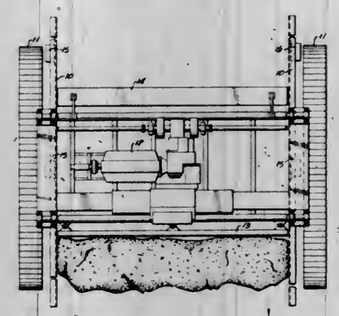


7. A road paving machine comprising a main truck unit and a spreader unit, said spreader unit including a screw conveyor for conveying material laterally of the spreader unit as the machine is propelled along the surface to be paved, said main truck unit comprising propelling side trucks at each side thereof having driven traction members, means connecting said propelling trucks on said main truck unit for lateral adjustment, said spreader unit also comprising an outrider frame connected to the front end of said main truck unit, said outrider frame including outrider trucks pivotally connected at their rear ends to the forward ends of said propelling trucks for relative vertical movement, laterally telescoping means for connecting said outrider trucks together, said outrider frame carrying a subframe for supporting the screw conveyor, means connected between said outrider frame and said subframe for suspending said subframe from said outrider frame for vertical movement relative to said outrider frame, said subframe having telescoping sections which are connected to said outrider trucks, said suspending means being supported from said outrider frame and interfitting vertical guide means being provided between said main frame and said subframe.

3,015,260
SLIP-FORM PAVER

Garvin Pelsue, Columbus, Ohio, assignor to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio

Filed Dec. 6, 1960, Ser. No. 74,186
2 Claims. (Cl. 94—46)

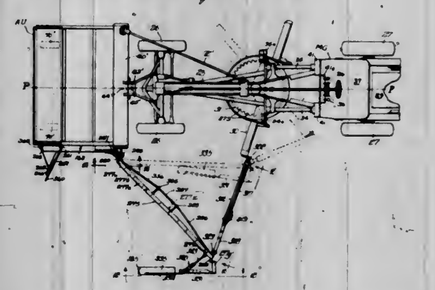


2. A slip-form paver comprising longitudinally extending, laterally spaced forms adapted to form the edges of material and having vertical edge-forming walls, a leveling member carried by the forms for leveling the material therebetween against the walls of the forms, vibrating means carried by the forms, said vibrating means comprising a vibrating unit carried by each form behind the leveling member, said vibrating units being carried outside the associated forms and exerting hammerlike blows on the forms substantially at right angles to the vertical walls of the forms.

3,015,261
TRENCH-FILLING AND SHOULDER SPREADING MACHINE

Raymore D. MacDonald, Eureka, Ill., assignor to Ulrich Manufacturing Co., Roanoke, Ill., a corporation of Delaware

Filed Apr. 25, 1958, Ser. No. 730,943
16 Claims. (Cl. 94—46)



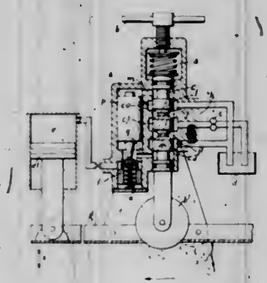
1. In combination, a motor grader comprising an adjustable scraper blade, a trench filling and shoulder spreading attachment unit comprising a frame, a pair of wheels supporting said attachment frame, a laterally rockable draft transmitting connection between the rear end of said attachment frame and said motor grader, a stabilizing bar pivotally connected between said attachment frame and said motor grader, a material receiving hopper carried by said attachment frame and adapted to receive fill material from dump trucks which are pushed ahead of the attachment unit in the truck dumping operation, a conveyor belt traveling in the lower portion of the hopper

for discharging fill material from said hopper to the side of the attachment unit, a strike-off assembly comprising a strike-off blade and a dividing blade at the outer end of said strike-off blade, said strike-off blade having its inner end connected with said attachment unit at a point disposed rearwardly of and in relatively close proximity to the point of discharge of said conveyor belt and extending laterally and rearwardly therefrom at an angle, adjustable lifting and lowering mechanism connected betwen said attachment unit frame and the inner end of said strike-off blade for vertically adjusting the strike-off level of the inner portion of said blade, articulating means operatively connected between the inner portion of said strike-off blade and said attachment unit frame permitting substantially horizontal angulation and substantially vertical angulation of said strike-off blade relative to said attachment unit frame, said dividing blade limiting the outward distribution of the fill material along said strike-off blade to the margin defined by said dividing blade, a vertically adjustable gauging shoe supporting the outer portion of said strike-off assembly; and a boom pivotally connected at its inner end with said scraper blade and pivotally connected at its outer end with the outer portion of said strike-off assembly and operative to transmit inward and outward shifting movement and downward pressure from said scraper blade to the outer portion of said strike-off assembly.

3,015,262
COMPRESSION BALING DEVICES

Frederick Baines, Swindon, England, assignor to The Plessey Company Limited, London, England, a British company

Filed May 5, 1959, Ser. No. 811,223
Claims priority, application Great Britain May 12, 1958
2 Claims. (Cl. 100—43)

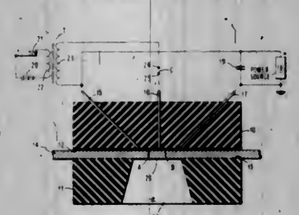


1. In a baling device having a baling passage including a wall member movable to adjust the width of said passage, the combination with said passage of a probe member movable transversely of said passage to vary the depth of penetration of the probe into the passage and means for resiliently urging said probe member to increase the depth of penetration, a hydraulic cylinder device operative upon the supply of hydraulic fluid to move said adjustable wall member in one direction and upon the release of such fluid to produce movement of said wall member in the opposite direction, a source of hydraulic pressure, a low-pressure outlet, and means for connecting said cylinder device selectively to said source and to said low-pressure outlet, said selective connecting means including a slide-valve device having two relatively movable co-operative parts, one said part being mechanically coupled to said probe so as to move relative to the other according to the depth of penetration of the probe, and the other said part being mechanically coupled to said movable wall portion to move relative to said one part according to the passage-adjusting movement of the movable wall portion, passages being provided in said co-operative parts so arranged that in a central relative position of said two parts the cylinder device is isolated, while upon relative displacement in the direction corresponding to movement of said probe inwardly of said chamber, hydraulic liquid is admitted from said source through a conduit leading to said cylinder to move said wall portion inwardly of the baling passage and upon relative displacement of said parts in the opposite direction, liquid from said cylinder device is allowed to escape to said low-pressure outlet to produce movement of said wall portion outwardly of the baling passage, until such movement in each case has restored said central relative position of said two co-operative parts of the control device, the baling device further including a non-return valve in said conduit, so arranged as to tend to isolate the cylinder except when liquid is supplied to said conduit, an auxiliary cylinder device having an inoperative position and having an operative position in which said auxiliary device forces said non-return valve to the open position, and passage means controlled by the relative position of the two co-operative parts of the slide-valve device for admitting liquid to said auxiliary cylinder device to move the same to its operative position upon relative movement of the parts of the valve device corresponding to inward movement of the probe and releasing such pressure upon return of said two parts to at least the central position.

3,015,263
HIGH SPEED MARKING APPARATUS

Ernest D. Lounsberry, Endwell, and Bruce E. Wendling, Binghamton, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Feb. 16, 1961, Ser. No. 89,822
7 Claims. (Cl. 101—19)

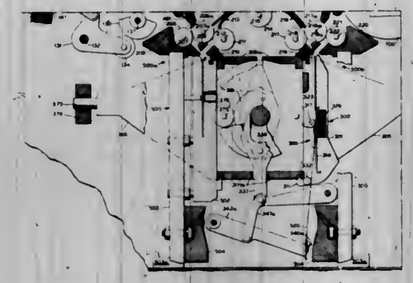


4. In an apparatus for marking a member positionable between surfaces of an electrode block and a backing block, the combination of three electrodes having spaced tips exposed through the surface of the electrode block and arranged substantially in line to provide an air gap between the outer electrodes which constitutes the only air gap in the discharge path, a source of potential connected to the outer electrodes and developing a voltage insufficient in itself to break down the air gap, a triggering circuit connected to the intermediate electrode and one of the outer electrodes, and means for developing a voltage in the triggering circuit sufficient to break down that part of the air gap between the intermediate electrode and one of the outer electrodes to effectively reduce the width of said gap and permit the source to complete the breakdown of said gap, thereby to produce a local increase in pressure across said gap of sufficient magnitude to drive the member into a portion of the surface of the backing block opposite said electrodes to cause the member to be marked according to the configuration of said portion.

3,015,264
RECORD CARD PROCESSING MACHINE

Fred M. Carroll, Binghamton, and Grey M. Gurley, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Sept. 19, 1957, Ser. No. 684,897
21 Claims. (Cl. 101—19)



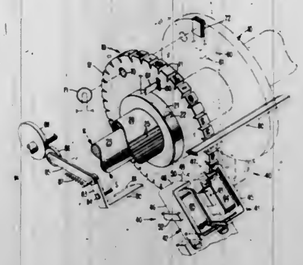
1. In a machine for processing cards of variable dimensions comprising a card hopper adjustable to accommodate the record cards being processed, a first punch station having punches for punching predetermined index positions of the record cards, a second punch station having punches for punching predetermined index positions of the record cards located from said first punch station to operate at the same time as the first punch station, means for locating the punches at said first and second punch stations so that the record cards will be punched at the predetermined index positions, a driving means for simultaneously operating said punches at said first and second punch stations, a printing means for printing serial numbers on the reverse side of the record cards being processed, a printing means for printing serial numbers on the obverse side of the cards, a means for indexing the reverse and obverse printing means, means for automatically controlling said print indexing means so that all cards will be printed upon in serial order, means for scoring the record cards, means for sequentially advancing cards in series from said card hopper to said first punch station, to said second punch station, to said reverse side printing means, to said obverse side printing means and to said scoring means, and means for positioning the cards for punching at said first and second punch stations, said positioning means receiving cards from and delivering cards to said card advancing means simultaneously in a manner that the oncoming cards and the outgoing cards pass each other.

3,015,265
DRIVING APPARATUS

Paul Gmelner, Rhinebeck, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 11, 1960, Ser. No. 49,063
7 Claims. (Cl. 101—93)

1. Apparatus of the type described comprising: a continuously driven shaft, said shaft having at least one longitudinal section thereof consisting of a permanent magnetic core, a non-magnetic sleeve fixedly embracing said magnetic core, said sleeve having a plurality of arcuately spaced longitudinal slots, and a plurality of magnetizable members fixedly disposed within said slots; an annular disc of magnetic material journaled upon said sleeve, the inner periphery of said annular disc having a plurality of arcuately spaced notches, whereby a detent type of magnetic coupling is establishing between said driven shaft and said disc so that the same is caused to rotate with said driven shaft in a definite angular relationship relative thereto; and selectively operable magnetic means for arresting said disc by gripping the same.



3,015,266
METHOD AND APPARATUS FOR INDICATING REGISTRATION IN A ROTARY MULTICOLOR PRINTING MACHINE

Charles U. Anderson, Lancaster Township, Lancaster County, and Edward W. Stanley, Manheim Township, Lancaster County, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

Filed June 10, 1959, Ser. No. 819,480
6 Claims. (Cl. 101—211)



1. In a method of indicating registration of printing on a web with an allowable tolerance in a rotary multicolor printing press wherein a plurality of colors are successively printed on a web by a plurality of cylinders, the steps comprising printing with one cylinder an open grid indicium on the web and printing with another cylinder for registration with the grid of the first mentioned cylinder an indicium having a main portion of the outline of the open grid and having tolerance tabs extending from the main portion in directions parallel to the direction of web travel and transversely thereof, the width of said tabs in said directions being equal to the allowable registration tolerance to indicate proper registration when said grid opening is closed by said indicium, within allowable tolerance when said grid opening is closed by said indicium except in an area contiguous to said main portion, and beyond allowable tolerance when said grid is open in an area beyond any one of said tolerance tabs.

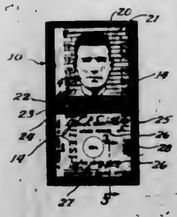
3,015,267
IDENTIFICATION AND PRINTING DEVICES

Stanley A. Dashew, Culver City, Calif., assignor to Dashew Business Machines, Inc., a corporation of Delaware

Filed Dec. 4, 1956, Ser. No. 626,127
4 Claims. (Cl. 101—369)

1. A tamper-proof printing and identification device comprising a plate formed from embossable material, a layer of photographically produced identifying text material and related identifying picture material in fixed posi-

tion on one face of said plate, and printable identifying text related to said photographically produced material



and embossed in said plate to modify portions of said photographically produced material.

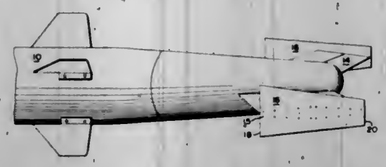
3,015,268
LAMINATED PRINTING PLATE AND PROCESS FOR MAKING SAME.
Russell U. Garrett, R.R. 1, Box 644, Ross Township, Kalamazoo County, Mich.
Filed Apr. 4, 1958, Ser. No. 726,537
3 Claims. (Cl. 101—401.1)



3. In a method of making a printing plate for a rotary printing press, the steps including: moving an elongated web of woven fiberglass through a liquid bath of heat activated resinous adhesive within a substantially closed container so that said bath of resinous adhesive is substantially isolated from ambient atmosphere and so that said fiberglass web is adhered to and is impregnated with said adhesive, at least the final portion of the travel of said web through said bath being upwardly directed; moving said adhesive impregnated web substantially vertically between a pair of carefully spaced dies to remove excess adhesive from said impregnated fabric so that said impregnated web is of accurately uniform thickness throughout its length; applying heat to the adhesive impregnated fabric as it moves upwardly immediately after it exits from the dies and thereby solidifying said adhesive; placing a sheet of uniform thickness of said adhesive impregnated fiberglass between the opposing surfaces of correspondingly curved, partially cylindrical, laminae of uniform thickness, the outer laminae having printing means on its remote surface; applying pressure to cause said laminae to move toward each other to the extent permitted by said sheet without changing the curvature of said laminae and simultaneously applying heat to activate said adhesive so that it adheres to said opposing surfaces, said adhesive being free to travel through said fabric; and cooling the adhesive to thereby form a printing plate of uniform thickness.

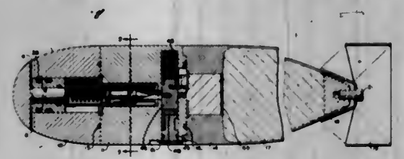
3,015,269
STABILIZING FIN
James H. Potts, Jr., Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 19, 1958, Ser. No. 781,817
4 Claims. (Cl. 102—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A stabilizing fin for elongated bombs comprising a pair of rigid horizontal sections attached to and extending from diametrically opposite sides of the bomb body to stabilize the bomb in the pitch attitude, each of said horizontal sections having rhombus-shaped cross section at a right angle to the principal axis thereof and in a plane parallel to the axis of the bomb, the leading surfaces of said horizontal sections having like acute adjacent angles to the center line of the bomb, a pair of flat vertical



tip plates to stabilize the bomb in the yaw attitude, a different one of said pair of plates being rigidly attached to the end of each of said horizontal sections, each of said plates having a greater vertical width at the leading edge than at the trailing edge and being throughout its length at an acute adjacent angle to the center line of the bomb.

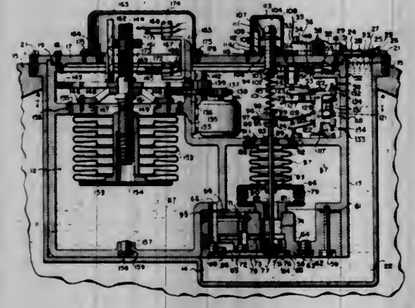
3,015,270
DEPTH CHARGE EXPLODER MECHANISM
Karl K. Domingos, Jr., George T. Powell, Jr., and John B. Malaspina, Macon, Ga., assignors to the United States of America as represented by the Secretary of the Navy
Filed Dec. 24, 1959, Ser. No. 862,015
4 Claims. (Cl. 102—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a depth charge, an exploder mechanism which comprises; a first section having a first bore therein, one end of said first bore having communication with the exterior of a depth charge; a pair of concentric pistons positioned in said first bore such that water entering the end of the first bore has communication with the exterior of the section and will exert pressure thereon when the exploder mechanism is submerged; locking means detachably secured to said section for restraining the outermost of said pistons from movement within the first bore until the locking means is removed therefrom; a second section having a cylinder therein smaller in diameter than the first bore, said first bore and the cylinder being positioned with respect to each other such that one end of the said cylinder communicates with the end of the said first bore opposite to the end thereof having communication with the exterior of the first named section, said first bore and the cylinder having a common axis; a first spring positioned substantially within the first bore and having an end portion extending into the cylinder, one end of said spring being adjacent to the faces of the concentric pistons opposite to the faces to be subjected to water pressure; a firing pin having a blunt end and positioned within the cylinder, the opposite end of said first spring being adjacent to the blunt end of the firing pin in a manner to urge the firing pin toward a fired position when the spring is compressed; means to hold the firing pin in a cocked position until at least one of said pistons has moved a predetermined distance to a firing position; a second bore formed in said second section, said second bore

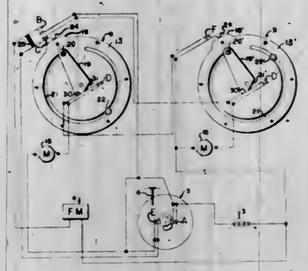
being substantially normal to said cylinder and communicating therewith, one end of said second bore having communication with the exterior of the second section; an elongated piston positioned in said second bore and having a lateral aperture filled with a first primary explosive charge; said elongated piston being positioned within the second bore such that the lateral aperture will be in a position to be struck by the firing pin after the elongated piston has moved to an armed position within the second bore; restraining means detachably secured to the elongated piston for preventing inward movement of the elongated piston until the restraining means is removed; a second spring positioned between the elongated piston and the bottom of the second bore in a manner to yieldably bias the elongated piston to a safe position and being of such strength that the explosive charge in the aperture of the elongated piston will be longitudinally aligned with the firing pin when the restraining means is detached and the pressure of the water against the elongated piston has reached a predetermined value sufficient to move the elongated piston to the armed position; means for stopping the elongated piston in said armed position, said last-named means holding the elongated piston against rotation; a second primary explosive charge aligned with said firing pin and with the first primary explosive charge when the elongated piston has moved to the armed position; and a booster explosive charge abutting the said second primary charge and in communication therewith.

3,015,271
DEPTH CONTROL DEVICE FOR A SUBFLOATING BODY
Jesse Edward MacAdams, 308 Patterson Court, Takoma Park, Md.
Filed Nov. 30, 1942, Ser. No. 467,478
15 Claims. (Cl. 102—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



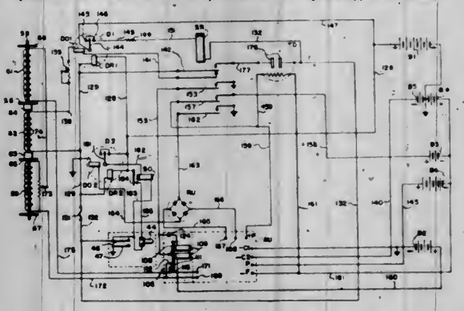
2. In a subflotating body adapted to perform an oscillating movement about a position of equilbrium below the surface of the water, a source of power, means adapted to be actuated by said source of power for varying the displacement of the body, a flotation chamber within which the displacement varying means is arranged having an outlet in communication with the surrounding water, a control chamber in communication with said flotation chamber, a pressure responsive device arranged within said control chamber adapted to be actuated to different settings by variations in the pressure received from said flotation chamber, and means controlled by said pressure responsive device for operatively connecting the displacement varying means to said source of power selectively in accordance with the settings of the pressure responsive device.

3,015,272
INTERMITTENT ARMING DEVICE FOR A MINE
Howard W. Semon, Philadelphia, Pa. (1130 Maryland Ave. NE., Washington 2, D.C.)
Filed Nov. 3, 1949, Ser. No. 125,362
6 Claims. (Cl. 102—16)
(Granted under Title 35, U.S. Code (1952) sec. 266)



1. A part-time mine arming circuit for a mine comprising, in combination, means for placing the firing mechanism in target responsive condition for a first predetermined period of time, and interrupting means operatively connected to said first-named means for cyclically placing the firing mechanism in a target non-responsive condition for a second predetermined period of time, said means for placing the firing mechanism in a target responsive condition including an armed interval control device having an electric motor, a shaft geared to said motor, a power spring which is wound up by said shaft, a switch disk having a slot therein mounted on said shaft, a protuberance integral with said switch disk, electrical switch means operated by said protuberance for arming circuit energization, a fixed bearing around said shaft, a toggle arm pivotally mounted on said bearing having a pin at one end disposed within the slot in the switch disk and having opening and closing switch engaging surfaces at the other end, switch means for the electric motor located at said other end for operation by said engaging surfaces, a self-starting escapement, and ratchet clutch power transmission means for connecting said escapement to said shaft to allow activation of the escapement only when the shaft is rotated by the power spring.

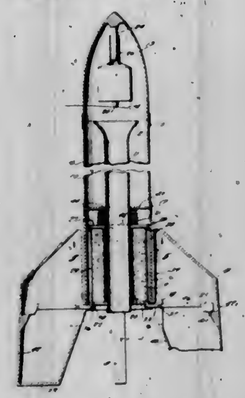
3,015,273
MAGNETIC MINE FIRING CONTROL MECHANISM
Robert H. Park, Pluckemin, N.J. (Corporation Road, Dennis, Mass.), Seymour J. Sindeband, New York, N.Y. (Stone Hill Road, Pound Ridge, N.Y.), and Edward S. Gilfillan, Manchester, Mass.
Filed Apr. 6, 1942, Ser. No. 437,812
19 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



17. In a firing mechanism for a submarine mine, the combination of means for arming the mine responsive to

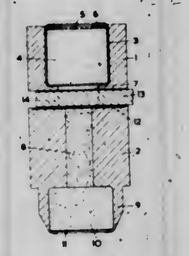
changes in the strength of the magnetic field adjacent thereto, and means for firing the armed mine selectively in accordance with the rate of change of the gradient of said magnetic field.

3,015,274
MODEL ROCKET AND PARACHUTE ASSEMBLY
Edward F. Papesh, 1504 Theodore St., Joliet, Ill.
Filed Dec. 16, 1959, Ser. No. 859,925
3 Claims. (Cl. 102—34.1)



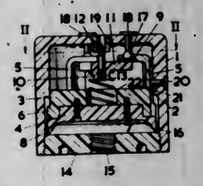
1. A rocket comprising a tubular nose section, a tubular intermediate section, means for temporarily connecting the nose section to the intermediate section, a tail section having fins extended therefrom, means for temporarily attaching the tail section to the intermediate section, a parachute assembly positioned in said tail section, a spring in the tail section for urging the parachute assembly from said tail section, and a plurality of gravity actuated fingers for retaining the parachute assembly in said tail section until the position of the rocket is inverted.

3,015,275
EXPLOSIVE INITIATORS
Stanley Victor Peyton, 18 Croft Way, Sevenoaks, England, and Edward Williams, Muriau Gwyn, Abbey Drive, Gronant, Prestatyn, Wales
Filed Sept. 3, 1958, Ser. No. 758,863
Claims priority, application Great Britain Sept. 3, 1957
1 Claim. (Cl. 102—70)



An initiator for high explosive systems comprising a forward casing, a capsule within a recess in the forward end of said casing, said capsule filled with lead styphnate, a rearward casing centrally spaced from the forward casing and attached thereto to provide an air gap therebetween, a central longitudinal channel in said rearward casing of less diameter than that of the recess in the forward casing, a column of P.E.T.N. within said longitudinal channel, an integral tubular rearward extension of the rearward casing, a recess in the tubular extension whose internal diameter is greater than that of the channel, a pellet of cyclonite within said recess and located immediately rearward of the column of P.E.T.N. in said channel, a slidable safety shutter having a port therethrough and occupying said air gap between said forward and rearward casing to maintain the initiator in an unarmed condition, said shutter operable before firing by moving said port into alignment with said recess in the forward casing and said column to provide the air gap necessary for the lead styphnate to function as a violent igniferous composition and initiate the explosive train of reactions.

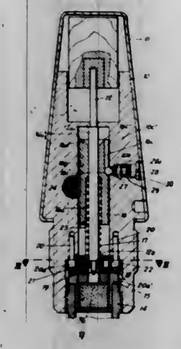
3,015,276
FUZE MECHANISMS
Benjamin John Surtees, 31 Churchill Ave., Horsham, England
Filed Sept. 3, 1958, Ser. No. 758,862
Claims priority, application Great Britain Sept. 3, 1957
2 Claims. (Cl. 102—76)



1. A striker mechanism for an impact type of fuze, comprising a casing having openings in the top and bottom thereof, a plunger slidable within said casing, symmetrically disposed tongues attached to the plunger projecting upwardly and bent radially inward, each tongue being provided with an opening in the bent portion near its end, balls disposed within each opening and free to move therethrough, a striker member having a firing pin and located interiorly of said symmetrically disposed tongues and resiliently connected to said plunger, radial arms extending from the striker member contiguous with each tongue while said striker mechanism is in safe position, said radial arms contacting the tongues to close each opening and retain the balls therein, fixed studs protruding interiorly of said casing and aligned with the respective openings of the tongues to contact and maintain the balls in a fixed position and the striker member in a safety position, pressure fluid means from a high pressure source introduced through the bottom opening of the casing to move the plunger and the tongues attached thereto upwardly away from said balls to remove the safety on the striker member, said balls held axially by the studs to maintain the striker member in an armed position and free to move laterally on impact to release the firing pin of the striker member through the top opening of the casing.

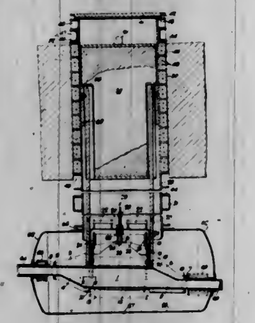
3,015,277
PERCUSSION FUZES
Helmut Junghans, Eckenhof, and Josef Müller, Unotweg 6, both of Schramberg-Sulgen, Germany, and Paul Kaiser, Weihergasse 28, Schramberg, Germany
Filed May 20, 1958, Ser. No. 736,582
Claims priority, application Germany May 20, 1957
5 Claims. (Cl. 102—78)

5. Percussion fuze particularly for unrifled projectiles comprising a fuze body, an inert member slidable in the body for forward and backward movement, a firing pin relatively slidable in the inert member, a thrust spring around the pin and bearing against the inert member with the latter movable against the action of the thrust spring, means for retarding at least the backward movement of the inert member in the event of a driving impulse of short duration, a locking slide in the fuze body to contact the firing pin, a control finger mounted on the locking slide engaging under the pin and extending into the path of movement of the inert member to bear against the inert member, a slide bolt and ball of which one half of the ball engages in the control slide and the other half in a stationary part of the fuze and the slide



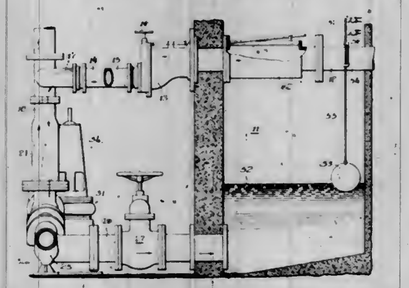
bolt being secured in position by a catch spring, and an extension of the slide bolt projecting into the path of movement of an end face of the inert member so that, during the backward movement of the inert member it will push the slide bolt forward into releasing position at the backward movement and the control finger and during this movement and during a predetermined portion of the forward movement occurring after the acceleration has ceased, continues to lock the pin locking slide.

3,015,278
ELECTROMAGNETIC PUMPS
William George Hutchinson, Appleton, near Warrington, and Leslie Charles Cole, Culcheth, Warrington, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Jan. 9, 1958, Ser. No. 707,972
Claims priority, application Great Britain Jan. 30, 1957
4 Claims. (Cl. 103—1)



1. In combination with an electromagnetic pump including a pump channel of flattened cross-section and having inlet and outlet connecting pipes, and a pair of stators disposed opposite each other adjacent said channel, said pump being disposed within thick radioactive shielding having an aperture therethrough, means for remotely inserting and removing said stators through said shielding aperture comprising guide means secured to the walls of said aperture and extending adjacent said pump channel, a carriage movable on said guide means, pivotable means connecting said pair of stators with said carriage, and means on said carriage for actuating movement of said pivotable means.

3,015,279
BY-PASS FOR PUMPING APPARATUS
Leonard M. Nechine, Highland Park, Ill., assignor, by mesne assignments, to FMC Corporation, a corporation of Delaware
Filed Sept. 26, 1958, Ser. No. 763,658
6 Claims. (Cl. 103—11)

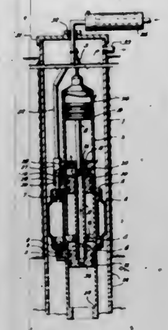


1. In combination, a sewage basin, a main inlet conduit bridging the basin, a diversion fitting on said conduit, said fitting comprising a plurality of branches, a reverse flow conduit in flow communication with each branch of said diversion fitting, a pump operatively connected to each reverse flow conduit, each of said pumps being spaced from said sewage basin and operable to pump liquid from the basin through its related reverse flow conduit, a motor for operating each pump, a pump by-pass passageway in each reverse flow conduit, a common conduit connecting said by-pass passageways with the basin, a valve element in each by-pass passageway, means to hold each valve element in open position to permit flow of liquid to the basin through the related reverse flow conduit while the related pump is idle, each of said valve elements being moved automatically into closed position when the related pump is started, separate normally open switches for each motor, means for successively closing said switches in response to rises of the liquid level in the basin, the operation of each pump stopping the flow of liquid to the basin through its related reverse flow conduit, and an overflow bar box in the main inlet conduit through which liquid may spill into the basin when all of the pumps are operating.

3,015,280
PUMP
Joseph B. King, 3423 Ozark, Houston, Tex.
Filed Nov. 19, 1959, Ser. No. 854,114
5 Claims. (Cl. 103—46)

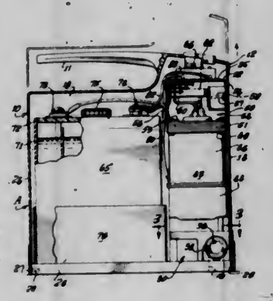
1. In a pump, a tubular member to be mounted in a well casing, inflatable packing means on said member movable into packing relation with the well casing, a pressure piston in said member and flexible conduit leading from the ground surface to the tubular member, means for pumping fluid under pressure through said conduit to inflate said packing and after said packing has been inflated to move said power piston to one direction, means for subjecting said power piston to the pressure head of the column of fluid in the casing to move said piston in the other direction, a pair of vertically aligned pump pistons actuated by said power piston and means

for directing an upward flow of fluid through said pump pistons and said casing upon upstroke of said power



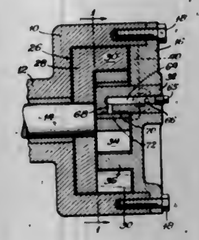
piston, means on said tubular member for deflating and releasing said packing upon upward movement of said tubular member.

3,015,281
PORTABLE LIQUID PUMP
Franklyn G. Umholtz, Long Beach, Calif. (% Cederholm, R.F.D. 1, Sunrise Lane, Sturbridge, Mass.)
Filed Feb. 23, 1960, Ser. No. 10,261
3 Claims. (Cl. 103—118)



1. A portable liquid pumping unit comprising: a vertically oriented case including a housing and a base plate, a single-cell 2-volt battery positioned within said housing and mounted vertically upon said base plate; a rotary pump positioned upon said base plate proximate the forward edge thereof, a pump inlet extending through one side wall of said housing to the exterior thereof, a pump outlet extending through the opposite side wall of said housing; a 2-volt electric motor positioned above said pump and connected thereto with the shaft of said motor vertically aligned with and connected to said pump such that said pump is rotated about a vertical axis; a battery charging unit positioned within said housing above said motor and including a 110-volt receptacle, a rectifier and a transformer, said receptacle being electrically connected to said transformer, said transformer being electrically connected to said rectifier, said rectifier being electrically connected to the negative terminal of said battery; a switch extending through said housing and operable from the exterior thereof, electrical connectors connecting the terminals of said battery through said switch to the terminals of said motor.

3,015,282
PUMP
Alfred August Camarata, Cedar Falls, Iowa, assignor to Viking Pump Company, Cedar Falls, Iowa, a corporation of Iowa
Filed Feb. 16, 1959, Ser. No. 793,557
2 Claims. (Cl. 103—126)

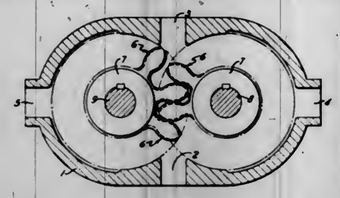


1. In a reversible gear pump, a pump housing, a driving gear journalled in the housing, a smaller idler gear within and in meshing engagement with said driving gear, said idler gear being journalled eccentrically to said driving gear on a shaft fixed in the wall of said housing and being formed so as to provide a clearance space adjacent each face of said idler gear, said housing having a crescent-shaped projection extending into the eccentric space between said two gears, said gears dividing said pump into high and lower pressure zones, said housing and shaft having formed therein at least one continuous communicating passageway extending from said high pressure zone regardless of the direction of rotation of the pump to a point on said journal which is midway between the high and low pressure zones of the pump on the side of the journal which is farthest from the full meshing point of the gears and extending through said idler gear journal and into said clearance spaces adjacent said idler gear faces so as to fill said clearance spaces, a portion of the pumped liquid being thereby continuously diverted under maximum pump pressure to the journal and equally to the idler gear faces irrespective to the direction of rotation of said gears so as to lubricate and cool the journal and provide axial balance for said idler gear, a portion of the length of said passageway being at and enclosed within the surface of said shaft, and a check valve in said passageway permitting liquid to flow only from the high pressure zone to the journal.

3,015,283
GEAR PUMPS AND MOTORS
Ulrich Knipp, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Nov. 12, 1959, Ser. No. 852,566
Claims priority, application Germany Nov. 24, 1958
7 Claims. (Cl. 103—126)

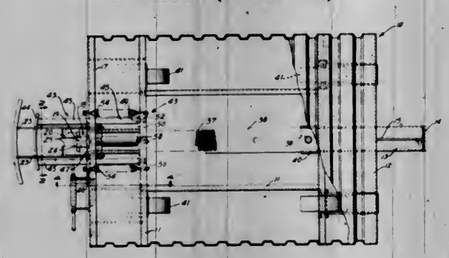
1. A gear of a resilient material for use in hydraulic pumps and motors comprising a hub portion and a plurality of tooth-like members radially extending from said hub portion, said gear having two substantially parallel side surfaces which determine the thickness of said gear, said tooth-like members each being defined by said two side surfaces, a leading surface and a trailing surface which meet at the radially outermost position of said gear to form a crest portion which extends the thickness of said gear, a longitudinal groove in each of said leading and trailing surfaces adjacent said crest portion extending the thickness of said gear to provide a sealing lip, and a pair of grooves adjacent said side surfaces of each of said tooth-like members extending from the longitudinal

groove in the leading surface of one of said tooth-like members to the longitudinal groove in the trailing surface



of the adjacent tooth-ike member to form circumferentially extending sealing lips.

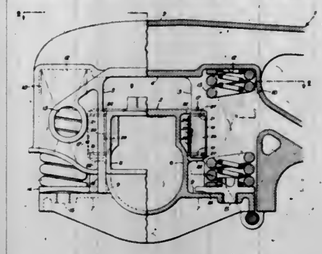
3,015,284
FLOOR TRUCK FOR SUB-FLOOR CONVEYOR SYSTEM
Paul Klamp, St. Clair Shores, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Apr. 17, 1958, Ser. No. 729,212
13 Claims. (Cl. 104—172)



1. A load conveying unit comprising a mobile load supporting carrier having a propelling member movably mounted thereon for a limited lost motion in the direction of movement of the carrier and adapted to be engaged and disengaged by a moving power device to propel said carrier when so engaged, spring means opposing the lost motion movement of said member, and anti-shock control means for said carrier connected to the latter and acting to move said propelling member out of said propelling engagement and to decelerate said carrier smoothly upon impact engagement with another object, said control means comprising a bumper device mounted on said carrier and movable thereon by said impact engagement, a shock absorber device mounted on and anchored to said carrier, and means operatively connecting said bumper device with said propelling member and said shock absorber device whereby, in the order named, to move the former out of said propelling engagement and to cause the latter to decelerate the carrier.

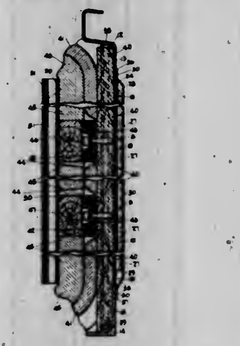
3,015,285
SNUBBED RAILWAY TRUCK
Emil H. Blattner, deceased, late of Williamsville, N.Y., by Elizabeth Blattner, executrix, Rochester, and Howard Winther, Elma, N.Y., assignors to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Feb. 9, 1959, Ser. No. 792,456
11 Claims. (Cl. 105—224)

1. In a railway truck having spring-supported and supporting members relatively movable in a plurality of angularly related directions, snubbing means comprising friction shoe means having a plurality of angularly related friction faces each frictionally engageable with one of a plurality of correspondingly related friction surfaces on said members, and rubber spring means prestressed in shear for reaction in a plurality of angularly related



directions and therethrough acting in shear on said shoe means for urging said faces and surfaces into frictional engagement and snubbing said relative movement of said members.

3,015,286
METALLIC SIDE WALL STRUCTURES FOR INSULATED RAILWAY CARS
Carl E. Johansson, Cleveland, Ohio, assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed July 14, 1958, Ser. No. 748,343
8 Claims. (Cl. 105—409)



1. A metallic car side structure for insulated railway cars comprising a side sill having an upstanding leg, a side plate having a depending flange in substantial alignment with said leg of said side sill, spaced intermediate posts, said posts having webs extending substantially between and in alignment with said flange and said leg, said webs being butt welded to said flange and leg and having vertical portions extending substantially between and outwardly of said flange and leg and portions disposed inwardly of said flange and leg, the ends of said inwardly disposed portions overlapping and being secured to the inside of said flange and leg, metallic sheathing secured to the outside of said flange, leg and webs, said inwardly disposed portions of said posts being reduced in depth by an amount substantially equal to the depth of said outwardly extending portions of said webs.

3,015,287
GRIDDLE-CONVEYOR FLIGHT
Eugene M. Noel, 238 Main St., Cambridge 42, Mass.
Filed Aug. 17, 1959, Ser. No. 834,183
9 Claims. (Cl. 107—56)

1. Conveyor flight-elements for connection at their ends in closely-spaced parallel relationship to a pair of

spaced link-belts traveling around sprockets to constitute an endless griddle conveyor, each flight-element comprising, an elongated metal member having marginal strips overlaid along the lateral edges with the inner opposed edges of the strips disposed above the face of the member to provide opposed inwardly-facing guideways along the lateral edges of the member, the sheet-metal member also having a series of spaced openings extending longitudinally thereof between the guideways, and a



flat plate mounting a longitudinal series of dough-retaining means on the face thereof, the plate being removably superimposed on the member with the lateral edges of the plate seated in the member guideways, the longitudinal spacing of the dough-retaining means being the same as the spacing of the member openings whereby the bottoms of the dough-retaining means are in registration with the respective member openings when the plate and member are superimposed as aforesaid.

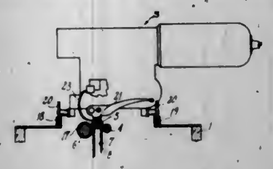
3,015,288
ARCHED ROOFS
Louis H. Hosbein, Glencoe, and Raymond E. Over, Mokena, Ill., assignors to M. H. Detrick Company, Chicago, Ill., a corporation of Delaware
Filed July 25, 1958, Ser. No. 751,003
9 Claims. (Cl. 110—99)



1. The combination with a framework of an arched refractory furnace roof having refractory bricks mounted in fixed position relative to adjacent bricks, said bricks being each provided with metallic means secured to said bricks against any movement relative thereto, metallic members extending crosswise of the roof, securing means connecting said metallic means and said metallic members rigidly to each other, metallic members extending longitudinally of said roof, securing means connecting said longitudinally extending metallic members and said crosswise extending metallic members rigidly to each other and means for anchoring said longitudinally extending metallic members to said framework.

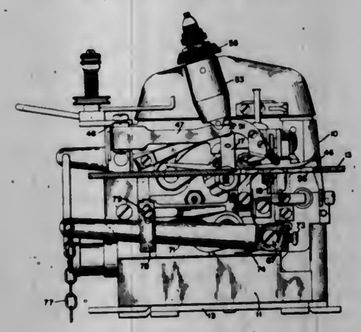
3,015,289
SEWING MACHINES
Gaston Vendittl, 44 Ave. Jules Valles, Coeuilly-Champigny, France
Filed July 1, 1958, Ser. No. 746,029
12 Claims. (Cl. 112—2)

1. For use with a portable sewing machine having spaced supporting wheels, an attachment for stitching collars and lapels comprising a frame, a pair of spaced rails on said frame adapted for engagement by said pair of spaced supporting wheels of said sewing machine, a set of elongated rollers having ends journalled on said frame and extending between said rails and parallel thereto and adapted for gripping between adjacent surfaces thereof at least two juxtaposed plies of material to be stitched by said machine as the machine is advanced over said rails, one of said rollers being positioned to support the juxtaposed plies of material during the sewing thereof about the upper part of the periphery of said



roller and means connected to at least one end of at least one of said rollers for pivoting the latter about the axis thereof in a direction transverse to the stitching produced by the machine during advance thereof over said rails for shifting said plies over the supporting roller in a direction transverse to the axis thereof.

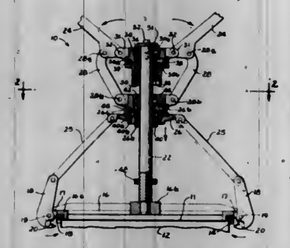
3,015,290
STITCH LENGTH CONTROL FOR SEWING MACHINES
Arthur N. Hale, Park Ridge, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Filed May 28, 1958, Ser. No. 738,333
6 Claims. (Cl. 112—210)



1. In a sewing machine having a frame provided with a work-supporting surface, a four motion feed dog having a work engaging top portion, means for imparting movement to said feed dog to carry said work engaging portion thereof along a substantially elliptical path partially above and partially beneath said surface and a presser foot spring urged toward said surface, the combination which comprises a throat plate arranged to provide a portion of said surface through which said feed dog is moved perpendicularly thereto and longitudinally thereof in the direction of feed, vertically movable means on which said throat plate is mounted for lifting movement into different positions in relation to said surface, and the path of the work engaging portion of said feed dog, a member operable during the operation of the machine at the will of the operator connected with said vertically movable means for lifting said throat plate into said different positions to vary the extent of said path along which the said work engaging portion of the feed dog is above the work supporting surface of the throat plate, means for normally urging said throat plate into a predetermined vertical position in relation to the path of said feed dog, and adjustable means providing a positive stop

for predetermining the extent of movement of said throat plate by said member and thereby verying the effective feed stroke of said feed dog to a pre-selected amount.

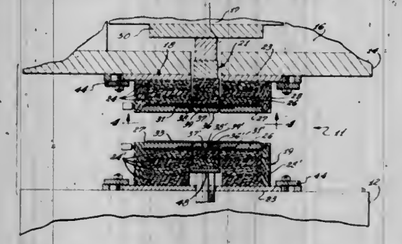
3,015,291
DRUM CLOSING TOOL
Christian Ragettli, Chicago, Ill., assignor to Grotnes Machine Works, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 10, 1958, Ser. No. 720,366
6 Claims. (Cl. 113—18)



1. A drum closing tool having a circular base plate adapted to seat against the flanged lid of a drum and having a series of crimping levers pivotally mounted around its peripheral edge to swing from retracted positions to operated positions to crimp the flange of the lid to the drum, said tool having means operable manually for swinging the crimping levers step-by-step from retracted to operated positions comprising, in combination, a standard extending upwardly from the base plate, a first collar mounted on and slidable axially of said standard, a second collar mounted on said standard between said first collar and the base plate and slidable axially thereon, links pivotally connected between said second collar and the respective levers operative to rock the levers toward operated positions as the collar moves toward the base plate and to retract the levers as the collar moves away from the base plate, a pair of hand levers pivotally mounted on said first collar to swing from a generally upright retracted position outwardly and downwardly to an actuated position, a pair of links pivotally connected to the respective hand levers and to said second collar, standard gripping means for each collar normally allowing said collars to move toward the base plate while restraining them against movement away from the base plate thereby conditioning said first collar to define stationary fulcra for said hand levers to enable them to move said second collar toward the base plate when the levers are rocked from retracted to operated position and conditioning said second collar and the links of said pair to define stationary fulcra for said hand lever to enable them to move said first collar toward said base plate when the levers are rocked from the actuated to the retracted position, means operative in response to the movement of said collars through a predetermined range for releasing said gripping means to free the collars for return movement, and means operative in response to the return of the collars to retracted position for resetting the gripping means for a subsequent operation.

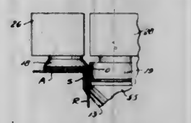
3,015,292
HEATED DRAW DIE
Robert A. Bridwell, Lynwood, Calif., assignor to Northrop Corporation, Hawthorne, Calif., a corporation of California
Filed May 13, 1957, Ser. No. 658,810
3 Claims. (Cl. 113—49)

1. In a metal forming press having open and closed positions and including holding and main rams aligned respectively with a bed plate and a die cushion, the combination comprising: upper and lower die members each including a metallic holding plate having opposed side surfaces and outer edge surfaces and having a die receiving opening formed therein; said die members including insulating material mounted on said holding plates, on a side surface thereof and covering the outer edge surfaces of each of said holding plates; said insulating material being further characterized by having openings formed therein which are aligned with the die receiving openings in said holding plates when mounted on said holding plates; means mounting said upper and lower die members on said holding ram and bed plate, respectively, with the exposed side surfaces of said holding plates in spaced, opposed and aligned relation; male and auxiliary die members each including a metallic punch plate each having



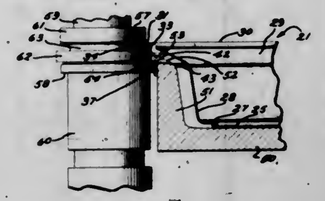
opposed side surfaces; insulating material mounted on a side surface of each of said punch plates; means mounting and positioning said male and auxiliary die members in said die receiving openings and on said main ram and die cushion, respectively; said male and auxiliary die members as mounted on said main ram and die cushion being further characterized in that the exposed side surfaces of said punch plates have an opposed relation with respect to each other and a coplanar relation with respect to the exposed surface of said holding plate with which they are associated at such time as said press is in said open position; and said upper, lower, male and auxiliary die members including heating units having heating elements which are completely surrounded by said insulating material, holding and punch plates and are equally spaced from the exposed side surfaces of said holding and punch plates.

3,015,293
SEAMER AND METHOD
Fletcher L. Parham, 1225 Lexington Ave., Akron, Ohio
Filed June 14, 1957, Ser. No. 666,281
15 Claims. (Cl. 113—54)



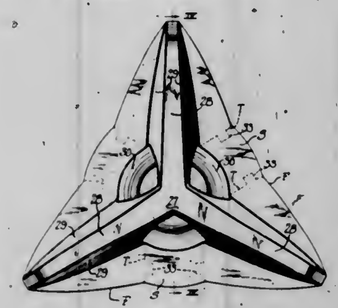
5. In the process of closing a Pittsburgh lock from the assembly of an angled sheet-metal member and a replaited sheet-metal member with an S-fold therein in which is an outer bend, with an outstanding edge extending beyond the S-fold in substantially the same plane as the replaited member inside of the S-fold, with the bent edge of the angled member in the S-fold, the step of pressing said members to hold them in said relation by applying pressure continuously and progressively (1) to the outside surface of the angled member inside of the bend and (2) directly to the outer bend of said fold in the direction of the angled member at about 45° to the original plane of the outstanding edge and completing the closing of the lock.

3,015,294
METHOD OF MAKING WHEEL COVERS
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed July 22, 1955, Ser. No. 523,674
3 Claims. (Cl. 113—116)



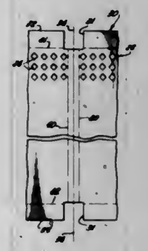
1. In a method of making wheel covers, shaping a sheet metal blank into a circular member body with a return bent outer generally radially projecting marginal formation and a retaining flange extending axially therefrom in concealed relation spaced radially inwardly from the edge of said marginal formation, supporting said marginal formation against axial displacement, and while thus supporting said marginal formation bending said axially extending flange intermediate its length into a generally radially inwardly extending offsetting reinforcing and seating shoulder but maintaining the flange on opposite axial sides of the shoulder in the axial orientation but with the free end portion of the flange offset radially inwardly relative to the axial portion of the flange between said shoulder and said marginal formation.

3,015,295
METHOD OF MAKING SHEET METAL WHEEL COVER MEMBERS
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Original application July 1, 1955, Ser. No. 519,341, now Patent No. 2,935,358, dated May 3, 1960. Divided and this application Apr. 30, 1958, Ser. No. 732,016
4 Claims. (Cl. 113—116)



1. In a method of making a central arm member for disposition at the outer side of a vehicle wheel cover, drawing a sheet metal blank into a plurality of generally radially extending rib-like arms with gusset-like reinforcement portions adjacent juncture of the arms and disposed between side wall portions of the arms lying in generally axial planes, during such drawing maintaining coplanar flat flanges angularly to said side wall portions between the tip portions of the arms and connecting the adjacent side wall and gusset portions as continuations therefrom, severing intermediate and limited partial portions of said flanges in line with and from the edges of said gusset-like portions to thereby separate the remaining portions of the flanges providing extensions from the side walls of the arms, and thereby leaving gaps in the flanges bounded by edges on the gusset-like portions between the side walls of the arms and also confronting edges on the separated extensions, and completing the side walls of the arms by bending said separated remaining flange portion extensions into coplanar relation to the generally axial planes of the side walls of which they are extensions.

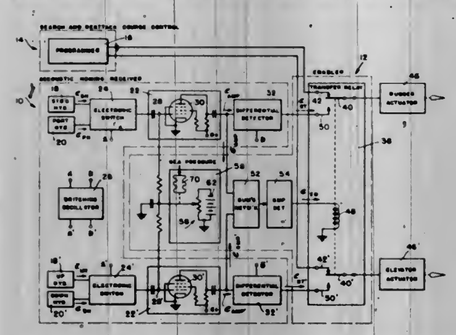
3,015,296
METHOD OF MAKING RIBBED DISPLAY PANEL
Donald L. Mapson, La Habra Heights, Calif., assignor to M & D Store Fixtures, Inc., Industry, Calif., a corporation of California
Original application Jan. 20, 1958, Ser. No. 710,106. Divided and this application Feb. 12, 1959, Ser. No. 792,891
2 Claims. (Cl. 113—116)



1. A method of making a perforated display panel from a rectangular sheet of metal of such longitudinal and transverse dimensions as to be a suitable work piece for a multiple power punch and a rib forming die, said method comprising the steps of positioning said sheet with a transverse edge portion thereof aligned with said multiple punch and in readiness to be punched thereby, punching a straight row of holes in said sheet, the centers of adjacent pairs of holes in said row being spaced apart a particular given distance, excepting certain adjacent pairs of holes in said row, the centers of which are spaced apart a whole multiple of said given distance, repeating said punching step at regular time intervals, shifting said sheet said given distance longitudinally during each such time interval to cause the aforesaid repeated operation of said multiple power punch to produce a multiple of like straight rows of holes in said sheet, the centers of adjacent rows being uniformly spaced apart said given distance, and to produce longitudinally disposed imperforate rib areas between the adjacent holes in said rows which are spaced apart a whole multiple of said given distance, positioning said sheet with each of said rib areas in turn symmetrically aligned with said rib forming die, and die-forming a rib from each of said rib areas which will contract said sheet to bring the centers of the holes bordering said rib area in each of said rows of holes to a spacing of precisely said given distance.

3,015,297
ENABLING DEVICE FOR ACOUSTIC TORPEDO HOMING SYSTEMS
Dwight L. Supernaw, Key West, Fla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 10, 1959, Ser. No. 819,518
3 Claims. (Cl. 114—23)

1. In a torpedo having an acoustic homing apparatus and having an acoustic level operated device for enabling the acoustic homing apparatus wherein sound sensing means transforms sonic energy to an electrical signal, an amplifier transforms said electrical signal to an amplified signal and relay means receives said amplified signal, the relay means being adapted to enable the acoustic homing system upon receipt of an amplified signal of a predetermined level to permit steering of the torpedo, the improvements, in combination, comprising; adjustable means to vary the gain of said amplifier, and pres-



sure responsive means adapted to sense depth of submergence of the torpedo within a range of depths wherein the level of torpedo self noise received by said sound sensing means is above minimum, said pressure responsive means being operatively connected to said adjustable means to vary the gain of said amplifier as a function of depth of submergence of the torpedo whereby the acoustic homing system will not be enabled by self noise.

3,015,298
SHIP STABILIZERS
John Bell, John Victor Foll, and Francis Heron Muirhead, all of Beckenham, England, assignors to Muirhead & Co. Limited, Beckenham, England
Filed May 4, 1961, Ser. No. 107,851
Claims priority, application Great Britain Mar. 23, 1961
4 Claims. (Cl. 114—126)



1. A movement control fin comprising a shaft for securing to the structure the movement of which is to be controlled, a fin element mounted on the shaft for oscillatory movement about the shaft axis, a web integral with the shaft and extending into the body of the fin element, inflatable means mounted one on each side of the web between the web and the fin element and fluid passages extending from within the inflatable means to outside the fin element.

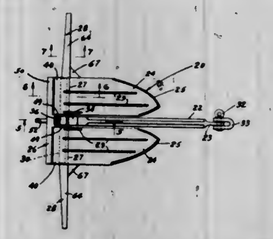
3,015,299
MOORING ANCHOR
Richard C. Towne, 822 W. Roderick Ave., Oxnard, Calif., and Johnnie V. Stalcup, 533 Acacia Road, Santa Paula, Calif.
Filed Dec. 23, 1959, Ser. No. 861,725
3 Claims. (Cl. 114—208)
(Granted under Title 35, U.S. Code (1952) sec. 266)

1. A light-weight, heavy-duty mooring anchor comprising:

a shank having an outer end with a shackle for attachment to a mooring cable, an inner end with a trunnion bar receiving bore, and integrally formed abutment means on opposite vertical edges of said shank near said bore, said abutment means having inner faces parallel to the axis of said bore and inclined outwardly toward the outer end of said shank;

a generally angular box-like crown assembly having main sides meeting in an apex pointing toward the outer end of said shank, said crown assembly being disposed equally on either side of said shank with said apex parallel to the transverse axis passing through said shank bore and disposed toward the outer end of said shank with relation to said transverse axis;

a trunnion bar extending transversely of said shank through said bore;



means in said crown assembly for receiving the trunnion bar whereby said crown assembly is pivotally supported about the inner end of said shank;

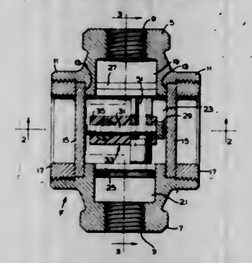
centrally disposed massive stopper means carried by said crown assembly, said stopper means being adapted to coact with said shank abutment means to limit the rotation of said crown assembly with respect to said shank to an angle of 50° on either side of the longitudinal axis of said shank;

detachable means for attachment to the inner faces of said shank abutment means for limiting the rotation of said crown assembly to an angle of 35°;

twin flat flukes secured to the apex of said crown assembly, said flukes being disposed on opposite sides of said shank and extending toward the outer end of said shank a distance of .535 to .600 of the length of said shank; and

a plurality of truncated triangular stiffeners for each of the flat sides of said flukes, said stiffeners being disposed parallel to the axis of said shank.

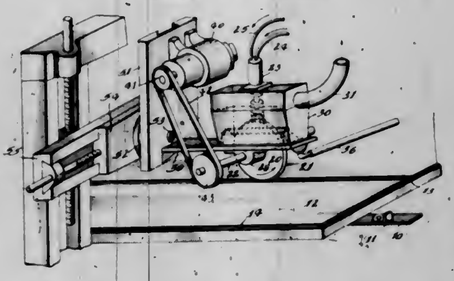
3,015,300
FLOW INDICATOR UNIT
George S. Tarbox, Yonkers, N.Y., assignor to Jacoby-Tarbox Corporation, Yonkers, N.Y., a corporation of New York
Filed Apr. 29, 1960, Ser. No. 25,631
3 Claims. (Cl. 116—117)



1. A fluid flow indicator unit including a fitting in communication with a pipe line, said fitting having a flow

passage therethrough in communication with said pipe line, a transparent pane defining a wall of said fitting, and a rotor operatively mounted in said passage, a spindle fixed in said fitting and rotatively mounting the rotor, said rotor being visible from the exterior of said fitting through said transparent pane, and said rotor comprising a tubular axle having a longitudinal bore therethrough and formed with a pair of axially spaced transverse openings therethrough, with the respective axis of each of said openings disposed at ninety degrees to each other and to said bore, a pair of impellers, one of said impellers extending through one of said openings and the longitudinal bore, and the other of said impellers extending through the other of said openings and the longitudinal bore, means coactive between each impeller and the spindle for preventing lateral displacement of an impeller relative to the axle, and each of said impellers extending radially in opposite directions beyond said tubular axle.

3,015,301
APPARATUS FOR PAINTING
Ludwig K. Heinrich, Chesterton, Ind., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 7, 1958, Ser. No. 772,595
4 Claims. (Cl. 118—239)



1. Apparatus for applying paint, comprising a paint transfer wheel, the wheel having a beveled paint carrying and applying peripheral face, a paint spray gun mounted adjacent thereto and supplying a uniform coat of paint directly to the peripheral face of the transfer wheel for application thereby, a hood member mounted on said spray gun enclosing said spray gun and a portion of said paint transfer wheel, and deflecting shield members connected to the bottom periphery of said hood and extending upwardly therefrom closely embracing said paint transfer wheel on each side thereof to deflect over-spray from said spray gun and form a reservoir for reception of said over-spray.

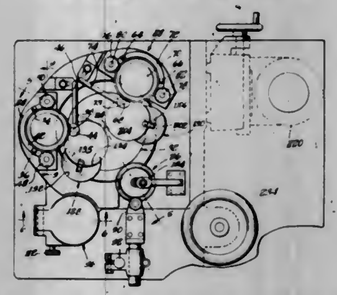
3,015,302
CAN END COATING NOZZLE
Teddy Miller, John H. Anderson, and David J. Rosbe, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Original application Sept. 9, 1957, Ser. No. 682,755. Divided and this application May 6, 1959, Ser. No. 811,479
6 Claims. (Cl. 118—318)

3. A compound applying nozzle for applying sealing compounds to a rotating can end in two separated lines with the nozzle being centered between said two lines, said nozzle comprising a hollow body to receive the compound, said body being generally conical in outline and being downwardly tapered to a tip having two downwardly converging flat surfaces meeting along a line disposed generally tangential to the path of the rotating can end disposed therebelow to provide clearance for compound being applied, said tip having a downwardly disposed compound discharge opening extending entirely



through said body and opening at least partially through each of said flat surfaces remote from said meeting line.

3,015,303
APPARATUS FOR PROCESSING CAN ENDS
Roger H. Stohlquist, Rockford, Ill., assignor to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois
Filed June 1, 1959, Ser. No. 817,248
13 Claims. (Cl. 118—318)

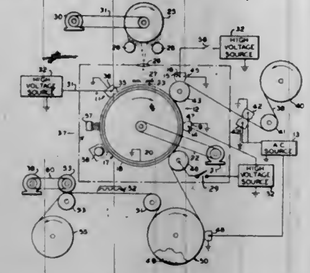


1. An apparatus for successively processing a plurality of workpieces comprising a feeding station, a processing station and a discharge station, endless carrier means extending past all of said stations, first chuck means mounted on said carrier means and movable past all of said stations for delivering successive workpieces from said feeding station to said processing station, second chuck means on said carrier means and movable past all of said stations for delivering processed workpieces from said processing station to said discharge station, and means at said processing station for processing workpieces after the workpieces have been delivered thereto by said first mentioned chuck means and before the workpieces are transferred therefrom by said second mentioned chuck means.

3,015,304
ELECTROSTATIC IMAGE REPRODUCTION
Chester F. Carlson, Pittsford, and Harold Bogdonoff, Rochester, N.Y., assignors, by mesne assignments, to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed Oct. 2, 1957, Ser. No. 687,669
17 Claims. (Cl. 118—637)

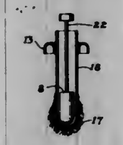
7. In image forming apparatus in which an electrostatic latent image is formed on an insulating web conforming in configuration to an original pre-formed electric image pattern including first and second guide means to place a first surface of the insulating web against the pre-formed electric image pattern and to maintain said web stationary relative to said image pattern, means to apply an intense electric field between said web and said electric image pattern while said web is maintained relatively stationary against said image pattern, and means to separate said web from said image pattern, the improvement comprising said second guide means being an electrically insulated conductive electrode positioned and

disposed relative to said web against said image pattern contacting the second surface of said web as said web is



separated from said image pattern, a potential source, and means to connect said second guide means to said potential source.

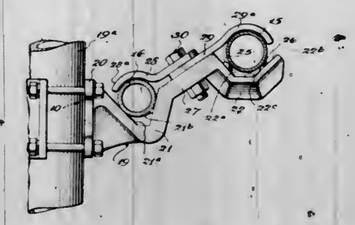
3,015,305
DEVELOPMENT OF ELECTROSTATIC IMAGES
Richard H. Hall, Rochester, N.Y., and John W. Bird, Jr., Royal Oak, Mich., assignors to Xerox Corporation, Rochester, N.Y., a corporation of New York
Filed May 23, 1958, Ser. No. 739,453
14 Claims. (Cl. 118—637)



3. Apparatus for making visible an electrostatic image through the deposition thereon of magnetic developer powder particles, the apparatus comprising in combination means for moving a member bearing an electrostatic image past a powder depositing position, a plurality of magnetic field producing means, a continuous non-magnetic shield enclosing said field producing means and closely spaced therefrom, said field-producing means being positioned and adapted so that the magnetic field produced thereby contains a substantial field component perpendicular to said shield and extending externally therefrom, means for supplying magnetic developer particles in contact with the exterior of said non-magnetic shield whereby said particles are formed into a brush-like array by the lines of force of said field producing means, means for withdrawing said field producing means relative to said shield, a projecting non-magnetic collar encircling the portion of said shield from which said field producing means may be withdrawn and positioned and adapted thereon so that as the field producing means is withdrawn from said shield said developer particles are retained by the collar and thereby restrained from following the field producing means as it is withdrawn, and means for rotating said field producing means causing said developer particles to move in contact over said shield in brush-like configuration and through said depositing position.

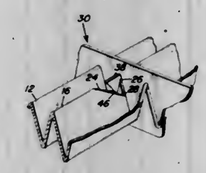
3,015,306
MILK PIPELINE SUPPORT
Thomas W. Merritt, St. Charles, and Chester A. Thomas, Lake Forest, Ill., assignors to Babson Bros. Co., a corporation of Illinois
Filed Jan. 19, 1959, Ser. No. 787,516
3 Claims. (Cl. 119—14.03)

1. A support for a pipeline, comprising: a bracket member having an upwardly opening pipe receiving portion with a recess therein; roller means in said recess having a pipe engaging surface spaced from the pipe receiving portion of said bracket; a pipe resting on said roller means;



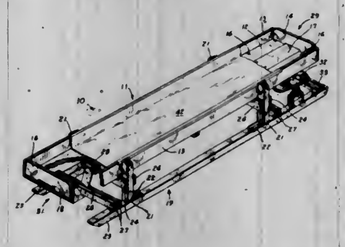
and a keeper closing said upwardly opening pipe receiving portion of said bracket, arched over and spaced from while generally conforming with said pipe whereby said pipe is free to move both longitudinally and laterally.

3,015,307
CHICKEN FEEDER
William A. Johnson, 607 5th St. NE., and Joe R. Short, 705 Guntersville Road, both of Arab, Ala.
Filed May 1, 1959, Ser. No. 810,311
3 Claims. (Cl. 119—61)



1. A chick feeder comprising a horizontal, accordion plaited panel defining a series of integral, parallel, generally V-shaped feed troughs, vertical horizontally elongated supporting plates mounted transversely on said panel, said supporting plates having therein longitudinal zigzag slots slidably receiving the troughs, and means for securing said plates in position on the troughs, said panel having notches in certain of the apex portions thereof, said means including bendable tabs integral with the plates and engageable in the notches.

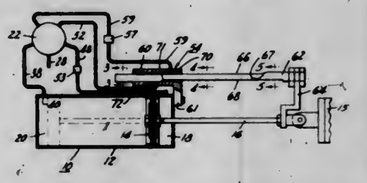
3,015,308
FEED BUNK
Hobart Beresford, Ames, Iowa, assignor to Iowa State College Research Foundation, Ames, Iowa, an association of Iowa
Filed Oct. 8, 1959, Ser. No. 845,135
6 Claims. (Cl. 119—61)



1. A dry material feeding apparatus comprising, an elongated feed trough having a bottom wall with an elongated movable central portion, means supporting said

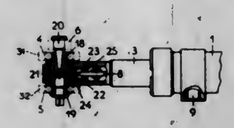
feed trough, means resiliently mounting said central portion on said supporting means for longitudinal and vertical movement thereof relative to said bottom wall, means mounted on said supporting means for reciprocally moving said central portion in a direction toward one end of said feed trough, and means secured to the inner surfaces of said feed trough and movable in a rippling manner over said bottom wall upon movement of said central portion.

3,015,309
STAGE MOTOR
Leonard Edmond Austin, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 1, 1955, Ser. No. 544,132
4 Claims. (Cl. 121—38)



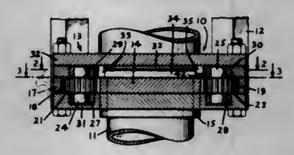
1. A motor mechanism for controlling the movement of a load in a plurality of directions said mechanism including a double acting, double ended pressure differential operated motor comprising a cylinder and a power element therein, means connected with the power element and adapted to be connected to the load the movement of which is to be controlled, and means for controlling the operation of the motor including a 4-way valve for controlling the influx of power fluid into the motor to impose a force upon the power element and to determine the direction of movement of the load to be moved, other valve means, comprising a part, having fluid controlling ports therein, fixed to the cylinder and a part fixedly secured to the power element and reciprocable within the latter part, separate conduits interconnecting said ports with the 4-way valve, and two separate conduits interconnecting the motor with the 4-way valve, said conduits and valve mechanism serving to control the efflux of power fluid from the motor and thereby control the mode of movement of the load as it is moved from one place to another, the part connected to the power element having a plurality of flat faced portions and a plurality of tapered portions thereon both of said portions cooperating with the aforementioned ports to control the efflux of power fluid from the motor.

3,015,310
HOLLOW PISTON JACK AND CONTROL VALVE
Jacques Faisandier, 32 Blvd. Felix-Faure à Chatillon-sous-Bagneux, France
Filed July 7, 1958, Ser. No. 747,081
Claims priority, application France July 12, 1957
7 Claims. (Cl. 121—38)



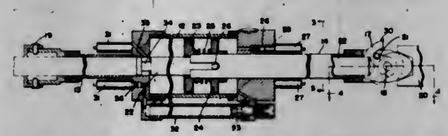
1. A pressure operated jack comprising a movable hollow piston and a cylinder in which said piston operates, a hollow piston rod extending from said piston, a slide-valve distributor slidingly disposed in said hollow piston, control means external to the jack to transmit an input movement, a control rod slidably extending through said hollow piston rod and operatively connected to said control means and to said slide-valve whereby said slide valve and said control rod may slide longitudinally with respect to said piston rod and piston and also move bodily with said piston and piston rod, hollow trunnion means on said hollow piston rod arranged substantially perpendicular to the direction of movement of said hollow piston and rod, and a transmission member freely passing through said hollow trunnion means and operatively associated with said control means externally of said jack whereby said control rod is operatively connected with said control means.

3,015,311
SHIMMY DAMPENING DEVICE FOR AIRCRAFT LANDING GEAR
Benjamin N. Ashton, Kingston, N.Y., assignor, by mesne assignments, to Electrol Incorporated, a corporation of New York
Filed Apr. 28, 1959, Ser. No. 809,511
12 Claims. (Cl. 121—39)



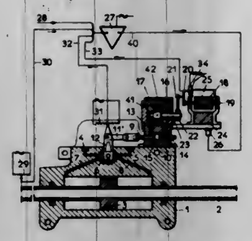
1. An anti-shimmy mechanism for steerable landing gear of aircraft comprising a casing, a gear member rotatable in said casing, a plurality of pinions rotatably mounted in said casing and meshing with said gear member and forming therewith a plurality of gear pumps each having an inlet and an outlet, and passages in said casing directly connecting the inlet of each of said gear pumps to the outlet of at least one of the other gear pumps to form a flow circuit for circulation of liquid therethrough, and means in at least one of said passages for restricting flow of liquid through said passages to resist relative rotation of said gear member of said casing.

3,015,312
SELECTIVE MULTICYCLE ACTUATOR
Albert M. Stott, Aldan Clifton Heights, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Oct. 26, 1959, Ser. No. 848,876
6 Claims. (Cl. 121—40)
(Granted under Title 35, U.S. Code (1952) sec. 266)



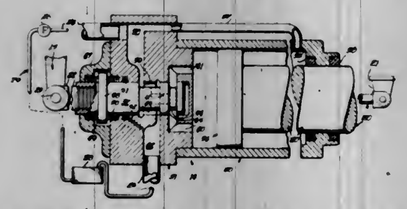
1. In an actuator, the combination of a cylinder, first and second pistons movable in said cylinder, a keeper, a tubular member fixed at one end to said first piston, a latch pivoted to the other end of said member and arranged to lock said member to said keeper, a latch operating rod extensible through said member and said cylinder and movable with said second piston for controlling said latch, means biasing said pistons to a spaced relationship, means for applying a first pressure whereby said second piston and said rod are moved to unlock said latch and said rod and said member are thereafter moved into said cylinder, and means arranged to apply to the first of said pistons a second pressure whereby said first pressure is relieved and said rod and said member are moved into locking engagement with said keeper.

3,015,313
SERVO-CONTROLS
Jacques Faisandier, 32 Blvd. Felix-Faure, Chatillon-sous-Bagneux, France
Filed Jan. 11, 1957, Ser. No. 633,718
Claims priority, application France Jan. 18, 1956
6 Claims. (Cl. 121—41)



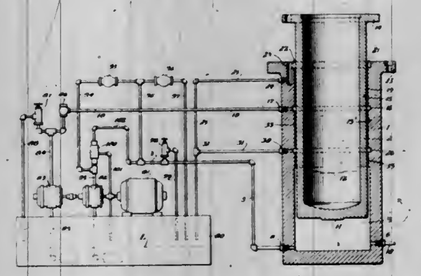
1. In a hydro-electric servo control mechanism in which the final position of the principal hydraulic device is defined by an input voltage, the output movement of the hydraulic device deriving a feedback voltage, the combination comprising a torque motor having a rotor and normally responsive to the combined input and feedback voltages, an auxiliary valve distributor controlled by said torque motor, first electric means controlled by the output movement of said torque motor to provide an output voltage, an auxiliary hydraulic device controlled by said auxiliary valve distributor, second electric means controlled by the output movement of said auxiliary hydraulic device to provide a second output voltage, a principal valve distributor controlling said principal hydraulic device and controlled by said auxiliary hydraulic device, means for applying to the input of the torque motor the combined output voltages of said first and second electric means and the combined input and feedback voltages.

3,015,314
HYDRAULIC POWER STEERING ARRANGEMENT
Don S. Strader, Mount Prospect, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Jan. 12, 1959, Ser. No. 786,425
3 Claims. (Cl. 121—41)



1. A hydraulic motor and valve arrangement for a vehicle steering system comprising, a hydraulic cylinder, a piston and rod slidably carried in said cylinder, said piston having an area which is substantially equal to twice the cross-sectional area of said rod, a valve body mounted on the head end of said hydraulic cylinder, a valve bore formed in said valve body and connected in free fluid communication with the head end of said hydraulic cylinder, a hydraulic fluid passageway connected between said valve bore and the rod end of said cylinder, a high pressure hydraulic fluid inlet formed in said valve body and connected to said passageway in free fluid communication therewith, a low pressure hydraulic fluid outlet formed in said valve body and connected to said valve bore in free fluid communication therewith at a longitudinal position of said valve bore between the connection of said passageway to said valve bore and the connection of said valve bore to said head end of said hydraulic cylinder, a valve spool slidably carried in said valve bore, two annular grooves formed in said valve spool and separated by a land, a second hydraulic fluid passageway formed in said valve spool between said two annular grooves; said two annular grooves, said land, and the connections of said first passageway and said low pressure hydraulic fluid outlet to said valve bore relatively positioned so that in one longitudinal position of said valve spool relative to said valve bore, said low pressure hydraulic fluid outlet is blocked by said land, and said first passageway and the head end of said hydraulic cylinder are interconnected in free fluid communication through said second passageway, so that in a second position of said valve spool relative to said valve bore, said first passageway is connected to said low pressure hydraulic fluid outlet through one of said annular grooves, and the head end of said hydraulic cylinder is connected to said low pressure hydraulic fluid outlet through said second passageway, and so that in a third position of said valve spool relative to said valve bore said first passageway is blocked by said valve spool, and the head end of said hydraulic cylinder is connected to said low pressure hydraulic fluid outlet through said second passageway.

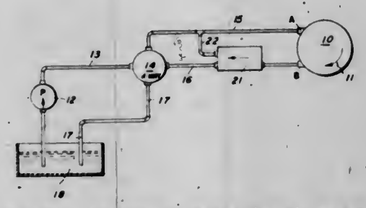
3,015,315
PISTON-CENTERING MEANS FOR HYDRAULIC TESTING MACHINES OR THE LIKE
Robert S. Strimel, Penllyn, Pa., assignor to Tinius Olsen Testing Machine Company, Willow Grove, Pa., a corporation of Pennsylvania
Filed Sept. 28, 1959, Ser. No. 842,828
11 Claims. (Cl. 121—46)



1. In a testing machine or the like: a cylinder having an inside wall; a piston disposed in said cylinder in close association with said wall and arranged to move along the axis of the cylinder; a first source for developing fluid pressure; a chamber formed in said cylinder connected to receive fluid from said first source to develop a force for controlling the movement of said piston; a second source for developing fluid pressure independent of said first source; fluid inlet means on said wall open to said piston and symmetrically oriented about the axis of the cylinder, the inlet means being connected to receive fluid from said second source; first fluid outlet means on said wall spaced from said inlet means and open to said piston and symmetrically oriented about the axis of the cylinder; and second fluid outlet means on said wall spaced from said inlet means at the opposite side thereof as said first inlet and open to said piston and symmetrically oriented about the axes of the cylinder and arranged to receive leakage fluid, if any, from said chamber, said second source and said inlet and outlet means cooperating to cause fluid to flow into and from said inlet along the wall of said cylinder to and through said outlets to create a fluid pressure zone as between the wall and the

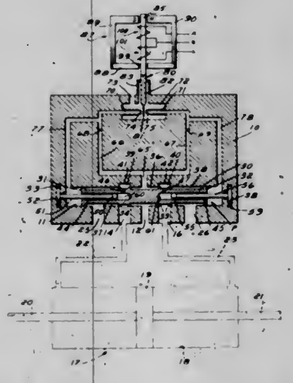
piston, the zone extending around the piston and for an axial length to center the piston substantially along the axis of the cylinder so as to avoid friction contact between the piston and the cylinder.

3,015,316
COUNTERBALANCE VALVES AND THE LIKE
William W. Thomas, Glenview, Ill., assignor to William Waterman, Evanston, Ill.
Filed Jan. 8, 1959, Ser. No. 785,701
6 Claims. (Cl. 121—46.4)



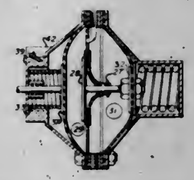
1. In a system for controlling a hydraulic motor the combination comprising a hydraulic motor having inlet and discharge, a source of pressure fluid including lines leading respectively to said inlet and discharge, a counterbalance valve interposed in said discharge line, said valve having throttling valve means controlling discharge through said discharge line, said throttling valve means having pressure responsive means for controlling its operation, a pilot line leading from said inlet line to said pressure responsive means to render the latter responsive to pressure in said inlet line, and a by-pass passage for said discharge line around said throttling valve means and having therein a check valve to limit flow through said by-pass passage to flow in a direction opposite to discharge flow.

3,015,317
PRESSURE CONTROL SERVO VALVE
J. D. Buchanan, Burbank, and Bert Smith, Jr., Los Angeles, Calif., assignors to Hydraulic Research and Manufacturing Company, Burbank, Calif.
Filed Feb. 11, 1958, Ser. No. 714,650
7 Claims. (Cl. 121—46.5)



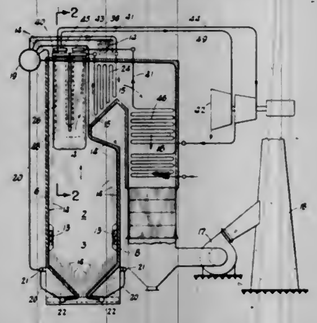
1. A control mechanism for a hydraulic control system, comprising: a valve mechanism including a housing having a cylinder therein; a valve member slidably disposed in said cylinder, said valve member including a body having flanges thereon defining in said body a central annular chamber receiving pressure fluid from a source of pressure, an annular actuator fluid chamber at each side of said central chamber, and an annular fluid return chamber spaced outwardly of each actuator fluid chamber, said cylinder having a central pressure fluid inlet port communicating with said central chamber, an actuator fluid port spaced axially outwardly of said central chamber for connection with the opposite ends of the cylinder of an actuator device and communicating with the respective actuator fluid chambers, there being a recess in the wall of the cylinder forming a chamber connected with said actuator fluid chambers, a return port spaced outwardly of each of the actuator fluid ports and communicating with the respective return chambers, said valve body having a bore extending longitudinally inward from each end and closed at the inner end, the inner end of each bore being connected with the adjacent actuator fluid chamber; a pressure holding piston operably disposed in each bore and mounted against independent movement, slight movement of the valve in either direction resulting in communication between the central chamber of the valve body and the respective adjacent port, connecting the other adjacent port with a respective return port, and connecting said central chamber with the actuator fluid chamber next thereto in the direction of movement of said valve member; means connecting the respective ends of said cylinder with pressure fluid; means for maintaining the pressures at the ends of said cylinder at substantially the same value so that said pressures are balanced against said valve ends; and means for unbalancing said pressure to effect movement of said valve member.

3,015,318
AIR BRAKE BOOSTER
Clarence Mendes, San Jose, Calif. (744 Lemos Ave., Salinas, Calif.)
Filed Apr. 4, 1960, Ser. No. 19,785
9 Claims. (Cl. 121—48)



1. An air brake booster, comprising: a pair of similar, flange lipped, circular, cup-shaped parts arranged coaxially with their open ends and flanges in opposition and their bottoms away from each other, three diaphragms extending across and between said cups and flanges, a piping ring between and peripherally coextensive with said flanges, and means clamping together the above parts; one of said cups being a service cup and the other a safety cup, said diaphragms being a service, a septum, and a safety diaphragm, said septum diaphragm being between said service and safety diaphragms which, respectively, close said service and safety cup open ends, said septum diaphragm being formed with a rigid annulus and a flexible disc across the opening of said annulus, said service and safety diaphragms and said septum disc being formed of a flexible rubber like material, said service and safety diaphragms each being flexible and movable to each form a space between it and said septum, the space between service diaphragm and septum being a service space, and the space between safety diaphragm and septum being a safety space; a service compression spring between said service cup bottom and said service diaphragm and coaxial thereof, a safety compression spring between said safety cup bottom and said safety diaphragm and coaxial thereof, a brake link extending coaxially of said cups and thru said service spring and the bottom of said service cup, a head secured to said link and extending between said service spring and said service diaphagm, a spool having a stem extending coaxially of said cups and sealed thru said septum disc, a service head on one end of said stem and in said service space, on the other end thereof, a safety head secured to said safety diaphragm, a service opening and a safety opening formed in said piping ring and said openings communicating with said service space and with said safety space, respectively, said safety spring being stiffer than said service spring, and said spool service head seating on said annulus upon compression of said safety spring; whereby the admission of air under pressure thru said service opening into said service space will move said service diaphragm and actuate said brake link, whereby the admission of air under pressure thru said safety opening into said safety space will move said safety diaphragm to compress said safety spring and will move said spool to cause its service head to seat on said annulus, and whereby the absence of air under pressure in said spaces will allow said safety spring to move said diaphragms and to actuate said brake link.

3,015,319
RADIANT TUBULAR HEAT EXCHANGER
Gerhard Steinert, Stuttgart, Germany, assignor to Kohlenscheidungs-Gesellschaft m.b.H., a corporation of Germany
Filed Jan. 22, 1958, Ser. No. 710,508
2 Claims. (Cl. 122—478)

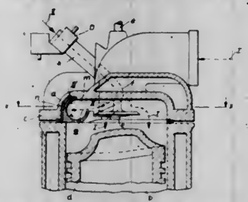


1. In a radiant heat exchanger having a combustion chamber for the generation of hot gases by the burning of fuel and a top-jacently adjoining radiation chamber having two parallel side walls lined with heat absorbing tubes, said heat absorbing wall tubes creating parallelly flowing vertical zones of gas of non-uniform temperature characteristic when measured in a horizontal plane, with the temperature of the centrally located gas zone being higher than the temperature of the side wall adjacent gas zones, the combination of a row of upright tubular wall panels spacedly disposed across the upper portion of said radiation chamber in parallel relation to the heat absorbing tubes lining said side walls and to each other, each panel comprising a plurality of parallelly spaced tubes carrying a gaseous medium to be heated by absorbing radiant heat from the hot gases generated in said combustion chamber, the lineal circumference when measured in a horizontal plane, per rated gas flow area, of the tubes forming the said tubular panels that are adjacent said side walls being substantially smaller than the corresponding lineal circumference of the tubes forming the tubular panels located adjacent the centre of said radiation chamber, and said upright tubular panels being divided into serially connected groups including a first group located adjacent said side walls and a second group occupying a central location within said radiation chamber, said first group having means for receiving said gaseous medium to be heated, means for progressively increasing the temperature thereof while advancing said medium through the tubes of said first group, said second group having means for receiving said medium from said first group, means for progressively increasing the temperature thereof while advancing said medium through the tubes of said second group, and means for discharging said gaseous medium from said second group after having been heated.

3,015,320
MULTI-GRADED LUBRICANT FOR 2-CYCLE ENGINES
Elmer W. Brennan, Carpentersville, and James G. Hall, Woodstock, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Jan. 5, 1956, Ser. No. 557,434
10 Claims. (Cl. 123—1)

1. A method for operating a spark-ignited, 2-cycle, internal combustion engine, which comprises introducing into the combustion chamber of said engine, a combustible admixture of air and a fuel consisting essentially of a major portion of a gasoline, and a minor portion of a lubricant consisting essentially of the following three components: (1) a major portion of a mineral lubricating oil having enhanced viscosity-index characteristics, (2) 1.0 to 2.5 wt. percent, based on said oil, of a barium salt of an alkyl phenol sulfide, and (3) 0.25 to 1.0 wt. percent, based on said oil, of an oil soluble alkaline earth metal sulfonate, at least one of the components 2 and 3 having a Neutralization Value (Total Base Number) to impart to said oil, when added thereto in the aforesaid amount, a Neutralization Value (Total Base Number) of 0.6 to 3.5.

3,015,321
INTERNAL COMBUSTION ENGINE AND METHOD FOR OPERATING SAME
Friedrich Stümpfig, Bismarckstrasse 31, and Curt Bellwinkel, Thornerstrasse 8, both of Nurnberg, Germany
Filed Mar. 2, 1959, Ser. No. 796,382
Claims priority, application Germany Mar. 4, 1958
10 Claims. (Cl. 123—30)

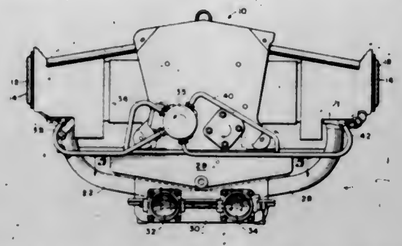


1. An internal combustion engine comprising a cylinder including a cylinder head and a piston in said cylinder, said cylinder head including an air compression chamber and a vaporizing chamber, and heat insulating means in the form of an air space or the like provided intermediate the wall of said cylinder head and said vaporizing chamber, said vaporizing chamber being formed of porous sinter metal.

3,015,322
AIR INDUCTION SYSTEM FOR AN INTERNAL COMBUSTION ENGINE
Fredric G. Rohm, Lycoming County, Pa., assignor to Avco Corporation, Williamsport, Pa., a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 22,917
3 Claims. (Cl. 123—32)

1. In an air induction system for a reciprocating internal combustion engine having opposed banks of cylin-

ders, inlet pipes for feeding air to said cylinders extending from the cylinders under the engine past the center line of the engine and staggered and overlapping in a substantially horizontal position, a container for covering the overlapping section and inlet portions of said pipes ex-



tending in a substantially horizontal position underneath the engine, an inlet including a throttle valve therefor for controlling the inlet of air to said container and said inlet pipes, and separate fuel injection means for injecting fuel individually to said cylinders, each inlet pipe length in inches being

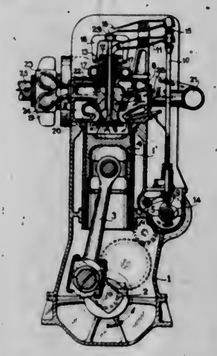
$$\frac{C\theta}{2N(n+.25)}$$

minute of the engine at which optimum power advantages are desired, and n is any number giving a length on computation best suited to the engine arrangement.

3,015,323
FOUR-STROKE INTERNAL COMBUSTION ENGINE

Alfred Buchi, Hurden, Switzerland; Hermann Walder, executor of said Alfred Buchi, deceased, assignor to Ingenieurbureau D.-Ing. Alfred J. Buchi A.G., Winterthur, Switzerland, a Swiss company

Filed May 12, 1958, Ser. No. 734,667
Claims priority, application Switzerland June 19, 1957
4 Claims. (Cl. 123—79)

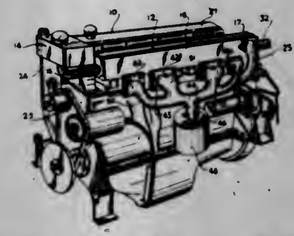


1. In a supercharged four-stroke internal combustion engine having a cylinder head, an inlet valve seated in the cylinder head, an exhaust valve arranged concentrically within the inlet valve with the opening periods of said inlet and exhaust valves overlapping a certain time, said inlet valve having wall means and said wall means defining a space between the inlet and exhaust valves, said wall means being provided with through-flow openings for the exhaust gas controlled by the outlet valve, means defining a spirally formed inlet duct around said wall means for the admission of charging and scavenging air tangentially and for rotation of the scavenging air in said space between the inlet and exhaust valves, means defining a chamber around the through-flow openings, means defining an exhaust duct, and means tangentially connecting the exhaust duct to the chamber whereby the rotation during the scavenging cycle in said space between the inlet and exhaust valves is intensified and after scavenging of the gas, relatively cool scavenging air is maintained in the space between the inlet and exhaust valves for intensified cooling of said inlet and exhaust valves.

3,015,324
CONVERSION INTERNAL COMBUSTION ENGINE FOR USE AS A MARINE ENGINE

Roger Lehman, 234 Raymond Ave., South Orange, N.J.

Filed Dec. 18, 1959, Ser. No. 860,547
3 Claims. (Cl. 123—122)

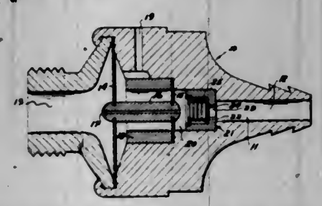


1. A manifold structure for converting an internal combustion engine for use as a marine engine, said combustion engine having cylinders, said structure comprising a housing having a cooling chamber, an exhaust gas manifold in said chamber, means for circulating water in the chamber for cooling the exhaust gases, said housing having exhaust gas passages communicating directly with said exhaust manifold conducting exhaust gases thereto for cooling said exhaust gases, said housing having air intake passages for passing air therethrough to the cylinders of the engine, said housing having air inlets communicating with the air passages, said air intake passages and exhaust gas manifold having a common dividing wall, whereby the air in said air intake passages is preheated by conduction of heat from the common wall, said air intake passages terminating at the air inlets in said housing, an air intake manifold below the top of the engine having branches secured to the housing at the respective air inlets of the air intake passages, said air intake manifold having a depending common intake pipe, and an air filter secured to said intake pipe below the exhaust manifold.

3,015,325
FUEL INJECTOR

Russell F. Williams, 609 Stacey St., Tecumseh, Mich.; Philip R. Morgan, Tecumseh, Mich. (Box 471, Clinton, Mich.); and Martin Glenday, Tecumseh, Mich. (112 Locust St., Clinton, Mich.)

Filed Mar. 4, 1960, Ser. No. 12,791
7 Claims. (Cl. 123—139)



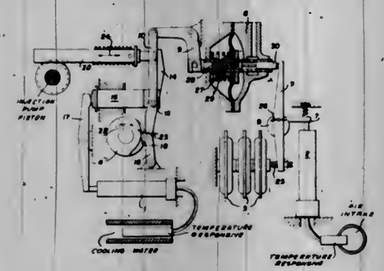
1. A fuel injector for a closed crankcase type internal-combustion engine, comprising: an injector body having

a longitudinal passage extending therethrough, defining at opposite ends a fuel inlet and a fuel outlet; a first flexible pressure-responsive diaphragm mounted in fluid-tight manner transversely across said longitudinal passage adjacent said fuel outlet; means for exposing the surface of said first diaphragm facing said fuel outlet to the varying pressure of said crankcase; a second flexible pressure-responsive diaphragm of smaller area than the first diaphragm, mounted in fluid-type manner transversely across said longitudinal passage at a position closer to said fuel inlet; a hollow piston having a passage extending therethrough, and being affixed to and freely suspended from both of said diaphragms so as to cause said diaphragms and said piston to undergo joint longitudinal motion in response to variations in crankcase pressure; means for maintaining in the space between said diaphragms a pressure intermediate the maximum and minimum crankcase pressures; a fuel compression zone intermediate the ends of the aforesaid longitudinal passage extending through said injector body, intermediate said second diaphragm and said fuel inlet; and pressure-responsive check valve means located at the junction between said fuel inlet and said fuel compression zone, adapted to close when the pressure in said fuel compression zone reaches a predetermined pressure; the flexibility and relative areas of said diaphragms being so selected as to cause said piston and diaphragms to move from an initial position in the direction of said fuel inlet and to create in said fuel compression zone a fuel pressure substantially in excess of the crankcase pressure when the latter is at its maximum positive value and at least equal to the aforesaid predetermined pressure required to close said pressure-responsive check valve means, and a sufficient reduction in pressure when the crankcase pressure is at its maximum negative value to cause the opening of the aforesaid check valve and to return said piston and said diaphragms to their initial position, without requiring the aid of spring loading to assist said motions and pressure changes in said fuel compression zone.

3,015,326
CONTROL ARRANGEMENT FOR FUEL INJECTION DEVICES

Robert J. Wirsching, Korntal, near Stuttgart, and Ulrich Conrad, Ludwigsburg-Osswell, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany

Filed Mar. 30, 1959, Ser. No. 802,912
Claims priority, application Germany Apr. 12, 1958
15 Claims. (Cl. 123—140)



1. A control arrangement for controlling the fuel injection quantity, particularly of mixture-compressing injection-type internal combustion engines comprising first means for adjusting the quantity of injected fuel, second means for producing a control magnitude in response to the rotational speed of the engine, third means for producing a control magnitude in dependence on the engine control throttle position, fourth means for producing a control magnitude in dependence on the air pressure, fifth means for producing a control magnitude in dependence on the air temperature, sixth means for producing a control magnitude in dependence on the cooling-water temperature, and seventh means for transmitting the control magnitudes from said second, third, fourth, fifth and sixth means to said first means to provide a continuous correction over the entire control range in dependence on the prevailing air density including a double-armed pivot lever means transmitting the control magnitudes and having a movable pivot means, and means for displacing said pivot means by any one of said sixth means, fifth means and fourth means, the transmission ratio of the two arms of said double-armed lever means being adjustable in dependence on the prevailing air density.

3,015,327
ARCHERY BOWS

Joseph F. Lightcap, 3108 Ave. I, Brooklyn 10, N.Y.

Filed Sept. 4, 1959, Ser. No. 838,093
7 Claims. (Cl. 124—23)

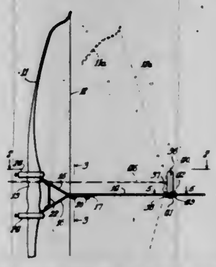


1. An archery bow comprising a core formed of an inorganic honeycomb member, a layer of high compressive strength material secured to the face of said honeycomb member, and a layer of high tensile strength material secured to the back of said honeycomb member.

3,015,328
AIM IMPROVER FOR BOW AND ARROW

Elmer Ryder, 212 Walnut St., Aurora, Ill.

Filed Jan. 26, 1959, Ser. No. 788,905
1 Claim. (Cl. 124—30)



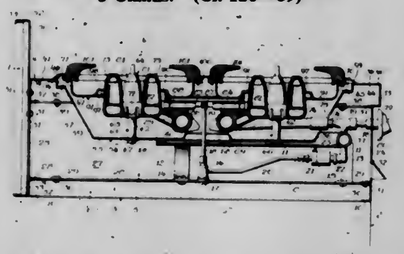
An aim improver device for a bow and arrow arrangement, comprising a rigid bar, a Y-piece, said Y-piece being connected to the forward end of the bar and having bifurcations for securement to the bow respectively above and below the central hand-hold portion thereof, means carried by each bifurcation for releasable attach-

ment to the bow, and an upstanding hand-grip member carried by the bar adjacent its rear end and adjustable longitudinally of the bar, whereby one hand of the user may grasp the bow by said hand-hold portion between said bifurcations, the bar being aligned with said hand, and the other hand may draw the bow string and arrow back along said bar and hold the arrow by aid of said upstanding hand-grip member spaced from the bar for aiming the arrow.

3,015,329
BURNER BOX FOR TOP BURNER UNIT

John E. Chambers, Shelbyville, Ind., assignor to Chambers Corporation, a corporation of Indiana

Filed Feb. 21, 1955, Ser. No. 489,457
5 Claims. (Cl. 126—39)

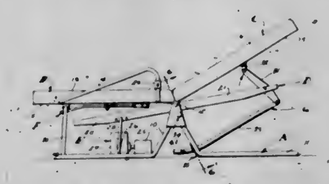


1. In a top burner unit, a top frame having four top walls forming an open rectangle, flanges extending downwardly from two opposite top walls, spacing studs extending inwardly from each of said downwardly extending flanges, horizontal flanges extending inwardly from said other two top walls, a burner box having a bottom wall and four upwardly extending side walls, a horizontal flange extending outwardly from each of two oppositely disposed upwardly extending side walls, said last mentioned flanges being adapted to seat on said inwardly extending flanges to suspend said burner box within said top frame, the opposite sides of said burner box being spaced from the side walls of said frame by said spacing studs whereby conduction of heat from said burner box to said frame is substantially reduced, and a plurality of burner supports rigidly secured to said bottom wall and extending upwardly therefrom whereby said burner box and said burner supports may be handled as a single unit in the assembly of said top burner unit, said bottom wall having an aperture through which a pilot lighter tube is adapted to extend, said aperture being positioned between two of said burner supports.

3,015,330
MOTOR OPERATED THERAPEUTIC COUCH

Frank O. Linstrom, 5942 Cadillac Ave., Los Angeles 34, Calif.

Filed Nov. 30, 1959, Ser. No. 856,217
3 Claims. (Cl. 128—25)

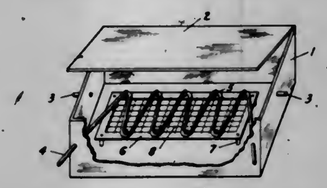


1. A couch of the character described and including, a base supporting a horizontal pivot, a pair of relatively shiftable body supporting panels with abutting inner ends carried on said horizontal pivot, a rocker carried on said pivot and having oppositely projecting arms and each arm engaged with a panel, said panels being free to swing independently of said rocker, a drive for oscillating the rocker whereby the relatively shiftable panels are alternately lifted and lowered, and a means comprising a lifting lever pivotally carried between the ends thereof by the rocker and with one end having lifting engagement with one of said panels and a pull rod anchored to the base and pivotally connected to the other end of the lifting lever to shift said lifting lever when the rocker is moved relative to the base.

3,015,331
BLOOD OXYGENATOR

Earl L. Warrick, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Filed Oct. 17, 1957, Ser. No. 690,762
2 Claims. (Cl. 128—214)

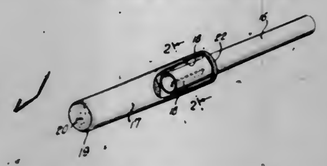


1. An apparatus for oxygenating blood which comprises a container provided with an inlet and outlet for oxygen and within said container silicone rubber tubing in sinuous configuration, having blood inlet means, said tubing being of sufficient length and wall thickness to allow the oxygen to diffuse therethrough into blood passing through said tubing and to allow carbon dioxide to diffuse from the blood through said tube wall into the container said silicone rubber tube being composed of peroxide vulcanized rubber having a high diffusion rate for oxygen and carbon dioxide, support means for said tube and outlet means for passing blood out through said tube.

3,015,332
APPLICATOR

George Brecht, New Brunswick, N.J., assignor to Personal Products Corporation, a corporation of New Jersey

Filed Feb. 25, 1957, Ser. No. 642,125
4 Claims. (Cl. 128—263)

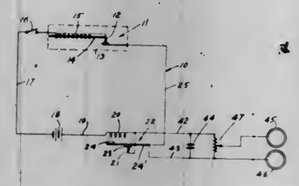


1. An applicator for introducing catamenial tampons into the vaginal cavity comprising an elongated outer tube presenting an outer surface of hydrophobic plastic material having the surface characteristics of polyethylene, an elongated inner tube telescopically positioned in said outer tube and longitudinally movable therein, said outer tube having on its inner surface at one end section a plurality of inwardly extending protuberances reinforcing said end section, the ends of said protuberances presenting continuous surfaces extending an appreciable distance in the direction of the length of said outer tube a distance at least about as great as the diameter of the inner tube and defining an opening within which said inner tube is slideably positioned, said surfaces supporting said inner tube along its length maintaining said inner tube in fixed spaced relationship with respect to said outer tube for guiding said tube axially with respect to said outer tube as said inner tube is slideably moved therein.

3,015,333
DEVICE FOR ELECTRICAL CONTRACTION OF BODILY TISSUES

William J. Browner, San Mateo, Calif., assignor to Relaxacizor, Inc., Los Angeles, Calif., a corporation of California

Filed Oct. 19, 1956, Ser. No. 617,195
4 Claims. (Cl. 128—424)

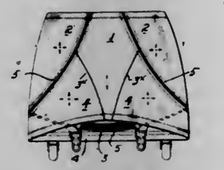


1. In a device for electrical treatment of the bodily tissues: an electrical circuit comprising a periodic switch for alternately closing and opening the circuit, a battery, an induction coil, and an intermittent switch, connected in series; magnetic conductors disposed so as to form a magnetic circuit for the coil; an armature disposed so as to be attracted by only a part of the magnetic flux generated by the energization of said coil; resilient means supporting the armature for oscillating movement; means connecting the armature to said intermittent switch so as to open and close the same; a pair of output conductors connected respectively to the contacts of said intermittent switch in parallel therewith; and means for connecting body contact pads to said output conductors so that the electrical current from said induction coil will pass through the bodily tissues connected in series with said body contact pads.

3,015,334
GIRDLES

Bette K. Kaupp, New York, N.Y., assignor to Malden Form Brassiere Co., Inc., New York, N.Y., a corporation of New York

Filed May 20, 1960, Ser. No. 30,642
1 Claim. (Cl. 128—542)



A girdle having a waist terminating line, a back area comprising a central back panel proportioned to have its lower edge approximately at the base of the buttocks of a wearer, and opposed panels seamed thereto, each of said opposed panels being extended to the front of the girdle and there being spaced from each other, at the front of the girdle, each of said opposed panels having its greatest width at the girdle waist line and thence sweeping downwardly and outwardly toward the back of the girdle with progressively decreased width from top to base, a front panel assembly joining said spaced opposed panels at the front of the girdle, said front panel assembly being formed as an upwardly directed wedge downwardly continuing as a loop area carried backwardly and forming the rear lower margin of the girdle, said loop being seamed to the said central back panel and said opposed panels, said loop area progressively decreasing in width from a relatively high point of each of said opposed panels to a width forming a narrow band-like base terminus of the girdle under the said back central panel.

3,015,335
HEADBAND

Ross C. Whitman, Framingham Center, Mass., assignor to The Kendall Company, Boston, Mass., a corporation of Massachusetts

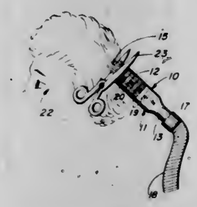
No Drawing. Filed Sept. 24, 1959, Ser. No. 841,933
8 Claims. (Cl. 132—9)

1. As an article of manufacture, a head band formed of absorbent material containing between about .001 and about 0.1% of a water soluble salt of a bivalent metal selected from the group consisting of copper, manganese, cobalt, nickel and iron.

3,015,336
VACUUM HAIR CUTTING GAUGE

Jesse W. Caples, R.F.D. 2, Old Lyme, Conn.

Filed May 22, 1959, Ser. No. 815,008
2 Claims. (Cl. 132— 45)



1. A vacuum hair cutting gauge comprising a piece of transparent material including a body member, said body member having its opposite ends open, and said body member including a hollow flattened portion and an end portion, the flattened portion adapted to receive the ends of a person's hair which is being cut, said end portion adapted to be connected to a hose which is connected to a suitable source of vacuum pressure, there being scale markings on said flattened portion whereby the length of hair to be cut may be determined.

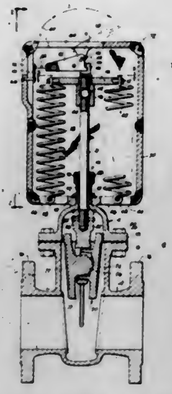
3,015,337
VALVE FOR FIRE PROTECTION

William C. Hookway, Morristown, N.J., assignor to Cooper Alloy Corporation, Hillside, N.J., a corporation of New Jersey

Filed Mar. 24, 1959, Ser. No. 801,633
3 Claims. (Cl. 137—75)

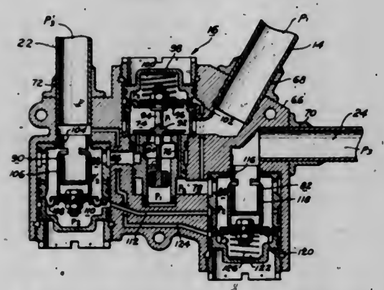
1. A valve control mechanism for fire protection, said mechanism being mounted on a gate valve body having a bonnet and packing gland, a gate, and a stem projecting up from the gate through the bonnet and gland, said mechanism comprising a yoke fixedly mounted on said bonnet, side walls enclosing the space within said yoke, resilient means within said yoke for urging the stem downward, a fulcrum lever of great mechanical advantage within said yoke, detent means on said fulcrum lever for engaging the upper end of the stem within said yoke to hold the stem elevated against the resilient means, a fusible link within said yoke connecting the long end of the fulcrum lever to the yoke to prevent movement thereof, whereby failure of the fusible link releases the fulcrum lever and the gate for automatic closing, the ful-

crum lever pivot being disposed near a wall of the yoke and the said wall being cut away to permit the lever to



fly outward, whereby closing of the gate is visibly signalled by exposure of the fulcrum lever outside the yoke.

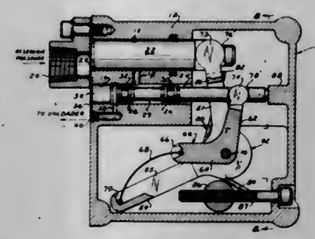
3,015,338
FLOW DIVIDER
Howard L. McCombs, Jr., South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Oct. 7, 1958, Ser. No. 765,782
5 Claims. (Cl. 137—100)



1. A flow divider comprising a housing having a fluid inlet and first and second fluid outlets, first and second conduits respectively connecting said inlet to said first and second outlets, valve means controlling the area of the connection between said inlet and said conduits, means responsive to the pressure differential between the pressures in said inlet and one of said conduits for controlling said valve means, first and second valves respectively controlling said first and second outlets, a movable wall connected to said first valve and responsive to the pressure differential between the pressures in said first conduit and said second outlet, and a movable wall connected to said second valve responsive to the pressure differential between the pressures in said conduits.

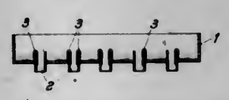
3,015,339
FLUID PRESSURE CONTROL MECHANISM
Russell C. Savage, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed July 8, 1958, Ser. No. 747,160
8 Claims. (Cl. 137—102)

1. A fluid pressure governor, comprising a housing having a cylinder therein and a valve chamber having a fluid connection with said cylinder, a fluid pressure inlet port for said cylinder, an outlet port for said valve chamber, an atmospheric port connected to said valve chamber, a valve in said chamber movable between a first position connecting said chamber to said outlet port and a second position connecting said outlet port to said atmospheric port, a piston in said cylinder exposed at all times to the pressure at said inlet port, said piston being movable between a first position and a second position, a bell crank pivoted in said housing and having one



limb operatively connected to said piston, a second bell crank pivoted in said housing and having one limb operatively connected to said valve, an over-center snap-acting spring operatively connected between the corresponding opposite limbs of said bell cranks and arranged to urge said bell cranks in opposite directions so that when said piston is in its first position said valve is in its second position and vice versa, and a second spring acting on said piston in opposition to the fluid pressure at said inlet so as to normally urge said piston towards its first position.

3,015,340
APPARATUS FOR PROCESSING A LIQUID
Otto Montz and Hans Joachim Klose, Hilden, Rhineland, Germany, assignors to Julius Montz, Hilden, Rhineland, Germany
Filed Apr. 21, 1960, Ser. No. 23,858
Claims priority, application Germany Apr. 22, 1959
7 Claims. (Cl. 137—124)

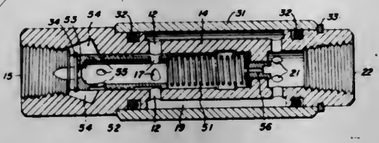


1. Apparatus for use in a column comprising a substantially horizontal flat tray, said tray having a plurality of openings, a wall surrounding each opening and extending upwardly from said tray, said walls having top edges determining a plane, a capillary member comprising a plurality of wires of U-shape straddling each of said walls, said wires being juxtaposed to define capillary passages therebetween, said capillary passages having a uniform cross section over the length thereof.

3,015,341
FLOW REGULATORS
Harry A. Hedland, Evanston, and Paul M. Waterman, Glenview, Ill., assignors to William Waterman, Evanston, Ill.
Filed Jan. 10, 1958, Ser. No. 708,215
5 Claims. (Cl. 137—493)

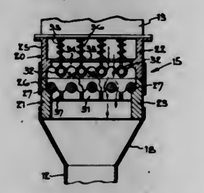
1. A flow regulator comprising in combination a housing having a cylindrical bore therein and terminal connections communicating with said bore to adapt the same for connection in a fluid line, a piston valve slidable in said bore in response to flow through said bore, throttling ports in said bore adapted to be variably throttled by

movement of said piston during normal flow in response to variations in fluid pressure, an orifice in said piston adjacent one end of said bore to create a pressure drop to actuate said piston, a spring adjacent the other end of said bore to balance the pressure drop force against said piston, supplemental return flow ports in said bore bypassing said orifice closed by movement of said piston



during normal flow through, said bore being longer than the length to accommodate throttling movement of said piston by a distance equivalent to the movement of the piston to open and close said supplemental ports, said additional length being located up-stream of said throttling ports whereby initial movement of said piston during normal flow cuts off said supplemental ports before throttling said throttling ports.

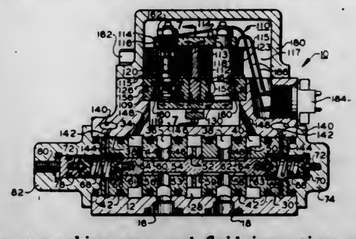
3,015,342
BLAST CLOSURE
Charles D. Price, Dayton, Ohio, assignor to The Mosler Safe Company, Hamilton, Ohio, a corporation of New York
Filed Sept. 24, 1959, Ser. No. 841,974
8 Claims. (Cl. 137—512.1)



1. A blast valve comprising, a set of bars, frame means mounting said bars in spaced parallel relationship, spaces for the flow of air normally being defined between said bars, a set of cylindrical rods parallel to and normally spaced from said bars, spaces for the flow of air normally being defined between said rods, said rods being staggered with respect to said bars, the diameters of said rods being substantially equal to the width of the spaces between said bars, yieldable means holding said rods away from said bars when air at low velocity flows between said rods toward said bars but yielding when air at high velocity impinges on said rods to permit the rods to be moved to positions between the respective bars, and strips mounted edgewise in said frame means parallel to and between said bars, the widths of said strips being substantially less than the widths of the spaces between said bars whereby air can normally flow between said strips and bars, said strips being positioned to support said rods, when said rods are moved between said bars, in positions such that said rods touch said bars at diametrically opposed points.

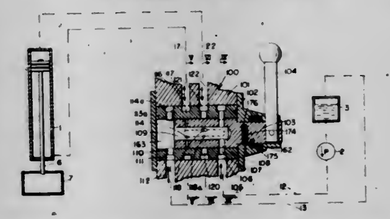
3,015,343
POWER TRANSMISSION
Duncan B. Gardiner and Frank E. Hill, Detroit, Mich., assignors to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Filed Nov. 24, 1958, Ser. No. 775,957
13 Claims. (Cl. 137—623)

1. An electro-hydraulic servo valve comprising: a dry zone; a wet zone; an electromagnetic coil in the dry zone; permanent magnetic means in the dry zone; means forming a mechanically static barrier interposed between the dry and wet zones; means in the wet zone spaced from said barrier forming between said last named means and



barrier a working gap; and fluid impervious magnetic material forming part of and extending through said barrier to conduct flux from said coil and said permanent magnet to said working gap.

3,015,344
HYDRAULIC CONTROL VALVE
Werner Hausmann, Uthleben, near Nordhausen, and Richard Vogel, Nordhausen, Germany, assignors to VEB Schlepperwerk Nordhausen, Nordhausen, Harz, Germany, a corporation of Germany
Filed May 25, 1959, Ser. No. 815,499
Claims priority, application Germany May 24, 1958
12 Claims. (Cl. 137—624)

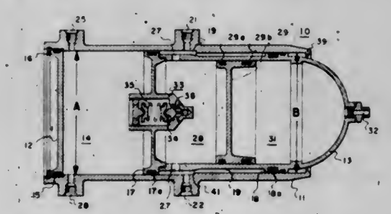


1. A control device for hydraulic installations, comprising a housing member, a rotatable valve member within said housing member, control means for rotating said members relatively to each other, one of said members being provided with a first, a second, a third and a fourth port, the other of said members being provided with a first and a second channel separated from each other, said first channel being accessible at four axially spaced locations, said second channel being accessible at three axially spaced locations, said first channel communicating respectively with said first, second and third ports in a first, a second and a third relative angular position of said members and with said fourth port in all three of said angular positions, said second channel communicating respectively with said second and third ports in each of the two last-mentioned positions, first conduit means connecting one of said ports to a source of hydraulic fluid under pressure, second conduit means connecting another of said ports to a sink for said fluid, and fluid-transmission means connecting the remaining two ports to opposite sides of a load.

3,015,345
COMBINATION RESERVOIR-ACCUMULATOR ARRANGEMENT FOR HYDRAULIC SYSTEM
Vilo G. Michael, Denver County, Colo., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed June 2, 1958, Ser. No. 739,391
10 Claims. (Cl. 138—31)

1. A pressurized reservoir for use in a fluid system in which a demand for high pressure fluid may change,

comprising a reservoir housing having a closed end, a piston member located in said housing for longitudinal movement toward and away from said closed end and defining with said closed end a reservoir of variable capacity, said piston member having a pair of integral, spaced, circumferential ring-like members each of a diameter to fit closely into respective portions of said housing, said spaced ring-like members defining an essentially toroidally-shaped high pressure chamber between the inner surface of the housing and the outer surface of said piston member, said piston member being of generally cylindrical configuration and defining therein an accumulator, said accumulator comprising an accumulator chamber in which fluid of the fluid system may reside, fluid port means for providing fluid communication between said accumulator chamber and said high pressure chamber, and compressible means in said piston member against which the system pressure in said ac-



cumulator chamber may manifest itself, said compressible means serving to deliver pressurized fluid from said accumulator chamber to said high pressure chamber during a drop in pressure in said high pressure chamber due to a sudden demand for high pressure fluid in the system, said ring-like member nearest the closed end of said housing presenting a larger area to the fluid of said high pressure chamber than the other said ring-like member, fluid port means located in the wall of said housing for providing fluid communication to said high-pressure chamber, additional fluid port means for providing fluid communication to the reservoir portion of said housing, the difference in areas of said circumferential ring-like members multiplied by the system pressure manifested in said high pressure chamber providing a net force tending to move said piston member toward the closed end of said housing so as to pressurize fluid contained in said reservoir portion of said housing.

3,015,346
HARNESS FOR CROSS WEAVING

Frank H. Kaufmann, Huntingdon Valley, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed June 7, 1960, Ser. No. 34,453
4 Claims. (Cl. 139—52)

1. In loom harness for cross weaving, a pair of lifting heddles, and a doup needle comprising a thin flat piece of metal having an eye portion through which the doup warp extends and two legs extending downwardly therefrom, each of the lifting heddles comprising two flat strips of metal and each of said lifting heddles having a seat for engaging the eye portion of the doup needle, each of said lifting heddles having an upward extension above said seat and extending vertically upward in separated relationship to their upper end portions thereby providing a space through which the standard warp extends and in which the crossing of the warps occurs, said extensions of said lifting heddles above said seat being disposed in planes parallel to the plane of said doup needle, at least one of said lifting heddles having at its inner edge and at said upward extension an outwardly offset edge portion for alignment with said eye portion and for reception

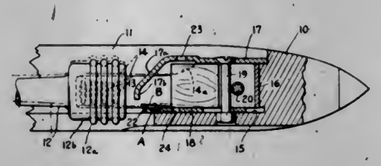


of the doup warp in closely spaced condition of said upward extensions of said lifting heddles.

3,015,347
BOBBIN GRIP AND STRAP

John J. Kaufmann, Jr., Greenville, S.C., assignor to Steel Heddle Manufacturing Company, Paris, S.C., a corporation of Pennsylvania

Filed Sept. 27, 1960, Ser. No. 58,818
7 Claims. (Cl. 139—207)



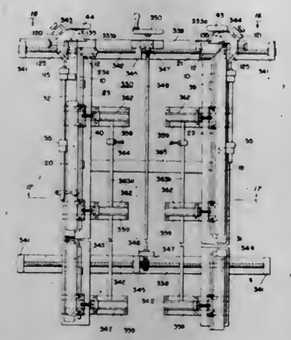
1. In a shuttle having a shuttle cavity and a bobbin chamber a strap and a grip, the improvement including, a bottom plate having an inclined surface which extends downwardly away from the bobbin chamber, and a grip having a complementary inclined surface on the lower portion of the grip, said bottom plate being adjustably mounted relative to said grip whereby relative movement between the inclined surfaces results in a vertical adjustment of the grip.

3,015,348
SYSTEM FOR ASSEMBLING PREHUNG DOORS AND JAMBS

Warren B. Zern, R.D. 3, Pottstown, Pa.

Filed Nov. 17, 1958, Ser. No. 775,093
11 Claims. (Cl. 144—2)

4. In apparatus for assembling door casings or the like, pressure-applying mechanism comprising a pair of spaced side plates, each of said side plates having an upper slot and a lower slot, a plunger disposed between said side plates, a pressure member carried by one end of said plunger and adapted to engage a portion of the door casing, a pin extending through the other end of said plunger and through said upper slot of said plates, a carriage member adapted to ride in the lower slot of said plates for supporting said one end of said plunger,

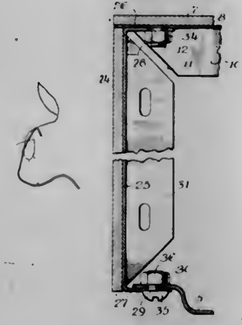


and means for actuating said plunger to move said pressure member into and out of clamping engagement with the door casing.

3,015,349
METHOD OF ASSEMBLING KNOCK-DOWN CABINETS

Emanuel Rawson, Chicago, Ill., assignor to Grand Sheet Metals Products Company, Melrose Park, Ill., a corporation of Illinois

Filed June 3, 1960, Ser. No. 33,661
2 Claims. (Cl. 144—318)

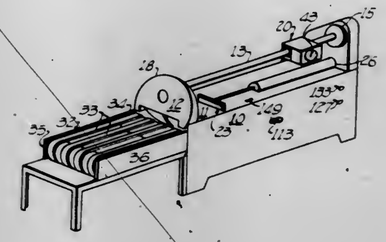


1. A method of making a corner joint for a knock-down cabinet that comprises the steps of bonding a wood panel to a metal plate with opposite ends of the wood panel projecting beyond the ends of the metal plate, simultaneously trimming the ends of the wood panel to form a top wall having accurately dimensioned wood portions projecting beyond the ends of the metal plate, bonding a second wood panel to a flanged metal plate, trimming one end of the second wood panel flush with the outer surface of said flange to form a side wall, finishing the exposed surfaces of both of said wood panels, assembling said walls with the outer surface of said flange abutting said metal plate and said side wall flush with one trimmed end of said top wall, and securing connecting means on said first metal plate and said flange together to hold said top and side walls in fixed relationship.

3,015,350
BACON SLICER HAVING ADJUSTABLE CONTROL OF GROUP SIZE

Howard G. Reichel and Stephen W. Lis, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 14, 1957, Ser. No. 689,860
8 Claims. (Cl. 146—94)

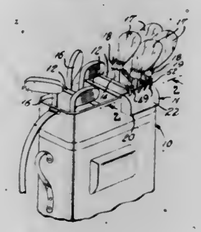


7. In a slicing machine, in combination: a rotatable slicing knife; a feed carriage moveable toward the slicing knife; advancing means to move said carriage toward said knife; cam means rotatable at a speed proportionate to the speed of said knife; a first sensing means adjacent said cam means and engageable thereby momentarily once each revolution of the cam means; and a second sensing means adjacent said cam means and engageable thereby once each revolution of the cam means, said first and said second sensing means being adjustable about said cam means with respect to one another, one of said sensing means being connected to stop the advancing means and the other sensing means being connected to start the advancing means.

3,015,351
RETRACTIBLE DEVICE FOR GOLF CLUB HEAD COVERS

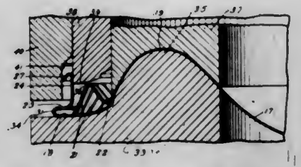
Harry R. Harris, % Du-All Sample Corporation, 139 Duane St., New York 13, N.Y.

Filed May 12, 1961, Ser. No. 109,709
9 Claims. (Cl. 150—52)



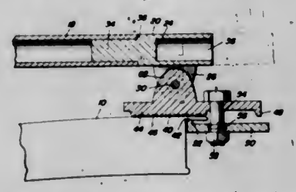
3. A golf club head protective device comprising an elongated housing having a plurality of longitudinally spaced openings formed therein, means adapted to secure said housing to the upper border of a golf bag, a plurality of open ended hoods, a plurality of flexible members each having one end thereof connected to one of said hoods and the other end thereof extending into said housing through a corresponding one of said openings, and means disposed in said housing and independently resiliently drawing each of said flexible members into said housing.

3,015,352
APPARATUS FOR MAKING WHEEL COVERS
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Original application Feb. 17, 1956, Ser. No. 566,229. Divided and this application Sept. 2, 1958, Ser. No. 758,288
3 Claims. (Cl. 153—1)



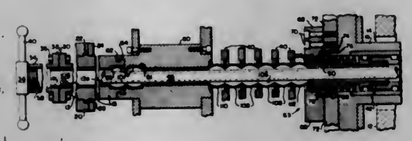
1. In cover making apparatus, a supporting die member having an annular centering groove receptive of a cover ring component which has a generally radially extending body portion with an outer marginal overturned flange providing a radially inwardly opening groove and an upstanding retaining means flange, said supporting die member also having radially inwardly from said groove a supporting portion for internesting with a cover body component provided with a peripheral series of marginal tabs of an over-all length to extend into said ring groove but initially bent up to have the tips of the tabs on a smaller diameter than said upstanding retaining means flange so as to fit therein in overlying relation to the ring body disposed within said die member groove, a reciprocable hold down die member for clamping the cover body upon said internesting portion of the supporting die member, a relatively reciprocable pressure die member for pressing against the bent up marginal retaining tabs to drive the same against the ring member body and to straighten the same into projecting relation within the ring groove, and a third reciprocable die member for movement into compressing relation to the overturned flange of the ring member after the tabs have been driven into the ring member groove for thereby locking the tabs therein, said third reciprocable die member having a radially inwardly facing clearance groove for clearing said upstanding retaining means flange, said pressure die member having a radially outwardly facing back-up surface for engagement by said retaining means flange to retain the same against distortion during compression of said overturned flange by said third die member.

3,015,353
CLAMP FOR BODY JACK
James E. Brown, 211 College St., Henderson, N.C., assignor of thirty-seven and one-half percent to Spencer H. Ferrell, Durham, and thirty-seven and one-half percent to Florence N. Bailey, Henderson, N.C.
Filed Nov. 24, 1958, Ser. No. 775,960
8 Claims. (Cl. 153—32)



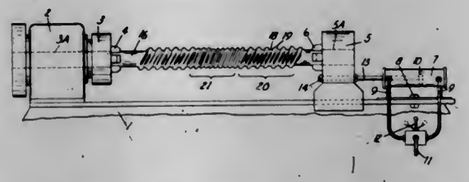
1. For use with a body jack that has at least one axially movable bar, a clamp adapted to engage a part of the motor vehicle body which is to be straightened, said clamp tightened on the body in response to axial movement in one direction of said bar and having a fitting adapted to connect with said bar, a pair of jaws, one of said jaws constructed of a plate having a serrated gripping surface, means pivotally securing said plate to said fitting, the other of said jaws constructed of a plate having a jaw surface opposing the serrated jaw, and means connecting said plates.

3,015,354
FLEXIBLE TUBE FORMING MACHINE
Thomas M. N. Wood, Foxboro, Mass., assignor to Standard-Thomson Corporation, Boston, Mass., a corporation of Delaware
Filed Dec. 11, 1956, Ser. No. 627,683
10 Claims. (Cl. 153—73)



2. Apparatus for forming flexible convoluted tubing having, in combination, a pair of tubes arranged in spaced coaxial relationship to receive a workpiece, said workpiece including a length of tubing and having a portion conforming externally to a part of at least one completed convolution, the workpiece having an open end within each of said tubes, each tube having means to form an annular seal with the outer wall of the workpiece, spaced forming plates adapted for closing around the workpiece in the space between the tubes, means for applying hydraulic pressure to the interior of said tubes, said tubes having clearances about the workpiece to permit said pressure to reach the inner and outer surfaces of the workpiece except for the outer surface between the seals, whereby the workpiece is bulged outwardly against the plates to form partial convolutions, means for completing said convolutions by moving the tubes together while said pressure is maintained, means for removing the forming plates from the convolutions, and means engageable with said portion and adapted to advance the workpiece between said tubes and to engage at least one of the completed convolutions.

3,015,355
METHOD FOR FORMING SPIRALLY RIBBED TUBING
Alfred H. Humphrey, Kalamazoo, Mich., assignor to General Gas Light Company, Kalamazoo, Mich.
Filed July 6, 1959, Ser. No. 825,114
8 Claims. (Cl. 153—78)



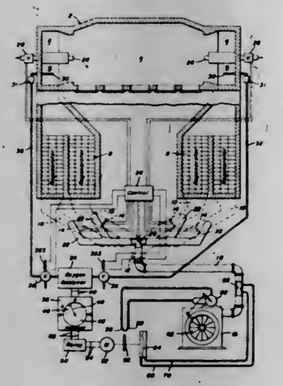
1. The process of forming spirally corrugated tubular elements which comprises the steps of providing a cylindrical tubular element, extruding at least one portion of the wall of said element outwardly from the adjacent areas of the wall and adjacent one end of the tubular element, axially fixedly and rotatably gripping the other end of said element from said extrusion, inserting a mandrel within said tubular element and non-rotatably clamping said one end of said element to said mandrel on the opposite side of said extrusion from said fixed end, rotating said fixed end relative to said one end of said tubular element about the axis of the element, and selectively applying axially directed compression and tension forces to said one end of said element while the element is being rotated to respectively increase and decrease the pitch of the rib formed in said element during the rotation thereof.

3,015,356
METHOD OF MAKING A DECORATIVE COMPOSITION SHEET
Harold J. White, Maplewood, and Anthony N. Piacente, North Arlington, N.J., assignors to Congoleum-Nairn Inc., Kearney, N.J., a corporation of New York
Filed May 31, 1957, Ser. No. 662,787
18 Claims. (Cl. 18—59)



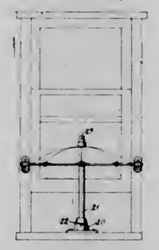
1. A process for producing a sheet of composition material having a wood-like decoration which comprises feeding in a plastic state a thick composition sheet to the nip of two calender rolls, maintaining a rolling bank of small pieces of similar composition of contrasting color on the surface of said sheet at said nip and substantially reducing the gauge of said sheet while simultaneously pressing some of said pieces from said bank into the sheet until they are flush with the surface of the sheet by passing between said calender rolls.

3,015,357
METHOD OF CONTROLLING THE OPERATION OF AN OPEN HEARTH FURNACE
John W. Bain, Provo, and Alton E. Sumsion, American Fork, Utah, assignors to United States Steel Corporation, a corporation of New Jersey
Filed Jan. 23, 1958, Ser. No. 710,657
1 Claim. (Cl. 158—117.5)



The method of operating an open hearth furnace comprising delivering fuel to opposite ends of the furnace alternately, varying the amount of fuel flow wholly independently of the air supply in accordance with a predetermined pattern based upon the fuel requirements during the various parts of the heat, delivering air through the regenerators to opposite ends of the furnace alternately, the fuel being delivered to one end of the furnace at the same time that the air is being delivered to that end, continuously analyzing the waste gases for oxygen in the downtake at the end of said furnace opposite the fuel and air delivery end, and independently of fuel flow varying the air flow through the regenerators to the furnace as the oxygen content in said waste gases varies to maintain a predetermined excess of oxygen in said waste gases.

3,015,358
COLLAPSIBLE OUTSIDE WINDOW SHADING DEVICE
Serena Kennedy, 158 E. 32nd St., Apt. 9, New York 16, N.Y.
Filed Jan. 20, 1958, Ser. No. 709,972
2 Claims. (Cl. 160—53)



1. A collapsible window shading device for a window having a frame including a sill and side frame members, said device comprising a support post, means for mounting said support post in an upstanding position on a window sill, a flexible opaque sheet, a plurality of ribs carrying and supporting said sheet, means secured on the upper end of said support post pivotally mounting the inner end of each rib for movement between a retracted position adjacent and substantially aligned with said support post and an extended position in which said ribs extend radially from said support post, the ribs radiating in different directions from said support post in their extended positions to hold said sheet stretched over the width of a window, a sleeve vertically slidable on the support post, means for locking said sleeve in an adjusted position on said support post, operating arms hingedly connected between said sleeve and said ribs to extend and retract the ribs upon sliding movement of the sleeve, a reinforcing rod, bracket means for pivotally mounting said reinforcing rod at its ends on side frame members of a window frame for pivoting movement of said reinforcing rod between a depending position and a substantially horizontal position, and means slidably connecting the outer ends of said ribs with said reinforcing rod, said reinforcing rod being arcuate in shape so that in said depending position thereof with said sleeve in a lowered position said ribs are held in a lowered and folded position adjacent said post.

3,015,359
FOLDING DOOR CONSTRUCTION
Ray E. Ogburn, 4115–4125 46th St., Bladensburg, Md.
Filed Apr. 1, 1960, Ser. No. 19,263
2 Claims. (Cl. 160—206)

1. A folding door assembly for use with a door frame mounted in a wall having a door opening therein, the door frame including vertical, spaced side frame members, and a horizontal top frame, the folding door assembly comprising:

(*a*) a folding door including at least two door panels hinged to one another, one of the door panels being

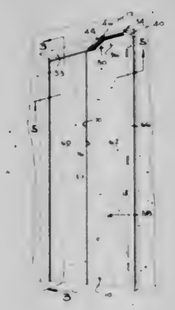
hinged to one of the side frame members of the door frame;

(*b*) the panels being adapted for movement from an extended non-folded position wherein they are arranged in side-by-side relationship to bridge the door opening interiorly thereof, to a folded position wherein the panels are located substantially parallel to each other and to the adjacent wall exteriorly of the opening;

(*c*) a guide assembly for guiding the doors in the movement thereof, comprising—

(*d*) an elongated flat body portion secured to the top frame member of the door frame and including an outer side;

(*e*) the body portion having a slot formed therein, a first portion of said slot being disposed throughout



substantially one-half of its length interiorly of the opening in the vertical plane of the door panels when in said extended position, said slot including a second portion disposed in a vertical plane extending transversely of said first named vertical plane, and a final portion exteriorly of the opening which is disposed in substantially the vertical plane of the other of said panels when in said folded position;

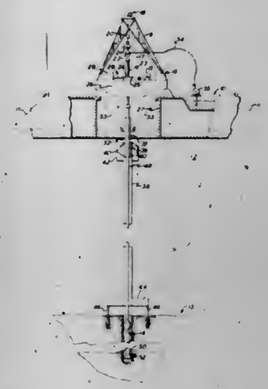
(*f*) the body portion including a first portion in which the first named portion of the slot is formed, the first portion of the body portion being disposed interiorly of the door frame;

(*g*) the body portion further including a second portion containing said second and final portions of said slot, arranged exteriorly of the frame; and

(*h*) the outer side of the body portion being contoured in parallelism with the slot therein.

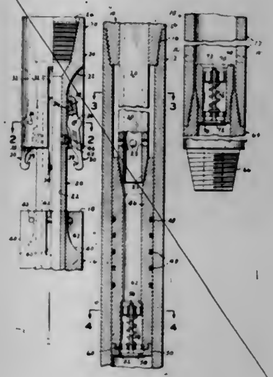
3,015,360
METHOD AND APPARATUS FOR UNDERWATER DRILLING
Hal Stratton, Pasadena, Calif., assignor to Shell Oil Company and Continental Oil Company, both corporations of Delaware, and The Superior Oil Company and Union Oil Company of California, both corporations of California, all of Los Angeles, Calif.
Filed Aug. 19, 1957, Ser. No. 678,902
8 Claims. (Cl. 166—46)

1. The method for drilling a well in an underwater formation from a floating vessel comprising the steps of anchoring the vessel over the underwater formation, disposing a guide conduit with its upper end terminating in the vicinity of the vessel and its lower end terminating in the vicinity of the formation, disposing drilling equipment in the guide conduit, operating the equipment to drill a well in the formation, withdrawing the drilling equipment from the well, lowering a casing through the guide conduit into the well, disposing the upper end of the casing to be in the vicinity of the floating vessel, sealing the lower end of the casing in the well, stripping the guide conduit up off the upper end of the casing,



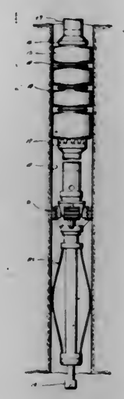
disposing drilling equipment in the casing, and operating the equipment in the casing to drill the well deeper.

3,015,361
HYDRAULIC SQUEEZING AND DRILLING DEVICE
Douglas H. Rowland, 6317 Forest Lane, Dallas, Tex.
Filed Jan. 4, 1960, Ser. No. 275
8 Claims. (Cl. 166—101)



1. A hydraulic pressure generating device adapted to be lowered into a well bore on the lower end of a string of fluid circulating drill pipe, comprising: an elongated cylindrical sleeve having a bore of reduced diameter in its upper end portion; pins transversely secured to the upper end portion of said sleeve; a centrally bored mandrel slidably carried within said sleeve and projecting upwardly beyond the upper end portion of said sleeve and adapted to be connected to said drill pipe; a centrally bored piston coaxially connected with said mandrel within said sleeve; closure means carried by the depending end of said piston to prevent fluid flow upward through the bore of the latter when the piston is lowered with respect to said sleeve; piston rings carried by said piston intermediate its ends in sealing contact with the inner wall of said sleeve; and spring urged latch means carried by the upper end portion of said mandrel and engageable with said pins for lifting said sleeve with said mandrel after downward movement of the latter.

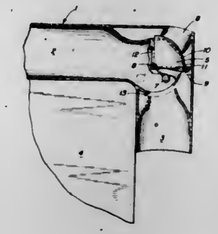
3,015,362
WELL APPARATUS
Jack A. Moosman, Houston, Tex., assignor to Johnston Testers, Inc., Houston, Tex., a corporation of Texas
Filed Dec. 15, 1958, Ser. No. 780,489
5 Claims. (Cl. 166—216)



4. A slip type anchor for use in a borehole comprising: a cylindrical body adapted to be connected at one end to a pipe string for movement therewith, said body having integral portions inclined relative to the longitudinal axis of said body and spaced about said body, slip means for each of said inclined portions including pairs of superimposed first and second slip blocks wherein the first of said blocks has substantially parallel inner and outer surface portions and is disposed intermediate of a surface portion on the second slip block and said inclined portion so that said clip blocks may slide parallel to one another and to said inclined portion; means in each pair of slip blocks to slidably secure said first slip block to said inclined portions and to said second slip block; an annular assembly slidably mounted on said body and including a tubular sleeve; coupling means releasably securing said assembly against longitudinal movement relative to said body; means to couple said sleeve to said second slip blocks whereby upon relative movement in only one direction, said first and second block members are moved radially outward from said body while moving in a parallel relationship to one another and to said inclined first surface portion until said slip means are in locking relation with the borehole wall; wall-engaging friction means for frictionally engaging the sidewall of a well bore; and means for releasably coupling said wall-engaging friction means to said sleeve.

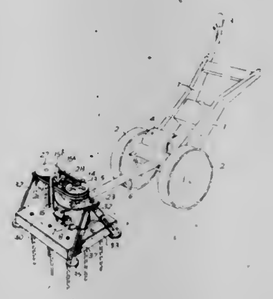
3,015,363
HELICOPTER-REACTION TIP BRAKE
Robert S. Knecht, 23 Copperdale Lane, Huntington, N.Y.
Filed Jan. 28, 1960, Ser. No. 5,322
2 Claims. (Cl. 170—135.4)
(Granted under Title 35, U.S. Code (1952) sec. 266)

1. A reaction type rotor for helicopters comprising a plurality of air foils mounted for rotation about a common axis and formed with axial passages therein, a propulsion nozzle located within said rotor and near the tip thereof for exhausting the gases in such a manner as to produce rotation of said rotor, a braking nozzle located within said rotor and near the tip thereof for exhausting gases in such a manner as to produce a braking action on said rotor, a diverter valve positioned intermediate said propulsion nozzle and said braking nozzle for alternately directing the discharge of said gases into one of said nozzles, a biasing spring and a weight attached to said diverter valve for assisting in closing said braking nozzle when it is desired to operate said rotor,



positive means for positioning said diverter valve into one of two positions whereby said propulsion nozzle is opened in one position while said braking nozzle is closed and said propulsion nozzle is closed while said braking nozzle is opened in the other position.

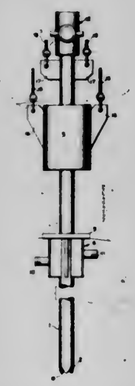
3,015,364
HORTICULTURAL IMPLEMENT
William Michael Fitzgerald, White Lodge, Holmwood Drive, Leicester, England
Filed Nov. 2, 1959, Ser. No. 850,386
Claims priority, application Great Britain Nov. 6, 1958
1 Claim. (Cl. 172—22)



A horticultural implement comprising a vehicle, a supporting arm attached to and extending forwards from said vehicle, a motor mounted on said vehicle, a power reduction gear box rigidly mounted to the leading edge of said supporting arm, a first pulley rotatable with respect to said gear box and power transmission means in said gear box and in said supporting arm for transmitting power from said motor to said first pulley, a cradle mounted by connecting means to said gear box for rotation of said cradle between upper and lower positions on a horizontal axis transverse to said supporting arm, a housing attached rigidly connected to said cradle for rotation therewith about said axis, at least one rotatable earth tiller rotatably mounted in said housing to be in working position when said cradle is rotated to its lower position, second power transmission means carried by said housing for driving said rotatable earth tiller including a second pulley in said second power transmission means

disposed for alignment with said first pulley to accommodate a driving belt between said first and second pulleys when the cradle is in its lower position.

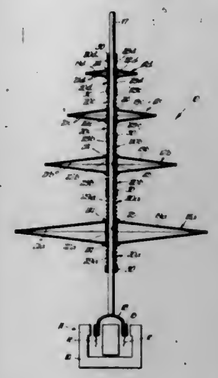
3,015,365
SLIDING WEIGHT HOLEPUNCHER FOR THE INSTALLATION OF WELLPOINTS
David H. Griffin, Bronxville, and David A. Werblin, Riverdale, N.Y., assignors to Griffin Wellpoint Corporation, New York, N.Y., a corporation of New York
Filed Aug. 18, 1959, Ser. No. 834,435
2 Claims. (Cl. 175—137)



1. A sliding weight holepuncher for the installation of wellpoints for withdrawing water from the ground comprising an elongated tubular cylindrical shank open at both ends thereof and having a lower toothed cutting edge, a hammer weight mounted and freely slidable upon said shank, manually controllable means for alternately raising said weight and releasing it to cause it to fall by gravity, and an anvil member upon which said weight falls, thereby driving said shank into the ground, said anvil member consisting of an upper striking plate, and a lower support therefor having a plurality of radial circumferential wings upon which said plate rests, said radial wings being each securely welded to said shank and to said plate by welds extending along the full lengths and breadths of said radial wings and located in both of opposite corners at the intersections of the vertical and horizontal edges of said radial wings with said shank and said plate, said radial wings being each of equal breadth throughout its length, said striking plate being provided with a superposed cushion of wood and a cushion retainer welded thereto, said shank having an upper tubular cylindrical cap open at both ends thereof and the bore of which is the same as that of said shank, said cap having therein a rotatable valve provided with a diametric port, the bore of which is of less diameter than that of said shank, said shank having inlet pipes for air and for water communicating with the bore thereof and located below said valve for jetting air and/or water through said shank when said valve is closed.

3,015,366
SPEAKER SYSTEM
George M. Bishop, Box 347, Mebane, N.C.
Filed Dec. 14, 1956, Ser. No. 628,401
16 Claims. (Cl. 181—31)

1. In a speaker system, a vibratory driver, a plurality of sound propagating elements, and respective resilient balancing means separately and independently connecting each of said sound propagating elements in parallel



with said vibratory driver, whereby said sound propagating elements vibrate at substantially magnified amplitudes in respective pre-determined frequency ranges.

3,015,367
FILTRATION MEDIA
Stanton B. Smith and Arvo J. Juhola, Pittsburgh, Pa., assignors, by mesne assignments, to Pittsburgh Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed July 19, 1955, Ser. No. 523,100
4 Claims. (Cl. 183—4)

1. A laminated article containing three layers, the outer layers being a mixture of staple cotton and vinyl chloride-acetate polymer fibers, and the intermediate layer being a mixture comprising long fiber asbestos, long staple vinyl chloride-acetate polymer fiber and particulate activated carbon.

3,015,368
TREATMENT OF DESICCANTS
Luther J. Reid, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Mar. 16, 1960, Ser. No. 15,269
6 Claims. (Cl. 183—114.2)

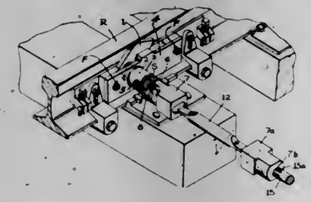
1. A method for inhibiting fouling of a solid porous siliceous desiccant consisting essentially of at least about 97 percent by weight silica and a small amount not exceeding about 3 percent by weight of an oxide of a metal selected from group IIA, IIIB and IVA of the periodic table, attributable to the accumulation therein of carbonaceous deposit resulting from catalytic conversion under conditions of elevated temperature of previous adsorbed hydrocarbon which comprises treating said desiccant prior to adsorption of said hydrocarbon with an aliphatic amine.

3,015,369
REMOVAL OF NITROGEN OXIDES FROM COMBUSTION GASES
James A. Brennan, Merchantville, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed May 23, 1960, Ser. No. 30,767
5 Claims. (Cl. 183—114.2)

1. A process for reducing the content of oxides of nitrogen in a combustion gas containing the same which comprises bringing said gas into contact at a temperature between about 400° C. and about 600° C. with a material selected from crystalline alkali metal and alkaline earth

metal aluminosilicates having rigid three-dimensional networks made up of unit cells characterized by the substantial absence of change in unit cell dimensions upon dehydration and rehydration and pores of uniform dimensions distributed throughout the crystalline structure, which material has been subjected to thermal pretreatment in an inert atmosphere prior to said contact at a temperature within the approximate range of 400 to 550° C. for a period of between about 1 and about 10 hours.

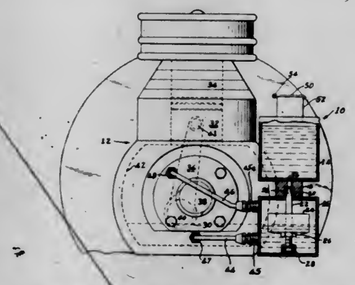
3,015,370
TRACK LUBRICATOR
James B. McWilliams, Pittsburgh, Pa., assignor to Railway Maintenance Corporation, Pittsburgh, Pa., a corporation of Pennsylvania, and Poor & Company, Chicago, Ill., a corporation of Delaware, jointly
Filed Nov. 25, 1960, Ser. No. 71,471
2 Claims. (Cl. 184—3)



1. In a track lubricator installation where the grease pump is mounted in a grease tank having opposite wall portions, and a grease distributor are arranged in predetermined spaced relation to each other and to the rail of the track upon which the lubricator is mounted, the combination comprising, a quickly dismantled and quickly assembled pump operating shaft assembly including a ramp lever, a stub shaft for the lever and provided with an axial spline portion, a first socket member including a shank portion internally splined to slidably engage said spline portion of the stub shaft for relative axial movement and having a non-circular socket portion, a second socket member also having a non-circular socket portion and an internally splined portion, a universal coupling bar having non-circular end portions engaged in the non-circular sockets of said socket members, a coil spring in the shaft assembly for imparting relative angular movement between the ramp lever and the first socket member, a pump shaft having a spline portion at one end engaging in the splined portion of said second socket member, a bushing on one wall of the tank, a thrust collar on said shaft at the inner side of the bushing and held thereto by a set screw, a socket member on the wall of the tank opposite said bushing, and a collar on the shaft adjacent the mouth of the socket and held thereto by a set screw, whereby, upon loosening the said set screw on the last mentioned collar the shaft may be moved axially into its related socket to release its splined end from the spline of the second socket member and the latter may be disconnected from the coupling bar and said bar in turn disconnected from the first socket member.

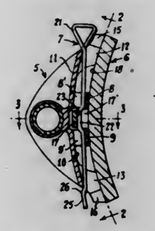
3,015,371
LEVEL REGULATOR
Edward C. Gits, La Grange, Ill., assignor to Gits Bros. Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed June 15, 1959, Ser. No. 820,347
1 Claim. (Cl. 184—103)

A compressor structure for maintaining a substantially unchanging volume of lubricant in a crankcase thereof comprising a compressor including piston means, a crankshaft therefor, a crankcase, and means for maintaining a substantially constant volume in the crankcase comprising a float chamber, means for supplying lubricant to said float chamber, valve means controlling the level of lubricant in said float chamber and including float means for controlling the passage of lubricant from said means supplying lubricant to said float chamber, a first conduit communicating the lower portion of the float chamber below the lubricant level therein with the lower portion of the crankcase, and a second conduit communicating the upper portion of the fluid chamber above the lubricant level



therein with the upper portion of the crankcase, said crankcase defining an opening for the second conduit disposed in a plane normal to the axis of rotation of the crankshaft and disposed at a level above any level to which lubricant may be agitated by the crankshaft, thereby to provide communication of atmosphere between the float chamber and the crankcase and to prevent circulation of fluid between the float chamber and the crankcase so as to continuously and uninterruptedly equalize pressure conditions in the float chamber and the crankcase.

3,015,372
BRAKE SHOE KEY
Keith D. Landell, Laval Sur Le Lac, Quebec, and Robert L. Lineker, Hudson, Quebec, Canada
Filed July 21, 1960, Ser. No. 44,494
6 Claims. (Cl. 188—243)



1. In a railroad brake assembly including a brake head and a brake shoe member, the said brake head including an arcuate plate having opposing outer end edges and a pair of U-shaped lugs projecting from the said arcuate plate and having keyway defining openings, the said lugs being in spaced relation to each other midway of the length of said arcuate plate, and said brake shoe having an attaching lug having an opening therethrough in alignment with the openings in the lugs on said arcuate plate, all of said openings being aligned to afford a keyway, a brake shoe key disposed in said keyway locking said brake shoe to said brake head, the said key being formed from a single length of steel stock bent upon itself midway of its length to form a pair of legs disposed in side-by-side arrangement, the said legs being offset from the common plane of the legs midway of their length to form a shallow transverse channel, the said legs being angled above and below the said offset towards the side

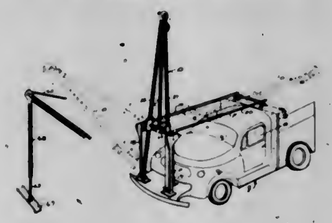
of the legs in which is formed the transverse channel, the outer surface of said offset engaging with the surface of the opening through said brake shoe lug while those portions of the key adjacent the transverse channel engage with the surface of the openings in lugs of the brake head, the pressure of said lugs on said key straightening out the angled portions of the legs of the key and forcing said legs into pressure contact with said arcuate plate, and means to lock said key in said keyway comprising an offset at the lower end of the legs of the key, the said latter offset providing a shoulder engaging with the adjacent end of the said arcuate plate.

3,015,373
METHOD AND STRUCTURE FOR STORING SEMI-FLUID MATERIAL
John H. MacMillan, Jr., Wayzata, and Mentor C. Addicks, Minneapolis, Minn.; John Hugh MacMillan III, Cargill MacMillan, Jr., and A. J. James, executors of said John H. MacMillan, Jr., deceased, assignors to Cargill, Incorporated, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 8, 1956, Ser. No. 602,772
11 Claims. (Cl. 189—3)



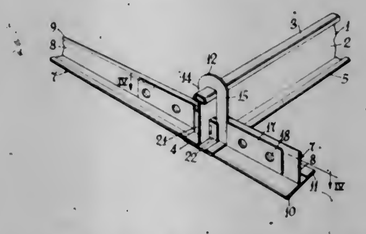
1. In a building construction the improvement comprising an inclined linear frame member positioned at an acute angle relative to the horizontal, a plurality of wall supporting members positioned in spaced relation therealong, each wall supporting member of sheet material comprising a planar supporting surface joined to supporting legs, said supporting legs being cooperatively inclined for securing to the top of said frame member, and a passageway between said legs in the direction of the extension of said frame member and a step wall skin being secured to said planar supporting surfaces.

3,015,374
HYDRAULIC DERRICK
Ralph E. Carbert, Arne M. Blomquist, and Raymond L. Kennedy, Minneapolis, Minn., assignors to Tel-E-Lect Products Inc., Minneapolis, Minn., a corporation of Minnesota
Filed May 4, 1956, Ser. No. 582,730
12 Claims. (Cl. 189—11)



1. A derrick assembly comprising a frame adapted to be mounted upon one end of a vehicle, a derrick carried by said frame for swinging movement in a vertical plane and having upper and lower end portions and medial portions, releasable pivot means carried by said frame and said derrick and constructed and arranged to pivotally engage and support said derrick at its medial portions upon said frame during a portion of its movement through said vertical plane to horizontal overhanging position relative to the vehicle, said pivot means being movably mounted on said frame for forward shifting movement relative thereto to storage position, releasable pivot means carried by said frame and said derrick and constructed and arranged to pivotally engage and support said derrick at its lower end portions upon said frame during the remainder of its movement through said vertical plane, and means for moving said derrick in said vertical plane.

3,015,375
LOCKING CONNECTION FOR SUPPORTING GRID SYSTEMS
Robert P. Lickliter, 119 Buffalo St., and Earl Abbott, 62 Dudley Ave., both of Hamburg, N.Y.
Filed Aug. 24, 1959, Ser. No. 835,466
10 Claims. (Cl. 189—36)

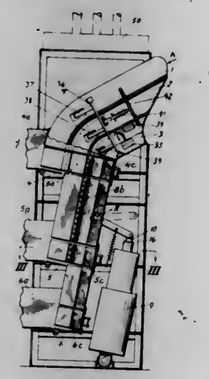


1. A locking device for supporting grid systems and the like comprising, in combination with a first support member having a web portion and lateral flanges on opposite sides thereof, said web portion having a slot therein, a pair of second support members extending transversely of said first support member on opposite sides thereof, one of said second support members having a locking portion of inverted generally U-shape receiving said web portion of said first support member and having opposite side leg portions bearing at their lower ends against said lateral flanges of said first support member, and the other of said second support members having a locking portion extending through said slot and engaging each of said side leg portions on opposite sides thereof.

3,015,376
APPARATUS FOR RECEIVING, ASSORTING AND STORING OF RETURNED EMPTY BOTTLES IN SHOPS AND THE LIKE
Allan Gustaf Otto Glembring, 19B Norra Gubberogatan, Goteborg, Sweden
Filed Mar. 16, 1959, Ser. No. 799,727
Claims priority, application Sweden Mar. 18, 1958
8 Claims. (Cl. 194—4)

5. An apparatus for receiving, assorting and storing of returned empty bottles for milk, refreshing drinks and the like in shops and stores comprising a plurality of inclined guide members forming respective paths for bottles of different sizes from an intake end adjacent the upper end of each guide member to respective stop plates at the lower end of each guide member, a movable discharge member for the bottles at each stop plate to displace the bottles into transversely extending store channels, the guide paths being in the shape of trough-like channels in a number corresponding to the number of different diameters of bottles and each of a width suited for a different bottle diameter, and an assorting device in

the vicinity of the intake end for distributing the bottles to the guide members in accordance with the bottle diameters, the guide members extending from the assorting device with a curve directing the paths downwards with such a steepness that the bottles arrive at the stop plates in upright position, the stop plates being yieldably mounted arranged for the impact of the bottle and by the yielding brought in coaction with switches for electric circuits to energize an electric motor assembly in coaction with the discharge members, pivotable



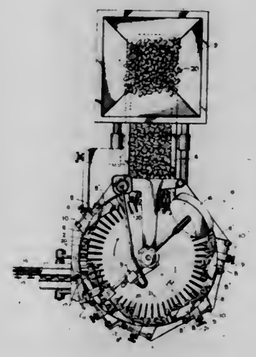
feelers positioned in the vicinity of the stop plate of at least one of the channels used for bottles of the same width but different length, said feelers, being positioned at a height to be engaged by the uppermost portions of bottles of predetermined heights when they are moved away from the stop plate, a switch operated by each of the feelers, a ticket delivering device, and means controlled by each of the switches upon operation thereof for operating the ticket delivering device to deliver a ticket.

3,015,377
CONSOLE TYPEWRITER BIT PRINTING
Henry A. Reitfort, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 25, 1960, Ser. No. 17,656
6 Claims. (Cl. 197—19)



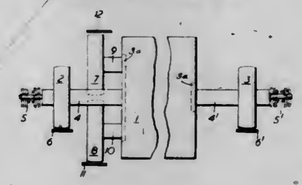
1. The combination with a typewriter having a plurality of keys for typing characters and having operating magnets therefor, of input means including a plurality of bit means selectively operable in different combinations to effect operation of particular ones of said magnets in response to a bit code having different combinations of a prescribed number of bits for each character, check means controlled by said bit means in response to other than the prescribed number of bits in any character, and means controlled by the check means for effecting operation of the magnets to print the actual bits.

3,015,378
ORIENTATION APPARATUS FOR ARTICLES TO BE WRAPPED
Hermann Thürlings, Viersen, Bezirk Dusseldorf, Germany, assignor to Hansella-Werke Albert Henkel A.G., Viersen, Rhineland, Germany, a corporation of Germany
Filed Jan. 21, 1960, Ser. No. 3,912
Claims priority, application Germany Aug. 19, 1959
6 Claims. (Cl. 198—33)



1. In or for a packaging machine including wrapping apparatus, means for orienting articles to be wrapped before their delivery to the wrapping apparatus, comprising a continuously rotating plate serving to receive the articles to be wrapped, said plate being provided around its edge with pockets for accommodating the articles and said plate sloping conically upwardly from its edge to its axis of rotation, a stationary edge member surrounding said plate, and at least one wedge-shaped stationary deflector arranged above said plate and adjacent to said edge member, said deflector being positioned so that it widens in a horizontal plane in the direction of rotation of said plate and is encountered by articles carried by said plate and not yet located in said pockets thus moving said articles upwardly and inwardly along the surface of said plate away from said pockets.

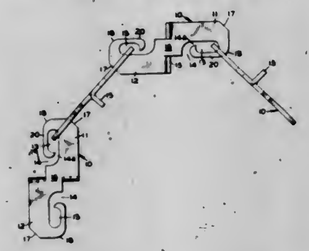
3,015,379
CARRIER SUPPORTS FOR SORTING MACHINE
Jules Jean Emmanuel Marie Schockaert, Antwerp, Belgium, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,227
Claims priority, application Netherlands Nov. 4, 1957
2 Claims. (Cl. 198—145)



1. In combination, an article carrier for a continuous conveyor system of the type having a pair of parallel spaced chains which reeve back and forth in different horizontal directions and a pair of spaced tracks each of which is adjacent a different one of said chains and parallel therewith, each of said carriers comprising an object holder, a pair of parallel extension plates extending from said holder, axle means extending outwardly from said plates

and coupled to said chains, a pair of spaced axles attached to one of said plates, said axles lying in a common plane, said common plane spaced from the plane of said axle means, a pair of idler rollers rotatably mounted on said axle means on opposite sides of said holder adjacent said chains whereby to support said carrier on said tracks, a pair of guide rollers, each one rotatably mounted on a different one of said spaced axles, all of said rollers being of a uniform diameter, the spacing between said axles being slightly larger than said diameter, the distance between said common plane and the plane of said axle means being slightly larger than the radius of any of said rollers, one of said guide rollers adapted to abut against a guide roller of an adjacent carrier in the system, whereby a predetermined angular displacement of each carrier is maintained with respect to said tracks.

3,015,380
FLEXIBLE CHAIN
James H. McAuley, Bremen, Ohio, assignor to McAuley Manufacturing, Inc., Bremen, Ohio, a corporation of Ohio
Filed May 8, 1959, Ser. No. 812,001
5 Claims. (Cl. 198—176)



1. A chain formed from identical interlocking links interlocked and positioned at right angles to each other, each of said links comprising a flat body portion having opposed hook-shaped ends in the plane of the flat body portion, and a material-moving blade projecting from one flat surface of the flat body portion at an angle thereto intermediate said hook-shaped ends.

3,015,381
BELT CONVEYORS
Franz Mohwinkel, Soltau-Ahlften, and Helmut Funke, Hannover, Germany; said Funke assignor to said Mohwinkel
Filed Feb. 10, 1958, Ser. No. 714,332
Claims priority, application Germany Feb. 14, 1957
2 Claims. (Cl. 198—203)



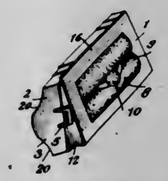
1. In a conveyor system for conveying root crops, an improved endless conveyor having an upper and a lower run and comprising in combination; endless parallel belts of reinforced flexible material transversely spaced apart, each said belt having inner and outer surfaces and side edges, said outer surface having regularly-spaced transverse blocks defining transverse holes and said inner surface having smooth running bands adjacent the side edges and regularly-spaced transverse teeth extending between said running bands; a plurality of rods extending between said endless belts and engaged in said holes of the upper surface blocks; a pair of pulleys, for each said endless belt, mounted for rotation about parallel axes and defining said upper and lower runs of said conveyor, each said pulley having opposite sides and radially extending rims, said rims being axially spaced apart at least the transverse extent of said teeth to respectively engage the smooth running bands of said belt.

3,015,382
ELEVATOR CASING
Wilhelm Kaufmann, Mukwonago, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 20, 1960, Ser. No. 37,167
9 Claims. (Cl. 198—206)



1. In an elevator casing, a casing section assembled in end-to-end relation with similar sections to form an elevator housing including a lower boot section supporting the sections in a vertical column and a head section carrying the drive and elevating mechanism, the adjacent ends of said sections comprising rectangular frames having outward flanges bolted together and the oppositely extending flanges defining a rectangle, each casing section including a sheet metal tube of rectangular cross-section and having open ends assembled over the flanges of said frames and having U-shaped corner projections, said U-shaped corner projections allowing the expansion of said ends to receive the flanges of said frames and comprising vertical columns in bearing relation to said frames to provide the support of the upper sections and said head section.

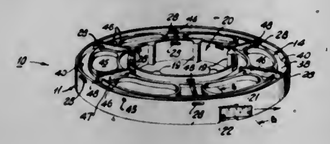
3,015,383
DISPLAY CONTAINERS
Jerome Shiffman, 125 E. 144th St., New York 51, N.Y.
Filed Aug. 30, 1960, Ser. No. 52,816
2 Claims. (Cl. 206—45.23)



1. A container comprising, a tray having end walls provided with centrally-located openings, a cover member fitted over the tray and having side walls and having end walls overlying the end walls of the tray, the end walls on the cover member having downwardly-extending lugs formed with integral studs entering the openings in the end walls of the tray, the tray having side walls, one

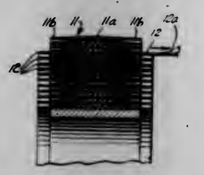
of said side walls being formed with a projecting flange extending for its length, said flange limiting the pivotal movement of the tray in one direction by its contact with one of the side walls of the cover member, and limiting the pivotal movement of the tray in the opposite direction by its contact with an opposite side wall of the cover member, the tray having a range of pivotal movement with respect to the cover member to permit the top of the tray to either face upwardly within the cover member or to face downwardly to have its upper face completely exposed out of the cover member for display of its contents.

3,015,384
CONTAINER AND DISPENSER FOR COILED STRIP STOCK, BANDSAW BLADE STOCK, AND THE LIKE
Charles T. Kellogg, Middletown, N.Y., assignor to Clemson Bros., Inc., Middletown, N.Y.
Filed Dec. 9, 1958, Ser. No. 779,172
15 Claims. (Cl. 206—52)



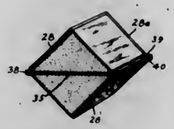
1. A container and dispenser for coiled metal strip stock, bandsaw blade stock, and the like comprising a container body having an inner wall and an outer wall with a bottom surface therebetween defining a channel between said inner and outer walls, a coil of the strip stock in said channel, said outer wall having an opening therein out through which the coil can be unwound, a ring cover fitting down snugly into said channel between said inner and outer wall, and means for holding said ring cover at a desired level in said channel for retaining the coil of stock therein.

3,015,385
SILICONE RUBBER TAPE ROLL
James A. Chesnut, Metuchen, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Nov. 6, 1959, Ser. No. 851,301
4 Claims. (Cl. 206—59)



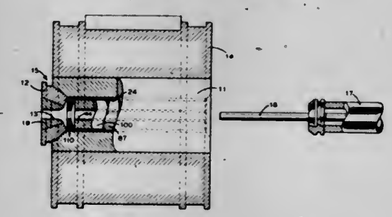
1. A roll consisting of an unsupported silicone rubber tape having a cross-section thicker at the center than at the edges wound together with a thin interliner strippable from silicone rubber and flexible in all directions, said interliner being wider than the tape and extending beyond the edges thereof in said roll, said interliner being releasably held in the roll in frictional contact with the thicker central portion of the tape only, the edges of the interliner extending between but being relatively free from frictional contact with the edges of the adjacent coils of tape in said roll, whereby said interliner can be removed from said roll without unwinding the tape by grasping the edge of the interliner and pulling it in a direction away from the roll.

3,015,386
PACKAGING FLUENT PRODUCTS
Clarence W. Vogt, Weston, Conn. (Box 232, Westport, Conn.)
Original application July 30, 1956, Ser. No. 601,030, now Patent No. 2,934,867, dated May 3, 1960. Divided and this application Oct. 12, 1959, Ser. No. 845,881
5 Claims. (Cl. 206—65)



1. A package comprising a pair of sections of thermoplastic sheet material, each having a cavity therein filled with fluent material, said cavities having open top sides and closed bottom and end portions, said cavities having their open top sides in opposed relation and said sections being joined around the peripheries of said open sides, and reinforcing strips secured to said sections and extending around parts of the bottom portions and said end portions of each section to provide a peripheral enclosure for said package extending around its ends and two opposite sides.

3,015,387
METHOD AND APPARATUS FOR METAL WORKING
Sidley O. Evans, Beaver Falls, Pa., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 29, 1958, Ser. No. 731,736
1 Claim. (Cl. 207—10)



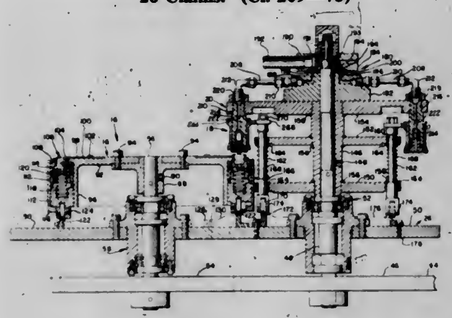
The method of extruding tubes from a heated cylindrical tubular billet of high melting temperature metal in an extrusion press having a substantially cylindrical billet chamber with a die at its discharge end, a mandrel arranged to be inserted through the billet passage and die, and a ram for applying pressure axially on the billet to force the billet to flow through the die around the mandrel, which comprises providing the tubular billet with at least three longitudinally extending circumferentially spaced radially outwardly extending billet centering ribs having a cross-sectional shape providing a substantially linear contact with circumferentially spaced portions of the billet chamber circumferential wall when the billet is positioned in the chamber, filling the arcuate spaces between said billet ribs with a layer of incompressible refractory lubricant material having a relatively wide melting range and extending radially outwardly to the same extent as said billet ribs so that the ribs and layer of lubricant material form the circumferential peripheral section of the billet with a circumferential periphery concentric with the billet passage, charging the coated ribbed billet into the extrusion press billet chamber with the billet ribs having a linear contact with the billet chamber wall and centering the billet in said chamber, inserting the mandrel through the billet passage and the die, and

extruding the billet through the die around the mandrel while utilizing the layer of lubricant between said ribs as the lubricant between the billet chamber wall and the billet, whereby said layer of lubricant prevents substantial deformation of said ribs prior to the use of the material thereof in the actual extrusion.

3,015,388
CAP INSPECTION APPARATUS

Elbe A. Wilckens, Baltimore, Md., assignor to Crown Cork & Seal Company, Inc., Philadelphia, Pa., a corporation of New York

Filed May 25, 1959, Ser. No. 815,587
26 Claims. (Cl. 209—75)



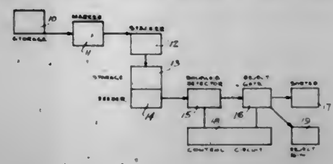
1. In an apparatus for the quality inspection of caps of the type having a shell with a depending skirt and a liner therein: a frame structure; means carried by said frame structure for receiving and supporting a cap to be tested; a testing head coacting with said cap supporting means, said testing head including a sleeve element having an outside diameter substantially equal to the inside diameter of a cap being tested for gauging the inside diameter of the cap, said sleeve element also having an annular liner engaging surface of less diameter than its outside diameter and capable of providing a seal with a perfect liner, valve means cooperating with said sleeve element to apply a vacuum to said cap and remove the same from said supporting means when the liner has a perfect sealing surface and is tightly fitting within the shell of the cap, a second sleeve element carried by said testing head and movable with respect to said first sleeve for gauging the outside diameter of the cap when the cap is supported by vacuum from said valve means, said second sleeve element ejecting a cap from said valve means when the cap has a diameter greater than a predetermined diameter; means cooperating with said cap supporting means and said testing head for receiving caps lacking liners from said supporting means and caps ejected by said second sleeve; means on said second sleeve to positively eject perfect caps from said testing head; and means to receive the perfect caps.

3,015,389
FEEDING MECHANISM AND METHOD FOR FLAT ARTICLES

Maurice M. Levy, Ottawa, Ontario, Canada, assignor to Her Majesty The Queen in the right of Canada as represented by the Postmaster General

Filed Dec. 18, 1959, Ser. No. 860,594
11 Claims. (Cl. 209—111.5)

8. Apparatus comprising means for scrutinizing simultaneously both exposed major faces of each of a series of flat articles having pairs of identifiable marks thereon, the marks of each pair being disposed on respective opposite major faces of each said article in a predetermined spatial relationship to each other, said relationship being the same for all said articles, means for exposing the major faces of said articles seriatim and substantially individually to said scrutinizing means, said scrutinizing means including means for detecting each mark of each said pair of marks and generating a corresponding signal, signal comparison means, means for feeding the signals generated in said detecting means to said signal com-

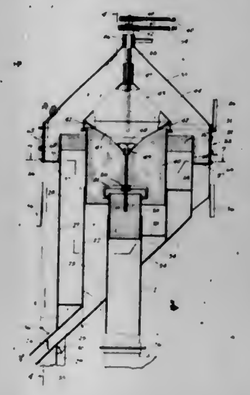


parison means, said signal comparison means including means for determining the temporal relationship of said signals corresponding to the spatial relationship of said marks and means sensitive to the existence of a mark-indicating signal unrelated to a companion mark-indicating signal in the temporal relationship corresponding to said predetermined spatial mark relationship.

3,015,390
PNEUMATIC SEPARATOR

Troy C. Stewart, Sr., P.O. Box 162, Patterson, Calif.

Filed Jan. 27, 1961, Ser. No. 85,382
13 Claims. (Cl. 209—140)

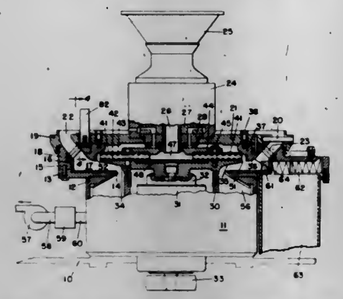


5. A pneumatic separator including a vertical open-topped stack, means to create an upward draft of air in the stack from the lower end thereof, a material supply hopper on one side of the stack intermediate its ends and having an opening at the bottom delivering into the stack, the stack being open at the top, a discharge chute leading from the stack below the hopper opening, a downwardly sloping screen unit across the stack below said opening and delivering to the chute, a chamber surrounding the upper portion of the stack and projecting above the stack and into which the latter at the top delivers, a member substantially closing said chamber at the top but leaving an opening thereabout, a second but open-topped chamber surrounding the first chamber and into which the last named opening delivers, a third chamber surrounding and extending above the second chamber and having air discharge screen units in its outer side, and a cover upstanding from the third chamber and enclosing all the chambers; there being individual discharge chutes from the lower ends of all the chambers.

3,015,391
CLASSIFICATION PROCESS AND APPARATUS

Thomas D. Sharples, Plymouth Meeting, Pa., assignor to The Sharples Corporation, a corporation of Delaware

Filed Feb. 24, 1960, Ser. No. 10,596
14 Claims. (Cl. 209—144)

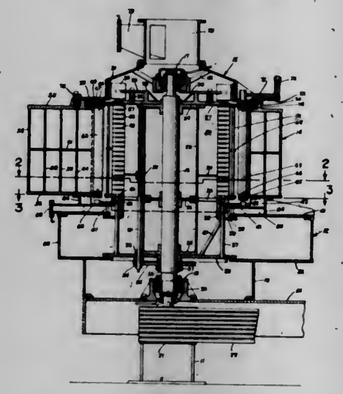


6. A classifier for finely divided material comprising boundary means including first and second opposing wall structures forming between them an annular classifying zone, inlet means including a plurality of fluid-directing means adjacent the outer limit of said zone for producing within said zone an inwardly spiralling vortex, one said fluid-directing means directing fluid in a direction relative to said classifying zone which is different from that of another said fluid-directing means, inlet means for said finely divided material, outlet means communicating with the inner boundary of said annular classifying zone, means for producing a differential in pressure between said first-mentioned inlet means and said outlet means for the flow of fluid into said classifying zone directed by said plurality of fluid-directing means and out of said classifying zone through said outlet means, and means for controlling the volume of the component fluid flows with respect to each other to obtain the desired shape of the spiral in the inwardly spiralling flow.

3,015,392
VERTICAL FEED CENTRIPETAL CLASSIFIER

Tibor A. Rozsa and Robert O. Holmes, Minneapolis, Minn., assignors to The Microcyclomat Co., Minneapolis, Minn., a corporation of Delaware

Filed Aug. 14, 1959, Ser. No. 833,771
13 Claims. (Cl. 209—144)

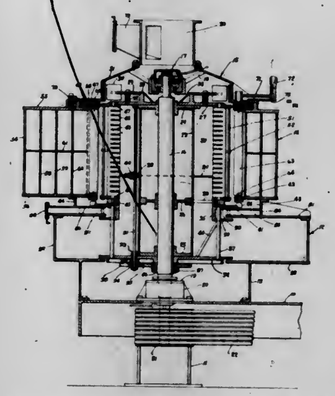


1. A vertical classifier apparatus for dry pulverulent material which comprises a peripheral inlet-axial outlet centripetal extraction classifier rotor journaled for rotation on a vertical axis within a rotor housing, said rotor comprising a plurality of spaced apart hoizontal annular disks and a plurality of vertical blades between the disks, an annular axial discharge duct extending through said rotor, a material feed inlet at the top of said housing, means for distribution of feed for gravitational flow about the cylindrical periphery of said rotor, a scroll housing air inlet to said rotor housing spaced from and surrounding and substantially co-extensive with the classifying section of said rotor for introducing air in a tangential inward flow to the annular zone surrounding said rotor, a fan housing and product discharge in communication with the axial discharge duct of said rotor and fan means on said rotor within said fan housing.

3,015,393
CENTRIPETAL CLASSIFIER ROTOR DECK SELECTOR

Tibor A. Rozsa and Robert O. Holmes, Minneapolis, Minn., assignors to The Microcyclomat Co., Minneapolis, Minn., a corporation of Delaware

Filed Aug. 14, 1959, Ser. No. 833,772
11 Claims. (Cl. 209—144)



1. In a centripetal classification apparatus comprising a housing, material inlet means to and product discharge means from said housing, air inlet means and means for inducing a flow of air through said housing, a centripetal extraction classifier rotor including a plurality of parallel spaced apart annular elements mounted together for rotation on a shaft within said housing and having an annular axial duct formed in the space between the inner peripheries of said annular members and the shaft, said axial duct being in communication with the spaces between said annular elements and said product discharge, rotor deck selector means comprising an annular disc in said axial duct perpendicular to the axis of said rotor and means associated with the annular disc for moving said annular disc axially in said duct.

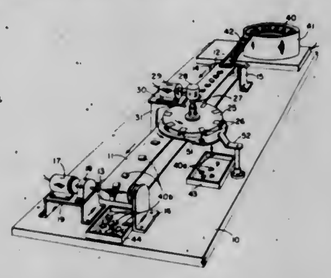
3,015,394
MAGNETIC CONVEYING APPARATUS

William C. Woods, Lynn, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Sept. 29, 1958, Ser. No. 763,972
3 Claims. (Cl. 209—222)

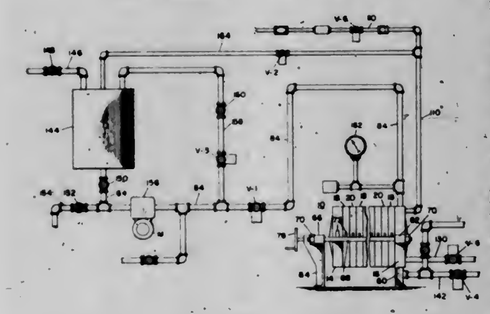
1. Apparatus for handling magnetic elements including conveying means for moving a quantity of elements along a path, carrier means supporting a plurality of magnets in a horizontal circular array in a plane generally parallel to

said path, driving means for rotating said carrier means and passing each magnet in sequence above a portion of said path and subsequently above an area removed from said path, a separator plate of non-magnetic material interposed between said magnets and said path and between said magnets and said area, said separator plate lying adjacent the magnets in the region above said path and below the level of said path in the region above said area removed from the path, and means for rotating said separator plate about a point directly below the center of the circular array of magnets in synchronism with the



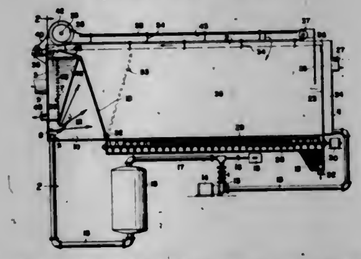
rotation of said carrier means, whereby magnetic elements attracted by a magnet as the magnet passes over the path are held in contact with the underside of the separator plate by magnetic attraction and are moved laterally with the rotation of the carrier means and the separator plate from over said path to over said area removed from the path, the vertical distance between said elements and said magnet increasing as the elements and the portion of the separator plate in contact with the elements pass over said area removed from the path until the magnetic attraction is not sufficient to hold the elements against the underside of the separator plate.

3,015,395
APPARATUS FOR FILTRATION
George Stram, Hellam, Alexander A. McIntyre, Lancaster, and Joe E. Thomas, York, Pa., assignors to Capitol Products Corporation, a corporation of Pennsylvania
Filed Dec. 16, 1958, Ser. No. 780,760
4 Claims. (Cl. 210—138)



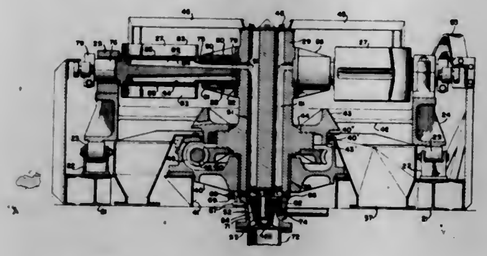
3. A filter device having an unfiltered liquid chamber and a filtered liquid chamber and a material retaining filter medium therebetween, means for continuously delivering unfiltered liquid to said unfiltered liquid chamber; a drain connected to said unfiltered liquid chamber; a drain connected to said filtered liquid chamber; a pressurized air supply line connected to said filtered liquid chamber separate and apart from said last named drain; a normally closed valve in said unfiltered liquid drain and a normally closed valve in said pressurized air supply line and a normally open valve in said filtered liquid drain whereby liquid is filtered in said device; and control means intermittently opening and closing the valves in said unfiltered liquid drain and said pressurized air supply line simultaneously and closing the valve in said filtered liquid drain subsequent to each opening but prior to each closing of the valves in said unfiltered liquid drain and said pressurized air supply line to admit pressurized air to said filtrate chamber to displace the filtrate in said filtered liquid chamber while said filtered liquid drain valve is open and to dislodge deposited material from said filter medium while said filtered liquid drain valve is closed; whereby the continuous supply of unfiltered liquid is alternately filtered and discharged along with the dislodged deposited material.

3,015,396
APPARATUS FOR FLOTATION OF SUSPENDED MATERIAL
Gilbert W. Quast, Brookfield, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 3, 1959, Ser. No. 857,061
8 Claims. (Cl. 210—221)



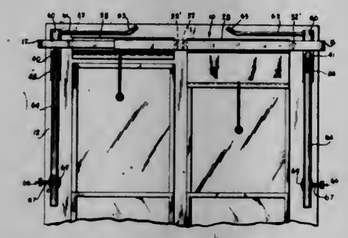
1. In a tank having a forward zone for receiving a liquid carrying suspended solids and having a quiescent zone for the separation of the material from the liquid by flotation, an inclined plate forming a beach at the liquid level of the tank and a perforate plate extending from the lower edge of the beach to the bottom of the tank, said beach being disposed to receive the floating material pushed toward the forward zone of the tank and with said perforate plate separating the quiescent zone from the forward end of the tank, a series of flights operable over the quiescent zone of the tank to move the floating material up and over the beach, wall means in said forward zone dividing the same into upper and lower sections, the upper section comprising a trough beneath said beach to receive such material, an outlet for withdrawing the material from the lowermost part of the trough, said wall means having a steep slope downwardly from the sides of the tank and from the lower edge of said beach and converging just below said outlet, a delivery pipe communicating with the forward zone of the tank immediately beneath said wall means at the shallow end of the trough and above said outlet, a baffle extending downwardly from said wall means and having a lower edge extending across the tank and spaced from the bottom of the tank to divide said lower section into a downward passage from said pipe and a generally upward passage to said perforate plate, said downward passage having a progressively enlarging cross-section laterally of the tank and said generally upward passage having a progressively enlarging cross-section in the vertical direction whereby the flow from the delivery pipe is distributed over the entire area of the perforate plate before passing therethrough and into the quiescent zone of the tank.

3,015,397
FILTER VALVE CONSTRUCTION
Daniel M. Schwartz, Salt Lake City, Utah, assignor, by mesne assignments, to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,625
2 Claims. (Cl. 210—395)



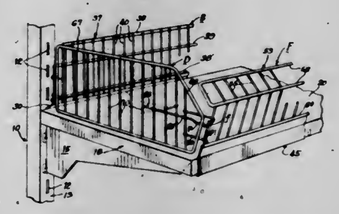
2. In a rotary filtering apparatus including a plurality of filter sections, a relatively rotating port means having arcuately spaced openings therein communicating with the filter sections, a stationary valve block in operative relation to said port means, said stationary valve block having openings extending rectilinearly through the valve block and each of said valve block openings communicating with at least two selected arcuately spaced openings in said port means upon rotation of the port means, said valve block openings being shaped to provide a substantially rectilinear flow path through the valve block openings to and through said selected arcuately spaced openings in the port means, and means for maintaining alignment of said valve block with said port means.

3,015,398
HANGER FOR CURTAINS, DRAPERIES AND ACCESSORIES
Albert Noberelt, 290 Suydam St., Brooklyn, N.Y.
Filed Oct. 27, 1960, Ser. No. 65,450
7 Claims. (Cl. 211—96)



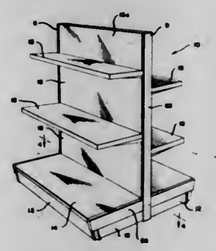
1. A combined window shade holder and hanger for curtains, comprising a pair of elongated channel-shaped brackets adapted to be fixed to a window casing at the sides thereof in vertical arrangement, cylindrical mounting rods removably supported in the brackets in vertical position with a portion of the rods extending above the brackets, said mounting rods having transverse openings therethrough, telescoping curtain rods constituting an endless frame, said curtain rods having spaced openings therein in alignment with the openings in the mounting rods, screws extending through the aligned openings for fastening the endless frame to the mounting rods, said curtain rods being C-shaped in cross section and having telescoping straight ends and opposed angular ends, and a slidable pair of brackets along the straight ends of the curtain rods inside the endless frame at one side thereof for holding the shade roller, said latter brackets comprising flat elongated sheet metal bodies with opposed notches in the long edges thereof at one end, engaged with and interlocked with the long edges of the curtain rods, one bracket of the slidable pair having a slot intersecting one long edge at one end of the body for receiving the flat pin of a shade roller, the other bracket of the slidable pair of brackets having a round opening at its other end for receiving the other round pin of the shade roller.

3,015,399
MERCHANDISE DISPLAY EQUIPMENT
John R. Radek, Hinsdale, Ill., assignor to Ready Metal Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 7, 1959, Ser. No. 832,275
14 Claims. (Cl. 211—134)



13. Merchandise display equipment comprising a shelf having front and rear portions bent downwardly from the major plane of the shelf to provide hooks, front and rear wall members attached to said shelf, said wall members being essentially of wire-lattice formation and having downwardly extending hook portions interlocking with the respective front and rear hooks of said shelf, and a divider adapted to be detachably positioned at a plurality of points along the length of the shelf, said divider being essentially of wire formation and having hook portions at the front and rear extremities of said divider for detachable engagement with wires of the front and rear walls, respectively.

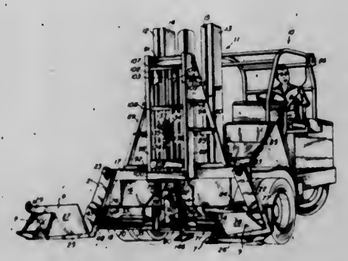
3,015,400
SHELF CONSTRUCTION
Allan D. Foster, Grosse Pointe, Mich., assignor to Almor Corporation, Detroit, Mich.
Filed Oct. 14, 1959, Ser. No. 846,301
8 Claims. (Cl. 211—183)



1. A support column formed of two identical interlocked halves, each half comprising an elongated, flat, rigid strip of rectangular shaped sheet metal having elongated side edges, each strip having an integral groove bent out of one face of the strip and opening at the plane of the other face thereof, the groove extending the full length of the strip parallel to the side edges of the strip and being open at its ends and with the mouth of the groove being constricted relative to the width of the groove, the groove being located near one side edge at a line located

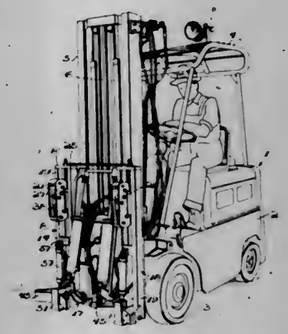
approximately one-third the distance from that one side edge towards the other side edge; each strip also having an integral tongue formed of a double fold bent outwardly of the said other face of the sheet with the two folds forming a seam at the sheet and with the two folds being flat and in face to face contact from the sheet to a point near the free end of the tongue formed therefrom, and at the free end, the folds being integrally joined and being spread apart to form an enlarged end shaped to correspond to the shape of said groove for tightly fitting within and filling the groove of the other strip, said tongue extending the full length of the strip and being perpendicular to the flat strip and extending outwardly of the strip a distance substantially less than the width of the strip and being located near said other side edge but spaced therefrom a distance equal to the spacing of the mouth of the groove from said one side edge; the two halves being inverted relative to each other and being interlocked, with the enlarged head of the tongue of each frictionally and snugly fitted into the groove of the other to form an assembled column with the two tongues forming transverse walls and the two strips being closely spaced apart and with the two tongues and the strip portions between them forming a rectangular in cross-section column center portion and with each tongue and the strip portion located between their adjacent side edges and the respective tongue each forming side edge channels opening outwardly at the side edges of the strips, and the tongues each being provided with uniformly spaced apart slots along their entire length.

3,015,401
MATERIALS HANDLING APPARATUS
Carl V. Bergstrom, 645 E. Ocean Blvd., Long Beach, Calif.
Filed Oct. 30, 1958, Ser. No. 770,897
5 Claims. (Cl. 214—317)
(Granted under Title 35, U.S. Code (1952), sec. 266)



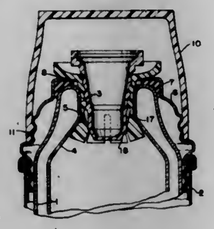
1. An apparatus, for use with an industrial lift truck in picking up, transporting and dumping both bottom-dump and skip-box types of containers both of which have outwardly-projecting lateral lugs, comprising a frame, a fork-supporting carriage slideably mounted on said frame for selective vertical movement therealong, means connected to said carriage for controlling the vertical position of said carriage along said frame, load supporting elevator means slideably mounted on said carriage for selective vertical movement therealong, means connected to said elevator means for controlling the vertical position of said elevator means along said carriage, a first controllably engageable and releaseable latching means attached to said elevator means and adapted to engage complementary means on the upper portion of a bottom-dump type container for enabling hoisting of the upper portion of said bottom-dump type container by said elevator means for dumping purposes, a second controllably engageable and releasable latching means mounted on said carriage for maintaining a skip-box type container in horizontal, upright position until released to allow dumping of said container, a pair of laterally-spaced L-shaped load supporting forks pivotally mounted on said carriage, means connected to said forks for controllably pivoting said forks, in unison, toward or away from one another to establish a selected lateral spacing between the lower substantially horizontally-extending portions of said respective forks, and a pair of load supporting attachment means each of which is carried respectively by the lower substantially horizontally-extending portion of each of said forks for enabling said forks to accommodatingly support by means of the laterally-extending lugs of the containers a range of different sized containers of both the bottom-dump and skip-box types, each of said load supporting attachment means running substantially the length of the horizontally-extending fork portion by which it is carried and each of said load supporting attachment means being formed in part by a sloped planar surface member extending upwardly from the inboard edge of said horizontal fork portion, said sloped planar surface member being inclined at an angle in a direction toward the outboard edge of said horizontal fork portion and defining at its upper most limit a horizontally-extending bearing surface which is adapted to support the lugs of bottom-dump type containers, said planar surface member being formed at its lower section which is farthest removed from the vertical portion of said L-shaped fork with a freely accessible socket adapted to engage lugs of skip-box type containers, and in part by a supporting member also extending upwardly from said horizontal fork portion to supportingly mate with said sloped planar surface member at a location below said bearing surface for the purpose of buttressing said sloped planar surface member.

3,015,402
VERTICAL-HORIZONTAL FORKLIFT DRUM HANDLING ATTACHMENT
Desmond H. Norton and Jeff D. Castleberry, Ogden, Utah, assignors to the United States of America as represented by the Secretary of the Army
Filed June 5, 1959, Ser. No. 818,491
12 Claims. (Cl. 214—620)
(Granted under Title 35, U.S. Code (1952) sec. 266)



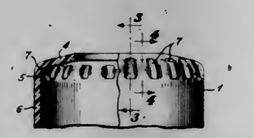
1. A drum-handling attachment for forklift trucks, comprising a base plate for association with the lift mechanism of the truck, an arm pivoted at one end to the lower end of the base plate, a trackway mounted at the free end of the arm, a wheeled carriage mounted in the trackway for reciprocal adjustment, a casing secured to the carriage and having an open front, a pair of movably-mounted jaws in said casing with their operative portions extending through the opening, means for operating the jaws, and screw-threaded means for adjusting the carriage along the trackway.

3,015,403
THREADED STOPPER EXPANDING POURING LIP COMBINATION FOR VACUUM BOTTLE
George W. Fuller, Hampton, Conn., assignor, by mesne assignments, to The American Thermos Products Company, Ann Arbor, Mich., a corporation of Michigan
Filed Apr. 8, 1959, Ser. No. 804,959
5 Claims. (Cl. 215—13)



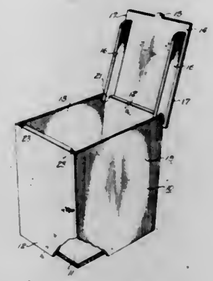
1. In a vacuum insulated bottle the combination of a double-walled vacuum insulated container having an approximately cylindrical open neck, a closure member having a threaded tapered stopper portion, said stopper portion having an inner extension thereon, the inner end of said stopper portion having the form of the frustum of a cone, a stopper receiving member having a sleeve portion with an outer surface fitting within said mouth and a pouring lip portion above said mouth, said sleeve member being integrally tapered and threaded to receive said stopper portion, said sleeve also having a plurality of flexible arcuate extensions at its inner end, each of said flexible arcuate extensions being provided with a longitudinal central rib having a sloping upper end to cooperate with the cone-shaped end of the stopper portion, said inner cone-shaped end of said stopper portion cooperating with said flexible sections to cause them to expand into fluid-tight connection with said neck as the closure is turned into position.

3,015,404
IMPROVEMENTS IMPARTED TO STOPPERS FOR VESSELS OF THERMOPLASTIC MATERIAL
Jean Joseph Charles Wuyckens, Brussels, Belgium, assignor to Plax Corporation, Bloomfield, Conn., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,410
Claims priority, application Belgium Mar. 27, 1959
1 Claim. (Cl. 215—31)



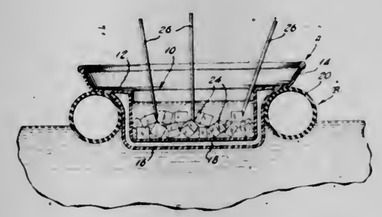
A plastic neck portion for a container comprising a vertically disposed generally cylindrical wall portion, an annular generally frusto-conical lip portion integral with said wall portion, said lip portion extending inwardly and upwardly from the upper end of said wall portion and cooperating therewith to form an annular shoulder, said lip portion terminating in a closure receiving, central dispensing opening of substantially lesser diameter than that of said wall portion and disposed in a plane substantially above the plane of said upper end of said wall portion, and inwardly and upwardly extending grooves in said shoulder which terminate in said lip portion outside and below said central opening.

3,015,405
REFUSE CONTAINERS
Don L. Sterling, 4539 N. Central Expressway, Dallas, Tex.
Filed Oct. 24, 1958, Ser. No. 769,451
6 Claims. (Cl. 217—56)



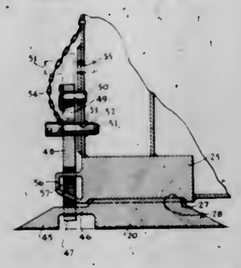
6. A container including an open top receptacle having side walls and forward and rearward end walls, a lid for the receptacle having front and rearward ends and lateral edges, spaced ribs depending from the underside of the lid in parallel relationship adjacent the lateral edges of the lid, the ribs extending from a point adjacent the rearward end wall of the receptacle to a point adjacent the forward end wall thereof and in close proximity to the inner faces of the side walls of the receptacle when the lid is in closed position, the rearward ends of the ribs being formed as pivot members and including an inclined surface extending forwardly and downwardly from the rearward end of the lid and extending to a rearwardly facing notch having as its lower wall a projection extending rearwardly a distance less than the inclined surface, and stop means depending from the lid for limiting forward motion of the lid with respect to the receptacle.

3,015,406
FLOATING SERVER
May E. Nolte, 38 Willits Lane, Plandome, N.Y.
Filed Mar. 24, 1958, Ser. No. 723,168
2 Claims. (Cl. 220—1)



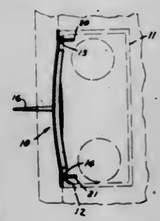
1. A floatable food server comprising an inflatable annular float, a food container having an outstanding projecting flange supported on said annular float, said food container having a portion projecting downwardly into said annular float to form a food chamber therein, the walls of said chamber comprising inner and outer walls in spaced relation to form an insulating space throughout the bottom and sides thereof.

3,015,407
STACKING CARGO CONTAINERS
Norman W. Fesmire, Huntingdon Valley, and John J. Whirlein, Langhorne Manor, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 25, 1960, Ser. No. 4,522
8 Claims. (Cl. 220—1.5)



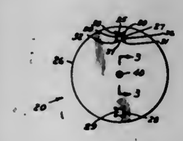
1. Stacking cargo containers comprising in combination, a parallelepiped container body, nesting corner fittings attached to said body at the top and bottom corners of the containers, nesting floor or deck tie-down fittings vertically aligned with said corner fittings of said containers, raised tapered projections on said top fittings and said floor fittings for engagement into lowered tapered recesses in said bottom nesting corner fittings, said top and floor fittings having side-opening sockets for receiving a hook or finger locking bar from the side, latches secured to the container bodies for pivoting and sliding movement, said latches having hooks or fingers adapted to enter said side-opening sockets by a pivoting movement of said latches, and means for locking said latches in said sockets, whereby said containers may be physically locked to each other between said top and bottom corner fittings and between said bottom and floor fittings so that each locked corner fitting restrains movement in all directions.

3,015,408
OUTLET BOX COVER
Frank S. Campbell, Reseda, Joseph R. Frank, Sherman Oaks, and Malcolm J. Charles, Granada Hills, Calif., assignors to CFC Corporation, Los Angeles, Calif., a corporation of California
Filed Apr. 29, 1960, Ser. No. 25,727
12 Claims. (Cl. 220—3.4)



1. An outlet box cover adapted to be affixed to an outlet box having a pair of threaded openings therein, comprising: a flexible base sheet; a flexible rod-like locator member projecting from a medial position on said base sheet, said locator member being flexible in all lateral directions and sufficiently springy to return to an upright position through wet plaster relative to the base sheet, said base sheet being convexly domed in all directions toward said locator member; a pair of prongs integral with and extending from the base sheet on the opposite side of said base sheet from the locator member, and so disposed and arranged as to enter into individual ones of the threaded openings in the outlet box; a pair of cross-ribs integral with the base sheet and on the same side thereof as the prongs; notches on said prongs spaced apart to conform to the pitch of the threads in said openings, said notches forming ridges adapted to enter and engage in the said threads, the material of the ridges being sufficiently resilient to enable the ridges to spring over the crests of the threads and spring into said threads, whereby the cover may be attached to the outlet box by forcing the prongs into the openings in the outlet box until the notches engage with the threads therein, and the cover may thereafter be plastered over, whereupon the locator member returns upright and protrudes through the plaster to serve as a locator means, and whereby the plaster adjacent the locator member may be pressed inwardly to flex the dome structure and crack the plaster around the cover, the cover and the plaster which coats it being thereby removable by a pull on the locator member.

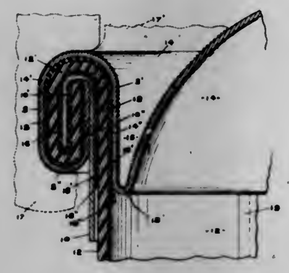
3,015,409
OUTLET BOX COVER
Frank S. Campbell, Reseda, Joseph R. Frank, Sherman Oaks, and Malcolm J. Charles, Granada Hills, Calif., assignors to CFC Corporation, Los Angeles, Calif., a corporation of California
Filed Sept. 6, 1960, Ser. No. 54,303
1 Claim. (Cl. 220—3.4)



In combination: an outlet box having an opening with an axis; a headed screw threaded into said box adjacent to said opening and having the under surface of its head axially spaced from the opening; and a cover comprising a base sheet adapted to overlay said opening to seal it, the base sheet having an aperture therein, a flexible finger integral with the base sheet and extending into said aperture, and a flexible rod-like locator member integral with and extending outwardly from the base sheet, said locator member being flexible in all lateral directions and being sufficiently springy to return to an upright position through wet plaster, whereby the cover is attachable to the outlet box by pressing the base sheet toward the box so that the screw head passes through the aperture and the finger snaps over the head to engage its under surface and retain the cover to the outlet box, the cover being detachable from the outlet box by pulling on the locator member.

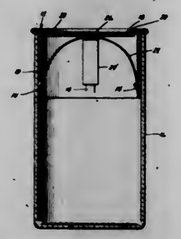
3,015,410
CONTAINER SEAMS
John W. Everett, 3748 Beech Ave., Baltimore 11, Md., and Gordon C. Murray, 7 St. Johns Road, Baltimore, Md.
Filed Sept. 12, 1958, Ser. No. 760,664
2 Claims. (Cl. 220—63)

1. A portable pressurized container for automatically discharging materials therefrom, comprising a body portion of rigid bendable material having at least one open end including a rolled flange extending outwardly around its open end, a diaphragm of bendable organic plastic material including a flange positioned within the container of substantially the same diameter as the container body, the flange on the diaphragm having substantially the same outer peripheral circumference as the outer edge of the flange carried on the end of the body portion of the container, said diaphragm flange extending outwardly and about the rolled flange of the container body, an elastic coating of greater elasticity than the material from which the diaphragm is constructed adhesively fixed to each side of the flange surface of the diaphragm beginning at the peripheral outer edge of the diaphragm flange and extending inwardly from its peripheral edge and over the flange surface of the diaphragm including the entire area under pressure of the seam, a rigid end member including a flange of substantially the same diameter as the diaphragm superimposed on the flange of the diaphragm,



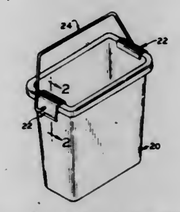
the flange of the container body, the elastic coated diaphragm and the periphery of the end portion being pressed together in a flat rolled hermetically sealed double seam in which the flange of the diaphragm containing the elastic coating extends continuously around both surfaces of the container flange, the outer edge of the diaphragm flange extending upwardly to the under surface of the upper horizontal portion of the container flange of the double seam, the rolled flange of the diaphragm positioned between the rolled flange of the container body and the rolled periphery of the end member.

3,015,411
SPILL-PROOF DEVICE
Richard B. Smith, 709 W. Oakdale Drive, Fort Wayne, Ind., assignor of forty-five percent to Willard M. Jones, Fort Wayne, Ind.
Filed July 9, 1958, Ser. No. 747,530
10 Claims. (Cl. 220—90.4)



1. An adaptor for open-ended drinking tumblers and the like comprising a cylindrically shaped tubular insert of plastic material for insertion in the open end of the tumbler, said insert being convexly shaped radially outwardly for tightly gripping the wall of said tumbler, a flat annular rim secured to the perimeter of one end of said insert, said rim extending radially outwardly of the outer surface of said insert for engaging the rim of said tumbler and inwardly of the inner surface of said insert to define a circular opening, a flat circular closure plate loosely fitting inside said insert and normally engaging the underside of said rim around the entire inner peripheral margin thereof thereby closing said opening, two metallic elongated flat springs arranged at right angles to each other with juxtaposed flat sides thereof in engagement, four inwardly projecting abutments on the inner side of said insert spaced a predetermined distance from said one end, said abutments being circumferentially spaced in quadrature from each other, the ends of said springs engaging respective ones of said abutments and said insert, said springs being curved with the midportions thereof operatively engaging the central portion of the underside of said closure plate and urging the latter to closed position whereby said plate may be depressed away from said rim against said springs at any point on its periphery to permit drinking or pouring from said tumbler.

3,015,412
BUCKET BAIL AND EXTRUSION
John W. Klages, Columbus, Ohio, assignor to The Columbus Auto Parts Company, Columbus, Ohio, a corporation of Ohio
Filed Nov. 24, 1959, Ser. No. 855,197
8 Claims. (Cl. 220—91)



2. In combination, a flanged article of the type that includes an upwardly extending article flange, an outwardly extending article flange, and a downwardly extending article flange, said flanges defining a slot; and a clip for transmitting a load to or from said flanged article comprising a strip of rigid material that includes a vertically extending clip flange, an upper horizontally extending clip flange and a lower horizontally extending clip flange, said horizontally extending clip flanges being normally extended from said vertically extending clip flange in spread configuration for the free insertion of said article flanges between said horizontally extending clip flanges, said horizontally extending clip flanges being bent together into conforming gripping relationship with said article flanges.

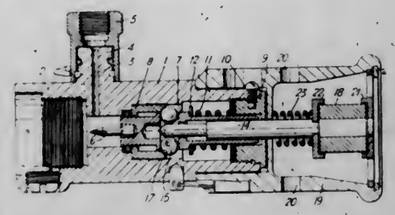
3,015,413
ORIENTING AND FEEDING DEVICE
Robert J. Hengel, 2167 Shankin, Walled Lake, Mich.
Filed June 25, 1958, Ser. No. 744,579
6 Claims. (Cl. 221—9)



1. In a screw orienting device, a slide member having a slot for receiving a screw to be oriented, probe means operatively associated with said slide and operable to engage a screw in said slot for determining if said screw is in right side up or right side down position, means operatively associated with said probe and said slide for moving said slide in one direction or the opposite in response to determination of screw position by said probe, a discharge passage adapted to register with said slot in response to slide movement in one direction, and screw

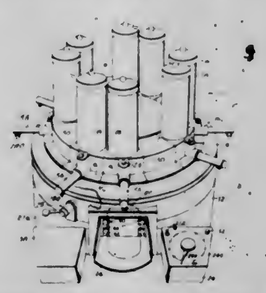
reversing means including a screw reversing tube adapted to register with said slot and with said discharge passage in response to slide movement in the opposite direction.

3,015,414
GAS RELEASE DEVICES
Paul Vernon Wilson, London, England, assignor to The Walter Kidde Company Limited, Greenford, Middlesex, England, a British company
Filed Aug. 11, 1959, Ser. No. 832,989
2 Claims. (Cl. 222—5)



1. An inflator device for automatically releasing gas from a storage container upon immersion in water comprising a body, a storage container opening member guided for longitudinal movement in said body having an axial bore and a radial aperture intersecting said bore, a spindle guided for longitudinal movement in said bore, a seating surface in said body adjacent said aperture, spring means urging said member downwardly, a ball in said aperture, said ball being held by said spindle in a projecting position in engagement with said seat surface to lock said member against downward movement when said spindle is in a downwardly displaced position, second spring means urging said spindle to move upwardly out of contact with said ball to allow said ball to move out of engagement with said seat unlocking said member, an abutment in said body above said spindle, a soluble plug positioned between said abutment and said spindle preventing upward movement of said spindle, and passageway means in said body for permitting the access of water to said plug in the event of immersion of said body.

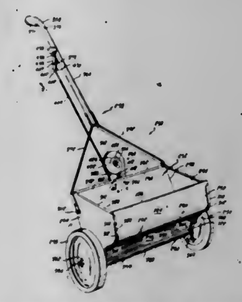
3,015,415
MIXING AND DISPENSING APPARATUS
Lyle Marsh, St. Clair Shores, Mich., and Gabriel Malkin, Westfield, N.J., assignors to Marien Metal Products Co., Hazel Park, Mich., a corporation of Michigan, and Benjamin Moore & Co., New York, N.Y., a corporation of New Jersey
Filed Feb. 25, 1960, Ser. No. 10,950
4 Claims. (Cl. 222—14)



1. A dispensing device comprising a base; a turntable rotatably mounted thereon; a plurality of liquid supply means carried on the turntable; said turntable being rotatable to position a selected one of the supply means in dispensing relationship to a container; each of said liquid supply means including a pump for dispensing liquid therefrom; said pump comprising a metering chamber having an inlet and an outlet; said inlet communicating with the liquid supply; check valve means releasably closing said outlet; a plunger opening in said metering chamber; a plunger slidably received in the plunger opening; wall means extending across the metering chamber and separating the inlet opening from both the outlet opening and the plunger opening; an opening in said wall means for the passage of fluid therethrough; a valve element carried by the plunger operable on one stroke to close the wall opening and trap a metered quantity of liquid in the metering chamber and to subsequently displace and expel a predetermined quantity of liquid through the outlet; a single prime mover carried by the base to selectively actuate the pumps; said prime mover having a rotatable shaft carrying a cam mechanism; said cam mechanism being positioned in operative relationship to drive a pump plunger when said plunger's associated pump and liquid supply means are positioned in dispensing relationship to a container; and electro-mechanical control means for selectively predetermining the number of times the pump is actuated to vary the total quantity of liquid dispensed.

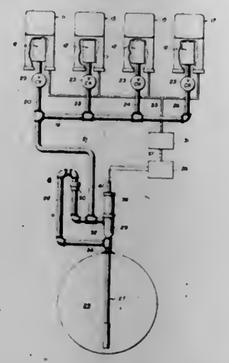
3,015,416
SPREADER CONSTRUCTION
Virgil H. Peoples and John R. West, Marysville, Ohio, assignors to The O. M. Scott & Sons Company, Marysville, Ohio, a corporation of Ohio
Original application Mar. 20, 1957, Ser. No. 647,229. Divided and this application Jan. 22, 1959, Ser. No. 788,366

14 Claims. (Cl. 222—41)



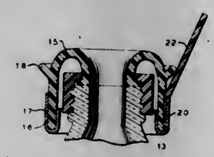
1. A wheel supported spreader comprising: a hopper with a handle; discharge opening means; an outlet shutter means adapted to close said discharge opening means in one position and to open said discharge opening means in a number of other positions; control means for said shutter movable to a fixed locking position holding said shutter in closed position and movable away from said locking position to a plurality of positions corresponding to said open positions, said control means comprising a pivotable link mechanism mounted on said handle and connecting means between said linkage mechanism and said shutter means, a support means secured to the rear wall of said hopper comprising a portion extending above the rear top edge of said hopper, an adjustable member mounted on said top portion of said support bracket limiting the movement of said control means in each of said adjusted open positions of said shutter means, and spring means acting to hold said control means and shutter in said fixed locking position with the shutter in said closed position and also acting to hold said shutter in each of its adjusted set positions.

3,015,417
REMOTE CONTROL SYSTEM FOR A BOOSTER PUMP
Roger J. Daley, Fort Wayne, Ind., assignor to Bowser, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Dec. 1, 1955, Ser. No. 550,384
11 Claims. (Cl. 222—63)



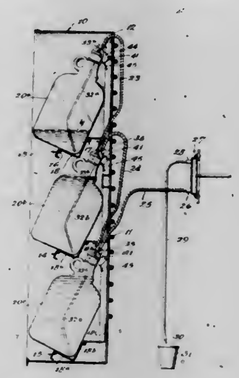
11. In a pumping system for volatile liquids, the combination of a storage tank for liquid, a first pump disposed at the tank and having its inlet disposed to withdraw liquid from the tank, a discharge conduit connected to receive liquid under pressure from said pump, a first electric motor connected to drive said pump, a number of liquid dispensers disposed at points remote from said first pump, each dispenser comprising a dispenser pump having a suction and a discharge port, an electric dispenser motor connected to drive the dispenser pump, a dispensing line connected to the discharge port and a manually operable valve in said line, each dispenser pump having its suction port connected to said discharge conduit, electrical switch means at each dispenser, and electrical means responsive to said switch means for energizing the motor of the tank pump and of the dispenser pumps, said switch means and electrical means being operable to energize the tank pump motor when any of the dispenser pump motors is energized.

3,015,418
POURING SPOUT
Joseph S. Hornston, 1629 N. Columbia Place, Decatur, Ga.
Filed July 9, 1958, Ser. No. 747,446
10 Claims. (Cl. 222—108)



3. A pouring spout for vessels comprising a flexible tubular body of generally circular cross section and having an inner and outer end, said cross section being of generally increasing diameter toward said outer end of said body, said body being everted adjacent said outer end so as to form an annular return-folded rim when said body is extended, an annular ridge projecting from said tubular body, said annular ridge being adjacent said outer end and so positioned on said body such that upon movement of said body to a contracted position said ridge defines an upwardly opening trough on the outside of said rim, and upon movement of said body to its extended position said ridge defines a downwardly opening trough on the inside of said tubular body.

3,015,419
SYRUP SUPPLY SYSTEM
Leslie Arnett and William G. Freise, Chicago, Ill., assignors, by mesne assignments, to Square Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 8, 1958, Ser. No. 765,966
4 Claims. (Cl. 222—130)

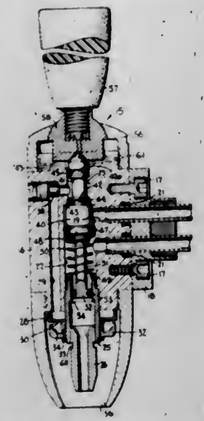


1. In a beverage dispensing machine, a syrup supply, comprising: a refrigerated cabinet having a plurality of transversely extending, vertically spaced supports; a plurality of syrup bottles, each having an open mouth, carried on said supports; sealing connectors seated in the mouths of said bottles; an elongated outlet tube carried by each of said stoppers and extending to a point adjacent the bottom of the associated bottle; an inlet tube carried by each of said stoppers; means connected with the outlet tube of the lowest bottle for withdrawing syrup therefrom; and conduit means interconnecting the inlet tubes of the lower bottles with the outlet tube of the next higher bottle, for transferring the syrup from the higher bottles successively through the bottles to the lowest bottle, said connectors each having independent mounting means for resilient pivotal movement to enable said bottles to receive said associated tubes and connector and then to be swung into supporting position on said supports.

3,015,420
DOUBLE STROKE VARIABLE CONTROL FLUID DISPENSING VALVE
Morris H. Chudnow, 560 Island Ave., Woodmere, N.Y.
Filed July 25, 1960, Ser. No. 45,210
12 Claims. (Cl. 222—144.5)

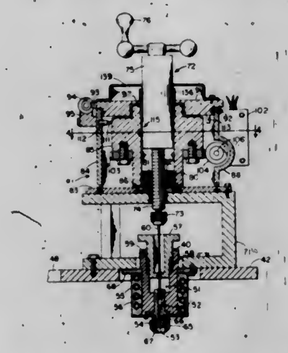
1. A fluid mixing faucet comprising in combination, a main body member having a central chamber, a fluid inlet communicating with the interior of said chamber, one end of said main body member having a nozzle, a control handle supported for movement upon the opposite end of said main body member, a duct through said main body member communicating at opposite ends with said chamber and said nozzle, the point of communication of said duct with said chamber being spaced longitudinally of said chamber from said fluid inlet, a plunger slidably supported within said chamber having first means movable longitudinally between a normally closed flow blocking position between said fluid inlet and said duct and an open longitudinally disposed position, spring means yieldably resisting movement of said plunger out

of said normal position, and said handle in response to manually directed pivotal movement in at least one direction urging said plunger toward said open position against the action of said spring means, an injector carried by said main body member at one end in communication with said chamber and an opposite end in



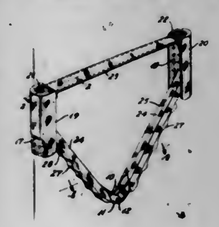
communication with said nozzle, said plunger having second means blocking flow through said injector in said open and closed positions of said plunger, and said handle including detent means for actuating said plunger from said closed position to an extended position beyond said open position to provide flow through said injector from said chamber.

3,015,421
APPARATUS FOR DISPENSING LIQUIDS
Robert E. Hunt, Reading, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed May 26, 1959, Ser. No. 815,978
5 Claims. (Cl. 222—309)



1. Apparatus for repeatedly dispensing liquid material in precise quantities including a vessel for containing liquid material, said vessel having a first aperture therein for the passage of liquid material therethrough and a second aperture therein, a piston adapted to fit snugly within said second aperture, one end of said piston extending into said vessel whereby movement of the piston further into the vessel when the vessel is filled with liquid material and all gases have been expelled therefrom causes a quantity of liquid material to be displaced and extruded through said first aperture, the opposite end of said piston being attached to a lead screw having a threaded portion, a support fixedly positioned with respect to said vessel, a threaded lead screw advancing nut rigidly mounted with respect to said support for engaging the threaded portion of the lead screw, a driving drum encircling said lead screw, a unidirectional clutch in said drum for binding the lead screw to the drum as the drum is rotated in one direction and for disengaging the lead screw from the drum as the drum is rotated in the opposite direction, a first stop means associated with said drum and said support for establishing a first position of said drum with respect to said support, a second stop means associated with said drum and said support for establishing a second position of said drum with respect to said support at a predetermined angle of rotation of said drum from said first position, and driving means for rotating said drum from said first position to said second position in the one direction and for rotating said drum from said second position to said first position in the opposite direction, said lead screw thereby being rotated through the predetermined angle and said piston being advanced into the vessel to cause a quantity of liquid material to be extruded therefrom as said drum is rotated from said first to said second position, said lead screw remaining stationary with respect to said support as said drum is rotated from said second position to said first position.

3,015,422
UNIVERSAL SLEEVE TOOL
Anthony T. De Fino, 2712 SW. 12th St., Des Moines, Iowa
Filed Sept. 25, 1959, Ser. No. 842,284
4 Claims. (Cl. 223—74)

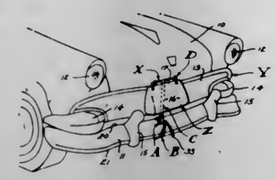


1. A device for holding a portion of the sleeve of a garment during the pressing of the garment comprising a pair of elongated arms having ends pivotally connected, spring means urging the free ends of said arms apart, longitudinally and transversely rounded sleeve engaging members to the intermediate portions of which the free ends of said arms are pivotally connected, a fabric strap connecting the outer ends of said members for limiting the separating movement thereof, said spring means urging said arms apart to cause said members to conform to the interior of the sleeve at opposite sides of the same, and said strap limiting the separation of said arms and forming a barrier for steam for the full transverse area of said sleeve.

3,015,423
WATER BAG SUPPORT
Edwin R. Garraway, 624 Utah Ave., Victorville, Calif.
Filed June 13, 1958, Ser. No. 741,798
1 Claim. (Cl. 224—42.03)

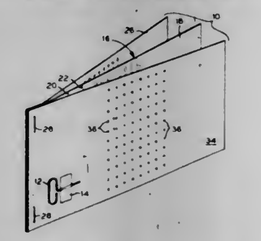
A support adapted to be secured to a vehicle bumper and the like having a convex surface with spaced upper and lower edges, said support including a base for supporting engagement with the bumper and having a plate portion to overlie the bumper and having a hooked portion at one side to lock with the upper edge of the bumper and having a flange portion at the other side to engage

the surface of the bumper to space the plate portion therefrom, anchoring means for yieldingly securing the base in working position including a hook adapted to engage the lower edge of the bumper and further including a



pressure exerting means connected to the plate portion and said hook, a standard pivotally joined to the plate portion of the base and a clamp on the base to secure the standard in position to project from the base, and a header on the standard to carry an article.

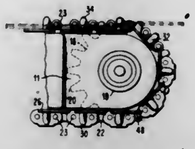
3,015,424
RECORD DEVICE
Guy R. Laframboise, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 29, 1959, Ser. No. 816,957
8 Claims. (Cl. 225—93)



1. In a portable assembly of elements for use in making a machine-processable punched record, the combination comprising a record card of the type having at least some of its index-point areas individually scored to provide at each such area a chip of card material that can be punched out selectively by a hand punch in accordance with data to be recorded in said card, and a backing sheet of yieldable material having sets of intersecting slits therein aligned with a respective one of said scored index-point areas in said card, converging tongues defined by each set of intersecting slits for yieldingly supporting an aligned chip of card material when the same is being punched out of said card and for holding the punched-out chip in the event it does not pass completely through said backing sheet, whereby such a chip is prevented from clinging to said card when said card and backing sheet are separated following the punching operation.

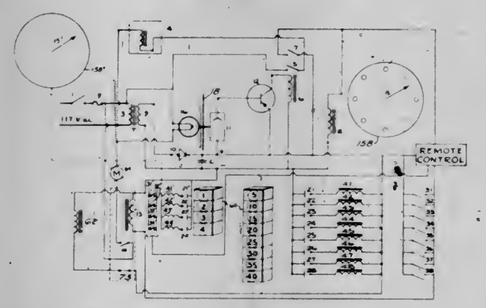
3,015,425
TRACTOR FEED FOR CONTINUOUS FORMS
Harold P. Wicklund, Johnson City, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 29, 1959, Ser. No. 823,710
7 Claims. (Cl. 226—74)

6. In a tractor mechanism for feeding forms having a plurality of uniformly spaced perforations, the combination of an endless driven member, a plurality of pins operatively carried by said member successively in linear and curved paths and projectable into the perforations to drive each form in a generally linear direction, and disengaging members operably connected to at least some of the pins and projecting toward their respective succeeding pins, each disengaging member during at least a



portion of the curved motion of its connected pin being shifted toward the form to displace and at least partially disengage the form from the corresponding succeeding pin.

3,015,426
APPARATUS FOR DISPENSING STAMPS
Max M. Dietz, 99 Draper St., Springfield, Mass., and Paul R. O'Connell, 190 Elm St., East Longmeadow, Mass.
Filed July 15, 1958, Ser. No. 748,760
6 Claims. (Cl. 226—109)

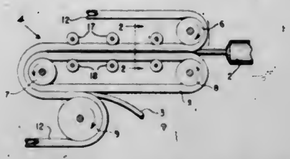


5. An apparatus for delivering a preselected number of stamps of the perforated type from a strip leading to a delivery area, a motor, means for imparting action from said motor to said strip of stamps, a motor relay having contacts that energize said motor, a plurality of fixed switches displaced from one another and selectively actuable for energizing said motor relay and turning on said motor, a pulsing circuit consisting of a pulsing relay and means responsive to the passage of a given number of stamps to said delivery area to pulse said relay a given number of times, said pulsing relay having contacts, a stepping actuator energized by said relay contacts and having a movable member for traversing each of said fixed switches sequentially in response to successive pulses applied to said pulsing relay, said movable member deactuating any of said previously actuated fixed switches upon traversing that switch, whereby said motor is turned off after a predetermined number of pulses, and after said preselected number of stamps have been delivered to the delivery area.

3,015,427
ENDLESS CONVEYER MEANS FOR DEFORMABLE ARTICLES
Gerald Kessler, 7240 Glenwood Ave., Youngstown, Ohio
Filed Feb. 10, 1960, Ser. No. 7,885
5 Claims. (Cl. 226—172)

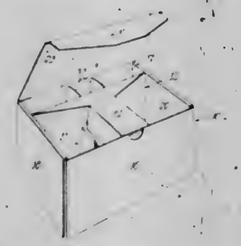
1. Conveyor belt means for handling lengths of easily deformable material without substantially deforming same, comprising two endless belts having conveying portions

thereof contiguous to each other for a distance sufficient to support a substantial axial length of material, means for driving said portions in the same direction at the same speed, at least one of the adjacent surfaces of the contiguous portions of said belts being soft and yielding to



support a limp and easily deformable article therebetween without substantial deformation, at least one of said belts being an endless length of fluid-tight hose in partially inflated condition, and of sufficient width to laterally enfold an article carried between the said belts.

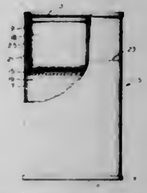
3,015,428
CONTAINER WITH INNER PACKING
John T. Magazzu, Lafayette, Calif., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Feb. 12, 1960, Ser. No. 8,451
7 Claims. (Cl. 229—14)



1. An arrangement formed entirely of foldable paperboard for packing and shipping cylindrical articles such as lock-type doorknob assemblies comprising, in combination: an outer rectilinear container having a horizontal bottom wall, pairs of vertical side and end walls upstanding therefrom, and a cover wall hingedly attached to one of the vertical walls; and a pair of separate inner upper and lower packing members disposed within the container, one of said members having an opening therein receiving a portion of the other member to afford interlocking engagement between the members, said members each having panels with edge portions in abutting engagement with certain of the walls of the container to maintain the members in a fixed position within said container relative to said walls and to divide the interior of the container into separate compartments for receiving and supporting portions of said articles.

3,015,429
DIVIDER PACKAGE
Alfred A. Morici, San Jose, Calif., assignor to Contadina Foods, a corporation of California
Filed Mar. 18, 1959, Ser. No. 800,322
1 Claim. (Cl. 229—15)

In combination, a first tubular container having an open top and a closed bottom; a second tubular member of a diameter identical to that of the said first tubular member and being formed of a resilient material of a thickness identical to that of the said material from which the said first tubular member is formed, said second tubular member having an open bottom and a closed top, said second tubular member having the open bottom thereof abutting the open top of the said first tubular member and being supported by said first tubular member, said second tubular member being approximately one-half the length of said first tubular member; a paper wrapper encompassing substantially the entirety of both the said first and the said second tubular members and being secured thereabout whereby said paper wrapper serves as a label and as the sole means for maintaining said first and said second tubular members in a unitary relationship, said first tubular member being adapted to hold a particulate food product and said second tubular member being adapted to enclose substantially the entirety of an hermetically sealed can containing a food product; and a removable separator consisting of a flat



disc of approximately the same area as the area of the circle circumscribed by the said tubular members, said flat disc having an upstanding flange about the periphery thereof, said flange fitting snugly within said first tubular container, being frictionally held in place therein and resting upon said particulate material when said first tubular container is substantially filled with said particulate material whereby to prevent passage of said particulate material beyond the said separator, said flat disc also serving as a support for said hermetically sealed can when the said can is within the said second tubular member, the said flange on the said disc describing a circle of sufficient diameter to permit an end of the said hermetically sealed can to fit entirely within said flange whereby said hermetically sealed container is directly in contact with said flat disc.

3,015,430
CONTAINER CONSTRUCTION
Robert E. Bauer, 8105 Flourtown Ave., Wyndmoor, Pa.
Filed Nov. 18, 1957, Ser. No. 697,762
1 Claim. (Cl. 229—45)



A container comprising a generally rectangular body portion having front and rear and side walls and an open upper end providing access to the container body portion, a cover member hingedly connected to the container rear wall and adapted to overlie and close the open end of the container, a skirt portion on said cover projecting downwardly therefrom in the closed position of the cover operable to closely embrace the outer upper ends of the container side and front walls, means defining an opening in said container cover skirt portion adjacent the junction between said container front and side walls, a dust flap foldably connected to each of said container

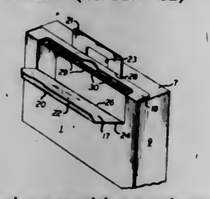
side walls and projecting interiorly therefrom toward one another, a locking tab foldably connected to the forward portion of each of said dust flaps extending downwardly therefrom exteriorly of said container front wall adjacent the junction between said front and side walls, an internal shoulder on said skirt facing upwardly and operable to be engaged under said locking tabs when said container cover is in said closed position, and a portion of said locking tabs projecting outwardly beyond the periphery of said front and side walls and adapted to project through and interlock with said openings when said cover is in said closed position, the engagement of said locking tabs with said internal shoulder and with said openings operable to maintain said cover in said closed position.

3,015,431
SHIPPING BOX
Edward W. Mulcoy, Santa Clara, Calif., assignor to American Forest Products Corporation, a corporation of Delaware
Filed Aug. 24, 1959, Ser. No. 835,705
3 Claims. (Cl. 229—45)



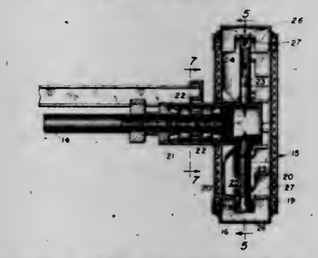
1. In a produce box including end panels, side panels, and cover flaps hinged along the upper edge of the side panels for movement between open and closed positions; a tongue integral with and upstanding from each end panel lengthwise thereof and intermediate the side panels; the tongues projecting above the cover flaps when the latter are closed; the box including a bottom having slots therein disposed in line with and adapted to receive the projecting tongues of the next lowermost box of a stack thereof.

3,015,432
DISPENSING CARRIER
Walter J. Tyrseck, Montville, Conn., assignor to Robertson Paper Box Company Incorporated, Montville, Conn., a corporation of Connecticut
Filed Feb. 19, 1958, Ser. No. 716,179
1 Claim. (Cl. 229—52)



A paper box carrier comprising a unitary blank including bottom, front, back and top panels, and end flaps forming end closures, the front panel having hingedly joined to it a glue flap panel terminating centrally of the top panel, lying flat against the same, and joined thereto along two lines of adhesive, one adjacent the edge of the top panel and the other adjacent the edge of the glue flap panel, and comprising further a handle integrally hinged to the edge of the glue flap panel and adapted to lie flat against the top panel or be turned upward into perpendicular relation thereto for carrying purposes, the said front panel and glue flap being cut and scored to form a removable section for providing access to the contents, the said removable section including the major part of the length of the adhesively joined portion of the glue panel which is adjacent the edge of the top panel but not the ends thereof, so that the said ends form permanent connections between the front panel and the glue flap panel beyond the said removable section, the top panel being printed to prevent effective adhesion along the major part of the said adhesively joined area and having partially cut out unprinted areas holding down the upper edge of the said removable section while permitting detachment thereof, the adhesive joining of the said glue panel adjacent its edge and beyond the outline of the said removable section securing the handle to the carrier for supporting the same without placing substantial strain on the glue flap panel and front panel areas at the ends of the said removable section, and the edge of the top panel being spaced slightly from the hingeline between front panel and glue flap panel, whereby opening of the removable section does not affect the carrying of the box by the handle.

3,015,433
EXHAUST POWER
William Walter Ward, 1485 S. High St., Columbus 7, Ohio
Filed Mar. 13, 1959, Ser. No. 799,282
2 Claims. (Cl. 230—116)



2. In a device of the character described, a crosspiece, an exhaust pipe, spaced apart braces connected to said crosspiece, a stationary housing affixed to the rear ends of said braces, a plurality of flanges on opposite sides of said housing, screen members mounted in said flanges, a plurality of stationary vanes of similar construction arranged in spaced apart relation with respect to each other, and said vanes being positioned within said housing, said vanes being provided with registering central cutouts, a rotary cylindrical casing mounted on said exhaust pipe, a plurality of radially disposed tubes affixed to said casing, said tubes having transverse end portions which are mounted for movement through the cutouts in said vanes, and blades affixed to said tubes.

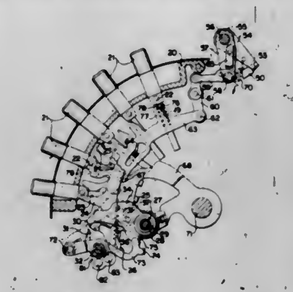
ERRATUM

For Class 230—139 see:
Patent No. 3,015,222

3,015,434
REPEAT CYCLING CONTROL MECHANISM FOR CASH REGISTERS AND ACCOUNTING MACHINES
Gene E. Slamb and Frank R. Werner, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed May 19, 1960, Ser. No. 30,377
6 Claims. (Cl. 235—11)

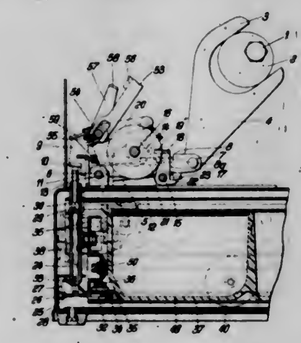
1. In a machine of the class described constructed and arranged to perform value-repeating operations, the com-

bination of releasable means to initiate cycles of machine operation, said releasable means arranged to be restored to unreleased position at the end of each cycle of machine operation; means normally effective to retain the releasable means against releasing movements; manipulative means to render the retaining means ineffective to initiate a cycle of machine operation; means operable



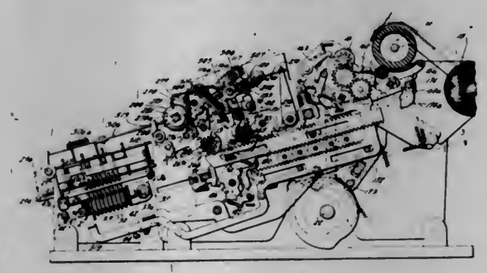
in conjunction with the retaining means to hold the releasable means in restored position in case the retaining means is retained in ineffective position by the manipulative means; and means operable by a subsequent operation of the manipulative means when no new value is set up in value-repeating operations to render the holding means inoperable to cause the machine to perform multiple uninterrupted cycles of operation.

3,015,435
CASH DRAWER MECHANISM FOR CASH REGISTERS AND OTHER BUSINESS MACHINES
Alfred Hecker, Bielefeld, Germany, assignor to Anker-Werke Aktiengesellschaft, Bielefeld, Germany, a corporation of Germany
Filed Apr. 8, 1957, Ser. No. 651,288
Claims priority, application Germany May 18, 1956
11 Claims. (Cl. 235—22)



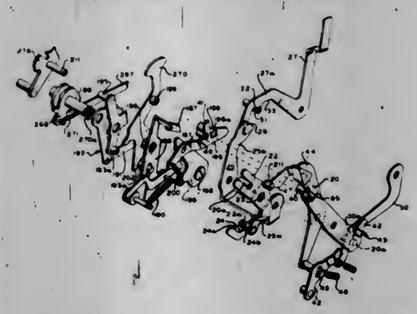
4. In a cash register machine provided with a cash drawer movable to a closed and open position and having a money-tray insert removably positioned in said drawer, a latching mechanism including a latching element for arresting said cash drawer within the machine when said drawer is pushed into said machine to said closed position, said mechanism further including elements operatively connected to an operation-initiating member of said machine, which elements prevent operation of the machine when the cash drawer is released from its arrested position, and means to prevent said latch member from keeping the cash drawer so arrested, said means being actuated when said money-tray insert is removed, whereby locking of the cash drawer is prevented when said money tray insert is not in position in said drawer.

3,015,436
DIVISION MECHANISM FOR LISTING CALCULATOR
Herman Gang, Morris Plains, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed May 10, 1957, Ser. No. 658,353
10 Claims. (Cl. 235—60)



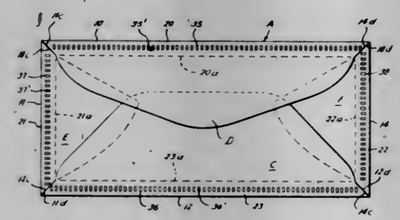
1. In a calculating machine having a register for receiving a dividend, reciprocatory cyclically operable actuating means for said register, adjustable means for effecting relative adjustment between said register and said actuating means for idle operation of said actuating means or for additive or subtractive registration during one or both strokes of each cycle of operation thereof, and selection means for receiving a divisor and for controlling the extent of the excursions of said actuating means; division control mechanism including, means operable to initiate operation of said actuating means and to control said adjustable means for subtractive registration by said actuating means during both strokes of each cycle of operation, means operable to detect an overdraft of an amount in said register, and means operable in response to operation of said detection means to suspend subtractive operation of said actuating means at the end of the current stroke of registering operation.

3,015,437
TOTALIZING CONTROL MEANS
James W. Dodsworth, Mount Tabor, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Sept. 26, 1958, Ser. No. 763,646
18 Claims. (Cl. 235—60.2)



1. In a calculating machine having a register, totalizing means operable to take totals and subtotals from said register, means for initiating operation of said totalizing means to take a total, means for interrupting a total-taking operation if the value being totaled is negative, and means for resuming an interrupted total-taking operation as a subtotal operation.

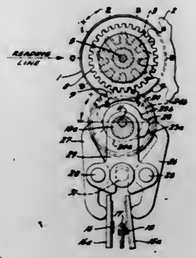
3,015,438
ENVELOPE CONSTRUCTION
John L. Knight, 5526 Fire Fly St., Houston, Tex.
Filed July 18, 1958, Ser. No. 749,385
4 Claims. (Cl. 235—61.12)



1. In an envelope construction having a sheet of flexible material having a front section, a back section joined to the lower edge of said front section and having a fold therebetween, a closure flap joined to the upper edge of said front section and having a fold therebetween, and a side section joined to each side of said front section and having a fold between each side section and said front section, the improvement residing in, adhesive means securing a narrow portion of said front section and a narrow portion of said back section together along the fold therebetween to form a lower strip, adhesive means securing a narrow portion of said front section and a narrow portion of said closure flap together along the fold therebetween to form an upper strip, adhesive means securing a narrow portion of said front section and a narrow portion of each side section together along the respective folds between each side section and said front section to form a side strip on each side of the envelope, said back section and said end sections having overlapped portions, means securing said overlapped portions together to form an envelope pocket confined by said lower strip, upper strip and side strips, said closure flap having an adhesive surface which is adapted to be contacted with the upper portions of the back section and side sections for closing said envelope pocket to seal a letter therein, and a single row of perforated punch-out designators formed in each of said lower strip, upper strip, and side strips for designating the destination or other information in connection with a letter or the like transmitted in said envelope.

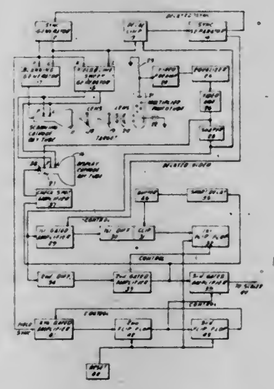
3,015,439
SIGN DETECTION MEANS FOR CRAWL CARRY REGISTER
Herman Gang, Morris Plains, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 764,294
8 Claims. (Cl. 235—79)

1. In a register including an ordinal series of numeral wheels and crawl tens transfer mechanism between said wheels; the combination of, electric signaling circuit means including switching means associated with each of said wheels and circuit connections adapted to be opened and closed by each of said switching means, a switch controlling device operable in time with each of said wheels for controlling operation of the associated switching means to complete a circuit upon change of sign of said register, and means operable in time with each successive



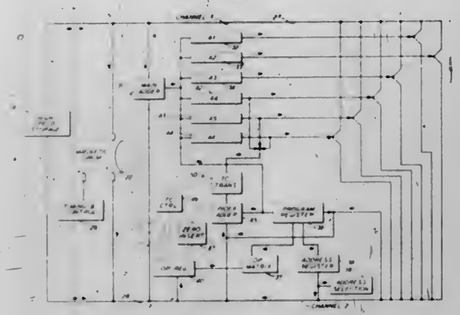
lower order wheel to change the time of operation of the switch controlling device of the next higher order wheel.

3,015,440
CHECK SPOT FOR PARTICLE COUNTER
Gerard Ernest Gerhardt, Plainfield, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed May 16, 1960, Ser. No. 29,433
4 Claims. (Cl. 235—92)



1. In a particle counting device for counting particles above a predetermined size comprising: a holder adapted to hold a sample in a predetermined plane, raster scanning means optically associated with said plane, a photoelectric detector for producing electric pulses at video frequency as discrete particles in the plane are scanned, an electronic counter therefor including a main delay circuit having a delay period equal to a multiple of a horizontal scanning period, feedback means from said main delay circuit to the raster scanning means to insure synchronous operation, and triggered gating means actuated by the output of the delay circuit to form a coincidence-anti-coincidence circuit, counting taking place only when no pulse from the delay line output encounters the triggered gating means, the improvement which comprises a display cathode ray tube which shows the scanning raster from a signal from said photoelectric detector and the particles being counted, and means fed from said counting circuit to cause the display tube to show a brightened pulse for each counting signal at each scan of the raster.

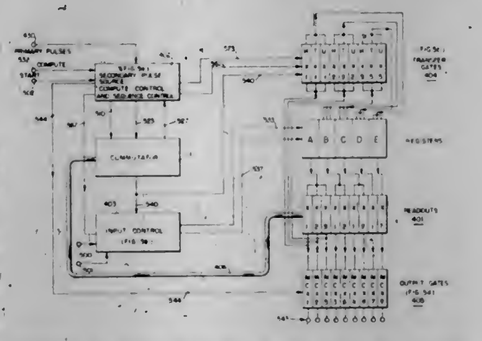
3,015,441
INDEXING SYSTEM FOR CALCULATORS
Edward F. Rent, Vestal, and Flavius M. Powell, Johnson City, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 4, 1957, Ser. No. 682,016
5 Claims. (Cl. 235—157)



1. An indexing system for a stored-program calculator having a program register for receiving and storing a program step word having a plurality of digit positions bearing coded character representations and wherein certain of the said digit positions define an address for data, said program step word further including a sign position capable of bearing a selected one of a plurality of indexing control digits, said indexing control digits being divided into a first group indicating plus operations and a second group indicating minus operations, said system comprising at least one indexing accumulator for storing data thereat in like coded character representations, an accumulator sign register associated with said accumulator for storing a sign indication of the accumulator stored data, an auxiliary arithmetic section including an index adder, main storage means, means including said auxiliary arithmetic section for selectively connecting said program register to said main storage means through said index adder, to thereby supply said program step words to said program register, indexing control means governed by the values of said indexing control digits, true-complement translating means connected to said adder, means for governing said true-complement translating means in accordance with the group in which said indexing digits fall and in accordance with the indication of said accumulator sign register, and means governed by said indexing control means for connecting said accumulator to said true-complement translating means to selectively add the true or the complemented value of the data stored in said accumulator to said address portion of said program step word during delivery to said program register.

3,015,442
ELECTRONIC MULTIPLIERS
Arthur H. Dickinson, Greenwich, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1954, Ser. No. 477,507
8 Claims. (Cl. 235—160)

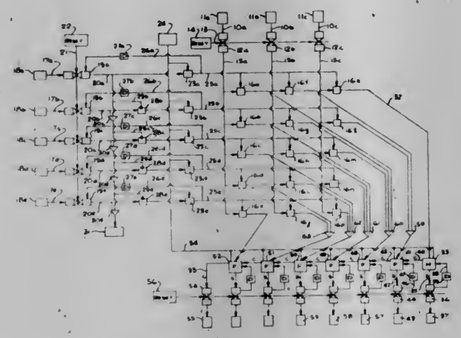
3. An electronic product generator for accepting an electrical manifestation representative of an input multi-order decimal quantity and rendering, as an output, nine discrete electrical manifestations respectively representative of the one through nine multiples of said input multi-order decimal quantity, said electronic product generator comprising in combination: electronic means for accepting said electrical manifestation representative of said input multi-order decimal quantity; electronic commutator means having a plurality of output terminals, each of said plurality of output terminals having a discrete electrical pulse thereon during successive time displaced discrete time intervals; first electronic gating means interconnecting said electronic means and said plurality of output terminals of said electronic commutator means, said first electronic gating means employing a plurality of transistors logically interconnected with a plurality of grid controlled electron discharge devices, said grid controlled electron discharge devices having the grids thereof connected to said plurality of output terminals of said electronic commutator means, and being selectively responsive to said discrete electrical pulses from said electronic commutator means to render an output electrical manifestation representative of the five multiple of said input mulit-order decimal quantity; second electronic gating means interconnecting said electronic means and said



plurality of output terminals of said electronic commutator means, said second electronic gating means employing a plurality of transistors logically interconnected with a plurality of grid controlled electron discharge devices, said grid controlled electron discharge devices having the grids thereof connected to said plurality of output terminals of said electronic commutator means, and being selectively responsive to said discrete electrical pulses from said electronic commutator means to render an output electrical manifestation representative of the five multiple of said input multi-order decimal quantity; and additional electronic means interconnected and cooperating with said electronic means and said first and second electronic gating means for rendering, as an output, said nine discrete electrical manifestations respectively representative of one through nine multiples of said input multi-order decimal quantity.

3,015,443
ELECTRONIC COMPUTER
Wendell S. Miller, 1341 Comstock Ave., Los Angeles, Calif.
Filed Apr. 21, 1960, Ser. No. 23,724
16 Claims. (Cl. 235—164)

1. Computer apparatus comprising an ordered series of input conductors, means for supplying electrical input signals to a plurality of said input conductors simultaneously and in any of several different combinations of the different input conductors, an ordered series of separately energizable control conductors, an array of logical "and" circuits each responsive to one of said input conductors and one of said control conductors and each operable to produce a predetermined output signal in response to a predetermined combination of input and control signals from the associated input conductor and control conductor but not in response to only one of said signals, a plurality of read-out circuits actuable by different sets of said "and" circuits, each of said read-out circuits being actuable by any one of the "and" circuits in an associated set thereof which may be defined as including a first "and" circuit actuable by one of said input conductors and one of said control conductors, and as including all and only such other "and" circuits as are actuable respectively by pairs of conductors including an input conductor which is a predetermined number beyond said one input conductor in said first mentioned series and a control conductor which is the same number beyond said one control conductor in said second mentioned series, and scanning circuitry for controlling the transmission of signals from said control conductors to the "and" circuits and operable to pass said signals from

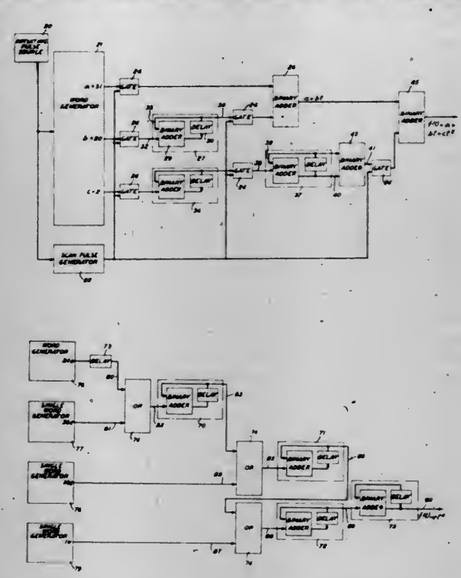


the control conductors in a predetermined sequence of the control conductors, said scanning circuitry including disabling means operable to prevent the transmission of a signal from each of said control conductors to the "and" circuits responsive thereto as long as any preceding control conductor in said sequence is connected to the "and" circuits for transmission of a signal thereto, said disabling means being automatically operable to pass a signal from a particular control conductor when the preceding control conductors are no longer connected to the "and" circuits, and said scanning circuitry including means for ceasing the transmission of a signal from each control conductor to the "and" circuits after the "and" circuits have been actuated thereby.

3,015,444
DIGITAL DATA GENERATOR CIRCUITS FOR COMPUTER TESTING
Herbert A. Schneider, Coytesville, N.J., assignor to Bell Telephone Laboratories, Inc., New York, N.Y., a corporation of New York
Filed Nov. 30, 1954, Ser. No. 471,994
7 Claims. (Cl. 235—164)

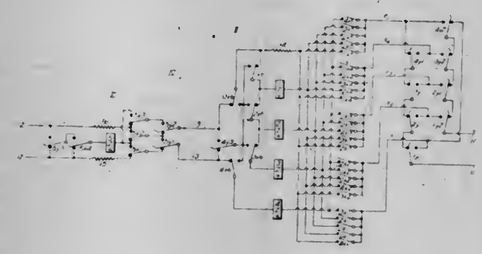
1. A circuit for generating functions of the form $f(t)=a+bt+ct^2+dt^3 \ldots +xt^n$ comprising means for generating trains of pulses representing the coefficients $a, b, c, d \ldots x$ required by a particular function, means for generating each of the powers of the variable comprising a plurality of accumulator circuits, each of said accumulator circuits comprising an adder circuit and a delay circuit connected between the output of the adder circuit and the input thereof, the number of said accumulator circuits employed for the generation of a particular power of the variable being equal to the power of that variable, and means for applying each of said pulse trains to the means for generating the corresponding power of the variable.

5. A circuit for generating a function of the form $f(t)=xt^n$ comprising a plurality of accumulator circuits, each of said accumulator circuits comprising an adder circuit and a delay circuit between the output of said adder circuit and the input thereof, and means applying



pulse trains to each of said accumulator circuits whereby each successive accumulator circuit generates a series corresponding to the series of differences between successive terms of the next higher series, the number of accumulators corresponding to the power of the variable being generated.

3,015,445
RELAY TYPE BI-QUINARY ADDER APPARATUS
Toshio Kashio, Musashino, Japan, assignor of one-half to Uchida Yoko Company, Limited, Tokyo, Japan, a corporation of Japan
Filed May 20, 1958, Ser. No. 736,542
1 Claim. (Cl. 235—174)



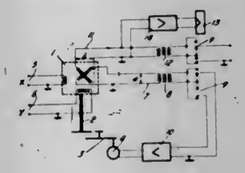
A relay type bi-quinary adder apparatus for adding digits of decimal numbers, said digits having the same digital position and said adder apparatus comprising: a pair of inputs one of which is activated when a carry-in digit 0 is present from the addition of a preceding digital position, and the other of which is activated when a carry-out digit 1 is present; a quinary network section

for designating the digits, 0, 1, 2, 3, and 4 and comprising; a first network portion including five summation members energizable responsive to the summation digits 0–4 respectively, the summation responsive members corresponding to the digit 0 being a resistor and the remaining said members being relay winding members; a first contact network connected to said pair of inputs and comprising a pair of addend transfer contact chains and five groups of summand contacts, each said summand group including five normally open and operable to close summand relay contacts responsive to the summand digits 0–4 respectively and associated with said five summation members for each said member to be connected to all the groups by a different summand contact from each group, and each said addend chain including four addend transfer contacts operable from make to break positions responsive to the addend digits 0–4 respectively, the transfer contacts for the addend digits 1, 2, 3 and 4 in one said transfer chain connected to one input of said pair of inputs being respectively coupled to the transfer contacts for the addend digits 2, 3, 4 and 1 in the other said transfer chain connected to the other input of said pair of inputs and to different groups of the summand contact groups for disjunctively connecting one of said inputs to the summation responsive members through the summand and addend contacts in said first contact network, dependent on the resulting quinary summation digit obtained from the addition of the summand and addend digits and said carry-in digit; and a second network portion comprising two internal carry leads, a summand transfer chain including four summand transfer contacts operable from break to make positions responsive to the summand digits 0–3 respectively and adapted to be coupled to the summation responsive members for the digits 0–3 and to one of said internal carry leads, a summand transfer contact operable from a break to a make position responsive to the summation digit 4 and adapted to be coupled to the summation responsive member for the digit 4 and to the other said internal carry lead, and an addend transfer contact operable from a break to a make position responsive to the addend digit 4 coupled to said pair of internal carry leads, said second network portion for disjunctively connecting said pair of internal carry leads to that summation responsive member corresponding to said resulting summation digit through the addend and summand contacts in accordance with the presence of a carry-out digit; and a binary network section connected in series with said quinary network section for designating digits 5, 6, 7, 8 and 9 and comprising a third network section consisting of a pair of transfer trees having a pair of inputs connecting said pair of internal carry leads respectively and three outputs connected respectively and three outputs connected respectively to a pair of summation resistor members responsive to the decimal summation digits below 5 and a summation relay winding member responsive to the decimal summand digit 5, each of said transfer trees including a pair of summand transfer contacts operable from break to make positions responsive to the decimal summand digit 5 and an addend transfer contact operable from a break to a make position responsive to the decimal digit 5, one said summand transfer contact being common in said pair of the transfer trees, the pair of said summation resistor members being connected to said pair of outputs respectively, said second contact network being operable to disjunctively connect one of the internal carry leads to said summation responsive members through the addend and summand operated and unoperated contacts in said second contact network, dependent on the resulting binary summation digit obtained from the addition of the binary summand and addend digits and the carry-in digits 1 and 0 and simultaneously to select one of said summation resistor members in accordance with the presence of the carry-out digit 1 in the binary section, said summation relay winding being arranged to be connected to one of said outputs through a summand relay transfer contact having make and break positions and operated from said break to make positions, addend transfer contact having break and make positions and operated from break to make positions, and to be connected to the other output through said summand relay transfer contact in break positions and alternatively through said summand relay transfer contact in make position and said addend transfer contact in break position, said last mentioned transfer contacts being responsive to the decimal digits below 5 whereby two decimal digits are added together and to the carry-in digit and simultaneously the carry-out digit is provided for addition in the next digital position.

3,015,446
SERVO-RESOLVERS

Jean André Ville and Jean Théophile Marie Gustave Bouzitat, Paris, France, assignors to Societe Alsacienne de Constructions Mecaniques, Mulhouse (Haut-Rhin), France, a public establishment of France

Filed July 15, 1957, Ser. No. 671,908
Claims priority, application France July 23, 1956
4 Claims. (Cl. 235—189)



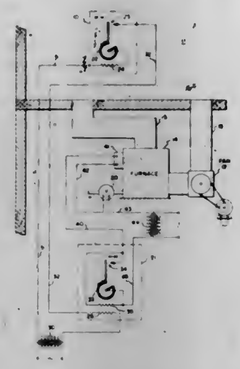
1. A servo-resolver for converting rectangular coordinates to spherical coordinates comprising: a pair of input circuits; means for applying to said input circuits respectively, voltages representing the rectangular coordinates; a rotatable shaft electrically associated with said input circuits; a pair of output circuits; a sign detector connected in one of said output circuits; a series of inverters; means for actuating said inverters from said sign detector, to effect the sign inversion of voltages in said output circuits; and an electric motor for driving said shaft, said motor being energized from the other of said output circuits.

3,015,447
CONTROL APPARATUS

Elmer A. Carlson, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 23, 1959, Ser. No. 801,322
3 Claims. (Cl. 236—68)

1. In a temperature control for controlling a heat furnishing device to supply heat to a space, a space temperature responsive switch means which closes a circuit upon a decrease in space temperature below a predetermined value, a first electrical heater mounted in thermal relation to said temperature responsive switch means, temperature responsive actuator means having a first switch which is closed when said actuator means is heated above a predetermined temperature, a second electrical heater mounted in thermal relation to said actuator means, a source of power, circuit connection means connecting said space switch means, said first heater, and said second heater in a series circuit to said source of power whereby as the temperature of the space drops said space switch means energizes said first heater and said second heater to heat said actuator means, said first heater causing said space switch means to have an on-time depending upon the amount the space temperature has dropped below said predetermined value, an anticipating heater mounted in thermal relation to said actuator means, circuit connection means connecting said anticipating heater in parallel with said first switch, and circuit means adapted to

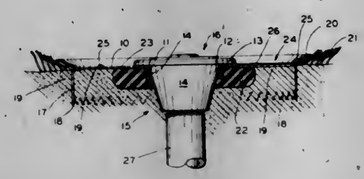


connect said first switch to control the heat furnishing device whereby upon the closing of said first switch said anticipating heater is de-energized to modify the operation of said actuator means.

3,015,448
LAWN SPRINKLER HEAD GUARD

Bernard F. Hurless, 15004 Sunstone Park, Sherman Oaks, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California

Filed Dec. 12, 1960, Ser. No. 75,341
5 Claims. (Cl. 239—201)

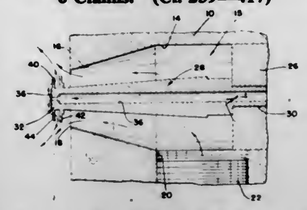


1. A lawn sprinkler head guard comprising a growth-inhibiting cover member, said cover member being provided with sprinkler-engaging means comprising an aperture-defining portion for engaging a lawn sprinkler head below an upper water emission portion thereof whereby to firmly position the growth-inhibiting cover member around the lawn sprinkler head and immediately over and in growth-inhibiting relationship with respect to adjacent underlying ground surface portions; said growth-inhibiting cover member being peripherally provided with a growth deflector adapted to deflect weeds and other growing objects from growing over the peripheral edge of the growth-inhibiting cover member, said growth deflector and the upper surface of said growth-inhibiting cover member defining an upper chamber provided with peripheral drain aperture means and communicating trough means for draining liquid out of said chamber through said drain aperture means, said trough means comprising downwardly depressed grooves formed in the upper surface of said cover member.

3,015,449
LIQUID FUEL ATOMIZER

David Meyer, Canton, Ohio, assignor to E. W. Bliss Company

Filed Jan. 16, 1961, Ser. No. 83,112
6 Claims. (Cl. 239—417)

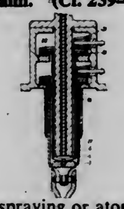


6. In a fuel atomizer device, including, in combustion: a housing having a nozzle outlet; means for atomizing a fuel communicating with said housing and nozzle outlet; a body member movably mounted in said housing and having a fuel inlet; a fuel discharge tip communicating with said fuel inlet and located at said nozzle outlet; a plurality of circumferentially spaced, radial discharge channels in communication with the interior of said fuel discharge tip terminating at their outer ends in front of corresponding pairs of circumferentially spaced apart lobes, the front lobe of each said pair of lobes having a bore passing therethrough, whereby fuel is drawn from the interior of said discharge tip along each of said channels and thereafter rearwardly through said bores in said front lobes and in between said pairs of lobes for atomization with a gaseous medium under pressure from said atomizing means passing over and between said pairs of lobes.

3,015,450
APPARATUS FOR SPRAYING OR ATOMIZING MOLDABLE COMPOSITIONS

Alfred Haltmeier, Leverkusen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Apr. 14, 1959, Ser. No. 806,241
Claims priority, application Germany May 21, 1958
1 Claim. (Cl. 239—421)



An apparatus for spraying or atomizing moldable compositions comprising means for passing molded material under pressure in hollow cylindrical form through a first annular slot, said first annular slot including means defining an inner edge and an outer edge, means for passing a gas radially and outwardly from a second annular slot concentrically positioned adjacent the inner edge of the means defining the first annular slot, said means defining the inner and outer edges of the first annular slot being mounted for rotation in the same direction at different velocities.

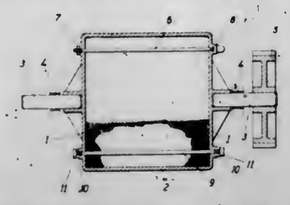
3,015,451
BALL MILL

Paul August Goeser, Mannheim-Feudenheim, Germany, assignor to Firma Draiswerke G.m.b.H., Mannheim-Waldhof, Germany

Filed Aug. 26, 1959, Ser. No. 836,159
Claims priority, application Germany Sept. 1, 1958
6 Claims. (Cl. 241—172)

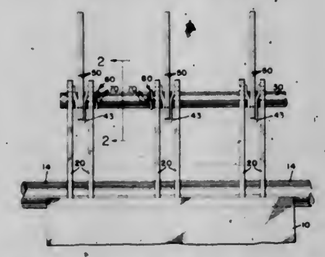
1. In a ball mill comprising a drum containing a charge of grinding balls and having opposite end walls, a casing

extending between said end walls, journalling means disposed externally of said end walls, driver rods extending intermediate said end walls through the interior of said drum and movable with said drum and relative to said grinding balls to increase the grinding capacity of said



mill, and bearing means for individual ones of said rods provided in said opposite end walls, including at least one bearing opening outwardly through one said end wall adapted to receive a rod and permitting removal and replacement of said rod through said end wall.

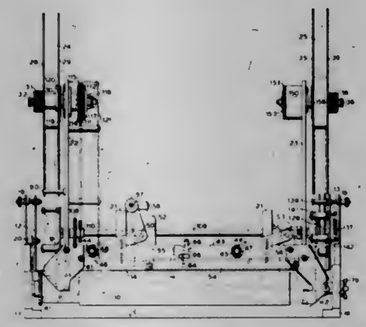
3,015,452
BAR LOCK FOR GRAIN HAMMERMILLS
Sanning C. Jensen, Neola, Iowa
Filed Dec. 8, 1958, Ser. No. 778,909
1 Claim. (Cl. 241—194)



In a hammermill knife mounting, the combination which comprises a hammermill rotor shaft, spaced pairs of arms mounted on and extended from the rotor shaft, a knife bar extended through and carried by extended ends of the arms, a knife mounted on the knife bar and positioned between the arms, said knife bar being longitudinally slidable through said arms of said pairs of ends, and at least one bar lock disposed around said knife bar, said bar lock comprising at least one loop formed of resilient material which is biased to cling to said bar with sufficient force for restricting longitudinal movement of said knife bar through said arms, said knife bar having a smooth cylindrical surface adjacent said bar lock.

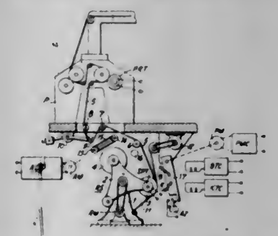
3,015,453
WEB FEEDING AND WINDING DEVICE
Frank J. Furman, Endicott, and Walter W. Wagner, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 405,171, Jan. 20, 1954. This application Apr. 29, 1959, Ser. No. 809,876
1 Claim. (Cl. 242—55.14)

In a device of the class described, a web, a supply reel for said web, a take-up reel for said web, drive means for intermittently driving said take-up reel, driving rollers in contact with the web on said supply reel and operated by said drive means to intermittently drive said supply reel, web advancing means disposed between said reels and operated by said drive means to intermittently pull said web from said supply reel toward said take-up reel, a pretension roller arm between said web advancing means and take-up reel and around which said web is looped to form a free loop extending in a direction opposite to the direction of web feed, said pretension roller arm being effective to reduce shock to the web when said take-up reel is called into operation, a second pretension roller arm between said web advancing means and said supply reel and around which said web is looped to form a free loop extending in the same direction as the direction of web feed, said second web loop effective to move said second arm towards the supply reel as the loop decreases due to the web being pulled by said web advancing means, stop means for limiting the movement of said second arm towards said supply reel, means for causing said second arm to move in a reverse direction as web is being



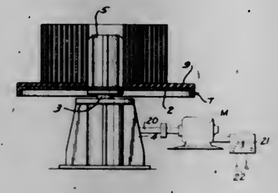
let out by said supply reel, a braking device for preventing overdriving of said supply reel and web, switch means, and means for positioning said switch means in the path of movement of said second pretension roller arm, said switch means being operated by said second pretension roller arm each time a supply of web has been let out by said supply reel for effecting operation of said braking device to lock said supply reel against overdriving advancement, said second pretension roller arm also being effective each time a supply of web is pulled by said advancing means to operate said switch means for effecting operation of said braking device to release said supply reel for advancement whereby a free moving loop of web is re-formed in readiness to be pulled by said web advancing means when each advancement is required.

3,015,454
AUTOMATIC PASTER CONTROL FOR ROTARY-PRESS PRINTING PLANTS
Edward J. Flannery, Chicago, and Francis A. Raymond, La Grange, Ill., assignors to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed Mar. 29, 1960, Ser. No. 18,300
8 Claims. (Cl. 242—58.2)



1. An automatic paster control system for splicing a new roll to an expiring roll of paper being fed to a rotary printing press, comprising paster control means for releasing the splicing operation, a speed-responsive source of pilot voltage proportional to the rotating speed of the expiring roll, a speed-responsive source of reference voltage proportional to the press speed, ratio-sensing relay means having two electric input circuits connected to said respective voltage sources and having an output member responsive to occurrence of a datum value of the reference-to-pilot voltage ratio and controllingly connected to said paster control means for releasing the operation of the latter when responding to said value, and ratio-setting means connected with said source of reference voltage to be controlled in dependence upon the press speed, said setting means being operatively connected to one of said input circuits in the sense required for decreasing said ratio datum value with increasing reference voltage.

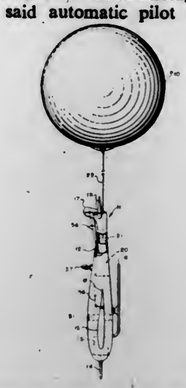
3,015,455
OPENED COIL SUPPORTING TURNTABLE
Calvin C. Blackman, Bay Village, Ohio, assignor to Lee Wilson, Cleveland, Ohio
Filed Aug. 11, 1959, Ser. No. 832,984
8 Claims. (Cl. 242—78.6)



1. In apparatus for supporting opened coils of strip metal having spaced apart laps during recoiling thereof, a turntable, means for supporting said turntable for rotation about a vertical axis, controllable speed means for rotating said turntable, and resilient pad means secured to said turntable and having a normally flat depressible upper surface portion disposed to be engaged by and to support the bottom edges of the spaced apart laps of an opened coil of strip metal supported on said turntable and adapted to yield under the weight of said coil whereby lateral movement of said laps during rotation of said turntable will be prevented.

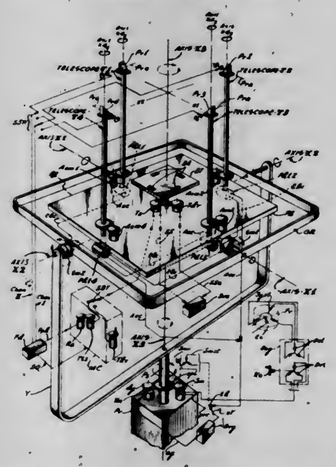
3,015,456
APPARATUS FOR ATMOSPHERIC SOUNDING AND CELESTIAL OBSERVING
Delbert A. Deisinger, 16 Richard Lane, West Long Branch, N.J.
Filed Jan. 5, 1959, Ser. No. 785,095
5 Claims. (Cl. 244—2)
(Granted under Title 35, U.S. Code (1952) sec. 266)

1. Apparatus for atmospheric sounding and celestial observing comprising a balloon, an unmanned glider to carry data gathering equipment, means to suspend the glider from the balloon, automatic means to detach the balloon from the glider when a predetermined elevation is reached, maneuverable aerodynamic controls on said glider, a ground radio transmitter, an automatic direction finding antenna on said glider receiving energy from said transmitter, automatic pilot means in the glider receiving data from said direction finding antenna and connections from said automatic pilot equipment to said



aerodynamic controls whereby the glider when released is returned to earth guided in its direction of flight by said ground transmitter.

3,015,457
AZIMUTH CONTROL IN A GUIDANCE SYSTEM
Bruce E. Dixson, Vashon, Wash., assignor to Northrop Corporation, a corporation of California
Original application Oct. 13, 1952, Ser. No. 314,449. Divided and this application Mar. 6, 1953, Ser. No. 340,683
19 Claims. (Cl. 244—14)

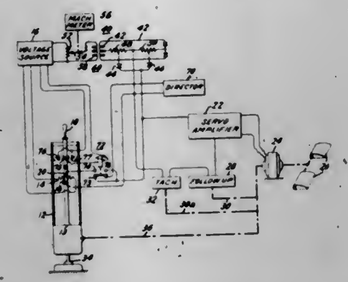


18. In a system for navigating a powered aircraft over a predetermined time-related trajectory, a first platform mounted in a universal support in said craft to have three degrees of freedom, two orthogonal axes of rotation of said first platform being parallel to the plane of said platform, the third axis of rotation of said first platform being fixed in said craft normal to the longitudinal and lateral axes of said craft, a second platform mounted on said first platform and rotatable around said third axis in a plane parallel to the plane of said first platform, a pair of accelerometers mounted on said second platform with their respective directions of response oriented to respond to forces parallel to two orthogonal axes in the plane of said second platform, a direction indicating device for producing a first azimuth signal, a pair of star tracking telescopes mounted on said first platform at 90°-positions

thereon corresponding respectively to said orthogonal axes of said first platform, each of said telescopes producing azimuth error signals and altitude error signals when tracking a predetermined star, means for orienting the optical system of each of said telescopes in altitude independently of said first platform, a record having recorded thereon a signal sequence channel, a trajectory direction signal channel, an azimuth angle signal channel and an altitude angle signal channel, said angle signal channels being timewise divided into a precelestial signal portion and a celestial signal portion, said division point corresponding to a predetermined time and position in said trajectory for the beginning of celestial navigation of said craft, the signal records in said first portions being records of signal angles representing the respective azimuth and altitudes of two selected stars over said precelestial portion of said trajectory just prior to said division point, the celestial signal portion starting at said predetermined division point and being records of signals representing respective azimuths of said two stars over the remainder of said trajectory, and of a precomputed time specified sequence of star altitude angles for each of said two stars for each instant of time over the remainder of said trajectory at a constant altitude, the signal record representing altitude angles of said two stars defining a specified apparent horizontal plane for each instant of the remainder of said trajectory, means for playing back said record in timewise relation to said trajectory to produce signals, means for guiding said aircraft over a precelestial guidance course to reach the position represented by said division point at the proper predetermined time, means for locking said second platform to said first platform with their respective orthogonal axes parallel during said precelestial guidance course, means operated by accelerometer outputs during said precelestial guidance course to maintain said first platform level, means for orienting said first platform in azimuth in accordance with said first azimuth signal during said precelestial guidance course, means operated by a signal from said signal sequence channel just prior to said craft reaching said position to direct signals from the precelestial signal portions of said azimuth and altitude star angle channels to orient the optical systems of said telescopes in azimuth and altitude to cause said telescopes to pick up and track said two selected stars, and a plurality of means operated by a signal from said signal sequence channel at the time of said division point representing said predetermined position for celestial navigation over the remainder of said trajectory to begin, for unlocking said second platform from said first platform, for rotating said second platform in azimuth to align one of the orthogonal axes of said second platform in accordance with signals from said trajectory direction signal channel, for adjusting the optical systems of said telescopes in accordance with signals from the record of said time specified sequence of star altitude angles as the remainder of said trajectory is traversed, for shifting the levelling control of said first platform to altitude error signals from said telescopes to place said first platform in said specified apparent horizontal plane for each instant of the remainder of said trajectory, for shifting azimuth control of said first platform to azimuth error signals from said telescopes, and for connecting the outputs of said accelerometers to control said craft in direction and speed.

3,015,458
STALL AND HIGH SPEED BUFFETING LIMITER FOR AIRCRAFT
Michael F. Marx, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 1, 1956, Ser. No. 612,999
2 Claims. (Cl. 244—77)

1. In a flight control system for an aircraft having a movable elevator control surface, a control stick adapted to develop a control signal for manual control of said aircraft, a director means for developing a control signal for automatic control of said aircraft, a servo adapted to actuate said elevator control surface, means for energizing said servo by one of said control signals, said means including switching means adapted to provide manual or



automatic control of said aircraft, and limiter means adapted to limit the strength of said one control signal, said limiter means including unidirectional devices provided with a variable bias voltage varied in response to the speed of said aircraft whereby sad control signal controlling said aircraft is limited to a predetermined safe value determined by the speed of said aircraft.

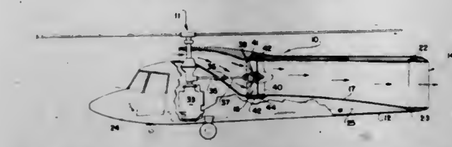
3,015,459
AUTOMATIC CONTROL APPARATUS
Robert C. McLane, St. Paul, and Orville R. Pomeroy, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 7, 1956, Ser. No. 626,936
21 Claims. (Cl. 244—77)



4. In combination: a signal responsive condition controller; means giving a first signal representative of the extent of departure of the condition from a desired schedule; means giving a second signal having at least a component determined by the product of the condition multiplied by its rate of change; means normally supplying said first signal to said controller to maintain said condition at the scheduled value thereof; and further means operable to supply said second signal to said controller so that the condition is adjusted at least in part in accordance with said product.

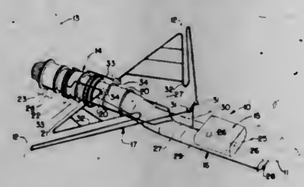
14. A flare-out computer comprising a first servo system giving signals representative of the altitude of an aircraft; a second servo system giving signals representative of the rate of change of altitude; means giving a signal representative of the product of said altitude multiplied by said rate, and means connected to receive said signals for giving an output having at least a component determined by said product.

3,015,460
AIRCRAFT YAW CONTROL
Charles H. Christenson, Burbank, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Jan. 27, 1960, Ser. No. 4,958
5 Claims. (Cl. 244—79)



1. In an aircraft, control means comprised of a rotary compressor to provide a source of high velocity air, gimbal means for said rotary compressor on an axis 90 degrees from a horizontal axis of said aircraft, nozzle means at an extremity of said aircraft, means to conduct said high velocity air through said nozzle means, means to permit rotation of said nozzle means about at least one axis, means fixed to move with said rotary compressor at said gimbal means axis, means to connect said least named means to said nozzle means so that movement of said aircraft with respect to said rotary compressor as permitted by said gimbal means will cause said nozzle means to be directed in the direction of said movement to counteract said movement.

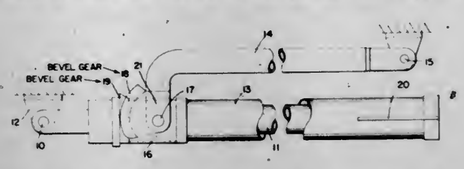
3,015,461
HIGH-PERFORMANCE AIRCRAFT
Solomon S. Fineblum, Columbus, Ohio, assignor to North American Aviation, Inc.
Filed Mar. 7, 1958, Ser. No. 719,833
5 Claims. (Cl. 244—117)



1. An airplane having: a power plant, a fuel-burning thrust augmentation component in said power plant, a fuel supply containing fuel for said thrust augmentation component, and a metallic fuel transfer means connected to said fuel supply and connected to said thrust augmentation component, said fuel transfer means having a heat exchanger section located in heat exchange relation to an exterior surface of said airplane, a flow restrictor means located intermediate said heat exchanger section and said fuel supply, and having fuel re-pressurization means located in said fuel transfer means intermediate said heat exchanger section and said thrust augmentation component, said flow restrictor means and fuel re-pressurization means substantially reducing the pressure of fuel transferred through said fuel transfer means.

3,015,462
STABILIZATION BOOM FOR AIRCRAFT ENCAPSULATED SEAT
William H. Simmons, Feasterville, and Albert M. Stott, Clifton Heights, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Feb. 1, 1960, Ser. No. 6,078
2 Claims. (Cl. 244—122)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In an aircraft ejection seat having at least one telescopic cartridge actuated stabilization boom provided with stabilizing fins adjacent an outer end thereof, said boom including inner and outer telescoping tubes, the combination therewith of the improvement for simplifying the construction of such a boom whereby it is no longer necessary to fold such fins for storage in a compact arrangement, said improvement including one tube of said boom being pivotally secured at a base portion of said seat, a link pivotally secured to an upper end portion of said seat, a sleeve longitudinally fixed to but in which a lower end portion of the second tube may rotate at least to some extent, said fins being secured to an upper end portion of said second tube for storage generally parallel to the back of said seat with said boom upstanding and said fins substantially parallel to said back of the seat, a trunnion and yoke by means of which said link is connected to said sleeve, a bevel gear connection between said link and said lower end portion of said second tube, whereby on extension of said boom said upper end portion of said second tube may be at least partially rotated as said boom is swung away from said seat.



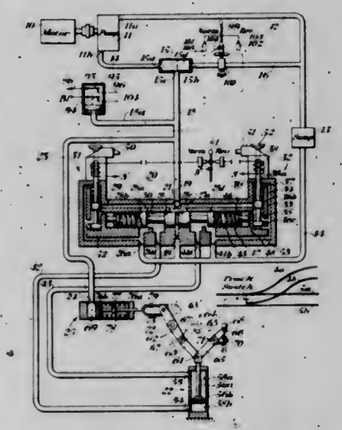
3,015,463
ROCKET PROBE DEVICE
Reinhold J. Gross, 1753 Hearthstone Drive, Dayton, Ohio
Filed Apr. 13, 1960, Ser. No. 22,067
7 Claims. (Cl. 244—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device for effecting damping of free fall of a load delivered to ground from an aircraft comprising a rocket propelled ground probe, a support for said load, rocket propelling means in said probe, a probe housing carried on said support, a cable connecting said probe to said housing and adapted to be stowed within said housing, a parachute pack, a parachute attached to said load for ground delivery support of said load, and adapted to be stowed in said pack, time altitude controlled means for igniting said rocket and propelling said probe downward under rocket propulsion, an electrical circuit, electrical conductors carried in said probe cable, a ground contact element in said probe, a switch in said probe for closing said circuit, said ground contact element closing said

switch when ground contact is made, means for deploying said parachute from said parachute pack, said means being rendered operative for deploying said parachute when said circuit is closed.

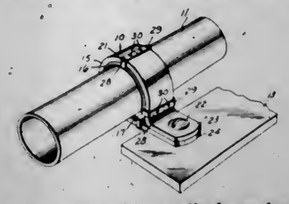
3,015,464
RAILWAY SWITCH CONTROL APPARATUS
Rankin J. Bush, Jeannette, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Oct. 7, 1958, Ser. No. 765,836
4 Claims. (Cl. 246—258)



1. Hydraulic apparatus arranged to receive fluid under pressure for operating a railway track switch between first and second extreme positions comprising valve means for controlling the flow of said fluid, first and second track switch operating cylinders each including a rod and piston unit, linkage means operatively connecting said rod and piston units to said track switch, spring means biasing the rod and piston unit of said second cylinder to the nearest extreme position during a trailing movement over said switch, said spring means being effective during a trailing movement to initially oppose and then aid movement of said switch as it is moved from one to the other of its extreme positions, means for routing fluid to said first and second cylinders concurrently, the fluid routed to said first cylinder causing its rod and piston unit to move said switch from one to the other of its extreme positions, and the fluid routed to said second cylinder nullifying the force of said spring means to ease movement of the track switch under power from one to the other of its positions whereby closure shock of the switch is lessened.

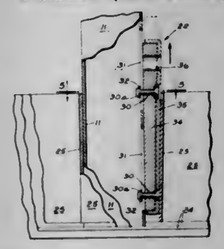
3,015,465
SUPPORT CLAMP
Raymond C. Schmitt, Meriden, Conn., assignor to Aero Gasket Corporation, Meriden, Conn., a corporation of Connecticut
Filed May 11, 1959, Ser. No. 812,344
3 Claims. (Cl. 248—74)

1. A support clamp for tubing and the like comprising a metal strap having a loop formed intermediate the strap ends, one of said strap ends overlying the other strap end and spaced therefrom, said loop being dimensioned to substantially surround the tubing in spaced relationship therewith, means on said strap ends for securing said strap to a support body, a wire mesh pad dimensioned to overlie the inside surface of said circular loop, and a metalbearing strip disposed along the inside surface of said pad extending substantially throughout the full length and width thereof and engageable with the tubing, said



strip having a plurality of integrally formed tabs fastened to the outside of said loop and forming the sole support for said pad and said strip relative to said loop.

3,015,466
DISPLAY RACK
Edward M. Levy, Evanston, Ill., assignor to Reflector-Hardware Corporation, Melrose Park, Ill., a corporation of Illinois
Filed Oct. 29, 1959, Ser. No. 849,672
4 Claims. (Cl. 248—158)



1. In a structure for displaying merchandise and the like, a base having an upwardly extending wall portion, a strap member carried by said wall portion and providing a laterally extending offset defining a socket for receiving a standard therein, a longitudinally extending load bearing standard member having a lower end portion disposed within said socket and extending upwardly therefrom, a thrust surface on the bottom of said end portion for transferring the load on said standard member, a supporting abutment disposed below said socket and engaging said thrust surface for receiving the downward load of said standard member, a wedge disposed within said socket secured to and slidably carried by one of said members, said wedge carrying member having a slot therein elongated generally in the direction of the longitudinal axis of said standard member, a pin connecting said wedge to said wedge carrying member and slidably disposed in said slot for movement therealong, first friction surfaces on two spaced apart confronting walls of said socket, said confronting walls extending laterally from said base wall portion, one of said first surfaces being inclined in a direction upward and away from the longitudinal axis of said standard member, the other of said first surfaces being disposed generally parallel to the longitudinal axis of said standard member, second friction surfaces on two opposed parallel sides of said end portion, and wedging surfaces on two opposed sides of said wedge, one of said wedging surfaces being inclined in a direction upward and away from the longitudinal axis of said standard member and generally parallel to said inclined first surface, the other of said wedging surfaces being disposed generally parallel to the longitudinal axis of said standard member, said inclined wedging surface forcibly engaging said inclined first friction surface, the other of said wedging surfaces forcibly engaging one of said second friction surfaces for providing a wedging force between said end portion of said standard and the adjacent socket wall, the other of said second friction surfaces forcibly engaging the other of said first friction surfaces for providing a reaction force between said socket wall and said end portion to prevent inadvertent retrograde movement of said standard member out of said socket, said wedging force and said reaction force acting in directions parallel to said base wall portion.

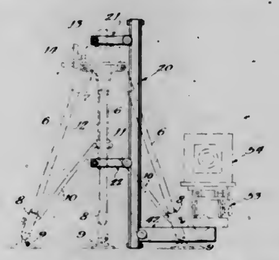
3,015,467
CLAMP FOR MOUNTING FISHING ACCESSORIES ON SMALL BOATS
Woodrow W. Vieaux, 819 Lakeside Place, Green Bay, Wis.
Filed July 6, 1959, Ser. No. 825,260
4 Claims. (Cl. 248—226)



1. A self retaining spring clamp enageable over the side wall of a boat or the like to serve as a supporting bracket for a fish net or other fishing accessory, said clamp being made from a continuous length of strong spring wire, and comprising: a pair of spaced apart side-by-side substantially identical inverted U-shaped members, each having a bight and long and short legs depending from opposite ends of the bight, the long legs having their lower end portions bent towards the short legs and under their respective bights; bridge means spanning and connecting the lower ends of the long legs and comprising a roller rotatably carried by the lower ends of said long legs and cooperating therewith to define a first U-shaped jaw; other bridge means spanning and connecting the lower ends of the short legs and likewise comprising a roller rotatably carried by the lower ends of the short legs and cooperating therewith to define a second U-shaped jaw; said rollers normally occupying positions from which they must be moved by forcibly spreading the jaws apart to enable the placement of the clamp upon the side wall of a boat or the like, the rotatability of the rollers facilitating said placement of the clamp and the difference in length between the long and short legs, causing the spring tension in the legs to maintain the upper ends of the long legs against the side of the wall when the clamp is mounted; and means on said bights intermediate the junctions thereof with their respective legs providing for the attachment of a fishing accessory to the clamp.

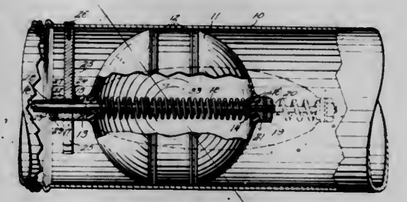
3,015,468
CAMERA SUPPORTING ATTACHMENT FOR A TRIPOD
Paul C. Mooney, Northbrook, Ill., assignor to Quick-Set, Inc., a corporation of Illinois
Filed Feb. 23, 1960, Ser. No. 10,221
5 Claims. (Cl. 248—230)

1. A tripod camera supporting attachment for rigidly positioning a camera at any selected position within a range from floor level to above total tripod height, comprising: an elongated structural post member adapted to be arranged upright relative to the camera tripod, a support arm securable to the camera tripod and extending laterally therefrom, manually actuated clamping means associated with the outer end of the support arm for selected rigid supporting attachment of the arm to the post member, a strut member adapted to be secured to the tripod in spaced relation to the support arm with manually actuated clamping means for attachment to the post member to brace the same against movement, said manually actuated clamping means being adapted to be loosened for manual up and down selected movement of



the post member relative to the tripod and clamps; and a camera supporting arm secured to said post member and extending laterally therefrom to mount a camera thereon, and means for clamping said camera supporting arm along the length of said post member at selected positions, said support arm and strut being adapted to hold said post member rigidly relative to the tripod when the lower end extends upwardly from the floor and when the upper end is elevated above the tripod whereby said post member may provide rigid support for a camera throughout a range from floor level upwardly to above the tripod.

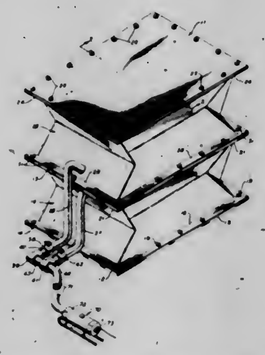
3,015,469
CONTROL VALVE FOR VENTILATING DUCTS
Louis W. Falk, 4723 N. Cumberland Blvd., Whitefish Bay 11, Wis.
Filed Feb. 9, 1961, Ser. No. 88,071
8 Claims. (Cl. 251—331)



1. The combination with a fluid conducting system including a cylindrical duct, of a control vale in said duct for regulating the flow of fluid through the duct, said control valve comprising a resilient deformable hollow body portion having a normal transverse diameter substantially equal to the internal diameter of said duct and cooperating therewith in relaxed condition to form a sealing closure for said duct, a valve mounting bracket in said duct, attaching means adapted to be fixedly secured to a portion of said hollow valve body to retain the same in fixed relationship with said valve mounting bracket, an actuating rod slidably receivable through said valve mounting bracket and extending through said hollow valve body, anchoring means on said actuating rod adapted for attachment to said hollow valve body at a point diametrically opposite to said attaching means whereby axial

movement of said actuating rod in one direction in said body portion serves to elongate the axial dimension of said hollow valve body and simultaneously decrease its transverse dimension to form an unobstructed passage between the outer surface of said valve body and the inner surface of said duct to thereby control and regulate the flow of fluid through said duct in accordance with the size of said unobstructed passage as predetermined by the manually adjusted position of said actuating rod.

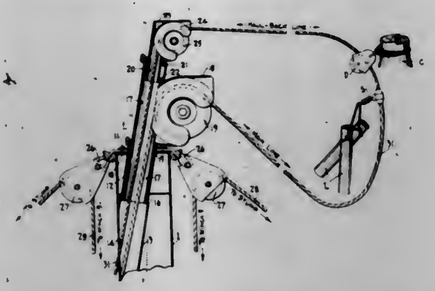
3,015,470
CONSTRUCTION JACK
Roy R. Patchen, 3742 Ardley Ave., Oakland, Calif.
Filed July 25, 1958, Ser. No. 750,902
4 Claims. (Cl. 254—93)



1. A differential pressure actuated construction jack operable to lift weighty objects, the combination comprising a top member, a first bellows sealed to said top member, a bottom member, a second bellows sealed to said bottom member, an intermediate member disposed between said top member and said bottom member, said intermediate member having said first bellows and said second bellows sealed thereto, a first hose sealed to said first bellows through which differential pressure of said first bellows is controllable from below atmospheric pressure to above said pressure, a second hose sealed to said second bellows through which differential pressure of said second bellows is controllable from below atmospheric pressure to above said pressure, separate control means for said first and said second bellows to control air pressure separately in each bellows.

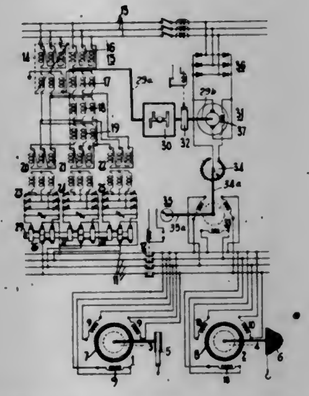
3,015,471
SPAR TREE
Norman W. Madill, 62 Arena St., Nanaimo, British Columbia, Canada
Filed Apr. 9, 1958, Ser. No. 727,342
Claims priority, application Canada Feb. 4, 1958
2 Claims. (Cl. 254—139.1)

1. A spar tree including a main boom vertical to the ground; a plurality of guy-lines connected to the upper end of said boom; upper and lower primary sheaves each free to rotate about its own axis; an upper mounting sleeve for said upper primary sheave; a lower mounting sleeve for said lower primary sheave; a portion of said lower sleeve being rotatably mounted on bearings within the upper end of said boom and extending upwardly therefrom, a portion of said upper sleeve being rotatably mounted on bearings within the upper end of said lower sleeve and extending upwardly therefrom, whereby said upper and lower primary sheaves are disposed above all of said guy-lines, said bearings mounting said sleeves to be independently and freely rotatable about parallel and closely adjacent axes, said upper and lower sleeves each being rotatable in their bearings through 360°; and an adjustable loop cable passing over said primary sheaves for hauling articles to a position adjacent the base of



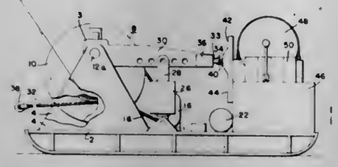
said boom, said loop cable including a haul-back line passing over said upper primary sheave, and a main line passing over said lower primary sheave, said haul-back line and said main line passing through the interior of said sleeves, each end of said cable being anchored to an associated cable winch.

3,015,472
ELECTRIC WINCH APPARATUS
Peter Scott, Birmingham, and Bernard Hugh Stonehouse, Orpington, England, assignors to The General Electric Company Limited, London, England
Filed Jan. 10, 1957, Ser. No. 633,465
Claims priority, application Great Britain Jan. 11, 1956
5 Claims. (Cl. 254—168)



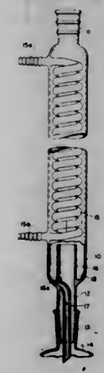
1. An electric winch arrangement comprising a winch drum, a hoisting member wound on said drum with the diameter of turns of said hoisting member on said drum decreasing progressively in the direction of unwind, a synchronous electric motor, a source of power supply of variable frequency for said motor, a permanent magnet rotor and stator winding for said motor, a two-way driving connection between said rotor and said winch drum whereby, under power failure conditions, rotation of said drum is transmitted to said rotor, said rotor thereby serving to cooperate with said stator winding to exert a braking force that increases with the speed of unwind so as to control the speed of unwind from said drum.

3,015,473
TENSION CONTROL DEVICE
Carlton B. Frellsen, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 6, 1958, Ser. No. 753,568
17 Claims. (Cl. 254—172)



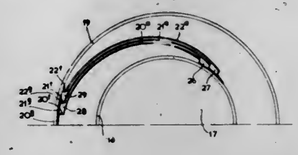
1. A control device comprising, a storing means including shaft means, means for rotatably supporting said shaft means which extends radially therefrom and which is supported for rotation only about an axis spaced radially from said shaft means, means for normally locking said shaft means to said supporting means whereby said storing means is rotatable only about said radially spaced axis, and control means actuated by predetermined movement of said storing means about said radially spaced axis to release said locking means whereby said shaft means is rotatable with reference to said supporting means.

3,015,474
CONDENSING APPARATUS
George A. Dalin, 1563 Van Ness Terrace, Union, N.J.
Filed Sept. 19, 1956, Ser. No. 610,807
6 Claims. (Cl. 257—30)



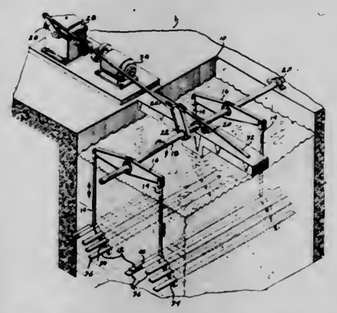
1. A refluxing apparatus which comprises a vessel for containing a liquid, the vessel having a single opening for escape of vapor and for introduction of liquid, a liquid-collecting cooling and condensing member having an opening for escape of liquid and for introduction of vapor, a connection between the respective vessel and member openings, the connection including inner and outer substantially concentric tubes, the outer tube extending from the vessel opening through the member opening to terminate in the interior of the condensing member above the member opening, said outer tube having an opening through its wall close to and above the member opening, the upper end of said inner tube communicating with the upper tube wall opening, and the lower end of said tube projecting beyond the lower end of said outer tube to terminate in the vapor space within the vessel below the vessel opening.

3,015,475
CYLINDRICAL HEAT EXCHANGER
Roelf Jan Meijer and Matthias Leonardus Hermans, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 4, 1958, Ser. No. 778,135
Claims priority, application Netherlands Dec. 5, 1957
5 Claims. (Cl. 257—241)



1. A cylindrical heat exchanger comprising an annular chamber, a plurality of concentric, slightly resilient metal plates in said chamber, each having a curved central portion, an end part bent at an angle to said central portion and an extremity conforming in shape to one of the walls of said heat exchanger and abutting therewith, said metal plates forming at the end parts and extremities thereof a multiplicity of closed, adjacent supply and discharge ducts for the media traversing the heat exchanger, the media in the curved central portions of said heat exchanger being in heat exchanging relationship, and said extremities of the concentric metal plates being secured together, the relatively cold combustion air being supplied to certain predetermined ducts of said heat ducts of said heat exchanger, said air leaving the heat exchanger through other predetermined ducts located at the inner surface of said heat exchanger.

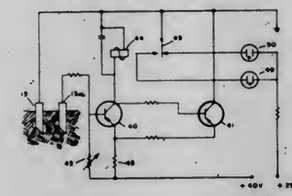
3,015,476
AGITATOR
Fred E. Stuart, Baltimore, Md., assignor to Stuart Corporation, Baltimore, Md., a corporation of Maryland
Filed Oct. 5, 1959, Ser. No. 844,295
5 Claims. (Cl. 259—141)



5. In a flocculator for treating waters, a walking beam operator, an agitator comprising a stepwise structure including spaced frame members comprising interconnected inverted V-shaped angles, means interconnecting said frame members, means rigidly attached to the outer edges of said frame members forming support means in the form of steps, flat elongated agitator members attached to said support means extending in horizontal planes and parallel with each other, said agitator being reciprocated vertically by said walking beam, said agitator members overlapping in the horizontal direction, said support means comprising angle clips attached to said frame members, each angle clip having a vertical leg engaging the back edge of one of the agitator members, and a hori-

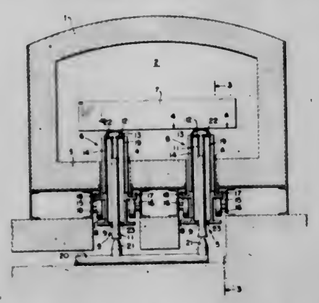
zontal leg at the top end of the vertical leg engaging the bottom of the agitator member next above said one agitator member.

3,015,477
COAL-ROCK SENSING DEVICE
Sten I. Persson and Charles H. Reynolds, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Aug. 20, 1958, Ser. No. 756,188
5 Claims. (Cl. 262—27)



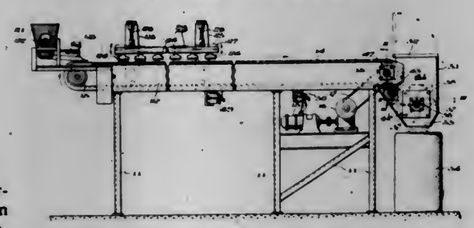
1. In combination in coal mining machinery, a power-driven cutting bit for cutting coal in a natural coal seam having a rock boundary; and means for sensing rock encountered by said bit, said means comprising a sensing tool disposed adjacent said bit for intimately and alternately contacting the face of the coal and rock being cut, a resistance sensitive bistable device having a trigger circuit, said trigger circuit being connected directly to said sensing tool and being responsive to the electrical resistance of the coal and rock being cut for abruptly changing the bistable device from one state to another as said electrical resistance changes from one value to another, respectively, above and below a predetermined resistance value, and means for manually changing the level of said predetermined resistance value.

3,015,478
FURNACE
Robert E. Buckholdt, Abington, and Quentin M. Bloom, Huntingdon Valley, Pa., assignors to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Nov. 20, 1958, Ser. No. 775,255
13 Claims. (Cl. 263—6)



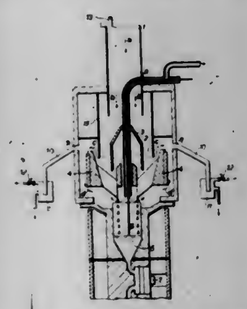
3. In combination with a furnace floor, a pier to support work to be heated above said floor, said pier including a vertically extending, tubular load supporting member, means independent of and under said floor to support said member with a portion of said member extending through and above said floor, a cap upon which work to be heated is placed fastened to the upper end of said member, a second tubular member surrounding and spaced from said load supporting member, means forming a passage between said load supporting member and said second tubular member adjacent to said cap and including said cap as a portion thereof, and means to supply a cooling fluid to the lower end of said load supporting tubular member to flow through said passage and be exhausted through said second tubular member.

3,015,479
MACHINE APPARATUS FOR MANUFACTURE OF FOAMED POLYSTYRENE
Edwin A. Edberg, Butler, and John J. Tress, Beaver Falls, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed June 23, 1955, Ser. No. 517,436
6 Claims. (Cl. 263—8)



3. An apparatus for partially pre-expanding an expandable thermo-plastic polymeric material in the form of beads having integrated therein a liquid hydrocarbon boiling in the range of 30–100° C., comprising a continuously moving conveyor belt having an upper run and a lower run and including a bead depositing end and a discharge end, means adjacent said depositing end for feeding a single layer of freely separable beads on said conveyor belt, a source of radiant heat selectively spaced above said conveyor belt and located intermediate said feed and discharge ends for heating said layer of beads to the temperature at which beads become partially expanded, a discharge hopper mounted adjacent the discharge end of said conveyor and including means for separating the partially expanded beads which have become thermally adhered during exposure to the radiant heat because of the thermo-plastic characteristic of the material, and power means for said belt and said bead separating means.

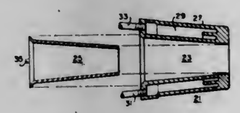
3,015,480
APPARATUS FOR MELTING POLYAMIDE SHREDS
Günter Nawrath, Robert Schnegg, and Otto Haberstroh, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Sept. 18, 1957, Ser. No. 684,786
Claims priority, application Germany Sept. 20, 1956
1 Claim. (Cl. 263—11)



Apparatus for the treatment of polyamide material comprising a chamber having a central upper inlet to admit

shredded polyamide and extending thereinto, a heating and melting grid below said inlet to receive said polyamide material, a hood within said chamber to direct said polyamide material onto said grid, a sump to receive said melted polyamide, outlets in said chamber side wall for the withdrawal of gas from said chamber, a baffle about said hood to form a path in the direction of said outlets for the removal of moisture entrained with said polyamide material prior to exposure to said grids, a centrally disposed downwardly directed conduit within said hood and terminating below said grid to discharge inert gas in a path directed at said outlets and transverse to the direction of flow of polyamide whereby said polyamide is rid of moisture before melting and cleansed before deposition into said pump.

3,015,481
TUYERE ASSEMBLY
Archie H. Clingensmith, 177 Hinkel Road, Pittsburgh, Pa.
Filed Dec. 11, 1959, Ser. No. 858,970
1 Claim. (Cl. 266—41)



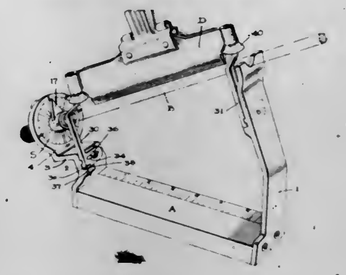
A tuyere assembly for a blast furnace including a cooling member having an outer surface adapted to be engaged by the wall of a tuyere opening in said blast furnace and having an inner wall surface defining an opening and having a cooling cavity between said wall surfaces, said assembly also including a nozzle bushing engaging said inner wall surface throughout and having throughout a smooth substantially continuous inner surface through which a gas may flow into the said blast furnace, said bushing when at room temperature having a cross-sectional dimension throughout its length slightly smaller than the corresponding dimension of said inner surface throughout its length, and said bushing being composed of a material having a substantially higher thermal coefficient of expansion than said cooling member so that when said bushing is heated it engages said inner wall surface in good heat-exchange relationship.

3,015,482
SPRING DEVICE
James H. Maker, Bristol, Conn., assignor to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware
Filed Sept. 1, 1959, Ser. No. 837,512
1 Claim. (Cl. 267—1)



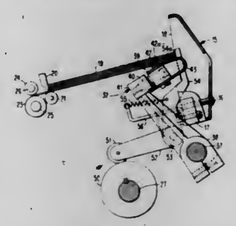
A cylindrical compression spring device for providing substantially uniform axial loading in an annular path at both ends thereof, comprising two spaced Belleville spring members, a plurality of helically shaped resilient elements positioned between said spring members and having their ends connected thereto, said resilient elements being arranged equidistantly in an annular series about a common axis which is also that of the Belleville spring members and being wound in the same direction through less than 360°.

3,015,483
FLETCHING JIG
Royce H. Martin, Box 205, Umatilla, Oreg.
Filed Apr. 30, 1959, Ser. No. 809,991
3 Claims. (Cl. 269—38)



1. A multi-purpose fletching jig comprising, in combination, first and second end walls disposed upwardly with respect to a horizontal base, the first of said walls having a notch for cradling the medial portion of an arrow shaft, and the second of said walls having an opening and an annular degree scale on the face thereof disposed toward said first wall, said scale having its axis concentric with said opening, the face of said second wall opposite the scale having a series of annularly disposed depressions related to given degree marks on said scale, each series having a radius of different length and whose axis of rotation coincides with the axis of said opening; and an arrow positioning assembly journalled in the opening of the second wall, said assembly including a shaft having a nock-receiving socket, a radial pointer at the socket end of the shaft cooperating with the said degree scale, an operator's handle on the shaft, a cover plate on the handle, a radial selector arm on the operator's handle and said arm having a slot, and spring means on the selector arm slidable in said slot for engaging a depression corresponding to the position of the pointer in relation to the degree scale.

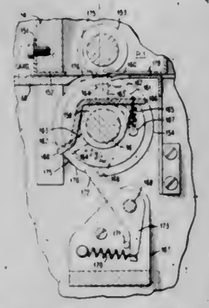
3,015,484
CARD FEED APPARATUS
Harold J. Kistner and Joseph J. Pajerek, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 8, 1960, Ser. No. 54,680
6 Claims. (Cl. 271—41)



1. In an apparatus for successively feeding forms from a stack in a hopper past a predetermined point, the combination of two movable members each for contacting the trailing edge of the bottom form at different times during a feed cycle, and means for moving the respective members back and forth in a synchronized out of phase relation to cause one of said members to be moved forward and contact the trailing edge of the then bottom form to maintain its leading edge substantially registered at said point during one part of said

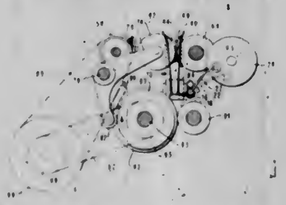
cycle while the other of said members is moved rearward in contact with the under side of said form, and thereafter during another part of said cycle cause said other member to be moved forward and contact said trailing edge and drive said form past said point while said one member is moved rearward preparatory to exerting a registering bias on the following form.

3,015,485
SHEET FEEDING AND REGISTERING MACHINES
Arthur F. Smith, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 23, 1958, Ser. No. 750,405
6 Claims. (Cl. 271—53)



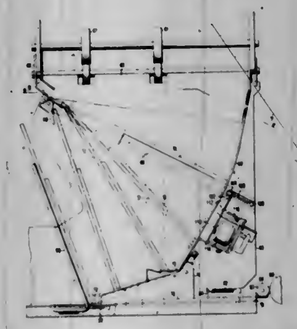
1. In combination with an upper feed roller, a lower feed roller adapted to cooperate with the upper feed roller, means to feed a sheet to said rollers, a sheet aligning device comprising a gate disposed above the periphery of said lower feed roller carried by said lower feed roller, resilient support means for the gate to enable either a synchronous rotation of said lower feed roller and said gate or an independent rotation of the lower feed roller while said gate is stationary and adapted to be engaged by the leading edge of a sheet fed by said sheet feeding means to straighten and align said leading edge, means for causing said gate to remain stationary during the independent rotation of said lower feed roller and the alignment of said sheet, and means comprising a terminal peripheral portion of a recess axially across the lower feed roller and cooperating with said upper feed roller for seizing said sheet at a predetermined distance from said leading edge to cause further feeding of said sheet after the aligning operation.

3,015,486
SHEET ALIGNING APPARATUS
James A. Weidenhammer, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 20, 1959, Ser. No. 807,697
12 Claims. (Cl. 271—58)



1. A sheet aligning device comprising; a chute for receiving individual sheets, a pair of side walls forming the sides of the chute, a movable trap door adapted to selectively close the bottom of said chute, means for moving said trap door to and from chute bottom closing position, a driven rotatable member having a stationary axis disposed at an angle to the plane of the bottom of the chute, the periphery of the rotatable member adapted to contact a side of a sheet in the chute to apply a diagonally directed force thereto to drive said sheet toward the bottom and one end of said chute, and a rotatable end roller having a small diameter portion thereon at the end of the chute toward which said sheet is driven, the small diameter portion forming a positioning stop for an end edge of said sheet.

3,015,487
STACKER
Michael Fiehl, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 24, 1959, Ser. No. 822,675
6 Claims. (Cl. 271—86)

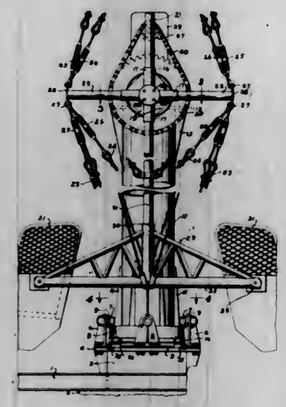


1. A stacker for receiving business record cards, means for temporarily arresting one edge of the card while the other edge falls freely so that the cards that are received in the stacker can be stacked on their edge, means for stacking standard and shorter column cards, the means including card arresting means to temporarily support the standard card which standard size card then forms a support for the shorter cards, means for releasing the arresting means to permit the standard size card and the shorter size cards to fall together to be stacked on their edge to prevent the shorter sized cards from falling uncontrolled to cause a card jam.

3,015,488
AMUSEMENT RIDES
Wayland D. Keith, P.O. Box 2446, Wichita Falls, Tex., and John V. Hollowell, Morganton, N.C.; said Hollowell assignor to said Keith
Application Oct. 25, 1954, Ser. No. 464,328, now Patent No. 2,883,013, dated Apr. 21, 1959, which is a continuation of abandoned application Ser. No. 179,104, Aug. 14, 1950. Divided and this application Dec. 31, 1957, Ser. No. 706,421
19 Claims. (Cl. 272—36)

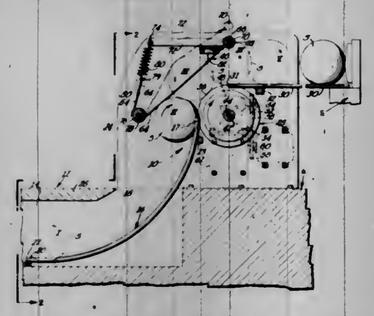
5. In an amusement riding device a base, an upright standard mounted on said base, a horizontally disposed shaft mounted on said standard a spaced distance above said base, a hub mounted near each end of said horizontally disposed shaft, each of said hubs having opposed sockets formed therein, an arm fitted in each of said opposed sockets and extending radially outward therefrom, a T-member, having a bar portion, mounted on the distal end of each arm, the bar portion of which T-member extends outward in each direction from said distal ends of said

arms at a right angle thereto and to a plane passing longitudinally through said arm and through the axis of said horizontally disposed shaft, which bar portions of the respective T-members each has a pivot member near each outer end thereof, the axes of which pivot members are horizontally disposed and are in parallel relation to each



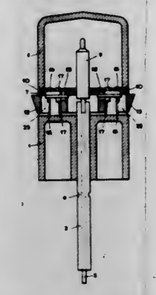
other and with said horizontally disposed shaft, the axes of which pivot members are spaced apart a distance to pivotally receive a car between pairs of said pivot members for simultaneous, unimpeded rotation of said cars about said respective parallel axes, and means for rotating said arms about the axis of said horizontally disposed shaft mounted on said standard.

3,015,489
BOWLING BALL STOP MECHANISM
Harold A. Jones, Shelby, Ohio, Fred J. Schmidt, Stamford, Conn., and Stanley E. Condon, Plymouth, Ohio, assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed June 18, 1958, Ser. No. 742,908
23 Claims. (Cl. 273—47)



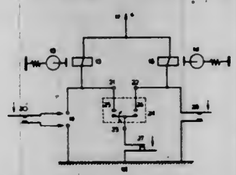
1. The method of retarding the speed of a rolling bowling ball and delivering it slowly to a position of rest comprising positively engaging and holding a rapidly rolling bowling ball and substantially immediately bringing its forward travel to a standstill and reversing its direction of rotation, and while holding said ball moving said ball with said reverse direction of rotation to a point of delivery onto a surface directing it to said position of rest, releasing said ball at said point of delivery, and causing said ball to again reverse its direction of rotation and roll slowly to said position of rest.

3,015,490
CENTRAL RECORD SPINDLE FOR RECORDS HAVING A LARGE CENTRAL APERTURE
Bruno Hoffmann, Berlin-Charlottenburg, Germany, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 7, 1955, Ser. No. 545,457
Claims priority, application Germany Nov. 10, 1954
3 Claims. (Cl. 274—10)



1. In an automatic record changer, a hollow record spindle arrangement located above a turntable comprising a housing, at least two apertured main supports and at least two apertured auxiliary supports in said housing, each pair of main supports and each pair of auxiliary supports being adapted to move laterally in opposite directions, a plate-shaped member located between said main and auxiliary supports and spacing the same apart a distance equal to the thickness of a record to be played, a control pin journalled for pivotal movement in said spindle, two levers each having a unilateral driving pin and two bilateral driving pins thereon, the latter projecting above and below said levers respectively, at least some of said pins projecting into the apertures of both said main supports and auxiliary supports, said levers being operatively connected to said control pin through said plate-shaped member whereby movement of said control pin results in the lateral movement of said supports.

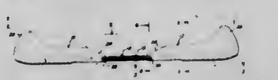
3,015,491
SWITCHING ARRANGEMENT FOR DICTATION APPARATUS
Friedrich Kindl, Vienna, Austria, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 16, 1958, Ser. No. 709,407
Claims priority, application Austria Mar. 7, 1957
2 Claims. (Cl. 274—11)



1. In dictation apparatus having a record carrier with driving mechanism therefor, and a recording phase and a reproduction phase, a first switch connected in series with said driving mechanism for energizing said driving mechanism to move said carrier for recording or reproduction of information, a second switch connected in parallel with said first switch and in series with said driving mechanism for energizing said driving mechanism to move said carrier for reproduction of information and a third switch arranged in series circuit arrangement with said

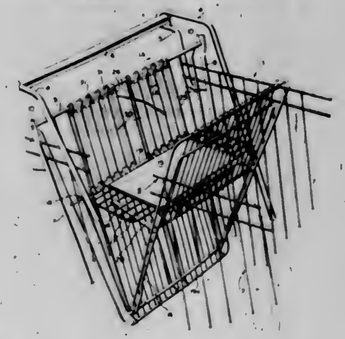
second switch, said third switch being opened during the recording phase and closed during the reproduction phase to allow said driving mechanism to be energized by said second switch only during the reproduction phase of said apparatus.

3,015,492
COLLAPSIBLE ICE SKATE SCABBARD
Richard N. Kesner, Needham, and Herbert B. Hawes, East Brookfield, Mass., assignors to St. Lawrence Manufacturing Company, Inc., Giffard, Quebec, Canada, a corporation of the Province of Quebec
Filed Apr. 5, 1960, Ser. No. 20,079
8 Claims. (Cl. 280—11.38)



8. An ice skate scabbard comprising two duplicate guard members having inwardly directed attachment ends and outwardly directed heads and lower surfaces having tread portions, a resilient attachment element connected to said inwardly directed ends for exerting force in pulling said members toward one another, each of said members having side flanges spaced to provide a central longitudinal skate-receiving groove extending for the major portion of the length thereof and terminating at the head end of said member in an upwardly and rearwardly extending wall, constituting a pocket for securing said member over the end of the blade of an ice skate positioned therein, said members being provided with upper and lower openings between said flanges, adjacent the point of attachment of said attachment element to said attachment ends, for receiving said attachment element between said flanges when said members are collapsed with one said member positioned above the other said member.

3,015,493
CLOSURE MEANS FOR LEG OPENINGS FOR USE IN BABY SEAT ASSEMBLIES
Kurt H. Schweitzer, 100 SE. 2nd St., Oklahoma City 2, Okla.
Filed Oct. 6, 1958, Ser. No. 765,362
9 Claims. (Cl. 280—33.99)



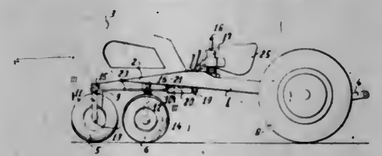
8. A baby seat assembly for use in nesting carriers comprising a gate member having hinge mountings at its upper end, a panel member hinged at its base to the bottom portion of the gate member, said gate member being formed with a leg opening for the passage of legs therethrough, a seat structure hingedly mounted on one of said members and movable from a horizontal seating position to an upper position against the member to which it is hinged, means on the other member for holding the seat structure in horizontal seating position, means for limiting the relative movement between the gate and panel members, leg opening closure means supported by and mounted on said gate member and adapted to close said leg opening, said closure means being contained wholly within the frame of said gate member and including portions which are movable in the plane of the gate member to provide passageways permitting the projection of a child's legs through the leg opening when the seat is occupied.

3,015,494
MATERIALS HANDLING CART
Geoffrey A. Fosbrook, Sr., Hatboro, Pa. (Clearview Drive, Jamison, Bucks County, Pa.)
Filed Dec. 7, 1959, Ser. No. 857,873
15 Claims. (Cl. 280—33.99)



1. In a train of nested materials handling carts, each cart including a frame having front swivel wheels and rear fixed wheels and a materials-retaining container mounted on said frame; means carried by the frame of one cart coacting with a portion of the frame of an adjacent forward cart raising the rear fixed wheels of said adjacent forward cart out of ground engagement, and means including swivel wheels coacting with a portion of the rearmost cart raising the rear fixed wheels of said rearmost cart out of ground engagement whereby the entire train of nested carts is supported solely upon swivel wheels.

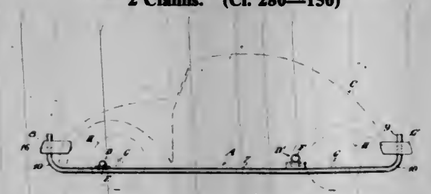
3,015,495
AGRICULTURAL TRACTOR HAVING TWO TANDEM STEERING WHEELS
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited company
Filed Oct. 8, 1958, Ser. No. 766,009
Claims priority, application Netherlands Oct. 10, 1957
3 Claims. (Cl. 280—87)



1. An agricultural tractor comprising a frame having front and rear ends and defining a longitudinal axis, a pair of relatively fixed and laterally spaced wheels on said frame at one of said ends, a pair of steerable wheels at the other of said ends and aligned in leading and trailing relationship and adapted to traverse a single path with

said tractor moving in a direction parallel to said longitudinal axis, means pivotally coupling said steerable wheels to said frame for movement about spaced vertical axes, and means coupled to said steerable wheels to steer the same, said steerable wheels being inclined in opposite directions and defining wheel planes which with the steerable wheels aligned for forward travel enclose an inverted dihedron having its apex substantially at the level of the ground traversed and which with the steerable wheels turned define an inverted dihedron having its apex beneath said level.

3,015,496
SUB-FRAME FOR MOTOR VEHICLES
Raymond W. Campbell, 4225 Wawona St., Los Angeles 65, Calif.
Filed May 16, 1958, Ser. No. 735,792
2 Claims. (Cl. 280—150)



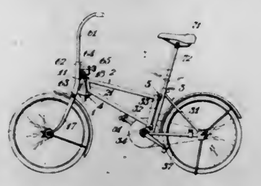
1. In a vehicle having a body carried on wheeled front and rear axle assemblies including sheathed torsion bars; a sub-frame embodying a pair of side rails, means supporting said side rails solely from said sheathed torsion bars in fixed engagement therewith in dependent relation thereto with said rails extending longitudinally of said body independent thereof, means rigidly interconnecting said rails; said side rails having free integral upwardly curved front and rear end portions terminating in vertically extending guard portions disposed in outwardly spaced detached relation to the lower portions of said front and rear ends of said body.

3,015,497
STABILIZER PAD
John L. Aldred, Jr., Bloomfield Hills, Mich., assignor, by mesne assignments, to Ford Motor Company, a corporation of Delaware
Filed Feb. 18, 1959, Ser. No. 794,057
2 Claims. (Cl. 280—150)



1. A stabilizer for mobile equipment, comprising, in combination: a stabilizer arm, a dished ground engaging pad formed of a surface of revolution having the general form of a flat, inverted cone, and means, including a pivot located centrally of the pad and immediately above the bottom of the inverted cone, mounting the pad for pivotal movement on the end of the stabilizer.

3,015,498
FOLDING BICYCLES
Shoji Tanaka, 6 Niiyamadori, 3-Chome Nakanoku, and Yoshiyuki Katori, 397 Aotomachi 4-Chome Katsushikaku, both of Tokyo, Japan
Filed Oct. 22, 1958, Ser. No. 768,907
Claims priority, application Japan Oct. 30, 1957
4 Claims. (Cl. 280—278)



1. A folding bicycle comprising front, center and rear frame assemblies, a handle bar mechanism on the front assembly, a seat post and pedal driven mechanism on the rear assembly, hinge members connecting respective pairs of said assemblies; each hinge member comprising: upper and lower hinge plates on one of the assemblies of one of the pairs, said plates being provided with engaging slots at one side thereof, a stud supported on a side of the other assembly of said one pair of pivotally supported on said plates at the other side of the latter, a locking rod rotatably supported on said other assembly on the other side of the latter, said rod including sections of reduced dimension to enter said slots and engage therein, and tightening means for fixing said rod to said plates.

3,015,499
AGRICULTURAL MACHINE, PARTICULARLY COMBINED SIDE DELIVERY RAKE-TEDDER
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited liability company
Filed June 26, 1956, Ser. No. 594,023
Claims priority, application Netherlands June 29, 1955
2 Claims. (Cl. 280—456)



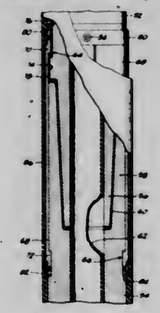
1. A hitch for coupling an agricultural implement to a pulling device comprising a draw arm, a vertical pivot operatively associated with said draw arm to enable a pivoting thereof in a horizontal plane, said pivot being adapted for connection to said pulling device, a horizontal axle device operatively associated with said draw arm for connection to said implement, said horizontal axle device enabling the connection of said implement independently of the rotational disposition of said draw arm, a vertical hinge supported on said axle device for coupling the implement to the axle device and enabling a pivoting of the implement thereabout, a supporting member

coupled to said hinge and connectible to the implement, said supporting member being pivotable on said hinge for positioning said implement, a locking device operatively associated with said hinge for restricting the pivoting of the supporting member, an axle supported on the supporting member and, in turn, coupled to the implement, and a toothed sector and pin positioned in mutually engageable relation on said axle and said implement for fixing the relative positions of the supporting member and implement.

3,015,500
DRILL STRING JOINT

Paul B. Barnett, Glendora, Calif., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Continuation of application Ser. No. 550,932, Dec. 5, 1955. This application Jan. 8, 1959, Ser. No. 785,755
4 Claims. (Cl. 285—47)



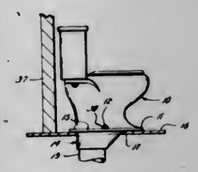
1. A drill string joint including in combination: a pair of oppositely-positioned body members including complementarily formed box and pin members thereof interconnected in telescoping, end-to-end coaxial and normally rigid engagement; an external, annular groove formed coaxially around the exterior of each of said body members adjacent said box and pin members such grooves each being formed with the faces nearest the said box and pin members undercut; a longitudinally extending split sleeve member encircling said box and pin members and said body portion; longitudinally spaced-apart, inwardly projecting lug members, of a longitudinal width less than the longitudinal width of the said grooves and having undercut end portions adapted to fit the aforesaid undercut faces of said grooves, attached to said sleeve member and extending into the grooves; a flexible ring fitting into one of the grooves between a side thereof and one of said lugs and in close engagement therewith, said ring biasing said sleeve member longitudinally so that said lugs are urged against sides of the groove into which they fit thereby being effective to retain said body members against substantial longitudinal movement with respect to one another in event of failure of the normally rigid joint between said box and pin members; retaining bands extending around said sleeve member and fitting over at least a portion of each of said lugs; and means holding said bands on said sleeve in close engagement with said lugs.

3,015,501
ADAPTER BETWEEN TOILET AND DISCHARGE PIPE

Angelo Miselis, Houston, Tex., assignor, by mesne assignments, of one-third to Cleo Clifford Pajdowski and two-thirds to Svea Mary Clifford, both of Chicago, Ill.

Filed Oct. 1, 1956, Ser. No. 613,086
2 Claims. (Cl. 285—58)

1. An adapter for installing a toilet eccentrically with respect to its discharge pipe therebelow and comprising as an integral hollow preformed member the combination of a cylindrical lower part to fit about the top of the discharge pipe for leak-proof connection thereto, a semi-cylindrical part extending upwardly from half of said cylindrical lower part in coplanar extension thereof, a complementary part for said upwardly extending semi-cylindrical part connected smoothly thereto and tapering upwardly and outwardly from said cylindrical lower part and of elongated shape in horizontal cross section, said complementary part blending smoothly into and terminating in a second upwardly extending semi-cylindrical part of the same radius as said first named semi-cylindrical part and relatively straight upwardly extending parts joining said semi-cylindrical parts, said semi-cylindrical parts and said joining parts defining a smooth and continuous interior wall free of crevices and sharp bends. said semi-cylindrical parts and said joining parts defining

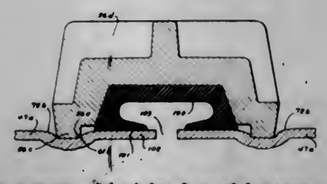


an elongate inlet opening and having their tops coextensive, a horizontal flange extending outwardly from the coextensive tops of said semi-cylindrical and joining parts and having a downwardly turned edge rim, and the medial portions of said horizontally extending flange providing bolt openings therein and arcuate slots therein extending substantially therearound, whereby said adapter accommodates bolts with non-circular cross-section heads positioned downwardly in said openings non-rotatably between said rim and said adapter parts and slidably positioned in said slots with their shanks extending upwardly through the toilet base slots thereabove to receive nuts to connect said adapter to the toilet, and whereby said adapter is rotatable on the vertical axis of said cylindrical lower part so that said inlet opening may be rotated eccentrically to permit adjustment of mis-registry of the discharge outlet of the toilet and the inlet into the discharge pipe.

3,015,502
GROOVED TUBING FOR CONNECTION WITH SLEEVE TYPE COUPLING

Raymond B. Frost, Springfield, and Edward W. Pistek, Linden, N.J., assignors to Victaulic Co. of America, Union, N.J., a corporation of New Jersey

Filed Nov. 29, 1957, Ser. No. 699,866
5 Claims. (Cl. 285—112)



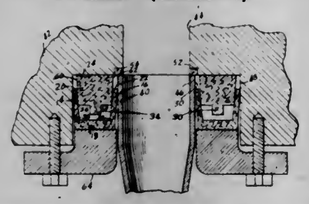
1. A pressure tight joint formed between sections of thin walled internally unreinforced conduit, including two

sections of such conduit and a circumferential clamp type coupling housing formed of housing sections adapted to be drawn together for clamping engagement with the conduit sections, each of said conduit sections adjacent the joined ends thereof being formed with annular rolled grooves in the exterior surfaces thereof and extending inwardly with respect to the cylinder of the outside wall of said conduit, said grooves being of no greater depth than the thickness of the wall of said conduit, said grooves having substantially flat cylindrical bottoms and concavely curved side walls extending radially outwardly from said bottoms, the wall material of said conduits beneath the bases of said grooves projecting inwardly of the normal internal cylindrical walls of said conduits, said projections being substantially wider than said groove, the wall of said conduit through said grooved section being substantially as strong as the wall of the ungrooved portion of said conduit, the exteriors of said conduit sections between said grooves and the free end faces of said conduits being formed with smooth cylindrical gasket receiving surfaces thereon, a gasket overlying the gap between said conduit ends and having portions engaging said gasket receiving surfaces, said coupling housing encompassing said gasket and said coupling housing at the axially remote ends thereof being formed with radially inwardly extending key sections, said key sections being substantially rectangular in cross section and being seated in said grooves with the radially inwardly facing surfaces of said key sections located adjacent to and substantially in abutting relationship with respect to the bottoms of the respective grooves.

3,015,503
EXPANSIBLE PACKING

Amos W. Broughton, Jr., Neshanic, and Herman G. Koch, Somerville, N.J., assignors to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed Dec. 24, 1957, Ser. No. 704,932
2 Claims. (Cl. 286—7)

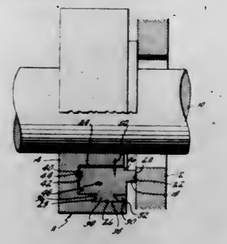


2. In combination, a housing having wall portions defining an opening and a recess coaxial with said opening, a frangible tube extending from said opening, and an expansible seal circumposing said tube and positioned within said recess, said seal comprising: a unitary sealing ring having a base and integrally formed substantially concentric inner and outer sealing lip portions thereon, an expansion ring having a base face in fixed axial engagement with the base of said recess, said expansion ring having laterally opposing sides and defining a cross-section therebetween different from the cross-section of the space between said inner and outer sealing lip portions of said sealing ring, said lateral sides providing peripheral edges which tangentially engage said lip portions intermediate the terminal ends thereof when in operating position to deflect said outer sealing lip into sealing engagement with said housing and to deflect said inner sealing lip into sealing engagement with said frangible tube, and abutment means integral with said expansion ring and being intermediate said peripheral edges and a face of the base of said sealing ring, said abutment means also having a radial dimension less than the least radial distance between said sealing lips.

3,015,504
TEMPERATURE COMPENSATED SEAL

George P. Fulton, Bel Air, Md., and Ralph S. Lombard, East Hartford, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed June 27, 1957, Ser. No. 668,536
6 Claims. (Cl. 286—11.13)

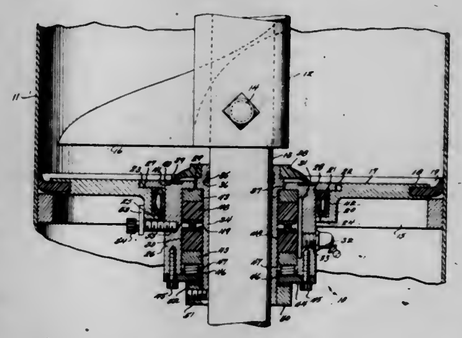


1. In a face seal, a seal member having one coefficient of thermal expansion, a support member for said seal member having a different coefficient of expansion, and means for maintaining said members in contact over certain mating areas during a wide range of temperature chosen to lie on the same line for both members which is the resultant of the radial and axial expansion of said members, and the angle of others of said mating surfaces being chosen to lie on a line which is slightly different from the resultant of axial and radial growth of said members, whereby the surfaces will grow together slightly when heated.

3,015,505
PACKING GLAND FOR VERTICAL SCREW CONVEYOR

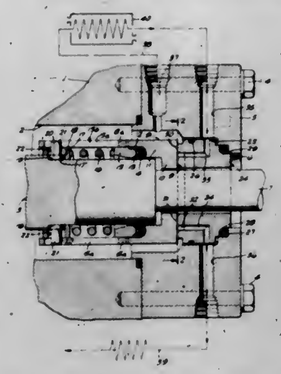
Donald W. Smith, Oklahoma City, Okla., assignor to Southwestern Cotton Oil Company, Oklahoma City, Okla.

Filed Jan. 12, 1959, Ser. No. 786,205
3 Claims. (Cl. 286—11.13)



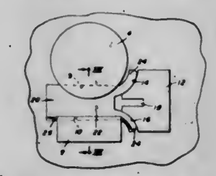
1. A packing gland for vertical screw conveyors of the type including a cylindrical housing and a rotatable shaft axially mounted in said housing comprising a disc, means sealing said disc peripherally to said housing, said disc including a depending annular boss, a stuffing box sealingly mounted in said annular boss for flexible radial movement therein, a sleeve fixed to said shaft for rotation therewith and extending through said stuffing box, first seal means fixed to said sleeve in sealing engagement with said stuffing box to prevent entrance of material thereto, and second seal means sealing said sleeve and said stuffing box to prevent passage of material therebetween.

3,015,506
MULTI-STEP MECHANICAL SEAL
Herbert E. Tracy, Alhambra, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 17, 1958, Ser. No. 722,077
11 Claims. (Cl. 286—11.14)



1. A seal comprising, a housing having a shaft opening, a shaft extending through said opening, mechanical sealing means interposed in the shaft opening between said housing and said shaft for sealing the opening against leakage of fluid under pressure therefrom, said sealing means including a ring connected to said shaft for rotation therewith and a relatively stationary ring operatively connected to said housing, said rotatable ring having a relatively broad radial sealing face, said stationary ring having a pair of relatively narrow radially spaced sealing faces disposed in sealing relation to said broad face and defining an annular space, said stationary ring also having fluid inlet and outlet passages in direct communication with said annular space between said relatively narrow faces, means including a pressure reducer for directing fluid under pressure to said inlet passage from said housing at a pressure intermediate housing pressure and atmosphere, and means for directing said fluid away from said outlet passage.

3,015,507
SHAFT RETAINER KEY
Oscar F. Knoell, Center Township, Lake County, and Sten P. Lundskog, Cedar Creek Township, Lake County, Ind., assignors to United States Steel Corporation, a corporation of New Jersey
Filed June 29, 1960, Ser. No. 39,646
1 Claim. (Cl. 287—20)



Means for securing a shaft having a transverse slot therein relative to a structure in which the shaft is installed which compirses a guide member fixed to said structure adjacent said shaft, a key slidably disposed on said guide member and fitted in said slot, one end of said key having a tongue deformable to prevent removal of said key, and an abutment on said structure disposed in line with the longitudinal center line of the space between said shaft and said guide member, said abutment being adapted to be engaged by said tongue on insertion of said key in said space, said abutment having a slot therein for admitting a tool to engage said one end of said key.

3,015,508
TUBE-TO-TUBE SHEET FABRICATION
Cleon V. Kunz, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Sept. 22, 1959, Ser. No. 841,645
4 Claims. (Cl. 287—20.2)



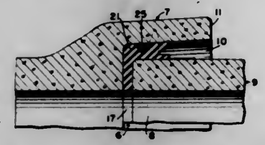
1. A tube and tube-sheet assembly comprising a two-layer tube sheet having a tube aperture therein, a thin-walled tube having one end received in said aperture, said tube sheet including an outer layer having a wall thickness approximately equal to the wall thickness of said tube and an inner layer having a relatively thick wall, a welded connection between said outer layer and said tube, and a brazed connection between said inner layer and said tube, said inner thick-walled tube-sheet layer having a cavity formed therein around the tube at the base of the welded connection between the tube and the outer tube-sheet layer.

3,015,509
CONNECTOR DEVICE
Emil Wayne Bollmeier, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Original application Mar. 1, 1955, Ser. No. 491,342, now Patent No. 2,890,266, dated June 9, 1959. Divided and this application June 8, 1959, Ser. No. 818,761
6 Claims. (Cl. 287—78)



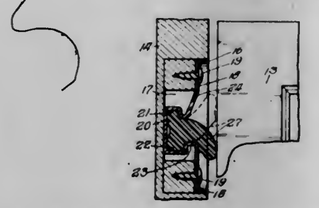
1. A connector device capable of being threadably axially advanced over a wire or rod-like member to provide a firm compression grip thereon and comprising a tapered helical spring-wire fastening element and a rigid cover member centrally open at each end, said fastening element being retained within said cover member and having end turns fitting snugly within the corresponding ends of said cover member and having intermediate turns of a diameter less than the internal diameter of said cover member and expandable under spring tension as said connector device is advanced over said wire or rod-like member, said end turns terminating in wire-tips accessibly located for application of force thereagainst in threadably rotating said fastening element, said rigid cover member being provided at each end with a single inwardly extending projection for bearing against the corresponding wire-tip in transmitting torque from said cover member to said fastening element.

3,015,510
PIPE SEALING GASKET
John Schuyler Bates, Berkeley, Calif., assignor by decree of distribution of seventy percent to Kenton Schuyler Bates, and of fifteen percent to Robert Brent Bates, and of fifteen percent to Margaret Elizabeth Bates Trotter
Filed Dec. 12, 1956, Ser. No. 627,845
2 Claims. (Cl. 288—23)



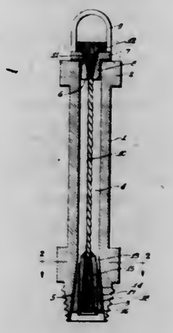
1. In a gasket unit particularly adapted for sealing a pipe joint of the bell-and-spigot type, a homogeneous body of resiliently flexible liquid-impervious material having a tubular portion arranged for its fixed and radially stretched mounting directly on and about the spigot end of a pipe section in sealed contact therewith and providing an outwardly-extending uniform annular bead portion at its forward end and arranged for its spigot-centering engagement within the bore of a spigot-receiving pipe bell to internally seal the passage between the bell bore and the exterior of the tubular body portion, and a continuous uniform integral sealing-fin body portion of triangular cross-section spaced rearwardly from said bead portion to define a peripheral annular groove between it and said bead and extending radially outwardly said tubular body portion to a sharpened peripheral edge, said radial fin portion of the body being rearwardly deflectable by and within the bore of a receiving pipe bell of a connected pipe section to externally seal the passage between the bell bore and the spigot thereat at an area bounded by said fin edge by reason of the insertion of the gasket in the bell with the mounting spigot, the space of said groove being arranged to fully receive the portion of the tubular body portion which is displaced by the sealing deflection of the fin.

3,015,511
WINDOW SASH POSITIONER
Charles K. Sitterly, Dubuque, Iowa, assignor to Caradco Incorporated, a corporation of Iowa
Filed June 15, 1959, Ser. No. 820,314
1 Claim. (Cl. 292—70)



In a window construction having a side jamb and an adjacent movable sash, a sash positioner, comprising: a flexible friction member held in the jamb having a stem portion engaging the sash, the stem being distortable upwardly when the sash is raised and downwardly when the sash is lowered; a mounting member in the jamb in which the friction member is held, the mounting member comprising a strip of metal and including a socket portion having an upwardly and downwardly extending recess in which is located a similarly shaped head of the friction member and from which said stem extends, a rigid portion adjacent the bottom of the stem against which the stem wedges to resist downward movement of the sash and a recessed portion adjacent the top of the stem toward which the stem moves on raising of the sash.

3,015,512
DRILL COLLAR HANDLING SUB
William E. Oakes, 11415 67th St., Edmonton, Alberta, Canada
Filed Aug. 11, 1960, Ser. No. 48,979
1 Claim. (Cl. 294—1)

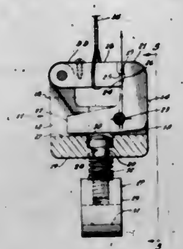


A drill collar handling sub comprising a rigid metal stem having a cap at one end and an externally threaded portion at the other end thereof, said stem having an axial bore extending therethrough, a wire line extending axially through said bore, and means for prestressing said wire line and for maintaining said wire line under tension comprising a socket member seated on said stem at each end thereof, said wire line having each of its ends embedded in and fixed to one of said socket members, one of said socket members having a shoulder seated on the end of said stem adjacent said cap, and a handling eye fixed to said shoulder, the other of said socket members being of substantially cylindrical externally threaded form, said bore having a tapered section lying within said threaded end portion of said stem, said tapered section being of gradually decreasing diameter from the adjacent end of said stem, and an expansible locknut having threaded engagement with said threaded socket member and also having a tapered outer surface complementary to and in engagement with said tapered section.

3,015,513
IMPACT RELEASE DEVICE
Edgar G. Ewing, Sepulveda, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Sept. 21, 1959, Ser. No. 841,374
4 Claims. (Cl. 294—83)

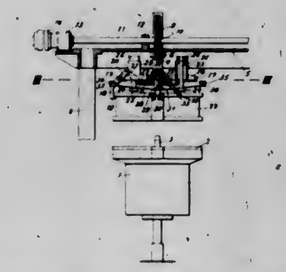
1. An impact release device comprising: a frame member; catch and latch members pivotally mounted on said frame member; said catch and latch members having operative positions in which said latch member contacts and maintains said catch member in a fixed position with respect to said frame member and an inoperative position in which said latch member is spaced from said catch member and the latter is free to pivot on said frame member; impact responsive means mounted on said frame member for movement between a first position in which said impact means is spaced from said latch member and

a second position in which said impact means contacts and moves said latch member to said inoperative position thereby allowing said catch member to also move to said



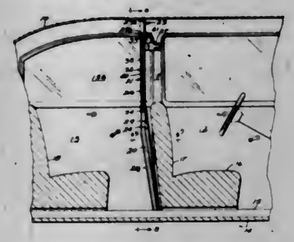
inoperative position; and resistance means between said impact means and said release device normally maintaining said impact means in said first position.

3,015,514
POSITIONING ARRANGEMENT FOR A GRIPPING DEVICE FOR MOULDING BOXES OR THE LIKE
Eduard Mezger, Muhlegasse 198, Kalinach, Switzerland
Filed Aug. 22, 1957, Ser. No. 679,656
Claims priority, application Switzerland Aug. 24, 1956
7 Claims. (Cl. 294—86)



6. Positioning arrangement for an object held by a gripping device, comprising, in combination, a movable support movable to and from an operative position; two pairs of gripping lever means mounted on said support for movement to and from a gripping position for gripping an object; operating means for operating said gripping lever means during movement of said support to and from said operative position; positioning means including a bar having at each end thereof a positioning pin adapted to engage a corresponding aperture in an object held by said gripping lever means to determine the position of said object, said bar being slidably guided in said support for movement in the direction of movement of the same to and from an operative position in which said pins engage said apertures; and a pair of rigid links interconnected by said bar and respectively interconnecting the gripping lever means of each pair, each link having at the ends thereof a slot, and each of said gripping lever means having a pin projecting into a slot of an associated link so that said bar and positioning pins are moved to and from said operative position of the same while said gripping lever means move to and from said gripping position, and are in said operative position while said gripping lever means are in said gripping position, said links blocking movement of said gripping lever means to said gripping position when said positioning means is blocked from movement to said operative position by said pins engaging the object outside of the apertures therein.

3,015,515
PRISONER CONFINING PARTITION FOR AUTOMOBILES
Harold A. Halstead, Harold A. Halstead, Jr., and Robert E. Halstead, Spokane, Wash., assignors to Novelty Carriage Works, Inc., a corporation of Washington
Filed Aug. 25, 1960, Ser. No. 51,293
5 Claims. (Cl. 296—24)



1. In an automobile body having front and rear seats, the front seat including a backrest extending between the sides of the automobile body, partition means for isolating the back seat area from the front seat area comprising;

a pair of inwardly facing side channels projecting upwardly behind the front seat backrest from the floor to the roof of the automobile body respectively adjacent the fixed dividers separating the front and rear doors at each side of the automobile;

bracket means fixed between said side channels and the automobile body;

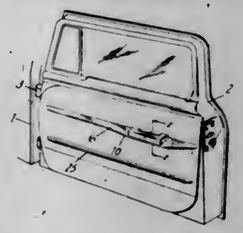
a roll bar fixed across the upper ends of the side channels adjacent the roof of the automobile body;

a solid rectangular plate secured between the front exterior surfaces of said side channels and extending upwardly from the floor to the top of the front seat backrest;

a slidable section mounted between said side channels and slidably supported thereby for vertical motion along the length thereof;

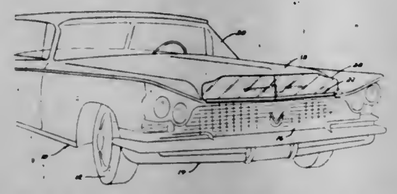
and means on said side channels and said slidable section adapted to cooperatively engage one another to thereby maintain said slidable section in an elevated position.

3,015,516
INNER PANEL WITH COMBINED ARMREST AND HANDHOLD FOR VEHICLE DOORS
Ivan F. Clark, Lyons, Mich., assignor to Ivan Clark Manufacturing Company, Lyons, Mich.
Filed Mar. 30, 1959, Ser. No. 802,827
10 Claims. (Cl. 296—44)



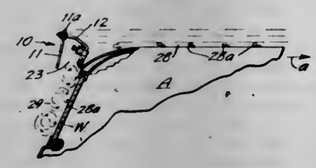
1. A door structure of the class described comprising an inner wall, a panel of fiberboard or the like disposed on the inner side of said inner wall in supported relation thereto, a horizontally extending rib like member of fiberboard or the like and of inwardly facing channel section having laterally projecting flanges on its edges fixedly secured to said panel, said rib-like member having a relatively wide section adjacent one end thereof and tapering in width in both directions from said relatively wide section thereof, the upper wall of such relatively wide section having spaced transverse slits therein, the wall portion between said slits being deflected downwardly providing a hand hold opening, a supporting bracket on said inner wall projecting below said hand hold opening in said rib like member in supporting relation to said downwardly deflected wall portion thereof, an upwardly facing hand hold member arranged in said opening and said rib like member in supported relation to said bracket and secured thereto, a cushioning member arranged in said opening to embrace the front and ends of said hand hold member, and upholstery covering for said panel extending over said rib like member and said hand hold cushioning member and connected to said panel to constitute an assembled unit therewith.

3,015,517
AIR CURRENT DEFLECTOR SHIELD
Argyle K. Thornburgh, Pleasantville, Iowa
Filed May 25, 1959, Ser. No. 815,487
3 Claims. (Cl. 296—91)



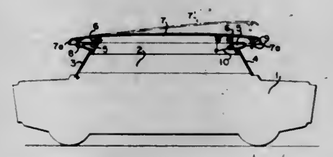
1. In an air current deflector shield, a shield member comprised of a single piece of transparent material, said shield member having its entire lower edge dwelling in a single flat plane, an elongated rigid bracket curved at its midpoint, and connecting means on said bracket to bind said shield in a curved position on said bracket in the curved shape defined by said bracket; said bracket engaging only the entire length of the lower edge of said shield member.

3,015,518
REAR WINDOW CLEANER
Marvin O. Nelson, Starbuck, Minn.
Filed Aug. 5, 1959, Ser. No. 831,762
1 Claim. (Cl. 296—91)



An automobile rear window cleaner comprising an elongate rigid air-deflecting plate to be oriented transversely of the automobile and along the top of the rear window and to extend in a forwardly and upwardly inclined direction with the upper edge of the plate extending above the top of the automobile body and in the air stream to direct air downwardly and turbulently across the rear window for scouring and sweeping dust and snow from the window, a pair of brackets respectively disposed adjacent opposite ends of the plate to extend between the plate and the automobile body, each of said brackets having a forward end with a downwardly and rearwardly extending bifurcated mounting portion defining a slot-like opening having an open lower end to receive an appendage of the automobile body therein for holding said plate in said predetermined position with respect to the rear window, said brackets also having rearwardly extending projections, said plate having a pair of projection-receiving apertures spaced from the upper and lower edges of the plate, said apertures being disposed closer to one of said edges than to the other of said edges, whereby to permit said plate to be mounted on said projections for adjustment relative thereto between adjusted positions in order to mount the plate with the upper edge thereof above the top of the automobile body, said plate being mounted on said projections when in one position with said one edge thereof disposed uppermost and being removable from said projections for turning of the plate to permit mounting thereof on the projections and in adjusted position with said one edge being disposed lowermost and means on said projections for retaining the plate thereon in the respective positions.

3,015,519
MOTOR VEHICLE ROOF CONSTRUCTION
Béla Barényi, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed June 22, 1959, Ser. No. 821,773
Claims priority, application Germany June 21, 1958
4 Claims. (Cl. 296—137)

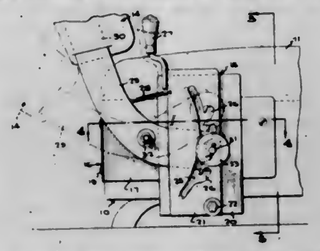


1. An adjustable roof construction for motor vehicles provided with a vehicle body having windows and terminating in an upwardly direction in a substantially annular support surface, a vehicle roof adapted to be supported on said support surface, said roof having portions projecting outwardly beyond said support surface on all sides and having an essentially flat under surface in the region of said support surface, sealing means secured to one of the two parts consisting of said roof and of said support surface, the entire roof resting on said support surface exclusively by the interposition of said sealing means, means to protect at least some of said windows from rain and sun, said means including portions of said roof projecting beyond said support surface, hinge means for said roof secured to said roof at the front end of said vehicle body at the outside thereof, said projecting portions of said roof extending beyond said vehicle body such a distance that said hinge means are located underneath said roof.

3,015,520
TILTING BACK MECHANISM
Orvel M. Johnson, 189 Sheridan Park Hill, North Little Rock, Ark.
Filed Sept. 7, 1960, Ser. No. 54,488
1 Claim. (Cl. 297—371)

In a device of the character described, a vehicle seat including a main body portion and a frame, a movable back rest adjacent said seat, a tilting mechanism comprising an L-shaped bracket positioned contiguous to the corner of said seat frame and secured thereto, said bracket including first and second portions which are arranged at right angles with respect to each other, a vertically disposed support member secured to the outer surface of the first portion of said bracket, a plate arranged in spaced parallel relation with respect to said

support member, a securing element pivotally connecting a lower corner portion of said plate to said support member, a spacer member on said securing element and said spacer member being interposed between said plate and support member, said plate being provided with an arcuate slot therein, there being a plurality of spaced



apart notches in said plate communicating with said slot, a handle affixed to said plate, a coil spring extending between said bracket and plate, an arm having one end affixed to said back rest, a stud bolt pivotally connecting said arm to said bracket, and a pin mounted in the free end of said arm, and said pin adapted to engage said slot and notches.

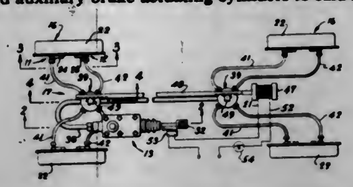
3,015,521
KNEELER BAR MOUNTINGS
Ray A. Hayden and Erving B. Morgan, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed Apr. 7, 1960, Ser. No. 20,731
4 Claims. (Cl. 297—426)



1. Mounting means for mounting a horizontal kneeler bar on the spaced upright rear legs of a pew whereby the bar may be swung upwardly to a position of non-use or downwardly to a position for use by a person in the rear of said pew, said mounting means comprising: a pair of mounting brackets secured to said rear legs above their lower extremities and extending rearwardly therefrom; a pair of tubular pivot members having flattened forward ends pivotally connected to said mounting brackets, said pivot members extending rearwardly from said brackets and thence mutually inwardly toward each other; a tubular connecting member disposed adjacent the underside of said kneeler bar and having its opposite ends telescopically engaging the inner ends of said pivot members; and fastening means passing through aligned apertures in the telescoped portions of both pivot members and the connecting member and into said kneeler bar.

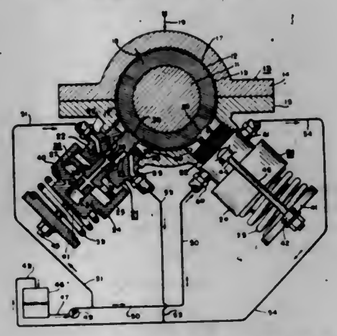
3,015,522
AUTOMATIC SAFETY BRAKE SYSTEM
Richard B. Spikes, 2421 4th Ave., Los Angeles, Calif.
Filed Oct. 26, 1959, Ser. No. 848,655
8 Claims. (Cl. 303—9)

1. In a dual braking system for automotive vehicles, a primary hydraulic brake actuating cylinder at each wheel, a master cylinder adapted for producing fluid under pressure upon movement of a piston therein, an auxiliary hydraulic brake actuating cylinder at each wheel, valve means connecting said primary brake actuating cylinders and said auxiliary brake actuating cylinders to said master



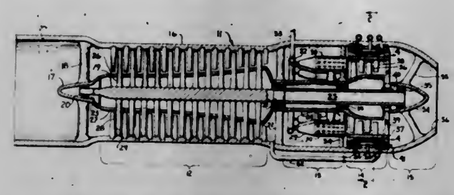
cylinder in first and second terminal positions respectively of said valve means, and sensing means operatively connected to said piston and adapted for actuating said valve means from said first position to said second position upon movement of said piston past a predetermined point in said cylinder.

3,015,523
VIBRATION ISOLATING BEARING SUPPORT
Harold W. Semar, Drexel Hill, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 4, 1960, Ser. No. 26,752
7 Claims. (Cl. 308—9)



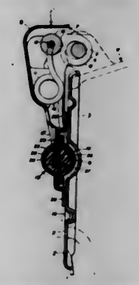
1. In combination, a rotatable shaft having a journal portion; a bearing for rotatably supporting said journal; a support structure for said bearing, there being an annular clearance space between said bearing and said support structure; and means for minimizing the transmission of vibration of said shaft to said support structure, said means comprising a member extending through said support structure into abutment with said bearing, means for slidably supporting said member, said member being movable in radial direction jointly with said journal portion, housing structure defining a chamber, said member having an abutment portion movably disposed in said chamber, a spring member, means for retaining said spring member in cooperative association with said housing, said spring member biasing said housing radially toward said bearing, a source of pressurized liquid, first passage structure for admitting some of said pressurized liquid to said chamber when said member is moved in radially outward direction by said bearing, said pressurized liquid in said chamber being effective to urge said housing radially outwardly against the bias of said spring member, and second passage structure for releasing some of the pressurized liquid from said chamber when said member is moved in radially inward direction, thereby to reduce the volume of liquid in said chamber and reduce the bias of said spring against said housing.

3,015,524
INVERTED TURBINE
Games Slayter, Newark, Ohio, and Arthur A. Fowle, Winchester, Mass., assignors, by direct and mesne assignments, to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware
Filed Nov. 19, 1958, Ser. No. 774,973
4 Claims. (Cl. 308—9)



1. An air bearing for rotatably supporting a large rotor which is subjected to a wide variation in temperature, said air bearing comprising an inner annular ring attached to the outer surface of said rotor and disposed in a plane perpendicular to an axis thereof, a plurality of segments constituting an outer annular ring disposed around said inner ring and spaced therefrom, resilient means operatively associated with and effective yieldingly to urge each of said segments inwardly, and means for admitting air to the space between said rings.

3,015,525
JOURNAL BOX LID
Emil H. Blattner, deceased, late of Williamsville, N.Y., by Elizabeth Blattner, executrix, Rochester, N.Y., assignor to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Mar. 31, 1958, Ser. No. 724,948
6 Claims. (Cl. 308—47)



1. In a journal box lid, the combination with a hood member and a cover member, of an articulated connection between said members including means fixed to said cover member, means fixed to said hood member and extending between said first-named means and cover member, rubber means interposed between and spacing said fixed means and yieldable to accommodate all relative articulation between said members, and means on said fixed means for positioning said rubber means therebetween.

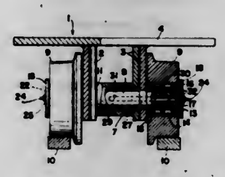
3,015,526
BEARING ARRANGEMENT
Georges Dubois, Grenchen, Switzerland, assignor to A. Schild S.A., Grenchen, Switzerland, a joint-stock company
Filed Dec. 2, 1958, Ser. No. 777,740
Claims priority, application Switzerland Dec. 2, 1957
6 Claims. (Cl. 308—135)

1. In a bearing arrangement, in combination, a frame; a movable element rotatably mounted on a part of a frame; holding means carried by said frame and provided with a cylindrical bearing surface portion arranged for enabling rotary motions of said element coaxial to said bearing surface; two adjacent surface portions provided one on said frame part and the other one on said movable element, said surface portions extending in parallel to one another for holding said movable element by abutting



engagement in a determined axial position with respect to said cylindrical surface portion; and a set of jewels mounted in one of said adjacent surface portions in fixed relationship thereto and spaced from each other so that each jewel has a part projecting beyond said one surface portion, said projecting jewel parts being arranged so as to come simultaneously in contact with said other adjacent surface portion.

3,015,527
BEARING ASSEMBLY
Oliver G. Schmidt, West Allis, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 4, 1959, Ser. No. 850,898
2 Claims. (Cl. 308—187)

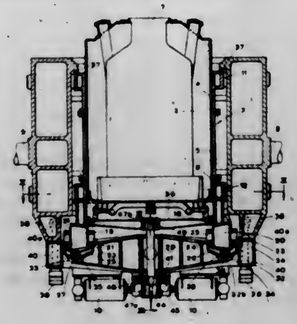


1. In a conveyor chain having projecting pins carrying replaceable bearing sleeves and wheels having bearings including said sleeves for supporting the chain on a track, the ends of each said pin and sleeve having corresponding segmental portions projecting beyond the face of the wheel, a disc having segmental openings to receive said projecting portions of the pin and sleeve and securing the latter thereon and against rotation with respect thereto, a grease-fitting threaded in the end of said pin and extending through a hole in said disc between said openings to secure the disc thereon, said disc being removably secured to the pin by said fitting and having its outer dimensions overlying the face of the wheel to secure the wheel on the sleeve, said pin having a grease-passage from said fitting to the sleeve and said sleeve having opposite openings disposed with respect to said projecting portions so that one or the other of said openings registers with said grease-passage for lubrication of the bearing.

3,015,528
THRUST BEARINGS
Patrick Alwyne Clark, Norton, Sheffield, Dennis Stubbs, Sheffield, and Dennis George Bloomfield, Rotherham, England, assignors to Davy and United Engineering Company Limited
Filed Aug. 15, 1958, Ser. No. 755,286
Claims priority, application Great Britain Aug. 16, 1957
7 Claims. (Cl. 308—231)

2. A thrust bearing assembly including in combination, two members mounted for relative rotation about a common axis, one of said members being formed with a circular, conical track facing towards the second member, a two-armed beam mounted on said second mem-

ber to rock about an axis at right angles to said first-mentioned axis, rockers pivoted respectively at the ends of said beam about axes that are tangential to said track, and conical rollers respectively mounted to rotate about axes fixed in said rockers and to run on said track, said roller axes being substantially at right angles to said first-

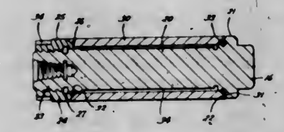


mentioned axis, at right angles to said rocker axes and displaced from said rocker axes towards said track, and each rocker axis being located in a flat plane to which the associated roller axis is perpendicular and which is closer to the wider end of the roller than to the narrower end of the roller, the wider end being radially outermost with respect to said first-mentioned axis.

3,015,529
PUMP PLUNGER CONSTRUCTION

Philip P. Hardcastle, Wichita, Kans., assignor to Cardwell Manufacturing Company, a partnership

Filed Nov. 23, 1959, Ser. No. 854,660
3 Claims. (Cl. 309—4)



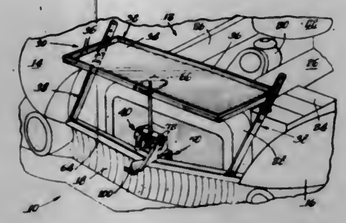
2. In a pump, a working cylinder having apertures in its opposite ends, a plunger having a body inserted through one of said apertures, a pair of longitudinally-spaced, outwardly-facing, inclined shoulders on said body, and axially concentric therewith, a wear sleeve mounted on said body and substantially spaced therefrom between said shoulders, said sleeve having inclined end surfaces complementary to and sealingly engaging said body shoulders for centering said sleeve, wrench engaging means at the end of said body within said working cylinder, a threaded connection at the opposite end of said body for attachment to actuating means, and a plug in the second of said cylinder end apertures and removable for introduction of wrench means to effect detachment, removal and reinsertion of said plunger therethrough, one of said body shoulders being removable to facilitate replacement of said sleeve.

3,015,530
MECHANIC'S TRAY ARRANGEMENT

Arthur B. Anderson, 2143 N. Keystone Ave., Chicago 39, Ill.

Filed June 6, 1960, Ser. No. 34,267
5 Claims. (Cl. 311—21)

1. A mechanic's tray arrangement for use with an automobile hood latching mechanism, said arrangement comprising: a tray structure adapted to be spaced apart from the radiator of an automobile and extending forwardly therefrom; means for receiving the fixed striker stud means of said hood latching mechanism, including a lock assembly and an elongated rod joined between said lock assembly and tray, said receiving means being attached to said tray structure adjacent a forward portion thereof

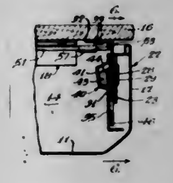


and spaced therebeneath extending into gripping engagement with said striker stud means; and leg means originating adjacent opposite lateral sides of said tray structure rearwardly of said receiving means and extending in a diagonally forward direction intercepting the plane of said receiving means to engage a structural element of said automobile forwardly of said striker stud means for supporting said tray structure in a stable position.

3,015,531
BOOK BOX DESK

Robert G. Mohr and Richard J. Lappin, Kalamazoo, Mich., assignors to Brunswick Corporation, a corporation of Delaware

Filed June 5, 1959, Ser. No. 818,345
2 Claims. (Cl. 312—316)

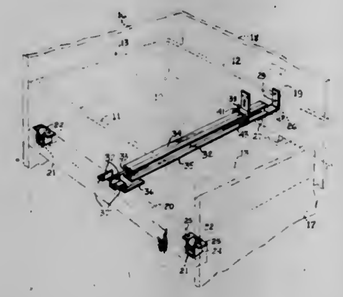


1. A book box desk, comprising a book box having a top opening, a book box cover on the book box, hinge means mounting the cover on the rear of the book box for pivotal movement between a first position closing the book box and a second inclined position exposing the interior of the book box, an arm depending from the cover, a friction device mounted on the book box engageable with said arm, movable to a first position in response to arm movement in an opening direction to exert a minimum substantially insignificant frictional drag on the arm during opening movement of the cover, and movable to a second position in response to arm movement in a closing direction to exert an increased frictional drag on the arm on closing movement of the cover to reduce the tendency of the cover to slam closed, and a resiliently yieldable means acting between the book box and the cover urging the cover toward open position with less force than the combined closing force of the cover and retarding effect of the friction device, in the opening direction, when the cover is in any position between the first, closed position and a third position intermediate the first and second positions, the retarding effect of the friction device, in the closing direction, being at least equal to the net closing force of the cover when the cover is in any position between the first position and the third position, whereby the cover may be manually opened to any position between the first position and the third position and remain there, said yieldable means urging the cover toward open position with greater force than the closing force of the cover and the retarding effect of the friction device, in the opening direction, when the cover is in any position between said second, open position and said third position, whereby the cover may be opened by said yieldable means from the third position to the second position.

3,015,532
DRAWER SUSPENSION

Vernon H. Wilson, Metamora, Ill., assignor to Metamora Woodworking Company, Metamora, Ill., a corporation of Illinois

Filed June 9, 1960, Ser. No. 35,041
7 Claims. (Cl. 312—343)



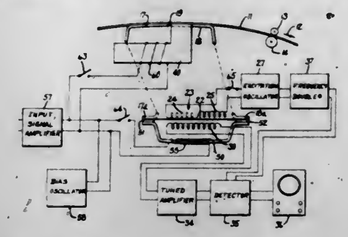
1. A drawer roller suspension of the type described including a horizontally disposed track member fixedly carried within a cabinet, said track member providing a pair of parallelly extending oppositely disposed tracks, a movable drawer support adapted to be fixedly connected at a predetermined point to a drawer to be movably supported thereby, said drawer providing a center support disposed in vertical alignment with respect to said track member, said movable drawer support having a lateral offset portion extending beneath the drawer and providing spaced apart confronting rollers adapted to be disposed in said oppositely related tracks and movable therethrough, means for supporting one end of the track member to a rear vertically disposed support provided by the cabinet, means for attaching the opposite end of the track member to a horizontal support provided by the cabinet, and a drawer guide means carried by said last mentioned attaching means for guiding the center support of said drawer as said drawer is moved relative to the cabinet.

3,015,533
MAGNETIC TRANSDUCER HEAD

Marvin E. Anderson, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois

Filed Dec. 11, 1957, Ser. No. 702,098
18 Claims. (Cl. 346—74)

4. A head assembly comprising a pair of pole portions defining therebetween a non-magnetic gap, means comprising a saturable element defining a loop playback flux path with said pole portions, means defining a recording flux path including said pair of pole portions and said non-magnetic gap therebetween but excluding said saturable element, and a recording winding extending in paral-

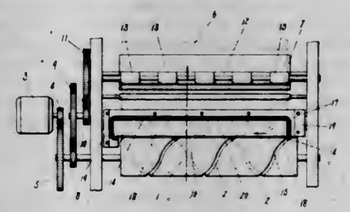


lel to said saturable element and coupled to said recording flux path for establishing a recording flux at said gap.

3,015,534
ELECTRIC SIGNAL RECORDING METHOD

Isaburo Ueno, Tokyo, Japan, assignor to Anritsu Electronic Works Limited, Tokyo, Japan, a corporation of Japan

Filed Apr. 8, 1959, Ser. No. 805,021
Claims priority, application Japan July 17, 1958
4 Claims. (Cl. 346—101)



1. An electric signal recording apparatus comprising a rotary cylinder having a peripheral helical groove extending along the surface thereof, means to rotate said cylinder, a first plate member having an edge disposed along the length of said cylinder, a second plate member including a portion extending upwardly adjacent said first plate and with an edge defining with said first plate a guide gap adjacent said cylinder, said first and second plate members being of magnetic material, a steel ball of a size to be received in the helical groove of said cylinder and disposed in said guide gap and within said groove, a recording paper stretched through said gap over said first plate member and under said steel ball, one of said first and second magnetic plates having a permanent magnet for urging the ball under constant pressure against said recording paper, and means for applying an electric signal voltage between said magnetic metals.

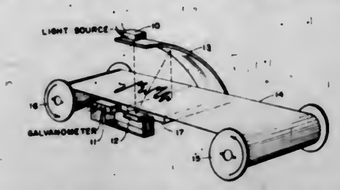
3,015,535
OPTICAL SYSTEM FOR MIRROR GALVANOMETERS

Stuart K. Clark, 5443 Lynbrook Drive, Houston, Tex.

Filed June 22, 1960, Ser. No. 37,955
4 Claims. (Cl. 346—109)

1. In combination with a mirror galvanometer adapted to rotate about an axis in response to a received electrical signal, and a film adapted to record variations in the rotational position of said mirror, and a light source adapted to cast a beam of light on said mirror and onto said film to record said variations in the position of said mirror; an additional reflecting element comprising a non-circular cylindrical portion having every element of said cylindrical portion parallel to the axis of said galvanom-

eter mirror, means supporting said reflecting element adjacent said film such that the entire light beam from said



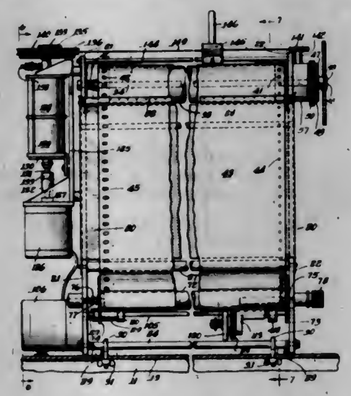
source when reflected from said mirror galvanometer and said noncircular cylindrical portion and onto said film will lie in substantially the same plane.

3,015,536
TWO SPEED REVERSIBLE RECORD CHART DRIVE

Carl A. Nielsen, Chicago, Edward F. Ewen, Northbrook, and Paul H. Sherrick, Winnetka, Ill., assignors to E. H. Sargent & Co., Chicago, Ill., a corporation of Illinois

Filed May 31, 1957, Ser. No. 662,914
11 Claims. (Cl. 346—136)

4. In a measuring and recording instrument having recording means adjacent a chart feed roll and movable across a chart for making a record on the chart, the improvement comprising, a chart feed roll, a chart supply roll, a chart take up roll, a chart extending from the chart supply roll over the chart feed roll to the chart take up roll, a first reversible electric motor for rotating the chart feed roll in one direction to move the chart in one direction toward the chart take up roll and for rotating the chart feed roll in the opposite direction to move the chart in the opposite direction toward the chart supply roll, a second reversible electric motor for rotating the chart take up roll in one direction also to move the chart in said one direction toward the chart take up roll and for rotating the chart supply roll in the opposite direction also to move the chart in said opposite direction toward the chart supply roll, means for controlling said first and second reversible electric motors to move



the chart in said one or opposite directions at a desired speed, said second reversible electric motor being operable to move the chart at a greater speed than said first reversible electric motor, and means for disconnecting the chart feed roll from the first reversible electric motor to allow independent movement of the chart at said greater speed by the second reversible electric motor.

CHEMICAL

3,015,537
PAPER HAVING IMPROVED CHARACTERISTICS AND ITS PREPARATION

Glen G. Gray and Joseph T. Leone, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 26, 1956, Ser. No. 580,722
5 Claims. (Cl. 8—121)

3. A method of preparing paper having substantially permanent surface characteristics and good resistance to the effects of moisture which comprises the steps of partially acylating the cellulose of the paper so as to impart thereto a 10–30% content of lower fatty acid radicals chemically combined therewith and subjecting the paper in a condition wet with a water-miscible liquid in the amount of at least 12% simultaneously to heat and pressing between two solid surfaces at least one of which is a polished metal surface at 300 to 1,000 p.s.i. and a non-deteriorating temperature of at least 200° F. to reduce the liquid content of the paper to a value not more than 5%.

3,015,538
METHOD OF MAKING FERRITES

Joachim F. L. Weber and Carl L. Heck, Nurnberg, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

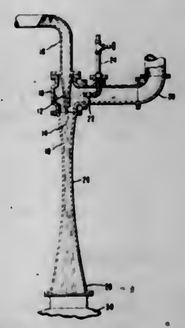
No Drawing. Filed Aug. 12, 1955, Ser. No. 528,136
3 Claims. (Cl. 23—50)

1. A method of making a ferrite, comprising mixing 45–60 mol percent iron oxide, 5–17 mol percent manganese oxide and 5–30 mol percent zinc oxide, and annealing said mixture in an atmosphere containing approximately 10% sulphur dioxide.

3,015,539
PRODUCTION OF CYANIDE SALTS

James M. Snyder, Memphis, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 8, 1957, Ser. No. 670,438
5 Claims. (Cl. 23—79)



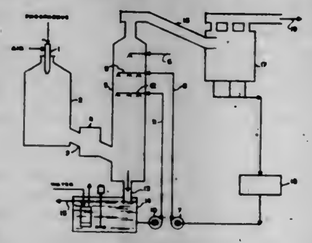
1. In the production of alkali metal cyanide by mixing hydrogen cyanide vapor with an aqueous solution containing alkali metal hydroxide, the process which comprises feeding hydrogen cyanide vapor into one end of an elongated chamber to maintain a vapor zone, spraying sufficient liquid consisting essentially of water into said vapor zone to wet all of the surfaces exposed to hydrogen cyanide vapor in the vapor zone, and passing

an aqueous solution containing alkali metal hydroxide concurrently with said vapor through the chamber at a velocity which provides a turbulent mixing zone separating said vapor zone from a solution exit at the other end of the chamber.

3,015,540
MANUFACTURE OF SUPERPHOSPHORIC ACID

Marcus M. Striplin, Jr., and David McKnight, Florence, and Ellis C. Marks, Sheffield, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed Nov. 23, 1960, Ser. No. 71,372
2 Claims. (Cl. 23—165)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An improved process for the production of superphosphoric acid which comprises the steps of burning phosphorus in air; passing the resulting hot phosphorus pentoxide at an initial temperature in the range from about 700° F. to about 1400° F. into a vertical hydration zone; introducing water into said hydration zone; introducing dilute phosphoric acid, containing from about 40 percent to about 70 percent P_2O_5 from a later-mentioned step, at a temperature in the range from about 150° F. to about 250° F. into said hydration zone; introducing superphosphoric acid, containing from about 72 percent to about 80 percent P_2O_5, from another later-mentioned step, at a temperature in the range from about 200° F. to about 300° F., into said hydration zone; adjusting the relative proportions of said acids and said water introduced to maintain in said hydration zone a concentration of about 72 percent to about 80 percent P_2O_5 in the resulting collected superphosphoric acid; withdrawing a hot gaseous effluent, at a temperature in the range from about 250° F. to about 400° F., from said hydration zone; condensing dilute phosphoric acid containing from about 40 percent to about 70 percent P_2O_5 from said effluent; returning the resulting dilute phosphoric acid at a temperature in the range from about 150° F. to about 250° F. into said hydration zone; withdrawing superphosphoric acid, containing from about 72 percent to about 80 percent P_2O_5, from a lower portion of said hydration zone at a temperature in the range from about 300° F. to about 400° F.; cooling said withdrawn superphosphoric acid to a temperature in the range from about 150° F. to about 300° F.; returning a portion of the cooled superphosphoric acid into said hydration zone; and withdrawing the remaining portion of the cooled superphosphoric acid as product.

3,015,541
REMOVAL OF DISCOLORIZING IMPURITIES FROM INORGANIC OXIDE GELS

Leonard C. Drake, Wenonah, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Apr. 22, 1959, Ser. No. 807,994
4 Claims. (Cl. 23—182)

1. In a method for manufacturing spheroidal particles of a normally colorless inorganic oxide gel by introducing globules of an inorganic oxide hydrosol into a column of water immiscible hydrocarbon-containing liquid whereby the globules of hydrosol undergo gelation to spheroidal particles of hydrogel during passage through said column under conditions such that a minute amount of said hydrocarbon-containing liquid is inadvertently occluded therein and said particles are thereafter recovered from said liquid and dried at a temperature giving rise to discoloration thereof attributable to the presence therein of said occluded hydrocarbon impurities, the improvement which comprises removing discolorizing organic material from the dried spheroidal inorganic oxide gel particles by bringing the same into contact with a stream of ozonized oxygen containing between about 1 and about 15 percent by volume of ozone at substantially atmospheric pressure and at a temperature between about 50° C. and about 125° C. for a treating period within the approximate range of 10 minutes to 4 hours.

3,015,542
METHOD OF PREPARING HYDRAZINE HYDRATE FROM DIHYDRAZINE SULFATE

Erich Rahlfs, Leverkusen-Bayerwerk, and Günter Henrich, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

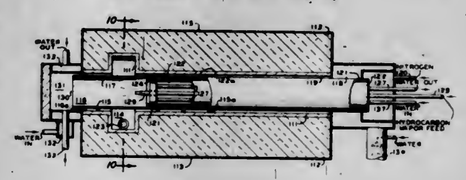
No Drawing. Filed Oct. 7, 1959, Ser. No. 844,857
Claims priority, application Germany Oct. 13, 1958
7 Claims. (Cl. 23—190)

1. A process for the preparation of hydrazine hydrate from ammonia and dihydrazine sulfate in the presence of water, which comprises saturating a mixture of dihydrazine sulfate and water at a temperature below about 20° C. with ammonia to thereby precipitate ammonium sulfate, filtering off the solution and recovering hydrazine hydrate from said solution by distillation.

3,015,543
CARBON BLACK PROCESS AND APPARATUS

Frederick E. Frey, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed June 6, 1958, Ser. No. 740,454
7 Claims. (Cl. 23—209.4)



1. A process for the production of carbon black which comprises in a substantially cylindrical reaction zone; forming an annulus section extending a substantial but not the entire length of said zone, thus leaving at one end of said zone a substantially entirely unobstructed reaction section; flowing a hot relatively inert gas from the other end of said zone through said annulus section turbulently in a curved path into said unobstructed reaction section, providing around said reaction zone a heating zone; further heating said relatively inert gas by indirect heat exchange relationship between it and heat in said heating zone; introducing a feed to be converted to carbon black substantially axially into said reaction section substantially at the place at which said annulus section communicates with one end of said reaction section; in said reaction section immediately transversely dispersing said feed outwardly into said relatively inert gas and immediately converting said feed in said gas to carbon black; removing the reaction product from the other end of said reaction section, cooling the reaction product and recovering carbon black therefrom.

3,015,544
METHOD OF PREPARING A CHEMICAL BLANK SAMPLE

George E. Shaffer, Jr., Philadelphia, Pa., and George W. Schneider, Jr., St. Petersburg, Fla., assignors to Milton Roy Company, Philadelphia, Pa., a corporation of Pennsylvania

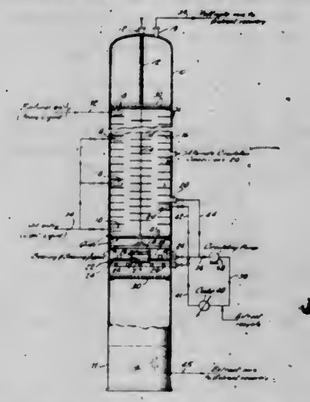
No Drawing. Filed May 28, 1958, Ser. No. 738,263
18 Claims. (Cl. 23—230)

1. In a procedure wherein a test sample and a blank sample are provided for optical comparison, the method of preparing said blank sample which comprises sequentially mixing a plurality of reagents in defined amount and sequence, said reagents comprising a first reagent reactive with a unique component of a fluid medium to result in an optical effect, and a second reagent effective to short-stop reaction between said reagent and said component, the sequence of mixing being such that said second reagent is introduced subsequent to said first reagent; and thereafter mixing the resulting mixture of reagents with an aliquot portion of fluid medium to be analyzed for said unique component.

3,015,545
APPARATUS FOR EFFECTING FLUID-FLUID CONTACT

Howard H. Gross, Pleasantville, and Wynkoop Kiersted, Jr., Scarsdale, N.Y., assignors to Texaco Development Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 26, 1959, Ser. No. 802,203
4 Claims. (Cl. 23—270.5)



1. An operable system suitable for effecting fluid-fluid contact between two immiscible fluid phases comprising in combination:

an elongated vertical container,

a plurality of vertically spaced disc-shaped rotors rotatably disposed and axially supported within said container,

a first permeable turbulence control means disposed at an intermediate position within said container below the lowermost of said rotors,

means below said first turbulence control means for withdrawal of a selected fluid phase from said container,

means for cooling withdrawn selected fluid phase,

means for reintroducing cooled selected fluid phase into said container below said means for withdrawal of a selected fluid phase,

a second permeable turbulence control means disposed within said container below said means for reintroducing cooled selected fluid phase, said first turbulence control means and said second turbulence control means delimiting a separating zone in the lower portion of said container,

a first outlet from said container positioned above the uppermost of said rotors,

a second outlet from said container positioned below said second turbulence control means,

a first inlet to said container positioned below said first outlet and above the uppermost of said rotors,

and a second inlet to said container positioned intermediate said first inlet and said first turbulence control means.

3,015,546
GASOLINES INHIBITED AGAINST THE FORMATION OF DEPOSITS, SLUDGE AND VARNISH

Adial E. Michaels, Cranford, N.J., and Antony Winward, Wantage, England, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 28, 1958, Ser. No. 769,991
16 Claims. (Cl. 44—62)

1. A gasoline to which has been added from about 0.001 wt. percent to about 0.5 wt. percent of a tripolymer prepared by the copolymerization of from about 25 to about 60 mol percent of an ester of an unsubstituted C_8 to C_{24} aliphatic alcohol and an unsaturated conjugated C_4 to C_5 dibasic acid, about 15 to 60 mol percent of a vinyl ester of a C_2 to C_4 fatty acid, and about 5 to 35 mol percent of an N-vinyl amide having the formula



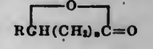
where n is an integer from 2 to 4.

3,015,547
MOTOR FUEL CONTAINING OCTANE IMPROVER

Robert Y. Heisler, Fishkill, and George W. Eckert, Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Nov. 6, 1958, Ser. No. 772,184
8 Claims. (Cl. 44—63)

1. A hydrocarbon fuel in the gasoline boiling range containing an organo-lead anti-knock agent, high octane components selected from the group consisting of olefinic hydrocarbons, aromatic hydrocarbons and mixtures thereof in a concentration of at least 10 volume percent, and a lactone having the general formula



wherein R is selected from the group consisting of hydrogen and a hydrocarbyl radical containing 1–27 carbon atoms and n has a value of 1–4, said lactone being present in a concentration of 0.1 to 5.0 volume percent, said amount being sufficient to effect substantial improvement of the octane rating of said organo-lead-containing hydrocarbon fuel.

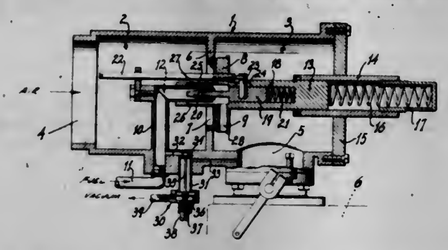
3,015,548
CARBURETOR OF THE PRESSURE TYPE

Harry W. McClain, 5460 El Parque, Long Beach 4, Calif.

Filed July 28, 1958, Ser. No. 751,509
7 Claims. (Cl. 48—180)

1. A carburetor of the pressure type comprising a housing, said housing having a mixture outlet thereon and a connection means to attach said mixture outlet to an intake manifold, said housing having an air intake therein spaced from said mixture outlet, a seat within said housing arranged between said mixture outlet and said air intake, a fuel intake tube positioned within said

housing, a fuel pipe extending into one end of the tube, the other end of said tube being positioned adjacent said seat, a disc positioned within the housing and resting on the seat in one position of the disc to close the air passage between the air intake and the mixture outlet, said disc having a single outlet duct therein, said duct extending towards said mixture outlet, a sleeve extending from one side of said disc and telescoping over one end of the fuel tube, said sleeve being spaced from the fuel

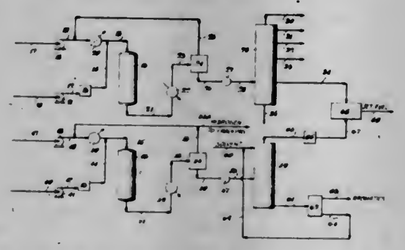


tube throughout a part of the length of the tube to provide a chamber between the sleeve and the fuel tube, said sleeve having ports therethrough extending into said chamber to admit air into the chamber, a metering valve, means adjustably mounting the metering valve on said disc, said metering valve extending into one end of the fuel tube to meter the fuel issuing therefrom, and means on the housing engaging said disc and urging said disc against said seat.

3,015,549
PRODUCTION OF HIGH QUALITY LIGHT JET FUEL

Frank G. Ciapetta, Silver Spring, Md., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed June 4, 1957, Ser. No. 663,400
6 Claims. (Cl. 209—60)



1. A process for producing a jet combustion fuel and aromatic hydrocarbons that comprises contacting a hydrocarbon charge stock having an initial boiling point of at least about 400° F. and an end boiling point greater than about 650° F. with a catalyst comprising between about 0.05 percent and about 20 percent, by weight of the catalyst, of at least one noble metal of the platinum and palladium series deposited upon a synthetic composite of refractory oxides of at least two elements of groups IIA, IIIB and IVA and B of the periodic arrangement of elements having an activity index of at least 25, in the presence of hydrogen in amounts, expressed in molar ratio of hydrogen to hydrocarbon charge varying between about 2 and about 80, at pressures varying between about 100 p.s.i.g. and about 3000 p.s.i.g., at a liquid hourly space velocity varying between about 0.1 and about 10, and at temperatures varying between about 500° F. and about 825° F., to convert at least a portion of the hydrocarbon charge into a jet fuel boiling within the range varying between about 160° F. and about 550° F.; separating said jet fuel into a cracked naphtha fraction and a fraction boiling at temperatures varying between about 390° F. and about 550° F.; separately reforming a paraffinic straight-run naphtha in contact with a platnium-containing reforming catalyst, in the presence of hydrogen in amounts, expressed in molar ratio of hydrogen to hydrocarbon charge, varying between about 1 and about 20, at pressures varying between about 100 p.s.i.g. and about 1000 p.s.i.g., at a liquid hourly space velocity varying between about 0.1 and about 10, and at temperatures varying between about 700° F. and about 1000° F. to produce a reformate; separating said reformate into a paraffinic fraction and an aromatic fraction; combining said paraffinic fraction with said fraction boiling at temperatures varying between about 390° F. and about 550° F. to produce a jet fuel and recovering aromatic hydrocarbons from said aromatic fraction.

3,015,550
PLANT GROWTH INHIBITION PROCESS EMPLOYING 2-CHLORO-6-NITROTOLUENE

Thomas J. McMahon, % McMahon Brothers Inc., Box 261, Tenafly, N.J.

No Drawing. Filed Apr. 28, 1959, Ser. No. 809,365
6 Claims. (Cl. 71—2.3)

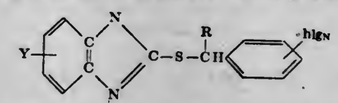
5. A process for the inhibition of plant growth in soil comprising substantially saturating a surface layer of the soil not less than ⅛ inch deep by applying to the surface of the soil a solution of approximately 1½ pounds of the chemical compound 2-chloro-6-nitrotoluene per gallon of carrier liquid in which said compound is soluble, said solution being applied at the rate of not less than approximately 1 quart per square yard.

3,015,551
DESTROYING UNDESIRED VEGETATION

Kenneth L. Godfrey, St. Albans, Va., and John J. D'Amico, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Jan. 10, 1958, Ser. No. 708,070, now Patent No. 2,921,079, dated Jan. 12, 1960. Divided and this application Mar. 20, 1959, Ser. No. 807,745
8 Claims. (Cl. 71—2.5)

1. The method of destroying undesired vegetation which comprises applying thereto a phytotoxic concentration of a phytotoxic compound of the structure



where Y is a member of the group consisting of hydrogen, chlorine, lower alkyl and lower alkoxy groups, R is a member of the group consisting of hydrogen and lower alkyl, X represents a chalkogen selected from the group consisting of oxygen and sulfur, hlg represents halogen and n is an integer from 3 to 5.

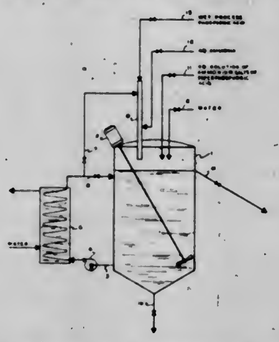
3,015,552
PROCESS FOR PREPARING STABLE LIQUID FERTILIZER AND PRODUCT THEREOF

Marcus M. Striplin, Jr., Florence, John M. Stinson, Sheffield, and James A. Wilbanks, Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States of America

Filed June 9, 1958, Ser. No. 740,982
4 Claims. (Cl. 71—41)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for the manufacture of liquid fertilizer which comprises the steps of introducing ammonium salt

of unhydrolyzed superphosphoric acid into a mixing vessel in such quantities as to supply as ammonium salts of polyphosphoric acids about 5 to 25 percent of the total P_2O_5 content of a liquid fertilizer to be produced, such quantity of salts being sufficient to maintain in solution the congeneric impurities of a later-mentioned wet-process phosphoric acid; simultaneously introducing wet-process phosphoric acid and ammonia into said mixing vessel



along with said ammonium salts; therein intimately mixing said materials introduced; controlling the rate of introduction of wet-process phosphoric acid and ammonia to maintain acidity in said mixing vessel in the range from pH 4.0 to about 7.0; maintaining a temperature of not more than about 200° F. in said vessel during mixing; and withdrawing a clear, stable, noncorrosive concentrated liquid fertilizer from said mixing vessel.

3,015,553
SLAG REDUCTION PROCESS
Arthur F. Johnson, Boulder, Colo., assignor to Strategic Materials Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed July 1, 1960, Ser. No. 40,158
8 Claims. (Cl. 75—24)

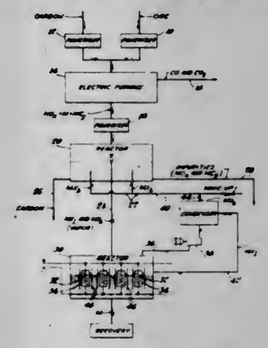
1. Process of treating the slag from burning coal which comprises passing the hot slag into a furnace, reducing with hot carbon the major portion of the iron oxide to iron, removing the slag and the reduced irbn contained therein from the furnace, rolling the reduced slag into a thin sheet, shattering the sheet and separating the reduced iron, leaving the slag in the form of small flakes.

3,015,554
METHOD AND DEVICE FOR CARRYING OUT METALLURGICAL PROCESSES, PARTICULARLY AIR REFINING PROCESSES
Roman Rummel, 29 Daberger Weg, Bruhl, Bezirk Koln, Germany
Filed Apr. 15, 1958, Ser. No. 728,679
Claims priority, application Germany Apr. 18, 1957
10 Claims. (Cl. 75—51)



1. A method of effectively carrying out metallurgical processes including converting processes, which comprises injecting reaction media into a circular zone, containing a bath of molten raw materials, from uniformly distributed sources with respect to the main axis of said zone, forcing said media both in a rotary direction oblique to the radius of said zone and in a direction forming a tangency with said axis of said zone, whereby to maintain said bath in uniform turbulent motion substantially in rotary direction around said axis, and also forcing said media in a circular direction with respect to which said axis is tangential, whereby to impart uniform distribution of said media throughout said bath.

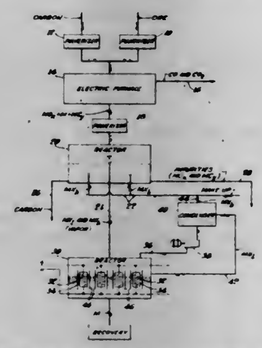
3,015,555
METHOD OF REFINING METALS
Karl J. Korpi, Pasadena, Calif., and Raymond C. Johnson, Orwigsburg, Pa., assignors to The Lummus Company, New York, N.Y., a corporation of Delaware
Filed Oct. 16, 1958, Ser. No. 767,632
9 Claims. (Cl. 75—84.1)



1. The method of producing a metal selected from the group consisting of titanium, zirconium, hafnium, vanadium and uranium by the disproportionation of a lower iodide of the metal to form the metal and a higher iodide of the metal which comprises: halogenating a crude mixture of said metal with a higher iodide of said metal to form a lower iodide of said metal; effecting said halogenation in a first reaction zone and at a temperature above the boiling point of said lower iodide of the metal and above the boiling point of said higher iodide of the metal thereby to form said lower iodide of said metal in said zone; withdrawing said lower iodide as a vapor from said first reaction zone; condensing said vaporous lower iodide and effecting the disproportionation of said condensed lower iodide in a second reaction zone in the presence of a heated body of said metal by forming a liquid pool consisting primarily of said lower iodide around said body while maintaining the liquid pool at a temperature above the melting point and below the boiling point of said lower iodide, said body being heated to a temperature sufficient to maintain said pool temperature; depositing a substantially solid layer of disproportionated metal on said body; and recirculating the higher iodide formed during disproportionation to said first reaction zone to provide the higher iodide utilized for said halogenation.

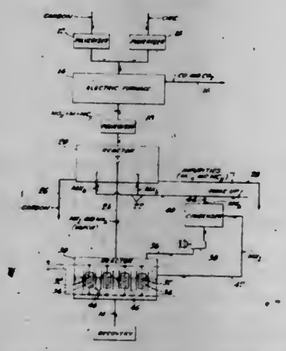
3,015,556
METHOD OF REFINING METALS
Karl J. Korpi, Pasadena, Calif., and Raymond C. Johnson, Orwigsburg, Pa., assignors to The Lummus Company, New York, N.Y., a corporation of Delaware
Filed Oct. 31, 1958, Ser. No. 771,162
9 Claims. (Cl. 75—84)

1. The method of producing a metal selected from the group consisting of titanium, zirconium, hafnium, tungsten and uranium by the disproportionation of a lower bromide of the metal to form the metal and a higher bromide of the metal which comprises: halogenating a crude mixture of said metal with a higher bromide of said metal to form a lower bromide of said metal; effecting said halogenation in a first reaction zone and at a temperature above the boiling point of said lower bromide of the metal and above the boiling point of said higher bromide of the metal thereby to form said lower bromide of said metal in said zone; withdrawing said lower bromide as a vapor from said first reaction zone; condensing said vaporous lower bromide and effecting the disproportionation of



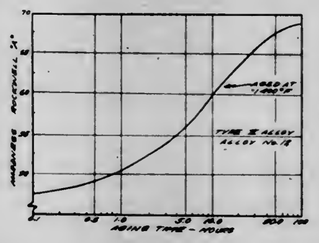
said condensed lower bromide in a second reaction zone in the presence of a heated body of said metal by forming a liquid pool consisting primarily of said lower bromide around said body while maintaining the liquid pool at a temperature above the melting point and below the boiling point of said lower bromide, said body being heated to a temperature sufficient to maintain said pool temperature; depositing a substantially solid layer of disproportionated metal on said body; and recirculating the higher bromide formed during disproportionation of said first reaction zone to provide the higher bromide utilized for said halogenation.

3,015,557
METHOD OF REFINING METALS
Karl J. Korpi, Pasadena, Calif., and Raymond C. Johnson, Orwigsburg, Pa., assignors to The Lummus Company, New York, N.Y., a corporation of Delaware
Filed Oct. 16, 1958, Ser. No. 767,633
7 Claims. (Cl. 75—84.1)



1. The method of producing a metal selected from the group consisting of titanium, zirconium and uranium by the disproportionation of a lower chloride of the metal to form the metal and a higher chloride of the metal which comprises: halogenating a crude mixture of said metal with a higher chloride of said metal to form a lower chloride of said metal; effecting said halogenation in a first reaction zone and at a temperature above the boiling point of said lower chloride of the metal and above the boiling point of said higher chloride of the metal thereby to form said lower chloride of said metal in said zone; withdrawing said lower chloride as a vapor from said first reaction zone; condensing said vaporous lower chloride and effecting the disproportionation of said condensed lower chloride in a second reaction zone in the presence of a heated body of said metal by forming a liquid pool consisting primarily of said lower chloride around said body while maintaining the liquid pool at a temperature above the melting point and below the boiling point of said lower chloride, said body being heated to a temperature sufficient to maintain said pool temperature; depositing a substantially solid layer of disproportionated metal on said body; and recirculating the higher chloride formed during disproportionation to said first reaction zone to provide the higher chloride utilized for said halogenation.

3,015,558
NICKEL-CHROMIUM-ALUMINUM HEAT RESISTING ALLOY
Nicholas J. Grant, 10 Leslie Road, Winchester, Mass., and Albert G. Bucklin, Cambridge, Mass.; said Bucklin assignor to said Grant
Filed Sept. 16, 1959, Ser. No. 840,326
11 Claims. (Cl. 75—171)



1. An age-hardenable, aluminum-containing, heat resistant, high chromium nickel alloy characterized by improved resistance to softening in the aged condition at elevated temperatures ranging up to about 1200° F. which comprises by weight about 30% to 40% chromium, about 2% to 5% aluminum and the balance substantially nickel, the sum of the chromium and nickel content being at least about 85% of the total composition at a ratio of nickel to chromium of about 1.3 to 1 to about 1.75 to 1.

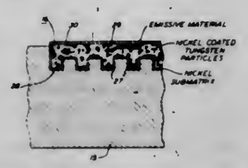
3,015,559
OXIDATION RESISTANT CHROMIUM ALLOY
James A. McGurty, Cincinnati, and John F. Collins, Hamilton, Ohio, assignors to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 25, 1959, Ser. No. 842,522
4 Claims. (Cl. 75—176)

1. A binary alloy of chromium which consists of chromium and 0.5 to 6.0 weight percent of a rare earth element selected from the group consisting of cerium, praseodymium, neodymium, samarium, gadolinium, dysprosium, holmium, erbium, thulium, ytterbium and lutetium.

3,015,560
METHOD OF FABRICATING CATHODE FOR ELECTRON DISCHARGE DEVICES

Elmer A. Thurber, Bethlehem, Pa., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Original application Feb. 2, 1955, Ser. No. 485,696, now Patent No. 2,858,470, dated Oct. 28, 1958. Divided and this application Mar. 7, 1958, Ser. No. 719,829
8 Claims. (Cl. 75—207)

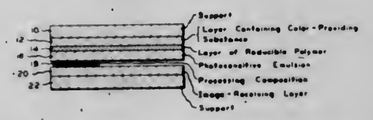


1. The method of fabricating a cathode comprising moistening the surface of a plurality of coarse tungsten particles with a plasticized nitrocellulose solution, dusting very fine nickel oxide powder onto said tungsten particles while the surface thereof is still in the tacky condition and while said tungsten particles are being continuously agitated, heating said coated particles in a hydrogen atmosphere to reduce said nickel oxide, placing said coated particles onto a cathode base member, sintering the coated particles to coalesce the coatings of adjacently situated particles so as to form a porous matrix and to bond the matrix to the base member, and impregnating the matrix with electron emissive material.

3,015,561
NOVEL PHOTOGRAPHIC COLOR PROCESSES AND PRODUCTS

Howard G. Rogers, Weston, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Mar. 15, 1957, Ser. No. 646,384
5 Claims. (Cl. 96—29)



1. The process comprising developing an exposed silver halide emulsion with an aqueous alkaline solution containing a silver halide developing agent, said silver halide developing agent being present in such quantity per unit area of silver halide emulsion as to be substantially completely reacted in fully developed areas of said emulsion, forming in undeveloped areas of said emulsion as a result of said development an imagewise distribution of unoxidized silver halide developing agent having a concentration substantially inversely proportional to the degree of development per unit area of said silver halide emulsion, reducing a reducible polymer imagewise with said unoxidized silver halide developing agent, said reducible polymer being the product obtained by coupling the oxidation product of a color developer with a polyvinyl acetal formed from polyvinyl alcohol and an aromatic aldehyde selected from the group consisting of aromatic aldehydes containing benzene and naphthalene nuclei containing a hydroxyl group and having an available coupling position para to said hydroxyl group, the substituent formed by said coupling reaction being reducible by said unoxidized silver halide developing agent less readily than is said exposed silver halide but more readily than is said unexposed silver halide, said reduction of said substituent of said reducible polymer forming the leuco derivative of said substituent.

2. A process as defined in claim 1, wherein said substituent of said reducible polymer is colored, said leuco derivative is substantially colorless, the layer containing said reducible polymer is separated from superposition with said exposed silver halide emulsion after said leuco derivative has been formed, and said separated layer containing said reducible polymer treated with an acidic solution to stabilize the reduced and unreduced forms of said reducible polymer, thereby providing a negative transfer image in said polymer layer of the developed areas of said exposed silver halide emulsion.

3,015,562
RECEIVING SHEET FOR USE IN PHOTOGRAPHIC SILVER TRANSFER PROCESS

Clifford E. Herrick, Jr., Chenango Forks, Floyd J. Lafreniere, Johnson City, and Douglas Straw, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 7, 1958, Ser. No. 733,505
10 Claims. (Cl. 96—29)

1. A receiving material for use in the photographic diffusion-transfer process comprising a support having thereon a water receptive layer comprising an alkali treated mixture of a polyalkyl vinyl ether-maleic anhydride co-polymer and a hydrophobic resin compatible therewith, a silver halide developing agent, a fogging agent capable of transforming a soluble silver halide image into an image of high optical opacity and a water soluble silver salt.

3,015,563
COMPONENTS OF FEEDS

Adolf Rosenberg, Forest Hills, N.Y., assignor to Commercial Solvents Corporation, a corporation of Maryland

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,138
7 Claims. (Cl. 99—2)

1. A product for use in feeds comprising a powdered absorbent feed material containing absorbed fluid raw unprocessed hot well oil.

3,015,564
FEED CONTAINING AN ARSENICAL AND POLYVINYLPYRROLIDONE

Vernon Dawe, Highland Park, Ill., assignor to Dawe's Laboratories, Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Filed Mar. 4, 1959, Ser. No. 797,010
3 Claims. (Cl. 99—2)

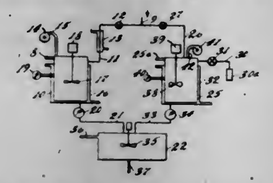
1. An animal feed containing 3-nitro-4-hydroxyphenyl arsonic acid and polyvinylpyrrolidone present in an amount within the range of 0.01 to 0.2% by weight of the feed to detoxify the arsonic acid compound and to stimulate the growth characteristics of the feed.

3,015,565
FERMENTATION PROCESSES FOR MAKING BREAD AND THE LIKE

Frank J. Suntheimer, York Road, Hatboro, Pa.

Filed July 7, 1958, Ser. No. 746,904
19 Claims. (Cl. 99—90)

1. In the making of dough for yeast raised baked products and in which the quantities are expressed as additional quantities by weight based on the total weight of the flour, and in which a predetermined quantity of water is employed in the range from 42 to 69% dependent upon the dough type, the steps which comprise mixing yeast about 2½ to 5½% with salt about 0.187% and not more than half the water required for the dough in the presence of air and at a pressure of the order of 20 to 35 p.s.i. and at a temperature in the range from about 66° to 72° F. and until $pH_{6.5}$ to pH_6 is attained, adding additional components of the dough including the remainder of the water and predetermined quanti-



ties of carbon dioxide, mixing the combined materials until a predetermined temperature in the range from 75° F. to 84° F. is attained, removing the dough, and preparing the dough for baking including pan proofing the dough for a period of from one half to one hour.

3,015,566
PROCESS FOR IMPROVING FRYING FATS AND THE RESULTING COMPOSITION

Ewald Georg Becker, Hamburg-Bahrenfeld, and Theophil Wieske, Hamburg-Grossflottbek, Germany, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 11, 1959, Ser. No. 839,300
Claims priority, application Great Britain Sept. 19, 1958
24 Claims. (Cl. 99—123)

1. A process for improving foodstuffs comprising emulsions of water and fat which are suitable for frying, which comprises incorporating in the foodstuff a surface-active substance containing carbon, hydrogen and oxygen, any other element present being nitrogen, said substance containing: one to five —CO groups each forming part of a radical selected from the class consisting of —CO.OH and CO.O.CO radicals, not more than three of said radicals being —CO.OH radicals, together with at least one acid radical of an acid selected from the class consisting of aliphatic polycarboxylic acids, aliphatic aminocarboxylic acids and aliphatic hydroxycarboxylic acids, not more than three additional hydrophilic groups, the number of such groups being at most equal to the sum of the carboxyl and any anhydride groups present, and at least two lipophilic groups each containing 6 to 30 carbon atoms and selected from the class consisting of saturated and olefinically unsaturated aliphatic and cycloaliphatic hydrocarbon radicals and heterocyclic radicals containing only carbon and oxygen in the ring, all the carbon-carbon linkages in said compound being present in groups selected from the class consisting of saturated and olefiinically unsaturated aliphatic groups and heterocyclic groups containing only carbon and oxygen in the ring, the ratio between the total number of carbon atoms and the sum of the carboxyl groups and any anhydride groups present being at least 40:1 when hydrophilic groups other than carboxyl and anhydride groups are absent and at least 55:1 when such other groups are present, and the molecular weight being not greater than 2000.

3,015,567
PROCESS FOR ENRICHING THE L-LYSINE CONTENT OF FOOD AND THE RESULTING PRODUCT

Norman Laurance Hause, West Chester, Pa., and William Haworth Todd, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

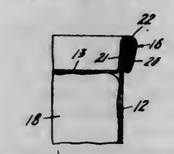
No Drawing. Filed Mar. 20, 1959, Ser. No. 800,649
5 Claims. (Cl. 99—143)

2. The process for enriching the L-lysine content of food and enhancing the flavor of the food which comprises adding to the food a salt selected from the group consisting of L-lysine succinate, L-lysine hydrogen succinate and L-lysine hydrogen adipate.

3,015,568
BAKED DOUGH PACKAGE

Clement J. McLain, Lombard, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed May 12, 1958, Ser. No. 734,434
5 Claims. (Cl. 99—172)



1. A package comprising a baked dough product hermetically sealed in a sheet metal can, said can comprising a body member having an end attached thereto by means of a double seam, and a cured gasket consisting essentially of a tough, cohesive butadiene-acrylonitrile elastomer, 0.25 to 0.8 part per part by weight of said elastomer of a normally solid cashew nut shell liquid modified phenol-aldehyde condensation product and 0.4 to 1.2 parts per part by weight of said elastomer of a normally liquid cashew nut shell liquid modified phenol-aldehyde condensation product, said dough product having been baked in said can prior to the double seaming of said end to said body member and said gasket being cured concurrently during the baking of the dough product and before assembly with said body member and said end and enclosed within and sealing said double seam.

3,015,569
TREATMENT OF PIGMENTS

Rudolf G. Frieser, Long Island City, N.Y., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Nov. 26, 1958, Ser. No. 776,434
8 Claims. (Cl. 106—26)

1. A method of treating a pigment taken from the group of pigments consisting of the alkaline earth metal derivatives of hydroxylated, sulfonated, azo naphthalenes in order to lower the yield value and decrease the thixotropy of a dispersion of the pigment in a volatile organic solvent solution of nitrocellulose and alcohol soluble resins including the steps of (1) preparing an aqueous slurry of the pigment, and (2) adding 2 to 5 parts of an aminopropyl alkoxy silane per 100 parts of pigment to the aqueous slurry.

7. Printing inks that are fluid and thin in body and comprising a dispersion of a finely ground treated pigment in a volatile organic solvent solution of nitrocellulose and alcohol soluble resins, where said finely ground treated pigment is a pigment taken from the group consisting of alkaline earth metal derivatives of hydroxylated, sulfonated, azo naphthalenes which has been treated in aqueous slurry with 2 to 5 parts of an aminopropyl alkoxy silane per 100 parts of pigment.

3,015,570
PLASTICIZED THERMOPLASTIC COMPOSITION CONTAINING DI(DINITROPHENYL)-R-GLYCOL ETHER

Norman J. Bowman, Hammond, Ind., and Wayne A. Proell, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Sept. 24, 1957, Ser. No. 686,811
4 Claims. (Cl. 106—181)

1. A thermoplastic composition consisting essentially of di(dinitrophenyl)-R-glycol ether where R is selected

from the class consisting of propylene and dipropylene and between about 18 and 40 percent of a polymer selected from the class consisting of polyvinyl butyral, polyvinyl chloride, polyvinyl acetate, a copolymer of styrene-acrylonitrile, polystyrene, polyacrylonitrile, asphalt and cellulose esters of acids from the group acetic, propanoic and butyric.

3,015,571

COMPOSITION CONTAINING THERMOPLASTIC POLYMER AND DINITROPHENYL-R-ETHER AS PLASTICIZER THEREFOR

Norman J. Bowman, Hammond, Ind., and Wayne A. Proell, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Sept. 24, 1957, Ser. No. 686,810
5 Claims. (Cl. 106—188)

1. A thermoplastic composition consisting essentially of dinitrophenyl-R-ether where R is selected from the class consisting of propyl and allyl and between about 18 and 40 percent of a polymer selected from the class consisting of cellulose esters of acids from the group acetic, propanoic and butyric, polyvinyl butyral, polyvinyl chloride, polyvinyl acetate, a copolymer of styrene-acrylonitrile, polystyrene, polyacrylonitrile and asphalt.

3,015,572

DRY POTENTIAL ADHESIVE COMPOSITIONS

James P. Casey and Ellis R. Lehman, Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

No Drawing. Filed Apr. 2, 1958, Ser. No. 725,780
8 Claims. (Cl. 106—197)

8. In the manufacture of corrugated paperboard wherein an amylaceous adhesive is prepared by mixing an aqueous suspension of ungelatinized starch with a separately prepared aqueous carrier therefor and an adhesive bond is developed by gelatinizing the ungelatinized starch between the plies of said board, the improvement comprising the steps of dispersing in water a dry composition that consists essentially of ungelatinized starch, a granular form of borax and a granular form of sodium carboxymethylcellulose to form said adhesive and applying said adhesive to at least one of the plies of said paperboard before gelatinizing the starch, the ratio of said sodium carboxymethylcellulose to starch lying within the range of 0.005 to 0.10, the percentage of borax based on starch lying within the range of 0.5 to 8.

3,015,573

TITANIUM DIOXIDE PIGMENT CARRYING AN AMINE SALT AS DISPERSION AID

Myron L. Myers and Walter R. Whately, Lynchburg, Va., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 14, 1959, Ser. No. 806,211
6 Claims. (Cl. 106—300)

1. Dry titanium dioxide pigment particles having adsorbed thereon a small but effective amount of a water-soluble salt of a water-soluble tertiary amine with an organic acid having a solubility between 1/20% and 2% by weight in water at 20° C. as agent improving the dispersibility of said particles in water and in hydrophobic alkyd resins.

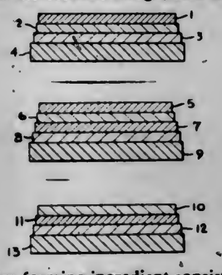
3,015,574

UNDERGLAZE DECALCOMANIA AND METHOD OF MAKING SAME

Johannes Göbel, Aschaffenburg (Main), Germany, assignor to Buntpapierfabrik A.G., Aschaffenburg (Main), Germany

Filed Mar. 31, 1958, Ser. No. 724,819
Claims priority, application Germany Apr. 4, 1957
6 Claims. (Cl. 117—3.1)

1. The method of preparing a ceramic decalcomania, comprising applying a water soluble base coating on strong carrier paper, said water soluble coating selected from the group consisting of dextrin, gum arabic, water soluble starch, polyvinyl methyl ether and polyvinyl alcohol, thereafter coating a design in ceramic color, said ceramic color being in the form of a liquid composition containing a binder selected from the group consisting of varnish, drying oil and lacquer, then applying a hydrophilic masking coating over the ceramic design, said masking coating



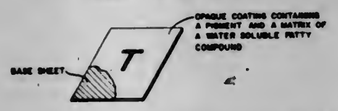
containing a film forming ingredient consisting of a hydrophilic polymer selected from the group consisting of polyacrylic acid, polymethacrylic acid and maleic acid polymer and copolymers of said acids with a substance selected from the group consisting of polyvinyl chloride, polyvinylidene chloride, polyvinyl acetate, polyvinyl alkyl ether, polymethacrylic acid ester, polyacrylic acid ester, polyvinyl acetals and styrene.

3,015,575

PRESSURE-SENSITIVE, HEAT-RESISTANT RECORDING MATERIAL AND METHOD OF MAKING SAME

George S. McKnight, Jr., and Harold W. Buck, Rumford, Maine, assignors to Oxford Paper Company, Rumford, Maine, a corporation of Maine

Continuation of application Ser. No. 720,019, Mar. 10, 1958. This application Dec. 10, 1959, Ser. No. 858,573
17 Claims. (Cl. 117—36.7)



1. Pressure-sensitive, heat-resistant recording material including a base sheet, a normally opaque coating having the property of becoming relatively transparent under writing pressure without becoming relatively transparent under heat up to about the charring temperature of paper and including a matrix formed of at least one essentially non-volatile water-soluble fatty compound and a pigment embedded in said matrix, said pigment having a refractive index of less than about 1.64 and being capable of producing an opaque coating when laid down and high transparency when imaged, and an undersurface of a color contrasting to the color of said pigment, said fatty compound being present in proportions between about 15 and 120 percent by weight based on the dry weight of said pigment.

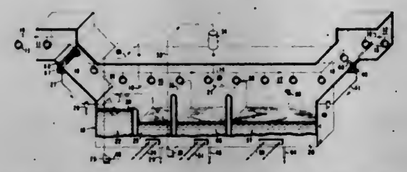
3,015,576

DEGREASING AND COATING APPARATUS AND PROCESS

Philip R. Hendrixson and Frederick G. Schumacher, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 15, 1957, Ser. No. 659,355
2 Claims. (Cl. 117—49)

1. An apparatus for the continuous cleaning and coating of metal articles under solvent vapor comprising an elongated vessel having entrance and exit openings in the upper ends thereof, condensing means positioned below said openings for defining a single and continuous air-free solvent vapor zone within said vessel below said openings, the bottom of said vessel being divided into a plurality of sections by partitions, said sections being adapted to contain hot solvent and solvent containing



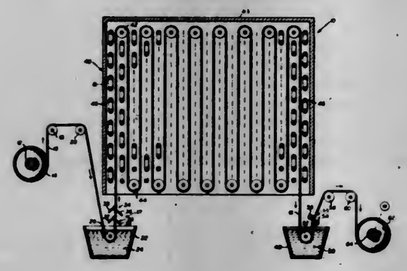
mixtures for sequential degreasing, spray painting, and paint coalescing of metal articles, heating means positioned within said vapor zone below said exit opening and means for conveying said metal articles through said entrance into continuous contact with said vapor zone during treatment before said articles are removed from said exit opening.

3,015,577

PLASTIC IMPREGNATED PAPER AND METHOD AND APPARATUS FOR MAKING SAME

Alex Sacher, Maplewood, N.J., assignor, by mesne assignments, to Standard Insulation Company Inc., East Rutherford, N.J., a corporation of Delaware

Filed Aug. 4, 1958, Ser. No. 752,981
6 Claims. (Cl. 117—62)



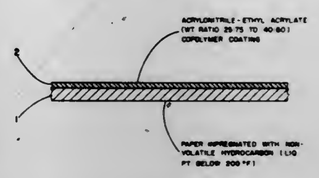
1. A plastic impregnated paper, said paper being taken from the group consisting of bleached and unbleached sulfite and sulfate papers of northern and southern pine, said plastic being a fully polymerized impregnating agent, said impregnating agent comprising a resin consisting essentially of about 50% to 90% of the condensation product of bis-phenol-A and epichlorhydrin having an epoxy equivalent of from about .44 to about .48 mol per 100 grams and a viscosity of from about 4,000 to about 90,000 centipoises at about 73° F., and about 10% to 50% of a monomer having reactive epoxy groups; said agent further comprising an anhydride having a side group taken from the class consisting of aromatics and aliphatics containing 4 to 18 carbon atoms, said anhydride being present in such quantity as to provide an anhydride group to epoxy group ratio of about 1:1; and about 1 to 2 parts of a temperature latent amine for about every 100 parts of said resin said plastic being substantially uniformly distributed throughout said paper and constituting from about 8% to 11% by weight of said impregnated paper, said plastic impregnated paper containing from about 4½ to 5½% water, this water being uniformly distributed throughout said paper.

3,015,578

TWO-SIDED PAPER

Daniel D. Ritson, Riverside, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Mar. 25, 1958, Ser. No. 723,654
6 Claims. (Cl. 117—68)



1. Paper uniformly impregnated with a non-volatile hydrocarbon having a liquefaction point below 200° F. and carrying externally on one side only a hard and glossy grease-resistant coating of a polymer having a molecular weight in excess of about 50,000 consisting essentially of copolymerized acrylonitrile and ethyl acrylate in weight ratio between about 25:75 and 40:60, said paper being resistant to passage of water vapor therethrough.

3,015,579

METAL COATING PROCESS

Maurice R. Commanday, Los Angeles, and James R. Darnell, Reseda, Calif., assignors, by mesne assignments, to Chromizing Corporation, a corporation of Delaware

No Drawing. Filed June 15, 1959, Ser. No. 820,122
8 Claims. (Cl. 117—107)

1. The process of treating a refractory metal of the group consisting of columbium, tantalum and alloys thereof to render the metal surface resistant to oxidation at high temperatures, that includes, heating the metal to a temperature between about 1600° F. and 2800° F. in a non-oxidizing atmosphere and in surface contact with a powder mixture of about 30 to 50 weight parts of a substance of the class consisting of molybdenum and ferro molybdenum, about 70 to 50 parts of inert filler and 0.02 to 5 parts of an inorganic halide and thereby alloying molybdenum into the metal surface; and subsequently heating the metal to a temperature between about 1600° F. and 2800° F. in a non-oxidizing atmosphere with said surface in contact with a powder mixture of about 20 to 50 parts of silicon, 70 to 45 parts of inert filler and 0.02 to 5 parts of an inorganic halide to thereby form a molybdenum silicide protective surface coating.

3,015,580

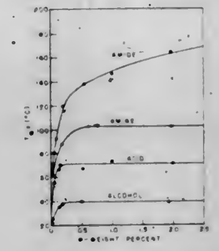
METHOD OF PROTECTING A METAL SURFACE WITH A COATING OF PRIMARY-N-OCTADECYLAMINE AND ARTICLE PRODUCED THEREBY

William A. Zisman, Washington, D.C., and Lamar Pickett, Tidwell, Va.

Filed Aug. 30, 1948, Ser. No. 46,844
2 Claims. (Cl. 117—113)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Process for protecting metal surfaces by providing on the surface a dry, invisible oleophobic and hydrophobic monomolecular film consisting of closely packed and aligned molecules of primary -n-octadecylamine, the methyl group of the primary -n-octadecylamine standing away from the surface and the amino group thereof being oriented and adsorbed to the surface, which comprises dipping the surface in clean, smooth condition into a solution consisting of primary -n-octadecylamine in a higher boiling liquid hydrocarbon which does not wet the

primary -n-octadecylamine when the latter is adsorbed to the surface, allowing adsorption of the primary -n-octadecylamine from the solution to the surface to take place at a temperature below that at which the surface becomes



wetted by the solution and at which an oleophobic film is formed thereon, and slowly withdrawing the surface from the solution at a rate such that the emerging surface has no drops of the solution adhering thereto.

3,015,581
RAPID DRYING OF ADHESIVE AND CLAY COATINGS ON FIBROUS BACKINGS
Robert Gallino, Flushing, N.Y., and Kenneth Thompson, Woodcliff Lake, N.J., assignors to Lowe Paper Company, Ridgefield, N.J., a corporation of New Jersey
No Drawing. Filed July 7, 1959, Ser. No. 825,418
9 Claims. (Cl. 117—119.6)

1. In the process for applying an adhesive and clay containing liquid coating composition to a fibrous backing, the improvement which comprises rapidly drying said coating composition on said backing within seven seconds after the application of said coating composition the adhesive content of said coating composition being less than about 12% based on dry clay and pigment contained in the coating composition.

3,015,582
ROOFING FELT
Allen L. Simison, Toledo, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
No Drawing. Filed Jan. 15, 1957, Ser. No. 634,171
2 Claims. (Cl. 117—126)

1. An asphalt impregnated roofing felt completely fibrous in basic nature having a minor fibrous glass component amounting to one to three percent by weight of the impregnated felt, and being in the form of short multifilament strands.

3,015,583
WRINKLE RESISTANT CELLULOSIC TEXTILES AND METHOD OF PRODUCTION
Sidney L. Vail, John G. Frick, Jr., and John David Reid, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Feb. 19, 1960, Ser. No. 10,005
7 Claims. (Cl. 117—139.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for treating a cellulosic textile material whereby said material is rendered wrinkle-resistant and resistant to damaging effects from hypochlorite bleaching agents comprising impregnating said cellulosic textile material to a wet pickup of about from 70% to 80% with an aqueous solution containing from about 7% to about 12% by weight of the reaction product of formaldehyde and a substituted melamine selected from the group consisting of N,N'-dimethyl-N'',N''-bis(2-hydroxyethyl)-melamine and N,N',N''-trimethylmelamine, and from about 0.5% to about 5% by weight of an acidic catalyst, drying the impregnated material, and then curing it at a temperature of about 160° C.

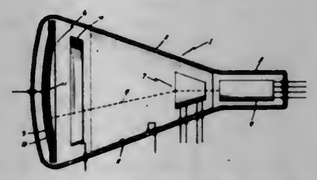
3,015,584
WRINKLE RESISTANCE TREATMENT FOR CELLULOSIC TEXTILE FABRICS
Robert M. Reinhardt, John G. Frick, Jr., Richard L. Arceneaux, and John D. Reid, all of New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Mar. 23, 1959, Ser. No. 801,417
2 Claims. (Cl. 117—139.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for treating a cellulosic textile material whereby said material is rendered durably wrinkle- and muss-resistant and resistant to damaging effects from hypochlorite bleaching agents, which process comprises the following steps: impregnating said cellulosic textile material to a wet pickup of from about 70 to 80% with an aqueous solution comprising from 3 to 7% by weight of dimethylol ethyleneurea, from 5 to 10% by weight of a polymeric acetal formed from formaldehyde and a polyhydroxy compound, and from 1 to 6% by weight of an acidic condensation catalyst; drying the impregnated material; and then curing it at a temperature of from about 130° to 170° C.

3,015,585
HEXAFLUOROISOBUTYL SUBSTITUTED SILICON COMPOUNDS
George W. Holbrook and Omar W. Steward, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,338
14 Claims. (Cl. 117—161)

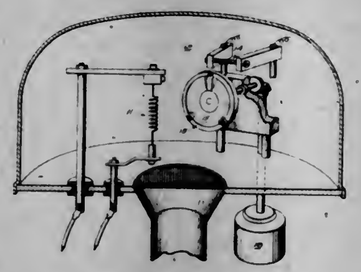
13. A method for the production of an oleophobic textile material which comprises wetting a textile material with a mixture of an organosiloxane oil consisting essentially of polymeric units of the formula $[(CF_3)_2CHCH_2]HSiO$, and an organosiloxane curing catalyst, and thereafter curing the textile material at a temperature and for a time sufficient to set the said organosiloxane oil.

3,015,586
METHOD OF MAKING CHARGE STORAGE ELECTRODES FOR CHARGE STORAGE TUBES
Michael F. Toohig, Fort Wayne, and Cyril L. Day, Huntington, Ind., assignors to International Telephone and Telegraph Corporation
Filed Jan. 15, 1958, Ser. No. 709,072
6 Claims. (Cl. 117—201)



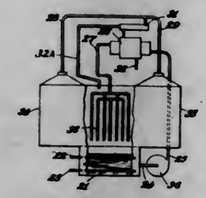
1. A method of forming a relatively thick layer of silicon monoxide on the inner surface of a bowl-shaped imperforate substrate member having at least its inner surface electrically conductive comprising the steps of: placing a charge of silicon monoxide in an evaporating receptacle; positioning said substrate member over said receptacle with its inner surface facing the same and spaced therefrom; positioning a container over said receptacle and substrate member and evacuating the same; preheating said substrate member to a temperature of approximately 400° C. while continuing said evacuation; heating said receptacle while continuing said evacuation and substrate heating thereby to evaporate said silicon monoxide onto the inner surface of said substrate member to form said layer; cooling said substrate member with said layer thereon while continuing said evacuation and controlling the relative rates of cooling of said substrate member and layer so that said layer cools more slowly than said substrate member whereby said substrate member always maintains said layer in compression; and terminating said evacuation and removing said substrate member with said layer thereon from said container.

3,015,587
RHODIUM GERMANIUM FILM RESISTOR
William J. MacDonald, Littleton, Mass., assignor to Technology Instrument Corporation of Acton, a corporation of Massachusetts
Filed Sept. 5, 1958, Ser. No. 759,165
7 Claims. (Cl. 117—213)



1. A process for producing an electrical resistor element comprising the steps of providing as a substrate a piece of rigid electrically insulating material having a planar surface, cleaning and slightly abrading said planar surface, depositing on said planar surface a thin film comprising rhodium and germanium in predetermined relative amounts, and thereafter subjecting said substrate and film to heat treatment at an elevated temperature for an extended period of time.

3,015,588
SPRAY PICKLING PROCESSES FOR THE SURFACE TREATMENT OF METAL
Montagu Hyams, London, England, assignor, by mesne assignments, to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware
Filed Dec. 30, 1952, Ser. No. 330,000
Claims priority, application Great Britain Dec. 31, 1951
1 Claim. (Cl. 134—36)

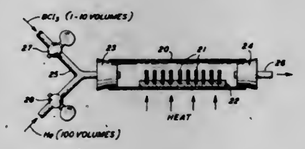


Process of cleaning the surface of metal in a spray chamber by the chemical action on said metal at superatmospheric temperature of an aqueous acid pickling liquid capable of dissolving metal oxide from said metal surface, which comprises applying said aqueous acid pickling liquid from spray producing means as rapidly moving spray on to said surface and condensing steam having a temperature in excess of 180° F. upon said spray whilst the spray is moving towards the said surface, vapors and gases being extracted during the process from said chamber through compression means and then returned to said chamber to supply heat to said spray by condensation upon the surface of said spray.

3,015,589
CHEMICAL METHOD
Howard E. Everson and Frank P. Ilenda, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed July 16, 1959, Ser. No. 827,430
4 Claims. (Cl. 134—42)

1. In a process for treating metal, the steps comprising immersing said metal in a molten bath consisting essentially of, on a weight basis, 50 to 95% sodium hydroxide, 15 to 50% potassium hydroxide, and 4 to 15% of an alkali metal fluoride.

3,015,590
METHOD OF FORMING SEMICONDUCTIVE BODIES
Calvin S. Fuller, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 5, 1954, Ser. No. 414,272
5 Claims. (Cl. 148—1.5)



2. The method of fabricating a junction-type semiconductor signal translating device from a body of n-type conductivity silicon which comprises providing a planar junction at a depth within 0.1 mil from a surface of said body, said method comprising the steps of placing said body in an enclosure, maintaining the body for at least five minutes at a temperature between 900° C. and 1300° C. and circulating past said heated body the vapor of a boron compound mixed with an inert gas at a boron vapor pressure such that elemental boron diffuses into the solid silicon body without any discernible melting of the silicon surface or formation of a significant boron deposit on said body, thereby to convert said diffused portion to p-type conductivity silicon, removing said body from said chamber, and treating said body to remove the diffused surface portions from selected regions, thereby to produce a body having at least one surface portion of p-type conductivity and at least one surface portion of n-type conductivity.

3,015,591
SEMI-CONDUCTOR RECTIFIERS AND METHOD OF MANUFACTURE
Edwin A. Zarathiewicz, South Amboy, and Edward J. Smith, Lyndhurst, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 18, 1958, Ser. No. 749,513
15 Claims. (Cl. 148—1.5)

6. In the method of making a silicon rectifier device the steps comprising heat-treating silicon at an elevated temperature below the melting point of silicon in a hydrogen atmosphere sufficient to remove impurities from said silicon, selecting an impurity from the group consisting of boron, aluminum, gallium, indium, tellurium,

phosphorous, antimony, arsenic and bismuth, alloying said impurity with said silicon at a given temperature

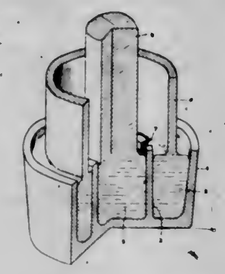


below the melting point of said silicon in a hydrogen atmosphere and cooling said alloyed silicon to room temperature in a nitrogen atmosphere.

3,015,592
METHOD OF GROWING SEMICONDUCTOR CRYSTALS

Frans Martinus Leopold, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 11, 1959, Ser. No. 819,766
Claims priority, application Netherlands July 11, 1958
3 Claims. (Cl. 148—1.6)



1. A method of growing high-quality semiconductor crystals, comprising the steps of providing a melt of semiconductor material, drawing a first growing tubular crystal upwards from the melt, and, simultaneously with the last step, drawing a second growing single crystal upwards from the melt within the first crystal and separate from the latter and such that it never extends beyond the first crystal.

3,015,593
METHODS AND COMPOSITION FOR PRODUCING A PHOSPHATE COATING ON ZINC METAL

John Phillip Jayne, Concord, Ohio
(1177 Johnny Cake Ridge, Painesville, Ohio)

No Drawing. Filed Oct. 4, 1960, Ser. No. 60,310
4 Claims. (Cl. 148—6.15)

1. In a composition for coating zinc metal consisting essentially of:

	Percent by weight
Calcium nitrate	5.0
Mono sodium dihydrogen phosphate	1.0
Phosphoric acid	0.2
Sodium nitrate	1.0
Water	92.8

3,015,594
PHOSPHATE COATING PROCESS

William S. Russell, Royal Oak, Mich., assignor to Parker Rust Proof Company, a corporation of Michigan

No Drawing. Filed Oct. 23, 1959, Ser. No. 848,176
7 Claims. (Cl. 148—6.15)

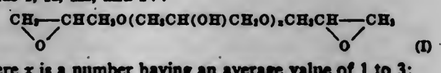
1. A method for operating a phosphate coating bath of the type which forms on a metal surface a coating containing a metal ion derived from the coating solution which comprises the steps of forming an aqueous acidic phosphate solution containing a coating metal phosphate ion, treating an acidic ion exchange resin with an aqueous saturant solution containing the said coating metal ion until the said resin is substantially saturated with said metal ion, and passing at least a part of said coating solution through said resin bed to thereby remove from said coating solution cations other than said coating metal ion and to add to said solution said coating metal ion.

3,015,595
BONDED NON-WOVEN FIBROUS PRODUCTS

Vincent J. Moser, Willow Grove, and Benjamin B. Kine, Levittown, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

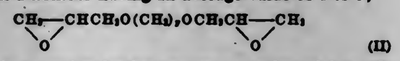
No Drawing. Filed Apr. 9, 1958, Ser. No. 727,245
12 Claims. (Cl. 154—46)

1. As an article of manufacture, a non-woven fibrous product resistant to dry-cleaning and laundering in which the fibers are distributed in random array, fibers in the product being bonded together by 2 to 200% by weight, based on the weight of fibers in the product, of a binder comprising an insoluble, infusible reaction product of (1) a water-insoluble addition polymer of 1% to 10% by weight of methacrylamide and 90% to 99% by weight of at least one compound selected from the group consisting of acrylonitrile and esters of an acid selected from the group consisting of acrylic acid and methacrylic acid with an alcohol selected from the group consisting of benzyl alcohol, cyclohexanol, and alkanols having 1 to 18 carbon atoms, said polymer having a T_1 of not over 17° C., and (2) a water-dispersible thermosetting resin-forming condensate selected from the group consisting of (*a*) condensates of formaldehyde with urea, N,N'-ethyleneurea, and melamine, and (*b*) polyepoxides of the Formulas I, II, III, and IV:



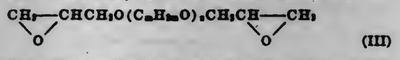
(I)

where *x* is a number having an average value of 1 to 3;



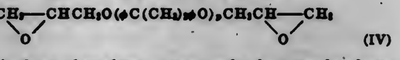
(II)

where *y* is a number having an average value of 2 to 10;



(III)

where *m* is an integer having a value of 2 to 4, and *z* is a number having an average value of 1 to 5; and



(IV)

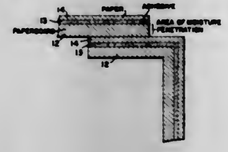
where ϕ is the p-phenylene group, and *p* is a number having an average value of 1 to 3,
the amount of condensate (2) being from 5% to 17% by weight of the polymer (1).

3,015,596
MOISTURE-RESISTANT CONTAINER

Robert de S. Couch and Milton Yezek, Battle Creek, Mich., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

Filed Nov. 27, 1956, Ser. No. 624,511
2 Claims. (Cl. 154—50)

1. A carton for containing a commodity which requires protection against water vapor, said carton being formed from a carton material consisting of a paperboard ply, a ply of paper capable of being printed, said paper ply having substantially less thickness than said paperboard ply and lying in superposed relation to said paperboard ply, and a moisture-resistant laminating adhesive interposed between said plies as a continuous film of substantially uniform thickness in contact with said plies over substantially the entirety of their superposed surfaces, said carton being erected from said material so

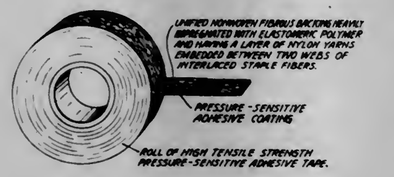


that said paper ply is the outer ply and said paperboard ply is the inner ply of said carton.

3,015,597
NONWOVEN PRESSURE-SENSITIVE SHOE TAPES

Richard J. Lambert, East Oakdale Township, Washington County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed June 26, 1958, Ser. No. 744,678
1 Claim. (Cl. 154—53.5)

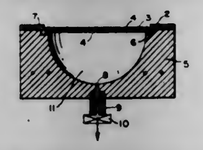


A nonwoven pressure-sensitive adhesive tape of the character described, having a nonwoven fibrous backing coated on one side with normally tacky pressure-sensitive adhesive, the backing being formed of two interbonded tissue-like webs of interlaced staple textile fibers having a length of at least approximately one inch, at least one of which includes a substantial proportion of nylon staple fibers, and a nonwoven layer of lineally-aligned yarns of continuous nylon filaments embedded between said webs, the fibrous backing structure being impregnated and unified by elastomeric fiber-binding latex sizing agent so that the tape product can be unwound from a roll without disruption, the elastomeric sizing agent having a dry solids weight greater than that of the fibers and yarns, the nylon yarns being in adequate number so that the tape has a lengthwise tensile strength of at least about 100 pounds per inch width.

3,015,598
MANUFACTURING ABSORBENT DIAPHRAGMS

John Leslie Jones, 1070 Glen Oaks Blvd., Pasadena, Calif.

Filed Nov. 3, 1958, Ser. No. 771,502
10 Claims. (Cl. 156—222)

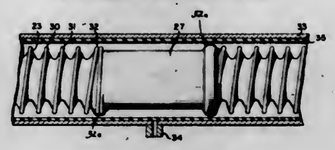


1. In a process for manufacturing a single use, absorbent diaphragm, the steps comprising: forming a thermoplastic reinforcing ring and a thermoplastic sheet into a thermoplastic web; laminating interiorly of said ring cellulosic fibers to two surfaces of said thermoplastic web, said cellulosic fibers being in a movable spaced relationship, to form a laminated ply structure; and forming said laminated ply structure into a stretched spheroidal shaped diaphragm.

3,015,599
METHOD OF MAKING REINFORCED CORRUGATED HOSE

Fred T. Roberts and Robert E. Roberts, both of White Fences, Danbury Road, Wilton, Conn.

Filed Apr. 16, 1958, Ser. No. 728,985
6 Claims. (Cl. 156—144)



6. The method of making a reinforced corrugated hose which comprises positioning a reinforcement comprising a helical wire covered with a layer of elastomeric material over the crests of the corrugations of a mandrel having a rigid corrugated molding surface so that said reinforcement is engaged by the crests and retained in position thereby, positioning over said reinforcement and over said mandrel a tubular layer of at least partially uncured elastomeric material, said mandrel having a hollow bore and having passages extending therefrom to the corrugated surface thereof, subjecting the resulting assembly to heat to effect curing of the elastomeric material while at the same time creating a differential pressure around the mandrel to force the layer of elastomeric material into surface contact therewith and with said reinforcement, continuing the application of heat and differential pressure until curing of the elastomeric material is effected, and thereafter removing the finished hose from the mandrel.

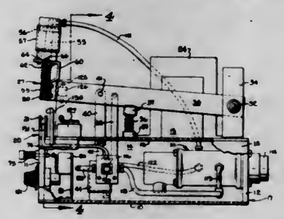
ERRATUM

For Class 156—222 see:
Patent No. 3,015,598

3,015,600
PLASTIC FILM CUTTER AND SEALER

Eugene C. Cook, Concord, N.C., assignor to Cook Engineering and Electronics, Inc., Concord, N.C., a corporation of North Carolina

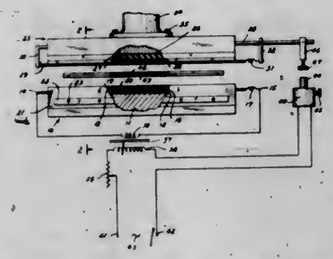
Filed Feb. 4, 1957, Ser. No. 638,136
14 Claims. (Cl. 156—356)



1. An apparatus for simultaneously cutting and heat-sealing thermoplastic sheet material comprising a housing, a first jaw member fixed on said housing, a second movable jaw member, means for moving said second jaw toward said first jaw to clamp said thermoplastic material between said jaws, resilient means for moving said second jaw away from said first jaw, a heating element supported in said second jaw member, and means controlled by movement of said second jaw toward said first

jaw for moving said heating element relative to said second jaw, through said thermoplastic sheet material and into said first jaw.

3,015,601
ART OF HEAT SEALING AND SEVERING THERMOPLASTIC FILMS
Alfred Fener, Brooklyn, N.Y., assignor to Nicholas Langer, New York, N.Y.
Filed Aug. 13, 1959, Ser. No. 833,438
10 Claims. (Cl. 156—515)

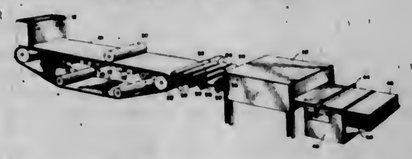


1. A sealing member for heat sealing machines comprising, in combination, a base, an elongated heater element in the form of a metal band on said base adapted to be heated to uniform sealing temperature throughout its length by the passage of current therethrough, and a layer of insulation covering said metal band and constituting the operative sealing face of the member, said layer having a row of perforations in its linear region which is directly overlying said metal band, the diameter of said perforations being at least equal to the width of said metal band.

3,015,602
METHOD OF RECLAIMING FIBERS FROM PARCHMENTIZED PAPER
Edward L. Taylor, Parchment, Mich., assignor, by mesne assignments, to KVP Sutherland Paper Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Sept. 5, 1958, Ser. No. 759,152
6 Claims. (Cl. 162—7)

6. The method of producing cellulose fibers suitable for paper making from parchmentized paper stock including the step of cooking the parchmentized paper stock in water containing aluminum sulphate in the proportion of approximately 11 pounds of aluminum sulphate to approximately 1500 gallons of water until the amylose of the parchmentized stock has been dissolved or weakened to such degree as to free the fibers from the amylose and permit the separation thereof by beating.

3,015,603
PROCESS OF MAKING FELTED CONTAINERS
Don Milligan Hawley, Geneva, Ill., assignor to Hawley Products Company, St. Charles, Ill., a corporation of Delaware
Filed Aug. 12, 1957, Ser. No. 677,612
3 Claims. (Cl. 162—117)



1. A continuous process for making carton blanks comprising forming a continuous, fibrous, thick felt from an aqueous slurry of cellulosic fibers on a felt-forming mechanism of a paper-making machine; passing the continuous, fibrous felt, upon leaving said forming mechanism, through a series of pairs of squeeze rolls and thereby squeezing water from said felt, the pressure exerted by each pair of squeeze rolls being progressively greater; scoring in the squeezed, wet felt fold lines extending longitudinally of and laterally across the wet felt for the folding of said blank into box form; and drying the scored, wet felt, all in one continuous operation.

3,015,604
POROUS POLYTETRAFLUOROETHYLENE ARTICLE CONTAINING GLASS MICROBALLOONS
Jerome Hochberg, Newburgh, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 2, 1957, Ser. No. 656,511
1 Claim. (Cl. 162—157)

A porous felt-like article comprising an intimate mixture of about from 25 to 75% by weight of polytetrafluoroethylene fibers having a fiber length of less than about 0.25 inch and about from 75 to 25% by weight of glass microballoons having an average diameter of about from 25 to 500 microns, said fibers being partially fused at their fiber intersections.

3,015,605
PAPER SIZED WITH LINEAR CATIONIC POLYMER
Yun Jen, Anaheim, Calif., and Ronald R. House, Darien, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 17, 1958, Ser. No. 742,496
8 Claims. (Cl. 162—168)

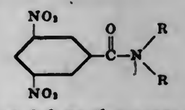
1. Paper composed of waterlaid cellulose fibers sized by a content between 0.05% and 3%, based on the dry weight of the fibers, of a normally water-soluble cationic vinyl polymer substantially composed of

—CHX—CX($C_6H_4CH_3$)—

linkages, —CHX—CX($C_6H_4CH_2Cl$)— linkages, and quaternary ammonium linkages formed by reaction of —CHX—CX($C_6H_4CH_2Cl$)— linkages with a water-soluble tertiary amine, wherein X designates a substituent from the group consisting of hydrogen and chlorine, the number of said quaternary ammonium linkages being between about 2% and 20% of the total number of linkages in the polymer.

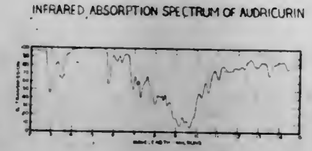
3,015,606
DINITROBENZAMIDE REMEDIES FOR COCCIDIOSIS AND SALMONELLA INFECTIONS
Arthur W. Walde, Charles City, Iowa, assignor to Dr. Salsbury's Laboratories, a corporation of Iowa
No Drawing. Filed July 2, 1956, Ser. No. 595,115
9 Claims. (Cl. 167—53.1)

1. A veterinary composition comprising an orally ingestible nontoxic vehicle and a small, but effective nontoxic amount of a compound represented by the general formula



wherein R is selected from the group consisting of hydrogen, alkyl, alkenyl, hydroxy-substituted alkyl, alkoxy-substituted alkyl, hydroxy-substituted alkenyl, and alkoxy-substituted alkenyl radicals having no more than 1 to 4 carbon atoms, said compound being present in an approximate amount between 0.0125% and 0.5% by weight of the composition.

3,015,607
CURAMYCIN AND ITS PRODUCTION
Maria Susana Cataldi, Vicente Lopez, Oscar Luis Galmarini, Martinez, and Jose Pahn, Villa Bosch-San Martin, Argentina, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed June 17, 1959, Ser. No. 821,017
5 Claims. (Cl. 167—65)

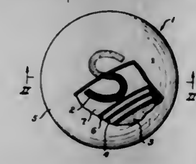


1. Curamycin, a weakly acidic crystalline antibiotic active against gram positive microorganisms, melting at about 196° C., having the following average elemental analysis: C, 48.89%; H, 6.52°; and Cl, 5.16% $[\alpha]_D = -5.5°$ in chloroform, soluble in sodium hydroxide, ethyl acetate, chloroform, acetone and pyridine, having a maximum at 280 mμ in the ultraviolet spectrum in ethanol and characterized by bands in the infra-red spectrum in mineral oil as indicated in the drawing.

3,015,608
PROCESS OF RECOVERING INTRINSIC FACTOR FROM PYLORIC MUCOSA
Leon Ellenbogen and William L. Williams, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Dec. 5, 1958, Ser. No. 778,306
9 Claims. (Cl. 167—74)

1. An improved process for obtaining intrinsic factor concentrate in free-flowing particulate form and having a potency of at least 30 milligrams daily dosage which comprises slurrying comminuted pyloric mucosa from hog stomachs with a cold, essentially aqueous medium, separating solids from the liquid extract by a filtration procedure thereby producing a filtrate containing intrinsic factor, reslurrying the so separated solids with cold water, repeating the separation step, combining the filtrates and subjecting them to spray-drying to form a free-flowing, high potency intrinsic factor containing powder.

3,015,609
MARKED PHARMACEUTICAL TABLET AND METHOD OF MARKING THE SAME
Roy Y. Sanders, Jr., Eggertsville, N.Y. (745 Lebrun Road, Buffalo 26, N.Y.)
Continuation of application Ser. No. 333,147, Jan. 26, 1953. This application July 29, 1960, Ser. No. 46,157
4 Claims. (Cl. 167—82)



1. A marked pharmaceutical product for internal consumption comprising, an unpolished coated medicinal core, a coating of shellac over said coated core, indicia printed on a portion only of said shellac coating in an ink consisting essentially of an alcoholic solution of shellac and an edible pigment of a distinguishing color, and a protective outer coating of substantially transparent material over said coating and said indicia thereon.

3,015,610
MARKED PHARMACEUTICAL TABLET
Roy Y. Sanders, Jr., 745 Lebrun Road, Buffalo 21, N.Y.
Continuation of application Ser. No. 563,666, Feb. 6, 1956. This application Nov. 4, 1957, Ser. No. 698,020
5 Claims. (Cl. 167—82)

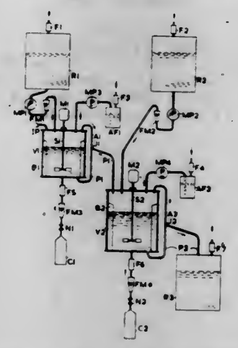


1. A marked pharmaceutical tablet comprising a coated medicinal core including a plurality of foundation subcoats, an ink receptive coating thereover comprising a major amount of shellac, a lubricative plasticizer and ethyl cellulose and ink indicia printed on said layer.

3,015,611
LOW DENSITY WHEY-BOUND TABLETS
Max Smedresman, Queens Village, N.Y., assignor to Nysco Laboratories, Inc., Long Island City, N.Y., a corporation of New York
No Drawing. Filed Aug. 25, 1959, Ser. No. 835,827
5 Claims. (Cl. 167—82)

1. The improved method of producing a tablet comprising intimately admixing low density milk whey in expanded powder form with an active ingredient in the substantial absence of added water and in the absence of granulation to produce a mixture containing at least 30% by weight of said whey shaping said mixture into tablets under sufficient pressure to compress said whey into an adherent mass containing said active ingredient.

3,015,612
CONTINUOUS FERMENTATION APPARATUS FOR THE PRODUCTION OF A CHEMICAL PRODUCT
Stanley John Pirt, Blackheath, London, and Donald Sidney Callow, Bremerton, near Salisbury, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed Feb. 18, 1958, Ser. No. 715,882
Claims priority, application Great Britain Feb. 21, 1957
6 Claims. (Cl. 195—141)



1. Apparatus for carrying out a continuous fermentation process for the formation of a given chemical product from a substrate by the action of a micro-organism and comprising a first culture vessel adapted to contain a first continuously fermenting culture medium, a first continuous feed device for supplying at a steady predetermined rate the first culture vessel with a growth medium for the micro-organism, a second culture vessel adapted to contain a second continuously fermenting cul-

ture medium fermenting simultaneously with the first culture medium, a second continuous feed device for supplying fermenting medium continuously at said predetermined rate from the first vessel to the second vessel, a third continuous feed device for supplying a medium containing said substrate direct to the second culture vessel continuously at a steady rate, and an output device for withdrawing medium from the second culture vessel at the rate medium is supplied to this vessel, a first control system for maintaining constant and homogeneous continuous culture conditions in the first vessel which are more favourable to the growth of the micro-organisms than to the formation of the chemical product, and a second control system for simultaneously maintaining constant and homogeneous culture conditions in the second vessel which are more favourable to the formation of the chemical product than to the growth of the micro-organisms.

3,015,613
SOLAR WATER STILL

William B. Edmondson, 1502 N. Lincoln St., Santa Ana, Calif.

Filed Aug. 4, 1954, Ser. No. 447,940
5 Claims. (Cl. 202—187)
(Granted under Title 35, U.S. Code (1952), sec. 266)

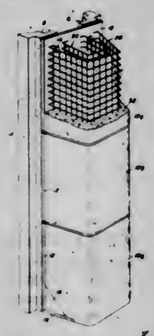


1. A circular solar still comprising, in combination, a base, said base being adapted to hold a liquid pool to be evaporated, a conical type roof permeable to solar radiation covering said base and supported thereby, means for admitting air substantially uniformly about the periphery of the still to the space underneath said roof, a vertical tubed condenser centrally positioned on and attached to said roof at the apex of the roof, said roof sloping upwardly to said condenser, and a catch basin below and vertically aligned with the said condenser and connected to said base to receive the condensate from said condenser.

3,015,614
COKE OVEN DOOR

Walter A. Bowman, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Sept. 30, 1959, Ser. No. 843,390
6 Claims. (Cl. 202—248)



1. A coke oven door comprising a door frame, a plug fastened to said door frame, said plug including a generally vertical plate, a generally U-shaped member of wire mesh extending generally vertically and having its legs fastened to said plate, a second generally U-shaped member of wire mesh extending generally vertically and having its legs fastened to said plate, the second U-shaped member being spaced from said first U-shaped member around the periphery thereof and a castable refractory surrounding said U-shaped members and abutting against said plate, and means for attaching said plate to said door frame.

3,015,615
METHOD OF MAKING TUBULAR NUCLEAR FUEL ELEMENTS

Walter Precht, Baltimore, Raymond J. Geckle, Dundalk, and Louis Frank, Baltimore, Md., assignors to Martin-Marietta Corporation, a corporation of Maryland

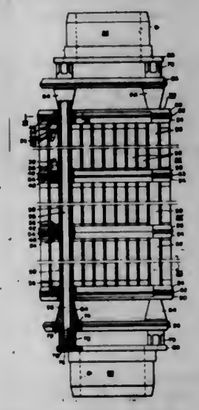
No Drawing. Filed Apr. 8, 1958, Ser. No. 727,029
5 Claims. (Cl. 204—154.2)

1. The method of metallurgically bonding an assembly comprising an inner metal tube, an outer metal tube and a cylindrical cermet core encased between said inner and outer metal tubes, said cermet core consisting of particles of an oxide of a fissionable metal dispersed in a metal matrix, said oxide being selected from the group consisting of uranium dioxide, uranosic oxide, thorium oxide and plutonium oxide, said inner and outer tubes and said metal matrix being composed of a metal from one of the groups of the periodic table selected from group IIIa, group VIb and group VIII and having a thermal neutron absorption cross section of not more than about 5.0 barns, said oxide being selected from the group consisting of uranium dioxide, uranosic oxide, thorium oxide and plutonium oxide, said method comprising the steps of inserting a mandrel in said inner tube, cold drawing said assembly so as to bring said cermet core into contact with said inner and outer tubes, and subsequently heating the assembly so as to form a metallurgical bond between said cermet core and said inner and outer tubes.

3,015,616
ROD TYPE FUEL ASSEMBLY

William E. Stuntz, Youngwood, and Erling Frisch, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 2, 1956, Ser. No. 620,071
16 Claims. (Cl. 204—193.2)

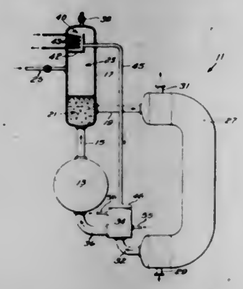


2. In a fuel element bundle adapted for use in a nuclear reactor core, the combination comprising a plurality of parallel end plates; a number of tie rods extending through said end plates; a plurality of encased fuel elements supported in spaced array between adjacent ones of said end plates, each of said fuel elements having a plug member inserted into an end thereof and provided with a centrally tapped hole, said plug members and said fuel elements being secured to one of said end plates by headed screws inserted through spaced apertures in said end plate and threaded into said tapped holes; means for securing each of the other ends of said fuel elements to another of said spaced end plates, said means including a second plug member inserted into the opposite end of said fuel element and having a threaded stud secured centrally thereof and threaded into a tapped aperture of said opposite end plate; screw retaining plates mounted on said tie rods adjacent the outermost ones of said end plates; and means associated with said tie rods for clamping said screw retaining plates and end plates together upon said tie rods.

3,015,617
METHOD AND APPARATUS FOR AQUEOUS HOMOGENEOUS REACTOR SYSTEMS

Jay E. Brunings, Bloomfield, N.J., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York

Filed Mar. 21, 1958, Ser. No. 722,991
1 Claim. (Cl. 204—193.2)



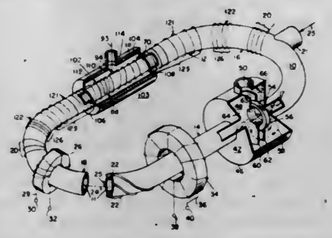
In a homogeneous neutronic reactor system comprising a reactor, a heat exchanger, a pump for circulating an aqueous nuclear fuel solution through the system, and a pressurizer, said pressurizer comprising a vessel, the lower portion of which is connected to the system and contains a quantity of said fuel solution, the upper portion of said vessel being connected to a source of pressurized gas and gas exhaust means connected to the upper portion of said vessel to provide a flow of said pressurized gas through the upper portion of said vessel to facilitate the stripping of gaseous fission products from said fuel solution, the improvement consisting of venting and purging means comprising a cooling condenser arranged in the upper portion of said pressurizer vessel for condensing water vapor therein, said condenser including a container for retaining condensate therein, a conduit connected at one end to said container and at the other to the pump for delivering condensate to the bearings thereof and for venting non-condensible gases from the pump to the pressurizer vessel.

3,015,618
APPARATUS FOR HEATING A PLASMA

Thomas H. Stix, Princeton, N.J., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed June 30, 1958, Ser. No. 745,778
6 Claims. (Cl. 204—193.2)

1. Apparatus for transferring energy to a plasma and heating the plasma, comprising a cylindrical torus-like tube defining a uniformly evacuated endless chamber, means for establishing a quasi-static plasma-confining magnetic field in said chamber, means establishing a plasma of ions and electrons immersed in said magnetic field, an induction coil around said tube having periodic oppositely directed windings, a resonating magnetic second field generating section operable with said coil to produce in said chamber ion accelerating second fields having a

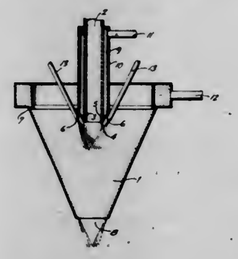


time and spatial periodicity along the lines of force of said confining magnetic field so as to excite hydromagnetic waves in said plasma, and means for thermalizing the energy in said hydromagnetic wave including means for establishing a magnetic field gradient in said confining magnetic field to heat said plasma by cyclotron damping.

3,015,619
PROCESS AND DEVICE FOR CHILLING HOT CRACKED GASES

Rudolf Wimmer, Rudolf Wirtz, and Willi Portz, Frankfurt am Main, Werner Fischer, Bad Soden (Taunus), and Hartmut Schilken, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

Filed Feb. 24, 1959, Ser. No. 795,076
Claims priority, application Germany Feb. 26, 1958
14 Claims. (Cl. 208—48)



1. A process for chilling hot cracked gases having a temperature of at least 700° C. which comprises passing hot cracked gases to leave a shaped zone at a passage which is shaped as a cutting in the direction of flow and which is held at a temperature in the range from 100 to 300° C., then cooling down said hot cracked gases to a temperature at which the cracking reaction is quenched by bringing them into contact with water which is vaporized thereby, substantially removing non-gaseous particles which are suspended in said chilled cracking gas therefrom by means of a film of hydrocarbon oils which are of a nature such that no substantial amounts thereof are distillable under normal pressure.

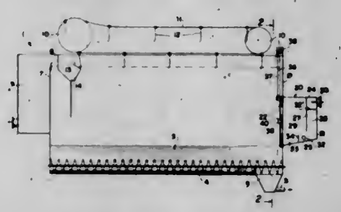
ERRATUM

For Class 208—60 see:
Patent No. 3,015,549

3,015,620
MANUFACTURE OF A SILICA-ZIRCONIA CATALYST FOR CONVERSION OF HYDROCARBONS
Charles J. Plank, Woodbury, Edward J. Rosinski, Almonesson, and Robert B. Smith, Glassboro, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Apr. 2, 1959, Ser. No. 803,552
20 Claims. (Cl. 208—119)

11. A process for the conversion of hydrocarbons which comprises contacting hydrocarbon vapor at conversion conditions of temperature and pressure with a catalyst consisting essentially of silica and zirconia and having a zirconia content of between about 2 and about 20 percent by weight, prepared by a process which comprises reacting a water-soluble zirconium compound and a silicate selected from the group consisting of an alkali metal silicate and an organic silicate ester to effect formation of a gelable sol consisting essentially of silica and zirconia characterized by a pH in excess of 6 and a zirconia content, on a dry solids basis, of between about 2 and about 20 percent by weight, permitting the said sol to set forming a silica-zirconia gel, reducing the pH of said gel to below 5 and maintaining the gel under such conditions of reduced pH while in contact with an aqueous acidic solution at a temperature in the approximate range of 150 to 220° F. for a period of at least about 1 hour under conditions of substantially atmospheric pressure, thereafter washing the gel free of soluble matter, drying and calcining.

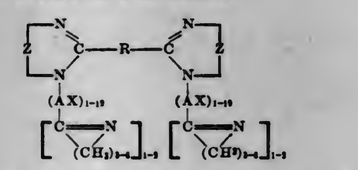
3,015,621
INFLUENT APPARATUS FOR FLOTATION TANKS
Gilbert W. Quast, Brookfield, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 3, 1959, Ser. No. 857,060
7 Claims. (Cl. 210—205)



2. In a tank for the separation of suspended material from a liquid by air-flotation, said tank having an opening at one end extending substantially the width of the tank and spaced from the bottom and top thereof, a box having an open side attached to said end and over said opening of the tank, a first vertical baffle dividing the box into a distribution zone and a mixing zone and spaced from the bottom of the box to provide an opening between said zones, a removable perforate baffle disposed within the tank over said first opening and providing the controlled introduction of the suspension from said mixing zone into the tank, said box having means for connection to a pipe delivering the suspension to the tank and opening into said distribution zone, a lower vertical baffle spaced forwardly of said first baffle and extending from the floor of the box, a header having means for connection to a source of air-charged liquid and extending within the box adjacent to the rear side of said lower baffle and having ports opening in the direction of said lower baffle whereby the air-charged liquid is directed upwardly across the opening from said distribution zone into said mixing zone and whereby the suspension in passing from beneath said first baffle mixes therewith in a circulatory motion about an axis crosswise of the tank before passing through said perforate baffle into the tank.

3,015,622
PROCESS OF INHIBITING CORROSION
Kwan-ting Shen, Brentwood, Mo., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware
No Drawing. Original application Mar. 17, 1958, Ser. No. 721,643, now Patent No. 2,987,522, dated June 6, 1961. Divided and this application Dec. 18, 1959, Ser. No. 860,339
18 Claims. (Cl. 252—8.55)

1. A method of inhibiting corrosion of ferrous metals in hydrocarbon systems characterized by contacting said metals with a compound of the formula:



where Z is selected from the group consisting of (1) $(CB_2)_{2-3}$ and B is selected from the group consisting of hydrogen, and a lower alkyl group, and (2)



A is a lower alkylene group; X is selected from the group consisting of O, S, NH_{0-1}; and R is a hydrocarbon group having 1–36 carbon atoms.

3,015,623
LITHIUM BASE GREASE CONTAINING LEAD OLEATE, SULFURIZED LARD OIL AND MOLYBDENUM DISULFIDE
Lewis D. Loring, Dolton, and Henry J. Voss, Homewood, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 24, 1960, Ser. No. 38,456
3 Claims. (Cl. 252—18)

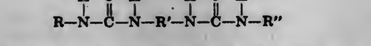
1. A grease composition of improved extreme pressure characteristics consisting essentially of a petroleum base lubricating oil thickened to grease consistency with lithium 12-hydroxy stearate soap, about 2 to 4 weight percent lead oleate, about 3 to 6 weight percent sulfurized lard oil and about 0.5 to 3 weight percent molybdenum disulfide.

3,015,624
METHOD OF PREPARING LITHIUM SOAP GREASES
William R. Heneke, Groves, and Cecil F. McBurnett and Lloyd F. Badgett, Port Arthur, Tex., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Dec. 22, 1958, Ser. No. 781,944
13 Claims. (Cl. 252—41)

1. The process of preparing a lubricating grease comprising as the major component a lubricating oil thickened to a grease consistency by a lithium soap which comprises providing a saponification mixture consisting essentially of a substantially saturated saponifiable material comprising at least about 35 percent by weight of a soap-forming hydroxy fatty acid material, a basic lithium compound in an amount corresponding approximately to the stoichiometric amount required to react with the said saponifiable material, a minor amount of water, and a lubricating oil which is substantially non-reactive under the saponification conditions in an amount equal to from about 3 to about 16 times the weight of the said saponifiable material, heating the said mixture under substantially atmospheric pressure gradually up to about 300° F. over a period of time sufficient to obtain complete saponification, further heating the resulting saponified mass up to a maximum temperature in the range from about 300° F. to about 10° F. below the melting point of said soap for a sufficient time to accomplish dehydration, adding any additional lubricating oil required to obtain a grease mixture containing at least the major amount of the lubricating oil contained in the finished grease with the avoidance of any substantial amount of cooling and while the grease mixture is maintained at a temperature of at least about 300° F., and thereafter cooling the said grease mixture to the drawing temperature at a rate below about 10° F. per minute.

3,015,625
LUBRICANT COMPRISING A LUBRICATING OIL AND AN UREIDO COMPOUND
Robert J. Rosscup, Chamblee, Ga., and Hubert J. Liehe, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed July 21, 1958, Ser. No. 750,050
16 Claims. (Cl. 252—49.6)

1. A lubricant composition comprising at least about 40% of a normally liquid lubricating oil and from about 2% to about 60% of at least one ureido compound having the general formula



wherein R and R'' are abietyl radicals selected from the group consisting of a dehydroabietyl radical, a dihydroabietyl radical, a tetrahydroabietyl radical and mixtures thereof, and R' is an organic radical selected from the group consisting of an alkylene radical of from 1 to about 30 carbon atoms, and an arylene radical.

3,015,626
INSULATING COMPOSITION
John C. Kingsbury, 1405 Mayfield Ave., Joliet, Ill.
No Drawing. Filed Sept. 29, 1959, Ser. No. 843,046
5 Claims. (Cl. 252—62)

5. A light weight insulating composition consisting essentially of expanded perlite particles comprising 30–65% by weight of the composition, delaminated exfoliated vermiculite particles comprising 15–50% by weight of the composition, fibers comprising 10–25% by weight of the composition, and a binder comprising 10–20% by weight of the composition, said perlite being present as essentially discrete cellular particles not larger than about 20-mesh particle size, said vermiculite being present as thin, flat platelets, and said expanded perlite, delaminated vermiculite, fibers and binder components each being intimately and uniformly distributed throughout the composition.

3,015,627
GAMMA FERRIC OXIDE FOR MAGNETIC IMPULSE RECORD MEMBERS
Joseph W. Ayers and Robert A. Stephens, Easton, Pa., assignors to C. K. Williams & Co., East St. Louis, Ill., a corporation of Delaware
Continuation of application Ser. No. 840,199, Sept. 15, 1959, which is a continuation of application Ser. No. 499,260, Apr. 5, 1955. This application July 6, 1960, Ser. No. 41,209
13 Claims. (Cl. 252—62.5)

1. A magnetic impulse record member having a substantially uniform signal output at frequencies up to at least about 11,000 cycles per second comprising, a binding medium having therein a synthetic gamma ferric oxide, Fe_2O_3, produced from a synthetic, magnetic gamma ferric oxide monohydrate by reduction and oxidation of said monohydrate, said ferric oxide, Fe_2O_3, consisting essentially of very fine-grained, plate-like crystalline particles having a length of not more than five microns, also having a length to width ratio of more than 1 to 1 and a width to thickness ratio of at least 3 to 1.

3,015,628
FERROSO-FERRIC OXIDE FOR MAGNETIC IMPULSE RECORD MEMBERS
Joseph W. Ayers and Robert A. Stephens, Easton, Pa., assignors to C. K. Williams & Co., East St. Louis, Ill., a corporation of Delaware
Continuation of application Ser. No. 840,200, Sept. 15, 1959, which is a continuation of application Ser. No. 499,718, Apr. 6, 1955. This application Dec. 7, 1960, Ser. No. 75,899
14 Claims. (Cl. 252—62.5)

6. A magnetic impulse record member having a utilizable signal output over the whole frequency range up to 20,000 cycles per second comprising, a non-magnetic strip having thereon an attached track containing a binding medium having therein a synthetic ferroso-ferric oxide formed from a synthetic, ferro magnetic gamma ferric oxide monohydrate, said ferroso-ferric oxide consisting essentially of very fine-grained, plate-like crystalline particles having a length of not more than five microns, also having a length to width ratio of more than 5 to 1 and a width to thickness ratio of at least 3 to 1 and having a coercivity of from about 250 to 600 oersteds and a retentivity of from about 1500 to 2500 gauss.

3,015,629
ANTIFREEZE COMPOSITION
James K. Truitt, Beacon, N.Y., assignor to Texaco Inc., a corporation of Delaware
No Drawing. Filed Mar. 24, 1958, Ser. No. 723,085
14 Claims. (Cl. 252—75)

1. An antifreeze composition adapted to be added to water consisting essentially of a water-soluble liquid glycol, between about .01 and 5% by weight of magnesium tetraborate and between about .0001 to 1% by weight of an alkali metal mercaptobenzothiazole.

3,015,630
AQUEOUS SOLUTION FOR STRIPPING NICKEL
Robert E. Thompson, Mason, and Charles R. Allison, St. Bernard, Ohio, assignors to General Electric Company, a corporation of New York
No Drawing. Filed Aug. 24, 1959, Ser. No. 835,426
9 Claims. (Cl. 252—101)

1. An aqueous solution for stripping nickel consisting essentially of in percent by weight 20–70 HNO_3; at least 1 H_2SO_4; at least 0.5 of a metal nitrate, the metal of said metal nitrate being selected from the group consisting of silver, magnesium, cobalt, aluminum and nickel; with the balance water.

3,015,631
POLYMERIZATION ACTIVATOR
Chester M. McCloskey, 1981 Sinaloa Ave., Altadena, Calif.
No Drawing. Filed Sept. 21, 1956, Ser. No. 611,387
7 Claims. (Cl. 252—426)

1. An initiator for the polymerization of ethylenically unsaturated resinophors comprising the product formed by the reaction of a mixture of methyl ethyl ketone and cyclohexanone, the ratio by weight of methyl ethyl ketone to cyclohexanone being between approximately 3 to 2 and 19 to 1, with hydrogen peroxide.

3,015,632

ELECTRICALLY CONDUCTIVE PRINTING INK AND METHOD OF PRODUCING SAME

Robert K. Remer, Elgin, Ill., assignor to Tribune Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Dec. 31, 1956, Ser. No. 631,458
8 Claims. (Cl. 252—511)

1. A cationic, electrically-conductive printing ink comprising a pigment and a vehicle composed of the reaction product of an oil-modified alkyd polycarboxylic acid-polyhydric alcohol resin and an aliphatic primary amide of high molecular weight which amide is surface active and of the cationic type.

3,015,633

MANUFACTURE OF THERMISTORS

Michel Humbert and Jacques Floriot, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France

No Drawing. Filed Jan. 2, 1958, Ser. No. 706,539
Claims priority, application France Jan. 23, 1957
6 Claims. (Cl. 252—519)

1. A process of manufacturing thermistors comprising the steps of sintering at a temperature higher than 1000° C., a mixture of an organic binder and powdered metallic oxides selected from the group consisting of titanium, vanadium, manganese, iron, cobalt, nickel, copper and aluminum oxides whereby a first thermistor is obtained; of grinding said first thermistor into a fine powder, of shaping said powder with a lead borate enamel, the melting point of which is lower than 1000° C. to provide a shaped object and subjecting the shaped object to a sintering treatment, at a temperature at least 5% lower than the temperature used in the manufacture of said first thermistor.

3,015,634

MINERAL FILLED POLYURETHANE FOAMS

Thomas H. Ferrigno, Metuchen, N.J., assignor to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Apr. 15, 1959, Ser. No. 806,431
11 Claims. (Cl. 260—2.5)

1. A composition comprising an open celled plastic foam which is the reaction product of at least one liquid long chain polyol and an excess of an arylene diisocyanate which has been foamed by incorporation of water and catalyst therein, said polyol being selected from the group consisting of a linear polyalkylene ether polyol having an equivalent weight of at least 200, a fatty acid triglyceride having an hydroxyl number of at least 49 and a linear saturated polyester having terminal hydroxyl groups which is the esterification product of a dibasic acid and a dihydric alcohol, and uniformly distributed throughout the walls of said open celled foamed plastic from about 5% to about 40%, based on the weight of said foamed reaction product, of kaolin clay, said kaolin clay being substantially free from particles coarser than 44 microns and having a particle size distribution such that not over 80% by weight consists of particles finer than 2 microns in equivalent spherical diameter and not more than 35% by weight consists of particles finer than 0.55 micron.

3,015,635

COMPOSITIONS CONTAINING EPOXY ESTERS AND BITUMINOUS MATERIALS

Theodore F. Bradley, Orinda, and Harry J. Sommer, Lafayette, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 21, 1957, Ser. No. 660,455
13 Claims. (Cl. 260—18)

1. A composition consisting essentially of a bituminous material and from 1% to 85% by weight of the combined mixture of an epoxy organic ester possessing more than one vic-epoxy group and at least 8 carbon atoms in the acid portion of the ester molecule.

3,015,636

SULFUR CURING OF POLYETHER-URETHANE RUBBERS

Otto C. Elmer, Akron, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 24, 1957, Ser. No. 692,028
16 Claims. (Cl. 260—18)

1. A sulfur curable polyether-urethane composition comprising the reaction product of (1) one mole of a saturated poly(alkylene ether) glycol having a molecular weight of above 600, (2) from about 0.9 to 1.5 moles of an organic polyisocyanate, and (3) a material selected from the group consisting of an aliphatic glycol and a cycloaliphatic glycol and consisting of carbon, hydrogen and oxygen and having at least one carbon-to-carbon double bond, said double bond being positioned in the chain joining the hydroxyl radicals of said material, at least one hydrocarbon group of at least 5 consecutive saturated aliphatic carbon atoms positioned in said chain joining said hydroxyl radicals, and one of the carbon atoms of said double bond being attached directly to a carbon atom of said group, and the amount of said material being from 10 to 60 mole percent of the total moles of said poly(alkylene ether) glycol and said material.

3,015,637

ORGANO SILOXANE-ALKYD RESIN COATING COMPOSITIONS

Lawrence A. Rauner and Leslie J. Tyler, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Mar. 27, 1959, Ser. No. 802,284
2 Claims. (Cl. 260—22)

1. A method of preparing a coating resin comprising reacting by heating together a combination selected from the group consisting of (1) a combination of (*a*) a polyhydric alcohol, (*b*) a polycarboxylic compound selected from the group consisting of polycarboxylic acids, anhydrides of said acids and esters of said acids, (*c*) a fatty acid and (*d*) an organosiloxane resin made up of units of the general formula

$$R_nSi(OR')_mO_{\frac{4-n-m}{2}}$$

in which each R is a monovalent hydrocarbon radical, each R' is a substituent selected from the group consisting of the hydrogen atom and alkyl radicals of less than six carbon atoms, *n* has an average value of from 0.90 to 1.90 and *m* has an average value of from 0.1 to 1.5, and (2) a combination of (*a*), (*b*) and (*d*), in any case said organosiloxane resin being employed in an amount equal to from 0.5 to 90 percent by weight based on the combined weight of (*a*), (*b*), (*c*) and (*d*), said organosiloxane resin being employed in contact with a metallic compound selected from the group consisting of esters of the formula $M(OR'')_4$ and partial hydrolyzates of said esters, in which M is an atom selected from the group consisting of titanium and zerconium and each R'' is a substituent selected from the group consisting of the hydrogen atom, monovalent hydrocarbon radicals and monovalent acyl radicals, said metallic compound being present in an amount sufficient to provide from 0.01 to 3.0 percent by weight of M based on the combined weight of (*a*), (*b*), (*c*) and (*d*), the reaction temperature subsequent to the addition of (*d*) to the system being limited to the range from 100° to 210° C., said heating being continued until a compatible resin is obtained.

3,015,638

WATER-DISPERSED ADHESIVE OF RUBBER AND A MIXTURE OF TACKIFIERS, AND PROCESS FOR PREPARING SAME

Rocco J. Sergi, Forest Hills, N.Y., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

No Drawing. Filed Oct. 1, 1959, Ser. No. 843,623
10 Claims. (Cl. 260—24)

7. A process for providing a water dispersion at normal room temperature of a rubber base adhesive suitable for the installation of smooth surface floor covering over on grade concrete floors containing about 15 to 25% rubber selected from the group consisting of synthetic rubber, natural rubber and mixtures thereof, about 22 to about 32% water, about 15 to 30% of finely divided mineral matter having a Gardner-Coleman value of at least about 30 and tackifier to provide a ratio of tackifier to rubber of at least as great as 3 to 2, said tackifier comprising at least 10% by weight based on the weight of the final adhesive of a water dispersible rosin ester of a polyhydric alcohol having a softening point of at least about 65° F. and about 10 to about 20% by weight based on the weight of the final adhesive of a non-saponifiable, dispersible, compatible second tackifier having a softening point of about 65° F. to about 220° F., which comprises blending together to form a uniform dispersion containing only said 22 to 32% water, a latex of all of said rubber containing about 35 to about 75% solids and a water dispersion of said rosin ester containing about 40 to about 60% solids to partially plasticize the rubber, distributing said mineral matter throughout said dispersion of partially plasticized rubber and, thereafter, adding said second tackifier in a molten state to the dispersion of partially plasticized rubber and mineral matter thereby forming said water dispersion of said rubber base adhesive.

3,015,639

WATER BASE DISPERSIONS OF SHELLAC SOAPS AND POLYEPOXIDES AND METHOD FOR THE PREPARATION OF SUCH DISPERSIONS

Herbert S. Cockeram, New York, N.Y., assignor to Gillespie-Rogers-Pyatt Co., New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,534
18 Claims. (Cl. 260—25)

1. A water dispersion comprising an aqueous base, a material selected from the group consisting of shellac soaps, Manila gum soap, and soap of a synthetic resin having an acid number in the range from about 30 to about 300 dissolved therein, a polyepoxide body dispersed in said aqueous solution, the amount of the polyepoxide body in relation to the said soap being in a weight ratio of about 1:100 to about 10:1.

3,015,640

PROCESS OF MAKING A PLASTICIZED VINYL RESIN AND PROCESS OF MAKING A SURFACE COVERING THEREFROM

John B. Weaver, Lancaster, Pa., and Robert K. Petry, Mountain Lakes, N.J., assignors to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

No Drawing. Filed Dec. 15, 1960, Ser. No. 75,934
26 Claims. (Cl. 260—26)

1. A process for producing a hard, flexible surface covering of uniform composition containing as a binder a fused thermoplastic polymer of ethylenic unsaturated compounds solvated with a plasticizer which comprises admixing a minor portion of said thermoplastic polymer of ethylenic unsaturated compounds with at least a portion of said plasticizer, heating the mixture to fuse and solvate said minor portion of polymer with said plasticizer, cooling the mixture and dispersing the remainder of said polymer in discrete particles throughout the cooled mixture without solvating the remaining portion of polymer with plasticizer, comminuting the resulting composition to form solid granules containing said particles uniformly dispersed therein in said unsolvated state, consolidating said granules to mold them together to form a sheet and heating the sheet to solvate said remaining portion of polymer with plasticizer and fuse the entire composition thereby forming said surface covering.

3,015,641

METHOD OF INCREASING PARTICLE SIZE IN SYNTHETIC RUBBER LATEX BY TREATMENT WITH VOLATILE SALT AND POLYETHYLENE POLYAMINE

Carl V. Bawn, Naugatuck, and Byron A. Hunter, Woodbridge, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 16, 1960, Ser. No. 15,253
12 Claims. (Cl. 260—29.7)

1. The method of increasing the size of the dispersed polymer particles in a synthetic rubber latex aqueous emulsion polymerizate of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2{=}C<$ group and are copolymerizable with butadienes-1,3 which comprises adding to the latex 2% to 15% of a volatile electrolyte selected from the group consisting of ammonium and amine salts that can be volatilized from aqueous solution at temperatures up to 100° C. and 0.03% to 1% of polyethylene polyamine selected from the group consisting of diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, heptaethylene octamine and higher polyethylene polyamines from the still bottom from the distillation recovery of the lower polyethylene polyamines from the product of the reaction of ethylene dichloride and ammonia, said percentages being based on the weight of the solids of the latex.

3,015,642

INCREASING THE PARTICLE SIZE OF SYNTHETIC RUBBER LATEX

Carl V. Bawn, Naugatuck, and Byron A. Hunter, Waterbury, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,670
12 Claims. (Cl. 260—29.7)

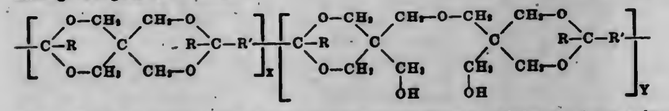
1. The method of increasing the size of the dispersed polymer particles in a synthetic rubber latex aqueous emulsion polymerizate of material selected from the group consisting of butadienes-1,3 and mixtures of butadienes-1,3 with up to 70% by weight of such mixtures of monoethylenic compounds which contain a $CH_2{=}C<$ group and are copolymerizable with butadienes-1,3 containing 2 to 10 parts of a water-soluble soap of soap-forming monocarboxylic acid per 100 parts of latex solids and having a pH from 8 to 11 which comprises reducing the pH of the latex to within the range of 5.5 to 7.5 in the presence of 0.05% to 1% based on the weight of the latex solids of polyethylene polyamine selected from the group consisting of diethylene triamine, triethylene tetramine, tetraethylene pentamine, pentaethylene hexamine, hexaethylene heptamine, heptaethylene octamine and higher polyethylene polyamines from the still bottom from the distillation recovery of the lower polyethylene polyamines from the product of the reaction of ethylene dichloride and ammonia, and thereafter increasing the pH of the latex to within the range of 8 to 11.

3,015,643
REACTION PRODUCT OF A POLYSPIRANE RESIN WITH A POLYCARBOXYLIC ACID ANHYDRIDE, MIXTURES THEREOF WITH OTHER POLYMERIC MATERIALS, PROCESS FOR PREPARING SAME, AND CONDUCTOR COATED THEREWITH

Albert H. Markhart, Wilbraham, Charles F. Hunt, Springfield, and Edward Lavin, Longmeadow, Mass., assignors to Shawinigan Resins Corporation, Springfield, Mass., a corporation of Massachusetts

No Drawing. Filed Aug. 11, 1958, Ser. No. 754,173
28 Claims. (Cl. 260—42)

18. The crosslinked reaction product of a polyspirane having the general formula



where R is taken from the group consisting of H and CH_3, R' is taken from the group consisting of aliphatic hydrocarbons defined by $(CH_2)_S$, where S is an integer from 0–8 and alicyclic and aromatic hydrocarbons of 5–6 carbon atoms, and methyl and ethyl substituted products thereof, X plus Y is equal to an integer from 2–100 and Y is equal to no more than 50% of X plus Y, 2,2'-bis(p-hydroxyphenyl) propane-epichlorohydrin, epoxy resin and an organic material wherein the organic material is selected from the group consisting of (*a*) polycarboxylic acid anhydrides of the saturated and unsaturated aliphatic series, (*b*) aromatic polycarboxylic acid anhydrides, (*c*) alicyclic polycarboxylic acid anhydrides, (*d*) methyl and halogen substituted products of (*a*), (*b*), and (*c*), (*e*) polymeric polyanhydrides selected from the class consisting of soluble copolymers of styrene maleic anhydride and vinyl acetate-maleic anhydride and (*f*) mixtures of (*a*), (*b*), (*c*), (*d*) and (*e*).

3,015,644
STABILIZING POLYPROPYLENE WITH ORGANICTIN-MERCAPTO COMPOUNDS

William E. Leistner and Olga H. Knoepke, Brooklyn, and Arthur C. Hecker, Richmond Hill, N.Y., assignors to Argus Chemical Corporation, a corporation of New York

No Drawing. Filed Jan. 31, 1958, Ser. No. 712,306
6 Claims. (Cl. 260—45.75)

1. Polypropylene substantially free from halide combined with a stabilizing amount of a tin mercapto compound which is nonvolatile and compatible with polypropylene, having the formula:

$$R_xSn(SR^1)_{4-x}$$

in which R is a monovalent hydrocarbon radical selected from the group consisting of alkyl radicals having from one to eighteen carbon atoms and aryl radicals having from six to fourteen carbon atoms, *x* is an integer having a value from one to three and R^1 is a monovalent radical selected from the group consisting of alkyl radicals having from one to eighteen carbon atoms and aryl radicals having from six to fourteen carbon atoms and such alkyl and aryl radicals bearing an organic substituent selected from the group consisting of hydroxy, carboxy ester, carboxy, thioncarboxy and amido groups.

3,015,645
SILICA POWDERS

Leslie J. Tyler, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Oct. 6, 1954, Ser. No. 460,773
12 Claims. (Cl. 260—46.5)

1. The method of preparing hydrophobic organosilicon powders which comprises mixing (1) an organosilicon compound selected from the group consisting of compounds of the formula R_nSiX_{4-n} and

$$R_nSiO_{\frac{4-n}{2}}$$

in which R is selected from the group consisting of monovalent aliphatic hydrocarbon radicals of less than 5 carbon atoms and phenyl radicals, there being no more than one phenyl radical per silicon atom, X is selected from the group consisting of chlorine and alkoxy radicals of less than 6 carbon atoms, and *n* has a value from 2 to 3 inclusive, said organosilicon compound being in a fluid state with (2) a polymeric silica organogel containing an inert solvent, which solvent has not been removed from said gel at any time prior to the reaction in which gel at least 50 mol percent of the polymer units are SiO_2 units any remaining polymer units being of the formula $R'SiO_{1.5}$, in which R' is a monovalent aliphatic hydrocarbon radical of less than 5 carbon atoms, said organogel (2) having from .02 to .35 g. of total SiO_2 and $R'SiO_{1.5}$ per cc. and said organosilicon compound (1) being present in amount such that there is reacted through SiOSi bonds at least .04 organosilyl unit of compound (1) per polymer unit of (2) in the presence of a strong acid catalyst and thereafter removing the volatile materials from the organogel whereby a dry powdery material having a pore volume of at least 3 cc. per g. as determined by the difference in volume of mercury and octamethylcyclotetrasiloxane absorbed by a given weight of the dry powder is obtained.

3,015,646
METHOD OF CURING CONDENSED SILOXANE RESINS

John L. Speier, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Original application Feb. 14, 1955, Ser. No. 488,163. Divided and this application Aug. 28, 1958, Ser. No. 757,699
6 Claims. (Cl. 260—46.5)

1. A resinous coating composition in which the resin-forming constituent consists essentially of a mixture of (1) a completely condensed copolymeric siloxane containing from 5 to 75 mol percent siloxane units of the formula

$$XR_aSiO_{\frac{3-a}{2}}$$

in which X is a functional radical of the formula $(YOOC)_aR''$— in which R'' is a radical of at least three carbon atoms and is of the group consisting of divalent and trivalent saturated aliphatic hydrocarbon radicals and divalent and trivalent saturated cycloaliphatic hydrocarbon radicals in all of which each carbonyl group is attached at least the third carbon atom away from the silicon atom, Y is of the group consisting of alkyl radicals and hydrogen and *a* is an integer from 1 to 2 inclusive, R is of the group consisting of monovalent hydrocarbon radicals free of aliphatic unsaturation and halogenated monovalent hydrocarbon radicals free of aliphatic unsaturation, *n* has an average value from 0 to 2, the remainder of said siloxane being composed of siloxane units of the formula

$$Z_mSiO_{\frac{4-m}{2}}$$

in which Z is of the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals and *m* has an average value from 0 to 3 inclusive, said copolymeric organosiloxane having an average of from 1 to 1.7 inclusive total organic groups per silicon atom and (2) a diamine.

3,015,647
CURABLE PRODUCT FROM A HALOHYDRIN AND PHENOL CONDENSATION PRODUCT

Elizabeth S. Lo, Princeton, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Filed Oct. 31, 1958, Ser. No. 770,933
12 Claims. (Cl. 260—47)

1. The method of manufacturing a curable epoxy resin containing glycidyl groups comprising reacting in an alkaline medium at a temperature between about 50 to 150° C., a halohydrin selected from the group consisting of epihalohydrins and polyhalohydrins with a phenol condensation product selected from the group consisting of phenolphthaleins, phenolmaleins, phenolsucceins, phenolnaphthaleins and phenolsulfonephthaleins, the molar ratio of the halohydrin to the phenol condensation product being at least 2:1, the reaction medium being free of substantial amounts of water which would cause significant hydrolysis of the glycidyl groups of said epoxy resin.

3,015,648
EPOXIDE RESIN COMPOSITION

Elizabeth S. Lo, Fords, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Filed Oct. 31, 1958, Ser. No. 770,934
16 Claims. (Cl. 260—47)

1. The method of manufacturing a curable epoxy resin containing glycidyl groups comprising reacting in an alkaline medium at a temperature between about 50 to 150° C. a halohydrin selected from the group consisting of epihalohydrins and polyhalohydrins with a phenol-condensation product, selected from the group consisting of phenolphthaleins, phenolmaleins, phenolsulfonephthaleins, phenolsucceins, and phenolnaphthaleins, and a dihydric phenol, the molar ratio of the halohydrin to the combined molar amount of the phenol-condensation product and dihydric phenol being at least 2:1, the reaction being free of substantial amounts of water which would cause significant hydrolysis of the glycidyl groups of said epoxy resin.

3,015,649
DICYANDIAMIDE FORMALDEHYDE CONDENSATION PRODUCTS AND THEIR PRODUCTION

Bruno Zorn, Koln-Deutz, and Gustav Manthe, Opladen, Germany, assignors to Farbenfabriken-Bayer Aktiengesellschaft, a corporation of Germany

No Drawing. Filed Oct. 4, 1957, Ser. No. 688,121
Claims priority, application Germany Apr. 17, 1957
8 Claims. (Cl. 260—69)

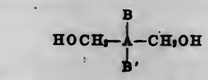
1. A process for preparing a clear stable solution of a dicyandiamide urea and formaldehyde condensation product, which comprises heating at a reaction temperature an aqueous solution having a pH of above 7 of dicyandiamide, urea and formaldehyde to the stage wherein the resinous product from these three ingredients is water-insoluble, the proportions of the reactants being from about 0.3 to about 5.5 moles of urea per mole of dicyandiamide, from about 0.5 to about 1.5 moles of formaldehyde per mole of dicyandiamide, and from about 0.5 to about 1 mole of formaldehyde per mole of urea; adding to the said water-insoluble resinous product a water-soluble alkali metal salt of a sulfonic acid selected from the group consisting of aliphatic sulfonic acids containing at least ten carbon atoms in the alkyl group thereof and aromatic sulfonic acids to form a clear aqueous solution thereof.

3,015,650
THERMOPLASTIC POLYESTERURETHANES

Charles S. Schollenberger, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed May 7, 1957, Ser. No. 657,484
12 Claims. (Cl. 260—75)

1. A polyesterurethane characterized by being tough and hard, with a Shore D hardness value at least as high as about 85, thermoplastic, linear and essentially free of cross-links, with a second order transition temperature at least as high as about 87° C. and a melting point at least as high as about 100° C., soluble in methyl ethyl ketone and ethyl acetate to give solutions having as high as 10 to 20% total solids, but incapable of dissolving in pure toluene to give such solutions, and capable of forming, from such solutions, clear, flexible abrasion resistant and weather resistant films; said polyesterurethane being the product of the substantially complete reaction of three reactants, said reactants being (A) a hydroxyl terminated polyester of ester forming reactants consisting of (1) a saturated aliphatic diol containing from 5 to 10 carbon atoms of the structure



wherein A is a number selected from the class consisting of a tetravalent carbon atom and a saturated tetravalent hydrocarbon group, B is an alkyl group of from 1 to 5 C atoms and B' is a member selected from the class consisting of alkyl groups having from 1 to 5 C atoms and methoxy-methyl, said diol having at least one carbon atom adjacent a CH_2OH group substituted with at least one B and at least one B' group, as defined above with (2) a dicarboxylic acid selected from the class consisting of orthophthalic acid, isophthalic acid, terephthalic acid and hexahydrophthalic acid, said hydroxy-terminated polyester having an average molecular weight from about 250 to 2500 and an acid number less than 10 (B) a saturated aliphatic glycol having from 2 to 10 carbon atoms and only carbon atoms in its longest chain to two of which are attached the two hydroxyl groups and (C) an aromatic diisocyanate and the proportions of said reactants being such that the moles of (C) are substantially equal to the sum of the moles of (A) and (B) and that there are 1.1 to 4 moles of (C) for each mole of (A).

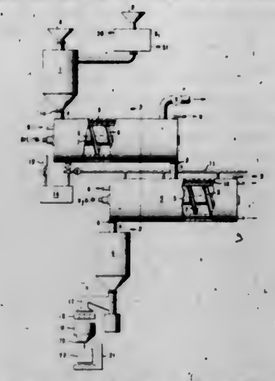
3,015,651
INCREASING VISCOSITY OF POLYCAPROLACTAM BY REMOVING EXTRACTABLES WITH SOLVENTS AND FURTHER SOLID PHASE POLYMERIZING THE POLYMER

Eric William Kjellmark, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 28, 1956, Ser. No. 612,838
3 Claims. (Cl. 260—78)

1. A process for increasing the inherent viscosity and molecular weight of a polymer from epsilon caprolactam having a number average molecular weight of less than 29,000 and an inherent viscosity of less than 1.5, said polymer containing at least 2% by weight of a material that is extractable in a solvent selected from the class consisting of water, methyl alcohol, ethyl alcohol and trichloroethylene, which comprises the steps of extracting said material from said polymer with a solvent selected from said class, until the amount of said material in said polymer is reduced to no more than 1.5% by weight, and then increasing the inherent viscosity and number average molecular weight of the polymer by solid phase polymerization in an atmosphere of an inert gas at a temperature between 190° C. and the melting point of the polymer until the inherent viscosity is increased to

at least 1.75 and the number average molecular weight is increased to at least 33,000, the inherent viscosity



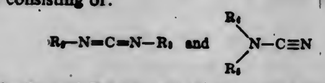
being measured in a solution of the polymer containing 0.5 gram of polymer in 100 cc. of m-cresol at 25° C.

3,015,652
PROCESS FOR THE PRODUCTION OF POLYAMIDES

Hermann Schnell, Krefeld-Uerdingen, and Gerhard Fritz, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 6, 1957, Ser. No. 676,488
Claims priority, application Germany Aug. 18, 1956
4 Claims. (Cl. 260—78)

1. The process for producing a polyamide by ionic polymerization of a lactam selected from the group consisting of ϵ-caprolactam, C-methyl-ϵ-caprolactam, the lactam of ω-aminoenanthic acid and the ω-capryl lactam, which comprises heating in the complete absence of water a mixture of said lactam, a basic lactam polymerization catalyst selected from the group consisting of alkali and alkaline earth metals, alkali and alkaline earth metal and hydrides, oxides, hydroxides and salts of weak acid compounds selected from the group consisting of carbonic acid, acetic acid, benzoic acid and 4,4'-dihydroxydiphenyl-2,2-propane, and an added accelerator selected from the group consisting of:



wherein R_2 and R_3 are radicals selected from the group consisting of alkyl with up to 8 carbon atoms, cycloalkyl, unsubstituted and nuclear halogenated phenyl and naphthyl and R_4 and R_5 are radicals selected from the group consisting of hydrogen and the same radicals defining R_2 and R_3, said basic catalyst being present in the mixture in amounts of about 0.003 to about 1.0 percent by weight of said lactam and said accelerator being present in the mixture in amounts from about 0.001 to about 4 percent by weight of said lactam, said heating step being carried out at polymerizing temperatures higher than about 120° C. until the desired degree of polymerization is obtained.

3,015,653
MALEIC ANHYDRIDE-STYRENE-ACRYLONITRILE TERPOLYMER

Roger G. Richards and Edmond R. Osgood, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed Jan. 6, 1958, Ser. No. 707,420
25 Claims. (Cl. 260—78.5)

1. The method of polymerizing an unsaturated polymerizable monomeric composition selected from the group consisting of vinyl esters of monocarboxylic acids, vinyl halides and mixtures thereof with further ethylenically unsaturated monomers copolymerizable therewith, which comprises the steps of suspending said monomeric composition in water using as a suspending



agent a small amount of styrene-maleic anhydride-acrylonitrile terpolymer defined by the area DEFH in FIGURE 1, and while the monomeric composition is so suspended, effecting polymerization thereof with the aid of heat and a polymerization catalyst.

3,015,654
PREPARATION OF O-GALACTOSYLISOMALTOL

John E. Hodge and Earl C. Nelson, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Dec. 10, 1959, Ser. No. 858,837
6 Claims. (Cl. 260—210)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method comprising heating a reaction mixture containing a source of lactose, a salt of a strongly basic secondary amine ($K_B > 10^{-8}$ in water), and a non-reactant member selected from the group consisting of an inert solvent, a tertiary amine buffer, a sterically hindered secondary amine, a mixture of said inert solvent and said tertiary amine buffer, and a mixture of said inert solvent and said sterically hindered secondary amine, at a temperature of about from 60° to 100° C. for about from 10 to 24 hours and recovering O-galactosylisomaltol.

3,015,655
SEPARATION OF NITROGENOUS ORGANIC COMPOUNDS

John B. Stark, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

Original application July 18, 1955, Ser. No. 522,885, now Patent No. 2,891,945, dated June 23, 1959. Divided and this application Jan. 6, 1959, Ser. No. 791,244
3 Claims. (Cl. 260—211.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

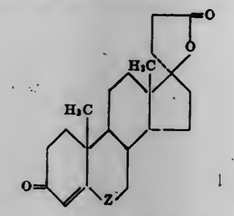
1. The process which comprises applying to a strongly-acidic cation exchanger in the hydrogen form an impure solution containing at least one nitrogenous organic compound of the group consisting of purine bases, pyrimidine bases, nucleosides, and amino acids, thereafter eluting the cation exchanger with aqueous ammonium hydroxide, collecting the eluate being a purified solution containing at least one member of the aforesaid group, evaporating ammonia from the eluate, applying the resulting solution to a strongly-basic anion exchanger, eluting the anion exchanger with an aqueous solution of carbon dioxide, and recovering the eluate being a further purified solution containing at least one member of the aforesaid group.

3,015,656
6-OXYGENATED 17α-(2-CARBOXYETHYL)-17β-HYDROXYANDROST-4-EN-3-ONE LACTONES

Roy H. Bible, Jr., Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 5, 1960, Ser. No. 26,960
8 Claims. (Cl. 260—239.57)

1. A compound of the formula



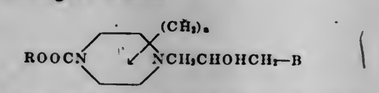
wherein Z represents a member of the class consisting of carbonyl, methoxymethylene, acetoxymethylene, and hydroxymethylene radicals.

3,015,657
1-CARBALKOXY-4-(AMINOALKANOL) PIPERAZINES

Charles F. Geschickter, Lorton, Va.; John S. Pierce, 813 Roseneath Road, Richmond, Va.; Ying H. Chen, 6745 Miami Ave., Richmond, Va.; and Ebenezer E. Reid, 302 E. 33rd St., Baltimore, Md.

No Drawing. Filed May 28, 1959, Ser. No. 816,403
7 Claims. (Cl. 260—247.2)

1. Compounds selected from the group consisting of (1) those having the formula

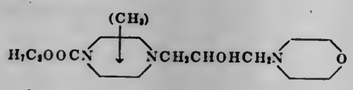


wherein R is an alkyl radical of from 1 to 4 carbons, n is a whole number up to 4, including zero, and B is a member of the group consisting of morpholino, pyrrolidino, piperidino, monomethylpiperidino and



in which R' and R'' each is an alkyl radical of from 1 to 4 carbons and (2) the therapeutically useful acid addition salts thereof.

2. The compound



3,015,658
PROCESS FOR THE PREPARATION OF NEW THEOPHYLLINE DERIVATIVES

Ernst Jucker, Binningen, Baselland, Erwin Rissi, Basel, and Rudolf Süess, Rheinfelden, Switzerland, assignors to Sandoz A.G., Basel, Switzerland, a Swiss firm

No Drawing. Filed Nov. 16, 1959, Ser. No. 852,967
Claims priority, application Switzerland Nov. 21, 1958
6 Claims. (Cl. 260—253)

1. A member of the class consisting of 7-(4'-pyridyl)-theophylline, 7-(3'-pyridyl)-theophylline, 7-β-picolyl-theophylline, 7-γ-picolyl-theophylline, their hydrohalides, their lower alkylhalides and their hydroxy lower alkylhalides.

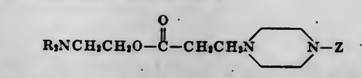
2. 7-[N-(β'-hydroxyethochloride)-β-picolyl]-theophylline.

3,015,659
DIALKYLAMINOETHYL PIPERAZINEPROPIONATES AND PROCESS

Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 8, 1960, Ser. No. 20,830
7 Claims. (Cl. 260—268)

1. A compound of the formula



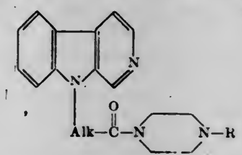
wherein R represents a lower alkyl radical and Z represents a member of the group consisting of lower alkyl, hydroxy-(lower alkyl), ethoxycarbonyl, and phenyl radicals.

3,015,660
9-CARBOXYALKYL-9-PYRID[3,4-b]INDOLE PIPERAZIDES

Richard A. Robinson, Evanston, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,200
7 Claims. (Cl. 260—268)

1. A compound of the structural formula



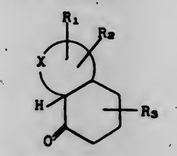
wherein Alk is a lower alkylene radical and R is selected from the group consisting of hydrogen, lower alkyl, hydroxy (lower alkyl), and (lower alkanoyloxy) (lower alkyl) radicals.

3,015,661
DECAHYDROISOQUINOLINE DERIVATIVES

Vlasios Georgian, 2626 Princeton, Evanston, Ill.

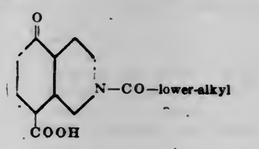
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,926
8 Claims. (Cl. 260—287)

1. A ketone having the formula:



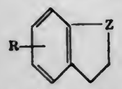
wherein X is a 3 to 5 atom saturated monoaza-hydrocarbon straight chain; R_1 is an N-substituent selected from the group consisting of hydrogen, a lower-alkyl group, and a lower-alkanoyl group; R_2 is a C-substituent selected from the group consisting of hydrogen and lower-alkyl, carboxy, and lower-carbalkoxy groups; and R_3 is selected from the group consisting of hydrogen, a lower-carboxy-alkyl group, a carboxy group, a lower-carbalkoxy group, an oxo group, and an oxo group ketalized by a compound selected from the class consisting of glycols and thioglycols from 2 to 3 carbon atoms.

5. 5-keto-1-carboxy-N-acyldecahydroisoquinoline having the formula:

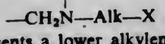


3,015,662
BENZOPIPERIDINOALKYLIMIDES
Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 28, 1959, Ser. No. 862,086
8 Claims. (Cl. 260—287)

1. A compound of the formula



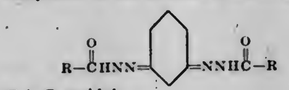
wherein R represents a member of the class consisting of hydrogen and lower alkoxy radicals, and Z represents a radical of the formula



in which Alk represents a lower alkylene radical and X represents a member of the class consisting of succinimido and phthalimido radicals.

3,015,663
1,3-CYCLOHEXANEDIONE BIS-(N-PYRIDINE-CARBOXYHYDRAZONES)
Markus Zimmermann, Riehen, Switzerland, assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 29, 1959, Ser. No. 843,060
3 Claims. (Cl. 260—295)

1. A compound of the structural formula



wherein R is C-pyridyl.

3,015,664
PROCESS FOR THE PREPARATION OF ADDITION PRODUCTS OF TERTIARY AMINES WITH DI-CHLOROMETHYL ETHERS OF DIOLS
Paul Muller, Chantilly, France, assignor to Compagnie Francaise des Matieres Colorantes, Paris, France, a company of France
No Drawing. Filed Nov. 10, 1959, Ser. No. 851,972
Claims priority, application France July 21, 1959
3 Claims. (Cl. 260—296)

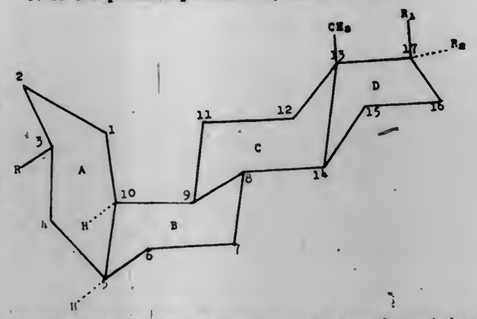
1. A process for the preparation of quaternary di-salts which comprises condensing a diol selected from the group consisting of 1:2-ethanediol, 1:2-propanediol, 1:3-propanediol, 1:2-butanediol, 1:3 butanediol, 1:4-butanediol, 2:3-butanediol, 2:2-dimethylpropane and diethylene glycol with trioxymethylene and gaseous hydrochloric acid at a temperature between 0° C. and 50° C., adding anhydrous calcium chloride to the reaction mass and permitting the mass to form into two separate layers, removing the lower aqueous layer which is formed, reacting the remaining upper layer with a tertiary base selected from the group consisting of pyridine, picoline, trimethylamine, triethylamine and dimethylaniline at a temperature between 0° C. and 78° C. in the presence of a member selected from the group consisting of acetone and methylethylketone to precipitate the white crystalline quaternary di-salt, and separating by filtration said quaternary di-salt.

3,015,665
SYNTHESIS OF DIOXANE COMPOUNDS
Johannes Wollner, Moers, Germany, assignor to Rheinpreussen Aktiengesellschaft für Bergbau und Chemie, Homberg, Lower Rhine, Germany, a corporation
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,120
Claims priority, application Germany Aug. 7, 1957
8 Claims. (Cl. 260—340.7)

2. The compound 5(α,β-dihydroxyethyl)-5-methyl-1,3-dioxane.

3,015,666
NOVEL 5α,10α-19-NOR STEROIDS AND METHOD FOR THEIR PREPARATION
Eugene Farkas and Richard T. Rapala, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
No Drawing. Filed June 16, 1958, Ser. No. 742,008
8 Claims. (Cl. 260—397.5)

5. A compound represented by the formula:



in which R represents a member of the group consisting of hydrogen, hydroxy and lower alkoxy; R_1 represents a member of the group consisting of hydroxy, lower alkyl, lower acyloxy, and α-hydroxyethyl; R_2 represents a member of the group consisting of hydrogen and hydroxy; and R_1 and R_2 when taken together represent α,β-ethylenedioxy.

3,015,667
HYDROGENATION PROCESS
Lukas Hans Ruiter and Johannes Martinus Van Schaik, Vlaardingen, Netherlands, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Jan. 15, 1960, Ser. No. 2,589
Claims priority, application Great Britain Jan. 23, 1959
7 Claims. (Cl. 260—409)

1. A process for hydrogenating unsaturated higher fatty acids in the vapor phase, the improvement in which comprises carrying out hydrogenation with a mixture of water vapor and hydrogen, in which mixture the molecular proportion of water vapor to hydrogen is within the range of from 2:100 to 200:100.

3,015,668
PROCESS FOR PRODUCING CYCLOMATIC MANGANESE TRICARBONYL COMPOUNDS
John Kozikowski, Walled Lake, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 24, 1959, Ser. No. 855,016
4 Claims. (Cl. 260—429)

1. A process comprising reacting a cyclomatic-alkali metal compound in which the cyclomatic group is a hydrocarbon group containing from 5 to about 13 carbon atoms with a manganese pentacarbonyl halide in the presence of an inert solvent and under a blanketing atmosphere of an inert gas to yield a cyclomatic manganese tricarbonyl compound in which the cyclomatic group is a hydrocarbon group containing from about 5 to about 13 carbon atoms.

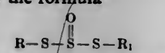
3,015,669
DIALKYL ALUMINUM HYDRIDES AND THEIR PRODUCTION
Karl Ziegler, Kaiser Wilhelm Platz 2, Mulheim (Ruhr), Germany, and Hans-Georg Gellert and Eckard Boaltz, Mulheim (Ruhr), Germany; said Boaltz and said Gellert assignors to said Ziegler, Mulheim (Ruhr), Germany
No Drawing. Filed June 21, 1955, Ser. No. 528,117
Claims priority, application Germany June 22, 1954
13 Claims. (Cl. 260—448)

1. Process for the production of dialkyl aluminum hydrides which comprises heating a reactant substantially solely consisting of an aluminum trialkyl, the alkyl component of which has at least two carbon atoms, to a temperature between about 50 and 200° C. at which the aluminum trialkyl is thermally decomposed splitting off one molecule of an olefin, and recovering the converted reactant comprising a major portion of dialkyl aluminum hydride.

11. A dialkyl aluminum hydride of the general formula $HAlR_2$ in which R represents a primary branched alkyl radical having at least four carbon atoms.

3,015,670
DIESTERS OF DITHIOSULFUROUS ACID AND METHODS OF PREPARING SAME
William F. Wolff, Park Forest, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,798
10 Claims. (Cl. 260—453)

1. As compositions of matter diesters of dithiosulfurous acid represented by the formula



wherein R and R_1 are hydrocarbon radicals.

3,015,671
BICYCLOOCTENE DERIVATIVE AND PROCESS OF PRODUCING SAME
Homer J. Sims, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Sept. 21, 1960, Ser. No. 57,369
5 Claims. (Cl. 260—491)

1. The compound, 1,3,3,4,5,6-hexachloro-2-keto-7- acetoxy-[2.2.2]-bicyclooctene-5.

3,015,672
DIHYDROXYBIPHENYL CARBOXYLIC ACID MANUFACTURE
Melvin E. Baum, Monroeville, and Donald E. Hostetler, Verona, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
No Drawing. Filed Mar. 17, 1960. Ser. No. 15,530
4 Claims. (Cl. 260—520)

1. In a method of making 4,4'-dihydroxybiphenyl-2-carboxylic acid from fluorene-2,7-disulfonic acid by fusion with an alkali metal hydroxide, the improvement comprising admixing an alkali metal salt of fluorene-2,7-disulfonic acid with sodium hydroxide, said sodium hydroxide being present in a weight ratio of 1.1–2.5 to 1 based on the weight of said disulfonic acid salt, heating the admixed mass in the presence of an alkali metal nitrate at a temperature of 240–280° C. to effect fusion thereof, said alkali metal nitrate being present in an amount of about 0.5–1 mole for each mole of said disulfonic acid salt in said admixed mass, and recovering 4,4'-dihydroxybiphenyl-2-carboxylic acid from the reaction mixture.

3,015,673
NEW UREA DERIVATIVES AND PREPARATION THEREOF
Peter Hans Zahler, Berne, Switzerland, assignor to Swiss Serum and Vaccine Institute, Berne, Switzerland
No Drawing. Filed Sept. 25, 1957, Ser. No. 686,045
Claims priority, application Switzerland Sept. 28, 1956
1 Claim. (Cl. 260—553)

N(3-aminobenzenesulfonyl)-N'-n-butyl-urea.

3,015,674
PROCESS FOR THE PRODUCTION OF ALKYLACYLAMIDES
Arthur W. Campbell, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland
No Drawing. Filed Mar. 10, 1958, Ser. No. 720,069
10 Claims. (Cl. 260—561)

1. In a process for the production of lower alkylacylamides by contacting a lower alkylamine with an acid, the step which comprises contacting an alkylamine selected from the group consisting of lower monoalkylamines and lower dialkylamines with an acid selected from the group consisting of formic and acetic acids in an alkyl amine to acid molar ratio ranging from 0.8:1 to 1.5:1 in the presence of an activated alumina containing catalyst at temperatures ranging from about 160–375° C.

3,015,675
SUBSTITUTED HYDRAZINE PROCESS
Forrest R. Hurley, Glen Burnie, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut
Filed Apr. 4, 1958, Ser. No. 726,403
1 Claim. (Cl. 260—583)

In a method of forming dimethylhydrazine comprising passing an ammonia-stabilized anhydrous chloramine mixture into dimethylamine, wherein a reaction mixture containing dimethylhydrazine, dimethylamine hydrochloride, and free dimethylamine results; maintaining sufficient ammonia in the reaction mixture to provide alkaline conditions therein; and recovering the dimethylhydrazine formed, the improvement in recovering the dimethylhydrazine in an anhydrous condition when said reaction mixture contains free dimethylamine in amounts less than about 3 parts by weight of dimethylamine per part of said dimethylhydrazine formed, which consists in adding to the reaction mixture 2 to 5 parts by weight of a hydrocarbon solvent selected from the group consisting of pentane, hexane, heptane, benzene, toluene and xylene per part of said dimethylhydrazine, thereby causing the dimethylamine hydrochloride to crystallize from solution; removing said hydrochloride by filtration; and recovering said dimethylhydrazine from the reaction mixture.

3,015,676
METHOD FOR ORTHO ARALKYLATION OF PHENOL
David A. Johnson, Syracuse, and Elwin J. Richardson, Jr., Kirkville, N.Y., assignors, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 4, 1959, Ser. No. 791,039
2 Claims. (Cl. 260—619)

1. The method of benzylation of phenol in the presence of hydrogen chloride resulting in the formation of a product having a high ortho-para ratio, which method comprises the gradual addition of benzyl chloride to a solution of a moderate excess of phenol in a non-polar solvent selected from the group consisting of straight and branched chain aliphatic hydrocarbons having from 7 to 16 carbon atoms inclusive and mixtures thereof at a temperature range of 130° to 180° C.

3,015,677
PROCESS FOR THE STABILIZATION OF CHLOROPRENE
Wilhelm Vogt, Knapsack, near Koln, Hans Welden, Koln-Nippes, Klaus Gehrmann, Bonn, and Kurt Sennewald, Knapsack, near Koln, Germany, assignors to Knapsack-Greisheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany
No Drawing. Filed Jan. 20, 1960, Ser. No. 3,515
Claims priority, application Germany Jan. 31, 1959
6 Claims. (Cl. 260—652.5)

1. process for the stabilization of chloroprene against ω-polymerization, which comprises adding to the chloroprene as polymerization inhibitor a substance selected from the group consisting of N-nitroso-diphenylamine, dichloro-1-nitro-ethylene, dimeric monochloronitroethylene and a mixture of dichloro-1-nitroethylene and dimeric monochloronitroethylene, in an amount of at least 0.2 part per thousand parts of chloroprene.

3,015,678
PRODUCTION OF MONOCHLORBUTENES
Frank Christopher Newman, Great Bookham, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company
No Drawing. Filed June 23, 1959, Ser. No. 822,182
Claims priority, application Great Britain July 11, 1958
9 Claims. (Cl. 260—652.5)

1. A monochlorbutene, selected from the group consisting of 3-chlorbutene-1 and 1-chlorbutene-2 and mixtures thereof, stabilized against metal-induced polymerization, by at least one organic sulphur compound containing a divalent sulphur atom attached by one of its valencies to a carbon atom, and attached by the second of its valencies to an atom selected from the group consisting of carbon and hydrogen atoms.

3,015,679
PRODUCTION OF DICHLORBUTENES
Frederick James Bellringer, Leatherhead, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company
No Drawing. Filed June 23, 1959, Ser. No. 822,184
Claims priority, application Great Britain July 11, 1958
12 Claims. (Cl. 260—652.5)

1. 3:4-dichlorbutene-1 stabilized against metal-induced reversion to 1.4-dichlorbutene-2, by at least one organic sulphur compound containing a divalent sulphur atom attached by one of its valencies to a carbon atom and attached by the second of its valencies to an atom selected from the group consisting of carbon and hydrogen atoms.

3,015,680
PROCESS FOR THE MANUFACTURE OF CAROTENE COMPOUNDS
Otto Isler, Marc Montavon, and Rudolf Rüegg, Basel, and Paul Zeller, Neuallschwil, near Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed June 21, 1956, Ser. No. 592,758
Claims priority, application Switzerland June 27, 1955
4 Claims. (Cl. 260—666)

4. A process for the production of beta-carotene which comprises condensing beta-cyclogeranyl bromide with triphenylphosphine, thereby producing beta-cyclogeranyl-triphenylphosphonium bromide; reacting the latter with phenyl-lithium to produce triphenyl-(2,6,6-trimethyl-1-cyclohexen-1-yl)-methylidene phosphine; and condensing the latter with 2,6,11,15-tetramethylhexadecaheptaene-(2,4,6,8,10,12,14)-dial-(1,16) and removing the triphenyl phosphine oxide from the reaction mixture.

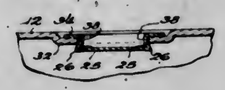
ELECTRICAL

3,015,681
PRIMARY CELL
Edgar S. Long, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Nov. 6, 1958, Ser. No. 772,261
10 Claims. (Cl. 136—111)



1. A primary cell comprising a container; an anode and a cathode in said container; an alkaline electrolyte in said container; and a barrier membrane formed of a sulfonated polymer of the cation exchange type separating said anode and cathode and in contact with said electrolyte; the alkaline concentration of said electrolyte being sufficiently great to induce said barrier membrane to exercise substantially no permselective effect in the reaction in said cell.

3,015,682
FLUORESCENT BALLAST CLOSURE MEANS AND METHOD OF APPLYING SAME
William J. Cheske, Brookfield, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 23, 1959, Ser. No. 848,469
9 Claims. (Cl. 174—52)



1. In a ballast for the operation of fluorescent lamps, said ballast including a canister body and a cover member therefor, said canister containing electrical components therein adapted to be immersed in a potting compound, and there being electrical leads extending externally from said canister, said cover having an opening provided therein for forceful introduction of molten potting compound into the interior of said canister; means for seating a closure member upon said cover for closing of said opening, said closure member comprising an annular sheet metal dish adapted to fit within said opening and having means permanently securing same within said opening.

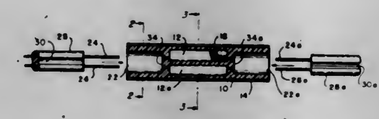
3,015,683
ELECTRICAL CONNECTOR
Michael F. O'Keefe, Mechanicsburg, and Frederick W. Wahl, Hummelstown, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed Jan. 21, 1960, Ser. No. 3,841
1 Claim. (Cl. 174—84)



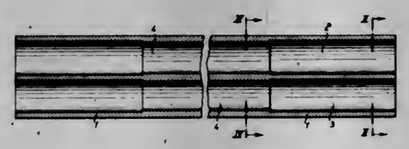
A connection between a pair of steel, copper-coated wires including: a pair of metal ferrules crimped onto said wires, a strap connecting said ferrules, a steel insert located in said ferrules, said insert comprising a rectangular metal strip having a smooth outer surface and serrations on its inner surface, said serrations implanted through the copper coating of the wires into the steel, said insert being deformed into an arcuate shape to provide residual pressure, the edges of said insert biting into the ferrules, an outer plastic sleeve surrounding the ferrules, and a pair of ring members, one on each end of the plastic sleeve connecting the plastic sleeve to the insulation on the wire.

3,015,684
INSULATED ELECTRICAL CONNECTOR
Wilhelm A. Schneider, Fair Haven, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 29, 1960, Ser. No. 39,739
1 Claim. (Cl. 174—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A connector for the stripped ends of a pair of insulated conductors comprising a pair of spaced metal clamps, each of said clamps formed of sheet metal longitudinally folded on its centerline with the longitudinal edges of the respective walls bent inwardly and extending longitudinally over the channels formed by the folded metal clamps, said clamps having a V-shaped cross-section and being diametrically opposed to each other with said respective channels being in parallel alignment, said longitudinal edges of said respective walls disposed in a direction facing the fold line of each of said clamps, each of said channels adapted to receive the stripped ends of said conductors, tubular insulating material surrounding said clamps and extending on each side thereof, said insulating material provided with separate passages at opposite ends of said clamps and aligned with said channels to permit entry of the stripped ends of said conductors in the opposite ends of each of said channels, discrete shoulders formed by said insulating material at the inner terminations of said passages, and a malleable metal tube surrounding said insulating material and co-extensive therewith for providing means for crimping said clamps upon the stripped ends of each of said respective conductors.

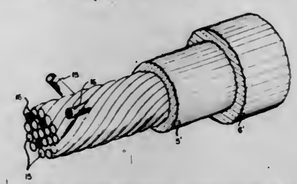


3,015,685
CONNECTION OF TWO SIDE BY SIDE ELECTRIC CABLES
Martin Gerlach and Wilhelm Forster, Schwabach, near Nurnberg, Germany, assignors to Bayerische Schrauben- und Federn-Fabriken Richard Bergner, Schwabach, near Nurnberg, Germany
Filed Feb. 9, 1959, Ser. No. 792,080
Claim priority, application Germany Apr. 23, 1958
3 Claims. (Cl. 174—90)



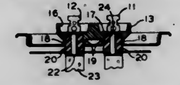
1. Means for joining together the two adjacent ends of stranded electrical cables comprising, an elongated socket member of one of the metals of the class including aluminum, aluminum alloy and copper having a length of more than ten times the diameter of each of the cables, said member having two parallel normally cylindrical bores extending therethrough and through each of which a cable end portion extends, the wall thickness of said member, at least over a part of the periphery of each bore, being no more than three-fifths of the normal bore radius, the central portion of the sleeve having a bore radius smaller than the terminal portion of the bore, a substantially elongated rigid compressible spreader member lying between the strands of each cable end portion and entirely within the terminal portion of the bore adjacent to the cable end, the walls of said bores being compressed over the cables along substantially the entire length of the socket member to compress the spreader members and wedge the cables within the bores.

3,015,686
ARTICLE OF MANUFACTURE UTILIZING A STRANDED CORE CONSTRUCTION AND METHOD OF MAKING
Hermann C. N. Heckel, Oxford, and Robert T. Jefferson, Jr., Dayton, Ohio, assignors, by mesne assignments, to Rea Magnet Wire Company, Inc., Fort Wayne, Ind., a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 757,789
4 Claims. (Cl. 174—122)



1. An article of manufacture comprising a core made up of twisted elongated copper wires, said twisted wire having dispersed throughout the core strand cavities to provide expansion space, electrical insulation enclosing said copper wire core composed of siliceous resilient material of relatively high temperature softening point, said resilient siliceous insulation being readily slippable relative to said core, and an outer covering of siliceous material which is of relatively lower temperature softening point than said resilient siliceous insulation material, said lower softening point resilient siliceous material adhering to the outer surface of said higher softening point insulation material and providing a continuous layer of insulation material over said copper wire core.

3,015,687
ELECTRICAL COMPONENT TERMINAL
Anthony J. Ruscito, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Nov. 3, 1959, Ser. No. 850,728
2 Claims. (Cl. 174—153)

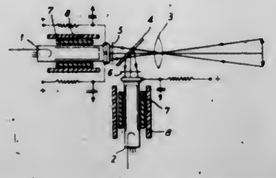


1. A terminal construction in combination with a casing wall for an electrical component having at least two electrical elements cooperating with the terminal construction comprising a single piece insulator member attached to the casing wall, a pair of passages extending into said insulator member from the side adjacent the wall, a pair of adjacent recesses formed inwardly of the insulator side most removed from the attached wall in alignment with each of the passages, terminal posts positioned in each of said recesses, an angular depression formed laterally in the wall of at least one of the passages at its respective recess, an angular portion of the terminal post in the respective recess in locking engagement with said depression, circular flanges formed outwardly in the casing wall toward the insulator member forming apertures having surfaces coincidental with the walls of each passage so that the apertures and the passages are aligned co-axially, electrical connections extending through the casing wall and each of said apertures and passages and joined to the terminal posts, resilient bushings placed around each electrical connection and extending with the electrical connections through the apertures and passages into contact with the terminal posts, the angular portion being attached to the respective electrical connection and the bushing extending along the respective electrical connection being under compression against the angular portion of the terminal post to hold said angular portion in locking engagement in the depression.

3,015,688
COLOR TELEVISION APPARATUS

Denis V. Ridgeway, Cambridge, England, assignor to Pye Limited, Cambridge, England, a company of Great Britain

Filed Apr. 21, 1958, Ser. No. 729,570
Claims priority, application Great Britain Apr. 24, 1957
13 Claims. (Cl. 178—5.4)

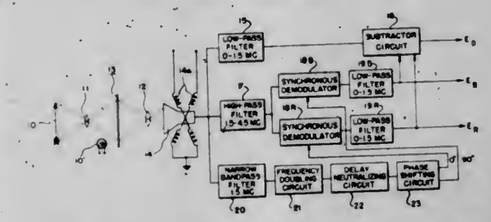


1. A colour television camera incorporating only two camera tubes to analyse a subject in terms of its green, red and blue components, and comprising a first camera tube including means for producing two different signals corresponding to the green and red components of a subject, a second camera tube including means for producing a single signal corresponding to the blue component only of said subject, means for splitting the light from the subject into two beams, and means for focussing said beams respectively on to the two tubes.

3,015,689
COLOR-TELEVISION CAMERA

Charles J. Hirsch, Locust Valley, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois

Filed Aug. 13, 1959, Ser. No. 833,499
8 Claims. (Cl. 178—5.4)



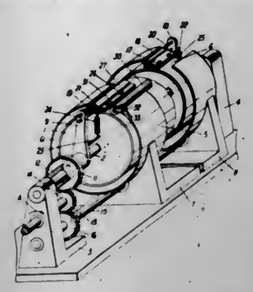
1. A color-television camera comprising: means for deriving an image of a scene to be televised; light filter means for resolving each elemental area of said image in one color and at least two portions of the elemental area in two different additional colors; means for analyzing the light output of all such elemental areas to derive a composite signal comprising one low-frequency component representative of the one color and a high-frequency wave carrying, at different phases, modulation components representative of the two additional colors; means for detecting said modulation components; and means for extracting the low-frequency component from said composite signal.

3,015,690
FACSIMILE APPARATUS

Frederick Percival Mason and Ronald Gilbert Stemp, Croydon, England, assignors to Creed & Company Limited, Croydon, England, a company of Great Britain

Filed Nov. 2, 1959, Ser. No. 850,146
Claims priority, application Great Britain Nov. 20, 1958
12 Claims. (Cl. 178—7.1)

1. Facsimile apparatus comprising means for scanning a message-form, said means comprising a cylinder through a portion of which scanning may be accomplished, a drum arranged coaxially within the said cylinder so as to leave an annular space therebetween, a shaft arranged coaxially through said drum, means rotatable about the axis of the said shaft for causing a message-form to be

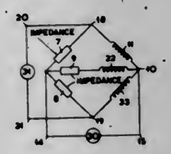


moved over the surface of the said drum and relative thereto within the confines of the said annular space, and means for maintaining any portion of the message-form being scanned in a scanning position against the surface of the drum.

3,015,691
CIRCUIT ARRANGEMENT FOR THE IMAGE-DEFLECTION AND LINE-DEFLECTION COILS OF AT LEAST TWO CATHODE-RAY TUBES

Teunis Poorter, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Feb. 4, 1959, Ser. No. 791,059
Claims priority, application Netherlands Feb. 8, 1958
10 Claims. (Cl. 178—7.5)



1. A deflection circuit for a cathode-ray tube system of the type including a pair of cathode-ray tubes having coplanar axes intersecting at a point on the optical axis of the system, the axes of said tubes being outside of said optical axis, said circuit comprising a bridge circuit, a pair of separate deflection coil means for said tubes, said pair of deflection coil means comprising adjacent arms of said bridge circuit, a source of deflection signals for said coil means, means applying said deflection signals between diagonal junctions of said bridge circuit, a source of correction signals for correcting of distortion attributable to the non-parallel disposition of said axes, and means applying said correction signals to the remaining junctions of said bridge circuit.

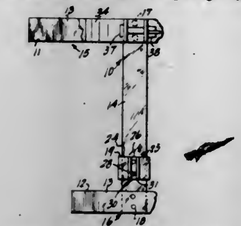
3,015,692
CATHODE RAY PICTURE TUBE TEST TOOL

Ervin W. Herrington, 127 Gleason Ave., Vallejo, Calif.

Filed Mar. 20, 1959, Ser. No. 800,750
5 Claims. (Cl. 178—7.8)

2. In a cathode ray picture test tube tool having a front member and a rear member, a slide member connecting said front and rear members, and a flexible band centrally mounted on said front member and adjustable to resiliently hold the front end of a picture test tube; combined supporting means for the neck of the picture tube, and positioning and retaining means for the core of the picture tube, comprising a slider adjustable on said slide member, and opposed arcuate spring fingers

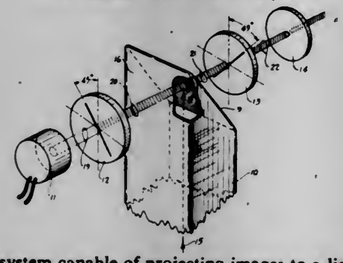
forming an extension upwardly from said slider for supporting the neck of the tube with the spring fingers having extensions to span the passage in a core mounted on the neck to retain the core in predetermined adjusted position.



3,015,693
OPTICAL PROJECTION OF A CATHODE RAY TUBE IMAGE

Herman W. Volberg and Laurence R. Beach, San Diego, Calif., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Oct. 29, 1958, Ser. No. 770,420
5 Claims. (Cl. 178—7.87)



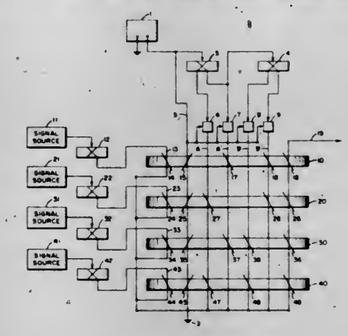
5. A system capable of projecting images to a light display means of images projected on the screen of a cathode ray tube, comprising in combination, a light source means for providing a light beam, cathode ray tube means having an electron beam and a screen positioned at approximately a 45 degree angle to the path of said electron beam, said screen being positioned in the path of said light beam with the surface of said screen arranged at approximately a 45 degree angle to said path, first polarizing means positioned in the path of said beam between said screen and said light source for projecting said light beam in only a predetermined polarized acceptance plane through said screen, said screen including means for interrupting the polarized condition of portions of said light beam passing through said screen in areas where said electron beam contacts said screen, a second polarizing means positioned in the path of said beam and having an angle of acceptance normal to the angle of acceptance of said first polarizing means for passing said portions of said light beam whose polarized condition has been interrupted by said screen and for substantially preventing the passage of the remainder of said light beam, and projection means for displaying the portions of said light beam passing through said second polarizing means.

3,015,694
SOLID STATE BINARY CODE MULTIPLEXING AND DEMULTIPLEXING DEVICE

Freddy David, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed July 16, 1959, Ser. No. 827,655
8 Claims. (Cl. 178—50)

1. In a time position multiplexing and demultiplexing device, a given number of magnetic members each of which is capable of being magnetically saturated in either a first or second condition of saturation, a pulse source for sequentially producing pulses, a pulse counter coupled to said pulse source for cyclically counting the pulses sequentially applied thereto up to a number equal to said given number, said pulse counter producing a signal output manifesting the count registered thereby, means including AND gate means coupled to said pulse source and said pulse counter for applying said signal output only during the presence of a pulse from said pulse source to all said magnetic members to maintain all said magnetic members except only a selected one thereof in said first condition of saturation and thereby permit only said

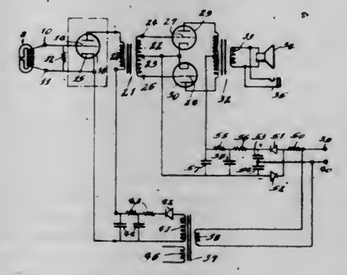


selected one of said magnetic members to be switched from one condition of saturation to the other, said selected one of said magnetic members being determined by the count registered by said pulse counter, and means for applying a switching signal which occurs simultaneously with a pulse from said pulse source to all said magnetic members tending to switch all said magnetic members from said first condition of saturation to said second condition of saturation, whereby only the one of said magnetic members selectively determined by the count registered by said pulse counter at the time said switching signal is applied may be switched to said second condition of saturation.

3,015,695
AMPLIFIER SYSTEM FOR MAGNETIC RECORDER-REPRODUCER

Carl W. Claras, Western Springs, and Theodore Wickstrom, Skokie, Ill., assignors, by mesne assignments, to Revere Camera Company (formerly Samica Corporation), a corporation of Delaware

Filed Jan. 31, 1958, Ser. No. 712,560
2 Claims. (Cl. 179—1)



1. In a magnetic recorder-reproducer having a reproducing head in which low-level potential is generated,

an amplifying system for amplifying said potential and delivering output power, said amplifying system en-

ergized from an alternating current power line and comprising:

a pre-amplifier stage connected to said reproducing head;

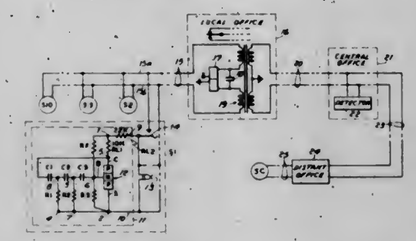
a power output stage including an input transformer connected to said pre-amplifier stage and an output transformer connected to a speaker and adapted to be connected to auxiliary output equipment, said power output stage having space current requirements of at least five times the space current requirements of said pre-amplifier stage;

a power supply for said pre-amplifier stage inductively connected to the alternating current power line and including a step-up power transformer connected to said power line and rectifier and filter means connected between said step-up power transformer and said pre-amplifier stage;

and a separate power supply for said power output stage conductively connected to the alternating current power line and including resistance, capacitance and rectifier means connected between said power line and the secondary of said input transformer and the primary of said output transformer;

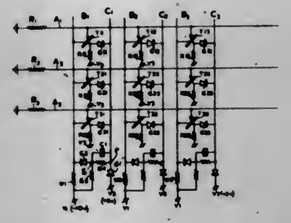
whereby said pre-amplifier stage is isolated from conductive connection with the power line so that hum conditions are minimized and auxiliary input equipment safely may be connected to said pre-amplifier stage, and whereby said power output stage which is conductively connected to the power line is isolated from said pre-amplifier stage and from the speaker and auxiliary output equipment by said input and output transformers respectively.

3,015,696
TRANSISTOR OSCILLATORS
Henry F. Herbig, Smoke Rise, N.J., and Edward R. Schmidt, Rochester, N.Y., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 8, 1957, Ser. No. 633,066
16 Claims. (Cl. 179—17)



13. A telephone party line subscriber station having dial contacts adapted to be coupled for operation across a party line and an oscillator operable at a frequency assigned for identification of said station, said oscillator comprising a transistor having emitter, base and collector electrodes, a resistance-capacitance feedback network coupled between collector-to-emitter output and base-to-emitter input of said transistor for producing oscillation at said assigned frequency, a pair of connecting leads, load resistance means connected between said collector electrode and one lead of said pair, said emitter electrode being connected to the other lead of said pair, non-inductive means connecting said pair of leads across said dial contacts for coupling D.C. supply power from said line to said oscillator and for coupling A.C. output at said frequency from said oscillator to said line only when said contacts are opened to simultaneously transmit a D.C. circuit interruption pulse.

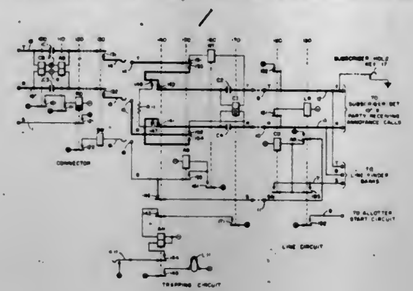
3,015,697
ARRANGEMENT IN AUTOMATIC SIGNALLING SYSTEMS FOR ESTABLISHING SIGNAL CONNECTIONS
Jacob Fredrik Klinkhamer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 22, 1957, Ser. No. 654,312
Claims priority, application Netherlands June 5, 1956
5 Claims. (Cl. 179—18)



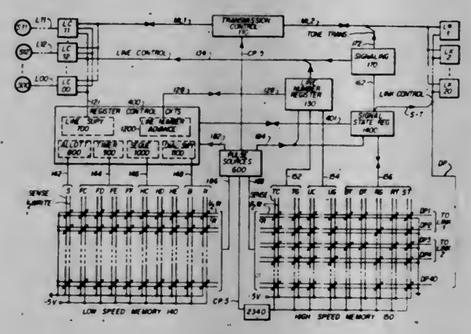
1. An automatic signalling system comprising a first group of a plurality of conductors, a second group of a plurality of conductors, a plurality of transistors each having emitter, collector and base electrodes, means connecting said emitter, electrodes respectively to the conductors of said first group, means connecting said collector electrodes respectively to the conductors of said second group, means for biasing the electrodes of said transistors to render the emitter collector paths thereof normally nonconducting, means for varying the voltage of one or more of said conductors to cause a selected one of said transistors to become conductive through the emitter-collector path thereof, a plurality of electrical terminals respectively associated with each conductor of said second group, means respectively connecting each of said terminals to the base electrodes of all of the transistors which have their collector electrodes connected to the associated conductor of said second group, a plurality of first rectifiers connected respectively between said terminals and a point of constant potential, and a plurality of networks each comprising a rectifier and a resistor connected in series and a capacitor connected across said resistor, said networks being connected respectively between each of said terminals and the associated conductor of said second group.

3,015,698
ANNOYANCE CALL TRAPPING CIRCUIT
Robert F. Pedrick, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 8, 1959, Ser. No. 818,582
6 Claims. (Cl. 179—18)

1. An annoyance call trapping circuit for preventing the release of switching means for connecting a first line associated with a first subscriber set of a calling party to a second line associated with a second subscriber set of a called party through a connector circuit and a line circuit, said trapping circuit comprising, means for releasing the switching means upon the receipt of a signal over the second line indicative of an inactive condition of the second subscriber set, means for initiating the holding of the switching means regardless of the state of activation of the second subscriber set, means responsive to the operation of said initiating means for preventing an inactive condition of the second subscriber set from actuating said means for releasing thereby to facilitate the tracing of the annoyance call, and means responsive to the operation of said initiating means for altering the state of the line circuit so that a call may be placed at the second subscriber set while the annoyance call is being traced.

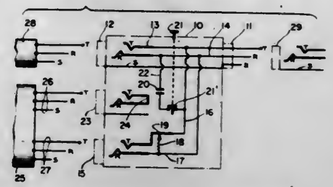


3,015,699
ELECTRONIC SWITCHING SYSTEM
Alfred H. Faulkner, Redondo Beach, Calif., and Donald K. Melvin, Arlington Heights, Ill., assignors to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Sept. 30, 1959, Ser. No. 843,380
73 Claims. (Cl. 179—18)



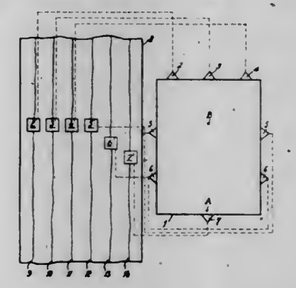
1. In a time division multiplex communication system, a first group of transmission paths each having a terminating unit individually connected thereto, a second group of transmission paths each having a connecting unit individually connected thereto, a time division multiplex transmission medium between and common to said terminating units and said connecting units, each of said terminating units and each of said connecting units including a transmission gate interposed between its transmission path and the common transmission medium, and common control equipment shared on a time division multiplex basis by said connecting units, said common control equipment including circulating memory means for selectively storing the identity of the individual terminating unit to be effectively connected over said common transmission medium with an individual connecting unit in a given call and for storing the sequence state of said call, and including apparatus time shared by the individual calls during repetitive pulse cycles of, and controlled by, the circulating memory means for selectively supplying cyclically recurring enabling pulses to the respective transmission gates to establish said effective connection in accordance with said stored information, and for selectively altering said stored information in accordance with received supervisory signals.

3,015,700
HEAD SET ADAPTER FOR CORD OPERATED SWITCHBOARDS
Lawrence J. Semon, 918 Ocean Front, Santa Monica, Calif.
Filed Oct. 31, 1960, Ser. No. 66,017
3 Claims. (Cl. 179—42)



1. A head set adapter for cord-operated telephone switchboards, comprising: a plug member having a standard plug at one end and a standard jack socket at its other end; conductor means in said member connecting said standard plug to said standard socket; a head set socket having terminals in said plug member connected in parallel with said conductor means; a resistance element in said member normally connected across said terminals of said head set socket; contact means within said member connected between one end of said resistance element and one of said terminals of said head set socket, said contact means being positioned to be engaged by a head set plug upon insertion into said head set socket for disconnecting said resistance element and to be released by said head set plug upon removal of said head set plug for reconnecting said resistance element; a condenser in said member; and manually operable switch means for connecting said condenser across said conductor means to inhibit aural shock when inserting said standard plug into a switchboard.

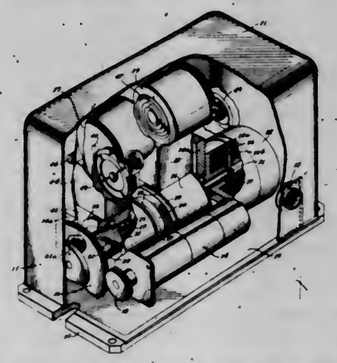
3,015,701
SOUND REPRODUCTION SYSTEM
Derk Kleis and Roelof Vermeulen, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 21, 1955, Ser. No. 548,211
Claims priority, application Netherlands Nov. 30, 1954
3 Claims. (Cl. 179—100.1)



1. A sound reproduction system for an enclosed area comprising a sound record having a plurality of primary sound tracks recorded thereon, a plurality of secondary sound tracks recorded on said sound record, said secondary tracks recording different intensities of substantially the same sound as that of said primary tracks, means for scanning said primary tracks comprising a reproducing head positioned in operative relation with each of said primary tracks, means for scanning said secondary tracks comprising a reproducing head positioned in operative relation with each of said secondary tracks, a

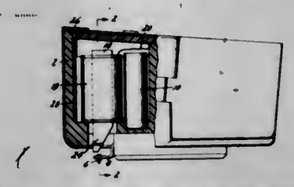
plurality of loudspeakers positioned along the boundaries of said area for reproducing the sound recorded on said sound record, means for connecting each of the primary track reproducing heads to each of a predetermined group of said loudspeakers, said predetermined group being positioned at one side of the area to produce a source of localized sound, and means for connecting the secondary track reproducing heads to the remaining loudspeakers, said remaining loudspeakers being positioned around said area at different predetermined distances from said predetermined group to produce a source of non-localized sound, each reproducing head associated with a specific secondary track being connected to a remaining loudspeaker at a specific predetermined distance, said secondary track reproducing heads being so positioned with respect to each other that the reproduction of sound by said remaining loudspeakers is delayed by predetermined periods of time relative to the reproduction of sound by said predetermined group of loudspeakers.

3,015,702
MULTICHANNEL AUDIO WARNING SYSTEM
Alvin R. Vogel, Los Angeles, David E. Ruch, Playa Del Rey, and Leland W. Bagby, La Puente, Calif., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed May 29, 1959, Ser. No. 816,948
17 Claims. (Cl. 179—100.2)



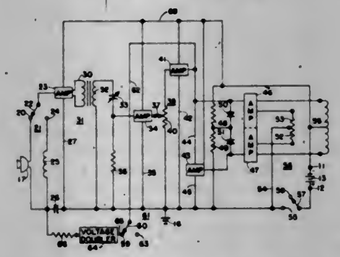
15. A multiple channel audio warning system comprising a first and a second two-reel magnetic tape assembly each having a multiple-channel magnetic head, a motor, a two-way clutch driven by said motor and engageable with a take-up reel of either of said tape assemblies, a recoil spring in each tape assembly connected to a recoil reel thereof for automatic rewinding when its associated tape assembly is not engaged by said clutch, an input energizing circuit for each channel of said system, said circuits being normally open and inactive, control means responsive to closing of any one of said input circuits to energize said clutch in one direction and connect the magnetic head corresponding to the energized channel and driven tape assembly to a signal output, limit switch means in each tape assembly actuated at the end of forward travel thereof and connected to reverse said control means to operatively start and connect the corresponding head of the other tape assembly while allowing the first to rewind, priority logic means interconnecting all said input circuits to reverse said control means when a higher priority input circuit is closed while a lower priority input circuit is already closed, and delay means connected between said limit switch means and said control means to delay reversal thereof when a higher priority input circuit is closed while a disengaged tape assembly is still rewinding.

3,015,703
STEREOPHONIC MAGNETIC PHONOGRAPH PICK-UP CARTRIDGE
Peter E. Pritchard, Skaneateles, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 21, 1959, Ser. No. 828,602
8 Claims. (Cl. 179—100.41)



1. A phonograph pick-up cartridge having a pair of pole pieces each having a tip, said pole pieces being arranged so that the tips thereof are spaced apart to provide a gap having a width of approximately 0.030 inch, and an elongated armature of magnetic material positioned substantially parallel to the length of said air gap and aligned substantially symmetrically with respect to the tips of said pole pieces, said armature having a neutral position and being movable from said neutral position in all directions in a plane substantially perpendicular to the axis of said armature, said armature being spaced a distance of approximately 0.016 inch from a plane passing through the tips of said pole pieces, said armature having a cross-sectional area of approximately 0.00050 sq. inch, and the thinnest dimension of said cross-sectional area of the armature being no less than one-fourth of the widest dimension thereof.

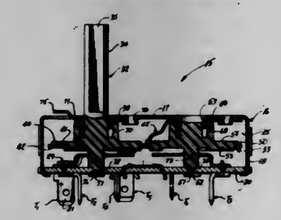
3,015,704
ACOUSTICAL APPARATUS
Donald James Behymer, Minneapolis, Minn., assignor to Maico Electronics, Incorporated, Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 24, 1960, Ser. No. 64,630
9 Claims. (Cl. 179—107)



1. An amplifier for use in a hearing aid having at least four stages of amplification comprising: a first amplifier having first transistor for amplifying input signals received on the base element thereof; a first transducer connected between the base and emitter elements of said first transistor and being responsive to audio frequency sound waves to provide an output signal for driving said first amplifier; a second amplifier including a tone control and having a second transistor for amplifying input signals received on the base element thereof; said base element being connected to said tone control; a transformer coupling the emitter and collector elements of said first transistor to said tone control and said emitter element of said second transistor; a third amplifier having first and second transistor driver stages to provide amplified output signals on the collector elements thereof; a first resistance-capacitance coupling having a variable

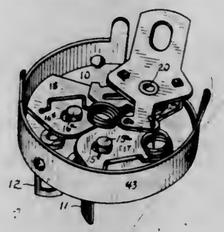
resistor for changing the amount of coupling connected between the collector and emitter elements of said second transistor and the base and emitter elements of said first driver stage; a second resistance-capacitance coupling having a variable resistor for changing the amount of coupling connected between the collector and emitter elements of said first driver stage and the base and emitter elements of said second driver stage; a fourth amplifier having first and second transistor power amplifier stages to provide power output signals on the collector elements thereof, the emitter elements being connected through a pair of plug-in series connected resistances where the common junction of said resistances is connected to the emitter elements of said first, second, and third transistors, and the base elements being connected through a pair of oppositely poled series connected diodes; a third resistance-capacitance coupling connecting the collector element of said first driver stage to the base element of said first power amplifier stage; a capacitive coupling connecting the collector element of said second driver stage to the base element of said second power amplifier stage; a direct voltage source having one terminal connected to the emitter elements of said first, second, and third transistors and having the other terminal connected to the collector elements of said first, second and third transistors, a voltage divider connected in parallel with said direct voltage source having a center tap connected to the common junction of said diodes in said fourth amplifier; a second transducer responsive to electrical signals received between said collector elements of said first and second power amplifier stages and said direct voltage terminal connected to the collector elements of said first, second, and third amplifying means for transforming said electrical signals to audio frequency sound waves; and a signal compressor responsive to the output signals on the collector element of said first driver stage and connected to the base element of said first amplifying means so that distortion of the output signals received by said second transducer are substantially reduced.

3,015,705
DUAL ROTARY SWITCH ASSEMBLY
William B. Dull, Coldwater, Mich., assignor to Kingston Products Corporation, Kokomo, Ind., a corporation of Indiana
Filed Oct. 6, 1958, Ser. No. 765,603
7 Claims. (Cl. 200—6)



1. A rotary switch comprising a substantially rectangular cup-shaped housing open along one wall, a terminal member closing said wall and attached to said housing, resilient contact arms secured to the terminal member and having detent portions extending into the housing interior, a first one-piece actuator member comprising a stem journaled in the terminal member and one wall of said housing and a flange extending radially from said stem inwardly of opposite ends thereof, one side of said flange having cam surfaces formed thereon receiving the detent portions of the resilient contact arms during rotation of the actuator member, a second one-piece actuator member journaled at opposite ends in the terminal member and one wall of the housing and having between said ends a radially extending flange engageable with the flange of the first actuator member for rotation therewith, one side of the flange of the second actuator having cam surfaces formed thereon receiving the detent portions of other resilient contact arms during rotation of the actuator members, the other side of the last-named flange being provided with cam surfaces arranged adjacent the periphery thereof, and resilient positioning means clampingly held between the housing and the second actuator member and having a detent portion engageable with the camming surfaces on the other side of the last-named flange to index the actuator members.

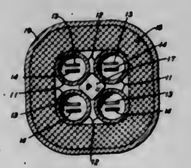
3,015,706
ELECTRIC SWITCH
Ludwig J. Fichter, Chicago, Ill., assignor to Oak Manufacturing Co., Crystal Lake, Ill., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 57,013
4 Claims. (Cl. 200—67)



1. An electric switch comprising a flat insulating base, three fixed contacts carried by said base and extending upwardly from one face thereof, one contact being common and the other two contacts being symmetrically arranged with respect to said common contact, said base having a pivot point position that is symmetrical with respect to said two other contacts, said common contact being disposed between said pivot point and said two other contacts, a pair of flat insulating blades mounted parallel to said one face for pivotal movement with respect to said pivot point along said one face, said blades being spaced from the one face of said insulating base, said blades having the bodies thereof co-planar and being adjacent the contacts, each blade having an aperture in a portion of the blade, said fixed contacts making two contact pairs with said common contact as one of each pair, a blade cooperating with one contact pair, each blade being movable so that the apertured portion thereof moves toward or away from its contact pair, a movable contact for each blade, each movable contact having a portion for engaging the apertured portion of its blade, each blade being movable from a neutral position to a position where its movable contact closes against its cooperating contact pair, an operating member pivoted at said pivot portion, a coiled helical spring for each blade, said two springs having the axes of the coils laterally offset and disposed generally perpendicular to the base, each spring having end portions extending into apertures in said operating member and a corresponding blade, and means for limiting the movement of said blades away from the corresponding cooperating contact pair, said coil springs being arranged so that said operating member transmits a force to each blade whereby when said operating member is in a neutral position, said two blades are in neutral positions with the movable contacts away from the contact pairs so that no electrical connections are established, said operating member when turned in one direction from said neutral position causing one blade only to move its contact toward the cooperating contact

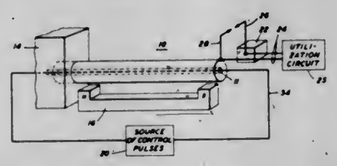
pair to close against the contact pair, said operating member when moved in the other position accomplishing the same for the other blade and its fixed contact, said switch having three stable positions with snap action in moving between positions.

3,015,707
RELAY
George E. Perreault, White Plains, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 19, 1957, Ser. No. 697,465
9 Claims. (Cl. 200—87)



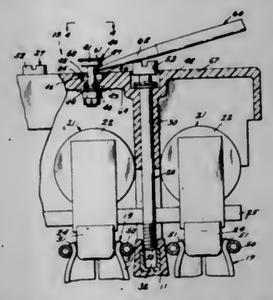
5. A magnetically latched relay comprising four reed switching devices arranged coextensively in a group, each of said switching devices comprising a tubular envelope and a pair of contact reeds mounted at respective ends of said envelope and extending longitudinally thereof so as to present overlapping contact areas, said switching devices being grouped so that, the tubular envelopes being cylindrical, a void space exists in the center of the group, a short permanent magnet disposed in said void space at a longitudinal position which is symmetrical with respect to the switch gaps of said switching devices, and a common energizing coil surrounding said group, said permanent magnet being no longer than one-quarter the length of said coil and providing a magnetic flux for magnetizing said overlapping contact areas only.

3,015,708
COMBINED MEMORY STORAGE AND SWITCHING ARRANGEMENTS
Warren P. Mason, West Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 2, 1959, Ser. No. 824,548
9 Claims. (Cl. 200—87)



1. The combination comprising an elongated cylindrical element of a material susceptible to polarization and having substantial remanent polarization, the element being polarized longitudinally, means rigidly supporting the element at one end, a first electrical contacting means rigidly attached to the other end of the element, a second electrical contacting means supported independently of the element and in close proximity to the first contacting means, a utilization circuit connected to the first and second contacting means, means responsive to a momentary unidirectional signal pulse to impress a transverse field on the element and a source of momentary unidirectional signal pulses of reversible polarity electrically connected to the last-mentioned means, whereby distortion of the element resulting from application of the transverse field causes the first electrical contacting means to move toward the second for one polarity of signal pulse or to move away from the second for the other polarity of signal pulse, remanent polarization of the element maintaining its response position to the last received signal pulse until the next pulse of opposite polarity is received, the combination thereby serving both as a switching device adapted to close and open a wholly metallic circuit and a memory device in which is registered a record of the polarity of the last signal pulse received.

3,015,709
COVER LIFT PIN
August Bodenschatz, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 9, 1959, Ser. No. 805,183
9 Claims. (Cl. 200—114)

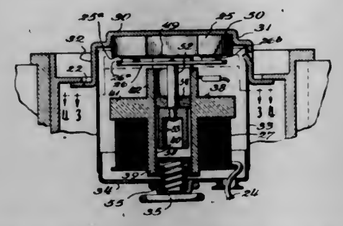


1. A circuit interrupter comprising a base, a circuit breaker mounted to said base, a fuse means operatively connected to said circuit breaker, securing means removably mounting said fuse means to said base; said fuse means being comprised of a cover and a fuse mounted to said cover; said fuse having a first and a second terminal; a third and a fourth terminal mounted to said base and removably engaged with said first and said second terminals, respectively; means carried by said cover and operatively positioned with respect to said securing means so as to be engageable by and cooperable with a prying device which utilizes said securing means as a fulcrum to thereby readily overcome the mechanical force which accompanies the engagement between said fuse terminals and said base mounted terminals when said fuse means is mounted to said base; said means comprising a lift pin having an enlarged head; said securing means being comprised of a screw passing through a clearance hole of said cover; one end of said screw having an enlarged head and the other end of said screw having threads mated with a threaded aperture in said base; said head being positioned beyond a first surface of said cover when said screw is at the entrance of said aperture; said means carried by said cover extending above said cover first surface when the prying device is manipulated to overcome the aforesaid mechanical force.

3,015,710
THERMOSTATIC CONTROL UNIT
William D. Kelly, Western Springs, Ill., assignor to Ferro Corporation, a corporation of Ohio
Filed Sept. 17, 1959, Ser. No. 840,652
5 Claims. (Cl. 219—20)

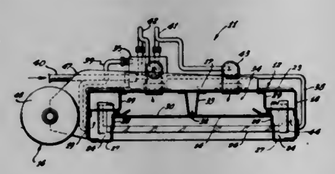
5. A thermostatic control unit for a range element, comprising: a circuit affecting the operation of said range element; a switch in said circuit having contact means movable from a first to a second position; electromagnetic

means urging said contact means toward said first position and connected in a circuit with a variable element controlling the current flowing therethrough; magnet means urging said contact means toward said second position, said magnet means being in heat transfer relation with said element and having a marked, linear magnetic



field strength variation with temperature over a substantial temperature range, the position of said contact means being dependent upon the relation between the temperature of the magnet means and the current through said electromagnet, variation of the current providing a control over the temperature maintained by said element.

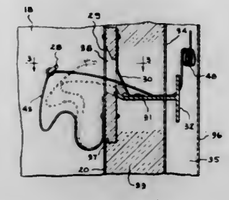
3,015,711
REFLECTOR FOR RADIANT HEATING
Robert A. Bridwell, Lynwood, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Mar. 3, 1959, Ser. No. 796,880
1 Claim. (Cl. 219—34)



In a reflector assembly the combination comprising: a bottomless box-like housing having top, side, and end walls; plate means cooperating with said side and end walls to partially close the bottom side of said housing and define elongated minor chambers adjacent each side wall of said housing; a reflector plate mounted on said housing closing the remainder of said bottom side and cooperating with said plate means top and end walls to define a major chamber; conduit means communicating with said minor chambers adapted to deliver pressurized fluid to said minor chambers; conduit means communicating with said major chamber adapted to deliver pressurized fluid to said major chamber; said last named conduit means including aspirator means whereby ambient fluid is also caused to enter said major chamber; and at least one of said end walls defining apertures through which fluid may exit from said major and minor chambers.

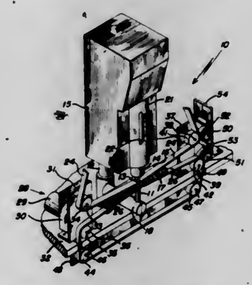
3,015,712
OVEN THERMOSTAT BULB PROTECTOR
Raymond L. Dills, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed June 10, 1960, Ser. No. 35,289
8 Claims. (Cl. 219—35)

1. A thermostat bulb protector for use with an oven comprising a thermostat that has a fluid-filled bulb mounted in the oven and joined on the end of a capillary tube, a protective housing cooperating with the bulb and adapted to be supported on the outside of the oven, spring means for supporting the bulb at a distance from the housing, said spring means being affected by high temperatures in excess of about 500° F. to automatically shift



the bulb out of the oven and into the housing, and cooling means for cooling the housing to protect the bulb from reaching excessive temperatures that might otherwise destroy the bulb and its control fluid.

3,015,713
AUTOMATIC DECONTAMINATION OF WELDING ELECTRODES
Richard C. Eckler, Wayland, and Austin L. Morrill, Marlboro, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 797,983
10 Claims. (Cl. 219—86)

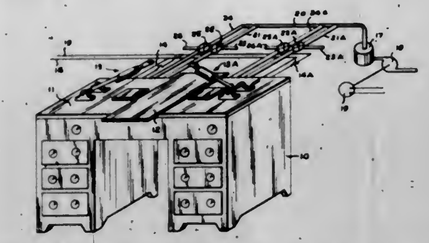


1. In a device for welding together two contacting work pieces, the combination of a pair of welding electrodes between which said work pieces are supported, electrically conductive means disposed between at least one of said work pieces and the electrode adjacent thereto, means for effecting movement of said conductive means relative to said electrodes during the absence of welding, and cleaning means for said conductive means disposed adjacent the path of said conductive means and synchronized with said movement for cleaning said conductive means during movement thereof.

3,015,714
MAGNETIC FORCE WELDING APPARATUS
Thomas F. Hewins, 1917 Bellefonte Drive, Lexington, Ky.
Filed Sept. 15, 1960, Ser. No. 56,138
12 Claims. (Cl. 219—95)

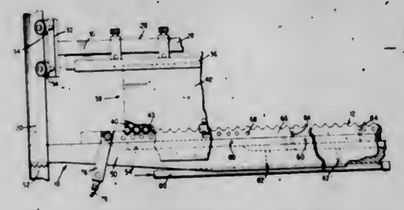
1. Welding apparatus for percussion welding of a stud to a workpiece comprising, a pivotally mounted arm biased for travel toward said workpiece, a collet mounted on said arm adjacent one end thereof for detachably holding a stud, arm-positioning means movable between a first position holding said stud out of contact with said workpiece and a second position permitting said stud to approach and to contact said workpiece, means for actuating said arm-positioning means, an electric

power source connected between said arm and said workpiece and adapted to establish a flow of welding current upon contact of said stud with said workpiece, and



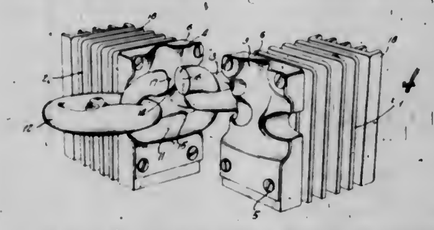
magnetic means operable to urge said stud toward said workpiece immediately prior to, during, and following the flow of said welding current.

3,015,715
METHOD AND APPARATUS FOR RESISTANCE WELDING
James R. Campbell, 1504 Carmelita St., Laguna Beach, Calif.
Filed June 13, 1958, Ser. No. 741,802
2 Claims. (Cl. 219—117)



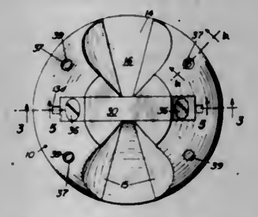
1. In a resistance welding electrode, the combination of: an elongated supporting bar; and welding paltes on opposed surfaces of said bar connectible to a source of welding potential, said welding plates each being of corrugated configuration and incorporating a plurality of welding projections arranged in a continuous corrugated pattern along the length of each plate.

3,015,716
MOLD FOR USE IN WELDING CHAIN LINKS
Arthur D. Pelkey, 32 Joy Road, Peabody, Mass.
Filed Aug. 6, 1959, Ser. No. 832,124
10 Claims. (Cl. 219—130)
(Granted under Title 35, U.S. Code (1952) sec. 266)



1. A device for use in forming a chain which comprises a mold formed of separable metallic sections which abut face to face, the abutting faces of said mold sections being lined with good heat conducting metal in relatively thin form and having between the linings when the sections are assembled a space with a passage therefrom terminating in an opening in a side of the mold, and which space is of a shape and size to receive and hold an incomplete chain link having a gap in one side thereof with the gap adjacent said opening in the side of the mold and a complete link engaged with each end of the incomplete link, whereby a welding electrode may be inserted through said passage for contact with said incomplete link to deposit a filling for closing the gap in said incomplete link, said mold sections having exposed cooling surface area for cooling them and said lining metal.

3,015,717
RUNWAY LIGHT
James F. Angier, Takoma Park, Md., assignor to Structural Electric Products Corp., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,741
5 Claims. (Cl. 240—1.2)



1. A light for installation in a surface over which wheeled vehicles run, comprising a base having a top at least slightly domed, said top and base having an elongated recess therein, and having a slot therein extending from said recess substantially perpendicularly thereof at least in one direction from said recess to the peripheral edge of said base, said slot having walls diverging outwardly from said recess to the edge of said base, said sidewalls being canted outwardly and upwardly from the bottom of the recess and at an angle to the vertical which increases continuously toward the peripheral edge of said base, means for mounting an elongated source of light in said elongated recess comprising a terminal member mounted in said base at each end of said elongated recess, said terminal member having a projection thereon extending upwardly therefrom, and an elongated source of light comprising an elongated lamp, terminal engaging means engaging the ends of said lamp and engaging with the projections on said terminals, a sealing compound around the ends of said lamp and said terminal engaging means, and a cover over said elongated recess removably secured to said domed top, said elongated source of light being secured to said cover.

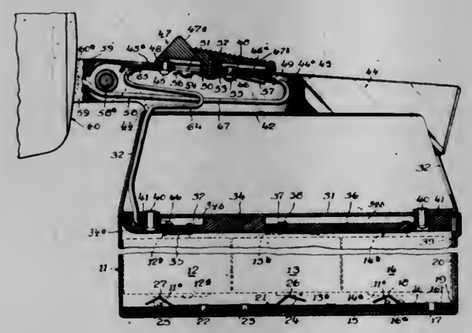
3,015,718
ELECTRICAL ASSEMBLY
Hector D. Petri, Framingham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 779,692
1 Claim. (Cl. 240—8.16)



An instrument panel for mounting on a vehicle or the like comprising a one-piece housing member, first openings formed in said housing member in spaced relation to one another, lamp socket means detachably positioned

in each of said first openings for receiving a light bulb therein, tubular light shield means open at both ends and integrally formed with said housing member around each of said first openings and extending from one surface of said housing member to shield a light bulb when positioned in said lamp socket means and in transverse relationship to the surface of the housing member and in axial alignment with said opening for directing light initiated therein in an axial direction, means forming a gauge housing centrally of said housing member and extending outwardly in substantially transverse relation from the other surface of said housing member in a direction opposite to that of said lamp shield means, at least one second opening formed in said housing member adjacent said gauge housing for positioning lamp socket means therein, printed electrical conductive circuit means formed on the surface of said housing member from which said gauge housing extends, said conductive means including terminal means surrounding said first and second openings for detachable electrical engagement with said lamp socket means positioned therein, and electrical source means carried by said housing member electrically connected to said printed circuit means.

3,015,719
ELECTRIC HAND LAMP
Fredrick J. Kirkman, Freeport, Ill., assignor to Servel, Inc., Evansville, Ind., a corporation of Delaware
Filed Jan. 7, 1960, Ser. No. 1,044
6 Claims. (Cl. 240—10.63)



1. As an article of manufacture, a multicell operated electric hand lamp comprising an elongated cell receptacle, a plurality of cells arranged in a row in said receptacle, a frame removably mounted on said receptacle, said frame including a cover part for the receptacle having a sliding mechanical and electrical interengaging connection with said receptacle and a bail-like handle structure spanning said cover part, and adapted to support a lamp head at the forward extremity thereof and switch parts including a switch button thereon and electrical contact members carried on the under face of the cover part and insulated therefrom and arranged to make electrical connections with the cells simultaneously with the securing of the cover part to said receptacle by sliding the cover part onto said receptacle.

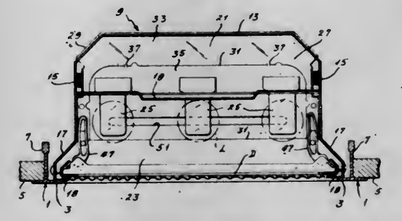
3,015,720
PORTABLE TELESCOPIC OUTDOOR ELECTRIC LANTERN
Richard J. Silverman, 1 Hilltop Road, Searingtown, N.Y.
Filed Mar. 18, 1960, Ser. No. 15,874
1 Claim. (Cl. 240—25)

In a lantern structure, a supporting post, a cylindrical base on said post, a globe mounted on said cylindrical base, a lamp bulb in said base, a socket in said globe for threadedly receiving the base of the lamp bulb, a bracket carrying the socket, a ring supporting the bracket, a threaded nipple mounting the ring, a bushing sleeved over the nipple, one end of the bushing contacting the ring, the other end of the nipple extending outwardly of the bushing, a nut on the extending end of the nipple clamping the bushing between the ring and nut, a tube having one end sleeved over said bushing, the other end



of the tube being reduced in diameter, another tube aligned with the first-named tube and having one end fitted over the reduced end of the first-named tube, the other end of the second-named tube being pointed, and opposed wings on the pointed end of said tube, said cylindrical base having an opening in its side wall, and electrical conductors extending through the opening in said side wall, one end of the conductors connected to the lamp bulb, the other end having a plug for connection to a source of electromotive force.

3,015,721
FLUORESCENT LIGHTING FIXTURES
Edwin F. Guth, Jr., Ladue, Mo., assignor to The Edwin F. Guth Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 4, 1960, Ser. No. 19,587
4 Claims. (Cl. 240—51.11)



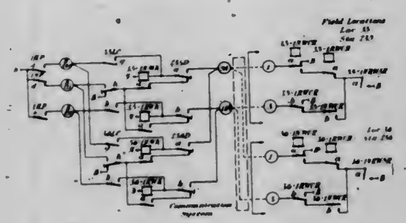
1. In a substantially-enclosed fluorescent lamp fixture for use in a suspended ceiling having panel-supporting rails centered on a predetermined module, the fixture having an elongate housing formed with top, side and end walls and lamp sockets enclosed within the housing at opposite ends thereof, the fixture being adapted to utilize a tubular lamp having terminal prongs at its ends with the dimension between the ends of the prongs being greater than that defined by the opening of said panel-supporting rails; the improvement that comprises said end walls being spaced a distance substantially equal in distance to that of said predetermined module in order to permit the mounting of said fixtures end-to-end with-

in the pattern of the module, and at least one of the end walls being formed with an opening adjacent to but laterally spaced from a socket, said opening being of a size sufficient to admit only the terminal prongs at one end of the lamp, thereby to facilitate the insertion and removal of the lamp without an excessively large housing while maintaining a substantially enclosed condition.

3,015,722
CENTRALIZED TRAFFIC CONTROL SYSTEM FOR RAILROADS

Frank T. Pascoe, Scott Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Feb. 4, 1959, Ser. No. 791,185
43 Claims. (Cl. 246—5)



16. In a system for controlling and indicating at a control point the positions of a group of railway traffic controlling devices at each of a plurality of locations, in combination, a plurality of indication relays at said control point for each device, means controlled by each device for controlling the relays associated with the device to different first combinations of positions for indicating the positions of the device, a controller for each device, and means controlled by each controller for controlling the relays associated with the corresponding device to different second combinations of positions for controlling the positions of the device.

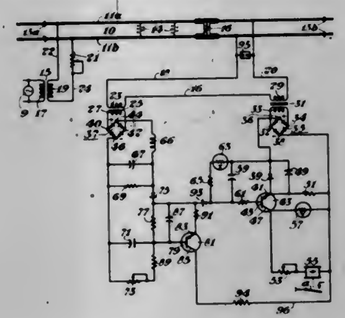
18. A device having at least two operated positions, a plurality of relays, means controlled by said device for controlling said relays to selectively indicate the position of the device, manually operable controllers, and means controlled by said controllers for selectively controlling said relays to store controls for selectively operating the device.

3,015,723
HIGH SHUNTING SENSITIVITY TRACK CIRCUITS

Crawford E. Staples, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Oct. 28, 1959, Ser. No. 849,372
8 Claims. (Cl. 246—34)

4. A track circuit for a section of railway track having resistance existing across the track rails, comprising, in combination, means connecting electrical energy to said rails for providing a voltage across said track rails which is a function of the resistance existing across said track rails, first and second means for coupling electrical energy from said track rails to the remainder of said track circuit, said second coupling means providing a substantially constant voltage over a range of voltages appearing across said track rails, said first coupling means providing a voltage which is the difference between the voltage appearing across said track rails and the voltage provided by said second coupling means whereby a voltage change across said track rails due to a change in the resistance across said track rails develops a proportionally larger voltage change across said first coupling means, a track relay, switch means for at times connecting said track relay to receive energy from said second coupling means, means for controlling the operation of said switch means, means

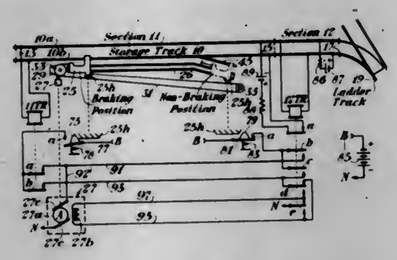


for connecting said controlling means to said first coupling means to receive energy therefrom, said controlling means being deenergized when the resistance across said track rails decreases, and said controlling means when deenergized opening said switch means for a limited period of time to decrease current flow through said relay during said limited period of time.

3,015,724
RAILWAY SKATE CONTROL SYSTEM

Glen V. Jefferson, Edgewood, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Sept. 11, 1958, Ser. No. 760,400
5 Claims. (Cl. 246—182)

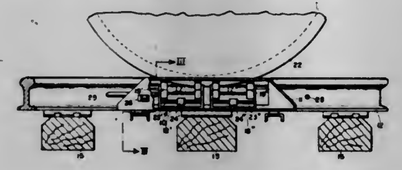


3. In combination with first and second railway track sections, said first track section having a grade, a skate operating apparatus including a skate movable along a rail of said first track section between a car braking position on the rail and a non-braking position off and away from said rail, in the braking position said skate arranged to engage and brake a moving car approaching from a first direction and up said grade, said skate being moved by said car from its braking to its non-braking position, said car when stopped then moving down said grade to clear said first track section, a first control means associated with said first track section for returning said skate to its braking position when said car clears said first track section, a second control means associated with said first track section for moving said skate to its non-braking position when said second track section is occupied.

3,015,725
AXLE COUNTER FOR RAILROAD INSTALLATIONS

Ernst Hofstetter, Wallisellen, and Kurt Haas, Zurich, Switzerland, assignors to Societe Technique pour l'Industrie Nouvelle S.A. "Stin," Vevey, Switzerland

Filed June 3, 1960, Ser. No. 33,840
Claims priority, application Switzerland June 4, 1959
11 Claims. (Cl. 246—247)

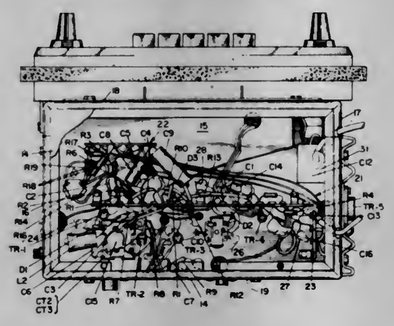


1. An axle counter for railroad installations, comprising an elongated magnet positioned alongside a rail for producing a unidirectional flux through said rail in the region of passage of a wheel over said rail, a pair of electromagnetic transducers spacedly positioned along the rail in air gaps between said rail and respective poles of said magnet, signaling means controllable by said transducers, and circuit means connecting said transducers to said signaling means in balanced relationship for energizing said signaling means only upon the presence of an extraneous body of magnetic permeability different from unity within one of said air gaps.

3,015,726
TRANSISTORIZED AUTOMOBILE RADIO

John S. De Metrick, Lexington, Mass., assignor to Automatic Radio Mfg. Co., Inc., Boston, Mass., a corporation of Massachusetts

Filed Dec. 1, 1960, Ser. No. 73,083
9 Claims. (Cl. 250—20)

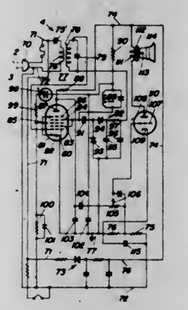


1. A fully transistorized vehicular radio receiver comprising, a substantially rigid chassis of conducting material having a top plate of relatively large area and a plurality of side plates generally perpendicular to and on the same side of said top plate for enclosing all but one side of an electrically shielded volume defined by said chassis, a center row of terminals extending from said top plate on said same side thereof generally parallel to the lengthwise centerline of said top plate along a strip of said top plate including said centerline for most of its length, at least one other row of terminals extending from said top plate on said same side thereof generally parallel to said center row for less than half the length of said plate, I.-F. transformers all extending from said top plate on the other side of said top plate with only the terminals of said transformers extending from said top plate on said same side, a shield surrounding each I.-F. transformer, ground terminals contacting said chassis, a plurality of radio frequency circuits comprising, resistors, capacitors, inductors, transistors and semiconductor diodes interconnecting, soldered to and supported by said terminals and located within said shielded volume, and a bottom conducting plate secured to said side plates and covering said all but one side, all the transistors in the radio frequency circuits of said receiver being located within said electrically shielded volume and shielded from said I.-F. transformers by means including both said top plate and said I.-F. transformer shields.

3,015,727
HIGH FREQUENCY CALL SYSTEM

Ronald Howard and George P. M. Cochrane, both of 24 Ehrenbachgasse, Kitzbuhel, Austria

Filed Feb. 18, 1957, Ser. No. 640,760
7 Claims. (Cl. 250—20)

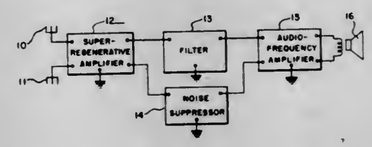


1. A receiver for carrier signals modulated with intelligence signals comprising amplifying means for the intelligence signals including first electron tube means, negative bias means for normally biasing said first electron tube means to cutoff, circuit means including second electron tube means for reducing the negative bias on said amplifying means in response to receipt of carrier signals, said last mentioned means including means for varying the gain of said amplifying means inversely with variations in the integrated amplitude of the carrier signals.

3,015,728
NOISE SUPPRESSOR SYSTEM FOR A SUPERREGENERATIVE RECEIVER

Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois

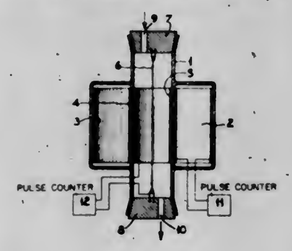
Filed Oct. 22, 1959, Ser. No. 847,989
6 Claims. (Cl. 250—20)



1. A noise suppressor system for a super-regenerative receiver comprising: first means for supplying a modulated quench signal; second means coupled to said first means for selecting a portion of the frequency spectrum of said modulated quench signal, said portion lying between adjacent harmonics of quench frequency and separated from said harmonics by a frequency differential

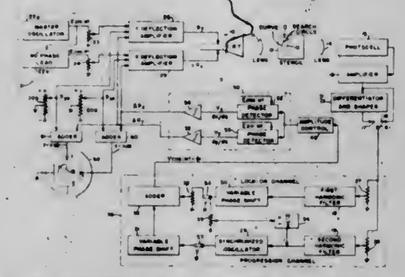
exceeding the maximum modulation frequency; and means coupled to said second means for deriving from said selected signal a control effect dynamically responsive to noise information and for using the control effect to control the audio gain of said receiver.

3,015,729
APPARATUS FOR MEASURING THE RADIOACTIVITY OF PARTICLES IN A GAS
Jacob Hendrik Spaa and Edward Fokko de Haan, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 18, 1958, Ser. No. 749,525
Claims priority, application Netherlands July 26, 1957
10 Claims. (Cl. 250—83.6)



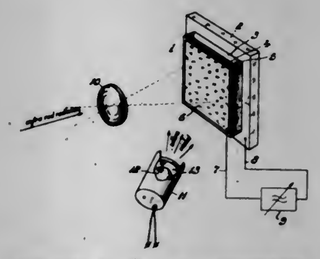
1. Apparatus for measuring the radioactivity of particles in a gas with a Geiger type counter, comprising anode and cathode electrodes of substantially tubular configuration arranged in concentric spaced relationship, means for directing said gas through the inner one of said electrodes, a closed substantially tubular housing enclosing said electrodes, and means positioned in said inner electrode for causing the electrostatic precipitation within said inner electrode of particles from said gas.

3,015,730
ELECTRONIC CURVE FOLLOWER
Charles W. Johnson, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 26, 1956, Ser. No. 618,553
13 Claims. (Cl. 250—202)



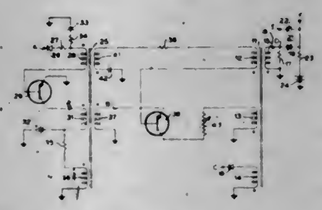
1. An electronic curve follower, comprising curve display means, an electron beam device having electron beam producing means, means to focus said beam to a scanning spot on a search surface, and means to deflect said beam and said spot; means placing said curve display means and said search surface in reciprocally imaged relationship; means to apply first and second sinusoidal voltages to said deflection means, said first and second sinusoidal voltages each having the same frequency and respectively having amplitudes and phase angles such that said deflection means causes said spot to move in a search circle the diameter of which is small by comparison to the length of said curve on said search surface; means co-acting with said electron beam device and said curve display means to derive at least one signal voltage containing information determined by the relationship between said curve and said circle; an oscillator tuned to the frequency of said first and second sinusoidal voltages, means to apply said signal voltage to control the phase of the output of said oscillator, means to derive third and fourth voltages from the output of said oscillator, and means to apply said third and fourth voltages to said deflection means to move the center of said search circle along said curve.

3,015,731
RADIATION INDICATING DEVICE
Johannes Gerrit van Santen and Gesinus Diemer, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 29, 1955, Ser. No. 525,323
Claims priority, application Netherlands Aug. 21, 1954
12 Claims. (Cl. 250—213)



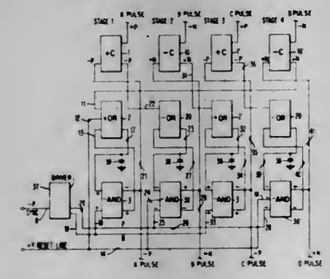
11. In combination, an electroluminescent layer; a photoconductive layer applied over the luminescent layer; said photoconductive layer being composed of photoconductive material susceptible to infrared photoconductive quenching; means coupled between said layers to apply a voltage therebetween; means to illuminate said photoconductive layer with incident light; and means to selectively irradiate said photoconductive layer with infrared to form an infrared image thereon, whereby photoconductive quenching ensues and said electroluminescent layer displays the negative of said image against an illuminated background.

3,015,732
DELAYED COINCIDENCE CIRCUIT
Harry C. Kuntzleman, Newark Valley, and John G. Simek, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 23, 1957, Ser. No. 704,623
8 Claims. (Cl. 307—88)



1. A delay device comprising in combination, an element having first and second stable saturation states and a plurality of stable states intermediate the two saturation states, means for setting said element in said first of said saturation states, means for incrementally urging said element through said plurality of intermediate stable states toward said second stable state, means responsive to each incremental urging before said element reaches said record saturation state for producing an output pulse, an "AND" circuit, means for applying said output pulses to one side of said "AND" circuit, and means for applying second pulses to the other side of said AND circuit, whereby an output will be produced from said "AND" circuit only if said second pulse occurs within a predetermined number of time increments after said element is set in said first state of saturation and before said element reaches its second stable state.

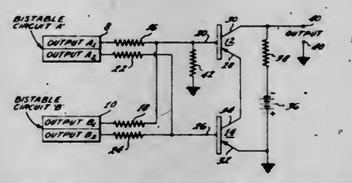
3,015,733
BIPOLAR SWITCHING RING
Joseph P. Vignos, Binghamton, N.Y., and Donald P. Shoultes, Charleston, S.C., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 12, 1960, Ser. No. 1,966
9 Claims. (Cl. 307—88.5)



1. A sequentially operable switching ring for issuing bipolar signals comprising: a first stage of positive logic elements responsive to a coincidence of at least two positive signals to provide P type bipolar signals having voltage excursions referenced to a negative potential; a second stage of negative logic elements responsive to a coincidence of at least two negative signals to provide N type bipolar signals having voltage excursions referenced to a zero potential; interstage coupling means responsive to one type of said bipolar signals issued by a stage to provide a converted signal which is of the other type to the immediate following stage; a source of recurring positive and negative signals including means for supplying said signals to the respective positive and negative logic elements; and logic means for gating each stage of logic elements with the appropriate converted signal to effect coincidence in the signals applied to each stage, thereby rendering said stages sequentially operable.

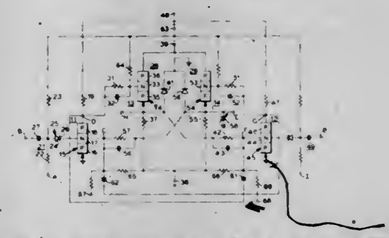
3,015,734
TRANSISTOR COMPUTER CIRCUIT
John Paul Jones, Jr., Pottstown, Pa., assignor to Navigation Computer Corporation, a corporation of Pennsylvania
Filed Oct. 18, 1956, Ser. No. 616,805
4 Claims. (Cl. 307—88.5)

1. An exclusive or circuit comprising in combination, a first transistor and a second transistor each having common and output electrodes connected in series for direct-current and each having an input electrode, said transistors being connected in said circuit to provide an output variation only when both of said transistors are conductive, means providing an output circuit connected with one of said transistors for deriving an output signal in response to a conductive condition of both of said transistors, first bistable means having a first and a second output terminal providing complementary output voltages, means direct-current conductively connecting said first output terminal with the input electrode of said first transistor and said second output terminal with the input electrode of said second transistor, second bistable means having a third and fourth output terminal providing complementary output voltages, said first and third output terminals providing substantially identical output voltages only when said first and second bistable means are in the same stable state and providing complementary output voltages only when said first and second bistable means are in complementary stable electrical states, said



second and fourth output terminals providing substantially identical output voltages only when said first and second bistable means are in the same stable state and providing complementary output voltages only when said first and second bistable means are in complementary stable electrical states, and means direct-current conductively connecting said third output terminal with the input electrode of said first transistor and said fourth output terminal with the input electrode of said second transistor whereby said first and second transistors are simultaneously conductive only when said first bistable means is in one stable electrical state and said second bistable means is in another and complementary stable electrical state and the net input to each of said transistors from said bistable means is the same.

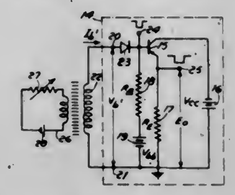
3,015,735
FLIP-FLOP WITH EACH SIDE CROSS-COUPLED TO OTHER SIDE BY CAPACITOR AND EMITTER FOLLOWER IN PARALLEL
Henry Douglas Harford, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 23, 1957, Ser. No. 704,638
3 Claims. (Cl. 307—88.5)



1. A trigger circuit comprising; first and second PNP transistors each having an emitter connected to a fixed potential level, a base, and a collector connected through a resistor to a source of potential negative with respect to said fixed potential; third and fourth PNP transistors each having an emitter connected through a resistor to a source of potential, a base, and a collector connected to a source of potential negative with respect to said fixed potential; means coupling the collector of said first transistor with the base of said third transistor; means coupling the collector of said second transistor with the base of

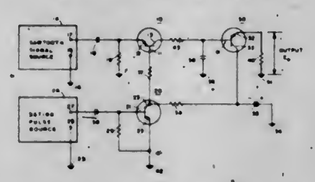
said fourth transistor; a resistor and capacitor connected in parallel between the emitter of said third transistor and the base of said second transistor; a resistor and capacitor connected in parallel between the emitter of said fourth transistor and the base of said first transistor; a capacitor connected between the collector of said first transistor and the base of said second transistor; and capacitor connected between the collector of said second transistor and the base of said first transistor.

3,015,736
TRIGGER CIRCUIT
Robert T. Schultz, Glendora, Calif., and John F. Sullivan, Bloomfield, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Dec. 5, 1957, Ser. No. 707,839
8 Claims. (Cl. 307—88.5)



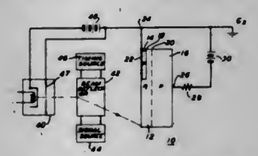
1. A trigger circuit for generating pulse signals comprising a negative resistance circuit including a transistor having a base electrode, an emitter electrode and a collector electrode, said transistor having a current amplification factor alpha greater than unity, a reference potential, a source of bias voltage coupled between said reference potential and said collector electrode, and means coupling said emitter electrode to said reference potential; a saturable inductor coupled between said base electrode and said reference potential; a trigger input connected to said base electrode to initiate a pulse cycle for the generation of said pulse signals; said saturable inductor saturating at a given value of current within each pulse cycle, the pulse width of said pulse signals being determined by the time required for said saturable inductor to reach saturation; and means coupled to said emitter electrode to remove said generated pulse signals.

3,015,737
TRANSISTORIZED PHASE DISCRIMINATOR
Ben A. Harris, Clyde W. Baxter, and Neil L. Wiseman, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,058
10 Claims. (Cl. 307—88.5)



1. A phase discriminator of the type which produces a direct current potential level proportional to the relative phase relationship between a saw-tooth reference signal and randomly occurring gating signal pulses comprising a first control device having at least a first input electrode, a first output electrode, and a first control electrode; a second control device having at least a second input electrode, a second output electrode, and a second control electrode; a source of saw-tooth reference signal potential; first coupling circuit means for applying said saw-tooth reference signal potential to said first input electrode in a polarity for conditioning said first control device for conduction; a voltage divider network including said second control device; a bias potential source connected across said voltage divider network; direct current coupling means for applying the potential across said second control device to said first control electrode in a polarity for biasing said first control device off; a source of gating pulses; second coupling circuit means for applying randomly occurring gating signal pulses from said source of gating pulses across said second input and control electrodes in a polarity for producing conduction through said second control device over the duration of the gating signal pulse thereby reducing the bias potential applied to the said first control electrode for permitting said first control device to translate said saw-tooth reference signal over the duration of the gating signal pulse; and charge storage means connected between said first output electrode and a point-of-reference potential for storing a charge substantially equal to the amplitude of the saw-tooth reference signal potential at the time of the occurrence of a gating signal pulse and maintaining said charge until the occurrence of the next gating signal pulse whereby a direct current potential level is produced which is proportional to the phase relationship between said reference and gating signals.

3,015,738
SIGNAL TRANSLATING DEVICE
Fred W. Kammerer, Morristown, Richard P. Riesz, Berkeley Heights, and Robert L. Wallace, Jr., Warren Township, Somerset County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 17, 1958, Ser. No. 767,980
2 Claims. (Cl. 307—88.5)

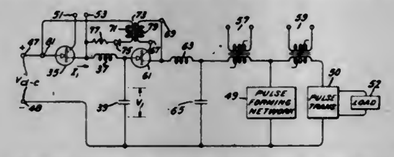


1. Apparatus for translating a signal from a signal source to a load impedance; said apparatus comprising a source of a beam of charged particles, a semiconductor body disposed to have a front surface in target relation with the particle source, the semiconductor body comprising a first zone of one conductivity type forming part of said front surface, a second zone of opposite conductivity type forming the back surface, a third zone of said opposite conductivity type forming the remaining part of said front surface, low resistance electrodes contacting said second and third zones, said first zone of one conductivity type being free of any electrodes, means for directing a beam from said source upon said front surface, means for connecting said third zone electrode to a point of substantially fixed potential, said load impedance being connected between said second zone electrode and said point of fixed potential, and means for biasing the PN junction between said first and second zones in the reverse direction.

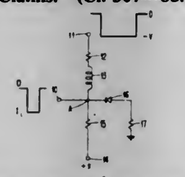
3,015,739
DIRECT-CURRENT CHARGED MAGNETIC MODULATOR
Erich W. Manteuffel, Ithaca, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1958, Ser. No. 771,135
3 Claims. (Cl. 307—88.5)

1. A direct-current charging circuit comprising a first silicon controlled rectifier having an anode, cathode and

gate junction, a first series inductor-capacitor network coupled to the cathode junction of said first silicon controlled rectifier, a second silicon controlled rectifier coupled to the junction of said inductor-capacitor network, said second silicon controlled rectifier having an anode, cathode and gate junction, a second series inductor-capacitor network coupled to the cathode junction of said second silicon controlled rectifier, a series circuit including a first inductor and diode connected between the anode and cathode junctions of said first silicon controlled rectifier, a second inductor connected between the gate and cathode junctions of said second silicon controlled rectifier, said first and second inductors being the primary and secondary windings of a transformer, respectively, a source of direct current voltage, said direct current voltage applied between the anode junction of said first silicon controlled rectifier and each of said first and second series inductor-capacitor networks, and means for triggering the gate junction of said first silicon controlled rectifier.



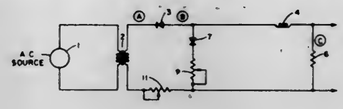
3,015,740
COINCIDENT DIODE GATING PRODUCING AN OUTPUT RESULTING FROM CURRENT OVERSHOOT
Ivars G. Akmenkalns, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,769
3 Claims. (Cl. 307—88.5)



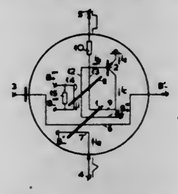
3. A diode gating circuit for selectively passing applied current pulses in response to voltage control signals comprising, a diode having an input terminal, biasing means electrically connected to said input terminal, said biasing means establishing a potential level at said input terminal which renders said diode normally reverse biased, a load circuit connected to said diode, a branch circuit connected to said input terminal and including a resistor and an inductor in series, means for applying a voltage control signal to said branch circuit whereby electrical energy will be stored in said inductor and the potential level at said input terminal will be shifted, and means for applying the current pulses to be passed to said input terminal whereby the potential level at said input terminal will be shifted again sufficiently to forward bias said diode, the electrical energy stored in said inductor discharging as current flow to said load circuit.

3,015,741
PULSE SHAPING CIRCUITRY
Glenn L. Richards, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 22, 1959, Ser. No. 821,995
5 Claims. (Cl. 307—88.5)

1. A pulse shaper comprising, a source of fluctuating D.C. having a pair of output terminals, a first series circuit comprising an inductor and a load impedance, means for coupling said first series circuit across the output terminals of said source of fluctuating D.C., a second series circuit comprising a diode and a potentiometer, and means for coupling said second series circuit across the output terminals of said source of fluctuating D.C.

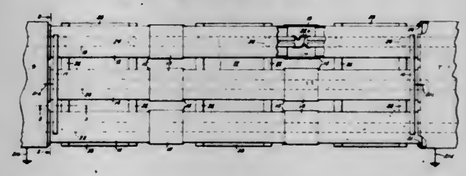


3,015,742
PULSE AMPLIFIER UTILIZING TWO MAGNETIC CORES CONNECTED IN SERIES
Theodoor Hans Hormann, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,524
Claims priority, application Netherlands Aug. 22, 1958
4 Claims. (Cl. 307—88.5)



1. A pulse amplifier comprising first and second magnetic cores of square loop material, said first core having a cocking winding, a first control winding, a first output winding, and a triggering winding, said second core having a reset winding, a second control winding, and a second output winding, amplifying means having input and output circuits, means connecting said cocking winding to a source of cocking signals, means connecting said triggering winding to a source of triggering signals, said first and second control windings being serially connected to said input circuit of said amplifying means, said first and second output windings being serially connected in said output circuit of said amplifying means, and said reset winding being connected to a source of direct voltage.

3,015,743
ELECTRIC BUS DUCT APPARATUS
Wilfred F. Skeats, Lansdowne, Pa., assignor to General Electric Company, a corporation of New York
Filed Mar. 30, 1959, Ser. No. 802,822
20 Claims. (Cl. 307—147)



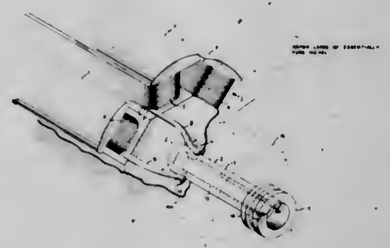
1. Isolated-phase bus duct apparatus comprising at least two spaced-apart ducts of highly conductive material each of which has an external perimeter of at least 32 inches, a phase conductor disposed within each duct, insulating means including columns of insulating material at longitudinally-spaced locations along each conduc-

tor for mounting said conductors in substantially coaxial relationship with respect to their surrounding ducts, connecting means for providing short-circuit connections between said ducts at opposite ends of said two ducts, each of said ducts being electrically continuous between said short-circuit connections so as to enable induced currents to circulate around a loop defined by the series combination of said ducts and said connecting means, each of said ducts surrounding its conductor at substantially all points along the length of the conductor between said short-circuit connections, said connecting means forming short-circuit connections between the ends of said two ducts both during the flow of normal current through said phase conductors and during the flow of short-circuit current through said phase conductors, the resistance per unit length of each duct being such that the vectorial difference between the current in its corresponding phase conductor and the induced current in said duct is less than one third of the phase conductor current.

3,015,744
ROTOR LEADS

Adolph J. Wesolowski, Scottsdale, Ariz., assignor to General Electric Company, a corporation of New York

Filed Aug. 19, 1959, Ser. No. 834,867
4 Claims. (Cl. 310—234)



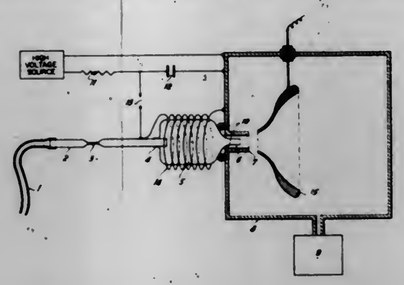
1. A dynamoelectric machine comprising a shaft having salient pole pieces mounted thereon with coils formed of copper thereabout and a current collector mounted on said shaft at one end thereof, means for providing an electrical connection between said current collector and an end of one of said coils adjacent said current collector comprising a rectangular cross section strip of essentially pure nickel brazed at one end thereof to said end of one of coils and brazed at the other end thereof to means on said shaft in electrical contact with said current collector, said nickel strip being unsupported between points of connection.

3,015,745
APPARATUS FOR IONISING A GAS TO OBTAIN HIGH INTENSITY PULSED IONS OR ELECTRONS

Siegfried Klein, Paris, France, assignor to Commissariat a l'Energie Atomique, Paris, France

Filed Sept. 16, 1959, Ser. No. 840,429
Claims priority, application France Sept. 20, 1958
2 Claims. (Cl. 313—63)

1. In apparatus for ionising a gas, a conductive-walled enclosure, a source of gas to be ionised, means for maintaining vacuum in the said enclosure, a second insulating-walled enclosure having a gas inlet and a gas outlet connected to said first enclosure and connected to said source of gas to be ionised, a conductive element at said inlet and a conductive element at said outlet of said second enclosure, an inductive winding around said second enclosure, a condenser, one side of said condenser being connected to one end of said winding, a spark-gap, said spark-gap being connected between the other side of said condenser and a point common to said other conductive element and the other end of said winding, a

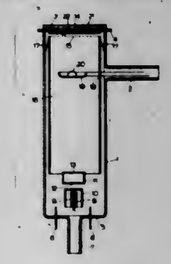


high-voltage source connected to and charging said condenser and an ion extractor electrode inside said conductive-walled enclosure.

3,015,746
ELECTRON DISCHARGE DEVICES EMPLOYING PHOTO-CONDUCTIVE TARGET ELECTRODES

Hans Gerhard Lubszynski, Lawrence, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed Feb. 6, 1956, Ser. No. 563,800
Claims priority, application Great Britain Feb. 15, 1955
2 Claims. (Cl. 313—65)



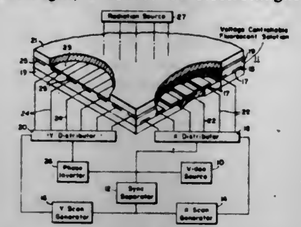
1. A photo sensitive charge storage pick up tube having within an enclosing envelope a target and facing said target an electron gun for generating a beam of electrons, said target comprising a light translucent electrically conducting signal electrode, a porous layer of a photo conductive material disposed on one surface thereof and having a thickness providing a particular capacitance and a solid layer of a photo conductive material deposited on said porous layer, said solid layer having a thickness which provides a higher capacitance than said porous layer, the combined effect of said porous layer and said solid layer with electrons from said gun impinging on said solid layer providing a capacitance to said signal electrode which is less than the capacitance of said porous layer alone.

3,015,747
FLUORESCENT SCREEN

Barnett Rosenberg, New York, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 19, 1959, Ser. No. 821,510
6 Claims. (Cl. 313—108)

1. A color imaging screen comprising a plurality of cell members arranged in parallel relationship, each of said cell members including a solution capable of being transformed from a non-fluorescent to a fluorescent state upon a change of the hydrogen ion concentration of said solution, each of said cells having a different characteristic emission wavelength, a source of electromagnetic radi-

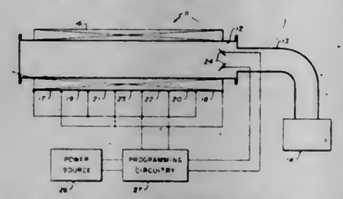


ation positioned so as to irradiate said plurality of cells and a means for changing the hydrogen ion concentration of discrete elemental areas of said cell members.

3,015,748
PYROTRON WITH TRANSLATIONAL CLOSURE FIELDS

Edward C. Hartwig, Walnut Creek, David B. Cummings, Livermore, and Richard F. Post, Walnut Creek, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Feb. 13, 1958, Ser. No. 715,157
21 Claims. (Cl. 313—161)



1. Means for producing a magnetic field for containing plasma and raising same to elevated temperatures comprising an elongated solenoid formed of a plurality of solenoidal segments connected in series, a plurality of electrical energy storage means corresponding to the solenoidal segments on each side of the center one thereof, central electrical energy storage means, a power source connected in charging relationship with said plurality of storage means and said central storage means, a plurality of series switching means correspondingly connected between said plurality of storage means and the solenoidal segments disposed on each side of the center one thereof, a parallel array of switching means connected between the central storage means and the solenoidal segments disposed centrally of the two extreme end segments thereof, a plurality of short circuit switching means correspondingly coupled in shunt with the plurality of solenoidal segments, and programming means responsively coupled to said switching means for correlatively actuating pairs of the series, parallel, and short circuit switching means in inward sequence from both ends of said solenoid as the currents through each succeeding pair of energized segments attain maximum values.

3,015,749
HIGH TRANSCONDUCTANCE CATHODE-RAY TUBE

Jan Carel Francken, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed June 11, 1959, Ser. No. 819,659
Claims priority, application Netherlands July 17, 1958
5 Claims. (Cl. 315—3)

1. A cathode-ray tube comprising an envelope, an electron beam producing electrode system within the envelope and comprising a first cathode, a first control grid, and a first accelerating anode, an amplifying electrode system also within the envelope and comprising a second cathode, a second control grid, and a second anode, an impedance within the envelope, means directly connecting the first and second anodes together and to said imped-

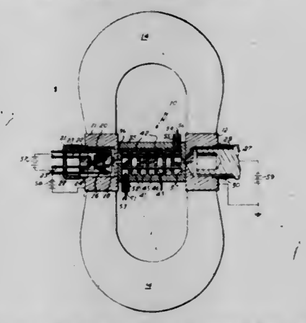


ance, means for applying to the impedance a potential, means directly connecting together the first cathode and the second control grid, and means for applying a signal potential to the connected first cathode and second control grid.

3,015,750
TRAVELING WAVE ELECTRON DISCHARGE DEVICES

John F. Skowron and Donald L. Winsor, Waltham, Mass., assignors to Raytheon Company, Waltham, Mass., a corporation of Delaware

Filed Oct. 1, 1959, Ser. No. 843,689
10 Claims. (Cl. 315—3.5)



3. An electron discharge device comprising: a tubular base member and a plurality of transverse walls defining a series of microwave cavities therein, said walls each having a centrally located aperture, said walls comprising a first group having coupling apertures and a second group having coupling apertures, a respective one of said second group being interposed between each adjacent pair of said first group with said centrally disposed apertures in substantial alignment; conductive members extending between adjacent walls of each of said groups through respective ones of said coupling apertures in the other of said groups in electrically insulated relationship with respect to said coupling apertures to couple together the two of said cavities adjacent each said coupling aperture for the passage of microwave energy therebetween; means for introducing an electromagnetic wave into said device; and means for projecting a beam of electrons through said aligned central apertures.

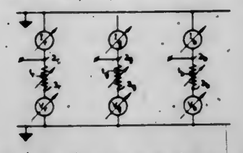
3,015,751
CIRCUIT FOR ADJUSTING THE BACKGROUND BRIGHTNESS IN TELEVISION REPRODUCING DEVICE

Teunis Poorter and Josue Jean Philippe Valeton, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 2, 1959, Ser. No. 796,510
Claims priority, application Netherlands Mar. 7, 1958
10 Claims. (Cl. 315—13)

1. A circuit for adjusting the background brightness of an image reproducing device having at least two electron

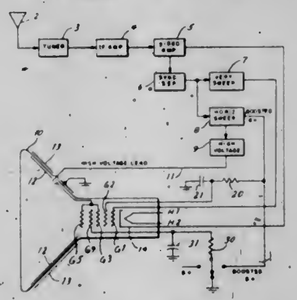
guns, comprising separate means for deriving a bias potential for each of said electron guns and means applying said bias potentials to the respective electron guns, each of said bias deriving means comprising a resistor having two terminals, means providing a first variable potential at one of said terminals with respect to a reference potential, means for varying the potential drop between said terminals independently of the potential at said one terminal, means applying the sum of said first potential and at least a portion of said potential drop to the respective electron gun, and means simultaneously adjusting said portions of the potential drops of said resistors by the same fraction with respect to the voltage between the terminals of the respective resistors.



3,015,752
FLASH-OVER SUPPRESSION IN CATHODE RAY TUBES

Ray B. Schrecongost, Park Ridge, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 798,251
2 Claims. (Cl. 315—16)



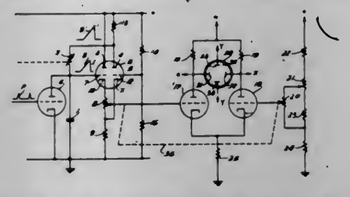
1. In combination in a television system; a cathode ray tube; a plurality of low voltage electrodes in said tube; at least one high voltage electrode in said tube; base means on said tube having connectors for extending connections from outside said tube to said low voltage electrodes; said high voltage electrode being positioned in close proximity to at least one of said low voltage electrodes and producing a potential gradient of a magnitude such that the probability of internal flashovers therebetween is high; means for preventing excessive voltage buildup on said connectors in said base means in the event of said flashovers comprising: a capacitor having a low value of internal series impedance connected in bypass relationship with said one low voltage electrode.

3,015,753
CIRCUIT FOR CONTROLLING THE SWEEP OF A CATHODE-RAY OSCILLOSCOPE

Gerhard Wolf, 5 Chopin Strasse, Munich, Pasing, Germany

Filed Jan. 22, 1958, Ser. No. 710,550
Claims priority, application Germany Jan. 23, 1957
9 Claims. (Cl. 315—26)

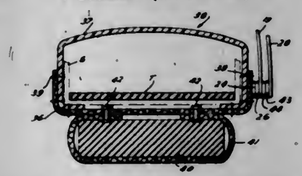
1. In a cathode-ray oscilloscope, in combination, a screen; means for causing a reciprocating sweep of an electron beam in X-axis direction across said screen about a zero position in which the center of said sweep is located at a predetermined point along the X-axis of said screen, and including push-pull amplifier means for amplifying and controlling a first voltage determining said zero position as well as for controlling a first voltage determining said sweep, and linear sawtooth generator means directly coupled with said amplifier means for producing said second voltage under control of said amplifier means; adjusting means for shifting the electron beam in the direction of the X-axis into a shifted position in which the shifted center of the sweep is located a predetermined shifting distance from said predetermined point of said screen, and including means for regulating said first voltage; first control means for varying the total length of said sweep of said electron beam, whenever required, by regulating said second voltage; and second control means coupled with said first control means for simultaneous actuation, for further varying said predetermined shifting distance by further regulating said first voltage in equal proportion with a simultaneous regulation of said second voltage, whereby a selected point along the path of the electron beam across the screen in X-axis direction remains at a fixed distance from an Y-axis line through said predetermined point, irrespective of variations of said length of said sweep.



3,015,754
BODY GROUNDING DEVICES

Walter G. Legge, Brooklyn, N.Y. (% Walter G. Legge Co., Inc., 101 Park Ave., New York, N.Y.)

Original application Sept. 3, 1957, Ser. No. 681,735, now Patent No. 2,933,651, dated Apr. 19, 1960. Divided and this application Oct. 16, 1959, Ser. No. 846,875
4 Claims. (Cl. 317—2)

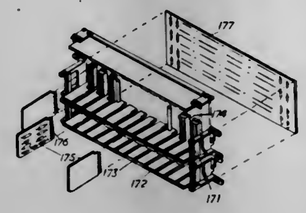


1. In a body grounding device, band means adapted to encircle the fore part of a shoe and extend under the shoe in the region of the instep, said band means including a resilient upper strap portion and a flexible conductive lower strap portion protruding below the heel of the shoe for engagement with a supporting surface, a pad of resilient material secured to said conductive lower strap portion and disposed between the same and the instep of the shoe for cushioning said conductive lower strap portion, a conductor member adapted to be arranged in engagement with the body of the wearer, a flexible conductor connected to said conductor member, and interengageable conductor means carried by said flexible conductor and said conductive lower strap portion releasably connecting said flexible conductor and said conductive lower strap portion for carrying off electrostatic charges from the body of the wearer through said conductive lower strap portion.

3,015,755
ELECTRONIC EQUIPMENT PRACTICE

Esmond Philip Goodwin Wright, Alexander Douglas Odell, and Cecil Parker, London, England, assignors to International Standard Electric Corporation, New York, N.Y.

Filed Mar. 27, 1956, Ser. No. 574,214
Claims priority, application Great Britain Mar. 31, 1955
4 Claims. (Cl. 317—101)

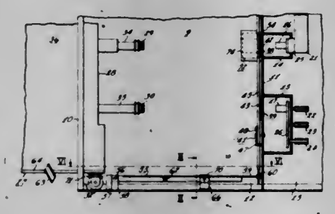


1. A mounting rack comprising a plurality of identical sub-panels, each sub-panel carrying a set of electronic components interconnected in substantially identical circuits, a common panel carrying a plurality of sub-assemblies of mutually distinct electronic components thereon, means for connecting each sub-assembly to at least one of said sub-panels whereby said subpanels together with said sub-assemblies form a complete electronic functional unit, and means on said common panel for interconnecting a given number of such functional units to constitute a complete electronic equipment each and every functional part of which has as its basis the standard sub-panel.

3,015,756
ENCLOSED SWITCHBOARD EMPLOYING SWITCH CARRIER FOR DISMANTLING TRANSFORMERS

Nicholas Kreekon and William H. Lane, Milwaukee, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Nov. 26, 1958, Ser. No. 776,507
3 Claims. (Cl. 317—103)

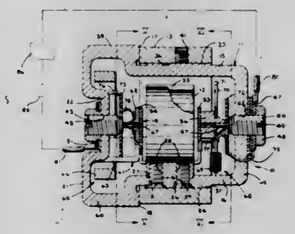


2. An enclosed switchboard having a truck compartment and a conductor compartment, a shutter controlling communication between said compartments and movable between open and closed positions, said shutter comprising a pair of reciprocally mounted blades, means for connecting said blades together in a counterbalancing arrangement for minimizing the force required for actuation thereof, a truck movable into and out of said truck compartment, an electric switch, said switch comprising a relatively movable contact mounted on a stud arranged on said truck and a relatively stationary contact mounted within said conductor compartment, a current transformer, said transformer comprising a coil mounted within said truck compartment adjacent said shutter and within the path of movement of said stud whereby said stud upon movement of said truck into said truck compartment passes through said coil and becomes the primary conductor of said transformer, said shutter being arranged between said coil and said communication between said compartments, and a shutter operating mechanism having means interlocking with said truck for actuating said shutter upon movement of said truck into and out of said truck compartment, said interlocking means comprising a latch for holding said shutter closed when said truck is out of said truck compartment.

3,015,757
FRAME CONSTRUCTION FOR A METER MOTOR

Frank M. Van Campen, Kalamazoo, Mich., assignor to Allen Electric and Equipment Company, Kalamazoo, Mich., a corporation of Michigan

Filed Apr. 7, 1958, Ser. No. 726,661
5 Claims. (Cl. 317—166)



1. A meter motor comprising: a magnetic core having a substantially circular cross section; an integral substantially rectangular frame member having a pair of spaced side walls and a pair of spaced, integral end walls; interfitting means extending through said frame into said core rigidly securing said core to said frame member between said side walls and between and spaced from said end walls, the axis of said core extending through said end walls; a conductive coil within said frame and axially encircling said core, said coil being spaced from, and rotatable with respect to, said core; means pivotally supporting said coil upon said end walls for rotation about the axis of said core; resilient means secured to said frame member and connected to said coil for resisting rotation of said coil about said axis of said core; a stator ring sleeved over said side walls and surrounding the periphery of said core; and positively engaging means securing said frame member to said ring, said ring being coaxial with said core and with said coil, said frame having stop surfaces thereon engaging said stator ring and said core for maintaining predetermined axial alignment therebetween.

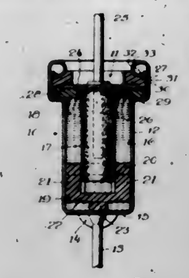
3,015,758
ELECTROLYTIC CAPACITOR

Robert A. Hildebrandt, Arlington Heights, Ralph J. Hovey, Glen Ellyn, and Robert R. Walters, Plainfield, Ill., assignors to Fansteel Metallurgical Corporation, a corporation of New York

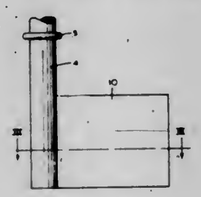
Filed Sept. 20, 1957, Ser. No. 685,289
2 Claims. (Cl. 317—230)

1. An electrolytic capacitor comprising a can-shaped cathode, a porous anode concentrically arranged in said cathode, an anode support seated in said container-shaped cathode supportingly engaging the lower end of said anode and formed of a material inert to said electrolyte, a shoulder on said cathode, a plate secured to the upper end of said anode, a washer on said shoulder and supporting said plate, a gasket overlying said plate and said washer, and means at the end of said cathode clamping said gasket and said plate and said washer together to provide a seal between said cathode and said anode, said

gasket and said washer being formed of materials having matching mechanical characteristics with said anode support and being inert to said electrolyte in a temperature range of from about −75° C. to about +250° C.

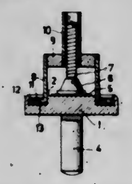


3,015,759
ELECTROLYTIC WOUND CAPACITOR
Roelof Dirk Bügel and Salomon Boone, Centuurbaan, Zwolle, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,155
Claims priority, application Netherlands June 25, 1957
6 Claims. (Cl. 317—230)



1. In an electrolytic wound capacitor wherein at least two strip-like electrodes and interposed spacing material impregnated with electrolyte are concentrically wound about a discrete axial rod mechanically connected with at least one of said electrodes; the improvement characterized by a continuous rod and at least one electrode strip.

3,015,760
SEMI-CONDUCTOR DEVICES
Frits Weil, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,205
Claims priority, application Netherlands June 10, 1959
4 Claims. (Cl. 317—234)



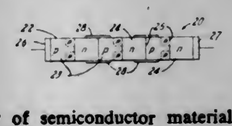
1. A semiconductor device comprising a sealed envelope, said envelope including a one-piece copper base member having a depending, cylindrical, mounting stud, a semiconductor element mounted on said base within the envelope, and a rolled screw-thread on the stud and adapted to be engaged by a nut for attachment of said device to a mounting surface, most of said copper base member having a hardness below 70 VPN, the said rolled screw-thread exhibiting significantly greater hardness than the said most of said copper base member.

3,015,761
SEMI-CONDUCTIVE ELECTRODE SYSTEM
Ludovicus Augustinus Lambertus Esseling, Nijmegen, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 27, 1958, Ser. No. 745,032
Claims priority, application Netherlands July 1, 1957
9 Claims. (Cl. 317—234)



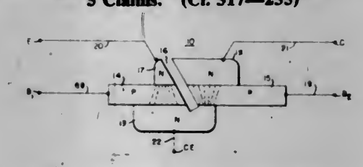
2. A semiconductor device comprising a semiconductive body, and a wire-like element fused at one end to the semiconductive body, the outer wire portions consisting essentially of aluminum and containing a genetic aluminum oxide layer having a thickness between about 3 and 40 microns.

3,015,762
SEMICONDUCTOR DEVICES
William Shockley, 23466 Corta Via, Los Altos, Calif.
Filed Mar. 23, 1959, Ser. No. 801,158
12 Claims. (Cl. 317—234)



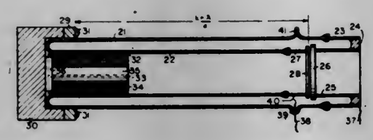
1. A body of semiconductor material comprising a sequence of zones of alternating conductivity types separated by junctions of alternating first and second polarities, and a high density of recombination centers in the vicinity of junctions of the first polarity for providing a low impedance path for current flow from one zone to an adjacent zone across the junctions of the first polarity.

3,015,763
SIGNAL-TRANSLATING DEVICE
William F. Bailey, Valley Stream, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 8, 1956, Ser. No. 570,347
5 Claims. (Cl. 317—235)



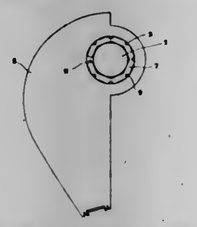
1. A signal-translating device comprising: a body of semiconductive material having therein a relatively flat surfaced intermediate zone of one conductivity type between and contiguous with a pair of outer zones of the opposite conductivity type, said body having a slot extending obliquely through said intermediate zone and one of said outer zones, thereby to define two junction transistor units for which the other of said outer zones constitutes an electrically common collector and emitter region and the portions of said intermediate and one outer zone on one side of said slot constitute base and emitter regions respectively and the portions of said intermediate and said one outer zone on the other side of said slot constitute base and collector regions respectively.

3,015,764
VACUUM CHOPPER SYSTEM
George V. Young, Los Angeles, Calif.
(3002 Pennsylvania Ave., Santa Monica, Calif.)
Original application July 31, 1958, Ser. No. 752,274. Divided and this application July 15, 1959, Ser. No. 831,454
4 Claims. (Cl. 317—250)



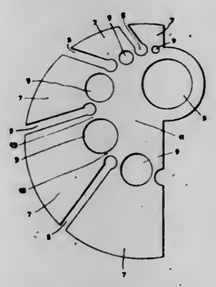
4. In an electrical system for amplifying weak electrical energy a vibratory capacitor comprising a vacuum envelope having a reentrant portion nested within said envelope, one capacitor plate attached to said envelope and a second capacitor plate attached to the extremity of said reentrant portion closely adjacent to said one capacitor plate over one complete surface thereof, a magnetostrictive element attached to said reentrant portion at the end thereof opposite said extremity, a coil to excite said magnetostrictive element within but out of contact with the same, said reentrant portion of said envelope having a length approximately equal to a quarter wavelength of the frequency employed to vibrate said second capacitor plate, and a mass attached to said envelope adjacent said reentrant portion to enhance the vibratory displacement of said second capacitor plate by mechanical resonance.

3,015,765
VARIABLE CAPACITOR
Jan Dirk Repko and Marinus Gerard Verheijden, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 26, 1959, Ser. No. 795,733
Claims priority, application Netherlands Mar. 26, 1958
5 Claims. (Cl. 317—253)



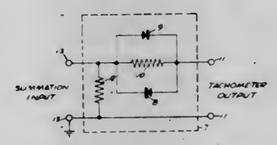
1. A variable capacitor having apertured electrode plates secured at right angles to at least one shaft passing through the aligned apertures of each said plate; the improvement comprising a sleeve of polygonal shape constituted of resilient material which is harder than the material of said plates, said sleeve having a single axial slit and being positioned around said shaft in firm engagement with said shaft at points of tangency, and the other side of said sleeve in firm engagement with said electrode plates, said slit being located with respect to the plates at a point at which said plates have a comparatively large radial dimension, said sleeve comprising a pair of sharp edges defined by a longitudinal groove at the apex of the corners defining the outer surface of said polygonal sleeve whereby said sharp edges penetrate into said plates, the portion of said sleeve between said edges comprising a chord of an arc defined by said edges and the aperture of said plates.

3,015,766
VARIABLE CAPACITOR
Jan Dirk Repko, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 26, 1959, Ser. No. 795,795
Claims priority, application Netherlands Mar. 29, 1958
1 Claim. (Cl. 317—253)



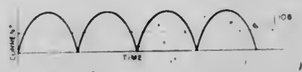
A capacitor plate for a variable capacitor the improvement comprising a plurality of wing means defining a plurality of radially elongated slits extending from the outer periphery of said plate and each terminating in an aperture spaced from a shaft opening in said plate, a plurality of apertures located between the adjacent apertured ends of said radial slits and separated from said slits whereby each of said wings are connected to the uninterrupted portion of said plate located between said slits and said shaft opening by a pair of bridge means.

3,015,767
TACHOMETER STABILIZATION NETWORKS
Hugh P. Taylor, Littleton, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,927
3 Claims. (Cl. 318—28)



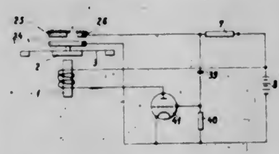
2. A servo system including, in combination, comparison means connected to a source of input voltage, forward-path means connected to said comparison means for producing an output signal, feedback means connected to said forward-path means for producing a feedback signal the value of which is proportional to the rate of change of said output signal, and compensating means connected to said feedback means and to said comparison means including impedance means for multiplying said feedback signal by less than unity when said feedback signal is less than a predetermined value and rectifying means for multiplying said feedback signal by substantially unity when said feedback voltage is greater than said predetermined value.

3,015,768
POSITIONING MOTOR CONTROL SYSTEM
Anthony J. Hornfeck and Harold H. Koppel, South Euclid, and John R. Louis, Euclid, Ohio, assignors to Bailey Meter Company, a corporation of Delaware
Filed Jan. 14, 1959, Ser. No. 786,820
18 Claims. (Cl. 318—28)



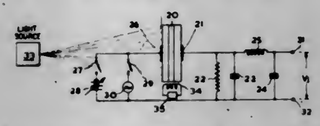
2. A positioning system responsive to an electrical signal representative of a variable for positioning a controller, comprising, means for establishing an electrical signal representative of the magnitude of the variable, means for establishing an electrical signal representative of the position of the controller, a pair of magnetic amplifiers having oppositely arranged input windings to cause one amplifier to produce an output signal in response to a negative input signal and the other amplifier to produce an output signal in response to a positive input signal, circuit means for applying the difference between said established signals to each of said input windings, a reversible electric motor operative in opposite directions to effect positioning of the controller in opposite directions, a first relay actuated switch means responsive to the output of said one amplifier to effect operation of said motor in one direction, and a second relay actuated switch means responsive to the output of the said other amplifier to effect rotation of said motor in the opposite direction.

3,015,769
SELF-DRIVING VIBRATING CAPACITOR WITH AN AUXILIARY ELECTRODE
László Natonek, 3 Sallai Imre Utca, Budapest XIII, Hungary
Filed July 23, 1959, Ser. No. 829,023
Claims priority, application Hungary Aug. 27, 1958
3 Claims. (Cl. 318—128)



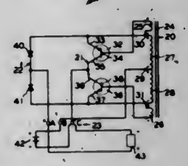
1. In a vibrating condenser inverter, for use in inverting a unidirectional current into alternating current, and of the type including a fixed condenser main plate, a movable condenser main plate, alternating current energized vibrating means connected to said movable plate, and a source of A.C. potential connected to said vibrating means to vibrate said movable plate with an amplitude and frequency corresponding to that of said source of A.C. potential: the improvement comprising an auxiliary condenser plate fixed relative to and electrically isolated from one of said condenser main plates and forming, with the other condenser main plate, an auxiliary condenser; means, including a source of direct current potential, operable to apply a substantially constant charge to said auxiliary condenser to produce an A.C. signal voltage proportional to the vibration of said vibrating condenser; modulating means interposed between said source of A.C. potential and said vibrating means; and means operable to apply said A.C. signal voltage to said modulating means to modulate the A.C. potential applied to said vibrating means in accordance with said A.C. signal voltage.

3,015,770
RECTIFYING CIRCUIT ELEMENT
Johannes Gerrit van Santen and Hendrik Esvelt, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 15, 1958, Ser. No. 748,750
Claims priority, application Netherlands July 15, 1957
20 Claims. (Cl. 321—8)



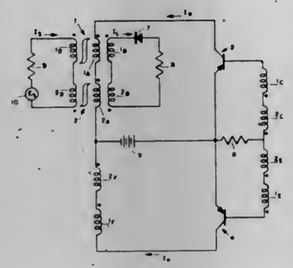
1. As a new electrical device, the combination of a semiconductive body and an electret in contact with one another and forming a junction therebetween, means for applying an electrical signal across the said junction to establish a current path for the signal through the contacting semiconductive body and electret, and means for polarizing the electret.

3,015,771
VOLTAGE MODIFIER
Lee Orland Mesenhimer, Lakewood, Ohio, assignor to Lorain Products Corporation, a corporation of Ohio
Filed May 29, 1958, Ser. No. 738,798
34 Claims. (Cl. 321—15)



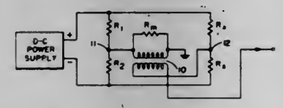
17. In a voltage multiplier for receiving and supplying unidirectional voltage, an external circuit including a source of unidirectional voltage and a load, an electrical circuit including an inductor coil, intermediate and lateral taps thereon, a terminal system including oppositely poled terminals and an electrically intermediate terminal, said terminal system receiving poled connections from said load and said source, one of said poled terminals being common to like poles of said source and said load, the other poled terminal being connected to the load pole opposite that of the common terminal, said intermediate terminal being connected to the remaining pole of said source, means for electrically connecting the intermediate tap on said coil to the intermediate terminal, electro-responsive, alternately and severally conducting and non-conducting devices connected in series, in oppositely poled relationship and between lateral taps, electrically unidirectional devices connected in series, in oppositely poled relationship and between lateral taps, the unidirectional device and the electro-responsive device connected to each respective side of the lateral tap being disposed in similarly poled relationship with respect to one another, means electrically connecting said common terminal between electro-responsive devices, means connecting said other poled terminal between said unidirectional devices, means connecting said intermediate terminal and said intermediate tap, means connected to said electro-responsive devices for alternately and severally rendering the same in conducting and non-conducting condition to respectively block and afford flow of current therethrough and through alternate unidirectional devices to alternately excite different sections of said coil for supplying unidirectional, quantitatively modified voltage to said load.

3,015,772
SERIES CONNECTED D.C. SUPPLY MAGNETIC AMPLIFIER
Robert W. Rochelle, 943 Swarthmore Drive, Alexandria, Va.
Filed June 2, 1959, Ser. No. 817,690
3 Claims. (Cl. 323—56)
(Granted under Title 35, U.S. Code (1952), sec. 266)



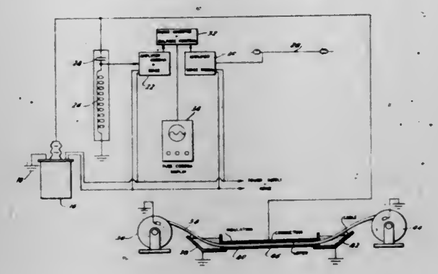
1. A magnetic amplifier comprising, in combination, first and second saturable core transformers, each transformer having at least a control winding, exciting windings and an output winding, means for connecting said control windings in series opposition and said output windings in series opposition, a unidirectional signal coupled to said control windings and biasing the cores of said transformers to different levels of magnetization, a load resistor and a rectifier across the series combination of said output windings, a free-running multivibrator circuit, said multivibrator circuit having a signal feedback path which includes said exciting windings whereby said multivibrator is triggered from one stable state to another whenever the cores of said transformers are both at saturation insuring synchronous operation between the multivibrator circuit and said unidirectional signal so that the frequency and phase of the multivibrator circuit can automatically adjust to that of said unidirectional signal, said multivibrator driving the cores of said transformers to saturation in opposite directions during successive half cycles thereof.

3,015,773
POWER LINE NOISE CANCELLATION
Robert F. Herrman, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 27, 1957, Ser. No. 668,358
5 Claims. (Cl. 323—75)



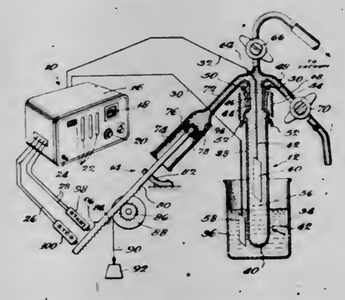
1. In combination with a balanced four-sided bridge circuit, a regulated direct-current voltage source connected across one diagonal of said bridge; an output circuit connected to one apex of the other diagonal, a voltage bucking circuit connected to the other apex of said other diagonal, said voltage bucking circuit comprising a resistor connected between said other apex and reference ground and being coupled into said output circuit to neutralize in the output circuit undesired voltages appearing across said other diagonal.

3,015,774
CORONA-TESTING OF ELECTRIC INSULATION
David Eigen, Passaic, N.J., assignor to The Okonite Company, Passaic, N.J., a corporation of New Jersey
Filed Dec. 17, 1957, Ser. No. 703,320
7 Claims. (Cl. 324—54)



5. A device for detecting voids in the insulation of an electric cable comprising a bath of semi-conducting liquid in which the cable is immersed; a source of high voltage between the liquid and the conductor of the cable, stressing the insulation to produce corona in the voids therein; a high-frequency detector closely coupled to the cable and responsive to high-frequency emanations resulting from said corona discharge and responsive to electrical disturbances in the surrounding area; a second high-frequency detector; an antenna connected to said second detector for receiving high-frequency electrical disturbances from the surrounding area, said antenna being positioned sufficiently remote from the stressed insulation that the high-frequency emanations resulting from said corona discharge will be attenuated before reaching the antenna; and means superimposing the response of the second detector on the response of the first detector in such a manner that the combined output of the two detectors is a result of substantially only corona discharge in the cable voids.

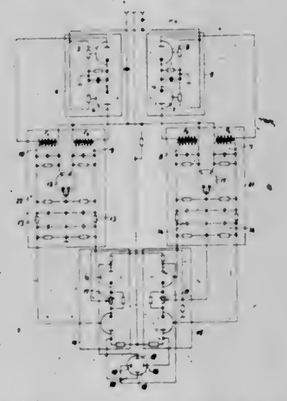
3,015,775
FLUID METERING SYSTEM AND APPARATUS
Wallace H. Coulter, Chicago, and Joseph R. Coulter, Jr., Roselle, Ill., assignors to Coulter Electronics, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 9, 1959, Ser. No. 785,931
17 Claims. (Cl. 324—71)



3. A particle studying device which includes a pair of vessels having an orifice therebetween and a separate body of fluid in each vessel with one body of fluid including particles therein, a circuit established between said vessels through said orifice and including a detector therein adapted to indicate an electrical change when a particle

from said one body passes through said orifice to said second body, means for drawing fluid from said first body through said orifice which comprises a reciprocable member of predetermined shape in fluid pressure engagement with said second body of fluid and arranged to move in a direction for increasing the volume of said second body of fluid, and means for activating and deactivating said detector during a predetermined portion of the stroke of said reciprocable member, whereby said detector will be operating only for a period of flow represented by the displacement of the reciprocable member during said predetermined portion of said stroke.

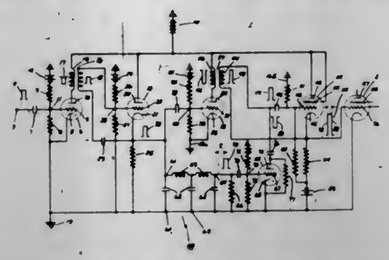
3,015,776
INDICATING FLUCTUATIONS IN FREQUENCY AND AMPLITUDE
Heinz Matüsche, Munich, Germany, assignor to Sud Atlas-Werke G.m.b.H., Munich, Germany
Filed Dec. 30, 1957, Ser. No. 706,014
Claims priority, application Germany Feb. 9, 1957
10 Claims. (Cl. 324—82)



9. Apparatus for simultaneously providing an indication of frequency and amplitude variations of an input signal comprising, a pair of frequency modulation detectors having frequency response characteristics each exhibiting a positive and a negative peak separated by the same frequency difference in both said detectors, the magnitude of each of said peaks being substantially equal, each characteristic having an S-shaped portion which crosses the frequency axis midway between the associated positive and negative peak frequencies and coinciding substantially with one of the peak frequencies of the other characteristic, means for applying said input signal to the inputs or both said detectors, and indicator means connected to the outputs of said detectors for orthogonally combining the output signals from said detectors.

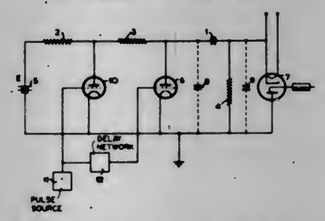
3,015,777
SYSTEM FOR PROVIDING SHORT HIGH AMPLITUDE SQUARE VOLTAGE PULSES
Thomas E. Beling, Fort Wayne, Ind., assignor to International Telephone & Telegraph Corporation
Filed Jan. 22, 1958, Ser. No. 710,585
8 Claims. (Cl. 328—58)

8. A system for producing short, high amplitude voltage pulses having fast rise and fall times comprising a normally non-conductive amplifier having an input circuit and an output circuit, a source of unidirectional pulses, a first circuit coupled between said source and said input circuit to render said amplifier conductive in response to said unidirectional pulses to initiate said voltage pulses in said output circuit, and a second circuit including means to delay said unidirectional pulses and means to invert said unidirectional pulses coupled between



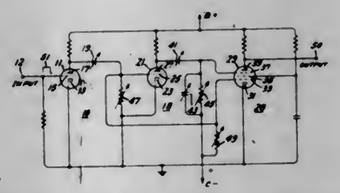
said source and said input circuit to render said amplifier nonconductive in response to the delayed and inverted pulse output of said second circuit to terminate said voltage pulses in said output circuit.

3,015,778
ARRANGEMENT FOR IMPULSE MODULATION OF A MAGNETRON
Hugo Georg Bruijning, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 21, 1960, Ser. No. 3,862
Claims priority, application Netherlands Feb. 6, 1959
5 Claims. (Cl. 328—67)



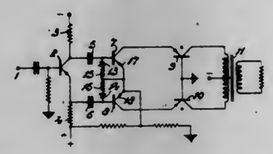
1. In a pulse modulation system of the type having serially connected first switch means, capacitor means and magnetron means, means for reducing the dissipation of energy in said first switch means comprising serially connected second switch means and resistance means connected in parallel with said first switch means, and means connected to close said second switch means before said first switch means is closed.

3,015,779
APPARATUS FOR PULSE-WIDTH DISCRIMINATION
Jay G. Levinthal, Sunnyvale, Calif., assignor to General Electric Company, a corporation of New York
Filed June 6, 1958, Ser. No. 740,390
6 Claims. (Cl. 328—112)



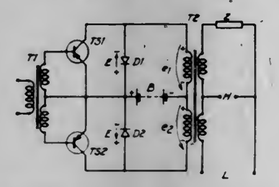
1. A pulse amplifier for producing an output pulse, the amplitude of which is proportional to the amplitude of the input signal and inversely proportional to the width of the input signal comprising an amplifier stage for amplifying an incoming signal, an inverter stage, and a coincidence detector stage, differentiating means for coupling said amplifier stage to both said inverter and coincidence detector stage, said differentiating means generating differential pulses of both the leading and trailing edges of the amplified input signal, and integrating means for delaying the differential pulse of the leading edge of the amplifier input signal to said coincidence detector stage.

3,015,780
TRANSISTOR CLASS-B BIASING CIRCUITS
Raymond Georges Schayes, Forest-Brussel, Belgium, and Johannes Ensink, Hilversum, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware
Filed Feb. 16, 1955, Ser. No. 488,607
Claims priority, application Netherlands Feb. 16, 1954
4 Claims. (Cl. 330—14)



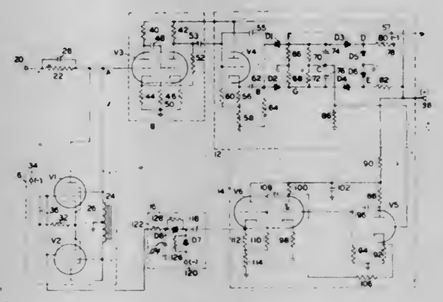
4. A signal amplifier circuit comprising, a transistor having base, emitter and collector electrodes connected and biased to provide class B operation for amplifying an alternating current signal, direct current feedback stabilization means for said transistor, said stabilization means providing a change in bias for said transistor with changes in the amplitude of said alternating current signal, signal responsive means for providing a direct current control signal proportional to said alternating current signal, and means for applying said control signal to the electrodes of said transistor for biasing said emitter electrode in the current conducting direction with respect to said base electrode and to compensate for said change in bias.

3,015,781
DEVICE FOR THE PROTECTION OF ELECTRICAL APPARATUS AGAINST EXCESS VOLTAGE
David Eklov, 23 Stavsjovagen, Alvsjo, Sweden
Filed Dec. 26, 1957, Ser. No. 705,314
Claims priority, application Sweden Oct. 30, 1957
3 Claims. (Cl. 330—15)



1. In an amplifier, an amplifying output stage having two transistors in push-pull connection, a transformer for connecting said amplifying stage with a transmission line, said transformer having a winding with a first terminal connected to one transistor and a second terminal connected to the other transistor and a center tap between said first and second terminal, including a source of direct current for supplying operating current to said transistors through two circuits, one of said circuits including the part of said transformer winding between said center tap and said first terminal, and the other circuit including the part of said transformer winding between said center tap and said second terminal, and a protective device in the amplifying output stage load circuit for protecting the transistors against excessive voltages of either polarity that may appear on said line, said protective device consisting solely of a first rectifier connected in parallel with the series circuit of the source of direct current and the part of said transformer winding which is located between said center tap and said first terminal, and a second rectifier connected in parallel with the series circuit of the source of direct current and the part of said transformer winding which is located between said center tap and said second terminal, said rectifiers being so poled that they are biased in their reverse direction by the source of direct current.

3,015,782
COMPRESSOR AMPLIFIER
George E. Pihl, Abington, Mass., assignor to Technology Instrument Corporation of Acton, a corporation of Massachusetts
Filed June 10, 1959, Ser. No. 819,345
9 Claims. (Cl. 330—145)

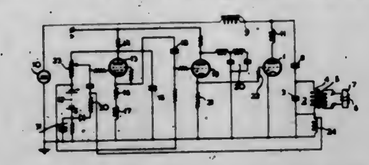


1. A compressor amplifier comprising a first input terminal to which an alternating current input signal is to be applied, an alternating current amplifier for amplifying said alternating current input signal, said amplifier having a second input terminal, a fixed resistance connecting said first and second input terminals, a variable resistance connected between ground and the junction of said fixed resistance and said second terminal, an output terminal, means for applying the alternating current signal output of said amplifier to said output terminal, means for establishing positive and negative direct current reference voltages, means for directly comparing said alternating current signal output with said positive and negative reference voltages and for producing an alternating current error signal having positive and negative components proportional in value to the differences in amplitude between said positive and negative reference voltages and the positive and negative excursions respectively of said alternating current signal output, and means responsive to the positive and negative components of said error signal for varying said variable resistance in the direction and by the amount required to minimize said error signal.

3,015,783
HIGH-FREQUENCY OVEN FOR HIGH POWERS
Hajo Lorens van der Horst and Peter Hubertus Gerardus van Vlodrop, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,717
Claims priority, application Netherlands July 13, 1957
5 Claims. (Cl. 331—54)

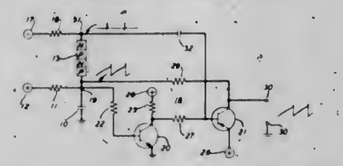
1. A high frequency circuit arrangement comprising a gaseous discharge tube having an anode and a control

electrode, means for supplying a direct voltage to said anode, a resonant circuit connected to said anode, a load circuit connected to said resonant circuit, means for periodically initiating the operation of said discharge tube thereby to periodically energize said resonant circuit, said last-mentioned means comprising an electrical discharge



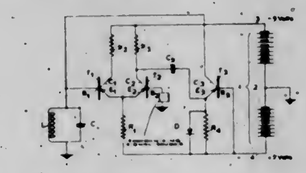
device having a control electrode and an output electrode, means for applying a signal having a substantially sawtooth waveform to said control electrode, means for deriving an auxiliary voltage from said resonant circuit and for superimposing the same on said signal, and means for connecting said output electrode to the control electrode of said gaseous discharge tube.

3,015,784
SAWTOOTH OSCILLATOR
Frank P. Cirone, Dover, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 4, 1959, Ser. No. 831,613
15 Claims. (Cl. 331—111)



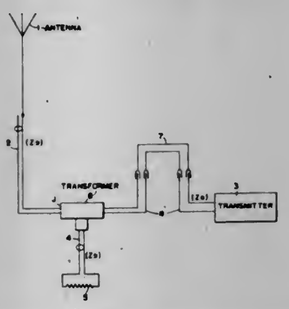
14. An oscillator for generating impulses with a high degree of frequency stability, said oscillator comprising a capacitor, a charging circuit connected to said capacitor, a discharging circuit connected to said capacitor, a switching device connected in said discharging circuit, a regenerative amplifier, a single circuit connection between said amplifier and said circuits of said capacitor, said single circuit connection comprising means connecting the input of said amplifier to said discharging circuit, and said amplifier including means responsive to the attainment of a predetermined potential difference across said capacitor for rapidly increasing the potential difference across said capacitor.

3,015,785
LC TYPE TRANSISTOR OSCILLATOR
Eric B. Vass, Kingston Park, South Australia, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,504
4 Claims. (Cl. 331—117)



1. An oscillation generator comprising a resonant circuit, first, second and third transistors each having a base, emitter and collector electrode, a source of voltage having first and second terminals and an intermediate terminal, means connecting the base of said first transistor to said intermediate terminal by way of said resonant circuit, common resistance means connecting the emitters of said first and second transistors to said first terminal, separate resistance means connecting the collectors of said first and second transistors to said second terminal, means connecting the base of said second transistor to said intermediate terminal, means connecting the base of said third transistor to said first terminal, means connecting the collector of said third transistor to the base of said first transistor, resistance means connecting the emitter of said third transistor to said first terminal, and means coupling the collector of said second transistor to the emitter of said third transistor.

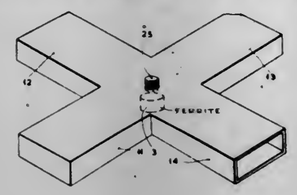
3,015,786
MEANS FOR ABSORBING REFLECTED ENERGY IN AN ANTENNA TRANSMISSION LINE
Andrew Alford, Winchester, Mass. (299 Atlantic Ave., Boston, Mass.)
Filed May 15, 1957, Ser. No. 659,262
1 Claim. (Cl. 333—9)



High frequency apparatus comprising, a source of a high frequency video-modulated carrier signal, an antenna having an input impedance subject to change and coupled to said source by means consisting of a linear system, said linear system comprising a first transmission line coupled to said antenna and having a characteristic impedance corresponding to the normal input impedance of said antenna, a resistance of at least said characteristic impedance, a second transmission line of said characteristic impedance coupling said resistance to said first transmission line at a junction, a line stretcher coupled to said source for substantially maximizing the impedance presented by said source at said junction, and impedance transforming means coupling said junction to said line stretcher, whereby substantially only energy directly transmitted from said source is delivered to said antenna even when said antenna mismatches the impedance of said first transmission line.

3,015,787
WAVEGUIDE CIRCULATOR
Philip Edgar Varnham Allin and Frederick Warren Smith, London, England, assignors to North American Philips Company, Inc., New York, N.Y.
Filed Nov. 26, 1958, Ser. No. 776,464
Claims priority, application Great Britain Dec. 2, 1957
4 Claims. (Cl. 333—9)

1. A four-terminal waveguide circulator comprising a pair of rectangular waveguides extending in perpendicular relationship in a common plane and forming a junction having a pair of parallel boundary walls, a prism of ferromagnetic ferrite material disposed within said waveguides on one of said boundary walls at the center of said junction, the axis of said prism being normal to said plane and the axial length of said prism being less than the distance between said walls, and an axially adjustable



prismatic admittance controlling member threaded in the other boundary wall in axial alignment with said prism, said prismatic member comprising a permanent magnet having a magnetic field directed axially of said prism, said magnetic field having a strength to produce circulator action.

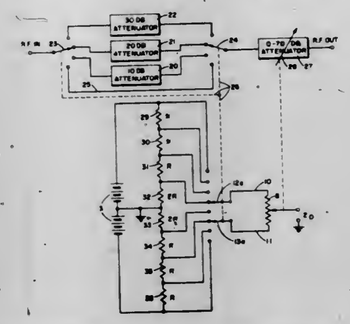
3,015,788
MICROWAVE DEVICE
Marshall H. Sirvetz, Cambridge, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Apr. 13, 1956, Ser. No. 578,043
7 Claims. (Cl. 333—24)

7. An isolator device for electromagnetic energy, comprising waveguide means for guiding such energy, magnetic means for establishing a magnetic field within said waveguide means, and an insert member within such magnetic field comprising a body of the composition $Ni_{1-x}Co_xFe_2O_4$, in which "x" is approximately inversely proportional to the coefficient of anisotropy formed with cobalt oxide and $1-x$ is inversely proportional to the coefficient of anisotropy of a ferrite formed with nickel, which coefficient is opposite in sign to that of the ferrite formed with cobalt, whereby the losses in such isolator device are significantly reduced as a result of the substantially zero magnetocrystalline anisotropy of said insert member.

3,015,789
MECHANICAL FILTER
Seiichi Honda, Hitachi-shi, Ibaragi-ken, and Yuzo Nakazawa, Kawasaki-shi, Kanagawa-ken, Japan, assignors to Toyotsushinki Kabushiki Kaisha (known as Toyo Communication Equipment Co., Ltd.), Kawasaki-shi, Japan
Filed Apr. 16, 1957, Ser. No. 653,190
3 Claims. (Cl. 333—72)

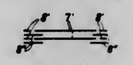
1. An electro-mechanical wave filter comprising a shaped solitary body having input-and-output transducer-plates with at least one intermediate resonator plate and a single rod coupled between said transducer plates, said at least one resonator having two free ends and being coupled from a point of dissymmetry of said resonator intermediate said free ends and separated from its vibration nodal point to said single rod.

3,015,790
ADDITION CIRCUIT FOR STEP AND CONTINUOUS FUNCTIONS
Leo C. Eisaman, Rochester, and David L. Tobias, Fairport, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed May 2, 1957, Ser. No. 656,708
3 Claims. (Cl. 333—81)



3. An attenuator system for a microwave transmission circuit comprising a plurality of fixed-value microwave attenuators, first switch means for selectively connecting said attenuators into said microwave transmission circuit, a continuously variable microwave attenuator with adjusting means in said microwave transmission circuit; means for indicating the total attenuation in said circuit without sampling the microwave energy flowing in said transmission circuit including a first potentiometer with electrically spaced taps, a source of voltage of predetermined fixed value connected across the terminals of said potentiometer, a second potentiometer with terminals and a continuously variable wiper, second switch means for selectively connecting the terminals of said second potentiometer to said taps, a first mechanical linkage between said first switch means and said second switch means, and a second mechanical linkage between the mentioned variable attenuation adjusting means and said wiper, the resistance values between taps of said first potentiometer and the resistance value subtended by said wiper being such that the voltages produced at said wiper is analogous to the sum of the fixed and variable attenuation values.

3,015,791
LAMINATED CORES FOR TRANSFORMERS AND REACTORS
Erich Rolf, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Apr. 11, 1952, Ser. No. 281,831
Claims priority, application Germany Apr. 18, 1951
5 Claims. (Cl. 336—217)



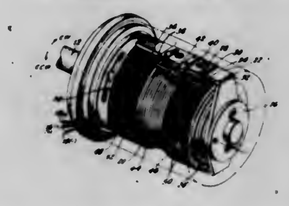
1. A jointed magnetizable core designed to avoid or minimize increase in magnetic induction at the joints, comprising a frame forming a closed magnetic flux path, the frame comprising limbs and yokes formed of a plurality of layers of assembled laminations formed lengthwise from strip material having a favorable magnetic direction lengthwise of the strip, the layers each comprising two limb strips and a yoke strip, the limb strips each having one diagonally disposed end edge and one substantially right-angled end edge, and the yoke

strip having opposite diagonally disposed end edges, the diagonally disposed edges of the yoke strip adjoining, and being substantially coextensive with the diagonally disposed edges of the limb strips, the yoke strip being wider than the limb strips, the opposite diagonally disposed end edges of the yoke strip thereby providing, in conjunction wtih the diagonally disposed edges of the limb strips, two enlarged diagonally disposed joints, the adjacent layers of the frame being turned 180 degrees to alternate, at the corners, the said wider yoke strips with the right-angled end edges of the limb strips, the right-angled end edges of the limb strips in each layer extending substantially to an outer end edge of the core, the corner joints of each layer being overlapped by magnetic material of an adjacent layer, the limbs of the core having diagonally disposed joints only.

3,015,792
POTENTIOMETER WIPER RECIPROCATING MECHANISM

George Towner Senseney, New York, and Dale Loren Hardy, New Rochelle, N.Y., assignors to USECO, Inc., Mount Vernon, N.Y.

Filed May 4, 1960, Ser. No. 26,842
9 Claims. (Cl. 338—145)



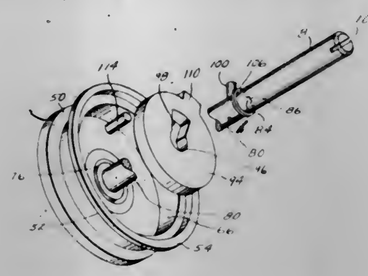
1. A reciprocating mechanism for a continuously rotatable multiturn potentiometer including a resistive helix having an axis, and a wiper element adapted to conductively engage the resistive helix, said reciprocating mechanism comprising: a guide helix mounted adjacent to and coaxial with the resistive helix and counter wound with respect thereto; wiper carriage means mounted adjacent the resistive helix and adapted to support the wiper element; means for imparting a relative rotational motion between said wiper carriage means and said guide and resistive helices; follower means connected to said carriage means and selectively engageable in said guide helix, said follower means being operative in response to relative rotational motion to transport said carriage means in the axial direction.

3,015,793
WIDE ANGLE MECHANICAL STOP FOR ROTATABLE SHAFTS IN POTENTIOMETERS AND THE LIKE

Alton W. Fraser, Van Nuys, and John P. Thomas, Thousand Oaks, Calif., assignors to Technology Instrument Corporation of Acton, a corporation of Massachusetts

Filed Apr. 19, 1960, Ser. No. 23,214
6 Claims. (Cl. 338—162)

1. A wide angle mechanical stop for a shaft supported in a housing for rotation relative to said housing, comprising a first stationary pin extending parallel to said shaft but spaced therefrom a predetermined distance, a disk rotatably mounted on said shaft, means preventing said disk from moving axially along said shaft, a flat radial arm on said disk at its periphery, said arm extending radially a distance sufficient for it to engage said first pin when said disk is rotated, said disk having a radial slot, and a second pin secured directly to said shaft and extending radially into said slot, said second pin having a maximum outside diameter in said slot which is less than the minimum width of said slot, whereby when said shaft is rotated said second pin can rotate relative to said disk

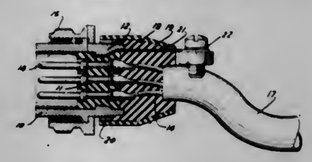


an amount equal to the difference between said minimum width of said slot and said maximum diameter of said pin before said disk is engaged and rotated by said second pin.

3,015,794
ELECTRICAL CONNECTOR WITH GROUNDING STRIP

Warren E. Kishbaugh, Unadilla, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Mar. 30, 1956, Ser. No. 575,139
7 Claims. (Cl. 339—14)



1. An electrical connector comprising an elongated rigid metallic shell having an opening therein, a resilient electrically insulating insert spanning the opening in the shell and mounted in the shell by a compression fit, at least one contact mounted in the insert and insulated thereby from the shell, and an electrically conductive strip extending into the shell and having a portion thereof gripped tightly between the inner wall of the shell and the outer surface of the insert, whereby the said portion of the strip makes secure electrical contact with the shell.

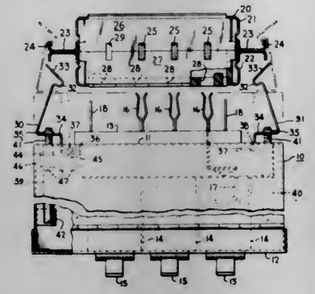
3,015,795
BUSWAY POWER TAKE-OFF PLUG

John W. Meacham, Endwell, N.Y., assignor to General Electric Company, a corporation of New York

Filed May 28, 1959, Ser. No. 816,527
2 Claims. (Cl. 339—14)

1. A busway power take-off device including a generally rectangular metallic enclosure having side walls, a front wall, and a back wall for mounting adjacent a busway housing; at least one resilient supporting bracket on the back wall of said enclosure, said supporting bracket including an inwardly directed portion for engaging an external surface portion of said busway housing to retain said device on said housing, said bracket having a portion adjacent the back wall of said enclosure turned parallel to said back wall with a threaded opening therethrough and a further portion extending from said parallel portion into the interior of said enclosure through an aperture therein, the back wall of said enclosure having an unthreaded opening aligned with the threaded opening

in said bracket, means for supporting and adjustably positioning said supporting bracket with respect to said housing including an elongated supporting rod of electrically conducting material carried by and within said enclosure abutting said back wall and parallel to a side wall thereof, said electrically conducting rod having a

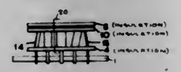


threaded end portion of reduced diameter extending through said unthreaded opening and engaging the threaded opening in said bracket, the end of said rod opposite said threaded end extending into proximity with the front wall of said enclosure for adjustment, and means carried by said bracket adjacent the back wall of said enclosure for connection of a ground conductor thereto.

3,015,796
TUBE SOCKET ADAPTER FOR PRINTED BOARD

Auke Piat and Johannes Christoffel Antonie Recourt, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 24, 1958, Ser. No. 730,632
Claims priority, application Netherlands May 17, 1957
4 Claims. (Cl. 339—17)



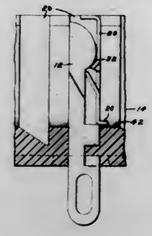
1. Apparatus comprising a support plate having a plurality of apertures therein, an adapter including an aligning plate having a plurality of apertures therein, and a tube holder having a plurality of pins with tube receiving apertures, the pins extending therefrom adapted to be inserted through selected ones of the apertures of said aligning plate and into selected ones of the apertures of said support plate, said aligning plate including means indicating the correct position of said adapter on said supporting plate, said aligning plate being thin relative to said support plate and being positioned intermediate said tube holder and said support plate, said pins being shaped to collectively form one pattern at the said tube holder and to form a relatively different pattern at their insertion points in said support plate, and electrical conducting means mounted on the said support plate connecting selected ones of said apertures of said support plate.

3,015,797
ELECTRICAL CONNECTOR WITH POLARIZING KEY

Edward B. Mitchell, Arlington, and William H. Flanagan, Jr., Wellesley, Mass., assignors to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Filed Oct. 28, 1958, Ser. No. 770,182
1 Claim. (Cl. 339—17)

An electronic assembly comprising in combination a slotted printed circuit board edge connector having therein a plurality of resilient contact members each having a torsion arm spaced from each other and one or more polarizing keys adapted for axial snap engagement with a radius of a torsion arm of said contact members, said polarizing keys being formed of a flat strip having a body portion with the free extremities bent substantially perpendicular to the body portion and in opposite directions,

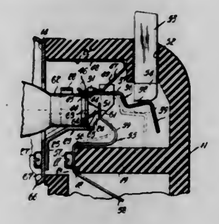


an arm extending from one face of the body portion inclining upwardly and away from the plane of said body portion, a tang axially spaced from said arm extending from said body portion and inclined downwardly in the direction of said arm, whereby said arm portion will enter into snap engagement with the contact to secure the key within the edge connector.

3,015,798
FLASH GUN SOCKET

Robert F. Rau, Ann Arbor, Mich., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Mar. 9, 1959, Ser. No. 798,249
5 Claims. (Cl. 339—45)

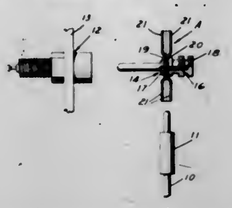


1. In a flash gun, a casing having an opening, and a generally tubular lamp receiving socket structure disposed within the casing at said opening comprising a socket member rigidly mounted on said casing and open forwardly in registration with said opening, said member being open rearwardly into the interior of said casing, a contact and ejector spring mounted within the casing and having a portion adjacent the rear opening of said socket member adapted to be engaged and compressed by the base of a lamp thrust into the front opening of said socket member, a latch member rockably mounted on said socket member, spring means biasing said latch member toward lamp base latching position on said socket member, means comprising a transverse slot and coacting opposed lips depending at said slot on the forward portion of said latch member extending toward said socket member and adapted to engage and interlock with the base of a lamp thrust into the front opening of said socket member, and a manually operable member accessible exteriorly of said casing and extending through said casing into contact with a rear portion of said latch member for rocking said latch member to lamp base release position against the force of said spring means to thereby permit said ejector spring to eject said lamp forwardly away from said casing.

3,015,799
MULTICONDUCTOR TEST TERMINAL

Robert W. Seeger, Pasadena, Calif., assignor to Microdot Inc., South Pasadena, Calif., a corporation of California

Filed Dec. 16, 1958, Ser. No. 780,846
2 Claims. (Cl. 339—249)

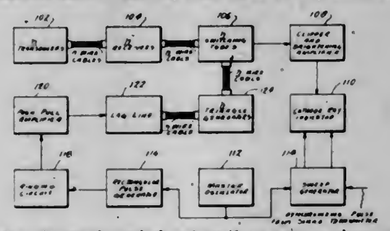


1. A multiconductor adapter for a single conductor terminal connector, comprising: an elongate member having one end formed to provide a mating connector element portion and its other end having a threaded portion; shoulder means at the inner end of said threaded portion; a nut threaded on said threaded portion; a plurality of coextensive discs of springy material on said member centrally secured in electrical contact between said shoulder and nut so as to leave the peripheral margins of the discs free for relative resilient deflection; and radially extending grooves in said discs terminating at their marginal edges for guidingly receiving electric conducting elements endwise therein, the conducting elements acting to resiliently force the disc edge margins apart so as to frictionally clamp the inserted elements between said discs.

3,015,800
ELECTRONIC SCANNING SWITCH

John F. Jewett, Saugerties, N.Y., and Kenneth L. Moothart, Mystic, Harold J. Morrison, Waterford, and John R. Snow, New London, Conn., assignors to the United States of America as represented by the Secretary of the Navy

Filed July 15, 1955, Ser. No. 522,410
4 Claims. (Cl. 340—6)
(Granted under Title 35, U.S. Code (1952) sec. 266)



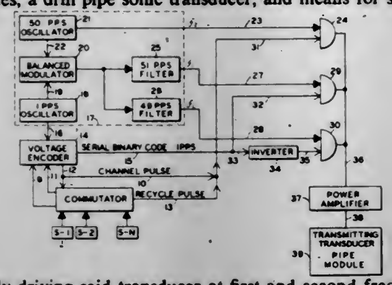
1. An electronic switch adapted to scan a given plurality of signal sources, said switch comprising; a plurality of amplifiers equal in number to said given plurality, each of said amplifiers producing an output current having an instantaneous magnitude substantially proportional to the product of the instantaneous magnitudes of first and second separate input voltages applied thereto over the operating range of each of said amplifiers; a single output load; means coupling said load to said amplifiers for applying the output currents of said amplifiers in parallel through said load; means coupling said signal sources to said amplifiers for applying each one of the signals from said signal sources as said first input to a separate one of said amplifiers; second input voltage means coupled to said amplifiers for normally applying as said second input to said amplifiers a voltage sufficient to render said amplifiers cut-off, said second input voltage means including switching voltage generating means responsive to the time of occurrence of a scan initiating input applied thereto for generating a sequence of separate time-spaced triangular pulses equal in number to said given plurality, each pulse following the first of said sequence being initiated a given predetermined time interval after the initiation of the next preceding pulse of said sequence and each pulse of said sequence having first a slope of a substantially fixed magnitude for a duration equal to said given time interval and then a slope of said substantially fixed magnitude but of opposite sign for a duration equal to said given time interval, and means coupled to said voltage generating means for applying a separate one of said triangular pulses as said second input to each one of said amplifiers for operating each of said amplifiers only during the presence of the triangular pulse applied thereto, whereby a continuous interpolated output signal is obtained across said load during a scan of said signal sources; said second input voltage means including a multitapped lag line having a plurality of taps equal in number to said given plurality, said taps being equally spaced from each other along the length thereof, said lag line being responsive to a sinusoidal wave having a period which is long relative to said predetermined time interval applied as an input thereto, the spacing between taps being such that the time required for said wave to travel the distance between any two adjacent taps is equal to said given predetermined time interval, a plurality of full wave rectifier means equal in number to said given plurality each of which is coupled between a respective one of the taps of said lag line and a respective one of said amplifiers for fully rectifying the sinusoidal wave output appearing at said respective one of said taps, and means for applying the fully-rectified sinuosoidal wave output with sufficient amplitude and the proper polarity as said second input to said respective one of said amplifiers as to allow operation of said respective one of said amplifiers only in the vicinity of the cusp of said fully-rectified sinusoidal wave for a duration equal to twice said predetermined time interval; sinusoidal wave generating means for generating discontinuous waves of sinusoidal form at fixed time intervals which are independent of the period of said waves; means for applying said waves as the input to said lag line; said sinusoidal wave generating means including oscillator means for generating oscillations at a first given frequency, rectangular pulse generating means coupled to said oscillator means for generating a rectangular pulse having a width equal to a fixed portion of the period of an oscillation in fixed time relationship with respect to each cycle of said oscillations, a gated ringing circuit including a tuned circuit resonant at a second given frequency which is higher than said first given frequency, and means for applying said rectangular pulse to said ringing circuit to initiate the generation of said sinusoidal wave at said second given frequency in response to the leading edge of said rectangular pulse and to cease the generation of said sinusoidal wave in response to the lagging edge of said rectangular pulse, the width of said rectangular pulse being at least equal to a period of said sinusoidal wave.

3,015,801
DRILL PIPE MODULE DATA COLLECTION AND TRANSMISSION SYSTEM

David C. Kalbfell, 941 Rosecrans St., San Diego 6, Calif.

Filed June 16, 1959, Ser. No. 820,680
22 Claims. (Cl. 340—18)

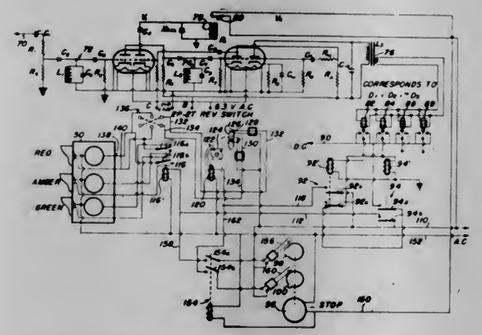
1. A drill pipe module data collection and transmission system comprising, a plurality of sensors for producing analog voltages representing the measurement of parameters of interest in a well, means for converting said analog voltages to a series of corresponding binary numbers each comprising a series of "1" and "0" bit values, a drill pipe sonic transducer, and means for selectively driving said transducer at first and second frequencies corresponding to said binary values.



3,015,802
REMOTE CONTROL OF TRAFFIC SIGNALS

Roy R. Newsom, Greeley, Colo.
(7291 W. Ellsworth Ave., Denver 26, Colo.)

Filed Apr. 7, 1953, Ser. No. 347,211
12 Claims. (Cl. 340—40)



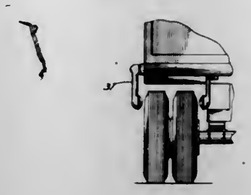
6. A traffic light system for controlling the operation of signal lights at a multiplicity of control points, said system comprising means including a central station for generating and transmitting a main carrier wave, means for generating a sub-carrier wave at a lower frequency than that of said carrier, means for generating a signal pulse pattern comprising repeated series of bursts of energy at discrete low frequencies, means for modulating said pattern onto said sub-carrier, means for modulating said sub-carrier modulated by said pattern onto said main carrier, a receiving means for each of said control points for demodulating said main carrier wave and for demodulating said sub-carrier wave, said receiving means also including means responsive to the low frequency bursts of said pattern for controlling the signal lights at the control points, said last-mentioned means including means at each control point responsive to respective ones of said low frequency bursts for effecting individual control of the respective signal light in accordance with said pattern.

3,015,803
PNEUMATIC TIRE TEMPERATURE WARNING DEVICE

Wallace I. Neu, 101 N. 14th St., Alpine, Tex.

Filed Aug. 22, 1958, Ser. No. 756,586
6 Claims. (Cl. 340—58)

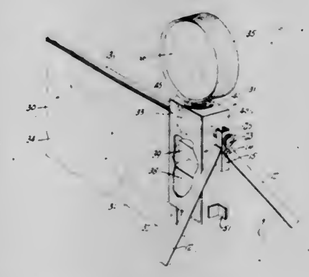
2. In a system for apprising a vehicle operator of an underinflation condition in one or more of the pneumatic vehicle tires which causes a rise in the temperature of the uninflated tire, wherein there is a plurality of bimetallic gages each having a pointer for indicating the temperature of a respective tire and an electrical circuit connected to and energizing the gages, the combination with the vehicle tires and said electrical circuit of a plurality of electrical temperature responsive devices carried by the vehicle with each positioned in close proximity to a respective tire and exposed to radiation from the respective tire, said devices being connected into said electrical circuit to change the current flowing through respective gages in accordance with the temperatures of the respective tires.



3,015,804
COMBINED BARRICADE AND FLASHING SIGNAL LIGHT

Ewing D. Nunn, Mequon, Wis., assignor to Northern Signal Company, Inc., Saukville, Wis., a corporation of Wisconsin

Filed May 17, 1961, Ser. No. 110,745
5 Claims. (Cl. 340—81)

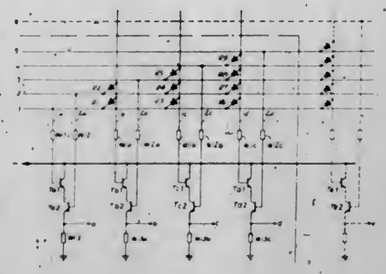


1. A warning barricade comprising the combination of: spaced apart leg units; a panel having an attention-attracting appearance; a flasher unit including a lamp, a battery lens means through which the light of the lamp shines, mechanism to periodically energize the lamp with current from the battery, and a closed metal container housing the battery and said mechanism and having the lamp and the lens means mounted thereon with the axis of the lens means transverse to the vertical axis of the metal container so that the container must be in an upright position for the lamp to provide an effective warning, said closed metal container having opposite upright side walls with aligned holes therein above the center of gravity of the flasher unit; a rod supported at its ends upon said leg units, the rod passing through said aligned holes in the side walls of the metal container to hingedly support the flasher unit in an upright position despite unevenness of the ground upon which the leg units stand; and means hingedly connecting the panel above its center of gravity with said rod so that the panel normally hangs in a vertical position but is free to swing in response to wind pressure thereon.

3,015,805
CIRCUIT ARRANGEMENT FOR ENCODING DEVICES

Rainer Thyen, Hirschlanden, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 11, 1957, Ser. No. 683,353
Claims priority, application Germany Sept. 19, 1956
8 Claims. (Cl. 340—147)



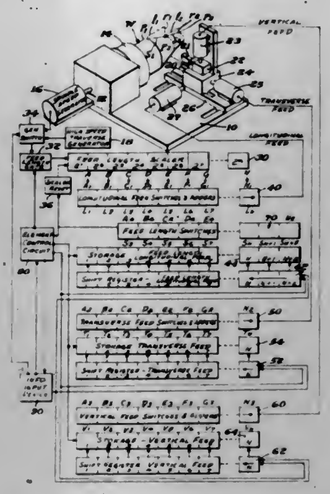
1. An error checking arrangement for an electric circuit having a plurality of m points which are arranged to be marked in permuted sets with a marking on a predetermined fixed number n of markings per set whereby the said points are marked in an n out of m code, comprising a plurality of chains of n electrical switches, a control circuit for each switch in a chain, $m-n+1$ output circuits connected respectively to the last switches of different chains, means for connecting control circuits of at least one corresponding switch in each chain respectively to different ones of said m points, means for connecting control circuits of corresponding other switches in said chain respectively to different combinations of said m points excluding the point to which the control circuit of said one switch of that chain is connected, whereby a control voltage is produced on the output circuit connected to a chain when the n points to which the control circuits of that chain are connected are simultaneously marked, a second set of $(m-n+1)$ switches, control means connecting said second set of switches with said output circuits, a utilization device, and means connecting said utilization device in common to said second switches whereby said utilization device is rendered ineffective when more than one of said control voltages is applied to said second set of switches.

3,015,806
MACHINE TOOL CONTROL SYSTEM

An Wang and Ge Yao Chu, Lincoln, Mass., assignors to Wang Laboratories Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Mar. 12, 1958, Ser. No. 721,056
32 Claims. (Cl. 340—147)

1. In a control system, a sequential series of pulse scaling elements having a common input and an output associated with each of said scaling elements to provide a plurality of pulse trains of successively decreasing frequency at each said output in inverse proportion to the number of pulse scaling elements interposed between said input and an output, at least two series of output pulse train switch means each having a common output, with each switch means of said series having its input connected to one only of said scaling element outputs, and means for selectively operating each of said series of output pulse train switch means to maintain each of said switch means thereof in a preselected condition providing substantially simultaneously and independently from each of the outputs of said series of switch means a series of pulses decreased in frequency relatively to the input pulses fed to said series of pulse scaling elements

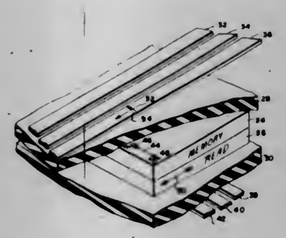


by a ratio established by the condition of said switch means of each of said series thereof.

3,015,807
NON-DESTRUCTIVE SENSING OF A MAGNETIC CORE

Arthur V. Pohm, White Bear Lake, Earl N. Mitchell, St. Paul, and Thomas D. Rossing, Northfield, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 23, 1957, Ser. No. 691,902
18 Claims. (Cl. 340—174)

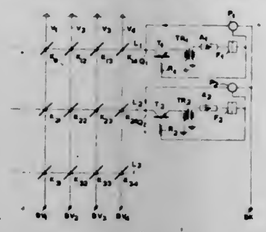


1. Apparatus comprising a plurality of magnetic cores each core having two stable remanent magnetic states and an axis of remanent magnetization, said cores being disposed adjacent one another with said axes transverse, one of the said cores being susceptible to and having a transverse field applied to it by the remanent magnetization of another core whose remanent axis is transverse to that of said one core, means for changing the amount of said transverse field, and means coupled to said one core for changing the state thereof at least once but only during the existence of the changed transverse field and then only if said another of the cores is in one state but not if it is in another state, the arrangement being such that in either case the state of said another core is not destroyed.

3,015,808
MATRIX-MEMORY ARRANGEMENT

Nicolaas Cornelis de Troye, Eindhoven, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 31, 1958, Ser. No. 784,290
Claims priority, application Netherlands Jan. 7, 1958
4 Claims. (Cl. 340—174)

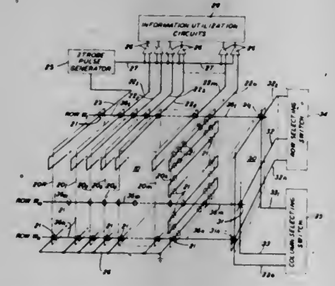


1. A matrix-memory circuit arrangement comprising a plurality of groups of memory elements, said elements being composed of magnetic material having a rectangular hysteresis loop and a high remanence, each of said groups being coupled together to one group conductor with corresponding elements of the groups being coupled together to one reading conductor and to a bistable trigger circuit, means for applying a first pulse to one of said group conductors for reading-out information stored in one group, and means for subsequently applying a second pulse of opposite polarity to said group conductor for back-recording said information, means for applying a third pulse concurrent with said second pulse to the associated reading conductor through a gate circuit, said gate circuit being controlled by said bistable trigger circuit, and isolating means connected in each reading conductor at a point between the memory elements and the associated bistable trigger circuit for isolating said memory elements from the remainder of the reading circuit during the time interval of said second and third pulses, said isolating means comprising a second gate circuit which is cut-off during said time interval and conductive at other times.

3,015,809
MAGNETIC MEMORY MATRIX

Peter B. Myers, Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed June 19, 1959, Ser. No. 821,430
15 Claims. (Cl. 340—174)

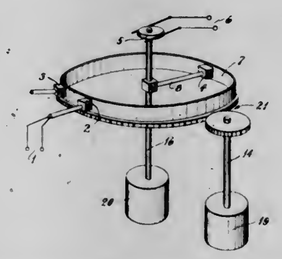


1. An information storage matrix comprising a plurality of information storage devices, a reference storage device, a plurality of information sensing conductors associated respectively with said information storage devices, a reference sensing conductor associated with said reference storage device, read-out means for inducing read-out signals on said information and reference sensing conductors representative of the operative state of each of said information and reference storage devices, respectively, a strobe pulse generator operated responsive to a read-out signal on said reference sensing conductor for generating a strobe signal, and gating means operated responsive only to the coincidence of said strobe signal and said read-out signals on said information sensing conductors for generating output signals indicative of said operative states of said information storage devices.

3,015,810
MAGNETIC RECORDER AND REPRODUCER

William S. Latham, Groton, and William F. Sagrs, Niantic, Conn., assignors to the United States of America as represented by the Secretary of the Navy

Filed Dec. 27, 1954, Ser. No. 477,958
10 Claims. (Cl. 340—174.1)
(Granted under Title 35, U.S. Code (1952) sec. 266)



10. A transient recorder comprising an endless erasable recording medium, recording and erasing heads arranged to cyclically traverse a path to produce a record track on said medium while continuously recording at the beginning of a cycle and continuously erasing near the end of the cycle, a reproducing head arranged to cyclically traverse an adjacent mechanically-independent path closely paralleling the path of said recording head at the recording location and within the influence of said record track and said track recording head at a cyclical rate substantially greater than twice the recording rate, whereby each reproduction cycle repeats a majority of the signal reproduced in the preceding reproduction cycle even though recording is continued simultaneously with reproduction, and utilization means operated from said reproducing head.

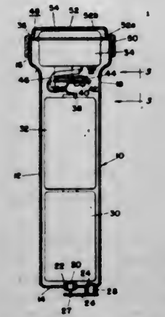
3,015,811
PORTABLE FIRE ALARM UNIT

Leonard R. Rubin, Wynnewood, Pa., assignor to Harry Rubin & Sons Inc., Philadelphia, Pa., a corporation of Pennsylvania

Filed Mar. 9, 1959, Ser. No. 797,958
2 Claims. (Cl. 340—227)

1. A fire alarm unit comprising a hollow metal casing, a contact extending through and secured to said casing, means electrically insulating said contact from said casing, a bimetal switch arm mechanically and electrically secured to the outside of said casing, said switch arm extending across and normally spaced from said contact, batteries in series within said casing, one of said batteries being in direct abutting electrical engagement with said contact, an audible alarm device, means mechanically and electrically securing said alarm device to said casing, a resilient contact biasing said batteries together and in engagement with the contact secured to said cas-

ing, said resilient contact being electrically connected to said alarm device, and at least one perforation in a portion of said casing to admit audible signals from said alarm device.

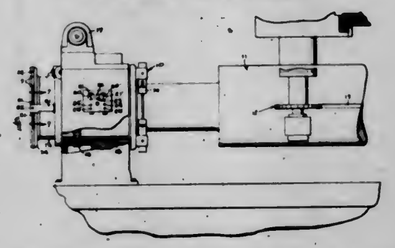


3,015,812

POSITIONING MECHANISM

Harold H. Turner, Rockford, Ill., assignor to The Ingersoll Milling Machine Company, Rockford, Ill., a corporation of Illinois

Filed Apr. 24, 1957, Ser. No. 654,924
9 Claims. (Cl. 340—282)



1. The combination of, a member mounted for movement along a predetermined path, an elongated tape extending along said path and movable in unison with said member, a plurality of apertures formed in and spaced along said tape and defining pairs of opposed edges with the centers between the edges of the successive pairs spaced along said member, a feeler head lying adjacent one face of said tape and having orifices of equal size spaced along said path to correspond to the spacing of said edges so as to be uncovered equal amounts when any one of said pairs of edges is centered relative to the orifices, said orifices being covered by said tape or uncovered unequal amounts by said apertures in other positions of said tape and member, means providing a balanceable pneumatic network including said orifices and balanced either when both of said orifices are covered by solid areas of said tape or partially and equally uncovered by exposure to one of said apertures, and means for sensing balance and unbalance of said network whereby to indicate the centering of any selected one of said apertures relative to said feeler head.

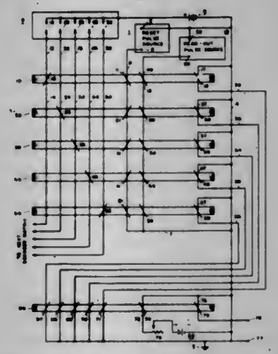
3,015,813

BINARY INFORMATION DECODER

William V. Tyrlick, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed May 2, 1958, Ser. No. 732,645
3 Claims. (Cl. 340—347)

1. A binary information decorder responsive to a preselected one of a given plurality of binary codes, each of said codes being composed of a unique combination of mark and space information bits, said decoder comprising an array of bistable elements each of which corresponds to a particular information bit and each of which has first and second stable conditions, a reset pulse source, means coupling said reset pulse source to each of said bistable elements for presetting the stable condition of each of said bistable elements in response to a reset pulse to manifest the binary complement of said preselected one of said binary codes, means coupled to each of said bistable elements for applying each of the respective bits of any of said plurality of binary codes to its corresponding bistable element following the presetting thereof to switch the preset stable condition of only those bistable elements having a mark information bit



applied thereto to the other stable condition thereof, whereby only in response to the application of said preselected one of said binary codes will all said bistable elements have the same given stable condition, a readout pulse source coupled to each of said bistable elements for switching those bistable elements having said given stable condition to a stable condition opposite to said given stable condition in response to a readout pulse, individual output means individually coupled to each bistable element for producing an output pulse therefrom in response to the bistable element to which it is individually coupled switching from said given stable condition to a stable condition opposite to said given stable condition, and coincidence means coupled to all said output means for producing a final output only in response to the simultaneous production of output pulses by all said output means.

3,015,814

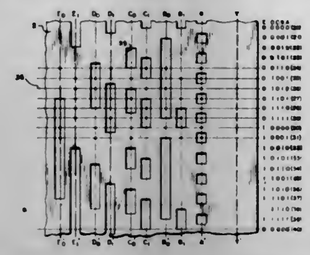
CATHODE RAY CODING TUBE AND CIRCUIT

Bernard Lippel, 39 Fairway Ave., West Long Branch, N.J.

Filed Mar. 2, 1959, Ser. No. 796,712
6 Claims. (Cl. 340—347)
(Granted under Title 35, U.S. Code (1952), sec. 266)

6. An analog to digital converter providing number outputs coded in terms of two-valued signal bits, comprising a code pattern and a reading element, said code pattern having areas for providing in conjunction with said reading element different sequencies of successive bits for a plurality of digits at each of a plurality of analog input values, each bit except a first being derived alternatively from either one of a corresponding pair of columns of the pattern, said first bit being an output bit and also selecting the proper one of the pair of columns from which a second output bit is derived to avoid ambiguity at transitions in digital values with change in analog values, one of said output bits also selecting the proper one of the pair of columns from which a further similar output bit is similarly derived, wherein the radix

of said number outputs involves an odd factor and successive changes in the value of a particular said output bit correspond sometimes to an odd and sometimes to



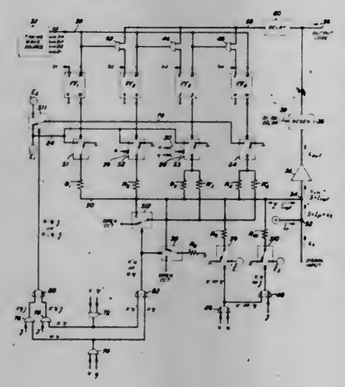
an even number of changes in the value of an output bit previous to said particular bit and so selecting that one of the pair of columns corresponding to said particular bit.

3,015,815

CONVERSION BETWEEN ANALOG AND DIGITAL INFORMATION ON A PIECEWISE-LINEAR BASIS

Henry Mann, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 18, 1959, Ser. No. 813,777
8 Claims. (Cl. 340—347)



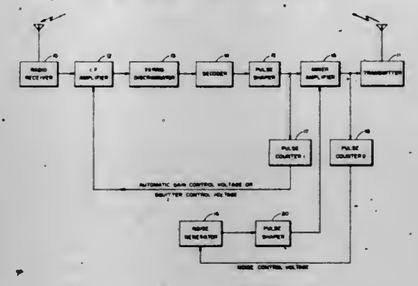
1. An encoder to transform amplitude samples of current to a binary code, nonlinearly on a piecewise-linear basis, comprising means to establish a relation between said code and said current samples defining a piecewise-linear characteristic consisting of a plurality of segments and at least one breakpoint per quadrant; means to generate currents defining and extending to each breakpoint of said characteristic; means to encode said amplitude samples linearly within each segmental range of the current axis of said piecewise-linear characteristic, including a summing node, a reference current network to supply reference currents to said node, and means to supply said amplitude samples to said node for comparison with said reference currents, means to change said relation between said amplitude samples and said code only as the operation of the encoder proceeds from one segmental range to another; and means, ultimately responsive to said comparisons, to render the load-to-ground impedance of said summing node constant during the transformation of said samples to said code.

3,015,816

DUTY CYCLE CONTROL FOR RADIO BEACONS

George F. Morris, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed May 17, 1960, Ser. No. 29,664
9 Claims. (Cl. 343—6.8)



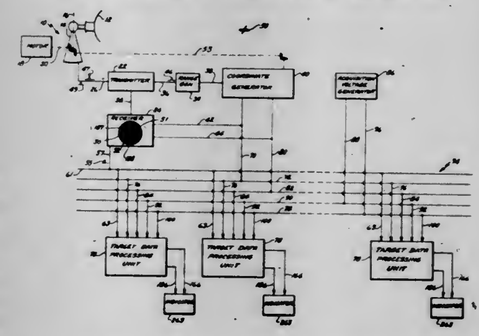
1. A radio beacon comprising a radio frequency receiver and a radio frequency transmitter, said receiver being capable of receiving and demodulating pulse signals of random rates, means responsive to the pulse signals from said receiver for modulating the radio frequency output of said transmitter; a separate noise generator for producing pulses of random occurrence, means responsive to the random pulses of said noise generator for pulse modulating the radio frequency output of said transmitter, and means responsive to the average repetition rate of said pulse signals of said transmitter and operative upon said noise generator for inversely changing the average rate of generated noise pulses so that the average pulse repetition rate of said transmitter output will be substantially constant.

3,015,817

AUTOMATIC TRACKING APPARATUS

James J. Pastoriza, 46 Lincoln St., Belmont, Mass.

Filed May 25, 1956, Ser. No. 587,439
5 Claims. (Cl. 343—7.3)
(Granted under Title 35, U.S. Code (1952) sec. 266)



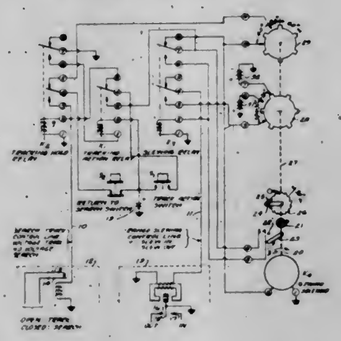
1. In a radar tracking system of the type having a scanning antenna, a transmitting and receiving system for transmitting pulses of radio energy and receiving corresponding reflected pulses from distant targets, a radar screen and a sawtooth voltage signal generator for projecting said reflected pulses in polar positions on said screen; means coupled to said generator for transforming the sawtooth voltage signal from said generator into a pair of sawtooth voltage signals, one modulated as the sine and the other the cosine of the orientation of said

scanning antenna; capacitor means for storing a pair of voltages, each representing a Cartesian coordinate of the position of said target with respect to said scanning antenna; a voltage differential amplifier circuit for each of said Cartesian coordinates, each voltage differential amplifier circuit being coupled to the corresponding coordinate storing means and modulated sawtooth signal means for continuously comparing the coordinate stored voltage with the modulated voltage signals; a voltage correction circuit for each of the coordinates coupled to the corresponding coordinate capacitor storing means and differential amplifier; a gating circuit coupled to each of said correction circuits and receiver for controlling the passage of said reflected pulses to each of the correction circuits; a gate generating means coupled to each of the differential amplifier circuits and said gating circuit for allowing said reflected pulses to pass said gating circuit during the period of substantial voltage equality between each compared modulated voltage and the voltage at the corresponding coordinate capacitor storage means; and means in each of said correction circuits responsive to each of said gated pulses for causing an incremental voltage correction in the corresponding coordinate voltage storage means.

3,015,818
RANGE SLEWING SWITCH FOR AIRBORNE RADAR

Donald J. Oda and Robert L. McCollor, Runnemede, N.J., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Mar. 28, 1958, Ser. No. 724,783
3 Claims. (Cl. 343—7.3)

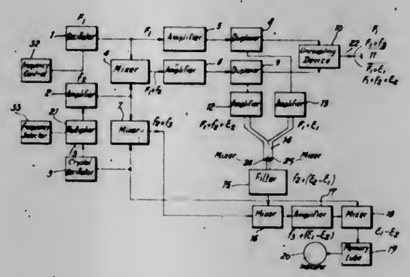


1. In combination with airborne radar apparatus having a search mode of operation and a tracking mode of operation, said tracking mode including automatic range tracking by means of a slewable range gate, and having first and second control lines, said apparatus operating in said search mode when said first control line is deenergized and in said tracking mode when energized, and said range gate being slewed outward when a negative potential is applied to said second control line and inward when a positive potential is applied thereto, switching means for controlling the energization of said control lines and thereby the conversion of said apparatus between search and tracking modes and the slewing of said range gate, said apparatus comprising: a two-stage voltage actuatable polarity selecting means comprising an output terminal and means operative in one state to apply a voltage of one polarity to said output terminal and in the other state to apply a voltage of opposite polarity to said output terminal, said polarity selecting means changing from whichever state it is in to the other each time an actuating voltage is applied thereto; a source of electrical power; a single-pole single-throw normally open switch having one terminal connected to said source; means operative upon closure of said switch to connect said first control line to said source and to connect the other terminal of said switch to said polarity selecting means for applying an actuating voltage thereto; means operative upon actuation of said polarity selecting means to break the connection between the other terminal of said switch and said polarity selecting means and to connect said output terminal to said second control line; and means operative upon opening of said switch to disconnect said output terminal from said second control line and to reconnect said other terminal of said switch to said polarity reversing means.

3,015,819
ELECTROMAGNETIC PULSE TRANSMITTING AND RECEIVING SYSTEMS

Léo Thourel, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France

Filed Oct. 9, 1957, Ser. No. 689,224
Claims priority, application France Nov. 2, 1956
6 Claims. (Cl. 343—7.7)



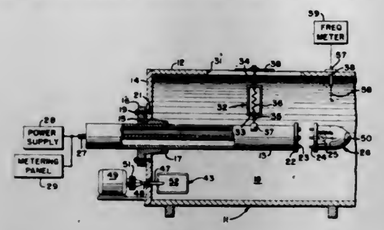
1. A radar system for transmitting signals simultaneously on two close frequencies and receiving the echo thereof for detecting movable targets, comprising: first oscillator means for providing a first signal having a first frequency; second oscillator means for providing a second signal having a second frequency; means for mixing said signals to provide a third signal; an aerial; first and second duplexer means for separately feeding said first and third signals to said aerial; means, respectively coupled to said duplexer means, for mixing the echoes of said first and third signals with each other to provide a fourth signal having the frequency of said second signal plus the difference between the respective Doppler effect frequencies of said first and third signals; and means for deriving from said fourth signal the difference between the respective Doppler components of said first and third signal echoes.

3,015,820
RADIATION LOAD SIMULATOR FOR PROXIMITY FUZE

Gerald N. Plotkin, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 4, 1958, Ser. No. 752,707
7 Claims. (Cl. 343—17.7)
(Granted under Title 35, U.S. Code (1952) sec. 266)

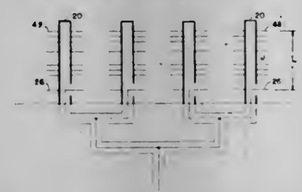
1. Apparatus for simulating the free space antenna loading on a proximity fuze comprising a closed end section of coaxial transmission line having an inner conductor and an outer conductor, means disposed within said coaxial line for receiving and energizing a proximity fuze connected thereto, impedance means bridging said inner and outer conductors for effecting the loading presented by said coaxial line to the connected proximity fuze, and rotating means disposed within said coaxial line for selectively varying the loading presented by said coaxial line to the connected proximity fuze.



3,015,821
END FIRE ELEMENT ARRAY

Richard D. Bogner, Bethpage, N.Y., assignor to Avien, Inc., Woodside, N.Y., a corporation of New York

Filed July 29, 1957, Ser. No. 674,926
9 Claims. (Cl. 343—753)



1. A high gain antenna for transmission of energy of wavelength λ comprising a plurality of retarded surface wave end fire elements, each of said elements being composed of a plurality of discrete metallic members, each said member being greater than $\lambda/4$ and less than $\lambda/2$ in major dimension, each said member being symmetrical about a plane containing an axis common to said members, said members being spaced between $\lambda/8$ and $\lambda/2$ apart along said axis, said axis being aligned in the direction of propagation of said element to form an elongated radiator fitting within a circumscribing cylinder coaxial with said axis, said cylinder having a diameter which is greater than $\lambda/4$ and less than $\lambda/2$, said elements being arranged so that their projections onto a common plane are parallel; a launcher arranged symmetrically about said axis for propagation of energy along said axis and means for feeding said launchers in common phase, said elements being spaced at least

$$\frac{360}{\sin \frac{100}{\sqrt{L}}}$$ electrical degrees apart

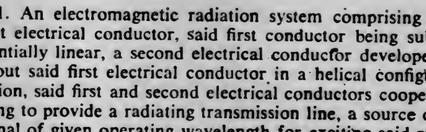
where L is the length of the element in wavelengths at the frequency of transmission.

3,015,822
IONIZED-GAS BEAM-SHIFTING TSCHEBYSCHEFF ARRAY ANTENNA

Lawrence B. Brown, Anaheim, Calif., William R. Jones, Hillsdale, N.J., and Elwin W. Seeley, Riverside, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Mar. 23, 1960, Ser. No. 17,234
3 Claims. (Cl. 343—771)
(Granted under Title 35, U.S. Code (1952) sec. 266)

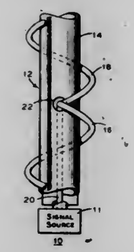
1. A beam shifting array antenna adapted to uniformly and quickly shift the ionization level of a gaseous medium operatively associated therewithin comprising a section of coaxial waveguide defined by an outer conductor of rectangular cross-section having a pair of relatively wide faces and a pair of relatively narrow faces and an inner conductor coaxially disposed relative to said outer conductor, means closing the ends of said waveguide section to define an enclosed chamber therewithin, said inner conductor being spaced from said wide faces by a distance that is small compared to its length, a rare ionizable gas filling said enclosed chamber, an array of slots formed in the Tschebyscheff pattern on one of said wide faces, said slots having sealed windows thereacross, input means for applying R.F. input energy to one end of said waveguide, a source of R.F. energy connected to said input means, a source of varying current for rapidly changing the ionization level of said gas whereby its permittivity, and thus the wavelength of the waveguide, is varied, and means connecting said current source across said outer conductor and said inner conductor.



3,015,823
HELICAL ANTENNA NULL SUPPRESSOR

Paul M. Pan, Adelphi, Md., assignor to General Electric Company, a corporation of New York

Filed Feb. 17, 1959, Ser. No. 793,822
15 Claims. (Cl. 343—895)

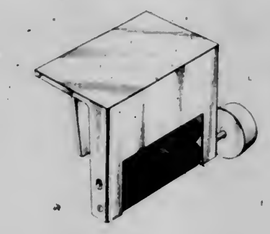


1. An electromagnetic radiation system comprising a first electrical conductor, said first conductor being substantially linear, a second electrical conductor developed about said first electrical conductor in a helical configuration, said first and second electrical conductors cooperating to provide a radiating transmission line, a source of signal of given operating wavelength for exciting said radiating transmission line, coupling means for coupling said source of signal to said radiating transmission line, and loading means for introducing a cancelling discontinuity positioned in a region along the length of said radiating transmission line to minimize the main azimuth null in the radiation pattern caused by the electromagnetic discontinuity introduced by said coupling means.

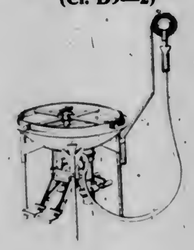
DESIGNS

JANUARY 2, 1962

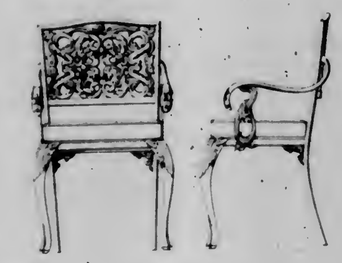
192,004
COLLAPSIBLE TUBE SQUEEZER
Clarence N. Coley, Star Rte., Kernersville, N.C.
Filed July 31, 1959, Ser. No. 57,024
Term of patent 14 years
(Cl. D4—3)



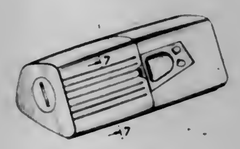
192,005
STERILIZER FOR OPEN END CONTAINERS
Frank Haloski, Downers Grove, Ill., and Rudolph A. Adams, Eau Claire, Mich., assignors to Vacuum Can Company, Chicago, Ill.
Filed Nov. 1, 1960, Ser. No. 62,702
Term of patent 14 years
(Cl. D9—2)



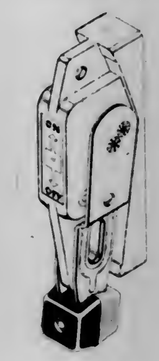
192,006
CHAIR
Joseph Rosner, Coral Gables, Fla., assignor to Scroll, Inc., Miami, Fla., a corporation of Florida
Filed Feb. 15, 1961, Ser. No. 63,941
Term of patent 14 years
(Cl. D15—1)



192,007
DENTAL FLOSS DISPENSER
Irvin J. Gershen, Springfield, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed July 27, 1960, Ser. No. 61,538
Term of patent 14 years
(Cl. D24—1)



192,008
SWITCH OPERATOR
Carl W. Sundberg, Bloomfield Hills, and Montgomery Ferar, Huntington Woods, Mich., assignors to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed Nov. 23, 1960, Ser. No. 62,947
Term of patent 14 years
(Cl. D26—13)



192,009
DESK
Charles U. Deaton, 9635 W. Colfax Ave., Lakewood, Colo.
Filed Dec. 18, 1959, Ser. No. 58,720
Term of patent 14 years
(Cl. D33—7)



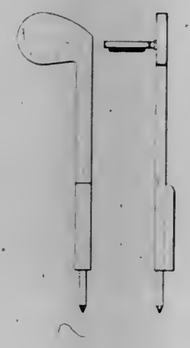
192,010
TABLE OR THE LIKE
Richard G. Reineman, Covina, Calif., and George E. Schaefer, Muskegon Heights, Mich., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 60,122
Term of patent 14 years
(Cl. D33—14)



192,011
TOY RACECOURSE BOWL
Charles F. Nowlin, 2 Tara Lane, Worcester, Mass.
Filed May 19, 1959, Ser. No. 55,975
Term of patent 14 years
(Cl. D34—5)



192,012
COMBINED GOLF COURSE TEE-OFF MARKER AND CIGARETTE HOLDER
Mark E. Buffamoyer, Rte. 2, Lebanon, Pa.
Filed July 18, 1961, Ser. No. 65,962
Term of patent 14 years
(Cl. D34—5)



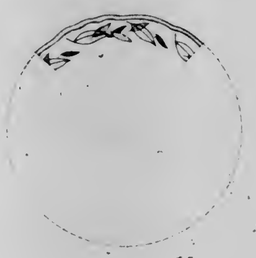
192,013
GAME BOARD
Marvin S. Hecker, 10 E. 85th St., Manhattan, N.Y.
Filed Aug. 21, 1961, Ser. No. 66,439
Term of patent 14 years
(Cl. D34—5)



192,014
TUMBLER OR SIMILAR ARTICLE
Bjørn Wiinblad, Selb, Bavaria, Germany, assignor to Rosenthal-Porzellan Aktiengesellschaft, Bavaria, Germany, a corporation of Germany
Filed May 2, 1961, Ser. No. 65,007
Term of patent 14 years
(Cl. D36—10)



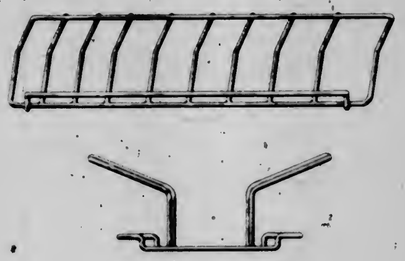
192,015
PLATE OR SIMILAR ARTICLE
John H. Reiser, Downey, Calif., assignor to Wallace China Co., Ltd., Los Angeles, Calif., a corporation of California
Filed Aug. 7, 1961, Ser. No. 66,223
Term of patent 14 years
(Cl. D44—15)



192,016
TEAKETTLE
Richard B. Cronheim, 411 N. 7th St., St. Louis, Mo.
Filed Aug. 23, 1961, Ser. No. 66,472
Term of patent 14 years
(Cl. D44—25)



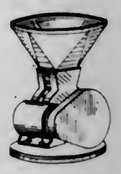
192,017
UTENSIL LID RACK OR SIMILAR ARTICLE
Charles Gregg Moore, Wooster, Ohio, assignor to Rubbermaid Incorporated, Wooster, Ohio, a corporation of Ohio
Filed July 21, 1961, Ser. No. 66,012
Term of patent 14 years
(Cl. D44—29)



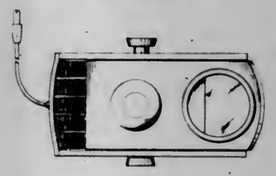
192,018
CAKE SERVER
Charles A. McLeod, 162 E. Ohio St., Chicago, Ill.
Filed Aug. 15, 1961, Ser. No. 66,363
Term of patent 14 years
(Cl. D44—29)



192,019
MACHINE FOR COMMINUTING SOAP CAKES
Arthur E. Leisenring, 1733 Blake St., Denver, Colo.
Filed July 15, 1960, Ser. No. 61,370
Term of patent 14 years
(Cl. D55—1)



192,020
COMBINATION LENS INDEXER AND MARKER
John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass.
Filed Sept. 12, 1960, Ser. No. 62,091
Term of patent 14 years
(Cl. D57—1)



192,021
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed June 13, 1961, Ser. No. 65,581
Term of patent 14 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Juvinall, James W., to Ransburg Electro-Coating Corp. Apparatus for and method of conveying articles. Re. 25,108, 1–2–62, Cl. 117—93.
Medlock, Alfred A., to Safety Bath International, Inc. Shower seat. Re. 25,107, 1–2–62, Cl. 4—147.
Natho, Paul J., to Pan American Petroleum Corp. Surface controlled subsurface tubing pressure shut-off valve. Re. 25,109, 1–2–62, Cl. 166—72.
Pan American Petroleum Corp.: *See*—
Natho, Paul J. Re. 25,109.
Ransburg Electro-Coating Corp.: *See*—
Juvinall, James W. Re. 25,108.
Safety Bath International, Inc.: *See*—
Medlock, Alfred A. Re. 25,107.

LIST OF PLANT PATENTEES

Ball, George J., Inc.: *See*—
Lamborot, Lazare A. 2,117.
Lamborot, Lazare A. 2,118.
Lamborot, Lazare A. 2,119.
Lamborot, Lazare A., to George J. Ball, Inc. Chrysanthemum plant. 2,117, 1–2–62, Cl. 47—60.
Lamborot, Lazare A., to George J. Ball, Inc. Chrysanthemum plant. 2,118, 1–2–62, Cl. 47—60.
Lamborot, Lazare A., to George J. Ball, Inc. Chrysanthemum plant. 2,119, 1–2–62, Cl. 47—60.

LIST OF DESIGN PATENTEES

Adams, Rudolph A.: *See*—
Haloski, Frank, and Adams. 192,005.
American Optical Co.: *See*—
Armbruster, John T. 192,020.
Armbruster, John T., to American Optical Co. Combination lens indexer and marker. 192,020, 1–2–62, Cl. D57—1.
Brunswick Corp.: *See*—
Reineman, Richard G., and Schaefer. 192,010.
Buffamoyer, Mark E. Combined golf course tee-off marker and cigarette holder. 192,012, 1–2–62, Cl. D34—5.
Coley, Clarence N. Collapsible tube squeezer. 192,004, 1–2–62, Cl. D4—3.
Cronheim, Richard B. Teakettle. 192,016, 1–2–62, Cl. D44—25.
Deaton, Charles U. Desk. 192,009, 1–2–62, Cl. D33—7.
Decorative Fabrics Co. Inc.: *See*—
Leavy, Natalie. 192,021.
Ferar, Montgomery: *See*—
Sundberg, Carl W., and Ferar. 192,008.
Gershen, Irvin J., to Johnson & Johnson. Dental floss dispenser. 192,007, 1–2–62, Cl. D24—1.
Haloski, Frank, and R. A. Adams, to Vacuum Can Co. Sterilizer for open end containers. 192,005, 1–2–62, Cl. D9—2.
Hecker, Marvin S. Game board. 192,013, 1–2–62, Cl. D34—5.
Johnson & Johnson: *See*—
Gershen, Irvin J. 192,007.
Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 192,021, 1–2–62, Cl. D92—1.
Leisenring, Arthur E. Machine for comminuting soap cakes. 192,019, 1–2–62, Cl. D55—1.
McLeod, Charles A. Cake server. 192,018, 1–2–62, Cl. D44—29.
Moore, Charles G., to Rubbermaid Inc. Utensil lid rack or similar article. 192,017, 1–2–62, Cl. D44—29.
Nowlin, Charles F. Toy racecourse bowl. 192,011, 1–2–62, Cl. D34—5.
Reineman, Richard G., and G. E. Schaefer, to Brunswick Corp. Table or the like. 192,010, 1–2–62, Cl. D33—14.
Reiser, John H., to Wallace China Co., Ltd. Plate or similar article. 192,015, 1–2–62, Cl. D44—15.
Rosenthal-Porzellan Aktiengesellschaft: *See*—
Wiinblad, Bjørn. 192,014.
Rosner, Joseph, to Scroll, Inc. Chair. 192,006, 1–2–62, Cl. D15—1.
Rubbermaid Inc.: *See*—
Moore, Charles G. 192,017.
Schaefer, George E.: *See*—
Reineman, Richard G., and Schaefer. 192,010.
Scroll, Inc.: *See*—
Rosner, Joseph. 192,006.
Square D Co.: *See*—
Sundberg, Carl W., and Ferar. 192,008.
Sundberg, Carl W., and M. Ferar, to Square D Co. Switch operator. 192,008, 1–2–62, Cl. D26—13.
Vacuum Can Co.: *See*—
Haloski, Frank, and Adams. 192,005.
Wallace China Co., Ltd.: *See*—
Reiser, John H. 192,015.
Wiinblad, Bjørn, to Rosenthal-Porzellan Aktiengesellschaft. Tumbler or similar article. 192,014, 1–2–62, Cl. D36—10.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See*—
O'Keefe, Michael F., and Wahl. 3,015,683.

Abbott, Earl: *See*—
Licklider, Robert P., and Abbott. 3,015,375.

Addicks, Mentor C.: *See*—
MacMillan, John H., Jr. 3,015,373.

Admiral Corp.: *See*—
Schreiber, Ray B. 3,015,752.

Advance Transformer Co.: *See*—
Cheske, William J. 3,015,682.

Aero Gasket Corp.: *See*—
Schmitt, Raymond C. 3,015,465.

Aerojet-General Corp.: *See*—
Geckler, Richard D. 3,015,209.

Aeroscience, Inc.: *See*—
Ganahl, Joseph F. 3,015,231.

Ahlgren, Axel W., to Amerock Corp. Hinge. 3,015,126, 1–2–62, Cl. 16—168.

Aho, Eemil L. Supporting device for nether-garments. 3,015,109, 1–2–62, Cl. 2—302.

Akmenkalns, Ivars G., to International Business Machines Corp. Coincident diode gating producing an output resulting from current overshoot. 3,015,740, 1–2–62, Cl. 307—88.5.

Akron Standard Mold Co., The: *See*—
Voth, Walter P. 3,015,130.

Aktiebolaget Electrolux: *See*—
Descarries, Raymond. 3,015,123.

Aldred, John L., Jr., to Ford Motor Co. Stabilizer pad. 3,015,497, 1–2–62, Cl. 280—150.

Alford, Andrew. Means for absorbing reflected energy in an antenna transmission line. 3,015,786, 1–2–62, Cl. 333—9.

Allen Electric and Equipment Co.: *See*—
Van Campen, Frank M. 3,015,757.

Allen, Russel G., to Owens-Illinois Glass Co. Selective control apparatus for automatic glass forming machine. 3,015,189, 1–2–62, Cl. 49—19.

Allers, Larry P., to Gibson, Inc. Mute means for string musical instruments. 3,015,247, 1–2–62, Cl. 84—273.

Allin, Philip E. V., and F. W. Smith, to North American Philips Co., Inc. Waveguide circulator. 3,015,787, 1–2–62, Cl. 333—9.

Allis-Chalmers Mfg. Co.: *See*—
Kreekon, Nicholas, and Lane. 3,015,756.

Allison, Charles R.: *See*—
Thompson, Robert E., and Allison. 3,015,630.

Almor Corp.: *See*—
Foster, Allan D. 3,015,400.

Amchem Products, Inc.: *See*—
Hyams, Montagu. 3,015,588.

American Can Co.: *See*—
Becker, Joseph C. 3,015,198.
Dobson, Frank E., and Manvell. 3,015,155.
McLain, Clement J. 3,015,568.

American Cyanamid Co.: *See*—
Ellenbogen, Leon, and Williams. 3,015,608.
Gerhardt, Gerard E. 3,015,440.
Jen, Yun, and House. 3,015,605.
Myers, Myron L., and Whately. 3,015,573.
Rifkin, Daniel D. 3,015,578.

American Drill Bushing Co.: *See*—
Armacost, Robert H. 3,015,242.

American Forest Products Corp.: *See*—
Mulcoy, Edward W. 3,015,431.

American Machine & Foundry Co.: *See*—
Jones, Harold A., Schmidt, and Condon. 3,015,489.

American-Marietta Co.: *See*—
Lindbloom, Henry E. 3,015,143.

American Seating Co.: *See*—
Hayden, Ray A., and Morgan. 3,015,521.

American Thermos Products Co., The: *See*—
Fuller, George W. 3,015,403.

Amerock Corp.: *See*—
Ahlgren, Axel W. 3,015,126.

Amoruso, Joseph. Shingled tile block veneer wall. 3,015,193, 1–2–62, Cl. 50—246.

Anaconda American Brass Co., The: *See*—
Nichols, Lyman B. 3,015,133.

Anderson, Arthur B. Mechanic's tray arrangement. 3,015,530, 1–2–62, Cl. 311—21.

Anderson, Charles U., and E. W. Stanley, to Armstrong Cork Co. Method and apparatus for indicating registration in a rotary multicolor printing machine. 3,015,266, 1–2–62, Cl. 101—211.

Anderson, Donald G. Polish container. 3,015,120, 1–2–62, Cl. 15—258.

Anderson, John H.: *See*—
Miller, Teddy, Anderson, and Rosbe. 3,015,302.

Anderson, Marvin E., to Armour Research Foundation of Illinois Institute of Technology. Magnetic transducer head. 3,015,533, 1–2–62, Cl. 346—74.

Angier, James F., to Structural Electric Products Corp. Runway light. 3,015,717, 1–2–62, Cl. 240—1.2.

Anker-Werke Aktiengesellschaft: *See*—
Hecker, Alfred. 3,015,435.

Anritsu Electronic Works Ltd.: *See*—
Ueno, Isaburo. 3,015,534.

Antell, Frederick G.: *See*—
Antell, Robert A. 3,015,164.

Antell, Raymond E.: *See*—
Antell, Robert A. 3,015,164.

Antell, Robert A., ⅙ to F. G. Antell, and ⅙ to R. E. Antell. Devices and method for laying out skirtboards. 3,015,164, 1–2–62, Cl. 33—102.

Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Hydraulically operated pavement finishing machine. 3,015,257, 1–2–62, Cl. 94—45.1.

Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Paving material spreader. 3,015,258, 1–2–62, Cl. 94—46.

Apel, John H., and R. J. Beeson, to The Jaeger Machine Co. Paving material spreader. 3,015,259, 1–2–62, Cl. 94—46.

Arbeit, Pierre, to Societe Compagnie de Saint-Gobain. Apparatus and method for circulating molten glass. 3,015,190, 1–2–62, Cl. 49—54.

Arburg-Feingeratefabrik oHG Hehl & Sohne: *See*—
Hehl, Karl. 3,015,131.

Arceneaux, Richard L.: *See*—
Reinhardt, Robert M., Frick, Arceneaux, and Reid. 3,015,584.

Argus Chemical Corp.: *See*—
Leistner, William E., Knoepke, and Hecker. 3,015,644.

Armacost, Robert H., to American Drill Bushing Co. Liner bushings for slip renewable tool guide bushings. 3,015,242, 1–2–62, Cl. 77—62.

Armer, Rollin A., to Calpat Products, Inc. Parking meter and time release mechanism therefor. 3,015,208, 1–2–62, Cl. 58—142.

Armour Research Foundation of Illinois Institute of Technology: *See*—
Anderson, Marvin E. 3,015,533.

Armstrong Cork Co.: *See*—
Anderson, Charles U., and Stanley. 3,015,266.

Arnett, Leslie, and W. G. Freise, to Square Mfg. Co. Syrup supply system. 3,015,419, 1–2–62, Cl. 222—130.

Arwell Inc.: *See*—
Scott, Wellington W., and Irvine. 3,015,184.

Ashton, Benjamin N., to Electrol Inc. Shimmy dampening device for aircraft landing gear. 3,015,311, 1–2–62, Cl. 121—39.

Associated Spring Corp.: *See*—
Maker, James H. 3,015,482.

Augustin, Darold A., to Bendix-Westinghouse Automotive Air Brake Co. Air hydraulic brake actuator. 3,015,213, 1–2–62, Cl. 60—54.6.

Austin, Leonard E., to The Bendix Corp. Stage motor. 3,015,309, 1–2–62, Cl. 121—38.

Automatic Electric Laboratories, Inc.: *See*—
Faulkner, Alfred H., and Melvin. 3,015,699.

Automatic Radio Mfg. Co., Inc.: *See*—
De Metrick, John S. 3,015,726.

Avco Corp.: *See*—
Rohm, Fredric G. 3,015,322.

Avien, Inc.: *See*—
Bogner, Richard D. 3,015,821.

Ayers, Joseph W., and R. A. Stephens, to C. K. Williams & Co. Gamma ferric oxide for magnetic impulse record members. 3,015,627, 1–2–62, Cl. 252—62.5.

Ayers, Joseph W., and R. A. Stephens, to C. K. Williams & Co. Ferroso-ferric oxide for magnetic impulse record members. 3,015,628, 1–2–62, Cl. 252—62.5.

Ayotte, Joseph E. Adjustable safety razor. 3,015,158, 1–2–62, Cl. 30—41.

Babcock & Wilcox Co., The: *See*—
Evans, Sidley O. 3,015,154.
Evans, Sidley O. 3,015,387.

Babson Bros. Co.: *See*—
Merritt, Thomas W., and Thomas. 3,015,306.

Backer, William R., to Norton Co. Torque responsive control for a driven means. 3,015,195, 1–2–62, Cl. 51—165.

Badgett, Lloyd F.: *See*—
Hencke, William R., McBurnett, and Badgett. 3,015,624.

Bagby, Leland W.: *See*—
Vogel, Alvin R., Ruch, and Bagby. 3,015,702.

Bailey, Florence N.: *See*—
Brown, James E. 3,015,166.
Brown, James E. 3,015,353.

Bailey Meter Co.: *See*—
Hornfeck, Anthony J., Koppel, and Louis. 3,015,768.

Bailey, William F., to Hazeltine Research, Inc. Signal-translating device. 3,015,763, 1–2–62, Cl. 317—235.

Bain, John W., and A. E. Sumsion, to United States Steel Corp. Method of controlling the operation of an open hearth furnace. 3,015,357, 1–2–62, Cl. 158—117.5.

Baines, Frederick, to The Plessey Co. Ltd. Compression baling devices. 3,015,262, 1–2–62, Cl. 100—43.

Baird-Atomic, Inc.: *See*—
Foreman, William T., and Shaw. 3,015,253.

Barber, Herbert H., Jr., to Standard Oil Co. Union and gas chromatography column port. 3,015,227, 1–2–62, Cl. 73—23.

Barényi, Béla, to Daimler-Benz Aktiengesellschaft. Motor vehicle roof construction. 3,015,519, 1–2–62, Cl. 296—137.

Barnes, Frederick J., and W. J. Neuhauser, to Reynolds Metals Co. Splicing system. 3,015,255, 1–2–62, Cl. 93—1.1.

Barnes, W. F., and John, Co.: *See*—
Stohlquist, Roger H. 3,015,303.

Barnett, Paul B., to Dresser Industries, Inc. Drill string joint. 3,015,500, 1–2–62, Cl. 285—47.

Baskin, Aaron D.: *See*—
Darby, Richard T., Baskin, and Lilly. 3,015,226.

Bates, John S., 70% to K. S. Bates, 15% to R. B. Bates, and 15% to M. E. B. Trotter, by decree of distribution. Pipe sealing gasket. 3,015,510, 1–2–62, Cl. 288—23.

Bates, Kenton S.: *See*—
Bates, John S. 3,015,510.

Bates, Robert B.: *See*—
Bates, John S. 3,015,510.

Bauer, Robert E. Container construction. 3,015,430, 1–2–62, Cl. 229—45.

Baum, Melvin E., and D. E. Hostetler, to Koppers Co., Inc. Dihydroxybiphenyl carboxylic acid manufacture. 3,015,672, 1–2–62, Cl. 260—520.

Bawn, Carl V., and B. A. Hunter, to United States Rubber Co. Method of increasing particle size in synthetic rubber latex by treatment with volatile salt and polyethylene polyamine. 3,015,641, 1–2–62, Cl. 260—29.7.

Bawn, Carl V., and B. A. Hunter, to United States Rubber Co. Increasing the particle size of synthetic rubber latex. 3,015,642, 1–2–62, Cl. 260—29.7.

Baxter, Clyde W.: *See*—
Harris, Ben A., Baxter, and Wiseman. 3,015,737.

Bayerische Schrauben- und Federn-Fabriken Richard Bergner: *See*—
Gerlach, Martin, and Forster. 3,015,685.

Beach, Laurence R.: *See*—
Volberg, Herman W., and Beach. 3,015,693.

Becker, Ewald G., and T. Wieske, to Lever Brothers Co. Process for improving frying fats and the resulting composition. 3,015,566, 1–2–62, Cl. 99—123.

Becker, Joseph C., to American Can Co. Machine for sealing cartons. 3,015,198, 1–2–62, Cl. 53—387.

Beemer, Paul K., and J. W. Morris, to Preco Inc. Temperature regulation for cargo carriers and the like. 3,015,217, 1–2–62, Cl. 62—186.

Beeson, Robert J.: *See*—
Apel, John H., and Beeson. 3,015,257.
Apel, John H., and Beeson. 3,015,258.
Apel, John H., and Beeson. 3,015,259.

Behymer, Donald J., to Maico Electronics, Inc. Acoustical apparatus. 3,015,704, 1–2–62, Cl. 179—107.

Beling, Thomas E., to International Telephone & Telegraph Corp. System for providing short high amplitude square voltage pulses. 3,015,777, 1–2–62, Cl. 328—58.

Bell, John, J. V. Foil, and F. H. Muirhead, to Muirhead & Co. Ltd. Ship stabilizers. 3,015,298, 1–2–62, Cl. 114—126.

Bell Telephone Laboratories, Inc.: *See*—
Cirone, Frank P. 3,015,784.
Fuller, Calvin S. 3,015,590.
Kammerer, Fred W., Riesz, and Wallace. 3,015,738.
Mann, Henry. 3,015,815.
Mason, Warren P. 3,015,708.
Myers, Peter B. 3,015,809.
Perreault, George E. 3,015,707.
Schneider, Herbert A. 3,015,444.
Thurber, Elmer A. 3,015,560.

Bellringer, Frederick J., to The Distillers Co. Ltd. Production of dichlorbutenes. 3,015,679, 1–2–62, Cl. 260—652.5.

Bellwinkel, Curt: *See*—
Stümpfig, Friedrich, and Bellwinkel. 3,015,321.

Bendix Corp., The: *See*—
Austin, Leonard E. 3,015,309.
Kishbaugh, Warren E. 3,015,794.
McCombs, Howard L., Jr. 3,015,338.
Williamson, John R., and Doussard. 3,015,210.

Bendix-Westinghouse Automotive Air Brake Co.: *See*—
Augustin, Darold A. 3,015,213.
Savage, Russell C. 3,015,339.

Beresford, Hobart, to Iowa State College Research Foundation. Feed bunk. 3,015,308, 1–2–62, Cl. 119—61.

Bergstrom, Carl V. Materials handling apparatus. 3,015,401, 1–2–62, Cl. 214—317.

Bible, Roy H., Jr., to G. D. Searle & Co. 6-oxygenated 17α-(2-carboxyethyl)-17β-hydroxyandrost-4-en-3-one lactones. 3,015,656, 1–2–62, Cl. 260—239.57.

Bird, John W., Jr.: *See*—
Hall, Richard H., and Bird. 3,015,305.

Bishop, George M. Speaker system. 3,015,366, 1–2–62, Cl. 181—31.

Blackman, Calvin C., to L. Wilson. Open coil supporting turntable. 3,015,455, 1–2–62, Cl. 242—78.6.

Blattner, Elizabeth: *See*—
Blattner, Emil H. 3,015,525.
Blattner, Emil H., and Winther. 3,015,285.

Blattner, Emil H., deceased (by E. Blattner, executrix), and H. Winther, to Symington Wayne Corp. Snubbed railway truck. 3,015,285, 1–2–62, Cl. 105—224.

Blattner, Emil H., deceased (by E. Blattner, executrix), to Symington Wayne Corp. Journal box lid. 3,015,525, 1–2–62, Cl. 308—47.

Bliss, E. W., Co.: *See*—
Meyer, David. 3,015,449.

Blomquist, Arne M.: *See*—
Carbert, Ralph E., Blomquist, and Kennedy. 3,015,374.

Bloom, Quentin M.: *See*—
Buckholdt, Robert E., and Bloom. 3,015,478.

Bloomfield, Dennis G.: *See*—
Clark, Patrick A., Stubbs, and Bloomfield. 3,015,528.

Blount-Parker Corp.: *See*—
Parker, Robert E. 3,015,111.

Bodenschatz, August, to I-T-E Circuit Breaker Co. Cover lift pin. 3,015,709, 1–2–62, Cl. 200—114.

Bogdonoff, Harold: *See*—
Carlson, Chester F., and Bogdonoff. 3,015,304.

Bogner, Richard D., to Avien, Inc. End fire element array. 3,015,821, 1–2–62, Cl. 343—753.

Bohnet, Herman C. Trailer coupling guide. 3,015,162, 1–2–62, Cl. 33—46.

Bollmeier, Emil W., to Minnesota Mining and Mfg. Co. Connector device. 3,015,509, 1–2–62, Cl. 287—78.

Bonitz, Eckard: *See*—
Ziegler, Karl, Gellert, and Bonitz. 3,015,669.

Boone, Salomon: *See*—
Bügel, Roelof D., and Boone. 3,015,759.

Borg-Warner Corp.: *See*—
Tracy, Herbert E. 3,015,506.

Bosse, Robert W.: *See*—
Braendel, Felix W., and Bosse. 3,015,117.

Bouzitat, Jean T. M. G.: *See*—
Ville, Jean A., and Bouzitat. 3,015,446.

Bowman, Norman J., and W. A. Proell, to Standard Oil Co. Plasticized thermoplastic composition containing di(dinitrophenyl)-R-glycol ether. 3,015,570, 1–2–62, Cl. 106—181.

Bowman, Norman J., and W. A. Proell, to Standard Oil Co. Composition containing thermoplastic polymer and dinitrophenyl-R-ether as plasticizer therefor. 3,015,571, 1–2–62, Cl. 106—188.

Bowman, Walter A., to United States Steel Corp. Coke oven door. 3,015,614, 1–2–62, Cl. 202—248.

Bowser, Inc.: *See*—
Daley, Roger J. 3,015,417.

Bradley, Theodore F., and H. J. Sommer, to Shell Oil Co. Compositions containing epoxy esters and bituminous materials. 3,015,635, 1–2–62, Cl. 260—18.

Braendel, Felix W., and R. W. Bosse, to Groov-Pin Corp. Insert tapping machine with work clamp means reciprocable between feed stud tapping stations. 3,015,117, 1–2–62, Cl. 10—139.

Brecht, George, to Personal Products Corp. Applicator. 3,015,332, 1–2–62, Cl. 128—263.

Brennan, Elmer W., and J. G. Hall, to The Pure Oil Co. Multi-graded lubricant for 2-cycle engines. 3,015,320, 1–2–62, Cl. 123—1.

Brennan, James A., to Socony Mobil Oil Co., Inc. Removal of nitrogen oxides from combustion gases. 3,015,369, 1–2–62, Cl. 183—114.2.

Bridwell, Robert A., to Northrop Corp. Heated draw die. 3,015,292, 1–2–62, Cl. 113—49.

Bridwell, Robert A., to Northrop Corp. Reflector for radiant heating. 3,015,711, 1–2–62, Cl. 219—34.

Bristol-Myers Co.: *See*—
Johnson, David A., and Richardson. 3,015,676.

Broughton, Amos W., Jr., and H. G. Koch, to Johns-Manville Corp. Expansible packing. 3,015,503, 1–2–62, Cl. 286—7.

Brown, James E., 37½% to S. H. Ferrell and 37½% to F. N. Bailey. Measuring gauge. 3,015,166, 1–2–62, Cl. 33—148.

Brown, James E., 37½% to S. H. Ferrell and 37½% to F. N. Bailey. Clamp for body jack. 3,015,353, 1–2–62, Cl. 153—32.

Brown, Lawrence B., W. R. Jones, and E. W. Seeley, to United States of America, Navy. Ionized-gas beam-shifting tschebyscheff array antenna. 3,015,822, 1–2–62, Cl. 343—771.

Browner, William J., to Relaxacizor, Inc. Device for electrical contraction of bodily tissues. 3,015,333, 1–2–62, Cl. 128—424.

Bruehl, Lawrence: *See*—
Leathers, Ward, Di Monico, and Bruehl. 3,015,254.

Bruijning, Hugo G., to North American Philips Co., Inc. Arrangement for impulse modulation of a magnetron. 3,015,778, 1–2–62, Cl. 328—67.

Brunings, Jay E., to Foster Wheeler Corp. Method and apparatus for aqueous homogeneous reactor systems. 3,015,617, 1–2–62, Cl. 204—193.2.

Brunswick Corp.: *See*—
Mohr, Robert G., and Lappin. 3,015,531.

Buchanan, J. D., and B. Smith, Jr., to Hydraulic Research and Mfg. Co. Pressure control servo valve. 3,015,317, 1–2–62, Cl. 121—46.5.

Buchi, Alfred, deceased; H. Walder, executor, to Ingenieurbureau D.-Ing. Alfred J. Buchi A.G. Four-stroke internal combustion engine. 3,015,323, 1–2–62, Cl. 123—79.

Buck, Harold W.: *See*—
McKnight, George S., Jr., and Buck. 3,015,575.

Buckholdt, Robert E., and Q. M. Bloom, to Selas Corp. of America. Furnace. 3,015,478, 1–2–62, Cl. 263—6.

Bucklin, Albert G.: *See*—
Grant, Nicholas J., and Bucklin. 3,015,558.

Budd Co., The: *See*—
Fesmire, Norman W., and Whirlein. 3,015,407.

Buegeleisen, Joseph, Co.: *See*—
Zbikowski, Ted. 3,015,103.

Bügel, Roelof D., and S. Boone, to North America Philips Co., Inc. Electrolytic wound capacitor. 3,015,759, 1–2–62, Cl. 317—230.

Bunting, Albert L. Method of molding plastic articles. 3,015,132, 1–2–62, Cl. 18—48.

Buntpapierfabrik A.G.: *See*—
Göbel, Johannes. 3,015,574.
Bush, Rankin J., to Westinghouse Air Brake Co. Railway switch control apparatus. 3,015,464, 1–2–61, Cl. 246—258.
Buyer, Walter, to The Ridge Tool Co. Slidable outer jaw wrench. 3,015,246, 1–2–62, Cl. 81—167.
CFC Corp.: *See*—
Campbell, Frank S., Frank, and Charles. 3,015,408.
Campbell, Frank S., Frank, and Charles. 3,015,409.
Callow, Donald S.: *See*—
Pirt, Stanley J., and Callow. 3,015,612.
Calpat Products, Inc.: *See*—
Armer, Rollin A. 3,015,208.
Camarata, Alfred A., to Viking Pump Co. Pump. 3,015,282, 1–2–62, Cl. 103—126.
Campbell, Arthur W., to Commercial Solvents Corp. Process for the production of alkylacylamides. 3,015,674, 1–2–62, Cl. 260—561.
Campbell, David L. Method of making spectacle lenses. 3,015,196, 1–2–62, Cl. 51—284.
Campbell, Frank S., J. R. Frank, and M. J. Charles, to CFC Corp. Outlet box cover. 3,015,408, 1–2–62, Cl. 220—3.4.
Campbell, Frank S., J. R. Frank, and M. J. Charles, to CFC Corp. Outlet box cover. 3,015,409, 1–2–62, Cl. 220—3.4.
Campbell, James R. Method and apparatus for resistance welding. 3,015,715, 1–2–62, Cl. 219—117.
Campbell, Raymond W. Sub-frame for motor vehicles. 3,015,496, 1–2–62, Cl. 280—150.
Canada, Her Majesty the Queen in the right of, as represented by the Postmaster General: *See*—
Levy, Maurice M. 3,015,389.
Capitol Products Corp.: *See*—
Stram, George, McIntyre, and Thomas. 3,015,395.
Caples, Jesse W. Vacuum hair cutting gauge. 3,015,336, 1–2–62, Cl. 132—45.
Caradco Inc.: *See*—
Sitterly, Charles K. 3,015,511.
Carbert, Ralph E., A. M. Blomquist, and R. L. Kennedy, to Tel-E-Lect Products Inc. Hydraulic derrick. 3,015,374, 1–2–62, Cl. 189—11.
Cardwell Mfg. Co.: *See*—
Hardcastel, Philip P. 3,015,529.
Cargill, Inc.: *See*—
MacMillan, John H., Jr., and Addicks. 3,015,373.
Carlson, Chester F., and H. Bogdonoff, to Xerox Corp. Electrostatic image reproduction. 3,015,304, 1–2–62, Cl. 118—637.
Carlson, Elmer A., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,015,447, 1–2–62, Cl. 236—68.
Carlucci, Michael P., and R. W. Persico, to United States of America, Army. Fold-upstyle service cap. 3,015,108, 1–2–62, Cl. 2—195.
Carroll, Fred M., and G. M. Gurley, to International Business Machines Corp. Record card processing machine. 3,015,264, 1–2–62, Cl. 101—19.
Cartier, Inc.: *See*—
Muller, Gerard. 3,015,179.
Casey, James P., and E. R. Lehman, to A. E. Staley Mfg. Co. Dry potential adhesive compositions. 3,015,572, 1–2–62, Cl. 106—197.
Castieberry, Jeff D.: *See*—
Norton, Desmond H., and Castieberry. 3,015,402.
Cataldi, Maria S., O. L. Galmarini, and J. Pahn, to Olin Mathieson Chemical Corp. Curamycin audricurin and its production. 3,015,607, 1–2–62, Cl. 167—65.
Catallo, Frank: *See*—
Cohn, Eugene, Catallo, and Cohn. 3,015,145.
Cohn, Eugene, Catallo, and Cohn. 3,015,146.
Caterpillar Tractor Co.: *See*—
Kimsey, Woodrow P., and Ryan. 3,015,173.
Celotex Corp., The: *See*—
Heinrich, Ludwig K. 3,015,301.
Chain Belt Co.: *See*—
Kaufmann, Wilhelm. 3,015,382.
Quast, Gilbert W. 3,015,396.
Quast, Gilbert W. 3,015,621.
Schmidt, Oliver G. 3,015,527.
Chambers Corp.: *See*—
Chambers, John E. 3,015,329.
Chambers, John E., to Chambers Corp. Burner box for ... burner unit. 3,015,329, 1–2–62, Cl. 126—39.
Chapman, James M. Liquid level. 3,015,167, 1–2–62, Cl. 33—209.
Charles, Malcolm J.: *See*—
Campbell, Frank S., Frank, and Charles. 3,015,408.
Campbell, Frank S., Frank, and Charles. 3,015,409.
Chedister, Conkling and R. K. Driver training and testing equipment. 3,015,169, 1–2–62, Cl. 35—11.
Chedister, Ronald K.: *See*—
Chedister, Conkling and R. K. 3,015,169.
Chen, Ying H.: *See*—
Geschickter, Charles F., Pierce, Chen, and Reid. 3,015,657.
Cheske, William J., to Advance Transformer Co. Fluorescent ballast closure means and method of applying same. 3,015,682, 1–2–62, Cl. 174—52.
Chesnut, James A., to Johnson & Johnson. Silicone rubber tape roll. 3,015,385, 1–2–62, Cl. 206—59.
Christenson, Charles H., to Lockheed Aircraft Corp. Aircraft yaw control. 3,015,460, 1–2–62, Cl. 244—79.
Chromizing Corp.: *See*—
Commanday, Maurice R., and Darnell. 3,015,579.
Chu, Ge Y.: *See*—
Wang, An, and Chu. 3,015,806.
Chudnow, Morris H. Double stroke variable control fluid dispensing valve. 3,015,420, 1–2–62, Cl. 222—144.5.
Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Production of high quality light jet fuel. 3,015,549, 1–2–62, Cl. 208—60.
Cirone, Frank P., to Bell Telephone Laboratories, Inc. Sawtooth oscillator. 3,015,784, 1–2–62, Cl. 331—111.
Claraa, Carl W., and T. Wickstrom, to Revere Camera Co. (formerly Samica Corp.). Amplifier system for magnetic recorder-reproducer. 3,015,695, 1–2–62, Cl. 179—1.
Clark, Ivan F., to Ivan Clark Mfg. Co. Inner panel with combined armrest and handhold for vehicle doors. 3,015,516, 1–2–62, Cl. 296—44.
Clark, Ivan, Mfg. Co.: *See*—
Clark, Ivan F. 3,015,516.
Clark, Patrick A., D. Stubbs, and D. G. Bloomfield, to Davy and United Engineering Co. Ltd. Thrust bearings. 3,015,528, 1–2–62, Cl. 308—231.
Clark, Raymond C., to Penn Metal Co., Inc. Building construction and expansion joint therefor. 3,015,194, 1–2–62, Cl. 50—346.
Clark, Stuart K. Optical system for mirror galvanometers. 3,015,535, 1–2–62, Cl. 346—109.
Clemson Bros., Inc.: *See*—
Kellogg, Charles T. 3,015,384.
Clifford, Svea M.: *See*—
Minella, Angelo. 3,015,501.
Clingensmith, Archie H. Tuyere assembly. 3,015,481, 1–2–62, Cl. 266—41.
Coblentz, Robert C. Air conditioning system. 3,015,216, 1–2–62, Cl. 62—180.
Cochrane, George P. M.: *See*—
Howard, Ronald, and Cochrane. 3,015,727.
Cockeram, Herbert S., to Gillespie-Rogers-Pyatt Co. Water base dispersions of shellac soaps and polyepoxides and method for the preparation of such dispersions. 3,015,639, 1–2–62, Cl. 260—25.
Cohn, Eugene, F. Catallo, and J. Cohn, to Compax Corp. Method and apparatus for treating web materials, such as fabrics. 3,015,145, 1–2–62, Cl. 26—18.6.
Cohn, Eugene, F. Catallo, and J. Cohn, to Compax Corp. Method and apparatus for compacting web materials, such as fabrics. 3,015,146, 1–2–62, Cl. 26—18.6.
Cohn, Joseph: *See*—
Cohn, Eugene, Catallo, and Cohn. 3,015,145.
Cohn, Eugene, Catallo, and Cohn. 3,015,146.
Cole, Leslie C.: *See*—
Hutchinson, William G., and Cole. 3,015,278.
Collins, John F.: *See*—
McGurty, James A., and Collins. 3,015,559.
Columbus Auto Parts Co., The: *See*—
Klages, John W. 3,015,412.
Commanday, Maurice R., and J. R. Darnell, to Chromizing Corp. Metal coating process. 3,015,579, 1–2–62, Cl. 117—107.
Commercial Solvents Corp.: *See*—
Campbell, Arthur W. 3,015,674.
Rosenberg, Adolf. 3,015,563.
Commissariat a l'Energie Atomique: *See*—
Klein, Siegfried. 3,015,745.
Compagnie Francaise des Matieres Colorantes: *See*—
Muller, Paul. 3,015,664.
Compagnie Generale d'Electricite: *See*—
Massot, Roger, and Eyraud. 3,015,205.
Veyrie, Charles. 3,015,219.
Compagnie Generale de Telegraphie Sans Fil: *See*—
Humbert, Michel, and Floriot. 3,015,633.
Thourel, Leo. 3,015,819.
Compax Corp.: *See*—
Cohn, Eugene, Catallo, and Cohn. 3,015,145.
Cohn, Eugene, Catallo, and Cohn. 3,015,146.
Condon, Stanley E.: *See*—
Jones, Harold A., Schmidt, and Condon. 3,015,489.
Congoleum-Nairn Inc.: *See*—
Sergi, Rocco J. 3,015,638.
Weaver, John B., and Petry. 3,015,640.
White, Harold J., and Piacente. 3,015,356.
Conrad, Ulrich: *See*—
Wirsching, Robert J., and Conrad. 3,015,326.
Contadina Foods: *See*—
Morici, Alfred A. 3,015,429.
Container Corp. of America: *See*—
Magazzu, John T. 3,015,428.
Continental Can Co., Inc.: *See*—
Miller, Teddy, Anderson, and Rosbe. 3,015,302.
Continental Oil Co.: *See*—
Stratton, Hal. 3,015,360.
Cook, Calvin S., to Louis Marx & Co., Inc. Toy machine gun. 3,015,186, 1–2–62, Cl. 46—175.
Cook Engineering and Electronics, Inc.: *See*—
Cook, Eugene C. 3,015,600.
Cook, Eugene C., to Cook Engineering and Electronics, Inc. Plastic film cutter and sealer. 3,015,600, 1–2–62, Cl. 156—356.
Cook, Robert E. Mobile electric vacuum cleaner. 3,015,122, 1–2–62, Cl. 15—327.
Coonradt, Harry L.: *See*—
Ciapetta, Frank G., Coonradt, and Garwood. 3,015,549.
Cooper Alloy Corp.: *See*—
Hookway, William C. 3,015,337.
Couch, Robert de S., and M. Yezek, to General Foods Corp. Moisture-resistant container. 3,015,596, 1–2–62, Cl. 154—50.
Coulter Electronics, Inc.: *See*—
Coulter, Wallace H., and J. R. Coulter, Jr. 3,015,775.
Coulter, Joseph R., Jr.: *See*—
Coulter, Wallace H., and J. R. Coulter, Jr. 3,015,775.
Coulter, Wallace H., and J. R. Coulter, Jr., to Coulter Electronics, Inc. Fluid metering system and apparatus. 3,015,775, 1–2–62, Cl. 324—71.
Creamery Package Mfg. Co., The: *See*—
Wakeman, Allen H. 3,015,218.
Creed & Co. Ltd.: *See*—
Mason, Frederick P., and Stemp. 3,015,690.

Crosson, Jean H., and H. N. Khanbegian, to United States of America, Army. Camouflage cover for helmets. 3,015,104, 1–2–62, Cl. 2—6.
Crown Cork & Seal Co., Inc.: *See*—
Wilckens, Elbe A. 3,015,388.
Croxton, William B., and R. J. Holshouser, to Mooresville Iron Works, Inc. Slasher creel apparatus. 3,015,147, 1–2–62, Cl. 28—28.
Cummings, David B.: *See*—
Hartwig, Edward C., Cummings, and Post. 3,015,748.
Cummings, Hugh M. Square attachment. 3,015,163, 1–2–62, Cl. 33—94.
Curtis, John T., to Whirlpool Corp. Home appliance. 3,015,125, 1–2–62, Cl. 16—82.
D & D Co., Inc.: *See*—
Dowling, Robert W., and del Riccio. 3,015,252.
Daimler-Benz Aktiengesellschaft: *See*—
Barényi, Béla. 3,015,519.
Wirsching, Robert J., and Conrad. 3,015,326.
Daley, Roger J., to Bowser, Inc. Remote control system for a booster pump. 3,015,417. 1–2–62, Cl. 222—63.
Dalin, George A. Condensing apparatus. 3,015,474, 1–2–62, Cl. 257—30.
D'Amico, John J.: *See*—
Godfrey, Kenneth L., and D'Amico. 3,015,551.
Darby, Richard T., A. D. Baskin, and H. C. Lilly. Cycling leaching and extraction apparatus. 3,015,226, 1–2–62, Cl. 68—181.
Darnell, James R.: *See*—
Commanday, Maurice R., and Darnell. 3,015,579.
Darrow, Robert H.: *See*—
Tuttle, Kenneth W., and Gammill. 3,015,182.
Dashew Business Machines, Inc.: *See*—
Dashew, Stanley A. 3,015,267.
Dashew, Stanley A., to Dashew Business Machines, Inc. Identification and printing devices. 3,015,267, 1–2–62, Cl. 101—369.
David, Freddy, to General Dynamics Corp. Solid state binary code multiplexing and demultiplexing device. 3,015,694, 1–2–62, Cl. 178—50.
Davy and United Engineering Co. Ltd.: *See*—
Clark, Patrick A., Stubbs, and Bloomfield. 3,015,528.
Dawe, Vernon, to Dawes Laboratories, Inc. Feed containing an arsenical and polyvinylpyrrolidone. 3,015,564, 1–2–62, Cl. 99—2.
Dawes Laboratories, Inc.: *See*—
Dawe, Vernon. 3,015,564.
Day, Cyril L.: *See*—
Toohig, Michael F., and Day. 3,015,586.
Dean, Ralph K., E. J. Slatkovski, and H. E. Wegner, to National Distillers and Chemical Corp. Ventilated metal awning. 3,015,135, 1–2–62, Cl. 20—57.5.
De Baun, John E. Combined safety razor blade and guard assembly. 3,015,159, 1–2–62, Cl. 30—47.
De Fino, Anthony T. Universal sleeve tool. 3,015,422, 1–2–62, Cl. 223—74.
De Haan, Edward F.: *See*—
Spaa, Jacob H., and de Haan. 3,015,729.
Deisinger, Delbert A. Apparatus for atmospheric sounding and celestial observing. 3,015,456, 1–2–62, Cl. 244—2.
Del Riccio, Lorenzo: *See*—
Dowling, Robert W., and Del Riccio. 3,015,252.
De Metrick, John S., to Automatic Radio Mfg. Co., Inc. Transistorized automobile radio. 3,015,726, 1–2–62, Cl. 250—20.
Descarries, Raymond, to Aktiebolaget Electrolux. Vacuum cleaner with wheeled undercarriage. 3,015,123, 1–2–62, Cl. 15—327.
Detrick, M. H., Co.: *See*—
Hosbein, Louis H., and Over. 3,015,288.
Detroit Edison Co., The: *See*—
Shuttleworth, Cornelius J., and McConnell. 3,015,228.
De Troye, Nicolaas C., to North American Philips Co., Inc. Matrix-memory arrangement. 3,015,808, 1–2–62, Cl. 340—174.
Detwiler, Harry S., J. H. Reese, and P. J. Serlemitsos, to The Hamilton Watch Co. Electric watch. 3,015,206, 1–2–62, Cl. 58—28.
Diamond Alkali Co.: *See*—
Everson, Howard E., and Ilenda. 3,015,589.
Richards, Roger G., and Osgood. 3,015,653.
Dickinson, Arthur H., to International Business Machines Corp. Electronic multipliers. 3,015,442, 1–2–62, Cl. 235—160.
Diemer, Gesinus: *See*—
Van Santen, Johannes. 3,015,731.
Dietz, Max M., and P. R. O'Connell. Apparatus for dispensing stamps. 3,015,426, 1–2–62, Cl. 226—109.
Dills, Raymond L., to General Electric Co. Oven thermostat bulb protector. 3,015,712, 1–2–62, Cl. 219—35.
Di Monico, George S.: *See*—
Leathers, Ward, Di Monico, and Bruehl. 3,015,254.
Distillers Co. Ltd., The: *See*—
Bellringer, Frederick J. 3,015,679.
Newman, Frank C. 3,015,678.
Dixson, Bruce E., to Northrop Corp. Azimuth control in a guidance system. 3,015,457, 1–2–62, Cl. 244—14.
Dobson, Frank E., and T. J. Manvell, to American Can Co. Apparatus for assembling aerosol valves. 3,015,155, 1–2–62, Cl. 29—211.
Dodsworth, James W., to Monroe Calculating Machine Co. Totalizing control means. 3,015,437, 1–2–62, Cl. 235—60.2.
Doe, Elmer F., to Pawling Rubber Corp. Resilient mat structure. 3,015,136, 1–2–62, Cl. 20—78.6.
Doering, George I.: *See*—
Hays, Willard C., and Doering. 3,015,129.
Domingos, Karl K., Jr., G. T. Powell, Jr., and J. B. Malaspina, to United States of America, Navy. Depth charge exploder mechanism. 3,015,270, 1–2–62, Cl. 102—7.
Doussard, John R.: *See*—
Williamson, John R., and Doussard. 3,015,210.
Dow Corning Corp.: *See*—
Holbrook, George W., and Steward. 3,015,585.
Rauner, Lawrence A., and Tyler. 3,015,637.
Speier, John L. 3,015,646.
Tyler, Leslie J. 3,015,645.
Warrick, Earl L. 3,015,331.
Dowling, Robert W., and L. del Riccio, to D & D Co., Inc. Binocular telescope focusing means. 3,015,252, 1–2–62, Cl. 88—34.
Dracka, Clarence L., to Port Clinton Mfg. Co. Handle-lever grip, slidable jaw wrench. 3,015,245, 1–2–62, Cl. 81—126.
Drader, Joseph C., to Michigan Tool Co. Tool for pressure forming toothed elements. 3,015,243, 1–2–62, Cl. 80—20.
Drake, Leonard C., to Socony Mobil Oil Co., Inc. Removal of discolorizing impurities from inorganic oxide gels. 3,015,541, 1–2–62, Cl. 23—182.
Dresser Industries, Inc.: *See*—
Barnett, Paul B. 3,015,500.
Dubois, Georges, to A. Schild, S.A. Bearing arrangement. 3,015,526, 1–2–62, Cl. 308—135.
Dull, William B., to Kingston Products Corp. Dual rotary switch assembly. 3,015,705, 1–2–62, Cl. 200—6.
Du Pont de Nemours, E. I., and Co.: *See*—
Hause, Norman L., and Todd. 3,015,567.
Hendrixson, Philip R., and Schumacher. 3,015,576.
Hohberg, Jerome. 3,015,604.
Kjellmark, Eric W., Jr. 3,015,651.
Snyder, James M. 3,015,539.
Eastman Kodak Co.: *See*—
Gray, Glen G., and Leone. 3,015,537.
Eaton Mfg. Co.: *See*—
Williams, Richard J. 3,015,238.
Eckert, George W.: *See*—
Heisler, Robert Y., and Eckert. 3,015,547.
Eckler, Richard C., and A. L. Morrill, to Raytheon Co. Automatic decontamination of welding electrodes. 3,015,713, 1–2–62, Cl. 219—86.
Edberg, Edwin A., and J. J. Tress, to Koppers Co., Inc. Machine apparatus for manufacture of foamed polystyrene. 3,015,479, 1–2–62, Cl. 263—8.
Edmondson, William B. Solar water still. 3,015,613, 1–2–62, Cl. 212—187.
Eichorn, Robert N., to International Business Machines Corp. Carton slitter and forming machine. 3,015,197, 1–2–62, Cl. 53—208.
Elgen, David, to The Okonite Co. Corona-testing of electric insulation. 3,015,774, 1–2–62, Cl. 324—54.
Elmco Corp., The: *See*—
Schwartz, Daniel M. 3,015,397.
Elsaman, Leo C., and D. L. Tobias, to General Dynamics Corp. Addition circuit for step and continuous functions. 3,015,790, 1–2–62, Cl. 333—81.
Eklov, David. Device for the protection of electrical apparatus against excess voltage. 3,015,781, 1–2–62, Cl. 330—15.
Electric & Musical Industries Ltd.: *See*—
Lubszynski, Hans G. 3,015,746.
Electrol Inc.: *See*—
Ashton, Benjamin N. 3,015,311.
Elfving, Thore M. Mechanically refrigerated railway car. 3,015,220, 1–2–62, Cl. 62—435.
Ellenbogen, Leon, and W. L. Williams, to American Cyanamid Co. Process of recovering intrinsic factor from pyloric mucosa. 3,015,608, 1–2–62, Cl. 167—74.
Elmer, Otto C., to The General Tire & Rubber Co. Sulfur curing of polyether-urethane rubbers. 3,015,636, 1–2–62, Cl. 260—18.
Ensink, Johannes: *See*—
Schayes, Raymond G., and Ensink. 3,015,780.
Epperlein, Helmut, to Hamilton Watch Co. Balance wheel assembly. 3,015,207, 1–2–62, Cl. 58—28.
Ernst, Walter: *See*—
Krafft, Frederick G., and Ernst. 3,015,212.
Esseling, Ludovicus A. L., to North American Philips Co., Inc. Semi-conductive electrode system. 3,015,761, 1–2–62, Cl. 317—234.
Esso Research and Engineering Co.: *See*—
Michaels, Adial E., and Winard. 3,015,546.
Esveit, Hendrik: *See*—
Van Santen, Johannes G., and Esveit. 3,015,770.
Ethyl Corp.: *See*—
Kozikowski, John. 3,015,668.
Evans, Sidley O., to The Babcock & Wilcox Co. Ribbed extrusion billet. 3,015,154, 1–2–62, Cl. 29—183.
Evans, Sidley O., to The Babcock & Wilcox Co. Method and apparatus for metal working. 3,015,887, 1–2–62, Cl. 207—10.
Everett, John W., and G. C. Murray. Container seams. 3,015,410, 1–2–62, Cl. 220—63.
Everson, Howard E., and F. P. Ilenda, to Diamond Alkali Co. Chemical method. 3,015,589, 1–2–62, Cl. 134—42.
Ewen, Edward F.: *See*—
Nielsen, Carl A., Ewen, and Sherrick. 3,015,536.
Ewing Development Co.: *See*—
Ewing, Walkley B. 3,015,156.
Ewing, Edgar G., to Northrop Corp. Impact release device. 3,015,513, 1–2–62, Cl. 294—83.
Ewing, Walkley B., to Ewing Development Co. Method of making a shade screen. 3,015,156, 1–2–62, Cl. 29—429.
Eyraud, Ivan P.: *See*—
Massot, Roger, and Eyraud. 3,015,205.
FMC Corp.: *See*—
Nechine, Leonard M. 3,015,279.
Fahrenbach, Wolfgang B., and F. E. Helmick; said Fahrenbach assor. to said Helmick. Machine for forming cartons. 3,015,256, 1–2–62, Cl. 93—37.
Falsandier, Jacques. Hollow piston jack and control valve. 3,015,310, 1–2–62, Cl. 121—38.

Faisandier, Jacques. Servo-controls. 3,015,313, 1-2-62, Cl. 121—41.

Falk, Louis W. Control valve for ventilating ducts. 3,015,409, 1-2-62, Cl. 251—331.

Fansteel Metallurgical Corp.: *See*—
Hildebrandt, Robert A., Hovey, and Walters. 3,015,758.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Haltmeier, Alfred. 3,015,450.
Knipp, Ulrich. 3,015,283.
Nawrath, Gunter, Schnegg, and Haberstroh. 3,015,480.
Rahifs, Erich, and Henrich. 3,015,542.
Schnell, Hermann, and Fritz. 3,015,652.
Zorn, Bruno, and Mauthe. 3,015,649.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Wimmer, Rudolf, Wirtz, Portz, Fischer, and Schilken. 3,015,619.

Farkas, Eugene, and R. T. Rapala, to Eli Lilly and Co. Novel 5a,10a-19-nor steroids and method for their preparation. 3,015,666, 1-2-62, Cl. 260—397.5.

Faulkner, Alfred H., and D. K. Melvin, to Automatic Electric Laboratories, Inc. Electronic switching system. 3,015,699, 1-2-62, Cl. 179—18.

Fener, Alfred, to N. Langer. Art of heat sealing and severing thermoplastic films. 3,015,601, 1-2-62, Cl. 156—515.

Ferrell, Spencer H.: *See*—
Brown, James E. 3,015,166.
Brown, James E. 3,015,353.

Ferrigno, Thomas H., to Minerals & Chemicals Philipp Corp. Mineral filled polyurethane foams. 3,015,634, 1-2-62, Cl. 260—2.5.

Ferro Corp.: *See*—
Kelly, William D. 3,015,710.

Fesmire, Norman W., and J. J. Whirlein, to The Budd Co. Stacking cargo containers. 3,015,407, 1-2-62, Cl. 220—1.5.

Fichter, Ludwig J., to Oak Mfg. Co. Electric switch. 3,015,706, 1-2-62, Cl. 200—67.

Fiehl, Michael, to International Business Machines Corp. Stacker. 3,015,487, 1-2-62, Cl. 271—86.

Fineblum, Solomon S., to North American Aviation, Inc. High-performance aircraft. 3,015,461, 1-2-62, Cl. 244—117.

Fior, Aldo, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Polypropylene fishing articles. 3,015,150, 1-2-62, Cl. 28—81.

Firma Draiswerke G.m.b.H.: *See*—
Goeser, Paul A. 3,015,451.

Fischer, Werner: *See*—
Wimmer, Rudolf, Wirtz, Portz, Fischer, and Schilken. 3,015,619.

Fishman, Bernard: *See*—
Ryder, Frederick, and Fishman. 3,015,233.

Fitzgerald, William M. Horticultural implement. 3,015,364, 1-2-62, Cl. 172—22.

Flanagan, William H., Jr.: *See*—
Mitchell, Edward B., and Flanagan. 3,015,797.

Flannery, Edward J., and F. A. Raymond, to R. Hoe & Co., Inc. Automatic paster control for rotary-press printing plants. 3,015,454, 1-2-62, Cl. 242—58.2.

Floriot, Jacques: *See*—
Humbert, Michel, and Floriot. 3,015,633.

Flow Measurements Corp.: *See*—
Schnoll, Nathan. 3,015,232.

Fogle, Harry C.: *See*—
Fogle, Jennings E. 3,015,160.

Fogle, Jennings E., ½ to H. C. Fogle. Scissors. 3,015,160, 1-2-62, Cl. 30—232.

Foll, John V.: *See*—
Bell, John, Foll, and Muirhead. 3,015,298.

Ford Motor Co.: *See*—
Aldred, John L., Jr. 3,015,497.
McKeon, Charles E., and Richey. 3,015,199.
Spurlin, William G. 3,015,248.

Foreman, William T., and C. H. Shaw, to Baird-Atomic, Inc. Alkali metal ultraviolet filter. 3,015,253, 1-2-62, Cl. 88—106.

Forster, Wilhelm: *See*—
Gerlach, Martin, and Forster. 3,015,685.

Fosbrook, Geoffrey A., Sr. Materials handling cart. 3,015,494, 1-2-62, Cl. 280—33.99.

Foster, Allan D., to Almor Corp. Shelf construction. 3,015,400, 1-2-62, Cl. 211—183.

Foster, Boutwell H., and N. Haddad, to United States Rubber Co. Combined carpet and spacer fabric. 3,015,149, 1-2-62, Cl. 28—78.

Foster, Christopher J. Bilge block gear for dry docks. 3,015,214, 1-2-62, Cl. 61—66.

Foster Wheeler Corp.: *See*—
Brunings, Jay E. 3,015,617.

Fowle, Arthur A.: *See*—
Slayter, Games, and Fowle. 3,015,524.

Francken, Jan C., to North American Philips Co., Inc. High transconductance cathode-ray tube. 3,015,749, 1-2-62, Cl. 315—3.

Frank, Joseph R.: *See*—
Campbell, Frank S., Frank, and Charles. 3,015,408.
Campbell, Frank S., Frank, and Charles. 3,015,409.

Frank, Louis: *See*—
Precht, Walter, Geckle, and Frank. 3,015,615.

Fraser, Alton W., and J. P. Thomas, to Technology Instrument Corp. of Acton. Wide angle mechanical stop for rotatable shafts in potentiometers and the like. 3,015,793, 1-2-62, Cl. 338—162.

Freeman, David A. Smooth surface press plate. 3,015,176, 1-2-62, Cl. 38—66.

Freise, William G.: *See*—
Arnett, Leslie, and Freise. 3,015,419.

Freitsen, Carlton B., to Joy Mfg. Co. Tension control device. 3,015,473, 1-2-62, Cl. 254—172.

Frey, Frederick E., to Phillips Petroleum Co. Carbon black process and apparatus. 3,015,543, 1-2-62, Cl. 23—209.4.

Frick, John G., Jr.: *See*—
Reinhardt, Robert M., Frick, Arceneaux, and Reid. 3,015,584.
Vail, Sidney L., Frick, and Reid. 3,015,583.

Frieser, Rudolf G., to Interchemical Corp. Treatment of pigments. 3,015,569, 1-2-62, Cl. 106—26.

Frisch, Erling: *See*—
Sturts, William E., and Frisch. 3,015,616.

Fritz, Gerhard: *See*—
Schnell, Hermann, and Fritz. 3,015,652.

Frost, Raymond B., and E. W. Piatek, to Victaulic Co. of America. Grooved tubing for connection with sleeve type coupling. 3,015,502, 1-2-62, Cl. 285—112.

Fuller, Calvin S., to Bell Telephone Laboratories, Inc. Method of forming semiconductive bodies. 3,015,590, 1-2-62, Cl. 148—1.5.

Fuller, George W., to The American Thermos Products Co. Threaded stopper expanding pouring lip combination for vacuum bottle. 3,015,403, 1-2-62, Cl. 215—13.

Fulton, George P., and R. S. Lombard, to United Aircraft Corp. Temperature compensated seal. 3,015,504, 1-2-62, Cl. 286—11.13.

Funke, Helmut: *See*—
Mohwinkel, Franz, and Funke. 3,015,381.

Furman, Frank J., and W. W. Wagner, to International Business Machines Corp. Web feeding and winding device. 3,015,453, 1-2-62, Cl. 242—55.14.

Futuronic Development Co.: *See*—
Ulrich, William D. 3,015,121.

Gadget-Of-The-Month Club, Inc.: *See*—
Hurless, Bernard F. 3,015,448.

Gallino, Robert, and K. Thompson, to Lowe Paper Co. Rapid drying of adhesive and clay coatings on fibrous backings. 3,015,581, 1-2-62, Cl. 117—119.6.

Galmarini, Oscar L.: *See*—
Cataldi, Maria S., Galmarini, and Pahn. 3,015,607.

Gammill, Paul, Jr.: *See*—
Tuttle, Kenneth W., and Gammill. 3,015,182.

Ganahl, Joseph F., to Aeroscience, Inc. Missile flight simulation system. 3,015,231, 1-2-62, Cl. 73—116.

Gang, Herman, to Monroe Calculating Machine Co. Division mechanism for listing calculator. 3,015,436, 1-2-62, Cl. 235—60.

Gang, Herman, to Monroe Calculating Machine Co. Sign detection means for crawl carry register. 3,015,439, 1-2-62, Cl. 235—79.

Gardiner, Duncan B., and F. E. Hill, to Vickers Inc. Power transmission. 3,015,343, 1-2-62, Cl. 137—623.

Garwood, William E.: *See*—
Ciapetta, Frank G., Coonradt, and Garwood. 3,015,549.

Garraway, Edwin R. Water bag support. 3,015,423, 1-2-62, Cl. 224—42.03.

Garrett, Russell U. Laminated printing plate and process for making same. 3,015,268, 1-2-62, Cl. 101—401.1.

Geckle, Raymond J.: *See*—
Precht, Walter, Geckle, and Frank. 3,015,615.

Geckler, Richard D., to Aerojet-General Corp. Means for supporting a propellant charge in a rocket motor. 3,015,209, 1-2-62, Cl. 60—35.6.

Gehrmann, Klaus: *See*—
Vogt, Wilhelm, Welden, Gehrmann, and Senneweld. 3,015,677.

Gellert, Hans-Georg: *See*—
Ziegler, Karl, Gellert, and Bonitz. 3,015,669.

General Aniline & Film Corp.: *See*—
Herrick, Clifford E., Jr., Lafreniere, and Straw. 3,015,562.

General Dynamics Corp.: *See*—
David, Freddy. 3,015,694.
Eisaman, Leo C., and Tobias. 3,015,790.
Harris, Ben A., Baxter, and Wiseman. 3,015,737.
Herrman, Robert F. 3,015,773.
Morris, George F. 3,015,816.
Pedrick, Robert F. 3,015,698.
Persson, Sten I., and Reynolds. 3,015,477.
Richards, Glenn L. 3,015,741.
Tyrlick, William V. 3,015,813.
Volberg, Herman W., and Beach. 3,015,693.

General Electric Co.: *See*—
Dills, Raymond L. 3,015,712.
Johnson, Charles W. 3,015,730.
Levinthal, Jay G. 3,015,779.
Manteuffel, Erich W. 3,015,739.
Marx, Michael F. 3,015,458.
McGurty, James A., and Collins. 3,015,559.
Meacham, John W. 3,015,795.
Pan, Paul M. 3,015,823.
Pritchard, Peter E. 3,015,703.
Skeats, Wilfred F. 3,015,743.
Thompson, Robert E., and Allison. 3,015,630.
Wesolowski, Adolph J. 3,015,744.

General Electric Co. Ltd., The: *See*—
Scott, Peter, and Stonehouse. 3,015,472.

General Foods Corp.: *See*—
Couch, Robert D. and Yezek. 3,015,596.

General Gas Light Co.: *See*—
Humphrey, Alfred H. 3,015,355.

General Tire & Rubber Co., The: *See*—
Elmer, Otto C. 3,015,636.

Georgian, Vlasios. Decahydroisoquinoline derivatives. 3,015,661, 1-2-62, Cl. 260—287.

Gerhardt, Gerard E., to American Cyanamid Co. Check spot for particle counter. 3,015,440, 1-2-62, Cl. 235—92.

Gerlach, Martin, and W. Forster, to Bayerische Schrauben- und Federn-Fabriken Richard Bergner. Connection of two side by side electric cables. 3,015,685, 1-2-62, Cl. 174—90.

Geschickter, Charles F., J. S. Pierce, Y. H. Chen, and E. E. Reid. 1-carbalkoxy-4-(aminoalkanol) piperazines. 3,015,657, 1-2-62, Cl. 260—247.2.

Gibson, Inc.: *See*—
Allers, Larry P. 3,015,247.

Gillespie-Rogers-Pyatt Co.: *See*—
Cockerham, Herbert S. 3,015,639.

Gilfillan, Edward S.: *See*—
Park, Robert H., Sindeband, and Gilfillan. 3,015,273.

Gits Bros. Mfg. Co.: *See*—
Gits, Edward C. 3,015,371.

Gits, Edward C., to Gits Bros. Mfg. Co. Level regulator. 3,015,371, 1-2-62, Cl. 184—103.

Glembring, Allan G. O. Apparatus for receiving, assorting and storing of returned empty bottles in shops and the like. 3,015,376, 1-2-62, Cl. 194—4.

Glenday, Martin: *See*—
Williams, Russell F., Morgan, and Glenday. 3,015,325.

Gmeiner, Paul, to International Business Machines Corp. Driving apparatus. 3,015,265, 1-2-62, Cl. 101—93.

Gobel, Johannes, to Buntpapierfabrik A.G. Underglaze decalcomania and method of making same. 3,015,574, 1-2-62, Cl. 117—3.1.

Godfrey, Kenneth L., and J. J. D'Amico, to Monsanto Chemical Co. Destroying undesired vegetation. 3,015,551, 1-2-62, Cl. 71—2.5.

Goeser, Paul A., to Firma Draiswerke G.m.b.H. Ball mill. 3,015,451, 1-2-62, Cl. 241—172.

Goodrich, B. F., Co., The: *See*—
Schollenberger, Charles S. 3,015,650.

Grace, W. R., & Co.: *See*—
Hurley, Forrest R. 3,015,675.

Grand Sheet Metals Products Co.: *See*—
Rawson, Emanuel. 3,015,349.

Grant, Nicholas J., and A. G. Bucklin; said Bucklin assor. to said Grant. Nickel-chromium-aluminum heat resisting alloy. 3,015,558, 1-2-62, Cl. 75—171.

Gray, Glen G., and J. T. Leone, to Eastman Kodak Co. Paper having improved characteristics and its preparation. 3,015,537, 1-2-62, Cl. 8—121.

Grether, Tobias. Sugarcane tying machine. 3,015,187, 1-2-62, Cl. 47—1.

Griffin, David H., and D. A. Werblin, to Griffin Wellpoint Corp. Sliding weight holepuncher for the installation of wellpoints. 3,015,365, 1-2-62, Cl. 175—137.

Griffin Wellpoint Corp.: *See*—
Griffin, David H., and Werblin. 3,015,365.

Groov-Pin Corp.: *See*—
Braendel, Felix W., and Bosse. 3,015,117.

Gross, Howard H., and W. Kiersted, Jr., to Texaco Development Corp. Apparatus for effecting fluid-fluid contact. 3,015,545, 1-2-62, Cl. 23—270.5.

Gross, Reinhold J. Rocket probe device. 3,015,463, 1-2-62, Cl. 244—147.

Grotnes Machine Works, Inc.: *See*—
Ragettli, Christian. 3,015,291.

Gurley, Grey M.: *See*—
Carroll, Fred M., and Gurley. 3,015,264.

Guth, Edwin F., Co., The: *See*—
Guth, Edwin F., Jr. 3,015,721.

Guth, Edwin F., Jr., to The Edwin F. Guth Co. Fluorescent lighting fixtures. 3,015,721, 1-2-62, Cl. 240—51.11.

Haas, Kurt: *See*—
Hofstetter, Ernst, and Haas. 3,015,725.

Haberstroh, Otto: *See*—
Nawrath, Günter, Schnegg, and Haberstroh. 3,015,480.

Haddad, Nassib: *See*—
Foster, Boutwell H., and Haddad. 3,015,149.

Haddad, Nassib, to United States Rubber Co. Spacer fabrics and method of making them. 3,015,148, 1-2-62, Cl. 28—72.

Hale, Arthur N., to Unjon Special Machine Co. Stitch length control for sewing machines. 3,015,290, 1-2-62, Cl. 112—210.

Hall, James G.: *See*—
Brennan, Elmer W., and Hall. 3,015,320.

Hall, Richard H., and J. W. Bird, Jr., to Xerox Corp. Development of electrostatic images. 3,015,305, 1-2-62, Cl. 118—637.

Halstead, Harold A., H. A. Halstead, Jr., and R. E., to Novelty Carriage Works, Inc. Prisoner confining partition for automobiles. 3,015,515, 1-2-62, Cl. 296—24.

Halstead, Harold A., Jr.: *See*—
Halstead, Harold A., H. A. Halstead, Jr., and R. E. 3,015,515.

Halstead, Robert E.: *See*—
Halstead, Harold A., H. A. Halstead, Jr., and R. E. 3,015,515.

Haltmeier, Alfred, to Farbenfabriken Bayer Aktiengesellschaft. Apparatus for spraying or atomizing moldable compositions. 3,015,450, 1-2-62, Cl. 239—421.

Hamilton Watch Co., The: *See*—
Detwiler, Harry S., Reese, and Serlemitsos. 3,015,206.
Epperlein, Helmut. 3,015,207.
Long, Edgar S. 3,015,681.

Hansella-Werke Albert Henkel A.G.: *See*—
Thurlings, Hermann. 3,015,378.

Hardcastle, Philip P., to Cardwell Mfg. Co. Pump plunger construction. 3,015,529, 1-2-62, Cl. 309—4.

Hardy, Dale L.: *See*—
Senseney, George T., and Hardy. 3,015,792.

Harford, Henry D., to International Business Machines Corp. Flip-flop with each side cross-coupled to other side by capacitor and emitter follower in parallel. 3,015,735, 1-2-62, Cl. 307—88.5.

Harris, Ben A., C. W. Baxter, and N. L. Wiseman, to General Dynamics Corp. Transistorized phase discriminator. 3,015,737, 1-2-62, Cl. 307—88.5.

Harris, Harry R. Retractible device for golf club head covers. 3,015,351, 1-2-62, Cl. 150—52.

Hartford National Bank and Trust Co.: *See*—
Liebe, August A. 3,015,153.

Hartwig, Edward C., D. B. Cummings, and R. F. Post, to United States of America, Atomic Energy Commission. Pyrotron with translational closure fields. 3,015,748, 1-2-62, Cl. 313—161.

Hause, Norman L., and W. H. Todd, to E. I. du Pont de Nemours and Co. Process for enriching the L-lysine content of food and the resulting product. 3,015,567, 1-2-62, Cl. 99—143.

Hausmann, Werner, and R. Vogel, to VEB Schlepperwerk Nordhausen. Hydraulic control valve. 3,015,344, 1-2-62, Cl. 137—624.

Hawes, Herbert B.: *See*—
Kesner, Richard N., and Hawes. 3,015,492.

Hawley, Don M., to Hawley Products Co. Process of making felted containers. 3,015,603, 1-2-62, Cl. 162—117.

Hawley Products Co.: *See*—
Hawley, Don M. 3,015,603.

Hayden, Ray A., and E. B. Morgan, to American Seating Co. Kneeler bar mountings. 3,015,521, 1-2-62, Cl. 297—426.

Haydock, Raymond, to R. Haydock, trustee. Caster sleeve. 3,015,124, 1-2-62, Cl. 16—43.

Haydock, Raymond: *See*—
Haydock, Raymond. 3,015,124.

Hays, Willard C., and G. I. Doering, to Industrial Nucleonics Corp. Extrusion process controls. 3,015,129, 1-2-62, Cl. 18—12.

Hazeltine Research, Inc.: *See*—
Bailey, William F. 3,015,763.
Hirsch, Charles J. 3,015,689.
Marley, John. 3,015,152.
Richman, Donald. 3,015,728.

Heck, Carl L.: *See*—
Weber, Joachim F. L., and Heck. 3,015,538.

Heckel, Hermann C. N., and R. T. Jefferson, Jr., to Rea Magnet Wire Co. Article of manufacture utilizing a stranded core construction and method of making. 3,015,686, 1-2-62, Cl. 174—122.

Hecker, Alfred, to Anker-Werke Aktiengesellschaft. Cash drawer mechanism for cash registers and other business machines. 3,015,435, 1-2-62, Cl. 235—22.

Hecker, Arthur C.: *See*—
Leistner, William E., Knoepke, and Hecker. 3,015,644.

Hedland, Harry A., and P. M. Waterman, to W. Waterman. Flow regulators. 3,015,341, 1-2-62, Cl. 137—493.

Hehl, Karl, to Arburg-Feingeratefabrik oHG Hehl & Sohne. Clamping mechanism for molding press. 3,015,131, 1-2-62, Cl. 18—30.

Heiberg, Oernulf E., to Whittin Machine Works. Torque controlled strand tensioning system and method. 3,015,203, 1-2-62, Cl. 57—93.

Heinrich, Ludwig K., to The Celotex Corp. Apparatus for painting. 3,015,301, 1-2-62, Cl. 118—239.

Heisler, Robert Y., and G. W. Eckert, to Texaco Inc. Motor fuel containing octane improver. 3,015,547, 1-2-62, Cl. 44—63.

Helmick, Fred E.: *See*—
Fahrenbach, Wolfgang B., and Helmick. 3,015,256.

Hembd, Alfred E. and P. E. Advertising display assemblies. 3,015,177, 1-2-62, Cl. 40—10.

Hembd, Paul E.: *See*—
Hembd, Alfred E. and P. E. 3,015,177.

Hencke, William R., C. F. McBurnett, and L. F. Badgett, to Texaco Inc. Method of preparing lithium soap greases. 3,015,624, 1-2-62, Cl. 252—41.

Hendrixson, Philip R., and F. G. Schumacher, to E. I. du Pont de Nemours and Co. Degreasing and coating apparatus and process. 3,015,576, 1-2-62, Cl. 117—49.

Hengel, Robert J. Orienting and feeding device. 3,015,413, 1-2-62, Cl. 221—9.

Henrich, Günter: *See*—
Rahifs, Erich, and Henrich. 3,015,542.

Herbig, Henry F., and E. R. Schimdt, to International Telephone and Telegraph Corp. Transistor oscillators. 3,015,696, 1-2-62, Cl. 179—17.

Hermans, Matthias L.: *See*—
Meijer, Roelf J., and Hermans. 3,015,475.

Herrick, Clifford E., Jr., L. J. Lafreniere, and D. Straw, to General Aniline & Film Corp. Receiving sheet for use in photographic silver transfer process. 3,015,562, 1-2-62, Cl. 96—29.

Herrington, Ervin W. Cathode ray picture tube test tool. 3,015,692, 1-2-62, Cl. 178—7.8.

Herrman, Robert F., to General Dynamics Corp. Power line noise cancellation. 3,015,773, 1-2-62, Cl. 323—75.

Hewins, Thomas F. Magnetic force welding apparatus. 3,015,714, 1-2-62, Cl. 219—95.

Hildebrandt, Robert A., R. J. Hovey, and R. R. Walters, to Fansteel Metallurgical Corp. Electrolytic capacitor. 3,015,758, 1-2-62, Cl. 317—230.

Hill, Frank E.: *See*—
Gardiner, Duncan B., and Hill. 3,015,343.

Hirsch, Charles J., to Hazeltine Research, Inc. Color-television camera. 3,015,689, 1-2-62, Cl. 178—5.4.

Hodge, John E., and E. C. Nelson, to United States of America, Agriculture. Preparation of O-galactosylisomaltol. 3,015,654, 1-2-62, Cl. 260—210.

Hodnett, Carl D. Drill attachment. 3,015,240, 1-2-62, Cl. 77—55.

Hoe, R., & Co., Inc.: *See*—
Flannery, Edward J., and Raymond. 3,015,454.

Hoebing, Cyril J. Fishing sinker molding apparatus. 3,015,137, 1-2-62, Cl. 22—57.

Hoffmann, Bruno, to North American Philips Co., Inc. Central record spindle for records having a large central aperture. 3,015,490, 1-2-62, Cl. 274—10.

Hoffmann-La Roche Inc.: *See*—
Isler, Otto, Montavon, Ruegg, and Zeller. 3,015,680.

Hofstetter, Ernst, and K. Haas, to Societe Technique pour l'Industrie Nouvelle S.A. "Stin." Axle counter for railroad installations. 3,015,725, 1–2–62, Cl. 246—247.

Hohberg, Jerome, to E. I. du Pont de Nemours and Co. Porous polytetrafluoroethylene article containing glass microballoons. 3,015,604, 1–2–62, Cl. 162—157.

Holbrook, George W., and O. W. Steward, to Dow Corning Corp. Hexafluoroisobutyl substituted silicon compounds. 3,015,585, 1–2–62, Cl. 117—161.

Hollowell, John V.: *See*—
Keith, Wayland D., and Hollowell. 3,015,488.

Holmes, Robert O.: *See*—
Rozsa, Tibor A., and Holmes. 3,015,392.
Rozsa, Tibor A., and Holmes. 3,015,393.

Holovka, Charles, Jr.: *See*—
Johnson, Oliver D., and Holovka. 3,015,168.

Holshouser, Robert J.: *See*—
Croxton, William B., and Holshouser. 3,015,147.

Honda, Seiichi, and Y. Nakazawa, to Toyotsushinki Kabushiki Kaisha (known as Toyo Communication Equipment Co., Ltd.). Mechanical filter. 3,015,789, 1–2–62, Cl. 333—72.

Hookway, William C., to Cooper Alloy Corp. Valve for fire protection. 3,015,337, 1–2–62, Cl. 137—75.

Hormann, Theodoor H., to North American Philips Co., Inc. Pulse amplifier utilizing two magnetic cores connected in series. 3,015,742, 1–2–62, Cl. 307—88.5.

Hornfeck, Anthony J., H. H. Koppel, and J. R. Louis, to Bailey Meter Co. Positioning motor control system. 3,015,768, 1–2–62, Cl. 318—28.

Hornston, Joseph S. Pouring spout. 3,015,418, 1–2–62, Cl. 222—108.

Hosbein, Louis H., and R. E. Over, to M. H. Detpick Co. Arched roofs. 3,015,288, 1–2–62, Cl. 110—99.

Hostetler, Donald E.: *See*—
Baum, Melvin E., and Hostetler. 3,015,672.

Hough, Frank G., Co., The: *See*—
Strader, Don S. 3,015,314.

House, Ronald R.: *See*—
Jen, Yun, and House. 3,015,605.

Hovey, Ralph J.: *See*—
Hildebrandt, Robert A., Hovey, and Walters. 3,015,758.

Howard, Ronald, and G. P. M. Cochrane. High frequency call system. 3,015,727, 1–2–62, Cl. 250—20.

Humbert, Michel, and J. Floriot, to Compagnie Generale de Telegraphie Sans Fil. Manufacture of thermistors. 3,015,633, 1–2–62, Cl. 252—519.

Humphrey, Alfred H., to General Gas Light Co. Method for forming spirally ribbed tubing. 3,015,353, 1–2–62, Cl. 153—78.

Hunt, Charles F.: *See*—
Markhart, Albert H., Hunt, and Lavin. 3,015,643.

Hunt, Robert E., to Sylvania Electric Products Inc. Apparatus for dispensing liquids. 3,015,421, 1–2–62, Cl. 222—309.

Hunter, Byron A.: *See*—
Bawn, Carl V., and Hunter. 3,015,641.
Bawn, Carl V., and Hunter. 3,015,642.

Hurless, Bernard F., of ½% to Gadget-Of-The-Month Club, Inc. Lawn sprinkler head guard. 3,015,448, 1–2–62, Cl. 239—201.

Hurley, Forrest R., to W. R. Grace & Co. Substituted hydrazine process. 3,015,675, 1–2–62, Cl. 260—583.

Hutchinson, William G., and L. C. Cole, to United Kingdom Atomic Energy Authority. Electromagnetic pumps. 3,015,278, 1–2–62, Cl. 103—1.

Hyams, Montagu, to Amchem Products, Inc. Spray pickling processes for the surface treatment of metal. 3,015,588, 1–2–62, Cl. 134—36.

Hydraulic Research and Mfg. Co.: *See*—
Buchanan, J. D., and Smith. 3,015,317.

I-T-E Circuit Breaker Co.: *See*—
Bodenschatz, August. 3,015,709.

Ilenda, Frank P.: *See*—
Everson, Howard E., and Ilenda. 3,015,589.

Illinois Tool Works: *See*—
Pergande, Wilbur F. 3,015,151.

Industrial Nucleonics Corp.: *See*—
Hays, Willard C., and Doering. 3,015,129.

Ingenieurbureau D.-Ing. Alfred J. Buchi A.G.: *See*—
Buchi, Alfred. 3,015,323.

Ingersoll-Milling Machine Co., The: *See*—
Turner, Harold H. 3,015,812.

Interchemical Corp.: *See*—
Frieser, Rudolf G. 3,015,569.

International Business Machines Corp.: *See*—
Akmenkalns, Ivars G. 3,015,740.
Carroll, Fred M., and Gurley. 3,015,264.
Dickinson, Arthur H. 3,015,442.
Elchorn, Robert N. 3,015,197.
Fiehl, Michael. 3,015,487.
Furman, Frank J., and Wagner. 3,015,453.
Gmeiner, Paul. 3,015,265.
Harford, Henry D. 3,015,735.
Johnson, Oliver D., and Holovka. 3,015,168.
Kistner, Harold J., and Pajerek. 3,015,484.
Kuntzleman, Harry C., and Simek. 3,015,732.
Laframboise, Guy R. 3,015,424.
Leathers, Ward, Di Monico, and Bruehl. 3,015,254.
Lounsberry, Ernest D., and Wendling. 3,015,263.
Reitfort, Henry A. 3,015,377.
Rent, Edward F., and Powell. 3,015,441.
Smith, Arthur F. 3,015,485.
Vignos, Joseph P., and Shoultes. 3,015,733.
Weidenhammer, James A. 3,015,486.
Wicklund, Harold P. 3,015,425.

International Standard Electric Corp.: *See*—
Schockaert, Jules J. E. M. 3,015,379.
Thyen, Rainer. 3,015,805.
Weber, Joachim F. L., and Heck. 3,015,538.
Wright, Esmond P. G., Odell, and Parker. 3,015,755.

International Telephone & Telegraph Corp.: *See*—
Beling, Thomas E. 3,015,777.
Herbig, Henry F., and Schmidt. 3,015,696.
Schults, Robert T., and Sullivan. 3,015,736.
Tochig, Michael F., and Day. 3,015,586.
Zarattkiewicz, Edwin A., and Smith. 3,015,591.

Iowa State College Research Foundation: *See*—
Beresford, Hobart. 3,015,308.

Irvine, Joseph P.: *See*—
Scott, Wellington W., and Irvine. 3,015,184.

Isler, Otto, M. Montavon, R. Rüegg, and P. Zeller, to Hoffmann-La Roche Inc. Process for the manufacture of carotene compounds. 3,015,680, 1–2–62, Cl. 260—666.

Jacoby-Tarbox Corp.: *See*—
Tarbox, George S. 3,015,300.

Jaeger Machine Co., The: *See*—
Apel, John H., and Beeson. 3,015,257.
Apel, John H., and Beeson. 3,015,258.
Apel, John H., and Beeson. 3,015,259.
Pelsue, Garvin. 3,015,260.

James, A. J.: *See*—
MacMillan, John H., Jr., and Addicks. 3,015,373.

Jayne, John P. Methods and composition for producing a phosphate coating on zinc metal. 3,015,593, 1–2–62, Cl. 148—6.15.

Jefferson, Glen V., to Westinghouse Air Brake Co. Railway skate control system. 3,015,724, 1–2–62, Cl. 246—182.

Jefferson, Robert T., Jr.: *See*—
Heckel, Hermann C. N., and Jefferson. 3,015,686.

Jen, Yun, and R. R. House, to American Cyanamid Co. Paper sized with linear cationic polymer. 3,015,605, 1–2–62, Cl. 162—168.

Jensen, Sanning C. Bar lock for grain hammermills. 3,015,452, 1–2–62, Cl. 241—194.

Jewett, John E., K. L. Moothart, H. J. Morrison, and J. B. Snow, to United States of America, Navy. Electronic scanning switch. 3,015,800, 1–2–62, Cl. 340—6.

Johansson, Carl E., to The Youngstown Steel Door Co. Metallic side wall structures for insulated railway cars. 3,015,286, 1–2–62, Cl. 105—409.

Johns-Manville Corp.: *See*—
Broughton, Amos W., Jr., and Koch. 3,015,503.

Johnson, Arthur F., to Strategic Materials Corp. Slag reduction process. 3,015,553, 1–2–62, Cl. 75—24.

Johnson, Charles W., to General Electric Co. Electronic curve follower. 3,015,730, 1–2–62, Cl. 250—202.

Johnson, David A., and E. J. Richardson, Jr., to Bristol-Myers Co. Method for ortho aralkylation of phenol. 3,015,676, 1–2–62, Cl. 260—619.

Johnson & Johnson: *See*—
Chesnut, James A. 3,015,385.
Lo, Elizabeth S. 3,015,647.
Lo, Elizabeth S. 3,015,648.

Johnson, Oliver D., and C. Holovka, Jr., to International Business Machines Corp. Web conditioning machine. 3,015,168, 1–2–62, Cl. 34—156.

Johnson, Orvel M. Tilting back mechanism. 3,015,520, 1–2–62, Cl. 297—371.

Johnson, Raymond C.: *See*—
Korpi, Karl J., and Johnson. 3,015,555.
Korpi, Karl J., and Johnson. 3,015,556.
Korpi, Karl J., and Johnson. 3,015,557.

Johnson, Wallace C.: *See*—
Reynolds, Richard W., and Johnson. 3,015,157.

Johnson, William A., and J. R. Short. Chicken feeder. 3,015,307, 1–2–62, Cl. 119—61.

Johnston Testers, Inc.: *See*—
Moosman, Jack A. 3,015,362.

Jones, Harold A., F. J. Schmidt, and S. E. Condon, to American Machine & Foundry Co. Bowling ball stop mechanism. 3,015,489, 1–2–62, Cl. 273—47.

Jones, John L. Manufacturing absorbent diaphragms. 3,015,598, 1–2–62, Cl. 156—222.

Jones, John P., Jr., to Navigation Computer Corp. Transistor computer circuit. 3,015,734, 1–2–62, Cl. 307—88.5.

Jones, Owen M., to Vermiculite Mfg. Co. Brick package and method of making same. 3,015,192, 1–2–62, Cl. 50—103.

Jones, Walter L., to United-Carr Fastener Corp. Heat sealed fastener installation. 3,015,141, 1–2–62, Cl. 24—216.

Jones, Willard M.: *See*—
Smith, Richard B. 3,015,411.

Jones, William R.: *See*—
Brown, Lawrence B., Jones, and Seeley. 3,015,822.

Joy Mfg. Co.: *See*—
Frellsen, Carlton B. 3,015,473.

Jucker, Ernst, E. Rissi, and R. Süess, to Sandoz A.G. Process for the preparation of new theophylline derivatives. 3,015,658, 1–2–62, Cl. 260—253.

Juhola, Arvo J.: *See*—
Smith, Stanton B., and Juhola. 3,015,367.

Junghans, Helmut, J. Müller, and P. Kaiser. Percussion fuzes. 3,015,277, 1–2–62, Cl. 102—78.

Just, William F. Sharpening and filing apparatus for serrated cutting edges. 3,015,239, 1–2–62, Cl. 76—36.

KVP Sutherland Paper Co.: *See*—
Taylor, Edward L. 3,015,602.

Kaiser, Paul: *See*—
Junghans, Helmut, Müller, and Kaiser. 3,015,277.

Kalbfell, David C. Drill pipe module data collection and transmission system. 3,015,801, 1–2–62, Cl. 340—18.

Kammerer, Fred W., R. P. Riesz, and R. L. Wallace, Jr., to Bell Telephone Laboratories, Inc. Signal translating device. 3,015,738, 1–2–62, Cl. 307—88.5.

Kaplan, Morris. Stretchable slipper construction. 3,015,171, 1–2–62, Cl. 36—9.

Kasbio, Toshio, ½ to Uchida Yoko Co. Relay type bi-quinary adder apparatus. 3,015,445, 1–2–62, Cl. 235—174.

Katori, Yoshiyuki: *See*—
Tanaka, Shoji, and Katori. 3,015,498.

Kaufmann, Frank H., to Steel Heddle Mfg. Co. Harness for cross weaving. 3,015,346, 1–2–62, Cl. 139—52.

Kaufmann, John J., Jr., to Steel Heddle Mfg. Co. Bobbin grip and strap. 3,015,347, 1–2–62, Cl. 139—207.

Kaufmann, Wilhelm, to Chain Belt Co. Elevator casing. 3,015,382, 1–2–62, Cl. 198—206.

Kaupp, Bette K., to Maiden Form Brassiere Co., Inc. Girdles. 3,015,334, 1–2–62, Cl. 128—542.

Keith, Wayland D., and J. V. Hollowell; said Hollowell assor. to said Keith. Amusement rides. 3,015,488, 1–2–62, Cl. 272—36.

Kellogg, Charles T., to Clemson Bros., Inc. Container and dispenser for coiled strip stock, bandsaw blade stock, and the like. 3,015,384, 1–2–62, Cl. 206—52.

Kelly, William D., to Ferro Corp. Thermostatic control unit. 3,015,710, 1–2–62, Cl. 219—20.

Kendall Co., The: *See*—
Whitman, Ross C. 3,015,335.

Kennedy, Raymond L.: *See*—
Carbert, Ralph E., Blomquist, and Kennedy. 3,015,374.

Kennedy, Serena. Collapsible outside window shading device. 3,015,358, 1–2–62, Cl. 160—53.

Kesner, Richard N., and H. B. Hawes, to St. Lawrence Mfg. Co., Inc. Collapsible ice skate scabbard. 3,015,492, 1–2–62, Cl. 280—11.38.

Kessler, Gerald. Endless conveyer means for deformable articles. 3,015,427, 1–2–62, Cl. 226—172.

Khanbegian, Harry N.: *See*—
Crosson, Jean H., and Khanbegian. 3,015,104.

Kidde, Walter, Co. Ltd., The: *See*—
Wilson, Paul V. 3,015,414.

Kiersted, Wynkoop, Jr.: *See*—
Gross, Howard H., and Kiersted. 3,015,545.

Kimm, John A.: *See*—
Wellborn, John M., and Kimm. 3,015,222.

Kimsey, Woodrow P., and W. J. Ryan, to Caterpillar Tractor Co. Shipping accessory for tractor drawn scrapers. 3,015,173, 1–2–62, Cl. 37—129.

Kindl, Friedrich, to North American Philips Co., Inc. Switching arrangement for dictation apparatus. 3,015,491, 1–2–62, Cl. 274—11.

Kine, Benjamin B.: *See*—
Moser, Vincent J., and Kine. 3,015,595.

King, Joseph B. Pump. 3,015,280, 1–2–62, Cl. 103—46.

Kingsbury, John C. Insulating composition. 3,015,626, 1–2–62, Cl. 252—62.

Kingston Products Corp.: *See*—
Dull, William B. 3,015,705.

Kirkman, Fredrick J., to Servel, Inc. Electric hand lamp. 3,015,179, 1–2–62, Cl. 240—10.63.

Kishbaugh, Warren E., to The Bendix Corp. Electrical connector with grounding strip. 3,015,794, 1–2–62, Cl. 339—14.

Kistner, Harold J., and J. J. Pajerek, to International Business Machines Corp. Card feed apparatus. 3,015,484, 1–2–62, Cl. 271—41.

Kjellmark, Eric W., Jr., to E. I. du Pont de Nemours and Co. Increasing viscosity of polycaprolactam by removing extractables with solvents and further solid phase polymerizing the polymer. 3,015,651, 1–2–62, Cl. 260—78.

Klages, John W., to The Columbus Auto Parts Co. Bucket ball and extrusion. 3,015,412, 1–2–62, Cl. 220—91.

Klamp, Paul, to Mechanical Handling Systems, Inc. Floor truck for sub-floor conveyor system. 3,015,284, 1–2–62, Cl. 104—172.

Klein, Siegfried, to Commissariat a l'Energie Atomique. Apparatus for ionising a gas to obtain high intensity pulsed ions or electrons. 3,015,745, 1–2–62, Cl. 313—63.

Kleis, Derk, and R. Vermeulen, to North American Philips Co., Inc. Sound reproduction system. 3,015,701, 1–2–62, Cl. 179—100.1.

Klinkhamer, Jacob F., to North American Philips Co., Inc. Arrangement in automatic signalling systems for establishing signal connections. 3,015,697, 1–2–62, Cl. 179—18.

Kloss, Hans J.: *See*—
Montz, Otto, and Kloss. 3,015,340.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Vogt, Wilhelm, Weiden, Gehrmann, and Sennewald. 3,015,677.

Knecht, Robert S. Helicopter-reaction tip brake. 3,015,363, 1–2–62, Cl. 170—135.4.

Knight, John L. Envelope construction. 3,015,438, 1–2–62, Cl. 235—61.12.

Knipp, Ulrich, to Farbenfabriken Bayer Aktiengesellschaft. Gear pumps and motors. 3,015,283, 1–2–62, Cl. 103—126.

Knoell, Oscar F., and S. P. Lundskog, to United States Steel Corp. Shaft retainer key. 3,015,507, 1–2–62, Cl. 287—20.

Knoepke, Olga H.: *See*—
Leistner, William E., Knoepke, and Hecker. 3,015,644.

Koch, Herman G.: *See*—
Broughton, Amos W., Jr., and Koch. 3,015,503.

Kohlenscheidungs-Gesellschaft, m.b.H.: *See*—
Steinert, Gerhard. 3,015,319.

Konwal, Ignatius. Boring bars. 3,015,241, 1–2–62, Cl. 77—58.

Koppel, Harold H: *See*—
Hornfeck, Anthony J., Koppel, and Louis. 3,015,768.

Koppers Co., Inc.: *See*—
Baum, Melvin E., and Hostetler. 3,015,672.
Edberg, Edwin A., and Tress. 3,015,479.

Korpi, Karl J., and R. C. Johnson, to The Lummus Co. Method of refining metals. 3,015,555, 1–2–62, Cl. 75—84.1.

Korpi, Karl J., and R. C. Johnson, to The Lummus Co. Method of refining metals. 3,015,556, 1–2–62, Cl. 75—84.

Korpi, Karl J., and R. C. Johnson, to The Lummus Co. Method of refining metals. 3,015,557, 1–2–62, Cl. 75—84.1.

Kozikowski, John, to Ethyl Corp. Process for producing cyclomatic manganese tricarbonyl compounds. 3,015,668, 1–2–62, Cl. 260—429.

Krafft, Frederick G., and W. Ernst, to The Thompson Grinder Co. Pump control. 3,015,212, 1–2–62, Cl. 60—52.

Kramer, Lewis. All purpose slipper. 3,015,170, 1–2–62, Cl. 36—9.

Kreekon, Nicholas, and W. H. Lane, to Allis-Chalmers Mfg. Co. Enclosed switchboard employing switch carrier for dismantling transformers. 3,015,756, 1–2–62, Cl. 317—103.

Kuntzleman, Harry C., and J. G. Simek, to International Business Machines Corp. Delayed coincidence circuit. 3,015,732, 1–2–62, Cl. 307—88.

Kunz, Cleon V., to United Aircraft Corp. Tube-to-tube sheet fabrication. 3,0155,508, 1–2–62, Cl. 287—20.2.

Laframboise, Guy R., to International Business Machines Corp. Record device. 3,015,424, 1–2–62, Cl. 225—93.

Lafreniere, Floyd J.: *See*—
Herrick, Clifford E., Jr., Lafreniere, and Straw. 3,015,562

Lamaudiere, Paul F. J. Combined windshield wiper and washer switch mechanism. 3,015,119, 1–2–62, Cl. 15—250.02.

Lambert, Richard J., to Minnesota Mining and Mfg. Co. Nonwoven pressure-sensitive shoe tapes. 3,015,597, 1–2–62, Cl. 154—53.5.

Landell, Keith D., and R. L. Lineker. Brake shoe key. 3,015,372, 1–2–62, Cl. 188—243.

Lane, William H.: *See*—
Kreekon, Nicholas, and Lane. 3,015,756.

Langer, Nicholas: *See*—
Fener, Alfred. 3,015,601.

Lappin, Richard J.: *See*—
Mohr, Robert G., and Lappin. 3,015,531.

Latham, William S., and W. F. Saars, to United States of America, Navy. Magnetic recorder and reproducer. 3,015,810, 1–2–62, Cl. 340—174.1.

Lavin, Edward: *See*—
Markhart, Albert H., Hunt, and Lavin. 3,015,643.

Leathers, Ward, G. S. Di Monico, and L. Bruehl, to International Business Machines Corp. Stabilized control mechanism for a gun mounted on a turret. 3,015,254, 1–2–62, Cl. 89—41.

Legge, Walter G. Body grounding devices. 3,015,754, 1–2–62, Cl. 317—2.

Lehman, Ellis R.: *See*—
Casey, James P., and Lehman. 3,015,572.

Lehman, Roger. Conversion internal combustion engine for use as a marine engine. 3,015,324, 1–2–62, Cl. 123—122.

Leistner, William E., O. H. Knoepke, and A. C. Hecker, to Argus Chemical Corp. Stabilizing polypropylene with organic-tin-mercapto compounds. 3,015,644, 1–2–62, Cl. 260—45.7.

Leonard, George E. Pouring form assembly with interlock. 3,015,144, 1–2–62, Cl. 25—131.

Leone, Joseph T.: *See*—
Gray, Glen G., and Leone. 3,015,537.

Leopold, Frans M., to North American Philips Co., Inc. Method of growing semiconductor crystals. 3,015,592, 1–2–62, Cl. 148—1.6.

Lever Bros. Co.: *See*—
Becker, Ewald G., and Wieske. 3,015,566.
Ruiter, Lukas H., and Van Schaik. 3,015,667.

Levinthal, Jay G., to General Electric Co. Apparatus for pulse-width discrimination. 3,015,779, 1–2–62, Cl. 328—112.

Levy, Edward M., to Reflector-Hardware Corp. Display rack. 3,015,466, 1–2–62, Cl. 248—158.

Levy, Maurice M., to Her Majesty the Queen in the right of Canada as represented by the Postmaster General. Feeding mechanism and method for flat articles. 3,015,389, 1–2–62, Cl. 209—111.5.

Lickliter, Robert P., and E. Abbott. Locking connection for supporting grid systems. 3,015,375, 1–2–62, Cl. 189—36.

Liebe, August A., to Hartford National Bank and Trust Co., as trustee. Method of making a heat regenerator. 3,015,153, 1–2–62, Cl. 29—157.3.

Liebe, Hubert J.: *See*—
Rosscup, Robert J., and Liebe. 3,015,625.

Lightcap, Joseph F. Archery bows. 3,015,327, 1–2–62, Cl. 124—23.

Lilly, Eli, and Co.: *See*—
Farkas, Eugene, and Rapala. 3,015,666.

Lilly, Howard C.: *See*—
Darby, Richard T., Baskin, and Lilly. 3,015,226.

Lindbloom, Henry E., to American-Marietta Co. Machine for cutting tile pipe. 3,015,143, 1–2–62, Cl. 25—107.

Lineker, Robert L.: *See*—
Landell, Keith D., and Lineker. 3,015,372.

Linstrom, Frank O. Motor operated therapeutic couch. 3,015,330, 1–2–62, Cl. 128—25.

Lippel, Bernard. Cathode ray coding tube and circuit. 3,015,814, 1–2–62, Cl. 340—347.

Lippman, Bernard. Flap construction for articles of clothing. 3,015,107, 1–2–62, Cl. 2—115.

Lis, Stephen W.: *See*—
Reichel, Howard G., and Lis. 3,015,350.

Lo, Elizabeth S., to Johnson & Johnson. Curable product from a halohydrin and phenol condensation product. 3,015,647, 1–2–62, Cl. 260—47.

Lo, Elizabeth S., to Johnson & Johnson. Epoxide resin composition. 3,015,648, 1–2–62, Cl. 260—47.

Lockheed Aircraft Corp.: *See*—
Christenson, Charles H. 3,015,460.

Lombard, Ralph S.: *See*—
Fulton, George P., and Lombard. 3,015,504.

Long, Edgar S., to Hamilton Watch Co. Primary cell. 3,015,681, 1–2–62, Cl. 136—111.

Long, John R., to Shuford Mills, Inc. Speed control for spinning machines and the like. 3,015,204, 1–2–62, Cl. 57—98.

Lorain Products Corp.: *See*—
Mesenhimer, Lee O. 3,015,771.
Loring, Lewis D., and H. J. Voss, to Sinclair Refining Co. Lithium base grease containing lead oleate, sulfurized lard oil and molybdenum disulfide. 3,015,623, 1–2–62, Cl. 252—18.
Louis, John R.: *See*—
Hornfeck, Anthony J., Koppel, and Louis. 3,015,768.
Lounsberry, Ernest D., and B. E. Wendling, to International Business Machines Corp. High speed marking apparatus. 3,015,263, 1–2–62, Cl. 101—19.
Lowe Paper Co.: *See*—
Gallino, Robert, and Thompson. 3,015,581.
Lubszynski, Hans G., to Electric & Musical Industries Ltd. Electron discharge devices employing photoconductive target electrodes. 3,015,746, 1–2–62, Cl. 313—65.
Lucchesi, Leo. Swimming pool and method for erecting same. 3,015,191, 1–2–62, Cl. 50—100.
Lummus Co., The: *See*—
Korpi, Karl J., and Johnson. 3,015,555.
Korpi, Karl J., and Johnson. 3,015,556.
Korpi, Karl J., and Johnson. 3,015,557.
Lundskog, Sten P.: *See*—
Knoell, Oscar F., and Lundskog. 3,015,507.
Luttrell, Earl B., to Luttrell Engineering Corp. Radial turbine engine. 3,015,211, 1–2–62, Cl. 60—39.36.
Luttrell Engineering Corp.: *See*—
Luttrell, Earl B. 3,015,211.
Lyon, George A., to Lyon Inc. Method of making wheel covers. 3,015,294, 1–2–62, Cl. 113—116.
Lyon, George A., to Lyon Inc. Method of making sheet metal wheel cover members. 3,015,295, 1–2–62, Cl. 113—116.
Lyon, George A., to Lyon Inc. Apparatus for making wheel covers. 3,015,352, 1–2–62, Cl. 153—1.
Lyon Inc.: *See*—
Lyon, George A. 3,015,294.
Lyon, George A. 3,015,295.
Lyon, George A. 3,015,352.
M & D Store Fixtures, Inc.: *See*—
Mapson, Donald L. 3,015,296.
MacAdams, Jesse E. Depth control device for a subfloating body. 3,015,271, 1–2–62, Cl. 102—14.
MacDonald, William J., to Technology Instrument Corp. of Acton. Rhodium germanium film resistor. 3,015,587, 1–2–62, Cl. 117—213.
MacMillan, Cargill, Jr.: *See*—
MacMillan, John H., Jr., and Addicks. 3,015,373.
MacDonald, Raymore D., to Ulrich Mfg. Co. Trench filling and shoulder spreading machine. 3,015,261, 1–2–62, Cl. 94—46.
MacMillan, John H., Jr., deceased (J. H. MacMillan, III, C. MacMillan, Jr., and A. J. James, executors), and M. C. Addicks, to Cargill, Inc. Method and structure for storing semi-fluffi material. 3,015,373, 1–2–62, Cl. 189—3.
Madill, Norman W. Spar tree. 3,015,471, 1–2–62, Cl. 254—139.1.
Magazzu, John T., to Container Corp. of America. Container with inner packing. 3,015,428, 1–2–62, Cl. 229—14.
Maico Electronics, Inc.: *See*—
Behymer, Donald J. 3,015,704.
Maiden Form Brassiere Co., Inc.: *See*—
Kaupp, Bette K. 3,015,334.
Maker, James H., to Associated Spring Corp. Spring device. 3,015,482, 1–2–62, Cl. 267—1.
Maki, Charles E., to Textron Electronics, Inc. Apparatus for use in a vibration testing system. 3,015,229, 1–2–62, Cl. 73—71.6.
Malaspina, John B.: *See*—
Domingos, Karl K., Jr., Powell, and Malaspina. 3,015,270.
Malkin, Gabriel: *See*—
Marsh, Lyle, and Malkin. 3,015,415.
Mann, Henry, to Bell Telephone Laboratories, Inc. Conversion between analog and digital information on a piecewise-linear basis. 3,015,815, 1–2–62, Cl. 340—347.
Manteuffel, Erich W., to General Electric Co. Direct-current charged magnetic modulator. 3,015,739, 1–2–62, Cl. 307—88.5.
Manvell, Theodore J. A.: *See*—
Dobson, Frank E., and Manvell. 3,015,155.
Mapson, Donald L., to M & D Store Fixtures, Inc. Method of making ribbed display panel. 3,015,296, 1–2–62, Cl. 113—116.
Marburg, Edgar, to United States Steel Corp. Sectional hot top. 3,015,139, 1–2–62, Cl. 22—147.
Marien Metal Products Co.: *See*—
Marsh, Lyle, and Malkin. 3,015,415.
Markhart, Albert H., C. F. Hunt, and E. Lavin, to Shawinigan Resins Corp. Reaction product of a polyspirane resin with a polycarboxylic acid anhydride, mixtures thereof with other polymeric materials, process for preparing same, and conductor coated therewith. 3,015,643, 1–2–62, Cl. 260—42.
Marks, Ellis C.: *See*—
Striplin, Marcus M., Jr., McKnight, and Marks. 3,015,540.
Marley, John, to Hazeltine Research, Inc. Process of manufacturing magnetic deflection yokes. 3,015,152, 1–2–62, Cl. 29—155.57.
Marsh, Lyle, and G. Malkin, to Marien Metal Products Co., and Benjamin Moore & Co. Mixing and dispensing apparatus. 3,015,415, 1–2–62, Cl. 222—14.
Martin-Marietta Corp.: *See*—
Michael, Vilo G. 3,015,345.
Precht, Walter, Geckle, and Frank. 3,015,615.
Martin, Royce H. Fletching jig. 3,015,483, 1–2–62, Cl. 269—38.
Marx, Louis, & Co., Inc.: *See*—
Cook, Calvin S. 3,015,186.
Marx, Michael F., to General Electric Co. Stall and high speed buffeting limiter for aircraft. 3,015,458, 1–2–62, Cl. 244—77.
Mason, Frederick P., and R. G. Stemp, to Creed & Co. Ltd. Facsimile apparatus. 3,015,690, 1–2–62, Cl. 178—7.1.
Mason, Warren P., to Bell Telephone Laboratories, Inc. Combined memory storage and switching arrangements. 3,015,708, 1–2–62, Cl. 200—87.
Massot, Roger, and I. P. Eyraud, to Compagnie Generale d'Electricite. Axial carrier steel cable with a plurality of wires for a submarine cable. 3,015,205, 1–2–62, Cl. 57—148.
Matusche, Heinz, to Sud Atlas-Werke G.m.b.H. Indicating fluctuations in frequency and amplitude. 3,015,776, 1–2–62, Cl. 324—82.
Mauthe, Gustav: *See*—
Zorn, Bruno, and Mauthe. 3,015,649.
McAuley, James H., to McAuley Mfg., Inc. Flexible chain. 3,015,380, 1–2–62, Cl. 198—176.
McAuley Mfg., Inc.: *See*—
McAuley, James H. 3,015,380.
McBurnett, Cecil F.: *See*—
Hencke, William R., McBurnett, and Badgett. 3,015,624.
McClain, Harry W. Carburetor of the pressure type. 3,015,348, 1–2–62, Cl. 48—180.
McCloskey, Chester M. Polymerization activator. 3,015,631, 1–2–62, Cl. 252—426.
McClure, Jessie O. Flounder gig. 3,015,180, 1–2–62, Cl. 43—6.
McCollor, Robert L.: *See*—
Oda, Donald J., and McCollor. 3,015,818.
McCombs, Howard L., Jr., to The Bendix Corp. Flow divider. 3,015,338, 1–2–62, Cl. 137—100.
McConnell, Thomas A.: *See*—
Shuttleworth, Cornelius J., and McConnell. 3,015,228.
McGurty, James A., and J. F. Collins, to General Electric Co. Oxidation resistant chromium alloy. 3,015,559, 1–2–62, Cl. 75—176.
McIntyre, Alexander A.: *See*—
Strum, George, McIntyre, and Thomas. 3,015,395.
McKeon, Charles E., and C. B. Richey, to Ford Motor Co. Machine for compressing hay into cakes. 3,015,199, 1–2–62, Cl. 56—1.
McKnight, David: *See*—
Striplin, Marcus M., Jr., McKnight, and Marks. 3,015,540.
McKnight, George S., Jr., and H. W. Buck, to Oxford Paper Co. Pressure-sensitive, heat-resistant recording material and method of making same. 3,015,575, 1–2–62, Cl. 117—36.7.
McLain, Clement J., to American Can Co. Baked dough package. 3,015,568, 1–2–62, Cl. 99—172.
McLane, Robert C., and O. R. Pomeroy, to Minneapolis-Honeywell Regulator Co. Automatic control apparatus. 3,015,459, 1–2–62, Cl. 244—77.
McMahon, Thomas J. Plant growth inhibition process employing 2-chloro-6-nitrotoluene. 3,015,550, 1–2–62, Cl. 71—2.3.
McWethy, Irvin E., to The Murray Corp. of America. Lint filter. 3,015,225, 1–2–62, Cl. 68—18.
McWilliams, James B., to Railway Maintenance Corp., and Poor & Co. Track lubricator. 3,015,370, 1–2–62, Cl. 184—3.
Meacham, John W., to General Electric Co. Busway power take-off plug. 3,015,795, 1–2–62, Cl. 339—14.
Mechanical Handling Systems, Inc.: *See*—
Klamp, Paul. 3,015,284.
Medin, Jose. Buoyant device. 3,015,115, 1–2–62, Cl. 9—333.
Meijer, Roelf J., and M. L. Hermans, to North American Philips Co., Inc. Cylindrical heat exchanger. 3,015,475, 1–2–62, Cl. 257—241.
Melvin, Donald K.: *See*—
Faulkner, Alfred H., and Melvin. 3,015,699.
Mendes, Clarence. Air brake booster. 3,015,318, 1–2–62, Cl. 121—48.
Merritt, Thomas W., and C. A. Thomas, to Babson Bros. Co. Milk pipeline support. 3,015,306, 1–2–62, Cl. 119—14.03.
Mesenhimer, Lee O., to Lorain Products Corp. Voltage modifier. 3,015,771, 1–2–62, Cl. 321—15.
Metal Specialties Mfg. Co.: *See*—
Semler, Loren H., and Nyberg. 3,015,161.
Metamora Woodworking Co.: *See*—
Wilson, Vernon H. 3,015,532.
Meyer, David, to E. W. Bliss Co. Liquid fuel atomizer. 3,015,449, 1–2–62, Cl. 239—417.
Mezger, Eduard. Positioning arrangement for a gripping device for moulding boxes or the like. 3,015,514, 1–2–62, Cl. 294—86.
Michael, Vilo G., to Martin-Marietta Corp. Combination reservoir-accumulator arrangement for hydraulic system. 3,015,345, 1–2–62, Cl. 138—31.
Michaels, Adlai E., and A. Winard, to Esso Research and Engineering Co. Gasolines inhibited against the formation of deposits, sludge and varnish. 3,015,546, 1–2–62, Cl. 44—62.
Michigan Tool Co.: *See*—
Drader, Joseph C. 3,015,243.
Microcyclomat Co., The: *See*—
Rozsa, Tibor A., and Holmes. 3,015,392.
Rozsa, Tibor A., and Holmes. 3,015,393.
Microdot, Inc.: *See*—
Seeger, Robert W. 3,015,799.
Mignealt, Fernand W.: *See*—
Mignealt, Romuald and F. W. 3,015,134.
Mignealt, Romuald and F. W. Window panel divider. 3,015,134, 1–2–62, Cl. 20—52.
Miller, Teddy, J. H. Anderson, and D. J. Rosbe, to Continental Can Co., Inc. Can end coating nozzle. 3,015,302, 1–2–62, Cl. 118—318.
Miller, Wendell S. Electronic computer. 3,015,443, 1–2–62, Cl. 235—164.

Minella, Angelo, ½ to C. C. Pajdowski and ½ to S. M. Clifford. Adapter between toilet and discharge pipe. 3,015,501, 1–2–62, Cl. 285—58.
Minerals & Chemicals Philipp Corp.: *See*—
Ferrigno, Thomas H. 3,015,634.
Minneapolis-Honeywell Regulator Co.: *See*—
Carlson, Elmer A. 3,015,447.
McLane, Robert C., and Pomeroy. 3,015,459.
Minnesota Mining and Mfg. Co.: *See*—
Bollmeier, Emil W. 3,015,509.
Lambert, Richard J. 3,015,597.
Mitchell, Earl N.: *See*—
Pohm, Arthur V., Mitchell, and Rossing. 3,015,807.
Mitchell, Edward B., and W. H. Flanagan, Jr., to United-Carr Fastener Corp. Electrical connector with polarizing key. 3,015,797, 1–2–62, Cl. 339—17.
Mohr, Robert G., and R. J. Lappin, to Brunswick Corp. Book box desk. 3,015,531, 1–2–62, Cl. 312—316.
Mohwinkel, Franz, and H. Funke; said Funke assor. to said Mohwinkel. Belt conveyors. 3,015,381, 1–2–62, Cl. 198—203.
Monroe Calculating Machine Co.: *See*—
Dodsworth, James W. 3,015,437.
Gang, Herman. 3,015,436.
Gang, Herman. 3,015,439.
Monsanto Chemical Co.: *See*—
Godfrey, Kenneth L., and D'Amico. 3,015,551.
Montavon, Marc: *See*—
Isler, Otto, Montavon, Rüegg, and Zeller. 3,015,680.
Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Flor, Aldo. 3,015,150.
Montz, Julius: *See*—
Montz, Otto, and Kloss. 3,015,340.
Montz, Otto, and H. J. Kloss, to J. Montz. Apparatus for processing a liquid. 3,015,340, 1–2–62, Cl. 137—124.
Mooney, Paul C., to Quick-Set, Inc. Camera supporting attachment for a tripod. 3,015,468, 1–2–62, Cl. 248—230.
Moore, Benjamin, & Co.: *See*—
Marsh, Lyle, and Malkin. 3,015,415.
Moore, David P. Apparatus for and method of the heat treatment of thermoplastic high pile fabrics. 3,015,223, 1–2–62, Cl. 66—147.
Mooresville Iron Works, Inc.: *See*—
Croxton, William B., and Holshouser. 3,015,147.
Morrill, Austin L.: *See*—
Eckler, Richard C., and Morrill. 3,015,713.
Morris, John W.: *See*—
Beemer, Paul K., and Morris. 3,015,217.
Morrison, Harold J.: *See*—
Jewett, John E., Moothart, Morrison, and Snow. 3,015,800.
Moosman, Jack A., to Johnston Testers, Inc. Well apparatus. 3,015,362, 1–2–62, Cl. 166—216.
Moothart, Kenneth L.: *See*—
Jewett, John E., Moothart, Morrison, and Snow. 3,015,800.
Morgan, Erving B.: *See*—
Hayden, Ray A., and Morgan. 3,015,521.
Morgan, Philip R.: *See*—
Williams, Russell F., Morgan, and Glenday. 3,015,325.
Morici, Alfred A., to Contadina Foods. Divider package. 3,015,429, 1–2–62, Cl. 229—15.
Morris, George F., to General Dynamics Corp. Duty cycle control for radio beacons. 3,015,816, 1–2–62, Cl. 343—6.8.
Moser, Vincent J., and B. B. Kine, to Rohm & Haas Co. Bonded non-woven fibrous products. 3,015,595, 1–2–62, Cl. 154—46.
Mosler Safe Co., The: *See*—
Price, Charles D. 3,015,342.
Muirhead & Co. Ltd.: *See*—
Bell, John, Foll, and Muirhead. 3,015,298.
Muirhead, Francis H.: *See*—
Bell, John, Foll, and Muirhead. 3,015,298.
Mulcoy, Edward W., to American Forest Products Corp. Shipping box. 3,015,431, 1–2–62, Cl. 229—45.
Muller, Gerard, to Cartier, Inc. Picture container. 3,015,179, 1–2–62, Cl. 40—152.1.
Müller, Josef: *See*—
Junghans, Helmut, Müller, and Kaiser. 3,015,277.
Muller, Paul, to Compagnie Francaise des Matieres Colorantes. Process for the preparation of addition products of tertiary aminea with dichloromethyl ethers of diols. 3,015,664. 1–2–62, Cl. 260—296.
Murray Corp. of America, The: *See*—
McWethy, Irvin E. 3,015,225.
Oles, Joseph F. 3,015,224.
Murray, Gordon C.: *See*—
Everett, John W., and Murray. 3,015,410.
Musgrave, Orly. Variable speed drive. 3,015,237, 1–2–62, Cl. 74—230.17.
Myers, Myron L., and W. R. Whately, to American Cyanamid Co. Titanium dioxide pigment carrying an amine salt as dispersion aid. 3,015,573, 1–2–62, Cl. 106—300.
Myers, Peter B., to Bell Telephone Laboratories, Inc. Magnetic memory matrix. 3,015,809, 1–2–62, Cl. 340—174.
Nakazawa, Yuzo: *See*—
Honda, Seiichi, and Nakazawa. 3,015,789.
National Cash Register Co., The: *See*—
Slamb, Gene E., and Werner. 3,015,434.
National Distillers and Chemical Corp.: *See*—
Dean, Ralph K., Slatkovski, and Wegner. 3,015,135.
National Research Development Corp.: *See*—
Pirt, Stanley J., and Callow. 3,015,612.
Natonek, László. Self-driving vibrating capacitor with an auxiliary electrode. 3,015,769, 1–2–62, Cl. 318—128.
Navigation Computer Corp.: *See*—
Jones, John P., Jr. 3,015,734.
Nawrath, Günter, R. Schnegg, and O. Haberstroh, to Farbenfabriken Bayer Aktiengesellschaft. Apparatus for melting polyamide shreds. 3,015,480, 1–2–62, Cl. 263—11.
Nechine, Leonard M., to FMC Corp. By-pass for pumping apparatus. 3,015,279, 1–2–62, Cl. 103—11.
Nelson, Earl C.: *See*—
Hodge, John E., and Nelson. 3,015,654.
Nelson, Marvin O. Rear window cleaner. 3,015,518, 1–2–62, Cl. 296—91.
Neu, Wallace I. Pneumatic tire temperature warning device. 3,015,803, 1–2–62, Cl. 340—56.
Neuhauser, William J.: *See*—
Barnes, Frederick J., and Neuhauser. 3,015,255.
New Britain Machine Co., The: *See*—
Pethybridge, Charles A., and Pulsifer. 3,015,116.
Newman, Frank C., to The Distillers Co. Ltd. Production of monochlorbutenes. 3,015,678, 1–2–62, Cl. 260—652.5.
Newman, John P. Rotary impact hammer. 3,015,244, 1–2–62, Cl. 81—52.3.
Newsom, Roy R. Remote control of traffic signals. 3,015,802, 1–2–62, Cl. 340—40.
Nichols, Lyman B., to The Anaconda American Brass Co. Method of making jacketed strip-wound metal hose. 3,015,133, 1–2–62, Cl. 18—59.
Nielsen, Carl A., E. F. Ewen, and P. H. Sherrick, to E. H. Sargent & Co. Two speed reversible record chart drive. 3,015,536, 1–2–62, Cl. 346—136.
Noberit, Albert. Hanger for curtains, draperies and accessories. 3,015,398, 1–2–62, Cl. 211—96.
Noel, Eugene M. Griddle-conveyor flight. 3,015,287, 1–2–62, Cl. 107—56.
Nolte, May E. Floating server. 3,015,406, 1–2–62, Cl. 220—1.
North American Aviation, Inc.: *See*—
Pineblum, Solomon S. 3,015,461.
North American Philips Co., Inc.: *See*—
Allin, Philip E. V., and Smith. 3,015,787.
Bruijning, Hugo G. 3,015,778.
Bügel, Roelof D., and Boone. 3,015,759.
De Troye, Nicolaas C. 3,015,808.
Esseling, Ludovicus A. L. 3,015,761.
Francken, Jan C. 3,015,749.
Hoffmann, Bruno. 3,015,490.
Hormann, Theodoor H. 3,015,742.
Kindl, Friedrich. 3,015,491.
Kiels, Derk, and Vermeulen. 3,015,701.
Klinkhamer, Jacob F. 3,015,697.
Leopold, Frans M. 3,015,592.
Meijer, Roelf J., and Hermans. 3,015,475.
Plat, Auke, and Recourt. 3,015,796.
Poorter, Teunis. 3,015,691.
Poorter, Teunis, and Valeton. 3,015,751.
Repko, Jan D. 3,015,766.
Repko, Jan D., and Verheijden. 3,015,765.
Schayes, Raymond G., and Enslnk. 3,015,780.
Spaa, Jacob H., and de Haan. 3,015,729.
Van der Horst, Hajo L., and van Vlodrop. 3,015,783.
Van Santen, Johannes G., and Diemer. 3,015,731.
Van Santen, Johannes G., and Esvelt. 3,015,770.
Vass, Eric B. 3,015,785.
Well, Frits. 3,015,760.
Northern Signal Co., Inc.: *See*—
Nunn, Ewing D. 3,015,804.
Northrop Corp.: *See*—
Bridwell, Robert A. 3,015,292.
Bridwell, Robert A. 3,015,711.
Dixson, Bruce E. 3,015,457.
Ewing, Edgar G. 3,015,513.
Taylor, Philip H. 3,015,249.
Vogel, Alvin R., Ruch, and Bagby. 3,015,702.
Norton Co.: *See*—
Backer, William R. 3,015,195.
Norton, Desmond H., and J. D. Castleberry, to United States of America, Army. Vertical-horizontal forklift drum handling attachment. 3,015,402, 1–2–62, Cl. 214—620.
Novelty Carriage Works, Inc.: *See*—
Halstead, Harold A., H. A. Halstead, Jr., and R. E. Halstead. 3,015,515.
Nowakowski, Albert J., to The Still Fish Reel Co. Fishing line reservoir. 3,015,183, 1–2–62, Cl. 43—20.
Nunn, Ewing D., to Northern Signal Co., Inc. Combined barricade and flashing signal light. 3,015,804, 1–2–62, Cl. 340—81.
Nyberg, Curt E.: *See*—
Semler, Loren H., and Nyberg. 3,015,161.
Nysco Laboratories, Inc.: *See*—
Smedresman, Max. 3,015,611.
Oak Mfg. Co.: *See*—
Fichter, Ludwig J. 3,015,706.
Oakes, William E. Drill collar handling sub. 3,015,512, 1–2–62, Cl. 294—1.
Obenshain, David N., to West Virginia Pulp and Paper Co. Wet web tensile tester. 3,015,230, 1–2–62, Cl. 73—89.
O'Connell, Paul R.: *See*—
Dietz, Max M., and O'Connell. 3,015,426.
Oda, Donald J., and R. L. McCollor, to United States of America, Air Force. Range slewing switch for airborne radar. 3,015,818, 1–2–62, Cl. 343—7.3.
Odell, Alexander D.: *See*—
Wright, Esmond P. G., Odell, and Parker. 3,015,755.
O'Donnell, Edward P., to R. C. Rich. Fishhook setting device. 3,015,181, 1–2–62, Cl. 43—15.
Ogburn, Ray E. Folding door construction. 3,015,359, 1–2–62, Cl. 160—206.
O'Keefe, Michael F., and F. W. Wahl, to AMP Inc. Electrical connector. 3,015,683, 1–2–62, Cl. 174—84.
Okonite Co., The: *See*—
Eigen, David. 3,015,774.
Okunami, Hideo. Adjustable drying rack. 3,015,185, 1–2–62, Cl. 45—24.

Oles, Joseph F., to The Murray Corp. of America. Lint filter. 3,015,224, 1–2–62, Cl. 68—18.

Olin Mathieson Chemical Corp.: *See*—
Cataldi, Maria S., Galmarini, and Pahn. 3,015,607.
Reynolds, Richard W., and Johnson. 3,015,157.

Osgood, Edmond R.: *See*—
Richards, Roger G., and Osgood. 3,015,653.

Over, Raymond E.: *See*—
Hosbein, Louis H., and Over. 3,015,288.

Owens-Corning Fiberglas Corp.: *See*—
Simison, Allen L. 3,015,582.
Slayter, Games, and Fowle. 3,015,524.
Stalego, Charles J. 3,015,127.

Owens-Illinois Glass Co.: *See*—
Allen, Russell G. 3,015,189.

Oxford Paper Co.: *See*—
McKnight, George S., Jr., and Buck. 3,015,575.

Pahn, Jose: *See*—
Cataldi, Maria S., Galmarini, and Pahn. 3,015,607.

Pajdowski, Cleo C.: *See*—
Minella, Angelo. 3,015,501.

Pajerek, Joseph J.: *See*—
Kistner, Harold J., and Pajerek. 3,015,484.

Pan, Paul M., to General Electric Co. Helical antenna null suppressor. 3,015,823, 1–2–62, Cl. 343—895.

Papesh, Edward F. Model rocket and parachute assembly. 3,015,274, 1–2–62, Cl. 102—34.1.

Parham, Fletcher L. Seamer and method. 3,015,293, 1–2–62, Cl. 113—54.

Park, Robert H., S. J. Sindeband, and E. S. Gilfillan. Magnetic mine firing control mechanism. 3,015,273, 1–2–62, Cl. 102—18.

Parker, Cecil: *See*—
Wright, Esmond P. G., Odell, and Parker. 3,015,755.

Parker, Robert E., to Blount-Parker Corp. Baby bath screen guard lock and release. 3,015,111, 1–2–62, Cl. 4—177.

Parker Rust Proof Co.: *See*—
Russell, William S. 3,015,594.

Parnas, Odd. Snow and ice removal apparatus. 3,015,172, 1–2–62, Cl. 37—43.

Pascoe, Frank T., to Westinghouse Air Brake Co. Centralized traffic control system for railroads. 3,015,722, 1–2–62, Cl. 246—5.

Pastoriza, James J. Automatic tracking apparatus. 3,015,817, 1–2–62, Cl. 343—7.3.

Patchen, Roy R. Construction jack. 3,015,470, 1–2–62, Cl. 254—93.

Pawling Rubber Corp.: *See*—
Doe, Elmer F. 3,015,136.

Pedrick, Robert F., to General Dynamics Corp. Annoyance call trapping circuit. 3,015,698, 1–2–62, Cl. 179—18.

Pelkey, Arthur D. Mold for use in welding chain links. 3,015,716, 1–2–62, Cl. 219—130.

Pelsue, Garvin, to The Jaeger Machine Co. Slip-form paver. 3,015,260, 1–2–62, Cl. 94—46.

Pender, Lloyd G., Sr., to United-Carr Fastener Corp. Tubing clip. 3,015,140, 1–2–62, Cl. 24—73.

Penn Controls, Inc.: *See*—
Siri, Louis J. 3,015,235.

Penn Metal Co., Inc.: *See*—
Clark, Raymond C. 3,015,194.

Peoples, Virgil H., and J. R. West, to The O. M. Scott & Sons Co. Spreader construction. 3,015,416, 1–2–62, Cl. 222—41.

Pergande, Wilbur F., to Illinois Tool Works. Hob. 3,015,151, 1–2–62, Cl. 29—103.

Perreault, George E., to Bell Telephone Laboratories, Inc. Relay. 3,015,707, 1–2–62, Cl. 200—87.

Persico, Ralph W.: *See*—
Carlucci, Michael P., and Persico. 3,015,108.

Personal Products Corp.: *See*—
Brecht, George. 3,015,332.

Persson, Sten I., and C. H. Reynolds, to General Dynamics Corp. Coal-rock sensing device. 3,015,477, 1–2–62, Cl. 262—27.

Pethybridge, Charles A., and C. D. Pulsifer, deceased, (M. B. Pulsifer, executrix); said Pethybridge and Pulsifer assors. to The New Britain Machine Co. Threading attachment with change speed transmission for reversing tool spindle rotation. 3,015,116, 1–2–62, Cl. 10—138.

Petri, Hector D., to United-Carr Fastener Corp. Electrical assembly. 3,015,718, 1–2–62, Cl. 240—8.16.

Petrolite Corp.: *See*—
Shen, Kwan-Ting. 3,015,622.

Petry, Robert K.: *See*—
Weaver, John B., and Petry. 3,015,640.

Peyton, Stanley V., and E. Williams. Explosive initiators. 3,015,275, 1–2–62, Cl. 102—70.

Phillips Petroleum Co.: *See*—
Frey, Frederick E. 3,015,543.

Placente, Anthony N.: *See*—
White, Harold J., and Placente. 3,015,356.

Platek, Edward W.: *See*—
Frost, Raymond B., and Platek. 3,015,502.

Pickett, Lamar: *See*—
Zisman, William A., and Pickett. 3,015,580.

Pierce, John S.: *See*—
Geschickter, Charles F., Pierce, Chen, and Reid. 3,015,657.

Pihl, George E., to Technology Instrument Corp. of Acton. Compressor amplifier. 3,015,782, 1–2–62, Cl. 330—145.

Pirt, Stanley J., and D. S. Callow, to National Research Development Corp. Continuous fermentation apparatus for the production of a chemical product. 3,015,612, 1–2–62, Cl. 195—141.

Pittsburgh Chemical Co.: *See*—
Smith, Stanton B., and Juhola. 3,015,367.

Plank, Charles J., E. J. Rosinski, and R. B. Smith, to Socony Mobil Oil Co., Inc. Manufacture of a silica-zirconia catalyst for conversion of hydrocarbons. 3,015,620, 1–2–62, Cl. 208—119.

Plat, Auke, and J. C. A. Recourt, to North American Philips Co., Inc. Tube socket adapter for printed board. 3,015,796, 1–2–62, Cl. 339—17.

Plax Corp.: *See*—
Wuyekens, Jean J. C. 3,015,404.

Plessey Co. Ltd., The: *See*—
Baines, Frederick. 3,015,262.

Plotkin, Gerald N., to United States of America, Navy. Radiation load simulator for proximity fuze. 3,015,820, 1–2–62, Cl. 343—17.7.

Pohm, Arthur V., E. N. Mitchell, and T. D. Rossing, to Sperry Rand Corp. Non-destructive sensing of a magnetic core. 3,015,807, 1–2–62, Cl. 340—174.

Polaroid Corp.: *See*—
Rogers, Howard G. 3,015,561.

Pollan, David, to Viewlex, Inc. Powerized automatic slide projector. 3,015,251, 1–2–62, Cl. 88—28.

Pomeroy, Orville R.: *See*—
McLane, Robert C., and Pomeroy. 3,015,459.

Poor & Co.: *See*—
McWilliams, James B. 3,015,370.

Poorter, Teunis, to North American Philips Co., Inc. Circuit arrangement for the image-deflection and line-deflection coils of at least two cathode-ray tubes. 3,015,691, 1–2–62, Cl. 178—7.5.

Poorter, Teunis, and J. J. P. Valeton, to North American Philips Co., Inc. Circuit for adjusting the background brightness in television reproducing device. 3,015,751, 1–2–62, Cl. 315—13.

Port Clinton Mfg. Co.: *See*—
Dracka, Clarence L. 3,015,245.

Portz, Willi: *See*—
Wimmer, Rudolf, Wirtz, Portz, Fischer, and Schliken. 3,015,619.

Post, Richard F.: *See*—
Hartwig, Edward C., Cummings, and Post. 3,015,748.

Potts, James H., Jr., to United States of America, Navy. Stabilizing fin. 3,015,269, 1–2–62, Cl. 102—3.

Powell, Flavius M.: *See*—
Rent, Edward F., and Powell. 3,015,441.

Powell, George T., Jr.: *See*—
Domingos, Karl K., Jr., Powell, and Malaspina. 3,015,270.

Precht, Walter, R. J. Geckle, and L. Frank, to Martin-Marietta Corp. Method of making tubular nuclear fuel elements. 3,015,615, 1–2–62, Cl. 204—154.2.

Precision Metalsmiths, Inc.: *See*—
Watts, Claude H. 3,015,138.

Preco Inc.: *See*—
Beemer, Paul K., and Morris. 3,015,217.

Price, Charles D., to The Mosler Safe Co. Blast closure. 3,015,342, 1–2–62, Cl. 137—512.1.

Pritchard, Peter E., to General Electric Co. Stereophonic magnetic phonograph pick-up cartridge. 3,015,703, 1–2–62, Cl. 179—100.41.

Proell, Wayne A.: *See*—
Bowman, Norman J., and Proell. 3,015,570.
Bowman, Norman J., and Proell. 3,015,571.

Pulsifer, Clarence D.: *See*—
Pethybridge, Charles A. 3,015,116.

Pulsifer, Marguerite B., executrix: *See*—
Pethybridge, Charles A., and Pulsifer. 3,015,116.

Pure Oil Co., The: *See*—
Brennan, Elmer W., and Hall. 3,015,320.

Pye Ltd.: *See*—
Ridgeway, Denis V. 3,015,688.

Quast, Gilbert W., to Chain Belt Co. Apparatus for flotation of suspended material. 3,015,396, 1–2–62, Cl. 210—221.

Quast, Gilbert W., to Chain Belt Co. Influent apparatus for flotation tanks. 3,015,621, 1–2–62, Cl. 210—205.

Quick-Set, Inc.: *See*—
Mooney, Paul C. 3,015,468.

Radek, John R., to Ready Metal Mfg. Co. Merchandise display equipment. 3,015,399, 1–2–62, Cl. 211—134.

Ragettli, Christian, to Grotnes Machine Works, Inc. Drum closing tool. 3,015,291, 1–2–62, Cl. 113—18.

Rahlfs, Erich, and G. Henrich, to Farbenfabriken Bayer Aktiengesellschaft. Method of preparing hydrazine hydrate from dihydrazine sulfate. 3,015,542, 1–2–62, Cl. 23—190.

Railway Maintenance Corp., and Poor & Co.: *See*—
McWilliams, James B. 3,015,370.

Rapala, Richard T.: *See*—
Farkas, Eugene, and Rapala. 3,015,666.

Rau, Robert F., to Sylvania Electric Products Inc. Flash gun socket. 3,015,798, 1–2–62, Cl. 339—45.

Rauner, Lawrence A., and L. J. Tyler, to Dow Corning Corp. Organo siloxane-alkyd resin coating compositions. 3,015,637, 1–2–62, Cl. 260—22.

Rawson, Emanuel, to Grand Sheet Metals Products Co. Method of assembling knock-down cabinets. 3,015,349, 1–2–62, Cl. 144—318.

Raymond, Francis A.: *See*—
Flannery, Edward J., and Raymond. 3,015,454.

Raytheon Co.: *See*—
Eckler, Richard C., and Morrill. 3,015,713.
Sirvetz, Marshall H. 3,015,788.
Skowron, John F., and Winsor. 3,015,750.
Taylor, Hugh P. 3,015,767.

Rea Magnet Wire Co.: *See*—
Heckel, Hermann C. N., and Jefferson. 3,015,686.

Ready Metal Mfg. Co.: *See*—
Radek, John R. 3,015,399.

Recourt, Johannes C. A.: *See*—
Plat, Auke, and Recourt. 3,015,796.

Reese, James H.: *See*—
Detwiler, Harry S., Reese, and Serlemitsos. 3,015,206.

Reflector-Hardware Corp.: *See*—
Levy, Edward M. 3,015,466.

Reichel, Howard G., and S. W. Lis, to Swift & Co. Bacon slicer having adjustable control of group size. 3,015,350, 1–2–62, Cl. 146—94.

Reid, Ebenezer E.: *See*—
Geschickter, Charles F., Pierce, Chen, and Reid. 3,015,657.

Reid, John D.: *See*—
Reinhardt, Robert M., Frick, Arceneaux, and Reid. 3,015,584.
Vail, Sidney L., Frick, and Reid. 3,015,583.

Reid, Luther J., to Socony Mobil Oil Co., Inc. Treatment of desiccants. 3,015,368, 1–2–62, Cl. 183—114.2.

Reinecker, Walter J., and D. J. Westergard. Mulching machines. 3,015,188, 1–2–62, Cl. 47—9.

Reinhardt, Robert M., J. G. Frick, Jr., R. L. Arceneaux, and J. D. Reid, to United States of America, Agriculture. Wrinkle resistance treatment for cellulosic textile fabrics. 3,015,584, 1–2–62, Cl. 117—139.4.

Reitfort, Henry A., to International Business Machines Corp. Console typewriter bit printing. 3,015,377, 1–2–62, Cl. 197—19.

Relaxacizor, Inc.: *See*—
Browner, William J. 3,015,333.

Remmele Engineering, Inc.: *See*—
Toensing, James W. 3,015,236.

Remer, Robert K., to Tribune Co. Electrically conductive printing ink and method of producing same. 3,015,632, 1–2–62, Cl. 252—511.

Rent, Edward F., and F. M. Powell, to International Business Machines Corp. Indexing system for calculators. 3,015,441, 1–2–62, Cl. 235—157.

Repko, Jan D., and M. G. Verheijden, to North American Philips Co., Inc. Variable capacitor. 3,015,765, 1–2–62, Cl. 317—253.

Repko, Jan D., to North American Philips Co., Inc. Variable capacitor. 3,015,766, 1–2–62, Cl. 317—253.

Revere Camera Co. (formerly Samica Corp.): *See*—
Claras, Carl W., and Wickstrom. 3,015,695.

Reynolds, Charles H.: *See*—
Persson, Sten I., and Reynolds. 3,015,477.

Reynolds Metals Co.: *See*—
Barnes, Frederick J., and Neuhauser. 3,015,255.

Reynolds, Richard W., and W. C. Johnson, to Olin Mathieson Chemical Corp. Metal fabrication. 3,015,157, 1–2–62, Cl. 29—470.9.

Rheinpreussen Aktiengesellschaft fur Bergbau und Chemie: *See*—
Wollner, Johannes. 3,015,665.

Rich, Ralph C.: *See*—
O'Donnell, Edward P. 3,015,181.

Richards, Glenn L., to General Dynamics Corp. Pulse shaping circuitry. 3,015,741, 1–2–62, Cl. 307—88.5.

Richards, Roger G., and E. R. Osgood, to Diamond Alkali Co. Maleic anhydride-styrene-acrylonitrile terpolymer. 3,015,653, 1–2–62, Cl. 260—78.5.

Richardson, Elwin J., Jr.: *See*—
Johnson David A., and Richardson. 3,015,676.

Richey, Clarence B.: *See*—
McKeon, Charles E., and Richey. 3,015,199.

Richman, Donald, to Hazeltine Research, Inc. Noise suppressor system for a superregenerative receiver. 3,015,728, 1–2–62, Cl. 250—20.

Ridge Tool Co., The: *See*—
Buyer, Walter. 3,015,246.

Ridgeway, Denis V., to Pye Ltd. Color television apparatus. 3,015,688, 1–2–62, Cl. 178—5.4.

Riesz, Richard P.: *See*—
Kammerer, Fred W., Riesz, and Wallace. 3,015,738.

Rissi, Erwin: *See*—
Jucker, Ernst, Rissi, and Süess. 3,015,658.

Ritson, Daniel D., to American Cyanamid Co. Two-sided paper. 3,015,578, 1–2–62, Cl. 117—68.

Roberts, Fred T. and R. E. Method of making reinforced corrugated hose. 3,015,599, 1–2–62, Cl. 156—144.

Roberts, Robert E.: *See*—
Roberts, Fred T. and R. E. 3,015,599.

Robertson Paper Box Co. Inc.: *See*—
Tyrseck, Walter J. 3,015,432.

Robinson, Richard A., to G. D. Searle & Co. 9-carboxyalkyl-9-pyrid[3,4-b]indole piperazides. 3,015,660, 1–2–62, Cl. 260—268.

Rochelle, Robert W. Series connected D.C. supply magnetic amplifier. 3,015,772 1–2–62, Cl. 323—56.

Rogers, Howard G., to Polaroid Corp. Novel photographic color processes and products. 3,015,561, 1–2–62, Cl. 96—29.

Rogowski, Frank J. Safety face mask. 3,015,105, 1–2–62, Cl. 2—9.

Rohm, Fredric G., to Avco Corp. Air induction system for an internal combustion engine. 3,015,322, 1–2–62, Cl. 123—32.

Rohm & Haas Co.: *See*—
Moser, Vincent J., and Kine. 3,015,595.
Sims, Homer J. 3,015,671.

Rolf, Erich, to Siemens-Schuckertwerke Aktiengesellschaft. Laminated cores for transformers and reactors. 3,015,791, 1–2–62, Cl. 336—217.

Rome Cable Corp.: *See*—
Steele, Maurice G. 3,015,165.

Rorig, Kurt J., to G. D. Searle & Co. Dialkylaminoethyl piperazinepropionates and process. 3,015,659, 1–2–62, Cl. 260—248.

Rorig, Kurt J., to G. D. Searle & Co. Benzopiperidinoalkylimides. 3,015,662, 1–2–62, Cl. 260—287.

Rosa, Richard J., to United States of America, Navy. Spectrograph. 3,015,250, 1–2–62, Cl. 88—14.

Rosanoff, Richard A., and L. S. Thomas. Friction gripping device. 3,015,142, 1–2–62, Cl. 24—263.

Rosbe, David J.: *See*—
Miller, Teddy, Anderson, and Rosbe. 3,015,302.

Rosenberg, Adolf, to Commercial Solvents Corp. Components of feeds. 3,015,563, 1–2–62, Cl. 99—2.

Rosenberg, Barnett, to Westinghouse Electric Corp. Fluorescent screen. 3,015,747, 1–2–62, Cl. 313—108.

Rosinski, Edward J: *See*—
Plank, Charles J., Rosinski, and Smith. 3,015,620.

Rosscup, Robert J., and H. J. Liehe, to Standard Oil Co. Lubricant comprising a lubricating oil and an ureido compound. 3,015,625, 1–2–62, Cl. 252—49.6.

Rossing, Thomas D.: *See*—
Pohm, Arthur V., Mitchell, and Rossing. 3,015,807.

Rowland, Douglas H. Hydraulic squeezing and drilling device. 3,015,361, 1–2–62, Cl. 166—101.

Roy, Milton, Co.: *See*—
Shaffer, George E., Jr., and Schneider. 3,015,544.

Rozsa, Tibor A., and R. O. Holmes, to The Microcyclomat Co. Vertical feed centripetal classifier. 3,015,392, 1–2–62, Cl. 209—144.

Rozsa, Tibor A., and R. O. Holmes, to The Microcyclomat Co. Centripetal classifier rotor deck selector. 3,015,393, 1–2–62, Cl. 209—144.

Rubin, Harry, & Sons Inc.: *See*—
Rubin, Leonard R. 3,015,811.

Rubin, Leonard R., to Harry Rubin & Sons Inc. Portable fire alarm unit. 3,015,811, 1–2–62, Cl. 340—227.

Ruch, David E.: *See*—
Vogel, Alvin R., Ruch, and Bagby. 3,015,702.

Ruegg, Rudolf: *See*—
Isler, Otto, Montavon, Ruegg, and Zeller. 3,015,680.

Ruiter, Lukas H., and J. M. Van Schaik, to Lever Bros. Co. Hydrogenation process. 3,015,667, 1–2–62, Cl. 260—409.

Rummel, Roman. Method and device for carrying out metallurgical processes, particularly air refining processes. 3,015,554, 2–2–62, Cl. 75—51.

Ruscito, Anthony J., to Sprague Electric Co. Electrical component terminal. 3,015,687, 1–2–62, Cl. 174—153.

Russell, William S., to Parker Rust Proof Co. Phosphate coating process. 3,015,594, 1–2–62, Cl. 148—6.15.

Rutkowski, Edward A. Advertising display. 3,015,178, 1–2–62, Cl. 40—132.

Ryan, William J.: *See*—
Kimsey, Woodrow P., and Ryan. 3,015,173.

Ryder, Elmer. Aim improver for bow and arrow. 3,015,328, 1–2–62, Cl. 124—30.

Ryder, Frederick, and B. Fishman, to Simmonds Aerocessories, Inc. Mass flowmeter. 3,015,233, 1–2–62, Cl. 73—205.

S.A. Etablissements Van Moer: *See*—
Van Moer, Henri. 3,015,106.

Saars, William F.: *See*—
Latham, William S., and Saars. 3,015,810.

St. Lawrence Mfg. Co., Inc.: *See*—
Kesner, Richard N., and Hawes. 3,015,492.

Salsbury's, Dr., Laboratories: *See*—
Walde, Arthur W. 3,015,606.

Sacher, Alex, to Standard Insulation Co., Inc. Plastic impregnated paper and method and apparatus for making same. 3,0155,577, 1–2–62, Cl. 117—62.

Sanders, Roy Y., Jr. Marked pharmaceutical tablet and method of marking the same. 3,015,609, 1–2–62, Cl. 167—82.

Sanders, Roy Y., Jr. Marked pharmaceutical tablet. 3,015,610, 1–2–62, Cl. 167—82.

Sandoz A.G.: *See*—
Jucker, Ernst, Rissi, and Süess. 3,015,658.

Sargent, E. H., & Co.: *See*—
Nielsen, Carl A., Ewen, and Sherrick. 3,015,536.

Savage, Russell C., to Bendix-Westinghouse Automotive Air Brake Co. Fluid pressure control mechanism. 3,015,339, 1–2–62, Cl. 137—102.

Schayes, Raymond C., and J. Ensink, to North American Philips Co., Inc. Transistor class-B biasing circuits. 3,015,780, 1–2–62, Cl. 330—14.

Schild, A., S.A.: *See*—
Dubois, Georges. 3,015,526.

Schliken, Hartmut: *See*—
Wimmer Rudolf, Wirtz, Portz, Fischer, and Schliken. 3,015,619.

Schmidt, Edward R.: *See*—
Herbig, Henry F., and Schmidt. 3,015,696.

Schmidt, Fred J.: *See*—
Jones, Harold A., Schmidt, and Condon. 3,015,489.

Schmidt, Oliver G., to Chain Belt Co. Bearing assembly. 3,015,527, 1–2–62, Cl. 308—187.

Schmitt, Raymond C., to Aero Gasket Corp. Support clamp. 3,015,465, 1–2–62, Cl. 248—74.

Schnegg, Robert: *See*—
Nawrath, Günter, Schnegg, and Haberstroh. 3,015,480.

Schneider, George W., Jr.: *See*—
Shaffer, George E., Jr., and Schneider. 3,015,544.

Schneider, Herbert A., to Bell Telephone Laboratories, Inc. Digital data generator circuits for computer testing. 3,015,444, 1–2–62, Cl. 235—164.

Schneider, Wilhelm A., to United States of America, Army. Insulated electrical connector. 3,015,684, 1–2–62, Cl. 174—88.

Schnell, Hermann, and G. Fritz, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of polyamides. 3,015,652, 1–2–62, Cl. 260—78.

Schnoll, Nathan, to Flow Measurements Corp. Flow cell. 3,015,232, 1–2–62, Cl. 73—204.

Schockaert, Jules J. E. M., to International Standard Electric Corp. Carrier supports for sorting machine. 3,015,379, 1–2–62, Cl. 198—145.

Schollenberger, Charles S., to The B. F. Goodrich Co. Thermoplastic polyesterurethanes. 3,015,650, 1–2–62, Cl. 260—75.

Schrecongost, Ray B., to Admiral Corp. Flash-over suppression in cathode ray tubes. 3,015,752, 1-2-62, Cl. 315—16.

Schultz, Robert T., and J. F. Sullivan, to International Telephone and Telegraph Corp. Trigger circuit. 3,015,736, 1-2-62, Cl. 307—88.5.

Schumacher, Frederick G.: *See*—
Hendrikson, Philip R., and Schumacher. 3,015,576.

Schwartz, Daniel M., to The Elmco Corp. Filter valve construction. 3,015,397, 1-2-62, Cl. 210—395.

Schweitzer, Kurt H. Closure means for leg openings for use in baby seat assemblies. 3,015,493, 1-2-62, Cl. 280—33.99.

Scott, O. M., & Sons Co., The: *See*—
Peoples, Virgil H., and West. 3,015,416.

Scott, Peter, and B. H. Stonehouse, to The General Electric Co. Ltd. Electric winch apparatus. 3,015,472, 1-2-62, Cl. 254—168.

Scott, Wellington W., and J. P. Irvine, to Arwell Inc. Bait box. 3,015,184, 1-2-62, Cl. 43—131.

Searle, G. D., & Co.: *See*—
Bible, Roy H., Jr. 3,015,656.
Robinson, Richard A. 3,015,660.
Rorig, Kurt J. 3,015,659.
Rorig, Kurt J. 3,015,662.
Zimmermann, Markus. 3,015,663.

Seeger, Robert W., to Microdot, Inc. Multiconductor test terminal. 3,015,799, 1-2-62, Cl. 339—249.

Seeley, Elwin W.: *See*—
Brown, Lawrence R., Jones, and Seeley. 3,015,822.

Selb, Frederick A. Combination litter and carriage means therefor. 3,015,114, 1-2-62, Cl. 5—86.

Selas Corp. of America: *See*—
Buckholdt, Robert E., and Bloom. 3,015,478.

Semar, Harold W., to Westinghouse Electric Corp. Vibration isolating bearing support. 3,015,523, 1-2-62, Cl. 308—9.

Semler, Loren H., and C. E. Nyberg, to Metal Specialties Mfg. Co. Punch device. 3,015,161, 1-2-62, Cl. 30—363.

Semon, Howard W. Intermittent arming device for a mine. 3,015,272, 1-2-62, Cl. 102—16.

Semon, Lawrence J. Head set adapter for cord operated switchboards. 3,015,700, 1-2-62, Cl. 179—42.

Sennewald, Kurt: *See*—
Vogt, Wilhelm, Welden, Gehrmann, and Sennewald. 3,015,677.

Seseney, George T., and D. L. Hardy, to USECO, Inc. Potentiometer wiper reciprocating mechanism. 3,015,792, 1-2-62, Cl. 338—145.

Sergi, Rocco J., to Congoleum-Nairn Inc. Water dispersed adhesive of rubber and a mixture of tackifiers, and process for preparing same. 3,015,638, 1-2-62, Cl. 260—24.

Serlemitsos, Peter J.: *See*—
Detwiler, Harry S., Reese, and Serlemitsos. 3,015,206.

Servel, Inc.: *See*—
Kirkman, Fredrick J. 3,015,719.

Shaffer, George E., Jr., and G. W. Schneider, Jr., to Milton Roy Co. Method of preparing a chemical blank sample. 3,015,544, 1-2-62, Cl. 23—230.

Sharples Corp., The: *See*—
Sharples, Thomas D. 3,015,391.

Sharples, Thomas D., to The Sharples Corp. Classification process and apparatus. 3,015,391, 1-2-62, Cl. 209—144.

Shaw, Charles H.: *See*—
Foreman, William T., and Shaw. 3,015,253.

Shawlnigan Resins Corp.: *See*—
Markhart, Albert H., Hunt, and Lavin. 3,015,643.

Shell Oil Co.: *See*—
Bradley, Theodore F., and Sommer. 3,015,635.
Stratton, Hal. 3,015,360.

Shen, Kwan-Ting, to Petrolite Corp. Process of inhibiting corrosion. 3,015,622, 1-2-62, Cl. 252—8.55.

Sherrick, Paul H.: *See*—
Nielsen, Carl A., Ewen, and Sherrick. 3,015,536.

Shiffman, Jerome. Display containers. 3,015,383, 1-2-62, Cl. 206—45.23.

Shockley, William. Semiconductor devices. 3,015,762, 1-2-62, Cl. 317—234.

Short, Joe R.: *See*—
Johnson, William A., and Short. 3,015,307.

Shoultes, Donald P.: *See*—
Vignos, Joseph P., and Shoultes. 3,015,733.

Shuford Mills, Inc.: *See*—
Long, John R. 3,015,204.

Shuttleworth, Cornelius J., and T. A. McConnell. Air quality gauge. 3,015,228, 1-2-62, Cl. 73—29.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Rolf, Erich. 3,015,791.

Silverman, Richard J. Portable telescopic outdoor electric lantern. 3,015,720, 1-2-62, Cl. 240—25.

Simek, John G.: *See*—
Kuntzleman, Harry C., and Simek. 3,015,732.

Simison, Allen L., to Owens-Corning Fiberglas Corp. Roofing felt. 3,015,582, 1-2-62, Cl. 117—126.

Simmonds Aerocessories, Inc.: *See*—
Ryder, Frederick, and Fishman. 3,015,233.

Simmons, William H., and A. M. Stott, to United States of America, Army. Stabilization boom for aircraft encapsulated seat. 3,015,462, 1-2-62, Cl. 244—122.

Sims, Homer J., to Rohm & Haas Co. Bicyclooctane derivative and process of producing same. 3,015,671, 1-2-62, Cl. 260—491.

Sinclair Refining Co.: *See*—
Loring, Lewis D., and Voss. 3,015,623.

Sindeband, Seymour J.: *See*—
Park, Robert H., Sindeband, and Gilfillan. 3,015,273.

Siri, Louis J., to Penn Controls, Inc. Adjustable thermostat. 3,015,235, 1-2-62, Cl. 73—363.1.

Sirvetz, Marshall H., to Raytheon Co. Microwave device. 3,015,788, 1-2-62, Cl. 333—24.

Sitterly, Charles K., to Caradco Inc. Window sash positioner. 3,015,511, 1-2-62, Cl. 292—70.

Skeats, Wilfred F., to General Electric Co. Electric bus duct apparatus. 3,015,743, 1-2-62, Cl. 307—147.

Skowron, John F., and D. L. Winsor, to Raytheon Co. Traveling wave electron discharge devices. 3,015,750, 1-2-62, Cl. 315—3.5.

Slaub, Gene E., and F. R. Werner, to The National Cash Register Co. Repeat cycling control mechanism for cash registers and accounting machines. 3,015,434, 1-2-62, Cl. 235—11.

Slatkovski, Emil J.: *See*—
Dean, Ralph K., Slatkovski, and Wegner. 3,015,135.

Slayter, Games, and A. A. Rowle, to Owens-Corning Fiberglas Corp. Inverted turbine. 3,015,524, 1-2-62, Cl. 308—9.

Smedresman, Max, to Nysco Laboratories, Inc. Low density whey-bound tablets. 3,015,611, 1-2-62, Cl. 167—82.

Smith, Arthur F., to International Business Machines Corp. Sheet feeding and registering machines. 3,015,485, 1-2-62, Cl. 271—53.

Smith, Bert, Jr.: *See*—
Buchanan, J. D., and Smith. 3,015,317.

Smith, Donald W., to Southwestern Cotton Oil Co. Packing gland for vertical screw conveyor. 3,015,505, 1-2-62, Cl. 286—11.13.

Smith, Edward J.: *See*—
Zaratkiewicz, Edwin A., and Smith. 3,015,591.

Smith, Frederick W.: *See*—
Allin, Philip E. V., and Smith. 3,015,787.

Smith, Richard B., 45% to W. M. Jones. Spill-proof device. 3,015,411, 1-2-62, Cl. 220—90.4.

Smith, Robert B.: *See*—
Plank, Charles J., Rosinski, and Smith. 3,015,620.

Smith, Robert D. Excavator. 3,015,175, 1-2-62, Cl. 37—192.

Smith, Stanton B., and A. J. Juhola, to Pittsburgh Chemical Co. Filtration media. 3,015,367, 1-2-62, Cl. 183—4.

Snow, John R.: *See*—
Jewett, John E., Moothart, Morrison, and Snow. 3,015,800.

Snyder, James M., to E. I. du Pont de Nemours and Co. Production of cyanide salts. 3,015,539, 1-2-62, Cl. 23—79.

Societe Alsacienne de Constructions Mecaniques: *See*—
Ville, Jean A., and Houzitat. 3,015,446.

Societe Compagnie de Saint-Gobain: *See*—
Arbelt, Pierre. 3,015,190.

Societe Technique pour l'Industrie Nouvelle S.A. "Stin": *See*—
Hofstetter, Ernst, and Haas. 3,015,725.

Socony Mobil Oil Co., Inc.: *See*—
Brennan, James A. 3,015,369.
Ciapetta, Frank G., Cogaradt, and Garwood. 3,015,549.
Drake, Leonard C. 3,015,541.
Plank, Charles J., Rosinski, and Smith. 3,015,620.
Reid, Luther J. 3,015,368.

Somerville, George R., Jr., to Southwest Research Institute. Encapsulating apparatus. 3,015,128, 1-2-62, Cl. 18—2.6.

Sommer, Harry J.: *See*—
Bradley, Theodore F., and Sommer. 3,015,635.

Southwest Research Institute: *See*—
Somerville, George R., Jr. 3,015,128.

Southwestern Cotton Oil Co.: *See*—
Smith, Donald W. 3,015,505.

Spaa, Jacob H., and E. F. de Haan, to North American Philips Co., Inc. Apparatus for measuring the radioactivity of particles in a gas. 3,015,729, 1-2-62, Cl. 250—83.6.

Sperry Rand Corp.: *See*—
Rohm, Arthur V., Mitchell, and Rossing. 3,015,807.

Speier, John L., to Dow Corning Corp. Method of curing condensed siloxane resins. 3,015,646, 1-2-62, Cl. 260—46.5.

Spikes, Richard B. Automatic safety brake system. 3,015,522, 1-2-62, Cl. 303—9.

Sprague Electric Co.: *See*—
Ruscito, Anthony J. 3,015,687.

Springfield, Redwood L. Bimetallic mounting. 3,015,234, 1-2-62, Cl. 73—339.

Spurlin, William G., to Ford Motor Co. Linch pin with spring retainer means. 3,015,248, 1-2-62, Cl. 85—8.3.

Square Mfg. Co.: *See*—
Arnett, Leslie, and Freise. 3,015,419.

Stalcup, Johnnie V.: *See*—
Towne, Richard C., and Stalcup. 3,015,299.

Stalego, Charles J., to Owens-Corning Fiberglas Corp. Method and apparatus for forming fibers. 3,015,127, 1-2-62, Cl. 18—2.5.

Staley, A. E., Mfg. Co.: *See*—
Casey, James P., and Lehman. 3,015,572.

Standard Insulation Co., Inc.: *See*—
Sacher, Alex. 3,015,577.

Standard Oil Co. (Indiana): *See*—
Barber, Herbert H., Jr. 3,015,227.
Bowman, Norman J., and Proell. 3,015,570.
Bowman, Norman J., and Proell. 3,015,571.
Rosscup, Robert J., and Liehe. 3,015,625.
Wolff, William F. 3,015,670.

Standard-Thomson Corp.: *See*—
Wood, Thomas M. N. 3,015,354.

Stanley, Edward W.: *See*—
Anderson, Charles U., and Stanley. 3,015,266.

Staples, Crawford E., to Westinghouse Air Brake Co. High shunting sensitivity track circuits. 3,015,723, 1-2-62, Cl. 246—34.

Stark, John B., to United States of America, Agriculture. Separation of nitrogenous organic compounds. 3,015,655, 1-2-62, Cl. 260—211.5.

Steel Heddle Mfg. Co.: *See*—
Kaufmann, Frank H. 3,015,346.
Kaufmann, John J., Jr. 3,015,347.

Steele, Maurice G., to Rome Cable Corp. Rolling contact measuring device. 3,015,165, 1-2-62, Cl. 33—134.

Steinert, Gerhard, to Kohlenscheidungs-Gesellschaft, m.b.H. Radiant tubular heat exchanger. 3,015,319, 1-2-62, Cl. 122—478.

Stemp, Ronald G.: *See*—
Mason, Frederick P., and Stemp. 3,015,690.

Stephens, Robert A.: *See*—
Ayers, Joseph W., and Stephens. 3,015,627.
Ayers, Joseph W., and Stephens. 3,015,628.

Sterling, Don L. Refuse containers. 3,015,405, 1-2-62, Cl. 217—56.

Steward, Omar W.: *See*—
Holbrook, George W., and Steward. 3,015,585.

Stewart, Troy C., Sr. Pneumatic separator. 3,015,390, 1-2-62, Cl. 209—140.

Still Fish Reel Co., The: *See*—
Nowakowski, Albert J. 3,015,183.

Stinson, John M.: *See*—
Striplin, Marcus M., Jr., Stinson, and Wilbanks. 3,015,552.

Stix, Thomas H., to United States of America, Atomic Energy Commission. Apparatus for heating a plasma. 3,015,618, 1-2-62, Cl. 204—193.2.

Stohlquist, Roger H., to W. F. and John Barnes Co. Apparatus for processing can ends. 3,015,303, 1-2-62, Cl. 118—318.

Stonehouse, Bernard H.: *See*—
Scott, Peter, and Stonehouse. 3,015,472.

Stott, Albert M.: *See*—
Simmons, William H., and Stott. 3,015,462.

Stott, Albert M., to United States of America, Army. Selective multicycle actuator. 3,015,312, 1-2-62, Cl. 121—40.

Strader, Don S., to The Frank G. Hough Co. Hydraulic power steering arrangement. 3,015,314, 1-2-62, Cl. 121—41.

Strader, William R. Scouring pad holder. 3,015,118, 1-2-62, Cl. 15—209.

Stram, George, A. A. McIntyre, and J. E. Thomas, to Capitol Products Corp. Apparatus for filtration. 3,015,395, 1-2-62, Cl. 210—138.

Strategic Materials Corp.: *See*—
Johnson, Arthur F. 3,015,353.

Stratton, Hal, to Shell Oil Co., Continental Oil Co., The Superior Oil Co., and Union Oil Co. of California. Method and apparatus for underwater drilling. 3,015,360, 1-2-62, Cl. 166—46.

Straw, Douglas: *See*—
Herrick, Clifford E., Jr., LaFreniere, and Straw. 3,015,562.

Strimel, Robert S., to Tinius Olsen Testing Machine Co. Piston-centering means for hydraulic testing machines or the like. 3,015,315, 1-2-62, Cl. 121—46.

Striplin, Marcus M., Jr., D. McKnight, and E. C. Marks, to Tennessee Valley Authority. Manufacture of superphosphoric acid. 3,015,540, 1-2-62, Cl. 23—165.

Striplin, Marcus M., Jr., J. M. Stinson, and J. A. Wilbanks, to Tennessee Valley Authority. Process for preparing stable liquid fertilizer and product thereof. 3,015,552, 1-2-62, Cl. 71—41.

Structural Electric Products Corp.: *See*—
Angier, James F. 3,015,717.

Stuart Corp.: *See*—
Stuart, Fred E. 3,015,476.

Stuart, Fred E., to Stuart Corp. Agitator. 3,015,476, 1-2-62, Cl. 259—141.

Stubbs, Dennis: *See*—
Clark, Patrick A., Stubbs, and Bloomfield. 3,015,528.

Stümpfig, Friedrich, and C. Bellwinkel. Internal combustion engine and method for operating same. 3,015,321, 1-2-62, Cl. 123—30.

Sturtz, William E., and E. Frisch, to Westinghouse Electric Corp. Rod type fuel assembly. 3,015,616, 1-2-62, Cl. 204—193.2.

Sud Atlas-Werke G.m.b.H.: *See*—
Matusche, Heinz. 3,015,776.

Süess, Rudolf: *See*—
Jucker, Ernst, Rissl, and Süess. 3,015,658.

Sullivan, John F.: *See*—
Schultz, Robert T., and Sullivan. 3,015,736.

Sumsion, Alton E.: *See*—
Bain, John W., and Sumsion. 3,015,357.

Sunthelmer, Frank J. Fermentation processes for making bread and the like. 3,015,565, 1-2-62, Cl. 99—90.

Superior Oil Co., The: *See*—
Stratton, Hal. 3,015,360.

Superior Sleeprite Corp.: *See*—
Wallen, Frank S. 3,015,113.

Supernaw, Dwight L., to United States of America, Navy. Enabling device for acoustic torpedo homing systems. 3,015,297, 1-2-62, Cl. 114—23.

Surtees, Benjamin J. Fuze mechanisms. 3,015,276, 1-2-62, Cl. 102—76.

Swift & Co.: *See*—
Reichel, Howard G., and Lis. 3,015,350.

Swiss Serum and Vaccine Institute: *See*—
Zahler, Peter H. 3,015,673.

Sylvania Electric Products Inc.: *See*—
Hunt, Robert E. 3,015,421.
Rau, Robert F. 3,015,798.
Woods, William C. 3,015,394.

Symington Wayne Corp.: *See*—
Blattner, Emil H. 3,015,525.
Blattner, Emil H., and Winther. 3,015,285.

Tanaka, Shoji, and Y. Katori. Folding bicycles. 3,015,498, 1-2-62, Cl. 280—278.

Tarbox, George S., to Jacoby-Tarbox Corp. Flow indicator unit. 3,015,300, 1-2-62, Cl. 116—117.

Taylor, Edward L., to KVP Sutherland Paper Co. Method of reclaiming fibers from parchmentized paper. 3,015,602, 1-2-62, Cl. 162—7.

Taylor, Hugh P., to Raytheon Co. Tachometer stabilization networks. 3,015,767, 1-2-62, Cl. 318—28.

Taylor, Philip H., to Northrop Corp. Tracking telescope. 3,015,249, 1-2-62, Cl. 88—1.

Technology Instrument Corp. of Acton: *See*—
Fraser, Alton W., and Thomas. 3,015,793.
MacDonald, William J. 3,015,587.
Pihl, George E. 3,015,782.

Tel-E-Lect Products Inc.: *See*—
Carbert, Ralph E., Blomquist, and Kennedy. 3,015,374.

Tennessee Valley Authority: *See*—
Striplin, Marcus M., Jr., McKnight, and Marks. 3,015,540.
Striplin, Marcus M., Jr., Stinson, and Wilbanks. 3,015,552.

Texaco Development Corp.: *See*—
Gross, Howard H., and Kiersted. 3,015,545.

Texaco Inc.: *See*—
Heisler, Robert Y., and Eckert. 3,015,547.
Hencke, William R., McBurnett, and Badgett. 3,015,624.
Truitt, James K. 3,015,629.

Textron Electronics, Inc.: *See*—
Maki, Charles E. 3,015,229.

Thomas, Joe E.: *See*—
Stram, George, McIntyre, and Thomas. 3,015,395.

Thomas, John P.: *See*—
Fraser, Alton W., and Thomas. 3,015,793.

Thomas, Leroy S.: *See*—
Rosanoff, Richard A., and Thomas. 3,015,142.

Thomas, William W., to W. Waterman. Counterbalance valves and the like. 3,015,316, 1-2-62, Cl. 121—46.4.

Thompson Grinder Co., The: *See*—
Krafft, Frederick G., and Ernst. 3,015,212.

Thompson, Kenneth: *See*—
Gallino, Robert, and Thompson. 3,015,581.

Thompson, Robert E., and C. R. Allison, to General Electric Co. Aqueous solution for stripping nickel. 3,015,630, 1-2-62, Cl. 252—101.

Thornburgh, Argyle K. Air current deflector shield. 3,015,517, 1-2-62, Cl. 296—91.

Thourel, Leo, to Compagnie Generale de Telegraphie Sans Fil. Electromagnetic pulse transmitting and receiving systems. 3,015,819, 1-2-62, Cl. 343—7.7.

Thurber, Elmer A., to Bell Telephone Laboratories, Inc. Method of fabricating cathode for electron discharge devices. 3,015,560, 1-2-62, Cl. 75—207.

Thurlings, Hermann, to Hansella-Werke Albert Henkel A.G. Orientation apparatus for articles to be wrapped. 3,015,378, 1-2-62, Cl. 198—33.

Thyen, Rainer, to International Standard Electric Corp. Circuit arrangement for encoding devices. 3,015,805, 1-2-62, Cl. 340—147.

Tinius Olsen Testing Machine Co.: *See*—
Strimel, Robert S. 3,015,315.

Tobey, Raymond E., to Whirlpool Corp. Home appliance. 3,015,215, 1-2-62, Cl. 62—96.

Tobias, David L.: *See*—
Elsaman, Leo C., and Tobias. 3,015,790.

Todd, William H.: *See*—
Hause, Norman L., and Todd. 3,015,567.

Toensing, James W., to Remmele Engineering, Inc. Drive mechanism with continuous input and intermittent output. 3,015,236, 1-2-62, Cl. 74—84.

Toohig, Michael F., and C. L. Day, to International Telephone and Telegraph Corp. Method of making charge storage electrodes for charge storage tubes. 3,015,586, 1-2-62, Cl. 117—201.

Towne, Richard C., and J. V. Stalcup. Mooring anchor. 3,015,299, 1-2-62, Cl. 114—208.

Toyotsushinki Kabushiki Kaisha (known as Toyo Communication Equipment Co., Ltd.): *See*—
Honda, Seiichi, and Nakazawa. 3,015,789.

Tracy, Herbert E., to Borg-Warner Corp. Multi-step mechanical seal. 3,015,506, 1-2-62, Cl. 286—11.14.

Tréand, Pierre. Prefabricated bathroom unit. 3,015,110, 1-2-62, Cl. 4—2.

Tress, John J.: *See*—
Edberg, Edwin A., and Tress. 3,015,479.

Tribune Co.: *See*—
Remer, Robert K. 3,015,632.

Trotter, Margaret E. B.: *See*—
Bates, John S. 3,015,510.

Truitt, James K., to Texaco Inc. Antifreeze composition. 3,015,629, 1-2-62, Cl. 252—75.

Turner, Harold H., to The Ingersoll Milling Machine Co. Positioning mechanism. 3,015,812, 1-2-62, Cl. 340—282.

Tuttle, Kenneth W., and P. Gammill, Jr., ½ to R. H. Darrow. Power casting device. 3,015,182, 1-2-62, Cl. 43—19.

Tyler, Leslie J.: *See*—
Rauner, Lawrence A., and Tyler. 3,015,637.

Tyler, Leslie J., to Dow Corning Corp. Silica powders. 3,015,645, 1-2-62, Cl. 260—46.5.

Tyrlick, William V., to General Dynamics Corp. Binary information decoder. 3,015,813, 1-2-62, Cl. 340—347.

Tyrseck, Walter J., to Robertson Paper Box Co., Inc. Dispensing carrier. 3,015,432, 1-2-62, Cl. 229—52.

USECO, Inc.: *See*—
Senseney, George T., and Hardy. 3,015,792.

Uchida Yoko Co.: *See*—
Kashio, Toshio. 3,015,445.

Ueno, Isaburo, to Anritsu Electronic Works Ltd. Electric signal recording method. 3,015,534, 1-2-62, Cl. 346—101.

Ulrich Mfg. Co.: *See*—
MacDonald, Raymore D. 3,015,261.

Ulrich, William D., to Futuronic Development Co. Brush cleaner. 3,015,121, 1-2-62, Cl. 15—311.

Umholtz, Franklyn G. Portable liquid pump. 3,015,281, 1-2-62, Cl. 103—118.

Union Oil Co. of California: *See*—
Stratton, Hal. 3,015,360.
Union Special Machine Co.: *See*—
Hale, Arthur N. 3,015,290.
United Aircraft Corp.: *See*—
Fulton, George P., and Lombard. 3,015,504.
Kunz, Cleon V. 3,015,508.
United-Carr Fastener Corp.: *See*—
Jones, Walter I. 3,015,141.
Mitchell, Edward M., and Flanagan. 3,015,797.
Pender, Lloyd G., Sr. 3,015,140.
Petri, Hector D. 3,015,718.
United Kingdom Atomic Energy Authority: *See*—
Hutchinson, William G., and Cole. 3,015,278.
United States of America
Agriculture: *See*—
Hodge, John E., and Nelson. 3,015,654.
Reinhardt, Robert M., Frick, Arceneaux, and Reid. 3,015,584.
Stark, John B. 3,015,655.
Vail, Sidney L., Frick, and Reid. 3,015,583.
Air Force: *See*—
Oda, Donald J., and McCollor. 3,015,818.
Army: *See*—
Carlucci, Michael P., and Persico. 3,015,108.
Crosson, Jean H., and Khanbegian. 3,015,104.
Norton, Desmond H., and Castleberry. 3,015,402.
Schneider, Wilhelm A. 3,015,684.
Simmons, William H., and Stott. 3,015,462.
Stott, Albert M. 3,015,312.
Atomic Energy Commission: *See*—
Hartwig, Edward C., Cummings, and Post. 3,015,748.
Stix, Thomas H. 3,015,618.
Navy: *See*—
Brown, Lawrence B., Jones, and Seeley. 3,015,822.
Domingos, Karl K., Jr., Powell, and Malaspina. 3,015,270.
Jewett, John E., Moothart, Morrison, and Snow. 3,015,800.
Latham, William S., and Saars. 3,015,810.
Plotkin, Gerald N. 3,015,820.
Potts, James H., Jr. 3,015,269.
Rosa, Richard J. 3,015,250.
Supernaw, Dwight L. 3,015,297.
United States Rubber Co.: *See*—
Bawn, Carl V., and Hunter. 3,015,641.
Bawn, Carl V., and Hunter. 3,015,642.
Foster, Boutwell H., and Haddad. 3,015,149.
Haddad, Nassib. 3,015,148.
United States Steel Corp.: *See*—
Bain, John W., and Sumsion. 3,015,357.
Bowman, Walter A. 3,015,614.
Knoell, Oscar F., and Lundskog. 3,015,507.
Marburg, Edgar. 3,015,139.
VEB Schlepperwerk Nordhausen: *See*—
Hausmann, Werner, and Vogel. 3,015,344.
Vail, Sidney L., J. G. Frick, Jr., and J. D. Reid, to United States of America, Agriculture. Wrinkle resistant cellulosic textiles and method of production. 3,015,583, 1–2–62, Cl. 117—139.4.
Valeton, Josue J. P.: *See*—
Poorter, Teunis, and Valeton. 3,015,751.
Van Campen, Frank M., to Allen Electric and Equipment Co. Frame construction for a meter motor. 3,015,757, 1–2–62, Cl. 317—166.
Van der Horst, Hajo L., and P. H. G. van Vlodrop, to North American Philips Co., Inc. High-frequency oven for high powers. 3,015,783, 1–2–62, Cl. 331—54.
Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. 3,015,200.
Van der Lely, Cornelis and A. 3,015,201.
Van der Lely, Cornelis and A. 3,015,202.
Van der Lely, Cornelis and A. 3,015,495.
Van der Lely, Cornelis and A. 3,015,499.
Van der Lely, C., N.V.: *See*—
Van der Lely, Cornelis and A. 3,015,200.
Van der Lely, Cornelis and A. 3,015,201.
Van der Lely, Cornelis and A. 3,015,202.
Van der Lely, Cornelis and A. 3,015,495.
Van der Lely, Cornelis and A. 3,015,499.
Van der Lely, Cornelis and A., to C. van der Lely N.V. Side-delivery rakes. 3,015,200, 1–2–62, Cl. 56—377.
Van der Lely, Cornelis and A., to C. van der Lely N.V. Side delivery rake with reversible rake wheels. 3,015,201, 1–2–62, Cl. 56—377.
Van der Lely, Cornelis and A., to C. van der Lely N.V. Running wheel structure for a raking device and methods associated therewith. 3,015,202, 1–2–62, Cl. 56—377.
Van der Lely, Cornelis and A., to C. van der Lely N.V. Agricultural tractor having two tandem steering wheels. 3,015,495, 1–2–62, Cl. 280—87.
Van der Lely, Cornelis and A., to C. van der Lely N.V. Agricultural machine, particularly combined side delivery rake-tedder. 3,015,499, 1–2–62, Cl. 280—456.
Van Moer, Henri, to S.A. Etablissements Van Moer. Coveralls. 3,015,106, 1–2–62, Cl. 2—79.
Van Santen, Johannes G., and G. Diemer, to North American Philips Co., Inc. Radiation indicating device. 3,015,731, 1–2–62, Cl. 250—213.
Van Santen, Johannes G., and H. Esvelt, to North American Philips Co., Inc. Rectifying circuit element. 3,015,770, 1–2–62, Cl. 321—8.
Van Schaik, Johannes M.: *See*—
Ruiter, Lukas H., and Van Schaik. 3,015,667.
Van Vlodrop, Peter H. G.: *See*—
Van der Horst, Hajo L., and van Vlodrop. 3,015,783.
Vass, Eric B., to North American Philips Co., Inc. LC type transistor oscillator. 3,015,785, 1–2–62, Cl. 331—117.
Venditti, Gaston. Sewing machines. 3,015,289, 1–2–62, Cl. 112—2.
Verheijden, Marinus G.: *See*—
Repko, Jan D., and Verheijden. 3,015,765.
Vermeulen, Roelof: *See*—
Klein, Derk, and Vermeulen. 3,015,701.
Vermiculite Mfg. Co.: *See*—
Jones, Owen M. 3,015,192.
Veyrie, Charles, to Compagnie Generale d'Electricite. Apparatus for cooling granular material. 3,015,219, 1–2–62, Cl. 62—381.
Vickers Inc.: *See*—
Gardiner, Duncan B., and Hill. 3,015,343.
Victaulic Co. of America: *See*—
Frost, Raymond B., and Piatek. 3,015,502.
Vieaux, Woodrow W. Clamp for mounting fishing accessories on small boats. 3,015,467, 1–2–62, Cl. 248—226.
Viewlex, Inc.: *See*—
Pollan, David. 3,015,251.
Vignos, Joseph P., and D. P. Shoultes, to International Business Machines Corp. Bipolar switching ring. 3,015,733, 1–2–62, Cl. 307—88.5.
Viking Pump Co.: *See*—
Camarata, Alfred A. 3,015,282.
Ville, Jean A., and J. T. M. G. Bouzitat, to Societe Alsacienne de Constructions Mecaniques. Servo-resolvers. 3,015,446, 1–2–62, Cl. 235—189.
Vogel, Alvin R., D. E. Ruch, and L. W. Bagby, to Northrop Corp. Multichannel audio warning system. 3,015,702, 1–2–62, Cl. 179—100.2.
Vogel, Richard: *See*—
Hausmann, Werner, and Vogel. 3,015,344.
Vogt, Clarence W. Packaging fluent products. 3,015,386, 1–2–62, Cl. 206—65.
Vogt, Wilhelm, H. Weiden, K. Gehrmann, and K. Sennewald, to Knapsack-Griesheim Aktiengesellschaft. Process for the stabilisation of chloroprene. 3,015,677, 1–2–62, Cl. 260—652.5.
Volberg, Herman W., and L. R. Beach, to General Dynamics Corp. Optical projection of a cathode ray tube image. 3,015,693, 1–2–62, Cl. 178—7.87.
Voss, Henry J.: *See*—
Loring, Lewis D., and Voss. 3,015,623.
Voth, Walter P., to The Akron Standard Mold Co. Retreading equipment. 3,015,130, 1–2–62, Cl. 18—18.
Wachsman, William P. Sofa bed. 3,015,112, 1–2–62, Cl. 5—8.
Wagner, Walter W.: *See*—
Furman, Frank J., and Wagner. 3,015,453.
Wahl, Frederick W.: *See*—
O'Keefe, Michael F., and Wahl. 3,015,683.
Wakeman, Alden H., to The Creamery Package Mfg. Co. Freezer apparatus. 3,015,218, 1–2–62, Cl. 62—306.
Walde, Arthur W., to Dr. Salsbury's Laboratories. Dinitrobenzamide remedies for coccidiosis and salmonella infections. 3,015,606, 1–2–62, Cl. 167—53.1.
Walder, Hermann: *See*—
Buchi, Alfred. 3,015,323.
Walker, Frank M. Pump in absorption refrigeration machine. 3,015,221, 1–2–62, Cl. 62—487.
Wallace, Robert L., Jr.: *See*—
Kammerer, Fred W., Riesa, and Wallace. 3,015,738.
Wallen, Frank S., to Superior Sleeprite Corp. Adjustable bed. 3,015,113, 1–2–62, Cl. 5—63.
Walters, Robert R.: *See*—
Hildebrandt, Robert A., Hovey, and Walters. 3,015,758.
Wang, An, and G. Y. Chu, to Wang Laboratories Inc. Machine tool control system. 3,015,806, 1–2–62, Cl. 340—147.
Wang Laboratories Inc.: *See*—
Wang, An, and Chu. 3,015,806.
Ward, William W. Exhaust power. 3,015,433, 1–2–62, Cl. 230—116.
Warrick, Earl L., to Dow Corning Corp. Blood oxygenator. 3,015,331, 1–2–62, Cl. 128—214.
Waterman, Paul M.: *See*
Hedland, Harry A., and Waterman. 3,015,341.
Waterman, William: *See*—
Hedland, Harry A., and Waterman. 3,015,341.
Thomas, William W. 3,015,316.
Watts, Claude H., to Precision Metalsmiths, Inc. Sprue form and method of precision casting. 3,015,138, 1–2–62, Cl. 22—134.
Weaver, John B., and R. K. Petry, to Congoleum-Nairn Inc. Process of making a plasticized vinyl resin and process of making a surface covering therefrom. 3,015,640, 1–2–62, Cl. 260—26.
Weber, Joachim F. L., and C. L. Heck, to International St andard Electric Corp. Method of making ferrites. 3,015,538, 1–2–62, Cl. 23—50.
Wegner, Herman E.: *See*—
Dean, Ralph K., Siatkovski, and Wegner. 3,015,135.
Weiden, Hans: *See*—
Vogt, Wilhelm, Weiden, Gehrmann, and Sennewald. 3,015,677.
Weidenhammer, James A., to International Business Machines Corp. Sheet aligning apparatus. 3,015,486, 1–2–62, Cl. 271—58.
Weil, Frits, to North American Philips Co., Inc. Semi-conductor devices. 3,015,760, 1–2–62, Cl. 317—234.
Weilborn, John M., and J. A. Kimm, to Whirlpool Corp. Refrigerant compressor. 3,015,222, 1–2–62, Cl. 62—505.
Wendling, Bruce E.: *See*—
Lounsberry, Ernest D., and Wendling. 3,015,263.
Werblin, David A.: *See*—
Griffin, David B., and Werblin. 3,015,365.
Werner, Frank R.: *See*—
Slamb, Gene E., and Werner. 3,015,434.
Wesolowski, Adolph J., to General Electric Co. Rotor leads. 3,015,744, 1–2–62, Cl. 310—234.

West, John R.: *See*—
Peoples, Virgil H., and West. 3,015,416.
Westergard, David J.: *See*—
Reinecker, Walter J., and Westergard. 3,015,188.
Westinghouse Air Brake Co.: *See*—
Bush, Rankin J. 3,015,464.
Jefferson, Glen V. 3,015,724.
Pascoe, Frank T. 3,015,722.
Staples, Crawford E. 3,015,723.
Westinghouse Electric Corp.: *See*—
Rosenberg, Barnett. 3,015,747.
Semar, Harold W. 3,015,523.
Sturtz, William E., and Frisch. 3,015,616.
West Virginia Pulp and Paper Co.: *See*—
Obenshain, David N. 3,015,230.
Whately, Walter R.: *See*—
Myers, Myron L., and Whately. 3,015,573.
Whirlein, John J.: *See*—
Fesmire, Norman W., and Whirlein. 3,015,407.
Whirlpool Corp.: *See*—
Curtis, John T. 3,015,125.
Tobey, Raymond E. 3,015,215.
Wellborn, John M., and Kimm. 3,015,222.
White, Harold J., and A. N. Placente, to Congoleum-Nairn Inc. Method of making a decorative composition sheet. 3,015,356, 1–2–62, Cl. 18—59.
Whitin Machine Works: *See*—
Heiberg, Oernulf E. 3,015,203.
Whitman, Ross C., to The Kendall Co. Headband. 3,015,335, 1–2–62, Cl. 132—9.
Wicklund, Harold P., to International Business Machines Corp. Tractor feed for continuous forms. 3,015,425, 1–2–62, Cl. 226—74.
Wickstrom, Theodore: *See*—
Claras, Carl W., and Wickstrom. 3,015,695.
Wieske, Theophil: *See*—
Becker, Ewald G., and Wieske. 3,015,566.
Wilbanks, James A.: *See*—
Striplin, Marcus M., Jr., Stinson, and Wilbanks. 3,015,552.
Wilckens, Elbe A., to Crown Cork & Seal Co., Inc. Cap inspection apparatus. 3,015,388, 1–2–62, Cl. 209—75.
Williams, C. K., & Co.: *See*—
Ayers, Joseph W., and Stephens. 3,015,627.
Ayers, Joseph W., and Stephens. 3,015,628.
Williams, Edward: *See*—
Peyton, Stanley V., and Williams. 3,015,275.
Williams, William L.: *See*—
Ellenbogen, Leon, and Williams. 3,015,608.
Williams, Richard J., to Eaton Mfg. Co. Axle housing. 3,015,238, 1–2–62, Cl. 74—607.
Williams, Russell F., P. R. Morgan, and M. Glenday. Fuel injector. 3,015,325, 1–2–62, Cl. 123—139.
Williamson, John R., and J. R. Doussard, to The Bendix Corp. Attitude control for high altitude missile. 3,015,210, 1–2–62, Cl. 60—35.54.
Wilson, Lee: *See*—
Blackman, Calvin C. 3,015,455.
Wilson, Paul V., to The Walter Kidde Co. Ltd. Gas release devices. 3,015,414, 1–2–62, Cl. 222—5.
Wilson, Vernon H., to Metamora Woodworking Co. Drawer suspension. 3,015,532, 1–2–62, Cl. 312—343.
Wimmer, Rudolf, R. Wirtz, W. Portz, W. Fischer, and H. Schilken, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process and device for chilling hot cracked gases. 3,015,619, 1–2–62, Cl. 208—48.
Winard, Antony: *See*—
Michaels, Adlai E., and Winard. 3,015,546.
Winsor, Donald L.: *See*—
Skowron, John F., and Winsor. 3,015,750.
Winther, Howard: *See*—
Blattner, Emil H., Blattner, and Winther. 3,015,285.
Wirsching, Robert J., and U. Conrad, to Daimler-Benz Aktiengesellschaft. Control arrangement for fuel injection devices. 3,015,326, 1–2–62, Cl. 123—140.
Wirtz, Rudolf: *See*—
Wimmer, Rudolf, Wirtz, Portz, Fischer, and Schilken. 3,015,619.
Wiseman, Neil L.: *See*—
Harris, Ben A., Baxter, and Wiseman. 3,015,737.
Wolf, Gerhard. Circuit for controlling the sweep of a cathode-ray oscilloscope. 3,015,753, 1–2–62, Cl. 315—26.
Wolff, William F., to Standard Oil Co. Diesters of dithiosulfurous acid and methods of preparing same. 3,015,670, 1–2–62, Cl. 260—453.
Wollner, Johannes, to Rheinpreussen Aktiengesellschaft fur Bergbau und Chemie. Synthesis of dioxane compounds. 3,015,665, 1–2–62, Cl. 260—340.7.
Wood, Thomas M. N., to Standard-Thomson Corp. Flexible tube forming machine. 3,015,354, 1–2–62, Cl. 153—73.
Woods, William C., to Sylvania Electric Products Inc. Magnetic conveying apparatus. 3,015,394, 1–2–62, Cl. 209—222.
Wright, Esmond P. G., A. D. Odell, and C. Parker, to International Standard Electric Corp. Electronic equipment practice. 3,015,755, 1–2–62, Cl. 317—101.
Wuyekens, Jean J. C., to Plax Corp. Improvements imparted to stoppers for vessels of thermoplastic material. 3,015,404, 1–2–62, Cl. 215—31.
Xerox Corp.: *See*—
Carlson, Chester F., and Bogdonoff. 3,015,304.
Hall, Richard H., and Bird. 3,015,305.
Yezek, Milton: *See*—
Couch, Robert D., and Yezek. 3,015,596.
Young, George V. Vacuum chopper system. 3,015,764, 1–2–62, Cl. 317—250.
Youngstown Steel Door Co., The: *See*—
Johansson, Carl E. 3,015,286.
Zahler, Peter H., to Swiss Serum and Vaccine Institute. New urea derivatives and preparation thereof. 3,015,673, 1–2–62, Cl. 260—553.
Zaratkiewicz, Edwin A., and E. J. Smith, to International Telephone and Telegraph Corp. Semi-conductor rectifiers and method of manufacture. 3,015,591, 1–2–62, Cl. 148—1.5.
Zbikowski, Ted, to Joseph Buegeleisen Co. Safety helmet. 3,015,103, 1–2–62, Cl. 2—3.
Zeller, Paul: *See*—
Isler, Otto, Montavon, Ruegg, and Zeller. 3,015,680.
Zern, Warren B. System for assembling prehung doors and jambs. 3,015,348, 1–2–62, Cl. 144—2.
Ziegler, Karl, H.-G. Gellert, and E. Bonitz; said Bonitz and said Gellert assors. to said Ziegler. Dialkyl aluminum hydrides and their production. 3,015,669, 1–2–62, Cl. 260—448.
Zielinski, Frank E. Motor grader. 3,015,174, 1–2–62, Cl. 37—156.
Zimmermann, Markus, to G. D. Searle & Co. 1,3-cyclohexanedione bis-(N-pyridinecarboxyhydrazones). 3,015,663, 1–2–62, Cl. 260—295.
Zisman, William A., and L. Pickett. Method of protecting a metal surface with a coating of primary-n-octadecylamine and article produced thereby. 3,015,580, 1–2–62, Cl. 117—113.
Zorn, Bruno, and G. Mauthe, to Farbenfabriken Bayer Aktiengesellschaft. Dicyandiamide formaldehyde condensation products and their production. 3,015,649, 1–2–62, Cl. 260—69.

CLASSIFICATION OF PATENTS

ISSUED JANUARY 2, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

2— 3: 3,015,103
6: 3,015,104
9: 3,015,105
79: 3,015,106
115: 3,015,107
195: 3,015,108
302: 3,015,109
4— 2: 3,015,110
147: Re.25,107
177: 3,015,111
5— 8: 3,015,112
63: 3,015,113
86: 3,015,114
8— 121: 3,015,537
9— 333: 3,015,115
10— 138: 3,015,116
139: 3,015,117
15— 209: 3,015,118
250.02: 3,015,119
258: 3,015,120
311: 3,015,121
327: 3,015,122
3,015,123
16— 43: 3,015,124
82: 3,015,125
168: 3,015,126
18— 2.5: 3,015,127
2.6: 3,015,128
12: 3,015,129
18: 3,015,130
30: 3,015,131
48: 3,015,132
59: 3,015,133
3,015,356
20— 52: 3,015,134
57.5: 3,015,135
78.6: 3,015,136
22— 57: 3,015,137
134: 3,015,138
147: 3,015,139
23— 50: 3,015,538
79: 3,015,539
165: 3,015,540
182: 3,015,541
190: 3,015,542
209.4: 3,015,543
230: 3,015,544
270.5: 3,015,545
24— 73: 3,015,140
216: 3,015,141
263: 3,015,142
25— 107: 3,015,143
131: 3,015,144
26— 18.6: 3,015,145
3,015,146
28— 28: 3,015,147
72: 3,015,148
78: 3,015,149
81: 3,015,150
29— 103: 3,015,151
155.57: 3,015,152
157.3: 3,015,153
183: 3,015,154
211: 3,015,155
429: 3,015,156
470.9: 3,015,157
30— 41: 3,015,158
47: 3,015,159
232: 3,015,160
363: 3,015,161
33— 46: 3,015,162
94: 3,015,163
102: 3,015,164
134: 3,015,165
148: 3,015,166
209: 3,015,167
34— 156: 3,015,168
35— 11: 3,015,169
36— 9: 3,015,170
3,015,171
37— 43: 3,015,172
129: 3,015,173
156: 3,015,174
192: 3,015,175
38— 66: 3,015,176
40— 10: 3,015,177
132: 3,015,178
152.1: 3,015,179
43— 6: 3,015,180
15: 3,015,181
19: 3,015,182
20: 3,015,183
131: 3,015,184
44— 62: 3,015,546
63: 3,015,547
45— 24: 3,015,185
46— 175: 3,015,186

47— 1: 3,015,187
9: 3,015,188
60: P.P.2,117
P.P.2,118
P.P.2,119
48— 180: 3,015,548
49— 19: 3,015,189
54: 3,015,190
50— 100: 3,015,191
103: 3,015,192
246: 3,015,193
346: 3,015,194
51— 165: 3,015,195
284: 3,015,196
53— 208: 3,015,197
387: 3,015,198
56— 1: 3,015,199
377: 3,015,200
3,015,201
3,015,202
57— 93: 3,015,203
98: 3,015,204
148: 3,015,205
58— 28: 3,015,206
3,015,207
142: 3,015,208
60—35.54: 3,015,210
35.6: 3,015,209
39.36: 3,015,211
52: 3,015,212
54.6: 3,015,213
61— 66: 3,015,214
62— 96: 3,015,215
180: 3,015,216
186: 3,015,217
306: 3,015,218
381: 3,015,219
435: 3,015,220
487: 3,015,221
505: 3,015,222
66— 147: 3,015,223
68— 18: 3,015,224
3,015,225
181: 3,015,226
71— 2.3: 3,015,550
2.5: 3,015,551
41: 3,015,552
73— 23: 3,015,227
29: 3,015,228
71.6: 3,015,229
89: 3,015,230
116: 3,015,231
204: 3,015,232
205: 3,015,233
339: 3,015,234
363.1: 3,015,235
74— 84: 3,015,236
230.17: 3,015,237
607: 3,015,238
75— 24: 3,015,553
51: 3,015,554
84: 3,015,556
84.1: 3,015,555
3,015,557
171: 3,015,558
176: 3,015,559
207: 3,015,560
76— 36: 3,015,239
77— 55: 3,015,240
58: 3,015,241
62: 3,015,242
80— 20: 3,015,243
81— 52.3: 3,015,244
126: 3,015,245
167: 3,015,246
84— 273: 3,015,247
85— 8.3: 3,015,248
88— 1: 3,015,249
14: 3,015,250
28: 3,015,251
34: 3,015,252
106: 3,015,253
89— 41: 3,015,254
93— 1.1: 3,015,255
37: 3,015,256
94— 45: 3,015,257
46: 3,015,258
3,015,259
3,015,260
3,015,261
96— 29: 3,015,561
3,015,562
99— 2: 3,015,563
3,015,564
90: 3,015,565
123: 3,015,566
143: 3,015,567

99— 172: 3,015,568
100— 43: 3,015,262
101— 19: 3,015,263
3,015,264
93: 3,015,265
211: 3,015,266
369: 3,015,267
401.1: 3,015,268
102— 3: 3,015,269
7: 3,015,270
14: 3,015,271
16: 3,015,272
18: 3,015,273
34.1: 3,015,274
70: 3,015,275
76: 3,015,276
78: 3,015,277
103— 1: 3,015,278
11: 3,015,279
46: 3,015,280
118: 3,015,281
126: 3,015,282
3,015,283
104— 172: 3,015,284
105— 224: 3,015,285
409: 3,015,286
106— 26: 3,015,569
181: 3,015,570
188: 3,015,571
197: 3,015,572
300: 3,015,573
107— 56: 3,015,287
110— 99: 3,015,288
112— 2: 3,015,289
210: 3,015,290
113— 18: 3,015,291
49: 3,015,292
54: 3,015,293
116: 3,015,294
3,015,295
3,015,296
114— 23: 3,015,297
126: 3,015,298
208: 3,015,299
116— 117: 3,015,300
117— 3.1: 3,015,574
36.7: 3,015,575
49: 3,015,576
62: 3,015,577
68: 3,015,578
93: Re.25,108
107: 3,015,579
113: 3,015,580
119.6: 3,015,581
126: 3,015,582
139.4: 3,015,583
3,015,584
161: 3,015,585
201: 3,015,586
213: 3,015,587
118— 239: 3,015,301
318: 3,015,302
3,015,303
637: 3,015,304
3,015,305
119—14.03: 3,015,306
61: 3,015,307
3,015,308
121— 38: 3,015,309
3,015,310
39: 3,015,311
40: 3,015,312
41: 3,015,313
3,015,314
46: 3,015,315
46.4: 3,015,316
46.5: 3,015,317
48: 3,015,318
122— 478: 3,015,319
123— 1: 3,015,320
30: 3,015,321
32: 3,015,322
79: 3,015,323
122: 3,015,324
139: 3,015,325
140: 3,015,326
124— 23: 3,015,327
30: 3,015,328
126— 39: 3,015,329
128— 25: 3,015,330
214: 3,015,331
263: 3,015,332
424: 3,015,333
542: 3,015,334
132— 9: 3,015,335
45: 3,015,336
134— 36: 3,015,588

134— 42: 3,015,589
136— 111: 3,015,681
137— 75: 3,015,337
100: 3,015,338
102: 3,015,339
124: 3,015,340
493: 3,015,341
512.1: 3,015,342
623: 3,015,343
624: 3,015,344
138— 31: 3,015,345
139— 52: 3,015,346
207: 3,015,347
144— 2: 3,015,348
318: 3,015,349
146— 94: 3,015,350
148— 1.5: 3,015,590
3,015,591
1.6: 3,015,592
6.15: 3,015,593
3,015,594
150— 52: 3,015,351
153— 1: 3,015,352
32: 3,015,353
73: 3,015,354
78: 3,015,355
154— 46: 3,015,595
50: 3,015,596
53.5: 3,015,597
156— 144: 3,015,599
222: 3,015,598
356: 3,015,600
515: 3,015,601
158—117.5: 3,015,357
160— 53: 3,015,358
206: 3,015,359
162— 7: 3,015,602
117: 3,015,603
157: 3,015,604
168: 3,015,605
166— 46: 3,015,360
72: Re.25,109
101: 3,015,361
216: 3,015,362
167— 53.1: 3,015,606
65: 3,015,607
74: 3,015,608
82: 3,015,609
3,015,610
3,015,611
170—135.4: 3,015,363
172— 22: 3,015,364
174— 52: 3,015,682
84: 3,015,683
88: 3,015,684
90: 3,015,685
122: 3,015,686
153: 3,015,687
175— 137: 3,015,365
178— 5.4: 3,015,688
3,015,689
7.1: 3,015,690
7.5: 3,015,691
7.8: 3,015,692
7.87: 3,015,693
50: 3,015,694
179— 1: 3,015,695
17: 3,015,696
18: 3,015,697
3,015,698
3,015,699
42: 3,015,700
100.1: 3,015,701
100.2: 3,015,702
100.41: 3,015,703
107: 3,015,704
181— 31: 3,015,366
183— 4: 3,015,367
114.2: 3,015,368
3,015,369
184— 3: 3,015,370
103: 3,015,371
188— 243: 3,015,372
189— 3: 3,015,373
11: 3,015,374
36: 3,015,375
194— 4: 3,015,376
195— 141: 3,015,612
197— 19: 3,015,377
198— 33: 3,015,378
145: 3,015,379
176: 3,015,380
203: 3,015,381
206: 3,015,382
200— 6: 3,015,705
67: 3,015,706
87: 3,015,707

200— 87: 3,015,708
114: 3,015,709
202— 187: 3,015,613
248: 3,015,614
204—154.2: 3,015,615
193.2: 3,015,616
3,015,617
3,015,618
206—45.23: 3,015,383
52: 3,015,384
59: 3,015,385
65: 3,015,386
207— 10: 3,015,387
208— 48: 3,015,619
60: 3,015,549
119: 3,015,620
209— 75: 3,015,388
111.5: 3,015,389
140: 3,015,390
144: 3,015,391
3,015,392
3,015,393
222: 3,015,394
210— 138: 3,015,395
205: 3,015,621
221: 3,015,396
395: 3,015,397
211— 96: 3,015,398
134: 3,015,399
183: 3,015,400
214— 317: 3,015,401
620: 3,015,402
215— 13: 3,015,403
31: 3,015,404
217— 56: 3,015,405
219— 20: 3,015,710
34: 3,015,711
35: 3,015,712
86: 3,015,713
95: 3,015,714
117: 3,015,715
130: 3,015,716
220— 1: 3,015,406
1.5: 3,015,407
3.4: 3,015,408
3,015,409
63: 3,015,410
90.4: 3,015,411
91: 3,015,412
221— 9: 3,015,413
222— 5: 3,015,414
14: 3,015,415
41: 3,015,416
63: 3,015,417
108: 3,015,418
130: 3,015,419
144.5: 3,015,420
309: 3,015,421
223— 74: 3,015,422
224—42.03: 3,015,423
225— 93: 3,015,424
226— 74: 3,015,425
109: 3,015,426
172: 3,015,427
229— 14: 3,015,428
15: 3,015,429
45: 3,015,430
3,015,431
52: 3,015,432
230— 116: 3,015,433
235— 11: 3,015,434
22: 3,015,435
60: 3,015,436
60.2: 3,015,437
61.12: 3,015,438
79: 3,015,439
92: 3,015,440
157: 3,015,441
160: 3,015,442
164: 3,015,443
3,015,444
174: 3,015,445
189: 3,015,446
236— 68: 3,015,447
239— 201: 3,015,448
417: 3,015,449
421: 3,015,450
240— 1.2: 3,015,717
8.16: 3,015,718
10.63: 3,015,719
25: 3,015,720
51.11: 3,015,721
241— 172: 3,015,451
194: 3,015,452
242—55.14: 3,015,453
58.2: 3,015,454
78.6: 3,015,455

244— 2: 3,015,456
14: 3,015,457
77: 3,015,458
3,015,459
79: 3,015,460
117: 3,015,461
122: 3,015,462
147: 3,015,463
246— 5: 3,015,722
34: 3,015,723
182: 3,015,724
247: 3,015,725
258: 3,015,464
248— 74: 3,015,465
158: 3,015,466
226: 3,015,467
230: 3,015,468
250— 20: 3,015,726
3,015,727
3,015,728
83.6: 3,015,729
202: 3,015,730
213: 3,015,731
251— 331: 3,015,469
252— 8.55: 3,015,622
18: 3,015,623
41: 3,015,624
49.6: 3,015,625
62: 3,015,626
62.5: 3,015,627
3,015,628
75: 3,015,629
101: 3,015,630
426: 3,015,631
511: 3,015,632
519: 3,015,633
254— 93: 3,015,470
139.1: 3,015,471
168: 3,015,472
172: 3,015,473
257— 30: 3,015,474
241: 3,015,475
259— 141: 3,015,476
260— 2.5: 3,015,634
18: 3,015,635
3,015,636
22: 3,015,637
24: 3,015,638
25: 3,015,639
26: 3,015,640
29.7: 3,015,641
3,015,642
42: 3,015,643
45.75: 3,015,644
46.5: 3,015,645
3,015,646
47: 3,015,647
3,015,648
69: 3,015,649
75: 3,015,650
78: 3,015,651
3,015,652
78.5: 3,015,653
210: 3,015,654
211.5: 3,015,655
239.57: 3,015,656
247.2: 3,015,657
253: 3,015,658
268: 3,015,659
3,015,660
287: 3,015,661
3,015,662
295: 3,015,663
296: 3,015,664
340.7: 3,015,665
397.5: 3,015,666
409: 3,015,667
429: 3,015,668
448: 3,015,669
453: 3,015,670
491: 3,015,671
529: 3,015,672
553: 3,015,673
561: 3,015,674
583: 3,015,675
619: 3,015,676
652.5: 3,015,677
3,015,678
3,015,679
666: 3,015,680
262— 27: 3,015,477
263— 6: 3,015,478
8: 3,015,479
11: 3,015,480
266— 41: 3,015,481
267— 1: 3,015,482

269— 38: 3,015,483
271— 41: 3,015,484
53: 3,015,485
58: 3,015,486
86: 3,015,487
272— 36: 3,015,488
273— 47: 3,015,489
274— 10: 3,015,490
11: 3,015,491
280—11.38: 3,015,492
33.90: 3,015,493
3,015,494
87: 3,015,495
150: 3,015,496
3,015,497
278: 3,015,498
456: 3,015,499
285— 47: 3,015,500
58: 3,015,501
112: 3,015,502
286— 7: 3,015,503
11.13: 3,015,504
3,015,505
11.14: 3,015,506
287— 20: 3,015,507
287— 20.2: 3,015,508
78: 3,015,509
288— 23: 3,015,510
292— 70: 3,015,511
294— 1: 3,015,512
83: 3,015,513
86: 3,015,514
296— 24: 3,015,515
44: 3,015,516
91: 3,015,517
3,015,518
137: 3,015,519
297— 371: 3,015,520
426: 3,015,521
303— 9: 3,015,522
307— 88: 3,015,732
88.5: 3,015,733
3,015,734
3,015,735
3,015,736
3,015,737
3,015,738
3,015,739
3,015,740
3,015,741
307— 88.5: 3,015,742
147: 3,015,743
308— 9: 3,015,523
3,015,524
47: 3,015,525
135: 3,015,526
187: 3,015,527
231: 3,015,528
309— 4: 3,015,529
310— 234: 3,015,744
311— 21: 3,015,530
312— 316: 3,015,531
343: 3,015,532
313— 63: 3,015,745
65: 3,015,746
108: 3,015,747
161: 3,015,748
315— 3: 3,015,749
3.5: 3,015,750
13: 3,015,751
16: 3,015,752
26: 3,015,753
317— 2: 3,015,754
101: 3,015,755
317— 103: 3,015,756
166: 3,015,757
230: 3,015,758
3,015,759
234: 3,015,760
3,015,761
3,015,762
235: 3,015,763
250: 3,015,764
253: 3,015,765
3,015,766
318— 28: 3,015,767
3,015,768
128: 3,015,769
321— 8: 3,015,770
15: 3,015,771
323— 56: 3,015,772
75: 3,015,773
324— 54: 3,015,774
71: 3,015,775
82: 3,015,776
328— 58: 3,015,777
67: 3,015,778
112: 3,015,779
330— 14: 3,015,780
15: 3,015,781
145: 3,015,782
331— 54: 3,015,783
111: 3,015,784
117: 3,015,785
333— 9: 3,015,786
3,015,787
24: 3,015,788
72: 3,015,789
81: 3,015,790
336— 217: 3,015,791
338— 145: 3,015,792
162: 3,015,793
339— 14: 3,015,794
3,015,795
17: 3,015,796
3,015,797
45: 3,015,798
249: 3,015,799
340— 6: 3,015,800
18: 3,015,801
40: 3,015,802
58: 3,015,803
340— 81: 3,015,804
147: 3,015,805
3,015,806
174: 3,015,807
3,015,808
3,015,809
174.1: 3,015,810
227: 3,015,811
282: 3,015,812
347: 3,015,813
3,015,814
3,015,815
343— 6.8: 3,015,816
7.3: 3,015,817
3,015,818
7.7: 3,015,819
17.7: 3,015,820
753: 3,015,821
771: 3,015,822
895: 3,015,823
346— 74: 3,015,533
101: 3,015,534
109: 3,015,535
136: 3,015,536

CLASSIFICATION OF DESIGNS

D 4— 3: 192,004
D 9— 2: 192,005
D15— 1: 192,006
D24— 1: 192,007
D26— 13: 192,008
D33— 7: 192,009
D33— 14: 192,010
D34— 5: 192,011
192,012
D34— 5: 192,013
D36— 8: 192,014
D44— 15: 192,015
D44— 25: 192,016
29: 192,017
192,018
D55— 1: 192,019
D57— 1: 192,020
D92— 1: 192,021

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

January 2, 1962 Volume 774 Number 1

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 344,958 (ROTO-ROOTER), Roto Rooter Corporation, Sewer and drain cleaning machines; **Reg. No. 597,721**, same, Municipal, industrial and domestic sewer, drain and pipe cleaning service, **filed** Nov. 27, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1505/61–HW, *Roto Rooter Corporation et al.* v. *W. L. Watson & Son.*

Reg. No. 501,706 (PRUDENTIAL ETC. AND DESIGN), The Prudential Insurance Company of America, Services in providing individual and group life insurance protection, **filed** Nov. 21, 1961, D.C., S.D. Ind. (Indianapolis), Doc. 61–C–376, *The Prudential Insurance Company of America* v. *Gibraltar Industrial Life Insurance Company et al.*

Reg. No. 532,083 (CARCO), Pacific Car and Foundry Company, Heavy machinery and parts thereof; **Reg. No. 541,790**, same, Log carts, motor coach bodies and van type delivery bodies; **Reg. No. 556,894**, same, Wire rope fittings; **Reg. No. 610,286**, same, Logging bunks employed in connection with railroad cars and trucks, said trucks being used off and on highways, **filed** Aug. 14, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/107, *Pacific Car & Foundry Co.* v. *Carco Industries Inc. et al.* Consent judgment; injunction granted Nov. 27, 1961.

Reg. No. 541,790. (See Reg. No. 532,083.)

Reg. No. 556,894. (See Reg. No. 532,083.)

Reg. No. 558,709 (PERITRATE), The Maltine Company, A product for use in the treatment of coronary artery diseases; **Reg. No. 569,575** (CL AND DESIGN), Chilcott Laboratories, Inc., Medicinal and pharmaceutical compounds and preparations in pill or tablet form, **filed** Nov. 29, 1961, D.C., S.D.N.Y., Doc. 61/4212, *Warner-Lambert Pharmaceutical Company Inc.* v. *Goldman Pharmacy Inc.*, doing business as *Corner Pharmacy.*

Reg. No. 569,575. (See Reg. No. 558,709.)

Reg. No. 571,798 (ROQUEFORT), The Community of Roquefort, Cheese, **filed** June 10, 1960, D.C., S.D.N.Y., Doc. 60/2290, *Community of Roquefort et al.* v. *William Faehndrich, Inc.* Decree granting injunction; claims 2, 3 and 4 of complaint dismissed Nov. 8, 1961.

Reg. No. 597,721. (See Reg. No. 344,958.)

Reg. No. 603,441 (PANEL COILS), Dean Products, Inc., Heat exchangers and cooling and freezing surfaces—namely, plates, slabs, etc.; **Reg. No. 603,442** (THERMO PANEL), same, **filed** Nov. 29, 1961, D.C., S.D.N.Y., Doc. 61/4216, *Dean Products Inc.* v. *Thermon Panel Corporation.*

Reg. No. 603,442. (See Reg. No. 603,441.)

Reg. No. 610,286. (See Reg. No. 532,083.)

Reg. No. 612,082 (CERTANE), Rosemarie Lewis, doing business as Vogarell Products Company, Preparations of an antiseptic nature comprising antiseptic vaginal cones, vaginal jelly, etc., **filed** Nov. 7, 1960, D.C., S.D. Fla. (Jacksonville), Doc. 4588–J, *Vogarell Products Company* v. *Leon Products, Inc.* Order of dismissal without prejudice (notice Nov. 22, 1961).

Reg. No. 615,490. (See Reg. No. 501,706.)

CONDITION OF TRADEMARK APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 15,100
Date of oldest new application ..... April 10, 1961
Date of oldest amended application ..... May 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	4-10-61	5-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	5-17-61	6-1-61
Renewals (All Classes)	11-7-61	11-20-61
Sec. 12 (c) Publications (All Classes)	11-6-61	11-24-61

Applications filed during the month of November 1961—2,018

Registrations Issued ..... 343—No. 725,762 to No. 726,104
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 633,899 (ARMEL AND DESIGN), Armel Electronics, Inc., Electrical terminals, connectors, fittings and electrical equipment units including insulators, resistors, capacitors and inductances, filed Nov. 24, 1961, D.C., S.D.N.Y., Doc. 61/4160, *Armel Electronics Inc.* v. *Sprague Electric Company.*

Reg. No. 678,044 (MERCEDES-BENZ), Daimler-Benz Aktiengesellschaft, Keys, key blanks, locks and automobile door locking devices, safes, strong boxes, etc., filed Nov. 20, 1961, D.C., W.D. Pa. (Pittsburgh), Doc. 61/727, *A. Finkl & Sons Company* v. *Crucible Steel Company of America et al.*

Reg. No. 680,651 (HUMANE HOG RING CO. AND DESIGN), Humane Hog Ring Company, Nose rings for swine, filed Nov. 24, 1961, D.C., S.D. Ind. (New Albany), Doc. NA-61-C-77, *Humane Hog Ring Company* v. *Seymour Manufacturing Co., Inc.*

Reg. No. 689,655 (BARBIE), Mattel, Incorporated, Doll, filed Nov. 21, 1961, D.C., S.D.N.Y., Doc. 61/4135, *Mattel, Inc.* v. *Faber-Luft Ltd. (Inc.).*

Reg. No. 705,295 (ALASKINE), Staron, Inc., Silk and wool fabrics, filed Nov. 29, 1961, D.C., S.D.N.Y., Doc. 61/4207, *Staron, Inc.* v. *Federated Department Stores, Inc.*

Reg. No. 705,696 (BUSINESS MEN'S CLEARING HOUSE), Employment agency services, filed Nov. 16, 1961, D.C. Mass. (Boston), Doc. 61/893-F, *Charles M. O'Shea* v. *Business Men's Clearing House, Inc. et al.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 88,325. The Johnson-March Corporation, d.b.a. Waverly Petroleum Products Company, Philadelphia, Pa. Filed Dec. 31, 1959.

KITTY BOX

For Absorbent Pet Litter.
First use Oct. 14, 1959.

SN 106,087. Gaspesia Sulphite Company Ltd., Quebec, Quebec, Canada. Filed Oct. 10, 1960.

WONDERWHITE

Owner of Canadian Reg. No. 119,253, dated Aug. 26, 1960.
For Wood Pulp Sold to Paper Manufacturers Only.

SN 108,343. Ed. F. Mangelsdorf & Bro., Inc., St. Louis, Mo. Filed Nov. 14, 1960.

PHOTO-GENETIC

For Field Seeds.
First use Aug. 11, 1960.

SN 108,590. Abitibi Power & Paper Company, Limited, Toronto, Ontario, Canada. Filed Nov. 17, 1960.

ARBISO

Priority claimed under Sec. 44(d) on Canadian application filed July 7, 1960; Reg. No. 121,116, dated Feb. 10, 1961.
For Wood Pulp.

SN 109,783. S. B. Foot Tanning Company, Red Wing, Minn. Filed Dec. 7, 1960.

FABULife

For Tanned Leather Material.
First use Oct. 7, 1960.

SN 111,437. Slab Fork Coal Company, Slab Fork, W. Va. Filed Jan. 6, 1961.

AUSTIN BLACK ACHROMITE

For Pulverized Coal.
First use May 3, 1960.

SN 114,926. W. Atlee Burpee Company, Philadelphia, Pa. Filed Mar. 6, 1961.

GOLDEN GREENHOUSE

For Seed Flats.
First use Feb. 11, 1961.

SN 120,451. South River Sand Company, Old Bridge, N.J. Filed May 19, 1961.

MR. SANDBOX

For Sand
First use Mar. 28, 1961.

SN 122,472. Sebago Chemical Corporation, South Windham, Maine. Filed June 20, 1961.

PILOT LITE

For Comminuted Material for Igniting Solid Fuel.
First use Apr. 28, 1961.

SN 122,691. General Mills, Inc., Minneapolis, Minn. Filed June 23, 1961.

GALAXY

Owner of Reg. No. 570,724.
For Vegetable Gum.
First use June 5, 1961.

SN 122,830. The Ohio Leather Company, Girard, Ohio. Filed June 26, 1961.

SOFTEX

For Leather.
First use July 15, 1940.

SN 122,862. United Carbon Company, Houston, Tex. Filed June 26, 1961.

UNITED CARBON

For Synthetic Rubber.
First use Apr. 6, 1961.

SN 122,934. Jointine Products Company Limited, North Hykeham, Lincoln, England. Filed June 27, 1961.

FIBREFLEX

Owner of British Reg. No. B785,430, dated Dec. 23, 1958.
For Material in Sheet Form Made Principally of Vegetable Fibre for Use in the Manufacture of Insoles for Shoes (Footwear).

SN 123,005. Eastman Kodak Company, Rochester, N.Y. Filed June 28, 1961.

UVEX

Owner of Reg. No. 708,910.
For Plastic Sheeting of Cellulosic Organic Acid Ester or Cellulose Organic Acid Mixed Esters.
First use June 19, 1961.

SN 123,010. Gothard, Inc., Canutillo, Tex. Filed June 28, 1961.

TRIK-O

For Insect Eggs for Biological Pest Control.
First use June 21, 1961.

SN 123,208. Leather's Best, Inc., New York, N.Y. Filed June 30, 1961.

CAVIAR

For Leather in the Piece.
First use May 9, 1961.

SN 123,209. Leather's Best, Inc., New York, N.Y. Filed June 30, 1961.

PRINCESSA

For Leather in the Piece.
First use June 8, 1961.

SN 123,210. Leather's Best, Inc., New York, N.Y. Filed June 30, 1961.

PRINCESS

For Leather in the Piece.
First use May 15, 1932.

SN 123,254. Alaska Lumber & Pulp Co., Inc., Seattle, Wash. Filed July 3, 1961.

ALPA

For Wood Pulp.
First use on or about Jan. 13, 1960.

Class 4—Abrasives and Polishing Materials

SN 111,384. Brillo Manufacturing Company, Inc., Brooklyn, N.Y. Filed Jan. 6, 1961.

SHINE-O-MATIC

For Detergent Products, Particularly for Use as Ingredients of Cleaning, Scouring, and Polishing Wads.
First use Jan. 4, 1961.

Class 6—Chemicals and Chemical Compositions

SN 66,494. The Ross Seed Company, Wichita, Kans. Filed Jan. 26, 1959.

GARDN-WISE

For Insecticides.
First use Apr. 1, 1958.

SN 83,259. Fog Shield, Incorporated, Cedartown, Ga., assignee of Carl J. Woolf, Cedartown, Ga. Filed Oct. 14, 1959.

FOG SHIELD

For Preparation To Prevent Foggy Mist Upon Glass Surfaces.
First use Mar. 30, 1959.

SN 83,867. The Dow Chemical Company, Midland, Mich. Filed Oct. 23, 1959.

GYPBAN

For Particulate Complex Phosphates, Especially for Sequestering Alkaline Earth Compounds in Underground Earth Formations, Such as Oil and Gas Wells.
First use Aug. 10, 1957.

SN 90,050. General Aniline & Film Corporation, New York, N.Y. Filed Feb. 1, 1960.

NYLITON

For Dyes and Dyestuffs for Coloration of Nylon and Similar Textile Fibres.
First use Aug. 30, 1949.

SN 95,050. Braco Chemical Company, St. Louis, Mo. Filed Apr. 14, 1960.

STAT O MIST

For Anti-Static Spray for Application to Fibrous Materials.
First use Apr. 4, 1960.

SN 100,742. The Western Petrochemical Corporation, New York, N.Y. Filed July 12, 1960.

WESPET

For Chemical Preparations for Coating Paper, Paperboard and Other Paper Products for the Finishing, Lubricating and Otherwise Processing Thereof.
First use June 27, 1960.

SN 102,182. Birs Beteiligungs- und Verwaltungsgesellschaft AG, Basel, Switzerland. Filed Aug. 8, 1960.

BIRS
T

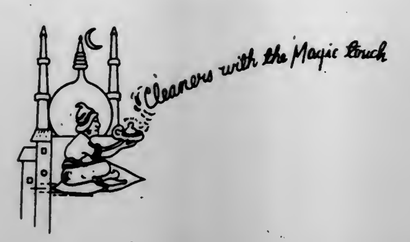
Owner of Swiss Reg. No. 178,851, dated Nov. 6, 1959.
For Agar-Agar, Disinfectants, Insecticides and Herbicides, Photographic Chemicals, Textile Auxiliaries, Tanning Agents, Bleaching Agents, and Leather Dressing and Preserving Agents.

SN 103,947. Monsanto Chemical Company, St. Louis, Mo. Filed Sept. 6, 1960.

NFB

For Phosphoric Acid for Use as an Aluminum Brightener.
First use Aug. 26, 1960.

SN 105,480. Aladdin, Inc., Atlanta, Ga. Filed Sept. 30, 1960.



The words "Cleaners With the Magic Touch" are disclaimed apart from the mark as shown.
For Disinfectants, Insecticides, and Deodorants for Commercial and Industrial Uses.
First use on or about Nov. 1, 1945, on disinfectants.

SN 107,211. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Oct. 26, 1960.

SUPER-KARB

For Activated Carbon for Solvent Clarification.
First use Sept. 15, 1960.

SN 107,418. The Dow Chemical Company, Midland, Mich. Filed Oct. 31, 1960.

NOVEGE

For Herbicides.
First use Sept. 30, 1960.

SN 107,693. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Nov. 2, 1960.

4P

For Tertiary Dodecyl Mercaptans.
First use July 1, 1959.

SN 107,706. D. Sebel & Company Limited, Erith, Kent, England. Filed Nov. 2, 1960.

JETEX

Owner of U.S. Reg. No. 525,758.
For Fuel Including a Urea Derivative Burned To Generate Gas and Drive Miniature or Model Engines by Reaction Propulsion.
First use Mar. 18, 1959; in commerce Mar. 18, 1959.

SN 107,708. Soilserv, Incorporated, Salinas, Calif. Filed Nov. 2, 1960.

SOILSERV

For Insecticides.
First use Jan. 15, 1954.

SN 107,710. Stauffer Chemical Company, New York, N.Y. Filed Nov. 2, 1960.

VICTAD

For Condensed Phosphates for Use as Dispersing Agents, Deflocculating Agents, and Clay Additives.
First use on or about June 13, 1960, on condensed phosphates for use as clay additives.

SN 108,150. Arkansas Company, Inc., Newark, N.J. Filed Nov. 10, 1960.

HY-AD

For Textile Finishing Agent To Improve the Oleophobic and Hydrophobic Properties of Fabrics Containing Aliphatic Organic Nitrogenous Compounds.
First use July 25, 1960.

SN 108,160. Pittsburgh Plate Glass Company, Pittsburgh, Pa., assignee of Columbia-Southern Chemical Corporation, Pittsburgh, Pa. Filed Nov. 10, 1960.

SPROUT NIP

Applicant disclaims the word "Sprout" apart from the mark as shown.
For Chemical Preparations for Use as Potato Sprout Inhibitors.
First use Apr. 28, 1960.

SN 108,398. William E. Sievers, Long Beach, Calif. Filed Nov. 14, 1960.

DELTA



For Oil Well Additives and Stimulating Compositions—Namely, Solvents, Surfactants, and Mixtures of Acid With Solvents and/or Surfactants.
First use Nov. 6, 1956.

SN 108,442. Armour and Company, Chicago, Ill. Filed Nov. 15, 1960.

ARMACFLOTE

Owner of Reg. Nos. 429,342 and 429,345.
For Ore Flotation Chemicals.
First use Oct. 6, 1960.

SN 108,550. Humble Oil & Refining Company, Houston, Tex. Filed Nov. 16, 1960.

HUMBLE-THERM

Owner of Reg. No. 536,952.
For Heat Transfer Agents.
First use July 27, 1960.

SN 108,690. James Austin Company, Mars, Pa. Filed Nov. 18, 1960.

Austin's fluff

Owner of Reg. No. 591,426.
For Fabric Softener.
First use Sept. 22, 1960.

SN 109,437. John M. Simel, d.b.a. Fly Stripe Co., Alameda, Calif. Filed Dec. 1, 1960.

FLY STRIPE

The word "Fly" is disclaimed apart from the mark as shown.
For Insecticides for Flies.
First use May 1, 1960.

SN 109,560. Chemco Photoproducts Company, Inc., Glen Cove, N.Y. Filed Dec. 5, 1960.

DS SOLUTION

Applicant disclaims the word "Solution" apart from the mark as shown.
For Solution for Use in the Preparation of Zinc and Copper Plates for Etching, Especially in Photoengraving.
First use Jan. 29, 1960.

SN 109,612. Moretex Chemical Products, Inc., Spartanburg, S.C. Filed Dec. 5, 1960.

AQUAZINE

For Composition for Wet Processing of Textiles as a Fiber Softener.
First use Sept. 1, 1960.

SN 110,536. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Dec. 20, 1960.

CONTROLWAX

Owner of Reg. Nos. 637,880, 676,950, and others.
For Oil Well Drilling Fluid Additives—Namely, a Composition Compounded To Act as a Solvent and Dispersant for Waxy Materials That Separate From Crude Oil During Production and Transportation.
First use on or about Oct. 23, 1960.

SN 110,820. Coleman Instruments, Inc., Maywood, Ill. Filed Dec. 27, 1960.

CHEMCOTE

For Liquid Agent for Application to the Surfaces of Chemical Glassware To Make Them Non-Wettable.
First use Oct. 20, 1960.

SN 111,813. Rohm & Haas Company, Philadelphia, Pa. Filed Jan. 13, 1961.

PRIMAFLOC

For Coagulants and Coagulant Aids for Use in the Clarification of Water and Sewage.
First use on or about Dec. 6, 1960.

SN 112,050. Knickerbocker Biologicals, Inc., New York, N.Y. Filed Jan. 18, 1961.

ALBUZYME

Owner of Reg. No. 715,957.
For Formulation of Specific 22% Albumin and Activated Enzymes Such as Ficin, Trypsin and Papain, and for Use as a Laboratory Reagent.
First use Dec. 28, 1960.

SN 116,555. Nutrilite Products, Inc., Buena Park, Calif. Filed Mar. 27, 1961.

BIOTROL

Owner of Reg. No. 682,726.
For Biological Insecticide.
First use Oct. 13, 1960.

SN 116,878. Geigy Chemical Corporation, Ardsley, N.Y. Filed Mar. 31, 1961.

GESACURE

Owner of Reg. Nos. 406,217 and 409,820.
For Chemical Compound Used as an Ingredient for Fungicides.
First use Mar. 16, 1961.

SN 117,027. O. E. Linck Co., Inc., Clifton, N.J. Filed Apr. 3, 1961.

ENL

For Herbicides.
First use Mar. 15, 1961.

SN 117,968. Jerclaydon, Inc., Clifton, N.J. Filed Apr. 17, 1961.

NULITE

Owner of Reg. Nos. 564,163, 704,088, and others.
For Fluorescent Brightening Agent or Optical Bleach Incorporated as an Ingredient in a Sprayable Liquid Starch Composition.
First use Feb. 12, 1961.

SN 118,554. Cabot Corporation, Boston, Mass. Filed Apr. 25, 1961.

CAB-O-CURE

Owner of Reg. Nos. 696,597, 706,478, and others.
For Peroxigen Catalyst as a Crosslinking or Polymerization Agent.
First use Feb. 24, 1961.

SN 120,731. Lestoil Products, Inc., Holyoke, Mass. Filed May 24, 1961.

SNO-SHOO

For Pellets for Melting Ice and Snow.
First use May 5, 1961.

SN 121,366. The Dow Chemical Company, Midland, Mich. Filed June 5, 1961.

BENAX

For Surface Active Agent.
First use Apr. 12, 1961.

SN 121,438. Sel-Rex Corporation, Nutley, N.J. Filed June 5, 1961.

ALGOCLAD

For Composition for Plating Gold.
First use January 1955.

SN 121,440. Sel-Rex Corporation, Nutley, N.J. Filed June 5, 1961.

AUROBOND

For Composition for Plating Gold.
First use January 1961.

Class 11—Inks and Inking Materials

SN 119,352. Caribonum Limited, Leyton, London, England. Filed May 5, 1961.

PLENETYPE

Owner of British Reg. No. 809,154, dated Aug. 8, 1960.
For Typewriter Ribbons.

Class 12—Construction Materials

SN 111,575. American-Marietta Company, Chicago, Ill. Filed Jan. 10, 1961.

AMERETTA

For Siding and Accessories Therefor, Shutters, Roof Shingles, Soffit and Fascia Systems.
First use on or about Oct. 5, 1960.

SN 112,012. Società Applicazioni Gomma Antivibranti "SAGA" S.p.A., Milan, Italy. Filed Dec. 22, 1960.

CARGO

Owner of Italian Reg. No. 143,961, dated June 4, 1959.
For Anti-Vibration Mountings of Rubber Being Elements or Fittings in the Construction of Bridges and Building Purposes.

SN 113,833. The Johnson Rubber Company, Middlefield, Ohio. Filed Feb. 16, 1961.

IMPERIAL

For Vinyl Cove Bases.
First use September 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 113,188. Delta Mercantile Corp., New York, N.Y. Filed Feb. 7, 1961.

DELTA STITCH

For Metal Wires.
First use Oct. 3, 1960.

SN 118,512. U.S. Expansion Bolt Company, York, Pa. Filed Apr. 24, 1961.

TAP-IT

For Expansion-Type Anchors and Fasteners.
First use November 1957.

SN 118,739. Unique Zipper Distributing Co., Tacoma, Wash. Filed Apr. 26, 1961.

UNIQUE

For Zippers and Sewing Machine Foot Attachments for Stitching Zippers.
First use on or about Mar. 11, 1960.

Class 15—Oils and Greases

SN 104,341. James E. Thorn, d.b.a. Thorn Sales Co., Kansas City, Mo. Filed Sept. 12, 1960.

Magic KOTE

For Chemical Composition Used as a Mold Release Agent.
First use Feb. 4, 1960.

SN 118,021. Westland Oil Company, Minot, N. Dak. Filed Apr. 17, 1961.

SELECTANE

For Gasoline.
First use Mar. 31, 1961.

SN 119,052. Ross Utilities, Inc., d.b.a. Ross Inc., Belleville, Ill. Filed May 1, 1961.

ROSS

Owner of Reg. Nos. 720,542 and 720,543.
For Gasoline.
First use July 30, 1954.

Class 18—Medicines and Pharmaceutical Preparations

SN 81,685. Doctor James Industries, Inc., Camp Hill, Pa. Filed Sept. 21, 1959.



The drawing is lined for pink or flesh color, red, yellow, and blue—but no claim is made to color.
For Kit Consisting of Medicaments for the Relief of Toothache and Oral Irritations.
First use Aug. 27, 1959.

SN 104,196. Arthur G. Seltzer, d.b.a. Stom Ease Company, Toledo, Ohio. Filed Sept. 9, 1960.

STOMease

For Remedy for the Relief of Hyperacid Stomachs, and Gastric Distress Due to Hypertension.
First use November 1959.

SN 110,363. Ro-Mar Products Co., Cleveland, Ohio. Filed Dec. 16, 1960.

AVOL

Owner of Reg. No. 718,847.
For Vitamin A Preparation in Capsule Form.
First use Aug. 1, 1955.

SN 115,030. American Home Products Corporation, d.b.a. Fort Dodge Laboratories, Fort Dodge, Iowa. Filed Mar. 7, 1961.

CLOSTROID

For Bacterin for Veterinary Use.
First use Jan. 11, 1961.

SN 115,621. Pharmaton, S.A., Lugano, Switzerland. Filed Mar. 14, 1961.

PHARMATON

Owner of Swiss Reg. No. 103,311, dated Oct. 22, 1942.
For Chemico-Pharmaceutical Products, Local Anaesthetics, Surface Anaesthetics, Vitamin and Multivitamin Products in Ampules and Capsules, and Antibiotic Products, Particularly Penicillin.

SN 115,938. Nixon & Company, Omaha, Nebr. Filed Mar. 17, 1961.

HOG UMPH

No claim is made to the word "Hog" apart from the mark as shown, applicant reserving all of its rights at common law.
For Medicated Feed for Livestock.
First use Oct. 18, 1957.

SN 115,943. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Mar. 17, 1961.

DROXONE

For Hormone-Containing Preparations.
First use Feb. 28, 1961.

SN 116,206. Carter Products, Inc., New York, N.Y. Filed Mar. 22, 1961.

NEOMIL

For Pharmaceutical Preparation Used as a Sedative.
First use Feb. 10, 1961.

SN 118,459. Samuel S. Loseff, d.b.a. Loseff Laboratory, Chicago, Ill. Filed Apr. 24, 1961.

ALKAGEL

For Medicinal Preparation for Reducing Gastric Acidity.
First use Sept. 1, 1929.

SN 119,924. Bristol-Myers Company, New York, N.Y. Filed May 15, 1961.

KANTREXINE

Owner of Reg. No. 663,046.
For Antibiotic Pharmaceutical Preparation.
First use Mar. 3, 1961.

SN 119,925. Bristol-Myers Company, New York, N.Y. Filed May 15, 1961.

KANTREXIL

Owner of Reg. No. 663,046.
For Antibiotic Pharmaceutical Preparation.
First use Mar. 3, 1961.

SN 120,608. Aktiebolaget Leo, Helsingborg, Sweden. Filed May 23, 1961.

KONTRAST "U"

Applicant disclaims any exclusive right in the term "Kontrast" apart from the mark as shown. Owner of Swedish Reg. No. 44,155, dated Oct. 22, 1934.
For X-Ray Contrast Agent.

SN 120,640. Irwin, Neisler & Co., Decatur, Ill. Filed May 23, 1961.

POM

For Psychotherapeutic Agent.
First use May 12, 1961.

SN 121,202. Kenwood Laboratories, Inc., Brooklyn, N.Y. Filed June 1, 1961.

PROMOMS

For Pre-Natal Tablets Consisting of Vitamins and Minerals for Use as a Dietary Supplement.
First use Apr. 1, 1961.

SN 121,506. Richardson-Merrell Inc., New York, N.Y. Filed June 6, 1961.

NIDRAFUR

For Veterinary Preparation for the Prevention of Coccidiosis, Blackhead, CRD Complex (Air Sacculitis) and Pullorum in Chickens.
First use May 4, 1960.

SN 121,507. Richardson-Merrell Inc., New York, N.Y. Filed June 6, 1961.

NIHYDRA

For Veterinary Preparation for the Prevention of Coccidiosis, Blackhead, CRD Complex (Air Sacculitis) and Pullorum in Chickens.
First use Dec. 9, 1960.

SN 122,268. Ciba Limited, Basel, Switzerland. Filed June 19, 1961.

DIANACORTEN

Owner of Swiss Reg. No. 183,916, dated Nov. 29, 1960.
For Hormone Preparation.

SN 122,270. Ciba Limited, Basel, Switzerland. Filed June 19, 1961.

TRASICOR

Owner of Swiss Reg. No. 181,170, dated May 25, 1960.
For Pharmaceutical Preparation for the Treatment of Circulatory Disorders.

SN 122,271. Ciba Limited, Basel, Switzerland. Filed June 19, 1961.

VETIBENZAMINE

Owner of Swiss Reg. No. 176,174, dated June 30, 1959.
For Veterinary Preparation for Use in Allergic Conditions.

SN 122,542. Longlife Fish Food Products, Inc., Denville, N.J. Filed June 21, 1961.

INFUSYL

For Bacterial Culture in Tablet Form for Use in Feeding Fish.
First use September 1951.

SN 123,215. The Mifflin, McCambridge Company, Riverdale, Md. Filed June 30, 1961.

RED CLOUD BERRIES

Applicant disclaims the word "Berries" alone and apart from the mark as shown.
For All-Vegetable Laxative Preparation for Relief of Constipation; and of Biliousness and Headaches Caused by or Associated With Constipation.
First use Nov. 10, 1888.

SN 123,288. Ethica Standard Co., Inc., Long Island City, N.Y. Filed July 3, 1961.

BALATRIN

For Pharmaceutical Preparation for Metabolic Processes.
First use June 23, 1961.

SN 123,289. Ethica Standard Co., Inc., Long Island City, N.Y. Filed July 3, 1961.

NEOCARBON

For Pharmaceutical Preparation for Intestinal Disorders.
First use May 15, 1959.

SN 123,468. Carter Products, Inc., New York, N.Y. Filed July 6, 1961.

SOLAMIL

For Pharmaceutical Preparation for Use as an Aid To Relieve Pain and To Achieve Sleep.
First use May 26, 1961.

SN 123,469. Carter Products, Inc., New York, N.Y. Filed July 6, 1961.

SUPRAMIL

For Pharmaceutical Preparation for Use as an Aid To Relieve Pain and To Achieve Sleep.
First use May 26, 1961.

SN 123,973. F.A. Products Company, Chicago, Ill. Filed July 14, 1961.

CALCONTROL

For Medicinal Preparation in Tablet Form for Appeasing the Appetite.
First use June 1960.

SN 123,975. F.A. Products Company, Chicago, Ill. Filed July 14, 1961.

ACIDAMOL

For Medicinal Preparation in Tablet Form for Stomach Hyperacidity.
First use June 1960.

SN 123,976. F.A. Products Company, Chicago, Ill. Filed July 14, 1961.

CLAIR-NASAL

For Medicinal Preparation in Tablet Form for Combating Cold Misery and Sinus Congestion.
First use June 1960.

SN 123,978. F.A. Products Company, Chicago, Ill. Filed July 14, 1961.

VITAFFEINE

For Medicinal Preparation in Tablet Form for Use as a Stimulant and Containing Vitamins and Minerals.
First use June 1960.

SN 124,110. Merck & Co., Inc., Rahway, N.J. Filed July 17, 1961.

THIBENZOLE

For Veterinary Medicinal Preparation Particularly Useful as an Anthelmintic.
First use July 10, 1961.

SN 124,210. O. W. Meyer, d.b.a. Farmers Friend Mineral Co., Napoleon, Ohio. Filed July 18, 1961.

PHENO-MINRAL

For Food Supplement in Block or Granular Form, for Animals Having Non-Lactating Ruminants.
First use Apr. 17, 1961.

SN 124,446. Laboratories for Applied Biology Limited, London, England. Filed July 21, 1961.

ORNIMED

Owner of British Reg. No. 811,958, dated Oct. 13, 1960.
For Medicated Foodstuffs for Birds.

SN 124,447. Laboratories for Applied Biology Limited, London, England. Filed July 21, 1961.

ORNIVITE

Owner of British Reg. No. 811,959, dated Oct. 13, 1960.
For Medicated Foodstuffs for Birds.

SN 124,755. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed July 26, 1961.

PYOCILLIN

For Antibiotic Preparation.
First use May 10, 1961.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 87,792. Eidophor Inc., New York, N.Y. Filed Dec. 22, 1959.



For Electrical Apparatus for Use in Television—Namely, Receivers and Projectors for Television and Also for Closed-Circuit Systems.
First use on or about May 5, 1959.

Class 22 — Games, Toys, and Sporting Goods

SN 95,923. Paul-Reed, Inc., Charlevoix, Mich. Filed Apr. 27, 1960.

WEATHER SHIELD

For Sporting Goods—Namely, Hand Warmers, Foot Warmers and Seat Warmers of the Insulated Type.
First use during the month of May 1959.

SN 101,874. Ideal Toy Corporation, Hollis, N.Y. Filed Aug. 2, 1960.

PATTI PLAYPAL

For Dolls.
First use Mar. 19, 1959.

SN 106,317. Richard L. East, Modesto, Calif. Filed Oct. 13, 1960.

MARBA-DICE

For Equipment Sold as a Unit for Playing a Marble and Dice Board Game.
First use Dec. 14, 1959.

SN 106,513. Mattel, Inc., Hawthorne, Calif. Filed Oct. 17, 1960.

TOMMY-BURST

Owner of Reg. No. 658,748.
For Toy Guns.
First use Sept. 2, 1960.

SN 106,620. Mattel, Inc., Hawthorne, Calif. Filed Oct. 18, 1960.

BARBIE

Owner of Reg. No. 689,055.
For Equipment Sold as a Unit for Playing a Board Type of Game.
First use Sept. 2, 1960.

SN 107,842. Donald F. Duncan, Incorporated, Chicago, Ill. Filed Nov. 4, 1960.



For Tops of the Bandalore Return Type.
First use Aug. 1, 1960.

SN 108,474. Cyril Farny, Morris Plains, N.J. Filed Nov. 15, 1960.

SKI DEK

For General Line of Ski Equipment, Exclusive of Ski Clothing, for Use in Indoor Skiing.
First use Nov. 8, 1960.

SN 110,920. Western Lace & Line Company, d.b.a. Western Fishing Line Co., Glendale, Calif. Filed Dec. 27, 1960.

W-20

Owner of Reg. No. 585,743.
For Fishing Line.
First use Aug. 10, 1960.

SN 113,002. Cook Enterprises Inc., Dallas, Tex. Filed Feb. 3, 1961.

COOK COMET

For Electrically Powered Carts for Carrying Golf Bags.
First use Jan. 11, 1961.

SN 114,610. General Mills, Inc., Minneapolis, Minn. Filed Feb. 28, 1961.

SNIPPER DOODLER

For Toy Cutout and Assembly Kit.
First use Feb. 6, 1961.

SN 114,666. George Young & Company, Chicago, Ill. Filed Feb. 28, 1961.

Day-Flyer

For Baseballs and Soft Balls.
First use Feb. 1, 1961.

SN 115,179. The Seamless Rubber Company, New Haven, Conn. Filed Mar. 8, 1961.

SNARK II

For Underwater Skin-Diving Equipment—Namely, a Breathing Apparatus Consisting of a Rubber Mouthpiece, Removable Bridle, Hose, and Safety Air Relief Valve.
First use Mar. 7, 1960.

SN 115,185. The Seamless Rubber Company, New Haven, Conn. Filed Mar. 8, 1961.

SNARK III

For Underwater Skin-Diving Equipment—Namely, a Breathing Apparatus Consisting of a Rubber Mouthpiece, Removable Bridle, Hose, and Safety Air Relief Valve.
First use Mar. 7, 1960.

SN 115,469. Help-Trouble Whistle Company, Chicago, Ill. Filed Mar. 13, 1961.

HELP-TROUBLE

For Whistles.
First use Mar. 8, 1961.

SN 115,567. Alexander Doll Company, Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Mar. 14, 1961.

"MIMI"

For Dolls.
First use Jan. 20, 1961.

SN 115,955. Sila-Flex, Costa Mesa, Calif. Filed Mar. 17, 1961.

MAGNUM

Owner of Reg. No. 661,610.
For Ski Poles and Component Parts Thereof.
First use Feb. 14, 1961.

SN 116,778. Brunswick Corporation, Chicago, Ill., assignee of Zebco Company, Tulsa, Okla. Filed Mar. 29, 1961.

ZEEBEE

For Fishing Reels.
First use on or about July 29, 1960.

SN 117,234. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed Apr. 5, 1961.

"DOLLY·POP"

For Dolls.
First use Dec. 14, 1960.

SN 117,517. Harry L. Morrill, Jr., Marietta, Ga. Filed Apr. 10, 1961.

FIGURE-N

For Apparatus Sold as a Unit for Playing Educational Card Games.
First use Mar. 22, 1961.

SN 118,210. The Avalon Hill Company, Baltimore, Md. Filed Apr. 20, 1961.

D-DAY

For Equipment Sold as a Unit for Playing a Board Game.
First use Jan. 18, 1961.

SN 118,211. The Avalon Hill Company, Baltimore, Md. Filed Apr. 20, 1961.

AIR EMPIRE

For Equipment Sold as a Unit for Playing a Board Game.
First use Jan. 18, 1961.

SN 118,396. Atlantic Lures, Inc., Providence, R.I. Filed Apr. 24, 1961.

FLAT HEAD

For Fishing Lures.
First use August 1957.

SN 118,484. Radio Steel & Mfg. Co., Chicago, Ill. Filed Apr. 24, 1961.

RADIO CHIEF

Owner of Reg. Nos. 561,829, 687,508, and others.
For Coaster Wagons.
First use November 1957.

SN 118,485. Radio Steel & Mfg. Co., Chicago, Ill. Filed Apr. 24, 1961.

REX CHIEF

Owner of Reg. Nos. 619,865, 635,874, and 647,402.
For Coaster Wagons.
First use April 1961.

SN 118,486. Radio Steel & Mfg. Co., Chicago, Ill. Filed Apr. 24, 1961.

REX ROCKET

Owner of Reg. Nos. 619,865, 635,874, and 647,402.
For Coaster Wagons.
First use January 1957.

SN 118,487. Radio Steel & Mfg. Co., Chicago, Ill. Filed Apr. 24, 1961.

REX MISSILE

Owner of Reg. Nos. 619,865, 635,874, and 647,402.
For Coaster Wagons.
First use February 1958.

SN 118,666. Del Mar Engineering Laboratories, Los Angeles, Calif. Filed Apr. 26, 1961.

DEL MAR

For Tow Targets.
First use in April 1954.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 116,764. Friedrich Tonne, Stuttgart-Vaihingen, Germany. Filed Mar. 29, 1961.

AIRFIX

Owner of German Reg. No. 738,955, dated Aug. 4, 1960.
For Pneumatic Conveyor Systems, Conveying Containers of Synthetic Material and/or Metal, Pneumatic Dispatch Carriers, and Parts Thereof.

SN 118,053. Chain Belt Company, Milwaukee, Wis. Filed Apr. 18, 1961.

REXLON

Owner of Reg. Nos. 126,139, 596,707, and others.
For Journal Bearings.
First use Mar. 17, 1961.

SN 118,432. Fry and Company, Inc., Canon City, Colo. Filed Apr. 24, 1961.

FLOmaster

For Belt Conveyor Equipment, Belt Conveyor Turns, Vehicle Mounted Belt Conveyor Baggage Loaders and Belt Conveyor Baggage Dispensers.
First use on or about Mar. 1, 1959.

SN 118,570. Food Fair Stores, Inc., Philadelphia, Pa. Filed Apr. 25, 1961.

Fyne·Edge

For Razor Blades.
First use Jan. 3, 1961.

Class 26—Measuring and Scientific Appliances

SN 115,141. General Aniline & Film Corporation, New York, N.Y. Filed Mar. 8, 1961.

Ansco - FILE

Owner of Reg. Nos. 249,170, 701,349, and others.
For Containers for Light-Sensitive Photographic Materials.
First use Feb. 14, 1961.

SN 116,308. Ihagee Kamerawerk Aktiengesellschaft, Frankfurt am Main, Germany. Filed Mar. 23, 1961.

IHAGEE

Owner of German Reg. No. 298,535, dated Feb. 28, 1923.
For Cameras and Accessories Therefor, Such as Range Finders, Lens Extension Rings and Lightmeters.

SN 118,221. Charles Bruning Company, Inc., Mount Prospect, Ill. Filed Apr. 20, 1961.

DUET

For Combination Photocopy and Diazo Reproduction Machines, Photographic Materials—Namely, Photo-Transfer Positive Papers, Photo-Transfer Negative Papers, Photo-Transfer Transparent Films, and Photo-Transfer Translucent Papers.
First use Mar. 6, 1961.

SN 118,250. Hudson Photographic Industries, Inc., Irvington-on-Hudson, N.Y. Filed Apr. 20, 1961.

CINE SUN

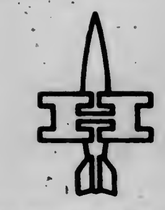
For Photographic Lighting Equipment.
First use on or about Dec. 7, 1960.

SN 118,289. Sawyer's Inc., Portland, Oreg. Filed Apr. 20, 1961.

TRAY-MASTER

For Portable File Cabinets for Trays of Projector Slides.
First use Mar. 30, 1961.

SN 120,528. Hurletron Incorporated, Danville, Ill. Filed May 22, 1961.



For Electrical and Mechanical Time Delay Apparatus for Programming Systems and Processes, Control Apparatus for Various Devices and Systems Used in the Printing, Paper Making, and Motion Picture Industries, Comprising Registration Control Equipment, Printing Press Drives and Drive Controls, Caliper and Moisture Control Equipment for the Boxboard and Paper Making Industries, Color Analyzing Equipment, and Shutter Control Equipment for the Motion Picture Film Printer.
First use Apr. 19, 1961.

Class 27—Horological Instruments

SN 116,412. Montres Rolex S.A., d.b.a. Rolex Uhren AG, and Rolex Watch Co. Ltd., Geneva, Switzerland. Filed Mar. 24, 1961.

KING MIDAS

Owner of Swiss Reg. No. 175,267, dated Apr. 29, 1959.
For Time Pieces and Parts Thereof.

Class 32—Furniture and Upholstery

SN 116,216. Eisen Brothers, Inc., Hoboken, N.J. Filed Mar. 22, 1961.

Eisen·Bilt

For Colonial-Type Furniture—Namely, Living Room, Bedroom, and Dining Room Furniture.
First use in 1940.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 112,550. Koyo Seiko Co., Ltd., Ikunoku, Osaka, Japan. Filed Jan. 26, 1961.

KOYO BLU-SEAL

Applicant disclaims any exclusive rights to the words "Blue-Seal" apart from the mark as shown. Owner of U.S. Reg. No. 700,097.
For Contact Seals for Ball and Roller Bearings.
First use Jan. 7, 1960; in commerce Jan. 7, 1960.

Class 37—Paper and Stationery

SN 90,337. Jolly Products, Inc., Chicago, Ill., by change of name from Jolly Gulp, Inc., Chicago, Ill. Filed Feb. 4, 1960.



The face of the boy is fanciful.
For Paper Wrapper for Frozen Confection.
First use Oct. 26, 1956.

SN 103,431. American Can Company, New York, N.Y. Filed Aug. 26, 1960.

ENVOY

For Folded Paper Towels and Tissues for Use in Dispensers.
First use Oct. 21, 1955.

SN 109,161. Bonnar-Vawter, Incorporated, Keene, N.H. Filed Nov. 28, 1960.

FIRMFORM

For Business Forms.
First use Oct. 10, 1960.

SN 114,793. Rite Marker, Inc., Ramsey, N.J. Filed Mar. 2, 1961.



The drawing is lined for red. Applicant makes no claim as to the word "Marker."
For Felt-Type Marking Device.
First use on or about July 2, 1960.

SN 117,371. International Paper Company, New York, N.Y. Filed Apr. 7, 1961.

TICONDEROGA ENGLISH FINISH

The words "English Finish" are disclaimed apart from the mark as shown.
For Papers and Paper Products—Namely, Printing and Book Papers.
First use Dec. 1, 1932.

SN 117,638. International Paper Company, New York, N.Y. Filed Apr. 11, 1961.

GATOR PEL

Owner of Reg. Nos. 323,347 and 711,240.
For Waterproof Treated Paper and Paperboard.
First use Feb. 25, 1961.

SN 118,401. The Beckett Paper Company, Hamilton, Ohio. Filed Apr. 24, 1961.

BECKETT 1848 TRADITIONAL

Owner of Reg. No. 710,272.
For Paper Stock.
First use Apr. 8, 1961.

SN 120,893. Kimberly-Clark Corporation, Neenah, Wis. Filed May 26, 1961.

TWIN-SERVER

Owner of Reg. No. 696,443.
For Paper Table Napkins.
First use May 23, 1961.

SN 121,667. Riegel Paper Corporation, New York, N.Y. Filed June 8, 1961.

PRINTAPOUCH

For Kraft Paper.
First use on or before May 19, 1961.

SN 121,763. The Rytex Company, Indianapolis, Ind. Filed June 9, 1961.

TOWN & COUNTRY

For Writing Paper and Envelopes.
First use in or about May 1946.

SN 122,446. MacAndrews & Forbes Company, Camden, N.J. Filed June 20, 1961.

MAF-Brite

For Fibre Boxboard for Use in the Manufacture of Cartons or Similar Containers.
First use May 18, 1961.

SN 123,818. Hydrol Chemical Company, Philadelphia, Pa. Filed July 12, 1961.

SANAPRON

For Disposable Paper Products—Namely, Aprons, Sheets, Bibs, Pillow Cases and Towels.
First use Aug. 25, 1960.

SN 123,926. The Rough Notes Company, Inc., Indianapolis, Ind. Filed July 13, 1961.

"REDI-SET"

For Multi-Copy Blank Forms for Invoices, Vouchers, Bills and Orders.
First use Dec. 26, 1947.

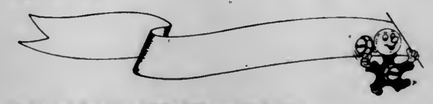
Class 38—Prints and Publications

SN 79,950. John F. Rider Publisher, Inc., New York, N.Y. Filed Aug. 20, 1959.

SOUND-N-SIGHT

For Courses of Instruction in Telegraph Code Transmission and Reception Including Printed Instructional Books, and Instructional Phonograph Records.
First use Apr. 15, 1959.

SN 80,989. Kelsey-Hayes Company, Detroit, Mich., assignee of Gunite Foundries Corporation, Rockford, Ill. Filed Sept. 8, 1959.



Owner of Reg. Nos. 234,066 and 610,564.
For Company Letter Issued Periodically and Dealing With Wheels, Brake Drums and Associated Parts.
First use June 17, 1959.

SN 83,232. The Merrill Anderson Company, Inc., New York, N.Y. Filed Oct. 14, 1959.

FAMILY AFFAIRS

For Monthly Publication Concerning Estates, Trusts, and Taxes, Prepared for Clients of the Applicant.
First use July 1959.

SN 88,593. Builders, Inc., d.b.a. Home Owner Tax Reports, Wichita, Kans. Filed Jan. 7, 1960.

Home Owner Tax

For Periodically Issued Newsletter.
First use July 1, 1959.

SN 88,719. American Greetings Corporation, Cleveland, Ohio. Filed Jan. 11, 1960.

AMERICARD

For Greeting Cards.
First use Dec. 10, 1959.

SN 108,628. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Nov. 17, 1960.



For Greeting Cards.
First use Oct. 15, 1960.

SN 109,456. The Sunday School House, d.b.a. Gospel Light Publications, Glendale, Calif. Filed Dec. 1, 1960.

TEACH

For Magazine.
First use June 1, 1959.

SN 110,515. Medical Books for Children Publishing Company, Minneapolis, Minn. Filed Dec. 19, 1960.



For Books.
First use July 2, 1959.

SN 110,683. Horizon House-Solid State, Inc., Brookline, Mass. Filed Dec. 22, 1960.

SOLID STATE JOURNAL

Applicant disclaims the exclusive right to "Solid State Journal" apart from the mark as shown.
For Bimonthly Magazine.
First use on or about Aug. 3, 1960.

SN 112,433. American Aviation Publications, Inc., Washington, D.C. Filed Jan. 25, 1961.

AF | DEFENSE MARKET/PLANNING REPORT

No claim of exclusive use is made to the words "Defense Market/Planning Report" apart from the mark as a whole.
For Monthly Defense Marketing Newsletter.
First use Dec. 1, 1960.

SN 114,716. Mrs. America, Inc., New York, N.Y. Filed Mar. 1, 1961.

NATION'S TOP HOMEMAKERS

Owner of Reg. Nos. 575,274 and 705,565.
For Newsletter Published From Time to Time.
First use Feb. 6, 1961.

SN 115,519. The Purse Company, d.b.a. Purco, Chattanooga, Tenn. Filed Mar. 13, 1961.

THE ESTATE LETTER

Owner of Reg. No. 651,577.
For Pamphlet Issued Periodically for Distribution Under the Auspices of Trust Institutions, Dealing With Subjects Related to Trusts and Wills.
First use Mar. 1, 1956.

SN 117,844. The Chase Manhattan Bank, New York, N.Y. Filed Apr. 14, 1961.



For Periodical Bank Reports; Periodical, Economic and Financial Bulletins, Employee Publications Issued Periodically, Leaflets, Pamphlets and Booklets Issued From Time to Time.
First use Sept. 7, 1960.

SN 118,010. The Sportsmaster Corporation, Detroit, Mich. Filed Apr. 17, 1961.

GOLFMASTER

For Guide Cards Which Contain Golfing Instructions.
First use Apr. 13, 1961.

SN 118,600. Plumbing & Heating Publishing Company, Inc., Washington, D.C. Filed Apr. 25, 1961.

phc — the magazine of contracting management
PLUMBING · HEATING · COOLING BUSINESS
residential · commercial · industrial

Applicant disclaims all wording except "PHC."
For Monthly Trade Magazine.
First use Apr. 1, 1961.

SN 122,459. Phaidon Press Ltd., London, England. Filed June 20, 1961.

PHAIDON

For Books.
First use 1938; in commerce 1938.

SN 122,656. The Topics Publishing Company, Inc., New York, N.Y. Filed June 22, 1961.

DRUG TRADE NEWS

For Fortnightly Publication Devoted to the Pharmaceutical, Drug, Merchandising, and Allied Fields.
First use December 1925.

SN 122,856. Super Market Publishing Co., Inc., New York, N.Y. Filed June 26, 1961.

DM THE DISCOUNT MERCHANDISER

For Monthly Publication—Namely, a Trade Journal of Interest to Those Concerned With or Engaged in Discount Store Merchandising.
First use May 16, 1961.

SN 122,910. Business Reports, Inc., Larchmont, N.Y. Filed June 27, 1961.

THE TRADERS PAGE

For Monthly Report Relating to Stock Investments and Other Financial Matters.
First use July 15, 1960.

SN 123,126. National Milk Producers Federation, Washington, D.C. Filed June 29, 1961.

NATIONAL MILK PICTORIAL

For Monthly Magazine Containing Items of Interest to Dairy Farmers and Dairy Cooperatives.
First use Nov. 18, 1960.

SN 123,354. P & O-Orient Lines, Inc., San Francisco, Calif. Filed July 3, 1961.

POSH

For Magazine.
First use June 21, 1960.

SN 123,513. Whaley-Eaton Corporation, Staunton, Va. Filed July 6, 1961.

THE BUSINESS STATESMAN

For Business News Publication Published From Time to Time.
First use June 9, 1961.

Class 39 — Clothing

SN 110,288. Spiegel, Inc., Chicago, Ill. Filed Dec. 15, 1960.

BUDGET POWER

For Women's Dresses.
First use May 3, 1956.

SN 111,883. Hickory Knitting Mills, Inc., Hickory, N.C. Filed Jan. 16, 1961.

HICKORY HOUSE

For Sweaters.
First use Nov. 28, 1960.

SN 112,649. Talbott, Inc., New York, N.Y. Filed Jan. 27, 1961.

ALASSIO

For Women's and Misses' Sportswear—Namely, Knit, Woven Sweaters, Skirts, Suits, Blouses, Pants, Coats and Shirts.
First use Jan. 3, 1961.

SN 113,843. Lindale Mills, Incorporated, New York, N.Y. Filed Feb. 16, 1961.

Linda Lee

The name "Linda Lee" is purely fanciful.
For Infants' and Children's Anklets.
First use Sept. 15, 1960.

SN 115,261. Sawyer-Tower, Inc., d.b.a. Sawyer-Tower Safety Co., Watertown, Mass. Filed Mar. 9, 1961.

ALSPEC

For Protective Clothing Made From Treated Fabrics and Furnishing Protection Against Chemical and Other Industrial Hazards.
First use Feb. 10, 1961.

SN 116,112. Federated Department Stores, Inc., New York, N.Y. Filed Mar. 21, 1961.

WALKIN-STYLE

For Shoes Made of Leather, Fabric and Combinations Thereof.
First use Mar. 25, 1937.

SN 116,155. Proudfoot Hosiery Corp., New York, N.Y. Filed Mar. 21, 1961.

SNAP-A-PAIR

For Hosiery for Men, Women and Children.
First use Mar. 13, 1961.

SN 116,644. The Joseph & Feiss Company, Cleveland, Ohio. Filed Mar. 28, 1961.

STURDITWIST

Owner of Reg. Nos. 327,309, 390,239, and 516,442.
For Piece Goods Sold in the Form of Men's Tailored Apparel—Namely, Men's Suits, Topcoats, Jackets, and Trousers.
First use on or about July 12, 1940.

SN 117,454. Cobblers Incorporated, Los Angeles, Calif. Filed Apr. 10, 1961.



For Women's Shoes.
First use Mar. 24, 1961.

SN 117,455. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed Apr. 10, 1961.

DOUBLE-BILT

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers and Vests.
First use Mar. 15, 1961.

SN 117,864. HMH Publishing Co., Inc., Chicago, Ill. Filed Apr. 14, 1961.



For Ties and Men's and Women's Shirts.
First use Apr. 3, 1959, on men's shirts.

Class 45—Soft Drinks and Carbonated Waters

SN 99,719. Canada Dry Corporation, New York, N.Y. Filed June 27, 1960.

CAFAY DRY

Applicant makes no claim of exclusive right to use the word "Dry" apart from the complete mark shown.
For Coffee-Flavored Carbonated Soft Drink.
First use June 14, 1960.

SN 116,876. The Frostie Company, Baltimore, Md. Filed Mar. 31, 1961.

FROSTIE

Owner of Reg. Nos. 639,770, 678,542, and others.
For Soft Drinks and Flavoring Bases for Making the Same.
First use Mar. 27, 1947.

SN 117,477. Frank's Beverages, Philadelphia, Pa. Filed Apr. 10, 1961.

BLUE ANCHOR

Owner of Reg. Nos. 177,685 and 179,115.
For Soft Drinks.
First use Feb. 1, 1922.

Class 46—Foods and Ingredients of Foods

SN 75,180. Feed Service Corporation, Crete, Nebr. Filed June 5, 1959.

MOREA

Owner of Reg. No. 569,141.
For Prepared Fresh and Frozen Hamburger, Fresh Meat Cuts and Frozen Meat Cuts.
First use Mar. 11, 1959.

SN 78,851. Chili Products Corporation Ltd., Los Angeles, Calif. Filed Aug. 3, 1959.

STERI-VAC

For Chili Powder, Chili Pepper, and Spices.
First use May 15, 1959.

SN 80,623. Atkinson Milling Company, Minneapolis, Minn. Filed Sept. 1, 1959.



Owner of Reg. Nos. 398,655, 527,992, and 610,143.
For Wheat Flour for Use in Institutional Trade.
First use Apr. 23, 1954.

SN 82,533. R.G.B. Laboratories, Inc., Kansas City, Mo. Filed Oct. 1, 1959.

dzert whip

For Pasteurized Blend of Water, Hydrogenated Vegetable Oil, Stabilizer, Sweetening and Flavoring Similar to the Consistency, Flavor, Whipping Character and Use of Fresh Dairy Whipping Cream and for a Concentrate for Making Same.
First use November 1951.

SN 82,911. New Horizon Foods, Inc., New York, N.Y. Filed Oct. 8, 1959.

SPICE MATES

Applicant claims no exclusive rights in "Spice" as the name of goods identified herein.
For Pepper, Cloves, Cinnamon, Allspice, Ginger, and Turmeric.
First use June 1, 1959.

SN 84,737. Eugene Fruit Growers Association, Eugene, Oreg. Filed Nov. 6, 1959.

FULY-RYPE

For Canned and Frozen Fruits and Vegetables.
First use June 1, 1928.

SN 85,450. Yoder Feeds, Inc., Kalona, Iowa. Filed Nov. 16, 1959.



The drawing is lined for red and blue. The words "Better Quality" are disclaimed apart from the mark and no exclusive rights in "Feeds" as the name of the goods are claimed. Owner of Reg. No. 592,028.
For Swine, Cattle and Poultry Feeds.
First use on or about June 15, 1956.

SN 85,523. Societe Laitiere A.L.B., Clamart (Seine), France. Filed Nov. 17, 1959.



Owner of French Reg. No. 463,676, dated Mar. 20, 1957 (Paris); Natl. Inst. No. 87,417.
For Milk Products—Namely, Cheese, Yogurts, and Butter.

SN 85,762. Mai Kai, Inc., d.b.a. Mai Kai Restaurant, Fort Lauderdale, Fla. Filed Nov. 20, 1959.



For Tea.
First use Dec. 28, 1956.

SN 90,552. National Tea Co., d.b.a. National Food Stores, Chicago, Ill. Filed Feb. 8, 1960.

NATIONAL'S
TOP
taste

Owner of Reg. Nos. 444,626, 665,146, and others.
For Prepared and Canned Beef Stew, Corn Beef Hash, and Chili Con Carne.
First use Dec. 29, 1959.

SN 95,440. Imperial Sugar Company, Sugar Land, Tex. Filed Apr. 20, 1960.

IMPERIAL
SUGAR

The drawing is lined for red. Exclusive use of the words "Pure Cane Sugar" is disclaimed. Owner of Reg. Nos. 636,912 and 636,913.
For Sugar.
First use July 1929.

SN 96,472. Bushey & Wright, Inc., Chicago, Ill. Filed May 5, 1960.

RED & WHITE

Owner of Reg. Nos. 203,957 and 278,207.
For Wheat Flour, Macaroni, Food Flavoring Extracts, Egg Noodles, Cocoa, Catsup, Peanut Butter, Canned Fruits, Canned Vegetables, Fats, Shortening and Cooking Oils of Vegetable Origin, Baking Mixtures—Namely, Pie Crust Mix, Pancake Mix, Buckwheat Mix and Biscuit Mix, Food Flavoring Syrup, Olives, Pickles, Unpopped Popcorn, Rice, Vinegar, Canned Fish, Canned Soup, Canned Meat, Canned Fruit Juices and Fruit Nectar, Condimental and Other Sauces, Condiments—Namely, Tomato Paste, Prepared Mustard, Mayonnaise Dressing and Seasoning Salts, Spices, Dried Fruits, Dehydrated Vegetables and Edible Herbs, Salad Dressing, Gelatine Dessert Powders, Candy, Tea, Butter, Fresh Eggs, Cheese, Ice Cream, Frozen Meat Pie Dinners, Frozen Fruits, Frozen Vegetables and Frozen Fruit Juices.
First use Jan. 1, 1910.

SN 97,944. Kosher Zion Sausage Company of Chicago, Chicago, Ill. Filed May 26, 1960.



The exclusive right to the use of the Star of David is disclaimed apart from the mark. Owner of Reg. No. 695,778.
For Processed Meat Products—Namely, Bologna, Salami, Frankfurters, Pickled Beef Tongue, Cooked Beef Tongue, Corned Beef, Knockwurst, Pastrami, and Sausages.
First use at least as early as Mar. 12, 1958, with respect to bologna and salami.

SN 101,794. Maroon Bros., Peoria, Ill. Filed Aug. 1, 1960.

MAROON'S

For Cheese Spread.
First use April 1954.

SN 102,104. Diamond Walnut Growers, Inc., Stockton, Calif. Filed Aug. 5, 1960.

EMERALD

Owner of Reg. Nos. 225,244 and 639,432.
For Shelled and Unshelled Nuts Comprising Pecans, Filberts, Almonds, Peanuts, Walnuts, Cashews, and Brazil Nuts.
First use July 9, 1959.

SN 105,164. Hunt Foods and Industries, Inc., New Orleans, La. Filed Sept. 26, 1960.

MIDAS

For Shortening Made of Hydrogenated Vegetable Oil.
First use July 12, 1960.

SN 105,341. Continental Baking Company, Rye, N.Y. Filed Sept. 28, 1960.



The word "Bakery" is disclaimed apart from the mark as shown. Owner of Reg. No. 698,266.
For Bakery Products—Namely, Bread, Rolls, Muffins, Cakes, Doughnuts, Cookies, Pies, Pastries, and Pretzels.
First use September 1959.

SN 105,342. Continental Baking Company, Rye, N.Y. Filed Sept. 28, 1960.

DAFFODIL FARM BAKERY

The word "Bakery" is disclaimed apart from the mark shown. Owner of Reg. No. 698,266.
For Bakery Products—Namely, Bread, Rolls, Muffins, Cakes, Doughnuts, Cookies, Pies, Pastries, and Pretzels.
First use September 1959.

SN 105,412. Blue Goose Growers, Inc., Fullerton, Calif., by change of name from American National Growers Corporation, Fullerton, Calif. Filed Sept. 29, 1960.

TEMESCAL

"Temescal" is an Indian word meaning "sweat bath."
For Fresh Citrus Fruits.
First use at least as early as the year 1940.

SN 105,760. M. J. Pritchard, Inc., Minneapolis, Minn. Filed Oct. 4, 1960.



Owner of Reg. No. 511,555.
For Feed for Horses.
First use Nov. 12, 1958.

SN 106,594. General Mills, Inc., Minneapolis, Minn. Filed Oct. 18, 1960.



For Icing Mix, Cake Mix, Cookie Mix, Biscuit Mix, Muffin Mix, Pancake Mix, and Roll Mix.
First use May 4, 1960.

SN 106,595. General Mills, Inc., Minneapolis, Minn. Filed Oct. 18, 1960.



For Dehydrated Prepared Potatoes.
First use Feb. 13, 1960.

SN 107,759. Hunt Foods and Industries, Inc., d.b.a. Hunt Foods, Inc., Fullerton, Calif. Filed Nov. 3, 1960.

Hunt's

The drawing is lined for the color red. Owner of Reg. Nos. 397,355 and 573,487.
For Canned Fruits and Vegetables.
First use Oct. 31, 1960.

SN 107,760. Hunt Foods and Industries, Inc., d.b.a. Hunt Foods, Inc., Fullerton, Calif. Filed Nov. 3, 1960.

Hunt's

The drawing is lined for the color red. Owner of Reg. Nos. 397,355 and 573,487.
For Canned Fruits and Vegetables.
First use Oct. 31, 1960.

SN 108,342. Mama Weiss Foods, Inc., Los Angeles, Calif. Filed Nov. 14, 1960.

JACQUES

For Salad Dressing.
First use Nov. 15, 1941.

SN 108,356. The Nestlé Company Inc., White Plains, N.Y. Filed Nov. 14, 1960.

JEM

For Dietary Food Concentrate Used as a Food Supplement.
First use Oct. 18, 1960.

SN 111,808. Milk Foods Inc., U.S.A., Monterey, Calif. Filed Jan. 13, 1961.

SOUP-R-TRIM

For Dietary Food Concentrate in Soup Form To Be Used in Weight Control.
First use Dec. 16, 1960.

SN 114,399. Anderson, Clayton & Co., Dallas, Tex. Filed Feb. 27, 1961.

UNIKORN

For Specially Processed Vegetable Oil for Food Purposes.
First use Jan. 25, 1961.

SN 114,490. Kelley, Farquhar & Co., Tacoma, Wash. Filed Feb. 27, 1961.

FreZerv

BRAND

Applicant disclaims the word "Brand." Owner of Reg. No. 609,686.
For Frozen Uncooked Fruit Spread, for Use as a Spread for Bread, Toast and Waffles, as a Topping for Ice Cream, and as a Filler for Pastries.
First use Feb. 20, 1961.

SN 115,611. King Kullen Grocery Co., Inc., Jamaica, N.Y. Filed Mar. 14, 1961.



Owner of Reg. Nos. 684,512 and 688,423.
For Canned Vegetables, Canned Puree, Frozen Vegetables and Frozen Berries.
First use September 1958 on frozen French fried potatoes.

SN 115,848. Salada-Shirriff-Horsey, Inc., Woburn, Mass. Filed Mar. 16, 1961.

JUNKET

Owner of Reg. Nos. 30,916, 681,229, and others.
For Unflavored Food Gelatin.
First use Sept. 2, 1960.

SN 116,049. Marinpro Limited, London, England. Filed Mar. 20, 1961.

MARINPRO

Priority claimed under Sec. 44(d) on British application filed Jan. 9, 1961; Reg. No. 815,420.
For Meats, Fish, Poultry, Game, Meat Extracts, Preserved Fruits and Vegetables, Dried Fruits and Vegetables, Cooked Fruits and Vegetables, Jellies, Jams, Eggs, Milk and Other Dairy Products, Edible Oils and Fats, Preserves, and Pickles.

SN 116,475. The Carey Salt Company, Hutchinson, Kans. Filed Mar. 27, 1961.

HANDI-SHAKE

For Table Salt.
First use Dec. 1, 1958.

SN 116,995. Fulham Brothers, Inc., Boston, Mass. Filed Apr. 3, 1961.



Owner of Reg. Nos. 544,234, 617,259, and 621,410.
For Packaged Frozen and Non-Frozen Fish and Shellfish Products.
First use on or about June 1, 1955.

SN 117,095. Crest Brokerage Company, d.b.a. Crest Brokerage Co., Los Angeles, Calif. Filed Apr. 4, 1961.



For Whole Cooked Lobster; Frozen Lobster Tails.
First use Dec. 2, 1960, on whole cooked lobster.

SN 117,132. T. J. Power, d.b.a. T. J. Power & Co., Carrizo Springs, Tex. Filed Apr. 4, 1961.

CLASSEE

Owner of Reg. No. 386,173.
For Fresh Vegetables and Fresh Fruit.
First use Dec. 23, 1939.

SN 117,449. Cal-Cod Process Corp., Maspeth, N.Y. Filed Apr. 10, 1961.

SONG-TIME

For Bird Food.
First use Mar. 10, 1961.

SN 117,487. Habeeb Ranches, Mesa, Ariz. Filed Apr. 10, 1961.

desert mesa

For Fresh Citrus Fruits.
First use Mar. 8, 1961.

SN 117,871. Illinois Baking Corporation, Chicago, Ill. Filed Apr. 14, 1961.

KRUNCH KOTE

The word "Krunch" is disclaimed apart from the mark.
For Particles of Candy, Nuts and Coconut Employed Primarily as Toppings for Frozen Dairy Desserts Such as Ice Cream and Ice Milk.
First use on or about Jan. 15, 1961.

SN 118,000. Royal Cup Inc., Birmingham, Ala. Filed Apr. 17, 1961.



The drawing is lined for red, yellow and gold. Owner of Reg. Nos. 222,236, 600,460, and 703,014.
For Coffee.
First use Mar. 7, 1961.

SN 118,368. Dwight Paulhamus, d.b.a. Skookum Foods Company, Oakland, Calif. Filed Apr. 21, 1961.

SKOOKUM

Owner of Reg. No. 229,548.
For Jams, Jellies, Fruit Butters, Canned Fruits, Canned Applesauce, and Canned Vegetables.
First use July 15, 1913.

SN 118,502. Scoop Products, Inc., Melrose Park, Ill. Filed Apr. 24, 1961.

MINTDENT

For Chewing Gum.
First use Apr. 10, 1961.

SN 120,519. Henri's Food Products Company, Inc., Milwaukee, Wis. Filed May 22, 1961.

PARTY-PINK

For Salad Dressing.
First use May 9, 1961.

SN 120,818. Meyenberg-Old Fashion Products Company, San Francisco, Calif. Filed May 25, 1961.

Satin Royal

For Ice Cream and Ice Milk.
First use April 1959.

SN 120,955. E. J. Brach & Sons, Chicago, Ill. Filed May 29, 1961.



For Candy.
First use July 1959.

SN 121,358. Max J. Brown, d.b.a. Advanced Health Products, Venice, Calif. Filed June 5, 1961.

REJUVATE

For Health Food Supplement in Dry Solid Form, Composed Principally of Herbs and Seeds.
First use on about Oct. 15, 1960.

SN 121,393. Kay's Ranches, Inc., Thermal, Calif. Filed June 5, 1961.

desert classic

For Fresh Grapes.
First use May 18, 1961.

SN 121,454. Wilson & Co., Inc., Chicago, Ill. Filed June 5, 1961.

ROYAL ASTER

For Shortening Made From Meat Fats and Vegetable Oils.
First use 1922.

SN 121,565. Horlicks Corporation, Racine, Wis. Filed June 7, 1961.

TRAINERS

For Food Treat for Dogs.
First use May 9, 1961.

SN 122,434. Food Fair Stores, Inc., Philadelphia, Pa. Filed June 20, 1961.

GOLD O' CORN

For Oleomargarine.
First use Jan. 12, 1961.

SN 122,461. Nick Rajkovich, d.b.a. N. P. Rajkovich, San Jose, Calif. Filed June 20, 1961.

BLOSSOM FARMS

For Fresh Fruit.
First use May 10, 1961.

SN 122,992. Beatrice Foods Co., Chicago, Ill. Filed June 28, 1961.

HOLLAND
Dutch Treat

Owner of Reg. No. 57,099.
For Ice Cream and Fluid Milk.
First use May 1, 1952; June 1, 1889, as to "Holland."

SN 125,344. General Mills, Inc., Minneapolis, Minn. Filed Aug. 3, 1961.

WISH

For Milk Additive.
First use July 17, 1961.

Class 47—Wines

SN 116,684. United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. Filed Mar. 28, 1961.

SWISS MIST

Owner of Reg. Nos. 663,908, 696,174, and others.
For Wines.
First use Mar. 22, 1961.

Class 48—Malt Beverages and Liquors

SN 79,986. Glazer's Wholesale Drug Company, Inc., Dallas, Tex. Filed Aug. 21, 1959.



For Beer.
First use Aug. 12, 1959.

SN 87,954. International Breweries, Inc., Detroit, Mich. Filed Dec. 24, 1959.

PHOENIX

For Beer and Ale.
First use approximately May 10, 1934.

SN 121,500. The National Brewing Company, Baltimore, Md. Filed June 6, 1961.



The drawing is lined for the colors red and gold. Owner of Reg. Nos. 622,809 and 708,501.
For Beer.
First use Nov. 1, 1960.

Class 49—Distilled Alcoholic Liquors

SN 108,792. Kommanditgesellschaft Chantré & Cie., Nieder-Olm, near Mainz, Germany. Filed Nov. 21, 1960.

Chantré

Owner of German Reg. No. 709,608, dated Dec. 30, 1957.
For Brandy.

SN 117,895. John McEwan & Co. Limited, Leith, Edinburgh, Scotland. Filed Apr. 14, 1961.

CHEQUERS

For Whisky.
First use Mar. 28, 1961; in commerce Mar. 28, 1961.

SN 118,061. Joseph S. Finch and Company, New York, N.Y. Filed Apr. 18, 1961.

OLD BATES

Owner of Registration No. 391,124.
For Whiskey.
First use July 11, 1940.

SN 118,320. Austin, Nichols & Co. Incorporated, Maspeth, N.Y. Filed Apr. 21, 1961.

VOSTOK

The English translation for the Russian word "Vostok" is "east."
For Vodka.
First use Apr. 17, 1961.

SN 121,403. Mr. Boston Distiller Inc., Boston, Mass. Filed June 5, 1961.

CAPTAIN'S CHOICE

For Whiskey.
First use May 22, 1961.

Class 50—Merchandise Not Otherwise Classified

SN 94,692. Fleming H. Revell Company, Westwood, N.J. Filed Apr. 8, 1960.

Revell-ware

For Metal Church Candlesticks and Other Metal Articles Used as Church Furnishings.
First use Sept. 11, 1959.

Class 51—Cosmetics and Toilet Preparations

SN 53,383. Aloe Creme Laboratories, Inc., Fort Lauderdale, Fla. Filed June 12, 1958.

triumph
over prematurely ageing skin

Applicant hereby disclaims "Over Prematurely Aging Skin."
For Skin Lotion.
First use Feb. 3, 1953.

SN 74,637. Viviane Woodard Corporation, Panorama City, Calif., by change of name from Viviane Woodard Cosmetics, Panorama City, Calif. Filed May 27, 1959.

5X MOISTURIZER

The word "Moisturizer" is disclaimed apart from the mark as shown.
For Skin Moisturizer.
First use Dec. 11, 1958.

SN 102,183. Birs Beteiligungs- und Verwaltungsgesellschaft AG, Basel, Switzerland. Filed Aug. 8, 1960.

BIRS
T

Owner of Swiss Reg. No. 178,851, dated Nov. 6, 1959.
For Cosmetics.

SN 108,881. John H. Douglas N.V., Haarlem, Netherlands. Filed Nov. 22, 1960.

HOLLAND HOUSE

Priority claimed under Sec. 44(d) on Dutch application filed Sept. 1, 1960; Reg. No. 138,773, dated Oct. 5, 1960.
For After-Shave and Pre-Shave Lotions, Men's Colognes, Shaving Creams, Shaving Soaps, Personal Deodorants, Bath Salts, and Bath Powders.

SN 109,694. Johnson & Johnson, New Brunswick, N.J. Filed Dec. 6, 1960.

JOHNSON'S

Owner of Reg. Nos. 88,088, 620,110, and others.
For Skin Lotion.
First use 1944.

SN 115,660. Breon Laboratories, Inc., New York, N.Y. Filed Mar. 15, 1961.

TOD'LETTE

Owner of Reg. Nos. 567,498 and 574,909.
For Skin Cleaning Tissues.
First use Feb. 15, 1961.

SN 119,131. Instru-Chem, Inc., Dallas, Tex. Filed May 2, 1961.

Hidden Glove

For Hand Lotion.
First use Mar. 1, 1961.

SN 119,333. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed May 4, 1961.

EFFERDENT

For Effervescent Denture Cleanser.
First use May 1, 1961.

Class 52—Detergents and Soaps

SN 82,252. Madison Chemical Corporation, Maywood, Ill. Filed Sept. 28, 1959.

ECON-O-MIST

For Concentrated Cleaner for General Cleaning, Dewaxing and Degreasing.
First use in October 1953.

SN 82,260. Madison Chemical Corporation, d.b.a. Madison Supply and Equipment Company, Maywood, Ill. Filed Sept. 28, 1959.

NEUTREX

For Floor Film Remover.
First use in January 1958.

SN 107,245. Crysto-Sheen Co., South Bend, Ind. Filed Oct. 27, 1960.

CRYSTO SHEEN

For Cleaning Compound, Particularly Intended for Use in Cleaning Glass, Porcelain and Metal Surfaces.
First use Oct. 20, 1960.

SN 108,203. Oil Specialties & Refining Co., Inc., Brooklyn, N.Y. Filed Nov. 10, 1960.

SAFLEX

For Liquid Cleaner for Use on Floors, Walls, and for General Cleaning.
First use June 3, 1955.

SN 108,207. Peck's Products Company, St. Louis, Mo. Filed Nov. 10, 1960.

DEO-CLEAN

For Cleaner for Use on Floors and Equipment and for Steam Cleaning.
First use Jan. 2, 1949.

SN 109,297. Borg-Warner Corporation, Chicago, Ill. Filed Nov. 30, 1960.

NORG CLOR

Owner of Reg. Nos. 331,103, 550,467, and others.
For Dry Cleaning Concentrates and Solvents.
First use on or prior to Sept. 23, 1960.

SN 109,431. The Procter & Gamble Company, Cincinnati, Ohio. Filed Dec. 1, 1960.

MISTY

Owner of Reg. Nos. 209,452 and 341,945.
For Soap.
First use Nov. 2, 1960.

SN 114,869. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Mar. 3, 1961.

POLYPHOS

For Cleaning Preparations for Application to Contaminated Surfaces To Be Rinsed From Such Surfaces With Water To Clean Such Contaminated Surfaces.
First use on or about Apr. 16, 1945.

SN 115,601. Granitize Products, Inc., d.b.a. Granitize Products Co., Lynwood, Calif. Filed Mar. 14, 1961.

BILD-A-GLAZE

For Paint Cleaner.
First use January 1948.

SN 117,129. P.M. Chemical Co. Inc., San Diego, Calif. Filed Apr. 4, 1961.

LIKIDY SUDS

Exclusive right to the use of the word "Suds," apart from the mark is disclaimed.
For Household Soaps and Detergents.
First use Apr. 11, 1958.

SN 118,162. National Chemical Laboratories of Pa., Inc., Philadelphia, Pa. Filed Apr. 19, 1961.

SUPER NAC

For Detergent Cleaning Concentrate for Both Industrial and Household Use.
First use Nov. 28, 1956.

SN 118,171. Pittsburgh Plate Glass Company, Pittsburgh, Pa. Filed Apr. 19, 1961.

DITZ-O

For Wax and Grease Remover.
First use Feb. 2, 1955.

SN 120,466. Scientific Safety Corporation, New York, N.Y. Filed May 9, 1961.

FOG-STIK

For Fogging Preventive and Cleaner for Use on Glass and Plastic.
First use Apr. 3, 1961.

SN 120,542. Walter G. Legge Company, Inc., New York, N.Y. Filed May 22, 1961.

LEGCLEAN

For Floor Cleaning Compound.
First use Aug. 14, 1960.

SN 121,304. National Chemical Laboratories of Pa., Inc., Philadelphia, Pa. Filed June 2, 1961.

Hurrah

For Liquid Hand Dish Wash.
First use June 27, 1960.

SN 121,309. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed June 2, 1961.

LINER-ITE

For Cleaner for Plastic Pools and Pool Liners.
First use Jan. 5, 1961.

SN 121,441. Sloan Chemicals, Inc., Cleveland, Ohio. Filed June 5, 1961.

ACL-
RUST REMOVER
GEL

The words "Rust Remover" are disclaimed apart from the mark as shown.
For Rust Remover.
First use May 10, 1961.

SN 123,123. Mila, Societe Anonyme, Paris, France. Filed June 29, 1961.

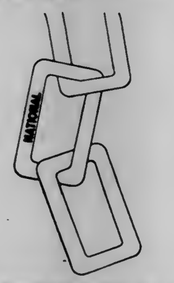
HEGOR

Owner of French Reg. No. 483,792, dated Nov. 5, 1959 (Seine); Natl. Inst. No. 133,791.
For Shampoo.

SERVICE MARKS

Class 100—Miscellaneous

SN 80,110. National Leasing Company, Inc., Cincinnati, Ohio. Filed Aug. 24, 1959.



For Leasing of Capital Equipment to Business and Industry.
First use Nov. 6, 1956.

SN 120,766. R. C. Simpson & Staff, Inc., Ridgewood, N.J. Filed May 24, 1961.

AQR

For Investigative Services in Connection With the Qualifications of Professional Arbitrators and the Rendering of Specially Prepared Written and/or Telephonic and Telegraphic Reports to Subscribers.
First use on or about Apr. 30, 1953.

Class 101—Advertising and Business

SN 670,789. King Korn Stamp Company (Delaware corporation), Wilmington, Del., by merger and change of name from King Korn Stamp Company (Iowa corporation), Des Moines, Iowa. Filed July 29, 1954.

KING KORN

For Providing Premium Stamps to Various Business Establishments and Redeeming Such Stamps for Merchandise at Redemption Centers.
First use Nov. 1, 1953.

SN 90,173. George Miller, d.b.a. Missile Electronic Research Industries, Waltham, Mass. Filed Feb. 2, 1960.

Missile Electronic Research Industries

The words "Missile Electronic Research Industries" are disclaimed apart from the mark as shown.
For Consulting and Research Services in Respect to Missiles, Rockets, Electronics, Radar and Computers.
First use Dec. 22, 1959.

SN 101,802. North American Bowling Incorporated, Arlington, Va. Filed Aug. 1, 1960.

BOWL AMERICA FOR FINEST FAMILY FUN

For Management and Operation of Bowling Establishments, the Leasing of Equipment Used by Bowlers, Including Bowling Shoes, Balls and Bowling Apparatus, and Promoting Group Contests by Others in Competitive Sports—Namely, Bowling.
First use on or about June 2, 1960.

SN 105,549. The Research Guild, Chicago, Ill. Filed Sept. 30, 1960.

The Homemakers Guild

For Organization of a Consumer Panel of Housewives Who Report Their Purchases and Experiences With Household Products for the Purpose of Conducting of Consumer Market Surveys in the Household Products and Related Fields.
First use June 15, 1960.

SN 114,929. City Products Corporation, Chicago, Ill. Filed Mar. 6, 1961.

SCOTT

For Retail Variety Store Services.
First use Jan. 1, 1929.

Class 102—Insurance and Financial

SN 117,180. East River Savings Bank, New York, N.Y. Filed Apr. 5, 1961.

EAST RIVER SAVINGS BANK — SERVICE AND SECURITY SINCE 1848

Applicant disclaims the wording "Service and Security Since 1848."
For Banking Services.
First use May 1, 1960.

SN 122,905. Badger Mutual Insurance Company, Milwaukee, Wis. Filed June 27, 1961.

SELF/RATE

For Underwriting of Automobile Insurance.
First use Mar. 15, 1961.

Class 103—Construction and Repair

SN 95,801. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Apr. 26, 1960.

POWER-LIFT

For Custom Installation, Adjustment and Maintenance of Surface Condensers, Mechanical Draft Fans, Heat Transfer Equipment, Feed Water Heaters, Fly Ash Precipitators, and Fluid Drive Units.
First use Feb. 10, 1960.

SN 95,802. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Apr. 26, 1960.

AIR-LIFT

For Custom Installation, Adjustment and Maintenance of Surface Condensers, Heat Transfer Fluid Drive Units, Air Conditioning, Heating, Air Handling and Air Pollution Control Equipment.
First use Jan. 30, 1960.

SN 96,752. The Servco Company, Long Beach, Calif. Filed May 9, 1960.



For Drilling and Servicing of Oil Wells and Servicing of Oil Well Tools Such as Milling Cutters, Directional Drilling Tools, and Fishing Tools.
First use in January 1958.

SN 117,719. Magnaflux Corporation, Chicago, Ill. Filed Apr. 12, 1961.

MAGNAFLUX

Owner of Reg. Nos. 325,366 and 373,290.
For Testing the Goods of Others for Flaws by Various Laboratory Procedures.
First use December 1934.

Class 104—Communication

SN 87,793. Eidophor Inc., New York, N.Y. Filed Dec. 22, 1959.



For Leasing and Operating Closed Circuit Television Communication Systems Through Which Shows or Demonstrations Are Presented.
First use on or about May 5, 1959.

Class 105—Transportation and Storage

SN 109,785. Freight Boat Travel Service, Inc., d.b.a. The Bon Voyage Co., Los Angeles, Calif. Filed Dec. 7, 1960.

THE BON VOYAGE CO.

For Travel Agency Services.
First use 1947.

SN 119,439. Trana World Airlines, Inc., New York, N.Y. Filed May 5, 1961.

SAF-T-WAY

For Air Transportation of Property.
First use Oct. 10, 1960.

Class 107—Education and Entertainment

SN 56,387. Cavalcade Productions, Inc., Chicago, Ill. Filed July 31, 1958.

creators of cinemastage

The words "Creators of Cinemastage" are disclaimed apart from the mark as shown.
For Producing and Directing Live Theatrical Presentations Combined With a Simultaneous Showing of Movie Material or Documentary Theatrical Exhibitions To Promote the Sale of Goods or Services of Others.
First use Jan. 21, 1958.

SN 91,123. Simmons-Boardman Publishing Corporation, New York, N.Y. Filed Feb. 17, 1960.

THE RAILWAY EDUCATIONAL BUREAU

For Educational and Training Services for Railway Employees and Executives, Said Services Being Conducted Through the Medium of Correspondence.
First use in 1914.

SN 108,127. Lifeways, Inc., Detroit, Mich. Filed Nov. 9, 1960.

LIFEWAYS Inc.

For Correspondence Courses in the Fields of Personal Development, Career Advancement, Executive and Management Development, as Well as Courses for the Teenager and Young Men and Women in Personal Development and Leadership.
First use Sept. 26, 1960.

SN 124,348. Fidelity Federal Savings and Loan Association, Nashville, Tenn. Filed July 20, 1961.

CLASSROOM OLYMPICS

For Title of a Television Quiz Program for High School Students.
First use Feb. 12, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 121,039. Tau Kappa Epsilon Fraternity, Kansas City, Mo. Filed May 29, 1961.

TAU KAPPA EPSILON

For Indicating Membership in Applicant, an International Collegiate Fraternity, and Its Subordinate Chapters.
First use Jan. 10, 1902.

CERTIFICATION MARKS

Class A — Goods

SN 116,249. New York Certified Seed Growers Co-Operative, Inc., Ithaca, N.Y. Filed Mar. 22, 1961.



The mark certifies that said goods have been inspected by applicant and found to conform to the published standards of excellence. Owner of Reg. No. 391,435.

For Vegetable, Grain, and Flower Seeds, Tubers, and Propagated Plant Parts.

First use Dec. 21, 1939.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

725,762. NYLSUISSE AND DESIGN. Societe de la Viscose Suisse. SN 111,695. Pub. 10–17–61. Filed 1–11–61.

725,763. RANDO-ROV. Curiator Corporation. SN 113,272. Pub. 10–17–61. Filed 2–8–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

725,764. GAD-A-BAG. Johnson & Johnson, d.b.a. Tek Hughes. SN 105,985. Pub. 10–17–61. Filed 10–7–60.

725,765. TREVIRA. Farbwerke Hoechst Aktiengesellschaft, vormals Meister Lucius & Bruning. SN 118,674. Pub. 10–17–61. Filed 4–26–61.

Class 4 — Abrasives and Polishing Materials

725,766. MIDCOTE. Midland Laboratories. SN 97,852. Pub. 10–17–61. Filed 5–25–60.

725,767. POLIBOY. Brandt & Walther. SN 110,578. Pub. 10–17–61. Filed 12–19–60.

725,768. SPACE AGE. Fuld Brothers, Inc. SN 116,877. Pub. 10–17–61. Filed 3–31–61.

Class 5 — Adhesives

725,769. STIKVEL. Velsicol Chemical Corporation. SN 119,655. Pub. 10–17–61. Filed 5–9–61.

Class 7 — Cordage

725,770. BUNN. Bunn Supply Company. SN 114,425. Pub. 10–17–61. Filed 2–27–61.

Class 8 — Smokers' Artides, Not Including Tobacco Products

725,771. MAGIC INCH. Max J. Doppelt, d.b.a. E. A. Carey Company. SN 81,686. Pub. 10–17–61. Filed 9–21–59.

725,772. WHITEHALL. The Bloch Brothers Tobacco Co. SN 121,165. Pub. 10–17–61. Filed 6–1–61.

Class 10 — Fertilizers

725,773. PLUG-O. Hookrite Products Corp. SN 87,679. Pub. 10–17–61. Filed 12–21–59.

725,774. T AND DESIGN. L. Teweles Seed Co. SN 104,338. Pub. 10–17–61. Filed 9–12–60.

725,775. KEY GREEN. Nutrilite Products, Inc. SN 116,557. Pub. 10–17–61. Filed 3–27–61.

Class 11 — Inks and Inking Materials

725,776. DALEMARK. Dale Marking Equipment Co., Inc. SN 113,912. Pub. 10–17–61. Filed 2–17–61.

Class 12 — Construction Materials

725,777. SPACE LITES. Southwestern Plastics, Inc. SN 96,150. Pub. 10–17–61. Filed 4–29–60.

725,778. GROUTITE. William Gold, Inc. SN 102,760. Pub. 10–17–61. Filed 8–16–60.

725,779. PANELUX. Monostructure Inc. SN 95,914. Pub. 10–24–61. Filed 4–27–60.

725,780. FLEX-TEE. Flexforms, Inc. SN 103,716. Pub. 10–17–61. Filed 8–31–60.

725,781. THERMO-STEEL. Glenn Sucetti. SN 104,650. Pub. 10–17–61. Filed 9–16–60.

725,782. SAFWAY AND DESIGN. Safway Steel Products, Inc. CONSOLIDATED CERTIFICATE. SN 121,126, pub. 10–10–61, filed 5–31–61, Cl. 12; SN 121,125, pub. 8–22–61, filed 5–31–61, Cl. 22; SN 104,757, pub. 8–15–61, filed 9–19–60, Cl. 50.

725,783. COLORCHIP. Johns-Manville Corporation. SN 106,206. Pub. 10–17–61. Filed 10–11–60.

725,784. KRAC-KALK. Dry Mix Concrete Company. SN 106,587. Pub. 10–17–61. Filed 10–18–60.

725,785. DOUBLE ARROW DESIGN. Vulcan Materials Company, d.b.a. Concrete Pipe Division. SN 107,085. Pub. 10–17–61. Filed 10–24–60.

725,786. FUL-TRIM. W. P. Fuller & Co. SN 107,605. Pub. 10–17–61. Filed 11–1–60.

725,787. V-WALL. H. H. Robertson Company. SN 107,703. Pub. 10–17–61. Filed 11–2–60.

725,788. GARDLITE. Reichhold Chemicals, Inc. SN 110,789. Pub. 10–17–61. Filed 12–23–60.

725,789. RIDGEWAY. Reichhold Chemicals, Inc. SN 110,790. Pub. 10–17–61. Filed 12–23–60.

725,790. NO-TRAK. Servicised Products Corporation. SN 111,815. Pub. 10–17–61. Filed 1–13–61.

725,791. SHOP-IN-CAR. Shop-In-Car Corp. SN 112,783. Pub. 10–17–61. Filed 1–30–61.

725,792. RAPISTAN. The Rapids-Standard Company, Inc. SN 113,136. Pub. 10–17–61. Filed 2–6–61.

725,793. THRUST-A-PAD. The Johnson Rubber Company. SN 113,731. Pub. 10–17–61. Filed 2–15–61.

725,794. OXIBAK. Harbison-Walker Refractories Company. SN 113,917. Pub. 10–17–61. Filed 2–17–61.

725,795. SASH-TRAC. Harvey Window Corporation. SN 114,958. Pub. 10–17–61. Filed 3–6–61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

725,796. GLASS MAID. Lawrence W. Heinze, d.b.a. Fiberglass Progress Co. SN 81,704. Pub. 10–17–61. Filed 9–21–59.

725,797. NIBCO. Nibco Inc. SN 94,797. Pub. 10–17–61. Filed 4–11–60.

725,798. FLOW-TOUCH. Thermotronics Corporation. SN 102,957. Pub. 10–17–61. Filed 8–18–60.

725,799. GUSHER. Betts Machine Company. SN 104,137. Pub. 10–9–61. Filed 9–9–60.

725,800. SPEEDFAST. Speedfast Corporation. SN 104,767. Pub. 10–17–61. Filed 9–19–60.

725,801. WHITEY. Whitey Research Tool Co. SN 105,038. Pub. 10–17–61. Filed 9–22–60.

725,802. WIRELINK. Reliable Electric Company. SN 107,285. Pub. 10–17–61. Filed 10–27–60.

725,803. FLEXIFORM. Société S.A.T.U.J.O. (Societe Anonyme). SN 108,399. Pub. 10–17–61. Filed 11–14–60.

725,804. STOP ETC. AND DESIGN. National Metal Products Company. SN 111,005. Pub. 10–17–61. Filed 12–29–60.

725,805. PEG-LOK. Hindley Manufacturing Company. SN 113,339. Pub. 10–17–61. Filed 2–9–61.

725,806. HOSTESS. Faultless Caster Corporation. SN 114,850. Pub. 10–17–61. Filed 3–3–61.

725,807. SKY JET. L. R. Nelson Mfg. Co., Inc. SN 116,413. Pub. 10–17–61. Filed 3–24–61.

725,808. RIGIDBILT AND DESIGN. Elkay Manufacturing Company. SN 116,490. Pub. 10–17–61. Filed 3–27–61.

725,809. DELRIN. E. I. du Pont de Nemours and Company. SN 118,340. Pub. 10–17–61. Filed 4–21–61.

Class 14—Metals and Metal Castings and Forgings

725,810. IVY. Sulphide Corporation Pty. Limited. SN 87,736. Pub. 10–17–61. Filed 12–21–59.

725,811. SULCORP. Sulphide Corporation Pty. Limited. SN 87,737. Pub. 10–17–61. Filed 12–21–59.

725,812. L–100–M. Vanadium-Alloys Steel Company. SN 117,315. Pub. 10–17–61. Filed 4–6–61.

725,813. BLAZONITE. Blazon, Inc. SN 117,765. Pub. 10–17–61. Filed 4–13–61.

Class 15—Oils and Greases

725,814. MACHINE-KUT. Sulfo, Inc. SN 115,195. Pub. 10–17–61. Filed 3–8–61.

725,815. SUNICOOL. Sun Oil Company. SN 116,168. Pub. 10–17–61. Filed 3–21–61.

725,816. BOT-O-LUB. MM & C Company, Inc. SN 116,823. Pub. 10–17–61. Filed 3–30–61.

725,817. CENT A GRADE. Sun Oil Company. SN 117,553. Pub. 10–17–61. Filed 4–10–61.

725,818. BLANKONTROL. W. L. Spencer Co. SN 117,920. Pub. 10–17–61. Filed 4–14–61.

725,819. SPRA-SAFE. Joseph Dixon Crucible Company. SN 118,039. Pub. 10–17–61. Filed 4–18–61.

725,820. DINO. Sinclair Refining Company. SN 118,292. Pub. 10–17–61. Filed 4–20–61.

Class 16—Protective and Decorative Coatings

725,821. POLYSHIELD PLASTIC. Lenoir Wood Finishing Company. SN 100,271. Pub. 10–17–61. Filed 7–5–60.

725,822. LUX-SOL. The Patterson-Sargent Company. SN 106,428. Pub. 10–17–61. Filed 10–14–60.

725,823. CHARM HOUSE AND REPRESENTATION OF A HOUSE. Arkwright Merchandising Corporation. SN 110,727. Pub. 10–17–61. Filed 12–23–60.

725,824. BETTY DAVIS. Betty Davis Paint Manufacturers. SN 112,526. Pub. 10–17–61. Filed 1–26–61.

725,825. FASHION TONES. Great Lakes Paint and Varnish Company. SN 113,209. Pub. 10–17–61. Filed 2–7–61.

725,826. EPOLOID. Con-Lux Paint Corporation. SN 113,328. Pub. 10–17–61. Filed 2–9–61.

725,827. CERAMI-GLAZE. Arvon Products Co., Inc. SN 114,385. Pub. 10–17–61. Filed 2–24–61.

725,828. TERAZZO-WALL. Arvon Products Co., Inc. SN 114,386. Pub. 10–17–61. Filed 2–24–61.

725,829. TOPOX. Tnemec Company, Inc. SN 115,015. Pub. 10–17–61. Filed 3–6–61.

725,830. PLASTI-DYE. Meyer Magid, d.b.a. The Magi-Dyes Co. SN 116,328. Pub. 10–17–61. Filed 3–23–61.

725,831. SPLEK. Airkote, Inc. SN 117,075. Pub. 10–17–61. Filed 4–4–61.

725,832. NUCLEAR. Norfolk Paint Corporation, d.b.a. Nuclear Research Associates. SN 117,126. Pub. 10–17–61. Filed 4–4–61.

725,833. FLAMBOYANT. The Sherwin-Williams Company. SN 117,915. Pub. 10–17–61. Filed 4–14–61.

725,834. HAYDONIZED. Haydon Auto Painting Systems, Inc. SN 118,075 Pub. 10–17–61. Filed 4–18–61.

725,835. HAYDONIZED AUTO PAINTING AND DESIGN. Haydon Auto Painting Systems, Inc. SN 118,076. Pub. 10–17–61. Filed 4–18–61.

725,836. LIQUI-MAT. The Tremco Manufacturing Company. SN 119,574. Pub. 10–17–61. Filed 5–8–61.

725,837. TERRASHIELD. Brulin & Company, Inc. SN 119,671. Pub. 10–17–61. Filed 5–10–61.

Class 17—Tobacco Products

725,838. ROYAL TIVOLI. Poul Petersen, d.b.a. Poul Petersen Tobaksfabriker. SN 107,284. Pub. 10–17–61. Filed 10–27–60.

Class 18—Medicines and Pharmaceutical Preparations

725,839. OTHO DERMA. The G. F. Harvey Company, Inc. SN 70,890. Pub. 8–23–59. Filed 4–6–59.

725,840. DAWE'S MICROFAC AND DESIGN. Dawe's Laboratories, Inc. SN 99,304. Pub. 1–3–61. Filed 6–20–60.

725,841. WINSTROL. Sterling Drug Inc. SN 113,037. Pub. 10–17–61. Filed 2–3–61.

Class 19—Vehicles

725,842. ROYAL. United States Rubber Company. SN 96,155. Pub. 10–17–61. Filed 4–29–60.

725,843. SKAGIT. Skagit Plastics, Inc. SN 115,265. Pub. 10–17–61. Filed 3–9–61.

725,844. SAFE-CHEK. Eaton Manufacturing Company. SN 118,668. Pub. 10–17–61. Filed 4–26–61.

725,845. TROJAN. Kit Manufacturing Company. SN 119,011. Pub. 10–17–61. Filed 5–1–61.

725,846. ALUMARINE. Kiekhaefer Corporation. SN 119,136. Pub. 10–17–61. Filed 5–2–61.

Class 20—Linoleum and Oiled Cloth

725,847. TAKORK. Congoleum-Nairn Inc. SN 105,055. Pub. 10–17–61. Filed 9–23–60.

725,848. COLOR TILE AND DESIGN. Color Tile of Colorado, Inc. SN 108,159. Pub. 10–17–61. Filed S.R. 11–10–60; Am. P.R. 6–19–61.

725,849. SIBONEY. The Dodge Cork Company, Incorporated. SN 117,177. Pub. 10–17–61. Filed 4–5–61.

725,850. TEMPEST. Congoleum-Nairn Inc. SN 117,617. Pub. 10–17–61. Filed 4–11–61.

Class 21—Electrical Apparatus, Machines, and Supplies

725,851. DESIGN OF FIGURE Y AND GREEK OMEGA. Fukuin Denki Kabushiki Kaisha, d.b.a. Fukuin Electric Works, Ltd. SN 30,010. Pub. 3–11–58. Filed 5–14–57.

725,852. TWO BATTERY LINE. States Batteries, Inc. SN 73,842. Pub. 10–17–61. Filed 5–15–59.

725,853. REPCO AND DESIGN. Repco Limited. SN 79,287. Pub. 10–17–61. Filed 8–10–59.

725,854. "TOTAL SOUND STEREO." Packard-Bell Electronics Corporation. SN 88,419. Pub. 10–17–61. Filed 1–4–60.

725,855. STEELY. Hanlon & Wilson Company. SN 95,079. Pub. 10–17–61. Filed 4–14–60.

725,856. ELECTROSHIFT. Bowmar Instrument Corporation. SN 102,187. Pub. 10–17–61. Filed 8–8–60.

725,857. INHECO. Industrial Heater Co. SN 104,726. Pub. 10–17–61. Filed 9–19–60.

725,858. STANDARD KOLLSMAN. Standard Kollsman Industries Inc. SN 104,957. Pub. 10–17–61. Filed 9–21–60.

725,859. COMPA-STATION. Motorola, Inc. SN 105,656. Pub. 10–17–61. Filed 10–3–60.

725,860. MAGNETI MARELLI. Fabbrica Italiana Magneti Marelli S.p.A. SN 105,732. Pub. 10–17–61. Filed 10–4–60.

725,861. RAPAC AND DESIGN. Square D Company. SN 106,007. Pub. 10–17–61. Filed 10–7–60.

725,862. SILARGON. Dr. Eugen Durrwachter, Doduco. SN 106,193. Pub. 10–17–61. Filed 10–11–60.

725,863. MAGIC MEMORY. The Soundscriber Corporation. SN 106,285. Pub. 10–17–61. Filed 10–12–60.

725,864. ULTRA-LUX. El-Tronics, Inc., assignee of Nu-Lite Corporation. SN 110,618. Pub. 10–17–61. Filed 12–21–60.

725,865. FALCON. The Electric Storage Battery Company. SN 112,528. Pub. 10–17–61. Filed 1–26–61.

725,866. HYDTROL. Cook Electric Company. SN 113,331. Pub. 10–17–61. Filed 2–9–61.

725,867. TYPELITER. George Gilbert. SN 115,331. Pub. 10–17–61. Filed 3–10–61.

725,868. STARAMA. Sunbeam Lighting Company. SN 115,542. Pub. 10–17–61. Filed 3–13–61.

725,869. EXAMATRON. Sunbeam Lighting Company. SN 115,543. Pub. 10–17–61. Filed 3–13–61.

725,870. SATIN-GLO. General Electric Company. SN 115,598. Pub. 10–17–61. Filed 3–14–61.

725,871. COLOROLA. Motorola, Inc. SN 115,711. Pub. 10–17–61. Filed 3–15–61.

725,872. VOLTALOC. International Basic Economy Corporation. SN 115,810. Pub. 10–17–61. Filed 3–16–61.

725,873. QUIK-C. Tasker Instruments Corporation. SN 115,855. Pub. 10–17–61. Filed 3–16–61.

725,874. TECHNIPOWER. Technipower, Incorporated. SN 115,856. Pub. 10–17–61. Filed 3–16–61.

725,875. CAPITRON. AMP Incorporated. SN 115,871. Pub. 10–17–61. Filed 3–17–61.

725,876. ROYAL AND DESIGN (VERTICAL). Royal Appliance Mfg. Co. SN 115,969. Pub. 10–17–61. Filed 3–17–61.

725,877. ROYAL AND DESIGN (HORIZONTAL). Royal Appliance Mfg. Co. SN 115,970. Pub. 10–17–61. Filed 3–17–61.

725,878. SWEEPER VAC. The Shetland Co. Inc. SN 116,845. Pub. 10–17–61. Filed 3–30–61.

725,879. BARBARA LANE. United Whelan Corporation. SN 117,065. Pub. 10–17–61. Filed 4–3–61.

725,880. VARILUG. Burndy Corporation. SN 117,088. Pub. 10–17–61. Filed 4–4–61.

725,881. VARISTUD. Burndy Corporation. SN 117,089. Pub. 10–17–61. Filed 4–4–61.

725,882. VARILINK. Burndy Corporation. SN 117,090. Pub. 10–17–61. Filed 4–4–61.

725,883. INSULUBE AND DESIGN. Herbert A. Henderson, d.b.a. H. A. Henderson. SN 118,078. Pub. 10–17–61. Filed 4–18–61.

725,884. STERILVOX. Connecticut Telephone & Electric Corporation of Meriden. SN 119,941. Pub. 10–17–61. Filed 5–15–61.

725,885. IMPERIAL. Paramount Supply, Inc. SN 120,000. Pub. 10–17–61. Filed 5–15–61.

725,886. SOUTHERN STATES SS AND DESIGN. Southern States Equipment Corporation. SN 120,142. Pub. 10–17–61. Filed 5–16–61.

Class 22—Games, Toys, and Sporting Goods

725,782. CONSOLIDATED CERTIFICATE. See Class 12.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

725,887. HYDROSTOP. Mannesmann Aktiengesellschaft. SN 107,275. Pub. 10–24–61. Filed 10–27–60.

725,888. UTINA. Utina-Elektrowerk G.m.b.H. SN 87,925. Pub. 10–17–61. Filed 12–23–59.

725,889. FLEX-O-RAIL. Flex-O-Rail, Incorporated. SN 95,887. Pub. 10–17–61. Filed 4–27–60.

725,890. ENGELBERG. Sundstrand Corporation. SN 101,047. Pub. 10–17–61. Filed 7–18–60.

725,891. McFLOCK. McFlock, Inc. SN 103,467. Pub. 10–17–61. Filed 8–26–60.

725,892. DOES-MORE. L. E. Wilson, d.b.a. Wilson Welding & Fabricating Company. SN 104,786. Pub. 10–17–61. Filed 9–19–60.

725,893. HAZELETT. Hazelett Strip-Casting Corporation. SN 105,807. Pub. 10–17–61. Filed 10–5–60.

725,894. PELLETIZER. Silbaugh Manufacturing Company, d.b.a. Dodgen Industries. SN 106,152. Pub. 10–17–61. Filed 10–10–60.

725,895. CRATE MATE AND DESIGN. Stokvis Multiton Corp. SN 109,119. Pub. 10–17–61. Filed 11–25–60.

725,896. DRUM CADDY. Holsclaw Bros., Inc. SN 109,795. Pub. 10–17–61. Filed 12–7–60.

725,897. ROLAMAT. Sir W. G. Armstrong Whitworth Aircraft Limited. SN 111,050. Pub. 10–17–61. Filed 12–27–60.

725,898. BISHMAN. Bishman Manufacturing Company. SN 113,898. Pub. 10–17–61. Filed 2–17–61.

725,899. SAFETY GREEN. C. A. Norgren Co. SN 114,039. Pub. 10–17–61. Filed 2–20–61.

725,900. ILLINIZING. Illinois Tool Works, Inc., by merger from Illinois Tool Works. SN 114,960. Pub. 10–17–61. Filed 3–6–61.

725,901. ATOMUFFLER. Allied Witan Co., Inc., d.b.a. Allied Witan Company. SN 115,288. Pub. 10–17–61. Filed 3–10–61.

725,902. AVCORAMIC. Avco Corporation. SN 115,884. Pub. 10–17–61. Filed 3–17–61.

725,903. JES CAL AND DESIGN WITHIN A CIRCLE. National Automatic Tool Company, Inc. SN 116,146. Pub. 10–17–61. Filed 3–21–61.

725,904. LEWIS. Union Special Machine Company. SN 116,273. Pub. 10–17–61. Filed 3–22–61.

725,905. JET. The Wood Shovel and Tool Company. SN 116,277. Pub. 10–17–61. Filed 3–22–61.

725,906. JET-LITE. The Wood Shovel and Tool Company. SN 116,279. Pub. 10–17–61. Filed 3–22–61.

725,907. AUTOMATIC COFFEE SHOPPE. Apco Products Corp. SN 116,457. Pub. 10–17–61. Filed 3–27–61.

725,908. HYDROCKET. Aerojet-General Corporation. SN 116,458. Pub. 10–17–61. Filed 3–27–61.

725,909. KWIX-O AND DESIGN. Unity Sewing Supply Co., Inc. SN 116,939. Pub. 10–17–61. Filed 3–31–61.

725,910. JOHN DEERE AND DEER DESIGN. Deere & Company. SN 116,983. Pub. 10–17–61. Filed 4–3–61.

725,911. HAN-DRAULIC. Elkhart Brass Manufacturing Company, Inc. SN 116,989. Pub. 10–17–61. Filed 4–3–61.

725,912. QUIKKLE. Quikut Incorporated. SN 117,532. Pub. 10–17–61. Filed 4–10–61.

725,913. QK (FANCIFUL). Quikut Incorporated. SN 117,533. Pub. 10–17–61. Filed 4–10–61.

725,914. WINGET. Winget Limited. SN 117,584. Pub. 10–17–61. Filed 4–10–61.

725,915. OGESTO. Beaver Tool & Engineering Corporation. SN 117,836. Pub. 10–17–61. Filed 4–14–61.

725,916. TIERMASTER. Lewis-Shepard Products, Inc. SN 117,884. Pub. 10–17–61. Filed 4–14–61.

725,917. SOUTHERN STATES SS AND DESIGN. Southern States Equipment Corporation. SN 120,140. Pub. 10–17–61. Filed 5–16–61.

Class 24 — Laundry Appliances and Machines

725,918. GOLDEN BOY. Nicholas G. Zaccaria, d.b.a. Pressco Supply Company. SN 102,444. Pub. 10–17–61. Filed 8–10–60.

725,919. GOLDEN BOY AND REPRESENTATION OF A SMILING BOY. Nicholas G. Zaccaria, d.b.a. Pressco Supply Company. SN 102,445. Pub. 10–17–61. Filed 8–10–60.

725,920. FREE SPAN. General Electric Company. SN 102,919. Pub. 10–17–61. Filed 8–18–60.

725,921. THRIFTEX. Raybestos-Manhattan, Inc. SN 117,647. Pub. 10–17–61. Filed 4–11–61.

Class 26 — Measuring and Scientific Appliances

725,922. VOL-U-METER AND DESIGN. George K. Porter, Incorporated. SN 75,578. Pub. 10–17–61. Filed 6–11–59.

725,923. DACOM. Eastman Kodak Company. SN 76,068. Pub. 10–17–61. Filed 6–19–59.

725,924. ABACUS INCORPORATED AND DESIGN. Abacus, Incorporated. SN 82,181. Pub. 10–17–61. Filed 9–28–59.

725,925. COMBO. United States Safety Service Co. SN 82,736. Pub. 10–17–61. Filed 10–5–59.

725,926. EXACTEL AND DESIGN. Eugene A. Glassey, d.b.a. Exactel Instrument Company. SN 94,293. Pub. 10–17–61. Filed 4–4–60.

725,927. SOLINE. Solar Products Corp., assignee of Solar Products Limited. SN 94,838. Pub. 10–17–61. Filed 4–11–60.

725,928. MOTOR GUIDE. Harvey E. Hanson Company, d.b.a. Gilbert Davis Co. SN 95,497. Pub. 10–17–61. Filed 4–21–60.

725,929. LUMATRON. Lumatron Electronics, Inc. SN 97,846. Pub. 10–17–61. Filed 5–25–60.

725,930. DYNAMATIC. The Vapor Recovery Systems Company. SN 101,525. Pub. 10–17–61. Filed 7–26–60.

725,931. TRANSICORD. Electro Methods Ltd. SN 104,026. Pub. 10–17–61. Filed 9–7–60.

725,932. MILK-TROL. Minneapolis-Honeywell Regulator Company. SN 108,064. Pub. 10–17–61. Filed 11–8–60.

725,933. SB AND DESIGN. Sklenena Bixuterie, Narodni Podnik. SN 111,129. Pub. 10–17–61. Filed 12–30–60.

725,934. ULTRACOUPLER. International Inspection Inc. SN 113,221. Pub. 10–17–61. Filed 2–7–61.

725,935. ULTRAGAGE. International Inspection Inc. SN 113,222. Pub. 10–17–61. Filed 2–7–61.

725,936. ULTRACHART. International Inspection Inc. SN 113,223. Pub. 10–17–61. Filed 2–7–61.

725,937. PROJECTO-LITE. General Aniline & Film Corporation. SN 115,140. Pub. 10–17–61. Filed 3–8–61.

725,938. SHURSET. Textron Inc. SN 115,546. Pub. 10–17–61. Filed 3–13–61.

725,939. GLAZE-ITE. The Electric Storage Battery Company. SN 116,218. Pub. 10–17–61. Filed 3–22–61.

725,940. NATAFLEX. Agfa Aktiengesellschaft. SN 117,074. Pub. 10–17–61. Filed 4–4–61.

725,941. RUTH-O-MATIC. Sun Chemical Corporation. SN 117,154. Pub. 10–17–61. Filed 4–5–61.

725,942. DUOJECTOR. Rainbow Crafts, Inc. SN 119,312. Pub. 10–17–61. Filed 5–4–61.

725,943. EVERGUARD. Everpure, Inc. SN 119,367. Pub. 10–17–61. Filed 5–5–61.

725,944. RIDL. Radiation Instrument Development Laboratory, Inc. SN 119,419. Pub. 10–17–61. Filed 5–5–61.

725,945. COLOR-MATIC. Cenco Instruments Corporation. SN 119,474. Pub. 10–17–61. Filed 5–8–61.

725,946. MONROE/SWEDA. Monroe Calculating Machine Company. SN 119,539. Pub. 10–17–61. Filed 5–8–61.

725,947. MAGNA-SIGHTER. Fabricon Company. SN 119,762. Pub. 10–17–61. Filed 5–11–61.

725,948. EXPAND-O-ADAPTER. Expando Meter Company. SN 120,083. Pub. 10–17–61. Filed 5–16–61.

725,949. EXPANDO. Expando Meter Company. SN 120,084. Pub. 10–17–61. Filed 5–16–61.

725,950. SAV-A-LAB. Seneca Audio-Visual Corp. SN 120,348. Pub. 10–17–61. Filed 5–18–61.

725,951. KAR KAM. Samuel N. Nemer. SN 120,434. Pub. 10–17–61. Filed 5–19–61.

725,952. DIP-CHEK. Comroe Laboratories, Inc. SN 120,497. Pub. 10–17–61. Filed 5–22–61.

725,953. COMBUSTOMETER. Protection Controls, Inc. SN 120,666. Pub. 10–17–61. Filed 5–23–61.

725,954. SELECTAFLOW. American Radiator & Standard Sanitary Corporation. SN 120,685. Pub. 10–17–61. Filed 5–24–61.

725,955. CRYO-SONICS. Cryo-Sonics, Inc. SN 120,698. Pub. 10–17–61. Filed 5–24–61.

725,956. LUMALITE. Sears, Roebuck and Co. SN 120,758. Pub. 10–17–61. Filed 5–24–61.

725,957. TRI ANGLE. Triangle Business Machines, Inc. SN 120,833. Pub. 10–17–61. Filed 5–25–61.

725,958. DIGITIME. Instrument Corporation of Florida. SN 120,888. Pub. 10–17–61. Filed 5–26–61.

725,959. VARIOTRONIC. Agfa Aktiengesellschaft. SN 120,931. Pub. 10–17–61. Filed 5–29–61.

Class 27 — Horological Instruments

725,960. MINICHOC. Novochoc S.A. SN 117,524. Pub. 10–17–61. Filed 4–10–61.

Class 29 — Brooms, Brushes, and Dusters

725,961. SQUEEZ-MASTER. Easy Day Manufacturing Company, d.b.a. Suburbanite Mop Company. SN 63,154. Pub. 6–30–59. Filed 11–25–58.

725,962. ORBITEX. American Standard Mfg. Co. SN 91,987. Pub. 10–17–61. Filed 3–2–60.

725,963. BRISTLE KLEEN. Lester R. Pellet. SN 107,210. Pub. 10–17–61. Filed 10–26–60.

725,964. DUALIFE. Weiler Brush Company Inc. SN 111,831. Pub. 10–17–61. Filed 1–13–61.

725,965. LLAMELLA. Star Brush Manufacturing Co., Inc. SN 115,086. Pub. 10–17–61. Filed 3–7–61.

Class 30 — Crockery, Earthenware, and Porcelain

725,966. WALLACE AND DESIGN. Wallace China Co., Ltd. SN 115,863. Pub. 10–17–61. Filed 3–16–61.

Class 31 — Filters and Refrigerators

725,967. PUR-FLO. Eskay Manufacturing Co., assignee of Standard-Keil Hardware Manufacturing Co., Inc. SN 105,389. Pub. 10–17–61. Filed 9–28–60.

725,968. WONDERBAR. Whirlpool Corporation. SN 112,344. Pub. 10–17–61. Filed 1–23–61.

Class 32 — Furniture and Upholstery

725,969. INTERNATIONAL. Schnadig Corporation. SN 87,827. Pub. 10–17–61. Filed 12–22–59.

725,970. MODERNA COLLECTION. Schnadig Corporation. SN 91,970. Pub. 10–17–61. Filed 3–1–60.

725,971. KUSH-ONS. R. G. Barry Corporation. SN 96,077. Pub. 10–17–61. Filed 4–29–60.

725,972. RANDO. Randolph Metal Works, Inc. SN 113,364. Pub. 10–17–61. Filed 2–9–61.

725,973. HYGENETTE. Kennedy Baby Bath Corporation. SN 115,607. Pub. 10–17–61. Filed 3–14–61.

725,974. LI'L TEXAS SPREAD. Li'l Texas Spread, Inc. SN 116,138. Pub. 10–17–61. Filed 3–21–61.

725,975. DIMENSIONAL. Shampaine Industries, Inc. SN 117,544. Pub. 10–17–61. Filed 4–10–61.

725,976. NYLOPRENE. Conway Bedding Company, Inc. SN 118,867. Pub. 10–17–61. Filed 4–28–61.

725,977. NORCOR. Norcor Manufacturing Company, Inc. SN 118,899. Pub. 10–17–61. Filed 4–28–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

725,978. PETROCARB. Cabot Corporation, by merger from Godfrey L. Cabot, Inc. SN 100,495. Pub. 10–17–61. Filed 7–8–60.

725,979. ALASKAN. The Steam-O-Matic Corporation, by change of name from National Engineering & Manufacturing, Inc. SN 104,634. Pub. 10–17–61. Filed 9–16–60.

725,980. PROBAT. Probat-Werke von Gimborn & Co., Kommanditgesellschaft. SN 106,743. Pub. 10–17–61. Filed 10–19–60.

725,981. TEMPAIRE. Star Metal Corporation. SN 112,417. Pub. 10–17–61. Filed 1–24–61.

725,982. QUADRA-MATIC. Elgen Manufacturing Corp. SN 113,628. Pub. 10–17–61. Filed 2–14–61.

725,983. TOWN HOUSE. Tennessee Stove Works, Inc. SN 114,810. Pub. 10–17–61. Filed 3–2–61.

725,984. BUG-O. Weld Tooling Corporation. SN 115,279. Pub. 10–17–61. Filed 3–9–61.

725,985. MODERNWAY. E. L. Mustee & Sons, Inc. SN 115,616. Pub. 10–17–61. Filed 3–14–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

725,986. N-R. The Goodyear Tire & Rubber Company. SN 113,829. Pub. 10–17–61. Filed 2–16–61.

725,987. DUO-CORD. The Goodyear Tire & Rubber Company. SN 113,830. Pub. 10–17–61. Filed 2–16–61.

725,988. DELUXE CHAMPION. The Firestone Tire & Rubber Company. SN 116,495. Pub. 10–17–61. Filed 3–27–61.

725,989. ULTRA M 200. Lee Rubber & Tire Corporation. SN 117,975. Pub. 10–17–61. Filed 4–17–61.

725,990. HDP. Anchor Coupling Co. Inc. SN 118,318. Pub. 10–17–61. Filed 4–21–61.

725,991. RENOVEX. Michelin Tire Corporation. SN 118,702. Pub. 10–17–61. Filed 4–26–61.

725,992. CURVE-FLO. The Goodyear Tire & Rubber Company. SN 119,124. Pub. 10–17–61. Filed 5–2–61.

Class 36 — Musical Instruments and Supplies

725,993. MAZZEO. Rosario Mazzeo. SN 96,716. Pub. 10–17–61. Filed 5–9–60.

725,994. CRUSADE. Crusade Records, Inc. SN 108,949. Pub. 10–17–61. Filed 11–23–60.

725,995. EXOTICA. Jack L. Westheimer, d.b.a. Westheimer Sales Co. SN 117,582. Pub. 10–17–61. Filed 4–10–61.

Class 38 — Prints and Publications

725,996. TI AND DESIGN. Texas Instruments Incorporated. SN 117,244. Pub. 10–17–61. Filed 4–10–61.

Class 39 — Clothing

725,997. IRONWEAR. Bee Em Mfg. Co. SN 71,340. Pub. 9–22–59. Filed 4–13–59.

725,998. T.V. STAR AND DESIGN. Ben Cooper, Inc. SN 75,403. Pub. 10–17–61. Filed 6–9–59.

725,999. MODERN LIFE. Shoe Corporation of America. SN 85,915. Pub. 10–17–61. Filed 11–23–59.

726,000. SEA BELLE. Belle Maid Foundations, Inc. SN 87,398. Pub. 10–17–61. Filed 12–16–59.

726,001. TAWNY TONES. Harry & Dan Grossman Furs, Inc. SN 91,378. Pub. 10–17–61. Filed 2–23–60.

726,002. ALIX OF MIAMI FLORIDA'S FIRST NAME IN AMERICAN FASHION. Alix of Miami, Inc. SN 93,121. Pub. 10–17–61. Filed 3–18–60.

726,003. LEG-AMOUR. Airmaid Hosiery Mills. SN 102,529. Pub. 10–17–61. Filed 8–12–60.

726,004. LIFESAVER. Ralph W. Green, d.b.a. Life Saver Garment & Disposable Pad Co. SN 103,018. Pub. 10–17–61. Filed 8–19–60.

726,005. PARIS HAUSER SPORT AND DESIGN. Hauser S.A.R.L. SN 104,259. Pub. 10–17–61. Filed 9–12–60.

726,006. "CHARLEY WEAVER." Cliff Arquette. SN 105,612. Pub. 10–17–61. Filed 10–3–60.

726,007. A BAMBURY ORIGINAL. Rosenblatt and Kahn, Inc. SN 105,763. Pub. 10–17–61. Filed 10–4–60.

726,008. E AND DESIGN. Edmont, Inc. SN 107,248. Pub. 10–17–61. Filed 10–27–60.

726,009. FLINGS. G. R. Kinney Corporation. SN 108,183. Pub. 10–17–61. Filed 11–10–60.

726,010. SUZETTE JUNIOR. Cay Artley Apparel, Inc. SN 109,773. Pub. 10–17–61. Filed 12–7–60.

726,011. SUZETTE CLASSIC. Cay Artley Apparel, Inc. SN 109,774. Pub. 10–17–61. Filed 12–7–60.

726,012. KEY MODERNS. Freeman Shoe Corporation. SN 109,864. Pub. 10–17–61. Filed 12–8–60.

726,013. KITTY KELLY. Kitty Kelly Shoe Corporation. SN 110,442. Pub. 10–17–61. Filed 12–19–60.

726,014. ENNYWEATHER. Fashion Park, Inc. SN 111,594. Pub. 10–17–61. Filed 1–10–61.

726,015. NYLSUISSE AND DESIGN. Societe de la Viscose Suisse. SN 111,693. Pub. 10–17–61. Filed 1–11–61.

726,016. JEANNE LANVIN. Société Anonyme Jeanne Lanvin. SN 111,929. Pub. 10–17–61. Filed 1–16–61.

726,017. OPUS 1 AND DESIGN. Opus 1 of Cambridge, Inc. SN 113,296. Pub. 10–17–61. Filed 2–8–61.

726,018. WHIPPERSNAPPER. M. Cohen and Sons Shoes Co., Inc. SN 113,326. Pub. 10–17–61. Filed 2–9–61.

726,019. FORWARD THRUST. Donald D. McCarthy. SN 113,348. Pub. 10–17–61. Filed 2–9–61.

726,020. HEREFIT. The Rhodesian Bata Shoe Company Limited. SN 114,642. Pub. 10–17–61. Filed 2–28–61.

726,021. SUDDENLY SLIM. Olga Company. SN 115,372. Pub. 10–17–61. Filed 3–10–61.

726,022. STRAIGHT A'S. Sidney Blumenthal & Co. Inc., d.b.a. The Adler Company. SN 115,889. Pub. 10–17–61. Filed 3–17–61.

726,023. SUDDENLY TRIM. Olga Company. SN 117,295. Pub. 10–17–61. Filed 4–6–61.

726,024. GOLDEN NEEDLE AND NEEDLE DESIGN. The Manhattan Shirt Company. SN 118,198. Pub. 10–17–61. Filed 4–20–61.

Class 40 — Fancy Goods, Furnishings, and Notions

726,025. BALLERINA. Walter Sporn, d.b.a. Walter Sporn Co. SN 115,390. Pub. 10–17–61. Filed 3–10–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

726,026. TERRI-CORD. Terri-Cord Mills, Inc. SN 103,226. Pub. 10–17–61. Filed 8–22–60.

726,027. NYLSUISSE AND DESIGN. Societe de la Viscose Suisse. SN 111,696. Pub. 10–17–61. Filed 1–11–61.

726,028. CANTONI VELVETEEN. Amity Fabrics Inc. SN 113,321. Pub. 10–17–61. Filed 2–9–61.

726,029. SUPERTRIQUE 32. Webco Mills, Inc. SN 114,895. Pub. 10–17–61. Filed 3–3–61.

726,030. MIGNONETTES. M. Lowenstein & Sons, Inc. SN 115,067. Pub. 10–17–61. Filed 3–7–61.

726,031. MINICARE NR. Joseph Bancroft & Sons Co. SN 116,198. Pub. 10–17–61. Filed 3–22–61.

726,032. TISSAVERRE. Tissages de Soieries Reunis (T.S.R.), Société Anonyme. SN 117,567. Pub. 10–17–61. Filed 4–10–61.

726,033. SPINDRIL. Shirley Fabrics Corporation. SN 117,812. Pub. 10–17–61. Filed 4–13–61.

726,034. AVICOLOR. American Viscose Corporation. SN 118,123. Pub. 10–17–61. Filed 4–19–61.

726,035. CRYSTAL. David Crystal, Inc. SN 118,566. Pub. 10–17–61. Filed 4–25–61.

Class 43 — Thread and Yarn

726,036. NYLO SPORTS. Emile Bernat & Sons Company. SN 115,421. Pub. 10–17–61. Filed 3–13–61.

Class 44 — Dental, Medical, and Surgical Appliances

726,037. SW 1 AND DESIGN. Becton Dickinson and Company. SN 99,118. Pub. 10–17–61. Filed 6–16–60.

726,038. SW 3 AND DESIGN. Becton Dickinson and Company. SN 99,119. Pub. 10–17–61. Filed 6–16–60.

726,039. SW 2 AND DESIGN. Becton Dickinson and Company. SN 99,120. Pub. 10–17–61. Filed 6–16–60.

726,040. DUAL HITE. Simmons Company. SN 114,800. Pub. 10–17–61. Filed 3–2–61.

726,041. ELECTROCARDIOCORDER. The Holter Research Foundation. SN 116,126. Pub. 10–17–61. Filed 3–21–61.

726,042. DYNA-FLEX. Johnson & Johnson. SN 118,083. Pub. 10–17–61. Filed 4–18–61.

726,043. STUCCA. A/S Dumex (Dumex Limited). SN 118,202. Pub. 10–17–61. Filed 4–20–61.

726,044. CORDIS. Cordis Corporation. SN 118,337. Pub. 10–17–61. Filed 4–21–61.

726,045. TEM-CURE. The Motloid Company. SN 118,473. Pub. 10–17–61. Filed 4–24–61.

726,046. THERMALITE. American Thermocraft Corp. SN 118,543. Pub. 10–17–61. Filed 4–25–61.

726,047. DISCO. Disco Dental Imports Sales Co. SN 118,773. Pub. 10–17–61. Filed 4–27–61.

Class 46 — Foods and Ingredients of Foods

726,048. CHARLEY WEAVER'S. Cliff Arquette. SN 105,611. Pub. 10–17–61. Filed 10–3–60.

Class 50 — Merchandise Not Otherwise Classified

725,782. CONSOLIDATED CERTIFICATE. See Class 12.

726,049. GIFTIE PAK AND DESIGN. Giftie Pak Company. SN 92,250. Pub. 10–17–61. Filed 3–7–60.

726,050. ADJUS TEEL AND DESIGN. Jocelyn Iron & Steel Corp. SN 98,711. Pub. 10–17–61. Filed 6–9–60.

726,051. WIL-NES. The Wil-Nes Corporation. SN 105,777. Pub. 10–17–61. Filed 10–4–60.

726,052. MAGVYGEN. The General Tire & Rubber Company. SN 116,502. Pub. 10–17–61. Filed 3–27–61.

726,053. KINGTENT. Germain's, Inc. SN 118,681. Pub. 10–17–61. Filed 4–26–61.

Class 51 — Cosmetics and Toilet Preparations

726,054. DERMAGENE. Hallmark Laboratories, Inc. SN 24,692. Pub. 2–9–60. Filed 2–19–57.

726,055. 21 PLUS. 21 Plus Products, Inc. SN 93,564. Pub. 12–20–60. Filed 3–23–60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6 — Chemicals and Chemical Compositions

726,056. Plantabbs Corporation, Baltimore, Md. SN 82,781. Filed P.R. 10–6–59; Am. S.R. 10–19–61.

STA-FRESH

For Chemical Compound for Extending the Life of Cut Flowers.
First use Sept. 2, 1959.

726,057. Specialty Products Co., Jersey City, N.J. SN 108,712. Filed P.R. 11–18–60; Am. S.R. 6–7–61.

KLENAL

For Non-Ionic Surfactant.
First use February 1959.

Class 12 — Construction Materials

726,058. Owensboro Brick & Tile Company, Owensboro, Ky. SN 81,739. Filed P.R. 9–21–59; Am. S.R. 10–30–61.

BRICKETTES

For Brick of One-Half Inch Thickness.
First use May 15, 1959.

726,059. Masonite Corporation, Chicago, Ill. SN 89,001. Filed P.R. 1–14–60; Am. S.R. 11–13–61.

FROSTED CHERRY

For Construction Board, and More Specifically, Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber With Coatings on the Surface Thereof for Decorative and Other Purposes.
First use Dec. 17, 1959.

726,060. Masonite Corporation, Chicago, Ill. SN 89,002. Filed 1–14–60.

COLONIAL CHERRY

For Construction Board, and More Specifically, Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber With Coatings on the Surface Thereof for Decorative and Other Purposes.
First use Dec. 17, 1959.

726,061. Masonite Corporation, Chicago, Ill. SN 89,003. Filed P.R. 1–14–60; Am. S.R. 11–13–61.

NATURA CHERRY

For Construction Board, and More Specifically, Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber With Coatings on the Surface Thereof for Decorative and Other Purposes.
First use Dec. 17, 1959.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

726,062. Flodar Corporation, Cleveland, Ohio. SN 80,979. Filed P.R. 9–8–59; Am. S.R. 10–27–61.

SELF-SEAT

For Port Fittings.
First use on or about Sept. 1, 1959.

Class 18 — Medicines and Pharmaceutical Preparations

726,063. Ames Company, Inc., Elkhart, Ind. SN 112,517. Filed 1–26–61.

TRABLETS

For Trapezoid-Shaped Tablet Which Contains a Medicinal Preparation—Namely, a Laxative.
First use July 31, 1959.

Class 22 — Games, Toys, and Sporting Goods

726,064. James Heddon's Sons, Dowagiac, Mich. SN 85,340. Filed P.R. 11–16–59; Am. S.R. 10–19–61.

FIN JIG

For Artificial Fish Lure.
First use Oct. 30, 1959.

726,065. Do-Ma Enterprises, Inc., Chicago, Ill. SN 94,880. Filed P.R. 4–12–60; Am. S.R. 10–25–61.

RETURN-A-BALL

For Game Device Comprising a Resiliently Supported Net From Which Baseballs or Other Balls Will Rebound With Virtually Undiminished Energy.
First use on or about Sept. 7, 1959.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

726,066. Ace Fastener Corporation, Chicago, Ill. SN 81,662. Filed P.R. 9–21–59; Am. S.R. 11–6–61.

LIFTOP

For Stapling Machines.
First use Sept. 15, 1958.

Class 38 — Prints and Publications

726,067. Congregational Publishing Society, d.b.a. The Pilgrim Press, Boston, Mass. SN 81,880. Filed P.R. 9–23–59; Am. S.R. 7–14–61.

LENTEN DEVOTIONS FOR YOUNG PEOPLE

For Lenten Publication Distributed Annually.
First use in 1936.

726,068. Merchandiser Publishing Company, Inc., New York, N.Y. SN 114,240. Filed P.R. 2-23-61; Am. S.R. 10-9-61.

CHAIN DRUG STORE
BUYERS DIRECTORY
OF VARIETY MERCHANDISE

For Trade Publication Produced Annually.
First use June 1960.

Class 44 — Dental, Medical, and Surgical Appliances

726,069. Deutsche Elektronik G.m.b.H., Berlin-Wilmersdorf, Germany. SN 108,756. Filed P.R. 11-21-60; Am. S.R. 10-16-61.

omnifon

Owner of German Reg. No. 621,656, dated June 6, 1952.
For Hearing Aids.

726,070. A. G. Spalding & Bros. Inc., Chicopee, Mass., assignee of Health Aids, Inc., New York, N.Y. SN 115,695. Filed P.R. 3-15-61; Am. S.R. 8-29-61.

Health Aids

For Electrically Operated Exercise Bicycles and Massage Tables.
First use in August 1958.

Class 46 — Foods and Ingredients of Foods

726,071. Diamond Crystal Salt Company, St. Clair, Mich., by change of name from Diamond Crystal Salt Co., St. Clair, Mich. SN 81,468. Filed P.R. 9-16-59; Am. S.R. 9-18-61.

VITAMIZED

For Salt.
First use Apr. 15, 1959.

726,072. Saucy Sue Products, Incorporated, Yonkers, N.Y. SN 84,342. Filed P.R. 10-30-59; Am. S.R. 8-28-61.

SPARIB

For Meat and Fish Sauces and Spreads.
First use February 1954.

726,073. Van Brode Milling Co., Inc., Clinton, Mass. SN 88,352. Filed P.R. 12-31-59; Am. S.R. 10-19-61.

PERSONAL

For Individual Portions of Salt, Ground Pepper, and Granulated Sugar.
First use Nov. 16, 1959.

726,074. The Kelling Nut Co., Chicago, Ill. SN 90,764. Filed P.R. 2-11-60; Am. S.R. 7-25-61.

ALWAYS SHINY FRESH!

For Plain and Salted Nut Meats.
First use 1947.

726,075. Spice Islands Company, South San Francisco, Calif. SN 92,318. Filed 3-7-60.

[redacted]

For Food Seasonings, Vinegars, Spices, Herbs, Shredded Coconut, Crystallized Ginger, Coffee, Tea, Dried Mushrooms, Vanilla Beans and Monosodium Glutamate Used To Intensify the Flavor of Foods.
First use in January 1959.

726,076. Birdsfoot Acres, Hinsdale, N.Y. SN 93,049. Filed P.R. 3-17-60; Am. S.R. 9-12-61.

Small-fry Eggs

For Fresh Eggs.
First use Sept. 8, 1958.

726,077. Ed. Messmer, Frankfurt am Main, Germany. SN 93,828. Filed P.R. 3-28-60; Am. S.R. 1-16-61.

MESSMER

Priority claimed under Sec. 44(d) on German application filed Sept. 29, 1959; Reg. No. 733,545, dated Feb. 8, 1960.
For Tea, Herb Tea; Products of Tea and Herb Tea—Namely, Prepared Mixtures of Tea or Herb Tea With Sugar, Tea or Herb Tea With Powdered Milk, and Tea or Herb Tea With Sugar and Powdered Milk; Tea or Herb Tea Tablets; Theine-Free Tea; Tea or Herb Tea Extract; Tea or Herb Tea Concentrate; Tea or Herb Tea Aromatizer; Tea, Herb Tea and Products Thereof—Namely, Prepared Mixtures of Tea and Herb Tea Packed in Immersible Bags; All Above for Nutrition, Consumption and Dietetic Purposes.

726,078. D'Arrigo Bros. Co. of California, d.b.a. D'Arrigo Bros. Co., San Jose, Calif. SN 95,258. Filed P.R. 4-18-60; Am. S.R. 10-9-61.



The drawing is lined for pink. Owner of Reg. Nos. 361,078, 625,542, and others.
For Fresh Vegetables.
First use in 1958; July 1, 1928, as to "Andy Boy."

726,079. Van Camp Sea Food Company, Port of Long Beach, Calif. SN 96,999. Filed P.R. 5-12-60; Am. S.R. 9-27-61.



For Canned Cat Food.
First use Mar. 3, 1960.

726,080. Franchett's Kruellers, Inc., Elizabeth, N.J. SN 99,052. Filed P.R. 6-15-60; Am. S.R. 8-11-61.

TOAST = A = DONUT

For Doughnuts.
First use June 1, 1960.

726,081. Robbins Brothers, Inc., Port Norris, N.J. SN 99,456. Filed P.R. 6-21-60; Am. S.R. 9-18-61.

"Jersey's Best"

For Canned Oysters.
First use Dec. 3, 1946.

726,082. Astor Products, Inc., Jacksonville, Fla. SN 101,073. Filed P.R. 7-19-60; Am. S.R. 10-9-61.

BREW-THRU

For Tea.
First use May 19, 1960.

726,083. Wardley Products Company, Inc., Long Island City, N.Y. SN 101,587. Filed P.R. 7-27-60; Am. S.R. 8-1-61.

SMALL FRY

For Tropical Fish Food.
First use Nov. 27, 1959.

726,084. Japan Food Corporation, San Francisco, Calif. SN 103,577. Filed P.R. 8-29-60; Am. S.R. 6-12-61.

TEA NUTS

For Encased Nuts, the Casing Consisting of Rice, Wheat Flour, Soy Sauce, Monosodium Glutamate, Vegetable Oil and Sugar.
First use April 1959.

726,085. Jerome Bostwick Griffin, d.b.a. J. B. Griffin Company, Norfolk, Va. SN 103,832. Filed P.R. 9-2-60; Am. S.R. 8-22-61.

Griffin's

For Instant Coffee.
First use Aug. 17, 1960.

726,086. Mom Farlow's Inc., Pittsville, Md. SN 104,820. Filed P.R. 9-20-60; Am. S.R. 9-22-61.

MOM FARLOW'S

For Corn Pone.
First use Aug. 22, 1960.

Class 47 — Wines

726,087. Paul Masson, Inc., d.b.a. Paul Masson Vineyards, San Francisco, Calif. SN 115,821. Filed 3-16-61.



"Paul Masson" is not the name of a living individual. The mark consists of the conformation of a bottle on which the name "Paul Masson" is displayed on a heart-shaped label, used as the container for applicant's wines. Owner of Reg. Nos. 348,215, 697,283, and others.
For Wines.
First use Oct. 1, 1952.

Class 49 — Distilled Alcoholic Liquors

726,088. Schenley Distillers, Inc., New York, N.Y. SN 92,184. Filed P.R. 3-4-60; Am. S.R. 10-23-61.

CERTIFIED

For Whiskey.
First use Feb. 18, 1960.

726,089. Hill, Thomson & Company Limited, Edinburgh, Scotland. SN 96,007. Filed 4-28-60.



Mr. P. T. Beasley is the jockey depicted and his consent that applicant use and register his portrait is of record. Owner of Reg. No. 687,686.
For Scotch Whisky.
First use July 1, 1938; in commerce July 1, 1938.

726,090. M. S. Walker, Inc., d.b.a. Allen's Ltd., Boston, Mass. SN 114,287. Filed P.R. 2-23-61; Am. S.R. 10-3-61.

KENNEDY'S

For Irish Whiskey.
First use Feb. 25, 1960.

726,091. Bertrams of Constantia Limited, Stellenbosch, Union of South Africa. SN 116,375. Filed 3-24-61.

Bertrams Van der Hum

For Liqueurs.
First use 1950; in commerce October 1953.

Class 51 — Cosmetics and Toilet Preparations

726,092. Richard Hudnut, Morris Plains, N.J. SN 85,496. Filed P.R. 11-17-59; Am. S.R. 10-4-61.

PINK IS FOR GIRLS

For Lipstick.
First use Oct. 15, 1959.

726,093. Richard Hudnut, Morris Plains, N.J. SN 85,497. Filed P.R. 11-17-59; Am. S.R. 10-4-61.

PEACH POODLE

For Lipstick.
First use Oct. 15, 1959.

726,094. Richard Hudnut, Morris Plains, N.J. SN 85,498. Filed P.R. 11-17-59; Am. S.R. 10-4-61.

GOLDEN HARLEQUIN

For Lipstick.
First use Oct. 15, 1959.

726,095. Richard Hudnut, Morris Plains, N.J. SN 88,759. Filed P.R. 1-11-60; Am. S.R. 10-13-61.

LIGHT UP ROSE

For Lipstick.
First use Dec. 16, 1959.

726,096. Richard Hudnut, Morris Plains, N.J. SN 88,760. Filed P.R. 1-11-60; Am. S.R. 10-13-61.

PERSIAN GOLD

For Hair Coloring.
First use Dec. 8, 1959.

726,097. Richard Hudnut, Morris Plains, N.J. SN 88,761. Filed P.R. 1-11-60; Am. S.R. 10-13-61.

BROWN LUSTRE

For Hair Coloring.
First use Dec. 8, 1959.

726,098. Richard Hudnut, Morris Plains, N.J. SN 88,762. Filed P.R. 1-11-60; Am. S.R. 10-13-61.

WHITE CRYSTAL

For Lipstick.
First use Dec. 16, 1959.

726,099. George H. Weyer, Inc., d.b.a. Affiliated Laboratories, Kansas City, Mo. SN 102,973. Filed P.R. 8-18-60; Am. S.R. 10-6-61.

BOUQUET LILAC

For Toilet Water.
First use 1927.

726,100. George H. Weyer, Inc., d.b.a. Affiliated Laboratories, Kansas City, Mo. SN 102,979. Filed P.R. 8-18-60; Am. S.R. 10-6-61.

PARFUM de Bonne Odeur

The English translation of the words "Parfum de Bonne Odeur" is "perfume of good fragrance."
For Personal Deodorant.
First use 1937.

Class 52 — Detergents and Soaps

726,101. Lestoil Products, Inc., Holyoke, Mass., assignee of Adell Chemical Co., Holyoke, Mass. SN 95,665. Filed P.R. 4-25-60; Am. S.R. 9-14-61.

WASH'N BLEACH

For Combination of Dry Bleach and Dry Detergent for Laundering.
First use Apr. 18, 1960.

726,102. Hysan Products Company, Chicago, Ill. SN 116,031. Filed P.R. 3-20-61; Am. S.R. 9-26-61.

VINYLCREME

For Detergent Cleaning Preparation.
First use Aug. 29, 1960.

Service Marks

Class 101 — Advertising and Business

726,103. National Downtown Week, Inc., New York, N.Y. SN 87,840. Filed P.R. 12-8-59; Am. S.R. 7-26-61.



For Advertising, Publicity and Promotion of the Business of Others in Downtown Sections of Cities Through Dissemination of Promotional Literature to the General Public and Through Sponsoring a National Contest.
First use June 19, 1958.

Class 106 — Material Treatment

726,104. Hyran, Inc., Los Angeles, Calif. SN 100,999. Filed P.R. 7-18-60; Am. S.R. 7-31-61.

CHARG 'N MAIL

For Film Processing Services—Namely, the Printing and Development of Photographic Film.
First use May 26, 1960.

TRADEMARK REGISTRATIONS RENEWED

147,103. IXL. Cl. 7. 10-4-21.
148,138. LIBERTY AND DESIGN. Cl. 15. 11-8-21.
148,353. BECLAWAT. Cl. 14. 11-15-21.
148,380. STANDARD EXOLEVER. Cl. 44. 11-15-21.
148,901. KADILLAC LINE. Cl. 37. 11-29-21.
148,990. BABBITT. Cl. 23. 12-6-21.
149,253. OCNUS. Cl. 15. 12-6-21.
149,447. M TRUSTWORTHY AND DESIGN. Cl. 23. 12-13-21.
150,573. SLOAN'S LINIMENT AND DESIGN. Cl. 18. 1-3-22.
150,627. HARLOMOOR. Cl. 42. 1-3-22.
150,974. K. Cl. 39. 1-10-22.
151,716. THE MINERAL WAX TWINS "CLEAN" AND "GOOD" AND DESIGN. Cl. 11. 2-14-22.
152,258. A'RES. Cl. 46. 2-21-22.
152,384. LITTLE WONDER. Cl. 23. 2-28-22.
152,763. SERENE. Cl. 17. 3-7-22.
152,771. FINLAND SUOMI AND DESIGN. Cl. 1. 3-7-22.
153,137. CEMENTOPPING. Cl. 12. 3-14-22.
153,316. WIZARD. Cl. 1. 3-14-22.
153,321. SNOWY OWL. Cl. 1. 3-14-22.
153,399. TNEMEC. Cl. 16. 3-21-22.
153,906. CARTER'S. Cl. 39. 3-28-22.
153,975. TIRRO. Cl. 5. 4-4-22.
389,373. CALTEX AND DESIGN. Cl. 6. 8-5-41.
389,374. CALTEX AND DESIGN. Cl. 15. 8-5-41.
389,750. PENTAPLEX. Cl. 18. 8-19-41.
389,865. CALTEX AND DESIGN. Cl. 16. 8-26-41.
389,902. CORONET AND DESIGN. Cl. 26. 8-26-41.
390,095. CALTEX AND DESIGN. Cl. 12. 9-9-41.
390,440. PARAVOX. Cl. 44. 9-23-41.
391,283. MORAER. Cl. 39. 10-28-41.
391,317. TEX-TAN. Cl. 3. 10-28-41.
391,354. STRATOSPHERE RAPPEPORT AND DESIGN. Cl. 3. 11-4-41.
391,366. ZOLITE. Cl. 16. 11-4-41.
391,598. BATHOFOAM. Cl. 51. 11-18-41.
391,798. ROUND TABLE. Cl. 38. 11-25-41.
391,809. SPOTTICATOR. Cl. 52. 11-25-41.
391,825. ESSO. Cl. 21. 11-25-41.
391,862. TEX TAN. Cl. 39. 11-25-41.
391,867. "LUBRI-TACT." Cl. 21. 11-25-41.
391,868. GLENWICK. Cl. 39. 11-25-41.
392,195. PENNSALT. Cl. 52. 12-16-41.
392,257. COOLERS. Cl. 39. 12-16-41.
392,357. RED SEAL AND DESIGN. Cl. 26. 12-23-41.
392,773. SELBY. Cl. 39. 1-13-42.
392,774. SELBY SHOES. Cl. 39. 1-13-42.
392,816. DRAKE AND DESIGN. Cl. 13. 1-13-42.
392,895. STYRITE. Cl. 1. 1-20-42.
392,944. NABISCO. Cl. 38. 1-20-42.
393,656. SPRING MORNING. Cl. 51. 2-24-42.
393,659. INTERLOCKING WARDROBE ETC. Cl. 39. 2-24-42.
393,670. REPRESENTATION OF KITTEN'S HEAD IN DESIGN OF CHEMICAL RETORT. Cl. 43. 2-24-42.
393,678. SYLVANIA. Cl. 6. 2-24-42.
393,679. SYLVANIA. Cl. 6. 2-24-42.
393,786. STYRALOY. Cl. 1. 3-3-42.
393,792. DRYDEX. Cl. 46. 3-3-42.
394,028. SKY FLAKE. Cl. 46. 3-17-42.
394,044. NAISCO. Cl. 12. 3-17-42.
394,113. STAR-CHEM. Cl. 6. 3-17-42.
394,615. ABOVE ALL. Cl. 51. 4-14-42.
394,766. SPRING MORNING. Cl. 52. 4-28-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

66,892. REPRESENTATION OF A YOUNG WOMAN. Cl. 18. 1-7-08.
600,118. GOLDEN CHALICE. Cl. 47. 12-28-54.
615,952. AIR MALE AND DESIGN. Cl. 51. 11-8-55.

The following registrations issued Nov. 15, 1955

616,003. FORMACOLOR. Cl. 1.
616,004. PLIOTHENE. Cl. 1.
616,005. UNICOLOR. Cl. 1.
616,012. HAZE-FADES. Cl. 4.
616,013. PORT-A-SHINE. Cl. 4.
616,014. LOBE-STIK. Cl. 5.
616,037. TW AND DESIGN. Cl. 12.
616,038. "WIN-TITE." Cl. 12.
616,047. ABA CO AND DESIGN. Cl. 12.
616,051. ACOUSTI-LUX. Cl. 12.
616,055. MICADYNE. Cl. 12.
616,056. FOLIATOR. Cl. 13.
616,060. KEROSTAL AND DESIGN. Cl. 16.
616,061. STONE-MASTER AND DESIGN. Cl. 16.
616,069. HEALTHWAYS ATHRID. Cl. 18.
616,079. MULSAFACT. Cl. 18.

616,088. AUROSEED. Cl. 18.
616,090. DEX-MINT. Cl. 18.
616,091. ROMIZIL. Cl. 18.
616,100. GENOBARB. Cl. 18.
616,101. REGULTON. Cl. 18.
616,104. R-THRI-TABS. Cl. 18.
616,105. CARRY AID. Cl. 18.
616,106. MARINA. Cl. 18.
616,109. PINTAIL. Cl. 19.
616,110. PLANET. Cl. 19.
616,113. "VISOR-GRIP." Cl. 19.
616,122. CAVALIER. Cl. 19.
616,123. RAIN-ETTE BABY SHIELDS AND DESIGN. Cl. 19.
616,130. SILVER MAID. Cl. 21.
616,134. SEA SKATE. Cl. 22.
616,137. RADIOACTIVE. Cl. 22.
616,138. HI! SPORT. Cl. 22.
616,141. CINCHER. Cl. 22.
616,142. PROSONIC. Cl. 22.
616,144. FIRE OUT AND DESIGN. Cl. 23.
616,147. ECA AND DESIGN. Cl. 23.
616,148. DARLING. Cl. 23.
616,150. DYNO-MITE. Cl. 23.
616,156. MOTO-VENT. Cl. 23.
616,158. SWIM-KLEEN. Cl. 23.
616,166. LOGRINC. Cl. 26.
616,171. AICO AND DESIGN (REPRESENTATION OF A CIRCLE AND ARROWS). Cl. 26.
616,174. RONSTRONG. Cl. 26.
616,175. RONBAR. Cl. 26.
616,176. RONKING. Cl. 26.
616,178. PHOTOME. Cl. 26.
616,179. DIGITRAN. Cl. 26.
616,183. RESOMAX. Cl. 26.
616,185. SHIELD DESIGN. Cl. 26.
616,187. WISP-A-LITE. Cl. 26.
616,188. TURFOMETER. Cl. 26.
616,189. "S-49ER." Cl. 26.
616,200. MELT-O-CYCLE. Cl. 31.
616,202. QUALITY LIVING. Cl. 31.
616,205. WEATHER KING EXCLUSIVE, ETC. AND DESIGN. Cl. 32.
616,208. U/R IN A BLACK CIRCLE. Cl. 32.
616,214. ALUMBRO. Cl. 34.
616,231. BRIGADOON. Cl. 39.
616,233. ROAMER. Cl. 39.
616,236. RITE-FIT TRAVELER. Cl. 39.
616,239. REPRESENTATION OF A WOMAN. Cl. 39.
616,244. CUTTER COPY. Cl. 39.
616,247. SUGAR 'N SPICE. Cl. 39.
616,251. WRANGLER FRONTIER JEANS. Cl. 39.
616,254. TAYLORD. Cl. 39.
616,260. SATURDAY SHIRT. Cl. 39.
616,262. SOLANO. Cl. 39.
616,265. WEE WISP. Cl. 39.
616,266. WISPON. Cl. 39.
616,271. LAZY PJ'S AND DESIGN. Cl. 39.
616,274. MR. MUSCLE. Cl. 39.
616,275. TOPPERS. Cl. 40.
616,278. KOZEE KOMFORT SMOOTHY. Cl. 42.
616,279. KOZEE KOMFORT TUFFY. Cl. 42.
616,280. BLOSSOM TONES. Cl. 42.
616,281. ALPAQUITA. Cl. 42.
616,285. AQUATROL. Cl. 44.
616,289. GEE-BEE. Cl. 45.
616,292. HAMPSHIRE. Cl. 46.
616,293. HENRY DENNY & SONS AND DESIGN. Cl. 46.
616,294. THE MERRY COW ETC. AND DESIGN. Cl. 46.
616,296. PIPIN' HOT. Cl. 46.
616,300. CHARKO BURGER AND DESIGN. Cl. 46.
616,301. FEW-CAL. Cl. 46.
616,302. DINE'R-TAKE. Cl. 46.
616,307. STAR BURSTS. Cl. 46.
616,309. VITALITY AND REPRESENTATION OF DOG. Cl. 46.
616,312. RSW. Cl. 46.
616,317. PELCO. Cl. 46.
616,324. STAND-E-Z-MAT. Cl. 50.
616,325. THE WNU ORIGINAL DURETYPE AND DESIGN. Cl. 50.
616,329. PERMA BROW. Cl. 51.
616,330. DEMI-PERM. Cl. 51.
616,331. DEMI-WAVE. Cl. 51.
616,337. NAF ETC. AND DESIGN. Cl. 100.
616,339. AROUND THE TOWN WITH MR. BROWN AND DESIGN. Cl. 107.
616,340. ALLEN GRANGER. Cl. 107.
616,342. THE SHINE THAT KEEPS LEATHER ALIVE. Cl. 4.
616,347. ADVANCE PATTERN BOOK FASHIONS FOR CHILDREN. Cl. 38.
616,350. TRAPPER. Cl. 38.
616,353. CHICKEN MITTS. Cl. 39.
616,354. CASHMERIZED. Cl. 39.
616,359. BREATHE EZE. Cl. 39.
616,360. STA-SET. Cl. 42.
616,367. NEVER-SLIP. Cl. 50.
616,368. NYLONLEATHER. Cl. 50.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

714,150. WINCRAFT FURNITURE AND DESIGN. Cl. 32. 4–18–61. Bill Karpen Winberg and Co., City of Industry, Calif. Corrected: In the statement, column 1, line 2, "1330" should be deleted and *13300* should be inserted.

715,068. ROYAL-MATIC. Cl. 32. 5–9–61. Royal Metal Manufacturing Company, Inc., New York, N.Y. Corrected: In the statement, column 1, line 1, "New York" should be deleted and *Delaware* should be inserted.

721,994. HELIX. Cl. 39. 9–26–61. Phrix-Werke Aktiengesellschaft, Hamburg, Germany. Corrected: In the statement, column 1, line 1, "Prix-" should be deleted and *Phrix-* should be inserted.

722,177. MERIDIAN. Cl. 19. 10–3–61. Glasspar Company, Santa Ana, Calif. Corrected: In the heading, "Patented" should be deleted and *Registered* should be inserted.

722,506. COLOR CREST. Cl. 16. 10–10–61. Ampruf Paint Co., Inc., El Monte, Calif. Corrected: In the statement, column 1, line 1, "Amprum" should be deleted and *Ampruf* should be inserted.

722,668. MOKATIA. Cl. 49. 10–10–61. Angostura Bitters (Dr. J. G. B. Siegert & Sons) Limited, Port of Spain, Trinidad. Corrected: In the heading "Patented" should be deleted and *Registered* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 4—Abrasives and Polishing Materials

432,212. Aug. 26, 1947. The American Products Company, d.b.a. Zanol Products Company, Cincinnati, Ohio, assignor to Royal Home Products, Incorporated, Richmond, Va. Pub. by Curley Company, Inc., Camden, N.J.

JIFFY

For Cleaning, Scouring and Polishing Substances and Articles—viz., for a Preparation for Cleaning Upholstery and Rugs; for Cleaning Paste for General Household Cleaning and Being in the Nature of a Soft Soap and Solvent for and Remover of Oils, Grease, Dirt and Grime From Various Surfaces Such as Linoleums, Oil Cloth, Painted Surfaces, Woodwork, Vitreous Articles, Stoves, Porcelain and the Like; for Hand Soap in Bar, Flake, Paste and Comminuted Forms; for Shoe Cleaner; for Shoe Polish; for Spot Remover; for Shampoo Preparation for Cleaning Hosiery, Lingerie and Other Articles Made of Fine Fabrics, Silk, Rayon, Nylon and Similar Yarns; for Glass Cleaner, Stove Polish, Shoe Cleaner, Flush Bowl Cleaner Having Incidental Deodorizing Properties; Chemical Preparations for Cleaning and Polishing Dishes, Silverware, Pots, Pans, Vitreous Surfaces, Enamelware, Porcelain, China, Glassware and Finished Surfaces of Wood, Composition and Metal; Chemical Preparation for Use on Fabrics for Removing Spots and Soil Therefrom; for Soap Flakes; for Metal Polish; for Cleaning, Scouring and Polishing Pads; for Dish Cleaner and Water Softener Having Detergent and Other Properties of Soap for Cleaning and Polishing Dishes, Silverware, China, Glassware, Etc.; Glass Cleaner, Laundry Soaps, Bath Soaps and Metal Polishing Cloths.

434,549. Nov. 25, 1947. The American Products Company, d.b.a. Zanol Products Company, Cincinnati, Ohio, assignor to Royal Home Products, Incorporated, Richmond, Va. Pub. by Curley Company, Inc., Camden, N.J.

JIFFY

For Scratch Remover, in the Nature of a Fluid or Paste Preparation Used in Polishing and Cleaning Various Finish Surfaces; Scratch Removing Polish; Automobile Polish, and Floor Wax.

Class 6—Chemicals and Chemical Compositions

441,169. Oct. 26, 1948. The American Products Company, d.b.a. Zanol Products Company, Cincinnati, Ohio, assignor to Royal Home Products, Incorporated, Richmond, Va. Pub. by Curley Company, Inc., Camden, N.J.

Jiffy

For Chemical Preparation Used as a Water Softener; Chemical Deodorizing Preparation Used as a Drain Pipe Opener; Chemical Deodorizing Preparation Used as a Flush Bowl Cleaner; Chemical Preparation Used for Deodorizing and Purifying Household Refrigerators and the Like.

Class 12—Construction Materials

394,161. Mar. 24, 1942. Roxseal Company, Inc., Long Island City, N.Y. Pub. by registrant.

Patcho

For Ready-Mixed Material for Patching and/or Resurfacing Concrete and Other Masonry Surfaces.

Class 18—Medicines and Pharmaceutical Preparations

380,482. Aug. 20, 1940. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

CITRALKA

For Preparation for Maintaining the Physiological Alkalinity of the Blood and Urine.

388,107. June 10, 1941. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

HEXAVIBEX

For Preparation Containing Vitamin B_6 (Pyridoxine Hydrochloride) for Use in Prevention of Deficiencies of This Factor.

389,446. Aug. 5, 1941. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

TAKA-COMBEX

For Combination of Vitamin B Complex With a Diastatic Enzyme for Use in Treatment of Certain Digestive Disturbances and Vitamin B Deficiencies.

389,464. Aug. 5, 1941. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

PROMIN

For Chemotherapeutic Agent for Use in Treatment of Hemolytic Streptococcic and Other Bacterial Infections.

391,311. Oct. 28, 1941. Cole Chemical Company, St. Louis, Mo. Pub. by registrant.

BILCAIN

For Pharmaceutical Preparation for Occasional Constipation.

419,977. Mar. 19, 1946. Associated Chemicals Limited, Richmond, England. Pub. by Nicholas International Limited, Toronto, Ontario, Canada.

PERSOMNIA

For Sedative and Soporific Pharmaceutical Preparation.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

152,506. Feb. 28, 1922. F. L. Smithe Machine Company, Incorporated, New York, N.Y. Pub. by registrant.

CHAMPION

For Machines for Making Envelopes.

Class 26—Measuring and Scientific Appliances

390,806. Oct. 7, 1941. Howard Wall Limited, London, England. Pub. by registrant.

DEAN

For Measuring Tapes.

Class 34—Heating, Lighting, and Ventilating Apparatus

278,558. Dec. 23, 1930. The Surface Combustion Co. Incorporated, Toledo, Ohio. Pub. by Midland-Ross Corporation, Columbus, Ohio.

JANITROL

For Gas-Burning Appliances Adapted for Converting House-Heating Furnaces Originally Designed for Burning Solid Fuel Into Gas-Fired Furnaces by Removing the Fuel Grates.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

228,947. June 14, 1927. Wilkening Manufacturing Company, Philadelphia, Pa. Pub. by registrant.

DUOFLEX

For Piston Rings.

Class 38—Prints and Publications

393,921. Mar. 10, 1942. United Press Association, New York, N.Y. Pub. by United Press International, Inc., New York, N.Y.

The Sports Patrol

For Title for a Section or Column Appearing in Daily and Sunday Newspapers.

Class 39—Clothing

390,416. Sept. 23, 1941. The Mallory Hat Company, Danbury, Conn. Pub. by John B. Stetson Company, Philadelphia, Pa.

PLIAFELT

For Men's and Boys' Hats.

390,433. Sept. 23, 1941. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.

STETSON
THREE WAY

The words "Three Way" are disclaimed.
For Men's and Women's Hats.

390,581. Sept. 30, 1941. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.



The word "Original" is disclaimed.
For Hats for Men, Women and Children.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

392,164. Dec. 16, 1941. Golding Bros. Company, Inc., New York, N.Y. Pub. by registrant.

SANITEX

For Germ Resistant Piece Goods Made of Cotton, Wool, Rayon and Mixtures of Same.

Class 44—Dental, Medical, and Surgical Appliances

441,174. Oct. 26, 1948. Voss Cutlery Company, Inc., New York, N.Y. Pub. by Edwin Jay, Inc., New York, N.Y.

Uni-Cut

For Nail and Cuticle Nippers.

Class 46—Foods and Ingredients of Foods

353,567. Jan. 11, 1938. Chr. Hansen's Laboratory, Inc., West Allis, Wis. Pub. by registrant.

HANSEN'S

For Rennet.

Class 51—Cosmetics and Toilet Preparations

250,755. Dec. 18, 1928. The American Products Company, Cincinnati, Ohio. Pub. by Curley Company, Inc., Camden, N.J.

DERMALINE

For Hand Soap, Facial Soap, Shaving Cream in Paste Form for Use Before Shaving, Shaving Soap, and Shaving Stick.

INDEX OF REGISTRANTS

JANUARY 2, 1962

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

A/S Dumex (Dumex Ltd.), Copenhagen S, Denmark. 726,043, pub. 10–17–61. Cl. 44.
Abacus, Inc., Los Angeles, Calif. 725,924, pub. 10–17–61. Cl. 26.
Abbott Laboratories, North Chicago, Ill. 616,088, canc. Cl. 18.
Ace Fastener Corp., Chicago, Ill. 726,066. Cl. 23.
Adams Engineering Co., Inc., Miami, Fla. 616,205, canc. Cl. 32.
Adell Chemical Co. : *See*—
Lestoll Products, Inc.
Adler Co., The : *See*—
Blumenthal, Sidney, & Co. Inc.
Advance Pattern Co., Inc., New York, N.Y. 616,347, canc. Cl. 38.
Aerojet-General Corp., Azusa, Calif. 725,908, pub. 10–17–61. Cl. 23.
Affiliated Laboratories : *See*—
Weyer, George H., Inc.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 725,940, pub. 10–17–61. Cl. 26.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 725,959, pub. 10–17–61. Cl. 26.
Ahrendt Instrument Co., The, College Park, Md. 616,171, canc. Cl. 26.
Airkote, Inc., New York, N.Y. 725,831, pub. 10–17–61. Cl. 16.
Airmaid Hosiery Mills, Dallas, Tex. 726,003, pub. 10–17–61. Cl. 39.
Alix of Miami, Inc., Miami, Fla. 726,002, pub. 10–17–61. Cl. 39.
Aljay Products, Inc., New York, N.Y. 616,144, canc. Cl. 23.
Allen's Ltd. : *See*—
Walker, M. S., Inc.
Allied Witan Co. : *See*—
Allied Witan Co., Inc.
Allied Witan Co., Inc., d b.a. Allied Witan Co., Cleveland, Ohio. 725,901, pub. 10–17–61. Cl. 23.
American Bitumuls & Asphalt Co., Wilmington, Del. 616,047, canc. Cl. 12.
American Maize-Products Co., New York, N.Y. 393,792, ren. 1–2–62. Cl. 46.
American Maize-Products Co., New York, N.Y. 394,113, ren. 1–2–62. Cl. 6.
American Optical Co., Southbridge, Mass. 616,187, canc. Cl. 26.
American Products Co., The, Cincinnati, Ohio, by Curley Co., Inc., Camden, N.J. 250,755, 12(c) pub. 1–2–62. Cl. 51.
American Products Co., The, to Royal Home Products, Inc., Richmond, Va., Cincinnati, Ohio, by Curley Co., Inc., Camden, N.J. 441,169, 12(c) pub. 1–2–62. Cl. 6.
American Products Co., The, d.b.a. Zanol Products Co., to Royal Home Products Inc., Richmond, Va., Cincinnati, Ohio, by Curley Co., Inc., Camden, N.J. 432,212, 12(c) pub. 1–2–62. Cl. 4.
American Products Co., The, d.b.a. Zanol Products Co., to Royal Home Products Inc., Richmond, Va., Cincinnati, Ohio, by Curley Co., Inc., Camden, N.J. 434,549, 12(c) pub. 1–2–62. Cl. 4.
American Radiator & Standard Sanitary Corp., New York, N.Y. 725,954, pub. 10–17–61. Cl. 26.
American Standard Mfg. Co., Chicago, Ill. 725,962, pub. 10–17–61. Cl. 29.
American Thermocraft Corp., Bloomfield, N.J. 726,046, pub. 10–17–61. Cl. 44.
American Tobacco Co., The : *See*—
Falk Tobacco Co., *Inc.*
American Viscose Corp. : *See*—
Sylvania Industrial Corp.
American Viscose Corp., Philadelphia, Pa. 726,034, pub. 10–17–61. Cl. 42.
Ames Co., Inc., Elkhart, Ind. 726,063. Cl. 18.
Amity Fabrics Inc., New York, N.Y. 726,028, pub. 10–17–61. Cl. 42.
Amp Inc., Harrisburg, Pa. 725,875, pub. 10–17–61. Cl. 21.
Ampruf Paint Co., Inc., El Monte, Calif. 722,506, cor. Cl. 16.
Anchor Coupling Co. Inc., Libertyville, Ill. 725,990, pub. 10–17–61. Cl. 35.
Angostura Bitters (Dr. J. G. B. Siegert & Sons) Ltd., Port of Spain, Trinidad. 722,668, cor. Cl. 49.
Apco Products Corp., New York, N.Y. 725,907, pub. 10–17–61. Cl. 23.
Arkwright Merchandising Corp., New York, N.Y. 725,823, pub. 10–17–61. Cl. 16.
Armor Oil & Chemical Co., Kansas City, Mo., to Tnemec Co., Inc., North Kansas City, Mo. 153,399, ren. 1–2–62. Cl. 16.
Armstrong, W. G., Sr., Whitworth Aircraft Ltd., Baginton, near Conventry, England. 725,897, pub. 10–17–61. Cl. 23.
Arquette, Cliff, Gettysburg, Pa. 726,006, pub. 10–17–61. Cl. 39.
Arquette, Cliff, Gettysburg, Pa. 726,048, pub. 10–17–61. Cl. 46.
Arvon Products Co., Inc., Philadelphia, Pa. 725,827–8, pub. 10–17–61. Cl. 16.
Associated Chemicals Ltd., Richmond, England, by Nicholas International Ltd., Toronto, Ontario, Canada. 419,977, 12(c) pub. 1–2–62. Cl. 18.
Astor Products, Inc., Jacksonville, Fla. 726,082. Cl. 46.
Auto-Photo Co., Los Angeles, Calif. 616,178, canc. Cl. 26.
Avco Corp., Nashville, Tenn. 725,902, pub. 10–17–61. Cl. 23.
B-M-R Laboratories, Inc., Atlanta, Ga. 616,090, canc. Cl. 18.
Babbitt Steam Specialty Co., New Bedford, Mass. 148,990, ren. 1–2–62. Cl. 23.
Back Export & Import Co. : *See*—
Back, Alexander.
Sender, Stefan.
Bancroft, Joseph, & Sons Co., Wilmington, Del. 726,031, pub. 10–17–61. Cl. 42.
Barry, R. G., Corp., Columbus, Ohio. 725,971, pub. 10–17–61. Cl. 32.
Bathasweet Corp. : *See*—
Welch, C. S., Co., The.
Bathasweet Corp. : *See*—
Welch, C. S., Co., The.
Bauer & Black, Chicago, Ill., to The Kendall Co., Boston, Mass. 153,975, ren. 1–2–62. Cl. 5.
Beamon, Amos R., d.b.a. Marina Products Co., Los Angeles, Calif. 616,106, canc. Cl. 18.
Beaver Tool & Engineering Corp., Gaylord, Mich. 725,915, pub. 10–17–61. Cl. 23.
Beckett, Laycock & Watkinson Ltd., London, England. 148,353, ren. 1–2–62. Cl. 14.
Bee Em Mfg. Co., Philadelphia, Pa. 725,997, pub. 9–22–59. Cl. 39.
Belding Heminway Co., to Belding Heminway Co., Inc., New York, N.Y. 393,670, ren. 1–2–62. Cl. 43.
Belding Heminway Co., Inc. : *See*—
Belding Heminway Co.
Belle Maid Foundations, Inc., Brooklyn, N.Y. 726,000, pub. 10–17–61. Cl. 39.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 726,036, pub. 10–17–61. Cl. 43.
Bertrams of Constantia Ltd., Stellebosch, Union of South Africa. 726,091. Cl. 49.
Best Foods Ltd., Alperton, Wembley, Middlesex, England. 616,289, canc. Cl. 45.
Betts Machine Co., Warren, Pa. 725,799, pub. 10–17–61. Cl. 13.
Biddle, James G., Co., Philadelphia, Pa. 391,867, ren. 1–2–62. Cl. 21.
Birdsfoot Acres, Hinsdale, N.Y. 726,076. Cl. 46.
Bisceglia Brothers Wine Co., Fresno, Calif. 600,118, canc. Cl. 47.
Bishman Mfg. Co., Osseo, Minn. 725,898, pub. 10–17–61. Cl. 23.
Blazon, Inc., Cuyahoga Falls, Ohio. 725,813, pub. 10–17–61. Cl. 14.
Bloch Brothers Tobacco Co., The, Wheeling, W. Va. 725,772, pub. 10–17–61. Cl. 8.
Blue Bell, Inc., Greensboro, N.C. 616,251, canc. Cl. 39.
Blumenthal, Sidney, & Co. Inc., d.b.á. The Adler Co., New York, N.Y. 726,022, pub. 10–17–61. Cl. 39.
Bowmar Instrument Corp., Fort Wayne, Ind. 725,856, pub. 10–17–61. Cl. 21.
Bradfield Regulator Co., The, Atlanta, Ga. 66,892, canc. Cl. 18.
Brandt & Walther, Bremen, Germany. 725,767, pub. 10–17–61. Cl. 4.
Breuninger Brothers, Coatesville, Pa. 616,300, canc. Cl. 46.
Brown's Velvet Ice Cream, Inc., New Orleans, La. 616,339, canc. Cl. 107.
Brulin & Co., Inc., Indianapolis, Ind. 725,837, pub. 10–17–61. Cl. 16.
Bunn Supply Co., Chicago, Ill. 725,770, pub. 10–17–61. Cl. 7.
Burndy Corp., Norwalk, Conn. 725,880–2, pub. 10–17–61. Cl. 21.
Cabet Corp., Wilmington, Del., by merger from Godfrey L. Cabot, Inc., Boston, Mass. 725,978, pub. 10–17–61. Cl. 34.
Cabot, Godfrey L., Inc. : *See*—
Cabet Corp.
California Texas Oil Corp. : *See*—
California Texas Oil Co., Ltd.
California Texas Oil Co., Ltd., to California Texas Oil Corp., New York, N.Y. 389,373–4, ren. 1–2–62. Cl. 6.
California Texas Oil Co., Ltd., to California Texas Oil Corp., New York, N.Y. 389,865, ren. 1–2–62. Cl. 16.
California Texas Oil Co., Ltd., to California Texas Oil Corp., New York, N.Y. 390,095, ren. 1–2–62. Cl. 12.
Carey, E. A., Co. : *See*—
Doppelt, Max J.
Carter, William, Co., The, Needham Heights, Mass. 153,906, ren. 1–2–62. Cl. 39.
Cavitron Ultrasonics, Inc. : *See*—
Clevel and Dental Mfg. Co.
Cay Artley Apparel, Inc., Johnstown, Pa. 726,010–11, pub. 10–17–61. Cl. 39.
Celotex Corp., The, Chicago, Ill. 616,051, canc. Cl. 12.
Cenco Instruments Corp., Chicago, Ill. 725,945, pub. 10–17–61. Cl. 26.
Clark, Robert H. : *See*—
Honegger, John A.

Clevel and Dental Mfg. Co., to Cavitron Ultrasonics, Inc., Cleveland, Ohio. 148,380, ren. 1–2–62. Cl. 44.
Cleveland Builders Supply and Brick Co., The, to The Cleveland Builders Supply Co., Cleveland, Ohio. 153,137, ren. 1–2–62. Cl. 12.
Cleveland Builders Supply Co., The: *See*—
Cleveland Builders Supply and Brick Co., The.
Cohen, M., and Sons Shoes Co., Inc., New York, N.Y. 726,018, pub. 10–17–61. Cl. 39.
Cole Chemical Co., St. Louis, Mo. 391,311, 12(c) pub. 1–2–62. Cl. 18.
Color Tile of Colorado, Inc., Denver, Colo. 725,848, pub. 10–17–61. Cl. 20.
Columbia Carbon Co., The, Dayton, Ohio. 151,716, ren. 1–2–62. Cl. 11.
Comroe Laboratories, Inc., Chicago, Ill. 725,952, pub. 10–17–61. Cl. 26.
Concrete Pipe Division: *See*—
Vulcan Materials Co.
Congoleum-Nairn Inc., Kearny, N.J. 725,847, pub. 10–17–61. Cl. 20.
Congoleum-Nairn Inc., Kearny, N.J. 725,850, pub. 10–17–61. Cl. 20.
Congregational Publishing Society, d.b.a. The Pilgrim Press, Boston, Mass. 726,067. Cl. 38.
Con-Lux Paint Corp., Metuchen, N.J. 725,826, pub. 10–17–61. Cl. 16.
Connecticut Telephone & Electric Corp. of Meriden, Meriden, Conn. 725,884, pub. 10–17–61. Cl. 21.
Conway Bedding Co., Inc., Chicopee, Mass. 725,976, pub. 10–17–61. Cl. 32.
Cook Electric Co., Chicago, Ill. 725,866, pub. 10–17–61. Cl. 21.
Cooper, Ben, Inc., Brooklyn, N.Y. 725,998, pub. 10–17–61. Cl. 39.
Cordia Corp., Miami, Fla. 726,044, pub. 10–17–61. Cl. 44.
Crusade Records, Inc., New York, N.Y. 725,994, pub. 10–17–61. Cl. 36.
Cryo-Sonics, Inc., Los Angeles, Calif. 725,955, pub. 10–17–61. Cl. 26.
Crystal, David, Inc., New York, N.Y. 393,659, ren. 1–2–62. Cl. 39.
Crystal, David, Inc., New York, N.Y. 394,615, ren. 1–2–62. Cl. 51.
Crystal, David, Inc., New York, N.Y. 726,035, pub. 10–17–61. Cl. 42.
Curlator Corp., East Rochester, N.Y. 725,763, pub. 10–17–61. Cl. 1.
Curley Co., Inc.: *See*—
American Products Co., The.
Cutter Cravat, Inc., Chicago, Ill. 616,244, canc. Cl. 39.
D'Arrigo Bros. Co.: *See*—
D'Arrigo Bros. Co. of California.
D'Arrigo Bros. Co. of California, d.b.a. D'Arrigo Bros. Co., San Jose, Calif. 726,078. Cl. 46.
Dartmouth Marketing Co., Inc.: *See*—
Foods Marketing Co.
Frozen Foods Marketing Co.
Davis, Betty, Paint Manufacturers, Gainesville, Tex. 725,824, pub. 10–17–61. Cl. 16.
Davis, Gilbert, Co.: *See*—
Hanson, Harvey E.
Dawe's Laboratories, Inc., Chicago, Ill. 725,840, pub. 1–3–61. Cl. 18.
Deere & Co., Moline, Ill. 725,910, pub. 10–17–61. Cl. 23.
Denny, Henry, & Sons Ltd., London, England. 616,293, canc. Cl. 46.
Denso, Inc., Denver, Colo. 616,285, canc. Cl. 44.
Dettra, John C., Oaks, Pa., to Little Wonder, Inc., Southampton, Pa. 152,384, ren. 1–2–62. Cl. 23.
Deutsche Elektronik G.m.b.H., Berlin-Wilmersdorf, Germany. 726,069. Cl. 44.
Diamond Crystal Salt Co., by change of name from Diamond Crystal Salt Co., St. Clair, Mich. 726,071. Cl. 46.
Dickinson, Becton, and Co., Rutherford, N.J. 726,037–9, pub. 10–17–61. Cl. 44.
Disco Dental Imports Sales Co., Panorama City, Calif. 726,047, pub. 10–17–61. Cl. 44.
Dixon, Joseph, Crucible Co., Jersey City, N.J. 725,819, pub. 10–17–61. Cl. 15.
Dodge Cork Co., The, Lancaster, Pa. 725,849, pub. 10–17–61. Cl. 20.
Dodgen Industries: *See*—
Silbaugh Mfg. Co.
Do-Ma Enterprises, Inc., Chicago, Ill. 726,065. Cl. 22.
Donuts, Inc., Boston Mass. 616,296, canc. Cl. 46.
Doppelt, Max J., d.b.a. E. A. Carey Co., Chicago, Ill. 725,771, pub. 10–17–61. Cl. 8.
Dow Chemical Co., The, to The Dow Chemical Co., Midland, Mich. 392,895, ren. 1–2–62. Cl. 1.
Dow Chemical Co., The, to The Dow Chemical Co., Midland, Mich. 393,786, ren. 1–2–62. Cl. 1.
Dry Mix Concrete Co., Franklin Park, Ill. 725,784, pub. 10–17–61. Cl. 12.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 725,809, pub. 10–17–61. Cl. 13.
Durham-Wyss, West Columbia, S.C. 616,247, canc. Cl. 39.
Durrwachter, Dr. Eugen, Doduco, Pforzheim, Germany. 725,862, pub. 10–17–61. Cl. 21.
Dyrud Laboratories: *See*—
Dyrud, Martinus.
Dyrud, Martinus, d.b.a. Dyrud Laboratories, Prairie du Chien, Wis. 616,130, canc. Cl. 21.
E. & A. Braid Corp., New York, N.Y. 616,113, canc. Cl. 19.
Eagle Clothes, Inc., Brooklyn, N.Y. 616,231, canc. Cl. 39.
Eagle Clothes, Inc., Brooklyn, N.Y. 616,233, canc. Cl. 39.
Eastern Trading Co., New York, N.Y. 616,105, canc. Cl. 18.
Eastman Kodak Co., Rochester, N.Y. 725,923, pub. 10–17–61. Cl. 26.
Easy Day Mfg. Co., d.b.a. Suburbanite Mop Co., Brookline, Mass. 725,961, pub. 6–30–59. Cl. 29.
Eaton Mfg. Co., Cleveland, Ohio. 725,844, pub. 10–17–61. Cl. 19.
Ed. Messmer, Frankfurt/Main, Germany. 726,077. Cl. 46.
Edmont, Inc., Coshocton, Ohio. 726,008, pub. 10–17–61. Cl. 39.
Electric Storage Battery Co., The, Philadelphia, Pa. 725,865, pub. 10–17–61. Cl. 21.
Electric Storage Battery Co., The, Philadelphia, Pa. 725,939, pub. 10–17–61. Cl. 26.
Electro Methods Ltd., Stevenage, England. 725,931, pub. 10–17–61. Cl. 26.
Electro-Snap Switch & Mfg. Co., Chicago, Ill. 616,134, canc. Cl. 22.
Elgen Mfg. Corp., Long Island City, N.Y. 725,982, pub. 10–17–61. Cl. 34.
Elkay Mfg. Co., Chicago, Ill. 725,808, pub. 10–17–61. Cl. 13.
Elkhart Brass Mfg. Co., Inc., Elkhart, Ind. 725,911, pub. 10–17–61. Cl. 23.
El-Tronics, Inc., Warren, Pa., from Nu-Lite Corp., Newark, N.J. 725,864, pub. 10–17–61. Cl. 21.
Eskay Mfg. Co., Philadelphia, Pa., to Standard-Kell Hardware Mfg. Co., Inc., Brooklyn, N.Y. 725,967, pub. 10–17–61. Cl. 31.
Everpure, Inc., Chicago, Ill. 725,943, pub. 10–17–61. Cl. 26.
Exactel Instrument Co.: *See*—
Glassey, Eugene A.
Expando Meter Co., Long Island City, N.Y. 725,948–9, pub. 10–17–61. Cl. 26.
Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy. 725,860, pub. 10–17–61. Cl. 21.
Fabricon Co., Chicago, Ill. 725,947, pub. 10–17–61. Cl. 26.
Falk Tobacco Co., Inc., to The American Tobacco Co., New York, N.Y. 152,763, ren. 1–2–62. Cl. 17.
Farbwerke Hoechst Aktiengesellschaft, vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. 725,765, pub. 10–17–61. Cl. 3.
Fashion Park, Inc., Rochester, N.Y. 726,014, pub. 10–17–61. Cl. 39.
Faultless Caster Corp., Evansville, Ind. 725,806, pub. 10–17–61. Cl. 13.
Favta Aktiengesellschaft, Frauenfeld, Thurgau, Switzerland. 616,148, canc. Cl. 23.
Fiberglass Progress Co.: *See*—
Heinze, Lawrence W.
Finnish Cellulose Association, Helsingfors, Finland. 152,771, ren. 1–2–62. Cl. 1.
Firestone Tire & Rubber Co., The, Akron, Ohio. 725,988, pub. 10–17–61. Cl. 35.
Fleischer, Joseph, & Co., New York, N.Y. 616,275, canc. Cl. 40.
Flexforms, Inc., Englewood, Colo. 725,780, pub. 10–17–61. Cl. 12.
Flex-O-Rail, Inc., Milton, Mass. 725,889, pub. 10–17–61. Cl. 23.
Flodar Corp., Cleveland, Ohio. 726,062. Cl. 13.
Franchett's Knellers, Inc., Elizabeth, N.J. 726,080. Cl. 46.
Frank, Jerome M., d.b.a. Frank Products, Beverly Hills, Calif. 616,013, canc. Cl. 4.
Frank Products: *See*—
Frank, Jerome M.
Freeman Shoe Corp., Beloit, Wis. 726,012, pub. 10–17–61. Cl. 39.
Fromageries Bel, Paris, France. 616,294, canc. Cl. 46.
Frozen Foods Marketing Co., also known as Foods Marketing Co., now by change of name Dartmouth Marketing Co., Inc., San Francisco, Calif. 616,292, canc. Cl. 46.
Fuld Brothers, Inc., Baltimore, Md. 725,768, pub. 10–17–61. Cl. 4.
Fuller & Co., San Francisco, Calif. 725,786, pub. 10–17–61. Cl. 12.
Fukuin Denki Kabushiki Kaisha, d.b.a. Fukuin Electric Works, Ltd., Bunkyo-Ku, Tokyo-To, Japan. 725,851, pub. 3–11–58. Cl. 21.
Fukuin Electric Works, Ltd.: *See*—
Fukuin Denki Kabushiki Kaisha.
Gamco: *See*—
Sitton, John R., Jr.
General Aniline & Film Corp., New York, N.Y. 725,937, pub. 10–17–61. Cl. 26.
General Electric Co., Schenectady, N.Y. 725,870, pub. 10–17–61. Cl. 21.
General Electric Co., Schenectady, N.Y. 725,920, pub. 10–17–61. Cl. 24.
General Garment Mfg. Co., Inc., Petersburg, Va. 616,260, canc. Cl. 39.
General Mills, Inc.: *See*—
Red Star Milling Co., The.
General Teleradio, Inc., New York, N.Y. 616,340, canc. Cl. 107.
General Tire & Rubber Co., The, Akron, Ohio. 726,052, pub. 10–17–61. Cl. 50.
Germain's, Inc., Los Angeles, Calif. 726,053, pub. 10–17–61. Cl. 50.
Giftie Pak Co., Dallas, Tex. 726,049, pub. 10–17–61. Cl. 50.
Gilbert, George, New York, N.Y. 725,867, pub. 10–17–61. Cl. 21.
Glassey, Eugene A., d.b.a. Exactel Instrument Co., Mountain View, Calif. 725,926, pub. 10–17–61. Cl. 26.
Glasspar Co., Santa Ana, Calif. 722,177, cor. Cl. 19.
Glostex Products, Inc., Chicago, Ill. 616,122, canc. Cl. 19.
Gold, William, Inc., New York, N.Y. 725,778, pub. 10–17–61. Cl. 12.
Golden Lantern Corp., d.b.a. The Golden Lantern Restaurant, Denver, Colo. 616,302, canc. Cl. 46.
Golden Lantern Restaurant, The: *See*—
Golden Lantern Corp.

Golding Bros. Co., Inc., New York, N.Y. 392,164, 12(c) pub. 1–2–62. Cl. 42.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 725,986–7, pub. 10–17–61. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 725,992, pub. 10–17–61. Cl. 35.
Grady, M. J., Co., Inc., The, to The Grady-Travers Co., Inc., New York, N.Y. 147,103, ren. 1–2–62. Cl. 7.
Grady-Travers Co., The: *See*—
Grady, M. J., Co., Inc.
Great Lakes Paint and Varnish Co., Chicago, Ill. 725,825, pub. 10–17–61. Cl. 16.
Green, Ralph W., d.b.a. Life Saver Garment & Disposable Pad Co., Vero Beach, Fla. 726,004, pub. 10–17–61. Cl. 39.
Griffin, J. B., Co.: *See*—
Griffin, Jerome B.
Griffin, Jerome B., d.b.a. J. B. Griffin Co., Norfolk, Va. 726,085. Cl. 46.
Grossman, Harry & Dan, Furs, Inc., New York, N.Y. 726,001, pub. 10–17–61. Cl. 39.
Hallmark Laboratories, Inc., Tuckahoe, N.Y. 726,054, pub. 2–9–60. Cl. 51.
Halsey, Turner, Co.: *See*—
Turner, Halsey, Co.
Hanlon & Wilson Co., Pittsburgh, Pa. 725,855, pub. 10–17–61. Cl. 21.
Hanson's, Chr., Laboratory, Inc., West Allis, Wis. 353,567, 12(c) pub. 1–2–62. Cl. 46.
Hanson, Harvey E., Co., d.b.a. Gilbert Davis Co., Paw Paw, Mich. 725,928, pub. 10–17–61. Cl. 26.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 725,794, pub. 10–17–61. Cl. 12.
Harrower Laboratory, Inc., The, Jersey City, N.J. 616,100, canc. Cl. 18.
Harvey, G. F., Co., Inc., The, New York, N.Y. 725,839, pub. 8–25–59. Cl. 18.
Harvey Window Corp., Dorchester, Mass. 725,795, pub. 10–17–61. Cl. 12.
Haspel Brothers, Inc., New Orleans, La. 616,262, canc. Cl. 39.
Hausser S.A.R.L., Paris, France. 726,005, pub. 10–17–61. Cl. 39.
Hausner, Oscar L., New York, N.Y. 616,368, canc. Cl. 50.
Hawbaker, S. Stanley, Ft. Loudon, Pa. 616,350, canc. Cl. 38.
Hawley & Hoops, Inc., Newark, N.J. 616,307, canc. Cl. 46.
Haydon Auto Painting Systems, Inc., New York, N.Y. 725,834–5, pub. 10–17–61. Cl. 16.
Haze-Fade Co.: *See*—
Olkowski, Joe B.
Hazelett Strip-Casting Corp., Winooski, Vt. 725,893, pub. 10–17–61. Cl. 23.
Health Aids, Inc.: *See*—
Spalding, A. G. & Bros. Inc.
Healthways, Los Angeles, Calif. 616,069, canc. Cl. 18.
Heddon's, James, Sons, Dowagiac, Mich. 726,064. Cl. 22.
Heinze, Lawrence W., d.b.a. Fiberglass Progress Co., White Bear Lake, Minn. 725,796, pub. 10–17–61. Cl. 13.
Henderson, H. A.: *See*—
Henderson, Herbert A.
Henderson, Herbert A., d.b.a. H. A. Henderson, Los Angeles, Calif. 725,883, pub. 10–17–61. Cl. 21.
Hill, C. V., & Co., Inc., Trenton, N.J. 616,200, canc. Cl. 31.
Hill, Thomson & Co. Ltd., Edinburgh, Scotland. 726,089. Cl. 49.
Hindley Mfg. Co., Cumberland, R.I. 725,805, pub. 10–17–61. Cl. 13.
Hoffmann-La Roche Inc., Nutley, N.J. 616,091, canc. Cl. 18.
Holsclaw Bros., Inc., Evansville, Ind. 725,896, pub. 10–17–61. Cl. 23.
Holter Research Foundation, The, Helena, Mont. 726,041, pub. 10–17–61. Cl. 44.
Honegger, John A., Bloomfield, N.J., to R. H. Clark, Beverly Hills, Calif. 391,598, ren. 1–2–62. Cl. 51.
Hookrite Products Corp., Brooklyn, N.Y. 725,773, pub. 10–17–61. Cl. 10.
Hudnut, Richard, Morris Plains, N.J. 726,092–8. Cl. 51.
Humble Oil & Refining Co.: *See*—
Liberty Oil Co., Ltd.
Hyran, Inc., Los Angeles, Calif. 726,104. Cl. 106.
Hysan Products Co., Chicago, Ill. 726,102. Cl. 52.
Illinois Tool Works: *See*—
Illinois Tool Works, Inc.
Illinois Tool Works, Inc., by merger from Illinois Tool Works, Chicago, Ill. 725,900, pub. 10–17–61. Cl. 23.
Imperial Chemical Industries Ltd., London, England. 616,214, canc. Cl. 34.
Industrial Heater Co., Gardena, Calif. 725,857, pub. 10–17–61. Cl. 21.
Instrument Corp. of Florida, Melbourne, Fla. 725,958, pub. 10–17–61. Cl. 26.
International Basic Economy Corp., New York, N.Y. 725,872, pub. 10–17–61. Cl. 21.
International Inspection Inc., Pasadena, Calif. 725,934–6, pub. 10–17–61. Cl. 26.
Japan Food Corp., San Francisco, Calif. 726,084. Cl. 46.
Jay, Edwin, Inc.: *See*—
Voss Cutlery Co., Inc.
Jocelyn Iron & Steel Corp., Chicago, Ill. 726,050, pub. 10–17–61. Cl. 50.
Johns-Manville Corp., New York, N.Y. 725,783, pub. 10–17–61. Cl. 12.
Johnson & Johnson, New Brunswick, N.J. 726,042, pub. 10–17–61. Cl. 44.
Johnson & Johnson, d.b.a. Tek Hughes, New Brunswick, N.J. 725,764, pub. 10–17–61. Cl. 3.
Johnson Rubber Co., The, Middlefield, Ohio. 725,793, pub. 10–17–61. Cl. 12.
Joseph & Feiss Co., The, Cleveland, Ohio. 391,283, ren. 1–2–62. Cl. 39.
Joseph & Feiss Co., The, Cleveland, Ohio. 391,868, ren. 1–2–62. Cl. 39.
Kelling Nut Co., The, Chicago, Ill. 726,074. Cl. 46.
Kendall Co., The: *See*—
Bauer & Black.
Kennedy Baby Bath Corp., Chattanooga, Tenn. 725,973, pub. 10–17–61. Cl. 32.
Kerostal Products Co.: *See*—
Wachtel Laboratories, Inc.
Kiekhaefer Corp., Cedarburg, Wis. 725,846, pub. 10–17–61. Cl. 19.
Kinney, G. R., Corp., New York, N.Y. 726,009, pub. 10–17–61. Cl. 39.
Kit Mfg. Co., Long Beach, Calif. 725,845, pub. 10–17–61. Cl. 19.
Kitty Kelly Shoe Corp., New York, N.Y. 726,013, pub. 10–17–61. Cl. 39.
Kiwi Polish Co. Proprietary Ltd., The, Richmond, near Melbourne, Victoria, Australia. 616,342, canc. Cl. 4.
La Trique Brassieres Co., New York, N.Y. 616,359, canc. Cl. 39.
Lee Ltd., Beverly Hills, Calif. 616,330–1, canc. Cl. 51.
Lee Rubber & Tire Corp., Conshohocken, Pa. 725,989, pub. 10–17–61. Cl. 35.
Lenoir Wood Finishing Co., Lenoir, N.C. 725,821, pub. 10–17–61. Cl. 16.
Lestoil Products, Inc., to Adell Chemical Co., Holyoke, Mass. 726,101. Cl. 52.
Lewis Pump Co., Philadelphia, Pa. 616,158, canc. Cl. 23.
Lewis-Shepard Products, Inc., Watertown, Mass. 725,916, pub. 10–17–61. Cl. 23.
Liberty Oil Co., Ltd., New Orleans, La., to Humble Oil & Refining Co., Houston, Tex. 148,138, ren. 1–2–62. Cl. 15.
Life Saver Garment & Disposable Pad Co.: *See*—
Green, Ralph W.
Li'l Texas Spread, Inc., Newport News, Va. 725,974, pub. 10–17–61. Cl. 32.
Link Aviation, Inc., Binghamton, N.Y. 616,183, canc. Cl. 26.
Little Wonder, Inc.: *See*—
Dettra, John C.
Lobe-Stik, Pasadena, Calif. 616,014, canc. Cl. 5.
Lodolyn Drug Co.: *See*—
Lodolyn, Roy S.
Lodolyn, Roy S., d.b.a. Lodolyn Drug Co., Lakewood, Ohio. 616,104, canc. Cl. 18.
Logistics Research Inc., Redondo Beach, Calif. 616,166, canc. Cl. 26.
Lowenstein, M., & Sons, Inc., New York, N.Y. 726,030, pub. 10–17–61. Cl. 42.
Lumatron Electronics, Inc., New Hyde Park, N.Y. 725,929, pub. 10–17–61. Cl. 26.
M M & C Co., Inc., Fort Walton Beach, Fla. 725,816, pub. 10–17–61. Cl. 15.
Mallory Hat Co., The, Danbury, Conn., by John B. Stetson Co., Philadelphia, Pa. 390,416, 12(c) pub. 1–2–62. Cl. 39.
Manhattan Shirt Co., The, New York, N.Y. 726,024, pub. 10–17–61. Cl. 39.
Mannesmann Aktiengesellschaft, Dusseldorf, Germany. 725,887, pub. 10–24–61. Cl. 23.
Manpin & Webb Ltd., London, England. 149,447, ren. 1–2–62. Cl. 23.
Marina Products Co.: *See*—
Beamon, Amos R.
Marking, Dale, Equipment Co., Inc., Brooklyn, N.Y. 725,776, pub. 10–17–61. Cl. 11.
Masonite Corp., Chicago, Ill. 616,055, canc. Cl. 12.
Masonite Corp., Chicago, Ill. 726,059–61. Cl. 12.
Masson, Paul, Inc., d.b.a. Paul Masson Vineyards, San Francisco, Calif. 726,087. Cl. 47.
Masson, Paul, Vineyards: *See*—
Masson, Paul, Inc.
Mayer, Gregory, & Thom Co., Detroit, Mich. 148,901, ren. 1–2–62. Cl. 37.
Mazzeo, Rosario, Boston, Mass. 725,993, pub. 10–17–61. Cl. 36.
McCahan Enterprises: *See*—
McCahan, Lloyd I.
McCahan, Lloyd I., d.b.a. McCahan Enterprises, Chicago, Ill. 616,353, canc. Cl. 39.
McCarthy, Donald D., Baltimore, Md. 726,019, pub. 10–17–61. Cl. 39.
McFlock, Inc., Los Angeles, Calif. 725,891, pub. 10–17–61. Cl. 23.
Merchandiser Publishing Co., Inc., New York, N.Y. 726,068. Cl. 38.
Merck & Co., Inc., Rahway, N.J. 616,079, canc. Cl. 18.
Meyer Magid, Palo Alto, Calif. 725,830, pub. 10–17–61. Cl. 16.
Michelin Tire Corp., Woodside, N.Y. 725,991, pub. 10–17–61. Cl. 35.
Midland Laboratories, Dubuque, Iowa. 725,766, pub. 10–17–61. Cl. 4.
Midland-Ross Corp.: *See*—
Surface Combustion Co. Inc., The.
Millers Falls Co., Greenfield, Mass. 616,150, canc. Cl. 23.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 725,932, pub. 10–17–61. Cl. 26.
Mom Farlow's Inc., Pittsville, Md. 726,086. Cl. 46.
Monostructure Inc., Sarasota, Fla. 725,779, pub. 10–24–61. Cl. 12.
Monroe Calculating Machine Co., Orange, N.J. 725,946, pub. 10–17–61. Cl. 26.
Monsanto Chemical Co., St. Louis, Mo. 616,056, canc. Cl. 13.
Motloid Co., The, Chicago, Ill. 726,045, pub. 10–17–61. Cl. 44.
Motorola, Inc., Chicago, Ill. 725,859, pub. 10–17–61. Cl. 21.
Motorola, Inc., Franklin Park, Ill. 725,871, pub. 10–17–61. Cl. 21.
Mustee, E. L., & Sons, Inc., Cleveland, Ohio. 725,985, pub. 10–17–61. Cl. 34.

"NAF," Azusa, Calif. 616,337, canc. Cl. 100.
National Automatic Tool Co., Inc., Richmond, Ind. 725,903, pub. 10–17–61. Cl. 23.
National Biscuit Co., New York, N.Y. 392,944, ren. 1–2–62. Cl. 38.
National Biscuit Co., New York, N.Y. 394,028, ren. 1–2–62. Cl. 46.
National Downtown Week, Inc., New York, N.Y. 726,103. Cl. 101.
National Engineering & Mfg., Inc.: *See*—
Steam-O-Matic Corp., The.
National Metal Products Co., Pittsburgh, Pa. 725,804, pub. 10–17–61. Cl. 13.
National Screw & Mfg. Co., The, Cleveland, Ohio. 392,816, ren. 1–2–62. Cl. 13.
National Sure-Fit Quilting Co., Inc., New York, N.Y. 616,360, canc. Cl. 42.
Nelson, L. R., Mfg. Co., Inc., Peoria, Ill. 725,807, pub. 10–17–61. Cl. 13.
Nemer, Samuel N., Minneapolis, Minn. 725,951, pub. 10–17–61. Cl. 26.
Neptune Meter Co., New York, N.Y. 392,357, ren. 1–2–62. Cl. 26.
Never-Slip Mfg., Inc., Sheboygan, Wis. 616,367, canc. Cl. 50.
Nibco Inc., Elkhart, Ind. 725,797, pub. 10–17–61. Cl. 13.
Nicholas International Ltd.: *See*—
Associated Chemicals Ltd.
Nocona Leather Goods Co., Nocona, Tex. 616,141, canc. Cl. 22.
Norcor Mfg. Co., Inc., Green Bay, Wis. 725,977, pub. 10–17–61. Cl. 32.
Nordmark-Werke Gesellschaft mit beschrankter Haftung, Hamburg, Germany. 616,101, canc. Cl. 18.
Norfolk Paint Corp., d.b.a. Nuclear Research Associates, Quincy, Mass. 725,832, pub. 10–17–61. Cl. 16.
Norgren, C. A., Co., Englewood, Colo. 725,899, pub. 10–17–61. Cl. 23.
North American Iron & Steel Co., Inc., Brooklyn, N.Y. 394,044, ren. 1–2–62. Cl. 12.
Novochoc S.A., La Chaux-de-Fonds, Switzerland. 725,960, pub. 10–17–61. Cl. 27.
Nuclear Research Associates: *See*—
Norfolk Paint Corp.
Nu-Lite Corp.: *See*—
El-Tronics, Inc.
Nutrilite Products, Inc., Buena Park, Calif. 725,775, pub. 10–17–61. Cl. 10.
Obex Mfg. Co., Inc., Lynbrook, N.Y. 616,185, canc. Cl. 26.
Olga Co., Van Nuys, Calif. 726,021, pub. 10–17–61. Cl. 39.
Olga Co., Van Nuys, Calif. 726,023, pub. 10–17–61. Cl. 39.
Olkowski, Joe B., d.b.a. Haze-Fade Co., St. Louis, Mo. 616,612, canc. Cl. 4.
Opus 1 of Cambridge, Inc., Cambridge, Mass. 726,017, pub. 10–17–61. Cl. 39.
Owensboro Brick & Tile Co., Owensboro, Ky. 726,058. Cl. 12.
Packard-Bell Electronics Corp., Los Angeles, Calif. 725,854, pub. 10–17–61. Cl. 21.
Paramount Supply, Inc., Chicago, Ill. 725,885, pub. 10–17–61. Cl. 21.
Paraphone Hearing Aid, Inc., Cleveland, Ohio, to Paravox, Inc., Ft. Lauderdale, Fla. 390,440, ren. 1–2–62. Cl. 44.
Paravox, Inc.: *See*—
Paraphone Hearing Aid, Inc.
Parke, Davis & Co., Detroit, Mich. 380,482, 12(c) pub. 1–2–62. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 388,107, 12(c) pub. 1–2–62. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 389,446, 12(c) pub. 1–2–62. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 389,464, 12(c) pub. 1–2–62. Cl. 18.
Patchogue-Plymouth Mills Corp., New York, N.Y. 616,324, canc. Cl. 50.
Patterson-Sargent Co., The, Cleveland, Ohio. 725,822, pub. 10–17–61. Cl. 16.
Pedersen Mfg. Co., The, Wilton, Conn. 616,142, canc. Cl. 22.
Pellet, Lester R., Hillsborough, Calif. 725,963, pub. 10–17–61. Cl. 29.
Pelolan Fruit Distributors, Dinuba, Calif. 616,317, canc. Cl. 46.
Pennsalt Chemicals Corp.: *See*—
Pennsylvania Salt Mfg. Co.
Pennsylvania Salt Mfg. Co., The.
Pennsylvania Salt Mfg. Co., to Pennsalt Chemicals Corp., Philadelphia, Pa. 391,809, ren. 1–2–62. Cl. 52.
Pennsylvania Salt Mfg. Co., The, to Pennsalt Chemicals Corp., Philadelphia, Pa. 392,195, ren. 1–2–62. Cl. 52.
Petersen, Poul, d.b.a. Poul Petersen Tobaksfabriker, Horsens, Jutland, Denmark. 725,838, pub. 10–17–61. Cl. 17.
Petersen, Poul, Tobaksfabriker: *See*—
Petersen, Poul.
Phrix-Werke Aktiengesellschaft, Hamburg, Germany. 721,994, cor. Cl. 39.
Pilgrim Press, The: *See*—
Congregational Publishing Society.
Plantabbs Corp., Baltimore, Md. 726,056. Cl. 6.
Porter, George K., Inc., Hatfield, Pa. 725,922, pub. 10–17–61. Cl. 26.
Pressco Supply Co.: *See*—
Zaccaria, Nicholas G.
Probat-Werke Von Gimborn & Co., Emmerich, Rhineland, Germany. 725,980, pub. 10–17–61. Cl. 34.
Protection Controls, Inc., Skokie, Ill. 725,953, pub. 10–17–61. Cl. 26.
Quaker Shirt Corp., New York, N.Y. 616,254, canc. Cl. 39.
Quikut Inc., Fremont, Ohio. 725,912–13, pub. 10–17–61. Cl. 23.
Radiation Instrument Development Laboratory, Inc., Northlake, Ill. 725,944, pub. 10–17–61. Cl. 26.
Rainbow Crafts, Inc., Cincinnati, Ohio. 725,942, pub. 10–17–61. Cl. 26.
Randolph Metal Works, Inc., Philadelphia, Pa. 725,972, pub. 10–17–61. Cl. 32.
Rapids-Standard Co., Inc., The, Grand Rapids, Mich. 725,792, pub. 10–17–61. Cl. 12.
Rappeport, R. E., & Sons, Inc.: *See*—
Rappeport, Rubin E.
Rappeport, Rubin E., to R. E. Rappeport & Sons, Inc., Chicago, Ill. 391,354, ren. 1–2–62. Cl. 3.
Raybestos-Manhattan, Inc., Manheim, Pa. 725,921, pub. 10–17–61. Cl. 24.
Red Star Milling Co., The, Wichita, Kans., to General Mills, Inc., Minneapolis, Minn. 152,258, ren. 1–2–62. Cl. 46.
Reichhold Chemicals, Inc., White Plains, N.Y. 725,788–9, pub. 10–17–61. Cl. 12.
Reliable Electric Co., Franklin Park, Ill. 725,802, pub. 10–17–61. Cl. 13.
Repco Ltd., Victoria, Australia. 725,853, pub. 10–17–61. Cl. 21.
Rhodesian Bata Shoe Co. Ltd., The, Gwelo, Southern Rhodesia. 726,020, pub. 10–17–61. Cl. 39.
Robbins Brothers, Inc., Port Norris, N.J. 726,081. Cl. 46.
Robertson, H. H., Co., Pittsburgh, Pa. 725,787, pub. 10–17–61. Cl. 12.
Rose, Sonya, Beverly Hills, Calif. 616,329, canc. Cl. 51.
Rosenblatt and Kahn, Inc., New York, N.Y. 726,007, pub. 10–17–61. Cl. 39.
Roth, Zoltan E., Meridian, Miss. 391,366, ren. 1–2–62. Cl. 16.
Roxseal Co., Inc., Long Island City, N.Y. 394,161, 12(c) pub. 1–2–62. Cl. 12.
Royal Appliance Mfg. Co., Cleveland, Ohio. 725,876–7, pub. 10–17–61. Cl. 21.
Royal Home Products Inc.: *See*—
American Products Co., The.
Royal Metal Mfg. Co., Inc., New York, N.Y. 715,068, cor. Cl. 32.
Russell-Newman Mfg. Co., Inc., Denton, Tex. 616,271, canc. Cl. 39.
Safway Steel Products, Inc., Milwaukee, Wis. 725,782. Pub. 10–10–61, Cl. 12; pub. 8–22–61, Cl. 22; pub. 8–15–61, Cl. 50. (Consolidated certificate, Classes 12, 22, and 50.)
Saucy Sue Products, Inc., Yonkers, N.Y. 726,072. Cl. 46.
Schenley Distillers, Inc., New York, N.Y. 726,088. Cl. 49.
Schnadig Corp., Chicago, Ill. 725,969–70, pub. 10–17–61. Cl. 32.
Sears, Roebuck and Co., Chicago, Ill. 725,956, pub. 10–17–61. Cl. 26.
Selmsheimer, H. A., Co., The, Cincinnati, Ohio. 392,257, ren. 1–2–62. Cl. 39.
Selby Shoe Co., The, Portsmouth, to The United States Shoe Corp., Norwood, Ohio. 392,773–4, ren. 1–2–62. Cl. 39.
Sender, Stefan, to A. Back, d.b.a. Back Export & Import Co., New York, N.Y. 616,239, canc. Cl. 39.
Seneca Audio-Visual Corp., Buffalo, N.Y. 725,950, pub. 10–17–61. Cl. 26.
Servicised Products Corp., Chicago, Ill. 725,790, pub. 10–17–61. Cl. 12.
Settelmayer, Joseph J., Chicago, Ill. 616,156, canc. Cl. 23.
Shampaine Industries, Inc., St. Louis, Mo. 725,975, pub. 10–17–61. Cl. 32.
Sheiden's Minerals Agency: *See*—
Shelden, Sterling R.
Shelden, Sterling R., d.b.a. Shelden's Minerals Agency, Denver, Colo. 616,189, canc. Cl. 26.
Sherwin-Williams Co., The, Cleveland, Ohio. 725,833, pub. 10–17–61. Cl. 16.
Shetland Co. Inc., The, Salem, Mass. 725,878, pub. 10–17–61. Cl. 21.
Shimabukuro, Leona S., Chicago, Ill. 616,123, canc. Cl. 19.
Shirley Fabrics Corp., New York, N.Y. 726,033, pub. 10–17–61. Cl. 42.
Shoe Corp. of America, Columbus, Ohio. 725,999, pub. 10–17–61. Cl. 39.
Ship-In-Car Corp., Shelby, N.C. 725,791, pub. 10–17–61. Cl. 12.
Sharon Optical Co., Inc., Geneva, N.Y. 616,174–6, canc. Cl. 26.
Silbaugh Mfg. Co., d.b.a. Dodgen Industries, Humboldt, Iowa. 725,894, pub. 10–17–61. Cl. 23.
Simmons Co., New York, N.Y. 726,040, pub. 10–17–61. Cl. 44.
Sinclair Refining Co., New York, N.Y. 725,820, pub. 10–17–61. Cl. 15.
Sitton, John R., Jr., d.b.a. Gamco, Houston, Tex. 616,137, canc. Cl. 22.
Skagit Plastics, Inc., La Conner, Wash. 725,843, pub. 10–17–61. Cl. 19.
Sklenena Bizuterie, Narodni Podnik, Jablonec nad Nisou, Czechoslovakia. 725,933, pub. 10–17–61. Cl. 26.
Skycharm Cosmetic Co., Kansas City, Mo. 615,952, canc. Cl. 51.
Sloan, Earl S., Dr., Inc., St. Louis, Mo., to Standard Laboratories, Inc., Morris Plains, N.J. 150,573, ren. 1–2–62. Cl. 18.
Smith Kilne & French Laboratories, Philadelphia, Pa. 389,750, ren. 1–2–62. Cl. 18.
Smithe, F. L., Machine Co., Inc., New York, N.Y. 152,506, 12(c) pub. 1–2–62. Cl. 23.
Societe Anonyme Jeanne Lavin, Paris, France. 726,016, pub. 10–17–61. Cl. 39.
Societe Civille Eca, Paris, France. 616,147, canc. Cl. 23.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 725,762, pub. 10–17–61. Cl. 1.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 726,015, pub. 10–17–61. Cl. 39.
Societe de la Viscose Suisse, Emmenbrucke, Switzerland. 726,027, pub. 10–17–61. Cl. 42.

Societe S.A.T.U.J.O. (Societe Anonyme), Paris, France. 725,803, pub. 10–17–61. Cl. 13.
Solar Products Corp., from Solar Products Ltd., Philadelphia, Pa. 725,927, pub. 10–17–61. Cl. 26.
Solar Products Ltd.: *See*—
Solar Products Corp.
Somervell Brothers Ltd., Kendal, England. 150,974, ren. 1–2–62. Cl. 39.
Sommersville Mf'g. Co., Somersville, Conn. 616,281, canc. Cl. 42.
Soundscriber Corp., The, North Haven, Conn. 725,863, pub. 10–17–61. Cl. 21.
Southern States Equipment Corp., Hampton, Ga. 725,886, pub. 10–17–61. Cl. 21.
Southern States Equipment Corp., Hampton, Ga. 725,917, pub. 10–17–61. Cl. 23.
Southwestern Plastics, Inc., Houston, Tex. 725,777, pub. 10–17–61. Cl. 12.
Spalding, A. G., & Bros. Inc., Chicopee, Mass., to Health Aids, Inc., New York, N.Y. 726,070. Cl. 44.
Specialty Products Co., Jersey City, N.J. 726,057. Cl. 6.
Speedfast Corp., Long Island City, N.Y. 725,800, pub. 10–17–61. Cl. 13.
Spencer, W. L., Co., Milwaukee, Wis. 725,818, pub. 10–17–61. Cl. 15.
Spice Islands Co., South San Francisco, Calif. 726,075. Cl. 46.
Sporn, Walter, Co.: *See*—
Sporn, Walter.
Sporn, Walter, d.b.a. Walter Sporn Co., Chicago, Ill. 726,025, pub. 10–17–61. Cl. 40.
Square D Co., Park Ridge, Ill. 725,861, pub. 10–17–61. Cl. 21.
Standard-Kell Hardware Mfg. Co.: *See*—
Eskay Mfg. Co.
Standard Kollsman Industries Inc., Melrose Park, Ill. 725,858, pub. 10–17–61. Cl. 21.
Standard Laboratories, Inc.: *See*—
Sloan, Earl S., Dr., Inc.
Standard Oil Co. of New Jersey, Wilmington, Del., to Humble Oil & Refining Co., Houston, Tex. 391,825, ren. 1–2–62. Cl. 21.
Standard Sash and Door Corp., Derry, N.H. 616,038, canc. Cl. 12.
Star Brush Mfg. Co., Inc., Boston, Mass. 725,965, pub. 10–17–61. Cl. 29.
Star Metal Corp., Philadelphia, Pa. 725,981, pub. 10–17–61. Cl. 34.
States Batteries, Inc., San Francisco, Calif. 725,852, pub. 10–17–61. Cl. 21.
Steam-O-Matic Corp., The, by change of name from National Engineering & Mfg., Inc., Sedalia, Mo. 725,979, pub. 10–17–61. Cl. 34.
Stearns & Foster Co., The, Cincinnati, Ohio. 153,321, ren. 1–2–62. Cl. 1.
Stearns & Foster Co., The, Lockland, Ohio. 153,316, ren. 1–2–62. Cl. 1.
Sterling Drug Inc., New York, N.Y. 725,841, pub. 10–17–61. Cl. 18.
Stetson, John B., Co.: *See*—
Mallory Hat Co., The.
Stetson, John B., Co., Philadelphia, Pa. 390,433, 12(c) pub. 1–2–62. Cl. 39.
Stetson, John B., Co., Philadelphia, Pa. 390,581, 12(c) pub. 1–2–62. Cl. 39.
Stevens & Oliver, Tampa, Fla. 616,061, canc. Cl. 16.
Stokvis Multiton Corp., Port Washington, N.Y. 725,895, pub. 10–17–61. Cl. 23.
Suburban Toy & Mfg. Corp., Pittsburgh, Pa. 616,138, canc. Cl. 22.
Suburbanite Mon.Co.: *See*—
Easy Day Mfg. Co.
Sucetti, Glenn, Grass Valley, Calif. 725,781, pub. 10–17–61. Cl. 12.
Sulfo, Inc., Elizabeth, N.J. 725,814, pub. 10–17–61. Cl. 15.
Sulphide Corp. Pty. Ltd., Boolaroo, New South Wales, Australia. 725,810–11, pub. 10–17–61. Cl. 14.
Sun Chemical Corp., New York, N.Y. 725,941, pub. 10–17–61. Cl. 26.
Sun Co., to Sun Oil Co., Philadelphia, Pa. 149,253, ren. 1–2–62. Cl. 15.
Sun Oil Co.: *See*—
Sun Co.
Sun Oil Co., Philadelphia, Pa. 725,815, pub. 10–17–61. Cl. 15.
Sun Oil Co., Philadelphia, Pa. 725,817, pub. 10–17–61. Cl. 15.
Sunbeam Lighting Co., Los Angeles, Calif. 725,868–9, pub. 10–17–61. Cl. 21.
Sundstrand Corp., Rockford, Ill. 725,890, pub. 10–17–61. Cl. 23.
Surface Combustion Co. Inc., The, Toledo, by Midland-Ross Corp., Columbus, Ohio. 278,558, 12(c) pub. 1–2–62. Cl. 34.
Sylvania Industrial Corp., Fredericksburg, Va., to American Viscose Corp., Philadelphia, Pa. 393,678–9, ren. 1–2–62. Cl. 6.
Talbott Knitting Mills, Inc., New York, N.Y. 616,354, canc. Cl. 39.
Tandy Corp.: *See*—
Texas Tanning & Mfg. Co.
Tasker Instruments Corp., Van Nuys, Calif. 725,873, pub. 10–17–61. Cl. 21.
Tecnipower, Inc., South Norwalk, Conn. 725,874, pub. 10–17–61. Cl. 21.
Tek Hughes: *See*—
Johnson & Johnson.
Tempest Shirt Mfg. Co., Inc., Jesup, Ga. 616,274, canc. Cl. 39.
Tennessee Stove Works, Inc., Chattanooga, Tenn. 725,983, pub. 10–17–61. Cl. 34.
Terri-Cord Mills, Inc., Warrington, Pa. 726,026, pub. 10–17–61. Cl. 42.
Teweles, L., Seed Co., Milwaukee, Wis. 725,774, pub. 10–17–61. Cl. 10.
Texas Instruments Inc., Dallas, Tex. 725,996, 10–17–61. Cl. 38.
Texas Tanning & Mfg. Co., Yoakum, Tex., to Tandy Corp., Fort Worth, Tex. 391,317, ren. 1–2–62. Cl. 3.
Texas Tanning & Mfg. Co., Yoakum, Tex., to Tandy Corp., Fort Worth, Tex. 391,862, ren. 1–2–62. Cl. 39.
Textron Inc., Geneva, N.Y. 725,938, pub. 10–17–61. Cl. 26.
Themec Co., Inc.: *See*—
Armor Oil & Chemical Co.
Thermotronics Corp., Valley Stream, N.Y. 725,798, pub. 10–17–61. Cl. 13.
Tildesley (Cycles) Ltd., Birmingham, England. 616,109–10, canc. Cl. 19.
Tissages de Soieries Reunis (T.S.R.), Societe Anonyme, Lyon, France. 726,032, pub. 10–17–61. Cl. 42.
Tnemec Co., Inc., North Kansas City, Mo. 725,829, pub. 10–17–61. Cl. 16.
Tremco Mfg. Co., The, Cleveland, Ohio. 725,836, pub. 10–17–61. Cl. 16.
Triangle Business Machines, Inc., Los Angeles, Calif. 725,957, pub. 10–17–61. Cl. 26.
Tri-State Distributors, Inc., now by change of name Tri-State Electric Mfg. Co., Delphos, Ohio. 616,202, canc. Cl. 31.
Tri-State Electric Mfg. Co.: *See*—
Tri-State Distributors, Inc.
Tubewrights Ltd., London, England. 616,037, canc. Cl. 12.
Turk, Jack, & Co., Inc., New York, N.Y. 616,278–9, canc. Cl. 42.
Turner, Halsey, Co., to Turner Halsey Co., New York, N.Y. 150,627, ren. 1–2–62. Cl. 42.
21 Plus Products, Inc., Bronx, N.Y. 726,055, pub. 12–20–60. Cl. 51.
Union Special Machine Co., Chicago, Ill. 725,904, pub. 10–17–61. Cl. 23.
United Press Association, by United Press International, Inc., New York, N.Y. 393,921, 12(c) pub. 1–2–62. Cl. 38.
United Press International, Inc.: *See*—
United Press Association.
United States Rubber Co., New York, N.Y. 725,842, pub. 10–17–61. Cl. 19.
United States Safety Service Co., Kansas City, Mo. 725,925, pub. 10–17–61. Cl. 26.
United States Shoe Corp., The: *See*—
Selby Shoe Co., The.
United Whelan Corp., Brooklyn, N.Y. 725,879, pub. 10–17–61. Cl. 21.
Unity Sewing Supply Co., Inc., New York, N.Y. 725,909, pub. 10–17–61. Cl. 23.
Universal-Rundle Corp., New Castle, Pa. 616,208, canc. Cl. 32.
University of Chicago, The, Chicago, Ill. 391,798, ren. 1–2–62. Cl. 38.
Upjohn Co., The, Kalamazoo, Mich. 616,188, canc. Cl. 26.
Utina-Elektrowerk G.m.b.H., Eutin, Holstein, Germany. 725,888, pub. 10–17–61. Cl. 23.
Vanadium-Alloys Steel Co., Latrobe, Pa. 725,812, pub. 10–17–61. Cl. 14.
Van Brode Milling Co., Inc., Clinton, Mass. 726,073. Cl. 46.
Van Camp Sea Food Co., Port of Long Beach, Calif. 726,079. Cl. 46.
Vapor Recovery Systems Co., The, Compton, Calif. 725,930, pub. 10–17–61. Cl. 26.
Velsicol Chemical Corp., Chicago, Ill. 725,769, pub. 10–17–61. Cl. 5.
Virginia Lens Co., Inc., Petersburg, Va. 389,902, ren. 1–2–62. Cl. 26.
Vitality Mills, Inc., Chicago, Ill. 616,309, canc. Cl. 46.
Voss Cutlery Co., Inc., by Edwin Jay, Inc., New York, N.Y. 441,174, 12(c) pub. 1–2–62. Cl. 44.
Vulcan Materials Co., d.b.a. Concrete Pipe Division, Mountain Brook, Ala. 725,785, pub. 10–17–61. Cl. 12.
Wachtel Laboratories, Inc., San Jose, to Kerostal Products Co., San Francisco8 Calif. 616,060, canc. Cl. 16.
Walker, M. S., Inc., d.b.a. Allen's Ltd., Boston, Mass. 726,090. Cl. 49.
Wall, Howard, Ltd., London, England. 390,806, 12(c) pub. 1–2–62. Cl. 26.
Wallace China Co., Ltd., Huntington Park, Calif. 725,966, pub. 10–17–61. Cl. 30.
Wamsutta Mills, New Bedford, Mass. 616,280, canc. Cl. 42.
Wardley Products Co., Inc., Long Island City, N.Y. 726,083. Cl. 46.
Webco Mills, Inc., Burlington, N.C. 726,029, pub. 10–17–61. Cl. 42.
Wedgworth Produce, Inc., Palm Beach, Fla. 616,312, canc. Cl. 46.
Weiler Brush Co. Inc., Cresco, Pa. 725,964, pub. 10–17–61. Cl. 29.
Welch, C. S., Co., The, to Bathasweet Corp., New York, N.Y. 393,656, ren. 1–2–62. Cl. 51.
Welch, C. S., Co., The, to Bathasweet Corp., New York, N.Y. 394,766, ren. 1–2–62. Cl. 52.
Weld Tooling Corp., Pittsburgh, Pa. 725,984, pub. 10–17–61. Cl. 34.
Westchester Plastics, Inc., Mamaroneck, N.Y. 616,003–5, canc. Cl. 1.
Western Newspaper Union, New York, N.Y. 616,325, canc. Cl. 50.
Westheimer, Jack L., d.b.a. Westheimer Sales Co., Chicago, Ill. 725,995, pub. 10–17–61. Cl. 36.
Westheimer Sales Co.: *See*—
Westheimer, Jack L.
Weyer, George H., Inc., d.b.a. Affiliated Laboratories, Kansas City, Mo. 726,099–100. Cl. 51.
Wiesen, Max, & Sons Co., Inc., New York, N.Y. 616,236, canc. Cl. 39.
Wilkening Mfg. Co., Philadelphia, Pa. 228,947, 12(c) pub. 1–2–62. Cl. 35.

Wil-Nes Corp., New York, N.Y. 726,051, pub. 10–17–61. Cl. 50.
Wilson, L. E., d.b.a. Wilson Welding & Fabricating Co., Osceola, Ark. 725,892, pub. 10–17–61. Cl. 23.
Wilson Welding & Fabricating Co.: *See*—
Wilson, L. E.
Winberg, Bill Karpen, and Co., City of Industry, Calif. 714,150, cor. Cl. 32.
Winget Ltd., Rochester, Kent, England. 725,914, pub. 10–17–61. Cl. 23.
Wispese Corp., New York, N.Y. 616,265–6, canc. Cl. 39.
Whirlpool Corp., St. Joseph, Mich. 725,968, pub. 10–17–61. Cl. 31.
Whitey Research Tool Co., Oakland, Calif. 725,801, pub. 10–17–61. Cl. 13.
Wright Engineering Co.: *See*—
Wright, H. Dudley.
Wright, H. Dudley, d.b.a. Wright Engineering Co., Pasadena, Calif. 616,179, canc. Cl. 26.
Wolferman, Fred, Inc., Kansas City, Mo. 616,301, canc. Cl. 46.
Wood Shovel and Tool Co., The, Piqua, Ohio. 725,905–6, pub. 10–17–61. Cl. 23.
Zaccaria, Nicholas G., d.b.a. Pressco Supply Co., Philadelphia, Pa. 725,918–19, pub. 10–17–61. Cl. 24.
Zanol Products Co.: *See*—
American Products Co., The.

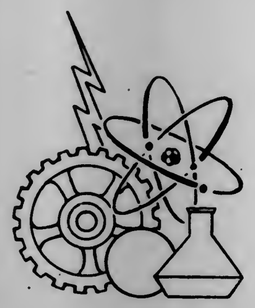
U.S. GOVERNMENT PRINTING OFFICE: 0—1961

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

January 9, 1962 • Volume 774 • Number 2



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of January 9, 1962	207
New Applications Received	207
Notices	
Board of Appeals Decisions Rendered in the Month of November 1961	207
Notice of Tentative Recordation of a Trade Name	207
Manual of Patent Examining Procedure	207
Adjudicated Patents	207
Disclaimers	207
Patents Available for Licensing or Sale	207
Classification Order No. 327	208
Condition of Patent Applications	209
Decisions in Patent and Trademark Cases	
Ex parte Nocka et al.	211
Reissue Patents Granted	213
Plant Patents Granted	215
Patents Granted	
General and Mechanical	216
Chemical	346
Electrical	371
Design Patents Granted	407
Index of Patentees	i
Classification of Patents	xix

Trademarks

Issue of January 9, 1962	TM 43
Applications Filed	TM 43
Condition of Trademark Applications	TM 43
Notices	
Erratum	TM 43
Notice of Tentative Recordation of a Trade Name	TM 43
Public Law 87–354	TM 44
Marks	
Marks Published for Opposition (296)	TM 45
Registrations Issued	
Principal Register	TM 69
Supplemental Register	TM 74
Registrations Renewed	TM 77
Registrations Canceled	TM 77
Registrations Amended, Disclaimed, Corrected, etc.	TM 78
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of November 1961

Examiner affirmed	361
Examiner affirmed in part	51
Examiner reversed	71
Total	483

Notice of Tentative Recordation of a Trade Name

[T.D. 55528]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., Dec. 8, 1961

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"GOJAX HOUSEWARES, INC.," a corporation organized under the laws of the State of Florida, located and doing business at 38 S.E. 8th Street, Miami 32, Florida. This trade name is used in connection with cutlery, china, housewares, etc., manufactured in Japan.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after January 15, 1962, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after January 15, 1962, of any opposition proceeding.

Until 45 days after January 15, 1962, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

Manual of Patent Examining Procedure

Orders are now being accepted by the Superintendent of Documents, Washington 25, D.C., for the Third Edition of the Manual of Patent Examining Procedure.

The subscription rate of this edition will be $4.00 domestic with $1.00 additional for foreign mailing. The sales price includes revision service for a limited period.

The issuance of revised pages for the Second Edition will be discontinued with the release of the Third Edition. Revision pages thereafter will be compatible only with the newer edition.

Adjudicated Patent

(D.C. Fla.) Pierce Patent No. 2,133,642 (250—36), for electrical system, *Held* invalid. *Pierce* v. *Aeronautical Communications Equipment, Inc.*, 198 F. Supp. 269; 130 USPQ 431.

Disclaimers

2,773,789.—*James D'A. Clark* and *Arthur L. Mottet*, Longview, Wash. CROSSCUT FIBER AND METHOD FOR ITS PREPARATION. Patent dated Dec. 11, 1956. Disclaimer filed June 27, 1961, by the assignee, *Consolidated Board Development Company.*

Hereby enters this disclaimer to claims 1, 3, 5, 6 and 11 of said patent.

2,901,163.—*José Waleffe*, Baden, Switzerland. PRESSURE CONVERTER. Patent dated Aug. 25, 1959. Disclaimer filed Nov. 29, 1961, by the assignee, *Aktiengesellschaft Brown, Boveri & Cie.*

Hereby enters this disclaimer to claims 1 and 6 of said patent.

Patents Available for Licensing or Sale

2,565,603. Doll (Non-Winding Life Like Doll). Ed. Fraysur, 120 S. Maple St., Winchester, Ky.

2,988,603. Automatic Telephone Dialing System. James H. Kumagai, 2326 California St., San Francisco 15, Calif.

3,000,581. Cop Winder. Henry C. Beecher, % Walter G. Finch, 1501–1503 Fidelity Building, Baltimore 1, Md.

3,001,802. Hydro-Seal Test Coupling. Joseph H. Rebman and Sidney E. Shensky, co-inventors. Correspondence to: Sidney E. Shensky, P.O. Box 607, North Miami Beach, Fla.

The Scovill Manufacturing Company is willing to grant licenses under the following three patents.

Applications for license may be addressed to: Scovill Manufacturing Company, 99 Mill St., Waterbury 20, Conn., Attention: Patent Department.

2,488,566. Pull Rod.

2,516,689. Bimetal Tubing With Ferruled Ends.

2,702,766. Method and Apparatus for Processing Strip Material Through Treating Units.

Montecatini Societa Generale per l'Industria Mineraria e Chimica is prepared to grant non-exclusive licenses under any or all of the following 13 U.S. patents upon reasonable terms to U.S. manufacturers.

New Applications Received During November 1961

Patents	7,043
Designs	429
Plant Patents	7
Reissues	21
Total	7,500

Issue

Patents	714	No. 3,015,824 to No.	3,016,537, incl.
Designs	48	No. 192,022 to No.	192,069, incl.
Plant Patents	1	No. 2,120	
Reissues	6	No. 25,110 to No.	25,115, incl.
Total	769		

Applications for license under said patents may be addressed to: Societa Montecatini, Servizio Brevetti-Largo Donegani 2, Milan, Italy.

2,882,263. Process for the Polymerization of Certain Unsaturated Hydrocarbons Using Iron-Based Polymerization Agents.

2,896,264. Method of Making Shaped Articles of Crystalline Polystyrene.

2,905,646. Catalysts for the Polymerization of Olefines and Process for Preparing Said Catalysts.

2,930,878. Apparatus for the Transverse Cutting of Films, Tapes, or the Like, of Thermoplastic Material.

2,931,740. Magnetic Elements and Methods for Making the Same.

2,947,598. Producing Shaped Articles Comprising Isotactic Polypropylene.

2,971,858. Synthetic Paper and Process for Producing Same.

2,971,950. Production of Isotactic Poly(Alpha-Olefins) Having Regulated Molecular Weight.

2,972,605. Hydroperoxides of High Polymers and Processes for Producing the Same.

2,974,559. Composite Ropes, Cords and the Like.

2,979,774. Method for Obtaining Shaped Thermoplastic Articles Having Improved Mechanical Properties.

2,993,028. Isotactic Polypropylene-Polyisobutene Blend and Method for Making Same.

3,000,870. Polymerization Catalysts and Process for Polymerizing Olefins Therewith.

General Electric Company is prepared to grant non-exclusive licenses under the following 16 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 14 patents may be addressed to: Patent Counsel, Semiconductor Products Dept., General Electric Co., Electronics Park, Syracuse, N.Y.

2,957,789. Semiconductor Devices and Methods of Preparing Same.

2,957,974. Method of Applying Contacts to Silicon.

2,958,022. Asymmetrically Conductive Devices.

2,960,418. Semiconductor Device and Method for Fabricating Same.

2,961,305. Method of Growing Semiconductor Crystals.

2,963,632. Cantilever Semiconductor Mounting.

2,967,095. Method and Apparatus for Forming Single Crystal in Cylindrical Form.

2,967,115. Method of Depositing Silicon on a Silica Coated Substrate.

2,968,770. Unijunction Transistor Circuit.

2,977,256. Semiconductor Devices and Methods of Making Same.

2,992,080. Method of Improving the Purity of Silicon.

2,994,018. Asymmetrically Conductive Device and Method of Making the Same.

2,997,665. Multivibrator Circuit Having a Bistable Circuit Driving and Triggered by a Relaxation Circuit.

2,999,195. Broad Area Transistors.

Applications for license under the following patent may be addressed to: General Electric Company, Housewares and Commercial Equipment Division, 1285 Boston Ave., Bridgeport 2, Conn.

2,967,981. Light Sensitive Control Circuit.

Applications for license under the following patent may be addressed to: General Electric Company, Atomic Power Equipment Department, 2151 S. First St., San Jose, Calif., Attention: Patent Counsel.

2,998,369. Plate Assembly.

Classification Order No. 327

Classification Order No. 327, dated December 15, 1961, incorporates changes in the following classes:

52, Abolished (Bulletin No. 207)

117, COATING: PROCESSES AND MISCELLANEOUS PRODUCTS

149, EXPLOSIVE AND THERMIC COMPOSITIONS OR CHARGES (New Class—Bulletin No. 446)

The above changes will be incorporated in the Manual of Classification replacement pages dated January 1962.

M. C. ROSA,
Director, Patent Examining Operation.

CONDITION OF PATENT APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of pending applications (excluding Designs)	196,777
Total number of pending Design applications	5,445
Total number of applications awaiting action (excluding Designs)	95,028
Total number of Design applications awaiting action	1,432
Date of oldest new application	Aug. 31, 1960
Date of oldest amended application	July 11, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	3-30-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-4-61	5-17-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	12-2-60	12-19-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-3-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-13-61	2-2-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	4-24-61	4-18-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-2-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-61	1-13-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-5-60	12-9-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-13-60	11-29-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-22-60	10-14-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-6-60	12-16-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	9-13-60	11-10-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-1-61	4-26-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	3-6-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-7-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-24-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-25-61	5-9-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	2-6-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	1-11-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles. Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-61	1-30-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	11-15-60	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	4-24-61	4-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	11-3-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	1-30-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-6-61	3-22-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	12-27-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-19-60	1-11-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	11-25-60	12-1-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-9-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	12-16-60
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	11-17-60	11-21-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	8-31-60	7-11-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	5-8-61	5-25-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-10-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-9-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-20-60	9-16-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-6-61	1-6-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-23-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	11-1-60	11-2-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-1-61	5-1-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-6-61	3-17-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-3-60	10-14-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-8-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-29-60	12-5-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	1-3-61	12-20-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3 61	4-3-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-8-60	11-10-60
60. (I) MANOAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-30-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-11-61	4-4-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-23-60	12-9-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-1-60	12-2-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	10-14-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	10-19-60	10-13-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-4-60	9-16-60
67. (VII) KRAEFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-21-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	12-6-60	12-5-60
81. (III) MONCURE, J. A., Industrial Arts	8-8-61	7-28-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-1-61	8-7-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	11-18-60	11-18-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	6-30-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	1-30-61	1-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-8-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during January 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953*.

Patents.....Numbers 2,966,154 to 2,966,612 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office Before the Board of Appeals

EX PARTE NOCKA ET AL.

Appeal No. 256—31. Decided October 16, 1961

1. PATENTABILITY—OBVIOUSNESS—CATALYTIC PROCESS.

"In our opinion, it would be quite obvious to one having average skill in this art to employ the known Ziegler-type polymerization catalyst taught by Roelen et al. to be useful to polymerize either ethylene or propylene as the catalyst in the Field et al. copolymerization of ethylene with a minor amount of propylene."

2. SAME—SAME—SAME.

"Field et al, teach a given catalyst system to be operative to either homopolymerize ethylene or to copolymerize ethylene with propylene. It would, therefore, be quite obvious to substitute the Ziegler-type catalyst of Roelen et al. for the catalyst system employed by Field et al. in copolymerizing ethylene with propylene. Similarly, it would be apparent to one having skill in this art to employ the catalyst of Roelen et al. not only in the homopolymerization of ethylene or propylene but also in the analogous copolymerization of mixtures thereof of the type employed in Field et al."

3. SAME—PARTICULAR SUBJECT MATTER—"COPOLYMERS OF ETHYLENE-PROPYLENE."

The rejection of the claims in appellants' application entitled "Copolymers of Ethylene-Propylene" as unpatentable over the prior art is affirmed.

APPEAL from the Examiner. Serial No. 562,604.

AFFIRMED.

Small, Dunham and *Thomas* and *E. J. Brenner* for appellants.

Before SURLE, *Examiner-in-Chief*, and BEHRENS and LIDOFF, *Acting Examiners-in-Chief*

LIDOFF, *Acting Examiner-in-Chief:*

This is an appeal from the final rejection of claims 16 and 21, which are all the claims remaining in the application.

Claim 16 is illustrative and reads as follows:

16. A process which comprises copolymerizing about 94 to 99 mol % ethylene with about 1 to 6 mol % propylene in the presence of a catalyst obtained by mixing in inert liquid diluent aluminum triethyl with titanium tetrachloride, the molar ratio of aluminum to titanium in said catalyst being about 1.5:1 to 3.0:1, the copolymerization being carried out in the presence of an inert liquid diluent at about atmospheric pressure and at a temperature of about 40° to 70° C. for about 3 to 6 hours.

The references relied on are:

Field et al., 2,773,053, December 4, 1956.
Roelen et al., 2,838,477, June 10, 1958.

The contended subject matter, as indicated in the claim copied above, relates to the copolymerization of a major amount of ethylene with a minor amount of propylene in the presence of a "Ziegler-type" catalyst.

The references are adequately described in pages 1 and 2 of the Examiner's answer.

We have carefully considered all of appellants' arguments but find no error in the Examiner's rejection of appealed claims 16 and 21 as unpatentable over Field et al. in view of Roelen et al. As pointed out in page 4 of the appellants' brief, the determinative issue is quote clear. [1] In our opinion, it would be quite obvious to one having average skill in this art to employ the known Ziegler-type polymerization catalyst taught by Roelen et al. to be useful

to polymerize either ethylene or propylene as the catalyst in the Field et al. copolymerization of ethylene with a minor amount of propylene.

As pointed out by the Examiner, Field et al. teach a given catalyst system to be operative to either homopolymerize ethylene or to copolymerize ethylene with propylene. [2] It would, therefore, be quite obvious to substitute the Ziegler-type catalyst of Roelen et al. for the catalyst system employed by Field et al. in copolymerizing ethylene with propylene. Similarly, it would be apparent to one having skill in this art to employ the catalyst of Roelen et al. not only in the homopolymerization of ethylene or propylene but also in the analogous copolymerization of mixtures thereof of the type employed in Field et al.

[3] The decision of the Examiner is affirmed.

AFFIRMED.

REISSUES

JANUARY 9, 1962

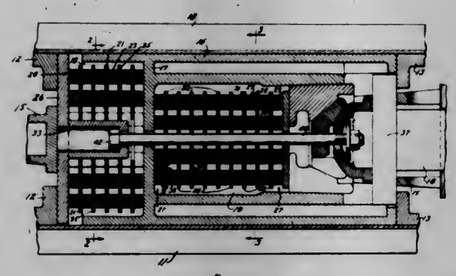
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,110
DRAFT GEARS FOR RAILWAY CARS

Herbert E. Tucker, Chicago, Ill., assignor to Cardwell Westinghouse Company, a corporation of Delaware

Original No. 2,738,078, dated Mar. 13, 1956, Ser. No. 245,573, Sept. 7, 1951. Application for reissue Dec. 23, 1957, Ser. No. 704,848

8 Claims. (Cl. 213—45)



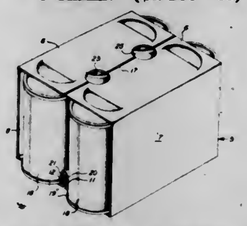
7. A selective travel draft gear arrangement for use with coupler-yoke means in a railway car underframe that has a draft gear pocket having front and rear stop means at opposite ends of the pocket and in which the draft gear arrangement provides greater cushioned travel in buff than in draft; in combination, compression members providing a casing having an open end and front and rear follower means for opposite ends of the casing, said casing having the open end thereof formed to provide outwardly directed, longitudinally spaced outer and inner sets of shoulders, the follower means for the open end of said casing having a cross-sectional shape conforming to the arrangement of the inner set of shoulders to accommodate longitudinal movement thereof through the space between the shoulders of said outer set for engagement against the shoulders of said inner set and being of less dimension lengthwise than the lengthwise spacing between said outer and inner sets of shoulders, with the other of said follower means overlapping the other end of said casing for solid abutment therewith in limiting buff travel of said coupler-yoke means, said front follower means having a central portion engageable with said coupler-yoke means and edge portions engageable with said front stop means and said rear follower means having a central portion engageable with said coupler-yoke means and having edge portions engageable with said rear stop means, and cushioning mechanism in said casing reacting between said front and rear follower means and including friction-producing elements engageable internally with said casing and projecting through the open end thereof for engagement with the follower means thereadjacent, said casing being of such length with respect to said pocket and said front and rear follower means that the casing is capable of movement in said pocket to an amount corresponding to the maximum draft travel of said arrangement, with the portion of said casing between said inner set of shoulders and said other end thereof being stressed in compression by engagement between said front and rear follower means in limiting buff movement of said coupler-yoke means, and with the portion of said casing between said outer set of shoulders thereof and said other end thereof being stressed in compression by reaction between the front stop means and the coupler-yoke means in limiting draft movement of said coupler-yoke means to an amount less than the permissible buff movement thereof.

25,111
CAN CARTON WITH CHIME ENGAGING TABS

Raymond A. Cote, Monroe, La., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Original No. 2,963,148, dated Dec. 6, 1960, Ser. No. 761,874, Sept. 18, 1958. Application for reissue July 10, 1961, Ser. No. 126,797

6 Claims. (Cl. 206—65)



5. An open and generally rectangular sleeve-type carton, formed of flexible, foldable paperboard, adapted to enclose two parallel, opposing rows of closed, chimed cans in side-by-side relation, said carton comprising: spaced parallel top and bottom walls interconnected by spaced side walls hingedly connected at their upper and lower edges to opposite edges of said parallel walls on parallel carton hinge lines; at least one of said parallel walls having hingedly attached thereto, along a fold line lying in the plane of said one parallel wall centrally thereof and substantially parallel to said hinge lines, a first strip adapted to be folded, on said fold line, so as to extend into the carton between the ends of a pair of adjacent cans of opposing rows; said first strip having hingedly attached thereto, on a second fold line spaced from said first fold line a predetermined distance, a second strip adapted to be folded outwardly toward said one parallel wall in generally parallel relationship with said first strip, said second strip having a free outer edge extending generally parallel to and spaced from said second fold line a distance slightly less than the distance between said first and second fold lines so that when said second strip is folded into parallel relation with said first strip the free outer edge of said second strip is adapted for engagement with a portion of the chime of an adjacent can to thereby limit vertical movement of said adjacent can relative to said one parallel wall.

25,112
FOLDING CLOSURE

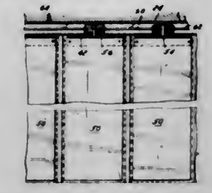
Solomon M. Collins, Detroit, Mich., assignor to Clopay Corporation, Cincinnati, Ohio, a corporation of Maryland

Original No. 2,667,218, dated Jan. 26, 1954, Ser. No. 269,410, Feb. 1, 1952. Application for reissue Jan. 26, 1959, Ser. No. 799,830

6 Claims. (Cl. 160—199)

6. A folding closure member for vertical openings such as doors having a vertical riser and a connecting lintel

to form the frame therefor which comprises a doubled sheet of decorative material having a consistency such as fabric, leather, and synthetic sheet material and having a length substantially equal to the height of the opening to be closed and a width at least equal to the width of said opening, said doubled sheet being closed at the top and the vertical edges, a plurality of stiffening plates positioned between the sheets of material forming said closure members in relatively closed spaced relation and extending substantially the full length of said sheet, means to position said plates within the doubled sheet in vertical spaced relation, and means on said plates to slidably suspend each of said plates at the top and from the lintel, said sheet material being supported entirely on said plates and said sheet of material constituting the sole connection between the plates.

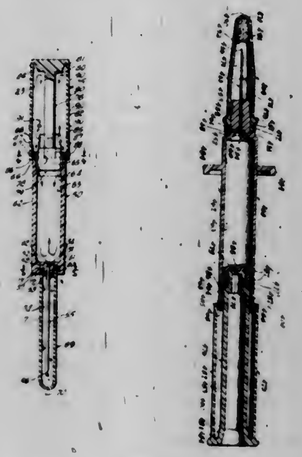


25,113
STERILIZABLE AND STERILIZED HYPODERMIC SYRINGE ASSEMBLIES

Edgar H. Wilburn, Rutherford, N.J., assignor to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

Original No. 2,860,635, dated Nov. 18, 1958, Ser. No. 720,804, Feb. 26, 1958. Application for reissue Oct. 31, 1960, Ser. No. 66,381

23 Claims. (Cl. 128—218)



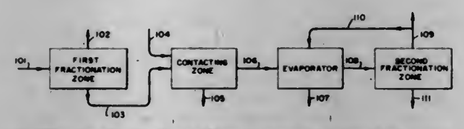
23. A sterilizable hypodermic syringe assembly comprising, in combination; cylindrical barrel means, providing a parenteral liquid chamber and having head means at one end with its other end terminating in circumambient edge means defining an open chamber back end, said head means having an outlet passage communicating with said chamber for injective discharge of contents; removable protective cap means temporarily supported by said head means and covering said outlet passage and isolating it from airborne bacteria in the outside atmosphere; and plunger sub-assembly means including piston means slidably and snugly mounted in a forward position in said chamber for drawing fluid thereinto upon retraction to a rearward position and expelling fluid therefrom upon forward thrust to its forward position, elongated plunger stem means extending through the open back end of said chamber and carrying said piston means on its front end, an elongated hood having an open front end with its back end being closed and carried by the back end of said plunger stem means, said hood having a fixed cylindrical shape and surrounding a major portion of said stem means with an annular space defined therebetween into which the back end of said barrel means is telescoped, the open front end of said hood having telescopic lap over said barrel in all positions of said plunger sub-assembly between the forward position of said piston means in said chamber and the retracted position thereof, the inside diameter of said hood being slightly greater than the outside diameter of said barrel to define an annular space between the hood and the barrel through which a sterilizing gas may pass from the outside atmosphere to the open chamber back end of said barrel, and cooperating sealing portions on said barrel means and said plunger sub-assembly, said sealing portions fitting tightly together and sealing off communication between said open chamber back end and the outside atmosphere only when the plunger sub-assembly is thrust to its forward position.

25,114
PURIFYING HYDROGEN PEROXIDE

George Clement Hood, Orinda, Calif., Randolph Eugene Smith, Anacortes, Wash., and Gino John Pierotti, El Cerrito, Calif., assignors to Shell Oil Company, a corporation of Delaware

Original No. 2,949,343, dated Aug. 16, 1960, Ser. No. 532,386, Sept. 6, 1955. Application for reissue Oct. 7, 1960, Ser. No. 61,326

10 Claims. (Cl. 23—207)



1. The method of purifying aqueous hydrogen peroxide solution [of at least 20% hydrogen peroxide content] containing as impurities lower aliphatic alcohol, lower aliphatic carbonyl compound corresponding to the alcohol, and organic impurities comprising other oxygenated organic compounds than the alcohol and carbonyl compound and including organic peroxidic materials of divergent volatilities annd stabilities, which comprises fractionally distilling said solution in a fractionation zone to take impurities comprising said lower aliphatic alcohol and said corresponding carbonyl compound overhead and to leave as bottoms product an aqueous solution of hydrogen peroxide *of at least 20% hydrogen peroxide content* comprising residual organic impurities comprising said organic peroxidic materials of divergent volatilities and stabilities, passing said distillation bottoms into an extraction zone, intimately contacting said bottoms product in said extraction zone with a polar organic solvent substantially immiscible with said bottoms product, substantially inert to hydrogen peroxide under the operating conditions and having from four to eight carbon atoms per molecule, thereby forming an extract phase consisting predominantly of said polar organic solvent comprising said residual organic impurities comprising said organic peroxidic materials of divergent volatilities and stabilities and an aqueous raffinate phase consisting predominantly of aqueous hydrogen peroxide in said extraction zone, separately withdrawing said raffinate and said extract phases from said extraction zone, and distilling said raffinate phase to recover hydrogen peroxide as an aqueous hydrogen peroxide fraction therefrom.

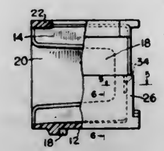
25,115
SLIDE PROJECTOR TRAY

Olin W. Boughton, Canandaigua, Charles J. De Grave, Jr., Chili, and Kenneth D. Maier, Mendon, N.Y., by Bausch & Lomb Incorporated, assignee, a corporation of New York

Original No. 2,931,116, dated Apr. 5, 1960, Ser. No. 722,296, Mar. 18, 1958. Application for reissue July 7, 1961, Ser. No. 127,430

5 Claims. (Cl. 40—79)

6. A slide tray for holding a plurality of picture slides which are to be successively advanced into projection position in a slide projector and returned to the tray after projection, said tray comprising an elongated frame of generally rectangular cross-section, one longitudinal side of said frame being in the form of a rectangular wall covering approximately all of said one side, a longitudinally extending side wall which only partially covers a second side of said frame and having one longitudinal edge contiguous with an adjacent longitudinal edge of said rectangular wall, a longitudinally extending narrow strip along the edge of a third side of said frame diagonally opposed, when said frame is viewed in cross-section, to said one edge of said second side, the remainder of said third side of the frame being uncovered and unobstructed, the fourth side of said frame being open sufficiently for permitting the ingress and egress of slides, and dividers spaced lengthwise along the interior of said frame and being mounted therein for defining compartments therebetween.



PLANT PATENTS

GRANTED JANUARY 9, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,120
ROSE PLANT

Angelo Asseretto, Sanremo (Imperia), Italy, assignor to Michel Blanchon, Paris, France

Filed Jan. 26, 1960, Ser. No. 4,841

Claims priority, application Italy Jan. 31, 1959

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by its large long-lasting flower of a color between rose-red and cherry-red, elongated floral peduncles, generally thin and erect floral stems, distinctive green foliage and vigorous growth.

PATENTS

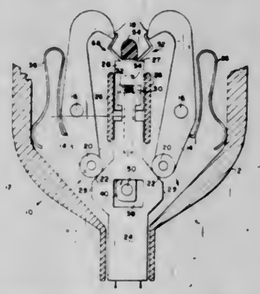
GRANTED JANUARY 9, 1962

GENERAL AND MECHANICAL

3,015,824
CLIP CRIMPING APPARATUS

Donald Richardson, Winchester, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Aug. 18, 1959, Ser. No. 834,467
6 Claims. (Cl. 1—329)



1. An adjustable crimping head for clip crimping apparatus for applying generally U-shaped deformable sealing clips to the twisted necks of flexible containers, comprising: a casing; a pair of opposed crimping jaws pivotally mounted in the casing and having rearwardly and inwardly extending crimping portions; a plunger slideably mounted between the jaws and having opposed cam faces adapted to pivot said crimping jaws; a floating punch slideably mounted for limited motion within the casing and adapted to engage said plunger; said punch being spring urged toward the crimping portions of said crimping jaws defining a clip receiving nest; and means within said casing to vary the pivotal motion of said crimping jaws.

3,015,825
ARTIFICIAL LIMBS

Brian G. Blatchford, 90 Clapham Road, London, SW. 9, England

Filed May 22, 1959, Ser. No. 815,082
Claims priority, application Great Britain May 27, 1958
11 Claims. (Cl. 3—27)



1. In an artificial leg comprising a thigh, a shin, and knee joint mechanism which includes a drum on the knee axis, the drum being fixed to and movable with the shin, and at least one band connected to the thigh and embracing the drum, the improvement comprising: link means pivotally connecting said thigh and said drum, said link means being connected to said thigh and said drum, respectively, by pivot means lying on a plane inclined downward and forward of the longitudinal axis of said thigh at a predetermined acute angle; said link means being rigid so as to prevent converging movement of said thigh and said drum along said inclined plane, said link means permitting downward arcuate movement of said thigh relative to said shin responsive to the application to said thigh of a weight vector directed downwardly within said predetermined acute angle forward of the longitudinal axis of said thigh, said downward movement bringing said band into locking engagement with said drum, and said link means preventing downward movement of said thigh responsive to a weight vector directed downwardly at an angle forward of said longitudinal axis of said thigh in substantial alignment with said inclined plane to avoid locking engagement of said band and drum.

3,015,826
FLUSH TOILET SANITARY DEVICES

Federico Aranas, % La Tondena, Inc., 453 Echague St., Manila, Luzon, Philippines

Filed Feb. 10, 1960, Ser. No. 7,886
2 Claims. (Cl. 4—7)

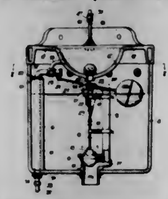


1. A flush toilet sanitary device comprising a tubular member being shorter than a standard toilet bowl is high and being upwardly extended from a floor near a toilet bowl, a hollow traverse member horizontally extending from one side of said toilet bowl to its other side and being attached to said tubular member, a first valve mounted on one end of said traverse member, a second valve mounted on the other end of said traverse member, a first pipe having a first vertical portion extending from said first valve as well as a horizontal portion extending from said first vertical portion over the upper rear portion of the aforementioned toilet bowl and a second vertical portion extending from said horizontal portion into the rear portion of the toilet bowl as well as an upwardly inclined portion extending from said second vertical portion, and a second pipe extending from said second valve having a first portion extending upwardly from said second valve and a second portion extending horizontally from said first portion over the upper front portion of said bowl and a third portion extending vertically from said second portion into the front portion of the bowl as well as an upwardly inclined portion extending from said third portion, and a pair of water conduits each of which is extended through said tubular member and said traverse member to one of said valves.

3,015,827
TOILET TANKS

Masafumi Iwata, 108 5-chome, Gotanda, Shinagawa-ku, Tokyo, Japan

Filed Feb. 12, 1959, Ser. No. 792,802
1 Claim. (Cl. 4—67)

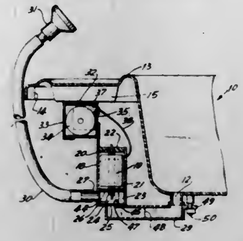


Toilet flushing apparatus comprising a water tank, said tank having a drain pipe in the bottom thereof, said drain pipe having a top opening and a valve seat in said top opening, a valve rod, means mounting said valve rod vertically and axially slidably within said tank in vertical alignment with said drain pipe opening, a valve member mounted on the bottom of said valve rod and adapted to be closingly received on said valve seat when said valve rod is lowered, a shaft, means mounting said shaft horizontally and turnably in either direction within said tank, said shaft being spaced above said valve rod and intersected by the axis of said valve rod, means coupled to said shaft on the outside of said tank for turning said shaft in either direction, a comma-shaped crank fixedly connected at one end thereof to said shaft within said tank and extending transversely to said shaft, one side edge of said crank being convex, the other side edge of said crank being concave, link means having one end thereof pivotally connected to said valve rod and the other end thereof pivotally connected to the othtr end of said crank, said shaft, said crank, said valve rod and said link being positioned to define an intermediate position of said crank and said shaft corresponding to the seated condition of said valve in which said crank and said link means extend generally vertically and generally downwardly from said shaft and from which intermediate position said crank is adapted to be swung in either direction corresponding to the direction of turning of said shaft, said valve being thereby raised, a pair of stops, means fixedly mounting said stops within said tank on opposite sides of said shaft and symmetrically spaced and arranged with respect thereto and with respect to said valve rod, said crank being adapted to engage one of said stops on its concave side edge and the other on its convex side edge upon turning of said horizontal shaft in either direction from its intermediate position, the angular distance between the point of engagement of the concave side edge and its associated stop being greater than the angular distance between the point of engagement of the convex side edges and its associated stop in the intermediate position of said crank, whereby the spacing of said valve from said valve seat is greater when the shaft is turned so as to engage the concave side edge of the crank against its associated stop than when the shaft is turned so as to engage the convex side edge of the crank against its associated stop.

3,015,828
SPRAY BATH

Herbert R. Beebe, Richmond Hill, N.Y., assignor to American Doll & Toy Corp., New York, N.Y., a corporation of New York

Filed July 12, 1960, Ser. No. 42,386
2 Claims. (Cl. 4—148)

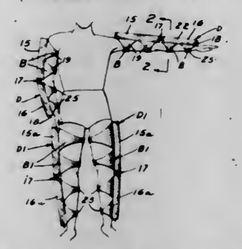


1. In a device of the character described, a bath tub open at the top and having a bottom wall provided with a drain opening, a spray device including a housing affixed to said tub exteriorly thereof and having a pump chamber at one end of said housing, a direct current motor arranged in said housing with the armature shaft protruding into said pump chamber, a centrifugal pump mounted in said pump chamber and affixed to the protruding end of the said armature shaft, said pump chamber having inlet and outlet openings, a conduit connected with the inlet of said pump chamber and with the drain outlet of the tub with the pump chamber disposed at a lower elevation than the bototm wall of the tub for gravationally receiving the flow of water from the tub through said drain outlet, a flexible conduit connected with the outlet of said pump chamber and having a spray nozzle on the free end thereof, said flexible conduit being adapted to be manually held and moved for spraying a doll when disposed in the tub, electric storage means carried by said tub, and electrical circuit means connecting said storage means with said motor for driving the same and including a switch arranged in said circuit means for placing said motor in and out of operation.

3,015,829
SWIMMING AID DEVICE

George Gronkowski, Rte. 2, Box 357, Vashon, Wash.

Filed Dec. 29, 1958, Ser. No. 783,433
4 Claims. (Cl. 9—307)



1. Apparatus adapted for use in aiding a swimmer, comprising a plurality of pairs of elongated inflatable finlike members arranged end-to-end and including a hinging connection between the adjacent ends of each pair of members, said inflatable members each including strap means for use in securing said members longitudinally along the exterior side of the swimmer's arm or leg with one member above and the other member of a given pair of inflatable members disposed below the elbow or the knee joint, there being a separate pair of inflatable members for attachment to each arm and to each leg.

3,015,830
WATER SKIS
Frederick L. Clark, % Canadian Research & Development Foundation, 1434 Queen St., West Toronto 3, Ontario, Canada
Filed Jan. 25, 1960, Ser. No. 4,443
3 Claims. (Cl. 9—310)



1. A pair of identical water skis, each of said pair of water skis comprising a buoyant hull of substantially longitudinal pontoon-shaped configuration, a foot well located within the upper surface of said hull substantially centrally of the longitudinal axis of said hull, the bottom of said foot well being substantially concave and foot hold means removably located within said foot well, said foot hold means having the configuration of a loose fitting shoe having a flexible sole portion, the central longitudinal portion of said sole portion being adapted to flex downwards into said concave base of said foot well upon a foot being applied to said sole portion, said foothold means having flexible sides adapted to flex towards a foot located in said foot hold means upon a foot biasing said sole portion into said concave bottom of said foot well.

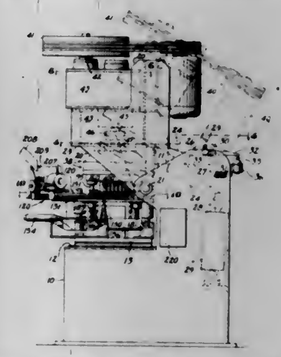
3,015,831
SLALOM WATER SKI
Philip R. Franke, 430 W. Diversey Parkway, Chicago, Ill.
Filed Feb. 20, 1958, Ser. No. 716,366
5 Claims. (Cl. 9—310)



1. A single slalom water ski comprising an elongate strip of relatively rigid material having an upturned bow at the forward end and a stern at the rearward end with the ski being substantially straight from the upturned bow to the stern, a foot rest on the top side of the ski about midway between the bow and the stern and a rearward foot rest spaced rearwardly of the forward foot rest but forwardly of the stern, the ski having substantially flat top and bottom walls and side walls which taper outwardly slightly from the upturned bow to a point in advance of the forward foot rest and then remain substantially parallel from said point to about the mid-portion of the forward foot rest, and which then taper inwardly from said mid-portion of the forward foot rest to a narrowest portion between the forward foot rest and the rearward foot rest and then taper outwardly from said narrowest portion between said foot rests to beyond the rearward foot rest but to a point in advance of the stern of the ski.

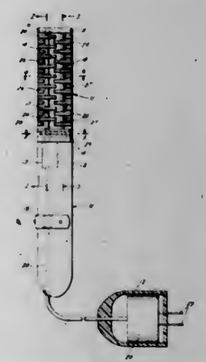
3,015,832
MULTIPLE SPINDLE NUT TAPPING MACHINE
Frank G. Zagar, Cleveland, Ohio, assignor to Zagar, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 2, 1960, Ser. No. 12,324
20 Claims. (Cl. 10—130)

1. A nut tapping machine comprising a plurality of taps extending parallel to each other in spread array at a tapping station, a multiple tap head for supporting said taps in said array at an operative position of said multiple tap head, platform means defining a corresponding array of sockets for supporting nut blank workpieces in apposed relation to said taps, powered feed means for urging said platform means and said tap head relatively together in a feed phase at a rate proportional to the rate of rotation of said taps to engage and tap said workpieces and for then urging said platform means and said tap head relatively apart in a withdrawal phase, power means for powering said array of taps and said powered feed means, means associated with said tap head for axially restraining said taps for imposition of tapping



thrust against said workpieces throughout the work-cutting portion of said feed phase and for then removing said axial restraints upon the completion of said feed phase, said multiple tap head being mounted for temporary shifting from its said operative position to access position at which said array of taps is removed from said platform means a sufficient distance to provide for ready removal and replacement of said taps.

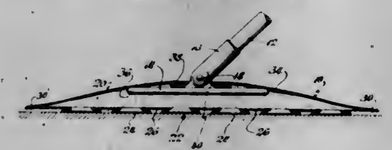
3,015,833
MOTOR DRIVEN TOOTH BRUSH
William Gilet, 2704 Schurz Ave., New York, N.Y.
Filed Mar. 9, 1959, Ser. No. 798,049
2 Claims. (Cl. 15—23)



1. In a tooth brush, an elongated brush head including a bottom wall and end walls, a pair of parallel shafts extending longitudinally of said brush head and rotatably mounted at their ends in said end walls, interengaging gearing means mounted on said shafts at one end of said brush head for the rotation of said shafts in unison, each of said parallel shafts having a series of cylindrical brush sections spaced apart longitudinally thereof for rotation therewith, a series of clumps of bristles affixed to said bottom wall in spaced relation longitudinally of said brush

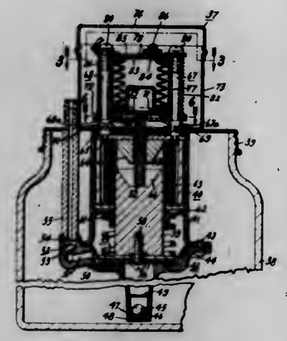
head and arranged in a row along each longitudinal side edge portion of said bottom wall, each of the clumps of bristles in one of said rows being arranged between adjacent cylindrical brush sections of one of said shafts, and each of the clumps of bristles in the other row being arranged between adjacent cylindrical brush sections of said other shaft.

3,015,834
DISPOSABLE DUST MOP HEAD
Ernestine I. Marrinson, 4619 Davis, and Marjorie B. Rothschild, 8943 Samoset Blvd., both of Skokie, Ill.
Filed Nov. 12, 1958, Ser. No. 773,322
3 Claims. (Cl. 15—228)



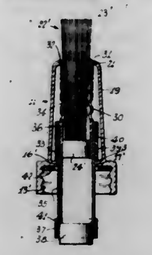
2. A dust mop head characterized by its disposability and comprising a bag enclosure formed by securing adjacent their peripheral edges a flexible impervious plastic member and a chemically treated paper member having a plurality of gathers therein, said bag enclosure having a resiliently contractible opening therein, said opening being formed in the plastic member and adapted to engage a mop stick.

3,015,835
WINDSHIELD WASHER AND COORDINATOR
John W. Dyer, Pendleton, and Brooks H. Short and Walter R. Parker, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 7, 1957, Ser. No. 688,463
9 Claims. (Cl. 15—250.02)



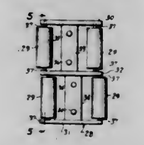
1. A windshield cleaning system including, a washer unit including a pump having electromagnetic means for directly effecting the intake stroke thereof and energy storing means for effecting the delivery stroke thereof, said pump being connected to a delivery conduit, a wiper unit, switch means for energizing the electromagnetic means for effecting the intake stroke of the pump, means operatively connected with the pump and actuated during the intake stroke thereof for automatically initiating operation of the wiper unit during the delivery stroke of the washer pump including dashpot means for continuing operation of the wiper unit for a predetermined time interval.

3,015,836
FLUID APPLICATORS
Stella Maynier, 68—12 Groton St., Forest Hills, N.Y., and John Victor, Bronxville, N.Y.; said Victor assignor to said Maynier
Filed Mar. 22, 1954, Ser. No. 417,666
5 Claims. (Cl. 15—543)



1. A fluid applicator comprising a flexible, resilient container having one end open, a cap over said open container end, there being an opening formed in said cap for conducting fluid from said container upon inward deflection of the latter, a hollow cover secured on said cap over said opening for receiving fluid from said container, said cover being formed with an opening remote from said cap, a graduated apertured sleeve disposed spacedly within said cover and having its outer end secured within said cover opening, a brush having one end secured in closing relation within said sleeve adjacent to the inner end of the latter and having its outer end extending beyond the outer end of said sleeve for receiving and dispensing said fluid, and a sheath movable on said sleeve for selectively opening and closing the apertures thereof to determine the rate of flow of fluid to said brush, said sheath comprising a tube longitudinally slidable and circumposed about said sleeve and having one end extending spacedly through said cap opening, and a plug removably inserted in said one tube end to seal said tube, whereby said tube may be adjusted and maintained in any selected position of its sliding movement.

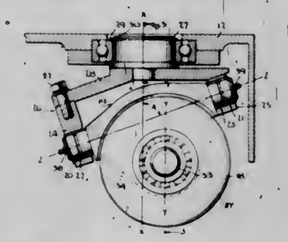
3,015,837
MATERIAL APPLICATOR
Melvin W. Teall, 5611 310th St., Toledo, Ohio
Filed Feb. 28, 1958, Ser. No. 718,256
2 Claims. (Cl. 15—544)



1. A coating applicator comprising a frame having two outer plates and an intermediate plate, all of which are parallel, two pairs of distributing rollers rotatably held by said frame, the rollers of each pair being parallel one to another and each pair being parallel to the other pair, means for rotatably and yieldably holding each of the rollers of one of said pairs between an outer plate and the intermediate plate for rotational movement and movement laterally of said plates, and for rotatably and yieldably holding each of the rollers of the other of said parts between the other outer plate and said intermediate plate for rotational movement and movement laterally of said plates, a plurality of nozzles located substantially symmetrically between each of said pairs and directed toward a surface to be coated, means for supply-

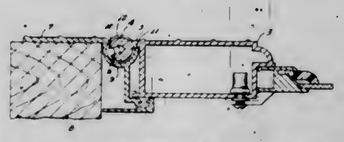
ing a coating composition under pressure to said nozzles, and means for controlling the rate at which the coating composition is supplied to said nozzles.

3,015,838
CASTER CONSTRUCTION
Bronislaus I. Ulinski, Flossmoor, Ill., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed May 12, 1960, Ser. No. 28,747
4 Claims. (Cl. 16—21)



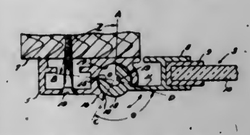
4. In an industrial truck, a caster wheel unit comprising, a fork member having laterally spaced arms, means mounting said fork member on said truck for rotation about a substantially vertical caster axis with the arms of the fork extending downwardly, a wheel support, a caster wheel rotatably mounted on said wheel support with the axis of rotation of said caster wheel offset laterally from said vertical caster axis and said caster wheel supporting said truck through said wheel support and mounting member, shaft means extending from opposite ends of said wheel support and journaled for rotation in said spaced arms of said mounting member with one end of said wheel support higher than the other end whereby said wheel support and said caster wheel rotatably supported thereon may tilt about an axis which is inclined toward said vertical caster axis and parallel to the plane of rotation of the caster wheel while the truck is supported on the caster wheel.

3,015,839
CONTINUOUS ENGAGEMENT TYPE ELONGATE HINGE
Harold E. Eskridge, Barberton, and Waldo O. Johnson, Wooster, Ohio, assignors to Weather-Seal, Inc., Barberton, Ohio, a corporation of Ohio
Filed Mar. 21, 1958, Ser. No. 722,994
3 Claims. (Cl. 16—136)



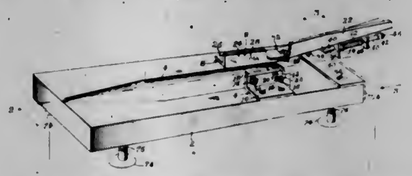
1. In a hinge, a cylindrical hinge pintle having a slot extending longitudinally thereof and inwardly from the periphery thereof, a hinge socket having a slot extending longitudinally thereof and having an arcuate surface connecting to and extending between the margins of said slot, and bearings carried by said hinge pintle at longitudinally spaced portions thereof and pivotally positioning it in said hinge socket, said bearings being of hollow cylindrical form and having arcuate surfaces engaging the periphery of said hinge pintle and having tangs thereon extending into and secured in said slot of said hinge pintle to retain said bearings in given positions radially spacing said pintle from said hinge socket.

3,015,840
CONTINUOUS HINGE
Harold E. Eskridge, Akron, and Waldo O. Johnson, Wooster, Ohio, assignors to Weather-Seal, Inc., Barberton, Ohio, a corporation of Ohio
Original application Apr. 5, 1957, Ser. No. 651,079, now Patent No. 2,866,997, dated Jan. 6, 1959. Divided and this application Sept. 22, 1958, Ser. No. 762,582
2 Claims. (Cl. 16—172)



1. In a casement window, or the like, a sash rail having a hinge pintle extending therefrom and having an arcuate peripheral surface of between about 265° to about 275°, said hinge pintle being connected to the remainder of the sash rail by an integral connector flange extending from intermediate the margins of said arcuate peripheral surface, and a supplementary frame member having a hinge pintle socket with an arcuate surface therein provided at one margin thereof, said pintle socket having a slot of about 110° in arcuate width extending the length thereof for receiving said hinge pintle and said connector flange for pivotal action between said sash rail and supplementary frame member, said hinge pintle having a center bore therein and having one wall extending radially of said center bore and one wall extending substantially tangentially of said center bore to provide a finger-like portion in said hinge pintle to facilitate threading said hinge pintle into engagement with said hinge pintle socket for arcuate action therein, said hinge pintle having an arcuate length between said radially extending wall and the remote edge of said connector flange about equal to but less than the arcuate length of said slot to permit a generally radial withdrawal of said hinge pintle from said pintle socket when said remote edge of said connector flange is swung over against a margin of said pintle socket.

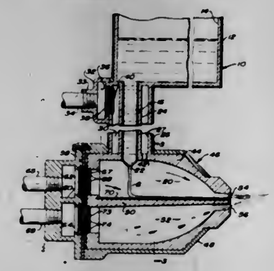
3,015,841
HOLDER FOR FILLETING FISH
Theodore Anderson Reutz, 1904 S. Van Buren St., Little Rock, Ark.
Filed Feb. 16, 1959, Ser. No. 793,342
1 Claim. (Cl. 17—8)



A fish holder comprising an elongated base member, said base member being provided with a longitudinally extending groove in its upper side, a pair of clamping jaws mounted on the upper side of said base member, said jaws being disposed in spaced relation on opposite sides of said groove, one of jaws being fixed to and the other pivoted on said base member, said pivoted jaw having one end extended beyond one end of said base member to provide a handle for moving said pivoted jaw toward and away from said fixed jaw, a plurality of barb means on each jaw for piercing a portion of a fish clamped between said jaws, a locking plate carried by said base member beneath said handle, said locking plate having a horizontally extending flange mounted on the upper side of said base member and a vertically extending flange

engaging said one end of said base member, said vertically extending flange being provided with a series of spaced perforations, a pair of spaced flange members extending downwardly from said handle and being provided with aligned apertures, a locking pin slidably mounted in said apertures, said pin being adapted to engage selected ones of said series of spaced perforations, a spring means between said pair of spaced flange members for urging said locking pin toward its locking position in one of said spaced perforations, and adjustable suction cup means on the lower side of said base member for releasably securing said holder on a supporting surface and for vertically adjusting one edge of said base member with respect to another.

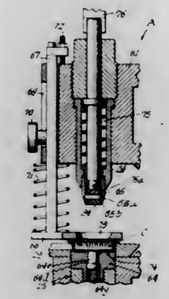
3,015,842
APPARATUS FOR PRODUCING FIBERS
Charles J. Stalego, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Jan. 25, 1954, Ser. No. 405,765
4 Claims. (Cl. 18—2.5)



1. Apparatus of the character disclosed including, in combination, a burner having a combustion chamber elongated in a generally horizontal direction, means for delivering combustible mixture into one end of the chamber adapted to be burned within the chamber, a restricted orifice formed in the wall defining the other end of the chamber, tubular means extending upwardly from the burner adapted to contain a supply of molten fiber-forming material, said tubular means being formed with a restricted outlet in communication with the chamber through which the molten material flows into the chamber in a direction generally normal to the path of flow of gases through the chamber, the pressure of the material at the outlet being greater than the pressure of the gases within the chamber, a second combustion chamber in heat-transferring relation with the tubular means, means for delivering combustible mixture into said second chamber adapted to be burned therein for heating the material in the tubular means, and a passage connecting the second chamber with the first mentioned chamber whereby the burned gases in the second chamber are delivered into the first mentioned chamber for discharge through the restricted orifice in the burner end wall, the forces of the blast provided by the gases discharged through the orifice attenuating the material in the first mentioned chamber to fibers.

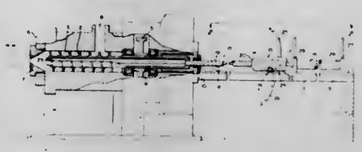
3,015,843
APPARATUS FOR MAKING COMPOSITE ARTICLES
Henry Z. Gora, Stratford, Conn., assignor, by mesne assignments, to Anchor Hocking Glass Corporation, Lancaster, Pa., a corporation of Delaware
Filed Feb. 1, 1956, Ser. No. 562,904
6 Claims. (Cl. 18—5)

1. In a molding apparatus, means for blanking slugs of predetermined shape and volume from a strip of adhesive moldable material comprising a pair of cooperating blanking dies, one of said dies being hollow and having a peripheral cutting edge on the end thereof and said other die constituting an anvil; means for positioning a strip of moldable material between said hollow die and anvil; and means for relatively moving the said dies to and from separated and engaged positions to blank a slug from the strip, said anvil die having a plunger at least the end of



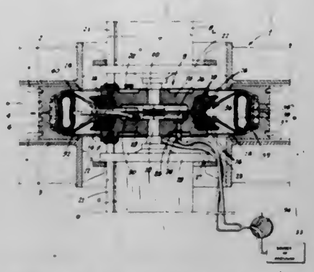
which consists of a material to which the moldable material will not adhere, said plunger being normally slightly extended above the surface of said anvil and projecting slightly within the hollow die when said dies are engaged to prevent the formed slug from adhering to the surface of the anvil die when the anvil and hollow die separate whereby said hollow die retains the blanked slug upon completion of the blanking operation.

3,015,844
EXTRUDING APPARATUS
Vernon E. Rice, St. Marys, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 5, 1959, Ser. No. 851,088
2 Claims. (Cl. 18—12)



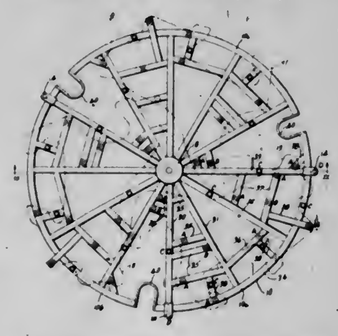
2. An extruding machine having an extrusion chamber and extruding screw normally operating in said chamber, driving means directly fixed to a portion of said screw a removable extrusion die on one end of said chamber adjacent the end of said screw and a screw ejecting means to eject said screw from said chamber, said screw ejecting and retreating means comprising an extension rigidly attached to the end of said screw opposite the die end thereof and normally projecting outwardly beyond the chamber, the interior of said extension being in communication with the interior of said screw and the length of said extension being at least equal to a substantial portion of that of said screw, a fluid pressure cylinder having a piston and rod therein in fixed position with respect to and spaced from said extruding machine, said cylinder being axially aligned with said screw extension, a coupling between the rod of said cylinder and end of said extension and attached to the extension and rod to permit rotation of said extension during operation of said extruding machine while the rod remains stationary and means attached to said extension to pass a coolant liquid through said extension and extruding screw.

3,015,845
VACUUM SYSTEM FOR TEMPORARY REDUCTION OF THE DIAMETER OF A TIRE
Arnold Duerksen, Lodi, Calif., assignor to Super Mold Corporation of California, Lodi, Calif., a corporation of California
Filed July 1, 1960, Ser. No. 40,434
3 Claims. (Cl. 18—18)



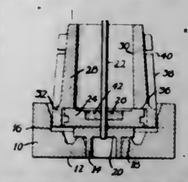
3. In an apparatus for temporary reduction of the diameter of a tire preparatory to entry into or removal from a tread vulcanizing mold; opposed members to engage the laterally outer faces of the beads of the tire, means to move said members toward each other to similarly move the beads so as to reduce the diameter of the tire, and means to then subject the interior of the tire to a tendency to vacuum to further reduce the diameter of the tire.

3,015,846
FRAME FOR MOLD
Kenneth T. MacMillan, Memphis, Tenn., and Ernest A. Millhoff, Doylestown, Ohio, assignors to Wonder Products Company, Collierville, Tenn., a corporation of Tennessee
Filed Feb. 3, 1960, Ser. No. 6,448
10 Claims. (Cl. 18—26)



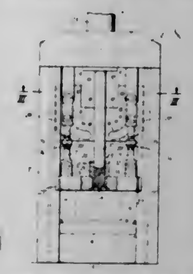
1. In a molding apparatus for casting plastic articles from a thermoplastic material, opposed frame members for clamping a plurality of molds therebetween during heating and cooling of the molds, said frame members each formed in sections with each section being substantially rigid and with the rigid sections in each frame member arranged in opposed relationship, mold supporting members on each of said sections for supporting individual molds between the sections of the frame members, means for releasably holding said frame members in a fixed opposed relationship in molding position, and yieldable means connected between adjacent rigid sections of each of the frame members to accommodate limited relative movement between said sections in molding position.

3,015,847
CANDLE MOLD
Lawrence T. Holden and Harry R. Askew, Chatham, N.J., assignors to Chatham Candle Corporation, Chatham, N.J., a corporation of New Jersey
Filed Nov. 5, 1957, Ser. No. 710,595
2 Claims. (Cl. 18—27)
(Filed under Rule 47(a) and 35 U.S.C. 116)



1. A candle casting mold comprising: a base member, a pin supporting member having a wick-hole forming pin fixed thereto supported by said base member, a bottom mold portion having an aperture therein through which said pin removably extends, a hollow mold member mounted on said bottom mold portion, said hollow mold member, said bottom mold portion and said pin supporting member being removable from each other and from said base.

3,015,848
JET MOLDING MACHINES
Hans Höllfritsch, Eslarn, Oberpfalz, Bavaria, Germany
Filed Aug. 25, 1960, Ser. No. 51,858
Claims priority, application Germany Aug. 27, 1959
9 Claims. (Cl. 18—30)

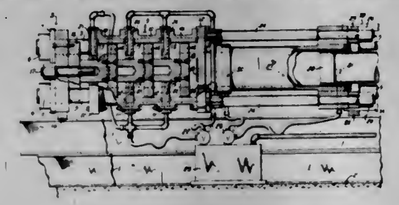


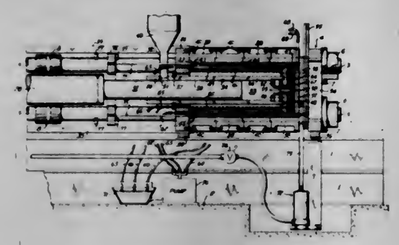
8. A molding machine, comprising, in combination: a mold having a movable part; an injecting plunger for introducing a molding medium through said mold part and into the mold; a toggle system for opening and closing the mold and for applying closing pressure by moving the movable mold part, said system including a plate having a slot formed therein which has a straight portion merging into an arcuate portion, said plate being connected to said plunger, said toggle system further including two toggle levers pivotally connected by a pin guided in said slot to be disposed in the straight portion thereof when the toggle system is in its dead center position and in the arcuate portion thereof during the opening and closing movements of said mold part.

3,015,849
SHORT-STROKE PRESS
Norbert F. Mittelstadt and William P. Pilz, Jr., Sheboygan, Wis., assignors to Plymouth Die Mold, Inc., Sheboygan, Wis., a corporation of Wisconsin
Filed June 8, 1959, Ser. No. 818,959
1 Claim. (Cl. 18—30)

Molding apparatus comprising, a pressure platen, a clamping platen, a plurality of longitudinally extending tie bars fixedly connecting said platens for simultaneous movement, a multi-chambered cylinder supported on

said tie bars adjacent said pressure platen, a piston disposed in each chamber of said cylinder with the respective pistons being connected to each other in series and with the series of pistons being connected to said pressure platen, a longitudinally extending mold mounted freely on said tie bars and with said mold having an end open toward said clamping platen, means freely mounted on said tie bars and connected to the inner end of said cylinder for introducing molding material into said mold, said clamping platen having an opening extending therethrough which is at least as large in lateral extent as said mold, a mold closure member mounted on said clamping platen and normally disposed between the open end of said mold and said clamping platen, means for introducing fluid into the chambers of said cylinder selectively on one or the other side of said pistons so that said tie bars will move said clamping platen and said mold closure member toward or away from the open end of said mold to close the latter for

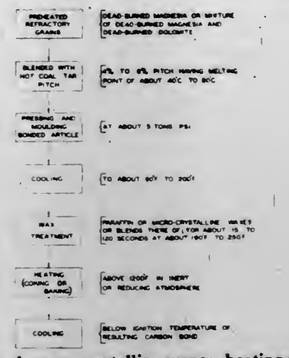




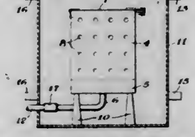
molding or to open the latter for unloading, the stroke of said pistons being substantially less than the depth of the mold, a knockout ring disposed adjacent the inner closed end of the mold for pushing the molded article out of the mold when the clamping platen unclamps, a plate connected to said ring and disposed inwardly of the mold, a plurality of pins mounted on said tie bars on each side of said plate, said pins being longitudinally spaced by more than the thickness of said plate to provide a lost motion delay in removing the molded article upon opening of the mold, a plurality of laterally extending tracks secured to said clamping platen so that the said platen opening is unobstructed and with said track members mounting said mold closure member for lateral movement thereon, and means for moving said mold closure member on said tracks and away from said platen opening when the mold is open so that the molded article may be removed longitudinally through the said platen opening.

3,015,850
CARBON BONDED REFRACTORY ARTICLE AND PROCESS OF MANUFACTURE
Samuel Rusoff and Robert S. Drabkowski, Tiffin, Ohio, assignors to Basic, Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 19, 1959, Ser. No. 787,410
15 Claims. (Cl. 18—47.5)

1. In the method of coking an article composed of refractory grains selected from the class consisting of dead-burned magnesia and a mixture of dead-burned magnesia and dead-burned dolomite and bonded with a coal tar pitch; the improvements of applying to the article a petroleum wax selected from the class consisting of paraffin waxes and mycrocrystalline waxes, heating to a temperature sufficient to pyrolytically decompose the coal tar pitch and produce a carbon bond, and then cooling the brick to a temperature below the ignition temperature of such carbon bond.



3,015,851
PROCESS FOR MAKING SHAPED CELLULAR ARTICLES FROM FOAMABLE THERMOPLASTIC ALKENYL AROMATIC RESINS
Charles R. Wiles, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 31, 1960, Ser. No. 65,973
4 Claims. (Cl. 18—48)

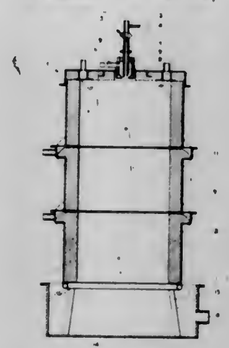


1. A process for making a cellular plastic article having a predetermined density and shape, which process comprises filling the cavity of a porous mold to at least 80 percent by volume of its capacity with discrete granules of an incompletely foamed-up thermoplastic alkenyl aromatic polymer containing a volatile non-solvent organic fluid raising agent and which is capable of further expansion and closing the mold, maintaining the closed porous mold in a zone of subatmospheric pressure and passing steam into contact with and through the mass of polymer granules therein at subatmospheric pressures not exceeding 350 millimeters of Hg absolute pressure, to heat the granules to about the softening point of the polymer, then passing steam into contact with the porous mold and into contact with and through the polymer granules in the mold at up to and including superatmospheric pressures of not greater than 10 pounds per square inch gauge pressure sufficient to heat the polymer to a temperature between 100° and 115° C., thereby expanding the polymer granules within said porous mold to completely fill the mold cavity with a cellular body of the foamed polymer, and thereafter withdrawing steam from contact with said porous mold and the cellular body sufficient to subject the mold and the cellular body therein to an absolute subatmospheric pressure of not more than 350 millimeters of Hg.

3,015,852
PROCESS OF SPHEROIDIZING IRREGULARLY SHAPED PARTICLES

Daniel Jakobus Nicolas Hoffman, Menlo Park, Pretoria, Transvaal, and Thomas Barry Beeton, Muckleneuk, Pretoria, Transvaal, Union of South Africa, assignors to South African Iron and Steel Industrial Corporation, Limited, Pretoria, Transvaal, Union of South Africa

Filed Mar. 26, 1958, Ser. No. 724,037
Claims priority, application Union of South Africa Apr. 4, 1957
6 Claims. (Cl. 18—48)



1. A process for spheroidizing irregularly shaped ferro-silicon particles which comprises passing a gas containing free oxygen in at least the proportion contained in air into the central passage of a downwardly directed flame-producing nozzle, introducing a combustible gas through an annular passage in said nozzle surrounding the said central passage at its outlet, thus producing a downwardly directed flame having a reducing zone at least towards its perimeter, feeding the irregularly shaped ferro-silicon particles to be spheroidized into the said central passage, causing the said particles to pass through the said flame and its reducing zone thereby melting them at least at their surface and allowing the thus spheroidized particles to enter a cooling zone.

3,015,853
PROCESS FOR HEAT-TREATING MOLDED COMPOSITIONS

David D. Munsell, Manchester, and William M. Jackson II, Woburn, Mass., assignors to Cabot Corporation, Boston, Mass., a corporation of Delaware

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,879
7 Claims. (Cl. 18—48)

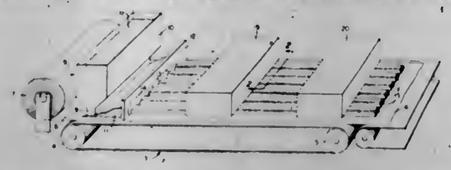
1. A process for curing a curable molded α-monoolefinic polymer composition which does not possess form stability at temperatures at which it is to be cured, which comprises embedding said molded composition in an inert finely divided supporting material containing a minor portion of a binder suitable for use at temperatures up to about 500° F. and heating said molded composition while embedded in said supporting material to curing temperatures.

3,015,854
METHOD OF SHAPING FOAMED RUBBER LATEX

Earl F. McClure, Cuyahoga Falls, Ohio, assignor, by mesne assignments, to The Goodyear Tire & Rubber Company, a corporation of Ohio

Filed Apr. 10, 1956, Ser. No. 577,310
1 Claim. (Cl. 18—53)

A method of continuously shaping ungelled, foamed rubber latex, which comprises partially stiffening a rubber latex by adding a primary stiffening agent selected from at least one of the group consisting of soybean protein, casein and gelatin to said latex in an amount sufficient to cause partial stiffening of the latex, foaming said partially stiffened latex, adding a second stiffening agent selected from at least one of the group consisting of sodium polyacrylate and ammonium polyacrylate to said

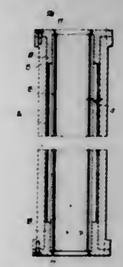


partially stiffened foam in an amount sufficient to further stiffen said foam whereby the foamed latex retains the shape imparted to it when unconfined, shaping the foamed latex by continuously passing it into and out of contact with a curved shaping means to thereby impart an orderly arranged configuration having a cross section of variable thickness and uniform density, and then continuously gelling and vulcanizing the shaped foamed latex.

3,015,855
METHOD OF AND DEVICE FOR MAKING HOLLOW BODIES

Ewald Merkel, Wolffssonweg 16, Hamburg, Germany

Filed May 1, 1958, Ser. No. 732,380
Claims priority, application Germany Feb. 1, 1958
6 Claims. (Cl. 18—55)



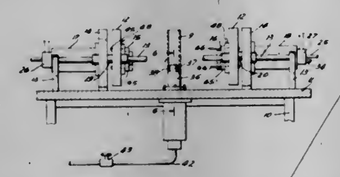
1. A method of making a hollow porous body of granular and pulverous heat expandable material composed at least partly of sintered polytetrafluoroethylene, which comprises the steps of: confining the material to be formed into said hollow body between a rigid wall of annular cross section and an elastic wall of annular cross section, subjecting said elastic wall to controlled fluid pressure so as to cause said elastic wall to expand, and compressing the material between the latter and said rigid wall, subsequently confining the compressed body in a correspondingly shaped chamber of sufficiently greater volume than the volume of said compressed body to permit limited expansion thereof, and sintering the compressed body in said chamber to expand said body to a predetermined degree of porosity.

3,015,856
METHOD OF MOLDING DOLLS' HEADS

David Cohn, Poundridge, N.Y., assignor to Model Plastic Corporation, White Plains, N.Y., a corporation of New York

Filed Oct. 10, 1958, Ser. No. 766,544
2 Claims. (Cl. 18—55)

1. A method of molding hollow dolls' heads having inwardly directed substantially semi-spherical rims extending peripherally about the eye openings in the heads from tubular units of thermoplastic material which have been preheated to approximately the flow temperature of said material, said method consisting of heating metal elements having substantially semi-spherical heads to the flow temperature of said thermoplastic material, affixing said metal elements to the wall of a mold for a doll's head with the heads of the metal elements projecting into the mold cavity and disposed at the locations for the eye openings respectively in a doll's head, maintaining said mold at a temperature approximately that of the flow temperature of the material of said preheated units, pro-

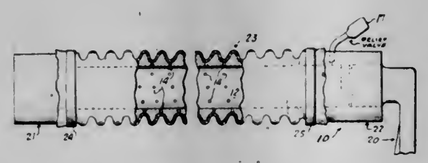


viding a tubular unit of thermoplastic material, heating said tubular unit to approximately the flow temperature thereof; expanding said heated tubular unit against the inner face of said mold and about the inwardly projecting portions of the heads of said metal elements, removing the expanded tubular unit from the mold with the heads of the metal elements embedded therein, cutting the portions of the expanded wall about the inner peripheries of said heads, and removing the metal elements and the portions of the wall cut away to thereby provide rims on the molded doll's head extending inwardly about eye openings therein.

3,015,857
METHOD FOR FORMING CORRUGATED TUBING

Paul Richard Weinandy, Findlay, Ohio, assignor to Cooper Tire & Rubber Company, Findlay, Ohio, a corporation of Delaware

Filed Sept. 4, 1959, Ser. No. 838,312
1 Claim. (Cl. 18—56)

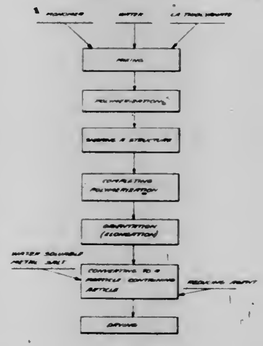


In a method for shaping corrugated tubing wherein a length of tubing is placed circumjacent a hollow corrugated core having holes extending between the exterior surface of the core and a chamber therein while the tubing is at room temperature and atmospheric pressure; the steps of sealing the ends of the tubing on the core to entrap air therein, increasing the pressure on the exterior of the tubing to force the tubing between the corrugations thereby forcing the air entrapped therein through the holes and compressing the same in the chamber to a pressure above atmospheric pressure but below the pressure applied to the exterior of the tubing to prevent the tubing from entering the holes, heating the tubing to curing temperature while maintaining the pressure on the exterior of the tubing, lowering the pressure exteriorly of the tubing to atmospheric pressure, venting the chamber interior to the atmosphere when the pressure of the entrapped air becomes greater than the pressure on the exterior of the tubing, and lowering the temperature of the tubing to room temperature.

3,015,858
PROCESS OF PREPARING SHAPED ARTICLES OF ACRYLONITRILE POLYMER CONTAINING FREE METAL PARTICLES

Robert William Hendricks, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 842,872
14 Claims. (Cl. 18—57)



9. A process for preparing a self-supporting polymeric film which comprises the steps, in sequence, of mixing 24–73 mole percent of water, 5–18.5 mole percent of calcium thiocyanate and 20–64 mole percent of at least one polmerizable monomer, said monomer composed of 75–100%, by weight, of acrylonitrile and the remainder being an ethylenically unsaturated monomer copolymerizable with acrylonitrile, the mole percentages of the water, the calcium thiocyanate and the monomer falling within the area ABCDEF of FIGURE 1; polymerizing said monomer to form a calcium thiocyanate-containing polymer; shaping said polymer into the form of a film; elongating the calcium thiocyanate-containing polymeric film at least 1.5× in at least one direction; treating the calcium thiocyanate-containing film with a solution of a water-soluble metal salt of metals selected from the group consisting of cobalt, copper, iron, lead, nickel and silver while holding said film under tension; reducing said metal of said soluble metal salt to water-insoluble particles of the free metal of said soluble salt while holding said film under tension; and, thereafter, drying the particle-containing self-supporting film at a temperature of 50–250° C. while holding said film under tension.

3,015,859
PROCESS FOR MOLDING COVERED RIGID AND SEMIRIGID BODIES

Sol Bloom, 264 E. 7th St., New York, N.Y., assignor of one-half to Sheldon J. Baer, Commack, N.Y.

Filed May 13, 1959, Ser. No. 812,995
4 Claims. (Cl. 18—59)

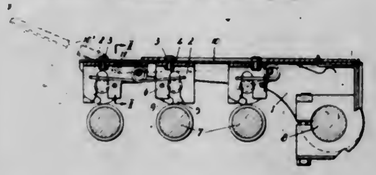
1. A process for molding covered rigid bodies comprising securing a piece of continuous fabric about a plurality of rigid dowels which are held in place by end plates through which the ends of said dowels protrude; shaping said fabric about said dowels by indenting said fabric between adjacent dowels by forcing a flexible board against the side of said fabric between said adjacent dowels; inserting legs into said fabric and into said dowels; pouring plastic molding material through an open-

ing in one of said end plates into the cavity inside said fabric; permitting said plastic molding material to harden;



removing said end plates; and removing said protruding ends of said dowels.

3,015,860
LOAD ARM FOR PRESSURE ROLLERS OF DRAW FRAMES
Fritz Stahlecker, Bad Uberkingen, Wurttemberg, Germany, assignor to Wilhelm Stahlecker G.m.b.H., Reichenbach im Tale, Germany
Filed Nov. 4, 1958, Ser. No. 771,800
Claims priority, application Germany Nov. 5, 1957
9 Claims. (Cl. 19—135)



1. In a draw frame for spinning machines having parallel upper and lower pressure rollers, means for mounting said upper pressure rollers so as to be adjustable in a substantially vertical direction relative to said lower pressure rollers, said means comprising a load arm, said upper pressure rollers being rotatably mounted on said load arm, means for mounting said load arm so as to be pivotable together with said upper pressure rollers relative to said lower pressure rollers, means for locking said load arm in the downward position, and means for releasing said load arm from its locked position, said last means including a second arm secured to said load arm but so as to be extensible therefrom to increase the leverage of said load arm, said second arm having a rest position on said load arm and comprising means embracing said load arm when said second arm is in said rest position.

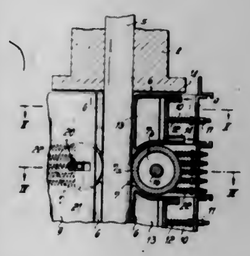
3,015,861
ONE PIECE MOLDED AWNING
Arleigh G. Hupp, P.O. 3290, North Highway 301, Sarasota, Fla.
Filed Aug. 11, 1958, Ser. No. 754,359
7 Claims. (Cl. 20—57.5)

1. In a window structure including a building wall having a window opening, an awning having spaced side wall areas and a vertically inclined roof area joining the spaced side wall areas at its opposite roof edges, the awning having a stepped area joined with the inclined roof area below a rear edge of the roof area with the stepped area being disposed above the window opening, the stepped area including generally horizontal and vertical step areas and the vertical step area having air ports whereby air may be heated as it moves rearwardly and vertically upwardly along an underside of the inclined roof area through the air ports to cool the awning structure, the awning having



a surface area defined by portions of the side wall areas and the horizontal step area for abutment against the building wall about the window opening, and means between the building wall and the surface area sustaining the awning on the wall.

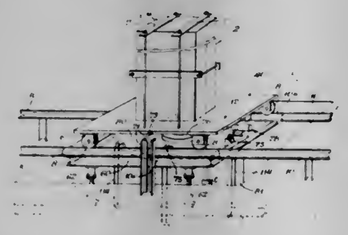
3,015,862
COMPOSITE MOLD
Hans Rustemeyer, Liebigstr. 1, and Felix Pollmeier, Bagelstr. 100, Dusseldorf, Germany
Filed Feb. 26, 1958, Ser. No. 717,757
11 Claims. (Cl. 22—57.2)



1. A composite mold for continuous casting, comprising, in combination, rigid molding means defining an elongated passage of polygonal cross-sectional contour and having an inlet end and an exit end; means adjacent to said exit end of said passage for defining a second elongated passage aligned with said first mentioned passage, said last mentioned means comprising a plurality of cooling means disposed in a plurality of rows extending longitudinally of said second passage with the number of rows corresponding to the number of sides of the cross-sectional contour of said passages; each of said cooling means having an inner surface extending in longitudinal direction and in line with one of the sides of the cross-sectional contour of said passages; means for constantly urging each of said cooling means toward said second passage; pressure roller means disposed between each pair of longitudinally aligned cooling means; a shaft for each of and rotatably mounting said pressure roller means; and resilient means for constantly urging said pressure roller means in substantially transverse directions toward said second passage in such a manner that said pressure roller means are pressed with a greater specific surface pressure against a casting passing through said second passage than said cooling means, whereby a casting, in passing from said first mentioned through said second passage will be held in

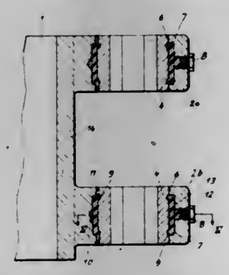
continuous contact with said inner surfaces of said cooling means and with a peripheral zone of each of said roller means.

3,015,863
BOTTOM CASTING ARTICLES
Charles F. Strom, Glen Ellyn, and Joseph Wszolek, Chicago, Ill., assignors to Griffin Wheel Company, Chicago, Ill., a corporation of Delaware
Filed July 29, 1959, Ser. No. 830,427
3 Claims. (Cl. 22—79)



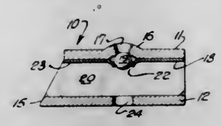
1. Casting apparatus comprising a foundation; a container of fluid metal supported by the foundation; a pouring tube communicating with the fluid metal; a mold assembly movable to and from said tube and having a gate connectable to the tube; cut-off means for terminating flow of fluid through the gate; and a power device for actuating said cut-off means, said power device including a first member movable into and out of engagement with a portion of said assembly, and a second member movable relatively of said first member and of said assembly and engageable with said cut-off means for actuation thereof.

3,015,864
DOWEL GUIDE WITH PLASTIC FILLER MATERIAL
Hans Paul Häberlin, Schaffhausen, Switzerland, assignor to Erwin Buhrer, Schaffhausen, Switzerland
Filed June 30, 1959, Ser. No. 823,966
Claims priority, application Switzerland Aug. 11, 1958
2 Claims. (Cl. 22—110)



1. A dowel guide in moulding flask having a tongue, said tongue having a bore and being provided with a guide bush arranged in said bore, said tongue being provided with at least one recess forming an annular space between said bush and said tongue, said guide bush having at least one indentation provided opposite said recess, said annular space and said indentation being filled with a cold setting resinous, non-resilient hardened epoxy plastic filler material, to prevent displacement of said bush relative to said tongue and to impede removal of said bush from said bore.

3,015,865
UNIVERSAL INSERTED BALL TYPE BUCKLE
John J. Rapuzzi, 222—11 100th Ave., Queens Village, N.Y.
Filed May 24, 1960, Ser. No. 31,495
5 Claims. (Cl. 24—21)
(Granted under Title 35, U.S. Code (1952), sec. 266)



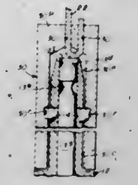
1. A universal banding buckle for use in coupling together overlapping portions of a band strap, selectively by any one of a plurality of banding tools, which comprises a body of rigid material having the shape of a closed loop band with two approximately flat opposite stretches and there being a space in a transverse direction between said flat stretches just slightly greater than the combined thicknesses of the superposed band strap portions to be coupled within the loop, one of said stretches having a cavity opening into the loop towards the opposite stretch, means for holding and confining an indenting ball with a portion of said ball extending beyond the face of said opposite stretch in a direction toward said one stretch, said means being a U-shaped member disposed within said loop and the cross arm of said member having a hole therethrough from face to face aligned with said ball, said hole being smaller than said ball, said cross arm approximately abutting the interior wall of said opposite stretch and the side arms of said member tightly abutting the inner walls of said loop joining said stretches, whereby said ball is confined between said opposite stretch and said cross arm, when said ball is moved toward said one stretch the superposed band strap layers are indented with said ball confined thereagainst to resist relative movement of said band strap layers out of said loop and relative to each other.

3,015,866
MOLDING ENGAGING SPRING FASTENER
Edwin F. Elms, Roseville, and Thomas B. Saunders, St. Clair Shores, Mich., assignors to Robert L. Brown, Ferndale, Mich.
Filed Dec. 3, 1959, Ser. No. 857,049
8 Claims. (Cl. 24—73)



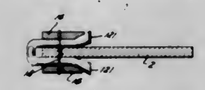
1. A sheet metal fastener for retaining a molding on a support panel comprising a pair of spaced apart and oppositely disposed molding engaging members having bottom edge portions adapted to bear against one face of the panel when the fastener is mounted thereon, a pair of spaced apart vertically rigid struts interconnecting said molding engaging members adjacent their opposite ends, said struts having their lower edges disposed in a plane spaced above said bottom edge portions of said molding engaging members, a flat leaf spring member extending transversely between and connecting said struts at generally the central portion thereof, said leaf spring member being readily flexible in a vertical direction, said leaf spring member also lying in a plane spaced above the bottom edge portions of said molding engaging members, and a pair of spring lugs depending from said central portion of said leaf spring member, said lugs providing two vertically spaced panel engaging shoulders.

3,015,867
COUPLING ASSEMBLY WITH RELEASE PIN
Nathan Bronstein, 8237 Provident St., and Harry Bronstein, 1967 71st Ave., both of Philadelphia, Pa.
Filed July 14, 1958, Ser. No. 748,208
2 Claims. (Cl. 24—123)



1. A coupling assembly comprising, in combination, a tubular body member having an inner end portion, an outer end and ball receiving sockets therein adjacent the inner end portion opening inwardly and outwardly of the tubular body, a plunger received in said tubular body and having an inner end, an outer end, attachment means at the outer end, a ball receiving recess adjacent the inner end and outwardly extending abutment means intermediate the ends, balls received in said sockets of the tubular body member and protruding from said sockets outwardly from said tubular body member and resting on said plunger on a portion thereof intermediate the abutment means and the ball receiving recess thereon, a sleeve means receiving the inner end portion of the tubular body and having a shoulder thereon against which said protruding ball portions abut and a plug portion at the end thereof adjacent the inner end of said tubular body, said plug portion having one or more cable receiving apertures therethrough adapted to receive a cable while said tubular body inner end is adapted to rest against and lock or secure said cable end in abutting engagement with said plug portion, a compression spring member disposed on said plunger and having one end abutting said abutment means on said plunger and the other end extending toward the outer end of said plunger and tubular body and within said tubular body, screw threaded spring retaining means attached to the outer end of said tubular body member and holding said spring against said abutment means on the plunger, said tubular body inner end portion holding said cable in abutting engagement with said plug portion on the sleeve and said ball receiving recess on the plunger spaced away from said ball receiving sockets in the tubular member toward said inner end of the plunger.

3,015,868
SLIDE FASTENER
Josef Ruhrmann, Stuttgart-Vaihingen, Kurt Streicher, Echterdingen, near Stuttgart, and Ernst Popovitsch, Stuttgart-Busnau, all in Germany, assignors to Talon, Inc., Meadville, Pa.
Filed Mar. 28, 1958, Ser. No. 724,631
8 Claims. (Cl. 24—205.13)



1. In a stringer for slide fasteners, in combination, an elongated continuous filament having the properties of a wire and having a zig-zag configuration provided with a series of ladder-like transverse portions all of which are substantially U-shaped to form scoops with the legs of said U-shaped portions located substantially in a pair of substantially parallel planes, and a series of longitudinal portions each interconnecting two adjacent scoops and respectively located at opposite ends of said scoops and at least partly located outside of said planes so as to provide secure guidance for the rails of a slider, each of said scoops being provided substantially at a central portion thereof with a head.

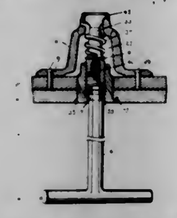
3,015,869
PLASTIC ANCHOR MEMBER
George M. Rapata, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Original application Aug. 11, 1954, Ser. No. 449,092, now Patent No. 2,836,215, dated May 27, 1958. Divided and this application May 23, 1958, Ser. No. 737,369
9 Claims. (Cl. 24—213)



1. A one-piece plastic anchor member comprising a head portion interconnectable with a member, and an axially extending shank portion projecting from said head portion and adapted to be inserted through an aperture in a workpiece panel, said head portion including a section extending laterally from an integral junction with said shank portion for overlying one side of the panel and a securing member extending forwardly from said section for relatively connecting said anchor member and a part to be associated therewith, said shank portion including a centrally relatively rigid axially extending element having transverse dimensions less than corresponding dimensions of said aperture, resilient wing means, and abutment means adjacent said head portion and having a transverse dimension greater than a corresponding transverse dimension of said element for engagement with a wall of said panel aperture for restraining lateral shifting of the anchor member within the aperture, said resilient wing means comprising a wing member integrally connected with an entering end of said shank element and flaring from said entering end of the shank element and generally toward said head portion and in laterally spaced relationship to one side of said shank element for flexing inwardly toward said laterally spaced shank element during insertion of the shank portion through the apertured panel and then springing outwardly for engaging an opposite side of the panel and cooperating with the head portion to retain the anchor member in assembled relationship with the panel, said wing member including a panel engageable surface extending transversely thereof substantially at a free end thereof and facing said head portion and having a predetermined width in the direction of said flexing movement, and said free end of said wing member normally being spaced laterally outwardly from said one side of the shank element a distance similar to said predetermined width of said panel engageable surface so as to facilitate flexing of the wing member sufficiently to enable the panel engageable surface to be snapped beneath the panel.

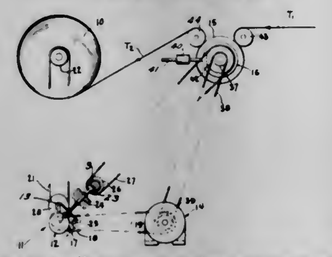
3,015,870
QUICK RELEASE CAM TYPE FASTENER DEVICE
Harley Lee Ely, Fort Worth, Tex.
(508 Timberland St., Smyrna, Ga.)
Filed Mar. 26, 1958, Ser. No. 724,006
1 Claim. (Cl. 24—221)

A fastener device comprising: a cam type retainer having a base portion, a crown portion integral with said base portion, said crown portion having cam surfaces at its outer end portion; said retainer being adapted for fixing to the outer face of a first structure having an opening therein, with said crown centered over said opening; a stud assembly comprising a stud, a helical stud ejection spring, a bearing nut, a closure pin, and a helical closure pin return spring; said stud having an integral collar intermediate its ends and a T head cam at one end and having external threads extending from said collar to the other end, an integral shank portion extending from said collar to said head, a diametral slot extending inwardly into said stud at its threaded end, and a cylindrical axial bore extending into said stud from the bottom of said slot, with said ejection spring carried on said shank; said bearing nut having an axial opening including a portion adjacent the nut head end having polygonal sides, and a portion having internal threads and a diametral slot



extending to the said portion having the polygonal sided opening, with said internal threads being adapted for cooperation with said stud threads, said bearing nut having an outer cylindrical surface adapted for fitting said first structure opening and also an opening in a second structure to be joined to the first, said bearing nut having a flat head which is flush with the outer surface of the second structure when the device is in the locked position; said pin having a cylindrical shank portion capped with an integral T head which is in turn capped with an integral polygonal head, with said T head being adapted for sliding in said bearing nut and stud slots, and said polygonal head adapted to fill the polygonal opening in said bearing nut, with said return spring being carried by said shank and inserted in said stud bore, so that said polygonal head outer surface is normally flush with said bearing nut head outer surface.

3,015,871
TENSION COMPENSATING APPARATUS
Harold C. Noe, Upper Montclair, N.J., assignor to Kidde Textile Machinery Corporation, Bloomfield, N.J., a corporation of Delaware
Filed Jan. 9, 1959, Ser. No. 785,817
4 Claims. (Cl. 28—36)



3. In warp tension compensating apparatus, the combination of a rotatably mounted warp beam, a rotatable shaft, a roll about which the warp passes mounted on said shaft for rotation therewith, a first gear rotatably mounted on said shaft, a second gear mounted on said shaft for rotation therewith, a second shaft, third and fourth gears mounted on said second shaft for rotation together, a bracket for pivotally supporting said second shaft on said first mentioned shaft with said third gear in mesh with said first gear and said fourth gear in mesh with said second gear, means for driving said first gear and said warp beam including a variable speed drive for said warp beam provided with a control element, and means on said bracket connected to said control element for controlling the speed at which said warp beam is driven.

3,015,872
APPARATUS FOR THE HEAT TREATMENT OF RUNNING YARNS
Clive Righton Jones, Abergavenny, England, assignor to British Nylon Spinners Limited, Monmouthshire, England
Filed Apr. 15, 1958, Ser. No. 728,635
Claims priority, application Great Britain Apr. 25, 1957
2 Claims. (Cl. 28—62)



1. Apparatus for the heat treatment of running yarns passed therethrough comprising: an elongated thermally insulated heating jacket defining within its interior at least one heating zone; said jacket having a threading slot extending longitudinally over one side and communicating with said zone, the slot being of inwardly tapered cross section; insulating block means disposed partially across said slot in transverse relationship adjacent to the inner end thereof; heat conducting material disposed within said zone and of a configuration to provide a passage for the yarn; heating means in contact with said heat conducting material; a thermally insulated closure member which is complementary in shape to said slot, said member being adapted for abutting engagement with the adjacent lateral surface of said slot when in a closed position in the apparatus while the inner surface thereof is spaced from the outside surface of said insulating block means when in the closed position to provide an air gap therebetween, whereby a leakage path is provided during operation of the apparatus.

3,015,873
COMPLEX ARTIFICIAL FILAMENTS
Hans-Joachim Dietzsch, Horn, and Otto Dietzsch, Wangen, Germany, assignors to Trikotfabriken J. Schiesser A.G., Radolfzell (Bodensee), Germany
Filed Mar. 8, 1956, Ser. No. 570,249
Claims priority, application Germany Mar. 8, 1955
1 Claim. (Cl. 28—82)

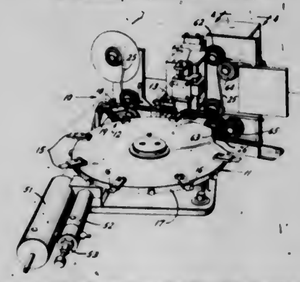
An extruded filament consisting of a sheath and a core composed of different materials and united with one another by intermixture at the contact area of the different materials, the core consisting of a sequence of cells each shaped against the inner surface of the sheath

and separated from each other by partitions extending in spaced relation each with its central cross sectional



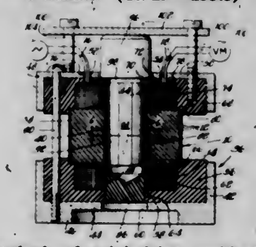
plane at right angles to the longitudinal axis of the filament and each partition being shaped by surface tension.

3,015,874
METHOD FOR FABRICATING SEMICONDUCTOR DEVICES
Richard Crouthamel, Telford, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 4, 1958, Ser. No. 726,582
5 Claims. (Cl. 29—25.3)



1. The method of automatically fabricating semiconductor devices, which comprises: heating a body of semiconductive material preparatory to applying contacts thereto to a temperature in excess of the melting point of the contact material; punching contacts in opposed, prealigned pairs from impurity material; transporting said contacts sequentially into abutment with opposed faces of said semiconductive material to support said body solely upon one of said contacts prior to applying the other of said contacts to said body; simultaneously pressing the opposed contacts, against said body at a time substantially coincident with their placement upon and partial liquification by, said heated body and conducting heat from said contacts thereby to utilize both pressing and heat conduction to prevent loss of dimensional form of said contacts.

3,015,875
ADJUSTMENT OF TACHOMETER GENERATORS
Felix F. Skuta, Chicago, Ill., assignor to G-M Laboratories Inc., Chicago, Ill., a corporation of Illinois
Filed June 27, 1955, Ser. No. 518,221
6 Claims. (Cl. 29—155.5)



1. The method of minimizing residual voltage in tachometer generators which comprises assembling input and output windings with the loosely assembled laminations of a tachometer generator stator, inserting a nonconductive, non-magnetic spacer sleeve into the center hole of the loosely assembled stator laminations, inserting a cylindrical slug having a flat on one side into the spacer sleeve in the stator in spaced relation thereto, applying A.C. voltage to the input winding, measuring the output voltage, rotating the slug to maintain a minimum output voltage, relatively shifting the loosely assembled laminations to obtain a minimum output voltage, and securing the laminations in the position giving the last mentioned output voltage.

3,015,876
METHOD OF MAKING RESILIENT SWITCH CONTACTS
Philip Hutt, Milford, Conn., assignor to General Electric Company, a corporation of New York
Filed June 18, 1957, Ser. No. 666,446
2 Claims. (Cl. 29—155.55)



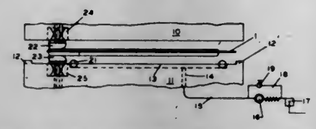
1. A method of producing resilient switch contacts with integral terminals comprising the steps of providing a thin strip of metal stock of uniform cross-section, cutting out a longitudinally extending groove adjacent the center of said strip to form a central section of reduced thickness, stamping the contacts with the integral terminals out of this metal strip with each of the contacts extending in a direction transverse to the longitudinal axis of the strip, and forming the stamped part into a finished switch subassembly with the central section of reduced thickness serving to increase the flexibility of the contacts.

3,015,877
METHOD FOR MAKING AN ANGLE PLUG WITH LOOPED CONDUCTOR
Wallace R. Francis, Milford, Conn., assignor to General Electric Company, a corporation of New York
Filed Aug. 1, 1957, Ser. No. 675,647
2 Claims. (Cl. 29—155.55)



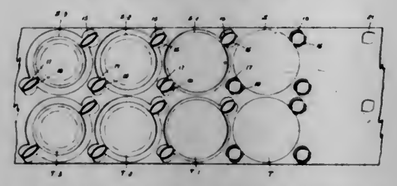
1. A method for forming a solid angle plug on an integral two-conductor electric cord comprising the steps of cutting each conductor of said two conductor electric cord to substantially the same length, crimping a contact prong to each of said conductors simultaneously, looping the conductor of one prong at least a full turn under and around the conductor of the other prong, arranging said prongs parallel and opposite to each other and at substantially right angles to the axis of the cord, and molding an insulating plug body around the area of the cord which is crimped to the prongs.

3,015,878
DIFFERENTIAL EXPANSION OF PRESSURE WELDED PASSAGEWAY PANEL
Paul R. Staples, Louisville, Ky., assignor to Reynolds Metals Co., Louisville, Ky., a corporation of Delaware
Filed July 27, 1956, Ser. No. 600,508
10 Claims. (Cl. 29—157.3)



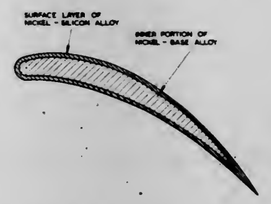
10. A method of expanding a pressure welded unexpanded passageway panel comprising: expanding the passageway walls of said panel differentially on the opposite panel faces by introducing a fluid under pressure into said panel while its faces are gripped between a relatively hard resilient die and a relatively soft resilient die to provide a "small" expanded passageway wall on one panel face and a "large" expanded passageway wall on the opposite panel face; sealing a measured volume of liquid in said expanded passageway; and flattening said small passageway wall while simultaneously and additionally expanding said large passageway wall by pressing a flat die against the small passageway wall panel face while the large passageway wall panel face is engaged against a second die having a cavity filled with a holding liquid receiving said large passageway wall.

3,015,879
BLANK CARRIER FOR SHEET METAL STRIP AND METHOD FOR MAKING SAME
George J. Babitt, Wellington, Ohio, assignor to The Sectional Die Company, Wellington, Ohio, a corporation of Ohio
Filed Aug. 11, 1958, Ser. No. 754,379
11 Claims. (Cl. 29—193.5)



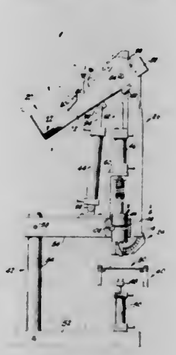
6. A flat sheet metal strip having a plurality of generally symmetrical juxtaposed blanks formed from the strip, said blanks being disposed substantially in alignment lengthwise of said strip for utilization of a minimum width of strip for a predetermined width of blank, at least a portion of the defining boundary of each of said blanks being of curved configuration in plan view with the material of the strip skeleton adjacent said curved portion normally representing scrap, and means for holding said blanks onto the strip skeleton for subsequent work operations, such as stamping operations, on said blanks, said means comprising a pair of relatively curved contiguous, flexible legs formed in said scrap section of said strip and non-rigidly connecting the respective blank to the strip skeleton, each of said legs being connected to the respective blank adjacent one end thereof and being connected to the strip skeleton adjacent the other end thereof, said legs being spaced from one another on their confronting inner edges intermediate their ends and being spaced from the strip skeleton at their outer edges intermediate their ends whereby the respective blank is held onto the strip skeleton by the legs at the outer ends of the legs, said legs being disposed laterally of the longitudinally extending axis of the respective blank, said legs being adapted for elongation in the plane of said strip during said work operations on the respective blank, to thereby prevent warpage of said strip skeleton.

3,015,880
CORROSION RESISTANT TREATMENT OF METAL ARTICLES
Norman Stephenson, Farnham, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Nov. 6, 1958, Ser. No. 772,344
Claims priority, application Great Britain Nov. 12, 1957
5 Claims. (Cl. 29—194)



1. A metal article characterized by high resistance to corrosion by a vanadium-containing atmosphere that comprises an inner portion comprised of at least one metallic material, and an integral surface layer overlying said portion, said surface layer being an alloy consisting of nickel and silicon in proportions corresponding to the nickel-silicon eutectic containing 12% silicon.

3,015,881
COMPONENT INSERTING APPARATUS
Robert W. Helda, Williamsville, William L. Lehner, Snyder, and Nelson Lee Walker, Batavia, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,546
5 Claims. (Cl. 29—203)



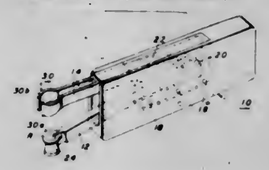
1. In an apparatus for inserting components of the leadless type into an apertured electrical chassis having a longitudinal axis the combination of an oscillatable hopper for said components, means for oscillating said hopper in a vertical plane about a fixed horizontal axis, a reciprocably mounted component inserting head having a vertical axis parallel to said plane, means for adjusting the angular position of said head about said vertical axis relative to the vertical plane of said hopper, flexible means secured at one end to said hopper and at the other end to said inserting head for conveying said components from said hopper to said inserting head, means for

operating said inserting head whereby said component is inserted in an aperture in said chassis at an angle to the longitudinal axis of said chassis and to the plane of said hopper.

3,015,882
RETAINING-RING ASSEMBLY TOOLS

Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York

Filed June 2, 1959, Ser. No. 817,668
8 Claims. (Cl. 29—229)



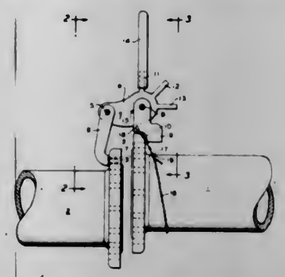
1. A pliers-type hand tool for assembling external split retaining rings having a gap between their free ends on grooved shafts and like workpieces comprising a pair of pivotally interconnected elongate arms having cooperating working ends which are movable towards and away from one another in a common plane, one working end including a ring spreading head in the form of a truncated cone whose smaller diameter end is substantially equal to the inner unstressed diameter of a ring to be assembled and whose larger diameter end is equal to the diameter of the shaft on which said ring is to be assembled and being adapted to receive and spread said ring to the diameter of said shaft, responsive to axial movement of the ring along the length of said head, said spreading head being connected to its carrying arm by a blade-like neck having narrow width enabling it to enter the gap between the open ends of the ring being spread, the other working end including ring pushing means adapted to exert push on one face of said ring placed on the smaller diameter end of said head in direction as to move same axially along said spreading head toward the large diameter end thereof in accordance with movement of said working ends towards one another, the construction and arrangement being such that by positioning the tool so that said spreading head abuts and is coaxial with said grooved shaft and thereupon moving said working ends towards one another, said pushing means pushes the ring axially along and thence strips it from said spreading head, thereby to spread the ring to shaft diameter and thereupon transfer same to the shaft for movement therealong to the plane of the shaft groove.

3,015,883
FLANGE ALIGNING TOOL

Glenn S. Brown, Bountiful, Utah, assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 2, 1957, Ser. No. 700,060
6 Claims. (Cl. 29—271)

1. Apparatus for aligning a substantially vertical fixed flange and a substantially vertical movable flange for bolting together comprising support means adapted to be positioned upon the top portion of said fixed flange in a substantially vertical plane passing through said flange axis and in alignment with a bolt hole in the top portion of said fixed flange, said support means having a bifurcated upper end with holes therethrough; means to secure said support means in said plane and in alignment with said bolt hole at the top portion of said fixed flange; grapple means having one end bifurcated with holes therethrough and a pin fixed to the other end to engage a bolt hole in said movable flange; linkage means pivotally connected to the bifurcation of said support means and to the bifurcation of said grapple means so that the bolt hole engaged by said pin and the bolt hole in alignment with said support means are in alignment when said linkage is rotated about the pivotal connection with said

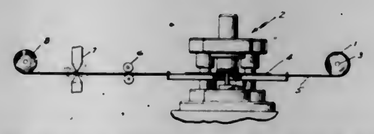


support means; and means to rotate said linkage about the pivotal connection with said support means so as to move the movable flange into alignment with the fixed flange.

3,015,884
METHOD OF STORING A MATERIAL WITHIN ANOTHER MATERIAL

Robert J. Chamberlain, Natick, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Oct. 16, 1957, Ser. No. 690,577
7 Claims. (Cl. 29—423)

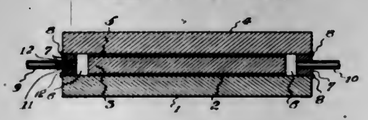


1. The method of storing a first rigid material within a second flexible, semi-rigid material comprising the steps of superimposing a quantity of said first material over a quantity of said second material, progressively feeding said superimposed materials at predetermined intervals to a cutting device, cutting said superimposed materials between said predetermined intervals so as to form pieces of each of said materials whereby holes are left in said superimposed materials, and inserting said pieces of said first material into said holes in said second material whereby a plurality of said pieces of said first material are embedded at predetermined positions in said second material.

3,015,885
CLADDING OF STEEL PLATES WITH TITANIUM

Kenneth W. McEuen, Malvern, and Eugene M. Smith, Coatesville, Pa., assignors to Lukens Steel Company, Coatesville, Pa., a corporation of Pennsylvania

Filed Mar. 7, 1958, Ser. No. 719,928
5 Claims. (Cl. 29—470.9)



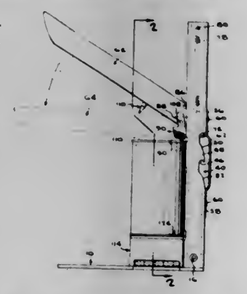
1. A process for producing a composite metal pack including a metallic base plate, a titanium cladding plate and a cover plate which comprises bonding a coating of nickel on the upper face of the base plate, placing a plate

of titanium on said coating, applying a parting material to the upper surface of said titanium plate, placing a cover plate over and in contact with said parting material, hermetically sealing the peripheral edges of said pack, providing the interior of said pack with an inlet means and an outlet means, filling a part of said inlet means with an active metal porous mass, heating the mass in said inlet means to a temperature of between 1500° F.–1800° F., then flushing the pack with a gas which is inert to said titanium plate when heated to thereby heat said pack to a temperature range of from 1400° F. to 1800° F., compressing said pack to reduce the thickness of the pack and to bond the plates to each other except those which are separated by said parting material.

3,015,886
ADJUSTABLE CAN TOP PERFORATOR

Henry W. Miller, % Carpenters' Home, P.O. Box 80, Lakeland, Fla., assignor of one-half to J. H. P. Brown, Lakeland, Fla.

Filed May 5, 1961, Ser. No. 107,962
7 Claims. (Cl. 30—6.1)

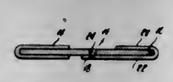


1. A can top perforator comprising a horizontal base plate, a standard fixed to and rising from the base plate, said standard vertically spaced downwardly facing notches, a lever having an end portion bearing freely against the standard, said end portion having a transverse pivot pin adapted to be selectively engaged in said notches, a stop cross pin on the lever adjacent to said end portion adapted to bear against the standard in opposition to the pivot pin engaged in a notch, spring means on the standard and connected to said end portion of the lever and biasing the lever upwardly so as to maintain the pivot pin in a selected notch, and longitudinally spaced punches extending downwardly from the lever at one side of the standard for punching the top of a can resting upon the base.

3,015,887
RAZOR BLADE CUTTER DEVICE AND GUARD THEREFOR

Daniel K. Higginbotham, P.O. Box 1957, Tulsa 1, Okla.

Filed Feb. 11, 1959, Ser. No. 792,517
3 Claims. (Cl. 30—162)



1. A cutting device comprising: a single edged razor blade having a non-cutting back portion, sides, a cutting edge, and a plurality of elongated narrow slots with longitudinal sides extending parallel to said cutting edge of the blade; and a channel-shaped guard of sheet material on said blade, said guard having two sides spaced from each other a distance slightly less than the thickness of the razor blade when the guard is not assembled thereon, with said cutting edge received therebetween, the length of said guard sides being substantially the same as the length of the blade, said guard having a plurality of detents thereon extending from one side of the guard towards the other side thereof, with each of said detents received in one of said elongated slots in the razor blade, so that the guard is movable with respect to the blade whereby the length of the blade edge exposed can be adjusted, the distance from each of said detents to the edge of the guard joining its two sides being slightly greater than the distance between the respective slots receiving the detents and the cutting edge of the blade, whereby the blade cutting edge is prevented from contacting the guard when it is moved to adjust the length of the blade cutting edge exposed.

3,015,888
ARTIFICIAL TOOTH STRUCTURE AND PLATE THEREFOR

Paul Dent, 34 N. George St., York, Pa.

Filed Apr. 28, 1959, Ser. No. 809,453
3 Claims. (Cl. 32—9)

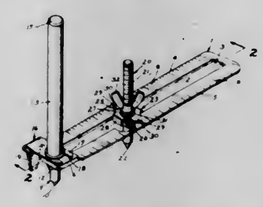


1. A dental structure for receiving an artificial tooth comprising a plate, an upstanding boss attached to said plate for retaining an artificial tooth thereon, said boss having a transverse slot therethrough; and means for retaining said structure in a mouth comprising a flat, leaf-type spring removably mounted in said slot.

3,015,889
COMBINATION CENTER PUNCH AND SCRIBING GAUGE

Burnett Godman, 512 12th Ave. S., Minneapolis, Minn.

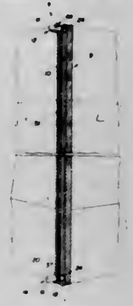
Filed Oct. 28, 1959, Ser. No. 849,273
5 Claims. (Cl. 33—27)



1. In a combination center punch and scribing gauge, a longitudinally slotted scale bar defining a guideway, said bar terminating in a head having a threaded aperture the axis of which is normal to the plane of said bar, a threaded center punch screw threaded within said head and having a depending point, the axis of said punch being coincidental with the aforesaid axis, a lock nut on said punch and engaging said head, an axially drilled and internally threaded striking block threaded on said punch, a laterally adjustable generally L-shaped guide flange removably secured to said punch and depending therefrom normal to the plane of said bar, a longitudinally adjustable indicating pin mounted and guided within said guideway, said indicating pin having a point depending from the same surface of said bar as the point of said center punch and the axis of said indicating pin being normal to

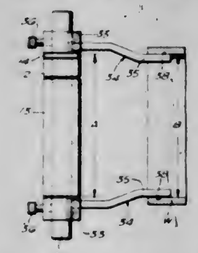
the plane of said bar, and means associated with said indicating pin for releasably locking same in a preselected position longitudinally of said scale bar.

3,015,890
CORNER BEAD INSTALLATION DEVICE
Donald Angus McCaskill, 138 N. 7th Ave., Pocatello, Idaho
Filed Sept. 23, 1938, Ser. No. 762,773
4 Claims. (Cl. 33—85)



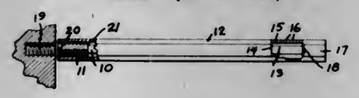
1. For use as a component unit of a corner bead installing device, at least one bracket formed from sheet metal bent upon itself into general U-shaped form and having a bight portion at one end and spaced parallel arms, said arms having free ends and said free ends being directed toward each other in converging relationship but terminating in close spaced proximity and are then provided with outstanding extremities, the extremities being opposed to each other and bent and fashioned into a pair of bead clamping and releasing jaws, one of said arms having a flange thereon projecting toward the other arm and confined within the limits of the space existing between the converging portions of the arms and said flange having at least one line hole therein centered between the arms, an L-shaped bolt having its main shank portion passing through holes provided therefor in the respective arms and provided at one end with a thumb nut, the other end being the laterally directed end and being secured between retaining tongues struck-out from the adjacent portion of the arm and partially embracing said one end.

3,015,891
PRECISION UNIVERSAL GAUGE
George C. Larson, 527 Giano Ave., La Puente, Calif.
Filed Oct. 17, 1958, Ser. No. 767,892
1 Claim. (Cl. 33—143)



A precision gauge for use by tool and die makers comprising a single smooth-surface rigid cylindrical mandrel, a plurality of tubular gauge blocks having a close sliding fit over said mandrel, said blocks being precision finished to different predetermined axial lengths whereby the distance between the opposite end faces of a plurality thereof assembled in snug abutting relation on said mandrel can be used to measure accurately distances between two points directly opposite said end faces, feeler means having a close sliding fit over said mandrel with one surface of said feeler means fixedly positioned directly opposite the outer end face of an end gauge block when said feeler means is positioned in snug contact with the latter, and a pair of said feeler means securable to said mandrel at the opposite ends of said gauge block while assembled on said mandrel, said feeler means each including a cylindrical rigid probe projecting normally to said mandrel and lying parallel to one another, the remote side walls of the outer ends of said probes lying in the same plane as the outer end face of an associated one of said gauge blocks and being adapted for use in measuring an internal dimension of an opening in a workpiece or the like.

3,015,892
THREAD DEPTH GAUGE
Edward O. Stuart, 1209 S. Irene St., Sioux City, Iowa
Filed July 20, 1960, Ser. No. 44,099
4 Claims. (Cl. 33—169)



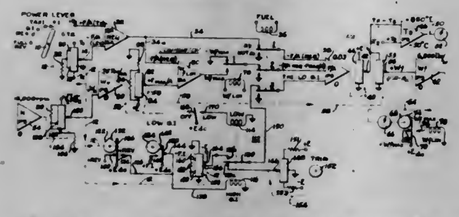
1. A thread depth gauge comprising a hexagonal male rod including a threaded end portion, said end portion being adapted to be received in a threaded cavity, a hollow hexagonal tube receiving said male rod, said hollow tube including a cut-out portion, said cut-out portion including an inner shoulder adapted to register with the outer end of said male rod when a required depth is to be checked.

3,015,893
FLUID FLOW CONTROL DEVICE FOR TENTER MACHINES UTILIZING SUPER-HEATED STEAM
John McCreary, N. Mohawk St., Cohoes, N.Y.
Filed Mar. 14, 1960, Ser. No. 14,921
8 Claims. (Cl. 34—158)



8. In a machine of the character described for drying and setting fabrics by means of super-heated steam circulating in a cabinet, which fabrics are stretched between tenter chain beds that are adapted to be moved toward and away from each other to accommodate fabrics of different widths, comprising an adjustable flow control chamber in the bottom of said cabinet for directing said super-heated steam to the underside of said fabric to pass therethrough, said chamber including a bottom pressure distributive member, a top pressure diffusion member positioned beneath said tenter chain beds, and adjustable side walls movably connected at their bottoms to said bottom member, and at their tops to said beds to be moved toward and away from each other as said beds are moved to receive different sizes or widths of fabrics therebetween, means to re-heat exhausted steam passed through said fabric and to re-circulate the same in super-heated form into said flow control chamber, and means to shut off communication of the super-heated steam with the flow control chamber when said machine has stopped and to re-route said steam to said circulating means out of contact with said fabric.

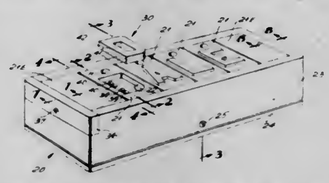
3,015,894
SIMULATED TURBINE SYSTEM FOR TURBO-PROPELLER AIRCRAFT
Duncan W. Simpson, Wyckoff, and William H. Dawson, Jr., Waldwick, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Mar. 17, 1959, Ser. No. 800,009
14 Claims. (Cl. 35—12)



8. In apparatus for simulating the engine system of an aircraft having computing means for representing the airflow of said engine, the combination comprising a simulated power lever positionable by a student pilot over a range of positions corresponding to a range of engine operation; function generating means operatively connected with said power lever for providing a variable electrical signal in accordance with the power lever position, the latter signal representing requested fuel-air-ratio; function generating means receiving as input signal an output signal of said airflow computing means and in turn providing an output signal representing the ratio of a predetermined maximum fuel flow to the instant airflow; means for comparing said two fuel-air-ratio signals and providing a difference signal that is subject to a change in sense when said requested fuel-air-ratio signal calls for fuel flow greater than said maximum fuel-air-ratio signal and vice versa; computing means for representing actual fuel-air-ratio responsive to said difference signal and to said requested signal received as input signals by the last-mentioned computing means, said requested signal being applied to said last-named computing means in canceling relation to the requested signal component in said difference signal; means receiving as input signals, output signals of said actual fuel-air-ratio and airflow computing means for computing fuel flow and defined by a limiting range wherein the computed fuel flow is constant at said predetermined maximum independently of said requested fuel-air-ratio signal and by a computing range wherein the computed fuel flow is a variable function of said requested fuel-air-ratio and computed air flow; and switching means responsive to said changes in sense for alternately switching out and in said difference signal to said actual fuel-air-ratio computing means as said maximum fuel-air-ratio signal exceeds said requested fuel-air-ratio signal and vice versa, thereby effecting transfer from said limiting range to said computing range and to render said actual fuel-air-ratio alternately independent of said computed air flow and independent of said requested fuel-air-ratio respectively.

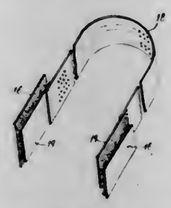
3,015,895
EDUCATIONAL TOY
Cash G. Stall, Manhattan Beach, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Sept. 19, 1960, Ser. No. 56,716
7 Claims. (Cl. 35—35)

1. An educational toy adapted to teach the correlation between related symbols, comprising: a hollow housing of substantially rectangular parallelopiped shape having a top wall provided with a plurality of downwardly directed different receiving recess-defining portions, said housing top wall being formed of a plurality of removable interchangeable panels, with each panel carrying one of said receiving recess-defining portions, whereby they can be removed and repositioned or replaced to provide different sets of meaningful correlations of symbols; a corresponding plurality of different insert members removably received within the corresponding ones of said recess-defining portions, the insert member means received by the corresponding recess-defining portions visibly indicating a correct correlation of symbols for educational purposes; normally open switch means corresponding to each



of said receiving recess-defining portions and each including a first switch portion positioned within the corresponding receiving recess-defining portion and a second switch portion carried by the corresponding insert member and adapted to close the switch means when said insert member is received within said receiving recess-defining portion; and electric circuit means adapted to be connected to a suitable source of electric power and connected to the plurality of first switch portions in a group of parallel branches, each provided with an individual signal light means whereby closure of any of said first switch portions by insertion of the corresponding insert member into the correlated receiving recess-defining portion will energize said signal light means to produce a visible signal indicating correct correlation of symbols.

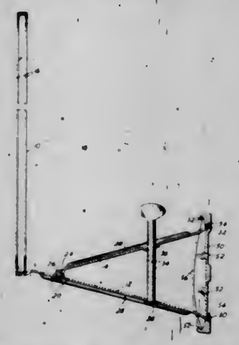
3,015,896
FOOTWEAR
Leon Breslow, 185 E. 162nd St., New York, N.Y.
Filed Nov. 15, 1960, Ser. No. 69,469
1 Claim. (Cl. 36—58.6)



Footwear with adjustable, removable and replaceable retaining means comprising a shoe structure having opposite side walls, a flexible heel engaging stay detachably connected at its opposite ends with said opposite side walls of the shoe structure, a pad of closely spaced, small, short, stiff holding elements on the inner surface of one side wall of said shoe structure projecting inwardly toward the center of the shoe and a companion pad of closely spaced, small, short, stiff holding elements on one end of said stay projecting outwardly toward the outside away from the center of the shoe and in interlocking engagement over the oppositely projecting holding elements in the shoe and said companion pads being adapted to be interlockingly connected in different extents of overlapped engagement and in different angular relations whereby effective length of the stay may be determined

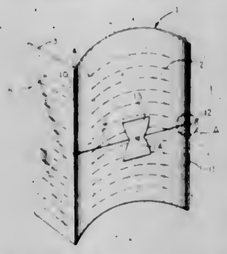
by overlapping the companion pads to different extents and angular relation of the stay to the shoe structure may be determined by engaging the overlapped pads in different angular relations.

3,015,897
DISPLAY DEVICE
Philip Hopp, New York, N.Y., assignor to The Hopp Press, Inc., New York, N.Y., a corporation of New York
Filed Apr. 14, 1960, Ser. No. 22,306
6 Claims. (Cl. 40—11)



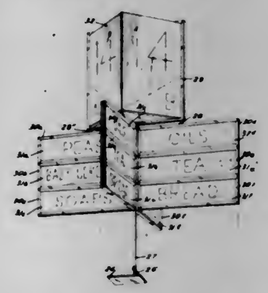
1. In a display device, in combination, a pair of supporting legs having inner ends pivotally connected to each other whereby their bodies define a V-shaped outline, a mounting for a display card permanently attached to one of said legs, the outer zones of said legs being contactable with undercut and opposed mounting surfaces and means for causing the outer ends of said legs to be forced in opposite directions to increase the angle defined by such legs and thus cause their outer zones to firmly engage the mounting surfaces.

3,015,898
ADVERTISING DISPLAY
Clifford R. Keeslar, Sturgis, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
Filed Sept. 8, 1958, Ser. No. 759,720
2 Claims. (Cl. 40—124.1)



1. An advertising display consisting of a substantially rectangular, resilient sheet capable of receiving advertising indicia thereon and having a fold line extending between two opposite edges thereof and parallel with the other two edges thereof and dividing said sheet into two panels which extend at an angle to each other; a pair of elongated, flexible strings, one pair of corresponding ends of said strings lying at least in substantial contact with each other and removably connected to said sheet at one of said other two edges and the other pair of corresponding ends of said strings lying in at least substantial contact with each other and connected to said sheet at said fold line, said connections being at corresponding points substantially midway between said two opposite edges and the length of said strings being identical to each other and less than the distance between said one edge and said fold line when said sheet is flat so that the panel between said one edge and said fold line is in a bowed condition and said strings are located in front of the concave surface thereof; and a mobile inserted between said strings and held therebetween by the tension applied to said strings by the resiliency of said bowed panel, whereby movement of said mobile attracts attention to said advertising indicia on the concave surface of said bowed panel.

3,015,899
THREE DIMENSIONAL DISPLAY DEVICE
Robert H. Ensign, Bronxville, N.Y., Danforth Cardozo, Jr., Weston, Conn., and George Woods, New York, and Milton Immermann, Piermont, N.Y., assignors to The Hopp Press, Inc., New York, N.Y., a corporation of New York
Filed Jan. 29, 1960, Ser. No. 5,487
6 Claims. (Cl. 40—125)

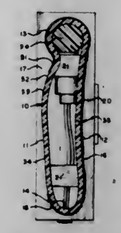


1. In a display device a base member, an upright extending vertically upward from said base member, a four sided rectangular frame member mounted on said upright, each of the sides of said frame member having a U-channel cross section with the base thereof forming the periphery of said frame, a rectangular indicating member of greater width than said frame, an edge of said indicating member maintained within a vertical side of said frame, an opposite edge of said indicating member maintained within the opposite vertical side of said frame, and a vertical bend in said indicating member allowing the bend portion to project outwardly away from said frame.

3,015,900
INTERNALLY ILLUMINATED SIGN
Richard F. Frink, Larimer, Colo. (300 S. Haines, Fort Collins, Colo.) and Raymond R. Puleston, Larimer, Colo. (Belvue Star Rte., Fort Collins, Colo.)
Filed Nov. 7, 1958, Ser. No. 772,613
5 Claims. (Cl. 40—130)

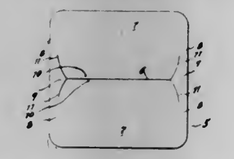
1. In an internally illuminated sign formed as a flattened tube-like element of translucent, opalescent-like material with one side forming a face side with the other side and edges being covered by a reflective backing and with a longitudinally-disposed rod-like linear light-emanating element at one edge thereof, an arrangement of curved sections adapted to dispense a uniform light on the face thereof including a head at the edge adapted to embrace the light emanating element, a curved base edge opposite the head adapted to reflect light to each side thereof, a necked-in portion between the face and head turning outwardly adjacent to the face, an inwardly

turned portion of the face surface adjacent to the neck and a substantially flat face portion extending tangentially from the inwardly turned portion to the edge opposite



the light source edge and at an inclination which permits a portion of the light from the element to strike this surface.

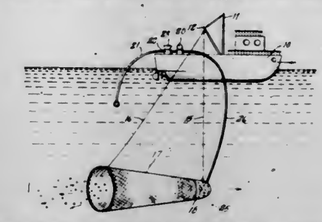
3,015,901
ATTACHMENT COLLARS FOR PAPER MILK CONTAINERS
Richard H. Storer, Toronto, Ontario, Canada, assignor to Associated Advertising Limited, Toronto, Ontario, Canada
Filed Mar. 21, 1960, Ser. No. 16,318
1 Claim. (Cl. 40—312)



In combination, an advertising device, and a rectangular carton, said carton having a closure at one end, said closure having a transverse ridge strip and inwardly disposed side wall portions at opposite ends of said ridge strip, said closure including planar top portions diverging angularly from the base of said ridge strip and overlying said inwardly disposed side wall portions, said advertising device comprising a normally planar, foldable member including a linear slit shorter than said container ridge strip and terminating inwardly of opposite side margins of said foldable member, said foldable member including secondary slits extending from and communicating with opposite terminal ends of said linear slit, said secondary slits divergently and arcuately curving away from said terminal ends of said linear slit and terminating inwardly of said opposite side margins of said foldable member, said secondary slits forming inwardly projecting detent elements, said advertising device being disposed on said container with said ridge strip projecting through said linear slit, said linear slit defining opposite side sections on the planar, diverging top portions of said container, said detent portions projecting into said inwardly disposed side portions of said container side wall portions, beneath the opposite ends of said ridge strip and normal to the general plane of said ridge strip.

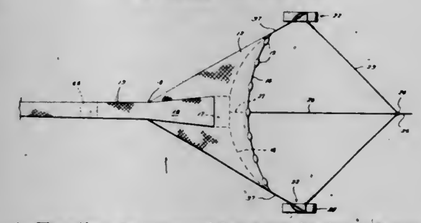
3,015,902
FISH TRAP
Wadsworth W. Mount, Warren Township, Somerset County, N.J. (51 High St., Summit, N.J.)
Filed Jan. 5, 1961, Ser. No. 80,904
8 Claims. (Cl. 43—7)

2. A fish trap mechanism comprising a conical-shaped net with rigid supports near the apex, means for moving the net through the water at the desired depth apex forward, means for creating an accelerated stream of water through the net from the apex and outwardly from the base of the net in a direction opposite to the forward



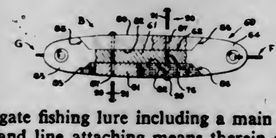
movement of the net, means for supplying bait particles to the accelerated stream and means for closing the net and hauling it in.

3,015,903
SHRIMPING GEAR
Herman P. Willingham, Aransas Pass, Tex., assignor to F. K. Lytle, Aransas Pass, Tex.
Filed July 13, 1959, Ser. No. 826,647
10 Claims. (Cl. 43—9)



1. Trawling gear comprising a net having a flared forward portion provided with an apex portion disposed rearwardly therefrom and a centered, generally tubular collecting part extending rearwardly from said apex portion and having top and bottom panels extending substantially forwardly of said apex portion, drag lines extending forwardly from the forward corners of said flared forward portion, otter doors secured to the forward ends of said drag lines, converging tow cables extending forwardly from said otter doors, and a center tow cable extending forwardly from the forward extremities of said top and bottom panels for carrying a substantial part of the load of said collecting part independently of said otter doors and said flared forward portion of the net.

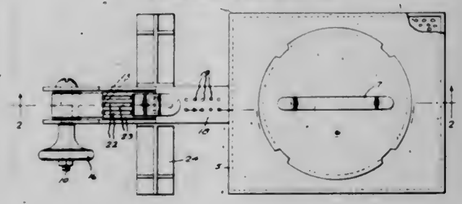
3,015,904
FISHING LURES
John J. Trani, 9 Lytle St., Princeton, N.J.
Filed Jan. 7, 1960, Ser. No. 1,013
1 Claim. (Cl. 43—42.09)



An elongate fishing lure including a main body having fish hook and line attaching means therein comprising a slender central portion disposed at the central longitudinal axis of the lure, and enlarged end portions all of opaque material, with said longitudinal axis extending through the centers of said enlarged end portions, said slender central portion having two narrow side faces and each of said enlarged end portions having outer edges and two side faces, wider than the width of said narrow side faces of said central portion, all portions of said side faces and outer edges being exterior exposed faces of said lure and having light rays-reflecting colored faces, said central por-

tion having two opposite substantially parallel narrow flat inner faces substantially normal to said two narrow side faces, and each of said enlarged end portions having narrow flat inner faces extending from the outer edges thereof to said narrow inner flat faces of said central portion and, with said narrow inner flat faces, defining two open-sided recesses; inserts disposed snugly in said recesses and each having a narrow flat inner face, two substantially parallel side faces exposed at the exterior of said lure, extending to and merging with the side faces of said central portion and merging with said enlarged end portions and forming parts fo the exterior surfaces of said lure, and outer longitudinally-extending faces merging with said outer edges of said enlarged end portions, said inserts being of light-rays-transmitting colored material differing from the color of said side faces of said central portion and enlarged end portions; and attaching means securing said inserts to said main body.

3,015,905
BAIT BOX FOR LIVE CRICKETS
Robert H. Everett, Rte. 1, Chipley, Fla.
Filed Feb. 17, 1960, Ser. No. 9,357
1 Claim. (Cl. 43—55)



A live bait box and dispenser, comprising a hopper-like container having a front, rear, side and bottom walls, an elongated open channel member disposed along the bottom of said container in communication with the interior of said container, an endless conveyor operating longitudinally within said channel member, transverse rows of plural pegs secured in transverse alignment to the belt conveyor, said channel member extending a substantial distance beyond the front wall of said container, said endless conveyor being adapted to receive bait from said container and delivering the bait to the forwardly extended end of said channel member, a hinged closure having elongated openings aligned with said pegs and adapted to permit said pegs to move therethrough, said closure operating directly over said channel member and normally contacting said endless conveyor, closing the channel member against escape of bait from said container, and means for effecting rotation of said endless conveyor.

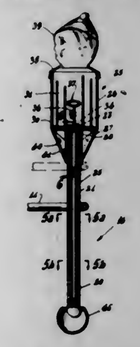
3,015,906
EASELS
Chester K. Guth, St. Petersburg, Fla., assignor to Oravisual Company, Incorporated, St. Petersburg, Fla., a corporation of Florida
Filed Sept. 28, 1959, Ser. No. 842,989
2 Claims. (Cl. 45—129)

1. An easel comprising, a sheet metal panel arranged to be supported upright and having rearwardly projecting side flanges, means to support said panel in an upright position, an open rectangular frame slidingly supported on the front of said panel and including two upright side members interconnected by top and bottom cross members, the opening of said frame adapted to be substantially closed by said panel when said frame is in its lowermost position relative to said panel to form a flat backing for sheet material supported by said top cross member, means to guide said frame vertically along said panel comprising rearwardly and inwardly extending portions of said side members adapted to embrace said rearwardly projecting side flanges of said panel, and cam means pivotally attached to said frame on an axis parallel



to the face of said panel and having its periphery normally engaging said panel and tending to rotate in a direction to urge said frame outwardly relative to said panel to frictionally lock the interengaging guide means and flanges of said frame and panel respectively.

3,015,907
HOOP TOYS
Fred A. Fasano, New York, N.Y.
(121—01 Jamaica Ave., Jamaica, N.Y.)
Filed Nov. 3, 1958, Ser. No. 771,588
4 Claims. (Cl. 46—52)



1. In combination, a hoop, and means for twirling the hoop, comprising a rod having a handle portion and a stem extending therefrom, a sleeve telescoping with and freely rotatable on the stem, amusement effect producing means carried by said sleeve for rotation therewith and operable in response to such rotation, means on the stem to retain the sleeve against coming off the stem, and said sleeve being exposed at its outer surface and being engaged by the inside of the hoop during twirling thereof, the centrifugal force of the twirling hoop causing rotation of the sleeve during twirling.

3,015,908
ORBITING SATELLITE TOY
Joseph J. Colletti, 24 Tappan St., Baldwinsville, N.Y., assignor of thirty-three and one-third percent to Richard von K. Bruns, Fayetteville, N.Y.
Filed July 13, 1959, Ser. No. 826,575
2 Claims. (Cl. 46—52)

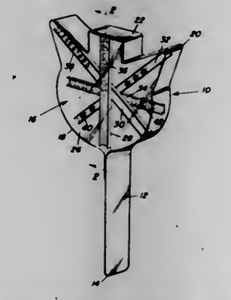
2. In an amusement device of the character described: a substantially spherical body fashioned to represent a

miniature satellite; and means to revolve said body around a point for simulating the orbiting movement of a satellite comprising a substantially rigid frame, and a handle detachably connected to said frame for manually rotating the frame around the handle; said frame having a handle engaging portion, a base portion normally depending from said handle engaging portion and extending substantially



horizontally a distance exceeding the diametrical thickness of said spherical body, portions connecting the ends of said base portion to said handle engaging portion, and a generally cup-shaped seat on said base portion for insecurely supporting said spherical body, said body being retained on said seat by gravity when the frame is stationary and held against the seat by centrifugal force when the frame is being rotated.

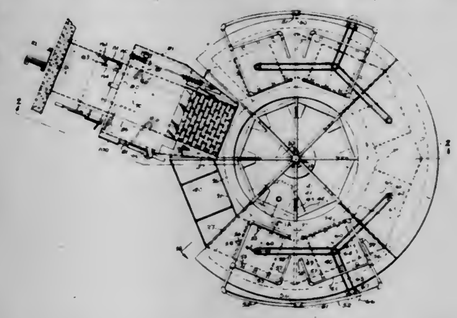
3,015,909
BABY RATTLER WITH SLIDING RATTLES
Robert L. Motley, 607 Burwood Ave., Dayton, Ohio
Filed Apr. 2, 1959, Ser. No. 803,716
6 Claims. (Cl. 46—193)



1. A rattler for infants comprising a hollow head including a front plate, a depending integral shank connected to said head and forming a handle for the head, a plurality of trackways disposed within said head, and a plurality of sliding elements carried by each trackway for movement thereon whereby the elements will move in relation to each other, each of said trackways being tubular and provided with a plurality of grooves and ridges defined in the major portion of the inner surface thereof, each of said sliding elements having grooved areas thereon for sliding engagement with the grooves in the trackway for producing a sound, said grooves and ridges on the trackway being arranged transversely of the trackway, the grooves on the sliding elements paralleling the grooves and ridges on the trackway.

3,015,910
GLASS TEMPERING FURNACE
Harold A. McMaster, Genoa, and Norman C. Nitschke, Perrysburg, Ohio, assignors to Permaglass, Inc., Genoa, Ohio
Filed May 23, 1955, Ser. No. 510,108
12 Claims. (Cl. 49—45)

6. A glass tempering mechanism including a furnace in the form of a hollow curved ring with a segment removed to define ends providing an entrance and an exit, the inner periphery of said furnace being formed with a continuous slot opening to the interior of the furnace and through the ends, a rotatable center support disposed centrally of said ring, a conveyor for carrying sheets of glass extending through said slot into the interior of said furnace and connected to said center support to turn therewith, renewable closure means carried by said conveyor and closing said slot, said conveyor also carrying radial partitions arranged to be carried into closing position for the ends of said slot by intermittent rotary movement of the conveyor, a blast head disposed at the exit to said furnace and said removed segment providing an open space for access to the conveyor to provide a loading station at the entrance adjacent the blast head, said blast head including a pair of movable frames disposed respectively at opposite sides of the conveyor, means for movably supporting said frames



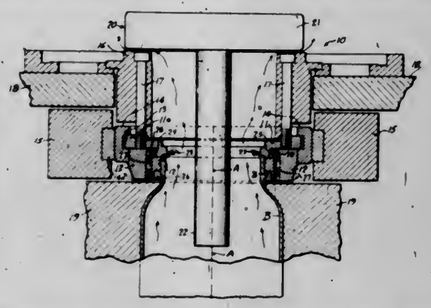
and means to move said frames toward and away from each other, said frames when moved toward each other surrounding said conveyor at said exit, and movable jet means carried by said frames for directing jets of air onto the glass on said conveyor from opposite sides.

11. A blast head for tempering glass comprising a pair of frames, hinge supports for said frames for selectively positioning the frames in confronting relation to one another or swung apart from one another, and a plurality of fluid jets carried by each of said frames to direct fluid streams onto glass positioned between said frames when the frames are in confronting relation to one another, the hinge support for each frame comprises a shaft, a rotatable gear on said shaft, and a member carried by the frame and engaging the toothed periphery of the gear to cause the frame to turn as a unit with the gear about the axis of said shaft when the gear is turned.

3,015,911
APPARATUS FOR FORMING NECK FINISHES ON GLASS CONTAINERS
Paul H. Payne, Bridgeton, N.J., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Original application Nov. 27, 1957, Ser. No. 699,254. Divided and this application Sept. 18, 1958, Ser. No. 761,829
7 Claims. (Cl. 49—68)

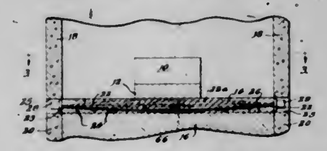
7. A partible neck mold apparatus which provides for control of the symmetry of dimension of a glass neck finish molded therein comprising, a pair of complementary partible neck ring halves operable to assume a closed juxtaposed relationship about a guide ring on a common diameter and defining a molding cavity for a neck finish portion of a glass container, an annular channel defined between the guide ring and the closed neck ring, means adapted for supplying a coolant fluid to said channel, axially disposed coolant passages in said neck ring halves each of which are connected to said channel, said passages being arranged in close proximity to the glass contacting surface of the neck ring in complementary, diametrically

opposed, circumferentially disposed zones on said neck ring, the center of each said zone being located on a diameter of the closed neck ring displaced 90° from said common diameter whereon said neck ring is closed, the



extremities of each said zone extending not more than 45° on either side of the said center of that zone, said passages conducting coolant supplied thereto axially of the neck ring to provide for cooling the neck ring in said opposed zones.

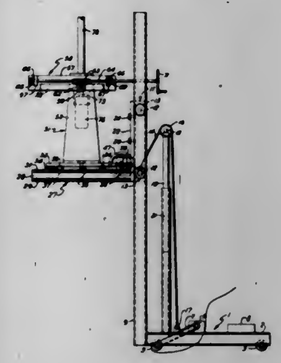
3,015,912
FOUNDATION STRUCTURE
Stanley H. Fistedis, Downers Grove, Ill. (500 N. Parkwood, Park Ridge, Ill.)
Filed May 23, 1957, Ser. No. 663,568
3 Claims. (Cl. 50—532)



1. The method of manufacturing a foundation for a machine which produces vibrations comprising the steps of laying a concrete mat in contact with the surface of the earth said mat being provided with a plurality of channels disposed in spaced vertical planes the ends of each channel being disposed on a horizontal plane totally disposed on one side of the remainder of said channel, placing a strand in each channel, mounting the machine on the surface of the mat, operating the machine to vibrate the mat and earth therebeneath, and anchoring the strands at the ends of the channels and tensioning the strands to minimize the vibrations produced in the mat.

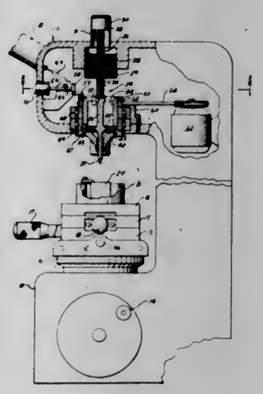
3,015,913
ADJUSTABLE MOUNTING FOR A CENTRIFUGAL GRIT BLASTING MACHINE
Lloyd E. Anderson, Sr., Pittsburgh, Pa., assignor to Pittsburgh-Des Moines Steel Company, a corporation of Pennsylvania
Filed June 10, 1960, Ser. No. 35,270
9 Claims. (Cl. 51—9)

1. An adjustable mounting for a centifugal grit blasting machine, comprising a wheeled carriage, upright frame members secured to the carriage, an elevator member slidably mounted for vertical movement on the frame members, a vertically disposed back plate rotatably mounted on the elevator member for rotation about an axis normal to the back plate, a normally horizontal base plate rigidly mounted on the back plate, a pedestal rotatably mounted on the base plate for rotation about an axis normal to the base plate, a mounting frame for supporting the grit blasting machine pivotally mounted on the pedestal member directly above the base plate for rotation about an axis parallel to the intersection of the planes



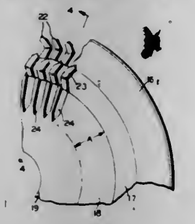
of the base and back plates, and separate means for raising and lowering the elevator member and for rotating the pedestal member about its vertical axis and for rotating the mounting frame about its axis.

3,015,914
MACHINE TOOL
Richard N. Roney, Dayton, Ohio, assignor to The Sheffield Corporation, Dayton, Ohio, a corporation of Delaware
Filed June 19, 1959, Ser. No. 821,546
18 Claims. (Cl. 51—56)



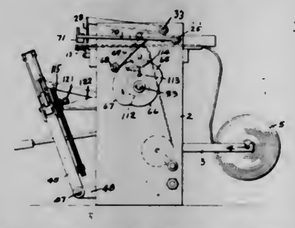
1. An apparatus for machining by high frequency oscillations comprising a base, a magnetostrictive driving assembly including a magnetostrictive driving unit and a motion transmitting member fixed to one end of said unit for supporting and driving a forming tool, means cooperating between said base and said member forming the sole support for said assembly and mounting said assembly for rotation on said base, an exciting winding for said unit connectable to a source of electrical energy of high frequency, and means mounting said winding on said base independent of said assembly and in close proximity but with clearance relative to said magnetostrictive unit.

3,015,915
CLINCHING HUBS FOR BUFFING RINGS
Isidore Hecht, 2600 Saw Mill Road, North Bellmore, N.Y., assignor of one-half to Milton Hecht, Dumont, N.J.
Filed Dec. 28, 1959, Ser. No. 862,360
5 Claims. (Cl. 51—193)



1. A one-piece clinching hub for a buffing ring, comprising a round dish-shaped member consisting of a ring wall adapted to support the inner edge of a buffing ring and a bottom closing one end of said ring wall; said member having an outward flange around the other end of said ring wall; said bottom having a central hole whereby said member is mountable on an arbor; a multiplicity of radially outwardly extending teeth being formed of said flange and a multiplicity of radially outwardly extending teeth being formed by being struck up from the outer perimetral lane of said bottom; the first mentioned teeth being opposite the second mentioned teeth; all of said teeth being bendable to enter and engage a buffing ring supported on said ring wall; said bottom, ring wall and flange being integral.

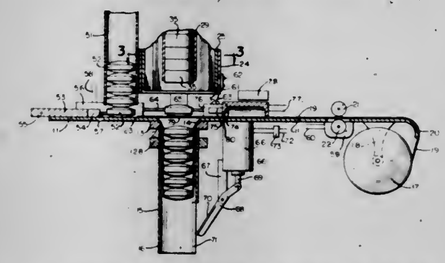
3,015,916
MEANS AND METHOD FOR BANDING OBJECTS
Harvey R. Denton, 4266 Edge Drive, Oakland, Calif.
Filed June 2, 1959, Ser. No. 817,547
7 Claims. (Cl. 53—3)



1. The method of securing a group of objects together with an elastic, stretchable strip of material that comprises the steps of; adherently securing a section of adhesive tape to each of the opposite ends of such strip with portions of said tape including the adhesive thereon projecting beyond the ends of said strip, then gripping the ends of said strip and stretching the latter horizontally and longitudinally thereof from its gripped ends, then moving said group of objects downwardly against the central portion of the strip so stretched and while maintaining said strip in its stretched condition swinging said ends thereof over the upper side of said objects and bringing the glued sides of the projecting portions of said sections of tape together into adherent holding relation and then releasing the said strips so the ends will be held together by said sections.

3. A machine for use in securing strips of an elastic, stretchable material about a group of objects comprising; a frame, a band of said elastic, stretchable material in a roll rotatably supported on said frame, a pair of rolls of adhesive tape rotatably supported on said frame, means for moving said band and said tapes from the rolls thereof along a path of travel in one direction and for adherently securing said tapes to one side of said band along the opposite marginal portions of the latter with said tapes projecting outwardly from said band along said portions, cutting means on said frame at a point along said path for successively cutting off the ends of said band and said tapes transversely of said band to form strips of said material having sections of said tape adherently secured to the opposite ends of each strip, gripping means for gripping the opposite ends of each strip so cut by said cutting means and means for moving said gripping means apart for stretching each such strip longitudinally thereof for presenting each strip in a position to be wrapped in a tensioned condition about each such group of objects.

3,015,917
INDIVIDUAL PACKAGING APPARATUS, METHOD, AND PACKAGE
Howard Nelson Moore, Apt. 201, 1901 East West Highway, Silver Spring, Md.
Filed Oct. 7, 1957, Ser. No. 688,756
18 Claims. (Cl. 53—21)

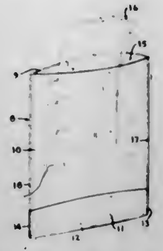


13. The method of packaging a plurality of articles by automatic machinery comprising the steps of placing an article on a cup-shaped first wrapper element, placing a second article on a second cup-shaped wrapper element, nesting said second cup-shaped wrapper element and said first wrapper element with said first article therebetween, controlling the nesting of said first and said second wrapper elements to limit the force exerted between said first and said second wrapper elements during the nesting thereof, providing overlapping side walls of said first and second cup-shaped wrapper elements, placing a third article on a third wrapper element, nesting said third wrapper element and said second wrapper element with said second article therebetween, controlling the nesting of said third and said second wrapper element to limit the force exerted between said third and said second wrapper elements, providing overlapping side walls of said second and said third wrapper elements, continuing said steps to form a compartmental package with a desired number of compartments and sealing together overlapping contiguous side walls of adjacent nested wrapper elements to produce a strong, unitary, columnar package of sealed individual compartments containing said articles.

3,015,918
ART OF PACKAGING COMMODITIES
Walter A. Schoen, Milwaukee, Wis.
Filed June 19, 1957, Ser. No. 666,515
7 Claims. (Cl. 53—29)

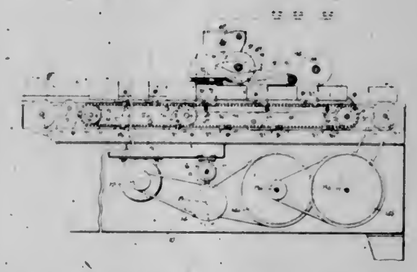
5. The method of packaging a commodity, which comprises, providing a tubular wrapper having its opposite ends open, closing one of the ends of the wrapper by means of a flap formed integral with one side of the wrapper and extending beyond and folded over the end of the other side wall and secured thereto only at its

opposite ends, supplying the commodity to the wrapper through the end thereof remote from the closure flap,



and thereafter transversely sealing the side walls to each other at the end of the wrapper through which the commodity has been supplied.

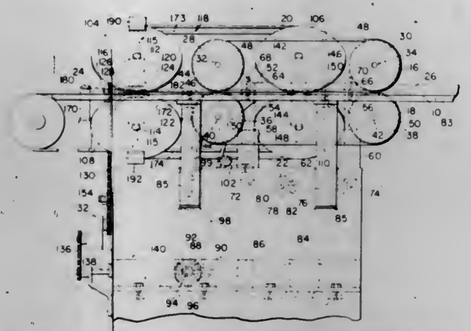
3,015,919
CARTON CLOSING MACHINE
Warren E. MacDonald, Barrington, R.I., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Sept. 3, 1959, Ser. No. 837,822
22 Claims. (Cl. 53—38)



22. A method of closing cartons of the class having a lid attached to one vertical face thereof, a flap at one end of the lid, a tongue on said flap slot means in the vertical carton face opposite said first mentioned carton face, and a dust flap attached to each side face thereof, the sides of said lid and said dust flaps having cooperating interlocking means, such method comprising the following steps: advancing the carton in a position such that the vertical face thereof to which the lid is attached constitutes the leading face of the carton as it moves, bending the dust flaps inwardly, bending the lid substantially to closed position, bending the lid flap to depending position adjacent the slotted face of the carton, lifting the lid slightly relatively to said carton face, depressing the lid flap and adjacent carton face to condition said tongue and slot for interlocking engagement, inserting said tongue into said slot, and locking the sides of said lid to said dust flaps by means of said cooperating interlocking means.

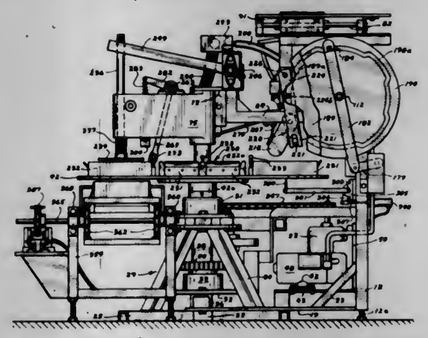
3,015,920
METHOD AND APPARATUS FOR TRIMMING AND SEALING PLASTIC BAGS
Robert W. Saumsiegle, Lexington, Mass., assignor, by mesne assignments, to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Filed Nov. 29, 1957, Ser. No. 699,630
22 Claims. (Cl. 53—44)

17. The method of trimming and sealing the mouth portions of plastic bags which comprises continuously advancing the bags, gripping the mouth portion along a line spaced inwardly from the outer edge of the mouth leaving an extended portion, and intersecting the extended mouth portion with a heated stationary hot wire element spaced a short distance outwardly from the gripped



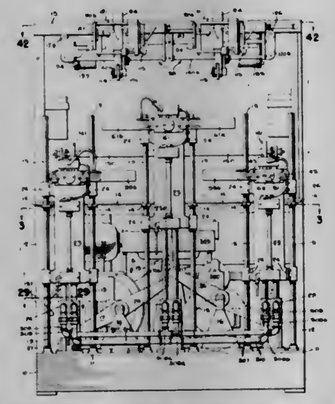
portion to effect liquefication of the plastic material and simultaneous trimming of the extended mouth portion along a line adjacent the gripped portion and inwardly of the outer edge of the mouth portion and to effect fusion of opposed walls of the mouth to seal the bag.

3,015,921
PACKAGING APPARATUS
Paul N. Dotzenroth, Minneapolis, Minn.; Gloria B. Dotzenroth and T. E. Holloran, executors of said Paul N. Dotzenroth, deceased, assignors to Baker Engineering Corp., Minneapolis, Minn., a corporation of Minnesota
Filed May 16, 1960, Ser. No. 29,353
8 Claims. (Cl. 53—171)



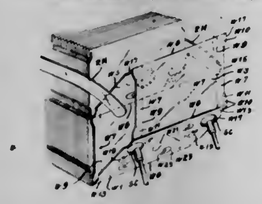
1. An apparatus for receiving and packaging popsicles having in combination, a receiving member comprising a plurality of transversely alined rows of pockets respectively to receive popsicles therein, a first retaining means for removably retaining said popsicles in said member, a plurality of alined channels vertically disposed to have said member pass thereover, means for advancing said member to respectively aline said rows of said member in register with said channels, means for respectively retaining a plurality of envelopes in operative association with each of said channels, means in connection with each of said channels for respectively engaging the foremost of said envelopes in connection with each of said channels to open the same to receive said popsicles, a second retaining means comprising a ledge in cooperative association with the movement of said receiving member to receive and support in upright position said envelopes loaded with said popsicles, means for withdrawing said ledge from said popsicles and actuating said first mentioned means for advancing said member guide means for receiving said popsicles in said envelopes from said ledge and directing the same, a receptacle for receiving said popsicles from said guide means, said receptacle comprising upstanding sides and having a movable bottom therein, an endless belt in an operative relationship with said receptacle, a plurality of cartons carried on said belt at spaced intervals adapted to be moved into vertical alinement with said receptacles to receive popsicles therefrom, and means for discharging said popsicles from said receptacle and packing the same into said cartons.

3,015,922
PACKAGING MACHINES
Carl A. Frank, Hillsdale, N.J. (585 Piermont Ave., Riverdale, N.J.), Robert B. McClosky, Rutherford, and Joseph A. Lynch, Union City, N.J.; said McClosky and said Lynch assignors to said Frank
Filed Feb. 27, 1956, Ser. No. 567,856
4 Claims. (Cl. 53—182)



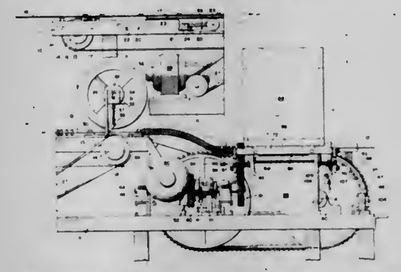
1. A packaging machine comprising pairs of end drawbars and a pair of intermediate drawbars disposed between said pairs, a reciprocable carriage for supporting each pair, driving means for said pairs, said intermediate pair being reciprocated alternately with respect to the end pairs, a walking beam connecting each end drawbar with the central drawbar, said driving means being connected to one of said walking beams.

3,015,923
CAN PACK
Paul N. Dotzenroth, Minneapolis, Minn., assignor to Alton Box Board Company, Alton, Ill., a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 805,882
8 Claims. (Cl. 53—186)



1. In packaging apparatus of the character disclosed, the improvement that comprises a table upon which a sleeve-like wrapper is placed, means for delivering a wrapper to a position upon said table, an article-conveying chute extending adjacent said table for delivering an article to be packaged to a position opposite an open end of a wrapper placed upon said table, means for moving articles along said chute, an article pusher mounted adjacent said chute and movable from a position clear of said chute to a position wherein an article is pressed within a wrapper upon said table, and a wrapper-folding member mounted on said article pusher and movable in timed relationship therewith to fold an end portion of said wrapper into article-retaining position while the article is pressed within the wrapper.

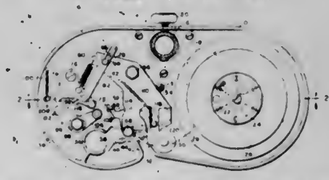
3,015,924
CLOTHESPIN COUNTING AND ASSEMBLING MACHINE
Harry A. Wolter, Akron, Ohio, and Gerald L. Vaughan, Rumford, Maine, assignors to Diamond National Corporation, a corporation of Delaware
Filed Jan. 30, 1959, Ser. No. 790,175
49 Claims. (Cl. 53—197)



1. A machine for assembling a plurality of kerf-type clothespins on an assembly element comprising an elongate guide, an endless belt trained over spaced pulleys, the upper run of said belt lying in a plane slightly below said guide, belt tensioning means engaging the upper run of said belt for maintaining said upper run substantially planar, means for rotating one of said pulleys, an idler roller having a resilient exterior surface, means mounting said idler roller above said one pulley and with the lowermost part of the exterior surface thereof slightly below the level of the upper surface of kerf-type clothespins mounted on said guide, said guide extending beyond said belt, a free conveyor comprising a belt having pockets therein for receiving a kerf-type clothespin in each pocket, said conveyor further comprising a pair of pulleys supporting the upper run of said conveyor in a plane slightly below the extending part of said guide, a power driven continuously rotating shaft, a clutch mounted on said shaft, a magazine adapted to hold assembly elements mounted above and to one side of said conveyor, a feed plate mounted for movement across the bottom of said magazine, means operatively connecting said feed plate and said clutch for movement of said plate from said clutch, a plurality of equally circumferentially spaced pins extending axially from one of said pulleys of said free conveyor, a microswitch mounted adjacent to but spaced from the locus of the free ends of said pins, a support slidable towards and away from said one pulley, a solenoid for moving said support away from said one pulley, a lever pivoted on said support having an end thereof in the locus of said pins in the forward position thereof, said lever overlying said microswitch, a stop-lever engageable with said clutch for preventing a movement of the driven part thereof, a second solenoid for moving said stop-lever out of engagement with the driven part of the clutch, circuit means connecting said microswitch and said second solenoid to release said clutch upon closing

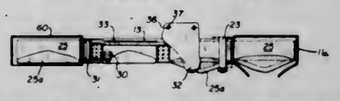
of said microswitch by a pin engaging said end of said lever, a cam operatively connected with said feed plate, a second microswitch closed by movement of said cam, and circuit means connecting said second microswitch and said first solenoid to thereby retract said support upon closing of said second microswitch by said cam.

3,015,925
STRIP SERVING AND APPLYING DEVICE
Theodore H. Krueger, Stratford, Conn., assignor to Better Packages, Incorporated, a corporation of New York
Filed July 23, 1956, Ser. No. 599,479
9 Claims. (Cl. 53—198)



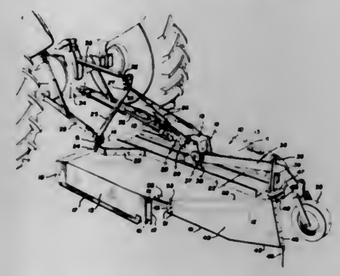
1. In a machine for applying a single adhesive tape band around an article, a frame having means defining a mouth for reception of an article to which the band is to be applied, means for supporting a roll of tape in the frame with a strip of tape from the roll extending across the mouth with the adhesive surface of the tape exposed, a surface on the frame beyond the mouth for engagement by the adhesive surface of the tape for holding the tape extended across the mouth, a transfer element having a recess therein for receiving the article and a portion of the tape strip in rear of the portion of the tape engaged with the surface on the frame beyond the mouth engaged by the leading end of the tape, means for contacting the non-adhesive face of the leading end of the tape and folding the tape over so as to bring the adhesive face of the leading end of the tape into contact with the adhesive face of the tape coming from the supply roll so as to bind the tape around the article, a severing knife and means for projecting the severing knife to sever the tape between the said surface on the frame engaged by the adhesive surface of the tape, and the said means contacting the non-adhesive surface of the tape.

3,015,926
APPARATUS FOR SELECTIVELY OPENING AND CLOSING ENVELOPE FLAPS
Max Galambos, 4095 Kendall, Wheatridge, Colo.
Filed May 23, 1960, Ser. No. 30,871
5 Claims. (Cl. 53—384)



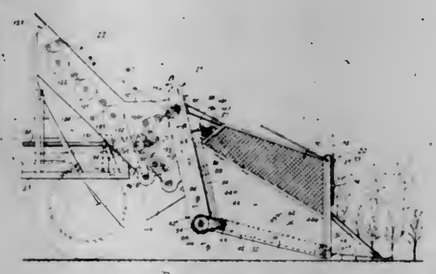
1. In machines for selectively opening or closing envelopes inclusive of a frame and including a series of rollers mounted above an envelope conveyor to pass envelopes on the conveyor below the rollers on the belt from a hopper at one end to another hopper at the other end, the improvement comprising an opening element mounted on said frame adjacent said conveyor and having a planar fin plate portion extending over and adjacent the belt, the fin plate portion being juxtaposed to an upwardly and outwardly smoothly curved flange portion which is connected to said fin plate portion by a curved knife-edge portion mounted to pass between an envelope body and an envelope flap whereby the envelope body passes under the fin plate on the belt and the flap is moved upwardly and over the knife edge under the curved flange.

3,015,927
ROTARY MOWER WITH WINDROWING ATTACHMENT
Frederick Clay Caldwell, Corpus Christi, Tex., assignor to E. L. Caldwell & Sons, Inc., Corpus Christi, Tex., a corporation of Texas
Filed Dec. 23, 1959, Ser. No. 861,506
3 Claims. (Cl. 56—25.4)



1. A hay making and windrowing machine comprising a mower housing having top and side walls and being open at its forward and rear ends and bottom, mobile draft means for said housing, horizontally rotatable cutter means within said housing below said top wall, a diagonal substantially vertical windrowing deflector plate hingedly secured to the rear end of said top wall near the transverse center thereof and projecting rearwardly of the housing and toward one side thereof and being horizontally swingable to regulate the character of the windrow being formed, a horizontal top plate secured to the upper edge of said deflector plate and disposed substantially at right angles thereto and extending beyond the forward side of the deflector plate in partial overlapping relation to the top wall of the housing and bodily swingable horizontally wih the deflector plate toward and from the housing, and means adjustably interconnecting the forward end of said top plate and the top wall of the housing, whereby said diagonal deflector plate may be releasably secured in the selected angular position relative to the path of travel of the housing, said deflector plate and top plate defining with the top wall of the housing a diagonal passage for the material to be windrowed adjacent the rear of said housing.

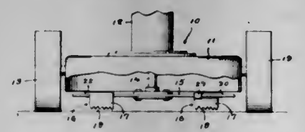
3,015,928
COTTON HARVESTER
Benjamin O. Kappelmann, 4430 N. 32nd St., and James B. Daiglish, 209 W. Flyn Lane, both of Phoenix, Ariz.
Filed Aug. 1, 1958, Ser. No. 752,527
14 Claims. (Cl. 56—33)



1. In a harvesting machine: a harvesting section including stripper means and conveyor means disposed

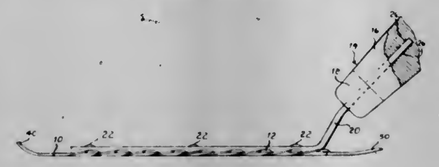
alongside each other, lengthwise of the machine, walls rising alongside the conveyor means providing a trough therefor, an elevator housing adjacent the rear of the trough, the front of the housing forming the rear of the trough, the lower end of the front of the housing having an opening to receive cotton from the rear of the conveyor means, a pivoted, depending panel swingably attached to the front of the housing, freely swingable forwardly from the housing, and overhanging the opening; and an elevator in the housing having means to lift cotton from the opening at the bottom of the housing, past the pivoted panel.

3,015,929
LAWN MOWER AND RAKE
Samuel F. Bright, 809 N. 5th, Ottumwa, Iowa
Filed Feb. 10, 1959, Ser. No. 792,435
2 Claims. (Cl. 56—193)



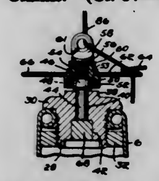
1. In a lawn mower and rake, a horizontally disposed rotary blade having longitudinally extending leading and trailing edges, said leading edge being a cutting edge, a pair of body members mounted on said blade and said body members defining rakes, each of said body members including a first portion provided with a plurality of spaced apart teeth, said first portion being inclined in a plane which is at an angle to a vertically disposed plane and said first portion being arranged angularly with respect to said blade, and said first portion being contiguous to the trailing edge of said blade, a second portion arranged angularly with respect to said first portion, and said second portion overlying a part of said blade and being secured to said blade, a vertically disposed third portion depending from said second portion, and a horizontally disposed fourth portion arranged at right angles with respect to said third portion, said fourth portion being arranged below said blade, and said second portion being provided with a sharp cutting edge which is arranged adjacent the leading edge of the blade.

3,015,930
SAW SICKLE
Lester H. Campbell, 6951 Post Town Road, Dayton, Ohio
Filed Sept. 30, 1960, Ser. No. 59,737
3 Claims. (Cl. 56—239)



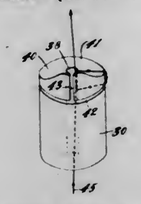
1. A saw sickle for cutting vegetation such as grain, grass, weeds and brush, said saw sickle including a blade and a handle attached thereto, said blade having a substantially triangular main body portion, the handle projecting rearwardly from near the apex of the main body portion, said body portion having laterally projecting teeth simulating saw teeth slanted toward the rear, the forward and rear edges of the teeth being sharpened so that as the blade is pulled through vegetation by the handle the blades hook and cut the vegetation, said teeth having the outer ends deflected upwardly through a distance at least equal to the thickness of the main body portion.

3,015,931
COMBINED BOBBIN AND FLYER ASSEMBLY
John A. Kookstra and Louis E. Bussiere, North Andover, Mass., assignors to Davis & Furber Machine Company, North Andover, Mass., a corporation of Massachusetts
Filed Sept. 14, 1960, Ser. No. 56,057
17 Claims. (Cl. 57—73)



2. In combination, a bobbin, said bobbin having an axially disposed opening in the upper end thereof, a flyer unit removably secured to the upper end of said bobbin, said unit comprising an axially disposed member nonrotatably positioned in said opening, a shaft and associated yarn guide arm rotatably mounted on said axially disposed member, and separable magnetically attracted elements, one of which is positioned at the lower end of said opening, holding said unit in operative position in said bobbin.

3,015,932
FALSE TWISTER
Henry W. McCard, 5418 Westford Road, Philadelphia, Pa.
Filed May 4, 1960, Ser. No. 26,744
3 Claims. (Cl. 57—77.3)

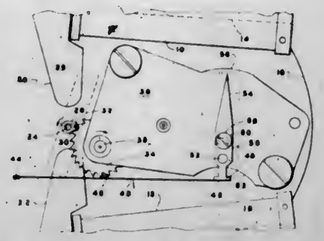


1. A twister head having an end adapted to connect to a spindle, having an axial opening, having a generally central transverse groove at the end remote from the spindle, having a transverse loop-forming groove at an intermediate position between the ends of the twister head, said loop-forming groove being nearer to the end of the twister head having a transverse groove and forming an acute angle with said axial opening, said loop-forming groove forming a segment of a plane which slopes inwardly toward the end remote from the spindle and terminates in a straight side which lies generally parallel to the said transverse groove, and a radial threading groove extending from the circumference of said head on the side having the loop-forming groove to the axial opening so as to intersect the plane segment formed by the said loop-forming groove and to extend to the said end remote from the spindle.

3,015,933
ELECTRIC TIMEPIECE CONTACT MECHANISM
Fred Koehler, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 15, 1958, Ser. No. 755,198
6 Claims. (Cl. 58—28)

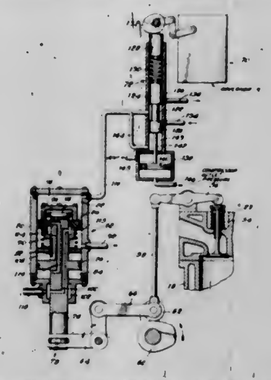
1. In a combined contact and index mechanism for an electric timepiece, a toothed index wheel, an elon-

gated contact carrying spring extending past said index wheel, cam means attached to said spring intermediate its ends and engaging said index wheel, a lever attached to



one end of said contact spring, and means pivotally mounting said lever on said timepiece for adjustment of the tension with which said cam means engages said index wheel.

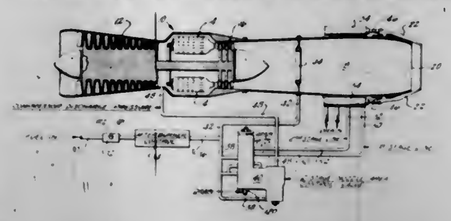
3,015,934
LOAD ACCELERATOR FOR SUPERCHARGED ENGINE
Ralph Miller, 1943 N. Summit Ave., Milwaukee 2, Wis.
Filed Nov. 29, 1956, Ser. No. 625,027
22 Claims. (Cl. 60—13)



14. In an internal combustion engine having an exhaust driven supercharger and a gaseous fuel supply with a spark ignition device and at least one valve for each cylinder, the improvement including engine load responsive means actuating the valves to increase the volume of air entrapped in the cylinders in response to rapid load increase and entrapping a volume of air in the cylinders during full load that is appreciably less than their full capacity, and second means modifying said load responsive means to reduce the entrapped volume as the supercharger speed increases to maintain a constant air-fuel ratio.

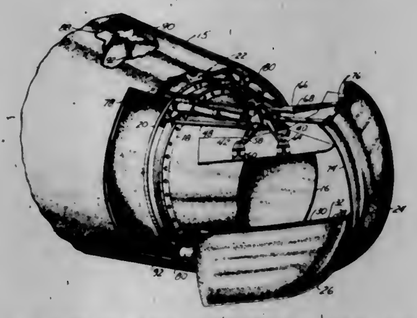
3,015,935
TWO-STAGE NOZZLE AREA CONTROL
Frederick P. Evans, West Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 27, 1959, Ser. No. 802,468
11 Claims. (Cl. 60—35.6)

1. A control for an afterburner of a turbine type power plant including a variable area nozzle, a fuel control for feeding fuel to the afterburner including a fuel metering control, means for controlling said variable area nozzle comprising a control valve actuated by the pressure of said fuel and a actuator means controlled by said control valve, said control valve including a main control land, said actuator means varying the area of said nozzle, means responsive to a first power plant variable indicative of power plant output for positioning the said control valve by said servo pressure for moving said actuator



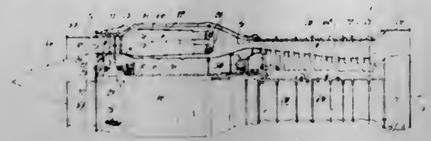
means to a first predetermined position, and means responsive to the ratio of said power plant variable and a function of a second power plant variable for further positioning said control valve to move said actuator means to a second predetermined position.

3,015,936
THRUST REVERSERS
Thomas L. Brewer, Ridgewood, John L. Hall, Hanover, and Paul M. Chewey, Belleville, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed June 3, 1957, Ser. No. 663,048
2 Claims. (Cl. 60—35.54)



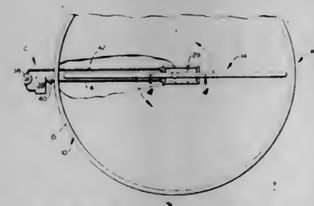
1. Thrust modulator means for a jet engine having a substantially circular downstream fluid ejection nozzle, comprising pads on opposite sides of said nozzle near its rearward end and secured to said engine; four substantially rectangularly arranged pivots on each said pad; an arm swingable on each pivot; two substantially semi-cylindrical segmental doors disposed around said nozzle, two of the arms from each pad being pivoted to each said door at spaced apart pivots thereon, said doors being swingable on said arms between a retracted position wherein the doors' cylindrical axis is substantially coincident with the nozzle axis and an extended position wherein the near edges of the doors meet on the nozzle axis and diverge forwardly and outwardly therefrom, the forward edges of said doors being spaced outwardly from said nozzle and said doors being sloped relative to the nozzle axis; translating means acting between an arm of each door and said engine selectively operable to move said doors between retracted and extended positions; and substantially flat baffle plates disposed on both sides of said nozzle and secured to said doors between said swingable arms and said nozzle, and movable with the doors, said baffle plates substantially bridging the gap between said nozzles end and the lateral margin of said doors and shielding said arms from reversed gases.

3,015,937
TEMPERATURE MODULATING SYSTEM FOR INTERNAL COMBUSTION TURBINES AND THE LIKE
James V. Gillberty, 26 Woodview Road, West Hempstead, N.Y.
Filed July 3, 1958, Ser. No. 746,570
2 Claims. (Cl. 60—39.66)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A gas turbine comprising a casing, a combustion chamber having an upstream end and a downstream end, said chamber being secured in said casing, a turbine having hollow turbine blades carried in said casing, said turbine being in flow series with the downstream end of said combustion chamber, a compressor having a discharge end in flow series with the upstream end of said combustion chamber, a cowl secured to said casing proximate said turbine blades, and a conduit defined by said combustion chamber and said casing, said cowl and said hollow blades and said conduit forming a passageway for atmospheric air through said cowl, then through said hollow blades, then through said conduit and then into said combustion chamber at the upstream end of said combustion chamber proximate the discharge end of said compressor, whereby the discharge from said compressor serves as a pumping means for said atmospheric air.

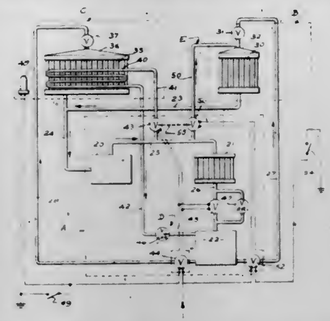
3,015,938
SKATING RINK AND METHOD FOR PROVIDING THE SAME
Franciscus A. Vereyken, San Jose, Calif. (619 Fairmont, Mount View, Calif.)
Filed Aug. 29, 1958, Ser. No. 758,032
7 Claims. (Cl. 62—66)



7. The method of providing a sheet of ice which comprises forming a shallow pool of brine, immersing in said brine narrow refrigerating means of a length to substantially span the brine, producing a slow relative movement between the refrigerating means and the brine to chill the latter to a temperature well below the freezing point of fresh water, covering the brine with a membrane of water-proof sheet material, and floating a layer of fresh water onto the membrane for support by the underlying brine, whereby the layer of fresh water is frozen.

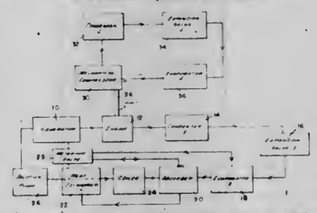
3,015,939
HEATING AND FREEZING SYSTEM
Maurice W. Brainard, Montebello, Calif. (3211 S. Hooper, Los Angeles, Calif.)
Filed June 22, 1959, Ser. No. 822,157
15 Claims. (Cl. 62—156)

1. In combination, a plurality of storage compartments, a unitary heating and cooling system related to said compartments including a refrigerating system having a condensing unit with a compressor and a condenser coil remote from said compartments, an evaporator unit in each compartment having an evaporator coil receiving liquid refrigerant from the condensing unit and discharging gaseous refrigerant which is compressed and condensed by the



condensing unit for recirculation and expansion through the evaporator units, a heat coil in one of the evaporator units and related to the evaporator coils thereof and valve means operable to shut off the flow of refrigerant through the condenser coil and bypass said refrigerant through the heater coil.

3,015,940
REFRIGERATIVE COMPRESSION SYSTEM DRIVEN BY FLUID ENERGY OF AN ABSORPTION SYSTEM
Stanley Harwich, 1471 Carroll St., Brooklyn, N.Y.
Filed July 26, 1954, Ser. No. 445,603
3 Claims. (Cl. 62—332)

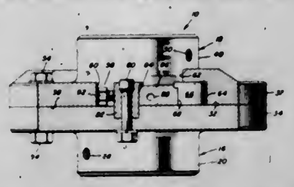


1. A refrigeration system including in combination, an absorption refrigeration circuit and a compression refrigeration circuit, said absorption refrigeration circuit including a generator, an engine, an evaporator and an absorber therein, said generator having therein a refrigerant absorbent solution, and said compression refrigeration circuit including a compressor, means coupling said engine to said compressor, and metering means in said absorption refrigeration circuit for metering concentrated refrigerant-absorbent solution from said generator to said absorber, said metering means including an inlet port and an outlet port, a valve member within said outlet port, and means controlling said valve member in response to the temperature of said absorber and pressure in said evaporator.

3,015,941
ADJUSTABLE SHAFT COUPLING
Donald T. Daniele, East Longmeadow, Mass., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 2, 1960, Ser. No. 53,677
17 Claims. (Cl. 64—24)

1. An adjustable shaft coupling for substantially axially aligned shafts comprising a pair of confronting hubs each

including means thereon for respectively securing said hubs to one of said shafts, driving means on one hub, driven means on said other hub, adjustable force transmitting mechanism on said one hub drivingly engaged between abutment portions on said driving and said driven means for adjustably and relatively rotating said hubs in one direction about their longitudinal axis, and fastening



means on said hubs including portions permitting said relative rotational adjustment and retaining the hubs in a fixed position with respect to each other, said driven means abutment portion being in the general plane of said other hub and in opposed relation to the abutment portion thereon, said force transmitting mechanism including wedge portions displaceably engageable between said driving and driven means abutment portions.

3,015,942
CIRCULAR KNIT HOSIERY AND METHOD OF FORMING THE FOOT OF SAME
James L. Getaz, New York, N.Y., assignor, by mesne assignments, to Frank D. DeLong, Jr., High Point, N.C.
Filed Jan. 31, 1958, Ser. No. 712,379
2 Claims. (Cl. 66—186)



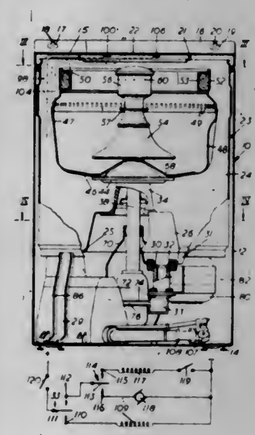
1. In circular knit hose, a foot portion, gores extending forwardly and downwardly along each side of said foot portion, and a seam of stitches closing said foot portion, said seam extending longitudinally of said foot portion and along the instep side thereof, said seam being located to one side of the centerline of the instep side of said foot portion.

3,015,943
SEAMLESS KNITTED HOSIERY ARTICLE
Guy Loizillon, Fontaine les Gres, France, assignor to Societe d'Etudes et de Participations pour l'Industrie et le Commerce de la Bonneterie, Fontaine les Gres, France
Filed May 18, 1956, Ser. No. 585,714
Claims priority, application France May 21, 1955
2 Claims. (Cl. 66—188)



1. A seamless stocking comprising a leg portion, a foot portion, a heel pocket and a toe pocket, at least the major portion of the entire length of said leg and foot portions being knit with half cardigan tuck rib stitches, said half cardigan tuck rib stitches being formed of two different yarns; one of the yarns appearing on the outside of the leg and foot of the stocking, the other yarn appearing in relief on the inside of the leg and foot, and the two yarns maintaining the above-recited relationship throughout at least the major portion of the entire length of the leg and foot portions of the stocking, each of said yarns performing a separate and distinct function.

3,015,944
AUTOMATIC WASHER WITH CONTROL MEANS FOR LIQUID SUPPLY AND HEATING
Charles Thomas Krause, Neuilly-sur-Seine, France, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 23, 1958, Ser. No. 769,127
Claims priority, application Great Britain Nov. 1, 1957
1 Claim. (Cl. 68—12)



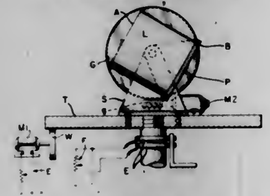
In combination with a washer machine including a rotatable liquid holding clothes tub, an oscillatable agitator in said tub, a controllable liquid inlet to said tub having a solenoid actuator, a stationary liquid container beneath said tub for receiving liquid overflow from said tub, a pump having an inlet connected to receive liquid from said container and an outlet, a controllable heat exchanger having an inlet connected to said pump outlet and an outlet for delivering liquid into said tub and a heating means, a control circuit comprsinig a power source, a timer motor for controlling the rotation of said tub, the oscillation of said agitator and the operation of said pump, a pressure sensitive device having a first switch connected to said power source and responsive to the level of liquid in said container, said first switch having a high liquid level contact position for stopping liquid flow through said liquid inlet and for conditioning said heating means in said heat exchanger for energization and a low liquid level contact position connected to said solenoid actuator, and a temperature responsive device having a second switch adjustably responsive to the temperature of the liquid in said heat exchanger outlet, said second switch being connected to said high liquid level contact and having a high temperature contact position connected directly to said timer motor for stopping heating in said heat exchanger and energizing said timer motor and a low temperature contact position connected directly to said heating means for initiating heating in said heat exchanger.

3,015,945
PERFORATED TUBES FOR THE WET TREATMENT, MORE PARTICULARLY DYEING, OF YARNS AND FILAMENTS
Jose Jungbecker, 11/13 Ros Strasse, Aachen, Germany
Filed Sept. 29, 1959, Ser. No. 843,182
8 Claims. (Cl. 68—198)



7. A tube for cross winding yarns and filaments thereon for wet treatment thereof comprising a tube body open at both ends, a plurality of spaced ribs projecting from the outer surface of said tube body, each of said ribs having upper and lower sides converging outwardly to form an arcuate edge which intersects the surface of said tube, said edge extending transversely to the axis of said tube body.

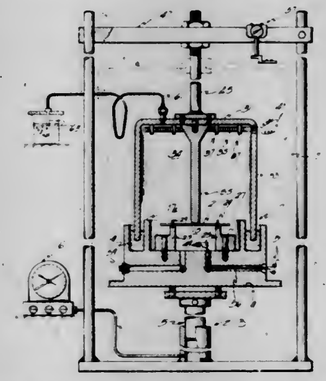
3,015,946
DEVICE AND METHOD FOR PRODUCING LOW RATE ANGULAR ACCELERATION
William A. Moore, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 28, 1957, Ser. No. 636,770
8 Claims. (Cl. 73—1)



1. A device to produce angular acceleration of an accelerometer which is to be calibrated, and which has an electrical center at the intersection of the plane wherein its masses move during acceleration and the axis about which such masses accelerate, said device comprising a turntable, means to rotate the urntable unidirectionally about its own axis at a selected angular velocity ω_1, a platform rotatably supported upon and rotatable with the turntable about the turntable's axis, means to rotate said platform unidirectionally about a second axis intersecting the turntable's axis at a selected angular velocity ω_2, the accelerometer being arranged upon said platform with its elecrical center coinciding with the intersection of said axes, and means to vary the ratio of the velocities ω_2/ω_1 in the range from less than 1 upwardly to a value of at least 10.

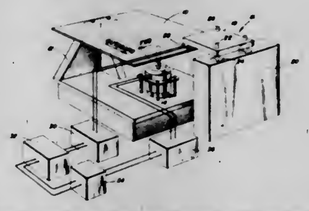
3,015,947
APPARATUS FOR TESTING PLASTIC LAMINATES AT ELEVATED TEMPERATURES IN AN OXYGEN-FREE ATMOSPHERE
Gerald H. Kadel, Elkton, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 17, 1960, Ser. No. 50,295
1 Claim. (Cl. 73—15.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An apparatus for testing flexure and compression of plastic materials at elevated temperatures in an oxygen-free atmosphere comprising in combination a base portion having a cylindrical upwardly extending edge forming a bottom chamber open at the top and closed at the bottom; an annular ring attached to the bottom of the base extending upwardly concentric with and spaced from the said edge whereby an annular groove is formed between the ring and the said edge; two cylindrical retainers positioned inside of the ring and being attached to the bottom of the base for holding a test specimen therebetween; an alloy consisting of 25 parts by weight of tin, 25 parts by weight of lead and 50 parts by weight of bismuth placed within the grooves, said alloy melting at 200° F. being capable of providing a non-toxic metallic liquid seal up to 2000° F.; a circular top portion having a diameter smaller than that of the base and having a



cylindrical downwardly extending edge forming a top chamber closed at the top and open at the bottom, said top portion being capable of receiving the bottom portion whereby its lower edge extends into the liquid metal sealing means thereby forming an airtight evacuable chamber around the test specimen; a loading edge attached to the circular top portion for applying a flexual load to the specimen when the top and bottom portions are in sealed relationship; inlet means connected to the base portion for introducing a gas into the chamber; outlet means connected to the top portion for evacuating any air from the chamber; heating coils attached to the inside of the circular top portion for raising the temperature of the test specimen in said chamber and a thermocouple positioned inside of the chamber for indicating the temperature inside the chamber.

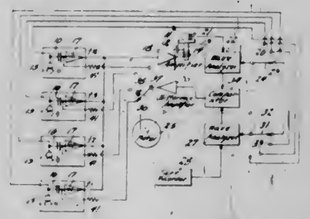
3,015,948
FLUTTER SIMULATOR
John P. Kearns, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 18, 1960, Ser. No. 30,039
4 Claims. (Cl. 73—67.2)



1. A flutter simulator for producing self-excited oscillations in a structure having spanwise and chordwise axes,

comprising, means for vibrating said structure to produce a deflection about its spanwise axis, and a feedback system coupled to said vibrating means and including means for producing a vibrating force 180 degrees out of phase with the angle of said deflection, said last mentioned means including means, including an air gap and a capacitance pickup arrangement, for obtaining measurements of said deflection of said structure, means connected with said arrangement, including an oscillator, for translating each of said measurements into an electrical signal, means for amplifying and varying the strength of said signal, and means for amplifying the power of said signal to produce an amplified current in phase with said signal.

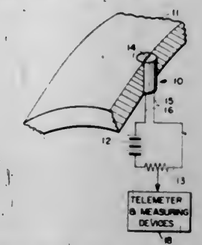
3,015,949
METHOD OF AND APPARATUS FOR VIBRATION TESTING
Howard H. Arnold, Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 30, 1959, Ser. No. 790,278
8 Claims. (Cl. 73—71.5)



1. A material testing device for vibrating a test piece in response to a signal of a preselected complex wave form which comprises means for generating a signal of a complex wave form composed of a plurality of sinusoidal frequency components, electromechanical vibrator means for vibrating the test piece in response to said signal of complex wave form, a first means connected to said vibration means for sequentially isolating and measuring the amplitude of the individual frequency components of the mechanical vibration produced by said signal, a second means for sequentially isolating and measuring the amplitude of identical frequency components of a signal of a preselected complex wave form composed of the same frequency components as the mechanical vibration produced by the vibrator means, means interconnecting said first and second isolating and measuring means for comparing the amplitudes of the frequency components of the same frequency thus measured, and means responsive to the difference in said amplitudes for adjusting the amplitudes of the frequency components of the mechanical vibration to equal the amplitudes of the identical frequency components of the preselected signal.

3,015,950
EROSION SENSOR
Bernard H. Doctor, Cincinnati, and James V. O'Bryan, Springdale, Ohio, assignors to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Feb. 23, 1960, Ser. No. 10,502
5 Claims. (Cl. 73—86)

1. In a system for measuring the erosion of the surface of a body, the combination comprising: an erosion sensor consisting of at least one film of material having electrical properties formed to provide an electrical impedance element having a length at least equal to the depth of erosion of said body to be measured, spaced apart electric current-carrying wires electrically connected to said impedance element at one end thereof, said impedance element being secured to a form composed of the same material as said body, said wires extending at one end of said form, the other end of said impedance element being flush with the other end of said form; means securing said erosion sensor in said body with said other end of said impedance element flush with said surface of said body, whereby said



surface and said other end of said impedance element erode simultaneously; a source of electrical energy connected to said impedance element through said wires; and means for measuring the change in impedance of said element due to erosion whereby an instantaneous indication of the depth of erosion is provided.

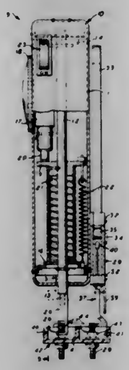
3,015,951
POINTER MECHANISM
Robert E. Ochs, Jr., Oreland, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 20, 1956, Ser. No. 629,540
15 Claims. (Cl. 73—141)



1. A mechanism for measuring and indicating the magnitude of a variable, comprising an elongated bowed flexure member, a first substantially frictionless flexible pivot means between a first end of said elongated member and a stationary block, a second substantially frictionless flexible pivot means between the opposite end of said member and a force applying means, a pointer connected to and extending away from a portion of said first mentioned end of said member, and said force applying means when applying a force in one direction acting to cause said two ends of said member to be moved toward one another and said pointer to move in an upscale direction along an indicating scale and said force applying means when applying a force in the opposite direction acting to cause said two ends to be moved away from one another and said pointer to be moved in a downscale direction along said indicating scale.

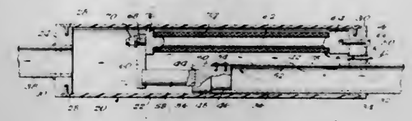
3,015,952
TESTING DEVICE FOR WIRE-WRAPPED TERMINAL CONNECTIONS
Robert P. Clagett, Yardley, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 24, 1958, Ser. No. 769,371
1 Claim. (Cl. 73—141)

A device for testing the strength of a wrapped terminal connection formed between a terminal post secured in a recess in a base member and a wire wrapped spirally on the terminal post, which comprises a dial-indicator, force-measuring gage, a housing forming a portion of the gage, a dial-actuating rod connected operatively to the gage and extending through the housing of the gage, a bifurcated, dial-actuating foot secured adjacent to a free end of the rod, straddling a terminal post of the connection being tested and underlying a wire wrapped spirally on the terminal post, the terminal post being positioned in a recess in a base member which projects above the lower portion of the wrapped wire of the connection being tested, a slotted member secured to the housing, a substantially L-shaped lever secured pivotably to the housing in a slot in the member with the leg of the L-shaped lever extending substantially transversely of the dial-actuating rod, a bifurcated member straddling the terminal being tested and the bifurcated dial-actuating foot to permit the bifurcated member to be reciprocated past the bifurcated foot in either direction, the bifurcated member being secured slidably to the housing in a slot in the slotted member, the bifurcated member contacting the upper surface of the portion of the base projecting above the lower portion of the wrapped wire of the connection being tested, the bifurcated member



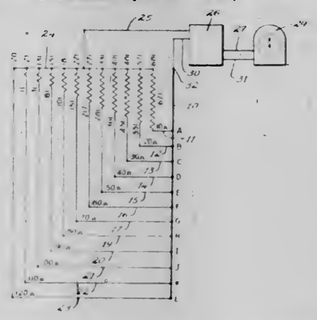
having an upper cam portion on the end thereof slidably engaging a portion of the leg of the L-shaped lever, resilient means secured between the slotted member and the bifurcated member for holding the cam portion of the bifurcated member in engagement with the leg of the L-shaped lever for urging the furcated portion of the bifurcated member toward the housing and for normally holding the furcated portion of the bifurcated member in an unoperated position between the dial-actuating foot and the housing to permit the device to be utilized for checking such wrapped terminal connections when the base member onto which the terminal is secured projects above the lower portion of the wrapped wire portion of the connection, and means for causing the indicator of the gage to remain in a position indicating the maximum force applied to the gage, the lever being utilized for sliding the bifurcated member axially of the terminal post in the slotted member away from the gage in the housing resulting in opposed forces being exerted on the under side of the wrapped wire and the adjacent upper surface of the base member by the bifurcated foot and bifurcated member, respectively, so as to produce a stripping action, the gage indicating the maximum stripping force applied to the spirally wrapped wire of the connection being tested during the stripping action.

3,015,953
MAGNETIC AIR VELOCITY TRANSDUCER
Veikko K. Peltola, Chicago, Ill., assignor to Illinois Testing Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed June 12, 1957, Ser. No. 665,344
19 Claims. (Cl. 73—194)



1. A magnetic transducer for providing a signal related to the velocity of a gas, comprising a chamber having an inlet and a slotted outlet, a reed having an end fixedly secured adjacent said chamber with the reed disposed in said slot for free vibration whereby gas admitted to said inlet and relieved through said slot will cause vibration of said reed at a constant frequency but with a deflection varying with gas velocity, and a magnetic circuit having flux threading the same and arranged so that the vibration of said reed modulates the flux of said magnetic circuit for providing a signal corresponding to the deflection of said reed.

3,015,954
AVERAGE TEMPERATURE INDICATOR
Herbert F. Dalglish, St. Paul, Minn., assignor to Mark W. Gehan, St. Paul, Minn.
Filed Nov. 25, 1955, Ser. No. 549,070
5 Claims. (Cl. 73—341)



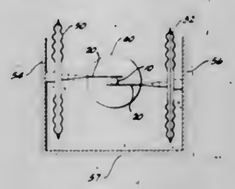
1. An apparatus for producing an average temperature indication including a thermocouple system including a common wire of one material and a series of wires of another material connected to said common wire at substantially equal intervals to form a plurality of thermocouple junctions, the series of thermocouple wires extending longitudinally of said common wire and varying in length, the total resistance of each set of thermocouple wires and junctions so formed being of predetermined value, a resistance added in each of said thermocouple wires except the longest thermocouple wire connected to the common wire, said added resistance being of such value which is slightly in excess of the total difference of resistances of individual thermocouple wires preceding the one to which the resistance is being added, means for suspending said wires with the junctions substantially vertically spaced throughout a cross-section of the zone to be sensed, a common conductor connected to the ends of all of the thermocouple wires, means supporting said wires when suspended so that said junctions are maintained substantially equidistant apart, and temperature indicating means connected in series between said common conductor and said common wire.

3,015,955
SURFACE THERMOMETER
George A. Argabrite, North Hollywood, Calif., assignor to Pacific Transducer Corporation, Los Angeles, Calif., a corporation of California
Filed Feb. 18, 1957, Ser. No. 640,669
4 Claims. (Cl. 73—363,7)



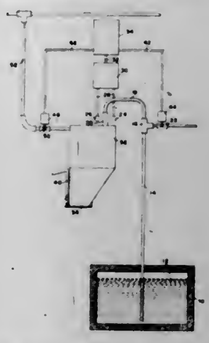
1. A surface thermometer comprising: a temperature responsive element adapted to contact the surface of a specimen along a plane and consisting of a bimetallic strip including a central portion having a spiral lower edge lying in said plane and an indicating arm having its lower edge lying in the plane along a generally radial line extending substantially from the central portion; and a dial bearing spaced temperature indicia thereon and carried on the inner end of said strip and lying in a plane spaced above and parallel to the first plane, the outer portion of said arm being in visual indicating relation with said indicia.

3,015,956
INSTRUMENT FOR MEASURING DISPLACEMENT OF A BODY
Harry N. Eklund, Pacific Palisades, Calif., assignor to Lear, Incorporated
Filed Jan. 31, 1957, Ser. No. 637,403
4 Claims. (Cl. 73—386)



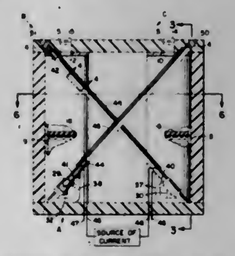
1. Apparatus for measuring variations in air pressure comprising a structure having a pair of supports fixed with respect to movement relative to each other, a pair of bellows each having one side rigidly fixed to a respective support such that the free sides of said bellows face each other so that the axes of said bellows are approximately parallel, a pair of rectangular blade elements of magnetic material each having first and second ends and disposed between the pair of bellows, each blade element being fixed at its first end to a respective free side of said bellows and each second end being spaced apart from and extending beyond the other's second end such that each element has a surface facing a surface of the other element, a rotatable shaft positioned between the surfaces of said elements which extends beyond each other's second end, said shaft having spaced portions of opposite magnetic polarity to establish respective magnetic paths through said shaft and elements, whereby said second ends of said elements are held against said shaft by magnetic attraction, said bellows being adapted to expand and contract in unison upon changes in surrounding air pressure, thereby to move said elements longitudinally in opposite directions and effect rotation of said shaft through an angle corresponding to the movement of the bellows, and means operable by said shaft to develop electrical signals corresponding to the angular movement thereof.

3,015,957
APPARATUS AND PROCESS FOR SAMPLING
Morris Paulson and Lawrence Rasmussen, International Falls, Minn., assignors to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed Nov. 2, 1959, Ser. No. 850,128
3 Claims. (Cl. 73—421)



1. A sampling device comprising a closed collecting container, said container having a hingedly connected bottom, a vacuum conduit, said conduit connected to the said collecting container side adjacent the top thereof, a valve in the vacuum conduit, a transparent conduit connected to the top of the collecting container, said transparent conduit extending upwardly therefrom, a supply conduit connected to the transparent conduit and extending into a source of groundwood pulp suspension to be sampled, an air conduit connected to the supply conduit a predetermined distance from the said transparent conduit, a valve positioned in the said air conduit for permitting atmospheric air to enter the supply conduit at predetermined times, a light source located on one side of said transparent conduit and a photoelectric tube positioned on the opposite side of said conduit, the said photoelectric tube operatively connected to said valves in the vacuum conduit and in the air conduit.

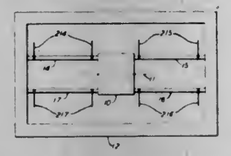
3,015,958
MULTI-DIRECTIONAL ACCELEROMETER
Jack E. Dove, 9715A Redstone Park, Huntsville, Ala.
Filed Dec. 31, 1959, Ser. No. 863,369
7 Claims. (Cl. 73—516)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An accelerometer comprising: a support; means for maintaining a base plane of said support in a constant position relative to a reference plane; a plurality of hollow casings having axes that are joined in a vertex spaced from said base plane and that are inclined to said base plane and to each other, each of said casings being fixed at one end to said support and at its other end to another of said casings; fluid reservoir means in each casing rigidly supported relative to said support, having port means

adjacent said support; a supply of acceleration-responsive mercury partially filling said reservoir means, and in communication with said port; a mercury-containing tube in each casing, said tube being located at an angle to said reservoir means, being smaller in cross section than said reservoir means and of a volume that is smaller than the volume of said reservoir means, having a base portion that is in communication with said port means, each tube being partially filled with mercury and having a hollow space extending toward said vertex from the head of said mercury in said tube whereby in the absence of an acceleration to be measured the flow-connected heads of mercury in said tube and said reservoir means are balanced and stabilized; an electrical resistance in each tube, part of which is in contact with said mercury, said resistance extending from said mercury into said hollow space and toward said vertex; a source of electric current; electrical conductors forming a circuit with said source of current and each of said resistances; whereby when said support receives an acceleration to be measured said heads of mercury in a plurality of said tubes are changed in level and the lengths of a plurality of said resistances that are electrically bypassed by said mercury changes, thus altering the electrical signals from a plurality of said circuits, said signals in combination indicating the magnitude and direction of a measured acceleration.

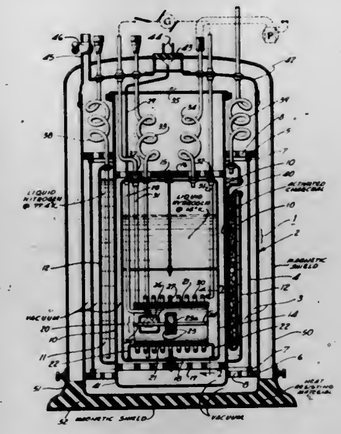
3,015,959
ACCELEROMETERS
Jeofry S. Courtney-Pratt, Springfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 25, 1960, Ser. No. 24,404
3 Claims. (Cl. 73—517)



1. A combination for use in an accelerometer comprising a mass, a rigid supporting means extending around and spaced from the mass, four like elongated piezoresistive members, a first pair of the members extending along a first common longitudinal axis, in opposite directions from the mass to the supporting means, the other pair of the members extending along a second common longitudinal axis, spaced from and parallel to the first axis, in opposite directions from the mass to the supporting means, whereby linear acceleration of the supporting means parallel to the common longitudinal axes of the pairs of members will cause a change between the resistances of the members of each pair but no change between the resistances of the corresponding members of the two pairs, and torsional or rotational acceleration will cause a change between the resistances of each pair and also between the corresponding members of the two pairs.

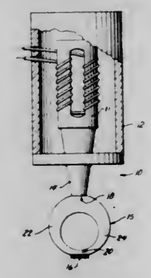
3,015,960
SUPERCONDUCTIVE RESONANT CIRCUIT AND ACCELEROMETER
Floyd G. Steele, Long Beach, Calif., assignor to Northrop Corporation, a corporation of California
Filed Dec. 20, 1948, Ser. No. 66,383
27 Claims. (Cl. 73—517)

1. An accelerometer comprising an oscillatory circuit including an extended hollow member having an annular cross-section, a capacity, conductors connecting said capacity across opposite edges of said member, said member, capacity and conductors being of a material capable of superconductivity, means for lowering the temperature of said member, capacity and connections to the superconductive state thereof, means for inducing a direct



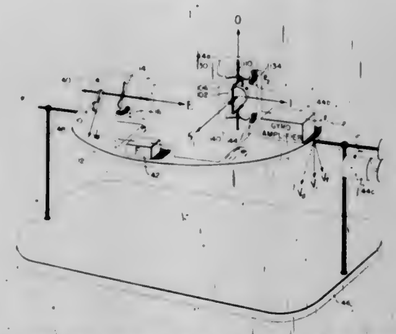
current circulating around a cross section of said extended member in its superconductive state to cause said circuit to oscillate and means for sensing alternating current flow in said circuit.

3,015,961
MACHINE COMPONENT
Richard N. Roney, Dayton, Ohio, assignor to The Sheffield Corporation, Dayton, Ohio, a corporation of Delaware
Filed May 2, 1960, Ser. No. 25,946
7 Claims. (Cl. 74—1)



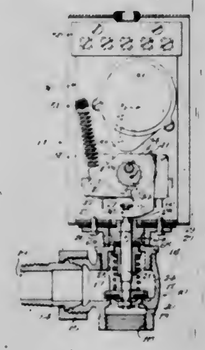
1. A motion converting member for use in an ultrasonic driving assembly for receiving vibratory energy at ultrasonic frequencies and transmitting said energy with amplified amplitude at the same frequency to an energy applying means of the assembly, said member being integrally formed, symmetrical relative to the longitudinal axis of the assembly, and having input and output coupling portions at its extremes along said axis for respective connection to an energy source and an energy applying means, the projected major configuration of said member in a plane including said axis being defined by inner and outer circular peripheries, the inner of said peripheries defining a circular hole through said member to provide dual vibration transmitting arms at each side thereof terminating in a portion of minimum cross-sectional area for defining said output coupling portion.

3,015,962
METHOD AND APPARATUS FOR INDICATING THE VERTICAL
Walter Wrigley, Wollaston, and Charles S. Draper, Newton, Mass., assignors, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Filed Nov. 30, 1955, Ser. No. 549,917
7 Claims. (Cl. 74—5.47)



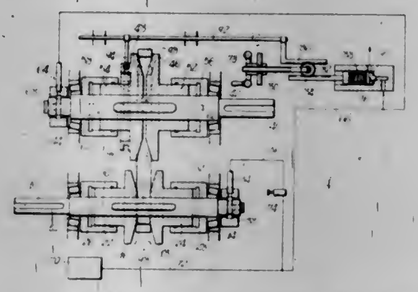
1. Apparatus for indicating the vertical in one plane, including a controlled member, a single-degree-of-freedom pendulum mounted on the member so as to swing in the plane, means to convert angular deflections of the pendulum with respect to the member to an electrical signal, means for integrating said electrical signal twice with respect to time, means for damping said integration, and means for moving said member through an angle proportional to the result of said integration and damping, said integrating and damping means having parameters to provide a period substantially that of an earth-radius pendulum.

3,015,963
VALVE MECHANISM
Charles M. Terry, Decatur, Ill., assignor to A. W. Cash Valve Manufacturing Corporation, a corporation of Illinois
Filed Apr. 20, 1959, Ser. No. 807,688
2 Claims. (Cl. 74—44)



1. A mechanism for operating a longitudinally movable stem of a valve or the like having an abutment thereon comprising, a rotatable shaft, an eccentric on said shaft, a motor operatively connected to said shaft for selectively rotating said shaft, a claw device having an opening receiving the eccentric and mounting the claw device on the eccentric, said claw device including a pair of depending generally L-shaped spaced apart fingers defining an open ended slot therebetween for receiving said stem with parts of said fingers disposed beneath the stem abutment, and means for yieldably retaining the claw device and stem in associated relation by urging the claw device rotatively about the eccentric to have the fingers engage the edge of the abutment whereby the claw device converts rotary eccentric motion to linear movement of the stem and the claw device can be disassociated from the stem by rotating the claw device in a direction against the force of said yieldable means.

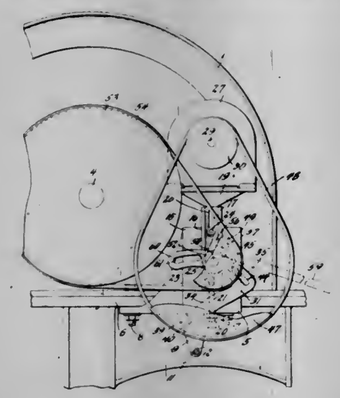
3,015,964
STEPLESS SPEED CHANGING MEANS
Yoshiyuki Noguchi, 141 Idogaya Kami-cho, Minami-ku, Yokohama-shi, Japan, assignor of fifty percent to Takanosuke Oki, Tokyo, Japan
Filed Nov. 23, 1959, Ser. No. 854,783
2 Claims. (Cl. 74—193)



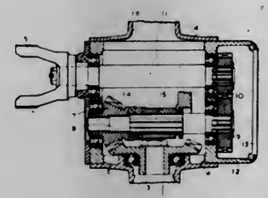
1. In a speed changing means comprising a driving shaft, a driven shaft, a pair of driving bevel wheels mounted axially slidably on said driving shaft, a pair of driven bevel wheels mounted axially slidably on said driven shaft, and a steel ring passing over said two pairs of bevel wheels: a stepless means for changing the position of said steel ring relative to said two shafts, which comprises four cylinders in engagement with four pistons formed on the backs of said four bevel wheels, respectively, four spaces between said four cylinders and four pistons being filled with a fluid compressed by a compressor, and a relief valve inserted between the compressor and the two spaces between the two cylinders and the two pistons formed on the backs of the driven bevel wheels, said relief valve being operated by means of a handle so as to change the pressure of said fluid in the last-named two spaces, whereby the position of said steel ring relative to said two shafts is changed steplessly.

3,015,965
CLUTCH-FREE TEXTILE CARDING MACHINE
William A. Williams, Philadelphia, and Eldon L. Nuernberger, Chambersburg, Pa., assignors to T. B. Wood's Sons Company, a corporation of Pennsylvania
Continuation of application Ser. No. 613,325, Oct. 1, 1956. This application Apr. 1, 1959, Ser. No. 803,544
9 Claims. (Cl. 74—242.12)

1. A drive for a textile carding machine comprising a main bracket fixed on the carding machine, a motor supporting base, a motor mounted on said base and having a drive wheel, means for adjusting said motor base relative to said main bracket, an idler bracket mounted on said main bracket, an idler wheel rotatably mounted on said idler bracket, a primary belt drive from said motor drive wheel to said idler wheel, a carding machine drive wheel; a secondary belt drive between said idler wheel and said carding machine drive wheel, said idler wheel having drive surfaces engaged by the belts of both said primary and secondary drives, respectively, the driving engagement between the secondary belt and the carding machine drive wheel being less strong than that between said secondary belt and the idler wheel, so as to allow slippage between said secondary belt and the carding machine drive wheel during starting of the carding machine, said idler bracket having an elongated arm extending transversely of said secondary drive belt, the mounting of said idler bracket on said main bracket being located toward one end of said arm and said mounting being pivotal, the position of mounting of said idler wheel on said idler bracket being spaced from said idler bracket mounting in a direction extending transversely of said secondary belt drive, releasable means for securing said idler bracket selectively in a multiplicity of positions of angular adjustment about its mounting for adjusting the drive between said secondary drive belt and the idler and carding machine drive wheels independently of said motor base adjustment means.

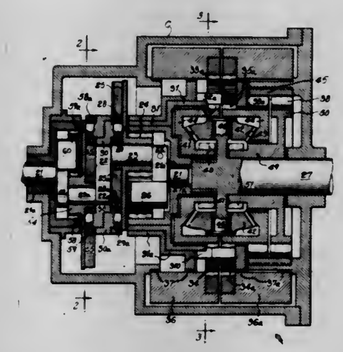


3,015,966
VARIABLE DRIVE TRANSMISSION
Arthur Clifford Howard, West Horndon, England, assignor to Rotary Hoes Limited, West Horndon, Essex, England
Filed Sept. 10, 1958, Ser. No. 760,155
Claims priority, application Great Britain Sept. 20, 1957
2 Claims. (Cl. 74—325)



1. A transmission having a casing, a driving shaft in said casing, said casing including spaced-apart front and rear walls transverse with respect to said driving shaft, a lay shaft substantially parallel to said driving shaft, said driving shaft and lay shaft adjacent opposite ends of the casing being journaled in said walls, a third shaft, said third shaft being journaled in said casing intermediate said walls on an axis at a right angle to said lay shaft, intermeshing gearing within the casing between said lay and third shaft including a gear loose on said lay shaft, clutch means rotatable with and slidable along said lay shaft, means operable through said casing from its exterior to shift said clutch means, said driving and lay shafts having portions extending rearwardly beyond said rear wall, and intermeshed reduction gears mounted on said portions of said driving and lay shafts to rotate therewith.

3,015,967
AUTOMATIC TRANSMISSION
Charles Bancroft, Ferris Hill Road, New Canaan, Conn.
Filed Feb. 8, 1956, Ser. No. 564,262
1 Claim. (Cl. 74—394)



A differential gearing of cyclical varying gear ratio, including an input shaft having diametrically extending crank arms each having a crankpin, a pinion journaled on one of said pins, a ring gear meshed with said pinion and arranged to revolve said pinion when said shaft turns, a set of guideways connected to said pinion and diametrically extending radially therefrom, a set of guideways journaled on the other of said pins and diametrically extending radially therefrom, a crankshaft having diametrically extending crank arms and pins with the latter engaged by and radially guided by one of said guideways of each of said sets, and a second crankshaft having diametrically extending crank arms and pins with the latter engaged by and radially guided by the other of said guideways of each of said sets.

3,015,968
CONTROL MECHANISM FOR GEAR BOXES OF MOTOR VEHICLES
László Székely, Budapest, Hungary, assignor to Jarmufejlesztesi Intezet, Budapest, Hungary, a firm
Filed Jan. 20, 1959, Ser. No. 788,012
Claims priority, application Hungary Jan. 27, 1958
4 Claims. (Cl. 74—477)



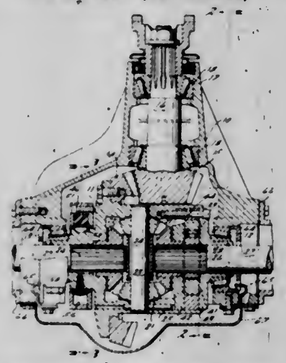
1. In a control mechanism for a gear box having six speeds for motor vehicles enclosed within a casing comprising three selecting forks provided with hubs having coaxial inner surfaces, a group of three rods arranged to have a common cross section enabling said selecting forks to move thereon, one of said rods secured to said casing, two of said forks secured to said other rods to be moved thereby, said other fork adapted to be moved directly, and means actuated by one of said moving forks adapted to secure the other said forks to said secured rod.

3,015,969
PUSH-PULL CABLE
Otto J. Bratz, Adrian, Mich., assignor to American Chain & Cable Company, Inc., a corporation of New York
Filed Apr. 1, 1958, Ser. No. 725,597
16 Claims. (Cl. 74—501)



1. In a push-pull cable assembly, a casing comprising an outer metallic sheath formed of at least one wire wrapped helically in the form of a coil having its neutral bending axis extending substantially along the center line of the coil and a resinous plastic tube disposed within and extending throughout the length of said sheath, said plastic tube being restrained against over-all longitudinal movement relative to said sheath but being free to accommodate the slight relative motion that occurs between adjacent turns of the sheath coil when the casing is bent, and a flexible metallic core element extending through said plastic tube and directly engageable therewith and freely movable longitudinally therein.

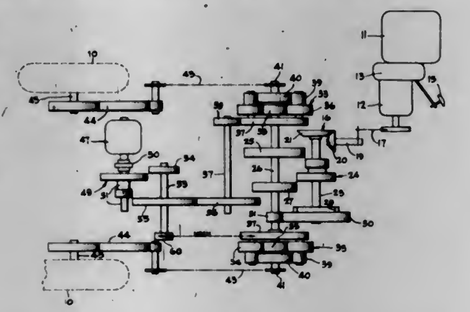
3,015,970
FLUID LOCK FOR DIFFERENTIAL
Otto Mueller, 13 Byfield Lane, Dearborn, Mich.
Filed Nov. 6, 1958, Ser. No. 772,220
5 Claims. (Cl. 74—711)



1. In a differential, a housing, a case within said housing having differential driving means therein, means for driving said case, a pair of axles extending from said case which may be relatively driven through said differential driving means, a positive displacement pump within the housing, means for driving said pump continuously when the axles are being driven to provide a continuous flow of differential fluid from the housing to the case which is maintained filled at all times during the rotation of said axles, a locking clutch in the nature of a pump connected to the case and one of said axles, and means employing the difference in the speed of rotation between said case and one of said axles for driving the second pump in rotation and producing a braking pressure to resist such rotation through the operation of the pump on the fluid drawn from said case.

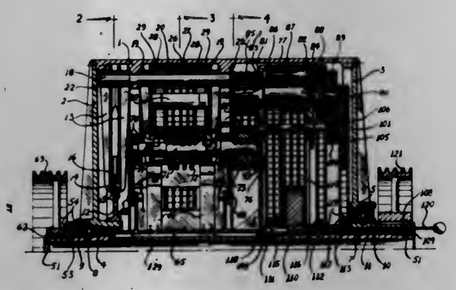
3,015,971
CONTROL CIRCUIT FOR HYDRAULIC POWER STEERING SKID STEER SYSTEMS
James F. Sauer and Leonard S. Burns, Aurora, Ill., assignors to Barber-Greene Company, Aurora, Ill., a corporation of Illinois
Filed Oct. 20, 1959, Ser. No. 847,642
11 Claims. (Cl. 74—720.5)

1. In a skid steer hydraulic power steering system, a pair of laterally spaced traction devices, two variable speed reduction devices, a common engine for driving each of said variable speed reduction devices, each variable speed reduction device having driving connection with one traction device, a source of fluid under pressure, a reversely operable variable speed hydraulic motor, geared drive connections from said hydraulic motor to said variable speed reduction devices, one of said drive connections including reverse gearing for varying the speeds of said variable speed reduction devices in a reverse order, means for locking said geared drive connections from rotation to effect drives through said



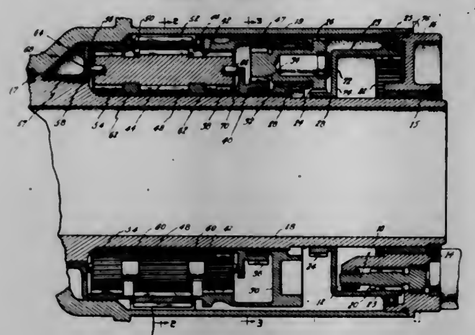
variable speed reduction devices at the same rates of speed, a control member, a control valve, an operative connection between said control member and valve for operating said valve, a pressure line connecting said valve with said source of fluid under pressure, a second pressure line connecting said valve with said hydraulic motor, and a variable flow regulator valve in said first mentioned pressure line and having operative connection with said control member and operated thereby and supplying fluid under pressure to said control valve at increasing rates of flow as said control member is moved past a straight ahead position.

3,015,972
VARIABLE SPEED DRIVE
Hellmut R. Voigt, Engineer M.S., 11821 Redbank St., Sun Valley, Calif.
Filed Jan. 26, 1959, Ser. No. 789,123
6 Claims. (Cl. 74—793)



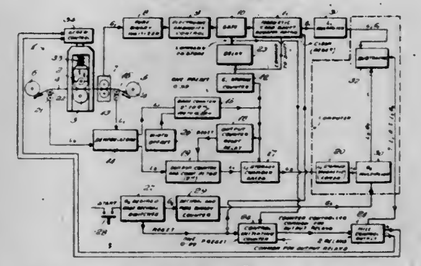
1. A variable speed transmission comprising a housing, a power input shaft, a power output shaft in alignment with the input shaft, said shafts comprising concentric tubes and a variable speed mechanism operatively connecting both shafts in the housing, said variable speed mechanism comprising a circular chain track concentric to the input shaft and constituting an internal toothed wheel featuring a changeability of its pitch diameter, that changeability resulting from the takeup of respective feeding chain links into and out of the chain track circle, a controlling assembly assuring the concentricity, centricity and tautness of said circular chain track, a primary planetary transmission consisting of a double knee lever mechanism keyed to the input shaft, a planetary shaft assembly turnably supported in bearings at the free ends of said double knee levers, said planetary shaft assembly including sprockets secured on said planetary shaft, one of said sprockets engaging the circular chain track and a counterweight for the planetary shaft assembly, a secondary planetary transmission, comprising a satellite carrier also fixed to the input shaft, a secondary planetary shaft assembly turnably supported in bearings at one end of said satellite carrier, said secondary planetary shaft assembly including a planetary shaft, a plurality of sprockets and a spur gear fixed on the shaft, the spur gear engaging the spur gear of a countershaft assembly also turnably supported in bearings in said satellite carrier to reverse the direction of rotation of the secondary planetary shaft to provide for a reverse speed range of the transmission, a further sprocket fixed to said countershaft and a counterweight attached to the opposite end of said satellite carrier to counterbalance the secondary planetary shaft assembly as well as the countershaft assembly, a chain drive operatively connecting the primary and the secondary planetary shaft assembly, a plurality of sprockets turnably supported on the output shaft, said sprockets drivingly connected by chains with the corresponding sprockets of the secondary planetary shaft assemblies and means to connect one or another of said sprockets operatively with the output shaft to provide for one or more speed ranges including a reverse speed range, the number of teeths of the sprockets being determined by the speed ranges desired for a certain application.

3,015,973
ROTARY SPEED CHANGER
George H. Doerries, West Caldwell, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Nov. 25, 1960, Ser. No. 71,560
9 Claims. (Cl. 74—801)



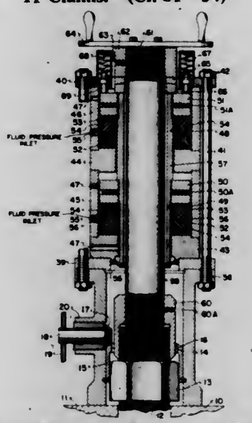
1. A high ratio speed changer comprising a hollow, low speed shaft, a high speed shaft outside the confines of the low speed shaft, a plurality of rotatably mounted transfer gears surrounding the low speed shaft and drivably connected to the high speed shaft, bearing means for said transfer gears mounted on the low speed shaft to prevent rotational movement of the low speed shaft relative to the bearing means, a plurality of planetary members around the low speed shaft, means drivably connecting the planetary members and the transfer gears, fixed structure, gears having different numbers of teeth on each planetary member, and other gears connected to the bearing means and fixed structure in mesh with the gears on each of the planetary members.

3,015,974
AUTOMATIC CONTROL SYSTEM FOR ROLLING MILLS AND ADJUSTABLE DIES
Orville E. Orbom, Brackenridge, James B. Murtland, Jr., Tarentum, and Fred J. Schoepf, New Kensington, Pa., assignors, by mesne assignments, to General Electric Company, a corporation of New York
Filed Sept. 18, 1958, Ser. No. 761,818
3 Claims. (Cl. 80—56)



1. In a system for performing work upon a moving strip by a pair of rolls through which said strip is advanced, means positioned along the path of said strip for measuring the gage of the strip before said strip enters said rolls and for producing data representative thereof, means for measuring the length of strip passing into said rolls and for producing data representative thereof, means for producing a data representation of the desired gage of said strip leaving said rolls, means for measuring the length of strip passing from said rolls and for producing data representative thereof, means for storing data representative of the gage of said strip before entering said rolls measured by the said measuring means, means for combining said data in respect to gage and length of strip before said strip enters said rolls to produce a first combination, means for combining said data in respect to length of strip after leaving said rolls with data representative of said desired gage to produce a second combination, means for comparing said first and said second combinations, and means controlled by said comparing means for adjusting said rolls.

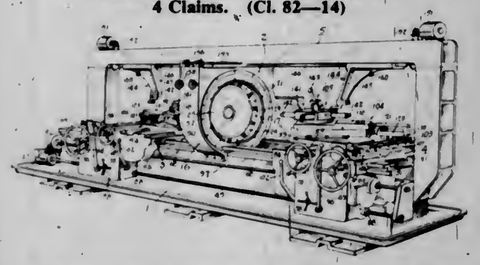
3,015,975
BOLT-TENSIONING APPARATUS
John L. Biach, Cranford, N.J., assignor to Biach Industries, Inc., Westfield, N.J., a corporation of New Jersey
Filed Nov. 17, 1959, Ser. No. 853,554
11 Claims. (Cl. 81—54)



1. A bolt tensioner including in combination a body providing a plurality of cylinders, said body having pas-

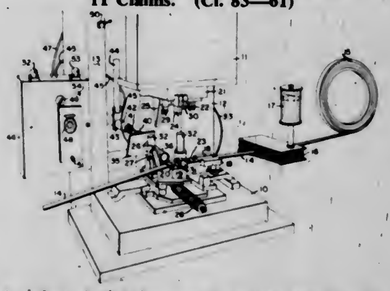
sages for liquid flow into such cylinders, pistons movable within said cylinders, a pulling bar connected with the pistons of the different cylinders to move with such pistons and bolt-engaging means connected to move with said bar.

3,015,976
CENTER DRIVE MACHINE TOOL
Charles H. Johnson, Madison, Wis., assignor to Gisholt Machine Company, Madison, Wis., a corporation of Wisconsin
Filed Feb. 27, 1957, Ser. No. 642,753
4 Claims. (Cl. 82—14)



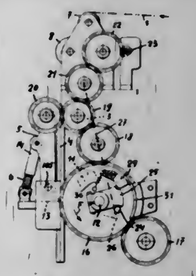
4. In a machine tool for machining opposed faces of a thin flexible disc, an annular chuck for gripping and supporting the periphery of a disc, means for driving said chuck in forward and reverse directions about the axis of rotation of the disc, steady rest means for engaging and supporting the disc directly above and closely adjacent said axis, a pair of tools disposed in a horizontal plane below said steady rest means and closely adjacent said axis for simultaneously machining the opposite faces of the disc and with said tools adapted to confine the disc therebetween; means for moving said tools in said plane and transversely of said axis from a first point adjacent said chuck to a second point adjacent said chuck but generally diametrically opposite from said first point, so that said tools are maintained between said chuck and said steady rest means with the disc confined between said tools during movement thereof so that the disc will be cooperatively supported against vibration in a direction parallel to the extent of said axis by said chuck, said steady rest means and said tools; and means for reversing the direction of rotation of said chuck when the tools are moved to adjacent the said axis by said tool moving means.

3,015,977
SAFETY DEVICE FOR PUNCH PRESSES AND THE LIKE
Aaron J. Stegink and Henry A. Wallenstrom, Denver, Colo., assignors to Shwayder Bros., Inc., Denver, Colo., a corporation of Colorado
Filed Sept. 30, 1957, Ser. No. 686,988
11 Claims. (Cl. 83—61)



1. A safety device for punch presses and the like, in which a completed article is forcibly ejected, comprising a plate mounted in a position to be struck by a completed article upon ejection; means mounted on said plate and responsive to the sound produced by the article striking said plate; and means controlled through said sound responsive means for preventing further operation of said punch press prior to the production of the next article in the event that said sound responsive means is not activated by a sound corresponding to that of an ejected article striking said plate.

3,015,978
SPRING-STORAGE ROTARY CUTTING DEVICE
Scipione Innocenti, Bologna, Italy, assignor to S.A.S.I.B.-S.p.A. Scipione Innocenti-Bologna, Bologna, Italy, an Italian joint-stock company
Filed July 2, 1957, Ser. No. 669,601
Claims priority, application Italy July 11, 1956
7 Claims. (Cl. 83—324)

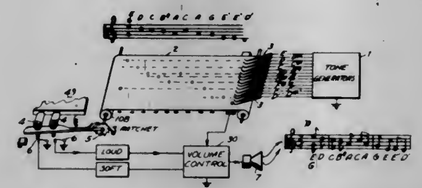


5. A cutting device for severing into predetermined lengths a continuous strip of sheet material such as paper or the like, comprising means for continuously feeding a strip of sheet material through a selected path, a fixed cutter blade disposed closely adjacent and transverse said path, a shaft parallel to and on the opposite side of said path from said fixed blade, a revolvable cutter blade carried by said shaft parallel to and cooperative with said fixed blade for shearing simultaneously the full width of a sheet in said path therebetween, bearings freely journaling said shaft, crank means including an arm fastened on said shaft, a gear train for driving said strip feeding means at a constant slow speed and including a gear element freely journaled on said shaft and driven at one revolution for each cycle of operation, an abutment member carried by said gear element and engageable with said arm on one side of said arm, a pawl-like member pivotally mounted on said gear element and engageable with said arm on the side thereof opposite said abutment member to lock said arm therebetween during a period of each revolution for driving said revolvable blade at the same rate as said strip driving means, means normally biasing said pawl-like member from the path of said arm, cam means in the path of said pawl-like member for moving the latter into the path of said arm for a portion of each revolution thereof, and spring means connected with said crank means and tensioned while said arm is locked by said pawl-like member and when said cam means releases said pawl-like member rapidly driving said blade at a greatly accelerated rate during the portion of its movement past said fixed blade.

3,015,979
ELECTRONIC MUSICAL INSTRUMENT
Merlin Davis, 5424 31st St. NW., Washington, D.C.
Filed Nov. 29, 1957, Ser. No. 699,779
7 Claims. (Cl. 84—1.18)

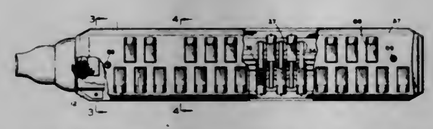
1. In a musical instrument; means for generating fundamental pitch frequencies, selection means including a

record having recordings in successive areas corresponding to given pitch frequencies, means for sensing said record, transport means for advancing said record with respect to said sensing means, a keyboard, drive means for said transport means operable upon each depression of any one of the keys of said keyboard to advance said record a single step of movement to bring a recorded area of said record into registration with said sensing



means, means operable in response to each key depression to initiate operation of the frequency generating means corresponding to the recorded area sensed by said sensing means, a plurality of preset tone quality control means for said frequency generating means, and means operable upon depression of given keys respectively of said keyboard to effect operation of said tone quality control means.

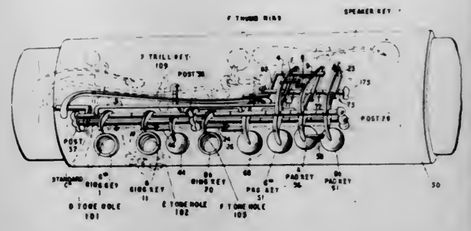
3,015,980
WIND INSTRUMENT
Walter Hohner, Trossingen, Wurttemberg, Germany, assignor to M. Hohner, Inc., New York, N.Y., a corporation of New York
Filed Sept. 4, 1959, Ser. No. 838,090
13 Claims. (Cl. 84—377)



1. An improved wind instrument of the character described comprising an elongated base board having spaced parallel under and upper faces and having formed in the under face thereof laterally spaced first and second sets of longitudinally spaced laterally extending wells and having ports opening through the upper face thereof and communicating with each of said wells, a reed plate underlying the underface of said base board and having reeds respectively registering with each of said wells, a hollow plenum chamber defining shell enclosing the underface of said reed plate and communicating with said reeds, a mouth piece communicating with said plenum chamber, valve elements mounted on said upper face and respectively registering with each of said ports and spring urged to a closed position relating thereto, and port opening keys respectively coupled to each of said valve elements.

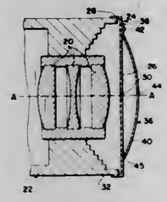
3,015,981
CLARINETS
Thomas F. McIntyre and Robert J. McIntyre, both of Elm St., Thomaston, Conn.
Filed Sept. 9, 1958, Ser. No. 759,966
12 Claims. (Cl. 84—382)

1. A clarinet including an upper section to be fingered principally by the left hand, said section having the conventional D, E, and F tone holes, said section having G♯, A and B♭ tone holes in substantial alignment with said first mentioned tone holes, rings associated with said D, E, and F tone holes, pads associated with said G♯, A and B♭ tone holes and operative connections between said D hole ring and said G♯ hole pad, said E hole ring and said A hole pad and said F hole ring and said B♭ hole pad, whereby G♯ may be played by merely placing a



finger on and depressing the D hole ring; A may be played by additionally placing a finger on and depressing the E hole ring and B♭ may be played by additionally placing a finger on and depressing the F hole ring.

3,015,982
LENS SHADE
Herbert A. Bing, Wellesley, and Richard R. Wareham, Marblehead, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 2, 1959, Ser. No. 803,628
6 Claims. (Cl. 88—1)

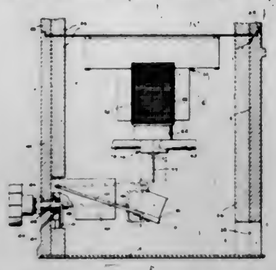


1. An aperture-defining and shading device for use with an optical lens system, said device including a first sheet-like opaque element having an exposure aperture therein and being so mountable in covering relation to said lens system that said exposure aperture is disposed approximately coaxially with the optical axis of said lens system, and a second sheet-like opaque element having a second aperture therein and being mounted on said first element, said second element having a normal configuration such that said second aperture is predeterminedly spaced from and is in coaxial alignment with said first aperture, said second element being resiliently deformable between its normal configuration and an approximately parallel configuration contiguous with said first element.

3,015,983
METHOD AND FLAME GENERATING APPARATUS FOR FLAME PHOTOMETRY
John J. J. Staunton, Oak Park, Ill., assignor to Coleman Instruments, Inc., Maywood, Ill., a corporation of Illinois
Filed Sept. 29, 1954, Ser. No. 459,084
22 Claims. (Cl. 88—14)

1. In a flame photometer, a burner for producing a flame, an atomizer including an intake tube for feeding a sample to the flame, a casing surrounding the burner having an access door therein, means on said door for supporting a sample container for movement with the

door to a position below the intake tube as the door is moved to its closed position, and means on said door for



elevating the sample container into operative position where the intake tube dips into the sample in the container.

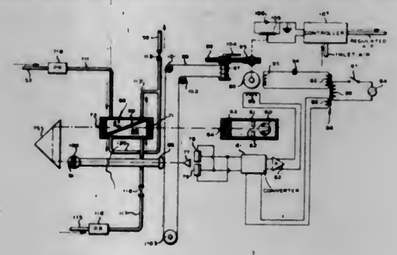
3,015,984
GRATING SPECTROMETERS OR ANALYSERS
Albert E. Martin, Newcastle-upon-Tyne, England, assignor to Sir Howard Grubb Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed Sept. 16, 1957, Ser. No. 684,226
Claims priority, application Great Britain Sept. 21, 1956
12 Claims. (Cl. 88—14)



1. In a grating spectrometer or analyser comprising a source unit for radiation, a monochromator for dispersing said radiation and traversing said dispersed radiation across an exit slit thereof, radiation detection means receiving the dispersed radiation from said exit slit and producing an electrical signal representative of the energy content of said radiation and an amplifier responsive to A.C. signals only and receiving signals from the detecting means, the provision in the monochromator of a plurality of plane diffraction gratings for dispersing said radiation, said gratings comprising a first grating from which radiation of wavelength λ and the higher orders thereof is focused on the exit slit and at least one additional grating from which the exit slit receives radiation of wavelength of higher orders of wavelength λ, namely λ/2, λ/3, etc., means being provided to transmit radiation to the exit slit alternately from said first grating and from the other gratings whereby said slit receives radiation of wavelength λ, λ/2, λ/3 etc. alternated with radiation of wavelength λ/2, λ/3 etc. and the detection means produces an alternating output proportional to radiation of wavelength λ only.

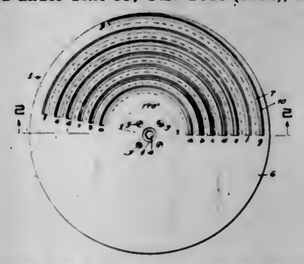
3,015,985
METHOD OF OPERATING AN ANALYZER
Elmer C. Miller, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Original application Aug. 20, 1956, Ser. No. 604,991, now Patent No. 2,890,571, dated June 16, 1959. Divided and this application Nov. 12, 1958, Ser. No. 773,371
2 Claims. (Cl. 88—14)

1. A method of operating two zones adapted to transmit light through a fluid in each of said zones, which comprises flowing a first fluid through a first pressure regulation zone, regulating the pressure of said first fluid and discharging said first fluid from said first reguation zone at a predetermined pressure, then flowing said first fluid into a first light transmitting zone, flowing said fluid from said zone into a common zone and from said common zone, regulating flow of total fluid from said common zone, flowing a second fluid through a second pressure regulation zone, regulating the pressure of said second fluid, and discharging said second fluid from said



second pressure regulation zone at a predetermined pressure, then flowing said second fluid into a second light transmitting zone, flowing said second fluid from said second light transmitting zone into said common zone into admixture therein with said first fluid, and regulating the flow of said second fluid from said second regulating zone into said second zone and the flow of the combined fluids from said common zone so that there is effected a flow of fluid through at least one of said first and said second light transmitting zones.

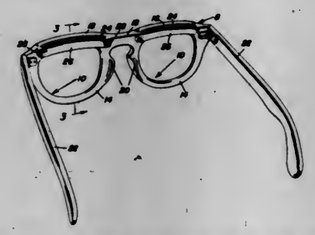
3,015,986
SPIRALED SHUTTER FOR A MOTION PICTURE CAMERA
Thomas P. Tyson, Trailer Court 6, Space 11, White Sands Missile Range, N. Mex.
Filed Dec. 8, 1960, Ser. No. 74,739
2 Claims. (Cl. 88—19.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A shutter for a high speed motion picture camera comprising a disc having an exposure area, said area consisting of a first series of spiral grooves on one face of said disc and in said exposure area and a second series of spiral grooves on the other face of said disc and in said exposure area, said grooves being arranged in offset relation, whereby spiraled apertures are formed through said disc and in said exposure area.

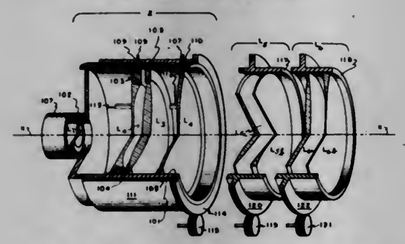
3,015,987
VENTILATED FRAME FOR LENSES
Walter H. Harrison, Box 111, Post Falls, Idaho
Filed Apr. 7, 1959, Ser. No. 804,712
3 Claims. (Cl. 88—41)

1. A frame for spectacles comprising a pair of coplanar conventional-type longitudinally spaced endless rims joined by a nose bridge, each rim having a hingedly connected temple, an inner peripheral endless groove with a lens fitted and retained therein, each rim also having an upper horizontal member increased in cross-sectional thickness and having an air circulating vent, said vent being relatively long and extending uninter-



ruptedly the length of said upper horizontal rim member and situated so that its locale when the spectacles are in use is between the lens groove in the upper portion of the rim and the horizontal part of the rim which customarily resides in contact, or nearly so, with the wearer's eyebrows.

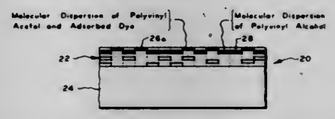
3,015,988
PERSPECTIVE ALTERATION MEANS
Harold S. Hemstreet, Binghamton, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Nov. 25, 1955, Ser. No. 548,842
13 Claims. (Cl. 88—57)



1. Apparatus for altering an original image of an object as said object appears when viewed from a first angle to provide a resultant image simulating the appearance of the same object viewed from a different angle, comprising in combination, first and second primitive transformation means and uniform magnification means arranged to act upon said original image, the powers and angular orientations of said primitive transformation means and the power of said uniform magnification means constituting adjustable parameters, drive means for adjusting a plurality of said adjustable parameters, and computer means providing signals to control said drive means in accordance with desired changes in viewing angle, said signals being so determined by said computer means that each point of said resultant image will be displaced with respect to the corresponding point of said original image by an amount proportional to the distance of said corresponding point from the horizon of said original image.

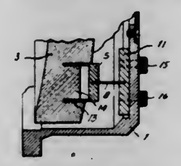
3,015,989
LIGHT-POLARIZING FILM MATERIALS AND PROCESS OF PREPARATION
John P. Delangre and Albert Cane, Los Angeles, Calif., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,297
16 Claims. (Cl. 88—65)

1. An organic dye light-polarizing film material having an improved dye density and polarizing efficiency, said film material comprising a transparent, high molecular weight, hydroxyl-containing vinyl polymer having its molecules substantially oriented in a given direction, at least one dichroic direct cotton dye contained in at least a given area of said film material so as to render said area light polarizing, and a mordant having an affinity for said dichroic direct cotton dye which enhances the receptivity of said molecularly oriented vinyl polymer



for said dichroic direct cotton dye and provides a substantial insolubilization of said dye, said dye mordant comprising an amino acetal of polyvinyl alcohol, the light-polarizing film material, owing to the coaction of said vinyl polymer, dye and mordant, having a dye density which is substantially higher than that of a light-polarizing film material comprising a similar molecularly oriented vinyl polymer and dye but which is devoid of said dye mordant.

3,015,990
MOUNTING OF OPTICAL ELEMENTS
Cornelis Otto Jonkers, Wassenaar, Netherlands, assignor to N.V. Optische Industrie "De Oude Delft," Delft, Netherlands, a Netherlands company
Filed Apr. 10, 1959, Ser. No. 805,461
Claims priority, application Netherlands Aug. 11, 1958
7 Claims. (Cl. 88—96)

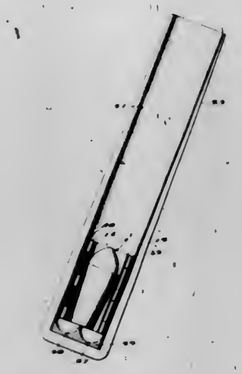


1. In an optical instrument, in combination, a housing, and an optical element having a front optically active surface and a rear surface in said housing, a center axis normal to said surfaces, a plurality of recesses symmetrically spaced apart behind said optically active front surface, supporting means connected to said housing for supporting said optical element in said housing in optical operative alignment, said recesses in said optical element being cylindrical in shape and having their axes substantially parallel to said center axis of said optical element, said supporting means comprising a plurality of metal cups each having a thin cylindrical side wall section whose outer diameter is slightly smaller than the diameter of said recesses, said side wall sections of said cups being cemented in said recesses, and a plurality of supporting spring blade members, each secured at one end to an associated metal cup and at the other end to said housing, said spring blade members lying in planes tangential to the optical element and compensating for differential radial contractions and expansions between said optical element and said housing.

3,015,991
PROJECTILE LAUNCHING DEVICE
Ernest E. Forbes, Jr., 2600 3rd Ave. S., Birmingham, Ala.
Filed Oct. 29, 1958, Ser. No. 770,397
4 Claims. (Cl. 89—1.7)

1. A device for launching a projectile comprising a rocket; a smooth bore barrel closed at one end; a rocket

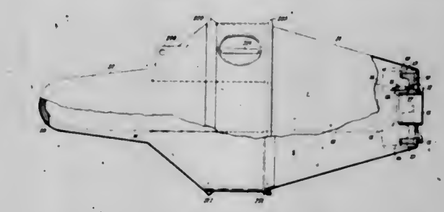
launching carriage within said barrel including a first cylindrical tube, a second-cylindrical tube mounted within said first tube coaxially therewith to define an annular space between said tubes, fin members disposed along the longitudinal axis at an angle thereto and secured to both of said tubes to position said tubes in a spaced relationship, and means mounted within said second tube to support said rocket; said launching being facilitated by the forward motion of the exhaust gases from said rocket which are deflected from said closed end and against said fin members when said rocket is supported in said carriage and said carriage is located in said smooth bore barrel.



3,015,992
LAUNCHING MEANS FOR ROCKET-PROPELLED MISSILES

Richard Sutton Ransom, Holywood, Northern Ireland, assignor to Short Brothers and Harland Limited, Belfast, Northern Ireland, a British company

Filed Feb. 17, 1959, Ser. No. 793,840
Claims priority, application Great Britain Feb. 25, 1958
2 Claims. (Cl. 89—1.7)

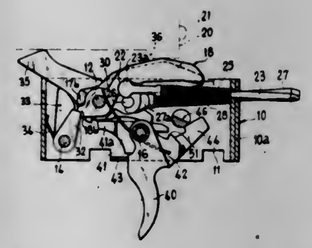


1. Container for storing or launching a rocket propelled missile which is adapted to be connected to a launching platform, the missile having a tail with spaced projections, comprising: a casing for retaining the missile, a base member joined to the rearward end of said casing, said base member including a plurality of slotted lugs extending rearwardly therefrom for engagement with a launching platform, and further including a longitudinal aperture therethrough for expelling exhaust gases, a blowout panel operatively secured to the rearward end of said base member, a plurality of lugs disposed on the inner-surface of said base member and arranged to engage the correspondingly spaced projections on the missile tail to thereby locate the missile in correct position for launching, means carried by said base member for releasably attaching the missile to said base member at one point, said attachment means being disposed on an axis offset from the longitudinal axis of the missile and including a shear pin so that when the propulsion rocket is discharged, said shear pin will be severed to release the missile.

3,015,993
SELECTIVE FIRE CONVERTER AND RATE REDUCER

Attilio Mario Franchi, Brescia, Italy, assignor to Soc. p. Az. Luigi Franchi, Brescia, Italy

Filed July 27, 1960, Ser. No. 45,711
Claims priority, application Italy Aug. 5, 1959
4 Claims. (Cl. 89—131)

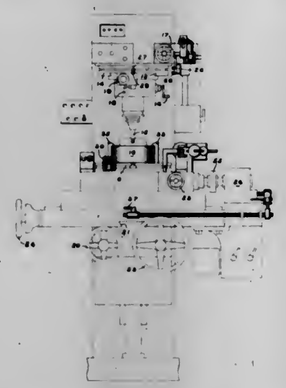


1. In a firing mechanism in an automatic firearm, a reciprocating breech bolt including a firing pin therein, a casing positioned below the path of the breech bolt, a first and a second pivot in the casing, a hammer swingable on the first pivot between a recoil condition and striking condition on a path intersecting the path of the breech bolt whereby the recoil stroke of the breech bolt displaces the hammer towards recoil condition of the latter, spring-loaded means jointly providing with the hammer a toggle link causing the hammer to snap into its first and second mentioned condition through a dead point condition, a spring-loaded delay mass swingable on the said first pivot adjacent the hammer between a recoil condition and a firing condition on a path intersecting the path of the breech bolt whereby the recoil stroke of the breech bolt displaces the delay mass to its recoil condition, spring-loaded lock means locking the mass in its recoil condition, a cam surface on the breech bolt causing the said lock means to unlock the mass on return of the breech to its firing condition thereby to cause the spring-loaded mass to swing into its firing condition, a lost motion connection between the delay mass and hammer effective on the hammer to displace the latter from its recoil condition through its dead point condition as the mass is about to reach its firing condition; a trigger swingable on the said second pivot from a safety condition to a continuous firing condition through a single shot condition and vice-versa, a tooth projecting from the trigger, a tooth radially projecting from the hammer, a two-armed sear extending with its arms between the paths of the two teeth, the said sear having an eyelet therein elongated in the general direction of the arms accommodating the said second pivot whereby the sear is shiftable by the tooth on the hammer acting on one of its arms to intersect, with its opposite arm, the path of the tooth on the trigger while retaining the hammer in cocked condition, and spring means acting on the sear to shift the latter in the direction of the first mentioned arm and cause the first mentioned arm to intersect the path of the tooth on the hammer, the said tooth on the trigger acting on the sear to swing the latter on the said second pivot thereby to bring the first mentioned arm out of the path of the tooth on the hammer.

3,015,994
APPARATUS FOR CUTTING AN ARCUATE VENTURI FOR RECOILLESS RIFLES

Alfred P. Batezell, Huntingdon Valley, and Robert McCullogh, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed Mar. 30, 1956, Ser. No. 575,286
1 Claim. (Cl. 90—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)

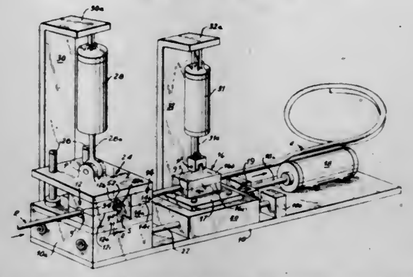


In a machine for cutting a kidney shaped venturi opening in a workpiece, said machine comprising a rotatable turntable, a bed below said turntable, a rotatable cutter movable relatively toward and from said turntable for operation on a workpiece fixed to said turntable, a rotatable head for moving said cutter in an arcuate path for cutting end walls of said venturi opening, means for rotating said cutter substantially continuously, means for rotating said turntable for cutting one longitudinal curved side of a venturi opening and for rotating the turntable in an opposite direction for cutting an opposite longitudinal side of substantially the same angular extent past the rotating cutter, means responsive to completion of a longitudinal arcuate cut at one side of said venturi opening for stopping the turntable and starting said rotating head through substantially a semicircle, means for stopping rotation of said head at the finish of said semicircular rotation and starting the rotation of said turntable in the opposite direction to the previous movement of said turntable for starting cutting the opposite longitudinal arcuate cut, means for adjusting the cutter with respect to a workpiece for cutting inclined sides and ends for a venturi, the combination therewith of the improvement for reducing the number of adjustments needed when the ends of said venturi opening are given different slopes from each other and from the longitudinal side walls, said improvement including means stopping the rotation of said turntable relative to the center of head rotation toward one end of said cut by substantially the same amount said turntable is rotated relative to said center of head rotation to the opposite end of said cut, said last mentioned means comprising a fixed support mounted on said bed, a threaded stem held in threaded adjustable engagement therewith and having ends projecting on each side of said support so that in adjusting said threaded stem the adjustment is added to one end and subtracted from the other end in determining the arcuate cut, and a stop on said turntable on each side of said support for engaging the ends of said threaded stem respectively for stopping movement of said turntable at each end of said arcuate cut.

3,015,995
APPARATUS FOR REMOVING WELDING FLASH AND SWELLING FROM ROD STOCK

William M. Fahy, 128 Oklahoma Ave., Oriskany, N.Y.

Filed Apr. 30, 1959, Ser. No. 810,070
7 Claims. (Cl. 90—24)

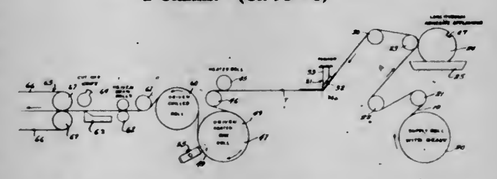


1. A device of the kind described comprising, a base, a first pedestal fixed on said base, upright frame means fixed on said base in spaced relation to said first pedestal, guide bars extending between said first pedestal and said upright frame means, a second pedestal slidingly mounted on said guide bars, and means for moving said second pedestal on said guide bars, a first guide member fixed on said first pedestal, a second guide member superimposed upon said first guide member, and means for raising and lowering said second guide member relative to said first guide member, the meeting faces of said guide members being grooved with complementary grooves forming a guideway, a first die member fixed on said first pedestal, a second die member superimposed on said first die member, and means for raising and lowering said second die member relative to said first die member, the meeting faces of said die members being grooved with said complementary grooves to provide a passage which is aligned with the said guideway, said die members coacting to provide a cutter head, a first clamp member fixed on said second pedestal, a second clamp member superimposed on said first clamp member, and means movable with said second pedestal for raising or lowering said second clamp member with respect to the first clamp member, the meeting faces of said clamp members being grooved with complementary grooves for frictionally engaging and holding a length of rod stock while the clamp members are moved with said second pedestal to draw the point of weld of the rod stock through said cutter head.

3,015,996
BAGS AND METHOD AND MACHINE FOR MAKING SAME

Vernon C. Ambler, Box 272, Esca E. Anderson, 431 18th SE., and Fay Wright, 1124 Church, all of Paris, Tex.

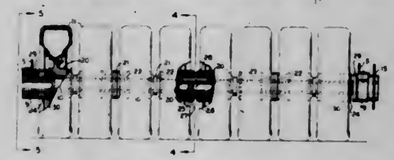
Filed Jan. 2, 1958, Ser. No. 706,680
2 Claims. (Cl. 93—8)



1. In a machine for making bags from a continuous web having on the surface that becomes the inner surface of said bags transverse bands of a relatively high melting point thermoplastic adhesive and having a paraffin wax coating that is continuous over said bands, means for forming said web into a flattened tube having a longi-

tudinal seam intermediate the sides of said tube, a heated bar roll having circumferentially spaced heated bars engageable with the trailing halves only of said transverse bands of adhesive and having segments of high heat conductivity between said bars and spaced therefrom to accommodate the circulation of air through said roll to maintain the web and the leading halves of said transverse bands of adhesive cool, adjacent guide and chill rolls wrapping the tube about said heated bar roll for a greater portion of the circumference thereof and maintaining the trailing halves of said transverse bands in engagement with said spaced heated bars and chilling the melted thermoplastic adhesive in the trailing halves of said bands, and means for severing said tube along a median line between said trailing half and said leading half of each band of adhesive to form bags with heat sealed closed bottoms and open tops that are heat sealable.

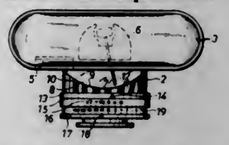
3,015,997
PNEUMATIC ROAD ROLLER
Harry J. Seaman, Milwaukee, Wis.
Filed Jan. 25, 1956, Ser. No. 568,952
2 Claims. (Cl. 94—50)
(Filed under Rule 47(b) and 35 U.S.C. 118)



1. A pneumatic self-propelled road roller comprising a ballast section and a drive unit section, a rear axle, a series of more than two pneumatic rolls freely mounted on said rear axle in relatively closely spaced relation and supported by said axle from the ballast section to provide a drum-like pneumatic roller member at the rear of the road roller, a front axle, a second series of more than two pneumatic rolls freely mounted individually on said front axle in relatively closely spaced relation and supported by said front axle from the drive unit section to provide a drum-like pneumatic roller member at the forward portion of the road roller, an engine mounted on the drive unit section and connected to the front axle to rotate said front axle, each roll mounted on said front axle having a central hub with generally flat clutch surfaces on each side thereof and journaled on said axle, clutch means keyed to the front axle and including flat frictional clutch members disposed between the flat surfaces of adjacent hubs, outward biasing means disposed on the axle between a pair of said rolls for urging the rolls of said series outwardly towards the ends of said axle, adjustable stop means secured to both ends of said axle and adjustable axially thereon to resist the axial thrust of said biasing means against the hubs and to selectively vary the force of said biasing means and the pressure between the clutch members and corresponding hubs to provide for individual wheel slippage on the torque loads above a predetermined drive torque.

3,015,998
INDICATING DEVICE FOR BUILT-IN EXPOSURE METER FOR A PHOTOGRAPHIC CAMERA
Wietse H. van der Mei, Apeldoorn, Netherlands, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed May 20, 1960, Ser. No. 30,509
Claims priority, application Germany May 22, 1959
3 Claims. (Cl. 95—10)

1. In a photographic camera having a shutter and a diaphragm, the lamellae of the diaphragm being adjustable by means of two diaphragm controls, one of which is coupled with the exposure time setter while the other of which is adjustable in accordance with the light value indications of a photographic exposure meter having an indicator movable non-linearly in accordance with linear changes in light values, the camera including setters for exposure factors, including diaphragm aperture, and the setters for exposure factors being in the form of coaxial relatively rotatable rings carrying linear scales of respective exposure factors: the improvement comprising a



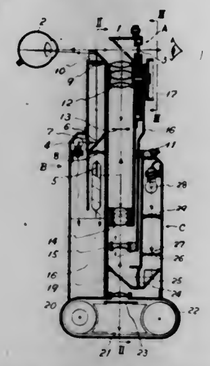
directrix field extending between the path of the indicating portion of said indicator and said diaphragm aperture setter; the ends of the directrices adjacent such path having spacings corresponding to the non-linear deflection of said indicator, and the ends of the directrices adjacent said diaphragm aperture setter having uniform and equal spacings corresponding to the linearity of the exposure factors; said diaphragm aperture setter carrying a mark cooperable with the last-named ends of said directrices for alignment with one end of a directrix having its other end aligned with the indicating portion of said indicator.

3,015,999
PROTECTIVE DEVICE FOR PHOTOGRAPHIC EQUIPMENT
Willy Kaden, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Mar. 11, 1958, Ser. No. 720,664
Claims priority, application Germany Mar. 20, 1957
2 Claims. (Cl. 95—11)



1. In a camera, in combination, a camera front wall member formed with a plurality of windows through which light passes, said front wall member also being formed with an aperture located below said windows; an elongated pivot pin carried by said front wall member over and extending along said windows; a cover member turnably carried by said pivot pin for turning movement between a closed position substantially parallel to said front wall member and covering said windows and an open position substantially perpendicular to said front wall member and uncovering said windows while at the same time forming a light shade therefor, said cover member having adjacent an edge thereof which is distant from said pivot pin a projection which extends into said aperture when said cover member is in said closed position thereof; and spring means carried by said pivot pin and cooperating with said cover member for urging the latter to turn around said pivot pin from said closed to said open position and also urging said cover member longitudinally along said pivot pin so that when said cover member is in said closed position thereof said projection will be urged by said spring means against an edge of said front wall member at said aperture to releasably maintain said cover member in said closed position thereof, whereby when said cover member is manually moved longitudinally along said pin in opposition to said spring means said projection will be moved out of engagement with said front wall member so that said spring means can turn said cover member to said open position thereof.

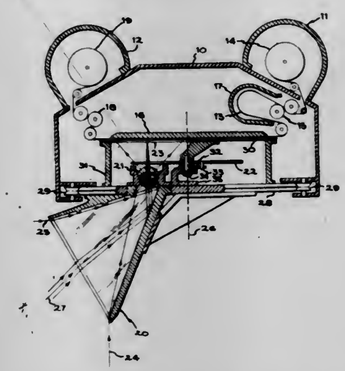
3,016,000
PORTABLE OCULI FUNDUS CAMERA
Kimiharu Noyori, Tokyo, Japan, assignor to Yasuyuki Sata, Tokyo, Japan
Filed June 19, 1958, Ser. No. 743,204
Claims priority, application Japan June 26, 1957
1 Claim. (Cl. 95—12)



A portable camera for viewing and photographing objects such as the fundus of the eye, comprising a camera having an aperture, a housing extending outwardly from said camera including wall means defining an image light reflecting passage aligned with and extending outwardly from the aperture of said camera and also defining a viewing passage extending at an angle with and intersecting said image light reflecting passage, said viewing passage including an object opening at one end for viewing an object to be illuminated and photographed, and an opening at the opposite end for positioning the eye of the operator for viewing purposes, said housing further including wall means adjacent said image light reflecting passage defining an illumination chamber, semitransparent mirror means disposed at the intersection of said viewing passage and said image light reflecting passage and positioned to both reflect the image of the object being viewed along said image light reflecting passage to said camera and to permit the passage of the image to the opposite end of said viewing passage for observation by the operator, light means in said illumination chamber including means to direct light onto the object being viewed in the vicinity of the object opening of said viewing passage, wall means defined on said housing adjacent said image light reflecting passage defining a focusing light chamber in communication with said image light reflecting passage at the end adjacent said camera, means in said focusing light passage for directing a light image into said image light reflecting passage to said viewing passage and onto said object, and a second semitransparent mirror disposed in said image light reflecting passage adjacent said camera and at the location to intercept light from said focusing light passage and reflected to said object while permitting light from the object to pass to said camera aperture.

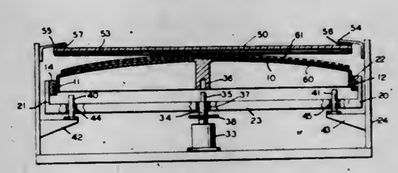
3,016,001
POLAR CAMERA
Frederick T. Sonne, Northbrook, Ill., assignor, by mesne assignments, to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Delaware
Filed Nov. 19, 1958, Ser. No. 775,081
7 Claims. (Cl. 95—15)

1. A panoramic camera comprising: a lighttight camera housing; a first and a second film holding device affixed exteriorly to said housing; a flat, film platen located within said housing and disposed parallel with the plane of view to be photographed; film transport means for cyclically withdrawing film from said first film holding device, conducting said film across said platen and directing said film to said second film holding device; support means rotatably mounted to said housing; a prism affixed to said support means for collecting a wide angle field of view extending radially from the nadir and adapted to be rotatable with said support means for collecting said



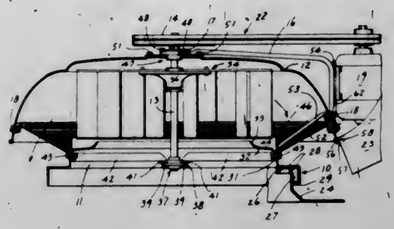
field of view through a full circle circuit of revolution; a wide angle lens system cooperatively associated with said prism for imaging at said platen the view collected by said prism; an exposure slit rotatable with said support means for restricting the view that is imaged by said lens system; and a shutter pivotally mounted to said support means for selectively obstructing the image path to said platen.

3,016,002
FLAT BED PRINTER
Frederick H. Frantz, Binghamton, N.Y., and Carl A. Ackermann, Brackney, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 28, 1959, Ser. No. 862,211
5 Claims. (Cl. 95—73)



1. Contact printing apparatus utilizing a translucent original and a light sensitive sheet material, including in combination, a housing, a curvilinear platen upon which said original in contact with the sensitized material is placed, a carriage supporting said platen, a flat transparent plate disposed above said platen, a frame for supporting said plate in said housing, power means for progressively lifting said carriage and thereby pressing said platen against said plate to the extent that said plate is constrained to follow the curvilinear surface configuration of said platen, the surface contact between said plate and said platen being thereby established from a central point progressively over the area thereof effecting a substantially creaseless and air-bubble free framing of said original and said light sensitive material, and a light source above said plate for exposing said material.

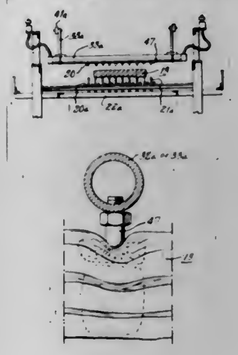
3,016,003
OFFSET BELTED ROOF VENTILATOR
Louis J. Jean and William E. Morrison, Indianapolis, Ind., assignors to Jenn Air Products Company, Inc., Indianapolis, Ind., a corporation
Filed Nov. 23, 1959, Ser. No. 854,969
6 Claims. (Cl. 98—43)



1. A roof ventilator air discharge assembly adapted to be mounted on a preconstructed, vertically-extending curb structure, said assembly including a tubular, rectangular frame member supported by said curb structure and pivotally secured thereto along a pivotal support axis parallel to one of its sides, the upper portion of said frame member being formed to provide a circular air inlet aperture disposed above said curb structure, a concavo-convex hood disposed in spaced, overlying relation to said inlet aperture with its concave side facing said aperture, means extending between said frame member and the marginal area of said hood for supporting said hood, a vertically positioned shaft mounted for rotation within said hood and having a portion extending beyond the convex outer face thereof, an air-moving impeller mounted within said hood and driven by said shaft, said impeller being positioned coaxially with said inlet aperture for drawing air through said aperture and discharging it through the space bounded by said hood, spaced L-shaped members having their ends attached respectively to the outer face of said hood adjacent its central axis and adjacent its peripheral margin whereby one set of legs of said L-shaped members extend substantially vertically and the other set horizontally, motor support means carried by the vertically extending legs of said L-shaped members, a motor carried by said support means and disposed so that its shaft extends vertically, power transmission means extending from said motor radially across the upper surface of said hood to said extending shaft portion for driving said shaft, and a cover for said motor and transmission means removably supported on said hood, said motor being disposed outboard of the pivotal support axis of said frame member whereby as said frame member is tilted about said pivotal support axis said motor acts as a counterweight.

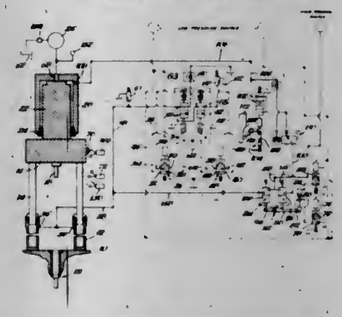
3,016,004
MEAT TREATING
Clarence Michael Harper, Jr., Speedway, and George Fox Harrington, Indianapolis, Ind., assignors to Hygrade Food Products Corporation, Detroit, Mich., a corporation of New York
Filed Jan. 26, 1960, Ser. No. 4,788
11 Claims. (Cl. 99—255)

1. An injection machine for automatically impregnating meat slabs with a curing liquid by means of a jet stream comprising a work chamber, a fixed trackway constituted by a plurality of longitudinally extending rails positioned within said chamber and spaced in parallel relationship, means for feeding slabs of meat into said chamber onto the input end of said trackway, a series of meat advancing mechanisms disposed at spaced positions below said trackway, each mechanism including a bank of parallel rods disposed in intermeshing relationship with the rails of said trackway, and means to oscillate said banks in a vertical and substantially circular plane to cause said rods to cyclically rise above and below said rails and thereby advance said slabs through said chamber, and an injection station positioned on said trackway intermediate adjacent advancing mechanisms thereof, said station including injection nozzles positioned to engage a face of the meat slab positioned on said trackway, a



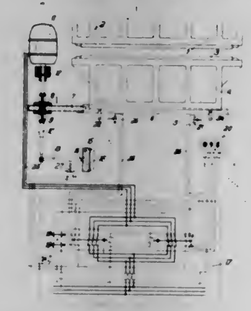
pressure plate positioned to engage the other face of the meat slab, and means to oscillate said pressure plate cyclically to engage said other face and to retract therefrom, said last-named means operating in phase opposition to the oscillation of said advancing mechanism whereby when the pressure plate is brought downwardly the slab thereunder is stationary and the plate urges said slab against said nozzles to effect the desired injection.

3,016,005
HYDRAULIC PRESS
Joseph W. Tomka and Robert C. Brenk, Cincinnati, Ohio, assignors, by mesne assignments, to Elmes & King Manufacturing Company, Cincinnati, Ohio, a copartnership
Filed Jan. 5, 1956, Ser. No. 557,490
12 Claims. (Cl. 100—48)



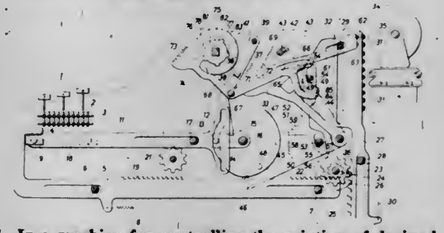
1. In a hydraulic press, the combination of a frame having a bed adapted to support a work piece carrying die, advance and return chambers and ram means reciprocable therein toward and away from the bed, a source of high pressure fluid, a main operating valve adapted to selectively direct high pressure fluid to respective chambers, and means to control the stroke of the slide comprising a three-way valve adapted when in a first position to exhaust fluid from said return chamber and thereby permit free fall of said ram, a first throttle valve associated with said three-way valve to control the free-fall speed of the ram, a second throttle valve interposed between said main operating valve and the advance chamber and adapted to vary the speed of the ram proportionately to the rate of flow through said second throttle valve, said second throttle valve having a piston rod extending outwardly thereof, cam carried by the ram for movement therewith, a rocker arm secured to the press, one end of said arm being operatively engageable with said piston rod and the other end of said arm being engageable with said cam, whereby rocking of said arm by said cam operates to move said rod to vary the rate of flow of hydraulic fluid through said second valve to said advance chamber.

3,016,006
PAPER PROCESSING MACHINES FOR PROCESSING WORKPIECES IN THE FORM OF SHEETS, PLATES OR THE LIKE
Friedrich Schröter, Friedhofstr. 14, Hannover, Germany
Filed Sept. 21, 1956, Ser. No. 611,394
Claims priority, application Germany Oct. 10, 1955
5 Claims. (Cl. 101—3)



1. In an automatic machine having moving means for moving work pieces from a receiving zone past a work zone to a delivery zone, the improvement comprising tool means arranged at said work zone for working work pieces passing therethrough, said tool means including a pair of cooperating components one of which is movable toward and away from the other during working of the work pieces and the other of which components is normally stationary but is adapted to be moved toward and away from said one component so as to enable adjustment of said components relative to each other, at least one of said components carrying a tool for working work pieces passed between said components; first moving means for moving said movable component toward and away from said normally stationary component so as to work work pieces passing between said components; second moving means independent of said first moving means for moving said normally stationary component in a step-wise manner toward and away from said movable component so as to adjust the work done by said components on work pieces passing between them; a plurality of control means each operatively connected with said second moving means for actuating the same, said plurality of control means being arranged, respectively, at a plurality of control points, and each of said control means being operable by an operator stationed at the respective control point; and a plurality of indicating counters arranged at said control points, respectively, and operatively connected to said second moving means for indicating to an operator stationed at any of said respective control points the number of steps which said normally stationary component is away from a predetermined index position, whereby an operator stationed at any of said control points may adjust the position of said normally stationary component in a step-wise manner and be apprised of the number of steps which said normally stationary component is away from said predetermined index position.

3,016,007
MECHANISM FOR CONTROLLING THE PRINTING OF DECIMAL SIGNS IN THE AMOUNTS PRINTED IN CALCULATING MACHINES
Helmut Gelling, Ulm, Germany, assignor to Walther Buromaschinen Gesellschaft m.b.H., Niederstatzingen, Wurttemberg, Germany, a firm
Filed Apr. 13, 1959, Ser. No. 806,019
Claims priority, application Germany Apr. 17, 1958
8 Claims. (Cl. 101—93)

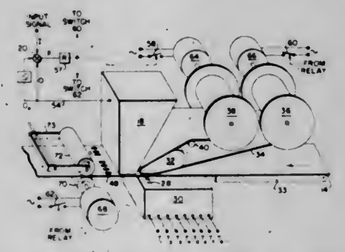


1. In a machine for controlling the printing of decimal signs in the amounts printed in calculating machines of the class described,
a printing mechanism comprising:
digital type carriers one for each denomination, carrying digital types and a zero type, decimal sign type carriers one between each pair of neighbouring digital type carriers, each decimal sign type carrier having a decimal point type, a comma type and a void spot,
a platen having a printing line and means for moving said digital type carriers against said platen,
means for adjusting each of said decimal sign type carriers into one of three positions, for bringing the decimal point type, the comma type or the void spot opposite the printing line,
said adjusting means comprising
a decimal sign setting means consisting of a number of denominationally arranged control-units, each having a series of different control elements each associated to one of the three positions of said sign type carriers, means for moving said decimal sign setting means into a number of positions each associated to a distinct ordinal position of the decimal point of the amount to be printed, operative connecting means between each decimal sign type carrier and the control-unit of the same denomination adapted to move each sign type carrier into one of its three positions opposite the printing line according to the decimal point ordinal positions of the amount to be printed, and means for releasing the printing movement of said sign type carriers by the printing movement of the digital type carriers,
whereby, on the printing movement of the digital type carriers, the decimal sign type carriers will print a decimal point, a comma, or neither of the two in ordinal positions of the amount to be printed according to the setting of said decimal sign setting means.

3,016,008
DATA PROCESSING APPARATUS
Ralph Berger, Wellesley, and Hugh E. Harlow, Reading, Mass., assignors to Anelex Corporation, Boston, Mass., a corporation of New Hampshire
Filed Dec. 16, 1959, Ser. No. 859,893
7 Claims. (Cl. 101—93)

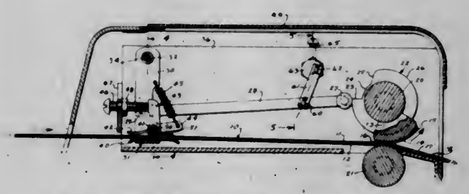
1. Apparatus for printing consecutive data characters in digital code in response to successive digitally encoded

input signals applied at input rates up to a maximum data acceptance rate, comprising a hammer module having a plurality of movable hammers, each of said hammers having a code mark engraved on its striking surface, an anvil spaced from said module, tape step drive means for moving a data tape at a predetermined rate through the space between said module and said anvil, ribbon drive means for moving a color ribbon between said tape and said anvil, means responsive to said input signal for selectively actuating said hammers to drive said tape and said ribbon against said anvil, said hammer actuation being adapted to print code symbols selectively on said tape into adjacently disposed columns of code symbol areas, each of said columns corresponding to one of said hammers, a reading head disposed in close prox-



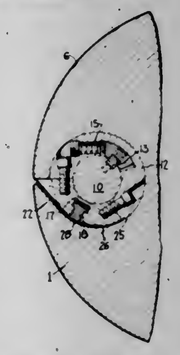
imity to said anvil and being adapted to observe said printed tape, said reading head comprising at least one light source positioned to illuminate said printed tape, a plurality of photo diodes each responsive to the specular, reflected light from successive code symbol areas of one of said columns to provide corresponding output pulses, the output pulses corresponding to respective data characters being derived in synchronism to form digitally encoded output signals, a comparison circuit for comparing the input and output signals corresponding to each data character to provide a signal upon non-coincidence of said compared signals, the position of said reading head relative to said anvil being so related to said rate of movement of said data tape to provide said non-coincidence signal prior to hammer actuation by the subsequent input signal applied at said maximum acceptance rate.

3,016,009
ADJUSTABLE EQUAL SPACING DEVICE
Frederic S. Tobey, Walpole, Mass., assignor to W. H. Brady Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 19, 1960, Ser. No. 23,232
9 Claims. (Cl. 101—228)



1. In a device including rotationally supported means for making periodic impressions upon a continuous web of material and wherein said means is further arranged to advance said web in a forward direction concurrently as each impression is made thereon; the combination therewith of equal spacing means comprising web support means, a web clamping member spaced rearwardly of said rotationally supported means relative to the direction of advancement of said web and being biased towards clamping engagement with said web when the web is supported by said web support means, and adjustable reciprocating motion translating means arranged for operative engagement with said rotationally supported means and with said web clamping member, said motion translating means being arranged to resist the normal bias of said web clamping member to prevent engagement thereof with said web during its forward advancement, and alternatively, being further arranged to permit said clamping engagement adjustably relative to the release position of said rotationally supported means and said web.
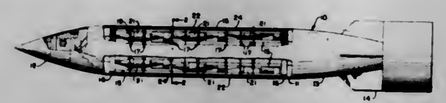
3,016,010
PRINTING PRESS PLATE CLAMPING MEANS FOR PREBENT WRAP AROUND PRINTING PLATES OF SOFT MATERIAL
Hans J. Luehrs, Westerly, R.I., assignor to The Cottrell Company, Westerly, R.I., a corporation of Delaware
Filed Aug. 20, 1959, Ser. No. 834,987
6 Claims. (Cl. 101—415.1)



1. Plate clamping mechanism for flexible wrap around printing plates comprising the combination of a rotary cylinder provided with a longitudinal slot across the circumference thereof, a bore in the cylinder below, parallel to and communicating with said slot, a printing plate wrapped around said cylinder so that its leading and trailing edges enter said slot and extend into said bore, said leading edge overlapping said trailing edge substantially throughout its length and extending partly around said shaft, means located within the cylinder bore for clamping and tensioning the plate in printing position on the cylinder and means located at the end of the cylinder for bringing the plate clamping and tensioning means into operative engagement with both plate ends, the said last named means being located in the cylinder bore for clamping and tensioning the plate to the cylinder including a turnable shaft mounted in said bore, spring biased collars turnably mounted and supported on said shaft against deflection, and spring biased plate engaging means mounted on said collars.

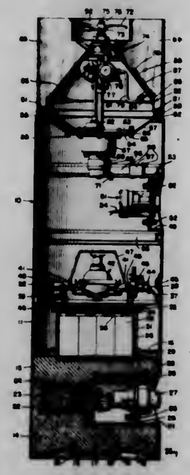
3,016,011
CLUSTER OPENING METHOD
Fred Brown, Chicago, Ill., assignor, by mesne assignments, to United States of America as represented by the Secretary of the Navy
Filed July 11, 1956, Ser. No. 597,313
1 Claim. (Cl. 102—7.2)

An aircraft launched cluster bomb comprising an elongated thin skinned casing provided with a tapered nose portion, means affixed to said casing for effecting rotation thereof subsequent to launching from the carrying aircraft, a plurality of miniature missiles nested in tandem groups along the longitudinal axis of said casing, a plurality of annular means spatially positioned within said casing perpendicular to the longitudinal axis thereof, unique pairs of said annular means surrounding each of said groups of missiles, each of said last recited means being formed of a plurality of normally communicating segmented members abutting the inner surface of said casing, a plurality of spatially positioned ignitable pyrotechnic devices abuttingly extending along the inner surface of said casing for effecting disintegration of said



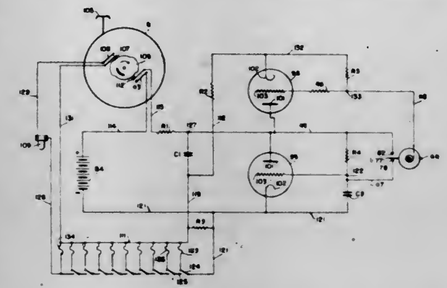
casing upon being ignited, a semicircular member enclosing each of said ignitable devices for directing the ignition effect thereof towards said casing, fuze means disposed in said nose portion of said casing for selectively effecting ignition of said ignitable devices, and interconnecting joint means affixed to both ends of each of said segmented members for normally maintaining communication therebetween and upon disintegration of said casing for effecting separation of said members thereby releasing said bound missiles.

3,016,012
INERTIA OPERATED MINE FIRING DEVICE
Joseph D. Turlay, 2211 Pierce St., Flint, Mich.
Filed Jan. 19, 1949, Ser. No. 71,741
8 Claims. (Cl. 102—17)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a floating mine, in combination, a pivot support, a first inertia member pivotally supported by said support, a second inertia member having a greater mass and a lower center of gravity than the first named inertia member, a tubular member axially depending from the second inertia member and tiltably supporting the second inertia member on the first inertia member, a pair of normally open firing contacts on said second inertia member, means for closing the firing contacts selectively in accordance with the degree of tilt of the first named inertia member with respect to the second inertia member, and resilient mounting means for said pivot support.

3,016,013
ACOUSTICAL MINE FIRING CONTROL SYSTEM
Grant N. Willis, Washington, D.C.
Filed Jan. 19, 1945, Ser. No. 573,621
13 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In an acoustically controlled marine mine adapted to be fired in response to sound signals received from an approaching vessel, a sound responsive device adapted to be set into operation as the vessel enters the threshold of sensitivity of the mine, a source of electrical energy, a discharge path for said source of energy, detonating means included in said discharge path and adapted to be fired as energy flows in the path, an electrical energy storage device, means including said sound responsive device for causing energy from said source to be stored periodically in said energy storage device as the sound responsive device operates and time measuring means controlled by said sound responsive device and including said energy storage device for causing energy to flow through said path when a predetermined period of time has been measured by the time measuring means in response to continuous operation of the sound responsive device.

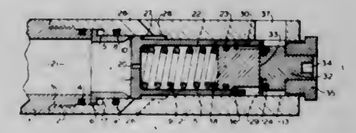
3,016,014
PERFORATING APPARATUS
Maurice P. Lebourg, Houston, Tex., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed May 23, 1955, Ser. No. 510,129
15 Claims. (Cl. 102—20)



15. Perforating apparatus for use in a borehole comprising a plurality of shaped explosive charges, each including a hollow container of generally cylindrical configuration for conforming with a cylindrical bore when said charges are mounted in axial alignment with respect to a mounting axis therealong, means for mounting said charges in alternately directed axial alignment, said container having therein an explosive material, a primer at its rearward end and a liner fitted in its hollowed-out for-

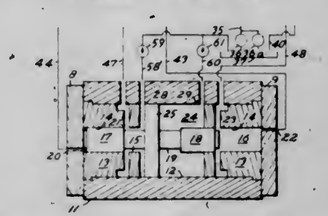
ward end from which a perforating jet emanates along a jet axis at an angle to said mounting axis upon detonation of said explosive material by said primer, and an elongated booster charge for said primer extending from the rear end of said container at an angle to its jet axis and in a direction generally parallel to said mounting axis, said booster charge being of a length to terminate in igniting relation with the path of the perforating jet and near to but not on the jet axis of an adjacent shaped charge opposite its forward end and presenting a relatively small cross-sectional area to the forward end of said charge to avoid substantial impairment of the penetration of the perforating jet emanating therefrom.

3,016,015
BLASTING DEVICES
Edward C. Filstrup, St. Joseph, Mich., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed May 14, 1959, Ser. No. 813,230
7 Claims. (Cl. 102—25)



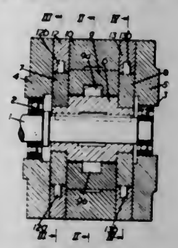
1. A blasting device comprising a substantially cylindrical body, a pressure chamber within the body having a lateral outlet, means for introducing gas under pressure at one end of said body, the opposite end of said body having an end wall provided with intersecting longitudinal and transverse passageways, a pressure responsive sleeve valve slidable in said chamber and normally positioned to span and seal said outlet, the valve having a smaller effective cross-sectional area on that side of the valve facing said end wall than on the other side of the valve, a skirt on the sleeve valve extending toward said end wall to a shear member, the skirt forming a secondary chamber, means of communication between the pressure chamber and the secondary chamber, an imperforate piston slidably sealed within the secondary chamber, and resilient means normally urging said piston into retaining position with the shearable member.

3,016,016
RECIPROCATING PUMP
Herman Horlacher, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed July 2, 1959, Ser. No. 824,593
3 Claims. (Cl. 103—48)



1. A scavenge pump comprising: means defining a pair of motor chambers each having an inlet port at one end and an outlet port spaced from the opposite end and each having a motor piston movable a predetermined distance in one direction in response to pressure at the inlet port to uncover the outlet port and connect said inlet and outlet ports, said motor pistons operatively connected to reciprocate in unison in response to pressure alternately supplied to said inlet ports; means defining a vacuum chamber having an inlet port and an outlet port, said vacuum chamber having a piston operatively connected to the motor pistons and reciprocated thereby to draw scavenge fluid in the vacuum chamber inlet port and to discharge fluid through the vacuum chamber outlet port; and a valve having a pressure port, a pair of motor ports in communication with the inlet ports of the motor chambers, respectively, and a pair of terminal ports in communication with the outlet ports of the motor chambers, respectively, said valve having a valve plunger slidably received therein having ends in communication with the terminal ports, said valve plunger having a pair of oppositely beveled surfaces thereon joined at an apex and having a spool shiftable thereon, the valve plunger shiftable in one direction in response to pressure at one terminal port from the outlet port of one motor chamber to connect the motor port in communication with the inlet of other motor chamber to the pressure port as the spool passes the pressure port and shiftable in the other direction in response to pressure at the other terminal port from the outlet port of said other motor chamber to connect the motor port in communication with the inlet port of said one motor chamber to the pressure port as the spool passes the pressure port, the spool shifting on the plunger in the direction of plunger movement when the spool passes the pressure port, said valve having a spring urged actuator adapted to engage the beveled surfaces of the valve plunger to assist movement of the valve plunger after the apex thereon has passed the actuator.

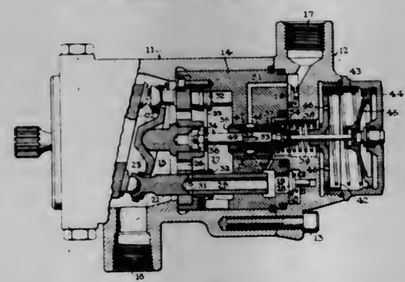
3,016,017
ROTARY PUMPS AND MOTORS
Charles Scott Prendergast, Shoreham-by-Sea, England, assignor to Brakeshoe International, S.A., Geneva, Switzerland, a corporation of Switzerland
Filed Aug. 21, 1959, Ser. No. 835,301
Claims priority, application Great Britain Dec. 23, 1958
6 Claims. (Cl. 103—4)



1. A pump or motor comprising end housings; a shaft journalled for rotation in said end housings; three rotors arranged side-by-side with their adjacent surfaces in sealing contact, mounted on and rotatable with said shaft; three bored stators each surrounding one of said rotors to form part annular fluid spaces of equal angular length therewith, at least the bore of the center stator being eccentric to the axis of said shaft; a plurality of vanes equally spaced and slidable in radial grooves formed in at least the center rotor to provide with its stator a series of fluid displacement chambers; fluid inlet and outlet chambers of equal angular length on opposite sides of the plane of eccentricity of at least the center stator bore, lands of equal angular length situated on the circumference of the stator bore separating said inlet and outlet chambers, each land having an angular length at least equal to the angular distance between adjacent rotor vanes; ducting connecting the part annular fluid space

on each side of the plane of eccentricity of the center stator to the part annular fluid spaces contained by the end rotors and their stators on the opposite side of said plane; the diameter of the center rotor differing from that of the two end rotors in sealing contact with it, thereby affording sealing surfaces between the respective part annular fluid spaces contained by the three rotors and stators without partitioning members between the rotors, and the product of the diameter and the axial width of each of the end rotors being substantially equal to half the product of the diameter and the axial width of the center rotor thereby insuring that the area under radial hydraulic pressure of the center rotor is approximately equal and opposite to the sum of the areas under hydraulic radial pressure of the two end rotors.

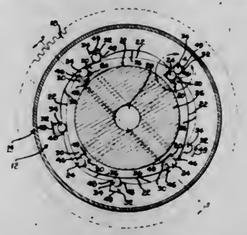
3,016,018
VARIABLE DISPLACEMENT PUMP
Samuel G. Williams, Cape Vincent, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Sept. 17, 1959, Ser. No. 840,643
2 Claims. (Cl. 103—37)



1. In a pump of the type including a housing containing inlet and discharge ports, an adjustable element associated with the pump and movable in displacement-increasing and decreasing directions for varying the displacement of the pump, and a control motor having a working chamber and a piston subject to the pressure in that chamber and connected with the adjustable element for shifting it in the displacement-decreasing direction, the improvement which comprises a passage establishing free communication between the working chamber and the discharge port; means controlled by movement of the piston for opening a vent connection leading from the working chamber as the piston approaches the limit of its movement in the displacement-decreasing direction; and a dashpot connected with the piston.

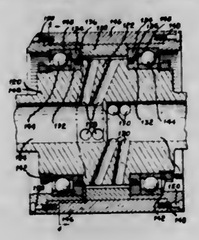
3,016,019
FLUID POWER CONVERTER
Arthur E. Rineer, 41 East Drive, Centerville, Ohio
Filed Feb. 18, 1957, Ser. No. 640,918
26 Claims. (Cl. 103—121)

1. In a fluid power converter comprising in combination a rotor member and a stator member adapted to rotate one with respect to the other, one of said members being an inner member substantially cylindrical in shape and having a contoured surface at the periphery thereof, the other of said members being an outer member encircling said inner member, said outer member having a contoured surface at the inner periphery thereof opposing the contoured surface of said inner member and having a length equal substantially to that of said inner member, the maximum radius of said inner member being substantially equal to the minimum radius of said outer member, this radius being designated the pitch radius, plate means abutting the ends of said inner and outer members enclosing the interspace between said opposing contoured surfaces, said inner and outer members each having a plurality of axially extending equispaced channels in the contoured surface thereof opening to the interspace therebetween substantially at the pitch radius thereof, there being more channels in said rotor member than in said stator member, a plurality of elongate cylindrical valve members, there being one valve member extending axially and loosely seated in each said channel, the ends of said valve members lying in close proximity to said plate means, said channels dividing the contoured surfaces of said inner and outer members into sectors, the sectors of said inner member having a radius of curvature greater than the pitch radius and the sectors of said outer member having a radius of curvature less than the pitch radius



whereby said sectors cooperate to provide a plurality of chambers between said inner and outer members, the maximum departure of the surface of each of said sectors from the pitch radius being less than the radius of each valve member seated in the channels of the opposing surface, and means providing a plurality of fluid inlet openings and fluid outlet openings in the contoured surface of said stator member, there being one fluid inlet opening adjacent one side of each channel in said stator member and one fluid outlet opening adjacent the other side of each channel of said stator member such that there is one fluid inlet opening and one fluid outlet opening in each sector of said stator member, the improvement wherein the portions of the contoured surface of said stator member bearing said fluid inlet openings and said fluid outlet openings have a radius of curvature equal substantially to the pitch radius.

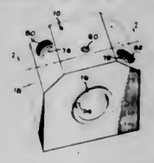
3,016,020
FLUID POWER CONVERTER
Arthur E. Rineer, 41 East Drive, Centerville, Ohio
Filed Aug. 23, 1957, Ser. No. 679,958
14 Claims. (Cl. 103—118)



9. In a fluid drive including, in combination, a rotary fluid power converter and a flywheel mechanically connected to the power converter, the improvement wherein said power converter comprises inner and outer members disposed concentrically for relative rotation about a common axis, said members having opposing peripheries encircling said axis of relative rotation and related so as to provide contiguous chambers therebetween, said cham-

bers each having a plurality of equally spaced axially extending channels in the opposing periphery thereof, there being more channels in the periphery of one of said members than in the other member, fluid inlet means opening to said chambers adjacent one side and fluid outlet means opening to said chambers adjacent the other side of each channel in said other member, and a valve disposed in each channel of both of said members, the valves in each member seating against the opposing periphery of the other member to partition and seal said chambers in response to fluid pressure in said chambers, said valves being adapted to move into said channels away from the opposing periphery to enable the valves of one member to cross over the valves of the other member as one member rotates relative to the other, said flywheel being connected to one of said inner and outer members and the other of said members being supported stationary relative to said flywheel, the operation being such that delivery of fluid under pressure to said fluid inlets induces said one member to rotate relative to the other member thereby rotating said flywheel, said flywheel, upon being rotated so as to store mechanical energy, being capable of returning this energy to the power converter by rotating said one member to drive the power converter as a pump.

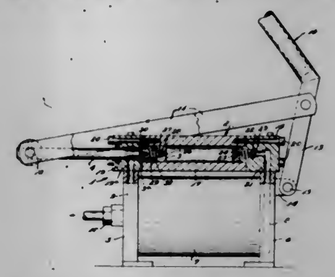
3,016,021
FLUID POWER CONVERTER
Arthur E. Rineer, 41 East Drive, Centerville, Ohio
Filed July 24, 1958, Ser. No. 750,751
9 Claims. (Cl. 103—123)



1. A fluid power converter comprising, in combination, a stator and a rotor mounted one within the other for relative rotation, the relation of one to the other being such as to provide contiguous chambers therebetween, said stator being provided with a plurality of equispaced channels adjacent said rotor, abutments floatably disposed in said channels, said abutments being engageable with said rotor to partition said chambers and to react with fluid therein, means providing a fluid inlet conduit passing into said stator and communicating with each said channel behind the abutment therein, there being clearance between the abutments and the walls of said channels for fluid flow from said inlet conduit to said chambers, means providing a first fluid outlet conduit communicating with said chambers at one side of each said channel, means providing a second fluid outlet conduit communicating with said chambers at the other side of each said channel, said first and second outlet conduits communicating with the exterior of said power converter to convey fluid from said chambers, and means to selectively close one of said outlet conduits whereby fluid flowing from said inlet conduit to the other of said outlet conduits reacts with said abutments to induce rotation of said rotor, the direction of rotation of said rotor being dependent upon which of said outlet conduits is selectively closed.

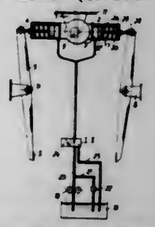
3,016,022
INTERNAL TOGGLE LINKAGE PUMP
Jay M. Roth, Uhrichsville, Ohio, assignor to Mechanisms Company, Uhrichsville, Ohio, a corporation of Ohio
Filed June 27, 1957, Ser. No. 668,495
5 Claims. (Cl. 103—215)

1. In a toggle linkage pump, a pump cylinder, a piston positioned for reciprocation in said pump cylinder, a piston rod secured to said piston and extending from one end of said pump cylinder, an operating link pivotally secured to said piston rod, a control link pivotally positioned at one end adjacent but below and spaced longitudinally from the opposite end of said pump cylinder, means pivotally securing said operating link and control links together to make said operating link extend at a small acute angle to said piston rod, and a control handle fixedly secured to said control link and extending therefrom for pump action by movement thereof, said links limiting said control handle to an operating arc of about 69 to 76°, said control link making an angle of about 65 to 75° with said operating



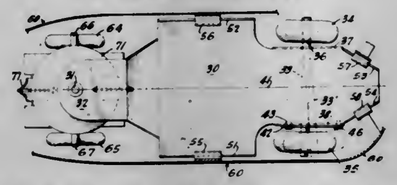
link and extending substantially normally to the longitudinal axis of said pump cylinder at one end of the pump stroke and an angle of about 10 to 12° with said operating link at the opposite end of the pump stroke, said control link not passing a dead center position relating to said operating link in the motion permitted for such control link, and said operating link making an angle of between about 4½ and 10° with and extending in one direction from said piston rod at one end of the pump stroke and an angle of between about 9 and 15° with and extending in the opposite direction from said piston rod at the other end of the pump stroke.

3,016,023
ACTUATING MECHANISM FOR PIVOTAL AND VIBRATORY BALLAST TAMPING TOOLS
Franz Plasser and Josef Theurer, both of Johannesgasse 3, Vienna, Austria
Filed Nov. 30, 1959, Ser. No. 856,074
Claims priority, application Austria Dec. 2, 1958
6 Claims. (Cl. 104—12)



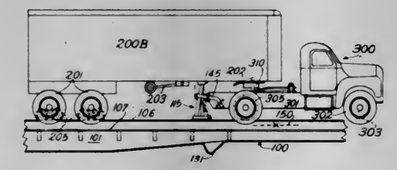
1. A tamping mechanism comprising a pivotal and vibratory ballast tamping tool, a tamping tool carrier, a fixed pivot mounting said tamping tool on said carrier, the tool being pivotal about said pivot, a mounting arm connected to the tamping tool, an eccentric shaft mounted on said carrier and operatively engaging the mounting arm whereby the mounting arm and the associated tamping tool are vibrated upon rotation of the eccentric shaft, and a pressure fluid operated means operatively connected with said tamping tool for pivoting the tamping tool about said fixed pivot, the vibratory and pivoting motion being applied at the same point of the tamping tool, which point is removed from the vibration or dead center of the tool.

3,016,024
SELF-PROPELLED REVERSING VEHICLE
Warner C. Silver, 1324 Superior St., Toledo, Ohio
Filed Feb. 24, 1956, Ser. No. 567,552
15 Claims. (Cl. 104—149)



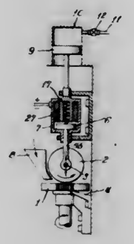
1. A self-propelled vehicle comprising: a chassis having a front portion and a longitudinal axis, at least one front wheel, a truck mounting said front wheel, means for attaching said truck to said front portion whereby said truck is free for complete rotation relative to said chassis about a vehical axis, self-propelling power means mounted in said vehicle and adapted to drive said front wheel, a pair of rear wheels, an axle connected to said rear wheels, and means for attaching said axle to said chassis rearward of said front wheel, said attaching means permitting limited angular movement of said axle slightly out of perpendicular with said longitudinal axis of said chassis.

3,016,025
FREIGHT TRANSPORTATION SYSTEMS AND METHODS
Deodat Clejan, Chicago, Ill., assignor, by mesne assignments, to General American Transportation Corporation, Chicago, Ill., a New York corporation
Filed June 12, 1959, Ser. No. 819,899
12 Claims. (Cl. 105—368)



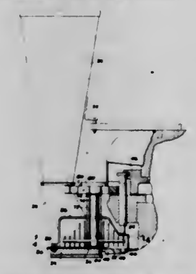
1. A railway car comprising an elongated center sill supported at the opposite ends thereof by a pair of trucks, said center sill including a pair of longitudinally extending and laterally spaced-apart beams respectively carrying flanges at the tops thereof, said center sill having a storage well therein arranged between said beams and provided with a top access opening thereinto, a standard carried by said center sill and selectively movable through said top access opening between a storage position disposed in said storage well and between said beams and below the flanges thereof and an erected position disposed out of said storage well and from between said beams and above the flanges thereof, means including an element carried by the lower portion of said standard and a cooperating guideway carried by said center sill for supporting said standard in its erected position for guided longitudinal movements with respect to said center sill, said guideway being located between said beams and below the flanges thereof, mechanism carried by the top of said standard and selectively operative to secure thereto a cooperating load that is also adapted to be supported upon said center sill for longitudinal movements with respect thereto during the transportation thereof, a motion limiting and cushioning mechanism carried by said center sill and disposed between said beams and below said flanges, and a connector mechanism for selectively connecting together the lower portion of said standard and said motion limiting and cushioning mechanism, so as to limit and to cushion fore-and-aft movements of said connected standard longitudinally with respect to said center sill and the corresponding movements of the connected load longitudinally of said center sill.

3,016,026
PELLET PRESS
Harry Walther Sörensen, Copenhagen-Holte, Denmark (Kildegardsvej 73, Hellerup, Denmark)
Filed July 16, 1958, Ser. No. 748,980
Claims priority, application Denmark July 19, 1957
10 Claims. (Cl. 107—14)



1. A press for processing comminuted food stuff to form edible pellets therefrom, comprising a matrix element having holes formed therein which extend therethrough and a pressure element cooperating with said matrix, means for supplying food stuff to said elements, means for effecting relative movement between said elements to move food stuff therebetween, means for imparting to at least one of said elements a vibratory motion, whereby said food stuff is pressed through the holes in said matrix element and extruded therefrom, and means for cutting off portions from the extruded material to form said pellets.

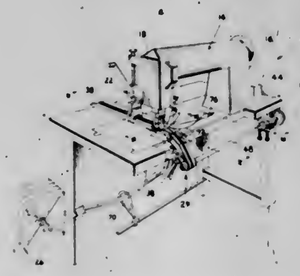
3,016,027
TABLET FORMING MACHINE
Hugh C. Edgar and Leo P. Gajda, Detroit, Mich., assignors to Arthur Colton Co., Detroit, Mich., a corporation of Michigan
Filed Mar. 4, 1959, Ser. No. 797,139
6 Claims. (Cl. 107—17)



1. In a tablet forming machine of the type utilizing a rotatable die ring having circumferentially spaced

pockets, a filling device for moving charges of compactable material into said pockets comprising a chamber to overlie said die ring including an open-bottom housing extending both inwardly and outwardly over a segment of the outer peripheral portion of said die ring, a material feeding inlet located in said housing, a bottom for said housing closing the portion of said housing outside of said die periphery and extending into overlying relation with the peripheral portion of said die ring outwardly of said spaced pockets, said overlying portion having an edge curved similar to the periphery of the die, and rotatable means in said chamber moving over said die ring to carry material into said die pockets.

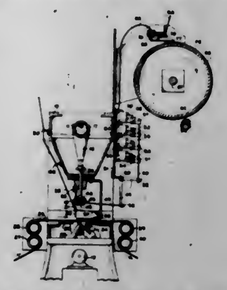
3,016,028
SEWING MACHINE AND METHOD
Harold J. Schreck, Marcy, and John L. Rockerath, Utica, N.Y., assignors to Jetsaw, Inc., Utica, N.Y.
Filed July 9, 1957, Ser. No. 670,741
14 Claims. (Cl. 112—2)



1. An automatic sewing machine for setting slide fasteners and the like in a piece of material comprising in combination a base member, a sewing machine mechanism including actuating means and sewing head, a throat plate mounted beneath said sewing head, a stripper member adapted to be selectively lowered into floating engagement with said plate, material feeding means for feeding the slide fastener and the like and the material past said sewing head comprising a first plurality of positive feed rollers mounted on the output side of said sewing head, a second plurality of slipping friction feed rollers mounted on the input side of said sewing head, means for rotating said first and second pluralities of feed rollers, means for regulating the feeding of the slide fasteners and the like and the material by said second plurality of rollers to a predetermined average rate less than, but approximately equal to the rate of said first plurality of positive feed rollers whereby a positive non-slipping feeding force is applied on the output side and a slipping friction feeding force is applied on the input side resulting in a predetermined constant tension in the zipper tape at the sewing head regardless of variations in material composition or quantity.

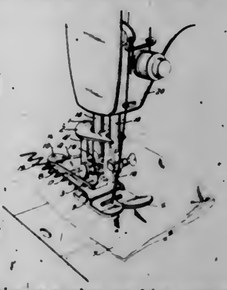
3,016,029
MULTIPLE NEEDLE SKIP-STITCH MACHINE
Joseph Lewis Card, Chattanooga, Tenn., assignor to Singer-Cobble, Inc., Chattanooga, Tenn., a corporation of Delaware
Filed Aug. 23, 1957, Ser. No. 679,824
5 Claims. (Cl. 112—79)

1. In a multiple needle sewing machine for tufting fabrics, a plurality of elongated needle bars, a carrier for said needle bars, means for reciprocating said carrier in the direction of the longitudinal axes of said needle bars, a locking pin for each needle bar, means for receiving each pin in slidable relationship within said carrier, said pin being adapted to engage and disengage said needle bar to latch and unlatch said needle bar to said carrier, a spring mounted on said carrier to bias each locking pin through said receiving means into latching engagement with its corresponding needle bar, a connecting rod for each locking pin, means for connecting one end of said rod to said



pin, a solenoid for each needle bar, an armature slidable axially within each solenoid, pivotal means for permanently connecting the other end of said rod to said armature during energization and de-energization of said solenoid, and pattern control means for selectively energizing each solenoid to attract said armature whereby the energized axial movement of said armature is simultaneously transmitted through said rod to disengage said locking pin from said needle bar.

3,016,030
ATTACHMENT FOR ZIGZAG SEWING MACHINES
Solomon Adler, 118—14 83rd Ave., Kew Gardens, N.Y.
Filed Apr. 22, 1959, Ser. No. 808,125
11 Claims. (Cl. 112—160)

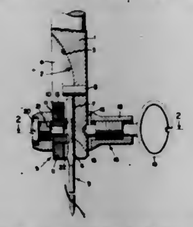


1. In combination, a sewing machine comprising a body, a needle bar mounted by said body for both axial and lateral reciprocation with respect thereto, means for engaging and guiding material, means for movably supporting said guiding means with respect to said body, means connecting said guiding means with said needle bar for laterally shifting said guiding means in response to lateral reciprocation of said bar and the range of shifting of the guide means effected by the connecting means being greater than the range of lateral bar movements.

3,016,031
NEEDLE CLAMPS FOR SEWING MACHINES
Walter D. Szuba, Summit, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Aug. 27, 1958, Ser. No. 757,609
1 Claim. (Cl. 112—226)

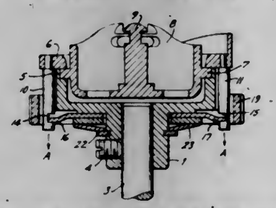
In a sewing machine, a needle including a shank formed as a slab-sided circular cylinder having a major

diameter and a minor diameter, a cylindrical needle bar having a flat-bottomed needle-shank-receiving slot extending endwise of said needle bar at the lower end thereof and a radial bore of a diameter greater than the width of said slot and intersecting said slot, said slot having a width substantially equal to the major diameter of said needle shank, and a needle clamp for securing said needle to said needle bar comprising a gib having a cylindrical portion disposed in said bore and a radially extending portion disposed in said slot, said cylindrical portion having a needle engaging face formed with a groove shaped to conform to the curved portion of said needle shank, said gib extending beyond the periphery of said slot when in needle clamping position, a needle



clamp body loosely surrounding said needle bar about said gib for providing for movement of said gib out of needle clamping position and for limiting such movement to a distance less than the difference between the major and minor diameters of said shank, said gib having a bore, a screw threaded through said needle clamp body and having a stud extending into the bore in said gib for securing said needle clamp body against movement endwise of the needle relatively to said gib, and a thumb screw threaded through said needle clamp body on the opposite side of the needle bar from said first mentioned screw and engaging said needle for tensioning said needle clamp body and pulling said gib into needle clamping position.

3,016,032
ROTARY HOOK FOR SEWING MACHINES
Luigi Bono, Pavia, Milan, Italy, assignor to Necchi S.p.A., Pavia, Italy
Filed Mar. 18, 1958, Ser. No. 722,167
Claims priority, application Italy Mar. 28, 1957
9 Claims. (Cl. 112—230)



1. A rotary hook for sewing machines comprising, in combination, rotary body means having an axis; retaining means non-rotatably mounted on said body means and abutting said body means in axial direction for retaining a bobbin holder in said body means; a locking member mounted on said body means for turning movement about said axis: and locking means comprising a first operative engaging component on said retaining means and a second operative engaging component on said locking member, said first and second operative engaging components being positioned when said locking member is turned in one direction to engage in locking contact to lock said retaining means to said body means and when said locking member is turned in the opposite direction to disengage from locking contact to release said retaining means from said body means to permit movement of said retaining means in the axial direction of said body means for removal of said retaining means.

3,016,033
SHUTTLE MECHANISMS FOR SEWING MACHINES
Edward J. Herbst, South Plainfield, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Jan. 9, 1958, Ser. No. 707,932
9 Claims. (Cl. 112—232)



1. A molded or cast shuttle body comprising a beak formed on the leading end of said shuttle body, a heel formed on the trailing end of said shuttle body, a back wall integral with said shuttle body and having a curved edge, a bobbin-cavity side wall having a portion of its boundaries coextensive with said curved edge, and a rear loop-expanding wall formed at an angle with respect to said back wall, said bobbin-cavity side wall at a location adjacent to said heel merging into said rear loop-expanding wall.

3,016,034
RAT GUARD FOR MOORING LINES
John E. Raistakka, 1414 SW. 12th Ave., Portland, Oreg.
Filed Jan. 11, 1960, Ser. No. 1,726
1 Claim. (Cl. 114—221)



A rat guard for mooring lines of ships comprising a disc formed of a pair of semi-circular disc sections, each including a straight edge having an elongated serrated opening therein, and a semi-circular edge, said straight edges being aligned in confronting relation, means forming a pocket in one straight edge in which the other straight edge seats, means pivotally connecting said disc sections adjacent one end of their confronting straight edges, one of said disc sections having an opening therein adjacent the end of its straight edge opposite the pivotal connection and spaced from said last-mentioned edge, a flexible member passed through said opening, a ball on one end of said flexible member retaining said one end of said flexible member in said opening, a weight on the other end of said flexible member, and a hook on the other of said disc sections adjacent the end of its straight

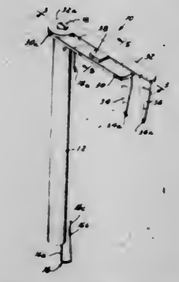
edge opposite the pivotal connection and spaced from said last-mentioned straight edge, said flexible member engaging over said hook and being held in position in said hook by said weight to clamp said disc sections about a mooring line seating in said elongated serrated openings, with said straight edges in confronting position.

3,016,035
SIGNAL DEVICE
Edward M. Asbury, 415 Burton Drive, Pittsburgh, Pa.
Filed Oct. 5, 1959, Ser. No. 844,487
4 Claims. (Cl. 116—63)



1. In a portable roadway signal device the combination comprising a base member having a semispherical upper surface and a planar road contacting lower surface, said base member having an upwardly extending central circular recessed portion and a central staff receiving portion, said central recessed portion having an outwardly flared side wall spaced from said upwardly extending staff receiving portion, said central recessed portion and said base member upper surface having a smooth, curved, annular lip portion therebetween, said annular lip portion spaced from said upwardly extending staff receiving portion, and a staff member having a rigid upper flag receiving portion and a lower flexible securing portion, said flexible securing portion fixedly secured in said base member upwardly extending staff receiving portion and extending upwardly therefrom.

3,016,036
PLACE-HOLDING DEVICE FOR BOOKS
Walter T. Jorgensen, 23 Matheron Ave., Baldwin, N.Y.
Filed May 4, 1960, Ser. No. 26,815
5 Claims. (Cl. 116—119)



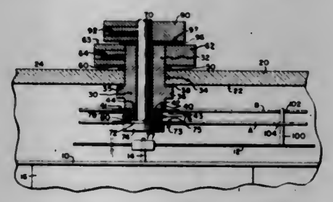
1. A place holder for books comprising a hollow supporting tube, a pair of resilient clips at the top and bottom of said supporting tube respectively adapted to grip the top and bottom of said book respectively whereby to secure said supporting tube along the spine of said book, said lower clip being formed with a resiliently compressible bight on the upper end thereof frictionally slidable within said tube for adjustment to different sized hooks and for holding a given adjustment, a plug secured in the lower end of said tube formed with an opening for said lower clip to extend therethrough but too small to admit said bight thereof, a plug secured in the upper end of said bore, a pair of arms in vertically and laterally offset relationship at one end of said supporting member and positioned to extend along the edges of confronting pages of said book, a fastener rotatably securing said arms to said upper plug for adjustment to different degrees of opening of said confronting pages and frictionally restraining rotation thereof for said arms to hold a given adjustment, a pair of flat transparent place-holding fingers on said respective arms positioned to extend across portions of the confronting open pages of said book to restrain accidental closing thereof, said fingers being flexible and having tapered, inwardly turned tips to facilitate the turning of pages, and a stop on one of said arms projecting into the path of the other arm to limit rotation of said arms toward each other and thereby prevent inversion thereof, said stop being so placed for said fingers to be substantially in alignment when said offset arms are rotated as near each other as permitted by said stop to allow said book to be closed nearly flat.

3,016,037
MAGNETIC INDICATOR FOR MULTI-CYLINDER ENGINE VALVE SETTING
Lee Smith, 278 Hayts Road, Ithaca, N.Y.
Filed July 10, 1958, Ser. No. 747,679
10 Claims. (Cl. 116—124)



1. A dead center indicator applicable to multicylinder internal combustion engines having a top dead center mark for a No. 1 cylinder thereon, comprising in combination an indicator plate, a primary pointer mounted on said plate, said pointer to be placed at a corresponding top dead center mark on the engine for the No. 1 cylinder, supplemental pointers also mounted on said plate to accord with top dead centers of the other cylinders, and magnets carried by the indicator plate to hold it adjustably in proper position relative to the crankshaft of the engine.

3,016,038
MAXIMUM-MINIMUM POINTER ASSEMBLY
Robert B. Stiens, Cincinnati, Ohio, assignor to Palmer Thermometers, Inc., Norwood, Ohio, a corporation of Ohio
Filed Aug. 26, 1959, Ser. No. 836,141
5 Claims. (Cl. 116—129)



1. A maximum-minimum pointer assembly for association with the transparent cover member of an indicating

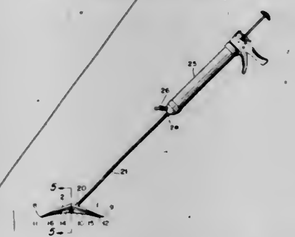
device, said cover member having a bore therethrough, said assembly comprising an axially bored first shaft rotatably journaled in and extending through the bore of said cover member, said shaft having an upper end and a lower end, the lower end of said shaft terminating in a cylindrical portion of reduced diameter, said portion having an upper and lower end, a first pointer journaled on the upper end of said cylindrical portion, a spacer member secured to and projecting radially from said cylindrical portion intermediate the ends of said portion, first means mounted on said cylindrical portion normally and yieldably urging said first pointer away from said spacer member, a second shaft extending axially through said bore of said first shaft, said second shaft having an upper and lower end, the lower end of said second shaft terminating in an annular shoulder of increased diameter, a second pointer journaled on said shoulder, second means mounted on said cylindrical portion of said first shaft below said spacer member normally and yieldably urging said second pointer therefrom, a first control knob secured to the upper end of said first shaft outwardly of said cover member, first friction means between said first knob and said cover for precluding accidental or unintentional rotation of said first shaft relative to said cover member, a second control knob secured to the upper end of said second shaft beyond said first control knob, second friction means disposed between said first and second control knobs for precluding accidental or unintentional rotation of said first shaft relative to said second shaft, said second friction means placing the second control knob in driven relationship with said first control knob whereby turning of the first control knob will simultaneously rotate both the first and second shafts and the second control knob, and whereby turning of the second control knob will rotate only the second shaft.

3,016,039
PHOTOGRAPHIC FILM COATING AND STRAIGHTENING DEVICE
Joseph Le May, 102—38 185th St., Hollis 23, N.Y.
Filed Oct. 10, 1958, Ser. No. 766,521
2 Claims. (Cl. 118—253)



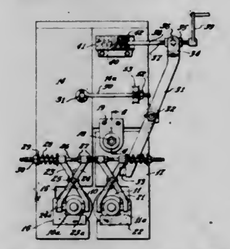
1. A photographic film coating and straightening device of the character described, comprising a container for a fixing solution, an applicator mounted on said container in contact with the fixing solution to become saturated thereby, and a guide element mounted on said container adjacent said applicator, said guide element and said applicator being adapted to receive a photographic film between them, the exposed face of the film against the applicator and the back of the film against the guide element, the spatial relationship between said guide element and said applicator being such as to permit such photographic film to be drawn manually between them, the guide element bearing against the film to hold said film in wiping contact with the applicator in order to coat the exposed face of the film with the fixing solution, said guide element being also adapted to bear against the film to straighten it as it is drawn manually between said guide element and said applicator, a pair of guide tracks being provided on the container along opposite sides of its top wall, said guide element comprising a guide plate which is slidably mounted in said guide tracks for horizontal movement toward and away from said applicator, said guide plate being movable away from the applicator to facilitate insertion of a photographic film between them and being movable into a position closely adjacent said applicator in order to press the photographic film against the applicator, as it is drawn manually between said guide plate and said applicator, to provide a wiping action between the film and the applicator and thereby to coat said film with the fixing solution, and an applicator cover hingedly secured to the container, the guide plate being retractable to expose the applicator and the applicator cover being pivotally movable into covering position relative to said applicator to prevent evaporation of the fixing solution therefrom.

3,016,040
APPARATUS FOR SEALING SHINGLES
Anthony J. Crookston, Jr., 1254 Overlook Drive, Barberton, Ohio
Filed Aug. 13, 1959, Ser. No. 833,596
5 Claims. (Cl. 118—410)



1. Apparatus for lifting and sealing shingles comprising a conduit having an elongated vertically extending handle portion and a lower generally horizontal nozzle portion disposed substantially at a right angle to said handle portion, an applicator having a top wall with a smooth convex outer surface and a generally vertical rear closure wall depending from the rear edge of said top wall, said rear closure wall having a horizontal bore therethrough, means mounting the applicator on the horizontal nozzle portion of the conduit for pivotal movement about the axis of said horizontal bore whereby the handle portion can be suitably pivoted about the applicator to thereby enable the apparatus to be moved first in one direction and then in the opposite direction by merely swinging the handle portion about the axis of the horizontal bore, and means for feeding a sealing compound through said conduit into said applicator.

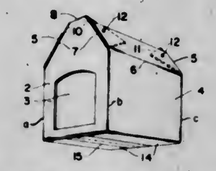
3,016,041
METALLIC COATING EXIT MACHINE WITH DRIVEN ROLLS
Kasimir Oganowski, West Middletown, and Forrest M. Morrow, Middletown, Ohio, assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed May 13, 1957, Ser. No. 658,742
4 Claims. (Cl. 118—419)



1. In an apparatus for producing a metallic coating on a metal strip, said apparatus having a pair of driven exit rolls, means for yieldingly and adjustably urging one roll

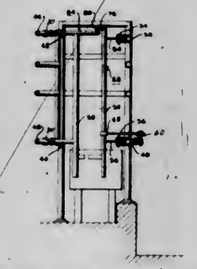
of said pair toward the other, and means independent of said urging means for applying an individual direct acting braking effort to each roll of said pair.

3,016,042
SMALL ANIMAL HOUSE
William J. Curn, Jr., Box 307, Steubenville, Ohio
Filed Sept. 29, 1958, Ser. No. 764,100
2 Claims. (Cl. 119—19)



1. A foldable small animal house comprising a single initially flat blank of material comprising a front wall having an opening therethrough to admit a small animal, side and rear walls forming with the front wall when the house is set up a substantially peripherally closed enclosure and a top structure comprising flaps connected with the substantially peripherally closed enclosure and whose edges define portions of a top opening of less area than the substantially peripherally closed enclosure.

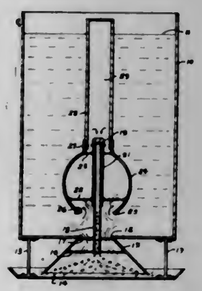
3,016,043
HEADSTOCK FOR MILKING PARLOR STALL
Oswald D. Dunn, Rte. 1, Box 94, New Bern, N.C.
Filed May 16, 1960, Ser. No. 29,351
7 Claims. (Cl. 119—27)



1. In a milking parlor structure defining an animal receiving space, two spaced side walls one of which comprises a gate section mounted to move from a closed position outwardly away from said space to an open position to permit passage of an animal; a first headstock portion supported on a part of said gate section; and a second headstock portion supported on a part of the other of said side walls, one of said headstock portions being fixed to the part on which it is supported, and the other of said headstock portions being mounted on and for movement relative to the part on which it is supported and relative to said one of said headstock portions when said gate is in closed position.

3,016,044
ANIMAL FOUNTAIN
Herbert M. Sollars, 609 S. Main St., Washington Court House, Ohio
Filed Jan. 28, 1960, Ser. No. 5,202
10 Claims. (Cl. 119—80)

1. In a device of the kind described, a storage tank for matter in a fluid state having an outlet at the lower end thereof, a receptacle spaced vertically below said storage tank to receive matter therefrom by gravity flow through said outlet, flotation means in said tank, means guiding said flotation means for reciprocable raising and lowering motions in line with said outlet, a valve on said flotation means adapted to seat on and close said outlet in a lowered position of said flotation means, said flotation means having a hollow interior and being formed with a single opening communicating such interior with said re-



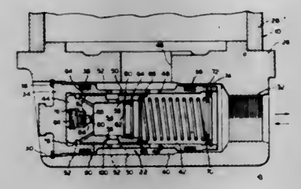
ceptacle through said outlet in a lowered position of the flotation means and communicating such interior with the storage tank in an elevated position of the flotation means, and means venting the interior of said flotation means dependent from an intermediate point therein through said tank outlet, admission of air therethrough inducing a raising of said flotation means in said tank.

3,016,045
COMBINED DESK PAD AND INFORMATION PANELS
Charles Robinson, Pittsburgh, Pa., assignor to Allan E. Jordan & Associates, Pittsburgh, Pa.
Filed June 2, 1958, Ser. No. 739,167
1 Claim. (Cl. 120—24)



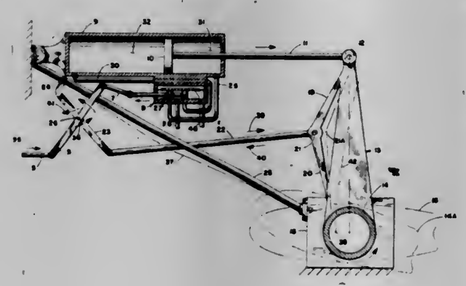
A combined desk pad and information folder, comprising a backing of hard cardboard having a pair of freely pivotal, stiff side panels extending along the entire height of the pad and across a small fraction of the width thereof and which are integrally secured to said backing solely by a flexible strip portion of reduced thickness, the ends of said side panels being free of connection with said backing board, said panels constituting the sole pocket-forming means in conjunction with said backing, and printed matter contained underneath said side panels, said flexible strip portion of reduced thickness being sufficiently stiff so as to automatically return said panels to their folded position when lifted and released, whereby the side panels will normally conceal said printed matter until pivotally moved to the open position, in combination with a blotter completely covering said backing and held thereto solely by the spring action of said side panels resulting from said stiffness of said flexible strip portions.

3,016,046
REGULATOR VALVE
Elmer R. Backofen, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed May 5, 1960, Ser. No. 27,079
17 Claims. (Cl. 121—38)



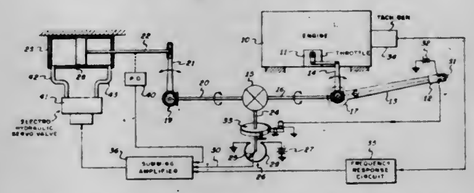
1. A valve device for use with a hydraulic motor comprising conduit means connected to the motor, an elongated valve sleeve fixedly located in the conduit having one open end and one closed end and defining first and second axially spaced circumferential openings communicating the conduit with the motor, a valve member located in the valve sleeve and movable axially thereof, resilient means urging the valve member toward the closed end of the sleeve, and flow control orifice means associated with the valve member and axially intermediate the said first and second spaced openings, said valve member being actuatable in opposition to said resilient means for controlling the area of said first and second spaced openings.

3,016,047
DEVICE FOR HYDRAULIC POWERING SYSTEM
Edward P. MacDonough, Dallas, Tex., assignor to Chance Vought Corporation, a corporation of Delaware
Filed Dec. 23, 1959, Ser. No. 861,591
8 Claims. (Cl. 121—38)



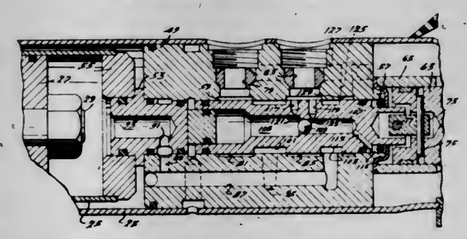
1. In a hydraulic powering system for actuating a member subject to reactive force, a hydraulic motor; a control valve therefor; a first linkage movable for control of said valve; a second linkage operatively connecting said motor to the actuated member, said second linkage being subject to positional shifting caused by reactive forces on said actuated member and including structure subject to distortion by said reactive forces in a direction in opposition to said shifting of said second linkage; and a follow-up linkage connecting said structure of said second linkage to said first linkage, said follow-up linkage being constructed and arranged to close said control valve when said input element and powered member are in predetermined relationship, the distortion of said structure serving to neutralize the effects on said follow-up linkage and said control valve of positional shifting of said second linkage.

3,016,048
APPARATUS FOR MULTIPLE MODE CONTROL SYSTEMS
Everett S. Joline, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,548
6 Claims. (Cl. 121—41)



1. In a control system having two modes of operation, controlled means automatically controlled in one mode of operation and manually controlled in another mode of operation, manually operable means connected to said controlled means, means responsive to the operation of said controlled means for providing a control signal representative of said operation, means for providing a reference signal, means for comparing said reference signal and said control signal for providing an error signal in accordance with the difference therebetween, actuating means responsive to said error signal for providing an output in accordance therewith, said reference signal providing means having two relatively movable portions during manual operation whereby the relative position of said portions determines said reference signal, said actuating means being connected to one of said portions for controlling the movement thereof during manual operation, and securing means for preventing relative movement of the two portions of said reference signal providing means during automatic operation, said securing means including means for effectively connecting said actuating means to said controlled means and to said manually operable means during automatic operation.

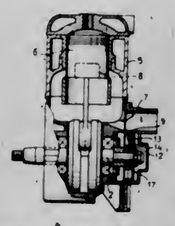
3,016,049
VEHICLE POWER STEERING CONTROL DEVICE
Charles J. Smith, Charles E. Read, and Bernard A. Wehring, Monroe, Mich., assignors to Monroe Auto Equipment Company, Monroe, Mich., a corporation of Michigan
Filed Oct. 22, 1959, Ser. No. 847,962
6 Claims. (Cl. 121—46.5)



1. A power steering control valve including housing means having a bore, a valve spool slidably disposed in said housing means bore, said housing means having a first passage communicating with said bore and adapted to be connected to a source of fluid under pressure, a second passage communicating with said bore and adapted to be connected to a fluid reservoir and third and fourth passages communicating with said bore and adapted to be connected to a fluid motor for directing fluid thereto, said spool having spaced grooves therein adapted to communi-

cate said first and second housing means passages with said third and fourth passages so as to control fluid flow through said valve, means for damping said valve spool against vibrations and undesired movement while still permitting easy manual shifting of said valve spool, said means including portions of said housing means and of said valve spool defining opposed chambers for containing fluid which will react in opposite directions against said valve spool, passage means connecting each of said chambers to said housing means second passage in all positions of movement of said valve spool in said housing means, each of said chamber passage means including a restricted orifice to substantially restrict the flow of fluid from each of said chambers to said housing means second passage upon movement of said valve spool relative to said housing means, and actuating means movably supported on said housing means and operatively connected with said valve spool for moving the same in opposite directions and thus actuating said control valve.

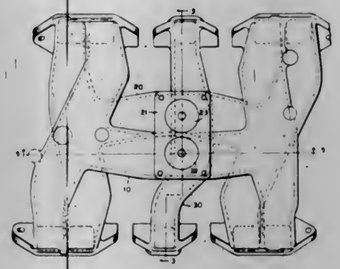
3,016,050
TWO-STROKE ENGINES HAVING AUTOMATIC SUCTION TIMING DEVICE
William Soncini, Milan, Italy, assignor to S.p.A. Meccanica Garelli, Milan, Italy
Filed Jan. 9, 1961, Ser. No. 81,612
1 Claim. (Cl. 123—73)



A two-stroke engine comprising a crankcase, a crankshaft rotatable in the crankcase, an inlet port in one of the end walls of the crankcase, and an automatic timing device controlling the said port comprising a support plate fixed to one end section of the crankshaft, a centrifugal weight pivotally supported from the plate including a toothed sector thereon, a pinon concentrical with the said end section of the crankshaft meshing with the said toothed sector in a mutual arrangement whereby centrifugal force acting on the weight on operation of the engine will angularly shift the pinion in a direction opposite to the rotation direction of the shaft, spring means urging the weight towards the shaft, and a disc-shaped shutter member fast with the said pinion controlling the said inlet port.

3,016,051
FUEL VAPORIZATION MEANS FOR INTERNAL COMBUSTION ENGINES
Caleb E. Summers, Orchard Lake, Mich.
Filed Aug. 3, 1959, Ser. No. 831,346
1 Claim. (Cl. 123—122)

An intake manifold for a V-type multi-cylinder internal combustion engine comprising a two-part manifold structure, each part disposed side by side and having oppositely extending longitudinally extending lateral portions connected with engine cylinders whereby each part services one-half of the engine cylinder, said manifold having a carburetor mounting having a pair of separate inlet ports each connected with a manifold part and disposed substantially medially of said longitudinally extending manifold portions and adapted for operable connection with a down draft two barrel carburetor, said manifold part provided with a recessed fuel condensate collecting well portion aligned with the inlet port, a by-pass conduit connecting said medial portions of said manifold parts and comprising a depending metallic U-tube connecting the recessed well portions, means for applying heat from the engine exhaust gases to said by-pass conduct comprising



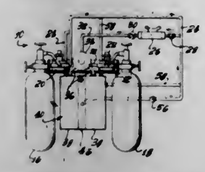
a lateral conduit connecting the exhaust manifolds of the banks of said cylinders of said V-type engine and which extends beneath said intake manifold parts, the U-tube extending within said lateral exhaust conduit in heat exchange relation with the exhaust gases therein, and an internal heat insulating lining for said lateral exhaust conduit.

3,016,052
MOUTH PROTECTOR
Louis L. Zubren, 5500 W. Capitol Drive, Milwaukee, Wis.
Filed Dec. 9, 1959, Ser. No. 858,417
2 Claims. (Cl. 128—136)



1. A contoured intra-oral dental mouth guard comprising a preformed base shaped to conform to the general characteristics of an average person's mouth and of a general U-shape in plan and of a U-shape in cross-section formed from flexible resilient material capable of being flexed and shaped by the fingers to initially conform generally to a certain person's mouth and including an inner lingual side wall and an outer buccal side wall, a connecting bottom wall and rear walls uniting the side walls and bottom wall, the sides of the U-shaped base curving upwardly from the anterior toward the rear walls to provide a mandibular compensating curvature and said outer wall extending above the inner wall and deformable to gum areas adjacent to teeth roots, said bottom wall having its inner and outer surfaces inclined upwardly and inwardly from the outer side wall to the inner side wall to conform to the maxillary and mandibular plane of inclination of a person's mouth, whereby the outer surface conforms to the lower jaw teeth cusps and provides a self-centering and balanced device when placed in the mouth, the preformed base having combined therewith an inner material having the same properties as the material from which the base is formed, said inner material having impressions of the upper teeth and adjacent gum areas with the cusp portions of the impressions extending down to the bottom wall of the base, and said bottom wall gradually increasing in thickness toward the front of the base in the region of the incisor teeth.

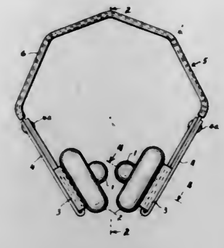
3,016,053
UNDERWATER BREATHING APPARATUS
George J. Medovick, 1914 Lundy, Pasadena 6, Calif.
Filed Aug. 2, 1956, Ser. No. 601,746
7 Claims. (Cl. 128—142)



1. A diving apparatus of the class described which includes:
breathing means;
inhalation and an exhalation check valves connected to said breathing means;
a carbon dioxide absorbent canister connected to said exhalation check valve;
an oxygen source;
a first demand regulator valve attached to said oxygen source;
an air source;
a second demand regulator valve connected to said air source and to said inhalation check valve;
and a pressure responsive control means for adding oxygen to the gas exhaled into said breathing means and passing through said pressure responsive control means during the use of said diving apparatus so as to provide sufficient oxygen to said exhaled gas to bring the composition of said exhaled gas supplied to said breathing means through said inhalation check valve back to its initial percentage composition by volume, said pressure responsive control means having inlet means connected to said canister and to said first demand regulator valve, and said pressure responsive control means also having outlet means connected to said inhalation valve, said pressure responsive control means being responsive to the ambient pressure surrounding said apparatus and the quantity of gas passing through said canister so as to obtain oxygen from said oxygen source in accordance with the mass of carbon dioxide absorbed by said canister so that said oxygen obtained from said oxygen source and said gas passing through said canister may be inhaled through said inhalation check valve from said pressure responsive control means along with air from said air source as required by the user of said apparatus.

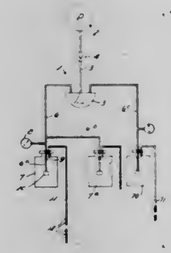
3,016,054
DEVICE FOR PROTECTING EARS FROM HIGH INTENSITY NOISE
Maurice C. Rosenblatt, 91 Central Park W., New York 23, N.Y.
Filed Sept. 16, 1959, Ser. No. 840,359
1 Claim. (Cl. 128—152)

An audio-acoustical device to protect the ears and the auditory complex from extreme or other noise, consisting of a head band of approximately hexagonal shape and form to provide even, uniform and constant pressure over the entire range of the size, form and shape of the human head and associated with said head band an assembly with adjustable means consisting of a casing to accommodate an adjustment by means of a slide associated therewith and mounted on said slide a cavitied, conforming, flexible, soft yet firm cup or cushion to conform to and overlay the external ear and in which cup or cushion is mounted a soft, flexible, conforming, articulating ball-shaped nipple tip having means therein whereby said nipple tip may be moved in or out of said cup or cushion for co-operative adjustment with said cup or cushion, the entire assembly as described to co-



operate to completely seal the meatus and the ear canal to prevent injury or impairment to the ear and auditory complex.

3,016,055
PULSATING STOMACH PUMPING APPARATUS AND THE LIKE
Frank A. Oldenburg, 2971 Silver Lake Blvd., Cuyahoga Falls, Ohio
Filed Mar. 20, 1958, Ser. No. 722,743
10 Claims. (Cl. 128—278)



1. A regularly pulsating stomach pumping apparatus or the like comprising means to supply a source of vacuum, a two-chamber vacuum motor connected to said vacuum means for continuous operation thereof, said vacuum motor alternately connecting each chamber thereof to said vacuum means and to the atmosphere, a receiver, a conduit connecting one chamber of said motor to said receiver to alternately set up a vacuum and atmospheric air pressure therein, means operatively connecting to said conduit for controlling the degree of vacuum set up within said receiver, and a tube connected to the interior of said receiver and adapted to be associated with a person for pumping action by the intermittent vacuums set up within the tube.

3,016,056
METHOD OF IDENTIFYING NEWLY BORN INFANTS
John Bay Jacobs, 2223 N. Scott, Arlington, Va.
Original application Nov. 7, 1952, Ser. No. 319,369. Divided and this application Jan. 25, 1956, Ser. No. 561,189
1 Claim. (Cl. 128—346)

The method of identifying a newly born baby comprising the steps of placing a deformable element over the umbilical cord in proximity to the abdomen of the baby while the cord still forms a connection between the baby and the mother, and clamping the deformable element tightly on the cord in a manner to check the flow of blood through the cord while concomitantly, and as a direct

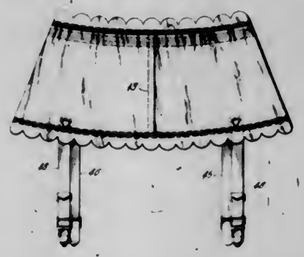
result of said clamping, applying identifying initials on the outer surface of the deformable element, and then



severing the umbilical cord on the placental side of the element.

3,016,057
BODY MOLDING GARMENT FOR FEMININE WEAR

Marian Halstead, 26 Gramercy Park S., New York, N.Y.
Filed Oct. 20, 1959, Ser. No. 847,603
4 Claims. (Cl. 128—549)

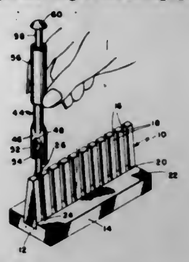


1. A body molding garment comprising an elongated member having a generally longitudinally extending concavely curved edge to lie along the top of the garment and a generally longitudinally extending convexly curved edge to lie along the lower end of the garment, said member having end portions to be overlapped in wearing the garment, said convexly curved edge adjacent the ends thereof curving relatively sharply toward and joining with said concavely curved edge to form said end portions of said member, means adjacent the opposite ends of said member and adjacent said concavely curved edge of said member for releasably securing said member around the waist of the wearer with said end portions overlapping to cross at the top edge of the garment and at a sufficiently inclined acute angle to create counter tensions across the hips of the wearer to mold and smoothly contain the upper hip area and abdominal protrusion of the wearer in use, the overlapping area of said crossed end portions being unconnected intermediate said securing means to permit free edjustment of the garment to the upper abdominal protrusion of individual wearers, said member having resiliently yieldable means incorporated along the concave edge of said member with such resiliently yieldable means being disposed to at least be effectively resiliently yieldable across the sides of the waist of the wearer and over the crest of the ilium in use, and means at spaced positions along the convex edge of said member for attachment of hose supporters.

3,016,058
BOBBY PIN SPREADER ASSEMBLY

William G. Clayton, 2665 Logan Ave., San Diego, Calif.
Filed Dec. 2, 1957, Ser. No. 700,133
6 Claims. (Cl. 132—1)

6. A bobby pin opener comprising: a body member having a recessed portion, one end of said recessed portion defining a socket whereinto the loop end of a bobby pin may be pushed; a fixed spreader element in said socket; a plunger reciprocatively mounted in said body member, said plunger having a head engaged by said loop



end to retract the plunger, and said plunger constituting means for ejecting the bobby pin.

3,016,059
APPARATUS FOR SIMULTANEOUSLY CURLING AND TREATING EYELASHES

Ruth D. Hutton, 420 Marion Ave., Aurora, Ill.
Filed Aug. 18, 1958, Ser. No. 755,662
6 Claims. (Cl. 132—32)



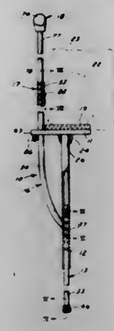
1. Apparatus for simultaneously curling and treating eyelashes comprising an upper jaw and a lower jaw movable toward and away from each other, said jaws being similarly curved to receive at one time like portions of the lashes of one eye, each of said jaws being substantially channel shaped in cross section and opening generally toward the other of said jaws, an absorbent pad removably inserted in each of said jaws capable of absorbing material for treating the lashes and having engageable faces of such width as to engage a substantial length of eyelash at one time, said engageable faces of said upper and lower pads being curved convexly and concavely respectively, whereby eyelashes pressed therebetween may be simultaneously curled and treated over a substantial length thereof in a single operation.

3,016,060
RIDING CRUTCH

Jackson W. Beattie, Sr., 229 E. Milham Road, Portage Township, Kalamazoo County, Mich.
Filed May 19, 1960, Ser. No. 30,350
6 Claims. (Cl. 135—50)

1. A crutch construction for a human, comprising: a substantially flat, rigid seat member; an elongated, substantially straight leg member and means rigidly securing the upper end of said leg member to said seat member so that it extends downwardly substantially perpendicularly from the central portion of said seat member; a foot element mounted upon the lower end of the leg member; a pair of elongated, similar upright members rigidly secured at corresponding points between their ends to said seat member near one edge thereof, said upright members having spaced parallel upper portions extending upwardly and substantially perpendicularly from said seat member,

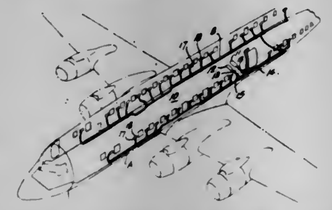
and said upright members having lower portions bent toward said leg member and secured near their lower ends to said leg member between the upper and lower ends



thereof; a handgrip connected to and firmly held with respect to said seat member adjacent said edge of said seat member; and an armrest having spaced means connected to the upper ends of said upright members.

3,016,061
EMERGENCY OXYGEN RELEASE SYSTEM AND COUPLING

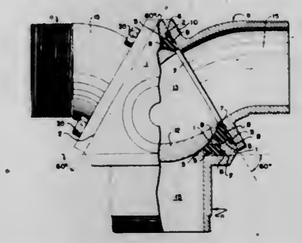
Robert W. Maddock, Pacific Palisades, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed May 19, 1958, Ser. No. 736,242
3 Claims. (Cl. 137—81)



1. A system for supplying a pressurized medicinal gas at least two different rates of flow, to the personnel of an aircraft, comprising: gas source-means including means for normal supply of said gas at a low pressure; gas-flow regulator means connected to said means for supply of gas at said low pressure; said gas source-means including means responsive to a reduction in the pressure of the ambient aircraft air in which said source means is located for forwarding said gas at an increased pressure; flow control means having an outlet into the aircraft and located onwardly in the system and arranged and connected to receive both the low pressure gas and the higher pressure gas and effective to emit either low, or high, pressure gas, said flow control means including first, normally closed valve means normally connected to said means for supplying low pressure gas and to said outlet; manual means arranged to open said normally closed valve so as to pass said low pressure gas out of said outlet; automatic means responsive to the differential in pressure between that pressure which is normal in said aircraft and that pressure which exists upon decompression of said aircraft, said automatic means being automatically communicated upon decompression with said means for forwarding said gas at said increased pressure from said source means, said means responsive to said differential pressure being effective upon occurrence of said response to open a path through the flow control means to cause emission from said outlet of said gas at an elevated pressure.

3,016,062
ROTARY BALL VALVE

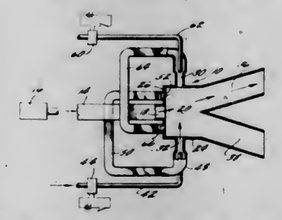
Theodore C. Zinniger, Hayward, Calif., assignor to Kaiser Industries Corporation, Oakland, Calif., a corporation of Nevada
Filed Jan. 3, 1961, Ser. No. 80,254
11 Claims. (Cl. 137—270)



1. A valve device of the type described comprising the combination of a hollow housing which is generally triangular in one cross-sectional configuration, said housing being provided with exposed faces on a plurality of sides of said housing which converge toward each other in the said cross-sectional configuration; said exposed faces having central openings which communicate with the hollow interior of said housing, an apertured ball element rotatingly mounted in said housing, the aperture of said ball element being simultaneously alignable with the openings of a pair of the exposed faces, hollow conduit fittings rotatably and adjustably affixed at predetermined angles to each face of said pair of exposed faces, resilient gasket means disposed adjacent the opening in each face of the housing for sealing said ball element within said housing and said fittings to said housing, and means for rotating said ball element within said housing so as to align the aperture of the ball element with the openings in the pair of exposed faces of the housing and the interior of the hollow conduit fittings irrespective of the angles at which said conduit fittings are affixed to said housing.

3,016,063
FLUID VALVE

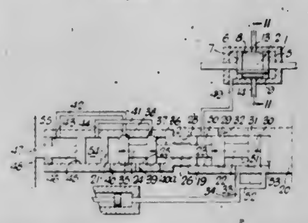
George F. Hausmann, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,887
6 Claims. (Cl. 137—597)



1. A fluid valve having a passage and a main fluid stream flowing therethrough, a flow exit for said passage, a plurality of ducts having a common inlet adjacent said exit, a plurality of control jets spaced about said exit directing fluid against the main fluid stream to deflect the latter, means for selectively operating at least one of said jets to direct the main fluid stream substantially into only one of said ducts, and means for increasing

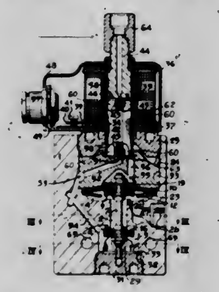
the deflecting capacity of said one said jet comprising an ejector operated by said jet and connected to an area of said exit opposite to said jet with respect to the main stream issuing from said exit.

3,016,064
HYDRAULIC PRESSURE CONTROL VALVE
Joseph Kenneth Royle, Manchester, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed July 20, 1959, Ser. No. 828,296
Claims priority, application Great Britain July 28, 1958
7 Claims. (Cl. 137—620)



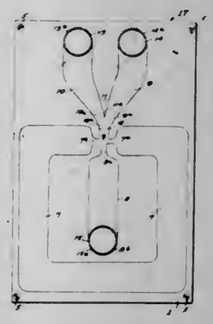
1. A hydraulic valve comprising first valve means having two parts, namely a first valve member mounted for movement in a first valve body, second valve means having two parts namely a second valve member mounted for movement in a second valve body, an actuator having two parts namely a body and a member movable relative to the body, one of the second valve parts being connected to one of the actuator parts, a displacement member operatively coupled to the second valve means and the actuator and co-operating with the first valve means to form a chamber for the reception of a liquid under pressure, and conduits for fluid under pressure between the interior of the second valve body and the interior of the actuator body, relative movement of the first valve member in the first valve body operating the second valve means to displace the fluid in at least one of said conduits and so control the actuator so as to cause movement of the said displacement member in such a sense as to substantially cancel out any variation in volume of the said chamber caused by the relative movement of the first valve member.

3,016,065
SERVO-VALVES
Harald Stampfli, Geneva, Switzerland, assignor to Lucifer S.A., Carouge, Geneva, Switzerland, a corporation of Switzerland
Filed Jan. 19, 1959, Ser. No. 787,750
Claims priority, application Switzerland Feb. 26, 1958
8 Claims. (Cl. 137—623)



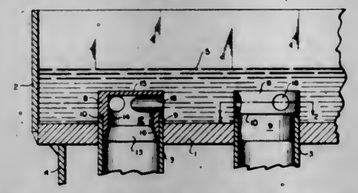
1. A servo-valve for controlling apparatus to be operated, comprising in combination, a body having first and second cavities opening toward opposite ends of the body and each internally threaded at their outer ends and connected by a central bore, said body having a portion of a diaphragm by-pass communicating with said first cavity, said cavities respectively having a pressure inlet passage and an exhaust passage and the central bore having a passage communicating with the apparatus to be operated, a bevelled shoulder in the first cavity facing the threaded portion thereof, a plug engaged with said threaded portion and in contact with said bevelled shoulder, a stepped abutment in the second cavity, a closure ring engaging the threads of the second cavity, a primary valve seat disposed in said first cavity at the outer end of the central bore, a secondary valve seat disposed in said second cavity at the inner end of the bore, a valve stem operating in said bore, a primary valve head assembly cooperating with said primary valve seat, a secondary valve head assembly cooperating with said secondary valve seat, a cylindrical block having inner and outer faces and fitted in the second cavity and also having a transfer passage disposed at an angle to the axis of the block and communicating with the portion of the diaphragm by-pass in said body, said body also having an orifice in its outer face surrounded by depressed annular valve seat and a vent passage establishing communication between the inner and outer face of the block above the secondary valve head assembly, a washer resting on said stepped abutment of the body, a diaphragm carried by the secondary valve head assembly and clamped between the peripheral edge of the said washer and the inner peripheral edge of the said cylindrical block, and an electromagnetically controlled core mounted on said closure ring coaxially with the valve stem and having fluid escape means in its side wall, a spring for biasing the core to close said orifice and the vent passage in the block, said core when energized to overcome the force of spring establishing communication between the diaphragm by-pass and the first cavity as well as the transfer passage.

3,016,066
FLUID OSCILLATOR
Raymond W. Warren, 2515 Seneca Ave., McLean, Va.
Filed Jan. 22, 1960, Ser. No. 4,162
5 Claims. (Cl. 137—624.14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



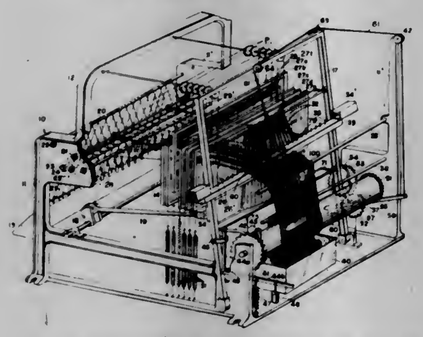
1. A fluid oscillator comprising: a pair of opposed surfaces capable of supporting fluid flow thereupon, means issuing a fluid stream between said surfaces, said surfaces diverging from said stream so issued such that said stream can lock on to either surface, nozzles for issuing fluid between said stream and said surfaces so as to deflect said stream between said surfaces, and regenerative means connecting said nozzles together, said regenerative means causing said nozzles to issue alternating fluid jets between said stream and said surfaces.

3,016,067
LIQUID DISTRIBUTING DEVICE
Eugene A. Edmonds, deceased, late of Jefferson County, Ky., by Dolly B. Edmonds, executrix, Jefferson County, Ky., assignor to Henry Vogt Machine Company, Louisville, Ky., a corporation of Kentucky
Filed Aug. 11, 1960, Ser. No. 48,945
3 Claims. (Cl. 138—38)



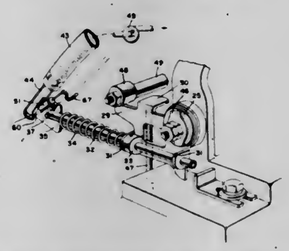
1. A liquid distributing device for use in the upper end of an upright tube in a vertical tubular heat exchanger comprising: a hollow ferrule body having a top wall, an upper head portion and a lower circular neck portion joined together, the neck portion being dimensioned to fit snugly within the upper end of said tube, the head portion being of relatively larger size to provide, along the outer side of the ferrule at the juncture of the head and neck, a circumferentially-extending downwardly-facing shoulder for seating the ferrule upon the upper end of said tube, said hollow ferrule body containing an internal chamber which is closed at its top by the top wall of said upper head portion and which is circumferentially defined by the vertical side walls of said head and neck portions, said side walls presenting to said chamber a circular inner-peripheral surface extending around a centrally disposed vertical axis, said chamber also being wide open at its bottom to provide unobstructed downward communication with the interior of said tube; and at least one liquid inlet passageway in the head portion of said body, said passageway extending from an inlet opening in the outer vertical side wall of said head portion to a tangentially arranged discharge opening in the head portion of said circular surface so that water is discharged from said passageway into said chamber in a substantially horizontal direction extending substantially tangentially to the circular peripheral surface of said chamber.

3,016,068
LOOM FOR WEAVING NON-CYLINDRICAL FABRICS
Joseph Felix, 260 Riverside Drive, New York, N.Y., assignor of one-third to Maxwell E. Sparrow and one-sixth to William G. Mulligan, both of New York, N.Y.
Filed Feb. 9, 1959, Ser. No. 791,948
6 Claims. (Cl. 139—11)



1. In a loom, comprising a reciprocating lay, harness means for shedding warp threads trained therethrough, shuttle means for carrying weft thread back and forth across the lay through the shed formed by said warp threads, and rotatable fabric take-up; the combination of a reed comprising spaced elongate members, said warp threads being threaded through spaces between said members, said members being disposed relative to each other whereby to provide a tapered body of non-lineal cross-section, said reed being mounted on said lay for upward and downward movements relative thereto and for reciprocation therewith, means for controlling said reed movements, means for intermittently rotating said fabric take-up, said latter means including means for providing balancing take-up motion for producing substantially uniform consistency of warp-weft in the fabric woven by said loom, and means for controlling the weft to provide additional length of weft to compensate for the difference in length of weft between a lineal line across said body and the non-lineal line across said body on the same plane for each pick, said means for controlling weft comprising a pair of horizontally slidable and vertically swingable transverse members projecting through said reed and in the path of said shuttle, and means for alternately raising and lowering said members whereby said shuttle may pass over one and under the other of said members for each pick.

3,016,069
SUCTION TUBE FILLING END TRAP FOR LOOMS
Clarence N. Coley, Star Rte., Kernersville, N.C.
Filed Apr. 8, 1958, Ser. No. 727,110
11 Claims. (Cl. 139—256)

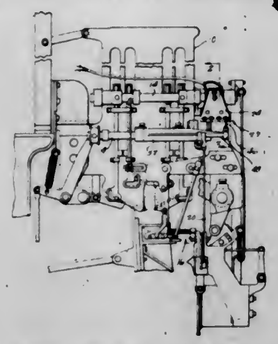


1. In a weft replenishing loom having a backwardly and forwardly reciprocating lay provided with a shuttle box containing a shuttle from which a thread extends to the adjacent selvage, a pneumatic weft end extractor movable from an elevated to a pick-up position, said extractor having a nozzle and a guide tongue in spaced relation thereto, suction means to induce the flow of air into said nozzle, a displaceable member supported for reciprocation in juxtaposition to said nozzle, said member being normally urged to contact the guide tongue to removably support an extracted thread thereon, and means to withdraw said member away from said guide tongue in the extractor pick-up position whereby said suction flow of air will remove an extracted thread supported on the guide tongue.

3,016,070
LOOM STOP MECHANISM
Covis M. Martin, Rte. 1, Box 168, Gaffney, S.C.
Filed Oct. 2, 1959, Ser. No. 844,049
4 Claims. (Cl. 139—336.4)

1. In a multishuttle weft replenishing loom including a motor, an electromagnetic switch in circuit with said motor and normally in closed condition, a selector rod reciprocable in a linear path, and a setting mechanism top shaft oscillatable in a path transverse to said linear path, the improvement consisting in a loom stop mechanism

comprising a switch base connected to said shaft for movement therewith, a fixed contact on said base, a contact member cooperatively positioned with respect to said contact and connected to said rod for movement there-



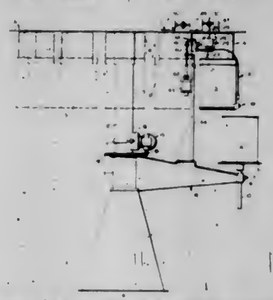
with, and means connecting said fixed contact and contact member in circuit with said switch, said contact upon engagement with said contact member shifting the switch to open condition.

3,016,071
LIGHT POLARIZING FABRICS
Myron Kahn, 1101 162nd St., Alvin M. Marks, 149—61 Powells Cove Blvd., and Mortimer M. Marks, 166—25 Cryders Lane, all of Whitestone 57, N.Y.
Filed Aug. 26, 1958, Ser. No. 757,351
3 Claims. (Cl. 139—420)



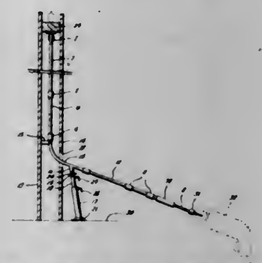
1. A fabric having the property of polarizing light passing therethrough comprising, a foil of tightly woven longitudinal and transverse strands disposed at right angles to each other at least a portion of which strands consists of a plurality of parallel fibers of a light polarizing material, and a plurality of birefringent elements angularly disposed with respect to said light polarizing strands and positioned therebetween.

3,016,072
METHOD AND APPARATUS FOR DISPENSING PREDETERMINED QUANTITIES OF LIQUID
Paul J. O'Neill, 166 Woodward St., Sausalito, Calif.
Filed May 26, 1958, Ser. No. 737,569
8 Claims. (Cl. 141—103)



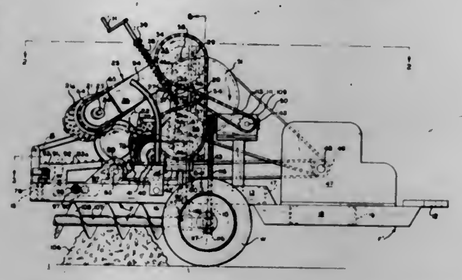
1. The method of dispensing a predetermined quantity of liquid from a container comprising the steps of: hermetically sealing the container with said liquid therein at atmospheric pressure, introducing a quantity of gas into said container of a volume at atmospheric pressure equal to the volume of the predetermined quantity of liquid to be dispensed, and permitting said liquid only to escape from said container until the pressure in said container is restored to atmospheric.

3,016,073
DRILL BIT GUIDE
John G. Broussard and Jubie D. Griffis, both of P.O. Box 578, Edna, Tex.
Filed Jan. 27, 1960, Ser. No. 5,009
6 Claims. (Cl. 144—105)



1. In a drill bit guide, a tubular bit receiving member, a plurality of interlocking conduits in which a flexible cable is mounted, one of said conduits being curved and having a laterally projecting fixed supporting member adjacent one end and a supporting member detachably mounted extending laterally from a point adjacent the other end.

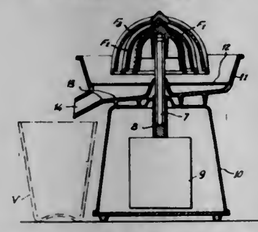
3,016,074
LOG DEBARKING MACHINES
Robert M. Baker, Rte. 2, Morley, and Norval K. Morey, Winn, Mich.
Filed May 16, 1958, Ser. No. 735,835
20 Claims. (Cl. 144—208)



18. In log debarking apparatus; a generally horizontally disposed main frame means; first generally horizontally disposed rotatable roll means having an axis extending in a generally horizontal direction mounted by said frame means; second generally horizontally disposed rotatable roll means having an axis extending in generally parallel but laterally spaced relation with said first roll means to define a nip between them; a revolvable bark removal member having bark removing means thereon generally coextensively extending with said roll means and having an axis generally parallel to said axes of the roll means; subframe means journaling said revolvable bark removal member; means with an axis extending transversely to said bark removal member

fixed on said main frame means under said nip supporting said subframe means and bark removal member for vertical, transverse tilting movement in a vertical plane while otherwise fixing it from movement away from said main frame means; said bark removal member being supported under said nip so that the weight of the log aids to maintain the bark removal member in bark removing contact therewith during tilting of the bark removing member in a vertical plane; and means for driving at least one of said roll means to revolve said log and move it axially past said bark removal member.

3,016,075
CITRUS FRUIT REAMER
Jean Mantelet, 11 Rue Jules Ferry, Bagnolet, France
Filed Nov. 19, 1958, Ser. No. 775,057
Claims priority, application Luxembourg Sept. 30, 1958
12 Claims. (Cl. 146—3)

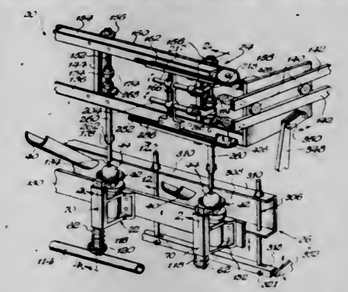


1. In a fruit squeezer, in combination, a first reamer having a first axis of symmetry, a first outer convex surface of a predetermined radius of curvature, a first top projection having a first outer face and extending from said first outer surface along said first axis, at least one first reaming rib having an outer edge portion of a second radius of curvature larger than said predetermined radius of curvature and extending downwards along said first outer surface; and a hollow cup shaped second reamer having a second axis of symmetry, a second outer convex surface, an inner concave surface of a radius of curvature larger than said second radius of curvature, a hollow second top projection extending along said second axis from said second outer convex surface and having an inner face adapted to encompass said first outer face of said first top projection, at least one second reaming rib extending downwards along said second outer convex surface, and at least one inner projection located on said inner concave surface adapted to engage said first reaming rib, whereby said second axis of symmetry will coincide with said first axis of symmetry when said second reamer is superimposed over said first reamer and rotation of said second reamer in relation to said first reamer is prevented in one direction when said second reamer is turned in said one direction until said one inner rib abuts against said first reaming projection.

3,016,076
FRUIT ORIENTATOR AND CORER
Thomas B. Keesling, Los Gatos, Calif., assignor, by mesne assignments, to FMC Corporation, a corporation of Delaware
Filed May 13, 1957, Ser. No. 658,846
15 Claims. (Cl. 146—52)

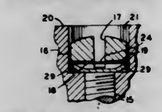
1. Apparatus for orienting fruit having two indents therein comprising a fruit support engageable in one indent of the fruit to support the fruit thereon, a finder element mounted above said fruit support for movement toward and away from said fruit support and fruit mounted thereon, and means to move said finder element in an orbit substantially less than the diameter of a fruit while moving said finder element into contact with the fruit, said orbit overlying at least a portion of the other indent of the fruit whereby said finder element enters the other indent to shift the fruit to seat the finder element in the other indent.

7. Apparatus for preparing apples having two indents therein disposed at opposite ends of the core axis of the apple comprising an apple receptacle having an aperture in the bottom thereof, an aligning disc positioned below said receptacle and in alignment with the aperture therein to support an apple in cooperation therewith, means simultaneously to rotate said aligning disc about a horizontal axis and about a vertical axis while in contact with an apple to find one indent therein, shields positioned adjacent said aligning disc on each side thereof to limit the area of contact between said aligning disc and an apple thereon, a carriage mounted above said receptacle for movement to one position above said receptacle and to



a second position removed from said receptacle, a finder element mounted upon said carriage above said aligning disc adapted in said one position to overlie said aligning disc, means to move said finder element in a circular orbit about said vertical axis above an apple having one indent positioned on said aligning disc, means to move said finder element toward the apple while the finder element is moved in the orbit to find the other indent of the apple, means to move said aligning disc and the apple thereon upwardly relative to said receptacle to vertically align the core axis of the apple between said finder element and said aligning disc, a corer mounted upon said carriage in alignment with said vertical axis, and means to rotate said corer about said vertical axis while upward movement of said aligning disc moves the apple into contact with said corer, said shields resisting rotation of the fruit during the finding of the other indent and during coring.

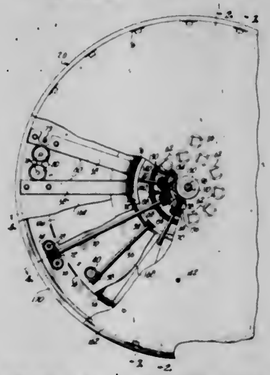
3,016,077
SELF-LOCKING SCREW
Paul A. Yocum, 524 E. Ford Ave., Barberton, Ohio
Filed Dec. 8, 1958, Ser. No. 778,662
5 Claims. (Cl. 151—70)



2. A self-locking screw device, comprising a screw member having a head for reception in a counterbore in a part into which the screw is to extend, said head having an axially inwardly extending turning-tool receiving recess and a cylindrical passage extending radially through said head and the narrowing upper portion of said passage communicating with said recess, and an elongated element of relatively stiff but springy material received through said passage with pointed opposite protrusion means extending beyond said head for yielding frictional engagement with the counterbore wall of the part to resist relative rotation of said member with respect to said part, cooperating means adjacent each end of said element for supporting the element in the upper

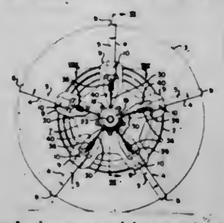
half of said passage to be bendable intermediate the projections, whereby a turning-tool is axially insertable through said recess for yielding depression of the element, thereby to release engagement of said opposite ends from the counterbore wall of the part, said element having integral shoulder means engaging said tool-receiving recess at said narrowing upper portion of said passage when said element is in the upper half of said passage for retaining the element centered in said passage in the head to prevent removal of the element from said passage at least in the undepressed position thereof and to maintain the same centered in said passage.

3,016,078
TRACTION DEVICE FOR VEHICLE WHEELS
William E. Schmidt, Shawnee, Kans. (1568 "A" White Drive, Chanute Air Force Base, Rantoul, Ill.)
Filed May 31, 1960, Ser. No. 32,828
16 Claims. (Cl. 152—216)



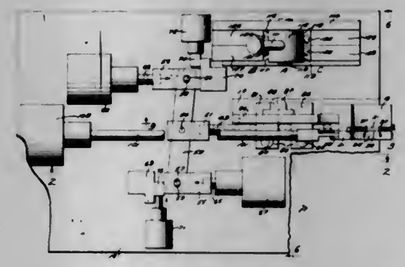
1. In a traction device for vehicle wheels, a housing engaged with a wheel of a vehicle for rotation therewith; traction producing means contained within said housing; and elongated drive means rotatable about the longitudinal axis thereof and coupled with said traction producing means for driving the latter between a first position within said housing and a second position extended from said housing and curved around the peripheral portion of said wheel whereby said wheel is provided with additional traction when said traction producing means are in said second position.

3,016,079
TRACTION DEVICE
Eli J. Weller, 3747 Main St., Weirton, W. Va.
Filed Jan. 8, 1960, Ser. No. 1,840
10 Claims. (Cl. 152—218)



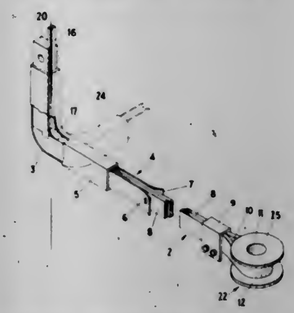
1. A traction device comprising a plurality of generally hook-like members adapted to be hooked over a vehicle tire, each such member having a shank adapted to be disposed in generally radial position alongside the wheel carrying the tire, a hub member adapted to be disposed alongside the wheel in substantially coaxial relation thereto, the hub member having guideways through which the shanks pass and having openings extending therethrough in a direction parallel to the axis of the hub member adjacent the ends of the shanks, tightening means connected with the hub member and extending generally axially thereof, connections between the tightening means and said shanks, said connections including springs disposed in said openings, and means for operating the tightening means to tighten the generally hook-like members about the tire.

3,016,080
APPARATUS FOR BENDING TERMINALS
William C. Kent, Naperville, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 30, 1959, Ser. No. 790,255
11 Claims. (Cl. 153—21)



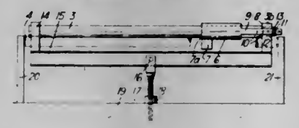
1. A bending apparatus comprising a stationary jaw, a movable jaw slidably mounted adjacent said stationary jaw, means pivotally connected to said movable jaw to reciprocate said movable jaw, a lever oscillatively connected at a mid-point thereof to said means having opposite ends thereof extending laterally from the path of the movement of the movable jaw, means for oscillating the lever, means for alternately locking the ends of the lever against movement to reciprocate the mid-point of the lever when the lever is oscillated to reciprocate the movable jaw, and means to sequentially operate the locking and oscillating means.

3,016,081
WAVEGUIDES AND METHODS OF BENDING WAVEGUIDES
Ronald Irwine Gill, Harrow, England, assignor to The General Electric Company Limited, Kingsway, London, England
Filed Nov. 28, 1958, Ser. No. 776,853
Claims priority, application Great Britain Dec. 2, 1957
6 Claims. (Cl. 153—32)



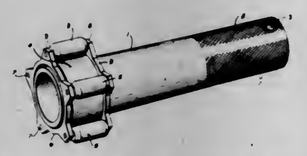
1. A waveguide-bending mandrel for use in making a second bend in a waveguide adjacent a previously-made first bend comprising a first part formed by a stack of substantially flat metal strips, said stack including a group of strips which has been doubled back on itself and loosely held together adjacent the loop so formed, and a second part adapted to cooperate with the end of the stack of strips remote from said loop, the cooperating ends of said first and second parts of the mandrel being shaped so that, in use, they meet and interlock in the portion of the waveguide which has said first bend in it, the cross-section of the mandrel being such that, when it is in use, the portion of the waveguide which has said first bend in it and the portion in which the second bend is to be made is substantially filled.

3,016,082
ROLL BENDING MACHINES FOR CURVING PLATE MEMBERS
Donald Miller, Nottingham, England, assignor to Whiteley-Read Engineers Limited, Nottingham, England
Filed May 7, 1958, Ser. No. 733,706
Claims priority, application Great Britain May 10, 1957
15 Claims. (Cl. 153—54)



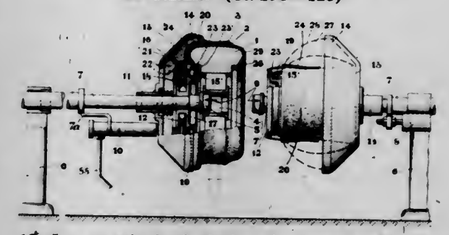
1. A cone-roll bending machine comprising a pair of guide rolls, upright standards for rotatably holding said guide rolls, a pressure roll, said pressure roll being in juxtaposed relationship to said guide rolls, means for mounting said pressure roll, said means being freely pivotable about an axis substantially transverse to the longitudinal axis of said pressure roll, abutment means on one side of said pressure roll, said abutment means being adapted to lower said pressure roll with said freely pivotable mounting means on the side of said abutment means in agreement with the particular force applied to said abutment means by engagement of a plate to be rolled.

3,016,083
SWAGING TOOL
Alfred S. Klingenberg, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 10, 1958, Ser. No. 760,271
3 Claims. (Cl. 153—81)



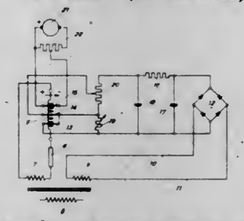
1. A swaging tool for the inside surface of hollow cylindrical tubes, said tool comprising in combination a cylindrical body member, a cage structure loosely mounted upon said body member and surrounding a portion of said body member for independent rotary motion thereabout, a group of rollers loosely supported by said cage structure for individual rotation thereof, said rollers being retained by said cage structure in an essentially circular arrangement around said portion of said body member, and means for limiting movement of said cage structure longitudinally along its axis, said means comprising a race member attached to said portion of said body member for providing said rollers with outward support, and said race member being of larger diameter than said body member.

3,016,084
METHOD OF AND DEVICE FOR MAKING PNEUMATIC TIRES
Walter Niclas, Altwarmbuchen, near Hannover, and Hans Menell, Ahlem, near Hannover, Germany, assignors to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed Feb. 12, 1958, Ser. No. 714,877
Claims priority, application Germany Feb. 15, 1957
12 Claims. (Cl. 156—123)



12. In a method of placing the lateral rubber strip for a tire side wall upon a tire carcass on a high shoulder tire building drum, in which the mean diameter of those drum surfaces which are intended for contact with the bead portions of the tire carcass is less than the mean diameter of the drum surfaces for contact with the zenith portion of the carcass, and the side walls of the carcass extend radially outwardly from the bead portions, the steps of: forming the rubber strip to form a side wall of the tire to be built up into a continuous, hollow substantially cylindrical body, supporting said strip in cylindrical form on an inflatable body having an extensible normally cylindrical peripheral wall, the ends of said body being inextensible and movable toward each other, one edge of said strip and one end of said body being positioned adjacent the bead of the tire carcass, and the opposite edge of said strip being intermediate the ends of said chamber, expanding said cylindrical wall intermediate its ends so as to increase the diameter of the opposite edge of said strip and its intermediate portion, so that said strip will extend radially outwardly from said bead portion, pressing the end of said body remote from said bead and the adjacent portion of said peripheral wall toward the end adjacent said bead and thereby causing the fluid pressure to press said peripheral wall and said strip against the side wall of said carcass, so that the strip will conform to said side wall and will be extended circumferentially to decrease in thickness adjacent the tread portion of the carcass.

3,016,085
APPARATUS FOR HEAT SEALING A THERMOPLASTIC WEB IN WHICH THE HEAT IS CONTROLLED BY THE SPEED OF THE WEB
Georges Gassner, Schiltigheim, France, assignor to Les Ateliers de Constructions Mecaniques C. & A. Holweg, Strasbourg, France, a responsible limited society
Filed Dec. 23, 1959, Ser. No. 861,511
Claims priority, application France Jan. 5, 1959
6 Claims. (Cl. 156—359)



5. Apparatus for coalescing synthetic films by heating the faces of the film to be coalesced comprising means

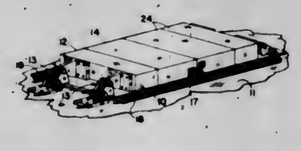
transporting the film in a longitudinal direction, a stationary electrically heated member interposed between the opposed film faces to be heated, electric control means controlling the current supplied to said heated member and, hence, the temperature thereof, means pressing the heated film faces together to effect the coa'escing and sensing means operatively associated with said film transporting means sensing the velocity of travel of said film and operatively associated with said control means regulating the current supplied to said heated element in accordance with the film velocity.

3,016,086
RECOILLESS FLAMETHROWER
John C. Smith, 123 McCormick St., Bel Air, Md.
Filed Sept. 24, 1959, Ser. No. 842,169
1 Claim. (Cl. 158—28)
(Granted under Title 35, U.S. Code (1952), sec. 266)



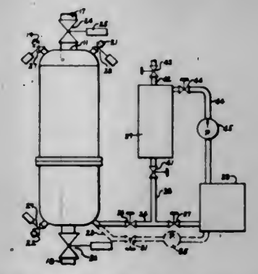
A multi-shot, recoilless flamethrower comprising a cylindrical barrel, a discharge nozzle at a first end of said barrel, a convergent-divergent nozzle at the second end of said barrel, a piston actuated valve arranged to open and close said discharge nozzle and comprising a spring urging said valve toward its closed position; said convergent-divergent nozzle comprising a first end having the same diameter as said barrel and joined thereto, a second end open to the atmosphere, and a construction between said ends; trigger operated generating means exterior of said barrel and said nozzles for generating propellent gases under pressure, means for introducing said propellent gases into said convergent-divergent nozzle between said constriction and said barrel, means for simultaneously applying the propellent gas to said piston to open said valve against the force of said spring: a freely movable plunger within said barrel and substantially closing the same adapted to be moved by said propellent gas toward said first end of said barrel to eject fuel from said discharge nozzle when said valve is open, means responsive to the opening of said valve for igniting said fuel as it is ejected from said nozzle; a fuel supply line connector mounted on an opening into said discharge nozzle, and comprising a check valve opening inwardly only, a fuel supply tank adapted to contain fuel under pressure, and a detachable fuel supply line joining said tank and said connector.

3,016,087
HATCH COVER
Wallace Hamilton, Chagrin Falls, Ohio, assignor, by mesne assignments, to Pneumo Dynamics Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 779,766
3 Claims. (Cl. 160—206)



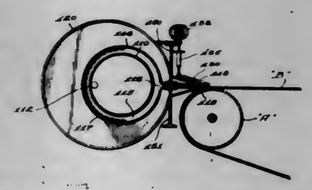
1. A hatch cover for covering a hatchway comprising a first cover panel and a second cover panel having adjacent inner ends disposed in abutting relation with the cover panels aligned with each other and overlying a hatchway, a hinge connecting said first and second cover panels at their adjacent inner ends for folding said panels to a position in which the cover panels are disposed in substantial parallelism, a link at the outer end of the first panel, a first pivot connecting the link to the first panel for pivotal movement of the first panel relatively to the link, a second pivot connecting the link to a fixed structure for pivotal movement of the link relatively to the fixed structure, said first pivot being disposed above the second pivot and forming the link with a lever arm extending upwardly from the second pivot to the first pivot and the force operating to fold said first and second panels also operating on said link through its lever arm to pivot the link on the second pivot and permitting said cover panels to be folded from said aligned position to a position in which the cover panels are substantially parallel.

3,016,088
RAPID CYCLE DIGESTER
Anton J. Horstman and Lee E. Eberhardt, Springfield, Ohio, assignors to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio
Filed Sept. 7, 1954, Ser. No. 454,590
3 Claims. (Cl. 162—242)



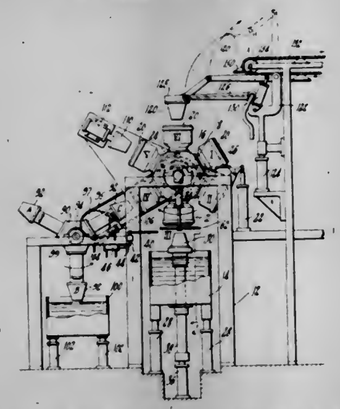
1. Apparatus for pulping and steaming wood chips and like fibrous plant material, including a pressure vessel, means for introducing such material into said vessel, a source of steam for supply to said vessel, a reservoir of cooking liquor, feed and exhaust connections forming a closed fluid system between said reservoir and said vessel, a liquor pressure tank, means connecting said tank to said reservoir and into said closed fluid system, and means for placing the liquor in said tank under pressure.

3,016,089
CYLINDRICAL PRESSURE HEADBOX
David R. Webster, Mount Royal, Quebec, Canada (1070 Graham Blvd., Apt. 1, Montreal 16, Quebec, Canada)
Filed Dec. 18, 1958, Ser. No. 781,355
6 Claims. (Cl. 162—339)



1. A pressure headbox adapted to deliver stock to a paper machine comprising, a material inlet conduit having discharge means extending along at least one element thereof, a cylindrical casing surrounding said conduit, a vertical wall at both sides of the paper machine to support said conduit and casing in spaced relationship from each other to form an unobstructed annular flow passage of cylindrical form therebetween, an unobstructed aperture along the length of said casing in diametrically opposed relationship to said conduit discharge means, a pair of opposed flexible slice lips connected to and extending outwardly from said casing in register with said outlet aperture to form an unobstructed outlet nozzle, said unobstructed annular flow passage terminating at the juncture of said cylindrical casing and said slice lips whereby stock delivered from said material inlet conduit through said discharge means is divided into two contained liquid streams adapted to impinge head-on at said juncture and issue as a composite stream between said slice lips, means to adjust the spacing between said lips, and framing means disposed exteriorly of said casing adapted to support said casing against liquid pressure created within said unobstructed annular flow passage, outlet aperture and opposed flexible lips constituting said outlet nozzle.

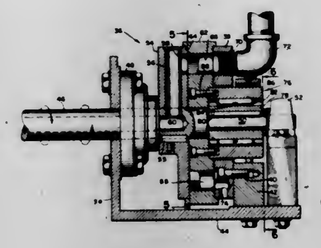
3,016,090
PULP MOLDING MACHINE
Charles J. Chaplin, South Portland, Maine, assignor, by mesne assignments, to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed June 3, 1957, Ser. No. 663,271
35 Claims. (Cl. 162—385)



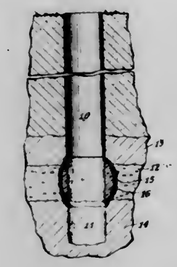
1. A pulp forming machine comprising a succession of suction forming dies arranged in annular sequence and mounted for rotation about a common axis, drive means for advancing said forming dies from position to position, a forming station, a tank adapted to contain a dilute water-fibre mixture at said forming station, a second forming die located at said forming station, means to raise the level of said dilute water-fibre mixture to immerse both said second forming die and one of said annularly arranged forming dies in said mixture at said forming station to accrete a section of fibres on each of said dies, and means to move said one and said second dies into cooperative relationship for transferal and consolidation of the accreted fibrous section formed on said second die to that section on said one die.

3,016,091
VACUUM CONTROL FOR PULP MOLDING MACHINES
Donald T. Daniele, East Longmeadow, Mass., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 11, 1960, Ser. No. 48,886
9 Claims. (Cl. 162—391)

1. In a vacuum control device for pulp molding machines and the like, wherein an oscillatable article carrying element is mounted upon a hollow rotatable shaft which turns alternately in opposite directions, the improvement comprising a first valve element secured to said shaft for turning motion therewith and having a passage communicating with the hollow interior thereof, a second valve element mounted non-rotatably adjacent said first valve element, said second valve element having a pair of ports communicating with a source of vacuum and with the atmosphere, a third valve element mounted rotatably intermediate said first and second valve elements with its opposite sides in contact therewith, said third valve element having a plurality of passages for selectively connecting the passage in the first valve element with the ports in the second valve element, and means for turning the third valve element in one direction only with the first valve element during alternate movements thereof, whereby said valve elements cooperate to connect the hollow shaft with the source of vacuum intermittently.



3,016,092
COMPOSITIONS OF MATTER AND METHODS AND STEPS OF MAKING AND USING THE SAME
Mortimer T. Harvey, South Orange, and Peter L. Rosamilia, Newark, N.J., assignors to Harvel Research Corporation, Irvington, N.J., a corporation of New Jersey
Filed May 31, 1957, Ser. No. 662,830
20 Claims. (Cl. 166—31)



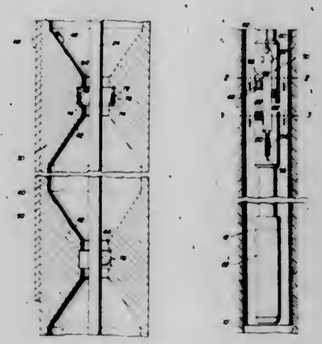
13. The method of sealing earth formation which comprises forcing thereagainst a slurry comprising water, hydraulic cement, ketone-aldehyde, normally water-soluble organic reaction product and aldehyde-reactive product produced by reacting aldehyde with monohydric phenol and polyhydric phenol whereby at least some of said organic reaction products are forced out of slurry and into said formation and cured in said formation thereby forming a sheath adjacent said hydraulic cement, said aldehyde-reactive organic reaction product being capable of being reacted with an aldehyde to produce a thermosetting resin.

3,016,093
METHOD OF AND APPARATUS FOR CLEANING OUT OIL WELL CASING PERFORATIONS AND SURROUNDING FORMATION BY APPLICATION OF ASYMMETRIC ACOUSTIC WAVES WITH PEAKED COMPRESSION PHASE
Albert G. Bodine, Van Nuys, Calif.
(13120 Moorpark St., Sherman Oaks, Calif.)
Filed July 12, 1957, Ser. No. 671,463
11 Claims. (Cl. 166—43)



11. An apparatus of the character described, comprising: means affording a vibratory sound wave radiator surface situated in contact with well fluid inside a casing in a well, an acoustic wave generator acoustically coupled to said means so as to vibrate said sound wave radiator surface and thereby radiate alternating positive and negative pressure wave half cycles into the well fluid, and means effecting a greater degree of acoustic coupling between said surface during the positive pressure half cycle than during the negative pressure half cycle, so as to produce a continuous repeating asymmetric acoustic wave characterized by positive pressure half cycles of high amplitude alternating with negative pressure half cycles of lower amplitude.

3,016,094
PARAFFIN REMOVING VALVE ASSEMBLY FOR TUBING
Tom L. Abbott, P.O. Box 1002, Whiteface, Tex.
Filed July 16, 1958, Ser. No. 748,974
12 Claims. (Cl. 166—169)



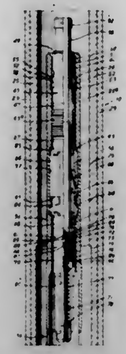
1. A paraffin removing device for well bores having a string of tubing including a reciprocating pump therein together with a sucker rod reciprocable in said tubing and connected to said pump comprising, a section of tubing having a discharge port therein at a region of paraffin deposit in said well bore, a valve carried by said section controlling said port, movable sealing means in said section below said port and movable between a closed position obstructing fluid flow through said tubing and an open position permitting fluid flow therepast, means connecting said valve to said sealing means for simultaneously opening of said port and closing of said sealing means.

3,016,095
SONIC APPARATUS FOR FRACTURING PETROLEUM BEARING FORMATION
Albert G. Bodine, 13120 Moorpark St.,
Sherman Oaks, Calif.
Filed Jan. 16, 1959, Ser. No. 787,252
4 Claims. (Cl. 166—177)



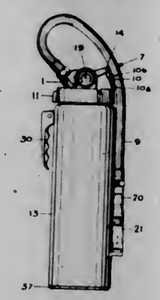
1. For use in a system for sonically fracturing oil bearing formation in the earth around a well bore therein by transmitting through the formation acoustic pressure waves of amplitude exceeding the endurance limit of the formation, a long, elastic wave transmission and energy storage column of solid elastic material positioned in the well bore and extending from the ground surface to the region of the formation to be fractured, said column having acoustic coupling means at its lower end for acoustic coupling to a body of surrounding liquid, a body of liquid in said well bore in contact with said coupling means and with the wall of the well bore, and a vibration generator at the ground surface coupled to the upper end portion of said column for applying thereto a vertically-directed alternating force at a resonant frequency of at least a lower section of the column, so that elastic waves are transmitted down said column and thence reflected upwards from the lower end portion thereof in correct phase to establish a longitudinal standing wave in at least said lower column section, and so as to store energy therein, in such manner that said coupling means on said column vibrates at said frequency and sets up acoustic pressure waves of corresponding frequency in said body of liquid, whereby said acoustic waves are transmitted therethrough to the walls of the well bore and thence into the surrounding formation, said vibration generator having a cyclic force output to produce, and said wave transmission column having a cross section to accommodate, an elastic wave amplitude in the column effecting transmission through said body of liquid and into said formation of acoustic pressure waves of amplitude exceeding the endurance limit of the formation.

3,016,096
CIRCULATING VALVE
James G. Spalding, Calgary, Alberta, Canada, assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,616
10 Claims. (Cl. 166—224)



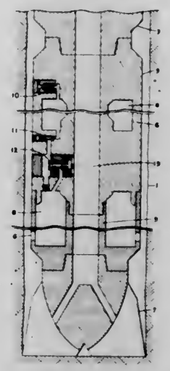
1. A well tool including: an elongate tubular housing; an elongate tubular body telescoped downwardly into said housing for limited longitudinal movement therewithin; means on said body and said housing coengageable to prevent relative rotation between said housing and said body about their longitudinal axes; a tubular mandrel in the lower end of said housing and extending upwardly into the bore of said body, the outer dimension of said mandrel being substantially less than the inside diameter of the bore of said body to provide a flow passage therebetween; means providing a lateral port through said mandrel intermediate the ends of said mandrel; and packing means disposed between said body and said mandrel to seal between said body and said mandrel below said port means when said body and said housing are telescoped together and to seal above said port means when said body and said housing are moved to extended position.

3,016,097
SAFETY DEVICE FOR A FIRE EXTINGUISHER
Robert L. Paus, Chicago, and Clyde Forrester, Glenview, Ill., assignors to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Filed June 16, 1959, Ser. No. 820,634
10 Claims. (Cl. 169—31)



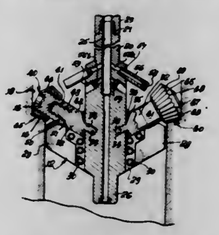
1. A fire-extinguishing apparatus comprising a container for storing an extinguishing agent under pressure, means for releasing the extinguishing agent from said container, a flexible hose connected to said container for conveying a stream of extinguishing agent expelled from said container, an actuating lever for actuating said releasing means, means for retaining said hose in removable engagement with the said lever, and stop means to restrain movement of the actuating lever, said stop means being maintained in restraining position by engagement of said hose with said stop means.

3,016,098
VIBRATORY DRILLING
John E. Eckel and Everett H. Lock, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Filed Mar. 11, 1958, Ser. No. 720,767
7 Claims. (Cl. 175—56)



5. In a drilling system using a circulating drilling fluid and wherein a vibratory vertical thrust is imparted to a rotating bit rotated by a drill string, an apparatus for minimizing energy dissipated to the drilling liquid which comprises: means for establishing a gaseous surge pocket at the lower end of the drill string; means for continuously injecting gas into said surge pocket during the circulation of drilling fluid; means for maintaining direct fluid communication between the gas in said surge pocket and drilling fluid in the space adjacent said bit whereby gas accumulated in the surge pocket compresses and decompresses to compensate volumetrically for liquid movement caused by the motion of vibrating vertical thrust.

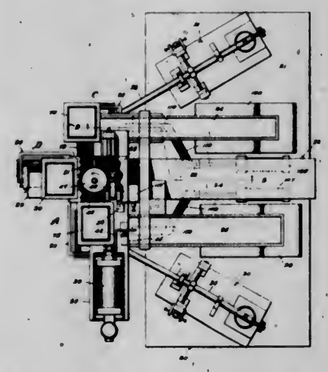
3,016,099
HOLE ENLARGER
Charles Robert Woodruff, Long Beach, Calif., assignor of fifty percent to Terminal Drilling and Production Co., Wilmington, Calif., a corporation of California
Filed July 17, 1959, Ser. No. 827,759
4 Claims. (Cl. 175—344)



1. A rotary earth boring hole enlarger for increasing the diameter of a well bore from the diameter of a pilot hole to a predetermined diameter comprising: an elongate tool body having relatively an upper end and a lower end adapted to be connected at the upper end thereof

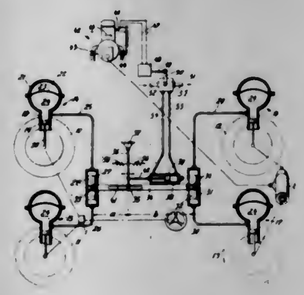
to a drill string, said elongate body defining a longitudinal fluid opening therethrough, a guide means affixed to said tool body proximate the lower end thereof, said guide means being adapted to position said body concentrically within said pilot hole, a plurality of cutter assembly affixing members affixed to said body above said guide means, said members extending radially outward from said body and spaced at circumferential intervals, said members being threaded at the radially outer end thereof, a plurality of cutter assemblies each removably affixed to a respective one of said members, said cutter assemblies including a radially extending shaft, said shaft being mateably threaded at the inner end thereof for threaded engagement with said respective member, and a cutter element rotatably affixed to said shaft, said cutter element having a cutting surface extending from the diameter of said pilot hole to said predetermined diameter, said tool body defining a plurality of fluid openings extending radially through said body to said longitudinal opening therethrough, each of said openings being positioned above a respective one of said affixing members, and a fluid nozzle positioned within each of said fluid openings coextensive therewith, each of said nozzles being directed radially outwardly and downwardly with an open outer end thereof positioned behind a respective one of said cutters relative to the direction of rotation of said tool body and cutter.

3,016,100
AUTOMATIC BATCH WEIGHING APPARATUS
Horace L. Smith, Jr., Richmond, Va., assignor, by mesne assignments, to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Feb. 25, 1957, Ser. No. 641,913
17 Claims. (Cl. 177—52)



5. In apparatus for providing consistently accurate predetermined-weight batches of discrete non-uniform solids components preliminary to the deposit of such batches into final containers, the combination of a plurality of independent weighing mechanisms fixedly disposed at spaced stations; a plurality of batch receptacles for receiving and holding successive batches of said components during the weighing thereof only; carrier means releasably supporting the several receptacles in spaced relation to one another and mounting them for serial movement between said stations; intermittently operable means for positively unidirectionally moving said carrier means and receptacles from station to station; means for temporarily releasing the receptacles from said carrier means at the respective weighing stations for free engagement with the weighing mechanism thereat; means at each such station for supplying the solids components to the receptacles while so released from the carrier means; means controlled by the respective weighing mechanisms for instantly interrupting the component supply at their station upon deposit in the receptacle thereat of a predetermined portion of a batch; means for positively preventing retrograde movement of the carrier means and receptacles from the respective stations during the weighing operations; and means for effecting discharge of the completed batches from the receptacles.

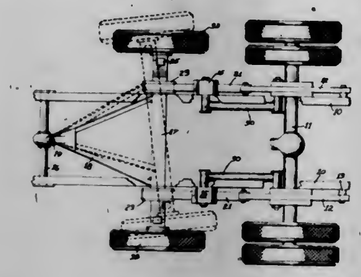
3,016,101
MOTOR VEHICLE EQUIPPED WITH MEANS IMPROVING ITS REACTION TO STEERING OPERATIONS
Ernst J. H. Fiala, Sindelfingen, Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Jan. 9, 1959, Ser. No. 785,928
Claims priority, application Germany Jan. 10, 1958
10 Claims. (Cl. 180—1)



1. In a motor vehicle having an engine, a pair of front wheels and a pair of rear wheels, at least one of said pairs being driven by said engine, the combination comprising means operative connected with the front wheels of the vehicle for modifying the difference of the load imposed upon one of said front wheels from the load imposed upon the other one of said front wheels, means operatively connected with the rear wheels for modifying the difference of the load imposed upon one of said rear wheels from the load imposed upon the other one of said rear wheels, a device for indicating the driving torque transferred from said engine to said driven pair of wheels, and a mechanism operable by said device and connected with both said means for actuation thereof to control the ratio of said differences in response to said driving torque.

3,016,102
AUXILIARY VEHICLE AXLE
Ralph T. Anderson, 403 N. Cherry, Van Wert, Ohio, and Donald J. Buettner, R.R. 1, Middle Point, Ohio
Filed Dec. 28, 1959, Ser. No. 862,288
4 Claims. (Cl. 180—22)

1. In an automotive vehicle having a frame, a rear drive axle and semi-elliptical springs for supporting the frame from said axle, means connecting the rear end of each spring to said frame, an auxiliary axle having a forwardly extending yoke rigid with the auxiliary axle and connected at its front end to said frame through a universal joint permitting rocking and swinging of the auxiliary axle, said auxiliary axle having coaxial ground-engaging wheels at its ends, a pair of equalizer bars each pivoted intermediately to said frame on a transverse horizontal axis located between the auxiliary axle and the front end of the adjacent spring, and means operatively connecting the rear ends of the equalizer bars respectively to the front ends of said springs, the front ends of the



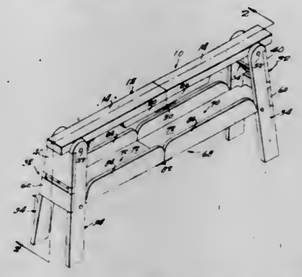
equalizer bars resting on and having sliding engagement with said auxiliary axle substantially in the vertical plane containing the axis of said wheels.

3,016,103
STEPLADDER HAVING ADJUSTABLE LEGS THEREON
Lewis O. Studer, Doylestown, Ohio, assignor to Weather-Seal, Inc., North Barberton, Ohio, a corporation of Ohio
Filed Mar. 4, 1960, Ser. No. 12,823
11 Claims. (Cl. 182—126)



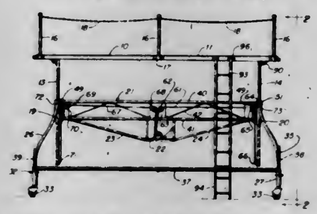
5. A stepladder comprising a pair of front support legs, a top support member secured to and extending between said front support legs at the top thereof, a pair of back support legs operatively secured to said top support member, a bucket-shelf pivotally carried by said back support legs spaced from the top thereof and including support arms operatively associated with said front support legs when said bucket-shelf is operatively positioned, spreader means pivotally engaging and extending between said front and back support legs below said bucket-shelf, extension legs slidably engaging each of said support legs, lock means on each of said support legs adapted to have operative positions engaging said extension legs to hold them in their present positions, and control means carried by said support legs and extending vertically thereof, said control means engaging said lock means and operatively engaging said spreader means and said bucket-shelf to move said lock means to operative position to lock said extension legs in place when said bucket-shelf is operatively positioned, and to move said lock means to a release position when only said spreader means is operatively positioned.

3,016,104
COLLAPSIBLE COMBINATION SAWHORSE AND TOOL CARRIER
Don E. Johnson, 2323 4th St. NW., Albuquerque, N. Mex.
Filed Dec. 23, 1959, Ser. No. 861,654
2 Claims. (Cl. 182—129)



1. A collapsible combination sawhorse and tool carrier comprising a bolster composed of two sections hinged together at their inward ends to fold only upwardly relative to each other from operative positions in which the inward ends of the sections are in abutting relationship, leg assemblies positioned at the outward ends of the bolster sections, each leg assembly comprising a pair of lateral spaced legs having upper ends engaged with the outer sides of the bolster sections and pivoted to the bolster sections at locations spaced inwardly from the outward ends of the bolster sections, said leg assemblies being foldable to put their legs along related sides of the bolster when in inoperative position, upper plates extending between and fixed to upper portions of the legs, said upper plates having upper edges adapted to engage the undersides of the bolster sections at locations outwardly from the pivotal axes of the legs, only in the vertical spread operative positions of the leg assemblies, and toggle levers extending diagonally between and pivoted at their ends to the upper plates of the leg assemblies and to the undersides of the bolster sections, at points spaced inwardly from the leg assemblies, said leg assemblies having rungs extending between their legs and spaced downwardly from said upper plates, and a tool carrier disposed beneath the bolster and comprising a pair of upwardly opening channel sections hinged together at their inward ends to fold only downwardly relative to each other, said channel sections having sidewalls having inward ends which are in abutting relationship in the unfolded condition of the channel sections, said channel sections having bottom walls having outward ends resting upon said rungs.

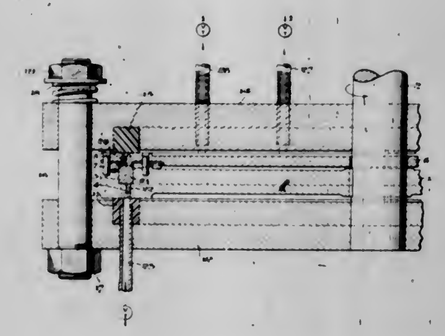
3,016,105
SCAFFOLD
Hugh L. House, Rte. 3, Rogersville, Tenn.
Filed Nov. 16, 1959, Ser. No. 853,196
1 Claim. (Cl. 182—149)



In a portable collapsible scaffold, the combination which comprises transversely disposed end frames, rollers on

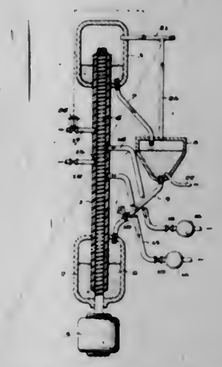
lower ends of the end frames, cross-braces connecting lower portions of the end frames, a truss extended between upper portions of the end frames, means pivotally connecting ends of the truss to the end frames, vertically disposed sleeves mounted in the end frames, a pair of hinged sections providing a platform, rods extended from the platform through the sleeves of the end frames for supporting the platform, a winch carried by the truss and connected by cables to the lower ends of the vertically disposed rods for manually elevating the platform, additional end frames spaced from the said end frames, and hinged sections providing extensions at the ends of the platform and connected to the sections of the platform, the end frames of the extensions being connected to the end frames of the scaffold.

3,016,106
APPARATUS FOR CONTINUOUS SEPARATION OF VOLATILE COMPONENTS OF A GASEOUS MIXTURE
Ludwig Luft, Cincinnati, Ohio, assignor, by mesne assignments, to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 17, 1959, Ser. No. 793,805
5 Claims. (Cl. 183—2)



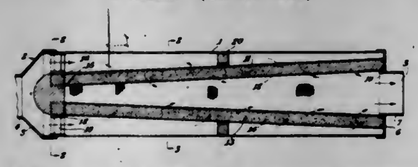
1. Apparatus for continuous separation of components of a gas mixture, comprising a rotatable circular member having parallel opposite sides and provided with a concentric annular chamber filled with gas separation material, said member having openings connecting said chamber with at least one of said sides, stationary cover means engaging the opposite sides of said member, means pressing the cover means against said member to seal said chamber, the cover means being provided with two circumferentially spaced inlet passages communicating with the chamber for delivering gases thereto, one of said passages being for a gas mixture to be separated and the other passage being for a purge gas, said cover means also being provided with an outlet passage at each side of said gas mixture inlet passage and communicating with said chamber, one outlet passage being located between said purge gas passage and one side of said gas mixture passage, the other outlet passage being located between said purge gas passage and the opposite side of said gas mixture passage, the said one of said outlet passages being closer than the other to said purge gas inlet, and means for continuously rotating the circular member in a direction to move a given point of said chamber from said gas mixture inlet first to said one outlet and then to said purge gas inlet.

3,016,107
METHOD AND APPARATUS FOR CONTINUOUS SEPARATION OF COMPONENTS OF A GASEOUS MIXTURE
John P. Strange, Murraysville, Kyle W. Charlton, Monroeville, and William P. Yant, Murraysville, Pa., assignors to Mine Safety Appliance Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 24, 1959, Ser. No. 801,648
5 Claims. (Cl. 183—2)



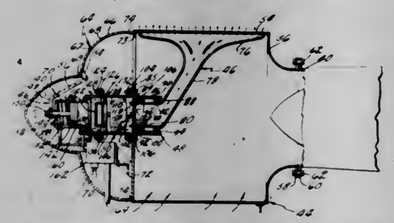
1. A method of continuously separating a gaseous mixture into fractions, comprising continuously moving lengthwise a column of gas separation material for which one of said fractions has less affinity than another, delivering an eluting gas to the column at a predetermined inlet point, releasing eluting gas from the column at two outlet points spaced lengthwise of the column in locations where some of the eluting gas will flow upstream through the column to both of said outlet points and the rest of the eluting gas will flow in the opposite direction, and delivering said gaseous mixture to the column between said outlet points, whereby said one fraction of said mixture will be carried upstream by the eluting gas through the column and out of it at the upstream outlet point and the rest of the mixture will be carried by the column downstream toward the other outlet point where a second fraction will escape with the eluting gas leaving at that point.

3,016,108
FILTERS FOR USE IN MOTOR VEHICLES
Geoffrey Cheadle Myddelton, Parkside, Henley-on-Thames, England, assignor to Carbonaire S.A., Vaud, Switzerland, a company of Switzerland
Filed Nov. 9, 1959, Ser. No. 851,591
Claims priority, application Great Britain Nov. 21, 1958
1 Claim. (Cl. 183—4.8)



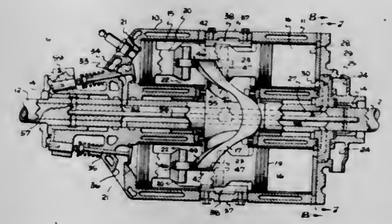
A filter unit for use in deodourizing atmospheric air passed into the heating and ventilating system of a motor vehicle, comprising an elongated imperforate cylindrical housing, a first elongated truncated cone-shaped wire gauze member mounted concentrically with said housing and within said housing to extend substantially the whole length thereof and to leave an annular space between said housing and said first member, a second elongated truncated cone-shaped wire gauze member mounted concentrically with said first member and within said first member to extend substantially the whole length of said housing and to leave an annular space between said first and second members, a layer of granulated activated charcoal packed in the annular space between said first and second members, a cap portion mounted on one end of said housing adjacent the ends of smaller diameter of said first and second members and forming the inlet end of said filter, a closure member mounted on the other end of said housing adjacent the ends of larger diameter of said first and second members and forming the outlet end of said filter, said closure member also serving to block off the annular space between said housing and said first member and between said first and second members, an annular plug member for blocking the annular space between said first and second members at said inlet end, a bullet-shaped plug member for blocking the bore of said second member at said inlet end and for guiding air through said filter with minimum resistance, a resilient metal spacing strip of sinuous cross-section mounted intermediate of said inlet and outlet ends and in said annular space between said housing and said first member to extend around and engage said first member at circumferentially spaced zones and to extend within and engage said housing for resiliently supporting said first and second members and said layer of charcoal in the region of the longitudinal centers of said housing and said first and second members, and means formed at said inlet and said outlet ends for connecting said filter to the air conduit of the motor vehicle, whereby contaminated air is caused to pass through said filter from said inlet to said outlet in such manner that it traverses said first member, said layer of charcoal and said second member in a direction which is radially inwards towards the lobngitudinal axis of said filter.

3,016,109
AIR FILTER
George J. Howard, Jr., Fairfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 17, 1958, Ser. No. 721,704
13 Claims. (Cl. 183—61)



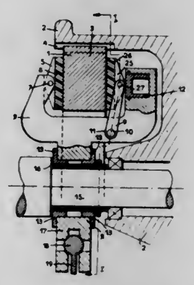
1. Air filtering system for a powerplant including a perforated filtering inlet member having a surface of revolution, one end of said member having an opening for the outlet of fluid from said member, the other end of said member having a nose section connected thereto, nozzle means mounted in said member for rotation, said nozzle means having its outlet directed generally radially towards the inner surface of said member and in juxtaposed relation thereto, separate means for driving said nozzle means, a turbine connected to said driving means, means connecting said driving means to said nozzle means, means for bypassing said filtering member comprising a bypass door in said nose section, means for actuating said door including a cylinder and piston unit, a source of fluid under pressure, and means connecting said source of fluid to said member and to said turbine for maintaining said door in its closed position and for driving said turbine to rotate said nozzle means.

3,016,110
FRICTION REDUCING APPARATUS FOR CAM ENGINES
Karl L. Herrmann, 1405 Airway, Glendale, Calif.
Filed Mar. 8, 1960, Ser. No. 13,460
5 Claims. (Cl. 184—6)



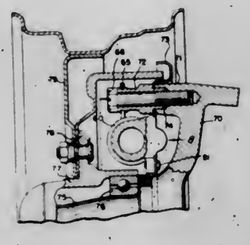
1. In an internal combustion engine having a shaft, a housing defining a plurality of cylinders arranged with their axes parallel to said shaft and grouped around said shaft, said shaft including a cam, pistons reciprocable in said cylinders, rotatable followers carried by said pistons and engageable with said cam, lubricating means for supplying lubricant to one side of said followers, said followers including pump means rotatable therewith for the passage of said lubricant to the other side of said followers.

3,016,111
MONODISC STIRRUP BRAKES
Rene Lucien, Neuilly-sur-Seine, France, assignor to Recherches Etudes Production R.E.P., Paris, France, a corporation of France
Filed May 5, 1959, Ser. No. 811,225
Claims priority, application France May 7, 1958
1 Claim. (Cl. 188—73)



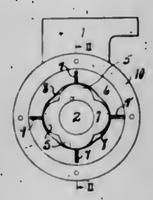
A jack brake comprising an axially displaceable brake disc, a brake stirrup operatively associated with said disc, a fixed part, first and second shafts fixedly coupled to the brake stirrup and substantially parallel to the brake disc on opposite sides thereof, a third shaft movably associated with the brake stirrup and substantially parallel to the plane of the brake disc, first and second supports each carrying a friction lining, said first support being pivotally coupled to said first shaft, said second support being pivotally coupled to said third shaft and movable therewith, means for engaging and displacing said second support, means including connecting rods of equal length movably coupling said third shaft to said second shaft to remain substantially parallel to the plane of the brake disc for all movements of said third shaft, and means for transmitting braking torque from the brake stirrup to the fixed part including a swivel mounted on the fixed part and an arm mounted on said swivel.

3,016,112
BRAKE ANCHOR PIN
James O. Helvern, Lewisburg, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 17, 1959, Ser. No. 840,714
5 Claims. (Cl. 188—78)



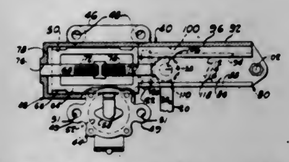
5. A vehicle drum brake, comprising, in combination, a support member, means on said support member rotatably supporting a brake drum and vehicle wheel, an embossment on said support member supporting a subassembly including a backing plate, a wheel cylinder, means connecting said wheel cylinder to said backing plate, two brake shoes adapted for frictionally engaging the inner periphery of said brake drum, a strut positioned between two cooperative adjacent ends of said brake shoes, said wheel cylinder positioned between the opposite two cooperative adjacent ends of said brake shoes, a hollow anchor pin engaging said brake shoes in their retracted position, a portion of said hollow anchor pin extending through an opening in said backing plate and adapted for engaging said embossment on said support member, a retraction means retracting said brake shoes, fastening means extending through the central opening in said hollow anchor pin adapted for threadedly engaging said embossment on said support member thereby providing the fastening means for said subassembly.

3,016,113
SAFETY BRAKES FOR HOIST LINES
Gerald J. Easley, Fort Worth, Tex.
(4409 Mackey Drive, Richland Hills 18, Tex.)
Filed Dec. 5, 1956, Ser. No. 626,460
2 Claims. (Cl. 188—189)



1. In a hoist, a housing, a shaft rotatably mounted in said housing, a sheave fixedly carried by said shaft, a brake drum secured to said housing, a brake shoe of relatively large mass within said brake drum, cam means carried by said shaft and engaging the internal periphery of said brake shoe whereby a sudden change in the velocity of said shaft will cause relative movement between said shoe and cam means and move said shoe into frictional engagement with said drum and cam means to stop rotation of said shaft.

3,016,114
SLACK ADJUSTER
Walter R. Polanin, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed Jan. 26, 1959, Ser. No. 788,851
13 Claims. (Cl. 188—203)



1. In a brake arrangement for a vehicle having a frame and a supporting wheel and axle assembly presenting a rotatable friction surface, the combination of: friction shoe means disposed for frictional engagement with said surface; a generally vertically disposed brake lever pivotally connected to said friction shoe means; power means operatively connected to the brake lever for actuation thereof; and an automatic slack adjuster mounted on the frame, said slack adjuster presenting an opening for receiving said brake lever, said opening being elongated in the direction of slack adjustment, said slack adjuster presenting adjacent to and extending along the length of said opening substantially parallel upwardly and downwardly facing surfaces; and a fulcrum element pivotally connected to said brake lever and supported by and between said surfaces for lineal movement parallelly thereof and along the length of said opening, said element being the sole support of said lever for resisting the brake torque of the lever about said rotatable surface.

3,016,115
PORTABLE SHELTER
Richard Harrison III, 63 Prospect Parkway, Portsmouth, Va.; Henry V. Shriver, 128 Sir Oliver Road, Norfolk, Va.; and Ayler J. Holland, Jr., 417 Rudee Blvd., Virginia Beach, Va.
Filed Aug. 13, 1958, Ser. No. 754,751
7 Claims. (Cl. 189—2)



1. A portable collapsible shelter comprising, a sheet of substantially rigid material having a hub and a perimeter spaced therefrom, a plurality of hinge lines extending from said hub and intersecting said perimeter, adjacent hinge lines being foldable in opposite directions, a tie variable in length at will, and attachment means adjacent alternate hinge lines and spaced from said hub to holdingly receive said tie, whereby said alternate hinge lines may be adjustably held conjointly inwardly of the hinge lines intermediate said alternate hinge lines to vary the height and width of said shelter in set up condition.

3,016,116
RETAINING MEANS FOR CONSTRUCTION PANELS
Clifton L. Clevenger, 5020 55th Ave., Hyattsville, Md.
Filed July 22, 1958, Ser. No. 750,241
11 Claim. (Cl. 189—34)

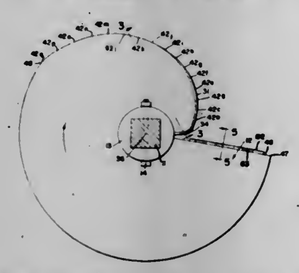
Structure for assembling wall panels in edge-to-edge coplanar arrangement, comprising: a pair of coextensive

stud-defining relatively straight strips of sheet material having their medial portions interconnected throughout the lengths thereof and their lateral portions diverging at least along one edge thereof to define a trough-like recess, the margins of said diverging portions being first bent coplanarly away from each other, next bent coplanarly toward each other to provide double-thickness coplanar flanges substantially perpendicular to a plane defined by the contacting surfaces of said medial portions, and finally bent toward each other and inwardly of the mouth of said recess, and a clip member formed of a third strip of sheet material of a length substantially equal to that of said first-mentioned strips bent into



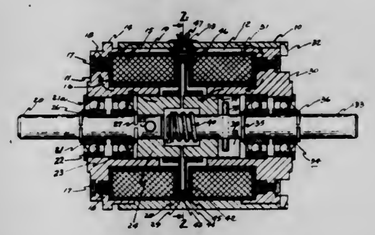
T-shaped cross-section with its marginal portions defining coplanar flanges forming halves of the cross bar of the T and with its central portion defining a two-lamina stem of said T, the laminae of which stem diverge slightly toward and are integrally joined at the free end of the stem by an integral rounded portion to provide a rounded-end tapered tongue for easy insertion between and binding engagement with the edges of the said stud-defining strips inturned at the mouth of said recess, whereby the adjacent edges of coplanar wall panels of various thickness can be quickly and easily fixed to the face of the stud defined by said strips, with the edges of said panels held thereagainst and covered by the oppositely extending flanges of said clip.

3,016,117
SCREW ANCHOR
Gerald A. Petersen, Saratoga, Calif. (% Petersen Engineering Co., 461 Kifer Road, Santa Clara, Calif.)
Filed Jan. 16, 1959, Ser. No. 787,198
5 Claims. (Cl. 189—91)



1. A screw anchor comprising a shaft, a hub on said shaft, and a helical blade on said hub, said blade have a cutting edge having a curved configuration connecting a series of points, said points being situated on concentric circles of radii increasing in equal increments, the first point being located on the innermost of said circles at a radius slightly greater than that of said hub, the second point being located at the intersection of the second innermost of said circles with a first line drawn at a predetermined first angle with a tangent to said first point, the third point being located at the intersection of the third innermost of said circles with a second line drawn at a second angle with a tangent to said second point, said second angle at a predetermined decrement relative to said first angle, and each successive point being located at the intersections of successive circles and lines drawn at angles diminishing at the same predetermined decrement with tangents to the preceding points, the shape of said cutting edge being such that all points along said cutting edge cut evenly, uniformly and simultaneously as said anchor is rotated in the soil.

3,016,118
ELECTROMAGNETIC CLUTCHES AND BRAKES
Norman C. Zatsky, Huntington, N.Y., assignor to Reeves Instrument Corporation, Garden City, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,552
15 Claims. (Cl. 192—18)



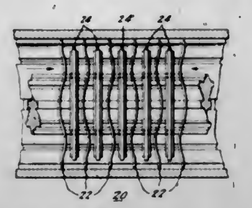
4. An electromagnetic device comprising a cylindrical housing, first and second substantially annular magnetic cores coaxially disposed within said housing, the adjacent ends of said cores being axially displaced from each other, first and second coils surrounding said first and second annular cores respectively, first and second shafts rotatably mounted within said first and second annular cores, a first armature rigidly coupled to said first shaft, a second armature slideably mounted on said second shaft and adapted for rotation therewith, spring means surrounding said second shaft and pressing against said second armature, said spring means urging said second armature away from said first armature, and first and second torque transmitting discs affixed to said first and second armatures respectively for rotation in the space between said first and second coils, said second torque transmitting disc being translated axially by said second armature to engage said first torque transmitting disc when said coils are energized.

6. An electromagnetic device as defined in claim 4, further comprising an annular stationary braking surface situated within said housing and wherein said second torque transmitting disc is pressed against said braking surface by the action of said spring means when said coils are de-energized.

3,016,119
CLUTCH STRUCTURE WITH FLAT AND UNDULATED DISK PACK
Maurice S. Rosenberger, Birmingham, and Frank J. Winchell, Franklin Village, Mich., and Harold W. Schultz, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 19, 1953, Ser. No. 386,976
7 Claims. (Cl. 192—68)

1. For use in an automatic transmission, a wet clutch pack adapted to operate in a fluid vehicle comprising a plurality of each of two types of plates alternately arranged in torque transmitting relation to one another, one type of plates consisting of unfaced metal having a waved

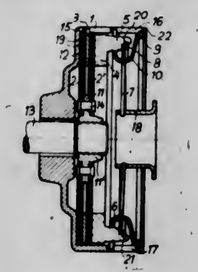
peripheral surface including at least three waves, and the other type of plates consisting of a flat metal base including non-metallic friction facings coextensively bonded to each side of every plate.



3,016,120
CLUTCH, ESPECIALLY FOR MOTOR VEHICLES

Kurt Häussermann, Stuttgart-Oberturkheim, Paul Maucher, Stuttgart, and Hans Stallbaumer, Esslingen-Hohenbuhl, Germany, assignors to Lamellen- und Kupplungsbau August Haussermann, Stuttgart-Oberturkheim, Germany

Filed July 2, 1958, Ser. No. 746,189
Claims priority, application Germany Dec. 5, 1957
2 Claims. (Cl. 192—89)

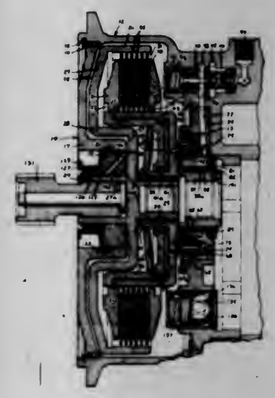


1. In a clutch, especially for motor vehicles: a bell-shaped body adapted to be drivingly connected to a drive shaft and comprising a hub portion and a substantially cylindrical skirt extending in axial direction of said hub portion, said skirt having first cutouts and second cutouts; a hub member having a radially extending flange and being located within said skirt in radially spaced relationship thereto, said hub member being substantially coaxial with said skirt and being adapted drivingly to be connected to an output shaft, a plurality of friction plates respectively connected to opposite sides of said flange, intermediate disc means extending between said friction plates and engaging said first cutouts for rotation with said bell-shaped body and for selective frictional driving engagement with said friction plates, an axially displaceable pressure plate having a flanged portion and being mounted within said skirt for selectively exerting pressure on said friction plates and said intermediate disc means, an annular supporting disc member having its major portion located within said skirt and being provided with radial extensions extending into said second cutouts for establishing rotatable connection between said supporting disc member and said bell-shaped body, said supporting disc member also being provided with peripheral cutouts slidably engaging said flanged portion, a cone-shaped spring having its marginal portion in engagement with said pressure plate and being operable selectively to move said pressure plate axially in either direction for respectively establishing and interrupting frictional engagement between said friction plates and said intermediate disc means, said supporting disc member having its inner marginal portion curved toward and in engagement with the inner side of the outer marginal portion of said spring at points spaced from the points of contact of said spring with said pressure plate, an annular lid member having its inner marginal portion curved toward and engaging the outer side of said spring substantially opposite to the lid member engaging portion of said supporting disc member, and a spring ring supported by and in engagement with the inner surface of said skirt and engaging the outer marginal portion of said lid member to thereby secure the latter and said friction plates and said pressure plate as well as said intermediate disc means within said skirt.

3,016,121
HYDRAULICALLY OPERATED CLUTCH

Bruce H. Mosbacher, Rockford, Ill., assignor to Roper Hydraulics, Inc., Rockford, Ill., a corporation of Illinois

Filed May 28, 1959, Ser. No. 816,464
12 Claims. (Cl. 192—91)

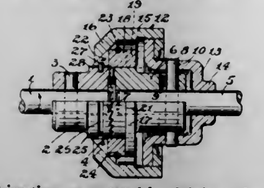


1. A multiple disk clutch including a housing, coaxial drive and driven members rotatably mounted in said housing, first and second sets of coaxial clutch elements respectively mounted on said drive and driven members and interleaved to form a stack, a first pressure applying member on said driven member at one side of said stack, a second pressure applying member mounted on said driven member for rotation therewith and for axial movement relative thereon, means including a spring carried by said driven member and engaging said second pressure applying member for urging the latter in a direction to compress the stack of clutch elements and engage the clutch, means including a radially extending wall portion on said driven member defining an annular cylinder, an annular piston in said cylinder engageable with said second pressure applying member for moving the latter axially away from the stack of clutch elements when fluid under pressure is supplied to said cylinder, said radially extending wall portion having a passage extending therethrough and spaced radially outwardly from the axis of said driven member, an annular distributor ring means mounted on said housing for axial sliding movement and having one end face thereof engaging said wall portion in overlying relation to said passage therein, means for urging said ring means axially into close running fit with said wall portion, and means including a passage in said ring means for supplying fluid under pressure through said passage in the wall portion to said cylinder.

3,016,122
AUTOMATICALLY ENGAGING AND DISENGAGING OVERRUNNING CLUTCH

Donald L. Miller, Horseheads, N.Y., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 30, 1959, Ser. No. 843,478
6 Claims. (Cl. 192—104)

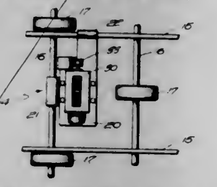


1. In combination, a rotatable driving clutch member having torque-transmitting means formed on a lateral face thereof, a driven shaft rotatably mounted in alignment with the driving clutch member, a driven clutch member slidably journalled on the driven shaft having laterally positioned torque-transmitting means movable into and out of engagement with the torque-transmitting means of the driving clutch member, an axially inclined torque-transmitting connection from the driven clutch member to the driven shaft operable to force the driven clutch member axially into engagement with the driving clutch member, means including centrifugal means for disengaging said clutch members when the driven clutch member overruns above a predetermined speed, and a frictional connection for transmitting torque between the driving clutch member and the driven clutch member when said clutch members are disengaged from each other below said predetermined speed.

3,016,123
CONVEYOR COUNTER

Kenneth L. Wilcox, 99 Carr St., Providence 5, R.I.

Filed June 9, 1960, Ser. No. 34,974
4 Claims. (Cl. 193—35)



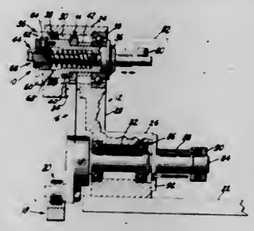
1. A counter for a conveyor having a plurality of longitudinal extending guide rails with a plurality of parallel axles mounted therein with rollers on said axles, a supporting plate for a counter having a clip means adapted to extend over one axle of the conveyor and having a second clip means oriented at right angles to the first clip means adapted to extend over the longitudinal rail of the conveyor, a counting mechanism affixed to the support plate, said counting mechanism having an actuating shaft extending therefrom, an actuating lever being affixed to said actuating shaft, said lever being oriented in a general vertical direction away from the supporting plate and extending above the supporting plate a distance greater than the clip means.

3,016,124
ARTICLE HANDLING APPARATUS

Alton L. Crosby, Austin, and Henry W. Roeber, Emporium, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Apr. 4, 1960, Ser. No. 19,838
2 Claims. (Cl. 198—33)

1. In a device for selectively angularly positioning a stem composed of an insulating wafer having a plurality of depending leads arranged in a patterned array about the longitudinal axis of said stem, the combination comprising a housing; a first stem holder portion mounted in said housing for rotation about the longitudinal axis of said first portion, a gear affixed to said first portion for rotation therewith, said first portion including a wafer contacting member transverse to said portion axis; a second stem holder portion mounted in said first portion for reciprocating movement along the axis of said first portion, said second portion slidably secured to said first portion for concurrent rotation therewith, said second portion including a member having apertures formed therein for receiving the depending leads of said stem,



said apertures aligned with said first portion axis; a spring reacting between said first and second holder portions along said first portion axis whereby a stem may be held between said wafer contacting member and said apertured member with the longitudinal axis of said stem aligned with said first portion axis; a multilated gear pivotally mounted on said housing in engagement with said gear affixed to said first portion, a cam follower mounted on said mutilated gear, a cam in contacting relation with said follower, and means for producing relative movement between said cam and said housing whereby said mutilated gear is caused to pivot on said housing thereby rotating said holder portions a distance proportional to the movement between said cam and said housing.

3,016,125
MAGNETIC MEANS AND CARRIERS FOR ENVELOPES TO FACILITATE SORTING MAIL AS TO DESTINATIONS

John W. Lucas, 1857 Windsor Road, San Marino, Calif.

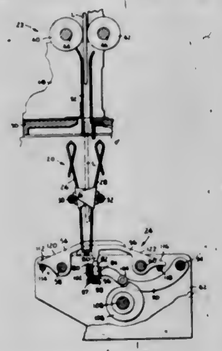
Filed May 22, 1959, Ser. No. 815,162
7 Claims. (Cl. 198—38)



1. As a new article of manufacture, an envelope to cooperate with a series of magnetized plates individually to sort them into different groups for forwarding to different destinations respectively, by means of magnetized steel plates to function as a carrier for the same, said envelopes having two lines of metallic elements extending transversely across the face thereof, and out of contact with each other, said metallic elements operating to adhere to, and attach the envelope to the said magnetized carrier plates individually, by the magnetic attraction of said magnetized plates; the distance between said laterally ex-

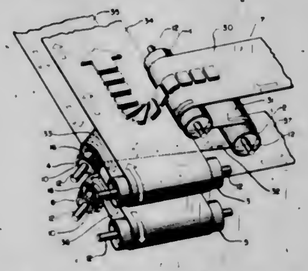
tending metallic elements and their individual location on said envelopes being distinctive to, and corresponding to, the destinations of said envelopes.

3,016,126
DECELERATING DEVICE
Deane A. Beytes, Norwalk, Conn., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Jan. 26, 1960, Ser. No. 4,800
4 Claims. (Cl. 198—140)



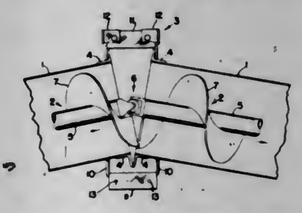
1. A device for decelerating articles such as letter mail when the latter are rapidly fed edgewise, said device having a shaft, a plurality of fingers mounted for individual pivotal movement about said shaft said fingers being adapted to extend transversely of the path of feed of said articles, and an individual friction means yieldably restraining each of said fingers against said pivotal movement in the direction of feed of said articles whereby at least a portion of the kinetic energy of each fed article is dissipated as friction when any of said fingers are pivotally deflected upon being struck by each fed article thereby reducing the tendency for each fed article to bounce.

3,016,127
BELT CONVEYOR APPARATUS
Emmit R. Cooper, California, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 19, 1956, Ser. No. 617,012
11 Claims. (Cl. 198—184)



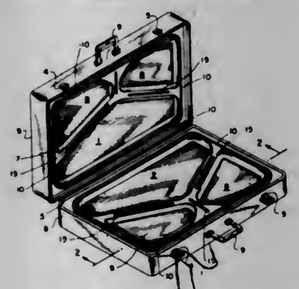
1. In a belt conveyor system for moving material continuously along two straight paths of travel intersecting in plan, the combination comprising an endless belt, first and second rolls arranged transversely to the first path of travel so that the first roll defines an end of that path and the second roll is positioned below the first roll, a third roll arranged adjacent the first and second rolls and transversely to the second path of travel so that the third roll defines an end of that path, and a fourth roll arranged diagonally in plan with respect to the first and third rolls; the belt being looped to travel over and under the first roll, over and under the second roll in the direction opposite to that of its travel around the first roll, under and spirally over the fourth roll, whereby its path of travel is changed, and under and over the third roll.

3,016,128
JOINT CONSTRUCTION FOR CONVEYOR HOUSING
Frederick W. Hacker, Kankakee, Ill., assignor, by mesne assignments, to A. O. Smith Harvestore Products, Inc., Kankakee, Ill., a corporation of Delaware
Filed Oct. 13, 1958, Ser. No. 766,978
5 Claims. (Cl. 198—213)



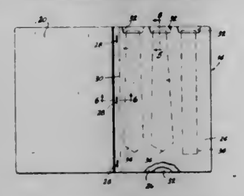
1. A conveyor structure, comprising a pair of conveyor housing sections disposed in spaced end-to-end relation to provide an open joint therebetween, a flange formed on the adjacent ends of said housing sections and extending laterally outwardly of the respective housing sections, a conveyor member disposed within said housing sections and adapted to move a material within said sections, a generally U-shaped strap disposed outwardly of the housing sections and disposed across said joint, said strap having a pair of inwardly extending spaced flanges disposed longitudinally outward of the respective flanges on said housing sections to prevent longitudinal and lateral displacement of said housing sections, and means for securing the free upper ends of the strap together to clamp said strap to said housing sections.

3,016,129
INSULATED CARRYING CASE FOR HEATED FROZEN FOOD DINNERS AND THE LIKE
Edward G. King III, 1004 Wedgewood Road, Baltimore, Md., assignor of one-half to Joseph Wyniger, Baltimore, Md.
Filed Nov. 14, 1957, Ser. No. 696,493
3 Claims. (Cl. 206—4)



1. An insulated carrying case adapted to snugly house a frozen food dinner complete in its pre-packaged container, comprising, a pair of sections hinged together to form an integral case, each of said sections comprising an outer rectangular casing having a bottom and having adjacent raised wall portions terminating in a continuous exposed edge, and an inner shell having a perimeter which is smaller than the perimeter of said edge of said casing, a continuous band of insulation material disposed therebetween with the inner perimeter of said band being rigidly secured to said perimeter of said shell and with the outer perimeter of said band being rigidly secured to said edge of said casing so as to form a complete and continuous heat-resisting seal between said casing and said respective shell, each of said shells being provided with three cavities recessed below the plane of said edge of said casing and separated one from another by flat surfaces on said shell, each of said cavities of one shell being complementary to a respective one of said cavities of the other shell so as to form three separate compartments when said sections are brought together, said shells and said cavities therein thereby being adapted to snugly house the usual three portions of a typical frozen food dinner, said flat surfaces separating said cavities one from another being provided with complementary tongue and groove formations on respective shells, said tongue and groove formations having a clearance therebetween when said sections are joined together which is just sufficient so that the relatively soft separating portions of a usual package for a frozen food dinner will be pinched together when said sections are closed in order that the individual courses of the meal will be prevented from running together, whereby said carrying case may be held in a variety of convenient positions, and means for locking said sections together.

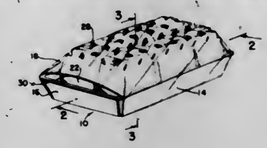
3,016,130
PORTABLE NECKTIE HOLDER AND PRESS
Clem F. Storckman, 1914 W. Main St., Jefferson City, Mo.
Filed Sept. 8, 1958, Ser. No. 759,460
2 Claims. (Cl. 206—7)



1. A portable tie storing and pressing container comprising a pair of outer sheets and at least two of inner sheets, the inner sheets being attached together adjacent a common side edge, the inner sheets having upper edges with a plurality of spaced notches therein, a tie received within each notch and draped on opposite sides of the corresponding sheet for providing separation of the ties so draped, each suspended from a separate one of the notches with portions of each tie on either side of an inner sheet, each outer sheet being integrally hinged to and foldable toward and away from an inner sheet, along fold lines parallel to the side edges thereof, the ties being pressed between the inner and outer sheets, and between the two inner sheets, when the outer sheets are folded toward the inner sheets, whereby the ties are held in place as initially separated from one another by their independent suspension from the notches.

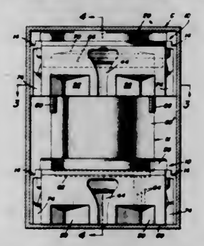
3,016,131
FOOD CONTAINER
Thomas B. Kennedy, Stamford, Conn., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 25, 1960, Ser. No. 4,247
8 Claims. (Cl. 206—45.33)

1. A container adapted for packaging objects which extend above the height of the container comprising a support having a horizontal bottom wall, upstanding side walls and end walls integral with said bottom wall and an open upper side, said side walls, end walls and bottom wall being of semi-rigid material, a rectangular thin flexible sheet of wrapping material having a width substantially the same as the width of said bottom wall and a length sufficient to extend across the bottom wall, over the side walls, across the open upper side including the objects adapted to be supported on said bottom wall, and again across the bottom wall, said wrapping material being secured at one end thereof to the underside of said



bottom wall to fixedly hold said sheet on said support in a predetermined position for wrapping about said support and its contents, a plurality of slits extending through the intermediate portion of said sheet which is adapted to extend over the open upper side of said support and the objects therein, whereby when the sheet is wrapped tightly around the support and its contents the slits will open up to closely follow the contour of the objects extending above the support and the side edges of the sheet will be positioned adjacent to the upper surface of the end walls of the support.

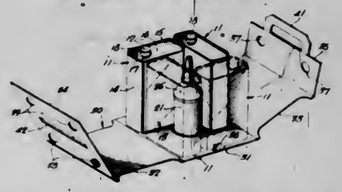
3,016,132
MULTI-FUNCTIONING MOLDED PULP ARTICLE-PACKING MEMBER
Charles J. Chaplin, South Portland, Maine, assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 25, 1960, Ser. No. 11,017
3 Claims. (Cl. 206—46)



1. In a package comprising a rectangular container, an article comprising a cylindrical casing including differently conformed opposite ends, one of said casing ends including a rectangular flange surrounding a transverse lens portion, mounting studs projecting from one side of said rectangular flange at the corners thereof and parallel to the outer surface of said casing, the other casing end including mounting screws projecting longitudinally therefrom, and a pair of identically conformed packing members disposed in respective inverted relationship at opposite ends of said casing and within said rectangular container, said packing members comprising a transversely apertured rectangular center section, four rectangularly disposed side sections uni-directionally hinged at right angles with respect to adjacent side sections of said center section in juxtaposition with the inner surface portions of said rectangular container, said rectangular center section including on one side thereof a circular recess portion extending in the direction toward which said side sections are uni-directionally hinged and

circumposed about one end of the cylindrical casing, the other side of said rectangular center section including rectangularly disposed abutment portions engaging beneath the respective corners of said rectangular flange of the cylindrical casing, said circular recess portion including a circular orienting portion disposed inwardly of said rectangularly disposed abutment portions, said side sections of said packing members including abutment foot-portions adjacent said hinge line and positioning said side sections normal to said rectangular center section, said abutment foot-portions including a shoulder portion in substantially coplanar relation and providing a fragmentary support surface at one side of said rectangular flange, said packing member side sections including positioning ribs extending in the direction of said abutment foot-portions and including a first surface portion spaced from and substantially parallel to said shoulder portions and positioned in overlying relationship to said abutment portions, said positioning ribs including second surface portions substantially normal to said first surface portions and arcuately conformed and juxtaposed on a fragmentary portion of the outer surface of said cylindrical casing, said positioning ribs including angularly extending portions diverging away from one edge of said second surface portions, said angularly extending portions forming a space therebetween in which the mounting studs of said rectangular flange are received.

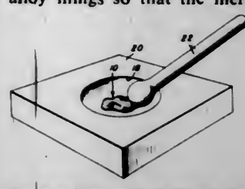
3,016,133
CAN PACKAGE
John Alexander Jones, 6312 Fairfield Drive, Flourtown, Pa.
Filed Jan. 29, 1960, Ser. No. 5,462
4 Claims. (Cl. 206—47)



1. A package of four similar generally rectangular containers having a length greater than their width, said containers being arranged in a square with the front wall of each container coplanar with and contiguous to a side wall of an adjacent container, said square having in each direction a dimension equal to the sum of the width and length of the rectangular containers, said containers forming a central square pocket therein having a dimension in each direction equal to the difference between said length and width, a measuring means received in said pocket, and wrapping means retaining said containers and measuring means in assembled relation.

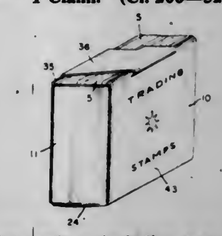
3,016,134
DENTAL AMALGAM PACKAGE
Harold Borsuk, P.O. Box 968, Pittsburg, Calif.
Filed July 1, 1959, Ser. No. 824,424
10 Claims. (Cl. 206—47)

8. A container for mercury for use in an amalgam comprising a readily frangible rigid shell constructed of forming the shell whereby the internal volume may be alloy filings and capable of being intermingled with liquid mercury and forming an amalgam, said shell retaining its shape during normal handling and packaging thereof and including an internal volume enclosed by the shell proportionate to the quantity of alloy filings employed in filled with mercury to exclude air therefrom and also to automatically measure the quantity of mercury so that the quantity of mercury will be proportionate to the quantity of alloy filings so that the mercury and alloy



filings may be amalgamated without further measurement of either ingredient.

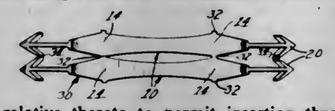
3,016,135
DISPENSING PACKAGE AND BOX FOR STRIP MATERIALS
Francis Ellis Green, Jr., Clarks Green, Pa., assignor to Eureka Specialty Printing Company, Scranton, Pa., a corporation of Pennsylvania
Filed Nov. 5, 1958, Ser. No. 772,035
1 Claim. (Cl. 206—52)



A dispensing package including a strip of material to be dispensed, and a box enclosing a major portion of the strip; said box having opposed first and second side panels and opposed first and second end panels and a closing bottom, an internal tab connecting said first end panel to said second side, a first flap attached to the upper margin of one of said side panels and extending over the portion of the strip within the box, a second flap attached to the upper margin of said first end panel and extending over said first flap, a guide tab attached to said second flap at the end thereof remote from its attachment to said first end panel and extending into the box adjacent said second end panel, said guide tab being disposed intermediate an end of said first flap and said second end panel with said first flap preventing movement of said guide tab and said second flap away from said second end panel to reinforce the connection between said first end panel and said second side panel, the strip extending from within the box between said guide tab and said second end panel and thence over the outer surface of said second flap, and a third flap attached to the upper margin of the one of said side panels other than that side panel to which said first flap is attached, said third flap extending over said second flap with the strip located between said second and third flaps, said third flap having a dimension along the length of the strip less than the corresponding dimension of said second flap and terminating short of said second end panel and thereby exposing the strip at a point between said second end panel and the edge of said third flap adjacent to said second end panel.

3,016,136
HANDLE DEVICE
Ouglesa Jules Poupitch, Itasca, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Feb. 24, 1959, Ser. No. 795,103
4 Claims. (Cl. 206—56)

1. A molded plastic handle structure comprising an elongated bight forming a nominally horizontal elongated body portion, a pair of legs at the opposite ends of and integral with said body portion, said legs depending from said body portion and diverging relative to one another to free ends, and a head at each of said free leg ends integral therewith and each adapted to enter an aperture smaller than the maximum transverse dimension of said head and to resist retraction therethrough, each said head having a tapered nose and a pair of oppositely disposed arms extending upwardly in diverging relation therefrom to upper ends spaced from the handle structure legs and



flexible relative thereto to permit insertion through an aperture smaller than the maximum dimension across said arms, said arms thereafter springing back to initial position to resist retraction, each leg and pair of arms lying in substantially a common plane, and the arms having an appreciable dimension substantially normal to said plane to impart stiffness in said arms normal to said plane whereby said arms resist deformation other than toward and away from said legs.

3,016,137
PLASTIC FILM ROLL SYSTEM
Orthello B. Pollock, Henrico County, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Nov. 6, 1957, Ser. No. 694,833
4 Claims. (Cl. 206—58)



1. A roll of clear plastic film wound with the adjacent convolutions in direct surface contact with each other, the said film exhibiting a tendency for adjacent layers thereof to cling together, and means to facilitate detachment of successive predetermined sections of the film, said means comprising uniformly spaced lines of perforations through the film, each extending transversely across the width of the film, and corresponding spaced narrow lengths of embossed areas of the film disposed immediately adjacent the respective lines of perforations on that side of each perforation furthest from the leading edge of the rolled film, whereby the film is readily tearable along each line of perforations, leaving an embossed area on the new leading end of the film to facilitate locating and lifting the said new leading end of the film from the roll.

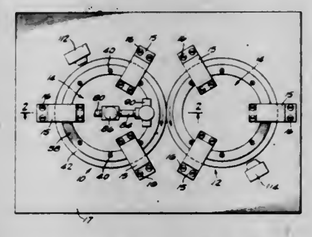
3,016,138
PROCESS OF BENEFICIATING LANGBEINITE ORES
Ira M. Le Baron, Evanston, Ill., and Douglas H. Fenske, Lakeland, Fla., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Dec. 11, 1958, Ser. No. 779,549
11 Claims. (Cl. 209—2)

1. A process of concentrating langbeinite in an ore containing langbeinite, sylvite and halite which comprises preparing a freely flowing aqueous pulp of sized ore by mixing sized ore with brine, flowing said pulp by gravity as a slurry stream in a spiral path at a rate of flow at least sufficient to avoid any substantial amount of agglomeration of particles, collecting a langbeinite concentrate portion from the spiralled stream as a slurry, and substantially separating the langbeinite concentrate from aqueous solution, the time interval from when the ore is mixed with brine to when the langbeinite concentrate is substantially separated from the aqueous solution being less than about five minutes.

3,016,139
METHOD OF BENEFICIATING MICA
Howard W. Adam, Gouverneur, N.Y., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Sept. 29, 1959, Ser. No. 843,077
6 Claims. (Cl. 209—8)

1. The process which comprises heating a mixture of iron-stained muscovite and iron-stained biotite mica at a temperature in the range of from about 300° F. to about 1800° F. under reducing conditions and thereafter subjecting the mixture to magnetic separation to produce a predominantly muscovite concentrate and a predominantly biotite tail.

3,016,140
CARD PROCESSING APPARATUS
Stuart L. Peck, Santa Monica, and Loren R. Wilson, Pacific Palisades, Calif., assignors to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed Jan. 30, 1956, Ser. No. 562,154
29 Claims. (Cl. 209—72)

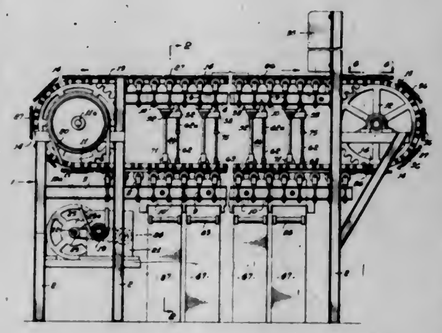


1. In combination for use with a plurality of cards each having a plurality of signal information media thereon, a rotatable drum provided with a plurality of openings at its periphery; means including a rotatable drum for exerting a force on the cards to hold the cards in fixed position on the drum during the drum rotation; a member for receiving the cards from the first drum; means having a stationary disposition displaced from the drum for subjecting the cards to a fluid stream under pressure with a force exceeding that exerted on the cards by the card holding means and in a direction counteracting the force exerted on the cards by the card holding means; the fluid-pressure means and the holding means including the drum being constructed to maintain the holding force exerted by the holding means on the cards during the action of the fluid-pressure means in removing the cards from the drum; and means operatively coupled to the fluid-pressure means for obtaining only intermittent operations of the fluid-pressure means in accordance with the signal information on the cards to obtain a transfer of only particular cards in the plurality from the rotatable drum to the receiving member.

3,016,141
MAIL SORTING APPARATUS AND METHOD
John W. Lucas, San Marino, Calif. (% Southwest Welding & Mfg. Co., 3201 W. Mission Road, Alhambra, Calif.)
Filed Dec. 5, 1957, Ser. No. 700,837
19 Claims. (Cl. 209—72)

1. In mechanism of the class described, the combination of an endless conveyor having a plurality of platens in succession with facing sheets of latex adhering to the outer faces thereof, said platens and facing sheets hav-

ing perforations through the same, a supply hopper having an open bottom for maintaining a pack of envelopes in face down relation above and adjacent to the upper run of the conveyor with the lowermost envelope of the pack exposed through said open hopper bottom, a vacuum suction head under the said upper run and in line with the supply hopper, means for actuating the conveyor to advance the platens under the hopper, and a connec-



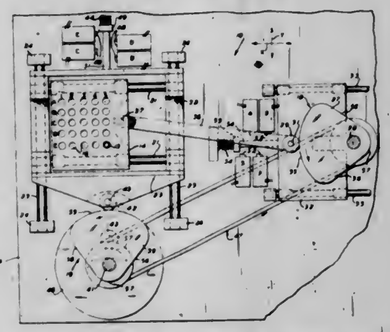
tion to the suction head for maintaining a partial vacuum in said suction head operating through the agency of the perforations to draw the envelopes which are successively exposed at the open bottom of the hopper down against the respective platens as the same are passed in succession between the supply hopper and the suction head, said envelopes having a composition for cohesion with the facing sheets of latex.

3,016,142

METHOD OF AND APPARATUS FOR DISTRIBUTING AN ARTICLE TO ONE OF SEVERAL RECEIVING LOCATIONS

Raymond W. Brown, Evergreen Park, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 26, 1960, Ser. No. 24,710
7 Claims. (Cl. 209—74)



1. Apparatus for distributing an advancing article to one of several receiving locations, which comprises a grid mounted for movement along two mutually perpendicular axes X and Y and having a plurality of article-receiving apertures each of which leads to an associated one of the receiving locations, each aperture being disposed in one of several rows parallel to the X axis and in one of several columns parallel to the Y axis; a pair of similarly shaped cams; a pair of cam followers, each of which is arranged so as to move said grid in an associated one of the X and Y directions; means for rotating said cams in synchronism with each other, said cams being so shaped that said grid tends to reciprocate in the X direction under the influence of one cam and in the Y direction under the influence of the other cam; means for stopping the reciprocation of said grid in the X direction at a time when the column containing the aperture associated with a selected receiving location registers with the line of advancement of the article; and means for stopping the reciprocation of said grid in the Y direction at a time when the row containing the aperture associated with the selected receiving location registers with the line of advancement of the article.

3,016,143

FLOTATION OF GRANULAR ORES

Joseph E. Trachta and Carlos O. Rodriquez, Carlsbad, N. Mex., assignors to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Dec. 19, 1958, Ser. No. 781,462
10 Claims. (Cl. 209—166)

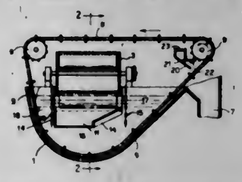
1. In a process for separating the components of a granular potash ore wherein one component of said ore is selectively floated in the presence of a selective reagent for said component, a frothing agent, and a petroleum oil fraction, the improvement which comprises employing as said fraction a petroleum fraction having a viscosity at 130° F. greater than about 100 SSU, more than 35% unsulfonatable materials, and a distillation range with a 10% point above about 500° F.

3,016,144

APPARATUS FOR SEPARATING MIXTURES OF SOLID PARTICLES

Jan N. J. Leeman, Brunssum, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands

Filed Jan. 2, 1959, Ser. No. 784,747
Claims priority, application Netherlands Jan. 3, 1958
6 Claims. (Cl. 209—172.5)



1. An apparatus for separating mixtures of solid particles into fractions of different specific gravities by the float and sink method comprising a tank for receiving a separating bath, a partition wall dividing said tank into a separating compartment having a mixture receiving end and an opposed float particle discharging end and a sink discharge compartment between the ends of said separating compartment communicating laterally therewith through a passage formed by the bottom of the tank and the lower edge of said partition wall, means in said separating compartment for guiding sinking particles in the separating bath therein to the central lower portion thereof, conveyor means for moving the particles settling to the central lower portion of the separating compartment through said passage and said sink discharge compartment and outwardly of said tank, and means for discharging floating particles in the separating bath within said separating compartment outwardly of the float discharge end thereof, said partition wall being formed by a row of flexible elements suspended beside each other in the tank and defining openings therebetween in their suspended condition of a size less than the size of the particles to be separated.

3,016,145

MAGNETIC SEPARATOR

Heinrich Spodig, Netteberge 84, Bork, Westphalia, Germany

Filed Sept. 29, 1958, Ser. No. 763,894
Claims priority, application Germany Oct. 6, 1949
1 Claim. (Cl. 209—223)



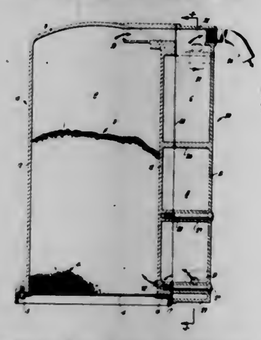
A part-magnetic separator comprising, in combination, a non-magnetic drum; stationary carrier plate means of ferro-magnetic material extending longitudinally in said drum and having longitudinal edge portions adjacent the inner surface of the drum; a group of permanent magnet units carried by said plate means axially spaced from one another so that the magnetic circuit is closed through said plate means, each unit having an uneven number of permanent magnet rods mounted on one side of said plate means to extend toward said drum in a plane transversal of the axis of said drum and so arranged that the polarities of the outer ends of the rods are of equal sign; and an even number of complementary magnetic rods of ferro-magnetic material mounted on said plate means in alternation with said permanent magnet rods and assuming at their outer ends the polarity of the inner ends of said permanent magnet rods so that the outer ends of the magnetic rods closest to said longitudinal edge portions have the same polarity, said plate means thus dividing the drum into a magnetically effective peripheral portion and a complementary magnetically ineffective portion, with said longitudinal edge portions of the plate means presenting polarities of equal sign.

3,016,146

PORTABLE WATER TREATMENT DEVICE

Donald C. Smith, Downey, and John C. King, Los Angeles, Calif., assignors to Alloy Die Casting Co., Los Angeles, Calif., a corporation of California

Filed May 15, 1958, Ser. No. 735,414
2 Claims. (Cl. 210—190)



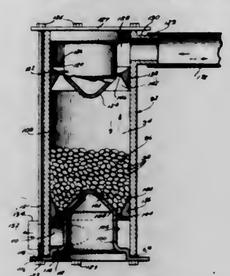
1. A container for water conditioning or treating purposes comprising a vertically elongated enclosed tank having a bottom and side wall members; an enclosing structure formed on and with a side wall of said tank, said side wall provided with a laterally outward projecting and continuous sealing edge, said structure having an end wall member having a complementary laterally projecting and continuous sealing edge adapted to be juxtaposed with said side wall edge, means for fastening said end wall member to said side wall, thereby forming an enclosure; a partition extending between said end wall member and said side wall formed by complementary laterally projecting edges on each, said edges extending downwardly from said sealing edges at the top of said structure and then to said sealing edges at the side of said structure, said partition dividing said enclosure into first and second treating compartments, a first passage opening formed laterally through said tank side wall adjacent said bottom and fluidly communicating with the lower end of said first compartment, a second passage opening formed laterally through said tank side wall adjacent the top thereof and fluidly communicating with the upper end of said second compartment, an inlet conduit extending into the lower end of said first compartment, and a discharge conduit extending from the upper end of said second compartment.

3,016,147

SELF-CLEANING FILTER FOR LAUNDRY MACHINE

Clifton A. Cobb, Edward E. Wiessner, and Carrol A. Orr, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware

Filed Mar. 13, 1957, Ser. No. 645,765
5 Claims. (Cl. 210—275)



1. A self-cleaning washing fluid filter for use in a washing machine comprising a cylindrically shaped filter container having a filter chamber therein, a plurality of particles of filter material within the chamber having a smooth outer surface and being of non-symmetrical shape, a filter cap having a cylindrical outer surface and insertible into the base of the filter container, a second filter cap for the opposite end of the container and insertible into the end thereof, an annular retainer ring located within the cylindrical filter chamber and annularly surrounding said first filter cap, a second annular retainer ring located within the cylindrical filter chamber and annularly surrounding the second filter cap, said filter caps and retainer rings each defining an annular flow passageway therebetween of a width smaller than the size of the filter particles, an inlet conduit connected to the filter container and communicating with the filter chamber through the said annular passageway, and a discharge conduit connected to the filter container and communicating with the filter chamber through said annular outlet passageway, the flow of washing fluid normally passing through the filter from the inlet to the outlet conduit but reversible to dislodge the individual filter particles from their supported position on the first filter cap to carry filtered foreign materials out through the inlet opening.

3,016,148

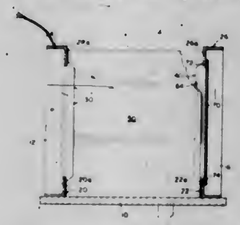
MOUNTING FOR CIRCUIT BOARDS

Joseph E. Riddle, Woodland Hills, Calif., assignor to General Precision, Inc., a corporation of Delaware

Filed Mar. 3, 1960, Ser. No. 12,581
6 Claims. (Cl. 211—41)

5. A mounting assembly for at least one circuit board, and the like, including: a first pair of elongated frame

members respectively including first and second co-planar strip portions each having an edge and disposed in parallel relationship and with the respective edges thereof spaced from one another by a particular distance, a first channel-shaped supporting member extending between the frame members of said first pair in perpendicular relationship therewith and mounted thereon for supporting one end of the circuit board, a second pair of elongated frame members respectively including first and second co-planar strip portions each having an edge and disposed in parallel relationship and with the respective edges thereof spaced from one another by said particular distance, a second channel-shaped supporting member extending between the frame members of said second pair in perpendicular relationship therewith and mounted thereon for supporting the other end of the circuit board, said first and second channel-shaped supporting members each having a length greater than said particular distance and each having slotted end portions for receiving the respective edges of corresponding ones of said strip portions, and said channel-shaped supporting members being composed of a deformable material to permit the same to be deformed and inserted into end mounted positions between said frame members.

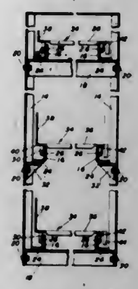


3,016,149
GARBAGE CAN RACK
Charles L. Dean, General Delivery, Thomson, Ga.
Filed May 6, 1960, Ser. No. 27,432
4 Claims. (Cl. 211—71)



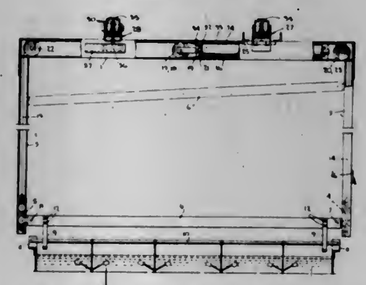
1. A rack for a container of the type having handles on opposite sides thereof, comprising generally bell-shaped side frame members spaced apart in parallel relation slightly more than the width of the container, said side members each having an elongated ground-engaging portion and upwardly converging front and rear portions connected at their upper ends by an arched portion, struts extending across the front and rear portions of the frame members beneath the arched portion, a suspender depending from the central portion of each of said struts, bracing bars connecting the frame members and extending between the front and rear parts, respectively, of the arched portions and between the front and rear parts, respectively of the ground-engaging portions, and a diagonal bracing bar connecting the lower end of one of said converging portions to the upper end of the parallel converging portion.

3,016,150
SHELVING WITH SLIDING SHELVES
Connie Lake, Jacksonville, Ill.
(31 Kent Road, Pittsford, N.Y.)
Filed Aug. 13, 1959, Ser. No. 833,516
7 Claims. (Cl. 211—143)



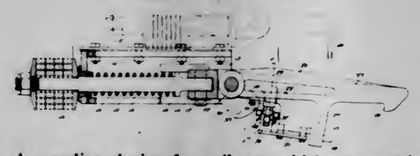
1. A sliding shelf construction comprising a framework, vertically spaced pairs of elongated, parallel and horizontal support elements secured to said framework, a plurality of aligned support rollers rotatably journaled in each of said support elements about horizontal axes extending transversely thereof, a plurality of shelves, each of said shelves having lower surfaces engaging the rollers of one pair of elements wherein said shelves are supported for longitudinal movement therealong, said rollers comprising the sole contact between said shelves and said framework, means on each shelf for guiding the latter against movement laterally of said elements during movement therealong, said guiding means comprising at least one downwardly opening groove formed across the lower surface of each of said shelves extending in the direction of its travel in which the rollers of at least one of said support elements are received, said framework and said support elements being free of portions disposed in close vertical overlying relation to said shelves, whereby a selected one of said shelves may be readily lifted vertically from engagement with the corresponding rollers, said framework on at least one side being open between adjacent vertically spaced support elements an amount sufficient to enable shelves lifted from engagement with said rollers to be withdrawn laterally through said one side of said framework.

3,016,151
HOISTS
Bernard C. Eisenberg, Brooklyn, N.Y.
(P.O. Box 567, Caldwell, N.J.)
Filed Feb. 1, 1960, Ser. No. 5,992
2 Claims. (Cl. 212—135)



1. In a hoist for moving articles relative to the tanks of a metal-plating apparatus, the combination of two horizontal tracks positioned above said tanks, trolley means operating on each of said tracks, a rigid vertical frame comprising a horizontal top bar and two vertical channel bars attached thereto supported by and movable with said trolleys and one of said trolleys being movable with respect to the other trolley, roller assemblies each contained and movable within one of said channel bars, a substantially horizontal movable cross bar supported by and pivotally attached to said roller assemblies and bearing insulated supporting means, air-operated means for raising and lowering said cross bar comprising an air-operated cylinder horizontally mounted with said top bar adapted to impart motion from its piston shaft to said roller assemblies and cross bar in such a manner that greater vertical motion is imparted to said roller assemblies and cross bar than is horizontally traversed by said piston shaft, and tension loading spring means for automatically tilting said cross bar from its horizontal position when said bar is elevated from its lowermost position and is loaded by a weight supported on said supporting means.

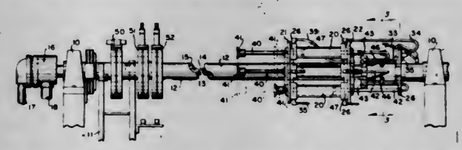
3,016,152
COUPLING DEVICES FOR RAILWAY VEHICLES
Harry William Norton, Sutton Coldfield, England, assignor to Flight Refuelling Limited, Tarrant, Rushton Airfield, near Blandford, England
Filed July 14, 1959, Ser. No. 827,019
6 Claims. (Cl. 213—89)



6. A coupling device for railway vehicles comprising coupling units mounted at the ends of railway vehicles to interengage when said vehicles come together, a mounting block for each of said coupling units, means supporting said mounting blocks for horizontal turning movement relative to said vehicles, horizontal pivot connections between said coupling units and said mounting blocks, each of said coupling units comprising a hook arm having a hook projection at its free end, a ramp integral with said hook arm and disposed to one side of said hook arm, and a hook-engaging part at the inner end of said ramp to receive the hook projection of a mating coupling unit, the hook-engaging part of each coupling unit being offset longitudinally from the hook arm of said coupling unit, a trip device on each coupling unit comprising a member vertically slidable in said coupling unit so that upward movement thereof lifts the hook arm of a mating coupling unit clear of the hook-engaging part, lever means movable through a dead-centre position to lift and lower said vertically slidable member, and spring means acting on said lever means to urge said lever means away from the dead-centre position in both directions, and interengaging means on said coupling units intermediate the hook arm and hook-engaging parts thereof whereby the lifting movement of one hook arm is transmitted to the other hook arm to lift both hook arms simultaneously clear of the hook-engaging parts.

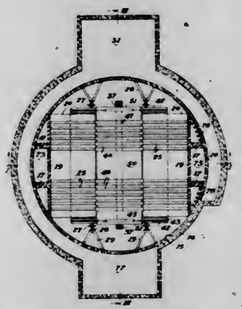
3,016,153
TRANSFER MECHANISM
Jack N. Porterfield, Denver, Colo., assignor, by mesne assignments, to Coors Porcelain Company, Golden, Colo., a corporation of Colorado
Filed June 9, 1958, Ser. No. 740,934
5 Claims. (Cl. 214—1)

1. Transfer mechanism comprising a rotated hollow shaft, separate concentric pressurized air and vacuum passageways one located within the other in the shaft, a source of pressurized air communicating with the air passageway, means for creating vacuum in the vacuum passageway, a cylinder carrier mounted on the shaft to rotate therewith extending radially from the shaft, a plurality of air cylinders axially parallel to the shaft mounted on the carrier, a hollow piston rod slidably mounted in each cylinder extending beyond opposite ends of the cylinder, a piston fixed on each rod within the cylinder, a suction cup on the forward end of each piston rod communicating with the hollow interior of the rod, an air valve carrier mounted on the shaft and rotatable therewith, a plurality of air valves fixed on the carrier, air tubes connecting the air passageway in the shaft



to each air valve, air tubes connecting each air valve to one end of a cylinder, other air tubes connecting the other end of each cylinder to an air valve and each air valve to the air passageway of the shaft, a vacuum valve carrier mounted on the shaft to rotate therewith, and vacuum tubes connecting the vacuum passageway in the shaft to each vacuum valve and each vacuum valve to a piston rod in communication with the interior of the rod, the air tubes alternately admitting pressurized air to a cylinder at opposite sides of the piston to alternately extend and retract the piston rod relatively to its cylinder and move the suction cup into and out of contact with an article to be transferred, all of said air tubes and vacuum tubes being carried in annular paths about the axial center of the shaft when the shaft is rotated.

3,016,154
GARAGE
Giorgio Ugolini, Rome, and Ugo Viale, 31 Via San Marino, Rome, Italy; said Ugolini assignor to said Viale
Filed Mar. 12, 1959, Ser. No. 798,937
Claims priority, application Italy Mar. 14, 1958
5 Claims. (Cl. 214—16.1)

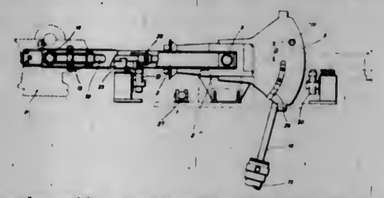


1. A garage for parking automotive vehicles which comprises a well casing vertically positioned below the ground, a hollow cylindrical structure vertically positioned in said well casing, said structure being spaced from the inner surface of the well casing to leave an air space, said hollow structure having two flat vertical walls, two vertical pillars connected between the inner surface of the structure and said walls and defining between the inner surface of the hollow structure and said vertical walls and on diametrically opposite sides of the well

three vertical channels disposed side by side and communicating with the inside of the cylindrical structure, a plurality of vertical guides fixed to the inner surface of the said cylindrical structure between the said vertical flat walls, said well casing having vertically extending recesses on opposite sides thereof, said recesses being in communication with the space above ground and with the inside of the said cylindrical structure, two pluralities of horizontal shelves, the shelves being vertically spaced from each other, said two pluralities of shelves being symmetrically arranged on the said two flat vertical walls and laterally spaced from each other so as to define a central vertical space therebetween, a hoist movable vertically in the said vertical space between the said two pluralities of horizontal shelves and guided by the said vertical guides, said horizontal shelves comprising cantilevered slabs fastened to the said vertical flat walls and a plurality of tubular elements supported by said slabs and distributed in two spaced rows, said tubular elements being parallel to and spaced from one another and having a free end projecting toward the central vertical space, said tubular elements being arranged to support a vehicle, a winch, a motor connected to the winch, the winch being located in one of the said recesses adjacent to the cylindrical structure, a plurality of sheaves rotatably mounted on the walls of the said one recess and a plurality of sheaves rotatably mounted on the lower outer surface of the hoist, metal rope means mounted on the said winch and extending over the said sheaves and moved by the winch, said rope means having one end fixed to the cylindrical structure, counterweights connected to the other end of the said rope means and moving in the central one of the said three vertical channels adjacent to the said flat vertical walls, said hoist consisting essentially of a platform on the upper part thereof having a plurality of tubular elements parallel to and positioned to interleave the tubular elements on the said slabs, the upper surfaces of said tubular elements of the platform forming a supporting plane for a vehicle, said supporting plane being at a height greater than the height of the supporting plane formed by the upper surfaces of the tubular elements on the said slabs when the platform is level with one of the said horizontal shelves for parking a vehicle on the said shelf, whereby said platform can be caused to perform a vertical motion together with the hoist to reach the level of a desired shelf, a horizontal motion on the hoist in one of two opposite directions to bring the tubular elements of the platform in interleaved position between the tubular elements on the said slabs, a vertical motion together with the hoist with respect to the tubular elements on the slabs, a horizontal motion on the hoist to bring said movable platform back again to the center of the hoist in the said cylindrical structure, and a vertical motion in the said cylindrical structure for parking a vehicle on a horizontal shelf, and can be caused to move in the opposite direction when the vehicle is removed from the said horizontal shelf.

3,016,155
DEVICES FOR THE AUTOMATIC HANDLING AND TURNING-ROUND OF ARTICLES
Lucien Perin, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed July 2, 1957, Ser. No. 669,574
Claims priority, application France Aug. 8, 1956
5 Claims. (Cl. 214—147)

1. In an automatic work-handling apparatus for transferring a workpiece from one position to another, in combination, at least one pivotable work-handling arm, a counterweight connected to said arm for constantly biasing the arm toward a ready position corresponding to an upright position of equilibrium, a reciprocably driven rod, first means pivotally connecting the rod to the counterweight at a pivot position, second means pivotally connecting the end of the rod opposite to the pivot connection to the counterweight to a set position, reciprocable means operable to reciprocably drive said rod thereby to oscillate said counterweight and rotate said arm in opposite directions between a terminal first position and a second position intermediate the terminal first position and another terminal position in which said arm is inclined with respect to said upright position, said intermediate position being disposed between said other terminal position of the arm and its upright position and said upright position being disposed between said terminal positions,



said reciprocable means having means operable to a terminal dead-center position for positioning the arm in its intermediate position, means connecting the last-mentioned means to said rod, a gripper mechanism on said arm for releasably grasping a workpiece at the terminal first position and releasing it at the other terminal position, means for actuating the gripper mechanism in timed relationship with the rod driving means, and the counterweight being so chosen as to allow the workpiece to assist in moving the arms to said other terminal position thereof when the arms are moved away from said position of equilibrium.

3,016,156
SERVICE CAR
Truman P. Mooney, Box 95, Kopperston, W. Va.
Filed Sept. 9, 1959, Ser. No. 838,875
11 Claims. (Cl. 214—152)

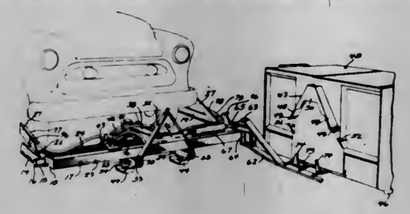


1. A method for moving a rail car over a broken section of track by means of a service locomotive having a jack mechanism and cable winch mechanism at one end of the locomotive comprising the steps of moving said one end of the service locomotive up to one side of the broken section of track; moving the adjacent end of the rail car on the opposite side of the broken section up to said one end of the locomotive; raising the adjacent end of the rail car by the jack mechanism on the locomotive and connecting the opposite end of the rail car to the cable winch mechanism to move the rail car over the broken section of track.

3,016,157
LOADER APPARATUS
John R. Brisson, Norway, Mich., assignor to Lodal Inc., Norway, Mich., a corporation of Michigan
Filed Dec. 19, 1957, Ser. No. 703,822
10 Claims. (Cl. 214—302)

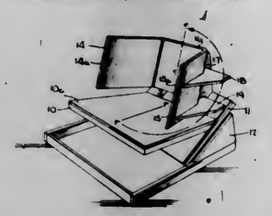
3. Loading apparatus comprising, an elevationally positionable elongated frame pivotally mounted on a vehicle, an upright triangle mounted on a front central portion of said frame, a sweep arm pivotally secured at one end to said elongated frame adjacent one end thereof and having a container engaging means on its free end swingable between laterally offset and centrally located positions

with respect to said frame, a material container having an inverted V-shaped member secured thereto and complementary to said triangle, power means on said vehicle to raise said frame and thereby wedgingly insert said tri-



angle in said V-shaped member when said loader is raised, and power means mounted on said frame for swinging said arm between said positions to thereby position said container adjacent said triangle.

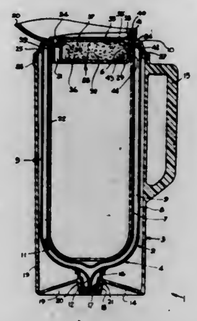
3,016,158
COIL UPENDER
Earl A. Horton, Philadelphia, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Apr. 13, 1959, Ser. No. 806,039
4 Claims. (Cl. 214—652)



1. An upender comprising a member providing a surface for receiving an article, means for moving said member in a path of movement defining a generally right angle conical surface of revolution having an axis extending at approximately 45° to the horizontal to thereby move said surface from a position in which said surface extends in a generally horizontal direction so that an article may be placed thereon to a position in which said surface extends substantially vertically upward relative to said horizontal direction, and side elements engageable with the outer periphery of said article and movable with said surface for accepting the weight of said article as said surface is moved from a generally horizontal direction to a generally vertical direction, said side elements being spaced from said surface to accommodate a pallet on which the article is supported.

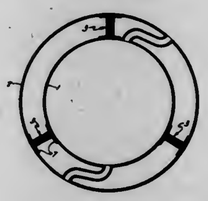
3,016,159
VACUUM BOTTLES WITH PLASTIC LINERS
Carl Bramming, Nashville, Tenn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois
Filed June 16, 1959, Ser. No. 820,700
1 Claim. (Cl. 215—13)

In a vacuum bottle, the combination comprising a vacuum insulated receptacle having inner and outer walls with an evacuated space therebetween, a protective jacket received around the outside of said receptacle, a liner closely received within the inside of said receptacle and covering the entire inner surface of said inner wall, means extending over the upper edge of said receptacle and joining the upper end portions of said liner and said jacket, a closure removably received within the upper end of said liner, said liner and said closure having interengageable elements for securing said closure in said liner, a pouring spout on said closure, an opening through said closure for



pouring liquid therethrough, and a movable valve member on said closure for opening and closing said opening.

3,016,160
THERMAL INSULATING BLOCK
George H. Scharpf, Gibsonia, Pa., assignor to M.S.A. Research Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 25, 1959, Ser. No. 801,875
1 Claim. (Cl. 220—15)

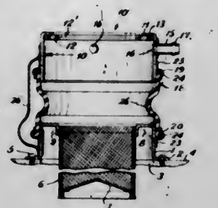


The combination with a pair of adjacent objects having different temperatures, of rigid spacing blocks extending across the space between said objects, each block comprising two thin metal strips each folded back and forth upon itself to form a stack of parallel plates spaced apart a distance equal to their individual thickness, and the plates of the two stacks being alternately interleaved but with one stack turned 90° to the other stack to lock the stacks together, said blocks being tightly compressed lengthwise of said stacks by said objects to press said plates tightly against one another throughout their areas to rigidly support one of said objects from the other in fixed spaced relation thereto, and the blocks thermally insulating each of said objects from the other.

3,016,161
FLEXIBLE FILLER TUBE ASSEMBLY
Stephen C. Peplin, Lakewood, Cleveland, Ohio, assignor to Lakewood Manufacturing Co., Westlake, Ohio, a corporation of Ohio
Filed Aug. 8, 1958, Ser. No. 753,954
2 Claims. (Cl. 220—86)

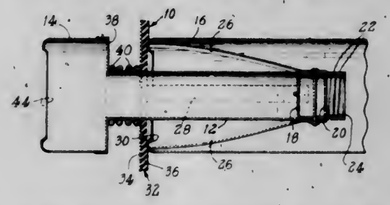
1. A filler tube assembly for liquid storage containers comprising a lower rigid cylindrical section adapted to be secured over a filler opening of a storage container, an upper rigid cylindrical section having a nozzle receiving opening, and an intermediate flexible tubular section secured at its extremities respectively to said lower and upper sections, said intermediate section comprising a tube of resilient material, the walls of said tube being pre-

formed to include concavo-convex areas between its ends, and means connecting said rigid sections and independent



of the flexible section to limit the relative movement of said sections as in flexing the assembly.

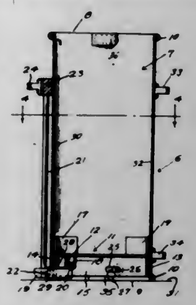
3,016,162
ANTI-SIPHONING DEVICE
Louis A. Cioffi, 345 E. 119th St., New York, N.N.Y.
Filed Dec. 19, 1958, Ser. No. 781,660
6 Claims. (Cl. 220—86)



4. An anti-siphoning device capable of use with a vehicle gas tank filling tube having an outwardly-extending lip which comprises a generally cylindrical sleeve member for partial insertion into said filling tube; grid means mounted within said sleeve member in the insertable portion thereof; spring-loaded retaining plate means mounted in the non-insertable portion of said sleeve member for holding said device firmly in said filling tube, said plate means having a cylindrical skirt extending therefrom with an internal diameter greater than that of said lip of said filling tube; and a plurality of flat spring means mounted at their lower ends on the inner surface of said cylindrical skirt and axially arranged in at least two opposed pairs, the upper ends of said flat spring means being adapted to engage the lip of said filling tube and there held in engagement by the spring loading of said retaining plate means.

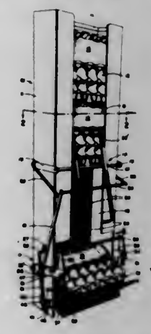
3,016,163
WASTE RECEPTACLE WITH EJECTOR MEANS
Corbie Kessinger, P.O. Box 135, Hopedale, Ill.
Filed July 6, 1960, Ser. No. 41,203
3 Claims. (Cl. 220—93)

1. A waste receptacle comprising an elongated hollow body having an open top and an open lower end, a plunger mounted for longitudinal sliding movement in said body and constituting a receptacle bottom when disposed in the lower end of the body, said plunger having an inner side and an outer side, a plunger rod extending from the outer side of said plunger longitudinally of the receptacle through the lower end of the body and having a outer end adapted to be manually engaged for forcibly projecting the plunger toward said open top, a rigid member secured to and projecting laterally from the other end of the plunger rod, and means swingably connecting said member at an end thereof spaced from the plunger rod to the outer side of the plunger for swinging movement of the plunger rod with said member to a folded position externally of the receptacle body and along a side thereof when said plunger is disposed in the lower end of the body, said outer end of the plunger rod being provided with a handle located adjacent the open top of the receptacle body in the folded position of the plunger rod and with said outer end disposed between the handle



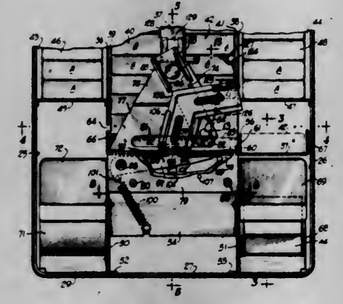
and receptacle body, and a second carrying handle secured to and extending outwardly from a part of the receptacle body and disposed approximately opposite the plunger rod handle, when the plunger rod is in a folded position.

3,016,164
CARTON DISPENSER AND SEPARATOR
Russell E. Matteson, Morris, Ill., assignor to Diamond National Corporation, a corporation of Delaware
Filed Aug. 8, 1958, Ser. No. 753,945
18 Claims. (Cl. 221—9)



16. A dispenser comprising a chute for holding a plurality of groups of nested cartons in vertical alignment, an escapement mechanism at an upper level of said chute and operatively connected therewith, said escapement mechanism comprising a vertically extending lever intermediately pivoted on a horizontal axis of rotation exteriorly of said chute, said lever including a pair of coplanar carton-engaging fingers vertically spaced from each other and oscillatable simultaneously in the same vertical plane, one of said fingers being disposed in the path of travel defined by said chute and alternately removable therefrom when the other finger is disposed in said path of travel for permitting one group of cartons to descend in said chute and retaining overlying groups of cartons against descent in said chute until the last of said one group of cartons is dispensed, an access shelf extending from said chute below said escapement mechanism to receive a group of cartons released thereby, actuating means for said escapement mechanism comprising vertically oscillatable, movable means engageable with the uppermost carton on said shelf, means for restraining movement of said actuating means in a direction to actuate said escapement mechanism when at least one carton of a group is on said shelf, and means for deactivating said movement restraining means when said movable means is in a position in which no cartons are on said shelf.

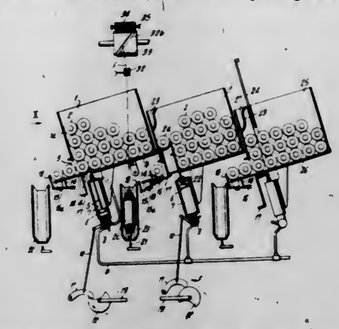
3,016,165
ARTICLE VENDING MACHINE
Charles L. Casey, Riverside, and Juddson B. Ryno, Chicago, Ill., assignors to Reliable Engineering Co., Chicago, Ill., a corporation of Illinois
Filed Sept. 26, 1958, Ser. No. 763,674
1 Claim. (Cl. 221—116)



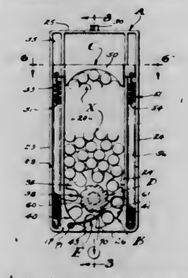
An article vending machine comprising, a cabinet having front, back side, top and bottom panels, a pair of spaced openings in said front panel through which articles are to be dispensed, a magazine in said cabinet adapted to support a double stack of articles in side-by-side relation, said magazine having opposite side walls and a bottom wall extending between said cabinet front and back panels, said magazine side walls terminating above said bottom wall and defining a pair of opposed openings adjacent said bottom wall thereof through which the articles may be ejected, guide means between said magazine and cabinet openings for guiding articles ejected from the magazine openings to the cabinet openings, ejector means for ejecting alternately the lowermost article of one stack through one of said magazine openings and the lowermost article of the other of said stacks through the other of said magazine openings, and means for assisting the stroke of the ejector means after it has partially ejected an article through a magazine opening, said means for assisting the stroke of the ejector means including a pin extending from said ejector means, a bifurcated lever engageable with said pin and pivotally mounted adjacent the ejector means and a spring connected to said lever and biasing same to a predetermined position.

3,016,166
MAGAZINE CONTROL APPARATUS FOR YARN WINDING MACHINES
Stefan Fürst, M. Gladbach, Germany, assignor to Walter Reiners, M. Gladbach, Germany
Filed Feb. 20, 1959, Ser. No. 794,771
10 Claims. (Cl. 221—200)

1. With a magazine container adapted for storing a number of spinning cops parallel to each other and having a front wall with a cop outlet opening adjacent to the container bottom, the combination of a magazine control device comprising an entrainer structure slidably movable in said container near said opening and having a top position in which said entrainer device covers said opening and a bottom position in which said entrainer device uncovers said opening, said entrainer device having a portion receivingly engageable with only the one supply coil closest to said opening when said entrainer device moves from said bottom position to said top position whereby said one coil is caused to issue through said outlet opening when said entrainer device returns to said bottom position, a surface structure located outside said container and adjacent said opening and forming a passageway for the coils issuing from said opening, a lock disposed on said structure for individually releasing the most forward coil therefrom, and control means connected with said retainer device and said lock for actuating them in a given relation to each other.



3,016,167
AMMUNITION DISPENSING DEVICE
William H. Richards, Jr., 724 E. Century Blvd., Los Angeles 2, Calif., and Curtis H. Shreve, 4227 Redondo Beach Blvd., Lawndale, Calif.
Filed Dec. 15, 1958, Ser. No. 780,341
5 Claims. (Cl. 221—235)

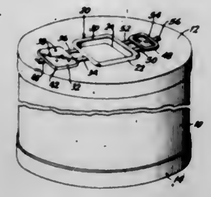


1. A dispensing device for storing and for discharging cartridges one at a time and including, a case with a chamber therein and a discharge opening in the bottom thereof, a transporting means to receive cartridges from the chamber and to shift them into alignment with the discharge opening and comprising a drum rotatably carried on an axis extending across the case and disposed over the bottom, the drum having a reduced peripheral portion and having a series of peripherally spaced pockets each adapted to receive a cartridge when faced upwardly and to carry said cartridges to said discharge opening, and a cam on the case and entering the reduced portion of the drum to engage and discharge the cartridges from each pocket as it is brought into alignment with the discharge opening.

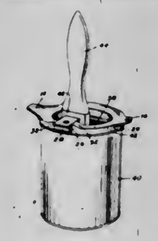
3,016,168
SHAKER AND POURING DISPENSER
Donald W. Larson, Hinsdale, Ill.
(235 La Grange Road, La Grange, Ill.)
Filed Dec. 29, 1958, Ser. No. 783,501
8 Claims. (Cl. 222—189)

1. A molded plastic dispensing device for a container comprising a flat frame member having a central opening

therethrough, a perforated web having a marginal edge adapted to seat within the opening in said frame and hinged thereto, an outwardly directed rim along the marginal edge of said web and forming a seat, and, a removable imperforate cover hinged to the dispensing device and seatable in the rim of the perforated web.

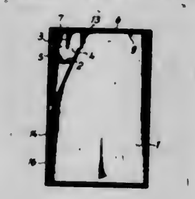


3,016,169
PAINT CAN ATTACHMENT
David Kirshenbaum, 315 Pocasset Ave., Cranston, R.I.
Filed Feb. 3, 1958, Ser. No. 712,792
4 Claims. (Cl. 222—192)



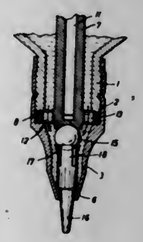
1. An attachment for paint cans and the like comprising a ring-like member having means for detachably securing said member to the upper extremity of an open-top can, and magnetic means secured to said member, said magnetic means having a portion extending radially inwardly of the inner edge of said member and a portion extending radially outwardly from the outer edge thereof, each of said portions possessing magnetic characteristics whereby a brush may be vertically suspended either internally or exteriorly of the can.

3,016,170
DISPENSING CONTAINER
Hans Merkel, Frickenhauserstr. 12, Nurtingen, Germany
Filed Oct. 27, 1958, Ser. No. 769,885
Claims priority, application Germany Oct. 31, 1957
4 Claims. (Cl. 222—425)



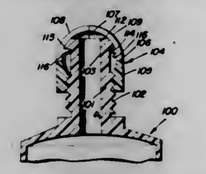
1. A dispensing container for dispensing measured amounts of a free-flowing solid material, comprising, in combination, receptacle means including a hollow body having an opening at one end, a cover plate mounted on said body for sliding movement between a closing position closing said opening and a discharge position defining a discharge opening in said receptacle means, said receptacle means having a dispensing position in which said cover plate forms the bottom of said receptacle means and a reversed position in which said cover plate is located on top of said receptacle means; said body having an inner wall having one end located opposite said discharge opening and another end located opposite said cover plate spaced from the same to form a passage with the same, and a partitioning wall located adjacent said discharge opening, being in sliding contact with said cover plate, and extending from the same toward said inner wall and defining with the same a dispensing compartment located on one side of said partitioning wall and communicating with said discharge opening; and a closure plate fixedly secured to said cover plate for movement with the same and projecting from the same into said hollow body, said closure plate closing said passage in said closing position of said cover plate and being spaced from said other end of said inner wall in said discharge position of said cover plate so that only in said discharge position of said cover plate material located in the interior of said hollow body accumulates in said dispensing position of said receptacle means between the other side of said partitioning wall and said closure plate on said cover plate so that a thus-accumulated quantity of material falls onto said inner wall in said reversed position of said receptacle means whereby a measured quantity of the material falls in said dispensing position through said discharge opening if said cover plate is in said discharge position.

3,016,171
BOTTLE, FLASK OR THE LIKE CONTAINER CLOSURE AND DISPENSING DEVICE
Heinrich Becher, Hauptstrasse, Uckerath Bezirk Koln, Germany
Filed May 26, 1958, Ser. No. 737,902
Claims priority, application Germany May 29, 1957
2 Claims. (Cl. 222—488)



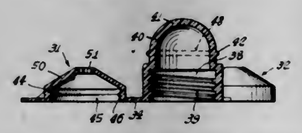
1. A container closure and dispensing device comprising a hollow cap having one end providing a region adapted to embrace tightly the neck of said container and formed immediately above said region with at least one vent aperture, said cap having another end terminating in a conically tapering tip formed with a liquid flow opening, an elongated vent pipe having a longitudinal bore adapted to extend into said container and having at its upper end a disc adapted to rest and to be retained on said container neck by means of said cap, said disc having an axis and being formed with at least one transversely extending passage communicating directly with at least one vent aperture in said cap and with said longitudinal bore in said vent pipe, said disc being further formed with at least one through bore arranged parallel to the disc axis to allow liquid flow through said disc, a member converging towards said tip seated in a recess provided in the disc face remote from said vent pipe, and a hollow, substantially conical closure member extending through the opening in the cap tip and having integral therewith a resilient expansible base supported on said converging member whereby normally to seal said opening, the arrangement being such that axially inward pressure exerted on said closure member coupled with inversion of said container produces expansion of said base and enables liquid to flow through the bore in said disc for dispensing from the clearance between said tip and the depressed closure member, said base member having a longitudinally notched lower edge to provide a plurality of spaced feet engaging said converging member.

3,016,172
CONTAINER CLOSURE
David W. Morrow and Carlos C. Morrow, both of 600 S. Wall St., Kankakee, Ill.
Filed Apr. 3, 1958, Ser. No. 726,279
9 Claims. (Cl. 222—490)



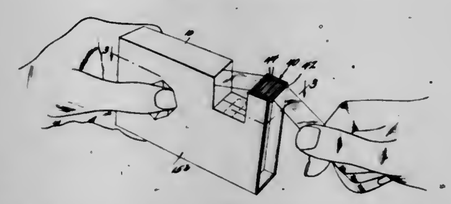
1. A container assembly comprising a hollow body having a discharge neck, a closure assembly longitudinally movable with respect to said neck and including a one piece cap having a forward end normally covering the open end of said neck when the cap is in a forward position relative to said neck, said forward end of the cap being slit to allow the same to open and uncover said open end of the neck when the cap is moved rearwardly with respect thereto, the slit portion of said cap being provided with abutment means on its inner surface, and said neck being provided with stop means engageable with said abutment means to forcibly close the slit portions of the cap when the cap is in a forward position relative to the neck.

3,016,173
CLOSURE AND DISPENSING STRUCTURE
Morton B. Stull, Clifton, N.J.
(221–223 Banta Ave., Garfield, N.J.)
Filed Mar. 2, 1956, Ser. No. 569,169
3 Claims. (Cl. 222—541)



1. As a new article of manufacture, a dispensing cap construction comprising a unitary, integral, molded-plastic piece having a cap body portion and a plurality of fitting portions spaced from and disposed in equispaced relation to each other about said body portion, said piece having connecting webs attached to and integral with said portions, said cap body portion having an internally-threaded bore for receiving the threaded neck of a container whereby the body portion may be secured thereover, said body portion having a projecting, hollow, squat dispensing structure provided with a reduced, closed tip, said fitting portions each comprising a squat, tubular body having a discharge orifice of different configuration from the others and having a bore adapted to receive at least a part of the said dispensing structure to frictionally fit thereto whereby the fitting portion may be frictionally retained on the dispensing structure, the plastic material of the said webs and reduced tip being flexible and readily severable by a cutting instrument, thereby to enable any of the fitting portions to be separated from the cap body portion and to enable the closed tip of the dispensing structure to be separated from the remainder thereof to thereby provide an open dispensing passage in the body portion, any of said fitting portions when applied to and frictionally retained by the dispensing structure being adapted to constitute an orifice for the said passage.

3,016,174
ROLL TAPE DISPENSER AND CONTAINER
William Perkins, Mimico, Ontario, Canada, assignor to F. N. Burt Company, Inc., Buffalo, N.Y., a corporation of Delaware
Filed Feb. 25, 1959, Ser. No. 795,450
Claims priority, application Canada June 23, 1958
6 Claims. (Cl. 225—47)

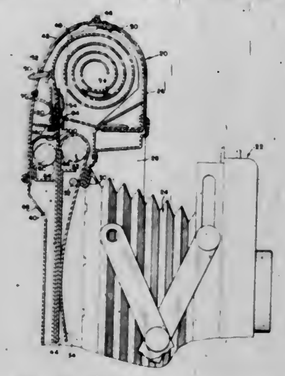


1. A roll tape dispenser and container made from a single blank of form-retaining material, foldable into rectangular box form with a cutting element thereon, said blank comprising: a main body portion scored to define two side walls with an interconnecting top wall, at least one bottom wall flap and at least one rear end wall flap; a cutting element fixed to the top wall and having its cutting edge at the front end of the top wall, a slot in the main body portion behind the cutting element and adjacent thereto adapted to enable tape within the container to be fed to the cutting element; at least one side wall having a forward extension at the front end thereof, said extension being provided with multiple vertical scorings to enable it to be folded to form a vertical reinforcing element disposed directly beneath that portion of the top wall carrying the cutting element to lend it rigid support.

3,016,175
SHEET-ARRESTING MECHANISM FOR PHOTOGRAPHIC APPARATUS
Richard R. Wareham, Marblehead, and Otto E. Wolff, Weston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,544
10 Claims. (Cl. 226—58)

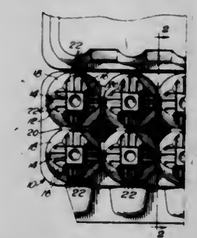
1. A photographic apparatus through which may be advanced sheet material having a succession of marginal engageable portions, said apparatus comprising, in combination, a rigid member extending transversely of and for supporting said sheet material, said member having formed therein at least one perforation adapted to be positioned in register with one of said engageable portions of said sheet material, at least one stop member for engaging at a first position said one registered engageable portion, said stop member being movable in engagement with and in the direction of advancement of said sheet material from said first position to a second position where the advancement of said stop member and of said sheet material is arrested, manually operable means for disengaging said stop member from said one portion at said second position to permit continued advancement of said sheet material, stop member detent means so connected with said stop member that only when said stop member is in said second position said detent means protrudes into said perforation to arrest movement of said

stop member oppositely to the direction of advancement of said sheet material, said detent means being so mounted as to be withdrawn from said perforation when said stop member is disengaged from said portion and



from said perforation, and means for repositioning said stop member to said first position for engagement with the next successive engageable portion of said sheet material.

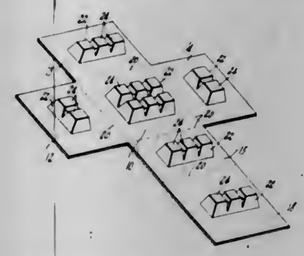
3,016,176
MOLDED PULP EGG CARTON
Richard F. Reifers, New Canaan, and Harold S. Crane, Stamford, Conn., assignors to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 16, 1960, Ser. No. 56,578
12 Claims. (Cl. 229—2.5)



9. In a molded pulp egg carton, an egg receiving section having a plurality of egg receiving cells comprising a base and upwardly diverging side walls extending therefrom, each said side wall having an elongate strip that is relatively thinner than the said side wall, two of said cells being aligned and the side walls of adjacent cells meeting at a V-shaped juncture, the strips of adjacent cells extending continuously from the base of one cell to the juncture and thence to the base of the adjacent cell.

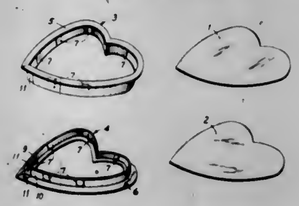
3,016,177
MOLDED PULP PACKAGE
Charles J. Chaplin, South Portland, Maine, assignor, by mesne assignments, to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Original application Nov. 19, 1957, Ser. No. 697,369. Divided and this application Aug. 22, 1958, Ser. No. 759,111
3 Claims. (Cl. 229—2.5)

1. A molded pulp container for packaging articles, comprising a unitary molded pulp sheet adapted to enclose an article to be packaged on all sides thereof, said sheet having interconnected generally flat sections forming container walls on each of the enclosed sides of the article, each of said sheet sections having at least one relatively small, centrally positioned, inwardly extending, integrally molded projection adapted to engage a portion of the packaged article and to suspend the article out of contact with the container walls, said projections being deformable progressively when a predetermined



load force is exceeded, thereby cushioning the packaged article and conforming to the shape thereof and each of said projections comprising a tapered truncated polyhedron subdivided intermediate its height to provide a plurality of separate upper polyhedron segments having flattened apex ends and being interconnected on a common projecting base.

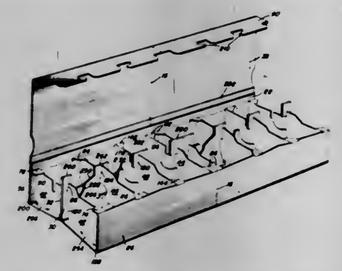
3,016,178
BOX CONSTRUCTION
Charles J. Knocks, 6965 Normandale Drive, St. Louis, Mo.
Filed Feb. 19, 1960, Ser. No. 9,958
1 Claim. (Cl. 229—8)



A container of the character described comprising a bottom member and a top member, said bottom member including a split plastic side wall provided with an edge plate perpendicular thereto, said top member including a split plastic side wall provided with an edge plate perpendicular thereto, a plurality of plastic lugs molded integral with and projecting from said side walls, an insertable bottom cover member and an insertable top cover member, each disposed in its respective side wall between the lugs integral with the side wall and the edge plate of said side wall, a V-shaped recess formed at the juncture of said side walls and a V-shaped recess in the edge members at the position where said edge members meet, and a plastic seal member in the form of a pair of V's disposed in and filling both of said recesses to seal and secure the split ends of the side walls together.

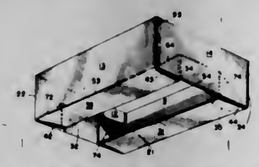
3,016,179
COLLAPSIBLE EGG CARTON
Vernon E. Swanson, Chicago, Ill., assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,540
11 Claims. (Cl. 229—29)

1. A carton comprising parallel front and rear panels respectively connected at lower edge portions to upwardly converging bottom panels terminating in inner edge portions, a cover panel hingedly connected to the upper edge of said rear panel and positionable in overlying relationship to said bottom panels, said cover panel including connecting portions detachably engageable at the upper edge of said front panel, a longitudinal reinforcing rib extending vertically from the inner edge portions of said bottom panels and terminating at an upper edge extending above the upper edge of said front panel, said rib comprising a pair of unglued, juxtaposed panel portions, one of said panel portions including depending feet struck from one of said bottom panels and terminating beneath said bottom panels, the upper edge of said rib being engageable at the inner surface of said cover panel for transmitting force applied to said cover panel through said



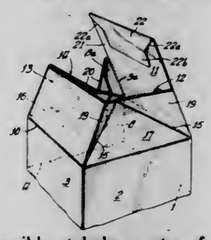
feet to a support surface, and a single, planar partition panel hingedly connected to the upper edge of said front panel and secured on the inner surface of said back panel and adapted to be juxtaposed on the inner surface of said cover panel with portions of said longitudinal reinforcing rib interposed therebetween, said partition panel including at least two full depth transverse partitions and two shallow depth partitions intermediate said full depth partitions, said rib including longitudinally spaced guide tabs having a guide edge at one side thereof, said partitions including a transverse guide edge respectively engaging the respective guide edge of one of said tabs and respectively intersecting co-linear longitudinal abutment edges engaging one side of said tabs normal to the longitudinal rib and buttressing said rib, said transverse guide edges being mutually parallel.

3,016,180
OPEN BOTTOM TRAY BLANK
Glenn E. Struble, Hamilton, Ohio, assignor to Diamond National Corporation, a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,809
1 Claim. (Cl. 229—37)



A blank for forming a shallow, open-topped tray having an open bottom retained in an erected condition by the tray contents wherein the contents can be observed through the bottom and top of the tray erected from the blank, said tray comprising first, second, third and fourth rectangular sidewall panels in linear, side-by-side relation and having a co-linear, uninterrupted upper marginal edge, said sidewall panels being integrally joined by mutually parallel transverse score lines normal to said upper edge, a glue flap joined to one end of the fourth sidewall panel by a score line parallel to said first mentioned score lines, first and second rectangular bottom panels integrally, hingedly joined to the bottom of each of said first and third sidewall panels by score lines parallel to said co-linear upper marginal edge, first and second rectangular retaining panels integrally, hingedly joined to the bottom of each of said second and fourth sidewall panels, respectively, by score lines co-linear with the score lines between said first and third sidewall panels and said bottom panels, score lines co-linear with said score lines normal to said upper edge and integrally joining said first bottom panel to said first retaining panel, said first retaining panel to said second bottom panel, and said second bottom panel to said second retaining panel, and a second glue flap joined to one end of said second retaining panel by a score line co-linear with the score line joining said first glue flap to said fourth sidewall panel, said second glue flap underlying said first glue flap, a cut separating said second glue flap from said first glue flap and extending inwardly from the end margin of said glue flaps and terminating at the score lines joining said glue flaps to said fourth sidewall panel and second retaining panel, said bottom and retaining panels including a lower co-linear margin parallel to the upper marginal edge of said sidewall panels, each of said retaining panels having a pair of diagonal scores converging from the lower corners of said second and fourth sidewall panels and extending diagonally through said retaining panels at substantially 45 degrees to the hinge line thereof and into the lower co-linear margin thereof and terminating in spaced relation thereat, the height of said bottom and retaining panels being less than one-half the width of said second and fourth sidewall panels and greater than one-half the height of said sidewall panels.

3,016,181
TUCK TOP CARTON WITH LOCK
John D. Desmond, Philadelphia, Pa., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed Feb. 8, 1961, Ser. No. 87,873
2 Claims. (Cl. 229—39)



1. A collapsible, tubular carton formed of foldable paperboard, comprising: two pairs of hingedly interconnected side and end walls expandable into rectangular form; said walls having extended portions hingedly attached thereto along aligned fold lines at one end of the carton, such portions being also hingedly attached to each other along lines forming extensions of the respective hinge lines between the carton walls; the end wall extended portions each having bellows fold lines formed therein converging outwardly from the junctures of the carton wall hinge lines and the hinge lines between the walls and related extended portions, the central parts of the end wall extended portions between the bellows fold lines of each of said end wall extended portions being foldable inwardly, causing the triangular side parts to fold against the central part and causing the side wall extended portions to fold into overlying relation with their attached triangular parts; one of the side wall extended portions having hingedly attached to its free edge an ex-

tended flap section the length of which when added to said one side wall extended portion is substantially equal to the width of an end wall; a locking flap hingedly attached to the free edge of said extended flap section and foldable beneath said extended flap section, each of the lateral edges of said locking flap being cut away on an angle complementary to the angle between the diagonal bellows fold line and the hinge line between the related end wall extended portion and its related carton end wall so that such edges will engage against the respective folded edges formed by the bellows fold hinges of the infolded bellows portions disposed below the other side wall extended portions when the carton is in closed position.

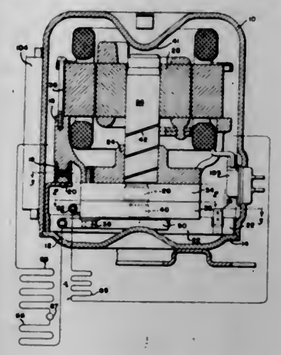
3,016,182
BOTTLE CARRIER
Francis A. Chidsey, Jr., Wayne, Pa., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,888
1 Claim. (Cl. 229—40)



An open-end carrier, for holding two parallel rows of containers having upper portions projecting out of the carrier arranged in side-by-side relation, formed from a unitary blank of suitable sheet material such as foldable paperboard, comprising: a pair of vertically spaced parallel top and bottom horizontal walls interconnected by a pair of horizontally spaced vertical side walls to form a tubular construction open at an end; said top wall including a panel having a plurality of openings therein arranged and disposed to permit upper portions of said containers to project upwardly therethrough out of the carrier; said bottom wall including a pair of generally flat panels hingedly connected at their outboard edges to respective side walls and having inboardly adjacent their inboard edges marginal portions disposed in overlapping relation with, and adhesively secured to each other; and a central retaining member formed of the overlapping marginal portions of said panels at an end of the carrier between said rows of containers for preventing the accidental movement of the containers out of said end of the carrier; said retaining members including a pair of triangular flaps on adjacent inboard corners of the panels each being formed by a fold line extending diagonally across said panel corner, said flaps being adapted to be folded to upright position, at least one of said flaps including a hinged tab formed by a tap fold line in the flap extending from a free outer edge of the flap to said flap fold line and a slit in said flap fold line extending from a free outer edge of the flap to said tab fold line, said tab being adapted, when the companion flaps of respective panels are folded to raised position, to be adhesively secured flatwise against the flap on the companion panel and thereby form said retaining member.

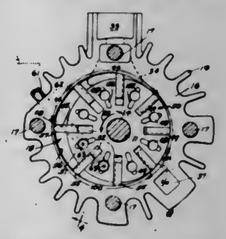
3,016,183
REFRIGERATING APPARATUS
John M. Murphy, Marion K. Tucker, and Thomas H. Fogt, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 19, 1957, Ser. No. 654,030
2 Claims. (Cl. 230—139)

1. In a refrigerant compressor, the combination, an inverted cup-shaped stamping forming an outer casing element, a closure means for the open end of said inverted cup-shaped stamping, a split mounting ring resting on said closure means, a cleat carried by said cup-shaped stamping for engaging the ends of said split ring for holding the same in place against said closure means, compressor mounting brackets having their lower ends secured to said split ring and having spring seats at their upper ends, spring means resting on said seats, a motor com-



pressor supporting frame resting on said spring means so as to be resiliently supported within said casing, a cylinder plate secured to the bottom of said frame and having a circular compression chamber formed therein and closed on the one side by said frame, an end plate secured to said cylinder plate for closing the other side of said compression chamber, piston means operating within said compression chamber, and motor means carried by said frame for operating said piston means.

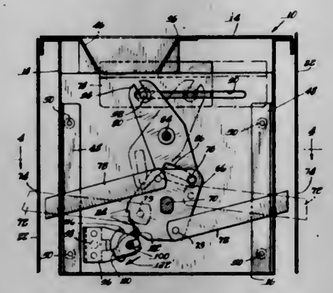
3,016,184
ROTARY COMPRESSORS
Edward C. Hart, Rochester, N.Y., assignor, by mesne assignments, to Scaife Company, Oakmont, Pa., a corporation of Pennsylvania
Filed Jan. 19, 1959, Ser. No. 787,773
7 Claims. (Cl. 230—152)



1. A rotary vane-type gas compressor pump comprising: a pair of end closure members; an annular stator member mounted intermediate said end closure members to define therewith a pump chamber; an oil conduit, extending through one of said end closure members and terminating in an oil inlet port opening into one side of said chamber; a cylindrical rotor member rotatably mounted eccentrically in the chamber between said end closure members, said rotor having a plurality of radially evenly spaced longitudinal vane-receiving slots therein, said rotor member further having a plurality of relatively small axial conduits extending therethrough for transmitting oil from said oil inlet port to the opposite side of said chamber, said rotor member further having a plurality of shallow pressure-equalizing depressions of substantially identical size formed in the opposed faces

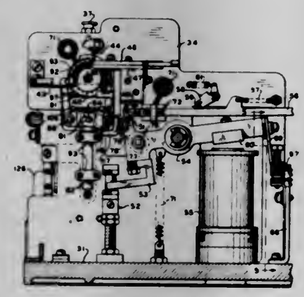
thereof adjacent to and communicating with said axial conduits, each of said depressions being equidistantly spaced between said slots whereby said rotor is rotationally balanced; and means for introducing oil, under pressure, through said oil conduit, said oil inlet port and said axial rotor conduits, into both sides of said pump chamber.

3,016,185
TAMPERPROOF COIN BOX
Fred H. Osborne, Snyder, N.Y., assignor to The Wurlitzer Company, Chicago, Ill., a corporation of Ohio
Filed Oct. 6, 1959, Ser. No. 844,737
8 Claims. (Cl. 232—15)



1. Coin-repositing apparatus comprising: a housing defining a coin-receiving chamber and having a coin-passing aperture which communicates with said chamber; a structure enclosing said housing; plate means slidably mounted to a fixed element within said housing and positionable to obstruct said aperture; latch means for releasably fastening said housing in said structure; and lock means for simultaneously positioning said plate means and operating said latch means, said lock means being arranged to position said plate means to obstruct said aperture when said latch means is disposed to release said housing from said structure and being arranged to position said plate means to free said aperture when said latch means fastens said housing in said structure.

3,016,186
TAPE READING PUNCH
Frank J. Haupt, Bergenfield, N.J., assignor to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed July 28, 1958, Ser. No. 751,210
7 Claims. (Cl. 234—28)



1. In a tape perforator, means responsive to an impressed signal impulse for punching successive sets of code perforations in a tape, electromagnetically energizable interponent means for code perforation punch arming movable out of engagement therewith only by electromagnetic deenergization, separate sensing means operative between successive tape punchings for sensing a last-punched code perforation set, and means responsive to said sensing means for back stepping said tape and overpunching a previously punched area thereof with a predetermined code.

3,016,187
DRIVE MECHANISM FOR RECIPROCATING NUMERICAL VALUE TRANSFER MEMBERS OF CALCULATING OFFICE MACHINES
Gustav Schenk, Wallisellen, Switzerland, assignor to Machine Tool Works Oerlikon, Administration Company, Zurich-Oerlikon, Switzerland, a company of Switzerland
Filed Feb. 19, 1959, Ser. No. 794,438
Claims priority, application Switzerland Feb. 26, 1958
2 Claims. (Cl. 235—60)

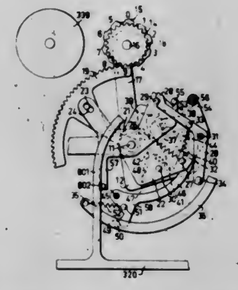


1. In a driving mechanism for calculating machines and the like the combination comprising a drive shaft of substantially rectangular cross-section having a longitudinal notch therein, a rack having a recess therein for said drive shaft having a straight lateral face extending longitudinally of said rack, a stop face at one end of said recess extending transversely to said lateral face for said drive shaft when in inoperative position, a resilient tongue integral with said rack extending into said recess having a face extending parallel to said lateral face and spaced therefrom forming a guide for said drive shaft and said resilient tongue adjacent said stop face having a detent extending into said recess so as to resiliently and elastically engage said notch when said rack is in inoperative position.

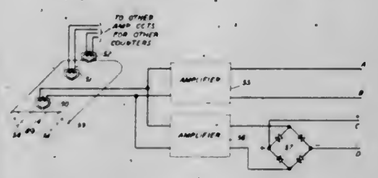
3,016,188
MULTIPLIER PRINTING MECHANISM
John Lydfors, Malmo, Sweden, assignor to Aktiebolaget Addo, Malmo, Sweden, a corporation of Sweden
Filed May 27, 1959, Ser. No. 816,295
Claims priority, application Sweden Sept. 8, 1955
6 Claims. (Cl. 235—60)

1. A multipler digit type selecting mechanism in a multiplier digit printing mechanism of calculating machines adapted for multiplication of the multiplicand by consecutive digits of the multiplier in accordance with the principle of short cut multiplication according to which the multiplier digits 0 to 9 are divided into two groups, viz. a lower group comprising the lowest digits, and a higher group comprising the highest digits, a multiplication control member displaceable from a starting position, at the beginning of a multiplication operation with one multiplier digit, a number of steps corresponding to the value of a digit from the lower digit group and to the

value of the formula 10–*n* for a digit from the higher digit group, said digit being represented by *n* in the formula, said multiplier digit type selecting mechanism comprising a multiplier digit type carrier actuated by the printing mechanism for consecutive printing of the multiplier digits, digit types on said carrier arranged in a row comprising in sequence, beginning with the type for the digit 0, first all the types for the digits of the lower group arranged in a rising digit value sequence, and then all the types for the digits of the higher group arranged in a declining digit value sequence, and a coupling mechanism transmitting the movements of the control member to said type carrier and being movable between two coupling positions, said coupling mechanism, when moving from one coupling position to the other coupling position, displacing said type carrier a distance corresponding to the displacement of said type carrier from the position for printing by means of the type for the digit 0 to the position for printing by means of the type for the highest digit of the lower digit group.

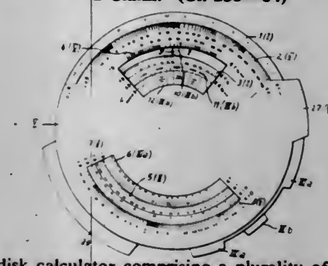


3,016,189
MAGNETIC RECORDING AND ANALYZING OF TRAFFIC OBSERVATIONS
Joseph W. Dehn, Great Neck, N.Y., and Edward Vroom, Brooklyn, Conn., assignors to Bell Telephone Laboratories, Incorporated, a corporation of New York
Filed Oct. 18, 1954, Ser. No. 462,874
18 Claims. (Cl. 235—61.6)



1. In a traffic data analyzer for analyzing the record of a plurality of occurrences of two successive events for a given period wherein said record comprises a storage medium in which is recorded a plurality of groups of indicia with each of said groups of indicia representing the elasped time between respective occurrences of said two events, the combination comprising reading means for reading said indicia in said storage medium, counting means connected to said reading means for counting said indicia, control means controlled by said reading means for resetting said counting means for each of said groups of indicia read by said reading means and means connected to said counting means and controlled by said control means for indicating the number of said groups of indicia which contain a given number of indicia.

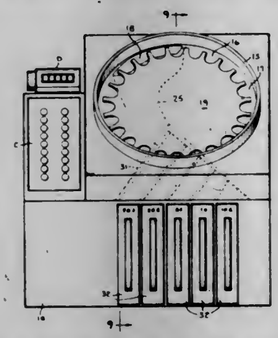
3,016,190
CALCULATING DISK FOR THE DETERMINATION OF THE MECHANICAL VALUES INVOLVED IN A CYLINDRICAL SPRING
Hans Baumann, Richterswil, Switzerland, assignor to Karl Schroeder, Richterswil, Switzerland
Filed Apr. 7, 1958, Ser. No. 726,986
Claims priority, application Switzerland Sept. 14, 1957
1 Claim. (Cl. 235—84)



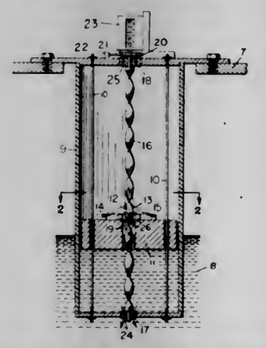
A disk calculator comprising a plurality of concentric disks mounted for relative rotation comprising a base disk having a first scale adjacent its periphery and a second scale inward of its periphery, a second disk having a third scale on its periphery and a fourth scale inward of its periphery and an arcuate opening of more than 180°, a third disk having an arcuate opening of more than 180° and an arcuate opening opposite said first opening of less than 180°, and a fifth scale on the inner edge of said last-named opening and a sixth scale on the outer periphery and a radial mark extruding from the outer edge of said last-named opening to the outer periphery adjacent said sixth scale, a fourth disk having a seventh scale on its peripheral edge and an eighth scale on its opposite peripheral edge, and a fifth disk having a ninth scale on its peripheral edge and two arcuate openings, and a tenth scale on the outer edge of one opening and an eleventh scale on the outer edge of the other opening, the first scale adjoining the ninth scale to cooperate therewith, the mark and the second, fifth and seventh scales being visible through the opening adjacent the tenth scale, said mark cooperating with the tenth scale and the second scale, said tenth scale also cooperating with said sixth scale, said fifth and seventh scales also cooperating, and said third scale being visible through said other opening in said fifth disk and cooperating with said eleventh scale, and said fourth and eighth scales cooperating and being visible through said last named opening, said third and fourth disks having integral interengaging formations to retain said disks frictionally against movement relative to each other while allowing movement freely relative to other disks, whereby the cooperating fifth and seventh scales on said third and fourth disks may be set and actuated as if a single disk, but said two disks may slip against frictional resistance for adjustment.

3,016,191
COIN SORTER AND COMPUTER
Arnold R. Buchholz and Frank Haban, Watertown, and Ray A. Weeks, Milwaukee, Wis., assignors to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Filed Feb. 13, 1956, Ser. No. 565,130
6 Claims. (Cl. 235—92)

1. In a coin value computer for coin sorting machines, the combination with digit coin value indicators 0 to 9 in increments of one cent, tens coin value indicators 0 to 90 in increments of ten cents, of means for controlling said indicators comprising electrically operated relays S1¢, S2¢, S3¢, S4¢, and S5¢ for controlling said digit indicators, each of said digit control relays being separately operable to control the digit indicators 1 to 5 and the relay S5¢ being operable in conjunction with the selective operation of relays S1¢, S2¢, S3¢, and S4¢ to control the indicators 6 to 9, a circuit closure operable by a cent, a circuit closure operable by a nickel, electrical circuits including relays and switches controlled thereby controlled by said circuit closures for controlling said relays S1¢, S2¢, S3¢, S4¢, and S5¢ to register the value of said coins up to nine cents passing said closures, electrically operated relays S10¢, S20¢, S30¢, S40¢, and S50¢ for controlling said tens indicators, each of said tens control relays being separately operable to control the tens indicators 10 to 50 and the relay S50¢ being operable in conjunction with the selective operation of relays S10¢, S20¢, S30¢, and S40¢ to control the indicators 60 to 90, a circuit closure operable by a dime, a circuit closure operable by a quarter, a circuit closure operable by fifty cents, electrical circuits including relays and switches controlled by said last three named circuit closures for controlling said relays S10¢, S20¢, S30¢, S40¢, and S50¢ and the S5¢ digit relay to register the value of dimes, quarters, and half dollars passing said closures, said first named electrical circuits including a carry over circuit to control the relay S10¢ when the digit indicators reach a value of ten cents or greater, said last named electrical circuits including a carry back circuit to control the relay S5¢ when the quarter closure is operated.
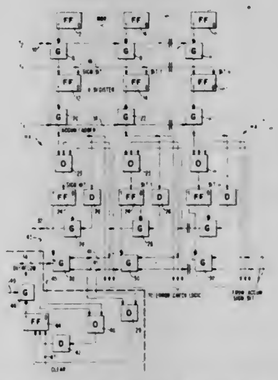


3,016,192
LIQUID REGISTERING DEVICE
Ocie Cook, Jr., Chattanooga, Tenn. (830 N. 33rd St., Birmingham, Ala.), and James H. Coulliette, % Industrial Research Institute, 614 Baldwin Ave., Chattanooga, Tenn.
Filed May 22, 1958, Ser. No. 737,105
1 Claim. (Cl. 235—94)



A registering device for a liquid tank comprising a float adapted to rise and fall with the change in the level of the liquid in the tank, means for vertically guiding and for preventing the rotation of said float, a spiral blade mounted in said tank for rotation about its vertical longitudinal axis, a vertical opening in said float through which said spiral blade is adapted to freely rotate without engaging said opening, a pair of substantially flat vanes pivotally mounted on said float on opposite sides of said spiral blade, said vanes being adapted to snugly engage said spiral blade when said vanes are substantially coplanar with each other, said vanes being adapted to rotate said spiral blade when said float is rising, and being adapted to freely ride on said blade without rotating said blade when said float is falling, and a totalizing counter adapted to be actuated by the rotation of said blade.

3,016,193
OVERFLOW INDICATOR
Morton Brett, Woodstock, and Arthur Schiff, Kingston, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 19, 1960, Ser. No. 9,759
5 Claims. (Cl. 235—153)

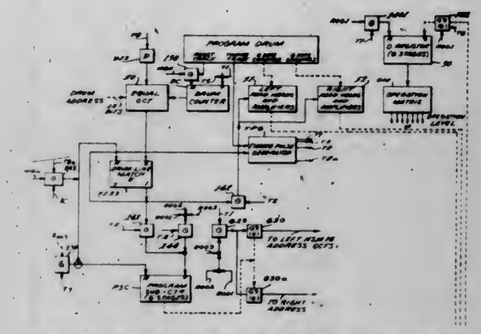


1. Means for detecting the overflow condition of a register of bistable elements, such register storing a sign bit as well as a plurality of bits to represent a number in binary form, means for adding a second sign bit and its associated binary number to said register so as to modify the latter to include the sum of said two sign bits and binary numbers, such modification resulting in the production of carry signals from a bistable element of a low order bit to the next immediate higher order bit of said register when each of such low order bistable elements is modified from a predetermined state to its other state, a bistable device for storing the number of carries so produced, whereby an even number of carries will leave such bistable device in its "non-overflow" state and an odd number of carries will change such bistable device in its "overflow" state.

3,016,194
DIGITAL COMPUTING SYSTEM
Lowell S. Bensky, Levittown, Pa., and David L. Nettleton, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 1, 1955, Ser. No. 544,275
20 Claims. (Cl. 235—157)

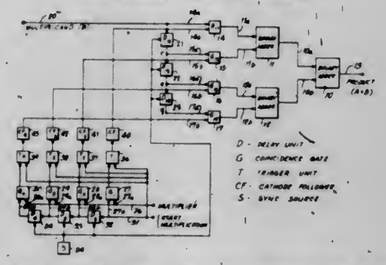
1. In a multiplication system for obtaining the product of two variable length operands by repeated additions to produce successive partial products, the combination comprising storage means having addresses and adapted to store said operands and said products at storage addresses, counters connected to address said operands and said prod-

ucts in said storage addresses, means responsive to said counters to withdraw said operands from and enter said operands into said storage, registers respectively coupled to the inputs of each of said counters for holding said



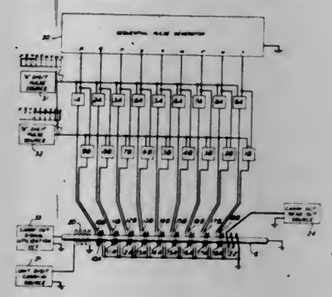
addresses, means to advance the address held in at least one of said registers by one upon the completion of certain of said partial products, and means to set at least one of said counters with the said address in said one register upon the completion of each of said partial products.

3,016,195
BINARY MULTIPLIER
Arthur Hamburgen, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1954, Ser. No. 478,595
12 Claims. (Cl. 235—164)



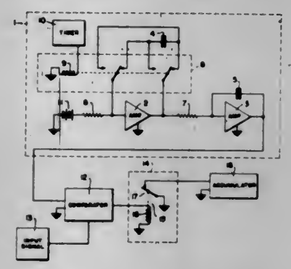
1. An electrical binary multiplier comprising, a binary adder including a plurality of adder units each adapted to add a pair of input binary numbers in serial form to develop an output binary number in serial form equal to the sum of the pair of input numbers, said adder units being arranged in parallel-cascade as a converging series to provide plural input channels corresponding in number to a predetermined maximum number of digits of a multiplier and providing an output circuit in which a resultant output sum binary digit is developed concurrently with the application of binary digits at any of said plural input channels and constituting one digit of a binary number in serial form equal to the sum of all binary numbers applied to said plural input channels, each of said channels having a controllable translation characteristic, means for applying a multiplicand binary number in serial form successively to each of said channels considered in a predetermined order but with a digit-period delay as between successive channels in said order, and means responsive to each of successive digits in a multiplier binary number in serial form for controlling in said predetermined order the translation characteristic of individual ones of said channels to effect controlled successive translation of said multiplicand binary number to said added.

3,016,196
ARITHMETIC CARRY GENERATOR
Paul Mallery, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 6, 1958, Ser. No. 772,208
13 Claims. (Cl. 235—176)



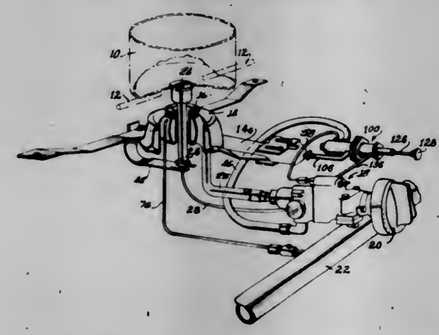
1. An arithmetic carry-out generator comprising an elongated magnetic conductor having a plurality of segments and exhibiting remanent magnetization characteristics when excited by at least a minimal magnetizing force, a first source of digit signals, first means connected to said source and coupled to said conductor for applying subminimal magnetizing forces to a predetermined number of said segments proportional to the value of said digital signals, a second source of digital signals, second means connected to said second source and coupled to said conductor for applying subminimal magnetizing forces to a predetermined number of said segments proportional to the value of said digital signals from said second source, and output means coupled to said conductor responsive to the magnetic state produced therein when the subminimal forces of said first means and said second means are applied to the same one of said segments of said conductor.

3,016,197
SQUARE ROOT EXTRACTING INTEGRATOR
William F. Newbold, Montgomery County, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 760,993
11 Claims. (Cl. 235—183)



1. An electrical integrator, comprising, in combination, an electrical function generating means, a comparison means for comparing an output signal from said generating means with an input information signal to be integrated, said comparison means including means for producing a control signal during the intervals corresponding to the time intervals whenever said input information signal is greater than the output signal from said generating means, time responsive accumulating means, and switching means responsive to the output signal from said comparison means, said last mentioned means connecting said accumulating means to said comparison means to energize said accumulating means during the time interval of the control signal from said comparison means.

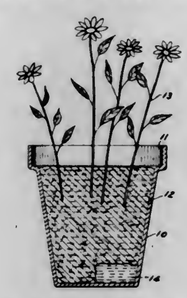
3,016,198
AUTOMATIC CONTROL FOR RANGE DOUBLE BURNER
George E. Small and John R. Fulmer, Kankakee, Ill., assignors to "Geo. D. Roper Corporation," a corporation of Massachusetts
Filed Feb. 29, 1956, Ser. No. 568,486
4 Claims. (Cl. 236—1)



1. In a range, the combination comprising a support for a heat-conducting utensil, inner and outer circular gas burners arranged concentrically below the support for heating a utensil, said inner burner having a relatively low heat capacity and said outer burner a relatively high heat capacity, a single settable thermostat control device connected to a source of gas and arranged for feeding said burners, said thermostat control device including throttling means for gradually varying the gas feed to said burners, a temperature sensing element connected to the thermostat control device for positioning said throttling means, said temperature sensing element being mounted in a centered position above said burners and having its uppermost surface approximately co-planar with the top surface of said support so that said uppermost surface of the sensing element presses intimately against the underside of a utensil, an on-off valve connected between said thermostat control device and said outer burner, means for feeding gas from said thermostat control device through said on-off valve and thence into said outer burner, manually operable means for opening said on-off valve when heating of a utensil is initiated, and means interposed between and mechanically connected between said on-off valve and said thermostat control device and responsive to the attainment of a predetermined opening of said throttling means for positively shutting off the on-off valve whereby all of the gas for heating a utensil is fed to said inner burner.

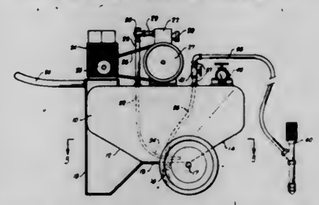
3,016,199
DEODORIZER CONTAINER
Kurt R. Keydel, 1326 E. Woodridge St., Detroit 7, Mich.
Filed July 26, 1957, Ser. No. 674,399
2 Claims. (Cl. 239—55)

1. The combination comprising an open ended container, a liquid retainer made of a capillary type material positioned within said container, said retainer substantially filling said container and having a surface adjacent said open end of said container, and a deodorizing mixture within said container impregnating said liquid retainer, said deodorizing mixture comprising a fragrant oil base medium, and a non-evaporating emulsifying agent for forming an emulsion of said fragrant medium and water, the ratio of the amount of emulsifying agent to the amount of fragrant medium ranging from 1:1 to 1:2, whereby the addition of water forms an emulsion



of said fragrant medium and water and the emulsion is carried by capillary action to the surface of the liquid retainer where the fragrant medium and water may be evaporated and the periodic addition of water causes a further emulsifying action of the remaining fragrant medium with water so that the replenished emulsion may be carried by capillary action to the surface of the liquid retainer.

3,016,200
SPRAY DEVICE AND METHOD
Max F. Boehm, Rte. 3, Box 431, Oklahoma City 7, Okla.
Filed Aug. 11, 1959, Ser. No. 833,078
3 Claims. (Cl. 239—143)

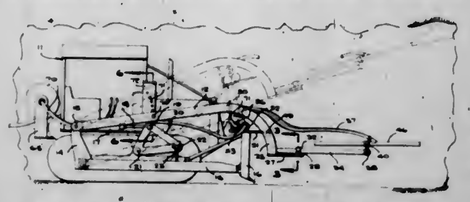


3. A device to agitate a liquid comprising in combination, a compressor; an engine for driving said compressor; a reservoir connected to said compressor for receiving compressed air from said compressor; tube means connected to said reservoir and extending into said liquid; and an interrupting means interposed between said tube means and said reservoir whereby flow of said compressed air is interrupted, said interrupting means including a spring loaded back pressure valve.

3,016,201
TUNNEL CLEANING MACHINE
Oren D. Brogden, % I. M. Tiffin, P.O. Box 241, Escalon, Calif.
Filed Dec. 15, 1959, Ser. No. 859,602
2 Claims. (Cl. 239—164)

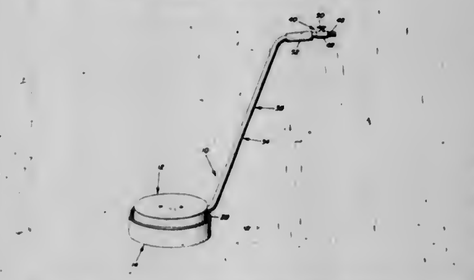
1. A tunnel cleaning machine comprising a movable supporting vehicle provided with elevating means pivoted to said vehicle, a frame pivoted at one end thereof to the vehicle and supported on said elevating means, means to detachably secure said frame in an elevated position with respect to said vehicle, said frame including a horizontal transverse support at its free end, a plurality of nozzle members, sleeve means on the transverse support supportingly receiving said nozzle members, means to adjust said sleeve means angularly in vertical and horizontal planes,

said sleeve means being arranged to support said nozzle members in positions projecting forwardly from said frame, a pair of horizontal header members transversely mounted on said frame, means to connect said header members respectively to a source of water and a source of compressed air, respective mixing valves mounted on



spaced portions of the header members and having inlet conduits communicatively connected to the header members and having outlet ports arranged to communicate with the inlet conduits, and flexible conduit means connecting each of said outlet ports to one of the nozzle members.

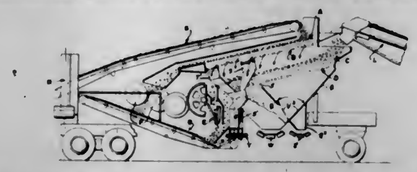
3,016,202
IRRIGATING DEVICE
Anton J. Zalewski, 5319 S. 43rd St., Milwaukee, Wis.
Filed Jan. 13, 1960, Ser. No. 2,304
3 Claims. (Cl. 239—542)



1. A soil irrigator comprising a pan adapted to rest on the ground, a generally inverted cup-shaped baffle mounted in said pan in spaced relation to the walls and bottom thereof, means fixedly securing the baffle in the pan, and means for discharging water into the baffle, the last-named means including a supply pipe extending into the baffle through a side wall portion thereof and terminating in an open discharge end opposed and adjacent to but spaced from an opposite wall portion thereof, said pipe including an upwardly inclined intermediate portion terminating in an angularly extending upper end portion including a grip and providing a carrying handle.

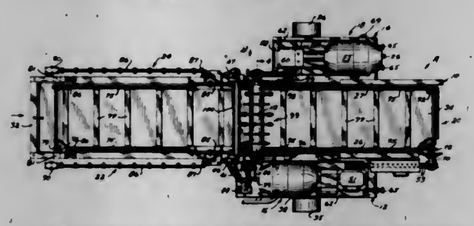
3,016,203
CRUSHING AND SCREENING PLANT
Chester G. Sears and Grant J. Butterworth, Minneapolis, Minn., assignors to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed May 3, 1957, Ser. No. 656,804
25 Claims. (Cl. 241—24)

1. A method of continuously recovering classified aggregates of different sizes in a recirculating conveyor system including, first and second crushers, which consists in, passing pit run material over a first screen to separate said pit run material into a relatively fine material and a coarse material, feeding said coarse material direct to the first crusher, screening the throughs from the first screen to divide out a quickly recoverable product and an intermediate product too coarse for said quickly recoverable product but so fine as to impair the efficiency of the first crusher and requiring further processing, by-passing the intermediate product around the first crusher, and return-



ing said intermediate product into the recirculating system for subsequent reduction by the second crusher and further screening.

3,016,204
CONVEYOR HAVING LOAD PROCESSING MEANS
John B. Long, Oak Hill, W. Va., assignor to Marmon-Herrington Company, Inc., Indianapolis, Ind., a corporation of Indiana
Filed Oct. 17, 1960, Ser. No. 62,910
3 Claims. (Cl. 241—200)

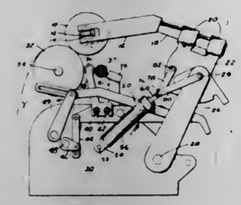


1. A conveyor having a loading end and a discharge end and including a frame, conveying means mounted upon said conveyor for moving a load from said loading end to said discharge end thereof, said conveying means including load moving means and shaft means for supporting said load moving means, load processing means including load shattering means mounted upon said conveyor for reducing individual pieces of a load upon said conveying means to a predetermined size as the load is moved along said conveyor by said conveying means, said load processing means including a pair of spaced apart side plates, means for movably securing one of said side plates to said conveyor frame adjacent each side of said conveying means, said load shattering means including a shaft extending transversely between said side plates and pick means mounted upon said shaft, means for rotatably supporting said shaft upon said side plates axially parallel to said shaft means of said conveying means, lift means attached to said side plates for positioning said shaft and said pick means of said load shattering means at variable spaced apart distances from said conveying means, power supply means mounted upon said conveyor, and means interconnecting said power supply means and said shaft of said load shattering means for providing a rotational force thereto independent of the movement of said conveying means through the entire range of variable spacing of said shaft and said pick means from said conveying means.

3,016,205
PACKAGE ARM CONTROL MECHANISM FOR WINDING MACHINES
Porter I. Barnes, Jr., Johnston, R.I., assignor to Leesona Corporation, Cranston, R.I., a corporation of Massachusetts
Filed May 19, 1960, Ser. No. 30,309
3 Claims. (Cl. 242—18)

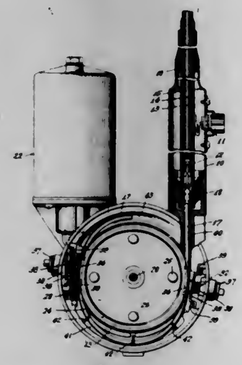
1. In combination with a winding machine, a rotatable mandrel adapted to receive a core to wind a yarn thereon,

driving means for rotating said mandrel, supporting means for said mandrel comprising a pair of arms, the first arm being adapted to support said mandrel for pivotal movement in a generally vertical direction and the second arm carrying said first arm and supporting it and said mandrel for pivotal movement in a generally horizontal direction, and means for applying a braking force to said first and



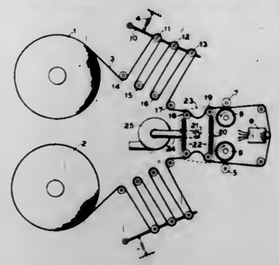
second arms, said last-named means including an element adapted for movement in two opposite directions, means for applying to said element a predetermined force retarding movement thereof in either of said directions, and rigid means connecting said element to each of said arms whereby motion of said arms is transmitted to said element, the retarding force applied to said element being thereby effective to retard movement of said arms.

3,016,206
ANTENNA
Joseph H. Cone, Bridgeport, Conn., assignor to Casco Products Corporation, Bridgeport, Conn., a corporation of Connecticut
Filed May 22, 1956, Ser. No. 586,485
16 Claims. (Cl. 242—54)



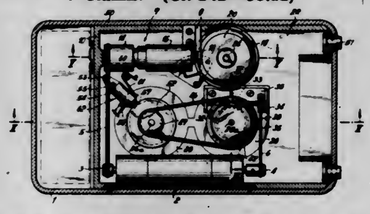
1. An extensible and retractable antenna comprising an antenna section mounted for telescoping movement into and out of a stationary, tubular section; a flexible rod connected to the antenna for actuating the section upon longitudinal movement of the rod; a rotatable pulley mounted to have portions of its periphery in engagement with the rod; motor means connected to the pulley to rotate same; pressure means located at not more than two spaced points adjacent the periphery of the pulley, for causing sufficient frictional engagement between the pulley and the rod only at the spaced points where the pressure means is located so that the pulley may actuate the rod; and means for preventing frictional engagement between the rod and the periphery of the pulley except at each spaced point.

3,016,207
VACUUM LOOP TAPE HANDLER
George E. Comstock 3d, Huntington, N.Y., assignor to Potter Instrument Co., Inc., Plainview, N.Y., a corporation of New York
Filed Dec. 15, 1958, Ser. No. 780,466
6 Claims. (Cl. 242—55.12)



6. In a tape handling system with progressive control means, the combination of, a pair of reels for receiving and for paying out tape, a recording/playback head, a multiple loop tension arm to provide tensioned tape loops between one of said reels and said head, tape driving means to drive tape in at least one direction between said reels, and a vacuum chamber including a tape receiving opening on one side of said head for maintaining tension on a tape as it passes from said tape driving means to said tension arm.

3,016,208
DRIVE MEANS FOR ELECTRICAL APPARATUS
Günter Herrmann, 6 Gartenweg, Ronnenberg, Hannover, Germany
Filed Apr. 23, 1959, Ser. No. 808,467
Claims priority, application Germany Apr. 26, 1958
7 Claims. (Cl. 242—55.12)

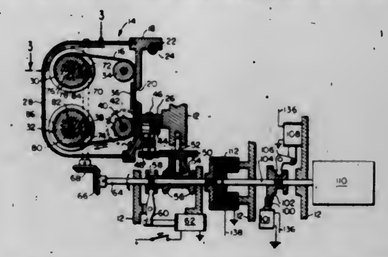


1. A drive mechanism for an electrical apparatus using a record carrier such as wire or tape, particularly for magnetic recorders, said drive mechanism comprising a shaft for driving a tape driving element at a constant speed, a flywheel rigidly mounted on said shaft, a balancing mass in slip connection with said flywheel, a pair of spool spindles, one connected to the other to be driven only when said one spool spindle is driven in one direction, and a single motor drivingly connected to said balancing mass and said one spool spindle, said balancing mass being freely rotatable over a wide range of speeds relative to said motor.

3,016,209
STRIP FEEDING MEANS
René A. Higonnet, Cambridge, and Louis M. Moyroud, West Medford, Mass. (both % Graphic Arts Research Foundation, Inc., 58 Charles St., Cambridge 41, Mass.)
Original application June 8, 1956, Ser. No. 590,306, now Patent No. 2,933,990, dated Apr. 26, 1960. Divided and this application Oct. 6, 1959, Ser. No. 844,767
Claims priority, application Great Britain Aug. 2, 1955
2 Claims. (Cl. 242—55.12)

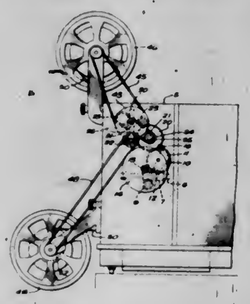
1. Film feeding means for photographic typographical projection apparatus having, in combination, a feed spool

and a takeup spool for the film, a light-tight housing in which the spools are rotatably mounted, each of said spools having a friction clutch, a first drive shaft rotatably supported in and extending from the housing and engaged with the clutches to urge the spools to tend to cause the film to move in opposing directions, a second drive shaft



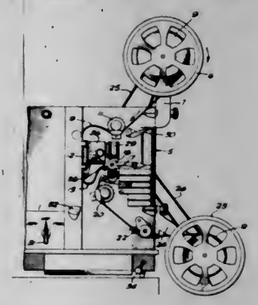
rotatably supported in and extending from the housing, drive means engaged with said second shaft and with the film, a reversing mechanism connected with the second shaft externally of the housing, a third drive shaft engaged with said first shaft and said mechanism externally of the housing, and an intermittent variable drive for said third shaft.

3,016,210
AUTOMATIC FILM TRANSPORT REVERSING MECHANISM
Mario E. Ecker, Pennsauken, and John A. Liggett, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,386
5 Claims. (Cl. 242—55.12)



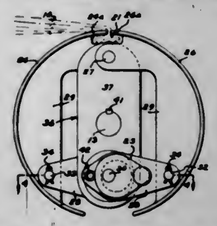
1. In a projector having a supply reel, a takeup reel, and film transport mechanism for moving a film from one to the other of said reels, the combination of driving means, means responsive to said driving means for actuating said mechanism selectively either for forward operation thereof to advance a film in a forward direction from said supply reel to said takeup reel at a normal speed or for reverse operation thereof to return said film in a reverse direction from said takeup reel to said supply reel at a speed comparable to said normal speed, said second-named means including a clutch device adapted to connect said driving means to said supply reel only during said reverse operation of said film transport mechanism, means for positively driving said takeup reel during said forward operation of said transport mechanism, said last-named means including means for releasing said takeup reel from positive drive during said reverse operation of said mechanism, and means for selectively driving said supply reel at a speed higher than said normal speed for rewinding said film rapidly from said takeup reel directly to said supply reel, said last-named means including a member constantly coupled to said supply reel for transmitting torque to said supply reel.

3,016,211
AUTOMATIC FLYWHEEL DRIVING MECHANISM
Mario E. Ecker and John J. Hoehn, Pennsauken, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 25, 1959, Ser. No. 855,387
9 Claims. (Cl. 242—55.12)



1. In a motion picture projector adapted to have a film threaded therein for advancement therethrough, the combination of a plurality of continuously driven sprockets for advancing said film continuously, an intermittent film advancing mechanism between said sprockets, a drum and flywheel unit between said intermittent mechanism and one of said sprockets, said unit being adapted to be engaged by said film and to be rotated by said film as said film is pulled over said unit during advancement thereof, said film being adapted to normally pass in a free loop from said intermittent mechanism to said film-pulled drum and flywheel unit, means for driving said sprockets, gear means coupling said driving means to said sprockets, said driving means being adapted to reverse the rotation of said sprockets, and means interposed between said gear means and said flywheel for connecting said flywheel to said gear means in one direction of rotation of said driving means and to disconnect said gear means from said flywheel in another direction of rotation of said driving means.

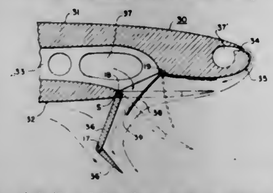
3,016,212
WINDING DRUMS
Jerome R. Marcus, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 1, 1960, Ser. No. 5,801
3 Claims. (Cl. 242—72)



1. A collapsible drum designed to grip and secure the end of a length of strand material therein when expanded and to facilitate the removal of strand material therefrom when contracted subsequent to a winding operation, which drum comprises an elongated hub, a pair of end plates secured to said hub at opposite extremities thereof, a rod

extending between the upper extremities of said end plates, each of said end plates having a substantially circular bearing surface bored in the lower extremity thereof, a pair of semi-circular drum segments pivotally mounted about said rod, said drum segments being constructed so that the extremities thereof adjacent said rod may grip and maintain strand material therebetween when said segments are pivoted to an expanded position, a shaft, a crank arm secured at one extremity of said shaft for controlling the movement thereof, a pair of double eccentrics each having a central concentric body and oppositely disposed eccentric portions on either side thereof, said double eccentrics being mounted at opposite extremities of said shaft and having the central concentric bodies thereof rotatably mounted within the bearing surfaces of said end plates, linking arms mounted about the eccentric portions of said double eccentrics and secured to said pivotally mounted drum segments, a sleeve mounted on said shaft and secured at the opposite extremities thereof to said eccentrics, and means for securing said crank arm to a first of said eccentrics whereby actuation of said crank arm results in rotation of said eccentrics within said linking arms and the pivoting of said drum segments about said rod.

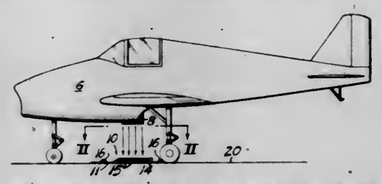
3,016,213
BLUNT-TAILED JET AIRFOIL
Roger W. Griswold II, Old Lyme, Conn.
Filed June 7, 1956, Ser. No. 590,068
13 Claims. (Cl. 244—42)



1. A jet airfoil originating and terminating in respective leading and trailing edges and having a chord line intersecting said edges, a generally rounded convex rear surface including said trailing edge and a sharp-edge lip asymmetrically displaced therefrom and juxtaposed relative to said surface to form therewith a relatively fixed terminal slot disposed in said airfoil on the negative pressure side of said chord line for discharge of a blowing jet toward said trailing edge and tangentially with said surface and with the local circulatory flow externally of said lip to entrain and effect resultant confluent flow over said surface, duct means communicating with said slot and power means in communication with said duct for supplying pressurized fluid to said slot within selective limits of resultant blowing jet momentum, whereby said confluent flow is maintained effectively attached over said surface to the region of respectively equalized velocities and pressures incident to impingement thereof against the opposing local flow on the positive pressure side of said chord line whereat the rear stagnation streamline and associated stagnation point of said airfoil is pneumatically established and stabilized with consequent direct control of the circulation thereover within limits of magnitude functional with said jet momentum.

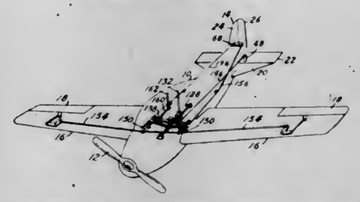
3,016,214
AIRCRAFT TAKE-OFF ASSIST DEVICE
Arthur M. Jackes, Williamsville, N.Y., assignor, by mesne assignments, to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware
Filed Sept. 1, 1959, Ser. No. 837,519
12 Claims. (Cl. 244—63)

1. A jet blast flow modifier comprising a plate-like device having a substantially flat outer rim portion adapted to lie horizontally upon an aircraft take-off surface, said device having a centrally located opening therethrough thereby defining an inner rim portion radially spaced from the outer rim portion thereof, said opening being adapted to be positioned directly beneath a jet blast and being of such dimension that substantially all of the jet blast passes through said opening, the device being shaped



so that said inner rim portion is at a higher elevation than said outer rim portion, said device being perforated substantially throughout its extent between said inner and outer rim portions, and tie-down means holding said device against substantial displacements in radial directions while permitting said device to rise a limited distance above said take-off surface.

3,016,215
AERODYNAMIC AIRCRAFT CONTROL SYSTEM
Frederick W. Ross, 719 N. Melbourn Ave., Dearborn, Mich.
Original application Apr. 14, 1952, Ser. No. 282,110, now Patent No. 2,781,182, dated Feb. 12, 1957. Divided and this application Feb. 11, 1957, Ser. No. 639,443
7 Claims. (Cl. 244—83)



1. In an aircraft having a frame and equipped with an aerodynamic yaw element and a pair of spaced oppositely-movable roll elements, an aerodynamic control system comprising a primary control member, a secondary control member, a first elongated flexible motion-transmitting element operatively connected to said yaw element, a second elongated flexible motion-transmitting element operatively connected to said roll elements, means connecting said flexible motion-transmitting elements to said primary control member for simultaneously pulling said flexible motion-transmitting elements in response to shifting said primary control member, and mechanism simultaneously engaging said flexible motion-transmitting elements and connected to said secondary control member for pulling one of said flexible motion-transmitting elements in one direction while pulling the other of said flexible motion-transmitting elements in the opposite direction in response to shifting said secondary control member.

3,016,216
AERIAL CARGO DELIVERY MEANS
James L. King, Del Mar, and Rex G. Finney, Spring Valley, Calif., assignors to The Ryan Aeronautical Co., San Diego, Calif.
Filed Feb. 23, 1960, Ser. No. 10,423
11 Claims. (Cl. 244—138)

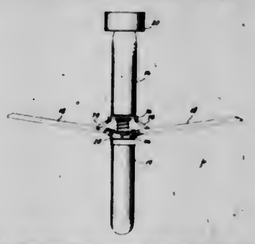
1. Aerial cargo delivery means, comprising: an elongated, rigid casing having removable end caps secured

thereto in sealed relation for holding a quantity of fluid therein, whereby items of cargo may be immersed in the fluid; one end of said casing having a rigid ground penetrating spike; a parachute operatively connected to the other end of said casing; release means operative to



release said parachute; said casing having swivelled tow line attachment means disposed axially of and at each end of said casing; said tow line attachment means including freely rotatable towing rings mounted externally on said end caps.

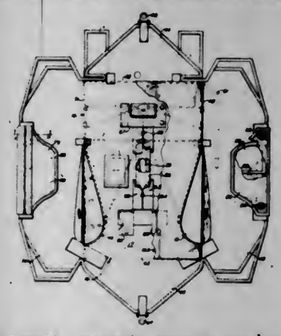
3,016,217
AERIAL DEVICE HAVING ROTOR FOR RETARDING DESCENT
Owen F. Polleys, Windsor, Donald J. Payton, Hartford, and Donald W. Robinson, Jr., Hazardville, Conn., assignors to The Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed Mar. 14, 1958, Ser. No. 721,605
11 Claims. (Cl. 244—138)



1. An aerial device for retarding the descent of a body which device includes a rotor connectible with the body to be retarded and rotatable about a central normally vertical axis and in a predetermined direction which rotor includes a hub and also includes a plurality of generally radial blades equally spaced circumaxially, said rotor further including pivot means connecting the blades with the hub for pivotal movements about transverse sweep axes tangent to a cylinder concentric with said central axis which blades have equal pitch angles providing suitable angles of air attack for causing autorotation of said rotor in said direction as the device descends, and means on said rotor automatically dependent upon variations in the speed of autorotation for moving said pivot means so as to tilt said sweep axes with respect to said hub and relatively to a horizontal plane in one direction to positively change said pitch angles in accordance with increased rotative speeds and for moving said pivot means so as to tilt said sweep axes in the opposite direction to negatively change said pitch angles in accordance with decreased rotative speeds.

3,016,218
FORM FITTING PARACHUTE PACK
Oscar W. Sepp, Jr., Dayton, Ohio, assignor to M. Steinthal & Co., Inc., New York, N.Y., a corporation of New York
Filed Apr. 1, 1960, Ser. No. 19,250
6 Claims. (Cl. 244—148)

6. A form fitting parachute pack comprising a body consisting of front and rear generally rectangular panels secured together along the top, bottom and side edges to provide a closed pocket, a generally rectangular metallic wire frame received in said pocket, said frame having a substantially straight central portion, a forwardly and downwardly extending bottom portion yieldably connected to the bottom of said central portion, a forwardly and upwardly extending intermediate portion yieldably connected to the top of said central portion and a forwardly and upwardly extending top portion yieldably connected to the top of said intermediate portion, said frame serving to provide said body with a yieldable contour conforming to the back of a person from above the shoulder blades to below the buttocks, said front panel extending upwardly and downwardly from the top and bottom edges of said body to provide top and bottom flaps, a ring secured to said top flap and a ring secured to said bottom flap, a side flap secured to said body along one side edge, a second side flap secured to said body along said opposite side edge, a sleeve closed at the forward end and secured to said body, a second sleeve closed at the forward end and secured to said body, said sleeves opening to the rear of said body, a reinforcing means secured to said front panel centrally thereof, eyelets in said front panel and reinforcing means, means for securing a rip cord assembly to said



reinforcing means, means to cover a portion of said rip cord assembly, said rear panel having apertures in alignment with said eyelets, said first and second side flaps and said top and bottom flaps being foldable over said rear panel to provide a compartment adapted to receive a folded parachute with a portion of the parachute disposed in said sleeves, spaced eyelets in said side flaps, an auxiliary flap secured to the rear surface of said first side flap, a second auxiliary flap secured to the rear surface of said second side flap, said auxiliary flaps being foldable over said side flaps to provide a second compartment adapted to receive a folded pilot chute, spaced eyelets in said first auxiliary flap, an elongated pocket on the rear surface of said second auxiliary flap closed by a slide fastener, spaced eyelets in said second auxiliary flap opening into said last named pocket, resilient means disposed in said last named pocket, the eyelets in said auxiliary flaps, said side flaps and said front panel, the apertures in said rear panel and the rings on said top and bottom flaps being in alignment when said flaps are folded over a parachute and pilot chute, flexible means extending through said eyelets and apertures and engaging said resilient means and releasably engaging the rip cord assembly to releasably retain said flaps in folded condition and means on said pack for attaching the same to a parachute harness.

3,016,219
TRANSMISSION LINE FOR COLD LIQUIDS
John A. Murphy, New York, N.Y., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed June 30, 1958, Ser. No. 745,726
5 Claims. (Cl. 248—55)

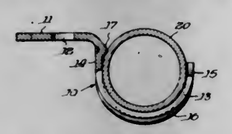
1. In a line for the transmission of an extremely cold liquid comprising the combination of lengths of pipes

arranged in end-to-end relation to form a continuous line preformed to a serpentine configuration in the horizontal plane, means supporting the line at the cross-over points of the serpentine arrangement for pivotal movement thereabout in a horizontal plane with essentially no displacement in the crosswise direction while permitting longitudinal movement thereof relative to the support, and a plurality of means supporting the line at a plurality of spaced apart points intermediate the cross-over points for relative displacement of the supported sections of the line in the crosswise direction as well as in the longitudinal direction, wherein the means for supporting the line at



the crossover points comprises a horizontally disposed supporting shelf and uprights extending upwardly from the shelf in spaced apart relation crosswise on the shelf corresponding to the crosswise dimension of the outside of the portion of the pipe received therebetween and the means for supporting the line at the spaced apart points intermediate to the crossover points comprises a horizontally disposed supporting shelf and uprights extending upwardly from the shelf in laterally spaced apart relation dimensioned to be substantially greater than the crosswise dimension of the outside of the pipe sections received therebetween whereby the pipe sections are capable of relative displacement crosswise on the support.

3,016,220
SNAP-ON METAL CLAMP FOR RIGID METAL PIPE
Kenneth D. Rose, Dubuque, Iowa, assignor to Blackhawk Industries, a corporation of Iowa
Filed Nov. 4, 1959, Ser. No. 850,803
4 Claims. (Cl. 248—74)



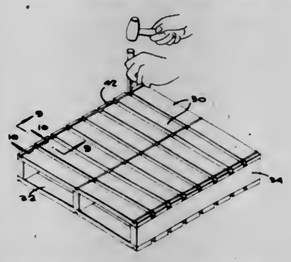
1. A snap-on integral clamp formed of 8 to 18 gauge resilient metal having a U-shaped hook portion for resiliently clasping therein a rigid pipe formed of nonresilient metal and a flat base portion with an opening therein for positioning the clamp and clasped pipe to a support, said flat base extending outwardly away from a terminal end portion of said hook, said hook being adapted to encircle more than half the circumference of the pipe, said hook having an offset rib formed therein that extends along the curved bottom portion thereof so as to increase the strength of the clamp and being provided with an inwardly and integrally extending dimple at one terminal end portion thereof, said dimple having an inwardly projecting smoothly formed face for engaging the pipe without marring it when the pipe is introduced in the hook for securement therein, said dimple and other end portion of the hook defining a normally narrow resiliently extendible entryway for the pipe, said entryway normally being narrower than the outside diameter of the pipe that is to be secured in said hook and resiliently providing an extended entryway at least as wide as said diameter of the pipe when the pipe is introduced into the entryway for securement in the hook, said dimple being positioned to resiliently grip the clasped pipe cooperatively with the other end portion of said hook, at least in part, beyond the center of the clasped pipe so as to hold the clamp resiliently on the pipe and at the same time maintain continuous compression thereon, and said hook being shaped to have said other end portion, the dimple, and a portion of said one end portion between said other end portion and dimple and spaced from and adjacent to said dimple cooperatively grip the clasped pipe to provide three point contact therewith, there being a discontinuity of contact between any two of the three points.

3,016,221
NURSING BOTTLE HOLDER
David C. Underwood, 1801 Ruea St., Grand Prairie, Tex.
Filed May 11, 1960, Ser. No. 28,478
1 Claim. (Cl. 248—102)



A nursing bottle holder comprising a tubular member of frusto-conical shape having a large end and a small end, and comprised of semi-resilient material adapted for the reception of a nursing bottle, with the small end and its nipple extending out of the small end of the holder, a projection on said holder, and a hook dimensioned to extend about the neck of a person feeding the infant, said hook having an elongated straight shank thereon, said projection being provided with a plurality of bores including a central bore substantially perpendicular to said holder and an angularly disposed inclined bore intersecting said perpendicular bore selectively adapted for the reception of said shank, said hook being positioned at an obtuse angle relative to said shank and inclining away from said tubular member.

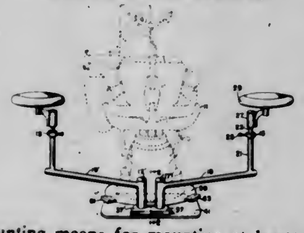
3,016,222
METHOD FOR FORMING A BONDED PALLET STRUCTURE AND PALLET PRODUCED BY SAME
Oscar F. Arthur, 220 Forest Glen Road, Silver Spring, Md.
Filed May 28, 1959, Ser. No. 816,495
2 Claims. (Cl. 248—120)



1. A pallet structure that comprises deck and bottom slats each having rows of holes that extend through them, stringers disposed crosswise of the slats, between the deck and the bottom and each having holes therethrough, in vertical alinement with adjacent rows of vertical holes through the deck and bottom, metallic binders of rod-like form disposed across the upper sides of the deck slats at the rows of holes and set into grooves formed cross-

wise in the slats, but their tops being not lower than the top surfaces of the slats, the stringers and the binders extending approximately the full width of the pallet, metallic binders disposed crosswise of the bottom slats, at the various rows of holes, and connector dowels in the various holes, in position to tie the upper slats and the lower slats together and bind them to the stringers, the ends of the dowels being welded to the binders.

3,016,223
MOUNTING FOR DENTAL CHAIR STOOLS
John K. Hoag, Rochester, and Elroy F. Schutt, Fairport, N.Y., assignors to Wilmot Castle Company, Rochester, N.Y., a corporation of New York
Filed Feb. 11, 1959, Ser. No. 792,488
5 Claims. (Cl. 248—194)



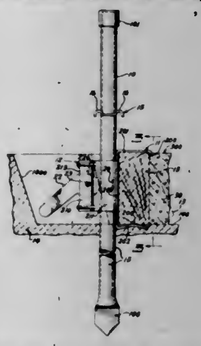
1. Mounting means for mounting at least one dental stool with relation to a dental chair base of at least one of two radial sizes, said mounting means including a base plate adapted at least partially to underlie a dental chair base and having a plurality of pairs of fastener-receiving holes, stationary means for aligning both said chair bases, a swivel retaining plate adapted to be secured to a vertical swivel post of a dental stool and having two positions of orientation relative to said base plate, means defining a plurality of fastener-receiving apertures in said swivel retaining plate arranged in asymmetrical relation to the ends of said swivel retaining plate so that in each of said positions the end of said swivel retaining plate nearest the chair base is at substantially the same distance from the edge of the chair base for each of the two radial sizes, selected ones of said base plate holes being alined with said swivel retaining plate apertures in each of said two positions, and fasteners extending through alined ones of said holes and apertures for removably securing said swivel retaining plate to said base plate.

3,016,224
ADHESIVE DISC AND CLASP FOR KEYS AND THE LIKE
Viola B. Hall, New York, N.Y.
(214 St. Paul St., Westfield, N.J.)
Filed Aug. 5, 1960, Ser. No. 47,800
2 Claims. (Cl. 248—205)



1. A unitary hanger unit to be adhesively connected to a flexible surface having a resilient base adapted to be displaced in unison with said surface and to remain fixed thereto, and at least one tongue-like retaining member out-struck from said base and having a form adapted to receive and retain an article to be held, the retaining member being folded over the uncut portion of the base and having a convoluted form a flared portion on said member spaced from the free tip thereof abutting said base, the flared portion being folded to a U-form with the formed legs thereof bearing against the base.

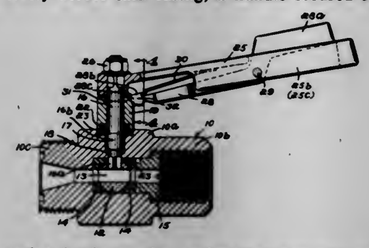
3,016,225
FORM SETTING DEVICES FOR CEMENT SIDEWALK AND DRIVEWAY FORMS
Robert S. Hughes and James A. Sheehan, both of 28275 Ranchwood, Birmingham, Mich.
Filed June 15, 1959, Ser. No. 820,208
4 Claims. (Cl. 248—230)



3. In a form setting device for accurately setting wood sidewalk and driveway forms to the desired line and grade on stakes driven into the ground alongside a prepared grade with a portion of said stakes extending thereabove, said device comprising a generally transversely disposed form supporting channel including a back, a top flange having a depending outer lip and a lower flange formed with a longitudinal upwardly disposed continuous ridge along the center thereof, said channel being relatively rigid yet sufficiently resilient to permit said form to be removably secured between the flanges of said channel by hooking the upper portion of said form under the depending outer lip of said upper channel flange and forcing the bottom thereof in spring gripping engagement with the said ridge in the lower channel flange, the said form supporting channel including a central vertically disposed mounting sleeve extending rearwardly therefrom formed for being loosely telescoped over the said stake permitting the said form supporting channel to slide longitudinally and tilt laterally of the vertical axis of said stake, said mounting sleeve terminating rearwardly in a U-shaped narrow cam-lock mounting bracket having spaced side walls and a rear wall, the said rear wall of said cam-lock mounting bracket having a slot therein, and a cam-lock including a cam and a cam-lock lever, the said cam-lock being pivotably mounted between the side walls of said cam-lock mounting bracket with the cam-lock lever extending rearwardly therefrom for pivoting said cam to lock the form supporting channel to said stake in the required vertical and selected generally horizontal altitude with respect to the said stake and the said prepared grade, the said form supporting channel being provided with a central rectangular aperture therein to permit the said mounting sleeve to be telescoped therethrough, the said channel back being embossed on each side of the said aperture therethrough leaving a recess adjacent said aperture at the front of said channel back, the said mounting sleeve including laterally disposed flanges bearing on the front of said channel back within said recesses.

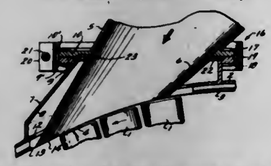
3,016,226
VALVE BONNET AND HANDLE
Howard G. Freeman, Worcester, Mass., assignor to Jamesbury Corp., Worcester, Mass., a corporation of Massachusetts
Filed Oct. 26, 1960, Ser. No. 65,176
2 Claims. (Cl. 251—109)

1. A ball valve comprising a valve casing having a through passage, a ball mounted in said passage and having a through opening, a stem extending into said casing and engaging said ball, said stem having a non-rotatable connection with said ball and being adapted to turn said ball between a closed position and an open position in which said opening is aligned with said passage, a bonnet block having a pair of parallel faces extending transversely across said casing, a handle secured to said



stem, and a latch member swingably mounted on said handle, said latch member engaging one of said faces when the ball is in open position and the other of said faces when the ball is in closed position and said handle having a projection engaging one of said faces engaged by said latch member when the ball is in open position and the same face when the ball is in closed position.

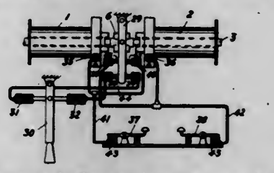
3,016,227
REMOVABLE FLUID IMPINGEMENT STARTER NOZZLE CONSTRUCTION FOR TURBO-ENGINE
Thomas Frederick Lawrence and James Frederick Ingleson, Beverly, Mass., assignors to General Electric Company, a corporation of New York
Filed Mar. 16, 1959, Ser. No. 799,602
2 Claims. (Cl. 253—78)



1. The combination in a turbo-engine of a cylindrical casing, a turbine rotor having a circumferentially-spaced row of turbine blades mounted in said casing for rotation about an axis, said casing circumferentially spaced about said blades in proximity to the tips of said blades and formed with an opening extending circumferentially about and axially along said blades over an arcuate portion of said casing, a mounting pad secured to said casing about said opening therein, a cover member including a mounting portion and an arcuate ring segment, said mounting pad constructed and arranged to receive a removable fluid impingement starter nozzle in fluid communication with said blades through said opening and to receive said cover member upon removal of said nozzle from said mounting pad, and means to secure said mounting portion of said cover to said mounting pad, said arcuate ring segment substantially filling said opening in said casing and extending into proximity to the tips of said blades when said mounting portion is secured to said mounting pad to oppose radial leakage of fluid through said opening in said casing.

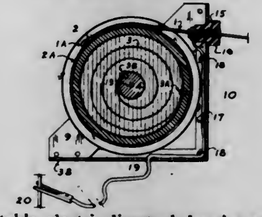
3,016,228
LOADING WINCH WITH TWO DRUMS, ESPECIALLY FOR SHIPS
Hans Boomkens, Hamburg, Germany, assignor to Eduard Winter Motoren- und Apparatebau, Hamburg-Schnelsen, Germany, a firm
Filed Nov. 12, 1958, Ser. No. 773,479
2 Claims. (Cl. 254—185)

1. A loading winch comprising a rotatable shaft, means for driving said shaft, two separate drums freely rotatable on said shaft, a clutch member rigidly secured to each of said drums, at least one movable clutch part mounted on the shaft for rotation therewith between the drums and longitudinally displaceable thereon to couple either drum selectively to the shaft, at least one pivoted clutch lever adapted to effect said longitudinal displacement of said movable clutch part on said shaft to couple one of said drums to said shaft, a hydraulic control device for actuating said clutch lever, springs provided between the hydraulic control device and the clutch lever, a braking device associated with each drum and arranged automatically to release the drum coupled with the shaft and brake the drum not coupled with the shaft, springs provided between the braking device and the clutch lever, said clutch



lever being arranged alternately to actuate said braking device of said drums, hydraulic receivers for actuating the clutch lever and first hydraulic transmitters for actuating the braking devices arranged in the swing paths of said clutch lever at either side thereof, the hydraulic control device comprising second transmitters and a control lever for actuating said second transmitters, first conduits connecting said second transmitters with said receivers, second conduits connecting the first hydraulic transmitters with the braking devices, the receivers being arranged to be directly actuated by the second transmitters through the control lever and the first conduits, whereas the brakes are arranged to be actuated directly by the first transmitters through the second conduits to effect a disengagement of each respective drum being coupled.

3,016,229
PORTABLE ELECTRIC LIVESTOCK BARRIER AND GATE
Walter A. Jacobson, 527 Wingra St., Madison 5, Wis.
Filed Nov. 17, 1958, Ser. No. 774,273
12 Claims. (Cl. 256—10)

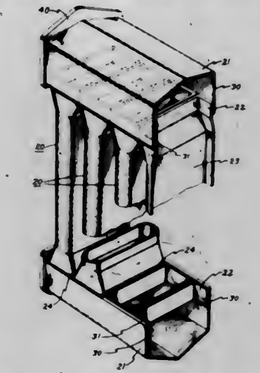


1. A portable electric livestock barrier and gate comprising, a housing, a bare flexible electric conducting wire secured at one end to an insulated reel within said housing, contact means contacting said conducting wire to supply electric current to said conducting wire, an insulated handle secured to the other extremity, means for securing said housing to a support therefor.

3,016,230
HEAT EXCHANGE ASSEMBLY
Curtiss M. Cederstrom and Charles W. Mellyn, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Mar. 30, 1959, Ser. No. 802,682
6 Claims. (Cl. 257—154)

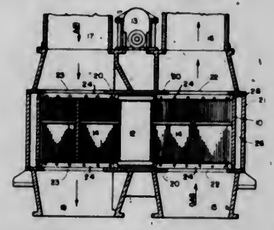
1. A heat exchange assembly comprising a plurality of parallel tubular heat exchange members extending be-

tween a pair of parallel headers, the end portions of said members having enlarged rectangular cross sections with greater dimensions than the corresponding dimensions of the central portions thereof, there being located inwardly of the ends of each member a line of transition between the greater dimensions of said rectangular end portions and those of said central portion, the ends of adjacent



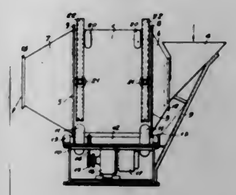
members being joined by visible welded joints extending along lines at the line of transition between the said rectangular end portions and said central portions, said headers having U-shaped cross sections with the edges extending over the end portions of said heat exchange members and being joined thereto by visible welded joints extending along lines coplanar with the welds joining the adjacent heat exchange members.

3,016,231
ROTOR SEAL
Robert H. Muller, Wellsville, N.Y., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York
Filed Aug. 9, 1954, Ser. No. 448,695
8 Claims. (Cl. 257—269)



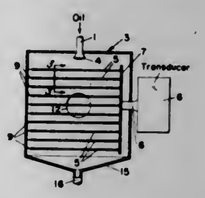
1. In a regenerative heat exchange device or the like having a rotor including a rotor shell and a housing enclosing the rotor and having axially spaced end plates formed with apertures for the flow of fluid therethrough, sealing means provided to substantially preclude the flow of fluid through the space between the rotor and the housing, said sealing means comprising; a first sealing surface mounted on the housing; a second sealing surface mounted on the rotor and forming in cooperation with said first sealing surface a restricted fluid passageway therebetween; and an extensible mounting means movably supporting one of said sealing surfaces for movement in an axial direction, said movably supported sealing surface having an area of sufficient size to provide a surface across which a differential of pressure effected by the flow of fluid through the restricted passageway is effective to move said surface relative to its cooperating sealing surface.

3,016,232
MIXER DRIVEN AND SUPPORTED BY WHEELS OF FLEXIBLE MATERIAL
Costante Domenighetti, Piazzale Giulio Cesare 20, Milan, Italy
Filed July 7, 1959, Ser. No. 825,547
3 Claims. (Cl. 259—177)



2. A mixer comprising a main frame, a pair of axles rotatably mounted at laterally spaced locations on said main frame, a pneumatic resilient tire affixed to each of said axles adjacent each end thereof and rotatable therewith, a mixing drum supported on top of said tires between said axles with the weight of the drum resting thereon and with the exterior surface of said drum in frictional contact with said tires, said drum having an axis of rotation, means to rotate said axles to rotate said drum about its axis of rotation, said drum having a pair of flanges extending outwardly from the surface thereof at spaced locations in respect to its axis of rotation and extending around the periphery thereof, a pair of spaced frame members secured to said main frame and encircling said drum at a location adjacent each respective flange, a first roller rotatably mounted on each of said frame members arranged to bear in opposite axial directions in respect to said drum on respective adjacent flanges of said drum, and a second roller rotatably mounted on each of said frame members arranged to bear in radial directions in respect to the axis of rotation of said drum directly on the surface of said drum.

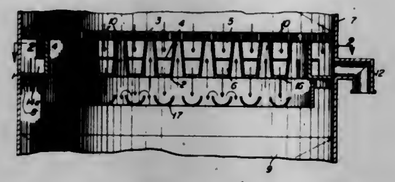
3,016,233
ULTRASONIC FUEL AND AIR MIXER
Van D. Olmstead, Liverpool, N.Y.
Filed Nov. 6, 1959, Ser. No. 851,380
5 Claims. (Cl. 261—81)



1. For use with a liquid fuel burner, an arrangement for atomizing the liquid fuel prior to combustion comprising a chamber, a plurality of ultrasonic compressional wave vibrators arranged in superposed labyrinthine form in said chamber, means for feeding liquid fuel to said chamber in such a manner as to flow in cascade fashion over said vibrators, said vibrators acting to atomize the liquid fuel flowing thereover; and means for removing the atomized fuel from said chamber.

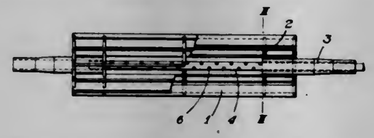
3. An arrangement as defined in claim 1, wherein the removing means comprises means for producing a flow of air through said chamber in a direction generally transverse to all of said vibrators.

3,016,234
UNITARY COLLECTING, DISTRIBUTING AND SUPPORTING PLATE FOR STAGE WASHERS
Wilhelm Hüppmeier, Essen, Germany, assignor to Didier Werke A.G., Wiesbaden, Germany
Filed Dec. 6, 1957, Ser. No. 701,178
Claims priority, application Germany Dec. 31, 1956
3 Claims. (Cl. 261—98)



1. A stage washer comprising an inset support bottom, a fluid collecting bottom and a distributing bottom, said fluid collecting bottom comprising an annular conduit, said distributing bottom also comprising an annular conduit located concentrically below said first mentioned conduit, a plurality of cross conduits supported by said annular conduits arranged at a slight lateral spacing from one another and extending parallel to a diameter of said annular conduits, said cross conduits upon said distributing conduit being closed on all sides and resistant to compression, spray nozzles upon said distributing cross conduits, said cross conduits upon said collecting bottom being open towards the top forming troughs, a supporting grid for the filling body inset positioned on said troughs, said annular conduit upon said distributing bottom having a fluid inlet for said cross conduits of said distributing conduit to said spray nozzles whereby the fluid is collected in said troughs and in said annular collecting conduit which leaves the filling body inset and is carried off in said annular collecting conduit.

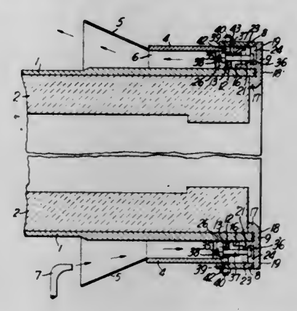
3,016,235
PULLEY FOR A CONVEYOR BELT
Maurice F. Cnudde, 51B Chaussee de Charleroi, Brussels 6, Belgium
Filed Apr. 26, 1960, Ser. No. 24,697
Claims priority, application Belgium May 13, 1959
4 Claims. (Cl. 263—8)



1. A hollow reversal pulley for an endless conveyor belt, said pulley comprising: first and second side circular discs in spaced relation, a shell connected to said discs, said shell including a plurality of flat bars spaced on said discs, a hollow journal coaxially fixed on each of said side discs and heating means extending between said journals for heating said pulley and conveyor belt.

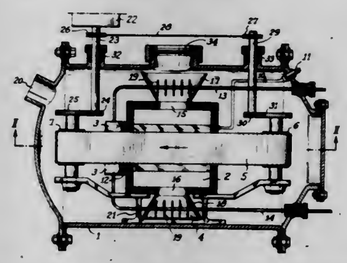
3,016,236
ROTARY KILN DISCHARGE END CONSTRUCTION
Bernardo Alonso, Whitefish Bay, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed June 22, 1960, Ser. No. 38,021
6 Claims. (Cl. 263—32)

1. A member adapted to coact and form with similar members a lining retaining end ring presenting a cylindrical portion adapted to engage the outer surface of a cylindrical kiln shell adjacent one end thereof and an annular flange projecting both radially outward and radially inward of said cylindrical portion, comprising, a metal ring segment having adjoining cylinder and radially outward and radially inward projecting flange forming portions, and a series of circumferentially spaced lugs projecting radially outward from said cylinder forming portion, each of said lugs having an axially extending U-shaped slot open in a radially outward direction and



further said lugs having a bolt head receiving recess also open in a radially outward direction, said recess being disposed in alignment with said axial slot opening on the end of said slot nearest said flange, said lugs thereby each being adapted to hold a bolt with its shank portion projecting through said slots in said lugs in a direction away from said flange forming portion for connecting said segment to said kiln shell.

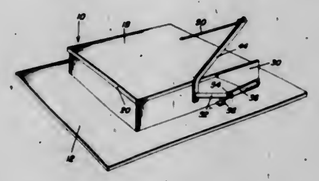
3,016,237
INSTALLATION FOR THE VAPORISATION, UNDER VACUUM, OF THE VOLATILE CONSTITUENT OF AN ALLOY
Michel Caron, Sevres, Georges Chaudron, Paris, and Léon Moreau, Vitry, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed Sept. 29, 1958, Ser. No. 764,162
Claims priority, application France Oct. 9, 1957
7 Claims. (Cl. 266—15)



6. Apparatus for treating a band of metallic alloy at least one constituent of which is a volatizable element, said apparatus comprising: a vacuum chamber; a furnace mounted within said chamber and having an inlet and an outlet formed in opposed relation in the walls thereof; means in said chamber for holding said band, said band being fed therefrom through said furnace between said inlet and said outlet, said furnace being provided with heating means to raise the temperature of said band above the volatilization temperature of said vaporizable element to effect volatilization thereof; means communicating with the interior of said furnace at a point between said inlet and said outlet for removing a portion of the volatilized element therefrom; cooling means in said

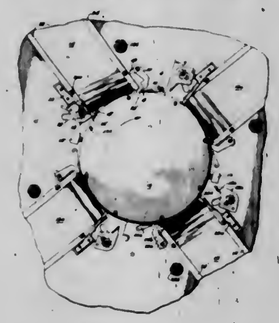
chamber outside of said furnace and adjacent said outlet thereof to cool said band as it emerges from said furnace; and means inside said chamber for receiving said band as it emerges from said cooling means.

3,016,238
ROOF OR WALL HATCH
Joseph M. Malik, Fred A. Malik, and Harry S. McDonald, all of P.O. Box 751, Toccoa, Ga.
Filed Feb. 10, 1959, Ser. No. 792,335
3 Claims. (Cl. 268—102)



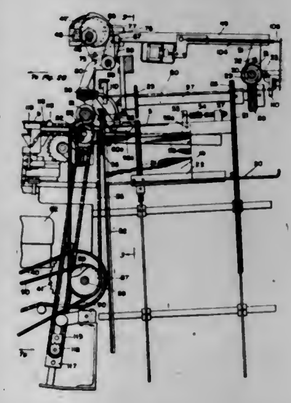
2. A gravity closure for an opening in a horizontal panel comprising a closure member pivotally supported along one edge thereof for swinging movement in a vertical plane, an arm pivotally connected to said member in spaced relation to the pivotal axis for free swinging movement in a vertical plane, said horizontal panel limiting the downward movement of the free end of said arm and providing a sliding surface therefor, a vertical stop lug mounted on the panel and disposed in the path of movement of the free end of the arm when the arm is engaged with the panel thereby preventing opening movement of the closure member without first moving the free end of the arm above said stop lug, and bellcrank means connected to the arm for raising the arm out of engagement with the stop lug.

3,016,239
CARD PROCESSING SYSTEM
Alfred M. Nelson, Redondo Beach, Hans M. Stern, Culver City, and Jerome B. Wiener, Granada Hills, Calif., assignors to Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed June 17, 1958, Ser. No. 742,546
4 Claims. (Cl. 271—5)



1. In apparatus for processing data on a plurality of information storage cards as represented by signal indications on the cards, the combination of, a card holder for maintaining the cards in a stacked relationship, a stack head positioned adjacent the card holder for retaining information storage cards in the card holder when in an operative position, means for shifting the stack head between the operative position thereof and a stand-by position to enable cards to be fed from the card holder, transport means disposed in contiguous relationship to the stack head for providing a movement of cards toward the stack head for transfer by the stack head into the card holder when the stack head is in the operative position, and means including a blower member for controllably introducing air under pressure in the vicinity of the stack head to selectively transfer cards from the transport means into the card holder in the operative position of the stack head.

3,016,240
APPARATUS FOR FEEDING SHEET MATERIAL
Sherman W. Twitchell, Contoocook, and John B. Bradicich, Warner, N.H., assignors to FMC Corporation, a corporation of Delaware
Filed Oct. 7, 1958, Ser. No. 765,849
14 Claims. (Cl. 271—11)

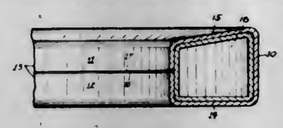


10. Apparatus for feeding sheet material from an end of a stack of sheets to a machine having feed rolls comprising suction means disposed adjacent the end of the stack and adapted to engage an outermost sheet at the end of the stack and apply suction thereto, and means for guiding said suction means in a predetermined path substantially triangular in shape, said suction means moving from an initial position along a plane substantially parallel to and spaced from the outermost sheet at the end of the stack then into engagement with the outermost sheet followed by return movement with the outermost sheet in a diagonal direction to the initial position to move the leading edge of the outermost sheet between the feed rolls.

3,016,241
BALL WHEEL AND METHOD OF MAKING THE SAME
Stephen C. Peplin, Lakewood, Ohio, assignor to Lakewood Manufacturing Co., Westlake, Ohio, a corporation of Ohio
Filed Aug. 11, 1958, Ser. No. 754,427
4 Claims. (Cl. 273—49)

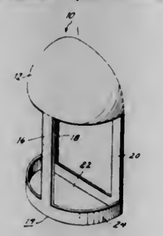
1. In an automatic bowling pin setting apparatus, a transfer means for conveying a bowling ball and pins from the pit of the bowling alley to the ball return and pin setting mechanism, said means comprising a rotatable hollow annulus of polygonal radial cross section characterized by a pair of concentric walls of different widths

and a pair of side walls formed integrally with and respectively connecting said first walls, one of said side



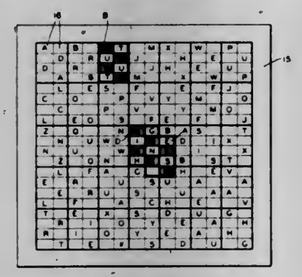
walls being inclined with respect to the other side wall, the other end wall being normal to each of said concentric walls.

3,016,242
GAME DEVICE
Frank F. Colucci, 1936 S. Norwood St., Philadelphia, Pa.
Filed Nov. 12, 1959, Ser. No. 852,343
5 Claims. (Cl. 273—102)



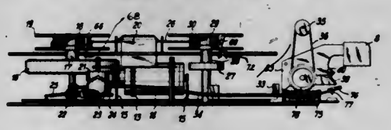
1. A ball game comprising a convex plate which is substantially a quarter of a sphere, a base, and a plurality of spaced upright legs depending from said plate and supporting said plate on said base, said plate being supported above said base solely by said legs in a position wherein the convex surface on said plate faces upwardly and outwardly from said legs so that a ball can be bounced off said convex surface, said legs being spaced from each other and structurally interrelated with said convex plate so that there is a substantial lack of rebound structure above and below said convex plate.

3,016,243
PLAYING CARD GAME
William R. Irwin, 1034 Tiffany St., Bronx 59, N.Y.
Continuation of application Ser. No. 441,915, July 7, 1954. This application June 17, 1957, Ser. No. 665,966
6 Claims. (Cl. 273—135)



2. The combination of a set of playing cards having a plurality of opaque areas and window areas, said areas of all cards being of substantially equal size and shape and disposed in a geometric pattern in which any two cards may be superimposed with a window area of the upper card in register with each opaque area of the lower card throughout the super-imposed areas of said cards, whereby all of the opaque areas of both cards are exposed, each of said opaque areas of all cards having letters of the alphabet thereon whereby any two of said cards may be arranged in a plurality of super-imposed relations to thereby combine the letter characters of one card variously with the letter characters of another card, and a playing base member of a larger area than that of each of said cards, said base member being divided into elemental areas corresponding in size and spacing to the opaque and transparent areas of said cards and at least some of said elemental areas bearing letter characters combinable with the letter characters on said cards to form word combinations when said cards are overlayed either separately or in superimposed groups on said base member.

3,016,244
MINIATURE MAGNETIC SOUND RECORDING AND REPRODUCING DEVICE
Carl Friedrich Schuh, Landshut, Lower Bavaria, Ernst Genning, Fassberg, near Celle, and Günter Hermann, Ronnenberg, Hannover, Germany, assignors to Protona Productionsgesellschaft für electro-akustische Geräte G.m.b.H., Hannover, Germany
Filed June 3, 1955, Ser. No. 513,056
Claims priority, application Germany July 29, 1954
9 Claims. (Cl. 274—4)

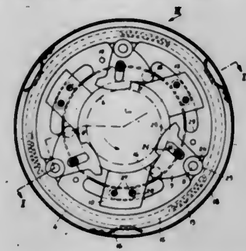


1. A miniature magnetic pocketable recorder for sound recording and reproducing on a magnetically modulatable and erasable sound carrier having a built-in amplifier, comprising two spaced spools for winding and rewinding said sound carrier, an electric motor, a circuit for said motor, a reversible drive mechanism driven by said electric motor for driving said spools, a speed governor for changing the speed of said motor to either of two selected speeds, a governor contact, a pair of slip rings on said governor, a bridging contact in said circuit controlling said speed governor via said slip rings, manually operated switching means in said circuit controlling said drive mechanism to drive said spools forwardly, reversely and to stop the same, an indicator device controlled by the rotation of one of said spools for indicating the position of the sound carrier thereon and an end cut-out upon each spool controlling said circuit for automatically cutting said circuit and thereby stopping said drive mechanism when said sound carrier has run off one of said spools.

3,016,245
CARRIER FOR MACHINE TOOLS, ESPECIALLY LATHE DOG
Ottomar von Zelewsky, Neuhausen am Rheinfall, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland
Filed Mar. 9, 1960, Ser. No. 13,871
Claims priority, application Switzerland Mar. 11, 1959
5 Claims. (Cl. 279—106)

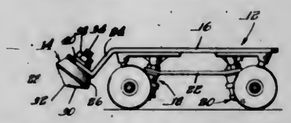
1. A carrier for use in connection with machine tools, especially lathes, having a machine spindle, which comprises: a supporting member adapted to be connected to the machine spindle of a machine tool for rotation therewith, a plurality of cam lever means pivotally connected to said supporting member for pivoting in a first direction and in a second direction, said cam lever means being provided with surface means for clamping and releasing a work piece therebetween depending on the pivot movement of said cam lever means in said first direction or

said second direction, manual actuating means for moving said cam lever means in said pivotal movements, fly member means supported by and displaceable relative to said supporting member, and means connected to said fly member means and provided with surface areas respectively for engagement with said cam lever means, said fly member means being movable relative to said supporting member in the direction of rotation of said carrier



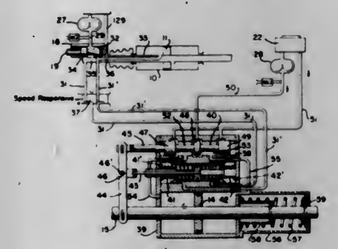
when connected to the machine spindle for pivoting said cam lever means in the work piece clamping direction of the latter and also being movable in opposite direction for releasing said cam lever means to thereby permit the latter to pivot in work piece releasing direction, said fly member means being adapted in response to deceleration of said supporting member to move in the direction of rotation of said carrier.

3,016,246
TOE BLOCK STRUCTURE
Gordon K. Ware, St. Charles, Ill., assignor to The Chicago Roller Skate Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 27, 1960, Ser. No. 25,144
1 Claim. (Cl. 280—11.2)



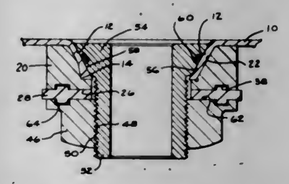
In a roller skate including a sole plate and wheel truck assemblies positioned in longitudinally spaced relationship therealong to defined fore and aft rolling centers, the provision of a toe block support structure depending from the front of the sole plate and including a plate portion projecting forwardly from said sole plate at an angle between the horizontal plane of the sole plate and a vertical plane therethrough, an elastomeric ground engaging element having fore and aft downwardly facing surfaces intersecting at an obtuse angle along a transversely elongated and narrow central ridge portion, and means mounting the elastomeric element to the depending support structure forwardly of the said plate portion, the rearwardly disposed downwardly facing surface of the elastomeric element constituting a braking surface and the transversely elongated ridge portion constituting a take-off surface, the angular disposition of the braking surface with relation to the angular disposition of the plate portion being such that the braking surface assumes a ground engaging planar position with the plate portion approaching a vertical position with respect to the ground surface and with the plate portion also approaching a similar vertical position when the transversely elongated ridge portion is used for take-off with the braking surface out of contact with the ground surface, whereby reactive thrusts from engagement of the braking surface and take-off surface with the ground surface are transmitted through the plate portion acting as a strut member approaching vertical positions.

3,016,247
CURVE STABILIZATION ARRANGEMENT, PARTICULARLY FOR MOTOR VEHICLES
Ulrich Eltze, Stuttgart-Riedenberg, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 11, 1958, Ser. No. 720,729
Claims priority, application Germany Mar. 15, 1957
7 Claims. (Cl. 280—112)



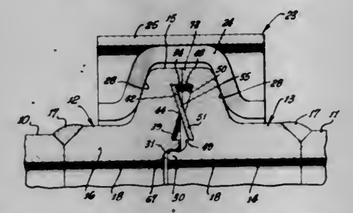
1. An installation for a curve stabilization system of a vehicle having a steering system and an anti-tilt spring system, comprising force circuit means for each of said systems, power means producing a force and supplying the same to each of said force circuit means, first actuating means in one of said force circuit means for actuating said steering system with the aid of said force, second actuating means in the other of said force circuit means for actuating said spring system with the aid of said force, and control means for controlling said other force circuit means by said one force circuit means, each of said actuating means including a double-acting working piston, and said second actuating means also including two slide valve members and intermediate scale-beam-like linkage means operatively connecting the working piston of said anti-tilt spring system with said two slide valve members.

3,016,248
TANK-THIMBLE ATTACHMENT MECHANISM
Peter H. Lindberg, 492 Drexel St., Detroit 15, Mich.
Filed Mar. 14, 1958, Ser. No. 721,419
2 Claims. (Cl. 285—89)



1. In a fluid tank having a wall thereof provided with an ingress-egress opening circumscribed by an outturned conical flange interposed snugly between complementary conical surfaces formed exteriorly of a thimble projecting axially through the flange and formed interiorly of a collar element surrounding the exterior of the flange, respectively, the thimble being threaded at that portion projecting axially beyond the flange to receive thereon a nut element for retaining the thimble and the collar element in assembly on the flange, the combination therewith of a vibration resistant interlocking of the flange, collar element and nut element comprising complementary lug and recess means on the flange exterior and the interior conical surface of the collar to prevent relative rotation therebetween, locking means interposed between the nut element and the collar element accommodating rotation of the nut element to thread the nut onto the thimble into jammed contact with the collar element but preventing reverse relative rotation therebetween, said nut acting to force said lug into intimate engagement with said recess means, said locking means including deflectible arms co-rotatable with one of the elements and recesses in the other of the elements for receiving the arms, and an annular seal ring carried by the thimble conical surface and contacting the interior conical periphery of the flange to prevent leakage from the tank intermediate the thimble and the flange.

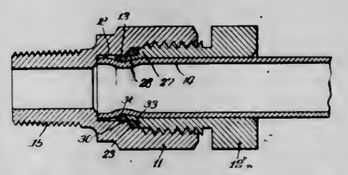
3,016,249
JOINT STRUCTURE
Gilbert E. Contreras, Los Angeles, and Robert W. Graves, Canoga Park, Calif., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Apr. 29, 1959, Ser. No. 809,768
4 Claims. (Cl. 285—336)



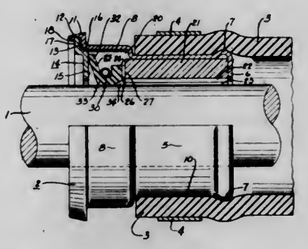
1. A joint structure comprising two members, each having an opening formed therein for accommodating a fluid and each having an annular joint surface circumscribing its opening, means for applying pressure on the members for drawing them toward each other with the joint surface of one member facing toward the joint surface of the other member and with said openings being substantially in axial alignment, each of said joint surfaces having an annular groove formed therein and defined by outside and inside shoulders and a bottom wall extending between said side shoulders, the shoulders being tubular walls and coaxial with respect to each other and substantially coaxial of said openings and extending into their respective members from said joint surfaces to a common plane perpendicular to the axis of said openings, the bottom wall projecting in a direction axially outwardly from said plane as two frusto-conical surface portions, the slant of each of said frusto-conical surface portions with respect to said plane being equal, and a gasket having inner and outer frusto-conical side surfaces and an annular outer end surface defining the outer circumferences of said side surfaces, and an annular inner end surface defining the inner circumferences of said side surfaces, the gasket being receivable and adapted to be stressed in said grooves with the outside edge of said outer end surface being in circular contact with the outside shoulder of one member and with the inside edge of said inner end surface being in circular contact with the inside shoulder of the other member, and with one side surface of the gasket being in contact with a frusto-conical surface portion of the groove of one member, and with the other side surface of the gasket being in contact with a frusto-conical surface portion of the groove of the other member.

3,016,250
FITTING
George E. Franck, Riverside, Ill., assignor to Imperial-Eastman Corporation, a corporation of Illinois
Filed Aug. 15, 1958, Ser. No. 755,203
2 Claims. (Cl. 285—342)

1. A fitting for use with tubing having an irregular outer surface, comprising: a female element provided with a bore having an axially inner portion adapted to receive an end of the tubing with which the fitting is to be used, an intermediate enlarged cylindrical portion, an axially outer enlarged threaded portion, and a rounded shoulder between said inner and intermediate portions; a male element provided with an axially outer threaded portion for engaging said bore threaded portion, a cylindrical portion complementary to and receivable in said bore intermediate portion, a constrictible reduced annular flange extending coaxially and widening frusto-conically from the last named cylindrical portion and having a convexly rounded end, a radial shoulder between said cylindrical portion of the male element and said flange, and a bore through said male element extending coaxially of the female element bore and having an original diameter substantially equal to the outside diameter of the tubing with which the fitting is to be used; and an annular insert secured to said flange, said insert being formed of a plastic sealing material having resistance to cold flow and provided with an axially outer first portion having a recess grippingly receiving said flange of the male member, the unstressed diameter of said recess being less than the maximum diameter of said flange, said first portion of the insert being further provided with a radially outer cylindrical surface having an unstressed diameter substantially equal to the diameter of said cylindrical portion of the male element and a radial outer end face abutting said radial shoulder of the male element, said insert further having an annular axially inner end portion disposed longitudinally inwardly of said flange and having an unstressed inside diameter substantially equal to the diameter of said male element bore and a radially outer frusto-conical surface narrowing from said first portion and arranged to abut said flared shoulder of the female element, said rounded end of the flange being juxtaposed to the rounded shoulder of the female element in the tube retaining disposition effectively dividing the insert into radially and axially spaced annular portions.



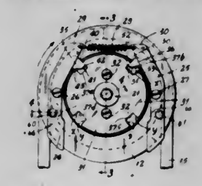
3,016,251
SHAFT SEAL
Walter J. Gilbert, Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Filed Jan. 8, 1959, Ser. No. 785,633
10 Claims. (Cl. 286—11)



1. A propeller shaft seal comprising a tubular housing having a chamber surrounding the propeller shaft and an abutment at one end, an antifriction sleeve with a bore providing clearance for the propeller shaft and contained

in said housing with one end engaging said abutment, an annular flexible seal member having a bore to snugly fit the propeller shaft to seal thereon and to be rotated thereby, an annular stub section one one end of said flexible seal member to engage the other end of said sleeve, an annular flange on the other end of said flexible seal member that is disposed at an acute angle relative to a transverse plane disposed normal to the axis of the bore of said flexible member, and an annular seal surface larger than said flange and supported on the other end of said housing and engaged by the outer face of said flange to permit said flange to ride laterally over said seal surface until the transverse movement of the propeller shaft traverses the sleeve clearance and the propeller shaft engages the sleeve to move the housing with said flange, whereby the angle of said flange is selected to maintain a sealing engagement with said annular sealing surface as said propeller shaft is at rest or traveling in reverse or at slow speeds preventing cavitation at the propeller shaft but said flange leaving contact with said sealing surface at higher speeds to eliminate wear and friction when water cavitation around said propeller shaft eliminates the necessity of a seal.

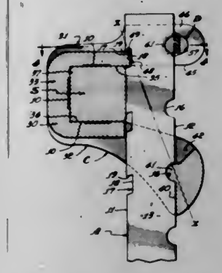
3,016,252
DOG CLUTCH
Orville Mitchell, Dallas, Tex., assignor to John E. Mitchell Company, Inc., Dallas, Tex., a corporation of Missouri
Filed Feb. 27, 1957, Ser. No. 642,891
11 Claims. (Cl. 287—52)



2. A clutch having first and second rotary members, each rotatable relative to the other, one of which is a driving member and the other a driven member; the first member having a pair of clutch dogs connected to it in such a way as to be movable in and out toward and from the axis of the clutch and the second member having a pair of generally radial abutment surfaces against which the dogs may respectively engage when so moved, one surface being disposed in the forward direction of rotation from its dog and the other surface being disposed in the backward direction of rotation from its dog; so that when the dogs are engaged with their respective surface they provide driving engagement between the clutch members in both directions of rotation, one of the dogs being a main dog and the other being a wedging dog having means to cause angular displacement between the rotary members, so that it can force the other abutment surface tightly against the main dog.

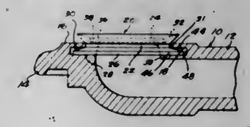
3,016,253
ADJUSTABLE TOOTH SHANK CONNECTION
Ernie Lloyd Launder, Montebello, Calif., assignor to H. & L. Tooth Company, Montebello, Calif., a corporation of California
Filed Dec. 31, 1956, Ser. No. 631,950
6 Claims. (Cl. 287—54)

4. A connection of the character described including, a shaft, an elongate shank engaged with the shaft and extending laterally from opposite sides of the shaft, said shank having a front engaging the shaft and a back faced away from the shaft, spaced notches in the back of the shank and a notch in the front of the shank, a coupler having spaced sections engaged with opposite sides of the shaft, a lateral opening in one section and said shank engaged through said opening and said section bearing on the back of the shank, a positioning lug formed on said section and projecting into the opening and engaged in one of the notches in the back of the shank, a lock lug



at and formed on the other section and engaged in the notch in the front of the shank, and a pin carried by the said other section and bearing on the back of the shank and engaged in another notch in the back of the shank securing the coupler in position relative to the shank and the shank in position relative to the shaft.

3,016,254
GASKET FOR RAILROAD COMPRESSED AIR HOSES
Eugene J. Holdeman, 1419 Demeter Drive, Freeport, Ill.
Filed Oct. 10, 1958, Ser. No. 766,568
5 Claims. (Cl. 288—23)

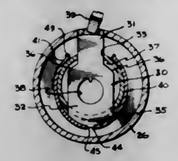


1. In combination, an air pressure hose head having a circular opening having a sidewall, an annular groove indenting said sidewall, said groove defining parallel spaced upper and lower flanges, the upper flange having an inner edge spaced radially outwardly from the inner edge of the lower flange, a flexible and compressible annular gasket having an annular flange engaged in said groove, said gasket flange having an outwardly and downwardly declining tapered upper surface a major portion of which is spaced out of contact with the upper head flange and a minor inward portion engaged with the upper head flange, said gasket flange having a flat horizontal under surface engaged throughout with the lower head flange, said gasket having an upper portion above its flange extending above the upper head flange and having a peripheral surface in contact with the inner edge of the upper head flange.

3,016,255
LEAF SPRING KNOB RETAINER
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif.
Filed Dec. 13, 1960, Ser. No. 75,535
3 Claims. (Cl. 292—352)

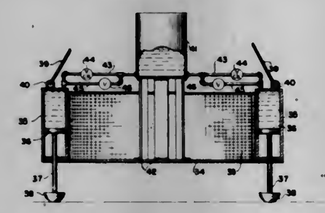
1. A lock sub-assembly comprising a spindle having a keeper opening, a keeper positioned transversely within said spindle having a retaining end adapted to extend outwardly through said keeper opening and having a pressure end extending outwardly through said spindle on a side opposite said keeper opening, an arcuate leaf

spring in engagement with said pressure end of the keeper, legs of said spring extending more than half-way



around the outside of said spindle whereby to hold said spring on the spindle and to urge said keeper outwardly into position.

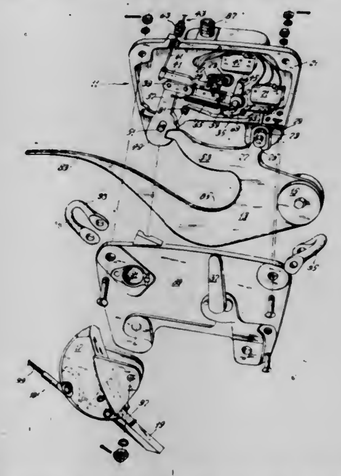
3,016,256
APPARATUS FOR LANDING LOADS ON A ROLLING SHIP
Loerwood C. Wasson, Wauwatosa, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 26, 1956, Ser. No. 612,282
6 Claims. (Cl. 294—67)



1. An apparatus for transferring a load to a moving platform which comprises, a support structure to support the load to be transferred, at least three vertically extending cylinders rigidly secured to the periphery of said support structure in spaced relation to each other, a piston slidably disposed in each cylinder and extending downwardly from said cylinder below the lower side of said support structure, contact means associated with the lower end of each of said pistons and terminating in a rounded foot member adapted to contact said platform, said cylinders being spaced in a manner such that the several contact means associated with the corresponding cylinder pistons form a tripod-like support for said support structure, and a fluid pressure medium contained in the upper end portion of each of said cylinders to oppose inward sliding movement of said pistons relatively of said cylinders to dampen the impact between said support structure and platform as the former is lowered onto the latter, said fluid pressure medium being contained in each of said cylinders under a uniform pressure and at a value which limits the maximum force developed in the piston-cylinder units as said pistons are moved inwardly of said cylinders to a value slightly higher than the total weight of said apparatus when containing a maximum load.

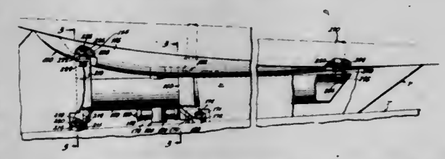
3,016,257
CARGO LATCH
Erving F. White, 18892 Ervin Lane, Santa Ana, Calif.
Filed June 10, 1959, Ser. No. 819,514
4 Claims. (Cl. 294—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)

3. An automatic cargo loading and release apparatus comprising in combination: a latching device comprising a housing, a latch member having a throat formed by a tongue and an arm pivotably attached at one end to said housing, said latch member being pivotable to an open or a closed position, a dog member movably affixed to said housing, said latch member in its closed position being engaged and retained by said dog member, movement of said dog member permitting said latch member to pivot to its open position under the actuation of weight applied to said tongue, a throat latch mounted on said housing and extending therefrom across the open portion of the throat of said latch member, a biasing weight mounted on said hook member to bias said latch member into a normally closed position, and a counterweight affixed to said housing for retarding movements of said housing in response to the dynamic thrust resulting from movement of said latch member to its closed position; and an electrical circuit comprising a release solenoid mechanically coupled with said dog member, actuation



of said release solenoid moving said dog member permitting said latch member to pivot to its open position under influence of a load, a touchdown switch in circuit with said solenoid, said touchdown switch mounted for closure when a load being carried by said release apparatus is deposited on a weight-bearing surface, closure of said switch actuating said release solenoid, and an arming switch and circuit-breaking relay in circuit with said release solenoid, actuation of said touchdown switch also actuating said circuit-breaking relay to prevent application of energy to all other components of said electrical circuit except said circuit-breaking relay until said arming switch is operated.

3,016,258
MEANS FOR RELEASABLY MOUNTING A STORE ON AN AIRCRAFT
John V. Landry, Manhattan Beach, Calif., assignor to Pastushin Aviation Corporation, Los Angeles, Calif., a corporation of California
Original application Sept. 28, 1955, Ser. No. 537,090, now Patent No. 2,948,563, dated Aug. 9, 1960. Divided and this application Sept. 18, 1959, Ser. No. 841,432
11 Claims. (Cl. 294—83)



1. In an apparatus for mounting a jettisonable store on an aircraft and for releasing the store with ejection

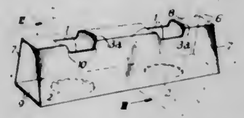
force, the combination of: suspension means unitary with said store to extend into the interior of said aircraft for anchorage of the store; engagement means mounted on the aircraft for engagement with said suspension means to support the store, said engagement means and the cooperating suspension means extending laterally of the store to provide laterally spaced support points for the store; first cooperative contact means on the aircraft and the store, respectively, comprising a socket and a pivot members seated therein for pivotal contact of the store near one end thereof with the aircraft; second cooperative contact means comprising a socket and a pivot member seated therein for pivotal contact of the store with the aircraft near the other end thereof, said suspension means being intermediate said first and second means, at least one of said first and second means being adjustable to exert separation force between the aircraft and the store to place said suspension means under stress to make the store rigid relative to the aircraft; ejector means separate from said suspension means and said engagement means to exert ejection force against said store at a point intermediate said first and second means; and means to release said engagement means from said suspension means in timed relation to the operation of said injector means.

3. A combination as set forth in claim 1 in which said ejector means includes: a piston on said store; means to subject said piston to fluid pressure to thrust the piston against the store; and means responsive to said fluid pressure to release said engagement means.

3,016,259
HOLDERS FOR BOTTLES AND LIKE NECKED CONTAINERS

Frank Dean Lawrence, 38 Bradford Road, Weymouth, Dorset, England

Filed Aug. 21, 1958, Ser. No. 756,370
Claims priority, application Great Britain Aug. 29, 1957
3 Claims. (Cl. 294—87.2)



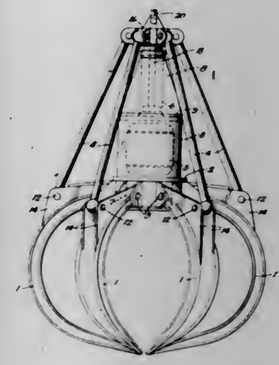
1. A carrier for bottles having an annular neck rib above a shoulder, said carrier comprising an elongated tubular body having a top and a bottom portion parallel to each other, said portions provided with respectively upper and lower registering openings, said upper openings being smaller than the bottom openings, resilient edges in said top portion at the upper openings to snap under the neck rib as it passes therethrough, and inclined walls converging from the bottom to the top portions to press the lower openings on to the shoulder of the bottle.

3,016,260
ELECTRO-HYDRAULICALLY OPERATED MECHANICAL GRABS

Jürgen Schrader, Peine am Bauhof, Germany, assignor to Norddeutsche Schraubenund Mutternwerke A.G., Peine, Germany, a corporation of Germany

Filed Oct. 12, 1959, Ser. No. 845,805
Claims priority, application Germany Oct. 22, 1958
5 Claims. (Cl. 294—88)

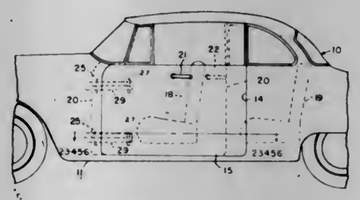
1. An orange peel mechanical grab characterized by a low center of gravity having a driving ring disposed approximately midway between the upper and lower ends of the grab, a plurality of downwardly-extending circumferentially-spaced load-engaging arms pivotally connected to said driving ring, a driving arm for each of said load-engaging arms extending upwardly therefrom, a hydraulic cylinder having a movable shaft disposed between said driving arms, connecting means fixed to said movable shaft, and electrically powered means for producing pressurized hydraulic fluid for operating said cylinder interposed between said driving ring and said cylinder to establish a rigid connection therebetween, said driving arms having their upper ends pivotally conected to said connecting means and their lower ends pivotally connected to said load-engaging arms, thereby protecting said cylinder and said electrically powered means from damage during use.



3,016,261
VEHICLE DOORS

John W. Tatter, 462 Barr Court, Akron 9, Ohio, assignor, by decree of distribution, to Marie W. Tatter and John Wilbur Tatter in equal proportions

Filed Sept. 16, 1959, Ser. No. 840,378
6 Claims. (Cl. 296—46)

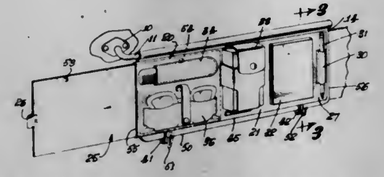


1. In a vehicle, a body structure having a door opening and a hinge pin secured near one side of said opening, a door structure dimensioned to fit said opening and having a hinge pin secured near one side, a hinge structure rotatably mounted on both of said hinge pins, said hinge structure having means operably connected with both of said hinge pins and operable on opening said door to substantially prevent relative rotation of said hinge pins on their axes with respect to each other, whereby said door structure is retained in a substantially parallel relationship to the plane of said door opening upon opening of said door, said hinge structure comprising a hollow casing and in which said means connecting said hinge pins comprises a pair of flexible connecting elements wound at the end on said hinge pins and extending through said hollow casing, one element being operable on opening said door to wind up on one hinge pin and unwind from the other hinge pin, the other element being simultaneously operable to unwind from said one hinge pin and wind up on said other hinge pin.

3,016,262
AUTOMOBILE SUN VISOR ACCESSORY

Harry J. Hunt, 3029½ Independence Ave., Kansas City, Mo.

Filed July 13, 1959, Ser. No. 826,874
1 Claim. (Cl. 296—97)

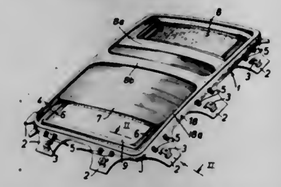


An accessory adapted to be affixed to the surface of an automobile sun visor of the type which includes an opaque sheet pivotally mounted proximate the upper portion of an automobile windshield comprising: an open-ended envelope, said envelope having opposed side surfaces substantially in contact and of generally rectangular configuration, both ends of said envelope being open; means for affixing said envelope to a surface of said opaque sheet of said sun visor with an outer edge of said envelope proximate the outer edge of said opaque sheet, said outer edge being that edge away from said pivotal mounting; a sheet of transparent material having a rectangular configuration substantially equal in size to the configuration of said envelope and slidably mateable therewith in frictional engagement within the opposed sides of said envelope, said transparent sheet being formed of material which reduces the intensity of light passing therethrough, said envelope and said transparent sheet being of a size relative to said opaque sheet which allows the transparent sheet to be partially extended from an open end of said envelope to extend beyond the surface of said opaque sheet; retaining means affixed to said envelope proximate said outer edge thereof, said retaining means including a pair of spaced-apart inwardly extending hooks; and openings provided proximate an edge of said transparent sheet, said openings being mateable with said hooks whereby said transparent sheet can be attached to said hooks to depend beneath said envelope.

3,016,263
SLIDING ROOFS FOR AUTOMOTIVE VEHICLES AND THE LIKE

Heinrich Rehmann, Stockdorf, near Munich, Germany, assignor to Wilhelm Baier, K.G., Stockdorf, near Munich, Germany

Filed Jan. 2, 1959, Ser. No. 784,671
Claims priority, application Germany Jan. 11, 1958
11 Claims. (Cl. 296—137)

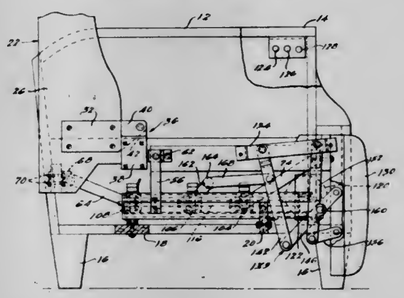


1. In a conveyance having a roof frame and a roof skin, in combination: a reinforcing frame having an opening and comprising a vertical portion having an upper end and a horizontal portion extending inwardly from said upper end and connected to the roof skin; means for rigidly connecting said reinforcing frame to the roof frame; a channel surrounding said opening and comprising a substantially vertical wall inwardly adjacent to the vertical portion of said frame, said wall having an upper end; a resilient strip connected to the upper end of said wall and in contact at least with the vertical portion of said reinforcing frame; means for releasably connecting the channel to said reinforcing frame; and a rigid roof member having edges slidably received in said channel for alternately closing or at least partially exposing said opening.

3,016,264
MOTOR-OPERATED RECLINING CHAIR

Albert L. Hughes, Detroit, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan

Filed June 17, 1958, Ser. No. 742,612
5 Claims. (Cl. 297—69)



1. A power-operated reclining chair comprising, a frame, spaced-apart side arms secured at the side of the frame, driving means mounted on said frame, said driving means including a lead screw disposed between and parallel to said side arms, three solenoid actuated running nut means mounted on said lead screw, each of said solenoid actuated running nut means being adapted to move axially over predetermined portions of said lead screw in response to the rotation of said lead screw in either of two directions, a back rest pivotally mounted to said frame, linkage means having one end thereof pivotally connected to said back rest and the other end thereof pivotally connected to one of said solenoid actuated running nut means, a seat pivotally connected to said frame, second linkage means having one end thereof pivotally connected to said seat and the other end thereof pivotally connected to a second one of said solenoid actuated running nut means, a footrest, a linkage system for movably connecting said footrest to said frame to enable said footrest to be moved between a vertical lowered position and a horizontal raised position, third linkage means pivotally connected to said linkage system and to a third one of said solenoid actuated running nut means, and means for selectively energizing each of said solenoid actuated running nut means and rotating said lead screw in either of two directions to selectively move the back rest, seat and footrest.

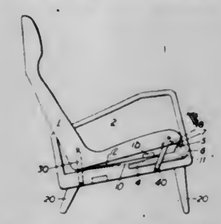
3,016,265
CHAIRS

William Reginald Cobb, Harlow, England, assignor to Greaves & Thomas Limited, London, England

Filed Dec. 17, 1959, Ser. No. 860,219
Claims priority, application Great Britain Jan. 6, 1959
8 Claims. (Cl. 297—88)

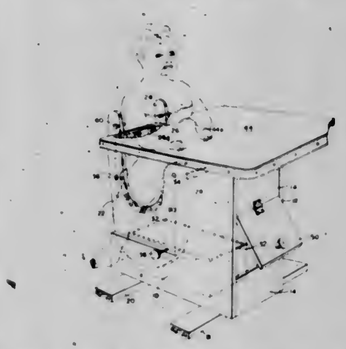
1. A chair comprising in combination, a body supporting member having a seat portion and a back portion, a frame member for supporting said body supporting member, leg means for supporting said frame member, a foot rest adapted for movement relative to the seat

portion about a pivot on the frame through an arc between two extreme positions one of which is beneath the seat portion, eccentric profile means operatively connected with said foot rest for rotative movement with respect to said supporting member and said frame, anchor means on said supporting member, at least one flexible connector having one of its ends attached to said anchor means and the other of its ends wrapped partly around and attached to said profile means for imparting rotative movement thereto, said flexible member extending be-



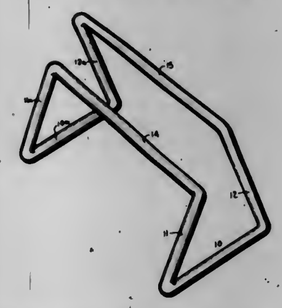
neath the seat portion of said supporting member and intermediate the side extremities of the seat portion, and being adapted to wrap a portion of said eccentric profile means when the foot rest is in one of its extreme positions, and means connected between said supporting member and said frame for permitting relative movement to be effected between said anchor means and said profile means whereby the foot rest may be moved from a position beneath the seat portion to an extended in-use position by said flexible connector and said profile means.

3,016,266
ORTHOPEDIC CHAIR
Marvin Caplan, Watertown, Mass.
(16 Prescott Road, Concord, Mass.)
Filed Mar. 30, 1959, Ser. No. 802,933
8 Claims. (Cl. 297—150)



5. For a patient wearing a spica cast which rigidly maintains the legs of the patient in a laterally outstretched position and which encircles the torso of the patient and extends upward to the underarms of the patient, an orthopedic chair adapted to receive and rigidly secure the patient in position comprising, a pair of rigid vertically disposed side pieces each having a generally semicircular cutout at the upper edge thereof of a diameter to receive said cast in the region of the thigh of the patient, means including a rigid generally vertical back piece disposed between and joined to said side pieces rigidly spacing said side pieces apart at such a distance that the lower curved edge of said cutouts engage said cast along spaced apart lines of contact in the region of the thighs of the patient to thereby constrain the patient against sidewise movement, said side and back pieces defining a vertically disposed box-like structure which is open at both ends, and a table top adjustably supported forwardly of said cutouts for horizontal movement above the upper edges of said side pieces into engagement with the cast in the region of the chest of the patient to lock the patient against said back piece to limit front and back movement of the patient.

3,016,267
FOOT REST
Ben Cones, 5130 Pleasant Run Parkway, N. Dr., Indianapolis 19, Ind.
Filed Jan. 13, 1960, Ser. No. 2,291
2 Claims. (Cl. 297—439)



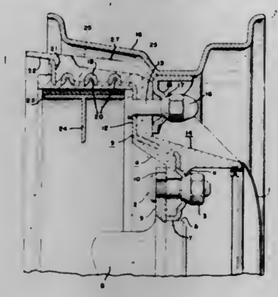
1. A multiple position foot rest comprising a pair of laterally spaced apart base members, each having relatively a front and back end; a first pair of side members fixed one each by a lower end to a front end of a base member and inclined upwardly and over that base member; a front upper member extending between and fixed by end portions to upper end portions of said side members; a second pair of side members, each of greater length than the lengths of the side members of said first pair; said second side members being fixed one each respectively to a back end of said base members and inclined over said base members; and a rear upper member extending between and fixed by its ends respectively to upper ends of said second side members, both of said front and rear upper members being horizontally disposed, one below the other, when said base members are horizontally disposed.

3,016,268
CONVERTIBLE TRAILER
Robert Lee Hadden, 8950 Atlantic Blvd., Jacksonville, Fla.
Filed Apr. 20, 1959, Ser. No. 807,700
6 Claims. (Cl. 298—17)



1. In a convertible trailer having a tongue adjustable in length and an axle adjustable in length and a removable bed, apparatus for supporting said bed upon said trailer comprising first means depending from opposite sides of said bed and resting upon said axle, second means depending from the forward end of said bed and resting upon said tongue for supporting the forward end of said bed and means depending centrally from said bed and engaging locking means on said trailer whereby said bed is supported on said trailer and locked in place.

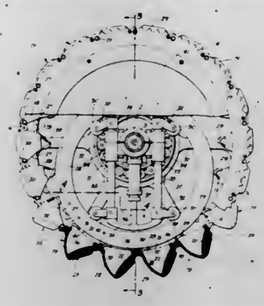
3,016,269
CAST BRAKE DRUM
John Z. De Lorean, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,860
Claims priority, application Germany Sept. 23, 1958
3 Claims. (Cl. 301—6)



1. A rim supporting vehicle wheel structure and brake drum forming an integral unit comprising in combination, a metal stamping, an aluminum casting cast integral with said stamping, a brake drum formed in said integral unit, a radial drum supporting wall connected to said drum and formed by said casting and said stamping, a plurality of holes angularly spaced in said radial wall adjacent to said drum adapted for receiving a plurality of bolts for supporting a wheel rim, a central opening in said radial wall adapted for reception on a hub, a plurality of bolt openings angularly spaced about said central opening adapted for receiving a plurality of bolts to fasten to said hub, a plurality of annular ridges formed in the drum section of said stamping to provide reinforcement and resistence to fracture, a plurality of perforations in said drum section of said stamping receiving a portion of the casting and interlocking the portion of the casting on the radial inner and radial outer sides of the drum section in said stamping, a plurality of radiating fins on the outer periphery of the casting to radiate heat dissipated within said drum of said unit, said unit thereby providing means for reinforcing a rim supporting wheel structure and providing a means for transfer of heat from the drum to the fins for cooling of said wheel structure.

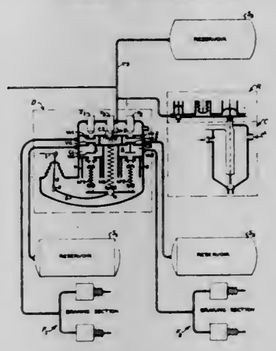
3,016,270
TRACTOR WHEEL WITH ADJUSTABLE GROUSERS
Emmitt M. Tucker, Sr., Medford, Oreg., assignor to Tucker & Sons, Grass Valley, Calif., a corporation of California
Filed Aug. 29, 1960, Ser. No. 52,639
2 Claims. (Cl. 301—48)

1. A grousered wheel for attachment to the driven hub projecting from the relatively stationary axle housing of a tractor, the wheel comprising a pair of transversely spaced rim rings, circumferentially spaced bars connecting the rings and maintaining them spaced, circumferentially extending grousers disposed between the rings and bars, means pivoting the grousers at one end on the rings, yieldable means normally holding the grousers retracted, the grousers each including radially outer and inner faces diverging from the pivoted end of the grouser and the outer face being substantially concentric with and adjacent the periphery of the rim rings when the grouser is retracted, cam-engaging wear members on the radially inner edge of the grousers adjacent the end thereof farthest from the pivot means, means connecting the laterally outer rim ring to the hub, a circular cam ring disposed in a vertical lateral plane back of the hub and intermediate the rim rings and surrounding the axle housing, upper and lower rollers engaging the inner periphery of the cam ring adjacent the top and bottom thereof respectively in planes on opposite sides of the axle housing, bearing brackets for the rollers, vertical rods on opposite sides of the axle



housing connected to and rigid with the brackets, a body fixed on the axle housing, guide sleeves for the rods fixed on the body, a cross bar connecting the rods adjacent one end thereof, and a hydraulic ram extending between and connecting the cross bar and body.

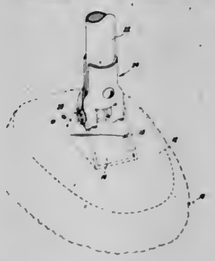
3,016,271
DISTRIBUTOR FOR PNEUMATIC BRAKING SYSTEMS WITH VARIABLE LOAD AND STROKE
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli, Milan, Italy, an Italian company
Filed Nov. 27, 1956, Ser. No. 624,684
Claims priority, application Italy Nov. 28, 1955
2 Claims. (Cl. 303—53)



1. A control valve mechanism for operating in succession pneumatically actuated devices, comprising, in combination, a casing having a stepped bottom wall comprising at least two consecutive stairlike surfaces, a plurality of valve members housed in said casing, springs biasing said valve members each of said biased valve members being adapted to control the opening of fluid inlet and outlet ports formed in said casing, an actuating toggle for thrusting said valve members against the bias of the respective springs, a bell-crank lever for lifting said actuating toggle and pivotally connected to one end thereof, a first biasing member mounted intermediate between every two adjacent spring-biased valve members for biasing said bell-crank lever, one end of said toggle being arrested in its downward stroke by one of said stairlike surfaces of said bottom wall of said casing, an adjustable second biasing member upwardly biasing the other end of said

toggle, the end of said bell-crank lever whereto said toggle is pivotally connected being arrested in its downward stroke by another of said stairlike surfaces of said bottom wall of said casing, said other stairlike surface being at a level lower than that of the first named stairlike surface.

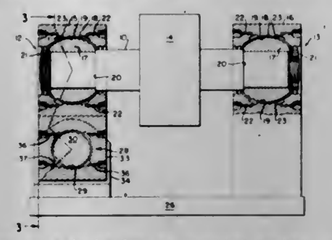
3,016,272
SOCKET CONNECTOR FOR MOP AND BRUSH HANDLES
John W. Bean, Bloomfield, Conn., assignor to The Fuller Brush Company, Hartford, Conn., a corporation of Connecticut
Filed Nov. 10, 1959, Ser. No. 852,068
1 Claim. (Cl. 306—19)



For use in connecting a mop handle to a mop frame, a two-part sheet metal socket adapted to receive and securely engage the end portion of a lohgitudinal handle and pivotally connect the same to a transverse pivot pin on a mop frame or the like, each part of the socket comprising an upper handle engaging portion of substantially semicircular cross-sectional shape and each part also comprising an integral lower pivot pin engaging portion including a pair of similar transversely spaced depending U-shaped legs, each of said U-shaped legs being arranged to open inwardly and having substantially flat wall portions adjacent their free inner edges all of which wall portions lie in planes substantially normal to the axis of the transverse pivot pin when the socket is pivotally connected with the pivot pin, the said inner edges on the wall portions of the legs of each socket part being generally rectilinear and disposed in a common plane, each of said flat wall portions of each U-shaped leg having an inwardly open substantially semicircular recess at its inner edge and also having a marginal section adjacent and throughout the length of the edge of the recess which extends a substantial radial distance from the edge of said recess, and all of asid recesses being coaxially arranged to receive and hold the transverse pivot pin when the two socket parts are connected to the handle and pivot pin, and means engageable with said upper handle engaging portions of said socket parts for securely clamping said portions about the handle end portion and for connecting said lower socket portions to the transverse pivot pin.

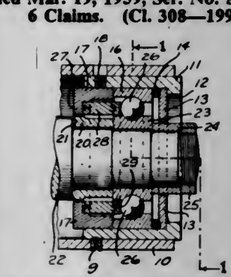
3,016,273
PIVOT-TYPE SELF-ALIGNING HYDROSTATIC BEARING ASSEMBLY
Conrad H. Benoit, Dedham, Mass., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed June 29, 1960, Ser. No. 39,605
4 Claims. (Cl. 308—72)

1. A self-aligning shaft and bearing assembly comprising, in combination; a shaft, first and second hydrostatic bearings spaced along said shaft for axially restraining and rotatively supporting said shaft, each of said first and second bearings comprising a member secured to said shaft and a bearing support member, each of said support members having an internal surface of revolution in minutely spaced relation from a like external surface of revolution of said first mentioned member, a third hydrostatic bearing supporting said first bearing pivotally for canting movement about an axis transverse to the rotational axis of said shaft and laterally spaced therefrom, said third hydrostatic bearing



comprising an axle having an external surface of revolution in minutely circumferentially-spaced relation from a like internal surface formed about said transverse axis in said bearing support member of said first bearing, and means for supplying a flow of fluid under pressure to said first and second bearings and to said internal surface of said third bearing.

3,016,274
MAGNETICALLY SPACED BALL BEARING
Edward O. Norris, Ledgemoor Lane, Westport, Conn.
Filed Mar. 19, 1959, Ser. No. 800,526
6 Claims. (Cl. 308—199)

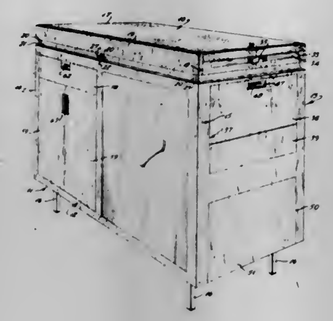


1. In a ball bearing having inner and outer ball races of magnetically permeable material and metal balls of magnetically permeable material disposed to roll between said races, an annular ring magnet mounted in fixed position with respect to one of said races and disposed on one axial side of said balls having an uninterrupted annular face extending around its entire periphery and aligned with the center of said balls as they roll around said races, said ring magnet being magnetized in an axial direction and having a uniform flux distribution around its entire periphery and being positioned to subject said balls to said uniform flux as they traverse the flux in their path of movement, and inner and outer field rings composed of magnetically permeable material disposed adjacent said inner and outer races and in registration with said ring magnet to complete the magnetic return path from said balls through both of said races to said ring magnet whereby the rolling surfaces of said balls are all of the same magnetic polarity.

3,016,275
MEDICAL EXAMINATION TABLE
Robert S. Grant, 3725 Pace Blvd., Lincoln, Nebr.
Filed Feb. 19, 1960, Ser. No. 9,749
4 Claims. (Cl. 312—209)

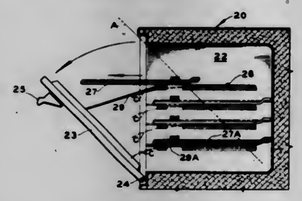
1. An examination table having a top providing an elongated supporting surface, a front side wall, end walls

and a rear side, a vertically adjustable guard rail above said front side wall end extending along the length of and adjoining the front edge of said top so that in the lowered position it is flush with said top supporting surface and constitutes the upper front corner of the table, means



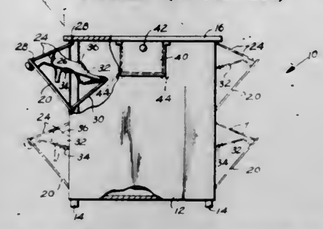
supporting said guard rail for vertical movement, means for securing said guard rail at the desired elevated position so that it may prevent objects from rolling off the table top and exposed handle means below the guard rail for operating said securing means.

3,016,276
OVEN CONSTRUCTION
Charles L. Morse, P.O. Box 156, South Dartmouth, Mass.
Filed Mar. 14, 1960, Ser. No. 14,673
17 Claims. (Cl. 312—274)



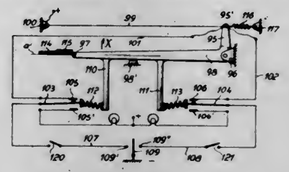
1. An oven or cabinet device having an opening, a door for said opening, said door being hingedly attached to said oven so as to have a horizontal hinge axis adjacent the lower edge of said opening, at least one shelf having substantial planar extent within said oven, shelf supporting means for supporting said shelf at any one of one or more levels therein for sliding movement in or out of said oven, said shelf having an arm pivotally related thereto on an axis parallel to the general plane of said shelf and between the foremost quarter and rearmost portions thereof, said arm being located under said shelf and having a rotational-biasing means to rotationally bias said arm rotationally forwardly and upwardly in a plane perpendicular to said shelf to underlie said shelf substantially parallel to the planar extent thereof, the free end of said arm lying adjacent and free of the forward end of said shelf, said door having at least one catch means mounted thereon projecting from the inner side theerof, means associated with the free end of said arm cooperating with said catch means whereby when said catch means engages said arm said shelf will slide in and out of said oven as said door moves between open and closed positions.

3,016,277
COMBINATION DRESSING TABLE, STOOL AND STORAGE
Roxy Griffin, Canoga Park, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Mar. 23, 1959, Ser. No. 801,338
1 Claim. (Cl. 312—287)



A storage unit comprising, in combination, a walled enclosure consisting of a substantially cubicle unit having a substantially flat rectangular top and opposite sides, with each of said opposite sides having a pair of vertically spaced side opening rack means, each comprising a substantially rectangular opening, a panel hingedly supported at the bottom thereof upon said side of said enclosure for pivotal movement between an open and closed position relative to said rectangular opening, and a support for carrying a plurality of shoes within each said panel comprising a plate extending substantially perpendicularly inwardly from said panel at the bottom thereof, a brace extending diagonally between the innermost end of said plate and the uppermost end of said panel at each end of said panel, and a crossbar secured to the mid portion of each brace of each of said panels, said crossbar supporting said shoes intermediate the heel and the arch portion thereof, and the innermost end of said plate supporting the toe portion of each of said shoes, said perpendicular plate and said panel carrying same effectively closing the bottom portion of each of said rack means.

3,016,278
RECORDER MECHANISM
Karl Vögtlin and Walter Rösch, Villingen, Germany, assignors to Kienzle Apparate G.m.b.H., Villingen im Schwarzwald, Germany
Filed Dec. 1, 1958, Ser. No. 777,343
Claims priority, application Germany Nov. 30, 1957
9 Claims. (Cl. 346—62)



9. In a recorder mechanism, in combination, recording means adapted to carry out a reciprocating movement between a normal and at least one displaced position for thereby recording phenomena of variable duration; resistance wire means capable of lengthening with rising temperature from a first predetermined length to a second predetermined length, and of shortening with falling temperature from said second to said first length; mechanical motion-transmitting means mounted between said resistance wire means and said movable recording means for actuating the latter depending upon lengthening and shortening of said resistance wire means in such a manner that upon lengthening of said resistance wire means from said first to said second predetermined length thereof said

recording means moves from said normal to a displaced position thereof, and upon shortening of said resistance wire means from said second to said first predetermined length thereof said recording means moves from said displaced to said normal position thereof; electrical circuit means comprising an electric circuit for causing heating of said resistance wire means when connected thereto, and means for connecting said resistance wire means to said electric circuit only while said resistance wire means has said first predetermined length and while it is lengthening from said first to said second predetermined length thereof, but disconnecting said electric circuit when said second predetermined length of said resistance means is reached and while said resistance wire means shortens from said second to said first predetermined length thereof; and means for energizing said electric circuit in conformity with the occurrence and for the duration of a phenomenon to be recorded by movement of said recording means between said normal and displaced positions thereof.

CHEMICAL

3,016,279
WOOD STAIN

Walter H. Lawin, Ashland, Wis.
(Hayward, Wis.)

No Drawing. Filed Jan. 7, 1959, Ser. No. 785,310
1 Claim. (Cl. 8—6.5)

The process of staining white sapwood to simulate red heartwood consisting of the steps of wetting the surface of white sapwood with an aqueous alkaline solution of one pound of sodium hydroxide dissolved in one gallon of water and one fourth ounce of oxalic acid, allowing the surface to dry, and neutralizing the dry alkaline surface with an aqueous acid solution.

3,016,280
TEXTILE TREATMENT

Fred Fortess and William J. Myles, Summit, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 30, 1955, Ser. No. 519,257
14 Claims. (Cl. 8—59)

1. Process for improving the properties of cellulose ester textile material, which comprises impregnating a textile fabric comprising filamentary material of cellulose triacetate of at least 59% acetyl value, calculated as combined acetic acid, with a hot bath of a glycol of the group consisting of ethylene glycol, propylene glycol and diethylene glycol, at a temperature of about 130 to 170° C. for a time sufficient to raise the safe ironing temperature of textile fabric of cellulose triacetate of at least 59% acetyl value, calculated as combined acetic acid, from an initial safe ironing temperature of 180° C. to a final safe ironing temperature of about 220 to 250° C.

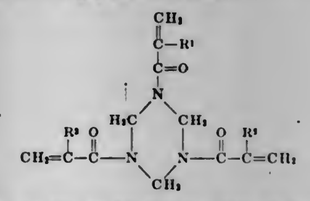
8. Process as set forth in claim 1 in which said bath contains dissolved therein a dye for said cellulose triacetate, the dye being inert to said glycol, and said cellulose triacetate being colored by said process.

3,016,281
PROCESS FOR TREATING CELLULOSIC TEXTILE MATERIAL WITH TRIACRYLYL-s-TRIAZINES

Edward L. Kropa, Greensboro, N.C., and Arthur S. Nyquist, Darien, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 16, 1957, Ser. No. 690,454
10 Claims. (Cl. 8—116.2)

1. A process for treating cellulosic textile material to impart shrinkage control and wrinkle resistance thereto through cross-linking of the cellulosic fibers, which consists essentially in treating said textile material in its entirety with a composition comprising an aqueous solution of an alkaline compound as a catalyst and a triazine compound selected from the group consisting of those having the following general formula:

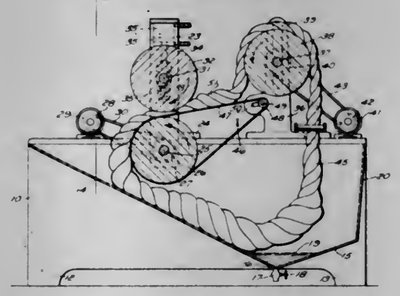


wherein R^1, R^2 and R^3 are selected from the group consisting of hydrogen, methyl, ethyl, propyl, butyl and the water-soluble bisulfite-modified adducts thereof, said alkaline catalyst being present in an amount sufficient to catalyze a reaction between the cellulose and said compound, and thereafter drying and curing the treated fabric.

3,016,282
PROCESS AND APPARATUS FOR SCOURING TEXTILE MATERIAL IN ROPE FORM

David C. Hardman, 100 Fiske Ave.,
Cumberland Hill, R.I.

Filed Sept. 21, 1959, Ser. No. 841,271
5 Claims. (Cl. 8—151)



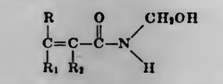
1. The process of scouring an endless loop of textile fabric in rope form which comprises wetting the rope at the bottom of the loop with cleaning fluid, lifting the wetted portion of the rope from below and feeding the rope to a squeezing operation between traveling surfaces on opposite sides thereof from a location at least as high as the squeezing operation, said squeezing traveling surfaces moving at a surface velocity slower than the velocity of the rope being fed to the squeezing operation so that the work passes through the squeezing operation in a relaxed relatively open form, and then depositing the rope below the squeezing operation and then repeating the cycle of travel of the rope.

3,016,283
RESIN SPUN VISCOSE

Joseph W. Schappel, Morton, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Filed Oct. 27, 1958, Ser. No. 769,543
6 Claims. (Cl. 18—54)

1. A method which comprises mixing viscose with an aqueous dispersion of a resinous linear polymer at least 50% of the units of which are derived from an amide having the formula:

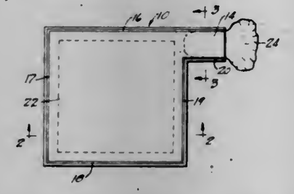


wherein each of R, R_1 and R_2 is a radical selected from the group consisting of hydrogen and lower alkyl radicals, shaping and coagulating the mixture to form a shaped article, regenerating cellulose in the article and then heating the article to cure the said resinous polymer.

3,016,284
PROCESS FOR INTRODUCING STERILE MATERIAL IN APPARATUS HAVING CONTROLLED ATMOSPHERE

Philip C. Trexler, Niles, Mich., assignor to University of Notre Dame du Lac, Notre Dame, Ind., a corporation of Indiana

Filed Sept. 11, 1957, Ser. No. 683,398
2 Claims. (Cl. 21—2)



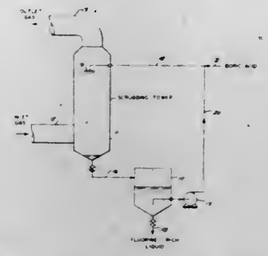
1. The method of introducing material through a sealable sterilizing lock into an apparatus having a selected atmosphere, comprising packaging said material in an envelope formed of fluid-impervious synthetic resin flexible film material capable of being heat sealed, said envelope having an open ended reduced neck communicating therewith containing a filler of porous material, evacuating air from said envelope through said neck and filler, introducing steam into said envelope through said neck and filler to sterilize the interior of said envelope and its contents, heat-sealing said envelope transversely of said neck between said filler and the body of said envelope to seal said neck while said envelope and its contents are protected from air-borne organisms by said filler, inserting said sealed envelope in said lock and exteriorly sterilizing the envelope in said lock while sealed, opening said lock into communication with said apparatus without altering said selected atmosphere to insert said envelope in said apparatus, and opening said envelope within said apparatus.

3,016,285
METHOD OF SELECTIVELY ABSORBING HYDROGEN FLUORIDE FROM GASES CONTAINING HYDROGEN FLUORIDE AND SULFUR DIOXIDE

Alan F. Clifford, Lafayette, Ind., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed July 23, 1958, Ser. No. 750,522
5 Claims. (Cl. 23—2)

1. A method for selectively absorbing hydrogen fluoride from a gaseous mixture containing hydrogen fluoride and sulfur dioxide, which method comprises passing said gaseous mixture through an absorption zone in contact

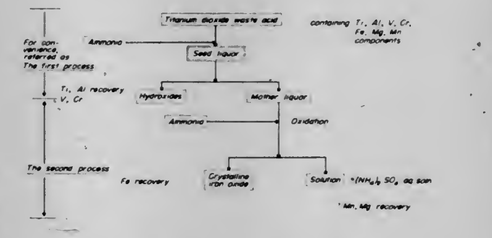


with an aqueous solution of boric acid containing at least about 1 weight percent of fluoboric acid.

3,016,286
METHOD FOR THE TREATMENT OF WASTE ACID RESULTING FROM TITANIUM DIOXIDE PRODUCTION

Miyoshi Masukawa and Naruo Ota, Yokkaichi-shi, Shigeki Yamada, Suzuka-shi, and Toshihiko Shimato, Yokkaichi-shi, Japan, assignors to Ishihara Sangyo Kaisha Ltd., Osaka, Japan, a corporation of Japan

Filed Feb. 29, 1960, Ser. No. 11,620
7 Claims. (Cl. 23—118)



5. A process for producing ammonium alum, ammonium sulfate, crystalline iron oxide and metal hydroxide, easily separable by filtration and consisting essentially of from one to four members selected from the group consisting of the hydroxides of aluminum, titanium, vanadium and chromium, which comprises adding from one to two members selected from the group consisting of ammonia and ammonium sulfate to waste acid liquor derived from hydrolysis of titanium sulfate solution, until the ammonium sulfate concentration reaches 40 to 120 grams per liter, cooling the mixture to above 5° to 20° C. to crystallize ammonium alum therefrom, and separating said alum from the resulting aqueous solution of ferrous sulfate, introducing the latter solution and ammonia into an aqueous liquor seeded with said metal hydroxide while stirring, heating at a temperature of from about 60° C. to the boiling point and removing a portion of the resulting mixture corresponding to the amount of the introduced aqueous solution of ferrous sulfate and ammonia, while maintaining a constant pH within the range of 4.5 to 7.0 therein, thereby stimulating the growth of the hydroxide particles in said portion, separating said hydroxide from the removed portion of the mixture, introducing ammonia into the resulting mother liquor so as to maintain a pH of 3.0 to 9.0 and concurrently feeding gas containing molecular oxygen in a finely dispersed form thereinto, thereby producing crystalline iron oxide

and an ammonium sulfate solution, and finally separating the crystalline iron oxide from the ammonium sulfate solution, and finally separating the crystalline iron oxide from the ammonium sulfate solution.

3,016,287
PROCESS OF SEPARATING LACTAMS

Thomas R. Hopkins, Johnson County, and William C. Francis, Mission, Kans., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

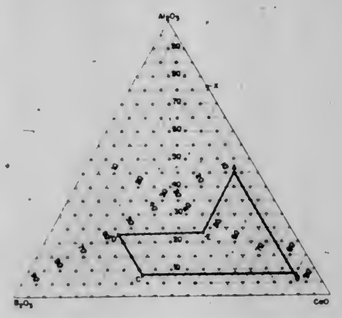
No Drawing. Filed Sept. 23, 1958, Ser. No. 762,702
16 Claims. (Cl. 23—166)

10. The process of recovering lactam from a Beckmann rearrangement reaction product mixture in which sulfuric acid has been the rearrangement catalyst and converting the rearrangement catalyst to a valuable by-product which comprises adding urea to the reaction product mixture containing sulfuric acid and lactam as a sulfuric acid salt in a ratio of at least 1 mole of urea per mole of sulfuric acid, separating lactam from the reaction product mixture to produce a substantially lactam-free residue containing a urea salt of sulfuric acid and treating the urea salt of sulfuric acid with sulfur trioxide to convert the salt to sulfamic acid.

3,016,288
ALUMINOTHERMIC PROCESS OF MAKING BORON, BORON COMPOUNDS AND ALLOYS

Jean Lucien Andrieux, Grenoble, and René Peffen, La Tronche, France (both % Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine, 10 Rue du General Foy, Paris (8e), France)

Filed Mar. 19, 1956, Ser. No. 572,393
Claims priority, application France Mar. 22, 1955
2 Claims. (Cl. 23—204)



2. A method of aluminothermically producing borides and boron alloy products having melting points too high and densities too low to permit separation by decantation between the products and the slag formed in the method; comprising mixing a charge material containing boric anhydride, aluminum, calcium oxide, and a material from the group consisting of metals and metal oxides to combine with the boron in said products; heating the mixture to form a mass including said product interspersed in a soluble slag; said charge material being proportioned to produce the product and said slag consisting essentially of a ternary system B_2O_3—Al_2O_3—CaO having mol percentages of B_2O_3, Al_2O_3 and CaO within the area A-B-C-D-E-A shown in the figure, said product being incapable of separation from the slag by decantation; solidifying the slag and product; dissolving the slag in a medium selected from the group consisting of hydrochloric acid, nitric acid and caustic soda solutions; and recovering the product.

3,016,289
PROCESS FOR PRODUCING PURIFIED SILICON HALOGENIDE

Franz Arthur Pohl and Toni Hauskrecht, Belecke (Moehne), Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany

No Drawing. Filed Apr. 24, 1958, Ser. No. 730,523
Claims priority, application Germany Apr. 25, 1957
4 Claims. (Cl. 23—205)

1. A process for producing silicon tetrachloride substantially free from boron trichloride comprising the steps of adding to silicon tetrachloride containing boron trichloride, an excess of azobenzene, reacting said boron trichloride present in the silicon tetrachloride with a portion of said azobenzene to form an addition compound, and separating a silicon tetrachloride substantially free from boron trichloride from the mixture containing silicon tetrachloride, said addition compound and said excess of purifying agent, the aforesaid steps being conducted at a temperature below the decomposition temperatures of both the purifying agent and the addition compound.

3,016,290
PURIFICATION OF HYDROGEN PEROXIDE

Arthur A. Elston and Wilbie S. Hinegardner, Niagara Falls, N.Y., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware

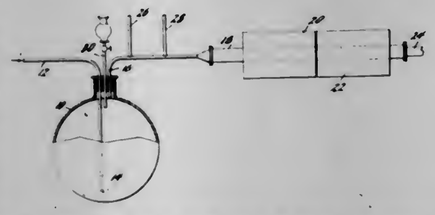
No Drawing. Filed Jan. 27, 1956, Ser. No. 561,950
13 Claims. (Cl. 23—207)

1. The method of removing organic impurities from an aqueous hydrogen peroxide solution comprising intimately contacting said solution under agitation and under non-alkaline conditions at a temperature not exceeding 40° C. with a finely-divided activated carbon from the group consisting of activated carbons from wood charcoal and from wood pulping waste liquors, then separating the activated carbon with adsorbed organic impurities from the solution before substantial peptization of said carbon in said solution occurs, said activated carbon being one which does not decompose more than about 2% of the hydrogen peroxide under the conditions of use and one which, when slurried at a 1% concentration in carbon dioxide-free distilled water, gives a slurry having a pH not exceeding 8.

3,016,291
PURE SILICON BY HYDROGEN REDUCTION

Robert S. Aries, 77 South St., Stamford, Conn.

Filed Apr. 15, 1959, Ser. No. 806,722
10 Claims. (Cl. 23—223.5)



1. Method for the production of silicon of very high purity which comprises heating a silicon halide in the vapor state with hydrogen, at a temperature between about 900° and about 1200° C., the hydrogen being present in an amount between 4 and about 8 mols per mol of silicon halide, and the time of contact of the reactants being about 15 to 25 seconds, and recovering the liberated silicon.

3,016,292
DIAGNOSTIC COMPOSITION

Robert Bauer, Kalamazoo, Mich., and Ray L. Mast, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed May 15, 1959, Ser. No. 813,336
6 Claims. (Cl. 23—253)

1. A diagnostic composition for detecting glucose which comprises glucose oxidase, an iodide salt selected from the group consisting of potassium iodide, sodium iodide, and ammonium iodide, a molybdate salt for intensifying the action of the iodide and selected from the group consisting of sodium molybdate, potassium molybdate, and ammonium molybdate and a color-forming substance oxidizable by hydrogen peroxide in the presence of said iodide and molybdate salts.

3,016,293
METHOD OF MULTI-COLORING SEALED ANODIZED ALUMINUM

Alexander Cybriwsky and Gerald L. Hager, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware

Filed July 29, 1957, Ser. No. 674,856
8 Claims. (Cl. 41—41)

1. A method of coloring a metal surface having a micro-porous anodic surface film formed by anodizing said metal surface, comprising: sealing said micro-porous anodic surface film with a seal of the hydration type to render the film non-absorbent of dye during a subsequent dyeing step; unsealing a portion of said film by selectively etching it leaving portions thereof unetched; dyeing said etched portion; and sealing said dyed portion.

3,016,294
ABRASIVE PRODUCT

George L. Haywood, Latham, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts

Filed Apr. 21, 1959, Ser. No. 807,892
3 Claims. (Cl. 51—297)



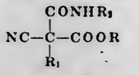
1. A method of making an abrasive article from a non-woven fibrous web, said article having at least one surface thereof containing predominantly the ends of the individual fibres comprising such web which comprises: substantially saturating with a slurry of adhesive and abrasive grain a relatively thin wide non-felted, open, non-woven fibrous web, said web having the majority of the individual fibres thereof randomly disposed with their length directions lying more in horizontal than in vertical planes with respect to the plane of said web so that said individual fibers are coated upon their surfaces with said abrasive grain and adhesive; rolling said saturated web tightly upon itself to form a roll; curing said adhesive while said web is in roll form to produce a unified, self-sustaining structure; and then slicing said roll to produce said article.

3,016,295
METHOD FOR ALTERING THE GROWTH CHARACTERISTICS OF PLANTS

Sidney H. Davidson, Wilmington, Del., and Charles J. Delp, Bradenton, Fla., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 23, 1958, Ser. No. 743,985
5 Claims. (Cl. 71—2.7)

1. The process of altering the growth characteristics of a plant comprising supplying to the plant, in an amount sufficient to alter the growth characteristics of the plant, a compound selected from the group consisting of:



where R is a member of the group consisting of alkyl of up to and including 12 carbon atoms and

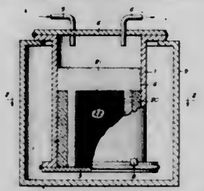
$$-(-CH_2-CH_2-O)_n-R_3$$

wherein n is a whole number from 1–2 and R_3 is from the group consisting of $-CH_3$ and $-C_2H_5$; R_1 is a member of the group consisting of hydrogen, sodium, potassium, lithium, magnesium, calcium, aluminum, zinc, copper, iron, molybdenum and manganese; and R_2 is a member of the group consisting of hydrogen and alkyl of 1–3 carbon atoms.

3,016,296
METHOD FOR REDUCTION OF REFRACTORY METAL OXIDE TO METAL BY CALCIUM CARBIDE

Morton M. Wong and Ernst K. Kleespies, Boulder City, Nev., assignors to the United States of America as represented by the Secretary of the Interior

Filed Sept. 23, 1959, Ser. No. 841,904
11 Claims. (Cl. 75—84)
(Granted under Title 35, U.S. Code (1952) sec. 266)



1. In the method for the preparation of refractory metals by reduction of an oxide of said refractory metal with calcium carbide in the presence of a flux material at a temperature at which the flux material is molten, the improvement which comprises disposing said carbide and flux and a reactant comprising refractory metal oxide in generally vertical layers within a crucible, the individual layers of the said oxide reactant and carbide being separated by each being in intimate contact with at least a different one of the walls of flux, which define the distinct generally vertically disposed outer surfaces of the layer of flux.

3,016,297
PHOTOPOLYMERIZABLE COMPOSITIONS COMPRISING POLYMERIC CHELATES AND THEIR USE IN THE PREPARATION OF RELIEFS

Walter E. Mochel, Bellevue Manor, and Louis Plambeck, Jr., Shipley Heights, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 13, 1956, Ser. No. 564,873
13 Claims. (Cl. 96—35)

1. A solid, essentially transparent photopolymerizable composition comprising: (1) at least 50% by weight of a polymeric crosslinked polyvalent metal chelate of a polymeric polyhydric alcohol-polycarboxylic acid condensation product modified by further esterification of a plurality, m, of hydroxyl groups thereof with a beta-keto-monocarboxylic acid having hydrogen on the alpha-carbon, the polyvalent metal being taken from the class consisting of the metals of groups II–A through V–A, I–B through VII–B, and VIII of the periodic table and having an absolute valence n, both m and n being plural integers and totalling at least 5, the unit weight of said polyhydric alcohol ester being less than 1000 for each beta-ketomonocarboxylic acid ester group, said chelate being cross-

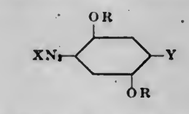
linked through said polyvalent metal present in six-membered chelate rings formed on different polymer chains, said metal being a common member of said chelate rings, each of said rings having an atom of the polyvalent metal linked to both the carbonylic and carboxylic oxygen atoms of a single beta-ketoacyloxy unit; (2) at least one addition polymerizable, ethylenically unsaturated compound containing at least one vinylidene group, having a minimum boiling point of 100° at atmospheric pressure, and being present in amount such that the vinylidene group constitutes at least 1% up to about 8.0%; and (3) an addition polymerization initiator activatable by actinic light in amount from 0.05 to 5%, said percentages being by weight of the entire composition.

3,016,298
ONE-COMPONENT DIAZOTYPE MATERIAL

Theodorus Petrus Wilhelmus Sanders, Venlo, and Hubertus Wilhelmus Henricus Maria Roncken, Roermond, Netherlands, assignors to Chemische Fabriek L. van der Grinten N.V., Venlo, Netherlands, a corporation of the Netherlands

No Drawing. Filed June 16, 1958, Ser. No. 742,025
Claims priority, application Netherlands June 17, 1957
13 Claims. (Cl. 96—75)

1. A one-component diazotype material comprising paper having a fibrous side thereof sensitized by a light-sensitive composition containing, and in the absence of an azo coupling component, an actively coupling light-sensitive diazo compound of the formula



in which X is an anion, R is a radical selected from the group consisting of alkyl and aralkyl radicals, and Y is a radical selected from the group consisting of acylamino, arylmercapto, and aryl radicals, and containing with said compound an aliphatic saturated dicarboxylic acid in which the carboxylic acid radicals are linked with two carbon atoms forming part of a hydrocarbon radical having from 2 to 8 carbon atoms, the electrolytic dissociation constants of said acid being smaller than 2.3×10^{-4}, said composition providing at least 1.7 millimols of said acid per square meter of the area of said side.

3,016,299
FUMARIC ACID COMPOSITION

Stanley P. Raffensperger, Palos Park, and Thomas T. Takashima, La Grange, Ill., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 9, 1959, Ser. No. 791,862
12 Claims. (Cl. 99—78)

1. A method of preparing a fumaric acid containing composition having an increased rate of solubility which comprises admixing water, fumaric acid powder and a crystalline sugar in such proportions that the crystalline character of the sugar is not completely destroyed and the sugar is in solution to an extent sufficient to coat fumaric acid powder and sugar crystals, combining said moistened sugar with fumaric acid powder in proportions whereat said sugar and powder are aggregated by said sugar solution, said fumaric acid powder being of a size whereat it does not float at the top of and does not sink to the bottom of a body of aqueous fluid, drying the aggregates of said wetted sugar and said fumaric acid powder at a temperature below the melting point of the sugar and for a sufficient length of time to preserve the crystallinity thereof while producing a friable, substantially anhydrous product, and breaking up said dried product into granules.

3,016,300
ADIPIC ACID COMPOSITION

Stanley P. Raffensperger, Palos Park, and Thomas T. Takashima, La Grange, Ill., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,595
16 Claims. (Cl. 99—78)

1. A method of preparing an adipic acid containing composition having an increased rate of solubility which comprises admixing water and a crystalline sugar in such proportions that the crystalline character of the sugar is not completely destroyed and the sugar is in solution to an extent sufficient to coat adipic acid powder and sugar crystals, combining said moistened sugar with adipic acid powder in proportions at which said sugar and powder are aggregated by said sugar solution, said adipic acid powder being of a size whereat it does not float at the top of and does not sink to the bottom of a body of aqueous fluid, drying the aggregate of said wetted sugar and said adipic acid powder at a temperature below the melting point of the sugar and for a sufficient length of time to preserve the crystallinity thereof while producing a friable, substantially anhydrous product, and breaking up said dried product into granules.

3,016,301
PROCESSES FOR IMPROVING THE TENDERNESS AND FLAVOR OF MUTTON

Beverly E. Williams, La Grange Park, Ill., assignor to Hodges Research and Development Company, New York, N.Y., a corporation of California

No Drawing. Filed July 14, 1959, Ser. No. 826,917
2 Claims. (Cl. 99—107)

1. A process for improving the tenderness and flavor of yearling lamb and mutton including the steps of stitch pumping the dressed carcass immediately after slaughter with a solution of monosodium glutamate the solution weighing approximately 3% by weight of the weight of the carcass and containing .4 to .6 ounce of monosodium glutamate per pound of injection solution, then increasing the internal body temperature of the dressed carcass to about 108° to 115° F. and then chilling the carcass.

3,016,302
INSTANT CHIFFON PIE FILLING AND METHOD OF PRODUCING THE SAME

Austin R. Hunter, La Mesa, Calif., assignor to Kelco Company, San Diego, Calif., a corporation of Delaware

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,667
24 Claims. (Cl. 99—131)

1. A new and useful composition suitable for producing an acid-type chiffon pie filling with water having at least a moderate degree of hardness comprising: 1.5 to 6 parts by weight of a low calcium ash water-soluble alginate; 0.25 to 5 parts by weight of an edible acidic ingredient; and ½ to 4 parts by weight of a whipping agent.

3,016,303
VEGETABLE DRYING PROCESS

Albert M. Cooley, Grand Forks, N. Dak., assignor to The State University and The School of Mines, also known as University of North Dakota, Grand Forks, N. Dak.

Filed July 15, 1960, Ser. No. 43,129
11 Claims. (Cl. 99—207)

1. A process for producing dehydrated mashed starchy vegetables comprising cooking raw vegetables for a period of at least 20 minutes by alternately subjecting to steam and vacuum a plurality of times, mashing the cooked vegetables, drying the mashed vegetables to a final moisture content of about 4 to 10 percent by applying a thin



film of the mashed vegetables to a heated surface and then recovering the dried vegetables from said surface.

3,016,304
TREATMENT OF TEXTILES

Iris Winifred Preston and John Payne, Buckinghamshire, England, assignors to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Filed Feb. 8, 1957, Ser. No. 638,929
Claims priority, application Great Britain Feb. 16, 1956
25 Claims. (Cl. 106—36)

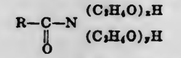
7. A process for the conditioning of unspun textile fibers to improve their interfibre friction which comprises applying to said fibers, at some stage of their processing prior to spinning, a fluid composition consisting essentially of a colloidal dispersion of from 5 to 20% by weight of silica having an ultimate particle size of 10 to 100 millimicrons in a textile lubricating oil as the dispersion medium having dissolved therein from 1.5 to 10% by weight of a dispersing agent which is soluble in said oil and is selected from the group consisting of (1) lanolin, (2) diethylene glycol mono-esters of long-chain alkyl carboxylic acids, (3) diethylene glycol di-esters of long-chain alkyl carboxylic acids, (4) polyethylene glycol mono-esters of long-chain alkyl carboxylic acids, (5) polyethylene glycol di-esters of long-chain alkyl carboxylic acids, (6) propylene glycol esters of long-chain alkyl carboxylic acids, (7) glyceryl esters of long-chain alkyl carboxylic acids, (8) sorbitan-fatty acid condensates, and (9) ethylene oxide-fatty alcohol condensates, said dispersing agent having the additional properties of favoring the formation of water-in-oil dispersions and of reducing the viscosity of said composition, said composition being applied in an amount sufficient to deposit from 0.1 to 0.5% of silica on the weight of the fibers.

3,016,305
MANUFACTURE OF THICK-SKINNED OR ALL-SKIN SHAPED ARTICLES FROM VISCOSE

Harry L. Vosters, Nijmegen, Netherlands, assignor to Kunstzijdespinnerij Nyma N.V., Nijmegen, Netherlands, a limited liability company

No Drawing. Original application May 10, 1956, Ser. No. 584,147. Divided and this application Dec. 22, 1958, Ser. No. 781,851
6 Claims. (Cl. 106—165)

1. The method of producing shaped bodies with a thick skin from viscose, comprising the step of extruding the viscose into a sulfuric acid coagulating bath containing at least 2% zinc sulfate in the presence of between 0.5% and about 2%, based on the weight of the cellulose, of a polyepoxyethane substituted fatty acid amide selected from the group consisting of cocoamide, hydrogenated tallow amide and red oil amide with the formula:

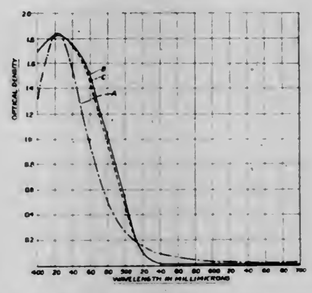


wherein $x+y=5$ to 30, and R is the fatty alkyl group of said amides.

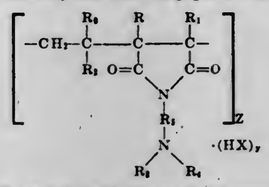
3,016,306
YELLOW FILTER LAYERS FOR MULTI-LAYER PHOTOGRAPHIC COLOR ELEMENTS

Paul M. Mader, Robert D. Nelson, and Thomas V. Crevling, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Nov. 25, 1957, Ser. No. 698,699
4 Claims. (Cl. 117—33.3)



1. In a method for preparing a multi-layer photographic element comprising (*a*) a support, (*b*) a red-sensitive silver halide emulsion layer, (*c*) a green-sensitive silver halide emulsion layer, (*d*) a blue-sensitive silver halide emulsion layer having substantially no sensitivity in the green and red regions of the spectrum, and (*e*) a blue-light absorbing colloid layer, said blue-sensitive silver halide emulsion layer (*d*) being outermost with respect to said silver halide emulsion layers (*b*) and (*c*), and said blue-light absorbing layer (*e*) being beneath said blue-sensitive silver halide emulsion layer (*d*) but outermost with respect to said silver halide emulsion layers (*b*) and (*c*), the steps comprising (1) incorporating a blue-light absorbing dye (*f*) as a constituent of one of said silver halide emulsion layers contiguous to said colloid layer (*e*) and (2) diffusing substantially all of said blue-light absorbing dye (*f*) from said contiguous silver halide emulsion layer into said colloid layer (*e*) while said contiguous silver halide emulsion layer is moist with water, said silver halide emulsion layers (*b*), (*c*) and (*d*) being substantially free of mordants, said blue-light absorbing dye (*f*) being water-soluble and containing at least one radical selected from the class consisting of carboxyl and sulfo, said blue-light absorbing dye (*f*) having its maximum absorption between about 400 and 500 mμ with substantially no absorption beyond about 500 mμ and being adapted to be released from said element upon treatment with the alkaline solutions normally employed in color photography, and said colloid layer (*e*) containing a mordant comprising interpolymer units represented by the following general formula:



wherein R, R_0 and R_1 each represents a member selected

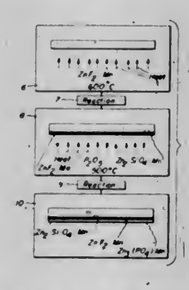
from the class consisting of a hydrogen atom and a lower alkyl group, R_2 represents a member selected from the class consisting of a hydrogen atom, a lower alkyl group, a monocyclic aryl group and a carbalkoxyl group, R_3 and R_4 each represents a member selected from the class consisting of (*a*) a lower alkyl group, (*b*) together represent the atoms necessary to complete a piperidine ring and (*c*) together represent the atoms necessary to complete a morpholine ring, R_5 represents an alkylene group containing from 2 to 5 carbon atoms, *z* represents a positive integer greater than about 10, X represents an acid anion selected from the class consisting of lactyloxy, glycolyloxy, alkanesulfonoxy, chloride, and a saturated aliphatic acyloxy group, and *y* represents a positive whole number having a value of ½ to 1 times *z*.

3,016,307

FORMATION OF PHOSPHOR FILMS OF REACTION

Lewis R. Koller, Schenectady, and Henry D. Coghill, Burnt Hills, N.Y., assignors to General Electric Company, a corporation of New York

Filed Mar. 13, 1959, Ser. No. 799,189
8 Claims. (Cl. 117—33.5)



1. A method of producing a luminescent screen comprising the steps of heating a screen substrate in an evacuated enclosure, evaporating a fluoride phosphor selected from the group consisting of zinc fluoride and magnesium fluoride in the region adjacent to said substrate, said evaporated phosphor condensing on said substrate, evaporating in said evacuated enclosure in the region of said substrate less than a stoichiometric quantity of an oxygen containing compound which is reactive with said evaporated phosphor to form a luminescent oxygen containing phosphor selected from the group consisting of phosphates, borates and silicates to form a multilayer luminescent screen having said fluoride phosphor and a phosphor formed by reaction as the separate layers thereof.

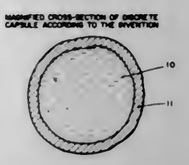
3,016,308

RECORDING PAPER COATED WITH MICROSCOPIC CAPSULES OF COLORING MATERIAL, CAPSULES AND METHOD OF MAKING

Norman Macaulay, Niagara Falls, N.Y., assignor to Moore Business Forms, Inc., Niagara Falls, N.Y., a corporation of Delaware

Filed Aug. 6, 1957, Ser. No. 676,574
29 Claims. (Cl. 117—36.7)

1. A process for producing a free-flowing powder of microscopic discrete rupturable capsules comprising liquid droplets encapsulated within an outer rupturable shell of film-forming material, said encapsulating outer shell being formed directly by evaporation forces on the solvent of a film-former solution of a non-ionizable water-soluble film-former which comprises the continuous phase of suspended minute particles of an emulsion, the discontinuous phase of which emulsion comprises the liquid droplets and between about 23% and 80% by weight of the capsules, which process comprises producing an emulsion of the liquid droplets in a film-former solution in which the latter forms the continuous phase and is substantially in-



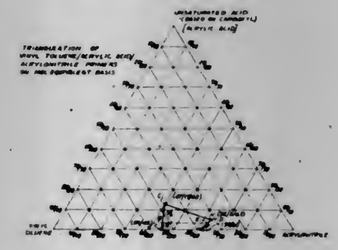
soluble in the liquid droplets, suspending minute particles of said emulsion in a gaseous atmosphere, and then subjecting said suspended emulsion particles to evaporation forces to produce said microscopic discrete capsules in the form of a free-flowing powder.

3,016,309

TRIPOLYMER PRIMER FOR VINYL RESIN DISPERSIONS AND STEEL COATED WITH A FILM THEREOF

Gerald P. Roeser, Lahaska, and Henry J. Bach, Mount Lebanon Township, Allegheny County, Pa., assignors to American Marietta Company, Stoner-Mudge Co. Division, Chicago, Ill., a corporation of Illinois

Filed Dec. 9, 1958, Ser. No. 779,082
22 Claims. (Cl. 117—75)



21. A sheet of steel having adhered thereto a film of primer comprising a copolymer of monomer components consisting essentially of vinyl toluene, acrylonitrile and an ethylenically unsaturated carboxylic acid selected from the group consisting of acrylic acid, methacrylic acid and itaconic acid, the proportions of said monomer components on a mol equivalent basis being within the area A—C—D—F—A on the triangulation in FIGURE 1, said copolymer having a relative viscosity measured at 25° C. in a 1 gram/100 ml. solvent solution in dimethyl formamide of from 1.4–3.5 and a topcoat adhered to said primer film, said topcoat comprising a fused layer of a polymer having a molecular weight above 20,000 and selected from the group consisting of polyvinyl chloride, copolymers of vinyl chloride with up to 10% by weight of vinyl acetate and copolymers of vinyl chloride with up to 10% by weight of vinylidene chloride.

3,016,310

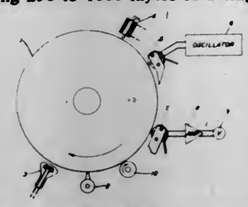
MAGNETIC RECORD DEVICE AND METHOD OF PREPARING IT

Harold B. Andrew and Clement C. Hipkins, Chatham, and Le Roy M. Towsley, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 5, 1959, Ser. No. 785,091
5 Claims. (Cl. 117—104)

5. A magnetic recording surface one mil to two mils

thick comprising 250 to 1000 layers of a single magnetic



composition of a dispersion of ferromagnetic particles in a resin, each layer being 0.002 mil to 0.004 mil thick.

3,016,311

HIGH TEMPERATURE COATINGS AND BODIES

Robert D. Stackhouse, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York

Filed Dec. 17, 1958, Ser. No. 780,944
22 Claims. (Cl. 117—105)



7. A method of making a thermal shock resistant and erosion resistant coating comprising impacting the surface to be coated with particles of a composition of between 5–60 weight percent of a refractory oxide and the remainder tungsten by passing the coating material in particle form through the hot gas of a wall-stabilized arc and then impinging the same on the workpiece at a supersonic velocity and high temperature to form a mechanical bond without substantial alloying with said surface, successively applying hot particles of said composition to interfuse and cohese with previously applied particles until a suitable thickness of coating is formed.

3,016,312

WAX COATED CELLOPHANE

John D. Tench, Prospect Park, Pa., and Seymour W. Ferris, Mount Holly, N.J., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed July 2, 1958, Ser. No. 746,087
2 Claims. (Cl. 117—119.2)

1. A new article of manufacture exhibiting substantially improved resistance to water vapor permeation and comprising cellophane having a superficial coating consisting essentially of a petroleum microcrystalline wax having a melting point of from 188° to 198° F., a penetration at 110° F. of 100 maximum and a viscosity at 210° F. of from 60 to 90 SUS, said coating having been applied in molten phase and solidified by slowly cooling in the absence of positive cooling means to a temperature at least below the melting point.

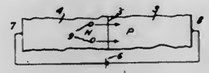
3,016,313

SEMICONDUCTOR DEVICES AND METHODS OF MAKING THE SAME

Erik M. Pell, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed May 15, 1958, Ser. No. 735,411
6 Claims. (Cl. 148—1.5)

1. The process of forming a wide intrinsic region in a semiconductor body of one-conductivity type which comprises; heating a rapidly diffusing opposite-conductivity type inducing activator impurity in contact with a one-conductivity type body of the semiconductor to cause the activator to penetrate therein and form a P-N junction therein; applying an electric field in the reverse direc-



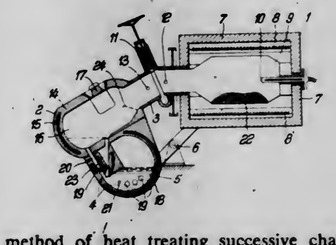
tion across the P-N junction so formed; and concurrently heating the semiconductor body to cause thermally excited ions of the rapidly diffusing activator to migrate across the P-N junction under the influence of the applied electric field to form a wide intrinsic region.

3,016,314

HEAT-TREATING METALS

Rudolf Kellermann, Petershutter Allee 7, Osterode (Harz), Germany

Filed Aug. 13, 1958, Ser. No. 754,780
Claims priority, application Germany Aug. 19, 1957
4 Claims. (Cl. 148—13)



1. A method of heat treating successive charges of metal parts in a continuous operation, comprising the steps of introducing a first one of said charges into a heating zone of a treating chamber; sealing and evacuating said chamber; heating said first charge in said heating zone to a predetermined temperature; transferring said heated charge to a quenching zone in said chamber spaced from, but communicating with, said heating zone; admitting a liquid coolant to said quenching zone for direct quenching contact with said heated charge; removing said coolant from said quenching zone while retaining the quenched charge therein; vacuum sealing said heating zone from said quenching zone after said charge has been transferred; discharging said quenched charge from said quenching zone after said vacuum sealing; introducing a second one of said successive charges into said heating zone, and repeating said steps.

3,016,315

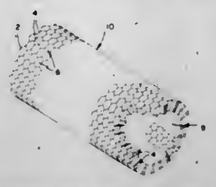
HONEYCOMB STRUCTURE AND METHOD

John J. Robinson, 1501 S. Keeler, Bartlesville, Okla., assignor of one-eighth to Carl D. Hall, Jr., and one-fourth to Harry A. Robinson, both of Tulsa, Okla.

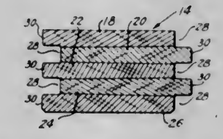
Filed Oct. 8, 1958, Ser. No. 766,031
6 Claims. (Cl. 154—45.9)

3. A honeycomb structure comprising a plurality of pieces of sheet material coated with a hardened plastic and fixed in generally parallel superposed relation in a stack having substantially uniform height or thickness throughout all portions of its plan area, said stack having an external elevational curved surface normal to its plan area characterized by a multiplicity of substantially identical cells all open to said surface and having their axes normal thereto, each cell opening begin defined by edges of individual pieces disposed in lines lying in said surface, said pieces being adhesively bonded together solely by bands of adhesive all extending to said surface and being staggered relatively in adjacent pieces, and

each of the pieces being disposed in substantially waved or undulating shape with all areas of maximum displacement of each sheet lying in two spaced apart parallel planes each normal to said named surface of the structure and normal to the height or thickness of the stack.

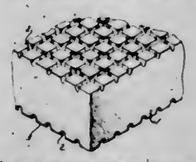


3,016,316
LAMINATED BOARD CONSTRUCTION
Arnold P. Olson, 512 Hannifin, Bismarck, N. Dak.
Filed Dec. 22, 1958, Ser. No. 782,286
4 Claims. (Cl. 154—45.9)



1. A laminated board comprising a plurality of longitudinally extending alternately laterally offset, superimposed plies, each ply having a predetermined lateral taper, said alternately offset plies forming alternate tongues and grooves on each lateral edge of said board, the wider edges of the plies providing the tongues, the surfaces of said tongues and the walls of said grooves being each cut away to provide parallel complementary surfaced tongues and grooves, the tongues on one edge being in a common plane with the grooves on the opposite edge, and said tongues and grooves having matching contours.

3,016,317
RESILIENT MAT
Emil Brunner, Sins, Aargau, Switzerland
Filed June 19, 1958, Ser. No. 743,161
Claims priority, application Switzerland June 21, 1957
10 Claims. (Cl. 154—49)



1. A resilient mat comprising, in combination, a sheet of gas-filled cellular material having a top face and a bottom face, each of said faces of said sheet having spaced grooves therein extending parallel to each other and parallel to the grooves in the other of said faces; a thin continuous cover sheet covering and firmly adhering to said grooved top face of said sheet so as to conform also to and cover the faces of the grooves therein in their entirety, said grooves in said covered top face permitting compression of the region of said sheet adjacent said covered top face thereof during rolling up of said mat with said covered top face located facing inwardly and said grooves in said grooved bottom face permitting expansion of the region of said sheet adjacent said grooved outer face facing outwardly during said rolling up of the mat, said continuous cover sheet having a plurality of spaced holes therein permitting escape of gas from the cells of the cellular material of said region adjacent said covered top face during rolling up of the mat.

3,016,318
FABRIC COVERED CELLULAR CUSHIONING ARTICLE AND MANUFACTURE THEREOF
Charles F. Sudman, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed July 15, 1959, Ser. No. 827,137
11 Claims. (Cl. 154—54)

1. The method of making cushioning elements having a body of foamed elastomeric material and a porous covering material associated therewith, which includes applying to the surface of said covering material a polymer having a skeletal chain containing fluorocarbon acrylate ester units indicated by the formula

$$R_fSO_2N(R')RCH_2OCOC(R'')CH_2-$$

wherein R_f is a perfluoroalkyl group containing 4 to 12 carbon atoms, R is an alkylene bridging group containing 1 to 12 carbon atoms, R' is an alkyl side group containing 1 to 6 carbon atoms, and R'' is hydrogen or methyl, forming a foamed elastomeric material onto the treated covering material and curing the foamed material.

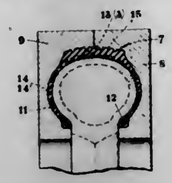
3,016,319
METHOD OF COLD REPAIRING RUBBER BELTS ESPECIALLY RUBBER CONVEYOR BELTS
Herbert Halverscheid, Dusseldorf, Germany, assignor to Hans Ziller, Millroth uber Hochdahl, Germany
Filed Feb. 28, 1957, Ser. No. 643,019
Claims priority, application Germany Mar. 7, 1956
2 Claims. (Cl. 156—98)



1. A method of cold repairing rubber belts, with a fabric insert, which includes the steps of: cutting out the damaged portion of the belt down to the fabric insert of the belt, applying to the exposed surface of the fabric insert a cold sticking film having on the outer side thereof a flexible and detachable cover foil, working and pressing said cold sticking film against said damaged portion while said cover foil is still in place so that said cold sticking film firmly adheres to said fabric insert, thereafter removing said cover foil from the applied cold sticking film, and superimposing upon said applied cold sticking film an unvulcanized plastic calendered rubber repair patch adapted to vulcanize when exposed to the air.

3,016,320
METHOD OF MAKING PNEUMATIC TIRES
Richard Beckadolph, Hannover, Germany, assignor to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed July 1, 1957, Ser. No. 668,952
Claims priority, application Germany July 2, 1956
2 Claims. (Cl. 156—123)

2. A method of making pneumatic vehicle tires to be provided with beads and with first reinforcements anchored on said beads and located in at least substantially radial planes and also to be provided with second reinforcements crossing said first reinforcements and arranged in the zenith portion of the tire, which comprises the steps of: building up an unvulcanized auxiliary tire with said second reinforcements only, mounting said auxiliary tire on a rim, inflating the thus built up tire on said rim, permitting said auxiliary tire while under pressure to adopt a resultant shape, determining therefrom the corresponding contour of a vulcanizing mold, building up the tire to be produced with said first and second reinforcements



therein, and vulcanizing said last mentioned tire in a mold having a contour corresponding to that of said inflated auxiliary tire.

ERRATA

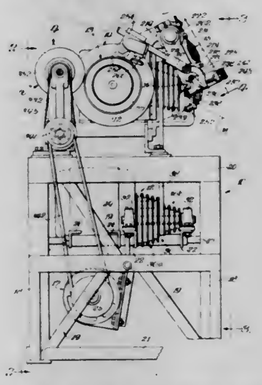
For Class 156—123 see:
Patent No. 3,016,084

For Class 156—339 see:
Patent No. 3,016,085

3,016,321
TIRE BUILDING MACHINE
Richard Beckadolph, Hannover, and Walter Niclas, Altwarmbuchen, Germany, assignors to Continental Gummi-Werke Aktiengesellschaft, Hannover, Germany
Filed Mar. 3, 1958, Ser. No. 718,721
Claims priority, application Germany Mar. 6, 1957
4 Claims. (Cl. 156—402)

1. In combination in a tire building machine: a tire building drum of variable diameter for receiving fabric layers for forming a tire carcass, and having its opposite end faces provided with axially inwardly extending recess means for receiving bead cores, a pair of first annular means for setting bead cores in said recess means and of variable diameter respectively arranged at opposite ends of said drum and substantially coaxial therewith, said first annular means being movable selectively toward said drum or away therefrom for conveying bead cores into said recess means, those ends of said first annular means which face the end faces of said drum being provided with reduced diameter projections forming bead core receiving portions of step-shaped cross section for receiving the portions of fabric extending beyond the ends of the drum and underlying the bead cores and for receiving the bead cores on said portions of fabric, said first annular means being movable axially toward the drum to dispose said projections in said respective adjacent recess means of said drum for moving said portions of fabric and the bead cores thereon into said recess means, and a plurality of second annular means respectively arranged at opposite ends of said drum for folding the marginal portions of the fabric layers on the drum back over the drum, said second annular means having radially outwardly yieldable means at the ends toward the drum resting on the outer surface of the adjacent said first annular means, said second annular means being movable axially over the respective adjacent first annular means and over respective adjacent portions of said drum whereby the respective fabric portions extending outwardly from said first annular means are lifted by said second annular means and folded over the respective adjacent bead cores.

3,016,322
MACHINE FOR BUILDING TIRE BEADS
John W. White, Wadsworth, Ohio, assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,532
9 Claims. (Cl. 156—422)

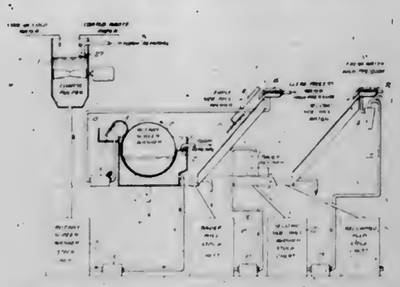


1. A machine for building tire beads comprising a rotatable former having an outer substantially cylindrical surface of which a first portion provides a bead starting position, said cylindrical surface having a second portion providing a bead finishing position in axially spaced relation away from said bead starting position, guide means for guiding tire bead material to the former for winding thereon in superposed convolutions, positioning means disposed circumferentially around said cylindrical surface and having a portion for engaging tire bead material wound on said former, means for mounting said positioning means for movement relative to said former longitudinally of the axis of rotation of the latter from said bead starting position to said bead finishing position to engage said portion of said positioning means with wound bead material at said bead starting position and move said wound tire bead material to said bead finishing position, and means connecting said guide means for conjoint movement with said positioning means to effect the continued winding of tire bead material around the tire bead material wound at said bead starting position during movement of the tire bead material by said positioning means to said bead finishing position.

3,016,323
PAPER DE-COATING AND BENEFACTION PROCESS AND PRODUCTS THEREOF
Norman A. Altmann, Wilmette, and William H. Bureau, Glen Ellyn, Ill., assignors to Butler Paper Corporations, Chicago, Ill., a corporation of Illinois
Filed Mar. 13, 1959, Ser. No. 799,357
6 Claims. (Cl. 162—4)

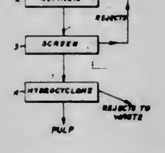
6. The method of de-coating waste paper having an inorganic burden of from about 15–40% by weight using cool or cold water throughout without cooking or chemicals so as to reclaim at least about 45% of the fiber content as clean pulp with an ash content not exceeding about 3% and being suitable for reuse in making paper of a quality at least equal to that of said waste paper, comprising, coarsely pulping such waste paper in cool or cold water, passing the coarse pulp through a continuous rotary screen pulp washer wherein a major portion of the in-

organic burden is removed and the ash content reduced to not more than about 8%, next washing the pulp on a side hill washer whereby its ash content is reduced to not



more than about 4%, next passing the pulp through a rotary disk refiner, and washing the refined pulp on a second side hill washer whereby its ash content is reduced to not more than about 3%.

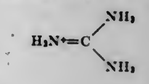
3,016,324
METHOD AND APPARATUS FOR PRODUCING WOOD PULP
Clinton K. Textor, Springfield, Ohio, assignor to The Bauer Brothers Company, Springfield, Ohio, a corporation of Ohio
Filed Mar. 7, 1957, Ser. No. 644,528
5 Claims. (Cl. 162—24)



1. A method of making wood pulp including the steps of chipping the raw wood, defibering the wood chips by successive compressing and shearing action, impregnating the defibered chips with a chemical solution immediately as the compressing and shearing action is completed to further weaken the cohesive quality of the chip fibers, further defibering the defibered wood chips, screening the resultant material, returning the rejected material for further defibering and passing acceptable material through a centrifugal cleaner.

3,016,325
PROCESS OF COMBINING WATER-INSOLUBLE ADDITAMENT WITH ORGANIC FIBROUS MATERIAL
Donald K. Pattilloch, New York, N.Y., assignor to Electro-Chem Fiber Seal Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 1, 1955, Ser. No. 544,134
5 Claims. (Cl. 162—164)

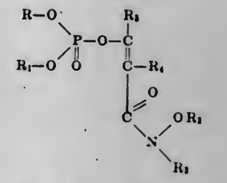
1. In the process of combining a water-insoluble additament with organic fibrous material involving the steps of (*a*) pretreating a mechanical aqueous suspension of an organic fibrous material with an organic fiber-activating agent and then (*b*) treating the so-activated organic fibrous material in an aqueous environment with an aqueous suspension of a water-insoluble dispersed additament, the improvement which consists in pretreating such suspension of organic fibrous material with an organic fiber-activating agent containing a reactive nitrogen group and a group containing reactive hydrogen, said agent being selected from the group consisting of a condensation product resulting from condensation of the reactants consisting essentially of dicyandiamide and formaldehyde, tetramethylol-acetylenediurea, polymerized imines, salts of guanidines containing the guanidine cation



and cyanohydrins.

3,016,326
NEW ORGANIC PHOSPHORUS COMPOUNDS
Ernst Beriger, Allschwil, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss company
No Drawing. Filed Dec. 6, 1960, Ser. No. 73,962
Claims priority, application Switzerland Dec. 9, 1959
24 Claims. (Cl. 167—22)

15. The method of controlling insects and acarids on plants, which comprises applying to plants that are subject to attack by said pests in insecticidal and acaricidal amount of an organic phosphorus compound which is represented by the general formula



in which R and R_1 each represent an alkyl radical containing 1 to 18 carbon atoms R_2 and R_3 each represent a lower alkyl radical, R_4 represents a member selected from the group consisting of a hydrogen atom, a lower alkyl radical and a chlorine atom and R_5 represents a lower alkyl radical.

3,016,327
BIOCIDAL COMPOSITION AND METHOD
Robert A. Schmitz, Greenwich, and Arnold F. Anderson, 29 Putnam Park, Greenwich, Conn., assignors, by direct and mesne assignments, of one-fourth to said Anderson and three-fourths to said Schmitz
No Drawing. Filed Dec. 12, 1955, Ser. No. 552,254
6 Claims. (Cl. 167—22)

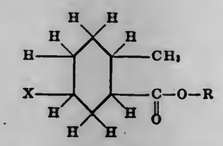
1. A biocidal composition comprising 0.5 to 2% by weight of a basic anion exchange resin having a particle size substantially no larger than 4 microns in diameter and 98 to 99.5% by weight of a basic hydrolyzable salt of an alkali metal and a weak acid selected from the group consisting of phosphoric acid, carbonic acid, higher fatty acids and mixtures thereof.

3,016,328
DIALDEHYDE ALCOHOLIC SPORICIDAL COMPOSITION
Rollin E. Pepper, East Lansing, Mich., and Emanuel R. Lieberman, Somerville, N.J., assignors to Ethicon, Inc., a corporation of New Jersey
No Drawing. Filed Jan. 3, 1961, Ser. No. 79,966
36 Claims. (Cl. 167—22)

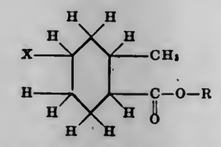
1. A sporicidal composition comprising a saturated dialdehyde containing from 2 to 6 carbons, a lower alkanol and an alkalinating agent.

3,016,329
ATTRACTANTS FOR THE MALE MEDITERRANEAN FRUIT FLY
Morton Beroza, 17 E. Ridge Road, Greenbelt, Md., and Nathan Green, 1805 Duke Drive, and Samuel I. Gertler, 8500 16th St., both of Silver Spring, Md.
No Drawing. Filed Aug. 6, 1959, Ser. No. 832,123
24 Claims. (Cl. 167—48)
(Granted under Title 35, U.S. Code (1952) sec. 266)

18. A method comprising baiting a trap with a mixture containing an aliphatic 4-halohexahydro-o-toluate having the formula



and an aliphatic 5-halohexahydro-o-toluate having the formula



wherein R is an aliphatic radical selected from the group consisting of an allyl radical and an alkyl radical containing from 2 to 5 carbon atoms, and X is a halogen selected from the group consisting of chlorine and bromine, said X in each of said formulas being identical, to attract the male Mediterranean fruit fly.

3,016,330
THERAPEUTICAL ANTIBIOTIC COMPOSITION
Hans Jacobsen, Copenhagen, Denmark, assignor to Novo Terapeutisk Laboratorium A/S, Copenhagen, Denmark, a Danish joint-stock company
No Drawing. Filed Nov. 6, 1956, Ser. No. 620,573
Claims priority, application Denmark Nov. 10, 1955
10 Claims. (Cl. 167—65)

1. A non-oral antibiotic composition comprising, in combination, a pharmaceutical oil, and pre-coated particles of at least one antibiotic substance in suspension in said oil, said particles being pre-coated with an aluminum salt of a higher fatty acid with at least 12 carbon atoms, said composition exhibiting a protracted therapeutic effect.

3,016,331
PURIFICATION OF HEPARIN
Nazzareno Toccacelli, Milan, Italy, assignor to Ormonoterapia Richter S.p.A., Milan, Italy, a firm
No Drawing. Filed May 9, 1960, Ser. No. 27,536
Claims priority, application Italy Jan. 28, 1960
8 Claims. (Cl. 167—74)

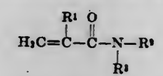
1. A method for the preparation of heparin comprising: autolyzing a suspension of animal tissue in an aqueous medium; digesting the resulting autolysate with a proteolytic enzyme while maintaining said medium at a pH between 7.8 and 8.5; adding a mineral acid to said medium to lower its pH to approximately 7.5; heating said medium to a temperature between 70–80° C.; cooling said medium to precipitate inactive material; separating said inactive material from said medium, said medium then existing as a clear, colored solution containing the whole heparinic activity; contacting said medium at a pH of from 2–2.5 with a protein soluble therein to produce a precipitate containing the whole heparinic activity; and separating said precipitate from said medium.

3,016,332
METHOD OF PREPARING ANTI-P SERUM AND ANTI-LE^a SERUM
Philip Levine, Plainfield, N.J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey
No Drawing. Filed Aug. 21, 1959, Ser. No. 835,188
7 Claims. (Cl. 167—78)

1. A method of producing blood serum selected from the group consisting of anti-P serum and anti-Le^a serum which comprises tanning red blood cells that are impotent to stimulate the production of the desired anti-serum, coating the tanned cells with the corresponding agglutinogen selected from the group consisting of P-substance and Le^a-substance; injecting the tanned and coated red cells into a warm-blooded animal; bleeding the animal after hemagglutinins have been produced and separating the desired anti-serum from the blood so obtained.

3,016,333
METHOD OF TREATING HAIR WITH HYDROXY-ETHER AMIDES OF POLYACRYLIC ACIDS
Roy W. Roth, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 31, 1958, Ser. No. 770,935
2 Claims. (Cl. 167—87)

1. A method of treating hair which comprises applying to said hair a composition comprising an alcoholic solution containing up to 20% by weight of a water soluble and an alcohol soluble reaction product of (A) a polymer of an acrylamido compound having the formula:



wherein R^1 is a member selected from the group consisting of hydrogen, methyl and ethyl; R^2 is a member selected from the group consisting of hydrogen and an alkyl hydroxy radical of not more than 5 carbon atoms and R^3 is a member of the group consisting of hydrogen, an alkyl radical having from 1 to 4 carbon atoms and an alkyl hydroxy radical of not more than 5 carbon atoms, and (B) an alkylene oxide wherein the mol ratio of said alkylene oxide to polymer is between 5:1 and 20:1 respectively.

3,016,334
SKIN CREAM CONTAINING LOW GEL STRENGTH, LOW VISCOSITY GELATIN
Thomas J. Lewis, 20 E. 90th St., New York 28, N.Y.
No Drawing. Filed Nov. 24, 1958, Ser. No. 775,724
9 Claims. (Cl. 167—91)

1. A cosmetic film forming cream for enhancing the moisture absorbing and moisture retaining properties of the skin, comprising a cream base which is an emulsion of the water-in-oil type having incorporated in the aqueous phase thereof an amount within the range of about 3 to 15% based on the weight of the finished cream of a collagen protein gelatin which is an acid hydrolyzate of animal skin, and which has a gel strength below about 50 Bloom gms. and a viscosity below about 20 millipoises.

3,016,335
RING-A DEHYDROGENATION OF STEROIDS WITH NOCARDIA MICROORGANISMS
Thomas H. Stoudt, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Oct. 14, 1955, Ser. No. 540,626
1 Claim. (Cl. 195—51)

The process which comprises contacting a 3-keto-pregnane compound with the dehydrogenating activity of Nocardia microorganisms, thereby forming the corresponding Δ^4-3-keto-pregnene.

3,016,336
DEOXYGENATING METHOD AND PRODUCT
Don Scott and Frank E. Hammer, Chicago, Ill., assignors to Fermco Laboratories, Inc., a corporation of Illinois
No Drawing. Filed Sept. 30, 1957, Ser. No. 686,881
13 Claims. (Cl. 195—63)

1. The method of preparing a deoxygenating body capable of removing free oxygen from closed receptacles containing moisture in amounts incapable of activating glucose-oxidase enzyme compositions which comprises interpenetrating particulate carrier material with an aqueous dispersion of substrate and an enzyme system, reactive with oxygen in the presence of said substrate to form a deoxygenating body, the water content of said dispersion and said carrier base being such that the water is absorbed and the deoxygenating body outer surface is substantially free of unbound moisture.

3,016,337
PROCESS FOR DEPYROGENATION AND PURIFICATION OF STREPTOKINASE
Heron Orlando Singher, Plainfield, and Leo Zuckerman, Bound Brook, N.J., assignors to Ortho Pharmaceutical Corporation, a corporation of New Jersey
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,893
3 Claims. (Cl. 195—66)

1. The method of depyrogenating streptokinase which comprises dissolving streptokinase in water in an amount so that the protein concentration of the solution is not greater than about 2.0% by weight, adjusting the pH of the solution to about 6.5 to 8.0, adding a quantity of washed, sodium alumino-silicate thereto so as to preferentially adsorb pyrogens thereon, and removing the sodium alumino-silicate gel to provide a solution of pyrogen free streptokinase.

3,016,338
ELECTROLYTIC RECORDING PAPER
Gerald Mandel, Flushing, N.Y., assignor, by mesne assignments, to Hogan Faximile Corporation, a corporation of Delaware
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,075
13 Claims. (Cl. 204—2)

1. An electrolytic recording medium comprising an impregnated sheet containing as a marking compound chromotropic acid in an electrolytically conducting solution.

12. An electrolytic recording medium according to claim 1 in which is included a stabilizer to prevent discoloration of the recording medium prior to marking and of the background thereof after marking and an additional acid for pH adjustment, the impregnant consisting essentially in approximate parts by relative weights of chromotropic acid 2, electrolyte 10, acid 5 as said additional acid, and stabilizer 0.2 as said stabilizer.

3,016,339
METHOD OF PROTECTING METAL SURFACES
Marcel Riou, Neuilly, and Henri Richaud, Chambery, France, assignors to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France
No Drawing. Filed Apr. 9, 1958, Ser. No. 727,247
Claims priority, application France Apr. 12, 1957
8 Claims. (Cl. 204—38)

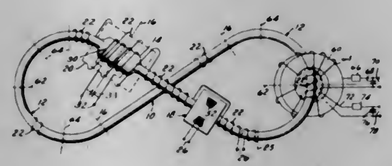
1. A method of sealing an adsorbent inorganic oxide protective layer which is produced on an oxidizable metallic surface by a chemical reaction with the metallic surface, which method comprises the steps subsequent to the formation of said inorganic protective layer of:

(*a*) immersing the metallic surface having the aforesaid inorganic layer in a sealing bath having a pH of 4–9, said sealing bath containing therein an organic polyacid compound having a molecular weight greater than 200, said compound being adsorbable by said inorganic protective layer and consisting of molecules, each of which comprises a chain of at least two carbon atoms linked to each other by saturated bond, at least two electro-negative substituents, at least one of which is an acidic group, and at least two electro positive groups;
(*b*) withdrawing the metal surface from said sealing bath;
(*c*) rinsing said withdrawn metallic surface with water to remove the excess of bath liquid unadsorbed by said inorganic layer from the latter; and
(*d*) drying the resulting sealed surface.

3,016,340
METHOD IN THE ELECTROLYTICAL PRODUCTION OF ALUMINUM
Hans Fredrik Hygen, Nils Juelsgt. 12, Oslo, Norway
No Drawing. Filed Feb. 21, 1958, Ser. No. 716,534
2 Claims. (Cl. 204—67)

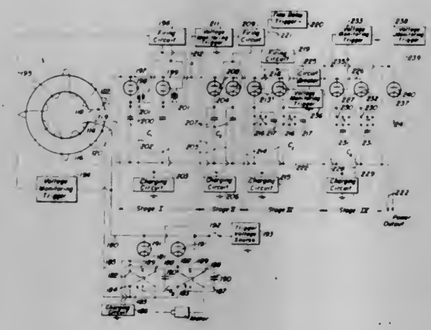
1. In the production of metallic aluminum by electrolytic reduction of alumina in a bath of fused electrolyte containing fluorides which is accompanied by the giving off of large amounts of carbon-oxygen gases, and in which the fluoride proportion and the quantity of the said electrolyte is periodically readjusted by adding fluorides to the electrolyte in a finely divided form such that it would be carried off by the carbon-oxygen gases unless precautions were taken to prevent it, that improvement in the step of adding the fluorides comprising enclosing a quantity of fluoride dust in said sufficiently finely divided form in an aluminum container, and forcing the aluminum container with the fluoride powder therein underneath the crust on the top of the bath directly into the electrolyte, whereby the finely divided fluoride dust is prevented from becoming entrained in the gases given off.

3,016,341
REACTOR
Lyman Spitzer, Jr., Princeton, N.J., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 3, 1957, Ser. No. 688,089
24 Claims. (Cl. 204—154.2)



1. The method of raising a gas to high temperature and producing neutrons therein in a closed endless tube having circular end loops and intercrossing sections connecting said end loops, having at least one enlarged section and at least one divertor section therein comprising: confining gas reactants selected from isotopes of hydrogen in said tube to form a circuitous gas path in said tube; applying an electric current to said path to ohmically heat the said path to an intermediate temperature; applying a varying magnetic field axially the tube at said enlarged sections; applying a first unidirectional magnetic field having a rotational transform axially the tube to concentrate reactant and reacted particles in the axial portion of the tube; and applying a second unidirectional magnetic field in said divertor section in a direction opposite to said first unidirectional magnetic field, whereby the said first magnetic field in the immediate vicinity of the walls of said tube is diverted into said divertor sections.

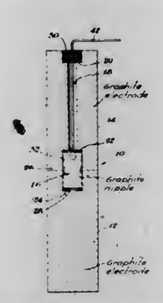
3,016,342
CONTROLLED NUCLEAR FUSION REACTOR
Martin Kruskal, Princeton, N.J., James L. Tuck, Los Alamos, N. Mex., and Stirling A. Colgate, Livermore, and Marshall N. Rosenbluth, San Diego, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 29, 1957, Ser. No. 685,771
(Filed under Rule 47(a) and 35 U.S.C. 116)
3 Claims. (Cl. 204—193.2)



1. A device for manipulation of a plasma and production of neutrons and other radiations, comprising in combination a gas-tight toroidal insulating chamber containing a filling of ionizable gases, a conducting shell surrounding said chamber over substantially its full length but terminating in spaced apart ends, a coil wound about said chamber along the entire length to provide one end at each of said shell ends, a first D.C. power supply means adapted to discharge a current pulse, said first D.C. power supply means being connected between one end of the conducting shell and the adjacent coil end and the other end of the coil being connected to the adjacent end of the conducting shell, a second D.C. power supply means coupled between the spaced ends of said shell and adapted to initiate discharge of a current pulse through said shell after the current pulse from said first power supply means has reached its maximum current value, a third D.C. power supply means coupled between the spaced ends of said shell and adapted to initiate discharge of a current pulse after said second power supply means has initiated discharge of a current pulse and when the voltage across said shell ends drops below a pre-set level, a fourth power supply means connected across said shell ends and adapted to initiate discharge of a current pulse at a pre-set time interval after said third power supply has initiated discharge, a fifth power supply means coupled across the ends of said shell and adapted to initiate discharge of a current pulse after said fourth power supply means has initiated discharge and when the voltage across said shell drops below a pre-set level, each of said second, third, fourth and fifth D.C. power supply means being connected to discharge current in the same direction through said shell.

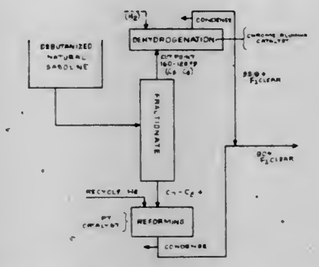
3,016,343
ANODE ASSEMBLY FOR ELECTROLYTIC CELL
Fred J. Krenzke, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 16, 1958, Ser. No. 767,572
2 Claims. (Cl. 204—280)

1. A composite anode comprising a pair of axially aligned elongated block-like consumable graphitic electrodes each having the same outer surface configuration along their entire length and having flat end surfaces, each electrode having a bore extending axially therethrough from end to end, a threaded counter bore extending inwardly from each end of each electrode, the threads of the counter bores of corresponding ends of the electrodes being identical, the pitch of the threads of the counter bore at one end of each electrode being in the same direction of rotation but different in pitch than the pitch of the thread of the counter bore at the other end of the electrode, a threaded solid graphitic nipple, said nipple



having an instrument receiving depression in one end thereof, the threads of the nipple being in two groups, one group being adapted to mate with the threads in the counter bore at one end of said electrode and the other group being adapted to mate with the threads at the opposite end of the said electrode, said nipple being threaded into a counter bore in each of said pair of electrodes with the end surfaces of the electrodes in contact and the outer surfaces of the electrodes aligned to form a substantially continuous outer surface along said joined electrodes.

3,016,344
UPGRADING NATURAL GASOLINE
Francis William Kirsch, Wilmington, Del., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
Filed Aug. 27, 1958, Ser. No. 757,445
2 Claims. (Cl. 208—79)



1. The method of upgrading natural gasoline which comprises fractionating such gasoline at a cut point in the range of 160–185° F. to provide (1) a major fraction of lower boiling hydrocarbons composed chiefly of C_5 and C_6 hydrocarbons and (2) a minor fraction of higher boiling hydrocarbons of which at least 90% by volume is composed of C_7 and C_8 hydrocarbons, passing said lower boiling fraction at catalytic dehydrogenation conditions including substantially atmospheric pressure over chromium oxide-alumina dehydrogenation catalyst and at a processing severity level to obtain therefrom a liquid condensate of at least 85.9 octane level (F_1 clear), collecting the condensable effluent from said de-

hydrogenation; subjecting the higher boiling fraction to hydrogenative reforming over supported platinum catalyst at a temperature in the range of 800–1000° F. and at a pressure of 200 to 600 p.s.i.g., and blending the liquid condensate from said hydrogenative reforming with the condensable effluent from said dehydrogenation to provide an upgraded gasoline material having an octane number of at least 90 (F_1 clear).

3,016,345
HYDROCARBON FILTRATION

Harold A. Price, Lafayette, Calif., assignor to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California

Filed May 14, 1958, Ser. No. 735,273
12 Claims. (Cl. 208—187)



1. A method of removing contaminants including water particles from a hydrocarbon liquid which comprises separating out solid material contaminants and increasing the static electrical charges on the water particles, then substantially neutralizing the electrical charges on the water particles, subsequently coalescing the water particles to propagate the size thereof, and finally separating out the particles of water from the hydrocarbon liquid.

3,016,346
HYDRODESULFURIZATION PROCESS AND CATALYST THEREFOR

Mark J. O'Hara, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

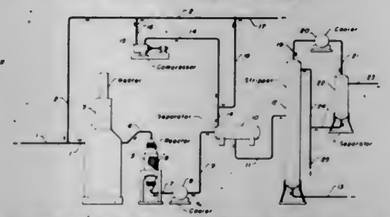
No Drawing. Filed May 25, 1960, Ser. No. 31,545
6 Claims. (Cl. 208—216)

1. A process for the purification of hydrocarbons and mixtures of hydrocarbons, containing undesirable contaminants, which comprises contacting said hydrocarbons, in a hydrogenation reaction zone, with a hydrodesulfurization catalyst containing at least one metallic component selected from the metals of groups VI-A and VIII of the periodic table, existing as the sulfide thereof, and composited with an alumina-titania carrier material, said catalyst having been prepared by sulfiding a composite of alumina, titania and an oxide of said metalic component with a gaseous mixture of hydrogen sulfide and hydrogen over a temperature range increasing from about 400° F. to about 750–800° F. and thereafter cooling the sulfided composite to below 400° F. while maintained under a positive pressure of hydrogen sulfide, removing a mixture of normally gaseous material and saturated, normally liquid hydrocarbons from said hydrogenation reaction zone, and thereafter separating said mixture into a gaseous phase and a liquid phase substantially free from the aforesaid undesirable contaminants.

3,016,347
HYDROCARBON PURIFICATION PROCESS AND CATALYST

Mark J. O'Hara, Chicago, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Sept. 21, 1959, Ser. No. 841,402
14 Claims. (Cl. 208—216)



1. A process for the purification of hydrocarbons and mixtures of hydrocarbons, containing undesirable contaminants, which comprises contacting said hydrocarbons with a hydrodesulfurization catalyst in a hydrogenation reaction zone maintained under an imposed hydrogen pressure; said hydrodesulfurization catalyst containing an alumina-silica carrier material composited with the sulfides of molybdenum and nickel and having been prepared by sulfiding alumina-silica-molybdenum oxide-nickel oxide with a gaseous mixture of hydrogen sulfide and hydrogen over a temperature range increasing from about 400° F. to about 750–800° F. and thereafter cooling the sulfided composite to below 400° F. while maintained under a positive pressure of hydrogen sulfide; removing from said hydrogenation reaction zone a mixture of normally gaseous material and saturated normally liquid hydrocarbons; and thereafter separating said mixture into a gaseous phase and a liquid phase substantially free from the aforesaid undesirable contaminants.

3,016,348
MANUFACTURE AND USE OF SULFIDED HYDROCARBON PURIFICATION CATALYST

Donald L. Holden, Des Plaines, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,088
6 Claims. (Cl. 208—216)

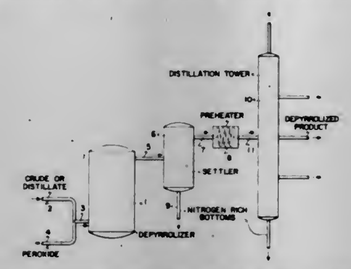
1. The method of preparing a hydrocarbon purification catalyst, having hydrogenation propensities, which comprises forming an alumina-silica carrier material containing from about 10% to about 25% by weight of silica, combining therewith from about 5% to about 10% by weight of molybdenum and from about 1% to about 5% by weight of nickel, oxidizing the resulting mixture to form the oxides of nickel and molybdenum, thereafter sulfiding the oxidized composite over a temperature range increasing from about 80° F. to about 800° F. with hydrogen sulfide in a substantially non-reducing atmosphere, and maintaining the thus-sulfided hydrocarbon purification catalyst under a positive hydrogen sulfide pressure of about 5 to about 15 pounds per square inch while the catalyst is being cooled from the highest sulfiding temperature to a temperature below about 300° F.

3,016,349
DENITROGENATION OF PETROLEUM

Alexis A. Oswald, Charles B. Rupar, Stephan Ilnyckyj, and Fernand Noël, all of Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 10, 1959, Ser. No. 832,734
8 Claims. (Cl. 208—254)

1. A process for the denitrogenation of hydrocarbons containing pyrrole-type nitrogen compounds which comprises contacting 0.1 to 5 moles, per mole of said pyrrole-type nitrogen compounds, of an organic compound selected from the class consisting of peroxides, sulfides and sulfoxides with said hydrocarbons, converting said

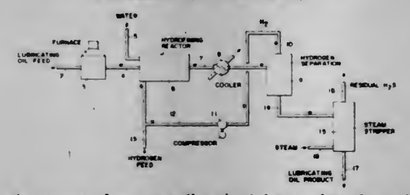


nitrogen compounds by reaction with said compounds whereby a high boiling fraction of high nitrogen concentration is formed, and separating said fraction from said hydrocarbons, said hydrocarbons being of substantially reduced nitrogen content.

3,016,350
HYDROFINING LUBRICATING OIL

Roger M. Butler and Robert Kartzmark, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 11, 1958, Ser. No. 741,346
8 Claims. (Cl. 208—264)



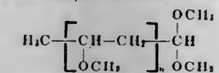
1. A process for upgrading and improving the color of a petroleum lubricating oil which comprises hydrofining a lubricating oil feed boiling in the range of about 700° F. to 1100° F. at 760 mm. pressure at a temperature of about 450° to 550° F. and pressure of from about 250 to 1500 p.s.i.g., in contact with a hydrofining catalyst and in the presence of a hydrogen atmosphere containing from about 5 to 50 volume percent of water vapor thereby improving the color of the oil without removing an appreciable quantity of sulfur.

3,016,351
PROCESS FOR IMPROVING SECONDARY OIL RECOVERY

Frederick A. Hessel, Montclair, N.J., and Francis J. Prescott, Flushing, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,757
2 Claims. (Cl. 252—8.55)

1. In the secondary recovery of petroleum from an underground formation by the water flooding method wherein water is injected through an input well into an underground oil bearing formation to force oil through such formation toward output wells from which oil is withdrawn, the step of increasing the injectivity of flood water into an input well, which comprises introducing through the input well into the adjacent formation a slightly water miscible polymethoxy acetal of the formula



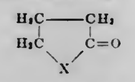
wherein n is an interger of from 1 to 15.

3,016,352
PROCESS FOR IMPROVING INJECTIVITY IN SECONDARY OIL RECOVERY

Frederick A. Hessel, Montclair, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,749
4 Claims. (Cl. 252—8.55)

1. In the secondary recovery of petroleum from an underground formation by the water flooding method wherein water is injected through an input well into an underground oil bearing formation to force the oil through the formation toward an output well from which oil is withdrawn, the step of increasing the injectivity of flood water into an input well which comprises introducing through the input well into the adjacent formation a water miscible compound of the formula



wherein X represents a member of the group consisting of O and an imino group and a lower alkyl (1 to 4 carbon atom) substituted imino group.

3,016,353
ESTER TYPE SYNTHETIC LUBRICANTS

Alfred H. Matuszak, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 15, 1954, Ser. No. 475,562
2 Claims. (Cl. 252—56)

1. A process for the preparation of an ester blend useful as a synthetic lubricant and comprising complex ester typified by the formula:

R—OOC—R′—COO—R″—OOC—R′—COO—R

and diester of the formula:

R—OOC—R′—COO—R

wherein R is a C_6 to C_{10} alkyl group, R′ is a C_6 to C_8 saturated aliphatic hydrocarbon group and R″ is an aliphatic hydrocarbon group containing interlinked oxygen atoms in ether groupings, which comprises reacting together under esterinterchanging conditions and in the presence of an esterification catalyst at a temperature within the range of about 225 to 270° C. for about 3 to 6 hours at atmospheric to subatmospheric pressure, about 2 molar proportions of diester, about one molar proportion of a glycol and about one molar proportion of a dicarboxylic acid.

3,016,354
REACTIVATION OF PLATINUM CATALYSTS

Saul Gerald Hindin, Wilmington, Del., and George Alexander Mills, Swarthmore, Pa., assignors to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 2, 1952, Ser. No. 323,722
7 Claims. (Cl. 252—413)

1. A process for reactivating a catalyst containing platinum supported on adsorptive alumina which comprises the step of treating the catalyst with concentrated aqueous halogen acid while finally dispersed bubbles of a gaseous oxidizing agent selected from the group consisting of air, oxygen and halogens is passed through the aqueous acid to dissolve at least a portion of the platinum without dissolving the adsorptive alumina support to a significant extent by reason of the restriction of the quantity of the halogen acid to only a small fraction of the quantity stoichiometrically necessary for dissolving all of the alumina and heating the mixture of catalyst and acid containing the oxidizing agent under conditions to effect

vaporization of water and other vaporizable components from the aqueous solution with resulting redeposition of platinum compounds in the adsorptive alumina support.

3,016,355

ACTIVATION OF CLAY BY ACID TREATMENT, SUPPLEMENTARY TREATMENT AND CALCINATION

Alfred J. Robinson, Bound Brook, Aldo P. Allegrini, Westfield, and Albert J. Mueller, Princeton, N.J., assignors to Minerals & Chemicals Philipp Corporation, a corporation of Maryland

No Drawing. Filed Oct. 21, 1957, Ser. No. 691,152
5 Claims. (Cl. 252—424)

1. A method for the preparation of a hydrocarbon conversion catalyst comprising reacting kaolin clay with sulfuric acid in an amount of from 20 percent to 130 percent by weight based on the volatile free weight of said kaolin clay, at least partially dehydrating the reacted material by heating at a temperature within the range of from about 450° F. to about 1000° F. thereby to form pores in the reacted material, filling the pores thus formed in the reacted material with an organic liquid selected from the group consisting of mineral oil, gas oil, naphtha and kerosene by soaking the dehydrated material in such organic liquid, carbonizing the organic liquid contained in said pores by heating the reacted material at an elevated temperature in a reducing atmosphere, and finally desulfating said reacted material by heating in an atmosphere selected from the group consisting of steam and a mixture of steam and reducing gases at an elevated temperature within the range of from 900° F. to 1600° F. and for a time sufficient to desulfate completely said reacted material in said atmosphere.

3,016,356

PREPARATION OF FLEXIBLE ELASTOMERIC CELLULAR POLYURETHANE PRODUCTS

Henry A. Pace, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 21, 1955, Ser. No. 554,423
6 Claims. (Cl. 260—2.5)

1. In the process of preparing a flexible elastomeric cellular material from the reaction of an organic diisocyanate, water, and an active-hydrogen-containing polymeric material containing not more than 0.2% water by weight and being selected from the group consisting of polyesters, polyesteramides and polyalkylene ether glycols having an average molecular weight of from 750 to 2,250 and a hydroxyl number of from 50 to 150, said polyesters and polyesteramides having an acid number not greater than 5 said polyesters being prepared from the condensation of at least one dicarboxylic acid and at least one glycol, said polyesteramides being prepared from the condensation reaction of at least one dicarboxylic acid, at least one glycol and a bifunctional amino compound selected from the group consisting of amino carboxylic acids, amino alcohols and diamines, which process includes the steps of first forming a liquid prepolymer by reacting said polymeric material with from 0.9 to 1.10 mols of an organic diisocyanate per mol of said polymeric material until the exothermic heat of reaction has been substantially evolved and removed from the reaction mixture, and then adding additional organic diisocyanate and water to said liquid prepolymer, and curing the complete reaction mixture, the improvement which comprises employing in at least one of the diisocyanate reactions a mixture of tolylene diisocyanates containing from 9 to 35% by weight of the 2,6 isomer and from 91 to 65% by weight of the 2,4 isomer.

3,016,357

RESINOUS COMPOSITIONS OBTAINED BY BLENDING ALKYD RESINS WITH THE RESINOUS CONDENSATION PRODUCTS OF ALDEHYDES WITH MIXTURES OF BUTENYLPHENOLS

Henry A. Vogel, Gibsonia, Pa., and Arthur F. Rylander and Robert F. Roach, Milwaukee, Wis., assignors to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

No Drawing. Filed Jan. 13, 1959, Ser. No. 786,444
9 Claims. (Cl. 260—20)

1. A heat hardenable resinous coating composition comprising about 50 percent to 95 percent by weight of an oil modified alkyd resin and about 5 percent to 50 percent by weight of the resinous condensation product of an aldehyde and a mixture of butenylphenols containing about 50 percent to 70 percent by weight of substantially equal amounts of orthobutenylphenol and para-butenylphenol.

3,016,358

METHOD OF PREPARING HARDENING COMPOSITIONS

Edmond Hustinx, Loolersgracht 4, Maastricht, Netherlands

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,730
Claims priority, application Netherlands Apr. 16, 1956
22 Claims. (Cl. 260—23)

1. A method of preparing hardening compositions which comprises mixing 100 parts by weight of a concentrated alkali silicate solution with from 6 to 70 parts by weight of a polymerizable ester of an olefinic alcohol with a carboxylic acid having not more than 18 carbon atoms and heating said mixtures between room temperature and about 100° C. until a hard mass is obtained.

3,016,359

COMPOSITION COMPRISING POLYVINYL CHLORIDE PLASTICIZED WITH ESTERS OF HEPTADECANEDICARBOXYLIC ACID

Donald H. Wheeler, Minneapolis, and Edgar R. Rogier, Hopkins, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Jan. 23, 1959, Ser. No. 788,504
2 Claims. (Cl. 260—31.8)

1. A composition of matter comprising polyvinyl chloride plasticized with a diester having the structural formula:

$$H(CH_2)_x-\underset{\underset{COOR}{|}}{CH}-(CH_2)_y-COOR$$

where x is from 1 to 15, y is from 1 to 15, the sum of x and y is 16 and R is a lower alkyl radical having 1 to 4 carbon atoms.

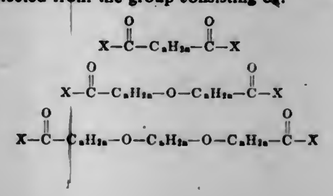
3,016,360

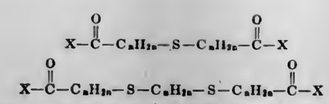
CONDENSATION ELASTOMERS CONTAINING FLUORINE

George C. Schweiker, Niagara Falls, and Paul Robitschek, Wilson, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Mar. 19, 1957, Ser. No. 646,968
34 Claims. (Cl. 260—40)

1. A linear polyester having a number average molecular weight of at least 3,000 and comprised of the reaction product of (1) a dicarboxylic compound having a formula selected from the group consisting of:





and mixtures thereof, wherein X is selected from the group consisting of hydroxy, chloro-, lower alkoxy, and anhydro-; and wherein n is an integer from 0 to 10; and (2) a fluorine-containing diol having the general formula:

$$HOCH_2-C_nF_{2n}-CH_2OH$$

wherein n is an integer from one to four.

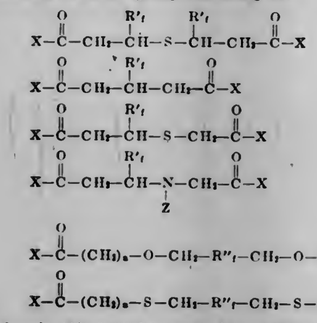
3,016,361

CONDENSATION ELASTOMERS FROM FLUORINE CONTAINING DICARBOXYLIC COMPOUNDS

George C. Schweiker, Niagara Falls, and Paul Robitschek, Wilson, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Sept. 16, 1957, Ser. No. 683,978
31 Claims. (Cl. 260—40)

1. A linear polyester comprised of the reaction product of (1) a dicarboxylic compound having a formula selected from the group consisting of:



wherein R'_f is a lower perfluoroalkyl group containing from one to seven carbon atoms, R''_f is a lower perfluoroalkylene group containing from one to seven carbon atoms, X is selected from the group consisting of hydroxy, chloro-, lower alkoxy and anhydro-, Z is selected from the group consisting of alkyl and 1,1-dihydro perfluoroalkyl, and n is an integer from one to three, and (2) a polyhydric alcohol.

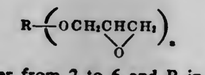
3,016,362

BLEND OF A HALOGENATED AROMATIC POLYGLYCIDYL ETHER AND AN ALIPHATIC POLYGLYCIDYL ETHER

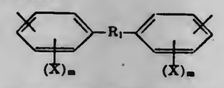
Marco Wismer, Gibsonia, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,099
16 Claims. (Cl. 260—42)

1. As a new material, a liquid blend consisting essentially of 1 to 45 parts by weight epoxy resin A and 4 parts by weight of epoxy resin B, both resins being of the formula



n being a number from 2 to 6 and R in epoxy resin A being of the structure



wherein R_1 is a saturated aliphatic hydrocarbon group of from 1 to about 6 carbon atoms, X being halogen, m being a number from 1 to 4, R in epoxy resin B being an aliphatic group containing about 2 to 10 carbon atoms.

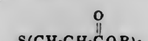
3,016,363

POLY-α-OLEFIN COMPOSITIONS CONTAINING DIALKYL-3,3'-THIODIPROPIONATES AND ALKYLATED HYDROQUINONE MONOGLYCIDYL ETHERS

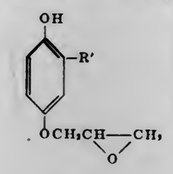
Clarence E. Tholstrup and Alan Bell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 15, 1960, Ser. No. 8,538
11 Claims. (Cl. 260—45.8)

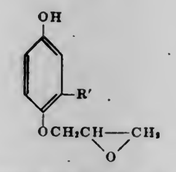
1. A solid poly-α-olefin composition comprising a solid poly-α-olefin prepared from an α-monoolefinic aliphatic hydrocarbon having 2 to 10 carbon atoms containing a stabilizer combination comprising about .001% to 5% by weight based on said poly-α-olefin of a stabilizer combination comprising a diester of 3,3'-thiodipropionic acid having the formula



wherein R is an alkyl radical having 4 to 18 carbon atoms, and about .001% to 5% by weight based on said poly-α-olefin of an alkylated hydroquinone monoglycidyl ether having a formula selected from the group consisting of



and



wherein R' is a tertiary alkyl radical having 4 to 8 carbon atoms.

3,016,364

POLYURETHANE PLASTICS

Erwin Müller, Leverkusen, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengeselischaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Aug. 1, 1957, Ser. No. 675,538
Claims priority, application Germany Nov. 16, 1956
3 Claims. (Cl. 260—47)

1. A method for making an elastomeric substantially non-porous polyurethane which comprises reacting a member selected from the group consisting of a polyester prepared by esterification of a dicarboxylic acid and a saturated glycol, a poly(alkylene ether) glycol, a polythioether glycol having O and S ether links in the chain thereof, and a polyacetal prepared from a glycol and formaldehyde, said group member having an hydroxyl number of from about 20 to about 80, a molecular weight of at least about 1000 and an acid number not substantially greater than about 1.5, p-phenylene di(β-hydroxy ethylether) in the ratio of from about 0.4 mol to about 4 mols per mol of said group member, and a member selected from the group consisting of 4,4'-diphenyl di-

methyl methane diisocyanate and 4,4'-diphenyl methane diisocyanate in an amount in excess of at least about 2 mols thereof per mol of said first mentioned group member.

3,016,365

POLYTHIOETHERURETHANE CASTING AND METHOD OF PREPARING SAME

Hans Holtschmidt, Koln-Stammheim, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 14, 1957, Ser. No. 645,912
Claims priority, application Germany Mar. 17, 1956
3 Claims. (Cl. 260—77.5)

1. A polyurethane casting obtained by a process which comprises reacting an excess of an organic polyisocyanate in a first step with a polythioether having terminal hydroxyl groups and having a molecular weight within the range of from about 800 to about 10,000, said polythioether having been formed by self-condensation of a monomeric thioether glycol having its hydroxyl groups in the beta position with respect to a sulfur ether atom to a temperature within the range of from about 100° C. to about 300° C., and thereafter mixing the resulting liquid product with a polyhydric alcohol containing 2 to 3 hydroxyl groups, pouring the resulting liquid mixture into a mold, and curing the liquid at a temperature of about 110° C. for at least about 24 hours until a completely cured solid polyurethane is formed.

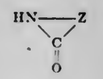
3,016,366

POLYMERIZATION OF PYRROLIDONE AND PIPERIDONE EMPLOYING N-SUBSTITUTED SECONDARY AMIDES

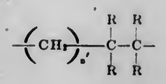
Samuel A. Glickman, Easton, and Edgar Shelley Miller, Bethlehem, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,330
10 Claims. (Cl. 260—78)

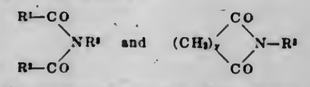
1. In the process of polymerizing lactams of the formula



wherein Z represents



where *n'* is an integer from 1 to 2 and R represents a member of the group consisting of H and lower alkyl groups of 1 to 4 carbon atoms, under essentially anhydrous conditions and in the presence of a minor amount up to about 10 mole percent based on said lactam of an alkali metal lactam as the polymerization catalyst; the improvement comprising effecting the polymerization in the presence of a minor amount up to about 10 mole percent based on said lactam of an N-substituted secondary amide selected from the group consisting of secondary amides of the formula



wherein R^3 represents a member of the group consisting of alkyl and aryl, and R^1 and R^2 each represent a member of the group consisting of hydrogen and alkyl and y is an integer from 2 to 3.

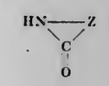
3,016,367

POLYMERIZATION OF PYRROLIDONE AND PIPERIDONE EMPLOYING N,N-DISUBSTITUTED SULFONAMIDES AS CHAIN INITIATORS

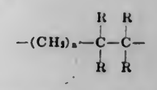
Samuel A. Glickman, Easton, and Edgar Shelley Miller, Bethlehem, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,334
6 Claims. (Cl. 260—78)

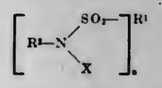
1. In the process of polymerizing lactams of the formula:



wherein Z represents



wherein *n'* is an integer from 1 to 2 and R represents a member of the group consisting of H and lower alkyl (1–4 carbon atoms), comprising polymerizing said lactam in the presence of a minor amount up to about 10 mole percent based on said lactam of an alkali metal lactam as the polymerization catalyst; the improvement which comprises effecting said polymerization under essentially anhydrous conditions and in the presence of a minor amount up to about 10 mole percent based on said lactam of a polymerization chain initiator consisting essentially of an N,N-disubstituted sulfonamide of the formula



wherein R^1 represents a member of the group consisting of hydrocarbon radicals of valence *n* and alkylene bivalent radical joined to bivalent X; R^2 represents a member of the group consisting of alkyl and aryl radicals and bivalent alkylene radical joined to bivalent X, provided, however, that only one of R^1 and R^2 may be such a bivalent alkylene radical; X is a member of the group consisting of alkylsulfonyl, arylsulfonyl, acyl, carbalkoxy, and carbanilino groups and a bivalent keto carbonyl group joined to one of the bivalent R^1 and R^2 groups specified above; and R^2 and X when bivalent form with the N atom to which they are attached a lactam ring and R^1 and X when bivalent form with the S and N atom to which they are respectively attached a heterocyclic ring and *n* is an integer from 1 to 3.

3,016,368

SULFONATED FLUOROCARBON COPOLYMER

George A. Gallagher, Media, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 22, 1960, Ser. No. 50,826
4 Claims. (Cl. 260—79.3)

1. A curable plastic sulfonated fluorocarbon copolymer made by subjecting a copolymer containing 30 to 70% by weight vinylidene fluoride monomer units, the remainder of said copolymer consisting of hexafluoropropene monomer units, to the action of a sulfonating agent taken from the group consisting of chlorosulfonic acid, fluorosulfonic acid, liquid sulfur trioxide, and a mixture of concentrated sulfuric acid and sulfur trioxide.

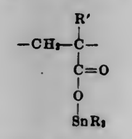
3,016,369

ORGANOTIN ACRYLIC POLYMERS

Juan C. Montermoso, Cochituate, Loreto P. Marinelli, Norwood, and Troy M. Andrews, Sudbury, Mass., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Filed July 16, 1958, Ser. No. 749,038
14 Claims. (Cl. 260—80)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An elastomeric organic-solvent-soluble heat-softenable organotin acrylic homopolymer consisting of repeating units having the general formula



wherein R is a monovalent saturated hydrocarbon radical having at least four carbon atoms, and R' is a member selected from the group consisting of hydrogen and a monovalent saturated hydrocarbon radical.

3,016,370

VINYL PYRROLIDONE-STYRENE BLOCK POLYMERS

Johann Wolfgang Breitenbach and Helmut Edelhauser, Vienna, Austria, assignors, by mesne assignments, to W. R. Grace & Co., a corporation of Connecticut

No Drawing. Original application Apr. 5, 1955, Ser. No. 499,499. Divided and this application Feb. 1, 1960, Ser. No. 10,529
1 Claim. (Cl. 260—88.1)

In the process for producing a copolymer of N-vinyl pyrrolidone and styrene comprising homogeneously mixing N-vinyl pyrrolidone, styrene, and water in a mol ratio varying from 1 to 2 mols of N-vinyl pyrrolidone per mol of styrene, the N-vinyl pyrrolidone:water mol ratio being 2:1, and polymerizing the said homogeneous mixture in the absence of atmospheric oxygen with a polymerization catalyst of azobutyric acid nitrile in a concentration of about 0.35%, the improvement comprising carrying out the polymerization with homogeneously admixed urea, the N-vinyl pyrrolidone:urea mol ratio being 1:0.1, whereby there is obtained a copolymer of N-vinyl pyrrolidone and styrene having a lower interfacial tension between benzene and water than the product polymerized in the absence of urea.

3,016,371

HOMOGENEOUS POLYMERIZATION CATALYSTS BASED ON COBALT, AND POLYMERIZATION OF DIOLEFINS THEREWITH

Giulio Natta, Lido Porri, and Leonardo Fiore, Milan, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Filed Feb. 20, 1959, Ser. No. 794,730
Claims priority, application Italy Feb. 26, 1958
8 Claims. (Cl. 260—94.3)

1. A homogeneous polymerization catalyst consisting essentially of a dinitrosyl cobalt monohalide and an alkyl halide of an element belonging to Groups II to III, inclusive of the Mendeléeff Periodic Table.

7. A process for polymerizing butadiene to polymers having substantially cis-1,4 structure, which process comprises bringing butadiene into intimate contact with a homogeneous polymerization catalyst consisting essentially of a dinitrosyl cobalt monohalide and a dialkyl aluminum chloride, and recovering the resulting polymerizate.

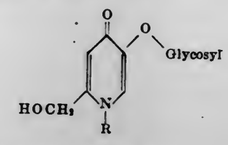
3,016,372

GLYCOSIDES OF THE PYRIDONE SERIES

Carl Peter Krimmel, Mundelein, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 13, 1956, Ser. No. 627,982
9 Claims. (Cl. 260—210)

1. A glycoside of the formula



wherein R is a member of the class consisting of hydrogen, lower alkyl radicals, and lower hydroxyalkyl radicals in which the hydroxyl group is separated from the cyclic nitrogen atom by at least two carbon atoms.

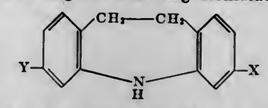
3,016,373

PROCESS FOR THE PREPARATION OF DIBENZ[b,f]AZEPINES

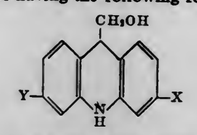
Andrew J. Saggiomo, Philadelphia, and Joseph Weinstock, Phoenixville, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Feb. 17, 1960, Ser. No. 9,191
6 Claims. (Cl. 260—239)

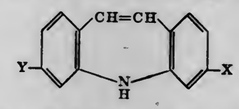
1. The method of forming 10,11-dihydro-5H-dibenz [b,f]azepines having the following formula:



in which X and Y are members selected from the group consisting of hydrogen, chlorine and trifluoromethyl, which comprises dehydrating with phosphorus pentoxide a 9-acridanemethanol having the following formula:



in which X and Y are as defined above to form a 5H-dibenz[b,f]azepine having the following formula:



in which X and Y are as defined above and hydrogenating said 5H-dibenz[b,f]azepine in the presence of a hydrogenation catalyst selected from the group consisting of platinum and palladium catalysts.

3,016,374

PRODUCTION OF LACTAMS BY THE BECKMANN REARRANGEMENT USING UREA BISULFATE AS CATALYST

Thomas R. Hopkins, Johnson County, Myron David Osborn, Overland Park, and William C. Francis, Mission, Kans., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed Oct. 3, 1958, Ser. No. 765,067
7 Claims. (Cl. 260—239.3)

1. In the process for production of a lactam by the Beckmann rearrangement of an alicyclic oxime the improvement which consists in the use of urea bisulfate as the rearrangement catalyst.

3,016,375
PROCESS OF PRODUCING EPSILON-CAPROLACTAM

Thomas R. Hopkins, Johnson County, and James W. Steele, Overland Park, Kans., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

Filed May 6, 1959, Ser. No. 811,383
9 Claims. (Cl. 260—239.3)

1. The process of separating caprolactam from a liquid reaction mixture formed by the rearrangement of cyclohexanone oxime by polyphosphoric acid which comprises extracting the reaction mixture with an organic solvent having a boiling point of 100 to 175° C. without prior neutralization of the reaction mixture, and isolating the epsilon-caprolactam of the organic solvent extract.

3,016,376
PROCESS OF SEPARATING EPSILON-CAPROLACTAM

William C. Francis, Overland Park, Kans., assignor to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed July 13, 1959, Ser. No. 826,485
8 Claims. (Cl. 260—239.3)

1. The process of separating epsilon-caprolactam from a mixture with a Beckmann rearrangement catalyst of the group consisting of polyphosphoric acid, ammonium bisulfate and urea bisulfate, which comprises distilling the mixture of catalyst and epsilon-caprolactam, without neutralization of the catalyst, at a reduced pressure and elevated temperature below 175° C. to directly distill the epsilon-caprolactam.

3,016,377
$\Delta^{8(9)}$ - 7,11 - DIOL DERIVATIVES OF THE ERGOSTANE, CHOLANE AND SPIROSTANE SERIES

Earl M. Chamberlin, Westfield, and John M. Chemerda, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 26, 1955, Ser. No. 524,580
8 Claims. (Cl. 260—239.55)

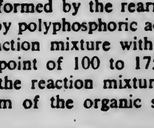
4. 3-acetoxy-7,11-dihydroxy-$^{8(9)}$-dehydrotigogenin.

3,016,378
AMINO-SUBSTITUTED PURINE DERIVATIVES

Josef Roch, Biberach (Riss), Germany, assignor to Dr. Karl Thomae G.m.b.H., Biberach (Riss), Germany, a corporation of Germany

No Drawing. Filed July 1, 1959, Ser. No. 824,172
9 Claims. (Cl. 260—247.5)

1. Compounds selected from the group consisting of tri- and tetra-substituted purines having the structural formula



and



wherein R′ is selected from the group consisting of hydrogen, lower alkyl, phenyl-substituted lower alkyl, N-morpholyl-substituted lower alkyl, phenyl, halo-substituted phenyl, lower alkyl-substituted phenyl and lower alkoxy-substituted phenyl,

one of substituents R_1, R_2 and R_3 is a heterocyclic radical selected from the group consisting of hexamethyleneimino, N-piperidyl, N-pyrrolidyl, N-tetrahydropyridyl, N-morpholyl, lower alkyl-substituted N-piperidyl, lower alkyl-substituted N-morpholyl, N′-lower alkyl-substituted N-piperazyl, N′-phenyl-substituted N-piperazyl and N′-halophenyl-substituted N-piperazyl,

one other of substituents R_1, R_2 and R_3 is selected from the group consisting of alkyl-amino, di-alkyl-amino, phenyl-amino, benzyl-amino, hydroxy-alkyl-amino, hydroxyalkyl-alkyl-amino, alkylamino-alkyl-amino, hydrazino, guanido, hexamethyleneimino, N-piperidyl, N-pyrrolidyl, N-tetrahydropyridyl, N-morpholyl, lower alkyl-substituted N-piperidyl, lower alkyl- substituted N-morpholyl, N′-lower alkyl-substituted N-piperazyl, N′-phenyl-substituted N-piperazyl and N′-halophenyl-substituted N-piperazyl and

the third of substituents R_1, R_2 and R_3 is selected from the group consisting of halogen, hydroxyl, lower alkoxy, phenoxy, lower alkoxy-substituted lower alkoxy, mercapto, lower alkyl-mercapto, phenyl-mercapto, amino, alkyl-amino, dialkyl-amino, phenyl-amino, benzyl-amino, hydroxyalkyl-amino, hydroxyalkyl-alkyl-amino, alkylamino-alkylamino, hydrazino, guanido, hexamethyleneimino, N-piperidyl, N-pyrrolidyl, N-tetrahydropyridyl, N-morpholyl, lower alkyl-substituted N-piperidyl, lower alkyl-substituted N-morpholyl, N′-lower alkyl-substituted N-piperazyl, N′-phenyl-substituted N-piperazyl and N′-halophenyl-substituted N-piperazyl, and

R_3 is in addition selected from the group consisting of phenyl, phenyl-substituted lower alkyl and N-morpholyl-substituted lower alkyl,

and their non-toxic, pharmacologically acceptable, water-soluble acid addition salts.

2. 2,6,8-tri-(N-morpholyl)-purine.

3,016,379
PRODUCTION OF TRIMETHYLENEUREA

Billy E. Lloyd, Memphis, Tenn., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 24, 1960, Ser. No. 17,265
4 Claims. (Cl. 260—251)

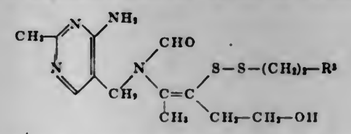
1. A process for producing trimethyleneurea which comprises heating a member of the group consisting of mono(3-aminopropyl) isocyanurate and bis(3-aminopropyl) isocyanurate at temperature in the range of about 165° to 300° C., thereby forming a reaction mixture comprising trimethyleneurea and recovering said trimethyleneurea from the reaction mixture.

3,016,380
TETRAHYDROPYRANYL AND TETRAHYDROFURYL DERIVATIVES OF THIAMINE

Shojiro Yurugi, Marutamachidori-Sembon-Higashiiru-Sagaru, Kamigyo-ku, Kyoto, and Tomiyoshi Fushimi, Toyonaka, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Osaka, Japan

No Drawing. Filed Aug. 15, 1958, Ser. No. 755,135
Claims priority, application Japan Aug. 16, 1957
6 Claims. (Cl. 260—256.5)

1. A crystallizable compound having the formula



wherein R^2 is a member selected from the group consisting of tetrahydrofuryl and tetrahydropyranyl groups,

said compound, notwithstanding the presence therein of a mercaptan grouping, being free of any characteristic mercaptan odor.

3,016,381
5,6,7,8-TETRAHYDROQUINOLINE-3-CARBOXAMIDE AND DERIVATIVES

Aaron Cohen and Anthony Mesnard Parsons, Welwyn Garden City, England, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1959, Ser. No. 855,271
Claims priority, application Great Britain Dec. 18, 1958
3 Claims. (Cl. 260—287)

1. A member selected from group consisting of 5,6,7,8-tetrahydroquinoline-3-carboxamide and its N-lower alkyl derivatives and medicinally acceptable acid addition salts of said amides.

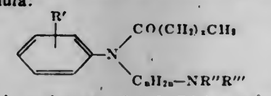
3,016,382
N-SUBSTITUTED ANILIDES AND METHOD OF PREPARING THE SAME

William B. Wright, Jr., Woodcliff Lake, N.J., and Herbert J. Brabander, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 15, 1958, Ser. No. 780,187
9 Claims. (Cl. 260—294)

1. The compound N - (1 - methyl - 2 - piperidinoethyl) - propionanilide.

8. A compound of the group consisting of those having the formula:



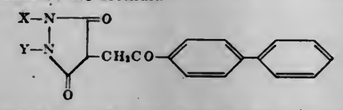
in which X is an integer of 1–3, R′ is a member of the group consisting of hydrogen, chloro, dichloro, bromo, hydroxyl, lower alkyl, lower alkoxy, lower alkanoyloxy, amino and lower alkanoylamino radicals, NR″R‴ is a member of the group consisting of diloweralkylamino, N-(lower alkyl)-allylamino, morpholino, methylpiperazinyl, piperidino, methylpiperidino, pyrrolidino and hexamethyleneimino, *n* is an integer from 2 to 4, and non-toxic therapeutic acid addition salts thereof.

3,016,383
CERTAIN 4-PHENYLBENZOYL METHYL-1,2-DIARYL PYRAZOLIDINE-DIONES

Gerald D. Laubach, Niantic, and Ellis R. Pinson, Jr., Waterford, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 4, 1959, Ser. No. 850,790
6 Claims. (Cl. 260—310)

6. A compound selected from the group consisting of compounds of the formula



in which X is a member selected from the group consisting of phenyl, hydroxphenyl, acetoxyphenyl, and benzyloxyphenyl; and Y is selected from the group consisting of phenyl, hydroxphenyl, and benzyloxphenyl; and alkali metal salts thereof.

3,016,384
PROCESS FOR THE MANUFACTURE OF COLOR PIGMENTS IN FINELY DIVIDED FORM

Armin Caliezi, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland

No Drawing. Filed July 2, 1959, Ser. No. 824,467
Claims priority, application Switzerland July 20, 1956
3 Claims. (Cl. 260—314.5)

1. A process for the manufacture of soft grained pigment of highly chlorinated copper phthalocyanine, which comprises heating at a temperature between the boiling point of water and 180° C. for at least 5 hours the crude pigment in water, and then removing the water.

3,016,385
METHOD OF PREPARING GLYOXAL HYDRATE

Jean-Claude Bondiou, Gentilly, and Bernard J. Petusseau, Paris, France, assignors to Societe Nobel Bozel, Paris, France, a French company

No Drawing. Filed June 1, 1956, Ser. No. 588,610
Claims priority, application France June 10, 1955
4 Claims. (Cl. 260—340.6)

1. A method of preparing a crystalline product having a composition corresponding to a glyoxal hydrate comprising the steps of subjecting an aqueous solution of glyoxal having a glyoxal content of at least 30% by weight to a moderate heating at about 40° C. and thereafter allowing crystallisation of the desired product to take place in the solution at a temperature which is lower than that of said heating.

3,016,386
ACYLTHIO-STEROIDS AND PRODUCTION THEREOF

Taichiro Komeno, Sumiyoshi-ku, Osaka-shi, Japan, assignor to Shionogi & Co., Ltd., Osaka-shi, Japan

No Drawing. Filed July 22, 1960, Ser. No. 44,514
Claims priority, application Japan Aug. 6, 1959
6 Claims. (Cl. 260—397.2)

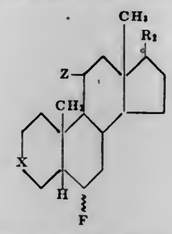
1. 5α-acetylthio-cholestan-3-one.

3,016,387
6-FLUORO ANDROSTANES

John C. Babcock and J Allan Campbell, Kalamazoo Township, Kalamazoo County, Milton E. Herr, Kalamazoo, John A. Hogg, Kalamazoo Township, Kalamazoo County, and Raymond L. Pederson, Charleston Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,570
14 Claims. (Cl. 260—397.3)

1. A 6-fluoro compound of the formula:



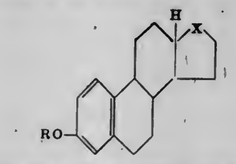
wherein R_3 is selected from the group consisting of hydroxyl, OAcyl, and keto, the term Acyl representing the acyl radical of an organic carboxylic acid containing from one to twelve carbon atoms, inclusive, X is selected from the group consisting of the carbonyl radical and the hydroxymethylene radical, and Z is selected from the group consisting of hydrogen, hydroxyl, and keto.

3,016,388
NEW ESTERS OF 19-NOR-TESTOSTERONE
Erik Duyvene de Wit, Oss, Netherlands, assignor to Organon Inc., West Orange, N.J., a corporation of New Jersey
No Drawing. Filed June 20, 1960, Ser. No. 37,085
Claims priority, application Netherlands June 30, 1959
3 Claims. (Cl. 260—397.4)

1. 19-nor-testosterone-17-ester of a hydrocarbon aliphatic carboxylic acid having 19–30 carbon atoms.

3,016,389
3,17-BISOXYGENATED-18-NOR-1,3,5(10)-ESTRATRIENES AND INTERMEDIATES
William F. Johns, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Apr. 13, 1959, Ser. No. 805,657
13 Claims. (Cl. 260—397.4)

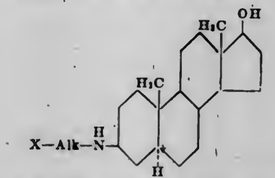
1. A compound of the structural formula



wherein R is selected from the group consisting of hydrogen, lower alkyl, and lower alkanoyl radicals; and X is selected from the group consisting of carbonyl, hydroxymethylene, and (lower alkanoyl)oxymethylene radicals.

3,016,390
N-(SUBSTITUTED ALKYL)AMINO-5α-ANDROSTAN-17β-OLS
Raymond E. Counsell, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed June 30, 1960, Ser. No. 47,339
6 Claims. (Cl. 260—397.5)

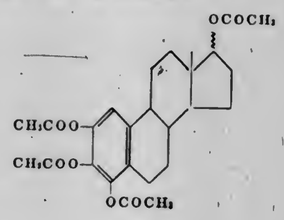
1. A compound of the structural formula



wherein X is selected from the group consisting of hydroxy, phenyl, and di-(lower alkyl)amino radicals, and Alk is a lower alkylene radical.

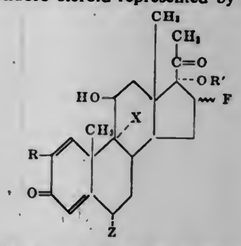
3,016,391
2,3,4,17-TETRAACETOXYESTRA-1,3,5(10)-TRIENE
James Jiu, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Feb. 20, 1961, Ser. No. 90,217
3 Claims. (Cl. 260—397.5)

1. A compound of the formula



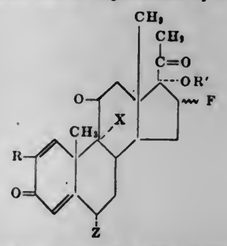
3,016,392
16-FLUORO STEROIDS OF THE PREGNANE SERIES
Barney J. Magerlein, Portage Township, Kalamazoo County, and Robert D. Birkenmeyer and Fred Kagan, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Jan. 11, 1960, Ser. No. 1,422
22 Claims. (Cl. 260—397.45)

1. A 16-fluoro steroid represented by the formula:



wherein R is selected from the group consisting of hydrogen and methyl, R′ is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from 1 to 12 carbon atoms, inclusive, X is selected from the group consisting of hydrogen and fluorine, and Z is selected from the group consisting of methyl and fluorine.

14. A 16-fluoro steroid represented by the formula:



wherein R is selected from the group consisting of hydrogen and methyl, R′ is selected from the group consisting of hydrogen and the acyl radical of a hydrocarbon carboxylic acid containing from 1 to 12 carbon atoms, inclusive, X is selected from the group consisting of hydrogen and fluorine, and Z is selected from the group consisting of methyl and fluorine.

3,016,393
SURFACE ACTIVE SULFONATED POLYESTERS
John D. Brandner and Ernest C. Ford, Jr., Wilmington, Del., assignors to Atlas Chemical Industries, Inc., a corporation of Delaware
No Drawing. Filed July 6, 1959, Ser. No. 824,937
7 Claims. (Cl. 260—400)

1. A substantially complete ester of an acyclic glycol containing from 2 to 6 carbon atoms and selected from the group consisting of alkylene and polyalkylene glycols, an aliphatic dicarboxylic acid containing from 4 to 10 carbon atoms and selected from the group consisting of saturated and ethylenically unsaturated acids, and a fatty acid containing from 12 to 18 carbon atoms, containing, per mol of complete ester, two mols of fatty acid radical, from one to three mols of dicarboxylic acid radical, and from two to four mols of glycol radical, wherein sufficient of the said dicarboxylic acid radicals contain a sulfonate group as substituent to furnish at least one sulfonate group per mol of said complete ester as well as at least one sulfonate group for each two dicarboxylic acid radicals.

5. A process for preparing a surface active agent which comprises reacting under esterification conditions, and in substantially stoichiometric proportions, from two to four molar proportions of an acyclic glycol containing from 2 to 6 carbon atoms and selected from the group consisting of alkylene and polyalkylene glycols, from one to three molar proportions of an aliphatic dicarboxylic acid containing from four to ten carbon atoms selected from the group consisting of saturated and ethylenically unsaturated acids, wherein at least 50 mol percent of the said dicarboxylic acid contains ethylenic unsaturation, and two molar proportions of a fatty acid containing from 12 to 18 carbon atoms, until esterification is substantially complete, and sulfonating the resulting polyester with sufficient aqueous bisulfite solution to furnish at least one sulfonate group per mol of said ester and at least one sulfonate group for each two dicarboxylic acid radicals in said polyester.

3,016,394
OLEFIN OXIDE POLYMERIZATION CATALYSTS
Charles E. Scott, Drexel Hill, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed June 24, 1959, Ser. No. 822,413
4 Claims. (Cl. 260—439)

1. A catalyst for the polymerization of olefin oxides consisting essentially of a complex formed by reacting a ferric halide selected from the group consisting of $FeCl_3$ and $FeBr_3$ with cyclododecatriene-1,5,9 and removing HCl resulting from the reaction.

3,016,395
METHYL-2-KETO-D-GLUCONATE
Oscar L. Norman, Northbrook, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Mar. 4, 1960, Ser. No. 12,670
11 Claims. (Cl. 260—483)

1. A method for preparing methyl-2-keto-D-gluconate which comprises commingling calcium-2-keto-D-gluconate with methanol and a substance selected from the group consisting of hydrogen chloride, hydrogen bromide, thionyl chloride, thionyl bromide, sulfuryl chloride, sulfuryl bromide, phosphorus oxychloride, phosphorus oxybromide, phosphorus trichloride, phosphorus tribromide, phosphorus pentachloride, phosphorus pentabromide, chlorine and bromine, the proportion of methanol being sufficient to react with the calcium-2-keto-D-gluconate and to initially produce a mobile slurry, and the molar proportion of said substance to calcium-2-keto-D-gluconate being at least about 2:1, whereby the solid phase dissolves in the methanol and methyl-2-keto-D-gluconate crystallizes therefrom.

3,016,396
METHOD OF PRODUCING ALUMINUM TRIETHYL
Tsuneo Irie, Tsutomu Kagiya, and Mamoru Asada, Niihama-shi, Japan, assignors to Sumitoma Chemical Company, Ltd., Higashiku, Japan, a corporation of Japan
Filed Apr. 2, 1958, Ser. No. 725,881
Claims priority, application Japan Apr. 3, 1957
6 Claims. (Cl. 260—448)

1. A method of producing aluminum triethyl which comprises preparing an activated aluminum by dry milling an aluminum powder in hydrogen atmosphere with a solid fatty acid compound in a weight ratio of several percent based upon the aluminum powder, and reacting the activated aluminum, hydrogen and ethylene in the presence of aluminum triethyl at a temperature of from 50° to 250° C. under a pressure of from 50 to 300 atmospheres and below the fixed critical partial pressure of the ethylene.

3,016,397
PROCESS FOR OXIDIZING ALUMINUM HYDROCARBONS
Robert A. Walde, Pittsburgh, Pa., assignor to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Sept. 25, 1958, Ser. No. 763,206
4 Claims. (Cl. 260—448)

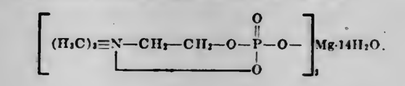
1. A process for oxidizing an aluminum hydrocarbon, wherein said hydrocarbon has from two to thirty carbon atoms and is represented by the following srtuctural formula AlR_3, wherein R is an alkyl group, which comprises oxidizing said aluminum hydrocarbon in oxygen at a selected temperature within the range of about 0° to 70° C. while permitting the temperature at any point in the reaction zone to vary no more than about 8° C. above the selected temperature.

3,016,398
STABILIZED PHYTIC ACID SOLUTIONS AND METHODS OF PREPARATION THEREOF
Roy F. Larson, David P. Langlois, and Paul R. Shildneck, all of Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware
No Drawing. Filed Apr. 6, 1959, Ser. No. 804,065
17 Claims. (Cl. 260—461)

1. In the process of preparing a concentrated aqueous solution of phytic acid derived from phytin, the improvement for stabilizing the color of the concentrated acid that comprises the step of adding to the concentrated acid a color-stabilizing amount of the combination of (1) a nitrate compound of the group consisting of nitric acid and water-soluble colorless nitrate salts and (2) a colorless, water-soluble, amino-group-containing compound selected from the group consisting of urea, diethylene glycol dicarbamate, alpha-amino acids, aliphatic primary amines and ammonia.

3,016,399
CHOLINPHOSPHORIC ACID SALTS AND PRODUCTION THEREOF
Andre Debay, Paris, France, assignor to Societe Francaise de Recherches Biochimiques H. Besson & Cie, Paris, France, a company of France
No Drawing. Filed May 27, 1959, Ser. No. 816,068
1 Claim. (Cl. 260—461)

Magnesium cholinphosphate of the formula



3,016,400
4,4′-(1,1,2,2-TETRAMETHYLETHYLENE)-DIBENZOIC ACID
John C. Petropoulos, Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 21, 1958, Ser. No. 750,048
1 Claim. (Cl. 260—515)

4,4′-(1,1,2,2-tetramethylethylene)dibenzoic acid.

3,016,401
NAPHTHALENE SEPARATION PROCESS
Murray G. Sturrock and Edwin L. Cline, Pittsburgh, and Kenneth R. Robinson, Pitcairn, and Robert J. Lovin, Glenshaw, Pa.; said Sturrock and said Cline assignors to Koppers Company, Inc., a corporation of Delaware
No Drawing. Filed Aug. 6, 1958, Ser. No. 753,403
7 Claims. (Cl. 260—523)

7. Method of concomitantly purifying naphthalene and making o-phthalaldehydic acid and o-phthaladehyde comprising dissolving 5 to 30% by weight crude naph-

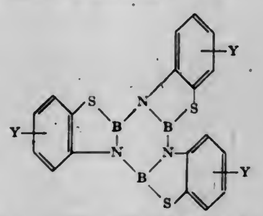
thalene in admixture with sulfur-containing impurities in a medium comprising a lower aliphatic alcohol, cooling the resulting solution to precipitate naphthalene in finely divided form, intimately contacting said crude naphthalene with an ozone-containing gas stream in an amount equal to one mol of ozone per mol of impurities and up to 0.6 mol of ozone per mol of naphthalene to form ozonation products, subjecting said ozonation products to hydrolysis in the presence of water and from 2 to 15% by weight of an alkaline reacting substance selected from the group consisting of alkali metal carbonates and alkali metal hydroxides by heating the aqueous alkaline mixture to its boiling point, concomitantly removing said alcohol from said mixture by distillation, separating naphthalene which is substantially free of said sulfur-containing impurities from the hydrolyzed mixture by steam distillation, recovering said naphthalene from said distillate, and recovering o-phthalaldehydic acid and o-phthalaldehyde from the residue of said hydrolyzed mixture by solvent extraction.

3,016,402
BORAAROTHIAZOLO BORAZINES

James J. Harris, Oakmont, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Dec. 17, 1959, Ser. No. 860,084
9 Claims. (Cl. 260—551)

1. A compound of the formula:



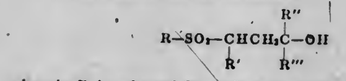
wherein Y is a member selected from the group consisting of hydrogen, halo, and lower alkyl, the remaining substitutable positions of the benzenoid nucleus being occupied by hydrogen.

3,016,403
1-ARYL-3-HYDROXYPROPYL SULFONES AND PROCESSES

Raymond M. Dodson, Park Ridge, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Illinois

No Drawing. Filed July 29, 1955, Ser. No. 525,387
10 Claims. (Cl. 260—607)

1. A compound of the formula



wherein R is selected from the group consisting of methyl and phenyl radicals, R′ is selected from the group consisting of phenyl and halophenyl radicals, and each of R″ and R‴ is selected from the group consisting of methyl radicals and hydrogen.

3,016,404
PURIFICATION OF CRUDE ALKYLENE OXIDE POLYETHER

William D. Beauchamp, Robert E. Booth, and Edward R. Degginger, Syracuse, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 28, 1959, Ser. No. 842,588
6 Claims. (Cl. 260—615)

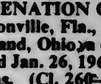
1. A process for refining crude alkylene oxide polyether containing alkali metal hydroxide catalyst to high purity alkylene oxide polyether which comprises adding HCl and water to the crude alkylene oxide polyether, said HCl being added in amount to reduce the pH of the crude alkylene polyether to 2.2–6.0, said water being in an amount of 1.5–6 parts by weight water per part by weight HCl, and separating precipitate resulting from the reaction of HCl with alkali metal hydroxide in the crude alkylene oxide polyether.

3,016,405
METAL CATALYZED PYROLYSIS OF FLUOROMETHANES

Elwyn Raymond Lovejoy, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 7, 1959, Ser. No. 785,323
16 Claims. (Cl. 260—648)

1. A process for preparing fluorocarbons containing 2 to 4 carbon atoms which comprises contacting a halocarbon of the structure:



where X is selected from the group consisting of chlorine and bromine and where Y_1 is selected from the group consisting of chlorine, fluorine, and bromine, and where Y_2 is selected from the group consisting of fluorine, chlorine, bromine and hydrogen, with a molten metal selected from the group consisting of lead, tin, zinc and lead alloys of metallic elements of groups I, II, IVA and VA of the Periodic Table of Elements.

3,016,406
REACTIONS OF PERFLUOROALKYL IODIDES AND OLEFINS IN THE PRESENCE OF ESTERS

Neal O. Brace, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 21, 1960, Ser. No. 57,383
6 Claims. (Cl. 260—653)

1. In the process of thermally reacting polyfluoroalkyl iodides with aliphatic olefins and acetylenes, the improvement wherein said reaction is carried out in the presence of aliphatic esters having the structure RCO_2R' wherein R is an alkyl group and R′ is selected from the group consisting of primary and secondary alkyl groups.

3,016,407
TELOMERS FROM $CH_2{=}CH_2$ AND ICF_2CF_2I

Neal O. Brace, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 21, 1960, Ser. No. 57,388
6 Claims. (Cl. 260—653.1)

1. A compound selected from the group consisting of those compounds having the structure

$$ICF_2CF_2(CH_2CH_2)_nI$$

and $I(CH_2CH_2)_mCF_2CF_2(CH_2CH_2)_nI$ in which structures *m* and *n* are integers having a value within the range of from 1 to 5.

3,016,408
HYDROHALOGENATION OF MYRCENE

Robert L. Webb, Jacksonville, Fla., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,616
5 Claims. (Cl. 260—654)

1. In a process for the hydrohalogenation of myrcene in a myrcene-containing reaction mixture with a hydrogen halide selected from the group consisting of hydrogen chloride and hydrogen bromide in the presence of cupric catalyst at a temperature in the range of about minus 30° to about plus 50° C., and at a pressure between subatmospheric and about 100 p.s.i.g. to obtain geranyl, neryl, and linalyl halides to the substantial exclusion of the conjugated halide, 2-methyl-2-halo-6-methylene-octene-7, the improvement which consists essentially of establishing and maintaining a cupric catalyst concentration, measured as elemental copper and based on the weight of myrcene charged to the reaction mixture, of between 0.1 and 10% and cupric catalyst particle size of at least about 18 mesh fineness, adding the hydrogen halide to the reaction mixture at an average rate between about 0.01 and about 30 mols per hour per mol of original myrcene charged to said reaction mixture, and correlating said rate of hydrogen halide addition with the maintenance of a 0–10% concentration of said conjugated halide in said reaction mixture.

3,016,409
PREPARATION OF 1-ALKYL-1-CYCLOHEXENES

Jerome A. Vesely, Park Ridge, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,878
12 Claims. (Cl. 260—666)

12. A process for the preparation of 1-methyl-1-cyclohexene which comprises hydrogenating a mixture of isomeric cresols in the presence of hydrogen and a nickel kieselguhr catalyst at hydrogenation conditions, dehydrating the resultant isomeric methylcyclohexanols in the presence of alumina, isomerizing the resultant isomeric methylcyclohexenes in the presence of a catalyst comprising sodium composited on a precalcined high surface area silica support at a temperature in the range of from about 25° to about 75° C. to form the desired 1-methyl-1-cyclohexene, and recovering said 1-methyl-1-cyclohexene.

3,016,410
PREPARATION OF CYCLOPENTADIENE FROM DICYCLOPENTADIENE

Clarence R. Dick and Huey Pledger, Jr., Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,092
4 Claims. (Cl. 260—666)

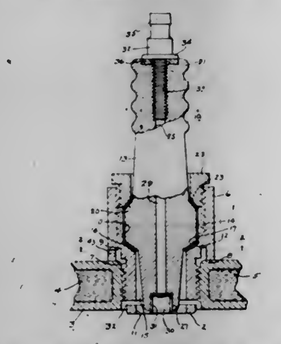
1. A process for the preparation of cyclopentadiene from a solution containing less than 30 weight percent of dicyclopentadiene in a solvent having a boiling point below the boiling point of dicyclopentadiene and above that of cyclopentadiene, which comprises immersing in the dicyclopentadiene solution a heating surface having an area not greater than 0.3 square feet per 1 cubic foot of solution, heating the dicyclopentadiene solution to a temperature in the range of 106° F. to the boiling point of the solution, and heating the heating surface to a temperature of from 750° to 1600° F. above the temperature of the solution to decompose the dicyclopentadiene to cyclopentadiene and to vaporize the cyclopentadiene so formed.

ELECTRICAL

3,016,411
IGNITION DEVICE

Bernard C. Fisher, Jersey City, N.J., assignor to Neutronic Development Corporation, Englewood, N.J.

Filed Sept. 8, 1959, Ser. No. 838,681
5 Claims. (Cl. 123—169)

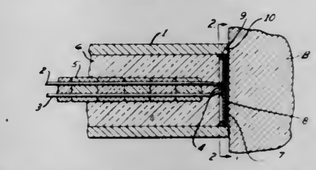


1. An ignition device comprising a tubular metallic body member having screw threads at one end for attaching said device to an internal combustion engine and having an enlarged other end, an insulator having one end within said body member and the other protruding out of the other end of said body member, said insulator being tapered at said one end, there being a space between the tapered end of said insulator and the interior walls of said body member, a conductor extending through said insulator and having sparking electrode means adjacent the tapered end of said insulator and a connecting terminal extending beyond the other end of said insulator, all but the extreme end of said electrode means being covered by said insulator, said body member having a cavity in the enlarged portion thereof, a duct leading from said cavity to the atmosphere, and means providing a tortuous path of small cross section from said cavity to a point adjacent said electrode means, the length of said path being greater than three times the circumference of said one end of said body member, said one end of said body member being provided with at least one cut-away portion through the wall thereof near said end, whereby gases can flow through said cut-away portion adjacent said electrode means.

3,016,412
HIGH-TEMPERATURE THERMOCOUPLE DEVICE

Nicholas V. Ross, Youngstown, Ohio, assignor to Ajax Magnethermic Corporation, a corporation of Ohio

Filed Mar. 27, 1958, Ser. No. 724,289
6 Claims. (Cl. 136—4)



1. A thermocouple device including a body having a forward wall adapted to be juxtaposed against the surface of an article of which the temperature is to be measured and having a relatively shallow end cavity facing forwardly toward said wall, a thermocouple including a relatively small, unitary thermocouple junction positioned in the cavity so as to be responsive to heat conditions created in the cavity, said junction being positioned, endwise of the cavity, inwardly from, and in closely spaced relation to the forward end so as to be in closely spaced relation to said surface of the article when the wall of the body is so juxtaposed, and, in addition to said junction, a heat conducting shield member of non-thermoelectric material having a portion in intimate heat con-

ducting relation to the junction and disposed forwardly thereof and extending outwardly, transversely of the cavity, therefrom, and sealing the cavity forwardly of the junction, said shield member having a forward face exposed in, and facing toward the forward end of the cavity, and spaced rearwardly from said forward end and rearwardly from said juxtaposed wall and said junction is juxtaposed against the rear face of the shield member.

3,016,413
GRID FOR BATTERY ELECTRODES

Renato Di Pasquale, Rutherford, N.J., and Frank Solomon, Lake Success, N.Y., assignors to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Oct. 10, 1958, Ser. No. 766,457
2 Claims. (Cl. 136—45)

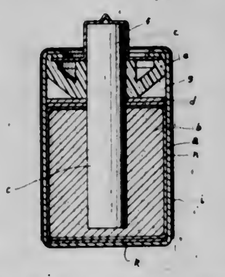


1. An electrode for electrochemical batteries comprising an active material and a pair of conductive sheets each having intersecting ribs which rise from one side of the sheet and form troughs open toward the other side, said sheets being joined together back-to-back with the ribs in registry and with said troughs combined into internal imperforate cooling channels, said sheets being in conductive contact with one another, said active material being in the form of blocks lodged in the spaces framed by said ribs, said blocks projecting above said ribs with mutual separation along said ribs to a sufficient extent to provide a channel for circulation of electrolyte.

3,016,414
DRY CELL

Bodo Franz Hubert Priebe, Ellwangen (Jagst), Germany, assignor to Pertrix Union G.m.b.H., Ellwangen (Jagst), Germany

Filed Feb. 9, 1959, Ser. No. 791,976
Claims priority, application Germany Feb. 13, 1958
3 Claims. (Cl. 136—107)

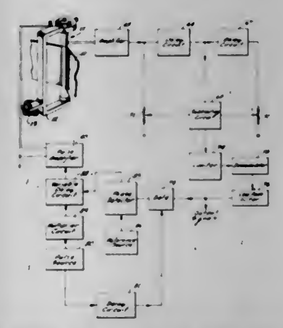


1. In a dry cell having a cup-shaped solution electrode; a depolarizing substance carrier disposed within said electrode and substantially filling the lower three-quarters thereof; a carbon rod vertically and concentrically disposed in said electrode, reaching from near the bottom of said carrier beyond the upper end of said electrode; a diaphragm impregnated with electrolyte and separating said electrode from said carrier; a metal closing cap at the upper end of said cell and also enclosing said carbon rod; a disc disposed on top of said carrier; and a distance ring directly above said disc; the improvements which comprise said distance ring having substantially the shape of a hollow cone and having a flattened lower end; said distance ring tightly enveloping said carbon rod; being seated on said disc; tightly fitting with its upper portion the walls of said electrode; thereby exerting a constant pressure on said depolarizing substance carrier; said distance ring and said electrode forming a space for expansion of gas and electrolyte liberated during actuation of said dry cell.

3,016,415
COLOR STABILIZING VIDEO TAPE REPRODUCING SYSTEM

Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,459
20 Claims. (Cl. 178—6.6)



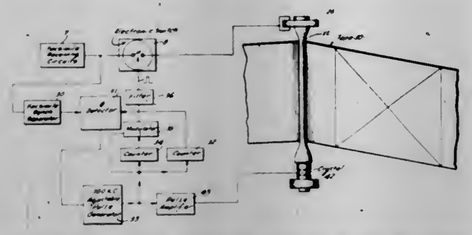
12. In a system for reproducing information recorded as successive transverse tracks on a moving medium stationary means disposed transversely relative to the medium for reproducing the information at successive positions along each transverse track on the medium upon each activation of the reproducing means, means operatively coupled to the reproducing means for activating the reproducing means, and means responsive to the information reproduced from each transverse track on the medium and operatively coupled to the activating means for controlling the time for activating the reproducing means in accordance with the reproduced information to compensate for variations in the positioning of the medium relative to the reproducing means in the transverse direction.

3,016,416
MAGNETIC TRANSDUCING SYSTEM

Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Apr. 14, 1959, Ser. No. 806,369
6 Claims. (Cl. 178—6.6)

4. A transducing system for producing information signals representing scanned lines of graphic material on a recording medium, including, means for receiving the information signals, sampling means coupled to said receiving means for successively sampling the information signals, scanning means including transducing means disposed transversely relative to the medium to produce a scanning action upon the introduction of an enabling signal to such scanning means, recording means operatively associated with the transducing means and the sampling means for obtaining a recording of the sampled signals at progressive transverse positions on the recording medium in accordance with the enabling of the transducing means at such transverse positions, enabling means coupled to said scanning means for periodically introducing enabling signals to the scanning means at a rate which is different than the sampling rate by said sampling means to obtain the sequential enabling of said transducer means at successive positions along said transducer means whereby said transducer means sequentially record said sampled



signals at successive transverse positions across said transducer means, and means operatively coupled to said receiving means and to said enabling means for synchronizing said enabling means with said information signals to obtain the recording of each line of the information signals in a particular pattern on the recording medium.

3,016,417
APPARATUS FOR REPRODUCING TELEVISION PICTURES

Fred Mast and Wilfried Janssen, Zurich, Switzerland, assignors to Gretag Aktiengesellschaft, Zurich, Switzerland, a company of Switzerland

Filed Feb. 16, 1959, Ser. No. 793,520
Claims priority, application Switzerland Feb. 25, 1958
9 Claims. (Cl. 178—7.5)

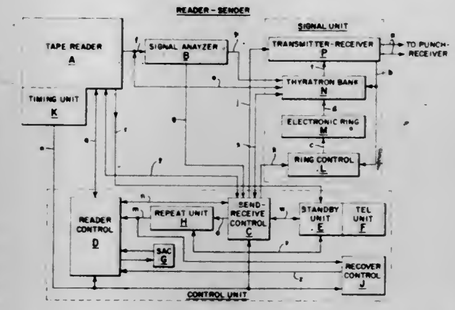


1. Apparatus for reproducing television pictures comprising a screen, a light source, a Schlieren-optical system interposed in the optical path between said source and screen, said Schlieren-optical system including a film deformable by modulation of an electron beam and a bar system composed of a plurality of spaced bars, the faces of said bars being arranged oblique to the path of the light rays incoming thereto from said light source and serving to reflect the light from said light source onto said modulatable film, and modulation of said film in conjunction with said bar system serving to effect a corresponding modulation of the light between said source and screen, means for producing said electron beam, means sweeping said beam across said deformable film in adjacent picture lines with constant scanning velocity and constant intensity, and means varying the width of the electrical charges deposited by said beam on said deformable film in accordance with the video signal such that the width of the charges across each picture line corresponds at each picture point to the magnitude of the video signal and varies inversely therewith.

3,016,418
RECORD MEMORY DEVICE

Paul M. Young, Pleasant Valley, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 22, 1960, Ser. No. 51,000
12 Claims. (Cl. 178—17)

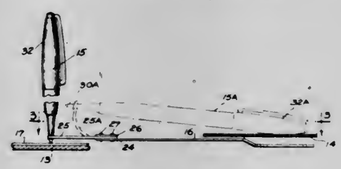


1. A reader-transmitter which utilizes a medium for storing a block of information records, and which includes first means for reading said information records from said medium one at a time and second means for transmitting each said record as it is read so as to define a first mode of operation for said reader-transmitter, and third means operative after one of said records has been transmitted for causing said first means to read said records from the beginning of said block while preventing said second means from transmitting so as to define a second mode of operation for said reader-transmitter.

3,016,419
RECORDING DEVICE

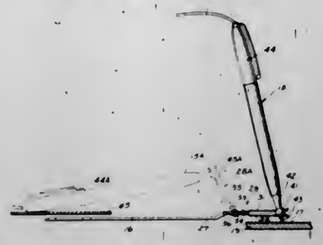
Peter G. S. Mero, 830 Mount Pleasant, Winnetka, Ill.

Filed Mar. 9, 1959, Ser. No. 797,982
2 Claims. (Cl. 178—18)



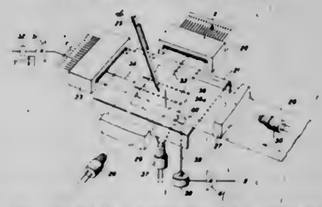
1. A recording device for a graphic communication system transmitter comprising: an elongated stylus member, suitable for manual operation, having a size, weight, and configuration similar to a conventional pen; means for mechanically connecting said stylus member to a graphic communciation system transmitter to translate movements of said stylus member into electrical control signals, said means including a stylus support arm; and mounting means for mounting said stylus member on said support arm, said mounting means comprising a thin resilient support member affixed at one end to the tip of said stylus member and at the opposite end to said support arm, said resilient support member being flexible enough to permit pivotal movement of said stylus member relative to said support arm, by twisting and bending of said support member, in response to ordinary minimal writing forces, said resilient support member further having adequate resilience relative to the weight of the stylus member to prop the stylus member in a predetermined rest position when bent back toward said support arm through an angle of about 90°.

3,016,420
RECORDING DEVICE
Peter G. S. Mero, 830 Mount Pleasant, Winnetka, Ill.
Filed Mar. 9, 1959, Ser. No. 798,267
6 Claims. (Cl. 178—18)



1. A recording device for a graphic communication system transmitter including a writing surface, disposed in a predetermined plane, and a signal-translating apparatus, said recording device comprising: a stylus member having a size and configuration suitable for use as a manual recording instrument and having a recording tip at one end thereof for engaging said writing surface; a support arm for connecting said stylus member to said signal-translating apparatus; and means for connecting said stylus member to said support arm, said means comprising a support link connected at one end to said support arm for free pivotal movement through an angle of at least 90° relative thereto about an axis parallel to said writing surface, and a universal joint connecting the opposite end of said support link to said stylus member closely adjacent the recording tip thereof, said support link and said support arm conjointly providing a prop for supporting said recording tip of said stylus member in a rest position with both said tip and said link out of contact with said writing surface.

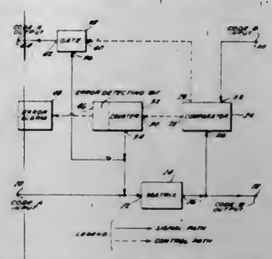
3,016,421
ELECTROGRAPHIC TRANSMITTER
Leon D. Harmon, Warren Township, Somerset County N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 30, 1960, Ser. No. 72,605
17 Claims. (Cl. 178—19)



1. An electrographic transmitter that comprises, a writing surface, a plurality of photosensitive elements positioned to capture, respectively, light projected across said surface substantially parallel to said writing surface from two nonparallel directions, and means responsive to signals generated by said photosensitive elements for indicating, respectively, shadowing of said light by an opaque element.

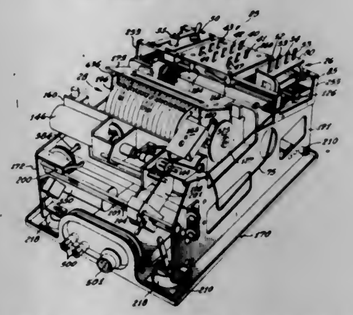
3,016,422
REVERSIBLE CODE CONVERTER
Francis F. Lee, Norristown, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 29, 1957, Ser. No. 699,685
8 Claims. (Cl. 178—26)

1. A code translator comprising a counter adapted to provide an output signal, a matrix coupled to the output of said counter, a comparator coupled to the output of said matrix, the output of said comparator being coupled to a stepping input terminal of said counter, and a coincidence gate for detecting the coincidence of a priming



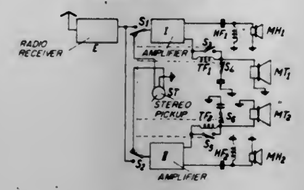
output from said comparator and the output signal from said counter, thereby providing an output signal code from said gate corresponding to an input signal code applied to said comparator.

3,016,423
TRANSDUCER FOR TRANSMISSION SYSTEMS
Biagio F. Ambrosio, Tarzana, and David Rutland, Sherman Oaks, Calif., assignors, by mesne assignments, to The Electrada Corporation, Culver City, Calif., a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,549
14 Claims. (Cl. 178—79)



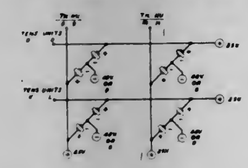
8. A data transmitter including a plurality of code wheels, each having magnetic code bars positioned along its peripheral surface, means for concentrically and individually supporting said plurality of code wheels so that their peripheral surfaces are longitudinally aligned, a magnetic scanning head movable longitudinally along portions of the aligned surfaces of said code wheels, means coupled to said code wheels for successively rotating said code wheels to angular positions indicative of coded information to be transmitted, means coupled to said scanning head for developing electrical signals in accordance with the particular code bars of said code wheels which said magnetic head is moved adjacent to an axially movable and rotatable additional code wheel, control means coupled to said additional code wheel for first axially positioning said additional code wheel in accordance with a code to be transmitted and then for rotating said additional code wheel to transmit the code registered by its axial position, and a stationary magnetic scanning head positioned adjacent the periphery of said additional code wheel for generating signals responsive to its rotation, said control means being operable after the operation of said successive rotating means and before the movement of said first-mentioned head without affecting the code registration by the positioned plurality of code wheels.

3,016,424
MONAURAL AND BINAURAL SOUND SYSTEM
Fritz Franke, Hannover, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Sept. 3, 1959, Ser. No. 837,837
Claims priority, application Germany Sept. 9, 1958
3 Claims. (Cl. 179—1)



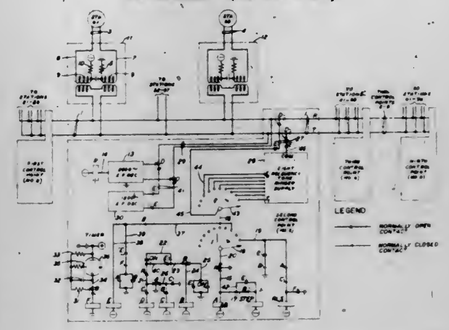
1. A sound system for alternatively reproducing monaural signals or stereophonically related signals comprising, larger loudspeaker means for radiating low and medium frequencies; two smaller loudspeaker means spaced from each other and oriented mutually divergently for radiating medium and high frequencies; two amplifiers each having an input and an output; a medium-and-high-frequency pass filter connected between an output of each amplifier and an associated smaller loudspeaker means; low-pass filter means associated with said larger loudspeaker means; and switching means comprising a plurality of simultaneously operated switch section in the inputs and outputs of the amplifiers and movable selectively into a monaural position wherein the amplifier inputs are both connected to receive the same monaural signal and the larger loudspeaker means is connected directly to the outputs of the amplifiers, and said switching means being movable to a stereo position wherein the amplifier inputs are separately connected to the stereo signals and wherein said switching means connect said low-pass filter means in series with the respective outputs and said larger loudspeaker means.

3,016,425
FERROELECTRIC TRANSLATOR
Edward E. Schwenzfeger, Bayside, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 18, 1956, Ser. No. 629,131
11 Claims. (Cl. 179—18)



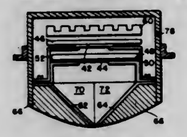
11. A switching device including a pair of serially connected ferroelectric crystals, a source of reference potential, means for applying a polarizing potential to the distal ends of said crystals and means connecting the mid-point of said pair to said source of reference potential thereby producing an initial condition of opposite polarization in each of said crystals, utilization circuits connected to the distal ends of said crystals, means for momentarily disconnecting said mid-point from said source of reference potential and applying a signal potential to said mid-point to reverse the polarity of said ferroelectric crystals thereby creating a momentary current flow in said utilization circuits, and means for reconnecting said mid-point to said source of reference potential to reestablish the initial polarization condition in said crystals.

3,016,426
MULTIPARTY SELECTIVE SIGNALING SYSTEM
Ferdinand S. Entz, Hartsdale, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 4, 1957, Ser. No. 688,367
10 Claims. (Cl. 179—84)



4. In a communication system a common line comprising a plurality of sections, a plurality of stations connected to each section, signaling means associated with each of said sections for generating ringing signals, means responsive to the initiation of a call by any one of said stations for isolating each of said sections from each other of said sections simultaneously, and means further responsive to said initiation of a call for applying ringing signals to only that one of said sections which includes the called station.

3,016,427
SATURABLE MAGNETIC HEAD
Frederic F. Grant, Bellflower, Calif., assignor to North American Aviation, Inc.
Filed Aug. 24, 1956, Ser. No. 606,045
9 Claims. (Cl. 179—100.2)

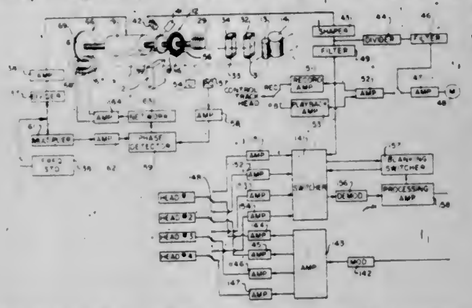


8. A transducer comprising first and second mutually discrete core assemblies nested one within the other, each said assembly comprising a nonmagnetic support, a saturable core of relatively small cross section secured to said support, a pair of magnetic connecting members of relatively large cross section secured to opposite end portions of said core and support, and a coil wound about said core; and a pair of pole pieces having pole tips in closely spaced relation and arranged to have a magnetic medium pass thereacross, said pole pieces being respectively secured to respective connecting members of both assemblies.

3,016,428
ROTARY HEAD DRIVE CONTROL MECHANISM AND CIRCUITRY FOR RECORDING MAGNETIC TAPE RECORDING AND/OR REPRODUCING APPARATUS
Louis J. Kabell, Palo Alto, Howard E. Murphy, Redwood City, and Walter B. Guggi, Palo Alto, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Aug. 4, 1958, Ser. No. 752,779
9 Claims. (Cl. 179—100.2)

1. In a magnetic tape apparatus, at least one transducer unit, rotary means for mounting said unit, guide means serving to guide magnetic tape whereby it is presented for

contact with the transducer unit, motive means serving to drive said rotary means, means for deriving a signal having a substantially constant frequency, power amplifying means serving to receive said signal and to provide power for driving the motive means, means for deriving a signal



which is indicative of the speed of rotation of said rotary means, means serving to receive said signal and to form a control signal, and means responsive to said control signal serving to apply a torque load to said motive means whereby the motive means has a substantially constant torque applied thereto.

3,016,429

MAGNETOSTRUCTURE RECORDING DEVICE

George N. Johnson, Tujunga, and Charles L. Vice, Pasadena, Calif., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Apr. 24, 1959, Ser. No. 808,739
11 Claims. (Cl. 179—100.2)



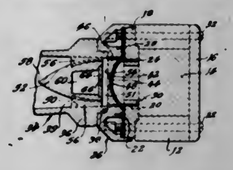
7. In a transducer assembly of the character described wherein a longitudinally stressed transducer tube of magnetostrictive material formed with a longitudinal non-magnetic gap is subjected to longitudinal elastic pulse waves of opposite sign to its longitudinal stress by a first signal generator cooperating with a tapered tubular driver section and is provided with a second signal generator in the form of a signal winding to develop a circumferential magnetic field therein, the combination therewithin of means to hold the parts of the assembly together to form a self-contained transducer unit, said holding means comprising: a support structure to support the assembly and place said tube under longitudinal stress; first engagement means engaging one end of said tube and connecting said one end with said support structure for transmission of stress between the tube and the support structure; second engagement means engaging the second end of said tube and connecting said second end with said support structure for transmission of stress between the tube and the support structure; and means clamping said first signal generator and said driver section together, said clamping means being supported by said support structure in position to hold said first signal generator and said driver section in axial alignment with the tube.

3,016,430

LOUDSPEAKER

Louis S. Hoodwin, Bridgman, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana

Filed Nov. 14, 1958, Ser. No. 773,877
7 Claims. (Cl. 179—115.5)



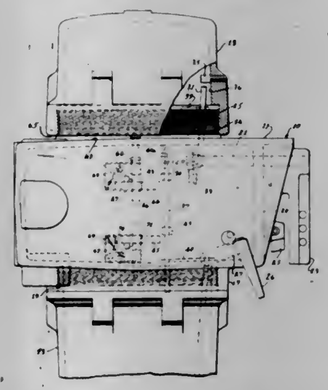
1. A loudspeaker comprising, in combination, means for converting electrical energy into acoustical energy having an output at one frequency greater than at another frequency, a sound propagating means acoustically coupled to the energy converting means, and means defining a resonator having a cavity and a neck extending from the cavity to the propagating means, the air in said cavity and neck resonating at the frequency of greater output of the energy converting means whereby the resonator forms an anti-resonant circuit at that frequency.

3,016,431

EXPLOSION PROOF ENCLOSURE FOR MOTOR STARTERS AND CIRCUIT BREAKERS

Carl J. Steigerwald, Chicago, Ill., assignor to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey

Filed July 15, 1960, Ser. No. 43,018
5 Claims. (Cl. 200—50)



1. In an interlock for motor starting devices and the like, a housing, a control member pivotally mounted on said housing on the outside thereof and a rod operated by said control member and extending within said housing, said control member being movable to "on" and "off" positions and moving said rod to effect the making and

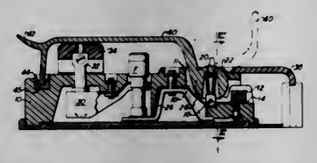
breaking of certain electrical connections, a closure mounted on said housing by rotatable movement of said closure with respect to said housing, an interlocking member guided within said housing and connected to said rod and extensibly moved with respect to said housing into interlocking engagement with said closure to prevent removal of said closure from said housing upon movement of said control member into an "on" position, a second interlocking member slidably guided in said housing and resiliently biased to project outwardly of said housing and retractibly moved with respect to said housing by said closure as said closure is placed in position on said housing, and an interlocking bar connected with said second interlocking member and biased to engage said first mentioned interlocking member and prevent movement of said control member to an "on" position upon removal of said closure from said housing, and retractibly moved with respect to said first mentioned interlocking member by retractible movement of said second interlocking member, as said second interlocking member is retractibly moved with respect to said housing as said closure is placed in position on said housing.

3,016,432

SAFETY AND PROTECTION DEVICE FOR ELECTRIC SWITCHES AND THE LIKE, PARTICULARLY FOR MIDDLE VOLTAGE EQUIPMENTS

Ermanno Bassani, Milan, Italy, assignor to Societa per Azioni Bassani, Milan, Italy, a joint-stock company of Italy

Filed Feb. 10, 1959, Ser. No. 792,393
Claims priority, application Italy June 7, 1958
3 Claims. (Cl. 200—50)



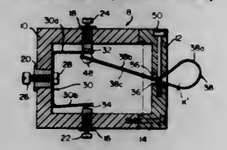
1. A switch comprising a base, two groups of spaced and fixed contacts aligned on said base, electrical components mounted on said base and coupled to the contacts of one group, a cover, a crosspiece on said cover and hinged to said base, said crosspiece being provided with aligned recesses, a plurality of resilient contacts in said crosspiece, said resilient contacts each comprising a spring-loaded roller located in one of said recesses adapted to connect said groups of contacts with said cover pivoted towards said base, and a handle integral with said cover for simultaneously lifting the cover to expose said components and removing said resilient contacts between said groups of contacts.

3,016,433

SNAP ACTION DEVICE

Robert R. Tarbuck, West Chester, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Jan. 22, 1960, Ser. No. 4,034
5 Claims. (Cl. 200—67)



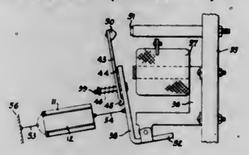
1. In a snap action device, the combination comprising, a pair of elongated strips of concavo-convex spring material extending in a first equilibrium position and secured together at one end with their convex surfaces facing outwardly, said elongated strips being stressed to a non-concavo-convex cross section at their other end portions, a member pivotally mounting said other end portions, and means for applying a force to said other end portions to cause the stressed region of one of said elongated strips to resume a concavo-convex cross section and to cause said elongated strips to rock about said member and assume a second equilibrium position.

3,016,434

PERMANENT MAGNET ATTACHMENTS FOR ELECTROMAGNETICALLY OPERABLE SWITCHING DEVICES

Edwin W. Seeger, deceased, late of Wauwatosa, Wis., by Florence J. Seeger, Wauwatosa, Wis., executrix, assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Continuation of application Ser. No. 563,526, Feb. 6, 1956. This application May 27, 1959, Ser. No. 816,337
8 Claims. (Cl. 200—87)



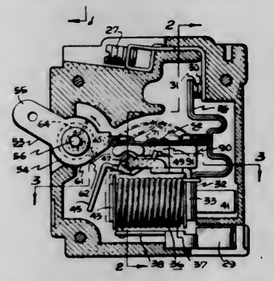
1. In an electromagnetically operable switching device, in combination, a stationary electromagnet, a contact carrying armature associated with said electromagnet and operable upon energization of the latter to complete an electric circuit, a stationary permanent magnet spaced from said armature, a movable permanent magnet positioned in the magnetic field of said stationary magnet, the north and south poles of said movable permanent magnet having a predetermined relation to the magnetic poles of said stationary magnet whereby said movable permanent magnet is afforded at least one stable position relative to and in the magnetic field of said stationary magnet, means for connecting said movable permanent magnet to said armature for movement by the latter relative to said stable position whereby said permanent magnets effectively damp armature vibration when said electromagnet is operated.

3,016,435

CIRCUIT BREAKER AND LATCH STRUCTURE

Norman J. Schwartz, Yardley, Pa., assignor to Heinemann Electric Company, Trenton, N.J., a corporation of New Jersey

Filed Mar. 18, 1959, Ser. No. 800,338
16 Claims. (Cl. 200—94)



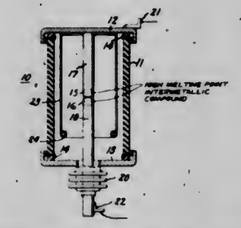
1. In a circuit breaker, a stationary contact member, a movable contact member biased away from said station-

ary contact member, a resilient member, said resilient member being movable from a first stable position to a second unstable position, cam means for urging said resilinet member against said movable contact member when said resilient member is in its first position and moving the said movable contact into abutment with said stationary contact member, tripping means for initiating the movement of said resilient member from said first position to said second position, the bias of said movable contact member completing the movement of said resilient member into said second position while said movable contact member moves away from said stationary contact member.

3,016,436
VACUUM CIRCUIT INTERRUPTERS

James M. Lafferty, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed July 24, 1958, Ser. No. 750,615
18 Claims. (Cl. 200—144)



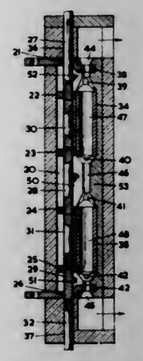
1. A vacuum alternating current circuit interrupter comprising; an evacuable envelope evacuated to a pressure lower than 10^{-4} mm. of mercury; a pair of electrical terminals adapted for connection in an alternating current circuit; a pair of electrodes located within said envelope, connected in circuit between said terminals and disposed in spaced-apart relationship during circuit interrupting operation to allow for the establishment of a circuit interrupting arc therebetween, each of said electrodes having a region on which a respective electrode spot for a low current arc may be established; one of said electrode regions being formed of an intermetallic compound having a melting point in excess of 800° C., at least one constituent of which comprises a metal having a vapor pressure greater than that of lanthanum and less than that of cadmium, all constituents of said compound being stable in air and suitable for processing in vacuo to remove gaseous impurities therefrom.

3,016,437
ELECTRICAL SWITCH

Emil Lange, Ville d'Avray, Seine-et-Oise, France, assignor of one-half to Aktieselskabet National Industri, Drammen, Norway

Filed Aug. 12, 1960, Ser. No. 49,384
Claims priority, application Germany Aug. 24, 1959
2 Claims. (Cl. 200—145)

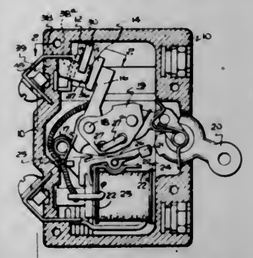
1. An electrical switch of the kind in which arcs in series with each other are quenched by streams of quenching medium moving under pressure produced by the arcs themselves, comprising a quenching chamber containing quenching medium and having at least one outlet, a plurality of fixed contacts in said quenching chamber, at least one fixed conductor in said quenching chamber, each said fixed conductor interconnecting two of said fixed contacts, a plurality of arc terminals attached one to each end of each said fixed conductors, an axially-slidable switch pin extending through said quenching chamber in sliding contact with all of said fixed contacts, at least one insulating body forming slots and passages in said quenching chamber, each said slot affording communication between one of said passages and said switch pin and said passages leading to said arc terminals, and two switch pin guides secured one at each end of said quenching chamber, said switch pin consisting of insulating pin parts and conducting pin parts, the arrangement being such that in the closed condition of said switch a current path through said switch is completed by said fixed contacts and said conducting pin parts and said fixed conductors, during opening of said switch said conducting pin parts draw arcs which are in series with each other from said fixed contacts and said arcs travel through said slots and burn in said passages with roots on said arc terminals, said arcs being quenched by quenching medium flowing through said passages towards said outlets under pressure produced by the arcs themselves, and said switch pin in all its positions extends through and obturates both of said switch pin guides.



3,016,438
INDUCTION BLOWOUT FOR CIRCUIT BREAKERS

Raymond B. Hellman, Trenton, N.J., assignor to Heinemann Electric Company, Trenton, N.J., a corporation of New Jersey

Filed Dec. 22, 1958, Ser. No. 782,197
5 Claims. (Cl. 200—147)

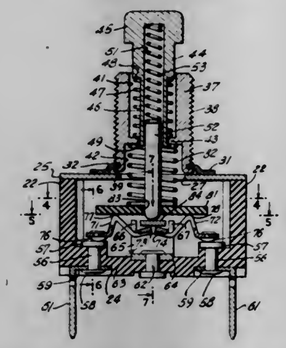


1. A circuit breaker having means for quenching arcs occurring between a stationary contact member and a movable contact member upon disengagement of the same on overload current, said contact members including portions less than the total contact areas from which arcs tend to be drawn, said means including a magnetizable member supported by means extending from one of said contact members and positioned in juxtaposition to the other of said contact members during engagement of said contact members, said magnetizable member having a width greater than the width of said contact faces and a length to define the densest magnetic flux field across only said portions of the contact members from which arcs tend to be drawn, said magnetizable member retaining substantially no residual magnetism after extinguishment of an arc, and said magnetizable member being disposed intermediate said contact members when fully separated.

3,016,439
MOMENTARY SWITCHES

Hugo E. Hagberg, West Hartford, Conn., assignor to Carling Electric, Inc., West Hartford, Conn., a corporation of Connecticut

Filed July 9, 1959, Ser. No. 825,969
23 Claims. (Cl. 200—159)

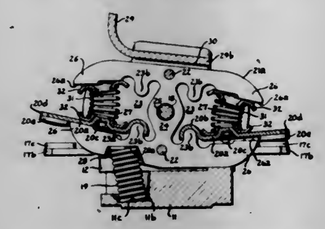


1. A momentary switch comprising a base, a pair of spaced apart stationary contacts mounted in said base, a pair of separate and independent contact levers each pivotally supported intermediate its respective ends in said base, each lever being operative to establish electrical connection with a respective stationary contact, first spring biased means operative on both contact levers for simultaneously closing the electrical circuits between said levers and their respective stationary contacts, and second spring biased means operative upon both contact levers for simultaneously opening the electrical circuits between said levers and their respective stationary contacts, said second spring biased means esfablishing electrical connection between said contact levers.

3,016,440
ELECTRIC SWITCH

Jerome F. Dries, Hales Corners, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Aug. 6, 1959, Ser. No. 831,965
6 Claims. (Cl. 200—166)
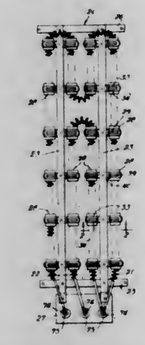


1. In an electric switch, in combination, an insulating base comprising a generally U-shaped block having an end wall and leg portions extending perpendicularly therefrom in spaced parallel relationship, at least one pair of stationary contacts having a contact thereof carried on each of said leg portions, an operating member having an opening cavity outwardly opening through an end thereof and having an intermediate portion rotatably supported between said leg portions about an axis parallel to said end wall, and a contactor having a stem portion removably pivotally mounted on a wall of said operating member defining said cavity and operable to bridge said pair of stationary contacts with a wiping action in response to rotation of said operating member.

3,016,441
SPLIT STRAP SUPPORTING MEANS FOR ELECTRICAL INSULATORS

Amos W. Hackman, Kirkland; and Clifford H. Jacobson, Kingston, Ill., assignors to Tuttle Electric Products, Inc., Kirkland, Ill., a corporation of Illinois

Filed May 23, 1960, Ser. No. 31,040
7 Claims. (Cl. 219—19)



1. An insulating support for elongated resistance coils of open coil heaters including a generally cylindrical insulating body having a central passage extending therethrough to provide for a relatively loose support of an elongated resistance coil of the open coil heater type, said insulating body having an externally formed heat dissipating rib extending circumferentially thereof adjacent the center thereof, and a metallic support for said insulating body, said support including laterally spaced relatively narrow portions passed around and conforming closely to the external surface of said insulating body, said portions being spaced on opposite sides of the rib of said body, said support including an offset attaching and securing arm, and said spaced portions being passed around a substantial distance of the periphery of said insulating body, the metallic support being a split strap with the split portions of the strap providing the said narrow portions and said strap having a securing tongue formed from the material of the strap between the split portions thereof at one end of the opening between said split portions and passed through the other end of the opening in the strap and folded over the body of the strap to secure the body to the strap.

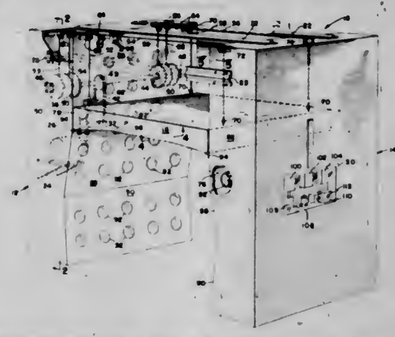
3,016,442
HEAT TREATING ARCH FOR TREATING FINISHES ON VEHICLES AND THE LIKE

Eugene Brach, 225 Viewmont Ave., Toronto, Ontario, Canada, assignor of one-half to Alexander Wagman, Toronto, Ontario, Canada

Filed May 18, 1960, Ser. No. 29,830
2 Claims. (Cl. 219—35)

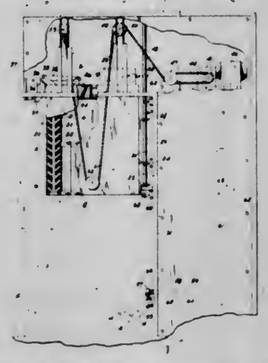
1. A heat-treating arch for drying finishes on vehicles or the like comprising a pair of spaced vertical side members, a top member extending transversely of said side members, heat emitting means on the confronting inner surfaces of said members for defining a heat treating

area, said top member being vertically adjustably mounted relative to said side members for controlling the height of the heat-treating area in relation to an article being treated in order to attain maximum efficiency from the emitted heat, said members being of a hollow construction to aid in maintaining the heat in said area, and power means connected between said top and at least one of said side members for mechanically adjusting the vertical height of said top member, said heat emitting means on said side members including a plurality of vertically spaced rows of heat emitting elements, said rows of heat emitting elements being vertically traversable by opposite side edges of said top member, the



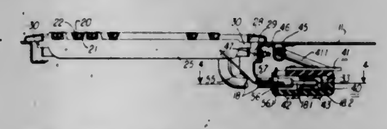
vertically adjusted position of said top member determining which heat elements disposed therebelow will emit heat to said heat treating area, said power means comprising a reversible motor mounted in one of said hollow side members, a reel shaft journaled on said one side member, means operatively connecting said shaft to said motor for rotation thereby, suspension cables secured at one end to said shaft for reeling and unreeling in response to shaft rotation, pulley means on confronting inner surfaces of said side members over which said suspension cables are entrained, said top member being secured to said suspension cables and being suspended thereby.

3,016,443
BAKE-OUT UNIT FOR WAVE TUBE EXHAUST MACHINE
Geza B. Fliezar and Jack J. Monahan, Allentown, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 18, 1959, Ser. No. 853,967
4 Claims. (Cl. 219—35)



1. A bake-out unit for articles supported by horizontal tops of holders movable in a given path successively into and out of a bake-out station and having contact members comprising a stationary frame mounted adjacent the station and traversing the path free of the articles, an oven closed at all portions with the exception of the bottom thereof which is open, means carried by the frame to guide the oven for movement between a normal position above the path, free of the articles and holders, and an operating position with its open bottom resting on and closed by the horizontal top of one of the holders in the station, electrically energizable heating elements mounted in the oven, a first electrically operable unit adapted to control energization of the heating elements, a second electrically operable unit adapted to cause movement of the oven between said positions, a contact element supported by the frame and movable into engagement with the contact member of each holder at the station, and electrical circuits for the electrically operable units rendered effective by the engagement of the contact element with the contact member of the holder.

3,016,444
PLUG-IN SPEED UNIT
Joseph J. Jasionowski, Niles, Ill., assignor to General Electric Company, a corporation of New York
Filed Nov. 6, 1959, Ser. No. 851,309
6 Claims. (Cl. 219—37)

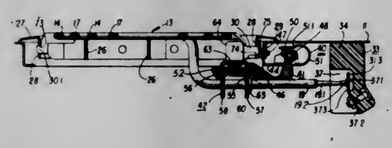


1. In an electric range having a cooking top formed with a cutout for receiving a cooking unit in a normal position parallel to said top and in which said cooking unit comprises a support structure and a flat coil heating element resting on said structure and having a plurality of rigid terminals extending from said coil substantially parallel to said coil and spaced therefrom, means for releasably receiving said heating element terminals for completing an operative circuit to said terminals while facilitating the removal of said cooking unit and the subsequent return thereof to operative position comprising: a terminal block having a plurality of terminal receptive sockets, each bearing therein a terminal connection member for electrical contact with said cooking unit terminals, means for mounting said terminal block from said cooking top for pivotal movement thereunder, said mounting means including a rigid member retaining said terminal block in spaced away relation from said cooking top, said mounting means further including means for positioning the sockets of said terminal block receptively angled toward said cutout for accepting the return of the terminals of said flat coil heating element upon insertion thereof from above the cooking top, and means for guiding said terminals into co-operative electrical contact with said terminal connection members, said hinge means thereupon operative to restore said heating element and said terminal block to a normal operative position parallel to said cooking top.

3,016,445
SURFACE HEATING UNIT CONSTRUCTION
Gunder Lien, Jr., Wheaton, Ill., assignor to General Electric Company, a corporation of New York
Filed Nov. 20, 1959, Ser. No. 854,309
9 Claims. (Cl. 219—37)

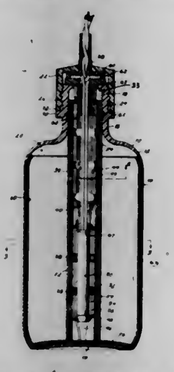
9. A heating unit adapted to be mounted in a cooking top surface and comprising a coiled heating element and a carriage structure joined thereto for supporting said element in an operative position parallel to said top surface,

means for hinging said heating element for movement between a first position parallel to said top surface and an inoperative position oblique to said top surface, terminal members extending in stepped fashion from said element to connect said heating element to a source of electric power, a stationary terminal block depending from said top surface, means in said block receptive to said terminals with said heating element in said first position for



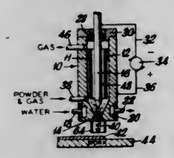
completing the connection of said terminals to said power source, said circuit completing means opening said connection to said power source with the heating element in said second position, means for detachably locking said heating element to said hinging means to allow ready removal of said heating element from said hinging means, and means for latching said hinging means in said second position receptively poised for return of the heating element thereto.

3,016,446
HEATING APPLIANCE
Raymond B. Kalbach, Bourse Bldg., 4th and Market Sts., Philadelphia, Pa.
Filed Nov. 28, 1958, Ser. No. 776,806
11 Claims. (Cl. 219—46)



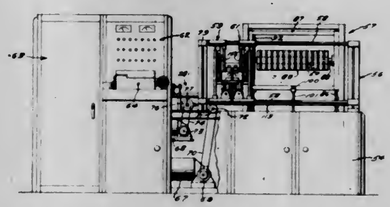
6. A heating appliance comprising a vessel formed of a plastic material that is of increased deformability upon heating but that does not retain permanent deformation upon cooling; said vessel having walls defining a chamber, one of said walls having an opening that is opposed to another of said walls, a closure for restricting said opening, a longitudinally extending heat distributor coaxial with said vessel, said heat distributor being restricted from lateral movement by the walls defining said opening, said heat distributor being restrained from longitudinal movement by said opposed wall in one direction, said closure restraining movement of said heat distributor in the opposite direction, a longitudinally extending electrical heater enclosed by said heat distributor, said distributor comprising a coaxial metallic cover enclosing said heater and extending beyond said heater at one end thereof, said metallic cover comprising longitudinally spaced generally radially directed spokes whereby the heat from the heater is directed along the longitudinal axis of the distributor and radially thereof, an insulating cloth surrounding said metallic cover for spacing the latter from said vessel, additional insulating cloths for insulating substantially all of the walls defining said chamber for aiding in attaining a uniform temperature in said walls.

3,016,447
COLLIMATED ELECTRIC ARC-POWDER DEPOSITION PROCESS
Robert M. Gage, Summit, N.J., and Ontario H. Nestor and Donald M. Yenni, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed Nov. 2, 1959, Ser. No. 850,444
15 Claims. (Cl. 219—76)



1. Method of welding particles of powder together to form a dense coherent mass composed of irregularly shaped microscopic leaves welded into interlocking relation with one another, which comprises concurrently maintaining a high pressure electric arc between a non-consumable stick electrode and a second electrode spaced therefrom, passing a stream of gas in contact with said stick electrode to contain said arc, passing said arc-containing gas stream through an orifice which constricts the gas stream and wall-stabilizes a portion of said arc so as to collimate the energy of said arc and gas stream and produce a high pressure arc and high thermal content effluent, passing powdered material through and with said high thermal content effluent to produce a high velocity stream of gas and heated particles, impinging said gas and heated particle stream against the surface of a suitable base, thereby depositing the so-heated particles on said base as a dense adherent coherent mass wherein the so-heated and deposited particles are welded together.

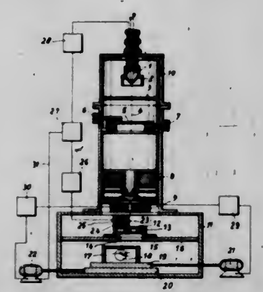
3,016,448
AUTOMATIC WIRING MACHINE
Chester C. Bach and Andrew J. Clark, Downers Grove, Ill., Willard D. Drukker, Worthington, Ohio, Gerald H. Klenke, Batavia, and Elmer N. Lenk, Westchester, Ill., and Heinz F. Runge, Madison, Wis., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 4, 1959, Ser. No. 838,291
21 Claims. (Cl. 219—79)



1. In an automatic wiring apparatus, a control unit including a source of intelligence pulses, a support frame,

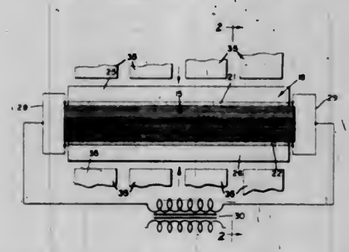
a carriage movably mounted within said support frame, a wire working tool mounted on said carriage for movement in three directions of a three dimensional coordinate system, means for advancing wire to a load position, a work holding fixture, and means rendered effective in accordance with output from said intelligence source for selectively advancing said wire working tool through said three dimensional coordinate system to align wire fed from said wire advancing means with said work holding fixture.

3,016,449
METHOD FOR WELDING A COVER PLATE TO A STRUCTURAL PART COMPOSED OF STRIPS OF ANY SHAPE
Karl Heinz Steigerwald, Heidenheim (Brenz), Germany, assignor to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany
Filed Oct. 2, 1959, Ser. No. 843,954
Claims priority, application Germany Oct. 2, 1958
12 Claims. (Cl. 219—117)



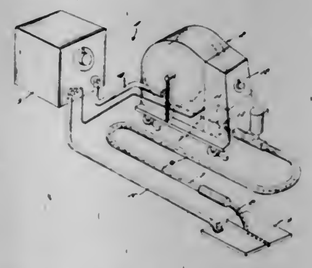
1. The method of welding a cover plate to a structural part assembled of strips of any shape along said strips, consisting of the steps of scanning said structural part and the cover plate with a beam which passes through the plate, detecting the modulation of the scanning beam by a sensor, and, in response to said detection, controlling the intensity and deflection of a beam of charge carriers so that the beam impinges only on those points of the cover plate below which a strip is located with an intensity sufficient for welding.

3,016,450
WELDING METHOD
George F. Keeleric, 6200 Doyle, Emeryville, Calif.
Filed Oct. 26, 1959, Ser. No. 848,693.
9 Claims. (Cl. 219—117)



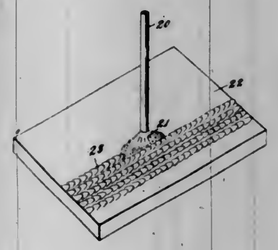
1. A method of welding metallic elements together having the steps of: establishing at least one point of metal to metal contact between said elements; heating said elements to an elevated temperature; and subjecting said elements to a magnetic field from a point remote from the elements of substantially greater magnitude than the earth's magnetic field and whereby the molecules of the metallic elements at their points of contact at elevated temperature are excited sufficiently to cause a welding to occur between said elements.

3,016,451
ELECTRODE FEED ROLL MEANS
Elliott C. Cornell, Jr., Cleveland, Ohio, assignor to The Auto Arc-Weld Mfg. Co., Cleveland, Ohio, a corporation of Ohio
Filed June 4, 1957, Ser. No. 663,504
1 Claim. (Cl. 219—130)



In combination, a pair of feed rolls having gear teeth thereon in engagement, means for driving one of said feed rolls, and an insulated tubular electrode cable, an electrode wire being engaged by said gear teeth and forced thereby into and through said electrode cable for welding action, said gear teeth having corresponding recesses in the peripheries thereof but only extending part of the depth of the teeth for forming electrode wire receiving recesses in the meshed gear teeth, said recesses having bases that are flat in a circumferential direction and form sharp edges with the gear teeth walls at the ends of the recesses, said electrode wire receiving recesses being of an effective size for pressure engagement with axially spaced but diametrically opposed parts of said electrode wire by said gear teeth and for a slight compression and kinking of said electrode wire thereby.

3,016,452
OVERLAY WELDING ELECTRODE
Wayne L. Wilcox, Havertown, Pa., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 16, 1961, Ser. No. 82,762
2 Claims. (Cl. 219—146)

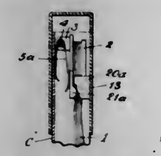


1. An electric arc welding electrode for overlay deposition of type 316 and type 317 stainless steel, which consists of from 39 to 70 percent of the metallic composition of the electrode of an envelope of type 304 stainless steel, and a core within said envelope having the following analysis in percentage by weight of the metallic composition of the electrode:

	Percent
Ferrochrome, 70% chromium	19 to 33
Nickel	7 to 20
Ferromolybdenum, 60% molybdenum	4 to 8

and in which the nitrogen content is 0.10% maximum.

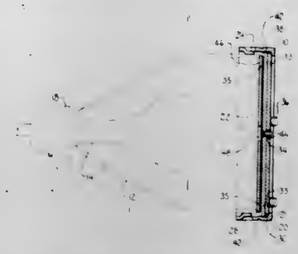
3,016,453
FLASHGUNS
Wietse Hendrik van der Mei, Buderich, near Dusseldorf, Germany, assignor to Zeiss Ikon A.G. Stuttgart, Stuttgart, Germany
Filed July 7, 1958, Ser. No. 747,079
Claims priority, application Germany July 10, 1957
1 Claim. (Cl. 240—1.3)



In a flashgun for photographic use, an elongated casing having side and end walls providing an opening in the front thereof, a sleeve rockably mounted in one end of said casing to tilt about an axis extending at right angles to the axis of the sleeve, a lamp socket in said sleeve adapted to receive the base of a photo flash bulb, a series of sector-shaped reflector units each provided with an opening in their reduced ends rotatably mounted on the outer surface of said sleeve, said reflector sectors when in stacked relation being of dimensions to be compactly received in said casing, means for retaining said reflector sectors in a folded compact position in said casing, means for yieldingly urging said sleeve and reflector sectors to a tilted position in which the reflector sectors are projected through said opening in said casing and outwardly of said casing a sufficient distance to permit the same to be unfolded by being angularly displaced about the axis of the sleeve to form a circular reflector; the side walls of said casing being cut away to provide sufficient clearance when folding and unfolding said reflector sectors, a cover removably mounted on one end of said casing and adapted to be slipped over said one end thereof to enclose said sleeve and reflector sectors, a control plate on one of the internal walls of said cover engaging a locking cam attached to said sleeve to urge the stack of reflector sectors into a retracted position and compactly contain the same within said casing and cover.

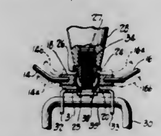
3,016,454
LIGHT DIMMING ATTACHMENT
Philip W. Simms, 450 W. 24th St., New York 11, N.Y.
Filed July 23, 1958, Ser. No. 750,439
3 Claims. (Cl. 240—46.03)

1. In combination, a lamp reflector, a light dimming attachment adapted for use in conjunction with said lamp reflector, said attachment comprising a rim having an inside diameter of a dimension sufficient to fit loosely around the outside of said reflector, said rim further having a plurality of inwardly directed lugs displaced from the periphery at one edge thereof and adapted to make spring contact with said reflector, an inwardly directed flange at the other edge thereof, and an annular bead pressed into the inner periphery thereof between said one and said other edge; a fixed first disk having a plurality of radial apertures therein secured within said rim by said annular bead, an opaque second disk also having a plurality of radial apertures therein rotatably maintained within said rim between said first disk and said flange, said second disk having a plurality of protuberances pressed into a face thereof adapted to slidably



lock with a corresponding plurality of depressions pressed into a face of said first disk for indexing the apertures of said second disk into predetermined relationships with the apertures of said first disk, and control knob means on said second disk for rotating said last-mentioned disk with respect to said first disk.

3,016,455
TILTABLE LAMP SHADE MOUNT
Philip F. Goldfine, Shaker Heights, Ohio, assignor to Phil-Mar Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 1, 1960, Ser. No. 46,834
3 Claims. (Cl. 240—148)

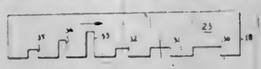


1. In combination with a lamp harp of the type having an upright shade supporting threaded stud centered in a flat washer, a tiltable shade, comprising, a frame having supporting ribs radiating from a mounting hub having a central bore therethrough of concave cross-section; an expandable frusto-spehical sleeve, having the same spherical diameter as the hub bore, nested within said bore and having an axial opening therethrough of larger diameter than the stud, the width of the sleeve being greater than the thickness of the hub; the hub and its supported shade being mounted on the stud with the lower edge of the sleeve seated on the stud washer; and means mounted on the stud for expanding the sleeve within the hub, to lock the supported shade in adjusted positions relative to the stud, whereby though the stud be not accurately vertical, the shade may yet be mounted and secured in a true level position.

3,016,456
APPARATUS FOR IDENTIFYING RAILROAD CARS
Frederic J. Corporon, 308 Earl Road, Michigan City, Ind.
Filed Mar. 19, 1957, Ser. No. 647,122
4 Claims. (Cl. 246—2)

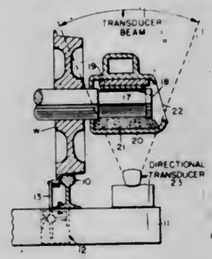
2. Apparatus for producing vehicle identification signals corresponding to digital designations assigned to a vehicle moving on a roadbed, said apparatus comprising a horizontally elongated bar formed of magnetizable material, fixedly mounted on the vehicle and extending longitudinally of the same, said bar having formed therein a series of longitudinally spaced notches which open

onto and extend inwardly from one longitudinal edge of the bar, there being one notch for each digital designation, said notches varying in depth and being designed, when the bar is magnetized, to produce in the vicinity of the notches, respective magnetic fields which vary in intensity in proportion to the depth of the respective notches, and a stationary coil fixedly mounted on the roadbed



at a sensing zone and in the path of movement of the fields produced by said bar, said coil being inductively responsive to the successive fields encountered thereby and traveling thereacross for producing sequential impulses varied by the differences in said field intensities, whereby impulses of varying voltage characteristics are induced in said coil.

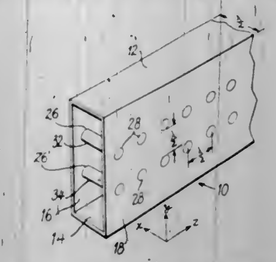
3,016,457
DETECTION MEANS FOR IMPROPERLY LUBRICATED JOURNALS
Ned C. L. Brown, Scottsville, and George Vande Sande, Rochester, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.
Filed Sept. 30, 1957, Ser. No. 687,148
3 Claims. (Cl. 246—169)



1. The method of detecting the presence of an inadequately lubricated journal for an axle on a railway car comprising the steps of, firstly, positioning a sound-responsive means adjacent the trackway; secondly, moving said axle, while rotating, into proximity with said sound-responsive means thereby to cause said responsive means to be energized by sound waves emanating from said journal; and thirdly, detecting the output of said sound-responsive means thereby to detect particular sound waves emanating from said journal which are characteristic of an inadequately lubricated journal, said sound-responsive means comprising an electro-acoustic transducer for converting the received sound energy into an electrical signal, said third step comprising the use of detecting means connected to the output of said sound-responsive means including amplifier and filtering means for amplifying the output of said sound-responsive means and for passing those frequencies which are characteristic of the sonic frequencies emanating from said journal when the frictional forces therein exceed a predetermined maximum value occurring before said journal becomes overheated and at the same time suppressing other frequencies normally resulting from motion of said car.

3,016,458
RESONATOR PARTICLE SEPARATOR
John P. Blewett, Bellport, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 22, 1960, Ser. No. 16,902
6 Claims. (Cl. 250—41.9)

1. A wave guide having *x*, *y* and *z* coordinate mutually perpendicular axes for use with a particular radio frequency signal with the direction of wave travel along the *z* axis of said guide, the transverse electric field of said signal being along the *y* axis of said guide and the magnetic field component of said signal being along the *x*



axis of said guide, comprising, means for terminating said guide along the *x*-axis to establish boundary conditions of zero electric potential, and means for establishing the boundary shapes of said guide along the *y* axis in accordance with the relation
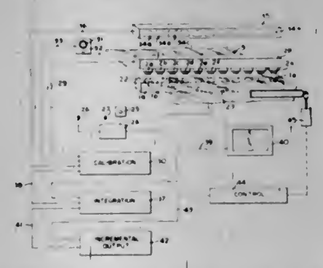
$$\sinh \frac{\omega}{c} Y \sin \frac{\omega}{c} Z = \text{constant}$$

where ω is 2π times frequency of said signal, *c* is the phase velocity of said signal and Y and Z are the values of the cordinate dimensions of said guide along the *y* and *z* axes respectively.

3,016,459
MASS SPECTROMETRY
Lewis Friedman, Patchogue, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Dec. 16, 1959, Ser. No. 860,051
2 Claims. (Cl. 250—41.9)

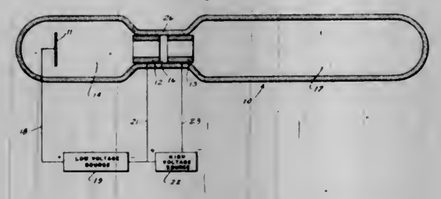
1. A method for improving the resolution qualities of a mass spectrometer in which non-conducting films are built up on the walls thereof which comprises the step of adding a small amount of a beta emitting material to each sample being tested for discharging before said testing, and thereby creating a leakage path in said film so as to prevent the accumulation of, a static electric charge on the interior walls of said spectrometer which would adversely affect the resolution characteristics thereof.

3,016,460
METHOD AND APPARATUS FOR WEB THICKNESS CONTROL
Gilbert J. C. Andresen, Stow, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 14, 1958, Ser. No. 728,240
17 Claims. (Cl. 250—83.6)



1. A radiation thickness gauge having a plurality of stations, each station comprising a gauging means and a connecting means coupling said gauging means to a calibrating and control means common to said plurality of stations; said gauging means comprising a source of ionizing radiation, a radiation sensing device disposed in the field of said source, energizing means connected to said sensing device and supplying a polarized potential thereto, and evaluating means including at least one electron discharge device having at least an anode, cathode and a control electrode, said control electrode being coupled to said sensing device so that said discharge device responds to a signal developed in said sensing device; said connecting means comprising variable voltage divider means connected to said control electrode; and said calibrating means comprising a potential source connected in common with said voltage divider means in a manner to bias said control electrode in said evaluating means oppositely to said signal developed in said sensing device and thereby create a null signal condition thereon for a given radiation intensity at said sensing means.

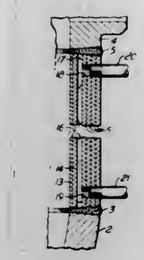
3,016,461
METHOD AND APPARATUS FOR GENERATING NEUTRONS
Leonard Reiffel, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Filed July 15, 1957, Ser. No. 672,013
4 Claims. (Cl. 250—84.5)



1. An apparatus for generating neutrons comprising a closed envelope containing an atmosphere of an isotope of hydrogen, an ionizing electrode contained within said envelope, a pair of spaced accelerating electrodes within said envelope spaced from said ionizing electrode, means for applying a relatively low potential between said ionizing electrode and one of said accelerating electrodes, means for applying a relatively higher potential between said accelerating electrodes, the spacing between said ionizing electrode and said one accelerating electrode being sufficiently large to create an electrical discharge zone therebetween under the pressure conditions existing within said envelope, and the spacing between said accelerating electrodes being sufficiently small to preclude an electrical discharge therebetween under said existing pressure conditions, said envelope also defining a reaction zone beyond said accelerating electrodes in direct line with the direction in which the ions are accelerated for reacting ions accelerated by said accelerating electrodes with the gas contained within said reaction zone.

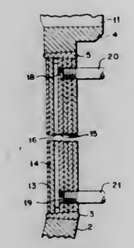
3,016,462
MULTI-LAYER VESSEL HAVING A GAMMA RAY FLUX ABSORBING LAYER
Warren Hendricksen, Milwaukee, Wis., and Howard H. Needham, deceased, late of Wauwatosa, Wis., by Margaret Needham, executrix, Wauwatosa, Wis., assignors to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 28, 1958, Ser. No. 731,341
5 Claims. (Cl. 250—108)

1. In a multi-layer vessel adapted to contain radio-active materials under high pressure and temperature, a wall section formed of a plurality of thin superimposed metallic layers disposed in tight engagement with each other, a gamma radiation absorbing layer disposed between two adjacent metallic layers and forming an integral part of said wall section, said gamma radiation absorbing layer being formed of a metallic material having a density greater than 8.0 grams per cubic centimeter and serving to absorb a substantial portion of the gamma



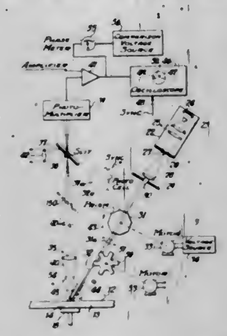
radiation emitted by the radio-active materials and thereby control the distribution of the heat generated within said wall section by the absorption of said gamma radiation, and means for introducing a cooling medium into heat transfer relation with said absorbing layer to effect a transfer of heat from said absorbing layer to the cooling medium and thereby decrease the thermal stresses in the wall section.

3,016,463
MULTI-LAYER VESSEL HAVING A NEUTRON ABSORBING LAYER
Howard H. Needham, deceased, late of Wauwatosa, Wis., by Margaret Needham, executrix, Wauwatosa, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 28, 1958, Ser. No. 731,342
7 Claims. (Cl. 250—108)



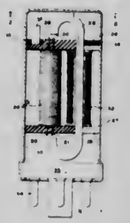
1. In a multi-layer vessel adapted to contain radio-active materials under high temperature and pressure, a wall section formed of a plurality of thin metal super-imposed layers, a neutron absorbing layer disposed between two adjacent metallic layers and forming an integral part of said wall section, said neutron absorbing layer being formed of a material having a thermal neutron cross section greater than 200 barns and serving to absorb a substantial portion of the neutrons emitted by the radio-active materials and thereby control the distribution of the heat generated within said wall section by the absorption of said neutrons, and means for introducing a cooling medium into heat transfer relation with said absorbing layer to effect a transfer of heat from said absorbing layer to the cooling medium and thereby decrease the thermal stresses in the wall section.

3,016,464
APPARATUS FOR DETERMINING THE LOCATION AND THICKNESS OF A REFLECTING OBJECT
Edwin M. Bailey, Ridgewood, N.J., assignor to Daystrom Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed June 10, 1959, Ser. No. 819,277
20 Claims. (Cl. 250—219)



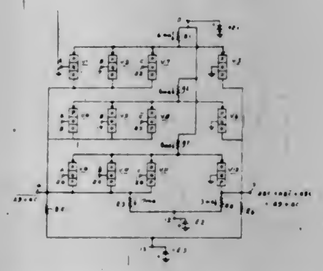
1. Apparatus for measuring the position of a surface of an object comprising means for illuminating said surface with a relatively narrow illuminating beam of electromagnetic radiant energy, directional detecting means electrically responsive to said energy and having a relatively narrow viewing beam, said detecting means being positioned to receive at least a portion of said energy reflected from said surface with said surface in a predetermined position, means for producing relative movement, independent of the energy received by said detecting means, between at least one of said illuminating and said viewing beams and said surface and indicating means synchronized with said means for producing relative movement and connected to and operable by said detecting means for indicating the relative positions of said one of said beams and said surface when said illuminating beam and said viewing beam intersect at said surface.

3,016,465
COINCIDENCE DETECTORS
George C. Devol, Greenwich, Conn., and Erik B. Hansell, deceased, late of South Norwalk, Conn., by Marjorie B. Hansell, administratrix, South Norwalk, Conn.; said Marjorie B. Hansell assignor to said George C. Devol
Filed Feb. 15, 1956, Ser. No. 565,611
21 Claims. (Cl. 307—88)



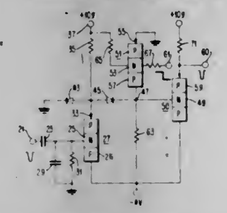
1. A coincidence detector, including in a unitary assembly, an enclosing magnetic shield, a dual magnetometer enclosed therein having a pair of magnetically sensitive portions, said dual magnetometer being adapted to respond in one manner to a magnetic field impressed on either of said portions and to respond in a different manner to magnetic fields impressed on both of said portions as well as magnetic fields at neither of said portions, respective magnetic field-producing elements disposed to impress respective magnetic fields on said portions, and separate and mutually independent information sources for energizing the respective magnetic field-producing elements with respective signals whose coincidence or lack of coincidence is to be detected.

3,016,466
LOGICAL CIRCUIT
Richard K. Richards, Old Troy Road, Wappingers Falls, N.Y.
Filed Dec. 30, 1957, Ser. No. 705,991
4 Claims. (Cl. 307—88.5)



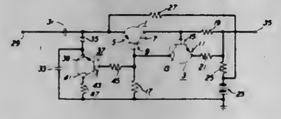
1. A current switching system for performing an AND and or an OR function involving three variables A, B and C, in a single level of switching to produce an output signal voltage of limited maximum value on a first output terminal and an inverse output signal voltage on a second output terminal, said system comprising a first current switching circuit including, a first source of constant current, a first main circuit branch and a first auxiliary circuit branch energized from said first source, said first main branch containing one electron control device having its input connected to one terminal of said first source and its output connected to said first output terminal, and said first main branch control device having a control element to receive an external digital-representative input voltage related to one of said variables, said first auxiliary branch containing one electron control device having its input connected to said first source and its output connected to said second output terminal, and said first auxiliary branch control device having a control element at a fixed ground potential; a second current switching circuit including a second source of constant current, a second main circuit branch and a second auxiliary circuit branch energized from said second source, said second main branch containing three electron control devices having their inputs connected to said second source and their outputs connected to said first output terminal, and each of said three electron control devices having a control element to receive an external digital-representative input voltage as a function of a different one of said three variables, said second auxiliary branch containing one electron control device having its input connected to said second current source and its output connected to said second output terminal and said control device in said second branch having a control element also at a fixed ground potential; a first load impedance having two terminals, with its first terminal connected to a first junction joining the outputs of said electron control device of said first main circuit branch and the outputs of the electron control devices of said second main branch at said first output terminal to establish a first output voltage on said first output terminal, a second load impedance having two terminals, with its first terminal connected to a second junction joining the output of said electron device of said first auxiliary circuit branch and the output of said electron control device of said second auxiliary branch at said second output terminal to establish a second output voltage on said second output terminal, and means connecting the second terminals of said first and second load impedances to a first common voltage point; a first balancing resistor having two terminals, with its first terminal connected to said first junction, a second balancing resistor having two terminals, with its first terminal connected to said second junction, and means connecting the second terminals of said first and second balancing resistors to a second common voltage point, the control elements of the several electron control devices in the main branch circuits being conditioned to respond to pre-selected functions of the three variables A, B and C, in a predetermined arrangement to establish a desired signal at the selected one of the two output terminals to indicate the occurrence of such pre-selected functions in the pre-determined arrangement.

3,016,467
EMITTER FOLLOWER PULSE AMPLIFIER
William N. Carroll, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,368
7 Claims. (Cl. 307—88.5)



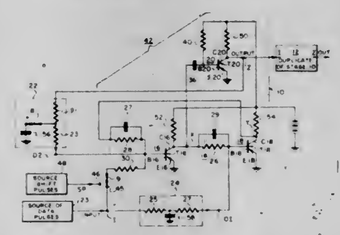
1. A gated pulse amplifier circuit for providing current and voltage amplification of a first signal under control of a second signal comprising first and second semiconductor signal translating devices connected in emitter follower circuit configuration, each transistor having base, collector and emitter electrodes and providing current and voltage amplification of pulse signals applied to the base thereof, capacitive means connected between said base and said collector electrodes for supplementing the capacitance between said base and said collector electrodes to control the duration of the overshoot of said emitter follower circuits, coupling means connecting the emitter terminal of said first transistor to the base terminal of said second transistor, means for applying said first signal to the base of said first emitter follower circuit and means responsive to said second signal for controlling said coupling means to selectively pass or inhibit the resultant signal at the emitter of said first emitter follower stage.

3,016,468
TRANSISTOR MONOSTABLE CIRCUIT
Howard Moraff, Bronx, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 11, 1958, Ser. No. 741,294
12 Claims. (Cl. 307—88.5)



1. A monostable transistor circuit having a stable and an unstable state of operation comprising a first transistor device having an emitter, base and collector electrode, a common junction point, current limiting capacitor means connected between said emitter electrode and said common junction point and operative to determine the duration of said unstable state of operation, a feedback promoting impedance element connected between said base electrode and said common junction point, and a second transistor device of opposite conductivity type having an emitter-base circuit and an emitter-collector circuit, said emitter-base circuit being connected between said emitter and said base electrodes of said first transistor device, said emitter-collector circuit being connected between said emitter electrode of said first transistor and said common junction point, and biasing means connected to said emitter and said collector electrodes of said first transistor device for normally maintaining said first transistor device nonconductive.

3,016,469
MULTISTABLE CIRCUIT
William G. Barrett, Bountiful, Utah, assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,565
20 Claims. (Cl. 307—88.5)

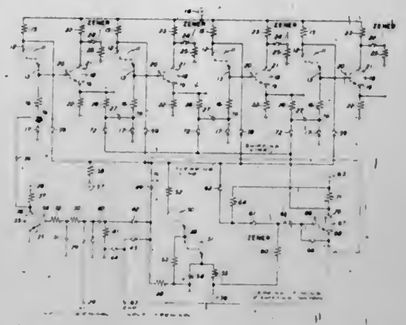


1. Digital storage apparatus comprising a multistable circuit including a plurality of sections interconnected to form a first closed loop circuit, each of said sections having an input and an output and each being operable in opposite states in response to signals applied to its input, and a second closed loop circuit operable in response to each reversal from a particular one to the other of the states of one of said sections for producing and applying to the input of said one section a pulse sensed as the input pulse that caused said reversal, said second loop circuit including a pulse-forming circuit and said one section, the pulse-forming circuit having an input and an output, the output of said one section being coupled to the input of the pulse-forming circuit and the output of the latter being coupled to the input of said one section.

3,016,470
SHIFT REGISTER
Gilbert A. Van Dine, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 14, 1959, Ser. No. 806,284
16 Claims. (Cl. 307—88.5)

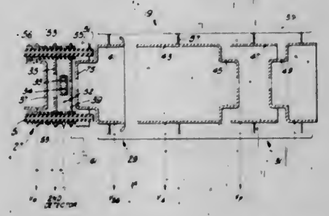
1. A shift register circuit comprising a plurality of memory stages, each of said stages including a single bistable device, first input means operative to place said device in a first state of operation, second input means including chargeable means operative to place said device in a second state of operation, and output means; capacitive means serially connecting said output means of each of said stages to said first input means of the next succeeding one of said stages; shifting means including Zener diode means operative responsive to the charge on said chargeable means for providing a pulse

to said capacitive means; first pulse source means for operating both said first input means to a first one of



said stages and said second input means; and second pulse source means for operating said second input means.

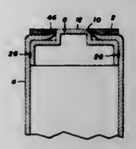
3,016,471
CATHODE RAY TUBE STRUCTURE
Oscar A. Drake and Harry E. Smithgall, Seneca Falls, N.Y., assignors to Sylvania Electric Products, Inc., a corporation of Delaware
Filed June 4, 1959, Ser. No. 818,098
4 Claims. (Cl. 313—82)



1. In a cathode ray tube employing a display screen, a longitudinally arrayed electrode structure spaced from said screen comprising a cathode, stacked amplifier electrodes disposed on one side of said cathode, stacked electron beam immersion lens electrodes including a grid disposed on the opposite side of said cathode, common insulating rods for mounting said amplifier and immersion lens electrodes relative to one another, insulating spacers for separating said electrodes telescoped over said rods, an electron beam focusing lens assembly positioned between said immersion lens electrodes and said screen, and common insulating supports for mounting said immersion lens grid and focusing lens electrodes relative to one another.

3,016,472
DISPENSER CATHODE
Patrick P. Coppola, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 25, 1960, Ser. No. 31,761
13 Claims. (Cl. 313—346)

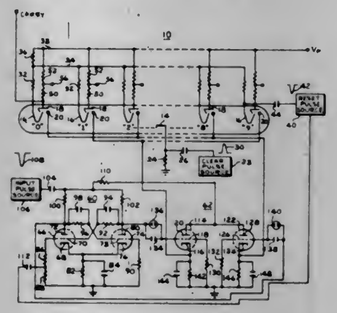
1. A dispenser cathode comprising an emission material reservoir including a first ingredient consisting of at least one oxidizing compound of an electropositive element selected from the group consisting of rare earths, alkaline earth metals and alkali metals, a reducing ingredient arranged in chemically reactable relation with at least a portion of said first ingredient whereby at least a portion of said first ingredient is reducible to the electropositive element and electropositive element oxide constituents thereof, an emission substrate member including a constituent promoting adsorption-coupled migration on an exposed surface thereof of a monolayer of said electropositive elements and electropositive element oxides of said reservoir, said exposed surface of said emission substrate member defining an emission surface, said migration-promoting constituent of said substrate member being chemically reactive with the first ingredient of said reservoir contacted by said migration-promoting constituent in a manner substantially entirely depletive of the electropositive elements and electropositive oxides in the



contacted portion, said reservoir being disposed in contiguous relation to said substrate member with said first ingredient contacting said substrate member only at a relatively narrow interface across the edge of which adsorption-coupled migration of said monolayer onto said emission surface may take place, whereby contact between said migration promoting constituent of said substrate member and said first ingredient of said reservoir is minimized to the vicinity of said interface to thereby avoid depletion of said electropositive elements and electropositive element oxides during reduction of said first ingredient.

ERRATUM
For Class 315—5.21 see:
Patent No. 3,016,501

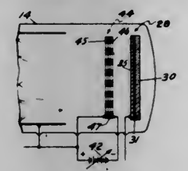
3,016,473
COUNTING CIRCUITS
John Cullis, Jr., Plainfield, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 29, 1956, Ser. No. 816,815
10 Claims. (Cl. 315—8.5)



1. A counter circuit including a magnetron beam switching tube having a cathode and a plurality of groups of electrodes each comprising a counting position; each group of electrodes including a target electrode which receives an electron beam and produces an output signal therefrom, a spade electrode which holds an electron beam on its associated target electrode, and a switching electrode which serves to switch an electron beam from one group of electrodes to the next; circuit means coupled to said switching electrodes for applying pulses thereto

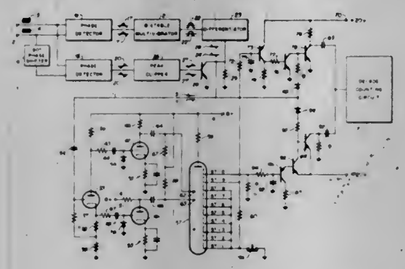
and causing an electron beam to switch from position to position; beam resetting means coupled to one of said positions to form an electron beam thereat, said resetting means also being coupled to said circuit means to energize the same and apply a pulse to the switching electrode at said one position to cause the electron beam to switch to the next position at substantially the same time that it begins to form at said one position.

3,016,474
CATHODE RAY TUBES
Rudolf C. Hergenrother, West Newton, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed May 11, 1954, Ser. No. 428,945
12 Claims. (Cl. 315—13)



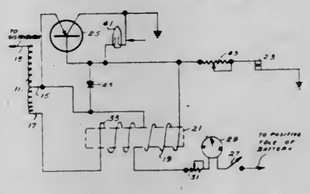
12. An electron discharge device comprising an evacuated envelope containing a target electrode adjacent one end thereof, a source of electrons positioned adjacent the other end thereof, and a compound electron lens mosaic comprising at least two individual apertured spaced-apart electron lens mosaics and being positioned between said electron source and said target electrode, means for providing a unidirectional electron accelerating voltage between said compound lens mosaic and said target electrode, and means for producing a retarding field in the region between said spaced-apart individual lens mosaics.

3,016,475
PHASE DIFFERENTIAL INDICATING CIRCUIT
Frederick A. Kirsten, Lafayette, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 19, 1960, Ser. No. 50,814
9 Claims. (Cl. 315—84.6)



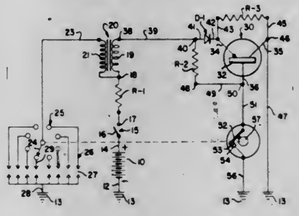
1. In a circuit for counting the net phase differential between two input signals, the combination comprising a detector circuit receiving said two input signals and providing output pulses having a positive polarity for a phase change of said input signals in one direction and having a negative polarity for a phase change of said signals in the opposite direction, a multi-electrode counting device having a discharge shiftable by a pair of pulse signals phase in accordance with the desired direction of counting and having a first and a second electrode for shifting said discharge, each of said electrodes being adapted to receive one of said phased pulse signals, a polarity inverting circuit connected to the output of said detector circuit, a first pulse delay circuit receiving the output of said polarity inverting circuit and having an output connected to said first electrode of said counting device, said first delay circuit being adapted to pass pulses of a first polarity undelayed and to delay pulses of a second polarity, a second pulse delay circuit receiving the output of said detector circuit and having an output connected to said second electrode of said counting device, said second delay circuit being adapted to pass pulses of said first polarity undelayed and to delay pulses of said second polarity.

3,016,476
TRANSISTORIZED IGNITION SYSTEM
Roger J. Bataille, Chester, N.J.
(45 Sherman Ave., Morris Plains, N.J.)
Filed Oct. 28, 1960, Ser. No. 65,765
3 Claims. (Cl. 315—135)



1. An ignition system comprising an ignition transformer having a high voltage output and an input winding, a battery, a transistor having an emitter electrode, a base electrode, and a collector electrode, a second transformer having a first winding and a second winding, a circuit connecting said first winding of said second transformer, said input winding of said ignition transformer, and the emitter and collector electrodes of said transistor in series across said battery, a circuit connecting said second winding of said transformer between the emitter and base electrode of said transistor, and a set of breaker points connected between the base electrode of said transistor and one side of said battery.

3,016,477
IGNITION SYSTEM
John G. Naborowski, Toledo, Ohio, assignor to The Electric Auto-Lite Company, Toledo, Ohio, a corporation of Ohio
Filed Jan. 29, 1960, Ser. No. 5,422
12 Claims. (Cl. 315—206)



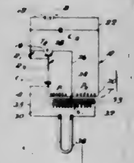
1. An ignition system for multi-cylinder internal combustion engines subjected to variable operating conditions of load and speed comprising a unidirectional source of electric current, a transistor, a unilateral conducting device, a step-up ignition transformer having its primary and secondary windings mounted on a magnetizable core, main circuit connections for the flow of the energizing electrical current from said source to the primary winding of said ignition transformer through said transistor, a control circuit including said unilateral conducting device for causing the operation of said transistor as "On" or "Off"

current switching means for said main circuit connections, and means operable in timed relation with the engine for connecting and disconnecting said control circuit across said source to cause by the operation of said transistor the application and interruption of the flow of the energizing current to the primary winding of said ignition transformer.

3,016,478
LIGHT FLASHING DEVICE

Harold W. KaDell, Highland Park, Ill., assignor to Illum-A-Rail, Inc., Chicago, Ill., a corporation of Illinois

Filed Aug. 11, 1959, Ser. No. 833,015
24 Claims. (Cl. 315—206)

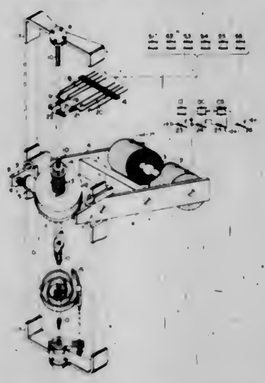


1. A light flashing device which comprises, a three electrode transistor having base, emitter and collector electrodes, a transformer having a primary winding and a secondary winding, a source of direct current, a source of light, an oscillating circuit connected between said base and one of the other electrodes including at least a portion of the primary winding and a storage element therein, biasing means immediately connected between said base and a second of said other electrodes, said direct current source being connected across said transistor and transformer primary winding in series, said light source being coupled to said secondary winding.

3,016,479
CYCLICAL CODE OSCILLATOR WITH MAGNETICALLY BIASED TORSION PENDULUM

Nelson B. Coley, Honeoye Falls, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.

Filed May 8, 1959, Ser. No. 811,964
4 Claims. (Cl. 317—171)



1. A normally inactive cyclical code oscillator comprising, two pole pieces, a permanent magnet and a normally deenergized electromagnet secured in tandem to said two pole pieces, a spring biased torsional pendulum, a magnetic armature adapted to rotate with said pendulum between said pole pieces, said armature being torsionally attracted by the flux of said permanent magnet when said electromagnet is in its normally deenergized state and the torsional force exerted on said armature by the flux of said permanent magnet being in opposition to the torsional force of said spring, stop means for limiting the rotation of said armature in the direction of said torsional force exerted on said armature by the flux of said permanent magnet, whereby the energization of the electromagnet reduces said torsional force exerted on said armature by the flux of said permanent magnet, and is initiated into free oscillations by said torsional force of said spring.

3,016,480
ARTICLES CONTAINING FLUOALUMINATES AS DIELECTRICS

Isadore Mockrin, Plymouth Meeting, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

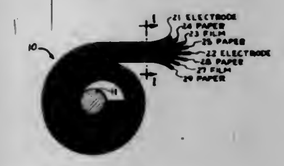
No Drawing. Filed June 29, 1960, Ser. No. 39,726
5 Claims. (Cl. 317—230)

3. A capacitor comprising a pair of metal electrodes and a solid spacer therebetween, said spacer consisting essentially of a sheet-like fluoaluminate selected from the group consisting of $KAlF_4$ and $RbAlF_4$.

3,016,481
CAPACITOR

Raymond J. Simpson, River Forest, Ill., assignor, by mesne assignments, to Dearborn Electronic Laboratories of Delaware, Inc., Orlando, Fla., a corporation of Delaware

Filed July 30, 1959, Ser. No. 830,661
1 Claim. (Cl. 317—258)



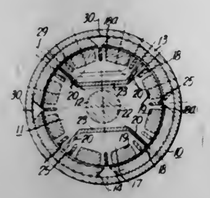
In a capacitor of the wound electrode type, the combination comprising a pair of electrodes in the form of extended ribbons of metal foil wound together in overlapping relation and having a predetermined area of overlap, a composite insulating layer interposed between said electrodes and extending beyond the area of overlap of the electrodes for insulating the same, said insulating layer comprising a first ply of porous paper adjacent one of said electrodes and a second ply of porous paper adjacent the other of said electrodes and a ply of plastic film arranged coextensively between said plies of paper for the purpose of providing an insulating barrier between any conductive or semi-conductive particles which may exist in the two plies of paper and which may be in register with one another, the pores of said paper being impregnated with oil or the like dielectric liquid so that the surfaces of the electrodes and plastic film are wetted with the oil thereby to inhibit the setting up of a corona type discharge when the capacitor is operated at high voltage.

3,016,482
TWO SPEED SYNCHRONOUS INDUCTION MOTOR

Wilhelm A. Andersen and Jan E. Haegh, Cincinnati, Ohio, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Jan. 12, 1960, Ser. No. 2,013
5 Claims. (Cl. 318—224)

1. A rotor for a synchronous induction motor comprising: a core having a plurality of arcuately spaced salient poles separated by axially extending grooves, said poles having winding slots near their periphery, alternate poles having at least one dividing slot extending radially inward from the periphery of said core, said alternate salient poles having a larger arcuate expanse than the other salient poles, the radially inner end of

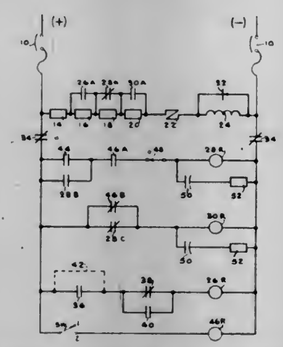


each of said dividing slots being connected to the radially inner end of a dividing slot in an adjacent pole, said slots and grooves being filled with a nonmagnetic electrically conducting material and interconnected at the ends of the core to form a squirrel cage winding.

3,016,483
MOTOR CONTROL SYSTEM

Douglas W. Fath, Brookfield, and Charles E. Smith, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed Mar. 17, 1958, Ser. No. 722,016
4 Claims. (Cl. 318—403)

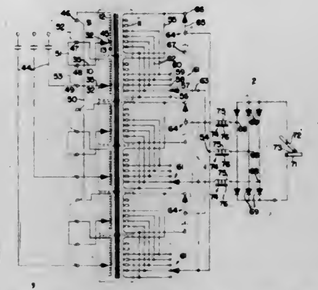


1. In a system for controlling a dynamoelectric machine having a field winding connected across a power supply source, a first and a second resistor in series circuit with said field winding, and control means for said machine comprising switch means, a first electroresponsive switch device of the timed release type normally shunting when unenergized said first resistor, a second electroresponsive switch device of the timed release type for shunting when energized said second resistor, means responsive to energization of said control means for energizing said second electroresponsive switch device to shunt said second resistor, and electrical means responsive to operation of said switch means for energizing said first electroresponsive switch device to effectively insert said first resistor in said series circuit and for initiating timed release of said second electroresponsive switch device, the latter effectively inserting said second resistor in said series circuit when it times out, said electrical means being thereafter responsive to re-operation of said switch means for energizing said second electroresponsive switch device to shunt said second resistor and for initiating timed release of said first electroresponsive switch device, the latter shunting said first resistor when it times out.

3,016,484
ARC WELDING TRANSFORMER POWER SUPPLY

Allan C. Mulder and Reidar P. C. Rasmusen, Appleton, Wis., assignors to Miller Electric Manufacturing Company, Appleton, Wis., a corporation of Wisconsin

Filed July 27, 1959, Ser. No. 829,581
18 Claims. (Cl. 321—24)



4. In a direct current arc welding supply including a three phase transformer having three similar phase winding assemblies and a full wave rectifier connected to the output of the transformer, a vertically mounted three-legged core assembly, each of said winding assemblies having a pair of primary coils and a corresponding pair of secondary coils concentrically wound on an individual leg of the core assembly, the secondary coils being wound in stacked relation on a core leg, each primary coil including a main winding portion superimposed on the secondary and an outer superimposed slide wire portion connected in series with the main winding portion, said slide wire portions including contact surfaces exposing the several turns of the slide wire portion, the ends of the main winding constituting first and second terminal means to each primary coil, individual contact means slidably engaging said contact surfaces and establishing third and fourth terminal means to each primary coil related respectively to said first and second terminal means, lead screw means adjustably supporting said contact means, drive means coupled to said lead screw means to simultaneously position said contact means, said first terminal means being connected to form a common junction, said fourth terminal means being adapted to be connected to the incoming power lines, said second and third terminals being adapted to be selectively connected to each other to establish a series connection of said primary coils and to the corresponding first and second terminal means to establish a parallel connection of said primary coils, said pair of secondary coils being connected in parallel, switch means adapted to selectively connect opposite ends of the paralleled secondary coils to establish three output terminals, contacts connected to corresponding turns on one half of each pair of the paralleled secondary coils, and contact arms connected to said output terminals and adapted to selectively engage said contacts on a secondary coil pair different from the corresponding switch means to vary the portion of the secondary coils connected in circuit.

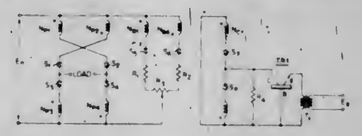
3,016,485
SERVO AMPLIFIER

Harry W. Mathers, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Continuation of application Ser. No. 559,262, Jan. 16, 1956. This application Oct. 21, 1960, Ser. No. 64,097
3 Claims. (Cl. 323—89)

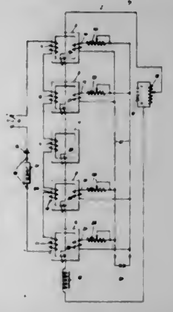
2. A transistor controlled magnetic servo amplifier adapted to render a phase reversible output, said transistor

controlled magnetic servo amplifier consisting in combination of: a first ferromagnetic core having a substantially rectangular hysteresis characteristic; a second ferromagnetic core having a substantially rectangular hysteresis characteristic; a first power input terminal and a second power input terminal; a source of alternating potential connected across said first and second power input terminals; a first diode having an anode and a cathode; a second diode having an anode and a cathode; a third diode having an anode and a cathode; a fourth diode having an anode and a cathode; a fifth diode having an anode and a cathode; a sixth diode having an anode and a cathode; a seventh diode having an anode and a cathode; an eighth diode having an anode and a cathode; a transistor having an emitter electrode, a base electrode and a collector electrode; a first series circuit directly connected between said first power input terminal and said anode of said second diode, said first series circuit consisting in seriatim of a first power winding electromagnetically coupled to said first ferromagnetic core in a first sense of electromagnetization; a second series circuit directly connected between said first power input terminal and said cathode of said first diode, said second series circuit consisting in seriatim of a second power winding electromagnetically coupled to said second ferromagnetic core in said second sense of electromagnetization; a first output terminal; a second output terminal; a direct connection between said anode of said first diode, said anode of said third diode, and said first output terminal; a direct connection between said cathode of said second diode, said cathode of said fourth diode, and said second output terminal; a third power winding electromagnetically coupled



to said first ferromagnetic core in said first sense of electromagnetization, said third power winding being directly connected between said cathode of said third diode and said second power input terminal; a fourth power winding electromagnetically coupled to said second ferromagnetic core in said second sense of electromagnetization, said fourth power winding being directly connected between said anode of said fourth diode and said second power input terminal; a first bias winding electromagnetically coupled to said first ferromagnetic core in said first sense of electromagnetization, said first bias winding being directly connected between said cathode of said fifth diode and said first power input terminal; a second bias winding electromagnetically coupled to said second ferromagnetic core in said second sense of electromagnetization, said second bias winding being directly connected between said anode of said sixth diode and said first power input terminal; a first resistor connected between said anode of said fifth diode and said cathode of said sixth diode, said first resistor having an adjustable tap directly connected to said second power input terminal; a first control winding electromagnetically coupled to said first ferromagnetic core in said first sense of electromagnetization, said first control winding being directly connected between said anode of said seventh diode and said base electrode of said transistor; a second control winding electromagnetically coupled to said second ferromagnetic core in said second sense of electromagnetization, said second control winding being directly connected between said anode of said eighth diode and said base electrode of said transistor; a direct connection between said cathode of said seventh diode, said cathode of said eighth diode, and said collector electrode of said transistor, a second resistor connected between said collector and said base electrodes of said transistor; a transformer having a primary and a second winding, said primary winding being directly connected across said emitter and said base electrodes of said transistor; a source of control potential directly connected across said secondary winding of said transformer, whereby a reversible output is obtained across said output terminals under control of said control potential.

3,016,486
MAGNETIC AMPLIFIER HAVING NON-LINEAR RESPONSE CHARACTERISTIC
Hugh M. Ogle, Palo Alto, Calif., assignor to General Electric Company, a corporation of New York
Filed Aug. 5, 1957, Ser. No. 676,340
7 Claims. (Cl. 323—89)
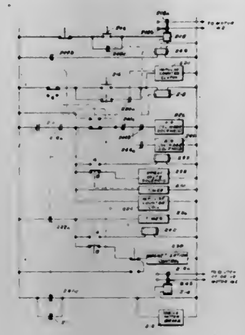


7. A self-saturating magnetic amplifier having a non-linear response characteristic comprising: at least three saturable cores each having a gate winding and a direct current control winding, said gate windings and control windings being respectively serially connected; an alternating current input circuit and a load circuit; rectifying means; said serially connected gate windings being connected in series with said alternating current input and load circuits and said rectifying means; circuit connections for impressing a selectively variable direct current signal on said serially connected control windings thereby providing a selectively variable control M.M.F. for all of said cores; at least one of said cores having a direct current bias winding with circuit connections for impressing a predetermined direct current signal thereon to provide a predetermined resetting M.M.F. level therefor; at least two other of said cores having different shaped dynamic hysteresis loops thereby establishing a different resetting M.M.F. level for each of said cores to provide a non-linear response characteristic for said magnetic amplifier.

3,016,487
SYSTEM FOR INSPECTING BEARING BALLS
Eugene W. Foley, Lombard, Ill., assignor to Magnaflux Corporation, Chicago, Ill., a corporation of Delaware
Filed May 6, 1959, Ser. No. 811,331
12 Claims. (Cl. 324—38)

10. A testing apparatus for ball bearings and the like comprising a support, a pair of rollers journalled in parallel relation on said support, means for rotating said rollers in the same direction, a pair of magnetizing contacts, air cylinder means for reciprocating said contacts toward and away from each other in parallel relation to said rollers, control means for synchronizing the movement of said rollers and air cylinders to rotate a bearing placed on said rollers through successive mutually perpendicular axes, means for energizing said contacts to impart successive magnetizing shots upon successive

movements of said rollers and means for spraying magnetic fluid onto said rollers in synchronization with successive movements thereof, including a tank in said support, a spray station above said rollers and means for pumping fluid to said spray station from said tank.



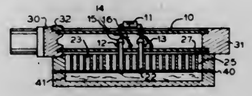
3,016,488
AUTOMATIC RANGE SELECTOR
Donald F. Smith, New York, and Jules P. Lester, Plainview, N.Y., assignors to Rodale Electronics, Inc., Westbury, N.Y., a corporation of New York
Filed Nov. 8, 1960, Ser. No. 68,038
6 Claims. (Cl. 324—115)



1. In an automatic range selector, for use in measuring an electric signal, in combination, an electric meter circuit comprising a multi-range meter and a series of parallel circuit branches before said meter, one for each range, a sensing circuit including sensing means operable to determine the meter range of the value of said signal, selector means energizable by said sensing means and operable to switch said circuit branches to select the proper branch for the sensed signal value, and delayed action means operable to apply said signal to the selected circuit branch of said meter after a time interval sufficient to complete the sensing.

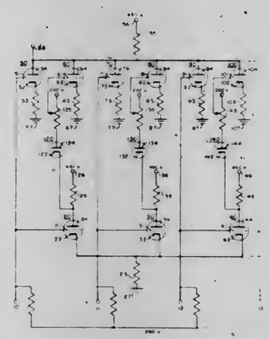
3,016,489
TEST JIG FOR CONTACTING CIRCUIT CARD POSITIONS
Thomas H. Briggs, Malvern, and Edwin A. Hollenbach, Broomall, Pa., assignors, by mesne assignments, to Drexel Dynamics Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 17, 1959, Ser. No. 827,913
9 Claims. (Cl. 324—158)

9. An electrical test jig assembly for a printed-circuit board having components and circuit conductors thereon with selected test points on the conductors positioned in a predetermined grid pattern, comprising in combination, a plurality of test probe assemblies having connector points adapted to contact said conductors at said selected test points, means providing a test terminal connection with each of said connector points, a plurality of insulated pegs connected one with each of said connector points, a matrix plate having a plurality of apertures for receiving and holding said pegs in substantially parallel relation for motion with respect to said test points, said apertures being positioned in the grid pattern corresponding to and in registration with said selected



test points, said circuit board being mounted near and in parallel relation to said matrix plate, a flexible fluid-pressure-operated diaphragm for contacting and moving said pegs with equalized pressure in the direction of said test points to bring the connector points into engagement therewith, an insulated perforated template having the same grid pattern of openings therethrough aligned and in registration with the matrix plate to define selectable positions for locating said pegs and the connector points carried thereby, and means for releasably holding said board and template in place in registration with said matrix plate.

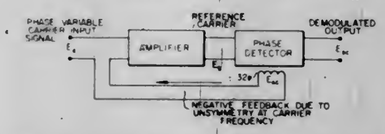
3,016,490
SEMI-COINCIDENCE DETECTOR
Andrew Petriw, Spring Lake Heights, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 5, 1959, Ser. No. 791,504
1 Claim. (Cl. 328—146)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a circuit for detecting coincident signals in the presence of noise in a communications system having at least three channels; an adding circuit comprising at least six vacuum tubes, each having grid, cathode, and plate electrodes; a first source of potential with respect to ground; a common plate load impedance connecting all of said adding circuit tube plates to said first source of potential; a cathode impedance connecting each of said adding circuit tube cathodes to ground; a difference detecting circuit comprising at least three vacuum tubes, each having grid, cathode, and plate electrodes; a common cathode impedance connecting all of said difference detecting tube cathodes to ground; a second source of potential; a plate load impedance connecting each of said difference detecting tube plates to said second source of potential; at

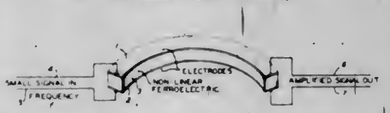
least three rectifier tubes each having a cathode electrode connected to the plate electrode of one of said difference detecting tubes, and a plate electrode connected through a load impedance to the grid of one of a first group of said adding circuit tubes; and each of the grids of the difference detecting tubes connected to one of the grids of a second group of the adding circuit tubes.

3,016,491
PHASE DETECTOR HAVING NEGATIVE FEEDBACK FOR NULL REBALANCING
Edward Paul Morse, Norwood, Mass., assignor, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Jan. 20, 1958, Ser. No. 710,100
3 Claims. (Cl. 329—50)



1. In a phase detection system, the combination of a source of alternating input signals, an amplifier fed by said source, a phase detector fed by said amplifier, said phase detector including means for converting the amplified input signal fed thereto into an output signal containing alternating components related to said alternating input signal and direct components having a polarity determined by the phase of said alternating input signal, and means for feeding back to said amplifier said alternating components.

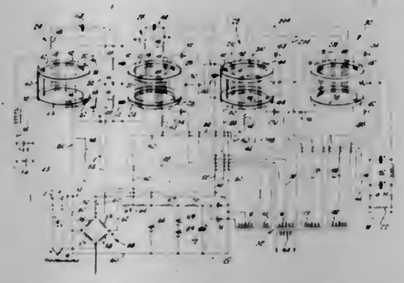
3,016,492
STANDING WAVE PARAMETRIC AMPLIFIERS
Rolf William Landauer, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,657
9 Claims. (Cl. 330—5)



1. Amplifying means consisting of a section of special transmission line included within a conventional transmission line and comprising electrodes secured to and separated by ferroelectric material having a nonlinear characteristic, means to apply to said electrodes evenly along the longitudinal axis thereof a stimulus, and a source of a stimulus having a frequency $2f$ where a signal transmitted over said line and into said section of special transmission line has a frequency f.

3,016,493
ELECTRIC-SIGNAL CONVERTING APPARATUS
Horace E. Darling, North Attleboro, Mass., assignor to The Foxboro Company, Foxboro, Mass.
Filed Sept. 11, 1958, Ser. No. 760,392
1 Claim. (Cl. 330—8)

An industrial process instrumentation system wherein the value of a process condition is sensed by a low-voltage D.-C. signal source such as a thermocouple or the like, and wherein a relatively high-powered D.-C. measurement current corresponding to the voltage of said signal source is produced in series transmission to one or more remote indicating or control devices presenting various load impedances; said system including transmitter apparatus to be connected to said signal source over a two-wire input line of variable length and adapted to produce a linearly corresponding measurement current over a two-wire output line without establishing conductive continuity between said input and output lines and without drawing any substantial current from said signal source, said transmitter apparatus comprising first and second high-gain magnetic amplifier sections each having input and output windings, an input circuit for connecting said first section input winding to said two-wire input line to receive the signal from said low-voltage signal source; a first negative feedback circuit responsive to the current in said first section output winding and conductively connecting said first section output winding to said input circuit to develop a D.-C. feedback voltage in series-opposition to the D.-C. signal from said signal source, said first feedback circuit being effective to substantially minimize variations in input current through said first section input winding due to variations in length of said two-wire input line and also to linearize the correspondence between the input and output of said first section magnetic amplifier; circuit means connecting said first section output



winding to said second section input winding; a feedback winding for said section section magnetic amplifier and conductively isolated from said second section input winding, output circuit means for connecting said second section output winding to said two-wire output line to transmit thereto a relatively high-powered measurement current; and a second negative feedback circuit responsive to the measurement current in said two-wire output line, said second feedback circuit being conductively connected to said feedback winding to produce in said second section magnetization changes that are nearly equal but opposite to the magnetization changes developed by variations in the current flowing in said second section input winding, said second feedback circuit being effective to substantially minimize variations in the measurement current flowing in said two-wire output line due to variations in the impedance presented by said indicating and control devices and also to assure linearity between said measurement current and the current flowing through said second section input winding, thereby establishing linear correspondence between the output of said signal source and said measurement current without introducing any conductive continuity between said input and output lines.

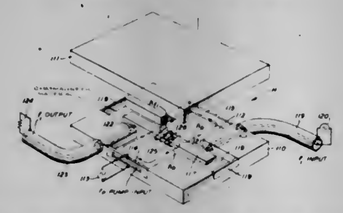
3,016,494
PARALLEL OPERATION OF TETRODE TRANSISTORS
James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 20, 1959, Ser. No. 854,333
5 Claims. (Cl. 330—24)

1. In an electronic circuit having a plurality of paralleled tetrode semiconductor amplifier means adapted to equalize the currents flowing therethrough, the combination comprising: a plurality of similar tetrode semiconductor amplifier means each having a plurality of electrodes including first and second control electrodes, a collector electrode and an emitter electrode; means connecting said first control electrodes in common with a signal input source; means connecting said collector electrodes in parallel with each other and in series with a source of direct current and load means; and resistor means connected in series with each of said emitter electrodes for developing voltages thereacross, respectively, proportional to the magnitude of the current flowing through the



corresponding emitter electrode, and circuit means coupling said second control electrodes on each of said plurality of amplifying means to said resistor means associated with another of said plurality of amplifying means in a phase direction such that an unbalance in the currents of said plurality of amplifier means produces corrective potentials to the second control electrodes such that said plurality of amplifying means are forced to share in a predetermined proportion the current flowing from said source to said load means.

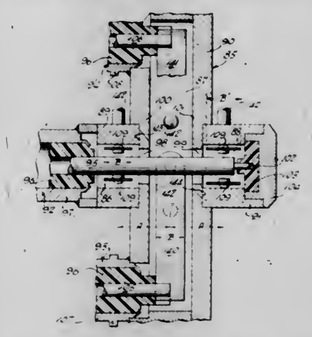
3,016,495
MAGNETOSTATIC MICROWAVE DEVICES
Ping K. Tien, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 5, 1958, Ser. No. 778,352
21 Claims. (Cl. 330—56)



1. In combination, first and second electromagnetic wave energy supporting structures having a common conductive partition therebetween, an aperture extending through said conductive partition, an element of gyromagnetic material capable of exhibiting a plurality of magnetostatic modes disposed within said aperture to couple said wave energy between said first and said second structures, means for substantially increasing said coupling comprising magnetic biasing means for inducing one of said magnetostatic resonance modes in said element, and means for varying said magnetic biasing to change the induced mode to another of said magnetostatic modes.

3,016,496
MULTI-CHAMBER COAXIAL LINE SWITCH APPARATUS
Carl W. Concelman, Danbury, Conn., assignor to Amphenol-Borg Electronics Corporation, Broadview, Ill., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,970
3 Claims. (Cl. 333—7)

1. An electrical switch for selectively and individually connecting a first high frequency coaxial transmission line to any one of a plurality of such transmission lines comprising, a switch structure having a plurality of switch body supports each provided with an individual longitudinal internal chamber defined by opposed interior conductive walls including end walls, said body supports being alternately crisscrossed thereby angularly displacing the longitudinal axes of adjacent chambers, a pair of coaxial connector means supported by each switch body, each connector of said pair having an individual inner conductor extending into its correlated chamber adjacent an end wall thereof, said connectors being supported from said structure for connection with individual ones of said plurality of transmission lines, an additional coaxial connector supported from one side of said structure by one body support for connection with said first transmission line, adjacent chambers having a contiguous conductive wall provided with a through bore aligned with said additional connector, dielectric means in a chamber conducting wall furthest from said additional connector and being aligned therewith, said additional connector having longitudinal inner conductor extending

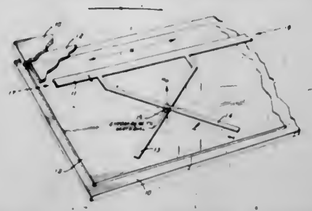


through said chambers and having its end remote from said additional connector supported by said dielectric means, said inner conductor being common to said chambers, the axis of said common inner conductor being angularly displaced with respect to the individual axes of said chambers, a pair of movable conductive switch arms supported in each chamber between said common inner conductor and a respective one of the inner conductors extending therein adjacent the chamber end walls thereof for making and breaking electrical connection between such respective inner conductors and said common inner conductor, each arm having a free end for conductively connecting alternately with one side of said common inner conductor and the confronting portion of the chamber wall containing said arm, means for selectively actuating said switch arms from one another of two positions wherein movement of each arm to a first position conductively connects its respective inner conductor with said common inner conductor, movement of each arm to its other position conductively connects its respective inner conductor to said chamber wall.

3,016,497
NONRECIPROCAL ELECTROMAGNETIC DEVICE
Joseph J. Kostelnick, Middlesex, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 8, 1959, Ser. No. 858,107
15 Claims. (Cl. 333—24)

15. A nonreciprocal electromagnetic wave device comprising means for guiding propagating electromagnetic wave energy, means for applying wave energy to said guiding means at a given frequency, means for electro-

magnetically coupling said wave energy at two longitudinally spaced regions along said guiding means which have a relative time phase difference of β degrees to a magnetically polarized material capable of exhibiting gyromagnetic properties at said given frequency, said coupling means comprising a pair of resonant shunt circuits tuned

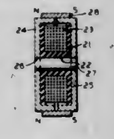


to said given frequency and supportive of magnetic field patterns having components thereof intersecting in said element at a given angle α where α and β are proportioned to produce a resultant circularly polarized magnetic field within said element, and means for magnetically polarizing said element in a direction normal to the plane of said intersecting magnetic field components.

3,016,498
TRANSMISSION SYSTEM

Albert E. Powell, Chatham, N.J., assignor, by mesne assignments, to Sealectro Corporation, Mamaroneck, N.Y., a corporation of New York

Filed Oct. 13, 1958, Ser. No. 766,969
5 Claims. (Cl. 333—30)



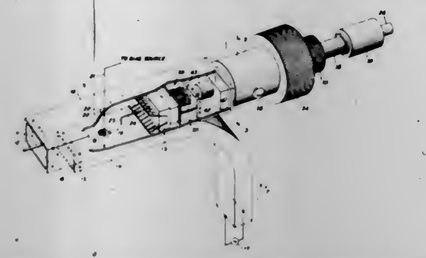
5. A transmission coil assembly for the transfer of energy between an electrical pulse in the coil windings and a mechanical pulse in a magnetostrictive line comprising a coil of wire surrounding the line, a ferromagnetic shield in two parts substantially surrounding said coil, each of said parts made in the form of a cup with a central hole for positioning the line, said cups spaced apart at their rims to form an air gap, and an annular permanent magnet with its poles adjoining said cups so as to apply a magnetic bias between said cups and to cause magnetic flux to traverse the portion of the line surrounded by the coil.

3,016,499
MICROWAVE DEVICE

Bernard C. De Loach, Jr., Little Silver, and Douglas H. Ring, Red Bank, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 12, 1960, Ser. No. 28,624
3 Claims. (Cl. 333—33)

1. A resonant cavity supportive of electromagnetic wave energy at a first frequency f_1 and at a second frequency $2f_1$ comprising a section of rectangular waveguide having longitudinally adjustable shorting members transversely disposed across said section, a coaxial cable extending through one of said members with the inside conductor of said cable extending into said cavity a distance equal to approximately one half a wavelength at said second frequency $2f_1$ and at said distance being bent at right angles to itself to form a conductive probe, the outer conductor of said cable having a threaded portion along its outer surface, a rotatable control knob supported in a fixed relative position with respect to said cavity in

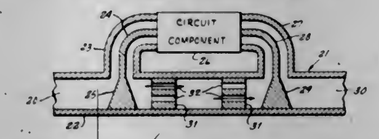


threaded contact with said portion, and means for locking said knob to said outer conductor.

3,016,500
RADIO FREQUENCY SIGNAL MODIFYING APPARATUS FOR PRESSURIZED TRANSMISSION SYSTEMS

Seymour Schneider, Bayside, N.Y., assignor to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York

Filed Jan. 18, 1960, Ser. No. 3,110
4 Claims. (Cl. 333—34)

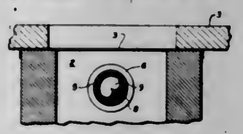


1. An electrical system for modifying a radio frequency signal comprising a first coaxial radio frequency transmission line section, a circuit component for modifying said signal and incapable of transmitting a pressurizing medium, said component being connected to receive an input signal from said first transmission line section, a second coaxial radio frequency transmission line section connected to receive an output signal from said circuit component, a first pressurizable transmission line connected to said first coaxial transmission line section, a second electrically separate pressurizable transmission line connected to said second coaxial transmission line section, at least one aperture in each of said pressurizable transmission lines dimensioned to be beyond cutoff as to transmission of signals within the operating frequency range of said system, and a conduit connecting the apertures in the respective pressurizable transmission lines to provide a closed path for pressurizing medium therebetween.

3,016,501
HIGH FREQUENCY PROBE APPARATUS

Bernard C. Gardner, Los Altos, and Curtis E. Ward, Palo Alto, Calif., assignors to Varian Associates, Palo Alto, Calif., a corporation of California

Filed July 31, 1957, Ser. No. 675,491
6 Claims. (Cl. 315—5.21)

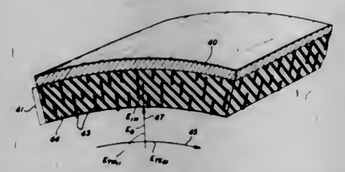


1. A microwave tuning apparatus for hollow microwave propagating structures including, a hollow wave propagating structure for propagating microwaves within the hollow interior thereof, a microwave tuning probe transversely extending into the interior of said hollow wave propagating wave structure through an aperture in a side wall of said wave propagating structure to effect tuning of said wave propagating structure, said tuning probe including an elongated hollow tubular probe member having alternate flat and curved portions, said tuning probe member curved portions bearing in tight slideable engagement with the inside peripheral surface of the aperture in said hollow wave propagating structure to produce circumferential restrictions of said tubular tuning probe member at relatively localized lengthwise portions of said tuning probe member in regions where said probe member curved portions engage the aforementioned aperture in said hollow wave propogating structure thereby producing a relatively high frictional unit load on said tuning probe member at said regions of bearing engagement whereby enhanced R.F. contact is assured between said tuning probe member and said wave propagating structure, and means coupled to said tuning probe for producting rectilinear translation of said probe within said wave propagating structure for tuning as desired.

3,016,502
SPURIOUS MODE SUPPRESSING WAVE GUIDE

Hans-Georg Unger, Lincroft, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 23, 1959, Ser. No. 861,609
10 Claims. (Cl. 333—95)

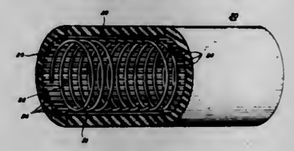


5. A transmission path for electromagnetic wave energy within a given range of operating frequencies comprising a hollow pipe wave guide of circular transverse cross section with an inside radius greater than five times the cut-off radius at the lowest operating frequency, and means having anisotropic conductivity lining the inner surface of said guide, the remainder of said guide being filled with a homogeneous isotropic lossless material.

3,016,503
HELIX WAVE GUIDE

John R. Pierce, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1959, Ser. No. 862,665
11 Claims. (Cl. 333—95)

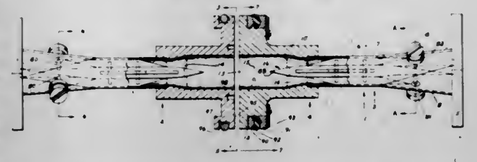


4. In an electromagnetic wave energy transmission system, the combination of means for launching the circular electric mode of said wave energy, means for receiving said wave energy, and means interconnecting said launching means and said receiving means, said interconnecting means comprising a conductor wound into a helix having a longitudinal axis with adjacent turns of said helix electrically insulated from each other, and anisotropically conductive means for improving the transmission characteristics of said helix surrounding and contiguous with said helix.

3,016,504
ROTATABLE WAVEGUIDE JOINT

Andrew Alford, Winchester, and David P. Flood, Natick, Mass. (Both of 299 Atlantic Ave., Boston, Mass.)

Filed July 26, 1957, Ser. No. 674,394
5 Claims. (Cl. 333—98)

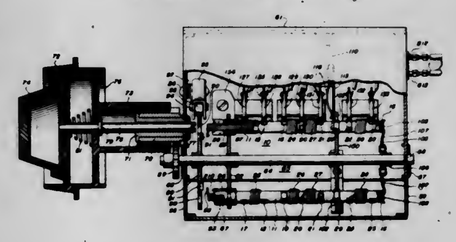


5. High frequency apparatus comprising, a first wave transmission conduit capable of delivering linearly polarized high frequency energy over a prescribed frequency range polarized in a first direction through an opening in said conduit to an external wave transmission conduit while linearly polarized energy travelling toward said opening and polarized normal to said first direction will be reflected back into said first conduit, a second wave transmission conduit connected to said first conduit and capable of propagating both orthogonal components of crossed linearly polarized energy within said prescribed range polarized along said first direction, means within said second conduit for imparting a relative phase delay of substantially 90 electrical degrees between said first and second orthogonal components, and a dissipative sheet within at least one of said first and second conduits in a plane normal to said first direction for suppressing the propagation of crossed linearly polarized energy polarized along a direction orthogonal to said first direction while allowing energy polarized along said first direction to propagate with negligible attenuation toward said opening.

3,016,505
TURRET TUNER

George C. Collins, Park Ridge, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

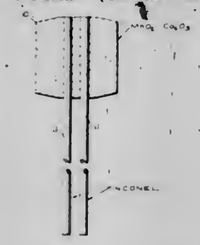
Continuation of application Ser. No. 745,684, June 30, 1958. This application May 10, 1960, Ser. No. 28,105
10 Claims. (Cl. 334—51)



1. A turret-type tuning mechanism comprising: a tuning strip including a hollow core member and a plurality of conductive elements disposed in spaced relation therealong for contributing reactive impedances to determine the frequency characteristic of said strip; means including at least two spaced coaxially aligned support panels for demountably supporting said tuning strip; mounting means provided on one of said panels for receiving and mechanically supporting one end of said core member;

and a tuning element comprised of a flexible material supported by said mounting means for introduction within said core member and yieldable obliquely of its axis to facilitate mounting and demounting said tuning strip between said support panels and displaceable axially of said mounting means and said core member to constitute with an adjacent end one of said conductive elements of said strip an adjustable reactance presenting an apparent reactance determined by the axial position of said element, the free end of said tuning element being formed to facilitate engagement by actuating means to effect selective axial displacement of said tuning element.

3,016,506
SEMI-CONDUCTIVE ELEMENT
Alexander Joseph Rakowski, Towaco, James Edgar Rollins, Newark, and John Conrad Zenobia, Jr., Belleville, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Feb. 1, 1960, Ser. No. 5,952
1 Claim. (Cl. 338—22)



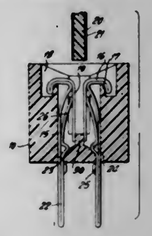
A semi-conductor comprising a body formed of a resistance material consisting essentially of between about 50% and about 80% by weight of manganese dioxide and between about 50% and about 20% by weight of cobaltic oxide; and spaced parallel conductive terminal wires for said body formed of an alloy consisting essentially of between about 6% and about 17% by weight of iron, between about 14% and about 18% by weight of chromium and the balance nickel at a minimum of 70% by weight.

3,016,507
THIN FILM MAGNETO RESISTANCE DEVICE
Paul M. Grant, Poughkeepsie, and Robert Vincent Penney, Newburgh, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 14, 1959, Ser. No. 839,864
2 Claims. (Cl. 338—32)



1. A magneto resistance active device comprising a first layer of ferro-magnetic material in the form of a thin plating, first insulation means in thin coating form superposed in deposited contact on said first layer, magnetizing current conductor means in thin plating form superposed in deposited contact on said first insulation means, output current carrying means in thin deposited film form superposed in deposited contact on said first insulation means and comprising magneto resistive semiconductor means, second insulation means in thin coating form superposed in deposited contact on said magnetizing current conductor means and on said current carrying means, and a second layer of ferro-magnetic material in the form of a thin plating superposed in deposited contact on said second insulation means, said first and second layers being oriented to embrace said conductor means to be magnetized by the field of current through said conductor means and to form magnetic poles embracing said semi-conductor means, and the thicknesses of said layers, said insulation means, said current conductor means, and said current carrying means being in the order of 100,000 Angstroms, 1,000 Angstroms, 7,000 Angstroms, and 7,000 Angstroms, respectively.

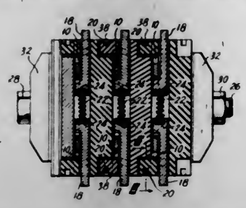
3,016,508
PRINTED CIRCUIT ELECTRICAL CONNECTORS
Guy J. Lalonde, Whitestone, N.Y., assignor to Precision Connectors, Inc., Jamaica, N.Y., a corporation of New York
Filed Oct. 24, 1960, Ser. No. 64,579
5 Claims. (Cl. 339—17)



1. An electrical connector for a printed circuit board comprising an elongated dielectric block, an elongated slot in the top of said block disposed along the longitudinal axis thereof, a plurality of spaced compartment defining walls in the slot extending from each side thereof in the direction of the center of said slot, an opening in the block leading from each of the compartments to the bottom of said block, a contact member in each of the compartments extending downwardly through the openings and out of the bottom of the block, each of said contacts comprising a single length of conductive material doubled back upon itself at each end thereof, a somewhat hook shaped member formed in the doubled back portion at the top of the contact and extending into the compartment, a contact wiper spring formed of the free end of the upper portion of the contact disposed in the slot and extending in the direction of the center thereof, an elongated terminal member formed of the doubled back bottom portion of the conductive material, and an upwardly disposed helper spring consisting of the free end of the bottom portion of the length of conductive material, said helper being bent to bear against the wiper spring to urge it in the direction of the center of the elongated slot.

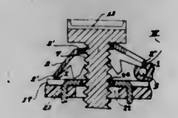
3,016,509
MULTI-POLAR TERMINAL CONNECTION FOR ELECTRIC CONDUCTORS
Gilbert M. Waninger, Siegen, Westphalia, Germany, assignor to Kabelschlepp G.m.b.H., Siegen, Westphalia, Germany
Original application Feb. 18, 1955, Ser. No. 489,139, now Patent No. 2,945,201, dated July 12, 1960. Divided and this application Mar. 23, 1960, Ser. No. 17,009
Claims priority, application Germany Feb. 20, 1954
6 Claims. (Cl. 339—49)

1. In a plug and socket type electric connection device comprising two joinable members of electrical insulating material, each of said members being provided with at least one row of flat electric contact blades respectively separated by interpositioned portions of said joinable members, all of said contact blades in said row being positioned with their faces parallel, each of said contact blades being provided with a notch, a locking slide element carried by each said joinable member for each contact blade thereof releasably engageable with the said notch in the pertaining blade for retaining said



contact blades in proper relative position, and clamping means releasably engaging said two joinable members and for clamping together the respective contact blades of said joinable members in firm contact in a direction substantially normal to the faces thereof.

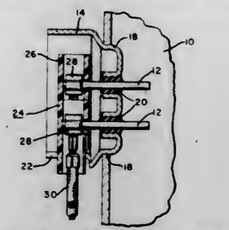
3,016,510
ELECTRICAL CLAMP-AND-CONNECTOR
Isaac S. Blonder, West Orange, N.J., assignor to Blonder-Tongue Electronics, Newark, N.J., a corporation of New Jersey
Filed July 23, 1958, Ser. No. 750,489
8 Claims. (Cl. 339—97)



1. A clamp-and-connector for an insulation covered conductor and the like having, in combination with said insulation covered conductor, a base, a threaded binding post projecting from said base and having an enlargement thereon spaced from said base and movable toward and away from said base in the direction of the length of said post, and a hollow conductive clamping member mounted upon said binding post, said clamping member being frusto-conical with an apex portion adjacent said enlargement and a base portion adjacent said base, said clamping member having a side wall which diverges from said apex portion to said base portion, said diverging side wall having a row of teeth, each of which has its length in the direction of side wall divergence and each of which has a tip at said base portion, said insulation covered conductor being interposed between said base and teeth of said clamping member, whereby when said clamping member is pressed toward said base by said enlargement, the teeth exert upon said insulation covered conductor forces having components parallel to said base as well as perpendicular to said base, and the teeth are pressed into the insulation to make electrical contact with said conductor and to clamp said insulation covered conductor to said base.

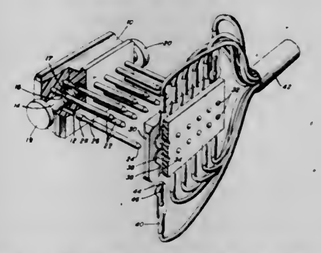
3,016,511
REFRIGERATING APPARATUS
Donald C. Unger, Grosse Pointe Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 5, 1957, Ser. No. 676,114
1 Claim. (Cl. 339—126)

In an electrical connector assembly, a housing element having an aperture therein, a one piece stamped sheet metal cup-shaped terminal mounting element supported within said aperture from the outside of said housing element and with the rim of said cup-shaped element disposed on the outside of said housing element, a plurality of terminals projecting through the bottom wall of said cup-shaped terminal mounting element, the bottom wall of said mounting element having a plurality of terminal receiving apertures formed therein, said mounting element having integrally formed tubular portions adjacent said apertures, and insulating bushings hermetically sealing said terminals within said tubular portions, the rim of said cup-shaped element extending beyond the outer



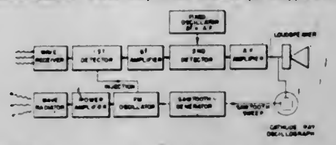
ends of said terminals and having a cut away portion, and connector means removably attached to the outer ends of said terminals and having a portion extending through said cut away portion, said rim substantially circumscribing said connector means so as to provide protection therefor and the outer face of said connector means being disposed below the rim of said cup-shaped element so as to be protected thereby.

3,016,512
CONNECTOR ASSEMBLY
Edwin H. Borchard, Westfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 22, 1959, Ser. No. 841,529
2 Claims. (Cl. 339—217)
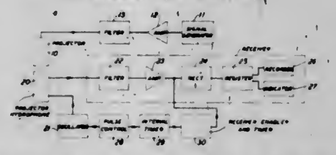


2. An electrical connector assembly for interconnecting a plurality of conductors comprising a plurality of substantially planar terminals, each of which is secured to an individual conductor, each terminal being bifurcated and having an aperture extending therethrough perpendicular to the plane thereof, the surface about the aperture providing a contacting surface, a plurality of substantially planar dielectric members, each of which holds a group of the terminals in a spaced array with the plane of the terminals extending approximately parallel to the plane thereof and each of which insulates each terminal from all other terminals held thereby, the plurality of dielectric members being stacked with the array of terminals of each in registration, and a plurality of pin members, each pin member having a cross sectional configuration generally similar to the configuration of the aperture in each terminal, the apertures in the terminals being slightly smaller than the cross section of the pin members, and each pin member extending through the apertures in and engaging the contacting surfaces of a plurality of stacked terminals, thereby moving the bifurcations apart, creating a clamping force against the pin members, and interconnecting the terminals.

3,016,513
FM ECHO-RANGING SYSTEM
Karl S. Van Dyke, Arlington, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 26, 1943, Ser. No. 488,501
3 Claims. (Cl. 340—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a fire-control mechanism which includes ordnance means for propelling a projectile to an object in a predetermined time; a low-frequency oscillator having means for generating a substantially adjustable linear sawtooth wave; a high-frequency oscillator frequency modulated between adjustable frequency limits by said sawtooth wave; a wave radiator driven by said high-frequency oscillator; a receiver tuned to exclude waves of frequency beyond said limits and mounted to receive waves emitted by said radiator after reflection from said object; said radiator, said receiver and the ordnance means being mounted in predetermined relation; means for indicating the presence of said waves between said frequency limits after reflection from said object; the ratio of the average frequency of said high-frequency oscillator to the maximum deviation of the frequency produced by the modulation of said oscillator being equal to one-half the ratio of the velocity of the wave in the medium over the average horizontal velocity of the projectile.

3,016,514
APPARATUS FOR FIELD TESTING SIGNAL GUIDED BODIES
Lester M. Ilgenfritz, Larchmont, N.Y., Hilbert R. Moore, Pluckemin, N.J., and Donald D. Robertson, Hartsdale, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 10, 1944, Ser. No. 521,778
13 Claims. (Cl. 340—3)



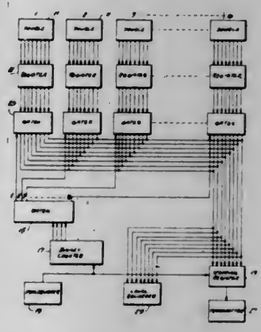
1. A submarine echo ranging system for indicating the motional behavior of a moving body of known speed within a limited area about a reference point, said system comprising a submarine signaling device operable as both a projector and a hydrophone, an oscillator coupled to said device, a normally disabled receiver coupled to said device, control means for said oscillator effective to produce energization of said device by said oscillator for periods of preassigned duration and at intervals small in comparison to the time required for said body to traverse a substantial part of said area, a first timer means for enabling said receiver for periods of preassigned duration, and a second timer means controlled by said oscillator control means for effecting operation of said first timer means at a predetermined interval after each period of energization of said device by said oscillator, said predetermined interval being short in comparison to the interval between successive energization periods of said device and the duration of the periods in which said receiver is enabled being long in comparison to the length of said energization periods.

3,016,515
VEHICLE TIRE PRESSURE ALARM APPARATUS
Gerald C. Summers and Robert L. Mills, Dallas, Tex., assignors to Metallurgical Resources, Inc., Dallas, Tex., a corporation of Delaware
Filed Aug. 31, 1959, Ser. No. 837,237
6 Claims. (Cl. 340—58)



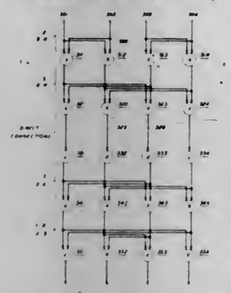
2. A tire pressure responsive warning apparatus including low frequency transmitter means for transmitting a low frequency signal indicative of a faulty tire pressure condition and including a transmitting coil mounted for rotation with said tire and the windings of which encircle the axle upon which said tire is mounted, an excitation circuit for said coil including in series a source of unidirectional current, a control switch, and a vibrator, switch actuating means including a tire pressure sensing element connected to said control switch to close said control switch when pressure in said tire is below a predetermined level, a receiver coil mounted in fixed relation with respect to said axle and oriented as to be coupled to the magnetic flux in said axle for production of a voltage therein upon energization of said transmitting coil, receiving means connected to said coil and including a plurality of amplifier stages at least one of which stages is connected to said receiver coil and said receiving means also including a relay connected to an output stage of said amplifier, and an indicator connected in circuit with said relay and adapted to be energized in response to closure of said relay upon closure of said control switch.

3,016,516
PULSE CODE MULTIPLEXING SYSTEMS
Charles H. Doersam, Jr., 24 Winthrope Road, Port Washington, N.Y.
Filed Jan. 24, 1957, Ser. No. 636,214
7 Claims. (Cl. 340—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



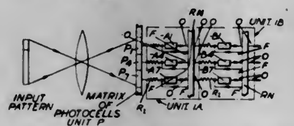
1. A pulse code multiplexing system comprising a plurality of input registers, a stepping register, said input register being coupled in parallel to said stepping register, matrix means controlling sequentially the transfer of pulses from said input registers to said stepping register, a plural-stage binary counter coupled to actuate said matrix means, and external synchronizing means coupled to said counter and to said matrix means, said synchronizing means determining the modulation rate of said system.

3,016,517
REDUNDANT LOGIC CIRCUITRY
Burton R. Saltzberg, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 15, 1959, Ser. No. 813,375
7 Claims. (Cl. 340—147)



1. Circuitry including a plurality of levels of quadruplicated circuits, means for interconnecting said levels, and bus bar means connected to said circuits for converting said circuits to a number of nonredundant circuits which are exactly representative of said circuitry.

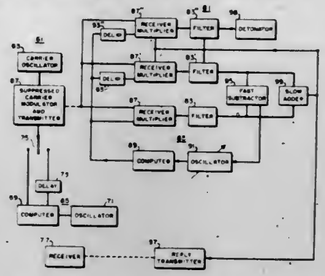
3,016,518
SYSTEM FOR ANALYSING THE SPATIAL DISTRIBUTION OF A FUNCTION
Wilfred Kenelm Taylor, London, England, assignor to National Research Development Corporation, London, England
Filed Feb. 13, 1956, Ser. No. 565,272
Claims priority, application Great Britain Feb. 14, 1955
11 Claims. (Cl. 340—149)



1. A system for analysing a single or multiple dimensional spatial distribution of a variable quantity including means for simultaneously producing signals having a magnitude which is proportional to the magnitude of the quantity at each of a plurality of zones in the distribution and means connected to said means for producing signals and operating simultaneously on all said signals such that larger signals are obtained from those zones in the distribution over which the quantity changes in magnitude or in spatial configuration and smaller or zero signals are obtained from those zones of the distribution over which the magnitude of the quantity is relatively constant.

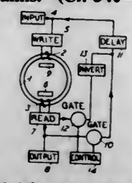
3,016,519
SYNCHRONIZATION FOR MAXIMUM CORRELATION
Herbert G. Lindner, Red Bank, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 12, 1956, Ser. No. 590,999
2 Claims. (Cl. 340—171)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A security remote control system comprising a source of prescheduled random noise modulating a suppressed carrier transmitter at a control station to transmit the noise sidebands of said carrier, a receiver multiplier for said sidebands and a narrow band filter tuned to said carrier to actuate a device at a controlled station, one input to said multiplier comprising a source of substantially identical prescheduled noise, the rate of generation of said noise sources differing slightly at said two stations to cause frequent periods of synchronism of sufficient



duration for the carrier restored by operation of said multiplier on said sidebands and said second noise to pass said narrow band filter and actuate said device.

3,016,520
ELECTRICAL SIGNAL STORAGE ARRANGEMENTS
Adam Chaimowicz, Stevenage, England, assignor to International Computers and Tabulators Limited, London, England, a British company
Filed June 21, 1957, Ser. No. 667,163
Claims priority, application Great Britain June 25, 1956
6 Claims. (Cl. 340—173)

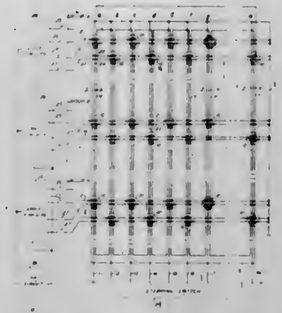


6. Electrical signal delay apparatus comprising a closed loop of magneto-strictive material; input transducer means operatively coupled to said loop for launching a mechanical stress wave in said loop in response to an electrical input signal; output transducer means operatively coupled to said loop to generate an electrical output signal in response to the passage of a stress wave through a portion of said loop; input means connected to said input transducer means for applying an electrical input signal to said input transducer means to launch a stress wave representing said input signal; signal delay means connected to said input transducer means and operative to provide a signal delay time equal to the transit time of a stress wave in said loop between said input transducer means and said output transducer means; a first gate connected to the input of said signal delay means and responsive to said electrical output signal from said output transducer means; signal inverter means connected to the input of said signal delay means; a second gate connected to the input of said signal inverter means and responsive to said electrical output signal from said output transducer means; and control means having two states, said control means when in one of said states energizing said first gate and said control means when in the other of said states energizing said second gate.

3,016,521
MAGNETIC CORE MEMORY MATRIX
John H. McGuigan, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 9, 1956, Ser. No. 603,010
18 Claims. (Cl. 340—174)

1. In a magnetic core memory circuit, a first and a second magnetic core each having a substantially rec-

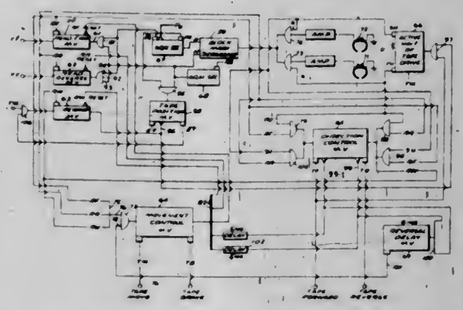
tangular hysteresis characteristic and being capable of being switched from one magnetic condition to another, a first lead threading said cores, second leads threading said cores, means for applying a first current pulse to said first lead, said first lead threading said first core a sufficient number of times to switch said first core but threading said second core an insufficient number of times to switch said second core, and means controllably responsive to the switching of said first core for applying a second current pulse to one of said second leads during the application of said first current pulse on said first lead to switch said second core.



3,016,522
INFORMATION STORAGE APPARATUS USING A RECORD MEDIUM

Norman M. Lourie, Watertown, and Kenneth E. Perry, Newton, Mass., assignors, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware

Filed May 7, 1956, Ser. No. 583,138
9 Claims. (Cl. 340—174.1)

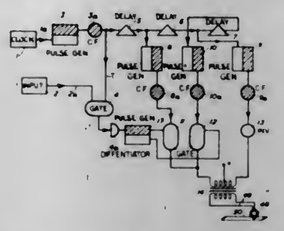


1. Data storage apparatus comprising an elongated record tape adapted to be reversibly driven, said record tape being divided into two halves each of which comprises a plurality of blocks alternately interlaced with the blocks of the other half, a block mark indicator record on said tape for each of said blocks, said block mark indicator record comprising means for selectively identifying the blocks of each half regardless of the direction of motion of said tape, data transfer means positioned relative to said tape to derive therefrom signals indicative of said block mark indicator record and produce tape movement controlling signals to effect the transfer of information relative to said tape, an end of tape indicator record on said tape, and means actuated by said end of tape record so that said data transfer means will be selectively active with the blocks of said first half or said second half.

3,016,523
INFORMATION STORAGE SYSTEMS

John Joshua Sharp, Stevenage, England, assignor to International Computers and Tabulators Limited, London, England, a British company

Filed Jan. 22, 1957, Ser. No. 635,236
Claims priority, application Great Britain Jan. 26, 1956
9 Claims. (Cl. 340—174.1)



9. Apparatus for recording binary signals comprising means responsive to each binary signal to be recorded to generate a group of three discrete pulses occurring at successive spaced instants of time, the second pulse of each group being of the opposite polarity to the other two, means responsive to an applied binary signal of one significance to select and first and second pulses of the group of pulses generated in response to that signal, means responsive to an applied binary signal of the other significance to select the second and third pulses of the group of pulses generated in response to that signal, a recording head, and means for applying the selected pulses to the recording head, said recording head being adapted to impress such pulses, as discrete areas of magnetization, upon a magnetizable medium.

3,016,524
INFORMATION STORAGE SYSTEMS

Arthur Garnet Wolseley Edmunds, 69 Warwick Ave., Edgware, England

Filed Mar. 18, 1957, Ser. No. 646,779
Claims priority, application Great Britain Mar. 20, 1956
2 Claims. (Cl. 340—174.1)



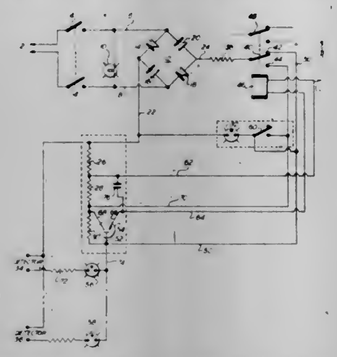
1. Apparatus for recording, storing and reproducing information comprising an elongated member of magnetostrictive material supported at non-reflecting terminations, recording means including means for producing localised variations in the magnetic field in said member at spatially arranged points on a part of said member, reproducing means including means for passing an electric pulse through said part of said member, and an electromechanical transducer coupled with another part of said member.

3,016,525
LEAK ANNUNCIATOR UNIT

Jon F. Hauck, Bethesda, Md., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, a corporation of Delaware

Filed Oct. 7, 1958, Ser. No. 765,866
8 Claims. (Cl. 340—242)

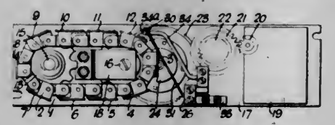
1. An electrical system comprising, in combination, a relay having a coil, a movable contact member and first and second stationary contact members alternately engageable by said movable contact member in response to variations of current flow through said coil; a transistor type semiconductor device having a first terminal connected to one end of said coil; a direct current supply connected between the other end of said coil and said movable contact member; a connection between said first stationary contact member and a second terminal of said semiconductor device; a connection between said second stationary contact member and a third terminal of said semiconductor device; detector means connected with said third terminal and operable to bias said semiconductor device alternately into high and low conductivity between said first and second terminals; and a switch having relatively engageable and disengageable contact members connected, respectively, with said third terminal and one of said first and second terminals of said semiconductor device.



3,016,526
ELECTRICALLY-OPERATED CHANGING DISPLAY INDICATORS

Albert Martin Hailey, Sidcup, and Gordon Herbert Clarke, East Croydon, England, assignors to Siemens Edison Swan Limited, London, England, a British company

Filed Nov. 18, 1958, Ser. No. 774,635
Claims priority, application Great Britain Nov. 18, 1957
8 Claims. (Cl. 340—324)

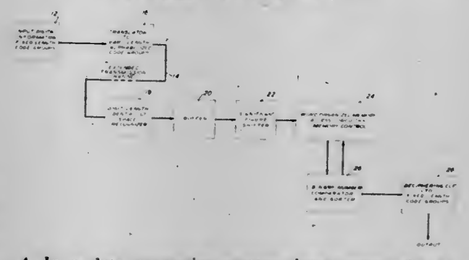


1. An electrically-operated changing display indicator for displaying information signified by code signals, comprising a member and driving means therefor, said member having a normal position and a plurality of discrete stopping positions, different display surfaces arranged to be displayed respectively at said stopping positions of the driven member, a control circuit including a plurality of code branches, means for applying code signals to said code branches, and a code switching device associated with said control circuit for controlling driving of said driven member, said code switching device comprising a fixed assembly of deflectable electric contact members respectively connected in said code branches and a fixed contact member spaced away from said driven member and co-operating with said deflectable contact members and also connected in said control circuit and a plurality of rigidly mounted, differently indented code edges on said driven member extending transversely to the direction of movement of said driven member and operatively engageable with said fixed assembly of deflectable electric contact members at each of said stopping positions of the driven member to deflect at least one of said deflectable members whereby to modify the code branch connections, said connections being so modified when any stopping position of said member corresponds to the requisite stopping position as signified by a particular code signal applied to said code branches that none of said code branches is effective to cause driving of the driven member to continue, which member accordingly stops in said requisite stopping position.

3,016,527
APPARATUS FOR UTILIZING VARIABLE LENGTH ALPHABETIZED CODES

Edgar N. Gilbert, Whippany, and Edward F. Moore, Chatham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Sept. 4, 1958, Ser. No. 759,067
4 Claims. (Cl. 340—347)



4. In a data processing system, input means for serially presenting fixed length binary codes representing individual alphabetical letters, means for translating said fixed length binary codes into variable length binary codes having the dual properties that the length of said variable length codes is generally inverse to the frequency of occurrence of said letters and that, starting from one end of said variable length codes, the numerical values of said codes are in the order of occurrence of said letters in the alphabet, means for transmitting said codes with the most significant digit first, means for breaking the transmitted digital signals into words, storage means, means for normalizing said words by shifting the most significant digit of the code group representing the first letter of each word into a standard position in said storage means, and means for numerically comparing said normalized words.

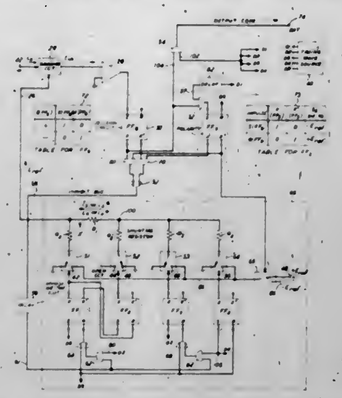
3,016,528
NONLINEAR CONVERSION BETWEEN ANALOG AND DIGITAL SIGNALS BY A PIECEWISE-LINEAR PROCESS

Claude P. Villars, Gillette, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N. Y., a corporation of New York

Filed May 18, 1959, Ser. No. 813,776
16 Claims. (Cl. 340—347)

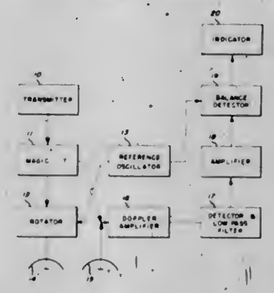
1. In a system, at one point of which amplitude samples of analog signals are, throughout the over-all dynamic range of said signals, transformed nonlinearly to groups of pulses arranged in accordance with a permutation code of base *b*, nonlinearly meaning that said code does not vary in direct proportion to said input samples, and at another point of which said groups of pulses are nonlinearly transformed to reconstitute their original analog form, apparatus to perform said over-all nonlinear transformations on a piecewise-linear basis which comprises means to change the relationship between said amplitude samples and said permutation code at predetermined transitions in the permutation of said code, and means to linearly transform said amplitude samples to said code and said code to said reconstituted samples only between

said predetermined transitions in the permutation of said code, linearly meaning that said amplitude samples and said code, as well as said code and said reconstituted



samples, vary in direct proportion to one another, respectively, only between said predetermined transitions in said code, the over-all relationship between said samples and said code being nonlinear.

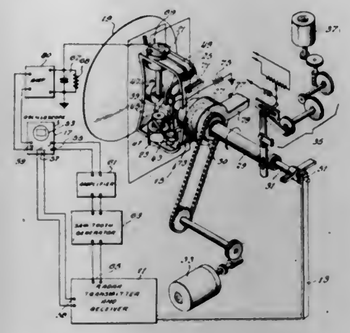
3,016,529
SYSTEMS FOR THE MEASUREMENT OF SEA STATE AND THE LIKE
Kurt M. Kramp, Lexington, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 764,437
13 Claims. (Cl. 343—5)



1. In a radio frequency system having directional transmitting and receiving means the combination comprising: means for alternately plane-polarizing and cross-polarizing said system at a rate less than the transmitting frequency for producing an amplitude modulated first signal at the output of said receiving means; means actuated by said first signal for producing a second signal proportional to amplitude variation of said first signal; and indicator means actuated by said second signal for indicating the roughness of a reflecting surface.

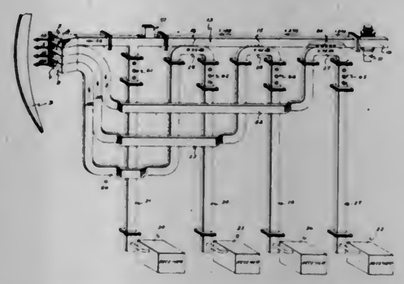
3,016,530
RADAR OBJECT POSITIONAL INDICATOR
Donald M. Skidmore, Farmingdale, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 14, 1946, Ser. No. 709,853
6 Claims. (Cl. 343—11)

1. A recurrent pulse radar object detection system comprising a directive conical scan antenna, a cathode ray indicator, means for sweeping the cathode ray beam in a vertical direction synchronously with the transmitted pulses of said radar and for deflecting said cathode ray beam in the horizontal direction from one side to the opposite side synchronously with the angular progress of said antenna from the down reference point on its conical scan locus, and means including a radar receiver having an output circuit coupled to the beam control cir-



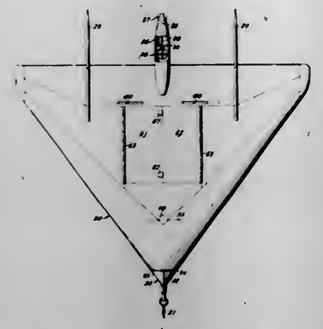
cuit of said cathode ray indicator for changing the intensity of the cathode ray beam according to the distance and relative direction of the radar targets, whereby low targets are presented at the extremities, and high targets are presented in the middle of the horizontal trace, the height of the horizontal trace on the indicator corresponding to the distance of the object.

3,016,531
ANTENNA DISTRIBUTION SYSTEM
Kiyo Tomiyasu, Flushing, and William F. Frost, Stewart Manor, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Mar. 14, 1955, Ser. No. 494,056
14 Claims. (Cl. 343—17.1)



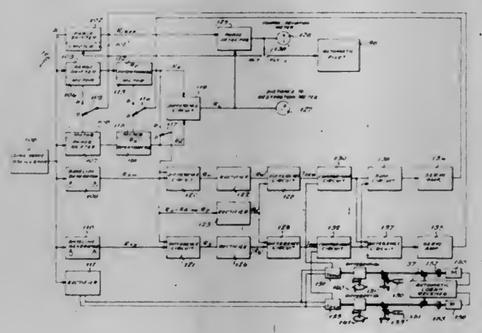
6. A distribution system for an antenna array comprising a microwave transmission line section, a plurality of directional couplers, each directional coupler having a primary and a secondary arm, said primary arms being interconnected along said transmission line, a plurality of radiating means, each of said radiating means being connected to one end of the secondary arm of a respective directional coupler, and a plurality of receiving means, each receiving means being connected to the other end of the secondary arm of a respective directional coupler.

3,016,532
TOW TARGET
Bruce E. Del Mar, Pacific Palisades, Calif., assignor to Del Mar Engineering Laboratories, Los Angeles, Calif., a corporation of California
Filed Feb. 25, 1957, Ser. No. 641,929
3 Claims. (Cl. 343—18)



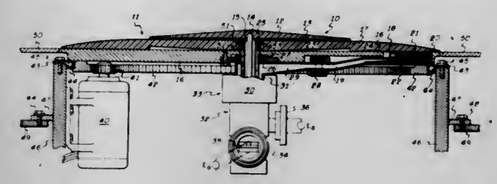
1. An aerial tow target for connection with a tow line for tow by an aircraft, comprising: a hollow, elongate, streamlined housing formed of a material permeable by radar waves; a shaft; means for rotatably mounting said shaft within said housing and longitudinally thereof; a radar reflecting unit including at least three normally intersecting disks fixedly mounted to said shaft; vane means drivingly connected to said shaft and disposed exteriorly of said housing, said vane means being aerodynamically driven as said target is towed in flight thereof to drivingly rotate said shaft, whereby said radar reflecting unit is rotated relative to said housing in the towed flight of said target; and means carried by the forward portion of said target for attaching the target to a tow line for tow by a towing aircraft.

3,016,533
NAVIGATION COMPUTER
Robert L. Frank, New York, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Mar. 22, 1951, Ser. No. 216,893
31 Claims. (Cl. 343—103)



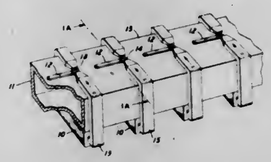
13. A Loran automatic craft navigator comprising, means to create voltage inputs representing Loran station base line vectors, means to insert the hyperbolic coordinates of present position and desired destination, means to create vector voltages representing the directions and distances from said Loran stations to said destination and said present position, means to compare said position and destination vector voltages to determine course and distance from said present position to said destination, and automatic pilot means responsive to said comparison means to guide said craft to said destination.

3,016,534
DUAL FUNCTION ANTENNA
Jack V. D'Agostino, Levittown, and Carl Rothenberg, New York, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed July 1, 1960, Ser. No. 40,377
9 Claims. (Cl. 343—725)



6. A dual function antenna for independently radiating electromagnetic energy both in an omnidirectional radiation pattern and in a directional radiation pattern comprising a thin circular lens having a radially varying effective index of refraction, electromagnetic energy feed means disposed adjacent the periphery of said lens for launching electromagnetic energy diametrically across said lens, a centrally apertured conductive plate disposed on an outer face of said circular lens, a disc of dielectric material having a radially varying index of refraction symmetrically disposed on the face of said plate opposite said lens thereby forming a dielectric-disc antenna, and a coaxial transmission line extending transversely through the central portion of said lens with the outer conductor of said line terminating on said plate and the center conductor extending through the central aperture of said plate and terminating within said dielectric disc for launching surface waves in said dielectric-disc antenna.

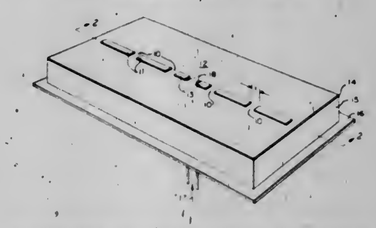
3,016,535
SLOTTED WAVEGUIDE ANTENNA
William H. Hewitt, Jr., Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,365
10 Claims. (Cl. 343—787)



1. A slotted waveguide antenna comprising a rectangular waveguide formed with a series of rectangular shaped slots spaced apart along the length of said waveguide for radiating into free-space the energy waves guided by said waveguide, said slots being located at predetermined positions in one of the broad faces of said waveguide and transversely displaced with respect to the longitudinal center line thereof, an element of gyromagnetic material uniformly disposed in each of said slots proximate to one of the ends thereof, and means for applying a variable

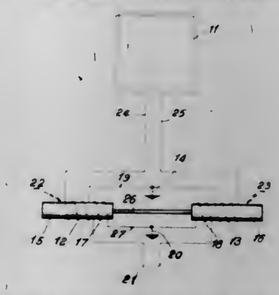
biasing magnetic field to the gyromagnetic material in each of said slots to effectively alter the length of each slot, said biasing magnetic field being applied in a direction transverse to the direction of travel of the energy through each slot.

3,016,536
CAPACITIVELY COUPLED COLLINEAR STRIP-LINE ANTENNA ARRAY
Eugene G. Fubini, Glen Head, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed May 14, 1958, Ser. No. 735,344
4 Claims. (Cl. 343—801)



1. An antenna array comprising, in combination, a first electrical half-wave strip element, a second electrical half-wave strip element spaced from said first element and in substantially collinear relationship therewith, two discrete electrical quarter-wave strip elements spaced intermediate said half-wave element and substantially collinear therewith, means coupled to the adjacent ends of said quarter-wave elements for propagating radio-frequency energy, a ground plane space from said quarter-wave and half-wave elements, and dielectric means intermediate said ground plane and elements for supporting said elements in substantially parallel relationship with said ground plane wherein the spacing of said strip elements from one another creates a capacitive coupling therebetween.

3,016,537
DIRECTION FINDER ANTENNA SYSTEM
Albert Troost and Rudi Sacher, Ulm (Danube), Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed June 25, 1958, Ser. No. 744,369
Claims priority, application Germany July 9, 1957
5 Claims. (Cl. 343—850)

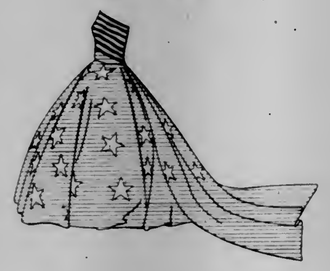


1. A balanced coupling system for coupling the terminals of at least one directional antenna to the terminals of a radio communication set comprising, two transformers each having a primary and a secondary winding and the windings on each transformer being mutually displaceable, the primary windings being connected to the antenna terminals and being symmetrically grounded at a center tap point; and the secondary winding being mutually connected in series across the terminals of said set and grounded at their center point of symmetry; separate permeable rods through both windings of the transformer and mechanically coupled together, the secondary windings being fixed to said rods and the sense in which said windings are interconnected being such, that axial reciprocation of the rods in the primary windings varies the mutual coupling oppositely in each of the transformers, and the rods being sufficiently long such that the inductance of the system is substantially independent of the various axial positions of the rods.

DESIGNS

JANUARY 9, 1962

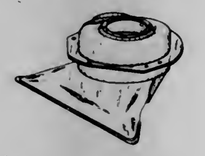
192,022
DRESS
Velia Marinelli, 1422 Post Ave., Rockford, Ill.
Filed Oct. 13, 1960, Ser. No. 62,480
Term of patent 14 years
(Cl. D3—26)



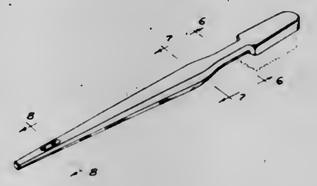
192,023
SOLE FOR A BOOT OR SIMILAR ARTICLE OF FOOTWEAR
Abraham Messinger, Larchmont, N.Y., assignor to Vylyt Corporation, New York, N.Y.
Filed Apr. 13, 1961, Ser. No. 64,723
Term of patent 14 years
(Cl. D7—5)



192,024
VACUUM CLEANER CASING
Robert J. McKnight, Springfield, Ohio, assignor to Orly Musgrave, Springfield, Ohio
Filed Sept. 24, 1959, Ser. No. 57,661
Term of patent 14 years
(Cl. D9—2)



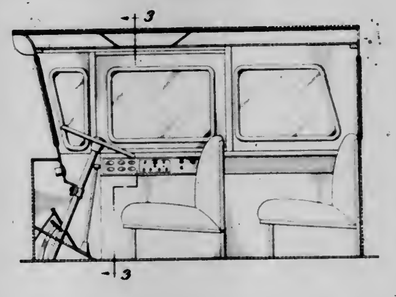
192,025
TOOTH BRUSH
Martin E. Rudnick, 5848 McKellar Drive, San Jose, Calif.
Filed Apr. 24, 1961, Ser. No. 64,856
Term of patent 14 years
(Cl. D9—2)



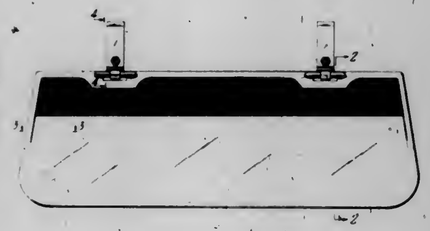
192,026
MOBILE SERVICE STATION
Joseph S. McGee, Dorval, Quebec, George J. Miron, Montreal, Quebec, and Margaret E. A. Pitt, Westmount, Quebec, Canada, assignors to Modenco of Canada Limited, Montreal, Quebec, Canada
Filed Sept. 28, 1959, Ser. No. 57,710
Term of patent 14 years
(Cl. D13—1)



192,027
TRUCK
Evan S. Prichard, La Canada, Calif., assignor, by mesne assignments, to Challenge-Cook Bros. Incorporated, La Miranda, Calif., a corporation of California
Filed May 4, 1959, Ser. No. 55,752
Term of patent 14 years
(Cl. D14—3)



192,028
ANTI-GLARE VISOR FOR AUTOMOBILE OR THE LIKE
Albert Rothgart, Brooklyn, N.Y., assignor to Visionade Manufacturing Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed Apr. 10, 1961, Ser. No. 64,671
Term of patent 7 years
(Cl. D14—6)



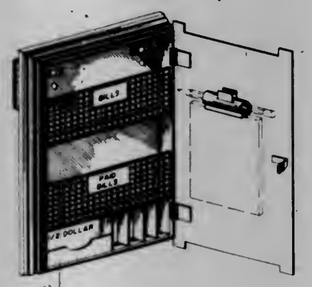
192,029
MOLDED SEAT
Sam Avedon, Los Angeles, Calif., and André Lalandre, Paris, France, assignors to Alladin Plastics, Inc., Gardena, Calif., a corporation of California
Filed Mar. 1, 1961, Ser. No. 64,106
Term of patent 14 years
(Cl. D15—1)



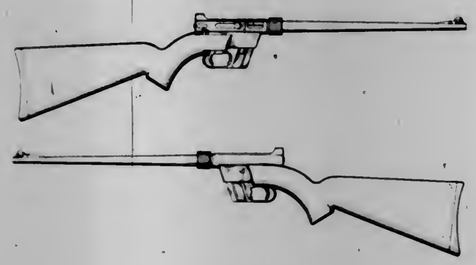
192,030
CASKET HARDWARE MEMBER
Lawrence L. Green, 2130 W. Rice St., Elmwood Park, Ill.
Continuation of design applications Ser. No. 63,420, Jan. 3, 1961, and Ser. No. 63,421, Jan. 3, 1961. This application May 22, 1961, Ser. No. 65,947
Term of patent 7 years
(Cl. D19—2)



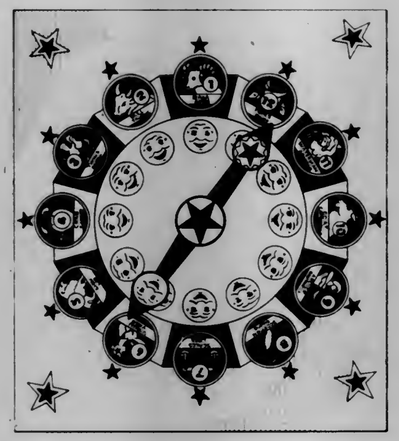
192,031
COMBINATION BILL AND MONEY FILE
Walter Kowalczyk, 3396 12th St., Wyandotte, Mich.
Filed Mar. 4, 1960, Ser. No. 59,612
Term of patent 14 years
(Cl. D29—23)



192,032
RIFLE
Eugene M. Stoner, Newport Beach, Calif., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland
Filed Mar. 15, 1960, Ser. No. 59,742
Term of patent 14 years
(Cl. D30—1)



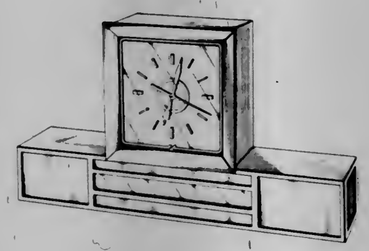
192,033
GAME BOARD INDICATOR
Joseph A. Slais, 425 Shenstone Road, Riverside, Ill.
Filed July 21, 1960, Ser. No. 61,467
Term of patent 14 years
(Cl. D34—5)



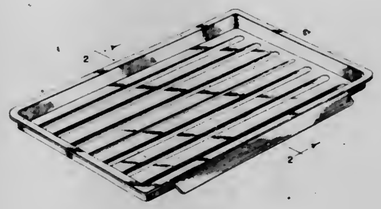
192,034
JOUNCING FOOT TOY
Norman T. Mills, 42 Clinton Ave., Bridgeport, Conn.
Filed Feb. 17, 1961, Ser. No. 63,979
Term of patent 14 years
(Cl. D34—5)



192,035
COMBINED CLOCK AND SIGN DISPLAY CASE OR SIMILAR ARTICLE
James E. Russell, 1425 Glenmore Forest Drive, Houston, Tex.
Filed May 29, 1961, Ser. No. 65,382
Term of patent 14 years
(Cl. D42—7)



192,036
MILK BOTTLE TRAY
George Eugene Raymond, Lincoln, R.I., assignor, by mesne assignments, to Dari-Plastics, Inc., a corporation of Rhode Island
Filed June 7, 1961, Ser. No. 65,510
Term of patent 14 years
(Cl. D44—10)



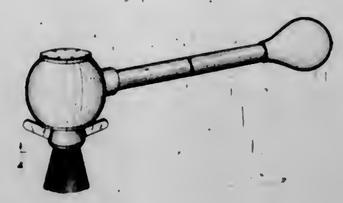
192,037
PLATE OR SIMILAR ARTICLE
Elliott M. House, Princeton Junction, N.J., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed July 7, 1961, Ser. No. 65,849
Term of patent 14 years
(Cl. D44—15)



192,038
BEVERAGE SERVER OR THE LIKE
Herbert R. Carpenter, Chicago, Ill., assignor to Club Aluminum Products Company, La Grange Park, Ill., a corporation of Illinois
Filed May 24, 1961, Ser. No. 65,321
Term of patent 14 years
(Cl. D44—21)



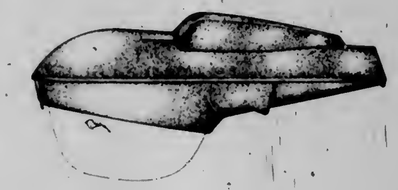
192,039
BARBECUE BASTER OR THE LIKE
Wilson K. Jones, 1812 Union St., and George N. Newham, Rte. 2, Canal Road, both of Brunswick, Ga.
Filed July 12, 1961, Ser. No. 65,896
Term of patent 14 years
(Cl. D44—29)



192,040
NIGHT LIGHT
Robert Goldman and Lillian Goldman, Louisville, Ky., assignors to Lili, Inc., Salem, Ind., a corporation of Indiana
Filed Aug. 18, 1961, Ser. No. 66,413
Term of patent 7 years
(Cl. D48—20)



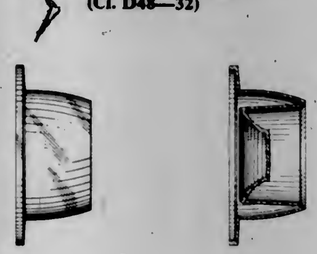
192,041
LUMINAIRE
Edmund L. Izzi, North Olmsted, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed Dec. 30, 1960, Ser. No. 63,401
Term of patent 14 years
(Cl. D48—31)



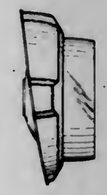
192,042
TAILLIGHT UNIT FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., 1455 Lakewood Road, Bloomfield Hills, Mich.
Filed Aug. 25, 1961, Ser. No. 66,500
Term of patent 7 years
(Cl. D48—32)



192,043
LAMP LENS FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., 1455 Lakewood Road, Bloomfield Hills, Mich.
Filed Aug. 25, 1961, Ser. No. 66,501
Term of patent 7 years
(Cl. D48—32)



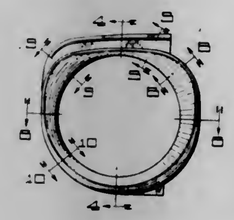
192,044
TAILLIGHT UNIT FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., 1455 Lakewood Road, Bloomfield Hills, Mich.
Filed Aug. 31, 1961, Ser. No. 66,575
Term of patent 7 years
(Cl. D48—32)



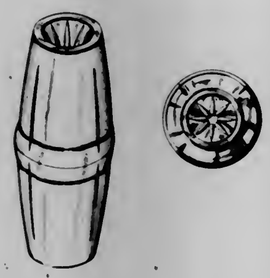
192,045
LAMP LENS FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., 1455 Lakewood Road, Bloomfield Hills, Mich.
Filed Aug. 31, 1961, Ser. No. 66,577
Term of patent 7 years
(Cl. D48—32)



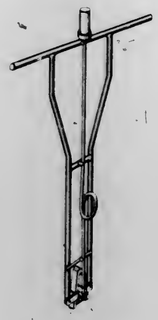
192,046
HEADLIGHT BEZEL FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., 1455 Lakewood Road, Bloomfield Hills, Mich.
Filed Sept. 21, 1961, Ser. No. 66,785
Term of patent 7 years
(Cl. D48—32)



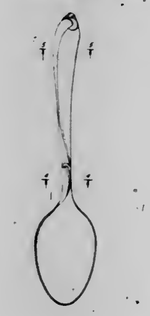
192,047
MINIATURE WASHING MACHINE
Guy F. Farmer, P.O. Box 225, Blackshear, Ga.
Filed Oct. 20, 1960, Ser. No. 62,547
Term of patent 14 years
(Cl. D49—1)



192,048
DIVINING ROD
Roy Rickard, 314 Wasson St., Toledo, Ohio
Filed Aug. 23, 1961, Ser. No. 66,469
Term of patent 14 years
(Cl. D52—1)



192,049
SPOON OR SIMILAR ARTICLE
Ellen B. Manderfield, Syracuse, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed July 7, 1961, Ser. No. 65,846
Term of patent 14 years
(Cl. D54—12)



192,050
SPOON OR SIMILAR ARTICLE
Frank R. Perry, Oneida, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed Aug. 25, 1961, Ser. No. 66,498
Term of patent 14 years
(Cl. D54—12)



192,051
SPOON OR SIMILAR ARTICLE
Melvin A. Lea, Oneida, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed Aug. 25, 1961, Ser. No. 66,499
Term of patent 14 years
(Cl. D54—12)



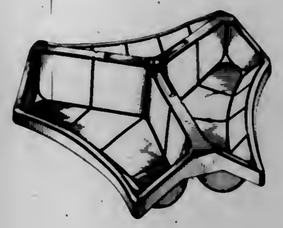
192,052
COMBINED BOTTLE AND EYE CUP
Charles E. Akers, 201 N. Wells St., Park Ridge, Ill.
Filed May 29, 1961, Ser. No. 65,391
Term of patent 14 years
(Cl. D58—6)



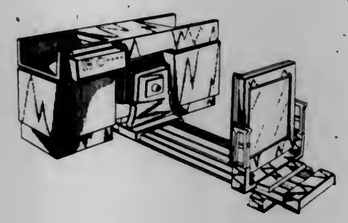
192,053
GARMENT BOX
Carl W. Sundberg, Bloomfield Hills, Mich., assignor to Gerald P. Kent, Southfield Township, Mich.
Filed Aug. 30, 1960, Ser. No. 61,958
Term of patent 14 years
(Cl. D58—12)



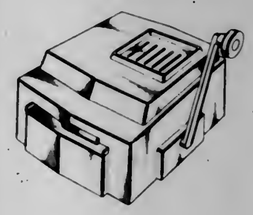
192,054
PARTS TRAY FOR WORK STATION
Godfrey L. de Caccia, 4460 Overland, Culver City, Calif.
Filed Apr. 10, 1961, Ser. No. 64,710
Term of patent 14 years
(Cl. D58—13)



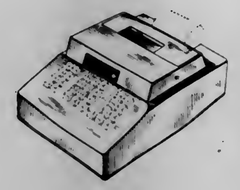
192,055
COMBINED COPYING CAMERA AND PRINT FINISHING CABINET OR THE LIKE
Charles P. Sippel, Jr., Villa Park, and Walter Wanielista, Westchester, Ill., assignors to Robertson Photo-Mechanix, Inc., Chicago, Ill., a corporation of Illinois
Filed May 26, 1961, Ser. No. 65,352
Term of patent 14 years
(Cl. D61—1)



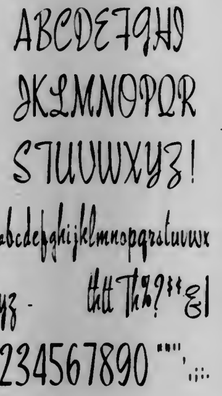
192,056
CASING FOR A DATA RECORDING MACHINE
Donald R. Biegel, North Hollywood, Calif., assignor to Datanamics, Inc., Canoga Park, Calif., a corporation of California
Filed Feb. 28, 1961, Ser. No. 64,090
Term of patent 14 years
(Cl. D64—11)



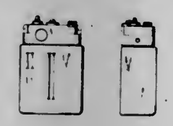
192,057
COMPUTING MACHINE OR THE LIKE
Peter Sieber, Frankfurt am Main, Seckbach, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany
Filed Apr. 3, 1961, Ser. No. 64,591
Term of patent 14 years
(Cl. D64—11)



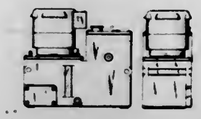
192,058
FONT OF PRINTING TYPE
Ray F. Morgan, Northfield, Ill., assignor to The Morgan Sign Machine Co., Chicago, Ill., a corporation of Illinois
Filed July 20, 1961, Ser. No. 65,996
Term of patent 14 years
(Cl. D64—12)



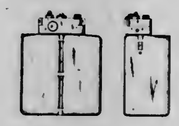
192,059
COMBINED LUBRICANT AND COOLING UNIT
Thomas R. Thomas, 151 W. Passaic St., New York, N.Y.
Filed Aug. 30, 1960, Ser. No. 61,943
Term of patent 14 years
(Cl. D65—1)



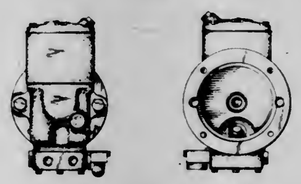
192,060
COMBINED LUBRICANT AND COOLING UNIT
Thomas R. Thomas, 151 W. Passaic St., New York, N.Y.
Filed Aug. 30, 1960, Ser. No. 61,944
Term of patent 14 years
(Cl. D65—1)



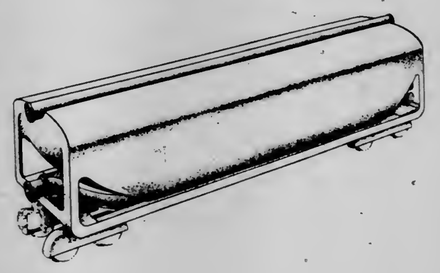
192,061
COMBINED LUBRICANT AND COOLING UNIT
Thomas R. Thomas, 151 W. Passaic St., New York, N.Y.
Filed Aug. 30, 1960, Ser. No. 62,072
Term of patent 14 years
(Cl. D65—1)



192,062
HYDRAULIC PUMP
John Rollitt, York, England, assignor to Armstrong Patents Co. Limited, London, England, a company of Great Britain
Filed Dec. 7, 1960, Ser. No. 63,145
Term of patent 14 years
Claims priority, application Great Britain Aug. 9, 1960
(Cl. D65—1)



192,063
BULK LADING CAR
Jack E. Gutridge, Dyer, Ind., assignor to Pullman Incorporated, a corporation of Delaware
Filed Aug. 29, 1961, Ser. No. 66,538
Term of patent 14 years
(Cl. D66—1)



192,064
AIRCRAFT
Frank A. Petry, 1615 Armacost Ave., Los Angeles, Calif.
Filed Feb. 29, 1960, Ser. No. 59,553
Term of patent 14 years
(Cl. D71—1)



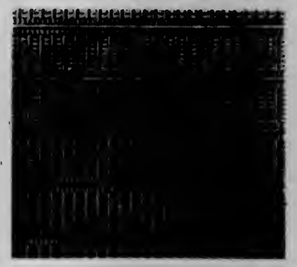
192,065
BOAT
Ernest L. Conway, 3116 E. 54th St., Kansas City, Mo.
Filed Apr. 19, 1960, Ser. No. 60,254
Term of patent 14 years
(Cl. D71—1)



192,066
BOTTLE WARMER
Chester H. Wickenberg, Elgin, and Burton Kelly, Bellwood, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 17, 1960, Ser. No. 61,787
Term of patent 14 years
(Cl. D81—10)



192,067
PLASTIC SHEET MATERIAL
John R. Ellefson, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 15, 1961, Ser. No. 66,357
Term of patent 14 years
(Cl. D87—3)



192,068
HAND SAW
Burton P. Franklin, Danville, Va., and James H. Parcher, Newtown Square, Pa., assignors to H. K. Porter Company (Delaware), Danville, Va., a corporation of Delaware
Filed June 12, 1961, Ser. No. 65,497
Term of patent 14 years
(Cl. D93—4)



192,069
MANUAL SAW
Burton P. Franklin, Danville, Va., and James H. Parcher, Newtown Square, Pa., assignors to H. K. Porter Company (Delaware), Danville, Va., a corporation of Delaware
Filed June 7, 1961, Ser. No. 65,498
Term of patent 14 years
(Cl. D93—4)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bausch & Lomb Inc.: *See*—
Boughton, Olin W., De Grave, and Maier. Re. 25,115.
Boughton, Olin W., C. J. De Grave, Jr., and K. D. Maier, to Bausch & Lomb Inc. Slide projector tray. Re. 25,115, 1-9-62, Cl. 40—79.
Cardwell Westinghouse Co.: *See*—
Tucker, Herbert E. Re. 25,110.
Clopay Corp.: *See*—
Collins, Solomon M. Re. 25,112.
Collins, Solomon M., to Clopay Corp. Folding closure. Re. 25,112, 1-9-62, Cl. 160—199.
Container Corp. of America: *See*—
Cote, Raymond A. Re. 25,111.
Cote, Raymond A., to Container Corp. of America. Can carton with chime engaging tabs. Re. 25,111, 1-9-62, Cl. 206—65.
De Grave, Charles J., Jr.: *See*—
Boughton, Olin W., De Grave, and Maier. Re. 25,115.
Hood, George C., R. E. Smith, and G. J. Pierotti, to Shell Oil Co. Purifying hydrogen peroxide. Re. 25,114, 1-9-62, Cl. 23—207.
Johnson & Johnson: *See*—
Wilburn, Edgar H. Re. 25,113.
Maier, Kenneth D.: *See*—
Boughton, Olin W., De Grave, and Maier. Re. 25,115.
Pierotti, Gino J.: *See*—
Hood, George C., Smith, and Pierotti. Re. 25,114.
Shell Oil Co.: *See*—
Hood, George C., Smith, and Pierotti. Re. 25,114.
Smith, Randolph E.: *See*—
Hood, George C., Smith, and Pierotti. Re. 25,114.
Tucker, Herbert E., to Cardwell Westinghouse Co. Draft gear for railway cars. Re. 25,110, 1-9-62, Cl. 213—45.
Wilburn, Edgar H., to Johnson & Johnson. Sterilizable and sterilized hypodermic syringe assemblies. Re. 25,113, 1-9-62, Cl. 128—218.

LIST OF PLANT PATENTEES

Asseretto, Angelo, to M. Blanchon. Rose plant. 2,120, 1-9-62, Cl. 47—61
Blanchon, Michel: *See*—
Asseretto, Angelo. 2,120.

LIST OF DESIGN PATENTEES

Akers, Charles E. Combined bottle and eye cup. 192,052, 1-9-62, Cl. D58—6.
Aliadin Plastics, Inc.: *See*—
Avedon, Sam, and Lalandre. 192,029.
Armstrong Patents Co. Ltd.: *See*—
Rollitt, John. 192,062.
Avedon, Sam, and A. Lalandre, to Aliadin Plastics, Inc. Molded seat. 192,029, 1-9-62, Cl. D15—1.
Biebel, Donald R., to Datanamics, Inc. Casing for a data recording machine. 192,056, 1-9-62, Cl. D64—11.
Bordinat, Eugene, Jr. Taillight unit for automobiles or the like. 192,042, 1-9-62, Cl. D48—32.
Bordinat, Eugene, Jr. Lamp lens for automobiles or the like. 192,043, 1-9-62, Cl. D48—32.
Bordinat, Eugene, Jr. Taillight unit for automobiles or the like. 192,044, 1-9-62, Cl. D48—32.
Bordinat, Eugene, Jr. Lamp lens for automobiles or the like. 192,045, 1-9-62, Cl. D48—32.
Bordinat, Eugene, Jr. Headlight bezel for automobiles or the like. 192,046, 1-9-62, Cl. D48—32.
Carpenter, Herbert R. to Club Aluminum Products Co. Beverage server or the like. 192,038, 1-9-62, Cl. D44—21.
Challenge-Cook Bros., Inc.: *See*—
Prichard, Evan S. 192,027.
Club Aluminum Products Co.: *See*—
Carpenter, Herbert R. 192,038.
Conway, Ernest L. Boat. 192,065, 1-9-62, Cl. D71—1.
Dari-Plastics, Inc.: *See*—
Raymond, George E. 192,036.
Datanamics, Inc.: *See*—
Biebel, Donald R. 192,056.
De Caccia, Godfrey L. Parts tray for work station. 192,054, 1-9-62, Cl. D58—13.
Du Pont de Nemours, E. I., and Co.: *See*—
Ellefson, John R. 192,067.
Ellefson, John R., to E. I. du Pont de Nemours and Co. Plastic sheet material. 192,067, 1-9-62, Cl. D87—3.
Fairchild Engine and Airplane Corp.: *See*—
Stoner, Eugene M. 192,032.
Farmer, Guy F. Miniature washing machine. 192,047, 1-9-62, Cl. D49—1.
Franklin, Burton P., and J. H. Parcher, to H. K. Porter Co., (Delaware). Hand saw. 192,068, 1-9-62, Cl. D93—4.
Franklin, Burton P., and J. H. Parcher, to H. K. Porter Co., (Delaware). Manual saw. 192,069, 1-9-62, Cl. D93—4.
Goldman, Lillian: *See*—
Goldman, Robert and L. 192,040.
Goldman, Robert and L., to Lill, Inc. Night light. 192,040, 1-9-62, Cl. D48—20.
Green, Lawrence L. Casket hardware member. 192,030, 1-9-62, Cl. D19—2.
Gutridge, Jack E., to Pullman Inc. Bulk lading car. 192,063, 1-9-62, Cl. D66—1.
House, Elliott M., to Oneida Ltd. Plate or similar article. 192,037, 1-9-62, Cl. D44—15.
Izzi, Edmund L., to Westinghouse Electric Corp. Luminaire. 192,041, 1-9-62, Cl. D48—31.
Jones, Wilson K., and G. N. Newbam. Barbecue baster or the like. 192,039, 1-9-62, Cl. D44—29.
Kelly, Burton: *See*—
Wickenberg, Chester H., and Kelly. 192,066.
Kent, Gerald P.: *See*—
Sundberg, Carl W. 192,053.
Kowalczyk, Walter. Combination bill and money tile. 192,031, 1-9-62, Cl. D29—25.
Lea, Melvin A., to Oneida Ltd. Spoon or similar article. 192,051, 1-9-62, Cl. D54—12.
Lill, Inc.: *See*—
Goldman, Robert and L. 192,040.
Manderfield, Ellen B., to Oneida Ltd. Spoon or similar article. 192,049, 1-9-62, Cl. D54—12.
Marinelli, Velia. Dress. 192,022, 1-9-62, Cl. D3—26.
McGee, Joseph S., G. J. Miron, and M. E. A. Pitt, to Modenco of Canada Ltd. Mobile service station. 192,026, 1-9-62, Cl. D13—1.
McKnight, Robert J., to O. Musgrave. Vacuum cleaner casing. 192,024, 1-9-62, Cl. D9—2.
Messinger, Abraham, to Vylyt Corp. Sole for a boot or similar article of footwear. 192,023, 1-9-62, Cl. D7—5.
Mills, Norman T. Jouncing foot toy. 192,034, 1-9-62, Cl. D34—5.
Miron, George J.: *See*—
McGee, Joseph S., Miron, and Pitt. 192,026.
Modenco of Canada Ltd.: *See*—
McGee, Joseph S., Miron, and Pitt. 192,026.
Morgan, Ray F., to The Morgan Sign Machine Co. Font of printing type. 192,058, 1-9-62, Cl. D64—12.
Morgan Sign Machine Co., The: *See*—
Morgan, Ray F. 192,058.
Musgrave, Orly: *See*—
McKnight, Robert J. 192,024.
Newbam, George N.: *See*—
Jones, Wilson K., and Newbam. 192,039.
Olympia Werke A.G.: *See*—
Sieber, Peter. 192,057.
Oneida Ltd.: *See*—
House, Elliott M. 192,037.
Lea, Melvin A. 192,051.
Manderfield, Ellen B. 192,049.
Perry, Frank R. 192,050.
Parcher, James H.: *See*—
Franklin, Burton P., and Parcher. 192,068.
Franklin, Burton P., and Parcher. 192,069.
Perry, Frank R., to Oneida Ltd. Spoon or similar article. 192,050, 1-9-62, Cl. D54—12.
Petry, Frank A. Aircraft. 192,064, 1-9-62, Cl. D71—1.
Pitt, Margaret E. A.: *See*—
McGee, Joseph S., Miron, and Pitt. 192,026.
Porter, H. K., Co., (Delaware): *See*—
Franklin, Burton P., and Parcher. 192,068.
Franklin, Burton P., and Parcher. 192,069.
Prichard, Evan S., to Challenge-Cook Bros. Inc. Truck. 192,027, 1-9-62, Cl. D14—3.
Pullman Inc.: *See*—
Gutridge, Jack E. 192,063.

Raymond, George E., to Dari-Plastics, Inc. Milk bottle tray. 192,036, 1-9-62, Cl. D44—10.
Rickard, Roy. Divining rod. 192,048, 1-9-62, Cl. D52—1.
Robertson Photo-Mechanix, Inc.: *See*—
Sippel, Charles P., Jr., and Wanielista. 192,055.
Rollitt, John, to Armstrong Patents Co. Ltd. Hydraulic pump. 192,062, 1-9-62, Cl. D65—1.
Rothgart, Albert, to Visionade Mfg. Co., Inc. Anti-glare visor for automobile or the like. 192,028, 1-9-62, Cl. D14—6.
Rudnick, Martin E. Tooth brush. 192,025, 1-9-62, Cl. D9—2.
Russell, James E. Combined clock and sign display case or similar article. 192,035, 1-9-62, Cl. D42—7.
Sieber, Peter, to Olympia Werke A.G. Computing machine or the like. 192,057, 1-9-62, Cl. D64—11.
Sippel, Charles P., Jr., and W. Wanielista, to Robertson Photo-Mechanix, Inc. Combined copying camera and print finishing cabinet or the like. 192,055, 1-9-62, Cl. D61—1.
Slais, Joseph A. Game board indicator. 192,033, 1-9-62, Cl. D34—5.
Stoner, Eugene M., to Fairchild Engine and Airplane Corp. Rifle. 192,052, 1-9-62, Cl. D30—1.
Sundberg, Carl W., to G. P. Kent. Garment box. 192,053, 1-9-62, Cl. D58—12.
Thomas, Thomas R. Combined lubricant and cooling unit. 192,059, 1-9-62, Cl. D65—1.
Thomas, Thomas R. Combined lubricant and cooling unit. 192,060, 1-9-62, Cl. D65—1.
Thomas, Thomas R. Combined lubricant and cooling unit. 192,061, 1-9-62, Cl. D65—1.
Visionade Mfg. Co., Inc.: *See*—
Rothgart, Albert. 192,028.
Vylyt Corp.: *See*—
Messinger, Abraham. 192,023.
Wanielista, Walter: *See*—
Sippel, Charles P., Jr., and Wanielista. 192,055.
Westinghouse Electric Corp.: *See*—
Izzi, Edmund L. 192,041.
Wickenberg, Chester H., and B. Kelly, to Sunbeam Corp. Bottle warmer. 192,066, 1-9-62, Cl. D81—10.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abbott, Tom L. Paraffin removing valve assembly for tubing. 3,016,094, 1-9-62, Cl. 166—169.
Ackermann, Carl A.: *See*—
Frantz, Frederick H., and Ackermann. 3,016,002.
Adam, Howard W., to International Minerals & Chemical Corp. Method of beneficiating mica. 3,016,139, 1-9-62, Cl. 209—8.
Adler, Solomon. Attachment for zigzag sewing machines. 3,016,030, 1-9-62, Cl. 112—160.
Aeroquip Corp.: *See*—
Contreras, Gilbert E., and Graves. 3,016,249.
Agfa Aktiengesellschaft: *See*—
Kaden, Willy. 3,015,999.
Air Preheater Corp., The: *See*—
Muller, Robert H. 3,016,231.
Ajax Magnethermic Corp.: *See*—
Ross, Nicholas V. 3,016,412.
Aktiebolaget Addo: *See*—
Lydfors, John. 3,016,188.
Aktieselskabet National Industri: *See*—
Lange, Emil. 3,016,437.
Aladdin Industries, Inc.: *See*—
Bramming, Carl. 3,016,159.
Alfieri, Giuseppe, to Fabrica Italiana Magneti Marelli. Distributor for pneumatic braking systems with variable load and stroke. 3,016,271, 1-9-62, Cl. 303—53.
Alford, Andrew, and D. P. Flood. Rotatable waveguide joint. 3,016,504, 1-9-62, Cl. 333—98.
Allegrini, Aldo P.: *See*—
Robinson, Alfred J., Allegrini, and Mueller. 3,016,355.
Allied Chemical Corp.: *See*—
Beauchamp, William D., Booth, and Degginger. 3,016,404.
Lloyd, Billy E. 3,016,379.
Allis-Chalmers Mfg. Co.: *See*—
Alonso, Bernardo. 3,016,236.
Andersen, Wilhelm A., and Haegh. 3,016,482.
Hauck, Jon F. 3,016,525.
Alloy Die Casting Co.: *See*—
Smith, Donald C., and King. 3,016,146.
Alonso, Bernardo, to Allis-Chalmers Mfg. Co. Rotary kiln discharge end construction. 3,016,236, 1-9-62, Cl. 263—32.
Altmann, Norman A., and W. H. Bureau, to Butler Paper Corps. Paper de-coating and benefaction process and products thereof. 3,016,323, 1-9-62, Cl. 162—4.
Alton Box Board Co.: *See*—
Dotzenroth, Paul N. 3,015,923.
Ambler, Vernon C., E. E. Anderson, and F. Wright. Bags and method and machine for making same. 3,015,996, 1-9-62, Cl. 93—8.
Ambrosio, Biagio F., and D. Rutland, to The Electrada Corp. Transducer for transmission systems. 3,016,423, 1-9-62, Cl. 178—79.
American Chain & Cable Co., Inc.: *See*—
Bratz, Otto J. 3,015,969.
American Cyanamid Co.: *See*—
Kropa, Edward L., and Nyquist. 3,016,281.
Petropoulos, John C. 3,016,400.
Roth, Roy W. 3,016,333.
Wright, William B., Jr., and Brabander. 3,016,382.
American Doll & Toy Corp.: *See*—
Beebe, Herbert R. 3,015,828.
American Marietta Co., Stoner-Mudge Co. Division: *See*—
Roeser, Gerald P., and Bach. 3,016,309.
American Metal Products Co.: *See*—
Hughes, Albert L. 3,016,264.
American Steel Foundries: *See*—
Polanin, Walter R. 3,016,114.
American Viscose Corp.: *See*—
Schappel, Joseph W. 3,016,283.
Ampex Corp.: *See*—
Kabell, Louis J., Murphy, and Guggi. 3,016,428.
Amphenol-Borg Electronics Corp.: *See*—
Concelman, Carl W. 3,016,496.
Anchor Hocking Glass Corp.: *See*—
Gora, Henry Z. 3,015,843.
Andersen, Wilhelm A., and J. E. Haegh, to Allis-Chalmers Mfg. Co. Two speed synchronous induction motor. 3,016,482. 1-9-62, Cl. 318—224.
Anderson, Arnold F.: *See*—
Schmitz, Robert A., and Anderson. 3,016,327.
Anderson, Esca E.: *See*—
Ambler, Vernon C., Anderson, and Wright. 3,015,996.
Anderson, Lloyd E., Sr., to Pittsburgh-Des Moines Steel Co. Adjustable mounting for a centrifugal grit blasting machine. 3,015,913, 1-9-62, Cl. 51—9.
Anderson, Ralph T., and D. J. Buettner. Auxiliary vehicle axle. 3,016,102, 1-9-62, Cl. 180—22.
Andresen, Gilbert J. C., to The Goodyear Tire & Rubber Co. Method and apparatus for web thickness control. 3,016,460, 1-9-62, Cl. 250—83.6.
Andrew, Harold B., C. C. Hipkins, and L. M. Towsley, to Bell Telephone Laboratories, Inc. Magnetic record device and method of preparing it. 3,016,310, 1-9-62, Cl. 117—104.
Andrews, Troy M.: *See*—
Montermoso, Juan C., Marinelli, and Andrews. 3,016,369.
Andrieux, Jean L., and R. Peffen. Aluminothermic process of making boron, boron compounds and alloys. 3,016,288, 1-9-62, Cl. 23—204.
Anelex Corp.: *See*—
Berger, Ralph, and Harlow. 3,016,008.
Ansul Chemical Co.: *See*—
Paus, Robert L., and Forrester. 3,016,097.
Aranas, Federico. Flush toilet sanitary devices. 3,015,826, 1-9-62, Cl. 4—7.
Arcos Corp.: *See*—
Wilcox, Wayne L. 3,016,452.
Argabrite, George A., to Pacific Transducer Corp. Surface thermometer. 3,015,955, 1-9-62, Cl. 73—363.7.
Aries, Robert S. Pure silicon by hydrogen reduction. 3,016,291, 1-9-62, Cl. 23—223.5.
Armco Steel Corp.: *See*—
Oganowski, Kasimir, and Murrow. 3,016,041.
Armour Research Foundation of Illinois Institute of Technology: *See*—
Reiffel, Leonard. 3,016,461.
Arnold, Howard H., to Western Electric Co., Inc. Method of and apparatus for vibration testing. 3,015,949, 1-9-62, Cl. 73—71.5.
Arthur, Oscar F. Method for forming a bonded pallet structure and pallet produced by same. 3,016,222, 1-9-62, Cl. 248—120.
Asada, Mamoru: *See*—
Irie, Tsuneo, Kagiya, and Asada. 3,016,396.
Asbury, Edward M. Signal device. 3,016,035, 1-9-62, Cl. 116—63.
Askew, Harry R.: *See*—
Holden, Lawrence T., and Askew. 3,015,847.
Associated Advertising Ltd.: *See*—
Storer, Richard H. 3,015,901.
Atlas Chemical Industries, Inc.: *See*—
Brandner, John D., and Ford. 3,016,393.
Auto Arc-Weld Mfg. Co., The: *See*—
Cornell, Elliott C., Jr. 3,016,451.
Avco Corp.: *See*—
Doctor, Bernard H., and O'Bryan. 3,015,950.
Babcock, John C., J. A. Campbell, M. E. Herr, J. A. Hogg, and R. L. Pederson, to The Upjohn Co. 6-fluoro androstanes. 3,016,387, 1-9-62, Cl. 260—397.3.
Babbitt, George J., to The Sectional Die Co. Blank carrier for sheet metal strip and method for making same. 3,015,879, 1-9-62, Cl. 29—193.5.
Bach, Chester C., A. J. Clark, W. D. Drukker, G. H. Klenke, E. N. Lenk, and H. F. Runge, to Western Electric Co., Inc. Automatic wiring machine. 3,016,448, 1-9-62, Cl. 219—79.
Bach, Henry J.: *See*—
Roeser, Gerald P., and Bach. 3,016,309.
Backofen, Elmer R., to Clark Equipment Co. Regulator valve. 3,016,046, 1-9-62, Cl. 121—38.
Baer, Sheldon J.: *See*—
Bloom, Sol. 3,015,859.
Baier, Wilhelm, K.G.: *See*—
Behmann, Heinrich. 3,016,263.
Bailey, Edwin M., to Daystrom Inc. Apparatus for determining the location and thickness of a reflecting object. 3,016,464, 1-9-62, Cl. 250—219.
Baker Engineering Corp.: *See*—
Dotzenroth, Paul N. 3,015,921.
Baker, Robert M., and N. K. Morey. Log debarking machines. 3,016,074, 1-9-62, Cl. 144—208.
Bancroft, Charles. Automatic transmission. 3,015,967, 1-9-62, Cl. 74—394.
Barber-Greene Co.: *See*—
Sauer, James F., and Burns. 3,015,971.
Barnes, Porter L., Jr., to Leesona Corp. Package arm control mechanism for winding machines. 3,016,205, 1-9-62, Cl. 242—18.
Barrett, William G., to Sperry Rand Corp. Multistable circuit. 3,016,469, 1-9-62, Cl. 307—88.5.
Basic, Inc.: *See*—
Rusoff, Samuel, and Drabkowski. 3,015,850.
Bassani, Ermanno, to Societa per Azioni Bassani. Safety and protection device for electric switches and the like, particularly for middle voltage equipments. 3,016,432, 1-9-62, Cl. 200—50.
Bataille, Roger J. Transistorized ignition system. 3,016,476, 1-9-62, Cl. 315—135.
Batezell, Alfred P., and R. McCullogh, to United States of America, Army. Apparatus for cutting an arcuate venturi for recoilless rifles. 3,015,994, 1-9-62, Cl. 90—15.

Bauer Bros. Co., The : *See*—
Horstman, Anton J., and Eberhardt. 3,016,088.
Textor, Clinton K. 3,016,324.

Bauer, Robert, and R. L. Mast, to Miles Laboratories, Inc. Diagnostic composition. 3,016,292, 1–9–62, Cl. 23—253.

Baumann, Hans, to K. Schroeder. Calculating disk for the determination of the mechanical values involved in a cylindrical spring. 3,016,190, 1–9–62, Cl. 235—84.

Bean, John W., to The Fuller Brush Co. Socket connector for mop and brush handles. 3,016,272, 1–9–62, Cl. 306—19.

Beattie, Jackson W., Sr. Riding crutch. 3,016,080, 1–9–62, Cl. 135—50.

Beauchamp, William D., R. E. Booth, and E. R. Degginger, to Allied Chemical Corp. Purification of crude alkylene oxide polyether. 3,016,404, 1–9–62, Cl. 260—615.

Becher, Heinrich. Bottle, flask or the like container closure and dispensing device. 3,016,171, 1–9–62, Cl. 222—488.

Beckadolph, Richard, to Continental Gummi-Werke Aktiengesellschaft. Method of making pneumatic tires. 3,016,320, 1–9–62, Cl. 156—123.

Beckadolph, Richard, and W. Niclas, to Continental Gummi-Werke Aktiengesellschaft. Tire building machine. 3,016,321, 1–9–62, Cl. 156—402.

Beebe, Herbert R., to American Doll & Toy Corp. Spray bath. 3,015,828, 1–9–62, Cl. 4—148.

Beeton, Thomas B. : *See*—
Hoffman, Daniel J. N., and Beeton. 3,015,852.

Bell Aerospace Corp. : *See*—
Jackes, Arthur M. 3,016,214.

Bell, Alan : *See*—
Tholstrup, Clarence E., and Bell. 3,016,363.

Bell Telephone Laboratories, Inc. : *See*—
Andrew, Harold B., Hipkins, and Towsley. 3,016,310.
Borchard, Edwin H. 3,016,512.
Courtney-Pratt, Jeofry S. 3,015,959.
Dehn, Joseph W., and Vroom. 3,016,189.
De Loach, Bernard C., Jr., and Ring. 3,016,499.
Entz, Ferdinand S. 3,016,426.
Gilbert, Edgar N., and Moore. 3,016,527.
Harmon, Leon D. 3,016,421.
Hewitt, William H., Jr. 3,016,535.
Ilgenfritz, Lester M., Moore, and Robertson. 3,016,514.
Klingenberg, Alfred S. 3,016,083.
Kostelnick, Joseph J. 3,016,497.
Mallery, Paul. 3,016,196.
McGulgan, John H. 3,016,521.
Moraff, Howard. 3,016,468.
Pierce, John R. 3,016,503.
Saltzberg, Burton R. 3,016,517.
Schwenzfeger, Edward E. 3,016,425.
Tien, Ping K. 3,016,495.
Unger, Hans-Georg. 3,016,502.
Van Dine, Gilbert A. 3,016,470.
Villars, Claude P. 3,016,528.

Bendix Corp., The : *See*—
Miller, Donald L. 3,016,122.

Benoit, Conrad H., to Northrop Corp. Pivot-type self-aligning hydrostatic bearing assembly. 3,016,273, 1–9–62, Cl. 308—72.

Bensky, Lowell S., and D. L. Nettleton, to Radio Corp. of America. Digital computing system. 3,016,194, 1–9–62, Cl. 235—157.

Berger, Ralph, and H. E. Harlow, to Anelax Corp. Data processing apparatus. 3,016,008, 1–9–62, Cl. 101—93.

Berliger, Ernst, to Ciba Ltd. New organic phosphorus compounds. 3,016,326, 1–9–62, Cl. 167—22.

Beroza, Morton, N. Green, and S. I. Gertler. Attractants for the male mediterranean fruit fly. 3,016,329, 1–9–62, Cl. 167—48.

Better Packages, Inc. : *See*—
Krueger, Theodore H. 3,015,925.

Beytes, Deane A., to Pitney-Bowes, Inc. Decelerating device. 3,016,126, 1–9–62, Cl. 198—140.

Biach Industries, Inc. : *See*—
Biach, John L. 3,015,975.

Biach, John L., to Biach Industries, Inc. Bolt-tensioning apparatus. 3,015,975, 1–9–62, Cl. 81—54.

Bing, Herbert A., and R. R. Wareham, to Polaroid Corp. Lens shade. 3,015,982, 1–9–62, Cl. 88—1.

Birkenmeyer, Robert D. : *See*—
Magerlein, Barney J., Birkenmeyer, and Kagan. 3,016,392.

Blackhawk Industries : *See*—
Rose, Kenneth D. 3,016,220.

Blatchford, Brian G. Artificial limbs. 3,015,825, 1–9–62, Cl. 3—27.

Blonder Tongue Electronics : *See*—
Blonder, Isaac S. 3,016,510.

Blewett, John P., to United States of America, Atomic Energy Commission. Resonator particle separator. 3,016,458, 1–9–62, Cl. 250—41.9.

Blonder, Isaac S., to Blonder-Tongue Electronics. Electrical clamp-and-connector. 3,016,510, 1–9–62, Cl. 339—97.

Bloom, Sol, ½ to S. J. Baer. Process for molding covered rigid and semirigid bodies. 3,015,859, 1–9–62, Cl. 18—59.

Bodine, Albert G. Method of and apparatus for cleaning out oil well casing perforations and surrounding formation by application of asymmetric acoustic waves with peaked compression phase. 3,016,093, 1–9–62, Cl. 166—43.

Bodine, Albert G. Sonic apparatus for fracturing petroleum bearing formation. 3,016,095, 1–9–62, Cl. 166—177.

Boehm, Max F. Spray device and method. 3,016,200, 1–9–62, Cl. 239—143.

Boeing Airplane Co. : *See*—
Moore, William A. 3,015,946.

Bondiou, Jean-Claude, and B. J. Petusseau, to Societe Nobel Bozel. Method of preparing glyoxal hydrate. 3,016,385, 1–9–62, Cl. 260—340.6.

Bono, Luigi, to Necchi S.p.A. Rotary hook for sewing machines. 3,016,032, 1–9–62, Cl. 112—230.

Boomkens, Hans, to Eduard Winter Motoren- und Apparatebau. Loading winch with two drums, especially for ships. 3,016,228, 1–9–62, Cl. 254—185.

Booth, Robert E. : *See*—
Beauchamp, William D., Booth, and Degginger. 3,016,404.

Borchard, Edwin H., to Bell Telephone Laboratories, Inc. Connector assembly. 3,016,512, 1–9–62, Cl. 339—217.

Borsuk, Harold. Dental amalgam package. 3,016,134, 1–9–62, Cl. 206—47.

Brabander, Herbert J. : *See*—
Wright, William B., Jr., and Brabander. 3,016,382.

Brace, Neal O., to E. I. du Pont de Nemours and Co. Reactions of perfluoronikyl iodides and olefins in the presence of esters. 3,016,406, 1–9–62, Cl. 260—653.

Brace, Neal O., to E. I. du Pont de Nemours and Co. Telomers from CH_2CH_2 and ICF_2CF_2I. 3,016,407, 1–9–62, Cl. 260—653.1.

Brach, Eugene, ½ to A. Wagman. Heat treating arch for treating finishes on vehicles and the like. 3,016,442, 1–9–62, Cl. 219—35.

Bradlcich, John B. : *See*—
Twitchell, Sherman W., and Bradlcich. 3,016,240.

Brady, W. H., Co. : *See*—
Tobey, Frederic S. 3,016,009.

Brainard, Maurice W. Heating and freezing system. 3,015,939, 1–9–62, Cl. 62—156.

Brakeshoe International, S.A. : *See*—
Prendergast, Charles S. 3,016,017.

Bramming, Carl, to Aladdin Industries, Inc. Vacuum bottles with plastic liners. 3,016,159, 1–9–62, Cl. 215—13.

Brandner, John D., and E. C. Ford, Jr., to Atlas Chemical Industries, Inc. Surface active sulfonated polyesters. 3,016,393, 1–9–62, Cl. 260—400.

Brandt Automatic Cashier Co. : *See*—
Buchholz, Arnold, Haban, and Weeks. 3,016,191.

Bratz, Otto J., to American Chain & Cable Co., Inc. Push-pull cable. 3,015,969, 1–9–62, Cl. 74—501.

Breitenbach, Johann W., and H. Edelhauser, to W. R. Grace & Co. Vinyl pyrrolidone-styrene block polymers. 3,016,370, 1–9–62, Cl. 260—88.1.

Brenk, Robert C. : *See*—
Tomka, Joseph W., and Brenk. 3,016,005.

Breslow, Leon. Footwear. 3,015,896, 1–9–62, Cl. 36—58.6.

Brett, Morton, and A. Schiff, to International Business Machines Corp. Overflow indicator. 3,016,193, 1–9–62, Cl. 235—153.

Brewer, Thomas L., J. L. Hall, and P. M. Chewey, to Curtiss-Wright Corp. Thrust reversers. 3,015,936, 1–9–62, Cl. 60—35.54.

Briggs, Thomas H., and E. A. Hollenbach, to Drexel Dynamics Corp. Test jig for contacting circuit card positions. 3,016,489, 1–9–62, Cl. 324—158.

Bright, Samuel F. Lawn mower and rake. 3,015,929, 1–9–62, Cl. 56—193.

Brisson, John R., to Lodal Inc. Loader apparatus. 3,016,157, 1–9–62, Cl. 214—302.

British Nylon Spinners Ltd. : *See*—
Jones, Clive R. 3,015,872.

Brogden, Oren D. Tunnel cleaning machine. 3,016,201, 1–9–62, Cl. 239—164.

Bronstein, Harry : *See*—
Bronstein, Nathan and H. 3,015,867.

Bronstein, Nathan and H. Coupling assembly with release pin. 3,015,867, 1–9–62, Cl. 24—123.

Broussard, John G., and J. D. Griffis. Drill bit guide. 3,016,073, 1–9–62, Cl. 144—105.

Brown, Fred, to United States of America, Navy. Cluster opening method. 3,016,011, 1–9–62, Cl. 102—7.2.

Brown, Glenn S., to Phillips Petroleum Co. Flange aligning tool. 3,015,883, 1–9–62, Cl. 29—271.

Brown, J. H. P. : *See*—
Miller, Henry W. 3,015,886.

Brown, Ned C. L., and G. Vande Sande, to General Railway Signal Co. Detection means for improperly lubricated journals. 3,016,157, 1–9–62, Cl. 246—169.

Brown, Raymond W., to Western Electric Co., Inc. Method of and apparatus for distributing an article to one of several receiving locations. 3,016,142, 1–9–62, Cl. 209—74.

Brown, Robert L. : *See*—
Elms, Edwin F., and Saunders. 3,015,866.

Brunner, Emil. Resilient mat. 3,016,317, 1–9–62, Cl. 154—49.

Buchholz, Arnold, F. Haban, and R. A. Weeks, to Brandt Automatic Cashier Co. Coin sorter and computer. 3,016,191, 1–9–62, Cl. 235—92.

Buettner, Donald J. : *See*—
Anderson, Ralph T., and Buettner. 3,016,102.

Buhrer, Erwin : *See*—
Häberlin, Hans P. 3,015,864.

Bureau, William H. : *See*—
Altmann, Norman A., and Bureau. 3,016,323.

Burns, Leonard S. : *See*—
Sauer, James F., and Burns. 3,015,971.

Burroughs Corp. : *See*—
Cullis, John, Jr. 3,016,473.
Tarbuck, Robert R. 3,016,433.

Burt, F. N., Co., Inc. : *See*—
Perkins, William 3,016,174.

Bussiere, Louis E. : *See*—
Konistra, John A., and Bussiere. 3,015,931.

Butler Paper Corps. : *See*—
Altmann, Norman A., and Bureau. 3,016,323.

Butler, Roger M., and R. Kartzmark, to Esso Research and Engineering Co. Hydrofining lubricating oil. 3,016,350, 1–9–62, Cl. 208—264.

Butterworth, Grant J. : *See*—
Sears, Chester G., and Butterworth. 3,016,203.

Cabot Corp. : *See*—
Munsell, David D., and Jackson. 3,015,853.

Caldwell, E. L., & Sons, Inc. : *See*—
Caldwell, Frederick C. 3,015,927.

Caldwell, Frederick C., to E. L. Caldwell & Sons, Inc. Rotary mower with windrowing attachment. 3,015,927, 1–9–62, Cl. 56—25.4.

Calliezi, Armin, to Ciba Ltd. Process for the manufacture of color pigments in finely divided form. 3,016,384, 1–9–62, Cl. 260—314.5.

Campbell, J Allan : *See*—
Babcock, John C., Campbell, Herr, Hogg, and Pederson. 3,016,387.

Campbell, Lester H. Saw sickle. 3,015,930, 1–9–62, Cl. 56—239.

Cane, Albert : *See*—
Delangre, John P., and Cane. 3,015,989.

Caplan, Marvin. Orthopedic chair. 3,016,266, 1–9–62, Cl. 297—150.

Carbonaire S.A. : *See*—
Myddelton, Geoffrey C. 3,016,108.

Card, Joseph L., to Singer-Cobble, Inc. Multiple needle skip-stitch machine. 3,016,029, 1–9–62, Cl. 112—79.

Cardozo, Danforth, Jr. : *See*—
Ensign, Robert H., Cardozo, Woods, and Immermann. 3,015,899.

Carling Electric, Inc. : *See*—
Hagberg, Hugo E. 3,016,439.

Caron, Michel, G. Chaudron, and L. Moreau, to Commissariat a l'Energie Atomique. Installation for the vaporisation, under vacuum, of the volatile constituent of an alloy. 3,016,237, 1–9–62, Cl. 266—15.

Carroll, William N., to International Business Machines Corp. Emitter follower pulse amplifier. 3,016,467, 1–9–62, Cl. 307—88.5.

Casco Products Corp. : *See*—
Cone, Joseph H. 3,016,206.

Casey, Charles L., and J. B. Ryno, to Reliable Engineering Co. Article vending machine. 3,016,165, 1–9–62, Cl. 221—116.

Cash, A.W., Valve Mfg. Corp. : *See*—
Terry, Charles M. 3,015,903.

Cederstrom, Curtiss M., and C. W. Mellyn, to General Electric Co. Heat exchange assembly. 3,016,230, 1–9–62, Cl. 257—154.

Celanese Corp. of America : *See*—
Fortess, Fred, and Myles. 3,016,280.

Chalmowicz, Adam, to International Computers and Tabulators Ltd. Electric signal storage arrangements. 3,016,520, 1–9–62, Cl. 340—173.

Chamberlain, Robert J., to Raytheon Co. Method of storing a material within another material. 3,015,884, 1–9–62, Cl. 29—423.

Chamberlin, Earl M., and J. M. Chemerda, to Merck & Co., Inc. $\Delta^{9(0)}$-7,11-diol derivatives of the ergostane, cholane and spirostane series. 3,016,377, 1–9–62, Cl. 260—239.55.

Chance Vought Corp. : *See*—
MacDonough, Edward P. 3,016,047.

Chaplin, Charles J., to Diamond National Corp. Pulp molding machine. 3,016,090, 1–9–62, Cl. 162—385.

Chaplin, Charles J., to Diamond National Corp. Multi-functioning molded pulp article-packing member. 3,016,132, 1–9–62, Cl. 206—46.

Chaplin, Charles J., to Diamond National Corp. Molded pulp package. 3,016,177, 1–9–62, Cl. 229—2.5.

Charlton, Kyle W. : *See*—
Strange, John P., Charlton, and Yant. 3,016,107.

Chaudron, Georges : *See*—
Caron, Michel, Chaudron, and Moreau. 3,016,237.

Chemerda, John M. : *See*—
Chamberlin, Earl M., and Chemerda. 3,016,377.

Chemische Fabriek L. van der Grinten N.V. : *See*—
Sanders, Theodorus P. W., and Roncken. 3,016,298.

Chewey, Paul M. : *See*—
Brewer, Thomas L., Hall, and Chewey. 3,015,936.

Chicago Aerial Industries, Inc. : *See*—
Sonne, Frederick T. 3,016,001.

Chicago Roller Skate Co., The : *See*—
Ware, Gordon K. 3,016,246.

Chidsey, Francis A., Jr., to Container Corp. of America. Bottle carrier. 3,016,182, 1–9–62, Cl. 229—40.

Ciba Ltd. : *See*—
Berliger, Ernst. 3,016,326.
Caliezi, Armin. 3,016,384.

Cincinnati Milling Machine Co., The : *See*—
Horlacher, Herman. 3,016,016.

Cioffi, Louis A. Anti-siphoning device. 3,016,162, 1–9–62, Cl. 220—86.

Clagett, Robert P., to Western Electric Co., Inc. Testing device for wire-wrapped terminal connections. 3,015,952, 1–9–62, Cl. 73—141.

Clark, Andrew J. : *See*—
Bach, Chester C., Clark, Drukker, Klenke, Lenk, and Runge. 3,016,448.

Clark Equipment Co. : *See*—
Backofen, Elmer R. 3,016,046.

Clark, Frederick L. Water skis. 3,015,830, 1–9–62, Cl. 9—310.

Clarke, Gordon H. : *See*—
Hailey, Albert M., and Clarke. 3,016,526.

Clayton, William G. Bobby pin spreader assembly. 3,016,058, 1–9–62, Cl. 132—1.

Clejan, Deodat, to General American Transportation Corp. Freight transportation systems and methods. 3,016,025, 1–9–62, Cl. 105—368.

Clevenger, Clifton L. Retaining means for construction panels. 3,016,116, 1–9–62, Cl. 189—34.

Clifford, Alan F., to Monsanto Chemical Co. Method of selectively absorbing hydrogen fluoride from gases containing hydrogen fluoride and sulfur dioxide. 3,016,285, 1–9–62, Cl. 23—2.

Cline, Edwin L. : *See*—
Sturrock, Murray G., Cline, Robinson, and Lovin. 3,016,401.

Cnudde, Maurice F. Pulley for a conveyor belt. 3,016,235, 1–9–62, Cl. 263—8.

Cobb, Clifton A., E. E. Wiessner, and C. A. Orr, to Whirlpool Corp. Self-cleaning filter for laundry machine. 3,016,147, 1–9–62, Cl. 210—275.

Cobb, William R., to Greaves & Thomas Ltd. Chairs. 3,016,265, 1–9–62, Cl. 297—88.

Coghill, Henry D. : *See*—
Koller, Lewis R., and Coghill. 3,016,307.

Cohen, Aaron, and A. M. Parsons, to Hoffmann-La Roche Inc. 5,6,7,8-tetrahydroquinoline-3-carboxamide and derivatives. 3,016,381, 1–9–62, Cl. 260—287.

Cohn, David, to Model Plastic Corp. Method of molding dolls' heads. 3,015,856, 1–9–62, Cl. 18—55.

Coleman Instruments, Inc. : *See*—
Staunton, John J. J. 3,015,983.

Coley, Clarence N. Suction tube filling end trap for looms. 3,016,069, 1–9–62, Cl. 139—256.

Coley, Nelson B., to General Railway Signal Co. Cyclical code oscillator with magnetically biased torsion pendulum. 3,016,479, 1–9–62, Cl. 317—171.

Colgate, Stirling A. : *See*—
Kruskal, Martin, Tuck, Colgate, and Rosenbluth. 3,016,342.

Colletti, Joseph J., 33⅓ to R. von K. Bruns. Orbiting satellite toy. 3,015,908, 1–9–62, Cl. 46—52.

Collins, George C., to Zenith Radio Corp. Turret tuner. 3,016,505, 1–9–62, Cl. 334—51.

Colton, Arthur Co. : *See*—
Edgar, Hugh C., and Gajda. 3,016,027.

Colucci, Frank F. Game device. 3,016,242, 1–9–62, Cl. 273—102.

Commissariat a l'Energie Atomique : *See*—
Caron, Michel, Chaudron, and Moreau. 3,016,237.

Comstock, George E., 3rd, to Potter Instrument Co., Inc. Vacuum loop tape handler. 3,016,207, 1–9–62, Cl. 242—55.12.

Concelman, Carl W., to Amphenol-Borg Electronics Corp. Multi-chamber coaxial line switch apparatus. 3,016,496, 1–9–62, Cl. 333—7.

Conch International-Methane Ltd. : *See*
Murphy, John A. 3,016,219.

Cone, Joseph H., to Casco Products Corp. Antenna. 3,016,206, 1–9–62, Cl. 242—54.

Cones, Ben. Foot rest. 3,016,267, 1–9–62, Cl. 297—439.

Container Corp. of America : *See*—
Chidsey, Francis A., Jr. 3,016,182.
Desmond, John D. 3,016,181.

Continental Gummi-Werke Aktiengesellschaft : *See*
Beckadolph, Richard. 3,016,320.
Beckadolph, Richard, and Niclas. 3,016,321.
Niclas, Walter, and Menell. 3,016,084.

Contreras, Gilbert E., and R. W. Graves, to Aeroquip Corp. Joint structure. 3,016,249, 1–9–62, Cl. 285—336.

Cook, Ocie, Jr., and J. H. Coulliette. Liquid registering device. 3,016,192, 1–9–62, Cl. 235—94.

Cooley, Albert M., to The State University and the School of Mines, also known as University of North Dakota. Vegetable drying process. 3,016,303, 1–9–62, Cl. 99—207.

Cooper, Emmit R., to Jones & Laughlin Steel Corp. Belt conveyor apparatus. 3,016,127, 1–9–62, Cl. 198—184.

Cooper Tire & Rubber Co. : *See*—
Welmandy, Paul R. 3,015,857.

Coors Porcelain Co. : *See*—
Porterfield, Jack N. 3,016,153.

Coppola, Patrick P., to General Electric Co. Dispenser cathode. 3,016,472, 1–9–62, Cl. 313—346.

Cornell, Elliott C., Jr., to The Auto Arc-Weld Mfg. Co. Electrode feed roll means. 3,016,451, 1–9–62, Cl. 219—130.

Corporon, Frederic J. Apparatus for identifying railroad cars. 3,016,456, 1–9–62, Cl. 246—2.

Cottrell Co., The : *See*—
Luehrs, Hans J. 3,016,010.

Coulliette, James H. : *See*—
Cook, Ocie, Jr., and Coulliette. 3,016,192.

Counsell, Raymond E., to G. D. Searle & Co. N(substituted alkyl)amino-5α-androstan-17β-ols. 3,016,390, 1–9–62, Cl. 260—397.5.

Courtney-Pratt, Jeofry S., to Bell Telephone Laboratories, Inc. Accelerometers. 3,015,959, 1–9–62, Cl. 73—517.

Crane, Harold S. : *See*—
Reifers, Richard F., and Crane. 3,016,176.

Crevling, Thomas V. : *See*—
Mader, Paul M., Nelson, and Crevling. 3,016,306.

Crookston, Anthony J., Jr. Apparatus for sealing shingles. 3,016,040, 1–9–62, Cl. 118—410.

Crosby, Alton L., and H. W. Roeber, to Sylvania Electric Products Inc. Article handling apparatus. 3,016,124, 1–9–62, Cl. 198—33.

Crouthamel, Richard, to Philco Corp. Method for fabricating semiconductor devices. 3,015,874, 1–9–62, Cl. 29—25.3.

Cullis, John, Jr., to Burroughs Corp. Counting circuits. 3,016,473, 1–9–62, Cl. 315—8.5.

Curn, William J., Jr. Small animal house. 3,016,042, 1–9–62, Cl. 119—19.

Curtiss-Wright Corp. : *See*—
Brewer, Thomas L., Hall, and Chewey. 3,015,936.
Doerries, George H. 3,015,973.
Simpson, Duncan W., and Dawson. 3,015,894.

Cutler-Hammer, Inc. : *See*—
Dries, Jerome F. 3,016,440.
Fath, Douglas W., and Smith. 3,016,483.
Seeger, Edwin W. 3,016,434.

Cybriwsky, Alexander, and G. L. Hager, to Reynolds Metals Co. Method of multi-coloring sealed anodized aluminum. 3,016,293, 1–9–62, Cl. 41—41.

D'Agostino, Jack V., and C. Rothenberg, to Sperry Rand Corp. Dual function antenna. 3,016,534, 1-9-62, Cl. 343—725.

Daimler-Benz Aktiengesellschaft: *See*—
Eltze, Ulrich. 3,016,247.
Fiala, Ernst J. H. 3,016,101.

Dalglish, Herbert F., to M. W. Gehan. Average temperature indicator. 3,015,954, 1-9-62, Cl. 73—341.

Dalglish, James B.: *See*—
Kappelmann, Benjamin O., and Dalglish. 3,015,928.

Daniele, Donald T., to Diamond National Corp. Adjustable shaft coupling. 3,015,941, 1-9-62, Cl. 64—24.

Daniele, Donald T., to Diamond National Corp. Vacuum control for pulp molding machines. 3,016,091, 1-9-62, Cl. 162—391.

Darling, Horace E., to The Foxboro Co. Electro-signal converting apparatus. 3,016,493, 1-9-62, Cl. 330—8.

Davidson, Sidney H., and C. J. Delp, to E. I. du Pont de Nemours and Co. Method for altering the growth characteristics of plants. 3,016,295, 1-9-62, Cl. 71—2.7.

Davis & Furber Machine Co.: *See*—
Koolstra, John A., and Bussiere. 3,015,931.

Davis, Merlin. Electronic musical instrument. 3,015,979, 1-9-62, Cl. 84—1.18.

Dawson, William H., Jr.: *See*—
Simpson, Duncan W., and Dawson. 3,015,894.

Daystrom Inc.: *See*—
Bailey, Edwin M. 3,016,464.

Dean, Charles L. Garbage can rack. 3,016,149, 1-9-62, Cl. 211—71.

Dearborn Electronic Laboratories of Delaware, Inc.: *See*—
Simpson, Raymond J. 3,016,481.

Debay, Andre, to Societe Francaise de Recherches Biochimiques H. Besson & Cie. Cholinphosphoric acid salts and production thereof. 3,016,399, 1-9-62, Cl. 260—461.

Degginger, Edward R.: *See*—
Beauchamp, William D., Booth, Degginger. 3,016,404.

Dehn, Joseph W., and E. Vroom, to Bell Telephone Laboratories, Inc. Magnetic recording and analyzing of traffic observations. 3,016,189, 1-9-62, Cl. 235—61.6.

Delangre, John P., and A. Cane, to Polaroid Corp. Light-polarizing film materials and process of preparation. 3,015,989, 1-9-62, Cl. 88—65.

Del Mar, Bruce E., to Del Mar Engineering Laboratories. Tow target. 3,016,532, 1-9-62, Cl. 343—18.

Del Mar Engineering Laboratories: *See*—
Del Mar, Bruce E. 3,016,532.

De Loach, Bernard C., Jr., and D. H. Ring, to Bell Telephone Laboratories, Inc. Microwave device. 3,016,499, 1-9-62, Cl. 333—33.

DeLong, Frank D., Jr.: *See*—
Getaz, James L. 3,015,942.

De Lorean, John Z., to General Motors Corp. Cast brake drum. 3,016,269, 1-9-62, Cl. 301—6.

Delp, Charles J.: *See*—
Davidson, Sidney H., and Delp. 3,016,295.

Dent, Paul. Artificial tooth structure and plate therefor. 3,015,888, 1-9-62, Cl. 32—9.

Denton, Harvey R. Means and method for banding objects. 3,015,916, 1-9-62, Cl. 53—3.

Desmond, John D., to Container Corp. of America. Tuck top carton with lock. 3,016,181, 1-9-62, Cl. 229—39.

Devol, George C., and E. B. Hansell, deceased, (by M. B. Hansell, administratrix); M. B. Hansell, assor. to said Devol. Coincidence detectors. 3,016,465, 1-9-62. Cl. 307—88.

Diamond National Corp.: *See*—
Chaplin, Charles J. 3,016,090.
Chaplin, Charles J. 3,016,132.
Chaplin, Charles J. 3,016,177.
Daniele, Donald T. 3,015,941.
Daniele, Donald T. 3,016,091.
Kennedy, Thomas B. 3,016,131.
Matteson, Russell E. 3,016,164.
Reifers, Richard F., and Crane. 3,016,176.
Struble, Glenn E. 3,016,180.
Swanson, Vernon E. 3,016,179.
Wolter, Harry A., and Vaughan. 3,015,924.

Dick, Clarence R., and H. Pledger, Jr., to The Dow Chemical Co. Preparation of cyclopentadiene from dicyclopentadiene. 3,016,410, 1-9-62, Cl. 260—666.

Didier Werke A.G.: *See*—
Huppmeier, Wilhelm. 3,016,234.

Dietzsch, Hans-Joachim and O., to Trikotfabriken J. Schiesser A.G. Radolfzell (Bodensee). Complex artificial filaments. 3,015,873, 1-9-62, Cl. 28—82.

Dietzsch, Otto: *See*—
Dietzsch, Hans-Joachim and O. 3,015,873.

Di Pasquale, Renato, and F. Solomon, to Yardney International Corp. Grid for battery electrodes. 3,016,413, 1-9-62, Cl. 136—45.

Doctor, Bernard H., and J. V. O'Bryan, to Avco-Corp. Erosion sensor. 3,015,950, 1-9-62, Cl. 73—86.

Dodson, Raymond M., to G. D. Searle & Co. 1-aryl-3-hydroxypropyl sulfones and processes. 3,016,403, 1-9-62, Cl. 260—607.

Doerries, George H., to Curtiss-Wright Corp. Rotary speed changer. 3,015,973, 1-9-62, Cl. 74—801.

Doersam, Charles H., Jr. Pulse code multiplexing systems. 3,016,516, 1-9-62, Cl. 340—147.

Domenighetti, Costante. Mixer driven and supported by wheels of flexible material. 3,016,232, 1-9-62, Cl. 259—177.

Dotzenroth, Gloria B.: *See*—
Dotzenroth, Paul N. 3,015,921.

Dotzenroth, Paul N., deceased (by G. B. Dotzenroth and T. E. Holloran, executors), to Baker Engineering Corp. Packaging apparatus. 3,015,921, 1-9-62, Cl. 53—171.

Dotzenroth, Paul N., to Alton Box Board Co. Can pack. 3,015,923, 1-9-62, Cl. 53—186.

Douglas Aircraft Co., Inc.: *See*—
Maddock, Robert W. 3,016,061.

Dove, Jack E. Multi-directional accelerometer. 3,015,958, 1-9-62, Cl. 73—516.

Dow Chemical Co., The: *See*—
Dick, Clarence R., and Pledger. 3,016,410.
Krenzke, Fred J. 3,016,343.
Wiles, Charles R. 3,015,851.

Drabkowski, Robert S.: *See*—
Rusoff, Samuel, and Drabkowski. 3,015,850.

Drake, Oscar A., and H. E. Smithgall, to Sylvania Electric Products, Inc. Cathode ray tube structure. 3,016,471, 1-9-62. Cl. 313—82.

Draper, Charles S.: *See*—
Wrigley, Walter, and Draper. 3,015,962.

Drexel Dynamics Corp.: *See*—
Briggs, Thomas H., and Hollenbach. 3,016,489.

Dries, Jerome F., to Cutler-Hammer, Inc Electric switch. 3,016,440, 1-9-62, Cl. 200—166.

Drukker, Willard D.: *See*—
Bach, Chester C., Clark, Drukker, Klenke, Lenk, and Runge. 3,016,448.

Duerksen, Arnold, to Super Mold Corp. of California. Vacuum system for temporary reduction of the diameter of a tire. 3,015,845, 1-9-62, Cl. 18—18.

Dunn, Oswald D. Headstock for milking parlor stall. 3,016,043, 1-9-62, Cl. 119—27.

Du Pont de Nemours, E. I., and Co.: *See*—
Brace, Neal O. 3,016,406.
Brace, Neal O. 3,016,407.
Davidson, Sidney H., and Delp. 3,016,295.
Elston, Arthur A., and Hinegardner. 3,016,290.
Gallagher, George A. 3,016,368.
Hendricks, Robert W. 3,015,858.
Lovejoy, Elwyn R. 3,016,405.
Mochel, Walter E., and Plambeck. 3,016,297.

Duyvene de Wit, Erik, to Organon Inc. New esters of 19-nor-testosterone. 3,016,388, 1-9-62, Cl. 260—397.4.

Dyer, John W., B. H. Short, and W. R. Parker, to General Motors Corp. Windshield washer and coordinator. 3,015,835, 1-9-62, Cl. 15—250.02.

Easley, Gerald J. Safety brakes for hoist lines. 3,016,113, 1-9-62, Cl. 188—189.

Eastman Kodak Co.: *See*—
Mader, Paul M., Nelson, and Creviling. 3,016,306.
Tholstrup, Clarence E., and Bell. 3,016,363.

Eberhardt, Lee E.: *See*—
Horstman, Anton J., and Eberhardt. 3,016,088.

Eckel, John E., and E. H. Lock, to Jersey Production Research Co. Vibratory drilling. 3,016,098, 1-9-62, Cl. 175—56.

Ecker, Mario E., and J. A. Liggett, to Radio Corp. of America. Automatic film transport reversing mechanism. 3,016,210, 1-9-62, Cl. 242—55.12.

Ecker, Mario E., and J. J. Hoehn, to Radio Corp. of America. Automatic flywheel driving mechanism. 3,016,211, 1-9-62, Cl. 242—55.12.

Edelhauser, Helmut: *See*—
Breitenbach, Johann W., and Edelhauser. 3,016,370.

Edgar, Hugh C., and L. P. Gajda, to Arthur Colton Co. Tablet forming machine. 3,016,027, 1-9-62, Cl. 107—17.

Edmonds, Dolly B.: *See*—
Edmonds, Eugene A. 3,016,067.

Edmonds, Eugene A, deceased, D. B. Edmonds, executrix, to Henry Vogt Machine Co. Liquid distributing device. 3,016,067, 1-9-62, Cl. 138—38.

Edmunds, Arthur G. W. Information storage systems. 3,016,524, 1-9-62, Cl. 340—174.1.

Eduard Winter Motoren- und Apparatebau: *See*—
Boomkens, Hans. 3,016,228.

Eisenberg, Bernard C. Hoists. 3,016,151, 1-9-62, Cl. 212—135.

Eklund, Harry N., to Lear, Inc. Instrument for measuring displacement of a body. 3,015,956, 1-9-62, Cl. 73—386.

Electrada Corp., The: *See*—
Ambrosio, Biagio F., and Rutland. 3,016,423.

Electric Auto-Lite Co., The: *See*—
Naborowski, John G. 3,016,477.

Electro-Chem Fiber Seal Corp.: *See*—
Pattilloch, Donald K. 3,016,325.

Electro-Voice, Inc.: *See*—
Hoodwin, Louis S. 3,016,430.

Elmes & King Mfg. Co.: *See*—
Tomka, Joseph W., and Brenk. 3,016,005.

Elms, Edwin F., and T. B. Saunders, to R. L. Brown. Molding engaging spring fastener. 3,015,866, 1-9-62, Cl. 24—73.

Elston, Arthur A., and W. S. Hinegardner, to E. I. du Pont de Nemours & Co. Purification of hydrogen peroxide. 3,016,290, 1-9-62, Cl. 23—207.

Eltze, Ulrich, to Daimler-Benz Aktiengesellschaft. Curve stabilization arrangement, particularly for motor vehicles. 3,016,247, 1-9-62, Cl. 280—112.

Ely, Harley L. Quick release cam type fastener device. 3,015,870, 1-9-62, Cl. 24—221.

Ensign, Robert H., D. Cardozo, Jr., G. Woods, and M. Immermann, to The Hopp Press, Inc. Three dimensional display device. 3,015,899, 1-9-62, Cl. 40—125.

Entz, Ferdinand S., to Bell Telephone Laboratories, Inc. Multiparty selective signaling system. 3,016,426, 1-9-62, Cl. 179—84.

Erdmann, Hans, to Waldes Kohinoor, Inc. Retaining-ring assembly tools. 3,015,882, 1-9-62, Cl. 29—229.

Eskridge, Harold E., and W. O. Johnson, to Weather-Seal, Inc. Continuous engagement type elongate hinge. 3,015,839, 1-9-62, Cl. 16—136.

Eskridge, Harold E., and W. O. Johnson, to Weather-Seal, Inc. Continuous hinge. 3,015,840, 1-9-62, Cl. 16—172.

Esso Research and Engineering Co.: *See*—
Butler, Roger M., and Kartzmark. 3,016,350.
Matuszak, Alfred H. 3,016,353.
Oswald, Alexis A., Rupar, Ilnyckyj, and Nöel. 3,016,349.

Ethicon, Inc.: *See*—
Pepper, Rollin E., and Lieberman. 3,016,328.

Eureka Specialty Printing Co.: *See*—
Green, Francis E., Jr. 3,016,135.

Evans, Frederick P., to United Aircraft Corp. Two-stage nozzle area control. 3,015,935, 1-9-62, Cl. 60—35.6.

Everett, Robert H. Bait box for live crickets. 3,015,905, 1-9-62, Cl. 43—55.

FMC Corp.: *See*—
Keesling, Thomas B. 3,016,076.
Twitchell, Sherman W., and Bradicich. 3,016,240.

Fabrica Italiana Magneti Marelli: *See*—
Alfieri, Giuseppe. 3,016,271.

Fahy, William M. Apparatus for removing welding flash and swelling from rod stock. 3,015,995, 1-9-62, Cl. 90—24.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Holtschmidt, Hans. 3,016,365.
Müller, Erwin. 3,016,364.

Fasano, Fred A. Hoop toys. 3,015,907, 1-9-62, Cl. 46—52.

Fath, Douglas W., and C. E. Smith, to Cutler-Hammer, Inc. Motor control system. 3,016,483, 1-9-62, Cl. 318—403.

Felix, Joseph, ½ to M. E. Sparrow and ½ to W. G. Mulligan. Loom for weaving non-cylindrical fabrics. 3,016,068, 1-9-62, Cl. 139—11.

Fenske, Douglas H.: *See*—
Le Baron, Ira M., and Fenske. 3,016,138.

Ferneo Laboratories, Inc.: *See*—
Scott, Don, and Hammer. 3,016,336.

Ferris, Seymour W.: *See*—
Tench, John D., and Ferris. 3,016,312.

Fiala, Ernst J. H., to Daimler-Benz Aktiengesellschaft. Motor vehicle equipped with means improving its reaction to steering operations. 3,016,101, 1-9-62, Cl. 180—1.

Filstrup, Edward C., to Olin Mathieson Chemical Corp. Blasting devices. 3,016,015, 1-9-62, Cl. 102—25.

Finney, Rex G.: *See*—
King, James L., and Finney. 3,016,216.

Fiore, Leonardo: *See*—
Natta Giulio, Porri, and Fiore. 3,016,371.

Fischer, Georg, Aktiengesellschaft: *See*—
Von Zelewsky, Ottomar. 3,016,245.

Fisher, Bernard C., to Neutronic Development Corp. Ignition device. 3,016,411, 1-9-62, Cl. 123—169.

Fistedis, Stanley H. Foundation structure. 3,015,912, 1-9-62, Cl. 50—532.

Fliegar, Geza B., and J. J. Monahan, to Western Electric Co., Inc. Bake-out unit for wave tube exhaust machine. 3,016,443, 1-9-62, Cl. 219—35.

Flight Refuelling Ltd.: *See*—
Norton, Harry W. 3,016,152.

Flood, David P.: *See*—
Alford, Andrew, and Flood. 3,016,504.

Fogt, Thomas H.: *See*—
Murphy, John M., Tucker, and Fogt. 3,016,183.

Foley, Eugene W., to Magnaflux Corp. System for inspecting bearing balls. 3,016,487, 1-9-62, Cl. 324—38.

Forbes, Ernest E., Jr. Projectile launching device. 3,015,991, 1-9-62, Cl. 89—1.7.

Ford, Ernest C., Jr.: *See*—
Brandner, John D., and Ford. 3,016,393.

Forrester, Clyde: *See*—
Pans, Robert L., and Forrester. 3,016,097.

Fortess, Fred, and W. J. Myles, to Celanese Corp. of America. Textile treatment. 3,016,280, 1-9-62, Cl. 8—59.

Foxboro Co., The: *See*—
Darling, Horace E. 3,016,493.

Franchi, Attilio M., to Soc. p. Az. Luigi Franchi. Selective fire converter and rate reducer. 3,015,993, 1-9-62, Cl. 89—131.

Francis, Wallace R., to General Electric Co. Method for making an angle plug with looped conductor. 3,015,877, 1-9-62, Cl. 29—155.55.

Francis, William C.: *See*—
Hopkins, Thomas R., Osborn, and Francis. 3,016,374.

Francis, William C., to Spencer Chemical Co. Process of separating epsilon-caprolactam. 3,016,376, 1-9-62, Cl. 260—239.3.

Francis, William C.: *See*—
Hopkins, Thomas R., and Francis. 3,016,287.

Franck, George E., to Imperial-Eastman Corp. Fitting. 3,016,250, 1-9-62, Cl. 285—342.

Frank, Carl A., R. B. McClosky, and J. A. Lynch: said McClosky and Lynch assors. to said Frank. Packaging machines. 3,015,922, 1-9-62, Cl. 53—182.

Frank, Robert L., to Sperry Rand Corp. Navigation computer. 3,016,533, 1-9-62, Cl. 343—103.

Franke, Fritz, to Telefunken G.m.b.H. Monaural and binaural sound system. 3,016,424, 1-9-62, Cl. 179—1.

Franke, Philip R. Slalom water ski. 3,015,831, 1-9-62, Cl. 9—310.

Frantz, Frederick H., and C. A. Ackermann, to General Aniline & Film Corp. Flat bed printer. 3,016,002, 1-9-62, Cl. 95—73.

Freeman, Howard G., to Jamesbury Corp. Valve bonnet and handle. 3,016,226, 1-9-62, Cl. 251—109.

Friedman, Lewis, to United States of America, Atomic Energy Commission. Mass spectrometry. 3,016,459, 1-9-62. Cl. 250—41.9.

Frink, Richard F., and R. R. Puleston. Internally illuminated sign. 3,015,900, 1-9-62, Cl. 40—130.

Frost, William F.: *See*—
Tomiyasu, Kiyo, and Frost. 3,016,531.

Fubini, Eugene G., to United States of America, Army. Capacitively coupled collinear stripline antenna array. 3,016,536, 1-9-62, Cl. 343—801.

Fuller Brush Co., The: *See*—
Bean, John W. 3,016,272.

Fulmer, John R.: *See*—
Small, George E., and Fulmer. 3,016,198.

Fürst, Stefan, to W. Reiners. Magazine control apparatus for yarn winding machines. 3,016,166, 1-9-62, Cl. 221—200.

Fushimi, Tomiyoshi: *See*—
Yurugi, Shojiro, and Fushimi. 3,016,380.

G-M Laboratories Inc.: *See*—
Skuta, Felix F. 3,015,875.

Gadget-Of-The-Month Club, Inc.: *See*—
Griffin, Roxy. 3,016,277.
Stall, Cash G. 3,015,895.

Gage, Robert M., O. H. Nestor, and D. M. Yenni, to Union Carbide Corp. Collimated electric arc-powder deposition process. 3,016,447, 1-9-62, Cl. 219—76.

Gajda, Leo P.: *See*—
Edgar, Hugh C., and Gajda. 3,016,027.

Galambos, Max. Apparatus for selectively opening and closing envelope flaps. 3,015,926, 1-9-62, Cl. 53—384.

Gallagher, George A., to E. I. du Pont de Nemours and Co. Sulfonated fluorocarbon copolymer. 3,016,368, 1-9-62, Cl. 260—79.3.

Gardner, Bernard C., and C. E. Ward, to Varian Associates. High frequency probe apparatus. 3,016,501, 1-9-62, Cl. 315—5.21.

Gassner, Georges, to Les Ateliers de Constructions Mecaniques C. & A. Holweg. Apparatus for heat sealing a thermoplastic web in which the heat is controlled by the speed of the web. 3,016,085, 1-9-62, Cl. 154—42.

Gehan, Mark W.: *See*—
Dalglish, Herbert F. 3,015,954.

Gelling, Helmut, to Walter Buromaschinen Gesellschaft m.b.H. Mechanism for controlling the printing of decimal signs in the amounts printed in calculating machines. 3,016,007, 1-9-62, Cl. 101—93.

General American Transportation Corp.: *See*—
Clejan, Deodat. 3,016,025.

General Aniline & Film Corp.: *See*—
Frantz, Frederick H., and Ackermann. 3,016,002.
Glickman, Samuel A., and Miller. 3,016,366.
Glickman, Samuel A., and Miller. 3,016,367.
Hessel, Frederick A. 3,016,352.
Hessel, Frederick A., and Prescott. 3,016,351.

General Electric Co.: *See*—
Cederstrom, Curtiss M., and Mellyn. 3,016,230.
Coppola, Patrick P. 3,016,472.
Francis, Wallace R. 3,015,877.
Hutt, Philip. 3,015,876.
Jaslonowski, Joseph J. 3,016,444.
Koller, Lewis R., and Coghill. 3,016,307.
Lafferty, James M. 3,016,436.
Lawrence, Thomas F., and Ingleson. 3,016,227.
Llen, Gunder, Jr. 3,016,445.
Ogle, Hugh M. 3,016,486.
Orbom, Orville E., Murtland, and Schoepf. 3,015,974.
Pell, Erik M. 3,016,313.

General Electric Co. Ltd., The: *See*—
Gill, Ronald I. 3,016,081.

General Foods Corp.: *See*—
Raffensperger, Stanley P., and Takashima. 3,016,299.
Raffensperger, Stanley P., and Takashima. 3,016,300.

General Mills, Inc.: *See*—
Wheeler, Donald H., and Rogier. 3,016,359.

General Motors Corp.: *See*—
De Lorean, John Z. 3,016,269.
Dyer, John W., Short, and Parker. 3,015,835.
Helvern, James O. 3,016,112.
Krause, Charles T. 3,015,944.
Murphy, John M., Tucker, and Fogt. 3,016,183.
Rosenberger, Maurice S., Winchell, and Schultz. 3,016,119.
Unger, Donald C. 3,016,511.

General Precision, Inc.: *See*—
Hemstreet, Harold S. 3,015,988.
Riddle, Joseph E. 3,016,148.

General Railway Signal Co.: *See*—
Brown, Ned C. L., and Vande Sande. 3,016,457.
Coley, Nelson B. 3,016,479.

Genning, Ernst: *See*—
Schuh, Carl F., Genning, and Hermann. 3,016,244.

Gertler, Samuel I.: *See*—
Beroza, Morton, Green, and Gertler. 3,016,329.

Getaz, James L., to F. D. De Long, Jr. Circular knit hosiery and method of forming the foot of same. 3,015,942, 1-9-62, Cl. 66—186.

Gilbert, Edgar N., and E. F. Moore, to Bell Telephone Laboratories, Inc. Apparatus for utilizing variable length alpha bettized codes. 3,016,527, 1-9-62, Cl. 340—347.

Gilbert, Walter J., to Syntron Co. Shaft seal. 3,016,251, 1-9-62, Cl. 286—11.

Giler, William. Motor driven tooth brush. 3,015,833, 1-9-62, Cl. 15—23.

Gillberty, James V. Temperature modulating system for internal combustion turbines and the like. 3,015,937, 1-9-62, Cl. 60—39.66.

Gill Ronald I., to The General Electric Co. Ltd. Waveguides and methods of bending waveguides. 3,016,081, 1-9-62, Cl. 153—32.

Gisholt Machine Co.: *See*—
Johnson, Charles H. 3,015,976.

Glickman, Samuel A., and E. S. Miller, to General Aniline & Film Corp. Polymerization of pyrrolidone and piperidone employing N-substituted secondary amides. 3,016,366, 1-9-62, Cl. 260—78.

Glickman, Samuel A., and E. S. Miller, to General Aniline & Film Corp. Polymerization of pyrrolidone and piperidone employing N N-disubstituted sulfonamides as chain initiators. 3,016,367, 1-9-62, Cl. 260—78.

Glidden Co., The: *See*
Webb, Robert L. 3,016,408

Goodrich Gulf Chemicals, Inc.: *See*
Wahle, Robert A. 3,016,397.

Goodyear Tire & Rubber Co., The: *See*
Andresen, Gilbert J. C. 3,016,460.
McClure, Earl F. 3,015,854.
Pace, Henry A. 3,016,356.
Rice, Vernon E. 3,015,844.
Sudman, Charles F. 3,016,318.

Grace, W. R., & Co.: *See*
Breitenbach, Johann W., and Edelhauser. 3,016,370.
Richardson, Donald. 3,015,824.

Grant, Frederic F., to North American Aviation, Inc. Saturable magnetic bead. 3,016,427, 1-9-62, Cl. 179—100.2.

Grant, Paul M., and R. V. Penney, to International Business Machines Corp. Thin film magneto resistance device. 3,016,507, 1-9-62, Cl. 338—32.

Grant, Robert S. Medical examination table. 3,016,275, 1-9-62, Cl. 312—209.

Graves, Robert W.: *See*
Contreras, Gilbert E., and Graves. 3,016,249.

Greaves & Thomas Ltd.: *See*
Cobb, William R. 3,016,265.

Green, Francis E., Jr., to Eureka Specialty Printing Co. Dispensing package and box for strip materials. 3,016,135, 1-9-62, Cl. 206—52

Green, Nathan: *See*
Beroza, Morton, Green, and Gertler. 3,016,329.

Gretag Aktiengesellschaft: *See*
Mast, Fred, and Janssen. 3,016,417.

Griffin, Roxy, 1/10 to Gadget-Of-The-Month Club, Inc. Combination dressing table, stool and storage. 3,016,277, 1-9-62 Cl. 312—287.

Griffin Wheel Co.: *See*
Strom, Charles F., and Wszolek. 3,015,863.

Griffis, Jubie D.: *See*
Broussard, John G., and Griffis. 3,016,073.

Godman, Burnett. Combination center punch and scribing gauge. 3,015,889, 1-9-62, Cl. 33—27.

Goldfine, Philip F., to Phil-Mar Corp. Tiltable lamp shade mount. 3,016,455, 1-9-62, Cl. 240—148.

Gora, Henry Z., to Anchor Hocking Glass Corp. Apparatus for making composite articles. 3,015,843, 1-9-62, Cl. 18—5.

Griswold, Roger W., II. Blunt-tailed jet airfoil. 3,016,213, 1-9-62 Cl. 244—42.

Gronkowski, George. Swimming aid device. 3,015,829, 1-9-62, Cl. 9—307.

Guggi, Walter B.: *See*
Kabell, Louis J., Murphy, and Guggi. 3,016,428.

Guth, Chester K., to Oravisual Co., Inc. Easels. 3,015,906, 1-9-62, Cl. 45—129.

H. & L. Tooth Co.: *See*
Launder, Ernie L. 3,016,253.

Haban, Frank: *See*
Buchholz, Arnold, Haban, and Weeks. 3,016,191.

Haberlin, Hans P., to Erwin Buhrer. Dowel guide with plastic filler material. 3,015,861, 1-9-62, Cl. 22—110.

Hacker, Frederick W., to Harvestore Products, Inc. Joint construction for conveyor housing. 3,016,128, 1-9-62, Cl. 198—213.

Hackman, Amos W., and C. H. Jacobson, to Tuttle Electric Products, Inc. Split strap supporting means for electrical insulators. 3,016,441, 1-9-62, Cl. 219—19.

Hadden, Robert L. Convertible trailer. 3,016,268, 1-9-62, Cl. 298—17.

Haegh, Jan E.: *See*
Andersen, Wilhelm A., and Haegh. 3,016,482.

Hagberg, Hugo E., to Carling Electric, Inc. Momentary switches. 3,016,139, 1-9-62, Cl. 200—159.

Hager, Gerald L.: *See*
Cybriwsky, Alexander, and Hager. 3,016,293.

Hadley, Albert M., and G. H. Clarke, to Siemens Edison Swan Ltd. Electrically-operated changing display indicators. 3,016,526, 1-9-62, Cl. 340—324.

Hall, Carl D., Jr.: *See*
Robinson, John J. 3,016,315.

Hall, John L.: *See*
Brewer, Thomas L., Hall, and Chewey. 3,015,936.

Hall, Viola B. Adhesive disc and clasp for keys and the like 3,016,224, 1-9-62, Cl. 218—205.

Halstead, Marian. Body molding garment for feminine wear. 3,016,057, 1-9-62, Cl. 128—540.

Halverscheid, Herbert, to Hans Ziller. Method of cold repairing rubber belts especially rubber conveyor belts. 3,016,319, 1-9-62, Cl. 156—98.

Hamburgen, Arthur, to International Business Machines Corp. Binary multiplier. 3,016,195, 1-9-62, Cl. 235—164.

Hamilton, Wallace, to Pneumo Dynamics Corp. Hatch cover. 3,016,087, 1-9-62, Cl. 160—206.

Hamilton Watch Co.: *See*
Koehler, Fred. 3,015,933.

Hammer, Frank E.: *See*
Scott, Don, and Hammer. 3,016,336.

Hansell, Erik B.: *See*
Devol, George C., and Hansell. 3,016,465.

Hansell, Marjorie B.: *See*
Devol, George C., and Hansell. 3,016,465.

Hardman, David C. Process and apparatus for scouring textile material in rope form 3,016,282, 1-9-62, Cl. 8—151.

Harlow, Hugh E.: *See*
Berger, Ralph, and Harlow. 3,016,008.

Harmon, Leon D., to Bell Telephone Laboratories, Inc. Electrographic transmitter. 3,016,421, 1-9-62, Cl. 178—19.

Harper, Clarence M., Jr., and G. F. Harrington, to Hygrade Food Products Corp. Meat treating. 3,016,004, 1-9-62, Cl. 99—255.

Harris, James J., to Koppers Co., Inc. Boraarothiazolo borazines. 3,016,402, 1-9-62, Cl. 250—551.

Harrison, Richard, III, H. V. Shriver, and A. J. Holland, Jr. Portable shelter. 3,016,115, 1-9-62, Cl. 189—2.

Harrison, Walter H. Ventilated frame for lenses. 3,015,987, 1-9-62, Cl. 88—41.

Hart, Edward C., to Scaife Co. Rotary compressors. 3,016,-184, 1-9-62, Cl. 230—152.

Harvel Research Corp.: *See*
Harvey, Mortimer T., and Rosamilia. 3,016,092.

Harvestore Products, Inc.: *See*
Hacker, Frederick W. 3,016,128.

Harvey, Mortimer T., and P. L. Rosamilia, to Harvel Resarch Corp. Compositions of matter and methods and steps of making and using the same. 3,016,092, 1-9-62, Cl. 166—31.

Harwich, Stanley. Refrigerative compression system driven by fluid energy of an absorption system. 3,015,940, 1-9-62, Cl. 62—332.

Hauck, Jon F., to Allis-Chalmers Mfg. Co. Leak annunciator unit. 3,016,525, 1-9-62, Cl. 340—242.

Haupt, Frank J., to The Western Union Telegraph Co. Tape reading punch. 3,016,186, 1-9-62, Cl. 234—28.

Hauskrecht, Toni: *See*
Pohl, Franz A., and Hauskrecht. 3,016,289.

Hausmann, George F., to United Aircraft Corp. Fluid valve. 3,016,063, 1-9-62, Cl. 137—597.

Häussermann, Kurt, P. Maucher, and H. Stallbaumer, to Lamellen-und Kupplungsbau August Haussermann. Clutch, especially for motor vehicles. 3,016,120, 1-9-62, Cl. 192—89.

Haywood, George L., to Norton Co. Abrasive product. 3,016,-294, 1-9-62, Cl. 51—297.

Hecht, Isidore, ½ to Milton Hecht. Clinching hubs for buffing rings. 3,015,915, 1-9-62, Cl. 51—193.

Hecht, Milton: *See*
Hecht, Isidore. 3,015,915.

Heilman, Raymond B., to Heinemann Electric Co. Induction blowout for circuit breakers. 3,016,438, 1-9-62, Cl. 200—147.

Heinemann Electric Co.: *See*
Heilman, Raymond B. 3,016,438.
Schwartz, Norman J. 3,016,435.

Helda, Robert W., W. L. Lehner, and N. L. Walker, to Sylvania Electric Products Inc. Component inserting apparatus. 3,015,881, 1-9-62, Cl. 29—203.

Helvern, James O., to General Motors Corp. Brake anchor pin. 3,016,112, 1-9-62, Cl. 183—78.

Hemstreet, Harold S., to General Precision, Inc. Perspective alternation means. 3,015,988, 1-9-62, Cl. 88—57.

Hendricks, Robert W., to E. I. du Pont de Nemours and Co. Process of preparing shaped articles of acrylonitrile polymer containing free metal particles. 3,015,858, 1-9-62, Cl. 18—57.

Hendricksen, Warren, and H. H. Needham, deceased (by M. Needham, executrix), to A. O. Smith Corp. Multi-layer vessel having a gamma ray flux absorbing layer. 3,016,462, 1-9-62, Cl. 250—108.

Herbst, Edward J., to The Singer Mfg. Co. Shuttle mechanisms for sewing machines. 3,016,033, 1-9-62, Cl. 112—232.

Hergenrother, Rudolf C., to Raytheon Co. Cathode ray tubes. 3,016,474, 1-9-62, Cl. 315—13.

Hermann, Günter: *See*
Schuh, Carl F., Genning, and Hermann. 3,016,244.

Herr, Milton E.: *See*
Babcock, John C., Campbell, Herr, Hogg, and Pederson. 3,016,387.

Herrmann, Günter. Drive means for electrical apparatus. 3,016,208, 1-9-62, Cl. 242—55.12.

Herrmann, Karl L. Friction reducing apparatus for cam engines. 3,016,110, 1-9-62, Cl. 184—6.

Hessel, Frederick A., to General Aniline & Film Corp. Process for improving injectivity in secondary oil recovery. 3,016,352, 1-9-62, Cl. 252—8.55.

Hessel, Frederick A., and F. J. Prescott, to General Aniline & Film Corp. Process for improving secondary oil recovery. 3,016,351, 1-9-62, Cl. 252—8.55.

Hewitt, William H., Jr., to Bell Telephone Laboratories, Inc. Slotted waveguide antenna. 3,016,535, 1-9-62, Cl. 343—787.

Higginbotham, Daniel K. Razor blade cutter device and guard therefor. 3,015,887, 1-9-62, Cl. 30—162.

Higonnet, Rene A., and L. M. Moyroud. Strip feeding means. 3,016,209, 1-9-62, Cl. 242—55.12.

Hindin, Saul G., and G. A. Mills, to Hondry Process Corp. Reactivation of platinum catalysts. 3,016,354, 1-9-62, Cl. 252—413.

Hinegardner, Wilbie S.: *See*
Elston, Arthur A., and Hinegardner. 3,016,290.

Hipkins, Clement C.: *See*
Andrew, Harold B., Hipkins, and Towsley. 3,016,310.

Hoag, John K., and E. F. Schutt, to Wilmot Castle Co. Mounting for dental chair stools. 3,016,223, 1-9-62, Cl. 248—194.

Hodges Research and Development Co.: *See*
Williams, Beverly E. 3,016,301.

Hoehn, John J.: *See*
Ecker, Mario E., and Hoehn. 3,016,211.

Hoffman, Daniel J. N., and T. B. Beeton, to South African Iron and Steel Industrial Corp., Ltd. Process of spheroidizing irregularly shaped particles. 3,015,852, 1-9-62, Cl. 18—48.

Hoffmann-La Roche Inc.: *See*
Cohen, Aaron, and Parsons. 3,016,381.

Hogan Faximile Corp.: *See*
Mandel, Gerald. 3,016,338.

Hogg, John A.: *See*
Babcock, John C., Campbell, Herr, Hogg, and Pederson. 3,016,387.

Hohner, M., Inc.: *See*
Hohner, Walter. 3,015,980.

Hohner, Walter, to M. Hohner, Inc. Wind instrument. 3,015,980, 1-9-62, Cl. 84—377.

Holdeman, Eugene J. Gasket for railroad compressed air hoses. 3,016,254, 1-9-62, Cl. 288—23.

Holden, Donald L., to Universal Oil Products Co. Manufacture and use of sulfided hydrocarbon purification catalyst. 3,016,348, 1-9-62, Cl. 208—216.

Holden, Lawrence T., and H. R. Askew. Candle mold. 3,015,-847, 1-9-62, Cl. 18—27.

Holland, Ayler J., Jr.: *See*
Harrison, Richard, III, Shriver, and Holland. 3,016,115.

Hollenbach, Edwin A.: *See*
Briggs, Thomas H., and Hollenbach. 3,016,489.

Höllfritsch, Hans. Jet molding machines. 3,015,848, 1-9-62. Cl. 18—30.

Holloran, T. E.: *See*
Dotzenroth, Paul N. 3,015,921.

Holtschmidt, Hans, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Polythioethernrethane casting and method of preparing same. 3,016,365, 1-9-62, Cl. 260—77.5.

Hoodwin, Louis S., to Electro-Voice, Inc. Loudspeaker. 3,016,430, 1-9-62, Cl. 179—115.5.

Hooker Chemical Corp.: *See*
Schweiker, George C., and Rohitschek. 3,016,360.
Schweiker, George C., and Rohitschek. 3,016,361.

Hopkins, Thomas R., and W. C. Francis, to Spencer Chemical Co. Process of separating lactams. 3,016,287, 1-9-62, Cl. 23—166.

Hopkins, Thomas R., M. D. Osborn, and W. C. Francis, to Spencer Chemical Co. Production of lactams by the Beckmann rearrangement using urea bisulfate as catalyst. 3,016,374, 1-9-62, Cl. 260—239.3.

Hopkins, Thomas R., and J. W. Steele, to Spencer Chemical Co. Process of producing epsilon-caprolactam. 3,016,375, 1-9-62, Cl. 260—239.3.

Hopp, Philip, to The Hopp Press, Inc. Display device. 3,015,-897, 1-9-62, Cl. 40—11.

Hopp Press, Inc., The: *See*
Ensign, Robert H., Cardozo, Woods, and Immermann. 3,015,899.
Hopp, Philip. 3,015,897.

Horlacher, Herman, to The Cincinnati Milling Machine Co. Reciprocating pump. 3,016,016, 1-9-62, Cl. 103—48.

Horstman, Anton J., and L. E. Eberhardt, to The Baner Bros. Co. Rapid cycle digester. 3,016,088, 1-9-62, Cl. 162—242.

Horton, Earl A., to The Yale and Towne Mfg. Co. Coil upender. 3,016,158 1-9-62, Cl. 214—652.

Hondry Process Corp.: *See*
Hindin, Saul G., and Mills. 3,016,354.
Kirsch, Francis W. 3,016,344.

House, Hugh L. Scaffold. 3,016,105, 1-9-62, Cl. 182—149.

Howard, Arthur C., to Rotary Hoes Ltd. Variable drive transmission. 3,015,966, 1-9-62, Cl. 74—325.

Howard, George J., Jr., to United Aircraft Corp. Air filter. 3,016,109, 1-9-62, Cl. 183—61.

Hughes, Albert L., to American Metal Products Co. Motor-operated reclining chair. 3,016,264, 1-9-62, Cl. 297—69.

Hughes, Robert S., and J. A. Sheehan. Form setting devices for cement sidewalk and driveway forms. 3,016,225, 1-9-62, Cl. 248—230.

Hunt, Harry J. Automobile sun visor accessory. 3,016,262, 1-9-62, Cl. 296—97.

Hunter, Austin R., to Kelco Co. Instant chiffon pie filling and method of producing the same. 3,016,302, 1-9-62, Cl. 99—131.

Hupp, Arleigh G. One piece molded awning. 3,015,861, 1-9-62, Cl. 20—57.5.

Hupp Corp.: *See*
Smith, Horace L., Jr. 3,016,100.

Huppmeier, Wilhelm, to Didier Werke A.G. Unitary collecting, distributing and supporting plate for stage washers. 3,016,234, 1-9-62, Cl. 261—98.

Hustinx, Edmond. Method of preparing hardening compositions. 3,016,358, 1-9-62, Cl. 260—23.

Hutt, Philip, to General Electric Co. Method of making resilient switch contacts. 3,015,876, 1-9-62, Cl. 29—155.55.

Hutton, Ruth D. Apparatus for simultaneously curling and treating eyelashes. 3,016,059, 1-9-62, Cl. 132—32.

Hygen, Hans F. Method in the electrolytical production of aluminium. 3,016,340, 1-9-62, Cl. 204—67.

Hygrade Food Products Corp.: *See*
Harper, Clarence M., Jr., and Harrington. 3,016,004.

Hgenfritz, Lester M., H. R. Moore, and D. D. Robertson, to Bell Telephone Laboratories, Inc. Apparatus for field testing signal guided bodies. 3,016,514, 1-9-62, Cl. 340—3.

Illinois Testing Laboratories, Inc.: *See*
Peltola, Veikko K. 3,015,953.

Illinois Tool Works: *See*
Pouplitch, Ongljesa J. 3,016,136.
Rapata, George M. 3,015,869.

Illum-a-Rall, Inc.: *See*
KalDell, Harold W. 3,016,478.

Hayckyj, Stephan: *See*
Oswald, Alexis A., Rupar, Hayckyj, and Nöel. 3,016,349.

Immermann, Milton: *See*
Ensign, Robert H., Cardozo, Woods, and Immermann. 3,015,899.

Imperial-Eastman Corp.: *See*
Franck, George E. 3,016,250.

Ingleson, James F.: *See*
Lawrence, Thomas P., and Ingleson. 3,016,227.

Innocenti, Scipione, to S.A.S.I.B.-S.p.A. Scipione Innocenti Bologna. Spring-storage rotary cutting device. 3,015,978, 1-9-62, Cl. 83—324.

International Business Machines Corp.: *See*
Brett, Morton, and Schiff. 3,016,193.
Carroll, William N. 3,016,467.
Grant, Paul M., and Penney. 3,016,507.
Hamburgen, Arthur. 3,016,195.
Landauer, Rolf W. 3,016,492.
Mathers, Harry W. 3,016,485.
Young, Paul M. 3,016,418.

International Computers and Tabulators Ltd.: *See*
Chaimowicz, Adam. 3,016,520.
Sharp, John J. 3,016,523.

International Minerals & Chemical Corp.: *See*
Adam, Howard W. 3,016,139.
Le Baron, Ira M., and Fenske. 3,016,138.
Normann, Oscar L. 3,016,395.
Trachta, Joseph E., and Rodriquez. 3,016,143.

Irie, Tsuneo, T. Kagiya, and M. Asada, to Sumitoma Chemical Co., Ltd. Method of producing aluminum triethyl. 3,016,396, 1-9-62, Cl. 260—448.

Irwin, William R. Playing card game. 3,016,243, 1-9-62, Cl. 273—135.

Ishihara Sangyo Kaisha Ltd.: *See*
Masukawa, Miyoshi, Ota, Yamada, and Shimato. 3,016,-286.

Iwata, Masafumi. Toilet tanks. 3,015,827, 1-9-62, Cl. 4—67.

Jackes, Arthur M., to Bell Aerospace Corp. Aircraft take-off assist device. 3,016,234, 1-9-62, Cl. 244—63.

Jackson, William M., II: *See*
Munsell, David D., and Jackson. 3,015,853.

Jacobs, John B. Method of identifying newly born infants. 3,016,056, 1-9-62, Cl. 128—346.

Jacobsen, Hans, to Novo Terapeutisk Laboratorium A/S. Therapeutical antibiotic composition. 3,016,330, 1-9-62, Cl. 167—65.

Jacobson, Clifford H.: *See*
Hackman, Amos W., and Jacobson. 3,016,441.

Jacobson, Walter A. Portable electric livestock barrier and gate. 3,016,229, 1-9-62, Cl. 256—10.

Jamesbury Corp.: *See*
Freeman, Howard G. 3,016,226.

Janssen, Wilfred: *See*
Mast, Fred, and Janssen. 3,016,417.

Jarmufelesztesi Intezet: *See*
Székely, László. 3,015,968.

Jaslonowski, Joseph J., to General Electric Co. Plug-in speed unit. 3,016,444, 1-9-62, Cl. 219—37.

Jenn Air Products Co., Inc.: *See*
Jenn, Louis J., and Morrison. 3,016,003.

Jenn, Louis J., and W. E. Morrison, to Jenn Air Products Co., Inc. Offset belted roof ventilator. 3,016,003, 1-9-62, Cl. 98—43.

Jensen, James L., to Minneapolis-Honeywell Regulator Co. Parallel operation of tetrode transistors. 3,016,494, 1-9-62, Cl. 330—24.

Jersey Production Research Co.: *See*
Eckel, John E., and Lock. 3,016,098.

Jetsaw, Inc.: *See*
Schreck, Harold J., and Rockerath. 3,016,028.

Jiu, James, to G. D. Searle & Co. 2,3,4,17-tetraacetoxyestra-1,3,5(10)-triene. 3,016,391, 1-9-62, Cl. 260—397.5.

Johns, William F., to G. D. Searle & Co. 3,17-bisoxygenated-18-nor-1,3,5(10)-estratrienes and intermediates. 3,016,389, 1-9-62, Cl. 260—397.4.

Johnson, Charles H., to Gisholt Machine Co. Center drive machine tool. 3,015,976, 1-9-62, Cl. 82—14.

Johnson, Don E. Collapsible combination sawhorse and tool carrier. 3,016,104, 1-9-62, Cl. 182—129.

Johnson, George N., and C. L. Vice, to Minnesota Mining and Mfg. Co. Magnetostructure recording device. 3,016,429, 1-9-62, Cl. 179—100.2.

Johnson, Waldo O.: *See*
Eskridge, Harold E., and Johnson. 3,015,839.
Eskridge, Harold E., and Johnson. 3,015,840.

Johnson, Wayne R., to Minnesota Mining and Mfg. Co. Color stabilizing video tape reproducing system. 3,016,415, 1-9-62, Cl. 178—6.6.

Johnson, Wayne R., to Minnesota Mining and Mfg. Co. Magnetic transducing system. 3,016,416, 1-9-62, Cl. 178—6.6.

Jolliffe, Everett S., to Sperry Rand Corp. Apparatus for multiple mode control systems. 3,016,048, 1-9-62, Cl. 121—41.

Jones, Clive R., to British Nylon Spinners Ltd. Apparatus for the heat treatment of running yarns. 3,015,872, 1-9-62, Cl. 28—62.

Jones, John A. Can package. 3,016,133, 1-9-62, Cl. 206—47.

Jones & Laughlin Steel Corp.: *See*
Cooper, Emmit R. 3,016,127.

Jonkers, Cornelis O., to N.V. Optische Industrie "De Oude Delft." Mounting of optical elements. 3,015,990, 1-9-62, Cl. 88—96.

Jordan, Allan E., & Associates: *See*
Robinson, Charles. 3,016,045.

Jorgensen, Walter T. Place-holding device for books. 3,016,-036, 1-9-62, Cl. 116—119.

Jungbecker, Jose. Perforated tubes for the wet treatment, more particularly dyeing, of yarns and filaments. 3,015,-945, 1-9-62, Cl. 68—198.

Kabell, Louis J., H. E. Murphy, and W. B. Guggi, to Ampex Corp. Rotary head drive control mechanism and circuitry for recording magnetic tape recording and/or reproducing apparatus. 3,016,428, 1-9-62, Cl. 179—100.2.

Kabelschlepp G.m.b.H.: *See*
Wanlnger, Gilbert M. 3,016,509.

Kadel, Gerald H., to United States of America, Navy. Apparatus for testing plastic laminates at elevated temperatures in an oxygen-free atmosphere. 3,015,947, 1-9-62, Cl. 73—15.6.

Kalbell, Harold W., to Hlum-a-Rail, Inc. Light flashing device. 3,016,478, 1-9-62, Cl. 315—206.

Kaden, Willy, to Agfa Aktiengesellschaft. Protective device for photographic equipment. 3,015,999, 1-9-62, Cl. 95—11.

Kagan, Fred: *See*—
Magerlein, Barney J., Birkenmeyer, and Kagan. 3,016,392.

Kagiya, Tsutomu: *See*—
Irie, Tsuneo, Kagiya, and Asada. 3,016,396.

Kahn, Myron, A. M. and M. M. Marks. Light polarizing fabrics. 3,016,071, 1-9-62, Cl. 139—420.

Kaiser Industries Corp.: *See*—
Zinniger, Theodore C. 3,016,062.

Kalbach, Raymond B. Heating appliance. 3,016,446, 1-9-62, Cl. 219—46.

Kaman Aircraft Corp., The: *See*—
Polleys, Owen F., Payton, and Robinson. 3,016,217.

Kappelmann, Benjamin O., and J. B. Dalglish. Cotton harvester. 3,015,928, 1-9-62, Cl. 56—33.

Kärtzmark, Robert: *See*—
Butler, Roger M., and Kartzmark. 3,016,350.

Kearns, John P., to United States of America, Navy. Flutter simulator. 3,015,948, 1-9-62, Cl. 73—67.2.

Keeleric, George F. Welding method. 3,016,450, 1-9-62, Cl. 219—117.

Keeslar, Clifford R., to The Upjohn Co. Advertising display. 3,015,898, 1-9-62, Cl. 40—124.1.

Keesling, Thomas B., to FMC Corp. Fruit orientator and corer. 3,016,076, 1-9-62, Cl. 146—52.

Kelco Co.: *See*—
Hunter, Austin R. 3,016,302.

Kellermann, Rudolf. Heat-treating metals. 3,016,314, 1-9-62, Cl. 148—13.

Kennedy, Thomas B., to Diamond-National Corp. Food container. 3,016,131, 1-9-62, Cl. 206—45.33.

Kent, William C., to Western Electric Co., Inc. Apparatus for bending terminals. 3,016,080, 1-9-62, Cl. 53—21.

Kessinger, Corbie. Waste receptacle with ejector means. 3,016,163, 1-9-62, Cl. 220—93.

Keydel, Kurt R. Deodorizer container. 3,016,199, 1-9-62, Cl. 239—55.

Kiddo Textile Machinery Corp.: *See*—
Noe, Harold C. 3,015,871.

Klenzle Apparate G.m.b.H.: *See*—
Vögtlin, Karl, and Rösch. 3,016,278.

King, Edward G., III, ½ to J. Wyniger. Insulated carrying case for heated frozen food dinners and the like. 3,016,129, 1-9-62, Cl. 206—4.

King, James L., and R. G. Finney, to The Ryan Aeronautical Co. Aerial cargo delivery means. 3,016,216, 1-9-62, Cl. 244—138.

King, John C.: *See*—
Smith, Donald C., and King. 3,016,146.

Kirsch, Francis W., to Houdry Process Corp. Upgrading natural gasoline. 3,016,344, 1-9-62, Cl. 208—79.

Kirshenbaum, David. Paint can attachment. 3,016,169, 1-9-62, Cl. 222—192.

Kirsten, Frederick A., to United States of America, Atomic Energy Commission. Phase differential indicating circuit. 3,016,475, 1-9-62, Cl. 315—84.6.

Kleespies, Ernst K.: *See*—
Wong, Morton M., and Kleespies. 3,016,296.

Klenke, Gerald H.: *See*—
Bach, Chester C., Clark, Drukker, Klenke, Lenk, and Runge. 3,016,448.

Klingenberg, Alfred S., to Bell Telephone Laboratories, Inc. Swaging tool. 3,016,083, 1-9-62, Cl. 153—81.

Knocks, Charles J. Box construction. 3,016,178, 1-9-62, Cl. 229—8.

Koehler, Fred, to Hamilton Watch Co. Electric timepiece contact mechanism. 3,015,933, 1-9-62, Cl. 58—28.

Koller, Lewis R., and H. D. Coghill, to General Electric Co. Formation of phosphor films of reaction. 3,016,307, 1-9-62, Cl. 117—33.5.

Komeno, Taichiro, to Shionogi & Co., Ltd. Acylthio steroids and production thereof. 3,016,386, 1-9-62, Cl. 260—397.2.

Kooistra, John A., and L. E. Bussiere, to Davis & Furber Machine Co. Combined bobbin and flyer assembly. 3,015,931, 1-9-62, Cl. 57—73.

Koppers Co., Inc.: *See*—
Harris, James J. 3,016,102.
Sturrock, Murray G., Cline, Robinson, and Lovin. 3,016,401.

Kostelnick, Joseph J., to Bell Telephone Laboratories, Inc. Nonreciprocal electromagnetic device. 3,016,197, 1-9-62, Cl. 333—24.

Kothe, C. A.: *See*—
Robinson, John J. 3,016,315.

Kramp, Kurt M., to Raytheon Co. Systems for the measurement of sea state and the like. 3,016,529, 1-9-62, Cl. 343—5.

Krause, Charles T., to General Motors Corp. Automatic washer with control means for liquid supply and heating. 3,015,944, 1-9-62, Cl. 68—12.

Krenzke, Fred J., to The Dow Chemical Co. Anode assembly for electrolytic cell. 2,016,343, 1-9-62, Cl. 204—280.

Krimmel, Carl P., to G. D. Searle & Co. Glycosides of the pyridone series. 3,016,372, 1-9-62, Cl. 260—210.

Kropa, Edward L., and A. S. Nyquist, to American Cyanamid Co. Process for treating cellulosic textile material with triacrylyl-S-triazines. 3,016,281, 1-9-62, Cl. 8—116.2.

Krueger, Theodore H., to Better Packages, Inc. Strip serving and applying device. 3,015,925, 1-9-62, Cl. 53—198.

Kruskal, Martin, J. L. Tuck, S. A. Colgate, and M. N. Rosenbluth, to United States of America, Atomic Energy Commission. Controlled nuclear fusion reactor. 3,016,342, 1-9-62, Cl. 204—193.2.

Kunstzijdespinnerij Nyma N.V.: *See*—
Vosters, Harry L. 3,016,305.

Lafferty, James M., to General Electric Co. Vacuum circuit interrupters. 3,016,436, 1-9-62, Cl. 200—144.

Lake, Connie, Shelving with sliding shelves. 3,016,150, 1-9-62, Cl. 211—143.

Lakewood Mfg. Co.: *See*—
Peplin, Stephen C. 3,016,161.
Peplin, Stephen C. 3,016,241.

Lalonde, Guy J., to Precision Connectors, Inc. Printed circuit electrical connectors. 3,016,508, 1-9-62, Cl. 339—17.

Lamellen-und Kupplungsbau August Häussermann: *See*—
Häussermann, Kurt, Maucher, and Stallbaumer. 3,016,120.

Landauer, Rolf W., to International Business Machines Corp. Standing wave parametric amplifiers. 3,016,492, 1-9-62, Cl. 330—5.

Landry, John V., to Pastushin Aviation Corp. Means for releasably mounting a store on an aircraft. 3,016,258, 1-9-62, Cl. 294—83.

Lange, Emil, ½ to Aktieselskabet National Industri. Electrical switch. 3,016,437, 1-9-62, Cl. 200—145.

Langlois, David P.: *See*—
Larson, Roy F., Langlois, and Shildneck. 3,016,398.

Larson, Donald W. Shaker and pouring dispenser. 3,016,168, 1-9-62, Cl. 222—189.

Larson, George C. Precision universal gauge. 3,015,891, 1-9-62, Cl. 33—143.

Larson, Roy F., D. P. Langlois, and P. R. Shildneck, to A. E. Staley Mfg. Co. Stabilized phytic acid solutions and methods of preparation thereof. 3,016,398, 1-9-62, Cl. 260—461.

Laubach, Gerald D., and E. R. Pinson, Jr., to Chas. Pfizer & Co., Inc. Certain 4-phenylbenzoyl methyl-1, 2-diaryl pyrazolidine-diones. 3,016,383, 1-9-62, Cl. 260—310.

Launder, Ernie L., to H. & L. Tooth Co. Adjustable tooth shank connection. 3,016,253, 1-9-62, Cl. 287—54.

Lawin, Walter H. Wood stain. 3,016,279, 1-9-62, Cl. 8—6.5.

Lawrence, Frank D. Holders for bottles and like necked containers. 3,016,259, 1-9-62, Cl. 294—87.2.

Lawrence, Thomas F., and J. F. Ingleson, to General Electric Co. Removable fluid impingement starter nozzle construction for turbo-engine. 3,016,227, 1-9-62, Cl. 253—78.

Lear, Inc.: *See*—
Eklund, Harry N. 3,015,956.

Le Baron, Ira M., and D. H. Fenske, to International Minerals & Chemical Corp. Process of beneficiating langbeinite ores. 3,016,138, 1-9-62, Cl. 209—2.

Lebourg, Maurice P., to Schlumberger Well Surveying Corp. Perforating apparatus. 3,016,014, 1-9-62, Cl. 102—20.

Lee, Francis F., to Radio Corp. of America. Reversible code converter. 3,016,422, 1-9-62, Cl. 178—26.

Leeman, Jan N. J., to Stamicarbon N.V. Apparatus for separating mixtures of solid particles. 3,016,144, 1-9-62, Cl. 209—172.5.

Leesona Corp.: *See*—
Barnes, Porter L., Jr. 3,016,205.

Lehner, William L.: *See*—
Heida, Robert W., Lehner, and Walker. 3,015,881.

Le May, Joseph. Photographic film coating and straightening device. 3,016,039, 1-9-62, Cl. 118—253.

Lenk, Elmer N.: *See*—
Bach, Chester C., Clark, Drukker, Klenke, Lenk, and Runge. 3,016,448.

Les Ateliers de Constructions Mecaniques C. & A. Holweg: *See*—
Gassner, Georges. 3,016,085.

Lester, Jules P.: *See*—
Smith, Donald F., and Lester. 3,016,488.

Levine, Philip, to Ortho Pharmaceutical Corp. Method of preparing anti-P serum and anti-Le^a serum. 3,016,332, 1-9-62, Cl. 167—78.

Lewis, Thomas J. Skin cream containing low gel strength, low viscosity gelatin. 3,016,334, 1-9-62, Cl. 167—91.

Licentia Patent-Verwaltungs-G.m.b.H.: *See*—
Pohl, Franz A., and Hnauskrecht. 3,016,289.

Lieberman, Emanuel R.: *See*—
Pepper, Rollin E., and Lieberman. 3,016,328.

Lien, Gunder, Jr., to General Electric Co. Surface heating unit construction. 3,016,445, 1-9-62, Cl. 219—37.

Liggett, John A.: *See*—
Ecker, Mario E., and Liggett. 3,016,210.

Lindberg, Peter H. Tank-thimble attachment mechanism. 3,016,248, 1-9-62, Cl. 285—89.

Lindner, Herbert G., to United States of America, Army. Synchronization for maximum correlation. 3,016,519, 1-9-62, Cl. 340—171.

Lloyd, Billy E., to Allied Chemical Corp. Production of trimethyleneurea. 3,016,379, 1-9-62, Cl. 260—251.

Lock, Everett H.: *See*—
Eckel, John E., and Lock. 3,016,098.

Lodal Inc.: *See*—
Brisson, John R. 3,016,157.

Lolzillon, Guy, to Societe d'Etudes et de Participations pour l'Industrie et le Commerce de la Bonneterie. Seamless knitted hosiery article. 3,015,943, 1-9-62, Cl. 66—188.

Long, John B., to Marmon-Herrington Co., Inc. Conveyor having load processing means. 3,016,204, 1-9-62, Cl. 241—200.

Lourie, Norman M., and K. E. Perry, to Minneapolis-Honeywell Regulator Co. Information storage apparatus using a record medium. 3,016,522, 1-9-62, Cl. 340—174.1.

Lovejoy, Elwyn R., to E. I. du Pont de Nemours and Co. Metal catalyzed pyrolysis of fluoromethanes. 3,016,405, 1-9-62, Cl. 260—648.

Lovin, Robert J.: *See*—
Sturrock, Murray G., Cline, Robinson, and Lovin. 3,016,401.

Lucas, John W. Magnetic means and carriers for envelopes to facilitate sorting mail as to destinations. 3,016,125, 1-9-62, Cl. 198—38.

Lucas, John W. Mail sorting apparatus and method. 3,016,141, 1-9-62, Cl. 209—72.

Lucien, Rene, to Recherches Etudes Production R.E.P. Monodise stirrup brakes. 3,016,111, 1-9-62, Cl. 188—73.

Lucifer S.A.: *See*—
Stampfli, Harald. 3,016,065.

Luehrs, Hans J., to The Cottrell Co. Printing press plate clamping means for prebent wrap around printing plates of soft material. 3,016,010, 1-9-62, Cl. 101—415.1.

Luft, Ludwig, to Mine Safety Appliances Co. Apparatus for continuous separation of volatile components of a gaseous mixture. 3,016,106, 1-9-62, Cl. 183—2.

Lukens Steel Co.: *See*—
McEuen, Kenneth W., and Smith. 3,015,885.

Lydfors, John, to Aktiebolaget Addo. Multiplier printing mechanism. 3,016,188, 1-9-62, Cl. 235—60.

Lynch, Joseph A.: *See*—
Frank, Carl A., McClosky, and Lynch. 3,015,922.

Lytle, F. K.: *See*—
Willingham, Herman P. 3,015,903.

M.S.A. Research Corp.: *See*—
Scharpf, George H. 3,016,160.

Macaulay, Norman, to Moore Business Forms, Inc. Recording paper coated with microscopic capsules of coloring material, capsules and method of making. 3,016,308, 1-9-62, Cl. 117—36.7.

MacDonald, Warren E., to St. Regis Paper Co. Carton closing machine. 3,015,919, 1-9-62, Cl. 53—38.

MacDonough, Edward P., to Chance Vought Corp. Device for hydraulic powering system. 3,016,047, 1-9-62, Cl. 121—38.

Machine Tool Works Oerlikon, Administration Co.: *See*—
Schenk, Gustav. 3,016,187.

MacMillan, Kenneth T., and E. A. Millhoff, to Wonder Products, Co. Frame for mold. 3,015,846, 1-9-62, Cl. 18—26.

Maddock, Robert W., to Douglas Aircraft Co., Inc. Emergency oxygen release system and coupling. 3,016,061, 1-9-62, Cl. 137—81.

Mader, Paul M., R. D. Nelson, and T. V. Crevling, to Eastman Kodak Co. Yellow filter layers for multi-layer photographic color elements. 3,016,306, 1-9-62, Cl. 117—33.3.

Magerlein, Barney J., R. D. Birkenmeyer, and F. Kagan, to The Upjohn Co. 16-fluoro steroids of the pregnane series. 3,016,392, 1-9-62, Cl. 260—397.45.

Magnaflux Corp.: *See*—
Foley, Eugene W. 3,016,487.

Magnavox Co., The: *See*—
Nelson, Alfred M., Stern, and Wiener. 3,016,239.
Peck, Stuart L., and Wilson. 3,016,140.

Malik, Fred A.: *See*—
Malik, Joseph M. and F. A., and McDonald. 3,016,238.

Malik, Joseph M. and F. A., and H. S. McDonald. Roof or wall hatch. 3,016,238, 1-9-62, Cl. 268—102.

Mallery, Paul, to Bell Telephone Laboratories, Inc. Arithmetic carry generator. 3,016,196, 1-9-62, Cl. 235—176.

Mandel, Gerald, to Hogan Faximile Corp. Electrolytic recording paper. 3,016,338, 1-9-62, Cl. 204—2.

Mantelet, Jean. Citrus fruit reamer. 3,016,075, 1-9-62, Cl. 146—3.

Marcus, Jerome R., to Western Electric Co., Inc. Winding drums. 3,016,212, 1-9-62, Cl. 242—72.

Marinelli, Loreto P.: *See*—
Montermoso, Juan C., Marinelli, and Andrews. 3,016,369.

Marks, Alvin M.: *See*—
Kahn, Myron, and A. M. and M. M. Marks. 3,016,071.

Marks, Mortimer M.: *See*—
Kahn, Myron, and A. M. and M. M. Marks. 3,016,071.

Marmon-Herrington Co., Inc.: *See*—
Long, John B. 3,016,204.

Marrinson, Ernestine L., and M. B. Rothschild. Disposable dust mop head. 3,015,834, 1-9-62, Cl. 15—228.

Martin, Albert E., to Sir Howard Grubb Parsons & Co. Ltd. Grating spectrometers or analysers. 3,015,984, 1-9-62, Cl. 88—14.

Martin, Covis M. Loom stop mechanism. 3,016,070, 1-9-62, Cl. 139—336.4.

Mast, Fred, and W. Janssen, to Gretag Aktiengesellschaft. Apparatus for reproducing television pictures. 3,016,417, 1-9-62, Cl. 178—7.5.

Mast, Ray L.: *See*—
Bauer, Robert, and Mast. 3,016,292.

Masukawa, Miyoshi, N. Ota, S. Yamada, and T. Shimato, to Ishihara Sangyo Kaisha Ltd. Method for the treatment of waste acid resulting from titanium dioxide production. 3,016,286, 1-9-62, Cl. 23—118.

Mathers, Harry W., to International Business Machines Corp. Servo amplifier. 3,016,485, 1-9-62, Cl. 323—89.

Matteson, Russell E., to Diamond National Corp. Carton dispenser and separator. 3,016,164, 1-9-62, Cl. 221—9.

Matuszak, Alfred H., to Esso Research and Engineering Co. Ester type synthetic lubricants. 3,016,353, 1-9-62, Cl. 252—56.

Mäucher, Paul: *See*—
Häussermann, Kurt, Mäucher, and Stallbaumer. 3,016,120.

Maynier, Stella, and J. Victor; said Victor assor. to said Maynier. Fluid applicators. 3,015,836, 1-9-62, Cl. 15—543.

McCard, Henry W. False twister. 3,015,932, 1-9-62, Cl. 57—77.3.

McCaskill, Donald A. Corner bead installation device. 3,015,890, 1-9-62, Cl. 33—85.

McClosky, Robert B.: *See*—
Frank, Carl A., McClosky, and Lynch. 3,015,922.

McClure, Earl F., to The Goodyear Tire & Rubber Co. Method of shaping foamed rubber latex. 3,015,854, 1-9-62, Cl. 18—53.

McCreary, John. Fluid flow control device for tenter machines utilizing super-heated steam. 3,015,893, 1-9-62, Cl. 34—158.

McCullogh, Robert: *See*—
Batezell, Alfred P., and McCullogh. 3,015,994.

McDonald, Harry S.: *See*—
Malik, Joseph M. and F. A., and McDonald. 3,016,238.

McEuen, Kenneth W., and E. M. Smith, to Lukens Steel Co. Cladding of steel plates with titanium. 3,015,885, 1-9-62, Cl. 29—470.9.

McGuigan, John H., to Bell Telephone Laboratories, Inc. Magnetic core memory matrix. 3,016,521, 1-9-62, Cl. 340—174.

McIntyre, Robert J.: *See*—
McIntyre, Thomas F. and R. J. 3,015,981.

McIntyre, Thomas F. and R. J. Clarinets. 3,015,981, 1-9-62, Cl. 84—382.

McMaster, Harold A., and N. C. Nitschke, to Permaglass, Inc. Glass tempering furnace. 3,015,910, 1-9-62, Cl. 49—45.

Mechanisms Co.: *See*—
Roth, Jay M. 3,016,022.

Medovick, George J. Underwater breathing apparatus. 3,016,053, 1-9-62, Cl. 128—142.

Mellyn, Charles W.: *See*—
Cederstrom, Curtiss M., and Mellyn. 3,016,230.

Menell, Hans: *See*—
Niclas, Walter, and Menell. 3,016,084.

Merck & Co., Inc.: *See*—
Chamberlin, Earl M., and Chemerda. 3,016,377.
Stoudt, Thomas H. 3,016,335.

Merkel, Ewald. Method of and device for making hollow bodies. 3,015,855, 1-9-62, Cl. 18—55.

Merkel, Hans. Dispensing container. 3,016,170, 1-9-62, Cl. 222—425.

Mero, Peter G. S. Recording device. 3,016,419, 1-9-62, Cl. 178—18.

Mero, Peter G. S. Recording device. 3,016,420, 1-9-62, Cl. 178—18.

Metallurgical Resources, Inc.: *See*—
Summers, Gerald C., and Mills. 3,016,515.

Miles Laboratories, Inc.: *See*—
Bauer, Robert, and Mast. 3,016,292.

Miller, Donald, to Whiteley-Read Engineers Ltd. Roll bending machines for curving plate members. 3,016,082, 1-9-62, Cl. 153—54.

Miller, Donald L., to The Bendix Corp. Automatically engaging and disengaging overrunning clutch. 3,016,122, 1-9-62, Cl. 192—104.

Miller, Edgar S.: *See*—
Glickman, Samuel A., and Miller. 3,016,366.
Glickman, Samuel A., and Miller. 3,016,367.

Miller Electric Mfg. Co.: *See*—
Mulder, Allan C., and Rasmusen. 3,016,484.

Miller, Elmer C., to Phillips Petroleum Co. Method of operating on analyzer. 3,015,985, 1-9-62, Cl. 88—14.

Miller, Henry W., ½ to J. H. P. Brown. Adjustable can top perforator. 3,015,886, 1-9-62, Cl. 30—6.1.

Miller, Ralph. Load accelerator for supercharged engine. 3,015,934, 1-9-62, Cl. 60—13.

Millhoff, Ernest A.: *See*—
MacMillan, Kenneth T., and Millhoff. 3,015,846.

Mills, George A.: *See*—
Hindin, Saul G., and Mills. 3,016,354.

Mills, Robert L.: *See*—
Summers, Gerald C., and Mills. 3,016,515.

Mine Safety Appliances Co.: *See*—
Luft, Ludwig. 3,016,106.
Strange, John P., Charlton, and Yant. 3,016,107.

Minerals & Chemicals Philipp Corp.: *See*—
Robinson, Alfred J., Allegrini, and Mueller. 3,016,355.

Minneapolis-Honeywell Regulator Co.: *See*—
Jensen, James L. 3,016,494.
Lourie, Norman M., and Perry. 3,016,522.
Newbold, William F. 3,016,197.
Ochs, Robert E., Jr. 3,015,951.

Minnesota Mining and Mfg. Co.: *See*—
Johnson, George N., and Vice. 3,016,429.
Johnson, Wayne R. 3,016,415.
Johnson, Wayne R. 3,016,416.

Minnesota and Ontario Paper Co.: *See*—
Paulson, Morris, and Rasmussen. 3,015,957.

Mitchell, John E., Co., Inc.: *See*—
Mitchell, Orville. 3,016,252.

Mitchell, Orville, to John E. Mitchell Co., Inc. Dog clutch. 3,016,252, 1-9-62, Cl. 287—52.

Mittelstadt, Norbert F., and W. P. Pilz, Jr., to Plymouth Die Mold, Inc. Short-stroke press. 3,015,849, 1-9-62, Cl. 18—30.

Mobay Chemical Co.: *See*—
Müller, Erwin. 3,016,364.
Holtschmidt, Hans. 3,016,365.

Mochel, Walter E., and L. Plambeck, Jr., to E. I. du Pont de Nemours and Co. Photopolymerizable compositions comprising polymeric chelates and their use in the preparation of reliefs. 3,016,297, 1-9-62, Cl. 96—35.

Mockrin, Isadore, to Pennsalt Chemicals Corp. Articles containing fluoaluminates as dielectrics. 3,016,480, 1-9-62, Cl. 317—230.

Model Plastic Corp.: *See*—
Cohn, David. 3,015,856.

Monahan, Jack J.: *See*—
Filezar, Geza B., and Monahan. 3,016,443.

Monroe Auto Equipment Co.: *See*—
Smith, Charles J., Read, and Wehring. 3,016,049.

Monsanto Chemical Co.: *See*—
Clifford, Alan F. 3,016,285.
Monsanto Chemicals Ltd.: *See*—
Preston, Iris W., and Payne. 3,016,304.
Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Natta, Giulio, Porri, and Flore. 3,016,371.
Montermoso, Juan C., L. P. Marinelli, and T. M. Andrews, to United States of America, Army. Organotin acrylic polymers. 3,016,369. 1-9-62, Cl. 260—80.
Mooney, Truman P. Service car. 3,016,156. 1-9-62. Cl. 214—152.
Moore Business Forms, Inc.: *See*—
Macaulay, Norman. 3,016,308.
Moore, Edward F.: *See*—
Gilbert, Edgar N., and Moore. 3,016,527.
Moore, Hilbert R.: *See*—
Ilgenfritz, Lester M., Moore, and Robertson. 3,016,514.
Moore, Howard N. Individual packaging apparatus, method, and package. 3,015,917. 1-9-62. Cl. 53—21.
Moore, William A., to Boeing Airplane Co. Device and method for producing low rate angular acceleration. 3,015,946. 1-9-62. Cl. 73—1.
Moraff, Howard, to Bell Telephone Laboratories, Inc. Transistor monostable circuit. 3,015,468. 1-9-62. Cl. 307—88.5.
Moreau, Leon: *See*—
Caron, Michel, Chaudron, and Moreau. 3,016,237.
Morey, Norval K.: *See*—
Baker, Robert M., and Morey. 3,016,074.
Morrison, William E.: *See*—
Jenn, Louis J., and Morrison. 3,016,003.
Morrow, Carlos C.: *See*—
Morrow, David W. and C. C. 3,016,172.
Morrow, David W. and C. C. Container closure. 3,016,172. 1-9-62. Cl. 222—490.
Morrow, Forrest M.: *See*—
Oganowski, Kasimir, and Morrow. 3,016,041.
Morse, Charles L. Oven construction. 3,016,276. 1-9-62. Cl. 312—274.
Morse, Edward P., to Northrop Corp. Phase detector having negative feedback for null rebalancing. 3,016,491. 1-9-62. Cl. 329—50.
Mosbacher, Bruce H., to Roper Hydraulics, Inc. Hydraulically operated clutch. 3,016,121. 1-9-62. Cl. 192—91.
Motley, Robert L. Baby rattler with sliding rattles. 3,015,909. 1-9-62. Cl. 46—193.
Mount, Wadsworth W. Fish trap. 3,015,902. 1-9-62. Cl. 43—7.
Moyroud, Louis M.: *See*—
Hugonnet, Rene A., and Moyroud. 3,016,209.
Mueller, Albert J.: *See*—
Robinson, Alfred J., Allegrini, and Mueller. 3,016,355.
Mueller, Otto. Fluid lock for differential. 3,015,970. 1-9-62. Cl. 74—711.
Mulder, Allan C., and R. P. C. Rasmussen, to Miller Electric Mfg. Co. Arc welding transformer power supply. 3,016,484. 1-9-62. Cl. 321—24.
Müller, Erwin, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Polyurethane plastics. 3,016,364. 1-9-62. Cl. 260—47.
Muller, Robert H., to The Air Preheater Corp. Rotor seal. 3,016,231. 1-9-62. Cl. 207—269.
Mulligan, William G.: *See*—
Felix, Joseph. 3,016,068.
Munsell, David D., and W. M. Jackson, II, to Cabot Corp. Process for heat treating molded compositions. 3,015,853. 1-9-62. Cl. 15—58.
Murphy, Howard E.: *See*—
Kabell, Louis J., Murphy, and Guggi. 3,016,428.
Murphy, John A., to Couch International Methane Ltd. Transmission line for cold liquids. 3,016,219. 1-9-62. Cl. 248—55.
Murphy, John M., M. K. Tucker, and T. H. Fogt, to General Motors Corp. Refrigerating apparatus. 3,016,183. 1-9-62. Cl. 230—139.
Murtland, James B., Jr.: *See*—
Orbom, Orville E., Murtland, and Schoepf. 3,015,974.
Myddelton, Geoffrey C., to Carbonaire S.A. Filters for use in motor vehicles. 3,016,108. 1-9-62. Cl. 183—4.8.
Myles, William J.: *See*—
Fortess, Fred, and Myles. 3,016,280.
N.V. Optische Industrie "De Onde Delft": *See*—
Jonkers, Cornelis O. 3,015,990.
Naborowski, John G., to The Electric Auto-Lite Co. Ignition system. 3,016,477. 1-9-62. Cl. 315—206.
National Research Development Corp.: *See*—
Royle, Joseph K. 3,016,064.
Taylor, Wilfred K. 3,016,518.
National-Standard Co.: *See*—
White, John W. 3,016,322.
Natta, Giulio, L. Porri, and L. Flore, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Homogeneous polymerization catalysts based on cobalt and polymerization of diolefins therewith. 3,016,371. 1-9-62. Cl. 260—94.3.
Necchi S.p.A.: *See*—
Bono, Luigi. 3,016,932.
Needham, Howard H., deceased (by M. Needham, executrix), to A. O. Smith Corp. Multi-layer vessel having a neutron absorbing layer. 3,016,463. 1-9-62. Cl. 250—108.
Needham, Howard H.: *See*—
Hendricksen, Warren, and Needham. 3,016,462.
Needham, Margaret: *See*—
Hendricksen, Warren, and Needham. 3,016,462.
Needham, Howard H. 3,016,463.
Nelson, Alfred M., H. M. Stern, and J. B. Wiener, to The Magnavox Co. Card processing system. 3,016,239. 1-9-62. Cl. 271—5.
Nelson, Robert D.: *See*—
Mader, Paul M., Nelson, and Creviing. 3,016,306.
Nestor, Ontario H.: *See*—
Gage, Robert M., Nestor, and Yenni. 3,016,447.
Nettleton, David L.: *See*—
Bensky, Lowell S., and Nettleton. 3,016,194.
Neutronic Development Corp.: *See*—
Fisher, Bernard C. 3,016,411.
Newbold, William F., to Minneapolis-Honeywell Regulator Co. Square root extracting integrator. 3,016,197. 1-9-62. Cl. 235—183.
New York Air Brake Co., The: *See*—
Williams, Samuel G. 3,016,018.
Niclas, Walter: *See*—
Beckadolph, Richard, and Niclas. 3,016,321.
Niclas, Walter, and H. Menell, to Continental Gummi-Werke Aktiengesellschaft. Method of and device for making pneumatic tires. 3,016,084. 1-9-62. Cl. 154—9.
Nitschke, Norman C.: *See*—
McMaster, Harold A., and Nitschke. 3,015,910.
Noe, Harold C., to Kidde Textile Machinery Corp. Tension compensating apparatus. 3,015,871. 1-9-62. Cl. 28—36.
Noël, Fernand: *See*—
Oswald, Alexis A., Rupar, Ihnyckyj, and Noël. 3,016,349.
Noguchi, Yoshiyuki, 50% to T. Oki. Stepless speed changing means. 3,015,964. 1-9-62. Cl. 74—193.
Norddeutsche Schraubenund Mutternwerke A.G.: *See*—
Schrader, Jürgen. 3,016,260.
Norman, Oscar L., to International Minerals & Chemical Corp. Methyl-2-keto-D-gluconate. 3,016,395. 1-9-62. Cl. 260—483.
Norris, Edward O. Magnetically spaced ball bearing. 3,016,274. 1-9-62. Cl. 308—199.
North American Aviation, Inc.: *See*—
Grant, Frederic F. 3,016,427.
Northrop Corp.: *See*—
Benoit, Conrad H. 3,016,273.
Morse, Edward P. 3,016,491.
Steele, Floyd G. 3,015,960.
Norton Co.: *See*—
Haywood, George L. 3,016,294.
Norton, Harry W., to Flight Refuelling Ltd. Coupling devices for railway vehicles. 3,016,152. 1-9-62. Cl. 213—89.
Novo Terapeutisk Laboratorium A/S: *See*—
Jacobsen, Hans. 3,016,330.
Noyori, Kiuiharu, to Yasuyuki Sata. Portable oculi fundus camera. 3,016,000. 1-9-62. Cl. 95—12.
Nuernberger, Eldon L.: *See*—
Williams, William A., and Nuernberger. 3,015,965.
Nyquist, Arthur S.: *See*—
Kropa, Edward L., and Nyquist. 3,016,281.
O'Bryan, James V.: *See*—
Doctor, Bernard H., and O'Bryan. 3,015,950.
Ochs, Robert E., Jr., to Minneapolis-Honeywell Regulator Co. Pointer mechanism. 3,015,951. 1-9-62. Cl. 73—141.
Oganowski, Kasimir, and F. M. Morrow, to Armco Steel Corp. Metallic coating exit machine with driven rolls. 3,016,041. 1-9-62. Cl. 118—419.
Ogle, Hugh M., to General Electric Co. Magnetic amplifier having non-linear response characteristic. 3,016,486. 1-9-62. Cl. 323—89.
O'Hara, Mark J., to Universal Oil Products Co. Hydrodesulfurization process and catalyst therefor. 3,016,346. 1-9-62. Cl. 208—216.
O'Hara, Mark J., to Universal Oil Products Co. Hydrocarbon purification process and catalyst. 3,016,347. 1-9-62. Cl. 208—216.
Oki, Takanosuke: *See*—
Noguchi, Yoshiyuki. 3,015,964.
Oldenburg, Frank A. Pulsating stomach pumping apparatus and the like. 3,016,055. 1-9-62. Cl. 128—278.
Olin Mathieson Chemical Corp.: *See*—
Filstrup, Edward C. 3,016,015.
Olmstead, Van D. Ultrasonic fuel and air mixer. 3,016,233. 1-9-62. Cl. 261—81.
Olson, Arnold P. Laminated board construction. 3,016,316. 1-9-62. Cl. 154—45.9.
O'Neill, Paul J. Method and apparatus for dispensing predetermined quantities of liquid. 3,016,072. 1-9-62. Cl. 141—103.
Oravisual Co., Inc.: *See*—
Guth, Chester K. 3,015,906.
Orbom, Orville E., J. B. Murtland, Jr., and F. J. Schoepf, to General Electric Co. Automatic control system for rolling mills and adjustable dies. 3,015,971. 1-9-62. Cl. 80—56.
Organon Inc.: *See*—
Duyvene de Wit, Erik. 3,016,388.
Ormoneterapia Richter S.p.A.: *See*—
Toccacelli, Nazzareno. 3,016,331.
Orr, Carrol A.: *See*—
Cobb, Clifton A., Wiessner, and Orr. 3,016,147.
Ortho Pharmaceutical Corp.: *See*—
Levine, Philip. 3,016,332.
Singher, Heron O., and Zuckerman. 3,016,337.
Osborn, Myron D.: *See*—
Hopkins, Thomas R., Osborn, and Francis. 3,016,374.
Osborne, Fred H., to The Wurlitzer Co. Tamperproof coin box. 3,016,185. 1-9-62. Cl. 232—15.
Oswald, Alexis A., C. B. Rupar, S. Ihnyckyj, and F. Noël, to Esso Research and Engineering Co. Denitrogenation of petroleum. 3,016,349. 1-9-62. Cl. 208—254.
Ota, Naruo: *See*—
Masukawa, Miyoshi, Ota, Yamada, and Shimato. 3,016,286.
Otis Engineering Corp.: *See*—
Spalding, James G. 3,016,996.
Owens-Corning Fiberglas Corp.: *See*—
Staiego, Charles J. 3,015,842.

Owens-Illinois Glass Co.: *See*—
Payne, Paul H. 3,015,911.
Pace, Henry A., to The Goodyear Tire & Rubber Co. Preparation of flexible elastomeric cellular polyurethane products. 3,016,356. 1-9-62. Cl. 260—2.5.
Pacific Transducer Corp.: *See*—
Argabrite, George A. 3,015,955.
Palmer Thermometers, Inc.: *See*—
Stiens, Robert B. 3,016,038.
Parker, Walter R.: *See*—
Dyer, John W., Short, and Parker. 3,015,835.
Parsons, Anthony M.: *See*—
Cohen, Aaron, and Parsons. 3,016,381.
Parsons, Sir Howard Grubb, & Co. Ltd.: *See*—
Martin, Albert E. 3,015,984.
Pastushin Aviation Corp.: *See*—
Landry, John V. 3,016,258.
Pattilloch, Donald K., to Electro-Chem Fiber Seal Corp. Process of combining water-insoluble additament with organic fibrous material. 3,016,325. 1-9-62. Cl. 162—164.
Paulson, Morris, and L. Rasmussen, to Minnesota and Ontario Paper Co. Apparatus and process for sampling. 3,015,957. 1-9-62. Cl. 73—421.
Paus, Robert L., and C. Forrester, to Ansul Chemical Co. Safety device for a fire extinguisher. 3,016,097. 1-9-62. Cl. 169—31.
Payne, John: *See*—
Preston, Iris W., and Payne. 3,016,304.
Payne, Paul H., to Owens-Illinois Glass Co. Apparatus for forming neck finishes on glass containers. 3,015,911. 1-9-62. Cl. 49—68.
Payton, Donald J.: *See*—
Polleys, Owen F., Payton, and Robinson. 3,016,217.
Pechiney Campagnie de Produits Chimiques et Electrometallurgiques: *See*—
Riou, Marcel, and Richaud. 3,016,339.
Peck, Stuart L., and L. R. Wilson, to The Magnavox Co. Card processing apparatus. 3,016,140. 1-9-62. Cl. 209—72.
Pederson, Raymond L.: *See*—
Babcock, John C., Campbell, Herr, Hogg, and Pederson. 3,016,387.
Peffen, Rene: *See*—
Andrieux, Jean L., and Peffen. 3,016,288.
Pell, Erik M., to General Electric Co. Semiconductor devices and method of making the same. 3,016,313. 1-9-62. Cl. 148—1.5.
Peltola, Veikko K., to Illinois Testing Laboratories, Inc. Magnetic air velocity transducer. 3,015,953. 1-9-62. Cl. 73—194.
Penney, Robert V.: *See*—
Grant, Paul M., and Penney. 3,016,507.
Pennsalt Chemicals Corp.: *See*—
Mockrin, Isadore. 3,016,480.
Peplin, Stephen C., to Lakewood Mfg. Co. Flexible filler tube assembly. 3,016,161. 1-9-62. Cl. 220—86.
Peplin, Stephen C., to Lakewood Mfg. Co. Ball wheel and method of making the same. 3,016,241. 1-9-62. Cl. 273—49.
Pepper, Rollin E., and E. R. Lieberman, to Ethicon, Inc. Dialdehyde alcoholic sporicidal composition. 3,016,328. 1-9-62. Cl. 167—22.
Peras, Lucien, to Regie Nationale des Usines Renault. Devices for the automatic handling and turning-round of articles. 3,016,155. 1-9-62. Cl. 214—147.
Perkins, William, to F. N. Burt Co., Inc. Roll tape dispenser and container. 3,016,174. 1-9-62. Cl. 225—47.
Permaglass, Inc.: *See*—
McMaster, Harold A., and Nitschke. 3,015,910.
Permanent Filter Corp.: *See*—
Price, Harold A. 3,016,345.
Perry, Kenneth E.: *See*—
Lourie, Norman M., and Perry. 3,016,522.
Pertrix Union G.m.b.H.: *See*—
Priehe, Bodo F. H. 3,016,414.
Petersen, Gerald A. Screw anchor. 3,016,117. 1-9-62. Cl. 189—91.
Petriw, Andrew, to United States of America, Army. Semi-coincidence detector. 3,016,490. 1-9-62. Cl. 328—146.
Petropoulos, John C., to American Cyanamid Co. 4,4'-(1,1,2,2-tetramethylethylene) dibenzoic acid. 3,016,400. 1-9-62. Cl. 260—515.
Petusseau, Bernard J.: *See*—
Bondiou, Jean-Claude, and Petusseau. 3,016,385.
Pfizer, Chas. & Co., Inc.: *See*—
Laubach, Gerald D., and Pinson. 3,016,383.
Philco Corp.: *See*—
Cronthamel, Richard. 3,015,874.
Phillips Petroleum Co.: *See*—
Brown, Glenn S. 3,015,883.
Miller, Elmer C. 3,015,985.
Phil-Mar Corp.: *See*—
Goldfine, Philip F. 3,016,455.
Pierce, John R., to Bell Telephone Laboratories, Inc. Helix wave guide. 3,016,503. 1-9-62. Cl. 333—95.
Pilz, William P., Jr.: *See*—
Mittelstadt, Norbert F., and Pilz. 3,015,849.
Pinson, Ellis R., Jr.: *See*—
Laubach, Gerald D., and Pinson. 3,016,383.
Pitney-Bowers, Inc.: *See*—
Beytes, Deane A. 3,016,126.
Pittsburgh-Des Moines Steel Co.: *See*—
Anderson, Lloyd E., Sr. 3,015,913.
Pittsburgh Plate Glass Co.: *See*—
Vogel, Henry A., Rylander, and Roach. 3,016,357.
Wismer, Marco. 3,016,362.
Plambeck, Louis, Jr.: *See*—
Mochel, Walter E., and Plambeck. 3,016,297.
Plasser, Franz, and J. Theurer. Actuating mechanism for pivotal and vibratory ballast tamping tools. 3,016,023. 1-9-62. Cl. 104—12.
Pledger, Huey, Jr.: *See*—
Dick, Clarence R., and Pledger. 3,016,410.
Plymouth Die Mold, Inc.: *See*—
Mittelstadt, Norbert F., and Pilz. 3,015,849.
Pneumatic Scale Corp., Ltd.: *See*—
Saumsiegle, Robert W. 3,015,920.
Pneumo Dynamics Corp.: *See*—
Hamilton, Wallace. 3,016,087.
Pohl, Franz A., and T. Hauskrecht, to Licentia Patent-Verwaltungs-G.m.b.H. Process for producing purified silicon halogenide. 3,016,289. 1-9-62. Cl. 23—205.
Polanin, Walter R., to American Steel Foundries. Slack adjuster. 3,016,114. 1-9-62. Cl. 188—203.
Polarad Electronics Corp.: *See*—
Schneider, Seymour. 3,016,500.
Polaroid Corp.: *See*—
Bing, Herbert A., and Wareham. 3,015,982.
Delange, John P., and Cane. 3,015,989.
Wareham, Richard R., and Wolff. 3,016,175.
Polleys, Owen F., D. J. Payton, and D. W. Robinson, Jr., to The Kaman Aircraft Corp. Aerial device having rotor for retarding descent. 3,016,217. 1-9-62. Cl. 244—138.
Pollmeier, Felix: *See*—
Rustemeyer, Hans, and Pollmeier. 3,015,862.
Pollock, Orthello B., to Reynolds Metals Co. Plastic film roll system. 3,016,137. 1-9-62. Cl. 206—58.
Poor & Co.: *See*—
Sears, Chester G., and Butterworth. 3,016,203.
Popovitsch, Ernst: *See*—
Ruhrmann, Josef, Streicher, and Popovitsch. 3,015,868.
Porri, Lido: *See*—
Natta, Giulio, Porri, and Flore. 3,016,371.
Porterfield, Jack N., to Coors Porcelain Co. Transfer mechanism. 3,016,153. 1-9-62. Cl. 214—1.
Potter Instrument Co., Inc.: *See*—
Comstock, George E., 3d. 3,016,207.
Poupitch, Ougljesa J., to Illinois Tool Works. Handle device. 3,016,136. 1-9-62. Cl. 206—56.
Powell, Albert E., to Sealectro Corp. Transmission system. 3,016,498. 1-9-62. Cl. 333—30.
Power Jets (Research and Development) Ltd.: *See*—
Stephenson, Norman. 3,015,880.
Precision Connectors, Inc.: *See*—
Lalonde, Guy J. 3,016,508.
Prendergast, Charles S., to Brakeshoe International, S.A. Rotary pumps and motors. 3,016,017. 1-9-62. Cl. 103—4.
Prescott, Francis J.: *See*—
Hessel, Frederick A., and Prescott. 3,016,351.
Preston, Iris W., and J. Payne, to Monsanto Chemicals Ltd. Treatment of textiles. 3,016,304. 1-9-62. Cl. 106—36.
Price, Harold A., to Permanent Filter Corp. Hydrocarbon filtration. 3,016,345. 1-9-62. Cl. 208—187.
Priebe, Bodo F. H., to Pertrix Union G.m.b.H. Dry cell. 3,016,414. 1-9-62. Cl. 136—107.
Protona Productionsgesellschaft fur electroakustische Gerate G.m.b.H.: *See*—
Schuh, Carl F., Genning, and Hermann. 3,016,244.
Puleston, Raymond R.: *See*—
Frink, Richard F., and Puleston. 3,015,900.
Pyle-National Co., The: *See*—
Steigerwald, Carl J. 3,016,431.
Radio Corp. of America: *See*—
Bensky, Lowell S., and Nettleton. 3,016,194.
Ecker, Mario E., and Liggett. 3,016,210.
Ecker, Mario E., and Hoehn. 3,016,211.
Lee, Francis F. 3,016,422.
Raffensperger, Stanley P., and T. T. Takashima, to General Foods Corp. Fumaric acid composition. 3,016,299. 1-9-62. Cl. 99—78.
Raffensperger, Stanley P., and T. T. Takashima, to General Foods Corp. Adipic acid composition. 3,016,300. 1-9-62. Cl. 99—78.
Ralstakka, John E. Rat guard for mooring lines. 3,016,034. 1-9-62. Cl. 114—221.
Rakowski, Alexander J., J. E. Rollins, and J. C. Zenobia, Jr., to Specialties Development Corp. Semi-conductive element. 3,016,506. 1-9-62. Cl. 338—22.
Ransom, Richard S., to Short Bros. and Harland Ltd. Launching means for rocket-propelled missiles. 3,015,992. 1-9-62. Cl. 89—1.7.
Rapata, George M., to Illinois Tool Works. Plastic anchor member. 3,015,869. 1-9-62. Cl. 24—213.
Rapuzzi, John J. Universal inserted ball type buckle. 3,015,865. 1-9-62. Cl. 24—21.
Rasmusen, Reidar P. C.: *See*—
Mader, Allan C., and Rasmusen. 3,016,484.
Rasmussen, Lawrence: *See*—
Paulson, Morris, and Rasmussen. 3,015,957.
Raytheon Co.: *See*—
Chamberlain, Robert J. 3,015,884.
Hergenrother, Rudolf C. 3,016,474.
Kramp, Kurt M. 3,016,529.
Read, Charles E.: *See*—
Smith, Charles J., Read, and Wehring. 3,016,049.
Recherches Etudes Production R.E.P.: *See*—
Lucien, Rene. 3,016,111.
Reeves Instrument Corp.: *See*—
Zatsky, Norman C. 3,016,118.
Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 3,016,155.
Rehmann, Heinrich, to Wilhelm Baier, K.G. Sliding roofs for automotive vehicles and the like. 3,016,263. 1-9-62. Cl. 296—137.
Reifers, Richard F., and H. S. Crane, to Diamond National Corp. Molded pulp egg carton. 3,016,176. 1-9-62. Cl. 229—2.5.
Reiffel, Leonard, to Armour Research Foundation of Illinois Institute of Technology. Method and apparatus for generating neutrons. 3,016,461. 1-9-62. Cl. 250—84.5.

Reiners, Walter: *See*—
Fürst, Stefan. 3,016,166.
Reliable Engineering Co.: *See*—
Casey, Charles L., and Ryno. 3,016,165.
Research Corp.: *See*—
Wrigley, Walter, and Draper. 3,015,962.
Reutz, Theodore A. Holder for filleting fish. 3,015,841, 1-9-62, Cl. 17—8.
Reynolds Metals Co.: *See*—
Staples, Paul R. 3,015,878.
Cybriwsky, Alexander, and Hager. 3,016,293.
Pollock, Orthello R. 3,016,137.
Rice, Vernon E., to The Goodyear Tire & Rubber Co. Extruding apparatus. 3,015,844, 1-9-62, Cl. 18—12.
Richards, Richard K. Logical circuit. 3,016,466, 1-9-62, Cl. 307—88.5.
Richards, William H., Jr., and C. H. Shreve. Ammunition dispensing device. 3,016,167, 1-9-62, Cl. 221—235.
Richardson, Donald, to W. R. Grace & Co. Clip crimping apparatus. 3,015,824, 1-9-62, Cl. 1—329.
Richaud, Henri: *See*—
Riou, Marcel, and Richaud. 3,016,339.
Riddle, Joseph E., to General Precision, Inc. Mounting for circuit boards. 3,016,148, 1-9-62, Cl. 211—41.
Rineer, Arthur E. Fluid power converter. 3,016,019, 1-9-62, Cl. 103—121.
Rineer, Arthur E. Fluid power converter. 3,016,020, 1-9-62, Cl. 103—118.
Rineer, Arthur E. Fluid power converter. 3,016,021, 1-9-62, Cl. 103—123.
Ring, Douglas H.: *See*—
De Loach, Bernard C., Jr., and Ring. 3,016,499.
Riou, Marcel, and H. Richaud, to Pechiney Compagnie de Produits Chimiques et Electrometallurgiques. Method of protecting metal surfaces. 3,016,339, 1-9-62, Cl. 204—38.
Roach, Robert F.: *See*—
Vogel, Henry A., Rylander, and Roach. 3,016,357.
Robertson, Donald D.: *See*—
Ilgenfritz, Lester M., Moore, and Robertson. 3,016,514.
Robinson, Alfred J., A. P. Allegrini, and A. J. Mueller, to Minerals & Chemicals Philipp Corp. Activation of clay by acid treatment, supplementary treatment and calcination. 3,016,355, 1-9-62, Cl. 252—424.
Robinson, Charles, to Allan E. Jordan & Associates. Combined desk pad and information panels. 3,016,045, 1-9-62, Cl. 120—24.
Robinson, Donald W., Jr.: *See*—
Polleys, Owen F., Payton, and Robinson. 3,016,217.
Robinson, Harry A.: *See*—
Robinson, John J. 3,016,315.
Robinson, John J., ¼ to C. D. Hall, Jr., and ¼ to H. A. Robinson. Honeycomb structure and method. 3,016,315, 1-9-62, Cl. 154—45.9.
Robinson, Kenneth R.: *See*—
Sturrock, Murray G., Cline, Robinson, and Lovin. 3,016,401.
Robitschek, Paul W.: *See*—
Schweiker, George C., and Robitschek. 3,016,360.
Schweiker, George C., and Robitschek. 3,016,361.
Roch, Josef, to Dr. K. Thomae, G.m.b.H. Amino-substituted purine derivatives. 3,016,378, 1-9-62, Cl. 260—247.5.
Rockerath, John L.: *See*—
Schreck, Harold J., and Rockerath. 3,016,028.
Rodale Electronics, Inc.: *See*—
Smith, Donald F., and Lester. 3,016,488.
Rodriquez, Carlos O.: *See*—
Trachta, Joseph E., and Rodriquez. 3,016,143.
Roeber, Henry W.: *See*—
Crosby, Alton L., and Roeber. 3,016,124.
Roeser, Gerald P., and H. J. Bach, to American Marietta Co., Stoner-Mudge Co. Division. Tripolymer primer for vinyl resin dispersions and steel coated with a film thereof. 3,016,309, 1-9-62, Cl. 117—75.
Rogier, Edgar R.: *See*—
Wheeler, Donald H., and Rogier. 3,016,359.
Rollins, James E.: *See*—
Rakowski, Alexander J., Rollins, and Zenobia. 3,016,506.
Roncken, Hubertus W. H. M.: *See*—
Sanders, Theodorus P. W., and Roncken. 3,016,298.
Roney, Richard N., to The Sheffield Corp. Machine tool. 3,015,914, 1-9-62, Cl. 51—56.
Roney, Richard N., to The Sheffield Corp. Machine component. 3,015,961, 1-9-62, Cl. 74—1.
Roper, Geo. D., Corp: *See*—
Small, George E., and Fulmer. 3,016,198.
Roper Hydraulics, Inc.: *See*—
Mosbacher, Bruce H. 3,016,121.
Rosamilia, Peter L.: *See*—
Harvey, Mortimer T., and Rosamilia. 3,016,092.
Rösch, Walter: *See*—
Vögtlin, Karl, and Rösch. 3,016,278.
Rose, Kenneth D., to Blackhawk Industries. Snap-on metal clamp for rigid metal pipe. 3,016,220, 1-9-62, Cl. 248—74.
Rosenberger, Maurice S., F. J. Winchell, and H. W. Schultz, to General Motors Corp. Clutch structure with flat and underlated disk pack. 3,016,119, 1-9-62, Cl. 192—68.
Rosenblatt, Maurice C. Device for protecting ears from high intensity noise. 3,016,054, 1-9-62, Cl. 128—152.
Rosenbluth, Marshall N.: *See*—
Kruskal, Martin, Tuck, Colgate, and Rosenbluth. 3,016,342.
Ross, Frederick W. Aerodynamic aircraft control system. 3,016,215, 1-9-62, Cl. 244—83.
Ross, Nicholas V., to Ajax Magnethermic Corp. High-temperature thermocouple device. 3,016,412, 1-9-62, Cl. 136—4.
Rotary Hoes Ltd.: *See*—
Howard, Arthur C. 3,016,966.
Roth, Jay M., to Mechanisms Co. Internal toggle linkage pump. 3,016,022, 1-9-62, Cl. 103—216.
Roth, Roy W., to American Cyanamid Co. Method of treating hair with thydroxyether amides of polyacrylic acids. 3,016,333, 1-9-62, Cl. 167—87.
Rothenberg, Carl: *See*—
D'Agostino, Jack V., and Rothenberg. 3,016,534.
Rothschild, Marjorie B.: *See*—
Marrinson, Ernestine L., and Rothschild. 3,015,834.
Royle, Joseph K., to National Research Development Corp. Hydraulic pressure control valve. 3,016,064, 1-9-62, Cl. 137—620.
Ruhrmann, Josef, K. Streicher, and E. Popovitsch, to Talon, Inc. Slide fastener. 3,015,868, 1-9-62, Cl. 24—205.13.
Runge, Heinz F.: *See*—
Bach, Chester C., Clark, Drukker, Klenke, Lenk, and Runge. 3,016,448.
Rupar, Charles B.: *See*—
Oswald, Alexis A., Rupar, Hnyckyj, and Nöel. 3,016,349.
Rusoff, Samuel, and R. S. Drabkowski, to Basic, Inc. Carbon bonded refractory article and process of manufacture. 3,015,850, 1-9-62, Cl. 18—47.5.
Russell, Fred J. Leaf spring knob retainer. 3,016,255, 1-9-62, Cl. 292—352.
Rustemeyer, Hans, and F. Pollmeier. Composite mold. 3,015,862, 1-9-62, Cl. 22—57.2.
Rutland, David: *See*—
Ambrosio, Biagio F., and Rutland. 3,016,423.
Ryan Aeronautical Co., The: *See*—
King, James L., and Finney. 3,016,216.
Rylander, Arthur F.: *See*—
Vogel, Henry A., Rylander, and Roach. 3,016,357.
Ryno, Juddson B.: *See*—
Casey, Charles L., and Ryno. 3,016,165.
S.A.S.I.B.-S.p.A. Scipione Innocenti-Bologna: *See*—
Innocenti, Scipione. 3,015,978.
S.p.A. Meccanica Garelli: *See*—
Soncini, William. 3,016,050.
Sacher, Rudi: *See*—
Troost, Albert, and Sacher. 3,016,537.
Saggiomo, Andrew J., and J. Weinstock, to Smith Kline & French Laboratories. Process for the preparation of dibenz[b,f] azepines. 3,016,373, 1-9-62, Cl. 260—239.
St. Regis Paper Co.: *See*—
MacDonald, Warren E. 3,015,919.
Saltzberg, Burton R., to Bell Telephone Laboratories, Inc. Redundant logic circuitry. 3,016,517, 1-9-62, Cl. 340—147.
Sanders, Theodorus P. W., and H. W. H. M. Roncken, to Chemische Fabriek L. van der Grinten N.V. One-component diazotype material. 3,016,298, 1-9-62, Cl. 96—75.
Sauer, James F., and L. S. Burns, to Barber-Greene Co. Control circuit for hydraulic power steering skid steer systems. 3,015,971, 1-9-62, Cl. 74—720.5.
Saumsiegle, Robert W., to Pneumatic Scale Corp., Ltd. Method and apparatus for trimming and sealing plastic bags. 3,015,920, 1-9-62, Cl. 53—44.
Saunders, Thomas B.: *See*—
Elms, Edwin F., and Saunders. 3,015,866.
Scaife Co.: *See*—
Hart, Edward C. 3,016,184.
Schappel, Joseph W., to American Viscose Corp. Resin spun viscose. 3,016,283, 1-9-62, Cl. 18—54.
Scharpf, George H., to M. S. A. Research Corp. Thermal insulating block. 3,016,160, 1-9-62, Cl. 220—15.
Schenk, Gustav, to Machine Tool Works Oerlikon, Administration Co. Drive mechanism for reciprocating numerical value transfer members of calculating office machines. 3,016,187, 1-9-62, Cl. 235—60.
Schiff, Arthur: *See*—
Brett, Morton, and Schiff. 3,016,193.
Schlumberger Well Surveying Corp.: *See*—
Lebourg, Maurice P. 3,016,014.
Schmidt, William E. Traction device for vehicle wheels. 3,016,078, 1-9-62, Cl. 152—216.
Schmitz, Robert A., and A. F. Anderson, ¼ to said Anderson, and ¾ to said Schmitz. Biocidal composition and method. 3,016,327, 1-9-62, Cl. 167—22.
Schneider, Seymour, to Polarad Electronics Corp. Radio frequency signal modifying apparatus for pressurized transmission systems. 3,016,500, 1-9-62, Cl. 333—34.
Schoen, Walter A. Art of packaging commodities. 3,015,918, 1-9-62, Cl. 53—29.
Schoepf, Fred J.: *See*—
Orbom, Orville E., Murtland, and Schoepf. 3,015,974.
Schrader, Jürgen, to Norddeutsche Schraubenund Muttern-werke A.G. Electro-hydraulically operated mechanical grabs. 3,016,260, 1-9-62, Cl. 294—88.
Schreck, Harold J., and J. L. Rockerath, to Jetsaw, Inc. Sewing machine and method. 3,016,028, 1-9-62, Cl. 112—2.
Schroeder, Karl: *See*—
Baumann, Hans. 3,016,190.
Schroter, Friedrich. Paper processing machines for processing workpieces in the form of sheets, plates or the like. 3,016,006, 1-9-62, Cl. 101—3.
Schuh, Carl F., E. Genning, and G. Hermann, to Protona Productionsgesellschaft fur electroakustische Gerate G.m.b.H. Miniature magnetic sound recording and reproducing device. 3,016,244, 1-9-62, Cl. 274—4.
Schultz, Harold W.: *See*—
Rosenberger, Maurice S., Winchell, and Schultz. 3,016,119.
Schutt, Elliroy F.: *See*—
Hoag, John K., and Schutt. 3,016,223.
Schwartz, Norman J., to Heinemann Electric Co. Circuit breaker and latch structure. 3,016,435, 1-9-62, Cl. 200—94.

Schweiker, George C., and P. Robitschek, to Hooker Chemical Corp. Condensation elastomers containing fluorine. 3,016,360, 1-9-62, Cl. 260—40.
Schweiker, George C., and P. Robitschek, to Hooker Chemical Corp. Condensation elastomers from fluorine containing dicarboxylic compounds. 3,016,361, 1-9-62, Cl. 260—40.
Schwenzfeger, Edward E., to Bell Telephone Laboratories, Inc. Ferroelectric translator. 3,016,425, 1-9-62, Cl. 179—18.
Scott, Charles E., to Sun Oil Co. Olefin oxide polymerization catalysts. 3,016,394, 1-9-62, Cl. 260—439.
Scott, Don, and F. E. Hammer, to Fermco Laboratories, Inc. Deoxygenating method and product. 3,016,336, 1-9-62, Cl. 195—63.
Sealectro Corp.: *See*—
Powell, Albert E. 3,016,498.
Seaman, Harry J. Pneumatic road roller. 3,015,997, 1-9-61, Cl. 94—50.
Searle, G. D., & Co.: *See*—
Counsell, Ramond E. 3,016,390.
Dodson, Raymond M. 3,016,403.
Jiu, James. 3,016,391.
Johns, William F. 3,016,389.
Krimmel, Carl P. 3,016,372.
Sears, Chester G., and G. J. Butterworth, to Poor & Co. Crushing and screening plant. 3,016,203, 1-9-62, Cl. 241—24.
Sectional Die Co., The: *See*—
Babitt, George J. 3,015,879.
Seeger, Edwin W., deceased, by F. J. Seeger, executrix, to Cutler-Hammer, Inc. Permanent magnet attachments for electromagnetically operable switching devices. 3,016,434, 1-9-62, Cl. 200—87.
Seeger, Florence J.: *See*—
Seeger, Edwin W. 3,016,434.
Sepp, Oscar W., Jr., to M. Steinthal & Co., Inc. Form fitting parachute pack. 3,016,218, 1-9-62, Cl. 244—148.
Sharp, John J., to International Computers and Tabulators Ltd. Information storage systems. 3,016,523, 1-9-62, Cl. 340—174.1.
Sheehan, James A.: *See*—
Hughes, Robert S., and Sheehan. 3,016,225.
Sheffield Corp., The: *See*—
Roney, Richard N. 3,015,914.
Roney, Richard N. 3,015,961.
Shildneck, Paul R.: *See*—
Larson, Roy F., Langlois, and Shildneck. 3,016,398.
Shimato, Toshihiko: *See*—
Masukawa, Miyoshi, Ota, Yamada, and Shimato. 3,016,286.
Shionogi & Co., Ltd.: *See*—
Komeno, Taichiro. 3,016,386.
Short, Brooks H.: *See*—
Dyer, John W., Short, and Parker. 3,015,835.
Short Brothers and Harland Ltd.: *See*—
Ramsden, Richard S. 3,015,992.
Shreve, Curtis H.: *See*—
Richards, William H., Jr., and Shreve. 3,016,167.
Shriver, Henry V.: *See*—
Harrison, Richard, III, Shriver, and Holland. 3,016,115.
Shwayder Bros., Inc.: *See*—
Stegink, Aaron J., and Wallenstrom. 3,015,977.
Siemens Edison Swan Ltd.: *See*—
Hailey, Albert M., and Clarke. 3,016,526.
Silver, Warner C. Self-propelled reversing vehicle. 3,016,024, 1-9-62, Cl. 104—149.
Simms, Philip W. Light dimming attachment. 3,016,454, 1-9-62, Cl. 240—46.03.
Simpson, Duncan W., and W. H. Dawson, Jr., to Curtiss-Wright Corp. Simulated turbine system for turbo-propeller aircraft. 3,015,894, 1-9-62, Cl. 35—12.
Simpson, Raymond J., to Dearborn Electronic Laboratories of Delaware, Inc. Capacitor. 3,016,481, 1-9-62, Cl. 317—258.
Singer-Cohble, Inc.: *See*—
Card, Joseph L. 3,016,029.
Singer Mfg. Co., The: *See*—
Herbst, Edward J. 3,016,033.
Szuba, Walter D. 3,016,031.
Singher, Heron O., and L. Zuckerman, to Ortho Pharmaceutical Corp. Process for depyrogenation and purification of streptokinase. 3,016,337, 1-9-62, Cl. 195—66.
Skidmore, Donald M., to Sperry Rand Corp. Radar object positional indicator. 3,016,530, 1-9-62, Cl. 343—11.
Skuta, Felix F., to G-M Laboratories, Inc. Adjustment of tachometer generators. 3,015,875, 1-9-62, Cl. 29—155.5.
Small, George E., and J. R. Fulmer, to Geo. D. Roper Corp. Automatic control for range double burner. 3,016,198, 1-9-61, Cl. 236—1.
Smith, A. O., Corp.: *See*—
Hendricksen, Warren, and Needham. 3,016,462.
Needham, Howard H. 3,016,463.
Wasson, Loerwood C. 3,016,256.
Smith, Charles E.: *See*—
Fath, Douglas W., and Smith. 3,016,483.
Smith, Charles J., C. E. Read, and B. A. Wehring, to Monroe Auto Equipment Co. Vehicle power steering control device. 3,016,049, 1-9-62, Cl. 121—46.5.
Smith, Donald C., and J. C. King, to Alloy Die Casting Co. Portable water treatment device. 3,016,146, 1-9-62, Cl. 210—190.
Smith, Donald F., and J. P. Lester, to Rodale Electronics, Inc. Automatic range selector. 3,016,488, 1-9-62, Cl. 324—115.
Smith, Eugene M.: *See*—
McEuen, Kenneth W., and Smith. 3,015,885.
Smith, Horace L., Jr., to Hopp Corp. Automatic batch weighing apparatus. 3,016,100, 1-9-62, Cl. 177—52.
Smith, John C. Recoilless flamethrower. 3,016,086, 1-9-62, Cl. 158—28.
Smith Kline & French Laboratories: *See*—
Saggiomo, Andrew J., and Weinstock. 3,016,373.
Smith, Lee. Magnetic indicator for multi-cylinder engine valve setting. 3,016,037, 1-9-62, Cl. 116—124.
Smithgall, Harry E.: *See*—
Drake, Oscar A., and Smithgall. 3,016,471.
Soc. p. Az. Luigi Franchi: *See*—
Franchi, Attilio M. 3,015,993.
Societa per Azioni Bassani: *See*—
Bassani, Ermanno. 3,016,432.
Societe d'Etudes et de Participations pour l'Industrie et le Commerce de la Bonneterie: *See*—
Loizillon, Guy. 3,015,943.
Societe Francaise de Recherches Biochimiques H. Besson & Cie: *See*—
Debay, Andre. 3,016,399.
Societe Nobel Bozel: *See*—
Bondiou, Jean-Claude, and Petusseau. 3,016,385.
Sollars, Herbert M. Animal fountain. 3,016,044, 1-9-62, Cl. 119—80.
Solomon, Frank: *See*—
Di Pasquale, Renato, and Solomon. 3,016,413.
Soncini, William, to S.p.A. Meccanica Garelli. Two-stroke engines having automatic suction timing device. 3,016,050, 1-9-62, Cl. 123—73.
Sonne, Frederick T., to Chicago Aerial Industries, Inc. Polar camera. 3,016,001, 1-9-62, Cl. 95—15.
Sörensen, Harry W. Pellet press. 3,016,026, 1-9-62, Cl. 107—14.
South African Iron and Steel Industrial Corp., Ltd.: *See*—
Hoffman, Daniel J. N., and Beeton. 3,015,852.
Spalding, James G., to Otis Engineering Corp. Circulating valve. 3,016,096, 1-9-62, Cl. 166—224.
Sparrow, Maxwell E.: *See*—
Felix, Joseph. 3,016,068.
Specialties Development Corp.: *See*—
Rakowski, Alexander J., Rollins, and Zenobia. 3,016,506.
Spencer Chemical Co.: *See*—
Francis, William C. 3,016,376.
Hopkins, Thomas R., and Francis. 3,016,287.
Hopkins, Thomas R., Osborn, and Francis. 3,016,374.
Hopkins, Thomas R., and Steele. 3,016,375.
Sperry Rand Corp.: *See*—
Barrett, William G. 3,016,469.
D'Agostino, Jack V., and Rothenberg. 3,016,534.
Frank, Robert L. 3,016,533.
Joline, Everett S. 3,016,048.
Skidmore, Donald M. 3,016,530.
Tomiyasu, Kiyo, and Frost. 3,016,531.
Spitzer, Lyman, Jr., to United States of America, Atomic Energy Commission. Reactor. 3,016,341, 1-9-62, Cl. 204—154.2.
Spodig, Heinrich. Magnetic separator. 3,016,145, 1-9-62, Cl. 209—223.
Stackhouse, Robert D., to Union Carbide Corp. High temperature coatings and bodies. 3,016,311, 1-9-62, Cl. 117—105.
Stahlecker, Fritz, to Wilhelm Stahlecker G.m.b.H. Load arm for pressure rollers of draw frames. 3,015,860, 1-9-62, Cl. 19—135.
Stahlecker, Wilhelm, G.m.b.H.: *See*—
Stahlecker, Fritz. 3,015,860.
Stalego, Charles J., to Owens-Corning Fiberglas Corp. Apparatus for producing fibers. 3,015,842, 1-9-62, Cl. 18—2.5.
Staley, A. E., Mfg. Co.: *See*—
Larson, Roy F., Langlois, and Shildneck. 3,016,398.
Stall, Cash G., ½₀ to Gadget-Of-The-Month Club, Inc. Educational toy. 3,015,895, 1-9-62, Cl. 35—35.
Stallbaumer, Hans: *See*—
Hauissermann, Kurt, Mäucher, and Stallbaumer. 3,016,120.
Stamicarbon N.V.: *See*—
Leeman, Jan N. J. 3,016,144.
Stampfli, Harald, to Lucifer S.A. Servo-valves. 3,016,065, 1-9-62, Cl. 137—623.
Staples, Paul R., to Reynolds Metals Co. Differential expansion of pressure welded passageway panel. 3,015,878, 1-9-62, Cl. 29—157.3.
State University and the School of Mines, The: *See*—
Cooley, Albert M. 3,016,303.
Staunton, John J. J., to Coleman Instruments, Inc. Method and flame generating apparatus for flame photometry. 3,015,983, 1-9-62, Cl. 88—14.
Steele, Floyd G., to Northrop Corp. Superconductive resonant circuit and accelerometer. 3,015,960, 1-9-62, Cl. 73—517.
Steele, James W.: *See*—
Hopkins, Thomas R., and Steele. 3,016,375.
Stegink, Aaron J., and H. A. Wallenstrom, to Shwayder Bros., Inc. Safety device for punch presses and the like. 3,015,977, 1-9-62, Cl. 83—61.
Steigerwald, Carl J., to The Pyle-National Co. Explosion proof enclosure for motor starters and circuit breakers. 3,016,431, 1-9-62, Cl. 200—50.
Steigerwald, Karl H., to Carl Zeiss. Method for welding a cover plate to a structural part composed of strips of any shape. 3,016,449, 1-9-62, Cl. 219—117.
Steinthal, M., & Co., Inc.: *See*—
Sepp, Oscar W., Jr. 3,016,218.
Stephenson, Norman, to Power Jets (Research and Development) Ltd. Corrosion resistant treatment of metal articles. 3,015,880, 1-9-62, Cl. 29—194.
Stern, Hans M.: *See*—
Nelson, Alfred M., Stern, and Wiener. 3,016,239.
Stiens, Robert B., to Palmer Thermometers, Inc. Maximum-minimum pointer assembly. 3,016,038, 1-9-62, Cl. 116—129.

Storckman, Clem F. Portable necktie holder and press. 3,016,130, 1–9–62, Cl. 206—7.

Storer, Richard H., to Associated Advertising Ltd. Attachment collars for paper milk containers. 3,015,901, 1–9–62, Cl. 40—312.

Stoudt, Thomas H., to Merck & Co., Inc. Ring-A dehydrogenation of steroids with nocardia microorganisms. 3,016,335, 1–9–62, Cl. 195—51.

Strange, John P., K. W. Charlton, and W. P. Yant, to Mine Safety Appliance Co. Method and apparatus for continuous separation of components of a gaseous mixture. 3,016,107, 1–9–62, Cl. 183—2.

Streicher, Kurt: *See*—
Ruhrmann, Josef, Streicher, and Popovitsch.

Strom, Charles F., and J. Wszolek, to Griffin Wheel Co. Bottom casting articles. 3,015,863, 1–9–62, Cl. 22—79.

Struble, Glenn E., to Diamond National Corp. Open bottom tray blank. 3,016,180, 1–9–62, Cl. 229—37.

Stuart, Edward O. Thread depth gauge. 3,015,892, 1–9–62, Cl. 33—169.

Studer, Lewis O., to Weather-Seal, Inc. Stepladder having adjustable legs thereon. 3,016,103, 1–9–62, Cl. 182—126.

Stull, Morton B. Closure and dispensing structure. 3,016,173, 1–9–62, Cl. 222—541.

Sturrock, Murray G., E. L. Cline, K. R. Robinson, and R. J. Levin, to Koppers Co., Inc. Naphthalene separation process. 3,016,401, 1–9–62, Cl. 260—523.

Sudman, Charles F., to The Goodyear Tire & Rubber Co. Fabric covered cellular cushioning article and manufacture thereof. 3,016,318, 1–9–62, Cl. 154—54.

Sumitoma Chemical Co., Ltd.: *See*—
Irie, Tsuneo, Kagiya, and Asada.

Summers, Caleb E. Fuel vaporization means for internal combustion engines. 3,016,051, 1–9–62, Cl. 123—122.

Summers, Gerald C., and R. L. Mills, to Metallurgical Resources, Inc. Vehicle tire pressure alarm apparatus. 3,016,515, 1–9–62, Cl. 340—58.

Sun Oil Co.: *See*—
Scott, Charles E.
Tench, John D., and Ferris.

Super Mold Corp. of California: *See*—
Duerksen, Arnold.

Swanson, Vernon E., to Diamond National Corp. Collapsible egg carton. 3,016,179, 1–9–62, Cl. 229—29.

Sylvania Electric Products Inc.: *See*—
Crosby, Alton L., and Roeber.
Drake, Oscar A., and Smithgall.
Helda, Robert W., Lehner, and Walker.

Syntron Co.: *See*—
Gilbert, Walter J.

Székely, László, to Jarmufejlesztesi Intézet. Control mechanism for gear boxes of motor vehicles. 3,015,968, 1–9–62, Cl. 74—477.

Szuba, Walter D., to The Singer Mfg. Co. Needle clamps for sewing machines. 3,016,031, 1–9–62, Cl. 112—226.

Takashima, Thomas T.: *See*—
Raffensperger, Stanley P., and Takashima.
Raffensperger, Stanley P., and Takashima.

Takeda Pharmaceutical Industries, Ltd.: *See*—
Yurugi, Shojiro, and Fushimi.

Talon, Inc.: *See*—
Ruhrmann, Josef, Streicher, and Popovitsch.

Tarbuck, Robert R., to Burroughs Corp. Snap action device. 3,016,433, 1–9–62, Cl. 200—67.

Tatter, John W., to M. W. and J. W. Tatter, by Decree of Distribution in equal proportions. Vehicle doors. 3,016,261, 1–9–62, Cl. 296—46.

Tatter, John W.: *See*—
Tatter, John W.

Tatter, Marie W.: *See*—
Tatter, John W.

Taylor, Wilfred K., to National Research Development Corp. System for analysing the spatial distribution of a function. 3,016,518, 1–9–62, Cl. 340—149.

Teall, Melvin W. Material applicator. 3,015,837, 1–9–62, Cl. 15—544.

Telefunken G.m.b.H.: *See*—
Franke, Fritz.
Troost, Albert, and Sacher.

Tench, John D., and S. W. Ferris, to Sun Oil Co. Wax coated cellophane. 3,016,312, 1–9–62, Cl. 117—119.2.

Terminal Drilling and Production Co.: *See*—
Woodruff, Charles R.

Terry, Charles M., to A.W. Cash Valve Mfg. Corp. Valve mechanism. 3,015,963, 1–9–62, Cl. 74—44.

Textor, Clinton K., to The Bauer Bros. Co. Method and apparatus for producing wood pulp. 3,016,324, 1–9–62, Cl. 162—24.

Theurer, Josef: *See*—
Plasser, Franz, and Theurer.

Tholstrup, Clarence E., and A. Bell, to Eastman Kodak Co. Poly-α-olefin compositions containing dialkyl-3, 3'-thiodipropionates and alkylated hydroquinone monoglycidyl ethers. 3,016,363, 1–9–62, Cl. 260—45.8.

Thomae, Dr. Karl, G.m.b.H.: *See*—
Roch, Josef.

Tien, Ping K., to Bell Telephone Laboratories, Inc. Magnetostatic microwave devices. 3,016,495, 1–9–62, Cl. 330—56.

Tobey, Frederic S., to W. H. Brady Co. Adjustable equal spacing device. 3,016,009, 1–9–62, Cl. 101—228.

Toccacell, Nazzareno, to Ormonoterapia Richter S.p.A. Purification of heparin. 3,016,331, 1–9–62, Cl. 167—74.

Tomiyasu, Kiyo, and W. F. Frost, to Sperry Rand Corp. Antenna distribution system. 3,016,531, 1–9–62, Cl. 343—17.1.

Tomka, Joseph W., and R. C. Brenk, to Elmes & King Mfg. Co. Hydraulic press. 3,016,005, 1–9–62, Cl. 100—48.

Towsley, LeRoy M.: *See*—
Andrew, Harold B., Hipkins, and Towsley.

Trachta, Joseph E., and C. O. Rodriquez, to International Minerals & Chemical Corp. Flotation of granular ores. 3,016,143, 1–9–62, Cl. 209—166.

Trani, John J. Fishing lures. 3,015,904, 1–9–62, Cl. 43—42.09.

Trexler, Philip C., to University of Notre Dame du Lac. Process for introducing sterile material in apparatus having controlled atmosphere. 3,016,284, 1–9–62, Cl. 21—2.

Trikotfabriken J. Schiesser A. G. Radolfzell (Bodensee): *See*—
Dietzsch, Hans-Joachim and O. 3,015,873.

Troost, Albert, and R. Sacher, to Telefunken G.m.b.H. Direction finder antenna system. 3,016,537, 1–9–62, Cl. 343—850.

Tuck, James L.: *See*—
Kruskal, Martin, Tuck, Colgate, and Rosenbluth. 3,016,342.

Tucker, Emmitt M., Sr., to Tucker & Sons. Tractor wheel with adjustable grousers. 3,016,270, 1–9–62, Cl. 301—48.

Tucker, Marion K.: *See*—
Murphy, John M., Tucker, and Fogt. 3,016,183.

Tucker & Sons: *See*—
Tucker, Emmitt M., Sr. 3,016,270.

Turlay, Joseph D. Inertia operated mine firing device. 3,016,012, 1–9–62, Cl. 102—17.

Tuttle Electric Products, Inc.: *See*—
Hackman, Amos W., and Jacobson.

Twitchell, Sherman W., and J. B. Bradicich, to FMC Corp. Apparatus for feeding sheet material. 3,016,240, 1–9–62, Cl. 271—1.

Tyson, Thomas P. Spiraled shutter for a motion picture camera. 3,015,986, 1–9–62, Cl. 88—19.3.

Ugolini, Giorgio, and C. Viale; said Ugolini assor. to said Viale. Garage. 3,016,154, 1–9–62, Cl. 214—16.1.

Ulinskl, Bronislaus I., to The Yale & Towne Mfg. Co. Caster construction. 3,015,838, 1–9–62, Cl. 16—21.

Underwood, David C. Nursing bottle holder. 3,016,221, 1–9–62, Cl. 248—102.

Unger, Donald C., to General Motors Corp. Refrigerating apparatus. 3,016,511, 1–9–62, Cl. 339—126.

Unger, Hans-Georg, to Bell Telephone Laboratories, Inc. Spurious mode suppressing wave guide. 3,016,502, 1–9–62, Cl. 333—95.

Union Carbide Corp.: *See*—
Gage, Robert M., Nestor, and Lenni.
Stackhouse, Robert D.

United Aircraft Corp.: *See*—
Evans, Frederick P.
Hausmann, George F.
Howard, George J., Jr.

United States of America
Army: *See*—
Batezell, Alfred P., and McCullogh.
Fubini, Eugene G.
Lindner, Herbert G.
Montermoso, Juan C., Marinelli, and Andrews.
Petriw, Andrew.
Atomic Energy Commission: *See*—
Blewett, John P.
Friedman, Lewis.
Kirsten, Frederick A.
Kruskal, Martin, Tuck, Colgate, and Rosenbluth. 3,016,342.
Spitzer, Lyman, Jr.
Interior: *See*—
Wong, Morton M., and Kleespies.
Navy: *See*—
Brown, Fred.
Kadel, Gerald H.
Kearns, John P.
Van Dyke, Karl S.

Universal Oil Products Co.: *See*—
Holden, Donald L.
O'Hara, Mark J.
O'Hara, Mark J.
Vesely, Jerome A.

University of North Dakota: *See*—
Cooley, Albert M.

University of Notre Dame du Lac: *See*—
Trexler, Philip C.

Upjohn Co., The: *See*—
Babcock, John C., Campbell, Herr, Hogg, and Pederson.
Keeslar, Clifford R.
Magerlein, Barney J., Birkenmeyer, and Kagan.

Vande Sande, George: *See*—
Brown, Ned C. L., and Vande Sande.

Van der Mel, Wietse H., to Voigtlander A.G. Indicating device for built-in exposure meter for a photographic camera. 3,015,998, 1–9–62, Cl. 95—10.

Van Dine, Gilbert A., to Bell Telephone Laboratories, Inc. Shift register. 3,016,470, 1–9–62, Cl. 307—88.5.

Van Dyke, Karl S., to United States of America, Navy. FM echo-ranging system. 3,016,513, 1–9–62, Cl. 340—3.

Varian Associates: *See*—
Gardner, Bernard C., and Ward.

Vaughan, Gerald L.: *See*—
Wolter, Harry A., and Vaughan.

Vereyken, Franciscus A. Skating rink and method for providing the same. 3,015,938, 1–9–62, Cl. 62—66.

Vesely, Jerome A., to Universal Oil Products Co. Preparation of 1-alkyl-1-cyclohexenes. 3,016,409, 1–9–62, Cl. 260—666.

Viale, Ugo: *See*—
Ugolini, Giorgio, and Viale.

Vice, Charles L.: *See*—
Johnson, George N., and Vice.

Victor, John: *See*—
Maynier, Stella, and Victor.

Villars, Claude P., to Bell Telephone Laboratories, Inc. Nonlinear conversion between analog and digital signals by a piecewise-linear process. 3,016,528, 1–9–62, Cl. 340—347.

Vogel, Henry A., A. F. Rylander, and R. F. Roach, to Pittsburgh Plate Glass Co. Resinous compositions obtained by blending alkyd resins with the resinous condensation products of aldehydes with mixtures of butenylphenols. 3,016,357, 1–9–62, Cl. 260—20.

Vogt, Henry, Machine Co.: *See*
Edmonds, Eugene A.

Vögtlin, Karl, and W. Rösch, to Klenzle Apparate G.m.b.H. Recorder mechanism. 3,016,278, 1–9–62, Cl. 346—62.

Voigt, Hellmut R. Variable speed drive. 3,015,972, 1–9–62, Cl. 74—793.

Voigtlander A.G.: *See*
Van der Mei, Wietse H.

Von K. Bruns, Richard: *See*—
Colletti, Joseph J.

Von Zelewsky, Ottomar, to Georg Fischer, Aktiengesellschaft. Carrier for machine tools, especially lathe dog. 3,016,245, 1–9–62, Cl. 279—106.

Vosters, Harry L., to Kunstzijdespinnerij Nyma N.V. Manufacture of thick-skinned or all-skin shaped articles from viscose. 3,016,305, 1–9–62, Cl. 106—165.

Vroom, Edward: *See*
Dehn, Joseph W., and Vroom.

Wagman, Alexander: *See*—
Brach, Eugene.

Walde, Robert A., to Goodrich-Gulf Chemicals, Inc. Process for oxidizing aluminum hydrocarbons. 3,016,397, 1–9–62, Cl. 260—448.

Waldes Kohinoor, Inc.: *See*—
Erdmann, Hans.

Walker, Nelson L.: *See*—
Helda, Robert W., Lehner, and Walker.

Wallenstrom, Henry A.: *See*—
Stegink, Aaron J., and Wallenstrom.

Walther Buromaschinen Gesellschaft m.b.H.: *See*—
Gelling, Helmut.

Waninger, Gilbert M., to Kabelschlepp G.m.b.H. Multi-polar terminal connection for electric conductors. 3,016,509, 1–9–62, Cl. 339—49.

Ward, Curtis E.: *See*
Gardner, Bernard C., and Ward.

Ware, Gordon K., to The Chicago Roller Skate Co. Toe block structure. 3,016,246, 1–9–62, Cl. 280—11.2.

Wareham, Richard R.: *See*—
Bing, Herbert A., and Wareham.

Wareham, Richard R., and O. E. Wolff, to Polaroid Corp. Sheet-arresting mechanism for photographic apparatus. 3,015,175, 1–9–62, Cl. 226—58.

Warren, Raymond W. Fluid oscillator. 3,016,066, 1–9–62, Cl. 137—624.14.

Wasson, Loerwood C., to A. O. Smith Corp. Apparatus for landing loads on a rolling ship. 3,016,256, 1–9–62, Cl. 294—67.

Weather-Seal, Inc.: *See*—
Eskridge, Harold E., and Johnson.
Eskridge, Harold E., and Johnson.
Studer, Lewis O.

Webb, Robert L., to The Glidden Co. Hydrohalogenation of myrcene. 3,016,408, 1–9–62, Cl. 260—654.

Webster, David R. Cylindrical pressure headbox. 3,016,089, 1–9–62, Cl. 162—339.

Weeks, Ray A.: *See*—
Buchholz, Arnold, Haban, and Weeks.

Wehring, Bernard A.: *See*
Smith, Charles J., Read, and Wehring.

Weinandy, Paul R., to Cooper Tire & Rubber Co. Method for forming corrugated tubing. 3,015,857, 1–9–62, Cl. 18—56.

Weinstock, Joseph: *See*—
Saggiomo, Andrew J., and Weinstock.

Weller, Eli J. Traction device. 3,016,079, 1–9–62, Cl. 152—218.

Western Electric Co., Inc.: *See*—
Arnold, Howard H.
Bach, Chester C., Clark, Drukker, Klenke, Lenk, and Runge.
Brown, Raymond W.
Clagett, Robert P.
Filezar, Geza B., and Monahan.
Kent, William C.
Marcus, Jerome R.

Western Union Telegraph Co., The: *See*—
Haupt, Frank J.

Wheeler, Donald H., and E. R. Rogier, to General Mills, Inc. Composition comprising polyvinyl chloride plasticized with esters of heptadecanedicarboxylic acid. 3,016,359, 1–9–62, Cl. 260—31.8.

Whirlpool Corp.: *See*—
Cobb, Clifton A., Wiessner, and Orr.

White, Erving F. Cargo latch. 3,016,257, 1–9–62, Cl. 294—83.

White, John W., to National-Standard Co. Machine for building tire beads. 3,016,322, 1–9–62, Cl. 156—422.

Whiteley-Read Engineers Ltd.: *See*—
Miller, Donald.

Wiener, Jerome B.: *See*—
Nelson, Alfred M., Stern, and Wiener.

Wiessner, Edward E.: *See*—
Cobb, Clifton A., Wiessner, and Orr.

Wilcox, Kenneth L. Conveyor counter. 3,016,123, 1–9–62, Cl. 193—35.

Wilcox, Wayne L., to Arcos Corp. Overlay welding electrode. 3,016,452, 1–9–62, Cl. 219—146.

Wiles, Charles R., to The Dow Chemical Co. Process for making shaped cellular articles from foamable thermoplastic alkenyl aromatic resins. 3,015,851, 1–9–62, Cl. 18—48.

Williams, Beverly E., to Hodges Research and Development Co. Processes for improving the tenderness and flavor of mutton. 3,016,301, 1–9–62, Cl. 99—107.

Williams, Samuel G., to The New York Air Brake Co. Variable displacement pump. 3,016,018, 1–9–62, Cl. 103—37.

Williams, William A., and E. L. Nuernberger, to T. B. Wood's Sons Co. Clutch-free textile carding machine. 3,015,965, 1–9–62, Cl. 74—242.12.

Willingham, Herman P., to F. K. Lytle. Shrimping gear. 3,015,903, 1–9–62, Cl. 43—9.

Willis, Grant N. Acoustical mine firing control system. 3,016,013, 1–9–62, Cl. 102—18.

Wilmot Castle Co.: *See*—
Hoag, John K., and Schatt.

Wilson, Loren R.: *See*—
Peck, Stuart L., and Wilson.

Winchell, Frank J.: *See*—
Rosenberger, Maurice S., Winchell, and Schultz.

Wismer, Marco, to Pittsburgh Plate Glass Co. Blend of a halogenated aromatic polyglycidyl ether and an aliphatic polyglycidyl ether. 3,016,362, 1–9–62, Cl. 260—42.

Wolff, Otto E.: *See*—
Wareham, Richard R., and Wolff.

Wolter, Harry A., and G. L. Vaughan, to Diamond National Corp. Clothespin counting and assembling machine. 3,015,924, 1–9–62, Cl. 53—197.

Wonder Products Co.: *See*—
MacMillan, Kenneth T., and Millhoff.

Wong, Morton M., and E. K. Kleespies, to United States of America, Interior. Method for reduction of refractory metal oxide to metal by calcium carbide. 3,016,296, 1–9–62, Cl. 75—84.

Woodruff, Charles R., 50% to Terminal Drilling and Production Co. Hole enlarger. 3,016,099, 1–9–62, Cl. 175—344.

Woods, George: *See*—
Ensign, Robert H., Cardozo, Woods, and Immermann. 3,015,899.

Wood's, T. B., Sons Co.: *See*—
Williams, William A., and Nuernberger.

Wright, Fay: *See*—
Ambler, Vernon C., Anderson, and Wright.

Wright, William H., Jr., and H. J. Brabander, to American Cyanamid Co. N-substituted anilides and method of preparing the same. 3,016,382, 1–9–62, Cl. 260—294.

Wrigley, Walter, and C. S. Draper, to Research Corp. Method and apparatus for indicating the vertical. 3,015,962, 1–9–62, Cl. 74—5.47.

Wszolek, Joseph: *See*—
Strom, Charles F., and Wszolek.

Wurlitzer Co., The: *See*—
Osborne, Fred H.

Wyniger, Joseph: *See*—
King, Edward G., III.

Yale & Towne Mfg. Co., The: *See*—
Horton, Earl A.
Ulinski, Bronislaus I.

Yamada, Shigeki: *See*
Masukawa, Miyoshi, Ota, Yamada, and Shimato.

Yant, William P.: *See*—
Strange, John P., Charlton, and Yant.

Yardney International Corp.: *See*—
Di Pasquale, Renato, and Solomon.

Yasuyuki Sata: *See*—
Noyori, Kimiharu.

Yenni, Donald M.: *See*—
Gage, Robert M., Nestor, and Yenni.

Yocum, Paul A. Self-locking screw. 3,016,077, 1–9–62, Cl. 151—70.

Young, Paul M., to International Business Machines Corp. Record memory device. 3,016,418, 1–9–62, Cl. 178—17.

Yurugi, Shojiro, and T. Fushimi, to Takeda Pharmaceutical Industries, Ltd. Tetrahydropyranyl and tetrahydrofuryl derivatives of thiamine. 3,016,380, 1–9–62, Cl. 260—256.5.

Zagar, Frank G., to Zagar, Inc. Multiple spindle nut tapping machine. 3,015,832, 1–9–62, Cl. 10—130.

Zagar, Inc.: *See*—
Zagar, Frank G.

Zalewski, Anton J. Irrigating device. 3,016,202, 1–9–62, Cl. 239—542.

Zatsky, Norman C., to Reeves Instrument Corp. Electromagnetic clutches and brakes. 3,016,118, 1–9–62, Cl. 192—18.

Zeiss, Carl: *See*—
Steigerwald, Karl H.

Zeiss Ikon A.G. Stuttgart: *See*—
Van der Mel, Wietse H.

Zenith Radio Corp.: *See*—
Collins, George C.

Zenobia, John C., Jr.: *See*—
Rakowski, Alexander J., Rollins, and Zenobia.

Ziller, Hans: *See*—
Halverscheid, Herbert.

Zinniger, Theodore C., to Kaiser Industries Corp. Rotary ball valve. 3,016,062, 1–9–62, Cl. 137—270.

Zubren, Louis L. Mouth protector. 3,016,052, 1–9–62, Cl. 128—136.

Zuckerman, Leo: *See*—
Singher, Heron O., and Zuckerman.

CLASSIFICATION OF PATENTS

ISSUED JANUARY 9, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 329: 3,015,824
3— 27: 3,015,825
4— 7: 3,015,826
67: 3,015,827
148: 3,015,828
8— 6.5: 3,016,279
59: 3,016,280
116.2: 3,016,281
151: 3,016,282
9— 307: 3,015,829
310: 3,015,830
3,015,831
10— 130: 3,015,832
15— 23: 3,015,833
228: 3,015,834
250.02: 3,015,835
543: 3,015,836
544: 3,015,837
16— 21: 3,015,838
136: 3,015,839
172: 3,015,840
17— 8: 3,015,841
18— 2.5: 3,015,842
5: 3,015,843
12: 3,015,844
18: 3,015,845
26: 3,015,846
27: 3,015,847
30: 3,015,848
3,015,849
47.5: 3,015,850
48: 3,015,851
3,015,852
3,015,853
53: 3,015,854
54: 3,016,283
55: 3,015,855
3,015,856
56: 3,015,857
57: 3,015,858
59: 3,015,859
19— 135: 3,015,860
20— 57.5: 3,015,861
21— 2: 3,016,284
22— 57.2: 3,015,862
79: 3,015,863
110: 3,015,864
23— 2: 3,016,285
118: 3,016,286
166: 3,016,287
204: 3,016,288
205: 3,016,289
207: Re.25,114
3,016,290
223.5: 3,016,291
253: 3,016,292
24— 21: 3,015,865
73: 3,015,866
123: 3,015,867
205.13: 3,015,868
213: 3,015,869
221: 3,015,870
28— 36: 3,015,871
62: 3,015,872
82: 3,015,873
29— 25.3: 3,015,874
155.5: 3,015,875
155.55: 3,015,876
3,015,877
157.3: 3,015,878
193.5: 3,015,879
194: 3,015,880
203: 3,015,881
229: 3,015,882
271: 3,015,883
423: 3,015,884
470.9: 3,015,885
30— 6.1: 3,015,886
162: 3,015,887
32— 9: 3,015,888
33— 27: 3,015,889
85: 3,015,890
143: 3,015,891
169: 3,015,892
34— 158: 3,015,893
35— 12: 3,015,894
35: 3,015,895
36— 58.6: 3,015,896
40— 11: 3,015,897
124.1: 3,015,898
125: 3,015,899
130: 3,015,900
312: 3,015,901
41— 41: 3,016,293
43— 7: 3,015,902
9: 3,015,903
42.09: 3,015,904
43— 55: 3,015,905
45— 129: 3,015,906
46— 52: 3,015,907
3,015,908
193: 3,015,909
47— 61: P.P.2,120
49— 45: 3,015,910
68: 3,015,911
50— 532: 3,015,912
51— 9: 3,015,913
56: 3,015,914
193: 3,015,915
297: 3,016,294
53— 3: 3,015,916
21: 3,015,917
29: 3,015,918
38: 3,015,919
44: 3,015,920
171: 3,015,921
182: 3,015,922
186: 3,015,923
197: 3,015,924
198: 3,015,925
384: 3,015,926
56— 25.4: 3,015,927
33: 3,015,928
193: 3,015,929
239: 3,015,930
57— 73: 3,015,931
77.3: 3,015,932
58— 28: 3,015,933
60— 13: 3,015,934
35.54: 3,015,936
35.6: 3,015,935
39.66: 3,015,937
62— 66: 3,015,938
156: 3,015,939
332: 3,015,940
64— 24: 3,015,941
66— 186: 3,015,942
188: 3,015,943
68— 12: 3,015,944
198: 3,015,945
71— 2.7: 3,016,295
73— 1: 3,015,946
15.6: 3,015,947
67.2: 3,015,948
71.5: 3,015,949
86: 3,015,950
141: 3,015,951
3,015,952
194: 3,015,953
341: 3,015,954
363.7: 3,015,955
386: 3,015,956
421: 3,015,957
516: 3,015,958
517: 3,015,959
3,015,960
74— 1: 3,015,961
5.47: 3,015,962
44: 3,015,963
193: 3,015,964
242.12: 3,015,965
325: 3,015,966
394: 3,015,967
477: 3,015,968
501: 3,015,969
711: 3,015,970
720.5: 3,015,971
793: 3,015,972
801: 3,015,973
75— 84: 3,016,296
80— 56: 3,015,974
81— 54: 3,015,975
82— 14: 3,015,976
83— 61: 3,015,977
324: 3,015,978
84— 1.18: 3,015,979
377: 3,015,980
382: 3,015,981
88— 1: 3,015,982
14: 3,015,983
3,015,984
3,015,985
19.3: 3,015,986
41: 3,015,987
57: 3,015,988
65: 3,015,989
96: 3,015,990
89— 1.7: 3,015,991
3,015,992
131: 3,015,993
90— 15: 3,015,994
24: 3,015,995
79: Re.25,115
93— 8: 3,015,996
94— 50: 3,015,997
95— 10: 3,015,998
11: 3,015,999
12: 3,016,000
15: 3,016,001
73: 3,016,002
96— 35: 3,016,297
75: 3,016,298
98— 43: 3,016,003
99— 78: 3,016,299
3,016,300
107: 3,016,301
131: 3,016,302
207: 3,016,303
255: 3,016,004
100— 48: 3,016,005
101— 3: 3,016,006
93: 3,016,007
3,016,008
228: 3,016,009
415.1: 3,016,010
102— 7.2: 3,016,011
17: 3,016,012
18: 3,016,013
20: 3,016,014
25: 3,016,015
103— 4: 3,016,017
37: 3,016,018
48: 3,016,016
118: 3,016,020
121: 3,016,019
123: 3,016,021
215: 3,016,022
104— 12: 3,016,023
149: 3,016,024
105— 368: 3,016,925
106— 36: 3,016,304
165: 3,016,305
107— 14: 3,016,026
17: 3,016,027
112— 2: 3,016,028
79: 3,016,029
160: 3,016,030
226: 3,016,031
230: 3,016,032
232: 3,016,033
114— 221: 3,016,034
116— 63: 3,016,035
119: 3,016,036
124: 3,016,037
129: 3,016,038
117— 33.3: 3,016,306
33.5: 3,016,307
36.7: 3,016,308
75: 3,016,309
104: 3,016,310
105: 3,016,311
119.2: 3,016,312
118— 253: 3,016,039
410: 3,016,040
419: 3,016,041
119— 19: 3,016,042
27: 3,016,043
80: 3,016,044
120— 24: 3,016,045
121— 38: 3,016,046
3,016,047
41: 3,016,048
46.5: 3,016,049
123— 73: 3,016,050
122: 3,016,051
169: 3,016,411
128— 136: 3,016,052
142: 3,016,053
152: 3,016,054
218: Re.25,113
278: 3,016,055
346: 3,016,056
549: 3,016,057
132— 1: 3,016,058
32: 3,016,059
135— 50: 3,016,060
136— 4: 3,016,412
45: 3,016,413
107: 3,016,414
137— 81: 3,016,061
270: 3,016,062
597: 3,016,063
620: 3,016,064
623: 3,016,065
624.14: 3,016,066
138— 38: 3,016,067
139— 11: 3,016,068
256: 3,016,069
336.4: 3,016,070
420: 3,016,071
141— 103: 3,016,072
144— 105: 3,016,073
208: 3,016,074
146— 3: 3,016,075
52: 3,016,076
148— 1.5: 3,016,313
13: 3,016,314
151— 70: 3,016,077
152— 216: 3,016,078
218: 3,016,079
153— 21: 3,016,080
32: 3,016,081
54: 3,016,082
81: 3,016,083
154— 45.9: 3,016,315
3,016,316
49: 3,016,317
54: 3,016,318
156— 98: 3,016,319
123: 3,016,084
3,016,320
359: 3,016,085
402: 3,016,321
422: 3,016,322
158— 28: 3,016,086
160— 199: Re.25,112
206: 3,016,087
162— 4: 3,016,323
24: 3,016,324
164: 3,016,325
242: 3,016,088
339: 3,016,089
385: 3,016,090
391: 3,016,091
166— 31: 3,016,092
43: 3,016,093
169: 3,016,094
177: 3,016,095
224: 3,016,096
167— 22: 3,016,326
3,016,327
3,016,328
48: 3,016,329
65: 3,016,330
74: 3,016,331
78: 3,016,332
87: 3,016,333
91: 3,016,334
169— 31: 3,016,097
175— 56: 3,016,098
344: 3,016,099
177— 52: 3,016,100
178— 6.6: 3,016,415
3,016,416
7.5: 3,016,417
17: 3,016,418
18: 3,016,419
3,016,420
19: 3,016,421
26: 3,016,422
79: 3,016,423
179— 1: 3,016,424
18: 3,016,425
84: 3,016,426
100.2: 3,016,427
3,016,428
3,016,429
115.5: 3,016,430
180— 1: 3,016,101
22: 3,016,102
182— 126: 3,016,103
129: 3,016,104
149: 3,016,105
183— 2: 3,016,106
3,016,107
4.8: 3,016,108
61: 3,016,109
184— 6: 3,016,110
188— 73: 3,016,111
78: 3,016,112
189: 3,016,113
203: 3,016,114
189— 2: 3,016,115
34: 3,016,116
91: 3,016,117
192— 18: 3,016,118
68: 3,016,119
89: 3,016,120
91: 3,016,121
104: 3,016,122
193— 35: 3,016,123
195— 51: 3,016,335
63: 3,016,336
66: 3,016,337
198— 33: 3,016,124
38: 3,016,125
140: 3,016,126
184: 3,016,127
198— 213: 3,016,128
200— 50: 3,016,431
3,016,432
67: 3,016,433
87: 3,016,434
94: 3,016,435
144: 3,016,436
145: 3,016,437
147: 3,016,438
159: 3,016,439
166: 3,016,440
204— 2: 3,016,338
38: 3,016,339
67: 3,016,340
154.2: 3,016,341
193.2: 3,016,342
280: 3,016,343
206— 4: 3,016,129
7: 3,016,130
45.33: 3,016,131
46: 3,016,132
47: 3,016,133
3,016,134
52: 3,016,135
56: 3,016,136
58: 3,016,137
65: Re.25,111
208— 79: 3,016,344
187: 3,016,345
216: 3,016,346
3,016,347
3,016,348
254: 3,016,349
264: 3,016,350
209— 2: 3,016,138
8: 3,016,139
72: 3,016,140
3,016,141
74: 3,016,142
166: 3,016,143
172.5: 3,016,144
223: 3,016,145
210— 190: 3,016,146
275: 3,016,147
211— 41: 3,016,148
71: 3,016,149
143: 3,016,150
212— 135: 3,016,151
213— 45: Re.25,110
89: 3,016,152
214— 1: 3,016,153
16.1: 3,016,154
147: 3,016,155
152: 3,016,156
302: 3,016,157
652: 3,016,158
215— 13: 3,016,159
219— 19: 3,016,441
35: 3,016,442
3,016,443
37: 3,016,444
3,016,445
46: 3,016,446
76: 3,016,447
79: 3,016,448
117: 3,016,449
3,016,450
130: 3,016,451
146: 3,016,452
220— 15: 3,016,160
86: 3,016,161
3,016,162
93: 3,016,163
221— 9: 3,016,164
116: 3,016,165
200: 3,016,166
235: 3,016,167
222— 189: 3,016,168
192: 3,016,169
425: 3,016,170
488: 3,016,171
490: 3,016,172
541: 3,016,173
225— 47: 3,016,174
226— 58: 3,016,175
229— 2.5: 3,016,176
3,016,177
8: 3,016,178
29: 3,016,179
37: 3,016,180
39: 3,016,181
40: 3,016,182
230— 139: 3,016,183
152: 3,016,184
232— 15: 3,016,185
234— 28: 3,016,186
235— 60: 3,016,187
235— 60: 3,016,188
61.6: 3,016,189
84: 3,016,190
92: 3,016,191
94: 3,016,192
153: 3,016,193
157: 3,016,194
164: 3,016,195
176: 3,016,196
183: 3,016,197
236— 1: 3,016,198
239— 55: 3,016,199
143: 3,016,200
164: 3,016,201
542: 3,016,202
240— 1.3: 3,016,453
46.03: 3,016,454
148: 3,016,455
241— 24: 3,016,203
200: 3,016,204
242— 18: 3,016,205
54: 3,016,206
55.12: 3,016,207
3,016,208
3,016,209
3,016,210
3,016,211
72: 3,016,212
244— 42: 3,016,213
63: 3,016,214
83: 3,016,215
138: 3,016,216
3,016,217
148: 3,016,218
246— 2: 3,016,456
169: 3,016,457
248— 55: 3,016,219
74: 3,016,220
102: 3,016,221
120: 3,016,222
194: 3,016,223
205: 3,016,224
230: 3,016,225
250— 41.9: 3,016,458
3,016,459
83.6: 3,016,460
84.5: 3,016,461
108: 3,016,462
3,016,463
219: 3,016,464
251— 109: 3,016,226
252— 8.55: 3,016,351
3,016,352
56: 3,016,353
413: 3,016,354
424: 3,016,355
253— 78: 3,016,227
254— 185: 3,016,228
256— 10: 3,016,229
257— 154: 3,016,230
269: 3,016,231
259— 177: 3,016,232
260— 2.5: 3,016,356
20: 3,016,357
23: 3,016,358
31.8: 3,016,359
40: 3,016,360
3,016,361
42: 3,016,362
45.8: 3,016,363
47: 3,016,364
77.5: 3,016,365
78: 3,016,366
3,016,367
79.3: 3,016,368
80: 3,016,369
88.1: 3,016,370
94.3: 3,016,371
210: 3,016,372
239: 3,016,373
239.3: 3,016,374
3,016,375
3,016,376
239.55: 3,016,377
247.5: 3,016,378
251: 3,016,379
256.5: 3,016,380
287: 3,016,381
294: 3,016,382
310: 3,016,383
314.5: 3,016,384
340.6: 3,016,385
397.2: 3,016,386
397.3: 3,016,387
397.4: 3,016,388
3,016,389

260–397.45: 3,016,392
397.5: 3,016,390
3,016,391
400: 3,016,393
439: 3,016,394
448: 3,016,396
3,016,397
461: 3,016,398
3,016,399
483: 3,016,395
515: 3,016,400
523: 3,016,401
551: 3,016,402
607: 3,016,403
615: 3,016,404
648: 3,016,405
653: 3,016,406
653.1: 3,016,407
654: 3,016,408
666: 3,016,409
3,016,410
261— 81: 3,016,233
98: 3,016,234
263— 8: 3,016,235
263— 32: 3,016,236
266— 15: 3,016,237
268— 102: 3,016,238
271— 5: 3,016,239
11: 3,016,240
273— 49: 3,016,241
102: 3,016,242
135: 3,016,243
274— 4: 3,016,244
279— 106: 3,016,245
280— 11.2: 3,016,246
112: 3,016,247
285— 89: 3,016,248
336: 3,016,249
342: 3,016,250
286— 11: 3,016,251
287— 52: 3,016,252
54: 3,016,253
288— 23: 3,016,254
292— 352: 3,016,255
294— 67: 3,016,256
83: 3,016,257
3,016,258
87.2: 3,016,259
294— 88: 3,016,260
296— 46: 3,016,261
97: 3,016,262
137: 3,016,263
297— 69: 3,016,264
88: 3,016,265
150: 3,016,266
439: 3,016,267
298— 17: 3,016,268
301— 6: 3,016,269
48: 3,016,270
303— 53: 3,016,271
305— 19: 3,016,272
307— 88: 3,016,405
88.5: 3,016,406
3,016,407
3,016,408
3,016,409
3,016,470
308— 72: 3,016,273
199: 3,016,274
312— 209: 3,016,275
274: 3,016,276
312— 287: 3,016,277
313— 82: 3,016,471
316: 3,016,472
315— 5.21: 3,016,501
8.5: 3,016,473
13: 3,016,474
84.6: 3,016,475
135: 3,016,476
206: 3,016,477
3,016,478
317— 171: 3,016,479
230: 3,016,480
258: 3,016,481
318— 224: 3,016,482
403: 3,016,483
321— 24: 3,016,484
323— 89: 3,016,485
3,016,486
324— 38: 3,016,487
115: 3,016,488
158: 3,016,489
328— 146: 3,016,490
329— 50: 3,016,491
330— 5: 3,016,492
8: 3,016,493
24: 3,016,494
56: 3,016,495
333— 7: 3,016,496
24: 3,016,497
30: 3,016,498
33: 3,016,499
34: 3,016,500
95: 3,016,502
3,016,503
98: 3,016,504
334— 51: 3,016,505
338— 22: 3,016,506
32: 3,016,507
339— 17: 3,016,508
49: 3,016,509
97: 3,016,510
126: 3,016,511
217: 2,016,512
340— 3: 3,016,513
3,016,514
58: 3,016,515
340— 147: 3,016,516
3,016,517
149: 3,016,518
171: 3,016,519
173: 3,016,520
174: 3,016,521
174.1: 3,016,522
3,016,523
3,016,524
242: 3,016,525
324: 3,016,526
347: 3,016,527
3,016,528
343— 5: 3,016,529
11: 3,016,530
17.1: 3,016,531
18: 3,016,532
103: 3,016,533
725: 3,016,534
787: 3,016,535
801: 3,016,536
850: 3,016,537
346— 62: 3,016,278

CLASSIFICATION OF DESIGNS

D 3— 26: 192,022
D 7— 5: 192,023
D 9— 2: 192,024
192,025
D13— 1: 192,026
D14— 3: 192,027
6: 192,028
D15— 1: 192,029
D19— 2: 192,030
D29— 23: 192,031
D30— 1: 192,032
D34— 5: 192,033
192,034
D42— 7: 192,035
D44— 10: 192,036
15: 192,037
D44— 21: 192,038
29: 192,039
D48— 20: 192,040
31: 192,041
32: 192,042
192,043
192,044
192,045
D48— 32: 192,046
D49— 1: 192,047
D52— 1: 192,048
D54— 12: 192,049
192,050
192,051
D58— 6: 192,052
12.6: 192,053
D58— 13: 192,054
D61— 1: 192,055
D64— 11: 192,056
192,057
12: 192,058
D65— 1: 192,059
192,060
192,061
D65— 1: 192,062
D66— 1: 192,063
D71— 1: 192,064
192,065
D81— 10: 192,066
D87— 3: 192,067
D93— 4: 192,068
192,069

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

January 9, 1962 Volume 774 Number 2

TRADEMARKS

NOTICES

Notice of Tentative Recordation of a Trade Name

[T.D. 55528]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., Dec. 8, 1961

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946; and section 11.16, Customs Regulations:

"GOJAX HOUSEWARES, INC.," a corporation organized under the laws of the State of Florida, located and doing business at 38 S.E. 8th Street, Miami 32, Florida. This trade name is used in connection with cutlery, china, housewares, etc., manufactured in Japan.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after January 15, 1962, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after January 15, 1962, of any opposition proceeding.

Until 45 days after January 15, 1962, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

Erratum

In the OFFICIAL GAZETTE of December 5, 1961, page TM 25, under Class 37—Paper and Stationery, delete the listing of Registration No. 724,834 for the mark CRESTWOOD and in the same issue in the Index of Registrants, TM vi, delete the reference to Western Tablet & Stationery Corp. and to White & Wyckoff Mfg. Co.

CONDITION OF TRADEMARK APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,100
Date of oldest new application	April 10, 1961
Date of oldest amended application	May 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	4-10-61	5-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	5-17-61	6-1-61
Renewals (All Classes)	11-7-61	11-20-61
Sec. 12 (c) Publications (All Classes)	11-6-61	11-24-61

Applications filed during the month of November 1961—2,018

Registrations Issued ..... 280—No. 726,105 to No. 726,384
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Public Law 87-354
[87th Congress, S. 1186]
October 4, 1961

AN ACT

75 Stat. 775.

To facilitate the protection of consumers of articles of merchandise composed in whole or in part of gold or silver from fraudulent misrepresentation concerning the quality thereof, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) section 4 of the Act entitled "An Act forbidding the importation, exportation, or carriage in interstate commerce of falsely stamped articles of merchandise made of gold or silver or their alloys, and for other purposes", approved June 13, 1906 (34 Stat. 260; 15 U.S.C. 294 et seq.), is amended by— Gold or silver articles. Misrepresentation of quality.

(1) inserting therein, immediately after the section number "SEC. 4.", the subsection designation "(a)"; and

(2) adding at the end thereof the following new subsection:

"(b) Whenever any person, firm, corporation, or association, being a manufacturer or dealer subject to the first section of this Act—

"(1) applies or causes to be applied to any article of merchandise intended for sale or customarily sold as a complete product to consumers in any State, by stamping, branding, engraving, or otherwise, any quality mark or stamp indicating or purporting to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal; or

"(2) imports into any State any such article of merchandise bearing any such quality mark or stamp which indicates or purports to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal,

such person, firm, corporation, or association, before depositing any such article manufactured or imported after six months after the effective date of this Act in the United States mails, or causing such article to be so deposited, for transmission thereby, or delivering such article or causing such article to be delivered to any common carrier for transportation from one State to any other State, or transporting such article or causing such article to be transported from one State to any other State, shall—

"(A) apply or cause to be applied to that article a trademark of such person, firm, corporation, or association duly registered or applied for within thirty days after an article bearing the trademark is placed in commerce or imported under the laws of the United States or the name of such person, firm, corporation, or association; and Identifying trademark.

"(B) if such article of merchandise is composed of two or more parts which are complete in themselves but which are not identical in quality, and any one of such parts bears such a quality mark or stamp, apply or cause to be applied to each other part of that article of merchandise a quality mark or stamp of like pattern and size disclosing the quality of that other part.

Each identifying trademark or name applied to any article of merchandise in compliance with clause (A) of this section shall be applied to that article by the same means as that used in applying the quality mark or stamp appearing thereon, in type or lettering at least as large as that used in such quality mark or stamp, and in a position as close as possible to that quality mark or stamp. For the purposes of this subsection, the term 'State' includes the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the District of Columbia." "State."

75 Stat. 776.

SEC. 2. The amendments made by this Act shall take effect on the first day of the third month beginning after the date of enactment of this Act. Effective date.

Approved October 4, 1961.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 98,804. McHutchison & Co., Ridgefield, N.J. Filed June 10, 1960.



The drawing is lined for green and gold. The words "Plant Stakes" and the overall gold background are disclaimed except in the form shown.
For Bamboo Plant Stakes.
First use in or about November 1954.

SN 108,048. Houdry Process Corporation, Philadelphia, Pa. Filed Nov. 8, 1960.



The drawing is lined for blue.
For Processed Clay in Globular Form Particularly for Use in Catalyzing.
First use Oct. 13, 1958.

SN 108,357. Nicholas Turkey Breeding Farms, Inc., Sonoma, Calif. Filed Nov. 14, 1960.



No claim is made to the words "Broad Breasted White," "Broad Breasted Bronze," or to the representation of a turkey, except in the design shown. Owner of Reg. No. 606,172.
For Live Turkeys and Fresh Eggs for Breeding Purposes.
First use June 1958.

SN 110,320. Ferro Corporation, Cleveland, Ohio. Filed Dec. 16, 1960.

UNIROVING

Owner of Reg. No. 653,945.
For Glass Fiber Rovings.
First use on or about Oct. 13, 1960.

SN 112,522. Cobon Plastics Corp., Newark, N.J. Filed Jan. 26, 1961.

COBONITE

For Plastic Tubing for General Use in the Industrial Arts for Conveying Liquids.
First use Aug. 5, 1952.

SN 112,523. Cobon Plastics Corp., Newark, N.J. Filed Jan. 26, 1961.

COBOVIN

For Plastic Tubing for General Use in the Industrial Arts for Conveying Liquids.
First use Aug. 1, 1955.

SN 112,524. Cobon Plastics Corp., Newark, N.J. Filed Jan. 26, 1961.

COBON

For Plastic Tubing for General Use in the Industrial Arts for Conveying Liquids.
First use Aug. 5, 1952.

SN 112,531. Fiber Glass Industries, Inc., Amsterdam, N.Y. Filed Jan. 26, 1961.

TEXTILMAT

For Matted Glass Fiber Roving Sold in Sheets or Rolls and Used Essentially as Reinforcing for Plastics.
First use Jan. 7, 1959.

SN 116,428. Rexall Drug and Chemical Company, Los Angeles, Calif. Filed Mar. 24, 1961.

EL REX

For Thermoplastic Synthetic Resins in the Form of Molding Granules and Molding Powders.
First use Jan. 24, 1961.

SN 117,984. The Newcomer Corporation, Columbia, Mo. Filed Apr. 17, 1961.

PHOTO LAWN

For Lawn and Grass Seed.
First use Mar. 23, 1961.

SN 117,985. The Newcomer Corporation, Columbia, Mo. Filed Apr. 17, 1961.

ACTION LAWN

For Lawn and Grass Seed.
First use Mar. 23, 1961.

SN 117,986. The Newcomer Corporation, Columbia, Mo. Filed Apr. 17, 1961.

PARTY LAWN

For Lawn and Grass Seed.
First use Mar. 23, 1961.

SN 119,123. Germain's, Inc., Los Angeles, Calif. Filed May 2, 1961.

CENTURY 21

For Flower Seeds.
First use Apr. 25, 1961.

SN 120,312. Jayhawk Charcoal Co., Inc., Chetopa, Kans. Filed May 18, 1961.

CHIEF
CHE-TO-PAH



The drawing is lined for red and blue.
For Charcoal Briquets.
First use Mar. 10, 1961.

SN 121,730. Heird Lumber Co., Inc., Eureka, Calif. Filed June 9, 1961.

FOREST GLOW

For Prepackaged Firewood.
First use Apr. 24, 1961.

SN 122,243. Allied Chemical Corporation, New York, N.Y. Filed June 19, 1961.

ACLAR

For Fluorine-Containing Plastics in Sheet or Film Form.
First use Aug. 11, 1960.

SN 122,607. Extrudo-Film Corporation, New York, N.Y. Filed June 22, 1961.

OPTI-FILM

For Polyethylene Film or Sheeting.
First use May 10, 1961.

SN 122,628. Minerals & Chemicals Philipp Corporation, Menlo Park, N.J. Filed June 22, 1961.

CORRAGEL

For Clay for Use in Adhesive Compositions.
First use May 24, 1961.

SN 122,666. Vermont Kaolin Corporation, Shelburne, Vt. Filed June 22, 1961.

VerKa

For Clay and Silica Fillers.
First use May 2, 1961.

Class 2 — Receptacles

SN 116,812. Fine-Glo, Inc., New York, N.Y. Filed Mar. 30, 1961.

BOLST-A-PILLOW

For Cardboard Cylinders Used for the Concealment of Pillows.
First use Dec. 1, 1960.

SN 118,646. A.B. Bonnierforetagen, Stockholm, Sweden. Filed Apr. 26, 1961.

COSIL

For Packages, Food Containers, and Commodity Covers Made of Coated and Uncoated Substances—Namely, Paper, Cardboard, Plastic Film, Metal Foils, Fibrous Substances and Laminates Thereof.
First use Aug. 12, 1960; in commerce Apr. 15, 1961.

Class 4 — Abrasives and Polishing Materials

SN 107,065. The Slick-Shine Co. Inc., Newark, N.J. Filed Oct. 24, 1960.

SLICK SHINE

For Metal and Furniture Polishes.
First use in 1901.

SN 121,989. Gardner Machine Company, South Beloit, Ill. Filed June 14, 1961.

GREEN-RIM

Owner of Reg. Nos. 359,767, 374,464, and others.
For Abrasive Discs.
First use Apr. 24, 1961.

SN 122,248. American Home Products Corporation, d.b.a. Boyle-Midway, New York, N.Y. Filed June 19, 1961.

TOP-KIKS

For Shoe Polish.
First use May 17, 1961.

Class 5 — Adhesives

SN 122,222. Shell Oil Company, New York, N.Y. Filed June 16, 1961.

EPON

Owner of Reg. Nos. 625,682 and 611,978.
For Adhesive of Liquid Plastic Materials.
First use prior to June 8, 1961.

Class 6 — Chemicals and Chemical Compositions

SN 80,245. Hayes-Sammons Chemical Co., Mission, Tex. Filed Aug. 26, 1959.

LEAF-DROP

For Defoliant.
First use July 14, 1959.

SN 85,809. Frederic D. Barton, Holly, Mich. Filed Nov. 23, 1959.

BART'S RUST

No claim is made to the word "Rust" apart from the mark as shown. Owner of Reg. No. 567,325.
For Rust Inhibitor.
First use May 27, 1957.

SN 107,046. Paramount Chemical Laboratories, Inc., Chicago, Ill. Filed Oct. 24, 1960.

COOL-GARD

For Additive for Use With Anti-Freeze in Automotive Cooling Systems.
First use June 20, 1960.

SN 107,633. Aldrich Chemical Company, Inc., Milwaukee, Wis. Filed Nov. 2, 1960.

"DIAZALD"

For N-Methyl-N-Nitroso-P-Toluenesulfonamide, an Organic Chemical Intermediate.
First use Jan. 7, 1955.

SN 109,091. Metal & Thermit Corporation, Woodbridge Township, Middlesex County, N.J. Filed Nov. 25, 1960.

ALSTAN

For Chemicals Used for Making Up and Replenishing Baths Used for Coating Aluminum With Tin.
First use on or about May 27, 1960.

SN 109,849. Crown Zellerbach Corporation, San Francisco, Calif. Filed Dec. 8, 1960.

BOGOL

For Tall Oil.
First use Jan. 18, 1947.

SN 109,993. Printing Developments, Inc., New York, N.Y. Filed Dec. 9, 1960.

M R X

The drawing is lined for the colors red, yellow and blue. The words "Metal," "Reuse," and "X-Times" are disclaimed apart from their use as shown in the drawing.
For Light Sensitive Coating Solutions, Coating Sensitizer Solutions, Fountain Solutions, Developer Concentrate Solutions (Ammonia), Hardening and Desensitizing Etch Solutions, Metal Conditioner Solutions, and Image Remover Solutions.
First use Oct. 8, 1960.

SN 111,375. Aqua-Serv Engineers, Inc., Los Angeles, Calif. Filed Jan. 6, 1961.

AQUA-SERV

For Specialty Chemicals—Namely, Scale and Corrosion Inhibitors, Algae and Slime Growth Preventers, and Scale Solvents for Industrial Use in Boilers, Condensers, Cooling Towers and Similar Heat Exchange Apparatus.
First use Jan. 2, 1959.

SN 111,439. Sole Chemical Corporation, Chicago, Ill. Filed Jan. 6, 1961.

SOLE-ONIC

Owner of Reg. No. 680,616.
For Organic Surface Active Agents—Namely, Emulsifiers, Defoamers, Wetting Agents, and Spreading Agents.
First use May 7, 1957.

SN 114,115. Lafayette Pharmacal, Inc., Lafayette, Ind. Filed Feb. 21, 1961.

ELECTRELL

For Cream for Use in Electrocardiography To Provide a Conductive and Adhesive Portion on Those Parts of the Body To Which the Electrodes of the Electrocardiograph Are To Be Affixed.
First use Apr. 24, 1959.

SN 115,989. Anheuser-Busch, Incorporated, St. Louis, Mo. Filed Mar. 20, 1961.

A-B

For Starch and Dextrines for Industrial Use.
First use 1937.

SN 118,801. National Lead Company, New York, N.Y. Filed Apr. 27, 1961.

TEMEX

Owner of Reg. No. 697,958.
For Vinyl Resin Stabilizer.
First use Nov. 6, 1959.

SN 119,968. The O. Hommel Company, Carnegie, Pa. Filed May 15, 1961.

HOMMEL

Owner of Reg. No. 722,095.
For Ceramic Colors and Chemicals.
First use June 1, 1960.

SN 120,266. Wallace & Tiernan Inc., Belleville, N.J. Filed May 17, 1961.

CENWAX

For Hydrogenated Castor Oil and 12-Hydroxy Stearic Acid.
First use Mar. 25, 1953.

SN 120,413. Hyland Laboratories, Los Angeles, Calif. Filed May 19, 1961.

TRIC-TEST

For Diagnostic Reagent for Laboratory Use To Determine the Existence of Trichinosis.
First use May 5, 1951.

SN 120,520. Heyden Newport Chemical Corporation, New York, N.Y. Filed May 22, 1961.

COP-R-THRO

For Electroplating Chemicals Useful in Electroplating Baths.
First use Apr. 25, 1961.

SN 120,521. Heyden Newport Chemical Corporation, New York, N.Y. Filed May 22, 1961.

BAR-L-KOTE

For Electroplating Chemicals Useful in Electroplating Baths.
First use Apr. 25, 1961.

SN 120,522. Heyden Newport Chemical Corporation, New York, N.Y. Filed May 22, 1961.

FLEX-KOTE

For Electroplating Chemicals Useful in Electroplating Baths.
First use Apr. 25, 1961.

SN 120,523. Heyden Newport Chemical Corporation, New York, N.Y. Filed May 22, 1961.

THRO-KOTE

For Electroplating Chemicals Useful in Electroplating Baths.
First use Apr. 25, 1961.

SN 120,530. Imperial Chemical Industries Limited, London, England. Filed May 22, 1961.

VANTOC

Owner of British Reg. No. 686,021, dated Feb. 1, 1950.
For Bactericidal Preparations for Sterilising Eating and Drinking Containers.

SN 120,932. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 29, 1961.

ATOMAL

Owner of German Reg. No. 479,467, dated Oct. 14, 1935.
For Photographic Developers.

SN 121,266. Chem-Tech Corporation, Bellevue, Wash. Filed June 2, 1961.

KEM-KUT

For Chemical Solution for Sharpening Cutting Edges Such as Files, Knives, and the Like.
First use Sept. 16, 1960.

SN 121,267. Chem-Tech Corporation, Bellevue, Wash. Filed June 2, 1961.

CT-28

For Chemical Solution for the Displacement of Water and Inhibiting of Rust on Ferrous Metals, Commonly Referred to as a Rust Inhibitor.
First use Dec. 7, 1960.

SN 121,509. Robeco Chemicals, Inc., New York, N.Y. Filed June 6, 1961.

CAROLATE

For Self-Emulsifying Spermaceti-Amide.
First use Feb. 1, 1958.

SN 121,701. Cassella Farbwerke Mainkur Aktiengesellschaft, Frankfurt am Main-Fechenheim, Germany. Filed June 9, 1961.

CASSERVOL

For Chemical Products for Use as Auxiliary Agents for the Dyeing and Printing of Textiles.
First use Dec. 22, 1959; in commerce Feb. 15, 1960.

SN 122,032. Shell Oil Company, New York, N.Y. Filed June 14, 1961.

SHELL

For Glycerine.
First use prior to May 31, 1961.

SN 122,061. Ceetee Products, Inc., Clinton, N.J. Filed June 15, 1961.

HYDROTAB

For Tablets for Detecting Water in Various Liquids.
First use Apr. 28, 1961.

SN 122,245. Allied Chemical Corporation, New York, N.Y. Filed June 19, 1961.

GENESOLV

For Fluorinated Solvents.
First use July 1, 1960.

SN 122,302. General Aniline & Film Corporation, New York, N.Y. Filed June 19, 1961.

task

For Antifreeze for Use Primarily in Motor Vehicles.
First use May 23, 1961.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 89,324. American Registered Audiences, Inc., Northport, N.Y. Filed Jan. 20, 1960.

SAFE-T-SMOKE

For Ash Tray.
First use Dec. 22, 1959.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 110,289. Spiegel, Inc., Chicago, Ill. Filed Dec. 15, 1960.

BUDGET POWER

For Rifles.
First use Sept. 16, 1956.

Class 10—Fertilizers

SN 118,051. Centraal Stikstof Verkoopkantoor, N.V., The Hague, Netherlands. Filed Apr. 18, 1961.

PRIL-CAL

For Fertilizers.
First use Dec. 9, 1960; in commerce Dec. 9, 1960.

SN 118,372. Schultz Products Company, Incorporated, St. Louis, Mo. Filed Apr. 21, 1961.

"SCHULTZ-INSTANT"

Owner of Reg. Nos. 584,248 and 668,590.
For Fertilizer and Related Plant Chemical Products.
First use June 30, 1952.

SN 118,490. Re-Vita Incorporated, Lithonia, Ga. Filed Apr. 24, 1961.

RE-VITA

For Soil and Plant Conditioner.
First use Mar. 1, 1961.

SN 121,931. Meyer Co. Inc., Fort Collins, Colo. Filed June 13, 1961.

MyPO

For Poultry Manure and Organic Fertilizers.
First use Oct. 3, 1960.

SN 121,946. Jas. H. Smith Industries, Inc., New Orleans, La. Filed June 13, 1961.

FERTIL-REI

For Liquid Fertilizer.
First use Mar. 17, 1961.

SN 122,507. Blenders, Inc., Lithonia, Ga. Filed June 21, 1961.

NITRO-MIN

For Soil Conditioner.
First use June 19, 1961.

Class 11—Inks and Inking Materials

SN 109,991. Printing Developments, Inc., New York, N.Y. Filed Dec. 9, 1960.



The drawing is lined for the colors red, yellow and blue. The words "Metal," "Reuse," and "X-Times" are disclaimed apart from their use as shown in the drawing.
For Printing Ink.
First use Oct. 8, 1960.

SN 120,546. Markem Machine Company, Keene, N.H. Filed May 22, 1961.

SUPER KEMGO

Owner of Reg. No. 84,189.
For Printing Ink.
First use Apr. 19, 1961.

SN 120,594. Vari-Typer Corporation, Newark, N.J. Filed May 22, 1961.

Vari-Clear

For Inked Ribbons.
First use Sept. 15, 1960.

SN 121,630. Burroughs Corporation, Detroit, Mich. Filed June 8, 1961.

PASCACK

For Inked Ribbons.
First use in or about August 1947.

SN 122,557. Pioneer Printing Ink Corporation, Monroe, Mich. Filed June 21, 1961.

VARI-SET

For Printing Inks.
First use Apr. 7, 1961.

Class 12—Construction Materials

SN 94,433. The Sivad Ceramic Corporation, Oak Hill, Ohio. Filed Apr. 5, 1960.

SILLIMANITE

The word "Sillimanite" is disclaimed separate and apart from the mark as shown.
For Plastic Refractory Ramming Mix Consisting of Refractory Material.
First use April 1956 on cartons.

SN 117,274. Hastings Aluminum Products, Inc., Hastings, Mich. Filed Apr. 6, 1961.

CoPan

For Colored Aluminum Panels for Facing of Buildings, and Accessories Including Moldings, Clips, Canopies, Marquees and Entrances.
First use July 1, 1960.

SN 120,525. Holo-O-Met Manufacturing Corporation, Mesa, Ariz. Filed May 22, 1961.

HOLO-MET

The lining appearing on the drawing constitutes lining forming part of the mark and does not represent color.
For Hollow Metal Door Frames.
First use May 3, 1961.

SN 122,368. Plymouth Rubber Company, Inc., Canton, Mass. Filed June 19, 1961.

PLYMCOTE

For Pipe-Wrapping Tape.
First use Apr. 3, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 107,320. DK Manufacturing Company, Chicago, Ill. Filed Oct. 28, 1960.

FORM-A-LINE

For Pipes and Connectors Therefor.
First use Mar. 16, 1960, on pipes.

SN 113,189. Delta Mercantile Corp., New York, N.Y. Filed Feb. 7, 1961.

DELTA STRAPPING

For Metal Wires.
First use June 5, 1957.

SN 113,390. Armor Bronze & Silver Co., Inc., Taunton, Mass. Filed Feb. 10, 1961.

Coppercraft Guild

For Copper Products, Including Chafing Dishes, Tea Kettles, Pitchers, Vases, Plant Hangers, Plant Holders, and Other Household Products.
First use Oct. 7, 1949.

SN 118,375. Speakman Company, Wilmington, Del. Filed Apr. 21, 1961.

EASY-PUSH

For Metering Faucets.
First use Apr. 2, 1956.

SN 118,393. Air-Lec Industries, Inc., Madison, Wis. Filed Apr. 24, 1961.



For Door Operating Mechanisms, Hardware and Accessories.
First use about 1921.

SN 118,679. The Fyr-Fyter Company, Dayton, Ohio. Filed Apr. 26, 1961.

VARI-A-FOG

For Nozzles and Parts Therefor.
First use Nov. 10, 1955.

Class 14—Metals and Metal Castings and Forgings

SN 103,720. Charles Hardy, Inc., New York, N.Y. Filed Aug. 31, 1960.



All wording except "Hardy" is disclaimed.
For Vehicles for Powdered Metal Compositions.
First use Aug. 1, 1947.

SN 104,453. Inland Steel Company, Chicago, Ill. Filed Sept. 14, 1960.



Owner of Reg. Nos. 502,440, 511,254, and others.
For Steel Products, Particularly Carbon Steel Plates, Including Embossed Floor Plate, Coiled Strip, Flat Sheets, Galvanized Sheet and Strip, Tin Plate, Vitreous Enameling Sheets, Carbon Steel and Alloy Steel Merchant Bars and Silicon Steel Electrical Sheets.
First use in or about March 1949.

SN 107,820. Bergische Stahl-Industrie, Remscheid, Germany. Filed Nov. 4, 1960.

BSI

Owner of German Reg. No. 469,007, dated Sept. 11, 1934.
For Raw and Partly Worked Base Metals.

SN 107,821. Bergische Stahl-Industrie, Remscheid, Germany. Filed Nov. 4, 1960.

THERMODUR

Owner of German Reg. No. 635,885, dated Mar. 17, 1953.
For High-Temperature-Stable and Heat Resistant Steels, Raw and Partly Processed Base Metals, Machine and Hand-Worked Metal Castings and Forgings, Rolled and Cast Structural Elements, Machine Castings.

SN 110,087. Pneumodynamics Corporation, Cleveland, Ohio. Filed Dec. 12, 1960.

SEASTAPLE

For Embedment Anchors.
First use on or about July 26, 1960.

SN 121,025. Proler Steel Corporation, Houston, Tex. Filed May 29, 1961.

PROLERIZED

For Processed Steel Scrap.
First use February 1959.

SN 121,541. Columbia Engineering Co., Inc., Newark, N.J. Filed June 7, 1961.



For Steel Plates.
First use Aug. 5, 1960.

Class 15—Oils and Greases

SN 69,965. Humble Oil & Refining Company (Delaware corporation), Wilmington, Del., assignee of Humble Oil & Refining Company (Texas corporation), Houston, Tex. Filed Mar. 20, 1959.

GEAROL

For Lubricating Oils and Greases.
First use at least July 1, 1939.

SN 113,066. American Home Products Corporation, d.b.a. Boyle-Midway, New York, N.Y. Filed Feb. 6, 1961.

RADIANT

Owner of Reg. Nos. 250,427, 288,225, and 248,535.
For Lubricating Oil for Household Use.
First use at least as early as Nov. 10, 1938.

Class 16—Protective and Decorative Coatings

SN 109,992. Printing Developments, Inc., New York, N.Y. Filed Dec. 9, 1960.



The drawing is lined for the colors red, yellow and blue. The words "Metal," "Reuse," and "X-Times" are disclaimed apart from their use as shown in the drawing.
For Lacquer.
First use Oct. 8, 1960.

Class 17—Tobacco Products

SN 115,632. Service d'Exploitation Industrielle des Tabacs et Allumettes, Baltimore, Md. Filed Mar. 14, 1961.

GAULOISES
DISQUE BLEU



The literal translation of French words comprising the mark is "gallic blue disc." Owner of Reg. Nos. 651,395 and 644,890.
For Cigarettes.
First use Feb. 25, 1954.

SN 126,637. Enrico Melissari, d.b.a. Enrico Cigar Co., New York, N.Y. Filed Aug. 2, 1961.

ENRICO

For Cigars.
First use Nov. 7, 1939.

Class 18—Medicines and Pharmaceutical Preparations

SN 109,919. The Warren-Teed Products Company, Columbus, Ohio. Filed Dec. 8, 1960.

MUCAMIDE

Owner of Reg. No. 698,040.
For Composition for Treatment of Acute or Chronic Diarrhea.
First use Aug. 2, 1954.

SN 112,828. Chemische Fabrik von Heyden Aktiengesellschaft, Munich, Germany. Filed Jan. 31, 1961.

CORTOS-ANAL

Owner of German Reg. No. 728,718, dated Sept. 7, 1959.
For Pharmaceutical Preparations for the Treatment of Hemorrhoids, Anal Eczema, Anal Fissures, Rhagades, and External Oxyuriasis.

SN 114,020. McNeil Laboratories, Incorporated, Philadelphia, Pa. Filed Feb. 20, 1961.

AXIQUEL

For Mood Ameliorating Compounds.
First use Feb. 12, 1960.

SN 114,571. Zambon S.p.A., Vicenza, Italy. Filed Feb. 27, 1961.



Owner of Italian Reg. No. 145,853, dated Oct. 29, 1959.
For Pharmaceutical and Medicinal Preparations for Human and Veterinary Use.

SN 114,597. Center Laboratories, Inc., Port Washington, N.Y. Filed Feb. 28, 1961.

DAROIL

For Chemical Vehicle Comprising Mannide Mono-Oleate and Light Liquid Petrolatum.
First use December 1960.

SN 115,571. American Home Products Corporation, d.b.a. Fort Dodge Laboratories, New York, N.Y. Filed Mar. 14, 1961.

PORSIBAC

For Bacterin for Veterinary Use.
First use Jan. 12, 1961.

SN 115,754. Arakawa-Chotaro & Co., Nakaku, Nagoya City, Japan. Filed Feb. 7, 1961.

NORSHIN

Owner of Japanese Reg. No. 360,631, dated Dec. 28, 1943.
For Analgesic.

SN 116,022. Great Southern Drug Co., Atlanta, Ga. Filed Mar. 20, 1961.

AMPHORIN

For Buffered Aspirin for Relief in Arthritis, Rheumatic Diseases, or Simple Pain.
First use Mar. 1, 1961.

SN 117,708. Hellwig, Inc., Chicago, Ill. Filed Apr. 12, 1961.

PASCORBATE

For p-Aminosalicylic Acid Ascorbate in Tablet and Powder Form Dispensed on Prescription for Treatment of Tuberculosis.
First use Sept. 30, 1957.

SN 117,709. Hellwig, Inc., Chicago, Ill. Filed Apr. 12, 1961.

PASCORBIC

For p-Aminosalicylic Acid Ascorbate in Tablet and Powder Form Dispensed on Prescription for Treatment of Tuberculosis.
First use Oct. 27, 1955.

SN 118,333. Edward W. Clasen, d.b.a. E. W. Clasen Pharmacal Co., St. Louis, Mo. Filed Apr. 21, 1961.

GANZETAG

For Vitamin Preparation Sold in Capsule Form.
First use April 1960.

SN 118,334. Edward W. Clasen, d.b.a. Tron-V Company, St. Louis, Mo. Filed Apr. 21, 1961.

TRON-V

For Vitamin Preparations Sold in Capsule and Tablet Form.
First use July 1960.

SN 118,828. Claude J. Tipton, Jr., d.b.a. Tip-Off Company, Troy, Ohio. Filed Apr. 27, 1961.

TIP-OFF

For Food Supplements for Livestock Comprising a Preparation of Vitamins, Minerals and Anti-Biotics for Use as Additives to Livestock Feeds.
First use Aug. 14, 1956.

SN 119,448. Stuart Kabnick, Philadelphia, Pa. Filed May 2, 1961.

CABASIL

For Pharmaceutical Preparations and Therapeutic Agents Prepared in Powdered, Liquid, Suppository, Capsule, and Tablet Form—Namely, Surgical Powder, Nose and Throat Powder, Bland Ointment for Treatment of Burns and Minor Skin Conditions, Concentrate Ointment and Liquid for Use on Sloughing or Grangenous Tissues, Oral Tablets and Powder for Stomach Disorders and Mild Intestinal Diseases, Enema Powder, Vaginal Suppositories, Rectal Suppositories, Foot Powder, Toothpaste and Also Molded Compositions With Ligatures Therein for Use as Deep-Seating Implants for Draining Sinuses, Wounds and Slow-Healing Suture Lines.
First use June 12, 1934.

SN 120,482. Beutlich, Inc., Chicago, Ill. Filed May 22, 1961.



For Pharmaceutical Preparations.
First use Jan. 4, 1955.

SN 123,001. Dr. Le Gear, Inc., St. Louis, Mo. Filed June 28, 1961.

PIG SWIG

Owner of Reg. No. 641,642.
For Liquid Wormer for the Removal of Worms From Swine.
First use Nov. 10, 1955.

SN 124,232. Smith, Miller & Patch Inc., New York, N.Y. Filed July 18, 1961.

TEMPOTRIAD

For Exhilarant.
First use June 21, 1961.

SN 129,098. A. H. Robins Company, Inc., Richmond, Va. Filed Oct. 3, 1961.

WHITAMINE

For Antihistaminic Medicinal Preparation.
First use Sept. 19, 1961.

SN 129,099. A. H. Robins Company, Inc., Richmond, Va. Filed Oct. 3, 1961.

DONNAPOISE

For Antispasmodic and Tranquilizer Medicinal Preparation.
First use Sept. 19, 1961.

Class 19—Vehicles

SN 113,667. Sweden Freezer Manufacturing Company, Seattle, Wash. Filed Feb. 14, 1961.

MOBILIER

For Food and Drink Vending Motor Truck.
First use on or about Dec. 14, 1960.

SN 115,792. El Do-Craft Boat Company, Inc., Kenova, Ark. Filed Mar. 16, 1961.

EL DO-CRAFT

For Boats.
First use on or about Oct. 1, 1957.

SN 121,875. Charles L. Steiner, Jr., San Diego, Calif. Filed June 12, 1961.

VISI LUBE

For Transparent Dust Cap for Vehicle Wheel Hub.
First use Jan. 18, 1961.

SN 121,991. Great Dane Trailers, Inc., Savannah, Ga. Filed June 14, 1961.

STYPOLEX

For Insulation Used in Trailers.
First use June 23, 1960.

SN 122,180. Ben Fingeroot, Detroit, Mich. Filed June 16, 1961.

COMPRESS-O-SPRAY

For Windshield Washer for Vehicles.
First use Apr. 19, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 98,347. Developmental Engineering Corporation, Washington, D.C. Filed June 3, 1960.

LITHOCOM

For Electronic Equipment for Transmitting and Receiving Radio Signals Through the Earth.
First use May 17, 1960.

SN 103,366. The Smith and Winchester Manufacturing Company, South Windham, Conn. Filed Aug. 24, 1960.

Spacemastre

For Automatic Electronic Back Gauge Controls for Positioning Cutting Cycles of Paper Trimming Machines.
First use Feb. 14, 1960.

SN 107,185. Delcon Corporation, Palo Alto, Calif. Filed Oct. 26, 1960.



The drawing is lined for blue.
For Security Telephones in the Nature of a Portable Transistorized Voice Scrambler; Security Speech Scramblers in the Form of Transistorized Telephone Type Handsets Used on Radio Communication Equipment; Security Speech Scramblers in the Form of Transistorized Units To Be Used in Conjunction with 2-Way Radio Telephone Equipment; VHF Transceivers—Namely, a Portable Radio Transmitter and Receiver.
First use Mar. 21, 1960.

SN 107,344. Jay Lighting Mfg. Co. Inc., Brooklyn, N.Y. Filed Oct. 28, 1960.



JAY

Owner of Reg. No. 710,189.
For Electric Lighting Fixtures.
First use January 1946; January 1940 as to "Jay."

SN 108,205. Outercom Electronics Co., Charlotte, N.C. Filed Nov. 10, 1960.

outercom

For Radio, Television Sets and Electronic Parts, Fittings and Elements—Namely, Condensers, Capacitors, Switches, Tubes, Connectors, and Potentiometers.
First use July 1, 1958.

SN 108,577. Sealomatic Electronics Corporation, Brooklyn, N.Y. Filed Nov. 16, 1960.

Sealomatic

For Equipment Generating High Frequency Electrical Energy for Heating, Sealing, and Cutting Operations.
First use June 10, 1953.

SN 114,680. Bush Radio Limited, London, England. Filed Mar. 1, 1961.



Owner of British Reg. No. 579,983, dated Sept. 18, 1937.
For Apparatus for Use in Wireless Telephony, Radio, Television, and Telecommunications and Parts.
First use 1932; in commerce May 1958 as to radio sets.

SN 121,318. Raytheon Company, Waltham, Mass. Filed June 2, 1961.

RAYSISTOR

For Electrical Apparatus Such as Control Devices, Switches, Relays, and the Like.
First use in or about August 1960 on relays.

SN 121,663. Penn Battery Manufacturing Co., Inc., New York, N.Y. Filed June 8, 1961.



For Electric Batteries, Battery Leads, Cables, and Connectors.
First use Aug. 15, 1938.

SN 121,688. White Stores, Inc., Wichita Falls, Tex. Filed June 8, 1961.

CATALINA

Owner of Reg. Nos. 631,786, 671,832, and 704,235.
For Electric Appliances—Namely, Irons, Coffee Makers, Skillets, Mixers, Cookers, Roasters, Toasters, Can Openers, Waffle Irons, Corn Poppers, Heating Pads, Hair Dryers, Heaters, Blankets, Hot Plates, Electric Fans and Bean Pots.
First use Mar. 2, 1961.

Class 22—Games, Toys, and Sporting Goods

SN 110,376. Spiegel, Inc., Chicago, Ill. Filed Dec. 16, 1960.

BUDGET POWER

For Golf Clubs and Golf Bags.
First use May 16, 1956.

SN 114,655. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed Feb. 28, 1961.

SUNNY FACE

For Dolls.
First use Feb. 9, 1961.

SN 116,015. Games by Sonwell, Inc., New York, N.Y. Filed Mar. 20, 1961.

SONWELL

For Equipment for Playing Word Games, Toy Paint Sets, Toy Sets Containing Materials for Making Ornamental Figures, and Toy Sets Containing a Camera, Photographic Paper and Negatives for Making Pictures.
First use March 1960.

SN 116,016. Games by Sonwell, Inc., New York, N.Y. Filed Mar. 20, 1961.

FLICKERS

For Toy Set Containing a Camera, Photographic Paper, and Negatives for Making Pictures.
First use Jan. 16, 1961.

SN 120,360. Wilson Sporting Goods Co., River Grove, Ill. Filed May 18, 1961.

INDESTRUCTO

Owner of Reg. No. 637,105.
For Inflated Balls, Baseballs, and Softballs.
First use Jan. 14, 1958.

SN 120,610. Atlantic Lures, Inc., Providence, R.I. Filed May 23, 1961.

FRANTIC ANTIC

For Fishing Lures.
First use in August 1960.

SN 120,616. Orville L. Bradley, Waco, Tex. Filed May 23, 1961.

SPEED MERCHANT

For Football Shoes.
First use June 10, 1956.

SN 121,085. Donald F. Duncan, Incorporated, Evanston, Ill. Filed May 31, 1961.

BOLERO

For Toy Consisting of a Bowl Having a String Attached Thereto at One End and a Handle at the Other End.
First use May 1, 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 78,861. United Elastic Corporation, Easthampton, Mass., assignee of Easthampton Rubber Thread Co., Easthampton, Mass. Filed Aug. 3, 1959.

ERTCOPOL

For Molded Urethane Elastomer Machine Parts—Namely, Idler and Timing Gears; Machinery Rolls, Such as, Nip Rolls, Friction Rolls and Pinch Rolls; Impellers for Pumps and Machinery Wheels Made to the Customer's Specifications.
First use July 10, 1959.

SN 108,929. Wheel Trueing Tool Company, Detroit, Mich. Filed Nov. 22, 1960.

TRU-TURN

Owner of Reg. No. 428,837.
For Diamond Pointed Dressing Tools for Dressing and Truing Grinding Wheels.
First use May 18, 1960.

SN 109,213. Tri-Q, Inc., El Monte, Calif. Filed Nov. 28, 1960.



For Machinery and Tools—Namely, Router Bit Sharpeners.
First use Mar. 28, 1960.

SN 109,471. The Bullard Company, Bridgeport, Conn. Filed Dec. 2, 1960.

DYN-AU-MATIC

For Multiple Spindle Lathes.
First use Nov. 23, 1960.

SN 112,289. Motec Industries, Inc., Hopkins, Minn., by change of name from Minneapolis-Moline Company, Hopkins, Minn. Filed Jan. 23, 1961.

MOPOWER

For Tractors.
First use Jan. 18, 1961.

SN 113,334. Globe Hoist Company, Philadelphia, Pa. Filed Feb. 9, 1961.

CONTINENTAL

For Hoist for Lifting Automobiles.
First use July 31, 1958.

SN 115,428. Butler Bin Company, Waukesha, Wis. Filed Mar. 13, 1961.

BUTLER AIRFLOMATIC

For Cement Feeders for Concrete Mixing Plants.
First use Jan. 26, 1957.

SN 118,404. Brocar, Inc., Wichita, Kans. Filed Apr. 24, 1961.



For Snow Throwers.
First use on or about Mar. 10, 1961.

SN 118,503. Standard Steel Corporation, Los Angeles, Calif. Filed Apr. 24, 1961.

STANDARD

For Industrial Processing Equipment—Namely, Rotary Dryers, Kilns, Coolers, Calciners, Rock Scrubbers, Ammoniators, Furnaces, Mixers, and Combination Rotary Dryer-Coolers; Material Processing Plants—Namely, Portable and Stationary Asphalt Mixing Plants and Parts Thereof, and Fish Reduction Plants; Fish Canning Machinery—Namely, Cookers, Pressers, and Conveyors; Road Machinery—Namely, Subgraders; Cryogenic Equipment—Namely, Tanks, Trailers, Rechargers, and Pumps for Storing, Transporting, and Distributing Liquefied Gases at Subzero Temperatures; and Sugar Processing Equipment—Namely, Granulators and Cubers.
First use at least as early as 1941.

SN 118,525. The Wood Shovel and Tool Company, Piqua, Ohio. Filed Apr. 24, 1961.

RANGER

For Shovels, Spades, Scoops, Forks, Hoes, Rakes, Cultivators, Weeders, Scrapers, Edgers, and Handles Therefor.
First use at least as early as 1930 on shovels.

SN 118,667. Dri Mark Products, Inc., Mount Vernon, N.Y. Filed Apr. 26, 1961.

DRI MARK

For Stapling Devices and Staples Therefor.
First use August 1960.

SN 118,722. Rockwell-Standard Corporation, Coraopolis, Pa. Filed Apr. 26, 1961.

AMBOID

For Gearing.
First use Dec. 9, 1960.

SN 121,731. Heppenstall Company, Pittsburgh, Pa. Filed June 9, 1961.

SAFE-T-TONGS

For Automatic Tongs.
First use about June 1, 1940.

SN 121,786. The American Thermos Products Company, Norwich, Conn. Filed June 12, 1961.

THERMOS

Owner of Reg. Nos. 67,002, 700,748, and others.
For Bottle Opener and Cap Catcher.
First use May 24, 1961.

SN 121,951. Wagner Iron Works, Milwaukee, Wis. Filed June 13, 1961.

EARTHKING

For Power Cultivators.
First use Apr. 7, 1961.

SN 122,002. The International Silver Company, Meriden, Conn. Filed June 14, 1961.

FIRE SONG

For Stainless Steel Flatware—Namely, Knives, Forks and Spoons.
First use Apr. 28, 1961.

SN 122,042. Thor Power Tool Company, Aurora, Ill. Filed June 14, 1961.

COCHISE

For Pneumatically Actuated Paving Breakers, Clay Diggers, and Rock Drills, and Columns for Rock Drills.
First use 1911.

SN 122,097. Macdonald and Sons, Inc., Seekonk, Mass. Filed June 15, 1961.

DELMAC

For Non-Metallic Parts of Textile Machines.
First use Apr. 8, 1961.

SN 122,313. Idento Label Company, Inc., Charlotte, N.C. Filed June 19, 1961.



For Imprinting Presses.
First use Apr. 5, 1961.

SN 122,314. Idento Label Company, Inc., Charlotte, N.C. Filed June 19, 1961.

IDENTO-PRESS

For Imprinting Presses.
First use Apr. 5, 1961.

Class 24—Laundry Appliances and Machines

SN 107,025. Maschinenfabrik Peter Pfenningsberg G.m.b.H., Lintorf, Dusseldorf, Germany. Filed Oct. 24, 1960.



Owner of German Reg. No. 726,052, dated June 15, 1960.
For Industrial and Household Washing Machines, Automatic Washing Machines, Apparatus and Machines for Smoothing Laundry and Clothes—Namely, Smoothing Irons, Ironing and Pressing Machines, and Calendera.
First use July 26, 1958.

SN 121,574. McGraw-Edison Company, Elgin, Ill. Filed June 7, 1961.

YORKTOWN

For Dry Cleaning Apparatus.
First use Feb. 22, 1961.

Class 26—Measuring and Scientific Appliances

SN 70,833. Kabushiki Kaisha Yashica, Chuo-ku, Tokyo, Japan. Filed Mar. 3, 1959.

YASHICA

Priority claimed under Sec. 44(d) on Japanese application filed Sept. 17, 1958; Reg. No. 578,755, dated Aug. 15, 1961. Owner of U.S. Reg. No. 627,356.
For Instruments and Machines for Physical Chemistry, Medicine, Measuring, Photography and Education, Optical Glass and Calculators, and Accessories for the Above for Physical and Chemical Instruments and Parts Including Optical Instruments, Reflecting Mirrors, Prisms, Telescopes, Microscopes, Lenses, and Instruments and Parts for Chemical Analysis; Medical Instruments and Parts Including Hemadynamometers; Measuring Apparatus Including Thermometers, Calorimeters, Hyetometers, Anemometers, Manometers, Hydrometers, Compasses, and Surveying Instruments; Photographic Instruments and Accessories Including Cameras, Cine-Cameras, Lenses for Camera, Filters, Lens-Hoods, Flash-Guns, Tripod, Tilttops, Timers, Film and Film Magazines, Film Developing Tanks, Film Clips, Film Driers, Printing Boxes, Wipers, Rewinders, Film-Editors, Film Splicers, Titlers; Educational Instruments and Parts Including Globes, Models, Specimen, and Parts; Calculating Instruments Including Calculators, Count Gauges and Abaci; Binoculars and Spectacles.

SN 98,411. Wilco Products Incorporated, Orange, N.J. Filed June 3, 1960.

SPREADER BAR

For Telescoping Rod Used for Wheel Alignment.
First use 1952.

SN 105,981. Gustav F. Gerdts KG., Bremen, Germany. Filed Oct. 7, 1960.



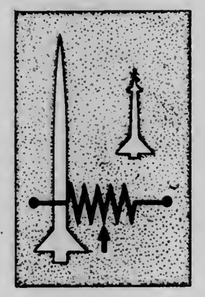
Owner of German Reg. No. 631,027, dated Dec. 3, 1952; and U.S. Reg. Nos. 705,578 and 705,579.
For Navigational Instruments, Water Level Indicators, Water Level Regulators, Apparatus for Removing Condensation Water Actuated by Floats, Thermically, Thermodynamically and by Means of Nozzles, Pneumatically Operated Water Removing Devices, Devices for Controlling and Inspecting Condensation Removers, Valves—Namely, Check Valves, Special Valves for Steam Boilers and Containers for Water and Gases, Rapidly Closing Valves and Thermically Operated Valves for Heating Plants; Apparatus for Removing Deposits From Boilers and Controlling Means for Such Apparatus, Pneumatically, Electrically and Mechanically Operating Regulators for Liquids and Gases and Apparatus and Devices To Guide, Lock, Regulate, Observe and Measure Liquids, Gases and Steam.

SN 108,572. Radiation Counter Laboratories, Inc., Skokie, Ill. Filed Nov. 16, 1960.

SPECTRUM STRIPPER

For Devices for Selectively Breaking Down Complex Spectra Obtained From Channel Pulse Analyzers, Each Said Device Comprising a Magnetic Recording Unit, Circuitry and Magnetic Tape.
First use on or about May 9, 1960.

SN 112,999. Bourns, Inc., Riverside, Calif. Filed Feb. 3, 1961.



For Measuring and Scientific Apparatus—Namely, Pressure Transducers; Motion Transducers; Accelerometers; Potentiometers for Electronic Computers, Electrical Instruments, Digital Readout Devices, Testing Circuits for Pressure-Sensitive Instruments, Hearing Aids, Testing Devices for Accelerometers, Oscillographs, Resistance-Calibration Devices and Scientific Instruments and Apparatus Other Than Television and Radio Receivers; and Electronic Systems Comprising Altitude-Hold Systems for Aerial Vehicles, Gain-Control Systems, Aileron-Control Systems, Testing Devices for Testing Pressure-Sensors, Testing Devices for Testing Resistors, Analog-to-Digital Converters, and Force and Displacement-Sensing Systems.
First use Sept. 1, 1960.

SN 117,934. Ankh Laboratories, Inc., Fairborn, Ohio. Filed Apr. 17, 1961.



For Apparatus for Conducting Qualitative and Quantitative Assays, Particularly Assays and the Activity of Chemical Agents in Relation to Micro-Organisms.
First use Feb. 2, 1961.

SN 119,438. Orrin H. Thomas, Clearfield, Pa. Filed May 5, 1961.

Photo Coater

For Receptacles for Support of Photographic Exposures for Coating the Same To Insure Permanency, as Well as Storage of the Exposures.
First use Oct. 15, 1957.

SN 120,589. Temptron, Inc., Reseda, Calif. Filed May 22, 1961.

TEMPTRON Inc.

For Temperature or Pressure Sensing, Controlling, and Calibrating Devices and Components Thereof—Namely, Thermocouples and Components Thereof; Thermopiles; Thermistors; Thermocouple Reference Junctions; Transistorized Thermocouple-Signal Amplifiers; Temperature Controllers; Freezing Point Standards; Thermocouple Calibration Furnaces, and Heater Elements and Graphite Liners Thereof; Temperature Controlled Calibration Baths; Temperature Indicators; Resistance Thermometers; Pressure Transducers; and Pressure Probes.
First use Feb. 16, 1961.

SN 121,296. Lithoid, Inc., Highland Park, N.J. Filed June 2, 1961.

COMPOS-O-LINE

For Photographic Data Processing or Sequential Card Camera.
First use Nov. 11, 1958.

SN 121,319. Raytheon Company, Waltham, Mass. Filed June 2, 1961.



The drawing is lined for the colors brown, blue, and silver.
For Apparatus, Such as Direction Finders and Depth Measuring Devices.
First use December 1955.

SN 121,339. Ambco Electronics, Los Angeles, Calif. Filed June 5, 1961.

SCREEN-EAR

For Audiometers.
First use Mar. 31, 1961.

SN 121,885. Western Tablet & Stationery Corporation, Dayton, Ohio. Filed June 12, 1961.

GUIDE LINE

For Combination Measuring and Drawing Instrument.
First use May 26, 1961.

SN 121,973. Jack Brooke, d.b.a. Photographic Equipment Company, Seattle, Wash. Filed June 14, 1961.

PRINT-A-MATIC

For Electrically Operated Roll Easel Attachment for Photographic Enlarging Machines.
First use July 15, 1960.

SN 122,046. Webber Gage Company, Cleveland, Ohio. Filed June 14, 1961.

MICRO-INCREMENT

For Gage Blocks, Specifically Precision Gage Blocks, Angle Gage Blocks, and Heavy Duty Gage Blocks.
First use in or about March 1961.

SN 123,011. HRB-Singer, Incorporated, State College, Pa. Filed June 28, 1961.

STAR

For Electrical Instruction Devices for Testing, Scoring, Recording, and Teaching.
First use Apr. 5, 1961.

SN 123,751. Kay Electric Company, Pine Brook, N.J. Filed July 11, 1961.

AUTO-NODE

Owner of Reg. Nos. 578,445, 617,218, and 654,767.
For Precision Noise-Figure Measurement Test Set.
First use June 26, 1961.

SN 124,276. National Beryllia Corporation, Haskell, N.J. Filed July 19, 1961.

CARBERLOX

Owner of Reg. No. 685,900.
For Ceramic Beryllium Oxide and Carbide Tubes, Discs, Blocks and Insulating Heat Sinks for Use in the Missile, Aircraft, Electronics and Nuclear Fields.
First use June 16, 1960.

Class 27—Horological Instruments

SN 110,290. Spiegel, Inc., Chicago, Ill. Filed Dec. 15, 1960.

BUDGET POWER

For Watches.
First use Dec. 17, 1956.

Class 28—Jewelry and Precious-Metal Ware

SN 94,407. McGrath-Hamin, Inc., Providence, R.I. Filed Apr. 5, 1960.

LITTLE PRINCESS

For Costume Jewelry for Children.
First use in or about November 1958.

SN 122,399. Uncas Manufacturing Company, Providence, R.I. Filed June 19, 1961.

UNCAS

For Jewelry for Personal Adornment.
First use July 1959.

SN 122,427. Coro, Inc., New York, N.Y. Filed June 20, 1961.

Corotots

For Pendants, Necklaces, Bracelets, Brooches, Lockets, Finger Rings, Charm Bracelets, Charms, Pearls for Personal Wear; and the Following Goods Made in Whole or in Part of Precious Metals or Plated With Same: Beads, Pins, and Jewelry Initials and Hair Ornaments.
First use March 1941.

SN 122,479. Socialite Creations, Inc., New York, N.Y. Filed June 20, 1961.

SOCIALITE

For Finger Rings, Pendants, Earrings, and Brooches.
First use May 5, 1961.

SN 122,480. Speidel Corporation, Providence, R.I. Filed June 20, 1961.

AQUARIUS

For Watch Bracelets and Identification Bracelets.
First use May 12, 1961.

SN 122,481. Speidel Corporation, Providence, R.I. Filed June 20, 1961.

BALMORAL

For Watch Bracelets.
First use May 12, 1961.

SN 122,482. Speidel Corporation, Providence, R.I. Filed June 20, 1961.

BRAZILIA

For Watch Bracelets and Identification Bracelets.
First use May 12, 1961.

SN 122,483. Speidel Corporation, Providence, R.I. Filed June 20, 1961.

POLARIS

For Watch Bracelets and Identification Bracelets.
First use May 12, 1961.

SN 122,526. Sidney Graboyes, Philadelphia, Pa. Filed June 21, 1961.

ETERNAL TROTH

For Finger Rings.
First use Sept. 19, 1960.

SN 122,585. Standish-Weber, Inc., New York, N.Y. Filed June 21, 1961.

"Allegro"

For Costume Jewelry.
First use June 14, 1961.

SN 122,823. Moraya Manufacturing Co. Inc., New York, N.Y. Filed June 26, 1961.

MORAYS

For Watch Bands, Watch Cases, Expansion Bracelets, Identification Tags, Jewelry Findings, Lockets, Charms, Bracelets, Clasps, and Catches, Made Entirely or in Part of Precious Metal.
First use 1932.

Class 29—Brooms, Brushes, and Dusters

SN 97,026. Balkamp, Inc., Indianapolis, Ind. Filed May 13, 1960.

B * K

For Garage Brooms, Squeegees, Bug Sponges, Cleaning Cloths, Wash Mitts, Paint and Varnish Brushes, and Car Wash Brushes.
First use Aug. 1, 1952.

SN 121,809. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed June 12, 1961.

BK

For Paint and Varnish Applicators.
First use March 1961.

Class 30—Crockery, Earthenware, and Porcelain

SN 122,501. American Lava Corporation, Chattanooga, Tenn. Filed June 21, 1961.

ALSIBASE

Owner of Reg. No. 538,459.
For Ceramic Shapes for Industrial Use.
First use Mar. 14, 1961.

SN 124,610. Wallace China Co., Ltd., Huntington Park, Calif. Filed July 24, 1961.

WALLACE

Owner of Reg. No. 530,862.
For Vitrified Hotel and Restaurant China—Namely, Plates, Serving Dishes, Cups, Saucers, Partitioned Plates, Creamers, Sugar Bowls, Mugs and Teapots.
First use Feb. 6, 1961.

Class 31 — Filters and Refrigerators

SN 119,014. Lee Filter Corporation, Edison, N.J. Filed May 1, 1961.

LEE

For Oil Filters, Air Filters, Gasoline Filters and Industrial Filters.
First use 1952.

Class 32 — Furniture and Upholstery

SN 109,462. Wood Engineering Co., Inc., Colville, Wash. Filed Dec. 1, 1960.

CHILD'S SPACE CHAIR

For Infant's Chair.
First use July 22, 1960.

SN 119,781. Merchandise Outlet Corp., Saddle Brook, N.J. Filed May 11, 1961.



For Window Shades.
First use May 1, 1961.

SN 121,176. Coyne Industries, Inc., Brooklyn, N.Y. Filed June 1, 1961.

BABY CADDY

For Combined Table and Chair for Infants.
First use May 12, 1961.

SN 122,134. Streater Industries, Inc., Spring Park, Minn. Filed June 15, 1961.

MELAMAR

For Display Fixtures, Shelving, Racks and Brackets Having Protective Finish.
First use Apr. 10, 1961.

SN 122,214. Pen Dee, Incorporated, Portsmouth, Va. Filed June 16, 1961.

DINER/RECLINER

For Adjustable Chair Bed for Babies.
First use Mar. 1, 1961.

SN 122,503. W. R. Ames Company, Milpitas, Calif. Filed June 21, 1961.

AMESTACK

For Metal Library Shelving.
First use Feb. 27, 1961.

SN 122,795. Ralph Friedland & Bros., Keyport, N.J. Filed June 26, 1961.

BLAKOUT

For Window Shades.
First use May 8, 1961.

Class 33 — Glassware

SN 109,057. Durward O. Guth, d.b.a. Guth Products Company, Elmwood Park, Ill. Filed Nov. 25, 1960.

KOOL-GRIP

For Receptacles—Namely, Glass Flasks, Bottles, Tumblers, and Glass Vases for Handling Hot or Cold Material.
First use Oct. 22, 1945.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 98,099. Jenn Air Products Company, Inc., Indianapolis, Ind. Filed May 31, 1960.

ASTRO-VENT

For Combination Exhaust Fan and Skylight.
First use Jan. 22, 1960.
Subj. to Intf. with SN 114,330.

SN 108,971. Fuel Reduction Devices, Inc., Yonkers, N.Y. Filed Nov. 23, 1960.

FUELMASTER

For Furnace Baffle Plates.
First use Oct. 18, 1960.

SN 112,446. The Denver Fire Clay Company, Denver, Colo. Filed Jan. 25, 1961.

DICKINSON

For Kilns for Pottery and Ceramic Products, and Parts Thereof.
First use about 1939.

SN 114,419. Bastian-Morley Co., Inc., La Porte, Ind. Filed Feb. 27, 1961.

BASMOR-LITTLE

Owner of Reg. Nos. 214,362, 670,249, and others.
For Gas-Fired Boilers.
First use Dec. 30, 1960.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 122,026. Riegel Paper Corporation, New York, N.Y. Filed June 14, 1961.

PERMATRAK

For Conveyor Belting.
First use on or before Mar. 14, 1961.

SN 122,143. George Angus & Company Limited, Newcastle-upon-Tyne, England. Filed June 13, 1961.

ANGUS

Owner of British Reg. Nos. 685,962, 753,860, dated Jan. 30, 1950 and May 16, 1956, respectively; and others.
For Machinery Packing Made From Natural and Synthetic Rubber, Leather, Plastics and/or Fabrics; Packing and Sealing Rings for Machinery; Oil Seals; Hose; Machine, Transmission, Conveyor, and Elevator Belting; Brake Linings; Clutch Linings.
First use in commerce 1926.

SN 122,182. Bishop Freeman Co., Evanston, Ill. Filed June 16, 1961.

BISHLON

For Flexible Hose.
First use on or about May 23, 1961.

Class 37 — Paper and Stationery

SN 65,497. KVP Sutherland Paper Company, Kalamazoo, Mich., assignee of Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich. Filed Jan. 8, 1959.

KVP ...the paper people

Owner of Reg. Nos. 145,127, 647,852, and others.
For Parchment Papers, Waxed Papers, Wrapping Papers, and Bond Writing Papers.
First use Nov. 28, 1958.

SN 101,535. Anaconda Aluminum Company, Louisville, Ky. Filed July 27, 1960.

KURL-KURE

For Foil Laminated to Paper, Particularly Aluminum Foil-Paper Laminate.
First use July 9, 1958.

SN 105,155. Fisher Pen Company, Forest Park, Ill. Filed Sept. 26, 1960.

FISHER

For Ball Point Pens, Pen Clips and Refills.
First use Oct. 31, 1948.

SN 109,162. Bonnar-Vawter, Incorporated, Keene, N.H. Filed Nov. 28, 1960.

FLEX-I-FORM

For Business Forms.
First use Oct. 4, 1960.

SN 113,058. American Can Company, New York, N.Y. Filed Feb. 6, 1961.

LINWORTH

For Toilet Paper.
First use Dec. 28, 1960.

SN 114,163. Arborfield Products (Export) Limited, Helpston, near Peterborough, England. Filed Feb. 23, 1961.

GLINDURA

For Paper Prepared for Use in Book-Binding.
First use Apr. 9, 1958; in commerce June 22, 1960.

SN 115,586. Dalomark Corporation, Englewood, N.J. Filed Mar. 14, 1961.

Mark-Aid

For Laundry Pen.
First use Mar. 1, 1961.

SN 118,252. International Paper Company, New York, N.Y. Filed Apr. 20, 1961.

TICONDEROGA OFFSET

The word "Offset" is disclaimed apart from the mark as shown.
For Papers and Paper Products—Namely, Printing and Book Papers.
First use Jan. 30, 1953.

SN 118,840. Western Tablet & Stationery Corporation, Dayton, Ohio. Filed Apr. 27, 1961.

TOTEM

Owner of Reg. No. 383,786.
For Poster Paper and Construction Paper, Used for Cut Out and Construction Work, Mounting, Paint and Crayon Art Work, Covers and Other Art Projects.
First use May 31, 1940.

SN 118,912. Scott Paper Company, Philadelphia, Pa. Filed Apr. 28, 1961.

SCOTT PRINTS

Applicant makes no claim to the word "Prints" apart from the mark as shown. Owner of Reg. Nos. 303,536, 669,919, and others.
For Bathroom Tissue.
First use Apr. 4, 1961.

SN 118,914. Scott Paper Company, Philadelphia, Pa. Filed Apr. 28, 1961.

SOFT-WEVE PRINTS

Applicant makes no claim to the word "Prints" apart from the mark as shown. Owner of Reg. No. 320,293.
For Bathroom Tissue.
First use Apr. 4, 1961.

SN 126,178. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Aug. 17, 1961.



Owner of Reg. No. 560,098.
For Copy Paper.
First use during February 1950.

Class 38 — Prints and Publications

SN 94,325. The George Macy Companies, Inc., New York, N.Y. Filed Apr. 4, 1960.



For Fictional and Non-Fictional Books.
First use 1937.

SN 107,007. General Promotions Co., Inc., Philadelphia, Pa. Filed Oct. 24, 1960.



The drawing is lined for yellow, but color is not claimed as a feature of the mark.
For Monthly Humor and Satire Magazine.
First use July 12, 1960.

SN 110,734. Bert H. Briney, d.b.a. AV Company, Denver, Colo. Filed Dec. 23, 1960.



"Audio-Visual" is disclaimed apart from the mark as shown.
For Prepared Slides and Text Material Including Tape Recorded Lectures for Use as an Instruction and Study Device in an Aviation Ground School Course.
First use Aug. 18, 1960.
Subj. to Intf. with SN 116,158.

SN 114,948. The Foundation for the Advancement of International Business Administration, Inc., New York, N.Y. Filed Mar. 6, 1961.

THE INTERNATIONAL EXECUTIVE

For Professional Magazine Issued Quarterly.
First use Mar. 5, 1959.

SN 115,702. Langenscheidt Kommanditgesellschaft, Berlin-Schoneberg, Germany. Filed Mar. 15, 1961.

LILLIPUT

For Miniature-Sized Dictionaries, Including Foreign Language Dictionaries.
First use 1954; 1909 in the spelling "Liliput"; in commerce 1955; 1928 in the spelling "Liliput."

SN 116,158. The Sanderson Films, Inc., Wichita, Kans. Filed Mar. 21, 1961.



The mark represents the letters "AVA."
For Flight and Ground Training Aviation Courses Comprising Text Books, Recorded Lectures, Film Strips and Projection Slide Films.
First use Sept. 21, 1960.
Subj. to Intf. with SN 110,734.

SN 116,546. Meredith Publishing Company, Des Moines, Iowa. Filed Mar. 27, 1961.

SUCCESSFUL FARMING

Owner of Reg. Nos. 61,626, 267,687, and 611,456.
For Farm Magazine Published Periodically.
First use Oct. 1, 1900.

SN 121,115. Pietro Deiro Jr., d.b.a. Pietro Deiro Publications, New York, N.Y. Filed May 31, 1961.

THE ACCORDIONAIRES

For Music and Musical Sales Magazine.
First use Mar. 15, 1961.

SN 121,187. Food Service Executives Association, Incorporated, Washington, D.C. Filed June 1, 1961.

FOOD EXECUTIVE

For Association Magazine.
First use Apr. 6, 1961.

SN 122,312. Idento Label Company, Inc., Charlotte, N.C. Filed June 19, 1961.



For Labels.
First use Jan. 16, 1961.

Class 39 — Clothing

SN 78,869. Robert L. Groff, Inc., San Diego, Calif. Filed Aug. 3, 1959.

BOBBETTES ANKLETS

No claim is made to the word "Anklets" apart from the mark.
For Hosiery, Specifically Women's and Children's Anklets.
First use May 14, 1959.

SN 87,590. Texas Harvest Hat Company, Laredo, Tex. Filed Dec. 18, 1959.



For Men's and Boys' Hats.
First use July 24, 1959.

SN 94,750. Dori Shoe Company, Inc., Lynn, Mass. Filed Apr. 11, 1960.

MISS CHIC

Owner of Reg. No. 635,257.
For Women's Shoes.
First use Oct. 20, 1959.

SN 97,310. Knitown Togs Corp., New York, N.Y. Filed May 17, 1960.

POUFF-KNIT

For Knitted Outerwear for Infants, Children and Teenagers—Namely, Sweaters.
First use Apr. 21, 1960.

SN 108,468. Desmond's, Inc., Los Angeles, Calif. Filed Nov. 15, 1960.

AVENAIRE

For Men's Suits, Men's Sportcoats, Slacks, Topcoats, Hats, Shoes, and Shirts.
First use Oct. 1, 1960.

SN 108,620. Exmoor Knitwear Co. Inc., New York, N.Y. Filed Nov. 17, 1960.

CRESTWICK

For Women's Sweaters and Women's Knitted Dresses.
First use Nov. 4, 1960.

SN 115,525. Red Wing Shoe Company, Inc., Red Wing, Minn. Filed Mar. 13, 1961.

SAFETY WING

For Safety Shoes.
First use Feb. 1, 1961.

SN 116,072. The Puritan Sportswear Corp., Altoona, Pa. Filed Mar. 20, 1961.

AQUAknit

For Men's and Boys' Sweaters.
First use Mar. 7, 1961.

SN 116,472. Josephine A. Bozio, Redwood City, Calif. Filed Mar. 27, 1961.

DRY SWIM

For Head Covering.
First use Mar. 3, 1961.

SN 116,587. Spatz Bros. Inc., New York, N.Y. Filed Mar. 27, 1961.

RALLY

For Coats.
First use Mar. 17, 1961.

SN 116,645. The Joseph & Feiss Company, Cleveland, Ohio. Filed Mar. 28, 1961.

HEATHERKNIT

Owner of Reg. No. 388,799.
For Piece Goods Sold in the Form of Men's Tailored Apparel—Namely, Topcoats, and Overcoats.
First use on or about June 21, 1939.

SN 116,647. The Joseph & Feiss Company, Cleveland, Ohio. Filed Mar. 28, 1961.

SEALNAP

Owner of Reg. No. 388,496.
For Men's and Boys' Suits, Topcoats, and Overcoats.
First use March 1940.

SN 116,873. Ben Cooper Inc., Brooklyn, N.Y. Filed Mar. 31, 1961.



Owner of Reg. No. 702,982.
For Masquerade Costumes.
First use Feb. 17, 1961.

SN 118,273. Milsan Mills, Inc., Lebanon, Pa. Filed Apr. 20, 1961.



Owner of Reg. No. 517,127.
For Men's and Boys' Sportshirts.
First use Apr. 3, 1961.

Class 44 — Dental, Medical, and Surgical Appliances

SN 114,228. The Kendall Company, Boston, Mass. Filed Feb. 23, 1961.

FLING

For Elastic Supports—Namely, Hosiery Comprising Elastic Yarns.
First use Jan. 20, 1961.

SN 120,980. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed May 29, 1961.

THERMOPONT

Owner of German Reg. No. 546,095, dated June 5, 1942.
For Impression Materials for Dental Purposes and Tooth Filling Agents.

Class 45—Soft Drinks and Carbonated Waters

SN 107,781. National Dairy Products Corporation, New York, N.Y. Filed Nov. 3, 1960.

FRIO MIST

"Frio" is a Spanish word meaning "cold," "cool," or "fresh air."
For Soft Drink Syrups and Concentrates.
First use Mar. 7, 1960.

Class 46—Foods and Ingredients of Foods

SN 79,400. Farmalabor Laboratori Chimici e Farmaceutici S.p.A., Milan, Italy. Filed Aug. 12, 1959.

FARMALABOR

Owner of Italian Reg. No. 133,304, dated Aug. 28, 1957.
For Infants' and Invalids' Dietectic Foods—Namely, Meat Products, Vegetable Products, Cereals and Gelatinous Foods, All Sold in Cans, Bottles, Jars, Boxes, and Other Containers.

SN 94,252. Bruce's Foods Company, New Iberia, La. Filed Apr. 4, 1960.

BRUCE'S TANGO

For Table Seasoning Sauce (Containing Pepper, Vinegar and Salt).
First use Apr. 21, 1958.

SN 106,716. Hereford Heaven Brands, Inc., d.b.a. Hereford Heaven Brands, Oklahoma City, Okla. Filed Oct. 19, 1960.

Hereford Heaven Brands'

Applicant disclaims the words "Hereford" and "Brands" apart from the mark as shown.
For Fresh and Frozen Packaged Meats.
First use 1953.

SN 106,718. Hereford Heaven Brands, Inc., d.b.a. Hereford Heaven Brands, Oklahoma City, Okla. Filed Oct. 19, 1960.

HEREFORD HEAVEN BRANDS'

The words "Brands'" and "Hereford" are disclaimed apart from the mark as shown.
For Fresh and Frozen Packaged Meats.
First use 1953.

SN 107,758. Hom-Del Corp., Hagerstown, Md. Filed Nov. 3, 1960.

Hom-Del

For Ice Cream, Ice Milk, Ices, Sherbets.
First use July 1, 1960, on ice cream.

SN 108,192. The Coca-Cola Company, Atlanta, Ga., by merger from Minute Maid Corporation, Orlando, Fla. Filed Nov. 10, 1960.

VI·PRO·MIN

For Frozen Dietary Food Concentrate of High Protein Content for Making a Low Calory Food Beverage.
First use Oct. 17, 1960.

SN 108,193. The Coca-Cola Company, Atlanta, Ga., by merger from Minute Maid Corporation, Orlando, Fla. Filed Nov. 10, 1960.

TRI-VITA

For Frozen Concentrated Grapefruit Drink.
First use Oct. 11, 1960.

SN 110,008. Vesta, Inc., New York, N.Y. Filed Dec. 9, 1960.

BRAND X

No exclusive rights are asserted in the word "Brand" apart from the mark as a whole.
For Unhydrogenated Corn Oil, and Salad Dressing, Margarine, and Shortening Made With Such Oil.
First use June 1, 1960.

SN 113,031. Rockwood Chocolate Co., Inc., Brooklyn, N.Y. Filed Feb. 3, 1961.

Rocklets

For Candy.
First use on or about Mar. 14, 1952.

SN 113,514. General Mills, Inc., Minneapolis, Minn. Filed Feb. 13, 1961.

SUBTRACT

For Food Concentrate for Weight Control.
First use Jan. 9, 1961.

SN 113,861. Remington Research, Inc., New York, N.Y. Filed Feb. 16, 1961.

TASTY-CAL

For Dietary Food Concentrate Designed for Weight Control.
First use Jan. 4, 1961.

SN 113,863. Rockwood Chocolate Co., Inc., Brooklyn, N.Y. Filed Feb. 16, 1961.

WAFLETS

For Candy.
First use on or about Aug. 21, 1952.

SN 114,861. T. J. Kuzelka, Takoma Park, Md. Filed Mar. 3, 1961.

NECTAR OF THE LAND

No claim of exclusive right is made to the word "Nectar" apart from the mark shown.
For Honey.
First use Jan. 5, 1961.

SN 114,963. King Kullen Grocery Co. Inc., Jamaica, N.Y. Filed Mar. 6, 1961.

KING KULLEN

Owner of Reg. Nos. 684,512 and 688,423.
For Fresh Fruits, Berries, and Vegetables.
First use Oct. 6, 1958.

SN 116,907. Pedro Marcos Noriega, Mexico City, Mexico. Filed Mar. 31, 1961.

SABRITOS

Owner of Mexican Reg. No. 99,000, dated Oct. 6, 1959.
For Food Product Made of Fried Wheat Flour Suitable for Use Particularly as a Cocktail Snack.

SN 118,434. Gol-Pak Corporation, Union City, N.J. Filed Apr. 24, 1961.

GOL PAK

For Frozen Breaded Ready-to-Cook Meats.
First use Mar. 1, 1947.

SN 121,210. Lekas & Drivas, Inc., Brooklyn, N.Y. Filed June 1, 1961.

ARISTOCRATIC

Owner of Reg. Nos. 112,909, 688,813, and others.
For Olive Oil (Edible); Bakery Goods—Namely, Baclava and Kataifi.
First use May 12, 1916.

SN 121,335. James O. Welch Company, Cambridge, Mass. Filed June 2, 1961.

SMALL FORTUNES

For Candy.
First use Apr. 25, 1961.

SN 121,747. Moorman Manufacturing Company, Quincy, Ill. Filed June 9, 1961.

PREMIX-TRATE

For High Protein Concentrate To Be Mixed With Feed for Poultry and Livestock.
First use Dec. 22, 1960.

SN 121,834. Joe Lowe Corporation, New York, N.Y. Filed June 12, 1961.

HI-COTE

For Liquid Imitation Chocolate Coating for Use on Frozen Confections With or Without Sticks.
First use May 26, 1961.

SN 121,845. Miss Saylor's Chocolates, Inc., Alameda, Calif. Filed June 12, 1961.

MISS SAYLOR'S

Owner of Reg. Nos. 147,158, 541,508, and others.
For Candy.
First use June 1920.

SN 125,425. Sakioka Farms, Santa Ana, Calif. Filed Aug. 4, 1961.

PORT BAY

For Fresh Vegetables.
First use June 27, 1961.

SN 125,426. Sakioka Farms, Santa Ana, Calif. Filed Aug. 4, 1961.

SEAL BAY

For Fresh Vegetables.
First use June 27, 1961.

SN 125,427. San Jose Canning Co., San Jose, Calif. Filed Aug. 4, 1961.

GARDEN VALLEY

For Canned Vegetables.
First use 1922 on canned beans.

SN 125,583. Central Retailer-Owned Grocers, Inc., Northlake, Ill. Filed Aug. 8, 1961.

CHILI-ETS

For Canned Foods—Namely, Beans in Chili Gravy.
First use June 1938.

Class 47—Wines

SN 108,464. J. O. Copel, Beaune, Cote-d'Or, France. Filed Nov. 15, 1960.

CHEVALIER D'OR

The English equivalent of the term "Chevalier d'Or" is "golden knight."
For Wines.
First use June 13, 1960; in commerce June 13, 1960.

SN 118,684. W. & J. Graham & Co., Vila Nova de Gaia, Portugal. Filed Apr. 26, 1961.

Brand

W.G.
GRAHAM
OPORTO

Applicant disclaims the words "Brand" and "Oporto" apart from the mark as shown. Owner of Portugese Reg. No. 44,996, dated Dec. 30, 1933; and U.S. Reg. Nos. 417,431 and 615,426.
For Wine.

SN 121,818. Jim Thomas, d.b.a. Thomas Import Co., Van Nuys, Calif., assignee of Franzia Brothers Winery, Ripon, Calif. Filed June 12, 1961.

CHATEAU TOMA'S

For Wines.
First use May 8, 1961.

Class 48 — Malt Beverages and Liquors

SN 39,186. The Burger Brewing Company, Cincinnati, Ohio. Filed Oct. 21, 1957.

mug

Owner of Reg. No. 359,438.
For Ale.
First use in May 1936.

Class 49 — Distilled Alcoholic Liquors

SN 118,499. Schenley Distillers, Inc., New York, N.Y. Filed Apr. 24, 1961.

BUCKINGHAM

Owner of Reg. No. 344,399.
For Whiskey.
First use 1880.

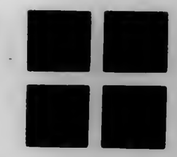
Class 51 — Cosmetics and Toilet Preparations

SN 103,550. Del Falla (Cosmetics) Limited, Manchester, England. Filed Aug. 29, 1960.

DEL FALLA

Priority claimed under Sec. 44(d) on British Reg. No. 806,128, dated May 19, 1960.
For Cosmetic and Toilet Preparations—Namely, Preparations for the Care of the Skin, Creams, Lotions, Essential Oils in the Nature of Perfume Essences and Cosmetic Additives, Lipsticks; Eye Make-Up—Namely, Eyebrow Pencils, Eye Shadow and Mascara; Rouge, Nail Polish and Nail Polish Remover, Face Powder, Compact Powder, Personal Deodorants, and Depilatory Preparations.

SN 105,459. Peter, Strong & Co., Inc., New York, N.Y. Filed Sept. 29, 1960.



For Tooth Cleanser in Paste and Tablet Form, Caries Control Cream, and Breath Deodorant, All for Professional Use.
First use June 10, 1957.

SN 110,129. Lola Young, d.b.a. Style-O-Matic, Carbondale, Ill. Filed Dec. 12, 1960.

STYLE-O-MATIC

For Hair Styling Lotion.
First use Oct. 3, 1960.

SN 110,233. Helena Rubinstein, Inc., New York, N.Y. Filed Dec. 14, 1960.

"Vis-À-Vis"

"Vis-à-Vis" means "opposite," "face to face" or "confronting."
For Perfume and Cologne.
First use Oct. 24, 1960.

SN 110,602. Amelia Cardenas de Mancera, Mexico City, Mexico. Filed Dec. 21, 1960.

NUFEIS

Owner of Mexican Reg. No. 84,760, dated Feb. 1, 1956.
For Cosmetics—Namely, Beauty Creams and Perfumes.

SN 117,521. Natcon Chemical Co. Incorporated, Bethpage, N.Y. Filed Apr. 10, 1961.

REPEL

For Deodorant Preparation for Dogs.
First use Feb. 21, 1961.

SN 119,803. John N. Stinson, d.b.a. Loran O'del Company, Oak Park, Ill. Filed May 11, 1961.

LORAN O'DEL

For Skin Lotions, Body Oils, and Bath Oils.
First use May 8, 1961.

SN 119,804. John N. Stinson, d.b.a. Loran O'del Company, Oak Park, Ill. Filed May 11, 1961.

CEL-TONE

For Skin Lotion Cosmetics.
First use Jan. 26, 1961.

SN 120,110. Middlebrooke-Lancaster, Inc., Brooklyn, N.Y. Filed May 16, 1961.

MIDNIGHT LACE

For Cold Wave Preparation for the Hair.
First use December 1958.

Class 52 — Detergents and Soaps

SN 101,574. Potter Drug & Chemical Corporation, Malden, Mass. Filed July 27, 1960.

LIQUID LUXURY

For Liquid Detergent.
First use July 20, 1960.

SN 108,874. Clairol Incorporated, New York, N.Y. Filed Nov. 22, 1960.

PINKESSA

For Hair Shampoo Concentrate.
First use Aug. 15, 1960.

SN 109,084. M-E Associates, Inc., Philadelphia, Pa. Filed Nov. 25, 1960.

MOR-EZE

For Liquid and Paste Cleaner for Use on Floors, All Painted Surfaces, Leather, Glass, Machinery, White Side Wall Tires, Brass, Copper and the Like.
First use Dec. 30, 1952.

SN 110,406. The Chemithon Corporation, Seattle, Wash. Filed Dec. 19, 1960.

TERGEX

For Household and Industrial Detergents.
First use in or about July 1959.

SN 110,815. The Borden Company, New York, N.Y. Filed Dec. 27, 1960.

FLO-TRON

For Synthetic Detergent Cleaner for Household, Commercial and Industrial Use.
First use Apr. 1, 1950.

SN 119,214. MacGregor Men's Toiletries, Inc., New York, N.Y. Filed May 3, 1961.

MAC GREGOR

Owner of Reg. No. 405,726.
For Shampoo.
First use Dec. 28, 1942.

SERVICE MARKS

Class 100 — Miscellaneous

SN 113,760. Putt-Putt Golf Courses Tournaments, Inc., d.b.a. Professional Putters Association, Fayetteville, N.C. Filed Feb. 15, 1961.



For Association Services—Namely, the Promoting of the Interests of Owners of Member Miniature Golf Courses Through the Promotion of Tournaments in Miniature Golf Competition.
First use Aug. 29, 1960.

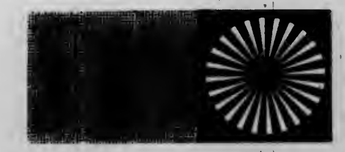
SN 118,887. Jerrico, Inc., d.b.a. Jerry's, Lexington, Ky. Filed Apr. 28, 1961.



Owner of Reg. No. 660,436.
For Restaurant Services.
First use Feb. 15, 1961.

Class 101 — Advertising and Business

SN 117,670. Martus Granirer, New York, N.Y. Filed Mar. 29, 1961.



For Commercial Photography.
First use Nov. 14, 1960.

Class 103 — Construction and Repair

SN 86,987. Nationwide Homes, Incorporated, Collinsville, Va. Filed Dec. 9, 1959.



No claim is made to the word "Homes" or to the representation of the map of the United States, apart from the mark.
For Erection of Shell Houses.
First use Oct. 1, 1959.

SN 117,935. Aluminum Training Company, Inc., Dayton, Ohio. Filed Apr. 17, 1961.



For Providing Consulting and Training Services for Others in Field Application, Direct Selling, and Home Exterior Styling in the Fields of Aluminum and Other Building Products.
First use on or about Feb. 11, 1961.

Class 105 — Transportation and Storage

SN 107,297. Trans World Airlines, Inc., New York, N.Y. Filed Oct. 27, 1960.



Owner of Reg. Nos. 390,227, 539,453, and others.
For Air Transportation of Persons, Property, and Mail.
First use Oct. 1, 1960.

SN 114,957. Happiness Tours, Inc., d.b.a. Happiness Journeys International, Chicago, Ill. Filed Mar. 6, 1961.

CARIBBEAN CAROUSEL

No claim is made to the word "Carribean" apart from the mark as shown.
For Arranging and Conducting Travel Tours for Tourists.
First use Nov. 1, 1958.

SN 115,527. Roberts of San Francisco, d.b.a. City Transfer & Storage Co., San Francisco, Calif. Filed Mar. 13, 1961.

WORLD PAC

The word "Pac" is disclaimed apart from the mark.
For Packing, Truck Transportation and Storage of Goods.
First use Jan. 2, 1961.

Class 106 — Material Treatment

SN 114,548. Solar Cine Products, Inc., Chicago, Ill. Filed Feb. 27, 1961.

SOLAR

For Services Comprising the Developing and Processing of Photographic Film.
First use 1939.

SN 117,741. Synthetics Finishing Corporation, Philadelphia, Pa. Filed Apr. 12, 1961.

SYNPROOF

For Application of Coating and Impregnating Materials to Textile Fabrics of the Goods of Others.
First use Nov. 30, 1959.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

726,105. COOK-OUT. Crawford Associates, Inc. SN 89,413. Pub. 10–24–61. Filed 1–21–60.

726,106. POLYHYCROP. Kleinwanzlebener Saatzucht vorm. Rabbethge & Giesecke Aktiengesellschaft. SN 94,171. Pub. 10–24–61. Filed 4–1–60.

726,107. POLYCROP. Kleinwanzlebener Saatzucht vorm. Rabbethge & Giesecke Aktiengesellschaft. SN 94,172. Pub. 10–24–61. Filed 4–1–60.

726,108. POLYFORM. Polyform Plastics Corp. SN 98,237. Pub. 10–24–61. Filed 6–1–60.

726,109. MOUNT RHYOLITE RANCH. Vernon J. Schryver and Laura A. Schryver (joint ownership), d.b.a. Mount Rhyolite Ranch. SN 100,866. Pub. 10–24–61. Filed 7–14–60.

726,110. P-A-G ETC. AND DESIGN. Pfister Associated Growers, Inc. SN 102,507. Pub. 10–24–61. Filed 8–11–60.

726,111. MAGNAFLORA ROSES. Lakeland Nurseries Sales Corporation. SN 103,343. Pub. 10–24–61. Filed 8–24–60.

726,112. DEERELK BY FLYNNTAN AND DESIGN. John Flynn & Sons, Inc. SN 103,776. Pub. 10–24–61. Filed 9–1–60.

726,113. PLAQ-WOOD. Elbert A. Thompson, d.b.a. Thompson Air Plastics. SN 105,472. Pub. 10–24–61. Filed 9–29–60.

726,114. SAF-T-FOAM. International Foam Corporation. SN 115,148. Pub. 10–24–61. Filed 3–8–61.

726,115. BARDEN. J. M. Huber Corporation. SN 117,016. Pub. 10–24–61. Filed 4–3–61.

Class 2 — Receptades

726,116. AUTO-SERV. Kimberly-Clark Corporation. SN 116,135. Pub. 10–24–61. Filed 3–21–61.

726,117. TERAMORA. Max Klein, Inc. SN 117,380. Pub. 10–24–61. Filed 4–7–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

726,118. AIR CRUISER. Leeds Travelwear, Inc. SN 109,258. Pub. 10–24–61. Filed 11–29–60.

Class 4 — Abrasives and Polishing Materials

726,119. KITCH'NETTE. Turtle Wax, Inc. SN 115,643. Pub. 10–24–61. Filed 3–14–61.

Class 5 — Adhesives

726,120. GENERAL. General Tape Corporation. SN 103,449. Pub. 1–31–61. Filed 8–26–60.

726,121. ELEPHANT DESIGN. Tamms Industries Co. SN 104,563. Pub. 10–24–61. Filed 9–15–60.

Class 6 — Chemicals and Chemical Compositions

726,122. PAN-L-LIFE. Leon G. Rockwell, d.b.a. Rockwell Specialties Company. SN 96,737. Pub. 10–24–61. Filed 5–9–60.

726,123. HYEX. Safety Development Corp., by change of name from Foamex, Incorporated. SN 100,443. Pub. 10–24–61. Filed 7–7–60.

726,124. NEULIN. Cowles Chemical Company. SN 104,068. Pub. 10–24–61. Filed 9–8–60.

726,125. MERCK AND DESIGN. Merck & Co., Inc. SN 112,394. Pub. 10–24–61. Filed 1–24–61.

726,126. TIMPREG PAK. Chapman Chemical Company. SN 112,684. Pub. 10–24–61. Filed 1–30–61.

726,127. PORTRADOL. Eastman Kodak Company. SN 112,889. Pub. 10–24–61. Filed 2–1–61.

726,128. VISA-TRET AND DESIGN. Rubon Incorporated. SN 113,032. Pub. 10–24–61. Filed 2–3–61.

726,129. GLAMORENE. Jerclaydon, Inc. SN 117,967. Pub. 10–24–61. Filed 4–17–61.

726,130. ACTION. Colgate-Palmolive Company. SN 118,562. Pub. 10–24–61. Filed 4–25–61.

Class 7 — Cordage

726,131. NORCROSS. Norcross, Inc. SN 102,685. Pub. 10–24–61. Filed 8–15–60.

726,132. TEX-STRAP. Texlon Corporation. SN 115,393. Pub. 10–24–61. Filed 3–10–61.

726,133. PENN-LACING. Penn Associates, Inc. SN 117,040. Pub. 10–24–61. Filed 4–3–61.

726,134. PENN-JACQUARD. Penn Associates, Inc. SN 117,041. Pub. 10–24–61. Filed 4–3–61.

Class 8 — Smokers' Articles, Not Including Tobacco Products

726,135. COLLECTOR'S ITEMS. A. Stein & Company, Inc., by merger and change of name from A. Stein & Company. SN 101,651. Pub. 10–24–61. Filed 7–28–60.

726,136. SCI CERAMICS AND DESIGN. Sikeston Ceramics, Inc. SN 105,312. Pub. 10–24–61. Filed 9–27–60.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

726,137. NELSON. Gregory Industries, Inc. SN 105,974. Pub. 10–24–61. Filed 10–7–60.

726,138. THE GREEN HORNET. Zenith Corporation. SN 116,101. Pub. 10–24–61. Filed 3–20–61.

Class 10 — Fertilizers

726,139. WALK-ON-BARK. Sequoia Forest Industries, Inc., by change of name from Ivory Pine Company. SN 83,522. Pub. 10–24–61. Filed 10–19–59.

726,140. PETUNIA-LIZER. Meryl L. Stoddard. SN 114,147. Pub. 10–24–61. Filed 2–21–61.

Class 11—Inks and Inking Materials

726,141. FANCIFUL REPRESENTATION OF LETTER K. Kores Manufacturing Corporation. SN 92,990. Pub. 10–24–61. Filed 3–16–60.

Class 12—Construction Materials

726,142. ALLSPAN. Macomber, Incorporated. SN 84,324. Pub. 6–28–60. Filed 10–30–59.

726,143. NELSON. Gregory Industries, Inc. SN 105,977. Pub. 10–24–61. Filed 10–7–60.

726,144. VAUGHAN WALLS. Vaughan Interior Walls, Inc. SN 109,220. Pub. 10–24–61. Filed 11–28–60.

726,145. CHEMCERAMIC. Permalastic Products Company. SN 113,858. Pub. 10–24–61. Filed 2–16–61.

726,146. KAMFLEX. Keasbey & Mattison Company. SN 113,924. Pub. 10–24–61. Filed 2–17–61.

726,147. REDIFRAME. American Frame Company. SN 117,331. Pub. 10–24–61. Filed 4–7–61.

726,148. FLEXICAST. The Flexicore Co., Inc. SN 117,354. Pub. 10–14–61. Filed 4–7–61.

726,149. ETERNAFLEX. The Gibson-Homans Company. SN 117,357. Pub. 10–24–61. Filed 4–7–61.

726,150. ARGOSEAL. Industrial Corporation of America. SN 117,368. Pub. 10–24–61. Filed 4–7–61.

726,151. DUAMESH. Penn Metal Company, Inc. SN 117,390. Pub. 10–24–61. Filed 4–7–61.

726,152. MT. The Eagle-Picher Company. SN 117,467. Pub. 10–24–61. Filed 4–10–61.

726,153. T-DECK. Keasbey & Mattison Company. SN 117,503. Pub. 10–24–61. Filed 4–10–61.

726,154. TILT-MASTER. Air Master Corporation. SN 117,674. Pub. 10–24–61. Filed 4–12–61.

726,155. AVBOARD. Avco Corporation. SN 117,679. Pub. 10–24–61. Filed 4–12–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

726,156. TAPE O' SCREWS. Elco Tool and Screw Corporation. SN 75,617. Pub. 10–24–61. Filed 6–12–59.

726,157. THERMOTRONICS. Thermotronics Corporation. SN 102,958. Pub. 10–24–61. Filed 8–18–60.

726,158. ROYAL DRU. Koninklijke Fabrieken Diepenbrock & Reigers N.V. SN 109,077. Pub. 10–24–61. Filed 11–25–60.

726,159. PRESTFLEX. Prestole Corporation. SN 110,170. Pub. 10–24–61. Filed 12–13–60.

726,160. S. Illinois Tool Works, Inc., by merger from Illinois Tool Works. SN 112,149. Pub. 10–24–61. Filed 1–19–61.

726,161. RAPISTAN. The Rapids-Standard Company, Inc. SN 113,137. Pub. 10–24–61. Filed 2–6–61.

726,162. TIFCO. Roland W. Pinger, d.b.a. The Independent Fitting Co. SN 116,254. Pub. 10–24–61. Filed 3–22–61.

Class 14—Metals and Metal Castings and Forgings

726,163. HOMMEL AND DESIGN. The O. Hommel Company. SN 116,028. Pub. 10–24–61. Filed 3–20–61.

726,164. T1. United States Steel Corporation. SN 118,017. Pub. 10–24–61. Filed 4–17–61.

Class 15—Oils and Greases

726,165. AVIA AND DESIGN. Avia-Verband trustfreier Benzin- und Heizöl-Importeure der Schweiz. SN 93,262. COLLECTIVE MARK. Pub. 10–24–61. Filed 3–21–60.

726,166. SUPER SALE. The Somerset Refinery, Inc. SN 100,064. Pub. 10–24–61. Filed 6–30–60.

726,167. 7 C's. The Standard Oil Company. SN 104,402. Pub. 1–24–61. Filed 9–13–60.

Class 16—Protective and Decorative Coatings

726,168. TRIPLE-KOTE. Great Lakes Paint and Varnish Company. SN 113,208. Pub. 10–24–61. Filed 2–7–61.

726,169. BETA-CRYL. Rinshed-Mason Company. SN 115,846. Pub. 10–24–61. Filed 3–16–61.

726,170. PROXSEAL. Pyroxylin Products, Inc. SN 116,156. Pub. 10–24–61. Filed 3–21–61.

Class 18—Medicines and Pharmaceutical Preparations

726,171. TIMEDS. Medicraft Pharmacal Co., Inc. SN 71,499. Pub. 9–22–59. Filed 4–14–59.

726,172. NU-LIFE. Elder Bonds. SN 92,699. Pub. 10–24–61. Filed 3–14–60.

726,173. HARDCAP. Nutrilite Products, Inc. SN 101,697. Pub. 10–24–61. Filed 7–29–60.

726,174. SETROL. Baxter Laboratories, Inc. SN 102,297. Pub. 1–17–61. Filed 8–9–60.

726,175. DEXTROID. Starr Pharmacal Company. SN 103,421. Pub. 10–24–61. Filed 8–25–60.

726,176. RESPAX. Nicholas International Limited. SN 108,996. Pub. 10–24–61. Filed 11–23–60.

726,177. GRADES AND DESIGN. Charles A. Crete. SN 109,040. Pub. 10–24–61. Filed 11–25–60.

726,178. SEDAPERSANTIN. Dr. Karl Thomae GmbH. SN 110,182. Pub. 10–24–61. Filed 12–13–60.

726,179. SULSTACIN. Ortho Pharmaceutical Corporation. SN 114,515. Pub. 10–24–61. Filed 2–27–61.

726,180. NEOFERM. Merck & Co., Inc. SN 114,624. Pub. 10–24–61. Filed 2–28–61.

726,181. BLEVIDON. Charles E. Frosst & Co. SN 116,717. Pub. 10–24–61. Filed 3–29–61.

726,182. FLURO-METHANE. Gebauer Chemical Company. SN 116,814. Pub. 10–24–61. Filed 3–30–61.

726,183. BLOATEMUL. Nicholas International Limited. SN 116,904. Pub. 10–24–61. Filed 3–31–61.

726,184. ERYJET. Affiliated Laboratories Corporation. SN 117,426. Pub. 10–24–61. Filed 4–10–61.

726,185. REDODERLEIN. Testagar & Co. Inc. SN 118,114. Pub. 10–24–61. Filed 4–18–61.

726,186. ANIVITE. Albert G. Siegel, d.b.a. Davis-Young & Co. SN 119,567. Pub. 10–24–61. Filed 5–8–61.

726,187. MENSAVITE. The Vitarine Co., Inc. SN 119,727. Pub. 10–24–61. Filed 5–10–61.

726,188. LOGAMEL. Geigy Chemical Corporation. SN 119,733. Pub. 10–24–61. Filed 5–11–61.

726,189. LORA. Carter Products, Inc. SN 119,747. Pub. 10–24–61. Filed 5–11–61.

726,190. BULCOID. The Purdue Frederick Company. SN 119,793. Pub. 10–24–61. Filed 5–11–61.

726,191. EUTHYMIN. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories. SN 120,191. Pub. 10–24–61. Filed 5–17–61.

726,192. ATENSEN. Irwin, Neisler & Co. SN 120,639. Pub. 10–24–61. Filed 5–23–61.

Class 19—Vehicles

726,193. ROBIN HOOD. Maremont Corporation, by change of name from Maremont Automotive Products, Inc. SN 104,286. Pub. 3–28–61. Filed 9–12–60.

726,194. POWER-BLOX. John W. Penn, d.b.a. Penn Warehouse. SN 107,049. Pub. 10–24–61. Filed 10–24–60.

726,195. ALASKAN AIRE. Sutone Corporation. SN 116,594. Pub. 10–24–61. Filed 3–27–61.

726,196. AUTUMN AIRE. Sutone Corporation. SN 116,595. Pub. 10–24–61. Filed 3–27–61.

Class 20—Linoleum and Oiled Cloth

726,197. UTILICORK. The Dodge Cork Company, Incorporated. SN 117,178. Pub. 10–24–61. Filed 4–5–61.

Class 21—Electrical Apparatus, Machines, and Supplies

726,198. "SPACE-AGE STEREO." Packard-Bell Electronics Corporation. SN 91,429. Pub. 10–24–61. Filed 2–23–60.

726,199. PERSONAL PAGE. Richard J. Hanak. SN 94,987. Pub. 10–24–61. Filed 4–13–60.

726,200. PALTAP. The Thomas & Betts Co. SN 101,904. Pub. 10–24–61. Filed 8–2–60.

726,201. M. Motorola, Inc. SN 105,011. Pub. 10–24–61. Filed 9–22–60.

726,202. WARNER ELECTRIC. Warner Electric Brake & Clutch Company. SN 105,397. Pub. 10–24–61. Filed 9–28–60.

726,203. NELSON. Gregory Industries, Inc. SN 105,975. Pub. 10–24–61. Filed 10–7–60.

726,204. WARNERMATIC. Warner Electric Brake & Clutch Company. SN 106,367. Pub. 10–24–61. Filed 10–13–60.

726,205. DAYCOA. Don R. Gealy, d.b.a. Daycoa Inc. SN 109,576. Pub. 10–24–61. Filed 12–5–60.

Class 22—Games, Toys, and Sporting Goods

726,206. POOL ROOM AND DESIGN. The Pool Room, Inc. SN 78,817. Pub. 10–24–61. Filed 7–31–59.

726,207. ORANGE BLOSSOM. Mattel, Inc. SN 106,514. Pub. 10–24–61. Filed 10–17–60.

726,208. SINGING IN THE SHOWER. Mattel, Inc. SN 106,515. Pub. 10–24–61. Filed 10–17–60.

726,209. OPEN ROAD. Mattel, Inc. SN 106,618. Pub. 10–24–61. Filed 10–18–60.

726,210. FIGHTING LADY. Remco Industries, Inc. SN 112,075. Pub. 10–24–61. Filed 1–18–61.

726,211. TUMBLE BUM. Remco Industries, Inc. SN 112,077. Pub. 10–24–61. Filed 1–18–61.

726,212. SHMO. Remco Industries, Inc. SN 112,402. Pub. 10–24–61. Filed 1–24–61.

726,213. M. I. HUMMEL. W. Goebel Porzellanfabrik. SN 114,210. Pub. 10–24–61. Filed 2–23–61.

726,214. BINGO. Douglas W. English, d.b.a. Doug. English Lure Co. SN 115,458. Pub. 10–24–61. Filed 3–13–61.

726,215. KITTEN. Alexander Doll Company, Inc., d.b.a. Madame Alexander. SN 115,569. Pub. 10–24–61. Filed 3–14–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

726,216. YANMAR AND DESIGN. Yanmar Diesel Engine Co., Ltd. SN 77,238. Pub. 10–24–61. Filed 7–7–59.

726,217. FORMULITE. Gits Bros. Mfg. Co. SN 98,651. Pub. 10–24–61. Filed 6–8–60.

726,218. MARK AND DESIGN. Mark Auto Company, Inc. SN 100,378. Pub. 10–24–61. Filed 7–6–60.

726,219. BUKAMA. Bukama G.m.b.H. SN 101,743. Pub. 10–24–61. Filed 8–1–60.

726,220. CENTER SINK. Norfolk Products Corporation. SN 104,302. Pub. 10–24–61. Filed 9–12–60.

726,221. JH AND DESIGN. Johnson Hydraulic Mfg. Co. SN 104,731. Pub. 10–24–61. Filed 9–19–60.

726,222. SPEEDFAST. Speedfast Corporation. SN 104,766. Pub. 10–24–61. Filed 9–19–60.

726,223. GRASSO. Grasso's Koninklijke Machinefabrieken N.V. SN 105,887. Pub. 10–24–61. Filed 10–6–60.

726,224. WICARIT. N.V. Wallramit Hardmetaal Maatschappij. SN 106,295. Pub. 10–24–61. Filed 10–12–60.

726,225. SEQUA-MATIC. FMC Corporation, by change of name from Food Machinery and Chemical Corporation. SN 106,591. Pub. 10–24–61. Filed 10–18–60.

726,226. COFFEE CUB. Rudd-Melikian, Inc. SN 108,394. Pub. 10–24–61. Filed 11–14–60.

726,227. HARTIG EXTRUDERS AND DESIGN. Midland-Ross Corporation. SN 108,800. Pub. 10–24–61. Filed 11–21–60.

726,228. KREBS CYCLONE. Equipment Engineers Inc. SN 109,307. Pub. 10–24–61. Filed 11–30–60.

726,229. ARONSON GEARED ELEVATION POSITIONERS AND DESIGN. Aronson Machine Company, Inc. SN 114,166. Pub. 10–24–61. Filed 2–23–61.

726,230. CESCO. Cochran Equipment & Service Company. SN 114,437. Pub. 10–24–61. Filed 2–27–61.

726,231. CARPET-TENDER. Modern Spacemaster Products, Inc. SN 114,627. Pub. 10–24–61. Filed 2–28–61.

726,232. SPA TONG. Nixdorff-Krein Manufacturing Company. SN 115,509. Pub. 10–24–61. Filed 3–13–61.

726,233. MOLE. M. Mole & Son Limited. SN 117,797. Pub. 10–24–61. Filed 4–13–61.

Class 24—Laundry Appliances and Machines

726,234. WINDSOR. The Proctor-Silex Corporation. SN 98,141. Pub. 10–24–61. Filed 5–31–60.

Class 25—Locks and Safes

726,235. VARIMATIC. J. Austin Smith & Son. SN 115,389. Pub. 10–24–61. Filed 3–10–61.

Class 26—Measuring and Scientific Appliances

726,236. AUTOGRAF. F. L. Moseley Co. SN 86,311. Pub. 5–16–61. Filed 11–30–59.

726,237. AUTOGRAF AND DESIGN. F. L. Moseley Co. SN 86,312. Pub. 5–16–61. Filed 11–30–59.

726,238. IMMUNOCRIT. Hyland Laboratories. SN 116,527. Pub. 10–24–61. Filed 3–27–61.

726,239. PHOTOVERTER. Photochron Instruments, Inc. SN 119,639. Pub. 10–24–61. Filed 5–9–61.

Class 27—Horological Instruments

726,240. MIDO AQUANAUT. Société Anonyme Mido. SN 107,066. Pub. 10–24–61. Filed 10–24–60.

Class 28 — Jewelry and Precious-Metal Ware

726,241. STAR-BLUE. Perkel & Klein. SN 107,141. Pub. 10–24–61. Filed 10–25–60.

726,242. SARAH COV. Sarah Coventry, Inc. SN 114,264. Pub. 10–24–61. Filed 2–23–61.

726,243. MISS HATTIE. Hattie Carnegie, Inc. SN 115,663. Pub. 10–24–61. Filed 3–15–61.

Class 30 — Crockery, Earthenware, and Porcelain

726,244. FAIRWOOD ETC. AND DESIGN. Porzellanfabrik Schönwald. SN 78,572. Pub. 10–24–61. Filed 7–28–59.

726,245. QUEEN ANNE. Stetson China Company. SN 110,487. Pub. 10–24–61. Filed 12–19–60.

726,246. LINCONITE. Stetson China Company. SN 110,488. Pub. 10–24–61. Filed 12–19–60.

726,247. COLONIAL LACE. Stetson China Company. SN 110,489. Pub. 10–24–61. Filed 12–19–60.

726,248. SILHOUETTE. Onondaga Pottery Company. SN 110,899. Pub. 10–24–61. Filed 12–27–60.

Class 31 — Filters and Refrigerators

726,249. IONETTE. General Ionics Corporation. SN 101,772. Pub. 10–24–61. Filed 8–1–60.

726,250. ALL-O-MATIC AND DESIGN. Ice All-O-Matic Manufacturing, Incorporated. SN 104,389. Pub. 10–24–61. Filed 9–13–60.

726,251. GRITROL. The Bastian-Blessing Company. SN 112,019. Pub. 10–24–61. Filed 1–18–61.

726,252. AMER KLEEN. American Air Filter Company, Inc. SN 116,284. Pub. 10–24–61. Filed 3–23–61.

Class 32 — Furniture and Upholstery

726,253. 1776 COLLECTION AND DESIGN. Johnson-Carper Furniture Company, Inc. SN 101,554. Pub. 10–24–61. Filed 7–27–60.

726,254. CASUALITE. Novo Industrial Corporation. SN 105,913. Pub. 10–24–61. Filed 10–6–60.

726,255. HC AND PANDA DESIGN. Home Comfort Products Co. SN 114,223. Pub. 10–24–61. Filed 2–23–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

726,256. ROTAIR. Basic Products Corporation. SN 80,489. Pub. 10–24–61. Filed 8–31–59.

726,257. AEROMATIC. Octagon Ventilator Co. SN 81,312. Pub. 10–24–61. Filed 9–14–59.

726,258. BECKON-LYTE. Baruda International Limited. SN 110,136. Pub. 10–24–61. Filed 12–13–60.

726,259. BECKON-BEAM. Baruda International Limited. SN 110,301. Pub. 10–24–61. Filed 12–16–60.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

726,260. LYPSOID. Tradall S.A. SN 103,423. Pub. 10–24–61. Filed 8–25–60.

726,261. VELVETRED. W. J. Voit Rubber Corp. SN 104,965. Pub. 2–21–61. Filed 9–21–60.

726,262. LEWSCO. Lewis Supply Co. Inc. SN 106,266. Pub. 10–24–61. Filed 10–12–60.

Class 36 — Musical Instruments and Supplies

726,263. SACCONI. Rembert Wurlitzer. SN 106,562. Pub. 10–24–61. Filed 10–17–60.

Class 37 — Paper and Stationery

726,264. WHITE & WYCKOFF AND DESIGN. Western Tablet & Stationery Corporation, assignee of White and Wyckoff Manufacturing Company. SN 85,701. Pub. 10–24–61. Filed 11–19–59.

726,265. STAMP-TELLER. Morgan Development Laboratories, Inc. SN 99,867. Pub. 10–24–61. Filed 6–28–60.

726,266. DITTO AND PANEL BLOCK DESIGN. Ditto, Incorporated. SN 101,379. Pub. 10–24–61. Filed 7–25–60.

726,267. PKG. Champion Papers Inc., by change of name from The Champion Paper and Fibre Company. SN 103,655. Pub. 10–24–61. Filed 8–30–60.

726,268. PERFAX. Perry-Sherwood Corporation. SN 104,475. Pub. 10–24–61. Filed 9–14–60.

726,269. GEMTONE. Premold Corporation. SN 106,221. Pub. 10–24–61. Filed 10–11–60.

726,270. WHITE PROTECTION. Bergstrom Paper Company. SN 106,469. Pub. 10–24–61. Filed 10–17–60.

726,271. SPEEDRITE. Speedrite Products, Inc. SN 109,639. Pub. 10–24–61. Filed 12–5–60.

726,272. TO AND FRO. Northern States Envelope Co., Inc. SN 110,225. Pub. 10–24–61. Filed 12–14–60.

726,273. BOXER. Canadian Wallpaper Manufacturers Limited. SN 115,777. Pub. 10–24–61. Filed 3–16–61.

726,274. KIMFORM. Kimberly-Clark Corporation. SN 110,525. Pub. 10–24–61. Filed 5–8–61.

Class 38 — Prints and Publications

726,275. OFFICIAL MOTOR FREIGHT TARIFF DIRECTORY. C. B. Guthrie Tariff Bureau, Inc. SN 82,510. Pub. 10–24–61. Filed 10–1–59.

726,276. OFFICIAL TARIFF DIRECTORY. C. B. Guthrie Tariff Bureau, Inc. SN 82,511. Pub. 10–24–61. Filed 10–1–59.

726,277. THORN McBRIDE. The Copley Press, Inc. SN 95,692. Pub. 10–24–61. Filed 4–25–60.

726,278. KEEPING TAB. Statistical Tabulating Corporation. SN 103,979. Pub. 10–24–61. Filed 9–6–60.

726,279. DIRECTORY OF THE NONMETALLIC MINERALS INDUSTRIES. Pit and Quarry Publications, Inc. SN 104,102. Pub. 10–24–61. Filed 9–8–60.

726,280. CONCRETE INDUSTRIES YEARBOOK. Pit and Quarry Publications, Inc. SN 104,103. Pub. 10–24–61. Filed 9–8–60.

726,281. TOURGIDE. Gulf Oil Corporation. SN 107,445. Pub. 10–24–61. Filed 10–31–60.

726,282. CANCIONERO PICOT. Picot Laboratories, Inc. SN 107,695. Pub. 10–24–61. Filed 11–2–60.

726,283. EYE AND FILM REEL DESIGN. CBS Films, Inc. SN 109,164. Pub. 10–24–61. Filed 11–28–60.

726,284. CARNIVAL. Carnival Films Inc. SN 113,489. Pub. 10–24–61. Filed 2–13–61.

726,285. STAMP WORLD. Stamp World Inc. SN 114,270. Pub. 10–24–61. Filed 2–23–61.

726,286. STEPS AND DESIGN. Augsburg Publishing House. SN 114,336. Pub. 10–24–61. Filed 2–13–61.

726,287. HAND IN HAND. Augsburg Publishing House. SN 114,337. Pub. 10–24–61. Filed 2–13–61.

726,288. TEEN WAYS AND DESIGN. Augsburg Publishing House. SN 114,338. Pub. 10–24–61. Filed 2–13–61.

726,289. CATTLE CHATTER. Humboldt Livestock Auction, Inc. SN 117,277. Pub. 10–24–61. Filed 4–6–61.

726,290. ANSCOCHROME. General Aniline & Film Corporation. SN 117,479. Pub. 10–24–61. Filed 4–10–61.

726,291. THE NATIONAL BOWHUNTER. Black Arrow Publishers, Inc. SN 118,217. Pub. 10–24–61. Filed 4–20–61.

Class 39 — Clothing

726,292. WHITE WINGS. Craddock-Terry Shoe Corporation. SN 82,330. Pub. 1–3–61. Filed 9–29–59.

726,293. PANTASIA. Derby Sportswear, Inc. SN 87,645. Pub. 7–26–60. Filed 12–21–59.

726,294. FERRARI. International Shoe Company. SN 102,847. Pub. 10–24–61. Filed 8–17–60.

726,295. LEON UNATIN ORIGINAL. Leon Unatin and Muriel Unatin (joint owners). SN 109,215. Pub. 10–24–61. Filed S.R. 11–28–60; Am. P.R. 8–7–61.

726,296. SEMI-JAMS. P. H. Hanes Knitting Company. SN 110,207. Pub. 10–24–61. Filed 12–14–60.

726,297. STRYDEFREE-CURVED-TO FIT. Dutchess Underwear Corporation. SN 110,827. Pub. 10–24–61. Filed 12–27–60.

726,298. GOOFY GOB. Simon Simple Originals, Inc. SN 111,616. Pub. 10–24–61. Filed 1–10–61.

726,299. VANALUX. Phillips-Van Heusen Corporation. SN 115,722. Pub. 10–24–61. Filed 3–15–61.

726,300. NATURE GIRL. Silvertone Undergarment Co., Inc. SN 115,733. Pub. 10–24–61. Filed 3–15–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

726,301. TRAVACEL. Celanese Corporation of America. SN 104,144. Pub. 10–24–61. Filed 9–9–60.

726,302. STAFLEX. Staflex Company Limited. SN 105,932. Pub. 10–24–61. Filed 10–6–60.

726,303. PETITUFT. Minette Mills, Incorporated. SN 114,242. Pub. 10–24–61. Filed 2–23–61.

Class 44 — Dental, Medical, and Surgical Appliances

726,304. SPRUCE. Abar Manufacturing Company. SN 90,134. Pub. 10–24–61. Filed 2–2–60.

726,305. ATCO AND DESIGN. Atco Surgical Supports, Inc., by change of name from The Akron Truss Company, Inc. SN 106,303. Pub. 10–24–61. Filed 10–13–60.

726,306. SLENDERLINE. Kimberly-Clark Corporation. SN 106,330. Pub. 10–24–61. Filed 10–13–60.

726,307. ELECTRO-POLL. John E. Fieser. SN 106,892. Pub. 10–24–61. Filed 10–21–60.

726,308. "EPO-TEX." Nu-Dent Porcelain Studio, Inc. SN 114,737. Pub. 10–24–61. Filed 2–24–61.

726,309. REG-U-TEMP. Harlan M. Buck, Inc. SN 115,298. Pub. 10–24–61. Filed 3–10–61.

726,310. TRICK. Cleo S. Chabot. SN 117,688. Pub. 10–24–61. Filed 4–12–61.

Class 45 — Soft Drinks and Carbonated Waters

726,311. SACRAMENTO SURVIVAL. Bercut-Richards Packing Co. SN 89,998. Pub. 10–24–61. Filed 2–1–60.

726,312. TASTY MATES AND DESIGN. Tasty Mates Company. SN 106,757. Pub. 10–24–61. Filed 10–19–60.

Class 46 — Foods and Ingredients of Foods

726,313. GRADE A. Tri Associates, Inc. SN 77,336. Pub. 10–24–61. Filed 7–8–59.

726,314. OMO. Oshita, Inc. SN 83,642. Pub. 3–29–60. Filed 10–20–59.

726,315. "A BIRD OF A TREAT!" AND DESIGN. Childers' Foods, Inc. SN 85,209. Pub. 10–24–61. Filed 11–13–59.

726,316. FANTASY. Fantasy Flavors, Inc. SN 94,754. Pub. 10–24–61. Filed 4–11–60.

726,317. SEA-PRO. Beacon Specialty Co., Inc. SN 97,540. Pub. 1–10–61. Filed 5–20–60.

726,318. LITTLE LYNN. Regal Stores, Inc. SN 99,242. Pub. 10–24–61. Filed 6–17–60.

726,319. RANCH STYLE ETC. AND DESIGN. Waples-Platter Company, d.b.a. Great Western Foods Company. SN 102,441. Pub. 10–24–61. Filed 8–10–60.

726,320. CHIFFON. King Candy Company. SN 103,859. Pub. 10–24–61. Filed 9–2–60.

726,321. MARTHA WHITE ETC. AND DESIGN. Martha White Mills, Inc. SN 108,728. Pub. 10–24–61. Filed 11–18–60.

726,322. GOLDEN-O. Tony M. Harris, d.b.a. The Winery and as Golden-O-Company. SN 108,978. Pub. 10–24–61. Filed 11–25–60.

726,323. JAM-B-ERRY. General Preserve Company, Inc. SN 111,093. Pub. 10–24–61. Filed 12–30–60.

726,324. BRISK. Foremost Dairies, Inc., d.b.a. Western Condensing Company. SN 111,792. Pub. 10–24–61. Filed 1–13–61.

726,325. PO-EM. Top-Scor Products, Inc. SN 112,174. Pub. 10–24–61. Filed 1–19–61.

726,326. APPLE RIDGE. Jack Brown Produce, Inc. SN 112,437. Pub. 10–24–61. Filed 1–25–61.

726,327. C SHARP. Reginald G. Hanson, d.b.a. Tested Products Co. SN 113,521. Pub. 10–24–61. Filed 2–13–61.

726,328. IGLO. Iglo N.V. SN 114,001. Pub. 10–24–61. Filed 2–20–61.

726,329. SHRAB. Neptunalia Seafood Company. SN 114,036. Pub. 10–24–61. Filed 2–20–61.

726,330. EL MITCO. Eldredge Mitchell, d.b.a. The Mitchell Co. SN 116,330. Pub. 10–24–61. Filed 3–23–61.

726,331. TIGER'S MILK. Plus Products. SN 119,888. Pub. 10–24–61. Filed 5–12–61.

726,332. WIND-MILL ETC. AND DESIGN. Cacao- en Chocoladefabrieken Bensdorp N.V. SN 120,175. Pub. 10–24–61. Filed 5–17–61.

726,333. GOLDEN SEAL. The Kansas Milling Company. SN 120,315. Pub. 10–24–61. Filed 5–18–61.

Class 47 — Wines

726,334. BALI HAI. United Vintners, Inc., d.b.a. Italian Swiss Colony. SN 112,801. Pub. 10–24–61. Filed 1–30–61.

Class 49 — Distilled Alcoholic Liquors

726,335. PIKESVILLE ETC. AND DESIGN. Vincent Flaccomio and Joseph V. Flaccomio. SN 93,782. Pub. 10–24–61. Filed 3–28–60.

726,336. CAPTAIN'S CHAIR. Mr. Boston Distiller Inc. SN 118,896. Pub. 10–24–61. Filed 4–28–61.

726,337. CORONADO AND DESIGN. George Zaninovich, Inc., d.b.a. Coronado Distillery. SN 119,163. Pub. 10–24–61. Filed 5–2–61.

Class 51 — Cosmetics and Toilet Preparations

726,338. HEADMAN. Chesebrough-Pond's Inc. SN 115,438. Pub. 10–24–61. Filed 3–13–61.

726,339. BINAFIX. Ciba Limited. SN 115,893. Pub. 10–24–61. Filed 3–17–61.

726,340. INECTO. Sales Affiliates, Inc. SN 116,347. Pub. 10–24–61. Filed 3–23–61.

Class 52 — Detergents and Soaps

726,341. BOLARIS. Napoleon A. Barbeau, d.b.a. Barbeau Supply Co. SN 105,133. Pub. 10–24–61. Filed 9–26–60.

726,342. CAPTURED BODY. The Procter & Gamble Company. SN 106,634. Pub. 10–24–61. Filed 10–18–60.

726,343. BOOT. Baxter Laboratories, Inc. SN 115,657. Pub. 10–24–61. Filed 3–15–61.

726,344. YOSEMITE. Yosemite Chemical Co., d.b.a. Yosemite Chemical Company. SN 115,751. Pub. 10–24–61. Filed 3–15–61.

726,345. CALCLEAN. Hagan Chemicals & Controls, Inc. SN 115,804. Pub. 10–24–61. Filed 3–16–61.

Service Marks

Class 100 — Miscellaneous

726,346. BCI. Armour and Company (Delaware corporation), assignee of Armour and Company (Illinois corporation). SN 98,842. Pub. 10–24–61. Filed 6–13–60.

726,347. FANCIFUL DESIGN OF THE LETTERS ARC. Atlantic Research Corporation. SN 124,323. Pub. 10–24–61. Filed 7–20–61.

Class 101 — Advertising and Business

726,348. GALLERY 3. Gallery Three Design Associates. SN 109,486. Pub. 10–24–61. Filed 12–2–60.

Class 102 — Insurance and Financial

726,349. PEOPLES LIFE INSURANCE PROTECTS THE ENTIRE FAMILY AND DESIGN. Peoples Life Insurance Company. SN 113,442. Pub. 10–24–61. Filed 2–10–61.

Class 103 — Construction and Repair

726,350. MIDAS MUFFLER SHOPS AND DESIGN. Midas, Inc. SN 87,260. Pub. 10–24–61. Filed 12–14–59.

726,351. LOMBARDI AND DESIGN. Lombardi Engineering Company. SN 100,917. Pub. 10–24–61. Filed 7–15–60.

Class 105 — Transportation and Storage

726,352. CONSOLIDATED FREIGHTWAYS INTERNATIONAL AND DESIGN. Foster Freight Lines, Inc. SN 105,734. Pub. 10–24–61. Filed 10–4–60.

726,353. PANORAMA. Sanders World Travel, Inc. SN 113,373. Pub. 10–24–61. Filed 2–9–61.

726,354. SILVER FALCON. Eastern Air Lines, Inc. SN 114,903. Pub. 10–24–61. Filed 1–25–61.

Class 106 — Material Treatment

726,355. ARRIS. The Goldsmiths' Company of Canada Limited. SN 97,482. Pub. 10–24–61. Filed 5–19–60.

726,356. TERRESTROL. Allied Biological Control Corporation. SN 110,297. Pub. 10–24–61. Filed 12–16–60.

Collective Membership Mark

Class 200

726,357. AMERICAN MUSIC GUILD AND DESIGN. American Music Guild, Inc. SN 116,956. Pub. 10–24–61. Filed 4–3–61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptades

726,358. Garner & Co., Inc., New York, N.Y. SN 95,070. Filed P.R. 4–14–60; Am. S.R. 2–7–61.

5-IN-1

For Canister Sets for Food Products.
First use Jan. 3, 1960.

Class 4 — Abrasives and Polishing Materials

726,359. Mirror Bright Polish Co., Pasadena, Calif. SN 95,611. Filed P.R. 4–22–60; Am. S.R. 10–16–61.

WASH 'N' GLAZE

For Polishes, Glazes and Finish Preservers and Sealers for Use on Finished Surfaces, Including Those of Automobiles, for Cleaning, Polishing, Glazing and Preserving the Finish.
First use Mar. 3, 1960.

Class 6 — Chemicals and Chemical Compositions

726,360. National Lead Company, New York, N.Y. SN 111,205. Filed 1–3–61.

SHALE BAN

For Drilling Mud Conversion and Maintenance Compound.
First use Dec. 7, 1956.

Class 12 — Construction Materials

726,361. G. Antolini and Son, Santa Barbara, Calif. SN 89,117. Filed P.R. 1–18–60; Am. S.R. 11–13–61.

Las Cruces Stone

The Spanish words "Las Cruces" means "the crosses."
For Quarried Building Stone.
First use June 15, 1959.

726,362. Brooks-Scanlon, Inc., Bend, Oreg. SN 91,059. Filed P.R. 2–17–60; Am. S.R. 10–12–61.

Brooks-Scanlon Pioneer

For Pine Paneling.
First use Jan. 13, 1960.

726,363. Brooks-Scanlon, Inc., Bend, Oreg. SN 91,060. Filed P.R. 2–17–60; Am. S.R. 10–12–61.

Brooks-Scanlon Old Colony

For Pine Paneling.
First use Jan. 13, 1960.

726,364. S. Sharpe Stanfield, d.b.a. S. Sharpe Stanfield & Associates, New Orleans, La. SN 96,632. Filed P.R. 5–6–60; Am. S.R. 9–18–61.

CHURCH ARTS

For Prefabricated Churches and Parts Therefor.
First use Sept. 15, 1958.

726,365. Alside, Inc., Akron, Ohio. SN 102,817. Filed P.R. 8–17–60; Am. S.R. 9–22–61.

Builder's Aluminum Siding

For Aluminum Siding.
First use July 21, 1960.

726,366. The Ruberoid Co., New York, N.Y. SN 103,049. Filed P.R. 8–19–60; Am. S.R. 10–18–61.

TWIN-TABS

For Asphalt Shingles.
First use Aug. 2, 1960.

726,367. The American Welding & Manufacturing Company, Warren, Ohio. SN 109,289. Filed P.R. 11–30–60; Am. S.R. 10–3–61.

STURDI-DOOR

For Steel Doors.
First use July 15, 1960.

Class 14 — Metals and Metal Castings and Forgings

726,368. Hydrometals, Inc., Chicago, Ill. SN 77,670. Filed P.R. 7–14–59; Am. S.R. 11–20–61.

METAL

The word "Metal" is claimed only when displayed in the distinctive manner or fashion as shown.
For Alloy of Zinc, Copper and Titanium, in Sheet, Strip, Bar, Extrusion and Wire Forms.
First use June 10, 1959.

726,369. M. Swift & Sons, Inc., Hartford, Conn. SN 104,958. Filed P.R. 9–21–60; Am. S.R. 10–10–61.

GLITTER FOIL

Applicant disclaims the word "Foil" apart from the mark as shown.
For Metal and Metal Appearing Foil in Roll Form.
First use Aug. 5, 1960.

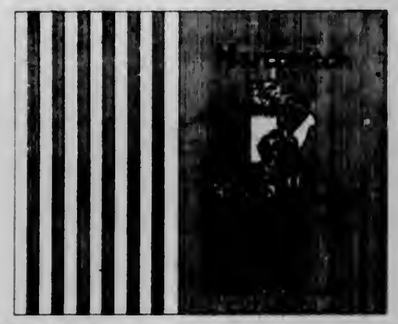
Class 17 — Tobacco Products

726,370. Rembrandt Tobacco Corporation (Overseas) Limited, Stellenbosch, Cape Province, Union of South Africa. SN 119,421. Filed P.R. 5–5–61; Am. S.R. 10–24–61.



Owner of South African Reg. No. 59,800, dated Mar. 17, 1959; and U.S. Reg. Nos. 385,374, 691,068, and others.
For Cigarettes.

726,371. The United Kingdom Tobacco Company, Limited, d.b.a. Markovitch & Co., London, England. SN 121,774. Filed 6-9-61.



The drawing is lined for red, and the lettering is white. Owner of U.S. Reg. No. 196,010.
For Cigarettes.
First use Oct. 1, 1954; in commerce Apr. 26, 1960.

Class 19—Vehicles

726,372. Stant Manufacturing Company, Inc., Connersville, Ind. SN 99,668. Filed P.R. 6-24-60; Am. S.R. 10-20-61.

LEV·R·VENT

For Safety Pressure Caps for Automobile Radiators.
First use June 8, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

726,373. International Resistance Company, Philadelphia, Pa. SN 97,662. Filed P.R. 5-23-60; Am. S.R. 10-23-61.

MU CIRCUIT

For Miniature Electronic Circuit Assemblies.
First use April 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

726,374. Firth Brown Tools Limited of Speedicut Works, Sheffield, England. SN 65,655. Filed P.R. 1-12-59; Am. S.R. 11-6-61.

SPEEDICUT

Owner of British Reg. No. B.403,227/59,178, dated Apr. 20, 1920.
For Segmental Cutting Saws; High Speed Twist Drills for Use in Metal Working Machines.

726,375. Kershaw Manufacturing Company, Inc., Montgomery, Ala. SN 70,906. Filed P.R. 4-6-59; Am. S.R. 11-9-61.

MULTIPLE TAMPER

For On-Track, Vehicle Mounted Apparatus for Packing Ballast Beneath the Crossties of a Railroad Track.
First use Mar. 16, 1959.

Class 26—Measuring and Scientific Appliances

726,376. Yardsticks, Inc., Oklahoma City, Okla. SN 80,476. Filed P.R. 8-28-59; Am. S.R. 10-20-61.

SAVINGS BY THE YARD

For Combination Measuring and Coin Savings Device.
First use Feb. 2, 1959.

726,377. Charles H. Fischberg, d.b.a. Charles H. Fischberg & Co., New York, N.Y. SN 82,964. Filed P.R. 10-9-59; Am. S.R. 5-15-61.

BEDFORD

For Cameras, Film.
First use May 15, 1959.

Class 33—Glassware

726,378. Ross Products, Inc., New York, N.Y. SN 120,574. Filed P.R. 5-22-61; Am. S.R. 8-31-61.

ROSSINI

For Glassware, Such as Stemware, Houseware, Giftware, and Novelties.
First use Feb. 1, 1959.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

726,379. Shuford Mills, Inc., Hickory, N.C. SN 112,079. Filed P.R. 1-18-61; Am. S.R. 10-24-61.

SOAK-N-SPRAY

For Garden Hose.
First use June 8, 1960.

Class 38—Prints and Publications

726,380. Vance Publishing Corporation, Chicago, Ill. SN 75,951. Filed P.R. 6-17-59; Am. S.R. 10-23-61.

dsc

For Magazine.
First use May 11, 1959.

Class 39—Clothing

726,381. Gordon-Ford Inc., Conshohocken, Pa. SN 97,203. Filed P.R. 5-16-60; Am. S.R. 10-25-61.

NORFORD

For Men's and Women's Suits, Coats, Jackets, Trousers, Walk-Shorts, and Boys' Clothes Comprising Boys' Suits, Boys' Coats, Boys' Trousers, and Boys' Walk-Shorts.
First use Aug. 1, 1957.

Class 44—Dental, Medical, and Surgical Appliances

726,382. Lif-O-Gen, Inc., Norristown, Pa. SN 105,904. Filed P.R. 10-6-60; Am. S.R. 8-7-61.

"LIFE IN THE PALM OF YOUR HAND"

For Emergency Oxygen Containers and Mouth-to-Mouth Breathing Equipment and Oxygen Masks.
First use Aug. 18, 1958.

Class 49—Distilled Alcoholic Liquors

726,383. Goddard's Ltd., Charlotte Amalie, Virgin Islands. SN 112,452. Filed P.R. 1-25-61; Am. S.R. 11-1-61.

OLD ST. THOMAS

For Rum.
First use June 10, 1960.

Class 51—Cosmetics and Toilet Preparations

726,384. Roux Laboratories, Inc., New York, N.Y. SN 102,793. Filed P.R. 8-16-60; Am. S.R. 11-1-61.

CHROMATIQUE

The translation of the word "Chromatique" is "chromatic."
For Hair Coloring Preparation in the Nature of a Rinse.
First use Aug. 9, 1960.

TRADEMARK REGISTRATIONS RENEWED

20,952. FRICTIONLESS AND DESIGN. Cl. 14. 4-5-1892.
146,808. REVOREE. Cl. 42. 9-20-21.
146,962. PANIPLUS. Cl. 46. 9-27-21.
148,086. INDIA. Cl. 5. 11-8-21.
148,166. SOCIETY. Cl. 39. 11-8-21.
148,897. EN TOUR. Cl. 42. 11-29-21.
149,733. JAY BEE AND DESIGN. Cl. 23. 12-20-21.
150,164. MARBLE RING. Cl. 46. 12-27-21.
150,290. INTESTOPAN. Cl. 6. 1-3-22.
150,700. "ACME" FISHING TOOL CO. Cl. 23. 1-10-22.
151,132. FULLER AND DESIGN. Cl. 29. 1-24-22.
151,430. BETHLEHEM. Cl. 14. 2-7-22.
152,002. "I LULL THE CITY TO SLEEP." Cl. 42. 2-14-22.
152,854. RELIANCE. Cl. 45. 3-7-22.
152,910. EMPIRE. Cl. 46. 3-7-22.
153,290. RAYCO. Cl. 35. 3-14-22.
153,647. BATEEK. Cl. 51. 3-28-22.
153,701. DOWCO. Cl. 6. 3-28-22.
153,972. UNION BAEROLINA AND DESIGN. Cl. 31. 4-4-22.
154,378. RU-BER-OID. Cl. 16. 4-11-22.
154,712. WICKHAM AND DESIGN. Cl. 39. 4-18-22.
388,926. LAKE-LOOM. Cl. 39. 7-15-41.
389,416. SPECTIFIER. Cl. 26. 8-5-41.
390,132. PIMLICO AND DESIGN. Cl. 42. 9-9-41.
390,586. AIRLANES. Cl. 38. 9-30-41.
390,663. CELAWRAP. Cl. 37. 9-30-41.
390,915. REX FIFTH AVENUE. Cl. 2. 10-14-41.
391,489. FOAMTRED. Cl. 39. 11-11-41.
391,522. HIGHWAY. Cl. 35. 11-11-41.
391,529. BONOIL AND DESIGN. Cl. 46. 11-11-41.
391,658. GOLDEN-V. Cl. 46. 11-18-41.
391,964. DESIGN CHINESE CHARACTERS. Cl. 51. 12-2-41.
391,989. FOODCRAFT. Cl. 45. 12-2-41.
391,993. TWECOTAN. Cl. 6. 12-2-41.
391,998. ORALINE. Cl. 51. 12-2-41.
392,005. SOLCAPA. Cl. 16. 12-2-41.
392,415. SPAN. Cl. 6. 12-23-41.
392,532. SUPER-X. Cl. 4. 12-30-41.
392,589. SEDULON. Cl. 18. 1-6-42.
392,590. SYNKAVITE. Cl. 18. 1-6-42.
392,597. SHAMMY. Cl. 37. 1-6-42.
392,639. WHITE PRANCER AND DESIGN. Cl. 46. 1-6-42.
392,863. JOYCE. Cl. 39. 1-13-42.
392,956. ONE 1 MOR. Cl. 45. 1-20-42.
393,117. SYNKAYVITE. Cl. 18. 1-27-42.
393,144. TRIM-FLO. Cl. 39. 1-27-42.
393,645. WELLCO. Cl. 39. 2-24-42.
393,652. MISS COLUMBIA. Cl. 39. 2-24-42.
393,879. McCRORY'S VANDERBILT AND DESIGN. Cl. 11. 3-10-42.
394,108. RAY-METL. Cl. 35. 3-17-42.
394,165. RCA MONOGRAM. Cl. 37. 3-24-42.
394,221. NIDO. Cl. 46. 3-24-42.
394,251. BOWL. Cl. 45. 3-31-42.
394,288. LOLLIPOP SHOP AND DESIGN. Cl. 39. 3-31-42.
394,577. NACO. Cl. 16. 4-14-42.
394,584. DRAMALITE. Cl. 21. 4-14-42.
394,603. SPUNSTERS. Cl. 39. 4-14-42.
394,775. MAGICOAT. Cl. 16. 4-28-42.
394,883. DOALL. Cl. 23. 5-5-42.
394,985. AGORAL. Cl. 18. 5-5-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

171,500. "R.C." ETC. AND DESIGN. Cl. 30. 8-7-23.
171,501. "ROSENTHAL" AND DESIGN. Cl. 30. 8-7-23.
182,977. "ROSENTHAL" AND DESIGN. Cl. 30. 4-22-24.
185,795. "ROSENTHAL" AND DESIGN. Cl. 30. 6-24-24.
377,037. PUNCH AND JUDY AND DESIGN. Cl. 39. 4-16-40.
630,212. GERLING-KONZERN. Cl. 102. 7-3-56.

Section 8

289,799. "WINTHROP" AND ARROW DESIGN. Cl. 28. 12-8-31.
317,748. DON FRANCISCO. Cl. 49. 10-2-34.
408,018. DOLMAR. Cl. 15. 7-11-44.

The following registrations issued Nov. 22, 1955

616,371. BAR-B-KETS. Cl. 1.
616,373. AIRELITE. Cl. 1.

616,374. CASTWOOD. Cl. 1.
616,375. X–54. Cl. 1.
616,376. JAPANESE CHARACTER CORRESPONDING TO "T." Cl. 1.
616,381. SCULPTURED KID. Cl. 1.
616,387. CELOPAD. Cl. 1.
616,394. CARSHIELD. Cl. 4.
616,396. DURA-WELD. Cl. 5.
616,403. AGRICULTURAL SUBURBAN HI-N AMMONIA AND DESIGN. Cl. 10.
616,404. RX–15. Cl. 10.
616,408. EASY AWN. Cl. 12.
616,410. CYCLONE. Cl. 12.
616,411. ARISTOCRAT. Cl. 12.
616,415. LUSTRE-BRITE. Cl. 12.
616,416. DURAFACE FOAMGLAS. Cl. 12.
616,417. MENDAVE AND DESIGN. Cl. 12.
616,420. MONSANTO. Cl. 13.
616,430. KELLER. Cl. 13.
616,444. VASCO AND DESIGN. Cl. 16.
616,446. MIR-ON AND DESIGN. Cl. 16.
616,453. STA FOIL AND DESIGN. Cl. 19.
616,455. FEATHER TOUCH. Cl. 19.
616,470. RECO-CUSHN. Cl. 21.
616,476. BRILLIANT. Cl. 21.
616,477. S STIEBEL ELTRON AND DESIGN. Cl. 21.
616,478. HI-FI-ET. Cl. 21.
616,481. JEMU. Cl. 21.
616,483. CORSAIR. Cl. 21.
616,484. CARIOCA. Cl. 21.
616,489. STATE TROOPER. Cl. 22.
616,490. KIDD-E-BARRO AND DESIGN. Cl. 22.
616,491. PRIZE CATCH FISH BAG AND DESIGN. Cl. 22.
616,492. LITTLE HERMAN. Cl. 22.
616,493. DESIGN OF EAGLE AND SHIELD. Cl. 22.
616,494. DESIGN OF EAGLE AND SHIELD. Cl. 22.
616,495. DESIGN OF EAGLE AND SHIELD. Cl. 22.
616,496. DESIGN OF EAGLE AND SHIELD. Cl. 22.
616,503. DYNO-MITE AND DESIGN. Cl. 23.
616,505. ELITE. Cl. 23.
616,506. FEECO. Cl. 23.
616,507. WRAP-VERTISER (WV AND DESIGN). Cl. 23.
616,510. EVEREST AND DESIGN. Cl. 23.
616,515. HOLLYWOOD. Cl. 23.
616,516. KING KUTTER. Cl. 23.
616,520. POWER-MATIC. Cl. 23.
616,521. HD ETC. IN A DIAMOND DESIGN. Cl. 23.
616,526. CROSS. Cl. 26.
616,527. BABY LIFE SAVER. Cl. 26.
616,533. COLD CACHE. Cl. 31.
616,534. DROLL. Cl. 32.
616,536. WEATHER WEB ETC. AND DESIGN. Cl. 32.
616,537. PANEL BAR AND DESIGN. Cl. 32.
616,540. SERVI-SEAT. Cl. 32.
616,548. IBM. Cl. 32.
616,550. HOT'N TOT AND DESIGN. Cl. 34.
616,551. MINIKAY. Cl. 34.
616,553. YORK GAS HEAT AND DESIGN. Cl. 34.
616,554. RIPON KING (DESIGN OF CROWN). Cl. 34.
616,555. TROJAN. Cl. 34.
616,559. HI-CRU. Cl. 35.
616,560. WESTERN. Cl. 35.
616,561. SUPER X AND DESIGN. Cl. 35.
616,562. L.C.P.M. Cl. 35.
616,570. REDIPRINT. Cl. 37.
616,575. "FRIENDS FOR KEEPS." Cl. 37.
616,581. PURINA RESEARCH DIGEST. Cl. 38.
616,582. YOUR PATIENT. Cl. 38.
616,590. MARGARET ROSE. Cl. 39.
616,591. GREEN TURTLE AND DESIGN (REPRESENTATION OF A TURTLE). Cl. 39.
616,595. SAXONE GOLF MASTER. Cl. 39.
616,606. CRAFT HOUSE AND DESIGN. Cl. 40.
616,607. LUSTERNYL. Cl. 42.
616,608. WUNDA BELLE. Cl. 42.
616,609. WUNDA LURE. Cl. 42.
616,610. VIGNETTE. Cl. 42.
616,611. BORDAFIX. Cl. 42.
616,612. VELVEFIX. Cl. 42.
616,613. MIRALON. Cl. 42.
616,615. MARVELON. Cl. 42.
616,622. NURSE-A-BABEE. Cl. 44.
616,630. LOCKOMATIC. Cl. 44.
616,632. SUPER-DONTIC. Cl. 44.
616,637. ASCO IDEAL AND DESIGN. Cl. 46.
616,641. WEATHER-PRUF AND DESIGN. Cl. 46.
616,647. MY. Cl. 52.
616,653. GRIN. Cl. 52.
616,654. FOA. Cl. 100.
616,656. MDS MOTORISTS' DISCOUNT SERVICE OF AMERICA INC. AND DESIGN. Cl. 101.
616,658. LIVING WONDERS. Cl. 107.
616,663. ROBBINS SELF ADHERING. Cl. 12.
616,664. HOBBY GREENHOUSE. Cl. 12.
616,665. EASY-TO-MAKE SCREEN KIT. Cl. 12.
616,666. BUBBLE-STREAM. Cl. 13.
616,668. YOULE DRIVE ON!. Cl. 13.
616,671. CRUISER CRAFT OF DALLAS. Cl. 19.
616,672. NO-FREEZE. Cl. 21.
616,673. CARTER LIGHTING. Cl. 21.
616,674. THE GREATEST GAMES EVER PLAYED. Cl. 22.
616,676. THE-RED LIGHT-GREEN LIGHT-SHOPPING GAME. Cl. 22.
616,677. THE GOLD RUSH GAME. Cl. 22.
616,678. DOLL-E-SHOPPER BY AMSCO AND DESIGN. Cl. 22.
616,679. BIKE PUT-PUT. Cl. 22.
616,682. GAYLORD. Cl. 23.
616,685. LADY TUCKER. Cl. 39.
616,686. EAR-AID AND DESIGN. Cl. 44.

Section 18

399,752. POLITICS. Cl. 22. 1–26–43.
680,964. POP-UP AND DESIGN. Cl. 2. 6–30–59.
697,975. GRANOLITH. Cl. 12. 5–24–60.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

247,311. CROWN. Cl. 37. 9–25–28. Crown Willamette Paper Company. Crown Zellerbach Corporation, San Francisco, Calif. Amended to appear:

CROWN

249,567. FANTREY. Cl. 39. 11–20–28. Ogus, Rabinovich & Ogus, Inc., New York, N.Y. Amended to appear:

FANTREY

611,412. BINOLUX. Cl. 26. 8–30–55. Compass Instrument & Optical Co., Inc., New York, N.Y. Amended: In the statement, column 2, line 3, the comma is deleted and *and* is inserted and in lines 4 and 5 "telescopes, barometers, and compasses" are deleted.

611,413. MONOLUX. Cl. 26. 8–30–55. Compass Instrument & Optical Co., Inc., New York, N.Y. Amended: In the statement, column 2, line 3, after "magnifiers," *and* is inserted and in line 4, "barometers, and compasses" is deleted.

621,022. A PRODUCT OF AVERY ISLAND LA AND DESIGN. Cl. A. 2–7–56. Avery Island, Inc., Iberia Parish, La. Corrected: In the heading, line 5 and in the statement, column 1, line 3, "New Iberia" should be deleted and *Iberia Parish* should be inserted and in the heading, line 5, "Louisiana" second occurrence, and in the statement, column 1, line 1, "Louisiana" should be deleted and *Delaware* should be inserted.

626,047. REPRESENTATION OF A PURITAN. Cl. 6. 5–1–56. Puritan Chemical Company, Atlanta, Ga. Amended to appear:



631,482. DOANE AGRICULTURAL SERVICE INC. ETC. AND DESIGN. Cls. 100, 101, 102. 7–24–56. Doane Agricultural Service, Inc., St. Louis, Mo. Amended to appear:



668,848. MOD-EPOX. Cl. 6. 10–28–58. Monsanto Chemical Company, St. Louis, Mo. Amended to appear:

MOD-EPOX

688,866. LION AND DESIGN. Cl. 103. 11–24–59. Monsanto Chemical Company, St. Louis, Mo. Amended to appear:



709,726. FONTESSA. Cl. 46. 1–10–61. C. J. van Houten & Zoon, N.V., Weesp, Netherlands. Amended: In the statement, column 2, lines 1 through 5, the description of goods is deleted and *cocoa and baking chocolate* is inserted.

717,374. HOLDIT. Cl. 5. 6–27–61. Eberhard Faber Inc., Wilkes-Barre, Pa. Amended to appear:

HOLDiT

721,185. EVERGLAZE. Cl. 2. 9–12–61. Metal Coating Corporation, Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

721,470. PERMA PRESSURE. Cl. 2. 9–19–61. Metal Coating Corporation, Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

722,837. LINDE AND DESIGN. Cl. 31. 10–17–61. Union Carbide Corporation, New York, N.Y. Corrected: In the statement, column 2, line 2, "Class 30" should be deleted and *Class 31* should be inserted.

INDEX OF REGISTRANTS

JANUARY 9, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Abar Mfg. Co., Cleveland, Ohio. 726,304, pub. 10–24–61. Cl. 44.

Acme Fishing Tool Co., to Acme Fishing Tool Co., Parkersburg, W. Va. 150,700, ren. 1–9–62. Cl. 23.

Adams Engineering Co., Inc., Miami, Fla. 616,536, canc. Cl. 32.

Affiliated Laboratories Corp., White Hall, Ill. 726,184, pub. 10–24–61. Cl. 18.

Air Master Corp., Philadelphia, Pa. 726,154, pub. 10–24–61. Cl. 12.

Akron Truss Co., Inc.: *See*—
Atco Surgical Supports, Inc.

Alexander Doll Co., Inc., d.b.a. Madame Alexander, New York, N.Y. 726,215, pub. 10–24–61. Cl. 22.

Allied Biological Control Corp., Boston, Mass. 726,356, pub. 10–24–61. Cl. 106.

Alside, Inc., Akron, Ohio. 726,365. Cl. 12.

American Air Filter Co., Inc., Louisville, Ky. 726,252, pub. 10–24–61. Cl. 31.

American Alcolac Corp., Fairfield, Baltimore, Md. 616,647, canc. Cl. 52.

American Cyanamid Co., New York, N.Y. 616,375, canc. Cl. 1.

American Frame Co., Los Angeles, Calif. 726,147, pub. 10–24–61. Cl. 12.

American Home Products Corp., d.b.a. Wyeth Laboratories, Div. of American Home Products Corp., Philadelphia, Pa. 616,582, canc. Cl. 38.

American Metal Specialties Corp., Hatboro, Pa. 616,490, canc. Cl. 22.

American Metal Specialties Corp., Hatboro, Pa. 616,678, canc. Cl. 22.

American Music Guild, Inc., Washington, D.C. 726,357, pub. 10–24–61. Cl. 200.

American Optical Co., Southbridge, Mass. 616,520, canc. Cl. 23.

American Screen Products Co., Miami, Fla. 616,665, canc. Cl. 12.

American Smelting and Refining Co.: *See*—
Frictionless Metal Co.

American Stores Co., Philadelphia, Pa. 616,637, canc. Cl. 46.

American Welding & Mfg. Co., The, Warren, Ohio. 726,367. Cl. 12.

Antolini, G., and Son, Santa Barbara, Calif. 726,361. Cl. 12.

Armour and Co., to Armour and Co., Chicago, Ill. 726,346, pub. 10–24–61. Cl. 100.

Army Chemical Corp., to Wrap-Vertiser Corp., New York, N.Y. 616,507, canc. Cl. 23.

Aronson Machine Co., Inc., Arcade, N.Y. 726,229, pub. 10–24–61. Cl. 23.

Associated Distributors, Inc., assor to James L. Younghusband, Chicago, Ill., to Richard Hudnut, Morris Plains, N.J. 391,964, ren. 1–9–62. Cl. 51.

Associated Specialties Co., Inc., Detroit, Mich. 616,672, canc. Cl. 21.

Atco Surgical Supports, Inc., by change of name from The Akron Truss Co., Inc., Cuyahoga Falls, Ohio. 726,305, pub. 10–24–61. Cl. 44.

Atlantic Research Corp., Alexandria, Va. 726,347, pub. 10–24–61. Cl. 100.

Atlas Chemical Industries, Inc.: *See*—
Atlas Powder Co.

Atlas Paint and Glass Mfg. Co., Kansas City, Mo. 616,446, canc. Cl. 16.

Atlas Powder Co., to Atlas Chemical Industries, Inc., Wilmington, Del. 392,415, ren. 1–9–62. Cl. 6.

Augsburg Publishing House, Minneapolis, Minn. 726,286–88, pub. 10–24–61. Cl. 38.

Avco Corp., Nashville, Tenn. 726,155, pub. 10–24–61. Cl. 12.

Avery Island, Inc., Iberia Parish, La. 621,022, cor. Cl. A.

Avia-Verband trustfreier Benzin- und Heizölimporteure der Schweiz, Zurich, Switzerland. 726,165, pub. 10–24–61. Cl. 15.

Ayre Publishing Co.: *See*—
Airlanes Publishing Co.
Benas, Jeannette J.

Baer, Ludwig, New York, N.Y. 153,972, ren. 1–9–62. Cl. 31.

Barbeau, Napoleon A., d.b.a. Barbeau Supply Co., St. Paul, Minn. 726,341, pub. 10–24–61. Cl. 52.

Barbeau Supply Co.: *See*—
Barbeau, Napoleon A.

Barksdale, Edgar W., d.b.a. Super-Dontic Mfg. Co., Montezuma, Ga. 616,632, canc. Cl. 44.

Baruda International Ltd., Gardena, Calif. 726,258–9, pub. 10–24–61. Cl. 34.

Basic Products Corp., Milwaukee, Wis. 726,256, pub. 10–24–61. Cl. 34.

Bastian-Blessing Co., The, Chicago, Ill. 726,251, pub. 10–24–61. Cl. 31.

Baxter Laboratories, Inc., Morton Grove, Ill. 726,174, pub. 1–17–61. Cl. 18.

Baxter Laboratories, Inc., Morton Grove, Ill. 726,343, pub. 10–24–61. Cl. 52.

Beacon Specialty Co., Inc., Gloucester, Mass. 726,317, pub. 1–10–61. Cl. 46.

Beckman Industrial Engineers: *See*—
Beckman, Roland A.

Beckman, Roland A., d.b.a. Beckman Industrial Engineers, Chicago, Ill. 616,570, canc. Cl. 37.

Belrug Mills of South Carolina, Greenville, S.C. 616,608–9, canc. Cl. 42.

Benas, Jeannette J., d.b.a. Airlanes Publishing Co., to Ayre Publishing Co., New York, N.Y. 390,586, ren. 1–9–62. Cl. 38.

Bercut-Richards Packing Co., Sacramento, Calif. 726,311, pub. 10–24–61. Cl. 45.

Bergstrom Paper Co., Neenah, Wis. 726,270, pub. 10–24–61. Cl. 37.

Berkowitz, Michael, Co., Inc., New York, N.Y. 393,652, ren. 1–9–62. Cl. 39.

Bethlehem Steel Co., Bethlehem, Pa. 151,430, ren. 1–9–62. Cl. 14.

Black Arrow Publishers, Inc., Norristown, Pa. 726,291, pub. 10–24–61. Cl. 38.

Bonds, Elder, Houston, Tex. 726,172, pub. 10–24–61. Cl. 18.

Bonoil Packing Corp., to Roberts Food Corp., Brooklyn, N.Y. 391,529, ren. 1–9–62. Cl. 46.

Borg-Warner Corp., Chicago, Ill. 616,455, canc. Cl. 19.

Bridgeville Finishing Mill, Bridgeville, Pa. 616,417, canc. Cl. 12.

Brooks-Scanlon, Inc., Bend, Oreg. 726,362–3. Cl. 12.

Brown, Charles M., Minneapolis, Minn. 616,373, canc. Cl. 1.

Brown, Firth, Tools Ltd. of Speedicut Works, Sheffield, England. 726,374. Cl. 23.

Brown, Jack, Produce, Inc., Sparta, Mich. 726,326, pub. 10–24–61. Cl. 46.

Brown, Samuel, d.b.a. Canvas Sports Co., Mobile, Ala. 616,491, canc. Cl. 22.

Buck, Harlan M., Inc., Baltimore, Md. 726,309, pub. 10–24–61. Cl. 44.

Bukama G.m.b.H., Hannover, Germany. 726,219, pub. 10–24–61. Cl. 23.

CBS Films, Inc., New York, N.Y. 726,283, pub. 10–24–61. Cl. 38.

Cacao- en Chocoladefabrieken Bensdorf N.V., Bussum, Netherlands. 726,332, pub. 10–24–61. Cl. 46.

Campbell Banking Co., Kansas City, Mo., and Wilmington, Del., to The Paniplus Co., Rye, N.Y. 146,962, ren. 1–9–62. Cl. 46.

Canadian Wallpaper Manufacturers Ltd., New Toronto, Ontario, Canada. 726,273, pub. 10–24–61. Cl. 37.

Canvas Sports Co.: *See*—
Brown, Samuel.

Carnegie, Hattie, Inc., New York, N.Y. 726,243, pub. 10–24–61. Cl. 28.

Carnival Films Inc., Lodi, N.J. 726,284, pub. 10–24–61. Cl. 38.

Carshield Wax Co.: *See*—
Gartner, William.

Carter Products, Inc., New York, N.Y. 726,189, pub. 10–24–61. Cl. 18.

Case, W. A., & Son Mfg. Co., Buffalo, N.Y. 616,555, canc. Cl. 34.

Celanese Corp. of America, New York, N.Y. 390,663, ren. 1–9–62. Cl. 37.

Celanese Corp. of America, New York, N.Y. 726,301, pub. 10–24–61. Cl. 42.

Celotex Corp., The, Chicago, Ill. 616,387, canc. Cl. 1.

Celotex Corp., The, Chicago, Ill. 616,411, canc. Cl. 12.

Century Lighting, Inc., New York, N.Y. 394,584, ren. 1–9–62. Cl. 21.

Chabot, Cleo S., Meriden, Conn. 726,310, pub. 10–24–61. Cl. 44.

Champion Paper and Fibre Co., The: *See*—
Champion Papers Inc.

Champion Papers Inc., by change of name from The Champion Paper and Fibre Co., Hamilton, Ohio. 726,267, pub. 10–24–61. Cl. 37.

Chapman Chemical Co., Memphis, Tenn. 726,126, pub. 10–24–61. Cl. 6.

Charron, Evariste E., La Junta, Colo. 399,752, canc. Cl. 22.

Chemische Fabrik Vormals Sandoz, Basel, Switzerland, to Sandoz, Inc., Hanover, N.J. 150,290, ren. 1–9–62. Cl. 6.

Chesebrough-Pond's Inc., New York, N.Y. 726,338, pub. 10–24–61. Cl. 51.

Childers' Foods, Inc., Bedford, Va. 726,315, pub. 10–24–61. Cl. 46.

Christie, John A., Akron, Ohio. 616,562, canc. Cl. 35.

Ciba Ltd., Basel, Switzerland. 726,339, pub. 10–24–61. Cl. 51.

Cochran Equipment & Service Co., Louisville, Ky. 726,230, pub. 10–24–61. Cl. 23.

Colgate-Palmolive Co., New York, N.Y. 726,130, pub. 10–24–61. Cl. 6.

Compass Instrument & Optical Co., Inc., New York, N.Y. 611,412–13. Am. 7(d). Cl. 26.

Connare Mfg. Corp., Manchester, N.H. 616,559, canc. Cl. 35.

Copley Press, Inc., The, Aurora, Ill. 726,277, pub. 10–24–61. Cl. 38.

Coronado Distillery: *See*—
Zaninovich, George, Inc.

Coventry, Sarah, Inc., Newark, N.Y. 726,242, pub. 10–24–61. Cl. 28.

Cowles Chemical Co., Cleveland, Ohio. 726,124, pub. 10–24–61. Cl. 6.
Craddock-Terry Shoe Corp., Lynchburg, Va. 726,292, pub. 1–3–61. Cl. 39.
Crandall Products Co., Chicago, Ill. 616,408, canc. Cl. 12.
Crawford Associates, Inc., Palo Alto, Calif. 726,105, pub. 10–24–61. Cl. 1.
Crete, Charles A., Marysville, Calif. 726,177, pub. 10–24–61. Cl. 18.
Crown Willamette Paper Co. Crown Zellerbach Corp., San Francisco, Calif. 247,311. Am. 7(d). Cl. 37.
Crown Zellerbach Corp.: *See*— Crown Willamette Paper Co.
Crown Zellerbach Corp., San Francisco, Calif. 392,597, ren. 1–9–62. Cl. 37.
Cruiser Craft of Dallas, Inc., Dallas, Tex. 616,671, canc. Cl. 19.
Davis-Young & Co.: *See*— Siegel, Albert G.
Daycon Inc.: *See*— Gealy, Don R.
Denver Chemical Mfg. Co., The, d.b.a. Wampole Laboratories, Stamford, Conn. 726,191, pub. 10–24–61. Cl. 18.
Derby Sportswear, Inc., New York, N.Y. 726,293, pub. 7–26–60. Cl. 39.
Diamond Crystal Salt Co., St. Clair, Mich. 616,641, canc. Cl. 46.
Ditto, Inc., Chicago, Ill. 726,266, pub. 10–24–61. Cl. 37.
Divelbiss, H. N., Mfg. Co.: *See*— Divelbiss, Hubert N.
Divelbiss, Hubert N., d.b.a. H. N. Divelbiss Mfg. Co., Napa, Calif. 616,521, canc. Cl. 23.
Doall Co., Inc., The, to The Doall Co., Des Plaines, Ill. 394,883, ren. 1–9–62. Cl. 23.
Doall Co., The: *See*— Doall Co., Inc.
Doane Agricultural Service, Inc., St. Louis, Mo. 631,482. Am. 7(d). Classes 100, 101, and 102.
Dodge Cork Co., Inc., The, Lancaster, Pa. 726,197, pub. 10–24–61. Cl. 20.
Dorset-Rex, Inc.: *See*— Rex Products Corp.
Doug. English Lure Co.: *See*— English, Douglas W.
Dow Chemical Co., The, to The Dow Chemical Co., Midland, Mich. 153,701, ren. 1–9–62. Cl. 6.
Draper Brothers Co., Canton, Mass. 616,615, canc. Cl. 42.
Drink Mor Beverage Co., to Old Fashion, Inc., Wilkes-Barre, Pa. 392,956, ren. 1–9–62. Cl. 45.
Dutchess Underwear Corp., New York, N.Y. 726,297, pub. 10–24–61. Cl. 39.
Eagle-Picher Co., The, Cincinnati, Ohio. 726,152, pub. 10–24–61. Cl. 12.
Eastern Air Lines, Inc., New York, N.Y. 726,354, pub. 10–24–61. Cl. 105.
Eastern Machine Screw Corp., The, New Haven, Conn. 389,416, ren. 1–9–62. Cl. 26.
Eastman Kodak Co., Rochester, N.Y. 726,127, pub. 10–24–61. Cl. 6.
Eddy, L. M., Mfg. Co., Inc., Framingham, Mass. 616,489, canc. Cl. 22.
Edmont Mfg. Co., Coshocton, Ohio. 616,591, canc. Cl. 39.
Elco Tool and Screw Corp., Rockford, Ill. 726,156, pub. 10–24–61. Cl. 13.
English, Douglas W., d.b.a. Doug. English Lure Co., Corpus Christi, Tex. 726,214, pub. 10–24–61. Cl. 22.
Equipment Engineers Inc., Palo Alto, Calif. 726,228, pub. 10–24–61. Cl. 23.
Erickson, F. E., Co., Inc., North Sacramento, Calif. 616,506, canc. Cl. 23.
"Everest"-Nahmaschinen-Verkaufsgesellschaft m.b.H., Stuttgart-N, Germany. 616,510, canc. Cl. 23.
FMC Corp., by change of name from Food Machinery and Chemical Corp., San Jose, Calif. 726,225, pub. 10–24–61. Cl. 23.
Faber, Eberhard, Inc., Wilkes-Barre, Pa. 717,374. Am. 7(d). Cl. 5.
Fabrex Corp.: *See*— Mallinson, H. R., & Co., Inc. National Fabrics Corp.
Faichney Instrument Corp., Watertown, N.Y. 616,527, canc. Cl. 26.
Fantasy Flavors, Inc., Wheaton, Ill. 726,316, pub. 10–24–61. Cl. 46.
Fieldcrest Mills, Inc., Spray, N.C. 616,610, canc. Cl. 42.
Fieser, John E., Clearwater, Kans. 726,307, pub. 10–24–61. Cl. 44.
Fischberg, Charles H., & Co.: *See*— Fischberg, Charles H.
Fischberg, Charles H., d.b.a. Charles H. Fischberg & Co., New York, N.Y. 726,377. Cl. 26.
Flaccomio, Vincent, and Joseph V. Flaccomio, Baltimore, Md. 726,335, pub. 10–24–61. Cl. 49.
Flexicore Co., Inc., The, Dayton, Ohio. 726,148, pub. 10–24–61. Cl. 12.
Flick, Dorothy, Industries, Inc., Chicago, Ill. 616,606, canc. Cl. 40.
Flynn, John, & Sons, Inc., Salem, Mass. 726,112, pub. 10–24–61. Cl. 1.
Foamex, Inc.: *See*— Safety Development Corp.
Food Machinery and Chemical Corp.: *See*— FMC Corp.
Foodco Appliance Corp., Dallas, Tex. 616,505, canc. Cl. 23.
Foodco Appliance Corp., Dallas, Tex. 616,515–16, canc. Cl. 23.
Foodcraft Products: *See*— United Buyers Corp.
Foremost Dairies, Inc.: *See*— Golden State Co., Ltd.
Foremost Dairies, Inc., d.b.a. Western Condensing Co., San Francisco, Calif. 726,324, pub. 10–24–61. Cl. 46.
Forestrong Co., Gardena, Los Angeles, Calif. 616,374, canc. Cl. 1.
Foster Freight Lines, Inc., Long Beach, Calif. 726,352, pub. 10–24–61. Cl. 105.
Freezer Owners Association, Inc., New York, N.Y. 616,654, canc. Cl. 100.
Frictionless Metal Co., Chattanooga, Tenn., to American Smelting and Refining Co., Jersey City, N.J. 20,952, ren. 1–9–62. Cl. 14.
Friedman Silver Co., Inc., Brooklyn, N.Y. 289,799, canc. Cl. 28.
Frost, Charles E., & Co., Westmount, Quebec, Canada. 726,181, pub. 10–24–61. Cl. 18.
Fuller Brush Co., The, East Hartford, Conn. 151,132, ren. 1–9–62. Cl. 29.
Gallery Three Design Associates, Clifton, N.J. 726,348, pub. 10–24–61. Cl. 101.
Garden Research Laboratories, New York, N.Y. 616,404, canc. Cl. 10.
Gardner-Denver Co.: *See*— Keller Tool Co.
Garner & Co., Inc., New York, N.Y. 726,358. Cl. 2.
Gartner, William, d.b.a. Carshield Wax Co., Wallingford, Conn. 616,394, canc. Cl. 4.
Gealy, Don R., d.b.a. Daycon Inc., Dayton, Ohio. 726,205, pub. 10–24–61. Cl. 21.
Gebauer Chemical Co., Cleveland, Ohio. 726,182, pub. 10–24–61. Cl. 18.
Geigy Chemical Corp., Ardsley, N.Y. 726,188, pub. 10–24–61. Cl. 18.
General Aniline & Film Corp., New York, N.Y. 726,290, pub. 10–24–61. Cl. 38.
General Dynamics Corp.: *See*— Stromberg-Carlson Co.
General Ionics Corp., Pittsburgh, Pa. 726,249, pub. 10–24–61. Cl. 31.
General Preserve Co., Inc., Brooklyn, N.Y. 726,323, pub. 10–24–61. Cl. 46.
General Tape Corp., St. Paul, Minn. 726,120, pub. 1–31–61. Cl. 5.
General Tire & Rubber Co., The: *See*— India Tire & Rubber Co., The.
General Tire & Rubber Co., The, Akron, Ohio. 391,522, ren. 1–9–62. Cl. 35.
Gerling International Insurance Co., Wilmington, Del. 630,212, canc. Cl. 102.
Gibson-Homans Co., The, Cleveland, Ohio. 726,140, pub. 10–24–61. Cl. 12.
Gits Bros. Mfg. Co., Chicago, Ill. 726,217, pub. 10–24–61. Cl. 23.
Goddard's Ltd., Charlotte Amalie, Virgin Islands. 726,383. Cl. 49.
Golden-O-Co.: *See*— Harris, Tony M.
Golden State Co., Ltd., d.b.a. Golden-V Laboratories, to Foremost Dairies, Inc., San Francisco, Calif. 391,658, ren. 1–9–62. Cl. 46.
Golden-V Laboratories: *See*— Golden State Co., Ltd.
Goldsmiths' Co. of Canada Ltd., The, Toronto, Ontario, Canada. 726,355, pub. 10–24–61. Cl. 106.
Goodmans Industries Ltd., Wembley, Middlesex, England. 616,481, canc. Cl. 21.
Gopher Outdoor Co.: *See*— Witwicke, Joseph W.
Gordon-Ford Inc., Conshohocken, Pa. 726,381. Cl. 39.
Grasso's Koninklijke Machinefabrieken N.V., 's-Hertogenbosch, Netherlands. 726,223, pub. 10–24–61. Cl. 23.
Great Lakes Paint and Varnish Co., Chicago, Ill. 726,168, pub. 10–24–61. Cl. 16.
Great Western Foods Co.: *See*— Waples-Platter Co.
Green & Green Inc., to R. H., A. M., and J. B. Green, a partnership d.b.a. Green & Green, to Green & Green, Inc., Houston, Tex. 394,251, ren. 1–9–62. Cl. 45.
Gregory Industries, Inc., Lorain, Ohio. 726,137, pub. 10–24–61. Cl. 9.
Gregory Industries, Inc., Lorain, Ohio. 726,143, pub. 10–24–61. Cl. 12.
Gregory Industries, Inc., Lorain, Ohio. 726,203, pub. 10–24–61. Cl. 21.
Grin Chemical Corp., Pasadena, Calif. 616,653, canc. Cl. 52.
Gruber Industries, Inc., Royersford, Pa. 616,540, canc. Cl. 32.
Gulf Oil Corp., Pittsburgh, Pa. 726,281, pub. 10–24–61. Cl. 38.
Guthrie, C. B., Tariff Bureau, Inc., Washington, D.C. 726,275–6, pub. 10–24–61. Cl. 38.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 726,345, pub. 10–24–61. Cl. 52.
Hanak, Richard J., Merion Station, Pa. 726,199, pub. 10–24–61. Cl. 21.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 726,296, pub. 10–24–61. Cl. 39.
Hanson, Reginald G., d.b.a. Tested Products Co., Kansas City, Mo. 726,327, pub. 10–24–61. Cl. 46.
Harris, Norman D., Wayland, Mass. 616,658, canc. Cl. 107.
Harris, Tony M., d.b.a. "The Winery," and as Golden-O-Co., Decatur, Ill. 726,322, pub. 10–24–61. Cl. 46.
Harvey, Thomas B., Leather Co., Philadelphia, Pa. 616,381, canc. Cl. 1.
Harwil Inc., St. Charles, Mich. 616,453, canc. Cl. 19.
Hobson & Botts Co., The, Danbury, Conn. 616,682, canc. Cl. 23.
Hoffmann, Henry L., d.b.a. Lockomat Mfg. Co., Minneapolis, Minn. 616,630, canc. Cl. 44.
Hoffmann-La Roche Inc., Nutley, N.J. 392,589–90, ren. 1–9–62. Cl. 18.

Hoffmann-La Roche Inc., Nutley, N.J. 393,117, ren. 1–9–62. Cl. 18.
Holmes, Archibald, & Son, Philadelphia, Pa. 616,613, canc. Cl. 42.
Home Comfort Products Co., Princeville, Ill. 726,255, pub. 10–24–61. Cl. 32.
Hommel, O., Co., The, Carnegie, Pa. 726,163, pub. 10–24–61. Cl. 14.
Huber, J. M., Corp., Borger, Tex. 726,115, pub. 10–24–61. Cl. 1.
Hudnut, Richard: *See*— Associated Distributors, Inc.
Humboldt Livestock Auction, Inc., Humboldt, Iowa. 726,289, pub. 10–24–61. Cl. 38.
Hydrometals, Inc., Chicago, Ill. 726,368. Cl. 14.
Hyland Laboratories, Los Angeles, Calif. 726,238, pub. 10–24–61. Cl. 26.
Ice All-O-Matic Mfg., Inc., Salt Lake City, Utah. 726,250, pub. 10–24–61. Cl. 31.
Iglo N.V., Utrecht, Netherlands. 726,328, pub. 10–24–61. Cl. 46.
Illinois Tool Works: *See*— Illinois Tool Works, Inc.
Illinois Tool Works, Inc., by merger from Illinois Tool Works, Chicago, Ill. 726,160, pub. 10–24–61. Cl. 13.
Independent Fitting Co., The: *See*— Pinger, Roland W.
India Tire & Rubber Co., The, Mogadore, Ohio, to The General Tire & Rubber Co., Akron, Ohio. 148,086, ren. 1–9–62. Cl. 5.
Industrial America Inc., Chicago, Ill. 616,493–6, canc. Cl. 22.
Industrial Corp. of America, Quakertown, Pa. 726,150, pub. 10–24–61. Cl. 12.
International Business Machines Corp., New York, N.Y. 616,548, canc. Cl. 32.
International Foam Corp., Chicago, Ill. 726,114, pub. 10–24–61. Cl. 1.
International Milling Co., Minneapolis, Minn. 392,639, ren. 1–9–62. Cl. 46.
International Resistance Co., Philadelphia, Pa. 726,373. Cl. 21.
International Shoe Co., St. Louis, Mo. 726,294, pub. 10–24–61. Cl. 39.
Irwin, Neisler & Co., Decatur, Ill. 726,192, pub. 10–24–61. Cl. 18.
Italian Swiss Colony: *See*— United Vintners, Inc.
Ivory Pine Co.: *See*— Sequoia Forest Industries, Inc.
Jacobi, Martin, Inc., Buffalo, N.Y. 393,144, ren. 1–9–62. Cl. 39.
Jacquez, Albert, Woodstock, N.Y. 616,444, canc. Cl. 16.
Jerclaydon, Inc., Clifton, N.J. 726,129, pub. 10–24–61. Cl. 6.
Jergens, Andrew, Co., The, Cincinnati, Ohio. 153,647, ren. 1–9–62. Cl. 51.
Johnson-Carper Furniture Co., Inc., Roanoke, Va. 726,253, pub. 10–24–61. Cl. 32.
Johnson Hydraulic Mfg. Co., Peoria, Ill. 726,221, pub. 10–24–61. Cl. 23.
Jones, Forrest A., Portland, Oreg. 616,686, canc. Cl. 44.
Joyce, Inc., Cincinnati, Ohio. 392,863, ren. 1–9–62. Cl. 39.
Kansas Milling Co., Wichita, Kans. 726,333, pub. 10–24–61. Cl. 46.
Keasbey & Mattison Co., Ambler, Pa. 726,146, pub. 10–24–61. Cl. 12.
Keasbey & Mattison Co., Ambler, Pa. 726,153, pub. 10–24–61. Cl. 12.
Keller Tool Co., to Gardner-Denver Co., Grand Haven, Mich. 616,430, canc. Cl. 13.
Kershaw Mfg. Co., Inc., Montgomery, Ala. 726,375. Cl. 23.
Kimberly-Clark Corp., Neenah, Wis. 726,116, pub. 10–24–61. Cl. 2.
Kimberly-Clark Corp., Neenah, Wis. 726,274, pub. 10–24–61. Cl. 37.
Kimberly-Clark Corp., Neenah, Wis. 726,306, pub. 10–24–61. Cl. 44.
King Candy Co., Fort Worth, Tex. 726,320, pub. 10–24–61. Cl. 46.
Klein, Max, Inc., Ferndale, Mich. 726,117, pub. 10–24–61. Cl. 2.
Kleinwanzlebener Saatzucht Vorm. Rabbethge & Giesecke Aktiengesellschaft, Einbeck, Hannover, Germany. 726,106–7, pub. 10–24–61. Cl. 1.
Koninklijke Fabrienken Diepenbrock & Riegers N.V., Ulft, Netherlands. 726,158, pub. 10–24–61. Cl. 13.
Kores Mfg. Corp., New York, N.Y. 726,141, pub. 10–24–61. Cl. 11.
Krauss, Evelyn, Toledo, Ohio. 616,492, canc. Cl. 22.
Lady Tucker, Inc.: *See*— Weiss, Barnett.
Lakeland Nurseries Sales Corp., New York, N.Y. 726,111, pub. 10–24–61. Cl. 1.
Langley & Michaels Co., San Francisco, Calif., to McKesson & Robbins, Inc., New York, N.Y. 152,854, ren. 1–9–62. Cl. 45.
Leeds Travelwear, Inc., New York, N.Y. 726,118, pub. 10–24–61. Cl. 3.
Lewis Supply Co. Inc., New York, N.Y. 726,262, pub. 10–24–61. Cl. 35.
Lif-O-Gen, Inc., Norristown, Pa. 726,382. Cl. 44.
Lockomat Mfg. Co.: *See*— Hoffmann, Henry L.
Lombardi Engineering Co., Derby, Conn. 726,351, pub. 10–24–61. Cl. 103.
Macomber, Inc., Canton, Ohio. 726,142, pub. 6–28–60. Cl. 12.
Madame Alexander: *See*— Alexander Doll Co., Inc.
Mallinson, H. R., & Co., Inc., to Fabrex Corp., New York, N.Y. 146,808, ren. 1–9–62. Cl. 42.
Mallinson, H. R., & Co., Inc., to Fabrex Corp., New York, N.Y. 148,897, ren. 1–9–62. Cl. 42.
Maremont Automotive Products, Inc.: *See*— Maremont Corp.
Maremont Corp., by change of name from Maremont Automotive Products, Inc., Chicago, Ill. 726,193, pub. 3–28–61. Cl. 19.
Mark Auto Co., Inc., Layton, N.J. 726,218, pub. 10–24–61. Cl. 23.
Markovitch & Co.: *See*— United Kingdom Tobacco Co., Ltd., The.
Mattel, Inc., Los Angeles, Calif. 726,207–09, pub. 10–24–61. Cl. 22.
May Department Stores Co., The, St. Louis, Mo. 377,037, canc. Cl. 39.
McCrory Corp.: *See*— McCrory Stores Corp.
McCrory Stores Corp., to McCrory Corp., New York, N.Y. 393,879, ren. 1–9–62. Cl. 11.
McKesson & Robbins, Inc.: *See*— Langley & Michaels Co.
Medicraft Pharmacal Co., Inc., Chicago, Ill. 726,171, pub. 9–22–59. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 726,125, pub. 10–24–61. Cl. 6.
Merck & Co., Inc., Rahway, N.J. 726,180, pub. 10–24–61. Cl. 18.
Meridan Corp., Chicago, Ill., assor. to United Mattress Machinery Co., Quincy, Mass. 616,534, canc. Cl. 32.
Metal Coating Corp., Chicago, Ill. 721,185, cor. Cl. 2.
Metal Coating Corp., Chicago, Ill. 721,470, cor. Cl. 2.
Metalold Co., The, Cleveland, Ohio. 616,537, canc. Cl. 32.
Midas, Inc., Chicago, Ill. 726,350, pub. 10–24–61. Cl. 103.
Midland-Ross Corp., Cleveland, Ohio. 726,227, pub. 10–24–61. Cl. 23.
Mid-West Abrasive Co., Owosso, Mich. 392,532, ren. 1–9–62. Cl. 4.
Millers Falls Co., Greenfield, Mass. 616,503, canc. Cl. 23.
Minette Mills, Inc., Grover, N.C. 726,303, pub. 10–24–61. Cl. 42.
Minnikay Aktiebolag, Goteborg, Sweden. 616,551, canc. Cl. 34.
Mirror Bright Polish Co., Pasadena, Calif. 726,359. Cl. 4.
Mitchell Co., The: *See*— Mitchell, Eldredge.
Mitchell, Eldredge, d.b.a. The Mitchell Co., Memphis, Tenn. 726,330, pub. 10–24–61. Cl. 46.
Modern Cap Mfg. Co., to Society Brand Hat Co., St. Louis, Mo. 148,166, ren. 1–9–62. Cl. 39.
Modern Globe, Inc.: *See*— Sosnik and Sosnik, Inc.
Modern Spacemaster Products, Inc., Great Neck, N.Y. 726,231, pub. 10–24–61. Cl. 23.
Mohawk Carpet Mills, Inc., Amsterdam, N.Y. 616,607, canc. Cl. 42.
Mole, M., & Son Ltd., Birmingham, England. 726,233, pub. 10–24–61. Cl. 23.
Monsanto Chemical Co., St. Louis, Mo. 616,420, canc. Cl. 13.
Monsanto Chemical Co., St. Louis, Mo. 688,866. Am. 7(d). Cl. 103.
Monsanto Chemical Co., St. Louis, Mo. 668,848. Am. 7(d). Cl. 6.
Moore, Alan L., Ypsilanti, Mich. 616,550, canc. Cl. 34.
Morgan Development Laboratories, Inc., New Canaan, Conn. 726,265, pub. 10–24–61. Cl. 37.
Moseley, F. L., Co., Pasadena, Calif. 726,236–7, pub. 5–16–61. Cl. 26.
Motorists' Discount Service of America, Inc., Poughkeepsie, N.Y. 616,656, canc. Cl. 101.
Motorola, Inc., Chicago, Ill. 726,201, pub. 10–24–61. Cl. 21.
Mount Rhyolite Ranch: *See*— Schryver, Vernon J., and Laura A. Schryver.
Mr. Boston Distiller Inc., Boston, Mass. 726,336, pub. 10–24–61. Cl. 49.
Multisonic Products, Brooklyn, N.Y. 616,470, canc. Cl. 21.
National Fabrics Corp., to Fabrex Corp., New York, N.Y. 390,132, ren. 1–9–62. Cl. 42.
National Lead Co., New York, N.Y. 726,360. Cl. 6.
Neptunalia Seafood Co., Thunderbolt, Ga. 726,329, pub. 10–24–61. Cl. 46.
Nestle Co., Inc., The: *See*— Nestle's Milk Products, Inc.
Nestle's Milk Products, Inc., New York, to The Nestle Co., Inc., White Plains, N.Y. 394,221, ren. 1–9–62. Cl. 46.
New York Canners, Inc., Rochester, N.Y., to Valley Evaporating Co., Yakima, Wash. 152,910, ren. 1–9–62. Cl. 46.
Nicholas International Ltd., Toronto, Ontario, Canada. 726,176, pub. 10–24–61. Cl. 18.
Nicholas International Ltd., Toronto, Ontario, Canada. 726,183, pub. 10–24–61. Cl. 18.
Nixdorff-Krein Mfg. Co., St. Louis, Mo. 726,232, pub. 10–24–61. Cl. 23.
Norcross, Inc., New York, N.Y. 726,131, pub. 10–24–61. Cl. 7.
Norfolk Products Corp., Norfolk, Conn. 726,220, pub. 10–24–61. Cl. 23.
Northern States Envelope Co., Inc., St. Paul, Minn. 726,272, pub. 10–24–61. Cl. 37.
Novel Novelties, Inc., Long Island City, N.Y. 616,674, canc. Cl. 22.
Novo Industrial Corp., Chicago, Ill. 726,254, pub. 10–24–61. Cl. 32.
Nu-Dent Porcelain Studio, Inc., New York, N.Y. 726,308, pub. 10–24–61. Cl. 44.
Nurse-A-Babee Products, Malden, Mass. 616,622, canc. Cl. 44.
Nutrilite Products, Inc., Buena Park, Calif. 726,173, pub. 10–24–61. Cl. 18.
N.V. Wallramit Hardmetaal Maatschappij, Keucheniusstraat, Maassluis, Netherlands. 726,224, pub. 10–24–61. Cl. 23.

Octagon Ventilator Co., Chicago, Ill. 726,257, pub. 10–24–61. Cl. 34.
Ogus, Rabinovich & Ogus, Inc., New York, N.Y. 249,567. Am. 7(d). Cl. 39.
Old Colony Paint & Chemical Co., Los Angeles, Calif. 394,577, ren. 1–9–62. Cl. 16.
Old Colony Paint & Chemical Co., Los Angeles, Calif. 394,775, ren. 1–9–62. Cl. 16.
Old Fashion, Inc.: *See*—
Drink Mor Beverage Co.
Olin Industries, Inc., now by merger and change of name Olin Mathieson Chemical Corp., East Alton, Ill. 616,560–1, canc. Cl. 35.
Olin Mathieson Chemical Corp.: *See*—
Olin Industries, Inc.
Onondaga Pottery Co., Syracuse, N.Y. 726,248, pub. 10–24–61. Cl. 30.
Ortho Pharmaceutical Corp., Raritan, N.J. 726,179, pub. 10–24–61. Cl. 18.
Oshita, Inc., Castroville, Calif. 726,314, pub. 3–29–60. Cl. 46.
Packard-Bell Electronics Corp., Los Angeles, Calif. 726,198, pub. 10–24–61. Cl. 21.
Panglus Co., The: *See*—
Campbell Banking Co.
Pan-Mar Corp., New York, N.Y. 616,476, canc. Cl. 21.
Peerless Corp., The, New York, N.Y. 616,483–4, canc. Cl. 21.
Penn Associates, Inc., Philadelphia, Pa. 726,133–4, pub. 10–24–61. Cl. 7.
Penn Crete Products Co., Philadelphia, Pa. 616,396, canc. Cl. 5.
Penn, John W., d.b.a. Penn Warehouse, St. Paul, Minn. 726,194, pub. 10–24–61. Cl. 19.
Penn Metal Co., Inc., Boston, Mass. 726,151, pub. 10–24–61. Cl. 12.
Penn Warehouse: *See*—
Penn, John W.
Peoples Life Insurance Co., Washington, D.C. 726,349, pub. 10–24–61. Cl. 102.
Perkel & Klein, New York, N.Y. 726,241, pub. 10–24–61. Cl. 28.
Permalastic Products Co., Detroit, Mich. 726,145, pub. 10–24–61. Cl. 12.
Perry-Sherwood Corp., New York, N.Y. 726,268, pub. 10–24–61. Cl. 37.
Pfister Associated Growers, Inc., Aurora, Ill. 726,110, pub. 10–24–61. Cl. 1.
Phillips-Van Heusen Corp., New York, N.Y. 726,299, pub. 10–24–61. Cl. 39.
Photochron Instruments, Inc., Westbury, N.Y. 726,239, pub. 10–24–61. Cl. 26.
Picot Laboratories, Inc., Mount Vernon, N.Y. 726,282, pub. 10–24–61. Cl. 38.
Pinger, Roland W., d.b.a. The Independent Fitting Co., Portland, Oreg. 726,162, pub. 10–24–61. Cl. 13.
Pit and Quarry Publications, Inc., Chicago, Ill. 726,279–80, pub. 10–24–61. Cl. 38.
Pittsburgh Corning Corp., Pittsburgh, Pa. 616,416, canc. Cl. 12.
Plus Products, Los Angeles, Calif. 726,331, pub. 10–24–61. Cl. 46.
Poland Brothers, Inc., Baltimore, Md. 680,964, canc. Cl. 2.
Polyform Plastics Corp., New York, N.Y. 726,108, pub. 10–24–61. Cl. 1.
Pool Room, Inc., The, Fort Lauderdale, Fla. 726,206, pub. 10–24–61. Cl. 22.
Porzellanfabrik Ph. Rosenthal & Co., A.G., Berlin, Germany. 171,500–501, canc. Cl. 30.
Porzellanfabrik Ph. Rosenthal & Co., A.G., Berlin, Germany. 185,795, canc. Cl. 30.
Porzellanfabrik Schonwald, Schonwald, Oberfranken, Germany. 726,244, pub. 10–24–61. Cl. 30.
Porzellanfabrik, W. Goebel, Oeslau, near Coburg, 13A, Bavaria, Germany. 726,213, pub. 10–24–61. Cl. 22.
Premold Corp., West Springfield, Mass. 726,269, pub. 10–24–61. Cl. 37.
Prestole Corp., Toledo, Ohio. 726,159, pub. 10–24–61. Cl. 13.
Procter & Gamble Co., The, Cincinnati, Ohio. 726,342, pub. 10–24–61. Cl. 52.
Proctor-Silex Corp., The, Philadelphia, Pa. 726,234, pub. 10–24–61. Cl. 24.
Propper Mfg. Co., Inc., Long Island City, N.Y. 616,526, canc. Cl. 26.
Purdue Frederick Co., The, New York, N.Y. 726,190, pub. 10–24–61. Cl. 18.
Puritan Chemical Co., Atlanta, Ga. 626,047. Am. 7(d). Cl. 6.
Pyroxylin Products, Inc., Chicago, Ill. 726,170, pub. 10–24–61. Cl. 16.
Quality Control Products, Inc., Durham, N.C. 697,975, canc. Cl. 12.
RCA Mfg. Co., Inc., Camden, N.J., to Radio Corp. of America, New York, N.Y. 394,165, ren. 1–9–62. Cl. 37.
Radio Corp. of America: *See*—
RCA Mfg. Co., Inc.
Raleigh Haberdasher, Inc., Washington, D.C. 388,926, ren. 1–9–62. Cl. 39.
Ralston Purina Co., St. Louis, Mo. 616,581, canc. Cl. 38.
Rapids-Standard Co., Inc., The, Grand Rapids, Mich. 726,–161, pub. 10–24–61. Cl. 13.
Raybestos-Manhattan, Inc.: *See*—
Raybestos Co., The.
Raybestos Co., The, Bridgeport, Conn., to Raybestos-Manhattan, Inc., Passaic, N.J. 153,290, ren. 1–9–62. Cl. 35.
Raybestos Manhattan, Inc., Passaic, N.J. 394,108, ren. 1–9–62. Cl. 35.
Regal Stores, Inc., Indianapolis, Ind. 726,318, pub. 10–24–61. Cl. 46.
Rembrandt Tobacco Corp. (Overseas) Ltd., Stellenbosch, Cape Province, Union of South Africa. 726,370. Cl. 17.
Remco Industries, Inc., Newark, N.J. 726,211–12, pub. 10–24–61. Cl. 22.
Rex Products Corp., New York, N.Y., to Dorset-Rex, Inc., New Britain, Conn. 390,915, ren. 1–9–62. Cl. 2.
Richard Publishing Co., The, Melvindale, Mich. 616,575, canc. Cl. 37.
Rinshed-Mason Co., Detroit, Mich. 726,169, pub. 10–24–61. Cl. 16.
Roberts Food Corp.: *See*—
Bonoil Packing Corp.
Robbins Floor Products, Inc., Tuscumbia, Ala. 616,663, canc. Cl. 12.
Rockwell, Leon G., d.b.a. Rockwell Specialties Co., Dearborn, Mich. 726,122, pub. 10–24–61. Cl. 6.
Rockwell Specialties Co.: *See*—
Rockwell, Leon G.
Room-Temp Lockers, Inc., Tacoma, Wash. 616,533, canc. Cl. 31.
Rosenthal-Porzellanfabrik vorm. Jac. Zeidler & Co., Bahnhof Selb, Germany. 182,977, canc. Cl. 30.
Roux Laboratories, Inc., New York, N.Y. 726,384. Cl. 51.
Ross Products, Inc., New York, N.Y. 726,378. Cl. 33.
Rubefold Co., The, New York, N.Y. 154,378, ren. 1–9–62. Cl. 16.
Ruberoid Co., The, New York, N.Y. 726,366. Cl. 12.
Rubon Inc., Independence, Mo. 726,128, pub. 10–24–61. Cl. 6.
Rudd-Melliklan, Inc., Hatboro, Pa. 726,226, pub. 10–24–61. Cl. 23.
Safety Development Corp., by change of name from Foamex, Inc., Greensburg, Pa. 726,123, pub. 10–24–61. Cl. 6.
Sales Affiliates, Inc., New York, N.Y. 726,340, pub. 10–24–61. Cl. 51.
Sanders World Travel, Inc., Washington, D.C. 726,353, pub. 10–24–61. Cl. 105.
Saxone Shoe Co. Ltd., Kilmarnock, Scotland. 616,595, canc. Cl. 39.
Schryver, Laura A.: *See*—
Schryver, Vernon J., and Laura A. Schryver.
Schryver, Vernon J., and Laura A. Schryver, d.b.a. Mount Rhyolite Ranch, Cripple Creek, Colo. 726,109, pub. 10–24–61. Cl. 1.
Sedberry, J. B., Inc.: *See*—
Sedberry, James B.
Sedberry, James B., Texarkana, Ark., to J. B. Sedberry, Inc., Tyler, Tex. 149,733, ren. 1–9–62. Cl. 23.
Selby Shoe Co., The, Portsmouth, Ohio. 616,590, canc. Cl. 39.
Selchow & Righter Co., New York, N.Y. 616,676–77, canc. Cl. 22.
Sequoia Forest Industries, Inc., by change of name from Ivory Pine Co., Dinuba, Calif. 726,139, pub. 10–24–61. Cl. 10.
Sherwin-Williams Co., The, Cleveland, Ohio. 392,005, ren. 1–9–62. Cl. 16.
Shuford Mills, Inc., Hickory, N.C. 726,379. Cl. 35.
Siegel, Albert G., d.b.a. Davis-Young & Co., Los Angeles, Calif. 726,186, pub. 10–24–61. Cl. 18.
Sikeston Ceramics, Inc., Sikeston, Mo. 726,136, pub. 10–24–61. Cl. 8.
Silvertone Undergarment Co., Inc., New York, N.Y. 726,300, pub. 10–24–61. Cl. 39.
Simon Simple Originals, Orange, N.J. 726,298, pub. 10–24–61. Cl. 39.
Smith, A. L., Iron Co., Chelsea, Mass. 616,673, canc. Cl. 21.
Smith, J. Austin, & Son, Loudonville, Ohio. 726,235, pub. 10–24–61. Cl. 25.
Societe Anonyme Mido, Bienne, Switzerland. 726,240, pub. 10–24–61. Cl. 27.
Society Brand Hat Co.: *See*—
Modern Cap Mfg. Co.
Somerset Refinery, Inc., The, Somerset, Ky. 726,166, pub. 10–24–61. Cl. 15.
Sosnik and Sosnik, Inc., Winston-Salem, N.C., to Modern Globe, Inc., Pawtucket, R.I. 394,288, ren. 1–9–62. Cl. 39.
Southern Toy & Novelty Corp.: *See*—
Wilson, Carlos G.
Speedfast Corp., Long Island City, N.Y. 726,222, pub. 10–24–61. Cl. 23.
Speedrite Products, Inc., Wichita, Kans. 726,271, pub. 10–24–61. Cl. 37.
Staflex Co. Ltd., London, England. 726,302, pub. 10–24–61. Cl. 42.
Stamp World Inc., Brooklyn, N.Y. 726,285, pub. 10–24–61. Cl. 38.
Standard Oil Co., The, Cleveland, Ohio. 726,167, pub. 1–24–61. Cl. 15.
Stanfield, S. Sharpe, & Associates: *See*—
Stanfield, S. Sharpe.
Stanfield, S. Sharpe, d.b.a. S. Sharpe Stanfield & Associates, New Orleans, La. 726,364. Cl. 12.
Stant Mfg. Co., Inc., Connersville, Ind. 726,372. Cl. 19.
Starr Pharmacal Co., Los Angeles, Calif. 726,175, pub. 10–24–61. Cl. 18.
Statistical Tabulating Corp., Chicago, Ill. 726,278, pub. 10–24–61. Cl. 38.
Stein, A., & Co.: *See*—
Stein, A., & Co., Inc.
Stein, A., & Co., Inc., Wilmington, Del., by merger and change of name from A. Stein & Co., Chicago, Ill. 726,135, pub. 10–24–61. Cl. 8.
Stetson China Co., Lincoln, Ill. 726,245–7, pub. 10–24–61. Cl. 30.
Stiebel, Theodor H., Holzminden, Weser, Germany. 616,477, canc. Cl. 21.
Stoddard, Meryl L., Flint, Mich. 726,140, pub. 10–24–61. Cl. 10.
Strawbridge & Clothier, to Strawbridge & Clothier, Philadelphia, Pa. 154,712, ren. 1–9–62. Cl. 39.
Stromberg-Carlson Co. to General Dynamics Corp., Rochester, N.Y. 616,478, canc. Cl. 21.

Suburban Farm Service Co., Whippany, N.J. 616,403, canc. Cl. 10.
Super-Dontic Mfg. Co.: *See*—
Barksdale, Edgar W.
Sutone Corp., Los Angeles, Calif. 726,195–6, pub. 10–24–61. Cl. 19.
Swift, M., & Sons, Inc., Hartford, Conn. 726,369. Cl. 14.
Takahashi, C. T., & Co., Inc., Seattle, Wash. 616,376, canc. Cl. 1.
Tamms Industries Co., Chicago, Ill. 726,121, pub. 10–24–61. Cl. 5.
Tasty Mates Co., Camden, N.J. 726,312, pub. 10–24–61. Cl. 45.
Taylor, White Extracting Co., Camden, N.J., to The J. S. Young Co., Baltimore, Md. 391,993, ren. 1–9–62. Cl. 6.
Testagar & Co. Inc., Detroit, Mich. 726,185, pub. 10–24–61. Cl. 18.
Tested Products Co.: *See*—
Hanson, Reginald G.
Texas Co., The, New York, N.Y. 408,018, canc. Cl. 15.
Texlon Corp., Dallas, Tex. 726,132, pub. 10–24–61. Cl. 7.
"The Winery": *See*—
Harris, Tony M.
Thermotronics Corp., Valley Stream, N.Y. 726,157, pub. 10–24–61. Cl. 13.
Thomae, Dr. Karl, GmbH, Biberach an der Riss, Germany. 726,178, pub. 10–24–61. Cl. 18.
Thomas & Betts Co., The, Elizabeth, N.J. 726,200, pub. 10–24–61. Cl. 21.
Thompson Air Plastics: *See*—
Thompson, Elbert A.
Thompson, Elbert A., d.b.a. Thompson Air Plastics, Mineola, N.Y. 726,113, pub. 10–24–61. Cl. 1.
Thrifty Drug Co. Ltd., d.b.a. Thrifty Drug Stores, Los Angeles, Calif. 317,748, canc. Cl. 49.
Thrifty Drug Stores: *See*—
Thrifty Drug Co. Ltd.
Top-Scor Products, Inc., Louisville, Ky. 726,325, pub. 10–24–61. Cl. 46.
Tradall S.A., Vaduz, Liechtenstein. 726,260, pub. 10–24–61. Cl. 35.
Tri Associates, Inc., Minneapolis, Minn. 726,313, pub. 10–24–61. Cl. 46.
Turtle Wax, Inc., Chicago, Ill. 726,119, pub. 10–24–61. Cl. 4.
UBC Distributors, Inc.: *See*—
United Buyers Corp.
Unatin, Leon and M. Unatin, Las Vegas, Nev. 726,295, pub. 10–24–61. Cl. 39.
Unatin, Muriel: *See*—
Unatin, Leon and M.
Union Carbide Corp., New York, N.Y. 722,837, cor. Cl. 31.
United Buyers Corp., also d.b.a. Foodcraft Products, to UBC Distributors, Inc., Chicago, Ill. 391,989, ren. 1–9–62. Cl. 45.
United Kingdom Tobacco Co., Ltd., The, d.b.a. Markovitch & Co., London, England. 726,371. Cl. 17.
United Mattress Machinery Co.: *See*—
Meridan Corp.
United Merchants and Manufacturers, Inc., New York, N.Y. 616,611–12, canc. Cl. 42.
United States Steel Corp., Pittsburgh, Pa. 616,410, canc. Cl. 12.
United States Steel Corp., Pittsburgh, Pa. 726,164, pub. 10–24–61. Cl. 14.
United Vintners, Inc., d.b.a. Italian Swiss Colony, San Francisco, Calif. 726,334, pub. 10–24–61. Cl. 47.
Valley Evaporating Co.: *See*—
New York Canners, Inc.
Vance Publishing Corp., Chicago, Ill. 726,380. Cl. 38.
Van Houten, C. J., & Zoon, N.V., Weesp, Netherlands. 709,726. Am. 7(d). Cl. 46.
Vanity Fair Mills, Inc.: *See*—
Vanity Fair Silk Mills.
Vanity Fair Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 394,603, ren. 1–9–62. Cl. 39.
Vaughan Interior Walls, Inc., Los Angeles, Calif. 726,144, pub. 10–24–61. Cl. 12.
Vitarine Co., Inc., The, New York, N.Y. 726,187, pub. 10–24–61. Cl. 18.
Voit, W. J., Rubber Corp., Los Angeles, Calif. 726,261, pub. 2–21–61. Cl. 35.
W. T. M. Mfg. Co., Ripon, Wis. 616,554, canc. Cl. 34.
Wampole Laboratories: *See*—
Denver Chemical Mfg. Co., The.
Waples-Platter Co., d.b.a. Great Western Foods Co., Fort Worth, Tex. 726,319, pub. 10–24–61. Cl. 46.
Ward Baking Co., New York, N.Y. 150,164, ren. 1–9–62. Cl. 46.
Warner Electric Brake & Clutch Co., South Beloit, Ill. 726,–202, pub. 10–24–61. Cl. 21.
Warner Electric Brake & Clutch Co., South Beloit, Ill. 726,–204, pub. 10–24–61. Cl. 21.
Warner-Lambert Pharmaceutical Co.: *See*—
Warner, William R., & Co., Inc.
Warner, William R., & Co., Inc., New York, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 394,985, ren. 1–9–62. Cl. 18.
Weiss, Barnett, from Lady Tucker, Inc., New York, N.Y. 616,685, canc. Cl. 39.
Wellco Shoe Corp., Waynesville, N.C. 391,489, ren. 1–9–62. Cl. 39.
Wellco Shoe Corp., Waynesville, N.C. 393,645, ren. 1–9–62. Cl. 39.
Wessel Bedding Co.: *See*—
Wessel, Herman.
Wessel, Herman, to Wessel Bedding Co., Cincinnati, Ohio. 152,002, ren. 1–9–62. Cl. 42.
Western Chef Products, Inc., Spokane, Wash. 616,371, canc. Cl. 1.
Western Condensing Co.: *See*—
Foremost Dairies, Inc.
Western Tablet & Stationery Corp., Dayton, Ohio, from White and Wyckoff Mfg. Co., Holyoke, Mass. 726,264, pub. 10–24–61. Cl. 37.
White, Martha, Mills, Inc., Nashville, Tenn. 726,321, pub. 10–24–61. Cl. 46.
White, S. S., Dental Mfg. Co., The, Philadelphia, Pa. 391,998, ren. 1–9–62. Cl. 51.
White and Wyckoff Mfg. Co.: *See*—
Western Tablet & Stationery Corp.
Wilson, Carlos G., d.b.a. Southern Toy & Novelty Corp., Memphis, Tenn. 616,679, canc. Cl. 22.
Wilson, Lloyd S., d.b.a. L. S. Wilson Mfg. Co., Chicago, Ill. 616,415, canc. Cl. 12.
Wilson Mfg. Co.: *See*—
Wilson, Lloyd S.
Witwicke, Joseph W., d.b.a. Gopher Outdoor Co., St. Paul, Minn. 616,664, canc. Cl. 12.
Wrap-Vertiser Corp.: *See*—
Arny Chemical Corp.
Wrightway Engineering Co., Chicago, Ill. 616,666, canc. Cl. 13.
Wurlitzer, Rembert, New York, N.Y. 726,263, pub. 10–24–61. Cl. 36.
Wyeth Laboratories, Div. of American Home Products Corp.: *See*—
American Home Products Corp.
Yanmar Diesel Engine Co., Ltd., Kita-Ku, Osaka, Japan. 726,216, pub. 10–24–61. Cl. 23.
Yardsticks, Inc., Oklahoma City, Okla. 726,376. Cl. 26.
York Shipley, Inc., York, Pa. 616,553, canc. Cl. 34.
Yosemite Chemical Co., d.b.a. Yosemite Chemical Co., San Francisco, Calif. 726,344, pub. 10–24–61. Cl. 52.
Youle Drive-On Gates, Inc., Batavia, Ill. 616,668, canc. Cl. 13.
Young, J. S., Co., The: *See*—
Taylor, White Extracting Co.
Younghusband, James L.: *See*—
Associated Distributors, Inc.
Zaninovich, George, Inc., d.b.a. Coronado Distillery, Orange Cove, Calif. 726,337, pub. 10–24–61. Cl. 49.
Zenith Corp., Clinton, Mo. 726,138, pub. 10–24–61. Cl. 9.

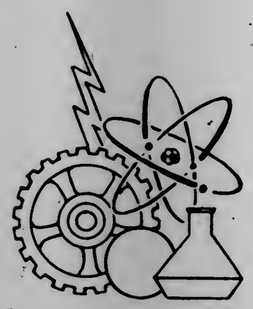
U.S. GOVERNMENT PRINTING OFFICE: 0— 1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

January 16, 1962 • Volume 774 • Number 3



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of January 16, 1962	415
New Applications Received	415
Notices	
Board of Appeals Decisions Rendered in the Month of November 1961	415
Notice of Tentative Recordation of a Trade Name	415
Disclaimers	415
Applications—Filing Dates	415
Adjudicated Patents	415
Patents Available for Licensing or Sale	415
Condition of Patent Applications	417
Decisions in Patent and Trademark Cases	
Jalar et al. v. Melott	419
Patent Suits	420
Reissue Patents Granted	422
Plant Patents Granted	422
Patents Granted	
General and Mechanical	423
Chemical	625
Electrical	664
Design Patents Granted	718
Index of Patentees	i
Classification of Patents	xxv

Trademarks

Issue of January 16, 1962	TM 81
Applications Filed	TM 81
Condition of Trademark Applications	TM 81
Notices	
Trademark Suits	TM 81
Notice of Tentative Recordation of a Trade Name	TM 82
Marks	
Marks Published for Opposition (282)	TM 83
Registrations Issued	
Principal Register	TM 107
Supplemental Register	TM 112
Registrations Renewed	TM 112
Registrations Canceled	TM 113
Registrations—New Certificates	TM 114
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of November 1961

Examiner affirmed	361
Examiner affirmed in part	51
Examiner reversed	71
Total	483

Notice of Tentative Recordation of a Trade Name

[T.D. 55528]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., Dec. 8, 1961

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"GOJAX HOUSEWARES, INC.," a corporation organized under the laws of the State of Florida, located and doing business at 38 S.E. 8th Street, Miami 32, Florida. This trade name is used in connection with cutlery, china, housewares, etc., manufactured in Japan.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after January 15, 1962, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after January 15, 1962, of any opposition proceeding.

Until 45 days after January 15, 1962, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, Jr.,
Commissioner of Customs.

Disclaimer

2,789,616.—*George R. Cuthbertson*, Ridgewood, N.J., and *Edward B. Erickson*, Grosse Pointe Woods, Mich. METHOD OF FORMING SIDEWALL OF TIRE. Patent dated Apr. 23, 1957. Disclaimer filed Oct. 18, 1961, by the assignee, *United States Rubber Company*.

Hereby enters this disclaimer to claim 4 of said patent.

Applications—Filing Dates

On and after February 1, 1962, the Application Branch will accord a filing date as of the date of receipt in the Office to application papers which include all of the necessary components of a complete application, even though there appear to have been omitted therefrom either:

(*a*) one or more figures of the drawing
(*b*) one or more pages of the specification
(*c*) one or more claims.

The apparent omission will be noted on the filing receipt mailed to applicant so that he may take any action in the matter which he deems appropriate or necessary.

EDWIN L. REYNOLDS,
Dec. 22, 1961. *First Assistant Commissioner.*

Adjudicated Patent

(C.A. Conn.) Woodfine Patent No. 1,916,905 (197–70), for marginal regulators for typewriters. Claim 3 *Held* valid and infringed. *Royal-McBee Corp.* v. *Smith-Corona Marchant, Inc.*, 295 F.2d 1; 130 USPQ 377.

Patents Available for Licensing or Sale

2,998,361. Electrochemical Treatment of Metal Surfaces and the Products Thereof. Toyo Kohan Co. Ltd. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

General Electric Company is prepared to grant non-exclusive licenses under the following 30 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 19 patents may be addressed to: Patent Counsel, General Electric Company, Chemical & Metallurgical Division, 1285 Boston Ave., Bridgeport 2, Conn.

2,813,811.	High Strength Crystals.
2,868,162.	Endless Belt Paint Applicator.
2,891,663.	Display Container.
2,891,755.	Mounting Ear in Slotted Opening.
2,892,174.	Surface Outlet.
2,900,466.	Electric Switch With Miniature Toggle Mechanism.
2,923,912.	Angle Plugs and Method of Assembling Same.
2,944,380.	Wire Twisting Machine.
2,946,977.	Interchangeable Wiring Device With Pressure Lock Terminals.
2,952,420.	Reel for Electrical Cable.
2,955,276.	Wiring Device With Simplified Wire Terminals.
2,959,656.	Mercury Feed-Through Cord Switch.
2,969,418.	Interchangeable Wiring Devices.

New Applications Received During November 1961

Patents	7,043
Designs	429
Plant Patents	7
Reissues	21
Total	7,500

Issue

Patents	1,096—No.	3,016,538 to No. 3,017,633, incl.
Designs	40—No.	192,070 to No. 192,109, incl.
Plant Patents	2—No.	2,121 to No. 2,122, incl.
Reissues	1—No.	25,116
Total	1,139	

2,969,442. Detent Mechanism for A.C. Switch.

2,969,479. Electrical Circuit Tester.

2,980,283. Faceplate Design With Removable Inserts.

2,980,791. Auto Map Light.

2,991,337. Master Selector Switch.

2,991,344. Push Button A.C. Switch.

Applications for license under the following 5 patents may be addressed to: T. E. Kristofferson, Patent Counsel, General Electric Company, Ordnance Dept., 100 Plastics Ave., Pittsfield, Mass.

2,969,544. Contoured Article.

2,969,759. Hydrodynamic Drag Reduction in Vehicles Through Boundary Layer Control.

2,973,751. Internal Combustion Engine.

2,981,825. Contact Tip for Welding Gun.

2,983,801. High Current Disconnect Device.

Applications for license under the following 5 patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

3,002,363. Automatic Ice Maker.

3,003,408. Damper Operating Arrangement.

3,006,162. Compressor Motor Cooling Arrangement for Reversible Refrigeration System.

3,006,163. Compressor Motor Cooling Arrangement for Reversible Refrigeration System.

3,006,164. Reversible Refrigeration System.

Applications to license under the following patent may be addressed to: General Electric Company, Atomic Power Equipment Department, 2151 S. First St., San Jose, Calif., Attention: Patent Counsel.

2,997,874. Method and Apparatus for Determining the Solute Content of a Solution.

CONDITION OF PATENT APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of pending applications (excluding Designs)	196, 777
Total number of pending Design applications	5, 445
Total number of applications awaiting action (excluding Designs)	95, 028
Total number of Design applications awaiting action	1, 432
Date of oldest new application	Aug. 31, 1960
Date of oldest amended application	July 11, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. O., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	3-30-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-4-61	5-17-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	12-2-60	12-19-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-3-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-13-61	2-2-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	4-24-61	4-18-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-2-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-61	1-13-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-5-60	12-9-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-13-60	11-29-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-22-60	10-14-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-6-60	12-16-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	9-13-60	11-10-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-1-61	4-26-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	3-6-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-7-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-24-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-25-61	5-9-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	2-6-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	1-11-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-61	1-30-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	11-15-60	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	4-24-61	4-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	11-3-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	1-30-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-6-61	3-22-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	12-27-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-19-60	1-11-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	11-25-60	12-1-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-9-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	12-16-60
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	11-17-60	11-21-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	8-31-60	7-11-60
45. (VI) MANFAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	5-8-61	5-25-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-10-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-9-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-20-60	9-16-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-6-61	1-6-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-23-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	11-1-60	11-2-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-1-61	5-1-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-6-61	3-17-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-3-60	10-14-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-8-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-29-60	12-5-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	1-3-61	12-20-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-3-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-8-60	11-10-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-30-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-11-61	4-4-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-23-60	12-9-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-1-60	12-2-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	10-14-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	10-19-60	10-13-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-4-60	9-16-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-21-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	12-6-60	12-5-60
81. (III) MONCURE, J. A., Industrial Arts	8-8-61	7-28-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-1-61	8-7-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	11-18-60	11-18-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	6-30-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	1-30-61	1-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-8-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during January 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents.....Numbers 2,366,154 to 2,368,612 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Commissioner's Decision

JALAR ET AL. *v.* MELOTT

Interference No. 90,762. Decided October 10, 1961

1. INTERFERENCE—PATENT AND APPLICATION—MOTION TO DISSOLVE BY PRIMARY EXAMINER—RULE 237(a).

Upon reviewing the decision of the Primary Examiner dissolving an interference between a patent and an application on his own motion under Rule 237(a) on the ground that the counts were unpatentable over new prior art cited therein, on a petition in which the applicant contended that Rule 237 is inapplicable to dissolve an interference between a pending application and a patent because under 35 USC 282 a patent is presumptively valid, and because, after the issuance of a patent, the Patent Office lacks jurisdiction to make any adjudication as to the patentability of subject matter claimed therein, *Held* that "The procedure followed in this case was strictly in accordance with Rule 237, which makes no distinction between interferences which involve patents and those which do not"; and that "Where, as here, it is discovered prior to the taking of any testimony that the patent claims which form the basis of the interference are not patentable, it is not thought that the Patent Office is properly chargeable with the duty of making a determination of priority as between the parties."

H. von Maltitz (for Jalar et al.).

Charles R. Fay (for Melott).

ON PETITION.

DENIED.

REYNOLDS, *First Assistant Commissioner:*

Melott petitions the Commissioner to exercise supervisory authority to set aside the decision of the Primary Examiner dissolving the above entitled interference between an application of Melott and a patent of Jalar et al., on his own motion under Rule 237(a) on the ground that the counts in the above identified interference were unpatentable over new prior art patents cited therein.

Petitioner contends primarily that Rule 237 is inapplicable to dissolve an interference between a pending application and a patent because under 35 USC 282 a patent is presumptively valid, and because after the issuance of a patent, the Patent Office lacks jurisdiction to make any adjudication as to the patentability of subject matter claimed therein. Petitioner urges that the question of patentability can be properly raised by the Patent Office only after a determination of priority in the applicant's favor.

[1] The procedure followed in this case was strictly in accordance with Rule 237, which makes no distinction between interferences which involve patents and those which do not. Where, as here, it is discovered prior to the taking of any testimony that the patent claims which form the basis of the interference are not patentable, it is not thought that the Patent Office is properly chargeable with the duty of making a determination of priority as between the parties.

The arguments advanced by petitioner have been carefully considered but no such irregularity in procedure has been discovered as would justify supervisory action and the petition is accordingly denied.

DENIED.

Withdrawal and Substitution of Opinion

The concurring opinion of Chief Judge Worley in Appeal No. 6697, entitled "*Alfred Dunhill of London, Inc.* v. *Dunhill Tailored Clothes, Inc.*," in the U.S. Court of Customs and Patent Appeals, as published in the December 19, 1961, issue of the OFFICIAL GAZETTE, 773 O.G. 611, 615 and 616, was withdrawn on December 18, 1961, and the following concurring opinion was substituted therefor:

WORLEY, *Chief Judge* (concurring):

I agree that the Board should be reversed but for different reasons than those advanced by the majority.

First, I fail to see how the district court action can be given the controlling weight accorded it below or by the majority here. The jurisdiction, the facts, and the issues there were wholly different from those here. There the basic issue was the right to *use*; here it is the right to *register*. That there are substantial differences between the two in fact as well as in law is too well established to require citation of authorities.

Second, I agree with the majority that "Dunhill" had, and has, a "special significance." Indeed, it is so significant that there is no doubt in my mind that the average purchaser would associate "Dunhill" and "Dunhill Tailors" to a degree which I think the provisions of section 2(d) were intended to prevent.

It is interesting to note that no application for concurrent registration has ever been filed or considered by the Patent Office. It is not mentioned in the reasons of appeal to this court. Yet the net effect of the majority view is to order the Board to grant concurrent registration. I have grave doubts that this court has that power.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,272,439, Stanley and Larsen, Aircraft sustaining rotor blades; **2,302,668**, P. H. Stanley, Sustaining rotor for aircraft; **2,321,572**, H. S. Campbell, Rotative winged aircraft; **2,380,580**, J. Cierva, Rotor-equipped aircraft; **2,380,582**, same, Aircraft having rotative wings; **2,380,583**, same, Aircraft with autorotative wings; **2,659,551**, same, Control system for tandem rotor helicopters; **2,670,804**, H. S. Campbell, Aircraft having rotative sustaining blades and control mechanism for such aircraft; **2,877,856**, same, Aircraft rotor blade control mechanism, **filed** Oct. 31, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30462, *Autogiro Company of America* v. *Boeing Company et al.*

2,282,654, W. L. Horner, Apparatus for determining fluid contents of solids; **2,296,852**, same, Earth exploration; **2,327,642**, same, Method and apparatus for measuring porosity of solids; **2,345,535**, same, Method of determining porosity; **2,361,844**, same, Method for determining fluid contents of solids; **2,617,296**, J. D. Wisenbaker, Process for treating core samples, **filed** Dec. 30, 1958, D.C., N.D. Tex. (Wichita Falls), Doc. 1366, *Core Laboratories, Inc.* v. *Riley G. Maxwell Co.* Consent decree; patents held valid and infringed (notice Oct. 30, 1961).

2,296,852. (See 2,282,654.)

2,302,668. (See 2,272,439.)

2,321,572. (See 2,272,439.)

2,327,642. (See 2,282,654.)

2,345,535. (See 2,282,654.)

2,361,844. (See 2,282,654.)

2,380,580. (See 2,272,439.)

2,380,582. (See 2,272,439.)

2,380,583. (See 2,272,439.)

2,390,636, L. J. Biro, Writing instrument; **2,397,229**, same; **2,400,679**, same, Fountain pens; **2,416,896**, same, Writing instruments, **filed** Jan. 12, 1956, D.C., N.D. Ill. (Chicago), Doc. 56c77, *Eversharp, Inc.* v. *Fisher Pen Co., Inc. et al.* Patents held valid and infringed Nov. 7, 1961.

2,397,229. (See 2,390,636.)

2,400,679. (See 2,390,636.)

2,416,896. (See 2,390,636.)

2,420,771, H. E. Crawford et al., Knitting machine and method; **2,466,885**, E. T. Floyd, Stockings; **2,473,677**, H. E. Crawford et al., Knitting machine; **2,716,876**, J. H. Surratt, Apparatus for knitting elastic fabric and method, **filed** Nov. 9, 1961, D.C., S.D. Tenn. (Chattanooga), Doc. 3817, *Morpul, Inc.* v. *Crescent Hosiery Mills.* **Same, filed** same, Doc. 3818, *Morpul, Inc.* v. *Tennessee Hosiery Mills Company, Inc.* **Same, filed** same, Doc. 3819, *Morpul, Inc.* v. *Allied Hosiery Mills.* **Same, filed** same, Doc. 3820, *Morpul, Inc.* v. *Engleknit Hosiery Mill.* **Same, filed** same, Doc. 3821, *Morpul, Inc.* v. *William P. Chestnut et al.*

2,466,885. (See 2,420,771.)

2,473,677. (See 2,420,771.)

2,617,296. (See 2,282,654.)

2,659,551. (See 2,272,439.)

2,665,838, H. W. Forrer, Carrying device for bottle carriers; **2,692,977**, R. Kuhlman, Package for radio tubes and the like (included by amendment Nov. 9, 1961), D.C., W.D.N.Y. (Buffalo), Doc. 8769, *Victor Wagner & Son, Inc.* v. *Wagner Folding Box Corporation.*

2,670,804. (See 2,272,439.)

2,692,977. (See 2,665,838.)

2,696,990, Orr and Sands, Magnetic deflection means for electron discharge services; **2,719,228**, I. L. Auerbach, Binary computation circuit; **2,721,955**, Sin-Pih Fan et al., Multi-position beam tube; **Reg. No. 333,110** (BURROUGHS), Burroughs Adding Machine Company, Electric motors, interference eliminators, etc.; **Reg. No. 342,430**, same, Adding machines, listing machines, calculating machines, key operated and automatic calculators, etc.; **Reg. No. 505,174**, same; **Reg. No. 518,895**, same, **filed** Oct. 24, 1961, D.C. Conn. (New Haven), Doc. 9009, *Burroughs Corporation* v. *Burroughs Electronics, Inc.*

2,706,697, P. Eisler, Manufacture of electric circuit components; **Re. 24,165** (of 2,587,568), same, **filed** Nov. 13, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/498, *Technograph Printed Circuits Ltd. et al.* v. *Philco Corporation.*

2,716,876. (See 2,420,771.)

2,719,228. (See 2,696,990.)

2,721,955. (See 2,696,990.)

2,745,075, R. L. Simkins et al., Insulated terminal, **filed** Nov. 8, 1961, D.C., N.D. Ohio (Toledo), Doc. 8748, *Essex Wire Corporation* v. *The Electric Auto-Lite Company.*

2,818,832, G. H. Bushway, Box toe blank conditioning machine, **Appeal, filed** Sept. 21, 1960, C.C.A., 1st Cir., Doc. 5739, *Shu-Conditioner, Inc.* v. *Bixby Box Toe Company, Inc.* Judgment of District Court affirmed (notice Nov. 15, 1961).

2,829,918, R. Aronstein, Optical device for therapeutic and other purposes, **filed** July 12, 1960, D.C., S.D.N.Y., Doc. 60/2716, *Transmirra Products Corporation* v. *The Dow Chemical Company.* Stipulation and order of discontinuance Nov. 13, 1961.

2,850,803, S. Briskman, Shears with arcuate profiled teeth; **Des. 180,578**, same, Shears or the like, **filed** Oct. 10, 1958, D.C., S.D.N.Y., Doc. 138/349, *Samuel Briskman et al.* v. *Cutlers Guild, Ltd. et al.* Stipulation and order discontinuing action and defendants' counterclaims.

2,868,223, W. O. Lum, Valves, **filed** Nov. 30, 1959, D.C., S.D.N.Y., Doc. 153/197, *H & H Thermostats, Inc.* v. *Hanco Metal Products, Inc.* Order dismissing action for lack of prosecution Nov. 14, 1961.

2,877,856. (See 2,272,439.)

2,895,218, W. Petzoldt, Kit for domestic or trade use, **filed** Apr. 25, 1960, D.C., S.D.N.Y., Doc. 1665, *Edaco Stahlwarenfabrik Ernst Darmann & Co.* v. *Hill Novelties Manufacturing Corporation.* Order of dismissal for lack of prosecution Nov. 14, 1961.

2,916,161, R. L. Schaefer, Utility containers; **Des. 186,819**, same, Vegetable bin, **filed** Jan. 4, 1960, D.C., S.D.N.Y., Doc. 60/17, *Republic Molding Corporation* v. *Rona Plastic Corporation.* Order of dismissal for lack of prosecution Nov. 14, 1961.

2,932,964, C. Dobell, Tank construction, **filed** Aug. 25, 1961, D.C., N.D. Fla. (Gainesville), Doc. 330 (originally filed Jan. 18, 1961, D.C., E.D. Va. (Richmond), Doc. 3232), *The Preload Co., Inc.* v. *The Crom Corporation.* Order holding patent valid and enjoining both plaintiff and defendant from certain representations Nov. 2, 1961.

3,004,893, G. J. Martin, Enteric coated trypsim and chymotrypsin anti-inflammatory compositions, **filed** Nov. 13, 1961, D.C., E.D. Ill. (Danville), Doc. 1913–D, *Richardson-Merrell, Inc.* v. *Armour and Company.*

Re. 24,165. (See 2,706,697.)

Re. 24,246, Fink and Heintz, Multiple shingle structure, **filed** Aug. 22, 1958, D.C., W.D.N.Y. (Buffalo), Doc. 7955, *Creo-Dipt Co., Inc.* v. *Kraus Shingle Panel & Lumber Company.* Order of dismissal for want of prosecution Nov. 14, 1961.

Des. 180,578. (See 2,850,803.)

Des. 186,819. (See 2,916,161.)

REISSUES

JANUARY 16, 1962

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,116
ROTARY PUMPS AND THE LIKE
Guillermo Frederico Baez, Hotel Seville, New York, N.Y.
Original No. 2,771,036, dated Nov. 20, 1956, Ser. No. 482,815, Jan. 19, 1955. Application for reissue Sept. 17, 1959, Ser. No. 840,785
4 Claims. (Cl. 103—94)



1. A device for lifting or compressing fluids, which comprises a casing having an inlet opening and an outlet opening; a first rotor mounted within said casing and provided with a plurality of blades adapted to move the fluid from said inlet opening towards said outlet opening; a second rotor mounted within said casing between said first rotor and said outlet opening, and provided with a plurality of blades extending in a direction opposite to that of the blades of the first rotor; a motor; and a mechanism for transmitting motion from said motor to said rotors in order to drive said first rotor in such a direction that the fluid is moved from said inlet towards said outlet and to drive said second rotor at the same speed as said first rotor but in an opposite direction, the pitch of the blades of said second rotor at the end adjacent the first rotor corresponding to the equation

$$\left[\alpha 3=\frac{Ve_2}{n'_2+n'_3}\right] tan\ \alpha_3=\frac{Ve_2}{\alpha u'_2+u_3}$$

wherein

α_3 is the pitch of said blades *of the second rotor at the end adjacent the first rotor*;

Ve_2 is the axial velocity at the outlet end of said [second] *first* rotor;

[n_3] u_3 is the tangential velocity of the counter-rotation *of said second rotor*; and

[n'_2 is $\sqrt{Ve_1^2-Ve_2^2}$] u'_2 is $\sqrt{V_{s1}^2-Ve_2^2}$

wherein

[Ve_1] V_{s1} is the velocity of the [admission of] fluid at the [inlet] *outlet* end of the first rotor [;]. [and Ve_2 is the velocity of the fluid at the discharge end of said first rotor.]

PLANT PATENTS

GRANTED JANUARY 16, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,121
ROSE PLANT
Walter E. Lammerts, Livermore, Calif., assignor, by mesne assignments, to C. R. Burr & Company, Inc., Manchester, Conn., a corporation of Connecticut
Filed Feb. 8, 1961, Ser. No. 87,981
1 Claim. (Cl. 47—61)

A new and distinct variety of hybrid tea rose plant, substantially as herein shown and described, characterized particularly by the very bright Cherry Red color and the relative absence of magenta color in its blooms, the large size of its blooms, its very large and glossy foliage which abundantly clothes the plant, its sturdy compact habit of growth, and its ability to tolerate salt accumulation in the leaves in hot dry areas.

2,122
AZALEA PLANT
George Albert Reid, Linwood, N.J., assignor to Fischer Greenhouses, Linwood, N.J., a corporation of New Jersey
Filed Dec. 20, 1960, Ser. No. 77,258
1 Claim. (Cl. 47—60)

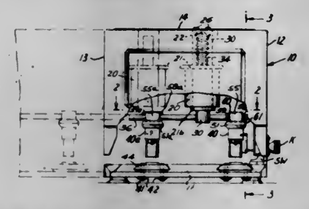
A new and distinct variety of azalea plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of exceptionally good winter-hardiness, the ability to withstand full sun and moderate winds, large flower size, a frilled hose-in-hose flower form, and a distinctive pink general color tonality of the flowers ranging from Strong Purplish Pink to Light Purplish Pink, with the center of the flower slightly lighter in color than the edge area.

PATENTS

GRANTED JANUARY 16, 1962

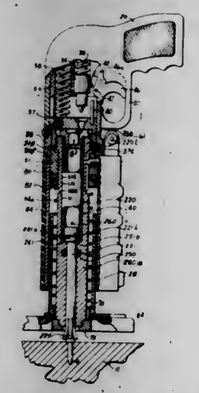
GENERAL AND MECHANICAL

3,016,538
MULTIPLE STAPLER
James J. Oussani, 777 5th Ave., Brooklyn 32, N.Y.
Filed Sept. 16, 1960, Ser. No. 56,391
7 Claims. (Cl. 1—3)



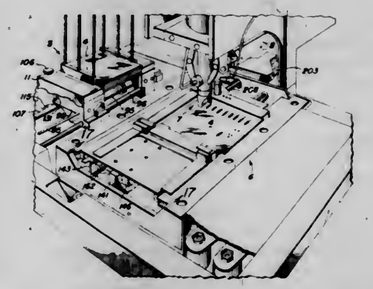
1. An adjustable powerized multiple stapler device comprising a housing having a base portion, a plurality of stapler members mounted side by side to said base to be laterally adjustable relative to each other, each said stapler including a driver arm, an electrical impeller secured to said housing having a depending, vertically shiftable plunger, means for activating and deactivating said impeller, a cross bar carried by said plunger horizontally disposed above said driver arms, and spring retainer fingers carried by said driver arms including portions extending over and slidably engaging said cross bar, said fingers biasing said driver arms against said cross-bar.

3,016,539
POWDER ACTUATED TOOL
Roger Marsh, Hudson, Rowland J. Kopf, Rocky River, and Robert W. Henning, Fairview Park, Ohio, assignors to Olin Mathieson Chemical Corporation, Cleveland, Ohio, a corporation of Virginia
Filed June 25, 1957, Ser. No. 667,807
9 Claims. (Cl. 1—44.5)



1. An explosive actuated apparatus for driving a working element comprising a barrel, a member axially slideably mounted in the barrel bore in forwardly constrained captive relationship with respect to said tool barrel for travel between a forward element driven position of said member and a rear ready-to-project adjustable position of said member in said bore, means on said member for receiving said element in detachable captive relationship with respect to said member ready for driving, and control means axially slideably mounted in the rear end of said barrel with telescoping relative movement between said barrel, member and control means, said control means having breech means for receiving an explosive blank cartridge therein and being adapted in one direction of said relative movement for manually positioning said member to a predetermined cartridge extraction position and subsequently to a ready-to-project position of said member and its captive element and in the opposite direction of said movement for manually extracting the spent cartridge and returning said control means for reception of another cartridge for actuation with said member remaining in ready-to-project position.

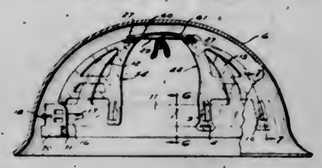
3,016,540
WAFER FEED AND POSITIONING MECHANISM FOR STAPLING MACHINE
Ralph Taynton, Fairfax, Va., assignor to Melpar, Inc., Falls Church, Va., a corporation of New York
Filed June 26, 1959, Ser. No. 823,102
24 Claims. (Cl. 1—321)



18. A machine for inserting selected electrical components at selected positions of a wafer, comprising a single stapling head, means for positioning said wafer including first and second motive means for moving said wafer in coordinate directions, control means for placing said wafer positioning means in a predetermined position, a guide means for said wafers, means for dropping a first lowermost wafer of said stack onto said guide means while supporting the remainder of said stack of wafers, said wafer positioning means having means for holding a wafer thereon, a wafer driving means repetitively movable between a first and a second position, said wafer driving means moving a wafer on said guide means a predetermined distance in a first direction onto said wafer positioning means when it is in said predetermined position, said control means moving said wafer positioning means so as to present different predetermined locations of said wafer lying in an area having a length parallel to said first direction approximately equal to said predetermined distance and a width approximately equal to the width of said wafer to said stapling head, said con-

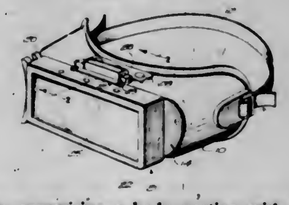
trol means thereafter returning said wafer positioning means to said predetermined position, said wafer feeding means again moving a wafer on said guide means a predetermined distance toward said wafer positioning means, means for causing said feeding means again to drop the lowermost wafer of said stack onto said guide means, after said motive means has presented substantially the entire length of said wafer parallel to said first direction to said stapling head, and means comprising further electrical programming devices for controlling said motive means to position said wafer with respect to said stapling head at positions appropriate to the selected ones of said components.

3,016,541
SAFETY HAT
Ralph L. Archbold, Euclid, Ohio, assignor to White Sewing Machine Corporation, Lakewood, Ohio, a corporation of Delaware
Filed July 1, 1959, Ser. No. 824,377
8 Claims. (Cl. 2—3)



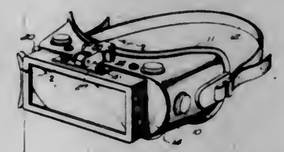
5. A harness comprising a headband formed of flat polyethylene plastic material, one end of said headband having a slot therein, the other end of said headband having an integrally formed lug extending into said slot, said lug having a flat head overhanging said slot, said headband adjacent said lug having a series of apertures, said headband adjacent said slot having an integrally formed button adapted to enter one of said apertures to lock the headband closed in adjusted position, said headband having a plurality of spaced upwardly extending integrally formed fingers arranged to curve inwardly towards the top of the hat, each of said fingers having an inverted depending V-shaped member secured thereto, the vertical height of said V-shaped members exceeding the length of said fingers so that the lower portions of the V-shaped members overhang said headband, the width of said members at their lower portions exceeding the width of the fingers, means to adjustably connect the upper ends of said fingers and said V-shaped members to each other, said lower portions of said V-shaped members having integrally formed sections at each side of its supporting finger, said sections having outwardly extending lugs for securing said harness to a hat.

3,016,542
GOGGLE WITH LIFTING COVER
Frank W. Lindblom, Warwick, R.I., assignor to Welsh Manufacturing Company, a corporation of Rhode Island
Filed Dec. 28, 1959, Ser. No. 862,296
1 Claim. (Cl. 2—14)



A goggle comprising a body portion with a window opening and a lens closing said opening, a cover for said lens comprising a frame mounting a transparent shield, hinge means above said window opening for hinging said frame to said body portion for swinging the frame from lens covering position to a position out of the line of sight through said lens, said hinge means comprises a member secured to said frame and a member secured to said body portion, said members being relatively movable about a common axis, one of said members having a tube of out of round cross-section, plunger parts of corresponding out of round cross-section slidable in each end of said tube, a spring urging said parts outwardly, said other member having cooperating parts in position to be engaged by said plunger parts, each pair of cooperating parts having one part with a V projection and the other part with a V recess whereby said members may be rotated through 180° from one interlocking relation to the other.

3,016,543
GOGGLE WITH LIFTING COVER
Frank W. Lindblom, Warwick, R.I., assignor to Welsh Manufacturing Company, a corporation of Rhode Island
Filed Dec. 28, 1959, Ser. No. 862,297
1 Claim. (Cl. 2—14)



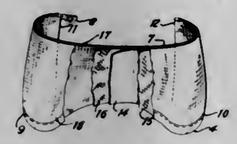
A goggle comprising a body portion with a window opening and a lens closing said opening, a cover for said lens comprising a frame mounting a transparent shield, hinge means above said window opening for hinging said frame to said body portion for swinging said frame from lens covering position to a position out of the line of sight through said lens, said hinge means comprising a member secured to said frame and a member secured to said body portion, one of said members having a post with a pair of angularly related abutment surfaces less than 90° apart, the other member having a pair of ears between which said post extends and is pivoted, a plunger in a bore between said ears and a spring pressing it into engagement with said post to hold the post by engagement with a selected one of said abutment surfaces in either of two positions greater than 90° apart.

3,016,544
NO-TIE BIB
Agnes C. Pinkney, 6 Lakeview, Baie D'Urfee, Quebec, Canada
Filed June 16, 1958, Ser. No. 742,228
Claims priority, application Canada June 20, 1957
1 Claim. (Cl. 2—49)



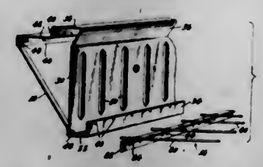
A bib for use on an infant or the like for retention thereon without ties or supplemental fasteners, said bib comprising a pair of main, substantially identical flexible body members each including at least one roughened surface, said roughened surfaces being juxtapositionable for retaining the bib on the infant exclusive of any other fastening means, said main body portions each including similar, integral, strap-like, neck-encircling arcuate portions extending toward each other and comprising mirror images of each other and extending from similar upper edge portions of said main body portions, means connecting said arcuate neck-encircling portions, said means including terminal angular marginal edges extending downwardly from an upper marginal portion of said neck-encircling portions, whereby said bib main body portions are normally disposed and urged into overlying relationship and a circular, flat, shoulder engaging portion is formed due to the angular edge margins being connected.

3,016,545
CAPS
Vincent J. Donahue, 3435 Beverly Glen Blvd., Sherman Oaks, Calif.
Filed Mar. 6, 1958, Ser. No. 719,568
1 Claim. (Cl. 2—199)



An aviator's cap for use in teaching instrument flying, the cap having a crown and a visor which extends forwardly of and joins the cap at the front lower edge of the crown, the combination therewith, of: an elongated opaque hood depending from and having one of its longitudinal edges joined to the free edge of and encircling the entire visor, said hood characterized in that it is made of deformable and shape retaining material; said hood having side portions of uniform width and a central portion having its free longitudinal edge curved inwardly midway between ends of the hood, said hood normally adapted to obstruct side and forward vision.

3,016,546
METHOD OF MANUFACTURING A SWIMMING POOL AND THE ARTICLE
Jack Lerner, 227 Palisades Ave., Yonkers, N.Y.
Filed Jan. 27, 1959, Ser. No. 789,339
5 Claims. (Cl. 4—172)



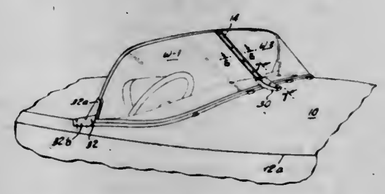
3. A swimming pool comprising, in combination, a plurality of prefabricated vertical side wall sections assembled in secured sealed relation, integrally formed ribs in each of said wall sections for reinforcing said side sections, a base integrally formed at the lower marginal edge of each side wall section having a horizontal portion inwardly extending from said lower margined edge and a return portion angularly extending from the marginal edge of the horizontal portion, the length of the return portion being less than the length of the horizontal portion and the length of the horizontal portion being less than the length of each side wall section, means disposed between opposite side wall sections and affixed to the respective bases of said opposite side wall sections to secure the opposite side wall sections one to the other, cement means covering and enveloping the bases of each opposite side wall section and said side wall securing means to form a cement bottom of the pool whereby the assembled side wall sections will retain water disposed therein, said cement embedded bases being yieldable with the expansion and contraction of said cement means during the contraction or expansion of said cement means, said side wall sections having integrally formed outwardly extending horizontal co-aligning coping portions disposed angularly and outwardly extending from the pool forming side sections, reinforcing means disposed between the outwardly extending coping sections and the lower external side sections, and the adjacent coping portions being sealed one to the other to facilitate the passage of water through said coping portions.

3,016,547
BATHTUB ATTACHMENTS
James W. Flood, 424 6th SE., Auburn, Wash.
Filed June 15, 1959, Ser. No. 820,198
2 Claims. (Cl. 4—185)



1. An attachment device for a bathtub, comprising an elongated trough member having an arm rest element arcuately shaped in transverse cross section adapted to fit the forearm of a person, said arcuate element extending upwardly on opposite longitudinal sides thereof to form sidewalls for preventing the forearm from sliding laterally therefrom, a hand grip member formed integral with said trough member adjacent one end thereof, a base portion joined to the longitudinal sidewalls of said arcuate element and extending downwardly below the bottom of said element and thereafter extending underneath said arcuate bottom to provide a bottom for the base portion, the bottom of said base portion being substantially planar shaped for abutting a bathtub edge on which it is to be mounted, and means on said trough member to secure said trough member in position on a tub.

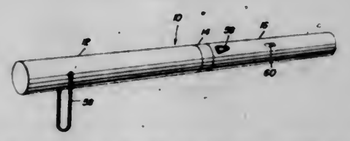
3,016,548
TWO PART GLASS WINDSHIELD TO REST ON A CROWNED BOAT DECK
Willard H. Taylor, Gloversville, N.Y., assignor to Nelson A. Taylor Co., Inc., Gloversville, N.Y., a corporation of New York
Filed Sept. 15, 1958, Ser. No. 761,233
3 Claims. (Cl. 9—1)



2. A glass windshield of the wrap-around type for assembly on a crowned deck which comprises, two glass windshield parts, each having a butt inner end and an outer end portion bent rearwardly, each part having a lower edge which is substantially straight adjacent its butt end and is curved upwardly adjacent its outer end, and a clamp for locking the windshield parts together in

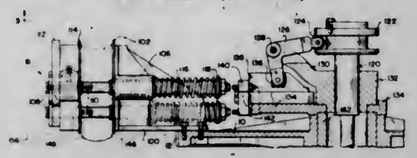
a selected relative position of the parts relative to one another both vertically and horizontally, said clamp comprising members adapted to extend over the inner and outer surfaces of the parts sufficiently to permit the angular relation of the parts to be adjusted by double rotation both in a substantially vertical plane and in a horizontal plane, and cross bolts extending between the clamp members in the space between the opposed butt ends of the windshield parts.

3,016,549
LIFE SAVING EQUIPMENT
Raymond J. Finn, Montgomery Road, R. D. 2, Middletown, N.Y.
Filed Aug. 12, 1959, Ser. No. 833,236
6 Claims. (Cl. 9—14)



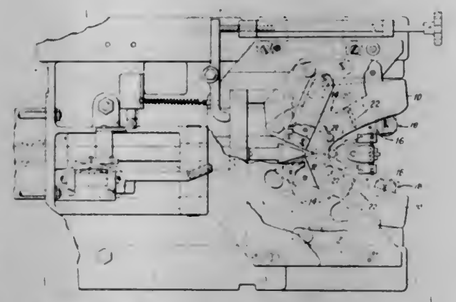
2. A night stick life saving device comprising a night stick member which includes three elongated sections disposed end to end, the first and third of said sections being tubular, the second of said sections comprising a plug, said first section being detachably secured to said plug at one end thereof, said third section being detachably secured to said plug at the opposite end thereof, said first and third sections having transverse walls on the ends thereof remote from said plug, an elongated spool removably accommodated in said first section, a cable wound on said spool, said cable being secured between said spool and said end of said plug secured to said first section, said first section and said opposite end of said plug presenting securing means for securing said first section and said opposite end of said plug in watertight relation therewith when said third section is removed therefrom, and said first section and said opposite end of said plug being buoyant in water when so secured.

3,016,550
BOOK FORMING AND PRESSING MACHINE
Carl Schramm, North Coventry, Conn., assignor to The Smyth Manufacturing Company, Hartford, Conn., a corporation of Connecticut
Filed July 28, 1958, Ser. No. 751,452
18 Claims. (Cl. 11—1)



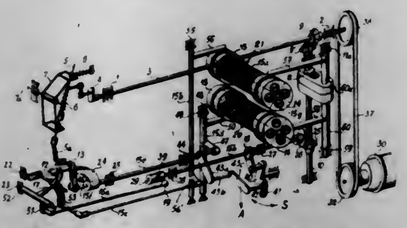
1. In a rotary machine for acting upon a succession of books having covers pasted thereto but with the paste initially not set, the combination comprising a rotatable turret which rotates on a substantially vertical axis, a plurality of presser units mounted on said turret in circumaxially spaced relationship each having a pair of opposed relatively movable clamping plates to engage substantially the entire area of the sides of a book cover and each unit having means for applying continuous pressure to a book through its clamping plates, mechanism for intermittently rotating the turret so as to position each of the presser units in succession at each of a plurality of stations during one revolution of the turret, a creaser unit having a pair of opposed relatively movable creaser jaws engageable with the book cover to crease its joints at at least one of the said stations, mechanism operable to close and then open the creaser jaws, and mechanism operable to open the clamping plates of a presser unit to accommodate book movement therebetween.

3,016,551
TRANSPARENT LASTING MACHINE WIPERS
Raymond M. Bowler, Salem Depot, N.H., and Donald L. Bray, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Nov. 23, 1960, Ser. No. 71,232
10 Claims. (Cl. 12—12)



1. In a lasting machine having lasting instrumentalities, a wiper for wiping an upper on its last, said wiper having a work-engaging surface which is transparent at least in part to facilitate viewing of the upper when presented to the machine and hence relative positioning of the unlasted margin of the upper with respect to the last and said instrumentalities.

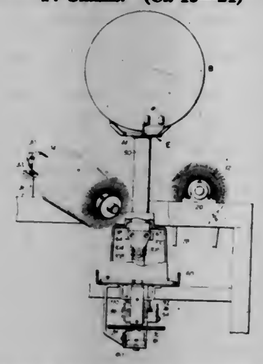
3,016,552
MACHINE FOR FOLDING THE EDGES OF SHOE UPPERS
Antonín Zatloukal, Gottwaldov, Czechoslovakia, assignor to Závody přesného strojírenství Gottwaldov, národní podnik, Gottwaldov, Czechoslovakia
Filed Oct. 27, 1958, Ser. No. 769,864
Claims priority, application Czechoslovakia Nov. 1, 1957
5 Claims. (Cl. 12—55)



1. A machine for folding the edges of shoe uppers and like material, comprising, in combination, a support; a bending and a folding tool pivoted to said support for reciprocating movement in two adjacent parallel planes about two radially spaced parallel axes toward and away from a path of material through the machine; a pressure foot mounted on said support axially spaced from said tools relative to said axes for reciprocating movement toward and away from said path; feeding jaw means mounted on said support for reciprocating movement along said path substantially in a plane transverse of the planes of

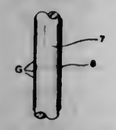
movement of said tools for sequentially feeding said material to said tools and to said pressure foot; drive means; and a plurality of motion transmitting means respectively interposed between said drive means and said bending and said folding tool, said pressure foot, and said jaw means for actuating movement of said tools, said foot, and said jaw means in a predetermined sequence.

3,016,553
BOWLING BALL CLEANING AND POLISHING APPARATUS
Frank Ralph Wilhelm and Richard H. Jordan, Mansfield, Ohio, assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 16, 1958, Ser. No. 780,705
14 Claims. (Cl. 15—21)



1. In a cleaning and polishing apparatus for spherical objects a pair of spaced angularly related elongated cleaning and polishing members, means mounting said members in spaced apart relationship less than the maximum diameter of a spherical object to provide a support for said object to be cleaned and polished, means for rotating said members to clean and polish said object supported thereby, a receiving and delivering device for receiving spherical objects to be cleaned and polished, means mounting said device for movement substantially vertically between said members to deliver said objects thereon into and out of cleaning and polishing position on said members, and operating means for said receiving device to position said device beneath a ball being cleaned and polished by said members, and above and out of the range of operation of said members when receiving or delivering a ball.

3,016,554
BRUSH MATERIAL AND BRUSH
Ruben O. Peterson, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed May 12, 1958, Ser. No. 734,790
13 Claims. (Cl. 15—159)

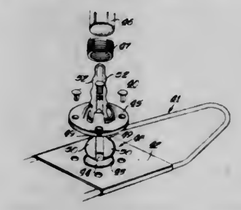


3. Brush bristle material comprising a plastic monofilament and a thin outer coating of epoxy resin composition effective to protect said monofilament against chemical attack, said outer coating including graphite incorporated therein effective to reduce friction between adjacent bristles when used in a brush.

3,016,555
TACK RAG
Charles E. Penoyer, Russell Township, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 24, 1958, Ser. No. 723,131
4 Claims. (Cl. 15—209)

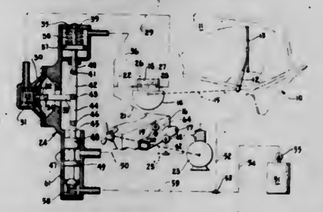
3. A tack rag comprising a fibrous web impregnated with a tackifier consisting essentially of approximately equal parts by weight of (*a*) a polyester formed from an aliphatic glycol and a dibasic cyclic organic acid selected from the group consisting of chlorendic acid, chlorendic anhydride, tetrachlorophthalic acid and tetrachlorophthalic anhydride and, in chemically unreacted physical admixture therewith, (*b*) a tri-ester of phosphoric acid.

3,016,556
MOP HAVING A UNIVERSALLY ADJUSTABLE HANDLE
Nathaniel B. Greenleaf, 77 York St., Toronto 1, Ontario, Canada
Filed Feb. 27, 1958, Ser. No. 718,056
1 Claim. (Cl. 15—229)



A mop construction, comprising: a mop head having a socket portion; a ball and stem member having a ball portion mounted in said socket for universal movement therein and having a stem portion extending from said ball portion; said ball portion being bifurcated and the ball and stem member having a resilient portion normally urging the bifurcated ball portion apart and against the interior of the socket so that the ball and stem member is frictionally held in place; an elongated resilient member mounted on the free end of said stem portion and having an end portion extending therefrom; and a handle mounted in said end portion of said resilient member and spaced from the stem portion, said resilient member flexing under pressure applied to the handle when said mop head contacts an immovable obstruction to permit pivotal movement of the head with respect to the handle.

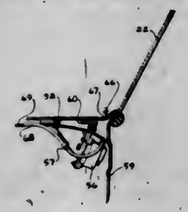
3,016,557
WINDSHIELD CLEANING SYSTEM
Erwin C. Horton, Hamburg, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Nov. 13, 1958, Ser. No. 773,617
6 Claims. (Cl. 15—250.12)



6. In combination in a vehicle: a vacuum operated windshield wiper system for cleaning a windshield and a compressed air system for providing a source of compressed air for the operation of accessories in said vehicle, means for selectively causing the vacuum produced by the

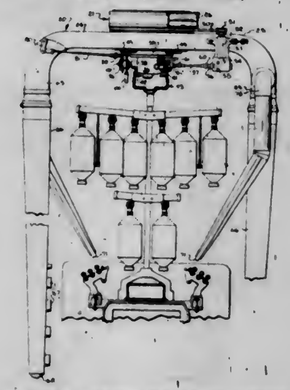
intake side of a compressor in said compressed air system to provide the vacuum for operation of said wiper system, said means maintaining said operating compressed air system completely divorced from said wiper system when said wiper system is not in operation.

3,016,558
WINDSHIELD WIPER ARRANGEMENT
Raymond A. Deibel, Cheektowaga, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Nov. 2, 1956, Ser. No. 620,079
3 Claims. (Cl. 15—250.16)



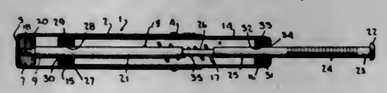
1. A windshield wiper arrangement for use on a motor vehicle having a hood pivoted at the forward end of the engine compartment with the rear edge of the hood lifting forwardly from the windshield, comprising, in combination therewith, a wiper motor affixed to the underside of the hood near the rear edge thereof, and a wiper and drive shaft assembly affixed to the under rear edge portion of the hood, power transmission means drivingly connecting the drive shaft assembly to the wiper motor, said motor and said drive shaft assembly being affixed to said hood for movement therewith about the forwardly disposed pivot axis thereof, a power line extending across the hood pivot and connecting the motor to a power source in the compartment, and means carried by said hood and supporting said wiper when the latter is in parked position.

3,016,559
TRAVELING CLEANER WITH AIR-DIVERTING MEANS
Grover B. Holtzclaw, Charlotte, N.C., assignor to Parks-Cramer Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Nov. 19, 1958, Ser. No. 774,942
2 Claims. (Cl. 15—312)



1. In a traveling cleaner apparatus adapted to move along a track above a row of textile machines, said traveling cleaner apparatus including a casing movable along said track, a fan in said casing, at least one outwardly extending duct on said casing having a downwardly extending outlet portion for discharging air from said fan, said duct having at least one opening in a medial portion thereof, a deflector pivotally mounted within said duct adjacent said opening, said deflector being movable between first and second positions, said deflector serving to close said opening while in said first position so that air passes through the outlet portion, and while in said second position, said deflector serving to open said opening while closing the duct to the passage of air therethrough beyond said opening whereby the air is deflected outwardly through said opening from said fan, means for moving said deflector from either of said positions to the other including a crank movable in fixed relation to said deflector and disposed exteriorly of said duct, a rotatable member movable with said casing and having a plurality of circularly spaced abutments thereon, a cam rotatable with and in fixed relation to said rotatable member, a follower carrier, follower means on said carrier engaging said cam, a shifter rod connected to said follower carrier, linkage connecting said shifter rod with said crank, a plurality of control elements spaced along said track, each control element comprising a trip finger adjustably supported by said track for movement into and out of the path of travel of corresponding abutments on said rotatable member whereby a step in rotation is imparted to said rotatable member and said cam with movement of said casing past each successive trip finger in the path of said rotatable member, alternate movements of said rotatable member and cam serving to move said shifter rod in one direction and to move said deflector from said first to said second position, and intervening movements of said rotatable member and said cam serving to shift said shifter rod in the opposite direction to move said deflector from said second position to said first position.

3,016,560
APPLICATORS
Joseph Averza, Scarsdale, N.Y.
(270 Lafayette St., New York 12, N.Y.)
Filed Nov. 13, 1959, Ser. No. 852,638
2 Claims. (Cl. 15—510)



1. An applicator comprising a housing, a container slidably mounted in said housing, an applicating rod slidably movable in said container, means for connecting one end of said rod at the inner end of said housing, a serrated portion on said rod to extend from said container when said container is moved into said housing, resilient washers in the ends of said container to receive said rod, said rod having smooth, cylindrical portions to cooperate with said washers to constitute fluid-tight joints between said container and said rod, a recess in said rod, and an hourglass spring having its intermediate diminished portion snapped into said recess and positioned in said container to move with said rod and relative to said container and thereby agitate the contents of said container.

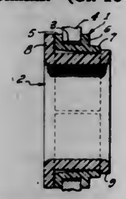
3,016,561
SQUEEZABLE TUBE DISPENSER CONSTRUCTION
Sheldon David Hulsh, 530 Park Ave., New York, N.Y.
Filed Sept. 4, 1959, Ser. No. 838,182
8 Claims. (Cl. 15—565)

1. A dispensing applicator container comprising, a deformable container having a top wall-apertured externally-threaded neck portion, a removable and replaceable sealer plug disposed partly within the aperture of said neck portion and effective to seal said aperture against escape of the container contents therethrough, an applicator cap having an apertured top wall and depending from the underside thereof an internally-threaded portion threaded complementally to the said externally-threaded neck portion, said internally-threaded portion being substantially concentric with the aperture in said applicator cap top wall and the aperture in said neck portion top wall when said cap is screwably engaged with said container neck portion, said sealer plug being clamped between said container neck top wall and the underside of said applicator cap top wall when said sealer plug is disposed within the aperture of said neck portion and said cap is screwably engaged with said container neck portion, an absorbent applicator element secured to the upper surface of said applicator cap top



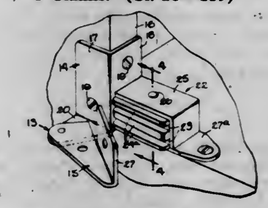
wall and including an opening therethrough substantially concentric with the aperture in said cap top wall, an applicator cover, and interlock means partly associated with said cover and partly associated with said applicator cap for detachably fixedly securing said cover to said cap and said cap to said container neck, whereby said cap may be screwably engaged with said container neck portion by rotation of said cover in one direction and disengaged therefrom for removal and replacement of said sealer plug by rotation of said cover in the counter direction, said interlock means including first means for locking said cover and cap against relative rotation in either direction as said cap is screwably engaged and disengaged from said container neck portion, and second means for opposing axial shifting of said cover relative to said cap.

3,016,562
GROMMET
William P. Reid, 2610 E. 67th St., Long Beach, Calif.
Filed Sept. 8, 1958, Ser. No. 759,540
4 Claims. (Cl. 16—2)



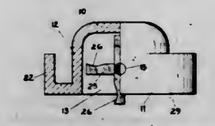
1. A combination including a grommet and an annular body, the grommet comprising; an elongated longitudinally split resilient planar ring adapted to be mounted by planar compression in an opening in a supporting member; flanges on said ring engageable with opposite faces of said member to interlock said ring with said member incident to the mounting of the ring in said opening; an annular body insertable through said ring; said ring and body having surfaces, coengageable to spread the opposed ends of said ring and thus expand the ring while the ring is locked in said opening, upon forcing said body through said ring; and means on said body operable upon the forcing of said body through said ring to engage said ring, and lock said ring and body in said opening against displacement by forces applied endwise of said ring and body.

3,016,563
COMBINED HINGE AND CATCH
George Edward De Jong, 509 Empire Bldg., Rockford, Ill.
Filed Mar. 4, 1959, Ser. No. 797,077
3 Claims. (Cl. 16—139)



3. A combined hinge and catch having, in combination, two hinge members pivotally connected together to turn relative to each other about an axis, a magnet assembly mounted on one of said members and an armature mounted on the other one of said members to turn with said member thereby to move into and out of engagement with said magnet assembly.

3,016,564
FISH SCALING DEVICE
Eugene E. Soulier, P.O. Box 233, Broussard, La.
Filed Aug. 8, 1960, Ser. No. 47,979
1 Claim. (Cl. 17—5)



A power operated fish scaling device comprising, a housing having opposed side walls and a fixed end wall, outwardly extending finger channels projecting from the lower edge of the side walls to provide protection for the fingers and thumb whilst holding and operating the deviee, a removable end wall disposed opposite the fixed end wall, a shaft rotatably mounted between the end walls, blades supported by diametrically opposed arms projecting from the opposite ends of the shaft, said blades being symmetrically oriented about the shaft and extending beneath the housing upon rotation, and flexible drive means for rotating the shaft.

3,016,565
FISH SCALING AND FILLETING JIG
Rowland Hill, Ben Lomond, Calif.
Filed May 14, 1959, Ser. No. 813,240
7 Claims. (Cl. 17—8)

1. A fish scaling jig comprising a base having a front end and sides and means for mounting said base on a support, a fixed jaw formed upwardly from said front end and having a lower transverse series of spaced teeth, a hinge standard formed upwardly from one side and a latch standard formed upwardly from the other side and having a vertical series of engaging elements, the front edges of said hinge standard and said latch standard being located in a vertical plane rearwardly of the vertical plane of said fixed jaw, a lever having one end hinged to said hinge standard and having an underside and having a pawl

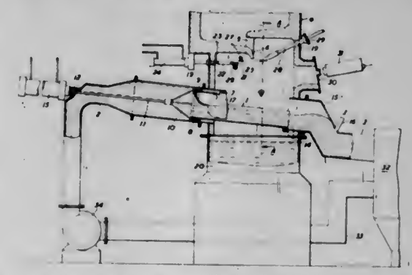
adjacent the other end to engage in said engaging elements and terminating in a handle and having an upper series of transversely spaced teeth formed in said underside, whereby the tail of a fish is bent over the said lower transverse series of teeth and engaged by the upper transverse series of spaced teeth in rearwardly spaced relation to maintain the tail of the fish free of undue mutilation while securely holding the tail.



3,016,566
GRANULATION OF MOLTEN MATERIAL

Herbert Raymond Hoy, Fetcham, Dennis Malcolm Wilkins, Carshalton, and Ronald Leslie Johnson, New Malden, England, assignors to C.U.R.A. Patents Limited, Leatherhead, Surrey, England

Filed Oct. 26, 1959, Ser. No. 848,744
Claims priority, application Great Britain Oct. 31, 1958
3 Claims. (Cl. 18—2.4)



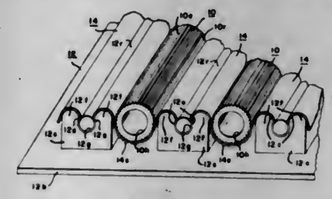
2. Apparatus for granulating molten material, which comprises discharging means for discharging molten material under gravity, two movable troughs, each for carrying a stream of coolant liquid and mounted for alternate advancement of the troughs from inoperative positions to operative positions directly beneath the discharging means, driving means for advancing and retracting each of said troughs in alternate relation, coolant liquid supplying means for supplying a stream of coolant liquid to one trough and separating means for separating granulated material from said stream after it has passed through said trough and separate coolant liquid supplying means for supplying a stream of coolant liquid to the other trough and separate separating means for separating granulated material from said stream after it has passed through said other trough and two fixed dislodging means, associated one with each trough, each spaced from the discharging means in the direction of retraction of the associated trough and arranged to extend within the associated trough during retraction thereof to remove solidified material adhering to the interior of the associated trough.

3,016,567
CURING FORM

Paul E. Clingman and Chester A. Lowe, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 24, 1958, Ser. No. 750,606
6 Claims. (Cl. 18—6)

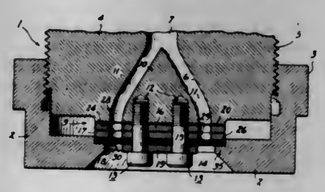
1. A curing tray for use in curing externally ribbed elastomeric articles of manufacture, comprising, at least a pair of longitudinal support members located in substantially parallel relation to each other, said support members each providing a longitudinal groove, a flexible mat-like form adapted to be suspended between said support members and having a loosely sagging portion laterally intermediate said support members, and retaining means provided for positioning said flexible mat-like form in predetermined adjustable locations in locked relation positively within the longitudinal groove of each of said support members, said form being resiliently laterally and longitudinally conformable and engageable relative to the external ribbed elastomeric articles of manufacture while space intermediate the externally ribbed elastomeric articles of manufacture and said mat-like form is supplied with heated gas and/or steam for effecting uniform and efficient curing of the externally ribbed elastomeric articles of manufacture.



3,016,568
LAMINATED EXTRUDING DIE

Romeo Gagne, Pelham, N.H., assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed July 15, 1959, Ser. No. 827,370
3 Claims. (Cl. 18—8)



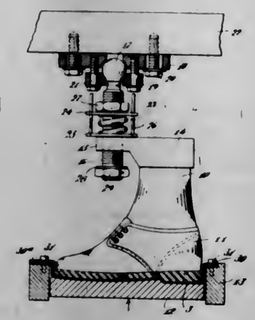
1. An extruding apparatus comprising a rigid block having an externally threaded generally cylindrical portion with a flat outer end and a tapered central recess at said outer end, a tapered guide member within said recess and spaced from said block to form a distributing passage which diverges toward the end of said threaded portion, a main supply passage in said block communicating with said distributing passage, a first plate engaging the outer end of said block around said recess, a second plate parallel to and engaging said first plate, and a series of thin metal sheets with a uniform thickness which is a small fraction of the thickness of each plate arranged in contacting superposed relation to form a laminated die stack having passages therein for extruding plastic monofilaments, an annular cap detachably connected to said block and having a surface engaging said stack around the periphery thereof to clamp the marginal portions of said sheets and said plate together, a third plate engaging the outer surface of said stack and located at the center of said cap, and means extending through said sheets and said plates for detachably connecting said third plate to said guide member and for clamping the central portions of said sheets and said plates together, said first and second plates having openings therein to permit flow of plastic through said passages, said first plate having

arcuate slots therein aligned with said passages and said second plate having generally cylindrical apertures aligned with the passages of said laminated stack, said apertures having a cross-sectional area several times the cross-sectional area of each die passage at the entrance to said passage, whereby a carbon-collecting shelf is provided.

3,016,569
VULCANIZING MACHINE WITH SPRING RELEASE

George H. Bingham, Jr., Westminster, and Otto Y. Olsson, Taneytown, Md., assignors to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland

Filed Apr. 13, 1960, Ser. No. 22,048
4 Claims. (Cl. 18—17)



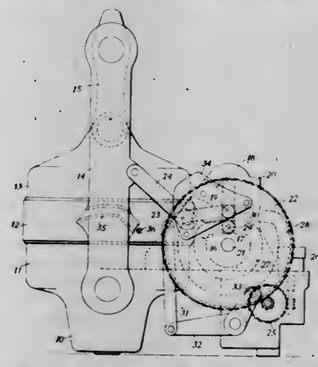
1. Apparatus for use in providing a lasted article of footwear with a molded outsole of elastomeric material, and a foxing strip integral with the outer sole by the use of a mold which comprises a multi-part ring defining the side wall of a mold cavity and whose parts are movable horizontally to expand or contract the mold cavity, a bottom wall member which is movable vertically relatively to the ring and which, during the molding operation, is moved upwardly within the ring, thereby to compress moldable sole-forming material within the cavity, and a last, with the lasted shoe therein, defines the top wall of the mold cavity during the molding operation, the mold ring having a peripheral overhanging inner edge which defines the upper edge of the desired foxing strip and wherein, during the molding operation, the ring mold is contracted about the lower portion of the lasted shoe and the bottom of the lasted shoe is below the plane defined by said inner edge of the mold ring, in combination, means operative to guide the last, with the lasted shoe thereon, for vertical movement relatively to the mold ring in response to upward pressure exerted by the moldable material during the molding operation, and means operative automatically to move the last downwardly when the molding pressure is released, thereby to separate the molded material from said overhanging lip prior to the expansion of the mold ring.

3,016,570
VEHICLE TYRE VULCANISING PRESS

Colin Macbeth, 67 Norwich Union Chambers, Congreve St., Birmingham, England

Filed Aug. 8, 1960, Ser. No. 48,217
Claims priority, application Great Britain Aug. 17, 1959
3 Claims. (Cl. 18—17)

1. A vehicle tyre vulcanising press of the kind specified, comprising in combination three superimposed holders between which two vehicle tyres to be vulcanised can be accommodated, the lowermost holder being fixed, and the intermediate and uppermost holders being movable, a stationary supporting base rigid with the lowermost holder, a toggle mechanism having a transverse member pivotally connected to, and extending across, the upper side of the uppermost holder, and a pair of elongated toggle links situated at opposite sides of the holders, and extending upwardly from the base, the upper and lower ends of the toggle links being pivotally connected respectively to the transverse member and the base, a rotary crank mechanism situated at the rear of, and spaced from, the holders, means whereby the rotary crank mechanism is supported on a fixed transverse axis, links interconnecting the rotary crank mechanism and the toggle links so that the latter are pivotally movable relative to the base by the crank mechanism, a first arm rigid with, and extending from the rear of, the uppermost holder, a first transverse pivot shaft to which the first arm is attached, a second arm rigid with, and extending from the rear of, the intermediate holder, a second transverse pivot shaft to which the second arm is attached, and which is situated below, and parallel with, the first pivot shaft, guide means by which the pivot shafts are supported for relative movement in a common vertical plane, cams which are rigid with, and surround the axis of, the rotary crank mechanism, and which, during rotational movement of the crank mechanism, act on the pivot shafts for imparting vertical movements thereto, and thereby serve in conjunction with the toggle mechanism for imparting vertical opening movements to the uppermost and intermediate holders, a pair of rollers attached to opposite sides respectively of the intermediate holder, guide means provided on the toggle links at positions adjacent the intermediate holder, and engageable with the rollers on the adjacent sides of the intermediate holder to retain the latter in parallel relationship with the lowermost holder during movement of the intermediate holder in response to vertical movement of the second pivot shaft, additional cam means attached to the rotary crank mechanism, link and lever mechanism connected to the intermediate holder, and operable by the said additional cam means for completing the opening movement of the intermediate holder, a single electric driving motor, and means operatively connecting the rotary crank mechanism to the driving motor.



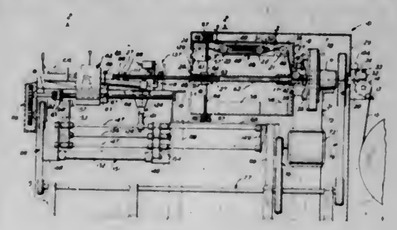
3,016,571
APPARATUS FOR FORMING SPRING-LIKE ARTICLES

George P. Adams, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 23, 1959, Ser. No. 861,662
15 Claims. (Cl. 18—19)

11. Apparatus for forming spring cords from continuous elastic-jacketed cordage, which comprises means for

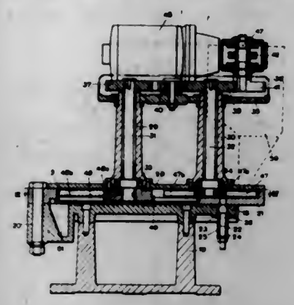
supplying a continuous length of such cordage, a rotatable mandrel to which an end portion of the cordage to be coiled into a helix is attached, a cup-shaped flyer mounted for rotation about the rotational axis of the mandrel and positioned in the path of travel of said cordage from said supply means to the mandrel, first guide means for guiding the cordage from said supply means into said flyer along said rotational axis, second guide means provided on said flyer for guiding said cordage from the first guide means through the flyer and toward the mandrel in such a manner as to form said cordage into a bight for rotation by the flyer about the rotational axis of the mandrel, means for rotating the flyer at a first predetermined speed, means for rotating the mandrel at a second predetermined rotational speed, the direction and speed of rotation of the mandrel relative to the flyer being such that the cordage is coiled helically upon the mandrel and the flyer imparts simultaneously a predetermined axial pretwist



to the cordage in a direction so as to tend to urge the thus-formed coils together to enhance the retractability of the finished spring cord, a reciprocable member having a cordage-engaging element, means for reciprocating said member between a first position whereat the cordage-engaging element is juxtaposed to a portion of the cordage extending between the flyer and the mandrel and a second position whereat said cordage-engaging element is removed from said first position, said cordage-engaging element being designed to engage the cordage and withdraw a loop of said cordage of predetermined length during movement of the reciprocable member between said first and second positions thereof, and means positioned along the path of travel of said withdrawn loop of the cordage for severing the withdrawn cordage to form two predetermined straight ends of cordage, one straight end on the helix of the cordage formed on said mandrel and the other straight end for a helix of cordage to be formed on a mandrel replacing said mandrel.

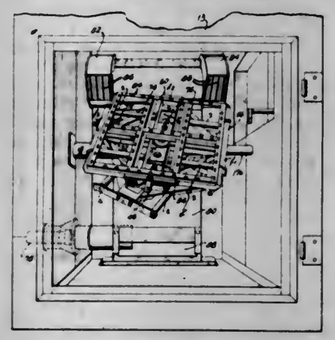
3,016,572
TABLETTING MACHINES
Frank Thomas Stott, Rochdale, England, assignor to John Holroyd & Company Limited, Milnrow, England
Filed Apr. 27, 1960, Ser. No. 25,045
Claims priority, application Great Britain May 21, 1959
8 Claims. (Cl. 18—20)

1. A tabletting machine including a rotary die table, a plurality of dies in said table, an upper punch and a lower punch associated with each said die, means for displacing said punches into their respective ones of said dies to compress material in said dies into tablets, and a feed mechanism for feeding said material to said dies, said feed mechanism comprising a stationary housing disposed on said die table, a vaned input/metering rotor disposed within said housing and rotatable about a first vertical axis, a vaned excess control rotor disposed also within said housing and rotatable about a second vertical axis spaced away from said first axis so that the vanes of said input/metering rotor are disposed above and overlap the vanes of said excess control rotor, said housing defining, around said rotors, a material feed chamber providing above said excess control rotor a free space, guide means in said free space for deflecting such material as may be disposed therein towards said input/metering rotor upon rotation of said excess control rotor, an



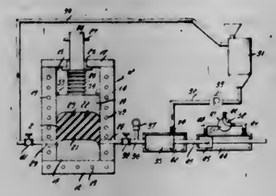
inlet in said housing permitting tabletting material to be fed to said inlet/metering rotor, outlet apertures, in the underside of said housing, permitting material from said housing to pass to said dies in said die table, and means for rotating said rotors.

3,016,573
DOUBLE ROTATION APPARATUS FOR MOLDING OF HOLLOW ARTICLES FROM LIQUID PLASTIC AND THE LIKE
Edward B. Blue, 9 Kimberly Place, New Canaan, Conn.
Filed July 17, 1959, Ser. No. 827,823
3 Claims. (Cl. 18—26)



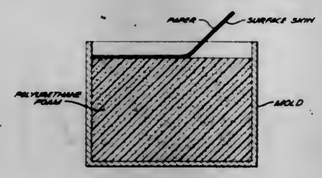
3. In apparatus for the double rotation of molds while heating them to set heat setting plastic material therein, the combination of, an air pervious mold carrier comprising a generally rectangular peripheral portion and one or more cross frame members extending between opposed sides of said peripheral portion, said peripheral portion and said cross members being apertured at spaced intervals to receive mold attachment means to dispose molds thereon projecting at right angles to the plane of the mold carrier, and flanges projecting outwardly laterally from the sides of said peripheral portion, and an air pervious support for the mold carrier comprising, a discontinuous support surface, a pair of side members disposed in parallel spaced relation and having means extending inwardly toward one another above the level of the support surface defining guideways, a stop disposed substantially in the plane of the guideways, lock means operative when a carrier is disposed on the support in abutting relation to said stop and with its flanges within said guideways, to prevent the carrier from sliding off the support means, and frame members interconnecting and spacing apart said angle members, said stop and said lock means.

3,016,574
CASTING APPARATUS
Charles F. Fischer, Jersey City, and Amory E. Austin, Jr., Colonia, N.J., assignors to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Aug. 6, 1958, Ser. No. 753,569
7 Claims. (Cl. 18—30)



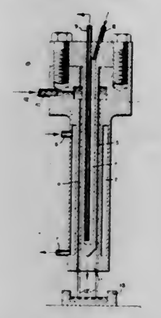
1. An apparatus for molding plastic products comprising a mold assembly having relatively separable forming die members defining a mold cavity between them, means normally urging the die members toward each other to define a minimum size cavity between them, means including supply and return passages for recycling liquid plastic through said cavity, means for blocking said return passage for enabling said liquid plastic to fill said cavity under pressure and force said die members apart until an enlarged cavity of predetermined size is attained, and further means effective at said supply passage for exerting increased pressure on said plastic in said enlarged cavity, said liquid plastic being recycled under pump pressure in one of said passages and said increased pressure being separately provided by a compression cylinder forming part of said supply passage.

3,016,575
METHOD OF MOLDING OPEN PORE ISOCYANATE FOAM
Harold Ebneth, Leverkusen, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 11, 1957, Ser. No. 645,160
Claims priority, application Germany Mar. 14, 1956
6 Claims. (Cl. 18—48)



4. Process for the production of isocyanate foam with predominately open pores which comprises mechanically removing the surface skin produced on the surface of said isocyanate foam immediately after completion of the foaming reaction and before complete curing of said isocyanate foam.

3,016,576
PROCESS FOR PREPARING EXPANDED CELLULAR MATERIALS
Richard M. Downing, Woodstown, N.J., and Richard E. Mortberg, Wilmington, and William J. Smith, Delaware City, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 31, 1957, Ser. No. 706,336
6 Claims. (Cl. 18—48)



1. A process for preparing expanded cellular resinous materials which comprises forming a fluid plastisol with a resin, a suitable plasticizer, and a chemical blowing agent, heating a continuously flowing thin film of said fluid plastisol to a temperature in the threshold temperature range of substantial thermal decomposition of the blowing agent, immediately discharging said heated plastisol into a mold wherein decomposition of the chemical blowing agent occurs to release a gas and foam the plastisol, and thereafter heating the foamed plastisol further to flux the resin with the plasticizer.

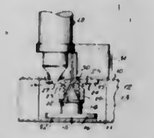
3,016,577
PROCESS OF PREPARING SHRINKPROOF FILAMENTS FROM LOW-PRESSURE POLYETHYLENE
Karlheinz Riggert, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Apr. 1, 1958, Ser. No. 725,484
Claims priority, application Germany Apr. 6, 1957
5 Claims. (Cl. 18—48)

1. A process of substantially reducing the tendency to fibrillate, of substantially increasing the abrasion resistance, and of reducing the shrinkage at elevated temperatures of oriented filaments and fibers made of low pressure polyethylene of high density, which comprises subjecting said articles to a heat treatment employing a heating medium at a temperature in the range from about 135–250° C. for a period of 1/10 second to 10 seconds whereby the filament is stabilized against shrinkage and extensibility without appreciable decrease in tenacity.

3,016,578
MOLDABLE INSERT PANEL AND METHOD OF ASSEMBLY
Frederick W. Rohe, 879 S. East St., Anaheim, Calif.
Filed Dec. 11, 1957, Ser. No. 702,009
1 Claim. (Cl. 18—59)

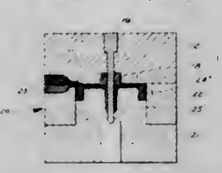
In the fabrication of a composite lightweight panel and insert assembly wherein an insert comprising a pair of heads of radial flange form one of which has a circular periphery, and a body of reduced diameter extending between and integrally joining said heads and provided with an axial bore to receive a securing element, is mounted

in a hole in a panel sandwich structure comprising a lightweight core and skin sheets attached to respective sides thereof, with said hole having a bottom defined by one of said skin sheets, the method of mounting said insert nut in said hole comprising: providing, in said one head, an aperture located radially outwardly of said body; providing in the periphery of the other head, anchor areas disposed radially inwardly of the areas of maximum radius of said periphery; attaching said insert to an injection gun, with the nozzle of the gun sealed in said aperture and with a guide on the gun engaging the outer face of said one head, and extending laterally beyond said one head; inserting said insert in said hole with said one head fitted in that portion of the hole which is defined in said other skin sheet, with said guide resting against said other skin sheet to position said insert for depth in said hol., and with said other head thereby



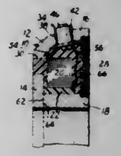
axially spaced from said hole bottom, so as to provide (*a*) a thin flat bottom space between said other head and said hole bottom, (*b*) an annular cavity between the lateral wall of said hole and the lateral surface of said nut body and between said heads, and (*c*) passages between said anchor areas and said hole wall, said passages providing communication between said annular cavity and said bottom space; then injecting under pressure through said aperture into said annular cavity and thence through said passages into said bottom space, a softened synthetic resin plastic material adapted to subsequently harden; and thereafter releasing said yielding connection and removing said injection gun and causing said plastic material to harden in said annular cavity and passages and bottom space so as to provide anchoring connections between said insert and said bottom and lateral wall of the hole, with said plastic material locked against said anchor areas to hold the insert against rotation.

3,016,579
METHOD OF MOLDING INDICIA WHEELS
Robert Frederick Schlitzkus, Oakland, Calif., assignor to Smith-Corona Marchant Inc., a corporation of New York
Filed Dec. 27, 1957, Ser. No. 705,665
4 Claims. (Cl. 18—59)



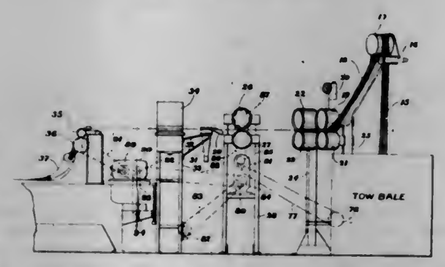
3. A process of making an indicia wheel comprising the steps of: applying a resilient material to a first mold to form indicium separate from one another with thin resilent members interconnecting the indicium, each of said indicium having an edge connected to an outer end of a resilient member and being molded on an undercut surface which lies in a plane transverse to the plane in which the members lie so that all portions of each of the indicium can be freely deflected inwardly towards the central axis of the mold; applying a force in an axial direction to the material to cause the indicium and the resilient members to deflect towards the axis away from the undercut portion of the mold to permit removal of the material from the mold; placing the resilient material removed from the first mold into a second mold; and applying another material contrasting with the material of the indicium to the second mold to fill in the spaces between the indicium and openings in the indicium to form the rim of the wheel.

3,016,580
METHODS FOR FORMING RIGID COMPOSITE STRUCTURES
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 24, 1958, Ser. No. 723,206
3 Claims. (Cl. 18—59)



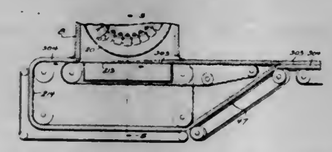
1. The method of making a rigid composite structure which normally operates at relatively high temperatures, comprising flowing a heat hardenable resin composition into a cavity formed by abutting at least two separate structural members, said resin composition comprising a homogeneous suspension of a liquid epoxy resin and a single curing agent consisting of pyromellitic dianhydride, and a finely divided inorganic filler, which suspension has a pot life of up to approximately five days, and heating said suspension to a temperature of between approximately 225° F. to 250° F. for about three hours thereby to only partially cure said resin composition and to bond said members together by an epoxy resin product, whereby subsequent operation of the resulting rigid composite structure at said relatively high temperatures progressively improves the characteristics of said resin product and the bonding strength of the product is progressively increased to values always sufficient to bond the structural members together under normal operating stresses and conditions.

3,016,581
APPARATUS FOR OPENING CONTINUOUS MULTIFILAMENT CRIMPED TOW
John Winston Smith, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Nov. 7, 1957, Ser. No. 695,080
5 Claims. (Cl. 19—65)



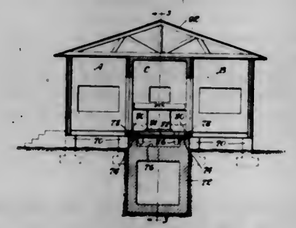
1. In a device for opening continuous multi-filament crimped tow, in combination, a first pair of rubber-covered rolls, a second pair of rubber-covered rolls, a third pair of rubber-covered rolls, said pairs of rolls being adjustably positioned to form a nip between the rolls of each pair and positioned to form a ratch between each of the adjacent pairs of rolls, means for conducting said tow between said pairs of rolls and through the ratches between the first and second and the second and third pairs of rolls, driving means for driving said second and third pairs of rolls, braking means for braking said first pair of rolls, the driving means for said second pair of rolls and said braking means cooperating to exert a tension by means of said rolls on the tow in the ratch between said rolls sufficient to stretch the filaments and temporarily straighten out the crimps, means comprising said driven third pair of rolls for maintaining the tension on said tow in the ratch between said second and third pairs of rolls, said third pair of rolls being positioned to exert a tension on adjacent filaments of the tow at different lengths thereof whereby the crimp in adjacent filaments are drawn out of registry with one another, and means for abruptly releasing the tension thereby permitting the crimps to reform in the tow in the out-of-registry position.

3,016,582
BATT OR MAT FORMING APPARATUS
Curt George Joa, Sheboygan Falls, Wis., assignor to Falls Paper & Power Company, Chester, Pa., a corporation of Wisconsin
Filed Feb. 14, 1957, Ser. No. 640,277
1 Claim. (Cl. 19—156)



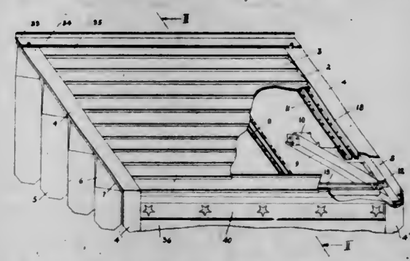
The combination with a hammer mill comprising a rotor having hammers, a housing for the rotor and a foraminous screen within the housing partially encircling the path of hammer movement, of a plurality of forming screen means movable side by side across the housing beyond the foraminous screen from the path of hammer movement and provided with suction box means for drawing to themselves material disintegrated by the hammers and passing through the foraminous screen, together with means for laminating together material deposited on a plurality of said forming screen means.

3,016,583
HOUSE CONSTRUCTION
Max Grunt, 15 Maple St., Newark, N.J., and Maier Ben Uri, Haifa, Israel; said Ben Uri assignor to said Grunt
Filed Apr. 13, 1954, Ser. No. 422,947
3 Claims. (Cl. 20—1)



1. A building construction comprising spaced, parallel permanently constructed sections, said permanently constructed sections including room-forming portions, a roof permanently secured to said permanent sections and defining a covered space between said sections, a rigid base projecting into said space, inwardly of and parallel to said permanently constructed sections, and a vehicular utility unit removably received on said base and conforming to the space between said permanent sections and beneath said roof, said utility unit including room-forming portions communicating with the room-forming portions of said permanently constructed sections, said base including parallel rails extending the length of said space, said utility unit including roller means journaled thereon and engageable with said rails to facilitate removal and installation of said vehicular utility unit in said space.

3,016,584
METAL AWNING
William F. Fatula, Dorseyville, Pa., assignor to Kool Vent Metal Awning Corporation of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 4, 1957, Ser. No. 638,120
5 Claims. (Cl. 20—57.5)



1. An awning having a sloping roof comprised of roof panels extending up and down the slope of the roof at each end of the roof, the end panels being in the form of inverted panels with a shallow upwardly-opening gutter-like flange extending along the inner edge thereof throughout the slope of the roof, louvres extending crosswise of the roof with the lower edge of each louvre overlapping the upper edge of the next-adjacent lower louvre and an upper edge of the next-adjacent louvre above it, said louvres having their ends terminating at the end panels with the end portions thereof overhanging the gutter-like flanges of said end panels, and means inwardly of the gutters and parallel therewith extending down the slope of the roof under the louvres and concealed from above the roof to which the louvres are anchored and retained in said overlapping relation.

3,016,585
AWNING STRUCTURE
Stanley M. Chial, San Jose, Calif., assignor to Paul A. Turner, doing business as Chial Mfg. & Sales Co.
Filed Oct. 9, 1958, Ser. No. 766,260
4 Claims. (Cl. 20—57.5)



1. In an awning structure of the type employing a plurality of substantially parallel slats supported on parallel rail supports that are provided with recesses for receiving the slats, the improvement comprising provid-

ing awning slats with slightly arcuate body portions which are adapted to be flexed when the slats are inserted into the recesses in the rail supports, said slats also having flat side portions extending along the sides of said slightly arcuate body portions, said flat side portions being bent downward with respect to said slightly arcuate body portion, the recesses in the rail supports each being arcuate in shape and each having a length substantially equal to the transverse dimension of said slats and the opposite ends of each of said recesses being defined by opposing overhanging ears which have flat surfaces gripping the upper flat sides of the slats over the widths thereof, said flat surfaces applying pressure to the slightly arcuate body portions of said slats thereby holding said slats spaced away from the bottoms of said recesses and arched thereover to prevent slippage thereof in said rail supports and also to prevent noisy vibration of said slats against said rails.

3,016,586
CONNECTOR PLATE

Wyman B. Atkins, North Miami, Fla., assignor to Timber Truss Connectors, Inc., a corporation of Florida

Filed Oct. 6, 1959, Ser. No. 844,724
5 Claims. (Cl. 20—92)



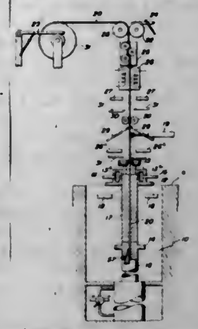
1. A connector plate for securing adjacent wooden structural members together comprising a metal plate having substantially parallel planar inner and outer faces, a series of elongated teeth integral with said plate punched therefrom and extending unidirectionally substantially perpendicularly from said plate to be impressed into the wooden members, said teeth terminating in a sharpened tip remote from said plate and having front and back faces formed from the outer and inner faces of said plate respectively, each tooth having a crimped zone curved concavely in section toward its vacated hole in said plate extending from a point spaced from said plate continuously to said sharpened tip along a major portion of the tooth, said crimped zone having substantially parallel sides, the lateral marginal portions of the front face and the adjoining portions of said sides forming elongated wedge-shaped formations projecting forwardly of the tooth portion connecting said zone with said plate which terminate in shoulders projecting forwardly from said connecting tooth portion to resist withdrawal of the teeth from the wooden members into which they are impressed.

3,016,587
ART OF PRODUCING HOLLOW INGOTS

Robert M. Brick, Hinsdale, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed July 8, 1959, Ser. No. 825,803
11 Claims. (Cl. 22—140)

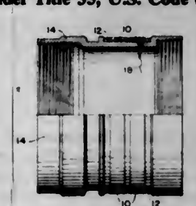
8. An apparatus for making ingots having removable core inserts therein, comprising means for supplying a flexible metal core strip, guide means for controlling the lateral position of the strip during a downward travel thereof, an open-ended casting mold for surrounding the strip at a part of its downward travel, means positioned above the mold for applying an anti-welding coating to the surfaces of the strip, a platform for initially closing the bottom of the molds, means for securing the lower end of the strip to the platform, means for retracting the platform downwardly, means for supplying molten ingot metal into the mold and around the tensioned strip, and means for cooling the ingot metal whereby to cause it to solidify before leaving the mold incidental to the downward travel of the platform, said applying means including a device for applying an anti-welding coating in a liquid, and a heater for evaporating the liquid before the strip comes in contact with molten metal in the mold.



3,016,588
CONTACT BANDS FOR ROCKETS

Robert A. Weinhardt and Paul T. Barnes, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Apr. 5, 1957, Ser. No. 651,117
1 Claim. (Cl. 22—203)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A method for forming an external insulated contact band about a tubular body portion of a rocket and connecting said band electrically to the interior of said body comprising the steps of forming an annular groove in the exterior surface of said body, forming a radial hole in said body into said groove, placing an annular band of insulating material into said groove, forming a groove in said band of insulating material, pushing the bared uninsulated end of an otherwise insulated lead wire through said radial hole and said band of insulated material from the inside of said tube so that said uninsulated end of said wire extends slightly into the groove in said insulating band, placing the assembly in a mould which is clamped around the band of insulation at spaced annular planes at opposite sides of said bared end of lead wire and thus provides an annular mould cavity between said planes, and injecting a molten relatively low melting point alloy into said mould cavity to form a contact band which is in electrical contact with said bared end of said lead wire, and which binds said insulating band tightly to said tube as it contracts upon cooling.

3,016,589
CLIP

Paul T. Collins, 173 N. Hill St., Pasadena, Calif.

Filed May 9, 1960, Ser. No. 27,805
1 Claim. (Cl. 24—3)

A device for applying a jewelry item around the wrist of a person, including: a resilient flat band bent to transversely conform to and partly encompass the wrist, said band having a progressively variable width from one end



to the other end thereof and the end of least width provided with a bifurcated hook which is bent upwardly and returnedly to the band length.

3,016,590
DECORATIVE TRIM STRIP ASSEMBLY

Abraham Shanok, Victor Shanok, and Jesse P. Shanok, all of 863 65th St., Brooklyn, N.Y.

Filed Dec. 18, 1957, Ser. No. 703,592
1 Claim. (Cl. 24—73)

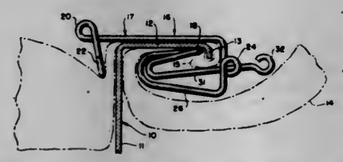


A base strip for a decorative trim formed of elongated flexible material adapted to be mounted on a supporting material by connection means transverse to the supporting material along a predetermined longitudinal axis, comprising a central portion adapted to engage the supporting material along a planar interface, said portion having an inner surface of arcuate contour which, when secured to the supporting material, flexes about the said axis to form a planar surface, and laterally extending flanges symmetrical about the axis, said flanges being adapted to engage coacting means of a decorative cap member to be mounted over the strip to provide an interlocking removable connection therebetween, said flanges also defining a longitudinal trough therebetween which functions as a guide in applying the connection means accurately along the said axis.

3,016,591
FASTENER CLIP

Bobby J. McWhorter, Lemon Grove, and Dean T. Johnson, Vista, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware

Filed Sept. 2, 1959, Ser. No. 837,711
8 Claims. (Cl. 24—81)

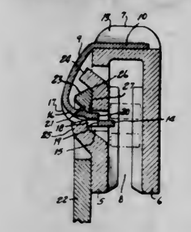


1. A fastener clip formed from a single length of flexible metallic material comprising a pair of spaced apart jaw members, an integral portion connecting said jaw members, said connecting portion being substantially perpendicular to at least one of said jaw members, a catch portion formed in said connecting portion, and an elongated integral locking arm extending from one of said jaw members operable to and from engagement with said catch portion to move said one of said jaw members toward and away from the other jaw member.

3,016,592
AUTOMATIC LOCK SLIDER FOR SLIDE FASTENERS

Harry F. Manning, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania

Filed May 12, 1959, Ser. No. 812,773
7 Claims. (Cl. 24—205.14)

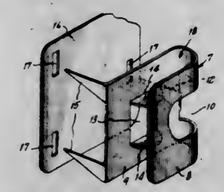


1. In a lock slider for slide fasteners, a slider body comprising a pair of spaced-apart wing portions interconnected at one end by a neck portion so as to provide a channel therebetween, a yieldable, inherently resilient, plate-like locking member mounted on one of said wing portions centrally thereof, means for attaching one end of said locking member to said slider body, a locking projection arranged on the opposite free end of said locking member which extends normally through an aperture in said wing portion into said slider channel, means attached to said locking member adjacent said locking projection and movable relative thereto which cooperates with said wing for temporarily arresting in one position the movement of said locking projection into said slider channel, a pull member having a transversely extending trunnion portion on one end thereof which is positioned between said locking member and said wing portion on which it is disposed, said trunnion portion adapted to control the actuation of said last mentioned means upon movement of said pull member.

3,016,593
HOOK

William T. Rowles, Decatur, Ga., assignor to Universal Button Company, a corporation of Kentucky

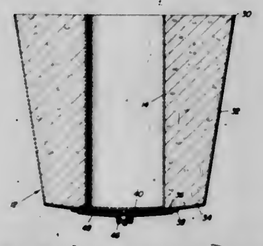
Filed Aug. 6, 1958, Ser. No. 753,476
2 Claims. (Cl. 24—227)



1. A sheet metal fastener hook of the class described for garment fabric comprising a base portion, a reversely curved hook portion extending from said base portion to one side thereof and spaced from said base portion, a pair of opposed spaced-apart semi-circular disk-like portions struck up from the body of said base portion and disposed substantially parallel to one another and sub-

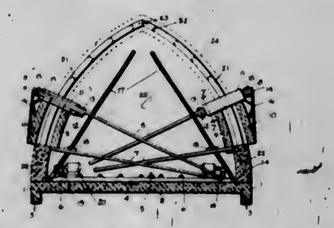
stantially perpendicular to said base portion for maintaining said base portion and said hook portion in spaced relation, a plurality of staple-like prong members carried by said base portion and extending outwardly therefrom on the side opposite that from said hook portion which are adapted to pass through the fabric, and an anchor plate member having a plurality of apertures arranged therein for receiving said staple-like prong members.

3,016,594
MOLD FOR JACKETING VASE RECEPTACLES
Frank Jacomaro, 1855 Narragansett, Chicago 39, Ill.
Filed Aug. 1, 1958, Ser. No. 752,644
4 Claims. (Cl. 25—118)



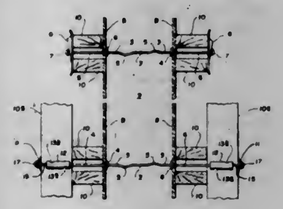
1. A portable device for combining a receptacle with a jacket of concrete, said receptacle having a peripheral flange at one end thereof comprising, a mold having a peripheral inclined wall, an open top and an inwardly extending bottom member provided with a central opening for receiving the flange on the end of the receptacle, a peripheral plate attached to the outer surface of the bottom member and extending inwardly past the edge of the opening for forming an abutment for the flange on the receptacle, said bottom member having a thickness substantially equal to the flange whereby the flange will project above the surface of the jacket, a first plate adapted to be detachably connected to the receptacle, a second plate engaging the outer surface of the peripheral plate, and means interconnecting said plates for pulling the first and second plates towards each other for retaining the receptacle and receptacle flange in rigid engagement with the peripheral plate mounted on the bottom member thereby rigidly securing the receptacle to the bottom member in sealed relation for receiving a filler of concrete between the receptacle and the wall of the open topped mold.

3,016,595
MOVABLE ARC FORM AND BUILDING METHOD
Norman H. Durst, P.O. Box 37, Moundridge, Kans.
Filed Feb. 4, 1957, Ser. No. 637,908
11 Claims. (Cl. 25—131)



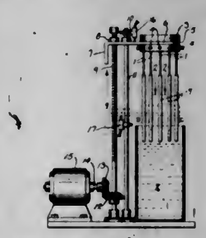
2. An apparatus for molding arched concrete structures employing a movable arc form, comprising an inner and an outer form member, one form member being spaced from the other form member, a casing in which both form members are supported, a lower support member pivotally supported at one end thereof, the other end of the lower support member being secured to the inner form member, an upper support member operating on the same pivot point as the lower support member and received by the casing, and means for raising and lowering the form members.

3,016,596
SNAP TIE FOR CONCRETE FORMS
Ernest R. Tisdale, Pittsburgh, Pa.
(341 Glendale, Creve Coeur, Ill.)
Filed Feb. 13, 1959, Ser. No. 793,190
2 Claims. (Cl. 25—131)



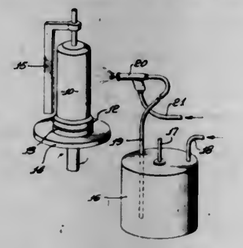
1. A composite snap tie for concrete forms comprising an integral main rod section having a button at each end and a washer spaced inwardly from each button, a separate connector member having an open recess at one end into which the button and end portion at one end of the main section of the tie is removably received, and an extension section having a button at each end thereof, the connector having a similar open recess at its other end into which the button and end portion of the extension are removably received.

3,016,597
CERAMIC DIPPING PROCESS
Peter A. Denes, 2934 N. Downer, Milwaukee, Wis.
Filed Apr. 24, 1958, Ser. No. 731,582
5 Claims. (Cl. 25—156)



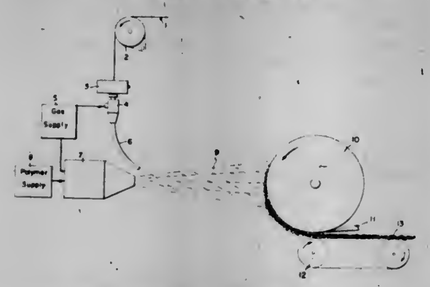
1. A method of manufacturing ceramic bodies of tubular cross section, said method of comprising the steps of coating a surface portion of an elongated rod with a liquifiable release composition of a thickness sufficient to cushion shrinkage forces exerted by a later deposited shrinkable coating; depositing upon an exposed surface of said release composition at least one layer of a ceramic powder blend from a slurry mixture thereof, wherein said powder is suspended in a solution of a plurality of liquids of respectively differing vapor pressures; drying the ceramic deposit in situ; severing the dried ceramic deposit peripherally of said rod at axially spaced points along said rod to provide a plurality of individual tubular ceramic bodies; liquifying the release composition; removing said bodies from said liquified release coated rod; and firing said tubular bodies.

3,016,598
METHOD OF MAKING DENSE REFRACTORY OBJECTS
William D. Anderson, La Crescenta, Calif., William O. Brandt, Denver, Colo., and Leon J. Le Clercq, Glendale, and Jarvis J. Fargo, La Crescenta, Calif., assignors to Gladding, McBean & Co., Los Angeles, Calif., a corporation of California
Filed Sept. 30, 1958, Ser. No. 764,352
6 Claims. (Cl. 25—156)



1. A method of making hard, dense, uniformly compacted and strong hollow objects formed essentially of refractory oxides, comprising: forming a suspension of inorganic solids comprising not less than 95% of finely divided, substantially inert refractory oxides in an organic solvent having a boiling point of not over 200° F., said solvent containing an adhesive resin in solution; pressure spraying such suspension upon a rigid, smooth-surfaced and non-absorptive mandrel to form a deposit of desired thickness of said inorganic solids on the surface of the mandrel; drying the deposit material on the mandrel; encapsulating said deposited material with a compliant impervious envelope; subjecting the deposited material to the action of vacuum to remove virtually all volatile material; then hydropressing the dry deposit while on said mandrel to compact and orient the refractory oxides in such deposited material; removing the article composed of such hydropressed and deposited material from the mandrel and subjecting the article to baking and firing steps.

3,016,599
MICROFIBER AND STAPLE FIBER BATT
Robert W. Perry, Jr., Manchester, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 1, 1954, Ser. No. 433,600
1 Claim. (Cl. 28—78)



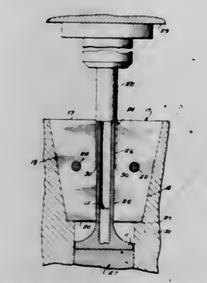
A composition of matter comprising a batt of homogeneously mixed microfiber produced from a synthetic linear polymer and staple, produced from a man-made continuous filament, said microfiber having an average diameter of less than about 1 micron and said staple fiber having a denier of at least 1, the mixture containing between 25 and 70% microfibers on a weight basis.

3,016,600
FILING TOOL
Adolf Schätzschock and Alois Weltzl, Vienna, Austria, assignors to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Aug. 25, 1953, Ser. No. 376,448
3 Claims. (Cl. 29—78)



1. A filing tool comprising a metal sheet having a succession of narrow strips of the same thickness as the metal sheet but of greater width than thickness and integrally joined at their ends to the remainder of the sheet and inclined relative to the sheet with the longitudinal edges extending outwardly beyond the opposite sides of the metal sheet, each of said strips being of rhomboidal cross-section having parallel planar side faces and parallel longitudinal edges forming breast faces oblique relative to said side faces, the breast faces disposed at the respective sides of the metal sheet facing generally forwardly in the direction of movement of the tool and extending inwardly from the outer side faces of the strips, the intersections of said breast faces and outer side faces forming acute cutting edges.

3,016,601
METHOD OF MAKING HOLLOW VALVES
Max J. Tauschek, Lyndhurst, and James M. Cherrie and Robert O. Bentell, Euclid, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Dec. 16, 1957, Ser. No. 703,034
4 Claims. (Cl. 29—156.7)



4. A method of making hollow coolant filled poppet valves from valve blanks having hollow cylindrical stems and utilizing only a single die and a single ram member, which comprises inserting the stem of such a blank in the die, supporting the head of the blank from therebeneath upon a support spaced from said same die, upsetting the tip end of the stem in said same die by applying a force to the stem end wall only and without entering the hollow stem, causing collapse of said tip end, removing the support on the valve head, and extruding the upset portion of the stem in said same die, completely closing the tip end of the stem.

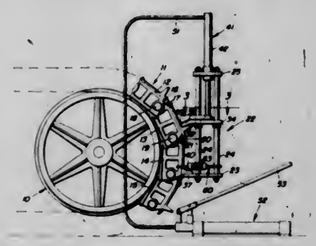
3,016,602
FILTER STRUCTURE
Allan R. Getzin, Jeffersontown, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Jan. 8, 1958, Ser. No. 707,793
4 Claims. (Cl. 29—190)

1. A filter frame blank for a knock-down filter frame which when assembled serves to hold a fluid filter com-

prising: a plurality of end-to-end connected side panels, said side panels being divided from each other by a first set of transverse score lines, a filter retaining panel depending from a corresponding side of each of said side panels, said filter retaining panels each being divided from its respective side panel by one of a second set of score lines transverse to said first set of score lines, each of said filter retaining panels having integral therewith at one corresponding extremity thereof a tongue portion and having positioned at an opposite corresponding extremity thereof a slotted tab portion to receive the tongue portion of an adjacent filter retaining panel, a connecting panel extending from one of the ends of said end-to-end connected side panels, said connecting panel being divided from said side panel from which it extends by a transverse score line, and means to connect said connecting panel to another side panel in forming said filter frame assembly.

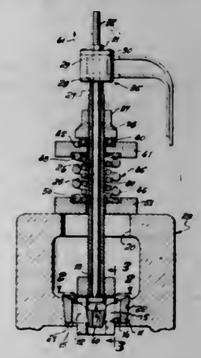


3,016,603
JACK FOR ENDLESS TRACK
Thomas C. Rutland, Jr., Columbus, Ga.
(Lot 2, Steel Trailer Court, Warner Robins, Ga.)
Filed Jan. 28, 1958, Ser. No. 711,672
3 Claims. (Cl. 29—252)



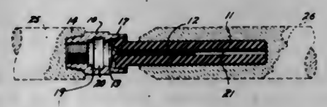
1. A jack for removing and replacing endless tracks of the type comprising a plurality of track pad elements having outwardly projecting and transversely extending cleats and provided with interdigitated ear portions having aligned apertures receiving a connecting link pivot pin; said jack comprising generally parallel base plate and platform members, at least three parallel guide posts secured and extending between said base plate and platform members, an extensible motor having a stationary portion with an elongated movable portion extending outwardly therefrom, said stationary portion mounted on said platform member and said movable portion extending through said platform member between said guide posts and mounted for reciprocating movement in directions paralleling said guide posts, a second plate disposed between said platform and base plate members, secured to the outer end of said movable portion and including means snugly and slidably receiving said guide posts, said base and second plates including opposing plate-like jaw portions disposed to one side of and extending transversely of said guide posts, said jaw portions including substantially flat outwardly convergent confronting surfaces of a size and shape adapted to engage the outwardly divergent remote surfaces of two cleats of an endless track positioned at a curved portion of the closed path of movement of the track in surface to surface contacting relation with said remote surfaces, an elongated safety hook element, means on one end of said safety hook element pivotally and slidably securing the latter to one of said guide posts for pivotal movement thereabout and sliding movement longitudinally therealong and including a laterally directed ear on the other end adapted to be engaged behind an associated track pad to prevent the jack from kicking away from the track pad when the second plate is moved toward the base plate.

3,016,604
VALVE SEAT PULLER
John Joseph Castelvecchi, Buena Park, Calif., assignor to Grant Oil Tool Company, Los Angeles, Calif., a corporation of California
Filed Oct. 9, 1958, Ser. No. 766,265
3 Claims. (Cl. 29—255)



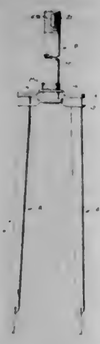
1. An insert removal device for removing an insert from a bore within a body comprising: an insert engaging means; a mandrel affixed to said engaging means, said mandrel being adapted to extend from said engaging means through said bore to the exterior of said body; a head plate adapted to be disposed upon said body and surrounding said mandrel, said mandrel being longitudinally movable through said head plate; spring means disposed upon said head plate and surrounding said mandrel; means for placing said spring means in compression, said last named means being continuously coupled to said mandrel thereby placing said mandrel in tension; and means for vibrating said mandrel to loosen said insert whereby said spring force moves said mandrel and insert substantially longitudinally out of said bore.

3,016,605
METHOD OF MAKING A HOSE NOZZLE
William W. Heckethorn, Rte. 1, Box 19, Littleton, Colo.
Filed Feb. 12, 1960, Ser. No. 8,372
1 Claim. (Cl. 29—453)



A method of manufacturing a hose nozzle of the type having a housing with a rear hose-receiving extremity and a forward tube-receiving extremity and a flexible nozzle tube extending from said tube forward extremity with a terminal flange surrounding the rear extremity of said nozzle tube and imbedded in an annular flange cavity in said housing comprising: forming a tapered funnel-like tube socket of less diameter than said flange cavity on the forward tube-receiving extremity of said housing concentric of and communicating with said flange cavity; forcing the terminal flange of said nozzle tube rearwardly into said tube socket so that the taper of the latter will impart diametric compression to said flange; continuing said forcing until said flange enters and expands in said flange cavity; and thence pressing said tube socket diametrically inward about said nozzle tube, said tube socket being initially formed with a cylindrical outer surface and a conical inner surface, said pressing deforming said socket to form a cylindrical inner surface and a conical outer surface.

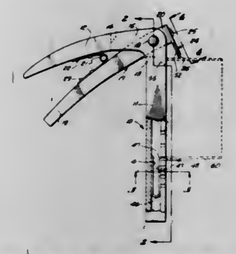
3,016,606
METHOD OF MANUFACTURING A BRAZED TUBULAR BICYCLE STEERING FORK ASSEMBLY
Alvin P. Douglas, Cleveland Heights, Ohio, assignor to The Murray Ohio Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 12, 1957, Ser. No. 652,547
2 Claims. (Cl. 29—480)



1. In the art of producing a bicycle steering fork including a stem, a pair of dependant fork arms, and a crown or shoulder structure rigidly joining the upper ends of the arms to the lower end of the stem, the steps of: forming axially straight identical tubular arm blanks; forming a semi-finished stem; forming a shoulder structure including a pair of lateral end apertures and a central aperture; press-fitting first the arm blanks simultaneously and then the stem respectively into the lateral and central apertures; applying brazing material to the regions of the resulting press-fitted joints; subjecting the resulting assembly to a brazing temperature to produce an assembly including a semi-finished stem, a shoulder and straight tubular arm elements rigidly secured together into an integral unit; thereafter bending the arm elements simultaneously into final desired like individual shapes and mutual disposition; and heat treating the brazed assembly at a temperature below the melting range of the brazing material to develop overall strength of the fork.

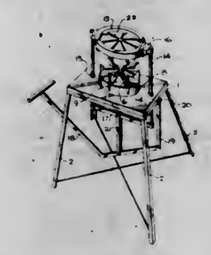
3,016,607
CAN OPENER
Vito A. Corazzelli, 617 Cortez Road, Arcadia, Calif.
Filed Apr. 11, 1960, Ser. No. 21,208
3 Claims. (Cl. 30—6.3)

1. A can opener comprising an elongated body member, a handle on one end of the body member extending transversely to the body on one side thereof, a piercing lever coplanar with the body and the handle and extending transversely to the body on each side thereof, a pivot attaching the piercing lever to the body at the handle end thereof for rotation of the piercing lever about the pivot in the plane of the body and the handle, a piercing point on the extent of the piercing lever on the side of the body opposite the handle and extending from the piercing lever in substantially the direction of the elongate extent of the body, an elongated channel shaped portion of the body extending longitudinally of the body away from the handle, a plurality of longitudinally spaced pairs of transversely spaced aligned fingers on the legs of the channel shaped portion of the body extending from said legs inwardly of the channel in spaced relation to the back of the channel, each finger of a pair of fingers



being the same shape as the other, and a can support member slidably disposed in the body intermediate the fingers and the back of the channel shaped portion of the body having portions adapted to removably engage any pair of the pairs of fingers and having a portion extending outwardly transversely to the body on the same side thereof as the piercing point, whereby the can support member may be moved longitudinally of the body and releasably locked in any one of a plurality of locations and a can to be opened by piercing its top may be positioned with its bottom engaging the can support member and its side adjacent the body for piercing with the piercing point by rotation of the piercing lever about the pivot.

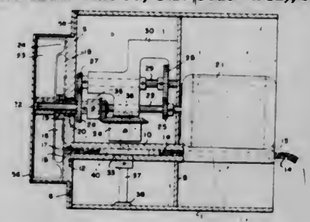
3,016,608
PIE CUTTER
Lester A. Myers, 3292 Cortese Drive, Los Alamitos, Calif.
Filed Feb. 15, 1960, Ser. No. 8,613
3 Claims. (Cl. 30—114)



1. A pie cutter comprising a base, a positioning die fixedly mounted on the base, said die consisting of a plurality of complementary wedge shaped sections, each of said sections being spaced to provide radial slots therebetween, means mounting each section spaced above the top surface of the base, a vertical wall on each side edge and extending above the wedge shaped sections, the outer ends of each of said vertical walls being inclined upwardly to conform to the shape of the outer rim of a pie pan; a pair of rods slidably mounted in the base, a

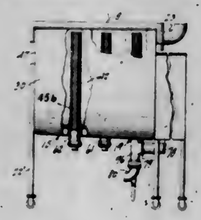
knife ring mounted on the upper end of said rods, a plurality of radially arranged knives mounted in said ring, each of said knives being aligned with one of the slots in the positioning die, and means to reciprocate said rods and knife ring.

3,016,609
GLASS ROVING SPRAY GUN
Edward J. Huebner, Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Filed July 7, 1960, Ser. No. 41,453
9 Claims. (Cl. 30—240)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a portable glass roving material spray gun for spraying roving material on a prepared receiving surface, comprising a portable elongated outer casing having an upper end, handle bar means projecting from opposite sides thereof, motor means fixed within said casing, tubular roving material guide means extending throughout said casing having a receiving end for receiving the roving material therein and a discharge end for delivering the roving material therefrom, roving material advancing means driven by said motor means for advancing said roving material through said guide means, rotary cutter means at said discharge end having radial cutter blades driven by said motor means for severing the roving material delivered through the discharge end of said guide means, centrifugal bladed impeller means at the upper end of said casing above said cutter means driven by said motor means inclosing one side and the periphery of said rotary cutter means for receiving roving material severed by said rotary cutter and projecting the same centrifugally therefrom, a blower casing inclosing the upper end of the first mentioned casing and said rotary cutter blades and said centrifugal impeller, having a tangential converging discharge nozzle for receiving said roving material from rotary cutter blades and said centrifugal impeller for spraying the same in a converging blast through said nozzle onto a surface prepared for the reception thereof.

3,016,610
COMBINATION CURD DRAINER AND COTTAGE CHEESE MIXER
Lowell J. Collins, 938 61st St., Oakland 8, Calif.
Filed Feb. 23, 1960, Ser. No. 10,142
8 Claims. (Cl. 31—48)



1. An attachment for converting a cottage cheese mixer having a bowl having a top and a bottom and having a discharge outlet in the bottom, and having an agitator having a hub at each end, and driving means therefor, and having angularly spaced blades having arms connecting the hubs, and having parallel connecting members spaced from the axis of the hubs, into a combination sequential drainer for washed curd and cottage cheese mixer; comprising a strainer having an upper end and a lower end, with the upper end extending to a plane adjacent the plane of the top, and the lower end removably mounted in communication with said discharge outlet, and a valve for said discharge outlet and adjustable to three positions, in the first of which the wash water drained from the curd is discharged to waste, in the second of which the discharge outlet is closed for retaining the drained curd for mixing to produce cottage cheese, and in the third of which the discharge outlet is open for discharge of the cottage cheese for packaging, with the strainer being removable at will from between the angularly spaced blades and parallel members and body of drained curd for freeing the agitator for the mixing operation to produce cottage cheese.

3,016,611
ELLIPSE COMPASS
Vesta K. Arthur, 2563 Belgrave Ave., Huntington Park, Calif.
Filed Aug. 15, 1960, Ser. No. 49,764
4 Claims. (Cl. 33—30)

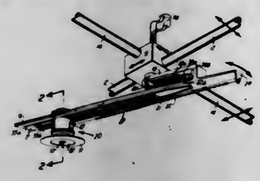


1. A compass device comprising, center pin means, scribing means rotatably mounted on said center pin means and spring biased toward said center pin means, cam means mounted on said center pin means and rotatively fast therewith, adjustably extensible radius means operatively mounted on said scribing means for engagement with said cam means for variably spacing said scribing means relative to said center pin means against the spring bias on the scribing means and releasable lock means mounted on said cam means for locking said radius means thereto at a reference point on the cam mean enabling extensible adjustment of the radius means for drawing the desired curve by subsequent release of the lock means and rotation of the scribing means about said center pin means.

3,016,612
RECORDING DEVICE
John J. Lynott, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 17, 1958, Ser. No. 729,110
19 Claims. (Cl. 33—32)

1. A recording device comprising means for marking a plotting surface, a positionable member carrying said marking means, said member being positionable along a plurality of axes with respect to said marking means, holding means coupled to said marking means to prevent

movement of said marking means with respect to said surface during positioning of said member, and biasing means



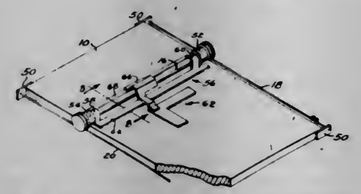
connected between said marking means and said member for urging the marking means toward said members upon release of said holding means.

3,016,613
VENTILATED RIB STRUCTURE FOR GUN BARRELS
Arne Y. Grahn, Hartford, Conn., assignor to The Poly Choke Company, Incorporated, East Hartford, Conn., a corporation of Connecticut
Filed Jan. 5, 1961, Ser. No. 80,844
9 Claims. (Cl. 33—47)



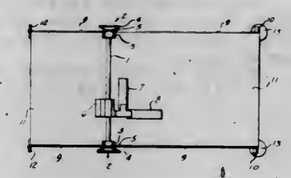
1. A ventilated sighting rib structure for a gun barrel, comprising a rib member having means defining transverse ventilating openings therein which are relatively long and arranged at short intervals to provide an upper strip-like part separated and supported from a lower strip-like part by a series of posts, and fastening means at points throughout the length of the rib member and remote from said posts, said fastening means including fastener elements extending through the lower strip-like part of the rib member to secure the latter to the gun barrel.

3,016,614
DRAFTING MACHINE OF THE GUIDE-WIRE TYPE
David G. Falconer, Washington, D.C., assignor to Jonker-Friend Corporation, a corporation of Delaware
Filed Oct. 18, 1957, Ser. No. 691,093
1 Claim. (Cl. 33—80)



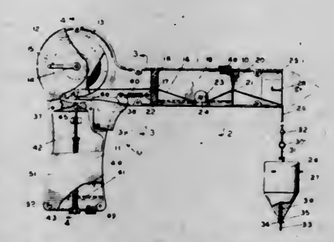
In a drafting machine or the like, in combination, a support shaft mounted for free movement always parallel to itself along and above a working surface, a bracket having inclined side walls encompassing the shaft and having bearing elements disposed to contact the shaft whereby to locate the bracket for sliding motion lengthwise of the shaft, a drafting instrument carried by said bracket and extending outwardly along and above said surface to one side only of said shaft, to permit tilting motion of the bracket about the shaft as an axis and thereby to lift the drafting instrument away from the working surface; a straight-edge element having stirrup portions partly encircling said shaft for tilting movements of said straight-edge element, and cooperating abutments on said drafting instrument bracket and said straight-edge element, to tilt the latter element upon tilting movements of the bracket.

3,016,615
CROSSBAR DRAFTING AND LAYOUT MACHINE BASED ON FLEXIBLE GUIDE ELEMENTS
David G. Falconer, Washington, D.C., assignor to Jonker Friend Corporation, a corporation of Delaware
Filed Oct. 25, 1957, Ser. No. 692,400
4 Claims. (Cl. 33—80)



1. A drafting machine comprising a drawing board having opposite parallel edges, a crossbar shaft extending across and above the board surface perpendicular to said edges, a single roller disposed concentrically upon and adjacent each of the opposite ends of said shaft and positioned for rolling contact with the marginal portions of the respective opposite board edges, said rollers being sized to hold said shaft out of contact with the surface of said board, a sheave secured to each end of the shaft beyond the said edges of the board, a pair of guide wires secured at one end of each to a corner of the board at an end of the corresponding opposite edges thereof, and each wrapped about a corresponding sheave, means for tensioning each of said wires in a position parallel to and beyond the corresponding board edge to constrain the shaft for motion parallel to itself and to hold said rollers in contact with the board margins, and a drafting instrument guide slidably mounted on said shaft for motion therealong.

3,016,616
COMBINATION MARKING LINE AND PLUMB BOB
Earl L. Matson, 5135 SW. View Point Terrace, Portland 1, Oreg.
Filed Apr. 21, 1959, Ser. No. 807,815
1 Claim. (Cl. 33—87)



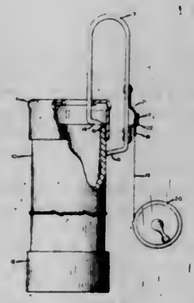
A combination plumb bob and marking line comprising a hollow housing, a handle, said housing and said handle at substantially right angles to each other, a reel journalled in a compartment integrally formed at the juncture of said handle and said housing, a marking line wound on said reel, a dye chamber in said housing, said line extending through said dye chamber, bulkheads defining said dye chamber, said bulkheads having apertures formed

therein through which the line passes, means to prevent dye leakage through one of said bulkheads, means in said dye chamber guiding said line beneath the surface of dye contained in said chamber, said handle providing a lubricant chamber, said handle having apertures formed in the bottom wall and top wall thereof, a spring biased plunger disposed in one of said apertures and having one end removably seated in the aperture in the top wall whereby movement of said plunger will permit lubricating fluid to pass through the aperture in the top wall onto said line when the tool is in inverted position.

3,016,617
PIPE MEASURING APPLIANCE

Clyde Henry Bricker, Ulysses, Kans., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Filed Oct. 31, 1960, Ser. No. 66,146
2 Claims. (Cl. 33—137)



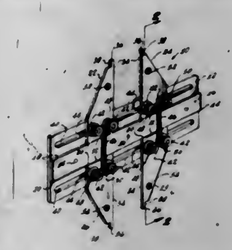
2. A device for use in measuring the length of a conduit having an externally threaded end with a protector thereon, said protector extending beyond said threaded end, which comprises a loop-shaped member, an extension substantially at right angles to a first leg of said member and extending toward the other leg of said member, a reference measuring point on said other leg positioned opposite said extension, means for securing the end of said tape measure at said reference measuring point on said other leg, and a stabilizing foot at the end of said other leg below said extension directed inwardly toward and adapted to rest on the outer wall of said conduit while said member is being used.

3,016,618
ADJUSTABLE MEASURING INSTRUMENT

Kenneth O. Speed, 1035 137th Place, Hawthorne, Calif., and Lawrence A. Wilson, 3817½ Moore St., Los Angeles 66, Calif.

Filed Oct. 21, 1960, Ser. No. 64,112
7 Claims. (Cl. 33—143)

1. A measuring instrument comprising a body including an elongate guide member having opposite, parallel, longitudinal bearing surfaces, a first pair of cooperating gauging arms at one side of and independently adjustable along the guide member, a second pair of cooperating gauging arms at the other side of and independently adjustable along the guide member, each gauging arm extending transversely of the guide member and having a base edge slidably seating against the adjacent bearing surface of the guide member, a spring connected between each gauging arm of the first pair of gauging arms and the corresponding gauging arm of the second pair of gauging arms for retaining said base edges of the gauging arms seated flat against their respective bearing surfaces of the guide member, and releasable means for locking

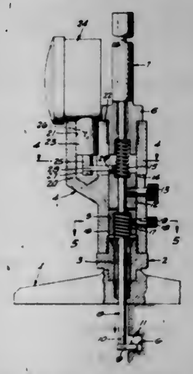


each gauging arm in a fixed position along the guide member.

3,016,619
DEPTH AND GROOVE LOCATING GAGE

Kurt H. Mueller, 1052 N. Allen Ave., Pasadena, Calif.

Filed Dec. 19, 1957, Ser. No. 703,781
2 Claims. (Cl. 33—172)

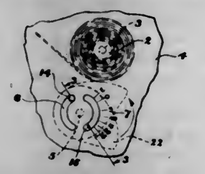


1. A depth and groove location gage attachment for dial indicators having a mounting stem, a longitudinally movable sensing element, and a laterally extending sensing tip, said attachment comprising: a body structure having a longitudinal bore therethrough and a socket parallel to, offset from, and in lateral communication with said bore, said socket adapted to receive said stem with said sensing tip projecting laterally into said bore; tubular guide means closing the ends of said bore, one of said means having a reference surface; a probe rod slidably mounted in said bore, guided by said guide means, and projecting beyond said body structure, one end of said probe rod having a sensing element for cooperation with said reference surface; a collar slidably mounted, in said body structure bore, on said probe rod and engageable by the sensing tip of said dial indicator; a set screw for securing said collar at various locations on said probe rod, there being an accommodation slot for said set screw in the side wall of said body structure bore; a pair of opposed springs surrounding said probe rod, bearing on said guide means, and urging said collar in opposite directions, one of said springs being stronger than the other whereby said probe rod and collar tend to urge said dial indicator toward one extreme condition; means for compressing said stronger spring to a position clearing said collar thereby to permit said probe rod and collar to cause said dial indicator to move toward its other extreme position.

3,016,620
FOOTAGE INDICATOR MECHANISM

Otto Wittel and John L. Salzer, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed June 13, 1958, Ser. No. 741,967
4 Claims. (Cl. 33—172)

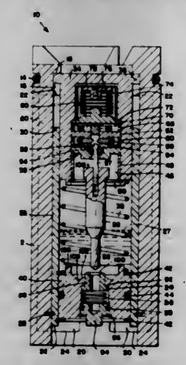


1. A film supply indicator for a camera of the type adapted to receive a supply spool of film within the camera body, comprising a camera body portion having a pair of slots therein, a film contacting member pivotally mounted on said body intermediate such slots and adapted to be moved into engagement with the periphery of film wound on said spool, biasing means normally urging said film contacting member away from such engagement, an operating element provided by said film contacting member and accessible through one of said slots for manual actuation from the exterior of the camera body to move said film contacting member in opposition to said biasing means into contact with the periphery of the film on the spool, and indicating means provided by said film contacting member and extending into the other of said slots and visible therein from the exterior of the camera body to indicate by its position in said other slot the amount of film on said supply spool when said film contacting member is moved into contact with the film.

3,016,621
FLUID PRESSURE RESPONSIVE INCLINOMETER

Fred S. Kielman, Jr., Houston, Tex., assignor to Sperry-Sun Well Surveying Company, Philadelphia, Pa., a corporation of Delaware

Filed May 11, 1959, Ser. No. 812,246
9 Claims. (Cl. 33—205)

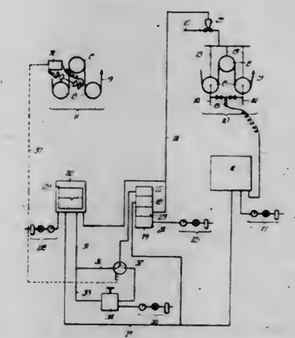


1. A fluid pressure responsive inclinometer comprising an elongated casing adapted to be positioned in a drill string in a bore hole, means forming a passage extending longitudinally of said casing, means normally closing off said passage and movable in said casing in response to fluid pressure at one end of said casing to open said passage, means restricting movement of said movable means when the degree of inclination of the casing exceeds a predetermined degree to prevent opening of said passage, and latching means preventing operation of said restricting means during movement of said movable means only after a restricted movement of said movable means whereby said movable means may move to open said passage.

3,016,622
CONTROL SYSTEM FOR PAPER MACHINE DRIERS

Marvin Francis Gade, Fullerton, Calif., and George Garnet McDonald Eastwood, Neenah, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed July 10, 1957, Ser. No. 670,891
5 Claims. (Cl. 34—48)



1. A system for maintaining steam heated rollers for drying the web from a paper making machine at a predetermined temperature comprising a temperature sensing device adapted to measure the temperature of the steam condensate from said rollers, a controller for receiving a signal from said temperature sensing device, means for establishing a predetermined reference signal in said controller, said reference signal and said first signal being substantially equal when said rollers are at said predetermined temperature, a valve for controlling the amount of steam flowing into said rollers, said valve being operated by a signal from said controller which is a function of said first signal and said reference signal, a photoelectric device for detecting a break in the web, means for reducing the magnitude of said reference signal actuated by said photoelectric device, a temperature sensing device for measuring the surface temperature of said rollers, and a controller actuated by a break in the web and adapted to receive signals from said temperature sensing device, said last named controller varying the amount of the reduction of said reference signal by said last named means in accordance with the signals from the temperature sensing device.

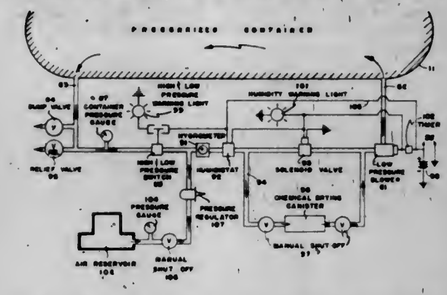
3,016,623
TRANSPORT VEHICLE

Wallace Hamilton, Bentleyville, and Jack Lovell, Chagrin Falls, Ohio, assignors to Cleveland Pneumatic Industries, Inc., a corporation of Ohio

Filed Nov. 13, 1956, Ser. No. 621,950
1 Claim. (Cl. 34—50)

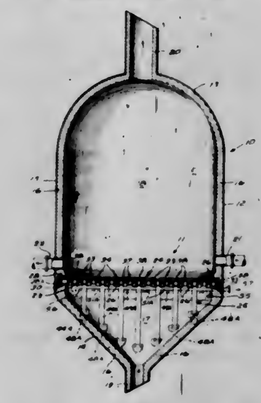
A closed circuit pressurizing system for a fluid tight load receiving container, a blower having inlet and pressure sides, pressure conduit means connecting the pressure side of said blower to said container to supply gas under pressure to said container, inlet conduit means connecting said container to the inlet side of the blower for returning gas from said container to said blower, a relief valve connected to said inlet conduit means for exhausting gas from the container when the pressure of the gas ex-

ceeds a predetermined maximum, a reservoir containing gas under pressure, conduit means connecting said reservoir to the inlet conduit means to supply make-up gas thereto, a pressure regulator in the last said conduit means to control the supply of gas from said reservoir when the pressure of the gas in the container drops below a predetermined minimum, gas drying means for the circulated gas, conduit means connecting said gas drying means in parallel with the inlet conduit for diversion of



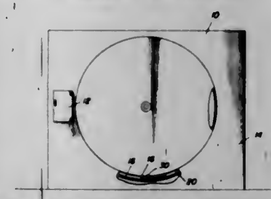
the flow of gas from the inlet conduit means through the gas drying means and returning the gas to the inlet conduit, moisture sensing means in the inlet conduit means for sensing the moisture in the circulated gas, valve means in the inlet conduit means operative to divert the flow of gas from the inlet conduit means to the gas drying means, and means connecting said valve means to the moisture sensing means to operate said valve means in response to the moisture content of the gas as sensed by the moisture sensing means.

3,016,624
GAS DISTRIBUTION BAFFLE
Charles Bliss, Hastings on Hudson, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Jan. 2, 1959, Ser. No. 784,656
8 Claims. (Cl. 34—57)



7. In a vessel for contacting a mass of finely divided solid material with an upwardly moving gasiform fluid, a gasiform fluid distribution baffle comprising, a cooling coil disposed in a horizontal plane in said vessel, said cooling coil comprising a plurality of closely spaced parallel tubes connected together at their ends by return bends to provide serial flow of fluid through the tubes, means connecting said cooling coil at each return bend to the vessel wall to support said tubes and to allow relative expansion of said tubes with respect to said vessel, a refractory floor positioned on and supported by the tubes of said cooling coil and connected to the vessel wall in a fluid-tight manner to divide the vessel into a solids contacting chamber and a gasiform fluid inlet chamber, said floor being adapted to loosely engage said tubes to allow for differential expansion between said tubes and said floor, said refractory floor having a plurality of spaced vertical openings disposed to communicate with the solids contacting chamber and the gasiform fluid inlet chamber between the tubes of the cooling coil for providing flow of gasiform fluid from the gasiform fluid inlet chamber into the solids contacting chamber, said cooling coil having an inlet communicating with a source of cooling fluid to receive the same for flow through said tubes for absorbing heat from said refractory floor, said cooling coil having an outlet to discharge heated cooling fluid, a tubular support assembly comprising a plurality of spaced hollow post members closed at both ends and connected to the bottom of said vessel, said hollow post members being interconnected by a plurality of inverted L-shaped pipes, an inverted L-shaped pipe being disposed with its vertical leg extending coaxially within a post member and in spaced relationship with the interior surface and bottom of said post member and its horizontal leg secured to the next adjacent post member and in communication with the interior thereof, said post members and inverted L-shaped pipes being dimensioned so that the pipes contact the tubes of said cooling coil to support the latter, one of said post members being connected to a source of cooling fluid to receive the same for flow through the post members and inverted L-shaped pipes, the inverted L-shaped pipe associated with the post member connected to a source of cooling fluid being provided with an outlet to discharge heated cooling fluid.

3,016,625
CLEANING ATTACHMENT FOR DRY CLEANING RECLAIMERS
Thomas F. Cull and Robert G. Leiteritz, both of 14 E. 16th St., Chicago Heights, Ill.
Filed June 18, 1958, Ser. No. 742,768
7 Claims. (Cl. 34—85)

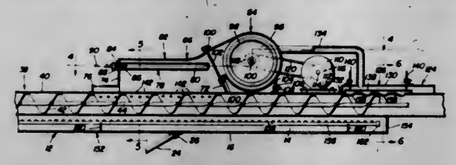


6. A sweeping attachment for a laundry machine having a rotary basket with perforations therein in spaced relation to a shell comprising backing means, cleaning means mounted on said backing means and in contact with said shell, removable fastener means extending through selected perforations of said basket and clamp means operatively connected to said fastener means and backing means to maintain said cleaning means in spaced relation to said basket and thereby avoid blockage of perforations other than those through which the fastener means extend.

3,016,626
GRAIN DRYER
Emery L. Kompus, Herndon, Kans.
Filed Sept. 10, 1958, Ser. No. 760,145
4 Claims. (Cl. 34—182)

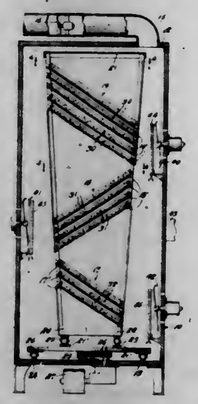
1. A combined grain dryer and conveyor, comprising an elongated housing having a grain inlet at one end

and a grain outlet at the other end thereof, a conveyor member extending longitudinally in said housing, an elongated heater chamber mounted exteriorly and longitudinally on the intermediate portion of the housing, said intermediate portion of the housing being provided with longitudinally extending rows of air openings communicating with said heater chamber, a blower connected



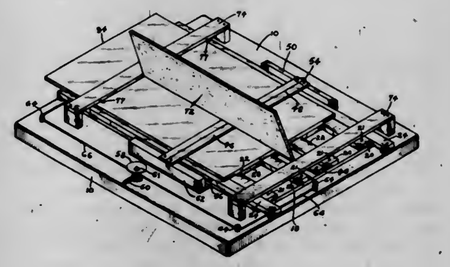
to the heater chamber for forcing air therethrough and through said openings into the housing, and an air intake chamber provided on the housing in communication with the atmosphere and with said blower, the grain inlet end portion of the housing being provided with an air passage communicating wtih said intake chamber, whereby only a portion of the volume of air entering said blower may be recirculated from said housing.

3,016,627
APPARATUS FOR DEHYDRATING FOOD AND THE LIKE
Berthold G. Freund, 105—35 67th Road, Forest Hills, N.Y.
Filed Apr. 22, 1959, Ser. No. 808,058
5 Claims. (Cl. 34—187)



1. Dehydrating apparatus, comprising: a normally closed, thermally-insulated housing affording a treating chamber, the top thereof being provided with an outlet for spent gaseous dehydrating medium; a door associated with said housing to afford an opening for introduction of material for dehydration; a rotatably-supported platform at the bottom of the housing, and means to rotate the platform; an inverted, truncated pyramidal, openframe truck adapted for removable support by said platform coaxially within the housing and passable through the opening afforded by the said door; a plurality of vertically inclined banks of open, perforated-bottom trays removably supported by the truck and adapted for introduction of material to be dehydrated within the housing, alternate banks being oppositely inclined; and means, supported by and located within said housing, for juxtaposition each to the lower end of a corresponding bank of racks, when located therein, to direct through material on said trays corresponding streams of heated gaseous, dehydrating medium.

3,016,628
SLIDE RULE TRAINER
Francis Low Woolley, Port Washington, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
Original application Feb. 27, 1959, Ser. No. 796,179. Divided and this application Feb. 27, 1961, Ser. No. 92,103
7 Claims. (Cl. 35—39)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A slide rule comprising spaced apart substantially parallel side members, a movable transparent strip with a depending flange, said transparent strip overlying said side members and being somewhat wider than the space between said side members, said transparent strip and said flange being substantially equal in length to said side members, said flange riding between both side members, with slide rule indicia on the upper faces of said side members and on said depending flange, the indicia on said side members and depending flange being in the same plane, and a transparent cursor movably mounted and retained over said side members and said overlying transparent strip.

3,016,629
GLOBE OVERLAYS
Charles B. Case, 913 Humboldt St., Denver 18, Colo.
Filed Sept. 29, 1958, Ser. No. 764,042
8 Claims. (Cl. 35—46)



1. In combination with a globe having cartographic representations thereon, a plurality of uniform size segments arranged to overlay a surface area of the globe, each said segment being of a size and shape to cover a predetermined regular geometrical portion of the globe, each overlay having representations thereon arranged to register with at least a portion of said cartographic representations

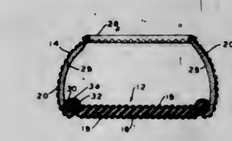
of the globe, said segments being substantially stiff members and being substantially transparent so as to display therethrough representations on the globe, and means for releasably securing each segment substantially in contact with the globe surface and in its respective position on said globe.

3,016,630
SHOES
Robert D. Twiggs, Jr., Eudora, Ark.
(3730 Cimarron St., Los Angeles 18, Calif.)
Filed May 1, 1958, Ser. No. 732,231
5 Claims. (Cl. 36—2.5)



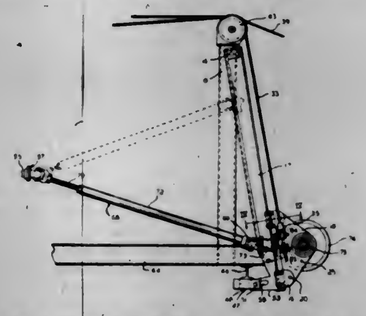
1. A shoe, comprising, a first sole-part, an upper having inturned edges, said first sole-part having an open recess extending therethrough and crosswise thereof, a second sole-part underneath said first sole-part, said second sole-part having a second recess extending crosswise thereof but wider therealong than said first recess extends along said first sole-part in order to form ledges on said first sole-part overhanging said second recess crosswise of said second sole-part, and projections on the edges of and extending along said upper and insertable through said second recess and under said ledges, said recesses being of sufficient dimensions to bodily receive said projections for engagement with and underneath said ledges.

3,016,631
SLIPPER
Robert S. Servin, Jenkintown, Pa., assignor to Robert Hosiery Mills, Inc., Trappe, Pa., a corporation of Pennsylvania
Filed July 14, 1960, Ser. No. 42,860
4 Claims. (Cl. 36—3)



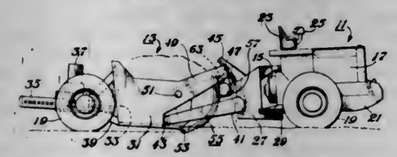
1. A slipper comprising a sole having a relatively flat elastic material layer covered on each side by a knitted material layer, said sole being of a shape corresponding to the bottom of a foot, an upper of a body of knitted material extending over said sole, said upper having a toe portion covering the front of said sole and a heel portion around the back of said sole, the upper having a bottom edge which extends around and overlaps the edge of said sole, the bottom edge of said upper being sewn to the edge of said sole by a line of overlock stitching, said line of stitching extending through all of the layers of the sole to secure said layers together, the knitted body of said upper being provided with a layer of cellular foam material, said foam material being secured to the inner surface of said body by an adhesive, and an elastic band extending around free edges of said upper thereby defining an opening through which a foot may extend.

3,016,632
DITCHER DRIVING AND STEERING MECHANISM
Harry A. Barber, Leonard S. Burns, and Edward J. Roots, Aurora, Ill., assignors to Barber Greene Company, Aurora, Ill., a corporation of Illinois
Continuation of application Ser. No. 635,632, Jan. 23, 1957. This application Mar. 25, 1960, Ser. No. 17,650
5 Claims. (Cl. 37—97)



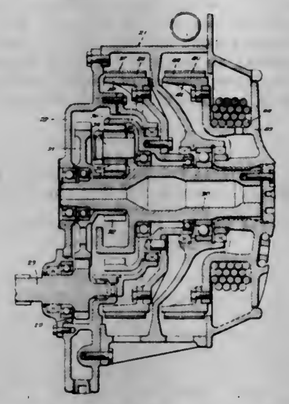
1. In a ditching machine, a self-propelled vehicle including a frame structure having parallel spaced side frame members having transversely spaced upright supports extending upwardly therefrom at the rear end thereof, a boom structure extending rearwardly of said upright supports and having a digging wheel rotatably supported thereon, means connecting said boom structure to said upright supports to be drawn by the vehicle to effect a ditching operation comprising an individual connector associated with each upright support, said connectors being mounted for pivotal movement about horizontal transverse axes spaced above said side frame members, means pivotally connecting said boom structure to said connectors for movement about horizontal transverse axes adjacent the lower end portions of said connectors, and motion limiting means associated with each connector beneath the horizontal transverse pivotal axis thereof and accommodating independent angular movement of said connectors toward and from said upright supports and having spaced stop surfaces limiting movement of said connectors toward and from said supports, whereby the draw bar pull of the vehicle is taken through both of said connectors in a straight forward travel of the vehicle and is taken through the outer of said connectors on the outside of a curve, with the draw bar pull on the inner of said connectors on the inside of a curve being relieved when drawing the digging wheel structure to dig along a curve, and thereby minimizing angular stresses on the digging wheel and boom structure during digging along a curve and facilitating the continuous digging of ditches as the machine is turned to the right or the left.

3,016,633
EARTH WORKING MACHINERY
Robert G. LeTourneau, P.O. Box 2307, Longview, Tex.
Filed Jan. 26, 1961, Ser. No. 85,038
4 Claims. (Cl. 37—129)



4. In a material handling machine of the self-loading type comprising a load carrying bowl having an open front and an apron serving as a controllable closure for the front of said bowl, a sector gear fixed to said apron and extending outwardly therefrom along the apron surface vertical contour, a drive pinion engaging said sector gear to drive said apron through its range of positions from fully open to fully closed, with operator controllable means for driving said pinion; that improvement which resides in said sector gear, and wherein said sector gear has two or more sections with each section being lighter and having narrower tooth width than the section above it.

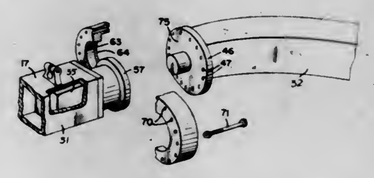
3,016,634
CRAWLER TRACTOR ATTACHMENTS
George S. Allin, Sr., Flossmoor, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 19, 1958, Ser. No. 762,095
3 Claims. (Cl. 37—144)



1. Transmission means for manipulating an implement on the front end of a tractor having an engine including a crankshaft, said transmission means comprising a cable unit mounted on the front end of the tractor and operatively connected with the implement for raising, holding and lowering the implement, rotatably mounted shaft means operatively connected with the crankshaft and carrying a first gear means constrained for rotation with the shaft means, second gear means meshing with the first gear means, and speed reduction drive transmitting means operatively connecting the second gear means with the cable unit, fluid operated means connected with the implement for selectively changing the pitch and tilt thereof and including a pump having a gear element meshing with the second gear means providing continuous engine driven pump operation, said transmission means being provided with operator controlled brake means including a first brake unit selectively engaged with the speed reduction drive transmitting means providing reduced drive connection between the second gear means and the cable unit to raise the implement and a second brake unit selectively engaged with the cable unit to hold the implement, said implement being lowered when both brake units are disengaged.

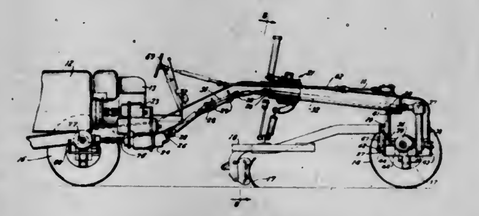
3,016,635
C-BAR STRUCTURE
William W. Aston, Glenwood, Wash.
Filed Nov. 24, 1958, Ser. No. 775,851
4 Claims. (Cl. 37—144)

1. In a device for joining the ends of a web of two half-sections of a C-bar of the type supporting working tools on the front of a tractor the combination of: round flanges mounted on the ends of said web sections; each flange having a diameter greater than the maximum cross-sectional dimension of the web; a first said flange having a greater diameter than the second said flange; a collar mounted over the second flange having an outer diameter greater than said second flange and an inner



diameter substantially less than said second flange; said flanges each formed with mating flat faces positioned to align said web sections in axial alignment when the faces are juxtaposed in axial alignment; and means rigidly attaching said first flange and said collar together to tightly compress said second flange and said first flange together.

3,016,636
ROAD SCRAPER WITH DRIVEN LEANING WHEELS
Anthony L. Lado, Rome, N.Y., assignor to Pettibone Mulliken Corporation, Chicago, Ill., a corporation of Delaware
Filed Mar. 30, 1956, Ser. No. 575,234
9 Claims. (Cl. 37—156)

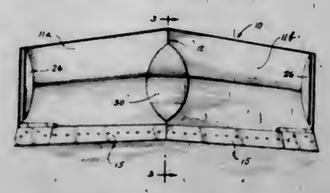


1. A road scraper including a frame forming an arch, a scraper blade supported by the frame beneath the raised portions of the arch; front and rear axle assemblies under the end portions of the frame and supporting the frame; an engine on one end portion of the frame; driving connections between the engine and the adjacent axle assembly; driving connections between the engine and the remote axle assembly, including a series of drive shafts connected by universal joints; a mounting and swinging assembly surrounding the frame and with it one of said drive shafts near the top of the arch and rotatable on said frame; chain drive means extending downwardly from the final one of the series of drive shafts to the remote axle assembly for driving the latter; each axle assembly including an axle beam, wheels carrying the beam and rotatable thereon at opposite ends thereof, a differential gear unit carried on the beam with output shafts approximately in alignment with the upper edges of the wheel hubs, and drive shaft and universal joint means connecting the differential output shafts in driving relation to the wheels; all four wheels being steerable, and the wheels on one axle assembly being leanable with respect to the axle assembly, the drive shafts on this axle assembly being telescopic to accommodate the leaning movement of said wheels.

3,016,637
MOLDBOARD ASSEMBLY

Finn R. Abel, Seattle, Wash., assignor to Allied Tractor Equipment Company, Seattle, Wash., a corporation of Washington

Filed Nov. 12, 1958, Ser. No. 773,298
1 Claim. (Cl. 37—170)



A moldboard of the character described having its rear side equipped with means for its functional support for a bulldozing or dirt moving operation; said moldboard comprising a pair of complemental side sections rigidly joined together in end abutting relation and in forwardly and laterally directed divergent relation whereby there is formed a vertical angle between the forward surfaces of the sections midway between the ends of the moldboard, and an elongate vertically disposed plate positioned against the said forward surfaces of said sections and bridging across said angle and presenting a forwardly facing surface extending straight across the angle and to substantially the same distance on each side of the line of join between the ends of said sections, the plate extending vertically substantially the entire vertical length of the angle, said plate being in engagement with and joined to said forward surfaces of the moldboard entirely around its periphery, the forward surfaces of the mold board sections being vertically concave and said plate being of elliptical edge contour and being longitudinally bowed rearwardly whereby the edges on opposite sides of a medial olngitudinal line thereof conform to the curvature of the adjacent surfaces of the moldboard sections and said medial longitudinal line and said line of join between the ends of said sections lie in a common vertical plane.

3,016,638
PRICE TAG MOUNT

Samuel Singer, 2133 Judah St., San Francisco, Calif.

Filed Apr. 6, 1959, Ser. No. 804,201
6 Claims. (Cl. 40—5)

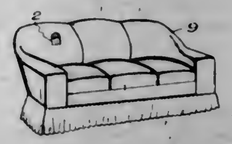


1. A price tag structure, comprising a rail adapted for fastening upon the edge of a shelf or the like, a rectangular housing having a window in the front thereof and having upper and lower rear edges fitting against the upper and lower edges of the rail, a tape mounted in the housing and having a section arranged opposite the window, and cooperative means associated with the rail and the housing for holding the housing to the rail and for flattening the tape against the window, the latter means comprising a T-shaped rib projecting centrally from the rail and slidable in the housing and a backing plate interposed between the tape and the rib.

3,016,639
TAG

Richard E. Kennedy, 1349 W. Rosemont, Ave., Chicago 40, Ill., and Mickey E. Griffin, 1652 2nd St., La Porte, Ind.

Filed June 29, 1959, Ser. No. 823,589
3 Claims. (Cl. 40—25)

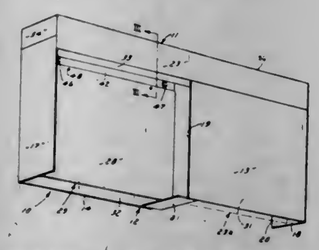


1. In combination, a reversible tag, a pin securing flap secured to said tag adjacent to one edge thereof, and a pin having one pair of substantially perpendicular elements including a securing element pivotally held between said tag and said pin securing flap and a penetrating element extending beyond said flap and said edge of said tag, said flap having an aperture therein at the edge of said tag, said penetrating element of said pin extending through said aperture, and said pin being substantially T-shaped.

3,016,640
AUTOMATIC DISPLAY DEVICE

Richard E. Swank, 592 W. Columbia Ave., Battle Creek, Mich.

Filed Apr. 30, 1959, Ser. No. 810,037
4 Claims. (Cl. 40—36)



1. An apparatus for moving a display panel between two horizontally spaced positions, comprising: an elongated, horizontally disposed mounting structure, said mounting structure having an elongated track thereon; a vertical panel disposed below said track; a plurality of rotatable rollers mounted on the upper edge of said panel for rotation about horizontal axes extending transverse to said track, said rollers resting upon said track so that said panel is supported for movement lengthwise thereof; a pair of horizontally spaced, radially aligned circular members rotatably supported on said mounting structure above said track near the path of movement of said panel for rotation about substantially parallel axes; an endless element extending around said circular members, said element having a pair of reaches extending between said circular members and substantially parallel with said track; means connected to one of said circular members for effecting rotation thereof in one direction whereby said endless element is moved in said one direction through a closed path around said circular members and lengthwise of said mounting structure; a drive finger secured to and extending outwardly from said endless element; a pair of driven members mounted on the upper edge of said panel and extending upwardly therefrom, respectively, to positions adjacent the respective reaches of said endless member so that the drive finger as it moves through each of said reaches will engage one of said driven members and will thereby move said panel in one direction or the other along said track, said drive finger being disengaged from said driven members as it passes around said circular members so that the panel remains in a non-moving position for a period of time.

3,016,641
REAR VIEW MIRROR WITH PARKING-TIME REMINDER

Guy Lepinay, 1 Blvd. de Strasbourg, and Yves Lepinay, 26 Blvd. Gouvion Saint-Cyr, both of Paris, France

Filed Mar. 17, 1960, Ser. No. 15,757
2 Claims. (Cl. 40—70)

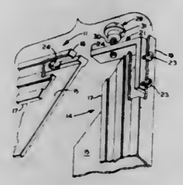


1. A combination rear view mirror and parking-time indicator for an automotive vehicle, which comprises a case of substantially rectangular configuration, said case being formed with a pair of aligned windows and comprising on its rear face a pair of spaced pivot-forming projections each disposed intermediate the two windows of one of said pairs, a pair of blocking disks each pivotally mounted on one of said case projections, said each blocking disk being formed with a pair of windows adapted, in a given angular position of said blocking disk, to uncover the pair of case windows disposed on either side of said specific case projection, a link mounted behind said pair of blocking disks for operatively interconnecting them with a view, by their movements, to uncover alternately one of said pairs of windows of said case while blocking the other pair, and vice-versa, a pair of control lugs respectively solid with said two blocking disks, said lugs projecting on either side of said case for controlling the simultaneous movement of said two disks, a pair of indicator disks pivotally mounted on said two pivot-forming projections of said case behind said two blocking disks, each indicator disk having on its two front and rear faces a peripheral zone carrying hour data corresponding diametrally by pairs to each other, two corresponding hour data of the front face of said each blocking disk being visible through the pair of case windows disposed on either side of the case projection on which said each indicator disk is pivotally mounted when said pair of case windows is uncovered by the blocking disk pivotally mounted on the same case projection, said each indicator disk comprising furthermore a circular edge projecting slightly from said case for controlling the rotary movements of said indicator disk in said case, the control action on said circular edge being prevented by that one of said two control lugs which project from the same side of said case as said circular edge when said control lug is in the position controlling the blocking of the pair of case windows disposed on either side of the projection on which said each indicator disk is pivotally mounted, a reflecting mirror applied against the rear face of said case on said pivot-forming projections of said rear face of the case, said reflecting mirror being formed with two pairs of windows each adapted to uncover two corresponding hour data of the rear face of one of said two disks, a frame member fitted on said mirror and case so as to assemble said mirror with said case and enclose said pair of blocking disks, said link for operatively interconnecting said pair of blocking disks and the two indicator disks, except said control lugs projecting on either side of said case and said circular control edges which project slightly from either side of said case.

3,016,642
FRAME FOR SHOW CARDS

Joseph J. Kowalski, Petersburg, Mich., assignor to The Yarder Manufacturing Company, Toledo, Ohio, a corporation of Ohio

Filed May 3, 1961, Ser. No. 107,560
3 Claims. (Cl. 40—152)



1. A frame for show cards and the like comprising, in combination, inwardly open frame members forming sides of an open center frame and a removable frame member forming one side thereof, the ends of two of said first frame members and the ends of said removable frame member having cooperating retaining means consisting of a retaining pin mounted at one end of said removable frame member, a cooperating pin-receiving hole in the associated end of one of said two first frame members, a keyhole slot in the end of the other of said two first frame members and a captive, shouldered member mounted in the other end of said removable frame member and movable through the narrow part of said keyhole slot, the shouldered portion thereof having a size larger than the narrow portion of said keyhole slot and adapted to seat in the enlarged portion of said keyhole slot.

3,016,643
MARKER FOR ANY KIND OF LIVE-STOCK, MORE SPECIALLY POULTRY

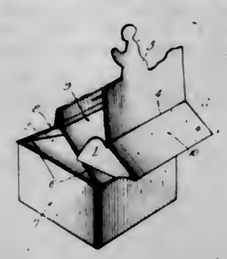
Roger Remi Gerard Guyot, Victor Heylenlel 49, Boechout, Belgium

Filed Oct. 29, 1959, Ser. No. 849,654
Claims priority, application Belgium May 6, 1959
3 Claims. (Cl. 40—302)



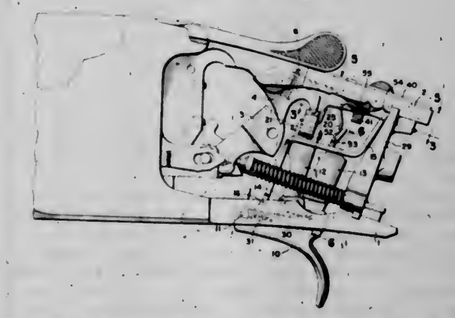
1. An identification means for live stock and the like, comprising a generally flat strap, one end of said strap having an opening therein, the other end of said strap having an extension terminating in a barb portion and arranged to pass through said opening, said extension being generally concavo-convex in cross-section throughout its length including the barb portion, a cupped receptacle communicating with and adjacent said opening, said receptacle including substantially parallel walls spaced apart a distance less than the maximum depth in cross-section of said barbed portion but having a width greater than that of said opening, said barb portion being adapted to be pressed through said opening and into said receptacle whereby said walls effect a deformation of said barb portion to a dimension wider than said opening so as to lock said barb portion within said receptacle.

3,016,644
FOLDING ADVERTISING DISPLAY
Dale H. Sass, Omaha, Nebr., assignor to Fairmont Foods Company, Omaha, Nebr., a corporation of Delaware
Filed Feb. 19, 1960, Ser. No. 9,854
2 Claims. (Cl. 40—312)



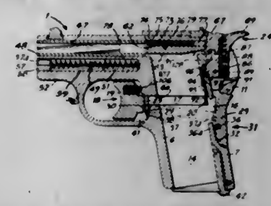
1. A detachable display device comprising a flexible sheet adapted to be releasably affixed to a container having recessed end portions formed by sloping front and back walls and indented side walls, said flexible sheet having a center portion suitable for printing and side portions cut so as to define flaps, said flaps extending from respective sides of the center portion and integral with the center portion, and which said flaps are each adapted to be bent around a terminal edge of a sloping wall, each flap having a bottom edge which slopes upwardly and outwardly from the center portion and having an arcuate top edge which terminates in a vertex with the said bottom edge, so that when placed upon the container, the bending of the flap around the terminal edge of the sloping wall brings the arcuate top edge of the flap and the bottom edge of the flap into contact with the adjacent and indented side wall of the container and also in contact with the underside of the particular sloping wall, and said flexible sheet further including a display portion extending upwardly above said center portion so that when the display device is used with a container said display portion extends superior to the top of the container.

3,016,645
SINGLE TRIGGER MECHANISM FOR A TWO-BARREL GUN
Howard L. Miller and Irvin K. Miller, both of R.D. 1, Millersburg, Pa.
Filed Apr. 19, 1960, Ser. No. 23,233
5 Claims. (Cl. 42—42)



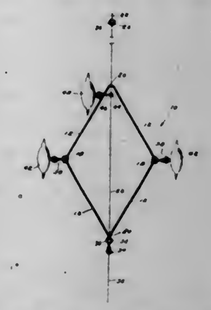
5. In a trigger mechanism for a two barrel gun having a pair of spring biased firing pin hammers each retained by a spring biased sear member, a pivotally mounted trigger member, a pivot pin secured to said trigger member, a trigger post mounted on said pivot pin, a trip member mounted on said post for engagement with one of said sear members, and a trigger weight pivotally mounted on the same pivot pin as the trigger post.

3,016,646
HAMMER ASSEMBLY FOR A PISTOL
Walter H. B. Smith, deceased, late of New York, N.Y., by Katherine B. Groves, executrix, 150 W. 58th St., New York, N.Y.
Filed Dec. 2, 1959, Ser. No. 856,750
18 Claims. (Cl. 42—69)



7. A hammer assembly comprising a housing including a pair of spaced parallel side walls joined by a web, a hammer pivotally mounted between said side walls, spring means in said assembly urging said hammer into engagement with said web, a sear pivotally mounted between said side walls and resiliently urged into engagement with said hammer, and key means on the outside of said housing for positioning said hammer assembly in the frame of a firearm.

3,016,647
DEVICE FOR ATTRACTING WILD GEESE AND DUCKS
Walter G. Peterson, Eugene, and Eugene Cadwallader, Springfield, Oreg., assignors of ten percent to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Apr. 20, 1959, Ser. No. 807,557
7 Claims. (Cl. 43—3)



1. A decoy array for wild geese and ducks comprising, in combination, a frame having opposite sides and ends, a pair of decoys, releasable fastening means securing said pair of decoys on said opposite sides of said frame, a lead decoy, longitudinal means, releasable fastening means securing said lead decoy to said longitudinal means at a longitudinally intermediate location therealong, said frame having longitudinally directed apertures longitudinally slidably receiving said longitudinal means, said lead decoy being secured to said longitudinal means laterally intermediate said pair of decoys for reciprocating sliding movement therewith from one end of said frame to the other in response to longitudinally reversed direction of movement of said longitudinal means through a body of water and with respect to said frame.

3,016,648
MECHANICAL FISHING DEVICE
Robert D. Ingersoll, 1028 E. Peoria, and Elmer W. Ingersoll, Jr., 205 W. Kaskaskia, both of Paola, Kans.
Filed June 25, 1958, Ser. No. 744,603
3 Claims. (Cl. 43—15)



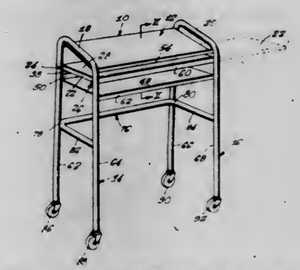
1. A mechanical fishing aid comprising a support adapted to be inserted in the ground, a fishing pole receiving frame pivotally mounted on the support so as to pivot between a cocked position and a released position, resilient means connected to the frame whereby to urge it toward the released position, the frame having an opening so formed therein that the pivotal mounting of the frame is between said opening and the connection of the resilient means to the frame, a member positioned in said opening and adjustable therein to vary the depth thereof, a trigger arm pivotally mounted on and relative to the support and adapted to be inserted in said opening to a variable depth limited by the position of the said member therein when the frame is in the cocked position, whereby to vary the sensitivity of the trigger, and means connected to said arm and extending so as to at least substantially contact a fishing pole supported by the frame when the latter is in the cocked position whereby a sufficient depression of the fishing pole will also sufficiently depress said contacting means and remove the arm from said opening whereby to permit movement of the frame under the action of the resilient means from the cocked to the released position, said trigger arm so formed that variations in the depth of said opening will not substantially vary the alignment of the rod contact means.

3,016,649
DEVICE FOR RECOVERING FISH LURES AND THE LIKE
Daniel Ratcliff, Washington, N.C.
Filed Apr. 15, 1959, Ser. No. 806,576
2 Claims. (Cl. 43—17.2)



1. In a device for application to a fishing line for freeing a snagged hook, the combination of a relatively heavy torpedo-like body having spaced fins extending radially outwardly thereof for stabilizing it against rotation, and a tapered portion at one end, a support handle for attaching a recovery line at the opposite end of said body, said body having an axial bore and a slot along the length thereof in communication with said bore whereby a fishing line may be introduced into said bore, latching means mounted on the opposite ends of said body for maintaining said line in said bore, a plurality of spaced rods connected to the tapered end portion of said body and extending substantially axially therefrom within the periphery of said body, a ring mounted on said rods and in spaced relation to said body, said ring having an angular slot disposed substantially out of line with the slot in said body whereby a fishing line is receivable in said ring and in the axial bore of said body.

3,016,650
DICTIONARY STAND
Lloyd E. Magers, 1500 Chicago Ave., Evanston, Ill.
Filed Mar. 31, 1960, Ser. No. 19,063
8 Claims. (Cl. 45—60)



1. A stand for reference works and the like comprising a pair of support members each having a pair of vertical legs and an upper cross-piece joining said legs and inclined at an acute angle from the horizontal, a shelf bridging said support members in predetermined spaced relationship beneath said cross-pieces, said cross-pieces being inclined in the same direction, said shelf being planar and inclined at an acute angle to the horizontal and in substantial parallelism with said cross-pieces, the cross-piece of each said support member being in coplanar relationship with the legs thereof, whereby to provide a guard serving to prevent the cuffs of a user from fraying or damaging the pages of a reference work which may be supported on said shelf, an upstanding flange at the lower longitudinal edge of said shelf and extending between said support members to retain a reference work on said shelf despite the inclination of said shelf, a horizontally extending shelf disposed a predetermined distance below said inclinded shelf and similarly connecting said support members, a downwardly and inwardly turned flange extending longitudinally along each side of said horizontally disposed shelf and formed integrally therewith, a longitudinally extending bead in the inwardly extending portions of said flanges and a superposed longitudinally extending bead in said shelf above each of said beads in said inwardly extending portions of said flanges, said beads protruding toward one another in spaced relationship to afford a pair of tracks, and a shelf of relatively thick material slidably received in said tracks for selective adjustment to either side of said stand.

3,016,651
DOLL MOUTH
Harry Brudney, 310 W. 72nd St., New York, N.Y.
Filed Feb. 6, 1958, Ser. No. 713,611
10 Claims. (Cl. 46—141)

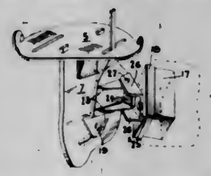
9. A doll mouth device for insertion in a cavity of a doll head, comprising a unitary element having a shell

open at one end at least and a doll mouth element disposed within said shell and mounted for relative rotation with respect thereto so as to expose either of two areas at said opening, one such area simulating denture means and the other of said areas simulating an open mouth,



passageway means within said shell disposed to conduct liquid from said open end into the interior of said shell when said simulated open mouth area is exposed at said open end and passageway means leading from said shell to provide egress of liquid therefrom.

3,016,652
DOLL LEG MOUNTING AND OPERATING MECHANISM
Robert Gardel, 11 Riverside Drive, New York 23, N.Y., and Arthur Rogovin, 32—25 Mott Ave., Far Rockaway, N.Y.
Filed Feb. 12, 1958, Ser. No. 714,756
18 Claims. (Cl. 46—149)



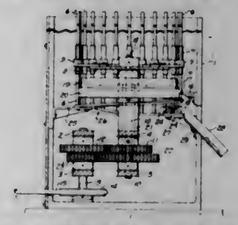
1. A doll leg mounting and operating mechanism in association with a doll body, comprising, an element connected to the doll body by means permitting rotation of said element with respect to said body around a substantially horizontal axis, an element connected to the doll leg, the connection between said last named elements and said leg including means permitting movement of the leg between standing and sitting positions, and a hinge connection between said elements, the hinge having a substantially vertical axis and being operable when the leg is in its sitting position.

3,016,653
AGRICULTURAL LIQUID, SUCH AS WEEDICIDE OR HORMONE, SPRAYING APPARATUS
Peter Alexander Gardner, Matain Glorit R.D., Kaukapakapa, New Zealand
Filed May 19, 1960, Ser. No. 30,119
7 Claims. (Cl. 47—1.7)



1. An agricultural liquid spraying apparatus comprising a rigid tubular boom adustably mounted on a vehicle for supplying liquid spray, a plurality of automatic shut-off valves mounted on said tubular boom at intervals therealong, spray nozzles connected to said shut-off valves, each shut-off valve comprises a body having a bore, a valve plunger slidably mounted within the bore and set against a spring located in the body so that an outer end of the plunger projects forwardly from the body relative to line of travel of the vehicle, an inlet duct opening connected from an aperture in the boom to the bore, an outlet duct connected from the bore to the spray nozzle so that upon inward pressure on the projecting end of the plunger the ducts will be open to one another, and an element operatively connected to each shut-off valve which is arranged in a downward direction to encounter plants projecting above the average sward during travel of said vehicle thereby so as to automatically actuate said shut-off valve from which it depends to spray liquid onto the plant.

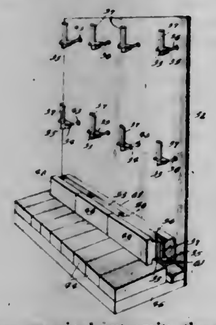
3,016,654
SCORING AND BREAKING APPARATUS FOR VITREOUS TUBING
John A. Lutz and Francis J. Vidoni, Bridgeville, Pa., assignors to General Electric Company, a corporation of New York
Filed Mar. 27, 1958, Ser. No. 724,353
2 Claims. (Cl. 49—48)



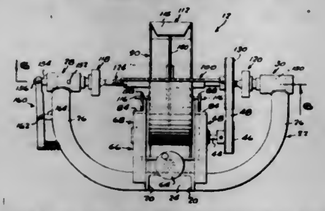
1. A machine for subdividing vitreous canes comprising in combination, means for conveying a plurality of canes in parallel spaced positions along a curvilinear path while supporting the canes for rotation on their longitudinal axes, cutter means on one side of said path presenting to the conveyed canes a stationary straight cutting edge intersecting said path in a plane normal to the axes of the conveyed canes, means including a wheel mounted on the opposite side of said path for engaging and rolling the conveyed canes along said cutting edge, the periphery of said wheel being opposed to and spaced from said cutting edge a distance less than the outer diameter of the conveyed canes, said wheel being stiffly resilient at its peripheral portion and being mounted for rotation on an axis parallel with the axes of the conveyed canes, the stiffly resilient peripheral portion of said wheel extending parallel with the axes of the conveyed canes so as to engage the said canes for a substantial distance longitudinally of the canes, said cutting edge being positioned to engage the conveyed canes intermediate the ends of the longitudinally extending portions of the canes engaged by the stiffly resilient peripheral portion of said wheel, said machine comprising also means for driving said conveyor and for rotating said wheel in the same direction and at such relative speeds that the conveyed canes are rolled along and pressed against the said cutting edge in sequence to score each cane along a circumferentially extending line while a bending moment of increasing magnitude is applied thereto to cause a square break in the cane at the score line.

3,016,655
REFRACTORY LINING
Louis H. Hosbein, Glencoe, Ill., assignor to M. H. Detrick Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 15, 1954, Ser. No. 423,343
6 Claims. (Cl. 50—418)

5. The combination with metallic supporting means of a thin refractory wall comprising horizontal rows of grooved horizontally elongated supporting refractories and horizontal rows of vertically elongated refractories supported thereon, each row of supporting refractories being widely vertically spaced from the next vertically adjacent row of supporting refractories and a single row of supported refractories lying between each pair of vertically adjacent rows of supporting refractories, the supported refractories being of much greater length than the width of either said supported or supporting refractories and being supported by and extending from the row of supporting refractories below the same to the row of supporting refractories above the same and means for mounting said supporting refractories on said metallic supporting means comprising metal brackets mounted thereon each having a flat faced refractory supporting portion at its inner end spaced from said metallic supporting means and an elongated groove engaging portion extending upwardly from said refractory supporting portion at the inner marginal extremity thereof, said groove engaging portions of said brackets extending lengthwise in grooves of the supporting refractories seated on said supporting portions of said brackets to hold said supporting refractories in spaced relation to said metallic supporting means, inwardly facing shoulders on said supported refractories and outwardly facing shoulders on said supporting refractories, said shoulders interengaging and being spaced from the inner faces of said refractories to align the inner faces of said supported refractories with the inner faces of said supporting refractories, said supported refractories being thinner than said supporting refractories to space the outer faces of said supported refractories at a greater distance from said metallic supporting means than the outer faces of said supporting refractories, said grooves in said supporting refractories being outwardly spaced from said shoulders a distance to locate all portions of said brackets outwardly from the outer faces of said supported refractories.



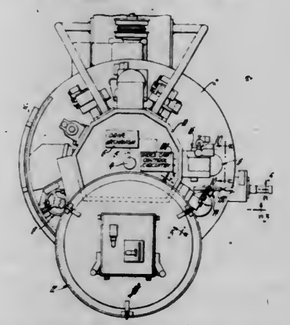
3,016,656
ROCK PROCESSING MACHINE
Merle Edwin Smith, 1203 Burnham, Des Moines, Iowa
Filed Oct. 30, 1959, Ser. No. 849,842
7 Claims. (Cl. 51—72)



1. A rock processing machine comprising an elongated horizontal base having front and rear ends, an upstand-

ing yoke fixed on the base at a location near said front end, said yoke having laterally spaced arms, aligned bearing sleeves fixed on the upper ends of said arms, conical elements journaled in said sleeves, a spindle comprising a shaft having recessed ends engaged on said conical elements and carrying a fixed driven wheel, rock working wheel means secured on said shaft between the yoke arms, and motor means mounted on the base at the rear end of the base and operatively connected to said driven wheel.

3,016,657
APPARATUS FOR MANUFACTURING PRE-AIMED LAMPS
William Ellsworth Rise, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 22, 1958, Ser. No. 737,160
15 Claims. (Cl. 51—134)



1. Apparatus for use in the manufacture of pre-aimed projection lamps of the type comprising an integrally joined reflector and lens enclosing a light source, and a plurality of readily re-identifiable surface portions on said lamp defining an aiming plane having a known relation with respect to the direction of a selected portion of the light rays projected from said light source; said apparatus comprising a plurality of independently movable probe means each being yieldably engageable with a respective one of said lamp surface portions to sense the relative heights of the latter, a probe master switch mechanism comprising a first movable member, a master switch mounted on said first member for movement with the latter, a second member movably mounted relative to said first member to control actuation of said switch upon relative movement of said members to a predetermined extent, motion-transmitting means operatively interconnecting said probe means with said probe master switch mechanism, whereby said switch will be actuated upon said probe means sensing a variation in the heights of said lamp surface portions beyond a predetermined extent, cutting tool means selectively operable on said lamp surface portions to remove stock therefrom in forming said aiming plane subsequent to operation of said probe means, and means controlling the feed of said cutting tool means to said lamp surface portions, said probe switch mechanism controlling the operation of said feed controlling means.

3,016,658
SHARPENER AND DRIVING MEANS THEREFOR
Kenneth S. Pondexter, 4609 E. Central, Wichita, Kans.
Filed Feb. 14, 1961, Ser. No. 89,236
11 Claims. (Cl. 51—159)

1. Apparatus for driving a cyclically-operative mechanism through a predetermined number of cycles, comprising:

a cyclically-operative mechanism;

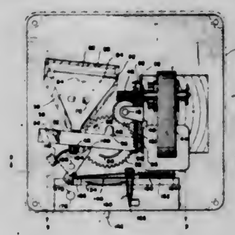
an electric motor drivingly connected to said mechanism;

an electric switch means for controlling energization of said motor;

and mechanical means connected to said mechanism for actuating the switch means to deenergize said motor upon the occurrence of a predetermined number of cyclic operations of said mechanism, comprising:

a slide mounted for movement toward and away from the switch means and being operatively engageable with said switch means;

a set of ratchet teeth on said slide;



an advancing means operatively responsive to each cyclic operation of said mechanism to engage the ratchet teeth and thereby to advance the slide toward operative engagement with said switch means by an amount dependent upon the spacing of the ratchet teeth;

a pawl biased toward engagement with the ratchet teeth;

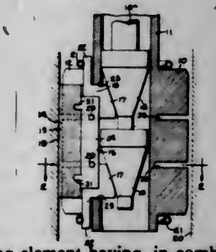
and an oscillating member connected to said mechanism, said member being coupled to said pawl for pivoting the pawl toward said switch means once during each cycle of oscillation of said member.

3,016,659
BENCH MOUNTING FIXTURE FOR PORTABLE BELT SANDER
Reynold Happe, Greenville, S.C., and Joseph P. Lubas, Cranford, N.J., assignors to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Dec. 30, 1960, Ser. No. 79,612
8 Claims. (Cl. 51—166)



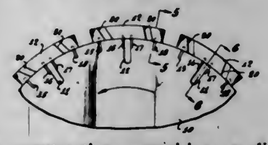
1. A fixture for mounting a portable sander relatively to a bench top, comprising a base, means for securing said base along one edge of a bench top, a sander supporting bracket, means pivotally securing said bracket to said base on an axis parallel to the bench top and perpendicular to the edge thereof along which said base is secured, clamp means on said bracket for securing a portable sander thereto, and a plurality of cooperating latch means on said base and bracket for selectively locking said said bracket in different angular positions relatively to said bench top.

3,016,660
HONE AND ABRASIVE ELEMENT THEREFOR
Maurice J. Gross, Rockford, Ill., assignor to Barnes Drill Co., Rockford, Ill., a corporation of Illinois
Filed July 31, 1959, Ser. No. 830,910
2 Claims. (Cl. 51—184.3)



1. A honing element having, in combination, a carrier comprising a sheet of material of Z-shaped cross-section having a backing flange and a second flange paralleling each other and projecting in opposite directions from opposite sides of an intermediate crosspiece, said crosspiece and said second flange cooperating to define a bottom recess for receiving a supporting bar, means formed on said second flange for fastening the same detachably to the supporting bar, a lug upstanding from said carrier at the junction of said second flange and crosspiece and paralleling said backing flange so as to cooperate with the latter and the crosspiece in defining a channel-like seat, and a rigid generally rectangular abrasive member including a stick of bonded abrasive and secured in said seat with the bottom supported by said crosspiece and one side face lying against said backing flange, the opposite side face of said member being exposed and located in a plane which parallels and is disposed between said backing flange and said lug whereby the latter acts as a spacer for maintaining said exposed face out of contact with a flat guide wall lying against said second flange.

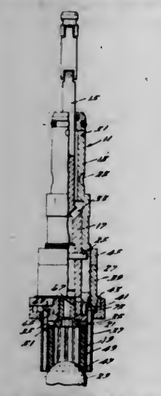
3,016,661
CUTTING DEVICE
Waldemar C. Nielsen, 4412 Don Cota, Los Angeles 8, Calif.
Filed Nov. 2, 1959, Ser. No. 850,374
9 Claims. (Cl. 51—206)



1. A saw construction comprising: a disc-like core member; a plurality of spaced cutting elements secured to the circumferential edge of said core member, said cutting elements and said core member having aligned openings in their confronting surfaces; and a plurality of lengths of hardened elements having portions extending into the aligned openings in said core member and said cutting elements.

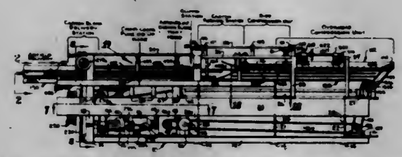
3,016,662
BALL HONING TOOL
Rollo G. Ellis, Birmingham, Mich., assignor to Micromatic Hone Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 11, 1958, Ser. No. 760,465
11 Claims. (Cl. 51—209)

1. A honing element comprising a hollow cylindrical abrasive stone, a reinforcing wall in intimate engagement with the outer periphery of said stone leaving at least one end of stone exposed, said stone having an inner reinforcing wall portion in engagement with the inner periph-



ery of said stone, said outer wall having a plurality of closely spaced grooves disposed adjacent to the exposed end of the stone.

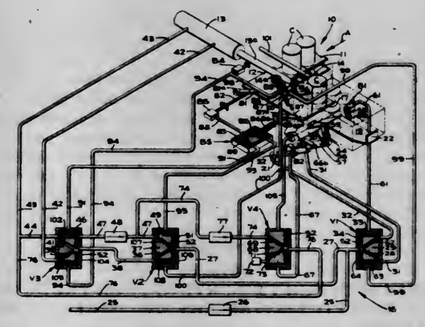
3,016,663
MACHINE FOR PACKAGING CYLINDRICAL OBJECTS
George B. Holmes, 330 Victory Ave., South San Francisco, Calif.; Charles H. Sinclair, 1817 Hall Ave., Charlotte, N.C.; Perry L. Alexander, Jr., Rte. 4, Matthews, N.C.; and Roy L. Vernon, 305 N. Poplar St., Charlotte, N.C.
Filed Feb. 4, 1957, Ser. No. 637,944
10 Claims. (Cl. 53—32)



1. A method of packaging cylindrical cans in open-ended cartons while continuously moving the cans and cartons and wherein the cartons are formed from flat strip-like carton blanks each having a can receiving and supporting medial wall portion provided with aperture forming portions adjacent its opposite edges and having locking tabs provided with free ends formed integral therewith and positioned adjacent and in transverse alinement with the aperture forming portions; said method comprising feeding groups of cans forwardly in a substantially horizontal path of travel while supporting the cans in upright position on their lower ends, feeding the carton blanks in flat condition forwardly and upwardly in a path of travel in vertical alinement with the path of travel of the groups of cans to meet the cans at a predetermined point while moving the carton locking tabs into overlapping relation with the can receiving and supporting wall to position the free ends of the tabs to terminate substantially at the side edges of the wall adjacent the aperture forming portions, moving the groups of cans onto the medial wall portion of the carton blanks while moving the carton blanks forwardly in timed relation thereto and in substantially a horizontal path of travel, maintaining the carton blank aperture forming portions stationary while folding the opposite ends of the carton blanks upwardly into engagement with the sides of the cans thereon to form apertures, applying a squeezing inward pressure to opposite sides of the upturned carton blank portions to position rim portions of the cans in the carton blank apertures, folding inwardly in overlapping relation the opposite ends of the carton blanks while continuing to apply pressure to the opposite sides of the cartons, and adhesively securing the overlapping portions together while applying a downward pressure to the carton.

2. A machine for packaging cylindrical articles in cartons comprising means for continuously feeding cartons in flat strip-like blank form forwardly and upwardly from a stack in spaced apart relation comprising a suction device, means for moving the suction device in a vertical path of travel to lift a carton from the stack, means for moving the suction device forwardly in a substantially horizontal path of travel, feed rollers positioned adjacent the suction device to receive the cartons delivered thereto by the suction device, means for breaking the vacuum in the suction device simultaneously with the delivery of the cartons to the feed rollers, and inclined conveyor means for moving the cartons forwardly and upwardly from the feed rollers, means for feeding cylindrical articles forwardly onto the carton blanks in a substantially horizontal path of travel, means for applying adhesive to the cartons, means for continuously moving the cartons and articles thereon forwardly in substantially a horizontal path of travel, means for folding the cartons upwardly and around the articles and means for exerting a sealing pressure on the cartons to set the previously applied adhesive.

3,016,664
CONTROL SYSTEM FOR CASE LOADING MACHINE
Leslie Vadas, Los Gatos, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed Apr. 28, 1960, Ser. No. 25,288
10 Claims. (Cl. 53—62)



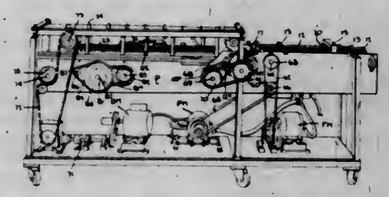
1. In a case loading machine of the type having an article accumulating plate, a conveyor for delivering articles in single file onto said plate and a pusher movable across the plate from a retracted position to a projected position to engage articles thereon and push them across the plate, a control system comprising a double acting power cylinder connected to said pusher; means supplying air under pressure; conduit means connecting said air supply means to both ends of said power cylinder; a control valve connected in said conduit means, said valve having a housing, a pair of spaced passages, and a valve element movable in said housing in response to the venting of said passages between a first position communicating one end of said power cylinder with said air supply means and venting the other end of said power cylinder to cause said pusher to be moved across said plate from said retracted to said projected position and a second position venting said one end and communicating said air supply means

with said other end to effect return of said pusher to its retracted position; a first bleeder valve responsive to the positioning of a first article on said accumulator plate for venting one of said passages in said valve housing causing said valve element to move to said first position; and a second bleeder valve effective when said article has advanced a distance equal to the width of said first article for venting the other of said passages in said valve housing for shifting said valve element to said second position.

3,016,665
PACKAGING MACHINE

La Vern H. Barrett, Lyons, N.Y., assignor to Manett Enterprises, Inc., New York, N.Y., a corporation of New York

Filed July 22, 1957, Ser. No. 673,291
22 Claims. (Cl. 53—73)



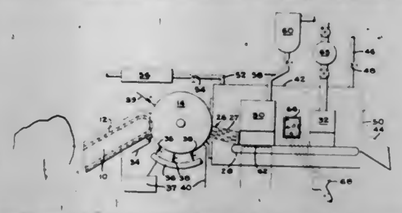
1. An assembly for orderly positioning in a box a plurality of similarly sized elongated objects, such as fish sticks, previously oriented in a plurality of columns to be in mutually parallel, leading edge haphazard relation, comprising a first conveyor means arranged to advance said parallel objects in the direction of their longitudinal axes, a second conveyor means arranged to proceed at a speed in excess of said first conveyor means and adapted to receive said objects from said first conveyor means, and to accelerate the movement of the objects to remove the same from the influence of said first means, transversely extended stop means variably positionable to release and stop position forming, in the closed position, an abutment extending across all said columns for dead heat aligning said objects of each of the columns in relation to each other thereagainst, and timing means arranged cyclically to move said stop means to the open position, thereby to permit a single row across all of said columns of said endwisely aligned objects to be fed by said second conveyor to a packing assembly arranged to receive and box said aligned objects.

3,016,666
APPARATUS FOR PRESERVING FOOD PRODUCTS IN SEALED CONTAINERS OF VITREOUS MATERIAL

Robert A. Whitmore, Riverside, Calif., assignor to FMC Corporation, a corporation of Delaware

Original application July 7, 1954, Ser. No. 441,704, now Patent No. 2,862,822, dated Dec. 2, 1958. Divided and this application Nov. 5, 1958, Ser. No. 772,057
4 Claims. (Cl. 53—112)

3. Apparatus for preserving a food product in a frangible vitreous container comprising an enclosure having an inlet opening and an outlet opening; a container sterilizer defining a sealed pressure chamber intermittently communicating with the inlet opening of said enclosure and including means for subjecting each vitreous container to saturated steam for a period of time sufficient to adequately sterilize its surfaces but insufficient to heat more than a thin outer stratum thereof to a sterilizing temperature, a pocketed rotor included in said sterilizer for intermittently delivering the container into said enclosure through said inlet opening, and drive means connected to said rotor for driving the same; a container filling machine in said enclosure adjacent said inlet opening and adapted to direct product into the container immediately upon entry into said enclosure and prior to penetration of heat to the internal wall structure of the vitreous container; a container closing machine in said

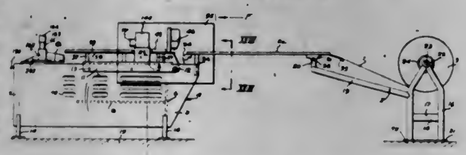


enclosure adjacent said filling machine; and means for maintaining the interior of said enclosure and the mechanisms therein in a sterile condition including means for passing a sterile gaseous fluid at a pressure above atmospheric pressure through said enclosure.

3,016,667
MACHINE FOR PACKAGING UNDER THERMOPLASTIC FILM

Lucien Yves Kerhoas, 26 Rue Charles de Gaulle, Orsay, France

Filed Jan. 18, 1960, Ser. No. 3,156
Claims priority, application France Jan. 22, 1959
6 Claims. (Cl. 53—182)



1. In an automatic machine for packaging articles under thermoplastic film, said machine having a frame; a device for unwinding flat thermoplastic film, a device for shaping said film according to a tube, the section of said tube corresponding to the master frame of articles to be packaged, a stationary unit for the longitudinal sealing of said tube, a mechanism for the driving and periodical depositing of said articles in said tube, a runway for guiding said film and said tube, a cyclic motive mechanism driving said runway, said motive mechanism comprising a carriage slidably mounted on said frame of said machine, a plurality of thin belts each one of which, being wound on a shaft which is rotatably driven by a belt-and-pulley means, an electric motor, a pulley of said belt-and-pulley means being coupled to said motor, a solenoid-operated clutch controlling said motor, said clutch being synchronized with a solenoid the core of which being integral with said carriage, elastic buffer means connecting said motive mechanism and said belts, motion damping means on said carriage whereby said carriage may be driven, by cooperation of said motor and said solenoid, and a timed and synchronized combined transversal cutting and sealing device supported by said cyclic motive mechanism.

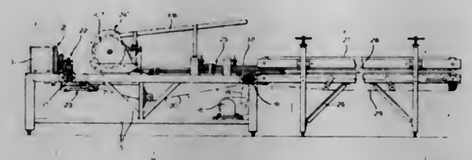
3,016,668
ARTICLE PACKAGING MACHINE

Frank A. Sell, Jr., Schiller Park, Ill., assignor to The Precise Engineering Company, Chicago, Ill., a corporation of Illinois

Filed July 2, 1959, Ser. No. 824,545
12 Claims. (Cl. 53—186)

1. In a group packing machine having means to deposit a number of units to be wrapped on a carton and forming

the carton about said units as the carton and units travel along, a carton blank magazine to hold a stack of flat cartons, said magazine being defined by side members, spaced front bar members, and a rear bar member, at least one of said front bar members being of a length to prohibit the exit of any but the lowermost carton therebeneath at a time, the rear bar member having an inside notch at the lower end thereof of a height to accommodate several cartons, the remainder of the cartons in the stack resting against said rear bar member above said notch in a downwardly and forwardly inclined position, and a feed roll beneath said magazine disposed to elevate the forward part of the stack as it contacts and feeds the lower carton whereby other cartons are jiggled and periodically drop into said notch and the full stack weight is not on the lower carton.



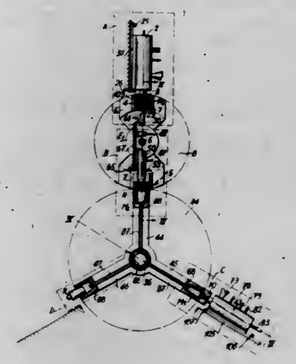
9. In a group packaging machine, a conveyor to carry unfolded cartons in spaced relationship along a path of travel, a carton magazine, feeding means to periodically deliver a carton from the magazine to the conveyor, a fixed star wheel assembly comprising an article guide box, a fixed hub on the rear side of said box, bearing means in said hub, a shaft operable in said bearing means and extending beyond said hub, a drive element removably secured to one end of said shaft, a star wheel on the other end of said shaft within said box and shaped to separate articles into groups each including a plurality of articles and deposit a group on each passing carton, a mounting bracket on a fixed part of said machine, a fixed mounting hub on said bracket to telescopically receive the guide box hub, simple set screw means to hold said hubs together whereby said star whee assembly is removable as a unit by the expedient of releasing said set screw means and taking off said drive element, and forming means adjacent the path of said conveyor to fold each carton about its group of articles.

3,016,669
MANUFACTURING PROCESS OF A CONTAINER MADE OF PLASTIC MATERIAL AND INSTALLATION FOR CARRYING OUT SAID PROCESS

René Grosclaude, Geneva, Switzerland, assignor to Laboratoires Vifor S.A., Geneva, Switzerland, a corporation of Switzerland

Filed July 22, 1959, Ser. No. 828,774
Claims priority, application Switzerland Aug. 13, 1958
9 Claims. (Cl. 53—191)

1. An apparatus for the manufacture of containers through injection of a fluid to be contained in said container into a mass of plastic material when is in a moldable state comprising a frame, a transfer device, three operating stations, each of said operating stations comprising a mold, each mold having a different shape according to the function it is intended to fulfill and comprising two mold parts, at least one of which is carried by said transfer device and in which said transfer device comprises first and second supports rotatably mounted on said frame, each of said supports carrying at least two of said mold parts carried by said transfer device, mold parts carried by one of said supports having the same shape and mold parts carried by the other of said supports having a different shape, mold parts carried by said first support cooperating successively through rotation of said first support with a linearly displaceable mold part forming a first operating station, a fluid filling hole provided in said mold parts carried by said first support, plastic injection means for said first operating station comprising an injection hole provided in said linearly displaceable mold part of said first operating station for injecting plastic material in a mold formed by said mold parts of said first operating station, closing means for said first operating station comprising a closing rod intended to close said filling hole of the mold part carried by the first support when cooperating with said linearly displaceable mold part of said first operating station, mold parts carried by said first support cooperating successively through rotation of said first and second supports with the mold parts of said second support to form a second operating station, fluid injection means for said second operating station comprising an injection member for engaging said filling hole of said



mold parts carried by said first support when cooperating with one of said mold parts carried by said second support to form and fill a container in the mold formed by said mold parts of said second operating station, mold parts carried by said second support cooperating successively through rotation of said second support with a linearly displaceable mold part of a third operating station, a duct provided in said mold part of said third operating station, sealing means of said third operating station comprising a push rod slidably engageable in said duct provided in said linearly displaceable mold part of said third operating station, whereby said mass of plastic material is carried from the first operating station to the second one by a mold part carried by the first support upon rotation of said first support and is further carried from said second operating station to the third one by a mold part carried by the second support upon its rotation.

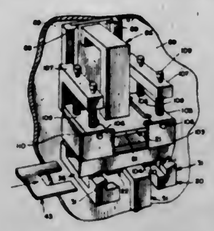
3,016,670
TRAY FILLING AND FORMING APPARATUS

Harry E. Engleson, Chicago, and Elmer D. Sramek, Cicero, Ill., assignors, by mesne assignments, to Crompton & Knowles Packaging Corporation, Holyoke, Mass., a corporation of Massachusetts

Filed Oct. 29, 1959, Ser. No. 849,670
5 Claims. (Cl. 53—194)

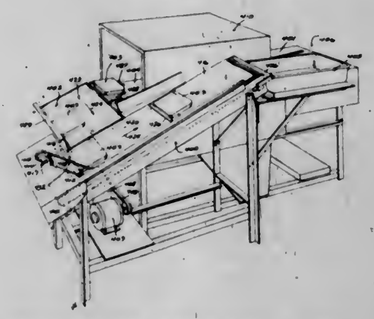
1. A tray filling and forming apparatus adapted to form a tray blank about an article wherein the tray blank includes a bottom, side and end walls and flaps attached to the side walls and adapted to engage the end walls upon forming of the tray blank, said apparatus comprising a tray forming frame, first pusher means adjacent one side of said frame for positioning a tray blank thereon, second pusher means adjacent the side of said frame opposite to said first pusher means for positioning an article on said

tray blank, article guide and flap score line breaking plates arranged relative to said tray forming frame for guiding movement of said article onto said tray blank and for



breaking said flaps prior to breaking of said end walls, and means for clamping the article to the tray blank and for plunging said article and tray blank through said frame thereby forming the tray about the article.

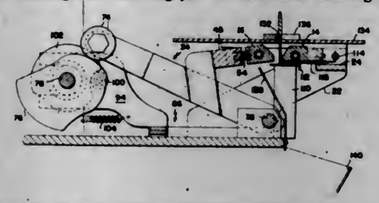
3,016,671
WRAPPING MACHINE WITH RETURN CONVEYOR
William F. Stremke, 8031 W. Holmes Ave., William F. Stremke, Jr., 3329 S. Springfield Ave., and Roman R. Pazderski, 3844 S. 15th Place, all of Milwaukee, Wis.
Filed Sept. 25, 1959, Ser. No. 842,513
11 Claims. (Cl. 53—206)



1. The combination with a wrapping machine of the type described and which includes a first conveyor and means for folding ends of a thermoplastic wrapper beneath a package advanced by said conveyor, of an elevator onto which a wrapped package is deposited by said first conveyor with its folded ends between the package and elevator, said elevator comprising a heat sealing plate to fuse the wrapper ends, means to lift said elevator and the wrapped package to a higher level, a second conveyor supported above the machine and running in a direction opposite to the direction in which the first conveyor runs, means to transfer the package from the heat sealing plate onto the second conveyor, and means supported above the machine to receive the package from said second conveyor.

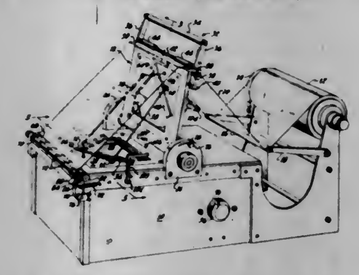
3,016,672
PACKAGING APPARATUS
Robert W. Hompe, Ithan, and Charles Trezona, Roslyn, Pa., and Alten E. Whitecar, Westville, N.J., assignors to Smith, Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 18, 1960, Ser. No. 22,843
9 Claims. (Cl. 53—373)

1. A packaging apparatus comprising a pair of heat sealing jaws, means fixedly mounting one of said jaws, means moving the other of said jaws between an open position in which said moving jaw is spaced from said fixed jaw and a closed position in which said jaws are in heat sealing contact with a package positioned therebetween, said jaws being mounted substantially horizontally and having a vertical path extending therebetween when in said open position thereof, means mounting said moving jaw on said moving means including a resilient means biasing said moving jaw toward heat sealing rela-



tion with said fixed jaw when said moving jaw is in said closed position, and means for positioning a package between said jaws including a plate positioned horizontally beneath said jaws and means moving said plate between a position intersecting said vertical path for positioning a package and a position clearing said vertical path whereby a package may drop through said spaced jaws.

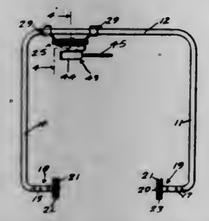
3,016,673
WRAPPING AND SEALING MACHINE
John M. Parker, 72 La Cuesta, Orinda, Calif.
Filed Aug. 1, 1960, Ser. No. 46,437
11 Claims. (Cl. 53—390)



11. A device for wrapping an object in a thermoplastic film and sealing the thermoplastic film thereabout comprising: a base; means supplying said thermoplastic film; a first member pivoted at a first end thereof to a first end of said base, said first member having film gripping means secured to a second end thereof; means on said base for gripping the said thermoplastic film, said means being positioned at the second end of said base; cooperating heat-sealing elements mounted on the said first member and on the said base, said heat-sealing elements being positioned to register with one another as the said first member is pivoted toward the said base; elastic bands stretched between the said base and the said first member and secured to said base and said first member at opposite ends of said elastic members, the said elastic bands being so positioned as to guide the said thermoplastic film between the said heat-sealing elements.

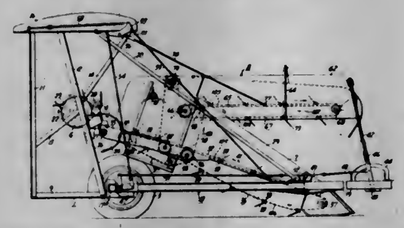
3,016,674
MOBILE SUPPORT FOR AN ELECTRIC HEDGE TRIMMER
Jimmie E. Pounders, Pinellas Park, Fla. (8727 Eyra Place, St. Johns 14, Mo.)
Filed Nov. 30, 1959, Ser. No. 856,267
2 Claims. (Cl. 56—236)

1. A mobile support for an electric hedge trimmer comprising a carriage including two bottom portions disposed in spaced apart substantially parallel relation to one another, two wheels journaled on each of said bottom portions in spaced apart aligned relation to one another, an arch shaped frame connecting said bottom portions and disposed in an upright position crosswise of the carriage and of said bottom portions and between and spaced from the wheels of each bottom portion, and a mounting bracket including an elongated first section having longi-



tudinally spaced spring clamps detachably connected to longitudinally spaced aligned parts of said arch shaped frame and a second section connected to and disposed longitudinally of the first section between the spring clamps and adapted to be secured to and disposed longitudinally of an electric hedge trimmer, said mounting bracket being disposed within the arch shaped frame for supporting the electric hedge trimmer within said arch shaped frame and substantially coplanar therewith.

3,016,675
CROP HANDLING MACHINE
Paul H. Harrer and William H. Shannon, La Porte, Ind., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Sept. 3, 1958, Ser. No. 758,768
4 Claims. (Cl. 56—341)



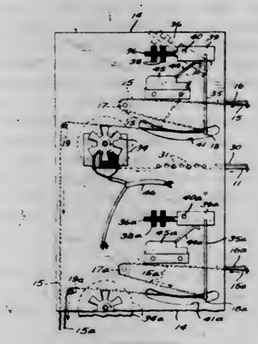
1. A crop handling machine comprising, in combination, a mobile support; a pickup conveyer unit pivotally connected with said support on a first horizontal transverse axis; actuating means operable to swing said pickup conveyer about said first axis selectively to raised and lowered operating positions; pivot means mounted on said pickup conveyer unit in radially spaced relation to said first axis and presenting a second horizontal transverse axis swingable in unison with said pickup conveyer unit about said first axis; an elongated load transmitting structure pivotally connected with a portion of said mobile support in spaced relation to said first axis; and an auxiliary conveyer unit having supporting connections at longitudinally spaced portions thereof with said pivot means and with said load transmitting structure, respectively, so as to present said auxiliary conveyer unit in overlying, spaced relation to said pickup conveyer unit and cause lowering movement of said auxiliary conveyer unit about said second axis in response to upward movement of said pickup conveyer unit about said first axis.

3,016,676
SIDE DELIVERY RAKE
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands
Filed July 19, 1957, Ser. No. 672,989
Claims priority, application Netherlands May 9, 1953
15 Claims. (Cl. 56—377)



1. A device for laterally displacing material lying on the ground comprising a frame adapted for ground traversing movement and having a normal direction of travel, a plurality of rake wheels in front of and on said frame in overlapping relation and arranged obliquely of said direction, and means in front of and on said frame and in front of at least the rearmost of said rake wheels to shield the same from excessive accumulations of said material.

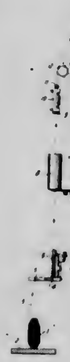
3,016,677
APPARATUS FOR PLYING CRIMPED YARN
Paul W. Langway, Claymont, Del., assignor to Joseph Bancroft & Sons Co., Wilmington, Del., a corporation of Delaware
Filed Mar. 30, 1960, Ser. No. 18,739
5 Claims. (Cl. 57—34)



1. Apparatus for plying a plurality of ends of crimped continuous filaments directly from core packages in which said ends are in the form of a compacted mass of crimped filaments held confined by a tape and wound with said tape in the form of helical windings with adjacent convolutions of the core separated by said tape, which comprises means supporting a plurality of said core packages for unwinding, a tape reel mounted to receive the tape from each of said packages, means driving each of said reels to unwind the tape from the corresponding package and to expose said core at a discharge point, a driven feed roll and a twister, means feeding the ends from each of said cores to said feed roll, individual tension control means disposed to engage and be actuated by each of said ends in advance of said feed roll, means controlled by each of said tension control means to actuate the re-

spective tape reels in a sense to withdraw tape from said packages at a rate to maintain a substantially constant tension on said ends as they are fed to said feed rolls, means feeding the combined ends from said feed roll to said twister for plying said ends into a yarn, said twister having means winding said plied yarn onto a package.

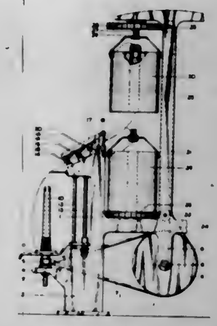
3,016,678
TEXTILE PROCESSES
Timothy Nesbitt-Dufort, Langley, near Macclesfield, England, assignor to Ernest Scragg & Sons Limited, Macclesfield, England
Filed June 10, 1959, Ser. No. 819,271
Claims priority, application Great Britain July 16, 1958
3 Claims. (Cl. 57—34)



1. In an apparatus for crimping a thermoplastic yarn, in combination, means for advancing the yarn which is to be crimped along a predetermined path; false twist means cooperating with the yarn as it moves along said path to false twist the same, said false twist means providing a twist of the yarn through a predetermined portion of said path in advance of said false twist means where the yarn moves toward the latter; softening means located along said path in advance of said false twist means at a part of said predetermined portion of said path for rendering the yarn partially plastic so that the twist is applied to the partially plastic yarn, the yarn moving through a free, open space from said softening means to said false twist means; and blower means driven by said false twist means for creating a stream of air which is directed from said false twist means toward said softening means and which engages the yarn in said free space to set the yarn before it reaches said false twist means.

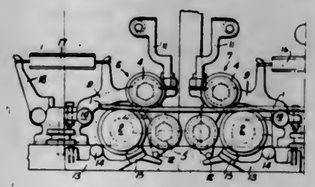
3,016,679
RING SPINNING MACHINE FOR SPINNING A SLIVER DIRECTLY INTO YARN
Albertus Rakhorst, 150 de Joncheerelaan, Nijverdal, Netherlands
Filed Dec. 14, 1959, Ser. No. 859,524
Claims priority, application Netherlands Dec. 22, 1958
4 Claims. (Cl. 57—36)

1. In a spinning machine which comprises a frame and cooperating drafting rollers workably mounted on the frame; the improvement for spinning a very fine sliver into yarn comprising an upper and lower row of sliver cans, said cans of the upper row having lower outlet ends disposed immediately adjacent the drafting rollers, said cans of the lower row having upper outlet ends disposed immediately adjacent the drafting rollers, means rotatably mounting the cans of the lower row at their lower ends, twisting means disposed adjacent the outlet ends of the cans of the lower row, means rotatably mounting the



cans of the upper row at their upper ends, and twisting means operatively carried by the cans of the upper row.

3,016,680
DRIVING ARRANGEMENT FOR SPINNING, TWISTING AND LIKE TEXTILE MACHINES
Moses Warnock, Shettleston, Glasgow, Scotland, assignor of one-half to J. & T. Boyd Limited, Shettleston, Glasgow, Scotland, a British company
Filed Sept. 10, 1958, Ser. No. 760,150
Claims priority, application Great Britain Sept. 13, 1957
6 Claims. (Cl. 57—88)



1. In a driving arrangement for spinning, twisting and the like textile machines of the type including a frame, a plurality of rotatable members such as spindles or flyers mounted on the frame, an endless driven belt for driving the rotatable members having a driving face and including a driving run extending laterally of the machine frame in a horizontal generally straight path with its driving face vertical, said plurality of rotatable members being located in spaced relation along the laterally-extending driving run of the belt, each engageable by the driving face of the belt for rotation about a vertical axis, a first whorl associated with each rotatable member and movable against said belt to cause the drive from said belt to be transmitted to said rotatable member, and a second whorl associated with each rotatable member and so mounted adjacent to the face of said belt remote from said first whorl as to be movable to disengage said belt from the associated rotatable member and to maintain said belt out of engagement with said associated rotatable member, said first and second whorls associated with each of the plurality of rotatable members constituting a set, the improvement in the arrangement of the plurality of rotatable members and their associated sets of first and second whorls along the driving run of the belt in which the sets of whorls are arranged in groups each consisting of two sets of whorls disposed adjacent to one another along the laterally-extending driving run of the belt, and each group of whorls being spaced from an adjacent group of whorls along the laterally-extending driving run of the belt by two rotatable members, the arrangement of each group of whorls and the two rotatable members associated therewith along the laterally-extending driving run of the belt being such that when the belt is disengaged from a selected one of the two rotatable members by its associated second whorl the first whorl associated with the other of the two rotatable members prevents any deflection of the belt therefrom and consequent reduction in the driving power imparted thereto by the belt.

3,016,681
DEVICE FOR EFFECTING HIGH SPEED UNREELING OF BOBBINS IN TEXTILE MACHINES
Gilbert Andremont, Moislains, France, assignor to La Cotonniere de Moislains, Paris, France, a French body corporate
Filed Nov. 8, 1957, Ser. No. 695,256
Claims priority, application France Nov. 14, 1956
4 Claims. (Cl. 57—106)



1. In a textile machine having non-rotating spindle-carrying bobbins separated by partitions, an unreeling device comprising a fence having a linear anti-ballooning thread-contacting edge portion conforming substantially to the general outline of the surface of revolution formed by the package of thread before unreeling, said edge portion being positioned in a radial plane with respect to the axis of the bobbin spindle and supported by an adjacent partition.

3,016,682
CORDAGE AND METHOD FOR PRODUCING THE SAME
Dexter W. Gaston, Delanco, N.J., assignor to Wall Rope Works, Inc., Beverly, N.J., a corporation of New Jersey
Filed Apr. 23, 1957, Ser. No. 654,550
8 Claims. (Cl. 57—140)



5. Rope composed of strands composed of thermoplastic filaments in which the filaments prior to being formed into rope have characteristics resulting from their having been partially shrunk to leave in the filaments of the formed rope capability of further shrinkage to an extent approximately that of expected elongation due to stress during use of the rope.

8. The method of making rope of thermoplastic filaments comprising passing the filaments rapidly and continuously through a heating chamber to partially shrink said filaments, the amount of said partial shrinkage of said treated filaments being such that the remaining possible shrinkage of said treated filaments approximates the expected elongation due to stress during use of the final rope, forming strands from said treated filaments and forming rope from said strands.

3,016,683
BLENDED FIBER ROPE
James S. Simpson, Auburn, N.Y., assignor to Columbian Rope Company, Auburn, N.Y., a corporation of New York
No Drawing. Filed Oct. 1, 1958, Ser. No. 764,526
6 Claims. (Cl. 57—140)

6. A rope composed of an homogeneously distributed blend of (*a*) at least 50% synthetic resin fibers having low temperature stability characteristics and (*b*) at least 30% vegetable fibers having relatively high moisture retentivity characteristics, said synthetic fibers predominating.

3,016,684
METHOD OF MAKING CORD
Edward T. Lessig, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
No Drawing. Filed Sept. 22, 1955, Ser. No. 536,040
19 Claims. (Cl. 57—157)

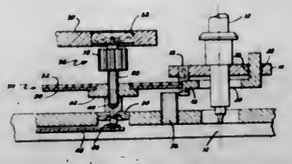
1. The method of producing a substantially balanced cord from twisted synthetic filamentary material that exhibits the property of appreciable contraction when heated which comprises, twisting a cord from filaments of said material while the filaments are moist, winding the twisted cord while still moist into a package suitable for use in a creel, and subjecting the package of wound cord while still containing 4% to 10% moisture to a high frequency alternating electrical field of a magnitude and for a time interval such that the temperature of the cord does not exceed 140° F. and the twist unbalance of the treated cord does not exceed 6 twists per yard.

11. The method of producing a package of twisted polyamide cord having improved resistance to heat degradation and a twist balance satisfactory for use in a creel which comprises, providing a plurality of twisted yarns of linear polyamide fibers containing from 4% to 10% moisture in the form of water, the said moisture having a substance therein which retards heat degradation of the fibers with the amount of said substance being sufficient to provide a deposit on the said yarns in order of .1 to 10.0% of the weight of the yarns, forming a normally unbalanced cord from said yarns by twisting them together while moist until the number of turns per inch of the cord approximates but is less than the number of turns per inch of the yarn, winding the twisted cord while moist into a package suitable for use in a creel, and dielectrically heating the package of wound cord for a period of time and to a temperature such that the package is not substantially distorted by heat shrinkage of the cord and the twist unbalance is reduced to an amount not in excess of 6 twists per yard of cord.

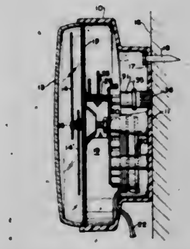
3,016,685
ELECTRIC WATCH
James H. Reese, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Feb. 9, 1959, Ser. No. 792,014
5 Claims. (Cl. 58—28)

1. A contact-indexing device for an electric watch comprising an oscillating balance staff, a toothed index wheel adapted to be driven by said balance staff, contact-index means carried by said balance staff, said contact-index means engaging said index wheel as said balance staff oscillates to advance said index wheel in one direction and to establish periodic electric contact between said index

wheel and said contact means, a permanent magnet mounted at one side of said index wheel and imparting an axial thrust thereto, an electrically conducting staff carrying said index wheel, and a contact member engaging one end of said staff to establish electrical contact therewith, said magnet thrusting said staff against said contact member to provide contact therewith as said index wheel rotates.



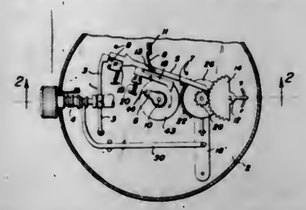
3,016,686
COLLAPSIBLE ADJUSTING KNOB
William C. Fox, Plainville, Conn., assignor to The Sessions Clock Company, Forestville, Conn., a corporation of Connecticut
Filed Mar. 5, 1959, Ser. No. 797,419
1 Claim. (Cl. 58—80)



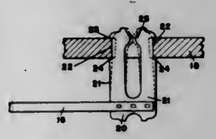
In combination with an adjustable clock mechanism enclosed in a casing and having means forming a casing back and means for suspending the casing back on a flat, vertical wall surface in a manner causing the casing back to be urged toward the wall surface by a weight component of said mechanism and casing, a rotatable member for adjusting said mechanism, a knob slidably but non-rotatably engaging said rotatable member and having a first operative position projecting outward of the casing back and a second operative position flush with the casing back, spring means urging said knob toward its first position and having a predetermined spring force less than said weight component in any operative position of said knob, said knob being positioned below said means for suspending whereby, when said casing is suspended on a wall, the weight component of the clock mechanism in the direction of the wall causes said knob to be moved to its flush position.

3,016,687
SAFETY AUTOMATIC REGULATOR FOR TIMEPIECES
Jacob Rabinow, 1603 Drexel St., Takoma Park, Md., assignor of one-half to Max L. Libman, Vienna, Va.
Filed Mar. 4, 1960, Ser. No. 13,679
5 Claims. (Cl. 58—109)

1. In a timepiece having normal running means and time-indicating means, rate regulating means, manual control means having a running position and a time-setting position, means to couple the time-indicating means to the rate regulating means when the manual control means are in the setting position, locking means actuated by operation of the manual control means from the setting position to the running position to lock the rate regulating means into a fixed position after the setting of the time indicating means, and means actuated by said normal running means to release said locking means for subsequent movement of the rate regulating means.

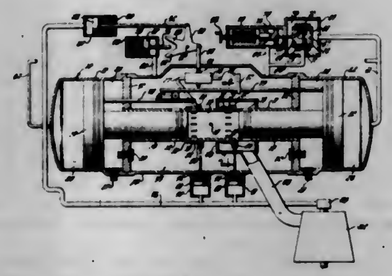


3,016,688
HAIRSPRING STUD
Herman Rueger, Lancaster Township, Lancaster County, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Aug. 3, 1956, Ser. No. 601,901
6 Claims. (Cl. 58—115)



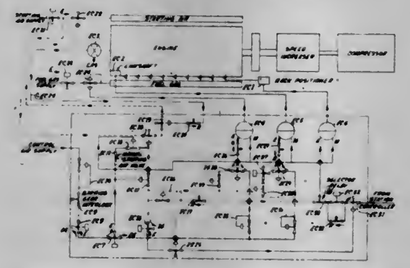
1. A watch containing a hairspring attached at one end to a balance staff-carried collet; a hairspring stud comprising a substantially U-shaped member having a base and two resilient arms extending from said base; the base of said stud being bonded to the other end of said hairspring; and a balance cock having an aperture in which the resilient arms of said stud are received and retained in interlocking frictional relationship.

3,016,689
APPARATUS FOR AUTOMATICALLY REDUCING THE STROKE OF A FREE PISTON ENGINE DURING LOW LOAD CONDITIONS OF AN ASSOCIATED RECEIVER MACHINE
Robert J. Bayer, Warren, Raymond M. Cole, Royal Oak, and George H. Stoughton, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,822
2 Claims. (Cl. 60—13)



1. An internal combustion free piston power plant comprising a diesel cylinder having main intake and exhaust ports and auxiliary intake and exhaust ports spaced therefrom, a compressor cylinder, a cushion cylinder, a piston assembly reciprocal in said cylinders and having a variable stroke, a scavenge chamber arranged to receive compressed air from said compressor cylinder and to feed said air to said diesel cylinder through said intake ports, fuel injection means for said diesel cylinder, a receiver machine subject to variable loads and arranged to receive exhaust gas from said diesel cylinder through said exhaust ports, separate intake and exhaust valves for closing said auxiliary intake and exhaust ports at high load conditions of said receiver machine and for opening said auxiliary ports at low load conditions, and governor means responsive to said various load conditions for automatically operating said valves for said auxiliary ports, said ports being so located that the piston assembly uncovers the auxiliary ports prior to the main ports on the power stroke to reduce piston displacement and exhaust gas delivery at low load conditions.

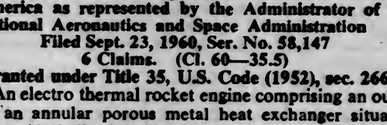
3,016,690
AUTOMATIC POWER PLANT SYSTEM
Bruce G. Erickson, South Milwaukee, Albert T. Metcalf, Jr., Greenfield, and Edwin C. Schuster, West Allis, Wis., assignors to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 1, 1958, Ser. No. 777,450
51 Claims. (Cl. 60—16)



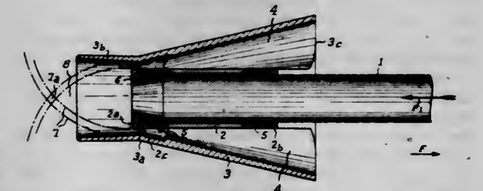
1. A system for controlling the start up, operation and shut down of a prime mover system including a source of motive power such as an internal combustion engine at a remotely located station, said system including, in combination, means for sensing selected station conditions, means for indicating the normality or abnormality of the selected station conditions, means for admitting power to an individual unit in the station in response to an indication of normality by the selected station condition indicating means, said unit including an internal combustion engine and its associated auxiliaries, means for sensing a plurality of selected unit conditions, means for indicating the normality or abnormality of the selected unit conditions, start up means responsive to an indication of normality by the selected condition unit indicating means for starting up the unit, means for controlling operation of the unit, and means for shutting down the unit.

3,016,691
CONVERTER OF ELECTRICAL ENERGY INTO MECHANICAL MOVEMENT
George Asakawa and Sergius Vernet, Yellow Springs, Ohio, assignors, by mesne assignments, to Antioch College, Yellow Springs, Ohio, a corporation of Ohio
Filed Dec. 8, 1955, Ser. No. 551,829
12 Claims. (Cl. 60—23)

1. A device for converting electrical energy into mechanical movement comprising a chamber-forming housing having wall portions including a movable wall; a solid body of thermally-expansible, electrically-conductive material within the housing chamber; said body comprising a mixture of finely divided electrically conductive, resistive particles dispersed in a thermally expansible, non-conductor of electricity; electric insulator means between two wall portions of the housing to electrically isolate said wall portions from each other except for the thermally-expansible, electrically-conductive body; each of said wall portions being in extended surface contact with the thermally-expansible, electrically-conductive body to constitute an electrode for the conduction of an electric current through said body; whereby current flowing through the body solely by the flow of current from particle-to-particle between the electrodes will heat said body so as to expand the expansible material and move the movable wall and the expansion of said expansible material increasing the spacing between the particles to reduce the current flow therethrough in proportion to the degree of expansion of said material.



3,016,692
COMBUSTION ENGINE EXHAUST TREATMENT
Arnaldo Iapella, 38 Rue Fernand Forest, André Lécolle, 5 Rue Kellog, and René Ducimetiere, 49 Rue de la Republique, all of Suresnes, France
Filed June 27, 1960, Ser. No. 38,957
Claims priority, application France June 27, 1959
5 Claims. (Cl. 60—30)

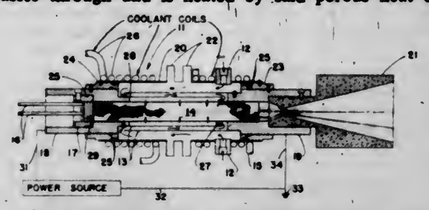


1. An arrangement for increasing exhaust gas velocity at the outlet of a combustion engine exhaust pipe, comprising a tapered nozzle member coaxially surrounding said pipe and defining therewith an annular space tapered in a direction towards the pipe outlet, and angularly spaced helicoidal vanes in said annular space for imparting a gyratory motion to an airstream flowing therethrough, the outlet end of said pipe being located rearwardly of said nozzle.

3,016,693
ELECTRO-THERMAL ROCKET
John R. Jack, North Olmsted, and Wolfgang E. Moeckel, Bay Village, Ohio, assignors to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Sept. 23, 1960, Ser. No. 58,147
6 Claims. (Cl. 60—35.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An electro thermal rocket engine comprising an outer shell, an annular porous metal heat exchanger situated within said shell, electrical connections operably associated with the opposite ends of said heat exchanger whereby an electrical current may be caused to pass through said heat exchanger, propellant inlet means operably associated with said outer shell for admitting propellant to

said heat exchanger whereby the propellant admitted passes through and is heated by said porous heat ex-

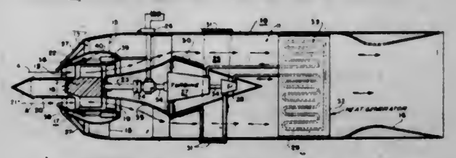


changer, and a convergent-divergent exhaust nozzle rigidly attached to said outer shell.

3,016,694
COMBINATION TURBOJET AND RAMJET ENGINE

Wesley L. Howarth, Livermore, and Tsoy K. Moy, San Jose, Calif., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 13, 1958, Ser. No. 734,902
4 Claims. (Cl. 60—35.5)



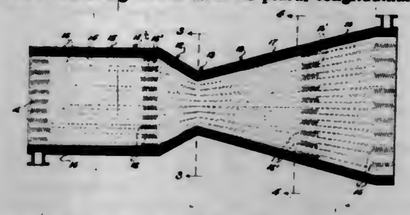
1. A combination turbojet-ramjet power plant comprising an elongated outer tubular casing having an air intake opening at one end and an air exhaust nozzle at the other end, said outer casing defining an air passageway communicating with said intake opening and said exhaust nozzle; an inner tubular structure substantially concentrically disposed within said outer casing and dividing said air intake opening into inner and outer concentric openings; a heat generator disposed in said passageway for heating air received through said intake openings prior to ejection through said exhaust nozzle in a propulsive jet; an air compressor disposed within said inner tubular structure and having its inlet in communication with the inner intake opening and its outlet in communication with said air passageway upstream of said heat generator; valve means for selectively blocking and unblocking said inner intake opening; and means including a closed-cycle fluid turbine power plant for driving said compressor, said turbine power plant including a fluid turbine unit drivingly connected to said air compressor, a fluid cooling unit, a fluid pump unit, and conduit structure for containing the motive fluid for said turbine unit and interconnecting said units in a closed-loop, said conduit structure further including means defining a fluid passageway in good heat exchange relation with said heat generator.

3,016,695
REACTION MOTOR THRUST CHAMBER

Joseph J. Lovingham, Madison, N.J., assignor to Thiokol Chemical Corporation, Bristol, Pa., a corporation of Delaware

Filed May 31, 1960, Ser. No. 32,737
15 Claims. (Cl. 60—35.6)

1. A thrust chamber for jet propulsion motors comprising, inner and outer coextensive coaxial shells conforming to the longitudinal contour of such a chamber to include a combustion chamber and a nozzle, said shells being sufficiently different in their respective diameters to provide an annular space therebetween, the intermediate main tying members fitted into the space between the shells and being in the form of plural longitudinally ex-

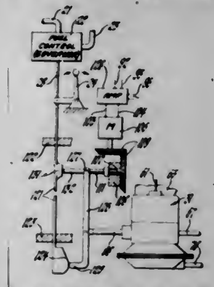


tending wire coils of cross-sectional outside diameter substantially equaling the radial spacing between shells.

3,016,696
JET NOZZLE AREA CONTROL

Leland W. Bryant, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 13, 1958, Ser. No. 741,796
3 Claims. (Cl. 60—35.6)



1. A jet nozzle area control for a turbojet engine with a variable area jet nozzle comprising, in combination, means for varying the nozzle area, control means responsive to the ratio of turbine inlet pressure and turbine outlet pressure and including pressure ratio setting means establishing a control point for the control means, the control means being effective to actuate the varying means to vary nozzle area to maintain turbine pressure ratio at the control point established by the pressure ratio setting means, manually controllable means, means responsive to turbine temperature, pressure ratio scheduling means operated by the manually controllable means connected to the pressure ratio setting means for control thereof, pressure ratio trimming means actuated by the temperature responsive means and connected to the pressure ratio setting means to trim the setting thereof in response to actual turbine temperature, and means actuated by the controllable means blocking operation of the trimming means in a direction to decrease the pressure ratio setting through a portion of the range of movement of the controllable means.

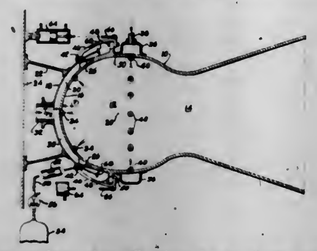
3,016,697
ROCKET ENGINE SWIVEL MOUNT

Marvin Sternberg, Hillsdale, N.J., and Edward A. Neu, Jr., Canoga Park, Calif., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Filed June 19, 1959, Ser. No. 821,572
12 Claims. (Cl. 60—35.6)

1. In combination with the thrust chamber casing of a rocket engine having a nozzle opening through which the rocket motive fluid discharges; a structure for providing a swivel mount for said rocket casing comprising a support member having a circular cross-section and having its concave side disposed adjacent to but spaced

from the closed end of said rocket casing; seal means enclosing the space between said support member and said closed end of the rocket casing; means for supplying a rocket combustion fluid under pressure to said space so that the fluid in said space exerts a force on said rocket casing in opposition to the force exerted on said casing by the rocket motive fluid therein during rocket

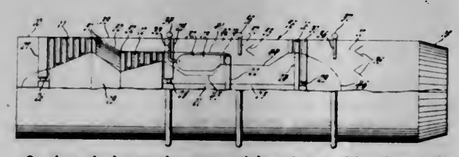


engine operation, the effective area of the portion of said closed end of the rocket casing bounding said space being such that during rocket operation said combustion fluid force is different in magnitude than said opposing rocket motive fluid force; and bearing means secured to said rocket casing and cooperating with said support member for supporting the rocket casing against unbalance of said forces to permit swiveling adjustment of said rocket casing on said support member about the center of the circular cross-section of said support member.

3,016,698
BYPASS ENGINE

Albert J. Sobey, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 2, 1959, Ser. No. 824,504
5 Claims. (Cl. 60—35.6)



2. A turbojet engine comprising, in combination, a first compressor, a second compressor, a first combustion apparatus, a first turbine, a second combustion apparatus, a second turbine, an afterburner, and a jet nozzle arranged for series flow therethrough in the order named; a bypass duct connecting the first compressor to the second combustion apparatus bypassing the second compressor, the first combustion apparatus, and the first turbine; valve means movable to direct the flow from the first compressor alternatively to the second compressor or to the bypass duct; and means for selectively supplying fuel to the first and second combustion apparatuses.

3,016,699
AERODYNAMICALLY ACTING JET DEFLECTING DEVICE

Jean H. Bertin, Neuilly-sur-Seine, and Marcel Kadosch and François M. L. Maunoury, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed Sept. 28, 1953, Ser. No. 382,804
Claims priority, application France Oct. 10, 1952
1 Claim. (Cl. 60—35.54)

The combination of a propulsion nozzle designed for producing a thrust providing stream of motive gas, and a device for deflecting said stream comprising an extension of the nozzle wall in the form of a cylindrical segment whose generatrices are perpendicular to the axis of said nozzle, said cylindrical segment facing toward the inside of said nozzle, a hollow cylindrical tubular member rotatably fitted into said cylindrical segment, a slot-like passage of constant area along a generatrix of said

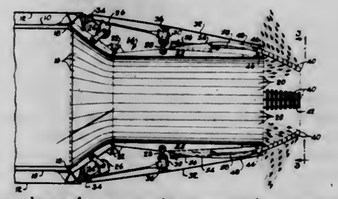


tubular member, means for supplying pressure gas to the inside of said tubular member whereby a gaseous jet is formed by said slot-like passage into said nozzle, and means for rotating said tubular member about said cylindrical segment whereby the angular position of said passage is varied.

3,016,700
THRUST REVERSER FOR JET ENGINES

Werner E. Howald, Ridgewood, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed July 7, 1958, Ser. No. 747,003
8 Claims. (Cl. 60—35.54)

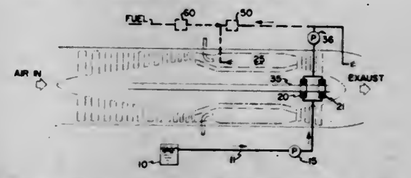


1. A jet engine exhaust nozzle construction comprising a circumferential assembly of nozzle members movable inwardly and outwardly to vary the nozzle area; a circumferential assembly of shroud members co-axially surrounding and connected to the nozzle members for simultaneous movement therewith; exhaust gas deflecting means supported by one of said assembly of members so as to be movable inwardly and outwardly with said supporting members; and means operable for retracting said deflecting means to a position between said assemblies and out of the flow path of the nozzle exhaust gases and for extending said deflecting means out from between said assemblies into the exhaust gas flow path of the nozzle for intercepting and laterally deflecting at least a portion of the nozzle exhaust gases.

3,016,701
METHOD FOR LUBRICATING A JET ENGINE

John J. Kolfenbach, North Plainfield, and Walter W. Gleason, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 18, 1961, Ser. No. 83,464
14 Claims. (Cl. 60—39.08)



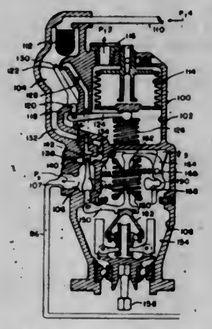
1. The process of cooling and lubricating surfaces on an engine, which process comprises: contacting the sur-

faces to be lubricated with a lubricating composition containing a lubricant and a hydrocarbon capable of endothermic conversion by a reverse Diels-Alder reaction, the absorbing of sufficient heat by said lubricating composition to effect the aforesaid conversion, and subsequently dissipating said heat absorbed by a heat exchange relationship between the lubricating composition and the hydrocarbon fuel.

3,016,702
BLEED VALVE ACTUATION

Joseph M. Ladd, Hamtramck, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Filed May 14, 1956, Ser. No. 584,851
11 Claims. (Cl. 60—39.29)



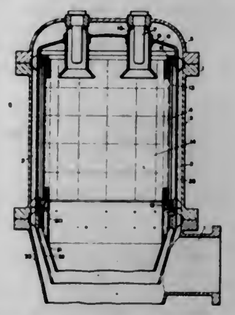
1. In altitude and speed responsive control mechanism for an internal combustion engine for controlling a signal pressure at values above and below a predetermined fraction of a supply pressure which comprises a compartment having an inlet port, a first passage connecting to a source of said supply pressure, an exhaust port, an exhaust passage connected to said exhaust port, and a signal transmission passage connected to said compartment, a restriction in said exhaust passage, another passage for delivering supply pressure to said compartment, an aneroid valve for closing said other passage upon attainment of a predetermined altitude, valve means for simultaneously opening one of said ports and closing the other to vary signal pressure from a value approaching supply pressure to exhaust back pressure when said aneroid valve is closed, the fluid supplied by said other passage when said valve means is in position to open said outlet port and said aneroid valve is open being sufficient to maintain signal pressure above the predetermined fraction of supply pressure.

3,016,703
COMBUSTION CHAMBERS

Jerzy Andre Lorett, Leicester, and Clifford Morris, Whetstone, England, assignors to The English Electric Company Limited, London, England, a British company

Filed Jan. 27, 1958, Ser. No. 711,482
Claims priority, application Great Britain Feb. 18, 1957
10 Claims. (Cl. 60—39.65)

1. A gas turbine combustion chamber comprising in combination: an outer shell, a polygonal louvred flame tube having packets, each of said packets comprising strips having their flat sides spaced from one another to form passageways therebetween, the respective edges of said strips defining the inner and outer walls of said packets such that the flow of secondary air through said passageways is transverse to the axis of said chamber, the said packets being stacked so as to form the sides of said polygonal louvred flame tube and guiding the secondary air inwardly into the interior of said flame tube substantially uniformly over the full axial length thereof, clamping and locating elements clamping the said packets to one another and locating the same with-



in the said outer shell, and at least one burner issuing into the interior of said flame tube.

3,016,704
APPARATUS FOR INTRODUCING A REACTIVE CHEMICAL INTO THE PILOT ZONE OF A COMBUSTION CHAMBER

Richard L. Duncan, Bethesda, Md., David J. Miller, Falls Church, Va., Frank R. Caldwell, Washington, D.C., Fillmer W. Ruegg, Falls Church, Va., and Ernest F. Flock, Waco, Tex., assignors to the United States of America as represented by the Secretary of the Navy

Filed June 25, 1959, Ser. No. 822,977
7 Claims. (Cl. 60—39.72)
(Granted under Title 35, U.S. Code (1952), sec. 266)



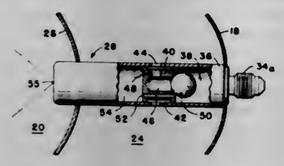
1. A burner system for a jet engine comprising a combustion chamber having upstream and downstream ends, fuel injection means mounted in said chamber near the upstream end thereof for injecting fuel in a downstream direction, an annular flameholder mounted in said chamber downstream from said fuel injection means, said annular flameholder having a flat downstream face, and an imperforate leading edge and a second injection means mounted in said chamber downstream from said flameholder, said second injection means formed by an injector ring having a plurality of radially spaced outlets positioned to direct a reactive chemical in an upstream direction against the flat face of said flameholder.

3,016,705
SELF-PURGING STARTING FUEL NOZZLES FOR GAS TURBINE ENGINES

Franz A. Kneidl, Milford, and Harold G. Beattie, Huntington, Conn., assignors to Avco Corporation, Stratford, Conn., a corporation of Delaware

Filed Aug. 4, 1960, Ser. No. 47,472
3 Claims. (Cl. 60—39.74)

1. A self-purging fuel nozzle for operation with a gas turbine engine having an air passage affording air under pressure adjacent a combustion chamber, said nozzle comprising: a tubular portion extending through said air passage and having a fuel orifice outlet into said combustion chamber, a conduit having an opening to the outside of said tubular portion into said air passage to receive air under pressure from said air passage and extending to an end opening in the interior of said tubular portion, means to feed fuel under pressure through said tubular portion and to said orifice outlet independently of said conduit, a check valve adjacent the end of said conduit interior of said tubular portion and positioned to be actuated by pressure of said fuel to close

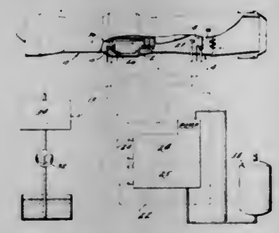


said conduit during fuel flow and positioned to open said conduit into said tubular portion on reduction of pressure of said fuel on termination of fuel flow thereby affording air passage pressure inside said tubular portion to purge said tubular portion of fuel on reduction of pressure feeding said fuel.

3,016,706
JET IGNITION SYSTEM

Richard F. Gamble, Simsbury, Conn., and Robert S. Lanctot, Longmeadow, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Sept. 9, 1960, Ser. No. 54,908
16 Claims. (Cl. 60—39.82)



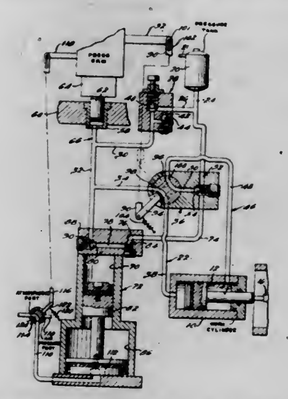
1. In a chemical ignition system for an internal combustion engine having compressor and a combustion section, a first source of fuel under pressure, means for regulating the flow of fuel from said source to said combustion section, a source of ignition fuel, means for injecting into said combustion section a finite charge of said ignition fuel, means responsive to a pressure of the main fuel for producing a first signal, said means also responsive to the pressure of air discharging from said compressor for producing a second signal, means responsive to said signals to actuate said injecting means at a predetermined value of said signals.

3,016,707
HYDRAULIC SYSTEM FOR FABRICATING DIES

Floyd M. Williamson, 452 Lakewood, Detroit 15, Mich.

Filed Feb. 12, 1960, Ser. No. 8,459
22 Claims. (Cl. 60—51)

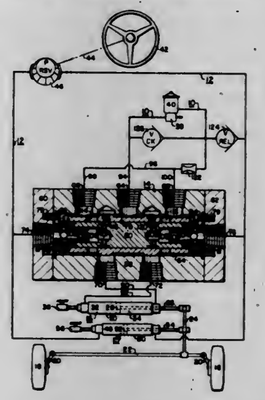
18. In combination with a press ram, a hydraulic system for utilizing the closing of the press ram to effect the working stroke of a tool, said system including a tank of hydraulic fluid under pressure, a work cylinder having a piston therein operable upon the advance thereof to effect the working stroke of a tool, said ram and piston being mechanically disconnected, a fluid flow connection from said tank to one end of said cylinder through which hydraulic fluid is supplied from said tank to said cylinder to react on the piston therein for advancing said piston independent of ram movement, a hydraulic pressure cylinder actuated by the press ram upon the closing thereof and connected to said one end of said work cylinder for supplying hydraulic fluid thereto under a pressure substantially higher than that provided by said tank to advance said piston through the work stroke thereof, a second connection between said hydraulic pressure cylinder and said tank through which hydraulic fluid under pressure is supplied from said tank to said hydraulic pressure cylinder, a pressure relief valve in said second connection, means for supplying pressure fluid to the other end of said work cylinder to react on the piston therein for retracting the same, said last-named means being operable in response to opening movement of the press ram, and a connection between said one end of said work cylinder and said tank through which hydraulic fluid is returned from said work cylinder to said tank upon retraction of the piston in said work cylinder.



3,016,708
POWER TRANSMISSION

Richard O. Gordon, Ypsilanti, and John B. Keir, Madison Heights, Mich., assignors to Vickers Incorporated, Detroit, Mich., a corporation of Michigan

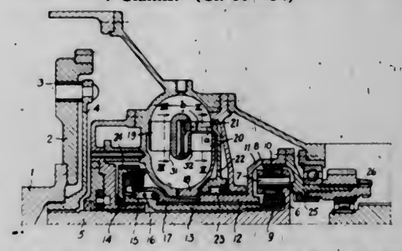
Filed Mar. 23, 1959, Ser. No. 801,150
16 Claims. (Cl. 60—52)



1. A valve comprising: a body; a longitudinal bore in said body; a pressure port, a return port and a motor port in communication with said bore; fluid chambers

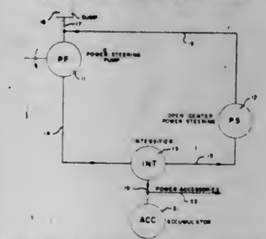
at the outer ends of the bore; a first valve member in said bore for normally connecting the pressure port to the motor port; and a second valve member hydraulically related to said first valve member through said chambers, movement of both of said valve members in the same direction being effective to establish communication between one of said chambers and the return port, said pressure port being isolated from said chambers in all positions of said valve members.

3,016,709
SINGLE STAGE TURBINE HYDRAULIC TORQUE CONVERTER
Alf Lysholm, Karlaplan 11, Stockholm, Sweden
Filed Nov. 16, 1953, Ser. No. 392,390
Claims priority, application Sweden Jan. 21, 1953
7 Claims. (Cl. 60—54)



1. A hydraulic torque converter comprising a housing structure having a central axis, a single stage impeller member comprising a ring of impeller blades rotatable about said axis, a single stage turbine member comprising a ring of turbine blades rotatable about said axis and a rotationally stationary reaction member having a ring of reaction blades concentric with said axis, said housing structure and said members together providing a closed toroidal circuit having spaced inner and outer walls concentric with said axis for flow of working fluid therebetween, said circuit comprising a radially extending outflow section, a radially extending inflow section and smoothly curved bladeless inner and outer return bend sections connecting said outflow and inflow sections, said ring of impeller blades and said ring of turbine blades being located in said outflow section with the turbine blades immediately adjacent to and radially outwardly of the impeller blades and said ring of reaction blades being located in said inflow section, the radial extent of the outflow section being substantially the same as that of the combined radial widths of said impeller and turbine blades and the radial width of the reaction blades being substantially coextensive with the radial extent of said inflow section, the inlet edges of the reaction blades and the outlet edges of the turbine blades being located at substantially the same radius from said axis, the curvature of the walls of the inner return bend section of the circuit providing a substantially constant cross-sectional free flow area through the section, the inner and outer walls of the inflow and outflow sections being substantially parallel in planes normal to said axis and being axially spaced to provide an outflow section having a cross-sectional area normal to said inner and outer walls immediately ahead of the inlet edges of the impeller blades and an inflow section having a cross-sectional area normal to said inner and outer walls immediately after the outlet edges of the reaction blades substantially equal to the cross-sectional free flow area through the inner return bend section, whereby to avoid abrupt change of velocity of the working fluid when passing into and out of said inner return bend section, said turbine and reaction members both being provided with reaction type blades of the kind having thick and bluntly rounded inlet edges disposed so that the tangents to the camber lines of the blades at the inlet edges are substantially radial and the outlet angles of the blades provide a total throat area for flow of the working fluid through the blade ring of the turbine member substantially the same as but not appreciably greater than the corresponding area for flow of working fluid through the blade ring of said reaction member and each of said total throat areas being smaller than the flow area of any remaining place in the circuit other than through said ring of impeller blades, whereby the throat area through the turbine blades provides the restriction primarily governing the rate of circulation of the working fluid resulting from any given hydraulic head developed by the impeller, the width of said reaction blades being related to the length thereof to provide an aspect ratio of less than 1 and the width of said turbine blades being related to the length thereof to provide an aspect ratio greater than 1.5:1.

3,016,710
CENTRAL HYDRAULIC SYSTEM
Alvin M. Kurz, Oak Park, and Warren A. Van Wicklin, Jr., Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 23, 1958, Ser. No. 769,210
8 Claims. (Cl. 60—54.5)

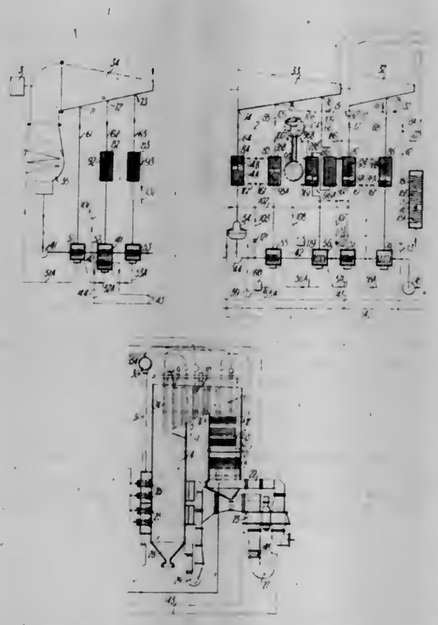


1. In a hydraulic intensifier, a housing containing a stepped diameter cylinder, pressure amplifying means comprising a unified piston assembly having low and high pressure piston portions reciprocable within respective low and high pressure portions of said cylinder, inlet conduit means for providing fluid from a low pressure source to the low pressure portion of said cylinder, a separate outlet conduit means connected to each of the low and high pressure portions of said cylinder, diversion means to divert a portion of the fluid from the low pressure portion of said cylinder to the high pressure portion thereof to be acted upon by said high pressure piston portion, the diversion occurring after said fluid at fluid source pressure acts on said low pressure piston portion to operate said pressure amplifying means to cause the fluid from said high pressure portion of said cylinder to be discharged from said intensifier at a higher pressure than the fluid from said low pressure portion, and bypass means effective to cause the fluid in said inlet conduit means to bypass said amplifying means and to flow directly from said inlet conduit means to the outlet conduit means connected to the low pressure portion of said cylinder, said bypass means including valve means responsive to the fluid in said outlet conduit means connected to the high pressure portion of said cylinder reaching a predetermined pressure.

3,016,711
STEAM TURBINE POWER PLANT
Frederick Shakeshaft, London, England, assignor to Babcock & Wilcox Limited, London, England, a British company
Filed Feb. 16, 1960, Ser. No. 9,068
Claims priority, application Great Britain Feb. 17, 1959
10 Claims. (Cl. 60—67)

1. Steam turbine power plant comprising steam generating means, a steam turbine, steam condensing means,

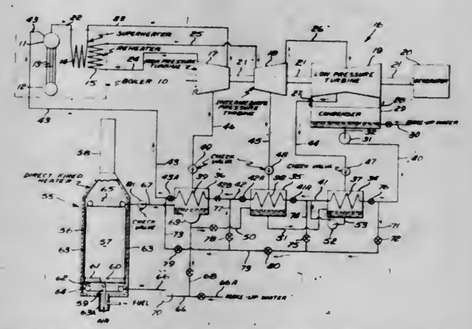
means for circulating aqueous fluid in a circuit through the steam generating means, steam turbine, steam condensing means and back to the steam generating means, bled steam heating feed heating means including a plurality of steam condensing heat exchangers connected in succession in the aqueous fluid circuit between the steam condensing means and the steam generating means and a plurality of steam bleed lines from respective steam bleed points of the turbine of successively increasing pressure to the respective heat exchangers, the said heat exchangers being adapted to condense bled steam in heating feed water, a plurality of steam desuperheating heat exchangers connected in the respective steam bleed lines between the



turbine and the steam condensing heat exchangers, means for delivering water to a steam desuperheating heat exchanger to be heated therein, steam and water separating means arranged to receive steam and water mixture generated in the last mentioned steam desuperheating heat exchanger, means for withdrawing steam from the steam and water separating means and passing it through at least one steam desuperheating heat exchanger to be superheated therein and delivering the resulting superheated steam to the turbine to assist the driving thereof, and means for withdrawing water from the steam and water separating means and introducing it into water in the aqueous fluid circuit.

3,016,712
METHOD AND APPARATUS FOR PREHEATING BOILER FEED WATER FOR STEAM POWER PLANTS
John E. Taylor, Kansas City, Mo., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed July 14, 1960, Ser. No. 42,924
4 Claims. (Cl. 60—67)

1. In a steam power plant having a boiler and turbines connected to receive and be driven by steam generated in said boiler, apparatus for preheating the feed water for said boiler comprising a plurality of feedwater heaters connected together in series and to a source of feed water so that feed water flows successively through each of the feedwater heaters, means for extracting steam from the turbines and for supplying the extracted steam to each of the feedwater heaters, each of the feedwater heaters having means for passing the feed water and extracted steam in indirect heat exchange relationship with each other to heat the feed water and to condense the steam, conduit means connected to the last feedwater heater and to the boiler for passing heated feed water from the last feedwater heater to the boiler, a steam generating apparatus connected to the last of the feedwater heaters with respect to the direction of flow of feed water through the



feedwater heaters to pass steam generated in said steam generating apparatus to the last feed water heater and in indirect heat exchange relationship with the feed water to heat the latter and condense the steam, said steam generating apparatus being operative to generate steam and pass the steam to the last feedwater heater when the load on the steam power plant increases above normal load conditions so that the feed water is heated to a predetermined temperature value, and a conduit connected at one end to the last feedwater heater and at the opposite end to said steam generating apparatus to respectively receive and pass the condensate from the last feedwater heater to the steam generating apparatus for reconversion to steam in the latter.

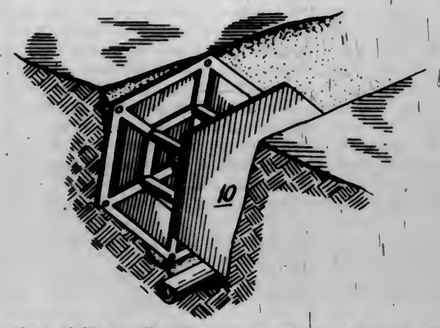
3,016,713
METHOD OF TREATING SOIL WITH AQUEOUS SLURRY OF LATTICE CLAY AND ANIONIC POLYELECTROLYTE
John M. Deming, Robertson, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 15, 1957, Ser. No. 659,439
5 Claims. (Cl. 61—1)

1. A method of preventing seepage of water from excavations in porous soils, which comprises treating the soil surfaces of the said excavations with an aqueous slurry containing 0.1 to 2.0 percent by weight of an expanding lattice clay and from 0.00005 to 0.001 percent of a water-soluble anionic polyelectrolyte having a weight average molecular weight of at least 10,000 and a structure derived by the polymerization of at least one monoolefinic compound through its aliphatic unsaturated group.

3,016,714
TRENCH WALL RETAINER
Felix Cote, 10562 Waverley, Montreal, Quebec, Canada
Filed Dec. 1, 1958, Ser. No. 777,449
2 Claims. (Cl. 61—41)

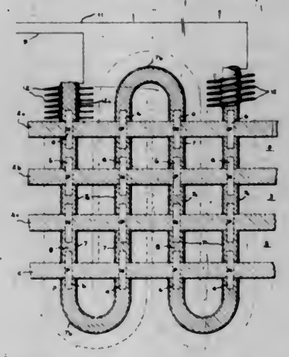
1. A shield for a trench adapted to protect workers working in said trench comprising a pair of walls and

braces connecting said walls and forming therewith a rigid self-supporting unit, the spacing of said walls being



substantially smaller than the space between the sides of said trench and said walls being in the shape of polygons having at least five sides.

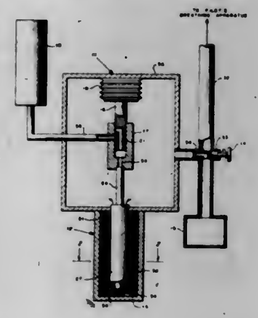
3,016,715
THERMOELECTRIC ASSEMBLY
Joseph A. Pietsch, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 15, 1960, Ser. No. 76,028
6 Claims. (Cl. 62—3)



1. A thermoelectric assembly for a heating and cooling device utilizing the Peltier effect comprising a thermoelectric element, a tubular-shaped conductor link adapted to conduct an electrical current to said thermoelectric element, said thermoelectric element having a portion thereof extending into one end of said tubular-shaped conductor link, means connecting said portion of said thermoelectric element to said end of said tubular conductor link in electrical and heat transfer relationship therewith, and fin means extending outwardly from the periphery of said conductor link in heat exchange relationship with the surrounding ambient.

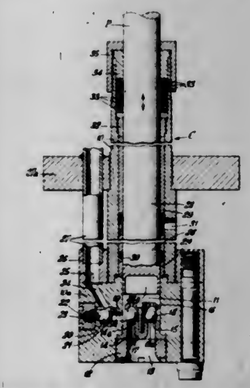
3,016,716
LIQUID OXYGEN COOLER FOR AIRBORNE INFRARED CELLS
Harold R. Walker, Warminster, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 27, 1959, Ser. No. 836,561
4 Claims. (Cl. 62—52)
(Granted under Title 35, U.S. Code (1952), sec. 266)

4. An airborne equipment cooler utilizing a liquid coolant comprising, a cooler chamber, a pressure chamber communicating with said cooler chamber, demand valve means within said pressure chamber for regulating the flow of the liquid coolant to said cooler chamber, pressure responsive means in said pressure chamber for regulating said demand valve means, conduit means for conducting the coolant from said demand valve means to said cooler chamber and into said pressure chamber for acting on said pressure responsive means so that coolant



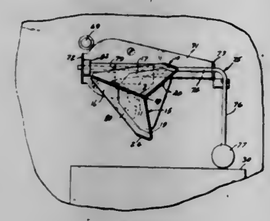
will be supplied to said cooler chamber as required, an infrared transmissive window having a sensitive surface in said cooler chamber, a lead line adapted to be connected to a coolant exhaust apparatus communicating with said pressure chamber, a storage tank communicating with said lead line, and a multiple-position valve controlling the flow of the coolant from said pressure chamber to the coolant exhaust apparatus and the storage tank.

3,016,717
APPARATUS FOR STORING AND PUMPING A VOLATILE LIQUID
Christian F. Gottzmann, Buffalo, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Oct. 25, 1957, Ser. No. 692,311
16 Claims. (Cl. 62—55)



1. A reciprocating pump for liquefied gases having a boiling point below 273° K. and having a clearance space, said pump comprising an elongated pump body having a pumping chamber therein adjacent one end and an opening at the other end; an inlet valve having a cage protruding into said pumping chamber and an inlet valve-controlled port near the end of said pumping chamber opposite said opening; a discharge valve and a discharge valve-controlled outlet passage from the pumping chamber; a reciprocating plunger extending through said opening in the pump body and having an inner pumping end portion with a cavity therein operable in said pumping chamber, the inner pumping end cavity being constructed and arranged for enclosing at least most of said inlet valve cage at the end of the discharge stroke and substantially filling the clearance space about said inlet valve cage; warm end packing means for the portion of said reciprocating plunger passing through said opening, said packing means being spaced at a substantial distance from said pumping chamber; and a flow restricting sleeve in said pump body closely fitting the plunger.

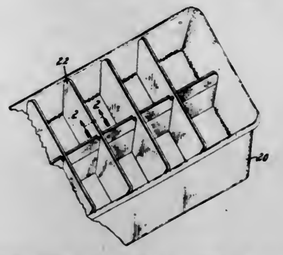
3,016,718
ICE LEVEL SENSOR
Robert R. Malone, Des Plaines, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Dec. 1, 1959, Ser. No. 856,518
7 Claims. (Cl. 62—137)



1. An ice making apparatus comprising: a support disposed within a freezing compartment; an ice tray pivotally mounted within said support having outwardly facing ice molds formed along the pivotal axis thereof; a collection tray; means for filling upwardly facing ice molds with water and ejecting ice blocks from downwardly facing molds into said collection tray; motor means for pivoting said ice tray to selectively dispose each of said molds in filling and ejecting positions; level sensing means having a member pivotally mounted on said support and movable into engagement with the ice blocks within said collection tray, operable to control operation of said motor means as a function of the ice block level sensed by said member; said member being mounted for pivotal movement only on one side of the pivotal axis of said ice tray; means for moving said member into and out of level sensing position; and means prevening movement of said member to sensing position when said tray is in a position to permit ejection of ice blocks from said one side of the pivotal axis thereof.

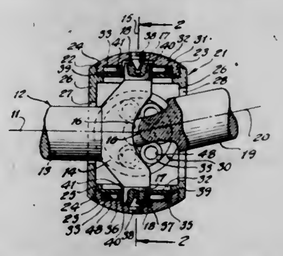
3,016,719
MATERIAL FOR METAL SURFACES UPON WHICE ICE ADHERES
Harold J. Reindl, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,411
9 Claims. (Cl. 62—357)

1. In a refrigeration system; a metal part to which ice adheres, a coating for said metal part comprising a transparent resin mixture consisting of a reacted mixture of an epoxy resin consisting of the reaction product of epichlorohydrin and bisphenol A and having an epoxide equivalent of from 450 to 2000 in quantities of from 1–9 parts by weight and a formaldehyde base resin taken from the class consisting of urea formaldehyde resin, melamine formaldehyde resin, phenol formaldehyde resin and triazine formaldehyde resin in quantities of 1 part by weight together with a wax component consisting of carnauba wax and a wax of the paraffin series wherein



the waxes make up from 10% to 20% by weight of the coating composition.

3,016,720
HIGH SPEED UNIVERSAL JOINT
Nikola J. Trbojevich, Santa Monica, Calif. (23920 Oxnard St., Woodland Hills, Los Angeles, Calif.)
Filed Oct. 19, 1959, Ser. No. 847,136
14 Claims. (Cl. 64—18)

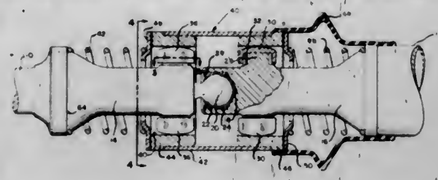


1. A universal joint comprising two T-shaped shafts so disposed that their axes intersect at a point, two trunnions outwardly extending from each said shaft and having an axis passing through the said point perpendicularly to the said first axis, four bearings encircling the said trunnions and coaxial therewith, means for adjusting the end thrust in the said trunnions, a spherical housing enveloping the joint and firmly holding the said bearings equispaced in a plane and a curved face in each shaft near the said point so formed that the said shafts are rotatable in two mutually perpendicular planes without interference and in which each said bearing comprises a plurality of ring shaped rollers of a predetermined degree of radial flexibility, for the purposes of avoiding backlash due to wear and for reducing the vibration in the said shafts.

3,016,721
UNIVERSAL JOINT
William E. Davis, Northville, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,333
1 Claim. (Cl. 64—21)

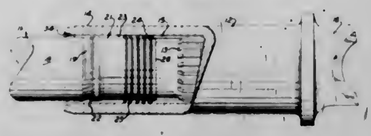
A constant velocity universal joint having driving and driven members, concentric ball and socket means interconnecting the ends of said driving and driven members, each of said members having at least one pair of opposed radially extending trunnions, said pairs of trunnions being positioned uniplanar, a torque transmitting member interconnecting said pairs of trunnions, said torque transmitting members comprising a pair of bearing members each receiving the trunnions of one of said driving and driven members, said bearing members having an axial

keyhole opening corresponding generally to the cross sectional configurations of said driving and driven members at their trunnions, a cylindrical piece joining said bearing members, cover plates closing the open end of said bearing members, said cover plates having an axial open-



ing corresponding to the opening of said bearing members and positioned 90° out of phase therewith, and a pair of springs centering said torque transmitting member, said springs each being interposed between one of said cover plates and one of said driving and driven members.

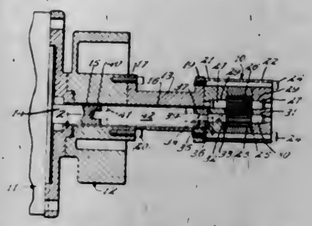
3,016,722
SLIP JOINT SEAL
John Q. Batdorf, Allen Park, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 26, 1959, Ser. No. 815,924
3 Claims. (Cl. 64—23)



1. A driveline slip joint comprising a driving element and a driven element, said driving element being telescoped into one end of said driven element, said elements respectively having intermeshing externally and internally splined portions forming a driving connection therebetween, said splines being effective to maintain said driving connection upon limited relative axial displacement of said elements, said driven element having a counterbored portion between its one end and said internal splines, said driving element having a reduced portion axially inwardly of said external splines, a sealing member encompassing said reduced portion of said driving element, external sealing means on said member in internal engagement with the counterbored portion of said driven element, said external sealing means comprising a plurality of axially spaced lips, and means interposed between said lips and the surface of said sealing member controlling the direction in which said lips flex during sealing engagement with the surface of said counterbored portion.

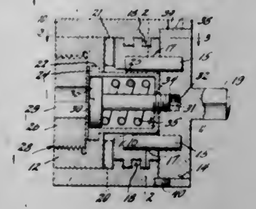
3,016,723
SHAFT COUPLINGS
John T. Gondek, 2206 Roosevelt St. NE., Minneapolis, Minn.
Filed Aug. 3, 1959, Ser. No. 831,191
1 Claim. (Cl. 64—27)

A flexible coupling for connecting a pair of shafts having opposed aligned ends, the shafts having axial sockets in said opposed aligned ends and a diametrically extending slot in each of said opposed ends intersecting said socket and extending into the shaft an axial distance less than the depth of said sockets, the connector comprising a flat member of spring material having ends of a width substantially equal to the diameter of said shaft, the thickness of said flat member being substantially equal to the width of said slots, and tongues extending from the ends of the flat body and projecting therefrom into said sockets, said tongues being of a width substantially equal to the



diameter of the sockets and holding said flat body from lateral movement relative to the axis of said shaft and the walls of said slots engaging said flat body on opposite sides of said tongues.

3,016,724
ADJUSTABLE TORQUE SENSITIVE COUPLINGS
Ernst Sussman, Blery's Bridge Road, Bethlehem, Pa.
Filed Feb. 20, 1961, Ser. No. 90,468
13 Claims. (Cl. 64—29)

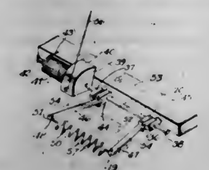


1. An adjustable torque sensitive coupling comprising a sleeve, a driving element positioned within said sleeve, a driven element positioned within said sleeve for axial and rotary movement with respect thereto, an intermediate element carried by said driving element for axial movement relative thereto, said intermediate and driven elements being provided with matching teeth which provide a driving connection between said elements when in mesh, a first retainer secured to said driving element, a second retainer secured to said driven element, a resilient member coupled to said retainers and normally urging said driving and driven elements into contact with said intermediate element, and means connecting said sleeve and said intermediate element whereby relative rotation advances said intermediate element axially of said sleeve, said connecting means including means for effecting separation of said driving and intermediate elements when said intermediate element moves in one axial direction to further stress said resilient member and thereby increase the force holding said teeth in driving contact.

3,016,725
YARN CLAMPING TENSIONING AND SEVERING MECHANISM FOR CIRCULAR KNITTING MACHINES
James A. C. Kimrey and Eugene Hinkle, Burlington, N.C., assignors to Baker-Cammack Hosiery Mills, Inc., Burlington, N.C., a corporation of North Carolina
Filed May 5, 1960, Ser. No. 27,166
18 Claims. (Cl. 66—140)

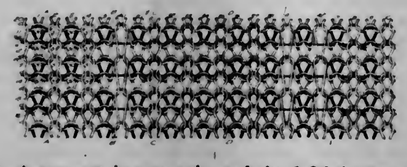
12. In combination with a circular knitting machine having a cylinder with independent needles and a yarn feeding station having a plurality of yarn feed fingers individually movable between active and inactive knitting

positions, a yarn clamping and severing attachment comprising a yarn severing means mounted within the needle circle, yarn clamping means positioned within the needle circle beneath the yarn feed fingers to releasably clamp



individual yarns extending from inactive yarn feed fingers and maintain said yarns in spaced apart relation, and means for displacing the yarn clamping means to present clamped yarns to the yarn severing means.

3,016,726
KNIT FABRIC INCORPORATING ELASTIC THREAD AND GARMENTS FORMED THEREOF
Robert H. Lawson, Pawtucket, R.I., assignor to Lawson Products, Inc., Pawtucket, R.I., a corporation of Rhode Island
Filed Dec. 6, 1956, Ser. No. 626,648
5 Claims. (Cl. 66—177)



1. A garment incorporating a knitted fabric comprising a base fabric of relatively inelastic yarn in which an uncovered elastic thread is knit into spaced courses but into not more than alternating stitches of those courses in which it occurs and by its elasticity tends to unknit itself in those spaced-apart stitches where it is knitted, said fabric having one or more locking zones extending walewise commensurately with the length of a walewise cut-line to be formed in the fabric and extending coursewise over a multiplicity of wales, said locking zone having said uncovered elastic thread knit into all the fabric stitches in each of the courses corresponding to those in which it occurs in the base fabric and due to its resistance to becoming unknit in said stitches being thereby held against slippage through the fabric when the latter is stretched in the plane of the fabric whether before or after walewise cutting of the fabric adjacently along and outside a locking zone, said fabric being cut along a line generally paralleling a locking zone margin and having another fabric piece inserted at and seamed along the cut edge with a plurality of the locking zone wales lying between the seam and the base fabric.

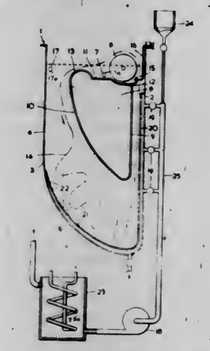
3,016,727
FLASH LAMP
Robert F. Vanden Boom, South Euclid, and Robert M. Anderson, Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Filed Apr. 2, 1959, Ser. No. 803,637
7 Claims. (Cl. 67—31)

1. A flash lamp comprising a sealed glass bulb having a flat external stem press extending from one end thereof and provided with means defining an unobstructed guideway extending transversely of and completely across one of its flat sides for sliding engagement with cooperating slide track means of a lamp-holder, combustible light-producing material within said bulb, a combustion-supporting gaseous filling in said bulb, and ignition means in said bulb for igniting said combustible material, said ignition means including a pair of lead-in wires having



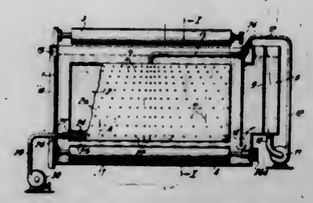
portions sealed through the stem press and rigid terminal portions extending outwardly from the end of said stem press, the said terminal portion of each of said lead-in wires being retroverted and having its free end re-entered and anchored within the end of said stem press.

3,016,728
APPARATUS FOR THE TREATMENT OF TEXTILE MATERIALS
Ralph James Mann, Spondon, near Derby, England, and Robert William Noon, Whitchurch, Glamorgan, Wales, assignors to British Celanese Limited, a corporation of Great Britain
Filed Nov. 7, 1957, Ser. No. 694,983
Claims priority, application Great Britain Nov. 13, 1956
8 Claims. (Cl. 68—177)



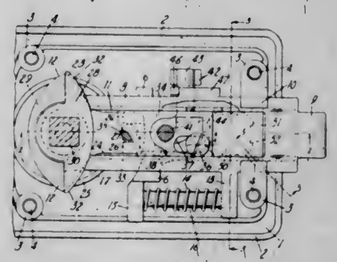
1. An apparatus suitable for the liquid treatment of textile fabrics in rope form, which comprises a bark to contain the treatment liquid, said bark including back, front and side walls and being of substantially rectangular horizontal cross-section, a winch roller positioned near the back of the bark so as to be at least partly submerged in the liquid in the bark and adapted on rotation to lift the rope of fabric up the rear part of the bark, said roller being of substantially circular form and substantially impermeable to flow of liquid through its surface, means below the liquid level and near the front face of the winch roller for injecting liquid in a generally upward direction to ensure separation of the fabric from the roller, and a baffle assembly within the bark comprising a generally horizontal first portion across the width of the bark extending forwardly from a point near the winch roller to a point short of the front of the bark, a second portion descending substantially vertically from the rearward end of the first portion, and a third portion descending from the front end of the first portion and curving backwardly to meet the lower end of the second portion.

3,016,729
SHEET WASHING MACHINE
Karl Menzel, Senne I, Post Windelsbleiche, Germany (Senne I uber Bielefeld 2, Friedrichsdorfer Strasse 1550, Germany)
Filed Apr. 15, 1960, Ser. No. 22,495
Claims priority, application Germany Apr. 20, 1959
5 Claims. (Cl. 68—183)



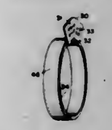
1. A machine for washing elongated webs consisting of fabric and like material, said machine comprising, in combination, a receptacle for a washing liquid; a plurality of hollow containers mounted in said receptacle and defining between themselves at least one substantially vertically extending channel for the passage of a web, said channel having a lower zone and each container formed with discharge opening means communicating with said channel; means for introducing washing liquid into said containers at a pressure sufficient to cause the flow of liquid through said opening means and into said channel whereby the liquid washes the web; and means for at least periodically introducing a compressed gas into the lower zone of said channel whereby the gas travels upwardly to agitate and to thereby enhance the washing action of the liquid.

3,016,730
KEY LOCKED DOOR LATCH MECHANISM
George E. Dey, Sr., Lowell, Mich., assignor to G.D.M. Company, Lowell, Mich.
Filed Dec. 10, 1959, Ser. No. 858,746
3 Claims. (Cl. 70—150)



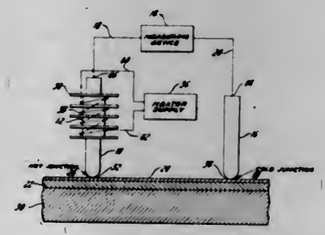
2. In a door latch structure having a base with a spring pressed latch bolt reciprocatingly mounted thereon and operatively associated with separate inner and outer door knob operated pawls, a lock bolt reciprocably mounted in a slot provided therefor in said latch bolt and having a locking stud lockingly engageable with said outer knob operated pawl to the exclusion of said inner operated pawl in the neutral position of the knob pawl and the extended locked position of the locking stud, means engageable between said latch bolt and said lock bolt to disengage said locking stud upon retraction of said latch bolt, a manually operable pin projecting inwardly from said lock bolt for operation from inside the door independently of said latch bolt, a key operated lock cylinder mounted in said base and operative from the outside thereof, an eccentric projection on the inner end of said cylinder, actuating surfaces spaced longitudinally on the outer side of said lock bolt and engageable by said projection in oppositely rotated positions of said cylinder and projection to lock and unlock said lock bolt, cylinder locking and key retaining pins projectable from said cylinder, and pin receiving grooves formed in said base around said cylinder to receive said pins in the neutral position and the lock bolt locking position of said cylinder.

3,016,731
DUST RING MOUNTED CHANGE GEAR FINDING SCALE FOR WATER METER TESTING
Abraham Adler Hirsch, 141 Norwood St., Shreveport, La.
Filed Sept. 8, 1958, Ser. No. 759,665
5 Claims. (Cl. 73—3)



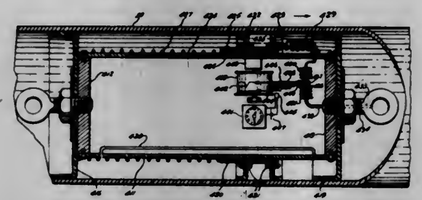
1. The combination in a liquid meter undergoing test for accuracy of registration, a set of change gears therein, a register with a dial and sweephand thereon, a dust ring around the edge of said register, said sweephand being rotated in response to revolutions of said change gears and an auxiliary scale appropriately graduated in terms of change gear combinations rotatably mounted on said dust ring so as to permit slidable adjustment at the periphery of said register dial, graduations on said auxiliary scale being on an arc concentric with said dial face so that the sweephand points thereto, readings for the purpose of change gear selection for said liquid meter being made according to the position of said sweephand with reference to said auxiliary scale.

3,016,732
MEASUREMENT OF COATING THICKNESSES BY THERMAL MEANS
Eugene A. Hanysz and Edward F. Weller, Jr., Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 1, 1952, Ser. No. 312,624
3 Claims. (Cl. 73—15)



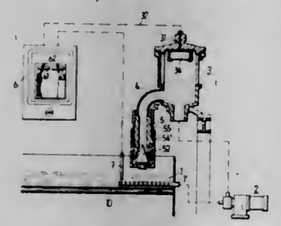
1. The method of measuring the thickness of an electrically nonconductive coating on a base material of substantial heat absorbing capacity comprising the steps of applying heat to one point on the surface of the coating at which its thickness is to be measured thereby establishing a tempertaure gradient of heat transmission through the coating to the base material dependent upon the coating thickness at said point, and measuring the difference in temperature between said point and a point thermally remote therefrom on said surface.

3,016,733
PIPELINE LEAK SURVEYING
Howard J. En Dean, Fox Chapel, Pa., John Delbert Jones, Tulsa, Okla., and Edward Topanelian, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Original application June 28, 1956, Ser. No. 594,482. Divided and this application Oct. 30, 1959, Ser. No. 849,956
3 Claims. (Cl. 73—40.5)



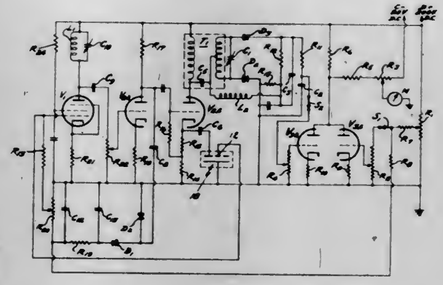
1. Apparatus for surveying a pipeline for leaks which comprises a vehicle insertable in the pipe, a packer on said vehicle adapted to form a sliding seal against the wall of the pipe, an annular carriage slidably disposed on said vehicle, elastic means connecting said carriage to said vehicle, isolating means on said carriage adapted to isolate a portion of the wall of the pipe and pipe space contiguous thereto, a sealed housing on said vehicle, pressure-difference-responsive means in said housing connected between said space and the space inside the pipe outside said isolating means, and means in said housing recording the indication of said pressure-difference-responsive means.

3,016,734
VISCOSITY SENSING OR MEASURING APPARATUS
Hans Kabelitz and Toni von Kannen, M. Gladbach, Germany, assignors to Gebruder Sucker G.m.b.H., M. Gladbach, Rhineland, Germany, a corporation of Germany
Filed Feb. 21, 1958, Ser. No. 716,756
Claims priority, application Germany Feb. 23, 1957
12 Claims. (Cl. 73—55)



1. An apparatus for sensing the viscosity of a liquid material comprising a pressure chamber into which the material is introduced, channel means providing a conical restricted passage for outlet of liquid from said chamber widening in the liquid outlet flow direction, and conical means widening in the same direction and manually settable in rigid fixed position in said conical passage to determine the cross-sectional area of the annular restricted passage between the conical means and the conical passage, the tapering angle of the conical means being greater than that of the conical passage, the angles being so correlated that the cross-sectional area of the flow path is substantially constant over the length of the conical passage, means sensing gas pressure in said chamber, which pressure is affected by inflow of the liquid material and restriction of outflow of liquid material, and thereby sensing the viscosity of the material.

3,016,735
STRUCTURAL BOND EVALUATION
James S. Arnold, Palo Alto, and Joseph A. Kochly, San Carlos, Calif., assignors to the United States of America as represented by the Secretary of the Air Force
Filed June 17, 1958, Ser. No. 742,694
1 Claim. (Cl. 73—67.1)

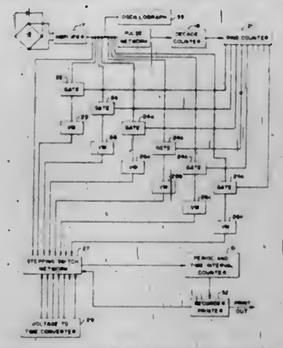


In circuitry for evaluating a physical characteristic of a structure to be tested, the combination, of a piezoelectric transducer mounted on said structure, said transducer having a plurality of electrodes on the surface opposite the structure-contacting surface, current amplifying means having its output electrically connected to one of said transducer electrodes, a control circuit including another of said transducer electrodes, means for utilizing said control circuit to feed energy back to said amplifying means, to control the gain factor, said utilizing means including an AGC circuit for impressing upon said amplifying means a gain controlling biasing voltage that is in direct proportion to the physical characteristics of the load being applied to said transducer by the structure undergoing test, means including a pair of monitoring amplifiers having a common plate circuit, one of said monitoring amplifiers having its control grid responsive to a first D.C. voltage representative of the frequency shift pattern manifested in said first-named amplifying means, the other of said monitoring amplifiers having its control grid responsive to a second D.C. voltage representative of the voltage level manifested in said control circuit as said transducer converts said applied physical forces into electrical energy, and means in said common plate circuit for indicating the magnitude of the physical characteristic to be evaluated, in terms of the sum of said first and second D.C. voltages.

3,016,736
DAMPING COEFFICIENT MEASURING INSTRUMENT
Wolfgang A. Menzel, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 9, 1959, Ser. No. 805,349
4 Claims. (Cl. 73—71.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

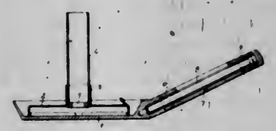
1. Apparatus for use in determining the damping coefficient of the periodic movement of a body which comprises; a transducer connected to said body for providing a periodic electrical signal correlative to the movement of the body, a plurality of normally closed gating circuits connected to the output of said transducer to receive the electrical signal, means connected to the output of said transducer to receive said electrical signal and coupled to said gating circuits to sequentially open the gating circuits at predetermined cycles of the electrical signal, a plurality of peak measuring voltmeters each connected to a respective gating circuit for receiving and storing the peak voltages impressed upon the respective gates, a converter for

converting the peak voltages to corresponding time intervals, a stepping switch coupled to receive the periodic electrical signal and the peak voltage from each of said voltmeters for sequentially applying the peak voltages to the converter whereby said converter produces a plurality



of pairs of pulses spaced apart at time intervals correlative respectively to values of the peak voltages received by said converter, means coupled to said stepping switch for recording the period of oscillation of the electrical signal and the time intervals indicative of the values of the corresponding peak voltages for sequentially operating said stepping switch.

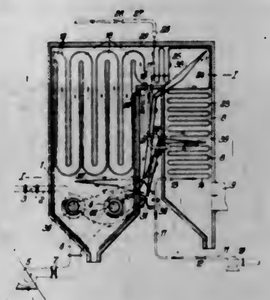
3,016,737
APPARATUS FOR DETERMINING THE MOISTURE IN CEREALS, GRASS, STRAW AND OTHER PRODUCTS
Odd Todnem, Norges Tekniske Hogskole, Trondheim, Norway, assignor to Landbruksteknisk Institutt, Vollebekk, Norway, a corporation of Vollebekk, Norway
Filed Nov. 26, 1957, Ser. No. 699,105
Claims priority, application Norway Nov. 27, 1956
2 Claims. (Cl. 73—76)



1. An apparatus for determining the moisture content of material comprising a metal pan adapted to receive said material for heating therein and a cover disposed on said pan above said material to provide an enclosed space in which said material is heated for driving off moisture therefrom, and an exteriorly open transparent dew pipe carried by said cover and communicating with said enclosed space, said dew pipe having a length such that moisture from said material condenses thereon.

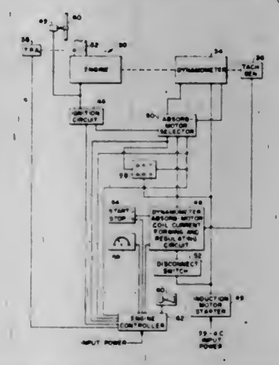
3,016,738
MEANS FOR SUPERVISING THE HEAT DEVELOPMENT AND HEAT TRANSFER IN BOILERS, FURNACES AND HEAT CONSUMERS
Martin Eule, 42 Bruderstrasse, Berlin-Spandau, Germany
Filed Sept. 27, 1955, Ser. No. 536,937
10 Claims. (Cl. 73—112)

1. A measuring device, for determining the performance of a heat generating plant having a heat absorbing medium, comprising a plurality of heat exchangers adapted to be disposed at different locations in the plant, pressure generating means operable for passing a fluid through each heat exchanger, throttling means in each heat exchanger operable to adjust separately for each heat exchanger the flow of the fluid to be proportional to the flow at said location of said heat absorbing medium, whereby each heat exchanger will simulate the rate of heat consumption by said medium at each location, temperature



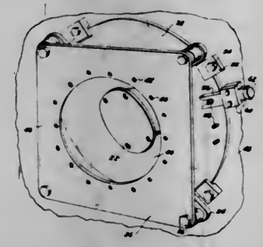
differential measuring means intercommunicating with the inlet and outlet of each heat exchanger and operable to determine the rate of heat consumption of each heat exchanger, whereby the rates of heat consumption at the different locations in the plant may be indicated and compared.

3,016,739
APPARATUS AND METHOD FOR AUTOMATIC CONTROL
Fredrick Lowell Jonach, Kew Gardens, N.Y., and Murray H. Edson, Rahway, and James A. Wilson, Stanhope, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 580
3 Claims. (Cl. 73—116)



1. A system for imposing automatic operating control according to a predetermined program upon a fuel-burning engine, said system comprising (1) a fuel-burning engine and an eddy current dynamometer coupled thereto, said engine being characterized by a throttle mechanism and said dynamometer being characterized by at least two magnetizing current coils, one associated only with the function of supplying motoring power input to said engine and another associated only with the function of absorbing combustion power output from said engine, (2) a positioning apparatus connected in power transmitting relation to said throttle mechanism, (3) a selector apparatus electrically connected to said dynamometer coils whereby magnetizing current may be directed alternately to the coil for motoring and the coil for power absorbing, (4) a magnetizing current circuit electrically connected to said selector apparatus whereby the magnitude of current flowing in whichever of said coils is energized at any given time according to the operation of said selector apparatus may be regulated, (5) a control signal generating apparatus which includes at least one signal storage member characterized by at least two surfaces modulated in contour according to signals stored in said member, at least one follower member in contacting relation to one of said surfaces, at least another follower member in contacting relation to the other of said surfaces, said signal storage member and said follower members being relatively moveable with respect to each other to generate displacement signals at said follower members in accordance with the contour modulations of said signal storage member surfaces, and actuating means operatively connected to said signal storage member and said follower members to cause relative and at least partially oscillatory motion therebetween, (6) signal transmitting means connecting one of said follower members and said positioning apparatus, and (7) signal transmitting means connecting the other of said follower members and said magnetizing current circuit.

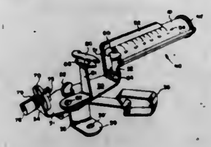
3,016,740
TURRETED HEADSTOCK FOR TRANSMISSION TEST STANDS
Frank Raidl, 3125 Fullerton Ave., Chicago 47, Ill.
Filed Dec. 7, 1959, Ser. No. 857,719
1 Claim. (Cl. 73—118)



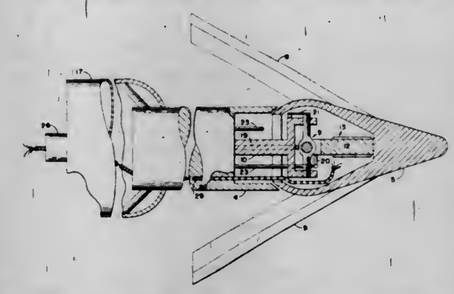
In an apparatus for testing automative transmission assemblies which includes means for mounting a transmission assembly on the apparatus and for operating the assembly under simulated running conditions, a prime mover for driving the transmission, a headstock carried by said apparatus comprising a disc member, a mounting plate supported on said disc member in axially spaced relation thereto having a plurality of spaced holes therein, certain of said holes being adapted for alignment with the mounting bolt holes of transmission assemblies of various makes and models, means mounting said headstock for rotation through 360°, latch means for latching said headstock in a plurality of selected rotative positions, a switch operatively connected with said latch, and means operated by said switch for rendering said prime mover operable only when said latch is in latched position.

3,016,741
ACCESSORY FOR USE BY FISHERMEN
Harry W. Kulp, 1350 Quarry Lane, Lancaster, Pa.
Filed Sept. 19, 1958, Ser. No. 762,154
9 Claims. (Cl. 73—143)

1. Apparatus for use in tying a line to a fishhook or the like and for testing the strength of the knot after the tie has been made comprising, in combination, a frame having a pair of spaced supports, a tension indicator mounted on one support, said tension indicator having scale means and a member cooperative therewith movable toward and away from the other support, means for detachably connecting a hook or the like to said movable member with an eye of the hook or the like facing said other support, a rotor mounted on said other support, and line gripping means on said rotor, said supports being so located that a free end of said line may be extended from said gripping means on said rotor to said one support, looped through said eye and then extended back toward said rotor whereby rotation of the rotor will form a twisted portion of line, said free end being projectable between said eye and said twisted portion to form a knot the strength of which can be tested by pulling the line in a direction away from said one support.



3,016,742
SERVO-VANE PITCH AND YAW INDICATOR
Joseph E. Fikes, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed June 23, 1959, Ser. No. 822,402
16 Claims. (Cl. 73—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)



13. A wind-tunnel model assembly comprising: a model subject to aerodynamic forces; an elongated support having one end fixed to the after end of said model and the other end adapted to be fixed to a wind tunnel; a boom mounted on said model; a nose section supported by said boom; means, connected to said boom, for universally mounting said nose section on said boom; a flexible beam having one end secured to said nose section and the other end supported by said mounting means; control means, secured inside said boom connecting said boom to one end of said flexible beam, for adjusting the position of said last-named end relative to said boom and holding said last-named end in an adjusted position; powered means, connected to the inside of said boom, for actuating said control means; electrical pickoff means, in said nose section, having one portion connected with said boom and another portion connecting with part of said mounting means, adapted to operate in either of two opposite directions in one plane; an electrical second pickoff means, in said nose section, having one portion mounted on a second part of said mounting means and another portion mounted on said nose section, adapted to operate in either of two opposite directions in a second plane; a pair of pitch sensitive vanes secured to said nose section and adapted to be influenced by an aerodynamic force, thus moving said nose section about a pitch axis; a pair of yaw sensitive vanes secured to said

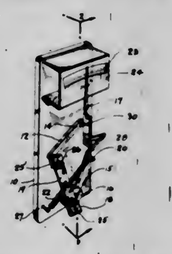
nose section and adapted to be influenced by an aerodynamic force, thus moving said nose section about a yaw axis; strain-sensing gauges fixed to an intermediate portion of said beam, adapted to be influenced by strain in the material of said beam when the beam flexes in either of said planes.

3,016,743
COHESION TESTER FOR TEXTILE YARNS
Albert Louis Promislow, Collins Bay, Ontario, and Maurice Harold Waldman, St. Hilaire Station, Quebec, Canada, assignors to Canadian Industries Limited, Montreal, Quebec, Canada
Filed May 22, 1959, Ser. No. 815,092
Claims priority, application Canada Nov. 25, 1958
2 Claims. (Cl. 73—160)



1. An apparatus for measuring the cohesion of the filaments in a multi-filamentary textile yarn which comprises essentially, in combination, an electrically grounded cup-shaped metallic container having at least one transparent window in the side wall thereof, an insulating lid for said container, an electrode passing centrally through said lid and having at its lower end retaining means for at least one sample of said textile yarn, and means for supplying an adjustable measurable high voltage to said electrode.

3,016,744
HYGROMETER
Oliver P. M. Goss, 4750 16th NE., Seattle, Wash.
Filed July 6, 1959, Ser. No. 824,982
9 Claims. (Cl. 73—337.5)



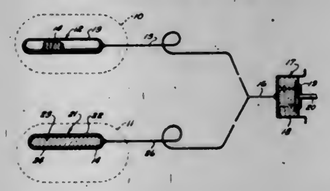
1. A relative humidity indicating instrument comprising, in combination, a base member and a graduated scale associated therewith, a pointer having a hub and a pivot member applied therethrough and mounting said pointer on said base member for swinging travel along said graduated scale, a stud fixed in said hub, outset from its pivot member, spring means acting on said pointer to urge it in one direction along said scale and a humidity sensitive element of belt form connected, under tension, at its ends, respectively to said base member and to said stud to balance the force of said spring means as applied to said pointer and operating in accordance with the lengthening or shortening of said element incident to humidity changes, to effect and control the pointer movement along the graduated scale; said stud being so located in said hub that the line of the points of pivotal connection of said humidity sensitive element with the base member and hub moves toward the axial line of said hub with rise of humidity.

3,016,745
TEMPERATURE PROBE
Wayne E. Simon, Columbus, Ohio, assignor to North American Aviation, Inc.
Filed Sept. 21, 1960, Ser. No. 57,587
14 Claims. (Cl. 73—349)



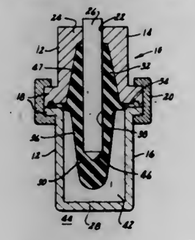
12. A temperature probe assembly for measuring the total temperature of an airstream sample and which includes, in combination: a shell member having an inlet opening, a bleed member of porous material having the form of a hollow frustrum of a cone and having an inlet opening which corresponds to said shell member inlet opening and an exit opening which is substantially smaller than said inlet opening, and thermocouple temperature-sensing means operatively contacting said bleed member, porous material, said bleed member and said shell member establishing uniform suction through said bleed member porous material and establishing three-dimensional fluid flow within the envelope of said shell member to develop a temperature for said bleed member porous material which corresponds to the total temperature of the airstream sample.

3,016,746
DIFFERENTIAL TEMPERATURE CONTROLLERS
Thomas M. Holloway, Waukesha, Wis., assignor to Johnson Service Company, Milwaukee, Wis., a corporation of Wisconsin
Filed July 8, 1960, Ser. No. 41,515
6 Claims. (Cl. 73—362.3)



1. In a differential temperature controller, means forming a common work chamber having a wall movable in response to a variation of pressure in the chamber, a capillary system including separate capillary tubes in communication with each other and with said work chamber, a direct acting temperature sensing element connected to one of said capillary tubes and adapted to be subjected to a first temperature condition in a first selected location and including a pressure transmitting fluent medium which is adapted to be forced into the said capillary system when the temperature rises in said first location and to move in a reverse direction when the temperature falls in said first location, and a reverse acting temperature sensing element connected to the other capillary tube and adapted to be subjected to a second temperature condition in a second location and including means for drawing in pressure transmitting fluent medium when the temperature rises in said second location and for forcing said fluent medium into the capillary system when the temperature falls in said second location whereby the movement of said single movable wall of said common work chamber is controlled by the difference between the temperatures in said two locations.

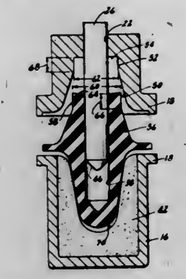
3,016,747
SQUEEZE-PUSH POWER ELEMENT
Sergius Vernet, Yellow Springs, Ohio, assignor to Antioch College, Yellow Springs, Ohio, a corporation of Ohio
Filed Nov. 28, 1956, Ser. No. 624,871
3 Claims. (Cl. 73—368.3)



1. In a thermostatic power element, a container including a cup and cap assembly defining an interior space, the cap having an aperture communicating with the interior space, a resiliently deformable plug in said space having an axial recess communicating with the cap aperture, a piston projecting axially of said plug and having a tapered first end bottomed in the recess, said piston having its other end projecting beyond the plug and through the cap aperture, the plug having a medial radially enlarged flange sealingly trapped between the cap and the cup, the plug above the flange constituting a substantial portion of the plug length and being snugly peripherally engaged by the cap, heat-responsive material confined in the cup and surrounding the lower portion of the plug, expansion of said material initially displacing the piston toward the cap as the heat-responsive material squeezes the plug radially inwardly to progressively collapse the plug beneath the lower end of the piston until such time as the piston is displaced axially of the plug to substantially radially align the piston lower end with the medial plug flange, subsequent expansion of the heat responsive material deforming the plug flange upwardly to inwardly collapse the plug above the flange and to close the plug recess above the flange, the piston being displaced upwardly beyond the flange by deformation of the plug after that portion of the plug below the flange has been collapsed, that portion of the plug below the sealing flange being of a length substantially less than the total length of travel of the piston.

3,016,748
SQUEEZE-PUSH POWER ELEMENT
Sergius Vernet, Yellow Springs, Ohio
Filed July 25, 1957, Ser. No. 674,208
7 Claims. (Cl. 73—368.3)

1. A power element comprising a container having an opening in one wall; a piston extending through said opening; an elastomeric force-transmitting body within said container and surrounding said piston; and pressure-producing material within said container; said force-transmitting body including an annular plug portion surrounding the piston adjacent the container opening and extending along the piston for a substantial axial distance; said force-transmitting body also including a sleeve portion extending inwardly from the plug portion a substantial axial distance and surrounding the innermost end portion of the piston; whereby initial outward movement of the piston is effected by a radial squeezing of the sleeve portion, and final outward movement of the piston is effected by an axial push of the plug portion; the container having a frusto conical surface of substantial axial dimension engaged with the innermost section of the plug portion and a cylindrical surface engaged with the outermost section of the plug portion; the aforementioned



opening in the container being of lesser diameter than the diameter of the circle described by the aforementioned cylindrical surface so as to form an annular radially extending surface therebetween; the outer end of the plug portion which engages the radially extending surface being conically concaved in the free state but being deformed into engagement with the radially extending surface during assembly of the power element.

3,016,749
TOOL FOR SAMPLING BATCHES OF FIBROUS MATERIAL
Herbert J. Wollner, Belmont, Mass., assignor to ACH Fiber Service, Inc., a corporation of Massachusetts
Filed Dec. 11, 1957, Ser. No. 702,167
1 Claim. (Cl. 73—425)

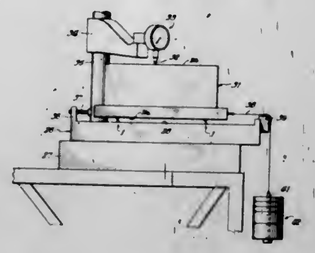


For sampling a batch of fibrous material, a tool comprising cutting means for cutting a core of the material at a selected location and attaching means for attaching the tool to the batch at a location offset from said seleced location, and means for conjointly actuating said cutting means and attaching means to apply opposing forces thereto, the attaching means projecting beyond the cutting means so that the attaching means first anchors the tool to the batch and the cutting means then cuts the core, one of said first two means comprising a plurality of parts offset in different directions from the other of the first two means to balance the opposing forces of the first two means, and said attaching means comprising a pair of hooked tongs.

3,016,750
STRUT ANGLE GAUGE
Bertram A. Fulton, Lynnfield, Mass., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 545,416, Nov. 7, 1955. This application July 18, 1960, Ser. No. 43,655
10 Claims. (Cl. 73—432)

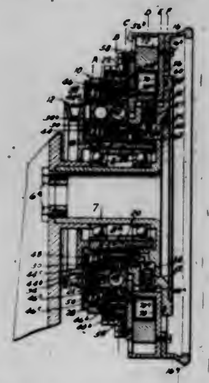
1. In a cam measuring gauge, the combination comprising a base member adapted to support a cam, means to

apply a vertical force to the cam, means supporting said vertical force applying means for substantially friction-



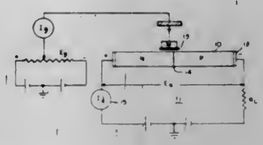
less horizontal movement, means for applying a horizontal force to said vertical force applying means, and means to indicate the magnitude of at least one of said forces.

3,016,751
AUTOMATIC BALANCING MACHINES
Joseph E. De Villiers, 420 Le Boeuf St., New Orleans 14, La.
Filed Sept. 16, 1959, Ser. No. 840,459
18 Claims. (Cl. 73—468)



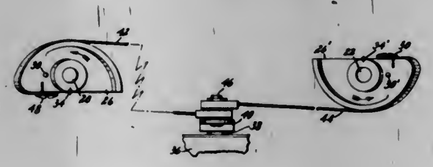
1. A machine to be connected with and to rotate a wheel to be balanced for automatically balancing out eccentricities in the weight thereof, comprising a frame; a motor mounted in the frame; a drum journaled on the frame and connected with the motor for rotation thereby; an annular balancing body carried by the drum and coupled for rotation therewith, the body being radially displaceable with respect to the axis of the drum; wheel coupling means for tightly connecting the balancing body with the wheel in coaxial relation therewith, said balancing body having a plurality of liquid receiving tube sections arranged in an annular series therewithin and said drum having a liquid containing reservoir and a liquid manifold; pump means connected between the drum and the balancing body whereby eccentric radial motion therebetween actuates the pump means to transfer liquid from the reservoir into the manifold; and valve means connected with each tube section and selectively connecting the latter to the reservoir or the manifold depending on the direction of radial displacement of the body on the drum to alter the distribution of liquid among the tube sections to reduce the unbalance causing the eccentric motion.

3,016,752
TRANSISTOR TYPE ACCELEROMETER
Eugene C. Huebschmann, Brevard County, Fla., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 16, 1960, Ser. No. 69,779
2 Claims. (Cl. 73—517)
(Granted under Title 35, U.S. Code (1952), sec. 266)



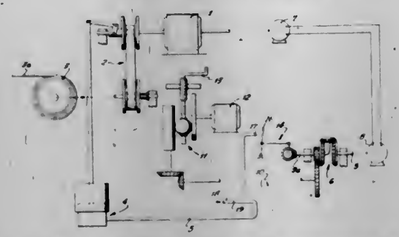
1. An accelerometer comprising: an NP junction type transistor, means for providing a reverse bias across said junction, a field electrode adjacent said junction, means including a free moving support for moving said field electrode relative to said junction in response to an acceleration applied to said accelerometer, means for applying a bias voltage to said field electrode, and means for sensing a change in current flow through said transistor in response to movement of said field electrode.

3,016,753
WINDSHIELD WIPER DRIVE MECHANISM
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 10, 1958, Ser. No. 772,888
3 Claims. (Cl. 74—95)



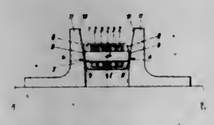
1. A windshield wiper drive including in combination, unidirectional rotary crank means, a pair of spaced pivot shafts rotatably supported by spaced brackets, an eccentric drum member attached to each pivot shaft having an arcuate peripheral surface, the axis of each shaft being disposed between the arcuate peripheral surface and the center thereof whereby the angular velocity of each shaft will be a maximum at its mid-stroke position and a minimum at its stroke end position, a torsion spring operatively associated with each pivot shaft, said torsion springs biasing said pivot shafts in the same rotary direction, and means operatively interconnecting said crank means and said drum members so as to effect angular movement of said pivot shafts in opposite directions during rotation of said crank means, said means including a pair of flexible strips, each flexible strip having one end operatively connected with said crank means and its other end secured to one of said drum members such that during each half revolution of said crank means one of said strips is unwound from its drum member and the torsion spring associated with its shaft is stressed, while the other strip is wound on its drum member by the spring associated with its shaft whereby said flexible strips are maintained under tension at all times and the torques created by said torsion springs offset each other.

3,016,754
CONTROL SYSTEM FOR POWER TRANSMISSION
Robert W. Corey, Anaheim, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 3, 1958, Ser. No. 771,386
3 Claims. (Cl. 74—230.17)



1. In a system for controlling the tension on a web being wound: a first variable ratio transmission mechanism; a second variable ratio transmission mechanism; electrically energizable motor means for driving the first mechanism; means for driving the second transmission mechanism at constant speed; means for independently adjusting the ratio of the second mechanism; means for comparing a function of the angular movements of the output of the motor means and the output of the other mechanism; and means controlling the ratio of the first mechanism in accordance with said comparison.

3,016,755
LINK CHAIN FOR INFINITELY VARIABLE PULLEY GEAR TRANSMISSIONS
Otto Dittrich, Bad Homburg vor der Hohe, Germany, assignor to Reimers-Getriebe K.G., Ascona, Switzerland, a firm of Switzerland
Filed Dec. 17, 1959, Ser. No. 860,225
Claims priority, application Germany Dec. 20, 1958
5 Claims. (Cl. 74—230.17)



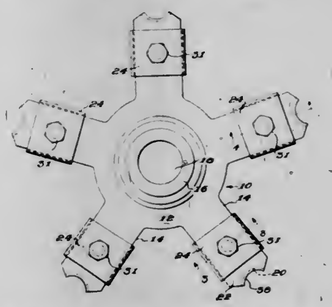
1. A link chain for an infinitely variable pulley-gear transmission, in which at least one pulley for transmitting the driving force within said gear consists of a pair of friction disks at least one of which is tapered, and in which means are provided for pressing one of said disks toward the other disk and against the chain interposed between and looped around said disks, said chain comprising a plurality of solid link bodies having recesses in their ends so as to form connecting lugs adapted to interengage with the lugs of the adjacent links, said lugs having transverse bores, and a link pin inserted into the lugs of each link for pivotably connecting said adjacent links to each other, each of said link pins comprising a pair of rocking pins adapted to engage with and rock on each other, said bores in the lugs at one end of each link being spaced from the bores in the lugs at the other end at the minimum distance commensurate with the required tensile strength, compressive strength and torsional resistance of said links, the outer surfaces of each link and the end surfaces of each link pin having opposite arcuate cylindrical surfaces disposed symmetrically to the longitudinal axis of said chain and adapted positively to engage at each side with the surface of one of said friction disks of said pair along a substantially uninterrupted line of the loop formed by said chain within said pulley.

3,016,756
V-BELTS
Fritz Jäckel, Bielefeld, Germany, assignor, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 5, 1958, Ser. No. 719,349
Claims priority, application Germany Mar. 9, 1957
1 Claim. (Cl. 74—234)



A belt having a substantially V-shaped cross section comprising a link chain reinforcement, said links securely hinged one with another about a transverse axis and enclosed by a substantially non-porous polyurethane body portion, said body portion securely bonded to said link chain, said polyurethane body portion containing molybdenum disulfide, silicone oil and a hydrocarbon.

3,016,757
SPROCKET SILENCER
Andrew T. Kornylak, Jersey City, N.J. (400 Heaton St., Hamilton, Ohio)
Filed Apr. 25, 1961, Ser. No. 105,331
3 Claims. (Cl. 74—243)



1. In a sprocket having a hub, a plurality of radial arms and a driving tooth on the end of each arm, the improvement comprising an auxiliary tooth of elastomeric material at one side of each sprocket tooth, said auxiliary tooth having the same contour as the sprocket tooth, but also having a greater radial extent, whereby the auxiliary tooth engages the driven element before contact therewith of the sprocket tooth.

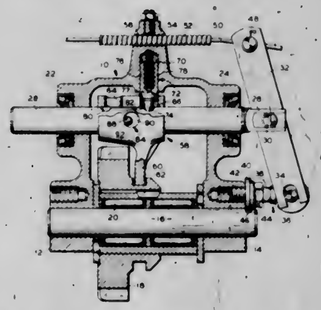
3,016,758
TRANSMISSION CONTROL
Robert C. Keller, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,967
12 Claims. (Cl. 74—473)

1. In a transmission control linkage, a support, a pair of control members reciprocally mounted on said support, cam means on each of said control members, said support having an axis spaced from said control members, a lever pivoted to said support for axial and rotary movement with respect to said axis, an intermediate member rotatably and axially slidably mounted with respect to said axis on said support, said lever being pivoted to said intermediate member at a point spaced from the pivot between the lever and support, said intermediate member having a cam actuator cooperating with said cam means on said control members, said intermediate member sliding axially in response to axial rocking

movement of said lever along the axis of said support to move said cam actuator to selectively engage one of said cam means on one control member and to reciprocate the selected one of said control members in response to rotary movement of said intermediate member and lever.



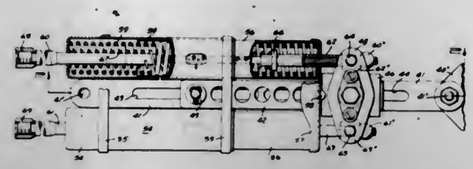
3,016,759
GEAR SHIFT LOCK
Robert E. Fletcher, Toledo, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed Sept. 24, 1959, Ser. No. 842,132
16 Claims. (Cl. 74—475)



1. In a gear shifting mechanism the combination comprising a shifting rod having indexing means associated therewith, a shifting sleeve disposed on said shifting rod, locking means preventing movement of said sleeve upon indexing of said indexing means, and means forming a lost motion connection between said shifting rod and said shifting sleeve whereby said shifting rod is moved from indexed position to release said locking means to effect shifting of the shifting sleeve.

3,016,760
CONTROL LINE REGULATOR
Robert J. Wrighton, Tarzana, and Clifford E. Cushman, Burbank, Calif., assignors, by mesne assignments, to Pacific Scientific Company, San Francisco, Calif., a corporation of California
Original application Jan. 30, 1956, Ser. No. 562,073, now Patent No. 2,921,480, dated Jan. 19, 1960. Divided and this application June 25, 1959, Ser. No. 845,046
5 Claims. (Cl. 74—501.5)

1. A control line tension regulator device comprising a main frame structure, a lock means slidably mounted on said main frame and arranged to carry a pair of control llnes slidably seated therein, a regulator spring associated with each of said control lines, said regulator springs exerting a resilient force on said lock means relative to said main frame to urge said lock means to slide on said main frame structure to uniformly tension the control lines seated therein, said lock means canting on said main frame structure when the tension applied to either one of said control lines exceeds the tension of the other line to lock said lock means to said frame to prevent any further play-out movement of the control lines relative to the main frame, and means associated with each of said control lines for exerting a take-up force on said control lines whereby any slack developed in the control line having the lesser tension during the locked condition of the regulator may be taken up, the slack control line sliding with respect to the lock means.

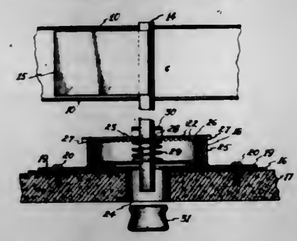


3,016,761
CONTROL LINE REGULATOR
Robert J. Wrighton and Clifford E. Cushman, Burbank, Calif., assignors, by mesne assignments, to Pacific Scientific Company, San Francisco, Calif., a corporation of California
Original application Jan. 30, 1956, Ser. No. 562,073, now Patent No. 2,921,480, dated Jan. 19, 1960. Divided and this application Aug. 31, 1959, Ser. No. 845,047
4 Claims. (Cl. 74—501.5)



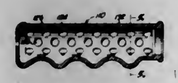
1. A control line tension regulator device adapted for coupling to the two control line terminals of a control line system comprising a synchronizer screw threaded on each end, the threads on one end being reversed relative to those on the opposite screw end, elongated nut members threaded over the ends of the synchronizer screw, a sleeve member associated with each nut member, said sleeve member being slidably mounted over the associated nut member, the outer ends of said sleeve members being adapted to couple to the control line terminals of the control line, pulling forces on said control line terminals urging said sleeves to move endwise outwardly, regulator springs in said device associated with said sleeve members for resiliently urging said sleeve members endwise toward each other to thereby tension the control lines coupled to said control line terminals, means urging said nut members against the inner ends of said sleeves such that said nut members move endwise inwardly toward and outwardly from each other as said sleeves move, said synchronizer screw freely revolving as said nuts move back and forth, and means for locking said synchronizer screw against revolving when a load tension is applied to one control line terminal greater than that applied to the other line terminal, said regulator springs urging said sleeves to slidably move endwise inwardly during said locked condition, said sleeve associated with said other line terminal having the lesser tension slidably moving relative to its associated locked nut to take up slack in the control line coupled to said other line terminal.

3,016,762
ADJUSTABLE REGULATOR FOR DAMPERS
Bobby W. Floyd, 912 Craig Place, Addison, Ill.
Filed Nov. 9, 1959, Ser. No. 851,579
4 Claims. (Cl. 74—527)



1. In an adjustable device for adjusting damper valves, a cup-shaped housing; apertured brackets for securing said housing; a plurality of teeth on the periphery of said housing; a transverse apertured mounting bar secured diametrically across said housing; a U-shaped centrally passaged yoke; a diametrically extending locking member secured to said yoke, and having extensions engageable with said teeth; a spring between said yoke and said transverse apertured mounting bar; a shaft extending through and having a non-rotating connection with said locking member and through said spring and said housing and projecting from said housing in both directions; said yoke and said locking member being depressible to disengage said locking member and permit rotation of said shaft; said shaft being adapted to be connected to a movable damper valve.

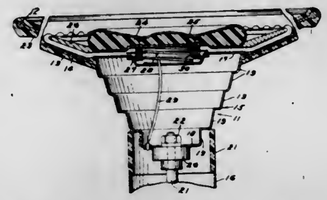
3,016,763
HANDGRIP FOR HANDLE BARS
John R. Albert, Prairie Village, Kans., assignor to Textile Rubber Company, Bowdon, Ga., a corporation
Filed Sept. 28, 1959, Ser. No. 842,691
2 Claims. (Cl. 74—551.9)



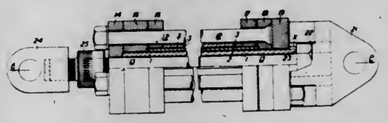
2. A handgrip for a handle comprising an elongated handle-receiving tube of flexible material having an inner face provided with a plurality of spaced knobs each having a concave handle-engaging terminal surface to effect suction cup action on the handle and adapted to engage the handle throughout an area substantially greater than line contact with said handle, each knob being undercut adjacent said face of the tube.

3,016,764
SAFETY STEERING WHEEL
Robert H. Fredericks and Roger P. Daniel, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,911
7 Claims. (Cl. 74—552)

1. A safety steering wheel comprising a rim, a hub, an inverted frustum-shaped member concentric with and interposed between said rim and hub, spoke means connecting said rim to the upper end of said member, the peripheral wall of said member comprising a series of stepped portions, said member terminating in an end wall connected to said hub, said spoke means being constructed and arranged to resiliently support said rim for movement toward said hub under an impact load, said stepped portions being constructed and arranged to telescopically and deformably collapse with energy absorbing effect under an impact load in excess of that capable of causing movement of said rim toward said hub.



3,016,765
GRAPHITE ASSEMBLIES FOR NUCLEAR REACTORS
James Wilfred Ashley, Dorking, and Leslie James Knight, Ashford, England, assignors to United Kingdom Atomic Energy Authority, London, England, a British authority
Filed Feb. 12, 1959, Ser. No. 792,874
Claims priority, application Great Britain Feb. 18, 1958
6 Claims. (Cl. 74—579)



1. A link for a restraint system for the graphite structure of a nuclear reaction comprising a nest of coaxial tubes arranged to receive compressive loads, a plurality of pairs of end plates, each tube being located between a pair of said end plates, a pair of couplings attached to the outermost pair of end plates, and a plurality of groups of solid tie rods arranged to carry tensile loads, each group of solid tie rods connecting the end plate at one end of a tube to the end plate at the other end of the adjacent inner tube, and each group of solid tie rods being disposed externally of and arranged symmetrically about the nest of tubes.

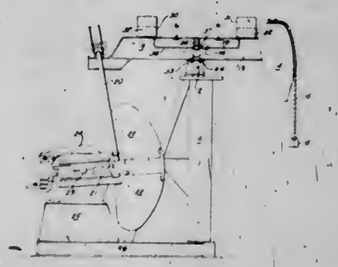
3,016,766
PIVOT BEARING, PARTICULARLY FOR WINDSHIELD WIPERS
Alfred Ernst Hoyler, Buhlertal, Baden, Germany, assignor to Avog Elektro- und Feinmechanik G.m.b.H., Buhlertal, Baden, Germany, a corporation of Germany
Filed Nov. 20, 1957, Ser. No. 697,597
Claims priority, application Germany Nov. 24, 1956
1 Claim. (Cl. 74—588)



A pivot bearing for the driving linkage of a windshield wiper, comprising a rigid bearing structure having a flat portion of bent and U-shaped configuration, said structure having two aligned coaxial bores through the respective flat limbs of the U-shaped portion, at least one of said bores being non-circular, a bushing of elastic material having a radially expandable middle portion between

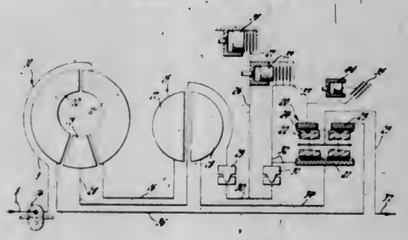
said two limbs and having two ends of smaller diameter than said middle portion and seated in said respective bores, said bushing having a central opening extending through said middle portion and said end portions in coaxial relation to said bores, said opening having an internal bearing surface of said elastic material, whereby said bushing is non-rotatably locked in between said bores by the radial elasticity of said material when said opening is occupied by a removably insertable pivot pin.

3,016,767
APPARATUS FOR COMPENSATING FOR GRADUAL CHANGES IN LOAD ON A WALKING BEAM PUMP
Edmond F. Egan, Houston, and Laurence M. Hubby, Bellaire, Tex., assignors to Texaco Inc., a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,676
9 Claims. (Cl. 74—589)



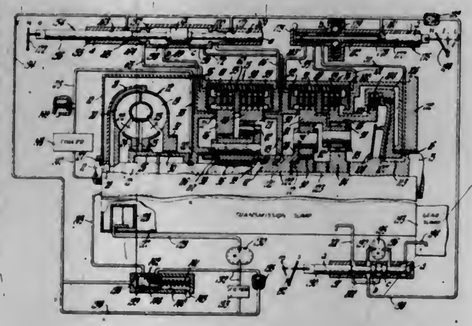
1. In an apparatus for reciprocating a member through a power stroke and a return stroke, including a driving element and a counterbalance acting in aid of said power stroke but in opposition to said return stroke for balancing the magnitude of the load on said driving element during said return stroke with respect to said power stroke, the combination of means for applying a pair of opposing forces one in aid of and the other in opposition to said load on the driving element, means for determining unbalance between the magnitude of said load during said return stroke relative to that during said power stroke, and means controlled by said unbalance determining means for reducing one and adding to the other of said pair of opposing forces in order to restore balance between the magnitude of the load during said power stroke and during said return stroke.

3,016,768
SPLIT TORQUE TRANSMISSION
John Z. De Lorean, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 31, 1958, Ser. No. 752,336
9 Claims. (Cl. 74—677)



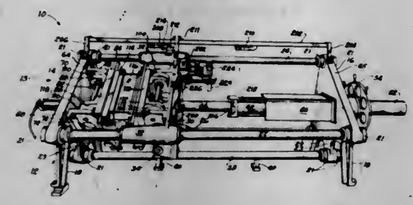
1. A transmission comprising in combination, a three element hydrodynamic torque converter unit, a fluid coupling unit and a planetary gearing unit, said torque converter comprising an impeller, a turbine and a reaction member, said fluid coupling unit being of the type adapted to be alternately filled with and emptied of working fluid and including an impeller and a turbine, a drive shaft connected to both of said impellers for rotating said impellers in unison, said planetary gearing unit including a planet carrier having a planet pinion gear journalled therein and in mesh with a sun gear and first and second ring gears, a final power output shaft fixed for rotation with said planet carrier, a drive connection directly connecting said converter turbine to said first ring gear for rotation therewith as a unit, a drive connection between said fluid coupling turbine and said sun gear, a rotatable housing, engageable and releasable brake means effective when engaged to prevent rotation of said housing, one-way brake means for preventing reverse rotation of said converter reaction member with respect to said housing, one-way brake means for preventing reverse rotation of said sun gear with respect to said housing, said torque converter turbine constituting the sole power input member to said gear unit when said fluid coupling is empty of working fluid, and said torque converter turbine and said fluid coupling turbine each constituting a power input member for transmitting torque to said gear unit when said fluid coupling is filled with working fluid.

3,016,769
TRANSMISSION
Howard W. Christenson, William G. Livezey, and Ulysses A. Breting, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 18, 1955, Ser. No. 509,298
25 Claims. (Cl. 74—732)



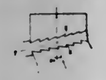
1. In a device of the character described, first fluid pressure actuated motor means, second fluid pressure actuated motor means, a source of fluid under pressure, a first supply line connecting said source of fluid pressure to said first motor means, a second supply line connecting said source of fluid pressure to said second motor means, valve means in said lines having a neutral position in which both of said lines are blocked, said valve means connecting said first supply line to said first fluid pressure actuated means and continuing to block said second supply line during movement from said neutral position toward a second position, said valve having an unbalanced area, said fluid pressure actuating said first fluid pressure actuated motor means acting on said unbalanced area of said valve to resist movement of said valve toward said second position, and said valve means directing said fluid to said first line for said first fluid actuating means and blocking said fluid from said unbalanced area when the valve means is in said second position so that the valve is at rest in said second position.

3,016,770
DIE SPOTTING PRESS
John M. Atols, Chicago, Ill., assignor to Atols Tool and Mold Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 8, 1960, Ser. No. 13,609
11 Claims. (Cl. 76—4)



5. A die spotting press including a pair of support members horizontally spaced from each other and defining thereby a frame, at least one of said support members mounted for movement toward and away from the other support member, a die-holding member pivotally mounted on each support member, the pivotal axis of each die-holding member positioned so the mating surfaces of die parts held by said die-holding members are movable between positions where the mating surfaces of the die parts face each other for mating engagement and positions where the mating surfaces of the die parts are adjacent to and face outwardly from the front of said frame.

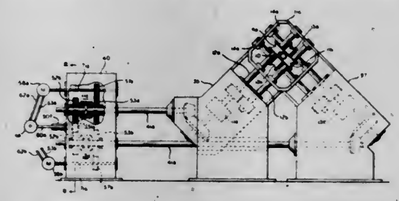
3,016,771
PROCEDURE AND TOOL FOR THE MANUFACTURE OF VARIOUS KINDS OF FILES AND RASPS
Ivan M. Meissler, Chattanooga, Tenn. (990 Anderson Ave., Bronx, N.Y.), and Laszlo Fazekas, 159 Grace St., Toronto, Ontario, Canada
Filed Feb. 6, 1958, Ser. No. 713,596
2 Claims. (Cl. 76—13)



1. A method for producing files and rasps out of a blank having parallel opposite surfaces, by stamping in order to form undercut teeth on both surfaces of the said blank, in which two stamping tools, each of which having a multitude of undercut teeth, are moved against the opposite surfaces of the blank in directions parallel to the flanks of the undercut teeth of the stamping tools and deviating from the vertical on the opposite surfaces of the blank for an angle equal to the angle of back taper of the teeth, the said directions of movement of the said tools crossing each other under an angle equal to twice the angle of back taper of the teeth of the tools, thereby forming a multitude of teeth at the same time on each of the opposite surfaces of the blank.

3,016,772
DRIVE ASSEMBLY FOR METAL WORKING MILL
Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Apr. 20, 1959, Ser. No. 807,605
13 Claims. (Cl. 80—36)

1. In a stretch reduction type metal working mill, a plurality of roll stands sequentially arranged along the axial length of said mill, each of said stands comprising a pair of rollers respectively mounted for rotation on a pair of shafts having parallel axes to define a nip therebetween, said nips being axially aligned along the axial length of said mill to receive said stock to be continuously drawn in said mill, the axes of the shafts of adjacent roll stands being alternately orthogonal to each other, a plurality of individual drive units with each one of said units connected to drive the rollers of a corresponding and aligned one of said roll stands, each of said individual drive units including a differential means and a separately adjustable hydraulic means to vary the speed of its driven roll stand independently of the others and



during operation and having an axial width materially greater than the diameters of said rollers and the axial spacing of said roller pairs, common meshed gear drive train means connected to all of said drive units along the length of said mill, and said drive units being in a plurality of alternately offset rows to reduce the axial spacing therebetween whereby the distance between the nips of adjacent stands is not substantially greater than the diameters of said rollers.

3,016,773
PREDETERMINED TORQUE RELEASE WRENCH
Robert Glen Woods, 3102 Grand Ave., Huntington Park, Calif.
Filed Dec. 12, 1958, Ser. No. 779,891
28 Claims. (Cl. 81—52.4)

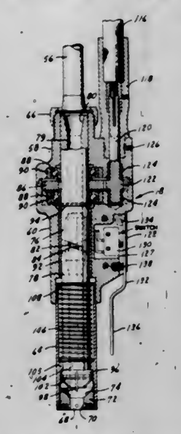


25. In a torque wrench the combination, comprising: a head member having a load-engaging means; a hinge member hingedly connected to said head member and extending rearwardly from said head member, said members having coacting means to limit relative angular movement therebetween; a lever pivotally connected at its forward end to said hinge member, said lever and hinge member having coacting means to limit relative angular movement therebetween; a plunger axially movably mounted in said lever rearwardly of said hinge member and yieldably biased toward said hinge member; and a torque-limiting means between adjacent ends of said hinge member and said plunger for depressing said plunger when an excessive torque is applied to said load-engaging means.

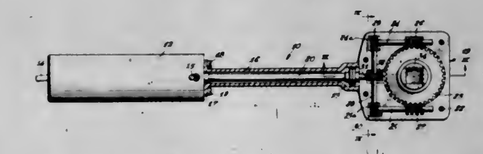
3,016,774
POWER OPERATED WRENCH FOR SCREW-ON-TYPE CONNECTORS
Mickey M. Minobe, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,286
13 Claims. (Cl. 81—54)

1. In a device for automatically rotating connectors of the screw-on type for assembly thereof on the stripped ends of electric wires or the like, an elongated housing with an inlet opening at one end for the reception of such connectors and an outlet opening at the other end for the discharge thereof, a turning station at the other end adjacent the outlet opening, a drive shaft in the housing having a head on one end generally aligned with the

turning station and outlet opening and constructed to be moved therein between a turning position and a withdrawn position, jaws on the head of the drive shaft constructed to grip such a connector in the turning station when the drive shaft is in its turning position and to release the connector when in its withdrawn position, means for feeding such connectors to the inlet opening in the housing, means for rotating the drive shaft, and means for moving the drive shaft between its withdrawn and turning positions.



3,016,775
POWER SOCKET WRENCH
Eugene Moses Calkins, 8119 Knowles Lane, El Paso, Tex.
Filed Mar. 1, 1960, Ser. No. 12,181
1 Claim. (Cl. 81—57)



A power wrench handle comprising an elongated frame member having a handle portion and a rotatable socket connector mounted thereon with a stud projecting from one side of the connector and a socket on the other side of the connector, a driving motor connected to said frame member, a drive shaft supported on said frame member and connected to said motor, a head at one end of said frame member supporting said socket connector and defining a gear housing, a rotary gear connected to said connector and positioned in said housing, a pair of side shafts in said housing positioned on each side of said rotary gear in the plane of said gear and having worms drivingly meshing with said gear, a cross shaft in said housing extending across said side shafts transversely of the axis of said rotary gear and positioned laterally of the side shafts on the side of said socket in said connector, first gear means connecting said cross shaft and said pair of shafts, a gear in the center of said cross shaft, and a meshing gear drivingly meshing with said center gear and connected to said drive shaft, said drive shaft being substantially in the plane of said pair of side shafts, said head and said housing projecting in the same general direction to enclose the socket side of the connector and said cross shaft.

3,016,776
CLAMP TYPE WRENCH ADAPTER FOR DEEP WELL OPERATIONS
Charles E. Myers, College Station, Tex., and William T. Linson, Houma, La., assignors to Texaco Inc., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,203
3 Claims. (Cl. 81—180)



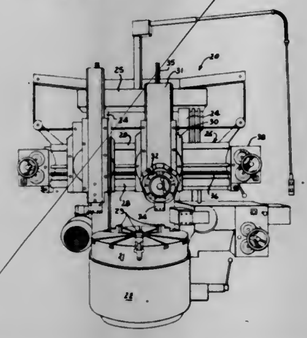
1. An adapter for deep well operations wherein a long string of relatively small diameter rods are to be unscrewed, said adapter comprising a split cylindrical structure, said structure comprising a longitudinally divided pipe having two oppositely situated parts, a longitudinally elongated die having a V cross section groove therealong and located on each of said parts for gripping one of the rods therebetween, a plurality of transverse panels located inside each of said parts to stiffen the same, said panels having a notch on each thereof aligned axially of said pipe for receiving the rod.

3,016,777
SEMI-AUTOMATIC THREADING-DEVICE FOR SLIDING LATHES
Michele Garombo, Piazza Rebaudengo 22, Turin, Italy
Filed Oct. 28, 1954, Ser. No. 465,387
Claims priority, application Italy Nov. 10, 1953
1 Claim. (Cl. 82—5)



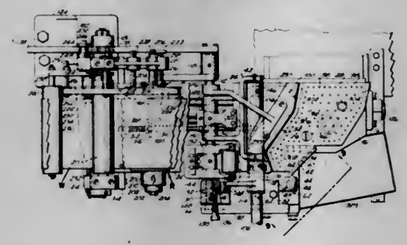
A threading attachment for a lathe, comprising, a base adapted for fixation to the slide of the lathe and including a casing integrally connected therewith, a longitudinal slide mounted on said base for guided translation thereon parallel with the axis of rotation of a workpiece mounted between centers in the lathe, first spring means acting between said base and said longitudinal slide, urging the latter into retrograde translation along said axis, a tool-carrying cross slide mounted on said longitudinal slide for guided translation thereon toward and from said axis, second spring means between said slides and urging said cross slide toward said axis, a vertical shaft journaled in said casing for rotation on an axis fixed with said base, and having a free end projecting upwardly through an aperture in said casing, a retraction cam fixed to said shaft within said casing, a feed cam removably fixed to the free end of said shaft above and externally of said casing, a lever pivoted between its ends on said base, one end of said lever projecting through an aperture in said casing to engage said retraction cam, the other end of said lever slidably engaging an abutment on said cross slide, a cam follower fixed with said longitudinal slide and engaging said feed cam, a worm gear fixed with said shaft within said casing, a worm journaled on said base and in mesh with said worm gear, and means rotating said worm in timed relation with rotation of the workpiece between lathe centers, said retraction cam operating said lever to retract said cross slide from said axis, just prior to completion of a work stroke translation of said longitudinal slide along said axis.

3,016,778
CONTROLS FOR MACHINE TOOLS AND THE LIKE
Arthur O. Fitzner, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed Sept. 24, 1958, Ser. No. 763,057
20 Claims. (Cl. 82—14)



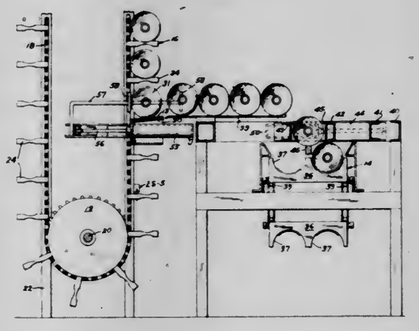
1. In a system for controlling the positioning of a translatable machine tool member, the combination comprising a machine tool having a rotatable element, selective speed means for driving said rotatable element at any one of a plurality of rotational speeds, a translatable member, selective feed means driven from said rotatable element and connected to translate said translatable member at any selected one of a plurality of relative feed rates, a computer, means conveying to said computer information indicative of the selected speed of said rotatable element, means included in said computer for determining a relative feed rate substan ially inversely related to the selected speed of said rotatable element, and means for converting the setting of said selective feed means to that determined by said computer as said translatable member closely approaches an end-point position in which it is to be stopped, so that the absolute feed rate of said translatable member prior to stopping of the latter is approximately the same regardless of the selected speed of said rotatable element.

3,016,779
TOBACCO PRODUCT AND METHOD AND APPARATUS FOR MAKING SAME
Sterling T. Gustavson, Rosedale, and Victor G. Hanson, Brooklyn, N.Y., assignors to International Cigar Machinery Company, a corporation of New Jersey
Filed Nov. 23, 1956, Ser. No. 624,067
5 Claims. (Cl. 83—242)



1. In a device suitable for attachment to a cigar machine for forming shaped cigar binders from a tobacco web, said device comprising a vertically reciprocable table, a source of tobacco web, a carriage reciprocably mounted for horizontal movement across said table, gripping means on said carriage to grip the leading edge of a web to draw said web forward on the feeding motion of said carriage across said table, said table being in its lowermost position during said forward feed of said carriage, a knife mounted on the first edge of said table and positioned substantially transverse the feeding movement of said carriage, cutting rollers on said carriage, said table being movable upwardly to engage said knife with said cutting rollers during the return movement of said carriage to sever said advanced web portion from said source, and a horizontally movable plate movable to a position beneath said knife to rigidly support said knife during coaction of said knife with said cutting rollers.

3,016,780
CANT ACCUMULATOR FOR PAPER CONVERTING MACHINES
Donald W. Mosen, Anaheim, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Nov. 28, 1958, Ser. No. 776,948
5 Claims. (Cl. 83—417)

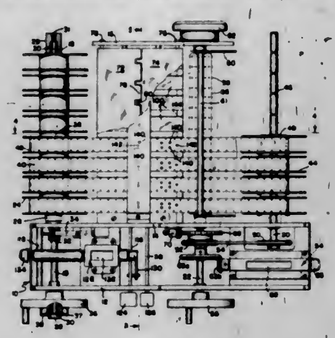


1. For combination with a rewinder for producing paper cants, a cant saw, means for conveying a succession of cants between the rewinder and the saw, a movable accumulator having a plurality of spaced apart cant supporting means, each being disposable in a position to receive a cant on the conveying means, cant detecting means between the cant saw and said position, means automatically controlled by said cant detecting means to eject cants from said position to said saw when said detecting means indicates the absence of a cant, and means automatically operable to move the cant accumulator in one direction with a cant on a cant supporting means to store cants on said accumulator when said detecting means indicates the presence of a cant.

3,016,781
CODE PUNCHING DEVICE
Lowell D. Beaverson, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed May 31, 1960, Ser. No. 32,731
9 Claims. (Cl. 83—633)

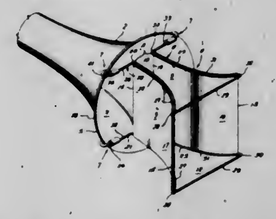
1. A coding device comprising means for holding a record medium that is to have formed thereon a desired code, a pair of flat rocker plates mounted for pivotal movement about their opposite edges and having substantially parallel adjacent edges, a first coding means actuatable by one of said plates for forming one portion of said code on the record medium, a second coding means actuatable by the other of said plates for forming a sec-

ond portion of said code on the record medium, and a pair of pivotal levers each engageable with a rocker plate



for causing pivoting thereof and consequent actuation of the particular coding means associated therewith.

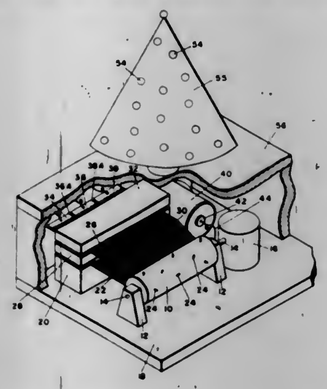
3,016,782
DEVICE FOR DEFLECTING THE TONE OF A MUSICAL INSTRUMENT
William E. Laas, 2801 Lake Shore Drive, Michigan City, Ind.
Filed Mar. 30, 1959, Ser. No. 802,839
8 Claims. (Cl. 84—453)



3. A device for increasing the effective area of distribution of tone from the bell of a musical instrument comprising, bracket means, means for holding said bracket means on the bell of an instrument, said bracket means defining at its inner end adjacent the bell of the instrument a throat, said bracket means flaring outwardly and toward its outer end to define the general outline of a bell, baffle means supported on said bracket means whereby tone from the instrument bell may be distributed laterally of the instrument bell, and said baffle means comprising a pair of spaced apart continuous surfaces which extend from said inner end of said bracket means and are flared outwardly toward said outer end of said bracket means so as to direct tone laterally and forwardly from the bell of the instrument.

3,016,783
MECHANICAL AUDIO AND VISUAL SIGNAL COORDINATING DEVICE
William A. Karraker, Downers Grove, Ill. (95th near Adams Road, Hinsdale, Ill.)
Filed June 20, 1958, Ser. No. 743,261
5 Claims. (Cl. 84—464)

1. A mechanical device adapted to coordinate the sounding of a musical note with an electrical signal comprising a rotatably mounted metal drum having radially positioned metal pins on the exterior thereof, means for rotating the drum, a first bank of reeds each reed being tuned to a single musical pitch and mounted to contact the pins at their tips, a second bank of metallic non-vibrating reeds, electrically insulated from the first bank,



positioned to briefly contact the pins at the instant that the respective first bank reeds are released by the pins.

3,016,784
SELF-THREADING SHEET METAL FASTENING DEVICE
Leslie Parkin, Bobbers Hill, and William Henry Brealey, Sandiacre, England, assignors to United-Carr Fastener Corporation, New Castle, Del., a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,285
Claims priority, application Great Britain May 23, 1958
1 Claim. (Cl. 85—47)

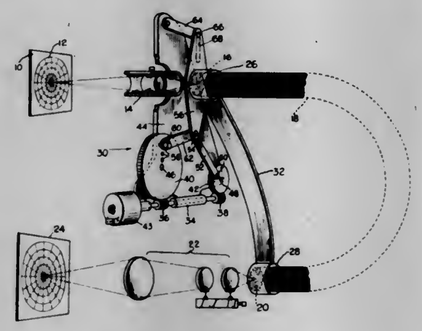


A rotatable self-threading fastening device for securing two members to one another comprising a relatively rigid sheet metal cylindrical body having a series of separate teeth projecting from its external surface, the said teeth being formed so as to lie on a helical path about the longitudinal axis of the cylindrical body and at least the first tooth being chisel-shaped at its leading edge to start self-threading of the fastening device into engagement with a member to be fastened, said teeth being of greater circumferential length than radial depth, and sheared from the body and bent outwardly about the base of the teeth.

3,016,785
METHOD AND MEANS FOR TRANSMITTING IMAGES THROUGH A BUNDLE OF TRANSPARENT FIBERS
Narinder S. Kapany, Rochester, N.Y. (2126 Greenways Drive, Woodside, Calif.)
Filed May 20, 1957, Ser. No. 660,393
9 Claims. (Cl. 88—1)

1. In the art of transmitting an image of an object through a flexible bundle of transparent fibers and onto an image receiving surface, the steps of producing continuous relative irregular and random motion having components lying in at least two different directions, in the same plane and an amplitude of approximately four diameters of an individual fiber between one end surface of

the bundle and the image forming light rays emanating from the object and entering said end surface whereby the faces of each of said fibers at said one end surface scan, respectively, the elemental areas positioned in a plane of origin of said image forming light rays, and simultaneously



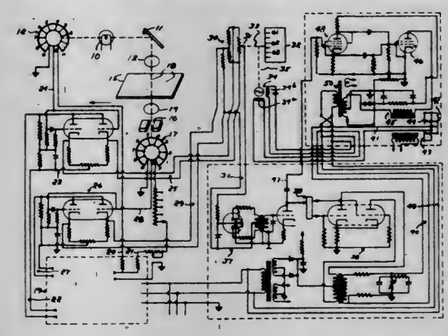
producing the same relative motion between the other end surface of the bundle and the image forming light rays emanating from said other end surface of the bundle whereby the pattern effect produced by the fibers in the transmitted image is substantially eliminated.

3,016,786
RANGE FINDER FOR PHOTOGRAPHIC CAMERAS
Friedrich Papke, Braunschweig-Gliesmarode, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed Nov. 23, 1959, Ser. No. 854,934
Claims priority, application Germany Nov. 22, 1958
11 Claims. (Cl. 88—2.4)



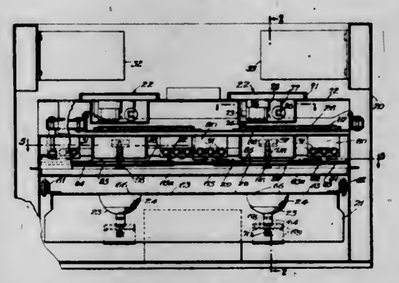
1. A measuring finder for photographic cameras comprising, in combination, a viewfinder providing a direct image of the object and including a semi-light permeable mirror and a frame arranged in the focal plane of said mirror for reflection thereby at substantially infinity; a telescope adapted to provide a real measuring image from light rays entering the telescope along an object viewing axis spaced laterally along the base of the measuring finder from the optical axis of said viewfinder, and including an objective; a reflecting mirror arranged substantially on the optical axis of the viewfinder in the focal plane of said semi-light permeable mirror and facing the latter, and inclined relatively to said optical axis; said reflecting mirrow being imaged at substantially infinity by said semi-light permeable mirror; and ray directing means operatively associated with said telescope and adjustable to direct the measuring image rays incident through said objective to said reflecting mirror; whereby, upon adjustment of said ray directing means, the two images respectively provided by said viewfinder and said telescope may be brought into substantial coincidence in the focal plane of said semi-light permeable mirror.

3,016,787
AUTOMATIC LOCK FOR THE ROTATABLE MEMBERS OF INSTRUMENTS FOR RECORDING CHANGES IN SIGNAL INTENSITIES
Richard K. Brehm, Lexington, Mass., assignor to Jarrell-Ash Company, Newtonville, Mass., a corporation of Massachusetts
Filed June 22, 1960, Ser. No. 38,076
8 Claims. (Cl. 88—14)



1. In a microphotometer of the type in which light from a projector is beamed through an exit slit on a photosensitive detector and in which a transparency having spectral lines is advanced through the projector with its lines in parallel with said slit to affect the output of said detector, the combination of a scale actuated in response to and in proportion to said detector output, a control circuit, means for effecting reversal in phase in said control circuit when the direction of light intensity on said detector passes through a minimum, a scale lock including a relay and a control element operatively connected to said control circuit and to said relay, said control element and relay being operable on said phase change to stop movement of said scale.

3,016,788
METHODS AND APPARATUS FOR COLOR GRADING OF FRUITS AND VEGETABLES
Traver J. Smith, Santa Clara County, Calif., assignor, by mesne assignments, of one-half to Genevieve I. Magnuson and one-half to Genevieve I. Magnuson, Robert Magnuson, and Lois J. Fox, as trustees
Filed May 24, 1952, Ser. No. 289,717
16 Claims. (Cl. 88—14)



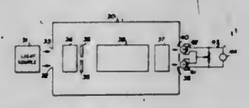
1. In a color grading instrument, a casing, an article supporting said casing for holding an article to be graded, phototube means mounted in said casing for viewing an article on said support, a source of light, light control means between said source of light and said article support for controlling illumination of said article and in-

cluding means intercepting direct rays of light, and light filter means disposed in the path of light from said source to said phototube means for defining the character of light reflected from said article to said phototube means, said light source being of generally circular shape, and said light control means including a tubular well surrounded by said light source and defining a part of the viewing path from the article to the phototube means.

3,016,789
POLARIMETRIC APPARATUS

Albert S. Keston, % New York University Medical School, 477 1st Ave., New York, N.Y.

Original application Aug. 6, 1951, Ser. No. 240,598, now Patent No. 2,829,555, dated Apr. 8, 1958. Divided and this application Jan. 3, 1958, Ser. No. 710,833
5 Claims. (Cl. 88—14)

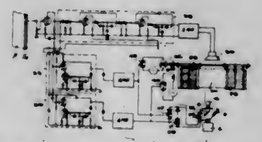


1. A polarimeter of the type that measures the rotation of the plane of polarization of a beam of plane polarized light produced by a substance through which the beam passes, comprising in combination, a source of light, light polarizer means for polarizing light from said source to form two beams of plane polarized light having polarization plane that are offset in opposite directions by small predetermined angles from an intermediate reference plane, a polarization analyzer mounted in the paths of said two beams of plane polarized light and having a polarizing axis substantially perpendicular to said reference plane, a sample chamber adapted to contain said substance located between said polarizer means and said analyzer, said polarimeter having no movable beam-rotating parts, whereby the intensities of the beams passing through said analyzer at the time of measurement differ as a function of, and only as a function of, the rotation of said beams by said substance in said chamber, and photometric means to indicate the extent of rotation of the planes of said beams by said substance, said photometric means comprising a pair of photocells, each of which is responsive to the portion of one of said two beams transmitted through said analyzer, said photocells being incorporated in an electrical circuit for measuring the ratio of the intensities of the portions of the two beams transmitted through said analyzer.

3,016,790
MOVIE SYSTEM ADAPTED FOR SIMULTANEOUSLY ENLARGING AND REDUCING A PROJECTED IMAGE AND THE AREA OF AN ASSOCIATED SCREEN

Yoshiro Nakamatsu, 2–62 Shimouma-cho, Setagay-ku, Tokyo, Japan

Filed Aug. 21, 1957, Ser. No. 679,503
Claims priority, application Japan Aug. 22, 1956
3 Claims. (Cl. 88—16)

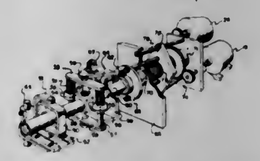


1. A motion picture projecting system comprising a projector including an anamorphic and a further lens and a master lens in operative association therewith, said projector being adapted to change magnification according to signal marks provided on a film having parts taken by an anamorphic lens system and parts taken by a second type of lens system, and a screen adapted to change size according to the size of the image projected, an attachment detachably fixed to said projector and comprising a movable mirror and a fixed mirror and a fixed anamorphic lens for the magnification of the image to be projected, the movable mirror being located between the anamorphic lens and the master lens of said projector, driving means for moving said mirror, relay means responsive to the signal marks on the film to operate said driving means and cause the mirror to take positions to direct light rays from the master lens to the anamorphic lens and further lens selectively to change said magnification, the screen including a fixed central portion for one size of the image and additional side portions constituted by a plurality of rectangular plates of relatively small width which have reflective and black surfaces and are rotatable on respective longitudinal axes thereby to control the area of the screen in cooperation with the fixed central portion, and a driving means responsive to the signal marks on the film to control rotation of said plates.

3,016,791
TARGET INDICATING SYSTEMS

Charles L. Van Inwagen, Jr., Rutherford, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 22, 1953, Ser. No. 382,507
7 Claims. (Cl. 88—24)

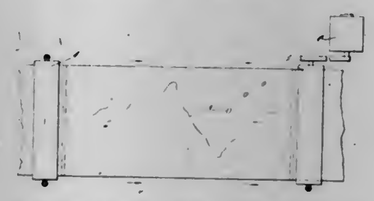


1. A light beam projector for portraying a radial and azimuthal presentation comprising, a collimating barrel, a light source in said barrel, a universal mount for said barrel to permit the pivoting of said barrel, a universal bearing means surrounding said barrel at a point remote from said universal mount, said bearing means being circularly and radially movable in a plane perpendicular to the direction of said universal mount from said bearing means.

3,016,792
METHOD OF PRODUCING A VISUAL MUSICAL RECORD

Kenneth Payne, 22 Addiscombe Grove, Croydon, England

Filed Apr. 23, 1956, Ser. No. 580,048
1 Claim. (Cl. 88—24)



The method of producing a displayable visual record of a musical script comprising depicting a musical composition in script form on a band of at least several inches in width with the script being depicted as a continuous visual image along such band, passing the band longitudinally of its axis in front of and past the optical axis of a constant speed cine camera having film therein, with the band moving transversely of such optical axis while playing the musical composition so that the script on the band is photographed on the film in the camera, and controlling the speed of movement of the band in accordance with the variations in tempo of the musical composition being played so that at any moment the portion of the script on the band that is in front of the camera is in correspondence with that same portion of the musical composition as it is being played whereby the film in the camera provides a continuous visual record of a musical script that coincides with the tempo of the musical composition that has been played.

3,016,793
OPTICAL PROJECTORS

John T. Armbruster, Niagara Falls, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Feb. 3, 1959, Ser. No. 790,928
3 Claims. (Cl. 88—24)

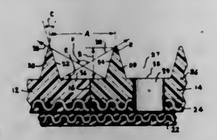


1. In an optical projector, a base adapted to support the projector in the position to which the base is tilted comprising a frame-work, a pair of contacts beneath said frame-work about which said frame-work is adapted to tilt, a leg pivotally carried on a transverse axis by the forward portion of said base for supporting the forward portion of said base at increasingly higher elevations relative to said pair of contacts as said leg is swung about its transverse pivot toward vertical position, tensioned coil spring means reacting against said base and biasing said leg toward its vertical position, the amount of tension in said coil spring means substantially counterbalancing the weight of said forward portion of the projector, and roller anti-friction means on the free end of said leg for facilitating the rotating action of said leg under spring tension to change the elevation of the forward portion of said base relative to said pair of contacts.

3,016,794
IMPROVEMENTS IN PROJECTION SCREENS

Harry D. Crandon, Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Filed Mar. 8, 1957. Ser. No. 644,949
2 Claims. (Cl. 88—28.90)

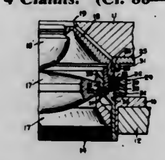


1. A flexible projection screen adapted to be held in a tensioned position within an outer peripheral supporting frame, said screen comprising a plurality of elongated flexible vertically extending strips of a vinyl thermoplastic sheet material, the front surface of each strip of sheet material being white and of a highly reflective light diffusing character, said strips being arranged in side-by-side relation and having the adjacent side edges of adjacent strips disposed in abutting relation to each other, a very large number of relatively small evenly spaced openings extending through each of said strips and uniformly dispersed relative to adjacent openings throughout the entire area of each of said strips for the transmission of sound therethrough, a narrow elongated flexible non-stretchable ribbon of a vinyl thermoplastic material having a dull black front surface fixedly secured to each pair of adjacent strips on the rear surface thereof by a relatively high molecular weight air-dried polyvinyl resin cement therebetween, and in such a manner as to overlie each pair of abutting edge portions and form a butt joint which extends throughout the entire length of the adjacent strips, each of said strips of vinyl sheet material having an embossed front surface embodying vertically disposed straight parallel outwardly projecting V-shaped ribs, each pair of adjacent ribs being spaced apart a mean distance ranging between approximately .06 and .07 of an inch and providing therebetween relatively flat vertically disposed light-reflecting surfaces, each V-shaped rib extending outwardly from the front surface of said sheet material a distance ranging from between approximately .025 and .031 of an inch, and each rib being defined by a pair of surfaces which are inclined to each other so as to include an acute angle of relatively small size therebetween, the ribs of adjacent strips being parallel to each other and the space between the ribs on opposite sides of each butt joint being equal to the space between any pair of adjacent ribs on said strips.

3.016,795
SUBSTAGE LIGHTING MEANS FOR MICROSCOPES

Charles J. De Grave, Jr., Chili, and Harold W. Straat, Irondequoit, N.Y., assignors to Bausch & Lomb Incorporated, a corporation of New York

Filed Dec. 28, 1959, Ser. No. 862,269
4 Claims. (Cl. 88—40)



1. Substage light condenser mechanism for a microscope having a stage and a movable substage aligned therewith comprising the combination of a lower lens cell supported by the substage in substantial optical alignment with an objective on said microscope, an upper lens cell axially slidably mounted on the lower lens cell for movement between terminal upper and lower operative positions which correspond respectively to the positions occupied in the focusing type of lighting and the Abbe type of lighting, means including a separate exterior coupling member having coupling elements thereon which are engageable with corresponding coupling elements formed on the upper and lower lens cells respectively to connect alternatively either the upper lens cell and said stage or the upper lens cell and the lower lens cell whereby said mechanism is converted from an Abbe type to a variable focusing type of condenser mechanism.

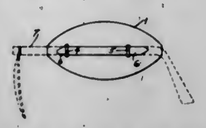
3,016,796
ADJUSTABLE FLOATER FOR SPECTACLES

Kenneth W. Boothe, Montgomery, Ala.
(P.O. Box 567, Craig Air Force Base, Selma, Ala.)

Filed Oct. 20, 1960. Ser. No. 63,757
4 Claims. (Cl. 88—41)

4. An adjustable floater for spectacles comprising, a body made of floatable material, said body being of a

size and shape to fit removably on the outside of an ear bar of a spectacle frame, two slots, said slots being formed through said body and spaced apart, two rubber bands, said bands being inserted through said slots and being of sufficient length to have an end of each fit re-



movably around an ear bar of a spectacle frame, a bar made of stiff material, said bar being of a size to be inserted through the outer end portions of the said rubber bands when adjacent the outer face of said body when it is in position for use.

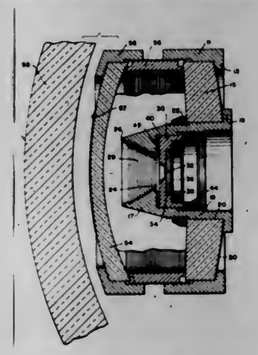
3,016,797
EYE PROTECTIVE SPECTACLE TYPE GOGGLE
Philip J. Liautaud, Chicago, Ill., assignor to Fendall Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 20, 1959, Ser. No. 787,898
4 Claims. (Cl. 88—43)



1. A spectacle type goggle comprising a frame front including lens frames and a primary bridge member extending between and interconnecting said lens frames, an auxiliary combination nose bridge and nose pad member having nose pads set in a predetermined and spaced-apart permanently fixed position, said auxiliary combination nose bridge and nose pad member being detachably latchable to said primary bridge member, latching means formed in one of said bridge members and cooperating with the other of said bridge members for detachably latching said auxiliary combination nose bridge and nose pad member upon the said primary nose bridge member, the said auxiliary combination nose bridge and nose pad member including a nose bridge portion having a transversely extending latching groove formed therein for the slidable detachable reception of said primary nose bridge member, the said auxiliary combination nose bridge and nose pad member having a latching portion formed therein above the said transversely extending latching groove, and the said transversely extending latching groove being adapted to latchingly engage the upper horizontal edge portion of said primary nose bridge member.

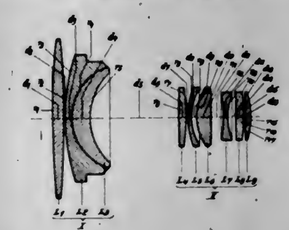
3,016,798
COMPACT ACHROMATIC TELESCOPE LENS
Robert E. Lawrence, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 9, 1958, Ser. No. 766,365
3 Claims. (Cl. 88—57)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A compact achromatic telescope lens system, comprising a front lens element and a rear lens element, a spacer member between said front and rear lens elements, a front lens holder for edge mounting said front lens element in place on the front side of said spacer member, a rear lens holder for edge mounting said rear lens element in place on the rear side of said spacer member, the rear side of said rear lens element and the central portion of the front side of said front lens element having mirrored surfaces facing the lens elements and forming primary and secondary mirrors respectively, said rear lens element having a large central aperture therethrough, a reticle shade mounted in said aperture in the rear lens, the forward portion of said reticle shade extending into the space between said front and rear lens elements, a reticle holder mounted in said reticle shade, a reticle mounted in said reticle holder, the portion of said front lens element not having a mirrored surface being operable to allow light rays to pass therethrough to said rear lens element, the primary mirror on the rear surface of said rear lens element being operable to reflect said light rays to



the secondary mirror on the central portion of said front lens element, said secondary mirror being operable to reflect said light rays to the reticle, said reticle being substantially in the focal plane of the lens system formed by said front and rear lens elements and mirrors and located wholly within the space between said lens elements, the forward portion of said reticle shade together with the central mirrored portion on said front lens element forming a light shade which is operable to prevent light other than that reflected by the primary and secondary mirrors from impinging on said reticle.

3,016,799
WIDE-ANGLE PHOTOGRAPHIC OR CINEMATOGRAPHIC OBJECTIVE
Günter Klemt and Karl Macher, Kreuznach, Rhineland, Germany, assignors to Jos. Schneider & Co., Kreuznach, Rhineland, Germany, a company of Germany
Filed Aug. 19, 1959, Ser. No. 834,834
Claims priority, application Germany Sept. 23, 1958
3 Claims. (Cl. 88—57)



1. A wide angle objective system consisting of a negatively refracting front component and a positively refracting rear component separated from said front component by a large air space ranging between 40% and 50% of the total physical length of the system, said front component consisting of two air-spaced members of alternate refractivity including a single positive front lens and a meniscus-shaped doublet following said front lens, said doublet being composed of a negative front meniscus of higher refractive index and a positive rear meniscus of lower refractive index having a forwardly convex cemented surface therebetween, said rear component consisting of at least five air-spaced members including a positive first member closest to said air space, a negative second member following said first member, and a positive third member following said second member, said second and third members being separated from each other by an air space bounded by two surfaces which are convex toward said front component, said surfaces being separated by an axial distance greater than 6% of the overall focal length of the system, said third member having a thickness less than 20% of said overall focal length, the members of said rear component further including a positive penultimate lens member and a positive final lens member having radii of curvature alternating in sign, all of said radii having absolute values greater than said overall focal length.

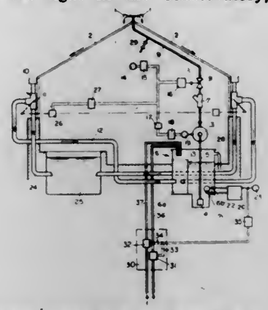
3,016,800
WEDGE FOR A DOUBLE BEAM SPECTROPHOTOMETER
William A. Pliskin, Poughkeepsie, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed July 3, 1958, Ser. No. 746,530
6 Claims. (Cl. 88—61)



1. In combination with a double beam spectrophotometer having a window with a graduated opening movably positioned in the path of one beam thereof for limiting the passage to a predetermined percentage of the energy in said beam depending upon the relative positions of said opening and said beam, said window opening having dimensions such that the maximum and minimum percentages of energy passed thereby are substantially one hundred and zero percent respectively, the improvement comprising first blocking means in said window for causing a first linear change in the percentage of energy passed through said opening over a part of the movement of the window, the maximum percentage of energy of said first linear change being different in relative magnitude from the ratio of said part to said full movement of the window in order to cause an amplified output, second blocking means for causing a second linear change in the percentage of energy passed through said opening over the remaining part of said full movement of the window, said second linear percentage change being complimentary to said first linear percentage change so that the sum of said first and second percentage changes covers the entire percentage change from substantially one hundred percent to zero.

3,016,801
DEVICE CONTROLLING THE LIGHT PASSING THROUGH THE GLASS ROOF OF A CONSERVATORY
Kaspar Michel, Zug, Switzerland, assignor to Gebruder Gysi A.G., Baar, Switzerland
Filed Nov. 12, 1959, Ser. No. 852,328
3 Claims. (Cl. 88—61)

1. A device for controlling the amount of sunlight passing through the glass roof of a conservatory into the interior thereof, comprising at least one spray tube extending along the ridge of the roof, a gutter extending along the lower edge of the roof, piping connecting said gutter to said spray tube, a circulating pump connected in said piping for recycling water from said gutter to said spray tube, and a flow control valve in said piping for controlling the quantity of water which is recycled, in combination with light-sensitive means positioned in the interior of the conservatory responsive to the light therein and connected to said flow control valve for automatically regulating said flow control valve in accordance with the light in the conservatory, said light-



sensitive means comprising a photoelectric cell and an amplifier having an input and an output, the input of said amplifier being connected to said photoelectric cell and the output of said amplifier being operatively connected to said flow control valve.

3,016,802
TRIPOD GUN RESTS
Anton Grunenberg, 207 Duncan Ave., Oak Hill, W. Va.
Filed Aug. 1, 1958, Ser. No. 752,649
3 Claims. (Cl. 89—40)

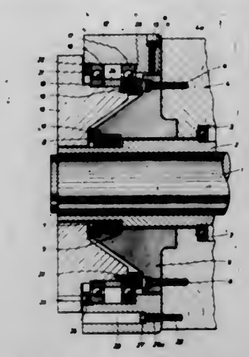


1. A gun rest comprising a tripod having legs, a block on which the upper ends of the legs are pivoted, said block having flat upper and lower ends, a U-shaped fork having a bight portion and upstanding legs, a downwardly extending stem fixed centrally to said bight portion, a turntable resting rotatably upon the upper end of the block, said turntable having a central opening passing said stem, an annular upstanding rib on the turntable having an upper surface upon which the bight portion of the fork rests, said block having an axial bore opening to its upper end and a counterbore opening to its lower end into which the bore opens, said counterbore having an upper end, said stem extending downwardly through the bore and the counterbore and being journaled through the bore and through the opening of the turntable, a washer circumposed on the stem and bearing against the lower end of the block, a nut threaded on the stem against the underside of the washer, and a helical spring circumposed on the stem and compressed between the washer and the upper end of the counterbore.

3,016,803
MOUNTING OF FACE PLATES FOR BORING AND MILLING MACHINES
Willi Schraub, Beckrath, Wickrath-Niers, Germany, assignor to Scharmann & Co. G.m.b.H., Rheydt, Rhineland, Germany
Filed Mar. 9, 1960, Ser. No. 13,889
Claims priority, application Germany Mar. 17, 1959
5 Claims. (Cl. 90—11)

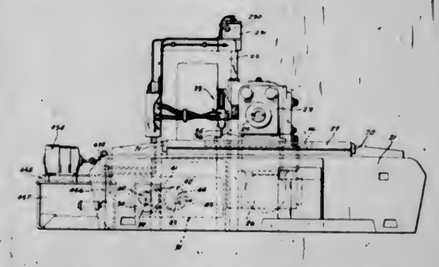
1. In combination for use in connection with boring and milling machines: a headstock, a boring spindle ro-

tatably and axially displaceably mounted in said headstock, supporting means connected to said headstock, a face plate, and means rotatably supporting said face plate



and being radially adjustably supported by said supporting means, said boring spindle extending through said supporting means and being additionally journalled therein.

3,016,804
PROGRAM CONTROL SYSTEM
Frank Zanki and John G. Osburn, Milwaukee, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Sept. 4, 1956, Ser. No. 607,948
17 Claims. (Cl. 90—15)



1. In a control system for a machine tool; a plurality of members carried for selective movement along a plurality of paths, separate transmission means associated with said movable members and being respectively operative to move the said member respectively associated with each of them, a source of electrical energy, a programming control system connected to be energized by said source and comprising an indexable stepping switch connected to operate a different preselected transmission means each time it is advanced to a succeeding station, a bank of separate electrically interconnected selector switches adapted to be preset for determining the selected sequence of operation of said transmission means in response to said stepping switch, separate holding circuits including one pair of normally closed circuit interrupters respectively positioned in proximity to each of said members, one of said holding circuits being connectable to be energized by said source upon advancement of said stepping switch to a next succeeding station, a coil connected to be energized by energization of one of said holding circuits, a resettable resiliently operable ratchet mechanism connected to be reset by energization of said coil, said ratchet mechanism being operative after being reset to effect a resiliently biased indexing movement of said stepping switch to its next station upon deenergization of said coil, and selectively positionable function change dogs respectively associated with said members in such a manner that one or another of said dogs is operative during movement of the associated one of said members to actuate one or another of said interrupters, thereby deenergizing said coil to permit resiliently biased advancement of said stepping switch to its next station whereby one member movement is terminated and another member movement is initiated in accordance with the sequence of operation of said transmission means.

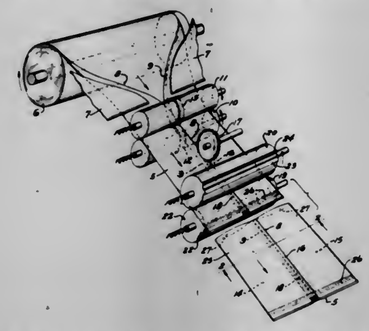
3,016,805
CLAMPING ARRANGEMENT
Kurt Kebde, Gesundheitstr. 22, Remscheid, Germany
Filed June 16, 1961, Ser. No. 117,748
Claims priority, application Germany June 20, 1960
17 Claims. (Cl. 269—157)



1. An arrangement for clamping workpieces in machine tools and the like, comprising in combination, main supporting means; elongated carrier means secured to and projecting from said supporting means and having an externally threaded portion; a clamping member having an end portion adapted to engage a workpiece placed onto said supporting means, said clamping member mounted on said carrier means so as to be movable longitudinally of said carrier means toward and away from said supporting means as well as in a plane substantially perpendicular to the longitudinal extension of said carrier means; means for permanently biasing said clamping member in the longitudinal direction of said carrier means and away from said supporting means so as to disengage the clamping member from the workpiece; operating means comprising an internally threaded rotary member meshing with said carrier means for moving said clamping member toward the supporting means and into engagement with the workpiece, and for permitting said biasing means to move the clamping member away from the workpiece; and motion transmitting means for moving the clamping member in said plane in response to rotation of said rotary member upon disengagement of the clamping member from the workpiece under the action of said biasing means.

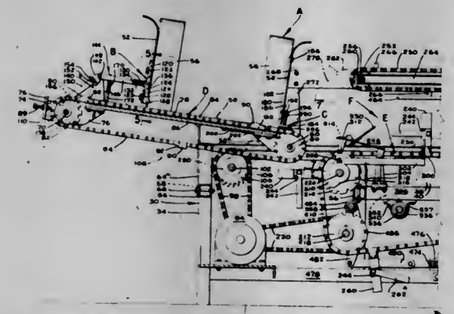
3,016,806
ART OF PRODUCING MULTIPLE COMPARTMENT BAGS
Walter A. Schoen and George J. Herrick, Milwaukee, Wis., assignors to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 718,019
1 Claim. (Cl. 93—35)

The method of producing successive unitary multiple compartment bags, which comprises, inwardly folding the opposite sides of a longitudinally advancing flexible ribbon to provide overlapped edges extending throughout the ribbon length, attaching the overlapped advancing ribbon edges to each other and to the adjacent ribbon body along a single longitudinal seam to provide a three-ply seal while dividing the ribbon into segregated tubular compartments extending throughout the ribbon length, longitudinally medially perforating the longitudinal seam to provide a tear line for effecting subsequent separation of the sealed compartments, and finally completing the successive multiple compartment bags by transversely sealing the folded longitudinally seamed and perforated rib-



bon at spaced intervals and by severing the latter into bag lengths adjacent to but beyond each transverse seal.

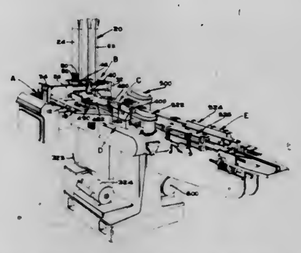
3,016,807
CARTON HANDLING MACHINE
Charles E. Kerr, Hoopeston, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed July 23, 1958, Ser. No. 750,420
9 Claims. (Cl. 93—49)



7. In a machine for erecting a carton having two end walls, two side walls, and a closure flap hinged along a fold line to each of said walls, a conveyor for advancing the carton in a direction parallel to said side walls with said flaps projecting laterally with respect to the direction of carton movement, rotary means mounted adjacent said conveyor and including shoe means for spreading apart the two opposed flaps connected to said side walls far enough to permit inward folding of the flaps connected to said end walls between the spread apart flaps, means mounted adjacent the conveyor for folding inward the flaps connected to said end walls, and means connected to said conveyor for operation in timed relation to movement of the carton thereon for actuating said spreading means prior to engagement of said folding means with said end wall flaps, said shoe means moving in the same direction as, but faster than, said conveyor.

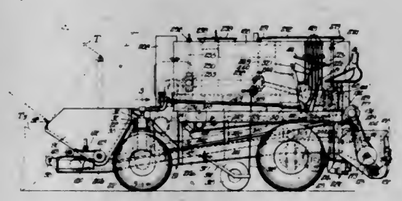
3,016,808
CARTON FEEDING AND ERECTING MECHANISM
Robert K. Galloway, Hoopeston, Ill., assignor to FMC Corporation, a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,077
7 Claims. (Cl. 93—53)

1. In a carton feeding and erecting mechanism, a first conveyor, a sprocket adjacent the forward end of said first conveyor about which said conveyor is trained, means for depositing onto said first conveyor flat folded cartons each including a top panel having end flaps projecting therefrom and a rear panel hinged to the top panel, a lug on said first conveyor engageable with the rear edge of a carton on the first conveyor, a second conveyor trained around forward and rear sprockets and extending forward from said first conveyor, the rear sprocket of said second conveyor being adjacent the forward sprocket of said first conveyor, front and rear carton engaging blocks on said second conveyor adapted to engage the front and rear panels of a carton and square the carton therebetween, means adjacent opposite sides of said conveyors for supporting a carton by engaging



the outwardly projecting end flaps attached to the top panel of the carton, and a carton erecting blade mounted adjacent said second conveyor for orbital translatory movement toward and away from a carton so supported and adapted to move the bottom panel of the carton downward away from the top panel as the rear panel is bent downwardly by the lugs on said first conveyor as they sweep around the forward sprocket of said first conveyor to bring the lower rear corner of said carton into position to be engaged by the rear carton squaring block sweeping upwardly around the rear sprocket of said second conveyor, said carton being confined between said front and rear carton engaging blocks on said second conveyor in its fully erected and squared condition when said rear block reaches its fully erect vertical position.

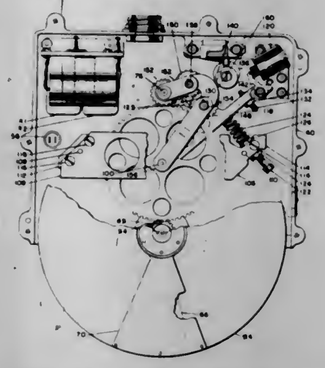
3,016,809
PAVING MACHINE
Richard L. McNeill, E. 9th St., Kewanee, Ill.
Filed Nov. 29, 1956, Ser. No. 625,085
6 Claims. (Cl. 94—46)



1. In a self-propelled paving machine for simultaneously and continuously laying asphalt and aggregate, the combination of a main frame comprising laterally spaced side sills, front steering wheels and rear driving wheels supporting said frame, a front trough-shaped receiving hopper extending transversely of said main frame in front of said front steering wheels and adapted to receive aggregate from a rear dumping supply truck traveling forwardly in front of said receiving hopper, a rear trough-shaped spreading hopper extending transversely of said

main frame in rear of said rear driving wheels and adapted to spread aggregate upon the road surface in rear of said rear driving wheels, longitudinally traveling belt conveyor means disposed substantially centrally of the machine between said side sills of the main frame and between the pairs of front and rear wheels for conveying the aggregate rearwardly from said receiving hopper to said spreading hopper, a discharge opening in the bottom of said trough-shaped front hopper for discharging aggregate upon said belt conveyor means, a front roller for the front end of said belt conveyor means located under said front hopper and a rear roller for the rear end of said belt conveyor means located above said rear hopper, means for driving one of said rollers, an asphalt supply tank supported to extend longitudinally of said main frame substantially midway of the sides thereof and overlying said belt conveyor means in immediate vertical proximity thereto, means for heating the asphalt in said tank, spray nozzles disposed transversely of said frame between said rear driving wheels and said rear spreading hopper operative to receive the heated asphalt from said tank and to spray it upon the road surface in rear of said rear wheels and immediately in front of the line of spreading of the aggregate from said rear spreading hopper, the rear wall of said trough-shaped receiving hopper overlying the front portions of said front steering wheels and said asphalt supply tank having its front end disposed substantially in the transverse vertical plane of the rear portions of said front wheels in such close proximity to said receiving hopper as to preclude the interposition of a longitudinally extending internal combustion engine therebetween, a longitudinally extending laterally disposed internal combustion engine mounted on said frame between one side of said tank and the adjacent side of said frame, an operator's seat mounted on said frame between the other side of said tank and the other side of said frame, a rear axle housing extending axially between said rear driving wheels, a differential housing embodied in said rear axle housing and enclosing a differential mechanism operative to drive said rear wheels differentially, a longitudinally extending pinion shaft entering said differential housing from the rear side thereof, a crosswise drive shaft extending transversely of said frame in rear of said rear axle housing, beveled gearing connecting said crosswise drive shaft with said longitudinally extending pinion shaft, selective speed transmission mechanism for transmitting a selective speed drive from said engine to said crosswise drive shaft, means operable from said operator's seat for controlling said selective speed transmission mechanism, an arched rockable axle mounting for said front steering wheels comprising a front overhead axle extending transversely above said front steering wheels, a longitudinal pivot at the center of said overhead axle and carried by said main frame to establish a transversely rockable mounting of said axle on said frame, vertical kingpins journaled for steering rotation in the ends of said axle, fork arms extending downwardly from said kingpins carrying spindles on which said steering wheels are rotatably mounted, said arched axle mounting defining an open vertical clearance space extending downwardly from the underside of said overhead axle to the ground between said steering wheels through which the front portion of said main frame and the front portion of said conveyor belt extend at a very low level, whereby said front receiving hopper is of trough-shaped formation and is disposed at a relatively low level for accommodating dumping trucks of low dumping height, while still having the front end of said conveyor belt pass beneath said discharge opening in the bottom of said receiving hopper for gravitational discharge of aggregate from said hopper to said conveyor belt means, and control means operative from the operator's position for controlling the rate of discharge of the asphalt and of the aggregate upon the road surface.

3,016,810
ROTARY CAMERA SHUTTER
Ronald Ernest N. Oxspring, Los Angeles, and Philip Rosenblum, Sierra Madre, Calif., assignors to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed Oct. 25, 1957, Ser. No. 692,444
11 Claims. (Cl. 95—10)



1. Shutter mechanism, comprising: an opaque shutter member having a transmissive area therein; means for continually rotating said shutter member on an axis perpendicular to a plane including the transmissive area at a constant speed; an opaque cover member for covering the transmissive area and adapted to rotate freely with respect to said shutter member on the same axis; differential gearing driven by said rotating means and arranged in a configuration for rotating said cover member in synchronism with said shutter member, said differential gearing including a differential gear train arranged in a variable quadrilateral with a gear mounted at each corner, an input end gear of the train being adapted to be rotated at a constant speed and mounted in a plane for engaging means for driving said shutter member, and an output end gear of the train being mounted in a plane for engaging a gear connected to drive said cover member in synchronism with said shutter member, the quadrilateral having diagonal axes which can be compressed and expanded to further rotate the gear connected to drive said cover member an amount whereby the relative angular position of said cover member to said shutter member can be changed; and means for varying the configuration of the arrangement of said differential gearing for moving said cover member relative to said shutter member, to uncover at least a part of the transmissive area for a predetermined portion of at least one revolution.

3,016,811
AUTOMATIC EXPOSURE CONTROL FOR PHOTOGRAPHIC CAMERAS
John J. Bundschuh, Loren J. Craig, and William T. Hochreiter, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 23, 1959, Ser. No. 801,006
10 Claims. (Cl. 95—10)

1. In a camera having a lens system disposed along a lens axis for focusing an image of a viewed scene onto a photosensitive surface; a photoelectric cell disposed for illumination by light from said scene; a galvanometer having a movable coil connected to said cell and energized thereby to position said coil as a function of the intensity of said light; a pointer connected to said coil for movement therewith; and a manually movable camera actuating device; the combination comprising: a sensing member having a cam surface normally out of engagement with said pointer and adapted for differential movement into engagement with said pointer for sensing the position thereof; a linkage yieldably coupling said sensing member to said actuating device for moving said sensing member a first distance to engage said cam surface with said pointer in response to manual movement of said actuating member through a second and shorter distance; a pair of diaphragm vanes having respective apertures disposed in overlapping relation on said axis to form a composite exposure aperture, said vanes being adapted for opposed sliding movement to vary the size of said exposure aperture; and a respective pin-and-slot coupling between said sensing member and each of said vanes for moving each vane a third distance, greater than said second distance, in response to said movement of the sensing member, for determining the size of said exposure aperture as a function of said intensity.

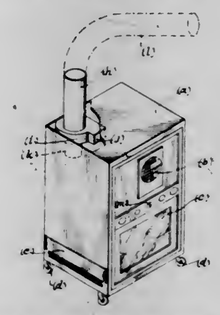


3,016,812
MOTION ANALYZER
Robert R. Chatlain, 140 Eudora St., Denver, Colo., assignor of fifty percent to Jay E. Sullivan, Denver, Colo.
Filed Feb. 3, 1955, Ser. No. 485,956
22 Claims. (Cl. 95—11)



1. In motion analyzing apparatus for analyzing the successive movements of an object during a predetermined time interval, the combination with an electrical circuit having at least two light sources for projecting spaced beams of light across the path of movement and arranged to be interrupted by the movement, light sensitive means in the circuit for each beam and being responsive thereto along with photoflash means associated with each light source and light sensitive means for projecting the flash of light across the path of movement at the area of interruption of each beam substantially simultaneously with the interruption of the light beam, of a camera having a row of lens and shutter units for taking successive pictures, a common body for mounting said lens and shutter units at divergent angles facing the path of movement to traverse separate fields of movement of the object across the path, film guide means arranged in convergent parallel relation behind said lens and shutter units for reception of a length of film at the focal planes of said lens and shutter units, said camera having means for advancing a length of film into a stationary position on said film guide means for a time interval sufficient to provide for a number of different exposures on successive portions of said film, said lens shutter units being disposed in relation to the path of movement to selectively expose successive portions of said film corresponding to the interruption of each respective light sensitive means, and means associated with the electrical circuit for tripping said shutter units in succession and operating the photoflash means substantially simultaneously upon each interruption whereby the film is exposed to successive movements of the object upon successive interruptions of the light beams.

3,016,813
EXPLOSION PROOF CABINET
Jordan D. Frasier, 9115 S. Merrill, and Harry L. Hunter, 5800 Stony Island Ave., both of Chicago, Ill.
Filed Sept. 8, 1958, Ser. No. 759,598
4 Claims. (Cl. 98—1)

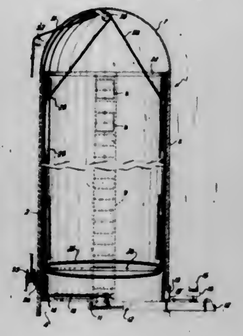


1. A cabinet for use in an explosive atmosphere and adapted to enclose electrically powered instruments likely to detonate an explosive atmosphere within the cabinet, said cabinet having an air intake pipe adapted to communicate with a non-explosive atmosphere and to receive and carry a predetermined air flow to the interior of the cabinet, blower means connected to said air intake pipe and establishing said predetermined air flow, air outlet means in said cabinet sized so the air flow to the interior of the cabinet through said air intake pipe results in higher air pressure inside the cabinet than outside the cabinet and thereby prevents the entrance of gases from said explosive atmosphere surrounding the cabinet, a pressure responsive electrical switch, said electrical switch mounted in the power line of any electrically powered instrument in said cabinet and set to open when the pressure in said cabinet drops to a predetermined level with respect to the pressure of the atmosphere outside the cabinet whereby the power to said electrical instruments is shut off before the entrance of gases from said explosive atmosphere.

3,016,814
SILO
Paul H. Beach, P.O. Box 63, Merrill, Mich.
Filed June 10, 1959, Ser. No. 819,303
7 Claims. (Cl. 99—235)

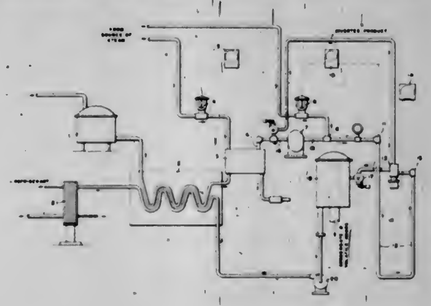
1. A container for the storage of forage crops comprising, a normally upright supporting structure providing a storage chamber therein, said chamber having an unloading zone adjacent the lower end thereof, means defining an access opening through said supporting structure adjacent the upper end of said chamber for loading the same, a flexible bag of substantially air impervious material secured adjacent its upper end to said support-

ing structure in substantially air tight relation thereto at a point above said access opening, said bag having a bottom wall normally resting on the upper surface of crops stored within said chamber, said bag bottom wall being slightly smaller in size than the interior cross section of said chamber and free to follow the upper surface of such stored crops as the same is lowered, said



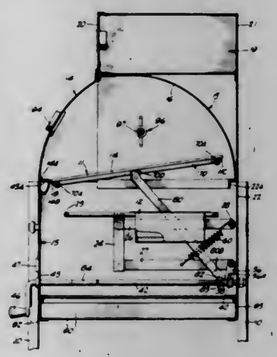
bag being of a length maintaining its said bottom wall out of said unloading zone when said bag is fully extended, and means for collapsing said bag upwardly above said access opening when it is desired to load said chamber, said bag thereby providing a movable top wall for said chamber and said supporting structure providing normally substantially air tight side and bottom walls therefor.

3,016,815
APPARATUS FOR HEAT-TREATING LIQUID FOOD STUFFS
Francis P. Hanrahan, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of Agriculture
Filed May 19, 1958, Ser. No. 736,413
3 Claims. (Cl. 99—251)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for heat treating liquid foodstuffs comprising a line for carrying a liquid foodstuff; a pump for moving said liquid foodstuff through said line under pressure; a steam injection heater connected to said line after said pump for instantaneously raising the entire body of liquid foodstuff to a predetermined treating temperature; an elongated holding tube for receiving heated liquid foodstuff, said holding tube having an input end thereof connected to said line after the steam injection heater and an outlet end thereof connected to a first valve comprising a flow diversion valve including two outlet ends for directing flow of liquid in one of two selected directions through one of the said two outlet ends of said flow diversion valve, said elongated holding tube being of such dimensions that the liquid foodstuff in passage between said inlet end and outlet end thereof will be maintained at the treating temperature for a predetermined time; vacuum cooling means for instantly cooling heated liquid foodstuff and removing part of the water content and volatile odor-producing materials from said liquid foodstuff; a second valve connecting said cooling means with one outlet end of said flow diversion valve, said second valve including means for maintaining a back pressure in the holding tube; liquid conveying means connecting the other outlet end of said flow diversion valve to the steam injection heater; and temperature-controlled means on the flow diversion valve for actuating said flow diversion valve to cause liquid foodstuff to flow from the holding tube to the steam injection heater if the temperature of the liquid foodstuff in the holding tube drops below a predetermined value.

3,016,816
OUTDOOR BARBECUE WITH SLANTING GRILL
Merle L. Persinger and Laverne O. Persinger, Burbank, Calif., assignors to Seidelhuber Steel Rolling Mill Corporation, a corporation of Washington
Filed Nov. 2, 1956, Ser. No. 620,020
2 Claims. (Cl. 99—339)

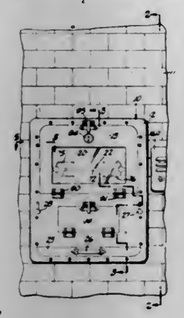


1. Barbecue equipment comprising, in combination, an adjustable open grill which is essentially planar, means for adjusting the angle of tilt of said grill, a fire box under said grill, separate means independently of the last mentioned means for adjusting the distance between the grill and fire box, and an arcuate cover overlying at least a portion of said grill, the lower edge of the grill, when tilted, being disposed outside of the vertical projection of the firebox so that drippings from said lower edge do not fall into said firebox.

3,016,817
INDOOR BARBECUE WITH SLANTING GRILL
Merle L. Persinger and Laverne O. Persinger, Burbank, Calif., assignors to Seidelhuber Steel Rolling Mill Corporation, a corporation of Washington
Filed Nov. 2, 1956, Ser. No. 620,097
4 Claims. (Cl. 99—339)

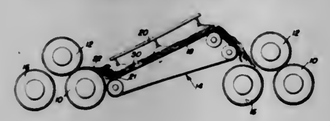
1. Barbecue equipment comprising, in combination, a generally rectangular casing for mounting in a recess

of a building structure, a flue extending upwardly from the top of said casing, a generally planar grill tiltably mounted in said casing, a fire box under said grill and in said casing, means on said casing for adjusting the tilt of said grill, means for adjusting the spacing between



said fire box and said grill without altering the tilt of the grill established by the last mentioned means, and a drip pan normally closing said casing but slidably mounted in said casing below said fire box for controlling the draft through said casing and flue and past the fire box.

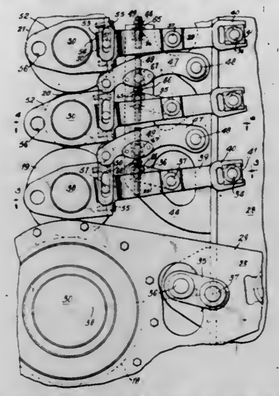
3,016,818
DISINTEGRATOR BAR AND METHOD OF DISINTEGRATING BAGASSE MATS
Ladislao Barreto (Martinez), Central Porfuerza, Calimete, Matanzas, Cuba
Filed Oct. 17, 1957, Ser. No. 690,692
7 Claims. (Cl. 100—75)



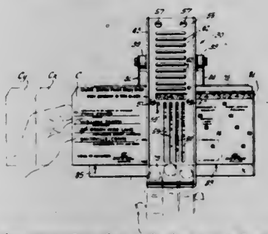
1. In a sugar cane mill having a pair of roller tandems for successively pressing sugar cane, means for conveying a bagasse mat of pressed cane fibers from the first tandem to the second tandem; a turn plate for removing the mat from the first tandem and discharging it to said conveying means, a disintegrator bar secured to said turn plate and extending across the line of travel of the mat thereon and extending upwardly from the surface of the turn plate and presenting an abrupt upper edge whereby to impose a resistance to travel of the mat over the turn plate.

3,016,819
SUPER CALENDER WITH CONSTANT NIP ALIGNMENT
John J. Kupka, Gladstone, N.J., assignor to McKiernan-Terry Corporation, Harrison, N.J., a corporation of New Jersey
Filed Feb. 25, 1960, Ser. No. 10,932
13 Claims. (Cl. 100—163)

3. A self aligning open front super calender comprising a stack of cooperative calender rolls, some at least mounted for pivoting movement about a supporting center for adjustment to compensate for varying roll diameter, roll lifting and lowering means for pivoting said rolls about said supporting centers for effecting vertical adjustment to compensate for varying roll diameters and means actuated by said roll lifting and lowering means for automatically shifting said rolls horizontally in proportion to the vertical extent of travel to keep said rolls substantially aligned on a common vertical nip line.



3,016,820
PRINTING VALUES AND IDENTIFYING MARKS ON DRAFTS
William F. Bernart, New Canaan, and Walter J. Hanson and Robert E. Schmeck, Old Greenwich, Conn., assignors to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Sept. 11, 1956, Ser. No. 609,158
5 Claims. (Cl. 101—94)

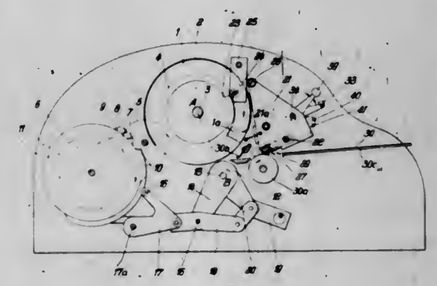


1. A printing member for printing postal money orders and the like comprising a carriage having spaced longitudinal rails; a plurality of elongate printing elements arranged side-by-side on said carriage and slidable on said rails, each of said elements carrying a row of digit types and being settable longitudinally to bring a selected digit of the row to a printing line at which the selected digits from all elements may be simultaneously printed to give a desired number; and a spot printing type at a predetermined location on each of said elements and settable therewith to a position which is different for each setting of the element whereby the spot type prints a spot whose position is indicative of and confirms the digit on the same element at the printing line.

3,016,821
MOISTENING METHOD AND APPARATUS FOR DUPLICATORS
Wilhelm Ritzerfeld, Schoriemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany
Filed Feb. 4, 1959, Ser. No. 791,190
Claims priority, application Germany Feb. 10, 1958
15 Claims. (Cl. 101—132.5)

14. In a duplicating machine for printing selected lines of selected columns, in combination, means for moisten-

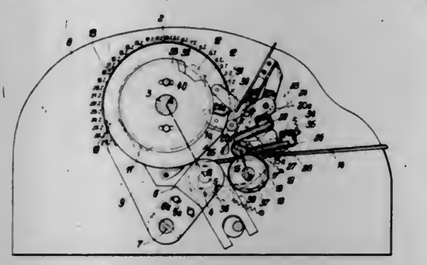
ing only parallel strip portions of a copy sheet corresponding to parallel column or line portions selected according to a first pattern; and means for pressing parallel line or column portions, respectively selected according to a second pattern on an inked master sheet and extending transverse to said moistened strip portions of the copy sheet against the copy sheet so that imprints appear on the copy sheet only where the selected line or column portions of the master sheet cross the moistened strip portions of the copy sheet corresponding to said selected column or line portions, respectively so that only selected lines of selected columns are printed on the copy sheet while no imprints appear on those portions of the copy sheet where the same is moistened without being pressed against the master sheet, and where the same is pressed against the master sheet but is not moistened.



15. A duplicating method for printing selected lines of selected columns comprising the steps of moistening parallel strip portions of a copy sheet corresponding to parallel column or line portions selected according to a first pattern; and pressing the copy sheet against parallel line or column portions, respectively, selected according to a second pattern on an inked master sheet while maintaining the copy sheet in a position in which the moistened strip portions of the copy sheet extend transverse to said line or column portions of the master sheet so that imprints appear on the copy sheet only where the selected line or column portions of the master sheet cross the moistened strip portions of the copy sheet corresponding to said selected column or line portions, respectively so that only selected lines of selected columns are printed on the copy sheet while no imprints appear on those portions of the copy sheet where the same is moistened without being pressed against the master sheet, and where the same is pressed against the master sheet but is not moistened.

3,016,822
MOISTENING DEVICE FOR DUPLICATING MACHINES
Wilhelm Ritzerfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany
Filed Sept. 17, 1959, Ser. No. 840,644
Claims priority, application Germany Sept. 23, 1958
4 Claims. (Cl. 101—132.5)

1. A rotary duplicating machine comprising, in combination, a printing roller; means for attaching a master sheet to said printing roller; a counterpressure roller movable to and from a duplicating position in close proximity to said printing roller for defining a printing line; control means for moving said counter pressure roller at selected intervals to and from said duplicating position; transporting roller means for transporting copy sheets to said printing line; moistening means for applying a liquid to said transporting roller means so that liquid is transferred to transported copy sheets; a moistening member movable to and from an operative moistening position for slidingly engaging the transported copy sheets and for applying a liquid to the copy sheets; and



actuating means for moving said moistening member to and from said moistening position and being operatively connected to said control means to operate said moistening member in timed relation with said counterpressure roller.

3,016,823
LITHOGRAPHIC PRINTING PLATE AND METHOD OF MAKING THE SAME
John F. Thurlow, Gorham, Maine, assignor to Fitchburg Paper Company, Fitchburg, Mass., a corporation of Massachusetts
No Drawing. Filed June 11, 1958, Ser. No. 741,222
17 Claims. (Cl. 101—149.2)

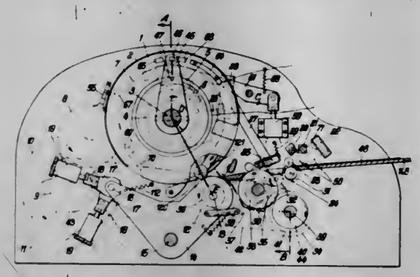
1. A lithographic printing plate comprising a base having on one surface a coating consisting essentially of a homogeneous mixture of from 10 to 60 parts by weight of an oleophilic, water-insoluble film former and from 40 to 90 parts, by weight, of a hydrophilic non-ionic wetting agent, the hydrophilic agent being soluble in an organic solvent in which said film former is soluble, said wetting agent and film former each being evenly distributed throughout the mass of said coating without being reacted together and imparting their hydrophilic and oleophilic characteristics to said coating effectively for lithographic printing.

3,016,824
LITHOGRAPHIC PRINTING FORM AND METHOD OF PREPARING THE SAME
Wilhelm Ritzerfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany
Filed Jan. 22, 1959, Ser. No. 788,383
Claims priority, application Germany Jan. 24, 1958
6 Claims. (Cl. 101—149.2)



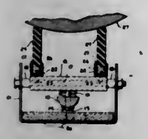
1. In a method of preparing lithographic printing forms, the steps of forming on a smooth face of a metal body a printing pattern consisting of a fat-accepting hydrophobic substance, leaving portions of said metal face free; and applying to said smooth face an aqueous liquid containing an organic hydrophilic colloid and a finely dispersed substance selected from the group consisting of the hydroxides of barium, strontium and calcium, whereby the hydrophilic properties of said free portions of said metallic printing face are improved.

3,016,825
COPY SHEET TRANSPORTING APPARATUS FOR PRINTING MACHINES
Wilhelm Ritzerfeld, Schorlemer Allee 14, Berlin-Dahlem, Germany, and Gerhard Ritzerfeld, Franzensbader Str. 21, Berlin-Grunewald, Germany
Filed July 21, 1959, Ser. No. 828,560
Claims priority, application Germany July 25, 1958
33 Claims. (Cl. 101—234)



1. In a printing machine, in combination, a rotary printing roller; a rotary counter pressure roller, one of said rollers being movable to and from a printing position in close proximity to the other roller for defining a printing line with the same; moving means for moving said one roller to and from said printing position; transporting means for transporting copy sheets to the bight between said rollers and through said printing line and including transporting rollers and a roller means mounted on said printing roller and cooperating with said counter pressure roller in the initial position of rest of said printing roller; means connecting said transporting rollers and said counter pressure roller for rotation; drive means; electro-magnetic coupling means for coupling said transporting means to said drive means; and control means for energizing and deenergizing said electro-magnetic coupling means so that said counter pressure roller and said roller means transport copy sheets while said one roller is retracted from said printing position.

3,016,826
PRINTING PRESS CLEANING APPARATUS
Earl M. Sage, 2173 N. Olney St., Indianapolis, Ind.
Filed June 22, 1960, Ser. No. 37,976
5 Claims. (Cl. 101—425)



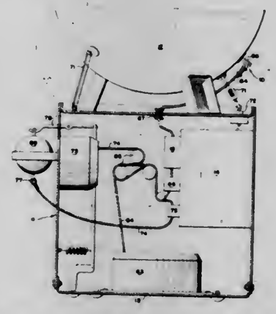
1. A printing press clean-up apparatus comprising a shaft adapted to be supported in a printing press in horizontal axially parallel relation with an ink-bearing press roll, an elongated plate overlying said shaft, a series of longitudinally spaced studs depending from the underface of said plate, said studs being freely received in axially transverse apertures in said shaft, a compression spring encircling each of said studs and bearing against said shaft and said plate underface to resiliently urge said plate away from said shaft, elongated channel-shaped members rigidly secured to said plate adjacent the side margins thereof and extending substantially the entire length of said plate, resilient elements carried by each of said channel-shaped members, said resilient elements being formed of strips of rubber accommodated within the bight of said channel-shaped members, and an elongated trough removably supported at the side margins of said plate and depending therefrom to enclose the central portion of said shaft, whereby when installed in a printing press said resilient elements yieldably engage an ink-bearing press roll to remove diluted ink and the like from the roll as it rotates, the material so removed being retained by said trough.

3,016,827
AERODYNAMIC ROLL CONTROL SYSTEM
William Hunter A. Boyd, Kensington, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed July 2, 1959, Ser. No. 824,752
2 Claims. (Cl. 102—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A roll control system for a missile having an elongated body with the longitudinal axis in the line of flight of said missile, said system comprising: a fin section mounted on the tail end of said missile perpendicular to the longitudinal axis thereof, a flap pivotally mounted to the end of said fin section, said flap adapted to move in response to an increase in air pressure on one side thereof as a result of missile roll about an axis substantially parallel to said longitudinal axis, a trim tab pivotally mounted to the trailing edge of said fin for pivotal movement about an axis substantially perpendicular to said longitudinal axis, and a channel member, one end of said member being fixed to the trailing edge of said flap and the other end forming a pair of spaced-apart edges adapted to alternately contact opposite faces of said trim tab depending upon the direction of movement of said flap.

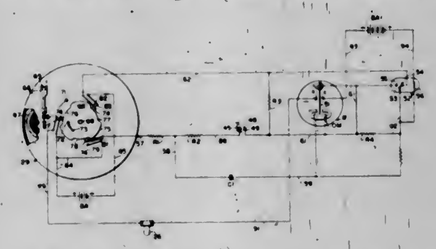
3,016,828
EXPLOSIVE SWAGING DEVICE FOR MOORING A SUBMERGED MINE
Charles F. Bowersett, Laurel, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 29, 1952, Ser. No. 285,040
9 Claims. (Cl. 102—13)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An explosive swaging device for a submerged mine having a floatation chamber separable from an anchor

and secured thereto by a mooring cable comprising a casing, an elongated deformable sleeve supported on said casing through which said cable is payed out as the floatation chamber is separated from said anchor and ascends toward the surface of a body of water, means including a movable member having a plurality of anvils formed thereon for swaging said deformable sleeve onto said cable and mooring said floatation chamber at a predetermined depth beneath the surface of said water as said anvils are forcibly driven into engagement with said deformable sleeve in response to an explosive force applied to said member, and explosive means for applying said force to said movable member as the explosive means is fired.

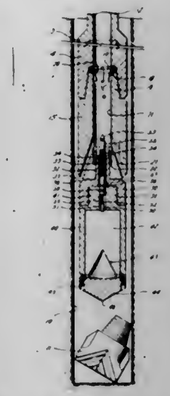
3,016,829
ACOUSTICAL MINE FIRING CONTROL SYSTEM
Harry H. Hall, United States Navy, Washington, D.C.
Filed Feb. 10, 1945, Ser. No. 577,249
19 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. In an acoustic mine firing control system, the combination of a mine firing circuit, vibration responsive means, energy storing means, means including said vibration responsive means adapted to cause energy to be stored in and discharged from said energy storing means alternately in a manner corresponding to the character of vibrations received by the vibration responsive means, and means controlled by said discharged energy for closing said mine firing circuit when the flow of discharge energy is of predetermined character.

3,016,830
JUNK SHOT
John Henry Kirby II, 2302 Cloquitt, Houston, Tex.
Continuation of application Ser. No. 548,878, Nov. 25, 1955. This application Mar. 4, 1959, Ser. No. 797,093
6 Claims. (Cl. 102—20)

5. In a tool adapted to be run in a well on a string of pipe comprising a hollow charge housing made of material that will be reduced by an explosion to a drillable state and containing an explosive charge shaped to direct the main blast of its explosion downwardly toward the well bottom, said housing further containing a detonator for said explosive charge, means for connecting the charge housing to the string of pipe, said connecting means having a fluid passage therethrough communicating at its upper end with the interior of the pipe and at its lower end by means of a downwardly directed portion with the space exterior of the tool forming the annulus between the tool and well when the tool is in the well whereby fluid can be circulated down inside the pipe through the tool into the annulus, said connecting means including a firing sub adapted to contain an electric power means, electric contact means in said firing sub, and means electrically connecting said contact means to said detonator, the improvement according to which said firing sub is open at the top to receive said electric power means as part of an electric go-devil run in through said pipe, said downwardly directed portion of the fluid passage is elongated and extends from the interior of said firing sub all the way to the exterior of the tool to form the fluid leaving said passage into a jet stream directed downwardly toward the well bottom, the distance between the lower end of said portion and the upper end of said explosive is short compared to the length of said charge, the distance between the bottom of said



charge and the lower end of said charge housing is short compared to the length of said charge, and said connecting means further includes a shielding means provided by a bumper sub of as large transverse dimensions as the charge housing, said shielding means being connected between said charge housing and said firing sub, said means electrically connecting said contact means to said detonator means extending through said bumper sub, said bumper sub being of short length compared to the length of said charge.

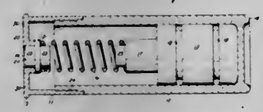
3,016,831
SURFACE WAVE GENERATOR
David L. Coursen, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 2, 1958, Ser. No. 764,916
3 Claims. (Cl. 102—22)



1. A surface-wave generator wherein the natural detonation front is distorted to arrive simultaneously at a plurality of points on its surface which comprises a plurality of parallel layers of cap-sensitive, high explosive in conormal relationship to one another, the thickness of each of said explosives being at least 0.2 mm. and such as to exceed the minimum thickness for support of the detonation, each of said explosive layers being separated one from another by a barrier plate provided with an array of detonation-transmitting channels, the barrier

plate being of a material having a shock velocity lower than the detonation velocity of the explosive, the array of said channels in successive plates being such that the axis of each channel in a given plate is equidistant from the axis of each of a plurality of channels in the immediately following plate, said detonation front being initiated at a point within the layer of said cap-sensitive, high explosive most distant from the base surface of said generator.

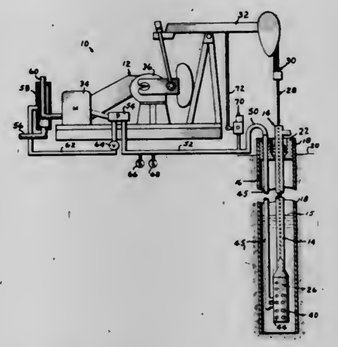
3,016,832
ROUND FOR TESTING SHOTGUN CONDITION
Clinton C. Carlson, 5335 NE. 39th Ave., Portland, Oreg.
Filed Mar. 28, 1961, Ser. No. 98,932
1 Claim. (Cl. 102—41)



A round for testing shotgun condition, a round being understood to be a cartridge or shotshell and a testing round being understood to be a powderless cartridge which can not expel a shot therefrom but which can be put through a gun by the normal manipulation of the action or mechanism of the gun to test the condition of the moving parts of the gun and their assembly together, said round for testing shotgun condition comprising a hollow body including a cylindrical shell having a closed end and an open end, a hollow cylindrical base having a closed end and an open end, the closed end of said base being formed with an axial hole therethrough, the open ends of said shell and said base being separably overlappingly secured coaxially together, a firing pin testing plug formed at its mid length with an annular rib therearound normal to its axis and including a pair of extensions of lesser diameter than said annular rib extending coaxially from said annular rib the same distance on either side of said rib, either of said pair of extensions of said plug being formed to be received from inside said base axially guidably in said hole in said closed end of said base less than the axial thickness of the closed end of said base, a piston mass enclosed in said hollow shell for free axial movement therein, the end of said piston adjacent said plug being formed with an axial extension thereon of approximately the same diameter as that of either of said extensions, a compression type spring confined in said hollow body between said other extension of said plug and said extension of said piston, the outer end surface of said base being generally flat and normal to the axis of said base, said base adjacent its flat outer end surface including a radially extending annular rim for engagement by the round extractor of said gun and said outer end surface of said base being formed with a radial distance gauge groove sunk therein concentric therewith for visual inspection with respect thereto of the radially inward throw of the shell latch of either a pump gun or an automatic gun being tested with the round for testing shotgun condition.

3,016,833
APPARATUS FOR AND METHOD OF PRODUCING HEAVY OIL
James R. Creed, 1717 NW. 29th, Oklahoma City, Okla.
Filed May 29, 1959, Ser. No. 816,783
4 Claims. (Cl. 103—1)

1. An apparatus for pumping viscid oil from individual oil wells in an oil producing area, comprising: a primary string of tubing adapted to be run into the oil well and extend from the surface of the earth to a point below the oil level in the well; a depending downwardly open elongated gas anchor substantially greater in horizontal cross-sectional area than said primary string of tubing axially secured to the lowermost end of said primary string of tubing string, said gas anchor having a series of vertically spaced ports in the lower end portion of its wall and having an imperforate wall portion extending thereabove; an oil well pump having a reciprocating plunger carried by the lower end portion of said primary string of tubing; a string of sucker rods connected with the plunger of said



pump and extending to the surface of the earth; oil well power pumping means connected with the upper end portion of said sucker rods for imparting reciprocating movement to said sucker rods; a secondary string of tubing adapted to extend from the surface of the earth downward to and be connected with said gas anchor adjacent the lower limit of its imperforate wall portion for conveying a diluent fluid from a source of supply to the oil within said gas anchor; and means regulating the flow of diluent fluid through said secondary tubing string.

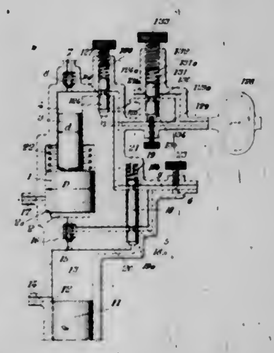
3,016,834
ROTARY PUMPS
Theodore J. Deska and John Harvey, Detroit, Mich., assignors to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 7, 1957, Ser. No. 688,632
3 Claims. (Cl. 103—4)



1. In a dual pump assembly comprising axially adjacent pumps, a common housing having axially adjacent pump cylinders therein, said housing also having a pair of intake and discharge ports therein for each of said cylinders, rotor means operable in the cylinders with the axially adjacent side faces of the rotor means of adjacent pumps in a coplanar running relation, the rotor means of each pump comprising a pair of cooperating rotatable driving and driven gear members defining variable pumping chambers in communication with the intake and discharge ports of such pump, the gear members comprising the rotor means of one of said pumps being of larger pitch diameter than the gear members comprising the

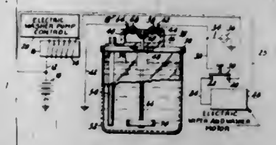
rotor means of the other pump such that the rotor means of said one pump forms an axial side wall of the pumping chambers formed by the rotor means of said other pump, transversely extending shaft means comprising a drive shaft having the driving gear of only one of said pumps secured thereto, and means connecting the driving gear of the last-mentioned one pump to the driving gear of the other pump.

3,016,835
SELF-REGULATING RECIPROCATING ACTION PUMPS
Pierre Etienne Bessiere, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France
Filed Jan. 26, 1959, Ser. No. 788,802
Claims priority, application France Jan. 28, 1958
4 Claims. (Cl. 103—5)



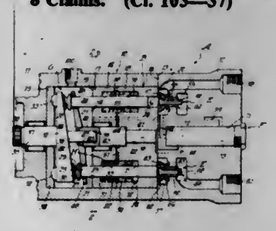
1. A reciprocating action pump which comprises, in combination, a main cylinder, a main piston fitting slidably in said cylinder and defining therewith a variable volume working chamber, a liquid delivery conduit leading out from said working chamber, an intermediate cylinder in line with said main cylinder and fixed in position with respect thereto, an intermediate piston fitting slidably in said intermediate cylinder, said main piston extending into said intermediate cylinder so as to be in contact with said intermediate piston, said intermediate cylinder being of a diameter greater than that of said main cylinder, unidirectional driving means for imparting to said intermediate piston successive displacements in the direction for which it pushes said main piston so as to reduce the volume of said working chamber, said displacements being called delivery strokes, return means operatively connected with said intermediate piston for urging it in the opposed direction to produce its return strokes, means for feeding liquid to the space of said intermediate cylinder located on the other side of said intermediate piston from said main piston, said last mentioned means being operative during the delivery strokes of said intermediate piston and being closed during its return strokes, a liquid inlet conduit starting from said space of said intermediate cylinder and opening into said working chamber, a throttled discharge conduit branching off from a point of said inlet conduit, valve means in said inlet conduit operative by said driving means for closing said liquid inlet conduit both upstream and downstream of said point thereof during the delivery strokes of said intermediate piston, a throttling member movably mounted across the portion of said inlet conduit extending between said point thereof and said main cylinder, and means operatively connected with said throttling member for controlling its position to close it more and more as the speed of reciprocation of said intermediate piston increases.

3,016,836
WINDSHIELD WASHER CONTROL SYSTEM
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 18, 1957, Ser. No. 697,084
2 Claims. (Cl. 103—26)



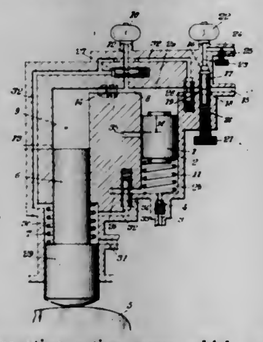
1. In combination, a reservoir adapted to contain a supply of liquid solvent, an electrically operable pump adapted to draw liquid solvent from said reservoir and deliver said liquid solvent under pressure, circuit means for energizing said pump including a source of electric power, a pump control relay coil connected to one terminal of said power source and a pair of switches connected in series between said coil and the other terminal of said power source, manual means controlling the operation of one of said switches, liquid level responsive means disposed within said reservoir controlling the operation of the other switch whereby energization of said pump control relay coil is precluded when the supply of liquid solvent in said reservoir is depleted, and a lamp shunting the switch controlled by the liquid level responsive means whereby manual actuation of said one switch when the other switch is open by reason of the supply of liquid solvent being depleted will energize said lamp and manual closure of said one switch when said other switch is closed due to the presence of liquid solvent in said reservoir will energize said pump control relay coil and short circuit said lamp.

3,016,837
VARIABLE DISPLACEMENT HYDRAULIC APPARATUS
Gerald S. Dlugos, Parma, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 18, 1959, Ser. No. 794,190
8 Claims. (Cl. 103—37)



1. In a hydraulic apparatus, a block; means defining a cylinder in said block; a piston disposed in said cylinder; means providing a cavity defined in part by said piston; means for reciprocating said piston between bottom dead center and top dead center relative to said block whereby movement of said piston from top dead center to bottom dead center increases the volume of said cavity; means defining a chamber fluidly interconnected with said cavity, said chamber being defined in part by a movable member carried by said piston whereby movement of said member from a first position to a second position relative to said block increases the volume of said chamber; means providing a fluid reservoir defined in part by said member; and means for selectively applying and venting fluid respectively to and from said reservoir whereby when said reservoir is filled with a predetermined amount of fluid, said member is maintained in said first position, and when the predetermined amount of fluid in said reservoir is decreased a selected amount, said member is permitted to move from its said first position to a selected position as said piston moves from bottom dead center to top dead center to thereby vary the combined volume of said cavity and said chamber when said piston is at top dead center.

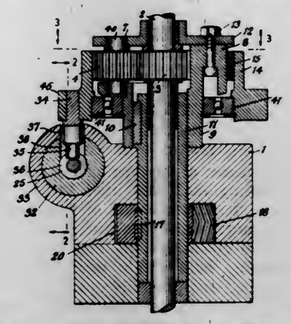
3,016,838
RECIPROCATING ACTION PUMPS, IN PARTICULAR FUEL INJECTION PUMPS
Pierre Etienne Bessiere, 55 Blvd. Commandant Charcot, Neuilly-sur-Seine, France
Filed Feb. 12, 1959, Ser. No. 792,903
6 Claims. (Cl. 103—38)



1. A reciprocating action pump which comprises, in combination, a cylinder, a member reciprocable in said cylinder parallel to the axis thereof, said member dividing the inside of said cylinder into two chambers of variable volumes, one of said chambers being a liquid delivery chamber, a delivery conduit leading out from said delivery chamber, driving means operatively connected with said member for imperatively transmitting thereto liquid delivery displacements in the direction which reduces the volume of said delivery chamber as far as a fixed upper limit, liquid feed means opening into one of said chambers for supplying it with a continuous flow of liquid, a discharge conduit leading out from said last mentioned chamber, said discharge conduit being distinct from said delivery conduit, throttling means in said conduit, valve means in said liquid feed means and said discharge conduit for controlling the communication of said liquid feed means and said discharge conduit with said last mentioned chamber, said valve means being operatively connected with said driving means to open this communication only during the displacements in the opposed direction of said member in said cylinder, regulating means operatively connected with said liquid feed means and with said throttling means for varying the pressure in said last mentioned chamber during said last mentioned displacements when the number of reciprocations of said member per unit of time varies, and resilient means interposed between said member and said cylinder for acting on said member in the direction opposed to that of the thrust exerted by said continuous flow of liquid on said member.

3,016,839
TORQUE VALVES
John F. Wellekens, 41 Crescent Ave., New York, N.Y.
Filed Jan. 5, 1960, Ser. No. 592
2 Claims. (Cl. 103—41)

1. A torque valve construction comprising, a gear pump, a shaft extending from one of the gears thereof, said shaft carrying a spider on which a plurality of gears is rotatively mounted, a drive shaft having a driving gear centrally positioned between those on the spider and operative to rotate said gears, a ring gear encircling the spider-borne gears, said ring gear having its teeth engaging those on the latter gears, a housing encircling the gear pump, a sleeve in the housing, a slide valve spring-biased and movable back and forth in the sleeve, the bias-exerting spring acting to normally locate the valve in one position, the valve being capable of movement to another position in opposition to its spring-bias, the



spring being operative to hold the ring gear against rotative movement during operation of the pump under given torque load and to permit movement of said ring gear to the second position when such torque load is exceeded, the spring being adjustable to vary its force against the valve, the valve having a groove and the coupling between the ring gear and the valve consisting of a pin projecting from the ring gear and entering into the groove.

3,016,840
FLUID ACTUATING DEVICE
Charles E. Frick, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 13, 1958, Ser. No. 773,741
6 Claims. (Cl. 103—44)

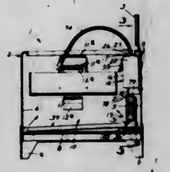


1. A fluid actuating device comprising hollow body member means, flexible diaphragm means sealably connected within said body member means and forming with said body member means first and second chambers, said first chamber adapted to receive an actuating fluid and disposed opposite said second chamber, said second chamber adapted to receive an actuated fluid, actuating fluid inlet means in said body member communicating with said first chamber and adapted to supply pressurized actuating fluid to said first chamber, actuating fluid outlet means in said body member means communicating with said first chamber, said diaphragm means normally positioned to close said actuating fluid outlet means but yieldable when the pressure of said actuating fluid reaches a predetermined value to flex and thereby move to a position opening said outlet means to release a portion of said actuating fluid whereby said diaphragm means is caused to return to its normal position closing said outlet means, actuated fluid inlet means and actuated fluid outlet means in said body member means communicating with said second chamber whereby actuated fluid is delivered to said second chamber through said actuated fluid inlet means and removed from said second chamber through said actuated fluid outlet means by the motion of said diaphragm means.

3,016,841
FLUID SUPPLY MEANS AND DRIVE THEREFOR FOR PARTS WASHERS AND THE LIKE

Victor N. Albertson and Robert V. Albertson, Minneapolis, Minn., assignors, by mesne assignments, to Practical Mfg. Co., Minneapolis, Minn., a corporation of Minnesota

Filed Nov. 3, 1960, Ser. No. 66,949
3 Claims. (Cl. 103—87)



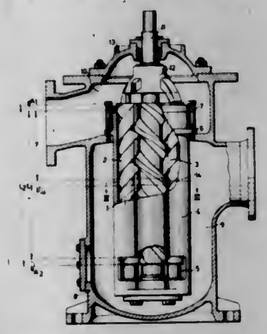
1. In a parts washer of the type having a cleaning fluid containing cleansing tank and used for washing dirty machinery parts, the improvement of fluid supply means therefor, said improvement comprising a rotary pump disposed within said cleansing tank and adapted to recirculate the cleaning fluid within said tank, said pump having an elongated and generally upstanding drive shaft, a motor housing secured to said tank and disposed above the fluid level therein and generally vertically above said pump, said motor housing defining a depending journal enclosure, a motor rigidly secured within said housing and having a generally vertically depending output shaft generally axially received within the upper end of said journal enclosure, a pump mounting and pump shaft bearing assembly rigidly secured intermediate said journal enclosure and said pump whereby to dispose said pump shaft in a longitudinally spaced generally coaxial position in relation to said motor output shaft, said pump mounting and pump shaft bearing assembly comprising an elongated generally tubular sleeve generally concentrically disposed about both of said shafts, the upper end of said sleeve being rigidly secured within said journal enclosure and the lower end thereof being rigidly secured to said pump and also being orificed to provide an inlet for said pump, and at least one annular bearing disposed within said sleeve intermediate the ends thereof for journalling said pump shaft in said position relative to said motor shaft, said pump shaft defining an axially opening bore at its upper end, and said fluid supply means further comprising flexible coupling means interposed between and connected to the drive shaft of said pump and the output shaft of said motor and being adapted to compensate for any axial misalignment between both of said shafts, said coupling means comprising an elongated coupling element having its lower end loosely received within the bore of said pump shaft and being connected at said lower end to said pump shaft for common rotation therewith and for diametric movement relative thereto, the upper end of said coupling element being received within the lower end of said journal enclosure and also being connected to the output shaft of said motor for common rotation therewith and for axial movement relative thereto.

3,016,842
SCREW PUMP

Carl Oscar Torsten, Montelius, Stockholm, Sweden, assignor to De Laval Steam Turbine Company, Trenton, N.J., a corporation of New Jersey

Filed June 13, 1960, Ser. No. 35,737
Claims priority, application Sweden Feb. 23, 1959
1 Claim. (Cl. 103—128)

A positive screw pump of the type comprising a screw assemblage including a first screw with convex thread flanks and at least one other screw with concave thread flanks intermeshing with said first screw, and a casing enclosing said screw assemblage and having intersecting bores for accommodating said screws, the screws sealing against each other and against the casing to form chambers within which the pumped fluid is conveyed axially along the screw assemblage from its inlet end to its outlet end, the length of the screws and a continuously closed length of the bores in the casing being such that during finite portions of each revolution of the first screw the number of seals is greater than the number of seals

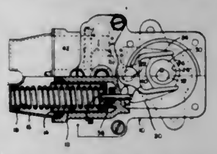


during the remainder of each revolution, characterized by the fact that only the bore accommodating the first screw is provided with a circumferentially extending groove throughout the circumferential extent of its walls, located between the ends of said closed length of the bores, said groove being located and dimensioned to interrupt the sealing between the chambers during said finite portions of each revolution to maintain constant the number of seals existing during each complete revolution of the first screw.

3,016,843
PUMPS

John E. Smith, St. Clair Shores, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Filed May 27, 1957, Ser. No. 661,935
3 Claims. (Cl. 103—170)



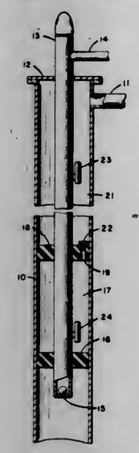
1. A pump comprising a body having a pair of pump cylinders therein, said body having an inlet passage provided with independent branch inlet passages, one of which is connected to each of said cylinders, a check valve in each of said branch inlet passages disposed to prevent flow of fluid from said cylinders to said branch inlet passages while permitting flow of fluid into said cylinders from said branch inlet passages, said body having an outlet passage provided with independent branch outlet passages, one of which is connected to each of said cylinders, a check valve in each of said branch outlet passages disposed to prevent flow of fluid into said cylinders from said branch outlet passages while permitting flow of fluid out of said cylinders, a piston in each of said cylinders, spring means in each of said cylinders urging said pistons in pumping strokes, and mechanical positive-acting drive means having one-way engagement with said pistons to drive said pistons alternately in suction strokes

and thereafter to release said pistons for pumping strokes under the influence of said springs, said drive means comprises a pivoted rocker having a pair of oppositely extending arms alternately movable toward and away from the ends of said cylinders, and actuating means extending into said cylinders and engageable therein with said pistons and engageable with said arms.

3,016,844
GAS LIFT APPARATUS

Renic P. Vincent, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Filed Feb. 10, 1958, Ser. No. 714,108
11 Claims. (Cl. 103—232)

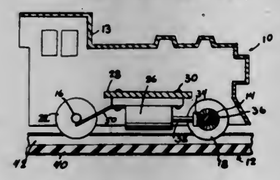


1. An apparatus for gas lifting liquid comprising a vertical liquid conduit, a gas conduit, a gas chamber between said liquid conduit and said gas conduit, the volume of said gas chamber being substantially less than the volume of said gas conduit, an orifice between said gas conduit and said gas chamber to meter gas from said conduit into said gas chamber, a gas outlet from said gas chamber leading into said vertical liquid conduit, the flow capacity of said outlet being substantially greater than the flow capacity of said orifice, and valve means to close said outlet when the pressure in said gas chamber is below a predetermined pressure and to open said outlet when the pressure in said gas chamber is above said predetermined pressure.

3,016,845
TOY AND TRACK ASSEMBLY

Jerome H. Lemelson, 8B Garfield Apartments, Metuchen, N.J.

Filed July 27, 1959, Ser. No. 829,931
1 Claim. (Cl. 104—148)

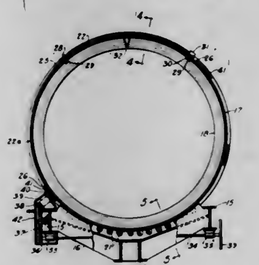


In a toy track for guiding an electric motor-driven toy vehicle, comprising in combination a base of electrical insulating material, said base having spaced apart rail portions for guiding said vehicle, said rail portions having a plurality of parallel planar faces, at least one of said faces of each rail portion having a strip of electrically conductive metal integrally bonded thereto along substantially its entire length, said strip of electrically conductive metal being substantially as wide as the width of the face of said rail portion to which it is bonded, a toy vehicle having wheels shaped to be guided by at least one face of each of said rail portions, one of said strips of metal being connected in an electric circuit with a power supply, the other strip of electrically conducting metal extending along said track parallel to said first strip and serving as a ground return for electrical energy to said power supply, and means for conducting electrical energy from said power supply through said first strip to the motor in said vehicle and from said motor to said second strip.

3,016,846
HANDLING BULK MATERIALS BY RAILROAD CAR

John Louis Beckel, 52 Charles St., Malverne, N.Y.

Filed Sept. 14, 1960, Ser. No. 56,026
8 Claims. (Cl. 105—270)



1. A freight car for transporting bulk material comprising a frame, a cylindrical shell arranged for rotation on said frame about its horizontal, longitudinal axis, means for rotating said shell, said shell having at least one combination filling and discharge opening in the wall thereof, cover means slidably mounted on said shell for covering said opening and arranged for movement relative to said shell between open and closed positions thereof, cooperating means on said cover and said frame for holding said cover stationary during rotation of said shell to bring the opening therein to a discharge position whereby to automatically expose said opening to allow the discharge of the contents of said shell.

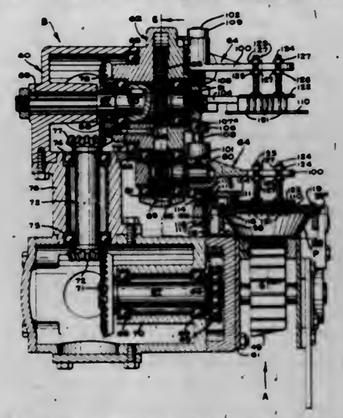
3,016,847
PIE TAMPING AND PERFORATING MECHANISM

Robert K. Galloway, Hoopeston, Ill., assignor to FMC Corporation, a corporation of Delaware

Original application Apr. 30, 1956, Ser. No. 581,402, now Patent No. 2,906,392, dated Sept. 29, 1959. Divided and this application Sept. 22, 1958, Ser. No. 762,587
7 Claims. (Cl. 107—1)

5. In a pie tamping and perforating mechanism, a conveyor for conveying pies in single file and in uniform spaced relation with each other along a predetermined path, a rotary housing mounted adjacent one side of said conveyor for rotation about an axis extending transversely above said predetermined path, a plurality of tamping and perforating heads rotatably mounted on said housing at points spaced about the rotational axis thereof, means for rotating said housing in timed relation to the speed of said conveyor, gear means within said housing

and geared to each of said tamping and perforating heads to restrict said heads to translatory movement as they orbit about said transverse axis during rotation of said housing, each of said perforating and tamping heads com-



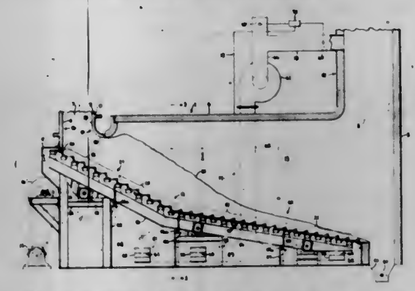
prising a first plate, a plurality of perforating units fixed to and extending downwardly from said first plate, and a tamping plate mounted below said first plate and having a plurality of apertures therein arranged to permit the passage of said perforating members therethrough.

3,016,848
SELF-SERVICE BANK DEPOSIT RECEIVER
George P. Diedrich, 361 Ridgewood Blvd. N., Westwood, N.J.
Filed Jan. 25, 1961, Ser. No. 84,898
9 Claims. (Cl. 109—23)



1. A self-service bank deposit receiver comprising: a frame constructed and arranged to be attached to the teller's counter of a bank; a security shielding partition supported fixedly by said frame and projecting upward from the front of said counter; a shelf-like writing desk supported by said frame at a position in front of said counter; a rod-like security guide member having one end affixed to said writing desk and projecting upwardly therefrom to a height exceeding that of said security shielding partition, said security guide member having its upper end portion free and bent rearward to encompass the upper edge of said security shielding partition and point obliquely downward in rear of the latter; and at least one deposit container having a through hole through which said security guide member is threaded loosely, whereby said container after a deposit has been placed therein may be slid upward along said security guide member and over the top of said security shielding partition into a shielded and secured region.

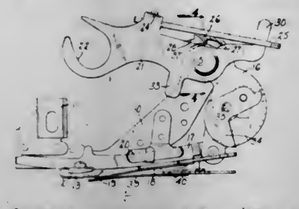
3,016,849
INCINERATOR FOR WASTE MATERIAL
Harry A. Markle, Jr., Allentown, and Joseph H. Morrow, Hokendauqua, Pa., assignors to Fuller Company, a corporation of Delaware
Filed Aug. 18, 1959, Ser. No. 834,524
2 Claims. (Cl. 110—18)



1. An incinerator for the burning of waste material comprising a burning chamber, a grate assembly in said chamber having alternate fixed grates and movable grates, said grate assembly comprising at least first and second sections inclined with respect to one another, means forming an inlet in said chamber located vertically above and adjacent the receiving end of said grate assembly for supplying material vertically to the upper end of the first grate section, the first grate section being inclined at an angle of between about 25° to 35° to the horizontal, said angle being substantially greater than the angle which the second grate section makes with the horizontal, said fixed and movable grates each having an upper surface and a forward face, the lower edge of the forward face of each grate overlying and terminating adjacent the upper surface of the subjacent grate, means for reciprocating the movable grates over at least a portion of the upper surfaces of the fixed grates to force, on their forward strokes, material on the subjacent fixed grates over the forward edges thereof and onto the forwardly-moving movable grates subjacent the respective fixed grates, the forward faces of the fixed grtaes, on the backward strokes of the movable grates, acting as abutments to force material on the movable grates over the forward edges thereof and onto the fixed grates subjacent the respective movable grates, whereby the material is caused to advance along the grates, an abutment adjacent the rearward edge portion of the incinerator inlet, an upper movable grate of the first section being adjacent and underlying said abutment, the forward face of said upper movable grate successively protruding beyond and receding back of a forward portion of said abutment upon reciprocation, whereby on the backward stroke of said upper grate the abutment causes material on said upper grate to be forced over the forward edge thereof, a plurality of the fixed and movable grates at the upper end of the first section being substantially imperforate, the fixed and movable grates of the second section and the fixed and movable grates of the lower end of the first section being perforate, and means for passing a combustion-supporting gas upwardly through the fixed and movable perforated grates.

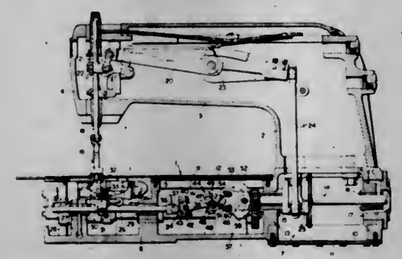
3,016,850
RUFFLERS
Samuel P. Caldwell, Hamden, Conn., assignor, by mesne assignments, to Mite Corporation, New Haven, Conn., a corporation of Delaware
Filed Apr. 9, 1959, Ser. No. 805,198
5 Claims. (Cl. 112—135)

1. A ruffler attachment for sewing machines comprising a frame, a lever pivoted thereto and carrying a ruffling blade at its lower end, a fork arm pivoted to the frame, a pawl carrier actuated by the fork arm, a pawl on said carrier having an end portion engaging said lever



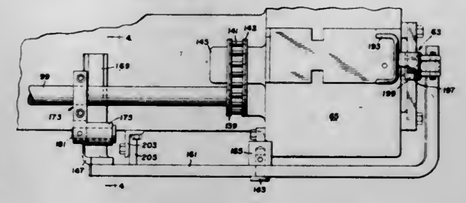
to effect a forward movement of the ruffling blade, and cam means on the frame to disengage said pawl from the lever at a predetermined point in the upward stroke of the fork arm.

3,016,851
LOOPER MECHANISMS FOR SEWING MACHINES
Hans Hacklander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Original application Sept. 14, 1956, Ser. No. 609,836, now Patent No. 2,976,831, dated Mar. 28, 1961. Divided and this application May 9, 1958, Ser. No. 734,182
2 Claims. (Cl. 112—200)



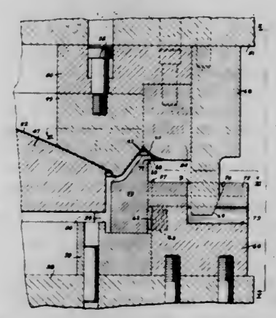
1. In a chain stitch sewing machine having a bed including a closed splash lubricated compartment, a rotary main shaft journaled longitudinally in said bed and extending into said closed compartment, a looper bar arranged parallel to said main shaft and mounted in said bed for oscillation and for axial reciprocation and having one end extending into said closed compartment, a looper mounted on said looper bar outside of said closed compartment and arranged for loop-seizing motion upon axial movement of said looper bar and for needle-avoiding motion upon oscillation of said looper bar, and means for actuating said looper bar comprising a looper driving shaft journaled transversely in said bed within said closed compartment and arranged perpendicular to and spaced vertically from said looper bar, operative connections between said main shaft and said looper driving shaft for imparting rotation to said looper driving shaft upon rotation of said main shaft, a crank element carried by said looper driving shaft and arranged upon an axis skewed with respect to the axis of said looper driving shaft, a link, means including a universal joint for connecting a second universal joint for connecting one end of said link to said looper bar and means including the other end of said link to said crank element, whereby, upon rotation of said looper driving shaft, the throw of said crank element will effect axial reciprocation of said looper bar and the gyratory action imparted to said crank element upon rotation thereof about the axis of said looper driving shaft will effect oscillation of said looper bar.

3,016,852
TUFTING METHOD AND APPARATUS
Nels Johnson, Kenosha, Wis., assignor to Simmons Company, New York, N.Y., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,583
1 Claim. (Cl. 112—262)



The method of tufting a mattress comprising the simultaneous compressing of the mattress for the execution of a tuft by substantially displacing opposed portions of the faces of the mattress toward each other to produce a local zone of reduced thickness intermediate the facial planes of the mattress, passing a needle having an eye threaded with a tufting cord through the zone of reduced thickness while maintainnig said compression, releasing the depression of one face of the mattress, partially releasing the depression of the other face of the mattress, tying a first button to the end of the tufting cord extending beyond the other face, reracting the needle to position the button against the other face of the mattress, severing the cord, increasing the compression applied to the other face so as to increase the inward displacement of the other face, tying a second button to the other end of the cord, the distance between said buttons being less than the original thickness of the mattress and releasing the compressed condition of the other face of the mattress to thereby place the tufting cord under tension with the buttons in engagement with the respectively opposed faces of the mattress.

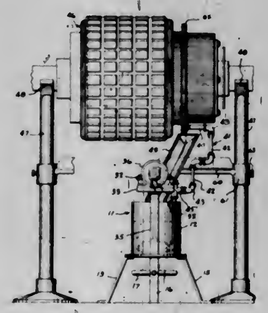
3,016,853
APPARATUS FOR SHAPING SHEET METAL WHEEL COVERS
Michael J. Celovsky, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Sept. 23, 1957, Ser. No. 685,493
9 Claims. (Cl. 113—48)



6. In apparatus for making sheet metal wheel covers, means for shaping a marginal generally axially extending rib of a cover member provided with generally axially oppositely extending retaining fingers of substantial width and with substantial recess areas between the fingers, said means including die structure engageable

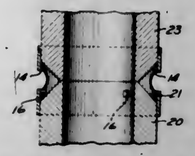
clampingly with the cover at the radially inner side of the rib, die means movable axially into shaping engagement with the rib to turn a radially inner wall of the rib to project generally radially outwardly and a radially outer wall into position under said radially inner wall as an underturned flange to thereby form a radially inwardly opening groove between the walls, and means for maintaining the finger extensions to their radial diameter and including structure movable operatively relative to the finger extension maintaining means from a radially inwardly retracted position to a radially outwardly protracted position for engagement within said groove and over at least the inner terminal portion of the between-finger areas of the radially outer rib wall as it is turned under by said die means, so as to avoid buckling distortions of said radially outer rib wall during said shaping of the cover rib.

3,016,854
SOLDERING PUMP
William S. Giles, % Giles Armature Electric Works Inc., 703 W. Stockton St., Marion, Ill.
Filed Apr. 25, 1958, Ser. No. 730,922
2 Claims. (Cl. 113—93)



1. In a soldering apparatus, a pair of spaced stationary vertical standards, respective cradle elements on the top ends of said standards rotatably supportingly engageable beneath the opposed end portions of the shaft of a motor armature, whereby to support said armature with its shaft in a horizontal position and with its coil leads exposed for soldering adjacent one of the standards, a solder pot located laterally adjacent the standards, a heater disposed beneath said pot in heat-transmitting relation thereto, a gear pump disposed horizontally on the bottom wall of the pot with the axes of the gears thereof perpendicular to said bottom wall and having an inlet port communicating with the interior of said pot, a variable speed electric motor mounted on the pot, a relatively small bevel gear on the shaft of the variable speed motor, said gear pump being provided with an upstanding driving shaft, a relatively large bevel gear secured on said driving shaft and meshingly engaging said small bevel gear, whereby said variable speed motor is drivingly connected to said pump, a vertical upstanding solder conduit connected to the outlet of said pump and extending upwardly from said pump, a horizontal discharge nozzle located between said standards and adjacent said one of the standards and parallel to said cradle elements, and angularly adjustable conduit means supportingly connecting said discharge nozzle to the top end of said solder conduit, said conduit means comprising a plurality of straight rigid conduit sections and elbow conduits rotatably connecting the ends of said conduit sections.

3,016,855
ALIGNMENT AND WELDING DEVICE
Rudolph A. Wimmer, Westfield, N.J., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Apr. 8, 1957, Ser. No. 651,482
4 Claims. (Cl. 113—102)



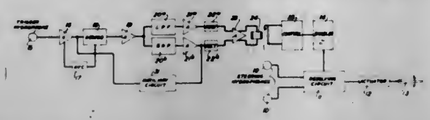
1. A device for use in the welding of adjacent bevelled ends of a pair of tubes, comprising a unitary sleeve of slightly larger diameter than a pair of tubes to be welded to accommodate the ends of said tubes therein, said sleeve having slots formed therein to permit a welding tool access to the interior of the sleeve, and means on the sleeve to engage the bevelled end of one of said tubes to align the slots with the tube ends to permit welding of the latter through said slots.

3,016,856
PIPE ALIGNMENT CLAMP
James D. Cummings, San Marcos, Tex., assignor to Crutcher-Rolfs-Cummings, Inc., Houston, Tex., a corporation of Texas
Filed Dec. 29, 1958, Ser. No. 783,238
6 Claims. (Cl. 113—102)

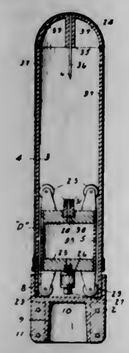
2. In an internal pipe line-up clamp assembly, two sets of expansible circular segments for co-operation with adjacent ends of two pipes to be aligned, a succession of circularly spaced apart rollers mounted on said segments for rotation on axes radially fixed relative to the periphery of the circular segments and parallel to the longitudinal axis of the clamp assembly, said rollers having their outermost tread portions radially spaced outwardly from the peripheries of said segments for line bearing engagement by each with a pipe wall.

3,016,857
CONTROL CIRCUITS
Verl J. Hawks, Mount Vernon, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 21, 1944, Ser. No. 546,019
12 Claims. (Cl. 114—23)

1. A control circuit comprising a hydrophone, a first signal channel including a filter adapted to pass only frequencies characteristic of the envelope of noise of ships having speeds within a preassigned range, a second signal channel including a filter adapted to pass a band of frequencies other than said characteristic frequencies, said channels being energized in common in accordance with the output of said hydrophone and substantially balanced for random submarine noise received by said hydrophone, means for resolving the outputs of said channels into a difference signal, means controlled by said difference signal to operate only when the output of said first channel exceeds that of said second channel, and means for preventing operation of said controlled means in response to explosion signals received by said hydrophone, said last means comprising auxiliary circuit means adapted to translate signals of said characteristic frequencies and energized in accordance with the output of said hydrophone for increasing the output of said second channel relative to that of said first channel and including an enabling element operable only in response to signals received by said hydrophone of amplitude greater than that requisite to produce an output from said first channel sufficient normally to effect operation of said controlled means.



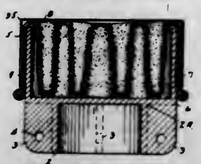
3,016,858
SAIL BOAT SAFETY DEVICE
Robert F. Johnson, Las Vegas, Nev., assignor to Robert Mark Johnson, Las Vegas, Nev.
Filed Mar. 28, 1960, Ser. No. 18,007
7 Claims. (Cl. 114—39)



1. In a safety device for a sail boat in combination with the boat and a mast thereof an inflatable bag mounted on the mast head, means to automatically inflate the bag when the boat heels over to a predetermined degree, and means to deflate the bag.

3,016,859
SAIL BOAT SAFETY DEVICE
Robert F. Johnson, Las Vegas, Nev., assignor to Robert Mark Johnson, Las Vegas, Nev.
Filed Dec. 6, 1960, Ser. No. 74,048
3 Claims. (Cl. 114—39)

1. In a sail boat safety device in combination with a boat and a mast head thereof, a rigging support on the mast head having a cylindrical shell provided with a bottom closure carried on and above the rigging support, an inflatable bag enveloping the cylindrical shell and adapted to be tucked within said cylindrical shell when not inflated, a pressure vessel, means connecting the pressure vessel to the bag, an expansive medium normally confined within the pressure vessel, means to automatically release the expansive medium from the pressure vessel into the bag to inflate it when the boat heels over to a predetermined degree, and means to deflate the bag.

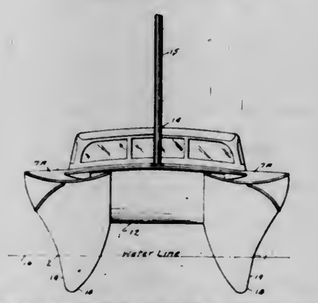


3,016,860
SAIL BOAT SAFETY DEVICE
Robert F. Johnson, Las Vegas, Nev., assignor to Robert Mark Johnson, Las Vegas, Nev.
Filed Dec. 6, 1960, Ser. No. 74,049
5 Claims. (Cl. 114—39)



1. In a sail boat safety device in combination with a sail of said boat, an inflatable bag attached to the sail adjacent the top thereof and adapted to lie flat against the sail when not inflated, a pressure vessel, means connecting the pressure vessel to the bag, an expansive medium normally confined within the pressure vessel, means to automatically release the expansive medium from the pressure vessel into the bag to inflate it when the boat heels over to a predetermined degree, and means to deflate the bag.

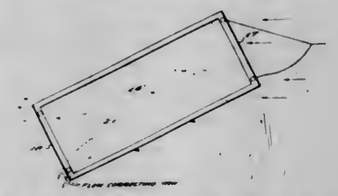
3,016,861
CATAMARANS
Woodbridge P. Brown, 3716 Campbell Ave., Honolulu, Hawaii
Filed Sept. 4, 1959, Ser. No. 838,176
5 Claims. (Cl. 114—61)



1. A catamaran hull having both sides thereof vertically curved with the sides asymmetrical to the vertical

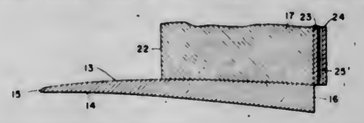
center line of said hull and both sides horizontally curved with the sides asymmetrical to the longitudinal center line of the hull said horizontal curvature being continuous from stem to stern and said longitudinal center line being straight from stem to stern.

3,016,862
BOW AND STERN CONSTRUCTION OF BARGES OR LIKE VESSELS ADAPTED TO BE TOWED
Charles D. Roach, 279 Richneck Road, Newport News, Va.
Filed Dec. 31, 1958, Ser. No. 784,169
2 Claims. (Cl. 114—62)



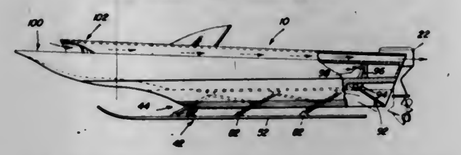
1. In a barge adapted to be towed, of the type having a relatively flat bottom, square ends constituting a bow and a stern, and side walls extending upwardly, one from each side edge of said bottom in parallel relation to each other, the improvement which comprises means for creating a distinct discontinuity in the flow field with the flow lines from the bottom of the hull having a distinct divergence as they move aft to thereby minimize the tendency of the barge to yaw and help maintain the directional stability of the barge in the line of tow, including an upwardly inclined end portion of said bottom at said stern end provided with a recess concave to the outer surface of said bottom, said recess converging symmetrically of the longitudinal center line of said bottom from the stern to a predetermined point positioned between the stern of the barge and the transverse center line axis of said barge.

3,016,863
HYDROFOIL
Virgil E. Johnson, Jr., Hampton, Va., assignor to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Mar. 30, 1960, Ser. No. 18,780
1 Claim. (Cl. 114—66.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



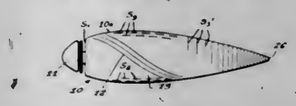
A non-supercavitating hydrofoil capable of submerged high speed operation comprising a body member wedge shaped in cross section having a convex top surface, a linear concave bottom surface, a rounded leading edge and a blunt trailing edge; a strut affixed to said body member top surface, said strut having parabolic convex symmetrical sides and a blunt trailing edge; and a pressure ventilator affixed to said blunt trailing edge of said strut, said pressure ventilator having a bore therethrough, said pressure ventilator extending downwardly from a source of atmospheric pressure and terminating at said top surface of said body member adjacent said blunt trailing edge of said body member, thereby being adapted to convey a gaseous medium to said blunt trailing edge of said body member for preventing supercavitating operation.

3,016,864
BOAT CONSTRUCTION
Vinson L. Woodfield, 3616 Cherry Hill St., Pine Bluff, Ark.
Filed June 27, 1960, Ser. No. 38,827
14 Claims. (Cl. 114—66.5)



1. A boat construction comprising a hull having a pair of integral longitudinally extending and transversely spaced runner members, said runner members being provided with substantially flat and generally horizontal lowermost planing surfaces and projecting downwardly and being downwardly divergent forming a longitudinally extending tunnel therebetween substantially truncated pyramidal in cross-section, a center narrow elongated water-engaging supporting member adapted to engage the water and provide a lifting force on said hull; means mounting said supporting member in spaced relation between said runner members with said supporting member projecting forwardly of said runner members and extending longitudinally of said hull and substantially horizontally disposed for vertical swinging movement toward and away from said hull, and means normally resiliently urging said supporting member to an extended position slightly below the lower extremities of said runner members.

3,016,865
METHOD AND APPARATUS FOR REDUCING DRAG ON SUBMERGED VEHICLES
Hans P. Eichenberger, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed May 21, 1959, Ser. No. 814,809
8 Claims. (Cl. 114—67)

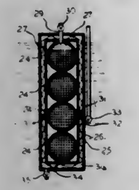


3. In a vehicle adapted to operate entirely immersed in water, drag reducing apparatus comprising, means positioned near the front of said vehicle to introduce a gas film around a major portion of the surface thereof, gas withdrawal means associated with said vehicle to maintain the thickness of said film at a predetermined value, and gas deflecting means on at least a portion of the surface of said vehicle to reduce the shear stress exerted on said water by said gas film to maintain a laminar water boundary layer adjacent said film.

3,016,866
BUOYANT PRESSURE VESSELS FOR GASES
Harry H. Walker, P.O. Box 3565, Beirut, Lebanon
Filed Sept. 12, 1960, Ser. No. 55,254
4 Claims. (Cl. 114—74)

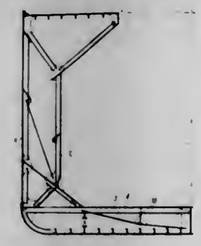
1. A vessel for the marine transport of liquid or gaseous cargoes by towing comprising an inner tubular cargo containing structure, an enclosing outer chamber defined by spaced inner and outer skins, a partition horizontally dividing said chamber to define an upper buoyancy compartment and a lower water ballast compartment to cause the vessel to float in an upright position, the overall depth of the vessel being several times greater than its width,

means for forcing air under pressure into the ballast compartment to expel the water ballast contained therein to cause the vessel when about to enter shallow waters to turn about a horizontal axis into a horizontal position



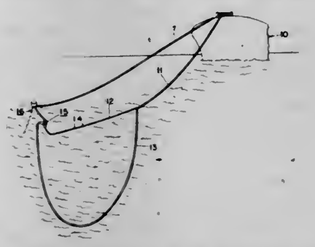
to very materially reduce its draft, and means for flooding the said ballast compartment with water when it is desired to return the vessel to an upright deep draft position.

3,016,867
SHIP'S HULL CONSTRUCTION
Vincent Albiach, 76 Rue Spontini, Paris, France
Filed Jan. 2, 1957, Ser. No. 632,140
Claims priority, application France Jan. 7, 1956
4 Claims. (Cl. 114—79)



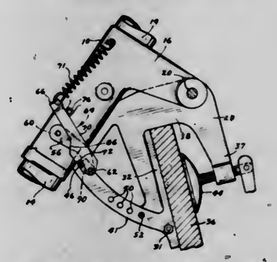
1. In a ship's hull particularly in the hull of a bulk and ore carrier, comprising a bottom, a deck and a shell defining side walls, in combination, a plurality of first platings connected with each other and constituting said deck; a plurality of second platings connected with each other and constituting said bottom; a plurality of first rib members spaced from each other and extending in longitudinal direction of said hull and attached to said first platings for bracing and stiffening same; a plurality of second rib members spaced from each other and extending in longitudinal direction of said hull and attached to said second platings for bracing and stiffening same; a plurality of third platings connected with each other and constituting one side wall; a plurality of lateral frame structures spaced from each other and extending substantially vertically and being attached to said third platings for bracing and stiffening same; an intermediate floor extending substantially parallel with said bottom between said side walls and adjacent to but spaced from said bottom to define a ballast room; keelson means extending longitudinally along said bottom; a plurality of transversal frame structures spaced from each other and supporting said intermediate floor for bracing and stiffening the latter, said transversal frame structures being attached to said keelson means and having ends directly connected to said lateral frame structures while bypassing said second rib members so as to transmit a substantial part of the load that may be imposed by cargo on said intermediate floor, to said shell of said hull, each of said transversal frame structures being unconnected to the other transversal frame structures by stress-transmitting reinforcements and constructed to withstand the local stresses imposed by cargo without transmitting them to said other transversal frame structures and said second rib members whereby dangerous superposition of local stresses imposed by cargo in the region of each of said transversal frame structures over the overall girder stresses in the ship structure is prevented.

3,016,868
MAGNETIC MINESWEEPING EQUIPMENT
Charles B. Haas, Crownsville, Md.
Filed Mar. 29, 1960, Ser. No. 18,459
2 Claims. (Cl. 114—235)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Minesweeping apparatus of the magnetic type comprising an electrical cable terminating in a pair of branch conductors each having a fixed inner end and a free outer end and which are payed out from a surface vessel onto the ocean surface, one of said branch conductors being generally rigid and of open loop shape and the other of said branch conductors being buoyant, in combination with an adaptor formed of a rigid brace having an arcuate passageway between its ends, an arcuate conductor in said passageway providing diverging end portions, each of said end portions forming a connector means, one of said connector means receiving the free end of one branch conductor and the other connector means receiving the free end of the other branch conductor and forming a closed loop conductor structure, said brace having an attaching portion generally centrally thereof and which is disposed between and diametrically opposite its diverging ends, and a link on said attaching portion receiving a tow line which is manipulable from the surface vessel for positioning the closed loop conductor structure as desired.

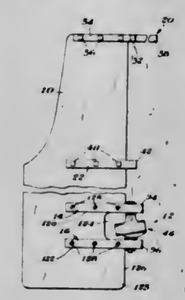
3,016,869
OUTBOARD MOTOR TILT MECHANISM
Glenn R. Anderson and John H. Klancke, Minneapolis, Minn., assignors to McCulloch Corporation, Scott Division, Minneapolis, Minn., a corporation of Minnesota
Filed Jan. 23, 1961, Ser. No. 84,258
7 Claims. (Cl. 115—17)



1. In an outboard motor, a transom bracket adapted for fixed attachment to the transom of a boat disposed above the surface of the water in which the boat is afloat, a normally upright propulsion unit having a driven pro-

peller at its lower end, means on said propulsion unit for reversing said propeller, said propulsion unit being pivoted to said transom bracket on a horizontal axis for tilting movement between a preselected upright operating position with the propeller relatively deeply submerged in the water and a preselected forwardly tilted operative position with the propeller less deeply submerged in said water, locking means acting between said propulsion unit and transom bracket for releasably locking said propulsion unit in said upright operating position, control means for releasing said locking means whereby reverse rotation of said propeller will swing said propulsion unit about said horizontal axis toward said tilted position, a second locking means acting between said propulsion unit and said transom bracket for locking the power unit in said preselected tilted position, and said two locking means having separate catch pins mounted on the transom bracket in spaced positions on a common arc of said horizontal axis.

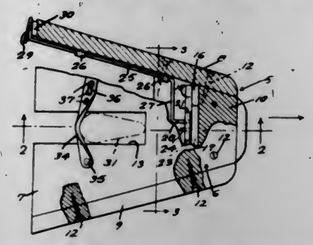
3,016,870
RUDDER AND PROPELLER DRIVE SHAFT SUPPORT ASSEMBLY
Charles D. Van Patten, Carp Lake, Mich.
Filed Apr. 6, 1959, Ser. No. 804,228
8 Claims. (Cl. 115—35)



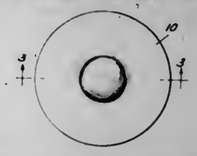
2. An improved rudder and propeller drive shaft support assembly comprising in combination a rudder and a trunnion-bearing assembly, attaching means for attaching said trunnion-bearing assembly to said rudder adjacent the forward edge and near the lower end of said rudder, said trunnion-bearing assembly comprising a support member and a guide member, each rotatably mounted in coaxial relation in said attaching means for attaching the trunnion-bearing assembly to said rudder, and a bearing body disposed between said support member and said guide member, said bearing body being pivotally attached to said support member and adapted to slideably engage said guide member, said bearing body having an internal bearing surface adapted to receive the end portion of a propeller shaft, and said trunnion-bearing assembly and said rudder having a common axis of rotation.

3,016,871
SPEED REDUCING ATTACHMENT FOR AN OUTBOARD MOTOR
Belvin Edwards, Pelahatchie, Miss.
(Rte. 1, Box 141, Brandon, Miss.)
Filed Mar. 16, 1960, Ser. No. 15,318
3 Claims. (Cl. 115—42)

1. A speed reducing attachment for an outboard motor comprising a housing formed of a non-foraminous material having an open rear end, said housing including a front wall having bores extending therethrough for admitting a restricted amount of water into the forward end of the housing, and means detachably securing said housing on the lower portion of the drive shaft housing of an outboard motor whereby the propeller is disposed for rotation within said housing.

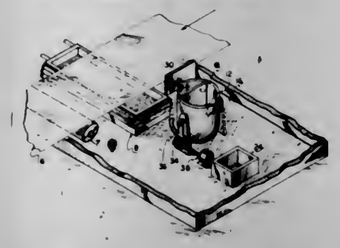


3,016,872
FIRE ALARM STICKER
Vira Hughey, Stigler, Okla.
Filed Mar. 14, 1960, Ser. No. 14,998
3 Claims. (Cl. 116—106)



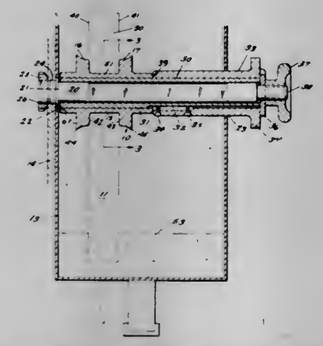
1. A fire alarm sticker comprising, a first non-metallic sheet, a second non-metallic sheet, an explosive charge, said explosive charge secured between said first and second non-metallic sheets, said first and second sheets being sealed together at their peripheries, and an adhesive placed on the outside surface of one of said first or second sheets, whereby said fire alarm sticker will be rigidly secured to a desired location when the adhesive portion of said sticker is pressed thereto.

3,016,873
COATING
Charles A. Baer, Needham, Philip J. Clough, Reading, and Robert W. Steeves, Nahant, Mass., assignors, by mesne assignments, to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Jan. 26, 1959, Ser. No. 789,016
4 Claims. (Cl. 118—49.1)



2. A coating apparatus comprising a vacuum chamber capable of being evacuated to the micron Hg abs. range, an elongated crucible for containing metal to be evaporated, a means for heating said crucible, means for passing a substrate above said crucible for the purpose of coating it with vapors emanating from said crucible, a rotatably mounted melting pot located above said crucible and adapted to be emptied into said crucible, means for feeding aluminum containing oxide to said pot, means for tilting said melting pot at a controlled rate, means for heating said melting pot to a temperature above the melting point of aluminum, said melting pot comprising an inner surface formed of material not reactive with molten aluminum at 1000° C., a pouring lip located adjacent the top of said pot and a separating member adjacent the top of the melting pot dividing the surface area of melt therein into a small portion adjacent to the pouring lip and a large portion on the other side of said separating member to which the feeding means is adapted to feed whereby most of the aluminum oxide can be confined in a surface scum on said large portion of surface and whereby on tilting of the melting pot in pouring the melt most of the melted material must pass beneath said member thereby preventing pouring of said surface scum.

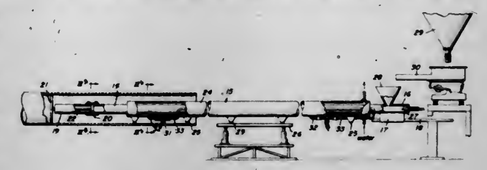
3,016,874
DOCTOR ROLL
Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed July 28, 1958, Ser. No. 751,252
6 Claims. (Cl. 118—262)



6. The combination of a rotatably driven gluing roll partially entered into a glue solution and a doctor roll freely mounted for rotation and operatively positioned in close proximity to said gluing roll to remove excess amounts of glue which may adhere to said gluing roll, means for adjusting the spacing between the axes of rotation of said gluing and said doctor rolls to thereby adjust the thickness of a glue film applied by said gluing roll, said doctor roll having a depression formed in the peripheral surface thereof to receive said gluing roll, said doctor roll being rotated by said gluing roll by means of a glue film positioned between walls, bounding said depression, and the side walls of said gluing roll, said doctor roll also including curved surfaces at the free ends of said walls, said surfaces being outwardly curved from said depression and away from the axis of rotation of said doctor roll, said surfaces having sharp edges opposite the edges bounding said depression.

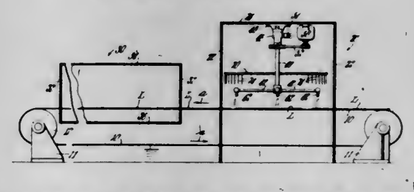
3,016,875
APPARATUS FOR COATING PIPE
William I. Ballentine, Jr., and Richard F. Lottes, Whittier, Calif., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 11, 1958, Ser. No. 779,716
2 Claims. (Cl. 118—306)

1. Apparatus for coating pipe lengths comprising a conveyor for moving the lengths axially and simultaneously rotating them about their axes, means for delivering lengths sidewise onto said conveyor, a boom positioned in alinement with said conveyor and mounted for axial travel into and away from a pipe length thereon, said boom including a conduit having deflector means at one end for a gas-borne stream of coating particles traveling therethrough, particle-feeding and gas-jet means at the other end of said conduit, a spray nozzle carried on the exterior of said conduit inwardly of said one end and



connections from said nozzle to sources of primer liquid and compressed gas, respectively, whereby, when said boom has been inserted in a pipe length, successive coatings of primer and particles are applied to the interior of the length on relative movement of the length and the boom opposite that by which the boom was inserted therein.

3,016,876
APPARATUS FOR ELECTROSTATICALLY SPRAY COATING ARTICLES
John Sedlacsik, Jr., Garfield, N.J., assignor to Interplanetary Research & Development Corp., Garfield, N.J., a corporation of New Jersey
Filed Oct. 27, 1958, Ser. No. 769,633
8 Claims. (Cl. 118—631)

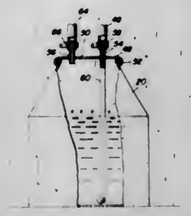


1. Apparatus for applying coating material to an article comprising a conveyor for carrying said article, applicator means adapted for deposition of said coating material and having a spray discharge means positioned for spraying said coating material substantially by air pressure directly onto said article as it is carried by said conveyor, electrostatic means ancillary to said applicator means to facilitate deposition of said coating material including discharge electrode means positioned substantially rearwardly of said spray discharge means and collector electrode means positioned on the opposite side of said spray discharge means, said article being disposed between said spray discharge means and said electrode whereby, when charged, said electrostatic means electrostatically repels particles of spray deflected from the surface of the article and urges said particles back onto the surface of the article to be coated and in a direction away from the discharge electrode.

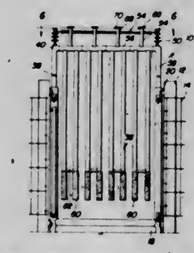
3,016,877
MILK PIPE LINE
Anders V. Sparr, Rte. 2, Waupun, Wis.
Filed Oct. 26, 1959, Ser. No. 848,806
4 Claims. (Cl. 119—14.03)

1. For use in conveying milk by way of a valved milk delivery line from a conventional-type milk filled bucket in a cow barn to a storing and cooling tank in a milk house; a conventional-type milk bucket, a lid fitted airtight atop said bucket, a pressurized air feeding nipple secured to the lid and having a lower end portion depending and terminating in the upper space of

the bucket, a compressed air hose connected communicatively at one end to said nipple and separably connectible at its other end to a valve provided therefor in a compressed air supply pipe, a bucket emptying milk nipple also connected to said lid and having a lower portion depending into said bucket and terminating adjacent the bottom of the bucket and an upper hose connecting portion projecting above the lid, and a separate hose connected with the upper end of said bucket emptying nipple and connectible with the valve provided therefor in said milk delivery line.



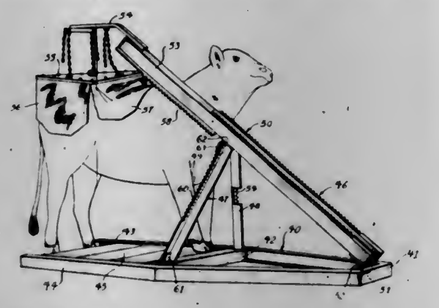
3,016,878
AUTOMATIC HOG GATE
Vincent J. Kallal, R.F.D. 2, Jerseyville, Ill.
Filed July 31, 1958, Ser. No. 752,312
7 Claims. (Cl. 119—155)



1. A hog gate comprising means defining a passageway, a transverse supporting shaft mounted by the defining means, a plurality of depending bars swingably mounted independently on said shaft and forming a closure for said passageway, a transverse abutment disposed in the bottom of the passageway, selectively operable means connected to the shaft for vertically positioning the bars within the passageway to permit two-way swinging thereof and to dispose lower ends of the depending bars on either side of the abutment by engagement therewith to prevent swinging movement of the bars in one direction in relation to the abutment and allowing swinging movement of the bars in the other direction thereby allowing passageway of hogs in the passageway in one direction only, and means pivotally mounted at one side of the gate and swingable across all of said bars for coaction with said abutment to prevent swinging of said bars in either direction when the lower ends of said bars are disposed on one side of the abutment.

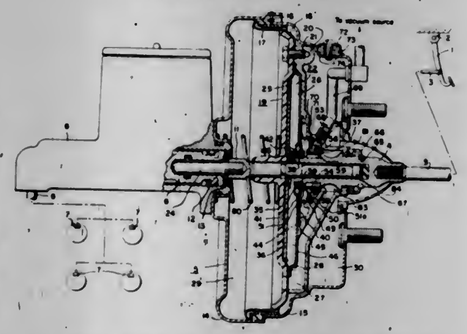
3,016,879
CATTLE TREATING DEVICE
Kelly P. Ryan, Blair, Nebr., assignor to Blair Manufacturing Co., Inc., a corporation of Nebraska
Filed Jan. 23, 1959, Ser. No. 788,699
11 Claims. (Cl. 119—157)

1. A cattle curry comprising a tripod having at least one leg extending to a height sufficient to permit cattle to stand therebeneath, an elongated currying device secured to and extending along the underside of said leg, means operatively associated with each of the legs of the tripod for securing the lower ends of the legs against movement, an oil reservoir generally triangular in plan flexibly suspended from near the top of said one leg and having oil



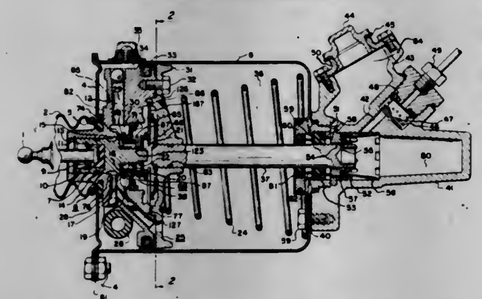
therein, three oiling pads suspended from the reservoir, one arranged to hang down each of the sides thereof in substantially vertical planes and positioned to contact cattle rubbing against said curring device, the top edges of said oiling pads being located above the surface of said oil to contact the oil only when said reservoir is jostled by cattle rubbing against the currying device.

3,016,880
DIAPHRAGM BRAKE BOOSTER
George E. Kellogg, Miamisburg, and William V. Kenzik, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 30, 1960, Ser. No. 52,825
8 Claims. (Cl. 121—41)



1. A brake booster unit comprising, in combination, a forward section of a booster unit, a rearward section of a booster unit, a power wall within said booster unit, a rolling diaphragm having a peripheral bead for reception between said forward and said rearward section of said booster unit casing to provide a permanent seal, a central diaphragm support member in said power wall, said power wall including a reaction compartment, said diaphragm extending through the intermediate portion of said reaction compartment to form a constant pressure cavity and a variable pressure cavity, said power wall separating the interior portion of said booster unit into a variable pressure chamber and a constant pressure chamber, said variable pressure chamber in communication with said variable pressure cavity in said reaction compartment, said constant pressure cavity in said reaction compartment in communication with said constant pressure chamber, valve means contained within said power wall for controlling the evacuation in said variable pressure chamber and said variable pressure cavity to provide power operation of said booster unit and transmit reaction in proportion to the degree of power operation of said booster unit.

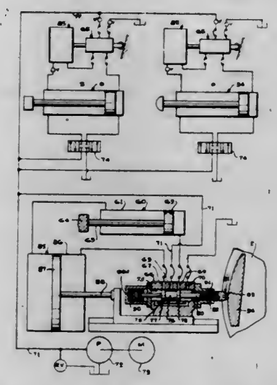
3,016,881
BRAKE BOOSTER UNIT
Carl E. Wilkens and Robert H. Bauman, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,261
9 Claims. (Cl. 121—41)



1. In a power brake booster unit, comprising in combination; a power unit casing, a power wall within said power unit casing directly connected to a power transmitting member, said power wall dividing the internal portion of said power unit casing into two compartments, one compartment being a constant pressure compartment and the other compartment being a variable pressure compartment, a valve mechanism carried within said power wall for controlling the pressure in the variable pressure compartment, a reaction force proportioning device carried within said power wall, a manually operated slidable air valve, said power wall provided with a concentric cylindrical bore therein for receiving said slidable manually operated air valve, an annular vacuum valve portion formed in said power wall concentric with said air valve, a resiliently held valve seat for operating with said vacuum valve and said air valve and mounted concentrically within said power wall, said valve seat biased by resilient means to a closed position on said vacuum valve, resilient means on the forward end of said sliding air valve to bias said air valve in the open position, a reaction plate operatively engaging the forward side of said valve seat resilient member and said air valve resilient member, said reaction plate slidably connected on the forward portion of said sliding air valve, a shoulder on said sliding air valve to limit the rearward movement of said reaction plate in relation to said sliding air valve, said reaction proportioning mechanism contained within said power wall operating directly from said power transmitting member and including said reaction plate, said reaction device and said resilient members to provide a resilient feel on said manually controlled air valve in seating said reaction plate on said shoulder of said sliding air valve during the initial operation of said power unit.

3,016,882
METAL FORMING MACHINE AND REVERSIBLE HYDRAULIC CONTROL THEREFOR
Robert F. De Marco, Mentor, Ohio, assignor to The Cyril Bath Company, Solon, Ohio, a corporation of Ohio
Filed Jan. 8, 1959, Ser. No. 785,666
3 Claims. (Cl. 121—41)

1. Control means comprising a follow-up valve including a body having a central bore and an inlet port, an outlet port, and a pair of cylinder ports, all of said ports being connected with, and spaced from each other axially of, said bore, a spool coaxial with and slidable endwise in said bore and having axially spaced lands cooperable with the ports and operable upon movement of the spool in one direction for connecting one cylinder port to the inlet and the other cylinder port to the outlet port, and then progressively increasing the flow of fluid through said one cylinder port, and operable upon axial movement of the spool in the opposite direction successively to decrease gradually the flow through said one cylinder port, to disconnect said one cylinder port and the inlet port and to connect the other cylinder port to the inlet port and said one cylinder port to the sump, to increase gradually the flow of fluid through said other cylinder port, and upon axial movement of the spool back in said one direction from the position in which said other cylinder port is fully connected to the inlet port, successively to decrease gradually the flow of fluid through said other cylinder port, a first resilient means operatively interposed between the spool and body for yieldably urging

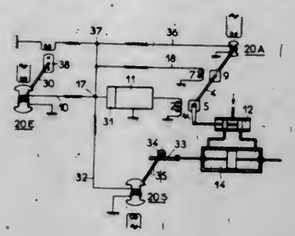


the spool in one of said directions relative to the body, a movable operating element adapted to be driven by extraneous means to different positions, a second resilient means operatively interposed between the element and spool for yieldably transmitting force between the element and the spool, when the element is so moved, for yieldably urging the spool in the opposite of said directions relative to the body and for yieldably transmitting force from the first resilient means through the spool to the element for urging the element to move with the spool in said direction of movement of the spool, means adapted for operatively interconnecting the body to additional extraneous means for moving the body axially in opposite directions, respectively, upon operation of the additional extraneous means, independently of the movement of the spool by the two resilient means, the two resilient means being operable to apply balanced forces to opposite ends of the spool in one relative position of the body, spool, and element, and one of said resilient means having a predetermined rate, and the rate of one resilient means being different from, and in a preselected ratio to, the rate of the other resilient means.

3,016,883
HYDRO-ELECTRIC SERVO MECHANISMS
Jacques Faisandier, 33 Blvd. Felix-Faure, Chatillon-sous-Bagneux, France
Filed Mar. 6, 1959, Ser. No. 797,654
Claims priority, application France Mar. 24, 1958
4 Claims. (Cl. 121—41)

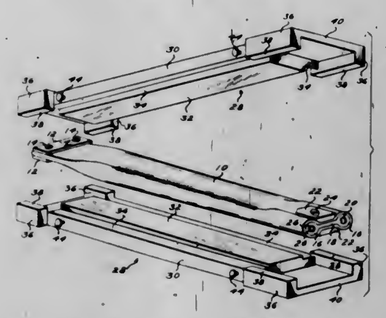
1. In a hydro-electric servo control mechanism of the type in which the final position of the hydraulic device

is defined by an input voltage, the output movement of the hydraulic device deriving an output voltage providing a feedback voltage and controlling a valve distributor of the hydraulic device, the combination comprising a torque motor having a rotor and normally responsive to combined input and feedback voltages for effecting move-



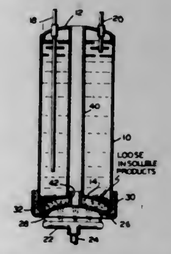
ment of the hydraulic device, a magneto-electric generator having a rotor, the said rotors being connected for rotation, means to combine the input voltage, the feedback voltage, and the output voltage of said generator, said torque motor being electrically connected to be controlled by the combined input and feedback voltages and the output voltage of said generator.

3,016,884
FLUID EXPANSION UNIT
Henry H. Merriman, 751 W. Washington St., Jackson, Mich.
Filed Oct. 31, 1958, Ser. No. 771,113
7 Claims. (Cl. 121—48)



6. In an expansible motor unit adapted to communicate with a pressurized fluid source, an elongated, expandable, flexible walled hose capable of assuming a deflated flattened configuration having opposed sides and a pair of longitudinal folded edges, fittings affixed to and sealing the ends of the hose, said fittings being of a generally flattened configuration and maintaining the ends of the hose in a substantially flattened form, a passageway defined in at least one of said fittings in communication at one end with the chamber defined within the hose and in communication at the other end with the pressurized fluid source, a pair of rigid elongated hose engaging members, a hose engaging surface formed on each of said members in engagement with one of the opposed sides of the hose, a pair of elongated longitudinally extending recesses defined in at least one of said surfaces adapted to receive the folded edges of the hose, recesses defined in said hose engaging members adjacent the ends of said hose engaging surfaces receiving said fittings, said surfaces being of a longitudinal length substantially equal to that of the expandable portion of said hose, wall elements defined on said hose engaging members defining the width of said fitting receiving recesses and extending at right angles to the plane of said hose engaging surfaces and means maintaining said hose and hose engaging members in assembled relation.

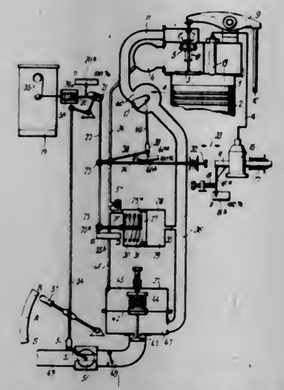
3,016,885
ELEVATED TEMPERATURE CLOSED LIQUID HEATING SYSTEMS
David G. Vandenburgh, Wayne W. Binger, and Basil M. Ponchel, New Kensington, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 15, 1958, Ser. No. 748,666
2 Claims. (Cl. 122—17)



1. In a closed elevated temperature liquid heating system comprising a liquid storage tank and a directly fired end closure crown sheet supporting a layer of loose insoluble deposits accumulated in the liquid within the closed system, said system having an audible noise level of operation in response to flash vaporization of liquid beneath the layer of loose insoluble deposits during pressure drop in the closed system below the rated capacity thereof in the absence of the insoluble deposits, the improvement comprising a heat deflecting means disposed between the exposed bottom surface of the end closure crown sheet and its direct firing means, said heat deflecting means comprising a marginally flanged pan spaced from the exposed bottom surface of the end closure crown sheet and having its marginal flange spaced from the exposed side wall of the storage tank and extended upwardly less than the axial length thereof, and an insulating material confined between the exposed bottom surface of the end closure crown sheet and exposed side wall of the storage tank and the heat deflecting pan, whereby the said system is operational at rated capacity in the absence of audible rumbling noise.

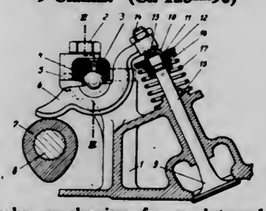
3,016,886
DUAL FUEL ENGINES
Walter Benz, Mannheim-Friedrichsfeld, and Hans Linnenkohl, Mannheim, Germany, assignors to Motoren-Werke Mannheim A.G., vorm. Benz Abt. stat. Motorenbau, Mannheim, Germany, a German company
Filed Sept. 1, 1960, Ser. No. 53,489
9 Claims. (Cl. 123—27)

1. In combination with a dual fuel internal combustion engine capable of operating alternatively on a gaseous fuel together with a small substantially fixed amount of liquid pilot fuel or on liquid fuel alone, a speed governor having a governor rod, a first fuel metering device for said gaseous fuel, a second fuel metering device for said liquid fuel surpassing said small amount, a gas pressure responsive device, a gas pressure regulator for said gaseous fuel, a conduit between said gas pressure regulator and said first fuel metering device for receiving gas under pressure from said gas pressure regulator, an air intake manifold of said engine containing air of varying pressure during operation of said engine, said first metering device having a control rod, said second metering device having a control rack, a two armed lever having three fulcrum points, said pressure responsive device comprising a pressure responsive means travelling in a housing, said housing having a first working chamber on a first side of said pressure responsive means and a second working chamber on a second side of said pressure responsive means, said pressure responsive means being operatively connected with a terminal rod, said terminal rod travelling substantially between positions "no gas pressure" and "full gas pressure," a spring in said first working chamber biasing said pressure responsive means into a position causing said terminal rod to be in the "no gas pressure" position, said governor rod travelling substantially between positions "no torque" and "full load torque," said control rod travelling substantially between positions "closed" and "open" of said first metering device, said control rack travelling substantially between positions "pilot fuel" amount and "full injection quantity" of said second metering device, said governor rod, said control rod and said terminal rod being each connected with a different fulcrum point of said two armed lever, an abutment being linked substantially to the same fulcrum point as said control rod, said control rod being substantially in position "open" when said governor rod is in position "full load torque" and when said terminal rod is in position "full gas pressure" said



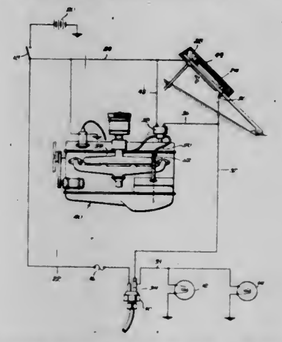
control rack being then in position "pilot fuel" said abutment just touching said control rack, said control rod being substantially in position "open" when said governor rod is in position "full load torque" and when said terminal rod is in position "no gas pressure" said control rack being then in position "full injection quantity" said abutment bearing on said control rack, said control rod being substantially in position "closed" when said governor rod is in position "no torque" and said terminal rod is in position "full gas pressure" said control rack being then in position "pilot fuel" a distance of substantially the same length as the travel of said abutment being between said control rack and said abutment, said governor rod, said terminal rod, said control rod, said abutment and said control rack having intermediate positions depending on the relative positions of said rods, rack and abutment, said first working chamber being connected with said air intake manifold so as to cause the air pressure in said manifold to act on the first side of said pressure responsive means, said conduit being connected to said second working chamber so as to cause said gas pressure in said conduit to be operative on said second side of said pressure responsive means, said gas pressure in said second working chamber being higher than said air pressure in said first working chamber so as to overcome the force of said spring if said terminal rod is in a position other than said "no gas pressure" position.

3,016,887
VALVE GEAR
Alfons Strelt, Carl-Maria-von Weber Str. 45, Leverkusen, Germany, and Alfons Stwiorok, Hauptstr. 193, Koln-Merkenich, Germany
Filed Oct. 3, 1958, Ser. No. 768,516
9 Claims. (Cl. 123—90)



1. In a valve mechanism for an internal combustion engine, a support member, a rocker arm member, one of said members having a spherical portion and the other of said members having a semi-spherical recess receiving said spherical portion whereby said rocker arm member is positioned against said support member for universal movement relative thereto, and spring biasing means interposed between a part of said rocker arm member and a part of the valve means operated thereby to stabilize said rocker arm member relative to said support member.

3,016,888
WASTE CONDENSATION TUBE AND STOP-LIGHT WARNING DEVICE
Grant S. Fortney, 7458 Kingston Ave., Chicago, Ill.
Filed Oct. 27, 1960, Ser. No. 65,415
8 Claims. (Cl. 123—119)

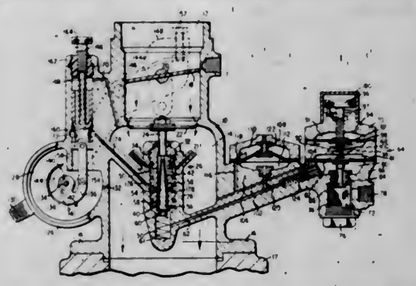


1. The combination with a pedal for a motor vehicle having stoplights and a waste condensation tube from the crank case to the intake manifold of the motor of said vehicle, of a switch associated with said pedal and operable by an operator's foot in actuating the pedal, an electrically operated valve controlling flow in said tube, an electric circuit interconnecting said pedal switch, valve, and stoplights, said pedal switch simultaneously controlling said valve and said stoplights.

3,016,889
FUEL INJECTOR
Frank B. Sweeney, 947 Meigs St., Rochester, N.Y.
Filed July 8, 1958, Ser. No. 747,199
13 Claims. (Cl. 123—119)

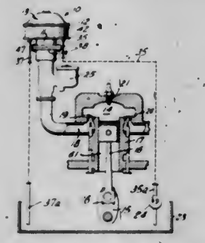
1. A fuel injector for an internal combustion engine having an intake conduit and a fuel line through which

fuel is pumped under pressure, said injector comprising, in combination, fuel metering means in said fuel line responsive to the flow of air into said intake conduit for regulating the flow of fuel in relation to said air flow for controlling the fuel to air ratio, pressure regulating means in said fuel line, said pressure regulating means being responsive to intake conduit pressure for varying



the pressure of the fuel supplied to said metering valve for varying the fuel to air ratio as required by engine load conditions, and air bleeding means open to the atmosphere and communicating with said fuel line, air metering means in said air bleeding means for controlling the quantity of air introduced into said fuel line, said air metering means being responsive to intake conduit pressure for varying the fuel to air ratio.

3,016,890
SYSTEM AND APPARATUS FOR IMPROVING THE OPERATION OF AN ENGINE
Denis M. Bibo, 1 Sampson Place, Long Branch, N.J.
Filed Apr. 26, 1960, Ser. No. 24,757
12 Claims. (Cl. 123—122)



1. In a system for replenishing heat lost by vaporization of fuel in the carburetion chamber of an engine, the improvement comprising apparatus for raising by convection the temperature of air passing through a filter before carburetion takes place including an element in direct communication with the lubricating line of said engine and mounted in the housing of said filter to provide a passageway for the flow of heated lubricant; means responsive to an increase in the load upon said engine for delivering increased quantities of air at higher temperature to the carburetion chamber of said engine and means including an apertured member movable in response to a change in the temperature of said lubricant to divert the flow of said lubricant so as to bypass said element.

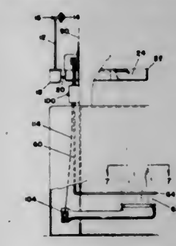
3,016,891
SPEAR GUN
Norbert Ebeling, 109 N. Oxford, Tulsa, Okla.
Filed Dec. 9, 1958, Ser. No. 779,246
8 Claims. (Cl. 124—22)

7. In a spear gun having a short frame and means connected with the frame to hold and release a spear, a muzzle having a sling holder, an end assembly attached to the outer end of the frame, said sling holder adapted to hold at least one sling having a pair of elastics, said end assembly including guide means for slidably receiving and laterally deflecting said elastics, means on the end of said elastics remote from said sling holder adapted to engage in a notch in a spear shaft, said slidably receiving means including means for compressively engaging



said elastics and decelerating the latter in passing through said guide means, said guide means including confronting surfaces between which said elastics are slidably received, said confronting surfaces being spaced apart a distance greater than the diameter of said elastics when in a stretched condition and less than the diameter of said elastics when being returned from a stretched condition to an unstretched condition.

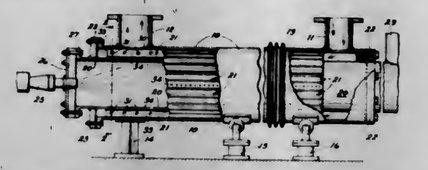
3,016,892
HUMIDIFIER
Erwin J. Sperath, 7230 N. Olcott Ave., Chicago 31, Ill.
Filed June 4, 1958, Ser. No. 739,877
4 Claims. (Cl. 126—113)



1. In a hot air furnace having a hot air plenum and a combustion chamber, a humidifier comprising, in combination, an evaporator pan in the hot air plenum of said furnace, means to maintain a supply of water in said evaporator, a tubular heating element carrying water from said evaporator through a tortuous path through the combustion chamber of said furnace and back to said evaporator, pump means to force a sufficient flow of water through said tubular heating element and back to said evaporator pan to prevent said water from boiling and means to control the speed of said pump.

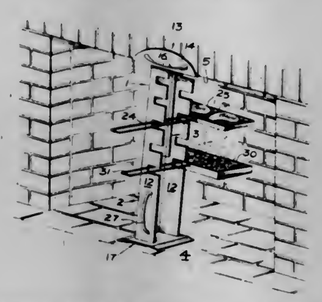
3,016,893
HEATER
John Wesley Brown, Jr., Lakewood, Ohio, assignor to Brown Fintube Company, Elyria, Ohio, a corporation of Ohio
Filed May 29, 1959, Ser. No. 816,795
3 Claims. (Cl. 126—116)

1. A heater comprising an elongated shell tube, a fluid conduit opening laterally into said shell tube, an elongated inner tube within said shell tube and defining with it an elongated annular space having an annular zone adjacent said conduit opening, said inner tube having fixed to its outer surface a plurality of spaced elongated fins which extend into close proximity to the inner surface of said shell tube and which extend longitudinally of said inner tube and into said zone adjacent said conduit opening, said fins being imperforate except in said annular zone wherein they have openings therethrough permitting fluid to flow circumferentially around said inner tube in



said annular zone, and means for supplying heat to the interior of said inner tube comprising a fluid fuel burner disposed adjacent the end of said inner tube located nearest said fluid conduit.

3,016,894
BARBECUE POST
Dennis E. Cleary, Centre St., Dennisport, Mass.
Filed Apr. 16, 1959, Ser. No. 806,929
3 Claims. (Cl. 126—137)



1. A device adapted to be removably held in the forward portion of a fireplace and which portion has upper and lower generally vertically facing opposed sides and laterally facing horizontally spaced opposed sides defining an opening into said fireplace, and a forwardly facing surface along said upper side and which device is adapted to support within said fireplace a food holder having an elongated horizontally extending handle projecting from one side thereof, said device comprising: an elongated, vertically extending, laterally opening channel strip providing a bottom wall and spaced opposed sidewalls extending longitudinally thereof with said sidewalls terminating in laterally facing free edges remote from said bottom wall, separate upper and lower means respectively secured to the upper and lower ends of said strip adapted to engage said upper and lower sides of said fireplace respectively for holding said strip in a generally vertically extending position within said opening into said fireplace with said free edges adapted to face one of the lateral sides of said fireplace; said sidewalls of said channel strip being formed with substantially horizontally aligned pairs of recesses opening outwardly of said free edges at one of their ends, each of the recesses of each aligned pair thereof having upper and lower edges spaced one over the other a sufficient distance for moving the horizontally extending handle of such food holder through the open ends of the recesses of each horizontally aligned pair to a position between the upper and lower edges of each recess of each such pair and for removal of such handle through said open ends free from tilting said handle in any direction relative to horizontal, an upper and a lower edge of a recess of each horizontally aligned pair thereof being adapted to engage the upper and lower sides of such handle at points on said handle spaced longitudinally thereof when the latter is substantially horizontal and within the recesses of one said horizontally aligned pairs for holding said handle horizontal, said upper means including a vertically elongated adjustable strip disposed between said sidewalls of said channel strip and against said bottom wall of the latter and substantially in slidable engagement with said bottom wall and said sidewalls of said channel strip for vertical reciprocable movement relative to said channel strip to an adjusted position projecting upwardly from the upper end of said channel strip, means for releasably securing said channel strip and said adjustable strip together in said adjusted position, a horizontally disposed plate secured to the upper end of said adjustable strip adapted to engage the upper side of said fireplace and stop means integral with said plate projecting upwardly from an edge thereof adapted to engage said forwardly facing surface of said forward portion of said fireplace to support the upper end of said channel strip against falling into said fireplace when said lower means is against said lower side of said fireplace.

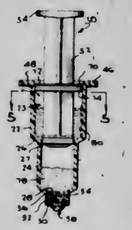
3,016,895
INJECTOR FOR SUBCUTANEOUS IMPLANTATION OF SOLIDS
Roberto Sein, Rio Piedras, Puerto Rico, assignor to Pan American Laboratories, Inc., Rio Piedras, Puerto Rico
Filed Aug. 1, 1958, Ser. No. 752,622
3 Claims. (Cl. 128—217)



1. A pellet implanter comprising in combination a barrel having an open end and a closed end provided with a central aperture, a pair of transversely spaced ears provided at and projecting longitudinally beyond the open end of said barrel, a pellet holding an injecting unit pivotally mounted between said ears for swinging movement about an axis transverse of the barrel, said unit including a body member disposed adjacent the open end of the barrel and pivoted to said ears, a tubular extension provided on said body member, said body member and extension having an axial pellet receiving bore disposed in axial alignment with said barrel when said unit is swung to an operative position and a counterbore in said body member at the end of said bore facing the open end of the barrel, said counterbore being of substantially the same diameter as the inside of the barrel and coaxial therewith when the unit is in its operative position but being oriented laterally with respect to the barrel when said unit is swung to a position for loading a pellet into said bore, said bore being substantially smaller in diameter than said counterbore, an injector needle coaxial with and separably connected to said body member extension and having a pellet passage therethrough in alignment with said bore, yieldable means provided between said needle and said extension for retaining a pellet in the portion of the bore in said extension, a sleeve slidable in said barrel and having an end portion projectable through the open end of the barrel into said counterbore for axially aligning said unit with the barrel and releasably locking the unit in its operative position, said sleeve being hollow and having closed ends provided with coaxial openings, an ejecting rod extending slidably through said openings of said sleeve and through said aperture in the closed end of the barrel, an end portion of said rod projecting from said one end portion of the sleeve receivable in said counterbore being

receivable in the portion of said bore in said body member to assist the sleeve in axially aligning said unit with the barrel and releasably locking the unit in its operative position, said end portion of said rod being engageable with a pellet in said bore to propel the pellet past said yieldable means and through the passage in said needle during sliding of the rod in said barrel and sleeve in the direction of said unit, abutment means provided on said rod within said sleeve and engageable with the closed end of the sleeve adjacent the closed end of the barrel for simultaneously withdrawing the rod from said bore and said sleeve from said counterbore during sliding of the rod outwardly through the closed end of the barrel whereby to unlock said unit and permit swinging thereof to the pellet loading position, resilient means interposed between the closed end of the barrel and the adjacent closed end of the sleeve for urging the latter into said counterbore when said unit is axially aligned with the barrel, and cooperating handle means provided at the closed end of the barrel and at the end of said rod projecting through the closed end of the barrel for sliding said rod.

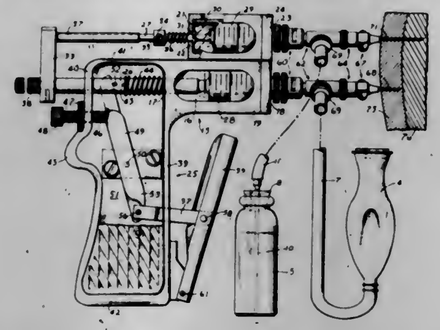
3,016,896
DISPOSABLE HYPODERMIC SYRINGE
Wilton E. Van Sickle, 621 Peach St., P.O. Box 1983, Lincoln, Nebr.
Filed Jan. 26, 1960, Ser. No. 4,742
4 Claims. (Cl. 128—218)



1. A hypodermic syringe comprising an elongated hollow cylindrical barrel having an inwardly projecting shoulder at one end thereof from the innermost end of which projects an elongated hollow cylindrical barrel extension, said innermost end of said shoulder and adjacent portions of said barrel forming a piston seat, an end wall extending across the outer end of said barrel extension, means on said end wall for connecting a cannula thereto in open communication with the interior of said barrel extension, a plunger mounted for reciprocation within said barrel and barrel extension, a piston mounted on one end of said plunger, said piston normally seating against said seat and being reciprocable within said barrel extension, a second piston mounted on said plunger intermediate its ends, said second piston being reciprocable within said barrel and being normally located adjacent the other end thereof, said pistons dividing said syringe into a pair of chambers, and said barrel having an opening extending transversely therethrough adjacent said other end of said barrel, said opening being disposed proximate the outer side of said second piston when the latter is in its said normal position.

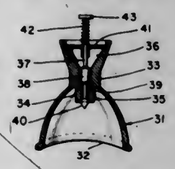
3,016,897
INJECTION MEANS FOR INJECTING SERUM, VACCINE, VIRUS AND THE LIKE INTO ANIMALS, AND METHOD
John W. Kendrick, 536 Anderson Road, Davis, Calif.
Filed Jan. 13, 1959, Ser. No. 786,475
3 Claims. (Cl. 128—218)

1. An injection device for injecting a serum and a vaccine, virus and the like into an animal comprising; a body having a pistol grip portion therein adapted to be gripped by the fingers of one hand of a person, a pair of separate metering chambers within said body adapted for respectively holding a serum and a vaccine to be discharged therefrom, a pair of hollow, parallel, spaced injection needles in side by side relation projecting from a side of said body and carried thereon in communication with said chambers respectively, movable means movable within each of said chambers for substantially



simultaneously ejecting the serum and vaccine therefrom and from said needles, a finger actuatable movable member alongside said pistol grip portion adapted for actuation for movement by the hand grasping said pistol grip portion, and means connecting said movable means with said movable member for simultaneously moving said movable means to effect the ejection of serum and vaccine from said chambers, and containers connected with said chambers for supplying the latter with a serum and a vaccine and the like.

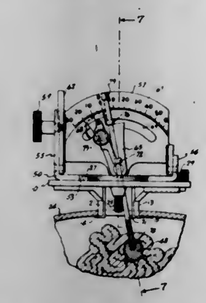
3,016,898
COMBINATION EYE CUP AND EYE FLUID APPLICATOR
Weldon C. Erwin, 8939 State St., Southgate, Calif.
Filed Sept. 8, 1959, Ser. No. 838,714
5 Claims. (Cl. 128—249)



1. In an eye cup: an auxiliary fluid receiving chamber opening to the exterior of said cup; a passage communicating between said chamber and the interior of said eye cup; and, a manually operable, elongated integral stem and valve member coupled to said eye cup and protruding outwardly of said chamber for opening and closing said passage.

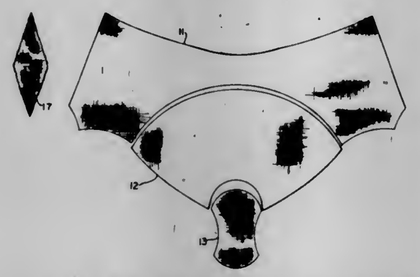
5. A combination eye cup fluid applicator comprising: an opaque cup member defining at its open end an eye piece; a fluid receiving chamber opening to the exterior of said cup, said chamber being integrally formed with said cup; a passage communicating from said chamber to the interior of said cup at a point spaced from said open end; a valve stem coupled to said cup and operable from a first position to a second position; first valve means formed on said stem at the chamber inlet to said passage, said first valve means being open in said first position and closed in said second position; second valve means formed on said valve stem at the cup end of said passage, said second valve means being closed in said first position and open in said second position.

3,016,899
SURGICAL INSTRUMENT
Carl B. Stenvall, Portchester, N.Y.
(15 River St., New Rochelle, N.Y.)
Filed Nov. 3, 1958, Ser. No. 771,425
2 Claims. (Cl. 128—348)



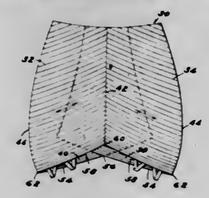
1. A surgical instrument for use in brain surgery wherein a tube or the like is to be inserted through an opening in the skull into a predetermined area of the brain, comprising a platform having an opening therein, clamps carried by said platform and disposed on opposite sides of said opening and adapted to be inserted in said skull opening, means spreading said clamps for gripping said skull, a base, means clamping said base to said platform, a bracket pivotally mounted on said base, guide means including an indicator for adjusting said bracket to a predetermined angular position with respect to said base, a guide member pivoted to said bracket for adjustment about an axis normal to the axis of said bracket, means including an indicator for adjusting said guide member to a predetermined angular position with respect to said bracket for thereby aligning said guide member with said predetermined brain area, said guide member being adapted to slidably hold said tube for insertion therealong through said opening into said predetermined area, and means associated with said guide member to clamp said tube thereon.

3,016,900
GARMENT
Jack Title, 350 Tait St., St. Laurent, Quebec, Canada
Filed Sept. 18, 1959, Ser. No. 840,953
Claims priority, application Canada Oct. 30, 1958
2 Claims. (Cl. 128—528)



1. A close fitting bifurcated pants garment adapted to extend from the waist to the crotch of the wearer and having leg openings, said garment comprising a top rear panel having a relatively narrow continuous central portion encircling at least a portion of the waist and a one piece lower rear panel, said top rear panel being primarily stretchable in a horizontal direction and substantially less stretchable vertically, said lower rear panel being stretchable primarily vertically but substantially less stretchable horizontally, said lower rear panel covering a substantially larger area of the rear of the garment than the relatively narrow portion of the top rear panel, said panels being joined by a bow-shaped seam extending from one leg opening across the top rear of the garment to the other leg opening whereby the vertical stretch of the lower rear panel is translated to a horizontal stretch of the top rear panel along a bias.

3,016,901
GIRDLE
Maude Constance Fridolph, 269 Crescent Bay Drive, Laguna Beach, Calif.
Filed Apr. 30, 1959, Ser. No. 810,157
15 Claims. (Cl. 128—548)



1. A girdle comprising a front portion and a rear portion connected together along their side edges to form a body encircling garment, the opposite side edges of said front and rear portions being of arcuate contour and curving inwardly and downwardly adjacent the lower portion of the garment such that when on the wearer the opening defined by the lower end of the garment is of smaller cross section than the cross section of the garment in a horizontal plane above said lower end in the lower portion of the garment, said front portion comprising a pair of similarly shaped panels oppositely arranged and connected together by a vertically extending center seam, said rear portion of the garment comprising a pair of similarly shaped, oppositely arranged panels having central overlapping portions, the overlapping portion of each of said last mentioned panels being secured to the overlapped portion of the other panel along a line spaced laterally inwardly from the adjacent side edge of the garment, the lower edges of the front and rear portions of the garment converging from the center front and the center back of the garment downwardly at each side of the garment such that when on the wearer, the garment extends generally from the waist downwardly at each side to adjacent the lower end portions of the gluteus maximus muscles at the thigh whereby the garment encircles each gluteus maximus muscle substantially completely to provide an uplift action thereto without substantial circumferential restriction in the lower portion of the thighs.

3,016,902
ADJUSTABLE FILTER TIP
Donald Lipp, 311 E. 80th St., New York 21, N.Y., and Gerald C. Nash, 645A Shaler Blvd., Ridgefield, N.J., assignors of one-half to Louis Stein, Deal, N.J.
Filed July 29, 1960, Ser. No. 46,232
6 Claims. (Cl. 131—10)

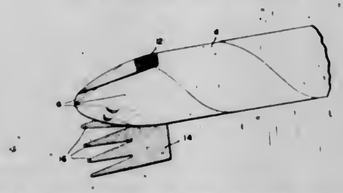
1. In a cigarette having a filter attached to one end thereof, an adjustable filter comprising a casing secured to and rotatable relative to the main body of the cigarette,

a collapsible and expandable filtering element within the casing, and means secured to the main body of the



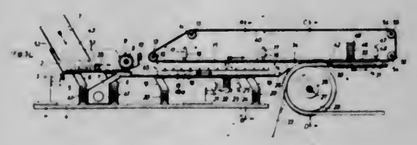
cigarette and to the filtering element for compressing or expanding the filtering element responsive to rotation of the casing relative to the main body of the cigarette.

3,016,903
CIGAR
Rush D. Touton, Wynnewood, Pa., assignor to Wurton Machine Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 25, 1960, Ser. No. 24,427
5 Claims. (Cl. 131—11)



1. A cigar comprising a binder sheet having a scalloped edge adjacent the head end of the cigar, a tobacco filler contained within said binder sheet, and a wrapper overlying said sheet and said strip, the head of said cigar being of reduced diameter and said scallops being overlapped.

3,016,904
METHOD AND EQUIPMENT SUITABLE FOR THE FORMATION OF CUT TOBACCO STRANDS IN CIGARETTE MAKING MACHINES
Alfred Schmermund, % Maschinenfabrik Alfred Schmermund, Gevelsberg, Westphalia, Germany
Filed Mar. 9, 1960, Ser. No. 13,770
Claims priority, application Germany Mar. 16, 1959
14 Claims. (Cl. 131—66)



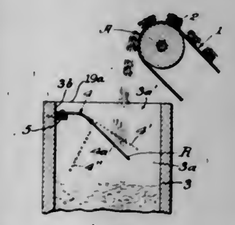
5. Apparatus for the production of tobacco strands from which cigarettes and the like may be cut into desired lengths comprising a travel chute having confining side walls, means for feeding a stream of tobacco fibers into said chute, means for moving the tobacco fibers along said chute, an endless belt mounted above the chute having a portion thereof facing the chute, and electrostatic means for causing the tobacco strands to be lifted from the chute onto a facing surface of the endless belt.

3,016,905
METHOD AND APPARATUS FOR AFFIXING THE MOUTHPIECE OR TIP ON CIGARETTES
Richard Creuzburg, Hamburg-Bergedorf, Germany, assignor to Kurt Korber & Co., K.G., Hamburg-Bergedorf, Germany
Filed Oct. 7, 1955, Ser. No. 539,243
Claims priority, application Germany Oct. 13, 1954
7 Claims. (Cl. 131—94)



7. In an apparatus for applying filter tip bands to assembled cigarettes and filter units, a machine frame, a roller rotatably supported by said machine frame, a pair of discs arranged one on each side of said roller, a series of equidistantly spaced circumferentially arranged rods in slightly spaced relation from said roller and journaled with their ends in said discs, means for rotating said roller in a counter-clockwise direction, gear means for rotating said discs in a clockwise direction, guide means extending about said roller to hold cigarettes in driving contact therewith and between said rods, an endless flexible belt forming a portion of said guide means and having driving contact with certain of the cigarettes between said rods, means for rotating said rods at directions corresponding to the direction of rotation and travel imparted to said endless belt so that the cigarettes will be in driven contact with the rods at diametral points, and a rotary drum having an enlarged peripheral portion provided with openings so that reduced pressure within the drum will cause a cigarette filter tip band to be applied to the lowermost cigarettes and filter unit during its rotation and thus become wrapped about the filter unit and adjacent inner ends of said cigarettes.

3,016,906
DEVICE FOR LOOSENING AND DISTRIBUTING OF TOBACCO OR THE LIKE MATERIAL
Otto Peters, Sanmannreihe, Hamburg-Lohbrugge, Germany, assignor to Kurt Korber & Co. K.G., Hamburg-Bergedorf, Germany
Filed Nov. 12, 1957, Ser. No. 695,693
Claims priority, application Germany Nov. 15, 1956
7 Claims. (Cl. 131—108)



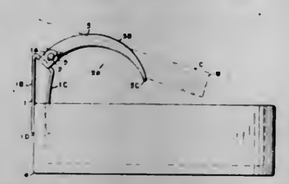
1. In a device for loosening and distributing tobacco and the like material, means forming a chamber which is open at its upper end and formed by approximately vertical walls, gravity feed means spaced above said

chamber for introducing the material to be loosened and distributed into the open upper end of said chamber, and substantially flat yieldable leaf spring members arranged in spaced relation within said chamber, said leaf spring members being rigidly secured to one of the vertical walls and with their outer ends being free and projecting obliquely downward and extending into the path of the material during its free gravity fall, the leaf spring members having such a yieldability that they perform an oscillating movement solely by the impact of the falling material when engaged by the material introduced into the upper end of said chamber, the major portion of the length of each of said leaf spring members including its free end lying in a single plane in said oblique direction when at rest, said leaf spring members extending beyond the central portion of said chamber with their free ends terminating in spaced relation from the wall of said chamber opposed to said one vertical wall.

3,016,907
MANUFACTURE OF TOBACCO
Sheldon Rosenberg, Westport, and Otto Karl Schmidt, Springdale, Conn., assignors to International Cigar Machinery Company, Inc., a corporation of New Jersey
No Drawing. Filed Oct. 19, 1959, Ser. No. 847,053
2 Claims. (Cl. 131—140)

1. In the manufacture of tobacco sheet from finely divided tobacco and an adhesive, the step of controlling sheet surface dustiness arising in the manufacture of sheets containing a relatively high proportion of tobacco dust, which comprises applying to the surface thereof a tacky material in liquid condition selected from the group consisting of methyl cellulose, dextrins, pectins, alginates, starches, guar, locust bean gum, gum karaya, gum tragicanth, amylose, carboxymethylcellulose, honey, corn syrup, molasses and apple syrup in an amount sufficient to suppress dust loss.

3,016,908
CIGARETTE HOLDER
Joseph V. Vasey, 8053 Bagley, Seattle, Wash.
Filed Oct. 12, 1959, Ser. No. 845,716
1 Claim. (Cl. 131—240)



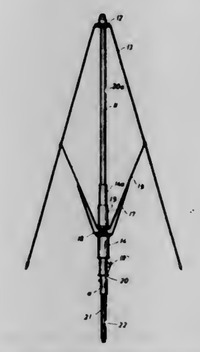
A cigarette holder including a substantially U-shaped member having spaced resilient leg portions biased toward each other and adapted to clamp onto an ash tray, said U-shaped member having upstanding spaced parallel ears having apertures adapted to receive a hinge pin therein and a cradle member having spaced downwardly depending parallel ears at one end portion having apertures adapted to receive said hinge pin therein to support said cradle over said ash tray, the cradle being arcuate in side elevation and being downwardly and inwardly inclined with respect to the ash tray and comprising a first transverse substantially horizontally disposed portion adjacent the ears and a second transverse substantially horizontally disposed portion at the free end of the cradle, said horizontal portions being adapted to support a cigarette thereon and a pair of spaced parallel upstanding arcuate portions joining said transverse horizontal portions, said upstanding portions extending upwardly above said horizontal portions providing an elongated opening between said horizontal and upstanding portions and being adapted to retain a cigarette therebetween, said second horizontal portion being sufficiently narrow that when a burning cigarette is placed on the cradle member, it will burn therebeyond and fall through said opening into the ash tray.

3,016,909
HAIR CURLERS
Louise Aby Schrock, 1260 E. 29th Place, Tulsa, Okla.
Filed Mar. 24, 1960, Ser. No. 17,371
2 Claims. (Cl. 132—40)



2. A hair curler for facilitating sleeping thereon and comprising a semi-rigid perforate inner mandrel of substantially cylindrical configuration for retaining a substantially circular cross-sectional configuration during sleeping on the curler, an outer covering of foam material secured to the outer periphery of the perforate mandrel for receiving a lock of hair thereon, said outer covering having the characteristic of inducing the hair to adhere thereto and of a thickness sufficient to provide a cushion for sleeping on the curler while retaining an outer periphery of substantially circular cross-sectional configuration for enhancing the curling operation, said perforate mandrel cooperating with the foam material for facilitating circulation of air to the lock of hair for enhancing drying thereof, an additional layer of foam material provided on the opposed ends of the curler for retaining the hair in the central portion thereof, and pin means to extend through at least a portion of the foam material and perforated inner mandrel for securing the curler to the hair.

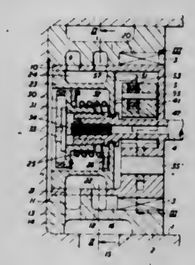
3,016,910
SELF-OPENING UMBRELLA
Karl Rosenkaimer, Leichlingen, Germany, assignor to Rosenkaimer G.m.b.H., Leichlingen, Rhineland, Germany
Filed July 29, 1958, Ser. No. 751,723
Claims priority, application Germany Aug. 1, 1957
1 Claim. (Cl. 135—22)



In an automatically opening umbrella frame, a tubular upper stick part, an inner stick part telescopically received in said upper stick part, a main slide reciprocable on said upper stick part and including an upper reduced diameter portion, an auxiliary slide reciprocably supported on said

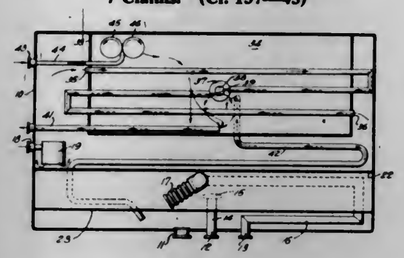
reduced diameter portion, spring means interposed between said slides, constant length rib members substantially the same length as said upper stick part and pivoted on said upper stick part, main struts pivotally connected between said auxiliary slide and intermediate portions of said rib members, auxiliary struts pivotally connected between said main slide and intermediate portions of said main struts, and catch lever means on said upper stick part detachably engageable with said main slide, said main slide including a longitudinally disposed slot therethrough, said upper stick part including a longitudinal slot therethrough in alignment with said main slide slot, said catch lever means comprising a leaf spring disposed longitudinally of said upper stick part, said leaf spring including a transversely curved portion at one end conforming to and juxtaposed on an outer surface portion on said upper stick part below the longitudinal slot of said upper stick part, a retaining collar circumposed about said upper stick part and overlying said transversely curved spring portion for retaining said spring in position, said leaf spring including a laterally projecting portion overlying said upper stick part and extending laterally therefrom and displaceable into said upper stick slot, said leaf spring including at the other end a longitudinally projecting abutment portion extending into said upper stick slot and engageable on the inner surface thereof adjacent said upper stick slot.

3,016,911
FLUID OPERATED PRIME MOVERS
George Frederick Strand, Gloucester, England, assignor to Rotol Limited, Gloucester, England, a company of Great Britain
Filed Apr. 7, 1959, Ser. No. 804,836
Claims priority, application Great Britain Apr. 11, 1958
5 Claims. (Cl. 137—33)



1. A fluid-operated prime mover including a motor having a shaft arranged to be turned by the fluid, a valve housing having a bore coaxial with the shaft and having in its interior surface a circumferential fluid inlet gallery and a circumferential fluid outlet gallery spaced from the inlet gallery, a valve in the bore for controlling the flow of fluid through the motor, and comprising an outer sleeve coaxial with the shaft, and having two sets of ports extending through it, and co-operating respectively with the inlet and outlet galleries, and an inner sleeve coaxial with the shaft and having means for connecting the sets of ports in the outer sleeve, the inner sleeve and outer sleeve being positively connected by a torsion coil spring coaxial with the shaft and located within the inner sleeve, one of the sleeves being rigidly connected to the shaft and the other of the sleeves carrying an abutment, and centrifugal control means comprising a flyweight which contacts the abutment, and is mounted on the shaft by a pivot having an axis which is displaced from the axis of the shaft.

3,016,912
VENTED LIQUID STORAGE TANK WITH PRIORITY SYSTEM OF SUPPLY
Walter C. Klank, Jr., Dayton, Ohio, and Paul R. Hughes, Los Angeles, Calif., assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed Dec. 14, 1959, Ser. No. 859,260
7 Claims. (Cl. 137—43)



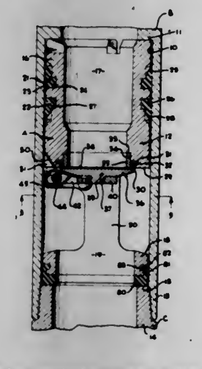
1. A liquid storage tank assuming in use different attitudes with respect to the earth's surface, including a tank shell defining an interior having normal upper and lower portions, a compartment wall having a lower edge terminating in the normal lower portion of the tank interior and defining a storage compartment communicating with the tank interior proper over the said lower edge of said compartment wall, a liquid outlet communicating with said storage compartment, and a liquid inlet delivering liquid to the tank interior in a downwardly directed path, said compartment wall and the adjacent shell surface defining a restricted path for velocity flow of the liquid to the normal lower portion of the tank interior and over the said lower edge of said compartment wall to maintain flow into said storage compartment during inverted and negative gravity flight conditions.

3,016,913
EXPLOSION SAFETY VALVES, ESPECIALLY FOR MARINE ENGINES
Richard Bargmann, Schongau, Germany
(Helgerleinstrasse 106, Vienna 17, Austria)
Filed Feb. 25, 1958, Ser. No. 717,412
Claims priority, application Germany Feb. 25, 1957
3 Claims. (Cl. 137—312)



1. An explosion safety valve comprising, in combination, annular valve seat means; a plurality of elongated supports distributed along, fixed to, and extending axially from one side of said valve seat means, said supports being arranged distant from each other to provide relatively large free spaces between themselves and said supports having free ends distant from said valve seat means; a substantially continuous stop plate extending between and fixed to said supports adjacent the free ends thereof so as to leave said spaces between said supports unobstructed at least in the region of said valve seat means, said stop plate having a peripheral flange extending toward said valve seat means and surrounding said supports and said stop plate being formed with a substantially central boss likewise directed toward said valve seat means; a valve plate formed from sheet metal and offset in the central region thereof for stiffening the plate and so as to form a central recess facing said stop plate, said valve plate being located between said stop plate and valve seat means for movement toward a closed position engaging the latter and away from the latter toward the stop plate to an open position, said peripheral flange of said stop plate adapted to direct flames when said valve plate is in its open position back toward said valve seat means, said plurality of supports being located beyond said valve plate and spaced therefrom; and a coil spring having at one end a convolution engaging said stop plate about said central boss and at its opposite end a convolution engaging said valve plate and located in said recess so that said spring urges said valve plate to its closed position.

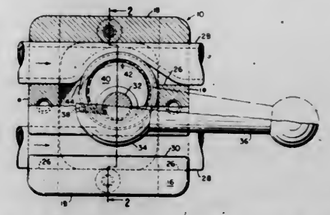
3,016,914
DRILL PIPE FLOAT VALVES
Julian D. Kelthahn, Anaheim, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 14, 1958, Ser. No. 773,976
5 Claims. (Cl. 137—515)



1. In combination: tubular means adapted to form part of a rotary drilling string for drilling a bore hole extending downwardly from the top of the ground; a valve body in said tubular means and having a passage therethrough surrounded by a valve seat; a valve head movable upwardly into engagement with said seat; means pivotally mounting said head for swinging movement about a pivot axis to and from engagement with said seat, said mounting means including a pivot pin, rubber material between said head and pin, and a rubber material between said pin and body; and rubber means acting upon said valve head substantially at its center of gravity for limiting movement of said head in a direction away from said seat, to prevent engagement of said head with said valve body, and to substantially relieve said mounting means of the centrifugal force of said valve head incident to rotation of said tubular means.

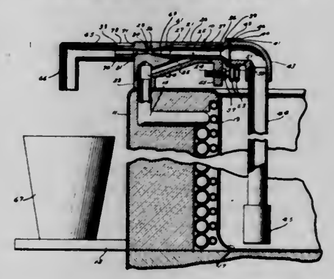
3,016,915
VALVE
Carl A. Moeller, Jr., Randolph, Mass., assignor to Image Transfer Incorporated, Randolph, Mass., a corporation of Massachusetts
Filed Sept. 24, 1959, Ser. No. 842,094
4 Claims. (Cl. 137—595)

1. A double acting valve for controlling fluid flow through a pair of tubes having resiliently deformable walls of predetermined thickness comprising a valve body having a top wall and a pair of spaced apart end walls depending from the top wall, the end walls being provided with two pairs of coaxially aligned tube receiving apertures, the top wall being provided with a slot connecting each pair of apertures for the insertion of the tubes laterally into the apertures whereupon the tubes will extend between said end walls, a tube engageable cylindrical cam eccentrically mounted on said body for rotation about an axis extending at right angles to and between the axes of said two pairs of tube receiving apertures, support means on the body disposed on the side of each pair of tube receiving apertures opposite the cam axis for laterally supporting the sides of tubes supported on said end walls, the axis of said cam being spaced from one end wall a distance greater than the major throw of the cam and being spaced from the other end wall a predetermined distance less than the major throw



of the cam so that in both directions of rotation of the shaft the cam will engage said other end wall to limit rotation of the cam, said predetermined distance being selected so that the major throw of said cam extends from the shaft axis angularly toward said other end wall in both rotational limit positions of the cam, the larger throw of said cam extending at right angles to the axes of said tube receiving apertures when the cam is in either of the limit positions being less than the distance between said side support means and cam axis by an amount less than twice the predetermined wall thickness of the tubes.

3,016,916
CONCENTRATE PROPORTIONER
El Roy J. Kraft, Des Plaines, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Oct. 9, 1957, Ser. No. 689,139
1 Claim. (Cl. 137—604)



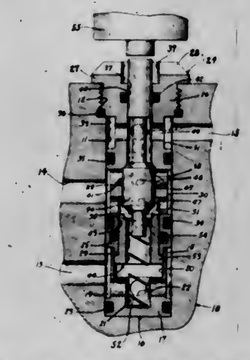
A proportioner for mixing and dispensing liquids of different viscosities comprising a proportioner body, a passageway extending through said body having a throat and having a converging wall portion converging in a downstream direction to said throat and having a diverging wall portion diverging in a downstream direction from said throat, a suction tube sealed to said body and having a portion extending within said passageway in spaced relation from the inner walls thereof and terminating within said converging wall portion of said passageway, means for supplying a first liquid under pressure to said passageway between the inner walls thereof and said suction tube to provide flow of same under pressure in a reducing annular flow path concentrically of said tube along the outer surface thereof and to provide a suction zone in-

side said reducing annular flow path at the end of said suction tube in the converging portion of said passageway to draw a second liquid through said suction tube for mixing with said first liquid, a hollow fitting secured to said proportioner body having a flow passage in communication with said diverging wall portion of said passageway and having a horizontally extending portion, wherein the minimum inner diameter of said flow passage is greater than the maximum diameter of said diverging wall portion of said passageway, means forming an extension from said proportioner body extending into but spaced from the wall of said flow passage within the said horizontally extending portion thereof, and atmospheric venting means formed solely within the uppermost surface of the horizontally extending portion of said fitting and upstream of the outermost end of said means for venting the interior of said flow passage to the atmosphere.

3,016,917
VALVE FOR CONTROLLING PRESSURIZED FLUID

Nathan C. Hunt, Salem, Ohio, assignor, by mesne assignments, to International Basic Economy Corporation, New York, N.Y., a corporation of New York

Filed Aug. 24, 1956, Ser. No. 606,165
3 Claims. (Cl. 137—620)



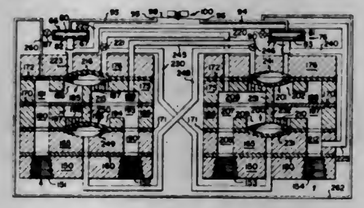
1. A valve for controlling flow of fluid, comprising means providing a valve bore having a first seat extending transversely of said bore, a valve plunger reciprocable within said bore and having longitudinally spaced portions, one of which is engageable with said first seat to control flow of fluid therethrough, a member reciprocable within said bore and providing a second seat engageable with the other of said longitudinally spaced portions of said valve plunger to control flow of fluid through said second seat, said reciprocable member moving relative to said valve plunger to effect sealing and unsealing relationship, and means in part carried by said reciprocable member and in part carried by said bore producing means and providing a fluid chamber which is varied in size by movement of said reciprocable member and which has a restricted opening for entrance and escape of fluid to thereby yieldably oppose rapid movement of said reciprocable member.

3,016,918
SELF CONTAINED DIAPHRAGM VALVE

Milo R. Wentworth, Deerfield, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 30, 1958, Ser. No. 783,890
9 Claims. (Cl. 137—620)

1. A self contained multiple stage pneumatic valve comprising, a manifold section with inlet, outlet and exhaust passages therein, a pair of valve body sections having passages therein which align with the inlet, outlet and the exhaust passages of said manifold section positioned adjacent thereto, said valve body sections forming at least a pair of valve means therebetween with one section having a valve seat and conduits leading to said passages, recesses in the other of said valve body sections, a single diaphragm means positioned between the pair of valve body sections and overlying the recesses to define

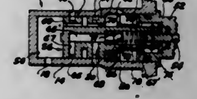


therewith pressure chambers for the valve means and cooperating with the seats to control fluid flow through said passages in said valve body sections, pilot valve means adapted to receive through conduit means fluid from said passages in said valve body sections and operative to control the pressure in said pressure chambers to operate said valve means selectively, and electromagnetic actuator means included with and controlling the operation of said pilot valve means.

3,016,919
OPERATOR FOR CONVERTIBLE TOPS

Lester E. Schutt, Dearborn, Mich., assignor to Dura Corporation, Oak Park, Mich., a corporation of Michigan

Filed July 13, 1960, Ser. No. 42,689
2 Claims. (Cl. 137—621)



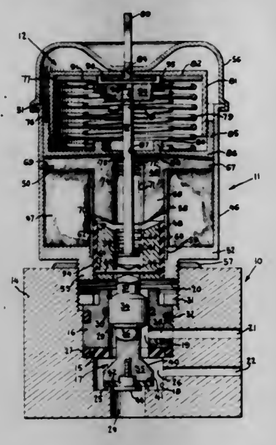
1. In a hydraulic automotive convertible top actuating mechanism having a hydraulically powered cylinder and piston unit for raising and lowering said top, a control valve for controlling said mechanism, said valve comprising a housing having a bore, said housing having pressure and return line ports and a pair of load ports, each port communicating the housing bore to the outside of the housing, a valve spool slidable in the housing bore, yieldable means centering the valve spool in a neutral position in the housing bore, means for actuating the spool to an extreme position in the housing bore from said neutral position, the structure of the spool including a bore within it and a pair of lands having a space therebetween, each land having a groove on it and a passageway communicating the spool bore to the groove, each land having another passageway through it, the extreme position of the spool connecting one of the line ports and the groove on one land and connecting one of the load ports and the groove on the other land, the extreme position of the spool also connecting the other line port and the other load port through said other passageways in both lands, said piston being positioned in a corresponding extreme position by a differential pressure across it in said extreme position of the spool, the neutral position of the spool connecting said one line port and the space between the lands and closing off each groove and the spool bore and interconnecting the line ports through said other passageway in said

other land, the neutral position of the spool also connecting each load port with the interconnected line ports, said one load port being connected directly with said other line port, said other load port being connected with said one line port through said other passageway in said one land, said piston being freely positionable by virtue of the balanced pressures across it in said neutral position of the spool.

3,016,920
SOLENOID OPERATED VALVE UNIT

William A. V. Thomsen, Glen Ridge, Carrel B. Morgan, Packanack Lake, and Bernard W. Quail, Scotch Plains, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey

Filed Aug. 6, 1957, Ser. No. 676,618
2 Claims. (Cl. 137—625.27)



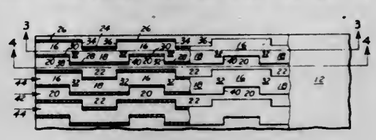
1. A device for controlling the flow of fluid medium comprising in combination a valve body providing an upper cylindrical chamber and a concentric lower cylindrical chamber of larger diameter, said upper chamber being provided with a side inlet opening, said lower chamber being provided with a side outlet opening and an end exhaust opening; a raised annular valve seat adjacent said exhaust opening, said valve seat being coaxial with said chambers and having an outside diameter equal to the diameter of said upper chamber; a second annular valve seat between said inlet opening and said outlet opening; an elongated valve member positioned in said chambers having an enlarged portion in said upper chamber adapted to seal said upper chamber, and a second enlarged portion in said lower chamber provided with a first surface adapted to abut said first valve seat and a second surface adapted to abut said second valve seat.

3,016,921
HEAT EXCHANGE FIN ELEMENT

Albert O. Tadewald, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed Apr. 14, 1958, Ser. No. 728,226
15 Claims. (Cl. 138—38)

1. A heat transfer element for use in a plate type heat exchanger, comprising an elongated metal strip provided with a series of transversely extending rows of longitudinally interconnected projections, said series of projections consisting of first projections and offset projections, depressions between the projections in each of said rows, said offset projections being in alternate rows and being offset from said first projections in the same direction as the preceding row of said offset projections, said first projections of each series of said interconnected projections being on a common centerline in the longitudinal direction, said first projections and said offset projections having two side walls, one of said side walls of said offset projection being longer than the other side wall of said

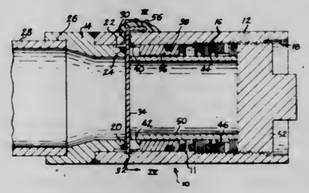


offset projections, said longer side wall of said offset projection overlapping the opposite side walls of the next adjacent first projections in each series whereby the longitudinally inter-connected projections will have bridging material therebetween substantially equal in width in the longitudinal direction to the amount of overlap of said longer side wall to prevent rupture of the heat transfer element.

3,016,922
CONDUIT TERMINAL FITTING

Fred H. Bunnell, 719 Woodfield Drive, Jackson, Mich.

Filed June 27, 1958, Ser. No. 745,191
4 Claims. (Cl. 138—94)



1. In a terminal fitting adapted to be affixed to the end of a conduit, a body, an axial bore within said body in communication with said conduit, a slot defined within said body and opening into said bore, a removable gate positionable within said slot for blocking said bore, an annular projection formed on said body within said bore defining a fixed annular shoulder adjacent said gate, sealing means supported on said shoulder and engageable by said gate, an axially movable metallic sleeve within said bore, spring means baising said sleeve toward said sealing means whereby said sleeve is adapted to engage said gate in a first axial position of said sleeve for maintaining engagement of said gate with said seating means and is adapted to engage said sealing means in a second axial position coincident with said slot upon removal of said gate, thereby sealing said slot with respect to said bore.

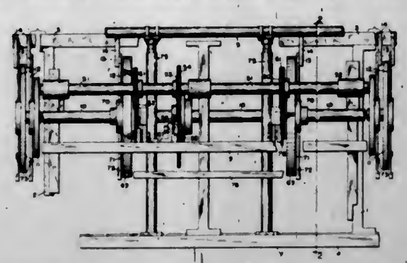
3,016,923
HARNESS MOTION FOR LOOM

Walter Y. Robb, Whitinsville, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Filed June 10, 1960, Ser. No. 35,242
8 Claims. (Cl. 139—46)

1. In a pile fabric loom operating with stationary pile wires and ground warps, a pile warp harness frame which upon a complete reciprocation lifts pile warps from a low position to a high position above the pile wires for shifting of the pile warps transversely over the pile wires, and then lowers the pile warps to said low position, rotary cams effective during a rotation thereof to form different sheds in the ground warps, cam means effective when

rotated to cause a reciprocation of the pile harness frame, and operative connections between the rotary cams and



the cam means causing the latter to rotate at a rate which is a multiple of the rate of rotation of the rotary cams to effect reciprocation of the pile harness frame.

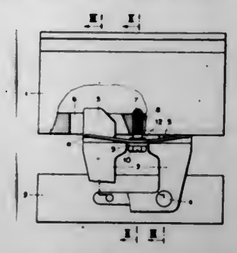
3,016,924
LENO HEALD
Otto Wagner, Horgen, Zurich, Switzerland, assignor to Grob & Co., A.G., Horgen, Switzerland
Filed Oct. 26, 1959, Ser. No. 848,730
Claims priority, application Switzerland Oct. 31, 1958
4 Claims. (Cl. 139—51)



1. In a leno weave heald, a pair of lifting healds each provided with an eye at each end for threading on a pair of heald rods disposed one above the other in a vertical plane, a doup needle, means on each of said lifting healds for supporting said doup needle whereby said doup needle is raised by upwardly movement of either of said lifting healds, and each of said lifting healds having at least one of the two portions thereof extending upwardly and downwardly from said doup needle supporting means to said eyes offset towards the side of said vertical plane facing away from the other lifting heald of the pair, said offset portions being substantially parallel with said vertical plane.

3,016,925
HEDDLE FRAME
Martin Graf, Horgenberg, Zurich, Switzerland, assignor to Grob & Co. A.G., Horgen, Zurich, Switzerland
Filed Feb. 13, 1961, Ser. No. 88,754
Claims priority, application Switzerland May 17, 1960
4 Claims. (Cl. 139—92)

2. A heddle frame comprising in combination: a heddle rod, a rail slotted at the inside, a carrier strap fixedly connected to the said heddle rod and having a single attachment screw only attached to it rotatably but restrained axially, and a spring secured to the said attachment screw against axial movement relative thereto, the said rail longitudinally slotted at its inside having a cor-



responding screw-tapped bore engaged by the said attachment screw and being exchangeably and adjustably connected by it to said heddle rod.

3,016,926
HEDDLE FOR HARNESS FRAMES
Ernst Froehlich, Albisweg 5, Rueschlikon, Zurich, Switzerland
Filed Oct. 6, 1958, Ser. No. 765,439
Claims priority, application Austria Oct. 7, 1957
2 Claims. (Cl. 139—93)



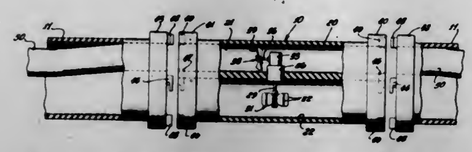
1. A weaving heddle comprising a heddle shaft with a U-shaped hook end and a perforation in the hook end adapted to be filed on a wire so that a plurality of heddles may be removed as a frontal plane assembly from or inserted in a harness frame as a unit, said U-shaped hook end cooperating with a similarly-shaped guide rail when the heddles are mounted in the harness frame.

3,016,927
FILLING CARRIER FOR SHUTTERLESS LOOMS
Edward C. Nichols, Upton, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Mar. 28, 1961, Ser. No. 98,907
10 Claims. (Cl. 139—122)



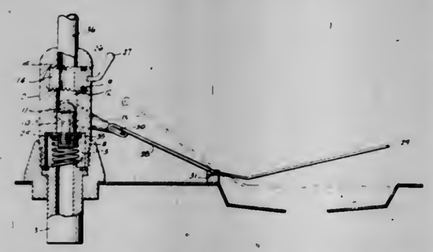
1. That method of inserting picks of filling in a fabric which includes the steps of projecting a loop of the filling from a supply part way through a shed of warp threads and then holding one end of the pick while extending the other end across the remainder of the shed and while so extending the pick subjecting it to a torsional influence tending to twist it in the direction of its original twist.

3,016,928
DEVICE FOR EXTRACTING FUMES FROM LIQUID FUEL STORAGE CONTAINERS
Robert Jay Brandt, Los Angeles, Calif. (2953 Cliff Drive, Newport Beach, Calif.)
Filed Jan. 19, 1959, Ser. No. 787,523
8 Claims. (Cl. 141—45)



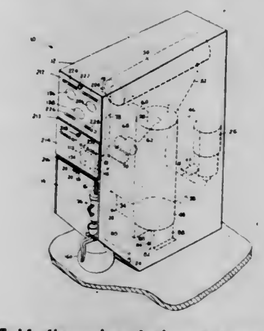
1. A device for extracting fumes from liquid fuel containers comprising a storage container and a receiving container, a fuel supply line from said storage container to said receiving container, an air line of substantially less diameter disposed in said fuel supply line, protruding therefrom at both ends thereof, having one end thereof disposed in the air space in the receiving container and the other end thereof disposed in the air space in the storage container, a float mounted on the end of the air line disposed in the air space in the storage container, an impeller mounted in said fuel supply line, and a suction fan mounted in said air line and connected by gear chain to said impeller whereby, when liquid passes through said fuel supply line toward said container, the impeller revolves, in turn causing the suction fan to draw fumes through said air line from the receiving container and into the storage container.

3,016,929
FILLING MECHANISM FOR GLASSES
Myron S. Rapaport, New Rochelle, N.Y., assignor to Kenco Products Corporation, a corporation of New Jersey
Filed Feb. 12, 1958, Ser. No. 714,864
2 Claims. (Cl. 141—263)



1. A dispensing mechanism comprising a body having a chamber therein, an inlet pipe communicating with said chamber, a passage of greater length than that of said chamber and extending from said chamber to an outlet, said passage being of lesser diameter than said chamber and forming a shoulder with said chamber, said passage being coaxial with said chamber, said shoulder constituting a valve seat, a cam pivoted in said passage, a valve closure in said chamber cooperating with said seat, a cam follower slidably mounted in said passage, on end of said follower being secured to said closure and the other end biased against said cam, said follower being of angular cross-section and contacting the walls of said passage at spaced areas throughout its length, the axis of said cam being transverse to and passing through the axis of said passage, a lever extending from said body, an arm pivotally connected to said lever at a first point and supported at a second point intermediate its length and spaced from said first point and at a lower level than said first point, said arm at the end remote from said first point being provided with a platform adapted to carry a vessel, said arm being actuated by the weight of said vessel on said remote end of said platform, whereby said cam causes said follower to move axially of said passage and to retract said closure from contact with said seat.

3,016,930
FLUID DISPENSING DEVICE
Edward J. Dziedziula, North Massapequa, Ralph R. Pecoraro, West Islip, and Angelo S. Sinatra, Massapequa Park, N.Y., assignors to Ref Manufacturing Corporation, Mineola, N.Y., a corporation of New York
Filed May 21, 1958, Ser. No. 736,771
12 Claims. (Cl. 141—361)

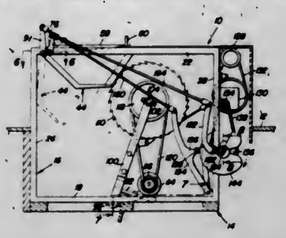


1. In a fluid dispensing device, a source of fluid, a plurality of fluid dispensing outlets, means connected between said outlets and said source to vary the characteristics of the source fluid, normally closed valve means operable selectively to dispense fluids from selected ones of said outlets, pump means operable to connect said plurality of outlets with said source of fluid, means to selectively operate said valve means to dispense fluid from a selected one of said outlets and to operate said pump means with said valve means to move the fluid from said source through said fluid characteristic varying means to said selected outlet, a further fluid dispensing outlet connected directly with said source of fluid, normally closed valve means for said further outlet operable to dispense fluid directly from said source, timer means to control the operation of said pump and selectively operable valve means after a predetermined period of operation, and means connecting said timer means with said pump and selectively operable valve means to render said timer operative with said pump and selectively operable valve means to control the period of operation thereof.

3,016,931
SEMI-AUTOMATIC MULTIBLADE POWER SAW
Alvin F. Brunkow, R.F.D. 1, Nelson, Wis., and James Brunkow, Box 61, Pepin, Wis.
Filed Oct. 30, 1959, Ser. No. 849,838
5 Claims. (Cl. 143—46)

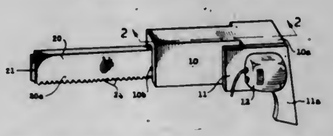
1. An automatic saw comprising, frame means, table means mounted on top of the frame means, hopper means fixedly mounted in the frame means below the table means, hopper closure means movably mounted by the frame means for opening movement above the table means, hopper unloading means movably mounted below the table means, rotating saw blade means movably mounted in the frame means below the table means for movement into and out of the hopper means, and single cycle initiated drive means operatively connected to the hopper closure means, hopper unloading means and saw

blade means for sequentially closing the hopper means, moving the saw blade means into and out of the hopper



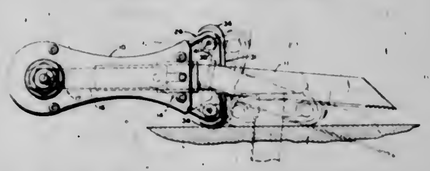
means, unloading the hopper means and opening the hopper means.

3,016,932
POWER OPERATED SAW HAVING OPPOSITELY RECIPROCATING BLADES
John M. Jacobson, Yellowknife, Northwest Territories, Canada
Filed Aug. 18, 1959, Ser. No. 834,437
6 Claims. (Cl. 143—68)



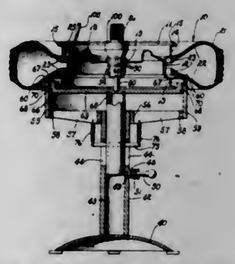
1. A portable power operated saw having two oppositely reciprocating members, one of said members comprising a unitary pair of toothed laterally spaced parallel blades and the other member being a toothed single blade straddled by the first said member and disposed between the parallel blades thereof, means for guiding said members in parallel rectilinear planes, a motor driven crank shaft having two oppositely offset cranks and a pair of connecting rods respectively connecting said offset cranks with said reciprocating members to cause simultaneous reciprocation thereof in opposite directions.

3,016,933
POWER OPERATED TOOL ATTACHMENT FOR ELECTRIC DRILLS AND THE LIKE
Thomas B. Keesling, 17480 Shelburne Way, Los Gatos, Calif., assignor of one-half to C. H. Keesling, San Jose, Calif.
Filed Feb. 11, 1957, Ser. No. 639,330
6 Claims. (Cl. 144—35)



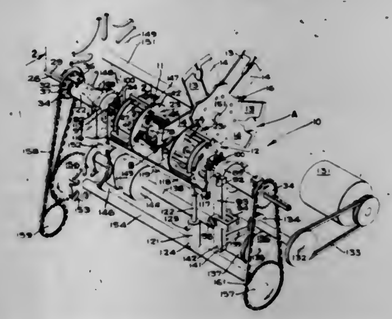
1. In an attachment for a portable electric drill, a body, reciprocatory means within said body, a saw connected to and driven by said reciprocatory means and projecting from said body, a work engaging shoe secured to said body and including an intermediate shoe portion positioned transverse to the direction of reciprocation of the tool and end portions leading from said intermediate portion to said body, and a shoe attachment detachably connected to said shoe and including a flat work engaging face immediately adjacent said saw and an arcuate end portion leading therefrom, including a work penetrating projection extending parallel to said saw and lying in the same plane.

3,016,934
WHEEL SUPPORTING APPARATUS
James A. Smyser, 207 Harrison, Taft, Calif.
Filed June 8, 1959, Ser. No. 818,951
6 Claims. (Cl. 144—288)



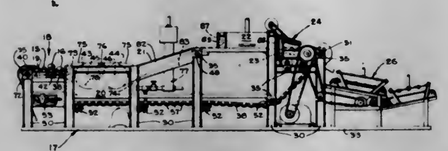
1. In an apparatus for releasably supporting a wheel, the wheel including an annular rim circumscribed by a tire and circumscribing a disk providing a central hub concentric to the rim, a rigid backing member against which such a wheel is adapted to be positioned, a spindle rigidly extended from the backing member and adapted to extend through the hub of the disk, a spinning member mounted on the spindle for spinning movement about the spindle and concurrent movement axially of the spindle, and detents connected to the spinning member for pivotal movement about axes substantially tangential to a circle concentric to the spindle, the detents having normally contracted positions closely adjacent to the spinning member to enable reception of the hub thereover, the detents being thrust into outwardly expanded positions by centrifugal force when the spinning member is spun about the spindle and being thereby moved into locking engagement with the hub as the spinning member is moved axially of the spindle toward the hub.

3,016,935
PEACH PITTER TWISTING HEAD
Harold W. Newburn, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,747
17 Claims. (Cl. 146—28)



1. In a fruit preparation machine, a twisting head comprising a support structure, a plurality of fruit gripping shoes disposed in circular array about a central axis, means mounting said shoes on said structure for movement as a unit in a circular path about said axis and mounting said shoes for individual movement from an open position adapted to receive a fruit segment therein to a closed position in engagement with the fruit segment, rotary power means operatively connected to said support structure for moving said shoes into frictional gripping engagement with the fruit segment, and second power means operatively connected to said mounting means for maintaining said frictional engagement and for moving said shoes in said circular path to rotate the fruit about said axis.

3,016,936
APPARATUS FOR LOOSENING TOMATO SKINS
Clifford K. Wilson, San Jose, Calif., Robert H. Mount, Hoopeston, Ill., and Robert O. Jabbusch, Green Bay, Wis., assignors to FMC Corporation, a corporation of Delaware
Original application May 28, 1954, Ser. No. 433,064, now Patent No. 2,862,535, dated Dec. 2, 1958. Divided and this application Oct. 27, 1958, Ser. No. 769,681
3 Claims. (Cl. 146—47)



1. Apparatus for preparing tomatoes or the like for the removal of the skins, comprising a support structure, a tank mounted on said structure for holding a liquid for treating the tomatoes, a power driven endless conveyor having a run extending through said tank below the liquid level for advancing tomatoes through the tank while submerged in the treating liquid, a load station for said conveyor, said conveyor having transverse flights provided with upstanding prongs for receiving tomatoes impaled thereon at said load station for passage through the treating liquid in said tank, and a flexible sheet-like strip suspended in said tank above said prongs for holding the impaled tomatoes submerged in said liquid and against displacement from said prongs during their passage through said tank for the duration of the liquid treatment.

3,016,937
MANUAL CLINGSTONE PEACH SPLITTER
Earl R. Anderson, 1900 Pollard Road, Campbell, Calif.
Filed Dec. 15, 1959, Ser. No. 859,688
1 Claim. (Cl. 146—72)

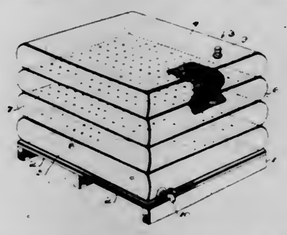


A device for halving of clingstone peaches by manual impact operation to provide half peaches with half pits therein for experimental use, said device comprising a pair of similar splitting blades, each blade having one planar side for disposition in scissors-like adjacency with the similar side of the other blade, in mutual overlapping supporting relation with each other at each end, said blades being separate and the scissors-like adjacency thereof providing the only connection therebetween, each blade having a V-shaped recess defined by a cutting edge, the apex of the V-shaped recess being curved to conform substantially to the contour of a peach pit in a plane containing the suture line of a peach, each of said edges having a length at either side of said apex providing for severing of at least half of the flesh of the fruit by translatory approaching movement of the blades along a line, the cutting edge of each blade being formed by a bevel on the side of said recess opposite to said planar side whereby a pair of said blades may be caused to penetrate the flesh of a whole clingstone peach in a plane containing the plane of the suture line and to be placed in firm engagement with the pit in the fruit, each of said blades providing easy-to-see adjustment of a peach and a blade to be engaged therewith to insure accurate alignment of the suture plane of the peach with the blade, and each blade being manually oscillatable with respect to a peach and the other blade to insure complete severing of the flesh of the fruit and firm engagement of a blade with the pit of the fruit, and whereby one of the blades may thereafter be impacted to cause severance of the peach into two peach halves containing half pits.

ERRATUM

For Class 149—60 see:
Patent No. 3,017,260

3,016,938
COLLAPSIBLE CONTAINER FOR FLUIDS
Joseph P. Akrep, 7039 Saratoga Drive, Bridgeview, Oak Lawn, Ill.
Filed Aug. 29, 1960, Ser. No. 52,747
4 Claims. (Cl. 150—.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

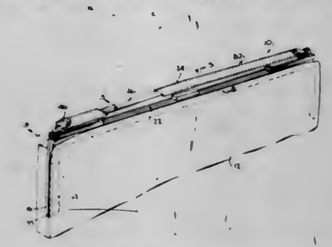


1. A collapsible rectangular container for fluids, said container having a plurality of rectangular cells vertical alignment, each of said cells having four flexible side walls, a flexible rectangular diaphragm being provided between adjacent cells, said diaphragm being provided with a plurality of apertures therethrough for permitting liquid to pass between said cells, the topmost cell being provided with a flexible rectangular top wall, and the bottom-most cell being provided with a flexible rectangular bottom wall and an outlet for said liquid; whereby said rectangular container may vertically expand to its maximum height when filled to capacity with said liquid, and gradually diminish in height, while retaining its general rectangular configuration, as said liquid is withdrawn.

3,016,939
HANDBAG
Edward R. Lowy, Brooklyn, N.Y., assignor to Lowy & Mund, Inc., New York, N.Y., a corporation of New York
Filed Sept. 5, 1961, Ser. No. 136,014
2 Claims. (Cl. 150—33)

1. In a handbag having a body and a handle extending along an edge of said body, said handle comprising an

elongated member of resiliently flexible material and inherently biased by its own resiliency to lie adjacent said edge of the bag and movable at its opposite ends longitudinally of said edge so that a part of the handle between said ends is moved transversely away from said edge of the bag for carrying the bag by said handle, track members secured to the bag in longitudinally spaced relation longitudinally of said edge of the bag, a slide member movably secured to each of said tracks for movement longitudinally thereof and having a part above the companion track, said part having laterally extending pivot bearing elements extending from the opposite sides,



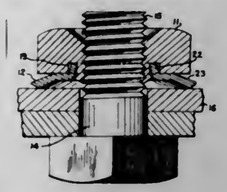
respectively, of said part in position transversely of said edge of the bag, and means at each end of said handle for pivotally securing the opposite ends of the handle to said pivot bearing elements, respectively, said handle securing means at each end of the handle comprising a member having a U-shaped part having upper and lower clamping arms between which the adjacent end portion of the handle is secured and a second part having a pair of arms secured to and extending from said U-shaped part in planes transversely of said handle-clamping arms and provided with apertures in which said bearing elements are positioned for said pivotal securement of said ends of the handle to the companion slide.

3,016,940
KEY CASE CONSTRUCTION
John M. Mullin, 1474 Maple St., Barberton, Ohio
Filed Aug. 28, 1959, Ser. No. 836,651
7 Claims. (Cl. 150—40)



1. Key case construction including laterally spaced generally longitudinally extending side portions, forward edge and bottom edge and rearward edge portions joining the side portions forming an upwardly opening pocket, an upper edge portion connected to certain of said side and edge portions having a longitudinal opening formed therein extending the major portion of the longitudinal length of said upper edge portion, the opening terminating forwardly in a permanently open large opening part, said large opening part extending substantially the entire lateral width of the upper edge portion and having a longitudinal length at least as great as said lateral width, the opening having a normally resiliently closed line opening part extending from the large opening part longitudinally the major portion of the longitudinal length of said upper edge portion, all of said portions being formed of a rubber-like resilient material, and key fastening means operably connected to one of said portions adjacent said large opening part for securing keys movable between positions completely inward of said pocket and through said upper edge portion opening to completely outward of said pocket.

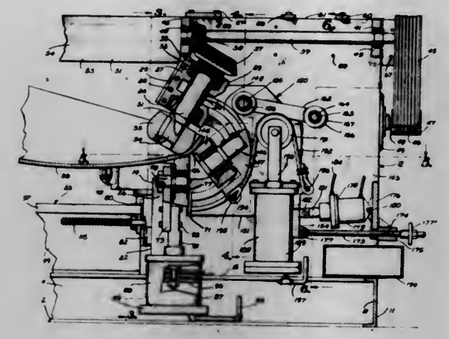
3,016,941
FASTENING DEVICES
Chester P. Coldren, Canton, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 18, 1958, Ser. No. 761,766
1 Claim. (Cl. 151—38)



In a fastener assembly; a threaded member comprising a body having an axially extending portion carrying a screw thread; a flat annular clamping surface on said body and lying in a plane extending transverse to the axis of the thread-carrying portion; said body having an annular groove therein between said thread-carrying portion and said clamping surface including an axially facing annular mouth opening lying in said plane; said groove having radially spaced outer and inner axially straight cylindrical side walls disposed in a parallel relation to each other and to said axis and with said inner side wall located on and extending around said said thread-carrying portion; a washer connected with said body for rotation relative thereto and comprising an inner annular flange and a flexible outer annular flange connected with the inner flange by a radially disposed intermediate annular web containing an opening; said inner flange projecting axially from said web on one side thereof and received in said groove, and said outer flange projecting axially from said web on the other side thereof for engagement with an associated work surface; said washer being split thereacross at one side of said opening; said outer flange being of a frusto-conical shape and inclined axially and outwardly from said web; said web being subject to axial thrust engagement by said clamping surface for pressing and deflecting said outer flange against said work surface; said inner flange being of a circular frusto-conical shape and inclined axially and inwardly toward said axis so as to have a minimum-diameter circular free end portion closely embracing said axially straight cylindrical inner side wall; and a radial annular bead projection on said thread-carrying portion and extending part-way across said mouth opening for retaining said washer connected with said body; the maximum diameter of said bead projection being greater than the minimum diameter of said circular free end portion for preventing withdrawal of said inner flange from said groove.

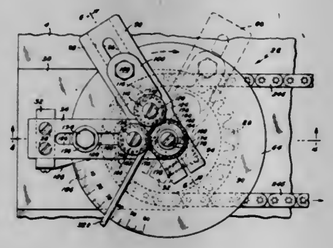
3,016,942
METAL PLATE FLANGING MACHINE
Ernest E. Johnson, Kansas City, Mo., assignor to Blue Valley Machine & Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 20, 1959, Ser. No. 854,467
10 Claims. (Cl. 153—4)

1. In a plate flanging machine, an abutment roller engaging one face of a plate at the area where the bend is to be produced, a support roller engaging the opposite face of the plate and holding said plate against the abutment roller, an arcuate guide, a sector mounted for movement on said arcuate guide, a bending roller carried by said sector and underlying said plate adjacent to and outwardly of the support roller, means for moving said sector on said arcuate guide to bend the plate toward the proximate face of said abutment roller, means pivotally supporting said arcuate guide for arcuate movement toward and away from said abutment roller independently of said support roller, means for moving said



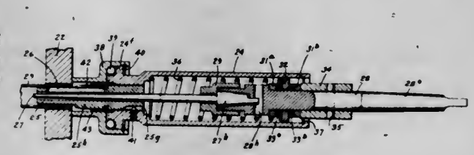
arcuate guide in an arcuate path to change the path of the bending roller and change the angle of engagement of said bending roller with said plate, and driving means to effect rotation of said plate.

3,016,943
APPARATUS FOR BENDING AND FORMING TUBING, RODS, WIRES AND THE LIKE
Peter Kilham, Plainville, Mass., assignor, by mesne assignments, to Maclodyne Corporation, East Providence, R.I., a corporation of Rhode Island
Filed Feb. 17, 1958, Ser. No. 715,690
8 Claims. (Cl. 153—40)



1. A machine for bending lengths of stock into arcuate shapes comprising a base; a shaft supported for rotation on said base; a first form roll having gear teeth and mounted on said shaft for rotation thereby; a support arm mounted on said base; a shaft stud mounted on said arm; a second form roll having gear teeth and mounted on said stud with its gear teeth meshing with the gear teeth of said first form roll, a portion of the face of said second form roll being spaced apart from an opposing portion of the face of said first form roll to permit the engagement there between of said stock; a rotatable housing having an axis common with the axis of said shaft and surrounding the latter; a third form roll having gear teeth and mounted on said housing with its gear teeth meshing with the gear teeth of said first form roll, a portion of the face of said third form roll being spaced apart from an opposing portion of the face of said first form roll to permit the engagement there between of said stock; said rotatable housing normally being positioned so that said second and third form rolls are juxtaposed to each other; the opposing portions of the faces of said first and second form rolls defining together with the opposing portions of the faces of said first and third form rolls, when said housing is in said normal position portions of the boundary of a substantially straight passageway through which substantially straight stock may pass, and defining portions of the boundary of a curved passageway through which only curved stock can pass through said machine, when said housing and said third form roll have been rotated away from said normal position to a second position wherein said third form roll is substantially spaced from said second form roll; said having and said third form roll being adapted to be moved automatically from said normal position to said second position progressively while said first, second and third form rolls move stock through said machine.

3,016,944
TUBE-EXPANDING DEVICE
Walter E. Stary, 32 Rust Hill Road, Levittown, Pa.
Filed Dec. 14, 1956, Ser. No. 628,258
8 Claims. (Cl. 153—82)

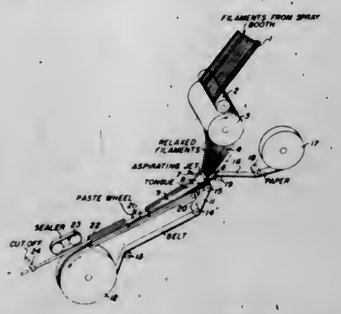


1. A device for expanding a tube-end into its tube-hole, by means of a roller-type tube-expanding tool having a tapered mandrel, a plurality of expanding rolls, and a tubular roll-cage with roll slots formed therein, with said expanding rolls and said roll cage mounted about said mandrel so that said rolls are radially movable in the roll slots in said roll cage and rotatable in and with said roll cage, about said mandrel; comprising a tubular spring housing cooperatively connected to a drive shaft so as to permit relative rotatable and axial movement between said spring housing and said drive shaft, with said relative axial movement being limited by said connecting means, with a spring housed in said spring housing so as to be freely rotatable with said spring housing, relative to said drive shaft, said spring normally urging said spring housing axially forward, relative to said drive shaft, to the forward limit of said relative axial movement between said spring housing and said drive shaft, wherein means are provided for connecting said roll cage to said spring housing, and means are provided for connecting said tapered mandrel to said drive shaft.

3,016,945
METHOD AND APPARATUS FOR FORMING TOBACCO SMOKE FILTERS
Vernon K. Wexler, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Sept. 17, 1958, Ser. No. 761,602
10 Claims. (Cl. 156—200)

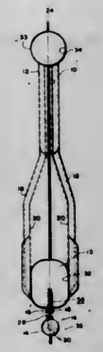
5. A method of making a filter element from spread out crimped continuous substantially untwisted filaments which comprises passing a band of several thousand of said spread out untwisted filaments into a cone shaped jet positioned in close proximity to and at an angle to compacting and forming means, supplying a gas to the jet whereby the spread out filaments are motivated into and through the jet and thereby upon exiting from the jet are pushed into the aforesaid closely positioned compacting and forming means thereby being formed into the filter

element, also supplying a filter element wrapping web to the forming means whereby the filter formed as aforesaid



is wrapped, sealing the wrapped web around the filter element and cutting the filter element to length.

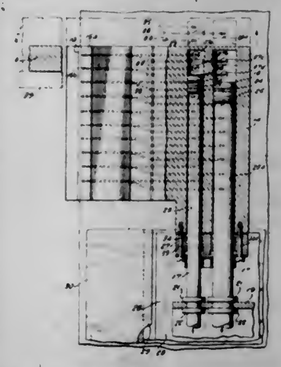
3,016,946
COMBUSTION SHELL, HEAT EXCHANGER AND BURNER ASSEMBLY
Raymond G. Ticknor, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 12, 1960, Ser. No. 8,417
5 Claims. (Cl. 158—7)



1. A combined combustion shell, heat exchanger and burner assembly comprising, a pair of sheet metal stampings having spaced apart wall portions forming a burner manifold adapted to receive a mixture of fuel and air, a combustion chamber and a heat exchanger, said sheet metal stampings being welded together, and a burner head rigidly connected to said stampings between the wall portions thereof in alignment with said burner manifold and said combustion chamber, said burner head having passage means providing communication between the manifold and the combustion chamber to allow the flow of fuel and air from the manifold to the chamber.

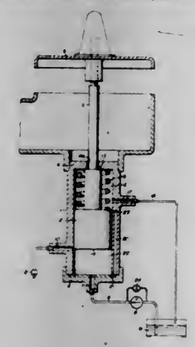
3,016,947
GAS SUPPLY AND DISTRIBUTION APPARATUS
Stewart Allan, Livingston, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed May 8, 1958, Ser. No. 733,861
4 Claims. (Cl. 158—27.4)

1. In a desurfacing device for thermochemically treating a metal surface, a desurfacing head having a plurality of spaced discharge ports for arrangement transversely of said surface for directing heating flames and a high velocity flow of oxygen against said surface, said desurfacing head being movable transversely of said surface to bring to bear thereon a number of said discharge ports in accordance with the width of surface to be treated, a gas distribution apparatus for automatically and separately supplying oxygen and a fuel gas to said discharge ports in sufficient amount to thermochemically treat said surface, which apparatus includes: a valve block mounted for bodily movement with said movable desurfacing head, said block having a pair of open ended bores extending therethrough in a direction parallel to the movable direction of said head, a pair of stationary pistons having longitudinal gas passages therethrough, said pistons fixedly disposed in axial alignment with and slidably in said respective bores, the longitudinal gas passage in one of said pistons communicated with a source of oxygen, the longitudinal passage in the other of said pistons communicated with a source of fuel gas, the forward end of said pistons opening into said respective bores to provide flows of gas from the respective longitudinal passages, a plurality of openings arranged longitudinally along a wall of each of said bores, passages communicating each of said openings with at least one of said discharge ports in the desurfacing head, and means for slidably mounting said valve block and desurfacing head transversely of the surface to be treated whereby the number of openings exposed by said pistons is adjusted in conformance with the width of surface to be treated to provide a gas flow to those chamber openings positioned forward of said pistons.



3,016,948
OIL REGULATOR
Carl Malmström and Björn Olof Magnus Palm, both of P.O. Box 631, Norrkoping, Sweden
Filed Nov. 12, 1957, Ser. No. 695,609
Claims priority, application Sweden Nov. 10, 1956
2 Claims. (Cl. 158—36.3)

1. An arrangement for an oil firing set comprising a cylinder having heads at opposite ends thereof, one of said heads having an inlet therein and the opposite head having a hole therein, an oil tank, an oil pump connected to the tank, conduit means connecting said oil pump with said inlet, a piston in said cylinder, spring means biasing said piston towards the head of the cylinder having the inlet, valve means for combustion air, a piston rod connected to said piston slidable through said hole and engageable with the valve means for opening and closing said valve means, a burner mouthpiece, a first outlet means connecting the burner mouthpiece with the interior of said cylinder, said first outlet means being spaced from the head of the cylinder having said inlet a distance less than the length of said piston and slightly less than the stroke of said piston, means defining a longitudinally extending channel in the interior of said cylinder of lesser area than that of said inlet, said channel having opposite open ends, one end of said channel being in communication with the cylinder adjacent said head having the inlet and the other end of said channel being at a distance from the head of the cylinder having the inlet slightly less than the length of the piston plus the stroke of the piston, said other end of the channel being spaced from said first outlet means a distance slightly less than the length of the piston, a second outlet means for said cylinder spaced a distance from the head of the cylinder having the inlet a distance greater than the length of the piston plus the stroke of the piston in communication with the interior of the cylinder on the piston rod side of the piston, and conduit means connecting said second outlet means with said oil tank so that when the pump means is inoperative, said spring means urges the piston in the direction of the head of the cylinder having the inlet thus closing said first outlet means and opening the other end of said channel so that oil below the piston may be forced through said channel to the piston rod side of the piston through said second outlet means and conduit means to the oil tank.

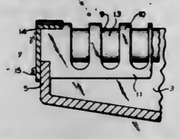


3,016,949
FUEL BURNER
John Rabbitt, 214 E. 126th St., New York, N.Y.
Filed Aug. 24, 1956, Ser. No. 606,071
2 Claims. (Cl. 158—104)



1. A gas heating device comprising vertically alined and spaced ring-shaped burners, means for rigidly supporting and connecting said burners in rigid relation and in horizontal planes, burner nozzles projecting from the opposed horizontal faces of said burners in vertical alinement with each other for producing vertical streams of a combustible mixture impinging upon each other between the upper and lower burners whereby to effect an annular zone of combustion gases between said burners and extending horizontally both within and without the burners, means supplying a combustible mixture to each of said burners.

3,016,950
GAS BURNERS
Herbert G. Smith, Moline, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Nov. 22, 1957, Ser. No. 698,282
7 Claims. (Cl. 158—116)



1. A gas burner insert comprising: a ladder-shaped grid of uniform thickness throughout and including longitudinally-spaced rungs and longitudinally-extending opposite side rails, folded along its longitudinal center line to form said rungs thereof into U-shaped contours, said opposite side rails of said grid extending along the lower end of said rungs to define, between adjacent rungs on each side, the lower end of a series of vertically disposed passageways; and, a single separator member disposed within said folded grid with the lower edge of said separator member being spaced above the lower end of said vertically disposed passageways to define therebetween an inlet for the flow of gas into each of said passageways.

3,016,951
INDUSTRIAL CURTAIN HARDWARE
Richard A. Greene, 1945 Del Mar St., San Marino, Calif.
Filed Feb. 23, 1960, Ser. No. 10,286
6 Claims. (Cl. 160—126)

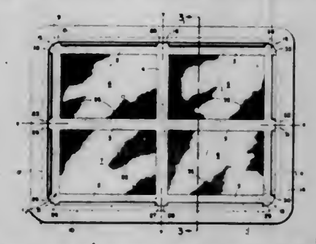


1. In combination: a pair of vertically spaced apart hangers secured to a foundation member, inner and outer tracks secured to each hanger, trolleys mounted for movement on each track, a curtain secured along its top edge to the trolleys supported by the inner track of the uppermost hanger and secured to the trolleys on the outermost track of the lower hanger, means for moving said trolleys, and each trolley including a U-shaped frame adapted to straddle a track and provided with spaced apart horizontal and vertical rollers engaging the track to handle both vertical and horizontal stresses imposed on the curtain.

3,016,952
AUTOMOBILE WINDOW SCREEN
Ronald D. Shero, 9100 Jensen Court NE., Albuquerque, N. Mex.
Filed Jan. 21, 1959, Ser. No. 788,182
1 Claim. (Cl. 160—354)

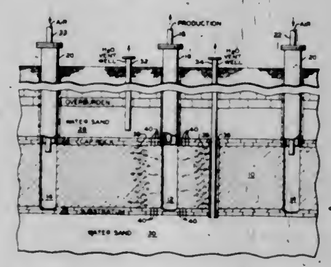
A window screen for a vehicle comprised of a rectangularly shaped highly elastic planar matrix defined by four

peripheral edges, four symmetrically oriented rectangular openings positioned within said elastic matrix, a rectangular screen fabric having four peripheral edges secured within each of said openings, there being two outer peripheral edges of each of said screen fabrics in parallel spaced relation with respect to the peripheral edges of the said planar matrix, and two inner peripheral edges of each of said screen fabrics in spaced parallel relation with respect to an edge of two other of the said screen fabrics, a pair of bar magnets secured to each of the said four peripheral



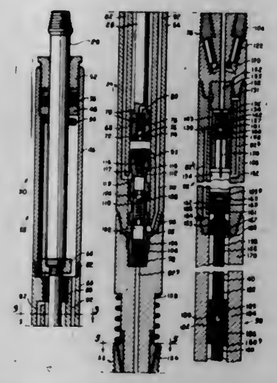
edges of said elastic planar matrix, each of the said bar magnets having a north pole and a south pole, each of said bar magnets being parallel with and extending the length of a said outer peripheral edge of a corresponding screen fabric, the north pole of each bar magnet being arranged in spaced, linear and end-to-end relation with respect to the south pole of another bar magnet, said window screen being adapted for being twice doubled up on itself and for magnetic retention in said twice doubled up position.

3,016,953
PREVENTION OF H_2O INVASION OF IN SITU COMBUSTION ZONES
John W. Marx, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,695
5 Claims. (Cl. 166—11)



1. In a process for producing hydrocarbons from a permeable carbonaceous stratum separated from a permeable water sand by an impermeable layer by in situ combustion comprising igniting said stratum adjacent an ignition well therein; and driving the resulting combustion front through said stratum to an offset well by feeding combustion supporting gas to said front through one of said wells and producing hydrocarbons through the other well, wherein said impermeable layer develops cracks from heat of combustion and subjects said stratum to flooding, the improvement comprising drilling at least one vent well into said water sand intermediate said ignition and offset wells, said vent well being closed to said stratum, thereby permitting gas pressure developed within said stratum by injection and combustion to pass through said cracks and force water into said vent well and reduce the flow of water into said stratum.
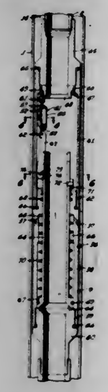
3,016,954
WIRE LINE FISHING TOOL
Carl C. Crowell, Odessa, Tex., assignor of twenty-five percent to Wendell Coffee, Lubbock, Tex.
Filed Nov. 18, 1957, Ser. No. 697,064
2 Claims. (Cl. 166—98)



1. A wire line fishing tool comprising the combination of a set of jars; a flexible line; means for connecting said line to said jars; a pump rod depending from said jars; a pump piston attached to the lower end of said pump rod; a pump cylinder surrounding said pump piston; fluid filling said cylinder; a spring biased check valve in said pump piston; a hollow member attached to the pump cylinder forming a surge space; means attached to the pump cylinder for anchoring the pump cylinder to a surrounding casing; a lifting cylinder attached to the pump cylinder; a lifting piston in said lifting cylinder; the lifting rod depending from said lifting piston; an annular packing joint at the bottom of said lifting cylinder forming a fluid tight joint between said lifting cylinder and said lifting rod; a plurality of lifting cylinders connected in series below said first mentioned lifting cylinder; a plurality of lifting pistons, each lifting piston in a separate lifting cylinder; the bottom of each lifting cylinder having a fluid tight seal between the lifting cylinder and the lifting rod; said lifting rod extending below all the lifting cylinders; a bumper sub connected to the bottom of the lifting rod; a grapple connected to the bottom of the bumper sub; a high pressure fluid passage adapted to carry high pressure fluid extending within the walls of said pump cylinder and within the walls of said first mentioned lifting cylinders and connected into the top of said pump cylinder and into the bottom of said first mentioned lifting cylinder; a spring biased check valve in said high pressure fluid passage, the location of said check valve being below said pump piston; a low pressure passage adapted to carry low pressure fluid extending in the walls of said pump cylinder, said low pressure passage connecting into said hollow member forming a surge space, said low pressure passage connecting into the bottom of said pump cylinder, said low pressure passage connecting into the top of said first mentioned lifting cylinder; a relief passage extending within the walls of said pump cylinder and connecting into said high pressure fluid passage below said check valve within said high pressure passage, said relief passage connected into said hollow member forming a surge space; a normally closed valve in said relief passage; means interconnecting said valve and said pump rod for opening said valve in said relief passage responsive to tension in said pump rod; a flush valve located within said first mentioned lifting cylinder walls immediately above said lifting cylinder; said flush valve located within a chamber, the chamber inlet from said lifting

cylinder, said chamber having a plurality of nozzles connecting said high pressure passage and said chamber; a rod depending from said flush valve through said inlet into the top of said first mentioned lifting cylinder so that when said lifting piston reaches the top of its stroke it opens the flush valve; said nozzles being so arranged and constructed that when said flush valve opens the fluid rushing from the high pressure passage through the nozzles direct a fluid jet against the valve holding it open so long as the pressure in the high pressure fluid passage exceeds the pressure in the low pressure fluid passage; a first fluid passage extending through the lifting rod, said first fluid passage opening through each of said lifting pistons to the space below of each said lifting pistons; a second fluid passage through the lifting rod, said second fluid passage opening into the space above each of said lifting pistons.

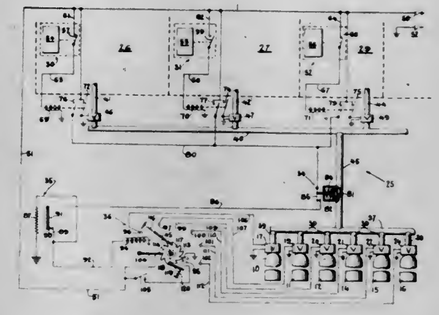
3,016,955
FLUID PRESSURE ACTUATED WELL SHUT-OFF VALVE
Robert H. Magill and John S. Page, Long Beach, Calif., assignors to Page Oil Tools, Inc., Long Beach, Calif., a corporation of California
Filed July 1, 1957, Ser. No. 669,012
11 Claims. (Cl. 166—224)



1. A flow control valve for wells, comprising: a housing adapted to be installed in a tubing string in a well; said housing having a flow passage therethrough; a valve seat in said housing circumscribing said passage; a gate valve pivotally mounted at one side of said seat and movable towards and away from said seat; operating means in said housing for moving said gate valve as aforesaid, said operating means including a fluid pressure operated actuator; means interconnecting said actuator with said gate valve; said actuator including a sleeve coaxially disposed in and radially spaced from said housing; means on said sleeve forming a piston slidably engaged with said housing; said sleeve and said housing being sealingly engaged in axially spaced relation to said piston and a fluid pressure inlet for admitting fluid into the space between said sleeve and said housing.

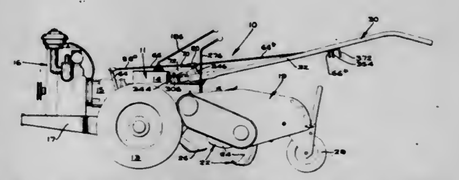
3,016,956
FLUID DISTRIBUTING SYSTEM
John W. Olandt, North Arlington, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed May 19, 1959, Ser. No. 814,199
5 Claims. (Cl. 169—11)

1. A fire extinguishing system comprising in combination receptacle means adapted to contain a supply of fire extinguishing agent under gaseous pressure, conduit means connected to said receptacle means and extending to an area to be protected, fire detecting means in the area to be protected, pressure detecting means in said conduit means, discharge controlling valve means for said receptacle means, and means responsive to said fire de-



tecting means and said pressure detecting means for operating said valve means to place a portion of said receptacle means in communication with said conduit means each time the pressure in said conduit means is below a predetermined value only during the detection of a fire by said fire detecting means.

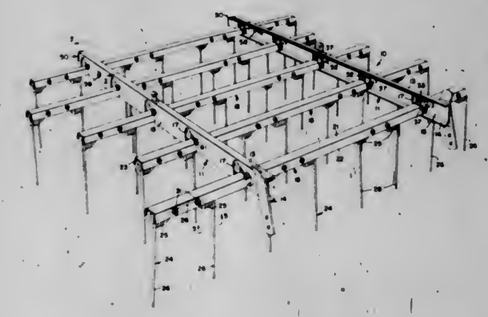
3,016,957
SOIL TILLING APPARATUS
Albert M. Olson, Sherman Oaks, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed May 1, 1958, Ser. No. 732,262
3 Claims. (Cl. 172—42)



3. In an apparatus for tilling soil having power transmitting means and being supported on two drive wheels, the combination of a turntable, a pair of radially directed apertured members on said turntable, a pair of rods, one of said rods being loosely received in the aperture in one of said members, and the other of said rods being loosely received in the aperture of the other member, a nut on each rod disposed on one side of said associated member and arranged to cause one of said rods to move axially upon pivotal movement of said turntable in one direction and the other of said rods to move axially upon pivotal movement of said turntable in the opposite direction, a pair of brake actuating levers, one lever being connected to and operable by one rod and the other lever being connected to and operable by the other rod, a brake connected to one of said levers and movable by said one lever between a locked position wherein one of the drive wheels is locked in driving engagement with the power transmitting means and an unlocked position wherein said one wheel is disengaged from the power transmitting means, a second brake connected to the other of said levers and movable by said other lever between a locked position wherein the other drive wheel is locked in driving

engagement with the power transmitting means and an unlocked position wherein said other wheel is disengaged from the power transmitting means, resilient means connected to said rods and arranged to normally hold both brakes in their locked position, and handle bars connected to said turntable to selectively pivot the same whereby pivotal movements of said turntable in one direction moves a first one of said brakes to its unlocked position and pivotal movement in the opposite direction moves the other brake to its unlocked position and allows the first brake to return to its locked position.

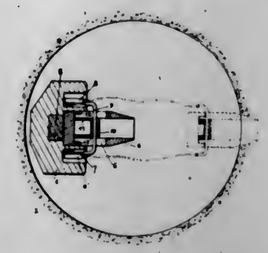
3,016,958
HARROWS
William E. Knapp, Moline, Ill., and William V. Lohrman, Davenport, Iowa, assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,571
5 Claims. (Cl. 172—639)



1. A flexible tooth harrow comprising a pair of longitudinal beams, each having a generally horizontal flange, a plurality of transverse tooth bars swingably connected with said beams and spaced from said flanges, ground working teeth carried by said bars, and means acting between said flanges and said tooth bars comprising a member slidable longitudinally of one of said beams and engaging the inner face of one of the flanges thereof and including means engageable with the associated tooth bar for locking said tooth bars against swinging movement.

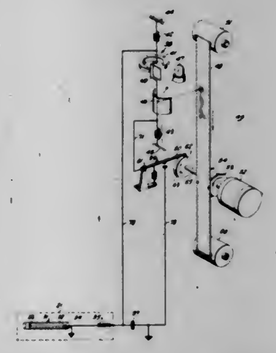
3,016,959
CORE SAMPLING ARRANGEMENT FOR OPERATION INSIDE GEOLOGICAL LAYERS
Bruno Pierre Berthelin, Paris, France, assignor to Societe de Prospection Electrique, Procedes Schlumberger, Paris, France, a corporation of France
Filed May 20, 1958, Ser. No. 736,628
4 Claims. (Cl. 175—4)

1. In a core-sampling arrangement, the combination of at least one gun-shaped section including a charge-carrying chamber, a missile to be inserted in said section and including a tubular body open at its front end and having a closed rear end which is adapted to be subjected to the firing of the charge in the charge-carrying chamber, said body being provided in its side wall with two longitudinal slots on opposite sides thereof extending rearwardly to a point adjacent the rear end of said tubular body, a cable the ends of which are operatively connected to the gun-shaped section on each side of the missile therein and the medial portion of which passes through said missile slots and across the interior of said tubular body of the missile, and collapsible means positioned rearwardly within said tubular body and in front of and in longitudinally spaced apart relation to the rear ends of said slots for supporting that portion of said cable passing across the interior of said tubular body,



said means being capable of rearward collapse in a direction toward the rear ends of said slots to damp the thrust exerted on the cable upon firing of the missile.

3,016,960
RADIOACTIVITY GEOPHYSICAL EXPLORATION
Hugh E. Hall, Jr., Bellaire, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Aug. 13, 1957, Ser. No. 677,967
15 Claims. (Cl. 175—41)

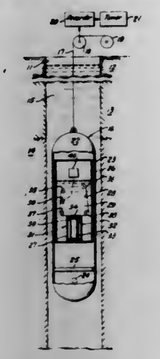


12. Apparatus for logging an earth formation traversed by a well bore during the course of drilling a well comprising a sealed housing mounted within a tubular member comprising a portion of a drill string, a self-contained logging instrument within said housing, said instrument being mounted for free rotation about its vertical axis, said instrument including a radiation detector and means for producing a record in response to the output of said detector.

3,016,961
RADIOACTIVITY GEOPHYSICAL PROSPECTING
Alexander S. McKay and Hugh E. Hall, Jr., Bellaire, Tex., assignors to Texaco Inc., a corporation of Delaware
Filed Aug. 13, 1957, Ser. No. 677,968
20 Claims. (Cl. 175—41)

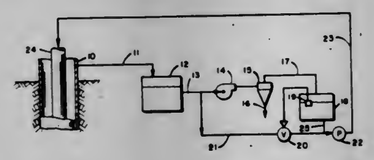
1. A self-contained instrument for logging an earth formation traversed by a well bore, said instrument comprising a liquid-tight container, a quantity of oil within said container, means for detecting and recording penetrative radiation submersed in said oil, said detecting and recording means comprising a luminophor adapted to produce light rays in response to penetrative radiation

and a photosensitive material optically coupled to the luminophor by means of said oil, and a resilient bellows



for displacing vapors from the surface of the oil while permitting the oil to expand or contract.

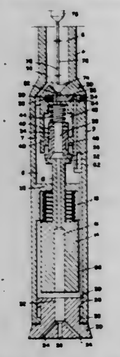
3,016,962
AUTOMATIC ACTING HYDROCYCLONES FOR DRILLING FLUIDS
James L. Lummus and Platho P. Scott, Jr., Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Filed Oct. 9, 1959, Ser. No. 845,414
14 Claims. (Cl. 175—66)



1. In the process of treating a drilling fluid with a hydrocyclone in which bit cuttings are withdrawn from the underflow opening and a major portion of the drilling fluid substantially free from large cuttings is withdrawn from the overflow outlet, the improvement to cause said hydrocyclone to reject an underflow stream only when bit cuttings retainable on a number 100 U.S. Standard sieve are present in said drilling fluid, comprising passing the drilling fluid to a hydrocyclone having a cone with a large end diameter of from about 8 to about 16 inches, a vortex finder having a diameter of from about 4 to about 5 inches, an underflow opening of from about ½ to about 1¼ inches, an overflow outlet at least as large as the vortex finder, and an inlet opening from about 1/10 to about ¼ the large end diameter of the hydrocyclone cone, while maintaining said overflow outlet substantially open to atmospheric pressure, and maintaining an inlet pressure between about 30 and about 100 pounds per square inch gage.

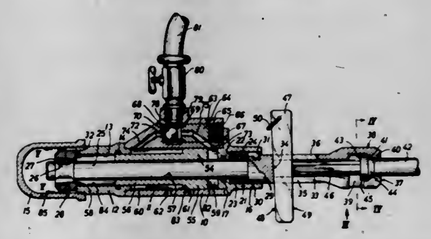
3,016,963
APPARATUS FOR BORE HOLE DRILL AND LOGGING
John D. Bennett and Fred M. Mayes, Richardson, Tex., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Nov. 4, 1957, Ser. No. 694,257
1 Claim. (Cl. 175—92)

A drill assembly for use with a logging means and arranged for connection to the lower end of a hollow drill stem, comprising a bit, hammer means controlled by fluid flowing through such drill stem for imparting blows to said bit to effect drilling movements thereof, said means including non-aligned fluid passages for its operation preventing direct passage through the hammer means of said logging means adapted to operate by projection beyond said bit, said first mentioned means being provided with an auxiliary passage through which such logging means may pass, and means permanently located in said assembly and closing said auxiliary passage during drilling to



restrict downward flow of fluid under pressure through said auxiliary passage but arranged to be opened following a drilling operation but while the bit remains in the hole, for downward passage of said logging means through said auxiliary passage for a logging operation, said closing means comprising a valve of yielding material having a central passageway normally closed by inward position of the yielding material but arranged to open upon insertion of said logging means into the central portion of the valve.

3,016,964
DEVICE FOR EXTRACTING JAMMED ROCK DRILLS
Paul Schmidt, Saalhausen, Sauerland, Germany
Filed Dec. 17, 1957, Ser. No. 703,426
Claims priority, application Germany Dec. 22, 1956
4 Claims. (Cl. 175—136)



1. A device for loosening jammed rock drills, comprising generally cylindrical housing means; a rod disposed axially and longitudinally in said housing means; connecting means integral with one end of said rod and adapted to secure said rod to a drill in a position in which said rod and said drill are substantially coaxial; a shoulder fixed to said rod and spaced from said connecting means, said shoulder having a face extending beyond the perimeter of said rod and facing said connecting means; a piston disposed on and shiftable along said rod while being slidable within said housing means between said connecting means and said shoulder, said shoulder providing an anvil on said rod adapted to be struck by the

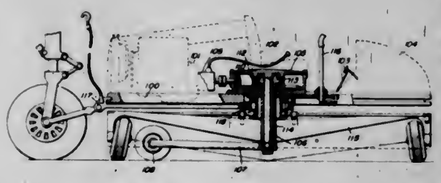
piston upon the movement of the piston in one direction; means for limiting the movement of said piston in an opposite direction; said piston having a shape such that its center of gravity lies substantially along the axis of said rod; said housing means and said piston forming inside said housing means a chamber whose volume increases whenever said piston is shifted towards said shoulder; and pneumatic means for applying intermittent pressure to said chamber, said pneumatic means comprising a source of fluid under pressure, said housing means being provided with inlet means for said fluid, air ducts interconnecting said inlet means and the interior of said housing means on either side of said piston, respectively, and valve means for alternately closing said ducts.

3,016,965
SNOW TRACTOR
Harry Charles Paul, 153 Oxford St., Winnipeg, Manitoba, Canada
Filed Mar. 21, 1960, Ser. No. 16,456
4 Claims. (Cl. 180—5)



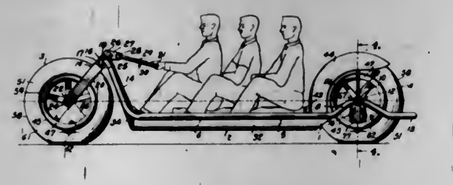
1. A snow tractor comprising in combination a pair of spaced and parallel flexible runners, cab structure spanning the forward portions of said runners, a plurality of endless track units situated one behind the other between said runners, and means supported by said runners for mounting the front ends of said units for limited vertical movement therein, said means mounting said units for limited vertical movement comprising a plate secured to and extending upwardly from each of said runners and adjacent the front end of each of said units, each plate being diagonally slotted, a mounting shaft extending transversely upon each side of said unit adjacent the front end thereof, the ends of said shafts engaging said diagonal slots.

3,016,966
OMNIDIRECTIONAL DRIVE SYSTEM FOR LAND VEHICLES
Howard Clair Hansen, 507 Illinois Ave. NW., Huron, S. Dak.
Filed Oct. 12, 1960, Ser. No. 62,189
28 Claims. (Cl. 180—26)



1. An omnidirectional drive land vehicle comprising,
a main frame,
a subframe,
means to pivotally support said main frame on said subframe to permit relative rotation therebetween about an axis generally perpendicular to the ground,
at least one wheel pivotally connected to said subframe at a point radially spaced from the axis of rotation of said subframe,
means to rotate said subframe,
steering means to determine the steering angle axis of rotation of each wheel,
control means for said steering means to cyclically vary the steering angle of each wheel from a position in which each wheel is in tangential alignment with the rotation of said subframe with a period equal to each complete rotation of said subframe and with controllable amplitude and phase relation of each wheel to the rotation of said subframe whereby the vehicle will translate over the ground in a direction determined by the phase relation of the variation of steering angle and with a speed determined by the amplitude of the steering angle variation of each wheel,
and means to head said main frame in the direction of its movement over the ground.

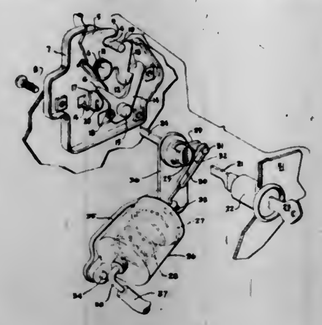
3,016,967
MOTORCYCLE WITH WIDE TREAD WHEELS
George W. Rehfeld, P.O. Box 185, Manhattan, Kans.
Filed Sept. 21, 1959, Ser. No. 841,330
4 Claims. (Cl. 180—30)



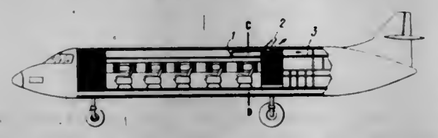
1. A motorcycle comprising front and rear wheels having treads substantially wide relatively to the diameter of said wheels and said treads curving laterally substantially in accordance with the radius of the circumference of said wheels to provide a substantially wide tread for lateral rocking of the wheels when the cycle is in motion, a frame having a drop portion between the front and rear wheels, a fork, means pivotally connecting the fork with forward portions of said frame, an axle carried by the fork for rotatably mounting the front wheel in said fork, an axle assembly on the rear end of the frame for mounting the rear wheel, a motor, and means suspending the motor from the axle assembly to position the motor below the axle assembly and to cooperate with the drop portion of the frame for maintaining a center of gravity below the axes of said wheels whereby the drop portion of the frame and motor weight cooperate to maintain lateral stability of the wheels when the wheels rock laterally on the lateral curving tread of said wheels.

3,016,968
REMOTELY ACTUATED TRUNK LOCK ARRANGEMENT FOR A MOTOR VEHICLE
Emory W. Lenz, Buffalo, and Hobart V. Roberts, Jr., Elma, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Apr. 7, 1959, Ser. No. 804,615
9 Claims. (Cl. 180—82)

1. A motor vehicle having a trunk with a lid adapted to be secured closed by a lock provided with a key unlocking part, comprising in combination therewith, a power adaptor including a transmission shaft inserted between said lock and said key unlocking part and motor means for moving said transmission shaft, and means for actuating said motor means from a remote position, to thereby either permit said lock to be selectively actuated by a key acting in conjunction with said key unlocking part or by the action of said motor means.



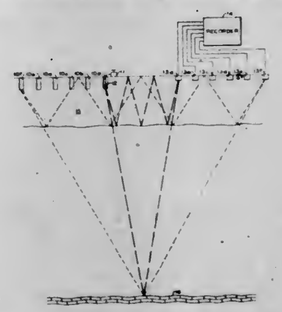
3,016,969
EJECTING DEVICE FOR VEHICLES IN COLLISIONS
Karl Edmund Devantier, Puerta del Sol 6, Madrid, Spain
Filed Nov. 18, 1959, Ser. No. 853,755
Claims priority, application Spain Nov. 20, 1958
25 Claims. (Cl. 180—82)



1. A device for automatically changing the direction in which momenta present at high speed of a vehicle are effective, said device comprising, in combination: conduit means mounted on the vehicle and having two straight end sections which extend in the general direction of travel of the vehicle, said end sections being placed in communication with each other by a connecting section which is curved convexly relative to said direction of travel; and a first and a lesser second weight slidably and fluid-tightly arranged in said end sections, respectively, whereby upon the occurrence of exceptionally high deceleration, the momenta of said weights will counteract each other through a hydraulic medium contained in said conduit means and said second weight will be displaced in a direction counter to the general direction of travel of the vehicle.

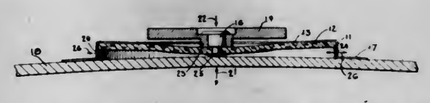
3,016,970
INTERPRETATION OF SEISMIC RECORDS
Robert M. Allyn and Sam D. Elliott, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,334
3 Claims. (Cl. 181—.5)

1. The method of seismic surveying which comprises imparting to the earth acoustic vibrations at a plurality of spaced first points and making first records of reflections of said vibrations from a common subsurface area at a plurality of second points respectively spaced from said first points, said first records containing primary reflections from said common subsurface reflecting area and multiple reflections from reflecting areas above said common subsurface area, and combining said first records with first portions of the first records which appear to be records of primary reflections from said common subsurface area substantially coincident so as to make a composite second record wherein the first portions of the resulting composite record remain substantially intact and the remaining portions are substantially neutralized, said combining being accomplished by producing a plurality of third records, wherein said primary reflections occur at the same time relative to one another, which represent said first records displaced with respect to one another by preselected first amounts, producing a plurality of



fourth records, wherein said secondary reflections occur at the same time relative to one another, which represent said first records displaced with respect to one another by preselected second amounts, summing said fourth records to form a fifth record, producing a plurality of sixth records by displacing said fifth record a plurality of times from a reference point by amounts equal to the respective differences between said second and first amounts, summing said third records, summing said sixth records, and subtracting the sum of said sixth records from the sum of said third records to obtain said composite second record.

3,016,971
TUNED SOUND DEADENER
Hugh A. McPherson II, Box 592, Fajardo, Puerto Rico
Filed May 18, 1959, Ser. No. 813,854
5 Claims. (Cl. 181—33)

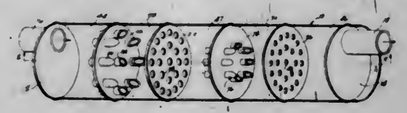


1. A sound deadener comprising a diaphragm of high mechanical hysteresis material; a weight attached to a central point of said diaphragm; a spacer between said weight and said diaphragm to limit the area of said diaphragm in contact with said weight; and a support for said diaphragm, said support comprising a cup having a flange extending outwardly from the rim thereof, an annular side wall and a bottom having a central portion thereof removed providing an opening therein, said diaphragm being attached to the bottom of said cup, and said spacer being located in said opening provided in the bottom of said cup.

3,016,972
MUFFLER FOR AN INTERNAL COMBUSTION ENGINE
Rebert J Dugas, 608 Lewis St., New Iberia, La.
Filed Apr. 10, 1959, Ser. No. 805,571
3 Claims. (Cl. 181—56)

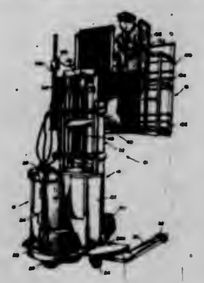
1. In a muffler, an open-ended elongated tunnel member, an end plate closing one end of said member and

having an inlet for receiving exhaust gases from an internal combustion engine, another end plate closing the other end of said member and having an outlet for discharging the exhaust gases from said member, a pair of partitions extending transversely of said member inwardly of and adjacent each of said end plates and fixedly attached to said member, each of said partitions and the portions of said member therebetween forming a constraining chamber, one of the partitions of each chamber being provided with ingress means embodying a plurality of open-ended nipples and the other of the partitions of said chamber being provided with egress means embodying a plurality of apertures, the nipples of each



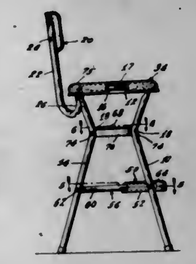
partition being disposed so that the intermediate portions are supported in said partition with one end within the adjacent chamber and facing toward the apertured partition of said chamber and the other end exteriorly of said chamber and facing toward the adjacent end plate of said member, said one end of each nipple being formed at an acute angle, the nipples of each partition being arranged in spaced relation thereabout with the angles being adjacent the perimeter of said partition and the parts contiguous to the acute angles being remote from the perimeter of said partition, the apertures and nipples of the ingress and egress means of said one chamber being of a larger diameter than the apertures and nipples of the ingress and egress means of said other chamber.

3,016,973
LIFT TRUCK
William A. Williamson, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 29, 1958, Ser. No. 783,364
12 Claims. (Cl. 182—14)



9. In a lift truck having a motor driven dirigible wheel, normal control means located on the truck for effecting tractive movement of the wheel in a forward or a reverse direction, other normal control means located on the truck and connected to the wheel for steering same; and an extensible upright connected to the truck and supporting a secondary or remote control station thereon for elevating movement along the upright; remote control steering means including reversible steering motor means connectible to the wheel for turning the wheel in either steering direction, means selectively engaging and disengaging said steering motor means with the wheel, the normal steering control means being movable to steer the wheel when the steering motor means is disengaged from the wheel, and remote steering motor control means located on the remote control station and operatively connected to the steering motor means for actuating same in a selected steering direction, electrical control means associated with the normal tractive control means for effecting elevating movement of the upright, remote operator controlled electrical means controlling the elevation of the remote control station on the upright, other remote operator controlled electrical means on the remote control station for operating the motor driven wheel in either forward or reverse, and travel limit means operatively connected to the motor driven wheel for de-energizing the wheel upon predetermined elevation of the remote control station.

3,016,974
STEP STOOL
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Mar. 30, 1959, Ser. No. 802,936
11 Claims. (Cl. 182—33)

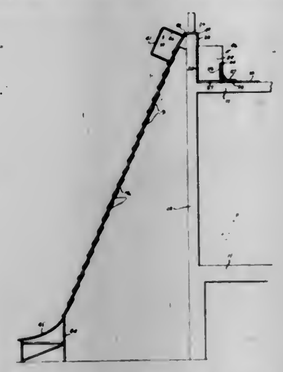


1. A step stool, comprising pairs of front legs and rear legs, means extending along the lateral edges of said stool interconnecting the upper ends of the front and rear legs at each side of the stool, a plurality of vertically spaced steps fixedly mounted at spaced intervals on said front and rear legs, said front legs being angled rearwardly from their lower ends to a point coplanar with the uppermost of said steps and then angled forwardly to dispose their upper ends forwardly of said uppermost step, a back rest mounted on said rear legs, and a seat pivotally interconnected to the rear legs and swingable between a collapsed position substantially parallel with the back rest and an extended position substantially parallel with the steps in which it is supported on said means.

3,016,975
FIRE ESCAPE SLIDE
Stefan Gogol, 1716 E. 26th St., and Leo C. Gogul, 6405 Edward Ave., both of Ashtabula, Ohio
Filed Mar. 8, 1960, Ser. No. 13,644
3 Claims. (Cl. 182—48)

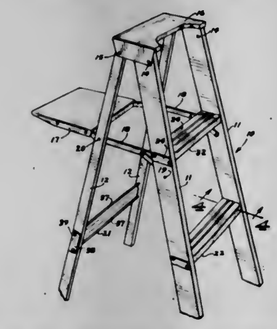
1. A fire escape apparatus, comprising, in combination, a container located on a floor beneath a window opening, a lid hinged to a wall embracing side of said container and adapted to open and terminate on the outer side of said window opening, a slide constructed from a series of plates having identical tubular members supportingly engaging opposite edges of the plate, said tubular members connected together in a superimposed spaced manner and adapted to slidably retract beneath each other to form a substantially rectangular block to be received in said container, said slide pivotally secured at one end to said lid, and adapted to extend downwardly from said opening to the ground at an angle formed by a wedge shaped bracket secured beneath the outer side of said window opening, a support hand rail pivotally

secured to one end of said slide and adapted to receive said rectangular block formed by the retracted slide, and



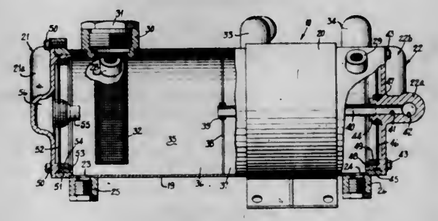
a landing frame located on the ground to receive the other end of said slide.

3,016,976
LADDER CONSTRUCTION
Donald J. Munson, Minneapolis, Minn., assignor to The J. R. Clark Company, Spring Park, Minn., a corporation of Minnesota
Filed Sept. 28, 1959, Ser. No. 842,702
1 Claim. (Cl. 182—194)



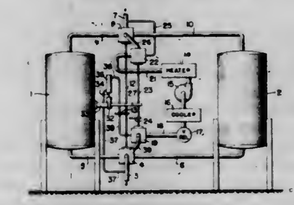
A step ladder comprising wooden spaced apart side rails and sheet metal step members, said step members extending between said side rails in vertically spaced apart position with the end edges thereof engaging one against each side rail, said sheet metal step members each being in the form of an inverted elongated channel in the provision of a central tread portion and having depending front and rear walls depending downwardly at substantially right angles from opposite sides of said central tread portion of the step, longitudinal elongated strengthening ribs formed in said step tread portion, said depending front and rear wall of each step having the lower edge curled inwardly in an annular direction on the lower edge of each respective wall, said lower curled edge of each wall extending beyond the length of said respective step members at each end in the provision of two spaced apart tubular extensions at each end of each respective step, said spaced apart wooden side rails each having oppositely positioned vertically spaced apertures therein, whereby the said tubular extensions of said respective vertically spaced steps project through said apertures, and a metal plate for each step likewise having oppositely positioned spaced apertures therein alignable with each of the respective spaced apertures of said wooden side rails, to thereby receive the said respective tubular extensions of an adjacently positioned step member, said plate serving as an anvil and said free ends of said tubular extensions being deformable into a flattened head portion against the exterior surface of said metal anvil plate to tightly secure the respective adjacent step endwise at each end between the said side rails.

3,016,977
OIL TANK ASSEMBLY
Roy C. Schweitzer, Highland Heights, and Charles R. Anspach, Willoughby, Ohio, assignors to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 26, 1959, Ser. No. 789,140
4 Claims. (Cl. 183—2.5)



1. An oil tank assembly, which comprises a housing providing an oil supply chamber therein, cap means secured to opposite ends of the housing and having air flow passages formed therein, one of said cap means being passaged to provide an oil supply path therethrough, an oil supply conduit within said chamber connecting with the supply passage in said one of the cap means and located to receive oil when the housing is at various attitudes, first conduit means received by the housing and communicating with the chamber to direct an oil-air mixture thereto at generally ambient pressure to compress any air in said chamber, second conduit means receiving essentially air-free oil from the supply passage in said one of the cap means, third conduit means receiving substantially oil-free air from the flow passages in each of the cap means, and filter members associated with each of the cap means and extending diametrally thereacross for venting air from the chamber to the air flow passages while blocking the movement of oil thereinto to standardize the pressure in said chamber at a pressure greater than ambient to prevent oil foaming at altitude.

3,016,978
DEHYDRATOR
John R. Hull, Feasterville, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Jan. 9, 1958, Ser. No. 708,040
8 Claims. (Cl. 183—4.1)

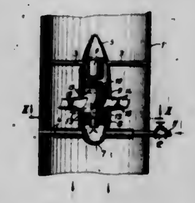


1. In a dehydrator, the combination of a pair of towers with a desiccant therein that are adapted to operate under

pressure, reactivating means, a first pair of valves, a second pair of valves, piping connecting said valves, towers and reactivating means, first means to adjust said first pair of valves from a first position in which one tower is connected in a line through which a gas to be dried flows to a second position in which the other tower is connected in said line, second means to adjust said second pair of valves from a first position in which the tower not connected to said line is connected to said reactivating means to a second position in which said tower has line pressure applied to it, locking means normally to prevent operation of said first adjusting means to its second position until said second adjusting means has been shifted to its second position, and line pressure responsive means to move said locking means to unlocking position operative in response to adjustment of said second adjusting means to its second mentioned position.

3,016,979
PROCESS AND CONTRIVANCE FOR SEPARATING SOLID OR LIQUID PARTICLES FROM GASES OR VAPOURS

Otto Schmid, Bregenz, Austria, assignor to Etablissement Aeromix, Vaduz (Furstentum), Liechtenstein
Filed May 26, 1960, Ser. No. 31,997
Claims priority, application Germany July 7, 1953
10 Claims. (Cl. 183—7)

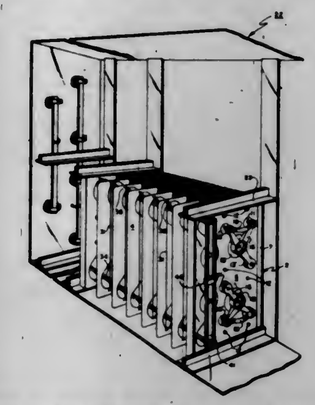


1. A method of separating particles having a magnitude of about one micron or less from gases, comprising the steps of passing the gases through a passage of a diameter exceeding about three feet, passing liquid within the passage and submitting it to rotation about an axis extending along the passage to drive it by centrifugal force along rotating generally radial channels of substantially uniform diameter, expelling the liquid in nonatomized form from the outer ends of the radial channels and at a rotational velocity such that it passes into an unobstructed space of the passage in drops at an initial velocity at right angles to the direction of gas flow of greater than ten thousand feet per minute and of a size to completely penetrate the gases to atomize the drops by their speed of travel through the gases to a size approximately that of the particles to be separated and before reaching the wall of the passage to form a uniformly distributed spray of atomized liquid across the remainder of the diameter of the passage for coalescing with the particles to be removed from the passage.

3,016,980
ELECTROSTATIC PRECIPITATOR

Don J. Gonzalez, Valley Station, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,029
19 Claims. (Cl. 183—7)

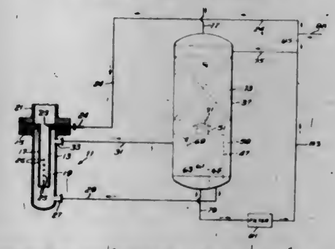
1. A plate electrode assembly for an electrostatic precipitator including an ionizer zone and a collector zone comprising a plurality of spaced plates disposed in said collector zone and extending into said ionizer zone, spaced discharge ionizing electrode members disposed in said ionizer zone alternately with that portion of said spaced plates extending into said ionizer zone, and support pins entirely disposed within said ionizer zone in insulated



relationship to and transverse said spaced plates to support said discharge ionizing electrode members.

3,016,981
METHOD AND APPARATUS FOR QUENCHING HIGH TEMPERATURE GASES

Wilfred J. Fritz, New Rochelle, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed May 20, 1960, Ser. No. 30,641
13 Claims. (Cl. 183—27)

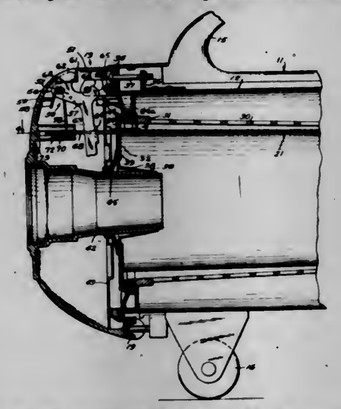


1. A method for removing soot from a gas in a quenching operation and for reducing the soot concentration of a continuously recycled liquid utilized to quench the gas, comprising the steps of, quenching incoming gas containing soot with a liquid by intimately contacting the gas with a confined liquid whereby a gas-liquid stream containing soot is produced, separating the gas-liquid stream in a separating zone into a gas stream containing an amount of soot and a liquid stream also containing an amount of soot, providing a substantially clean scrubbing liquid, scrubbing said gas with said scrubbing liquid to thereby provide a substantially soot-free gas, maintaining said scrubbing liquid substantially separate from said liquid stream, and recycling said scrubbing liquid to quench said incoming gas containing soot.

3,016,982
VACUUM CLEANER COVER LATCH CONTROL

Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 1, 1958, Ser. No. 725,730
7 Claims. (Cl. 183—43)

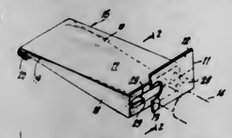
1. Latching mechanism for use on a vacuum cleaner of the type having a casing open at one side for the insertion and removal of a dust bag and a cover for closing the open side of the casing in which the latching means is rendered inoperative in the absence of a dust bag in the casing comprising, a latch keeper on the casing, a latch pivotally mounted on the cover for rocking movement to latching and unlatching positions in an arc with respect to the latch keeper on the casing, spring means for rocking the latch to latching position, an interlock bar mounted to slide on the cover in a linear path intercepting the arcuate path of at least a portion of the latch and



having an end projecting forwardly of the cover, spring means for moving the interlock bar to an extended position, said latch and interlock bar being positioned in side-by-side relation, and interlocking shoulders on the latch and interlock bar overlying each other when the bar is extended for holding the latch in unlatching position and offset when the bar is slid on the cover relative to the latch by engagement with the dust bag for releasing the latch for movement to latching position whereby to prevent the cover from being latched to the casing in the absence of a dust bag in the casing.

3,016,983
BAG

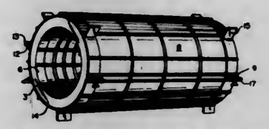
Lester J. Studley, Woodmere, N.Y., assignor to Studley Paper Company, Inc., a corporation of New York
Filed Nov. 13, 1958, Ser. No. 773,774
3 Claims. (Cl. 183—51)



1. A disposable dust bag for a suction cleaner, said bag having a body formed of porous sheet material, said body having a pair of opposing side walls and a pair of opposing gusseted end walls interconnecting said side walls and extending therebetween in the collapsed condition of said bag, means forming a closure for said bag at one end of said walls, and an end closure for said bag at the other end of said walls, said end closure comprising a substantially rigid sheet material member, said side walls and gusseted end walls being secured at said other end thereof to the inner surface of said member to form an effective end sealed area, said member having a central longitudinal fold line so that said member is foldable upon itself with contiguous portions of said inner surface in confronting relation in the collapsed condition of said bag and with said other end of said walls disposed between said contiguous confronting portions in said collapsed condition, said member having free unsecured marginal edges which overlie said side walls inwardly of said fold line in said collapsed condition and which extend laterally outwardly of said side walls in the extended condition of said bag.

3,016,984
GAS FILTER APPARATUS

Allan R. Getzin, Jeffersontown, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,732
5 Claims. (Cl. 183—73)



1. A filter apparatus comprising a gas pervious hollow inner housing member having an inlet opening at one end thereof, a replaceable filter medium surrounding the outer face of said inner housing member, an assembly hold-down means integral with said inner housing member and engageable with said filter medium, said hold-down means including a rod member extending in fixed relationship with and between opposite ends of said inner housing member and spaced from the outer face of said inner housing member to define an insert space with said outer face to accommodate one end of said filter medium therein, and a gas pervious outer housing member removably surrounding said filter medium to retain said filter medium in place.

3,016,985
METHOD OF RECOVERY OF ACETYLENE AND ETHYLENE

George A. Akin, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Dec. 28, 1959, Ser. No. 862,084
10 Claims. (Cl. 183—115)

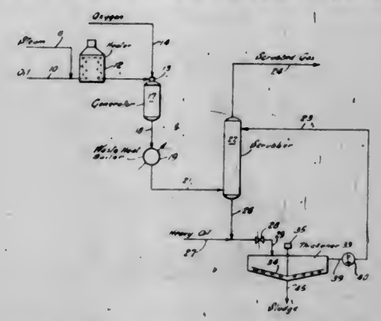
1. In a process for resolving a gaseous mixture containing acetylene and ethylene, the improvement which comprises absorbing both acetylene and ethylene from the gaseous mixture by contacting said mixture with a liquid hydrocarbon solvent, removing acetylene from said hydrocarbon solvent by continuous countercurrent extraction with a selective solvent which is immiscible with said hydrocarbon solvent and separating acetylene from said selective solvent and ethylene from said hydrocarbon solvent.

3,016,986
PRODUCTION OF CARBON MONOXIDE AND HYDROGEN

Roger M. Dille and Ronald W. Chapman, Whittier, and John C. Ahlborn, Monterey Park, Calif., assignors to Texaco Inc., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,841
2 Claims. (Cl. 183—121)

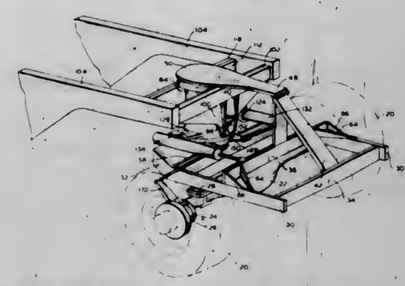
1. A method for recovering carbonaceous solid as a flowable mixture with a hydrocarbon oil from a product gas stream comprising carbon monoxide, hydrogen and entrained carbonaceous solid resulting from the reaction of a carbonaceous fuel with oxygen, said solid having an oil absorption value within the range of about 2.4 to 60 gallons per hundred pounds which method comprises contacting said product gas stream with water in a gas scrubbing zone to effect removal of carbonaceous solid entrained therein from said gas stream and to form a

dispersion of carbonaceous solid in water, contacting said dispersion with a heavy hydrocarbon liquid having a gravity less than 10° API in an amount within the range of 1.5 to 20 times the oil absorption value of said carbonaceous solid in a mixing zone to effect transfer of carbonaceous solid form said dispersion to said heavy



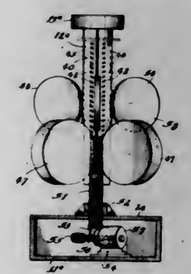
hydrocarbon liquid to form an oil-carbonaceous solid mixture having an apparent density greater than water effecting resolution of said dispersion into clarified water and a flowable oil-carbonaceous solid mixture and separating said clarified water and said flowable mixture by sedimentation.

3,016,987
PIVOTED VEHICLE STEERING MECHANISM
William A. Williamson, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Dec. 24, 1956, Ser. No. 630,197
12 Claims. (Cl. 187—9)



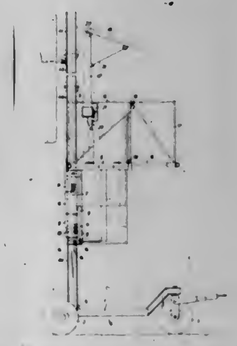
1. Vehicular means comprising a first body portion and a second dirigible body portion, said second body portion having a longitudinally extending framework, an axle unit supporting said framework and movable with said second body portion, dirigible wheels mounted at opposite ends of said axle unit for rotation both with the axle unit and relative to the axle unit, a pivot housing mounted in axially spaced relation to said axle unit and connected to said first body portion, a pivot shaft mounted within said pivot housing for rotation relative thereto, force transmitting means connected to said dirigible body portion for actuating it with said pivot shaft about the axis of said pivot shaft, said pivot shaft being connected to said framework, force transmitting linkage connecting said dirigible wheels to said pivot housing for simultaneously rotating said dirigible wheels relative to said axle unit coordinate with rotation of said axle unit with said pivot shaft, and pivot means mounted transversely of said pivot housing and longitudinally of said first body portion supporting said pivot housing and dirigible body portion for rotation in a plane transverse to the plane of rotation of said dirigible body portion with said pivot shaft, whereby said dirigible body portion, including said axle unit and wheels, is independently pivotable in either of said planes or is simultaneously pivotable in both of said planes.

3,016,988
LIFTING DEVICE
Charles W. Browning, 3032 N. Garrison, Tulsa, Okla.
Filed Oct. 19, 1959, Ser. No. 847,175
9 Claims. (Cl. 187—17)



1. A lifting device comprising a hollow base, a rigid platform spaced above said base, a plurality of lifting standards having their upper ends secured to and inserted into and carrying said rigid platform, said standards each consisting of multiple elongated curved metal strips in abutting relation to form a laminar structure with said strips being transversely curved and having longitudinally spaced transverse slots centrally located in each said strip with the slots in abutting strips in alignment, storage drums for housing the retracted portion of each standard, drive mechanism for simultaneously elevating or lowering said standards and the attached platform including drive means having teeth received in said transverse slots, and a common reversible drive motor for simultaneously actuating said drive means, the laminated standards being of concavo-convex shape and arranged relative to each other to resist buckling of any one or more standards.

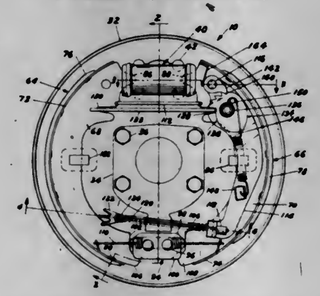
3,016,989
ELEVATOR PLANT AND ITS GUIDE RAILS
Alvar N. Lindmark, Strandgatan 24, Skelleftea, Sweden
Filed Dec. 16, 1958, Ser. No. 780,704
Claims priority, application Sweden Dec. 18, 1957
7 Claims. (Cl. 187—19)



1. Elevator plant comprising an elevator platform having guide means engageable with a rack equipped

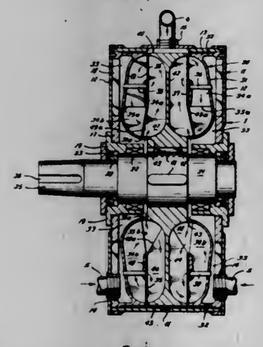
guide-rail adapted to be suspended from an upright wall and being operable for guiding and supporting the platform movably thereon, driving means supported by said platform and provided with gears engaging with said rack for effecting ascending and descending movement of said platform at will, said guide-rail being built up of short sections, the lowermost end section of said guide-rail being turnable about an axis parallel with the guide-rail.

3,016,990
SELF-ADJUSTING BRAKE
Truman W. Towns, St. Clair Shores, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed July 22, 1959, Ser. No. 828,829
3 Claims. (Cl. 188—79.5)



1. In an adjusting device for a pair of pivotably mounted members, a second class lever pivotably connected at one of its ends to one of said members, a strut interposed between the other of said members and said lever, said lever and strut being actuatable to force the separation of said members, adjusting means having an element rotatably mounted on said lever and having an edge of increasing radius engageable with the end of said strut, and spring means adapted to rotate said edge into engagement with said strut end.

3,016,991
HYDRAULIC TURBO BRAKE
Joe A. Lyne, 106 Ferndale, Bellaire, Tex.
Filed Jan. 26, 1959, Ser. No. 788,860
4 Claims. (Cl. 188—90)



1. A fluid brake comprising

a housing,

a shaft extending through said housing and rotatable therein and adapted to have impressed thereon torque which it is desired to oppose by braking force,

a rotor mounted on said shaft within said housing and having a concave wall of annular form,

a stator within said housing,

said stator having a concave annular wall spaced axially from one end of said housing and cooperating with said rotor annular wall to define a fluid chamber between said stator annular wall and said rotor annular wall,

the inner circular edge of said stator annular wall being spaced radially from said shaft and axially from said rotor to provide a clearance for fluid flow into the fluid chamber between said rotor and said stator,

the outer circular edge of said stator annular wall being spaced axially from said rotor annular wall to afford fluid flow from the fluid chamber space between said rotor and said stator;

a conduit from a source of fluid opening into said housing between said one end and said stator annular wall,

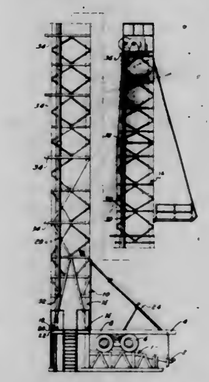
a plurality of generally radial vanes carried within each of said rotor and said stator concave annular walls to form opposing fluid pockets,

the radially inner termini of said stator vanes being spaced axially from said inner circular edge,

a plurality of said rotor vanes having portions thereof extending axially across said clearance and into the concavity of said stator annular wall to rotate adjacent said stator annular wall and said radially inner termini, and

a plurality of annularly spaced nozzles extending through said stator annular wall affording fluid communication between said fluid chamber and the space between said housing one end and said stator annular wall.

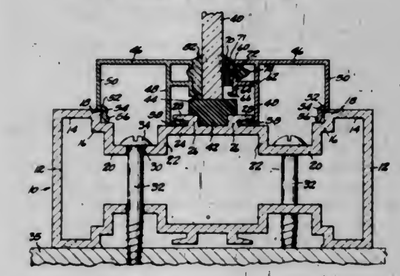
3,016,992
STABILIZER FOR FLUID CYLINDER PLUNGERS OF HIGH SLENDERNESS RATIO
John Hart Wilson, P.O. Box 329, Wichita Falls, Tex.
Filed Oct. 24, 1957, Ser. No. 692,129
15 Claims. (Cl. 189—14)



1. In a stabilizer for the plungers of fluid cylinders, a stationary support, a longitudinally slidable member mounted for sliding relation with respect to said stationary support, a fluid cylinder, a plunger telescoped into said fluid cylinder, one end of said cylinder being secured to said stationary support, the upper end of said plunger being secured to said slidable member, means mounted intermediate the length of said slidable member for selectively engaging said plunger, said means comprising a base mounted on said slidable member, a pair of gripper arms pivotally mounted on said base to engage said plunger when said plunger is in one position, and to

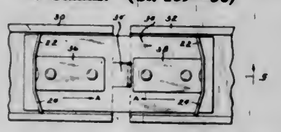
disengage said plunger when said plunger is in another position, cam means mounted on said stationary support, cam engaging means mounted on said slidable member and being cooperable with said cam upon relative movement of said slidable member with respect to said stationary support to move said gripper arms from one position to another position.

3,016,993
BUILDING FRAMING UNIT
Harry L. Owen, 907 Cedar St., Niles, Mich.
Filed June 18, 1959, Ser. No. 821,140
5 Claims. (Cl. 189—34)



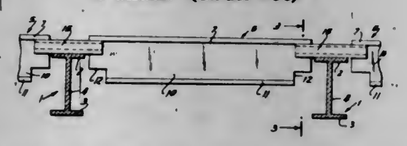
1. A building framing unit comprising a plurality of angularly disposed elongated frame members outlining a building opening, each frame member having an inner face interrupted by a longitudinal recess, a plurality of longitudinal parallel interlock parts carried by each member at its recess, two of said interlock parts of each member constituting beads at opposite sides of said recess, angle members connecting adjacent frame members, each angle member having a pair of legs seated in the recesses of adjacent frame members, and an attachment member carried by each frame member and having a pair of spaced marginal longitudinal projecting portions, each projecting portion having an interlock part complementary to one of the interlock parts of said frame member, and one thereof being engageable by a snap fit.

3,016,994
CONNECTOR FOR METAL STRIPS
Lorne C. Elder, Hamilton, Ontario, Canada, assignor to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,564
5 Claims. (Cl. 189—36)



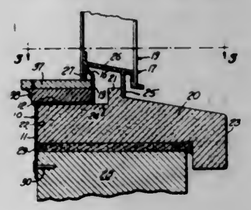
1. A device for connecting together in end-to-end relation two channel shaped members, comprising a base part having an outer surface adapted to be positioned in face-to-face engagement with the inner surfaces of the bottoms of the two channel shaped members when the two are in connected relation, said base part having on its inner surface and adjacent each end thereof at least one upstanding wall forming a wing member which is resilient in the direction in which the channel shaped members move when they are connected, each of said wing members extending transversely of the base member and being of such a length at its outer extremity lies outside the side edge of the base member sufficiently to engage a side wall of the channel shaped member when the connecting device is within such member, and each of such wing members being inclined from the longitudinal axis of the connecting device in the direction in which the channel shaped member which it is adapted to engage moves when the two channel shaped members are moved toward each other to connect them thereby to provide a wedging action resisting separation of the channel shaped members after connection thereof by said device.

3,016,995
PURLIN ARRANGEMENTS
Milton Rosen, Kew Gardens, N.Y.
(Lake Shore Drive, Lake Mohegan, N.Y.)
Filed Apr. 24, 1959, Ser. No. 808,851
5 Claims. (Cl. 189—36)



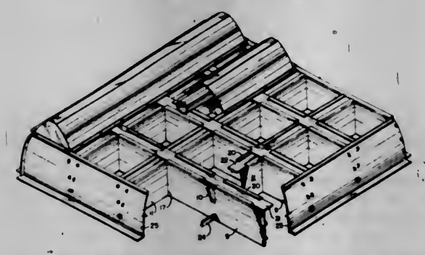
4. In a metal I-beam girder structure, a purlin arrangement comprising a supporting girder, a pair of I-shaped purlins arranged oppositely and traverse of the supporting girder each having upper and lower horizontal flange portions and a web portion, and a pair of longitudinal members having horizontal upper and lower portions which are as wide as those sections of the flange portions of said purlins at both sides of the web portion thereof and being traversely secured to the upper portions of said girder and laterally extended with both ends beyond the girder and spaced apart at a distance which is larger than the thickness of the web portion of the purlin, said purlins having at both ends sections of their lower flange portions removed, and said ends of each purlin being dropped between a pair of said longitudinal members so that end sections of their web portions are extended between said longitudinal members and that sections of their upper flange portions rest upon the end portions of the horizontal longitudinal members.

3,016,996
MULTIPLE WINDOW ANCHORING DEVICE
Ralph L. Smathers, 5012 Missouri Ave., and Joseph G. Raulerson, 315 Hibiscus, both of Lakeland, Fla.
Filed Feb. 12, 1960, Ser. No. 8,397
5 Claims. (Cl. 189—64)



2. An anchoring device for anchoring a multiple metal window frame and interconnecting mull bar assembly to a building wall wherein the bottom rails of the window frame rest on a window sill fixed in the building wall and include a depending flange at the inner edge of each frame and a depending web spaced toward the outer side of the building wall defining a downwardly opening channel therebetween, the window sill being of the type having a rib forming an outwardly facing shoulder to abut said depending web for locating the frames intermediate the inner and outer sides of the building wall and a stool portion extending toward the inner side of the building wall having right angular adjoining surfaces; said anchoring device comprising an elongated integral strap of rigid sheet metal including a right angular mounting bracket portion to abut and conform to said right angular adjoining surfaces of said stoop portion of the sill, said right angular mounting bracket portion having a portion at one end depending below said sill into lapping relation to said building wall to be secured thereto and having an upwardly extending hook formation at the other end thereof, said hook formation including a vertical riser leg lying in a vertical plane located between said depending flange and depending web of the bottom window frame rails and extending upwardly from said right angular mounting bracket portion into said downwardly opening channel and terminating in a toe portion inclined upwardly and inwardly toward the inner side of the building wall having a bearing edge for abutting the surface of said depending bottom rail flange facing the outer side of the building wall, said bearing edge being positioned relative to the right angle corner of said right angular mounting bracket portion when seated against the right angular adjoining surfaces of the window sill stool portion to force the window frames toward the inner side of the building wall to a position holding said depending web intimately against the outwardly facing shoulder of said window sill rib.

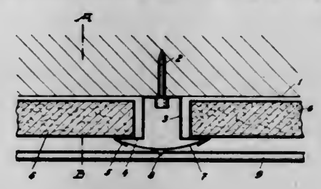
3,016,997
LIGHTING LOUVERS
Edison Price, 204 6th Ave., New York, N.Y.
Filed Nov. 27, 1959, Ser. No. 855,807
5 Claims. (Cl. 189—82)



1. A lighting baffle comprising two sets of V-shape louvers of sheet material intersecting in a crisscross grid, the louvers of one set having spaced upwardly opening notches with upwardly and outwardly tapering edges and tabs projecting from said edges in engagement with complementary slits formed in the sides of the louvers of the other set, and the louvers of said other set having notches tapering upwardly and outwardly from narrow downward openings in interlocking engagement with said upwardly opening notches, the sides of the louvers of both sets being resilient to permit squeezing those of the one set together to pass through the narrow downward openings of the notches of the other set and to permit squeezing the sides of the louvers of the other set together to pass said projecting tabs.
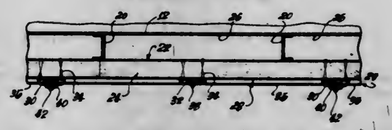
3,016,998
FACING ARRANGEMENT FOR WALLS
Eduard Buchmeier, Edingen (Neckar), Germany, assignor to Grunzweig & Hartmann A.-G., Ludwigshafen (Rhine), Germany, a corporation of Germany
Filed Feb. 18, 1959, Ser. No. 794,167
Claims priority, application Germany Feb. 24, 1958
5 Claims. (Cl. 189—85)

1. A ceiling wall arrangement, comprising, in combination, a substantially horizontal ceiling wall; a plurality of generally channel shaped clip members on the underside of the wall, said clip members each having a web portion secured to said wall, two flange portions spacedly extending downward from said web portion and lateral extension portions horizontally extending from respective flange portions in opposite directions, each web portion and the corresponding extension portion defining with said ceiling wall a lateral pocket; a panel member of sound absorbing material retained by its own weight in each of said pockets, said panel member having an edge portion



resting on corresponding extension portions of at least two of said clip members; fastening means on each of said extension portions; an elongated supporting member longitudinally extending between said two clip members and secured thereto by the respective fastening means on the extension portions thereof; a plurality of longitudinally spaced attaching means on said supporting member; and a plurality of elongated resilient facing strips of arcuate cross section attached to said supporting member in transversely spaced relationship by respective ones of said attaching means.

3,016,999
INSULATED STRUCTURE
Karl M. Glasoe, Jr., San Marino, Calif., assignor to Thorpe Insulation Company, Los Angeles, Calif., a corporation of California
Filed Oct. 28, 1959, Ser. No. 849,298
2 Claims. (Cl. 189—85)

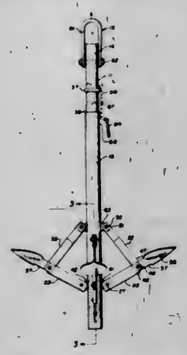


1. In combination: an underlying structure to be insulated; an anchoring layer overlying and secured to said underlying structure; an insulating layer overlying said anchoring layer; a plurality of spaced, elongated tie means connected at their inner ends to said anchoring layer and extending outwardly through said insulating layer; main and intermediate supports overlying said insulating layer and spaced apart in alternating relation, said tie means being arranged in rows and said supports being secured to the outer ends of said tie means of said rows, respectively; sheathing panels each spanning the space between two of said main supports and overlying the intermediate support therebetween, the ends of said sheathing panels being spaced apart at said main supports; means securing each sheathing panel only to the intermediate support which it overlies; and battens secured to said main supports and overlying the spaces between and the ends of said sheathing panels.

3,017,000
LAND ANCHOR
August A. Hynds, 3308 82nd Ave., Oakland, Calif.
Filed Feb. 4, 1960, Ser. No. 6,714
4 Claims. (Cl. 189—92)

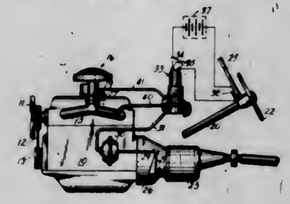
1. A land anchor comprising, a shaft adapted for driving of a normally lower end into the ground and provid-

ing a holding line connection at its normally upper end, a sleeve surrounding and slidably mounted upon said shaft for relative longitudinal reciprocation, a stop on said shaft engageable with said sleeve in a driving position carrying said sleeve into the ground with said shaft, said sleeve being open at both ends and said shaft extending longitudinally completely through said sleeve when in said driving position, said sleeve being formed with a longitudinally extending slot adjacent the normally



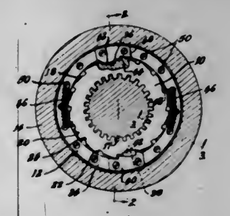
lower end thereof, an arm carried by and projecting radially outwardly from said shaft through said slot, an elongated fluke hinged at one end of the outer end of said arm, and a link connecting a mid-point of said fluke to said sleeve at a position upwardly from said arm and swinging said fluke to an upwardly folded position upon said sleeve in said driving position and swinging said fluke to an outwardly projecting position relative to said sleeve upon relative displacement of said shaft from said driving position in a ground withdrawal direction.

3,017,001
AUTOMOTIVE CLUTCH CONTROL SYSTEM
Franz Josef Von Bomhard, Schweinfurt (Main), Germany, assignor to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany
Original application Feb. 5, 1959, Ser. No. 791,482, now Patent No. 2,974,765, dated Mar. 14, 1961. Divided and this application Aug. 3, 1960, Ser. No. 53,329
Claims priority, application Germany Feb. 6, 1958
3 Claims. (Cl. 192—3.5)



1. An automotive clutch control system, comprising suction actuable servomotor means connected for disengaging said clutch when it would otherwise be engaged; an internal combustion engine in driving connection with said clutch, said engine including an intake manifold for delivering an air-fuel mixture to said engine; a transmission driven by said engine through said clutch; gear shifting means for selecting a desired gear ratio within said transmission; a solenoid valve having a suction chamber, a servomotor chamber and atmospheric pressure chamber; an energizing circuit for said solenoid valve, said energizing circuit including switch means actuated by said gear shifting means for energizing said circuit during the changing of gear ratios in said transmission; a first suction line connecting said suction chamber to said intake manifold; a second suction line connecting said servomotor chamber to said servomotor means; means defining a metering orifice through which said atmospheric pressure chamber communicates with the atmosphere; a valve member actuable upon energization of said energizing circuit which transfers said servomotor chamber from communication with said atmospheric pressure chamber into communication with said suction chamber, said valve member restoring the original communications among said chambers immediately upon deenergization of said energizing circuit; a pressure regulating valve by-passing said metering orifice; and inertia actuated means acting on said pressure regulating valve to reduce the pressure differential required for operation of said pressure regulating valve during acceleration of a vehicle propelled by said engine.

3,017,002
ONE-WAY CLUTCH
Joseph A. Marland, La Grange, Ill., assignor to Marland One-Way Clutch Co., La Grange, Ill.
Filed July 5, 1957, Ser. No. 670,095
4 Claims. (Cl. 192—45)

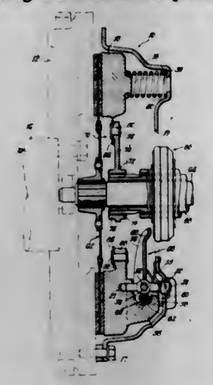


1. An assembly for a one-way clutch comprising, in combination, a generally cylindrical inner race having a plurality of spaced indentations on its outer surface, each indentation having a flat surface extending from the surface of the inner race parallel to the axis of the inner race, each of said flat surfaces being at approximately the same angle relative to the radial plane passing through the line of intersection of the flat surface and the outer surface of the inner race, and a trailing surface disposed approximately on a radial plane, a roller bearing assembly including a roller bearing confronting each of the indentations and a hollow cylindrical cage having a slot for each roller bearing to maintain the roller bearings on radial planes separated by fixed angles, and a stop lug secured to the cage confronting one of the above said indentations of the inner race having a tooth protruding toward the inner race adapted to abut the trailing surface of the indentation.

3,017,003
CLUTCH
Harold V. Reed, Chicago, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 24, 1958, Ser. No. 775,985
15 Claims. (Cl. 192—68)

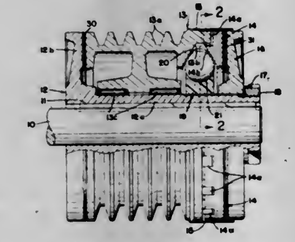
1. In a clutch assembly having a cover plate connectible to a flywheel, an annular pressure plate connected to said cover plate for rotation therewith, a driven plate connectible to a first output shaft, spring means for biasing said pressure plate into engagement with said driven plate, a plurality of circumferentially spaced pivotally mounted release levers engaging said pressure plate, a release bearing assembly axially movable selectively to engage said release levers and thereby afford disengagement of said

pressure plate from said driven plate, a second output shaft, the improvement comprising a power take-off assembly including a second driven plate fixed to said sec-



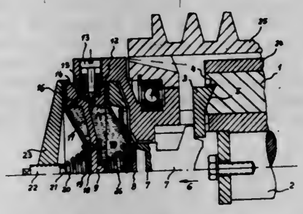
ond output shaft and means resiliently connecting said pressure plate to said second driven plate providing for relative axial displacement therebetween.

3,017,004
CENTRIFUGAL CLUTCH ASSEMBLY
Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, a corporation of Michigan
Filed Dec. 30, 1958, Ser. No. 783,841
4 Claims. (Cl. 192—105)



1. In a centrifugal clutch assembly, the combination of a rotary input drive element, a pair of axially spaced rotary driving members coupled to said input drive element to be driven thereby, a pair of rotatable driven members mounted between said driving members, at least one of said driven members having a substantial axial thickness so that said driven members space said driving members apart a substantial distance axially, said driven members being coupled to each other to rotate in unison and being movable axially with respect to one another, means on certain of said members for clutching engagement between the axially inward ends of both driving members and the axially outward ends of the respective driven members when the driven members are moved axially apart from one another and toward the respective driving members, said driven members at their axially inward ends presenting axially spaced apart, confronting annular cam faces which converge toward each other in a radially outward direction and which define between them an annular cam space which is progressively narrower radially outward, a rotatable cam carrier, and a plurality of circumferentially spaced cams carried by said cam carrier in said cam space for engagement with said cam faces, said cam carrier being coupled to said input drive element to be rotated thereby independent of the engagement of said cams with said driven members, said cams being mounted on said cam carrier to turn therewith in said cam space and to move outward centrifugally in response to the rotation of the cam carrier to force said driven members axially apart from each other and into clutching engagement with said driving members.

3,017,005
CENTRIFUGAL-FORCE CONTROLLED DELAYED-ACTION TRANSMISSION
Josef Mühlbeyer, Eschborner Landstr. 46, Frankfurt am Main, Germany
Filed Oct. 28, 1959, Ser. No. 849,410
Claims priority, application Germany Nov. 4, 1958
9 Claims. (Cl. 192—105)

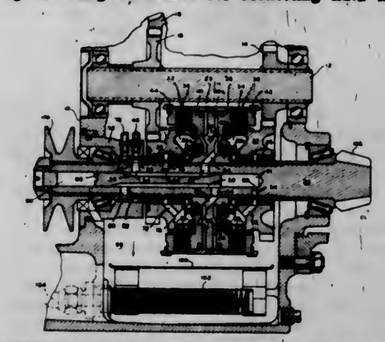


1. A centrifugally controlled coupling of selectively time-delayed action, comprising a revolvable driving member, a revolvable driven member, an intermediate coupling member revolvable together with said driving member and radially movable due to centrifugal force into coupling engagement with said driven member, force-transmitting means movable longitudinally relative to said driving member in a given direction parallel to the axis of revolution, said force-transmitting means having a surface in engagement with said intermediate member for limiting the radial motion of the latter depending upon the longitudinal motion of said force-transmitting means and to hold said intermediate member disengaged from said driven member when said driving member is at rest, adjustable time-delay means comprising a damping device having fluid-displacing means operatively connected with said force-transmitting means for movement by said force-transmitting means in said given direction, said damping device being provided with a variable volume hydraulic chamber cooperating with said fluid-displacing means to receive hydraulic fluid displaced thereby, and adjustment means accessible from the outside of said coupling for adjusting the maximum volume of said chamber, whereby the amount of radial motion of said intermediate member will depend upon the adjusted maximum volume of said chamber.

3,017,006
CLUTCH MECHANISM
Donald S. Dence and Francis L. Metz, Jackson, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Filed Oct. 1, 1959, Ser. No. 843,814
1 Claim. (Cl. 192—113)

In a transmission mechanism, a rotatable shaft having a longitudinal opening extending thereinto from one end and having first and second gears rotatably mounted thereon, an annular web member secured to the shaft between the said gears and rotatable with the shaft, a pair of clutch drum portions affixed to the said web member and extending axially therefrom in opposite directions, a pair of multiple disc clutch assemblies located on opposite sides of the said web member within the said clutch drum portions respectively and arranged to connect the said gears selectively to the said web member for conjoint rotation with the shaft, each said clutch

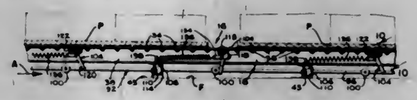
assembly including a plurality of friction discs with alternate discs splined to the said clutch drum portions and the intervening discs splined to the respective gears, each clutch assembly including also a piston slidable within its drum portion and forming a chamber with such drum portion and the said web member, a spool member expandibly fitted in the said longitudinal opening in the shaft, the said spool member having two longitudinal slots in the outer surface thereof forming with the walls of the said opening two longitudinally extending passageways in the said shaft which are not in communication with each other, first conduit means for admitting pressurized fluid to one of said chambers for engaging one clutch assembly and connecting one gear for the conjoint rotation with the shaft, said first conduit means including a first one of the said longitudinal pasageways in the shaft, a first radial opening in the said shaft communicating with the said first longitudinal passageway and an opening through said web member communicating with said first radial opening and said one chamber, a second radial opening in the said shaft communicating with the said first longitudinal passageway, said second opening including an orifice for restricting fluid flow,



and passageway means in the said other gear communicating with the said second radial opening for directing fluid from the said first longitudinal passageway to the friction surfaces of the said other clutch assembly for cooling and lubricating such friction surfaces when the said one clutch assembly is engaged, second conduit means for admitting pressurized fluid to the other of said chambers for engaging the other clutch assembly and thereby connecting the said other gear for conjoint rotation with the shaft, said second conduit means including the second longitudinal passageway in the said shaft, a third radial opening in the said shaft communicating with said second longitudinal passageway and an additional opening through said web member communicating with said third radial opening and said other chamber, a fourth radial opening in the said shaft communicating with the said second longitudinal passageway, said fourth opening including an orifice for restricting fluid flow, and additional passageway means in the said one gear communicating with the said fourth radial opening for directing fluid from the said second longitudinal passageway to the friction surfaces of the said one clutch assembly for cooling and lubricating such friction surfaces when the said other clutch assembly is engaged.

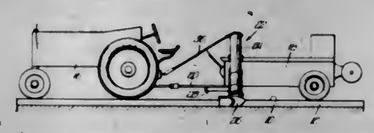
3,017,007
CONVEYOR MECHANISM
Earle J. McGrath, San Bernardino, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed July 10, 1958, Ser. No. 747,762
21 Claims. (Cl. 193—40)

1. A conveyor for transporting articles comprising a frame, a plurality of drive rollers journaled in longitudinally spaced relation along said frame, idle rollers freely journaled in a longitudinally spaced relation along said frame and disposed intermediate said drive rollers, the peripheries of said driving rollers being slightly elevated above the peripheries of said idle rollers, the elevation of said driving rollers above said idle rollers being such that at least one of said drive rollers is in partially supporting friction driving engagement with an article being



transported by said conveyor even though the article may also be partially supported by intermediate idle rollers, drive means to turn said drive rollers intermittently to advance the articles along said conveyor, said drive means including an impositively actuated intermittent drive that is ineffective to turn the associated drive roller when the roller is frictionally held against turning by an article resting thereon.

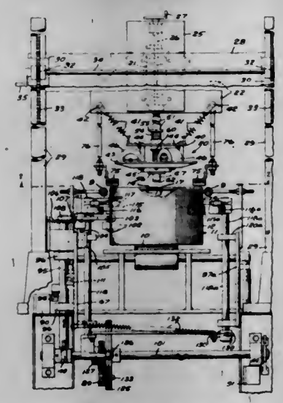
3,017,008
BARN CLEANING APPARATUS
Edward M. Olson, Lake Geneva, Wis.
Original application May 10, 1954, Ser. No. 428,474, now Patent No. 2,855,085, dated Oct. 7, 1958. Divided and this application July 31, 1958, Ser. No. 752,356
7 Claims. (Cl. 198—7)



1. In barn cleaning apparatus of the class described for cleaning manure from a manure gutter which is formed to extend lengthwise of the barn floor between the aisle floor level and the stanchion floor level, said barn cleaning apparatus comprising a conveyor tube adapted to be propelled in an inclined operating position which lies in a plane extending substantially transversely of said gutter with the lower inlet end of said tube being disposed adjacent to said gutter and its upper outlet end being disposed over the aisle floor level for discharging into a receptacle which also travels along said aisle floor level, a screw conveyor rotatably mounted in said conveyor tube, a cleaning head mounted on the lower end of said conveyor tube for traveling along within the bottom of the gutter and having a manure receiving opening therein facing forwardly substantially at right angles to the transverse plane of said conveyor tube and screw conveyor, said cleaning head being of generally rectangular formation comprising substantially vertical side walls and a substantially horizontal bottom wall which define said manure receiving opening, said side and bottom walls having leading edges which scrape the manure from the side and bottom surfaces of said gutter and direct it into the interior of said cleaning head for transfer into said conveyor tube, and rotating scraper blade means within said cleaning head driven by said screw conveyor, said scraper blade means comprising a crescent shaped portion having a spiral cutting edge which moves with a progressive cutting action spirally across the inner walls of said cleaning head, whereby said spiral cutting edge and the interior walls of said cleaning head cooperate to cause relatively large cornstalks, heavy straw, long grass and the like to be sheared or broken up between said spiral cutting edge and the interior walls of said cleaning head into a mass which can be fed up said inclined conveyor tube by said screw conveyor, said

crescent shaped portion being of substantially larger diameter than said screw conveyor so that in its rotation said crescent shaped portion can reach down into the inner or near corner area of the cleaning head traveling in the inner or near corner area of the gutter adjacent to said aisle floor level, which inner corner area cannot be reached by said screw conveyor because of the angle of inclination of the screw conveyor transversely of the gutter and because of the depressed position of the gutter below the floor level.

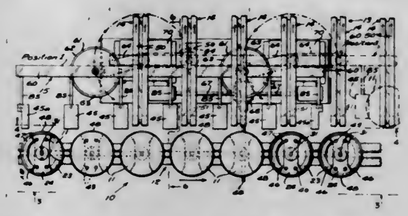
3,017,009
MACHINE FOR POSITIONING THE HANDLES OF CONTAINERS
Richard F. Wiggins, Southport, and John A. Maltas, Bridgeport, Conn., and Raymond L. Gann, Downers Grove, Ill., assignors to The Gyromat Corp., Fairfield, Conn., a corporation of Connecticut
Filed June 13, 1960, Ser. No. 35,665
12 Claims. (Cl. 198—29)



1. An apparatus for positioning handles on containers away from adjacent walls thereof at a handle positioning station, to permit the coating of said walls and of all sides of said handles, comprising a handle positioning mechanism at said station, conveyor means for feeding the containers successively through said handle positioning station, a pair of control members, means automatically operable each time both of said control members are actuated for initiating the operation of said handle positioning mechanism through a single operating cycle, means automatically operable by a container on said conveyor means in the vicinity of said station as it approaches said station for actuating one of said members, and means operable while said container is at said station for actuating the other of said control members, to initiate operation of said handle positioning mechanism through said cycle.

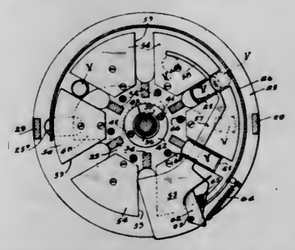
3,017,010
APPARATUS FOR TRANSFERRING OBJECTS BETWEEN CONVEYORS
Richard F. Wiggins, Southport, and John A. Maltas, Bridgeport, Conn., and Frederick E. Ullman, Winnetka, Ill., assignors to The Gyromat Corporation, Fairfield, Conn., a corporation of Connecticut
Filed Aug. 2, 1960, Ser. No. 47,087
6 Claims. (Cl. 198—31)

1. An apparatus for transporting objects comprising a conveyor for moving the objects in single file, a conveyor system for moving the objects in successive ranks, and means for cyclically transferring successive banks of said objects in file from said conveyor to said conveyor system for movement by said conveyor system in rank formation, said transferring means comprising a plurality of platforms, means for moving said platforms in unison through each cycle from a position near the conveyor to a position near the conveyor system to carry the objects from said conveyor to said conveyor system, and cam



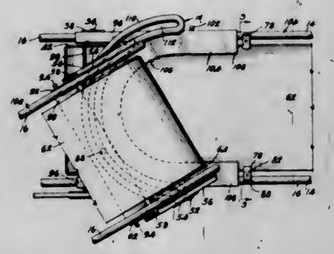
means for simultaneously moving the platforms up and down during each cycle, to cause the platforms when near the conveyor to move upwardly from below the objects to lift the objects from the conveyor, and to cause the platforms when near the conveyor system to descend from above the conveyor system to deposit the objects onto said conveyor system in rank formation.

3,017,011
APPARATUS FOR HANDLING AND TREATING VIALS
Robert W. Meyer, South Elgin, Ill., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Oct. 20, 1959, Ser. No. 847,532
18 Claims. (Cl. 198—33)



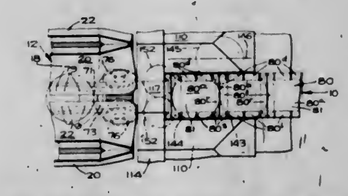
1. In apparatus for orienting vials and discharging them seriatim with an open end lowermost for gravity telescopic positioning over upstanding spindles as the latter are brought in succession to a vial receiving station beneath the apparatus, a rotor mounted for rotation on a vertical axis, said rotor having a series of circumferentially spaced pockets opening radially outward through its periphery and movable by rotation of the rotor past vial loading and unloading stations, each of said pockets having a closed inner end and an open lower side and being elongated radially of the rotor to receive vials in a recumbent position with their axes disposed in a generally radial direction, means common to the pockets for insuring placement of vials in their innermost position in the latter, a floor beneath the rotor provided with a discharge opening at the vial receiving station, a fixed horizontal vial support between a segment of the path of travel of the pockets and said floor, said support shaped and positioned relative to the axes of the pockets to provide a horizontal fulcrum extending generally normal to the axes of the pockets and about which pocketed vials turn under the influence of gravity and assume upright positions upon the floor and means for advancing the uprighted vials along the floor to said discharge opening.

3,017,012
PORTABLE CONVEYOR ASSEMBLY
Frank S. Wilde, 1002 S. Jason St., Denver, Colo.
Filed Sept. 4, 1959, Ser. No. 838,083
6 Claims. (Cl. 198—95)



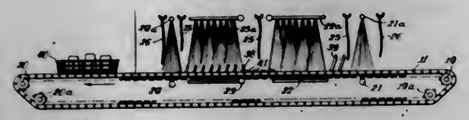
1. A portable conveyor assembly comprising, at least two conveyor sections arranged in end-to-end overlapping relation and having a coupling therebetween detachably interconnecting same for both relative pivotal and telescopable movement, each of said conveyor sections including a frame having spaced substantially parallel sides extending in the direction of the length thereof, a drive drum and a driven drum journaled for rotation between the sides at opposite ends thereof and in spaced substantially parallel relation to one another, an endless conveyor belt mounted on the drums for movement in response to rotational movement of the latter, and drive means operatively connected to the drive drum for rotating same, and said coupling comprising a single centrally-located pin and a track having an uninterrupted substantially semicircular slot therein sized and adapted to receive the pin for arcuate slidable movement from end-to-end thereof, one of said pin and track elements being attached to the lead section of the conveyor assembly adjacent the discharge end thereof and the other of said elements being mounted on the following section for adjustable movement in the direction of its length.

3,017,013
ARTICLE FEED MECHANISM
Charles E. Sheetz, Woodstock, Va., assignor to FMC Corporation, a corporation of Delaware
Filed Aug. 4, 1959, Ser. No. 831,658
7 Claims. (Cl. 198—102)



6. A feed mechanism for discharging one article at a time into one of a series of cups of a continuously driven conveyor comprising a narrow conveyor belt having an inlet end and a discharge end which communicates with said conveyor, means defining a plurality of equally spaced pockets in said belt, each of said pockets having an article supporting base and sides sloping outwardly from said base, means connected to said continuously driven conveyor for supporting and driving said conveyor belt in timed relation with and in the same direction as the continuously driven conveyor, guide means disposed forwardly of and along the sides of said conveyor adjacent the inlet end thereof and sloping towards said conveyor, and means for frictionally feeding articles into said guide means at a rate which tends to exceed that at which said conveyor belt can receive one article at a time in each pocket and remove the article from contact with said guide means whereby articles which avoid becoming seated in a pocket will gravitate from said conveyor.

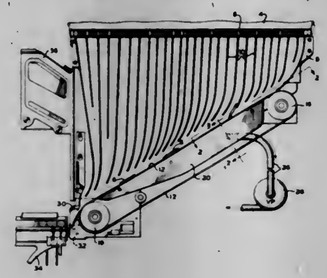
3,017,014
PLASTIC LINK CONVEYOR
John Cumming, River Forest, Ill., assignor to G. S. Blakeslee & Co., Cicero, Ill., a corporation of Illinois
Filed May 9, 1960, Ser. No. 27,766
3 Claims. (Cl. 198—131)



1. In an endless conveyor for dish washing machines in which the articles to be washed are subjected to liquid sprays projected upward thereagainst from beneath the upper run of the conveyor, said conveyor having an upper run and a lower run and comprising side driving chains extending lengthwise of said conveyor, parallel rods connecting said chains and extending transversely of said conveyor and spaced apart lengthwise thereof, and a plurality of links of substantially U-shape lengthwise of said conveyor disposed between each two adjacent rods and spaced apart transversely of said conveyor, said links extending inwardly between said runs and respectively comprising a leading arm and a following arm and a connecting element joining the inner ends of said arms, the latter and said connecting element being of substantially V-shape in cross section and tapering in thickness outwardly of the link, the connecting elements of the links at the upper run of said conveyor having upwardly diverging side surfaces effective for deflecting the upwardly projected sprays onto the dishes thereby precluding blocking of such sprays while assuring impingement thereof upon the dishes throughout the full width of said upper run, the leading arms of said links being pivoted on one of said two adjacent rods and the following arms of said links being pivoted on the other of said two adjacent rods, said links being open and unobstructed at their sides for downward insertion thereinto of dishes from the upper run of said conveyor and said rods being substantially in a common plane at the upper run of said conveyor.

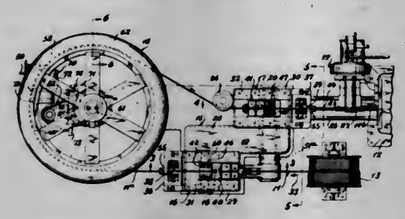
3,017,015
MATRIX DELIVERY MECHANISM FOR TYPOGRAPHICAL LINE COMPOSING MACHINES
George J. H. Sausele, New Providence, N.J., assignor to Harris-Intertype Corporation, Brooklyn, N.Y., a corporation of Delaware
Filed July 2, 1959, Ser. No. 824,726
4 Claims. (Cl. 199—18)

1. In a tape-controlled, high speed typographical composing machine, the combination of a magazine containing matrices which are selectively released therefrom, an assembler front extending downwardly from said magazine and having generally vertical passages of different lengths opening, at the bottom of said front, at successively spaced apart locations and adapted to have the selectively released matrices fall therethrough, an assembler, conveyor means moving along an inclined path under the bottom of said front to said assembler to carry the matrices to the latter in the order in which the matrices are selectively released, and means creating a positive air pressure differential between the pressures respectively above and below said conveyor means along at least the portion of the latter passing under the passages of said front remote from said assembler so that matrices



falling onto said conveyor means through said passages remote from the assembler are made to adhere to the conveyor means for avoiding rebounding and slipping of such matrices relative to the conveyor means and thereby preventing transposition on the conveyor means of matrices released successively from passages of said front opening at different locations along the conveyor means.

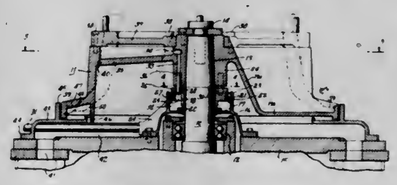
3,017,016
WIRE DRAWING APPARATUS
William A. Ehlert, South Euclid, and Leo D. Mersek, Euclid, Ohio, assignors to The Ajax Manufacturing Company, Euclid, Ohio, a corporation of Ohio
Filed July 28, 1960, Ser. No. 45,916
16 Claims. (Cl. 205—13)



1. In wire drawing apparatus; first and second drawing units in a series relation with respect to the path of advance movement of the wire to be drawn and each unit comprising a reciprocable die slide carrying a drawing die, a grip device adapted to grip the wire to prevent backward movement thereof and a swingable draw lever effective against the slide for causing intermittent drawing strokes of the die along the wire in a direction away from the grip device; frame means supporting the slides; actuating means connected with the draw levers for swinging the same to actuate said slides; wheel means at a point of said path intermediate said units and having said wire in at least a partially wrapped relation thereon; and driving means connected with said wheel means to impart rotation thereto during the operation of the drawing units.

14. In wire drawing apparatus; frame means containing a guideway; a slide reciprocably movable in said guideway; a drawing die on said slide and movable therewith through a drawing stroke; grip means on said frame means and adapted to grip and hold the wire during said drawing stroke of the die; actuating means effective on said slide for causing the drawing stroke of said die along the wire; said slide having passage means for the wire including a lubricant chamber, and a die recess containing said die and provided with an access opening on the side thereof remote from said chamber for movement of the die into and out of said recess; and partition means on the slide between said chamber and recess and having an opening to accommodate the wire and to feed limited amounts of lubricant to said die.

3,017,017
WATER COOLING APPARATUS FOR DRAWING BLOCKS
Carl O. Bruestle, Metuchen, N.J., assignor to Synchro Machine Company, Perth Amboy, N.J., a corporation of New Jersey
Filed June 30, 1960, Ser. No. 39,980
7 Claims. (Cl. 205—20)

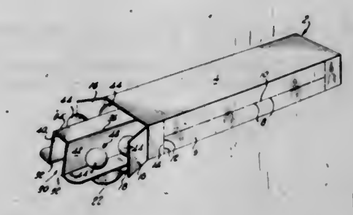


1. Means for cooling a sectored finishing block of the type having vertical slots extending inwardly of the block surface to receive elements of a coil removal device, said means comprising, in combination, a circular chamber formed about the block shaft and within the block, said chamber being closed on one side by a closure member rotatable with the finishing block, a plurality of passages equal to the number of sectors of the block, said passages extending longitudinally through said chamber closure member, a corresponding plurality of passageways in the hub of the block, each said passageway terminating in a tubular extension, said tubular extensions mating with the passageways in said chamber closure member, radially extending sector plates adjacent the upper edge of the drawing block, substantially radially extending passageways in the block hub communicating with the first mentioned passageways therein and with the space above said sector plates, and a plurality of apertures formed in each sector member at its outer edge adjacent the inner surface of the block, whereby cooling fluid supplied to said chamber under pressure flows through said chamber, said passageways in said chamber closure member, said longitudinal and radial passageways in the block hub and over said sector plates through said apertures and downwardly along the inner walls of the block.

3,017,018
SHIPPING AND DISPLAY CARTON
Edward M. Price, Bloomfield, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed May 12, 1959, Ser. No. 812,615
1 Claim. (Cl. 206—45.31)

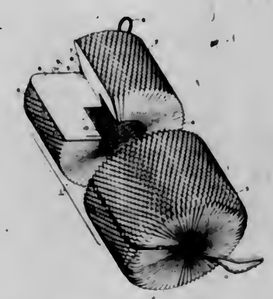
A shipping and display package of incandescent lamps comprising an outer container of rectangular cross section, an inner carrier member and a plurality of incandescent based lamps mounted on said carrier member, said outer container having four rectangular side walls and two end walls providing closure means for the container, each of two opposing side walls of the container having a medial line of perforation therein terminating

short of the end walls and two transverse lines of perforations intersecting the medial line at each end thereof, said two opposing side walls of the container, when severed at the lines of the perforation therein being divided into two sections which, when inwardly folded, define a window for display of the lamps and for dispensing the lamps therethrough, said inner carrier having a pair of spaced walls facing said perforated walls of the container and having a row of circular openings therein within which are friction mounted the bases of said lamps



with the lamp bulbs facing the perforated walls of the container, the openings in one spaced wall being staggered with relation to those in the other spaced wall and the spacing between the spaced walls being at least equal to the length of a lamp base, said carrier member including a pair of outwardly extending panels engaging said opposed perforated side walls of the container and spacing the spaced carrier walls equidistant therefrom, said carrier member with the lamps mounted thereon being introducible into the container through an open end wall thereof.

3,017,019
FREE DROP CONTAINER
Starr W. Cahill, Arcadia, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,503
9 Claims. (Cl. 206—46)



1. A free drop shock absorbent container, comprising: a honeycomb structure expanded from a relatively small volume package of honeycomb-connected sheets bound along a common edge for expansion rotation thereon, said honeycomb structure in expanded condition defining a centrally located internal cavity for accepting a load to be free dropped, and having predetermined structural characteristics for safely delivering a free dropped load carried in the cavity from high altitudes to ground; means securing together front and back sheet faces of said honeycomb structure, contiguous in the expanded condition; and adhesive strips taped about said expanded honeycomb structure, concentric with the common edge for expansion rotation, further securing said honeycomb structure in the expanded condition and enclosing honeycomb cells to increase container buoyancy.

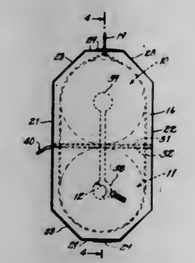
3,017,020
MULTIPLE LAYER THERMAL INSULATION
Jeremiah D. Giles, Litchfield, Conn., and William R. Julius, Pittsburgh, Pa.; said Julius assignor to said Giles
Filed Feb. 17, 1960, Ser. No. 9,259
5 Claims. (Cl. 206—59)



1. A roll of thermal insulation adapted to be opened up to form an insulating structure comprising spaced layers of material to resist flow of heat which structure will be held so as to run from the inner face of one stud of a building to the inner face of an adjacent stud, such roll comprising a base sheet having edge portions each folded inwardly to form edge creases, then folded outwardly to form base creases and first legs between said edge creases and base creases, then folded inwardly again toward the base creases to form peak creases and second legs between the peak creases and base creases, then folded outwardly again to form third legs between the peak creases and the line of said fourth folds and fourth legs which extend outwardly from said fourth fold lines toward the edge creases, the width of base sheet in said third and fourth legs between the edge creases and peak creases being shorter than the width of base sheet in the first and second legs between the edge creases and peak creases, means for attaching together a portion of the first and fourth legs in the sheet so that they are held against relative sliding movement with the two legs lying substantially flat against each other, a longitudinal pleat in a central portion of the base sheet, an insulating sheet attached adjacent each peak crease, said insulating sheet being of such width that when the edge creases of the base sheet are pulled apart to expand the said pleat the peak creases will move upwardly away from the body of the base sheet whereby portions of the third and fourth legs are caused to separate from the second and first legs respectively and tension is maintained tending to urge the peak creases outwardly towards the edge creases of the base sheet due to the difference in width of the portions of the base sheet in the legs thereof.

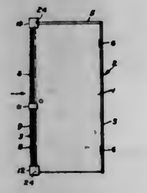
3,017,021
BALER TWINE PACKAGE
Luis A. Ruiz, 1922 Hazard, Houston 19, Texas
Filed June 3, 1958, Ser. No. 739,554
9 Claims. (Cl. 206—59)

1. A baler twine package composed of a unitary closed carton and two balls of baler twine to be dispensed from said closed carton as required, said balls being formed to be unwound from the inside and having the inner end of the twine in one ball connected to the outer end of the twine on the other ball so that the twine of both balls can be drawn from the carton as one continuous piece, the inner end of said other ball being free and projecting out of the top of such ball, said carton including top, bottom and side walls and end closure flaps integrally connected together and two adjacent partitions connected at their ends to two opposed walls of said carton and dividing the carton into two compartments, said balls being located in said compartments in side-by-side relation with said connecting portion of the twine extending from one compartment to the other within the carton and with the free inner end of said other ball being positioned adjacent to said top wall, said partitions being provided with openings through which extend said connecting portion of the twine, means on said top wall indicating the approximate position of said free inner end, separate cord means formed into a plurality of spaced loops extending in the direction of said top wall and being drawn over both said balls to lash the latter



together in side-by-side relation, and formed into a loop extending in the direction of but disposed transverse to said looped lashings, said latter loop extending from one end of the lashed balls and through the closure flaps on the associated end of the carton and forming a carrying handle for the package, said partitions being connected to the inner faces of said opposed walls to enable the carton to be divided into separate closed carton sections each containing a ball of twine by severing said top, bottom and side walls between said partitions, each of said separated sections providing a closed dispenser from which the twine of the ball located therein may be drawn as needed, the connecting portion of the twine between said balls being exposed by such division of the carton and readily severable to enable each ball to be unwound from the inside while in its associated section.

3,017,022
DOOR ASSEMBLY PACKAGING
Moran Lee Amundson, 308 Chesterton St., Belmont, Calif.
Filed Sept. 9, 1960, Ser. No. 54,983
2 Claims. (Cl. 206—60)



1. A packaging assembly for a prefabricated door unit which door includes a door jamb consisting of door side jambs, a head jamb connecting said side jambs on the top, a door hingedly connected to one of said side jambs, and a jamb casing consisting of two head planks and four side planks for covering said head jamb and said side jambs respectively on the front and back thereof, said assembly comprising three brackets, and consisting of top bracket for holding the top ends of said casing side planks against one of the jamb sides and for preventing the lateral and transverse displacement of said planks in relation to said jamb side; a lower bracket for holding the ends of the casing side and head planks against the lower end of the said jamb side and for preventing the lateral and transverse displacement of said planks in relation to said jamb side; and a middle bracket for pressing the side planks and the other ends of the head planks against the said jamb side substantially at the middle thereof; said end brackets being made of a piece of card board and comprising a back for pressing said jamb casing planks against the jamb side; a top extending from the back over the ends of said planks, a flap integral with the top for insertion between the planks and the jamb and two sides extending from the sides of said back toward the jamb side for securing thereto.

3,017,023
TOOL AND DISPLAY BOX
Milton J. Peterman, and Kermit D. Miller, Canoga Park, Calif., assignors to North American Aviation, Inc.
Filed Apr. 6, 1959, Ser. No. 804,166
4 Claims. (Cl. 206—65)

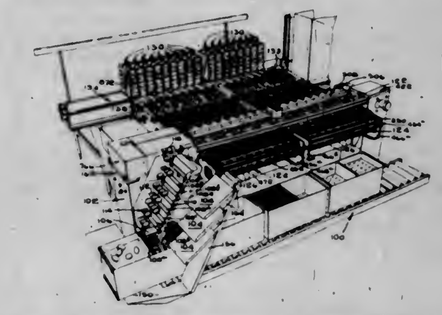


4. An internally cushioned box comprising a container having connected top and bottom sections, a highly compressible cushioning pad in each of said sections, each of said pads having undulating surface protrusions on their juxtaposed facing surfaces intermeshing when said box is closed, said protrusions on the bottom pad adapted to hold inserted articles in various positions and said protrusions on each of said pads adapted to compress around said articles when the container is in a closed position, said protrusions being pyramid shape and forming slantwise troughs between adjoining peaks.

3,017,024
CLASSIFICATION AND RECORDING MACHINE FOR HANDLING EGGS
Harold J. Momma, Riverside, Calif., assignor to FMC Corporation, a corporation of Delaware
Original application June 1, 1953, Ser. No. 358,621. Divided and this application Aug. 22, 1956, Ser. No. 605,642
7 Claims. (Cl. 209—74)

3. A classification recording and discharge control arrangement comprising, conveying means operable to advance eggs in a single file line along a predetermined path, a cylindrical drum operatively associated with said conveying means and having axially extending rows of niches provided in consecutive sectors of its peripheral surface with the individual niches of said consecutive rows aligned in circles, pins pivotally mounted within said niches to project with their heads continuously beyond the peripheral surface of said drum and adjustable from a radially directed upright to a laterally tilted position, spring means received by the inner ends of said pins to yieldably retain said pins in either of said positions of adjustment, means intermittently turning said drum in timed relation with said conveying means, a

stationary supporting structure surrounding said drum, solenoids detachably held by said supporting structure above the individual pin circles at initial sectors of the drum orbit and operative upon energization to shift a pin passing underneath from upright to laterally tilted position, switches detachably held by said supporting structure above the pin circles at subsequent sectors of the orbit of said drum and arranged to be actuated by pins in laterally tilted position passing underneath, means as-



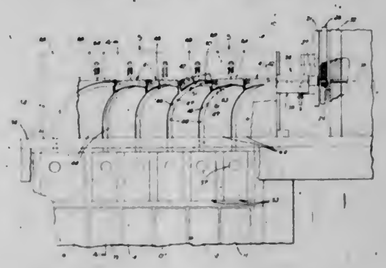
sociated with an initial portion of said egg conveying means and operable to energize different ones of said solenoids depending upon the classification of the eggs passing by, means associated with a terminal portion of said conveying means and rendered effective by closure of predetermined ones of said switches to eject eggs from said conveying means, and camming means held by said supporting structure at a terminal sector of the drum orbit to return tilted pins to their ineffective upright position.

3,017,025

APPARATUS FOR DISTRIBUTING AN ARTICLE TO ONE OF SEVERAL RECEIVING LOCATIONS

William F. Stephen, Elmwood Park., Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 26, 1960, Ser. No. 24,767
5 Claims. (Cl. 209—81)



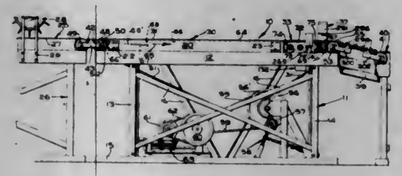
2. Apparatus for distributing a series of articles into particular ones of a group of receptacles, which comprises a plurality of spaced stationary guide blocks mounted in a horizontal row above the receptacles, each guide block having parallelly curved sides and a curved upper surface constituting a continuation of one of the curved sides, said curved surfaces defining a downwardly curved passageway between each adjacent pair of guide blocks in the row capable of passing the articles therethrough, the receptacles being mounted one below each passageway so as to receive the articles therefrom; a plurality of pivotable selector blocks mounted in a horizontal row one above each guide block, each selector block having a straight bore formed horizontally therethrough of sufficient size to pass the articles and having a curved under surface; means for biasing each selector block to a normal position where it rests on and is stopped by a portion of the upper surface of the associated guide block, in which position all of the straight bores are in alignment to pass the articles through the row of selector blocks; means for propelling the articles into the row of selector blocks along the line of the straight bores in the normal position, said selector blocks being pivoted at the end thereof remote from the propelling means for movement in a vertical plane; and means actuated prior to the advancement of each article in the series for pivoting one of said selector blocks against the action of said biasing means to an operated position where the curved under surface of the selected block is spaced from the curved upper surface of the associated guide block, the various blocks and pivoting means being so constructed and arranged that in the operated position the curved under surface of each selector block becomes aligned with the advancing articles and co-operates with the curved upper surface of the associated guide block to define a continuation of and entrance portion for an associated one of the passageways; whereby each article in the series passes through the straight bores of all selector blocks that are in the normal position until it approaches a selector block that has been pivoted to the operated position, after which the article passes downward along the curved passageway associated with that selector block to the associated receptacle.

3,017,026

WEIGHT CHECKING APPARATUS

Wendell S. Thompson, Los Gatos, Calif., assignor to FMC Corporation, a corporation of Delaware

Filed June 17, 1957, Ser. No. 665,893
12 Claims. (Cl. 209—121)



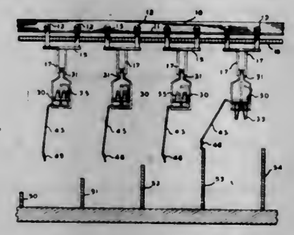
1. In a weight testing apparatus, means for continuously advancing articles along a predetermined path, a weighing device having a platform below and adjacent said path, means for preloading said weighing device to a predetermined value, said platform being depressible by an article passing thereacross having a weight in excess of the predetermined preload value, means responsive to movement of said platform for producing an electrical signal representative of the height of said platform, a rejecting mechanism mounted adjacent said path for deflecting articles individually while the articles are being advanced along said path, a control circuit including serially connected electron tubes for controlling the operation of said rejecting mechanism, light responsive means connected to one of said tubes for controlling the conductivity thereof in response to the presence of an article on said platform, and a detector circuit responsive to the electrical signal transmitted by said platform movement responsive means for rendering another of said tubes conductive when the article received by said platform has a weight less than the predetermined value, said control circuit being arranged to operate said rejecting mechanism upon simultaneous conduction of said tubes when the article advancing across said platform has a weight less than the predetermined value.

3,017,027

AUTOMATIC SORTING MACHINE

George W. Brown and Grover S. Harben, Jr., Gainesville, Ga., assignors to Gainesville Machine Co., Inc., Gainesville, Ga., a corporation of Georgia

Filed Dec. 2, 1957, Ser. No. 700,066
4 Claims. (Cl. 209—121)



4. In a sorting device of the class having an endless track with a conveyor movable along said track, the combination therewith of a plurality of spaced supporting assemblies engaged by said conveyor and movable simultaneously along said track by said conveyor, a plurality of upstanding fingers mounted below said track and spaced from each other to define fowl receiving areas, said fingers being aligned parallel to the travel of the conveyor and being progressively higher in the direction of travel of said conveyor, a balance arm pivotably carried by each of said support assemblies for pivoting in a vertical plane, a counterweight carried by one end portion of said balance arm, said counterweight being movable toward and away from the pivot of said balance arm, a frame pivotally depending from the other end portion of said balance arm, a horizontal trunnion carried by said frame, a claw having a bifurcated outer portion for receiving a fowl, said claw being mounted by its inner portion to said trunnion for pivotal movement in a vertical plane normal to the travel of the conveyor, said claw being pivotable from an upwardly inclined fowl carrying position to a downwardly inclined fowl releasing position, a latch block pivotally mounted on said trunnion and rigidly connected to said claw for rotation with said claw from its fowl carrying position to its fowl releasing position, said latch block being provided with a recess, and a release arm pivotally carried by said frame, said release arm being pivotable in a plane parallel to the travel of said conveyor, said release arm including at one end a trigger engageable in said recess of said latch block when said claw is in its fowl carrying position and being movable out of said recess upon pivotal movement of said release arm, said release arm including at its other end a downwardly extending feeler, the lower end of which is selectively engageable with any one of said fingers, whereby the height at which said other end of said balance arm holds said release arm determines which of said fingers said end engages as said conveyor moves said balance arm over said fingers, said claw and said feeler of said release arm being so spaced apart vertically that a fowl carried between the bifurcated portion of said claw is released to fall adjacent said fingers upon continued movement of said frame after the engagement of said end of said feeler with one of said fingers.

3,017,028

CLAY DEPRESSANT

Edmund A. Schoeld and Clarence W. Egbom, Carlsbad, N. Mex., assignors to Potash Company of America, Carlsbad, N. Mex., a corporation of Colorado

No Drawing. Filed Jan. 12, 1959, Ser. No. 786,033
9 Claims. (Cl. 209—167)

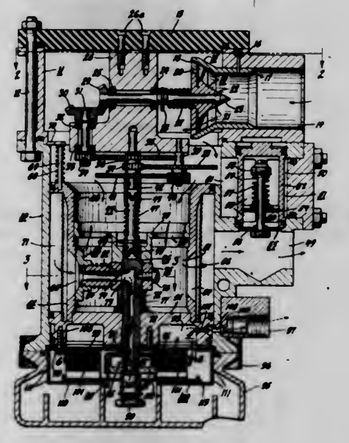
1. The improvement in the method of separating valuable constituents from potassium bearing ores including subjecting such an ore to a concentrating process employing a mineral collector, said improvement residing in distributing in said ore during the concentrating process a useful amount of an auxiliary reagent which is a water soluble, intermediate stage condensation resin of a carbamide compound and a lower molecular weight aldehyde.

3,017,029

SELF-CLEANING FILTER

Kenneth L. Berninger, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 30, 1957, Ser. No. 637,305
8 Claims. (Cl. 210—108)



1. A fluid filter including, a housing having an inlet opening for fluid to be filtered and an outlet opening for filtered fluid, a filter member disposed within the housing between the inlet and outlet openings, rotatable cleaning means for the filtering member disposed within the housing, a nozzle disposed within the housing adjacent one of said openings and having a diverging outlet portion, a rotatable turbine impeller coaxially disposed within the diverging outlet portion of said nozzle so as to be rotated by the flow of fluid therethrough, means interconnecting said turbine impeller and said rotatable cleaning means, and resilient means engaging said turbine impeller permitting axial movement thereof relative to said nozzle so as to maintain a substantially constant speed of impeller rotation during variation in the rate of flow of fluid through said filter above a predetermined flow rate.

3,017,030

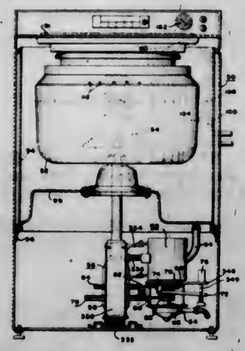
DOMESTIC APPLIANCE

Donald F. Alexander, and Marshall C. Harrold, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 19, 1959, Ser. No. 787,764
13 Claims. (Cl. 210—138)

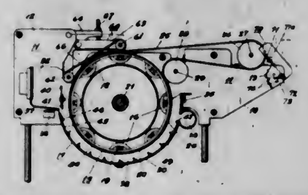
1. A control circuit for a centrifuging device having a container, prime moving means for rotating said container at high and low speeds comprising, a power supply, a timer, a timer motor, a speed selector switch, a rack and gear delay device associated with said speed

selector switch, means for energizing said prime moving means for low speed rotation, and means for energizing



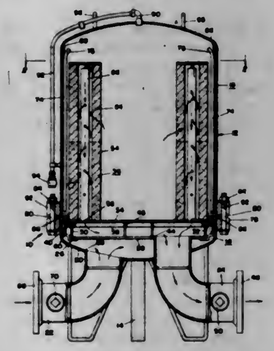
said device to delay high speed rotation when said speed selector switch is set for high speed.

3,017,031
MAGNETIC SEPARATOR
Leslie L. Fowler, Tucson, Ariz., assignor to Infilco Incorporated, Tucson, Ariz., a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 687,328
5 Claims. (Cl. 210—222)



4. In a magnetic clarifier for removing magnetic and non-magnetic solids from contaminated liquid and including a hoirzontally-disposed drum mounted to rotate about its longitudinal axis, a plurality of magnets mounted within said drum, an end plate on each end of said drum, an arcuate pan concentrically mounted about the lower portion of said drum and spaced radially outwardly from the drum periphery to define an arcuate passageway between the pan and the drum for the flow of contaminated liquid, said pan having a bottom and two sidewalls, an influent channel and an effluent conduit in hydraulic communication with said passageway, an endless conveyor belt trained about said drum, and means including a motor and a power circuit through said motor for rotating said drum, means for moving said pan in a horizontal plane relative to said drum whereby said arcuate passageway becomes wider at one end than at the other, said means for moving said pan including a pair of brackets slidably supporting one end of said pan, a pair of notched plates subjacent its other end portion, and a bar affixed to said pan and adapted to engage corresponding notches in said plates, sealing means affixed to said sidewalls and contacting said end plates in any position of said pan, means removably mounted in the bottom of said pan for collecting contaminants from said liquid, said removably mounted means extending over a major portion of said bottom and including a flexible sheet having projections disposed in spaced continuous rows extending longitudinally of said insert, means preventing magnetic solids from collecting subjacent the edges of said belt including bands of magnetic material encircling the end portions of said drum and diverting magnetic flux from said end portions, and a timer alternately opening said power circuit to interrupt rotation of said drum for periods of time sufficient to permit magnetic solids in said liquid to be attracted to said drum while it is at rest and form thereon brushes of predetermined length, and closing said power circuit for periods of time sufficient to move said brushes out of the liquid and immerse another portion of said drum.

3,017,032
FILTER
Howard D. Urdanoff, Levittown, N.Y., assignor to Le Chaude, Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 23, 1959, Ser. No. 808,431
2 Claims. (Cl. 210—236)



1. A filter comprising a base, a mounting plate, a shell, fastener means removably securing said shell to said base, said shell cooperating with said plate to form a filter chamber, the periphery of said plate being spaced radially inwardly of said base to define an annular inlet passage to said chamber, fastener means traversing said annular inlet passage at spaced points, said fastener means including elements removably securing the periphery of said plate to said base, said annular inlet passage surrounding said plate, annular dependent skirts secured to said plate radially inwardly of the periphery of said plate, an annular wall supported by said base and received between said skirts, a seal between said plate and the upper edge of said wall, outlet means in said plate providing outlets from said chamber, means mounting a plurality of filters in said chamber on said plate, a portion of said filters being located adjacent said outlet means so that substantially all liquid passing from said inlet to said outlet passes through said filters, and wall means cooperating with said annular wall and said plate to form an outlet chamber below said plate with said outlet means providing communication between said outlet chamber and said filter chamber.

3,017,033
IMPROVED GRID FOR FILLING MATERIAL
August Schreiber, 49a Bahnhofstrasse, Hannover-Vinnhorst, Germany
Filed Oct. 17, 1956, Ser. No. 616,406
2 Claims. (Cl. 210—293)

1. A grid for supporting filling material in a tank, comprising an assembly of abutting plates each provided with a flat rectilinear upper surface forming the sole support for all of the filling material, and each provided with a single, central, downwardly-tapering foot of solid cross-sectional area bearing against the floor of the tank, whereby a vertical cross-section through the plate shows a mushroom-like appearance, and the cross-section of the foot in contact with the floor surface is materially smaller than the upper flat surface and merely sufficiently large to take up the requisite bearing pressure due to the weight



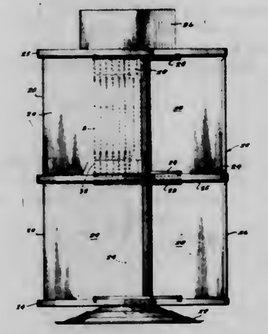
of the filling material on said flat rectilinear upper surface, openings for the passage of fluids in each plate, and projecting, downwardly-directed, bevelled surfaces at the corners of each plate whereby, when the plates are assembled together in abutting relation to form the grid, adjacent plates contact at the corners and additional flow passages are formed between abutting plates.

3,017,034
COMBINED RACK AND TABLE STRUCTURE
Edward Klein, Wilmette, Ill., assignor to Quaker Stretcher Company, Kenosha, Wis., a corporation of Wisconsin
Filed Jan. 30, 1961, Ser. No. 85,560
8 Claims. (Cl. 211—2)



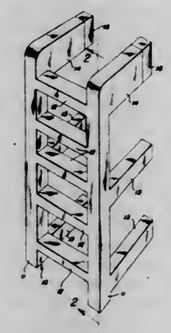
1. A structure selectively for use as a table and as a rack for supporting an article such as a folded tray table, comprising first and second frame means respectively including opposite side frame members pivotally connected together intermediate their ends for manual relative pivotal movement between a first crossed and relative upright and laterally collapsed position and a second crossed and relative inclined and opened position, means for retaining said frame means in said first position until said frame means are manually pivoted toward said second position, said first frame means including a transverse member extending between the side frame members thereof at a location substantially above the pivotal connection between said side frame members, said second frame means including a second transverse member extending between the side frame members thereof at a location substantially above the pivotal connection, said first mentioned transverse member and said second transverse member being disposed at opposite sides of a vertical plane containing said pivotal connection when said frame means are in said first position, the locations of said transverse members being reversed with respect to said plane when said frame means are in said second position, table top means extending substantially horizontally between said transverse members when said frame means are in said second position, and means releasably connecting said table top means with said transverse members when said frame means are in said second position.

3,017,035
MERCHANDISING DISPLAY DEVICE
Kenneth H. Bogle, Marietta, and Charles K. Lovejoy, Atlanta, Ga., assignors to Scripto, Inc., a corporation of Georgia
Filed June 4, 1959, Ser. No. 818,173
9 Claims. (Cl. 211—70)



3. A rotary merchandising display device for displaying article of manufacture comprising a base, a main body portion rotatably mounted with respect to said base and having a compartment formed therein, a plurality of cards disposed in said compartment adapted to secure an article of manufacture at an exposed edge of each card, and resilient holding means located within said compartment on at least one of said opposed surfaces for frictionally engaging an edge of said cards and urging said cards toward the other of said surfaces so that said cards are removably supported by compression between said surfaces solely by edge contact.

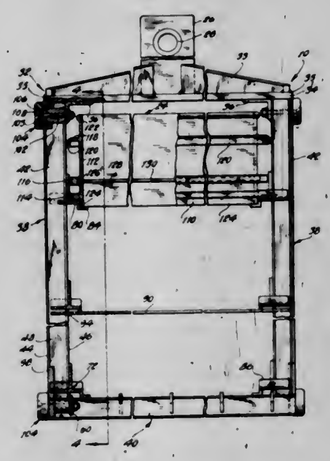
3,017,036
MAGNETIC SUPPORT
Pauline M. Albert, 1711 Santa Paula, Las Vegas, Nev., and Harry W. Gulles, Rte. 1, Box 672-J, North Bend, Oreg.
Filed Dec. 10, 1958, Ser. No. 779,415
1 Claim. (Cl. 211—87)



A magnetic support comprising a pair of vertically disposed bars arranged in spaced parallel relation with

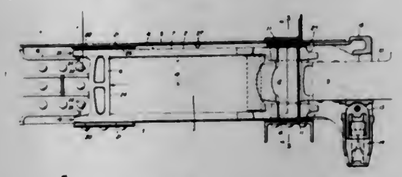
respect to each other, the lower ends of the bars adapted to engage a supporting surface such as a floor, a plurality of spaced parallel crosspieces extending between said bars, spaced parallel arms extending from said bars, end pieces extending from ends of said bars, there being threaded openings in said end pieces, magnets arranged contiguous to said end pieces and said magnets being provided with apertures therein registering with the openings in said end pieces, and securing elements extending through said apertures and engaging said openings, said arms being slightly longer than the end pieces so that with the magnets attached to the end pieces, the outer surfaces of the magnets will be in the same plane as the outer ends of the arms so that the device will fit snugly against the wall, and the magnets as well as the ends of the arms will abut a vertically disposed wall surface.

3,017,037
LIGHT-WEIGHT HEAVY DUTY CONVEYOR CARRIER CAGE
Lester T. McDonnell, 5390 Cecelia Ann Ave., Clarkston, Mich.
Filed Jan. 8, 1960, Ser. No. 1,233
11 Claims. (Cl. 211—114)



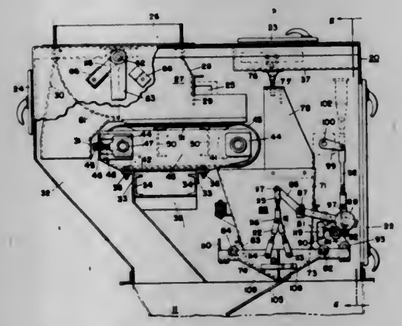
1. A light-weight heavy duty conveyor load carrier cage comprising an open-front box-shaped framework having vertically-spaced substantially horizontal top and bottom structures and horizontally-spaced substantially vertical opposite side structures secured at their upper and lower ends to said top and bottom structures respectively, a conveyor coupling element secured to said top structure, and a multiplicity of sets of load-supporting members secured to the inner sides of said vertical side structures in vertically-spaced relationship, each set having its respective load-supporting members disposed approximately in a common horizontal plane, said vertical side structures including horizontally-spaced elongated parallel vertical I-section bars with vertical webs and spaced parallel vertical flanges integral therewith, certain of the flanges of said vertical bars facing inwardly and having inwardly-facing notches disposed at vertically-spaced intervals on the inner sides thereof and said load-supporting members comprising elongated horizontal bars having outwardly-facing notches disposed in tightly-pressed interlocking engagement with said inwardly-facing notches.

3,017,038
DRAFT RIGGING
Geoffrey W. Cope, Williamsville, and Donald G. Symer, Lancaster, N.Y., assignors to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed May 8, 1959, Ser. No. 811,999
5 Claims. (Cl. 213—64)



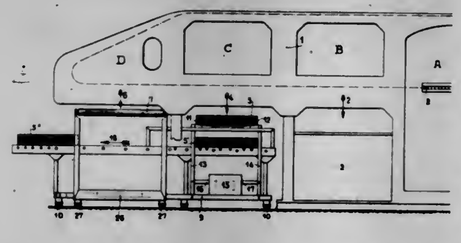
2. In draft rigging, the combination with a center sill having a yoke pocket, a coupler and a front support secured to said sill and underlying a front portion of said pocket, of a vertical yoke connected to said coupler and supported below its connection thereto on said front support, said yoke having a pair of vertically spaced longitudinally extending arms connected rearwardly by a rear wall, a rearward extension on said yoke in longitudinal alignment with a lower of said arms and projecting rearwardly beyond said rear wall, said extension having a horizontal underface substantially coterminous therewith and coplanar with and forming a rearward extension of an undersurface on said lower arm, and a rear support secured to and extending across said sill beneath said pocket and cooperating with said front support for supporting said yoke, said rear support being engaged by said underfaces and disposed longitudinally of said center sill normally to underlie said rear wall.

3,017,039
COAL HANDLING APPARATUS
Ronald F. Schwing, Philadelphia, Pa., assignor to Beaumont Birch Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 21, 1959, Ser. No. 828,590
6 Claims. (Cl. 214—2)



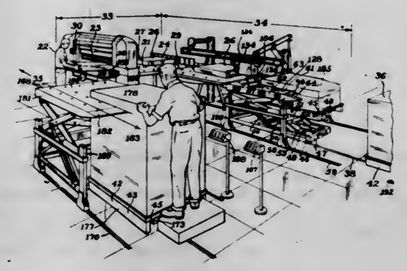
1. A bulk material delivery apparatus comprising, in combination, a bulk material inlet hatch, a bulk material discharge station, an intermittently operable conveyor positioned partially beneath said inlet hatch and extending between said inlet hatch and said discharge station effective when operated to cause bulk material entering the apparatus through the inlet hatch to be delivered to the discharge station, an auxiliary discharge passage communicating at one end thereof with an auxiliary discharge outlet and communicating at the other end thereof with the aforesaid inlet hatch to thereby form a bypass route by means of which material entering the inlet hatch may be conduited around the said conveyor and discharge station, and a selectively shiftable gate disposed below the inlet hatch and above the said conveyor and auxiliary discharge passage, said gate when shifted into a first position being operative to simultaneously direct bulk material entering said inlet hatch onto said conveyor and to prevent the flow of any bulk material into said auxiliary discharge passage, and said gate when shifted into a second position being operative to simultaneously direct bulk material entering said inlet hatch into said auxiliary discharge passage and to prevent the flow of any bulk material onto said conveyor or into the region occupied by said conveyor.

3,017,040
STACKING APPARATUS FOR SHEET MATERIAL
Henri Bobst, Lausanne, Switzerland, assignor to J. Bobst and Son S.A., a corporation of Switzerland
Filed July 9, 1957, Ser. No. 670,776
1 Claim. (Cl. 214—6)



Apparatus for stacking and transporting flexible cut sheets received from the reception station of a punch press thereabove, comprising a frame movable to a position below the reception station of the punch press, a continuously operable conveyor carried by said frame for transporting stacks of the cut sheets from under the reception station, a pair of horizontal flaps, means supporting said flaps on said frame in a horizontal plane above said conveyor and guiding said flaps for simultaneous movements toward and away from each other in said horizontal plane between closed positions, wherein said flaps are juxtaposed to intercept and support the successive cut sheets falling from the reception station and, thus, forming a stack of sheets on said flaps, said flaps cooperatively supporting said flexible sheets in a stack of juxtaposed horizontal planes and retracted positions, wherein said flaps are relatively widely spaced apart simultaneously and instantaneously to permit the stack of cut sheets previously formed on the flaps to fall evenly and undeformed between the latter onto the underlying conveyor, and means for intermittently effecting the movement of said flaps from said closed positions to said retracted positions and then back to said closed positions for again intercepting and supporting the cut sheets falling from said reception station, said means for intermittently effecting the movement of the flaps including levers pivotally supported at their lower ends for swinging movements in vertical planes parallel to the directions of movement of the flaps between said closed and retracted positions, links pivotally connected at their opposite ends to the upper ends of said levers and to said flaps, respectively, so that said flaps move between said closed and retracted positions in response to rocking of said levers toward and away from each other, and means for simultaneously rocking said levers.

3,017,041
REAM TRANSFER APPARATUS AND METHOD
Howard Theodore Hawkes, Cape Elizabeth, and Clarence M. Ginn and John H. Sabasteanski, Portland, Maine, assignors to Southworth Machine Company, Portland, Maine, a corporation of Maine
Filed Nov. 12, 1959, Ser. No. 852,253
11 Claims. (Cl. 214—8.5)

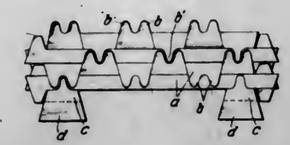


1. Apparatus for feeding reams of paper individually and successively from the top of a stack in an unstacking zone and delivering the same onto the deck of a paper trimming machine, said apparatus comprising stack support means, at floor level, in said unstacking zone for supporting a vertical stack of said paper; a horizontally translatable stack straddle table having ream support means, at the level of said trimmer deck, for supporting a ream of said paper between said unstacking zone and said trimmer; power lift means in said unstacking zone for raising and lowering one of said support means relative to the other; a plurality of spaced, power driven friction rolls recessed in the ream support means of said stack straddle table for unidirectionally moving a ream thereover power drive means on said stack straddle table for shuttling said ream support means from a stack straddling position under the topmost ream of said stack to a position alongside said trimmer, ream carrier means including a stationary ream storage platform alongside said trimmer, for receiving a ream deposited thereon during the retraction of said stack straddle table and a paddle conveyor mounted alongside said trimmer, said paddle conveyor extending above said platform, above a portion of said trimmer deck and over the shuttle path of said stack straddle table for sweeping each successive ream off said ream storage platform and onto said trimmer deck, and electric control mechanism automatically actuating said straddle table, the friction rolls of said ream support means and the paddle conveyor of said ream carrier means in synchronism with said paper trimming machine to feed successive reams from the top of said stack to said trimmer deck.

3,017,042
BILLET
Eduard Bertram, Neckarsulm, and Adolf Diez, Heilbronn (Neckar), Germany, assignors to Karl Schmidt G.m.b.H., Neckarsulm, Wurttemberg, Germany
Filed May 9, 1957, Ser. No. 658,159
Claims priority, application Germany May 30, 1956
4 Claims. (Cl. 214—10.5)

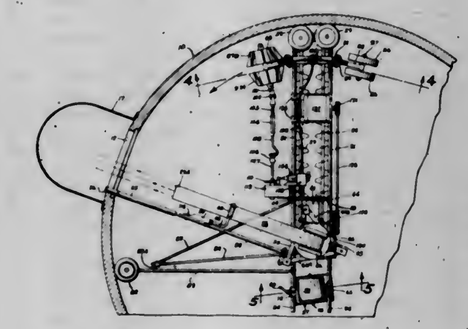
1. A solid stack of billets, each billet being composed of an elongated bar having opposite flat substantially rectangular surfaces extending longitudinally of said bar, a single tooth mounted perpendicular to one rectangular surface adjacent one end of said bar, a pair of teeth mounted perpendicular to said one surface adjacent the other end of said bar with the space between the pair of teeth having a shape complementary to said single tooth,

and each billet having a longitudinal length between each tooth and the pair of teeth equal to a whole multiple of the width of the billet; a lowest row of billets laid in side by side contact parallel to each other with the teeth of alternate billets projecting up and down, respectively, a



second similar row of billets laid upon said lowest row at right angles thereto, a third similar row of billets laid upon said second row and parallel to and in vertical alignment with the billets of said lowest row, and with the downwardly turned teeth of the third row interengaging with the upwardly projecting teeth of said lowest row.

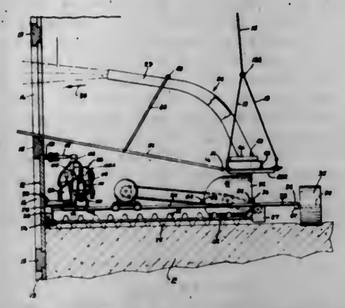
3,017,043
UNLOADER
Floyd E. Buschbom, Albert Lea, Minn., assignor to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Filed May 2, 1958, Ser. No. 732,735
14 Claims. (Cl. 214—17)



1. In a silo unloader the improvement of wheel means positioned on either side thereof and pivotally supported thereto for elevation or depression, hydraulic motor means for controlling the elevation and depression of the same, a source of hydraulic fluid under pressure, valve means for controlling delivery of the same to said hydraulic motor and gravitationally responsive sensing means for opening said valve means as one end of the silo unloader deviates from the horizontal in a given vertical direction.

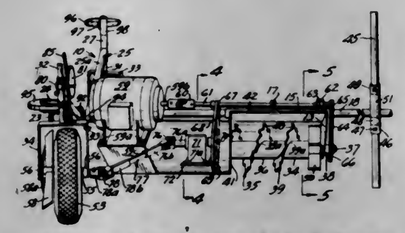
3,017,044
UNLOADER FOR SILOS AND THE LIKE
Milton E. Engelmann, Green Isle, Minn., assignor to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Filed June 4, 1958, Ser. No. 739,719
17 Claims. (Cl. 214—17)

3. In a silo unloader having ensilage engaging means having an outer end adapted to be positioned adjacent the wall of a silo and an inner end adapted to be positioned adjacent the center of the silo, the improvement of first wheel means adjustably supporting the outer end thereof, and second wheel means engaging the wall of



said silo, said second wheel means controlling hydraulic means for adjustment of said first wheel means.

3,017,045
SILAGE CUTTING AND COLLECTING APPARATUS
John Soehl and Warren C. Huffman, Winthrop, Minn.
Filed June 26, 1958, Ser. No. 744,706
2 Claims. (Cl. 214—17)

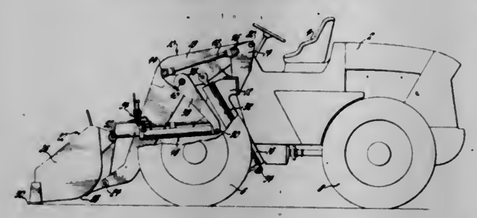


1. Apparatus for use on top of the silage in a silo, comprising a supporting structure having an inner end portion adjacent the center of the silo and an outer end portion adjacent the silo wall, said supporting structure including an elongate and substantially horizontal, open-bottomed auger housing extending generally inwardly from the silo wall, means connected with the inner end portion of the supporting structure to retain the same adjacent the center of the silo, rotary support and driving means journalled on the outer end portion of the supporting structure and arranged for rolling on the silage in a forward direction around the silo wall, an auger conveyor in the auger housing and journalled on the supporting structure for rotation about an axis extending inwardly from the outer end portion of the structure, the blade edges of the auger projecting downwardly from the open bottom of the housing into engagement with the silage for moving the loose silage toward the center of the silo, the auger housing having a forwardly facing discharge opening adjacent the inner end thereof for depositing the loosened silage in a circular windrow adjacent the center of the silo, and means on the supporting structure for rotating the auger conveyor and the rotary support means, whereby the blade edges will loosen and collect silage and move the same from the periphery of the silo to the central portion thereof as the apparatus is moved around the silo.

2. Apparatus for loosening silage in a silo, comprising a supporting structure having an outer end portion in proximity with the silo wall and having an inner end portion in proximity with the center of the silo, means on the inner end portion of the supporting structure

and anchored in the silage adjacent the center of the silage and preventing fore-and-aft swinging of the inner end portion of the supporting structure, but permitting movement of the supporting structure substantially radially of the silo, silage-moving means mounted on the supporting structure and engaging the silage therebelow, a pair of spaced, fore-and-aft rotary support elements journaled on the supporting structure for rotation about axes extending substantially radially of the silo, a source of power on the supporting structure and drivably connected with the movable silage-moving elements and also with one of the rotary support elements for driving the same, a pair of silo wall-engaging guide rollers journaled on the outer end portion of the supporting structure for rotation about upright axes spaced from each other a distance at least equal to the width of a door in the silo wall, whereby the guide rollers alternately engage portions of the silo wall on opposite sides of a door therein to cooperate with the means anchoring the inner end portion of the supporting structure to prevent swinging oscillation of the supporting structure and maintain the apparatus in predetermined relation with the silo wall.

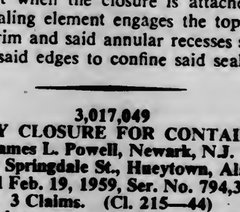
3,017,046
BUCKET POSITION INDICATOR
Joseph O. Runci, Hudson, and Ralph J. Bernotas, South Euclid, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 11, 1959, Ser. No. 812,269
15 Claims. (Cl. 214—140)



1. In a loader vehicle, the combination comprising a vertically adjustable boom pivoted at one end to said vehicle, a material handling implement pivoted at the other end of said boom, a tilt linkage operatively connected between said vehicle and implement for tilting the latter about said boom and comprising a fluid-operated jack including relatively movable piston and cylinder members, mechanism for indicating a selected position of said implement irrespective of boom elevation, said mechanism comprising a support fixed to one of said members, indicia on said support, an indicator pointer pivotally mounted intermediate its ends on said support, one end of said pointer cooperating with said indicia to indicate jack length, follower means at the other end of said pointer, and cam means supported on the other of said members and including an inclined cam surface engageable with said follower means upon reciprocation of said jack to pivot said pointer relative to said indicia.

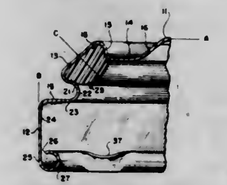
3,017,047
COMBINATION VACUUM BOTTLE AND CLOSURE MEANS THEREFOR
Arthur H. Payson, and Louis J. Darmstadt, Norwich, Conn., assignors, by mesne assignments, to The American Thermos Products Company, Ann Arbor, Mich., a corporation of Michigan
Filed Apr. 8, 1959, Ser. No. 804,957
8 Claims. (Cl. 215—13)

1. In combination with a blown glass vacuum bottle filler and the like having an evacuated space defined between thin double walls and a generally cylindrical opening in a neck portion at one end thereof, removable closure means for the opening in said filler comprising a generally cylindrical stopper of resilient material adapted to be inserted into said opening, internal threads in said opening formed integrally in the inner wall of the double-walled filler, and corresponding external threads formed



around the generally cylindrical surface of said stopper permitting said stopper to be inserted into said opening in threaded sealing engagement therewith, the shape of the stopper and of the neck portion of the filler including the thread clearance is such that when the stopper is threaded into the filler, radially expanding loads introduced against said filler neck portion by the stopper are substantially reduced.

3,017,048
CONTAINER CLOSURES
Allen B. Foye, West Bridgewater, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed May 8, 1959, Ser. No. 811,861
3 Claims. (Cl. 215—40)

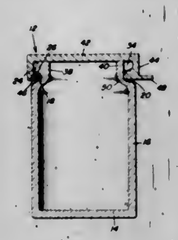


1. In a closure of the resealable type having a panel portion and an independent cylindrical skirt portion adapted to be removably mechanically attached to the rim of a container, the improvement comprising an annular, inclined, inwardly opening channel intermediate said panel and skirt portions and falling below the plane of said panel and within the confines of the cylinder in which the outer surface of the cylindrical skirt is situated, the base of said channel defining a frusto-conical surface, the sides of said channel converging toward each other and confining therein a resilient sealing element with an exposed normally convexly arcuate sealing surface, and outwardly opening annular recesses on the top and side of said channel, said sealing element being so positioned that when the closure is attached to a container, said sealing element engages the top and outside edges of said rim and said annular recesses serve in conjunction with said edges to confine said sealing element.

3,017,049
SAFETY CLOSURE FOR CONTAINERS
James L. Powell, Newark, N.J.
(115 Springdale St., Hueytown, Ala.)
Filed Feb. 19, 1959, Ser. No. 794,397
3 Claims. (Cl. 215—44)

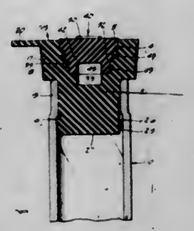
1. A safety closure assembly for containers comprising a container having a peripheral rim projecting outwardly

at the upper end thereof with a groove being defined immediately below the rim with the rim forming the upper wall of the groove and a shoulder defining the lower wall of the groove, said rim having a notch therein defined by an omitted portion of the rim, a cap for said container including a depending peripheral flange for telescopic movement over the rim, said flange including an inwardly projecting lug for passage through the notch into the groove whereby the cap may then be rotated for misaligning the lug with the notch for preventing withdrawal of the cap from the container, said flange on the cap being frictionally engaged with the rim and construct-



ed of a resilient material for snapping engagement with the container, said lug frictionally engaged with the groove for resistance to rotation thus requiring that the lug be stopped in exact alignment with the notch and the cap then pushed upwardly for removing the cap, the walls of said grooves converging towards each other at a point remote from the notch in the rim, said lug extending into the groove and being constructed of resilient material for frictionally binding in the groove for locking the cap against rotation thereby preventing rotation thereof unless considerable physical force is exerted.

3,017,050
BLOOD SAMPLE COLLECTION APPARATUS
Courtland H. Barr, Sr., Courtland H. Barr, Jr., and John W. Barr, all of 1600 N. Bonnie Beach Place, Los Angeles, Calif.
Filed Jan. 10, 1955, Ser. No. 480,989
2 Claims. (Cl. 215—48)



1. In a blood sample collection apparatus, a stopper of resilient self-sealing material, said stopper having a frusto-conical central recess extending downwardly from the top thereof, the bottom of said stopper being imperforate, a frusto-conical plug member of resilient material seated in sealing relation with said stopper in said recess, the lower portion of said plug member terminating short of the bottom of said recess whereby a central void is formed in said stopper, and means for locking said plug member to said stopper, said means including an upturned circumferential bead on the periphery of said plug cooperating with an upturned circumferential groove in said central recess.

3,017,051
LUMINESCENT COASTER
Morton M. Rosenfeld, 271 Madison Ave., Mount Vernon, N.Y.
Filed May 7, 1958, Ser. No. 733,668
8 Claims. (Cl. 215—100.5)



8. A coaster including a pair of mating identical flat impervious plastic disks entirely joined together along their outer portions by a thermofused joint, at least one of said disks being transparent, and a flat opaque phosphorescent material disposed intermediate said disks whereby the luminescence of said material is visible through said one transparent disk.

3,017,052
RIVETING TOOL
Robert F. Kolec, Whittier, Calif., assignor to Olympic Screw & Rivet Corporation, Downey, Calif., a corporation of California
Filed Jan. 10, 1958, Ser. No. 708,094
5 Claims. (Cl. 218—42)

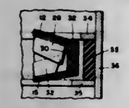


1. In a riveting tool for use with a rivet assembly which includes a stem having axially spaced tail flaring means and grippable means and which includes a tubular rivet on the stem and having a tail adjacent the tail flaring means and a head adjacent the grippable means, the combination of: a pressure member having an axis; a pressure nose having an end engageable with the head and having an axis and having an axial hole therethrough for the stem; universal joint means connecting said pressure nose to said pressure member, whereby the axis of said pressure member may shift relative to the axis of said pressure nose, said universal joint means providing an axial passage therethrough for the stem; a pulling member movable axially of said pressure member on the opposite side of said universal joint means from said pressure nose end; and gripping means on said pulling member and engageable with the grippable means on the stem upon insertion of the grippable means on the stem through said axial hole and said axial passage.

3,017,053
CLOSURE DEVICE
Drury Kemp Mitchell, Orange County, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 15, 1959, Ser. No. 813,609
2 Claims. (Cl. 220—24.5)

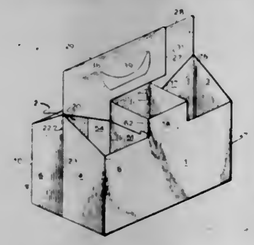
1. The combination of a container having an opening therein, a closure comprising a pair of frusto-conical shaped deformable plates arranged with their concave sides facing each other a sealing member disposed between and secured to said plates at the periphery thereof, a plurality of radially disposed gusset members carried by said plates, a pressure shoe connected to the terminal

end of each gusset member on one of said pair of plates and secured to said sealing member, means for axially compressing said plates to increase the diameter thereof and forcibly move the gusset members radially outward thereby transmitting the movement through the pressure shoes to said sealing member, means on the container for receiving and locking the periphery of said plates therein, means on said container cooperating with said receiving



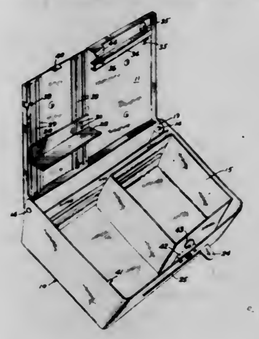
and locking means and said sealing member for sealing the closure to the container and within the opening as said sealing member is forcibly moved outwardly by said gusset members, said receiving and locking means comprising spaced apart walls cooperating with the periphery of said plates as the diameter of the plates has been increased a predetermined amount thereby preventing accidental displacement of the closure.

3,017,054
ARTICLE CARRIER
Homer W. Forrer, East Point, Ga., assignor to The Mead Corporation, a corporation of Ohio
Filed Feb. 10, 1960, Ser. No. 7,820
2 Claims. (Cl. 220—113)



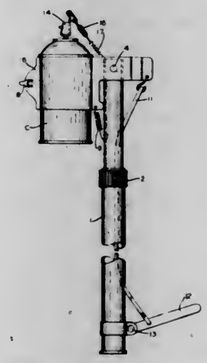
1. A carrier for a plurality of similar articles, said carrier comprising a handle panel, a partition strip on one side of said handle panel and interrelated with said handle panel along a substantially vertical fold line, said strip being disposed with respect to said handle panel in substantially normal relation thereto and forming a shallow separating means between adjacent ones of said articles alongside said handle panel when the carrier is set up and being foldable along said fold line to a position of parallel relation with respect to said handle panel when the carrier is collapsed, an auxiliary panel struck out of said handle panel to form a hand gripping aperture therein, said auxiliary panel being foldable along a substantially horizontal edge thereof into a position of parallel abutting relation with a part of said handle panel and when so folded said auxiliary panel being disposed generally at the level of said strip, an auxiliary cushioning partition having a first panel forming a downwardly extending continuation of said partition strip whereby the depth thereof is increased substantially and a second panel foldably joined to said first panel along a substantially vertical fold line forming a downwardly extending continuation of said auxiliary panel whereby the depth thereof is increased substantially, said auxiliary panel and said handle panel forming an abutment ledge along the edge of said handle panel coincident with the upper edge of said partition strip so that engagement between said abutment ledge and a part of said cushioning partition tends to hold said cushioning partition within the carrier, a slot in the upper part of the edge of said first panel remote from the fold line between said first and second panels for receiving the lower edge of said partition strip, and disjointable locking means forming releasable means interrelating said second panel and said auxiliary panel.

3,017,055
TWO-PACK TOILET TISSUE DISPENSER
Alexander Babin, Walnut Creek, Calif., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed June 15, 1959, Ser. No. 820,195
11 Claims. (Cl. 221—34)



1. A dispenser for interfolded sheets of toilet tissue or the like which comprises a container for two adjacent stacks of such sheets, said container having an opening for withdrawal of sheets from the first of said stacks, a cartridge in the container for the second stack with an opening registering with the first named opening, means to move the cartridge into the position of the first stack when it is depleted, and means to prevent withdrawal of sheets from the cartridge until it is so moved.

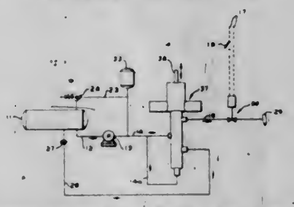
3,017,056
REMOTE CONTROL OF PRESSURIZED SPRAY CAN
Charles J. Bishop, 65 Main St., Framingham Center, Mass.
Filed Aug. 12, 1957, Ser. No. 677,656
4 Claims. (Cl. 222—164)



1. For the remote control of a pressurized spray can having a valve movable relative its body to control its outlet, apparatus comprising a pole, a can holder tiltably mounted on one end of the pole, means operable

from the other end of the pole for tilting the can holder, and means, responsive to a tilting movement of the can holder with respect to the pole, for moving the valve of a can held in the can holder relative the body of that can so as to discharge its contents, said last means including valve-tensioning means to permit continued tilting movement of the container after the valve has been moved as aforesaid.

3,017,057
LIQUID FLOW CONTROL SYSTEM
Edwin E. Reed, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 3, 1956, Ser. No. 601,877
5 Claims. (Cl. 222—318)



5. A system for supplying fluid under pressure to a fluid dispensing nozzle comprising, in combination, a supply tank for said fluid, a dispensing nozzle, a first conduit leading from the normally liquid containing space of said tank to said dispensing nozzle, a fluid transmitting pump in said conduit, a normally closed fluid flow control motor valve in said conduit intermediate said pump and said nozzle, a second conduit leading from said first conduit intermediate said pump and said fluid flow control valve to said tank, a pressure relief valve in said second conduit, a pressure surge tank communicating with said first conduit intermediate said pump and said flow control valve, a valve operating assembly comprising motive power transmitting means communicating with the motor of said fluid flow control valve and with said first conduit intermediate said pump and said valve, said valve operating assembly being adapted to open said flow control valve in response to outlet pressure of said pump, said fluid flow control valve being a three-way pressure operative valve having an inlet and a pair of outlets, said inlet and one outlet of said pair of outlets being in said first conduit, a third conduit communicating the other outlet of said three-way valve with said supply tank, and a fluid flow constricting means in said third conduit.

3,017,058
COMBINATION COAT AND TROUSER HANGER
William Plulander Hulbert, Box 127, Middleburg, Va.
Filed Aug. 2, 1960, Ser. No. 46,936
5 Claims. (Cl. 223—91)



2. A combination coat and trouser hanger adapted for permanent mounting on a wall, said combination comprising a mounting plate adapted to be secured to a wall, a wedging gripper slidably carried on the mounting plate for up and down movement thereon, means on the wedging gripper to engage the mounting plate so as to retain the gripper in any vertical position on said plate, a holder bracket held in spaced relation to the bottom portion of the mounting plate, said bracket having a top portion adapted to be engaged by the wedging gripper to retain the cuff end of a pair of trousers therebetween, and a coat hanger held in spaced relation to the mounting plate beneath the holder bracket.

3,017,059
IMPROVED PANTS HANGER
Joseph E. Dzienkiewicz, Lynwood, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed May 19, 1959, Ser. No. 814,349
3 Claims. (Cl. 223—91)

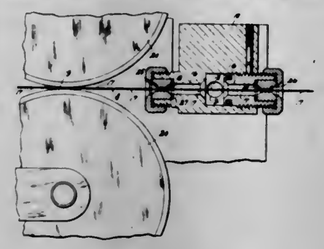


1. An improved pants hanger adapted to controllably resiliently engage and retain a pair of cuffs at the bottom of a pair of pants, with the remainder of the pants depending therefrom, comprising: a main body portion of substantially flat thin-sheet normally vertically directed material substantially centrally provided with upwardly directed hook means at the top thereof adapted to controllably removably engage an auxiliary transverse support member whereby to controllably removably support the main body portion therebelow, said main body portion including on each opposite surface thereof longitudinal normally horizontally oriented transversely outwardly open cuff-receiving recess means having a cuff-engageable surface at the inner end thereof, each of said longitudinal cuff-receiving recess means carried by opposite surfaces of said main body portion being provided with a controllably resiliently displaceable portion of a continuous resilient elastomeric cuff-engageable band means longitudinally encircling said main body portion and normally abutting each of said inner cuff-engageable surfaces of each of said recess means.

3,017,060
AUTOMATIC FEED CONTROL MECHANISM
Robert K. Miller, Allentown, Pa., assignor to Western Electric Company, Incorporated, a corporation of New York
Filed Dec. 6, 1960, Ser. No. 74,036
8 Claims. (Cl. 226—10)

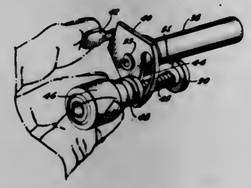
1. A feed control for an elongate element having a succession of portions each consisting of a length of relatively large cross-sectional area and a length of relatively small cross-sectional area, which comprises, a chamber in the path of the element having entrance and exit orifices spaced apart by a multiple of the length of the element portions, means for admitting fluid under

pressure to the chamber, means for advancing the element through the chamber, and means responsive to a



change of pressure in the chamber as the element passes therethrough for controlling the feed of the element.

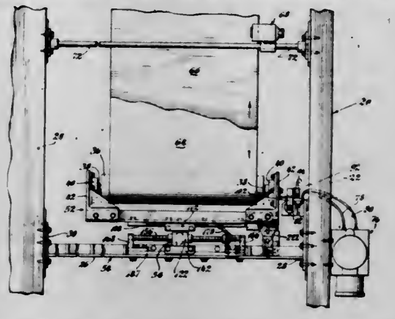
3,017,061
ECCENTRICALLY ADJUSTABLE BEARING
Leo G. Hobart, 4045 W. Imperial Highway, Inglewood, Calif., and Lyle Edwin Loper, 1150 N. Orange Drive, Hollywood, Calif.
Filed Jan. 26, 1960, Ser. No. 4,693
8 Claims. (Cl. 226—177)



3. An adjustment means for a printing device having an upper roll to cooperate with a lower roll to feed paper to a printing mechanism, wherein both ends of the upper roll are variable up and down synchronously along identical arcs on a given side of a vertical diameter through a first adjustment axis concentric of the arcs, and wherein the adjustment means is rotatable in a fixed bore of the printing device to control the elevation of one end of the lower roll and the printing device has a threaded bore near the fixed bore, said adjustment means comprising: a bearing body of cylindrical configuration dimensioned for rotation in said fixed bore about a lower axis of adjustment coinciding with the axis of the bore, said body having an eccentric bore to journal one end of the lower roll; means unitary with said bearing body and positioned radially thereof for manipulation by one finger to adjust the rotary position of the bearing body; a screw for threading into said threaded bore; and means unitary with said bearing body to cooperate with said screw to releasably hold the bearing body at selected positions of rotation and to limit the range of adjustments of said eccentrically positioned bore to an arc on said given side of a vertical diameter through said lower axis of adjustment.

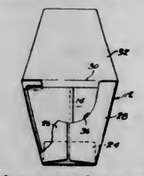
3,017,062
STEERING ROLL CONSTRUCTION WITH SLIDABLE PIVOT
Robert E. Watt and Carl L. Deeken, Danville, Ill., assignors to Electric Eye Equipment Company, Danville, Ill., a corporation of Delaware
Filed Nov. 17, 1959, Ser. No. 853,615
16 Claims. (Cl. 226—180)

16. For use in pivoting a steering roll adapted to engage a moving web upon which print is to be registered, said roll rotatable about one axis displaced from the plane of the web and engaging said web along a line transverse to the direction of movement of said web, the improvement comprising means for pivoting said roll about an axis perpendicular to said one axis responsive to the dis-



placement of said web along said line, and means for adjusting the position of said perpendicular axis transversely with respect to said roll without moving said roll transversely with respect to said web.

3,017,063
DISPOSABLE ASH TRAY PACKET
William A. Rooney, 517½ Ridge Road, Wilmette, Ill.
Filed May 16, 1960, Ser. No. 29,521
3 Claims. (Cl. 229—1.5)

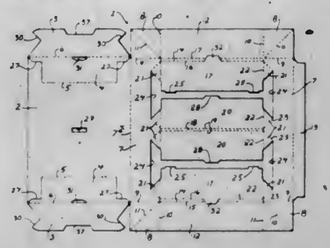


1. A disposable ash tray packet comprising a generally flat outer envelope having a front portion and a back portion joined together so as to present a pair of opposite side edges which converge in the direction of the lower edge of said envelope, said front portion being formed of a pair of generally similar panels each having an arcuate section cut from the upper corner edge thereof to provide an arcuate access opening at the upper central part of said front portion, said back portion having an extending tab section foldably connected thereto along its upper edge to provide a closure flap for said envelope which extends downwardly in covering relation to said arcuate access opening, and a plurality of disposable ash trays inserted within said envelope, each of said ash trays comprising a generally flat, open-end receptacle formed of fire-resistant sheet material, and said ash tray comprising a front and back panel joined along three sides with the two opposite sides converging toward the third side to present a configuration for the ash tray, when flat, generally corresponding with the configuration of said outer envelope.

3,017,064
SHIPPING CRATE
Warren F. Davis, La Mirada, Calif., assignor to Menasha Container of California, Division of Menasha Wooden Ware Corporation, Anaheim, Calif., a corporation of Wisconsin
Filed July 13, 1959, Ser. No. 826,580
7 Claims. (Cl. 229—16)

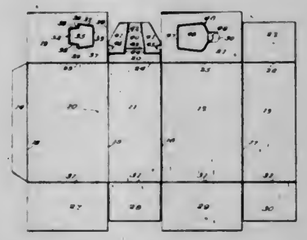
1. A shipping crate, comprising: an inner and an outer end wall panel joined by fold lines along their top mar-

gins; corner reinforcing panels foldably connected with said outer end wall panel at the ends thereof; side wall panels foldably connected to said corner reinforcing panels, said corner reinforcing panels having angular fold lines dividing said corner reinforcing panels into complementary sections foldable between said inner and outer end walls; a bottom panel having a hinge section at each end defined between a fold line at the extremity of said bottom panel and a fold line inwardly therefrom the



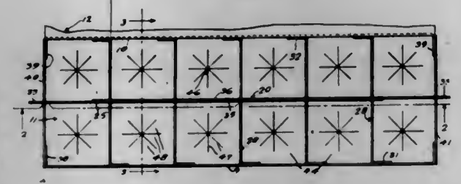
lateral ends of said hinge sections being stepped whereby said bottom panel forms shoulder elements when said hinge section is displaced from the surface of said bottom panel; and a tuck-in flap substantially the dimensions of said end wall panels foldably connected to an end of said bottom panel for upward insertion between said inner and outer end wall panels; and said inner end panel having tabs at its bottom edge engageable with said shoulder elements to hold said inner end panel in a crate end forming position.

3,017,065
SPOUT EQUIPPED CARTON
Stafford D. Collie, Fresh Meadows, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York.
Filed June 25, 1959, Ser. No. 822,894
8 Claims. (Cl. 229—17)



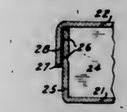
1. In a carton having a predetermined opening of a fixed size through which contents may be poured; a pouring spout associated with said opening and hinged to the carton for outward movement from a normal closed position to an open pouring position, said pouring spout and carton having coacting lock portions which engage upon movement of said spout to said pouring position, said lock portions being constructed and arranged to prevent return of the spout to said normal closed position until said lock portions are manually disengaged, the spout hinge being disposed at one end of said opening and at least one of the opposed longitudinal edges of said opening being inwardly stepped at the other end of said opening, providing said opening with at least one inner longitudinal edge wall portion toward said hinge, with at least one outer longitudinal edge wall portion remote from said hinge and with a shoulder at the juncture of said inner and outer edge wall portion, said spout having opposed side walls one of which slides upon said outer longitudinal edge wall portion during opening of said spout, said one of said side walls having a notch to clear said outer longitudinal edge wall portion when the spout reaches fully open position, said spout being sufficiently resilient to then outwardly snap said one of said side walls against said inner longitudinal edge wall portion, thereby causing reception of said shoulder in said notch and preventing return of the spout to closed position until said one of said side walls is inwardly sprung to disengage said notch from said shoulder, said shoulder and notch constituting the aforesaid coacting lock portions.

3,017,066
EGG CARTON
Aron Braunstein, Route 1, Box 78, Brownsville, Tex.
Filed Dec. 7, 1960, Ser. No. 74,418
5 Claims. (Cl. 229—28)



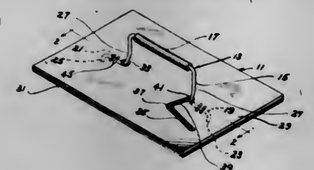
1. An egg carton including a front wall, a back wall, a bottom, end walls, a longitudinal divider, and a plurality of transverse dividers, said bottom being connected to and extending between the front and rear walls and being upwardly offset relative to the bottom edges of said front and rear walls, said longitudinal divider being connected to and extending upwardly from the bottom, said transverse dividers being conected to and supported solely by said longitudinal divider between said front and rear walls and above and spaced from said bottom, said end walls being connected to the ends of said front and rear walls and being disposed beyond the ends of the bottom, and interengaging means connecting said longitudinal divider to said end walls for supporting the longitudinal divider, transverse dividers and said bottom on said end walls.

3,017,067
CARTON ASSEMBLAGE HAVING LOCALIZED ATTACHMENT
George J. Parks, Menomonee Falls, Wis., assignor to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,924
2 Claims. (Cl. 229—48)



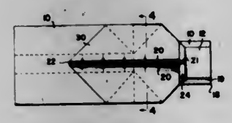
1. In a carton assemblage, a paperboard blank having a pair of overlappable elongated edge portions adapted to be adhesively united, one of said edge portions having thereon parallel ridges forming an intervening longitudinally unobstructed open ended valley of uniform depth between the overlapped edge portions extending throughout their entire lengths and the other edge portion having thereon a relatively flat surface adapted to cover said valley and to sealingly engage said ridges when said edge portions are overlapped, and a layer of glue of approximately the same thickness as the valley depth initially applied to one of said edge portions and confined entirely within said valley during overlapping of the edge portions to substantially fill said valley and adhesively unite said portions upon application of external pressure to the intervening glue confining area, said ridges being of sufficient height to prevent escape of glue thereover to local areas beyond the valley and to maintain air confining glue drying spaces within said local areas while the open valley ends allow excess glue to escape during said pressure application.

3,017,068
HANDLE ASSEMBLY
Joseph F. Jaeger, Oakland, and William Joseph Giles, Butler, N.J., assignors to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,789
6 Claims. (Cl. 229—52)



1. A handle assembly for a carton which comprises a handle having hand hold and end portions, an upper supporting member having a perforation and an L-shaped opening for insertion of the handle ends, said perforation and opening being located so that when the handle is inserted and positioned the upper support is above the handle ends and is uninterrupted by the perforation and L-opening in the area below the handle and a lower supporting member below the handle and upper support and fastened to the upper support so as to hold the handle ends in desired position between the supporting members.

3,017,069
BAG
Emanuel S. Kardon, Melrose Park, and Hans Volksdorf, Ambler, Pa., assignors to American Bag & Paper Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 9, 1959, Ser. No. 851,637
1 Claim. (Cl. 229—57)



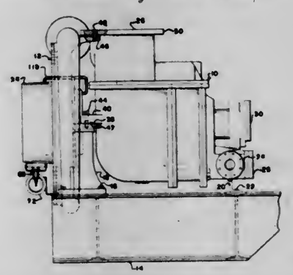
A bag comprising a tubular member having an outer sheet and an inner lining, said inner lining being made of heat-sealable material, said tubular member being collapsable to a flattened condition to form a pair of oppositely disposed walls, a first pair of spaced longitudinal slits in said outer sheet at a portion thereof forming one of said walls, said first slits extending inwardly from the edge of said tubular member from which the bottom of the bag is formed and being spaced from the sides of said one wall to define a tab, a second pair of spaced longitudinal slits in said lining at a portion thereof forming said one wall, said second slits extending inwardly from the bottom edge of said tubular member by an amount less than said first slits and being inwardly of said first slits, a partial diamond fold at the bag bottom having said tab at one end thereof, said partial diamond fold forming oppositely disposed flaps at the middle thereof and a double lining layer adjacent the innermost portion of said tab along a transverse strip between the innermost points of said first and second slits, said double lining layer being formed by the portion of said lining between adjacent first and second slits being folded to overlie the portion of said lining lying along said transverse strip, said transverse strip being bounded by lines interconnecting the innermost ends of said first and second slits respectively, means forming a seal along said transverse strip and a seal along said oppositely disposed flaps to thereby seal said inner lining, and means including said tab and the other end of said diamond fold forming the bottom of the bag.

3,017,070
BAG CLOSURE AND CARRIER
Melvin D. London, Kirkwood, Mo., assignor to The Absorbent Cotton Company, St. Louis, Mo., a corporation of Missouri
Filed Mar. 16, 1960, Ser. No. 15,463
8 Claims. (Cl. 229—62)



1. Means for merchandising goods in bags having body portions formed by two connected side walls open along one side edge thereof, and having a closure flap attached to one of said side walls adjacent the open side edge, said closure flap being foldable to a position adjacent to the bag body and having opposed end edges connected to edges of the bag adjacent to said one open side edge, the improvement comprising providing a foldable member having a first portion slidable to a position between the closure flap and the adjacent body side wall, a second portion foldable to a position adjacent to said first portion on the opposite side of the closure flap, and means carried by said second portion for engaging said first portion to maintain the folded condition thereof.

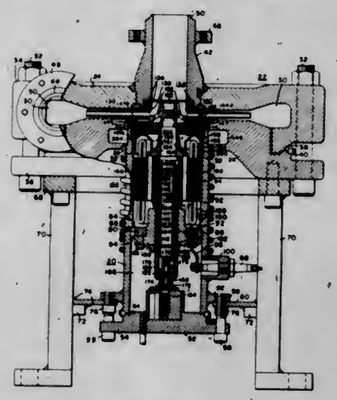
3,017,071
TURBINE COMPRESSOR ASSEMBLY
Joseph R. Lejk, Onalaska, and Hugo Merta, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed June 23, 1958, Ser. No. 743,797
7 Claims. (Cl. 230—116)



1. A turbine compressor assembly comprising a base, a scroll shaped compressor housing mounted on said base,

a turbine, a substantially horizontal shaft, bearing means on said turbine rotatably supporting said shaft, said shaft having an overhung unsupported portion extending from one end of said turbine into said compressor housing, an impeller mounted on said shaft for rotation in said compressor housing, means on said compressor housing supporting said one end of said turbine on said compressor housing for limited relative horizontal movement substantially radial to the axis of said shaft whereby the turbine is free to expand and contract with changes in temperature, and means at the periphery of said compressor housing slidably securing said compressor housing and said turbine for relative movement in a plane normal to said shaft.

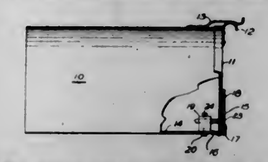
3,017,072
DYNAMOELECTRIC MACHINE
Arthur C. Hagg, Pittsburgh, and Benjamin Cametti, Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 27, 1958, Ser. No. 738,081
6 Claims. (Cl. 230—116)



1. In a dynamoelectric machine, the combination comprising a housing, an elongated supporting tube mounted within said housing, a driving shaft extending through said supporting tube, anti-frictional means mounted within said supporting tube on the inner periphery thereof and engaging said driving shaft, a hollow cantilever rotor secured to said driving shaft at a position closely adjacent at least a portion of said supporting tube, the hollow portion of said rotor at least partially surrounding said supporting tube, said supporting tube having coolant passages formed in said portion thereof for conducting coolant therethrough to the inner periphery of said rotor, means for circulating coolant through said passages, a stator assembly, and means for mounting said assembly at a position juxtaposed to said rotor.

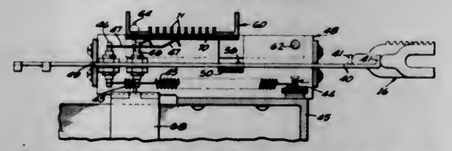
3,017,073
MAILBOX SIGNAL
Angie A. Piergiovanni, 426 E. La Clede Ave., Youngstown, Ohio
Filed Apr. 8, 1960, Ser. No. 20,973
2 Claims. (Cl. 232—35)

1. In a rural mailbox comprising a housing open at one end and provided at said open end with a hingedly mounted downwardly and outwardly swingable closing apertured door, a signal member comprising a flat ferrous metal member normally positioned vertically against the exterior of said apertured door and hinged at its bottom-most edge to said apertured door, a permanent magnet positioned in said mailbox adjacent said door and having a portion thereof engaged in said aperture in said door and touching said flat ferrous metal member and normally



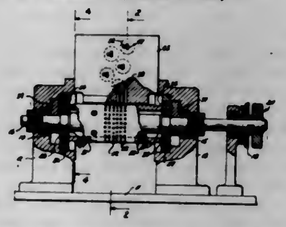
holding said flat ferrous metal member in said vertical position whereby upon the opening of said door said flat ferrous metal member will be moved away from said magnet and thereby caused to swing outwardly and downwardly.

3,017,074
INTERCOUPLING APPARATUS
Glenn E. Hagen, Hermosa Beach, Calif., assignor, by mesne assignments, to General Instrument Corporation, Hawthorne, Calif., a corporation of New Jersey
Filed Mar. 26, 1956, Ser. No. 573,719
25 Claims. (Cl. 234—23)



1. In combination for providing a coded recording of signal information on at least one card having a plurality of fields and a plurality of columns in each field in accordance with signal information from control apparatus, a first sequentially operated switch for indicating the particular field in the plurality being made available for operation, a second sequentially operated switch for indicating in the particular field the particular column being made available for operation, means for providing a control over the particular number of columns to be chosen in each field, means coupled to the control apparatus for providing indications as to the values in the different columns, and means including the first and second switches and the control means for obtaining the passage of signal indications for the recording of indications on each card as to the numerical values for the columns chosen in each field in accordance with the signal information from the control apparatus.

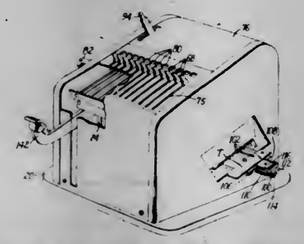
3,017,075
PUNCH APPARATUS
Elwin O. Witt, Sierra Madre, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Oct. 12, 1959, Ser. No. 845,679
5 Claims. (Cl. 234—39)



1. Apparatus for perforating a record medium or the like comprising a drum having a plurality of punches

spaced therearound, means for oscillating the center of said drum while rotating said drum about said center, said last mentioned means advancing said drum from one of said punches to another during each oscillation, a stationary die having a die opening aligned with said punches, said drum being effective to advance and retract a punch in said die opening during each oscillation of said drum whereby to form perforations in said record medium, said punches remaining in engagement with said perforations after forming said perforations whereby to advance said record medium.

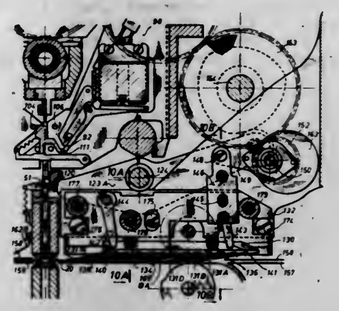
3,017,076
RECORD PERFORATING MACHINES
Karl J. Braun, Springdale, Conn., assignor to A. Kimball Company, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,458
7 Claims. (Cl. 234—78)



1. In a record perforating machine: punching means for recording information on a record member in the form of punched perforations, said punching means comprising side-by-side columns of selectively operable punching members; manually settable first selection means for controlling said columns of punching members; second selection means for alternately controlling one or more of said columns of punching members which are adapted to be controlled by said first selection means, said second selection means comprising a selection member insertable into said machine to an operable position and removable from said machine; said machine including means for receiving said selection member and guiding it to said operable position; and means for preventing either of said selection means from controlling said one or more columns of punching members if the other selection means is effective to control said one or more columns.

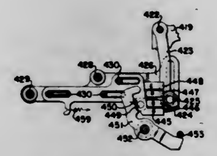
3,017,077
DEVICE FOR ADVANCING RECORD CARDS IN RECORD CARD CONTROLLED MACHINES
Jean-Claude Herpin, Paris, France, assignor to Compagnie des Machines Bull (Société Anonyme), Paris, France
Filed Feb. 12, 1960, Ser. No. 8,384
Claims priority, application France Feb. 17, 1959
4 Claims. (Cl. 234—128)

1. In a machine operating with record cards, means for advancing the cards step-by-step to a succession of equally spaced positions comprising a fixed guide plate, at least one movable support, means for actuating the said support with a reciprocating oscillating movement in the direction of advance of the cards, flexible blades disposed parallel to one another and each fixed to said support at one end, the free end of each blade having a rectilinear edge perpendicular to the direction of feed advance of the cards and being applied by flexure of the said blade against the said fixed guide plate disposed parallel to the movement of the support and serving as a path of movement for the cards, the free edges of the blades being staggered relative to one another for successively pushing the rear edge of a record card engaged between the said blades and the guide plate, and retaining means for preventing a card from returning



to the rear during the return movement of the support of the push blades.

3,017,078
SELECTIVE DRAWER CONTROL MECHANISM FOR CASH REGISTERS AND ACCOUNTING MACHINES
Frank R. Werner and Harold O. Randall, Dayton, and Kenneth C. Flint, West Carrollton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application July 1, 1955, Ser. No. 519,426, now Patent No. 2,884,851, dated May 5, 1959. Divided and this application Dec. 19, 1958, Ser. No. 781,525
2 Claims. (Cl. 235—22)

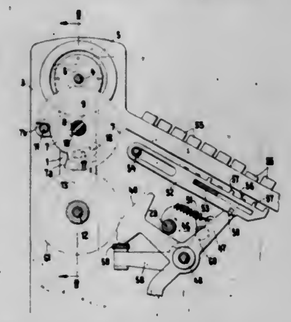


1. In a machine of the class described, the combination with depressible control keys to initiate and control machine operation, a cash drawer corresponding to each control key, a spring-actuated device for each drawer to open said drawers, and disengageable means for each drawer to retain said drawers closed against the action of the spring-actuated devices, of means including a vertically-shiftable element for each drawer, said elements effective when shifted to disengage the corresponding retaining means to free the corresponding drawer for opening movement; means comprising a horizontally-shiftable bar for each element and arranged to be shifted to shift the corresponding element; a horizontally-shiftable framework supporting the bars; a yoke member mounted in the framework for horizontal shifting movement thereby and for independent vertical shifting movement, said yoke having a bail arranged to be positioned in operating relationship with any selected one of the bars during vertical shifting movement of said yoke; means controlled by the depressed control key to position the bail in operating relationship with the corresponding bar; and means effective after the bail has been positioned to operate the framework to cause the bail to operate the selected bar to in turn shift the corresponding element to disengage the corresponding retaining means and thus to free the drawer corresponding to the depressed control key for opening movement.

3,017,079
VISUAL INDICATING DEVICE FOR CASH REGISTERS

Fritz Styner, Riedern, and Adolf Chlouba, Brunnenstrasse 55, Bern-Bumpliz, Switzerland; Gustav Adolf Erni executor of said Adolf Chlouba, deceased

Filed Dec. 28, 1954, Ser. No. 478,148
Claims priority, application Switzerland Jan. 20, 1954
3 Claims. (Cl. 235—23)



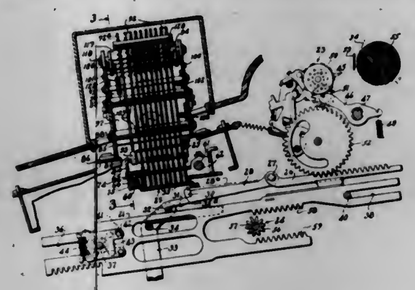
1. A visual indicating device for cash registers, comprising indicating cipher rolls mounted in a displaceable carrier, adjusting means for each of the said cipher rolls, a gear transmission between the said cipher rolls and the said adjusting means, spring means for each of the said adjusting means, adapted to displace the said adjusting means from a zero position, a bar adapted for cooperation with all of the said adjusting means for releasing the adjusting means from their zero position, registering keys for each of the said adjusting means, stops on the said keys adapted for cooperation with the said adjusting means when the said keys are operated, a driving shaft, first cam means operable by the said driving shaft adapted for imparting an oscillating movement to the said bar whereby the adjusting means are released from their zero position and are brought by the said spring means into a position determined by the said stops, the adjusting means being subsequently positively reset into their zero position by the return motion of the oscillating movement of the said bar, second cam means operable by the said driving shaft and adapted to displace the said carrier in such a way that the said indicating cipher rolls are disengaged from the said adjusting means before the said adjusting means are released by the said bar and the cipher rolls being engaged with the adjusting means when the adjusting means are reset into their zero position whereby the cipher rolls are posiitvely brought into their indicating position, a resetting shaft cooperating with the said cipher rolls for resetting them into their zero position and third cam means operable by the said driving shaft adapted for positively controlling the said resetting shaft when the cipher rolls are disengaged from the adjusting means whereby the cipher rolls are positively reset into their zero position.

3,017,080
READ-OUT SYSTEM

Fred N. Schwend, El Monte, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed Mar. 26, 1956, Ser. No. 573,680
4 Claims. (Cl. 235—60)

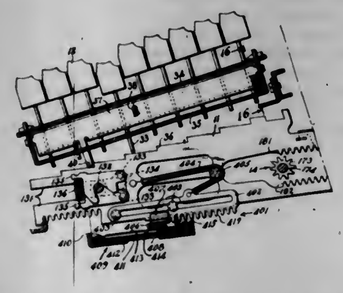
1. An amount registering system comprising the combination with a digit registering machine of the ten key type including independently operable elements for sequentially entering digit representations into said machine, said elements being effective to enter the digit representations from 0 to 9, respectively; of actuating devices for respective ones of said elements, spring means for independently actuating said devices, a plurality of permutation latches, each of said latches being effective to normally latch certain only of said devices against operation by said spring means, means for releasing one or more of said latches, and means controlled by one of said devices upon actuation thereof by said spring means for relatching said actuating devices by said previously released latches.



3,017,081
SALES TRANSACTION REGISTERING APPARATUS

Milton V. Scozzafava, Arcadia, John K. Linn, Los Angeles, and Richard E. Busch, La Puente, Calif., and Robert E. Boyden, Granby, Conn., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California

Filed Sept. 6, 1957, Ser. No. 682,551
8 Claims. (Cl. 235—60.31)

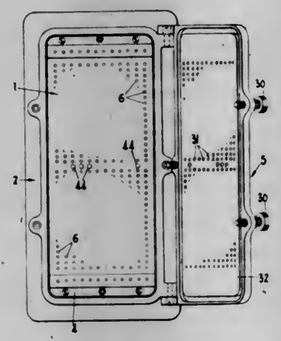


1. In a sales transaction registering apparatus, the combination comprising an accumulator including a plurality of ordinally arranged gears; a plurality of actuators for actuating respective ones of said gears, said actuators being mounted for fore and aft movement relative to said apparatus, certain of said actuators having upper and lower rack gear sections located respectively above and below respective ones of said gears, means for raising said accumulator to an upper position to mesh said gears with said upper rack sections and for lowering said accumulator to a lower position to mesh said gears with said lower rack sections whereby to cause said certain racks to drive said respective gears in one direction or the other, others of said racks having single rack sections operatively connected therewith, and means for maintaining said single rack sections in mesh with respective ones of said gears in different said positions of said accumulator.

3,017,082
DEVICES FOR SENSING PUNCHED CARDS, TAPES OR OTHER MEMBERS

Reginald Lionel Riddiford, Birmingham, and Frank Salisbury, Coventry, England, assignors to The General Electric Company Limited, London, England

Filed July 29, 1958, Ser. No. 751,731
Claims priority, application Great Britain August 1, 1957
11 Claims. (Cl. 235—61.11)

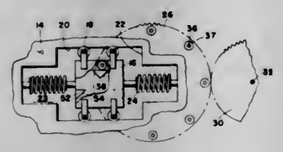


1. A device for sensing a punched card, tape or other member comprising an elongated member of electrically conducting material, an elongated coil of wire extending across said member, means to mount said coil so that one side of a portion thereof is close to said member, a part, and means to movably mount said part on the opposite side of said portion of the coil to said member so that, when a card, tape or other member is presented to the device, an end of the said part remote from said coil either is not in register with a hole in said card, tape or other member, in which case the part is moved by the card, tape or other member and there is an electrical connection between the coil and the member, or is in register with such a hole and there is no such connection.

3,017,083
SHOCK REGISTER

Thomas L. Greenwood, 1709 La Grande St., Huntsville, Ala.

Filed Aug. 15, 1958, Ser. No. 755,364
4 Claims. (Cl. 235—91)
(Granted under Title 35, U.S. Code (1952), sec. 266)

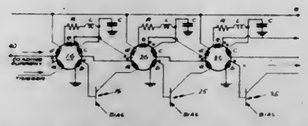


1. A shock register comprising a frame disposed for attachment to a mechanism and provided with a slot; an inertia device disposed therein and provided with a member slidably secured in said slot and a pair of springs secured between said frame and said member for bias thereof to a neutral position and operation thereof in slidable strokes responsive to shocks above a predetermined value applied to the mechanism; and a device secured to said frame for recording the number of the shocks responsive to the strokes.

3,017,084
MAGNETIC CORE SHIFT REGISTER

Sadia S. Guterman, Dorchester, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Nov. 26, 1954, Ser. No. 471,319
3 Claims. (Cl. 235—92)

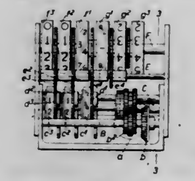


3. In a multi-stage digital counter, a field-sustaining element included in a first stage, a second field-sustaining element included in a second stage, regenerative coupling means for supplying field-shifting energy to said second stage to perform a counting operation therein, and winding and energy delay means in series with said regenerative coupling means forming part of said first stage for controlling operation of said regenerative coupling means in a manner adapted to prevent double reversal of said first stage in a single counting interval.

3,017,085
COUNTING MECHANISM

Walter Abel, Salford, England, assignor to Measure-Meters Co. Limited, Radcliffe, England, a corporation of Great Britain

Filed Mar. 25, 1955, Ser. No. 496,845
2 Claims. (Cl. 235—117)

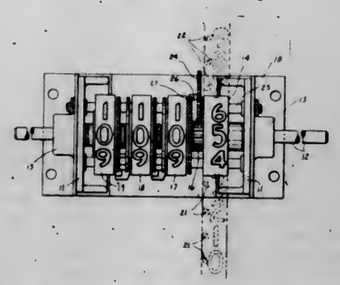


1. Counting mechanism for length measuring apparatus having measuring rollers between which passes material to be measured, comprising a first shaft having a set of counting wheels mounted thereon and driven from said measuring rollers, a second shaft parallel to said first shaft and on which a coaxial series of indicating wheels is mounted, said series of indicating wheels being divided into two groups and the numerals of said groups being relatively reversed and visible in upright position from opposite sides of the apparatus, and each indicating wheel of one group having a corresponding reverse indicating wheel in the other group, means fixedly mounting a first corresponding pair of said indicating wheels, one from each group, on said second shaft, means for mounting the other indicating wheels rotatably on said second shaft, a second corresponding pair of said rotatably mounted indicating wheels, one from each group, being directly secured for rotation together, gearing for driving said second corresponding pair of indicator wheels from one of said counting wheels, further gearing driving said second shaft from another of said counting wheels for simultaneously driving said first corresponding pair of indicator wheels, an intermediate lay shaft mounted parallel to said first and second shafts, a pair of gears fixed on said lay shaft, a gear rotatable with a third of said counter wheels meshed with one of said pair of lay shaft gears, and gears secured to rotate with a third corresponding pair of indicating wheels, one from each group, each meshed with one of said pair of lay shaft gears, so that said third counter wheel positively drives both of said third pair of corresponding indicating wheels simultaneously.

3,017,086
HIGH SPEED COUNTERS

Thomas B. Harker, Fort Wayne, Ind., and Evan B. Nutt, Jr., Riverside, Calif., assignors to The Magnavox Company, Fort Wayne, Ind., a corporation

Filed Dec. 4, 1957, Ser. No. 700,613
7 Claims. (Cl. 235—117)

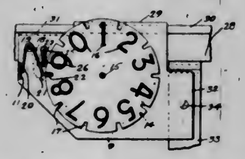


1. A high speed counting mechanism including a units drum and a tens drum mounted for rotation during a counting interval, a viewing window providing a reference for reading extent of rotation of said drums during the counting interval, units index markings equally spaced about said units drum and visible at said window depending upon the position of said units drum, tens index markings equally spaced about said tens drum and visible at said window depending upon the position of said tens drum, gear means for continuously driving said tens drum at a one to ten ratio with said units drum, the zero index marking on said units drum being offset rearwardly 180° with respect to the zero index markings on said tens drum when the tens drum is at its zero position, indicating means carried on said units drum and adapted to provide a directional indication establishing the index marking on said tens drum which correctly indicates the extent of rotation of said tens drum during the counting interval, the portion of said indicating means visible at said viewing window during the initial portion of a rotational cycle of said units drum being reversed in directional indication with respect to the portion of said indicating means visible at said viewing window during the terminal portion of a rotational cycle of said units drum.

3,017,087
REGISTERING DEVICE

Algot V. Bodeen, Alexandria, Minn. (Box 16, Port Wing, Wis.)

Filed Dec. 23, 1957, Ser. No. 704,804
2 Claims. (Cl. 235—122)

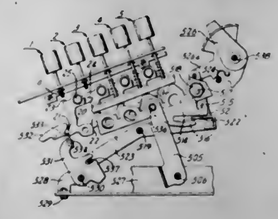


1. A registering device comprising a substantially flat housing including spaced front and rear walls, a disc disposed in the housing between the front and rear walls and forming a dial having circumferentially spaced numerals on one side thereof, means rotatably mounting said dial in the housing, said housing having a top portion provided with an opening through which a portion of the dial projects, said front wall having a notch through which one of the numerals of the dial is visible, said dial having outwardly opening circumferentially spaced notches in the periphery thereof, a spring lock mounted in said housing at a point spaced outwardly from a part of the dial periphery and having a part normally spring biased into engagement with one of the dial notches to retain the dial against rotation with one numeral thereof exposed through the front wall notch, said housing having a keyhole, and a key having a pin and bit insertable into the housing through the keyhole between the spring lock and a part of the dial and turnable in one direction within the housing to engage the spring lock for displacing said part of the spring lock out of engagement with the dial to release the dial for rotation by manually engaging the part of the dial exposed through the opening of the top portion and through the front wall notch.

3,017,088
CALCULATING MACHINES

Richard A. Edwards, Walnut Creek, and Eugene E. Reynolds, Richmond Annex, Calif., assignors to Smith-Corona Marchant Inc., a corporation of New York

Filed Nov. 13, 1956, Ser. No. 621,603
2 Claims. (Cl. 235—145)

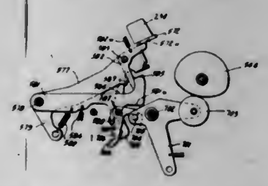


1. In a calculating machine having a keyboard comprising a plurality of ordinally arranged rows of value entry keys, the combination of: a differently settable member associated with each row of keys and mounted for movement to a plurality of positions in response to depression of the respective keys associated therewith, a device operable in one of two positions thereof for connecting one of said members with a second one of said members to cause identical movement of the second member upon depression of a key associated with said first member, means for moving said device to connecting position, and a mechanism responsive to said moving means for preventing the depression of the keys associated with said second member.

3,017,089
SPRING POWERED KEY MECHANISM

Eugene E. Reynolds, Richmond Annex, Calif., assignor to Smith-Corona Marchant, Inc., a corporation of New York

Original application Aug. 23, 1957, Ser. No. 679,909. Divided and this application Nov. 17, 1958, Ser. No. 774,502
4 Claims. (Cl. 235—145)

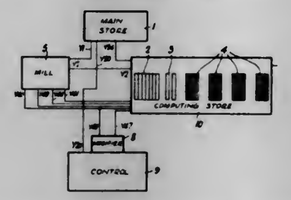


4. In a light touch key mechanism, the combination of: a heavily loaded control key lever, means for urging the key lever to a first position, a heavily loaded second lever, a releasable device connecting the second lever to the key lever, means connected to said second lever for urging the second lever from a first to a second position, a latch operable to hold the second lever in the first position, means operable upon an initial movement of the key lever to move the latch and release the second lever and key lever for movement to respective second positions, a restoring lever operable during the initial portion of a restoring cycle to move the releasable device to break said connection and permit the key lever to return to the first position, said restoring lever being cyclically operable to move the second lever to the first position for re-engagement with said latch and to permit the releasable device to be reconnected during a predetermined later portion of said cycle.

3,017,090
OVERFLOW CONTROL MEANS FOR ELECTRONIC DIGITAL COMPUTERS

Christopher Strachey, London, England, and Donald Bruce Gillies, Toronto, Ontario, Canada, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 23, 1956, Ser. No. 560,830
Claims priority, application Great Britain Jan. 24, 1955
12 Claims. (Cl. 235—153)

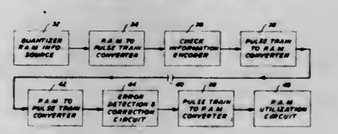


1. An electronic digital computing machine which includes a main data store and a separate computing data store, transfer circuits including signal-controlled switch means between said main data store and said computing data store, computing circuit means for performing a computing operation with at least two operand-representing signals applied thereto from said computing data store, overflow detector means connected to said computing circuit means for detecting overflow of a derived answer-representing signal therein beyond the range of numbers capable of being represented by the form of electric signals employed in the machine, said overflow detector means including overflow signal generating means for providing a sustained overflow indicating signal subsequent to the detection of overflow, a control system governing the form of machine operation during each operation cycle in accordance with the form of an applied order signal, rhythm control means for causing continuous machine operation during a plurality of successive operation cycles each in accordance with the form of successive order signals of a programme of orders, said control system including transfer code signal generating means for providing a transfer code control signal connected to operate said signal controlled switch means in said transfer channels between said main data store and said computing data store in response to an order signal requiring a transfer operation, signal controlled stop means connected to said rhythm control means for arresting the cyclic operation of the machine and signal coincidence testing means having separate inputs supplied respectively with said transfer code control signal and said overflow indicating signal, said coincidence testing means having an output connected to operate said stop means to cause automatic arrest of continued cyclic operation of the machine to prevent the performance of a transfer operation between said main data store and said computing data store subsequent to the detection of overflow.

3,017,091
DIGITAL ERROR CORRECTING SYSTEMS

Werner Ulrich, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 26, 1957, Ser. No. 648,633
9 Claims. (Cl. 235—153)

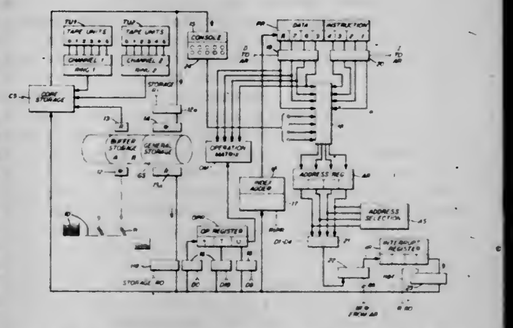


1. In a data processing system in which each digit is represented by at least three distinct states, a code group transmitter including means for providing at least one signal representing digital input information, means for providing at least one signal representing checking information, and means for providing at least one mixed digital signal including both input and checking information; and a decoder coupled to detect code group signals originated by said transmitter, said decoder including means for separating the input and checking information included in said mixed signal, and means for detecting errors in said code group signals.

3,017,092
PROGRAM CONTROL FOR DATA STORAGE AND PROCESSING MACHINE

Edward F. Rent, Vestal, and Flavious M. Powell, Johnson City, N.Y., assignors to International Business Machines Corporation, New York, N. Y., a corporation of New York

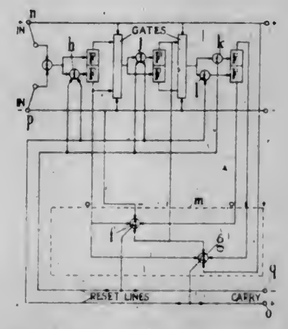
Filed Sept. 6, 1957, Ser. No. 682,487
11 Claims. (Cl. 235—153)



1. In a data processing machine of the type controlled by stored program steps each comprised of manifestations of data comprehending the operation to be performed and the address of the next succeeding program step, the combination comprising, an address register for receiving the address data from successive program steps, means controlled by the address register for advancing the machine through a main sequence of operations in accordance with said program steps, an auxiliary storage device, means for transferring each data address entered in the address register into said storage device during the main sequence of operations, program interrupt means for

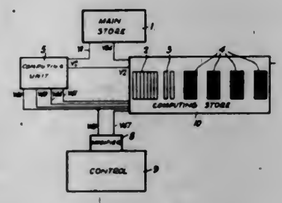
automatically interrupting said main sequence of operations, means controlled by said interrupt means for blocking any further entry of data into said storage device, stored program control means controlled by said interrupt means for entering address data into said address register to cause the machine to advance through an independent sequence of operations, and means for transferring the address data stored in said storage device back into said address register at the end of said independent sequence of operations to return the machine to the point in the main sequence of operations where the interruption occurred.

3,017,093
ELECTRICAL COUNTING
Geoffrey Charles Rowley, Cheam, England, assignor to A. V. Roe & Co. Limited, Middleton, England
Filed June 25, 1959, Ser. No. 822,775
Claims priority, application Great Britain June 30, 1958
1 Claim. (Cl. 235—155)



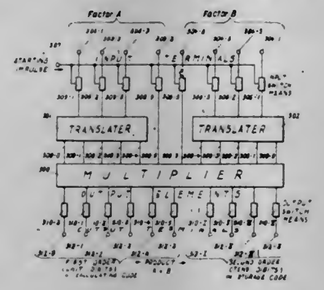
A reversible binary counter for counting modulo N where N is any number greater than 2, comprising a plurality of counter stages, each stage comprising an OR-gate having a first input to which impulses representing an increase in the count representation are applied, a second input to which impulses representing a decrease in the count representation are applied, and an output connected to the two trigger inputs of a bistable flip-flop circuit, a first output from the bistable flip-flop circuit connected to the first input of a first AND-gate, the second input of the first AND-gate being connected to a first input line to which are applied external impulses to cause a unit increase in the count representation, a second output from the bistable flip-flop circuit connected to the first input of a second two-input AND-gate, the second input of the said second AND-gate being connected to a second input line to which are applied external impulses to cause a unit decrease in the count representation, the output of the first AND-gate and the output of the second AND-gate being signals representing increases in the count representation for connection to the OR-gate in the succeeding counter stage, the first and second inputs to the OR-gate in the least significant stage being connected respectively to the first and second input lines, a pair of further AND-gates, the inputs of which comprise the first or second respective outputs from each of the flip-flops of each counter stage and the respective first and second input lines, and an output line connected to each of the further AND-gates for transmitting impulses upon detection of any preselected pair of lower and upper count representations, said output line being coupled to the counter for resetting it to the lower count representation when the upper count is reached and vice versa, the numerical difference between the upper and lower count representations being the required counting modulus.

3,017,094
ORDER CONTROL ARRANGEMENTS FOR ELECTRONIC DIGITAL COMPUTERS
Christopher Strachey, London, England, and Donald Bruce Gillies, Toronto, Ontario, Canada, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 23, 1956, Ser. No. 560,831
Claims priority, application Great Britain Jan. 24, 1955
11 Claims. (Cl. 235—157)



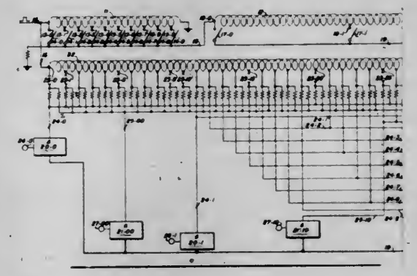
1. An electronic digital computer arranged for operation in the serial mode and with order signals which comprise separate first and second address-defining digit groups and which includes a first group of single word storage registers each of the immediate access type, each of said first group registers having a signal input including switching means controlled by a first address selection signal unique to that register, a first signal output including switching means also controlled by the same unique first address selection signal and a second signal output including switching means controlled by a second address selection signal unique to that register, a second group of single word storage registers each of the immediate access type and each including a signal input including switching means controlled by a first address selection signal unique to that register and a signal output including switching means also controlled by the same first address selection control signal unique to that register, a computing unit having first and second operand-signal inputs and a result-signal output, a control system including a circulating storage register for an applied order signal and first and second address signal staticisor means for providing the currently operative unique forms of said first and second address selection signals, a first signal transfer circuit connecting said result-signal output of said computing unit to the signal inputs of each of said first and second group registers, a second signal transfer circuit connecting the first operand-signal input of said computing unit to the first signal output of said first group registers and to said signal output of said second group registers, a third signal transfer circuit connecting said second operand-signal input of said computing unit to said second signal output of said first group registers and means including result-signal destination selector switch means in said control system for initially applying said order signal to said first and second address signal staticisor means whereby the operative unique forms of said first and second address selection signals are initially determined respectively by said first and second address-defining digit groups of said order signal and for subsequently re-applying said order signal from said circulating storage register only to said first address signal staticisor means through said result-signal destination selector switch means whereby the operative unique form of said first address selection signal is subsequently determined either by the digit configuration of said first address defining digit group or said second address defining digit group of said order signal in accordance with the setting of said result-signal destination selector switch means.

3,017,095
ELECTRIC MULTIPLYING ARRANGEMENT
Martin Hebel and Gunther Schweitzer, Nurnberg, Germany, assignors to Max Grundig, Furth, Bavaria, Germany
Filed May 15, 1959, Ser. No. 813,601
21 Claims. (Cl. 235—159)



18. In an electric multiplying arrangement for processing two one-digit number values introduced as factor signals in parallel in decimally coded form, and for sequentially producing a multiplication product of the one-digit factors as output signals in decimally coded form, in combination, first input means for receiving input signals in the form of input pulses representing respectively decimal code elements of a one-digit multiplier number and having a plurality of output terminals respectively assigned to the different orders of the particular decimal code, for respectively delivering in parallel, corresponding to the received input signals, decimally coded "0," "1," "2," "3," "4" and "5" signals in the form of factor pulses respectively representing decimal code elements of a one-digit multiplier number ranging from "1" to "5"; second input means for receiving input signals in the form of input pulses representing respectively decimal code elements of a one-digit multiplicand number and having a plurality of output terminals respectively assigned to the different orders of the particular decimal code, for respectively delivering in parallel, corresponding to the received input signals, decimally coded "0," "1," "2," "3," "4" and "5" signals in the form of factor pulses respectively representing decimal code elements of a one-digit multiplicand number ranging from "1" to "5"; multiplier means comprising a first group of multiplying coincidence circuit means each connected to a different combination of one of said output terminals of said first input means and one output terminal of said second input means, for multiplying one-digit factors ranging between "0" and "4" which are represented each by a single code element and correspondingly by a single one of said factor pulses and for delivering a decimally coded output signal representing the product of said one-digit factors; a second group of multiplying coincidence circuit means each connected to a different combination of more than one of said output terminals of either one of said input means and at least one of said output terminals of the other one of said output means, for multiplying a combination of one-digit factors of which at least one is in the range between "5" and "9" and represented by more than one code-element and correspondingly by a plurality of simultaneously delivered ones of said factor pulses, for delivering a decimally coded product output signal representing the product of said combination of one-digit factors, the number of coincidence circuit means of said second group thereof being restricted to one such coincidence circuit means each for those possible multiplications, respectively, which result from factors whose code-elements differ from the code-elements which are processed by said first group of coincidence circuit means, and which result in a product whose code-elements differ from the code-elements representing a product formed by said first group of coincidence circuit means; a plurality of blocking means respectively in circuit with said coincidence circuit means for blocking during any particular multiplying operation those coincidence circuit means which, unless blocked, would deliver an output signal representing a partial product formed from pulses representing partial components of the particular factors which are being processed, and thus comprised in the number value of the product to be formed of the whole factors; and output means respectively connected to said coincidence circuit means for delivering said product output signals in the form of pulses in parallel, representing the decimal code-elements of the particular product.

3,017,096
DECODING DEVICE UTILIZING A DELAY LINE
Franklin C. Chiang, Palo Alto, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 18, 1958, Ser. No. 722,249
15 Claims. (Cl. 235—160)

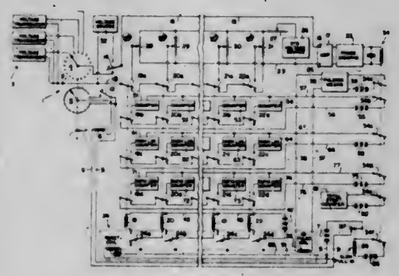


3. In combination, a first delay means settable for delaying signals a period of time corresponding to a first coordinate, a second delay means settable for further delaying said signals an additional period of time corresponding to a second coordinate, a plurality of output circuits each of which corresponds to predetermined combinations of said first and second coordinates, a gating circuit associated with each output circuit, a third delay means arranged in parallel with said first and second delay means for generating signals for conditioning said gating circuits at predetermined times, means for selectively connecting said conditioning signals to said gating circuits according to said predetermined combinations, and means for connecting signals delayed by said first and second delay means to said gating circuits for entry into those of said output circuits corresponding to said first and second coordinates.

3,017,097
CONTROL APPARATUS
John V. Werme, Fort Washington, William F. Newbold, Ambler, John Parnell, Philadelphia, and Joseph C. Volpe, Levittown, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 30, 1955, Ser. No. 550,141
8 Claims. (Cl. 235—168)

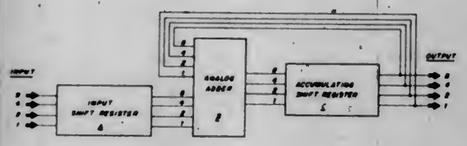
2. An apparatus for classifying an input signal according to its magnitude comprising an amplifier, a plurality of suppression sources, each of said sources representing a suppression group into which the input signal may fall, means for sequentially connecting said suppression sources, one after another, to the input of said amplifier

in opposition to said input signal, signal responsive means connected to the output of said amplifier and operative when energized to cause said first named means to connect said suppression sources to said amplifier input, said signal responsive means being arranged to be energized when said input signal predominates in said input of said amplifier, and to become deenergized upon said input



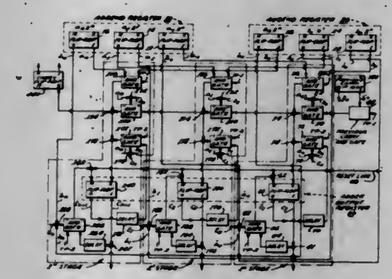
signal being effectively overcome by one of said opposing suppression sources, a counting means for each of said suppression groups, and means associated with said signal responsive means and operative when said signal responsive means are deenergized to cause the counter associated with the suppression group causing said deenergization to register.

3,017,098
ADDING DEVICE
John W. Haanstra, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 7, 1954, Ser. No. 454,255
1 Claim. (Cl. 235—172)



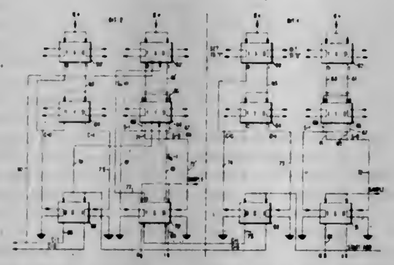
An adder comprising first, second and third registers, means for entering signals representing digits of an augend, addend and carry into said respective registers, first, second and third means respectively associated with said registers for converting the signal store within into first, second and third analog signals, means for summing said analog signals to provide a sum voltage the amplitude of which is the analog of the sum of said augend, addend and carry stored in said registers, means, including a plurality of triggers, for generating a standard voltage incrementally variable in response to the condition of said triggers, differential amplifier means for comparing said standard voltage with said sum analog voltage to produce signals indicative of equality and inequality, gate means coupled to said differential amplifier means and to said triggers to change the state of said triggers and reduce the standard voltage by equal increments in response to unequal signals from said differential amplifier means and to block further change of state of said triggers in response to an equal signal, a plurality of gates, means connecting one input of said gates to said triggers, means for simultaneously energizing the other input of said gates to produce output signals from those gates connected to triggers in a predetermined state whereby the output signals are indicative of the digital sum of said addend, augend and carry.

3,017,099
PARALLEL BINARY ADDER
Grant W. Booth, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 29, 1957, Ser. No. 680,999
4 Claims. (Cl. 235—175)



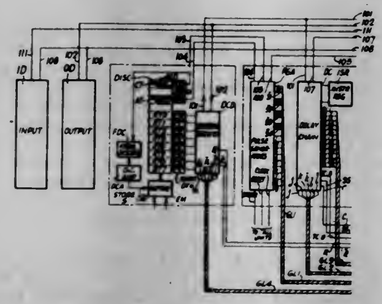
1. A binary adder comprising an addend flip-flop; an augend flip-flop; a previous carry flip-flop; a sum flip-flop; each of said flip-flops having two stable states, one of which is a set state and the other of which is a reset state, set and reset input terminals corresponding respectively to said two states, a binary "1" output having an enabling voltage corresponding to said set state and a complementary non-enabling voltage corresponding to said reset state, and a binary "0" output having two voltages respectively complementary to those of said binary "1" outputs, said sum flip-flop being responsive to an enabling voltage at its said set input terminal to assume its said set state and responsive to an enabling voltage at its said reset input terminal to assume its said reset state; means for receiving a first timing pulse; means for receiving a second timing pulse later than said first pulse; a first gating means connected to receive said "1" outputs of said addend, augend, and previous carry flip-flops and to receive from said first timing pulse receiving means said first timing pulse and to apply said first timing pulse as an enabling voltage to the set input terminal of said sum flip-flop when simultaneously with said first timing pulse at least two of said addend, augend, and previous carry flip-flop "1" outputs have enabling voltages; a second gating means connected to receive said sum flip-flop "0" output, said addend, augend, and previous carry "1" outputs and to receive from said second timing pulse receiving means said second timing pulse and to apply said second timing pulse as an enabling voltage to said sum flip-flop set terminal when simultaneously with said second timing pulse said sum flip-flop "0" output and any one of said addend, augend, and previous carry flip-flop "1" outputs have enabling voltages; a third gating means connected to receive said sum flip-flop "1" output and to receive said addend, augend, and previous carry flip-flop "0" outputs and to receive, from said second timing pulse receiving means, said second timing pulse and applying said second timing pulse as an enabling voltage to said sum flip-flop reset terminal when simultaneously said sum flip-flop "1" output and any one of said addend, augend, and previous carry flip-flop "0" outputs have enabling voltages, whereby said sum flip-flop "1" output has an enabling voltage corresponding to a binary "1" and a non-enabling voltage corresponding to a binary "0" of a sum including a previous carry, if any.

3,017,100
ADDER CIRCUIT
Bennett Housman, Arlington, Va., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,403
7 Claims. (Cl. 235—175)



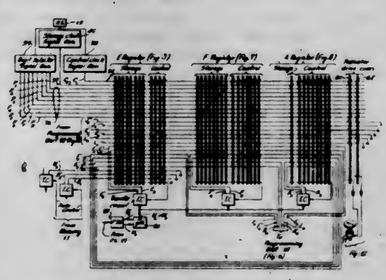
1. A binary adder for operation at temperatures near absolute zero comprising a plurality of stages wherein each stage comprises a first pair of flip-flops for storing the "addend" bit and a second pair of flip-flops for storing the augend bit, a fifth flip-flop for storing the "sum" of said bits, and a sixth flip-flop for storing the "carry" of said bits, means for obtaining a "0" output signal and a "1" output signal from said sixth flip-flop, said "sum" flip-flop being in a first series circuit with an "addend" flip-flop and an "augend" flip-flop, and the "carry" flip-flop being in a second series circuit with the other "addend" flip-flop and other "augend" flip-flop, means for employing the "1-carry" output of an immediate preceding stage to sense the binary state of said "sum" flip-flop and for employing a "0-carry" output signal of said immediate preceding stage to sense the binary state of said "carry" flip-flop.

3,017,101
ELECTRONIC DIGITAL COMPUTING MACHINES
Charles Edward Owen, Stanmore, England, assignor, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 23, 1954, Ser. No. 418,129
Claims priority, application Great Britain Mar. 24, 1953
6 Claims. (Cl. 235—176)



1. For an electronic digital computing machine operating in the serial mode with numbers represented by electric pulse signal trains, a computing circuit arrangement comprising first, second, third, fourth, fifth, sixth, seventh and eighth gate circuits, first and second inverter devices and a delay device having a delay time equal to one digit period of the applied signal trains, first and second pulse train inputs for receiving a first input pulse train (L) and a second input pulse train (M) respectively, circuit means for connecting said first pulse train input to a controlling input of said first, sixth and eighth gate circuits, circuit means for connecting said second pulse train input to a controlling input of said third and fourth gate circuits, circuit means for applying the combined outputs of said first and second gate circuits as a controlling input to said fifth gate circuit, circuit means for supplying a first control potential to a controlling input of said fourth and fifth gate circuits, circuit means for applying a second control potential to a controlling input of said second gate circuit, circuit means for applying a third control potential to a controlling input of said first gate circuit, circuit means for applying the combined outputs of said fourth and fifth gate circuits to said delay device to generate a carry pulse train (K), circuit means for applying said carry pulse train (K) to a controlling input of said third and fourth gate circuits, circuit means for combining said carry pulse train (K) with said second input pulse train (M) and applying said combined signal train (M or K) to a controlling input terminal of said fifth, sixth and seventh gate circuits, circuit means for applying the output of said third gate circuit to said first inverter device and feeding the output from said first inverter device as a controlling input to said sixth and seventh gate circuits, circuit means for applying the output from said sixth gate circuit to said second inverter device and applying the output from said second inverter device to a controlling input of said second, seventh and eighth gate circuits and means for combining the outputs of said seventh and eighth gate circuits as the answer-representing output, said first control potential being arranged to maintain said fourth and fifth gate circuits open except when a test of non-equivalence is required, said second and third control potentials being arranged whereby the second control potential renders said second gate circuit inoperative and said third control potential renders said first gate circuit operative when said circuit arrangement is required to effect addition, and said second control potential renders said second gate circuit operative and said third control potential renders said first gate circuit inoperative when the circuit arrangement is required to effect subtraction.

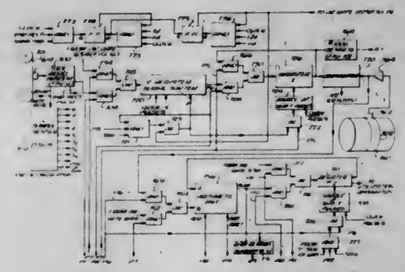
3,017,102
DIGITAL INDICATOR CIRCUITRY
Ladimer J. Andrews, Gardena, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Jan. 16, 1957, Ser. No. 634,524
12 Claims. (Cl. 235—176)



4. A digital computer cyclically operable through successive time intervals termed computer word periods, said computer comprising a data processing unit and a programming unit, each of which units comprises a respec-

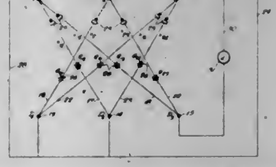
tive plurality of registers each register including a storage magnetic core array and a control magnetic core array; means including a source of read signals and write signals for the registers of the units, common sense conductors, one for each register, transfer circuits, one per register, connected with and each responsive to signals on a respective sense conductor and each constructed and arranged for supplying inhibiting signals to cores of the registers, each of the control cores of said data processing unit registers being operative to perform logical arithmetic operations with data transferred from storage cores through transfer circuits by read and write signals during a word period, the transfer circuit for any said unit being constructed and arranged to supply inhibiting signals coincident with the write signal applied to a core of one of the arrays in accordance with data signals read out of a core of the other of the arrays thereof, to thereby cause the core to perform logical arithmetic operations with data transferred from storage cores of the registers, the transfer circuits for said programming unit also being constructed and arranged to supply inhibiting signals coincident with a control write signal to render certain of the control cores of said data processing unit registers operable, and the transfer circuits for said data processing unit also being operable to supply inhibiting signals coincident with a write control signal to render certain of the control cores of said programming unit operable at the end of a word period.

3,017,103
SERVICE-CHARGE CALCULATION SYSTEM
Jacob Goldberg and Bonnar Cox, Palo Alto, Calif., assignor to General Electric Company, New York, N.Y., a corporation of New York
Filed Nov. 24, 1958, Ser. No. 775,835
12 Claims. (Cl. 235—176)



1. In a system wherein there is recorded on a storage medium for each customer over a predetermined interval signals representative of the account activity including signals representing items handled, and signals representing periodic current balance entries, a system for calculating the service charge to be made for handling items for a customer having less than a predetermined minimum balance, which charge is to be based upon a minimum fee plus a fixed charge per item less a credit based on the minimum balance value, said system comprising means for selecting from said storage medium the signals representing the minimum balance occurring for a customer, means for determining whether the minimum balance represented by said minimum balance value signals exceeds a predetermined value and to provide a signal indicative thereof, means responsive to said signal indicating the minimum balance exceeding a predetermined value to terminate further service-charge calculation for said customer, means for identifying item signals for which a charge is to be made, means for generating a set of signals representing a fixed charge for an item, means for accumulating a set of said signals representing fixed charges for each time identified by said means for identifying item signals to produce electrical signals representative of the fixed charge sum, a source of signals representing different first and second values and associated identifying signals representing minimum balance values, each said first value being the product of the lowest number of items for a minimum balance for which a charge is to be made and said fixed charge, each said second value being the sum of said first value and said minimum fee less the credit for said minimum balance value, means for comparing for identity the minimum balance signals obtained by said means for selecting the minimum balance value with the minimum balance signals at said source, means for extracting signals representing a first and second value from said source in accordance with an identity being established by said means for comparing, means for obtaining signals representing the difference between the value represented by said fixed-charge sum signals and the first value extracted by said means for extracting to provide difference signals, means responsive to said difference signals being representative of a zero or a negative quantity to terminate further service-charge calculation, and means to add said second value signals to said difference signals to obtain signals representing the service charge for said customer.

3,017,104
ECONOMIC DISTRIBUTION COMPUTER
Clifford E. McCarty, Ridley Park, and William D. Holak, Crum Lynne, Pa., assignors to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania
Filed Jan. 13, 1959, Ser. No. 786,563
14 Claims. (Cl. 235—185)

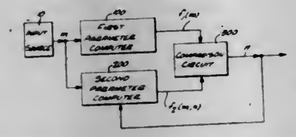


1. An analog computer comprising a network having two types of terminals, which are input and output terminals constituting network nodes, consisting of flow paths from various input to various output terminals, which flow paths constitute the internal portion of the network between the input and output terminals, each flow path having a potential producing element, flow rectifying elements in enough of the flow paths to prevent circulating currents within any loop internal of the input and output terminals which might otherwise be caused by the potential producing element, and at least two flow paths external of the internal portion of the network connecting output to input terminals in at least one of which external flow paths there is provided a flow generator.

3,017,105
SYSTEM FOR RADAR POSITIONAL DATA
Alvin Guy Van Alstyne and Garvin M. Moore, Jr., Los Angeles, Calif., assignors to Gilfillan Bros. Inc., Los Angeles, Calif., a corporation of California
Filed July 14, 1955, Ser. No. 521,965
14 Claims. (Cl. 235—186)

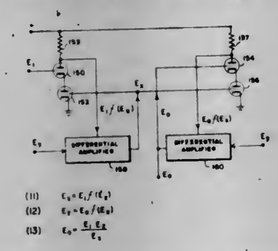
1. A coordinate translation system for producing an output signal proportional to at least one polar coordinate of a point with respect to a given origin of translation in response to signals proportional to the polar coordinates of the point with respect to a given initial origin,

said translation system comprising means responsive to the input signals for producing a first reference signal proportional to a variable common to each of the coordinate systems, means responsive to said input signals and



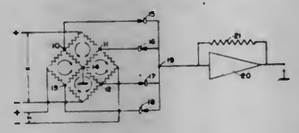
said output signal for producing a second reference signal proportional to said common variable, and means responsive to said first and second reference signals for producing said output signal.

3,017,106
COMPUTING CIRCUITS
Omar L. Patterson, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Jan. 13, 1954, Ser. No. 403,799
12 Claims. (Cl. 235—194)



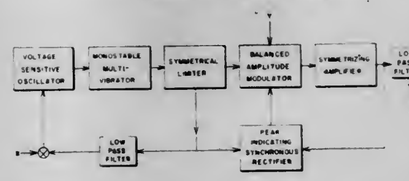
1. Apparatus of the type described comprising means providing a first output in the form of a product of a first quantity with a predetermined function of a variable parameter, a first differential amplifier receiving inputs of said first output and of a second quantity and providing said variable parameter as an output to maintain said inputs substantially equal, means receiving said variable parameter output and a third quantity and providing a second output in the form of a product of said third quanttiy with a predetermined function of said variable parameter, and a second differential amplifier receiving inputs of a fourth quantity and of said second output and providing an output of said third quantity, thereby providing said third quantity as a function of said other quantities by elimination of said variable parameter.

3,017,107
QUARTER-SQUARE MULTIPLIER AND CORRELATOR
Steve D. Moxley, Jr., Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Apr. 5, 1956, Ser. No. 576,494
3 Claims. (Cl. 235—194)



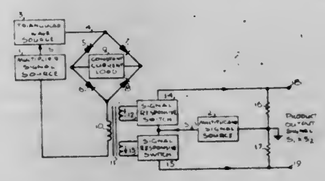
1. Apparatus for producing a continuous output signal whose magnitude is proportional to the instantaneous product of two input signals, comprising an impedance bridge having four legs connected in series, respective sets of input terminals connected across opposite diagonals of said bridge, impedance elements connecting the midpoints of the respective legs of said bridge to a first common point, alternately poled matched nonlinear rectifiers connecting successive midpoints of said legs to a second common point and connected in an unbiased manner, an output circuit connected between said second common point and said first common point, and means in said output circuit for maintaining said first and second common points at the same reference voltage level characterized further in that each of said rectifiers has a characteristic curve which includes one portion in which the space current deviates appreciably from values equal to the square of the voltage applied in one direction across said rectifier, and another portion in which the space current for voltages applied in other direction is substantially equal to the magnitude of the deviation, for equal values of the voltages applied in the opposite directions, and in which said reference voltage level is the voltage separating said portions of said curve.

3,017,108
ELECTRONIC ANALOG MULTIPLIER
David C. Kalbfell, 941 Rosecrans St., San Diego, Calif.
Filed June 2, 1958, Ser. No. 739,388
17 Claims. (Cl. 235—194)



1. In an electronic analog multiplier, the combination of a pulse width modulation system responsive to an X variable input of either sign for generating a square wave and introducing time asymmetries therein proportional to the magnitude of X and indicative of the sign of X; and a pulse height modulation system comprising a balanced modulator responsive to said square wave and to a Y variable input of either sign for amplitude modulating said square wave in proportion to the magnitude of Y and with or without phase inversion selectively depending on the sign of Y.

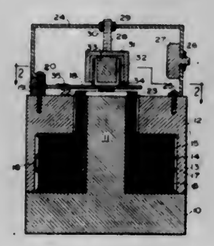
3,017,109
PULSE WIDTH SIGNAL MULTIPLYING SYSTEM
Vernon R. Briggs, Los Angeles, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Aug. 12, 1958, Ser. No. 754,616
14 Claims. (Cl. 235—194)



1. A signal multiplication system including the combination of a source of signals representing a first variable, a source of triangular waves connected serially with the

first signal source, an inductively loaded bridge rectifier circuit connected to the triangular wave source for producing a pulse width modulated wave in accordance with the value of the signal from the first signal source, a second signal source representing a second variable, an output impedance, and switching means connected between the inductively loaded bridge rectifier circuit and the second signal source for alternately and oppositely applying a signal from the second signal source to the output impedance in accordance with the pulse width modulated wave produced by the bridge rectifier circuit whereby a signal appears across the output impedance representing the product of the first and second variables.

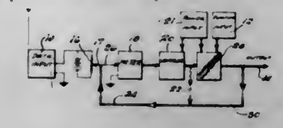
3,017,110
MULTIPLYING DEVICE
John Dwight Corder, 226 Harrison St., Lewisburg, Pa.
Filed Apr. 27, 1959, Ser. No. 809,101
9 Claims. (Cl. 235—194)



6. A multiplying device having conductors for receiving signal currents inputs to be multiplied comprising, in combination; a base; a center piece integrally formed with said base; a top plate having a hole disposed to be mounted around said center piece providing an air gap between said center piece and the top plate; a shell integrally formed with said top plate disposed to be supported on said base; said base center piece, top plate and shell being of magnetic material; a stationary coil mounted within said shell around said center piece adapted for receiving one of the said signal currents to be multiplied; a diverter coil mounted within said shell and around said center piece; a beam affixed to said top plate; a moveable coil affixed to said beam disposed around said center piece and adapted for movement within said air gap between said center piece and said top plate and adapted to receive one of the said signal currents to be multipled; means of diverting a portion of said signal which flows through said moveable coil through said diverter coil; a dampening means associated with said beam; a strain gage means affixed to said beam; and a strain gage measuring system electrically associated with said strain gage whereby signal current product of said signal current inputs may be obtained.

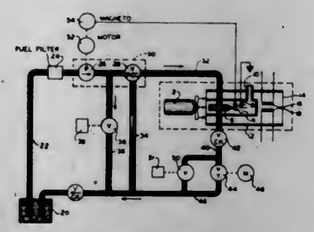
3,017,111
HIGH OUTPUT TORQUE FUNCTION GENERATOR UTILIZING A PUNCHED TAPE INPUT
John C. Bellamy, Chicago, Ill., assignor, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed Oct. 12, 1956, Ser. No. 615,648
24 Claims. (Cl. 235—197)

1. Data processing apparatus for producing a shaft displacement corresponding to a function of a data input comprising a first continuously rotating shaft, a second rotatable shaft, connecting means driven by said first shaft to intermittently move said second shaft in a clockwise direction, means controlled by said data input to control said clockwise connecting means for data inputs of a given polarity, connecting means driven by said first shaft to intermittently move said second shaft in a counterclockwise direction, means controlled by said data input to control said counterclockwise connecting means for data inputs of the opposite polarity, a third rotatable shaft, drive means driven by said first shaft to intermittently move said third shaft in a given direction, second drive means driven by said first shaft to intermittently



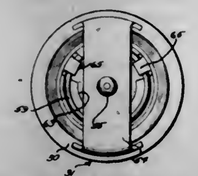
move said third shaft in the opposite direction, feedback means to actuate said data input in accordance with the position of said third shaft, and control means controlling said drive means to selectively actuate either one of said drive means periodically, said control means including an incrementally coded data storage device connected to said second shaft for movement therewith past a sampling station, and means at said station for sampling said incrementally coded data to selectively actuate either one of said drive means periodically.

3,017,112
AIR HEATER FUEL CONTROL SYSTEM
Paul J. Amundson, Moline, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 763,967
7 Claims. (Cl. 236—10)



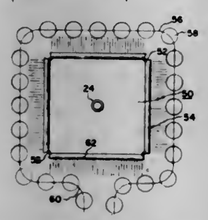
1. A fuel control system for an air heater, comprising a burner having a return conduit; means for supplying fuel to said burner; a throttle valve in said return conduit from said burner for varying in direct relation the fuel back pressure in said return conduit and the rate of fuel discharge into said burner; a normally closed solenoid operated dump valve in parallel with said throttle valve; first electrical switch means actuated one way or another for energizing said throttle valve for movement in one direction or another; air temperature responsive means for actuating said first electrical switch means said one way or another for energizing said throttle valve in a direction to increase and decrease fuel discharged into said burner in response to a sensed outlet air temperature produced by said burner respectively below and above a selected temperature; and, electrical means including circuit means having second electrical switch means actuated to a closed position for energizing said solenoid operated dump valve to an open position to substantially reduce said fuel back pressure in response to actuation of said first switch means said other way resulting from a condition of said air temperature sensitive means demanding a decreased rate of fuel discharge into said burner.

3,017,113
COMBINATION TEMPERATURE AND PRESSURE SENSITIVE VALVE STRUCTURE
Harold B. Drapeau, Oak Park, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 30, 1956, Ser. No. 562,277
1 Claim. (Cl. 236—34)



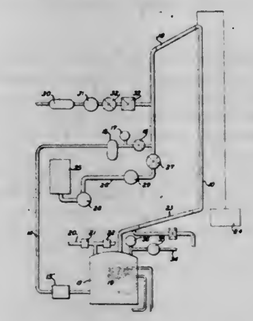
A valve for controlling fluid flow through a conduit comprising a casing having a flow port therethrough with a valve seat facing in a downstream direction, an annular valve member cooperable with said seat to control fluid flow through the port, a movable guide extending axially within said valve member and having an abutment limiting movement of the valve member on the guide in a direction toward said seat, a spring on said guide biasing the valve member against said abutment and yieldng with a predetermined pressure differential across the valve member to permit movement away from the valve seat, and thermal sensing power means having a temperature sensitive portion exposed to the temperature of fluid prior to passing through said port, said power means connected to said movable guide for moving the guide and the annular valve member relative to said port and to said valve seat to control fluid flow therethrough as a function of the temperature of said temperature sensitive porton, said guide being a tube open at its upstream end and closed at its downstream end by the thermal element thus affording communication between the upstream side of the valve seat and the temperature sensitive portion of said power means so that said temperature sensitive portion is exposed to the temperature of fluid prior to passing through said port.

3,017,114
ELECTROSTATIC PAINT SPRAY
John T. Marvin, Xenia, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,263
2 Claims. (Cl. 239—3)



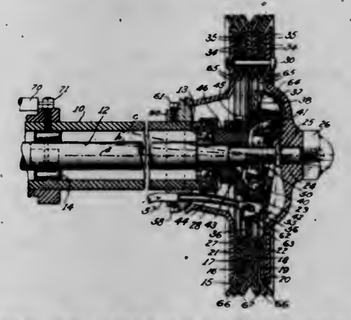
1. In a method for spraying a coating material in a plurality of separated patterns simultaneously from a common source, the steps of; supplying coating material to a stationary container, providing separated lips on said container extending upwardly and in different directions from a central point all having the same height and being of substantial extent wherein the longitudinal extent of all of the lips is in the same horizontal plane, overflowing simultaneously coating material from said container over all of said lips, and simultaneously impressing an electrostatic charge on the container lips whereby the coating material as it passes over the lips is dispersed, atomized and charged solely by electrostatic forces into separated spray patterns expanding outwardly around said central point.

3,017,115
ELECTROSTATIC PAINT SYSTEM
Robert A. Artman, Dearborn, and Richard C. Root and Allen H. Turner, Ann Arbor, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 18, 1958, Ser. No. 761,726
4 Claims. (Cl. 239—3)



2. A process for continuously electrostatically atomizing a siccative liquid through a plurality of small openings comprising establishing an electrical potential between the siccative liquid and a receiver to accomplish atomization of the siccative liquid, impressing a small superatmospheric pressure upon the siccative liquid to cause it to flow through the small openings, and periodically impressing momentarily upon the siccative liquid a subatmospheric pressure to cause the flow of siccative liquid through the small openings to reverse and cleanse the small openings of accumulated deposits.

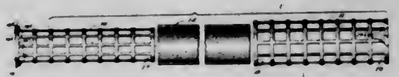
3,017,116
ELECTROSTATIC SPRAYING DEVICE
Edward O. Norris, Ledgemoor Lane, Westport, Conn.
Filed July 23, 1958, Ser. No. 750,471
6 Claims. (Cl. 239—15)



1. A spray head comprising a plurality of rotary atomizer discs axially spaced and having outer peripheral discharge rims, said discs being in the form of rings having central openings conjointly defining a chamber, a rotary spreader in said chamber having an annular peripheral discharge edge, means adjustably supporting said spreader in said chamber permitting the angularity

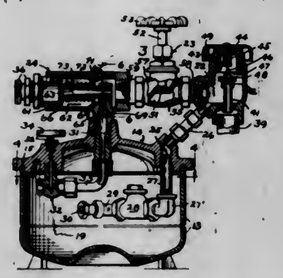
of the general plane of said peripheral discharge edge to be adjusted in relation to the axis of said discs, and means for feeding liquid material to said spreader.

3,017,117
DEODORANT INSERT FOR TOILET TISSUE
Josef F. Klingler, Wilmette, Ill., assignor to Frank J. Curran Co., a corporation of Illinois
Filed Dec. 27, 1960, Ser. No. 78,570
6 Claims. (Cl. 239—52)



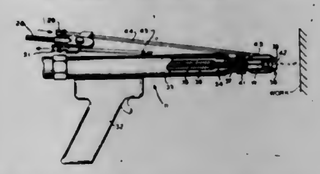
1. A deodorizing insert for location in the center bore of a roll of toilet tissue, said insert extending substantially the full length of said bore and comprising substantially coextensive inner and outer tubular members each of open mesh circumferential surface configuration, said members having their main length portions of different diameter to define an annular mounting chamber therebetween and having transversely extending interengaging means at their opposite ends for maintaining the inner member centered within said outer member and for resisting relative longitudinal movement therebetween, and a tubular deodorant sleeve located in said mounting chamber.

3,017,118
DETERGENT APPLYING UNIT
Simal R. Kane, 8031 Mountain Blvd., Oakland, Calif.
Continuation of application Ser. No. 599,641, July 23, 1956. This application Apr. 1, 1959, Ser. No. 803,542
2 Claims. (Cl. 239—61)



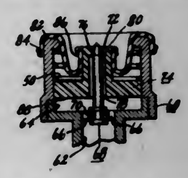
1. In combination with a supply pipe providing a pressure stream of a liquid solvent, a means for charging a stream of the liquid solvent from the solvent-supplying pipe with less than a saturation proportion of a solute for the liquid and comprising a branched fitting connected to the discharge end of the solvent-supplying pipe, a closed tank containing a charge of the solute in granular form, a liquid-mixing injector comprising a tubular body providing a longitudinal bore having intake and discharge ends and fixedly and intermediately mounting a venturi tube having an intermediately restricted bore directed axially in the body bore from the intake end portions of the body and tube to provide an annular flow passage about the tube, said body providing a radial suction intake duct extending to the restricted bore portion of the tube from an exterior connection at a side point of the body, a spring-biased valve means normally closing-off the rearward portion of said annular flow passage about said venturi tube and adapted to open only when a predetermined pressure differential between the intake and discharge ends of the passage is exceeded, a first pipe connecting one branch of the branched fitting to the flow passage of the injector body for the pressure delivery of uncharged solvent thereto, a flow-control valve in the first pipe, a second pipe connecting another branch of the branched fitting to the tank space to discharge therein for constantly providing a saturated solution of the solute in the solvent within the tank at the supply pipe pressure, a third pipe connecting the tank space with the suction duct connection of the injector, and a flow-control valve in the third pipe.

3,017,119
APPARATUS FOR METAL SPRAYING
Glenn J. Gibson, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Original applications Sept. 13, 1955, Ser. No. 533,934, and Sept. 11, 1958, Ser. No. 761,278. Divided and this application June 20, 1961, Ser. No. 118,472
The terminal portion of the term of the patent subsequent to September 5, 1978 has been disclaimed
1 Claim. (Cl. 239—81)



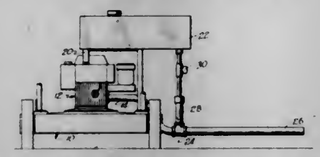
Apparatus for forming a free stream of high temperature fluid products from a consumable electrode gas shielded arc comprising, a tubular gas passage terminating in a nozzle through which a stream of shielding gas is projected into the space beyond said nozzle, an annular electrode within said nozzle having an inner cylindrical surface of smaller diameter than said gas passage forming an exit orifice for said shielding gas stream, a coolant jacket surrounding said nozzle for containing a cooling medium which cools said annular electrode to prevent melting thereof, a tubular electrode supporting means within said gas passage for positioning a consumable electrode coaxially with respect to the inner cylindrical surface of said annular electrode in spaced relation thereto to form an annular arc gap therebetween through which the shielding gas flows as it passes through said exit orifice, and means for feeding said consumable electrode toward the arc at a rate to maintain the arc as the said electrode is consumed.

3,017,120
WINDSHIELD WASHER NOZZLE
James E. Friant, Warren, Robert L. McWilliams, Lakeville, and George P. Ransom, Berkley, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 29, 1959, Ser. No. 823,741
2 Claims. (Cl. 239—117)



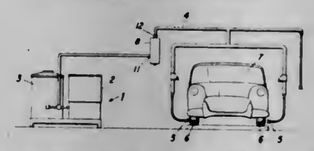
1. A windshield washer nozzle including, a housing having an open end, a reciprocable piston disposed within said housing and dividing said housing into a spring chamber and a pressure chamber, said piston having an axially extending rod portion adapted to project through the open end of said housing, said rod portion having a spray orifice therein, said piston being movable relative to said housing under hydrostatic pressure to a position wherein the rod portion extends through the open end of said housing for directing a jet of liquid onto a windshield, spring means in said spring chamber operable to retract said piston when the hydrostatic pressure is relieved, and an elastomeric diaphragm enclosing the open end of said housing, the outer periphery of said diaphragm being secured to said housing and the inner periphery of said diaphragm being secured to the rod portion of said piston.

3,017,121
MATERIAL APPLYING ATTACHMENT FOR POWER MOWERS
Vern W. Carlson, 9212 E. 87th St. Kansas City, Mo.
Filed Nov. 30, 1959, Ser. No. 856,034
2 Claims. (Cl. 239—129)



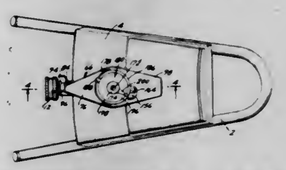
1. In combination with a wheeled lawn mower having an engine provided with an exhaust pipe, a liquid supply tank carried by the lawn mower; an elongated, horizontal manifold extending from said mower transversely to the normal direction of travel of the latter having one end thereof closed and the opposite end thereof communicating with and connected to the exhaust pipe in end-to-end relationship thereto, there being a series of perforations in the manifold throughout its length; a conduit depending from the tank and communicating with the exhaust pipe and the manifold adjacent said opposite end of the latter; a liquid conveying tube in the conduit and extending a substantial distance into the manifold through said opposite end of the latter for directing fluid from said supply tank toward the closed end of the manifold, a portion of the tube being coaxial with the manifold and of appreciably smaller diameter than the manifold and having a heat exchange surface over which exhaust gases flow to heat and vaporize liquid flowing therein; and a sleeve surrounding the tube in the conduit and tightly fitted between the tube and the conduit.

3,017,122
STEAM CLEANING MACHINE
Walter F. Malsbary, Oakland, Calif., assignor to Malsbary Manufacturing Company, Oakland, Calif., a corporation of California
Filed Jan. 27, 1958, Ser. No. 711,342
2 Claims. (Cl. 239—135)



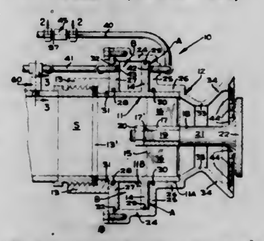
1. In a car wash system of the class having a spray nozzle operative for discharging superheated liquid in alternating active and idling periods, the active and idling periods being of substantially the same length, pumping means supplying at the discharge of the pumping means liquid at a constant rate of flow and pressure, heating means connected to said pumping means and adapted to superheat a liquid, a hollow pressure accumulator means to provide a reservoir, first conduit means connecting said pumping means and said heating means with said reservoir, said reservoir being downstream of said heating means, second conduit means connecting said reservoir with said spray nozzle, said pump having a rate of flow substantially one-half the rate of flow through said nozzle at pump pressure during the active periods, said reservoir having a capacity sufficient to accommodate the superheated liquid supplied by the pump during the idling periods, and said second conduit having a capacity at least as large as that of the nozzle at similar pressures so as to add liquid from the reservoir to the stream delivered by the pump and thereby providing the full rate of flow through the nozzle during the active periods.

3,017,123
LAWN SPRINKLER
Isaac Rinkewich, Brooklyn, and Ho Chow, Yonkers, N.Y., assignors, by mesne assignments, to International Patent Research Corp., New York, N.Y., a corporation of New York
Filed Feb. 10, 1960, Ser. No. 7,876
19 Claims. (Cl. 239—230)



1. A lawn sprinkler comprising a vertically extending stationary support member, a nozzle mounted on said member for rotation relative thereto about the vertical axis thereof, means including a fluid passage in said support member operatively connected to said nozzle for causing water to issue from said nozzle, means rotatably mounted on said support member independently of said nozzle and operatively connected to said nozzle for causing it to rotate selectively in either direction, and means normally fixedly mounted on and adjustably positionable relative to said support member and active on said nozzle-rotating means for controlling the arc over which said nozzle rotates.

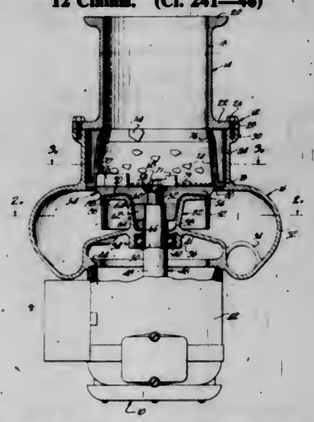
3,017,124
FLUID DISCHARGE NOZZLE
Houston W. Knight, La Mirada, Calif., assignor, by mesne assignments, to Chiksan Company, Brea, Calif., a corporation of California
Filed May 23, 1958, Ser. No. 737,338
12 Claims. (Cl. 239—456)



1. A fluid discharge nozzle comprising a housing having a fluid inlet port adapted for connection to a fluid source of pressure and a fluid outlet port, means operable within said housing and responsive to said pressure for varying the effective size of said fluid outlet port, means responsive to said pressure and connected to said varying means for limiting the rate of operation of said varying

means when decreasing the size of said fluid outlet port, and means responsive to said pressure and connected to said varying means for automatically actuating said varying means to increase the size of the fluid outlet port when a predetermined increase in the fluid pressure occurs in the housing.

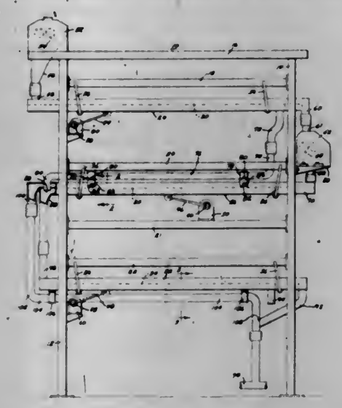
3,017,125
GARBAGE GRINDER
George O. Sherman, Prairie Village, Kans., assignor to The Salvajor Company, Kansas City, Mo., a corporation of Missouri
Filed July 6, 1959, Ser. No. 825,195
12 Claims. (Cl. 241—46)



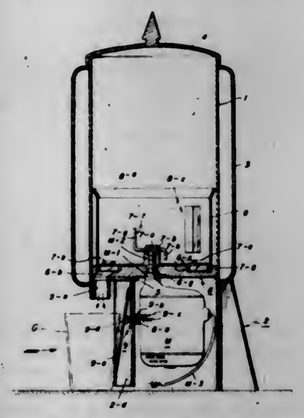
1. In a machine for grinding waste products, a housing having a waste products inlet, a waste products outlet disposed below said inlet in spaced relationship thereto and adapted to be coupled to a sewer pipe, an inner grinding surface intermediate said inlet and the outlet, and an opening therein for clearing a shaft; power means disposed exteriorly of the housing and provided with a shaft extending through said opening into the housing; and a rotor joined to the shaft for rotation therewith and having an outer grinding surface disposed to cooperate with said inner grinding surface of the housing to grind the products therebetween as the rotor is rotated and the products flushed through the housing by a flow of liquid directed thereinto through said inlet, said housing having a tubular section surrounding said shaft at the area thereof where the same projects outwardly from the housing through said opening, and said rotor having a cup-shaped segment thereon, normally circumscribing said section of the housing, disposed in spaced relationship to said section and cooperating with the latter to present an annular air pocket surrounding the shaft whereby the air in said pocket precludes passage of the liquid and ground products from the housing through the opening and onto said power means, said section of the housing being substantially concentric with the opening, extending away therefrom, and being in spaced relationship to said shaft, said rotor being provided with a tubular boss thereon, receiving the shaft and extending into and spaced from said section to restrict the volume of the air pocket presented between the boss and said section.

3,017,126
APPARATUS FOR MILLING
John O. Converse, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,479
3 Claims. (Cl. 241—77)

1. A stacked milling unit comprising a supporting frame, at least two vertically spaced classifiers on said frame, the lower of said two classifiers being a reciprocating sifter having a sifting surface therein and receiving and discharge ends, means for reciprocating said sifter and thereby conveying stock along said sifting surface from its receiving to its discharge end while at least partially classifying said stock, a milling machine mounted on said frame in position to receive one grade of stock from the upper classifier, to perform a milling operation on said stock and to discharge the resulting product into the receiving end of the lower classifier, a closed separate conveying tube mounted on the lower classifier for reciprocation therewith and having receiving and discharge ends corresponding to the receiving and discharge ends of the sifter, and means for guiding a second grade of stock from the upper classifier into the receiving end of the conveying tube, thereby also moving said second grade of stock across the frame in response to movement of said reciprocating means and discharging said first and second grades of stock at the same end of the sifter.



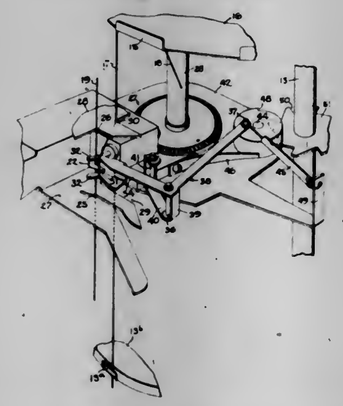
3,017,127
APPARATUS FOR SHAVING ICE
Edward D. Idzi, 7109 Pulaski Highway, Baltimore 6, Md.
Filed Feb. 25, 1960, Ser. No. 10,946
2 Claims. (Cl. 241—257)



1. In an apparatus for shaving ice, the combination of a hollow cylindrical body; a segmental, horizontal plate

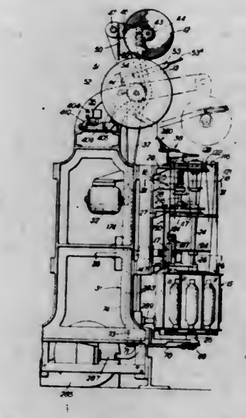
integral with the bottom of said body, and having a dependent, discharge throat; a circular base plate removably mounted on said segmental plate, and having a discharge opening registered with said dependent discharge throat, said base plate having a central orifice; an electric motor having a casing and a drive shaft, said casing being threaded in said said orifice, and said shaft extending out of said casing through said base plate; and a cutter plate threaded on said shaft.

3,017,128
THREAD POSITIONING MECHANISM
Wayne C. Trost, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed May 31, 1960, Ser. No. 32,991
6 Claims. (Cl. 242—35.6)



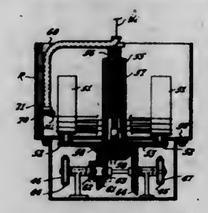
1. In a thread winder, the combination of, means for supporting a length of thread and advancing the same sidewise along a predetermined path, a finger normally disposed in said path to intercept said thread in its advance, an arm swingable about a fixed axis extending along and spaced laterally from said thread, an elongated lever supporting said finger at one end and fulcrumed intermediate its ends on the free end of said arm whereby to support said finger in said path for movement in an orbit extending transversely of said path, a crank rotatable about a second fixed axis normal to the plane of said orbit and parallel to said first mentioned fixed axis, an eccentric pin on said crank pivotally coupling the crank to the end of said lever opposite said finger, a spring normally urging said crank in one direction but acting to turn the crank in the opposite direction when the crank is moved over-center in the latter direction, a shoulder on said crank facing in said first direction, a retractable pawl normally engaging said shoulder under the action of said spring to hold said member in a predetermined position with said finger disposed in said path, and means operable in timed relation to the advance of said thread to turn said crank away from said position to and beyond an over-center position and thereby release the crank to the action of said spring, the inertia of said crank and the connected parts being sufficient to carry the crank beyond the opposite over-center position and thereby move said shoulder past said pawl before said spring becomes effective to reverse the direction of turning of the crank.

3,017,129
WINDER
Wayne C. Trost, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Dec. 20, 1960, Ser. No. 77,244
51 Claims. (Cl. 242—35.6)



1. In a winding machine, the combination of, an upright rotatable shaft, a magazine on said shaft supporting a plurality of bobbins angularly spaced apart around said shaft, means for indexing said shaft step by step to carry said bobbins one by one to an active winding position, the others being reserve bobbins, a knotter disposed above said magazine in said winding position, means for drawing thread off from said active bobbin along an upright path past said knotter, means actuated by said shaft and operable in the indexing thereof to transfer the leading end portion of the thread of the first reserve bobbin to and dispose the same alongside said running thread and in operative association with the knotter while angularly spacing an adjacent portion of the thread behind said running thread, a detector engaging the running thread below the level of said leading thread portion and adapted to sense a break in or exhaustion of the running thread, and an actuator for said knotter controlled by said detector and adapted when activated to tie said running and said first reserve threads together.

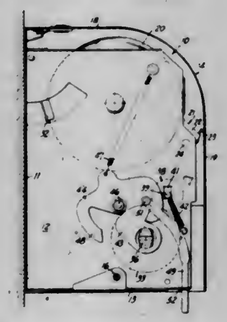
3,017,130
ACCUMULATOR DEVICE FOR A FLEXIBLE ELEMENT
Kenneth K. Knight, 604 Forest Ave., and William J. Wenzel, 41 Meadowlark Drive, both of Great Falls, Mont.
Original application Jan. 17, 1955, Ser. No. 482,367, now Patent No. 2,824,616, dated Feb. 25, 1958. Divided and this application Dec. 6, 1957, Ser. No. 701,093
7 Claims. (Cl. 242—47.09)



1. A differential reel for storing a great length of a flexible element which is adapted to be taken up on said

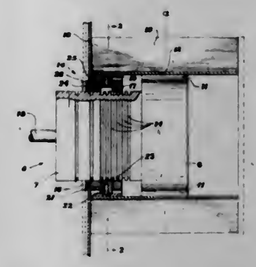
reel and paid out therefrom at different and changing rates, comprising a frame, a plurality of rollers symmetrically disposed with their axes parallel and having bearings in said frame, each of said rollers having a helical groove for seating a portion of said flexible element, a gear secured to each of said rollers, a common gear meshing with each of said roller gears for concurrently rotating all of said rollers in the same direction, an internally threaded sleeve coaxially secured to said common gear, an externally threaded member in threaded engagement with said internally threaded sleeve, a flexible element feeding arm secured to said externally threaded member and extending radially beyond the peripheries of said rollers, a splined shaft for rotating said externally threaded member, a gear secured to said splined shaft, a differential having one input controlled by the flexible element being taken up and a second input controlled by the flexible element being paid out, and an output in driving relation with said splined shaft gear, and a gear driven by said second input and in driving relation with said common gear.

3,017,131
PAPER TOWEL DISPENSER
Philip A. Wooster, 102 I St., San Rafael, Calif.
Filed June 23, 1958, Ser. No. 743,811
4 Claims. (Cl. 242—55.53)



1. In a dispenser suitable for dispensing a web of paper toweling in roll form, means for rotatably supporting a paper roll, a feed roller member rotatably supported on an axis parallel to the paper roll and adjacent the same, whereby the paper web as it leaves the roll passes over one side of the feed roller member, means for pressing the web into frictional contact with the feed roller member whereby rotation of the feed roller member serves to feed the paper web from the roll, first abutment means defining a stop element attached at an end of said feed roller member for rotation therewith, latch member means movably mounted adjacent at least one end of said feed roller member and having second abutment means thereon adjacent at least one end of the feed roller member said second abutment being in the path of rotation of said stop element with said latch member means in a first position, additional abutment means on one of the members engageable with the abutment means on the other member to limit rotation of said roller member with said latch member means in a second position wherein said second abutment means is withdrawn from said path, resilient means urging said latch member means from said second to said first position, means including a spring operatively connected to said feed roller member whereby when the feed roller member is rotated to the position imposed by said latch member means said spring means is tensioned, said spring means serving to rotate the feed roller member a predetermined portion of said predetermined amount of rotation to advance the web for manual engagement with said latch member means in said second position, manually operated means connected to said latch member means for moving said latch member means against the tension of said resilient means and to said second position of the same immediately before manual withdrawal of the web, and limiting means to prevent continued rotation of the feed roller member while said manually operated member is held to maintain the latch member means in its second position.

3,017,132
ADJUSTABLE FLANGES FOR VARIOUS WIDTH ROLL PAPERS
Oliver W. Gnage and John S. Pollock, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 22, 1960, Ser. No. 23,952
9 Claims. (Cl. 242—71.9)

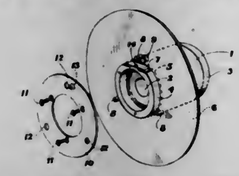


1. In a roll-supporting spindle mechanism, the combination comprising: a shaft having a first substantially cylindrical portion of a predetermined outside diameter substantially equal to the inner diameter of a roll to be supported, and a second cylindrical portion of an outside diameter smaller than said predetermined diameter; and a member mounted on said second portion and axially movable thereon into one of a plurality of positions, said member having a cylindrical support and a stop means for said roll, said support having an outside diameter substantially equal to said predetermined diameter and co-operating with said first portion to receive and support said roll which is adapted to be mounted thereon completely encircling said support and first portion with one end of said roll abutting said stop means, said member further having means cooperating with said second portion for releasably latching said member to said second portion in one of said axial positions.

3,017,133
ADJUSTABLE ROTATABLE HOLDER FOR ROLLS OF PHOTOGRAPHIC MATERIAL
Valentine M. Bowler, Wealdstone, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 29, 1958, Ser. No. 738,747
5 Claims. (Cl. 242—71.9)

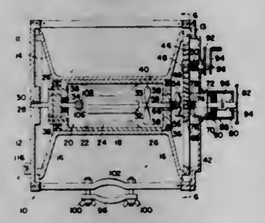
1. In a photographic roll holder of a predetermined length the combination of: a rotatable hub for receiving a roll of photographic film, a plate member secured to one end of said hub and having an outside diameter greater than the outside diameter of the hub, said plate member having an inner surface abutting the hub at the extremity of said hub, a flange member encircling said hub and located in opposition to the inner surface of the plate member and adapted to be axially movable relative to the hub to one of two predetermined positions on the hub;

and cooperating projections and apertures provided by said plate and flange members, said projections and apertures being angularly displaced relative to one another and out of registration when said flange member is in one of said predetermined positions whereby said flange member is axially spaced from said plate member to accommodate a roll of photographic paper of predetermined



width, said projections and apertures in the other of said predetermined positions of said flange member registering with and telescoping relative to one another whereby said flange member is axially movable to bear against said inner surface of said plate member to accommodate a roll of photographic paper of a width larger than said predetermined width.

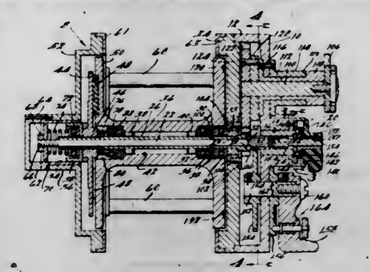
3,017,134
MOTOR DRIVEN FISHING REEL DEVICE
Ivo W. Duvall, 9 Maple St., Amityville, N.Y.
Filed Dec. 1, 1959, Ser. No. 856,393
15 Claims. (Cl. 242—84.44)



2. In a fishing reel device, a spool, electric motor means mounted for coaxial rotation within said spool to rotate the same, means to transmit the rotation of said motor means to said spool including gear means and driving and driven clutch means, said driving clutch means being rotatable with said motor means, said driving and driven clutch means having means thereon engageable to transmit the rotation from said motor to said spool by way of said driving clutch means, said driven clutch means having means releasably engageable with said gear means to interrupt the transmission of rotation from said motor to said spool.

3,017,135
FISHING REEL
Garfield A. Wood, Jr., Miami, Fla. (4565 Sable Palm Road, Bay Pointe, Fla.)
Filed Nov. 20, 1957, Ser. No. 697,670
14 Claims. (Cl. 242—84.54)

13. In a fishing reel, a pair of spaced end plates secured together in spaced relation, a hollow shaft rotatably supported by said plates, a spool having end flanges mounted for rotation on said hollow shaft, means for driving said hollow shaft in rotation, a disk clutch on said hollow shaft in driving relation therewith, rod means extending through said hollow shaft, spring means at one end of said rod means, and means at the opposite end of said rod means for axially moving said rod means for loading said spring means for relatively moving said disk clutch from an axial position of complete disengagement to an axial position of maximum frictional engagement with one



flange of said spool to provide a driving relation therebetween.

3,017,136
UNREELER TO UNWIND ROLLS OF ELECTRICAL WIRE
Alvin J. Noffke, 3437 E. Virginia, Phoenix, Ariz.
Filed June 13, 1960, Ser. No. 35,539
3 Claims. (Cl. 242—129)



1. An unreeler for holding and unwinding rolls of electrical conductor wire, composed of a central stem having a lower part and an upper part, a folding double hinge joint connecting said upper and lower stem parts and a top stem part telescoping within said upper stem part, a reel for mounting and centering a coil of wire to be uncoiled having a central tube rotatable on the said lower stem part, and having a plurality of pivotally attached radially extending spider arms; chains extending from the upper portion of said reel central tube to intermediate points on said spider arms to form supports for said arms, peripheral chains extending between the outer ends of said spider arms, a sleeve slidable on the upper part of the stem and slidable downwardly to cover said double hinge joint and render said double hinge joint inoperative, when desired, and a hook on the upper end of said telescoping top part of said stem for mounting the unreeler on a horizontal beam.

3,017,137
CONVERTIBLE AIRPLANE LOCKS
Kermit W. Helmke, 9th Tactical Reconnaissance Squadron, Shaw Air Force Base, S.C., and William A. Klos, 1926 Des Jardines, Houston, Tex.
Filed Nov. 19, 1958, Ser. No. 774,860
14 Claims. (Cl. 244—2)

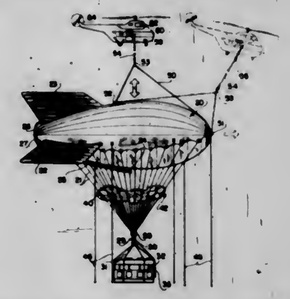
1. In a vehicle which is convertible between an airplane and an automobile, a body having a frame and a covering,

wings, means detachably securing said wings to said body, a tail section, means separably securing said tail section to said body, at least one of said securing means



including a plurality of sockets, a plurality of locking pins in said sockets, each locking pin having a notch, a cable, means for drawing said cable into the notch in each pin, and means for constraining the movement of said cable.

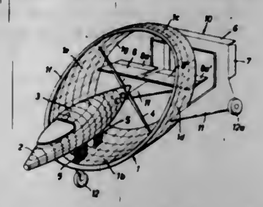
3,017,138
APPARATUS AND METHOD FOR MOVING LOADS WITH COMBINATION HELICOPTER AND BALLOON
Knute W. Flint, Los Angeles, Calif., assignor to World Wide Helicopters, Inc., Van Nuys, Calif., a corporation of California
Filed Mar. 5, 1958, Ser. No. 719,230
2 Claims. (Cl. 244—3)



1. The method of transporting a load with the combination of a helicopter and balloon, comprising the steps of attaching said load to a balloon having a lift less than the weight of the load so that the balloon is overweighted, positioning a tow line along the upper surface of the balloon attaching the tow line to the balloon at spaced points on the surface of the balloon, securing towing means to the helicopter, slidably connecting the towing means to the tow line, and flying the helicopter at different positions above and relative to the balloon to supply the additional lift force and tow force required to raise and transport the balloon and load.

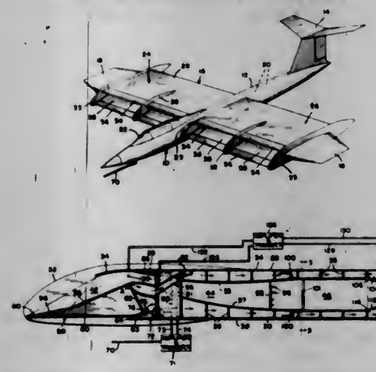
3,017,139
RING AIRFOIL AIRCRAFT
Wilhelm Binder, 9 Benediktinerring, Villingen, Black Forest, Germany
Filed Feb. 2, 1959, Ser. No. 790,481
11 Claims. (Cl. 244—12)

1. An airplane of the type described, comprising a ring airfoil having a bottom portion, an upper portion and lateral wall portions merging with each other in such a manner as to form a substantially cylindrical, substantially horizontally extending central zone, said ring airfoil having in its bottom portion and its upper portion asymmetrical profiles, whereas its lateral portions have symmetrical profiles, and said ring airfoil further having substantially the same profile thickness over the entire circumference, propulsion means being arranged in said ring airfoil, rudder means and elevator means positioned in a portion of the air stream accelerated by said propulsion means, said rudder means and elevator means being located substantially at the downstream end of the ring airfoil and located at a considerable distance from the center of gravity of the airplane, and deflecting means



pivotally mounted in another portion of the airstream accelerated by said propulsion means, said deflecting means being adjustable to deflect the air stream downwardly.

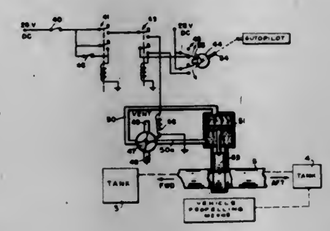
3,017,140
PROPULSION AND LIFTING SURFACE SYSTEM FOR AERIAL VEHICLES
John R. Barnard, Mishawaka, Ind. (MABS–11, MAG–11, % Fleet Post Office, San Francisco, Calif.)
Filed Mar. 27, 1959, Ser. No. 802,583
8 Claims. (Cl. 244—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In an aerial vehicle, aerodynamic sustaining and propulsion means operatively associated with said vehicle, said means comprising, a ducted airfoil, said ducted airfoil including panel members arranged in spaced superposed relationship, and a variable configuration ramjet engine integral with said ducted airfoil, said ramjet engine including a pivotable shock generator attached to the forward edge of one of said panels and a longitudinally slidable lip attached to the other of said panels, said lip and said generator being positioned in response to the speed of said vehicle to vary the intake of said engine, combustion means located between said panels, and variable exhaust means between panels rearward of said combustion means.

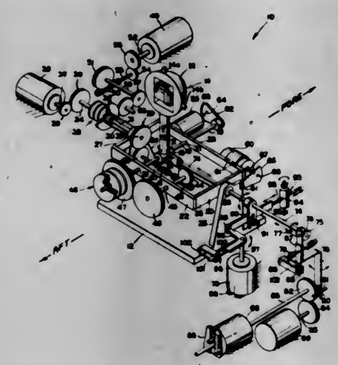
3,017,141
CENTER OF GRAVITY CONTROLLER
Morris Ollodort, Whittier, Calif., assignor to North American Aviation, Inc.
Filed Nov. 2, 1956, Ser. No. 620,010
9 Claims. (Cl. 244—76)

1. An airborne vehicle center of gravity control for heavier-than-air vehicles, comprising a liquid-propellant-containing tank forwardly of the center of gravity of the vehicle, a second liquid-propellant containing tank rearwardly of the center of gravity of the vehicle, at least one of said tanks being operably connected to provide liquid propellant to a vehicle propelling means, conduit means in communication between said tanks to conduct liquid propellant from one tank to the other, a flow regulating



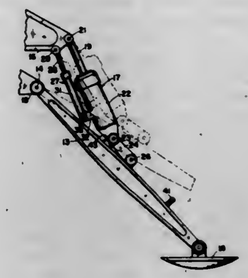
valve within said conduit, positioning means for positioning the setting of said valve and means sensing changes in said vehicle center of gravity, said last-mentioned means having an output dependent on said changes to control said positioning means and liquid flow means to transfer liquid propellant from one of said tanks to the other through said valve and conduit means to adjust the center of gravity of said vehicle.

3,017,142
MANUAL CONTROLLER
Francis Henry S. Rossire, Leonia, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 13, 1956, Ser. No. 559,064
8 Claims. (Cl. 244—77)



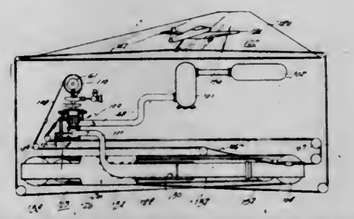
1. A manual controller for an automatic control system for mobile craft, comprising a supporting structure, universal mounting means carried on said supporting structure, manually operable control means normally centered relative to the supporting structure and connected to said universal mounting means, signal transmitters for mutually perpendicular channels of said control system, means interconnecting said control means and said transmitters for activating said transmitters to develop a signal by at least one of said transmitters in response to movement of said control means from its normally centered position, and motor means drivably connected to said universal mounting means and responsive to signals from the transmitters for urging said control means to its normally centered position when released from manual operation.

3,017,143
AIRCRAFT LANDING GEAR
Erwin H. Hartel, Brooklyn, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 24, 1958, Ser. No. 782,863
11 Claims. (Cl. 244—102)



1. A landing gear comprising a frame, a strut journalled on said frame for movement between extended and retracted positions, a toggle linkage connected between said frame and strut including a fluid extension spring adapted to resiliently support a load on the landing gear, said linkage being adapted to fold during movement of said strut to said retracted position, said linkage being adapted to move from said folded position to an overcenter position by operation of the fluid extension spring during the extension of the strut, and means engageable by said linkage limiting movement of said linkage beyond a predetermined overcenter position, said strut moving from said extended position toward said retracted position under the influence of said load applied to said landing gear while said link is in said overcenter position engaging said means thereby compressing said resilient spring to resiliently support said load.

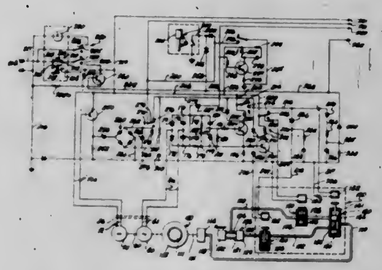
3,017,144
DEVICE FOR ARRESTING THE MOVEMENT OF LANDING AIRCRAFT OR THE LIKE
Robert W. Cruger, 70 Drexelbrook Drive, Drexel Hill, Pa.
Filed Mar. 29, 1957, Ser. No. 649,584
5 Claims. (Cl. 244—110)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device for arresting the movement of an aircraft or the like in a predetermined distance when landing on the flight deck on an aircraft carrier or the like, comprising an arresting engine including cylinder means, piston means slideably received within said cylinder means, sheave means associated with said cylinder means and fixed against movement relative thereto, sheave means operatively connected to said piston means and providing an engine crosshead movable with said piston means, cable means associated with said first and second mentioned sheave means, pendant means operatively connected to said cable means and being carried on said flight deck

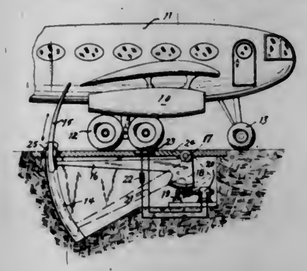
of said aircraft carrier, said pendant means being engageable by said aircraft landing on said carrier flight deck and thereby being operable to transmit the force of said landing aircraft to said cable means, accumulator means operatively connected to said engine cylinder means and being operable to supply said engine cylinder means with fluid under pressure, flask means operatively connected to said accumulator means for supplying said accumulator means with fluid under pressure, valve means operatively connected to said accumulator means and said engine cylinder means and including a valve member movable between open and closed positions relative to a valve seat for controlling the flow of pressurized fluid between said accumulator means and said engine cylinder means, said valve member normally blocking fluid flow from said accumulator to said cylinder and adapted to open under increased pressure therein, lever means associated with said valve means for selectively varying the lift of said valve member when said valve member is moved to said open position, cam means associated with said lever means and being operable upon rotation through a predetermined range of movement to move said valve member to said closed position, means for pre-setting said lever means at a predetermined position and means including said cable means operatively connecting said engine crosshead and said cam means whereby a predetermined movemen of said engine piston means and crosshead in response to a predetermined load being applied to said piston means and cross head by a landing aircraft engaging said deck pendant is accompanied by a corresponding predetermined rotation of said cam means and a predetermined movement of said valve member to said closed position.

3,017,145
CONTROL SYSTEM FOR VEHICLE WHEEL BRAKE
Gordon W. Yarber, % General Dellvery, Cornell, Calif.
Filed Sept. 4, 1958, Ser. No. 759,005
37 Claims. (Cl. 244—111)



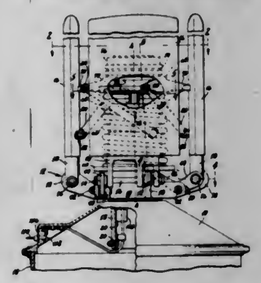
1. In a control system for a brake of an aircraft wheel which is carried by longitudinally flexible landing gear structure having a predetermined natural period of oscillation, the combination of means driven in accordance with rotation of the braked wheel for developing an alternating current voltage substantially proportional to the speed of the wheel, rectifying means responsive to the alternating current voltage and acting to produce a corresponding direct current voltage, delay circuit means acting to limit the rate of decrease of the output voltage of said rectifying means and having an RC constant exceeding half the natural period of the landing gear structure, differentiating circuit means acting to differentiate the resulting output voltage and to produce an electrical signal which corresponds to the rate of decrease thereof, and means actuable to relieve the brake in response to said signal.

3,017,146
JET ENGINE BLAST FENCE
Eleanor I. Wagner, Los Angeles, Calif.
(P.O. Box 1495, Palm Springs, Calif.)
Filed Oct. 26, 1959, Ser. No. 848,654
4 Claims. (Cl. 244—114)



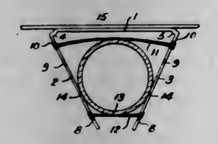
2. A disappearing baffle for intercepting and deflecting the blast of hot gases of an aircraft propelling jet engine, comprising an airport area having a sub-surface baffle supporting means with a laterally extending open slot, a pivotally mounted fence like baffle adapted and arranged to be lowered into and raised from said laterally extending slot in the airport surface, a supporting lever arm at each end of said baffle pivotally mounted upon said baffle supporting means at a point removed laterally from said slot, said pivotally mounted lever arms being operated by motive power means, and a power controlling means for said motive power means for raising said baffle when the jet of a jet propelled aircraft is in cooperating relation with said blast intercepting and deflecting baffle.

3,017,147
AERIAL DEVICE HAVING ROTOR FOR RETARDING DESCENT
Donald W. Robinson, Jr., Hazardville, and Clifford B. Packard, Glastonbury, Conn., assignors to The Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Filed Nov. 4, 1959, Ser. No. 850,830
14 Claims. (Cl. 244—138)



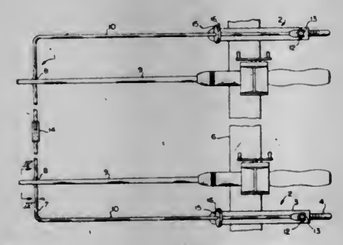
1. In an aerial device for retarding the descent of a body, the combination of a rotor connectible with the body for rotation in a predetermined direction about a normally vertical axis which rotor includes a hub and a plurality of generally radial blades extending from the hub and equally spaced circumaxially, said rotor further including means connecting the blades with the hub for pivotal movements about transverse sweep axes tangent to a cylinder concentric with said central axis and said blades initially having first positions wherein they have a relatively small included coning angle, and wherein their sweep axes are approximately horizontal and their center lines are approximately in axial planes passing through the axis of rotation, automatically acting spring biased means for tilting said sweep axes in one direction with respect to said hub to thereby move the blades from their said first positions to second positions wherein their center lines are inclined forwardly from said axial planes and wherein the blades have equal pitch angles providing suitable angles of air attack for causing autorotation of said rotor in said predetermined direction as the device descends, a latching device initially engaging the tilting means to prevent tilting of the blades, a movable element on the aerial device separate from said latching device and connectible by a static cord with an aircraft carrying said aerial device which element is relatively movable upon the release of said aerial device from said aircraft, and means dependent upon the relative movement of said movable element for releasing said latching device to permit the spring biased means to tilt said sweep axes.

3,017,148
DISPLAY DEVICE
Ernest Leslie Wathen, 20695 Stratford Ave.,
Rocky River 16, Ohio
Filed Feb. 25, 1960, Ser. No. 10,933
1 Claim. (Cl. 248—35)



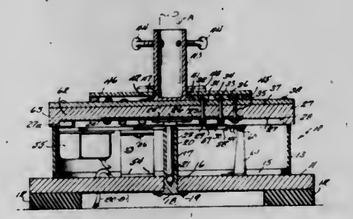
An article embracing display device comprising as a unitary structure a body of stiff material including multiple sections hingedly secured together, said sections comprising a pair of wing elements and an intermediate display support element all arranged in end-to-end relation in blank form to provide an elongate blank, said wings being folded about the hinged areas rearwardly of the intermediate display support element, and spaced apart elastic means removably spanning the wings for retaining the wings in position for supporting the device on a supporting article, said means being located on the wings to frictionally engage that portion of the supporting article which is to be received between said wings.

3,017,149
FISHING ROD REST
Richard E. Bossert, 2702 Randall Drive, Oregon, Ohio
Filed June 20, 1960, Ser. No. 37,312
2 Claims. (Cl. 248—39)



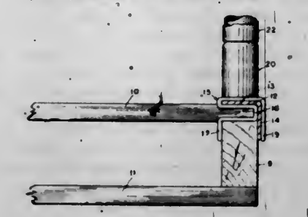
1. A fishing rod rest comprising a frame having an end with upwardly opening indentations therein each adapted to receive a fishing rod and support it from below and side members extending from the frame end, clamp means for each of the side members for connecting the frame to the side of a boat and supporting the frame over water adjacent the side of the boat, pivot means for pivotally connecting the side members to the clamp means at locations remote from the frame end, and adjustment means on the clamp means for pivoting the side members about the axes of the pivot means, at least one of the adjustment means comprising a slidable washer on one of the side members between the respective pivot means and the frame end, the washer resting on the respective clamp means whereby sliding the washer toward the respective pivot means raises the frame end and sliding the washer away from such pivot means lowers the frame end.

3,017,150
REVOLVING CHRISTMAS TREE STAND
Bruno A. Kahle, R.F.D. 1, Box 108, Tomahawk, Wis.
Filed Mar. 4, 1960, Ser. No. 12,849
2 Claims. (Cl. 248—45)



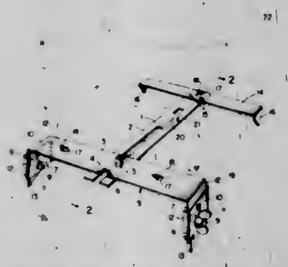
1. A revolving Christmas tree stand comprising a platform, a bearing post mounted centrally of said platform, said post being formed with a cylindrical bore in the upper end thereof, a ring fixed to said platform concentrically positioned with respect to said post, a cylindrical housing surrounding and secured to said ring, a turntable having a center spindle rotatably mounted in the bore of said post, said turntable overlying said band and being formed with a vertical cylindrical rim on its under side, a tree mount on the upper side of said turn table, plug sockets disposed around the tree mount for receiving electrical lines to the lights on the Christmas tree, an electric motor in the space between said turntable and platform, said motor having a vertical shaft, a friction drive element on the end of said shaft and engaging with said rim, means mounting and biasing said motor and thus said drive element into engagement with said rim concentrically positioned collector rings and a concentrically positioned row of contacts on the underside of said turntable, fastening elements extending through the turn table and holding the collector rings and the row of contacts in place, spring contact arms mounted on the platform and in contact respectively with said collector rings and said row of contacts, a first circuit comprised by a pair of conductors from a source of electrical power supply, a pair of the spring contact arms, the associated collector rings, the fastening elements mounting the collector rings on the turn table, and the conductors from the fastening elements to at least one of said sockets, and a second circuit comprised by one of said pair of conductors to the source of electrical power supply, the associated spring contact arm and the fastening elements mounting the collector ring on the turn table, a branch conductor from the other of the pair of conductors to the source of electrical power supply, a third spring contact arm, the row of contacts, the fastening elements mounting the row of contacts on the turn table, and the conductors from said latter fastening elements to others of said sockets.

3,017,151
PALLET-FORMED STORAGE RACK
William D. Townson, Jr., P.O. Box 191, Edenton, N.C.
Filed Feb. 25, 1960, Ser. No. 11,098
6 Claims. (Cl. 248—120)



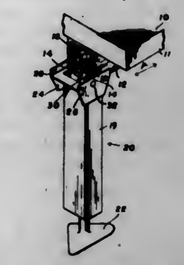
1. In combination with a pallet having transverse beams and spaced floor boards, angle bars each adapted to rest on the ends of the floor boards with one flange depending beyond one transverse beam, a movable fastening member resting on the upper edge of each transverse beam between the adjacent floor boards and fitted against the opposite sides of both flanges of the angle bar, spaced upwardly extending holders on the angle bars, vertical posts mounted on said holders, and two spreader bars each having lateral depending holders fitting the posts of opposite angle bars.

3,017,152
RECEPTACLE SUPPORTS FOR INCLINED SURFACES
Fred M. Alpaugh, 1966 Williams St., Union, N.J.
Filed May 5, 1958, Ser. No. 732,876
2 Claims. (Cl. 248—148)



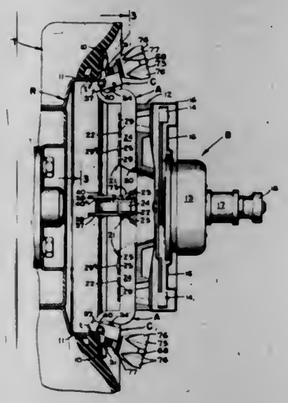
1. A device for supporting a receptacle on an inclined surface comprising a base member including a sheet metal base bar having a longitudinally arranged slot extending inwardly from the one end thereof, a sheet metal crossbar arranged transversely of said base bar and intersecting the same at substantially the midpoint of said crossbar, means for mounting said crossbar on said base bar for sliding movement freely of said crossbar longitudinally of said base bar including a depending lug struck from said crossbar and extending downwardly through said slot, legs integral with and depending from the free ends of said crossbar, upstanding receptacle gripping lugs struck from said crossbar and base member for engaging against the periphery of the bottom of a receptacle, and means for biasing said crossbar on said base bar to slide longitudinally of said slot to engage said gripping lugs against the bottom of the receptacle comprising depending lugs struck from said base bar and said crossbar and a tension spring connected at its opposite ends to said last mentioned lugs.

3,017,153
LEG ASSEMBLY
Peter W. R. Johnson, Wilton, Conn., assignor to Johnson Products, Inc., Wilton, Conn., a corporation of Connecticut
Filed June 22, 1959, Ser. No. 821,733
5 Claims. (Cl. 248—189)



1. A leg assembly for a support comprising a guide track secured to the underside of said support, a latch member assembly slidable in said guide track and having a latch rod therein, a leg, a cam latch, means mounting said cam latch for rotational movement on the top of said leg, said leg having a top portion thereof conforming to the shape of the bottom of said guide track, and a pair of flanges engaging the sides of said guide track to prevent rocking of the secured leg relative to said table top, said cam latch being adapted to removably engage said latch rod at preselected locations on said guide track to securely hold said leg to said support.

3,017,154
MOUNTING FOR WHEEL BALANCING DEVICE
Melvin H. Lill, Lansing, Mich., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 8, 1960, Ser. No. 7,461
11 Claims. (Cl. 248—205)



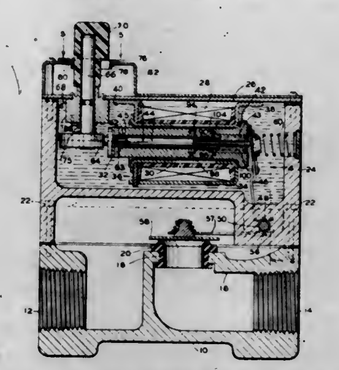
1. Apparatus for determining the unbalance of a wheel comprising an unbalance determining mechanism body, means for mounting said body on the wheel rim, said mounting means comprising four equally spaced radially adjustable mounting arms extending from said body, said arms each terminating in a rim clamping assembly, each rim clamping assembly comprising a foot on the associated arm having a generally radial clamping surface for pressing against the rim side flange, a jaw extending generally axially of the wheel rim, a pivot for said jaw adjacent the end of said arm and disposed radially inwardly of the rim engaging portion of said foot, a hard, sharp tooth on said jaw disposed axially inwardly of said foot for engaging and biting into the radially inner surface of the rim bead seat flange, and clamp means mounted between said jaw and said foot for pivoting said jaw to move the tooth on said jaw radially outwardly for pressure engagement with said rim bead seat flange, the included angle between a line defined by the pivot axis and the zone of engagement of said foot with the rim side flange, and a line defined by the pivot axis and said jaw tooth at its zone of engagement with the rim bead seat flange being less than 90°, so that actuation of said clamp means simultaneously urges said jaw tooth radially outwardly to bit into the rim bead seat flange and forces said foot axially inwardly tightly against the rim side flange.

3,017,155
MASONRY SHELF BRACKET
Lorenzo P. Scarpetti, 1204 Beaver Ave., Ellwood City, Pa.
Filed Jan. 6, 1960, Ser. No. 870
1 Claim. (Cl. 248—235)



A load-supporting bracket for removably mounting in a masonry wall during erection thereof in combination, a vertically-disposed bearing member for engaging the front face of the wall, a load-supporting member connected to and extending outwardly from said vertically-disposed bearing member intermediate the ends thereof, a thin member secured to the said bearing member adjacent the upper end thereof and extending rearwardly thereof for insertion into a vertical moist mortar joint between adjacent members of one course of said masonry wall, an inner depending portion on said thin member in spaced relation to said vertical bearing member for overlapping engagement with the rear face of a masonry member underlying said mortar joint upon said thin member engaging the upper face of said latter masonry member, said load-supporting member having a diagonal brace connected thereto adjacent the outer end thereof and extending to said bearing member below said load-supporting member, said load-supporting member having an upstanding flange thereon, a detachable plate-like member disposed upon the upper face of said load-bearing member and extending transversely thereof beyond the side margins thereof and between said load-bearing flange and the vertically-disposed bearing member, and a clamping member secured to the underface of said plate-like member, said clamping member having a first intermediate portion spaced from the plate-like member for passage of said load-bearing member flange therethrough and a second intermediate portion communicating with said first-named portion and in lesser spaced relation to the plate to receive said load-bearing member when the flange of the load-bearing member extends beyond the outer end of said plate-like member.

3,017,156
STEPPED-OPENING SOLENOID VALVES
Robert A. Lemberger, Webster Groves, Mo., assignor to White-Rodgers Company, St. Louis, Mo., a corporation of Delaware
Filed Apr. 20, 1959, Ser. No. 807,604
3 Claims. (Cl. 251—54)

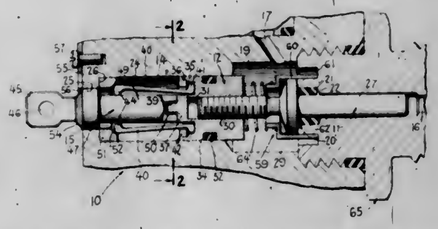


1. In a solenoid valve assembly, a valve, a strong spring means biasing said valve in a closed position, a solenoid including a plunger guide sleeve, a winding surrounding said sleeve, and a plunger slidably fitted in said guide sleeve and arranged to engage said valve and to move it open when said plunger is attracted in one direction upon energization of said winding, light compression spring means between said valve and said plunger for effecting an overtravel of said plunger in an opposite direction beyond the point to which it is moved by said valve closing spring when said winding is de-energized, whereby an amount of free plunger travel with respect to said valve occurs when said winding is energized, means forming a closure at one end of said guide sleeve, a chamber, a liquid in said chamber, a passage connecting said chamber and the interior of said guide sleeve at its closed end whereby liquid is caused to flow to and fro through said passage as said plunger is reciprocated in said sleeve, a flow responsive member movable axially in said passage between lesser and greater flow restricting positions therein, resilient means biasing said member in its less restricting position, and said member being arranged to move from its lesser to greater restricting position in response to a predetermined flow through said passage resulting from a predetermined initial movement of said plunger in a valve opening direction upon energization of said winding, whereby said plunger moves relatively rapidly a predetermined initial amount when energized until said member has reached its greater restricting position, and adjustable stop means arranged to be engaged by said plunger when de-energized for variably limiting the overtravel of said plunger to an amount equal to or less than the predetermined initial movement of the plunger required to move said member to its greater restrictive position, whereby that portion of the initial rapid opening movement of said plunger which is effective in moving said valve openward is varied.

3,017,157
LANYARD ACTUATED VALVE
Floyd B. Parsons, Ridgewood, and Joseph L. Then, Irvington, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Feb. 11, 1960, Ser. No. 8,092
10 Claims. (Cl. 251—66)

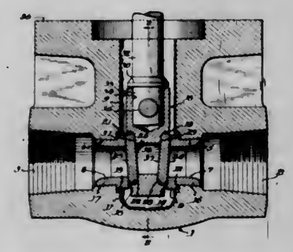
1. In a valve for controlling fluid under pressure including a body having an inlet, an outlet and a port and

a valve chamber between the inlet and the outlet, and a valve member for normally closing the port: a cylinder on the body facing the valve chamber formed with a restricted opening extending to the exterior of the body; a cam surface extending radially inwardly and towards said opening and surrounding said opening at the interior thereof; a piston connected to the valve member and slidably mounted in said cylinder; latch means including collapsible jaws pivotally mounted at one end on said piston and engaging said cam surface at the other end thereof; said jaws being dimensioned to pass through



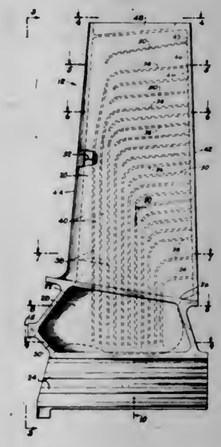
said restricted opening when collapsed and a retractable plunger extending inwardly through said opening into said cylinder and dimensioned to be engaged by the free end of said latch means jaws to retain said latch means jaws on said cam surface, whereby when said plunger is retracted the free ends of said latch means jaws are guided by said cam surface into and outwardly through said opening under the influence of fluid pressure acting on the valve member and the piston to open said port and establish fluid flow communication between the inlet and outlet.

3,017,158
RENEWABLE DISC INSERT FOR GATE VALVES OR THE LIKE
George E. Hansen, Elmwood Park, and Anton Korzenowski, Brookfield, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Mar. 18, 1959, Ser. No. 800,313
5 Claims. (Cl. 251—84)



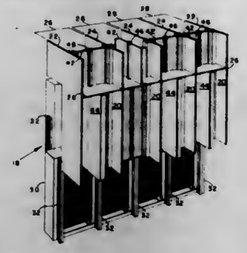
1. In a gate valve comprising a casing with ports therethrough and a valve chamber having oppositely disposed walls between the ports, the chamber having its outer limits defined by oppositely disposed valve seat means, a reciprocally movable closure member for predetermined fluid sealing contact with said seat means, the said closure member having on at least one face adjoining the said seat means a cut-out substantially transversely extending segment of oblong configuration, the said segment being continuous with open ends and extending in a plane substantially at right angles to the valve vertical axis, a relatively thin plate-like insert slidably received within the cut-out segment of substantially the same length as the cut-out segment, the said segment cut-out including means for retaining said plate-like insert on said closure member, the oppositely disposed walls of the casing chamber restricting the said insert against substantial endwise sliding movement relative to the closure member during the movement of the said closure member in opening and closing the valve, the length of said insert being substantially defined by the width of said closure member.

3,017,159
HOLLOW BLADE CONSTRUCTION
Tom Foster and Werner E. Howald, Ridgewood, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Nov. 23, 1956, Ser. No. 623,943
3 Claims. (Cl. 253—39.15)



1. A rotor blade for turbines, compressors or the like; said blade having a hollow airfoil portion and a root portion, said root portion having a cavity therein and an opening for the supply of a heat exchange fluid to said cavity for flow therefrom through said blade airfoil portion, said airfoil portion having opposed faces extending lengthwise of the blade and leading and trailing edges also extending lengthwise of the blade and joining said faces, said blade airfoil portion also having a plurality of spaced partitions dividing the hollow interior of said airfoil portion into a plurality of passages communicating at one end with said root portion cavity such that all of said heat exchange fluid flowing through said airfoil portion flows through said passages, said passages being spaced chordwise across the blade airfoil portion adjacent to the root portion of the blade and all of said passages extending lengthwise of the blade from the blade root portion but for varying distances and then turning toward and terminating in individual discharge openings spaced along the trailing edge of the blade airfoil portion, the passage adjacent to the leading edge of the blade airfoil portion extending lengthwise substantially the entire length of the blade airfoil portion and the lengthwise extent of the other of said passages progressively decreasing chordwise across the blade airfoil portion so that the passage adjacent to the blade trailing edge has its discharge opening disposed adjacent to the blade root portion and so that the discharge openings of said passages are disposed along substantially the entire length of said trailing edge, each of said passages having a restriction at its discharge opening and said leading edge passage having a reduced area region in its leading edge portion and disposed approximately midway along the blade leading edge.

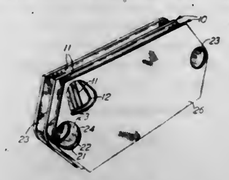
3,017,160
HEAT EXCHANGE UNITS
Ralph E. Lee and Jack F. Eckelaert, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Apr. 1, 1960, Ser. No. 19,346
6 Claims. (Cl. 257—137)



1. In a single or multi-zone heat exchange unit having air moving means and a heat exchanger assembly downstream of said air moving means, said heat exchanger assembly comprising; a heat exchanger with one side longer than another, said long side being located transverse to the air stream created by said air moving means, said heat exchanger having heat exchange fins therein substantially perpendicular to said long side, a plurality of clip plates located between said heat exchange fins on the upstream side of said heat exchanger, means forming a bypass for the passage of air around said heat exchanger substantially co-extensive with said long side of said heat exchanger, a partition member between said heat exchanger and said bypass passage and extending towards said air circulating means, clip means attached to said clip plates on the upstream side of said heat exchanger, first partition means secured to said clip means and forming a multiplicity of passages through said heat exchanger, second partition means in said bypass passage substantially co-planar with said first partition means and forming a multiplicity of passages through said bypass passage corresponding with said passagse through said heat exchanger, damper mean rotatably supported in each of said bypass passages, damper means rotatably supported in each of said passages through said heat exchanger uptream of said heat exchanger, and means interconnecting said bypass damper means out of phase with the corresponding damper means in said passage through said heat exchanger to close said heat exchanger damper means when said bypass means is open whereby the air passing through said bypass passages will not be overheated due to contact with said heat exchanger before inflow to said bypass passages.

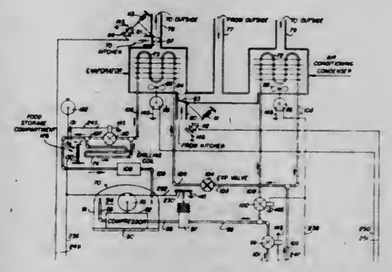
3,017,161
HEAT EXCHANGER
Raymond S. Slaasted, and Peter J. Kohler, Racine, Wis., assignors to Modine Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Filed Jan. 12, 1959, Ser. No. 786,108
11 Claims. (Cl. 257—245)

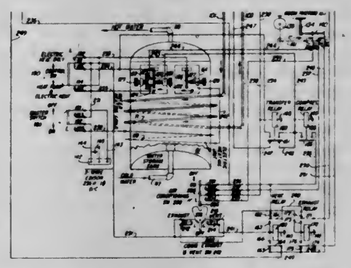
1. In a heat exchanger of the type accommodating the flow of two fluids in two separated passes, one of said passes comprising two sheets spaced apart a selected dimension to be adjacent each other in parallel planes and having at least two orifices through the end limits of said sheets and being axially aligned between said sheets, a closure member of an endless length and presenting a hollow interior and being of a thickness equal to said selected dimension and extending around and in abutment with the periphery of said sheets and therebetween and aligning with and conforming to the configuration of said orifices at the outermost segment of the latter disposed toward said end limits of said sheets, and a conduit having a planular edge on each end thereof and being in fluid-tight end abutment with the areas of said



sheets surrounding said orifices on each of said sheets on the sides thereof opposite said closure member to be in fluid flow communication with said orifices and the space between said sheets.

3,017,162
HEATING AND COOLING APPARATUS
Edward M. Haines, Lake Forest, and Charles E. Hughes, Berwyn, Ill., assignors to General Electric Company, a corporation of New York
Original application Jan. 17, 1958, Ser. No. 709,672, now Patent No. 2,934,913, dated May 3, 1960. Divided and this application Sept. 17, 1959, Ser. No. 840,626
11 Claims. (Cl. 257—290)





1. A water heating system comprising a water storage tank, a refrigerating machine including a refrigerant compressor and a refrigerant condenser arranged in heat-exchange relation with said storage tank and a refrigerant evaporator, an electric heating unit also arranged in heat-exchange relation with said storage tank, a first tank thermostat responsive to the temperature of the water in said storage tank and having low and high positions respectively corresponding to temperatures respectively disposed below and above a predetermined relatively low transfer temperature, a second tank thermostat responsive to the temperature of the water in said storage tank and having low and high positions respectively corresponding to temperatures respectively disposed below and above a predetermined relatively high storage temperature, means controlled by said first tank thermostat in its low

position for operating said refrigerating machine, means controlled by said second tank thermostat in its high position for de-energizing said heating unit, means controlled jointly by said first tank thermostat in its high position and by said second tank thermostat in its low position for energizing said heating unit, and means for supplying heat to said evaporator during operation of said refrigerating machine.

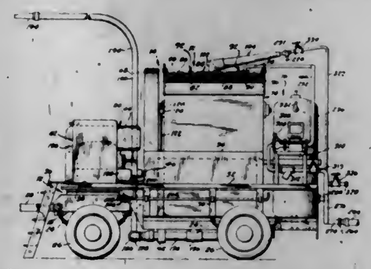
3,017,163
AERIAL CARGO DELIVERY SYSTEM
Willem D. van Zelm, Ruxton, and Martin A. Jackson, Bradshaw, Md.; said Jackson assignor to Van Zelm Associates Inc., Baltimore, Md., a corporation of Maryland
Filed Oct. 14, 1959, Ser. No. 846,474
11 Claims. (Cl. 258—1.2)



1. A system, for use with a cargo aircraft of the type having a rearwardly facing cargo compartment and hatch, for the removal of cargo from such aircraft while in motion over the ground, comprising a cargo pallet of a size to be positioned in said cargo compartment, an elongated hook member, means to hinge said hook member adjacent the rearward end of said cargo compartment of said aircraft including means to disengage said hook member from said aircraft upon a predetermined load on said hook member, cable means stretched close to the ground transversely of the path of motion of said aircraft, said hook member being of sufficient length to engage said cable means, means interconnecting said hook member and said cargo pallet, said hinge means restraining said cargo hook member in attachment with said compartment until a predetermined pull is exerted by said hook member, said cable means having means on each end to anchor said cable to the ground, coil means adjacent the ends thereof containing extensions on said cable means, and means adjacent the ends thereof to yieldingly resist the paying out of said cable means from said coil means with a predetermined restraining force as said cargo aircraft moves along a path away from engagement of said hook member with said cable means.

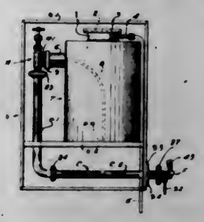
3,017,164
PORTABLE CONCRETE MIXING, FOAMATING AND DISPENSING MACHINE
Chesley Ayers, Dearborn, and Wray J. Bailey, Detroit, Mich., assignors to Acme Roofing and Sheet Metal Company, Detroit, Mich., a corporation of Michigan
Filed July 15, 1959, Ser. No. 827,254
2 Claims. (Cl. 259—151)

1. A portable concrete mixing, foamating and dispensing machine comprising a wheeled chassis, a concrete mixing casing mounted on said chassis intermediate the opposite ends thereof and having an inlet opening in the upper portion thereof and an outlet opening in the lower portion thereof, a concrete mixing device movably mounted in said casing, a closure member movably mounted adjacent said outlet opening, a concrete dispensing casing mounted below said mixing casing in communication with said outlet opening, a fluid concrete pump disposed adjacent said dispensing casing and having an intake passageway communicating therewith and also having a discharge passageway, a fluid concrete dispensing conduit connected to said discharge passageway, means for generating and delivering concrete foamating material to said mixing casing including foamating material mixing apparatus mounted on one end of said chassis and a foamating material generator mounted adjacent the upper part of said concrete mixing casing and connected to said foamating material mixing apparatus



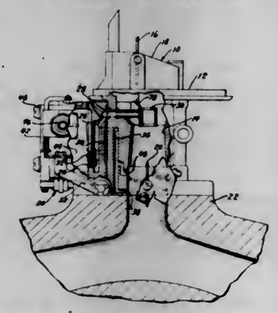
and a prime mover drivingly connected to said mixing device and pump, said foamating material mixing apparatus including a pair of foam solution mixing tanks mounted at said one end of said chassis and having foam liquid and water inlets connected thereto, said foamating material generator having an outlet connected to said mixing casing and also having an inlet, an air compressor, air piping including tank air valves for selectively connecting said air compressor to said tanks, said air piping also including foamating air valves for connecting said air compressor to said foam generator inlet, and a liquid piping system connecting said tanks to said foam generator inlet and including liquid valves for alternatively connecting one only of said tanks to said foam generator while disconnecting the other tank from said foam generator.

3,017,165
APPARATUS FOR AERATING A LIQUID
Edward D. Idzi, 7109 Pulaski Highway, Baltimore 6, Md.
Filed May 20, 1958, Ser. No. 736,591
1 Claim. (Cl. 261—19)



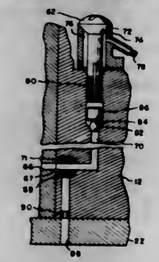
In an apparatus for aerating a liquid, the combination of a tank; a discharge throat mounted on said tank; a disc removably seated in the outer end of said throat and having a pair of orifices therethrough; a removable pipe extending from the lower end of said tank through said throat and having its upper end passed through one of said orifices and fixed in said disc; means adapted to so supply air under pressure to the upper part of said tank as to exert pressure on liquid in said tank to cause the liquid to flow through said pipe in one of said orifices and cause the air to flow from said tank through the other one of said orifices; and a mixing chamber removably mounted on said throat and having a passage connected with said upper end of said pipe for flow of the liquid to said mixing chamber, a second passage connected with said second orifice in said disc for flow of the air under pressure to said mixing chamber, a chamber with which said passage for the liquid connects, a second chamber with which the passage for the air connects, said second chamber having an orifice connected with said first chamber, and a needle valve rotatably mounted in said mixing chamber and adapted to control the opening of said orifice.

3,017,166
ACCELERATING PUMP
Melvin F. Sterner, Bloomfield Hills, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Oct. 8, 1958, Ser. No. 765,975
4 Claims. (Cl. 261—34)



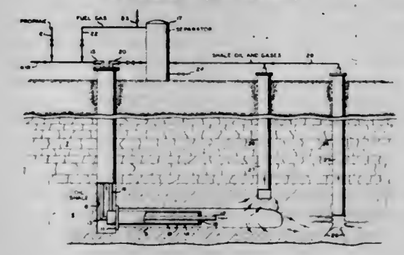
1. In an internal combustion engine carburetor having an idle fuel system, a main fuel system and an acceleration fuel system including a fuel chamber and a fuel discharge nozzle connected by a fuel passage having a valve openable on operation of said acceleration system, means operative only during engine operation for continuously removing vapors from said acceleration system, said means comprising a passage connected to said fuel passage between said valve and said nozzle and to a source of engine vacuum.

3,017,167
ACCELERATING PUMP CHANNEL VAPOR PURGING SYSTEM
Ralph R. Griffen, Roseville, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Sept. 21, 1959, Ser. No. 841,232
15 Claims. (Cl. 261—34)



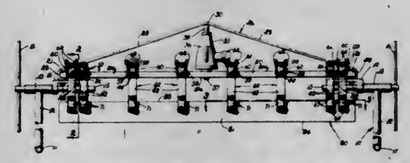
1. An accelerating pump system comprising: a carburetor having a mixing chamber; an accelerating pump having a fuel chamber therein for supplying additional fuel to the mixing chamber; a first passage connecting said fuel chamber to said mixing chamber; a second passage leading from a source of vacuum to said first passage; and a porous filter element at the intersection between said first and second passages to provide free fuel flow along said first passage and to intercept fuel flow from said first to said second passages, said filter element having pores of such size as to provide purging of the vapor in said first passage through the pores in said element and to prevent the passage of liquid fuel through the pores of the element.

3,017,168
IN SITU RETORTING OF OIL SHALE
Donald E. Carr, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 789,082
5 Claims. (Cl. 262—3)



1. A method for the in situ retorting of oil shale, comprising the steps of drilling a horizontal blind borehole into an oil shale stratum, which is a compact sedimentary rock containing a solid organic material, kerogen, said kerogen being convertible to shale oil by heat and pyrolysis, drilling a first group of vertical recovery wells into said stratum in proximity to said borehole, supplying a mixture of fuel gas and oxygen-containing gas to said borehole, igniting said mixture within said borehole to establish a combustion zone, continuously supplying oxygen-containing gas to said borehole to maintain said combustion zone and cause it to advance generally horizontally through said stratum in a direction toward said recovery wells, recovering the resulting products of retorting and combustion from said stratum through said first group, drilling a second group of vertical recovery wells at a distance removed from the resulting depleted area of said stratum about said first group; and continuing the afore-cited sequence of steps of supplying fuel gas and oxygen-containing gas and recovering the resulting products from said stratum through said second group.

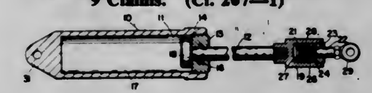
3,017,169
WORKPIECE HOLDING APPARATUS
Willard H. Weir, 5758 S. Elm, Fresno, Calif.
Filed Oct. 6, 1958, Ser. No. 765,459
6 Claims. (Cl. 266—5)



1. A jig for holding a pair of elongated substantially rectangular rigid earthworking blades in predetermined

positions in opposed substantially parallel spaced relation to each other during treatment of the outwardly disposed surfaces of the blades involving the application of heat, for imparting predetermined transverse curvatures to the blades in two planes, and for maintaining such curvatures during and subsequent to such treatment comprising an elongated mounting beam having longitudinal, transverse and thickness dimensions in right-angular relation to each other, said beam having substantial rigidity in the plane of its longitudinal and transverse dimensions; means connected to the opposite end portions of the beam for supporting the beam in a work position; a plurality of U-shaped blade hangers rigidly connected to the beam in longitudinally spaced relation therealong, each of the hangers including a pair of side arms on opposite sides of the beam extended from the beam in substantially perpendicular relation to the plane of its longitudinal and transverse dimensions, and a central portion interconnecting the arms in predetermined spaced parallel relation to each other with the arms along each side of the beam in a substantially common plane parallel to the plane of the longitudinal and thickness dimensions of the beam; a plurality of blade support bolts individually extended through the ends of the arms and substantially perpendicularly outwardly therefrom; nuts screw-threaded on the bolts; spacing washers circumscribing the bolts outwardly of the hanger arms; a plurality of auxiliary bolts individually extended through and substantially perpendicularly outwardly from the hanger arms in individually inwardly spaced relation to their respectively adjacent support bolts; nuts screw-threaded on the auxiliary bolts; pressure plates individually slidably fitted on respectively adjacent support and auxiliary bolts inwardly of the nuts on such bolts; auxiliary washers circumscribing the auxiliary bolts between the arms and the pressure plates, the support bolts on each side of the beam being adapted to extend through the bolt holes of a pair of such earthworking blades so that the blades are between the spacing washers and the pressure plates and extend transversely of the arms and in transversely spaced substantially parallel relation to the beam, there being a progressively greater number of spacing washers on the bolts from the hangers centrally of the beam outwardly to the hangers adjacent to the opposite end portions of the beam, and the nuts being screw-threadably tightened on their respective bolts tightly to clamp the blades between the hangers and the nuts thereby transversely oppositely to bend the blades out of parallelism with the plane of the longitudinal and thickness dimensions of the beam and so that the outwardly disposed surfaces of the blades are concave between the opposite ends thereof.

3,017,170
TEMPERATURE COMPENSATED LIQUID SPRING
William B. Westcott, Jr., Cleveland Heights, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 27, 1959, Ser. No. 802,390
9 Claims. (Cl. 267—1)



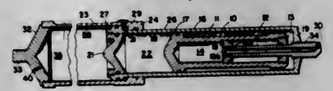
1. A compensated spring mechanism comprising a liquid spring compressible by loads between a minimum and a maximum load coupled in series with a mechanical spring, preloaded to an intermediate load greater than said minimum load and less than said maximum load, said mechanical spring having a substantially zero spring rate at a load applied to the spring mechanism equal to the preload on the mechanical spring to compensate for change in the spring rate of the liquid spring.

3,017,171
HEAVY DUTY SPRING ASSEMBLIES
Glenn E. Mather, Logansport, Ind., assignor to Rockwell-Standard Corporation, Cornoplis, Pa., a corporation of Pennsylvania
Filed Dec. 16, 1959, Ser. No. 860,009
8 Claims. (Cl. 267—1)



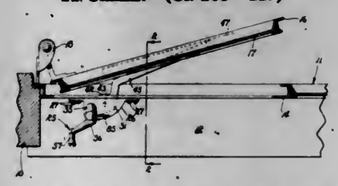
1. In a spring assembly, a pair of spaced apart relatively fixed support members and a one-piece spring spanning said support members and carried thereby to resist a centrally applied load, said spring comprising a flat-sided rigid rectangular base having integral side and end members and a central spring strip uniformly cambered in the direction of load application and deflectable by a load applied substantially midway thereon, said strip being centrally and uniformly spaced between said side members and integrally joined at its ends to said end members.

3,017,172
SHOCK ABSORBER
Erwin H. Hartel, Middleburg Heights, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 3, 1958, Ser. No. 771,394
9 Claims. (Cl. 267—64)



1. A shock absorber comprising a pair of telescoping members adapted to be connected to a load co-operating to define a first chamber the volume of which is changed by movement between said members, a liquid spring including first and second co-operating elements movable relative to each other, means co-operating with said first element to define a second chamber the volume of which is changed by relative movement between said elements for compression and extension of said liquid spring, an effective area for each of said chambers, the effective area of said second chamber being larger than the effective area of said first chamber, a passage connecing said chambers, and liquid filling said chambers which is incompressible at normal operating pressures whereby relative movement between said members in one direction displaces liquid through said passage from said first chamber to said second chamber to produce movement of said first element relative to said second element to compress said spring.

3,017,173
UNIDIRECTIONAL CONTROL MECHANISM FOR A ROTARY DRIVE LINKAGE
Hamilton S. Carlston, 556 Tower Ave., Fresno, Calif.
Filed Dec. 28, 1959, Ser. No. 862,195
11 Claims. (Cl. 268—119)



1. In a drive linkage, a support, a driven member journaled in the support, and a drive member journaled

in the support and having driving connection to the driven member for rotating the driven member selectively in opposite directions in response to rotation of the drive member in opposite directions; a selectively operable mechanism for allowing only unidirectional rotation of the members comprising a ratchet wheel connected to the drive member for rotation therewith; a pawl pivotally mounted in the support for movement between locked and unlocked positions respectively in engagement with and disengaged from the ratchet wheel; control means mounted in the support engaging the pawl for holding the pawl in unlocked position and being operable for moving the pawl into locked position; pawl unlocking means connected to the driven member and engageable with the pawl in a predetermined angular position of rotation of the drive member for moving the pawl from locked into unlocked position, the control means including an over-center spring positioned between the support and the pawl alternately yieldably urging the pawl into engagement with the ratchet wheel and out of such engagement, and a trigger mounted in the support for movement to a position engaging the pawl for urging the pawl from its unlocked position a distance sufficient for the over-center spring to urge the pawl into locked position and for movement to a position retracted from the pawl.

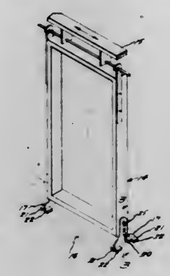
3,017,174
AIR DUCT JACK
Luke N. Reuter, 116 N. Fond du Lac Ave., Menomonee Falls, Wis.
Filed Mar. 4, 1959, Ser. No. 797,071
5 Claims. (Cl. 269—126)



1. A duct jack for use with an exposed joist in supporting a duct for installation beneath said joist, said jack comprising an upright jack post, an upright joist-engaging jaw connected with the upright of the post and constituting an upward extension thereof, a complementary jaw extending vertically in spaced relation to the jaw first mentioned, means for mounting the complementary jaw for movement to and from the jaw first mentioned, means for effecting such movement of the complementary jaw to and from clamping engagement with a joist intervening between said jaws, means extending transversely between said jaws and above which said jaws are open to receive a joist, the transversely extending means defining a straight edge adapted to be engaged with the lower margin of a joist with which said jaws are in clamping engagement, a member vertically adjustable along the post, and a duct-supporting arm projecting laterally from the member to partake of adjustment thereof.

3,017,175
ADJUSTABLE CLAMPING DEVICE
Frank J. Nadherny and Milton C. Prymek, Berwyn, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 9, 1959, Ser. No. 798,084
4 Claims. (Cl. 269—130)

1. A device for preventing movement of a pivotally suspended frame relative to a floor, which comprises an upstanding member having an aperture formed therethrough, means on said upstanding member for engaging the floor, and a clamping assembly for connecting said upstanding member to the frame, said clamping assembly including a rod having a flange adjacent one end thereof and a movable clamping member adjacent its other end, said flange being insertable through the aperture in said upstanding member and an aperture in the frame, said rod being of such dimensions as to be movable transversely within the apertures whereby said flange may be positioned in axial bearing engagement with the frame, the limits of the aperture in said upstanding member

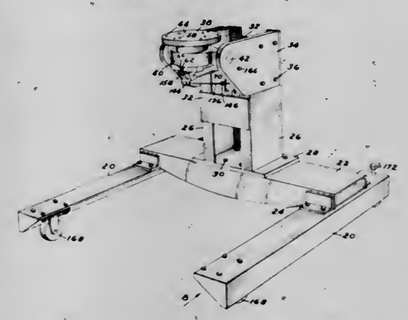


being such as to permit movement of said upstanding member relative to said rod when said flange is in axial bearing engagement with the frame, whereby said means for engaging the floor may be positioned in engagement therewith to prevent movement of the frame relative thereto, and said clamping member being movable into engagement with said upstanding member adjacent the aperture therein to clamp said upstanding member to the frame with said floor engaging means in its floor engaging position.

ERRATUM

For Class 269—157 see:
Patent No. 3,016,805

3,017,176
ENGINE MOUNTING STAND
John W. Breed, Jackson, Mich., assignor to Kent-Moore Organization, Inc., Warren, Mich., a corporation of Michigan
Filed Feb. 10, 1958, Ser. No. 714,261
4 Claims. (Cl. 269—185)



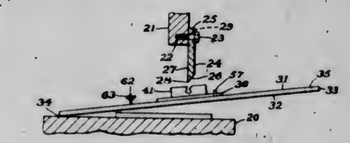
1. An engine-mounting stand comprising, in combination, a frame, a platform assembly swingably supported upon the frame upon a horizontal axis for tilting movement thereabout from a substantially vertical position to a substantially horizontal position and vice versa, hydraulic ram mechanism swingably supported upon the frame and including a ram reciprocable to be projected and withdrawn, said ram pivotally coupled with the plat-

form assembly to tilt the same from a vertical to a horizontal position when the ram is projected, adjustable plate positioning means adjustable to determine the precise projected substantially horizontal position of the platform assembly, said platform assembly including an engine-mounting plate pivotally supported for rotation about an axis which is disposed substantially normal with respect to the horizontal axis upon which the platform assembly is swingably supported, said engine mounting plate pivotal axis carried by that portion of the platform assembly provided with the horizontal axis upon which the assembly is supported for rotation, a locking pin operable to engage said engine mounting plate at adjusted positions of rotation to hold the plate against rotation, actuating means coupled with the pin to withdraw the same to permit rotation of the plate, said actuating means including a cable coupled with the pin and operable upon withdrawal of a determined length of the cable to withdraw the pin to release the plate to rotation when the plate is disposed in said horizontal position, said cable adapted when the plate has been tilted to the vertical position to permit said determined length of cable to be withdrawn without withdrawing the pin.

3,017,177
KNIFE CHANGING BOARD

Bruno E. Prevost, West Boxford, Mass., and Paul N. St. Onge, Madawaska, Maine, assignors to John W. Bolton & Sons, Inc., Lawrence, Mass., a corporation of Massachusetts

Filed June 12, 1958, Ser. No. 741,672
5 Claims. (Cl. 269—205)



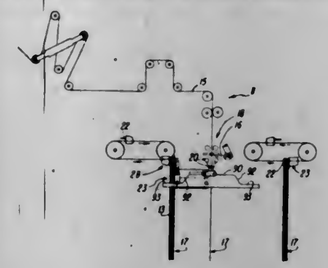
1. A machine knife changer comprising a longitudinally extending lever of rigid material having a laterally extending handle at one free terminal end and a laterally extending, relatively broad, fulcrum engaging edge at the opposite free terminal end for preventing rotation of said lever around its longitudinal axis; a machine knife cradle pivotally mounted on said lever, intermediate of the length thereof, to swing in a plane parallel to the plane of said lever, said cradle having laterally extending, upstanding walls defining a knife receiving slot in the upper face thereof for receiving and supporting the cutting edge portion of a knife and limit means, mounted on said knife changer, limiting the swing of said cradle relative to said lever to a predetermined angular distance.

3,017,178
APPARATUS FOR STACKING SHEET ARTICLES

Donald J. Brickle, Clifton Springs, N.Y., assignor to National Distillers and Chemical Corporation, a corporation of Virginia

Filed May 20, 1959, Ser. No. 814,552
11 Claims. (Cl. 271—63)

1. In a stacking apparatus for bags of flexible material delivered to a point within the stacking apparatus frame in a flat condition and suspended in a substantially vertical plane, the combination comprising, a pair of pin racks one on each side of the plane of delivery of the bags and facing the latter, each of said pin racks having a pair of spaced sharpened pins facing the bags, means including a horizontally reciprocable stacking head movable through the plane of delivery of the bags between said pin racks, a vacuum bar on said head including means for supporting said bags by vacuum from the point of delivery until impaled on the pins of said pin racks, means for timing the reciprocation of said stacking head with the delivery of the bags so that said vacuum bar takes a bag on the forward stroke and impales the latter on one of said pin racks and takes a succeeding bag on the return stroke and

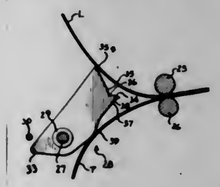


impales the latter on the other of said pin racks, and means for controlling the supply of vacuum to said vacuum bar so that the vacuum is applied while a bag is carried from the plane of delivery to one of said pin racks and is released substantially at the limit of horizontal movement of said vacuum bar to release the bag leaving the latter on said racks.

3,017,179
SHEET SEPARATOR DEVICE

Leo J. Stuckens, Evanston, Ill., assignor to American Photocopy Equipment Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 9, 1958, Ser. No. 759,898
17 Claims. (Cl. 271—64)



1. A device for separating superimposed sheets, the leading edge of a first of said sheets projecting forwardly of the leading edge of a second of said sheets said device comprising a member, means mounting said member for free movement to either one of two alternate positions, means on said member responsive to engagement by the leading edge of the first of said sheets to move said member from a first of said positions to the second position thereof, means on said member for guiding said one sheet in a first direction, and means on said member responsive to movement of the latter to said second position to guide another of said sheets in a second direction different from said first direction so as to separate said sheets.

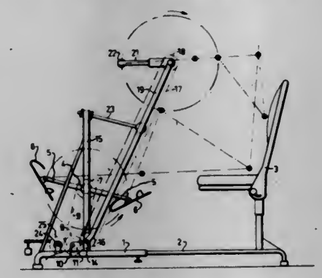
3,017,180
EXERCISING AND GYMNASTICS APPLIANCES

Allan Aronsohn, Halsingborg, Sweden
(Storgatan 80, Angelholm, Sweden)

Filed Nov. 2, 1959, Ser. No. 850,138
Claims priority, application Sweden Nov. 4, 1958
3 Claims. (Cl. 272—58)

1. An exercising and gymnatics appliance comprising a frame, a seat on said frame, a first pair of cranks, first mounting means on said frame, in front of and below said seat on which said first pair of cranks are rotatably

mounted, pedals on said cranks, a second pair of cranks, a pair of upstanding standards pivotally mounted on said frame at their lower ends, one on each side of said seat, for swinging movement about a common axis substantially parallel to the rotational axis of said first pair of cranks for movement towards and away from said seat, one of the cranks in said second pair of cranks rotatably mounted at the upper end of each of said standards independently of the other crank in said second pair for

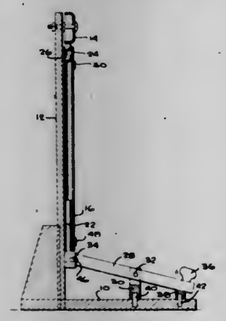


rotation about an axis substantially parallel to said rotational axis, means for locking said standards in different angular positions, the cranks in said second pair of cranks being spaced from each other in the axial direction of said axes, handles on the cranks in said second pair of cranks projecting towards each other from said cranks, and means coupling said first and second pairs of cranks together for rotating the second pair of cranks in the opposite direction from the first pair of cranks.

3,017,181
AMUSEMENT DEVICE

Kenneth R. Sanders, Box 13, Richland, Mont.

Filed Mar. 25, 1960, Ser. No. 17,631
3 Claims. (Cl. 272—76)

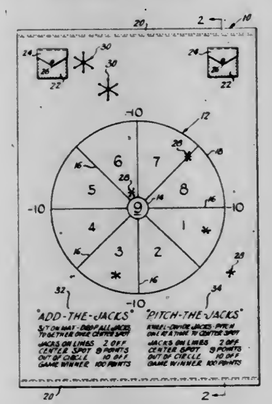


1. An amusement device comprising a base, a standard rising from said base adjacent one end of the latter, a gong carried by said standard adjacent the upper end, a vertically disposed elongated hollow tube having both ends open secured to said standard so that the upper end is adjacent to and spaced below a lower peripheral portion of said gong and the lower end is spaced above said base, an upright plunger positioned so that a portion adjacent the upper end is within and adjacent the lower end of said tube with the portion adjacent the lower end exteriorly of the lower end of said tube, a ball freely slidable within said tube and normally resting upon the upper end of said plunger, a lever positioned above said base and connected intermediate the ends to said base for rocking movement about a horizontal axis, one end of said lever being pivotally connected to the lower end portion of said plunger, and anvil means on the other end of said lever, said lever upon the application of a downwardly directed striking force to said anvil means being operable to execute rocking movement of said lever and cause upward movement of said plunger with the ball resting thereon toward said gong.

3,017,182
JACKS GAME

Leo F. Milan, Tallahassee, Fla.
(2076 S. Fillmore St., Denver 10, Colo.)

Filed Jan. 13, 1959, Ser. No. 786,548
4 Claims. (Cl. 273—1)



1. A jacks game comprising in combination, a substantially flat mat and a pattern of predetermined configuration within the central area of one face of said mat, said pattern comprising concentrically arranged inner and outer circles connected by spaced radial lines forming a series of annularly arranged radial segments, an identifying score number within each segment, a plurality of score numbers on said one face of said mat outside said outer circle, and a plurality of jacks and a bounceable ball, said identifying score number on said pattern determining the score credit for the particular jack which has been pitched thereon and thereafter retrieved by the player during the bouncing of the ball.

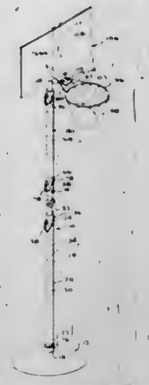
3,017,183
PORTABLE BASKETBALL GOAL ASSEMBLY

Charles P. Chalcroft, 815 25th Ave. W., Eugene, Oreg.

Filed Mar. 25, 1960, Ser. No. 17,675
3 Claims. (Cl. 273—1.5)

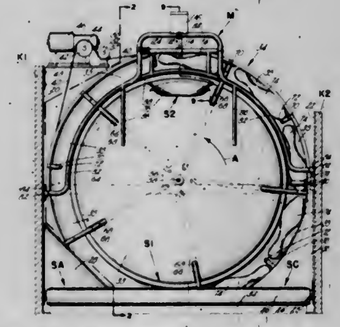
1. A portable basketball goal comprising a base member; an elongated, tubular first standard secured to the base member in generally perpendicular relationship thereto; an elongated, tubular second standard; adjustable linkage means releasably securing the second standard to the first standard, said linkage means including an elongated substantially cylindrical first extension element adapted to be telescopically received in the first standard and held at selected depths therein, a stub extension element adapted to be telescopically engaged with the second standard, and radially adjustable lock means securing the first extension and the stub extension together; a hoop and backboard assembly, including an upright backboard element; and means releasably and adjustably securing the last named assembly to the distal end of the second standard, said means including a sec-

ond radially adjustable lock means whereby the backboard element may be maintained in said upright loca-



tion throughout adjustment of the first mentioned lock means.

3,017,184
PIN ELEVATING MECHANISM FOR BOWLING PIN SPOTTING MACHINES
George A. Gruss, Shelby, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 6, 1957, Ser. No. 701,077
18 Claims. (Cl. 273—43)



5. Pin holding mechanism for use with a rotary pin elevating device of an automatic bowling pin spotting machine adapted to elevate bowling pins from the pit of a bowling alley to a discharge station thereabove, said elevating device including a substantially U-shaped channel provided with a plurality of pin carrying units, said pin holding mechanism comprising stationary means mounted in spaced relation to the pin receiving portions of said pin carrying units of said pin elevating device to retain pins in said units against removal therefrom during the rotation of said pin elevating device and release means mounted in said last-named means to selectively release said pins from said channel for gravity movement from said units at said discharge station.

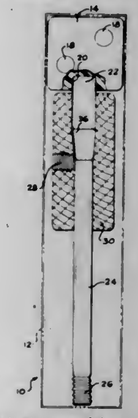
3,017,185
TOY
Gerald L. Marshall, 1944 E. 73rd St., Chicago, Ill.
Filed Dec. 17, 1958, Ser. No. 780,972
4 Claims. (Cl. 273—96)

1. A collapsible toy comprising, a flexible sheet member having hand grip means at diametrically opposite ends thereof, a relatively stiff platform having at least one post upstanding therefrom secured to a median portion of the upper surface of the sheet member and a hoop removably supported on said surface lateraliy spaced



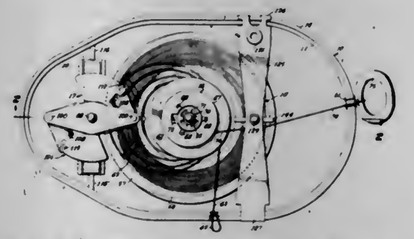
from the post, said sheet member adapted to be flexed transversely by selective movement of the hand grips to toss said hoop upwardly so that a player may attempt to impale the hoop on a post.

3,017,186
MALLET AND DIE GAME
Thomas Ascardi, 2202 Fulton St., Brooklyn, N.Y.
Filed Oct. 11, 1960, Ser. No. 61,961
5 Claims. (Cl. 273—146)



1. Game apparatus comprising, in combination, a die having conventional indicia thereon, a mallet including separate head and shaft portions, said head including socket means receiving one end of said shaft therethrough in a disassembled position, coupling means for securing said shaft perpendicularly upon said head, and said die including a recess receiving the terminal portion of said one end of said shaft therewithin.

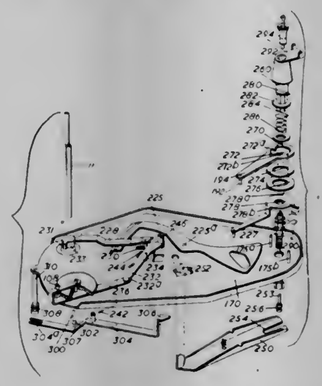
3,017,187
MULTIPLE SPEECH PHONOGRAPH
John W. Ryan, 11027 Cashmere St., Bel-Air, Calif.
Filed Feb. 25, 1960, Ser. No. 11,023
10 Claims. (Cl. 274—14)



1. In a phonograph device for use in a figure toy, a movably mounted record member having recorded

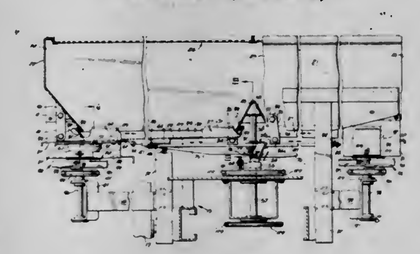
thereon a plurality of discrete sound sequences all starting at substantially the same starting position, driving means for moving said record an amount to reproduce only one of said sound sequences, sound reproducing means engageable with said record for reproducing the sound recorded thereon, manually controlled means for energizing said driving means, and means responsive to sequential operations of said manually controlled means for positioning said reproducing means at the starting position of said discrete sound sequences whereby all of said sound sequences may be reproduced upon repeated operations of said manually moveable and driving means.

3,017,188
AUTOMATIC PHONOGRAPHS
Hans Christian Hansen, 14 Christiansholmsvej, Copenhagen, Denmark
Filed Oct. 8, 1957, Ser. No. 688,950
Claims priority, application Great Britain Oct. 9, 1956
25 Claims. (Cl. 274—15)



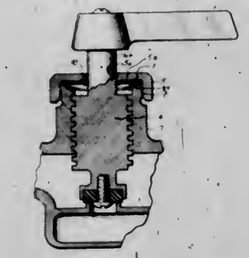
1. In a phonograph having a tone arm structure including a tone arm spindle, stylus means and a feeler abutment, electric drive means and an energizing circuit for said drive means including switch means, and a control mechanism for moving said tone arm after each playing of a record, in combination a cam follower structure including a cam follower arm provided with a track follower, frictional connecting means frictionally connecting said cam follower arm with said tone arm spindle to normally provide movement thereof in unison while also enabling relative movement therebetween upon the occurrence of a predetermined force and to simultaneously enable said cam follower arm to tilt in a plane extending through the geometrical axis of said tone arm, cam means for engagement by said track follower having at least one feeler control track portion forming a first track portion for moving said cam follower arm to swing said tone arm for engagement of said follower abutment against the edge of the next record to be played and to thereby swing said cam follower arm relative to said tone arm spindle against the friction of said frictional connecting means during continued movement of said track follower in said first track portion so as to cause further movement thereof to respond to the size of said record, and a second outwardly leading track portion in said cam means and including a sloping wall portion leading from said second track portion to a cam surface portion for thereafter swinging said cam follower arm and therewith said tone arm outwardly to enable free drop of said record, means in said phonograph and operative to obstruct said outward movement of said tone arm during engagement of said track follower in said outwardly leading second track portion to thereby cause said track follower to climb said sloping wall portion by tilting said cam follower arm within said plane and therewith leave said second track portion upon obstruction of the movement of said tone arm, said cam means further including track means operable to guide said track follower and therewith said cam follower arm and said tone arm inwardly after the record has been dropped to thereby land said tone arm with the stylus means thereof in the initial sound track of said last-mentioned record, trip starter means for controlling said cam means to initiate movement thereof after each play of a record, means operatively connected with said cam means to retain the same in a predetermined position during the playing of a record, manually operable control means including start-and-stop lever means operative upon movement in one direction to open said switch means and upon movement in another direction to close said switch means and simultaneously therewith to actuate said trip starter means, and alternate manual control means operatively connected with said start-and-stop lever means and operative to close said switch means upon movement in one of said two directions.

3,017,189
POWER-DRIVEN SPREADER APPARATUS FOR FERTILIZER OR THE LIKE
Vernon C. Belt, Orient, Ohio, assignor to The Belt Corporation, Orient, Ohio, a corporation of Ohio
Filed Apr. 8, 1960, Ser. No. 20,947
8 Claims. (Cl. 275—8)



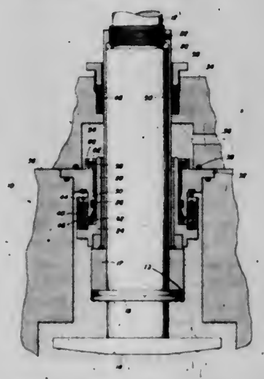
1. In a spreader for fertilizer or the like; a wheel mounted frame adapted for attachment in trailing relation to a towing vehicle; an elongated material-receiving hopper mounted on said frame and extending transversely of the normal path of movement of said frame over the terrain, said hopper having an open bottom; a pair of longitudinally aligned shaker pans mounted on said hopper in closing relation to the open bottom thereof and for limited reciprocating movement in a direction generally longitudinally of said hopper, one of said shaker pans having a bottom wall inclined downwardly and outwardly toward one end of said hopper and the other of said shaker pans having a bottom wall inclined downwardly and outwardly toward the opposite end of said hopper, the bottom walls of said shaker pans being formed with material-discharging outlets disposed, respectively, toward the opposite ends of said hopper; manually adjustable valve means positioned beneath said material-discharging outlets and operable to control the flow of materials therefrom; power-driven means connected with said shaker pans and operable to impart relatively high speed reciprocating movement thereto and to thereby cause materials received in said hopper to be conveyed by said shaker pans toward said outlets; and a pair of power-driven, rotary, material-scattering devices positioned, respectively, beneath said outlets and operable to centrifugally broadcast materials discharged from said outlets.

3,017,190
VALVE STEM SEAL
Wilfred E. Lindstrom, Oradell, N.J., assignor to Lindstrom & King Company, Passaic, N.J., a corporation of New Jersey
Filed Sept. 30, 1957, Ser. No. 687,203
7 Claims. (Cl. 277—32)



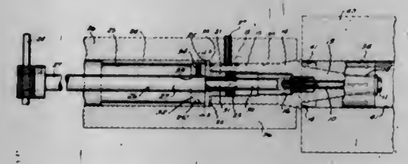
1. A seal ring of elastically deformable material, symmetrical with respect to a median plane perpendicular to the axis of the ring and having a central opening adapted to receive a shaft, said seal ring comprising an outer peripheral portion of substantial thickness and having plane surfaces on its opposite sides, an inner bead defining the opening and of circular cross-section, and a web portion integrally connecting the peripheral portion and the bead, said web portion having a thickness at its connection to the peripheral portion substantially equal to the thickness of that peripheral portion and tapering from said connection to a thickness substantially thinner than the peripheral portion and also thinner than the bead at its connection to the bead, said peripheral portion being effective when compressed in a direction parallel to the axis by opposed forces acting generally perpendicular to said plane surfaces to expand radially and force the web portion and the bead radially inwardly, thereby tending to decrease the diameter of the opening.

3,017,191
MECHANICAL SEAL
Robert C. Patterson, Chattanooga, Tenn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 10, 1956, Ser. No. 615,167
16 Claims. (Cl. 277—82)



1. A mechanical shaft seal operative to effectively prevent leakage of a working fluid along a rotatable, vertical shaft past a housing within which the shaft is disposed and comprising a mating ring on the shaft, a seal ring disposed in the housing and urged into sealing engagement with the mating ring, an annular friction seal member above the engaging surfaces of the seal ring and the mating ring effecting a seal between the seal ring and the housing while permitting relative movement therebetween for proper seating of the seal ring on the mating ring with the annular seal member being received in a groove in one of these members and engaging the others, means forming a chamber for the retention of a fluid intermediate said seal member and the working fluid, this last named means having a heavy fluid immiscible with the working fluid and such that foreign material in the working fluid will float on the surface thereof disposed therein preventing contact of said seal member by the working fluid with said heavy fluid being out of contact with engaging surface of the seal ring and the mating ring.

3,017,192
EXPANDABLE CHUCKS
Anton Illowsek, 11124 Church St., Hales Corners, Wis.
Filed June 23, 1960, Ser. No. 38,259
2 Claims. (Cl. 279—2)

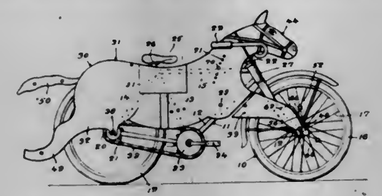


1. In combination with a machine tool having a spindle bore with an internal, rearwardly facing annular shoulder, said bore being flared outwardly at its forward end, a workholding chuck comprising: a collet body removably mounted in said spindle bore, said collet body having a nose portion projecting forwardly from said bore, having a flared central portion wedgingly fitted within said spindle bore flared forward end, and thereby preventing rearward longitudinal movement of said body within the bore, and said collet body having a cylindrical rearward portion projecting into said spindle bore and terminating forwardly of said bore annular shoulder, there being an axial bore through said collet body; a stop member having an enlarged head and having a forward shank portion removably inserted into the rear end of said collet body to a point where said enlarged head portion abuts said spindle internal shoulder and prevents forward longitudinal movement of the collet body within the spindle bore, said stop member having a bore therethrough in registration with said collet body bore; means for releasably locking said stop member in said inserted position; an expandable work-holding bushing on the forward nose portion of said collet body; and draw means longitudinally-movably carried in said registering collet body and stop member bores for expanding and contracting said bushing.

3,017,193
ANIMAL SIMULATING BICYCLE
Oscar R. Klein, 740 Custer St., Salina, Kans.
Filed June 3, 1958, Ser. No. 739,604
6 Claims. (Cl. 280—1.14)

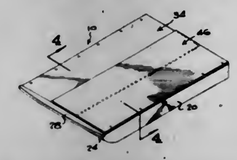
1. In a device of the character described, a bicycle including a frame, a front wheel provided with spokes, and a back wheel, front and rear axles connected to said wheels, said bicycle further including a seat supporting stem and a front fork, a shank extending upwardly from said fork, handle bars connected to said shank, an animal simulating member connected to said bicycle and said animal simulating member including a body portion mounted on said frame, there being slots in the lower

rear portion of said body portion for engagement with said rear axle, a front leg assembly provided with slots for engagement with said front axle, there being an opening in the upper section of said body portion for the projection therethrough of said seat supporting stem, a base



piece connected to said shank, a bracket secured to said body portion, a finger extending rearwardly from the upper portion of said base piece, and said finger being swivelly connected to said bracket, a movable head member spaced slightly forward of said body portion, and said head member being connected to said base piece.

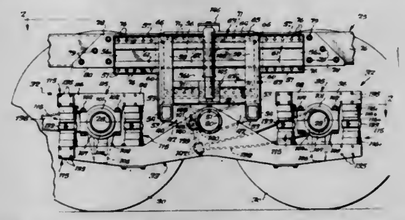
3,017,194
PORTABLE COLLAPSIBLE COMBINATION FISHERMAN'S SEAT, SHELTER, AND TOBOGGAN
Robert E. Anderson, 714 Schultz St., Merrill, Wis.
Filed Dec. 23, 1959, Ser. No. 861,653
10 Claims. (Cl. 280—18)



1. A portable and collapsible combination seat, shelter, and toboggan comprising a collapsible base component having an upper end, a pan-shaped toboggan container having a bottom wall, first and second end walls and sidewalls, and ground-engaging runners on the underside of said bottom wall, said base component being storable in said container in a collapsed condition, said container having overlapping inner and outer cover panels hinged on related sidewalls to enclose the collapsed base component in the container, said base component being adapted to be removed from the container and installed in erect position on a support in opened condition, with the container imposed upon the base component with said first end wall resting upon the base component, with the cover panels of the container opened so as to provide shelter sides, means releasably securing the container in place on the base component, and a seat panel hinged on the inward side of said first container end wall to store within the container, said seat panel being swingable out of the container to rest upon the upper end of the base component.

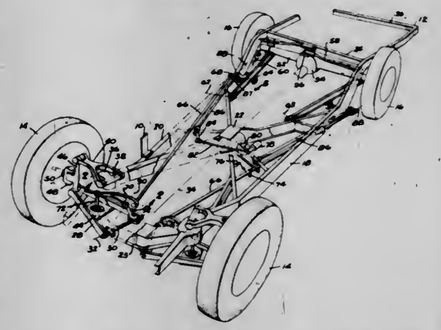
3,017,195
TANDEM AXLE SPRING SUSPENSION
Albert F. Hickman, Eden, N.Y., assignor to Hickman Developments, Inc., Eden, N.Y., a corporation of New York
Filed Feb. 18, 1959, Ser. No. 794,083
16 Claims. (Cl. 280—104.5)

1. A tandem axle spring suspension adapted to be interposed between a vehicle main frame and a pair of tandem axles each having wheels journalled at the ends thereof, comprising a walking beam arranged at each side of said main frame and extending lengthwise thereof, a supporting bracket adjacent the center of each walking beam, a pair of generally parallel, horizontal cross bars fixed to and rigidly connecting said brackets at their front and rear ends and arranged in fore-and-aft spaced relation with reference to said main frame, a cross tube fixed to and rigidly connecting said brackets and arranged intermediate and generally parallel to said cross bars, said brackets and their connecting cross tube forming a trans-



verse subframe intermediate said main frame and walking beams, bearing means supporting each end of said cross tube on the central part of each walking beam to permit said walking beam to oscillate about the axis of said cross tube, spring means supporting said main frame on each of said brackets for vertical movement relative thereto, and means movably connecting each end of each walking beam to the corresponding axle end.

3,017,196
SUSPENSION INTERLINKAGE
Forest R. McFarland, Huntington Woods, Mich., assignor to Studebaker-Packard Corporation, a corporation of Michigan
Filed May 10, 1954, Ser. No. 428,730
21 Claims. (Cl. 280—124)

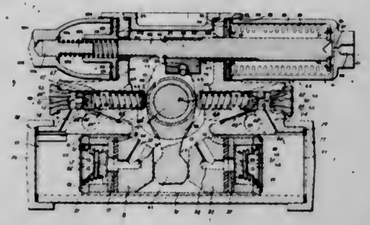


1. In a vehicle having a sprung assembly for supporting a load, the combination of a spring connected arm having means for attaching the same to the sprung assembly for oscillatable swinging movement relative thereto, a wheel-connected-suspension-assembly arm having means for attaching the same to the sprung assembly for oscillatable swinging movement relative thereto in the vicinity of the spring connected arm but about a separate swing axis, said arms each providing recess forming means and together having a common interconnecting link presenting a recess paired with each of the arm recesses with the recesses of each pair being opposed to one another in a registering relationship of closely spaced adjacency, and a compression bearing joint including a pair of studs connected with each pair of recesses, respectively; one stud of each pair having a rounded end portion engaging a bearing surface formed near the end of the other stud of each pair at a single point of rolling contact.

3,017,197
ADJUSTABLE SHOCK ABSORBER FOR VEHICLES WITH PNEUMATIC SUSPENSION

Charles Granet, 17 Rue Essling, Courbevoie, Georges Emile Robert Roland, 25 Blvd. d'Argenson, Neuilly, and Robert Rodolphe Crauc, 52 Rue Raphael, Vanves, all of France

Filed Oct. 26, 1959, Ser. No. 848,771
Claims priority; application France Nov. 6, 1958
5 Claims. (Cl. 280—124)



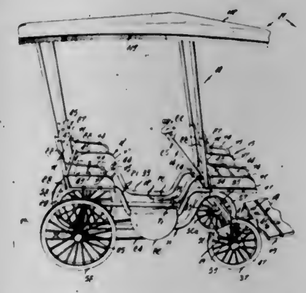
1. A shock absorber adapted to be mounted on vehicles provided with a pneumatic suspension communicating with a reservoir of compressed air by means of a valve controlling the admission of compressed air in the suspension in accordance with the actual load of the vehicle, comprising in combination, a casing in which is formed a cylinder space closed at both ends and a reservoir space for hydraulic fluid, which spaces communicate freely with each other, a double-headed hollow piston slidable in said cylinder and defining a working chamber of variable volume at each end of said cylinder, the interior of said piston being in hydraulic communication with the reservoir, a non-return valve in each piston head enabling hydraulic fluid to pass from the interior of the piston into the working chamber adjacent to each valve, a shaft journalled in said casing and capable of oscillating around an axis situated above the axis of the cylinder and perpendicular thereto, a crank fixed on said shaft, having a median plane of symmetry and engaging the piston intermediate its ends, channels providing hydraulic communication between each working chamber and the reservoir, a non-return valve in each of said channels enabling hydraulic fluid to pass from each chamber into the reservoir, a valve seat arranged in said casing for each of said last-named non-return valves, a cam-follower resiliently connected to each of said last-named non-return valves, a cam freely mounted on said shaft, said cam follower engaging opposite faces of the cam, a rod capable of axial movement drivingly connected to said cam, a piston fixed on one end of said rod, a cylinder engaged over the piston and an adjacent portion of said rod, spring means acting against the end of said rod opposite to the end carrying the piston, and means connecting freely the cylinder to the pneumatic suspension, whereby the actual pressure in the suspension acts on the piston and causes, through the rod drivingly connected to the cam, angular adjustment thereof in accordance with the said actual pressure in the pneumatic suspension.

3,017,198
CHILD'S PEDAL VEHICLE

Isadore Horowitz, Shreveport, La., assignor to Universal Manufacturing Co., Inc., Bossier City, La., a corporation of Louisiana

Filed June 15, 1959, Ser. No. 820,202
14 Claims. (Cl. 280—202)

1. A play vehicle comprising a pair of laterally opposed tubular side frames each composed of a length of metal tubing bent upon itself to form a frame subassembly having generally longitudinal tubular runs extending between respective upwardly arched end formations one of which is formed with its terminal end section extending vertically downward; respective steerable stub axles journalled on the terminal ends of each of said vertical downwardly extending terminal end sections and including a tie rod arm; a rear axle assembly connected adjacent its oppositely extending wheel supporting terminal ends to the respective tubular side frames at a point longitudinally remote from said one arched end formation and including drive wheels; a cross-tube fixedly secured at its opposite ends to the respective tubular side frames at a point adjacent the upper rearmost portion of its one arched end formation; a second cross-tube fixedly secured at its opposite ends to the respective lower terminal ends of said vertically downwardly extending terminal end sections; propulsion means fixedly journalled in laterally

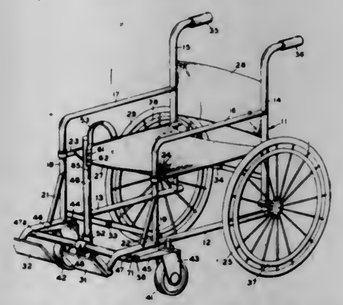


extending relation between said respective tubular side frames; a generally vertically extending tubular column fixedly secured to the midpoints of said respective cross-tubes; a steering post journalled in said tubular column and having a steering arm at its lower end and a hand grip at its other end; tie rod means interconnecting said steering arm of said steering post and said tie rod arms of said respective steerable stub axles thereby adapting said steerable stub axles for steering movement upon rotation of said steering post; respective wheels rotatably mounted on said steerable stub axles; drive means interconnecting said propulsion means and said rear axle assembly; and seat means extending laterally between the other upwardly arched end formations of said side frame sections to provide a seat for the vehicle operator.

3,017,199
WHEELCHAIR STEERING ARRANGEMENT

Roy H. Sechrist, 300 Forest Lawn Blvd., Marion, Ohio

Filed Jan. 21, 1959, Ser. No. 788,180
1 Claim. (Cl. 280—269)

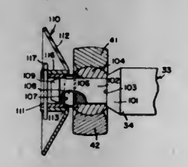


In combination a wheelchair having a pair of traction wheels and a pair of castor wheels, a forward extension secured to each of said castor wheels, a cross bar connecting the forward castor extensions and consisting of a tube and a screw threaded extension screwed into said tube whereby the length of the cross bar member may be effectively varied, an upwardly extending tube secured to an intermediate portion of said cross bar, and a leg yoke secured to the upper end of said vertical tube whereby the occupant of the wheelchair may steer the wheelchair by movement of his leg together with said yoke, said vertical tube, said cross bar, and said castors.

3,017,200
HITCH DEVICES WITH DETACHABLE GUIDE MEANS

Wallace H. Du Shane, Waterloo, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Original application Sept. 9, 1955, Ser. No. 533,462, now Patent No. 2,912,257, dated Nov. 10, 1959. Divided and this application Dec. 16, 1957, Ser. No. 703,133
13 Claims. (Cl. 280—477)

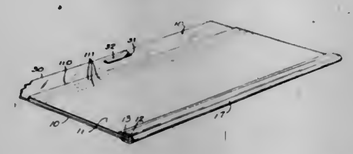


12. An implement-tractor connection comprising the combination of a stud having a link-receiving section apertured adjacent one end, a guide member having a cylindrical hub section and an outwardly flaring guide section, attaching means extending through the cylindrical hub section and the apertured portion of said stud to hold the guide member in position on the stud adjacent the link-receiving section thereof, said guide section and said hub section being integral and said guide member being apertured to provide pin-receiving means adapted to be aligned with the aperture in said stud, pin means disposable in said aligned apertures, and cross pin means extending into the aperture in said guide member to prevent displacement of said pin means.

3,017,201
TRANSPARENT BOOK JACKET PROTECTOR

Harold J. Armson, Madison, Wis., assignor to Finer Products Limited, Madison, Wis., a corporation of Wisconsin

Filed Sept. 17, 1959, Ser. No. 840,608
3 Claims. (Cl. 281—34)

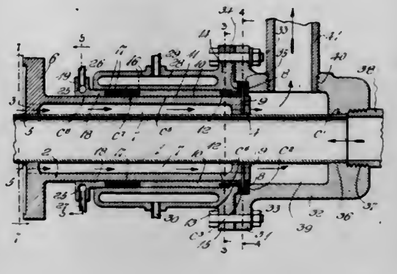


1. A protective envelope for a book jacket comprising a transparent facing web, a one piece backing web having a lower margin about which a lower marginal portion of the facing web is folded and adhesively joined to the backing web, the backing web providing a continuous surface substantially coextensive with the book jacket to be protected and the facing web having a top marginal portion free of and projecting beyond the backing web to be folded over the backing web and a book jacket introduced between said webs.

3,017,202
COOLED ROTARY JOINT HAVING A PLURALITY OF CONCENTRICALLY ARRANGED CONDUITS

Robert Casper Swaney, 241 Belvedere St., Carlisle, Pa.

Filed Mar. 14, 1958, Ser. No. 721,593
10 Claims. (Cl. 285—41)



1. A rotary joint for conducting fluid comprising an axially extending revolving tube for fluid, an inner cylindrical member having inwardly extending supports with fluid passageways therein at opposite ends thereof connected with said tube, said inner cylindrical member being spatially concentrically related to said tube intermediate said supports, a sleeve bearing disposed concentrically over the cylindrical surface of said inner cylindrical member and extending in an axial driection for a portion of the length of said inner cylindrical member, an outer cylindrical member concentrically surrounding said sleeve bearing and extending beyond the terminating end thereof, sealing means disposed in the annular space between said inner and outer cylindrical members and aligned with said sleeve bearing, a stuffing box including a cylindrical sleeve extending into the annular space between said inner and outer cylindrical members in alignment with said sleeve bearing, means extending between one end of said inner cylindrical member and said stuffing box for yieldably adjusting the annular sleeve of said stuffing box against said sealing means for establishing a substantially fluid tight seal between said inner and outer cylindrical member, means securing said sleeve bearing to said outer cylindrical member whereby said inner cylindrical member revolves within said sleeve member, said sealing means, and the cylindrical sleeve of said stuffing box and means connected with said outer cylindrical member and forming a bearing for the end of said revolving tube for providing fluid intake and discharge connections with respect to said tube, and with respect to the annular space formed by the spatial concentric relation of said inner cylindrical member and said tube revolving.

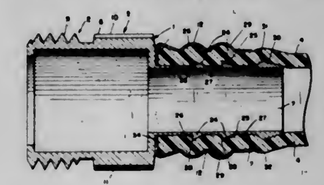
3,017,203
CONNECTORS FOR PLASTIC HOSE

Keith Macleod, Santa Barbara, Calif., assignor to W. D. Allen Manufacturing Co., Chicago, Ill., a corporation of Illinois

Filed July 19, 1957, Ser. No. 673,094
2 Claims. (Cl. 285—256)

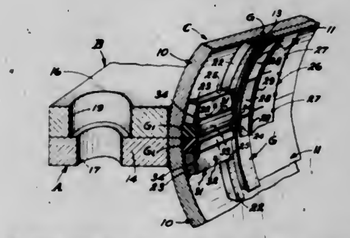
1. A coupling for mechanically locking a hose of synthetic resinous plastic material thereto wherein said plastic material has inherent cold flow properties and said coupling prevents cold flow of the hose relative thereto when the coupling is completely assembled on the hose, said coupling comprising a connector member, a hollow tail member extending from said connector member and inserted into an end of the hose, and a ferrule encircling the end of the hose and clamping same on the tail member, said tail member having an inside diameter substan-

tially equal to the normal inside diameter of the hose whereupon the end of the hose must be stretched to an increased diameter for insertion of the tail member therein, said tail member having at least one razor-sharp circumferential ridge extending outwardly therefrom gripping the stretched end of the hose, said circumferential ridge being triangular in cross-section with a forward side thereof facing the end of the hose being steeply sloped substantially normal to the longitudinal axis of said coupling and with a rearward side thereof remote from the end of the hose being shallowly sloped, said circumferential ridge having a radial thickness equal to substantially one-third the wall thickness of said hose, cylindrical surfaces joining the inner ends of said forward and rearward sides of said ridge, said cylindrical surfaces having an axial width at least as great as the axial width of said circumferential ridge, means projecting outwardly from said cylindrical surfaces engaging the hose and preventing



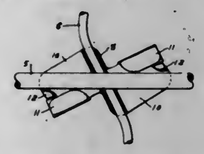
relative rotation between the hose and tail member, said ferrule being clamped tightly over the end of the hose and having circumferential corrugations extending inwardly indenting the plastic material of the hose and compacting it in intimate contact with the entire outer surface of said tail member and the entire inner surface of said ferrule, said inwardly extending corrugations being radially aligned with said cylindrical surfaces and said projecting means for tightly packing said hose thereagainst, and said tail member having an outwardly projecting circumferential end ridge positioned at the end thereof opposite the connector member and beyond the free end of the ferrule for creating an annular bulge in the hose immediately beyond the end of the ferrule such that a radial bend will be formed in the hose at the end of the coupling when a lateral pull is applied to the hose relative to the coupling and thereby spacing the closest cylindrical surface with its projecting means inwardly from said end of said tail member.

3,017,204
SPLIT COUPLING
Joseph B. Smith, Berea, Ohio
(5700 Detroit Ave., Cleveland 2, Ohio)
Filed Jan. 12, 1959, Ser. No. 786,391
4 Claims. (Cl. 285—373)



1. A split coupling for pipes comprising a pair of semi-cylindrical members, means to join said members into a single cylindrical unit to span the pipe, each of said members having semi-cylindrical internal circumferential gaskets adjacent the ends thereof to seal against endwise flow of fluid along the coupling and pipe assembly, and each of said members carrying longitudinally extending edge gaskets that normally project past the longitudinal edges of the members to seal against escape of fluid between the longitudinal edges of said semi-cylindrical members when they are joined together, each of said members having a body portion between said circumferential gaskets with an internal diameter greater than that of the pipe to be sealed, a pair of axially spaced, means defining semi-cylindrical internal recesses in each member disposed adjacent the outer ends of each body portion which receive said circumferential gaskets, the radial thickness of said circumferential gaskets exceeding the depth of said recesses, a series of flexible girdering strips joined to the inside of said members endwise beyond said circumferential gaskets and extending longitudinally inwardly partially across the inside of said circumferential gaskets, means at each longitudinal edge of each member defining a lengthwise recess which receives the respective edge gasket, each said lengthwise edge recess extending from one of said semi-cylindrical internal recesses to the other, longitudinally extending, flexible girdering strips joined to the respective members and extending partially across the radially inner face of the associated edge gasket, and axially extending girdering members extending partially across the outer face of the respective associated edge gasket.

3,017,205
FASTENER FOR WIRES
La Vergne H. Williams, Columbia, Conn., assignor to The Gunver Manufacturing Company, Manchester, Conn., a corporation of Connecticut
Filed July 10, 1959, Ser. No. 826,213
2 Claims. (Cl. 287—49)

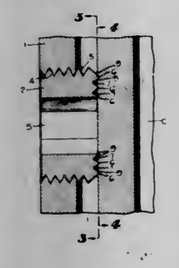


1. A fastener for fastening a pair of crossed wires in substantially perpendicular relation comprising: a member having a central portion containing a downwardly opening channel extending transversely thereof and adapted to receive one of said wires, coplanar wings extending laterally from the opposite sides of said central portion and having opposed inner edges extending transversely of said channel, a flange turned downwardly and inwardly from each of said edges and defining opposed hooks on the underside of said wings disposed on opposite sides of said channel, said hooks having bight portions lying in a common plane extending substantially perpendicular to said channel and adapted to receive the other of said wires, and a spur formed adjacent the mouth of each of said hooks, each of said spurs having an edge portion spaced from and opposed to the bight portion of its respective hook and engageable with the side of said other wire opposite said bight portion to retain said fastener thereon.

3,017,206
STOP COLLAR DEVICE
Horace A. Johnson, Van Nuys, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 10, 1958, Ser. No. 766,538
1 Claim. (Cl. 287—52.08)

A stop device for well casing apparatus, comprising a stop collar adapted to be fixedly anchored about the well

casing, said collar having a plurality of circumferentially spaced radially movable collar-anchoring die means, said die means each including a body having an end disposed for engagement with said casing, said end being provided with a plurality of concentric, annular, alternate ridges and grooves, said body having means for effecting radial movement thereof relative to the stop collar to engage said casing, said ridges being symmetrical in cross-section and relatively closely spaced apart, the sides of each ridge converging at the casing engaging end of the die body and terminating in a relatively blunt crest each having a relatively small radius in transverse cross-section and



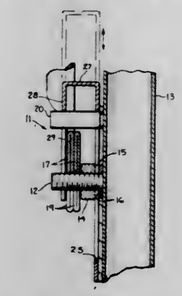
being disposed on a common plane lying at a right-angle to the axis of the body to engage said casing along arcuate segments of the ridges aligned longitudinally of the casing and to displace the material of the casing in the form of raised marginal beads at the opposite sides of each arcuate ridge segment, said material displacement being substantially confined by the grooves between the ridges primarily along a longitudinally extended zone of the casing, with only a relatively slight penetration of the casing material by the ridges aforesaid while affording relatively high resistance to longitudinal movement of the stop collar on the casing when the collar is subjected to axial load.

3,017,207
VEHICLE HUB CONSTRUCTION
James Russell Lloyd, Denver, Colo., assignor to Cutlas Tool and Manufacturing Company, Lyons, Ill., a corporation of Illinois
Filed Jan. 20, 1958, Ser. No. 709,881
4 Claims. (Cl. 287—53)



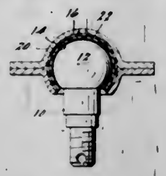
1. In a hub construction for disengageably interconnecting a driving axle with the wheel of a vehicle, the combination comprising a hollow cylindrical body, a star wheel mounted therein for relative rotation and having a plurality of symmetrically spaced points defining scallops therebetween of circular contour, said body and star wheel being adapted for connection to said wheel and axle, a cylindrical cam member mounted in said cylindrical body and rotatable in either direction about an axis located adjacent the periphery of the star wheel, said cam member being relieved on one side to provide clearance for the points on said star wheel when the cam member is in a first angular position and defining an off-center lobe which is rotated into register with one of said scallops when the cam member is rotated 180 degrees for locking said star wheel relative to said cylindrical body, said lobe having a span substantially exceeding the width of said star wheel points.

3,017,208
BRACE LOCK FOR MODULAR SCAFFOLDING
Wilbur M. Wyse, Archbold, Ohio, assignor to Bil-Jax, Inc., Archbold, Ohio, a corporation of Ohio
Filed May 29, 1959, Ser. No. 816,879
1 Claim. (Cl. 287—53.5)



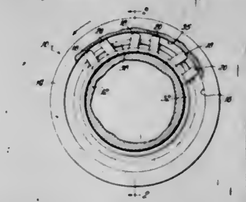
A brace lock for securing a cross brace to an upright of a modular scaffold, said brace lock comprising a threaded shank affixed to the upright and projecting perpendicularly outwardly therefrom; a nut on said shank, said shank being sufficiently long to receive slotted, flattened ends of two cross braces on that portion of said shank extending beyond the nut, the slots in said flattened ends extending laterally to the longitudinal extent of the braces and inwardly from side edges thereof; a post affixed to the upright and projecting perpendicularly outwardly therefrom, parallel to, and in vertical alignment with, said threaded shank, said post being affixed to said upright at a distance above said shank not more than the widths of said slotted, flattened ends of said cross braces and not less than the minimum distances between the ends of the slots in said flattened ends and side edges of the flattened ends opposite slotted edges thereof; a lock member having a first vertical wall with a vertically extending slot through which said post and said threaded shank extend, said upright being adjacent one side of said first vertical wall and said nut being adjacent the other side of said vertical wall, a horizontal connecting wall at the upper end of said vertical wall extending outwardly away from said upright, a second vertical wall parallel to said first vertical wall and connected thereto by said connecting wall, said second vertical wall extending downwardly from said connecting wall, the length of said second vertical wall being greater than the maximum distance between said post and said threaded shank, said second vertical wall having an open-ended slot therein extending vertically upwardly from the lower end of said second vertical wall and being longer than the maximum distance between said post and said threaded shank, said connecting wall being shorter than said post and said threaded shank so that said post and said threaded shank extend through said open-ended slot past said second vertical wall, said first slot in said first vertical wall being sufficiently long to enable the lower end of said second vertical wall to be moved from a position below the lowest portion of said threaded shank to a position above the lowest portion of said post, whereby said post prevents upward movement of the flattened ends off said threaded shank, and said second vertical wall prevents movement of the flattened ends off the end of said shank when said second vertical wall is in its lowest position, but does not interfere with movement of the flattened ends off the end of said threaded shank when said second vertical wall is in its highest position.

3,017,209
LOW FRICTION DAMPENED BEARING
Paul P. Thomas, Detroit, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed July 18, 1957, Ser. No. 672,799
3 Claims. (Cl. 287—87)



1. A ball joint construction comprising a member having a ball on one end thereof, a layer of low friction material disposed about the ball on both sides of the major diameter thereof, a layer of hardened resin backing material engaging and secured to the layer of low friction material to conform it to the ball on both sides of the major diameter thereof to provide a low friction bearing surface therefor, a compressed resilient material disposed about the layer of hardened resin backing material, and a housing disposed about the compressed resilient material.

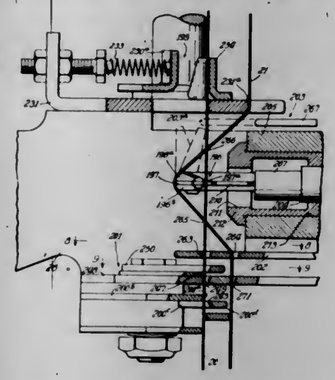
3,017,210
NON-ROTATING SPRAG COUPLING
James W. Palm, Rockford, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 7, 1958, Ser. No. 726,984
9 Claims. (Cl. 287—114)



1. A coupling for concentric shafts comprising a ring of tiltable frictional coplanar grippers interposed between the shafts and adapted wedgingly to engage said shafts to preclude relative rotation therebetween, said ring including a first series of grippers arranged at a predetermined angle with respect to the radii of the shafts to preclude relative rotation of the shafts in one direction, a second series of grippers arranged at a predetermined opposite angle to preclude relative rotation of the shafts in the opposite direction, and means operable upon actuation to move said second series of grippers out of wedging relation when said shafts have a tendency relatively to rotate in said one direction and to move said first series of grippers out of wedging relation when said shafts have a tendency relatively to rotate in said opposite direction.

3,017,211
MECHANISM FOR TYING WEAVERS' KNOTS
Wayne C. Trost, % Barber-Colman Co., 1300 Rock St., Rockford, Ill.
Original application July 1, 1957, Ser. No. 669,234. Divided and this application Oct. 22, 1959, Ser. No. 838,669
9 Claims. (Cl. 289—3)

1. The combination of, spaced clamps having yieldably engageable jaws, a rotary shaft, tapered knotter bills disposed side by side and projecting laterally from one side of said shaft between said clamps, one of said bills having a tail projecting from the opposite side of said shaft and curved toward the shaft, said clamps being adapted to grip and support a thread with the latter extending transversely of said shaft substantially in a straight line within and adjacent the heel defined by the junction of said shaft and said bills, means supporting a second thread alongside the first thread and crossing in front of the latter at points disposed between the bills and the respective clamps with the intervening part of the thread lying adjacent the outer side of said bills, means for turning said shaft through at least one revolution to first enter the tips of



said bills between said threads outwardly and between one of said crossing points and the adjacent clamp, and loop the two threads around said heel as said tail passes the other crossing point, means for opening and closing said bills in the latter part of the revoltuion to receive, cut off, and hold said second thread, means engaging said threads beyond said second cross and operable to shift the same laterally and, after formation of the thread loops, position the second thread only for entry between the open bills, means operating during such positioning to cut off said first thread at a point adjacent said positioning means, and a member engageable with both of said threads beyond said first cross and operable to shift the interlocking loops outwardly along and off from said bills.

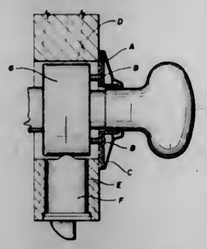
3,017,212
PANEL LOCKING MEANS FOR SASHLESS WINDOWS
Romuald Migneault and Fernand W. Migneault, both of 332 St. Andre St., Gatineau, Quebec, Canada
Original application June 16, 1958, Ser. No. 742,294, now Patent No. 2,949,647, dated Aug. 23, 1960. Divided and this application June 26, 1959, Ser. No. 823,187
2 Claims. (Cl. 292—202)



1. A device for locking slidable glass panels in any position along a sill of a sashless window structure comprising: a base plate fixedly mounted on the sill, a knob, means pivotally mounting said knob on said base plate, a rigid projection on one side of said knob adjacent a glass panel, said projection having an axially aligned socket therein facing towards said glass panel, a resilient glass panel engaging tip fixedly positioned within said socket, a stop positioned on said base plate adjacent said knob, stop

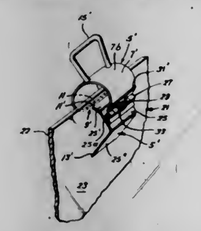
engaging means on said knob preventing said pivotal movement of said knob in one direction when said tip is engaged with said glass panel to lock said panel in any position along the sill, and concave finger receiving surfaces on second and third opposed sides of said knob adapted to be grasped to pivot said tip into and out of engagement with said glass panel at any position of said glass panel along said sill.

3,017,213
MOUNTING PLATE AND ROSE
Marron Kendrick, Atherton, Calif., assignor to Schlage Lock Company, a corporation
Filed Mar. 23, 1959, Ser. No. 801,048
7 Claims. (Cl. 292—357)



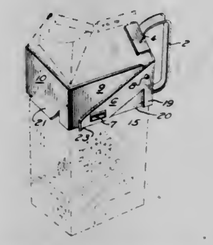
1. In a lock of the character described, a circular mounting plate and a rose escutcheon forming a cover therefor, said mounting plate having a plurality of spaced apart lugs formed on its peripheral marginal portion with the outer edges of said lugs being at about the same radius relative to the center of said plate as the outer edge of the remainder of said plate, and said lugs being formed with their outer edges raised with relation to the surface of the plate, said rose escutcheon having an annular flange to cover the outer ends of the lugs, and a plurality of latch-like detents formed in the flange of the rose and adapted to snap over the outer ends of the lugs.

3,017,214
LIFTING AND CARRYING DEVICE
Ernest H. Pape, 2213 Pech Road, Houston 24, Tex.
Filed Sept. 4, 1959, Ser. No. 838,283
2 Claims. (Cl. 294—31)



1. A device for lifting and carrying objects comprising a body having an opening therein for receiving sheet members, said body formed of sheet material and having end portions thereon, a first end portion on said body forming an engagement surface for contacting and engaging one side of a sheet member, said first end portion on said body defining one side of the opening in said body, a second and lower end portion on said body, pivotal means on said lower end portion on said body, an angular plate connected to said body by said pivotal means, upper and lower end portions on said plate, engagement surfaces on each of said upper and lower end portions on said plate whereby the opposite side of a sheet member may be contacted and engaged, said upper end portion on said plate defines the other side of the opening in said body, each of said engaging surfaces on said body and said plate being of a sufficient width to prevent the distortion of the member contacted and engaged thereby, and handle means on said body for lifting said body whereby as said handle is lifted when in position on the sheet member said first end portion engages one side of the sheet member and said lower end portion engages the opposite side of the sheet member thereby moving said upper end portion in engagement with the sheet member to hold the member vertically in said body.

3,017,215
HANDLE ASSEMBLY FOR CONTAINER
Polydore Galipeau, 62 Perkins St., Chicopee, Mass.
Filed Apr. 7, 1960, Ser. No. 20,687
3 Claims. (Cl. 294—31.2)

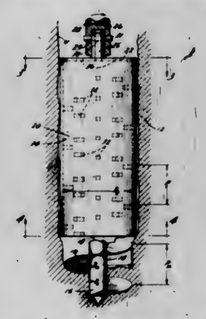


1. A removable handle device for containers, said containers of the type having pitched top surfaces and flat side surfaces, comprising a movable assembly and a fixed assembly, said movable assembly consisting of three plates having flat surfaces, two plates being opposite each other and at right angles to the third plate, and adapted to rest on the complementary surfaces of a container, a lip at the lower portion of the middle surface of the three plates and a detent near the lower portion of each surface of the side plates, said fixed assembly consisting of a handle, a flat plate having a triangular top and having flanges extending towards the container and adapted to engage the top of said container, longitudinal diagonal locking arms extending from the said triangular plate, the lower portion of said arms provided with an opening, said openings being of a configuration adapted to engage the detents in the aforesaid movable portion, and a pivot means interconnecting the said movable assembly with the said fixed assembly at the location of the upper portion of said diagonal arms.

3,017,216
RETRIEVER FOR AUGER EARTH BORING TOOLS
Richard E. Henry and Frank Wash, Port Washington, Wis., assignors to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 14, 1960, Ser. No. 14,871
8 Claims. (Cl. 294—86)

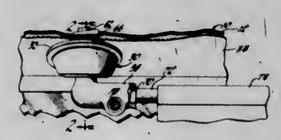
8. A retriever for recovering from a drilled hole detached auger sections and the like of the type having a central shaft with a helical blade disposed thereon, said retriever comprising, in combination, a tubular shell, drive means effecting a supporting and driving connection for inserting said shell into the drilled hole and withdrawing said shell out of the drilled hole, torque transmitting means interposed between said drive means and said shell, and means disposed on the inner surface of said shell for threadingly engaging the detached auger

section so that the auger section may be removed from the drilled hole, said last named means comprising a plurality of lugs rigidly secured to the inner surface of said shell, said lugs arranged in a helical pattern on said shell and projecting substantially radially into said shell, said lugs having end portions which terminate short of the axis



of said shell so that the end portions of said lugs define a tubular passage extending through said shell and along the axis thereof, said shell having an internal diameter greater than the diameter of the helical blade and said tubular passage having a diameter greater than the auger shaft but less than the helical auger blade.

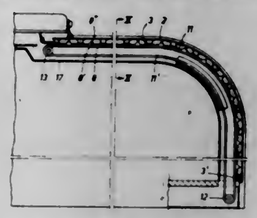
3,017,217
SUNSHADE SUPPORT ASSEMBLY
Bernard H. Keating, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 26, 1960, Ser. No. 4,657
6 Claims. (Cl. 296—97)



6. In combination with a vehicle body having a body header, a sunshade support assembly comprising, an annular anchor member mounted on said header, an annular escutcheon member telescopically located with respect to said anchor member, interengaging means on said escutcheon member and anchor member to slidably and non-rotatably couple said members, a socket member extending through said escutcheon member, locking means releasably securing said socket member to said anchor member against axial movement in one direction, resilient means seating between said escutcheon and socket member to bias said socket member in said one direction, and a sunshade support arm mounted on said socket member.

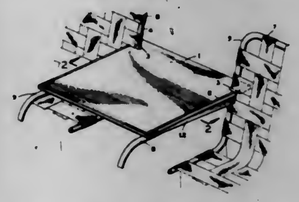
3,017,218
COVER STRUCTURES FOR WAGONS, TRUCKS OR THE LIKE
Otto I. Groth, Kyrkogardsgatan 12, Sture H. Carlson, Terassvagen 5B, and Karl A. I. Carlsson, Tratten 676B, all of Oskarshamn, Sweden, assignors of one-half to John E. W. Svensson, Lilljodal, Sweden
Filed Oct. 15, 1959, Ser. No. 846,693
Claims priority, application Sweden Oct. 17, 1958
1 Claim. (Cl. 296—106)

A heat and moisture insulated flexible cover adapted to be slid over an angle shaped opening formed at a rear end of a cover structure for freight cars, trucks, or the like, comprising in combination an outer layer of a continuous plate of flexible metal sheet material, transverse bars supporting said plate, tracks formed at the side walls of the sturcture along said angle shaped opening guiding the ends of said bars, a transverse strip of metal sheet ma-



terial secured to the inner side of each transverse bar, each said strip having one longitudinal edge bent obliquely and the other formed in a V-shape, each obliquely bent edge engaging the V-shaped portion of a respective adjacent strip, and heat insulating material in the space between said outer continuous plate and said inner strips.

3,017,219
DETACHABLE TABLE TOP
John E. Mallett, 1609 SW. 8th St., Miami, Fla.
Filed Oct. 18, 1960, Ser. No. 63,293
6 Claims. (Cl. 297—135)

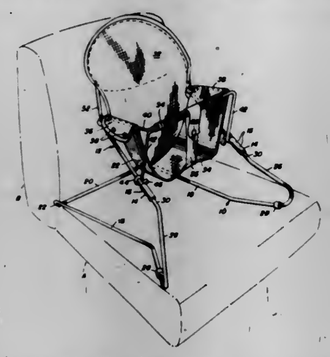


1. A table or tray for mounting upon a pair of spaced chairs comprising, a table top, channel members secured on the under side of the table top adjacent to its opposite side edges, each of the channel members being adapted to fit over one of the tubular arms on each of a pair of chairs disposed in spaced-apart relationship, the table top having recesses in its opposite side edges to fit around upright portions of the backs of the chairs, and a rotative leveling device at the rear end of each of the channel members on the bottom of the table top for positioning between the arms of the chairs and the bottom of the table top to thereby level the table top.

3,017,220
BABY CHAIR
Victor A. Chernivsky, 4349 Downers Drive, Downers Grove, Ill.
Filed Nov. 12, 1959, Ser. No. 852,527
10 Claims. (Cl. 297—390)

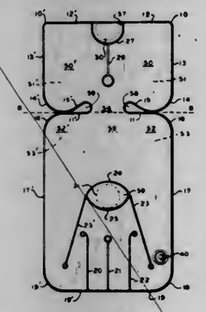
6. A baby chair, comprising a marginal wire frame having a supporting wire base and a wire back, and means for connecting the ends of the base and back together for supporting the back in an inclined position extending upwardly from the front of the base, similar wire arm rest and arm supporting members substantially U-shaped each having closed loops at the ends adapted to engage opposite sides of the back rest, means comprising angular bends on the back rest engaging the loops for holding said members to form an arm rest support therefor extending angularly with respect to the frame, and in front of the back rest, and a cover for the back

rest comprising a pouch to fit over the upper end thereof, a seat at the bottom extending between the arm rests and their supports and having flaps at the ends of the



seat engageably closed over the arm rests and means centrally of the front of the lower edge of the seat engaging around both the front portions of the arm rest and the arm rest supporting member.

3,017,221
PILLOWS
William M. Emery, 44 Pittsford Way, New Providence, N.J.
Filed Sept. 6, 1960, Ser. No. 54,055
10 Claims. (Cl. 297—397)



1. In a pillow suitable to provide extended support beyond the top of the back of a seat, a body portion tapered in thickness from top to bottom and two wings jutting from the top part of the body portion at an angle to said body portion to rest on the top of the seat, and thereby support said top portion when the head of the user presses there against.

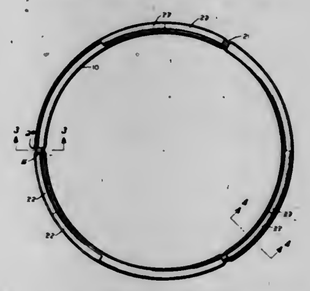
3,017,222
PORTABLE HEAD REST
Calvin T. Kissman, South Miami, Fla. (700 Sunset Blvd., New Port Richey, Fla.)
Filed Feb. 1, 1961, Ser. No. 86,448
3 Claims. (Cl. 297—397)

1. A portable head rest of self-sustaining sheet material for a seat back having a front face, a rear face and a top edge, said portable head rest including a back portion for contacting a portion of said rear face, a front portion having a back-contacting part for contacting said seat back and a portion of the back of a garment worn by an occupant of such seat back and leaning against said portable head rest, said front portion also having a head-contacting part merging into said back-contacting part and said back-contacting part being provided with an elongate longitudinally extending opening extending from the front face to the rear face of said back-contacting part; and manually foldable bridge means connecting said front portion, intermediate the height thereof,



and said rear portion, with a portion of said bridge means forming substantially a right angle with said head-contacting portion, said opening being of an area sufficient to accommodate a part of said back portion of said garment to project into said opening, whereby sidewise movements of the torso of the occupant will tend to cause said part of said garment to move sidewise with said torso and cause said head rest to move therewith.

3,017,223
AUTOMATIC ROTATION BALANCER
Louis R. Morrill, 3306 Alemany Blvd., San Francisco, Calif.
Filed Apr. 8, 1960, Ser. No. 20,972
10 Claims. (Cl. 301—5)

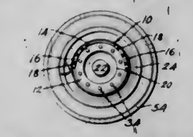


1. An automatic rotation balancer comprising a circular raceway, means dividing said raceway into a plurality of arcuate sections with fluid communicating passageways therebetween, a plurality of solid elongated weights movably mounted in said raceway with an equal number of said weights in each of said sections and with the sum of the lengths of the weights in each section measured along the arcuate length of the section being less than the length of the section, said weights being formed to permit fluid flow along the lengths thereof between the ends thereof when they are mounted in said raceway, and a lubricating and motion damping fluid filling said raceway.

3,017,224
WHEEL-BALANCING ASSEMBLY FOR TRUCK WHEELS AND THE LIKE
Elmer D. Palmer, Rancho Cordova, Calif.
Filed Sept. 4, 1959, Ser. No. 838,154
6 Claims. (Cl. 301—5)

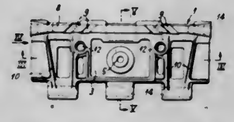
1. A wheel-balancing assembly for truck wheels and the like which comprises, a disk-like adapter plate of substantially the same diameter as the wheel rim and which has circumferential circular track on one face thereof that includes a pair of radially-spaced substan-

tially parallel ribs defining a continuous annular groove opening outwardly therefrom, said adapter plate having a plurality of angularly spaced openings therein located an equal radial distance from the center and adapted to receive the wheel lugs for use in fastening the plate to the wheel, a pair of substantially identical unitary wheel weights provided having a rib-like projection on one face thereof and being of a size sufficient and adapted to removably fit into the annular groove in the track of the adapter plate for adjustable slidable movement relative



thereto, and at least one fastener adapted to operatively interconnect each wheel weight to the adapter plate and lock same in adjusted position on said one face of the adapter plate, along the track wherein the fasteners include a head on one end thereof, a threaded shank and a nut, the annular groove in the track is sized to receive the head of the fastener for slidable movement therein, and the track includes an annular flange overhanging the groove and adapted to retain the head of the fastener therein.

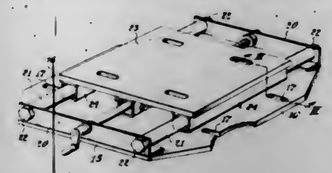
3,017,225
TRACK-CHAIN LINK
Walter Ruf, Landhaus am See, Bottighofen, Thurgau, Switzerland
Filed Oct. 7, 1958, Ser. No. 765,824
3 Claims. (Cl. 305—51)



1. A track chain link for track laying vehicles comprising a metal plate having a ground engaging face provided with a plurality of integral gripping elements projecting outwardly therefrom, said elements including a longitudinal element and a plurality of longitudinally-spaced-apart transverse elements, said face being formed with a cavity between said transverse elements occupying a minor portion of the surface area of said face, a rubber block seated in said cavity, a drilled-through metal disk cast in the rubber block, a threaded bolt secured in the cavity of the link, a nut screwed on the bolt to hold the rubber block firmly in the cavity, said block extending outwardly a predetermined distance greater than said gripping elements to permit said block to engage the ground prior to engagement by said elements, whereby on hard ground said block is the sole ground engaging portion of said link but on soft ground said link engages the ground with said block and said gripping elements, said plate being formed with recesses for receiving ice spurs for traction on ice-coated surfaces.

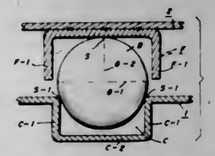
3,017,226
SUPPORTS
Jerome J. Sloyan, Trenton, N.J.
(% Automatic Motor Base Co., Windsor, N.J.)
Filed Mar. 4, 1957, Ser. No. 643,673
3 Claims. (Cl. 308—3)

1. A support for motors and the like, comprising rigidly mounted cylindrical parallel rails, and a carriage movable in a direction longitudinally of said rails, said carriage having parallel gliders, one for each rail, each of said gliders being an integral rigid entity on a corresponding rail which it contacts slidably substantially along four



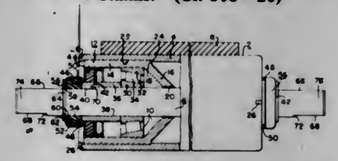
different longitudinal lines of contact substantially at 90° intervals around said rail.

3,017,227
BALL BEARING GUIDES
Isaiah V. Thornton, 3623 Alberta Ave., Sacramento, Calif.
Filed Mar. 3, 1960, Ser. No. 12,543
1 Claim. (Cl. 308—3.8)



In a ball bearing guide for a construction having a fixed part and a movable part slidably supported on said fixed part, the combination of a lower element adapted to be attached to the upper side of said fixed part, and having a ball trackway having a pair of vertical walls; an upper element adapted to be attached to the lower side of said movable part, and having a flange on its lower side, said flange having a horizontal upper surface and a pair of depending vertical arms; and a ball disposed on the upper ends of said walls and on which is disposed said surface of said flange, said vertical walls being relatively spaced at a distance slightly less than the diameter of said ball, and the arms of said flange being relatively spaced at a distance slightly greater than said diameter, and have a length slightly less than the radius of said ball.

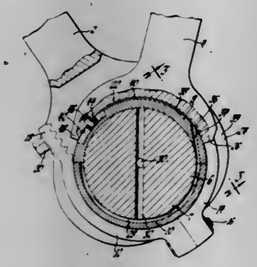
3,017,228
ROTARY SUPPORTING DEVICE
George Baechli, New Philadelphia, Ohio, assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 23, 1959, Ser. No. 841,873
4 Claims. (Cl. 308—20)



1. A rotary supporting device comprising, an elongated tubular member, an elongated shaft extending centrally through said tubular member, bearing means having one portion supported by said shaft and another portion supporting said tubular member, said bearing portions being movable relative to each other whereby said tubular member is rotatable about said shaft, a tubular deformable resilient ring mounted on said shaft with one end surface spaced from said one portion of said bearing, a tubular spacer slidably mounted on said shaft between said one

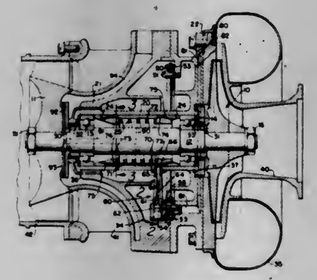
portion of said bearing and said ring, and holding means mounted on said shaft and engageable with the other end surface of said ring to deform said ring whereby a fluid seal is obtained between said ring and said shaft and said ring absorbs loads applied axially of said shaft.

3,017,229
BEARING LUBRICATION MEANS
William G. Dilworth, La Grange, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 779,646
1 Claim. (Cl. 308—122)



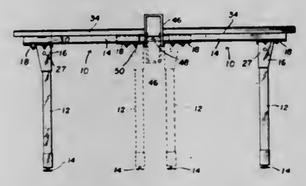
In combination with a pair of relatively oscillating members having cooperating surfaces thereon, means for lubrication of said surfaces comprising a pump recess in one of said surfaces in communication with said surfaces, a pump element secured to the other of said surfaces and movable back and forth in said recess by the relative movement between said members, and means for connection of said recess to a lubricant supply passage, one of said members having a passageway in communication with one end of said pump recess, the other of said members having another passageway adapted to be connected to said supply passage, one of said members having a cavity in the surface thereof adapted to alternately connect and disconnect said other passageway in response to the relative movement of said members.

3,017,230
LUBRICATION SYSTEM
John W. Meermans, North Hollywood, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Aug. 22, 1957, Ser. No. 679,728
22 Claims. (Cl. 308—187)



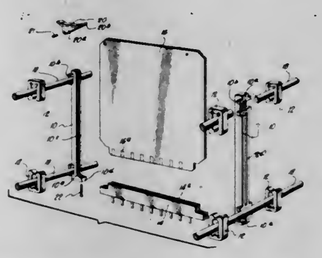
1. A bearing lubrication system comprising: a shaft rotatably supported by at least one bearing; a casing means for supporting said bearing; a lubricant reservoir formed in said casing; an annular hollow lubricant pickup element mounted in said reservoir and surrounding said shaft; a jet type pump, the suction of said pump being connected to the interior of said pickup element and the discharge of said pump being connected to distributing means having an end terminating adjacent said bearing.

3,017,231
WORK BENCH SYSTEM WITH QUICK-DISCONNECT LEGS
Peter W. R. Johnson, Wilton, Conn., assignor to Johnson Products Incorporated, Wilton, Conn., a corporation of Connecticut
Filed Jan. 12, 1959, Ser. No. 786,182
4 Claims. (Cl. 311—110)



1. A work bench frame structure comprising a frame, a plurality of leg seats secured at selected locations on the underside of said frame, each leg seat having a longitudinal groove therein, an element in said groove, a plurality of legs corresponding to the number of leg seats, a pivotally mounted cam in the top of said leg adjacent to said frame for releasably engaging said element in said groove to thereby securely fasten said leg to said frame.

3,017,232
PRINTED CIRCUIT BOARD FILE
Helmut Schwab, Pacific Palisades, Tage O. Anderson, Arcadia, and Stanley E. Beale, Bradbury, Calif., assignors to Applied Development Corporation, Hawthorne, Calif., a corporation of California
Filed Dec. 27, 1960, Ser. No. 78,730
10 Claims. (Cl. 312—223)

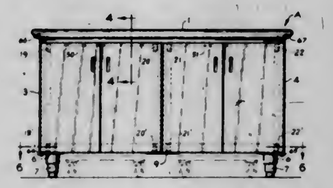


8. Modular hardware for mounting circuit boards and the like comprising an elongate element having a pair of mounting sockets formed on one side thereof adjacent its ends and adapted to receive and partially hug a mounting member when clamped thereto, said element including locking elements defined adjacent said sockets to extend outwardly of the element in a plane transverse to the plane of the element to be coextensive with a mounting member snapped into the socket and provided with a circuit board track on the side opposite from said one side defined to extend longitudinally thereof and to slidably receive and secure the edge of a circuit board.

3,017,233
COUNTERS AND SLIDING CLOSURES THEREFOR

Earl J. Gates, Affton, Mo., assignor to Servco Equipment Company, St. Louis, Mo., a corporation of Missouri

Filed May 21, 1959, Ser. No. 814,831
8 Claims. (Cl. 312—322)

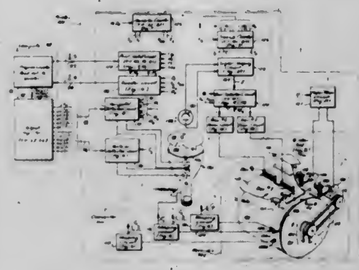


1. A counter having a top, a front wall, a rear wall, and side walls co-operatively arranged to form a hollow open-bottomed storage compartment, a partition-element adjacent to each of the side walls and positioned so as to define a side-pocket and a storage compartment within the counter beneath the top, said rear wall having an access-opening communicating with the storage compartment, a carrier slidably mounted in said side-pocket, a door hingedly mounted on the carrier by means of a long piano-type hinge, said door being adapted normally to extend closure-wise across the access-opening and also being adapted to swing out into a position in line with the path of movement of the carrier and thence be shifted inwardly into substantially concealed position within the side-pocket, a laterally projecting flange coplanar with said door and rigidly attached to said piano-type hinge adjacent said door and extending vertically along the line of its hinged connection with the carrier for swinging outwardly and being sized to conceal the opening of the side-pocket when the door is in closure-forming position, and a depending abutment member mounted across the upper margin of the access-opening for stop-forming engagement with the door when the latter is in closure-forming position.

3,017,234
ELECTROMAGNETIC PRINTER

Lyne S. Trimble, North Hollywood, Michael J. Markakis, Playa Del Rey, Jerome L. Nishball, Los Angeles, and Merton C. Leinberger, Inglewood, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed May 31, 1956, Ser. No. 588,450
16 Claims. (Cl. 346—74)

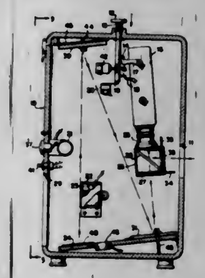


12. A system for forming a latent magnetic image of a character represented by a coded signal output of an electronic digital data-processor, said system comprising: a cathode-ray tube having on the face thereof a mask having areal portions assigned to respective characters and said areal portions having opaque portions and translucent portions, the translucent portions having areal shapes and configurations of respective characters each representable by a respective coded signal output of a digital data-processor; signal-handling means including means to receive said coded signal output and in response thereto direct the cathode ray beam of said tube to an area of the screen thereof overlaid by that areal portion of the mask assigned to the character represented by the said coded signal output, and to scan that area of the screen in a plurality of successive and adjacent lineal sweeps; means including a photoelectric means arranged to receive the light transmitted through the translucent portion of the said areal portion of the mask and to produce in response thereto respective successive sets of electric pulse signals, each set corresponding to a respective lineal sweep of the cathode-ray beam; an electromagnet recording bar means arranged to receive said pulse signals and produce a respective magnetic field in response to each signal thereof; means including a plurality of movable field-concentrating means each corresponding to a respective lineal sweep of the cathode ray beam and effective during that sweep to concentrate in a respective lineal recording region in a magnetic record medium any field produced by said bar means during the respective lineal sweep of the cathode ray beam, whereby to form in the record medium a corresponding set of lineal portions of a latent magnetic image of the said character.

3,017,235
MACHINE FOR SIMULTANEOUSLY PHOTOGRAPHING A DOCUMENT AND THE BEARER

David Sigmond, 46 Bay 43rd St., Brooklyn, N.Y.

Filed Nov. 7, 1958, Ser. No. 772,431
6 Claims. (Cl. 346—107)



1. A device for simultaneously photographing a document and a person comprising, a hollow housing, a light receiving opening in the front of said housing, a document receiving opening in the back of said housing, a document receiving table adjacent the rear opening and within the housing, a first mirror within the housing to receive light coming from the table, a second mirror within the housing to receive light coming from the first mirror, a camera carried within the housing and positioned to receive light reflected by the second mirror, box-like enclosure within the housing between the camera and second mirror, a first opening in the enclosure to admit light coming through the front opening of the housing, a second opening in the enclosure to receive light coming from the second mirror, and a third opening in the enclosure adjacent the camera to permit light to leave the enclosure and enter the camera, a partially silvered mirror diagonally disposed in the enclosure between the first and second openings with its reflective side toward the front opening of the housing to direct light coming therethrough into the camera, a plunger slidably carried by the housing and extending inwardly thereof, a switch in the housing adjacent the plunger, a light source responsive to the switch, said light source being connected to a source of electrical potential through the switch and means responsive to the sliding action of the plunger to close the switch, illuminate the document on the table and operate the camera to simultaneously photograph the document and record the image reflected and transmitted by the partially silvered mirror.

CHEMICAL

3,017,236
HYDROGEN PEROXIDE-ALKALI METAL BICARBONATE ACIDIC BLEACHING PROCESS

Neil J. Stalter, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,710
2 Claims. (Cl. 8—111)

1. The method of bleaching a solid surface responsive to bleaching with hydrogen peroxide selected from the group consisting of linoleum, rubber tile, wood, fiber based acoustical tile, and paperboard, comprising the step of coating said surface with an aqueous acidic bleaching solution having a pH about 5.5 to 6.5 and containing at least 5% by weight of an alkali metal bicarbonate and 10–50% by weight hydrogen peroxide.

3,017,237
CELLULOSE DERIVATIVE AND METHOD OF PREPARING SAME

Austin L. Bullock and John D. Guthrie, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Sept. 13, 1960, Ser. No. 55,808
9 Claims. (Cl. 8—120)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for producing a crosslinked, fibrous, cellulose derivative containing carboxyl groups, said cellulose derivative characterized by insolubility and resistance to swelling in water comprising reacting fibrous cellulose with dichloroacetic acid in the presence of an excess of sodium hydroxide.

3,017,238
METHOD FOR SOLVENT SPINNING POLYOLEFINS

Max Levine, Cleveland Heights, and Beryl M. Kuhn, Rocky River, Ohio, assignors, by mesne assignments, to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 7, 1960, Ser. No. 20,568
8 Claims. (Cl. 18—54)

1. A process for producing shaped poly-α-olefin articles comprising the steps of dissolving poly-α-olefin material in a fatty acid selected from the group consisting of fatty acids having the general formulae:

$$C_nH_{2n+1}COOH$$

wherein n is an integer from 4 to 18, inclusive;

$$C_nH_{2n-1}COOH$$

in which n is an integer from 10 to 24, inclusive;

$$C_nH_{2n-3}COOH$$

in which n is an integer from 10 to 24, inclusive; and mixtures of fatty acids having said formulae; extruding the resulting solution into shaped articles and eliminating a substantial amount of the fatty acid contained by said articles.

3,017,239
AIR CONDITIONER FILTERS HAVING GERMICIDAL PROPERTIES

Clarke A. Rodman, Barrington, R.I., assignor to Fram Corporation, Providence, R.I., a corporation of Rhode Island

Filed Nov. 3, 1958, Ser. No. 771,421
5 Claims. (Cl. 21—58)

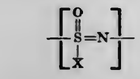
1. An air filter comprising a fibrous filter medium having applied to its fibers a dry non-oleaginous permanent coating comprising (1) a surface-active wetting agent and (2) as a non-volatile bactericide and fungicide a compound selected from the class consisting of an organotin compound having a tetravalent tin atom which is bonded directly to at least one negative substituent and its remaining valences bonded directly to organic substituents and an organo-silver compound selected from the class consisting of a silver salt of an organic acid and an organic complex of a silver salt.

3,017,240
LINEAR INORGANIC POLYMERS AND PROCESS OF PREPARING THE SAME

Richard David Cramer, Landenberg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 19, 1958, Ser. No. 781,472
6 Claims. (Cl. 23—14)

1. A process of preparing linear inorganic polymers containing a plurality of recurring structural units of the formula



wherein X is selected from the group consisting of fluorine and —NH_2, which comprises contacting thionyl tetrafluoride with substantially anhydrous ammonia at a temperature between 0° C. and about 450° C., the molar ratio of ammonia to thionyl tetrafluoride being at least 0.5:1.

3,017,241
CATALYTIC OXIDATION OF ORES

Daniel Chalmers McLean, Springdale, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 7, 1959, Ser. No. 811,541
10 Claims. (Cl. 23—14.5)

1. The process of catalytically oxidizing uranium dioxide in a uranium ore in an alkaline carbonate leach circuit to a water soluble form of uranium which comprises agitating finely divided uranium ore in aqueous suspension, and adding thereto oxygen in the gaseous form, in the presence of a catalytic quantity of soluble ferricyanide ions, the total amount of cyanide in the solution being not greater than two pounds of cyanide calculated as sodium cyanide per ton of ore.

3,017,242
REMOVAL OF CESIUM BY SORPTION FROM AQUEOUS SOLUTIONS

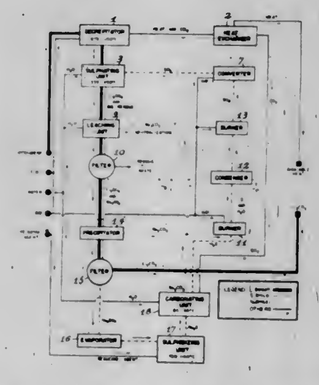
Lloyd L. Ames, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 9, 1959, Ser. No. 839,038
7 Claims. (Cl. 23—25)

1. A process of separating cesium values from other cations from an aqueous solution containing said cesium values in microquantities and mineral acid salts of said other cations in macroquantities, comprising contacting said solution with clinoptilolite whereby said cesium values are preferentially absorbed on the clinoptilolite,

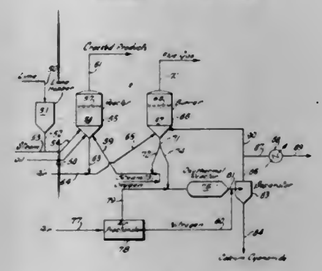
and separating said clinoptilolite with said cesium values from the solution containing the mineral salts of said other cations.

3,017,243
METHOD OF PRODUCING LITHIUM CARBONATE FROM SPODUMENE
Maurice Archambault, Quebec, Quebec, James U. MacEwan, Montreal, Quebec, and Charles A. Olivier, St. Foy, Quebec, Canada, assignors to Department of Mines, Quebec, Quebec, Canada
Filed Aug. 11, 1958, Ser. No. 754,437
4 Claims. (Cl. 23—63)



1. An integrated cyclic process for recovering lithium carbonate from spodumene, which comprises: heating comminuted material selected from the group consisting of spodumene ores and concentrates above decrepitation temperature but below sintering temperature of the normal components of the material and recovering excess heat; reacting the decrepitated spodumene with a gaseous mixture of sulphur trioxide, water vapour and air, at temperatures between about 335° C. and about 450° C., thus producing a mixture of water-soluble lithium sulphate with a minor amount of sodium sulphate from isomorphous sodium and an insoluble residue of hydrated aluminum silicate substantially free from available lithium; leaching and purifying said lithium sulphate with water containing enough sodium carbonate from a subsequent step of the process to precipitate contaminating impurities and to obtain a concentrated solution of lithium sulphate with some sodium sulphate and an insoluble residue containing said contaminating impurities; separating the lithium sulphate-containing solution from the insoluble residue; precipitating lithium carbonate by reacting the lithium sulphate solution with sodium carbonate from a subsequent step of the process; separating the precipitated lithium carbonate from the resulting solution; evaporating to dryness the separated solution which contains sodium sulphate; converting the dry sodium sulphate thus obtained into sodium sulphide by heating it in the presence of a reducing agent at a temperature between about 700° C. and 1100° C. while providing available excess heat and combustible gases; transforming the sodium sulphide into sodium carbonate by reacting it with carbon dioxide and water at a temperature from about 60° C. to about 95° C. and simultaneously evolving hydrogen sulphide; recovering the hydrogen sulphide thus evolved and processing it to sulphur dioxide, then to sulphur trioxide and providing available excess heat; recycling the sulphur trioxide so derived to the reaction with the spodumene, and recovering the sodium carbonate and employing it to purify further lithium sulphate leach solution and to precipitate further lithium carbonate from the purified lithium sulphate leach solution.

3,017,244
OXY-THERMAL PROCESS
Harold V. Atwell, Fishkill, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed May 9, 1958, Ser. No. 734,326
7 Claims. (Cl. 23—78)



1. A process for the production of calcium cyanamide which comprises reacting a carbon-lime composite in fine particle form comprising coke and lime and consisting of at least 0.6 part of carbon per part of lime with an oxygen stream in an unpacked reaction zone wherein said particles are suspended in gaseous reactants and resulting gaseous reaction products and reacted while in suspension to form calcium carbide at an autogenously maintained temperature within the range of about 3000 to about 5000° F. by reaction of a portion of said coke with oxygen, quenching the products from said reaction zone with a nitrogen stream to a temperature within the range of about 1475° to 1800° F. with concomitant formation of calcium cyanamide and separating solid calcium cyanamide from the quenched products.

3,017,245
REMOVAL OF SODIUM SULFATE FROM CAUSTIC SALT
Robert D. Goodenough, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Jan. 14, 1960, Ser. No. 2,350
4 Claims. (Cl. 23—89)

1. A process for the removal of sodium sulfate from caustic salt containing sodium sulfate and occluded caustic soda which comprises contacting at a temperature in the range of 0° to 125° C. the caustic salt with an aqueous sulfuric acid solution having from 12 to 65 weight percent of sulfuric acid to convert the sodium sulfate in the caustic salt to sodium bisulfate and to thereby dissolve the sodium bisulfate thus formed in the solution, said caustic salt being contacted with the acid in a stoichiometric amount to react with the sodium sulfate present in the caustic salt after the neutralization of the occluded caustic soda and separating the resulting solution from the remaining undissolved salt.

3,017,246
PROCESS FOR THE JOINT MANUFACTURE OF HYDROFLUORIC ACID AND PORTLAND CEMENT CLINKER
Jonas Kamlet, % Kamlet Laboratories, 300 Park Ave. S., New York 10, N.Y.; Edna Yadven Kamlet, executrix of said Jonas Kamlet, deceased
No Drawing. Filed Apr. 21, 1960, Ser. No. 23,633
13 Claims. (Cl. 23—153)

1. A process for the joint manufacture of hydrofluoric acid and Portland cement clinker which comprises the steps of:

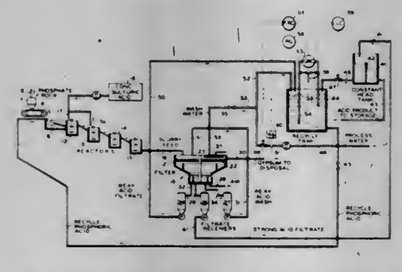
(*a*) feeding a mixture of a calcium fluoride-containing material, a source of alumina, a source of silica and a source of iron oxide to a rotary kiln, said mixture containing from 40.8 to 47.2 parts by weight of calcium in combined form as calcium fluoride and calcium carbonate, from 3.0 to 12.0 parts by weight of alumina, from 17.0 to 26.0 parts by weight of silica and from 2.0 to 6.0 parts by weight of iron oxide;

(*b*) calcining said kiln feed mixture at a maximum temperature of between 1000° C. and 1450° C. while passing steam over said mixture;

(*c*) recovering the effluent kiln gases containing hydrofluoric acid; and

(*d*) recovering a Portland cement clinker from the substantially defluorinated reaction products of the calcination.

3,017,247
MANUFACTURE OF PHOSPHORIC ACID
Edward E. Huxley, Pasadena, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 11, 1957, Ser. No. 639,256
2 Claims. (Cl. 23—165)

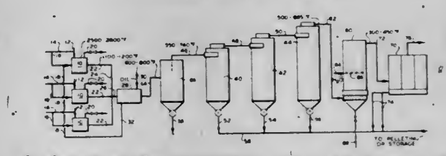


1. In a continuous process for the production of phosphoric acid, including the steps of initially reacting phosphatic material with recycle phosphoric acid, reacting the resulting mass with concentrated sulfuric acid to obtain a slurry comprising dilute phosphoric acid and gypsum, filtering said slurry in a filtration zone to obtain a first filtrate comprising dilute phosphoric acid, washing said gypsum remaining in said filtration zone with a wash comprising a first portion of water to obtain a second filtrate comprising dilute phosphoric acid, conducting said first filtrate to a first zone, conducting said second filtrate to a second zone, conducting a second portion of water directly to said second zone, conducting a portion of said first filtrate from said first zone to said second zone, and continuously withdrawing the contents from said second zone and using the same as said recycle phosphoric acid, the improvement comprising supplying said first and second portions of water from a common source, conducting said water to said second zone when the flow rate of the water from said common source reaches a predetermined value which indicates that the flow rate of said first portion thereof will flood said filtration zone, automatically sensing changes in the specific gravity of said recycle phosphoric acid from that of a predetermined specific gravity value which produces a uniform feed slurry to said filtration zone, automatically sensing changes in the liquid level in said second zone from that of a predetermined liquid level value which indicates a constant head for said first filtrate in said first zone, and automatically controlling the amount of said water used in said process and the amount of said first filtrate conducted to said second zone in accordance with said changes.

3,017,248
PREPARATION OF DIBORANE
Charles C. Clark, Kenmore, and Frank A. Kanda and Aden J. King, Syracuse, N.Y., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Oct. 18, 1956, Ser. No. 616,895
8 Claims. (Cl. 23—204)

1. A method for the preparation of diborane which comprises reacting a material selected from the class consisting of elemental boron and manganese boride with a heavy metal sulfide in a hydrogen atmosphere at a temperature of from 700° C. to 1800° C., and recovering diborane from the reaction mixture.

3,017,249
CARBON BLACK RECOVERY
Donald A. Marsh, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 6, 1959, Ser. No. 844,654
5 Claims. (Cl. 23—209.4)

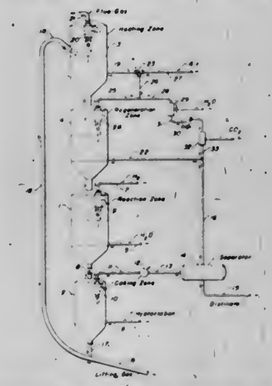


1. A process for recovering carbon black from the smoke from a carbon black furnace comprising quenching the furnace smoke containing carbon black to a temperature in the range of 600–800° F., passing the quenched gaseous stream without further quenching, other than heat loss to the atmosphere, thru a plurality of cyclone separators in indirect heat exchange with the atmosphere thru the uninsulated walls thereof to further reduce the temperature of said stream to the range of about 500 to 685° F. and to recover entrained black; water quenching the gaseous effluent from the downstream cyclone to a temperature in the range of 300 to 450° F.; and passing the quenched gaseous stream thru a bag filter unit to recover substantially all of the remaining carbon black therein.

3,017,250
CONTINUOUS PROCESS FOR THE PRODUCTION OF HYDROGEN
Charles H. Watkins, Arlington Heights, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Sept. 8, 1959, Ser. No. 838,599
4 Claims. (Cl. 23—214)

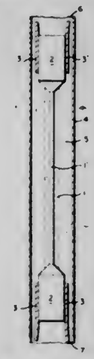
1. A continuous process for the preparation of hydrogen which comprises charging steam and hot fluidized particles comprising a metalliferous steam reducing agent to a reaction zone, reacting said steam and fluidized particles therein to form hydrogen and fluidized particles comprising an oxide of said metalliferous steam reducing agent, continually withdrawing hydrogen from said reaction zone, passing said hot fluidized particles and a hydrocarbon oil to a coking zone, cracking said hydrocarbon oil therein to form coked fluidized particles and hydrocarbon vapors, passing the hydrocarbon vapors to a separator wherein said vapors are separated into distillate and normally gaseous hydrocarbons and hydrogen, discharging said distillate and utilizing the normally gaseous hydrocarbons and hydrogen as a reducing gas as hereinafter set forth, passing the coke-laden fluidized particles and a combustible gas mixture to a heating zone, said combustible gas mixture comprising an oxygen-containing gas and a spent reducing gas formed as hereinafter set forth, heating said fluidized particles therein to an elevated temperature by burning the coke therefrom in the presence of said combustible gas mixture, passing

the resulting hot fluidized particles to a separate regeneration zone maintained at an elevated temperature by the flow of hot fluidized particles therethrough, charging a reducing gas to the regeneration zone, said reducing gas comprising the aforementioned normally gaseous hydrocarbons and hydrogen resulting from the thermal decomposition of the hydrocarbon oil in the coking zone, passing said reducing gas through said regeneration zone in contact with said hot fluidized particles, withdrawing



the spent reducing gas from said regeneration zone, passing a portion of the spent reducing gas to said heating zone in combination with an oxygen-containing gas to form the aforementioned combustible gas mixture, recycling another portion of the spent reducing gas through said regeneration zone in combination with the aforesaid normally gaseous hydrocarbons and hydrogen, withdrawing said hot fluidized particles from said regeneration zone and returning said particles to the reaction zone to complete the cycle.

3,017,251
PROCESS FOR THE PRODUCTION OF SILICON
Denis G. Kelemen, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 19, 1958, Ser. No. 755,901
4 Claims. (Cl. 23—223.5)



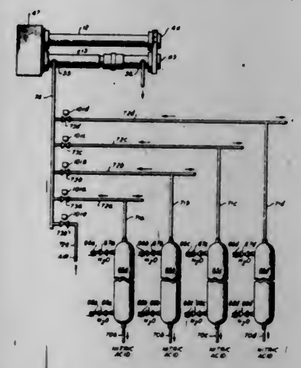
1. In a process for the production of silicon by the decomposition of a vaporized silicon compound having the formula

$$SiH_{(4-n)}X_n$$

wherein n is 0–4, and
X is a halogen selected from the group consisting of chlorine, bromine and iodine,

said process being conducted in a decomposition zone maintained below the melting point of silicon and containing an electrical-resistance-heated silicon filament, and when the silicon compound being decomposed is $SiCl_4$, hydrogen is an essential element within said decomposition zone, the improvement which comprises contacting the vapor of said silicon compound with an electrical-resistance-heated silicon filament having a deposition segment of relatively small cross section disposed between and integral with two end sections of larger cross section, said deposition section being maintained at least at the decomposition temperature of said silicon compound while said end sections are below said decomposition temperature by reason of a lesser electrical resistance in their larger cross sections, depositing silicon on said deposition section by decomposition of the silicon compound, and discontinuing the decomposition reaction before the end sections become sufficiently heated to cause substantial depositions of silicon thereon, and recovering silicon end product.

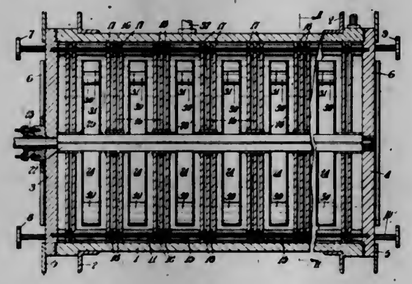
3,017,252
COMPOSITION ANALYZER UTILIZING RADIATION
Bill J. Simmons, Downey, Calif., assignor to Phillips Petroleum Company, a corporation of Delaware
Original application Oct. 8, 1953, Ser. No. 384,815, now Patent No. 2,854,585, dated Sept. 30, 1958. Divided and this application Apr. 21, 1958, Ser. No. 732,111
2 Claims. (Cl. 23—260)



1. In a nitric acid production system wherein nitrogen dioxide is passed through a plurality of first conduits to a plurality of respective reactors, water is passed through a plurality of second conduits to said reactors, nitric acid formed in said reactors is removed through respective product conduits, and off-gas from said reactors is removed through respective effluent conduits which communicate with the tops of said reactors, respectively; a control system comprising a pair of photoelectric cells, a source of visible light, means for passing beams of light from said source to said photoelectric cells, a chamber in the path of one of said beams, a plurality of valved sample lines connected between respective ones of said effluent conduits and said chamber, a timer, means responsive to said timer to open the valves in said sample lines in succession, a bridge network including said photocells to provide an output signal representative of the difference between the amounts of light on said photocells, said output signal being representative of the concentration of nitrogen dioxide in said effluent conduit, a control valve in each of said first conduits, a selsyn receiver connected to each of said control valves, a selsyn transmitter actu-

ated by said output signal, and means responsive to said timer to connect said transmitter to said receivers in succession so that a control valve is regulated which is associated with the same reactor from which a sample of the effluent is being analyzed so as to decrease the flow of nitrogen dioxide when said output signal exceeds a preselected value and to increase the flow of nitrogen dioxide when said output signal becomes less than said preselected value, thereby maintaining said output signal at said preselected value.

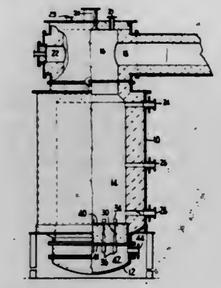
3,017,253
APPARATUS FOR COUNTERCURRENT TREATMENT OF IMMISCIBLE FLUIDS
John Coleby, Buckley, Wales, assignor to R. Graesser Limited, Chester, England, a British company
Filed Mar. 23, 1959, Ser. No. 801,305
Claims priority, application Great Britain Mar. 26, 1958
7 Claims. (Cl. 23—270.5)



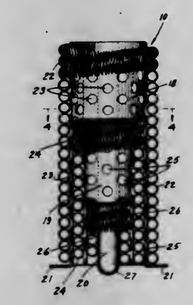
1. An apparatus for the treatment of substantially immiscible liquids of differing densities, comprising a substantially horizontal container having inlets and outlets for the two liquids, a plurality of groups of axially spaced stationary partitions within the container and having regulatable openings therein including at least one opening above and below the axis of the container, each group constituting a settling chamber and the spaces between adjacent groups constituting mixing chambers, a plurality of rotors, one in each mixing chamber, each rotor comprising end plates, having peripheral parts and a plurality of axially extending cylinders disposed between the peripheral parts of the end plates and closed at their ends by the end plates, and each cylinder having a slot extending from end to end thereof parallel to its axis in a curved surface portion facing the direction of rotation of the rotor, each end plate having circumferentially spaced vent holes therein at a location between its center and said cylinders, and means for simultaneously rotating all the rotors.

3,017,254
APPARATUS FOR THE PRODUCTION OF TITANIUM TETRACHLORIDE
Arthur Wallace Evans, Nunthorpe, Middlesbrough, and James Dennis Groves, Stockton-on-Tees, England, assignors to British Titan Products Company Limited, York, England, a corporation of Great Britain
Filed June 16, 1958, Ser. No. 742,404
5 Claims. (Cl. 23—284)

1. Apparatus for chlorinating a metal bearing material which comprises a furnace having a chlorination zone, a heat insulating refractory base extending across the lower portion of the zone, a metal plate supporting the base, a chlorine chamber below the metal plate, perforations in the base aligned with perforations in the metal plate constituting conduits extending from the chlorination zone to the chlorine chamber, removable restricted entrance orifices to the conduits which are separated from the chlorination zone by the refractory base and which give rise to a pressure drop between the chlorine chamber and the chlorination zone and means associated with the conduits which obstruct movement of solids from the chlorination zone into the conduits while permitting free passage of chlorine therethrough.



3,017,255
OXIDIZER
William Arthur Norris, 413 S. Curtis, Alhambra, Calif.
Filed July 2, 1959, Ser. No. 824,675
2 Claims. (Cl. 23—288)

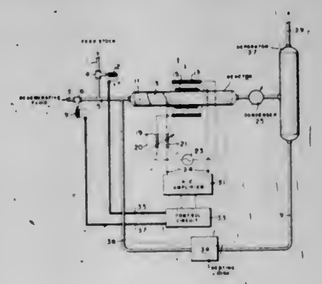


1. An oxidizing cartridge including a central cylindrical member, a coiled wire spirally arranged about the cylindrical member, a sleeve about the spirally arranged coil, a second coiled wire spirally arranged about the sleeve, a second sleeve arranged about the second spirally arranged coiled wire, and a third coiled wire spirally arranged about the second sleeve, each of said coiled wires being made of catalytic material, each of said sleeves having perforations therein permitting passage of gases into and out of the sleeves.

3,017,256
CONTROL OF CATALYTIC CONVERSION OF HYDROCARBONS
James T. Richardson, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed July 22, 1959, Ser. No. 828,815
7 Claims. (Cl. 23—288)

1. In a system for fluent phase catalytic chemical conversion of a fluent hydrocarbonaceous feed material uni-

directionally flowed through a conversion zone under conversion conditions in the presence of a finely divided, chemically active, solid catalyst having a ferromagnetic characteristic variable with its catalytic activity; first means connected to the conversion zone for controlling the flow of feed material into the conversion zone; a source of regenerating fluid adapted to restore the catalyst to catalytic activity after reaction of the feed material with the catalyst; second means connecting said source to the conversion zone for controlling the flow of regenerating fluid into the conversion zone; electrical means electromagnetically associated with the catalyst for detecting the magnetic state thereof and for producing an output signal having a first amplitude when the catalyst has a magnetic state indicative of a given catalytic activity, and a second amplitude when the catalyst has a magnetic state indicative of a given lessened catalytic activity; and

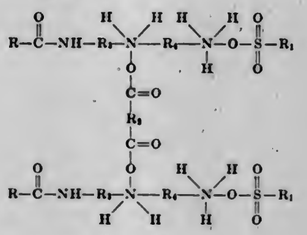


control means connected to said electrical means and to said first and second means for selectively actuating said first and second means responsive to variation in said output signal so that said first means permits flow of feed material into the conversion zone when said signal is of said first amplitude and stops flow of feed material when said signal reaches said second amplitude, and so that said second means permits flow of regenerating fluid when said signal is of said second amplitude and stops the flow of regenerating fluid when said signal reaches said first amplitude.

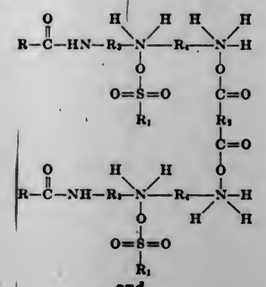
3,017,257
ANTI-CORROSIVE MINERAL OIL COMPOSITIONS
David B. Sheldahl, Griffith, Ind., and Thomas O. Counts, Park Forest, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Sept. 6, 1957, Ser. No. 682,281
4 Claims. (Cl. 44—66)

1. A mineral oil composition providing corrosion protection under high humidity conditions which consists essentially of a liquid petroleum oil and a small corrosion inhibiting amount of a compound selected from the formulae consisting of

I

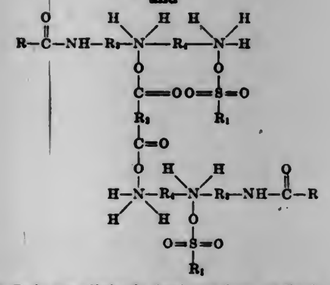


II



and

III



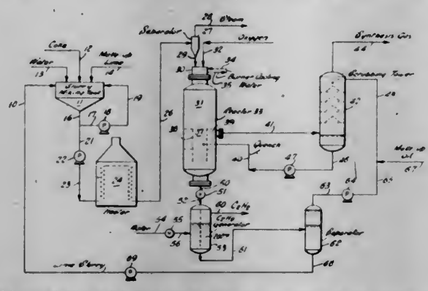
in which R is an aliphatic hydrocarbon radical or 16 to 18 carbon atoms; R_1 is the hydrocarbon radical of mahogany sulfonic acid; R_2 is the hydrocarbon radical of dimerized ricinoleic acid and R_3 and R_4 each contain 2–4 carbon atoms.

3,017,258
STABILIZATION OF BURNER OIL
Ernest L. Pollitzer, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Mar. 20, 1957, Ser. No. 647,200
10 Claims. (Cl. 44—72)

1. Burner oil tending to deteriorate in storage having incorporated therein a stabilizing concentration of the reaction product, formed at a temperature of from about 20° to about 150° C., of from one to two mol proportions of an aliphatic amine compound having at least one hydrogen atom attached to a nitrogen atom, said amine compound consisting of carbon, hydrogen and nitrogen, and having at least twelve and up to about forty carbon atoms and a straight chain of at least three carbon atoms attached to the nitrogen atom, with one mol proportion of an epihalohydrin compound selected from the group consisting of epichlorohydrin, 1,2-epi-4-chlorobutane, 2,3-epi-4-chlorobutane, 1,2-epi-5-chloropentane, 2,3-epi-5-chloropentane and corresponding bromo and iodo compounds, and reacting with an inorganic base to remove halogen.

3,017,259
CALCIUM CARBIDE PROCESS
Du Bois Eastman, Whittier, Calif., assignor to Texaco Inc., a corporation of Delaware
Filed June 24, 1958, Ser. No. 744,159
6 Claims. (Cl. 48—216)

1. A process for the manufacture of calcium carbide which comprises forming a gaseous suspension comprising steam, a carbonaceous fuel and a calcareous compound, selected from the group consisting of calcium oxide, calcium hydroxide, limestone and dolomite, said suspension containing sufficient calcareous compound and carbonaceous fuel to produce calcium carbide, passing said gaseous suspension into a flow type conversion zone, reacting said steam, said carbonaceous fuel, and said calcareous compound with a gas comprising oxygen at a temperature within the range of about 3000 to 5000° F. to form products comprising liquid calcium carbide and gaseous carbon monoxide and hydrogen; contacting



said products with hydrocarbon oil, cooling said products to a temperature below about 800° F. and separately withdrawing solid calcium carbide in suspension in said oil and a stream comprising gaseous carbon monoxide and hydrogen.

3,017,260
SOLID COMPOSITE ROCKET PROPELLANTS CONTAINING POLY(VINYL LOWER ALKYL ETHERS)
Gordon J. Arquette, Plainfield, Daniel S. Dixler, Springfield, and Murray P. Strier, Madison, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed May 9, 1958, Ser. No. 734,123
5 Claims. (Cl. 149—60)

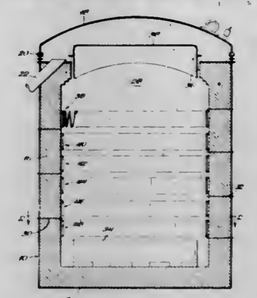
1. A solid rocket propellant consisting essentially of 5 to 50% by weight of poly(vinyl lower alkyl ether) and 50 to 95% by weight of a solid inorganic oxidizing salt.

3,017,261
RECOVERY OF ZINC FROM ZINC-CONTAINING MATERIALS
John Lumsden, Avonmouth, England, assignor to Metallurgical Processes Limited, Nassau, Bahamas, a corporation of Bahamas, and The National Smelting Company Limited, London, England, a British company, doing business together as Metallurgical Development Company, Nassau, Bahamas
No Drawing. Filed July 24, 1959, Ser. No. 829,210
Claims priority, application Great Britain Aug. 21, 1958
5 Claims. (Cl. 75—24)

1. A process for recovering metallic zinc from a molten zinciferous slag run off from a lead-smelting blast-furnace, in which, firstly, carbonaceous fuel, together with air containing approximately sufficient oxygen to burn the carbon to carbon dioxide and any hydrogen contained in the fuel to water vapour, is blown into the molten slag, whereby most of the lead and a small amount of the zinc are volatilized and, secondly, carbonaceous fuel of low hydrogen content, together with air containing at least sufficient oxygen to burn the carbon to carbon monoxide but insufficient to burn the carbon to a mixture of equal volumes of carbon monoxide and carbon dioxide, is blown into the molten slag, whereby the zinc in the slag is reduced and volatilized, and the zinciferous gases are conducted to a condenser for the recovery of zinc as metal.

3,017,262
ELECTRIC RESISTANCE, GAS-TIGHT FURNACE
George J. Fegan, Spokane, Wash., assignor to Chromium Mining & Smelting Corporation, Limited, Saint Ste. Marie, Ontario, Canada, a corporation of Ontario
Filed July 30, 1957, Ser. No. 675,053
6 Claims. (Cl. 75—28)

1. In an electric resistance furnace having a gas-tight chamber with means for maintaining selected sub-atmospheric pressures of any gas therein and wherein temperatures in excess of 1100° C. are maintained by bare resistance conductors, the improvement comprising conductors composed of a material selected from the group of



wrought iron and carbon steel which have a carbon content of not more than .03% by weight and have a surface layer of iron containing at least .5% of a metal of the group consisting of chromium and manganese.

3,017,263
PROCESS FOR PURIFYING METAL VAPORS
Otto Bretschneider, Bonn (Rhine), Ludwig Bender, Bruhl, near Koln, and Gerhard Jaekel, Knapsack, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany
Filed Oct. 3, 1958, Ser. No. 765,256
Claims priority, application Germany Oct. 10, 1957
1 Claim. (Cl. 75—67)



A process for purifying superheated magnesium vapors of nonvaporous impurities and vaporous impurities which have a higher condensation temperature than the magnesium vapors comprising the steps of continuously supplying granular material to one end of a treating zone, continuously withdrawing said material from the opposite end of said zone, directing the material in a definite path as it travels through said zone to form a pair of isolated chambers within said zone which chambers are separated by a moving layer of the granular material, introducing said impure superheated magnesium vapors into the moving granular material layer at a point adjacent one of the isolated chambers, heating the isolated chamber and thus the granular material adjacent thereto to a temperature which is above the condensation temperature of both the magnesium vapor and the vaporous impurities contained therein, passing the vapors through the moving layer of granular material to a point adjacent the second isolated chamber, heating said second isolated chamber and thus the granular material adjacent thereto to a temperaure which is above the condensation temperature of the

magnesium vapor but which is below the condensation temperature of the vaporous impurities whereby the temperature of the granular material and the vapors is decreased along the path travelled by the vapors through said material and only the vaporous impurities are condensed, and discharging the magnesium vapor from the heating zone.

3,017,264
PROCESS FOR DESENSITIZING ZIRCONIUM FOR USE IN PRIMERS

Peter Karlowicz, 4411 Higbee St., Philadelphia, Pa.
No Drawing. Filed July 28, 1959, Ser. No. 830,159
5 Claims. (Cl. 75—97)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for desensitizing powdered zirconium of a size about 10 to 70 microns comprising the treatment of said material by intimate contact with about a 1% solution of hydrofluoric acid in water at about room temperature for between about 3 to 5 minutes.

3,017,265
OXIDATION RESISTANT IRON-CHROMIUM ALLOY

James A. McGurty, Cincinnati, and John F. Collins, Hamilton, Ohio, assignors to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 25, 1959, Ser. No. 842,517
6 Claims. (Cl. 75—126)

1. A ternary alloy of iron, chromium and yttrium which consists of from 0.5 to 5.0 weight percent yttrium, from 20.0 to 95.0 weight percent chromium, and the balance being iron.

3,017,266
AUSTENITIC STEEL AND ARTICLES MADE THEREFROM

Joseph D. Murray, Sheffield, England, assignor to The United Steel Companies Limited
No Drawing. Filed June 2, 1960, Ser. No. 33,374
9 Claims. (Cl. 75—128)

1. Austenitic steel essentially consisting of chromium from 12 to 18%, nickel from 8 to 20%, manganese from 3 to 10%, carbon from 0.05 to 0.15%, boron from 0.005 to 0.075%, columbium+tantalum at least 0.5%, vanadium up to 2.5%, the total of columbium+tantalum and vanadium not exceeding 3%, molybdenum from 0.5 to 4%, and tungsten up to 3.5%, the total of molybdenum and tungsten not exceeding 4%, and the balance iron.

3,017,267
NODULAR IRON MANUFACTURE

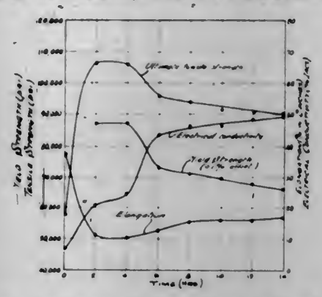
Lester J. Bartson, Plymouth, and Gerald M. McAnulty, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
No Drawing. Filed July 28, 1959, Ser. No. 829,991
3 Claims. (Cl. 75—130)

1. The process of imparting a nodularizing addition of magnesium to a cast iron base metal comprising placing within a ladle a layer of magnesium containing nodularizing material, superimposing upon this layer of magnesium containing nodularizing material a layer of solid ferrous metal at a temperature substantially below the temperature of molten cast iron, and pouring molten cast iron base metal into the ladle.

3,017,268
COPPER BASE ALLOYS

Matti J. Saarivirta, Plainfield, N.J., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York
Filed May 9, 1960, Ser. No. 27,680
8 Claims. (Cl. 75—154)

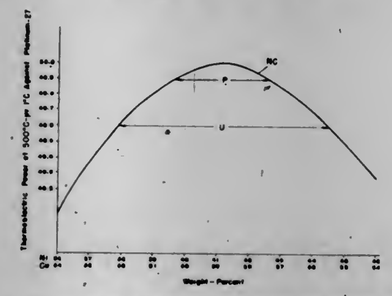
1. An age hardenable copper base alloy of at least 90% copper content, said alloy consisting essentially of, from 0.3 to 4% titanium, 0.5 to 5% tin and 0.05 to 2%



chromium, the balance being substantially all copper with incidental impurities normally associated therewith.

3,017,269
COPPER-NICKEL THERMOCOUPLE ELEMENTS WITH CONTROLLED VOLTAGE TEMPERATURE CHARACTERISTICS

Donald I. Finch, North Woods, Edward Korostoff, Philadelphia, and Daniel D. Pollock, Lansdale, Pa., assignors to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 4, 1959, Ser. No. 810,609
8 Claims. (Cl. 75—159)



1. A corrosion-resistant thermocouple element having against platinum a stable voltage/temperature characteristic whose average slope is —41.5 microvolts per degree centigrade within tolerance limits of plus and minus 1% and which consists of an alloy composed of the control elements titanium, silicon, tin, iron and cobalt totaling not more than 5%, said titanium, silicon and tin being present in at least minimum amounts effective to increase corrosion resistance, said iron and cobalt being present in at least minimum amounts effective to decrease the E.M.F. a predetermined extent, and the remainder essentially being a copper-nickel base having a copper-nickel ratio closely approximating 60% copper, 40% nickel, said control elements being essentially wholly in solid solution in the copper-nickel base.

3,017,270
PHOTOGRAPHIC SILVER HALIDE DIFFUSION TRANSFER PROCESS

Leonard W. Tregillus and Arthur A. Rasch, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Mar. 31, 1958, Ser. No. 724,828
3 Claims. (Cl. 96—29)

1. In a process for the direct production of positive images in which a silver halide emulsion layer is developed, to produce a silver image and the residual undeveloped silver halide is caused to diffuse image-wise to a

receiving stratum, and an argental image is formed in the stratum for said residual silver halide in the presence of a silver precipitating agent, the step of forming said argental image in contiguity with quaternary ammonium salt having a linear chain of at least seven atoms attached direct to a quaternary nitrogen atom and a compound of the class consisting of
2-mercapto-1-phenyl-tetrazole
2-mercapto-5-phenyl-1,3,4-oxadiazole
Dihydro-1,4-benzothiazin-3-one
2-γ-pyridylbenzothiazoline hydrochloride
5-t-butyl-6-methyl-1,2,3a,7-tetrazaindene-4-thiol
7-seleno-1,3,4,6-tetrazaindene
2,6-dimethyl-1,3,3a,7-tetrazaindene-4-thiol
5-ethyl-6-methyl-1,2,3a,7-tetrazaindene-4-thiol
Bis-(5-p-hydroxyphenyl-1,3,4-oxadiazolyl)disulfide
2-mercapto-5-(p-hydroxyphenyl)1,3,4-oxadiazole
μ-Thiolfructoxazoline
4-oxo-2,3,3a,4,5,6-hexahydro-1,3a-diaza-7-thiaindene
5-aminobenzotriazole
S-thiobenzoylthioglycolic acid
4-aminobenzotriazole·HCl
S-carbobenzoxy-L-cysteine
5-chloro-1,2,3-benzotriazole
Bromobenzotriazole
Ethylene thiourea
Ethylene thiocyanate
2,4,6-trimercapto-1,3,5-triazine
4,6-dimercapto-5-aminopyrimidine
μ-Thiolglucoxazoline
2,4,6-trithiouramil
Bis-(2,3-dihydroxypropyl)-disulfide
3-amino-5-mercapto-1,2,4-triazole
4-aminomethyl-2-mercaptoimidazole
1-(β-hydroxyethyl)-3-methylthiourea
3-p-anisyl-1,2-dithia-cyclopentene-5-thione
2-mercapto-5-amino-1,3,4-thiadiazole
3-mercapto-5-methyl-1,2,4-triazole
3-mercapto-1,2,4-triazole
2-mercapto-5-(m-tolyl)-1,3,4-oxadiazole
2-mercapto-5-(o-tolyl)-1,3,4-oxadiazole
2-mercapto-5-(o-methoxyphenyl)1,3,4-oxadiazole
2-mercapto-5-p-methoxyphenyl)-1,3,4-oxadiazole
2-mercapto-5-(p-nitrophenyl)-1,3,4-oxadiazole
2-mercapto-5-(m-nitrophenyl)-1,3,4-oxadiazole
β-Mercapto-propionic acid
1-phenyl-2(1)-thioquinolone
2-mercapto-β-naphthoxazole
3-phenyl rhodanine
1-cyclohexyl-5-mercaptotetrazole
Dimethylcarbamyldimethyl-thiocambamylsulfide
Sym-tetra-α-pyridyl-bis-(formamidine)-disulfide
5-(γ-pyridyl methylidene)-2-thiono-thiazolidone
ψ-1,5-diphenyl-3-mercapto-4-methyl-1,2,4-thiazole
2-mercaptobenzoxazole
3-amino-6-keto-4-methyl-1-phenyl-2-thiono-1,2,3,6-tetrahydropyrimidine
2-thionothiazolidone
2-mercaptobenzothiazole
β-Picolyl-dimethyldithiocarbamate
Thiobenzanilide
3-hydroxymethyl-2-thio-benzothiazolone
Bis-2-thiazolyldisulfide
2-aminothiazoline
Bis-2-benzoxazolyldisulfide
3,5-dimethyltetrahydro-1,3,5-2H-thiadiazine-2-thione
4-methyl-1,2,3a,7-tetrazaindene-6-thiol
2-(6-methyl-1,3,3a,7-tetrazainden-4-yl-thio)ethylthiuronium bromide
6-methyl-1,2,3a,7-tetrazaindene-4-thiol
4,6-diaza-1-diethylamino-5-thiodecane
Tetrapropyl thiuram disulfide
1-benzyl-3,3-dimethylthiourea
Thiodiglycolic dihydrazide
3-β-pyridylpropyldimethyldithiocarbamate
5-bromo-6-methyl-1,3,3a,7-tetrazaindene-4-thiol
2,4,6-tris(diethylamino-ethylamino)-s-triazine·3HCl
4-hydroxy-1,3,8-triazanaphthalene
4-thiono-4a-azanaphthalene
2-mercapto-5-furyl-1,3,4-thiadiazole
2-mercaptobenzimidazole
2-mercapto pyridine-N-oxide
2-isothioureido pyridine-N-oxide
2-mercapto-5-methyl-4H,1,3,4-thiadiazine
2,3-dihydro-2,5-dimethyl-1-phenyl-1,2,4-triazole 3-thione
4,5-dihydro-1-(4,5-dihydroimidazole-2-yl)-2-thiono-imidazole
Ethylene trithiocarbonate
3,4-diphenyl-5-mercapto-1,2,4-triazole
Dimethylethylenediaminebiscarbodithioate
5-p-dimethylaminobenzylidine-2-thio-2,4-oxazolidine-dione
6-hydroxy-2-mercapto-4-methylpyridimine
3-β-formamidoethyl-5-mercapto-1,2,4-triazole
1-γ-hydroxypropyl-3-methylthiourea
2-imino-5-thio-1,3,4-thiadiazolidine
5-imino-3-thiourazole
Bis-[2-(4-pyridyl)-ethyl]-sulfide
Phenacylodithiocarbohydrazide
1-mercapto-phthalazine
2-(β-phenethylthio)-5-mercapto-1,3,4-thiadiazole
4-mercapto-1-thia-3,5,7-triazaindene
α-Picolyldimethyldithiocarbamate
5-nitro-indazole
2-pyridine carboxaldehyde thiosemicarbazone
Benzothiazolium methyl metho sulfate
1-methyl-2-mercaptoimidazole
3,4-diamino-5-mercapto-1,2,4-triazole
4-hydroxy-6-methyl-1,2,3a,7-tetrazaindene-3-thiol
5-phenyl-1,2,3a,4-tetrazaindene-7-thiol
4-phenyliminothiourazole
5-methyl-1,2,3a,4-tetrazaindene-7-thiol
1,8-dibenzoyl-1,2,7,8-tetraza-4,5-dithia-3,6-dithionooctane
Aminothiatriazole
Bis-(5-m-tolyl-1,3,4-oxadiazolyl)disulfide, and
5-ethyl-3-mercapto-4-phenyl-1,2,4-triazole.

3,017,271
PHOTOGRAPHIC EMULSIONS SENSITIZED WITH ALKYLENE OXIDE POLYMERS AND QUATERNARY AMMONIUM SALTS

Douglas E. Piper, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Original application Dec. 1, 1955, Ser. No. 550,495, now Patent No. 2,886,437, dated May 12, 1959. Divided and this application July 2, 1958, Ser. No. 746,131
14 Claims. (Cl. 96—107)

1. A light-sensitive silver halide emulsion sensitized with a mixture of an alkylene oxide polymer selected from the class consisting of (1) polyalkylene ether glycols and (2) condensation products of an alkylene oxide with organic compounds containing an active hydrogen atom, said alkylene oxide containing from 2 to 4 carbon atoms and said alkylene oxide polymer having a molecular weight of at least 300, and a mono quaternary ammonium salt silver halide chemical sensitizing agent having a chain of at least seven atoms attached to a single quaternary ammonium group.

3,017,272
FEED COMPOSITIONS

Paul Van Dijck and Hendrik Eyssen, Kessel-Lo, Belgium, assignors to Recherche et Industrie Therapeutiques, Genval, Belgium, a corporation of Belgium
No Drawing. Filed Nov. 25, 1959, Ser. No. 855,262
13 Claims. (Cl. 99—2)

1. An improved feed for meat-producing animals com-

prising a basal feed ration combined uniformly with from about 1 gram to about 200 grams of Staphylomycin per ton of basal feed ration.

3,017,273
ANIMAL FOOD FROM CLAM WASTE
John Marvin, Boston, and Edward E. Anderson, Lexington, Mass., assignors, by direct and mesne assignments, to Pet Kitchens, Inc., Providence, R.I., a corporation of Rhode Island
No Drawing. Filed Sept. 21, 1959, Ser. No. 841,003
8 Claims. (Cl. 99—7)

1. Process for preparing a food product, comprising the steps of heating clam waste material to form a uniform liquefied material and adding to said material a binder whereby said waste material is thickened to form a homogeneous gel-like, uniformly consistent and textured product when cooled.

8. Process for preparing an animal food, comprising the steps of heating clam waste material to between about 160° and 190° F., to form a uniform liquified material, thickening the resulting liquefied material with a quantity of binder equivalent to about 1 to 10% by weight of said claim waste to form a uniform homogeneous composition, canning the resulting thickened composition under vacuum, and sterilizing the canned product whereby all bacterial and enzymatic bodies present in the clam waste material are deactivated.

3,017,274
PROCESS OF MANUFACTURING DAIRY PRODUCTS
Allan T. Dahlstrom, Castro Valley, Calif., assignor to Safeway Stores, Incorporated, Oakland, Calif., a corporation of Maryland
Filed Dec. 31, 1959, Ser. No. 863,159
18 Claims. (Cl. 99—116)

1. In a process for the manufacture of unripened cheese, the steps of dispersing in the milk a non-coagulated starter having an acidity calculated as lactic acid no greater than about 0.45%, and incubating the milk and starter for a period of time sufficient to achieve a coagulating acidity in excess of 0.45%.

3,017,275
METHOD FOR IMPROVING BUTTER SPREADABILITY
Samuel T. Coulter, Marine on St. Croix, Minn., assignor to Regents of The University of Minnesota, Minneapolis, Minn., a corporation of Minnesota
No Drawing. Filed May 19, 1958, Ser. No. 735,984
11 Claims. (Cl. 99—121)

1. A method for improving the spreadability of conventionally churned butter prepared from normal cream as customarily used in buttermaking which comprises rapidly chilling the butter after formation of butter granules and separation of buttermilk to a temperature between about 25° and 45° F. by direct agitating contact with a refrigerated brine.

3,017,276
FLUID EMULSIFIER FOR ICE CREAM
William H. Knightly, Wilmington, Del., assignor to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 29, 1959, Ser. No. 789,780
5 Claims. (Cl. 99—136)

1. A fluid food emulsifier composition, stable against the separation of solids at normal refrigeration temperatures for dairy products, consisting essentially of from 5 to 25 percent by weight of propylene glycol and from 75 to 95 percent by weight of a mixed partial glyceride of saturated and unsaturated higher fatty acids of from 40% to 70% mono ester content, wherein at least 87% by weight of the acyl radical is that of 14- to 18-carbon unsaturated acids and the remainder is that of saturated fatty acids.

3,017,277
PROCESS FOR PRESERVING YELLOW PEPPERS
Mitchell S. Root, % Allied Foods, 4116 Whiteside St., Los Angeles, Calif.
No Drawing. Filed June 1, 1959, Ser. No. 817,028
1 Claim. (Cl. 99—156)

The process of preserving yellow peppers, which comprises: preparing a saline acid brine; the salinity being about ten degrees and the acidity about forty grain; adding sodium bisulfite to the solution in about the proportion of nine ounces to each batch of fifty gallons; placing the peppers into a container; filling the container with the brine; closing and sealing the container; and subjecting the container and its contents to a temperature of about 165° F.

3,017,278
DISINFECTANT COMPOSITION
Robert M. Laff, 2844 Gregory St., Chicago, Ill.
No Drawing. Filed May 11, 1959, Ser. No. 812,100
7 Claims. (Cl. 106—13)

1. A composition of matter consisting essentially of an aqueous solution of about 0.0025 to about 0.15 percent by weight of high molecular weight alkyl dimethyl benzyl ammonium chloride wherein said alkyl group contains from 8 to 18 carbon atoms and about 0.3 to about 20 percent by weight nonyl phenoxy polyoxyethylene ethanol.

3,017,279
COLOR STABLE WHITE PORCELAIN ENAMEL AND METHOD OF PRODUCING SAME
Harry J. Van Dolah, Wheaton, and Otto C. Linhart, Cicero, Ill., assignors to Eagle Picher Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Feb. 13, 1961, Ser. No. 88,637
7 Claims. (Cl. 106—48)

1. An opacified enameling frit having an enhanced color stability over an extended firing range, said frit consisting essentially of from 20–55% by weight SiO_2, from 8–24% TiO_2, from 5–25% B_2O_3, from 0–25% Na_2O, from 0–25% K_2O, from 0–5% Li_2O, from 0–5% ZnO, from 0–4% Al_2O_3, from 0–3% MgO, from 0–5% P_2O_5, from 0–20% F, from 0–10% ZrO_2, from 0.01 to 0.20% cupric oxide, and from 0.0002 to 0.006% gold.

3,017,280
HARDENING OF COATINGS OF POLYMERS CONTAINING CARBOXYL GROUPS
Joseph Yudelson, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Apr. 20, 1959, Ser. No. 807,288
6 Claims. (Cl. 106—125)

1. A coating composition comprising a polymer in which carboxyl groups are chemically combined therewith having therein as a hardener for the coatings prepared therefrom an aziridinyl azine containing at least two aziridine groups, in an amount at least 0.5%, based on the weight of the polymer.

3,017,281
FORMULATION FOR CASTING PIGMENTED FILM
Robert L. Lambert, Emporium, and William R. McKeirnan, Crosby, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
No Drawing. Filed June 19, 1959, Ser. No. 821,344
6 Claims. (Cl. 106—185)

1. A suspension for casting a film consisting essentially of a mixture of alkaline earth carbonates, an organic soluble ethyl celluose binder therefor, a mixture of solvents with different evaporative temperatures for the binder, said mixture being predominantly toluene, a temporary plasticizer in the form of butyl carbitol and a film density control additive in the form of ethylene carbonate, the total weight of the carbonates and density control additive not exceeding by more than, approximately, 10% the total weight of said solvents.

3,017,282
STABLE, AQUEOUS SOLUTIONS OF ORGANIC TITANIUM COMPOUNDS
Harold C. Brill, Cranford, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 12, 1957, Ser. No. 652,375
11 Claims. (Cl. 106—287)

1. A stable aqueous solution of a reaction mixture obtained by reacting a lower alkyl titanate with acetylacetone in the ratio of 1 to 3 mols of acetylacetone for each mol of alkyl titanate consisting essentially of by weight about 11–300 parts of said reaction mixture per 100 parts of an aqueous acid selected from the group consisting of formic, acetic, propionic, hydrochloric and sulfuric acid, said solution having a pH of below about 4.5.

3,017,283
CORROSION INHIBITIVE PIGMENT
Leonard M. Bennetch, Bethlehem, Pa., and Charles P. West, Metuchen, and Howard H. Leiner, New Brunswick, N.J., assignors to Reichard-Coulston, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 30, 1959, Ser. No. 809,915
12 Claims. (Cl. 106—304)

1. A pigment particle uniformly and completely coated with a soybean phosphatide composition consisting essentially of, per 100 parts by weight, at least 50 parts of inositol phosphatides.

3,017,284
PROCESS OF CASTING FILM EMPLOYING 2-(2-AMINOETHYLAMINE) ETHANOL AS A RELEASE AGENT
Robert L. Lambert, Emporium, and William Richard McKeirnan, Crosby, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
No Drawing. Filed June 15, 1959, Ser. No. 820,131
4 Claims. (Cl. 117—5.1)

1. A process for casting films on moving surfaces comprising applying to the surface a release agent essentially in the form of 2-(2-aminoethylamino) ethanol and then casting on the so treated surface a suspension containing finely ground solids in a binder as well as a volatile organic solvent for the binder.

3,017,285
METHOD OF WRITING ON ANODIZED ALUMINUM
Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey
No Drawing. Filed May 29, 1959, Ser. No. 816,664
12 Claims. (Cl. 117—8)

1. A method of marking an aluminum substrate having a porous anodized surface layer wherein the pores in said surface layer have been sealed, which comprises: opening the pores in said surface by contact with a solution of a strong alkali selected from the group consisting of alkali metal hydroxides and organic ammonium hydroxides; impregnating the opened pores of said surface with a dilute solution of a strong reducing agent and thereafter contacting portions of the impregnated surface with an ink composition consisting essentially of a salt of an easily reducible metal in a liquid vehicle.

3,017,286
METHOD FOR COATING GRAPHITE WITH NIOBIUM CARBIDE
James S. Kane and John H. Carpenter, Livermore, and Oscar H. Krikorian, Danville, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Sept. 8, 1958, Ser. No. 759,830
5 Claims. (Cl. 117—22)

1. In a process for reacting graphite with finely divided niobium metal to produce a solid metal carbide coating comprising the steps of contacting niobium metal powders randomly with a quantity of graphite, said quantity being sufficient to cover the graphite surface upon melting and spreading, said distance between said particles not exceeding one inch, degassing said metal and said graphite surfaces by applying a vacuum pressure lower than about 10^{-3} mm. Hg thereto while heating said metal and graphite to a temperature of at least 1400° C. for a period of at least ten minutes, further heating said metal and said graphite to a temperature of above about 2500° C. within a period of about 15 minutes while continuing to pump thereon at a pumping rate in the range of about 50 liters per second per square inch of graphite surface, said vacuum pressure being maintained between 10^{-3} and 10^{-4} mm. Hg, whereby said niobium powders melt, flow and wet said graphite surfaces, and continuing to heat said graphite-niobium combination until carburization takes place.

3,017,287
WOOD FINISHING METHOD AND PRODUCT
John M. Berry, Martinsville, Va., and Everette E. Witt, Miamisburg, Ohio, assignors to Midland Chemical Corporation, Dayton, Ohio, a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,538
3 Claims. (Cl. 117—72)



3. The process of finishing wood to produce a wood finish surface in which color contrast between the pore and flake areas of the wood is accentuated, comprising the steps of successively applying to the wood surface to a wiping glaze and an aqueous resin containing dispersion, said wiping glaze containing—

Powdered boric acid	lbs.	1.5
Powdered alum	lbs.	1.5
Sucrose	lbs.	10
Water	gal.	3.5
Wetting agent (Triton X–100)	liq. ounces	6.4
Raw umber	do	20

said aqueous dispersion containing—

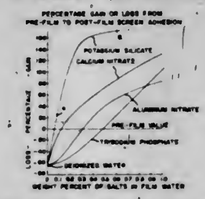
Urea formaldehyde	lbs.	15
Water	gal.	2.5
Glycerin	liq. ounces	64
Wetting agent (Triton X-100)	do	6.4

wiping and drying the glaze prior to the application of the dispersion to provide the glaze in the pore area of the wood and to substantially completely remove the glaze from the flake area of the wood, and drying the applied dispersion to a hard insoluble film.

3,017,288
METHOD FOR FILMING PHOSPHOR SCREENS

Harold F. Windsor, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 20, 1955, Ser. No. 541,611
3 Claims. (Cl. 117—33.5)

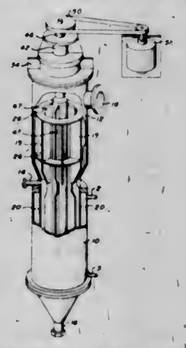


1. In a method of making a luminescent screen for a cathode ray tube or the like which includes the steps of covering a substrate with a layer of cushioning liquid containing particles of luminescent material and a water soluble binder for securing said particles together, allowing the luminescent material and binder to settle through the cushioning liquid onto the substrate in a layer of desired thickness, removing the cushioning liquid, and drying the layer of settled material in place on the substrate, re-covering the layer of settled material with an aqueous solution, introducing a charge of organic film forming material onto the surface of said aqueous solution, and removing said solution from beneath said film forming material to bring the film forming material into contact with the layer of luminescent material, the improvement in which the aqueous solution applied to the dried layer of luminescent material contains an alkali metal silicate in a concentration of 0.05 to 0.6 percent by weight.

3,017,289
METHOD OF PREPARING PHOTOGRAPHIC MATERIALS

Frank Dana Miller and Charles R. Adler, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 26, 1959, Ser. No. 789,050
5 Claims. (Cl. 117—34)



1. A process of preparing photographic products which comprises passing a gelatin-silver halide photographic emulsion having a solids content within the range of 5–15% through an agitated falling-film type evaporator whereby an emulsion is obtained having a solids content within the range of 30–60% and a temperature within the range of 85–130° F., transferring the concentrated emulsion to the hopper of an extrusion coating device while substantially maintaining its temperature and extruding the emulsion as a layer upon a support for the emulsion, all under darkened conditions, whereby a photosensitive photographic product is obtained.

3,017,290
MODIFIED PAPERS AND METHODS FOR PREPARING THEM

Isadore Rosenthal, Levittown, Pa., and Paul J. McLaughlin, Moorestown, N.J., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 12, 1957, Ser. No. 702,251
20 Claims. (Cl. 117—106)

1. A method which comprises subjecting a paper product in air-dry condition containing a small amount of moisture absorbed on its surface to vapor of an ester of α-cyanoacrylic acid having the formula

$$CH_2=C(CN)COOR$$

where R is an alkyl group having 1 to 4 carbon atoms, for a period of at least about 15 seconds.

3,017,291
WET-STRENGTH PAPER AND METHOD OF PRODUCING SAME

Paul J. McLaughlin, Moorestown, N.J., and Walter W. Toy, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 6, 1959, Ser. No. 785,128
16 Claims. (Cl. 117—119.6)

1. A method for producing a wet-strength paper which comprises impregnating throughout its mass a substantially dry paper prepared from cellulose fibers beaten to a Canadian freeness between 260 and 455 cc. and having a basis weight of 10 to 65 lbs. per ream of 500 sheets having a size of 24" by 36" with an aqueous dispersion containing 2 to 32% by weight of a water-insoluble copolymer of 3 to 10% by weight of units of a member selected from the group consisting of maleic acid, aconitic acid, and salts and anhydrides thereof, and at least one other comonomer selected from the group consisting of acrylonitrile, vinyltoluene, esters of acrylic acid, and esters of methacrylic acid, said dispersion being of low viscosity, having a total solids content not over about 36% by weight, and the amount of copolymer therein being at least about 85% by weight of the total solids content of the dispersion, drying the impregnated paper and heating the impregnated paper at a temperature of 240° F. to 450° F. for a period ranging from about 2 to 5 minutes at the higher temperature to about 30 minutes at the lower temperature.

3,017,292
FIRE RETARDANT NYLON FABRIC AND METHOD OF PRODUCING THE SAME

Hugh H. Mosher, Newark, N.J.

No Drawing. Filed June 18, 1954, Ser. No. 437,881
2 Claims. (Cl. 117—137)

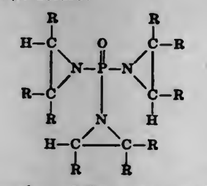
1. A process for producing fire retardant nylon net fabric which comprises passing the fabric through an aqueous finishing solution having a composition of 7.5% of ammonium bromide, 80% to 40% active methylated urea-formaldehyde resin, and 12.5% of water having sufficient ammonium hydroxide to give a pH of 8.0, then hydroextracting, drying and curing for three minutes at 300° F. to give a pick-up on the fabric of 10 to 20% of the solids in said finishing solution.

3,017,293
COATED CURED SYNTHETIC RUBBER SUBSTRATE

Leon Kutik, Jackson Heights, N.Y., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Apr. 28, 1959, Ser. No. 809,349
3 Claims. (Cl. 117—138.8)

1. An article of manufacture comprised of a cured synthetic rubber substrate having one surface coated with a cured film comprised of the addition polymerization product of ethyl acrylate, methyl methacrylate and methacrylic acid and a minor portion of trialkylene phosphoramide having the structure:



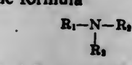
where R is a member of the group consisting of hydrogen, methyl and ethyl, said trialkylene phosphoramide exceeding 5% by weight of the cured film.

3,017,294
PROCESS FOR SIZING

Harry Meisel, Englewood, N.J., assignor to Corn Products Company, a corporation of Delaware

No Drawing. Filed Oct. 1, 1958, Ser. No. 764,485
3 Claims. (Cl. 117—139.5)

1. A process for sizing cellulosic substances which comprises contacting them in an aqueous medium with a starch derivative containing nitrogen and in unswollen granule form; said derivative being made by reacting, in contact with an alkaline catalyst under non-gelatinizing conditions starch with the reaction product of epihalohydrin and a compound from the group consisting of tertiary amines and tertiary amine salts; the tertiary amine being represented by the formula



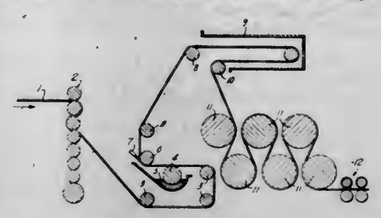
wherein R_1, R_2 and R_3 are radicals from the group consisting of alkyl, substituted alkyl, alkene, aryl, aralkyl and cyclic formed by joining two of the R's and when all three R_1, R_2 and R_3 are the same, each is an alkyl group containing not more than 3 carbon atoms, and when R_1, R_2 and R_3 are not the same and when R_3 contains 4 to 18 carbon atoms, then each R_1 nd R_2 is an alkyl group not larger than ethyl, and when R_1 and R_2 are joined to form a ring, then R_3 is an alkyl group not larger than ethyl; said reaction product being substantially free of epihalohydrin; said derivative being simultaneously gelatinized and dried in situ on said cellulosic substances.

3,017,295
COATED PAPER AND PAPERBOARD AND PROCESS FOR MAKING SAME

Charles R. Outterson, Richmond, James L. Baker, Sandston, and Brenton S. Halsey, Richmond, Va.; said Outterson assignor to Albemarle Paper Manufacturing Company, Richmond, Va., a corporation of Virginia

Filed July 8, 1958, Ser. No. 747,147
11 Claims. (Cl. 117—155)

8. A coated paper product comprising a solid paper sheet having a minimum caliper of about 0.005 in and formed from unbleached pulp selected from the group consisting of softwood sulfate pulp and a mixture of softwood sulfate pulp and alkaline-cooked hardwood pulp, said sheet having on a surface at least about 20 lbs. per 3000 sq. ft. of an uncalendered coating composition comprising clay and titanium dioxide pigment, the clay being in major proportion relative to the titanium dioxide, and a sole adhesive agent comprising an elastomeric polymer,



said sheet being characterized by a uniformly white surface and good printing smoothness.

3,017,296
PROCESS FOR MAKING PHOTOCONDUCTIVE LEAD SULFIDE FILMS

Joseph Stanley Dunn and Frank C. Bennett, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 19, 1957, Ser. No. 641,435
6 Claims. (Cl. 117—201)

1. The method of forming a photosensitive layer of lead sulfide crystals which comprises precipitating lead sulfide crystals onto a prepared surface by adding a solution of thiourea containing sodium metabisulfite to an alkali metal hydroxide solution of a water-soluble lead salt, selected from the group consisting of lead nitrate, lead acetate, lead chlorate and lead perchlorate, the temperature of the combined solutions being within the range of 5–40° C., the concentrations in the solutions when first combined being as follows: lead between 0.05 and 0.06 molar, alkali metal hydroxide between 0.55 and 0.75 molar, thiourea between 0.15 and 0.3 molar, and sodium metabisulfite between 0.005 and 0.05 molar, by immersing the prepared surface in the combined solutions to receive precipitated crystals of lead sulfide and then drying the surface containing lead sulfide.

3,017,297
SMUDGE - RESISTANT PRESSURE - SENSITIVE TRANSFER SHEET AND METHOD OF MAKING

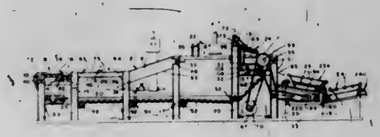
Douglas A. Newman, Glen Cove, and Harold F. E. Dixon, Douglaston, N.Y., assignors to Columbia Ribbon & Carbon Manufacturing Company, Inc., Glen Cove, N.Y., a corporation of New York

Original application Oct. 11, 1957, Ser. No. 689,635, now Patent No. 2,912,344, dated Nov. 10, 1959. Divided and this application Sept. 9, 1959, Ser. No. 838,921
13 Claims. (Cl. 117—216)



1. As a new article of manufacture, smudge-resistant pressure-senstive transfer element of the carbon paper type comprising a flexible foundation sheet having thereon two mutually adhering layers which are simultaneously locally transferable from the foundation to a copy sheet in a substantially stenciling manner in response to a blow or pressure, the base layer adjacent the surface of the sheet having readily releasable contact therewith and being so compounded as to be relatively hard and to have low adhesive properties whereby to resist strongly displacement due to normal physical contact with other articles, and being charged with pigment designed for automatic sensing, and the top layer being integrated with the surface of the base layer and having adhesive properties both for a copy sheet surface and for said base layer to effect local transfer thereof when desired.

3,017,298
TOMATO PEELING METHOD
Clifford K. Wilson, San Jose, Calif., Robert H. Mount, Delphi, Ind., and Robert O. Jabbusch, Hoopeston, Ill., assignors to FMC Corporation, a corporation of Delaware
Original application May 28, 1954, Ser. No. 433,064, now Patent No. 2,862,535, dated Mar. 12, 1958. Divided and this application Apr. 21, 1958, Ser. No. 729,846
4 Claims. (Cl. 146—234)



1. A method of peeling tomatoes or the like comprising the steps of subjecting each tomato to the action of a skin-loosening medium to loosen the skin from the flesh at all points around the periphery of the tomato except at the blossom end and at the stem end, cutting into the tomato at the stem end to sever the loosened skin jacket from the stem end of the tomato and to remove the core of the tomato, cutting off the blossom end of the tomato, and frictionally gripping and separating the loosened skin from the flesh of the tomato.

3,017,299
METHOD OF DEGASSING HYDROGEN FROM SOLID TITANIUM
Giles Frederick Carter, Green Acres, and John Rufford Harrison, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 13, 1958, Ser. No. 714,961
3 Claims. (Cl. 148—13.1)

1. The process for removing hydrogen from titanium, including titanium alloys, which comprises treating solid titanium with calcium metal in an inert molten bath of inorganic salt at a temperature of 500° to 850° C.

3,017,300
PELLETED IGNITER COMPOSITION AND METHOD OF MANUFACTURING SAME
Liles G. Herring, McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed June 21, 1956, Ser. No. 592,995
17 Claims. (Cl. 149—41)

1. As an article of manufacture, a pelleted igniter composition consisting of a mixture of 98 to 85 weight percent of a pyrotechnic component and 2 to 15 weight percent of ethylcellulose which serves as a binder for said pyrotechnic component, said pyrotechnic component consisting of a major amount of powdered potassium perchlorate and a minor amount of a powdered mixture of a 25/75 to 75/25 zirconium/nickel alloy and aluminum.

3,017,301
PROPELLANT COMPOSITIONS CONTAINING A POLYCYANO FUEL COMPONENT
Vaughn A. Engelhardt, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 27, 1959, Ser. No. 802,306
9 Claims. (Cl. 149—45)

1. A propellant composition consisting essentially of an organic polycyano compound in which the ratio of cyano groups to non-cyano carbon atoms in the molecule is at least 0.8:1 and an inorganic oxidizing agent therefor, said polycyano compound and oxidizing agent being present in a proportion of from 10:1 to 1:10 parts by weight and in the aggregate amounting to at least about 60% by weight of the propellant composition.

3,017,302
ART OF PACKAGING COMMODITIES
Paul B. Hultkrans, Milwaukee, Wis., assignor to Milprint, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,367
5 Claims. (Cl. 154—43)

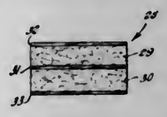
1. A commodity wrapper comprising, a ply of flexible polyester film which has been stretch-oriented to render the same heat-shrinkable at a temperature of substantially 210° F., and a ply of flexible and readily heat-sealable inherently weaker thermoplastic material having a lower melting point than said polyester film adhered thereto over substantially its entire surface to provide a composite heat-shrinkable wrapper sheet having a readily heat-sealable surface.

3,017,303
ADHESIVE COMPOSITION CONTAINING LIGNOCELLULOSE AND EXTRACTED LIGNIN AND PLYWOOD LAMINATE THEREOF
Joseph W. Ayers, Easton, Pa., assignor to Agrashell, Inc., Los Angeles, Calif., a corporation of Delaware
No Drawing. Filed Apr. 22, 1954, Ser. No. 425,051
17 Claims. (Cl. 154—45.9)

1. Plywood- and laminating-adhesive compositions which comprise a glue solution containing therein a mixture of 95–50% of a finely divided naturally-occurring lignocellulose extender composed of from 40–65% cellulose and 5–50% lignin, and 5–50% of an alkali-solubilized extracted lignin, said glue being selected from the group consisting of phenolic-aldehyde resin glues, amine-aldehyde resin glues and protein glues.

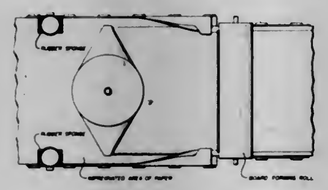
17. Exterior grade plywood the layers of which are bonded together by an adhesive composition comprising an amino-aldehydic resin glue containing therein a mixture of 90–70% of a finely divided lignocellulosic extender composed of about 40–65% cellulose and 5–50% lignin, and an addition of about 10–30% extracted sodium lignate.

3,017,304
ABSORBENT FIBROUS STRUCTURE AND METHOD OF PRODUCTION
Alfred A. Burgeni, Short Hills, N.J., assignor to Personal Products Corporation, a corporation of New Jersey
Filed May 24, 1956, Ser. No. 587,015
16 Claims. (Cl. 154—54)



2. A method of producing an absorbent fibrous body suitable for use as an absorbent component in absorbent products which comprises moistening a surface portion of a highly porous, loosely compacted, cellulosic fibrous bat having relatively low cohesive strength, relatively low capillary forces, relatively poor shape and volume stability, and relatively low fluid retentivity with from about 0.0005 to about 0.03 cubic centimeter of water per square centimeter of surface of said bat, applying pressure to said bat while the surface thereof is moistened with said water, said pressure being sufficient to form a paper-like, densified, compacted cellulosic fibrous layer in situ in said bat and integral therewith, said layer having relatively high cohesive strength, relatively good capillary forces, relatively good shape and volume stability, and relatively high fluid retentivity.

3,017,305
BUILDING BOARD
Manvel C. Dalley, Palo Alto, Calif., assignor to Kaiser Gypsum Company, Inc., Oakland, Calif., a corporation of Washington
Filed Aug. 23, 1956, Ser. No. 605,718
6 Claims. (Cl. 156—40)



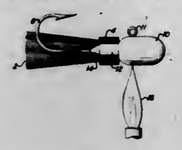
1. Process for making a gypsum core board having increased edge strength and hardness and having an upper and a lower paper liner which comprises first impregnating the inner surface of said lower liner in a strip extending from one inch to twelve inches inwardly from each edge of said liner with a water solution containing 15 pounds of sucrose and 20 pounds of glycerol and 65 pounds of water in an amount to provide from two to sixteen ounces of total of both substances per thousand square feet of board, thereafter depositing a plastic slurry of calcined gypsum upon said lower liner, folding the edges of said linear over the edges of said gypsum slurry, placing said upper paper liner upon said slurry and forming said board and heating to dry.

3,017,306
CONSTRUCTION OF THE INSULATION IN JOINTS FOR HIGH TENSION ELECTRIC CABLES
Paolo Gazzana Priaroggia, Milan, Italy, assignor to Pirelli Società per Azioni, Milan, Italy
Filed Sept. 11, 1956, Ser. No. 609,170
Claims priority, application Italy October 13, 1955
11 Claims. (Cl. 156—48)



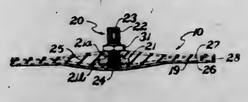
1. The improvement in the method of construction of the insulation of normal joints for high tension electric cables insulated with impregnated paper, characterized by comprising the following operations: making a conductive connection between the conductors of the cable cores that are being joined and forming windings of auxiliary spaced apart paper tubes having small thickness surrounding the insulation on the adjacent cylindrical ends of the respective cable cores that are being joined, the two auxiliary tubes being wound in opposite directions on the core ends so that each of them aids in the tension of the underlying external tape of its core, then filling of the space included between the opposite ends of the paper tubes by winding on the conductive connection between the joined conductors solid insulation in an amount to obtain a uniform cylindrical surface having a diameter equal to the outside diameter of the auxiliary paper tubes, and then winding a single outer paper tube on the whole of said cylindrical surface.

3,017,307
PROCESS FOR ATTACHING PLASTIC TO METAL AND ARTICLES PRODUCED THEREBY
Alwyn N. Halliburton, 3941 Porter Ave., Knoxville, Tenn.
Filed Sept. 26, 1957, Ser. No. 686,399
10 Claims. (Cl. 156—72)



1. A process for attaching to a metal body an element having a surface portion of a plastic material which will flow at a temperature below the melting point of the metal body, which comprises disposing said portion of said element between and in contact with a distended elastic element and the metal body, elevating the temperature of the plastic material sufficiently to cause it to flow under the pressure exerted thereon by said elastic element, and then cooling the plastic material to produce a skin adhering to the metal body.

3,017,308
METHOD OF PROVIDING A VALVE IN AN INFLATABLE TIRE
James W. Pond, Doylestown, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Original application Apr. 23, 1956, Ser. No. 583,350, now Patent No. 2,942,642, dated June 28, 1960. Divided and this application Oct. 14, 1958, Ser. No. 767,219
7 Claims. (Cl. 156—120)

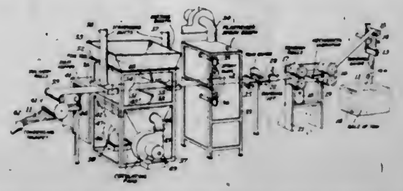


7. The method of providing an inflatable tire with an inflation controlling valve in the sidewall of the tire comprising providing a metal base member having a threaded bore therethrough, the said member being embedded in a pad of elastomer the thickness of which is such that its upper and lower surfaces are substantially coplanar with the end surfaces of the base member, placing a removable insert in said thread bore, placing the base member between adjacent plies of the tire carcass during construction of the latter so that the said base member is completely covered by the plies, the said plies having apertures aligned with the threaded bore of the base member and occupied by said insert with the ends of said insert substantially flush with the inner and outer surfaces of the carcass, thereafter curing the completed tire to unite the base member with the plies of the carcass, then removing the said insert from the base member and replacing it with a threaded valve stem having a radially extending flange externally of the carcass, and threading said stem into said base member until the said flange engages the external surface of the carcass in fluid-tight sealing relationship.

3,017,309
METHOD FOR THE MANUFACTURE OF FILTERS COMPOSED OF CELLULOSE ACETATE
Robert T. Crawford, and Joel B. Stevens, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Feb. 21, 1957, Ser. No. 641,691
16 Claims. (Cl. 156—161)

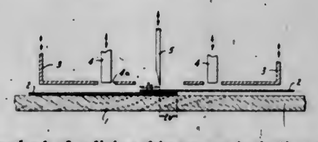
1. A continuous process for forming unitary rod-like filter elements which comprises providing a continuous

multifilament tow, the filaments of which have a plurality of crimps therein, stretching the tow under a tension sufficient to straighten out temporarily said crimps, expanding the cross-sectional dimensions of the tow by abruptly relaxing said tension thereby permitting said



crimps freely to reform, spreading the thus expanded tow to a ribbon-like band having a width considerably greater than that of said expanded tow, treating the thus spread-out tow with a bonding medium, condensing said treated tow to a substantially round rod-like form and wrapping and sealing the condensed tow in a thin wrapper.

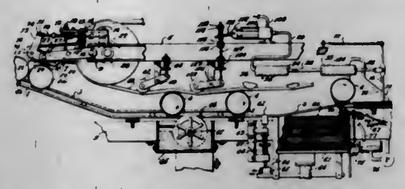
3,017,310
METHOD OF SPLICING VENEER
Armin Elmendorf, 860 Charleston Road, Palo Alto, Calif.
Filed June 10, 1960, Ser. No. 35,352
6 Claims. (Cl. 156—248)



1. A method of splicing thin veneer including the steps of coating a board with an adhesive of the type which in the dry condition can be activated by steam, allowing the adhesive to dry, placing two sheets of thin veneer on the adhesive coated board with an edge of one sheet overlapping an edge of the other, applying pressure to said veneer sheets over a large part of their areas to flatten the veneer, temporarily bonding each sheet of veneer to the board at small widely spaced points by activating the adhesive at said points with steam, shearing through the veneer at the lap, then removing the severed strips of veneer and thereafter pressing the veneer and board in a hot-plate press to permanently bond the veneer over the entire area.

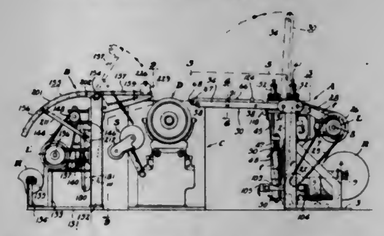
3,017,311
ADHESIVE APPLICATOR FOR A CAN LABELING MACHINE
Ralph J. Mattingly, deceased, late of Rising Sun, Ind., by Richard R. Mattingly, P.O. Box 325, Aurora, Ind., executor, and John J. Mattingly, 213 Front St., Rising Sun, Ind.
Original application Jan. 20, 1955, Ser. No. 483,074, now Patent No. 2,868,403, dated Jan. 13, 1959. Divided and this application Dec. 24, 1958, Ser. No. 782,833
11 Claims. (Cl. 156—357)

1. In a labeling machine wherein cans are advanced along a path in a predetermined spaced apart relation and wherein a label is disposed in the path of an advancing can, and including means for advancing the cans along said path, the improvement which comprises an applicator for contacting the label to apply an adhesive along an edge of the label, means supporting said applicator for movement between a label contacting position and a position removed from contact with a label, and fluid responsive means operatively connected to said can advancing means and actuated when the spacing between successive cans exceeds a predetermined amount



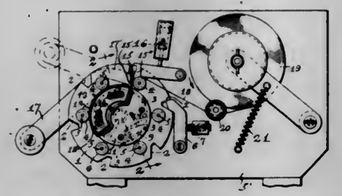
for actuating said applicator support means to move said applicator from said label contacting position to the position removed from contact with a label.

3,017,312
APPARATUS FOR SUPPLYING PLY FABRIC TO A TIRE BUILDING DRUM
Herman T. Kraft, Akron, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 12, 1957, Ser. No. 652,600
10 Claims. (Cl. 156—361)



1. In a tire building machine, an externally cylindrical tire building drum mounted for rotation about a horizontal axis, a servicer mounted near said drum having a frame spaced from said drum, a supply roll having a sheet of liner material and a sheet of rubberized tire fabric spirally wound thereon, means mounting said supply roll for rotation about an axis parallel to the drum axis, means for pulling said sheet from said supply roll and for separating said sheets including a pull roll and motor means for rotating said pull roll, means carried by said frame mounting said pull roll for rotation about an axis above and parallel to the axis of rotation of said supply roll, a fabric-supporting table mounted on said frame to swing about an axis parallel to the drum axis from a generally horizontal feeding position over the tire building drum to an upright retracted position spaced a substantial distance from said drum, said table having a carriage mounted for movement transversely in a direction parallel to the drum axis, a series of cylindrical fabric-engaging rolls mounted on said carriage parallel to the drum axis, means for guiding the rubberized fabric sheet from said supply roll over said pull roll to said table and for forming a fabric festoon between said rolls and said table, means for biasing the carriage in a transverse direction and for controlling the transverse movement of said carriage to locate the carriage in a series of predetermined positions, guide means for preventing relative transverse movement between said carriage and the fabric sheet supported by said carriage so that the fabric may be accurately positioned as it is applied to the tire building drum, means for producing a signal when the amount of fabric in said festoon is below a predetermined amount, and means for automatically controlling said motor means in response to said signal to maintain a supply of fabric on said table and in said festoon at all times.

3,017,313
DEVICE FOR WRAPPING INSULATING TAPE AROUND ELECTROMAGNET CORES
Joseph L. Lagasse, Montreal, and Maurice J. Malone, Outremont, Quebec, Canada, assignors to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed June 30, 1958, Ser. No. 745,749
5 Claims. (Cl. 156—446)



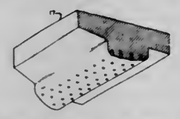
1. A device for wrapping a tensioned tape on a core comprising in combination: a circular flat plate dial, having a central opening, provided with notches on said dial on its outer and inner peripheries, equally spaced apart around their respective peripheries, pins projecting from a face of the dial, equally spaced therearound; a flat plate circular mounting means having a raised portion adapted to project through the central opening of the dial so that the dial is rotatable thereon, a tensioned pawl hinged on the mounting means in co-action with a notch on the inner periphery of the dial; a flat plate cover mounted on and secured to the raised portion of the mounting means, a wrapping element having its outside edge face conforming to the peripheral configuration of the periphery of the cover and secured on the cover so as to rotate a selected number of the cores as the tape is applied thereon: a flat plate supporting means, means to pivot the mounting means thereon, a tensioned pawl hinged on the supporting means in co-action with a notch on the outer periphery of the dial; the notches on the inner and outer peripheries of the dial each having a lateral face at right angles to the bottom face of the notch and the opposing lateral face outwardly shaped from the bottom face of the notch, the engaging end of the pawls being shaped to conform to the shape of the notches; so that when the mounting means is rotated in one direction, only the mounting means, cover and wrapping element rotate, and when the mounting means is rotated in the reverse direction, the dial as well rotates.

3,017,314
APPARATUS FOR PRODUCING PLASTIC BAGS
Alfred Kebekus, Nordenham, and Werner Rosenboom, Esenham, Germany, assignors to Norddeutsche Seekabelwerke Aktiengesellschaft, Nordenham, Germany, a corporation of Germany
Filed Oct. 14, 1960, Ser. No. 62,753
Claims priority, application Germany October 24, 1959
4 Claims. (Cl. 156—498)



1. In a welding and severing apparatus for producing bags from a tube of plastic material comprising a pair of clamping fixtures disposed laterally adjacent to but spaced from each other, and a heatable welding blade adapted to be moved within a plane perpendicular to said tube for welding a tightly closed intermediate portion of said tube and for simultaneously severing the welded intermediate portion into two pieces, each of which is held by a clamping fixture, the improvement comprising a metallic cooling element, means for moving said cooling element within the same plane as said welding blade, and means for controlling the movement of said cooling element in a timed relation to the movement of said welding blade so that said element will be moved into a final position of engagement with the surfaces along which said two pieces were severed after said welding blade has been moved away from said surfaces.

3,017,315
HEAT SEALING BAR
Robert Doyle, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,830
7 Claims. (Cl. 156—581)

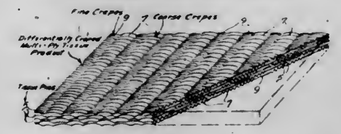


1. A heat sealing bar with a smooth convex, continuous heating face having separated openings spaced across said face.

3,017,316
METHOD OF BLEACHING WOOD PULP WITH CHLORINE DIOXIDE AND SODIUM BOROHYDRIDE
William Howard Rapson, Toronto, Ontario, Canada, assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed June 25, 1958, Ser. No. 744,337
2 Claims. (Cl. 162—80)

1. A process for bleaching wood pulp which comprises treating pulp with an aqueous solution of chlorine dioxide at from 50 to 90 degrees centigrade, at from one to fifteen percent consistency, for from thirty minutes to five hours at a pH of from one to eight; washing, and then contacting the same pulp with an aqueous solution of sodium borohydride.

3,017,317
METHOD OF CREPING TISSUE AND PRODUCT THEREOF
Edward H. Volgtman, Neenah, Harold F. Donnelly, Appleton, and Charles A. Lamb, Neenah, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Feb. 12, 1957, Ser. No. 639,792
2 Claims. (Cl. 162—111)



1. A multi-ply cellulosic tissue product having improved bulk and density comprising a plurality of superposed, dry creped, substantially lint-free cellulosic tissue sheets, each of said sheets having a basis weight of from about 3.5 to about 15 pounds per 3,000 square foot ream and a crepe ratio of from about 1.25 to about 2.5, each of said sheets being characterized by a differentially creped configuration comprising substantially parallel longitudinally extending strips of relatively coarse crepe alternating

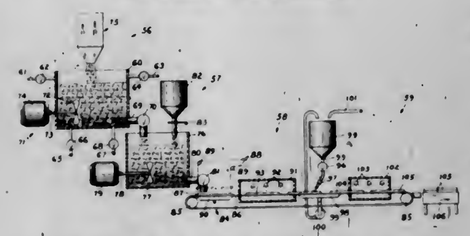
with longitudinally extending strips of relatively fine crepe in a regular pattern across substantially the entire width of each of said sheets, said coarsely creped strips comprising from about 15% to about 85% of the total area of each sheet and having from about 10 to about 20 crepes per inch, said finely creped strips comprising the remaining area of each sheet and having from about 30 to about 50 crepes per inch, the finely creped strips imparting stability to the adjacent coarsely creped strips in each sheet to maintain the improved bulk of the multi-ply product, which bulk is provided in each sheet by the coarsely creped strips, at a level from about 43.5 to about 95% higher than the bulk provided in a product formed of sheets having a single type of crepe.

3,017,318

HIGH TEMPERATURE RESISTANT SILICEOUS COMPOSITIONS AND METHOD OF PRODUCING

Dominick Labino, Maumee, and Lawrence V. Gagin, Toledo, Ohio, assignors, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware

Filed Nov. 2, 1956, Ser. No. 620,143
20 Claims. (Cl. 162—152)



1. The method of producing a substantially rigid article resistant to high temperatures, which comprises providing an aqueous slurry of siliceous fibers, admixing a granular mineral material with said slurry, forming a felt from said slurry, applying to said felt an aqueous suspension of a colloidal inorganic binder in an amount sufficient to supply from about 40 to about 80% solids by weight, and then drying said felt at a temperature and a time sufficient to prevent migration of the binder to the surface of the felt.

3,017,319

SLIMICIDE

William E. Rader, Modesto, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Apr. 20, 1959, Ser. No. 807,314
4 Claims. (Cl. 162—161)

1. The method of combating slime in industrial waters comprising the step of adding a biocidal effective amount of an ester of a haloacetoacetic acid to said water.

3,017,320

1,2-DI(TERT-ALKYL MERCAPTO) ETHANE INSECTICIDES

Richard D. Franz and Paul F. Warner, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed July 13, 1959, Ser. No. 826,458
14 Claims. (Cl. 167—22)

1. A method of killing an insect which comprises subjecting said insect to the action of an insecticidal amount of a 1,2-di(tert-alkyl mercapto) ethane compound having the structural formula

$$R—S—CH_2—CH_2—S—R$$

wherein R is a tert-alkyl group having from 4 to 12 carbon atoms.

3,017,321

TRICHLOROMETHYL 2-METHOXY-5-PHOSPHONOBENZENETHIOLSULFONATE PESTICIDES

Elizabeth M. Hardy, Hohokus, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 22, 1959, Ser. No. 807,980
6 Claims. (Cl. 167—30)

4. A method of controlling nematodes in the soil which comprises applying thereto trichloromethyl 2-methoxy-5-phosphonobenzenethiolsulfonate.

3,017,322

5-FLUOROURACIL COMPOSITIONS FOR TREATING COCCIDIOSIS

Joseph J. Ursprung, Waterford, Conn., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 9, 1959, Ser. No. 845,308
8 Claims. (Cl. 167—53.1)

1. A coccidiostatic composition for veterinary use comprising a nutritionally balanced animal feed as the carrier and a compound selected from the group consisting of 5-fluorouracil and non-toxic salts thereof as the anti-coccidial agent, said agent being present in said feed at a concentration level that is in the range of from about 0.01% to about 0.2% by weight of the total weight of the composition.

3,017,323

THERAPEUTIC COMPOSITIONS COMPRISING POLYHYDRIC ALCOHOL SOLUTIONS OF TETRACYCLINE-TYPE ANTIBIOTICS

Philip N. Gordon, Old Lyme, and Charles R. Stephens, Jr., Niantic, Conn., and Melvin M. Noseworthy, Brooklyn, and Fred W. Teare, Jamaica, N.Y., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 2, 1957, Ser. No. 669,460
8 Claims. (Cl. 167—65)

1. A therapeutic composition which comprises a solution of at least one tetracycline-type antibiotic selected from the class consisting of magnesium tetracycline having a molar ratio of magnesium to tetracycline of about 3:1, calcium tetracycline having a molar ratio of calcium to tetracycline of about 3:1, aluminum tetracycline having a molar ratio of aluminum to tetracycline of about 3:1, magnesium oxytetracycline having a molar ratio of magnesium to oxytetracycline of from about 1:3 to 3:1, calcium oxytetracycline having a molar ratio of calcium to oxytetracycline of from about 1:3 to 3:1, zinc oxytetracycline having a molar ratio of zinc to oxytetracycline of about 1:3 to 3:1, and aluminum oxytetracycline having a molar ratio of aluminum to oxytetracycline of about 1:3 to 3:1 in a polyhydric alcohol solvent selected from the class consisting of glycerine, polyethylene glycol, propylene glycol, mixtures thereof, and said solvents containing up to about 20% by volume of a non-toxic alkanol selected from the group consisting of sorbitol and ethanol, at a pH substantially between 7.0 and 10.

3,017,324

ANTACID COMPOSITION

Stewart M. Beekman, Berkeley Heights, N.J., assignor to Reheis Company, Inc., a corporation of New York

Filed Apr. 6, 1959, Ser. No. 804,414
10 Claims. (Cl. 167—55)

1. An antacid composition capable as determined by the Holbert, Noble and Grote test method of maintaining the pH of artificial gastric juice within the range from about 3 to about 4.5 for at least one hour, comprising the dried combination of hydrous gelatinous aluminum hydroxy carbonate and magnesium silicate, in a molecular weight ratio calculated as Al_2O_3:MgO within the range from about 1:2 to about 32:2.

3,017,325

THERAPEUTIC COMPOSITION FOR TOPICAL APPLICATION AND METHOD OF APPLYING THE SAME

David A. Vogel, 3910 N. Janssen, Chicago, Ill.

No Drawing. Filed Dec. 29, 1955, Ser. No. 556,083
23 Claims. (Cl. 167—58)

1. A composition useful in treating ulcerous wounds, which composition comprises cytochrome distributed in a viscous ointment carrier.

3,017,326

3-AMINO-4-PHENYLPYRAZOLE MUSCLE RELAXANT PREPARATIONS AND METHOD OF PRODUCING SKELETAL MUSCLE RELAXATION

Leonard Cook, Abington, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 4, 1959, Ser. No. 818,012
7 Claims. (Cl. 167—65)

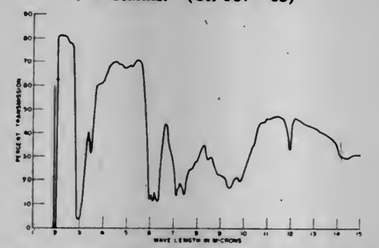
1. A pharmaceutical preparation having muscle relaxant activity, in dosage unit form, comprising a pharmaceutical carrier and from about 100 mg. to about 500 mg. of a member selected from the group consisting of 3-amino-4-phenylpyrazole and its nontoxic pharmaceutically acceptable acid addition salts.

3,017,327

AZACOLUTIN EXTRACTION FROM *S. CINNAMOMEUS* VAR. *AZACOLUTA*

Renato Craveri, Milan, Italy, and Odette L. Shotwell and Thomas G. Pridham, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

Filed Nov. 17, 1959, Ser. No. 853,666
2 Claims. (Cl. 167—65)



1. A method of obtaining high yields of azacolutin substantially free of duramycin comprising the steps of fermenting *Streptomyces cinnamomeus* f. *azacoluta* (NRRL B–1699) with aeration and stirring of the fermentation broth, removing the broth from the mycelia, extracting the mycelia with ethanol in the absence of light, concentrating the ethanolic extract under nitrogen to precipitate crude azacolutin, washing the crude precipitate with distilled water, dissolving the washed precipitate in a mixture of 1-butanol, pyridine, and water, centrifuging the solvent mixture to form phases, separating the upper phase containing the azacolutin, concentrating it in vacuo to precipitate the azacolutin therefrom, recovering the precipitate, washing the precipitate in liquid heptane, and drying to obtain the purified azacolutin.

3,017,328

HAIR STRAIGHTENING PREPARATION

Henry M. Childrey, Jr., Fort Wayne, Ind., and Eric Doty, Niles, Mich., assignors to Hairstrate, Inc., Fort Wayne, Ind.

No Drawing. Filed Jan. 30, 1957, Ser. No. 637,064
2 Claims. (Cl. 167—87.1)

1. An aqueous hair treatment solution consisting essentially of alkali metal hydroxide having from about 3% to about 4% by weight of alkali metal hydroxide and the balance of the active ingredients consisting essentially of a combination of cetyl alcohol, petroleum jelly, mineral oil and sodium lauryl sulfate which are present in proportions respectively of about 4:1:2:1, said active ingredients comprising about 37% by weight of the aqueous solution.

3,017,329

METHOD OF LOCATING ENTERIC CONSTRICTIONS WITH A PLURALITY OF PILLS CONTAINING AN X-RAY CONTRAST AGENT

Frederick E. Dulmage, Sr., Saginaw, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 15, 1957, Ser. No. 678,441
1 Claim. (Cl. 167—95)

A method for locating and gauging an enteric constriction comprising administering orally a plurality of enteric pills comprising barium sulfate and, as a binder therefor, a water-soluble cellulose ether wherein the etherifying radical is a member selected from the group consisting of methyl, hydroxyethyl and hydroxypropyl radicals and mixtures thereof, the combined content of hydroxyethyl and hydroxypropyl radicals not exceeding about 15%, by weight, of said ether, said pills being substantially spherical and of widely different diameters; tracking the pills by means of X-rays; locating the constriction by noting where the larger pills are stopped and gauging the size of the constricted passage by noting the size of the largest pills that pass through it.

3,017,330

METHOD OF MAKING DEXTROSE USING PURIFIED AMYLOGLUCOSIDASE

Ralph W. Kerr, Riverside, Ill., assignor to Corn Products Company, a corporation of Delaware

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,767
6 Claims. (Cl. 195—11)

1. In a process for producing dextrose from starch wherein the starch in aqueous system is hydrolyzed with an amyloglucosidase containing enzyme preparation to maximal D.E. and true dextrose contents, the hydrolyzate is clarified, concentrated by evaporation, and allowed to crystallize, and the crystallized dextrose is separated from the mother liquor, the improvement which consists in hydrolyzing the starch with an amyloglucosidase containing enzyme preparation which has been purified by developing upon a cellulosic bed a chromatogram from an aqueous solution that contains amyloglucosidase, and using as a developing agent a liquid that is a solution in water of a water-miscible non-solvent for the enzyme, and thereafter eluting from the chromatogram the portion thereof consisting essentially of the amyloglucosidase in purified form; said hydrolysis resulting in a final hydrolyzate which has maximal D.E. values of about 93 to 96 percent and maximal true dextrose contents of about 87 to 94 percent, dry basis.

3,017,331

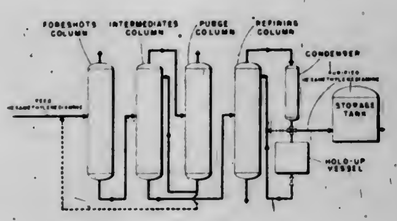
METHOD FOR THE PURIFICATION OF HEXAMETHYLENEDIAMINE

Charles R. Campbell, Richard D. Chapman, and Robert Johnson, Pensacola, Fla., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

Filed Apr. 15, 1959, Ser. No. 806,423
3 Claims. (Cl. 202—71)

1. In the continuous process for purifying refined hexamethylenediamine wherein hexamethylenediamine is distilled in a distillation zone and the resulting vaporous hexamethylenediamine is condensed with part of the condensed hexamethylenediamine being returned for redistillation as reflux and another part of the condensed

hexamethylenediamine being collected as final product, the improvement comprising the steps of retaining the remainder of the condensed hexamethylenediamine in a hold-up zone at a temperature between the melting point and the boiling point of hexamethylenediamine for a period of time of at least 15 minutes whereby the low-



boiling polarographically reducible impurities in the condensed hexamethylenediamine are converted to high-boiling polarographically reducible impurities, and thereafter returning the hexamethylenediamine from the hold-up zone to the said distillation zone as reflux for redistillation thereof.

3,017,332
METHOD OF JET PLATING INDIUM-LEAD ALLOY ELECTRODES ON GERMANIUM

George L. Schnable and John G. Javes, Lansdale, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 16, 1959, Ser. No. 787,128
6 Claims. (Cl. 204—15)

1. In the manufacture of semiconductor devices involving rapid jet plating of indium electrodes onto germanium blanks by directing a stream of electrolyte containing an indium salt against the germanium surface onto which the indium is to be applied and passing electric current through the electrolyte stream to said surface, and also involving subsequent application of heat to effect micro-alloying of at least one of the electrodes with the germanium which tends to cause deformation of at least one of the electrodes, the improvement which comprises conducting the jet plating of each electrode that tends to be deformed with a small amount of a soluble lead salt added to the electrolyte sufficient substantially to preclude intolerable deformation of the plated electrode during the subsequent micro-alloying operation, at least some of the lead plating out and becoming a minor alloy constituent of the plated electrode.

3,017,333
SELF-LEVELING BRIGHT NICKEL PLATING BATH AND PROCESS

Virgil H. Waite, Vermilion, and Bernard P. Martin, Cleveland Heights, Ohio, assignors to The McGean Chemical Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,100
26 Claims. (Cl. 204—49)

1. An aqueous acid bath solution for electroplating nickel containing at least one nickel salt as a source of nickel, which plating solution includes an organic compound selected from the group consisting of the diketo and imino keto thiazolidines and selenazolidines, and the 3 and 5 position substituted derivatives thereof; and the diketo and imino keto thiazines and selenazines, and the 3, 5 and 6 substituted derivatives thereof; said solution having a pH of not less than 2.5 and not exceeding about 5.0; said compound being dissolved in the bath solution in sufficient quantity to effect leveling and brightening of nickel deposits produced therein.

3,017,334
ZINC BRUSH PLATING SOLUTION

Griffin L. Jones, 2166 Waverly, San Antonio 1, Tex.

No Drawing. Filed Sept. 6, 1960, Ser. No. 54,327
1 Claim. (Cl. 204—55)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A zinc brush plating solution of the composition:

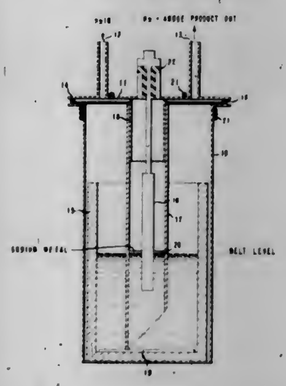
Zinc sulfate	150 grams per liter of solution
Zince acetate	200 grams per liter of solution
Ammonium chloride	30 grams per liter of solution
Boric acid	30 grams per liter of solution
Mannitol	50 grams per liter of solution
Concentrated hydrochloric acid	100 cc. per liter of solution

and enough distilled water to make one liter of solution.

3,017,335
ELECTROLYTIC PRODUCTION OF FLUOROCARBONS AND METALLIC SODIUM

William R. Wolfe, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Feb. 25, 1958, Ser. No. 717,429
10 Claims. (Cl. 204—62)



9. The process of simultaneously producing fluorocarbons from a carbon anode and metallic sodium which comprises electrolyzing, with direct current at a voltage of less than 30 volts between an insoluble cathode and an anode made of chemically uncombined carbon, a molten electrolyte comprising about 40–70% by weight of sodium fluoride, about 20–40% by weight of calcium fluoride, and about 10–30% by weight of magnesium fluoride, the three named metal fluorides constituting at least about 95% by weight of the electrolyte, any remainder thereof consisting essentially of the fluoride of a different metal, the temperature of said molten electrolyte being not above about 900° C. and the anode current density being at least about one ampere per square decimeter.

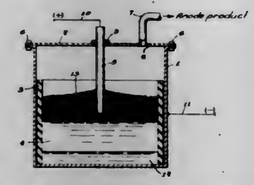
3,017,336
PREPARATION OF FLUOROCARBON NITRILES

Franciszek Olstowski, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Sept. 2, 1958, Ser. No. 758,437
13 Claims. (Cl. 204—62)

1. A process for the preparation of a fluorocarbon nitrile, which comprises passing an electric current at a sufficiently low voltage to prevent anode effect through an electrolyte between a porous carbon anode and an insoluble cathode at a temperature sufficient to melt the

electrolyte to obtain an anode product containing a fluorocarbon nitrile, said electrolyte consisting essentially of at least one metal fluoride which is non-volatile and stable at the electrolysis temperature selected from the group consisting of alkali metal fluorides, alkaline earth metal



fluorides, and earth metal fluorides and a metal salt which is non-volatile and stable at the electrolysis temperature selected from the group consisting of metal cyanides and metal thiocyanates, and recovering the fluorocarbon nitrile from the anode product.

3,017,337
REDUCTION OF DIPHENIMIDE

Hans Spiegelberg, Basel, and Bruno Peter Vaterlaus, Binningen, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

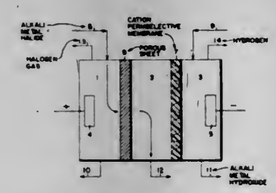
No Drawing. Filed Apr. 17, 1959, Ser. No. 807,012
Claims priority, application Switzerland May 8, 1958
3 Claims. (Cl. 204—75)

1. A process for making 6,7-dihydro-5H-dibenz[c,e]-azepine which comprises adding diphenimide to a catholyte solution comprising water, a lower alkanol and sulfuric acid; passing an electric current through said catholyte by means of a lead cathode at a current density of from about 0.015 amp./sq. cm. to about 0.02 amp./sq. cm. to reduce said diphenimide; and recovering said 6,7-dihydro-5H-dibenz[c,e]azepine from the resulting catholyte solution.

3,017,338
ELECTROLYTIC PROCESS AND APPARATUS

Clarence A. Butler, Jr., East Cleveland, and Christopher C. Silsby, Jr., Euclid, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,561
13 Claims. (Cl. 204—98)



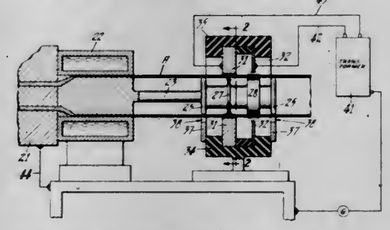
1. The method of producing alkali metal hydroxide comprising passing an aqueous solution of an alkali metal halide into the anode compartment of a three-compartment electrolytic cell having an anode compartment separated from the center compartment by a fluid permeable porous diaphragm and the center compartment separated from the cathode compartment by a cation permselective membrane, maintaining a greater hydraulic pressure in the anode compartment than in the center compartment, thus causing said alkali metal halide solution to flow from the anode compartment through said porous diaphragm into the center compartment, introducing water into the cathode compartment, passing a direct current through said compartments to cause migration of cations from the center compartment into the cathode compartment, withdrawing an aqueous solution of alkali metal hydroxide from the cathode compartment, withdrawing an aqueous solution of a mixture of an alkali metal hydroxide and alkali metal halide from the center compartment, and recovering the halogen of said halide from the anode compartment.

5. A three-compartment electrolytic apparatus for producing alkali metal hydroxide comprising an anode compartment, a center compartment, and a cathode compartment, the anode compartment being separated from the center compartment by a porous non-selective diaphragm, the center compartment being separated from the cathode compartment by a cation permselective membrane, said membrane comprising a solid polymeric structure reinforced by an embedded non-corrodible material, inlet means for passing alkali metal chloride brine into the anode compartment, means for maintaining a pressure in the anode compartment greater than the pressure in the center compartment to effect the transfer of said alkali metal chloride brine through said porous diaphragm into said center compartment, means for passing an aqueous electrolyte solution into the cathode chamber, means for passing a direct current transversely through said compartments, and outlet means for withdrawing aqueous solutions of alkali metal hydroxide from the cathode and center compartments.

3,017,339
METHOD OF AND APPARATUS FOR TREATING SURFACES OF EXTRUDED THERMOPLASTIC TUBING WITH CORONA DISCHARGE

Bradley Dewey, Cambridge, Mass., assignor, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Jan. 24, 1957, Ser. No. 636,021



2. A method of treating the surfaces of thermoplastic tubing for the reception of a surface coating, comprising advancing a continuous length of tubing along a path of travel, maintaining the tube fully expanded for at least a portion of its path of travel, passing the wall of the expanded portion of the tubing continuously between a pair of concentrically spaced electrodes one of which is arranged internally of the tubing and the other externally thereof with both electrodes arranged to nearly fit the tubing size and shape, so guiding the tubing as to be spaced a small but substantially constant and uniform distance radially from the surface of at least one of said electrodes, and impressing a high value alternating voltage across the space between said electrodes at values to produce a corona discharge.

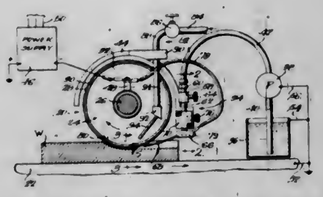
3,017,340
ELECTROLYTIC APPLICATOR

Lynn A. Williams, Winnetka, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 25, 1959, Ser. No. 835,901
16 Claims. (Cl. 204—217)

1. An applicator for an electrolytic grinding machine for feeding electrolyte into the interface between an electri-

cally conductive workpiece and an electrically conductive grinding tool wherein an electric current is passed between the workpiece and the tool across the interface, including in combination, at least one metallic electrolyte feed tube mounted on and insulated from the machine and having

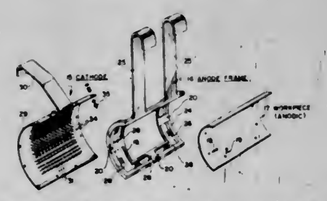


its outlet positioned closely adjacent the interface, means including electrically nonconductive conduit means connected to said feed tube and adapted to supply electrolyte thereto from an electrolyte source, and electrical connections making the electric sense and potential of said metallic feed tube the same as that of the grinding tool.

3,017,341
METHOD AND APPARATUS FOR ELECTRO-CHEMICAL MILLING

Paul A. Oelgoetz, Columbus, Ohio, assignor to North American Aviation, Inc.

Filed Jan. 21, 1960, Ser. No. 3,799
8 Claims. (Cl. 204—242)



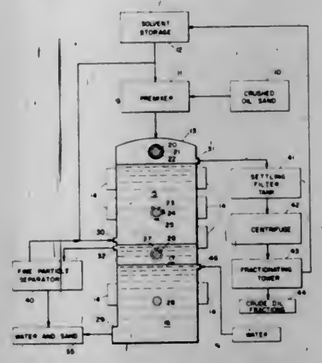
1. An assembly for use with an electrolyte solution and with an electrical energy supply to remove metal from an included workpiece, and comprising: said workpiece having an uncoated surface area, an anode frame having an interior opening, bleeder means contoured to cooperate with said workpiece and having an interior opening that encircles said workpiece uncoated surface area and that is located within said anode frame interior opening, cathode plate means, rod-like cathode elements connected to said plate means and having outward end portions which are projected to conform to said workpiece uncoated surface area as to projected contour, first fastener means securing said bleeder means to said frame fixedly and in electron-conducting relation, second fastener means securing said cathode plate means to said frame fixedly and in electrically-insulated relation, and third fastener means securing said workpiece to said frame fixedly and in electron-conducting relation, said third fastener means locating said workpiece so that said bleeder means is spaced-apart a uniform distance from said workpiece uncoated surface area and from said cathode element outward end portions.

3,017,342
OIL SEPARATION PROCESS

Thomas J. Bulat, Davenport, Iowa, James R. Logan, Rock Island, and Paul F. Kusy, Moline, Ill., assignors to The Bendix Corporation, a corporation of Delaware

Filed Sept. 5, 1958, Ser. No. 759,341
5 Claims. (Cl. 208—11)

1. The method of separating oil from oil bearing mineral matter which comprises premixing the oil bearing mineral matter with a solvent for oil having specific gravity less than that of water and being insoluble in water; moving the premix in free fall through a body of solvent for oil floating on water and insoluble in water



down through said solvent body and said water; sonically activating said solvent body in a degree sufficient to result in cavitation therein while moving said media through said body of solvent.

3,017,343
PREVENTING HEAT EXCHANGE DEPOSITS

Ernest L. Pollitzer, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,131
7 Claims. (Cl. 208—47)

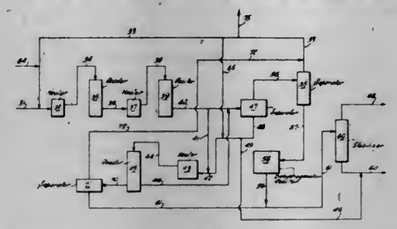
1. In the conversion of hydrocarbon oils wherein the oil is heated by indirect heat exchange with a heating fluid in a heat exchanger, said oil containing components which form deposits in the heat exchanger at the temperature to which the oil is heated in the exchanger, the method of retarding deposit formation in the heat exchanger which comprises heating the oil in said heat exchanger in admixture with from about 1 to about 1000 parts per million by weight of the reaction product of an aliphatic amine containing from 12 to about 40 carbon atoms per molecule and having from one to two hydrogen atoms attached to the nitrogen atom with an epihalohydrin compound selected from the group consisting of epichlorohydrin, 1,2-epi-4-chlorobutane, 2,3-epi-4-chlorobutane, 1,2-epi-4-chloropentane, 2,3-epi-5-chloropentane and corresponding bromo and iodo compounds, said reaction product having been formed by reacting from 1 to 2 mols of the amine with from 1 to 2 mols of the epihalohydrin compound at a temperature of from about 20° C. to about 150° C., followed by dehalogenation.

3,017,344
SERIAL REFORMING OF HYDROCARBONS

Robert A. Woodle, Nederland, Tex., assignor to Texaco Inc., a corporation of Delaware

Filed May 5, 1958, Ser. No. 732,926
6 Claims. (Cl. 208—65)

1. In a process for improving the octane number of a petroleum naphtha in which a full range petroleum naphtha is reformed by being passed serially with hydrogen through at least three reforming reactors containing a platinum reforming catalyst at a temperature between 850 and 1100° F. and a pressure between 200 and 700 p.s.i.g., the steps which comprise separating the partially reformed full range naphtha prior to the final catalytic reactor into a light naphtha fraction having a final boiling point within the range of 200–240° F. and a heavy naphtha fraction having an initial boiling point within the range of 200–240° F., contacting said light naphtha fraction with a chromia-alumina dehydrogenation catalyst



at a temperature of 800–1000° F., separately passing said heavy naphtha fraction through the balance of the reforming reactors and combining the fully reformed heavy naphtha with the partially reformed-dehydrogenated light naphtha.

3,017,345
TREATMENT OF HYDROCARBONS

Du Bois Eastman, Whittier, and Warren G. Schlinger, Pasadena, Calif., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

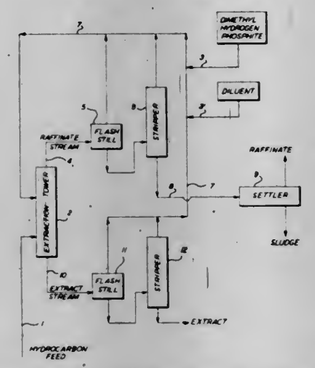
No Drawing. Filed July 12, 1960, Ser. No. 42,198
16 Claims. (Cl. 208—210)

1. A process for the production of a hydrocarbon fraction of reduced sulfur content which comprises passing a mixture of a sulfur-containing normally liquid hydrocarbon fraction and hydrogen through a first reaction zone at a temperature between about 850 and 1500° F., a pressure between 1000 and 20,000 p.s.i.g. and under conditions of highly turbulent flow, said mixture containing between 4000 and 100,000 cu. ft. of hydrogenating gas per bbl. of liquid hydrocarbon, and contacting at least a portion of the reaction product in a second reaction zone with a desulfurization catalyst at a temperature between 500 and 1000° F. and a pressure between atmospheric and 2000 p.s.i.g. in the presence of hydrogen.

3,017,346
SOLVENT EXTRACTION PROCESS USING DIMETHYL HYDROGEN PHOSPHITE

William B. Watson, Park Forest, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

Filed Oct. 15, 1959, Ser. No. 846,599
4 Claims. (Cl. 208—322)

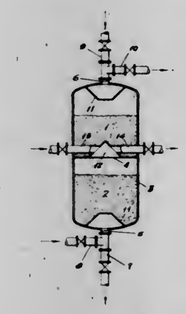


1. A process for the extraction of an aromatic hydrocarbon from a liquid hydrocarbon mixture containing the same and an aliphatic hydrocarbon which comprises contacting said mixture with dimethyl hydrogen phosphite to obtain two liquid phases and separating a relatively aliphatic hydrocarbon raffinate phase from a relatively aromatic hydrocarbon extract phase.

3,017,347
PROCESS OF PURIFYING WATER WITH ACTIVATED CARBON

Alfred J. P. Kratz, Frankfurt am Main, Germany, assignor to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany

Filed July 27, 1959, Ser. No. 829,636
Claims priority, application Germany, July 31, 1958
5 Claims. (Cl. 210—63)



1. In a process of purifying water containing dissolved heavy metal compounds and taste and odor imparting substances, wherein the water to be purified is dosed with an oxidizing agent and then contacted with a bed of activated carbon to precipitate the oxidized heavy metal compounds and remove taste and odor imparting substances, the improvement comprising passing the water dosed with oxidizing agents downwardly through a bed of granular activated carbon sufficiently deep to substantially complete the catalytic precipitation and deposition of dissolved heavy metal compounds oxidized but not precipitated by said oxidizing agents on the carbon in the upper portion of said bed and to maintain the carbon in the lower portion of said bed free of precipitated heavy metal compounds and available for adsorbing taste and odor imparting substances, backwashing said upper portion when its catalytic capacity is exhausted to prevent penetration of precipitated heavy metal compounds into said lower portion, then continuing flow of water to be purified through both portions of the bed, and repeating the alternate backwashing of said upper portion and passing of water to be purified through the entire bed until the adsorptive capacity of said lower portion of the carbon bed is exhausted.

3,017,348
FIRE EXTINGUISHING COMPOSITIONS

Vollrad Steppe, Illertissen, and Wilhelm Schulenburg, Frankfurt am Main, Germany, assignors to Chemische Fabrik Grünau Aktiengesellschaft, Frankfurt am Main, Germany

No Drawing. Filed Jan. 19, 1959, Ser. No. 787,360
Claims priority, application Germany Jan. 22, 1958
5 Claims. (Cl. 252—2)

1. A solid dry chemical fire extinguishing composition consisting essentially of a powdered mixture of 50 to 90

parts by weight of ammonium phosphate, 15 to 30 parts by weight of ammonium sulfate and 8 to 20 parts by weight of barium sulfate.

3,017,349
DRILLING FLUIDS

Paul W. Fischer, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Jan. 8, 1954, Ser. No. 403,071
23 Claims. (Cl. 252—8.5)

1. An oil-base drilling fluid essentially comprising a mineral oil-containing liquid suspending medium, a wall-building agent and the reaction product of an alkaline-earth metal base with the undistilled bottoms fraction obtained by vacuum distilling off under vacuum of about 5 to 25 mm. at a temperature of at least about 220° F. the fatty acid portion of the product obtained by reacting water with a material selected from the class consisting of animal and vegetable fats and oils and mixtures thereof at elevated temperatures of about 350° F. to about 600° F. and pressures between about 150 and 1600 p.s.i. to maintain the water in liquid state, said reaction product being employed in an amount sufficient to maintain said wall-building agent dispersed in said liquid suspending medium but insufficient to increase the viscosity of said suspending medium to such an extent that the said drilling fluid cannot be circulated in a well bore.

3,017,350
EMULSION-BASE DRILLING FLUIDS

Paul W. Fischer, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Jan. 18, 1954, Ser. No. 404,788
10 Claims. (Cl. 252—8.5)

1. An emulsion-base drilling fluid comprising a liquid suspending medium comprising between about 10 and about 90 percent by volume of mineral oil and between about 90 and about 10 percent by volume of water, a clay wall-building agent suspended in said suspending medium, and an emulsifying agent comprising the product of reaction between an alkaline compound of an alkali-metal and the undistilled bottoms fraction obtained by vacuum distilling off under vacuum of about 5 to 25 mm. at a temperature of at least about 225° F., the crude fatty acid portion of the product obtained by hydrolyzing with water a material selected from the class consisting of animal and vegetable fats and oils and mixtures thereof at elevated temperatures of about 350° F. to about 600° F. and pressures between about 150 and 1600 p.s.i. to maintain the water in a liquid state, said emulsifying agent being employed in an amount sufficient to maintain said oil and water stably emulsified.

3,017,351
SHALE HYDRATION INHIBITORS FOR CLEAR WATER DRILLING FLUIDS

Platho P. Scott, Jr., Duane B. Anderson, and Arthur Park, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

No Drawing. Filed Nov. 6, 1958, Ser. No. 772,164
11 Claims. (Cl. 252—8.5)

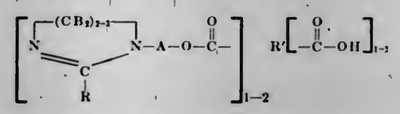
1. A drilling fluid comprising water substantially free of colloidally dispersed solids, containing in each 42-gallon barrel of water at least about 3 pounds of a salt selected from the group consisting of water-soluble ammonium and potassium salts and at least about 0.5 pounds of a water-soluble form of an amine having a hydrocarbon radical containing at least about 12 carbon atoms.

3,017,352
PROCESS OF INHIBITING CORROSION

William B. Hughes, and Verner L. Stromberg, Webster Groves, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Mar. 3, 1958, Ser. No. 718,489, now Patent No. 2,987,521, dated June 6, 1961. Divided and this application Jan. 25, 1960, Ser. No. 4,175
5 Claims. (Cl. 252—8.55)

1. A process of inhibiting the corrosion of ferrous metals in hydrocarbon systems characterized by contacting such metals with an acid-ester of the formula



where B is selected from the group consisting of hydrogen and a lower alkyl group, A is a lower alkylene group having at least two carbon atoms, and R and R′ are residues derived from carboxylic acids, each having 1–36 carbon atoms.

3,017,353
PROCESS FOR PROVIDING A SOLID BODY WITH A PROTECTIVE FILM

James G. Jewell, O'Hara Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 29, 1954, Ser. No. 478,547
11 Claims. (Cl. 252—8.55)

1. A process for providing a metal body in contact with with a mixture containing a mineral oil and a brine solution with a protective film comprised essentially of said mineral oil which comprises incorporating in said mixture a combination of at least two surface-active agents, one of which adsorbs to the surface of said metal body and reduces the contact angle of said mineral oil on said metal body to below 90° and is selected from the group consisting of aliphatic carboxylic acids having from 10 to 40 carbon atoms, aliphatic amines having from 10 to 40 carbon atoms, aliphatic amides having from 10 to 40 carbon atoms and lower aliphatic amine salts of a carboxylic acid having from 10 to 40 carbon atoms and another of which adsorbs to the interface between said mineral oil and said brine solution and decreases the interfacial tension therebetween to below about 10 dynes per centimeter and is selected from the group consisting of amine salts of an aliphatic carboxylic acid having from one to four carbon atoms wherein the total number of carbon atoms in the amine salt exceeds 10 but the total number of carbon atoms in the amine component thereof does not exceed 30, polyoxyalkylene derivatives of the fatty acid esters of anhydroalkitols with carboxylic acids having from 10 to 30 carbon atoms, polyethoxylated higher alkyl amines and polyethyleneglycol esters of higher fatty acids.

3,017,354
OIL WELL INHIBITOR

Olen L. Riggs, Jr., Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Filed Dec. 17, 1956, Ser. No. 628,539
13 Claims. (Cl. 252—8.55)

1. A corrosion inhibitor composition for gas and oil well equipment comprising from about 65 to about 75 parts of a dimer acid, from about 1 to about 10 parts of a nonionic dispersing agent and from about 34 to about 15 parts of a water soluble solvent for said dimer acid.

3,017,355
CORROSION INHIBITOR COMPOSITION

Billy D. Oakes, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 18, 1958, Ser. No. 729,241
15 Claims. (Cl. 252—8.55)

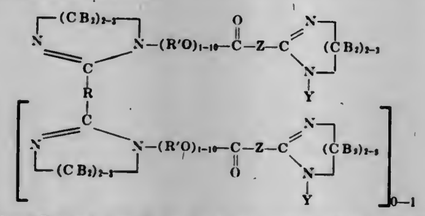
1. A metal corrosion inhibitor for use in aqueous acid solutions which comprises a mixture consisting of from 10 to 90 percent by volume of propargyl sulfide and from 90 to 10 percent by volume of an amine selected from the group consisting oif alkylamines having from 2 to 18 carbon atoms, inclusive, and alkyl pyridines.

3,017,356
PROCESS OF INHIBITING CORROSION

William B. Hughes and Verner L. Stromberg, Webster Groves, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Mar. 3, 1958, Ser. No. 718,391. Divided and this application Nov. 23, 1959, Ser. No. 854,553
15 Claims. (Cl. 252—8.55)

1. A method of inhibiting corrosion of ferrous metals employed in conjunction with a corrosive hydrocarbon fluid characterized by treating said metals with a compound of the formula:



where B is selected from the group consisting of hydrogen and lower alkyl, R′ is lower alkylene, R and Z are non-carboxylic residues of carboxylic acids, and Y is a residue of a polyalkylene polyamine.

3,017,357
HYDROCARBON OIL COMPOSITION

Henryk A. Cyba, Chicago, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed May 12, 1958, Ser. No. 734,408
6 Claims. (Cl. 252—32.5)

1. Hydrocarbon oil containing from about 0.0001% to about 1% by weight of an alkyl acid phosphate salt of the reaction product of an aliphatic amine containing from 12 to about 40 carbon atoms per molecule with an epihalohydrin compound selected from the group consisting of epichlorohydrin, 1,2-epi-4-chlorobutane, 2,3-epi-4-chlorobutane, 1,2-epi-5-chloropentane, 2,3-epi-5-chloropentane and corresponding bromo and iodo compounds, the phosphate of said salt being selected from the group consisting of mono-alkyl and dialkyl acid orthophosphates and pyrophosphates.

3,017,358
HYDROCARBON OIL COMPOSITION

Ernest L. Pollitzer, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Aug. 8, 1958, Ser. No. 753,894
7 Claims. (Cl. 252—32.5)

1. Hydrocarbon oil containing from about 0.0005% to about 1% by weight of an oil soluble HCl salt of the condensation product, formed at a temperature of from about 20° C. to about 150° C., of equimolar amounts of epichlorohydrin and an alkyl amine having from about 12 to about 40 carbon atoms per molecule, from about 1% to about 20% of the amino nitrogen in said condensation product being neutralized with HCl.

3,017,359
LUBRICATING COMPOSITION

Ralph I. Gottshall, Roslyn, and Howard W. Swain, Drexel Hill, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Aug. 28, 1959, Ser. No. 836,630
6 Claims. (Cl. 252—32.7)

1. An improved extreme pressure lubricating composition comprising a major proportion of a mineral lubricating oil and minor proportions consisting of about 0.1 to about 5.0 percent by weight of an alkyl phenol, said alkyl phenol containing at least one alkyl group containing between 3 and 12 carbon atoms, about 0.001 to about 1.0 percent by weight of an acid ester of (1) a dimeric acid derived from an unsaturated fatty acid containing from 6 to 22 carbon atoms and having from 2 to 3 ethylenic linkages per molecule and (2) a partial ester of a fatty acid containing from 12 to 24 carbon atoms and an alkitol anhydride and about 0.001 to about 1.0 percent by weight of a substantially neutral addition product of di oxo-octyl acid orthophosphate and a primary fatty amine, said amine being a mono-alkyl amine containing from 8 to 18 carbon atoms per molecule.

5. An improved turbine oil comprising a major proportion of a mineral lubricating oil and minor proportions consisting of about 0.1 to about 5.0 percent by weight of an alkyl phenol, said alkyl phenol containing at least one alkyl group containing between 3 and 12 carbon atoms, about 0.001 to about 1.0 percent by weight of an acid ester of (1) a dimeric acid derived from an unsaturated fatty acid containing from 6 to 22 carbon atoms and having from 2 to 3 ethylenic linkages per molecule and (2) a partial ester of a fatty acid containing from 12 to 24 carbon atoms and an alkitol anhydride, about 0.001 to about 1.0 percent by weight of a substantially neutral addition product of di oxo-octyl acid orthophosphate and a primary fatty amine, said amine being a mono-alkyl amine containing from 8 to 18 carbon atoms per molecule and about 0.01 to about 0.1 percent by weight of a metal alkyl thiophosphate, said alkyl group containing between 3 and 12 carbon atoms.

3,017,360
HYDROCARBON OIL COMPOSITION

Henryk A. Cyba, Chicago, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 23, 1958, Ser. No. 737,211
6 Claims. (Cl. 252—34)

1. Hydrocarbon oil containing from about 0.0001% to about 1% by weight of a salt of a carboxylic acid of from about 6 to about 50 carbon atoms per molecule and the condensation products of from 1 to 2 mols of an epihalohydrin compound with from 1 to 2 mols of an aliphatic amine of from about 12 to about 40 carbon atoms per molecule, said salt being the reaction product of from 1 to 2 mol proportions of acid per 1 to 2 mol proportions of amine group in the condensation product.

3,017,361
"NON-SQUAWKING" AUTOMATIC TRANSMISSION FLUID

John R. Morris, Fishkill, Raymond C. Schlicht, Wappingers Falls, Clinton W. Adams, Newburgh, and Julius A. Lawrence, Beacon, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Sept. 5, 1956, Ser. No. 607,994
6 Claims. (Cl. 252—35)

1. A method of operating an automatic transmission comprising lubricating said transmission with a fluid com-

prising at least 85 weight percent of a mineral lubricating oil and between 0.1 to 0.4 weight percent of an oil soluble metallic salt of an aliphatic hydrocarbyl mono carboxylic acid having at least eight carbon atoms, said metal being selected from a group consisting of metals of groups II, III and IV of the periodic table, said amount of said metallic salt being sufficient to eliminate squawking without adverse effect on the performance of the oil in the cycling test.

3,017,362
HYDROCARBON OIL COMPOSITION

Henryk A. Cyba, Chicago, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed June 12, 1958, Ser. No. 741,463
14 Claims. (Cl. 252—51.5)

1. Hydrocarbon oil containing from about 0.0001% to about 1% by weight of an ester of a carboxylic acid of from about 6 to about 50 carbon atoms per molecule and the condensation product of from 1 to 2 mols of an epihalohydrin compound with from 1 to 2 mols of an aliphatic amine having from about 12 to about 40 carbon atoms per molecule, said epihalohydrin compound being selected from the group consisting of epichlorohydrin, 1,2-epi-4-chlorobutane, 2,3-epi-4-chlorobutane, 1,2-epi-5-chloropentane, 2,3-epi-5-chloropentane and corresponding bromo and iodo compounds, the amount of said acid being sufficient to esterify from one to all of the hydroxyl groups in said condensation product.

3,017,363
DETERGENT COMPOSITION

James H. Wilson, Demarest, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 28, 1958, Ser. No. 757,702
6 Claims. (Cl. 252—152)

1. A detergent composition consisting essentially of a soluble salt of pentadecyl benzene sulfonic acid and a soluble salt of dodecyl benzene sulfonic acid, the two salts being present in the composition in the proportion of about 1:1 by weight.

3. A detergent composition consisting essentially of ammonium pentadecyl benzene sulfonate and ammonium dodecyl benzene sulfonate in the ratio of about 1:1 by weight.

3,017,364
STABILIZING SULFUR-CONTAINING ALKALINE SOLUTIONS

Robert C. Henry, Carpentersville, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 10, 1959, Ser. No. 858,570
10 Claims. (Cl. 252—188)

1. The method of stabilizing a sulfur-containing alkaline solution which comprises incorporating therein a stabilizing concentration of a mixture of ethylenediaminetetraacetic acid tetrasodium salt, diethylenetriaminepentaacetic acid pentasodium salt, N-hydroxyethylenediaminetriacetic acid trisodium salt and disodium salt of di-(beta-hydroxyethyl) glycine.

3,017,365
PHOSPHOR SUSPENSION

Don E. Harrison, East Cleveland, Ohio, assignor to General Electric Company, a corporation of New York

No Drawing. Filed Sept. 21, 1959, Ser. No. 841,020
2 Claims. (Cl. 252—301.3)

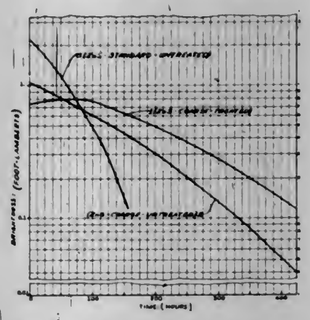
1. A phosphor suspension for application to a base member and consisting essentially of an aqueous solution of a water-soluble organic binder, said solution being free of soluble barium ions and containing in suspension a finely-divided water-insoluble barium-titanium-phospbate phosphor consisting essentially of the compound

$$2BaO:TiO_2:P_2O_5$$

3,017,366
ELECTROLUMINESCENT PHOSPHOR AND TREATMENT

Ralph M. Potter, Cleveland Heights, and Manuel Aven, Lyndhurst, Ohio, assignors to General Electric Company, a corporation of New York

Filed Jan. 5, 1959, Ser. No. 784,940
7 Claims. (Cl. 252—301.6)

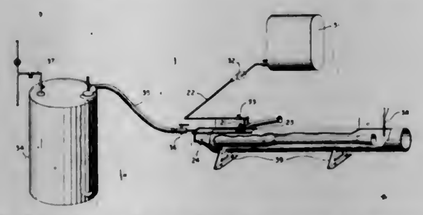


1. An electroluminescent phosphor having improved maintenance characteristics consisting essentially of activated zinc sulfide crystallites whereof the surface layers only have diffused thereinto a high concentration of metal from the group consisting of nickel, iron and cobalt, the depth of diffusion of said metal into said surface layers being limited to retain an initial brightness not less than 10% of the initial brightness in the absence of said metal.

3,017,367
VALVELESS PULSEJET SMOKE GENERATOR

Mario A. Persechino, Chesapeake Beach, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Oct. 22, 1959, Ser. No. 848,168
8 Claims. (Cl. 252—359)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An apparatus for producing dispersions of atomized liquid particles comprising a resonant pulsejet engine having a combustion chamber and an exhaust tube extending linearly therewith, a sleeve of larger diameter than said pulsejet engine surrounding said engine and spaced therefrom, said sleeve extending beyond said exhaust to provide a gaseous mixing chamber, means for feeding a fluid of substance to be atomized over the outer surface of said jet engine within the spacing between said engine and said sleeve, means for supplying a fuel to the combustion chamber of said engine and means for supplying air to be mixed with said fuel to provide a fuel air mixture for said jet engine.

3,017,368
PROCESS FOR PREPARATION OF A CATALYST

George E. Elliott, Jr., Oakmont, Joseph B. McKinley, New Kensington, and Meredith M. Stewart, Penn Hills Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 13, 1959, Ser. No. 799,099
6 Claims. (Cl. 252—439)

1. A method for the preparation of a catalyst comprising the mixed sulfides of at least one group VI metal, left sub-group, and at least one iron group metal comprising acidifying a first alkaline solution containing a salt of a thio acid of at least one group VI metal, left sub-group, to a pH which is sufficiently low such that substantially complete precipitation of group VI metal as a sulfide occurs, sulfiding a second solution containing a soluble compound of at least one metal of the iron group which upon sulfiding forms compounds with the other materials present which are non-explosive under the conditions prevailing in the subsequent gas contact step and maintaining this second solution sufficiently alkaline throughout the sulfiding operation such that substantially complete precipitation of iron group metal as a sulfide occurs, separating the precipitate from the supernatant liquor in each solution, mixing these precipitates while in the wet state and contacting the resulting mixture with a hydrogen-hydrogen sulfide gas mixture at a temperature sufficiently high to reduce group VI metal sulfide from a less stable to a more stable sulfide, the quantity of hydrogen sulfide in said gas mixture being sufficient to prevent any appreciable reduction in sulfur content of iron group metal sulfide.

3,017,369
CATALYST MANUFACTURING WITH CONTROL OF HALOGEN

William G. Nixon, Westchester, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Apr. 2, 1959, Ser. No. 803,789
9 Claims. (Cl. 252—441)

1. A method for manufacturing a noble metal-containing refractory inorganic oxide catalytic composite which comprises commingling hydrobromic acid with the bromometallic acid corresponding to said noble metal, impregnating said refractory inorganic oxide with a quantity of the resulting acidic mixture to yield a final catalytic composite containing from about 0.01% to about 2.0% by weight of said noble metal and calcining the impregnated inorganic oxide at a temperature in excess of about 400° C.

3,017,370
MAGNESIA MODIFIED KAOLIN CATALYST

George Alexander Mills, Swarthmore, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 3, 1959, Ser. No. 796,753
2 Claims. (Cl. 252—450)

1. The method of preparing kaolin catalyst particles possessing an advantageous combination of a controlled activity, cracking selectivity, attrition resistance and stability which includes the steps of: mixing pulverized kaolin particles with sufficient pulverized magnesium sulfate particles to provide from about 0.25% to about 0.75% magnesia on a calcined basis; dispersing the blended mixture in concentrated sulfuric acid whereby at least a portion of the magnesium sulfate is dissolved in the sulfuric acid and impregnated throughout each particle of kaolin; forming the mixture of kaolin, magnesium sulfate and sulfuric acid into particles having minimum dimensions of from 1 to 10 mm.; denning the particles; heating the denned particles in a gas stream to volatilize all sulfate therefrom; and calcining the desulfated particles to provide said cracking catalyst particles having said advantageous combination of controlled activity, cracking selectivity, attrition resistance and stability.

3,017,371
EXPANDABLE COMPOSITION CONSISTING ESSENTIALLY OF POLYOLEFIN, METAL SOAP AND p,p'-OXYBIS (BENZENE SULFONYL HYDRAZIDE), PROCESS FOR PREPARING SAME AND WIRE COATED WITH SAME

Paul M. Hohenberg, Cambridge, William R. James, Wilbraham, and Heinz E. Wechsberg, Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 9, 1958, Ser. No. 766,364
15 Claims. (Cl. 260—2.5)

1. An expandable thermoplastic polymeric composition consisting essentially of (*a*) 100 parts by weight of a polymeric material selected from the class consisting of aliphatic polyolefins, the monomeric units of which contain 2–4 carbon atoms, said aliphatic polyolefin being the only polymeric material present in the composition, (*b*) 0.5–1.5 parts by weight of p,p'-oxybis(benzene sulfonyl hydrazide), and (*c*) 0.1–5.0 parts by weight of a metal soap selected from the class consisting of metal salts of fatty acids, the metals being divalent and trivalent in nature and the fatty acid moieties containing at least 8 carbon atoms and mixtures of the same.

3,017,372
METHOD OF MAKING A LIQUID-FILLED SYNTHETIC RESIN STRUCTURE AND ARTICLE OBTAINED THEREFROM

Ralph H. Clark, Westwood, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Nov. 25, 1958, Ser. No. 776,179
11 Claims. (Cl. 260—2.5)

1. A method of making a liquid-filled synthetic resin structure which comprises a solid resin base and liquids expressible therefrom under pressure, the method comprising: dispersing a vinyl chloride resin and a blowing agent in liquid organic vehicles, said blowing agent being decomposable by heat to evolve a gas, said liquid organic vehicles comprising a plasticizer operative to facilitate fusion of the resin when heated to the fusion temperature, said liquid organic vehicles further comprising a non-drying organic liquid which is substantially non-volatile at the fusing temperature of the resin and which is present in sufficient concentration to exceed to a substantial extent its compatibility limit with the resin; heating the dispersion to cause the blowing agent to evolve a gas; further heating the dispersion to cause the resin particles to fuse, thereby forming, upon cooling, a fused porous solid in which substantial amounts of said non-drying non-volatile organic liquid are free to migrate and to be expressible therefrom under pressure.

3,017,373
COATING COMPOSITION FOR PAPER

Arne B. Carlson, Keyser, W. Va., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,602
10 Claims. (Cl. 260—6)

2. An aqueous coating composition for paper which comprises a pigment component, 15–80% of which is a basic carbonate pigment material based on the total pigment content, a protein adhesive in the amount of about 9–16 parts by weight per 100 parts of total pigment content, a water soluble modified formaldehyde resin in the amount of about 8% based on the weight of the protein adhesive, and at least 12% resorcinol based on the weight of said water soluble modified formaldehyde resin.

3,017,374
PRINTING INKS

Dominic J. Bernardi, Scarsdale, Alfred M. Tringali, Bayside, and Howard T. Roth, Ridgewood, N.Y., and Loy S. Engle, Harrington Park, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Filed Mar. 29, 1956, Ser. No. 574,587
4 Claims. (Cl. 260—18)

1. A moisture setting printing ink of improved rub-resistance comprising waxy material and solid coloring matter in a vehicle comprising a solution of a resinous ester of (1) an oil fatty acid having at least 12 carbon atoms with (2) a polymeric solid resinous epoxidized polyhydric alcohol with a melting point between 60 and 135° C. and a 1,2-epoxy equivalency greater than 1.0 and obtained by reacting epichlorohydrin and dihydroxy diphenyl dimethyl methane, there being at least one mol of oil fatty acid in the ester per mole of polymeric alcohol, but insufficient to render the ester insoluble in the solvent which constitutes at least 30 percent by weight of the vehicle and consists of a press stable water-soluble hygroscopic glycol selected from the group consisting of alkane diols having six or more carbon atoms and glycols having alkylene groups interrupted by ether linkages.

3,017,375
METHOD OF FOAM SUPPRESSION IN OIL-IN-WATER EMULSIONS BY USE OF SOLVENT SOLUTION OF LIQUID POLYVINYL ISOBUTYL ETHER

Harvey T. Gehring, Chicago, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 6, 1958, Ser. No. 707,115
11 Claims. (Cl. 260—22)

1. A method of suppressing foam formation in the manufacture of oil-in-water film-forming polymer latex containing emulsion paints which comprises including in said composition during its compounding and intermixing an amount within the range of from two to ten pounds per hundred gallons of completed paint product of a non-volatile liquid polyvinyl isobutyl ether having a molecular weight less than 200,000 in solution in a volatile organic solvent therefor:

3,017,376
CROSSLINKING PROCESS

Richard A. Bafford, Baltimore, and Razmic S. Gregorian, Silver Spring, Md., assignors to W. R. Grace & Co., Clarksville, Md., a corporation of Connecticut

No Drawing. Filed Dec. 1, 1959, Ser. No. 856,377
11 Claims. (Cl. 260—23)

1. The process of crosslinking a member of the group consisting of polyethylene and a copolymer of ethylene and butylene which comprises subjecting said member at a temperature above its respective melting point in the presence of free oxygen to the action of a crosslinking promoter consisting essentially of an organo-metallic compound containing a transition metal in a valence state less than 4 selected from the group consisting of Co and Mn, said compound being soluble in said polymeric group member.

3,017,377
EXTENDER COMPOSITION FOR TEXTILE PRINTING PASTES CONTAINING REACTION PRODUCT OF MONOETHANOLAMINE SOLUTION AND THE CO-POLYMER OF UNHYDROLYZED METHYL VINYL ETHER AND MALEIC ANHYDRIDE

Joseph M. Kuhn, Haddonfield, N.J., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

Filed Mar. 8, 1955, Ser. No. 492,905
3 Claims. (Cl. 260—29.6)

1. A composition of matter comprising water and from 0.25% to about 2.0% by weight of the entire composition of the reaction product of (*a*) a solid linear unhydrolyzed co-polymer of methyl vinyl ether and maleic anhydride and (*b*) monoethanolamine, the amount of monoethanolamine being sufficient to impart a pH of at least 7 to said composition.

3,017,378
RUBBER COMPOSITIONS

Verne G. Simpson, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Oct. 28, 1960, Ser. No. 65,578
5 Claims. (Cl. 260—37)

1. Organopolysiloxane rubber compositions comprising (1) 100 parts of an organopolysiloxane convertible to the cured, solid, elastic state, (2) 10 to 200 parts of a filler (3) and an effective amount of an aryl urethane that is sufficient to impart to said organopolysiloxane rubber composition an improved resistance to heat-aging, said aryl urethane having the formula:

$$R'OOCHN—R—NHCOOR'$$

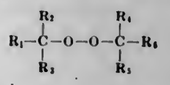
where R is a member selected from the class consisting of divalent arylene radicals halogenated divalent arylene radicals, and bis-arylene substituted alkylene radicals, and R' is a member selected from the class consisting of monovalent aryl radicals and halogenated monovalent aryl radicals, said organopolysiloxane of (1) having a viscosity of at least 100,000 centipoises when measured at 25° C., the organic radicals of said organopolysiloxane being members selected from the class of monovalent hydrocarbon radicals, halogenated monovalent hydrocarbon radicals, and cyanoalkyl radicals, said organic radicals being attached to silicon by carbon-silicon linkages, there being an average of about 1.98 to 2.01 organic radicals per silicon atom.

3,017,379
CROSS-LINKING OF POLY(VINYL CHLORIDE)

George B. Feild, New Castle, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,817
3 Claims. (Cl. 260—41)

1. The method of curing poly(vinyl chloride) which comprises heating poly(vinyl chloride) in contact with ½ to 6 percent of a peroxide of the formula



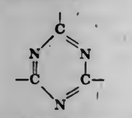
in which R_1 and R_6 are selected from the group consisting of phenyl and lower alkyl substituted phenyl, and R_2, R_3, R_4, and R_5 are selected from the group consisting of hydrogen and lower alkyl radicals, said lower alkyl containing 1 to 4 carbon atoms, and 6 to 12 percent of pentaerythritol, and zinc oxide in the pentaerythritol-zinc oxide weight ratio of 10:1 to 4:1 at a temperature in the range of about 300° F. to about 450° F., said percents being expressed as parts per hundred poly(vinyl chloride) by weight.

3,017,380
ALDEHYDE-TRIAZINYL ARSENIC CONDENSATION PRODUCTS AND METHOD OF MAKING SAME

Gaetano F. D'Alelio, South Bend, Ind., assignor, by direct and mesne assignments, to Dal Mon Research Co., Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Dec. 5, 1958, Ser. No. 778,289
19 Claims. (Cl. 260—45.3)

1. A composition of matter comprising the reaction product of a mass comprising an aldehyde and a triazine derivative having the formula:



wherein at least one of said valencies is attached to an aldehyde-reactable group and at least one of said valencies is attached to a group containing an aromatic nucleus having substituted thereon 1 to 3 groups selected from the class consisting of —AsO, the sodium, potassium, lithium, calcium, copper, chromium, amine, hydrazine, and protein salts of $—AsO(OH)_2$, and $—AsO(OR)_2$, wherein R is a radical selected from the class consisting of hydrogen, monovalent hydrocarbon radicals and the fluoro, chloro, nitro, nitroso, amino, carboxy, carbalkoxy, alkoxy, aryloxy, and mercapto derivatives of monovalent hydrocarbon radicals, said aldehyde being reacted in an amount of 1–8 moles per mole of triazine derivative, said reaction being conducted at a temperature of at least room temperature and being catalyzed by an agent selected from the class consisting of alkaline and acidic aldehyde-condensation catalysts.

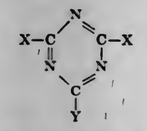
9. A composition of claim 1, in which said mass also comprises a glyceryl phthalate resin.

3,017,381
HEAT RESISTANT POLYESTER OF A DICARBOXYLIC ACID, A POLYHYDRIC ALCOHOL, AND A S-TRIAZINE HAVING AT LEAST TWO N-ALKENYLOXY GROUPS AND REACTION PRODUCT OF ETHYLENICALLY UNSATURATED MONOMER THEREWITH

John C. Schlegel, Jr., Peekskill, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 30, 1959, Ser. No. 809,900
20 Claims. (Cl. 260—45.4)

2. A polymerizable resinous composition of matter comprising the product obtained by esterifying, at a temperature of not less than about 140° C. for a period of time sufficient to effect the transesterification of at least two of the alkenyloxy substituents on the triazine nucleus, 1 mol of (A) an alpha, beta ethylenically unsaturated dicarboxylic acid, from about 1.25 to 3 mols of (B) a saturated aliphatic dihydric alcohol and from about 0.25 to 2.0 mols of (C) a compound represented by the general formula:



where X is an alkenyloxy radical containing not in excess of 4 carbon atoms and Y is selected from the group consisting or alkenyloxy, alkoxy, alkyl, aralkyl, aryl and amino radicals, wherein the mol equivalents of OH substituents contained by said (B) exceeds the mol equivalents of X substituents contained by said (C) by about 2.

10. A polymerizable resinous composition of matter comprising an admixture of 10 to 90 parts of the product according to claim 2 and correspondingly 90 to 10 parts of a monomeric material containing a $CH_2{=}C<$ group copolymerizable with said product.

3,017,382
COMPOSITION COMPRISING POLYSULPHIDE POLYMER AND FURFURAL-KETONE REACTION PRODUCT

John D. Faiella, Yonkers, N.Y., assignor, by mesne assignments, to Harvel Research Corporation, Newark, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 8, 1955, Ser. No. 527,142
12 Claims. (Cl. 260—45.5)

1. A composition of matter comprising (A) normally liquid material selected from the group consisting of (1) materials having the following average formula:

$$HS—(C_2H_4—O—CH_2—O—C_2H_4—S—S)_n —C_2H_4—O—CH_2—O—C_2H_4SH$$

in which *n* is a value of approximately 3–23 and (2) materials having the following average formula:

$$X—(CH_2CH_2SS\cdot CH_2CH_2O)_yCH_2CH_2SS\cdot CH_2CH_2—X$$

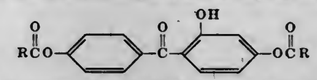
in which X is selected from the group of OH and SH and y is a value of approximately 3–40, intimately combined with (B) material liquid at 300° F. and selected from the group consisting of (*a*) monofurfural-ketone, (*b*) difurfural-ketone, (*c*) mixtures of (*a*) and (*b*), (*d*) homopolymers of (*a*)–(*c*) respectively, (*e*) partially hydrogenated (*a*)–(*d*) respectively produced by saturating (*a*)–(*d*) respectively with hydrogen to an extent of approximately 15%–65% of that necessary to saturate with hydrogen all of the carbon to carbon double bonds therein, (*f*) homopolymers of said partially hydrogenated (*a*)–(*d*) respectively, (*g*) organic reaction products produced by reacting (*a*)–(*f*) respectively with a phenol-reactive aldehyde.

3,017,383
POLY-α-OLEFINS CONTAINING HYDROXY-BENZOPHENONE DERIVATIVES

Gerald R. Lappin, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,941
10 Claims. (Cl. 260—45.85)

1. A solid poly-α-olefin composition comprising a solid poly-α-olefin prepared from an α-monoolefinic aliphatic hydrocarbon having 2 to 6 carbon atoms and about .01% to 10% by weight based on said poly-α-olefin of a 2-hydroxy-4,4'-diacyloxybenzophenone having the formula:



wherein R is an alkyl radical having 4 to 18 carbon atoms.

3,017,384
ORGANOPOLYSILOXANE FIBERS

Frank J. Modic, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Jan. 18, 1960, Ser. No. 2,846
3 Claims. (Cl. 260—46.5)

1. Fibers produced by drawing the siloxane product of intercondensation of a mixture of ingredients comprising (1) from 69 to 97 parts by weight of an organopolysiloxane cohydrolysis product of a lower alkyl hydrolyzable silane having a ratio of three lower alkyl radicals per silicon atom attached to silicon through carbon-silicon linkages and a lower alkyl silicate where the said lower alkyl hydrolyzable silane and the said lower alkyl silicate are cohydrolyzed in the ratio of from about 0.33 to 0.55 mole of hydrolyzable silane per mole of silicate and (2) from 3 to 31 parts by weight of a linear high viscosity organopolysiloxane fluid having terminal silicon-bonded

hydroxy groups and having a ratio of about 2 organic groups per silicon atom, the organic groups of said fluid being attached to silicon through silicon-carbon linkages and being selected from the class consisting of alkyl radicals, aryl radicals, alkaryl radicals, aralkyl radicals, haloaryl radicals, alkenyl radicals, and mixtures thereof, said fluid having a viscosity of from about 200,000 to 2,000,000 centipoises.

3,017,385
NOVEL ORGANOPOLYSILOXANES

Murray M. Sprung, Schenectady, N.Y., and Frederick O. Guenther, Louisville, Ky., assignors to General Electric Company, a corporation of New York

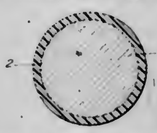
No Drawing. Filed Jan. 21, 1959, Ser. No. 788,068
4 Claims. (Cl. 260—46.5)

1. A benzene-soluble, phenylpolysiloxane infusible at a temperature of from 250–300° C., having a ratio of one phenyl group per silicon atom and having an intrinsic viscosity in benzene of from 0.10 to 0.30 dl./g. at 25° C.

3,017,386
BENZENE SOLUBLE PHENYL SILSESQUIOXANES

John F. Brown, Jr., and Lester H. Vogt, Jr., Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Jan. 21, 1959, Ser. No. 788,069
25 Claims. (Cl. 260—46.5)



1. A composition of matter comprising a benzene-soluble organopolysiloxane having an intrinsic viscosity in benzene when measured at 25° C. of at least 0.4 deciliter per gram, said organopolysiloxane being composed of from 90 to 100 mol percent of organosiloxy units of the formula

$$RSiO_{3/2}$$

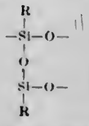
any remaining organosiloxy units being selected from the class consisting of organosiloxy units of the formula

$$R'R''SiO,\ R'[CN—(CH_2)_m]SiO,\ R'''SiO_{3/2}$$

and

$$CN(CH_2)_mSiO_{3/2}$$

where R is an aryl radical, R' and R'' are selected from the class consisting of aryl radicals, alkyl radicals, and alkenyl radicals, R''' is a lower alkyl radical of from 1 to 4 carbon atoms, and m is a whole number equal to from 2 to 4, inclusive, the said organopolysiloxane containing siloxy units of the formula



directly connected in linear unbranched arrangement, where R has the meaning above.

3,017,387
POLYEPOXY ETHERS OF POLYHYDRIC PHENOLS AND CURED PRODUCTS OBTAINED THEREFROM

Carl G. Schwarzer, Walnut Creek, and Paul H. Williams, Orinda, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed July 21, 1958, Ser. No. 749,639
8 Claims. (Cl. 260—47)

1. An ether of a vic-epoxy substituted monohydric alcohol containing from 3 to 15 carbon atoms and a dihydroxyphenylalkanediol having both phenol group substituents attached to the same carbon atom, said dihydroxyphenyl alkanediol being the condensation product of a phenol with a dihydroxyl substituted carbonylic compound selected from the group consisting of aliphatic dihydroxymonoaldehydes and aliphatic dihydroxymonoketones containing no more than twelve carbon atoms per molecule, said ether having more than one of the hydrogen atoms of the phenolic hydroxyl groups of said dihydroxyphenylalkanediol replaced by an epoxy-substituted radical in the average molecule and containing both aliphatic hydroxyl groups originally present in said dihydroxyphenylalkanediol, said ether being characterized by its ability to cure to a hard resin by application of heat in the absence of added curing agent.

4. A polyglycidyl ether of 1,2-dihydroxy-3,3-bis(4-hydroxyphenyl)propane wherein more than one of the hydrogen atoms of the phenolic OH groups of the 1,2-dihydroxy-3,3-bis(4-hydroxyphenyl)propane have been replaced by glycidyl radicals, and wherein the aliphatic hydroxyl groups originally present in the 1,2-dihydroxy-3,3-bis(4-hydroxyphenyl)propane remain as unreacted OH groups in the ether molecule.

3,017,388
RESINOUS POLYMERS FROM REACTION OF BIS(ACETOACETATES) AND BIS(ACETOACETAMIDES) WITH DIAMINES

John R. Caldwell and James C. Martin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 17, 1958, Ser. No. 729,056
11 Claims. (Cl. 260—65)

1. A process for preparing a resinous film-forming polymer which comprises heating at about from 121° to 240° C. an acetoacetic acid derivative selected from the group consisting of compounds having the following general formulas:

$$CH_3COCH_2COOROCOCH_2COCH_3$$

and

$$CH_3COCH_2CONHRNHCOCH_2COCH_3$$

wherein R is selected from the group consisting of an alkylene group containing from 2–12 carbon atoms, a phenylene group, a diphenylene group, a $—CH_2C_6H_4CH_2—$ group, and a $—C_6H_4—Y—C_6H_4—$ group wherein Y represents —O—, —S—, $—SO_2—$, $—CH_2—$, $—C_2H_4—$, $—CH(CH_3)—$, $—CH(CH_3)CH_2—$, $—CF_2—$, $—OC_2H_4O—$, $—OCH_2C_6H_4CH_2O—$, $—N(CH_3)—$, —CONH— and $—C(CH_3)_2—$, with a diamine represented by the following general formula:

$$H_2N—R—NH_2$$

wherein R is as above defined, in the proportions of 1 mole of the said acetoacetic acid derivative per mole of the said diamine.

3,017,389
PROCESS OF CONTROLLING THE MOLECULAR WEIGHT OF LINEAR FORMALDEHYDE POLYMERS

William Philip Langsdorf, Jr., Robert Neal MacDonald, and Carl Earle Schweitzer, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 18, 1955, Ser. No. 495,335
4 Claims. (Cl. 260—67)

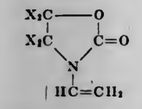
1. The process of preparing an addition polymer of formaldehyde with a reduced number average molecular weight of 10,000 to about 100,000 comprising continuously introducing substantially anhydrous formaldehyde into an inert liquid hydrocarbon medium containing a formaldehyde polymerization initiator and a small amount of an organic chain transfer agent having a degree of polymerization less than 10, being free of amine groups and phenol groups, and being selected from the group consisting of monofunctional esters having at least 3 carbon atoms, cycloaliphatic alcohols, aromatic alcohols, acid anhydrides, amides, imides, halides, carbonates, silicates, phosphites, phosphates, thiophanes, sulfides, cyclic sulfoxides, and nitro compounds having a hydrogen on the carbon alpha to the nitro group, and recovering an addition polymer of formaldehyde having a number average molecular weight of 10,000 to 100,000.

3,017,390
RING-SUBSTITUTED N-VINYL-2-OXAZOLIDINONE COPOLYMERS

Forrest A. Ehlers, Walnut Creek, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 1, 1958, Ser. No. 725,523
12 Claims. (Cl. 260—77.5)

1. Dye-receptive, water-insoluble, normally solid, cross-linked copolymer of (A) from between about 2 and 98 weight percent, based on the weight of the copolymer, of a ring-substituted N-vinyl-2-oxazolidinone monomer of the formula:



(I)

wherein each X is independently selected from the group consisting of hydrogen, alkyl radicals that contain from 1 to about 4 carbon atoms and aryl radicals that contain from 6 to about 10 carbon atoms with the limitation that not more than three of the X substituents can be hydrogen, and (B) between about 98 and 2 weight percent, based on the weight of the copolymer, of a non-resinous cross-linking, polyfunctional, ethylenically unsaturated monomer that contains at least two polymerizable ethylenically unsaturated constituents and is copolymerizable with said monomer of the Formula I.

3,017,391
PREPARATION OF POLYCAPROLACTAM USING N-ACYL ACTIVATORS

Edward H. Mottus, Ross M. Hedrick, and John M. Butler, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 13, 1956, Ser. No. 627,984
13 Claims. (Cl. 260—78)

1. The method of producing an oxidation stable poly-(ε-caprolactam) substantially free of primary amino end groups which method comprises polymerizing ε-caprolactam under substantially anhydrous conditions in the presence of (1) a catalyst selected from the group consisting of alkali metal and alkaline earth metal catalysts and (2) between about 0.01 and about 20 mole percent, based on the ε-caprolactam monomer, of a nitrogen-containing promoter compound in which the nitrogen atoms are trivalent and in which at least one nitrogen atom is directly attached to at least two radicals selected from the group consisting of carbonyl, thiocarbonyl, sulfonyl, and nitroso radicals and no promoter compound has more than one nitroso radical directly attached to said nitrogen atom, the remaining bonds of said nitrogen atom being attached to a member from the group consisting of said radicals and carbon, the remainder of said promoter compound being composed of organic radicals sufficient to satisfy the remaining available valences and no nitrogen atom in said organic radicals has more than one hydrogen atom attached directly thereto, and wherein the polymerization process is initiated at a temperature above the melting point of the ε-caprolactam monomer and below the softening point of the polycaprolactam.

3,017,392
POLYMERIZATION OF HIGHER LACTAMS

John M. Butler, Ross M. Hedrick, and Edward H. Mottus, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 5, 1957, Ser. No. 676,419
14 Claims. (Cl. 260—78)

1. In the base-catalyzed polymerization of higher lactams having more than 5 carbon atoms in the lactam ring thereof, the improvement comprising carrying out said polymerization under substantially anhydrous conditions at an initiating temperature above the melting point of the lactam and below the softening point of the polymerization product and in the presence of (1) between about 0.01 and about 20 mol percent, based on the lactam monomer, of a nitrogen-containing promoter compound in which the nitrogen atoms are trivalent and in which at least one nitrogen atom is directly attached to at least two radicals selected from the group consisting of carbonyl, thiocarbonyl, sulfonyl, nitroso, phosphinyl and thiophosphinyl radicals and no promoter compound has more than one nitroso radical directly attached to said nitrogen atom, the remaining bond of said nitrogen atom being attached to a member from the group consisting of said radicals and carbon, the remainder of said promoter compound being composed of organic radicals sufficient to satisfy the remaining available valences and no nitrogen atom in said organic radicals has more than one hydrogen atom attached directly thereto, and (2) between about 0.25 and about 2.0 mols, per mol of said nitrogen-containing promoter compound, of an amine regulator compound having at least one hydrogen atom attached to the amine nitrogen atom therein.

3,017,393
STABILIZATION OF POLYMERS OF PYRROLIDONE

William O. Ney, Jr., Lincoln Township, Washington County, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,162
5 Claims. (Cl. 260—78)

1. The process for stabilizing heat-sensitive solid polypyrrolidone against loss of weight on heating, which comprises slurrying the said polypyrrolidone in finely divided solid state with several volumes of an aqueous solution containing from about 0.5 to about 25 percent of a lower aliphatic monocarboxylic acid, removing the polypyrrolidone from the aqueous acid and drying the treated polymer, said polypyrrolidone being insoluble in said aqueous acid solution.

3,017,394
PROCESS FOR THE POLYCONDENSATION OF DIAMINES AND DICARBOXYLIC ACIDS

Werner Muench, Cesano Maderno, Luigi Notarbartolo, Milan, and Giuseppe Messina, Limbiate, Italy, assignors to Snia Viscosa Società Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy

No Drawing. Filed Aug. 25, 1958, Ser. No. 757,126
Claims priority, application Italy Aug. 28, 1957
3 Claims. (Cl. 260—78)

1. A process for the polycondensation of a salt of a dicarboxylic acid selected from the group consisting of adipic and sebacic and a diamine selected from the group consisting of metaxylylene diamine and hexamethylene diamine, comprising the steps of heating the said salts in the presence of a non-solvent organic liquid chosen from the group consisting of biphenyl oxide and mixtures

of biphenyl and biphenyl oxide, removing from the reaction mass the water formed in the reaction by distillation while leaving the portion of the said organic liquid not carried over with water, then distilling off the organic liquid, and thereafter completing the polycondensation at a higher temperature.

3,017,395

TETRAALKYLCYCLOBUTANE-1,3-DIAMINES AND RESINOUS POLYAMIDES THEREFROM

Edward U. Elam, Robert H. Hasek, and James C. Martin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed June 29, 1959, Ser. No. 823,337
7 Claims. (Cl. 260—78)

2. A resinous polyamide selected from the group consisting of (1) a polyamide of approximately equimolar proportions of 2,2,4,4-tetramethylcyclobutane-1,3-diamine and a dibasic acid represented by the following general formula:

HOOC—R—COOH

wherein R represents a member selected from the group consisting of a divalent alkylene group containing from 2–10 carbon atoms, a $—C_5H_8—$ group, a $—C_6H_{10}—$ group, a phenylene group, a tolylene group and the group $—CH_2C_6H_4CH_2—$, and (2) a polyamide of approximately equimolar proportions of (*a*) a diamine mixture consisting of from 10–90 mole percent of 2,2,4,4-tetramethylcyclobutane-1,3-diamine and conversely from 90–10 mole percent of a different diamine selected from the group consisting of 1,4-butanediamine, 1,6-hexanediamine, 1,4-cyclohexane bis(methylamine) and α,α'-xylenediamine and (*b*) a dibasic acid selected from those represented by the above general formula.

3,017,396

COPOLYMERS OF VINYL CHLORIDE AND ALKOXYALKYL ESTERS

Lester H. Arond, Leominster, William J. Salem, Worcester, and Harry Wechsler and Samuel Makower, Leominster, Mass., assignors to The Borden Company, a corporation of New Jersey

No Drawing. Filed Apr. 29, 1958, Ser. No. 731,627
2 Claims. (Cl. 260—78.5)

1. A resin that is resistant to swelling in contact with aliphatic hydrocarbon liquids, the resin comprising a terpolymer of vinyl chloride; an alkoxyalkyl acrylate of the fromula $CH_2=CH—CO—(OR')_n—OR$ in which R is an alkyl group having 1 to 4 carbon atoms, R' is an alkylene group having 2–4 carbon atoms, and *n* is an integer within the range 1 to 10; and a monomer selected from the group consisting of vinyl acetate, vinyl butyrate, and vinyl 2-ethylhexoate and C_2–C_{12} alkyl esters of acrylic, methacrylic, maleic, fumaric, citraconic, crotonic, and itaconic acids, the proportion of each of said acrylate and said monomer being 10–100 parts by weight for 100 of the vinyl chloride.

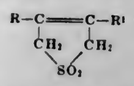
3,017,397

ACRYLONITRILE-CYCLIC SULPHONE COPOLYMERS

André Fournet and Hubert Lemoine, Lyon, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Filed Mar. 7, 1960, Ser. No. 12,950
Claims priority, application France Mar. 13, 1959
8 Claims. (Cl. 260—79.3)

1. A composition of matter consisting essentially of the copolymerisation product of 85–99.9% by weight of acrylonitrile, 0–10% by weight of a compound selected from the group which consists of acrylic and methacrylic esters, and 0.1–15% by weight of a cyclic sulphone of formula



wherein R and R¹ are both selected from the group which consists of hydrogen atoms and hydrocarbon radicals.

3,017,398

TEMPERATURE CONTROL IN LOW TEMPERATURE POLYMERIZATIONS

Donald H. Welch, Lake Charles, La., and Charles A. McKenzie and Robert F. Killey, Sarnia, Ontario, Canada, assignors to Polymer Corporation Limited, Sarnia, Ontario, Canada, a corporation

No Drawing. Filed June 12, 1959, Ser. No. 819,806
Claims priority, application Canada June 30, 1955
7 Claims. (Cl. 260—85.3)

1. A process for the low temperature copolymerization of isobutylene with a C_4 to C_{14} multi-olefinic hydrocarbon in a reaction zone having reactant circulating passages surrounded by refrigerant circulating passages said reaction zone thereby being provided with internal heat exchange surfaces, said process comprising the following steps in sequence: (A) feeding into the reaction zone so as to substantially fill said reactant circulating passages a pre-cooled reactant feed solution including, inter alia, 2–40 weight percent isobutylene, 0–6.0 weight percent C_4 to C_{14} multi-olefinic hydrocarbon, and 54–98 weight percent methyl chloride, at a temperature above its freezing point but below a temperature defined by TM in the equation $TM=X-(Y-Z)$

where TM is the upper temperature limit in Fahrenheit degrees of the reactant feed solution,
X is −155
Y is the actual temperature in Fahrenheit degrees of the refrigerant when it is fed to the refrigerant circulating passages,
and Z is −145;

(B) when said reactant circulating passages are substantially filled, commencing circulating of said reactant feed solution in said reactant circulating passages; (C) feeding a refrigerant into said refrigerant circulating passages and circulating it therein, said refrigerant being fed at a temperature lower than −155° F. whereby to cause formation of a film of frozen diluent on the internal heat exchange surfaces of the reaction zone; and (D) initiating the copolymerization reaction by feeding into the reaction zone a pre-cooled catalyst solution including, inter alia, methyl chloride containing up to 3.0 weight percent dissolved Friedel-Crafts catalyst and up to 1.5 weight percent of a reaction promoter, at a temperature above its freezing point but below a temperature defined by TC in the equation $TC=P-(Q)(R)$

where TC is the upper temperature limit in Fahrenheit degrees of the catalyst feed solution to the reaction zone,
P is the actual temperature of the reactant feed solution in Fahrenheit degrees,
Q is the numerical difference between the upper temperature limit in Fahrenheit degrees of the reactant feed solution and the actual temperature in Fahrenheit degrees of the reactant feed solution,
and R is the ratio of the volume of reactant feed solution to the volume of catalyst feed solution being fed to the reaction zone.

3,017,399

PRODUCTION OF VINYL CHLORIDE POLYMERS

Robert S. Holdsworth, Needham, and William Mayo Smith, Wellesley Hills, Mass., assignors to Escambia Chemical Corporation, Pace, Fla., a corporation of Delaware

No Drawing. Filed May 16, 1958, Ser. No. 735,694
8 Claims. (Cl. 260—92.8)

1. The process of producing substantially uniform, large particle size polyvinyl chloride beads, of a size of at least 80 mesh, which consists in polymerizing a monomer comprising vinyl chloride at a temperature between about 30° C. and 70° C. and at a pH below about 7.0 while suspended in an aqueous suspension medium consisting essentially of an oil-soluble free radical polymerization catalyst, an alkylene polyamine and a surface-active agent selected from the group consisting of organic sulfates and organic sulfonates, said polyamine and said surface-active agent each being present in an amount within the range of about 0.01 to about 1.0 part per 100 parts of vinyl chloride.

3,017,400

POLYMERIZATION OF OLEFINS

Herman S. Bloch, Skokie, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Nov. 2, 1956, Ser. No. 619,929
3 Claims. (Cl. 260—94.9)

1. A process for the polymerization of ethylene which comprises initiating said polymerization by the addition of ethylene oxide in an amount of from about 0.01 to about 10% by weight of the ethylene in the presence of an aluminum chloride catalyst, said ethylene oxide and said catalyst being separate chemically uncombined compounds and said polymerization being effected at a temperature in the range of from about 0° to about 300° C. and at a pressure in the range of from about 1 to about 350 atm., and recovering the resultant polymerized ethylene.

3,017,401

ETHYLENE POLYMERIZATION WITH ALUMINUM TITANIUM TETRACHLORIDE CATALYSTS

Gilbert Bo, Edouard Fichet, and André Perrot, Lyon, and Philippe Perras, Collonge au Mont d'Or, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Filed Mar. 19, 1958, Ser. No. 722,396
Claims priority, application France Mar. 23, 1957
2 Claims. (Cl. 260—94.9)

1. Process for the production of a catalyst for the polymerisation of ethylene which comprises heating to an elevated temperature of at most 300° C. a mixture of titanium tetrachloride and aluminium in which the molecular ratio of aluminium to titanium tetrachloride is from 3:1 to 20:1 in the absence of ethylene and other hydrocarbons capable of polymerising under the conditions employed and in the presence of a liquid diluent comprising 90% to 99.5% by volume of cyclohexane and 10% to 0.5% by volume of benzene, the heating being continued until the catalyst has a pink to violet-pink colour.

3,017,402

POLYMERIZATION OF ETHYLENE WITH MOLYBDENUMOXIDE ON SILICA-ALUMINA CATALYST

Willem F. Engel, Amsterdam, Netherlands, assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 28, 1958, Ser. No. 738,278
Claims priority, application Great Britain May 31, 1957
2 Claims. (Cl. 260—94.9)

1. The process which comprises polymerizing ethylene at a temperature between about 50° C. and about 350° C. and pressures ranging from about normal pressure to about 500 atmospheres in the presence of a catalyst composition consisting essentially of from 35 to 95% of silica, from 5 to 65% of alumina, and from 0.1 to 10% of molybdenum oxide, said molybdenum oxide having been treated with hydrogen at a temperature of between 400 and 550° C. and a pressure between 5 and 50 atmospheres for a time sufficient to reduce the molybdenum to a valence of less than 6.

3,017,403

ETHYLENE POLYMERIZATION

Walter R. Wszolek, Ellicott City, Md., assignor to W. R. Grace & Co., a corporation of Connecticut

No Drawing. Filed Apr. 14, 1959, Ser. No. 806,225
7 Claims. (Cl. 260—94.9)

1. The process of polymerizing ethylene which comprises subjecting ethylene under pressure to the action of a catalyst consisting essentially of $CrCl_2$ activated by grinding in an inert atmosphere for 1 to 5 days.

3,017,404

TREATED LIGNIN PRODUCT AND THE MANUFACTURE THEREOF

Frank J. Ball, Charleston, S.C., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 20, 1959, Ser. No. 847,657
13 Claims. (Cl. 260—124)

1. A method for the production of lignin in particulate form which comprises introducing into a drying atmosphere in discrete form small particles of an aqueous slurry of water-insoluble lignin containing a dissolving agent for said lignin, and drying said particles while surrounded by said atmosphere, at least approximately 50% by dry weight of the lignin in said slurry being undissolved, and a substantial portion of said lignin being dissolved by said dissolving agent and becoming fused at the particle surfaces during drying to form a surface crust.

3,017,405

PROCESS FOR PREPARING SALTS OF HYDROCARBON-PHOSPHORUS SULFIDE REACTION PRODUCTS

Herman D. Kluge, Fishkill, Jackson W. Wisner, Jr., Wappingers Falls, and Roger G. Lacoste, Hopewell Junction, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 23, 1959, Ser. No. 841,701
12 Claims. (Cl. 260—139)

1. In the neutralization of a phosphorus sulfide-hydrocarbon reaction product with a basic alkaline earth metal inorganic compound in a solvent medium containing a mineral lubricating oil, the improvement which comprises effecting said neutralization in the presence of a minor amount of a surfactant having the general formula: $RX(CH_2CH_2O)_nH$ wherein R is a hydrocarbon radical containing at least 10 carbon atoms, X is selected from the group consisting of —O—, —NH—, —CONH— and —COO— and *n* has a value of 1–12, said minor amount of adduct substantially reducing the viscosity of the resulting salt concentrate and effecting a higher degree of alkaline earth metal inorganic compound utilization.

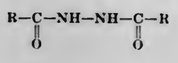
3,017,406

MANUFACTURE OF AZO COMPOUNDS

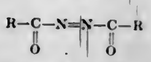
Louis Mehr, Belleville, N.J., assignor to Wallace & Tiernan Inc., Belleville, N.J., a corporation of Delaware

No Drawing. Filed Jan. 5, 1959, Ser. No. 784,863
9 Claims. (Cl. 260—192)

1. A process for oxidizing a hydrazo compound having the formula



to produce the corresponding azo compound having the formula



wherein both constituents R in each formula are identical and wherein R is selected from the class consisting of O—R′ and R″—N—R‴, R′ being selected from the class consisting of alkyl groups containing from 1 to 18 carbon atoms and cycloalkyl groups containing from 4 to 7 carbon atoms, and each of R″ and R‴ being selected from the class consisting of hydrogen, alkyl groups containing from 1 to 18 carbon atoms, cycloalkyl groups containing from 4 to 7 carbon atoms, unsubstituted aryl radicals selected from the group consisting of phenyl and naphthyl radicals, and aralkyl groups selected from the group consisting of benzyl and tolyl radicals, comprising reacting the hydrazo compound with an inorganic nitrate while maintaining said hydrazo compound dispersed in acetic acid having a concentration of at least 80%.

3,017,407
PROCESS FOR PRODUCING POLYSULFURIC ACID ESTERS OF POLYSACCHARIDES

Francis J. Petracek, Canoga Park, and Marshall D. Draper, Woodland Hills, Calif., assignors to Riker Laboratories, Inc., Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed Aug. 18, 1958, Ser. No. 755,387
19 Claims. (Cl. 260—234)

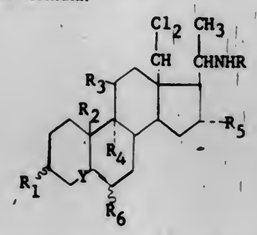
6. The process of producing an alkali salt of a polysulfuric acid ester of a polysaccharide consisting of polyglucose units having predominantly alpha 1,4 and alpha 1,6 linkages comprising: sulfating at a temperature below about 5° C. for not more than about 6 hours a polysaccharide selected from the class consisting of corn syrup solids and corn starch dextrin containing an average of between about 1 and 20 glucose units per molecule with chlorosulfonic acid in an amount of at least about 4 moles and not more than about 6.6 moles per glucose unit of said polysaccharide in the presence of a pyridine base under substantially anhydrous conditions, forming a water-soluble non-toxic alkali salt of said sulfated polysaccharide, precipitating from solution a fraction of said alkali salt containing an average of between about 5 and 15 glucose units per molecule and between about 1.5 and 3 sulfate groups per glucose unit.

3,017,408
18-DICHLOROSTEROIDS AND 18-HYDROXY-CONANINES MADE THEREFROM

James F. Kerwin, Broomall, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

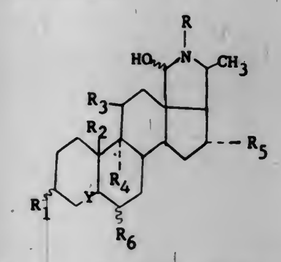
No Drawing. Filed Feb. 9, 1961, Ser. No. 88,034
20 Claims. (Cl. 260—239.5)

1. A chemical compound selected from the group consisting of a base and its acid addition salts, the base having the structural formula:



in which R is lower alkyl having from one to four carbon atoms; R_1 is a member selected from the group consisting of hydroxy, keto, trifluoroacetoxy and alkanoyloxy having a maximum of 6 carbon atoms; R_2 is a member selected from the group consisting of hydrogen and methyl; R_3 is a member selected from the group consisting of hydrogen and keto; R_4 is a member selected from the group consisting of hydrogen and fluoro; R_5 is a member selected from the group consisting of hydrogen, hydroxy, acetoxy and methyl; R_6 is a member selected from the group consisting of hydrogen, methyl and fluoro; and Y is a member selected from the group consisting of ethylene and vinylene.

8. A chemical compound selected from the group consisting of a pseudo base and its acid addition salts, the base having the formula:



in which R is lower alkyl having from one to four carbon atoms; R_1 is a member selected from the group consisting of hydroxy and keto; R_2 is a member selected from the group consisting of hydrogen and methyl; R_3 is a member selected from the group consisting of keto, hydrogen and hydroxy; R_4 is a member selected from the group consisting of hydrogen and fluoro; R_5 is a member selected from the group consisting of hydrogen, hydroxy and methyl; R_6 is a member selected from the group consisting of hydrogen, methyl and fluoro; and Y is a member selected from the group consisting of ethylene and vinylene.

3,017,409
17α,21-ETHOXYMETHYLENE DIOXY PREGNANES AND PROCESS FOR THEIR PREPARATION

Robert Joly, Montmorency, and Julien Warnant, Neuilly-sur-Seine, France, assignors to Les Laboratoires Francais de Chimiotheraple, Paris, France, a corporation of France

No Drawing. Filed July 6, 1960, Ser. No. 41,035
Claims priority, application France Aug. 20, 1959
4 Claims. (Cl. 260—239.55)

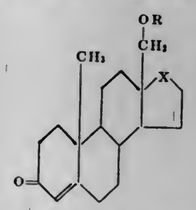
1. 17α,21 - ethoxymethylene dioxy - 3 - ethoxy-$\Delta^{3,5,9(11)}$-pregnatriene-20-one.

3,017,410
17β,18-BISOXYGENATED ANDROST-4-EN-3-ONES AND INTERMEDIATE

Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 28, 1959, Ser. No. 862,044
6 Claims. (Cl. 260—239.55)

1. A compound of the structural formula



wherein X is selected from the group consisting of car-

bonyl, β-hydroxymethylene, and β-(lower alkanoyl)oxymethylene radicals; and R is selected from the group consisting of hydrogen and lower alkanoyl radicals.

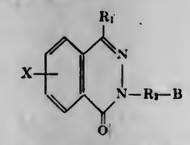
3,017,411
NEW SUBSTITUTED PHTHALAZONES AND PROCESS FOR THEIR PREPARATION

Heinz-Joachim Engelbrecht, Dessau, Dieter Lenke, Rodleben, and Hildegard Müller, Dessau, Germany, assignors to VEB Deutsches Hydrierwerk Rodleben, Rodleben, Germany

No Drawing. Filed July 23, 1958, Ser. No. 750,308
Claims priority, application Germany Aug. 15, 1957
11 Claims. (Cl. 260—247.2)

7. 2-(β-morpholinoethyl) - 4 - isoproxybenzylphthalazone-(1).

8. As a composition of matter an N-substituted phthalazone of formula



wherein R_1 is selected from the group consisting of phenyl, m-cresyl, α-naphthyl, benzyl, p-chlorobenzyl, p-brombenzyl, o-methoxybenzyl and p-isopropoxybenzyl; X is selected from the group consisting of hydrogen and chlorine; R_2 is the bivalent alkylene radical of from 2 to 5 carbon atoms; and B is selected from the group consisting of lower dialkylamino, piperidino, pyrrolidyl and morpholino.

3,017,412
PROCESS FOR THE PRODUCTION OF 3.5-DIAMINOPYRAZINE - 2.6 - DICARBOXYLIC ACID DERIVATIVES

Anthony Fenwick Daglish, Cheadle Hulme, England, Rodolphe Vonderwahl, Riehen, near Basel, Switzerland, and George Arnold Tillotson, Hale, England, assignors to J. R. Geigy, A.-G., Basel, Switzerland

No Drawing. Original application May 23, 1958, Ser. No. 737,215. Divided and this application Aug. 4, 1959, Ser. No. 835,160
Claims priority, application Switzerland May 29, 1957
9 Claims. (Cl. 260—250)

1. A process for the production of 3.5-diamino-pyrazine-2.6-dicarboxylic acid amides which comprises condensing one molecular proportion of 1.3-dialkyl-4-amino uracil with substantially one molecular proportion of 1.3-dialkyl-4-amino-5-nitroso uracil in an acidic medium while splitting off water and ammonia to form 3.2.;5.6-bis[(1′.3′-dialkyl - 2′.4′ - dioxo - 1′.2′.3′.4′ - tetrahydro) - 1′.4′ - pyrimidino]-pyrazine and saponifying this compound with an alkali metal hydroxide to form the 3.5-diamino-pyrazine-2.6-dicarboxylic acid amide while splitting off two molecular proportions of carbonic acid and transforming any carboxylic acid group formed during said alkaline treatment into a carboxylic acid amide group by treating said saponification product with a member selected from the group consisting of thionyl chloride, phosphorus trichloride and phosphorus tribromide to form the corresponding carboxylic acid halide and treating said carboxylic acid halide with a member selected from the group consisting of ammonia, primary alkyl amine, lower primary alkenylamine, lower primary hydroxyalkylamine, primary phenyl-lower alkylamine, primary cyclohexylamine, primary phenylamine, primary alkylphenylamine, primary halophenylamine, primary alkoxyphenylamine, primary phenoxyphenylamine, primary carboxyphenylamine, primary sulphophenylamine, primary sulphamylphenylamine, primary pyrazolylamine, primary thiazolylamine, primary thiadiazolylamine, primary pyridylamine, primary quinolylamine, lower alkylurea, benzylurea and phenylurea to form the corresponding carboxylic acid amide.

3,017,413
FUNGICIDAL AGENTS AND MEANS OF PRODUCING THE SAME

Frank H. Tendick, Grosse Pointe Park, Paul E. Thompson, Grosse Pointe Farms, and Edward F. Elslager, St. Clair Shores, Mich., assignors to Parke, Davis & Company, Detroit. Mich., a corporation of Michigan

No Drawing. Filed Dec. 5, 1958, Ser. No. 778,324
4 Claims. (Cl. 260—279)

1. A member of the class consisting of 3,6-dichloro-9-(γ-[bis - (β - hydroxyethyl)amino]propylamino)acridine and acid addition salts thereof.

3,017,414
PIGMENT PRODUCTION

John W. Minnich, Wilmington, Del., and Ronald L. Sweet, Westfield, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 20, 1959, Ser. No. 814,405
10 Claims. (Cl. 260—279)

1. A process for reducing the particle size of a colored pigment selected from the group consisting of phthalocyanine pigments and quinacridone pigments which comprises dry milling said colored pigment in a milling apparatus havng an attrition and shearing action, thereafter contacting said dry-milled pigment with an organic liquid in water emulsion wherein the liquid is selected from the group consisting of nitrobenzene, benzonitrile, unsubstituted aromatic hydrocarbons, chlorinated aromatic hydrocarbons, and chlorinated aliphatic hydrocarbons, boiling between about 100° C.–250° C., and subsequently removing the organic liquid from the pigment by steam distillation.

3,017,415
CERTAIN BENZIMIDAZOLES CARRYING THIAZOLYL, THIADIAZOLYL AND ISOTHIAZOLYL SUBSTITUENTS IN THE 2-POSITION

Lewis H. Sarett, Princeton, and Horace D. Brown, Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 18, 1960, Ser. No. 2,856
12 Claims. (Cl. 260—302)

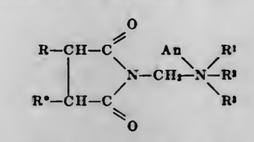
1. 2-(2′-thiazolyl)-benzimidazole.

3,017,416
N-SUCCINIMIDOMETHYL-SUBSTITUTED QUATERNARY AMMONIUM COMPOUNDS

Chien-Pen Lo, Philadelphia, Pa., and Richard L. Orsage, Mount Holly, N.J., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Aug. 28, 1959, Ser. No. 836,584
6 Claims. (Cl. 260—326.5)

1. Compounds of the formula



wherein An represents an anion, R and R* represent a member of the class consisting of hydrogen, alkyl of one to 12 carbon atoms, and alkenyl groups, R^1 represents a lipophilic group of 10 to 25 carbon atoms, and R^2 and R^3 when taken individually represent groups from the class consisting of alkyl groups of one to two carbon atoms, and 2-hydroxyethyl group, and the benzyl group

and when taken together form a divalent chain from the class consisting of

$-CH_2CH_2CH_2CH_2-$, $-CH_2CH_2CH_2CH_2CH_2-$, and $CH_2CH_2OCH_2CH_2-$

and these chains having a methyl substituent.

2. Dodecyldimethyl (succinimidomethyl) ammonium chloride.

3,017,417

IMPROVEMENTS IN PREPARING ALKYL MALEIC ACID ANHYDRIDES

Pieter Daniel Harkes, Vlaardingen, Netherlands, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 5, 1959, Ser. No. 851,012
Claims priority, application Great Britain Nov. 7, 1958
7 Claims. (Cl. 260—346.8)

1. The process for preparing alkyl maleic anhydrides which comprises reacting a compound of the formula

R.CO.COOR'

wherein R is an alkyl group containing not more than 2 carbon atoms and R' is selected from the group consisting of hydrogen, methyl and ethyl, with succinic anhydride in the presence of a compound selected from the group consisting of pyridine, picoline, lutidine, quinoline, isoquinoline and triethylamine and the hydrogen succinates of sodium, potassium, rubidium and caesium under substantially anhydrous conditions.

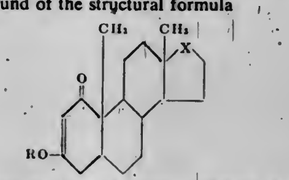
3,017,418

3,17-BISOXYGENATED ANDROST-2-EN-1-ONES AND INTERMEDIATES

Raymond M. Dodson, Park Ridge, and Arthur H. Goldkamp, Glencoe, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Jan. 20, 1960, Ser. No. 3,494
6 Claims. (Cl. 260—397.4)

1. A compound of the structural formula



wherein R is selected from the group consisting of hydrogen, lower alkyl, and lower alkanoyl radicals; and X is selected from the group consisting of carbonyl, β-hydroxymethylene, β-(lower alkanoyl)oxymethylene, [α-(lower alkyl) - β - hydroxy]methylene, and [α-(lower alkyl)-β-(lower alkanoyl)oxy]methylene radicals.

3,017,419

11α-METHYL-ANDROSTANE DERIVATIVES

Howard J. Ringold, John A. Zderic, Enrique Batres, and George Rosenkranz, all of Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed July 21, 1958, Ser. No. 749,617
Claims priority, application Mexico July 20, 1957
2 Claims. (Cl. 260—397.45)

1. 11α-methyl-androstan-11β-ol-3,17-dione.

3,017,420

PREPARATION OF ORGANIC ISOCYANATES

William D. Schaeffer, Pomona, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Oct. 25, 1957, Ser. No. 692,254
6 Claims. (Cl. 260—453)

1. A process for preparing an organic isocyanate which comprises reacting a hydrocarbyl halide containing a halogen atom bonded to an alkyl carbon atom and not more than one halogen atom on any one carbon atom, with a cyanate of a metal selected from the class consisting of the alkali metals and alkaline earth metals, said reaction being conducted between about 25° and 250° C., in the presence of a solvent consisting essentially of a hydrocarbyl sulfone wherein the hydrocarbyl radicals are selected from the class consisting of alkyl, naphthenyl and aryl, and recovering organic isocyanate from the reaction mixture.

3,017,421

FLUORINE-CONTAINING COMPOUNDS AND PROCESS FOR PREPARING THEM

Werner V. Cohen, Glen Farms, Md., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,900
13 Claims. (Cl. 260—456)

1. A polyfluoroalkyl compound of the formula

$H(CF_2)_nCH_2O—SO_2—X$

wherein X is a member of the group consisting of chlorine and a $—O—CH_2(CF_2)_nH$ group, and n is an integer of from 2 to 10.

3,017,422

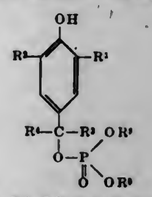
COMPOSITION OF MATTER

Ralph B. Thompson, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Jan. 8, 1958, Ser. No. 707,693
9 Claims. (Cl. 260—461)

3. The method of preparing a quinone methide phosphate which comprises reacting a quinone methide with a phosphoric acid at a temperature of from about —20° to about 150° C.

7. A compound having the following general structure:



wherein R^1, R^2, R^3, R^4, R^5 and R^6 are selected from the group consisting of hydrogen and alkyl groups.

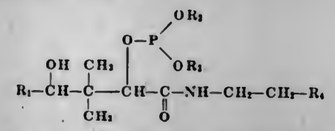
3,017,423

ORGANIC COMPOUNDS AND PROCESS

Barney J. Magerlein and Fred Kagan, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

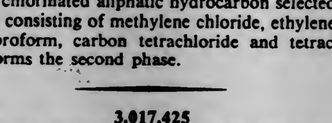
No Drawing. Filed May 29, 1959, Ser. No. 816,715
12 Claims. (Cl. 260—461)

1. A compound selected from the class consisting of (*a*) compounds having the formula:

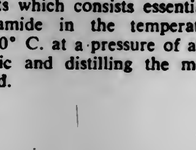


wherein R_1 is selected from the class consisting of hydrogen and methyl, R_2 and R_3 are selected from the class consisting of alkyl containing from 1 to 6 carbon atoms, inclusive, alkenyl containing from 3 to 6 carbon atoms, inclusive, aralkyl containing from 7 to 13 carbon atoms, inclusive, and aryl containing from 6 to 12 carbon atoms, inclusive, and R_4 is selected from the class consisting of —COOH and $—SO_3H$, and (*b*) the alkali metal and alkaline earth metal salts thereof.

7. A process for the preparation of an acid having the formula:



wherein R_1 is selected from the class consisting of hydrogen and methyl, R_2 and R_3 are selected from the class consisting of alkyl containing from 1 to 6 carbon atoms, inclusive, alkenyl containing from 3 to 6 carbon atoms, inclusive, aralkyl containing from 7 to 13 carbon atoms, inclusive, and aryl containing from 6 to 12 carbon atoms, inclusive, and R_4 is selected from the class consisting of —COOH and $—SO_3H$, which comprises reacting in the presence of an inert solvent a lactone having the formula:



wherein R_1, R_2, and R_3 have the significance hereinbefore defined, with a compound selected from the class consisting of alkali metal salts and alkaline earth metal salts of an amino acid having the formula $NH_2—CH_2—CH_2—R_4$ wherein R_4 has the significance hereinbefore defined to give the corresponding salt of the desired acid, and liberating the desired acid from the salt so obtained.

3,017,424

PROCESS FOR THE PRODUCTION OF DIARYLCARBONATES

Karl-Heinrich Meyer, Krefeld-Bockum, and Hermann Schnell, Krefeld-Uerdingen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 25, 1958, Ser. No. 723,648
Claims priority, application Germany, April 8, 1957
6 Claims. (Cl. 260—463)

1. In a process for the production of diarylcarbonates by reacting phosgene with an aqueous solution of a compound selected from the group consisting of the alkali metal and alkaline earth metal phenoxides and naphthoxides, the improvement of carrying out the reaction in a highly dispersed two-phase system in which the aqueous solution forms one phase and a solution of phosgene in a chlorinated aliphatic hydrocarbon selected from the group consisting of methylene chloride, ethylene chloride, chloroform, carbon tetrachloride and tetrachloroethane, forms the second phase.

3,017,425

METHOD FOR THE PREPARATION OF MONOCYANOETHYLFORMAMIDE

Newman M. Bortnick, Oreland, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Mar. 19, 1958, Ser. No. 722,399
6 Claims. (Cl. 260—465.4)

1. A method for the preparation of monocyanoethylformamide in a reaction medium substantially free of hydrolyzing agents which consists essentially of heating dicyanoethylformamide in the temperature range of about 140° to 250° C. at a pressure of about 0.01 mm. up to atmospheric and distilling the monocyanoethylformamide formed.

3,017,426

REMOVAL OF PHENOLIC INHIBITORS FROM ALKENYL MONOMERS

Norman R. Ruffing, James L. Amos, and Vincent D. Puzar, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,444
7 Claims. (Cl. 260—465.9)

1. A method for removing a phenolic inhibitor from an alkenyl monomer which method comprises contacting an alkenyl monomer containing a phenolic inhibitor and a proportion of water which is between 100 p.p.m. and 700 p.p.m. with a strongly basic quaternary ammonium anion exchange resin in the hydroxide form containing between 40 and 60 percent by weight of water and recovering alkenyl monomer from which phenolic inhibitor has been removed.

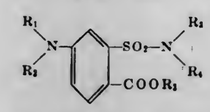
3,017,427

4-AMINO-2-SULFAMYLBENZOIC ACID ESTERS

Glenn H. Hamor, Los Angeles, Calif. (% Smith Kline & French Laboratories, 1530 Spring Garden St., Philadelphia 1, Pa.)

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,198
7 Claims. (Cl. 260—470)

1. A chemical compound of the class consisting of a free base and its nontoxic acid addition salts, the free base having the following structural formula:



in which R_1, R_2, R_3, and R_4 are members selected from the group consisting of hydrogen and lower alkyl having from 1 to 6 carbon atoms, and R_5 is a member selected from the group consisting of a branched alkyl group having from 3 to 5 carbon atoms, allyl, methallyl, propargyl, cyclopentyl, cyclohexyl and phenyl.

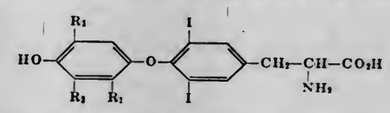
3,017,428

ANTIHYPERCHOLESTEROLEMIC THYRONINE DERIVATIVES

Eugene C. Jorgensen, South San Francisco, Calif., assignor to Regents of the University of California, Berkeley, Calif., a corporation of California

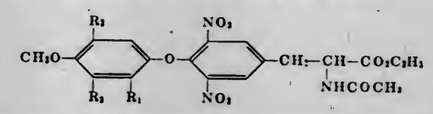
No Drawing. Filed Aug. 18, 1959, Ser. No. 834,386
8 Claims. (Cl. 260—471)

1. A chemical compound having the structural formula:



in which R_1 is lower alkyl of from 1 to 3 carbon atoms, and R_2 and R_3 are members selected from the group consisting of hydrogen and lower alkyl of from 1 to 3 carbon atoms, at least one of R_2 and R_3 being hydrogen.

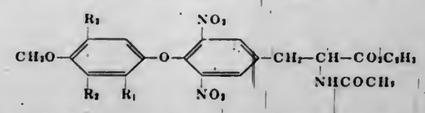
6. A chemical compound having the structure:



in which R_1 is lower alkyl of from 1 to 3 carbon atoms and R_2 and R_3 are members selected from the group consisting of hydrogen and lower alkyl of from 1 to 3

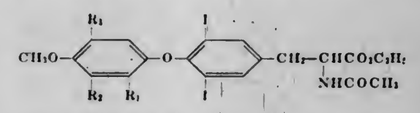
carbon atoms at least one of R_2 and R_3 being hydrogen.

7. A chemical compound having the structure:



in which R_1 is lower alkyl of from 1 to 3 carbon atoms and R_2 and R_3 are members selected from the group consisting of hydrogen and lower alkyl of from 1 to 3 carbon atoms at least one of R_2 and R_3 being hydrogen.

8. A chemical compound having the structure:



in which R_1 is lower alkyl of from 1 to 3 carbon atoms and R_2 and R_3 are members selected from the group consisting of hydrogen and lower alkyl of from 1 to 3 carbon atoms at least one of R_2 and R_3 being hydrogen.

3,017,429
PRODUCTION OF LINALYL ACETATE

Peter Nayler, Willerby, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Mar. 22, 1960, Ser. No. 16,655
Claims priority, application Great Britain May 7, 1959
3 Claims. (Cl. 260—489)

1. A process of producing linalyl acetate which comprises contacting linalool with ketene at a temperature below 30° C. in the presence of an acid esterification catalyst selected from the group consisting of para-toluene sulphonic acid and sulphuric acid.

3,017,430
PROCESS FOR PREPARATION OF SULFONIC ACID

George B. Arnold and Herman D. Kluge, Fishkill, Raymond C. Schlicht, Hopewell Junction, and William Smolin, Beacon, N.Y., assignors to Texaco Inc., a corporation of Delaware

Filed Apr. 24, 1958, Ser. No. 730,712
14 Claims. (Cl. 260—505)

1. Continuous process for the production of an oil-soluble sulfonic acid containing less than about 0.30 weight percent sodium and less than about 2.5 weight percent sulfuric acid, calculated as sulfate on a solvent free basis, comprising continuously introducing a heated aqueous sulfuric acid solution containing from about 30 weight percent to about 45 weight percent sulfuric acid into a contacting zone, continuously feeding into said contacting zone a hot liquid hydrocarbon solvent solution of an oil-soluble alkali metal sulfonate having an average molecular weight of from about 390 to about 600 and comprising chiefly mono-alkylated and poly-alkylated aromatic hydrocarbon sulfonates in which the total number of carbon atoms in the alkyl group side chains is from about 20 to about 30 carbon atoms; continuously maintaining in said contacting zone at least about 2.7 equivalents of sulfuric acid for each equivalent of alkali metal sulfonate present therein, continuously intimately mixing in said contacting zone at a temperature within the range of from about 125° to about 160° F. said sulfuric acid solution and said alkali metal sulfonate solution, and continuously withdrawing the resulting formed sulfonic acid from said contacting zone.

3,017,431
POLYHALOOCTAHYDROALKANONAPHTHALENEDICARBOXYLIC ACIDS AND METHOD OF PREPARATION THEREOF

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,832
7 Claims. (Cl. 260—514)

1. A halo-substituted polyhydroalkanonaphthalenedicarboxylic acid in which the halogen is selected from the group consisting of chlorine and bromine, said acid resulting from the Diels-Alder condensation, at a temperature of from about 50° C. to about 250° C., of a conjugated halocycloalkadiene selected from the group consisting of conjugated halocyclopentadienes and halocyclohexadienes in which the halogen is selected from the group consisting of chlorine and bromine, with the condensation product, formed at a temperature of from about 80° C. to about 250° C., of a conjugated aliphatic diene hydrocarbon containing from 4 to 9 carbon atoms per molecule and an olefinic dicarboxylic acid consisting of carbon, hydrogen and oxygen and containing not more than 18 carbon atoms per molecule.

3,017,432
PROCESS FOR THE PRODUCTION OF 2-CIS-β-IONYLIDENE ACETIC ACID

Karl Elter, Koln-Stammheim, and Ernst Truscheit, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,969
Claims priority, application Germany Aug. 20, 1958
4 Claims. (Cl. 260—514)

1. A process for the preparation of 2-cis-β-ionylidene acetic acid, which comprises the steps of (1) refluxing in an organic solvent medium selected from the group consisting of tetrahydrofurane, dioxane, benzene, toluene and mixtures thereof with diethyl ether, β-cyclocitral with at least equimolecular amounts of γ-bromo-β-methyl-crotono nitrile in the presence of zinc, (2) acidifying the reaction mixture thereby formed with a dilute aqueous acid to produce the salt of δ-imido lactone, (3) hydrolyzing the thus produced salt of δ-imido lactone whereby ammonia is split off and the corresponding lactone produced, (4) contacting the thus produced lactone with a member selected from the group consisting of alkali alkoxides containing up to 5 carbon atoms and alkali amides in a substantially anhydrous medium to thereby form the alkali salt of the isomeric 2-cis-β-ionylidene acetic acid, and (5) acidifying the reaction mixture containing said salt with the mineral acid to liberate the corresponding acid from its salt to produce the isomeric 2-cis-β-ionylidene acetic acid.

3,017,433
PRODUCTION OF DIBASIC ACIDS FROM C–8 AROMATIC HYDROCARBONS

Art C. McKinnis, Long Beach, and William L. Wasley, Santa Ana, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Filed May 3, 1954, Ser. No. 427,154
11 Claims. (Cl. 260—522)

1. A process for producing a mixed alkylate from a mixture of C–8 aromatic hydrocarbons comprising by volume at least about 10% of ethylbenzene, at least about 20% of m-xylene, and a substantial proportion, over 5%, of p-xylene, said mixed alkylate being particularly adapted for total conversion to terephthalic acid and isophthalic acid via oxidation and decarboxylation, which comprises subjecting said mixture to alkylation with propylene, in the presence of a catalyst selected from the class consisting of phosphorus pentoxide, phosphoric acid and sulfuric acid, said alkylation being effected at a temperature between about 50° and 140° C., continuing said alkylation for a time sufficient to effect substantially complete monoalkylation of said ethylbenzene and any o-xylene present, and terminating said alkylation (1) before any substantial amount of p-xylene has been alkylated, (2) before any substantial amount of polyalkylation has occurred, and (3) before complete monoalkylation of said m-xylene has occurred.

3,017,434
ISOLATION OF FATTY ACIDS FROM AQUEOUS SOLUTIONS THEREOF

Jack J. Bulloff, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

No Drawing. Original application Oct. 5, 1955, Ser. No. 538,764. Divided and this application July 24, 1958, Ser. No. 754,508
2 Claims. (Cl. 260—526)

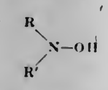
1. The method of isolating water-soluble alkyl-substituted acetic acid from aqueous solutions containing the same and produced by hydrolysis of butylcyclopentadiene and in a solution mixed with other water-soluble carboxylic acids, which comprises saponifying the solution, adding the saponified solution to an excess of an aqueous solution of a water-soluble aluminum salt selected from the group consisting of alum and aluminum sulfate to precipitate the insoluble aluminum soap of said alkyl-substituted acetic acid, filtering the resultant acid soaps, and treating the same with cold concentrated phosphoric acid.

3,017,435
PREPARATION OF AMINES

Donald Drake Coffman, West Chester, Pa., and Edward Levant Jenner, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 20, 1956, Ser. No. 592,488
Claims priority, application Canada Jan. 28, 1953
11 Claims. (Cl. 260—583)

1. The process, for introducing an amino radical into the hydrocarbon group of a compound containing up to and including 8 carbon atoms and having 1 to 2 ethylenic double bonds, said compound being a member of the group consisting of aliphatic hydrocarbons and monosubstituted aliphatic hydrocarbons, the substituent on the substituted hydrocarbon being a member of the group consisting of hydroxyl and carboxyl radicals, which comprises reacting in an organic solvent/water medium at −30° to +100° C. said compound with amino radicals generated in situ by the action of a metallic reducing ion of a metal of atomic number 22 to 24 on a hydroxylamino compound having the formula



wherein R and R′ are members of the group consisting of hydrogen and saturated aliphatic hydrocarbon radicals having a total of up to and including 4 carbon atoms, the molar ratios being 1 to 10 of said compound, 0.75 to 1.5 of said metallic reducing ion, and 0.75 to 1.5 of said hydroxylamino compound.

11. The process which comprises reacting butadiene with amino radicals in a water/tert. butyl alcohol medium at −30° to +100° C. to form diaminooctadiene, said amino radicals being generated in situ by the action of titanous sulfate on hydroxylamine sulfate, and said butadiene, said titanous sulfate and said hydroxylamine sulfate being used in substantially molecularly equivalent quantities.

3,017,436
PREPARATION OF FLUORAL

Dallas E. Hamilton, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 28, 1956, Ser. No. 624,758
3 Claims. (Cl. 260—601)

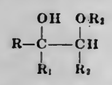
1. A process for preparing fluoral which comprises: passing through a reaction zone maintained between 200 and 400 degrees centigrade a 3:1 to 18:1 mole ratio mixture of hydrogen fluoride and chloral over a metallic catalyst selected from the group consisting of cobalt, nickel and chromium halides, said catalyst being impregnated on activated alumina, and, separating fluoral from the reaction zone effluent.

3,017,437
PRODUCTION OF GLYCOL MONOETHERS

Henri Normant, Paris, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, a French body corporate, Paris, France

No Drawing. Filed Oct. 11, 1957, Ser. No. 689,498
Claims priority, application France Nov. 27, 1956
2 Claims. (Cl. 260—611)

1. A process for the production of a glycol ether of the general formula



where R is selected from the class which consists of aryl groups, saturated and unsaturated aliphatic hydrocarbon groups, saturated and unsaturated cycloaliphatic hydrocarbon groups and groups which with R_1 and the carbon atom to which it is attached complete a cycloalkane ring, R_1 is selected from the class which consists of hydrogen atoms, and alkyl groups, R_2 is an alkyl group and R_3 is an alkyl group, provided that when R_1 is alkyl R is also alkyl, which comprises producing contact between a compound of the general formula $R.CO.R_1$ and the magnesium derivative of a compound of the general formula $R_2.CHCl.O.R_3$ at a temperature which is at highest in the neighborhood of room temperature and in a liquid cyclic ether selected from the class which consists of tetrahydrofuran and tetrahydropyran as reaction medium, and hydrolyzing the magnesium carbinolate so obtained.

3,017,438
MANUFACTURE OF ALCOHOLS

Mark T. Atwood, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed May 4, 1959, Ser. No. 810,701
12 Claims. (Cl. 260—632)

1. A process for the conversion of trialkylaluminum to alcohols comprising the steps of incompletely oxidizing trialkylaluminum by contacting said trialkylaluminum with an oxygen-containing gas, thereby obtaining a product mixture containing aluminum alkoxides and compounds with alkylaluminum structure, reacting said product mixture with a quantity of a compound having at least one hydroxyl group which acts as a proton donor and selected from the class of compounds consisting of monohydric and polyhydric alcohols, alkoxyalkanols, phenols and water, the quantity of said proton donor being the amount required to react with substantially all of the alkyl-aluminum structures in said product mixture, thereby obtaining a second product mixture containing aluminum alkoxides and hydrocarbons, distilling said second product mixture to recover aluminum alkoxides substantially free from hydrocarbons and hydrolyzing said aluminum alkoxides, thereby obtaining alcohols which are substantially free from hydrocarbon contaminants.

3,017,439
PROCESS FOR THE PRODUCTION OF NITROCYCLODODECANE AND CYCLODODECANE OXIME

Gunther Wilke, and Hermann Weslau, Mulheim (Ruhr), Germany, assignors to Studiengesellschaft Kohle m.b.H., Mulheim (Ruhr), Germany, a corporation of Germany

No Drawing. Filed Apr. 16, 1958, Ser. No. 729,033
Claims priority, application Germany April 18, 1957
17 Claims. (Cl. 260—644)

1. A member selected from the group consisting of nitrocyclododecane and aci-nitrocyclododecane.

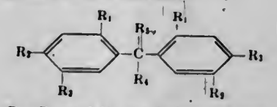
2. Process for the production of nitrocyclododecane which comprises reacting cyclododecane with a nitrating agent selected from the group consisting of gaseous nitric acid, nitrogen dioxide and aluminum nitrate hydrates, dissolving the nitro compound formed in a solution of an alkali metal hydroxide and recovering the nitrocyclododecane formed.

3,017,440
DIHALO, BIS-(2,4,5-TRIHALOPHENYL)-METHANES

Charles E. Entemann, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Oct. 30, 1957, Ser. No. 693,251
2 Claims. (Cl. 260—649)

1. A compound of the structure:



wherein R_1, R_2, R_3 and R_4 are halogen atoms.

3,017,441
PROCESS FOR NUCLEAR ALKYLATION OF AROMATIC HYDROCARBONS

Owen H. Thomas, Chicago, and William P. Hettinger, Jr., Dalton, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 10, 1957, Ser. No. 701,730
9 Claims. (Cl. 260—671)

1. A process for alkylating an aromatic hydrocarbon of the following general formula

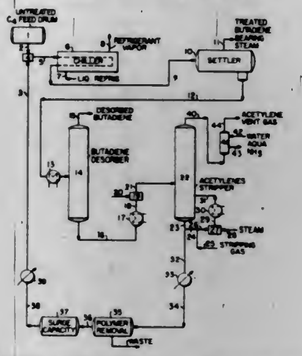


where n is 0 to 3 and R is an alkyl radical containing from about 1 to 20 carbon atoms, with a low molecular weight aliphatic olefin comprising reacting the aromatic hydrocarbon with the olefin in the presence of a polystyrene sulfonic acid resin catalyst cross-linked with divinylbenzene at a temperature of from about 220° F. to 375° F., a pressure of from about 200 p.s.i.g. to 2,000 p.s.i.g., and a WHSV of from about 0.3 to 5.0.

3,017,442
METHOD FOR IMPROVING CAA ACETYLENE REMOVAL

Norman N. Hochgraf, Basking Ridge, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Sept. 25, 1959, Ser. No. 842,302
7 Claims. (Cl. 260—681.5)



1. In a cuprous ammonium acetate pretreat process for the removal of acetylenes from butadiene-rich C_4 streams wherein acetylenes are stripped from the fat CAA solution at elevated temperatures with a stripping gas and wherein the lean solution is passed over an adsorbent to remove polymers before recycle to the process, the improvements which comprise injecting in addition to said stripping gas open steam into the fat CAA solution in an amount sufficient to replace water removed with the stripping gas and to supply at least a substantial part of the heat necessary to heat the solution to a temperature in the range of 180° F. to 220° F., and quenching the stripped lean solution to a temperature below 170° F. before passing it over the adsorbent.

3,017,443
METHOD OF INCORPORATING A MIXTURE OF 2,6-DIALKOXY-4-ALKYLPHENOL AND 2,2'-ALKYLENE-BIS-(4,6-DIALKYLPHENOL) IN RUBBER, AND RESULTING PRODUCT

Joseph A. Chenicek, Prairie View, and William L. Cox, Mount Prospect, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 30, 1957, Ser. No. 705,789
6 Claims. (Cl. 260—810)

1. The method of preventing the cracking of natural rubber due to ozone which comprises incorporating therein from about 0.25% to about 10% by weight of a synergistic mixture of from about 1 to about 10 parts of 2,6-dialkoxy-4-alkylphenol and 1 part of 2,2'-alkylene-bis-(4,6-dialkylphenol).

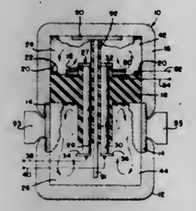
ELECTRICAL

3,017,444
CONSTANT ENERGY SOURCE

Robert W. Fritts, Arden Hills, Minn., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Original application Oct. 30, 1957, Ser. No. 693,308, now Patent No. 2,952,724, dated Sept. 13, 1960. Divided and this application June 27, 1960, Ser. No. 39,065
4 Claims. (Cl. 136—4)

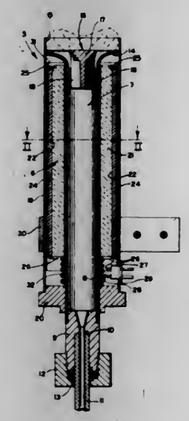
1. Constant output energy source means comprising, a thermoelectric generator having at least two thermojunctions, a bath comprising a first medium transformable from a solid state to a liquid state at a first predetermined temperature above a predetermined range of ambient room temperatures external to said bath, said medium being in thermal contact with one of said thermojunctions, a bath comprising a second medium transformable from a solid state to a liquid state at a second lower predetermined temperature above said range of ambient temperatures and in thermal contact with another of said thermojunctions, electrically energizable means having a heat emitting portion in said first bath and supplying heat to said first medium in quantity sufficient to maintain a portion only of said first medium in a liquid state, means communicating between said baths and having surface portions in thermal contact with both of said media for conducting heat from said first to said second medium to cause solid phase portions of said first medium to tend to collect on the surface portion of said conducting means in contact therewith as a result of extraction of heat from said first medium through said surface portion, and heat transfer means having a heat absorbing portion in thermal contact with said second medium for transferring heat to the ambient atmosphere from said second medium in sufficient quantity to maintain a portion only of said second medium in its solid phase and deposited on said heat absorbing portion, thereby controlling the heat content of both of said media in a manner to cause each of said media to have portions in both liquid and solid phases to maintain the temperatures of said media and hence those of the associated thermojunctions constant at the transformation temperatures of said media, the constant temperature differential between said one and another thermojunction thus produced affording said generator constant output potential.



3,017,445
BURNER-THERMOELECTRIC GENERATOR ASSEMBLY

Robert W. Fritts, Arden Hills, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed July 7, 1959, Ser. No. 825,498
8 Claims. (Cl. 136—4)



1. A combination burner-thermoelectric generator assembly comprising a burner body formed of concentric inner and outer sleeves and an annular transverse wall joining said sleeves at one end of said inner sleeve, said inner sleeve having fuel inlet means at its other end and terminating in a flame port at said annular transverse wall, said outer sleeve being formed of heat conductive material and extending axially beyond said annular wall to afford a tubular flange in spaced coaxial relation surrounding said flame port, and an annular thermoelectric generator disposed between said inner and outer sleeves and terminating short of all portions of said annular transverse wall, said generator having hot junction means in heat transfer relation with said outer sleeve adjacent said annular wall, and said flange being positioned to afford draft protection to burning fuel at said flame port as well as to afford means for collecting heat from said burning fuel.

3,017,446
PREPARATION OF MATERIAL FOR THERMOCOUPLES

Hiroshi Julian Goldsmid, South Ruislip, and Anthony Robert Sheard, Northwood, England, assignors to The General Electric Company Limited, London, England

No Drawing. Original application Dec. 16, 1957, Ser. No. 702,936, now Patent No. 2,990,439, dated June 27, 1961. Divided and this application Jan. 8, 1960, Ser. No. 1,186
Claims priority, application Great Britain Dec. 18, 1956
5 Claims. (Cl. 136—5)

1. A method of preparing thermocouple elements which consist essentially of a semiconductor having a constitutional formula $Bi_mSb_nTe_pSe_qS_r$ (where n has a value in the range 0–1.8, q has a value in the range 0–0.4 and r has a value in the range 0–0.24, subject to the conditions that $m+n=2$, $p+q+r=3$, $3n+2q+2r$ is not less than 0.03, and $3q+5r$ is not greater than 1.2): said method comprising the steps of, melting together in vacuo the constituent elements of the semiconductor in appropriate proportions, producing from the molten material an elongated solid ingot, subjecting the ingot to zone melting, and then cutting the thermocouple elements from the ingot with that dimension of each element which is to extend between the junctions of a thermocouple parallel to the longitudinal axis of the ingot.

3,017,447
SILICA CONTAINING BATTERY PLATES

Joseph Anthony Orsino, Mountain Lakes, N.J., and Edward J. Dunn, Jr., Port Washington, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed July 2, 1959, Ser. No. 824,459
5 Claims. (Cl. 136—26)

1. A plate for lead acid storage batteries, said plate comprising a grid and an active material, said active material containing at least one cocalcined silica-cored lead oxide; said silica-cored lead oxide containing from about 5% to about 20% of silica and from about 95% to about 80% of lead oxide based on the total weight of lead oxide plus silica and where the temperature of calcination of the silica-cored lead oxide is from about 450° C. to about 600° C.

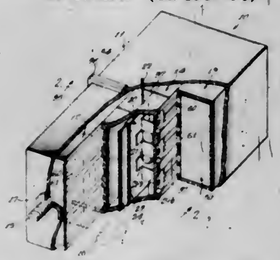
3,017,448
ELECTRIC BATTERY

Boris D. Cahan, Philadelphia, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey

Filed Dec. 21, 1959, Ser. No. 861,020
7 Claims. (Cl. 136—26)

1. A silver positive electrode for alkaline battery applications having present therein a lead compound selected from the group consisting of lead, lead oxide, lead hydroxide and sodium-plumbite in an amount of from about 0.1% to about 5% by weight of silver in the electrode.

3,017,449
QUICK ACTIVATING BATTERY
Edward L. Barrett, La Grange, Ill., assignor to Donald B. Alexander, Edgar R. Bourke, Ernest W. Schneider, and Lee J. Gary, as trustees
Filed Mar. 6, 1957, Ser. No. 644,402
16 Claims. (Cl. 136—90)



1. In an instantaneously activatable battery having a plurality of adjacent dry, non-activated cells, a container for controllably discharging electrolyte to the battery cells comprising, in combination, a frangible, sealed case mounted adjacent said cells, said case having lines of weakness extending across said plurality of cells, an expandable bladder positioned within said case, and an electrolytic solution filling the remainder of said case, said bladder when expanded being effective to fracture said case along said lines of weakness and discharge the electrolyte simultaneously into said cells.

3,017,450
CABLES
Charles H. Crosby, Cranford, William T. Hicks, Glen Rock, and Roger R. Wahlberg, Bloomfield, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Original application July 19, 1957, Ser. No. 672,890. Divided and this application Sept. 23, 1959, Ser. No. 841,754
2 Claims. (Cl. 174—34)



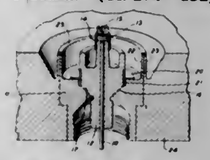
1. A multi-unit cable formed of a plurality of cable units bound together, the cable units having groups of twisted pairs of wires and the groups of pairs of wires in each unit being twisted together in a relative orientation which varies in a non-repetitive manner between the units throughout the length of the cable.

3,017,451
STEMS FOR ELECTRICAL DEVICES
Donald T. Zarbock, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Filed Dec. 29, 1959, Ser. No. 862,638
5 Claims. (Cl. 174—50.57)



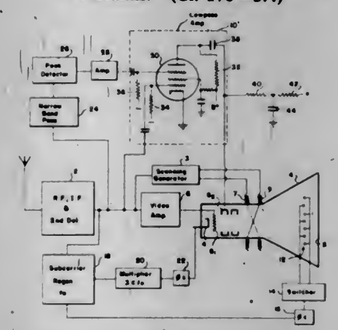
2. A stem for an electrical device comprising a flat glass disc press having a central portion under tension and a peripheral portion under compression, a central opening in said central portion, an exhaust tube projecting from one side of said press and communicating with said opening, a plurality of lead-in wires spaced apart in a circle in a neutral portion between said central portion and said peripheral portion and hermetically sealed therein, said press having an integral annular rib on the surface thereof opposite to that from which said exhaust tube projects and in the same said circle as the lead-in wires so as to not disturb the tension and compression strains and serving to resist distortion of the press during subsequent fusion of an envelope to the periphery of the press.

3,017,452
HIGH PRESSURE SEALS FOR LEAD-IN CONDUCTORS
Leif Rongved, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 23, 1958, Ser. No. 782,547
1 Claim. (Cl. 174—152)



An insulated coaxial lead-in for making electrical connection through a wall that is subjected to a large difference of pressure on its opposite sides, said lead-in comprising a central conductor and an outer conductor, a generally cylindrical body of rigid insulating material separating said conductors and sealed to each by a first and a second seal respectively, the first seal comprising a rigid head of metal secured to the high pressure end of the inner conductor and resting on the corresponding end of the insulating body, and a cap of flexible metal covering said head and an adjacent portion of the body, said cap being bonded to and in continuous interfacial contact with both the head and the body; said second seal comprising an annular portion of the body resting on an annular portion of the outer conductor and sealed thereto by a flexible metal ring bonded to and in continuous interfacial contact with both the body and the outer conductor.

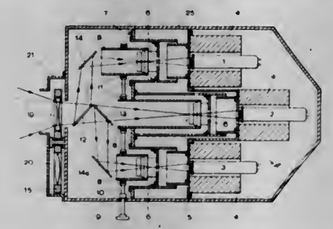
3,017,453
LOW FREQUENCY VIDEO SIGNAL ATTENUATION IN COLOR RECEIVER
Paul Raibourn, Southport, Conn.
Filed Apr. 27, 1956, Ser. No. 581,055
4 Claims. (Cl. 178—5.4)



3. A receiver for the display of television signals of the color subcarrier type in which the color subcarrier

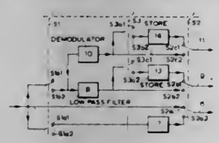
and its side bands are adjacent the upper end of the band of luminance video frequencies, said receiver comprising means to extract said signals from a modulated radio frequency carrier, a video amplifier for said extracted signals, a display device including a multiplicity of groups of areas excitable by said amplified extracted signals to luminescence in the primary colors employed in said signals, and means to attenuate in said amplified extracted signals before application to said areas frequency components below a limit below the lowest of said side bands.

3,017,454
COLOUR TELEVISION CAMERAS
Ivanhoe John Penfound James, South Ealing, London, and George Charles Newton, Hayes, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Mar. 18, 1958, Ser. No. 722,172
Claims priority, application Great Britain Mar. 22, 1957
7 Claims. (Cl. 178—5.4)



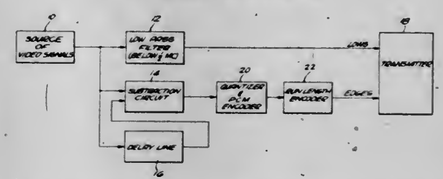
1. A colour television camera having at least two pick-up tubes and a dichroic mirror for dividing incident light into different colour components, at least two objective lenses one for each pick-up tube disposed respectively between said dichroic mirror and respective pick-up tubes for focusing colour components of an image transmitted or reflected by respective mirror onto said pick-up tubes, and a further lens disposed before said dichroic mirror and arranged in combination with each of the objective lenses to produce an equivalent lens of different angle of field of view from that of the respective objective lenses alone, means for varying the distance between said objective lenses and said pick-up tubes to cause the equivalent lens comprising said objective lens and said further lens to focus objects at different distances from the camera into the respective pick-up tubes.

3,017,455
PICK-UP DEVICES FOR COLOUR TELEVISION
George Ross Watson, Ickenham, Uxbridge, Denis Gordon Perkins, Gerrards Cross, and Ivanhoe John Penfound James, South Ealing, London, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Apr. 7, 1958, Ser. No. 726,861
Claims priority, application Great Britain Apr. 11, 1957
6 Claims. (Cl. 178—5.4)



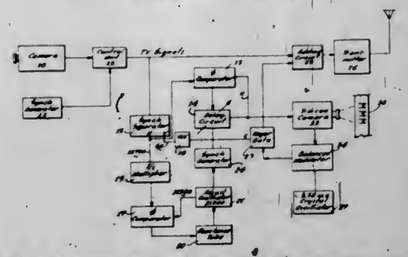
3. A pick-up device for generating colour television signals comprising a charge storage target, means for scanning said target according to a television raster to derive electrical signals corresponding to charges stored by said target, and optical means for projecting an image on said target including first filter means in the light transmission path to said target having alternate strips which transmit first and second colour components of corresponding areas of said image and intervening strips which transmit said first and second colour components and a third colour component of corresponding areas of said image, second filter means which transmits said second and third colour components but not said first colour component and third filter means which transmits said first colour component but not said second and third colour components, means synchronised with said scanning means for introducing said second filter means into the light path of said target during alternate field periods and for introducing said third filter means into the light path to said target during intervening field periods, to cause charges corresponding to said second and third colour components of an image divided into a plurality of respectively separate lines to be stored on said target during said intervening field periods, and to cause charges corresponding to said first colour component of an image to be stored on said target during said alternate field periods, three output terminals, and separating means comprising a low pass filter for signals corresponding to said second colour component and a demodulator for said signals corresponding to said third colour component, respective first, second and third stores for signals representing said first, second and third colour components, three output terminals, means synchronised with said scanning means for applying signals derived as a result of said scanning during said alternate field periods to said first store and a first of said output terminals, applying signals derived as a result of said scanning during said intervening field periods via said separating means to said second and third stores and respectively to the other two output terminals and for applying signals held in said first store to the first output terminal during intervening field periods and applying signals held in said second and third stores to the respective other output terminals during alternate field periods.

3,017,456
BANDWIDTH REDUCTION SYSTEM FOR TELEVISION SIGNALS
William F. Schreiber, Los Angeles, Calif., assignor to Technicolor Corporation, Hollywood, Calif., a corporation of Maine
Filed Mar. 24, 1958, Ser. No. 723,286
15 Claims. (Cl. 178—6)



6. In a system for reducing the bandwidth required for transmitting video signals by separating said signals into continuous-tone low-frequency signals and high-frequency signals and thereafter separately digitalizing and transmitting said portions, the improvement in transmitting said high-frequency signals comprising means for deriving difference signals from said video signals, a pulse-code modulation encoder including means for quantizing said difference signals with increasing steps for larger amplitudes, means for applying said difference signals to said pulse-code modulation encoder, a run-length encoder, means for applying the output of said pulse-code modulation encoder to said run-length encoder, and means for transmitting the output of said run-length encoder.

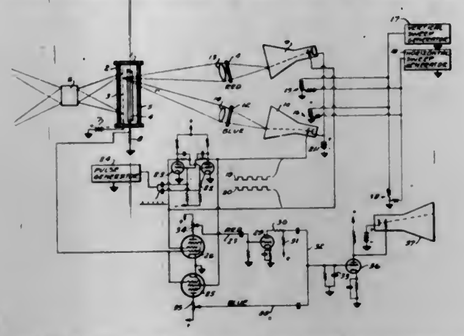
3,017,457
TRANSDUCING SYSTEM
Wayne R. Johnson, Los Angeles, Calif., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed July 13, 1959, Ser. No. 826,500
27 Claims. (Cl. 178—6)



1. In a system for transmitting and receiving multiplexed television signals representing a primary and an auxiliary image, first line scanning means for generating television signals representing the primary image, second line scanning means synchronized with said first line scanning means for generating television signals representing the auxiliary image during the vertical blanking intervals of the television signals representing the primary image, means coupled to said first and to said second line scanning means for multiplexing the television signals representing the auxiliary image from said second line scanning means with the television signals representing the primary image from said first scanning means, and means including a cathode ray tube coupled to said multiplexing means for receiving the multiplexed signals and for providing an image of either the said primary image or the auxiliary image at said cathode ray tube, said last mentioned means also including a first generator connectible to said cathode ray tube for providing a first predetermined deflection signal to said cathode ray tube, a second generator connectible to said cathode ray tube for providing to said cathode ray tube a second predetermined deflection signal, and switching means for connecting either said first or said second generator to said cathode ray tube to determine the respective sizes of the primary and the auxiliary images.

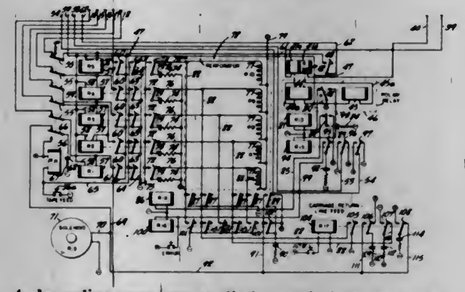
3,017,458
APPARATUS FOR REDUCING SPURIOUS SIGNALS IN THERMAL IMAGE CONVERTER
Max Garbuny, Pittsburgh, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 29, 1956, Ser. No. 619,094
4 Claims. (Cl. 178—6.8)

1. A thermal image converter comprising a thermally sensitive photoemissive cathode having a threshold wave length above which its photoemissivity is a function of temperature and below which its photoemissivity is substantially independent of temperature, means for forming an infrared image on said cathode, a pair of cathode-ray tubes having fluorescent screens, means causing the beams of said tubes to scan said screens in synchronism, means forming superimposed images of said fluorescent screens on said cathode, means restricting the light in one of said superimposed images to light of a wave length greater than said threshold wave length and means restricting the light in the other of said superimposed images to light of a wave length less than said threshold wave length, means normally biasing the beams in said tubes to cut-off, unblanking means for alternately turning on the beams in said tubes for equal short intervals, means for collecting the photoelectrons resulting from the light of both wave lengths in said superimposed images to produce a video signal, means synchronized with said unblanking means for producing a second video signal equal to the difference between that part of the video signal attributable to said light of greater wave



length and that part of the video signal attributable to said light of lesser wave length, and means synchronized with the scanning means of said pair of cathode ray tubes for producing a visual image of said second video signal.

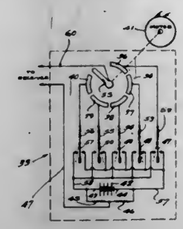
3,017,459
CODING APPARATUS
Joseph J. Saykay, Seacliff, N.N.Y., assignor to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed July 14, 1958, Ser. No. 748,341
14 Claims. (Cl. 178—17)



4. In coding apparatus, a diode matrix including input terminals in first and second groups, output conductors, a plurality of diode stacks connected in parallel across the output conductors, first conductive means joining each of the diode stacks to one of the first group input terminals, second conductive means joining selected ones of the diode stacks to one of the second group input terminals, an input conductor, switching means operable to connect the input conductor to each of the input terminals, a first control conductor connected by the switching means to the input conductor when the input conductor is connected to one of the first group input terminals, and a second control conductor connected by the switching means to the input conductor when the input conductor is connected to one of the second group input terminals.

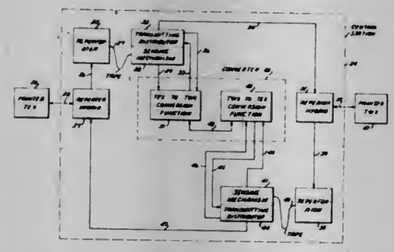
3,017,460
MULTIPLE PULSE COMMUNICATION SYSTEM
Arthur D. Alexander, Detroit, Mich.
(MR—73, Rochester, Minn.)
Filed Dec. 23, 1959, Ser. No. 861,656
4 Claims. (Cl. 178—17)

1. In a system of communication of the character described, means to generate a succession of direct current pulses of increasing amplitude, and means to vary the polarity of the pulses in accordance with a character to



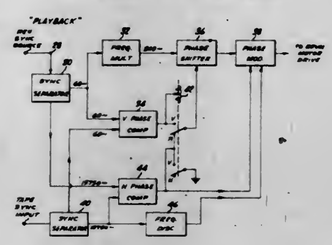
be transmitted while maintaining the amplitudes of the respective pulses substantially constant.

3,017,461
COMMUNICATION SYSTEM
Thompson H. Mitchell, Bronxville, N.Y., James S. Harris, Old Greenwich, Conn., and David Zekaria, Jamaica, N.Y., assignors to Radio Corporation of America, a corporation of Delaware
Filed Aug. 10, 1956, Ser. No. 603,381
20 Claims. (Cl. 178—26)



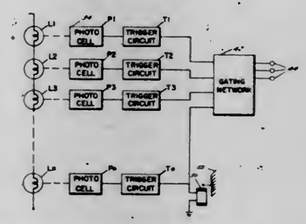
1. A code converter adapted for use in a communication system including a first device arranged to transmit and receive the upper and lower case characters in a first fixed-length telegraph code and means for receiving the characters in said code to control said first device, a second device arranged to transmit and receive the upper and lower case characters in a second fixed-length telegraph code and means for receiving the characters in said second code to control said second device, said first code differing in certain upper case characters from said second code and said second code differing in certain upper case characters from said first code, said converter comprising, in combination, a first switching circuit, means whereby said first switching circuit is made responsive to said certain upper case characters in said first code transmitted by said first device to perform the conversion functions required to convert said certain characters received to corresponding characters in said second code for transmission to said second device, a second switching circuit, means whereby said second switching circuit is made responsive to said certain characters in said second code transmitted by said second device to perform the conversion functions required to convert the said certain characters received to corresponding characters in said first code for transmission to said first device, and control means coupled to both of said circuits and responsive to the operation of either one of said circuits to cause the other of said circuits to assume a case status corresponding to that of the circuit in operation, whereby said first and said second switching circuits are maintained in the same case status at all times.

3,017,462
TAPE APPARATUS SYNCHRONIZING SYSTEM
Harold V. Clark, Menlo Park, and Donald B. MacLeod, Redwood City, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Apr. 21, 1960, Ser. No. 23,835
5 Claims. (Cl. 178—69.5)



1. A signal synchronizing system for synchronizing a magnetic tape apparatus with another independent information processing apparatus comprising: a source of composite sync signal derived from said magnetic tape apparatus having a plurality of sync components; means for separating said composite sync signal into at least a first sync component and a second sync component, said second sync component having a substantially greater frequency than said first sync component; a source of reference signal comprising a plurality of sync components corresponding to said at least a first sync component and a second sync component; means for separating said reference signal into a first reference sync component and a second reference sync component corresponding respectively to said first and second sync components derived from the said tape apparatus; means for comparing said separated first sync components for producing a first error control signal; means for comparing said separated second sync components for producing a second error control signal; and means for utilizing said error control signals to vary the rotational velocity of a scanning means of said tape apparatus.

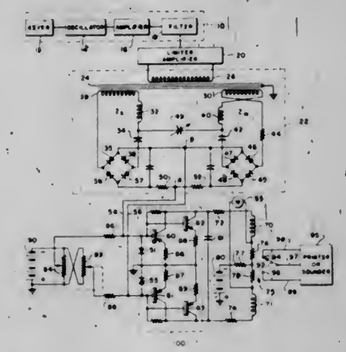
3,017,463
KEYBOARD APPARATUS
Stanley H. Dinsmore, Inglewood, and Robert M. Lee, Los Angeles, Calif., assignors to The Bendix Corporation, a corporation of Delaware
Filed Apr. 10, 1959, Ser. No. 805,489
3 Claims. (Cl. 178—79)

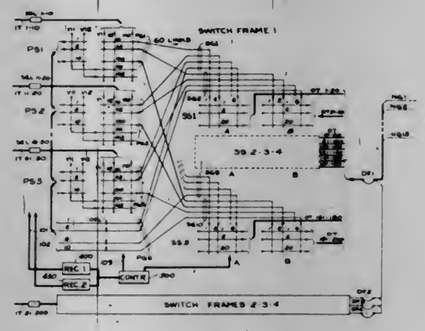


1. An apparatus for forming electrical code signals indicative of symbols associated with the keys of a manually-operated keyboard, comprising: a plurality of bars having various code patterns affixed thereto, said bars being controlled by said keys to be selectively placed in an operated position; a plurality of photo-electric devices for providing electrical signals and positioned to be variously operated by said code patterns when said bars are placed in an operated position; a gating network con-

nected to receive a control signal from one of said photo-electric devices, which one device is operative by each of said bars, said gating network being connected to receive signals from other of said photo-electric devices, said gating network functioning to pass code signals indicative of one of said symbols only upon depression of a key to place a bar in an operated position and upon receiving a control signal from said one photo-electric device; and an electrically-operated clapper means for providing a striking sound, said clapper means being connected to be operated by said control signal from said one of said photo-electric devices.

3,017,464
FREQUENCY SHIFT MODULATION RECEIVER
John E. Boughtwood, Halesite, N.Y., and Thaddeus M. Grybowski, River Edge, N.J., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Filed Dec. 3, 1958, Ser. No. 777,884
9 Claims. (Cl. 178—88)





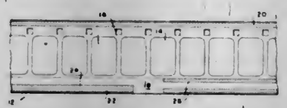
1. In a frequency shift signal receiver in combination: a transformer having a primary winding, a discriminator having a linear voltage-frequency characteristic, said discriminator including two series resonant circuits, each of said circuits having a winding mutually coupled to said primary winding, said circuits being tuned to two different signal frequencies, a variable capacitor connecting said circuits and adjusting their resonant frequencies equidistant from a predetermined mid-channel frequency, an output circuit, and two oppositely polarized rectifier bridges each having four terminals, a first two of the terminals of one bridge being connected to one of the resonant circuits, the first two terminals of the other bridge being connected to the other resonant circuit, a third terminal of the one bridge being connected to a third terminal of the other bridge, and a fourth terminal of each bridge being connected to said output circuit, said capacitor being effective to position said characteristic so that substantially zero voltage appears at said output upon application of signals of said mid-channel frequency lying midway between said two different signal frequencies.

3,017,465
PRIMARY-SECONDARY LINK-SPREAD CROSS-BAR SELECTOR SYSTEM
John C. Gibson, Oak Lawn, Ill., assignor to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed May 29, 1959, Ser. No. 816,801
12 Claims. (Cl. 179—22)

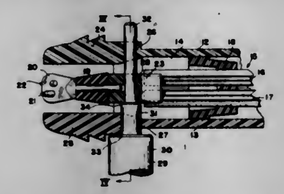
1. Selector switching apparatus for interconnecting incoming trunks with respective idle outgoing trunks by way of respective idle interposed link consisting of normal links and overflow links, comprising primary switching apparatus interposed between the incoming trunks and the links and secondary switching apparatus interposed between the links and the outgoing trunks, local links, the incoming trunks, the primary switching apparatus, the local links, and the primary end of the normal links being divided into similar primary groups each containing a normal section of switching apparatus operable to connect any incoming trunk of the group with any normal link or with any local link thereof and an overflow section of switching apparatus operable to connect any local link of the group to any said overflow link; the secondary end of the normal and overflow links, the secondary switching apparatus, and the outgoing trunks comprising similar separate secondary groups each containing switching apparatus operable to connect any link thereat to any outgoing trunk thereat; the normal links of each primary group, and the overflow links, each extending from the primary switching apparatus to a separate secondary group; the outgoing trunks comprising numerical groups each containing trunks extending from more than one secondary group, means for seizing any idle incoming trunk, means controlled over the seized trunk for designating any desired called numerical group, means responsive thereto for selecting a matched normal path, if available, from the calling incoming trunk over an idle normal link to an idle trunk in the called numerical group, means for operating switching apparatus in the pertaining primary and secondary groups to close the matched path, and means responsive to no matched normal path being available for selecting a matched overflow path, if available, from the normal section of the primary group containing the calling trunk to the overflow section thereof by way of an idle local link, and thence over an idle overflow link to an idle outgoing trunk in the called numerical group, and means for operating switching apparatus in the normal and overflow sections of the pertaining primary group and in the pertaining secondary group to close the matched overflow path.

3,017,466
MAGNETIC QUARTER-STRIPE SOUND TRACKS FOR 16 MM. FILM
Maxwell A. Kerr, 200 Meadow View Road, Falls Church, Va.
Filed June 18, 1958, Ser. No. 742,968
8 Claims. (Cl. 179—100.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A 16 mm. photographic film with a magnetic sound track comprising a photographic film having a photographic sound track along one edge, and magnetic means for recording another sound track on said film along said edge and overlapping said sound track whereby center clipping of photographic track may be avoided.



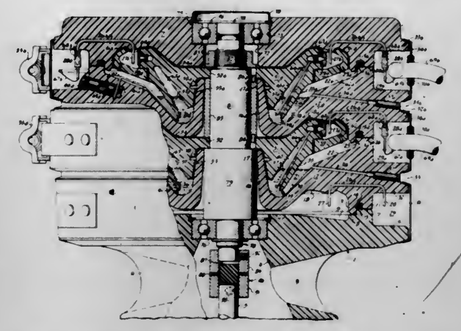
3,017,467
METHOD OF ASSEMBLY OF PHONOGRAPH PICKUP CARTRIDGES
Henry J. Cvetko, Geneva, and Charles J. Chapin, Conneaut, Ohio, assignors to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Filed Aug. 27, 1959, Ser. No. 836,516
3 Claims. (Cl. 179—100.41)



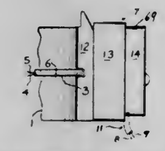
1. The method of assembling phonograph pickup cartridges of the kind having an elongated and generally tubular housing which is open at its forward end and having an elongated mechano-electrical transducer positioned centrally and longitudinally in the housing with its rear end portion clamped within the housing and its forward end portion affixed to a stylus-mounting member, comprising the steps of forming aligned apertures in diametrically opposite side wall portions of said housing, forming a transverse bore in said member in such position and orientation that when said assembled member and transducer are properly located within said housing said bore will be aligned with said apertures, and during the assembly of the parts inserting a gauge pin through said apertures and said bore in a close sliding fit with said apertures and bore whereby the longitudinal position relative to said housing of said member and a stylus carried thereby will be accurately controlled and whereby the angular position of said member and stylus with respect to any longitudinal plane of said housing will be accurately controlled.

3,017,468
MERCURY JET SWITCH AND ROTOR THEREFOR
Robert J. Matthews, Menlo Park, Calif., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,975
4 Claims. (Cl. 200—32)

1. A rotary jet switch comprising: a central mercury supply well; a rotor provided at its lower end with an annular mercury-confining recess and arranged to be immersed in a body of mercury contained in said well; a mercury scum-receiving cavity formed in said rotor extending upwardly and outwardly from the upper face of said confining recess, said cavity being closed at its upper end; a mercury jet nozzle provided on said rotor substantially above said well, and a mercury conduit provided in said rotor extending upwardly and outwardly from said annular recess, the lower end of said conduit being in communication with said recess at a point below the upper portion thereof and having an intake facing the direction of rotation of said rotor and the upper end of said conduit being in communication with said nozzle.



3,017,469
CORDLINE CONNECTOR FOR MEDICAL HEADLIGHT ASSEMBLY
Robert H. Giller, Jamaica, N.Y.
(92—17 Carlyle Ave., Surfside 54, Fla.)
Filed Dec. 12, 1958, Ser. No. 779,968
12 Claims. (Cl. 200—52)

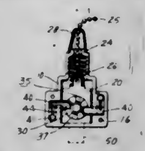


11. In a band adapted to encircle a member of the body, a combined cordline connector and electrical switch comprising a first member fixed to the band having a pair of spaced electrical cam contacts connectable with a load cordline, a second separable member slidably meteable in a downward direction with the first member and having a pair of electrical spring wiper contacts connectable to a supply cordline, each wiper contact having a position corresponding to one of the cam contacts; wherein each wiper contact has a knee end and an opposed relatively depressed end, the knee end of one of the wiper contacts facing in a direction reverse to that of the other wiper contact, and the separable member having a partially mating position relative to the first member wherein the knee end of one of the wiper contacts yieldingly abuts one cam contact and the depressed end of the other wiper contact overhangs in free relation the other cam contact, and the separable member having a full mating position relative to the first member wherein the wiper contacts are engaged with the corresponding cam contacts.

3,017,470
ELECTRIC SWITCH MECHANISM
Julius Eduards Bandenieks, Asheboro, N.C., assignor to General Electric Company, a corporation of New York
Filed Oct. 15, 1959, Ser. No. 847,043
3 Claims. (Cl. 200—64)

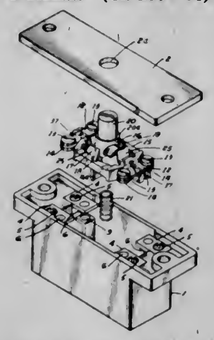
1. An electric switch comprising a hollow housing, a manually-operated spring-biased plunger within the housing, a transverse pivot member on the plunger for supporting a circular ratchet member having a series of

inclined faces separated by risers, and a current collector mounted across the working face of the ratchet with portions disposed on alternate inclined faces of the ratchet member, and a pair of spring electric contacts each located adjacent the said face of the ratchet and on opposite sides of the pivot member, the innermost end of each contact being opposed to the other and located on a di-



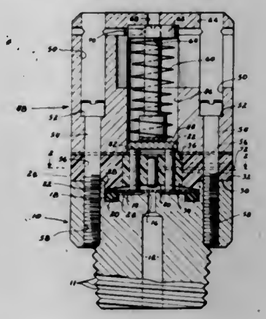
ametrical axis drawn through the said pivot member when the plunger is in its normal resting position so that when the plunger is actuated against the action of the spring one of said contacts will engage an adjacent riser to turn the ratchet member and when the plunger is released and returned by the spring to its normal resting position the other opposing contact will engage the adjacent riser to continue the turning of the ratchet in the same direction.

3,017,471
ELECTRIC SWITCH
Walter C. Karch, Milwaukee, Wis., assignor to Square D Company, Park Ridge, Ill., a corporation of Michigan
Filed Sept. 29, 1960, Ser. No. 59,363
6 Claims. (Cl. 200—76)



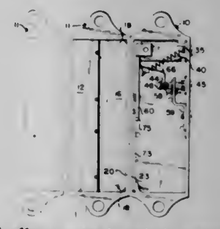
1. An electrical switch comprising a body, a pair of stationary contacts carried thereby, a contact assembly including a movable conductor element having a pair of contacts complementary to the stationary contacts and movable into and out of contact relation therewith upon movement of the element toward and away from the stationary contacts, a movable carrier, operating means to move the carrier in opposite directions, respectively, detachable means mechanically connecting the element to the carrier for effecting said movement of the element by the carrier upon movement of the carrier in said opposite directions, said detachable connecting means comprising a surface on the carrier engaging the longitudinal mid-portion of the element, shoulders at the opposite lateral margins of the surface and constraining displacement of the element transversely of its length, from the surface, a snap fastening spring C-clamp receivable on the carrier, transversely of the element and surface open end foremost with one arm of the clamp bridging across the space between the shoulders and overlying the conductor element, and the other arm engaging the carrier at a location at the opposite side of the element from that engaged by said one arm and in spaced relation to said surface, and said arms being in resilient clamping engagement with the carrier.

3,017,472
PRESSURE SENSOR
George Wintriss, Carversville, Pa.
Filed Dec. 19, 1958, Ser. No. 781,727
7 Claims. (Cl. 200—83)



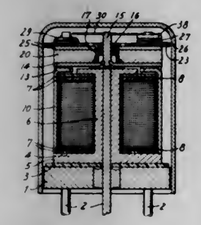
1. A pressure sensor comprising a housing having a chamber therein, an electric circuit, a diaphragm comprising a part of the electric circuit, said diaphragm being in the chamber and forming a partition across the chamber dividing the chamber into upper and lower portions, a conduit extending through the housing and opening into the lower portion of the chamber below the diaphragm, an electrical contact in said circuit and located in the upper portion of the chamber and confronting the diaphragm across an unobstructed space of the chamber, resilient loading means exerting force against the diaphragm to hold the diaphragm down and spaced from said contact, the diaphragm being movable upwardly far enough to touch the contact and constituting part of an electric circuit, and means for controlling the degree of fluid pressure required under the diaphragm to move the diaphragm into position to touch said contact.

3,017,473
MAGNETIC SWITCH
Nathan Verger, Great Neck, N.Y.
(26 Court St., Brooklyn 1, N.Y.)
Filed July 2, 1958, Ser. No. 746,278
1 Claim. (Cl. 200—87)



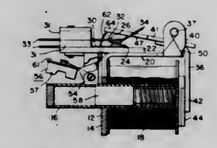
A magnetically-operated switch comprising a switch unit and an actuating unit, said switch unit comprising a housing of non-magnetic material, switch mechanism disposed within said housing, said housing comprising an enclosure having a top wall, side and end walls and a bottom panel, a portion of one of said side walls being enlarged and provided with a plurality of key slots, said switch mechanism comprising an armature supporting bracket having a horizontal base portion and a vertical side wall, said side wall being received within one of said key slots and being provided with an outwardly extending anchor hook, a pivot pin carried by the base portion of said bracket and extending vertically therefrom, an armature pivotally carried by said bracket, said armature comprising an arm, one end of said arm being provided with laterally extending apertured ears, said pin being received within the apertures of said ears whereby said armature is mounted for pivotal movement in a plane normal to the axis of said pin, a contact spring having a body portion and oppositely deflected end portions, one of said end portions being provided with projecting tongue and being secured to said armature adjacent the pivoted end thereof, the other end of said contact spring being provided with an electrical contact element whereby said contact element is movable correspondingly with the pivotal movement of said armature, a restoring spring having the ends thereof secured to said anchor hook and said tongue, a front stationary contact and a back stationary contact disposed in operative relation with respect to said movable contact element, a bracket for supporting said back contact, said bracket comprising a substantially Z-shaped element provided with a web portion and oppositely deflected side walls, one of said side walls being received in one of said key slots and the other side wall supporting said back contact element, said front contact being carried by a U-shaped supporting bracket provided with a horizontal base wall and vertically extending side walls, one of said side walls being received in one of said key slots and the other of said side walls supporting said front contact element, said front and back contacts being disposed in spaced alignment so that the movement of said movable contact element alternately contacts one or the other of said stationary contacts, a stationary armature extension disposed along the diagonally opposed portion of the other side wall of said housing, said extension comprising a strip of ferromagnetic material disposed in offset relation with respect to the free end of said armature to form an air gap therebetween when said armature is in its unactuated position and to make contact with a portion of said armature when said armature is in actuated position; said actuating unit comprising a housing of non-magnetic material, a bar magnet disposed within said housing, said units when brought into proximal relation causing said bar magnet to overlie said armature and the extension thereof, thereby actuating said armature.

3,017,474
MINIATURE RELAY
Clarence Huetten, Indianapolis, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Filed Feb. 9, 1960, Ser. No. 7,702
9 Claims. (Cl. 200—93)



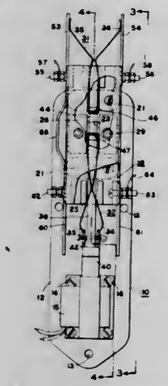
1. A relay comprising, in combination, a coil wound on a bobbin core, an iron coil enclosure having a top and a bottom surrounding said coil, portions of said top being bent inwardly to form flat electrical contacts, a radially magnetized permanent magnet placed above and spaced from said contact of said iron coil enclosure, and an armature having a shaft connected to its center placed in the space between said enclosure contacts and said permanent magnet, said armature free to move between said enclosure contacts and said permanent magnet upon said coil being energized, said permanent magnet being apertured to receive said armature shaft therethrough and to provide clearance for said shaft movement thereby.

3,017,475
RELAY STRUCTURE
Benjamin H. Smith, Bloomfield, N.J., assignor to Heinemann Electric Company, Trenton, N.J., a corporation of New Jersey
Filed Aug. 4, 1959, Ser. No. 831,600
17 Claims. (Cl. 200—103)



1. An electromagnetic structure comprising an armature, an electromagnet in operative association with said armature, said electromagnet including a coil and a magnetizable frame in the magnetic field of said coil, a magnetizable core, said magnetizable core and said armature being both actuated by said coil, means for delaying movement of said core, and magnetic means responsive to the movement of said core for delaying movement of said armature upon deenergization of said coil.

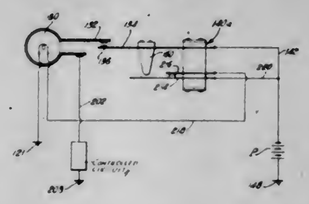
3,017,476
SWITCH
Paul N. Becka, Lakewood, Ohio, assignor to Tru-Fit Screw Products Corporation, a corporation of Ohio
Filed June 2, 1959, Ser. No. 817,612
6 Claims. (Cl. 200—104)



1. A solenoid operated switch including in combination a mounting plate, a solenoid secured to said mounting plate, a plastic switch body secured to said mounting plate, wall means defining a slot in said plastic switch body, first and second spring contactors each having an intermediate portion and first and second end portions, said intermediate portions being bent into generally a U-shape and residing in said slot with said first and second end portions of each contactor extending in the same general direction and each contactor extending from different ends of said slot, said first and second end portions of each contactor being biased away from each other, an insulated connecting member extending between and connecting said solenoid to said intermediate portions of said spring contactors, said solenoid upon energization moving said spring

contactors from a first to a second position, spring means for moving said spring contactors from said second to said first position, first and second contact means for establishing first and second electrical circuit means, said first and second end portions of said first spring contactor engaging said first contact means in said first position to establish said first electrical circuit means and said first and second end portions of said second spring contactor being out of engagement with said second contact means to break said second electrical circuit means, movement of said spring contactors to said second position causing said first and second side portions of said first spring contactor to move to different places of engagement with said wall means of said slot and to move out of engagement with said first contact means to break said first electrical circuit means and causing said first and second side portions of said second spring contactor to move to different places of engagement with said wall means of said slot and to move into engagement with said second contact means to establish said second electrical circuit means.

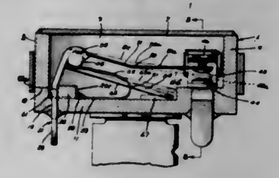
3,017,477
WARP SWITCHES
Michael J. De Leonardis, Valley Stream, N.Y.
Filed Mar. 13, 1956, Ser. No. 571,263
2 Claims. (Cl. 200—122)



1. A warp switch to operate in a region of varying ambient temperature comprising a member capable of being heated when a first electric circuit of which it forms a part is closed, a first heat responsive bimetallic arm positioned in operative relation to said heatable member, a second heat responsive bimetallic arm to compensate for warping of said first heat responsive bimetallic arms due to variation in the ambient temperature, said second heat responsive bimetallic arm positioned to be substantially unaffected directly by heat from said heatable member but extending into position to be contacted by said first arm when the latter has been slightly bent in response to heating of said heatable member, said second arm coacting with said first arm when contacted by said first arm to complete a second electric circuit, and means for preventing excessive heating and bending of said first and second bimetallic arms and thereby controlling the period required for said arms to separate and break said second electric circuit when said heatable member is deactuated by said means.

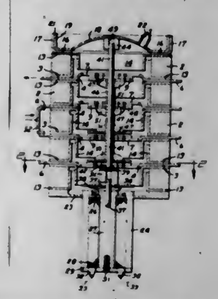
3,017,478
THERMALLY RESPONSIVE SWITCH
Charles Grimshaw, Fulton, Ill., assignor to General Electric Company, a corporation of New York
Filed June 3, 1960, Ser. No. 33,760
10 Claims. (Cl. 200—138)

4. A thermally responsive flame detecting switch comprising a casing, said casing including a hollow cavity in which the mechanism of said switch is mounted and a transparent wall portion for admitting radiant heat into said cavity, a bimetallic contact arm positioned within said cavity, a cylindrical member tangentially affixed to one end of said arm, a first terminal extending into said cavity, inner extension means on said first terminal for receiving said cylindrical member, a spring positioned adjacent said first terminal within said cavity and urging said cylindrical member into frictional engagement with said inner extension means thereby to provide a clutch means for controlling the rotatable movement of said arm, a movable contact supported by the other end of said arm, second and third terminals extending into said cavity, hot and cold side fixed contacts affixed to and supported by said second and third terminals respectively, said fixed contacts arranged on opposite sides of said movable contact to selectively cooperate therewith



in response to the thermal expansion and contraction of said bimetallic arm thereby to control an electrical apparatus, and a positioning rod attached to said cylindrical member and arranged to act upon said arm to maintain said movable contact in engagement with the cold side fixed contact when the ambient temperature of said switch is less than a predetermined temperature value, thereby to assure that said flame detecting switch will be started with its movable contact engaging the cold side contact when the switch is connected in an electrical circuit and the ambient temperature of said switch is less than said predetermined value.

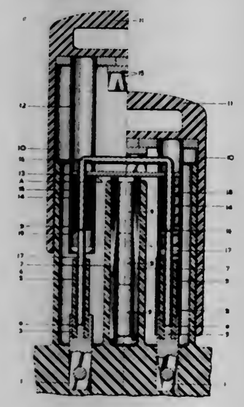
3,017,479
VACUUM SWITCH
Jo Emmett Jennings, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware
Filed Jan. 29, 1959, Ser. No. 789,925
3 Claims. (Cl. 200—144)



1. A vacuumized switch comprising a plurality of metallized rings, a metallic annular plate-like terminal member interposed between adjacent ceramic rings and integrally united thereto to unite all the rings in a hermetically tight ring assembly, each terminal member having radially inwardly and outwardly extending annular portions providing respectively a contact within the envelope and a terminal lead outside the envelope, said radially inwardly extending annular portion comprising a plurality of spaced apart integrally connected contact portions, an end plate structure hermetically closing each opposite end of the ring assembly to form a hermetically sealed envelope, a contact plate assembly movably supported within the envelope on one of said end plate structures and movable into and out of engagement with a

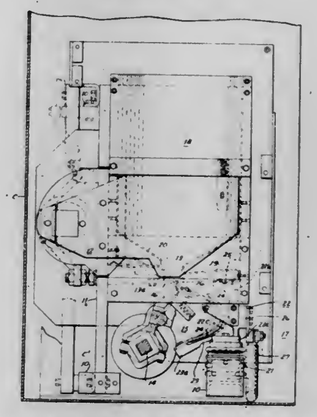
terminal member, said contact assembly being centrally arranged within the envelope and having an elongated stem forming the movable support on one of said end plate structures, a plurality of contact plates fixed on the stem at spaced intervals corresponding to the spacing between terminal members, said contact plates being circular and having an outer peripheral portion coextensive with said contact portions on each terminal member with radially extending slots in said outer peripheral portion to form resilient contact fingers for matching cooperation with respective contact portions on the terminal member and an annular back up member for each contact plate positioned on the opposite side thereof from the respective terminal member and of a size that its peripheral edge provides a fulcrum for each adjacent resilient contact finger whereby to insure a minimum amount of contact bounce and the ability of the switch to absorb impact shocks and remain closed under adverse conditions, and switch actuating means supported on said envelope and operatively connected with the contact plate assembly to move the resilient fingers of the contact plate into and out of engagement with the cooperating terminal contact portions.

3,017,480
HIGH-VOLTAGE CIRCUIT-BREAKER
Antonius Canisius Klaassen, Hengelo, Netherlands, assignor to N.V. Fabriek Van Electrische Apparaten Voorheen F. Hazenmeijer & Co., Hengelo, Netherlands, a corporation of the Netherlands
Filed Aug. 20, 1959, Ser. No. 834,988
Claims priority, application Netherlands Aug. 27, 1958
10 Claims. (Cl. 200—146)



1. A high voltage circuit breaker comprising stationary contact means having an inner portion and an outer portion with an insulating member separating the ends of said portions, insulating means movably mounted relative to said contact means, a conducting sleeve mounted on said insulating means in a position to engage said outer portion of said stationary contact, a switching member slidably mounted relative to said sleeve in a position to engage said inner portion of said stationary contact, and means innerconnecting said sleeve and said switching member whereby said conducting sleeve makes contact with said outer portion before said switching member makes contact with said inner portion during the closing of said switch and wherein said switching member disengages said inner portion after said sleeve disengages said outer portion during the opening of said switch.

3,017,481
HIGH VOLTAGE CONTACTOR
Charles A. Lister, Shaker Heights, Ohio, assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 25, 1958, Ser. No. 730,867
5 Claims. (Cl. 200—147)

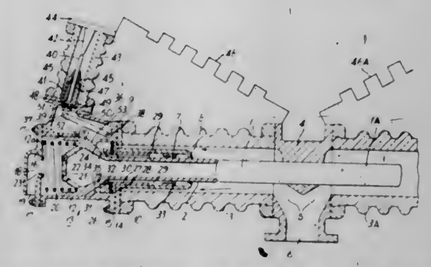


1. In a contactor having a stationary contact and a movable contact and means for moving said movable contact in a path towards and away from the stationary contact, the provision of a current conductive pedestal having upper and lower end portions and a terminal portion between said end portions and providing a terminal for connection to a load, a tongue joined to said lower end portion and extending downwardly and rearwardly therefrom, and a modified arcuate shaped flexible connector connected at one end to the lower end of said tongue and at the other end to said movable contact, said connector, pedestal and tongue being disposed in a plane common to the plane of the path of movement of the movable contact with the flexible connector also disposed between the movable contact and the pedestal, said flexible connector defining a first current conductive loop, said terminal portion being spaced from said tongue and defining a conducting path of substantial length in said lower portion of said pedestal, which conducting path, together with said tongue, defines a second current conductive loop in series with and in force opposition to said first loop whereby flow of current through both loops produces forces in the second loop in neutralizing force opposition to the forces in the first loop, and said flexible connector from its point of connection with the tongue being spaced rearwardly from the pedestal and tongue along the entire length of the adjacent portions of the pedestal and tongue.

3,017,482
AIR OR GAS BLAST ELECTRIC CIRCUIT BREAKERS
Albert Roxburgh, Willesden Green, London, and Albert Leigh, Kenton, Harrow, England, assignors to The British Thomson-Houston Company Limited, London, England, a British company
Filed June 23, 1958, Ser. No. 743,758
Claims priority, application Great Britain July 1, 1957
5 Claims. (Cl. 200—148)

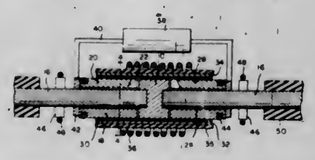
1. A gas blast circuit breaker comprising a pressure gas duct, a contact chamber, co-operating stationary and movable contacts enclosed in said chamber, first and second piston members, said movable contact being mechanically movable by said second piston member, means forming first and second spaces in which said first and

second piston members operate, a communicating passage between said first and second spaces, means for admitting the pressure gas from said duct to said first space and also through said passage to said second space, said means forming said second space comprising a pressure chamber having a wall with an outlet to outer atmosphere, a communicating means between said second space and said outlet to the outer atmosphere, said communicating means



comprising at least one port in a wall of said pressure chamber, said port being so positioned in relation to said second piston that it is normally open and is closed gradually as the second piston slides over the port along the surface of the wall of the said pressure chamber, the first piston being arranged to bear against the second piston so as to move it and cause by its movement the final closure of the port before the first piston arrives at the end of its effective movement.

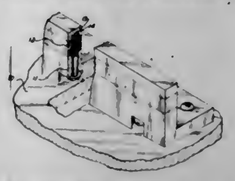
3,017,483
METHOD OF INDUCTION WELDING OF STRANDED ALUMINUM CABLE
Clarence A. Anderson, Dearborn, Mich., assignor to The Detroit Edison Company, Detroit, Mich., a corporation of New York
Filed June 22, 1959, Ser. No. 821,960
16 Claims. (Cl. 219—9.5)



1. The method of welding stranded aluminum cable which comprises confining a block of solid aluminum of a transverse dimension greater than the diameter of the stranded cable between and in contact with cable ends, melting the block by induction heating at a frequency which is substantially ineffective to melt the stranded cable, effecting substantial melting of the ends of the strands of the cable by heat transferred thereto primarily from aluminum melted from the aluminum block, and effecting vigorous stirring of the molten aluminum by the alternating field, and causing the molten aluminum to solidify.

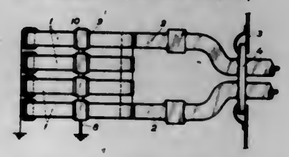
3,017,484
DIELECTRIC HEATING
Richard E. England, Birmingham, and William R. McCullough, Livonia, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 1, 1960, Ser. No. 12,071
2 Claims. (Cl. 219—10.53)

2. A dielectric heating apparatus suitable for welding together films of unsupported heat softenable plastic comprising an upper plate, a base plate, means for urging together the upper plate and base plate and an oscillator connected to the base plate and the upper plate, at least the base plate supporting a metallic cap, said metal-



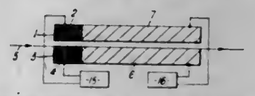
lic cap being electrically connected to the base plate, but thermally insulated therefrom said metallic cap comprising a rigid, massive metal member which presents a metallic highly conductive working surface to the films of unsupported heat softenable plastic.

3,017,485
MEANS FOR ELECTRIC VACUUM FURNACES
Åge Hansen, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Nov. 5, 1958, Ser. No. 772,133
Claims priority, application Sweden Nov. 19, 1957
2 Claims. (Cl. 219—10.79)



1. Means for avoiding corona of the induction coil and its associated live parts in a high-frequency induction furnace enclosed in an empty space, comprising an insulating layer on the conductor of the coil and its associated live parts, a conductive coating of comparatively high electric resistivity on said insulating layer divided into a plurality of separate parts along the turns of the coil, solid insulating layers covering the interstices between the conductive coating parts and contacting the solid conductive coating therebetween, a second layer of conductive material overlying each of the said insulating layer, said second layer being in contact with the end of one underlying conductive coating and the insulating layer and being insulated from the adjacent beginning of the other underlying conductive coating and leads connecting the said second layers of conductive material to a potential substantially lower than the potential of the coil and its associated live parts.

3,017,486
PERFORATION OF WEBS BY ELECTRICAL DISCHARGES
Philip Kogan, Hilardy Wolanek, and Raphael Jacob Wagner, London, England, assignors to J. F. Crosfield Limited, London, England, a British company
Filed Mar. 23, 1960, Ser. No. 17,029
Claims priority, application Great Britain Mar. 26, 1959
9 Claims. (Cl. 219—19)



6. Apparatus for perforating sheet material of the kind having natural discharge sites for electric discharges, com-

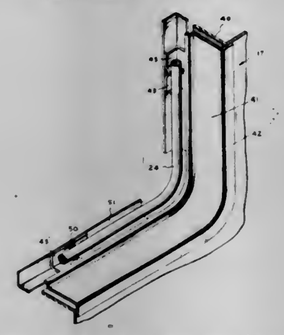
prising means for moving the material to be perforated through an electrode system including a fixed line electrode which is arranged on one side of the path of the material and which extends in the direction of movement of the material and an electrode on the other side of the material which has a point of coincidence with said line electrode which is arranged to move in the direction of and at the speed of the material to be perforated, said apparatus further comprising means for applying a plurality of successive electric pulses to said electrodes, whereby successive discharges take place through the same point in the material.

3,017,487
HOT-WIRE CUTTER
Frank P. Priestly, 17159 Stare St., Northridge, Calif.
Filed Feb. 11, 1960, Ser. No. 8,193
11 Claims. (Cl. 219—29)



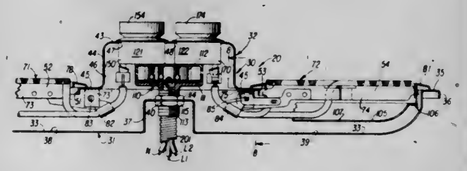
4. In a hot-wire cutter, a dielectric base having an opening therethrough, a metal eyelet disposed in such opening, means to conduct electric current to the eyelet, a heating wire extending through the eyelet and provided at one end with an insulator element that engages one end of the eyelet and centers the wire in spaced relation to the eyelet, and means to hold the other end of wire taut, means to conduct electric current to said other end, said eyelet and the spaced portion of the wire that is coincidental therewith constituting a normally-open switch that is closed upon lateral displacement of the wire into contact with the eyelet.

3,017,488
TENSION MOUNT FOR OVEN BREAKER FRAME
James K. Newell, Jr., Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 29, 1960, Ser. No. 59,434
13 Claims. (Cl. 219—37)



6. An oven comprising an oven liner of box-like construction supported in an oven body and being insulated therefrom by a thick blanket of thermal insulation, an outwardly directed annular lip formed on the oven liner near the front thereof, a metal sheathed heating element disposed on the oven liner just behind the said lip for adding heat to the oven liner in this area, the oven body having a front opening for receiving the oven liner therethrough, a metal breaker frame positioned within the front opening of the oven body, and tension means at the back portion of the oven liner for holding the front of the oven liner positioned within the breaker frame so that the heating element serves as a structural member compressed between the breaker frame and the lip of the oven liner.

3,017,489
COOKING APPLIANCES
John L. Andrews, Oxly, Mo., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1960, Ser. No. 66,186
17 Claims. (Cl. 219—37)

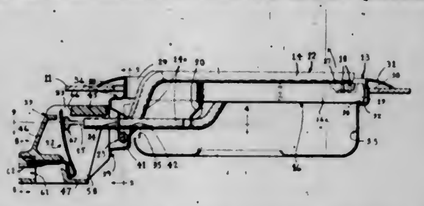


16. In an electric cooking appliance, an electric receptacle including a fixed contact set, an electric control switch including an in-contact set and an out-contact set and switching mechanism for selectively completing and interrupting different electric connections between said in-contact set and said out-contact set, means for removably mounting said control switch upon said receptacle, said in-contact set engaging said fixed contact set and said out-contact set being located in a predetermined position only when said control switch occupies its mounted position upon said receptacle, an electric heating unit mounted for movements between a use position and an non-use position, and a switching contact set mounted upon said heating unit and movable therewith, said switching contact set being movable into and out of a given position in response to movements of said heating unit into its respective use and non-use positions, said out-contact set and said switching contact set being arranged in cooperating relation with each other and constituting a disconnect switch having a closed position only when said out-contact set occupies its predetermined position and said switching contact set occupies its given position, whereby said disconnect switch is in an open position either when said control switch is removed from its mounted position upon said receptacle or when said heating unit is moved into its non-use position.

3,017,490
ELECTRIC HEATERS
Joseph McOrily, Pittsburgh, and George E. Ammerman, Lynn Oaks, Pa., assignors to Edwin L. Wiegand Company, Pittsburgh, Pa.
Filed Dec. 29, 1958, Ser. No. 783,579
26 Claims. (Cl. 219—37)

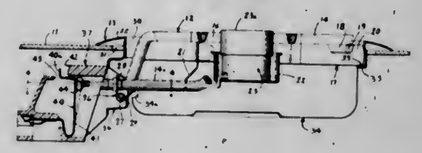
18. An electric heating assembly, comprising sheathed heating means having a plurality of terminal portions adapted to be disposed in predetermined horizontally aligned side-by-side relation but capable of moving to and from such relation, each terminal portion having a transversely extending member, all of the latter being

turned in the same direction, and means for tying together said members to hold said terminal portions in



said predetermined horizontally aligned side-by-side relation.

3,017,491
ELECTRIC HEATER-THERMAL ELEMENT ASSEMBLY
George Edward Ammerman, Oakmont, Pa., assignor to The Edwin L. Wiegand Company
Filed Mar. 30, 1959, Ser. No. 802,949
9 Claims. (Cl. 219—37)



8. An electric heating assembly, comprising a sheathed electric heating element having an intermediate convoluted heating portion disposed in a plane to support a vessel to be heated and having a pair of terminal portions disposed beneath said heating portion and extending radially thereof, said terminal portions being disposed in predetermined aligned side-by-side relation but being capable of moving to and from such relation, a temperature responsive member disposed within the center of the convoluted heating portion and having a pair of conductors disposed beneath said heating portion and extending radially thereof and adapted to be aligned in side-by-side relation with said terminal portions, a radially extending flange secured to each terminal portion and conductor, each flange having a looped part the axis of which is normal to and vertically spaced from the axis of the respective terminal portion and conductor, all looped parts being turned in the same direction and movable with the respective flange so that the openings of said looped parts may be axially aligned, and a metal strip extending through the aligned openings of said looped parts and tying together the latter in end-to-end abutting relation by having its opposite ends headed over the opposite free end of the looped parts.

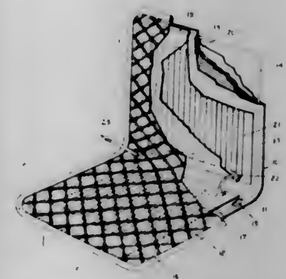
3,017,492
ELECTRIC HEATING DEVICE AND METHOD OF MAKING THE SAME
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 25, 1958, Ser. No. 723,877
3 Claims. (Cl. 219—44)

2. A cooking vessel comprising a thin liner formed in the shape of a cooking vessel having a bottom and sides, a heat distributing layer of aluminum having an inner surface conforming to the outer surface of said liner with said layer substantially extending to the top of the sides of said liner, locking means separate and independent of said liner for both said bottom and said sides of said liner and secured thereto, said locking means being imbedded in said heat distributing layer thereby to bond the adjacent surfaces of said liner and said layer together to form a unitary vessel, and an electric heating element



embedded in said layer in proximity to said liner but spaced therefrom, the space between said heating element and said liner being filled by said layer.

3,017,493
HEATED CAR SEAT
James R. Cooke, Toronto, Ontario, Canada, assignor to Pyrexon Ray Company Limited, Toronto, Ontario, Canada, a company of Ontario, Canada
Filed Jan. 22, 1960, Ser. No. 4,065
2 Claims. (Cl. 219—46)

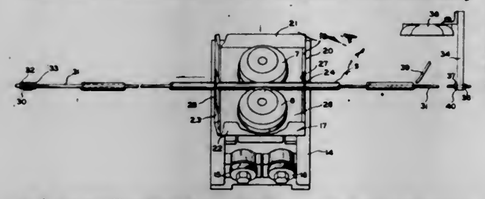


1. A portable electrically heated car seat comprising a seat portion, a back portion, a separate rigid stiffening frame surrounding each portion to maintain the same substantially flat, an envelope having separate pockets enclosing each portion and its associated frame, said envelope being foldable along a line between said portions, a separate low voltage flexible electric heating pad having a heating element permanently secured thereto overlaying the envelope above each pocket, the heating pad which overlays the seat portion being fastened to the envelope only along the front edge thereof and the heating pad which overlays the back portion being fastened to the envelope only along the top edge, whereby the respective heating pads having limited relative movement, and a covering of sheet material overlaying said pads and fastened along its edges to the perimeter of the envelope.

3,017,494
METHOD AND APPARATUS FOR ELECTRIC RESISTANCE TUBE WELDING
Eugene L. Mackey, Fairview Park, Ohio, assignor to The Yoder Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 1, 1959, Ser. No. 843,671
14 Claims. (Cl. 219—67)

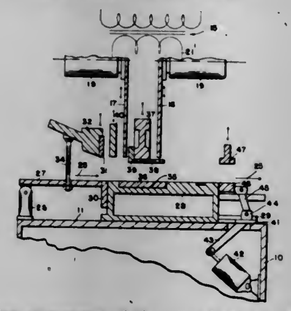
1. In the method of producing welded tubing which comprises forming a generally tubular blank having a longitudinally extending seam, longitudinally advancing such formed blank, and progressively electric resistance welding the opposed seam edges thereof together at a

predetermined welding station; completely immersing such blank in a protective liquid at such station both internally



and externally thereof to inhibit oxidation of such zone and expedite cooling of the weld.

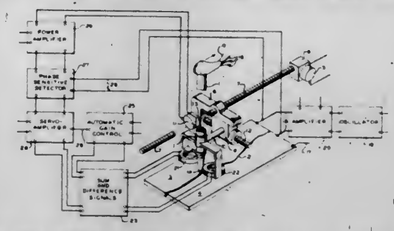
3,017,495
LIMITED OVERLAP TRAVEL-TYPE SERIES STRIP WELDER
Foster R. Woodward, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed Sept. 11, 1959, Ser. No. 839,364
9 Claims. (Cl. 219—82)



1. Welding apparatus of the type having a series secondary electrical circuit for joining the successive ends of metal strips and the like comprising a pair of longitudinally spaced welding electrode wheels, each of said weld-wheels, means to overlap the strip ends adjacent only one secondary terminal of a welding transformer, a transversely extending welding platen bridging said welding electrode wheels, means to move said welding electrode wheels transversely with respect to the normal path of strip travel, a vertically movable weld clamp positioned between said longitudinally spaced welding electrode wheels, means too verlap the strip ends adjacent only one of said welding electrode wheels whereby said one of said welding electrode wheels engages the overlap of said strip ends, said welding electrode wheels completing a single line of weld across said overlap upon energization of said means to move, said other of said welding electrode wheels serving as a conductor for completing said series secondary electrical circuit, a current conductive shoe carried by said welding clamp and extending longitudinally into the plane of said other of said welding electrode wheels, and said shoe providing a surface on which said other of said welding electrode wheels is adapted to roll during welding.

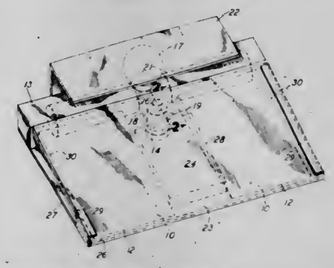
3,017,496
AUTOMATIC SEAM FOLLOWER
William John Greene, Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 20, 1958, Ser. No. 775,186
14 Claims. (Cl. 219—124)

1. Apparatus comprising means for establishing lengthwise of a seam between workparts an electromagnetic flux which is oppositely directed over said workparts on opposite sides of said seam and which decreases in magnitude laterally of said seam from a maximum value at said seam, means on opposite sides of said seam and responsive to the relative density of said electromagnetic flux on opposite sides of said seam for producing a signal which varies from a predetermined value which occurs



when said means is centered over said seam, means for traversing said workparts and said signal producing means relative to one another lengthwise of said seam, and means operated by said signal producing means and responsive to the deviation of its said signal from its said predetermined value thereof for centering said signal producing means over said seam during its travel lengthwise thereof.

3,017,497
FOOT-OPERATED NIGHT LIGHT
Jack L. Albright, 1619 Edgewood Ave., Racine, Wis.
Filed Oct. 22, 1959, Ser. No. 848,107
5 Claims. (Cl. 240—2)



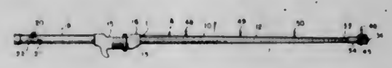
3. A night light for use on a floor and for operation by stepping thereon, comprising an electric lamp, an electric switch having a pushbutton, electric wiring connecting said switch with both said lamp and a source of electric power, a support member, said electric lamp being mounted on said support member, said switch being attached to said support member and projecting through the plane thereof, a step plate disposed over said support member and the pushbutton of said switch for up and down movement to actuate said switch and to abut said support member in the lower limit of movement, resilient means disposed below and in contact with said step plate to support the latter in the upper limit of movement, a flexible sheet attached to said step plate and extending over the upper surface thereof and around an end of said support member and beneath the latter and being attached thereto and forming a hinge for said step plate along said end of said support member, said resilient means being mounted on the end of said flexible sheet extending beneath said support member, and a luminous flexible tape attached to said flexible sheet and extending along the side edges on opposite sides thereof above said step plate and below said support member for flexing with the movement of said step plate and for indicating the borders of the said step plate.

3,017,498
VIBRATION DAMPENERS FOR SEWING MACHINE LIGHTING FIXTURES
Frank Parry, Trumbull, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed July 13, 1959, Ser. No. 826,766
1 Claim. (Cl. 240—2.14)



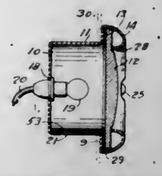
In a sewing machine having a casing including a standard and formed with a tapped hole; and a bracket arm extending from said standard, a shaft bearing carried in said bracket arm and secured in place by a set screw threaded into said tapped hole in said bracket arm, a lighting attachment including a bulb socket and a light shade carried by said bulb socket, bracket means attached to said bulb socket, and means for securing said bracket means to said sewing machine casing adjacent to the juncture of said standard and said bracket arm to support said lighting attachment with said light shade substantially parallel to the sewing machine bracket arm, and means for damping vibration of said lighting attachment, comprising a threaded stud engaging said tapped set screw hole in said bracket arm, and a block of cushioning material formed with an aperture into which said threaded stud is forced, said cushioning member disposed on said stud in engagement with said light shade.

3,017,499
ILLUMINATED FISHING RODS
Beaser G. Fore, Brookneal, Va.
Filed Dec. 3, 1958, Ser. No. 777,905
1 Claim. (Cl. 240—6.4)



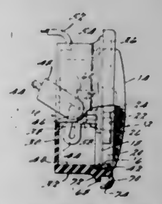
A fishing rod comprising a tubular shaft having a butt end and a tip end, said shaft being provided with a coating of phosphorescent paint, fishline guides carried by the shaft, a tubular reel holder comprising an after end, an intermediate reel mount portion and a forward end, said forward end being releasably affixed to the butt end of the shaft, a hollow handle releasably affixed to the after end of the reel holder, said tubular reel holder and tubular shaft forming an electric conduit extending from the handle to the tip end, and manually controllable means illuminating said shaft coating including an electric light mounted at the tip end of the shaft, a battery within the hollow handle, and means releasably electrically connecting the battery to the light including a switch on the handle and electric conductors in the conduit.

3,017,500
VEHICLE LAMP
Herman A. Pezzopane, 9206 S. 52nd Ave., Oak Lawn, Ill.
Filed Aug. 14, 1958, Ser. No. 754,961
1 Claim. (Cl. 240—8.2)



In a motor vehicle having a vertical bodywork panel having an opening therein and said opening being aligned with a wheel of the vehicle, the combination which comprises an electric lamp for use on said vehicle comprising a casing including a cup-shaped body having a base with a continuous wall extended from the periphery, and having at its open end an annular outwardly extended flange, said cup-shaped body being positioned in the opening of said vertical bodywork panel and said continuous wall having an opening in the lower side thereof, a lens on the open end of the casing and providing a closure therefor, a rim extended from the periphery of the flange and overlapping the lens for retaining the lens in position on the casing, means for retaining the rim in position on the flange, and a transparent arcuate plate positioned against the inner surface of said continuous wall and covering the opening therein, said opening in the continuous wall of the body being positioned in the lower side of the body and substantially midway between the base and flange, whereby with the casing in the opening of the vertical bodywork panel at the side of vehicle body the lens is exposed at one side of the panel and illumination is provided on the opposite side of the panel through said opening in the lower side of the wall of the casing, whereby with the opening of the bodywork panel in alignment with the wheel of the vehicle light is projected from a common light bulb from the side of the vehicle and also over the wheel of the vehicle with which the opening in the bodywork panel is aligned.

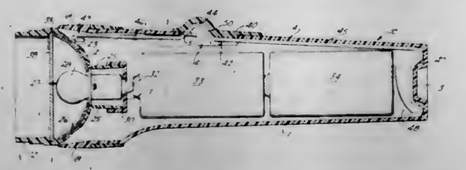
3,017,501
TRAILER CLEARANCE AND MARKER LIGHT
Keith W. Tantlinger, Grosse Pointe Shores, Mich., assignor to Fruehauf Trailer Company, Detroit, Mich., a corporation of Michigan
Filed July 10, 1959, Ser. No. 826,148
7 Claims. (Cl. 240—8.2)



1. A trailer light comprising a cup-shaped one-piece molded rubber housing adapted to fit snugly in a mounting hole and having spaced external flanges for holding said housing in said hole, and a lens fitting snugly in and closing the mouth of said housing, said housing having formed internal abutments provided with radial shoulders seating said lens and limiting movement thereof into said housing, at least one of said abutments being essentially narrower radially of the housing than the other of said abutments and normally supporting said lens but adapted
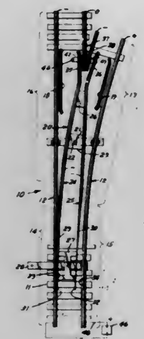
to release the same when said lens is pressed inwardly at a point adjacent thereto, whereby the pressed side of said lens can be snapped past said relatively narrow abutment and tilted into the housing to facilitate removal thereof from said housing.

3,017,502
FLASHLIGHT CONSTRUCTION
Eric Dent, 526 Bay St., Toronto, Ontario, Canada
Filed Oct. 27, 1959, Ser. No. 848,949
3 Claims. (Cl. 240—10.68)



3. A flashlight, comprising, in combination, an elongated hollow one-piece plastic battery casing having a front open end and having a rear end wall, said casing being formed intermediate its ends with an axial slot; a one-piece plastic hollow reflector casing connected with said front end of said battery casing and extending forwardly therefrom, said reflector casing having an open front end and including intermediate its ends a dished transverse wall having a forwardly directed concave face, said dished wall being formed with a central opening and at least one additional opening between said central opening and the outer periphery of said dished wall and said dished wall having a rearwardly extending tubular projection extending from said central opening thereof and provided with a springy tongue having a free end located adjacent said central opening of said dished wall; a dished reflector located against said concave face of said dished wall and having a reflector surface directed toward said front end of said reflector casing, said reflector having a central opening aligned with but smaller than said central opening of said dished wall and said reflector covering said additional opening of said dished wall, so that a bulb may be located with its front transparent envelope surrounded by said reflector and with its elongated rear end portion extending through and rearwardly beyond said tubular projection of said dished wall with a flange of said bulb engaging said reflector adjacent said central opening thereof and said tongue engaging said flange to hold said bulb assembled with and engaging said reflector; and an elongated springy wire of substantially L-shaped configuration located in said battery casing and having a long leg extending axially along said battery casing next to the wall thereof and a short leg extending transversely across the rear end wall of said battery casing, said short leg having a springy free end bent back upon itself for engaging a battery to urge the same forwardly toward said reflector assembly, the long leg of said springy wire extending along said slot and having a free end located adjacent said additional opening of said dished wall; and a one-piece plastic switch member axially movable along the exterior of said battery casing and having a pair of parallel springy walls extending through said slot into the interior of said casing, said long leg of said wire extending between said parallel walls of said switch member and one of said walls having a projection located between said wire and the axis of said battery casing to maintain said wire assembled with said switch member, said long leg of said wire having a substantially U-shaped jog extending radially away from the axis of said battery casing through said slot thereof and located adjacent the front end of said slot and said switch member being formed with a recess receiving said jog so that during forward movement of said switch member along said slot said switch member will tilt said long leg inwardly toward said axis so as to place the free end of said long leg in said additional opening in engagement with the portion of the reflector which covers said additional opening so as to close a circuit through the bulb when said switch member is thus moved forwardly.

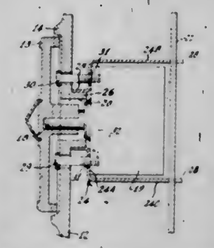
3,017,503
RAILROAD TRACK TURNOUT
August A. Kniff, San Dimas, Calif., assignor, by direct and mesne assignments, to Tru-Scale Models, Inc., San Dimas, Calif., a corporation of California
Filed Mar. 31, 1961, Ser. No. 99,815
6 Claims. (Cl. 246—415)



1. A model railroad turnout comprising: a conductive first stock rail; a conductive second stock rail, first portions of said stock rails being parallel, and second portions diverging from each other; a pair of conductive frog point rails spaced from and disposed at an angle to each other, and lying between said second portions, each being parallel to its nearer stock rail; a pivot unit between the stock rails, said unit being pivotally mounted to swing in an arc in the plane of said rails, said pivot unit comprising a pair of conductive and conductively interconnected wing rails, each having a diverter portion parallel to the second portion of the stock rail farther from it, and a contactor portion, the contactor portions diverging from each other and from their respective diverter portions and straddling the frog point rails, the ends of the wing rails removed from the contactor portions lying between the first portions of the stock rails and being spaced apart by a distance less than the spacing of the said stock rail first portions; a pair of contacts, each conductively connected to a respective one of the frog point rails, and being so disposed and arranged as to be contacted by the contactor portion of the wing rail which lies between it and its respective stock rail at a location spaced from the said frog point rail, and to be disconnected therefrom at a location closer to the frog point rail; whereby with the pivot unit swung so that the diverter portion of the wing rail nearer the first stock rail makes contact with the first stock rail, the contactor portion of the wing rail farther from the first stock rail is moved away from the frog point rail closer to the second stock rail and connects with its contact, while the contactor portion of the other wing rail is moved away from its contact and disconnected therefrom, both wing rails, and the frog point rail farthest from the first stock rail thereby being supplied with current from the first stock rail, and the pivot unit further serving to physically switch a train from trackage comprising the two stock rails to trackage comprising the second stock rail and the frog point rail nearer to it, swinging the pivot

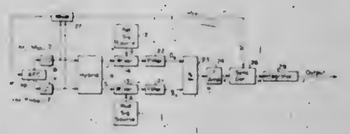
unit so that the wing rail closer to the second stock rail contacts the second stock rail serving to remove the other wing rail from contact with the first stock rail, moving the contactor portion of the wing rail closer to the second stock rail and off of its contact and connecting the other contactor portion to its contact, whereby current from the second stock rail is supplied through the pivot unit to the frog point rail closer to the first stock rail, and a train is switched to trackage comprising a first stock rail and the frog point track closer to it.

3,017,504
CABINET STRUCTURE FOR SMALL RADIO RECEIVERS AND THE LIKE
Robert F. Eaton, Stratford, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 31, 1960, Ser. No. 19,102
10 Claims. (Cl. 250—16)



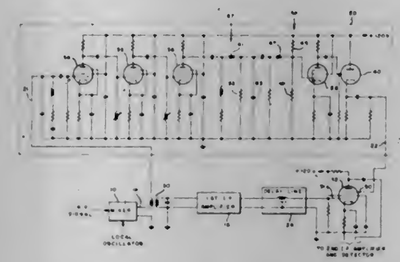
1. In a radio receiver, the combination of a casing therefor having a wall with a shaft opening therein and means providing a defined circular outer area on said wall about and concentric with said shaft opening, circular apparatus spacing and centering means integral with the inner face of said wall and concentric with said shaft opening, a control device for said receiver having a rotary operating shaft, a circular dial element for said shaft, a mounting frame for said device, and circular spacing and centering means connected with said frame and device concentric with the shaft and complementary to said first named spacing and centering means to provide an interlocked connection therewith for holding said frame and device with the shaft centered with respect to said circular outer area, whereby said dial element may operate on said shaft in concentric relation to said circular outer area.

3,017,505
RECEIVING APPARATUS FOR RADIO FREQUENCY SIGNALS
Roger E. Clapp, Cambridge, Mass., assignor, by mesne assignments, to AirTechnology Corporation, Cambridge, Mass., a corporation of Delaware
Filed Oct. 11, 1960, Ser. No. 61,880
6 Claims. (Cl. 250—20)



6. Signal receiving apparatus adapted to detect the amplitude relation between the signals of a first pair, one consisting of a received signal and the other consisting of a reference signal, said apparatus comprising means to provide a second pair of signals, each consisting of a local oscillator signal, a hybrid network having a pair of input circuits and a pair of output circuits, the signals of one of said pairs being applied to said input circuits, respectively, a pair of mixers coupled to the output circuits of said hybrid network, respectively, the signals of the other of said pairs being applied to said mixers to provide a pair of intermediate frequency signals, means for arithmetically combining the intermediate frequency signals from said mixers to obtain a composite signal having sinusoidal modulations representing alternately the magnitudes of said first pair of singals, means to derive a difference frequency signal from said local oscillator signals, and means to detect said composite signal in synchronism with said difference frequency signal.

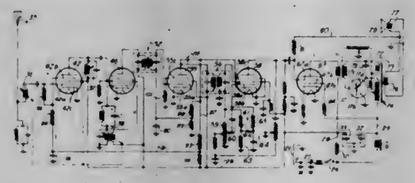
3,017,506
SELECTIVE SIGNAL ELIMINATOR
Harold A. Judy, Sunnyvale, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Jan. 7, 1959, Ser. No. 785,470
3 Claims. (Cl. 250—20)



3. In a superheterodyne receiver having a radio frequency signal input, the combination of a frequency translation mixer connected to said input, a local oscillator having an output connected to said mixer for combining with the radio frequency signal input to produce at the mixer output a signal at a predtermined intermediate frequency, a gate generator comprising an auxiliary intermediate frequency signal amplifier having an output and an input connected to the output of said mixer, said auxiliary amplifier being tuned to receive and amplify signals at frequencies which are submultiples of said predetermined intermediate frequency, a detector having an input connected to the output of said auxiliary amplifier and having an output for producing a gate; a main signal amplifier channel connected to the output of said mixer comprising a main intermediate frequency amplifier tuned to amplify signals at said predetermined intermediate frequency, and means for connecting the output of said detector to said main amplifier channel for blocking transmission of output signals from said main amplifier through said channel.

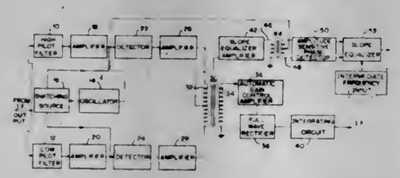
3,017,507
HYBRID RADIO RECEIVER
Bernhard Birkenes, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 615,690, Oct. 12, 1956. This application Jan. 29, 1959, Ser. No. 789,923
8 Claims. (Cl. 250—20)

7. In a low voltage radio receiver for use in an automobile and to be energized directly from the electrical system of the automobile, a radio frequency amplifier stage having a control grid, an intermediate frequency amplifier stage having a control grid and an output electrode, potential supply means connected to said stages for energizing the same, an automatic volume control circuit for developing a gain reducing voltage from the signal in said intermediate frequency amplifier stage, said automatic volume control circuit including a diode having an anode coupled to said output electrode of said intermediate frequency amplifier stage, a first circuit portion including series resistance means and shunt capacitor means connecting said diode to said control grid of said radio frequency amplifier stage for applying a potential thereto to control the gain thereof, said automatic volume control circuit including a voltage-divider circuit portion connected between said first circuit portion and a reference potential and having an intermediate point thereon connected to said control grid of said intermediate frequency



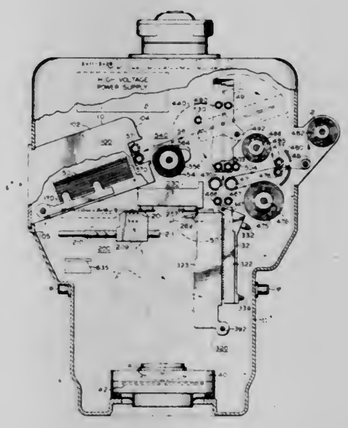
amplifier stage for applying a potential thereto to control the gain thereof, said anode of said diode producing through contact potential action a negative voltage in the absence of an applied signal from said intermediate frequency amplifier stage, and producing a further negative voltage in response to signals applied from said output of said intermediate frequency amplifier stage and which further voltage increases with the strength of such signals, and means including resistor means connecting said potential supply means to said automatic volume control circuit for supplying positive voltage to said anode of said diode for reducing the negative voltage on said anode produced through contact potential action so that said anode of said diode is slightly negative in the absence of a signal at the output of said intermediate frequency amplifier stage.

3,017,508
AUTOMATIC GAIN CONTROL SYSTEM
Gerald A. Klous, Lynchburg, Va., assignor to General Electric Company, a corporation of New York
Filed Sept. 14, 1959, Ser. No. 839,876
12 Claims. (Cl. 250—20)



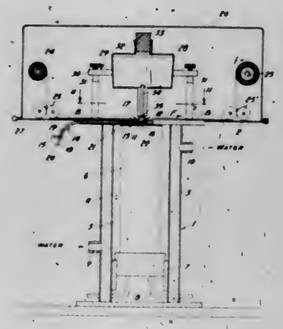
1. In a receiver for receiving transmitted signals contained in a chosen band, said transmitted signals including a high pilot signal having the frequency of the upper end of said band and the low pilot signal having the frequency of the lower end of said band; means for automatically controlling the gain of said receiver comprising means for selecting said high pilot signal from said transmitted signals, means for selecting said low pilot signal from said transmitted signals, means responsive to the outputs of said high and low pilot signals selecting means for sampling said high pilot signal and low pilot signals in phase opposition and at a frequency substantially less than the frequency of said pilot signals, means responsive to the output of said sampling means for detecting said sampled high pilot signal, means responsive to the output of said sampling means for detecting said sampled low pilot signal, means for combining said detected signals in subtractive relationship, means responsive to the output of said signal combining means for deriving a reference voltage from said combined signals which is a chosen fraction of said combined signals, and means for deriving from said reference voltage a unidirectional voltage which is a function of said reference voltage for controlling the gain of said receiver.

3,017,509
XEROGRAPHIC PLATE FEEDING AND CHARGING APPARATUS
Herbert E. Crumrine, Rochester, and Charles L. Huber, Byron, N.Y., assignors to Xerox Corporation, a corporation of New York
Original application June 3, 1957, Ser. No. 663,085. Divided and this application Dec. 24, 1958, Ser. No. 782,775
3 Claims. (Cl. 250—49.5)



1. A xerographic plate charging apparatus including means for advancing a plate toward a charging position, xerographic plate driving means for receiving a plate from the plate advancing means and for moving a plate over the charging position and for advancing the plate after charging to a plate utilization apparatus, a corona discharge electrode arranged transversely to the path of movement of a xerographic plate, mounting means supporting the discharge electrode for movement in spaced relation to a plate, said mounting means being movable between a retracted position in which the discharge electrode is displaced from position to effect plate charging to a charging position in which the discharge electrode is positioned to effect plate charging, drive means for moving the electrode mounting means between its retracted and its charging positions, means for causing the drive means to move the electrode mounting means from its retracted to its charging position prior to the advance of a plate, and means to cause the drive means to move the electrode mounting means from its charging position to its retracted position during the advance of a plate.

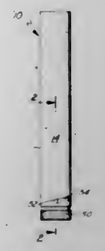
3,017,510
MEASUREMENT OF RADIOACTIVITY EMITTING COMPOUNDS
Jean-Claude Roucayrol, Paris, France, and Erich Oberhausen, Frankfurt am Main, and Richard Schussler, Volklingen, Germany, assignors to Centre National de la Recherche Scientifique, Paris, France, a corporation of France
Filed June 16, 1958, Ser. No. 742,318
Claims priority, application France June 28, 1957
5 Claims. (Cl. 250—71.5)



2. Apparatus for the continuous measurement of the radioactivity of radiation-emitting substances impregnated in a support constituted by a continuous band of absorbent material, said apparatus comprising in combination: a hollow frame, means for circulating a cooling fluid through said frame; a housing formed in said frame; a photo-multiplier device mounted in said housing; a plate mounted on said frame and adapted to cover said housing; a slot of small width and a length at least equal to the width of said band, formed in said plate above said photo-multiplier; a member inserted in said slot, said member being of a material transparent to the wavelengths of the scintillations to be detected; an opaque shutter for closing said slot at will against light; reeling means for causing said band to travel against the upper face of said closure member; a receptacle intended to contain a liquid scintillator composition, said receptacle being provided at its lower portion with a plurality of fine orifices disposed substantially in line, so as to deliver said liquid to the band so as to soak said band with it, legs to hold said receptacle and resting on said plate in such a position that the said fine orifices are located above said slot and at a distance from it less than the length of a drop of said liquid passing out of said orifices; cover means for enclosing said reeling means, said receptacle and said legs; and light-tight means for sealing the joint between said plate and said cover means.

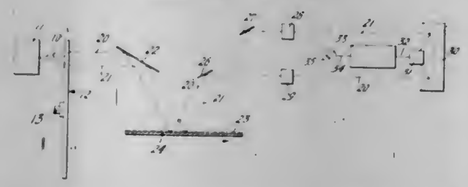
3,017,511
FRICTION CHARGER AND DOSIMETER EMPLOYING THE SAME
Ole G. Landsverk, Glendale, and Zenonas Glodenis, Los Angeles, Calif., assignors to Landsverk Electrometer Company, Glendale, Calif., a corporation of California
Filed Aug. 11, 1958, Ser. No. 754,305
14 Claims. (Cl. 250—83.3)

3. A friction charger which includes: a member having an elongated passage therein; a body of material located within said passage so as to be capable of movement along the length of said passage; at least one electrical conductor extending along the interior of said passage so as to be in electrical contact with said body of material during movement of said body of material within said



passage; and means for electrically connecting said conductor to the exterior of said member.

3,017,512
COATING THICKNESS GAUGE
Harris Jay Wolbert, Prospect Heights, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed June 29, 1959, Ser. No. 823,583
3 Claims. (Cl. 250—83.3)

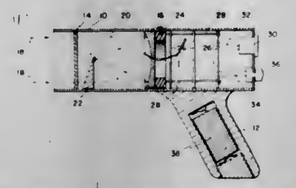


1. An apparatus for measuring the thickness of a thin film of a chemical substance carried on a reflective surface of a moving opaque substrate comprising means for moving said surface along a predetermined path, radiation means for emitting infrared light, means for directing a pair of beams of said light through said film and onto closely adjacent points on said surface from which said beams are reflected, means for maintaining said surface essentially uniplanar during reflection of said beams, and sensing means in the path of said reflected beams to sense alternately the intensity of each reflected beam, means to cause each of said reflected beams striking said sensing means to be composed of infrared light of a substantially single but different wave length, one of said reflected beams having a wave length such that a portion of its energy is absorbed by said film, and the other of said reflected beams having a wave length such that essentially none of its energy is absorbed by said film whereby the intensity of each reflected beam being sensed is different.

3,017,513
FIRE DETECTION APPARATUS
Stephen J. Messelt, Wilton, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed Oct. 8, 1959, Ser. No. 845,280
1 Claim. (Cl. 250—83.3)

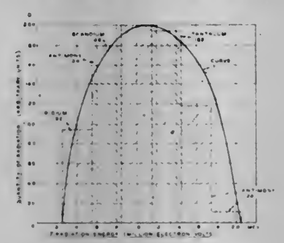
Fire detection apparatus comprising a tubular barrel having an infrared permeable window at one end thereof, said window being of substantially disk-like configuration and lying in a plane perpendicular to the longitudinal axis of said barrel; pistol grip means attached to said barrel for supporting the apparatus in a user's hand; paraboloidal reflector means positioned in said barrel to receive the radiation passed by said window and focus said

radiation on a finite area between said window and said reflector; detector means selected from the group consisting of lead selenide, lead sulphide, and bolometers positioned to receive the focused radiation, said detector being responsive to radiation wavelengths selected from the group consisting of about 3.5μ to 4.3μ and approxi-



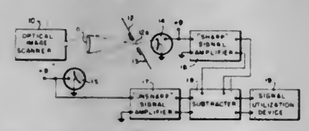
mately 5μ; electronic alternating current circuit means within said barrel means for producing an electrical signal responsive to the radiation on said detector; battery means within said pistol grip for supplying electric power to said circuit means; and indicating means responsive to said electric signal to disclose the presence of fire in an inspected area.

3,017,514
RADIOACTIVE ISOTOPE COMBINATION
Robert B. Costello, Rahway, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Filed Feb. 3, 1956, Ser. No. 563,295
15 Claims. (Cl. 250—106)



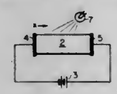
1. A source of electro magnetic radiations consisting essentially of a plurality of radioactive isotopes, said source emitting radiations of progressively higher energy intensity stepwise along the composite radiation spectrum of the constituent radioactive isotopes thereof, said constituent isotopes having half lives in the same order of duration.

3,017,515
PHOTOELECTRIC UNSHARP-MASKING APPARATUS
Albert B. Welch, Dallas, Tex., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Oct. 26, 1959, Ser. No. 848,736
5 Claims. (Cl. 250—209)



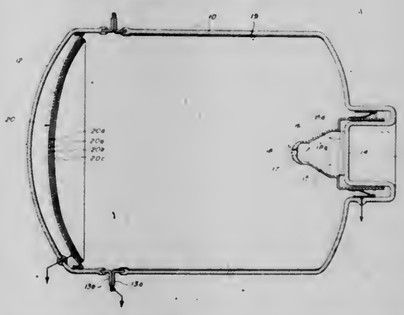
1. In an electro-optical object-scanning system including optical means for developing a light beam representative of the luminance of successive elemental areas of an object, a photoelectric unsharp-masking apparatus for deriving an image-representative signal with sharpened boundaries comprising: a member having an aperture disposed in the focal plane of said optical means for developing from said object light beam a sharp light beam; an optical element coplanar with said member and surrounding said aperture for developing from said object light beam an unsharp light beam; a pair of photoelectric devices individually exposed to said sharp beam and said unsharp beam for developing signals representative thereof; and means for differentially combining said signals to develop an output signal.

3,017,516
METHOD AND APPARATUS FOR PRODUCING AND CONTROLLING ELECTRON EMISSION
Arthur R. von Hippel, Weston, Mass., assignor to Research Corporation, New York, N.Y., a corporation of New York
Filed Mar. 15, 1954, Ser. No. 416,351
14 Claims. (Cl. 250—211)



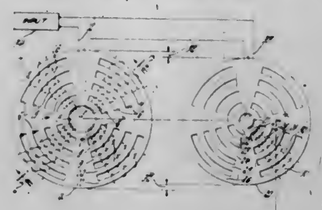
5. Apparatus for the production and control of electron emission comprising a polarizable dielectric medium, electrodes in conductive contact therewith, said dielectric medium having an internal field distribution to provide a steep potential gradient in the vicinity of the first of said electrodes, said potential gradient being sufficiently steep to effect the emission of electrons from said first electrode into said dielectric medium, a source of direct voltage, means for applying said direct voltage to said electrodes, and means for illuminating said dielectric medium to modify the field distribution therein.

3,017,517
IMAGE CONVERTER
Wilfrid F. Niklas, Park Ridge, Ill., assignor to The Rauland Corporation, a corporation of Illinois
Filed Jan. 18, 1960, Ser. No. 3,096
4 Claims. (Cl. 250—213)



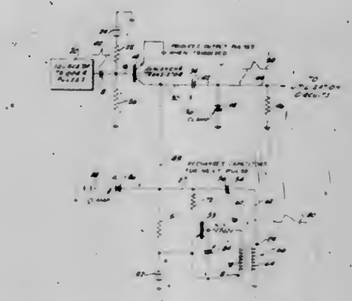
1. An image converter comprising: a photo-emissive cathode structure responsive to incident radiation to develop an electron image for propagation along a predetermined electron-optical path; a focus electrode disposed about said path; an anode positioned across said path having an aperture centered on said path through which electrons are focused by said focus electrode; a viewing screen likewise disposed across said path to be impinged by electrons issuing from said aperture of said anode; and a conductive structure, which is pervious to electrons, disposed across said path in the region between said anode aperture and said viewing screen.

3,017,518
MAGNETIC CORE STRUCTURE
Eugene A. Hanysz, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,856
7 Claims. (Cl. 307—88)



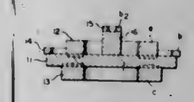
1. In a converter, a pair of magnetic cores, each of said cores having a plurality of apertures therein to define a plurality of parallel magnetic circuits of differing lengths, said cores differing in size to provide a conjugate series of magnetic circuit lengths, input winding means linking all of said magnetic circuits, and output winding means linking each of said magnetic circuits separately.

3,017,519
HIGH REPETITION RATE PULSE GENERATOR USING AVALANCHE TRANSISTOR TO DISCHARGE AND BLOCKING OSCILLATOR TO RECHARGE CAPACITOR
Johann G. Dill, Costa Mesa, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 27, 1960, Ser. No. 38,984
10 Claims. (Cl. 307—88.5)



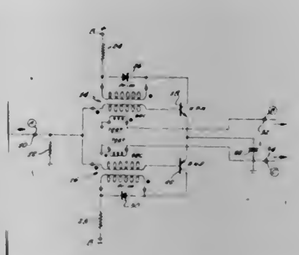
1. A pulse generator responsive to a source of trigger pulses comprising a transistor having avalanche multiplication characteristics and having a base and first and second electrode with the base coupled to the source of trigger pulses and the first electrode coupled to a source of reference potential, a power source, an impedance coupled between the second electrode of said transistor and the said power source, a first and second capacitor coupled in parallel between the second electrode of said transistor and said source of reference potential, switching means having a control terminal and having a load current path coupled between the second electrode of said transistor and said power source, delay means coupled between said second capacitor and the control terminal of said switching means, and clamping means coupled to the second electrode of said transistor for limiting the potential, thereat; when said switching means is rendered conductive.

3,017,520
INTEGRAL TRANSISTOR-THERMISTOR AND CIRCUIT USING SAME FOR COMPENSATING FOR CHANGING TRANSISTOR TEMPERATURE
Joseph T. Maupin, Deephaven, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 1, 1960, Ser. No. 40,268
9 Claims. (Cl. 307—88.5)



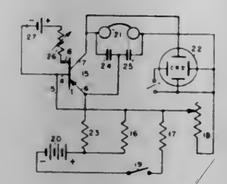
1. A semiconductive device comprising a body of semiconductive material having collector, emitter and base electrodes, said collector and emitter making junction contact with said body and said base electrode making ohmic nonjunction contact therewith; a relatively high resistivity germanium block having a high temperature coefficient of resistance in contact with said body at said base electrode, said block being in good thermal relation to the collector junction so that the resistance of said block reflects the temperature of said collector junction.

3,017,521
TRANSISTOR CIRCUIT FOR PRODUCING A PULSE OUTPUT FOR EACH INPUT SIGNAL PEAK
Adelbert C. Herstedt, Los Angeles, Calif., assignor to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed July 1, 1958, Ser. No. 745,880
13 Claims. (Cl. 307—88.5)



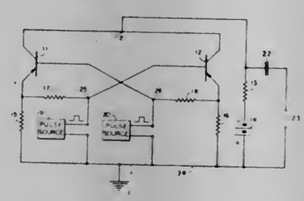
1. In combination for use with a reference potential for operating upon an input signal having an amplitude progressively increasing to a peak value and progressively decreasing from the peak value to produce pulses of short amplitude relative to the input signal and at peak amplitudes during the introduction of the input signal: a semiconductor; capacitor means coupled electrically to the semi-conductor; input circuit means coupled electrically to the semi-conductor and responsive to the input signal for producing a current flow through the semi-conductor to produce a charge on the capacitor and a bias on the semi-conductor in accordance with the amplitude at each instant of the input signal for an instantaneous decrease in the flow of current through the semi-conductor at the instant that the input signal reaches a peak amplitude, and means coupled to the semi-conductor and responsive to the instantaneous decrease in the flow of current through the semi-conductor for producing the output pulse at the instant of such decrease in the flow of current through the semi-conductor.

3,017,522
ELECTRICAL SEMICONDUCTOR COOLING BY USE OF PELTIER EFFECT
Harry R. Lubcke, 2443 Creston Way, Hollywood 28, Calif.
Filed Aug. 20, 1958, Ser. No. 756,253
14 Claims. (Cl. 307—88.5)



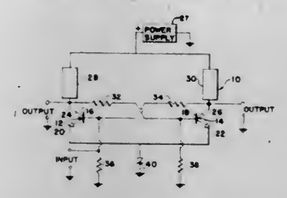
1. A semiconductor device comprising semiconductor material having a connection, plural contacts to said semiconductor material to valve electricity, an electrode having the thermoelectric characteristics of antimony directly mechanically contacting said semiconductor material adjacent to said contacts, and means to pass an electric current between said electrode and said connection through said semiconductor material to alter the thermal state of said semiconductor material adjacent to said contacts; said connection having a thermal dissipative capacity exceeding that of said contacts.

3,017,523
TRANSISTOR EXCLUSIVE-OR CIRCUIT WITH GAIN
Ellis D. Harris, 56 Elizabeth St., Apt. 1, Salt Lake City, Utah
Filed Dec. 10, 1958, Ser. No. 779,509
2 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



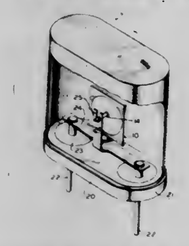
1. An Exclusive-Or network comprising, a first and second transistor each having emitter, base and collector terminals, a first and second source of input signals of a given polarity, a first signal path connected between the base terminal of said first transistor and said second signal source, a second signal path connected between the base terminal of said second transistor and said first signal source, voltage divider means connected to each of said sources for providing input signals of reduced magnitude, a third signal path connecting the voltage divider means of said first source to the emitter of said first transistor, a fourth path connecting the voltage divider means of said second source to the emitter of said second transistor, whereby said input signals of reduced amplitude are cross-coupled to the emitters of said transistors, and a common output means connected to the collector terminals of both said first and second transistors for combining the resulting output signals from said transistors.

3,017,524
STABILIZED TRANSISTOR MULTIVIBRATOR
Harold S. Koletsky, Syosset, and Murry W. Berkowitz, Flushing, N.Y., assignors to Avien, Inc., Woodside, N.Y.
Filed Dec. 31, 1959, Ser. No. 863,145
3 Claims. (Cl. 307—88.5)



2. A transistor multivibrator for operation in an extensive frequency range independently of ambient temperature, comprising a pair of transistors of like conductivity, each including a base electrode, an emitter electrode and a collector; a source of unidirectional current; a load connected to each of said collectors and said source; circuit means connecting the collector of a first of said transistors to one of the electrodes of the other of said transistors; circuit means connecting the collector of the other of said transistors to one of the electrodes of the first of said transistors; and diode means commonly connecting the remaining electrode of each of said transistors to said source, said diode means being poled for easy current flow of the major current through the remaining of said electrodes of said transistors.

3,017,525
MOUNTING SUPPORT FOR PIEZOELECTRIC CRYSTAL UNITS
John M. Wolfskill, Union Station Bldg., Erie, Pa.
Filed Nov. 26, 1956, Ser. No. 624,327
1 Claim. (Cl. 310—9.4)



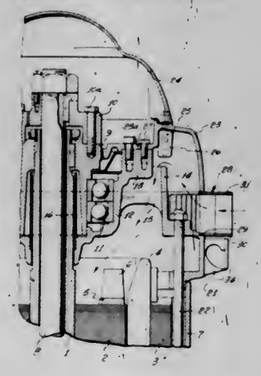
Piezoelectric crystal apparatus for use at relatively high operating temperatures, the piezoelectric crystal being mounted so that the piezoelectric activity and frequency characteristics of the crystal are substantially unaffected by the mounting thereof at relatively high temperatures in the range 85° C. to 200° C. or higher comprising in combination: a piezoelectric crystal having major faces, said piezoelectric crystal having a hole formed therethrough substantially at a nodal point thereof, said hole being small compared to a dimension of a major face of said crystal and said hole being formed so that no incipient cracks are produced in the side walls thereof, a rod of insulating material positioned in said hole, said rod being adapted to withstand the relatively high operating temperature of said crystal without being deformed, means comprising fired glass frit for bonding said rod to surfaces of said hole so that said crystal may be supported thereby, said means also being able to withstand shock and vibration and the relatively high operating temperature of said crystal, contiguous

electrodes applied to areas of said major faces and a coating of electrically conductive material on the exposed part of said rod on each side of said crystal extending to and contacting the electrode on the corresponding crystal side.

3,017,526
WEATHER PROTECTED VERTICAL MOTORS

Frederick O. Luenberger, Los Angeles, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California

Filed Apr. 4, 1958, Ser. No. 726,533
6 Claims. (Cl. 310—60)
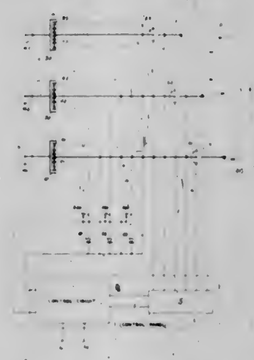


1. In a vertical electric motor having a casing and a cover above the casing, the lower edge of the cover defining with the casing, an annular opening: means cooperating with the opening, having walls defining a plurality of angled horizontal air passages communicating with the interior of the casing.

3,017,527
MULTIPLE DRIVE CONTROL SYSTEM

Theodore R. La Vallee, Ferndale, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Filed May 2, 1958, Ser. No. 732,744
11 Claims. (Cl. 310—94)

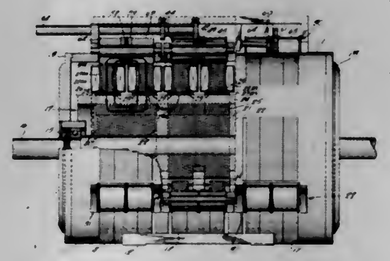


1. In a multiple drive system for a variable load the combination comprising, a plurality of driving and driven members, means for independently coupling each of said driven members in driving relation to said variable load, a plurality of electrical slip clutches respectively coacting to independently transmit the driving torque from each driving member to a corresponding one of said driven members and each having an energizing field coil, means for energizing each of said field coils to drive the driven members at a predetermined speed at the load, and common means for varying the energization of each of said field coils in response to variations in the speed of a selected one of said driven members to maintain the predetermined speed for all of the driven members at the load.

3,017,528
ADJUSTABLE SPEED ALTERNATING CURRENT MOTOR

Charles E. Ellis, 40 Armour Road, Mahwah, N.J.

Filed Apr. 9, 1959, Ser. No. 805,335
16 Claims. (Cl. 310—191)



1. In alternating current dynamo electric machinery, the combination of at least one pair of magnetic poles disposed in a row, said poles being disposed adjacent one another, electrical winding means adapted to be energized by one phase of a polyphase source and inductively coupled to the poles of said pair of poles for inducing therein magnetic fields of opposite polarities, a rotor disposed adjacent said pair of poles and spaced from said poles by a narrow air gap, a plurality of elongated conductors carried by said rotor, means extending longitudinally of said rotor forming a low reluctance, low eddy current loss, magnetic path for magnetic flux from said pair of poles, and means connected to each of said magnetic poles for moving said poles transversely of said rotor in order to vary the number of said conductors linked by the magnetic fields set up by said poles.

3,017,529
ELECTRIC BRUSHES FOR ELECTRIC MOTORS AND GENERATORS

Walter O. Helwig, 2632 N. 81st St., Wauwatosa 13, Wis.

Filed June 9, 1960, Ser. No. 35,040
3 Claims. (Cl. 310—248)

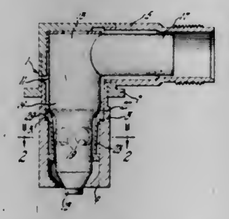


1. In an electrical contact brush, a brush body formed of a pair of sections, said sections being arranged in abutting relation, and a cap structure at the top of said brush body, said cap structure being formed of a pair of adhesively connected upper and lower laminations, the lower lamination being in fixed association with the brush sections and being partially severed along a line defined by the abutting surfaces of the brush body, and the upper lamination having a relatively hard upper wear surface and being attached to the lower lamination throughout a major portion of its contact area.

3,017,530
IGNITER PLUG

Earl W. Pierce, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 19, 1956, Ser. No. 623,090
3 Claims. (Cl. 313—11.5)

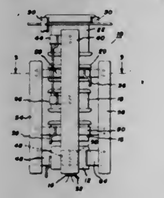


1. In an angle-type igniter plug, a body member comprising a shell portion having a sleeve portion extending at an angle from the upper part thereof, a mounting flange provided on the outer surface of said shell portion. at least two continuously open ports provided in said shell portion at positions substantially opposite each other between said flange and the lower end of said shell, a plane through said oppositely disposed ports and the longitudinal axis of said plug being substantially at right angles to a plane through the longitudinal axis of said sleeve portion and the longitudinal axis of said plug, said mounting flange being non-polarized to enable the igniter plug to be mounted in more than a single position while assuring the availability of cooling air thereto.

3,017,531
ELECTRON GUN ELECTRODE SUPPORTS

Edmund F. Schilling, Dewitt, N.Y., assignor to General Electric Company, a corporation of New York

Filed Dec. 16, 1959, Ser. No. 859,901
10 Claims. (Cl. 313—82)

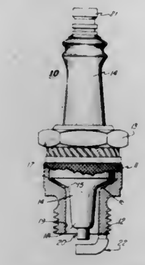


1. In an electron gun having a cathode for emitting electrons and electron beam forming means including a plurality of electrodes spaced along a predetermined electron beam path extending from said cathode, said electrodes including at least one accelerating electrode adapted to be maintained at a predetermined first voltage level and at least one focus electrode next adjacent said one accelerating electrode adapted to be maintained at a voltage level substantially different from said first voltage level, first and second sets of insulating support means for supporting said electrodes, means connecting said accelerating electrode to one only of said sets of insulating support means, and means connecting said focus electrode to the other only of said sets of insulating support means.

3,017,532
ELECTRICAL ELEMENTS

Paul Talmey, Barrington, Ill., assignor to General American Transportation Corporation, Chicago, Ill., a corporation of New York

Filed Feb. 27, 1956, Ser. No. 567,848
10 Claims. (Cl. 313—141)

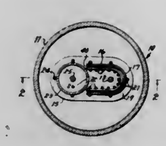


6. An electric contact comprising a current-conducting inner support and a contact-making and contact-breaking outer layer intimately bonded thereto, said support being formed essentially of a base metal and said layer being formed essentially of a nickel-phosphorus alloy, said alloy comprising by weight about 88 to 94% nickel and 6 to 12% phosphorus, said layer having a thickness of at least about 1 mil so as to afford substantial protection against pitting to said support.

3,017,533
AUXILIARY DISCHARGE GAS AMPLIFIER AND THE LIKE

Edward O. Johnson, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Continuation of abandoned application Ser. No. 185,745, Sept. 20, 1950. This application May 8, 1956, Ser. No. 583,443
27 Claims. (Cl. 313—189)



24. A gas discharge device comprising; a sealed envelope containing an ionizable medium, a main cathode and an anode in cooperative spaced relation within said envelope, means including an auxiliary cathode in laterally spaced relation to said main cathode for producing an ionizing discharge to provide a conductive plasma between said main cathode and anode, and means for diverting said ionizing discharge from said main cathode and directing said ionizing discharge into the region between said main cathode and anode.

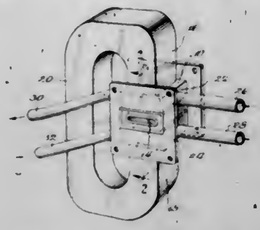
3,017,534
HIGH POWER MICROWAVE SWITCHING DEVICE

Louis W. Roberts, Boston, Mass., assignor to Microwave Electronic Tube Company, Inc., Salem, Mass., a corporation of Delaware

Filed Oct. 10, 1960, Ser. No. 61,695
13 Claims. (Cl. 315—39)

3. An electron tube for controlling radio frequency energy within a wave guide structure comprising a gas tight envelope, ionizable gas contained within the envelope, resonant window structures mounted on the sides

of the envelope for transmitting the energy into and out of the interior of the envelope, means for inducing a magnetic field in a plane perpendicular to the direction of propagation of radio frequency energy through the envelope, and means for cooling the tube at the surfaces thereof through which the magnetic field passes into the



envelope, the magnetic field being of sufficient strength so that the cyclotron frequency is greater than the collision frequency of electrons in the ionized gas, whereby highly energized free electrons resulting from ionization of the gas interact with the magnetic field, are restrained from contact with the windows and constrained to trajectories terminating on the means for cooling the tube.

3,017,535
HIGH FREQUENCY ELECTRON DISCHARGE TUBES
Percy Charles Ruggles, Great Baddow, England, assignor to English Elettric Valve Company Limited, London, England, a British company
Filed Oct. 9, 1958, Ser. No. 766,360
Claims priority, application Great Britain Oct. 14, 1957
4 Claims. (Cl. 315—39)



1. A vacuum discharge tube having an integral resonator body in which varying high frequency wave energy is produced, an output coupling for said tube comprising a coupling aperture in the resonator body, said aperture communicating with the interior of the resonator, a first length of waveguide, said first length being secured in vacuum sealing relationship to the body of the resonator and surrounding said coupling aperture, a second length of thin-walled waveguide, said second length being conductively attached to the interior of said first length in vacuum sealing relationship at that end remote from the resonator, means spacing the end of the second length of waveguide nearer the resonator from the resonator body, a metal plate having an aperture with bevelled edges, said plate being fitted within said second length of waveguide adjacent the resonator body and a frangible window plate attached to said bevelled edges wherein the window plate is aligned with the coupling aperture.

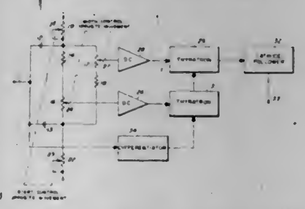
3,017,536
MOTOR VEHICLE HEADLAMP SYSTEM
Max J. Irland, Dearborn, and Victor L. Lindberg, Northville, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Original application Feb. 7, 1957, Ser. No. 638,752, now Patent No. 2,927,245, dated Mar. 1, 1960. Divided and this application Dec. 24, 1959, Ser. No. 861,854
5 Claims. (Cl. 315—83)

1. An arc lamp comprising a bifurcated electrode having a first and a second terminating end portion, a second electrode positioned opposite said first terminating end portion of said bifurcated electrode and a third electrode positioned opposite said second terminating end portion of said bifurcated electrode, a power source con-



nected to said bifurcated electrode and means for switching said power source between said second and said third electrode.

3,017,537
SQUARE-WAVE GENERATOR
Mark T. Nadir, Dumont, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 7, 1959, Ser. No. 825,617
4 Claims. (Cl. 315—230)



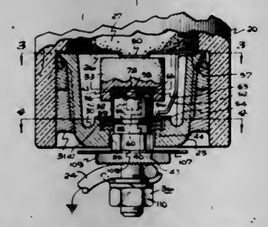
1. In a square-wave voltage generator having a sawtooth-voltage input, first and second thyratrons, each thyratron having a cathode, a control grid, a screen grid, and an anode, means for applying a voltage to each of said cathodes, means for applying a voltage to each of said anodes, said cathode voltages being more negative than said anode voltages, a direct-current voltage source having first and second voltage outputs, the voltage at said first output being more positive than the voltage at said second output, means for coupling said control grid of said first thyratron to said first voltage output, means for coupling said control grid of said second thyratron to said second voltage output, input means for coupling said sawtooth voltage to each of said control grids, means coupled to said input means and to said screen grid of said second thyratron for differentiating said sawtooth voltage, and means for applying a voltage to said screen grid of said first thyratron, said voltage becoming more negative whenever said second thyratron conducts.

3,017,538
ILLUMINATING DEVICE FOR MOTION PICTURE PROJECTING
Yoshinobu Sakaki, 5 Kikusakacho 1-chome, Chikusa-ku, Nagoya, Japan
Filed Mar. 10, 1959, Ser. No. 798,558
1 Claim. (Cl. 315—241)



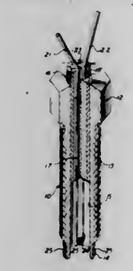
In a lamp circuit for a motion picture projector having in operation a driven film having successive images thereon, in combination, a full-wave rectifier having input connections for applying an input alternating current thereto and having a pulsating direct current output having a repetition rate corresponding to the frequency of the input alternating current, the rectifier having output connections, a capacitor and an impedance in series connected across said rectifier output connections, an arc discharge lamp connected across the rectifier connections, a pulse generating circuit having means for generating high voltage pulses and having output connections across which the lamp is connected, a stabilizer impedance in series with the rectifier and connected in series with the lamp between the rectifier and lamp, a switch connected to the first-mentioned impedance and to said capacitor selectively operable to a closed position for shortcircuiting the first-mentioned impedance and connecting the output of said rectifier through said capacitor as an input to the pulse generating circuit to apply a relatively smooth direct current voltage to cause it to generate a pulsed voltage having a magnitude sufficient to initiate an arc discharge within said lamp, the output of the rectifier being applied to the lamp when the pulse voltage is applied thereto, said switch being selectively operable to an open position subsequent to the initiation of said arc discharge to place said first-mentioned impedance in circuit with the lamp and disconnect the pulsating direct current output of the rectifier from the pulse generating circuit thereby to apply solely the pulsating direct current output of the rectifier to the lamp at a sufficient level to maintain the arc discharge and maintain the lamp operative to produce a pulsed light output at a repetition rate corresponding to the frequency of the alternating current input, and the pulsed light outputs being chosen to occur successively at periods corresponding to periods in which successive film images are in position to be projected by the lamp output and dark periods occurring during successive positioning periods in which the film images are positioned for the successive projections.

3,017,539
ELECTRICAL DISCONNECTOR FOR LIGHTNING ARRESTERS
Samuel R. Robinson, Philadelphia, Pa., assignor to H. K. Porter Company, Inc., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 760,934
6 Claims. (Cl. 317—66)



1. In an electrical disconnector, an assembly comprising a housing, supporting a first electrode and a second electrode, said second electrode spaced from said first electrode, a shearable bridging member for securing said second electrode to said housing, said second electrode being provided with a groove for receiving a portion of said bridging member, another portion of said bridging member being secured to said housing, a silicon carbide block interposed between said first and second electrodes, said block being in electrical contact with said first and second electrodes, an explosive charge located between said block and said second electrode, and a by-pass member joined to said first electrode for electrically by-passing said block, said by-pass member being spaced from second electrode and forming therewith an arc gap sufficiently removed from said explosive not to ignite said explosive, said explosive charge being ignited upon the passage of a predetermined electric current through said block for a predetermined period of time resulting in the electrical separation of said second electrode from said first electrode.

3,017,540
GLOW PLUG IGNITER
John J. Lawser, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,059
2 Claims. (Cl. 317—98)



1. In a glow plug igniter for use in a combustion chamber of a gas turbine engine, a body having an internal bore positioned therein, said body having an hexagonal portion at one end thereof, a threaded portion intermediate the ends, and a portion of reduced diameter at the end opposite said hexagonal portion, a sleeve positioned in said internal bore and extending from said hexagonal portion of said body to a position intermediate the ends of said body, said sleeve having a pair of conductors positioned therein, and a refractory insulating material positioned therein to electrically insulate said conductors from said sleeve and from each other, a hairpin shaped electrical resistance element positioned within said internal bore terminating short of the end of said body portion of reduced diameter, one end of said resistance wire being electrically connected to one of said conductors, the other end of said resistance wire being electrically connected to the other conductor, said hairpin shaped resistance element having a terminal portion positioned adjacent that end of the body which is adapted to be positioned in combustion chamber of the gas turbine engine, said body being imperforate from a position adjacent the electrical connection between said first and said second electrical conductors and said resistance element to a position adjacent the curved terminal portion of said resistance element, said body portion of reduced diameter having a plurality of apertures positioned therein immediately adjacent the curved terminal portion of said hairpin shaped electrical resistance element, each of said electrical conductors extending beyond said sleeve at the end of the hexagonal portion of said body and being bent outwardly from said sleeve to facilitate electrical connection thereto.

3,017,541
GLOW PLUG IGNITER
John J. Lawser, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,060
3 Claims. (Cl. 317—98)

1. A glow plug for use in the combustion chamber of a gas turbine engine comprising, a body for mounting the glow plug igniter within said combustion chamber, said body having a first internal bore extending from one end of said body to a point intermediate the ends thereof and a second internal bore extending from the other end of said body to said point intermediate the ends thereof

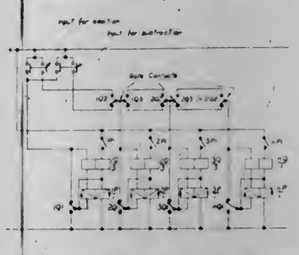
thereby forming a shoulder in said body, an electrical conductor having an enlarged end portion, said electrical conductor being positioned within said first internal bore with the enlarged end portion being positioned within said second internal bore, insulating material positioned between one end of said enlarged end portion and said shoulder, a refractory support having a helical groove positioned in the periphery thereof being supported by the other end of the enlarged end portion of said electrical conductor, and a helically coiled resistance wire positioned in the helical groove of said refractory support and being electrically connected at one end to said body and at the other end to said electrical conductor, said body extending axially beyond said refractory support and said helically wound resistance wire at the end of said body which is adapted to be positioned within said



combustion chamber, said body being imperforate from one end thereof to a position immediately adjacent the end thereof which extends beyond said refractory support and said helically wound resistance wire into said combustion chamber, said body having a plurality of apertures positioned around the periphery thereof immediately adjacent said end adapted to be inserted in the combustion chamber and immediately adjacent the end of said refractory support and said electrical resistance wire, the enlarged end portion of said electrical conductor engaging the shoulder in said body formed between said first internal bore and said second internal bore through said insulating material thereby preventing the fluid pressure which is developed within said combustion chamber from separating said refractory support and said helically coiled resistance wire from said body.

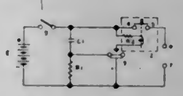
3,017,542
BINARY COUNTING ARRANGEMENTS
Frederick Melville Pearce, Hale, England, assignor to Metropolitan-Vickers Electrical Company, Limited, London, England, a British company
Filed Sept. 18, 1957, Ser. No. 684,682
Claims priority, application Great Britain Sept. 20, 1956
7 Claims. (Cl. 317—140)

1. A relay circuit having two states of stability comprising a magnetic lock-on relay having two operating coils and a contact, each of which operating coils is adapted on energisation in one direction to actuate a contact to move to the closed position, and on energisation in the opposite direction to actuate said contact to move to the open position, together with an auxiliary relay having two operating coils and contact means, said operating coils of said auxiliary relay each being in series with a respective coil of said lock-on relay so that two pairs of series-connected coils are formed, two supply lines which in operation are continuously energised, switch means the closure of which provides input pulses, a connection from one pair of coils to a selected supply line, said connection being formed by the closure of said lock-on relay contact, a connection from the other pair of coils to said selected supply line, said connection being formed by closure of said switch means, said auxiliary relay contact means being arranged on energisation and de-energisation of said auxiliary relay to provide a path for input



pulses through alternate operating coils of said lock-on relay, the direction of the paths of the input pulses through the respective coils being such that successive pulses move said contact into alternate positions and in which said auxiliary relay is arranged to be energised on cessation of alternate input pulses and to be de-energised on the cessation of intermediate input pulses.

3,017,543
TRANSISTOR TIME DELAY RELAY CIRCUIT
Murray J. Hillman, West Covina, and August Nuut, Glendale, Calif., assignors to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed June 27, 1957, Ser. No. 668,510
7 Claims. (Cl. 317—148.5)

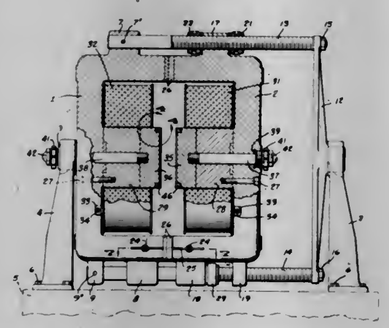


1. A transistor time delay relay circuit, comprising: a source of direct voltage; a time constant network including a capacitor connected in series with a resistor; means for connecting and disconnecting said source of direct voltage across said network; a transistor emitter follower connected across said network and having an input connected across said capacitor for a variable input signal; and a relay having a control coil connected in said transistor emitter follower as an emitter load element, said relay being operatively responsive to a predetermined magnitude of said variable input signal, and said control coil being of relatively high resistance whereby a high input impedance is obtained for said transistor emitter follower when said network is connected to said source of direct voltage by said connecting means.

3,017,544
MAGNET APPARATUS
Ralph W. Kane and Forrest A. Nelson, Atherton, and Emery H. Rogers, Palo Alto, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Filed Mar. 19, 1954, Ser. No. 417,482
8 Claims. (Cl. 317—158)

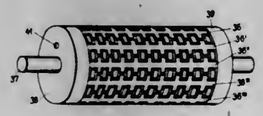
1. An electromagnet for producing a unidirectional magnetic field, comprising a pair of a U-shaped magnetic flux conducting yoke halves, the ends of the pairs of legs of the two halves adapted to alignably engage whereby the two halves form a closed magnet yoke, a pair of magnet pole members, each of the pole members being mounted on a respective one of the yoke halves between the

legs and extending inwardly toward each other in alignment and forming a magnetic field air gap therebetween, a pair of magnet energizing electric coil assemblies mounted on said magnet, each surrounding one of said pole members, means for producing adjustable relative movement between the two yoke halves whereby the two yoke halves may be separated to thereby increase the air



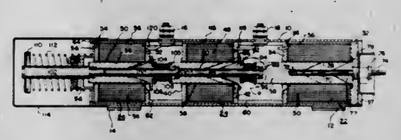
gap spacing between the two pole members, and a pair of magnetic flux conducting spacers of equal thickness, each of which is adapted to be positioned in different ones of the two spaces between the ends of the aligned yoke legs, the yoke halves being moved together to clamp the spacers therebetween so as to provide a continuous flux path through the yoke.

3,017,545
DEVICE FOR MAGNETIC CLAMPING
Karl Heinrich Meier, Zurich, Switzerland, assignor to Alfred E. Herzer, Zurich, Switzerland
Continuation of application Ser. No. 467,524, Nov. 8, 1954. This application May 27, 1960, Ser. No. 32,475
Claims priority, application Switzerland Aug. 12, 1954
17 Claims. (Cl. 317—159)



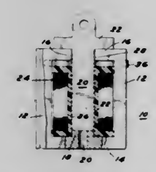
1. Magnetic clamping device for the clamping of workparts, especially magnetizable printing-form carriers to the printing mechanism of printing presses, comprising a cylindrical ferromagnetic base body having a generated surface forming a magnetic clamping surface, said base body having ferromagnetic parts located below said clamping surface, said base body having enclosed borings therein, a plurality of rod-shaped exciting magnets having two narrow sides and magnetized perpendicularly to their longitudinal axes with magnet poles on said narrow sides mounted below said magnetic clamping surface in said borings, said exciting magnets being rotatable around their longitudinal axes that extend parallel to said clamping surface, a plurality of channels in said body extending between said clamping surface and said borings and parallel to the axis of rotation of said magnets and an elongated pole-piece in each channel connected to said base body by non-magnetizable material whereby in switched-on-position one pole of all magnets faces its pole-piece so that the magnetic lines of flux emerge beyond said clamping surface and in switched-off position perpendicular thereto the magnet poles are shortcircuited by said ferromagnetic parts.

3,017,546
CONTROL DEVICE
Charles E. Bates, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,783
4 Claims. (Cl. 317—190)



1. A solenoid actuator comprising, a tubular housing, a plurality of coil windings fitting within said housing and axially spaced from each other, an armature positioned within each coil winding carrying a plunger member, a fixed magnetic member positioned within one of said coil windings and axially spaced from one of said armatures, a pair of members formed of magnetic material positioned adjacent the ends of the other coil windings and slidably disposed on a respective plunger, and means connecting said armatures for movement together in two directions.

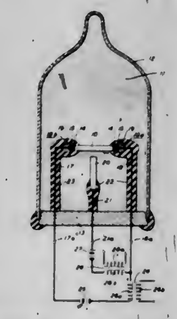
3,017,547
SOLENOID
Hollis W. Jencks, Ferndale, Mich., assignor to Detroit Coil Company, Ferndale, Mich., a corporation of Michigan
Filed Oct. 2, 1958, Ser. No. 764,992
4 Claims. (Cl. 317—191)



1. In a solenoid, a generally C-shaped stator having opposed arms spaced apart providing a coil and bobbin assembly-receiving space therebetween, said arms connected at one end by the bight portion of the C-shaped stator and provided at the end opposite to said bight portion with inturned arm portions terminating spaced apart providing an armature-receiving opening therebetween, said bight portion of the stator provided with a lug spaced between the stator arms and projecting upwardly, a coil and bobbin assembly positioned between the stator arms seated upon the bight portion of the stator and spaced below the inturned ends of the stator arms with the passageway through the bobbin received at one end over said lug and at the opposite end aligned with the armature-receiving opening between said inturned ends of the arms and with a portion of the bobbin extending beyond the coil and toward the space between the inturned ends of the stator arms, a T-shaped armature having its shank portion reciprocably extending through the armature-receiving opening between said inturned ends of the stator arms and into the bobbin passageway, and a generally U-shaped spring clip having its arms resiliently tensioned toward each other removably sprung transversely over one arm of the stator immediately underneath the inturned end of said arm with the two arms of the clip adjacent to its bight portion grippingly embracing therebetween said arm of the stator and grippingly embracing therebetween

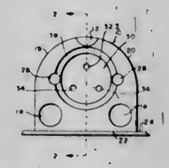
that portion of the bobbin assembly extending toward the space between the inturned ends of the stator arms, said two arms of the clip between the portion embracing said stator arm and the portion embracing said portion of the bobbin assembly tensioned toward each other and wedged within the space between the inturned end of the embraced stator arm and the adjacent end of the coil and bobbin assembly holding the coil and bobbin assembly toward the bight of the stator.

3,017,548
SIGNAL TRANSLATING DEVICE
Jacob F. Dewald, Mendham, and James J. Lander, Watchung, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 20, 1958, Ser. No. 709,931
8 Claims. (Cl. 317—231)



1. A signal translating device comprising a high energy gap semiconductive member, said member being characterized by a uniform type of conductivity, a relatively high conductivity electrolyte in contact with a portion of the surface of said member, an input electrode in contact with said electrolyte, and conductive leads adapted to be connected to a work circuit so that the working current may flow through said semiconductive member.

3,017,549
CIRCUIT ELEMENT MOUNTING
Grayson F. Bates, Maynard, and Louis W. De Simone, Needham, Mass., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 15, 1960, Ser. No. 22,427
4 Claims. (Cl. 317—234)



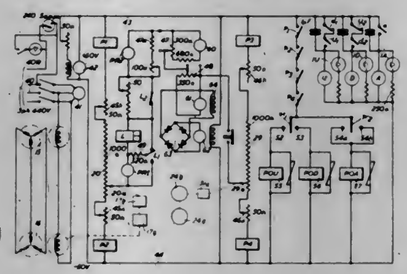
1. For an electronic circuit element having a base surface and a plurality of lead wires projecting therefrom, a lead wire supporting device comprising: a member having an open-faced cavity adapted to fit against said base, a cavity wall opposite the open face of said cavity, a first plurality of holes in said wall to accommodate the passage of said leads from said base through said cavity, and a second plurality of holes in said member to provide for air flow between said cavity and the outside atmosphere.

3,017,550
SEMICONDUCTOR DEVICE
Donald C. Dickson, Jr., Phoenix, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 7, 1959, Ser. No. 832,342
7 Claims. (Cl. 317—234)



1. A semiconductor diode device including in combination, enclosure means having a portion forming a terminal for the device, a junction semiconductor diode unit positioned in said enclosure means and having a pair of opposed faces with one face electrically connected to said enclosure means portion, a pair of lead wires extending through said enclosure means, conductor means positioned within said enclosure means and electrically connecting said lead wires together for providing a first current path in one of said lead wires through said conductor means and out the other of said lead wires, said conductor means having a portion connected to the other face of said semiconductor diode unit providing a second current path through said portion of said enclosure means forming said terminal, through said semiconductor diode unit, and through one of said lead wires.

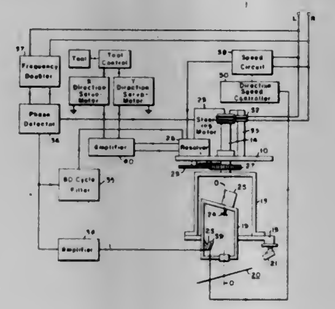
3,017,551
REMOTE CONTROL
Lionel Napier Bramley, Farnborough, England, assignor to The British Iron & Steel Research Association, London, England, a British company
Filed June 6, 1957, Ser. No. 664,140
Claims priority, application Great Britain June 8, 1956
5 Claims. (Cl. 318—29)



5. In a remote control system of the kind including an electric motor for controlling the position of an object to be controlled, means for generating an electrical difference signal dependent upon the difference between the position of said object and a datum position desired for said object, an amplifier the output of which controls said electric motor, and means for applying said difference signal to the input of said amplifier, the combination with a feed-back link for feeding a signal back to the amplifier, said feed back link comprising three tachogenerators each having a field winding, said generators being driven by said motor, a rectifier circuit connected

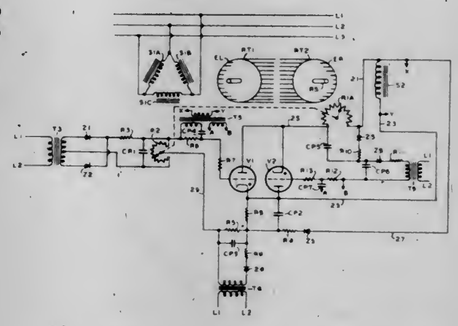
to the output of one of said tachogenerators and feeding the field winding of another one of said tachogenerators, means for algebraically adding together the voltages generated by said other tachogenerator and by the third of said tachogenerators to produce a feed-back signal, and means for applying said feed-back signal to the input of said amplifier in opposition to said difference signal.

3,017,552
PATTERN TRACER SERVOSYSTEM
Frans Brouwer, Ancaster, Ontario, Canada, assignor to Canadian Westinghouse Company, Limited, Hamilton, Ontario, Canada
Filed June 30, 1959, Ser. No. 824,103
Claims priority, application Canada July 16, 1958
22 Claims. (Cl. 318—39)



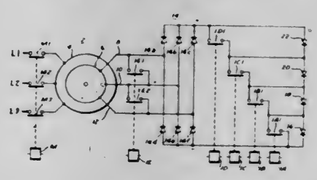
10. A curve following system comprising a surface bearing a curve to be followed, an optical system for collecting light from a spot on said surface, means connected to said system to scan the spot around a closed path intersecting said curve at a first frequency "*f*," means connected to said scanning means and to said optical system to convert the collected light into an electrical signal representative of the collected light, means connected to said converting means to select from said electrical signal a first control signal of frequency "*f*," and a second control signal of frequency 2"*f*," means to provide a third control signal of frequency "*f*" and an amplitude representative of the desired linear curve following velocity, means connected to said providing means and said selecting means to combine said first and third control signals in phase quadrature into a combined signal, a two dimensional servo system, for producing a relative motion of said optical system and said surface, said servo system including first means when actuated for producing said relative motion in a first direction and second means when actuated for producing said relative motion in a second direction substantially at right angles to said first direction, means connected to said combining means for resolving said combined signal into two signals in quadrature with each other, means connected to said first means for impressing one of said last-named signals to actuate said first means, means connected to said second means for impressing said other of said last-named signal to actuate said second means, said one and said other of said signals being impressed so that the actuation of said first and second means minimizes said control signal, means connected to said scanning means to provide a fourth control signal of frequency 2"*f*," having a phase representative of the phase of said scanning means, connected to said last-named providing means and to said selecting means to compare the phase of said second and fourth control signals and utilize the resultant to control the phase of the first frequency in such a manner that a reference line fixed relative to said means to scan the spot is maintained at a constant angle to a tangent to the portion of the curve intersected by the scan.

3,017,553
DYNAMOELECTRIC APPARATUS
Jack R. Homan, 35 Pleasant Hill Blvd., Palatine, Ill.
Filed Aug. 17, 1959, Ser. No. 834,301
15 Claims. (Cl. 318—199)



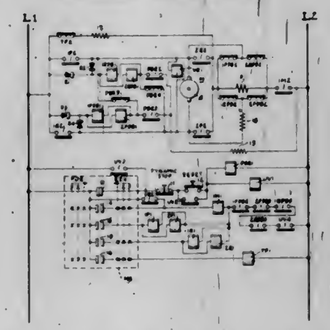
1. Dynamoelectric apparatus comprising first stator windings adapted to be connected to a source of electrical power and thereby to energize at least one pair of poles, a rotor including a first set of conductors positioned for rotation within a magnetic field formed by said poles and a second set of conductors directly interconnected therewith and oppositely arranged relative to said first set of conductors, said second set of rotor conductors adapted to provide a rotating magnetic field, second stator windings with at least a second pair of poles adapted to be swept by said rotating magnetic field, and an electrical load interconnected with said second stator windings, said two magnetic fields being generally axially aligned with and parallel to the rotational axis of said rotor.

3,017,554
ALTERNATING CURRENT MOTOR CONTROL SYSTEMS
Paul M. Fischer, Elm Grove, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed July 25, 1960, Ser. No. 45,213
18 Claims. (Cl. 318—239)



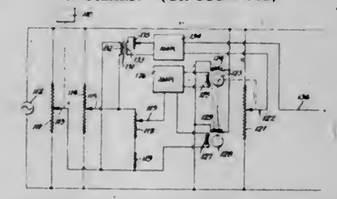
1. In a motor control system, an alternating current induction motor of the slip-ring type having a primary winding and a secondary winding, varistor means connected to said secondary winding for conducting the secondary current therethrough, said varistor means having a predetermined value of resistance for a given secondary voltage to control the speed of the motor to drive a load subject to variation, and said varistor means being of a type having a significant negative, voltage coefficient of resistance for regulating the motor speed under varying load.

3,017,555
DYNAMIC BRAKING CONTROL FOR SERIES WOUND MOTORS
John M. Newman and Edward J. Posselt, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 6, 1956, Ser. No. 602,233
5 Claims. (Cl. 318—380)



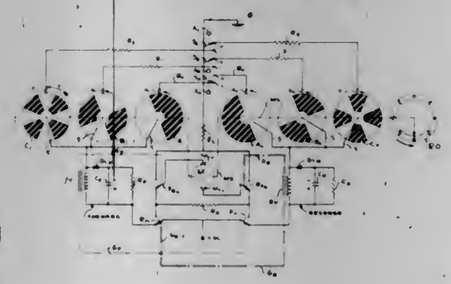
1. The combination with a series wound motor and means for selectively establishing forward and reverse power connections for the motor and for interrupting said power connections, of dynamic braking control comprising a resistor, first and second electromagnetic switch means energizable to connect said resistor, said armature and the motor field winding in a dynamic braking loop circuit with said armature and said field winding connected appropriately for forward or reverse rotation of said armature, respectively, said switch means each having an operating coil which are concurrently energizable to interrupt said loop circuit, means for concurrently connecting and disconnecting said operating coils of said switch means from a source of constant voltage, and means including unidirectional conducting means connected in circuit with said operating coils and said armature to be responsive to disconnection of said coils from the source of constant voltage and selectively apply armature voltage to the operating coil of one or the other of said switch means in accordance with the direction of rotation of said armature when said power connections are interrupted, said unidirectional conducting means comprising two pairs of half-wave rectifiers, one rectifier of each pair establishing current flow through the operating coil of an associated switch means while the other rectifier of each pair blocks current flow through the operating coil of the other switch means in accordance with the polarity of armature voltage during dynamic braking.

3,017,556
ELECTRICAL SERVOSYSTEM CONTROL CIRCUIT
Charles H. Smoot, Chicago, Ill., assignor to Republic Flow Meters Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 18, 1957, Ser. No. 646,785
9 Claims. (Cl. 318—448)



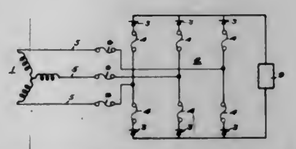
1. An electric control circuit comprising means to produce an electrical voltage proportional to departure of a condition from a set point, adjustable means to produce a variable output voltage, a motor responsive to the first-named voltage and mechanically connected to the adjustable means to adjust it, and means to add the first named voltage to the output voltage to produce a final output voltage.

3,017,557
POSITION SERVO
Carmelo J. Amato, Shaker Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 19, 1960, Ser. No. 9,790
17 Claims. (Cl. 318—467)



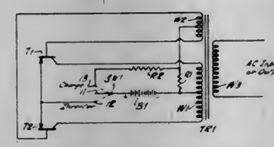
1. A position servo converter comprising circuit means including a movable member having a number of binary pairs of motion controlling, circuit control parts, each pair comprising a zero type and a one type of oppositely connected controls and only one of each pair being connected at any one position to provide, with said circuit means, a number of parallel circuits simultaneously transmitting different energy values for each such pair, a number of two condition, binary elements, said number being the same as the number of said pairs and the number of said simultaneously connected, parallel circuits, motor means connected in said circuit, means to actuate one of said movable member or said binary elements under the control of the other through the plurality of positions of said movable member, which plurality is two to the exponent which is the said number of said binary elements, and said circuit means including means to actuate said motor means in steps in order corresponding to the different energy values of the simultaneously connected parallel circuits.

3,017,558
SEMICONDUCTOR RECTIFIERS
Frederick J. Kozacka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Oct. 27, 1958, Ser. No. 769,789
3 Claims. (Cl. 321—14)



1. A semiconductor rectifier comprising a polyphase A.-C. source, a rectifier circuit including high current density semiconductor rectifier cells, a plurality of said cells being connected in parallel in each phase of said polyphase circuit, leads carrying A.-C. currents conductively connecting said source to said rectifier circuit, a plurality of current-limiting cell fuses having a relatively small current-carrying capacity arranged in said rectifier circuit each in series with one of said cells to limit the flow of current resulting from failure of each of said cells, current-limiting fuse means having a relatively large current-carrying capacity arranged in said leads, said fuse means having a predetermined clearing $\int i^2 \cdot dt$ sufficiently small to cause selective operation thereof on occurrence of external faults, and said fuse means including an insulating casing, a pulverulent arc-quenching fulgurite-forming filler in said casing, a plurality of fusible elements each having an arc-gap-forming point of reduced cross-section submersed in said filler and a plurality of insulating barrier means separating each of said plurality of elements means from said filler, said plurality of barrier means being adapted to inhibit formation of arc-gap-bridging fulgurites on blowing of said fuse means.

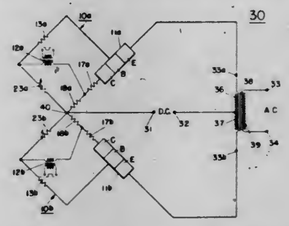
3,017,559
INVERTER-CHARGER CIRCUIT
Henry Rogers Mallory, Greenwich, Conn., assignor to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Jan. 9, 1958, Ser. No. 707,909
22 Claims. (Cl. 321—45)



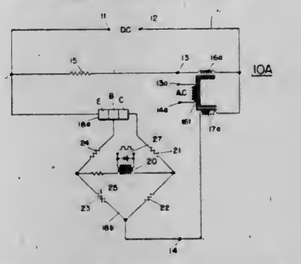
1. An inverter-charger circuit comprising first and second transistors each having a base electrode, an emitter electrode and a collector electrode, the emitters of both of said transistors being connected to each other, a transformer having a first winding, a second winding and a third winding, the collector of said first transistor being connected to one end of said first winding and the collector of said second transistor being connected to the other end of said first winding, the base of said first transistor being connected to one end of said second winding and the base of said second transistor being connected to the other end of said second winding, a resistor connected between the respective center taps of said first and second windings, a battery connected at one end to the center tap of said first winding, a switch having a contact arm and two poles, said contact arm being connected to the other end of said battery, the first of said poles being connected to the center tap of said second winding, the second of said poles being connected to the common connection between said emitters, said contact arm when in contact with said first pole and with an alternating current input introduced into said third winding causing said circuit to charge said battery, said contact arm when in contact with said second pole being operative to cause said circuit to invert the direct current of said battery into an alternating current output upon said third winding.

3,017,560
TRANSISTOR SWITCHING CIRCUITS
Norman E. Polster, Southampton, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 1, 1958, Ser. No. 764,585
6 Claims. (Cl. 321—45)

4. In a full-wave converter comprising a bridge circuit having first and second transistors respectively in two adjacent arms, an impedance element in each of the remaining arms, control circuits respectively connected to control electrodes of said transistors for controlling their conductivity, means for applying an alternating control voltage to each of said control circuits for cyclically rendering said first transistor conductive and said second transistor non-conductive and for then rendering said second transistor conductive and said first transistor non-conductive, an external direct current circuit effectively connected across one diagonal of said bridge, and an external alternating current circuit effectively connected across the opposite diagonal of said bridge, the improvement comprising means for compensating the effects of voltage offsets of said transistors including resistance means in series with the collector electrode of at least one of said transistors and of magnitude for development of a compensating potential difference which reduces to zero as a limit the current flow due to said voltage offsets of said transistors, said resistance means being at least in part of a material having a temperature coefficient of resistance which maintains compensation for said voltage offsets over a wide temperature range.

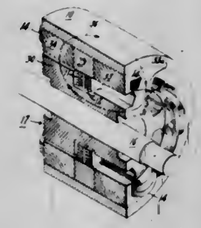


3,017,561
ELECTRICAL CONVERTER
Albert J. Williams, Jr., Philadelphia, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 28, 1958, Ser. No. 777,076
9 Claims. (Cl. 321—45)



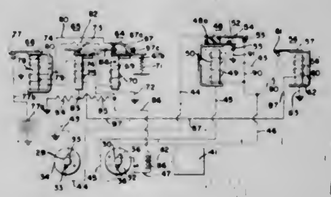
1. A full-wave converter comprising a bridge circuit having four arms, a two-terminal switching device in series in one of said arms for alternately interrupting and completing the circuit through said one arm, impedance elements in the remaining arms of said bridge circuit, an external direct current circuit connected across one diagonal of said bridge, an external alternating current circuit connected across the remaining diagonal of said bridge, and means including an alternating current source of supply separate from said alternating current circuit for operating said switching device at a predetermined frequency for producing a direct current output for said direct current circuit of one polarity or of an opposite polarity upon energization of said alternating current circuit with alternating current of one phase or of an opposite phase and upon energization of said direct current circuit with direct current of one polarity or of an opposite polarity for producing at said alternating current circuit an alternating current output of one phase or of an opposite phase.

3,017,562
ALTERNATOR CONTROL SYSTEM
James T. Duane, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed May 29, 1958, Ser. No. 738,834
8 Claims. (Cl. 322—46)



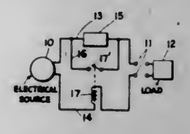
1. An inductor alternator arrangement for producing a regulated unidirectional voltage comprising a stator member having a main excitation winding thereon for producing magnetic flux in said stator upon excitation thereof, load windings on said stator member adapted to have alternating current induced therein upon variations in the magnetic flux in said stator, a rotor member mounted on a rotatable shaft within said stator member for causing cyclic variations in the magnetic flux in said stator member upon rotation of said shaft, the alternating voltage induced in said load windings being applied to rectifier means to produce a unidirectional output voltage for application to a direct current load, a stator demagnetization compensating winding on said stator member arranged to be connected in series circuit with said rectifier means and the load whereby rectified load current is carried by said compensating winding and is effective to produce a magnetizing effect on said stator proportional to the rectified load current to thereby decrease the excitation power requirements of said main excitation winding in producing the regulated unidirectional voltage.

3,017,563
MOTOR VEHICLE POWER GENERATION
Glen R. Renner and Lyman A. Rice, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 12, 1958, Ser. No. 734,648
19 Claims. (Cl. 322—90)



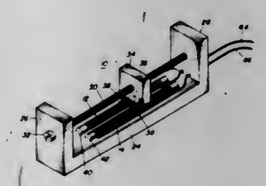
1. In a motor vehicle electrical system, the combination comprising, a variable speed engine, a direct-current generator having a field winding and an armature connected to be driven by said engine, said armature having first and second armature windings and first and second commutators that are connected respectively with a respective armature winding, a load circuit, switch means operating in response to the speed of said engine for at times connecting said armature windings in parallel with each other and with said load circuit and for at other times connecting said armature windings in series with each other and with said load circuit, and voltage regulating means connected with said load circuit and field winding for controlling energization of said field winding from said load circuit to maintain a constant voltage across said load circuit when said armature windings are connected in series or in parallel, said voltage regulating means including sensing means connected to sense the voltage appearing across said load circuit.

3,017,564
PROTECTIVE CIRCUIT
Walter Barney, 4106 W. Burbank Blvd., Burbank, Calif.
Filed Aug. 12, 1954, Ser. No. 449,413
5 Claims. (Cl. 323—9)



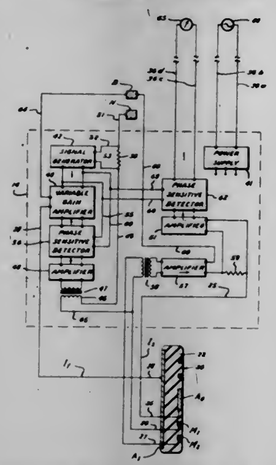
1. A protective circuit for connection between an electrical source and a load, comprising, in combination: an electrical element having a resistance which gradually decreases in response to current passing therethrough, said element being adapted for connection in series with said load such that all current initially supplied to said load passes through said element whereby said current gradually increases; a conductive circuit adapted to shunt said electrical element; and relay means connected in series with said load and said element and responsive to a given value of said current passing through said electrical element for closing said conductive circuit a given length of time after application of said load.

3,017,565
TEMPERATURE RESPONSIVE RESISTOR
Robert L. Carson, 701 Wiamea Drive, El Cajon, Calif., and Walter F. Conrad, 2551 Mulder St., Lemon Grove, Calif.
Filed Sept. 12, 1960, Ser. No. 55,591
6 Claims. (Cl. 323—74)



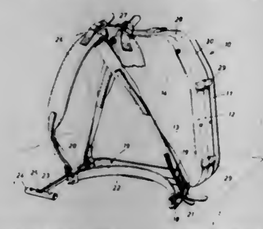
1. A temperature responsive resistor comprising a first resistive element; a second resistive element made of a material having a temperature coefficient of resistivity different from the material of said first resistive element; an electrically conductive contact member in engagement with and connecting in series said first resistive element and said second resistive element; and means coupled to said contact member and operative to adjust the position of said contact member relative to said first resistive element and said second resistive element, the total resistance of said resistor, at a predetermined temperature, being the same for any said position of said contact member, said total resistance being different at a temperature other than said predetermined temperature in proportion to the amounts of said first and second resistive elements which are then connected in series and the temperature coefficients of resistivity thereof.

3,017,566
APPARATUS FOR INVESTIGATING EARTH FORMATIONS
Nick A. Schuster, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed June 16, 1959, Ser. No. 820,662
12 Claims. (Cl. 324—1)



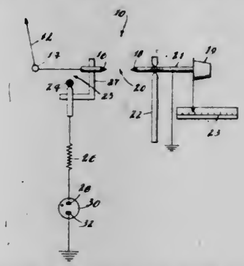
1. In apparatus for investigating earth formations traversed by a borehole containing a relatively conductive liquid, the combination comprising: a pad member adapted to be urged against the borehole wall; first electrode means for emitting electrical current from the wall-engaging face of the pad member into the adjacent earth formation; second electrode means for emitting electrical current from the pad member directly into the adjacent conductive liquid for controlling the flow pattern of the first electrode current and rendering such flow pattern relatively unaffected by the presence of a layer of mud cake on the wall of the borehole; means for energizing the first and second electrode means; and means responsive to the flow of the first electrode current for providing an indication representative of formation resistivity.

3,017,567
RECONNAISSANCE ELECTROMAGNETIC SURVEY PACK
Anthony René Barringer, Agincourt, Ontario, Canada, assignor to Selco Exploration Company Limited
Filed Dec. 3, 1957, Ser. No. 700,438
5 Claims. (Cl. 324—6)



1. A reconnaissance electro magnetic survey apparatus comprising, in combination: a pack in the form of an arched slab-like structure having a back wall including an upwardly and forwardly inclined portion, and a removable cover for sealing said pack; a pack frame of generally U-shaped form extending forwardly from said back wall, including means engageable with the back of an operator carrying said pack adapted to space the back wall from the back of the operator; strapping means extending from said frame adapted to pass about portions of the body of the operator for support of said pack thereby; an electro magnetic signal transmitter unit including a signal radiating coil, a transmitter and battery source therefor, disposed entirely within said pack; and a levelling device and means rotatably supporting said levelling device on said pack unit in a position forwardly thereof to dispose the same in front of an operator carrying said pack, whereby the operator may effect levelling of said pack while carrying the latter.

3,017,568
SHARP CUT-OFF SPARK GAP INDICATOR
Robert E. Barnes, 114 E. Grove St., Algona, Iowa
Filed Feb. 14, 1958, Ser. No. 715,307
3 Claims. (Cl. 324—18)

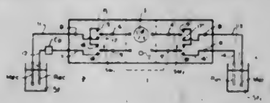


1. An apparatus for testing and measuring the voltage output of high voltage components in an automobile ignition system comprising first and second needle point electrodes, said electrodes mounted in spaced relation with the points of the electrodes facing each other to define a main spark gap, said first electrode adapted to be connected to a high voltage source from the component being tested, the other electrode at a lower potential, means for adjusting the spacing between the first and second electrodes to vary the length of the main spark gap, a radius point electrode mounted at a fixed distance from said high voltage electrode and at a lower potential defining a second spark gap, said radius point electrode positioned near enough to said high voltage electrode to cause a discharge in said second spark gap when said main spark gap fails to fire so that when the spacing between said needle point electrodes is increased to where misfires being to occur a discharge will occur in said second spark gap, a voltage dropping resistor and one terminal of a neon glow lamp connected in series to the radius point electrode, the other terminal of the neon glow lamp grounded whereby said neon glow lamp will flash each time a misfire occurs in the main spark gap, said means for adjusting the spacing between the first and second electrodes calibrated so that the length of the main spark gap at which misfires begin to occur can be determined precisely whereby the performance of the component being tested can be compared with the performance of a standard component.

3,017,569
METHOD AND POTENTIOMETER-TITRIMETER FOR MEASURING ELECTROIONIC POTENTIALS
Szilard Berenyi, Zarate, Argentina
(22—35 93rd St., Jackson Heights 69, New York, N.Y.)
Filed Mar. 2, 1959, Ser. No. 796,517
11 Claims. (Cl. 324—29)

1. The method of measuring an electroionic potential, comprising the steps of measuring the known electroionic

potential of a first standard solution to obtain a first electric magnitude, measuring the known electroionic potential of an identical second standard solution to obtain a second electric magnitude, injecting into said second electric magnitude an electric counterpotential to equalize

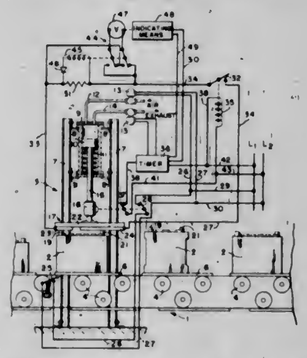


said first and said second electric magnitudes, substituting a solution of unknown electroionic potential for one of said standard solutions and measuring said unknown electroionic potential to obtain a third electric magnitude corresponding directly to said unknown electroionic potential.

3,017,570
AUTOMATIC BATTERY DISCHARGE MEANS

James Kermit Floyd, Kirtland, Ohio, assignor to The Electric Storage Battery Company, a corporation of New Jersey

Filed Dec. 4, 1959, Ser. No. 857,426
7 Claims. (Cl. 324—29.5)



1. An apparatus for performing a discharge test on a storage battery comprising, in combination, a contact plate having a first section adapted to contact one terminal of the battery to be tested and a second section adapted to contact the other terminal of said battery, means for bringing said contact plate into contact with said battery terminals, pressure responsive means for regulating the pressure of said contact, a discharge circuit, means controlled by said pressure responsive means for connecting said discharge circuit to said contact plate and discharge measuring means connected across said discharge circuit.

3,017,571
DEVICE FOR TESTING REACTANCES

Anthony C. Moricca, 447 W. Butler; Samuel A. Moricca, 445 W. Butler; and Carl E. Bohn, 2516 Dodge, all of Fort Wayne, Ind.

Filed Dec. 4, 1956, Ser. No. 626,136
8 Claims. (Cl. 324—51)



7. A reactance-testing device comprising a wave generator which produces a periodically occurring shock-exciting wave having a decaying trailing edge, said generator having two output terminals, a capacitor having two leads, one lead being connected to one terminal, the remaining lead and the other terminal providing an open circuit across which a reactance to be tested may be connected, an oscilloscope having horizontal and vertical deflecting means, one of said deflecting means being operatively coupled across said capacitor, and the other of said deflecting means being operatively coupled across said open circuit.

3,017,572
APPARATUS FOR TESTING A TRANSFORMER TO DETERMINE ITS ABILITY TO WITHSTAND VOLTAGE SURGES

Fred J. Vogel, Pittsburgh, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Sept. 19, 1958, Ser. No. 764,211
5 Claims. (Cl. 324—55)

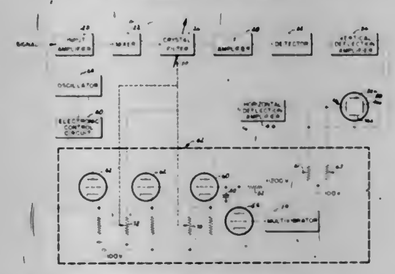


2. Apparatus for testing a transformer for its ability to withstand a switching surge having a predetermined frequency and a predetermined crest voltage, said apparatus comprising an alternating current generator connected across a winding of said transformer for plying a voltage wave having said predetermined frequency and having an oscillatory build-up to said predetermined crest in a relatively short time to simulate a switching surge, and means connected across a second winding of said transformer for short circuiting said second winding when said predetermined crest is reached to substantially remove said wave from said transformer.

3,017,573
SPECTRUM ANALYZER

Richard R. Hoffmann, Flushing, N.Y., assignor to Probescope Company, Port Washington, N.Y.

Filed Mar. 2, 1959, Ser. No. 796,607
2 Claims. (Cl. 324—77)



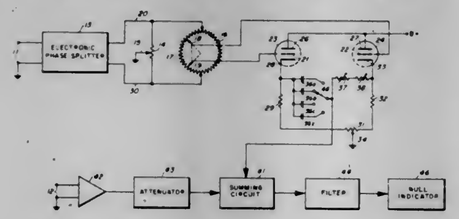
1. A spectrum analyzer, including a mixer, a sweeping local oscillator coupled to said mixer for converting incoming signals to said mixer to an intermediate frequency, a bandpass filter having its center frequency tuned to the said intermediate frequency, signal detecting means in cascade with said bandpass filters and display means in cascade with said detecting means for visually displaying the detected signals, voltage sensitive, electronic control means coupled to said local oscillator adapted to vary the sweeping rate, center frequency, and sweep width, of said oscillator, a deflection signal generator, first circuit varying means controlling the rate

of said deflection signal generator, circuit means for coupling a deflection signal derived from said deflection signal generator to said electronic control means, second circuit varying means to determine the amplitude of a portion of a deflection signal applied to said electronic control means so as to control sweep width of said local oscillator, means mechanically ganging said first and second circuit varying means so that both vary simultaneously so as to increase the sweep rate when the sweep width is increased, and third variable circuit means ganged to said first and second means arranged to adjust the bandwidth of said filter so as to automatically provide optimum resolution.

3,017,574
ELECTRICAL PHASE SHIFTER

John T. Redfern, and George M. Coleman, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy

Filed Mar. 24, 1959, Ser. No. 801,677
5 Claims. (Cl. 324—89)
(Granted under Title 35, U.S. Code (1952), sec. 266)

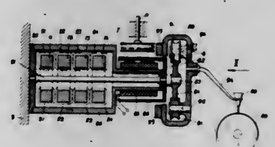


1. An electronic phase comparator comprising, electronic phase splitting means having input terminals and output terminals said input terminals connected to a first signal to be compared and a reference point, said phase splitting means operable to deliver to said output terminals a first output signal of the same phase as said first signal to be compared, and a second output signal 180° removed in phase from said first signal to be compared and equal in amplitude to said first signal, a resistance loop comprising two equal resistors each connected in parallel across said phase splitter output terminals forming a geometric circle, first and second contact wipers in electrical contact with said resistance loop angularly displaced by 90° and rotatable around said resistance loop, said resistors designed to vary in resistance progressively from points electrically equidistant from said phase splitter output terminals with the sine of the angle of rotation of said first and second wipers from said points, a third resistor connected across said phase splitting means output terminals, a third movable wiper contact on said third resistor connected to said reference point, first and second vacuum tubes each having a cathode, control grid and anode, said first and second wipers connected to the first and second vacuum tube grids respectively, said first and second vacuum tube anodes connected to a positive voltage source, said first vacuum tube cathode connected through a fourth resistor to one end of a fifth resistor, said second vacuum tube cathode connected through a sixth resistor to the other end of said fifth resistor, said fifth resistor having a slidable contact connected to said reference point, a seventh resistor and a capacitor connected in series between said first and second vacuum tube cathodes, said seventh resistor and said capacitor having equal impedances at the frequency of said signals, an amplifier having an input and an output, said amplifier input connected to a second signal to be compared, said amplifier output connected through a variable attenuator to one input of a summing means, a second input of said summing means connected to the junction of said seventh resistor and capacitor, a narrow passband filter connected to the output of said summing means, said filter tunable to the frequency of said signals, and amplitude responsive means connected to the output of said filter.

3,017,575
ELECTROMAGNETIC RECORDING APPARATUS

Bořivoj Dubský, Oldřich Straka, and Josef Bican, Prague, Czechoslovakia, assignors to Vyzkumny a zkusební letecky ustav, Letnamzlar, Prague, Czechoslovakia

Filed Mar. 4, 1959, Ser. No. 797,296
Claims priority, application Czechoslovakia Mar. 7, 1958
1 Claim. (Cl. 324—99)



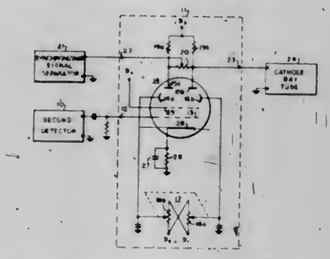
In combination in an electromagnetic recording apparatus, a cylindrical magnetic member having a main axis, means including a conductive cap connected to each end of said member and a conductive element disposed along said main axis and connected to said caps for cylindrically magnetizing said member with respect to said main axis, said means also including four annular cores coaxially disposed with respect to said axis and being mounted about said element and within one portion of said member, each of said cores having an energizing winding thereon, said four energizing windings being connected in order in series-aiding, alternating current means including a center tap point for energizing said four energizing windings, a servo motor having a control winding connected between said center tap point and a point between the second and third ones of said series-aiding energizing windings, each of said cores also having thereon a second winding, said second windings being connected in order such that the first and second ones thereof, and the second and third ones thereof, are respectively connected in series-opposition and the third and fourth ones thereof are connected in series-opposition, direct current means for energizing said four second windings, each of said cores also having thereon a third winding, said third windings being connected so that the first and second ones thereof, and the third and fourth ones thereof, are connected in series-opposition and the second and third ones thereof are connected in series-aiding, terminal member means connected to said third windings, each of said cores also having thereon a fourth winding, said fourth windings being connected in order in the same manner as said third windings, pick-up coil means coaxially disposed with respect to said axis and wound outside of and about another portion of said member, said pick-up coil means being connected in series with the fourth windings, rectifying circuit means connected in series with said pick-up coil means and said fourth windings to form a closed electrical path, a rail member fixedly secured to one of said conductive caps, indicating carriage means arranged for movement on said rail member and coupled to said servo motor, whereby the application of an unknown direct current voltage to said terminal member means causes a direct current to flow through said third windings to unbalance the inductances of said energizing windings and to cause a current flow through said servo motor control winding to turn said motor to move said carriage means to torsionally deflect said magnetic member to induce a voltage in said pick-up coil means to cause a direct

current to flow through said fourth windings in a direction to balance out the effect of the direct current flow arising from said applied unknown voltage.

3,017,576
DUAL GAIN AMPLIFIER

John R. White, Westbury, N.Y., assignor to Hazeltine Research, Inc., a corporation of Illinois

Filed May 6, 1959, Ser. No. 811,320
4 Claims. (Cl. 330—46)

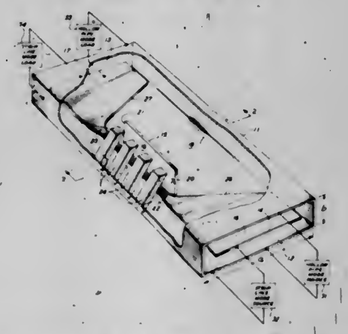


1. An amplifier comprising: means for supplying a first signal; an amplifying means, responsive to said signal supplying means and including a current-conductive device having two output electrodes and control-electrode means for controlling the distribution of current between the output electrodes, for simultaneously deriving at said output electrodes signals representative of said first signal and dependent upon the current distribution to the respective electrode; means coupled to said output electrodes for deriving a signal representative of said first signal and dependent upon the total current of said current-conductive device; first utilization means coupled to said last-mentioned means; and second utilization means coupled to one of said output electrodes; whereby said second utilization means is subjected to a variable gain representation of said first signal and said first utilization means is subjected to a fixed gain representation of said first signal.

3,017,577
MICROWAVE SELECTIVE MODE ISOLATOR

Joseph J. Kostelnick, Middlesex, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 21, 1959, Ser. No. 847,825
9 Claims. (Cl. 330—56)

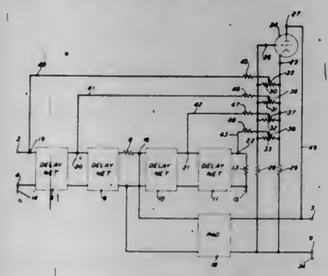


1. In combination, a transmission path for electromagnetic wave energy adapted to support first and second independent wave modes simultaneously, means within said path for segregating said first wave mode into a first channel and said second wave mode into a second channel which is physically separate from said first channel, one of said channels including means for attenuating wave energy propagating in one direction therethrough while freely transmitting wave energy propagating in the opposite direction therethrough, and means for recombining said modes in said path.

3,017,578
EQUALIZER

Walter R. Lundry, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Nov. 13, 1958, Ser. No. 773,621
2 Claims. (Cl. 330—87)



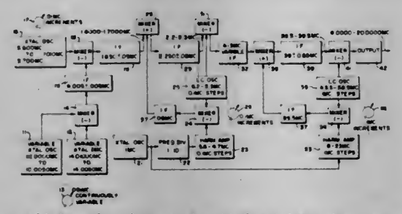
1. A wave transmission network comprising input terminals and output terminals, a terminated delay line connected to the input terminals, a transmission path from the center of the line to the output terminals, a loss pad of image impedance R_0 connected in the path, a plurality of pairs of tapping points symmetrically positioned with respect to the center of the line, a summing amplifier including an active element having two input electrodes, substantially equal resistors connected, respectively, between the electrodes and an output terminal, a plurality of input resistors connected in parallel between the electrodes, a transmission path from each tapping point to a point on one of the input resistors, a series resistor in each of the last-mentioned paths, a transmission path from the output of the amplifier to the output terminals, and a resistor connected in series at the center of the line at a point before the said transmission path from the center of the line, the line being constituted by tandem-connected delay networks of image impedance R_0 and the last-mentioned resistor having a resistance approximately equal to $R_0/2$.

3,017,579
FREQUENCY SYNTHESIZER

Werner Brack, Roslyn Heights, N.Y., assignor to Radio Engineering Laboratories, Inc., Long Island City, N.Y., a corporation of New York

Filed Aug. 6, 1959, Ser. No. 832,069
8 Claims. (Cl. 331—38)

1. A frequency synthesizer comprising a highly stable fixed frequency source, means for dividing the frequency from said source to obtain a quotient frequency, a first harmonic generator for generating harmonics of said quotient frequency, a first tunable oscillator, a first mixer means coupling said first oscillator and said first harmonic generator to said first mixer, first selective means for tuning said first oscillator and selecting one of said harmonics to produce a constant beat frequency in said mixer for any setting of said selective means, a tuned amplifier coupled to said mixer for amplifying said constant beat frequency, a second harmonic generator for generating a group of harmonics of the frequency of said source, a second tunable oscillator, a second mixer, means coupling said second tunable oscillator and said second harmonic generator to said second mixer, second selective means for tuning said second oscillator to a set of frequencies, a band pass amplifier for selecting a fixed beat frequency from said second mixer for any selected frequency of said set of frequencies, a third oscillation generator adjustable over a range of frequencies, a third mixer for heterodyning the frequency from said third generator with said constant beat frequency, a fourth mixer for heterodyning a selected band of frequencies from said third mixer and the frequency of said first oscillator, a fifth mixer for heterodyning a selected band of frequencies

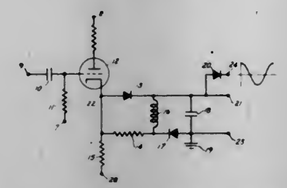


from said fourth mixer and said fixed beat frequency, a sixth mixer for heterodyning a selected band of frequencies from said fifth mixer and the frequency of said second oscillator, and means for selecting the output frequency from said sixth mixer over a band of output frequencies, said second oscillator, first oscillator and third oscillation generator being adjustable in steps with the steps differing in the order named by the factor of the radix of the designation of said output frequency and the heterodyning in said fourth and sixth mixers cancelling respectively the frequencies of said first and second oscillators as a term in the synthesis of said output frequency.

3,017,580
ELECTRONIC METHOD FOR GENERATION OF A SINGLE CYCLE OF A TRIGONOMETRIC FUNCTION

Paul C. Phillips, Medford Lakes, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Oct. 22, 1959, Ser. No. 848,170
3 Claims. (Cl. 331—166)

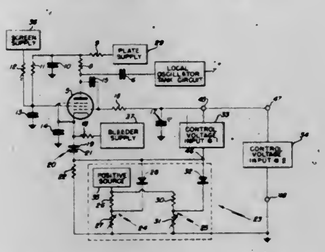


1. An electronic means for generation of an integral number of cycles of a trigonometric function said means comprising: a switch tube coupled across a source of potential; an input to said switch tube for gating signals; a first unidirectional means having one terminal coupled to the cathode of said switch tube and the other terminal coupled to a common junction between first terminals of an inductance means and a capacitance means; a second unidirectional means having a first terminal means coupled to a second terminal of said inductance means and having a second terminal means coupled to a second terminal of said capacitance means and having one of said second terminals further coupled to a point of intermediate ground potential; resistance means coupled between said cathode and said second unidirectional means; output terminals coupled to said capacitance; and impedance means coupled between said cathode and a source of negative potential for establishing a desired amplitude of signals at said output terminals.

3,017,581
REACTANCE TUBE CIRCUITS

Gerald L. Warner, Sudbury, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Nov. 6, 1958, Ser. No. 772,655
6 Claims. (Cl. 331—180)

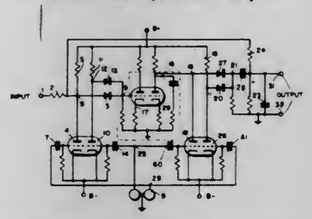


1. Means for controlling the frequency of an oscillator having a tank circuit comprising a reactance circuit connected to said tank circuit of said oscillator for varying the reactance of said tank circuit; means connected to said reactance circuit for supplying a first control signal to said reactance circuit to provide a first predetermined variation in the frequency of said oscillator; means connected to said reactance circuit for supplying a second control signal having a larger voltage level than said first control signal to said reactance circuit to provide a second predetermined variation in the frequency of said oscillator, said reactance circuit including a first means for linearizing said first predetermined variation in frequency over a first predetermined frequency range, and a second means for linearizing said second predetermined variation in frequency over a second predetermined frequency range.

3,017,582
HIGH SPEED LOW LEVEL SWITCHING DEVICE

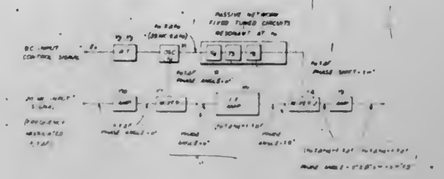
Martin L. Klein, Woodland Hills, Harry C. Morgan, Sherman Oaks, and Alan Goudey, Saugus, Calif., assignors to North American Aviation, Inc.

Filed July 22, 1958, Ser. No. 750,211
13 Claims. (Cl. 332—14)



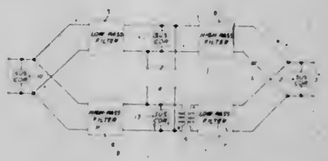
1. Switching means comprising electronic chopper means connected to receive and chop an electrical signal for producing a substantially square wave alternating-current signal, amplifier means having its input connected to receive said A.-C. signal and its output connected to present an amplified A.-C. signal, switch means for establishing a reference voltage level on said input and said output, and gating means synchronized with said chopper means to be 180° out of phase with said chopper means, said gating means connected to receive the output of said amplifier for providing a gated, square wave alternating-current output signal.

3,017,583
LARGE ANGLE RF PHASE SHIFTERS
Elliott W. Markow, Burlington, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed June 6, 1958, Ser. No. 740,359
4 Claims. (Cl. 332—22)



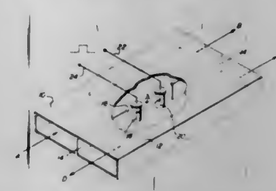
4. In combination, means for generating a first frequency modulated signal; means for generating a second frequency modulated signal; means connected to said first and second generating means for combining said first and second frequency modulated signals to produce a signal having a frequency equal to the sum of the frequencies of said first and second frequency modulated signals; a phase shift network including a plurality of resonant circuits tuned to the center frequency of said first frequency modulated signal and connected to said first generating means for shifting the phase of said first frequency modulated signal; reactance tube means connected to said first generating means; means for applying a D.C. control signal to said reactance tube means for controlling the frequency variation of said first frequency modulated signal to provide a preselected phase shift in response to said frequency variation; amplifying means connected to first combining means; and means connected to said phase shift network and to said amplifying means for combining the output signals of said phase shift network and said amplifying means to produce a frequency modulated output signal having a frequency equal to the frequency of said second frequency modulated signal and having a phase shift substantially equal to said preselected phase shift.

3,017,584
WAVE TRANSMISSION NETWORK
Walter R. Lundry, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,299
5 Claims. (Cl. 333—6)
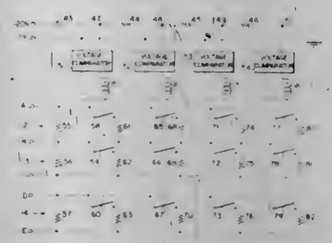


1. A wave transmission network comprising two low-pass filters and two high-pass filters alternately connected to form a closed loop with four ports at the respective junction points between filters and a susceptance corrector connected in shunt at each of the ports, each of the low-pass filters having a pass band coinciding with the stop band of each of the high-pass filters, each of the high-pass filters having a pass band coinciding with the stop band of each of the low-pass filters, and the susceptance correctors having substantially identical susceptance-frequency characteristics adapted to make the input impedance at each port more nearly non-reactive in the pass bands of the filters.

3,017,585
MICROWAVE SWITCH
George W. Luke, Rockville, Md., assignor to Research Corporation, New York, N.Y., a corporation of New York
Filed Apr. 24, 1959, Ser. No. 808,743
4 Claims. (Cl. 333—7)



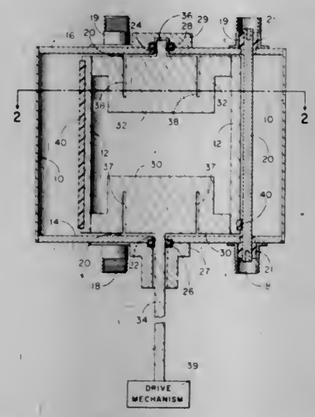
4. A microwave switch comprising primary and secondary waveguide sections arranged side-by-side and having a common wall formed with a slot between the sections, said primary section having an input branch and an output branch and said secondary section having output branches, a pair of crystal diodes mounted in the slot, said diodes being separated by a space of approximately one quarter wavelength, and means for applying energizing potentials to said diodes, said primary waveguide conducting maximum energy applied to its input branch to its output branch under a condition of zero pulse voltage input to the diodes, said energy output being divided between the primary waveguide output branch and the adjacent secondary waveguide output branch, and with minimum reflection to the secondary output branch adjacent the primary input branch; upon the application of a positive pulse to the diodes and with a coupling coefficient of 2, said energy output appearing in its entirety at said adjacent secondary waveguide output branch when said slot coupling coefficient is unity.

3,017,586
FILTER CIRCUIT
William C. Dersch, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 4, 1959, Ser. No. 810,953
2 Claims. (Cl. 333—17)



1. In a speech synthesizer, a noise source, means for selecting energy from said noise source comprising: a parallel T network consisting of resistors and capacitors, a control signal, means for establishing a plurality of standard voltage signals, a plurality of voltage comparison means, means connecting indivdual of said comparison means between said control signal and one of said standard signals, each of said comparison means including a relay coupled to vary the resistive values of said resistors whereby the center frequency of the rejection band of said network is controlled by said comparison means and responsive to said control signal while maintaining a constant bandwidth.

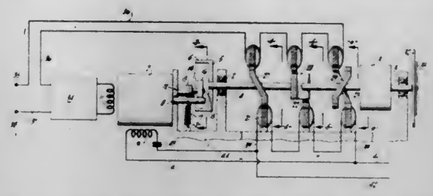
3,017,587
RADIO-FREQUENCY COAXIAL-TRANSMISSION PHASE SHIFTER
Dale B. Kern, Corona, and Robert L. Conger, Riverside, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 17, 1959, Ser. No. 853,662
9 Claims. (Cl. 333—31)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A high speed phase shifter for use in microwave frequency transmission systems utilizing coaxial transmission lines comprising a substantially cylindrical dielectric cam inserted between the inner and outer conductors of a section of a multiple coaxial transmission line, said section of a multiple transmission line being formed of a plurality of metal rods placed parallel to and spaced slightly away from a metal plate, each of said plurality of metal rods acting as one conductor of separate coaxial transmission lines and comprising the inner conductors thereof, said metal plate acting as the other conductor of said separate coaxial transmission lines and comprising the outer conductor thereof, means for rotating said cylindrical dielectric cam for passing varying amounts of dielectric material thereof between said metal rods and metal plate, a portion of the dielectric material of said dielectric cam being between each of said plurality of metal rods and said metal plate at all times, whereby the propogation velocity of microwave energy traveling between various metal rods of said plurality of metal rods and said metal plate will vary in proportion to the amount of said dielectric material therebetween and at a rate determined by the speed of said means for rotating said dielectric cam, and the phase of microwave energy traveling through a particular one of said metal rods is retarded with respect to the energy traveling through other of said metal rods having different amounts of said dielectric material between them and said metal plate.

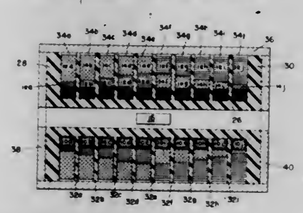
3,017,588
NULL-BALANCE INDICATION SYSTEM AND VARIABLE TRANSFORMER THEREFOR
Kenneth G. Heller, Redwood City, and William Snyder, Palo Alto, Calif., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,019
1 Claim. (Cl. 336—135)

A variable transformer comprising: a frame; a shaft journaled on said frame; a plurality of spaced, parallel transformer cores of C configuration mounted on said frame transversely of said shaft, each of said cores having axially offset poles straddling said shaft and forming an air gap thereacross; a rotor fixed to said shaft in the plane of each of said cores, each of said rotors being provided with diametrically opposed, axially offset ends arranged in



one position of said shaft to be aligned with the poles of its associated core thereby to substantially close its associated air gap, and each succeeding rotor being fixed to said shaft with a predetermined angular lag relative to the preceding rotor.

3,017,589
DIFFERENTIAL TRANSFORMER
Jacob Chass, Philadelphia, Pa., assignor to International Resistance Company, Philadelphia, Pa.
Filed May 13, 1958, Ser. No. 734,882
10 Claims. (Cl. 336—136)

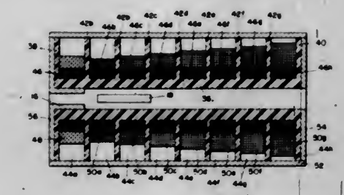


1. A differential transformer comprising the combination of a helically wound coil of electrically conducting wire having a uniform number of turns per unit length forming a primary coil, a second helically wound coil of electrically conducting wire over the full length of said coil forming a first secondary coil, said second helically wound coil having an increasing number of turns per unit length from one end of said first coil to the other end thereof, a third helically wound coil of electrically conducting wire wound over the full length of said first coil forming a second secondary coil, said third helically wound coil having a decreasing number of turns per unit length from said one end of said first coil to the other end thereof, said second coil being connected to said third coil in bucking series arrangement and an armature movably disposed within said coils.

3,017,590
NON-SYMMETRICAL DIFFERENTIAL TRANSFORMER
Jacob Chass, Philadelphia, Pa., assignor to International Resistance Company, Philadelphia, Pa.
Filed May 29, 1958, Ser. No. 738,770
5 Claims. (Cl. 336—136)

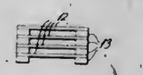
1. A differential transformer comprising the combination of an elongated helically wound coil of electrically conductive wire having a uniform number of turns per unit length, a second coil of electrically conductive wire wound over a portion of said first coil, a third coil of electrically conductive wire helically wound over the remaining portion of said first coil, said third coil having an increasing number of turns per unit length thereof from one of its ends to its other end, said third coil being connected

to said second coil in bucking series arrangement, a core of magnetic material within said first coil and extending



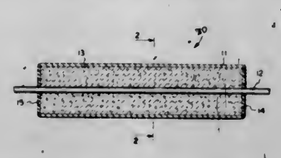
across said second coil, and an armature core of magnetic material movably disposed within said first coil.

3,017,591
STACKED MAGNETIC CORE HAVING MAGNETIZATION CURVE WITH SHARP KNEE
Ulrik H. Krabbe, Helsingor, and Harald M. Sorensen, Fruens Boge, Denmark, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 19, 1956, Ser. No. 572,421
Claims priority, application Denmark Mar. 23, 1955
12 Claims. (Cl. 336—215)



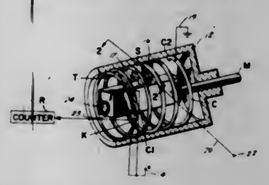
1. A magnetic core comprising rectangular leg laminations of magnetically oriented material and rectangular yoke laminations of magnetically oriented material, said leg and yoke laminations being overlappingly engaged at their ends to form only lap joints in the corners of the core, each of said yoke laminations lappingly engaging at least two of said leg laminations, said yoke laminations being wider than said leg laminations, there being at least as many of said yoke laminations as there are of said leg laminations, said leg laminations being thicker than said yoke laminations.

3,017,592
CONDITION RESPONSIVE APPARATUS
Roger P. Keller, St. Paul, and James J. Renier, Hopkins, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 25, 1959, Ser. No. 822,790
3 Claims. (Cl. 338—28)



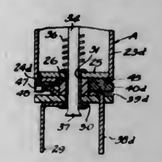
1. A thermally responsive resistor comprising an inner and outer relatively spaced electrode pair, and defining an annular area of substantially uniform thickness therebetween, the annular area being at least partially filled with lithium chloride-potassium chloride eutectic, so as to define a conductive path between said electrodes, said resistor element being characterized in that the electrode members consist essentially of a metal from the group consisting of aluminum and magnesium.

3,017,593
POTENTIOMETER APPARATUS
Leo J. Emenaker, Playa del Ray, Calif., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 23, 1960, Ser. No. 10,356
4 Claims. (Cl. 338—143)



4. A potentiometer for use in conjunction with a shaft for providing an analog signal indicative of the angular position of said shaft, comprising: a plural-turn coiled resistance conductor adapted to be connected across a source of potential whereby to provide a range of signals at contact points thereon; a slider mounted to engage said coiled conductor and adapted to be connected to said shaft whereby to be variously positioned on said conductor by revolving said shaft; and an open track of substantially a full turn adjacent one end of said conductor to receive and carry said slider as a continuation of said coiled resistance whereby said shaft may revolve through plural revolutions after said track receives said slider, said track being formed to guide said slider back to said coiled resistance upon reversed rotation of said shaft.

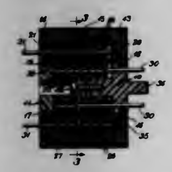
3,017,594
GLOW DISCHARGE LIGHT ASSEMBLY WITH RESISTOR
George H. Rodgers, Anaheim, Calif., assignor to Marco Industries Company, Anaheim, Calif., a corporation of California
Filed Sept. 8, 1958, Ser. No. 759,568
5 Claims. (Cl. 338—219)



1. A mounting socket unit for a glow discharge lamp having a base provided with a lateral contact and a central end contact, comprising: a metal socket element in which said base is receivable with electrical conductive engagement with said lateral contact, said socket element having a uniformly cylindrical tubular lateral wall and a radial flange defining an open bottom, said flange having a notch therein; a resistance washer seated against the outer face of said flange, said washer having on one face thereof a radially extending lug engaged in said flange notch and in its opposite face a radially extending recess; a terminal having a radial ring portion seated against said resistance washer and including an integral lug engaged in said recess thereof; insulator means within said flange and ring portion; an outward insulator washer engaged against the outer face of said ring portion; an insulator washer seated against the inner face of said flange and said resistance washer lug; a contact pin extending through and slidably mounted in said insulator means and in yielding conductive engagement with said central end contact; and another terminal mounted on said insulator means and having a part electrically connected to said contact pin, said resistance element providing (*a*) a high resistance

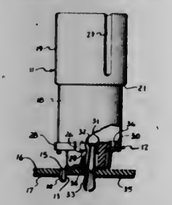
conductive connection between said first mentioned terminal and said socket and (*b*) a rotation-restraining locking connection therebetween and a metal bearing grommet extending through the assembly of said terminals, said insulator means, said resistance washer and said insulator washer and holding them in sandwich assembly, said contact pin being slidably mounted in said grommet; said resistance washer having a diameter approximately the same as that of said tubular lateral wall, and said terminals including legs extending axially within the cylindrical space projected axially from said cylindrical lateral wall, whereby said socket unit is receivable in a tubular cylindrical housing barrel.

3,017,595
PLUG-IN SLIP RING AND BRUSH ASSEMBLY
Clarence O. Drollinger and Richard L. Yarnall, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 16, 1955, Ser. No. 553,557
16 Claims. (Cl. 339—8)



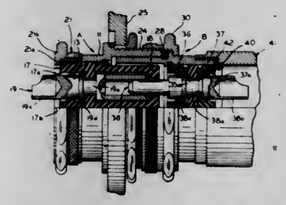
1. An electrical slip ring and brush assembly comprising a stack of alternately disposed conductor slip rings of a moderate thickness and flat circular insulator members, a first set of conductor rods longitudinally disposed in aligned holes defined by said conductor slip rings and said insulator members, said insulator member having bosses of substantially the same thickness as said slip rings and being positioned in all but one of the holes defined by each conductor slip ring so that each said rod is in direct electrical connection with a different slip ring, a second conductor associated with each said slip ring, and means having a brush element in sliding frictional engagement with each slip ring electrically connecting each said slip ring with its associated second conductor and means mounting said stack and the associated second conductors for relative motion.

3,017,596
TUBE SHIELD AND GROUND STRAP STRUCTURE
Lester B. Johnson, Des Plaines, Ill., assignor, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,794
3 Claims. (Cl. 339—14)



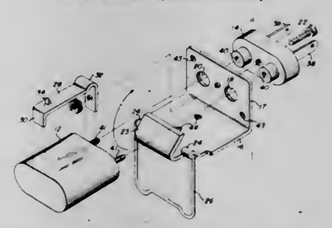
1. In combination with a casting equipped with a hollow ground terminal and adapted for use with a printed wire panel, a tube shield member secured to said casting, a ground strap formed integrally with said shield, said ground strap extending inwardly from said shield along the upper surface of said casting and having a depending tail extending into the interior of said ground terminal, said tail being substantially of the same width as the inner diameter of said ground terminal and angularly disposed relative to the longitudinal axis thereof to provide a portion adjacent its lower end in contiguous relation to said ground terminal.

3,017,597
ELECTRICAL CONNECTOR
Joseph A. Nava, Villa Park, and Lee A. Archer, Wheaton, Ill., assignors to The Pyle-National Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 13, 1958, Ser. No. 775,092
6 Claims. (Cl. 339—64)



4. In a multi-conductor connector, a disk-shaped mass of resilient dielectric material comprising an electrical insulation with separate openings through which the conductors extend and a pair of clamping plates substantially coextensive with and adjacent to opposite sides of said sealing material and having bores therein through which the conductors pass, said clamping plates having counterbores formed at said bores in the respective faces thereof engaging said sealing material, and means clamping said clamping plates against the sealing material, a portion of said sealing material being disposed within said counterbores and forming enlarged resilient dielectric barriers in said counterbores between adjacent conductors excluding air and contaminants and minimizing electrical tracking between the conductors, a plurality of cylindrical conductors, each characterized by the formation thereon of a radially outwardly extending flange on each side of said sealing material, and each said flange being received in a corresponding one of said counterbores, said flanges being of a lesser size than the corresponding counterbores and each of said enlarged resilient dielectric barriers taking the form of an annulus engaging the peripheral surfaces of said flanges.

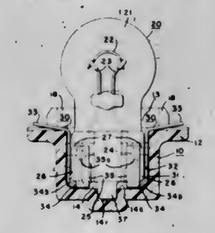
3,017,598
CLAMP HOLDERS
Russell Cutler Low, Rye, N.H., assignor to Raytheon Company, Waltham, Mass., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,766
6 Claims. (Cl. 339—75)



1. A holder for securing an electrical component to a socket comprising a socket, an electrical component in-

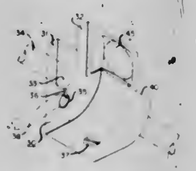
serted in said socket, an angle bracket having one end connected to said socket, a bearing at the other end of said bracket, a support member of spring material having one end connected to said socket, an ear projecting from the other end of said support member and adapted to contact the top portion of said electrical component to urge said electrical component toward said socket, and a wire loop surrounding said electrical component rotatably mounted in said bearing, said wire loop adapted to enclose said electrical component and said support member.

3,017,599
LAMP SOCKET
Ronald E. Loesch, Ravenna, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 5, 1960, Ser. No. 628
6 Claims. (Cl. 339—91)



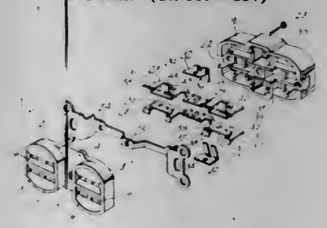
1. A lamp socket and terminal means assembly, comprising in combination, a lamp bulb free of any metal base though having a web-like glass bottom including a transverse notch as well as a pair of exposed wire contacts bent along one side of the web-like bottom, a socket body of plastic material having a transverse cavity open at one end to receive the web-like bottom and a pair of terminal spring contact means including a laterally extending tab projecting from the open end of the hollow interior, a side-serrated central portion which is integral with said tab as well as a substantially U-shaped segment and which fits into engagement with said body in diametrically opposite locations inside the cavity, and a pair of identical spring fingers included in the U-shaped segment of which one finger has a C-shaped contact engageable directly relative to the exposed wire contact of the glass bulb along one side of the web-like bottom and of which the other finger has a C-shaped locking end complementary and engageable relative to the transverse notch of the glass bulb for holding the latter in a fixed position relative to the socket body.

3,017,600
NEUTRAL WIRE CLAMPS AND THE LIKE
Norris C. Husted, R.D. 1, Gibsonia, Pa.
Filed June 12, 1959, Ser. No. 820,036
5 Claims. (Cl. 339—149)



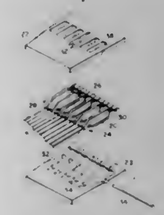
1. An electrical conductor clamp comprising a body portion, a pair of side-by-side legs extending from said body portion forming between them a generally parallel sided U-shaped slot to pass over the body of a conductor, said body portion having a passage spaced from and generally parallel to the bottom of said slot and adapted to receive an end of wire, clamping means in the body adapted to enter the passageway to clampingly engage the wire, a slot in the body portion adjacent the base of one of the legs creating a zone of resilience whereby said one leg may bend towards the other, said legs having openings spaced from the bottom of the slot to receive a clamping bolt, a clamping bolt in said openings and an abutment on the body portion adjacent the opening in one of the legs and engaging the head of the bolt therein.

3,017,601
QUADRUPLE CONVENIENCE OUTLET
George B. Benander, Oaklawn, R.I., assignor to General Electric Company, a New York corporation
Filed Oct. 31, 1958, Ser. No. 770,995
1 Claim. (Cl. 339—157)



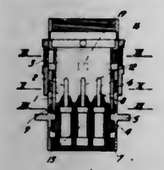
A quadruple convenience outlet comprising an insulated housing, and a pair of contact strips positioned in the housing, each contact strip having a pair of attachment blade-receiving portions at each end, each portion having two pairs of spring fingers, one of each pair of spring fingers being arranged edgewise with respect to the other of each pair, the edgewise fingers of each end portion being supported from a spring section having a loop on the side of the contact strip that is opposite the edgewise fingers.

3,017,602
TAPE CABLE CONNECTOR
Thomas Little, 2330 Galatin St. SW., Huntsville, Ala.
Filed Apr. 13, 1959, Ser. No. 806,195
4 Claims. (Cl. 339—174)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A connector for joining a pair of tape cables each provided with a ribbon of insulation and a plurality of conductors secured thereto in spaced relation; the cables being provided with end portions divided in respective strips having the conductors substantially centered therein and provided with bared surfaces; said connector comprising a pair of clamps disposed for gripped relation respectively to enclose adjacent ends of the respective cables; a receptacle and means provided therein for releasable attachment with the respective clamps, said means disposed for contact with said bared surfaces for electrical connection therebetween.

3,017,603
MULTIPLE PLUG AND SOCKET COUPLING
Fernand Georges Bac, 18 Rue du Mont-Cenis, Paris, France
Filed May 3, 1960, Ser. No. 26,584
6 Claims. (Cl. 339—186)



1. A multi-pin plug-and-socket electric coupling in which the engagement of the pins and sockets can be effected in one position only, selected from a plurality of predetermined relative positions, so as to provide a number of combinations of possible connections, said coupling comprising: a male coupling member and a female coupling member, a movable key device adapted to be removably housed in any one of a plurality of circumferential positions on the inner wall of said female member, said key device cooperating with a corresponding groove formed in the outer wall of said male member, a second movable key device adapted to be removably housed in any one of a plurality of circumferential positions on the outer wall of said male member, said second key device cooperating with a corresponding groove formed in the inner wall of said female member, the selected positions of said key devices being such that the angle of arc between the key and the groove of one member is equal to that between the key and groove of the other member, whereby the only possible position of engagement for each selected coupling combination is located by the correspondence of the key device of said male or female member with the corresponding groove of the other member.

3,017,604
VACUUM TUBE SOCKET
Scipione M. Del Camp, Maywood, Ill., assignor, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed May 27, 1955, Ser. No. 511,448
5 Claims. (Cl. 339—194)



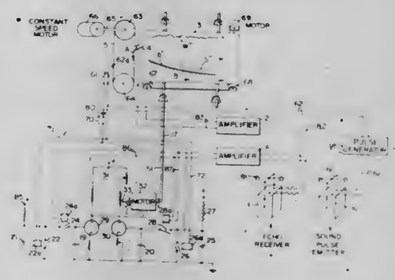
5. A socket of the type for mounting an electrical device having contact pins projecting therefrom on an apertured panel, and for electrically connecting said contact pins to conductive elements carried by said panel, said socket comprising a body of insulating material, a plurality of connector elements carried by said body, each of said connector elements comprising a pin-receiving portion for engaging a contact pin of said electrical device and a laterally off-set terminal post portion for insertion in an aperture of said panel, said terminal post portion constituting an elongated, rigid, substantially tubular member one end of which is seated in and secured to said body so as to prevent flexing of said member relative to the body, the other end of said member being longitudinally slotted to provide laterally yieldable side portions to permit insertion of said post in an aperture of said panel, and being tapered to facilitate such insertion, said tubular member being formed with longitudinally spaced, outwardly extending abutments for engaging opposite surfaces of said panel, the endmost of said abutments being located on said side portions so as to be laterally yieldable therewith.

3,017,605
PLUG-IN CONNECTOR
Elwood T. Platz and William H. Frank, Detroit, Mich., assignors, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 28, 1956, Ser. No. 631,090
4 Claims. (Cl. 339—252)



1. A male plug-in connector adapted to be constructed from wire having a plurality of outer conducting strands helically wound about a central strand, said connector comprising a plurality of conducting strands encompassing a central strand; said plurality of conducting strands being fixedly secured directly to said central strand at a first and a second point along the axis of said connector; said central strand being of shorter length than said encompassing strands, said encompassing strands being bowed outwardly to form a cage about said central strand; the outer periphery of said cage formed about said central strand being frictionally engageable with at least a portion of the inner surface of a cooperating female type connector with said central strand comprising a reference for biasing forces urging the encompassing strands outward.

3,017,606
ECHO SOUNDING SYSTEM
Hans Kietz, Pragerst. 23, and Willy Kunze, Alten Eichen 44, both of Bremen, Germany
Filed Sept. 10, 1958, Ser. No. 760,529
9 Claims. (Cl. 340—3)



1. An apparatus for recording a true contour of an area of the sea bottom over which the apparatus moves for use in a depth sounding equipped vessel comprising means for transmitting a sounding pulse, a sounding receiver for receiving the reflected echo of said pulse, recording means actuated at the instant of transmission of said pulse and at the instant of reception of the echo thereof for graphically representing in spaced relation the position of said vessel relative to the sea bottom, means responsive to said received echo signals for deriving a control signal which is a function of the difference between the instantaneous vertical position of said vessel and the

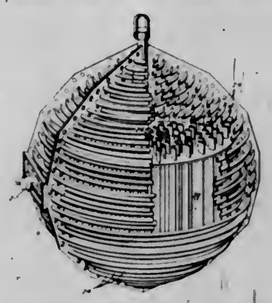
average vertical position as determined over a time interval long in comparison with the period of the wave motion of the sea, means for adjusting the relative locations of successive representations of the instants of transmission in response to said control signal whereby successive representations of the instants of reception may be recorded in a manner unaffected by said wave motion.

3,017,607
ACOUSTIC IMPEDANCE DETECTING APPARATUS
Sidney M. Rubens, St. Paul, Minn., and Gale White, Dallas, Tex.
Filed July 29, 1952, Ser. No. 301,618
4 Claims. (Cl. 340—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



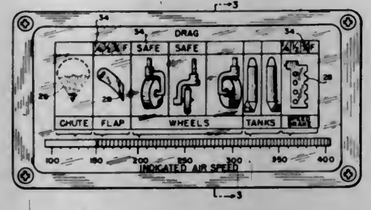
1. Apparatus for detecting the wake of a vessel moving through a body of water comprising a hydrophone having an electrical circuit and adapted to be positioned in said body of water, a normally balanced bridge circuit with four legs, the electrical circuit of said hydrophone connected to form one of the legs of said bridge circuit, oscillator means connected to said bridge for suppling an A.C. voltage thereto, detector means connected to said bridge for detecting an unbalance in said bridge when a change in the acoustic impedance in said body of water near said hydrophone caused by the wake of a vessel is reflected in a change of impedance in the electrical circuit of said hydrophone.

3,017,608
SPHERICAL ACOUSTICAL LENS SYSTEM FOR FOCUSING UNDERWATER SOUND
William J. Toulis, 4781½ Orchard Ave., San Diego 7, Calif.
Filed July 7, 1954, Ser. No. 441,954
11 Claims. (Cl. 340—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



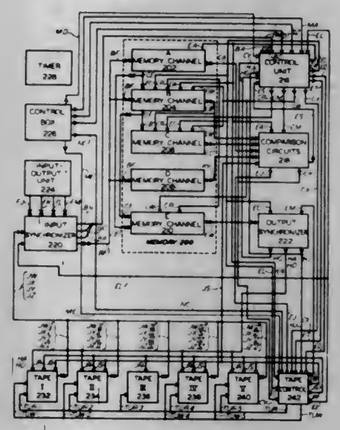
10. In an underwater sound detection system, a spherical lens of compliant tubing at a predetermined spacing and submerged in a liquid medium whereby the effective compressibility of the liquid between adjacent tubes is increased for focusing sound waves at a focal point in close proximity to the periphery thereof, said lens being constructed of hollow compliant tubing more compressible than said liquid media whereby the velocity of the sound waves is reduced in the liquid media between adjacent compliant tubes.

3,017,609
DRAG INDICATOR FOR AIRCRAFT COCKPITS
Malcolm L. Ritchie, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed June 24, 1958, Ser. No. 744,301
3 Claims. (Cl. 340—27)



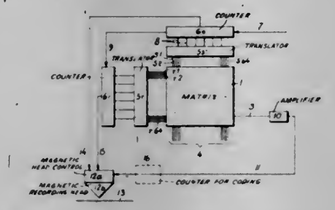
1. A drag indicator for use in airplanes, comprising a casing having a translucent window therein, a linear speed indicator mounted adjacent to said window, a plurality of symbols of certain airplane elements mounted on said window, each of said symbols being positioned in a side by side relationship along the length of said linear speed indicator and adjacent to speed values on said indicator at which safe operation of an aircraft element represented by its symbol may be effected, an enclosure beneath each of said symbols, and means in each enclosure for illuminating said symbols when the operations represented thereby are successfully completed.

3,017,610
ELECTRONIC DATA FILE PROCESSOR
Albert A. Auerbach, Hollis, Evelyn Berezin, New York, Samuel Lubkin, Bayside, and Robert F. Shaw, New York, N.Y., assignors, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Filed Mar. 15, 1957, Ser. No. 646,492
15 Claims. (Cl. 340—172.5)



1. Apparatus for processing a file of items, each item being represented by a plurality of signals in a descending order of significance, said apparatus comprising a first magnetic tape having recorded thereon the signals representing items of the file, means for reproducing the signals from said magnetic tape, a second magnetic tape, converting means for recording on said second magnetic tape in an ascending order of significance the signals reproduced from said first magnetic tape, and a reversing means to change the direction of motion of both said first and second magnetic tapes and to interchange their recording and reproducing functions whereby the signals representing items may be read from said second tape in a descending order of significance.

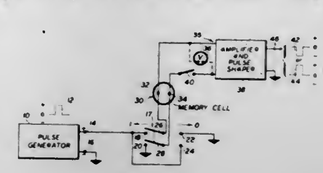
3,017,611
AN ASSEMBLY FOR COUNTING MARKING IMPULSES IN AN AUTOMATIC TELEPHONE SYSTEM
Nils Gustav Erik Stemme, Bromma, Sweden, assignor to Telefonaktiebolaget LM Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed June 27, 1957, Ser. No. 668,501
Claims priority, application Sweden July 2, 1956
4 Claims. (Cl. 340—172.5)



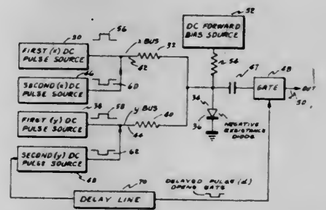
1. A device for counting marking impulses comprising a plurality of binary storage elements each having at least one input and an output and two alternative states, in one of said states an electrical read-out impulse applied to said input produces an electrical counting impulse on said output and in the other of said states no electrical impulse is produced by said read-out impulse on said output, each of said storage elements being adapted to be switched into said other state by a marking impulse and into said one state by a counting impulse, conductors for applying marking impulses to said binary storage elements, conductors for applying to said storage elements read-out impulses, at least one counting conductor for obtaining from said elements counting impulses respectively, means for generating read-out impulses, said binary storage elements being arrayed in a matrix and read-out impulses being applied periodically to the input of successive binary storage elements in said matrix, counting means for counting successive read-out impulses and indicating the sequential number of each read-out impulse within a read-out period thereby indicating the identity number of the binary element read out by said impulse, translating means for applying said read-out impulses to input conductors of successive binary storage elements so as to obtain impulses from the output of all the elements being in said other state, the time period of the sum of the duration of said read-out impulses being less than the time period between two successive marking impulses, and recording means for registering the sequential number of said read-out impulse.

3,017,612
METHOD AND APPARATUS FOR STORING INFORMATION
Jerome R. Singer, Washington, D.C., assignor to National Scientific Laboratories, Inc., Washington, D.C., a corporation of Delaware
Filed Nov. 23, 1956, Ser. No. 623,921
4 Claims. (Cl. 340—173)

1. A binary information storage system comprising a voltaic cell having a pair of electrodes of similar metal in an electrolyte, a source of discrete voltage pulses of selective polarity, means for selectively coupling said source across said electrodes thereby to impress a pulse of predetermined polarity on said cell whereby said cell is charged to the polarity of said pulse, voltage polarity detecting means, and means for selectively coupling said detecting means across said electrodes thereby to indicate the polarity of said charge on said cell.

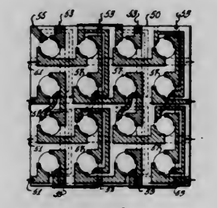


3,017,613
NEGATIVE RESISTANCE DIODE MEMORY
James C. Miller, Hamilton Square, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 31, 1959, Ser. No. 837,182
6 Claims. (Cl. 340—173)



1. In combination, an active element having two regions in its operating range which exhibit a positive resistance and a region between them which exhibits a negative resistance, said two positive resistance regions defining two stable states of said element; means for applying to said element direct-current read pulses having an amplitude sufficient to switch the element from one stable state to the other; and means for sensing the presence or absence of a direct voltage of relatively large amplitude across said element during the periods immediately after the termination of said read pulses.

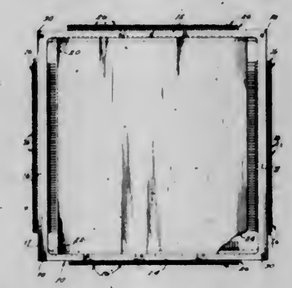
3,017,614
MAGNETIC STORAGE DEVICE
Jan A. Rajchman, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Original application Sept. 13, 1954, Ser. No. 455,724. Divided and this application Nov. 30, 1956, Ser. No. 625,332
13 Claims. (Cl. 340—174)



7. A device comprising a body including high remanance magnetic material and having two opposed surfaces and an aperture from one said surface to the other, the material about said aperture forming a magnetic element, and two electrical conductors each threading said aperture to link said element, said conductors each

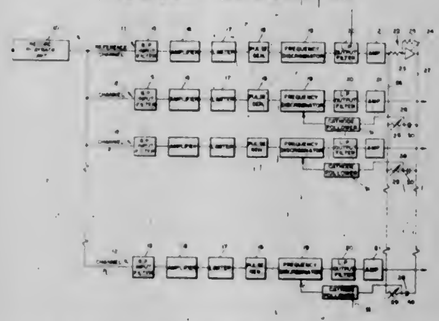
comprising a metallic coating on said two surfaces and on the inner wall of said aperture, said inner wall coating of one said conductor being spaced from that of the other said conductor, whereby said two conductors thread said aperture and are insulated from each other.

3,017,615
MATRIX FRAME
Lloyd B. Smith, Dorchester, and James D. Childress, Boston, Mass., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 19, 1957, Ser. No. 697,438
13 Claims. (Cl. 340—174)



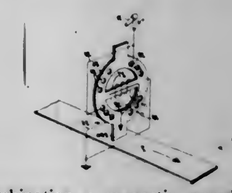
10. A matrix frame comprising a rigid frame made from metal bars fastened together at the ends thereof for providing a support means for a magnetic core matrix having windings, each said bar having a spaced array of tapered holes therein, said holes being aligned in rows, and alternate holes being in alternate rows, a plurality of feed-through terminals, each said feed-through terminal being press-fitted in a different one of said holes for connection to a different one of said matrix windings, said feed-through terminals each comprising a rod of insulating material formed about a relatively stiff electrical conductor, said conductor having an upset portion within said rod, the ends of said conductors within said frame being provided with a hook for connection to said matrix windings, and all said ends of said conductors lying in substantially the same plane.

3,017,616
SYSTEMS FOR PROCESSING RECORDED INFORMATION
Raymond A. Runyan, Ridgefield, Conn., assignor to Electro-Mechanical Research, Incorporated, Ridgefield, Conn., a corporation of Connecticut
Filed June 21, 1955, Ser. No. 516,869
40 Claims. (Cl. 340—174.1)



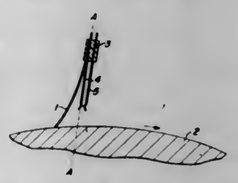
1. In a system for processing a time modulated intelligence signal recorded with a reference frequency signal, the combination comprising a frequency discriminator tuned to the reference frequency to derive an error signal representing record speed variations, a tunable frequency discriminator for demodulating the intelligence signal, and means for coupling said error signal with said tunable frequency discriminator to tune the same in proportion to record speed variations.

3,017,617
MAGNETIC TRANSDUCER
Edward A. Quade, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed July 31, 1956, Ser. No. 601,200
12 Claims. (Cl. 340—174.1)



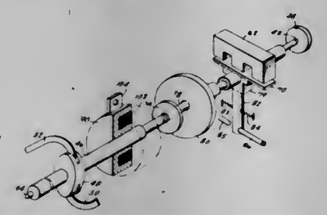
8. In combination, a magnetic recording medium for storing information signals in the form of magnetized areas thereon, a plurality of transducers cooperating with corresponding areas of said recording medium and arranged in columns and rows, each of said transducers comprising a magnetic core member having an annular portion, a cross bar portion diametrically disposed of said annular portion and two tip portions extending radially and externally of said annular portion on opposite sides thereof substantially normal with respect to said cross bar portion with one of said tip portions positioned adjacent said recording medium, there being a plurality of apertures in each quarter of said annular portion defined by the intersections between the annular portion and and the cross bar portion and the tip portions, a winding disposed on said cross bar portion, control conductors arranged in the apertures of opposing quadrants, a reading and writing circuit arranged to be connected selectively to all of said windings in each row of said transducers, and means selectively to pass electric currents through said control conductors in each column of said transducers, thereby to select but one of said transducers for translating information between said reading and writing circuit and said recording medium.

3,017,618
DEVICE FOR REMOVING AND DETECTING FOREIGN MATTER FROM A SURFACE
Anthony S. Cross, Harrow, England, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 25, 1960, Ser. No. 24,326
5 Claims. (Cl. 340—213)



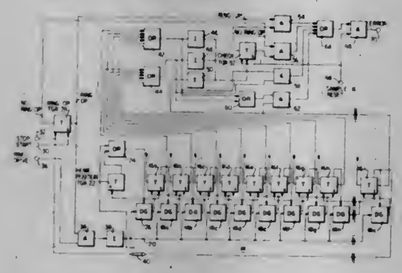
1. In a device for removing foreign matter from a surface and detecting any such matter not removable therefrom, the combination comprising: a surface; detecting means having a portion thereof in wiping engagement and relative movable relation with said surface and responsive to foreign matter on said surface which it is incapable of removing for movement of said portion in the plane of said surface from a normal wiping position, in which it removes foreign matter from said surface to a detecting position; a normally open switch responsive to said detecting means for movement to a closed position upon movement of said portion to its detecting position; and a warning device in circuit with said switch and actuable upon closure thereof by said detecting means.

3,017,619
ALTITUDE CONTROLLER
John H. Andresen, Jr., Greenwood Lake, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Filed Apr. 20, 1959, Ser. No. 807,418
12 Claims. (Cl. 340—213)



10. In an altitude controller; a pressure measuring means for converting a pressure change due to altitude change into a mechanical motion and a shaft relatively fixed with respect to said pressure measuring means and operatively connected to said pressure measuring means to be rotated thereby responsive to altitude change; an electromagnetic clutch, an electrical pick-off and a stop mechanism; said electrical pick-off being constructed to generate electrical signals responsive to an input motion; said stop means being associated with said electrical pick-off to limit the range of motion thereof; said shaft being connected to the input of said clutch, said electrical pick-off being connected to the output of said electromagnetic clutch; said electromagnetic clutch being characterized in being capable of transmission of only a relatively low, accurately controlled torque before slippage thereof after motion of said electrical pick-off is limited by said stop means.

3,017,620
RING CHECKING CIRCUIT
Irving Abzug, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 8, 1957, Ser. No. 644,784
8 Claims. (Cl. 340—248)

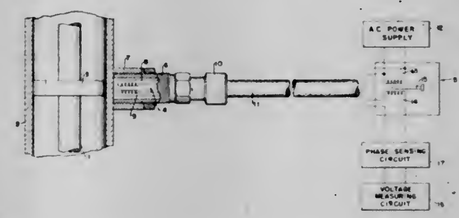


6. A checker for a ring having an input and a plurality of outputs and including an *n*th output, successive drive signals applied to the input causing conditioning to advance from one to the next of successive outputs, comprising:

(*a*) monitor means coupled to and responsive to each ring output to product a pattern of monitor signals; and

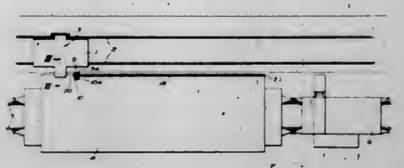
(*b*) error development means coupled to and responsive to said monitor means for producing an error development signal upon double-advance of the ring.

3,017,621
PROXIMITY LIMIT POSITION DETECTOR
Stanley Taborsky, Towson, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Dec. 31, 1956, Ser. No. 631,659
5 Claims. (Cl. 340—282)



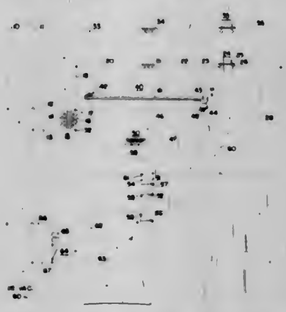
1. An electrical proximity device for detecting the arrival of a selectively positionable element containing magnetic material at a preselected limit position along a predetermined travel path, comprising a proximity pick-up transformer having a primary winding and a single separate secondary winding disposed in magnetic field coupling relationship with substantially the said travel path of the said element, said pick-up transformer primary winding having terminals for connection to a source of alternating current voltage and being separated from said secondary winding by non-magnetic material, whereby when energized a voltage is induced across its said single secondary winding, means for positioning said selectively positionable element so that the voltage induced across said single secondary winding is proportional to the proximity of said magnetic material contained in said positionable element, a balancing transformer having a primary winding and a single separate secondary winding substantially isolated magnetically from the said travel path of the said element, the primary windings of said pick-up transformer and said balancing transformer being connected in parallel, the secondary windings of the said pick-up and balancing transformers being series connected in opposing polarity relationship to produce a resultant voltage derived from subtraction of the individual voltages induced across said secondary windings, an alternating current supply connected to energize the primary windings of said balancing transformer and said pick-up transformer, the primary winding of said balancing transformer being coupled to induce a preselected voltage across its said single secondary winding, the value of said preselected voltage being such as to cancel the voltage induced across the secondary winding of the said pick-up transformer when the said positionable element is at the said preselected limit travel position, and a voltage measuring circuit connected across the series combination of the said secondary windings adapted to measure a zero value of the said resultant voltage developed across said series combination, said zero voltage being indicative of the arrival of the said magnetic element at the said preselected limit position.

3,017,622
OSCILLATORY CIRCUIT INTERLOCK OF HORIZONTAL COKE OVEN BATTERIES
Timothy Edward Scott Horsfall, London, England, assignor to Woodall-Duckman Construction Company Limited, London, England, a British company
Filed July 14, 1959, Ser. No. 826,942
13 Claims. (Cl. 340—282)



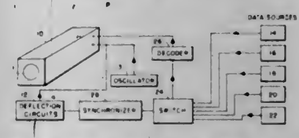
1. Horizontal coke oven battery equipment comprising, the combination of a coke guide machine having a coke guide operatively associated therewith and a coke car movable relative thereto into position therewith alongside a battery of coke ovens to receive hot coke from selected ovens of the battery through the guide on the coke guide machine, with an oscillating current circuit in a position, on the coke guide machine, at which the circuit will be affected by the proximity of a part on the coke car that is toally out of direct contact with said oscillating current circuit, said coke guide, and said coke guide machine, whereby said proximity of said part on the coke car causes the oscillatory condition of the circuit to be altered in a manner to produce an indication on the coke guide machine of the accurate positioning of the coke car alongside the coke guide machine when the coke car is moved into position to receive incandescent coke to be discharged through from the coke guide; said part on the coke car affecting said alteration of said circuit conditions only when the coke car and the coke guide are in coke receiving position relative to a single one of the coke ovens of said battery, and indicating means on the coke guide machine operable by said circuit when its oscillatory conditions are altered as aforesaid by the proximity of said part on the coke car.

3,017,623
DOORBELL AND PORCH LIGHT CONTROL
Carl J. Bishofberger, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 12, 1956, Ser. No. 571,056
4 Claims. (Cl. 340—322)



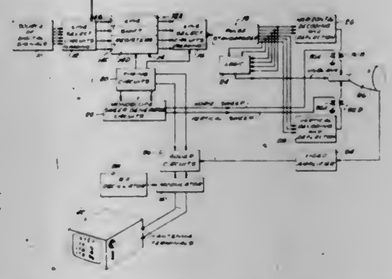
1. A household electric circuit comprising: a source of power, circuit means including a porch light and first switch means connected to said source of power, an audible doorbell signal, low voltage coupling means, second circuit means including said low voltage coupling means, said doorbell signal and a momentary type low voltage switch connected to momentarily energize said doorbell signal and concurrently with operation of said momentary switch, a bimetal operated switch, relay means including said first switch means and a second switch means, third circuit means connecting said coupling means to said relay means through said second switch means and said momentary type low voltage switch and including a heater associated with said bimetal, said third circuit means providing an arrangement for simultaneous energization of said porch light and said signal upon operation of the low voltage switch and delayed termination of the porch light after cessation of operation of said signal.

3,017,624
INDICATING DEVICE
Robert W. Deichert, Jersey City, N.J., assignor, by mesne assignments, to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Oct. 10, 1958, Ser. No. 766,516
9 Claims. (Cl. 340—324)



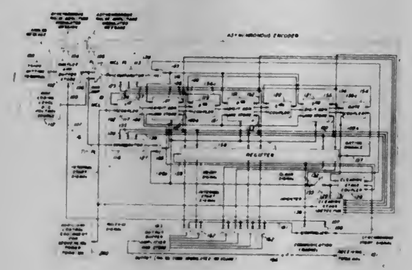
1. An indicating system comprising a cathode ray tube capable of color display; means producing a plurality of individual fixedly positioned indicating spots on the face of said tube; a plurality of data sources supplying information to be presented on said tube face; means causing each said source to be associated with a particular one of said fixedly positioned spots; and means causing the color of each said fixed spot to vary in accordance with the data supplied from each said associated source.

3,017,625
TRANSLATION SYSTEM
William E. Evans, Los Altos Hills, and Earle D. Jones, Palo Alto, Calif., assignors to A. B. Dick Company
Filed May 8, 1959, Serial No. 811,845
8 Claims. (Cl. 340—324)



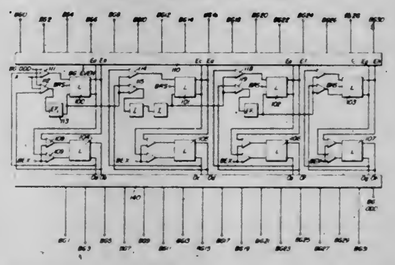
5. A system for obtaining a visual display of characters on a television receiver from a source of character-representative digital signals comprising for each separate line of characters to be displayed a separate means for storing character-representative digital signals for the associated line, means for filling each said means for storing from said source of character-representative digital signals, means for generating signals at a frequency equal to the product of the desired horizontal sweep frequency of said television receiver and the number of character positions per line, means responsive to said generated signals for successively deriving said character-representative digital signals from said separate means for storing in the same sequence as is desired for display by said television receiver, means for converting said character-representative digital signals to analog character selection deflection signals, means for deriving television receiver horizontal synchronizing signals from said generated signals, means for deriving television receiver vertical synchronizing signals from said generated signals, means for deriving monoscope horizontal sweep signals from said generated signals having the same frequency as said generated signals, means for deriving monoscope vertical signals from said generated signals having a frequency equal to the product of the number of lines of characters to be displayed by said television receiver and its vertical synchronizing signal frequency, monoscope tube means including means for providing video signals representative of a character responsive to analog character-selection deflection signals and monoscope sweep signals, means for applying said monoscope horizontal and vertical sweep signals and said analog character selection deflection signals to said monoscope tube, means to produce a video signal output, means for combining said video signal output with said receiver vertical and horizontal synchronizing signals, and means for applying said combined signals to said television receiver for display.

3,017,626
ASYNCHRONOUS ENCODER
David E. Muller, Urbana, Ill., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 2, 1960, Ser. No. 26,277
14 Claims. (Cl. 340—347)



1. In combination in an asynchronous P.A.M.-to-P.C.M. encoder, means for supplying a P.A.M. analog signal which is to be encoded into an *n*-digit pulse code group, means for supplying a signal which is the complement of said P.A.M. analog signal, *n* generating circuit means respectivcly representative of the *n* digits of said pulse code group and responsive to triggering signals for supplying sequentially-occurring digital switching signals, first comparator circuit means responsive to said P.A.M. analog signal and to said sequentially-occurring digital switching signals for converting each digital switching signal into an analog signal and for comparing said converted signal with said P.A.M. analog signal and for providing an output binary signal indicative of the relative magnitudes of said P.A.M. signal and said converted signal, second comparator circuit means responsive to said complement signal and to said sequentially-occurring digital switching signals for converting each digital switching signal into an analog signal and for comparing said converted signal with said complement signal and for providing an output binary signal indicative of the relative magnitudes of said complement signal and said converted signal, and circuit means responsive to said output binary signals from said first and second comparator circuit means for applying sequentially-occurring triggering signals to said *n* generating circuit means and for providing a gating signal at the completion of the coding of a P.A.M. analog signal into an *n*-digit pulse code group.

3,017,627
BIT GATE GENERATOR
Gene J. Cour, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 27, 1958, Ser. No. 745,194
14 Claims. (Cl. 340—350)

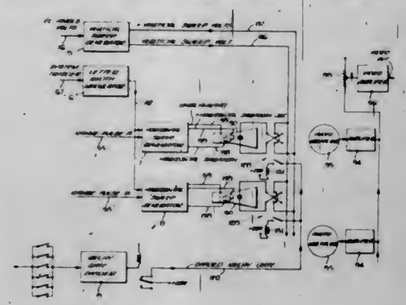


6. A bit generator for generating a sequence of bit gate pulses in consecutive minor cycles within a major cycle including means to feed said bit gate pulses in said sequence to associated individual odd and even bit gate output terminals therefor that comprises a plurality of master bistable latches and a buffer bistable latch associated with each of said master latches, each of said latches having a set condition indicative of a binary 1 and a reset condition indicative of a binary 0 and having set and reset inputs and outputs, means to advance the count of said master latches by one during each odd minor cycle, means to cause said buffer latches to assume the count of said master latches during each even minor cycle, means to feed the outputs of said master latches to a first decoding matrix, means to connect said even gate bit terminals to the outputs of said first matrix, means to decode said first matrix during each even minor cycle to provide an even bit gate pulse at a selected even bit gate terminal determined by the outputs of said master latches, means to feed the outputs of said buffer latches to a second decoding matrix, means to connect said odd bit gate terminals to the outputs of said second matrix and means to decode said second matrix during each odd minor cycle to provide an odd gate bit pulse at a selected odd bit gate terminal determined by the outputs of said buffer latches.

3,017,628
METHOD OF AND APPARATUS FOR IDENTIFYING AIRCRAFT DURING GROUND CONTROLLED APPROACH
Robert W. Landee and Burton Cutler, Los Angeles, Calif., assignors to Gilfillan Bros., Inc., Los Angeles, Calif., a corporation of California
Filed June 4, 1956, Ser. No. 589,176
19 Claims. (Cl. 343—5)

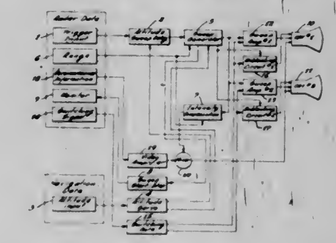
1. In a ground controlled approach system that has a track-while-scan assembly and includes devices to generate cyclically a discrete range pulse unique to a respective aircraft in each of a plurality of tracking channels, an elevation angle signal, an error warning signal when an aircraft in any channel gets into a dangerous situation, and a system trigger pulse at the beginning of each cycle of range pulses, and also includes an indicator responsive to range signals to display a continuous visual indication of the position of each aircraft being tracked: a novel functional

supplement including a cathode ray tube having a screen whereof a portion is obscured so that the unobscured portions define a symbol, means responsive to the elevation angle signal to generate a vertical sweep sawtooth voltage for the tube, means responsive to a range pulse to generate a sawtooth horizontal sweep voltage for the tube, means to limit the duration of the horizontal sweep sawtooth as a function of the range, photoelectric means re-



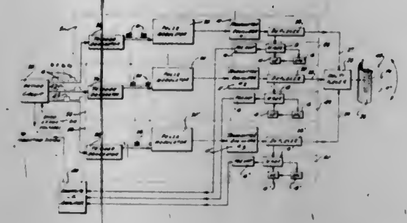
sponsive to light from the screen of the cathode ray tube to convert into electric currents the light from the unobscured portions of the screen as it is scanned, means to amplify such currents, and means to mix the amplified currents with signals from the said assembly and to apply the mixed currents and signals to the indicator where the said amplified currents produce the symbol adjacent to and moving in synchronism with the positional indication of the craft to which the symbol is related.

3,017,629
SWEEP CIRCUIT
William G. Applefield, Pasadena, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed Apr. 16, 1958, Ser. No. 729,032
6 Claims. (Cl. 343—5)



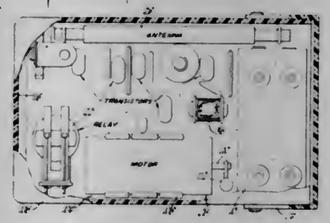
1. A sweep circuit, comprising: a sweep generator for providing a hyperbolic output signal; a cathode ray tube having a control grid and electron beam deflection means; means for applying the hyperbolic output signal to the deflection means of said cathode ray tube; a source of video signals; means for differentiating the hyperbolic output signal for a compensation signal; means for adding the compensation signal to the video signals; means for applying the compensated video signals to the control grid for modulating the electron beam of said cathode ray tube; and means for synchronizing application of the hyperbolic output signal to the deflection means of said cathode ray tube with application of the compensated video signals, to the control grid of said cathode ray tube whereby the electron beam is modulated to provide a cathode ray tube output which is compensated for a deflection sweep of the electron beam produced by the hyperbolic output signal.

3,017,630
RADAR SCANNING SYSTEM
Nicholas A. Begovich and Norman H. Enenstein, Los Angeles, Calif., assignors, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware
Filed Dec. 19, 1952, Ser. No. 327,018
15 Claims. (Cl. 343—17.1)



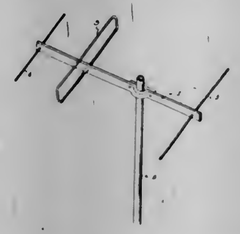
1. A radar scanning system comprising means for generating pulsed high-frequency energy in discrete frequency steps; antenna means coupled to said generating means for radiating said high-frequency energy in a beam having a direction stepwise variable over a predetermined scanning sector in response to each of said discrete frequency steps and for receiving echoes of said radiated beam; receiving means coupled to said antenna and responsive to said echoes; and control means coupled to said generating means and to said receiving means for cyclically shifting the frequency of said energy generated by said generating means in successive discrete steps of frequency, each frequency step having a predetermined duration, to vary the direction of said beam in discrete steps in accordance with said frequency steps and for rendering said receiving means responsive at any instant to echoes having the same frequency as that of said radiated beam.

3,017,631
SELECTIVE PAGING RECEIVER
Marvin J. Fink, Flint, and Christopher J. Birk, Clio, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,550
5 Claims. (Cl. 343—225)



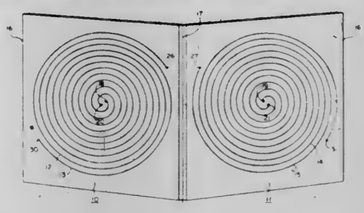
1. A personal paging receiver comprising a pocket-size casing, sensing means disposed within the casing and being responsive to space transmitted energy of predetermined frequency for developing a signal voltage, signaling means within the casing including a rotary motor having a rotor assembly with an eccentric mass center and having an unobstructed path of motion, a voltage source, control means within the casing connected with the sensing means and the voltage source and being responsive to the signal voltage for causig energization of said motor, the centrifugal force produced by rotation of said eccentric mass center being so related to the weight of the receiver to produce readily sensible vibrations of the receiver at a frequency corresponding to the rotative speed of said motor to signal the person that he is being paged.

3,017,632
AERIALS FOR RECEIVING TELEVISION AND MODULATED FREQUENCY BROADCAST SIGNALS
Gustave Jean Henri Josep, 126 rue Froissart, Brussels, Belgium
Filed Jan. 7, 1958, Ser. No. 707,570
Claims priority, application Belgium June 7, 1957
5 Claims. (Cl. 343—819)



1. An aerial chiefly for television and frequency modulated broadcast waves, comprising, a mast; a transverse stay carried by said mast and consisting of polyester material; and a plurality of aerial elements mounted on said stay and comprising at least one dipole, at least one reflector and at least one director, all said elements extending transversely of said stay, said reflector and said director being spaced in opposite directions from said dipole distances related to the wave length to be received, whereby said stay is effective to prevent leakage between the antenna elements, and to prevent reflection of said waves from said stay toward said aerial elements, for providing a relative optimum in directional gain, in front to back ratio, and in band width.

3,017,633
LINEARLY POLARIZED SPIRAL ANTENNA SYSTEM AND FEED SYSTEM THEREFOR
Arthur E. Marston, 718 Putnam Place, Alexandria, Va.; Henri P. Coleman, 510 Queen St., Alexandria, Va.; and Julius A. Kaiser, Jr., 10408 Detrick Ave., Kensington, Md.
Filed Nov. 30, 1959, Ser. No. 856,316
5 Claims. (Cl. 343—853)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. A spiral antenna system comprising, a planar base member of insulating material, a first spiral antenna element having two conductors disposed upon one side of the base member, a second spiral antenna element having two conductors disposed upon the opposite side of the base member, the centers of the elements falling on an axis normal to the plane of the base member, and a transmission line connected to the conductors in the region of the center of the elements.

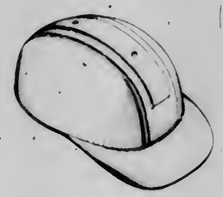
DESIGNS

JANUARY 16, 1962

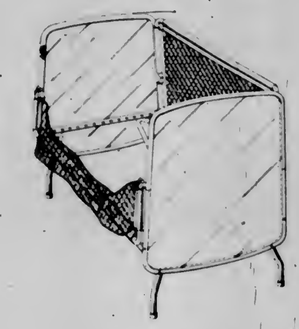
192,070
PLASTIC FOAM EAR MUFF
John F. Wall, 499 Midland Ave., Scarborough, Ontario, Canada
Filed Oct. 13, 1960, Ser. No. 62,481
Term of patent 3½ years
(Cl. D3—13)



192,071
HELMET
Le Grand W. Tucker, 4985 Sumner Ave., Memphis, Tenn.
Filed July 7, 1961, Ser. No. 65,841
Term of patent 14 years
(Cl. D3—13)



192,072
INFANTS CRIB
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., Columbus, Ind., a corporation of Indiana
Filed Jan. 13, 1960, Ser. No. 59,032
Term of patent 14 years
(Cl. D5—5)



192,073
DOOR
Alban Gifford Jackson, New York, N.Y., assignor to Simpson Timber Co., Seattle, Wash., a corporation of Washington
Filed May 27, 1960, Ser. No. 60,767
Term of patent 14 years
(Cl. D13—1)



192,074
CANOPY
Perry H. Pelley, Wichita, Kans., assignor to Tru-Scale, Inc., Wichita, Kans., a corporation of Kansas
Filed Aug. 9, 1960, Ser. No. 61,674
Term of patent 14 years
(Cl. D13—1)



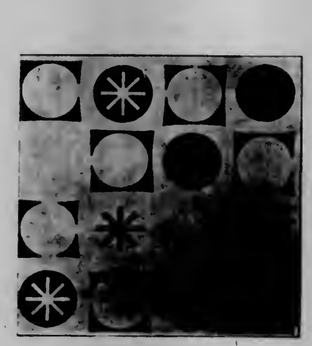
192,075
CHAIR
Wayland B. Parker, 427 2nd Ave., Olean, N.Y.
Filed Dec. 28, 1960, Ser. No. 63,363
Term of patent 7 years
(Cl. D15—1)



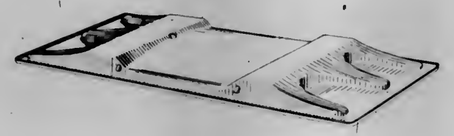
192,076
SOCK CLAMP OR SIMILAR ARTICLE
Patricia Coughlin, New York, N.Y.
(51—01 39th Ave., Long Island City, N.Y.)
Filed May 18, 1961, Ser. No. 65,221
Term of patent 14 years
(Cl. D17—6)



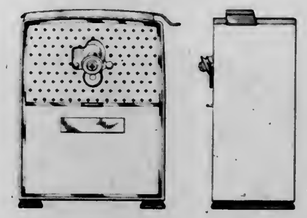
192,077
CEILING TILE
Charles W. Allen, Jr., Des Plaines, Ill., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 5, 1961, Ser. No. 66,604
Term of patent 14 years
(Cl. D18—2)



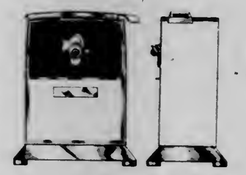
192,078
BURIAL VAULT BASE
John R. Hogberg, 65 Verndale Ave., Attleboro, Mass.
Filed June 16, 1961, Ser. No. 65,618
Term of patent 7 years
(Cl. D19—1)



192,079
ELECTRIC CAN OPENER
Henry J. Talge, Kansas City, and Joseph L. Grant and William A. Chappell, Raytown, Mo., assignors to Rival Manufacturing Company, a corporation of Missouri
Filed Aug. 7, 1961, Ser. No. 66,220
Term of patent 14 years
(Cl. D22—2)



192,080
ELECTRIC CAN OPENER
Henry J. Talge, Kansas City, and Joseph L. Grant and William A. Chappell, Raytown, Mo., assignors to Rival Manufacturing Company, a corporation of Missouri
Filed Aug. 7, 1961, Ser. No. 66,221
Term of patent 14 years
(Cl. D22—2)



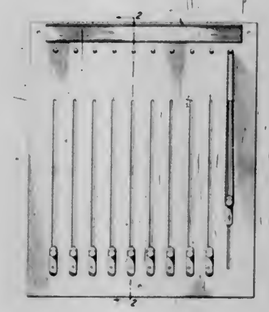
192,081
COMBINED POCKET KNIFE AND BOTTLE OPENER
Felix V. Amoroso, 1144 Narragansett Blvd., Cranston, R.I.
Filed July 19, 1960, Ser. No. 61,425
Term of patent 14 years
(Cl. D22—3)



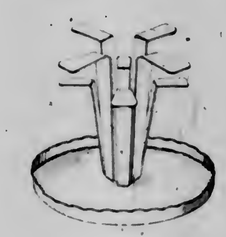
192,082
SWIMMING POOL ENCLOSURE
George Dabich, Cody, Wyo., assignor of one-third each to Louis Kousoulos, Jr., Richard M. McPhee, and Peter Kool Simpson, all of Cody, Wyo.
Filed Mar. 22, 1960, Ser. No. 59,830
Term of patent 14 years
(Cl. D28—2)



192,083
TAPE SUPPORTING RACK
Charles D. Oakes and Mack D. Harris, High Point, N.C., assignors to MacPanel Company, High Point, N.C., a corporation of North Carolina
Filed Nov. 1, 1960, Ser. No. 62,692
Term of patent 14 years
(Cl. D33—3)



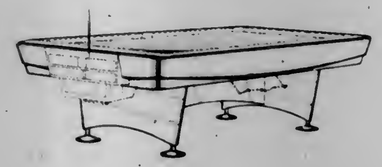
192,084
CONVERTIBLE BOOT DRIER AND TABLE
Genevieve M. Winckler, 824 Balfour Road, Grosse Pointe Park, Mich.
Filed Mar. 10, 1961, Ser. No. 64,212
Term of patent 14 years
(Cl. D33—14)



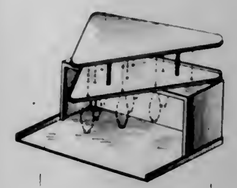
192,085
CABINET
Jacob J. Ribbens, Mayville, Wis., and Harley M. Leete, Belvedere, and Francis S. Foote, Jr., Berkeley, Calif., assignors to Tab Products Co., San Francisco, Calif., a corporation of California
Filed Oct. 23, 1959, Ser. No. 58,040
Term of patent 14 years
(Cl. D33—19)



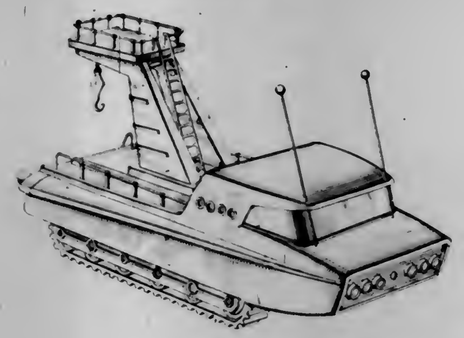
192,086
BILLIARD TABLE OR THE LIKE
Richard G. Reineman, Covina, Calif., George H. Hart, Chicago, Ill., and George E. Schaefer, Muskegon Heights, Mich., assignors to Brunswick Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 23, 1961, Ser. No. 66,471
Term of patent 14 years
(Cl. D34—3)



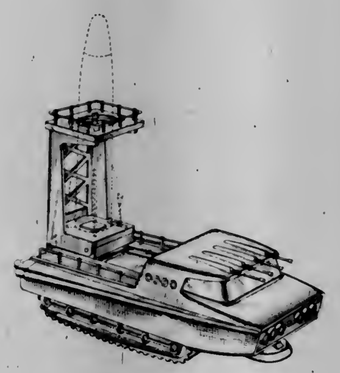
192,087
TOY BOWLING PIN SUPPORT
David Cohn, 123 Coleridge, Brooklyn, N.Y.
Filed Jan. 12, 1959, Ser. No. 54,138
Term of patent 14 years
(Cl. D34—5)



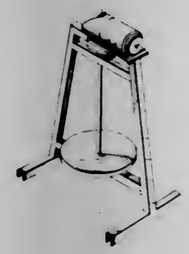
192,088
TOY TRACTOR TYPE AIRPLANE CARRIER
Allan J. Alvaney, Arlington Heights, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 63,054
Term of patent 3½ years
(Cl. D34—15)



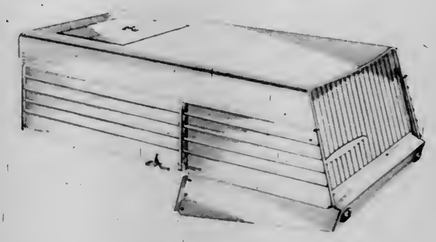
192,089
TOY MOBILE ROCKET LAUNCHER
Allan J. Alvaney, Arlington Heights, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 63,055
Term of patent 7 years
(Cl. D34—15)



192,090
PORTABLE GRINDER FOR SHARPENING FLAT FACED BARBERS' CLIPPER CUTTERS OR THE LIKE
Frank R. Johnson, 3312 Tate St., Baltimore, Md.
Filed Sept. 13, 1960, Ser. No. 62,129
Term of patent 14 years
(Cl. D37—1)



192,091
SEPARATOR HOOD FOR A COMBINE
Robert R. Lathe, St. Charles, Ill., assignor to Cockshutt Farm Equipment Limited, Brantford, Ontario, Canada, a corporation
Filed May 8, 1961, Ser. No. 65,059
Term of patent 14 years
Claims priority, application Canada Apr. 27, 1961
(Cl. D40—1)



192,092
ADJUSTABLE STAND FOR SUPPORTING REELS OR THE LIKE
Clare E. Holt, Milwaukee, Wis., assignor to Applied Power Industries, Inc., a corporation of Wisconsin
Filed Mar. 28, 1960, Ser. No. 59,901
Term of patent 3½ years
(Cl. D41—1)



192,093
WATCH
Ernest Schneider, Bienne, Switzerland, assignor to Sicura Watch Co. Ltd., Grenchen, Switzerland, a firm of Switzerland
Filed Oct. 4, 1960, Ser. No. 62,368
Term of patent 3½ years
Claims priority, application Switzerland June 10, 1960
(Cl. D42—8)



192,094
BEVERAGE SERVER OR THE LIKE
Herbert R. Carpenter, Chicago, Ill., assignor to Club Aluminum Products Company, La Grange Park, Ill., a corporation of Illinois
Filed May 24, 1961, Ser. No. 65,320
Term of patent 14 years
(Cl. D44—21)



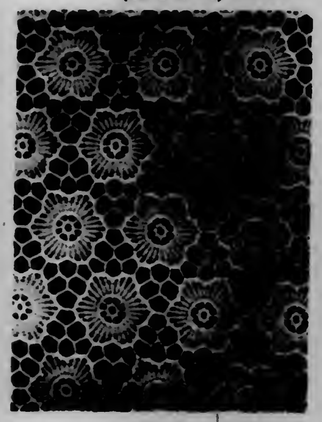
192,095
CAN OPENER
Arthur R. Colley, Box 21, Vincent, Ala.
Filed Nov. 21, 1960, Ser. No. 62,903
Term of patent 14 years
(Cl. D44—29)



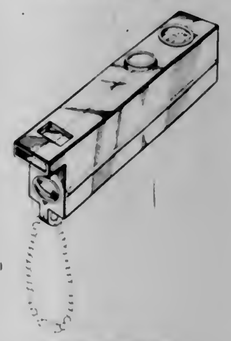
192,096
BEAD
Lee H. Pelzman, New York, N.Y., assignor to Spencer Novelty Manufacturing Company, New York, N.Y., a partnership
Filed Mar. 6, 1961, Ser. No. 64,156
Term of patent 7 years
(Cl. D45—1)



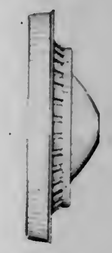
192,097
LACE FABRIC OR SIMILAR ARTICLE
Anton J. Wider, 14 Dianne Court, Clifton, N.J.
Filed Dec. 16, 1960, Ser. No. 63,327
Term of patent 3½ years
(Cl. D47—6)



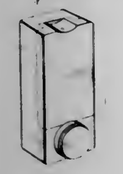
192,098
COMBINED FLASH LIGHT, WHISTLE, COMPASS, AND KEY CHAIN HOLDER
George L. Bautsch, 3520 Chase St., La Crosse, Wis.
Filed Mar. 17, 1961, Ser. No. 64,477
Term of patent 7 years
(Cl. D48—24)



192,099
LAMP BEZEL FOR AUTOMOBILES OR THE LIKE
Eugene Bordinat, Jr., 1455 Lakewood Road, Bloomfield Hills, Mich.
Filed Aug. 25, 1961, Ser. No. 66,502
Term of patent 7 years
(Cl. D48—32)



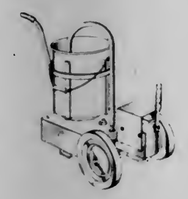
192,100
AMMUNITION DISPENSER
William H. Richards, Jr., 724 E. Century Blvd., Los Angeles, Calif., and Curtis H. Shreve, 4227 Redondo Beach Blvd., Lawndale, Calif.
Filed Feb. 15, 1960, Ser. No. 59,397
Term of patent 14 years
(Cl. D52—2)



192,101
COMPOUND HAND TOOL
Maynard H. Brown, Jr., Herkimer, N.Y. (East Herkimer, N.Y.)
Filed Nov. 10, 1960, Ser. No. 62,793
Term of patent 14 years
(Cl. D54—13)



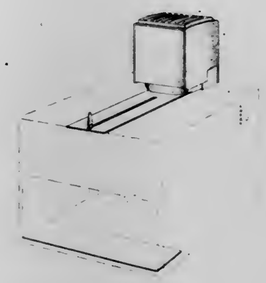
192,102
CARRIAGE SUPPORTED BATCH MIXER
Fred J. Machovec, 2595 Las Lunas, Pasadena, Calif.
Filed Feb. 25, 1960, Ser. No. 59,526
Term of patent 3½ years
(Cl. D55—5)



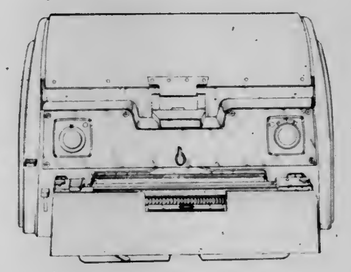
192,103
COMBINATION PACKAGE AND SERVING CONTAINER
Emory L. Groff, Jr., Bethesda, Md., assignor to Frank A. Buonauro, Union City, N.J.
Filed Apr. 26, 1961, Ser. No. 64,902
Term of patent 14 years
(Cl. D58—6.5)

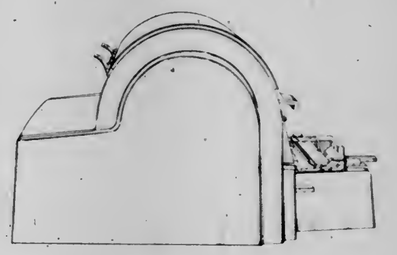


192,104
READING PROJECTOR
Glen W. Offensend and Norman J. Rosenburgh, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 10, 1961, Ser. No. 64,209
Term of patent 14 years
(Cl. D61—1)



192,105
PHOTOGRAPHIC COPYING APPARATUS
Frederick G. Knowles, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 26, 1961, Ser. No. 65,351
Term of patent 14 years
(Cl. D61—1)





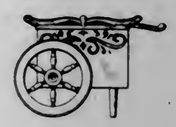
192,106
AIRSHIP
Alex A. Rommel, 2265 Poppy, Fresno, Calif.
Filed Mar. 6, 1961, Ser. No. 64,164
Term of patent 14 years
(Cl. D71—1)



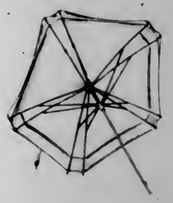
192,107
POWER SOURCE UNIT FOR A BEAUTICIAN'S FACIAL MASSAGER
Bronya Silber, 1521 15th Ave., Seattle, Wash.
Filed Sept. 19, 1960, Ser. No. 62,180
Term of patent 14 years
(Cl. D83—1)



192,108
HOLDER FOR LIPSTICK TUBES
Samuel E. Kelman, Providence, R.I., assignor to The Metalart Company, Providence, R.I., a corporation of Rhode Island
Filed Jan. 16, 1961, Ser. No. 63,570
Term of patent 3½ years
(Cl. D86—10)



192,109
UMBRELLA
Emanuel Schreck, 277 5th Ave., New York, N.Y.
Filed Jan. 12, 1960, Ser. No. 59,017
Term of patent 3½ years
(Cl. D88—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Baez, Guillermo F. Rotary pumps and the like. Re. 25,116, 1–16–62, Cl. 103—94.

LIST OF PLANT PATENTEES

Burr, C. R., & Co., Inc.: *See*—
Lammerts, Walter E. 2,121.
Fischer Greenhouses: *See*—
Reid, George A. 2,122.

Lammerts, Walter E., to C. R. Burr & Co., Inc. Rose plant. 2,121, 1–16–62, Cl. 47—61.
Reid, George A., to Fischer Greenhouses. Azalea plant. 2,122, 1–16–62, Cl. 47—60.

LIST OF DESIGN PATENTEES

Allen, Charles W., Jr., to The Celotex Corp. Ceiling tile. 192,077, 1–16–62, Cl. D18—2.
Alvaney, Allan J., to Sears, Roebuck and Co. Toy tractor type airplane carrier. 192,088, 1–16–62, Cl. D34—15.
Alvaney, Allan J., to Sears, Roebuck and Co. Toy mobile rocket launcher. 192,089, 1–16–62, Cl. D34—15.
Amoroso, Felix V. Combined pocket knife and bottle opener. 192,081, 1–16–62, Cl. D22—3.
Applied Power Industries, Inc.: *See*—
Holt, Clare E. 192,092.
Bautach, George L. Combined flash light, whistle, compass, and key chain holder. 192,098, 1–16–62, Cl. D48—24.
Bordinat, Eugene, Jr. Lamp bezel for automobiles or the like. 192,099, 1–16–62, Cl. D48—32.
Brown, Maynard H., Jr. Compound hand tool. 192,101, 1–16–62, Cl. D54—13.
Brunswick Corp.: *See*—
Reineman, Richard G., Hart, and Schaefer. 192,086.
Buonauro, Frank A.: *See*—
Groff, Emory L., Jr. 192,103.
Carpenter, Herbert R., to Club Aluminum Products Co. Beverage server or the like. 192,094, 1–16–62, Cl. D44—21.
Celotex Corp., The: *See*—
Allen, Charles W., Jr. 192,077.
Chappell, William A.: *See*—
Talge, Henry J., Grant and Chappell. 192,079.
Talge, Henry J., Grant, and Chappell. 192,080.
Club Aluminum Products Co.: *See*—
Carpenter, Herbert R. 192,094.
Cockshutt Farm Equipment Ltd.: *See*—
Lathe, Robert R. 192,091.
Cohn, David. Toy bowling pin support. 192,087, 1–16–62, Cl. D34—5.
Colley, Arthur R. Can opener. 192,095, 1–16–62, Cl. D44—29.
Coughlin, Patricia. Sock clamp or similar article. 192,076, 1–16–62, Cl. D17—6.
Dabich, George. ¼ each to L. Kousoulos, Jr., R. M. McPhee, and P. K. Simpson. Swimming pool enclosure. 192,082, 1–16–62, Cl. D28—2.
Eastman Kodak Co.: *See*—
Knowles, Frederick G. 192,105.
Offensend, Glen W., and Rosenburgh. 192,104.
Foote, Francis S., Jr.: *See*—
Ribbens, Jacob J., Leete, and Foote. 192,085.
Grant, Joseph L.: *See*—
Talge, Henry J., Grant and Chappell. 192,079.
Talge, Henry J., Grant, and Chappell. 192,080.
Groff, Emory L., Jr., to F. A. Buonauro. Combination package and serving container. 192,103, 1–16–62, Cl. D58—6.5.
Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F. 192,072.
Hamilton, Earl F., to Hamilton Cosco, Inc. Infant's crib. 192,072, 1–16–62, Cl. D5—5.
Harris, Mack D.: *See*—
Oakes Charles D., and Harris. 192,083.
Hart, George H.: *See*—
Reineman, Richard G., Hart, and Schaefer. 192,086.
Hogberg, John R. Burial vault base. 192,078, 1–16–62, Cl. D19—1.
Holt, Clare E., to Applied Power Industries, Inc. Adjustable stand for supporting reels or the like. 192,092, 1–16–62, Cl. D41—1.
Jackson, Alban G., to Simpson Timber Co. Door. 192,073, 1–16–62, Cl. D13—1.
Johnson, Frank R. Portable grinder for sharpening flat faced barbers' clipper cutters or the like. 192,090, 1–16–62, Cl. D37—1.
Kelman, Samuel E., to The Metalart Co. Holder for lipstick tubes. 192,108, 1–16–62, Cl. D86—10.
Knowles, Frederick G., to Eastman Kodak Co. Photographic copying apparatus. 192,105, 1–16–62, Cl. D61—1.
Kousoulos, Louis, Jr.: *See*—
Dabich, George. 192,082.
Lathe, Robert R., to Cockshutt Farm Equipment Ltd. Separator hood for a combine. 192,091, 1–16–62, Cl. D40—1.
Leete, Harley M.: *See*—
Ribbens, Jacob J., Leete, and Foote. 192,085.
Machovec, Fred J. Carriage supported batch mixer. 192,102, 1–16–62, Cl. D55—5.
MacPanel Co.: *See*—
Oakes, Charles D., and Harris. 192,083.
McPhee, Richard M.: *See*—
Dabich, George. 192,082.
Metalart Co., The: *See*—
Kelman, Samuel E. 192,108.
Oakes, Charles D., and M. D. Harris, to MacPanel Co. Tape supporting rack. 192,083, 1–16–62, Cl. D33—3.
Offensend, Glen W., and N. J. Rosenburgh, to Eastman Kodak Co. Reading projector. 192,104, 1–16–62, Cl. D61—1.
Parker, Wayland B. Chair. 192,075, 1–16–62, Cl. D15—1.
Pelley, Perry H., to Tru-Scale, Inc. Canopy. 192,074, 1–16–62, Cl. D13—1.
Pelzman, Lee H., to Spencer Novelty Mfg. Co. Bead. 192,096, 1–16–62, Cl. D45—1.
Reineman, Richard G., G. H. Hart, and G. E. Schaefer, to Brunswick Corp. Billiard table or the like. 192,086, 1–16–62, Cl. D34—3.
Ribbens, Jacob J., H. M. Leete, and F. S. Foote, Jr., to Tab Products Co. Cabinet. 192,085, 1–16–62, Cl. D33—19.
Richards, William H., Jr., and C. H. Shreve. Ammunition dispenser. 192,100, 1–16–62, Cl. D52—2.
Rival Mfg. Co.: *See*—
Talge, Henry J., Grant, and Chappell. 192,079.
Talge, Henry J., Grant, and Chappell. 192,080.
Rommel, Alex A. Airship. 192,106, 1–16–62, Cl. D71—1.
Schaefer, George E.: *See*—
Reineman, Richard G., Hart, and Schaefer. 192,086.
Schneider, Ernest, to Sicura Watch Co. Ltd. Watch. 192,093, 1–16–62, Cl. D42—8.
Schreck, Emanuel. Umbrella. 192,109, 1–16–62, Cl. D88—3.
Shreve, Curtis H.: *See*—
Richards, William H., Jr., and Shreve. 192,100.
Sears, Roebuck and Co.: *See*—
Alvaney, Allan J. 192,088.
Alvaney, Allan J. 192,089.
Sicura Watch Co., Ltd.: *See*—
Schneider, Ernest. 192,093.
Silber, Bronya. Power source unit for a beautician's facial massager. 192,107, 1–16–62, Cl. D83—1.
Simpson, Peter K.: *See*—
Dabich, George. 192,082.
Simpson Timber Co.: *See*—
Jackson, Alban G. 192,073.
Spencer Novelty Mfg. Co.: *See*—
Pelzman, Lee H. 192,096.
Tab Products Co.: *See*—
Ribbens, Jacob J., Leete, and Foote. 192,085.
Talge, Henry J., J. L. Grant, and W. A. Chappell, to Rival Mfg. Co. Electric can opener. 192,079, 1–16–62, Cl. D22—2.
Talge, Henry J., J. L. Grant, and W. A. Chappell, to Rival Mfg. Co. Electric can opener. 192,080, 1–16–62, Cl. D22—2.
Tru-Scale, Inc.: *See*—
Pelley, Perry H. 192,074.
Tucker, Le Grand W. Helmet. 192,071, 1–16–62, Cl. D3—13.
Wall, John F. Plastic foam ear muff. 192,070, 1–16–62, Cl. D3—13.
Wider, Anton J. Lace fabric or similar article. 192,097, 1–16–62, Cl. D47—6.
Winckler, Genevieve M. Convertible boot drier and table. 192,084, 1–16–62, Cl. D33—14.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACH Fiber Service, Inc.: *See*—
Woltner, Herbert J. 3,016,749.
Abel, Finn R., to Allied Tractor Equipment Co. Moldboard assembly. 3,016,637, 1–16–62, Cl. 37—170.
Abel, Walter, to Measure-Meters Co. Ltd. Counting mechanism. 3,017,085, 1–16–62, Cl. 235—117.
Absorbent Cotton Co., The: *See*—
London, Melvin D. 3,017,079.
Abzug, Irving, to International Business Machines Corp. Ring checking circuit. 3,017,620, 1–16–62, Cl. 340—248.
Acme Roofing and Sheet Metal Co.: *See*—
Ayers, Chesley, and Bailey. 3,017,164.
Adams, Clinton W.: *See*—
Morris, John R., Schlicht, Adams, and Lawrence. 3,017,361.
Adams, George P., to Western Electric Co., Inc. Apparatus for forming spring-like articles. 3,016,571, 1–16–62, Cl. 18—19.
Adler, Charles R.: *See*—
Miller, Frank D., and Adler. 3,017,289.
Agrashell, Inc.: *See*—
Ayers, Joseph W. 3,017,303.
Ahlborn, John C.: *See*—
Dille, Roger M., Chapman, and Ahlborn. 3,016,886.
Air Reduction Co., Inc.: *See*—
Arquette, Gordon J., Dixler, and Strier. 3,017,260.
Gibson, Glenn J. 3,017,119.
Greene, William J. 3,017,496.
Air Technology Corp.: *See*—
Clapp, Roger E. 3,017,505.
Ajax Mfg. Co., The: *See*—
Ehlert, William A., and Mersek. 3,017,016.
Akin, George A., to Eastman Kodak Co. Method of recovery of acetylene and ethylene. 3,016,985, 1–16–62, Cl. 183—115.
Akrep, Joseph P. Collapsible container for fluids. 3,016,938, 1–16–62, Cl. 150—5.
Aktiebolaget Electrolux: *See*—
Descarries, Raymond. 3,016,982.
Albemarle Paper Mfg. Co.: *See*—
Outterson, Charles R., Baker, and Halsey. 3,017,295.
Albert, John R., to Textile Rubber Co., Inc. Handgrip for handle bars. 3,016,763, 1–16–62, Cl. 74—551.9.
Albert, Pauline M., and H. W. Guiles. Magnetic support. 3,017,036, 1–16–62, Cl. 211—87.
Albertson, Robert V.: *See*—
Albertson, Victor N. and R. V. 3,016,841.
Albertson, Victor N. and R. V., to Practical Mfg. Co. Fluid supply means and drive therefor for parts washers and the like. 3,016,841, 1–16–62, Cl. 103—87.
Albiach, Vincent. Ship's hull construction. 3,016,867, 1–16–62, Cl. 114—79.
Albright, Jack L. Foot-operated night light. 3,017,497, 1–16–62, Cl. 240—2.
Alexander, Donald F., and M. C. Harrold, to General Motors Corp. Domestic appliance. 3,017,030, 1–16–62, Cl. 210—138.
Alexander, Arthur D. Multiple pulse communication system. 3,017,460, 1–16–62, Cl. 178—17.
Alexander, Donald B.: *See*—
Barrett, Edward L. 3,017,449.
Alexander, Perry L., Jr.: *See*—
Holmes, George B., Sinclair, Alexander, and Vernon. 3,016,663.
Allan, Stewart, to Union Carbide Corp. Gas supply and distribution apparatus. 3,016,947, 1–16–62, Cl. 158—27.4.
Allen, W. D., Mfg. Co.: *See*—
MacLeod, Keith. 3,017,203.
Allied Tractor Equipment Co.: *See*—
Abel, Finn R., 3,016,637.
Allin, George S., Sr., to International Harvester Co. Crawler tractor attachments. 3,016,634, 1–16–62, Cl. 37—144.
Allis-Chalmers Mfg. Co.: *See*—
Harrer, Paul H., and Shannon. 3,016,675.
Krabbe, Ulrik H., and Sorensen. 3,017,591.
Vogel, Fred J. 3,017,572.
Allmanna Svenska Elektriska Aktiebolaget: *See*—
Hansen, Åge. 3,017,485.
Allyn, Robert M., and S. D. Elliott, to Phillips Petroleum Co. Interpretation of seismid records. 3,016,970, 1–16–62, Cl. 181—.5.
Alpaugh, Fred M. Receptacle supports for inclined surfaces. 3,017,152, 1–16–62, Cl. 248—148.
Aluminum Co. of America: *See*—
Vandenburgh, David G., Binger, and Ponchel. 3,016,885.
Amato, Carmelo J., to Thompson Ramo Wooldridge Inc. Position servo. 3,017,557, 1–16–62, Cl. 318—467.
American Air Filter Co., Inc.: *See*—
Amundson, Paul J. 3,017,112.
Getzin, Allan R. 3,016,602.
Getzin, Allan R. 3,016,984.
Gonzales, Don J. 3,016,980.
Smith, Herbert G. 3,016,950.
American Bag & Paper Corp.: *See*—
Kardon, Emanuel S., and Volksdorf. 3,017,069.

American Can Co.: *See*—
Dewey, Bradley. 3,017,339.
Wolbert, Harris J. 3,017,512.
American Cyanamid Co.: *See*—
Hardy, Elizabeth M. 3,017,321.
McLean, Daniel C. 3,017,241.
Schlegel, John C., Jr. 3,017,381.
American Machine & Foundry Co.: *See*—
Gross, George A. 3,017,184.
Wilhelm, Frank R., and Jordan. 3,016,553.
American Metal Climax, Inc.: *See*—
Saarivirta, Matti J. 3,017,268.
American Metal Products Co.: *See*—
Thomas, Paul P. 3,017,209.
American Optical Co.: *See*—
Armbruster, John T. 3,016,793.
Crandon, Harry D. 3,016,794.
American Photocopy Equipment Co.: *See*—
Stuckens, Leo J. 3,017,179.
American Radiator & Standard Sanitary Corp.: *See*—
Heller, Kenneth G., and Snyder. 3,017,588.
Matthews, Robert J. 3,017,468.
American Thermos Products Co., The: *See*—
Payson, Arthur H., and Darmstadt. 3,017,047.
Ames, Lloyd L., to United States of America, Atomic Energy Commission. Removal of cesium by sorption from aqueous solutions. 3,017,242, 1–16–62, Cl. 23—25.
Ammerman, George E.: *See*—
McOrily, Joseph, and Ammerman. 3,017,490.
Ammerman, George E., to The Edwin L. Wiegand Co. Electric heater-thermal element assembly. 3,017,491, 1–16–62, Cl. 219—37.
Amos, James L.: *See*—
Ruffing, Norman R., Amos, and Puzar. 3,017,426.
Ampex Corp.: *See*—
Clark, Harold V., and MacLeod. 3,017,462.
Amundson, Moran L. Door assembly packaging. 3,017,022, 1–16–62, Cl. 206—60.
Amundson, Paul J., to American Air Filter Co., Inc. Air heater fuel control system. 3,017,112, 1–16–62, Cl. 236—10.
Anderson, Clarence A., to The Detroit Edison Co. Method of induction welding of stranded aluminum cable. 3,017,483, 1–16–62, Cl. 219—9.5.
Anderson, Duane B.: *See*—
Scott, Platho P., Jr., Anderson, and Park. 3,017,351.
Anderson, Earl R. Manual clingstone peach splitter. 3,016,937, 1–16–62, Cl. 146—72.
Anderson, Edward E.: *See*—
Marvin, John, and Anderson. 3,017,273.
Anderson, Glenn R., and J. H. Klancke, to McCulloch Corp., Scott Division. Outboard motor tilt mechanism. 3,016,869, 1–16–62, Cl. 115—17.
Anderson, Robert E. Portable collapsible combination fisherman's seat, shelter, and toboggan. 3,017,194, 1–16–62, Cl. 280—18.
Anderson, Robert M.: *See*—
Vanden Boom, Robert F., and Anderson. 3,016,727.
Anderson, Tage O.: *See*—
Schwab, Helmut, Anderson, and Beale. 3,017,232.
Anderson, William D., W. O. Brandt, L. J. Le Clercq, and J. J. Fargo, to Gladding, McBean & Co. Method of making dense refractory objects. 3,016,598, 1–16–62, Cl. 25—156.
Andremont, Gilbert, to La Cotonniere de Moislains. Device for effecting high speed unreeling of bobbins in textile machines. 3,016,681, 1–16–62, Cl. 57—106.
Andresen, John H., Jr., to Kollsman Instrument Corp. Altitude controller. 3,017,619, 1–16–62, Cl. 340—213.
Andrews, John L., to General Electric Co. Cooking appliances. 3,017,489, 1–16–62, Cl. 219—37.
Andrews, Ladimer J., to The National Cash Register Co. Digital indicator circuitry. 3,017,102, 1–16–62, Cl. 235—176.
Anocut Engineering Co.: *See*—
Williams, Lynn A. 3,017,340.
Applefield, William G., to Hycon Mfg. Co. Sweep circuit. 3,017,629, 1–16–62, Cl. 343—5.
Anspach, Charles R.: *See*—
Schweitzer, Roy C., and Anspach. 3,016,977.
Antioch College: *See*—
Asakawa, George, and Vernet. 3,016,691.
Vernet, Sergius. 3,016,747.
Applied Development Corp.: *See*—
Schwab, Helmut, Anderson, and Beale. 3,017,232.
Archambault, Maurice, J. U. MacEwan, and C. A. Olivier, to Department of Mines. Method of producing lithium carbonate from spodumene. 3,017,243, 1–16–62, Cl. 23—63.
Archbold, Ralph L., to White Sewing Machine Corp. Safety hat. 3,016,541, 1–16–62, Cl. 2—3.
Archer, Lee A.: *See*—
Nava, Joseph A., and Archer. 3,017,597.
Armbruster, John T., to American Optical Co. Optical projectors. 3,016,793, 1–16–62, Cl. 88—24.
Armson, Harold J., to Finer Products Ltd. Transparent book jacket protector. 3,017,201, 1–16–62, Cl. 281—34.

Arnold, George B., H. D. Kluge, R. C. Schlicht, and W. Smolin, to Texaco Inc. Process for preparation of sulfonic acid. 3,017,430, 1–16–62, Cl. 260—505.
Arnold, James S., and J. A. Kochly, to United States of America, Air Force. Structural bond evaluation. 3,016,735, 1–16–62, Cl. 73—67.1.
Arond, Lester H., W. J. Salem, H. Wechsler, and S. Makower, to The Borden Co. Copolymers of vinyl chloride and alkoxyalkyl esters. 3,017,396, 1–16–62, Cl. 260—78.5.
Aronsohn, Allan. Exercising and gymnastics appliances. 3,017,180, 1–16–62, Cl. 272—58.
Arquette, Gordon J., D. S. Dixler, and M. P. Strier, to Air Reduction Co., Inc. Solid composite rocket propellants containing poly(vinyl lower alkyl ethers). 3,017,260, 1–16–62, Cl. 149—60.
Arthur, Vesta K. Ellipse compass. 3,016,611, 1–16–62, Cl. 33—30.
Artman, Robert A., R. C. Root, and A. H. Turner, to Ford Motor Co. Electrostatic paint system. 3,017,115, 1–16–62, Cl. 239—3.
Asakawa, George, and S. Vernet, to Antioch College. Converter of electrical energy into mechanical movement. 3,016,691, 1–16–62, Cl. 60—23.
Ascardi, Thomas. Mallet and die game. 3,017,186, 1–16–62, Cl. 273—146.
Ashley, James W., and L. J. Knight, to United Kingdom Atomic Energy Authority. Graphite assemblies for nuclear reactors. 3,016,765, 1–16–62, Cl. 74—579.
Associated Spring Corp.: *See*—
Elder, Lorne C. 3,016,994.
Astatic Corp., The: *See*—
Cvetko, Henry J., and Chapin. 3,017,467.
Aston, William W. C-bar structure. 3,016,635, 1–16–62, Cl. 37—144.
Atkins, Wyman B., to Timber Truss Connectors, Inc. Connector plate. 3,016,586, 1–16–62, Cl. 20—92.
Atlas Chemical Industries, Inc.: *See*—
Knightly, William H. 3,017,276.
Atols, John M., to Atols Tool and Mold Corp. Die spotting press. 3,016,770, 1–16–62, Cl. 76—4.
Atols Tool and Mold Corp.: *See*—
Atols, John M. 3,016,770.
Atwell, Harold V., to Texaco Inc. Oxy-thermal process. 3,017,244, 1–16–62, Cl. 23—78.
Atwood, Mark T., to Continental Oil Co. Manufacture of alcohols. 3,017,438, 1–16–62, Cl. 260—632.
Auerbach, Albert A., E. Berezin, S. Lubkin, and R. F. Shaw, to Curtiss-Wright Corp. Electronic data file processor. 3,017,610, 1–16–62, Cl. 340—172.5.
Austin, Amory E., Jr.: *See*—
Fischer, Charles F., and Austin. 3,016,574.
Avco Corp.: *See*—
Kneidl, Franz A., and Beattie. 3,016,705.
Aven, Manuel: *See*—
Potter, Ralph M., and Aven. 3,017,366.
Aversa, Joseph. Applicators. 3,016,560, 1–16–62, Cl. 15—510.
Avien, Inc.: *See*—
Koltesky, Harold S., and Berkowitz. 3,017,524.
Avog Elektro -und Feinmechanik G.m.b.H.: *See*—
Hovler, Alfred E. 3,016,766.
Ayers, Chesley, and W. J. Bailey, to Acme Roofing and Sheet Metal Co. Portable concrete mixing, foamating and dispensing machine. 3,017,164, 1–16–62, Cl. 259—151.
Ayers, Joseph W., to Agrashell, Inc. Adhesive composition containing lignocellulose and extracted lignin and plywood laminate thereof. 3,017,303, 1–16–62, Cl. 154—45.9.
Babcock & Wilcox Ltd.: *See*—
Shakeshaft, Frederick. 3,016,711.
Babin, Alexander, to Crown Zellerbach Corp. Two-pack toilet tissue dispenser. 3,017,055, 1–16–62, Cl. 221—34.
Bac, Fernand G. Multiple plug and socket coupling. 3,017,603, 1–16–62, Cl. 339—186.
Baechli, George, to Joy Mfg. Co. Rotary supporting device. 3,017,228, 1–16–62, Cl. 308—20.
Baer, Charles A., P. J. Clough, and R. W. Steeves, to National Research Corp. Coating. 3,016,873, 1–16–62, Cl. 118—49.1.
Bafford, Richard A., and R. S. Gregorian, to W. R. Grace & Co. Crosslinking process. 3,017,376, 1–16–62, Cl. 260—23.
Bailey, Wray J.: *See*—
Ayers, Chesley, and Bailey. 3,017,164.
Baker-Cammack Hosiery Mills, Inc.: *See*—
Kimrey, James A. C., and Hinkle. 3,016,725.
Baker, James L.: *See*—
Outterson, Charles R., Baker, and Halsey. 3,017,295.
Baker Oil Tools, Inc.: *See*—
Keithahn, Julian D. 3,016,914.
Ball, Frank J., to West Virginia Pulp and Paper Co. Treated lignin product and the manufacture thereof. 3,017,404, 1–16–62, Cl. 260—124.
Ballentine, William L., Jr., and R. F. Lottes, to United States Steel Corp. Apparatus for coating pipe. 3,016,875, 1–16–62, Cl. 118—306.
Bancroft, Joseph, & Sons Co.: *See*—
Langway, Paul W. 3,016,677.
Bandenieks, Julius E., to General Electric Co. Electric switch mechanism. 3,017,470, 1–16–62, Cl. 200—64.
Barber-Colman Co.: *See*—
Trost, Wayne C. 3,017,128.
Trost, Wayne C. 3,017,129.
Barber Greene Co.: *See*—
Barber, Harry A., Burns, and Roots. 3,016,632.
Barber, Harry A., L. S. Burns, and E. J. Roots, to Barber Greene Co. Ditcher driving and steering mechanism. 3,016,632, 1–16–62, Cl. 37—97.
Bargmann, Richard. Explosion safety valves, especially for marine engines. 3,016,913, 1–16–62, Cl. 137—312.
Barnard, John R. Propulsion and lifting surface system for aerial vehicles. 3,017,140, 1–16–62, Cl. 244—15.
Barnes Drill Co.: *See*—
Gross, Maurice J. 3,016,660.
Barnes, Paul T.: *See*—
Weinhardt, Robert A., and Barnes. 3,016,588.
Barnes, Robert E. Sharp cut-off spark gap indicator. 3,017,568, 1–16–62, Cl. 324—18.
Barney, Walter. Protective circuit. 3,017,564, 1–16–62, Cl. 323—9.
Barr, Courtland H., Jr.: *See*—
Barr, Courtland H., Sr., C. H. Barr, Jr., and J. W. 3,017,050.
Barr, John W.: *See*—
Barr, Courtland H., Sr., C. H. Barr, Jr., and J. W. 3,017,050.
Barr, Courtland H., Sr., C. H. Barr, Jr., and J. W. Blood sample collection apparatus. 3,017,050, 1–16–62, Cl. 215—48.
Barreto, Martinez. Disintegrator bar and method of disintegrating bagasse mats. 3,016,818, 1–16–62, Cl. 100—75.
Barrett, Edward L., to D. B. Alexander, E. R. Bourke, E. W. Schneider, and L. J. Gary, as trustees. Quick activating battery. 3,017,449, 1–16–62, Cl. 136—90.
Barrett, La Vern H., to Manett Enterprises, Inc. Packaging machine. 3,016,665, 1–16–62, Cl. 53—73.
Barringer, Anthony R., to Selco Exploration Co. Ltd. Reconnaissance electromagnetic survey pack. 3,017,567, 1–16–62, Cl. 324—6.
Bartson, Lester J., and G. M. McAnulty, to Ford Motor Co. Nodular iron manufacture. 3,017,267, 1–16–62, Cl. 75—130.
Batdorf, John Q., to The Ford Motor Co. Slip joint seal. 3,016,722, 1–16–62, Cl. 64—23.
Bates, Charles E., to General Motors Corp. Control device. 3,017,546, 1–16–62, Cl. 317—190.
Bates, Grayson F., and L. W. De Simone, to Sylvania Electric Products Inc. Circuit element mounting. 3,017,549, 1–16–62, Cl. 317—234.
Bath, Cyril, Co., The: *See*—
De Marco, Robert F. 3,016,882.
Batres, Enrique: *See*—
Ringold, Howard J., Zderic, Batres, and Rosenkranz. 3,017,419.
Bauman, Robert H.: *See*—
Wilkens, Carl E., and Bauman. 3,016,881.
Bausch & Lomb Inc.: *See*—
De Grave, Charles J., Jr., and Straat. 3,016,795.
Bayer, Robert J., R. M. Cole, and G. H. Stoughton, to General Motors Corp. Apparatus for automatically reducing the stroke of a free piston engine during low load conditions of an associated receiver machine. 3,016,689, 1–16–62, Cl. 60—13.
Beach, Paul H. Silo. 3,016,814, 1–16–62. Cl. 99—235.
Beale, Stanley E.: *See*—
Schwab, Helmut, Anderson, and Beale. 3,017,232.
Beattie, Harold G.: *See*—
Kneidl, Franz A., and Beattie. 3,016,705.
Beaumont Birch Co.: *See*—
Schwing, Ronald F. 3,017,039.
Beaverson, Lowell D., to General Mills, Inc. Code punching device. 3,016,781, 1–16–62, Cl. 83—633.
Becka, Paul N., to Tru-Fit Screw Products Corp. Switch. 3,017,476, 1–16–62, Cl. 200—104.
Beckel, John L. Handling bulk materials by railroad car. 3,016,846, 1–16–62, Cl. 105—270.
Beekman, Stewart M., to Reheis Co., Inc. Antacid composition. 3,017,324, 1–16–62, Cl. 167—55.
Begovich, Nicholas A., and N. H. Enenstein, to Hughes Aircraft Co. Radar scanning system. 3,017,630, 1–16–62, Cl. 343—17.1.
Bell Telephone Laboratories, Inc.: *See*—
Dewald, Jacob F., and Lander. 3,017,548.
Hawks, Verl J. 3,016,857.
Kostelnick, Joseph J. 3,017,577.
Lundry, Walter R. 3,017,578.
Lundry, Walter R. 3,017,584.
Muller, David E. 3,017,626.
Rongved, Leif. 3,017,452.
Ulrich, Werner. 3,017,091.
Bellamy, John C., to Cook Electric Co. High output torque function generator utilizing a punched tape input. 3,017,111, 1–16–62. Cl. 235—197.
Beloit Iron Works: *See*—
Hornbostel, Lloyd. 3,016,772.
Belt Corp., The: *See*—
Belt, Vernon C. 3,017,189.
Belt, Vernon C., to The Belt Corp. Power-driven spreader apparatus for fertilizer or the like. 3,017,189, 1–16–62, Cl. 275—8.
Benander, George B., to General Electric Co. Quadruple convenience outlet. 3,017,601, 1–16–62, Cl. 339—157.
Bender, Ludwig: *See*—
Bretschneider, Otto, Bender, and Jaekel. 3,017,263.
Bendix Corp., The: *See*—
Bulat, Thomas J., Logan, and Kusy. 3,017,342.
Dinsmore, Stanley H., and Lee. 3,017,463.
Emenaker, Leo J. 3,017,593.
Rossire, Francis H. S. 3,017,142.
Bennetch, Leonard M., C. P. West, and H. H. Leiner, to Reichard-Coulston, Inc. Corrosion inhibitive pigment. 3,017,283, 1–16–62, Cl. 106—304.
Bennett, Frank C., Jr.: *See*—
Dunn, Joseph S., and Bennett. 3,017,296.
Bennett, John D., and F. M. Mayes, to Sun Oil Co. Apparatus for bore hole drill and logging. 3,016,963, 1–16–62, Cl. 175—92.
Ben Uri, Maier: *See*—
Grunt, Max, and Ben Uri. 3,016,583.

Benz, Walter, and H. Linnenkohl, to Motoren-Werke Mannheim AG, vorm. Benz Abt. stat. Motorenbau. Dual fuel engines. 3,016,886, 1–16–62, Cl. 123—27.

Berenyi, Szilard. Method and potentiometer-titrimeter for measuring electrotonic potentials. 3,017,569, 1–16–62, Cl. 324—29.

Berezin, Evelyn: *See*—
Auerbach, Albert A., Berezin, Lubkin, and Shaw. 3,017,610.

Berkowitz, Murry W.: *See*—
Koletsky, Harold S., and Berkowitz. 3,017,524.

Bernard, Gustave J. H. J. Aerials for receiving television and modulated frequency broadcast signals. 3,017,632, 1–16–62, Cl. 343—819.

Bernardi, Dominic J., A. M. Tringal, H. T. Roth, and L. S. Engle, to Interchemical Corp. Printing inks. 3,017,374, 1–16–62, Cl. 260—18.

Bernart, William F., W. J. Hanson, and R. E. Schmeck, to Pitney-Bowes, Inc. Printing values and identifying marks on drafts. 3,016,820, 1–16–62, Cl. 101—104.

Berninger, Kenneth L., to General Motors Corp. Self-cleaning filter. 3,017,029, 1–16–62, Cl. 210—108.

Bernotas, Ralph J.: *See*—
Runci, Joseph O., and Bernotas. 3,017,046.

Berry, John M., and E. E. Witt, to Midland Chemical Corp. Wood finishing method and product. 3,017,287, 1–16–62, Cl. 117—72.

Berthelin, Bruno P., to Societe de Prospection Electrique, Procedes Schlumberger. Core sampling arrangement for operation inside geological layers. 3,016,959, 1–16–62, Cl. 175—4.

Bertin, Jean H., M. Kadosch, and F. M. L. Maunoury, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Aerodynamically acting jet deflecting device. 3,016,699, 1–16–62, Cl. 60—35.54.

Bertram, Eduard, and A. Diez, to Karl Schmidt, G.m.b.H. Billet. 3,017,042, 1–16–62, Cl. 214—10.5.

Bessiere, Pierre E. Self-regulating reciprocating action pumps. 3,016,835, 1–16–62, Cl. 103—5.

Bessiere, Pierre E. Reciprocating action pumps, in particular fuel injection pumps. 3,016,838, 1–16–62, Cl. 103—38.

Beutell, Robert O.: *See*—
Tauschek, Max J., Cherrie, and Beutell. 3,016,601.

Bibo, Denis M. System and apparatus for improving the operation of an engine. 3,016,890, 1–16–62, Cl. 123—122.

Bican, Josef: *See*—
Dubsky, Bohvoj, Straka, and Bican. 3,017,575.

Bil-Jax, Inc.: *See*—
Wyse, Wilbur M. 3,017,208.

Binder, Wilhelm. Ring airfoil aircraft. 3,017,139, 1–16–62, Cl. 244—12.

Binger, Wayne W.: *See*—
Vandenburgh, David G., Binger, and Ponchiel. 3,016,885.

Bingham, George H., Jr., and O. Y. Olsson, to Cambridge Rubber Co. Vulcanizing machine with spring release. 3,016,569, 1–16–62, Cl. 18—17.

Birk, Christopher J.: *See*—
Fink, Marvin J., and Birk. 3,017,631.

Birkenes, Bernhard, to Motorola, Inc. Hybrid radio receiver. 3,017,507, 1–16–62, Cl. 250—20.

Bishofberger, Carl J., to Minneapolis-Honeywell Regulator Co. Doorbell and porch light control. 3,017,623, 1–16–62, Cl. 340—322.

Bishop, Charles J. Remote control of pressurized spray can. 3,017,056, 1–16–62, Cl. 222—164.

Blair Mfg. Co., Inc.: *See*—
Ryan, Kelly P. 3,016,879.

Blakeslee, G. S., & Co.: *See*—
Cumming, John. 3,017,014.

Bliss, Charles, to Foster Wheeler Corp. Gas distribution baffle. 3,016,624, 1–16–62, Cl. 34—57.

Bloch, Herman S., to Universal Oil Products Co. Polymerization of olefins. 3,017,400, 1–16–62, Cl. 260—94.9.

Blue, Edward B. Double rotation apparatus for molding of hollow articles from liquid plastic and the like. 3,016,573, 1–16–62, Cl. 18—26.

Blue Valley Machine & Mfg. Co.: *See*—
Johnson, Ernest E. 3,016,942.

Bo, Gilbert, E. Fichet, A. Perrot, and P. Perras, to Societe des Usines Chimiques Rhone-Poulenc. Ethylene polymerization with aluminum titanium tetrachloride catalysts. 3,017,401, 1–16–62, Cl. 260—94.9.

Bobst, Henri, to J. Bobst and Son S.A. Stacking apparatus for sheet material. 3,017,040, 1–16–62, Cl. 214—6.

Bobst, J., and Son S.A.: *See*—
Bobst, Henri. 3,017,040.

Bodeen, Algot V. Registering device. 3,017,087, 1–16–62, Cl. 235—122.

Bogle, Kenneth H., and C. K. Lovejoy, to Scripto Inc. Merchandising display device. 3,017,035, 1–16–62, Cl. 211—70.

Bohn, Carl E.: *See*—
Moricca, Anthony C. and S. A., and Bohn. 3,017,571.

Bolton, John W. & Sons, Inc.: *See*—
Prevost, Bruno E., and St. Onge. 3,017,177.

Booth, Grant W., to Radio Corp. of America. Parallel binary adder. 3,017,099, 1–16–62, Cl. 235—175.

Boothe, Kenneth W. Adjustable floater for spectacles. 3,016,796, 1–16–62, Cl. 88—41.

Borden Co., The: *See*—
Arond, Lester H., Salem, Wechsler, and Makower. 3,017,-896.

Borg-Warner Corp.: *See*—
Diuggs, Gerald S. 3,016,837.
Fulton, Bertram A. 3,016,750.
Johnson, Horace A. 3,017,206.
Palm, James W. 3,017,210.
Red, Harold V. 3,017,003.

Bortnick, Newman M., to Rohm & Haas Co. Method for the preparation of monocyanoethylformamide. 3,017,425, 1–16–62, Cl. 260—465.4.

Bossert, Richard E. Fishing rod rest. 3,017,149, 1–16–62, Cl. 248—39.

Boughtwood, John E., and T. M. Grybowski, to The Western Union Telegraph Co. Frequency shift modulation receiver. 3,017,464, 1–16–62, Cl. 178—88.

Bourke, Edgar R.: *See*—
Barrett, Edward L. 3,017,449.

Bowersett, Charles F., to United States of America, Navy. Explosive swaging device for mooring a submerged mine. 3,016,828, 1–16–62, Cl. 102—13.

Bowler, Raymond M., and D. L. Bray, to United Shoe Machinery Corp. Transparent lasting machine wipers. 3,016,-551, 1–16–62, Cl. 12—12.

Bowler, Valentine M., to Eastman Kodak Co. Adjustable rotatable holder for rolls of photographic material. 3,017,-133, 1–16–62, Cl. 242—71.9.

Boyd, J. & T., Ltd.: *See*—
Warnock, Moses. 3,016,680.

Boyd, William H. A., to United States of America, Army. Aerodynamic roll control system. 3,016,827, 1–16–62, Cl. 102—3.

Boyden, Robert E.: *See*—
Scozzafava, Milton V., Linn, Busch, and Boyden. 3,017,-081.

Brack, Werner, to Radio Engineering Laboratories, Inc. Frequency synthesizer. 3,017,579, 1–16–62, Cl. 331—38.

Bramley, Lionel N., to The British Iron & Steel Research Association. Remote control. 3,017,551, 1–16–62, Cl. 318—29.

Brandt, Robert J. Device for extracting fumes from liquid fuel storage containers. 3,016,928, 1–16–62, Cl. 141—45.

Brandt, William O.: *See*—
Anderson, William D., Brandt, Le Clercq, and Fargo. 3,016,598.

Braun, Karl J., to A. Kimball Co. Record perforating machines. 3,017,076, 1–16–62, Cl. 234—78.

Braunstein, Aron. Egg carton. 3,017,066, 1–16–62, Cl. 229—28.

Bray, Donald L.: *See*—
Bowler, Raymond M., and Bray. 3,016,551.

Brealey, William H.: *See*—
Parkin, Leslie, and Brealey. 3,016,784.

Breed, John W., to Kent-Moore Organization, Inc. Engine mounting stand. 3,017,176, 1–16–62, Cl. 269—185.

Brehm, Richard K., to Jarrell-Ash Co. Automatic lock for the rotatable members of instruments for recording changes in signal intensities. 3,016,787, 1–16–62, Cl. 88—14.

Breting, Ulysses A.: *See*—
Christenson, Howard W., Livezey, and Breting. 3,016,-769.

Bretschneider, Otto. L. Bender, and G. Jaekel, to Knapsack-Griesheim Aktiengesellschaft. Process for purifying metal vapors. 3,017,263, 1–16–62, Cl. 75—67.

Brick, Robert M., to Continental Can Co., Inc. Art of producing hollow ingots. 3,016,587, 1–16–62, Cl. 22—140.

Bricker, Clyde H., to Pan American Petroleum Corp. Pipe measuring appliance. 3,016,617, 1–16–62, Cl. 33—137.

Brickle, Donald J., to National Distillers and Chemical Corp. Apparatus for stacking sheet articles. 3,017,178, 1–16–62, Cl. 271—63.

Briggs, Vernon R., to Thompson Ramo Wooldridge Inc. Pulse width signal multiplying system. 3,017,109, 1–16–62, Cl. 235—194.

Brill, Harold C., to E. I. du Pont de Nemours and Co. Stable, aqueous solutions of organic titanium compounds. 3,017,-282, 1–16–62, Cl. 106—287.

British Celanese Ltd.: *See*—
Mann, Ralph J., and Noon. 3,016,728.

British Iron & Steel Research Association, The: *See*—
Bramley, Lionel N. 3,017,551.

British Thomson-Houston Co. Ltd., The: *See*—
Roxburgh, Albert, and Leigh. 3,017,482.

British Titan Products Co. Ltd.: *See*—
Evans, Arthur W., and Groves. 3,017,254.

Brouwer, Frans, to Canadian Westinghouse Co., Ltd. Pattern tracer servosystem. 3,017,552, 1–16–62, Cl. 318—39.

Brown Fintube Co.: *See*—
Brown, John W., Jr. 3,016,893.

Brown, George W., and G. S. Harben, Jr., to Gainesville Machine Co., Inc. Automatic sorting machine. 3,017,027, 1–16–62, Cl. 209—121.

Brown, Horace D.: *See*—
Sarett, Lewis H., and Brown. 3,017,415.

Brown, John F., Jr., and L. H. Vogt, Jr., to General Electric Co. Benzene soluble phenyl silsesquioxanes. 3,017,386, 1–16–62, Cl. 260—46.5.

Brown, John W., Jr., to Brown Fintube Co. Heater. 3,016,-893, 1–16–62, Cl. 126—116.

Brown, Woodbridge P. Catamarans. 3,016,861, 1–16–62, Cl. 114—61.

Browning, Charles W. Lifting device. 3,016,988, 1–16–62, Cl. 187—17.

Brudney, Harry. Doll mouth. 3,016,651, 1–16–62, Cl. 46—141.

Bruestle, Carl O., to Synchro Machine Co. Water cooling apparatus for drawing blocks. 3,017,017, 1–16–62, Cl. 205—20.

Brunkow, Alvin F. and J. Semi-automatic multiblade power saw. 3,016,931, 1–16–62, Cl. 143—46.

Brunkow, James: *See*—
Brunkow, Alvin F. and J. 3,016,931.

Bryant, Leland W., to General Motors Corp. Wet nozzle area control. 3,016,696, 1–16–62, Cl. 60—35.6.

Buchmeier, Eduard, to Grunzweig & Hartmann A.-G. Facing arrangement for walls. 3,016,998, 1–16–62, Cl. 189—85.

Bulat, Thomas J., J. R. Logan, and P. F. Kusy, to The Bendix Corp. Oil separation process. 3,017,342, 1–16–62, Cl. 208—11.

Bullock, Austin L., and J. D. Guthrie, to United States of America, Agriculture. Cellulose derivative and method of preparing same. 3,017,237, 1–16–62, Cl. 8—120.

Bulloff, Jack J., to The Commonwealth Engineering Co. of Ohio. Isolation of fatty acids from aqueous solutions thereof. 3,017,434, 1–16–62, Cl. 260—526.

Bundschuh, John J., L. J. Craig, and W. T. Hochreiter, to Eastman Kodak Co. Automatic exposure control for photographic cameras. 3,016,811, 1–16–62, Cl. 95—10.

Bunnell, Fred H. Conduit terminal fitting. 3,016,922, 1–16–62, Cl. 138—94.

Burgeni, Alfred A., to Personal Products Corp. Absorbent fibrous structure and method of production. 3,017,304, 1–16–62, Cl. 154—54.

Burns, Leonard S.: *See*—
Barber, Harry A., Burns, and Roots. 3,016,632.

Burroughs Corp.: *See*—
Clark, Ralph H. 3,017,372.

Busch, Richard E.: *See*—
Scozzafava, Milton V., Linn, Busch, and Boyden. 3,017,081.

Buschbom, Floyd E., to Vandale Corp. Unloader. 3,017,043, 1–16–62, Cl. 214—17.

Butler, Clarence A., Jr., and C. C. Silsby, Jr., to Diamond Alkali Co. Electrolytic process and apparatus. 3,017,338, 1–16–62, Cl. 204—98.

Butler, John M.: *See*—
Mottus, Edward H., Hedrick, and Butler. 3,017,391.

Butler, John M., R. M. Hedrick, and E. H. Mottus, to Monsanto Chemical Co. Polymerization of higher lactams. 3,017,392, 1–16–62, Cl. 260—78.

C.U.R.A. Patents Ltd.: *See*—
Hoy, Herbert R., Wilkins, and Johnson. 3,016,566.

Cadwallader, Eugene: *See*—
Peterson, Walter G., and Cadwallader. 3,016,647.

Cahan, Boris D., to The Electric Storage Battery Co. Electric battery. 3,017,448, 1–16–62, Cl. 136—26.

Cahill, Starr W., to Hycon Mfg. Co. Free drop container. 3,017,019, 1–16–62, Cl. 206—46.

Caldwell, Frank R.: *See*—
Duncan, Richard L., Miller, Caldwell, Ruegg, and Flock. 3,016,704.

Caldwell, John R., and J. C. Martin, to Eastman Kodak Co. Resinous polymers from reaction of bis(acetoacetates) and bis(acetoacetamides) with diamine. 3,017,388, 1–16–62, Cl. 260—65.

Caldwell, Samuel P., to Mite Corp. Ruffers. 3,016,850, 1–16–62 Cl. 112—135.

Calkins, Eugene M. Power socket wrench. 3,016,775, 1–16–62, Cl. 81—57.

Cambridge Rubber Co.: *See*—
Bingham, George H., Jr., and Olsson. 3,016,569.

Cametti, Benjamin: *See*—
Hagg, Arthur C., and Cametti. 3,017,072.

Campbell, Charles R., R. D. Chapman, and R. Johnson, to The Chemstrand Corp. Method for the purification of hexamethylenediamine. 3,017,331, 1–16–62, Cl. 202—71.

Canadian Industries Ltd.: *See*—
Promislow, Albert L., and Waldman. 3,016,743.

Canadian Westinghouse Co., Ltd.: *See*—
Brouwer, Frans. 3,017,552.

Carlson, Arne B., to West Virginia Pulp and Paper Co. Coating composition for paper. 3,017,373, 1–16–62, Cl. 260—6.

Carlson, Clinton C. Round for testing shotgun condition. 3,016,832, 1–16–62, Cl. 102—41.

Carlson, Sture H.: *See*—
Groth, Otto L., Carlson, and Carlsson. 3,017,218.

Carlson, Vern W. Material applying attachment for power mowers. 3,017,121, 1–16–62, Cl. 239—129.

Carlsson, Karl A. I.: *See*—
Groth, Otto L., Carlson, and Carlsson. 3,017,218.

Carlston, Hamilton S. Unidirectional control mechanism for a rotary drive linkage. 3,017,173, 1–16–62, Cl. 268—119.

Carpenter, John H.: *See*—
Kane, James S., Carpenter, and Krikorian. 3,017,286.

Carr, Donald E., to Phillips Petroleum Co. In situ retorting of oil shale. 3,017,168, 1–16–62, Cl. 262—3.

Carson, Robert L., and W. F. Conrad. Temperature responsive resistor. 3,017,565, 1–16–62, Cl. 323—74.

Carter, Giles F., and J. R. Harrison, to E. I. du Pont de Nemours and Co. Method of degassing hydrogen from solid titanium. 3,017,299, 1–16–62, Cl. 148—13.1.

Case, Charles B. Globe overlays. 3,016,629, 1–16–62, Cl. 35—46.

Castelvecchi, John J., to Groht Oil Tool Co. Valve seat puller. 3,016,604, 1–16–62, Cl. 29—255.

Celovsky, Michael J., to Lyon Inc. Apparatus for shaping sheet metal wheel covers. 3,016,853, 1–16–62, Cl. 113—48.

Centre National de la Recherche Scientifique: *See*—
Roncayrol, Jean-Claude, Oberhausen, and Schussler. 3,017,510.

Chalcroft, Charles P. Portable basketball goal assembly. 3,017,183, 1–16–62, Cl. 273—1.5.

Chapin, Charles J.: *See*—
Cvetko, Henry J., and Chapin. 3,017,467.

Chapman, Richard D.: *See*—
Campbell, Charles R., Chapman, and Johnson. 3,017,331.

Chapman, Ronald W.: *See*—
Dille, Roger M., Chapman, and Ahlborn. 3,016,986.

Chase-Shawmut Co., The: *See*—
Kozacka, Frederick J. 3,017,558.

Chass, Jacob, to International Resistance Co. Differential transformer. 3,017,589, 1–16–62, Cl. 336—136.

Chass, Jacob, to International Resistance Co. Non-symmetrical differential transformer. 3,017,590, 1–16–62, Cl. 336—136.

Chatlain, Robert R., 50% to J. E. Sullivan. Motion analyzer. 3,016,812, 1–16–62, Cl. 95—11.

Chemische Fabrik Grunau Aktiengesellschaft: *See*—
Steppe, Vollrad, and Schulenburg. 3,017,348.

Chemstrand Corp., The: *See*—
Campbell, Charles R., Chapman, and Johnson. 3,017,331.

Chenicek, Joseph A., and W. L. Cox, to Universal Oil Products Co. Method of incorporating a mixture of 2,6-dialkoxy-4-alkylphenol and 2,2'-alkylene-bis-(4,6-dialkylphenol) in rubber, and resulting product. 3,017,443, 1–16–62, Cl. 260—810.

Chernivsky, Victor A. Baby chair. 3,017,220, 1–16–62, Cl. 297—390.

Cherrie, James M.: *See*—
Tauschek, Max J., Cherrie, and Beutell. 3,016,601.

Chial Mfg. & Sales Co.: *See*—
Chial, Stanley M. 3,016,585.

Chial, Stanley M., to P. A. Turner, d.b.a. Chial Mfg. & Sales Co. Awning structure. 3,016,585, 1–16–62, Cl. 20—57.5.

Chiang, Franklin C., to International Business Machines Corp. Decoding device utilizing a delay line. 3,017,096, 1–16–62, Cl. 235—160.

Chicksan Co.: *See*—
Knight, Houston W. 3,017,124.

Childress, James D.: *See*—
Smith, Lloyd B., and Childress. 3,017,615.

Childrey, Henry M., Jr., and E. Doty, to Hairstrate, Inc. Hair straightening preparation. 3,017,328, 1–16–62, Cl. 167—87.1.

Chlouba, Adolf: *See*—
Styner, Fritz, and Chlouba. 3,017,079.

Chow, Ho: *See*—
Rinkewich, Isaac, and Chow. 3,017,123.

Christenson, Howard W., W. G. Livezey, and U. A. Breting, to General Motors Corp. Transmission. 3,016,769, 1–16–62, Cl. 74—732.

Chromium Mining & Smelting Corp., Ltd.: *See*—
Fegan, George J. 3,017,262.

Clapp, Roger E., to Air Technology Corp. Receiving apparatus for radio frequency signals. 3,017,505, 1–16–62, Cl. 250—20.

Clark, Charles C., F. A. Kanda, and A. J. King, to Olin Mathieson Chemical Corp. Preparation of diborane. 3,017,248, 1–16–62, Cl. 23—204.

Clark Equipment Co.: *See*—
Dence, Donald S., and Metz. 3,017,006.
Williamson, William A. 3,016,973.
Williamson, William A. 3,016,987.

Clark, J. R., Co., The: *See*—
Munson, Donald J. 3,016,976.

Clark, Harold V., and D. B. MacLeod, to Ampex Corp. Tape apparatus synchronizing system. 3,017,462, 1–16–62, Cl. 178—69.5.

Clark, Ralph H., to Burroughs Corp. Method of making a liquid-filled synthetic resin structure and article obtained therefrom. 3,017,372, 1–16–62, Cl. 260—2.5.

Clary Corp.: *See*—
Schwend, Fred N. 3,017,080.
Scozzafava, Milton V., Linn, Busch, and Boyden. 3,017,-081.
Witt, Elwin O. 3,017,075.

Cleary, Dennis E. Barbecue post. 3,016,894, 1–16–62, Cl. 126—137.

Cleveland Pneumatic Industries, Inc.: *See*—
Hamilton, Wallace, and Lovell. 3,016,623.
Hartel, Erwin H. 3,017,143.
Hartel, Erwin H. 3,017,172.
Westcott, William B., Jr. 3,017,170.

Clingman, Paul F., and C. A. Lowe, to General Motors Corp. Curing form. 3,016,567, 1–16–62, Cl. 18—6.

Clough, Philip J.: *See*—
Baer, Charles A., Clough, and Steeves. 3,016,873.

Coffman, Donald D., and E. L. Jenner, to E. I. du Pont de Nemours and Co. Preparation of amines. 3,017,435, 1–16–62, Cl. 260—583.

Cohen, Werner V., to E. I. du Pont de Nemours and Co. Fluorine-containing compounds and process for preparing them. 3,017,421, 1–16–62, Cl. 260—456.

Coldren, Chester P., to Eaton Mfg. Co. Fastening devices. 3,016,941, 1–16–62, Cl. 151—38.

Cole, Raymond M.: *See*—
Bayer, Robert J., Cole, and Stoughton. 3,016,689.

Coleby, John, to R. Graesser Ltd. Apparatus for countercurrent treatment of immiscible fluids. 3,017,253, 1–16–62, Cl. 23—270.5.

Coleman, George M.: *See*—
Redfern, John T., and Coleman. 3,017,574.

Coleman, Henri P.: *See*—
Marston, Arthur E., Coleman, and Kaiser. 3,017,633.

Colgate-Palmolive Co.: *See*—
Fischer, Charles F., and Austin. 3,016,574.
Jaeger, Joseph F., and Giles. 3,017,068.

Collie, Stafford D., to Continental Can Co., Inc. Spout equipped carton. 3,017,065, 1–16–62, Cl. 229—17.

Collins, John F.: *See*—
McGurty, James A., and Collins. 3,017,265.

Collins, Lowell J. Combination curd drainer and cottage cheese mixer. 3,016,610, 1–16–62, Cl. 31—48.

Collins, Paul T. Clip. 3,016,589, 1–16–62, Cl. 24—3.

Columbia Ribbon & Carbon Mfg. Co., Inc.: *See*—
Newman, Douglas A., and Dixon. 3,017,297.

Columbian Rope Co.: *See*—
Simpson, James S. 3,016,683.

Combustion Engineering, Inc.: *See*—
Patterson, Robert C. 3,017,191.

Commonwealth Engineering Co. of Ohio, The: *See*—
Bulloff, Jack J. 3,017,434.
Compagnie des Machines Bull (Societe Anonyme): *See*—
Herpin, Jean-Claude. 3,017,077.
Conger, Robert L.: *See*—
Kern, Dale B., and Conger. 3,017,587.
Conrad, Walter F.: *See*—
Carson, Robert L., and Conrad. 3,017,565.
Continental Can Co., Inc.: *See*—
Brick, Robert M. 3,016,587.
Collie, Stafford D. 3,017,065.
Continental Oil Co.: *See*—
Atwood, Mark T. 3,017,438.
Moxley, Steve D., Jr. 3,017,107.
Riggs, Olen L., Jr. 3,017,354.
Converse, John O., to General Mills, Inc. Apparatus for milling. 3,017,126, 1–16–62, Cl. 241—77.
Cook Electric Co.: *See*—
Bellamy, John C. 3,017,111.
Cook, Leonard, to Smith Kline & French Laboratories. 3-amino-4-phenylpyrazole muscle relaxant preparations and method of producing skeletal muscle relaxation. 3,017,326, 1–16–62, Cl. 167—65.
Cooke, James R., to Pyrexon Ray Co. Ltd. Heated car seat. 3,017,493, 1–16–62, Cl. 219—46.
Cope, Geoffrey W., and D. G. Symer, to Symington Wayne Corp. Draft rigging. 3,017,038, 1–16–62, Cl. 213—64.
Corazzelli, Vito A. Can opener. 3,016,607, 1–16–62, Cl. 30—6.3.
Corder, John D. Multiplying device. 3,017,110, 1–16–62, Cl. 235—194.
Corey, Robert W., to U.S. Electrical Motors, Inc. Control system for power transmission. 3,016,754, 1–16–62, Cl. 74—230.17.
Corn Products Co.: *See*—
Kerr, Ralph W. 3,017,330.
Meisel, Harry. 3,017,294.
Costello, Robert B., to The M. W. Kellogg Co. Radioactive isotope combination. 3,017,514, 1–16–62, Cl. 250—106.
Cote, Felix. Trench wall retainer. 3,016,714, 1–16–62, Cl. 61—41.
Coulter, Samuel T., to Regents of The University of Minnesota. Method for improving butter spreadability. 3,017,275, 1–16–62, Cl. 99—121.
Counts, Thomas O.: *See*—
Sheldahl, David B., and Counts. 3,017,257.
Cour, Gene J., to International Business Machines Corp. Bit gate generator. 3,017,627, 1–16–62, Cl. 340—350.
Coursen, David L., to E. I. du Pont de Nemours and Co. Surface wave generator. 3,016,831, 1–16–62, Cl. 102—22.
Cox, Bonnar: *See*—
Goldberg, Jacob, and Cox. 3,017,103.
Cox, William L.: *See*—
Chenicek, Joseph A., and Cox. 3,017,443.
Craig, Loren J.: *See*—
Bundschuh, John J., Craig, and Hochreiter. 3,016,811.
Cramer, Richard D., to E. I. du Pont de Nemours and Co. Linear inorganic polymers and process of preparing the same. 3,017,240, 1–16–62, Cl. 23—14.
Crandon, Harry D., to American Optical Co. Improvements in projection screens. 3,016,794, 1–16–62, Cl. 88—28.90.
Crane Co.: *See*—
Hansen, George E., and Korzenowski. 3,017,158.
Crane, Robert R.: *See*—
Granet, Charles, Roland, and Crane. 3,017,197.
Cravaert, Renato, O. L. Shotwell, and T. G. Pridham, to United States of America, Agriculture. Azacolutin extraction from S. cinnamomeus var. azacoluta. 3,017,327, 1–16–62, Cl. 167—65.
Crawford, Robert T., and J. B. Stevens, to Eastman Kodak Co. Method for the manufacture of filters composed of cellulose acetate. 3,017,309, 1–16–62, Cl. 156—161.
Creed, James R. Apparatus for and method of producing heavy oil. 3,016,833, 1–16–62, Cl. 103—1.
Creuzburg, Richard, to Kurt Korber & Co., K.G. Method and apparatus for affixing the mouthpiece or tip on cigarettes. 3,016,905, 1–16–62, Cl. 131—94.
Crompton & Knowles Corp.: *See*—
Robb, Walter Y. 3,016,923.
Crompton & Knowles Packaging Corp.: *See*—
Engelson, Harry E., and Sramek. 3,016,670.
Crosby, Charles H., W. T. Hicks, and R. R. Wahlberg, to Western Electric Co., Inc. Cables. 3,017,450, 1–16–62, Cl. 174—34.
Crosfield, J. F., Ltd.: *See*—
Kogan, Philip, Wolanek, and Wagner. 3,017,486.
Cross, Anthony S., to Eastman Kodak Co. Device for removing and detecting foreign matter from a surface. 3,017,618, 1–16–62, Cl. 340—213.
Crowell, Carl C., 25% to Wendell Coffee. Wire line fishing tool. 3,016,954, 1–16–62, Cl. 166—98.
Crown Zellerbach Corp.: *See*—
Babin, Alexander. 3,017,055.
Moses, Donald W. 3,016,780.
Cruger, Robert W. Device for arresting the movement of landing aircraft or the like. 3,017,144, 1–16–62, Cl. 244—110.
Crumrine, Herbert E., and C. L. Huber, to Xerox Corp. Xerographic plate feeding and charging apparatus. 3,017,509, 1–16–62, Cl. 250—49.5.
Crutcher-Rolfs-Cummings, Inc.: *See*—
Cummings, James D. 3,016,856.
Cull, Thomas F., and R. G. Leiteritz. Cleaning attachment for dry cleaning reclaimers. 3,016,625, 1–16–62, Cl. 34—85.
Cumming, John, to G. S. Blakeslee & Co. Plastic link conveyor. 3,017,014, 1–16–62, Cl. 198—131.
Cummings, James D., to Crutcher-Rolfs-Cummings, Inc. Pipe alignment clamp. 3,016,856, 1–16–62, Cl. 113—102.
Curran, Frank J., Co.: *See*—
Klingler, Josef F. 3,017,117.
Curtiss-Wright Corp.: *See*—
Auerbach, Albert A., Berezin, Lubkin, and Shaw. 3,017,610.
Foster, Tom, and Howald. 3,017,159.
Howald, Werner E. 3,016,700.
Sternberg, Marvin, and Neu. 3,016,697.
Cushman, Clifford E.: *See*—
Wrighton, Robert J., and Cushman. 3,016,760.
Wrighton, Robert J., and Cushman. 3,016,761.
Cutlas Tool and Mfg. Co.: *See*—
Llord, James R. 3,017,207.
Cutler, Burton: *See*—
Landee, Robert W., and Cutler. 3,017,628.
Cutler-Hammer, Inc.: *See*—
Fischer, Paul M. 3,017,554.
Newman, John M., and Posselt. 3,017,555.
Cvetko, Henry J., and C. J. Chapin, to The Astatic Corp. Method of assembly of phonograph pickup cartridges. 3,017,467, 1–16–62, Cl. 179—100.41.
Cyba, Henryk A., to Universal Oil Products Co. Hydrocarbon oil composition. 3,017,357, 1–16–62, Cl. 252—32.5.
Cyba, Henryk A., to Universal Oil Products Co. Hydrocarbon oil composition. 3,017,360, 1–16–62, Cl. 252—34.
Cyba, Henryk A., to Universal Oil Products Co. Hydrocarbon oil composition. 3,017,362, 1–16–62, Cl. 252—51.5.
Daglish, Anthony F., R. Vonderwahl, and G. A. Tillotson, to J. R. Geigy, A.-G. Process for the production of 3,5-diaminopyrazine-2,6-dicarboxylic acid derivatives. 3,017,412, 1–16–62, Cl. 260—250.
Dahlstrom, Allan T., to Safeway Stores, Inc. Process of manufacturing dairy products. 3,017,274, 1–16–62, Cl. 99—116.
Dailey, Manvel C., to Kaiser Gypsum Co., Inc. Building board. 3,017,305, 1–16–62, Cl. 154—87.
D'Alello, Gaetano F., to Dal Mon Research Co. Aldehydetriazinyl arsenic condensation products and method of making same. 3,017,380, 1–16–62, Cl. 260—45.3.
Dal Mon Research Co.: *See*—
D'Alello, Gaetano F. 3,017,380.
Dana Corp.: *See*—
Fletcher, Robert E. 3,016,759.
Daniel, Roger P.: *See*—
Fredericks, Robert H., and Daniel. 3,016,764.
Darmstadt, Louis J.: *See*—
Payson, Arthur H., and Darmstadt. 3,017,047.
Davis, Warren F., Menasha Container of California, Division of Menasha Wooden Ware Corp. Shipping crate. 3,017,064, 1–16–62, Cl. 229—16.
Davis, William E., to Ford Motor Co. Universal joint. 3,016,721, 1–16–62, Cl. 64—21.
Deeken, Carl L.: *See*—
Watt, Robert E., and Deeken. 3,017,062.
Deere & Co.: *See*—
Du Shane, Wallace H. 3,017,200.
Knapp, William E., and Lohrman. 3,016,958.
De Grave, Charles J., Jr., and H. W. Straat, to Bausch & Lomb Inc. Substage lighting means for microscopes. 3,016,795, 1–16–62, Cl. 88—40.
Deibel, Raymond A., to Trico Products Corp. Windshield wiper arrangement. 3,016,558, 1–16–62, Cl. 15—250.16.
Deichert, Robert W., to Fairchild Camera and Instrument Corp. Indicating device. 3,017,624, 1–16–62, Cl. 340—324.
De Jong, George E. Combined hinge and catch. 3,016,563, 1–16–62, Cl. 16—139.
De Laval Steam Turbine Co.: *See*—
Montelius, Carl O. 3,016,842.
Del Camp, Scipione M., to United-Carr Fastener Corp. Vacuum tube socket. 3,017,604, 1–16–62, Cl. 339—194.
De Leonardis, Michael J. Warp switches. 3,017,477, 1–16–62, Cl. 200—122.
De Lorean, John Z., to General Motors Corp. Split torque transmission. 3,016,768, 1–16–62, Cl. 74—677.
De Marco, Robert F., to The Cyril Bath Co. Metal forming machine and reversible hydraulic control therefor. 3,016,882, 1–16–62, Cl. 121—41.
Deming, John M., to Monsanto Chemical Co. Method of treating soil with aqueous slurry of lattice clay and anionic polyelectrolyte. 3,016,713, 1–16–62, Cl. 61—1.
Dence, Donald S., and F. L. Metz, to Clark Equipment Co. Clutch mechanism. 3,017,006, 1–16–62, Cl. 192—113.
Denes, Peter A. Ceramic dipping process. 3,016,597, 1–16–62, Cl. 25—156.
Dent, Eric. Flashlight construction. 3,017,502, 1–16–62, Cl. 240—10.68.
Department of Mines: *See*—
Archambault, Maurice, MacEwan, and Olivier. 3,017,243.
Dersch, William C., to International Business Machines Corp. Filter circuit. 3,017,586, 1–16–62, Cl. 333—17.
Descarries, Raymond, to Aktiebolaget Electrolux. Vacuum cleaner cover latch control. 3,016,982, 1–16–62, Cl. 183—43.
De Simone, Louis W.: *See*—
Bates, Grayson F., and De Simone. 3,017,549.
Deska, Theodore J., and J. Harvey, to Eaton Mfg. Co. Rotary pumps. 3,016,834, 1–16–62, Cl. 103—4.
Detrick, M. H., Co.: *See*—
Hosbein, Louis H. 3,016,655.
Detroit Coil Co.: *See*—
Jencks, Hollis W. 3,017,547.
Detroit Edison Co., The: *See*—
Anderson, Clarence A. 3,017,483.
Devantier, Karl E. Ejecting device for vehicles in collisions. 3,016,969, 1–16–62, Cl. 180—82.
De Villiers, Joseph E. Automatic balancing machines. 3,016,751, 1–16–62, Cl. 73—468.

Dewald, Jacob F., and J. J. Lander, to Bell Telephone Laboratories, Inc. Signal translating device. 3,017,548, 1–16–62, Cl. 317—231.
Dewey, Bradley, to American Can Co. Method of and apparatus for treating surfaces of extruded thermoplastic tubing with corona discharge. 3,017,339, 1–16–62, Cl. 204—165.
Dey, George E., Sr., to G.D.M. Co. Key locked door latch mechanism. 3,016,730, 1–16–62, Cl. 70—150.
Diamond Alkali Co.: *See*—
Butler, Clarence A., Jr., and Silsby. 3,017,338.
Entemann, Charles E. 3,017,440.
Dick, A. B., Co.: *See*—
Evans, William E., and Jones. 3,017,625.
Dickson, Donald C., Jr., to Motorola, Inc. Semiconductor device. 3,017,550, 1–16–62, Cl. 317—234.
Diedrich, George P. Self-service bank deposit receiver. 3,016,848, 1–16–62, Cl. 109—23.
Diez, Adolf: *See*—
Bertram, Eduard, and Diez. 3,017,042.
Dill, Johann G., to Hughes Aircraft Co. High repetition rate pulse generator using avalanche transistor to discharge and blocking oscillator to recharge capacitor. 3,017,519, 1–16–62, Cl. 307—88.5.
Dille, Roger M., R. W. Chapman, and J. C. Ahlborn, to Texaco Inc. Production of carbon monoxide and hydrogen. 3,016,986, 1–16–62, Cl. 183—121.
Dilworth, William G., to General Motors Corp. Bearing lubrication means. 3,017,229, 1–16–62, Cl. 308—122.
Dinsmore, Stanley H., and R. M. Lee, to The Bendix Corp. Keyboard apparatus. 3,017,463, 1–16–62, Cl. 178—79.
Distillers Co. Ltd., The: *See*—
Nayler, Peter. 3,017,429.
Dittrich, Otto, to Reimers-Getriebe K.G. Link chain for infinitely variable pulley gear transmissions. 3,016,755, 1–16–62 Cl. 74—230.17.
Dixler, Daniel S.: *See*—
Arquette, Gordon J., Dixler, and Strier. 3,017,260.
Dixon, Harold F. E.: *See*—
Newman, Douglas A., and Dixon. 3,017,297.
Diuggs, Gerald S., to Borg-Warner Corp. Variable displacement hydraulic apparatus. 3,016,837, 1–16–62, Cl. 103—37.
Dodson, Raymond M., and A. H. Goldkamp, to G. D. Searle & Co. 3,17-bisoxygenated androst-2-en-1-ones and intermediates. 3,017,418, 1–16–62, Cl. 260—397.4.
Dole Valve Co., The: *See*—
Drapeau, Harold B. 3,017,113.
Kraft, El Roy J. 3,016,916.
Malone, Robert R. 3,016,718.
Donahue, Vincent J. Caps. 3,016,545, 1–16–62, Cl. 2—199.
Donnelly, Harold F.: *See*—
Voigtman, Edward H., Donnelly, and Lamb. 3,017,317.
Doty, Eric: *See*—
Childrey, Henry M., Jr., and Doty. 3,017,328.
Douglas, Alvin P., to The Murray Ohio Mfg. Co. Method of manufacturing a brazed tubular bicycle steering fork assembly. 3,016,606, 1–16–62, Cl. 29—480.
Dow Chemical Co., The: *See*—
Dulmage, Frederick E., Sr. 3,017,329.
Ehlers, Forrest A. 3,017,390.
Goodenough, Robert D. 3,017,245.
Hamilton, Dallas E. 3,017,436.
Oakes, Billy D. 3,017,355.
Olstowski, Franciszek. 3,017,336.
Ruffing, Norman R., Amos, and Puzar. 3,017,426.
Downing, Richard M., R. E. Mortberg, and W. J. Smith, to E. I. du Pont de Nemours and Co. Process for preparing expanded cellular materials. 3,016,576, 1–16–62, Cl. 18—48.
Doyle, Robert, to Phillips Petroleum Co. Heat sealing bar. 3,017,315, 1–16–62, Cl. 156—581.
Drapeau, Harold B., to The Dole Valve Co. Combination temperature and pressure sensitive valve structure. 3,017,113, 1–16–62, Cl. 236—34.
Draper Corp.: *See*—
Nichols, Edward C. 3,016,927.
Draper, Marshall D.: *See*—
Petracek, Francis J., and Draper. 3,017,407.
Drollinger, Clarence O., and R. L. Yarnall, to Texas Instruments Inc. Plug-in slip ring and brush assembly. 3,017,595, 1–16–62, Cl. 339—8.
Duane, James T., to General Electric Co. Alternator control system. 3,017,562, 1–16–62, Cl. 322—46.
Dubský, Bořivoj O. Straka, and J. Bican, to Vyzkummy a zkusebni letecky ustav. Electromagnetic recording apparatus. 3,017,575, 1–16–62, Cl. 324—99.
Ducimetiere, René: *See*—
Ianella, Arnaldo, Lecolle, and Ducimetiere. 3,016,692.
Dugas, Robert J. Muffler for an internal combustion engine. 3,016,972, 1–16–62, Cl. 181—56.
Dulmage, Frederick E., Sr., to The Dow Chemical Co. Method of locating enteric constrictions with a plurality of pills containing an X-ray contrast agent. 3,017,329, 1–16–62, Cl. 167—95.
Duncan, Richard L., D. J. Miller, F. R. Caldwall, F. W. Ruegg, and E. F. Flock, to United States of America, Navy. Apparatus for introducing a reactive chemical into the pilot zone of a combustion chamber. 3,016,704, 1–16–62, Cl. 60—39.72.
Dunn, Edward J., Jr.: *See*—
Orsino, Joseph A., and Dunn. 3,017,447.
Dunn, Joseph S., and F. C. Bennett, Jr., to Eastman Kodak Co. Process for making photoconductive lead sulfide films. 3,017,296, 1–16–62, Cl. 117—201.
Du Pont de Nemours, E. I., and Co.: *See*—
Brill, Harold C. 3,017,282.
Carter, Giles F., and Harirson. 3,017,299.
Coffman, Donald D., and Jenner. 3,017,435.
Cohen, Werner V. 3,017,421.
Coursen, David L. 3,016,831.
Cramer, Richard D. 3,017,240.
Downing, Richard M., Mortberg, and Smith. 3,016,576.
Engelhardt, Vaughn A. 3,017,301.
Kelemen, Denis G. 3,017,251.
Langsdorf, William P., Jr., MacDonald, and Schweitzer. 3,017,389.
Minnich, John W., and Sweet. 3,017,414.
Perry, Robert W., Jr. 3,016,599.
Stalter, Neil J. 3,017,236.
Wolfe, William R., Jr. 3,017,335.
Dura Corp.: *See*—
Schutt, Lester E. 3,016,919.
Durst, Norman H. Movable arc form and building method. 3,016,595, 1–16–62, Cl. 25—131.
Du Shane, Wallace H., to Deere & Co. Hitch devices with detachable guide means. 3,017,200, 1–16–62, Cl. 280—477.
Duvall, Ivo W. Motor driven fishing reel device. 3,017,134, 1–16–62, Cl. 242—84.44.
Dziedziula, Edward J., R. R. Pecoraro, and A. S. Sinatra, to Ref Mfg. Corp. Fluid dispensing device. 3,016,930, 1–16–62, Cl. 141—361.
Dzienisiewicz, Joseph E., ⅓ to Gadget-Of-The-Month Club, Inc. Improved pants hanger. 3,017,059, 1–16–62, Cl. 223—91.
Eagle Picher Co.: *See*—
Van Dolah, Harry J., and Linhart. 3,017,279.
Eastman, Du Bois, to Texaco Inc. Calcium carbide process. 3,017,259, 1–16–62, Cl. 48—216.
Eastman, Du Bois, and W. G. Schlinger, to Texaco Inc. Treatment of hydrocarbons. 3,017,345, 1–16–62, Cl. 208—210.
Eastman Kodak Co.: *See*—
Akin, George A. 3,016,985.
Bowler, Valentine M. 3,017,133.
Bundschuh, John J., Craig, and Hochreiter. 3,016,811.
Caldwell, John R., and Martin. 3,017,388.
Crawford, Robert T., and Stevens. 3,017,309.
Cross, Anthony S. 3,017,618.
Dunn, Joseph S., and Bennett. 3,017,296.
Elam, Edward U., Hasek, and Martin. 3,017,395.
Gnage, Oliver W., and Pollock. 3,017,132.
Lappin, Gerald R. 3,017,383.
Miller, Frank D., and Adler. 3,017,289.
Piper, Douglas E. 3,017,271.
Smith, John W. 3,016,581.
Tregillus, Leonard W., and Rasch. 3,017,270.
Wexler, Vernon K. 3,016,945.
Wittel, Otto, and Salzer. 3,016,620.
Yudelson, Joseph. 3,017,280.
Eastwood, George G. M.: *See*—
Gade, Marvin F., and Eastwood. 3,016,622.
Eaton Mfg. Co.: *See*—
Coldren, Chester P. 3,016,941.
Deska, Theodore J., and Harvey. 3,016,834.
Jaeschke, Ralph L. 3,016,580.
La Vallee, Theodore R. 3,017,527.
Eaton, Robert F., to Radio Corp. of America. Cabinet structure for small radio receivers and the like. 3,017,504, 1–16–62, Cl. 250—16.
Ebeling, Norbert. Spear gun. 3,016,891, 1–16–62, Cl. 124—22.
Ebneth, Harold, ½ to Farbenfabriken Bayer Aktiengesellschaft and ½ to Mobay Chemical Co. Method of molding open pore isocyanate foam. 3,016,575, 1–16–62, Cl. 18—48.
Eckelaert, Jack F.: *See*—
Lee, Ralph E., and Eckelaert. 3,017,160.
Edson, Murray H.: *See*—
Jonach, Fredrick L., Edson, and Wilson. 3,016,739.
Edwards, Belvin. Speed reducing attachment for an outboard motor. 3,016,871, 1–16–62, Cl. 115—42.
Edwards, Richard A., and E. E. Reynolds, to Smith-Corona Marchant Inc. Calculating machines. 3,017,088, 1–16–62, Cl. 235—145.
Egan, Edmond F., and L. M Hubby, Texaco Inc. Apparatus for compensating for gradual changes in load on a walking beam pump. 3,016,767, 1–16–62, Cl. 74—589.
Egdom, Clarence W.: *See*—
Schoeld, Edmund A., and Egdom. 3,017,028.
Ehlers, Forrest A., to The Dow Chemical Co. Ring-substituted N-vinyl-2-oxazolidinone copolymers. 3,017,390, 1–16–62, Cl. 260—77.5.
Ehlert, William A., and L. D. Mersek, to The Ajax Mfg. Co. Wire drawing apparatus. 3,017,016, 1–16–62, Cl. 205—13.
Eichenberger, Hans P., to Thompson Ramo Wooldridge Inc. Method and apparatus for reducing drag on submerged vehicles. 3,016,865, 1–16–62, Cl. 114—67.
Elter, Karl, and E. Truschelt, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of 2-cis-β-ionylidene acetic acid. 3,017,432, 1–16–62, Cl. 260—514.
Elam, Edward U., R. H. Hasek, and J. C. Martin, to Eastman Kodak Co. Tetraalkylcyclobutane-1,3-diamines and resinous polyamides therefrom. 3,017,395, 1–16–62, Cl. 260—78.
Elder, Lorne C., to Associated Spring Corp. Connector for metal strips. 3,016,994, 1–16–62, Cl. 189—36.
Electric Eye Equipment Co.: *See*—
Watt, Robert E., and Deeken. 3,017,062.
Electric & Musical Industries Ltd.: *See*—
James, Ivanhoe J. P., and Newton. 3,017,454.
Watson, George R., Perkins, and James. 3,017,455.
Electric Storage Battery Co., The: *See*—
Cahan, Boris D. 3,017,448.
Floyd, James K. 3,017,570.

Electro-Mechanical Research, Inc.: *See*—
Runyan, Raymond A. 3,017,616.
Elliott, George E., Jr., J. B. McKinley, and M. M. Stewart, to Gulf Research & Development Co. Process for preparation of a catalyst. 3,017,368, 1-16-62, Cl. 252—439.
Elliott, Sam D.: *See*—
Allyn, Robert M., and Elliott. 3,016,970.
Ellis, Charles E. Adjustable speed alternating current motor. 3,017,528, 1-16-62, Cl. 310—191.
Ellis, Rollo G., to Micromatic Hone Corp. Ball honing tool. 3,016,662, 1-16-62, Cl. 51—209.
Elmendorf, Armin. Method of splicing veneer. 3,017,310, 1-16-62, Cl. 156—248.
Elsiager, Edward F.: *See*—
Tendick, Frank H., Thompson, and Elsiager. 3,017,413.
Emenaker, Leo J., to The Bendix Corp. Potentiometer apparatus. 3,017,593, 1-16-62, Cl. 338—143.
Emery, William M. Pillows. 3,017,221, 1-16-62, Cl. 297—397.
En Dean, Howard J., J. D. Jones, and E. Topanellian, Jr., Gulf Research & Development Co. Pipeline leak surveying. 3,016,733, 1-16-62, Cl. 73—40.5.
Enenstein, Norman H.: *See*—
Begovich, Nicholas A., and Enenstein. 3,017,630.
Engel, Willem F., to Shell Oil Co. Polymerization of ethylene with molybdenumoxide on silica-alumina catalyst. 3,017,402, 1-16-62, Cl. 260—94.9.
Engelbrecht, Heinz-Joachim, D. Lenke, and H. Müller, to VEB Deutsches Hydrierwerk Rodleben. New substituted phthalazones and process for their preparation. 3,017,411, 1-16-62, Cl. 260—247.2.
Engelhardt, Vaughn A., to E. I. du Pont de Nemours and Co. Propellant compositions containing a polycyano fuel component. 3,017,301, 1-16-62, Cl. 149—45.
Engelmann, Milton E., to Vandale Corp. Unloader for silos and the like. 3,017,044, 1-16-62, Cl. 214—17.
England, Richard E., and W. R. McCullough, to Ford Motor Co. Dielectric heating. 3,017,484, 1-16-62, Cl. 219—10.53.
Engle, Loy S.: *See*—
Bernardi, Dominic J., Tringal, Roth, and Engle. 3,017,374.
Engleson, Harry E., and E. D. Sramek, to Crompton & Knowles Packaging Corp. Tray filling and forming apparatus. 3,016,670, 1-16-62, Cl. 53—194.
English Electric Co. Ltd., The: *See*—
Lorett, Jerzy A., and Morris. 3,016,703.
English Electric Valve Co. Ltd.: *See*—
Ruggles, Percy C. 3,017,535.
Entemann, Charles E., to Diamond Alkali Co. Dihalo, bis-(2,4,5-trihalophenyl)-methanes. 3,017,440, 1-16-62, Cl. 260—649.
Erickson, Bruce G., A. T. Metcalf, Jr., and E. C. Schuster, to Nordberg Mfg. Co. Automatic power plant system. 3,016,690, 1-16-62, Cl. 60—16.
Erni, Gustav A.: *See*—
Styner, Fritz, and Chlouba. 3,017,079.
Erwin, Weldon C. Combination eye cup and eye fluid applicator. 3,016,898, 1-16-62, Cl. 128—249.
Escambia Chemical Corp.: *See*—
Holdsworth, Robert S., and Smith. 3,017,399.
Esso Research and Engineering Co.: *See*—
Hocheraf, Norman N. 3,017,442.
Jonach, Frederick L., Edson, and Wilson. 3,016,739.
Kolfenbach, John J., and Gleason. 3,016,701.
Richardson, James T. 3,017,256.
Etablissement Aeromix: *See*—
Schmid, Otto. 3,016,979.
Eule, Martin. Means for supervising the heat development and heat transfer in boilers, furnaces and heat consumers. 3,016,738, 1-16-62, Cl. 73—112.
Evans, Arthur W., and J. D. Groves, to British Titan Products Co. Ltd. Apparatus for the production of titanium tetrachloride. 3,017,254, 1-16-62, Cl. 23—284.
Evans, William E., and E. D. Jones, to A. B. Dick Co. Translation system. 3,017,625, 1-16-62, Cl. 340—324.
Eyssen, Hendrik: *See*—
Van Dijck, Paul, and Eyssen. 3,017,272.
FMC Corp.: *See*—
Galloway, Robert K. 3,016,808.
Galloway, Robert K. 3,016,847.
Kerr, Charles E. 3,016,807.
Lill, Melvin H. 3,017,154.
McGrath, Earle J. 3,017,007.
Mumma, Harold J. 3,017,024.
Newburn, Harold W. 3,016,935.
Olson, Albert M. 3,016,957.
Sheetz, Charles E. 3,017,013.
Thompson, Wendell S. 3,017,026.
Vadas, Leslie. 3,016,664.
Whitmore, Robert A. 3,016,666.
Wilson, Clifford K., Mount, and Jabbusch. 3,016,936.
Wilson, Clifford K., Mount, and Jabbusch. 3,017,298.
Faiella, John D., to Harvel Research Corp. Composition comprising polysulphide polymer and furfural-ketone reaction product. 3,017,382, 1-16-62, Cl. 260—45.5.
Fairchild Camera and Instrument Corp.: *See*—
Deichert, Robert W. 3,017,624.
Saykay, Joseph J. 3,017,459.
Welch, Albert B. 3,017,515.
Fairmont Foods Co.: *See*—
Sass, Dale H. 3,016,644.
Faisandier, Jacques. Hydro-electric servo mechanisms. 3,016,883, 1-16-62, Cl. 121—41.
Falconer, David G., to Jonker-Friend Corp. Drafting machine of the guide-wire type. 3,016,614, 1-16-62, Cl. 33—80.
Falconer, David G., to Jonker-Friend Corp. Crossbar drafting and layout machine based on flexible guide elements. 3,016,615, 1-16-62, Cl. 33—80.
Falls Paper & Power Co.: *See*—
Joa, Curt G. 3,016,582.
Farbenfabriken Bayer Aktiengesellscbaft: *See*—
Ebneth, Harold. 3,016,575.
Elter, Karl, and Truschelt. 3,017,432.
Mayer, Karl-Heinrich, and Schnell. 3,017,424.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Riggert, Karlheinz. 3,016,577.
Fargo, Jarvis J.: *See*—
Anderson, William D., Brandt, Le Clereq, and Fargo. 3,016,598.
Fatula, William F., to Kool vent Metal Awning Corp. of America. Metal awning. 3,016,584, 1-16-62, Cl. 20—57.5.
Fawick Corp.: *See*—
Fawick, Thomas L. 3,017,004.
Fawick, Thomas L., to Fawick Corp. Centrifugal clutch assembly. 3,017,004, 1-16-62, Cl. 192—105.
Fazekas, Laszlo: *See*—
Meissler, Ivan M., and Fazekas. 3,016,771.
Fegan, George J., to Chromium Mining & Smelting Corp., Ltd. Electric resistance, gas-tight furnace. 3,017,262, 1-16-62, Cl. 75—28.
Feild, George B., to Hercules Powder Co. Cross-linking of poly(vinyl chloride). 3,017,379, 1-16-62, Cl. 260—41.
Fendall Co.: *See*—
Haviland, Philip J. 3,016,797.
Fichet, Edouard: *See*—
Bo, Gilbert, Fichet, Perrot, and Perras. 3,017,401.
Fichtel & Sachs A.G.: *See*—
Von Bomhard, Josef. 3,017,001.
Fikes, Joseph E., to United States of America, Army. Servovane pitch and yaw indicator. 3,016,742, 1-16-62, Cl. 73—147.
Finch, Donald I., E. Korostoff, and D. D. Pollock, to Leeds and Northrup Co. Copper-nickel thermocouple elements with controlled voltage temperature characteristics. 3,017,269, 1-16-62, Cl. 75—159.
Finer Products Ltd.: *See*—
Armson, Harold J. 3,017,201.
Fink, Marvin J., and C. J. Birk, to General Motors Corp. Selective paging receiver. 3,017,631, 1-16-62, Cl. 343—225.
Finn, Raymond J. Life saving equipment. 3,016,549, 1-16-62, Cl. 9—14.
Fischer, Charles F., and A. E. Austin, Jr., to Colgate-Palmolive Co. Casting apparatus. 3,016,574, 1-16-62, Cl. 18—30.
Fischer, Paul W., to Union Oil Co. of California. Drilling fluids. 3,017,319, 1-16-62, Cl. 252—8.5.
Fischer, Paul W., to Union Oil Co. of California. Emulsion-base drilling fluid. 3,017,350, 1-16-62, Cl. 252—8.5.
Fischer, Paul M., to Cutler-Hammer, Inc. Alternating current motor control systems. 3,017,554, 1-16-62, Cl. 318—239.
Fitchburg Paper Co.: *See*—
Thurlow, John F. 3,016,823.
Fitzner, Arthur O., to Giddings & Lewis Machine Tool Co. Controls for machine tools and the like. 3,016,778, 1-16-62, Cl. 82—14.
Fletcher, Robert E., to Dana Corp. Gear shift lock. 3,016,759, 1-16-62, Cl. 74—475.
Flint, Kenneth C.: *See*—
Werner, Frank R., Randall, and Flint. 3,017,078.
Flint, Knute W., to World Wide Helicopters, Inc. Apparatus and method for moving loads with combination helicopter and balloon. 3,017,138, 1-16-62, Cl. 244—3.
Flock, Ernest F.: *See*—
Duncan, Richard L., Miller, Caldwell, Ruegg, and Flock. 3,016,704.
Flood, James W. Bathtub attachments. 3,016,547, 1-16-62, Cl. 4—185.
Floyd, Bobby W. Adjustable regulator for dampers. 3,016,762, 1-16-62, Cl. 74—527.
Floyd, James K., to The Electric Storage Battery Co. Automatic battery discharge means. 3,017,570, 1-16-62, Cl. 321—29.5.
Ford Motor Co.: *See*—
Artman, Robert A., Root, and Turner. 3,017,115.
Bartson, Lester J., and McAnulty. 3,017,267.
Batdorf, John Q. 3,016,722.
Davis, William E. 3,016,721.
England, Richard E., and McCullough. 3,017,484.
Fredericks, Robert H., and Daniel. 3,016,764.
Irland, Max J., and Lindberg. 3,017,536.
Kurz, Alvin M., and Van Wicklin. 3,016,710.
Lawser, John J. 3,017,540.
Lawser, John J. 3,017,541.
Towns, Truman W. 3,016,990.
Fore, Reaser G. Illuminated fishing rods. 3,017,499, 1-16-62, Cl. 240—6.4.
Forrer, Homer W., to The Mead Corp. Article carrier. 3,017,054, 1-16-62, Cl. 220—113.
Fortney, Grant S. Waste condensation tube and stoplight warning device. 3,016,888, 1-16-62, Cl. 123—119.
Foster, Tom, and W. E. Howald, to Curtiss-Wright Corp. Hollow blade construction. 3,017,159, 1-16-62, Cl. 253—39.15.
Foster Wheeler Corp.: *See*—
Bliss, Charles. 3,016,624.
Fritz, Wilfred J. 3,016,981.
Taylor, John E. 3,016,712.
Wimmer, Rudolph A. 3,016,855.
Fournet, Andre, and H. Lemoine, to Societe des Usines Chimiques Rhone-Poulenc. Acrylonitrile-cyclic sulfone copolymers. 3,017,397, 1-16-62, Cl. 260—79.3.
Fowler, Leslie L., to Infilco, Inc. Magnetic separator. 3,017,031, 1-16-62, Cl. 210—222.

Fox, Lois J.: *See*—
Smith, Traver J. 3,016,788.
Fox, William C., to The Sessions Clock Co. Collapsible adjusting knob. 3,016,686, 1-16-62, Cl. 58—80.
Foye, Allen B., to W. R. Grace & Co. Container closures. 3,017,048, 1-16-62, Cl. 215—40.
Fram Corp.: *See*—
Rodman, Clarke A. 3,017,239.
Frank, William H.: *See*—
Platz, Elwood T., and Frank. 3,017,605.
Franz, Richard D., and P. F. Warner, to Phillips Petroleum Co. 1,2-di(tert-alkyl mercapto) ethane insecticides. 3,017,320, 1-16-62, Cl. 167—22.
Frasier, Jordan D., and H. L. Hunter. Explosion proof cabinet. 3,016,813, 1-16-62, Cl. 98—1.
Fredericks, Robert H., and R. P. Daniel, to Ford Motor Co. Safety steering wheel. 3,016,764, 1-16-62, Cl. 74—552.
Freund, Berthold G. Apparatus for dehydrating food and the like. 3,016,627, 1-16-62, Cl. 34—187.
Friant, James E., R. L. McWilliams, and G. P. Ransom, to General Motors Corp. Windshield washer nozzle. 3,017,120, 1-16-62, Cl. 239—117.
Frick, Charles E., to Union Carbide Corp. Fluid actuating device. 3,016,840, 1-16-62, Cl. 103—44.
Fridolph, Maude C. Girdle. 3,016,901, 1-16-62, Cl. 128—548.
Fritts, Robert W., to Minnesota Mining and Mfg. Co. Constant energy source. 3,017,444, 1-16-62, Cl. 236—4.
Fritts, Robert W., to Minnesota Mining and Mfg. Co. Burner-thermoelectric generator assembly. 3,017,445, 1-16-62, Cl. 136—4.
Fritz, Wilfred J., to Foster Wheeler Corp. Method and apparatus for quenching high temperature gases. 3,016,981, 1-16-62, Cl. 183—27.
Froehlich, Ernst. Heddle for harness frames. 3,016,926, 1-16-62, Cl. 139—93.
Fruehauf Trailer Co.: *See*—
Tantlinger, Keith W. 3,017,501.
Fuller Co.: *See*—
Markle, Harry A., Jr., and Morrow. 3,016,849.
Fulton, Bertram A., to Borg-Warner Corp. Strut angle gauge. 3,016,750, 1-16-62, Cl. 73—432.
G.D.M. Co.: *See*—
Dey, George E., Sr. 3,016,730.
Gade, Marvin F., and G. G. M. Eastwood, to Kimberly-Clark Corp. Control system for paper machine driers. 3,016,622, 1-16-62, Cl. 34—48.
Gadget-Of-The-Month Club, Inc.: *See*—
Dzienislewicz, Joseph E. 3,017,059.
Peterson, Walter G., and Cadwallader. 3,016,647.
Gagin, Lawrence V.: *See*—
Labino, Dominick, and Gagin. 3,017,318.
Gagne, Romeo, to The General Tire & Rubber Co. Laminated extruding die. 3,016,568, 1-16-62, Cl. 18—8.
Gainesville Machine Co., Inc.: *See*—
Brown, George W., and Harben. 3,017,027.
Galipeau, Polydore. Handle assembly for container. 3,017,215, 1-16-62, Cl. 294—31.2.
Galloway, Robert K., to FMC Corp. Carton feeding and erecting mechanism. 3,016,808, 1-16-62, Cl. 93—53.
Galloway, Robert K., to FMC Corp. Pie tamping and perforating mechanism. 3,016,847, 1-16-62, Cl. 107—1.
Gamble, Richard F., and R. S. Lanctot, to United Aircraft Corp. Jet ignition system. 3,016,706, 1-16-62, Cl. 60—39.82.
Gann, Raymond L.: *See*—
Wiggins, Richard F., Maltas, and Gann. 3,017,009.
Garbuny, Max, to United States of America, Air Force. Apparatus for reducing spurious signals in thermal image converter. 3,017,458, 1-16-62, Cl. 178—6.8.
Gardel, Robert, and A. Rogovin. Doll leg mounting and operating mechanism. 3,016,652, 1-16-62, Cl. 46—149.
Gardner, Peter A. Agricultural liquid, such as weedicide or hormone, spraying apparatus. 3,016,653, 1-16-62, Cl. 47—1.7.
Garombo, Michele. Semi-automatic threading-device for sliding lathes. 3,016,777, 1-16-62, Cl. 82—5.
Garrett Corp., The: *See*—
Meermans, John W. 3,017,280.
Gary, Lee J.: *See*—
Barrett, Edward L. 3,017,449.
Gaston, Dexter W., to Wall Rope Works, Inc. Cordage and method for producing the same. 3,016,682, 1-16-62, Cl. 57—140.
Gates, Earl J., to Servco Equipment Co. Counters and sliding closures therefor. 3,017,233, 1-16-62, Cl. 312—322.
Gebruder Gysi A.G.: *See*—
Michel, Kaspar. 3,016,801.
Gebruder Sucker G.m.b.H.: *See*—
Kabelitz, Hans, and von Kannen. 3,016,734.
Gehring, Harvey T., to The Sherwin-Williams Co. Method of foam suppression in oil-in-water emulsions by use of solvent solution of liquid polyvinyl isobutyl ether. 3,017,375, 1-16-62, Cl. 260—22.
Geigy, J. R., A.-G.: *See*—
Daglish, Anthony F., Vonderwahl, and Tillotson. 3,017,412.
General American Transportation Corp.: *See*—
Talmey, Paul. 3,017,532.
General Dynamics Corp.: *See*—
McWhorter, Bobby J., and Johnson. 3,016,591.
General Electric Co.: *See*—
Andrews, John L. 3,017,489.
Bandenieks, Julius E. 3,017,470.
Benander, George B. 3,017,601.
Brown, John F., Jr., and Vogt. 3,017,386.
Duane, James T. 3,017,562.
Goldberg, Jacob, and Cox. 3,017,103.
Grimshaw, Charles. 3,017,478.
Haines, Edward M., and Hughes. 3,017,162.
Harrison, Don E. 3,017,365.
General Electric Co.: *See*—Continued
Kious, Gerald A. 3,017,508.
Lutz, John A., and Vidoni. 3,016,654.
McGurty, James A., and Collins. 3,017,265.
Modic, Frank J. 3,017,384.
Newell, James K., Jr. 3,017,488.
Pietsch, Joseph A. 3,016,715.
Potter, Ralph M., and Aven. 3,017,366.
Schilling, Edmund F. 3,017,531.
Simpson, Verne G. 3,017,378.
Sprung, Murray M., and Guenther. 3,017,385.
Vanden Boom, Robert F., and Anderson. 3,016,727.
Windsor, Harold F. 3,017,288.
Zarbock, Donald T. 3,017,451.
General Electric Co. Ltd., The: *See*—
Goldsmid, Hiroshi J., and Sheard. 3,017,446.
Riddiford, Reginald L., and Salisbury. 3,017,082.
General Instrument Corp.: *See*—
Hagen, Glenn E. 3,017,074.
General Mills, Inc.: *See*—
Beaverson, Lowell D. 3,016,781.
Converse, John O. 3,017,126.
General Motors Corp.: *See*—
Alexander, Donald F., and Harrold. 3,017,030.
Bates, Charles E. 3,017,546.
Bayer, Robert J., Cole, and Stoughton. 3,016,689.
Berninger, Kenneth L. 3,017,029.
Bryant, Leland W. 3,016,696.
Christenson, Howard W., Livezey, and Breting. 3,016,769.
Clingman, Paul E., and Lowe. 3,016,567.
De Lorean, John Z. 3,016,768.
Dilworth, William G. 3,017,229.
Fink, Marvin J., and Birk. 3,017,631.
Friant, James E., McWilliams, and Ransom. 3,017,120.
Hanysz, Eugene A. 3,017,518.
Hanysz, Eugene A., and Weller. 3,016,732.
Keating, Bernard H. 3,017,217.
Keller, Robert C. 3,016,758.
Kellogg, George E., and Kenzik. 3,016,880.
Loesch, Ronald E. 3,017,599.
Marvin, John T. 3,017,114.
Pierce, Earl W. 3,017,530.
Reindl, Harold J. 3,016,719.
Renner, Glen R., and Rice. 3,017,563.
Rise, William E. 3,016,657.
Runci, Joseph O., and Bernotas. 3,017,046.
Sobey, Albert J. 3,016,698.
Ticknor, Raymond G. 3,016,946.
Wilkens, Carl E., and Bauman. 3,016,881.
Ziegler, Eugene R. 3,016,753.
Ziegler, Eugene R. 3,016,836.
General Tire & Rubber Co., The: *See*—
Gagne, Romeo. 3,016,568.
Kraft, Herman T. 3,017,312.
Getzin, Allan R., to American Air Filter Co., Inc. Filter structure. 3,016,602, 1-16-62, Cl. 29—190.
Getzin, Allan R., to American Air Filter Co., Inc. Gas filter apparatus. 3,016,984, 1-16-62, Cl. 183—73.
Gibson, Glenn J., to Air Reduction Co., Inc. Apparatus for metal spraying. 3,017,119, 1-16-62, Cl. 239—81.
Gibson, John C., to International Telephone and Telegraph Corp. Primary-secondary link-spread crossbar selector system. 3,017,465, 1-16-62, Cl. 179—22.
Giddings & Lewis Machine Tool Co.: *See*—
Fitzner, Arthur O. 3,016,778.
Giles, Jeremiah D., and W. R. Julius; said Julius assor. to said Giles. Multiple layer thermal insulation. 3,017,020, 1-16-62, Cl. 206—59.
Giles, William J.: *See*—
Jaeger, Joseph F., and Giles. 3,017,068.
Giles, William S. Soldering pump. 3,016,854, 1-16-62, Cl. 113—93.
Gilfillan Bros., Inc.: *See*—
Landee, Robert W., and Cutler. 3,017,628.
Van Alstyne, Alvin G., and Moore. 3,017,105.
Giller, Robert H. Cordline connector for medical headlight assembly. 3,017,469, 1-16-62, Cl. 200—52.
Gillies, Donald B.: *See*—
Strachey, Christopher, and Gillies. 3,017,090.
Strachey, Christopher, and Gillies. 3,017,094.
Ginn, Clarence M.: *See*—
Hawkes, Howard T., Ginn, and Sabasteanski. 3,017,041.
Gladding, McBean & Co.: *See*—
Anderson, William D., Brandt, Le Clercq, and Fargo. 3,016,598.
Glasoe, Karl M., Jr., to Thorpe Insulation Co. Insulated structure. 3,016,999, 1-16-62, Cl. 189—85.
Gleason, Walter W.: *See*—
Kolfenbach, John J., and Gleason. 3,016,701.
Glodenis, Zenonas: *See*—
Landsverk, Ole G., and Glodenis. 3,017,511.
Gnage, Oliver W., and J. S. Pollock, to Eastman Kodak Co. Adjustable flanges for various width roll papers. 3,017,132, 1-16-62, Cl. 242—71.9.
Gogul, Stefan, and L. C. Gogul. Fire escape slide. 3,016,975, 1-16-62, Cl. 182—48.
Gogul, Leo C.: *See*—
Gogol, Stefan, and Gogul. 3,016,975.
Goldberg, Jacob, and B. Cox, to General Electric Co. Service-charge calculation system. 3,017,103, 1-16-62, Cl. 235—176.
Goldkamp, Arthur H.: *See*—
Dodson, Raymond M., and Goldkamp. 3,017,418.
Goldsmid, Hiroshi J., and A. R. Sheard, to The General Electric Co. Ltd. Preparation of material for thermocouples. 3,017,446, 1-16-62, Cl. 136—5.
Gondek, John T. Shaft couplings. 3,016,723, 1-16-62, Cl. 64—27.

Gonzalez, Don J., to American Air Filter Co., Inc. Electrostatic precipitator. 3,016,980, 1–16–62, Cl. 183—7.

Goodenough, Robert D., to The Dow Chemical Co. Removal of sodium sulfate from caustic salt. 3,017,245, 1–16–62, Cl. 23—89.

Goodrich, B. F., Co., The: *See*—
Lessig, Edward T. 3,016,684.
Pond, James W. 3,017,308.

Gordon, Philip N., C. R. Stephens, Jr., M. M. Noseworthy, and F. W. Teare, to Chas. Pfizer & Co., Inc. Therapeutic compositions comprising polyhydric alcohol solutions of tetracycline-type antibiotics. 3,017,323, 1–16–62, Cl. 167—65.

Gordon, Richard O., and J. B. Keir, to Vickers Inc. Power transmission. 3,016,708, 1–16–62, Cl. 60—52.1

Goss, Oliver P. M. Hygrometer. 3,016,744, 1–16–62, Cl. 73—337.5.

Gottshall, Ralph I., and H. W. Swain, to Gulf Research & Development Co. Lubricating composition. 3,017,359, 1–16–62, Cl. 252—32.7.

Gottzmann, Christian F., to Union Carbide Corp. Apparatus for storing and pumping a volatile liquid. 3,016,717, 1–16–62, Cl. 62—55.

Goudey, Alan: *See*—
Klein, Martin L., Morgan and Goudey. 3,017,582.

Grace, W. R., & Co.: *See*—
Bafford, Richard A., and Gregorian. 3,017,376.
Foye, Allen B. 3,017,048.
Wszolek, Walter R. 3,017,403.

Graesser, R., Ltd.: *See*—
Coleby, John. 3,017,253.

Graf, Martin, to Grob & Co. A.G. Heddle frame. 3,016,925, 1–16–62, Cl. 139—92.

Grahn, Arne Y., to The Poly Choke Co., Inc. Ventilated rib structure for gun barrels. 3,016,613, 1–16–62, Cl. 33—47.

Granet, Charles, G. E. R. Roland, and R. R. Crauc. Adjustable shock absorber for vehicles with pneumatic suspension. 3,017,197; 1–16–62, Cl. 280—124.

Grant Oil Tool Co.: *See*—
Castelvecchi, John J. 3,016,604.

Greene, Richard A. Industrial curtain hardware. 3,016,951, 1–16–62, Cl. 160—126.

Greene, William J., to Air Reduction Co., Inc. Automatic seam follower. 3,017,496, 1–16–62, Cl. 219—124.

Greenleaf, Nathaniel B. Mop having a universally adjustable handle. 3,016,556, 1–16–62, Cl. 15—229.

Greenwood, Thomas L. Shock register. 3,017,083, 1–16–62, Cl. 235—91.

Gregorian, Raz.nic S.: *See*—
Bafford, Richard A., and Gregorian. 3,017,376.

Griffen, Ralph R., to Holley Carburetor Co. Accelerating pump channel vapor purging system. 3,017,167, 1–16–62, Cl. 261—34.

Grimshaw, Charles, to General Electric Co. Thermally responsive switch. 3,017,478, 1–16–62, Cl. 200—138.

Grob & Co. A.G.: *See*—
Graf, Martin. 3,016,925.
Wagner, Otto. 3,016,924.

Groschinude, René, to Laboratoires Vifor S.A. Manufacturing process of a container made of plastic material and installation for carrying out said process. 3,016,669, 1–16–62, Cl. 53—191.

Gross, Maurice J., to Barnes Drill Co. Hone and abrasive element therefor. 3,016,660, 1–16–62, Cl. 51—184.3.

Groth, Otto I., S. H. Carlson, and K. A. I. Carlsson, ½ to J. E. W. Svensson. Cover structures for wagons, trucks or the like. 3,017,218, 1–16–62, Cl. 296—106.

Groves, James D.: *See*—
Evans, Arthur W., and Groves. 3,017,254.

Groves, Katherine B.: *See*—
Smith, Walter H. B. 3,016,646.

Grundig, Max: *See*—
Hebel, Martin, and Schweitzer. 3,017,095.

Grunenberg, Anton. Tripod gun rests. 3,016,802, 1–16–62, Cl. 89—40.

Grunt, Max, and M. Ben Uri; said Ben Uri assor. to said Grunt. House construction. 3,016,583, 1–16–62, Cl. 20—1.

Grunzweig & Hartmann A.-G.: *See*—
Buchmeier, Eduard. 3,016,998.

Gruss, George A., to American Machine & Foundry Co. Pin elevating mechanism for bowling pin spotting machines. 3,017,184, 1–16–62, Cl. 273—43.

Grybowski, Thaddeus M.: *See*—
Boughtwood, John E., and Grybowski. 3,017,464.

Guenther, Frederick O.: *See*—
Sprung, Murray M., and Guenther. 3,017,385.

Gulles, Harry W.: *See*—
Albert, Pauline M., and Gulles. 3,017,036.

Gulf Research & Development Co.: *See*—
Elliott, George E., Jr., McKinley, and Stewart. 3,017,368.
En Dean, Howard J., Jones, and Topanelian. 3,016,733.
Gottshall, Ralph I., and Swain. 3,017,359.
Jewell, James G. 3,017,353.

Gunver Mfg. Co., The: *See*—
Williams, La Vergne H. 3,017,205.

Gustavson, Sterling T., and V. G. Hanson, to International Cigar Machinery Co. Tobacco product and method and apparatus for making same. 3,016,779, 1–16–62, Cl. 83—242.

Guterman, Sadia S., to Raytheon Co. Magnetic core shift register. 3,017,084, 1–16–62, Cl. 235—92.

Guthrie, John D.: *See*—
Bullock, Austin L., and Guthrie. 3,017,237.

Guyot, Roger R. G. Marker for any kind of live-stock, more specially poultry. 3,016,643, 1–16–62, Cl. 40—302.

Gyromat Corp., The: *See*—
Wiggins, Richard F., Maltas, and Gann. 3,017,009.
Wiggins, Richard F., Maltas, and Ullman. 3,017,010.

Haanstra, John W., to International Business Machines Corp. Adding device. 3,017,098, 1–16–62, Cl. 235—172.

Haas, Charles B. Magnetic minesweeping equipment. 3,016,868, 1–16–62, Cl. 114—235.

Hacklander, Hans, to The Singer Mfg. Co. Looper mechanisms for sewing machines. 3,016,851, 1–16–62, Cl. 112—200.

Hagen, Glenn E., to General Instrument Corp. Intercoupling apparatus. 3,017,074, 1–16–62, Cl. 234—23.

Hagg, Arthur C., and B. Cametti, to Westinghouse Electric Corp. Dynamoelectric machine. 3,017,072, 1–16–62, Cl. 230—118.

Haines, Edward M., and C. E. Hughes, to General Electric Co. Heating and cooling apparatus. 3,017,162, 1–16–62, Cl. 257—290.

Hairstrate, Inc.: *See*—
Childrey, Henry M., Jr., and Doty. 3,017,328.

Hall, Harry H. Acoustical mine firing control system. 3,016,829, 1–16–62, Cl. 102—18.

Hall, Hugh E., Jr.: *See*—
McKay, Alexander S., and Hall. 3,016,961

Hall, Hugh E., Jr., to Texaco Inc. Radioactivity geophysical exploration. 3,016,960, 1–16–62, Cl. 175—41.

Halliburton, Alwyn N. Process for attaching plastic to metal and articles produced thereby. 3,017,307, 1–16–62, Cl. 156—72.

Halsey, Brenton S.: *See*—
Outterson, Charles R., Baker and Halsey. 3,017,295.

Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F. 3,016,974.

Hamilton, Dallas E., to The Dow Chemical Co. Preparation of fluoral. 3,017,436, 1–16–62, Cl. 260—601.

Hamilton, Earl F., to Hamilton Cosco, Inc. Step stool. 3,016,974, 1–16–62, Cl. 182—33.

Hamilton, Wallace, and J. Lovell, to Cleveland Pneumatic Industries, Inc. Transport vehicle. 3,016,623, 1–16–62, Cl. 34—50.

Hamilton Watch Co.: *See*—
Reese, James H. 3,016,685.
Rueger, Herman. 3,016,688.

Hamor, Glenn H. 4-amino-2-sulfamylbenzoic acid esters. 3,017,427, 1–16–62, Cl. 260—470.

Hanrahan, Francis P., to United States of America, Agriculture. Apparatus for heat-treating liquid food stuffs. 3,016,815, 1–16–62, Cl. 99—251.

Hansen, Åge, to Allmanna Svenska Elektriska Aktiebolaget. Means for electric vacuum furnaces. 3,017,485, 1–16–62, Cl. 219—10.79.

Hansen, George E., and A. Korzenowski, to Crane Co. Renewable disc insert for gate valves or the like. 3,017,158, 1–16–62, Cl. 251—84.

Hansen, Hans C. Automatic phonographs. 3,017,188, 1–16–62, Cl. 274—15.

Hansen, Howard C. Omnidirectional drive system for land vehicles. 3,016,966, 1–16–62, Cl. 180—26.

Hanson, Victor G.: *See*—
Gustavson, Sterling T., and Hanson. 3,016,779.

Hanson, Walter J.: *See*—
Bernart, William F., Hanson, and Schmeck. 3,016,820.

Hanyaz, Eugene A., to General Motors Corp. Magnetic core structure. 3,017,518, 1–16–62, Cl. 307—88.

Hanyaz, Eugene A., and E. F. Weller, Jr., to General Motors Corp. Measurement of coating thicknesses by thermal means. 3,016,732, 1–16–62, Cl. 73—15.

Happe, Reynold, and J. P. Luban, to The Singer Mfg. Co. Bench mounting fixture for portable belt sander. 3,016,659, 1–16–62, Cl. 51—166.

Harben, Grover S., Jr.: *See*—
Brown, George W., and Harben. 3,017,027.

Hardy, Elizabeth M., to American Cyanamid Co. Trichloromethyl 2-methoxy-5-phosphonobenzenethiosulfonate pesticides. 3,017,321, 1–16–62, Cl. 167—30.

Harker, Thomas B., and E. B. Nutt, Jr., to The Magnavox Co. High speed counters. 3,017,086, 1–16–62, Cl. 235—117.

Harkes, Pieter D., to Lever Brothers Co. Improvements in preparing alkyl maleic acid anhydrides. 3,017,417, 1–16–62, Cl. 260—346.8.

Harrer, Paul H., and W. H. Shannon, to Allis-Chalmers Mfg. Co. Crop handling machine. 3,016,675, 1–16–62, Cl. 56—341.

Harris, Ellis D. Transistor exclusive-or circuit with gain. 3,017,523, 1–16–62, Cl. 307—88.5.

Harris-Intertype Corp.: *See*—
Sausele, George J. H. 3,017,015.

Harris, James S.: *See*—
Mitchell, Thompson, Harris, and Zekaria. 3,017,461.

Harrison, Don E., to General Electric Co. Phosphor suspension. 3,017,365, 1–16–62, Cl. 252—301.3.

Harrison, John R.: *See*—
Carter, Giles F., and Harrison. 3,017,299.

Harrold, Marshall C.: *See*—
Alexander, Donald F., and Harrold. 3,017,030.

Hartel, Erwin H., to Cleveland Pneumatic Industries, Inc. Aircraft landing gear. 3,017,143, 1–16–62, Cl. 244—102.

Hartel, Erwin H., to Cleveland Pneumatic Industries, Inc. Shock absorber. 3,017,172, 1–16–62, Cl. 267—64.

Harvel Research Corp.: *See*—
Faiella, John D. 3,017,382.

Harvey, John: *See*—
Deska, Theodore J., and Harvey. 3,016,834.

Hasek, Robert H.: *See*—
Elam, Edward U., Hasek, and Martin. 3,017,395.

Hawkes, Howard T., C. M. Ginn, and J. H. Sabasteanski, to Southworth Machine Co. Ream transfer apparatus and method. 3,017,041, 1–16–62, Cl. 214—8.5.

Hawks, Veri J., to Bell Telephone Laboratories, Inc. Control circuits. 3,016,857, 1–16–62, Cl. 114—23.

Hazeltine Research, Inc.: *See*—
White, John R. 3,017,576.

Hebel, Martin, and G. Schweitzer, to M. Grundig. Electric multiplying arrangement. 3,017,095, 1–16–62, Cl. 235—159.

Heckethorn, William W. Method of making a hose nozzle. 3,016,605, 1–16–62, Cl. 29—453.

Hedrick, Ross M.: *See*—
Butler, John M., Hedrick, and Mottus. 3,017,392.
Mottus, Edward H., Hedrick, and Butler. 3,017,391.

Heinemann Electric Co.: *See*—
Smith, Benjamin H. 3,017,475.

Heller, Kenneth G., and W. Snyder, to American Radiator & Standard Sanitary Corp. Null-balance indication system and variable transformer therefor. 3,017,588, 1–16–62, Cl. 336—135.

Helmke, Kermit W., and W. A. Klos. Convertible airplane locks. 3,017,137, 1–16–62, Cl. 244—2.

Helwig, Walter O. Electric brushes for electric motors and generators. 3,017,529, 1–16–62, Cl. 310—248.

Henning, Robert W.: *See*—
Marsh, Roger, Kopf, and Henning. 3,016,539.

Henry, Richard E., and F. Wash, to Koehring Co. Retriever for auger earth boring tools. 3,017,216, 1–16–62, Cl. 294—86.

Henry, Robert C., to Universal Oil Products Co. Stabilizing sulfur-containing alkaline solutions. 3,017,364, 1–16–62, Cl. 252—188.

Hercules Powder Co.: *See*—
Feild, George B. 3,017,379.
Levine, Max, and Kuhn. 3,017,238.

Herpin, Jean-Claude, to Compagnie des Machines Bull (Societe Anonyme). Device for advancing record cards in record card controlled machines. 3,017,077, 1–16–62, Cl. 234—128.

Herrick, George J.: *See*—
Schoen, Walter A., and Herrick. 3,016,806.

Herring, Liles G., to Phillips Petroleum Co. Pelleted igniter composition and method of manufacturing same. 3,017,300, 1–16–62, Cl. 149—41.

Herstedt, Adelbert C., to The Magnavox Co. Transistor circuit for producing a pulse output for each input signal peak. 3,017,521, 1–16–62, Cl. 307—88.5.

Herzer, Alfred E.: *See*—
Meier, Karl H. 3,017,545.

Hettinger, William P., Jr.: *See*—
Thomas, Owen H., and Hettinger. 3,017,441.

Hickman, Albert F., to Hickman Developments, Inc. Tandem axle spring suspension. 3,017,195, 1–16–62, Cl. 280—104.5.

Hickman Developments, Inc.: *See*—
Hickman, Albert F. 3,017,195.

Hicks, William T.: *See*—
Crosby, Charles H., Hicks, and Wahlberg. 3,017,450.

Hill, Rowland. Fish scaling and filleting jig. 3,016,565, 1–16–62, Cl. 17—8.

Hillman, Murray J., and A. Nuut, to Hycon Mfg. Co. Transistor time delay relay circuit. 3,017,543, 1–16–62, Cl. 317—148.5.

Hinkle, Eugene: *See*—
Kimrey, James A. C., and Hinkle. 3,016,725.

Hirsch, Abraham A. Dust ring mounted change gear finding scale for water meter testing. 3,016,731, 1–16–62, Cl. 73—3.

Hobart, Leo G., and L. E. Loper. Eccentrically adjustable bearing. 3,017,061, 1–16–62, Cl. 226—177.

Hochgraf, Norman N., to Esso Research and Engineering Co. Method for improving CAA acetylene removal. 3,017,442, 1–16–62, Cl. 260—681.5.

Hochreiter, William T.: *See*—
Bundschuh, John J., Craig, and Hochreiter. 3,016,811.

Hoffmann, Richard R., to Probescope Co. Spectrum analyzer. 3,017,573, 1–16–62, Cl. 324—77.

Hoffmann-La Roche Inc.: *See*—
Spiegelberg, Hans, and Vaterlaus. 3,017,337.

Hohenberg, Paul M., W. R. James, and H. E. Wechsberg, to Monsanto Chemical Co. Expandable composition consisting essentially of polyolefin, metal soap and p p'-oxybis (benzene sulfonyl hydrazide), process for preparing same and wire coated with same. 3,017,371, 1–16–62, Cl. 260—2.5.

Holak, William D.: *See*—
McCarty, Clifford E., and Holak. 3,017,104.

Holdsworth, Robert S., and W. M. Smith, to Escambia Chemical Corp. Production of vinyl chloride polymers. 3,017,399, 1–16–62, Cl. 260—92.8.

Holley Carburetor Co.: *See*—
Griffen, Ralph R. 3,017,167.
Ladd, Joseph M. 3,016,702.
Smith, John E. 3,016,843.
Sterner, Melvin F. 3,017,166.

Holloway, Thomas M., to Johnson Service Co. Differential temperature controllers. 3,016,746. 1–16–62, Cl. 73—362 3.

Holmes, George B., C. H. Sinclair, P. L. Alexander, Jr., and R. L. Vernon. Machine for packaging cylindrical objects. 3,016,663, 1–16–62, Cl. 53—32.

Holroyd, John, & Co. Ltd.: *See*—
Stott, Frank T. 3,016,572.

Holtzclaw, Grover B., to Parks-Cramer Co. Traveling cleaner with air-diverting means. 3,016,559, 1–16–62, Cl. 15—312.

Homan, Jack R. Dynamoelectric apparatus. 3,017,553. 1–16–62, Cl. 318—199.

Hompe, Robert W., C. Trezona, and A. E. Whitecar, to Smith, Kline & French Laboratories. Packaging apparatus. 3,016,672, 1–16–62, Cl. 53—373.

Hooker Chemical Corp.: *See*—
Rapson, William H. 3,017,316.

Horizons Inc.: *See*—
Wainer, Eugene. 3,017,285.

Hornbostel, Lloyd, to Beloit Iron Works. Drive assembly for metal working mill. 3,016,772, 1–16–62, Cl. 80—36.

Horowitz, Isadore, to Universal Mfg. Co., Inc. Child's pedal vehicle. 3,017,198, 1–16–62, Cl. 280—202.

Horsfall, Timothy E. S., to Woodall-Duckman Construction Co. Ltd. Oscillatory circuit interlock of horizontal coke oven batteries. 3,017,622, 1–16–62, Cl. 340—282.

Horton, Erwin C., to Trico Products Corp. Windshield cleaning system. 3,016,557, 1–16–62, Cl. 15—250.12.

Hosbein, Louis H., to M. H. Detrick Co. Refractory lining. 3,016,655, 1–16–62, Cl. 50—418.

Houdry Process Corp.: *See*—
Mills, George A. 3,017,370.

Housman, Bennett, to International Business Machines Corp. Adder circuit. 3,017,100, 1–16–62, Cl. 235—175.

Howald, Werner E.: *See*—
Foster, Tom, and Howald. 3,017,159.

Howald, Werner E., to Curtiss-Wright Corp. Thrust reverser for jet engines. 3,016,700, 1–16–62, Cl. 60—35.54.

Howarth, Wesley L., and T. K. Moy, to Westinghouse Electric Corp. Combination turbojet and ramjet. 3,016,694, 1–16–62, Cl. 60—35.5.

Hoy, Herbert R., D. M. Wilkins, and R. L. Johnson, to C.U.R.A. Patents Ltd. Granulation of molten material. 3,016,566, 1–16–62, Cl. 18—2.4.

Hoyler, Alfred E., to Avog Elektro -und Feinmechanik G.m.b.H. Pivot bearing, particularly for windshield wipers. 3,016,766, 1–16–62, Cl. 74—588.

Hubby, Laurence M.: *See*—
Egan, Edmond F., and Hubby. 3,016,767.

Huber, Charles L.: *See*—
Crumrine, Herbert E., and Huber. 3,017,509.

Huebner, Edward J., to United States of America, Air Force. Glass roving spray gun. 3,016,609, 1–16–62, Cl. 30—240.

Huebschmann, Eugene C., to United States of America, Air Force. Transistor type accelerometer. 3,016,752, 1–16–62, Cl. 73—517.

Huetten, Clarence, to P. R. Mallory & Co., Inc. Miniature relay. 3,017,474, 1–16–62, Cl. 200—93.

Huffman, Warren C.: *See*—
Soehl, John, and Huffman. 3,017,045.

Hughes Aircraft Co.: *See*—
Begovich, Nicholas A., and Enenstein. 3,017,630.
Dill, Johann G. 3,017,519.

Hughes, Charles E.: *See*—
Haines, Edward M., and Hughes. 3,017,162.

Hughes, Paul R.: *See*—
Klank, Walter C., Jr., and Hughes. 3,016,912.

Hughes, William B., and V. L. Stromberg, to Petrolite Corp. Process of inhibiting corrosion. 3,017,352, 1–16–62, Cl. 252—8.55.

Hughes, William B., and V. L. Stromberg, to Petrolite Corp. Process of inhibiting corrosion. 3,017,356, 1–16–62, Cl. 252—8.55.

Hughey, Vira. Fire alarm sticker. 3,016,872, 1–16–62, Cl. 116—106.

Hulbert, William P. Combination coat and trouser hanger. 3,017,058, 1–16–62, Cl. 223—91.

Hull, John R., to Selas Corp. of America. Dehydrator. 3,016,978, 1–16–62, Cl. 183—4.1.

Hulsh, Sheldon D. Squeezable tube dispenser construction. 3,016,561, 1–16–62, Cl. 15—565.

Hultkrans, Paul B. to Milprint, Inc. Art of packaging commodities. 3,017,302, 1–16–62, Cl. 154—43.

Hunt, Nathan C., to International Basic Economy Corp. Valve for controlling pressurized fluid. 3,016,917, 1–16–62, Cl. 137—620.

Hunter, Harry L.: *See*—
Frasier, Jordan D., and Hunter. 3,016,813.

Husted, Norris C. Neutral wire clamps and the like. 3,017,600, 1–16–62, Cl. 339—149.

Huxley, Edward E., to Phillips Petroleum Co. Manufacture of phosphoric acid. 3,017,247, 1–16–62, Cl. 23—165.

Hycon Mfg. Co.: *See*—
Applefield, William G. 3,017,629.
Cahill, Starr W. 3,017,019.
Hillman, Murray J., and Nuut. 3,017,543.
Oxspring, Ronald E. N., and Rosenblum. 3,016,810.

Hynds, August A. Land anchor. 3,017,000, 1–16–62, Cl. 189—92.

I-T-E Circuit Breaker Co.: *See*—
Platz, Elwood T., and Frank. 3,017,605.

Iapella, Arnaldo, A. Lecolle, and R. Ducimetiere. Combustion engine exhaust treatment. 3,016,692, 1–16–62, Cl. 60—30.

Ideal Industries, Inc.: *See*—
Minobe, Mickey M. 3,016,774.

Idzi, Edward D. Apparatus for shaving ice. 3,017,127, 1–16–62, Cl. 241—257.

Idzi, Edward D. Apparatus for aerating a liquid. 3,017,165, 1–16–62, Cl. 261—19.

Illowsek, Anton. Expandable chucks. 3,017,192, 1–16–62, Cl. 279—2.

Image Transfer Inc.: *See*—
Moeller, Carl A., Jr. 3,016,915.

Inflico Inc.: *See*—
Fowler, Leslie L. 3,017,031.

Ingersoll, Elmer W., Jr: *See*—
Ingersoll, Robert D. and E. W. 3,016,648.

Ingersoll, Robert D. and E. W. Mechanical fishing device. 3,016,648, 1–16–62, Cl. 43—15.

Interchemical Corp.: *See*—
Bernardi, Dominic J., Tringal, Roth, and Engle. 3,017,374.
Kutik, Leon. 3,017,293.

International Basic Economy Corp.: *See*—
Hunt, Nathan C. 3,016,917.

International Business Machines Corp.: *See*—
Absug, Irving. 3,017,620.
Chiang, Franklin C. 3,017,096.
Cour, Gene J. 3,017,627.
Dersch, William C. 3,017,586.
Haanstra, John W. 3,017,098.
Housman, Bennett 3,017,100.
Lynott, John J. 3,016,612.
Owen, Charles E. 3,017,101.
Quade, Edward A. 3,017,617.
Rent, Edward F., and Powell. 3,017,092.
Strachey, Christopher, and Gillies. 3,017,090.
Strachey, Christopher, and Gillies. 3,017,094.

International Cigar Machinery Co.: *See*—
Gustavson, Sterling T., and Hanson. 3,016,779.
Rosenberg, Sheldon, and Schmidt. 3,016,907.

International Harvester Co.: *See*—
Allin, George S., Sr. 3,016,634.

International Patent Research Corp.: *See*—
Rinkewich, Isaac, and Chow. 3,017,123.

International Resistance Co.: *See*—
Chase, Jacob. 3,017,589.
Chase, Jacob. 3,017,590.

International Telephone and Telegraph Corp.: *See*—
Gibson, John C. 3,017,465.

Interplanetary Research & Development Corp.: *See*—
Sedlacsik, John, Jr. 3,016,876.

Irland, Max J., and V. L. Lindberg, to Ford Motor Co. Motor vehicle headlamp system. 3,017,586, 1–16–62, Cl. 315—83.

Jabbusch, Robert O.: *See*—
Wilson, Clifford K., Mount, and Jabbusch. 3,016,936.
Wilson, Clifford K., Mount, and Jabbusch. 3,017,298.

Jack, John R., and W. E. Moeckel, to United States of America, National Aeronautics and Space Administration. Electro-thermal rocket. 3,016,693, 1–16–62, Cl. 60—35.5.

Jäckel, Fritz, to Mobay Chemical Co. V-belts. 3,016,756, 1–16–62, Cl. 74—234.

Jackson, Martin A.: *See*—
Van Zelm, Willem D., and Jackson. 3,017,163.

Jacobson, John M. Power operated saw having oppositely reciprocating blades. 3,016,932, 1–16–62, Cl. 143—68.

Jacomaro, Frank. Mold for jacketing vase receptacles. 3,016,594, 1–16–62, Cl. 25—118.

Jaeger, Joseph F., and W. J. Giles, to Colgate-Palmolive Co. Handle assembly. 3,017,068, 1–16–62, Cl. 229—52.

Jaekel, Gerhard: *See*—
Bretschneider, Otto, Bender, and Jaekel. 3,017,263.

Jaeschke, Ralph L., to Eaton Mfg Co. Methods for forming rigid composite structures. 3,016,580, 1–16–62, Cl. 18—59.

James, Ivanhoe J. P.: *See*—
Watson, George R., Perkins, and James. 3,017,455.

James, Ivanhoe J. P., and G. C. Newton, to Electric & Musical Industries Ltd. Colour television cameras. 3,017,454, 1–16–62, Cl. 178—5.4.

James, William R.: *See*—
Hohenberg, Paul M., James, and Wechsberg. 3,017,371.

Jarrell-Ash Co.: *See*—
Brehm, Richard K. 3,016,787.

Javes, John G.: *See*—
Schnable, George L., and Javes. 3,017,332.

Jencks, Hollis W., to Detroit Coil Co. Solenoid. 3,017,547, 1–16–62, Cl. 317—191.

Jenner, Edward L.: *See*—
Coffman, Donald D., and Jenner. 3,017,435.

Jennings, Jo E., to Jennings Radio Mfg. Corp. Vacuum switch. 3,017,479, 1–16–62, Cl. 200—144.

Jennings Radio Mfg. Corp.: *See*—
Jennings, Jo E. 3,017,479.

Jepson, Ivar, to Sunbeam Corp. Electric heating device and method of making the same. 3,017,492, 1–16–62, Cl. 219—44.

Jewell, James G., to Gulf Research & Development Co. Process for providing a solid body with a protective film. 3,017,353, 1–16–62, Cl. 252—8.55.

Joa, Curt G., to Falls Paper & Power Co. Batt or mat forming apparatus. 3,016,582, 1–16–62, Cl. 19—156.

Johns-Manville Fiber Glass Inc.: *See*—
Labino, Dominick, and Gagin. 3,017,318.

Johnson, Dean T.: *See*—
McWhorter, Bobby J., and Johnson. 3,016,591.

Johnson, Edward O., to Radio Corp. of America. Auxiliary discharge gas amplifier and the like. 3,017,533, 1–16–62, Cl. 313—189.

Johnson, Ernest E., to Blue Valley Machine & Mfg. Co. Metal plate flanging machine. 3,016,942, 1–16–62, Cl. 153—4.

Johnson, Horace A., to Borg-Warner Corp. Stop collar device. 3,017,206, 1–16–62, Cl. 287—52.08.

Johnson, Lester B., to United-Carr Fastener Corp. Tube shield and ground strap structure. 3,017,506, 1–16–62, Cl. 339—14.

Johnson, Nels, to Simmons Co. Tufting method and apparatus. 3,016,852, 1–16–62, Cl. 112—262.

Johnson, Peter W. R., to Johnson Products, Inc. Leg assembly. 3,017,153, 1–16–62, Cl. 248—189.

Johnson, Peter W. R., to Johnson Products Inc. Work bench system with quick-disconnect legs. 3,017,231, 1–16–62, Cl. 311—110.

Johnson Products, Inc.: *See*—
Johnson, Peter W. R. 3,017,153.
Johnson, Peter W. R. 3,017,231.

Johnson, Robert: *See*—
Campbell, Charles R., Chapman, and Johnson. 3,017,831.

Johnson, Robert F., to R. M. Johnson. Sail boat safety device. 3,016,858, 1–16–62, Cl. 114—39.

Johnson, Robert F., to R. M. Johnson. Sail boat safety device. 3,016,859, 1–16–62, Cl. 114—39.

Johnson, Robert F., to R. M. Johnson. Sail boat safety device. 3,016,860, 1–16–62, Cl. 114—39.

Johnson, Robert M.: *See*—
Johnson, Robert F. 3,016,858.
Johnson, Robert F. 3,016,859.
Johnson, Robert F. 3,016,860.

Johnson, Ronald L.: *See*—
Hoy, Herbert B., Wilkins, and Johnson. 3,016,566.

Johnson Service Co.: *See*—
Holloway, Thomas M. 3,016,746.

Johnson, Virgil E., Jr., to United States of America, National Aeronautics and Space Administration. Hydrofoil. 3,016,865, 1–16–62, Cl. 114—66.5.

Johnson, Wayne R., to Minnesota Mining and Mfg. Co. Transducing system. 3,017,457, 1–16–62, Cl. 179—6.

Joly, Robert, and J. Warnant, to Les Laboratoires Francais de Chimiotherapie. 17α,21-ethoxymethylene dioxy pregnanes and process for their preparation. 3,017,409, 1–16–62, Cl. 260—239.55.

Jonach, Fredrick L., M. H. Edson, and J. A. Wilson, to Esso Research and Engineering Co. Apparatus and method for automatic control. 3,016,739, 1–16–62, Cl. 73—116.

Jones, Earle D.: *See*—
Evans, William E., and Jones. 3,017,625.

Jones, Griffin L. Zinc brush plating solution. 3,017,334, 1–16–62, Cl. 204—55.

Jones, John D.: *See*—
En Dean, Howard J., Jones, and Topanelian. 3,016,733.

Jonker-Friend Corp.: *See*—
Falconer, David G. 3,016,614.
Falconer, David G. 3,016,615.

Jordan, Richard H.: *See*—
Wilhelm, Frank R., and Jordan. 3,016,553.

Jorgensen, Eugene C., to Regents of the University of California. Antihypercholesterolemic thyronine derivatives. 3,017,428, 1–16–62, Cl. 260—471.

Joy Mfg. Co.: *See*—
Baechli, George. 3,017,228.

Judy, Harold A., to Sylvania Electric Products Inc. Selective signal eliminator. 3,017,506, 1–16–62, Cl. 250—20.

Julius, William R.: *See*—
Giles, Jeremiah D., and Julius. 3,017,020.

Kabelitz, Hans, and T. von Kannen, to Gebruder Sucker G.m.b.H. Viscosity sensing or measuring apparatus. 3,016,734, 1–16–62, Cl. 73—55.

Kadosch, Marcel: *See*—
Bertin, Jean H., Kadosch, and Maunoury. 3,016,699.

Kagan, Fred: *See*—
Magerlein, Barney J., and Kagan. 3,017,423.

Kahle, Bruno A. Revolving Christmas tree stand. 3,017,150, 1–16–62, Cl. 248—45.

Kaiser Gypsum Co., Inc.: *See*—
Dailey, Manvel C. 3,017,305.

Kaiser, Julius A., Jr.: *See*—
Marston, Arthur E., Coleman, and Kaiser. 3,017,633.

Kalbfell, David C. Electronic analog multiplier. 3,017,108, 1–16–62, Cl. 235—194.

Kalisz, Vincent J. Automatic hog gate. 3,016,878, 1–16–62, Cl. 119—155.

Kaman Aircraft Corp., The: *See*—
Robinson, Donald W., Jr., and Packard. 3,017,147.

Kamlet, Edna Y.: *See*—
Kamlet, Jonas. 3,017,246.

Kamlet, Jonas, deceased; E. Y. Kamlet, executrix. Process for the joint manufacture of hydrofluoric acid and Portland cement clinker. 3,017,246, 1–16–62, Cl. 23—153.

Kanda, Frank A.: *See*—
Clark, Charles C., Kanda, and King. 3,017,248.

Kane, James S., J. H. Carpenter, and O. H. Krikorian, to United States of America, Atomic Energy Commission. Method for coating graphite with niobium carbide. 3,017,286, 1–16–62, Cl. 117—22.

Kane, Ralph W., F. A. Nelson, and E. H. Rogers, to Varian Associates. Magnet apparatus. 3,017,544, 1–16–62, Cl. 317—158.

Kane, Simal R. Detergent applying unit. 3,017,118, 1–16–62, Cl. 239—61.

Kapany, Narinder S. Method and means for transmitting images through a bundle of transparent fibers. 3,016,785, 1–16–62, Cl. 88—1.

Karch, Walter C., to Square D Co. Electric switch. 3,017,471, 1–16–62, Cl. 200—76.

Kardon, Emanuel S., and H. Volkadorf to American Bag & Paper Corp. Bag. 3,017,069, 1–16–62, Cl. 229—57.

Karlowicz, Peter. Process for desensitizing zirconium for use in primers. 3,017,264, 1–16–62, Cl. 75—97.

Karraker, William A. Mechanical audio and visual signal coordinating device. 3,016,783, 1–16–62, Cl. 84—464.

Kearney & Trecker Corp.: *See*—
Zankl, Frank, and Osburn. 3,016,804.

Keating, Bernard H., to General Motors Corp. Sunshade support assembly. 3,017,217, 1–16–62, Cl. 296—97.

Kebekus, Alfred, and W. Rosenboom, to Norddeutsche Seekabelwerke Aktiengesellschaft. Apparatus for producing plastic bags. 3,017,314, 1–16–62, Cl. 156—498.

Keesling, C. H.: *See*—
Keesling, Thomas B. 3,016,933.

Keesling, Thomas B., ¼ to C. H. Keesling. Power operated tool attachment for electric drills and the like. 3,016,933, 1–16–62, Cl. 144—35.

Kehde, Kurt. Clamping arrangement. 3,016,805, 1–16–62, Cl. 269—157.

Keir, John B.: *See*—
Gordon, Richard O., and Keir. 3,016,708.

Keithahn, Julian D., to Baker Oil Tools, Inc. Drill pipe float valves. 3,016,914, 1–16–62, Cl. 137—515.

Kelemen, Denis G., to E. I. du Pont de Nemours and Co. Process for the production of silicon. 3,017,251, 1–16–62, Cl. 23—223.5.

Keller, Robert C., to General Motors Corp. Transmission control. 3,016,758, 1–16–62, Cl. 74—473.

Keller, Roger P., and J. J. Renier, to Minneapolis-Honeywell Regulator Co. Condition responsive apparatus. 3,017,592, 1–16–62, Cl. 338—28.

Kellogg, George E., and W. V. Kenzik, to General Motors Corp. Diaphragm brake booster. 3,016,880, 1–16–62, Cl. 121—41.

Kellogg, M. W., Co., The: *See*—
Costello, Robert B. 3,017,514.

Kenco Products Corp.: *See*—
Rapaport, Myron S. 3,016,929.

Kendrick, John W. Injection means for injecting serum, vaccine, virus and the like into animals, and method. 3,016,897, 1–16–62, Cl. 128—218.2.

Kendrick, Marron, to Schlage Lock Co. Mounting plate and rose. 3,017,213, 1–16–62, Cl. 292—357.

Kennedy, Richard E., and M. E. Griffin. Tag. 3,016,639, 1–16–62, Cl. 40—25.

Kent-Moore Organization, Inc.: *See*—
Breed, John W. 3,017,176.

Kenzik, William V.: *See*—
Kellogg, George E., and Kenzik. 3,016,880.

Kerhoas, Lucien Y. Machine for packaging under thermoplastic film. 3,016,667, 1–16–62, Cl. 53—182.

Kern, Dale B., and R. L. Conger, to United States of America, Navy. Radio-frequency coaxial-transmission phase shifter. 3,017,587, 1–16–62, Cl. 333—31.

Kerr, Charles E., to FMC Corp. Carton handling machine. 3,016,807, 1–16–62, Cl. 93—49.

Kerr, Maxwell A. Magnetic quarter-stripe sound tracks for 16 mm. film. 3,017,466, 1–16–62, Cl. 179—100.1.

Kerr, Ralph W., to Corn Products Co. Method of making dextrose using purified amyloglucosidase. 3,017,330, 1–16–62, Cl. 195—11.

Kerwin, James F., to Smith Kline & French Laboratories. 18-dichlorosteroids and 18-hydroxyconanines made therefrom. 3,017,408, 1–16–62, Cl. 260—239.5.

Keston, Albert S. Polarimetric apparatus. 3,016,789, 1–16–62, Cl. 88—14.

Kielman, Fred S., Jr., to Sperry-Sun Well Surveying Co. Fluid pressure responsive inclinometer. 3,016,621, 1–16–62, Cl. 33—205.

Kletz, Hans, and W. Kunze. Echo sounding system. 3,017,606, 1–16–62, Cl. 340—3.

Kilham, Peter, to Maclodyne Corp. Apparatus for bending and forming tubing, rods, wires and the like. 3,016,943, 1–16–62, Cl. 153—40.

Killey Robert F.: *See*—
Welch, Donald H., McKenzie and Killey. 3,017,398.

Kimball, A., Co.: *See*—
Braun, Karl J. 3,017,076.

Kimberly-Clark Corp.: *See*—
Gade, Marvin F., and Eastwood. 3,016,622.
Voigtman, Edward H., Donnelly, and Lamb. 3,017,317.

Kimrey, James A. C., and E. Hinkle, to Baker-Cammack Hosiery Mills, Inc. Yarn clamping tensioning and severing mechanism for circular knitting machines. 3,016,725, 1–16–62, Cl. 66—140.

King, Aden J.: *See*—
Clark, Charles C., Kanda, and King. 3,017,248.

Kinsman, Calvin T. Portable head rest. 3,017,222, 1–16–62, Cl. 297—397.

Kious, Gerald A., to General Electric Co. Automatic gain control system. 3,017,508, 1–16–62, Cl. 250—20.

Kirby, John H., II. Junk shot. 3,016,830, 1–16–62, Cl. 102—20.

Klaassen, Antonius C., to N.V. Fabriek Van Electrische Apparaten Voorheen F. Hazenmeijer & Co. High-voltage circuit-breaker. 3,017,480, 1–16–62, Cl. 200—146.

Klancke, John H.: *See*—
Anderson, Glenn R., and Klancke. 3,016,869.

Klank, Walter C., Jr., and P. R. Hughes, to United Aircraft Products, Inc. Vented liquid storage tank with priority system of supply. 3,016,912, 1–16–62, Cl. 137—43.

Klein, Edward, to Quaker Stretcher Co. Combined rack and table structure. 3,017,034, 1–16–62, Cl. 211—2.

Klein, Martin L., H. C. Morgan, and A. Goudey, to North American Aviation, Inc. High speed low level switching device. 3,017,582, 1–16–62, Cl. 332—14.

Klein, Oscar R. Animal simulating bicycle. 3,017,193, 1–16–62, Cl. 280—1.14.

Klemt, Gunter, and K. Macher, to Jos. Schneider & Co. Wide-angle photographic or cinematographic objective. 3,016,799, 1–16–62, Cl. 88—57.

Klingler, Josef F., to Frank J. Curran Co. Deodorant insert for toilet tissue. 3,017,117, 1–16–62, Cl. 239—52.

Klos, William A.: *See*—
Helmke, Kermit W., and Klos. 3,017,137.

Kluge, Herman D.: *See*—
Arnold, George B., Kluge, Schlicht, and Smolin. 3,017,430.

Kluge, Herman D., J. W. Wisner, Jr., and R. G. Lacoste, to Texaco Inc. Process for preparing salts of hydrocarbon-phosphorus sulfide reaction products. 3,017,405, 1–16–62, Cl. 260—139.

Knapp, William E., and W. V. Lohrman, to Deere & Co. Harrows. 3,016,958, 1–16–62, Cl. 172—639.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Bretschneider, Otto, Bender, and Jaekel. 3,017,263.

Kneidl, Franz A., and H. G. Beattie, to Avco Corp. Self-purging starting fuel nozzles for gas turbine engines. 3,016,705, 1–16–62, Cl. 60—39.74.

Kniff, August A., to Tru-Scale Models, Inc. Railroad track turnout. 3,017,503, 1–16–62, Cl. 246—415.

Knight, Houston W., to Chicksan Co. Fluid discharge nozzle. 3,017,124, 1–16–62, Cl. 239—456.

Knight, Kenneth K., and W. J. Wenzel. Accumulator device for a flexible element. 3,017,130, 1–16–62, Cl. 242—47.09.

Knight, Leslie J.: *See*—
Ashley, James W., and Knight. 3,016,765.

Knightly, William H., to Atlas Chemical Industries, Inc. Fluid emulsifier for ice cream. 3,017,276, 1–16–62, Cl. 99—136.

Kochly, Joseph A.: *See*—
Arnold, James S., and Kochly. 3,016,735.

Koehring Co.: *See*—
Henry, Richard E., and Wash. 3,017,216.

Kogan, Philip, H. Wolanek, and R. J. Wagner, to J. F. Crosfield Ltd. Perforation of webs by electrical discharges. 3,017,486, 1–16–62, Cl. 219—19.

Kohler, Peter J.: *See*—
Slaasted, Raymond S., and Kohler. 3,017,161.

Kolec, Robert F., to Olympic Screw & Rivet Corp. Riveting tool. 3,017,052, 1–16–62, Cl. 218—42.

Koletsky, Harold S., and M. W. Berkowitz, to Avien, Inc. Stabilized transistor multivibrator. 3,017,524, 1–16–62, Cl. 307—88.5.

Kolfenbach, John J., and W. W. Gleason, to Esso Research and Engineering Co. Method for lubricating a jet engine. 3,016,701, 1–16–62, Cl. 60—39.08.

Kollsman Instrument Corp.: *See*—
Andresen, John H., Jr. 3,017,619.

Kompus, Emery L. Grain dryer. 3,016,626, 1–16–62, Cl. 34—182.

Kool Vent Metal Awning Corp. of America: *See*—
Fatula, William F. 3,016,584.

Kopf, Rowland J.: *See*—
Marsh, Roger, Kopf, and Henning. 3,016,539.

Korber, Kurt, & Co. K.G.: *See*—
Creuzburg, Richard 3,016,905.
Peters, Otto. 3,016,906.

Kornylak, Andrew T. Sprocket silencer. 3,016,757, 1–16–62, Cl. 74—243.

Korostoff, Edward: *See*—
Finch, Donald I., Korostoff, and Pollock. 3,017,269.

Korzenowski, Anton: *See*—
Hansen, George E., and Korzenowski. 3,017,158.

Kostelnick, Joseph J., to Bell Telephone Laboratories, Inc. Microwave selective mode isolator. 3,017,577, 1–16–62, Cl. 330—56.

Kowalski, Joseph J., to The Yarder Mfg. Co. Frame for show cards. 3,016,642, 1–16–62, Cl. 40—152.

Kozacka, Frederick J., to The Chase-Shawmut Co. Semiconductor rectifiers. 3,017,558, 1–16–62, Cl. 321—14.

Krabbe, Ulrik H., and H. M. Sorensen, to Allis-Chalmers Mfg. Co. Stacked magnetic core having magnetization curve with sharp knee. 3,017,591, 1–16–62, Cl. 336—215.

Kraft, El Roy J., to The Dole Valve Co. Concentrate proportioner. 3,016,916 1–16–62, Cl. 137—604.

Kraft, Herman T., to The General Tire & Rubber Co. Apparatus for supplying ply fabric to a tire building drum. 3,017,312, 1–16–62, Cl. 156—361.

Kratz, Alfred J. P., to Metallgesellschaft Aktiengesellschaft. Process of purifying water with activated carbon. 3,017,347, 1–16–62, Cl. 210—63.

Krikorian, Oscar H.: *See*—
Kane, James S., Carpenter, and Krikorian. 3,017,286.

Kuhn, Beryl M.: *See*—
Levine, Max, and Kuhn. 3,017,238.

Kuhn, Joseph M., to The Sherwin-Williams Co. Extender composition for textile printing pastes containing reaction product of monoethanolamine solution and the co-polymer of unhydrolyzed methyl vinyl ether and maleic anhydride. 3,017,377, 1–16–62, Cl. 260—29.6.

Kulp, Harry W. Accessory for use by fishermen. 3,016,741, 1–16–62 Cl. 73—143.

Kunze, Willy: *See*—
Kletz, Hans, and Kunze. 3,017,606.

Kupka, John J., to McKiernan-Terry Corp. Super calender with constant nip alignment. 3,016,819, 1–16–62, Cl. 100—163.

Kurz, Alvin M., and W. A. Van Wicklin, Jr., to Ford Motor Co. Central hydraulic system. 3,016,710, 1–16–62, Cl. 60—54.5.

Kusy, Paul F.: *See*—
Bulat, Thomas J., Logan, and Kusy. 3,017,342.

Kutik, Leon, to Interchemical Corp. Coated cured synthetic rubber substrate. 3,017,293, 1–16–62, Cl. 117—138.8.

Laas, William E. Device for deflecting the tone of a musical instrument. 3,016,782, 1–16–62, Cl. 84—453.

Labino, Dominick, and L. V. Gagin, to Johns-Manville Fiber Glass Inc. High temperature resistant silliceous compositions and method of producing. 3,017,318, 1–16–62, Cl. 162—152.

Labman, Max L.: *See*—
Rabinow, Jacob. 3,016,687.

Laboratoires Vifor S.A.: *See*—
Grosclaude, René. 3,016,669.

Lacoste, Roger G.: *See*—
Kluge, Herman D., Wisner, and Lacoste. 3,017,405.

La Cotonniere de Moislains: *See*—
Andremont Gilbert. 3,016,681.

Ladd, Joseph M., to Holley Carburetor Co. Bleed valve actuation. 3,016,702, 1–16–62, Cl. 60—39.29.

Lado, Anthony L., to Pettibone Mulliken Corp. Road scraper with driven leaning wheels. 3,016,636, 1–16–62, Cl. 37—156.

Laff, Robert M. Disinfectant composition. 3,017,278, 1–16–62, Cl. 106—13.

Lagasse, Joseph L., and M. J. Malone, to Northern Electric Co., Ltd. Device for wrapping insulating tape around electromagnet cores. 3,017,313, 1–16–62, Cl. 156—446.

Lamb, Charles A.: *See*—
Voigtman, Edward H., Donnelly, and Lamb. 3,017,317.

Lambert, Robert L., and W. R. McKeirnan, to Sylvania Electric Products Inc. Formulation for casting pigmented film. 3,017,281, 1–16–62 Cl. 106—185.

Lambert, Robert L., and W. R. McKeirnan, to Sylvania Electric Products Inc. Process of casting film employing 2-(2-aminoethylamine) ethanol as a release agent. 3,017,284, 1–16–62, Cl. 117—5.1.

Lanctot, Robert S.: *See*—
Gamble, Richard F., and Lanctot. 3,016,706.

Landbrukstekniak Institutt: *See*—
Todnem, Odd. 3,016,737.

Landee, Robert W., and B. Cutler, to Gilfillan Bros., Inc. Method of and apparatus for identifying aircraft during ground controlled approach. 3,017,628, 1–16–62, Cl. 343—5.

Lander, James J.: *See*—
Dewald, Jacob F., and Lander. 3,017,548.

Landsverk Electrometer Co.: *See*—
Landsverk, Ole G., and Glodenis. 3,017,511.

Landsverk, Ole G., and Z. Glodenis, to Landsverk Electrometer Co. Friction charger and dosimeter employing the same. 3,017,511, 1–16–62, Cl. 250—83.3.

Langsdorf, William P., Jr., R. N. MacDonald, and C. E. Schweitzer, to E. I. du Pont de Nemours and Co. Process of controlling the molecular weight of linear formaldehyde polymers. 3,017,389, 1–16–62, Cl. 260—67.

Langway, Paul W., to Joseph Bancroft & Sons Co. Apparatus for plying crimped yarn. 3,016,677, 1–16–62, Cl. 57—34.

Lappin, Gerald R., to Eastman Kodak Co. Poly-α-olefins containing hydroxybenzophenone derivatives. 3,017,383. 1–16–62, Cl. 260—45.85.

La Vallee, Theodore R., to Eaton Mfg. Co. Multiple drive control system. 3,017,527, 1–16–62, Cl. 310—94.

Lawrence, Julius A.: *See*—
Morris, John R., Schlicht, Adams, and Lawrence. 3,017,361.

Lawrence, Robert E., to United States of America, Navy. Compact achromatic telescope lens. 3,016,798, 1–16–62, Cl. 88—57.

Lawser, John J., to Ford Motor Co. Glow plug igniter. 3,017,540, 1–16–62, Cl. 317—98.

Lawser, John J., to Ford Motor Co. Glow plug igniter. 3,017,541, 1–16–62, Cl. 317—98.

Lawson Products, Inc.: *See*—
Lawson, Robert H. 3,016,726.

Lawson, Robert H., to Lawson Products, Inc. Knit fabric incorporating elastic thread and garments formed thereof. 3,016,726, 1–16–62, Cl. 66—177.

Le Chaude, Inc.: *See*—
Urdanoff, Howard D. 3,017,032.

Le Clereq, Leon J.: *See*—
Anderson, William D., Brandt, Le Clereq, and Fargo. 3,016,598.

Lécolle, André: *See*—
Iapella, Arnaldo, Lécolle, and Ducimetiere. 3,016,692.

Lee, Ralph E., and J. F. Eckelaert, to The Trane Co. Heat exchange units. 3,017,160, 1–16–62, Cl. 257—137.

Lee, Robert M.: *See*—
Dinsmore, Stanley H., and Lee. 3,017,463.

Leeds and Northrup Co.: *See*—
Finch, Donald I., Korostoff, and Pollock. 3,017,269.
Polster, Norman E. 3,017,560.
Williams, Albert J., Jr. 3,017,561.

Leigh, Albert: *See*—
Roxburgh, Albert, and Leigh. 3,017,482.

Leinberger, Merton C.: *See*—
Trimble, Lyne S., Markakis, Nishball, and Leinberger. 3,017,234.

Leiner, Howard H.: *See*—
Bennetch, Leonard M., West, and Leiner. 3,017,283.

Leitertiz, Robert G.: *See*—
Cull, Thomas F., and Leitertiz. 3,016,625.

Lejk, Joseph R., and H. Merta, to The Trane Co. Turbine compressor assembly. 3,017,071, 1–16–62, Cl. 230—116.

Lemberger, Robert A., to White-Rodgers Co. Stepped-opening solenoid valves. 3,017,156, 1–16–62, Cl. 251—54.

Lemelson, Jerome H. Toy and track assembly. 3,016,845, 1–16–62, Cl. 104—148.

Lemoine, Hubert: *See*—
Fournet, Andre, and Lemoine. 3,017,397.

Lenke, Dieter: *See*—
Engelbrecht, Heinz-Joachim, Lenke, and Müller. 3,017,411.

Lenz, Emory W., and H. V. Roberts, Jr., to Trico Products Corp. Remotely actuated trunk lock arrangement for a motor vehicle. 3,016,968, 1–16–62, Cl. 180—82.

Lepinay, Guy and Y. Rear view mirror with parking-time reminder. 3,016,641, 1–16–62, Cl. 40—70.

Lepinay, Yves: *See*—
Lepinay, Guy and Y. 3,016,641.

Lerner, Jack. Method of manufacturing a swimming pool and the article. 3,016,516, 1–16–62, Cl. 4—172.

Les Laboratoires Francais de Chimiotherapie: *See*—
Joly, Robert, and Warnant. 3,017,409.

Lessig, Edward T., to The B. F. Goodrich Co. Method of making cord. 3,016,684, 1–16–62, Cl. 57—157.

Le Tourneau, Robert G. Earth working machinery. 3,016,633, 1–16–62, Cl. 37—129.

Lever Bros. Co.: *See*—
Harkes, Pieter D. 3,017,417.
Wilson, James H. 3,017,363.

Levine, Max, and B. M. Kuhn, to Hercules Powder Co. Method for solvent spinning polyolefins. 3,017,238, 1–16–62, Cl. 18—54.

Liautaud, Philip J., to Fendall Co. Eye protective spectacle type goggle. 3,016,797, 1–16–62, Cl. 88—43.

Lill, Melvin H., to FMC Corp. Mounting for wheel balancing device. 3,017,154, 1–16–62, Cl. 248—205.

Lindberg, Victor L.: *See*—
Triand, Max J., and Lindberg. 3,017,536.

Lindblom, Frank W., to Welsh Mfg. Co. Goggle with lifting cover. 3,016,542, 1–16–62, Cl. 2—14.

Lindblom, Frank W., to Welsh Mfg. Co. Goggle with lifting cover. 3,016,543, 1–16–62, Cl. 2—14.

Lindmark, Alvar N. Elevator plant and its guide rails. 3,016,990, 1–16–62, Cl. 187—19.

Lindstrom & King Co.: *See*—
Lindstrom, Wilfred E. 3,017,190.

Lindstrom, Wilfred E., to Lindstrom & King Co. Valve stem seal. 3,017,190, 1–16–62, Cl. 277—32.

Linhart, Otto C.: *See*—
Van Dolah, Harry J., and Linhart. 3,017,279.

Linn, John K.: *See*—
Scozzafava, Milton V., Linn, Busch, and Boyden. 3,017,081.

Linnenkohl, Hans: *See*—
Benz, Walter, and Linnenkohl. 3,016,886.

Linson, William T.: *See*—
Myers, Charles E., and Linson. 3,016,776.

Lipp, Donald, and G. C. Nash, ½ to L. Stein. Adjustable filter tip. 3,016,902, 1–16–62, Cl. 131—10.

Lister, Charles A., to Square D Co. High voltage contactor. 3,017,481, 1–16–62, Cl. 200—147.

Little, Thomas. Tape cable connector. 3,017,602, 1–16–62, Cl. 339—174.

Livezey, William G.: *See*—
Christenson, Howard W., Livezey, and Breting. 3,016,769.

Lloyd, James R., to Cutlas Tool and Mfg. Co. Vehicle hub construction. 3,017,207, 1–16–62, Cl. 287—53.

Lo, Chien-Pen, and R. L. Orsage, to Rohm & Haas Co. N-succinimidomethyl-substituted quaternary ammonium compounds. 3,017,416, 1–16–62, Cl. 260—326.5.

Loesch, Ronald E., to General Motors Corp. Lamp socket. 3,017,599, 1–16–62, Cl. 339—91.

Logan, James R.: *See*—
Bulat, Thomas J., Logan, and Kusy. 3,017,342.

Lohrman, William V.: *See*—
Knapp, William E., and Lohrman. 3,016,958.

London, Melvin D., to The Absorbent Cotton Co. Bag closure and carrier. 3,017,070, 1–16–62, Cl. 229—62.

Loper, Lyle E.: *See*—
Hobart, Leo G., and Loper. 3,017,061.

Lorett, Jerzy A., and C. Morris, to The English Electric Co. Ltd. Combustion chambers. 3,016,703, 1–16–62, Cl. 60—39.65.

Lottes, Richard F.: *See*—
Ballentine, William I., Jr., and Lottes. 3,016,875.

Lovejoy, Charles K.: *See*—
Bogle, Kenneth H., and Lovejoy. 3,017,035.

Lovell, Jack: *See*—
Hamilton, Wallace, and Lovell. 3,016,623.

Lovingham, Joseph J., to Thiokol Chemical Corp. Reaction motor thrust chamber. 3,016,695, 1–16–62, Cl. 60—35.6.

Low, Russell C., to Raytheon Co. Clamp holders. 3,017,598, 1–16–62, Cl. 339—75.

Lowe, Chester A.: *See*—
Clingman, Paul E., and Lowe. 3,016,567.

Lowy, Edward R., to Lowy & Mund, Inc. Handbag. 3,016,939, 1–16–62, Cl. 150—33.

Lowy & Mund, Inc.: *See*—
Lowy, Edward R. 3,016,939.

Lubas, Joseph P.: *See*—
Happe, Reynold, and Lubas. 3,016,659.

Lubcke, Harry R. Electrical semiconductor cooling by use of peltier effect. 3,017,522, 1–16–62, Cl. 307—88.5.

Lubkin, Samuel: *See*—
Auerbach, Albert A., Berezin, Lubkin and Shaw. 3,017,010.

Luenberger, Frederick O., to U.S. Electrical Motors, Inc. Weather protected vertical motors. 3,017,526, 1–16–62, Cl. 310—60.

Luke, George W., to Research Corp. Microwave switch. 3,017,585, 1–16–62, Cl. 333—7.

Lummus, James L., and P. P. Scott, Jr., to Pan American Petroleum Corp. Automatic acting hydrocyclones for drilling fluids. 3,016,962, 1–16–62, Cl. 175—66.

Lumsden, John, to Metallurgical Processes Ltd., and National Smelting Co. Ltd., doing business together as Metallurgical Development Co. Recovery of zinc from zinc-containing materials. 3,017,261, 1–16–62, Cl. 75—24.

Lundry, Walter R., to Bell Telephone Laboratories, Inc. Equalizer. 3,017,578, 1–16–62, Cl. 330—87.

Lundry, Walter R., to Bell Telephone Laboratories, Inc. Wave transmission network. 3,017,584, 1–16–62, Cl. 333—6.

Lutz, John A., and F. J. Vidoni, to General Electric Co. Scoring and breaking apparatus for vitreous tubing. 3,016,654, 1–16–62, Cl. 49—48.

Lyne, Joe A. Hydraulic turbo brake. 3,016,991, 1–16–62, Cl. 188—90.

Lynott, John J., to International Business Machines Corp. Recording device. 3,016,612, 1–16–62, Cl. 33—32.

Lyon, Inc.: *See*—
Celovsky, Michael J. 3,016,853.

Lysholm, Alf. Single stage turbine hydraulic torque converter. 3,016,709, 1–16–62, Cl. 60—54.

Macbeth, Colin. Vehicle tyre vulcanising press. 3,016,570, 1–16–62, Cl. 18—17.

MacDonald, Robert N.: *See*—
Langsdorf, William P., Jr., MacDonald, and Schweitzer. 3,017,389.

MacEwan, James U.: *See*—
Archambault, Maurice, MacEwan, and Olivier. 3,017,243.

Macher, Karl: *See*—
Klemt, Gunter, and Macher. 3,016,799.

Mackey, Eugene L., to The Yoder Co. Method and apparatus for electric resistance tube welding. 3,017,494, 1–16–62, Cl. 219—67.

MacLeod, Donald B.: *See*—
Clark, Harold V., and MacLeod. 3,017,462.

MacLeod, Keith, to W. D. Allen Mfg. Co. Connectors for plastic hose. 3,017,203, 1–16–62, Cl. 285—256.

Maclodyne Corp.: *See*—
Kilham, Peter. 3,016,943.

Magerlein, Barney J., and F. Kagan, to The Upjohn Co. Organic compounds and process. 3,017,423, 1–16–62, Cl. 260—461.

Magers, Lloyd E. Dictionary stand. 3,016,650, 1–16–62, Cl. 45—60.

Magill, Robert H., and J. S. Page, to Page Oil Tools, Inc. Fluid pressure actuated well shut-off valve. 3,016,955, 1–16–62, Cl. 166—224.

Magnavox Co., The: *See*—
Harker, Thomas B., and Nutt. 3,017,086.
Herstedt, Adelbert C. 3,017,521.

Magnuson, Genevieve I.: *See*—
Smith, Traver J. 3,016,788.

Magnuson, Robert: *See*—
Smith, Traver J. 3,016,788.

Makower, Samuel: *See*—
Arond, Lester H., Salem, Wechsler, and Makower. 3,017,396.

Mallett, John E. Detachable table top. 3,017,219, 1–16–62, Cl. 297—135.

Mallory, Henry R., to P. R. Mallory & Co., Inc. Inverter-charger circuit. 3,017,559, 1–16–62, Cl. 321—45.

Mallory, P. R., & Co., Inc.: *See*—
Huetten, Clarence. 3,017,474.
Mallory, Henry R. 3,017,559.

Malmstrom, Carl, and B. O. M. Palm. Oil regulator. 3,016,948, 1–16–62, Cl. 158—36.3.

Malone, Maurice J.: *See*—
Lagasse, Joseph L., and Malone. 3,017,313.

Malone, Robert R., to The Dole Valve Co. Ice level sensor. 3,016,718, 1–16–62, Cl. 62—137.

Malsbary Mfg. Co.: *See*—
Malsbary, Walter F. 3,017,122.

Malsbary, Walter F., to Malsbary Mfg. Co. Steam cleaning machine. 3,017,122, 1–16–62, Cl. 239—135.

Maltas, John A.: *See*—
Wiggins, Richard F., Maltas, and Gann. 3,017,009.
Wiggins, Richard F., Maltas, and Ullman. 3,017,010.

Manett Enterprises, Inc.: *See*—
Barrett, La Vern H. 3,016,605.

Mann, Ralph J., and R. W. Noon, to British Celanese Ltd. Apparatus for the treatment of textile materials. 3,016,728, 1–16–62, Cl. 68—177.

Manning, Harry F., to Talon, Inc. Automatic lock slider for slide fasteners. 3,016,592, 1–16–62, Cl. 24—205.14.

Marco Industries Co.: *See*—
Rodgers, George H. 3,017,594.

Markakis, Michael J.: *See*—
Trimble, Lyne S., Markakis, Nishball, and Leinberger. 3,017,234.

Markle, Harry A., Jr., and J. H. Morrow, to Fuller Co. Incinerator for waste material. 3,016,849, 1–16–62, Cl. 110—18.

Markow, Elliott W., to Raytheon Co. Large angle RF phase shifters. 3,017,583, 1–16–62, Cl. 332—22.

Marland, Joseph A., to Marland One-Way Clutch Co. One-way clutch. 3,017,002, 1–16–62, Cl. 192—45.

Marland One-Way Clutch Co.: *See*—
Marland, Joseph A. 3,017,002.

Marsh, Donald A., to Phillips Petroleum Co. Carbon black recovery. 3,017,249, 1–16–62, Cl. 23—209.4.

Marsh, Roger, R. J. Kopf, and R. W. Henning, to Olin Mathieson Chemical Corp. Powder actuated tool. 3,016,539, 1–16–62, Cl. 1—44.5.

Marshall, Gerald L. Toy. 3,017,185, 1–16–62, Cl. 273—96.

Marston, Arthur E., H. P. Coleman, and J. A. Kaiser, Jr. Linearly polarized spiral antenna system and feed system therefor. 3,017,633, 1–16–62, Cl. 343—853.

Martin, Bernard P.: *See*—
Waite, Virgil H., and Martin. 3,017,333.

Martin, James C.: *See*—
Caldwell, John R., and Martin. 3,017,388.
Elam, Edward U., Hasek, and Martin. 3,017,395.

Martin-Marietta Corp.: *See*—
Taborsky, Stanley. 3,017,621.

Marvin, John, and E. E. Anderson, to Pet Kitchens, Inc. Animal food from clam waste. 3,017,273, 1–16–62, Cl. 99—7.

Marvin, John T., to General Motors Corp. Electrostatic paint spray. 3,017,114. 1–16–62, Cl. 239—3.

Marx, John W., to Phillips Petroleum Co. Prevention of H_2O invasion of in situ combustion zones. 3,016,953, 1–16–62, Cl. 166—11.

Mather, Glenn E., to Rockwell-Standard Corp. Heavy duty spring assemblies. 3,017,171, 1–16–62, Cl. 267—1.

Matson, Earl L. Combination marking line and plumb bob. 3,016,616, 1–16–62, Cl. 33—87.

Matthews, Robert J., to American Radiator & Standard Sanitary Corp. Mercury jet switch and rotor therefor. 3,017,468, 1–16–62, Cl. 200—32.

Mattingly, Ralph J., deceased (by R. R. Mattingly, executor), and J. J. Mattingly. Adhesive applicator for a can labeling machine. 3,017,311, 1–16–62, Cl. 156—357.

Mattingly, Richard R.: *See*—
Mattingly, Ralph J. and J. J. 3,017,311.

Maunoury, Francois M. L.: *See*—
Bertin, Jean H., Kadosch, and Maunoury. 3,016,699.

Maupin, Jerrel T., to Minneapolis-Honeywell Regulator Co. Integral transistor-thermistor and circuit using same for compensating for changing transistor temperature. 3,017,520, 1–16–62, Cl. 307—88.5.

Mayes, Fred M.: *See*—
Bennett, John D., and Mayes. 3,016,963.

McAnulty, Gerald M.: *See*—
Bartson, Lester J., and McAnulty. 3,017,267.

McCarty, Clifford E., and W. D. Holak, to Scott Paper Co. Economic distribution computer. 3,017,104, 1–16–62, Cl. 235—185.

McCulloch Corp., Scott Division: *See*—
Anderson, Glenn R., and Klancke. 3,016,869.

McCullough, William R.: *See*—
England, Richard E., and McCullough. 3,017,484.

McDonnell, Lester T. Light-weight heavy duty conveyor carrier cage. 3,017,037, 1–16–62, Cl. 211—114.

McFarland, Forest R., to Studebaker-Packard Corp. Suspension interlinkage. 3,017,196, 1–16–62, Cl. 280—124.

McGean Chemical Co.: *See*—
Waite, Virgil H., and Martin. 3,017,333.

McGrath, Earle J., to FMC Corp. Conveyor mechanism. 3,017,007, 1–16–62, Cl. 193—40.

McGurty, James A., and J. F. Collins, to General Electric Co. Oxidation resistant iron-chromium alloy. 3,017,265, 1–16–62, Cl. 75—126.

McKay, Alexander S., and H. E. Hall, Jr., to Texaco Inc. Radioactivity geophysical prospecting. 3,016,961, 1–16–62, Cl. 175—41.

McKeirnan, William R.: *See*—
Lambert, Robert L., and McKeirnan. 3,017,281.
Lambert, Robert L., and McKeirnan. 3,017,284.

McKenzie, Charles A.: *See*—
Welch, Donald H., McKenzie, and Killey. 3,017,398.

McKiernan-Terry Corp.: *See*—
Kupka, John J. 3,016,819.

McKinley, Joseph B.: *See*—
Elliott, George E., Jr., McKinley, and Stewart. 3,017,368.

McKinnis, Art C., and W. L. Wasley, to Union Oil Co. of California. Production of dibasic acids from C-8 aromatic hydrocarbons. 3,017,433, 1–16–62, Cl. 260—522.

McLaughlin, Paul J.: *See*—
Rosenthal, Isadore, and McLaughlin. 3,017,290.

McLaughlin, Paul J., and W. W. Toy, to Rohm & Haas Co. Wet-strength paper and method of producing same. 3,017,291, 1–16–62, Cl. 117—119.6.

McLean, Daniel C., to American Cyanamid Co. Catalytic oxidation of ores. 3,017,241, 1–16–62, Cl. 23—14.5.

McNeill, Richard L. Paving machine. 3,016,809, 1–16–62, Cl. 94—46.

McOrlly, Joseph, and G. E. Ammerman, to Edwin L. Wiegand Co. Electric heaters. 3,017,490, 1–16–62, Cl. 219—37.

McPherson, Hugh A., II. Tuned sound deadener. 3,016,971, 1–16–62, Cl. 181—33.

McWhorter, Bobby J., and D. T. Johnson, to General Dynamics Corp. Fastener clip. 3,016,591, 1–16–62, Cl. 24—81.

McWilliams, Robert L.: *See*—
Friant, James E., McWilliams, and Ransom. 3,017,120.

Mead Corp., The: *See*—
Forrer, Homer W. 3,017,054.

Measure-Meters Co. Ltd.: *See*—
Abel, Walter. 3,017,085.

Meermans, John W., to The Garrett Corp. Lubrication system. 3,017,230, 1–16–62, Cl. 308—187.

Mehr, Louis, to Wallace & Tiernan Inc. Manufacture of azo compounds. 3,017,406, 1–16–62, Cl. 260—192.

Meier, Karl H., to A. E. Herzer. Device for magnetic clamping. 3,017,545, 1–16–62, Cl. 317—159.

Meisel, Harry, to Corn Products Co. Process for sizing. 3,017,294, 1–16–62, Cl. 117—139.5.

Meissler, Ivan M., and L. Fazekas. Procedure and tool for the manufacture of various kinds of files and rasps. 3,016,771, 1–16–62, Cl. 76—13.

Menasha Container of California Division of Menasha Wooden Ware Corp.: *See*—
Davis, Warren F. 3,017,064.

Melpar, Inc.: *See*—
Taynton, Ralph. 3,016,540.

Menzel Karl. Sheet washing machine. 3,016,729, 1–16–62, Cl. 68—183.

Menzel, Wolfgang A., to United States of America, Navy. Damping coefficient measuring instrument. 3,016,736, 1–16–62, Cl. 73—71.4.

Merck & Co., Inc.: *See*—
Barrett, Lewis H., and Brown. 3,017,415.

Merriman Henry H. Fluid expansion unit. 3,016,884, 1–16–62, Cl. 121—48.

Mersek, Leo D.: *See*—
Ehlert, William A., and Mersek. 3,017,016.

Merta, Hugo: *See*—
Lejk, Joseph R., and Merta. 3,017,071.

Messelt, Stephen J., to The Perkin-Elmer Corp. Fire detection apparatus. 3,017,513, 1–16–62, Cl. 250—83.3.

Messina, Giuseppe: *See*—
Muench, Werner, Notarbartolo, and Messina. 3,017,394.

Metallgesellschaft Aktiengesellschaft: *See*—
Kratz, Alfred J. P. 3,017,347.

Metallurgical Development Co.: *See*—
Lumsden, John. 3,017,261.

Metallurgical Processes Ltd.: *See*—
Lumsden, John. 3,017,261.

Metcalf, Albert T., Jr.: *See*—
Erickson, Bruce G., Metcalf, and Schuster. 3,016,690.

Metropolitan-Vickers Electrical Co. Ltd.: *See*—
Pearce, Frederick M. 3,017,542.

Metz, Francis L.: *See*—
Dence, Donald S., and Metz. 3,017,006.

Meyer, Karl-Heinrich, and H. Schnell, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of diarylcarbonates. 3,017,424, 1–16–62, Cl. 260—463.

Meyer, Robert W., to Owens-Illinois Glass Co. Apparatus for handling and treating vials. 3,017,011, 1–16–62, Cl. 198—33.

Michel, Kaspar, to Gebruder Gysi A.G. Device controlling the light passing through the glass roof of a conservatory. 3,016,801, 1–16–62, Cl. 88—61.

Micromatic Hone Corp.: *See*—
Ellis, Rollo G. 3,016,662.

Microwave Electronic Tube Co., Inc.: *See*—
Roberts, Louis W. 3,017,534.

Midland Chemical Corp.: *See*—
Berry, John M., and Witt. 3,017,287.

Migneault, Fernand W.: *See*—
Migneault, Romuald and F. W. 3,017,212.

Migneault, Romuald and F. W. Panel locking means for sashless windows. 3,017,212, 1–16–62, Cl. 292—202.

Milan, Leo F. Jacks game. 3,017,182, 1–16–62, Cl. 273—1.

Miller, David J.: *See*—
Duncan, Richard L., Miller, Caldwell, Ruegg, and Flock. 3,016,704.

Miller, Frank D., and C. R. Adler, to Eastman Kodak Co. Method of preparing photographic materials. 3,017,289, 1–16–62, Cl. 117—34.

Miller, Howard L. and I. K. Single trigger mechanism for a two-barrel gun. 3,016,645, 1–16–62, Cl. 42—42.

Miller, Irvin K.: *See*—
Miller, Howard L. and I. K. 3,016,645.

Miller, James C., to Radio Corp. of America. Negative resistance diode memory. 3,017,613, 1–16–62, Cl. 340—173.

Miller, Kermit D.: *See*—
Peterman, Milton J., and Miller. 3,017,023.

Miller, Robert K., to Western Electric Co., Inc. Automatic feed control mechanism. 3,017,060, 1–16–62, Cl. 226—10.

Mills, George A., to Houdry Process Corp. Magnesia modified kaolin catalyst. 3,017,370, 1–16–62, Cl. 252—450.

Milprint, Inc.: *See*—
Huitkrans, Paul B. 3,017,302.
Parks, George J. 3,017,067.
Schoen, Walter A., and Herrick. 3,016,806.

Minneapolis-Honeywell Regulator Co.: *See*—
Bishofberger, Carl J. 3,017,023.
Keller, Roger P., and Renier. 3,017,592.
Maupin, Joseph T. 3,017,520.
Wentworth, Milo R. 3,016,918.
Werme, John V., Newbold, Parnell, and Volpe. 3,017,097.

Minneapolis Mining and Mfg. Co.: *See*—
Fritts, Robert W. 3,017,444.
Fritts, Robert W. 3,017,445.
Johnson, Wayne R. 3,017,457.
Ney, William O., Jr. 3,017,393.

Minnich, John W., and E. L. Sweet, to E. I. du Pont de Nemours and Co. Pigment production. 3,017,414, 1–16–62, Cl. 260—279.

Minobe, Mickey M., to Ideal Industries, Inc. Power operated wrench for screw-on-type connectors. 3,016,774, 1–16–62, Cl. 81—54.

Mitchell, Drury K., to United States of America, Navy. Closure device. 3,017,053, 1–16–62, Cl. 220—24.5.

Mitchell, Thompson, J. S. Harris, and D. Zekaria, to Radio Corp. of America. Communication system. 3,017,461, 1–16–62, Cl. 178—26.

Mite Corp.: *See*—
Caldwell, Samuel P. 3,016,850.

Mobay Chemical Co.: *See*—
Ebneth, Harold. 3,016,575.
Jickel, Fritz. 3,016,756.

Modic, Frank J., to General Electric Co. Organopolysiloxane fibers. 3,017,384, 1–16–62, Cl. 260—46.5.

Modine Mfg. Co.: *See*—
Haasted, Raymond S., and Kohler. 3,017,161.

Moeckel, Wolfgang E.: *See*—
Jack, John R., and Moeckel. 3,016,693.

Moeller, Carl A., Jr., to Image Transfer Inc. Valve. 3,016,915, 1–16–62, Cl. 137—595.

Monsanto Chemical Co.: *See*—
Butler, John M., Hedrick, and Mottus. 3,017,392.
Deming, John M. 3,016,713.
Hohenberg, Paul M., James, and Wechsberg. 3,017,371.
Mottus, Edward H., Hedrick, and Butler. 3,017,391.

Montelius, Carl O. T., to De Laval Steam Turbine Co. Screw pump. 3,016,842, 1–16–62, Cl. 103—128.

Moore, Garvin M., Jr.: *See*—
Van Alstyne, Alvin G., and Moore. 3,017,105.

Morgan, Carrel R.: *See*—
Thomsen, William A. V., Morgan, and Quail. 3,016,920.

Morgan, Harry C.: *See*—
Klein, Martin L., Morgan, and Goudey. 3,017,582.

Moricca, Anthony C. and S. A. and C. E. Bohn. Device for testing reactances. 3,017,571, 1–16–62, Cl. 324—51.

Moricca, Samuel A.: *See*—
Moricca, Anthony C. and S. A., and Bohn. 3,017,571.

Morrill, Louis R. Automatic rotation balancer. 3,017,223, 1–16–62, Cl. 301—5.

Morris, Clifford: *See*—
Lorett, Jerry A., and Morris. 3,016,703.

Morris, John R., R. C. Schlicht, C. W. Adams, and J. A. Lawrence, to Texaco Inc. "Non-squawking" automatic transmission fluid. 3,017,361, 1–16–62, Cl. 252—35.

Morrow, Joseph H.: *See*—
Markle, Harry A., Jr., and Morrow. 3,016,849.

Mortberg, Richard E.: *See*—
Downing, Richard M., Mortberg, and Smith. 3,016,576.

Mosen, Donald W., to Crown Zellerbach Corp. Cant accumulator for paper converting machines. 3,016,780, 1–16–62, Cl. 83—417.

Mosher, Hugh H. Fire retardant nylon fabric and method of producing the same. 3,017,292, 1–16–62, Cl. 117—137.

Motoren-Werke Mannheim AG, vorm. Benz Abt. Stat Motorenbau: *See*—
Benz, Walter, and Linnenkohl. 3,016,886.

Motorola, Inc.: *See*—
Birkenes, Bernhard. 3,017,507.
Dickson, Donald C., Jr. 3,017,550.

Mottus, Edward H.: *See*—
Butler, John M., Hedrick, and Mottus. 3,017,392.

Mottus, Edward H., R. M. Hedrick, and J. M. Butler, to Monsanto Chemical Co. Preparation of polycaprolactam using N-acyl activators. 3,017,391, 1–16–62, Cl. 260—78.

Mount, Robert H.: *See*—
Wilson, Clifford K., Mount, and Jabbusch. 3,016,936.
Wilson, Clifford K., Mount, and Jabbusch. 3,017,298.

Mozley, Steve D., Jr., to Continental Oil Co. Quarter-square multiplier and correlator. 3,017,107, 1–16–62, Cl. 235—194.

Moy, Tsoy K.: *See*—
Howarth, Wesley L., and Moy. 3,016,694.

Mueller, Kurt H. Depth and groove locating gage. 3,016,619, 1–16–62, Cl. 33—172.

Muench, Werner, L. Notarbartolo, and G. Messina, to Snia Viscosa Societa Nazionale sIndustria Applicazioni Viscosa S.p.A. Process for the polycondensation of diamines and dicarboxylic acids. 3,017,394, 1–16–62, Cl. 260—78.

Mühlbeyer, Josef. Centrifugal-force controlled delayed-action transmission. 3,017,005, 1–16–62, Cl. 192—105.

Muller, David E., to Bell Telephone Laboratories, Inc. Asynchronous encoder. 3,017,626, 1–16–62, Cl. 340—347.

Müller, Hildegard: *See*—
Engelbrecht, Heinz-Joachim, Lenke, and Müller. 3,017,411.

Mullin, John M. Key case construction. 3,016,940, 1–16–62, Cl. 150—40.

Mumma, Harold J., to FMC Corp. Classification and recording machine for handling eggs. 3,017,024, 1–16–62, Cl. 209—74.

Munson, Donald J., to The J. R. Clark Co. Ladder construction. 3,016,976, 1–16–62, Cl. 182—194.

Murray, Joseph D., to The United Steel Companies Ltd. Austenitic steel and articles made therefrom. 3,017,266, 1–16–62, Cl. 75—128.

Murray Ohio Mfg. Co., The: *See*—
Douglas, Alvin P. 3,016,606.

Myers, Charles E., and W. T. Linson, to Texaco Inc. Clamp type wrench adapter for deep well operations. 3,016,776, 1–16–62, Cl. 81—180.

Myers, Lester A. Pie cutter. 3,016,608, 1–16–62, Cl. 30—114.

N.V. Fabriek Van Electrische Apparaten Voorheen F. Hazenmeijer & Co.: *See*—
Klaassen, Antonius C. 3,017,480.

Nadherny, Frank J., and M. C. Prymek, to Western Electric Co., Inc. Adjustable clamping device. 3,017,175, 1–16–62, Cl. 269—130.

Nadir, Mark T., to United States of America, Navy. Square-wave generator. 3,017,537, 1–16–62, Cl. 315—230.

Nakamatsu, Yoshiro. Movie system adapted for simultaneously enlarging and reducing a projected image and the area of an associated screen. 3,016,790, 1–16–62, Cl. 88—16.

Nash, Gerald C.: *See*—
Lipp, Donald, and Nash. 3,016,902.

National Cash Register Co., The: *See*—
Andrews, Ladimer J. 3,017,102.
Trimble, Lyne S., Markakis, Nishball, and Leinberger. 3,017,234.
Werner, Frank R., Randall, and Flint. 3,017,078.

National Distillers and Chemical Corp.: *See*—
Brickle, Donald J. 3,017,178.

National Lead Co.: *See*—
Orsino, Joseph A., and Dunn. 3,017,447.

National Research Corp.: *See*—
Baer, Charles A., Clough, and Steeves. 3,016,873.

National Scientific Laboratories, Inc.: *See*—
Singer, Jerome R. 3,017,612.

National Smelting Co.: *See*—
Lumsden, John. 3,017,261.

Nava, Joseph A., and L. A. Archer, to The Pyle-National Co. Electrical connector. 3,017,597, 1–16–62, Cl. 339—64.

Nayler, Peter, to The Distillers Co. Ltd. Production of linalyl acetate. 3,017,429, 1–16–62, Cl. 260—489.

Nelson, Forrest A.: *See*—
Kane, Ralph W., Nelson, and Rogers. 3,017,544.

Nesbitt-Dufort, Timothy, to Ernest Scragg & Sons Ltd. Textile processes. 3,016,678, 1–16–62, Cl. 57—34.

Neu, Edward A., Jr.: *See*—
Sternberg, Marvin, and Neu. 3,016,697.

Newbold, William F.: *See*—
Werme, John V., Newbold, Parnell, and Volpe. 3,017,097.

Newburn, Harold W., to FMC Corp. Peach pitter twisting head. 3,016,935, 1–16–62, Cl. 146—28.

Newell, James K., Jr., to General Electric Co. Tension mount for oven breaker frame. 3,017,488, 1–16–62, Cl. 219—37.

Newman, Douglas A., and H. F. E. Dixon, to Columbia Ribbon & Carbon Mfg. Co., Inc. Smudge-resistant pressure-sensitive transfer sheet and method of making. 3,017,297, 1–16–62, Cl. 117—216.

Newman, John M., and E. J. Posselt, to Cutler-Hammer, Inc. Dynamic braking control for series wound motors. 3,017,555, 1–16–62, Cl. 318—380.

Newton, George C.: *See*—
James, Ivanhoe J. P., and Newton. 3,017,454.

Ney, William O., Jr., to Minnesota Mining and Mfg. Co. Stabilization of polymers of pyrrolidone. 3,017,393, 1–16–62, Cl. 260—78.

Nichols, Edward C., to Draper Corp. Filling carrier for shuttleless looms. 3,016,927, 1–16–62, Cl. 139—122.

Nielsen, Waldemar C. Cutting device. 3,016,661, 1–16–62, Cl. 51—206.

Niklas, Wilfrid F., to The Rauland Corp. Image converter. 3,017,517, 1–16–62, Cl. 250—213.

Nishball, Jerome L.: *See*—
Trimble, Lyne S., Markakis, Nishball, and Leinberger. 3,017,234.

Nixon, William G., to Universal Oil Products Co. Catalyst manufacturing with control of halogen. 3,017,369, 1–16–62, Cl. 252—441.

Noffke, Alvin J. Unreeler to unwind rolls of electrical wire. 3,017,136, 1–16–62, Cl. 242—129.

Noon, Robert W.: *See*—
Mann, Ralph J., and Noon. 3,016,728.

Nordberg Mfg. Co.: *See*—
Erickson, Bruce G., Metcalf, and Schuster. 3,016,690.

Norddeutsche Seekabelwerke Aktiengesellschaft: *See*—
Kebekus, Alfred, and Rosenboom. 3,017,314.

Normant, Henri, to Societe des Usines Chimiques Rhone-Poulenc. Production of glycol monoethers. 3,017,437, 1–16–62, Cl. 260—611.

Norris, Edward O. Electrostatic spraying device. 3,017,116, 1–16–62, Cl. 239—15.

Norris, William A. Oxidizer. 3,017,255, 1–16–62, Cl. 23—288.

North American Aviation, Inc.: *See*—
Klein, Martin L., Morgan, and Goudey. 3,017,582.
Oelgoetz, Paul A. 3,017,341.
Oliodort, Morris. 3,017,141.
Peterman, Milton J., and Miller. 3,017,023.
Simon, Wayne E. 3,016,745.

Northern Electric Co., Ltd.: *See*—
Lagasse, Joseph L., and Malone. 3,017,313.

Noseworthy, Melvin M.: *See*—
Gordon, Philip N., Stephens, Noseworthy, and Teare. 3,017,323.

Notarbartolo, Luigi: *See*—
Muench, Werner, Notarbartolo, and Messina. 3,017,394.

Nutt, Evan B., Jr.: *See*—
Harker, Thomas B., and Nutt. 3,017,086.

Oakes, Billy D., to The Dow Chemical Co. Corrosion inhibitor composition. 3,017,355, 1–16–62, Cl. 252—8.55.

Oberhausen, Erich: *See*—
Roucayrol, Jean-Claude, Oberhausen, and Schussler. 3,017,510.

Oelgoetz, Paul A., to North American Aviation, Inc. Method and apparatus for electro-chemical milling. 3,017,341, 1–16–62, Cl. 204—242.

Olandt, John W., to Specialties Development Corp. Fluid distributing system. 3,016,956, 1–16–62, Cl. 169—11.

Olin Mathieson Chemical Corp.: *See*—
Clark, Charles C., Kanda, and King. 3,017,248.
Marsh, Roger, Kopf, and Henning. 3,016,589.

Olivier, Charles A.: *See*—
Archambault, Maurice, MacEwan, and Olivier. 3,017,243.

Oliodort, Morris, to North American Aviation, Inc. Center of gravity controller. 3,017,141, 1–16–62, Cl. 244—76.

Olson, Albert M., to FMC Corp. Soil tilling apparatus. 3,016,957, 1–16–62, Cl. 172—42.

Olson, Edward M. Barn cleaning apparatus. 3,017,008, 1–16–62, Cl. 198—7.

Olsson, Otto Y.: *See*—
Bingham, George H., Jr., and Olsson. 3,016,569.

Olstowski, Franciszek, to The Dow Chemical Co. Preparation of fluorocarbon nitriles. 3,017,336, 1–16–62, Cl. 204—62.

Olympic Screw & Rivet Corp.: *See*—
Kolec, Robert F. 3,017,052.

Orsage, Richard L.: *See*—
Lo, Chien-Pen, and Orsage. 3,017,416.

Osborn Mfg. Co., The: *See*—
Peterson, Ruben O. 3,016,554.

Osburn, John G.: *See*—
Zankl, Frank, and Osburn. 3,016,804.

Orsino, Joseph A., and F. J. Dunn, Jr., to National Lead Co. Silica containing battery plates. 3,017,447, 1–16–62, Cl. 136—26.

Ouesani, James J. Multiple stapler. 3,016,538, 1–16–62, Cl. 1—3.

Outterson, Charles R., J. L. Baker, and B. S. Halsey; said Outterson assor. to Albemarle Paper Mfg. Co. Coated paper and paperboard and process for making same. 3,017,295, 1–16–62, Cl. 117—155.

Owen, Charles E., to International Business Machines Corp. Electronic digital computing machines. 3,017,101, 1–16–62, Cl. 235—176.

Owen, Harry L. Building framing unit. 3,016,993, 1–16–62, Cl. 189—34.

Owens-Illinois Glass Co.: *See*—
Meyer, Robert W. 3,017,011.

Oxspring, Ronald E. N., and P. Rosenblum, to Hycon Mfg. Co. Rotary camera shutter. 3,016,810, 1–16–62, Cl. 95—10.

Pacific Scientific Co.: *See*—
Wrighton, Robert J., and Cushman. 3,016,760.
Wrighton, Robert J., and Cushman. 3,016,761.

Packard, Clifford B.: *See*—
Robinson, Donald W., Jr., and Packard. 3,017,147.

Page, John S.: *See*—
Magill, Robert H., and Page. 3,016,955.

Page Oil Tools, Inc.: *See*—
Magill, Robert H., and Page. 3,016,955.

Palm, Björn O. M.: *See*—
Malmstrom, Carl, and Palm. 3,016,948.

Palm, James W., to Borg-Warner Corp. Non-rotating sprag coupling. 3,017,210, 1–16–62, Cl. 287—114.

Palmer, Elmer D. Wheel-balancing assembly for truck wheels and the like. 3,017,224, 1–16–62, Cl. 301—5.

Pan American Laboratories, Inc.: *See*—
Sein, Roberto. 3,016,895.

Pan American Petroleum Corp.: *See*—
Bricker, Clyde H. 3,016,617.
Lummus, James L., and Scott. 3,016,962.
Scott, Piatho P., Jr., Anderson, and Park. 3,017,351.
Vincent, Renic P. 3,016,844.

Pape, Ernest H. Lifting and carrying device. 3,017,214, 1–16–62, Cl. 294—31.

Papke, Friedrich, to Voigtlander A.G. Range finder for photographic cameras. 3,016,786, 1–16–62, Cl. 88—2.4.

Pappo, Raphael, to G. D. Searle & Co. 17β,18-bisoxygenated androst-4-en-3-ones and intermediate. 3,017,410, 1–16–62, Cl. 260—239.55.

Park, Arthur: *See*—
Scott, Piatho P., Jr., Anderson, and Park. 3,017,351.

Parke, Davis & Co.: *See*—
Tendick, Frank H., Thompson, and Eislager. 3,017,413.

Parker, John M. Wrapping and sealing machine. 3,016,673, 1–16–62, Cl. 53—390.

Parkin, Leslie, and W. H. Brealey, to United-Carr Fastener Corp. Self-threading sheet metal fastening device. 3,016,784, 1–16–62, Cl. 85—47.

Parks, George J., to Milprint, Inc. Carton assemblage having localized attachment. 3,017,067, 1–16–62, Cl. 229—48.

Parks-Cramer Co.: *See*—
Holtzclaw, Grover B. 3,016,559.

Parnell, John: *See*—
Werme, John V., Newbold, Parnell and Volpe. 3,017,097.

Parry, Frank, to The Singer Mfg. Co. Vibration dampeners for sewing machine lighting fixtures. 3,017,498, 1–16–62, Cl. 240—2.14.

Parsons, Floyd B., and J. L. Then, to Specialties Development Corp. Lanyard actuated valve. 3,017,157, 1–16–62, Cl. 251—66.

Patterson, Omar L., to Sun Oil Co. Computing circuits. 3,017,106, 1–16–62, Cl. 235—194.

Patterson, Robert C., to Combustion Engineering, Inc. Mechanical seal. 3,017,191, 1–16–62, Cl. 277—82.

Paul, Harry C. Snow tractor. 3,016,965, 1–16–62, Cl. 180—5.

Payne, Kenneta. Method of producing a visual musical record. 3,016,792, 1–16–62, Cl. 88—24.

Payson, Arthur H., and L. J. Darmstadt, to The American Thermos Products Co. Combination vacuum bottle and closure means therefor. 3,017,047, 1–16–62, Cl. 215—13.

Pazderski, Roman R.: *See*—
Stremke, William F., Stremke, and Pazderski. 3,016,671.

Pearce, Frederick M., to Metropolitan-Vickers Electrical Co. Ltd. Binary counting arrangements. 3,017,542, 1–16–62, Cl. 317—140.

Pecoraro, Ralph R.: *See*—
Dziedziula, Edward J., Pecoraro, and Sinatra. 3,016,930.

Penoyer, Charles E., to The Sherwin-Williams Co. Tag rag. 3,016,555, 1–16–62, Cl. 15—209.

Perkin-Elmer Corp., The: *See*—
Messelt, Stephen J. 3,017,513.

Perkins, Denis G.: *See*—
Watson, George R., Perkins, and James. 3,017,455.

Perras, Philippe: *See*—
Bo, Gilbert, Fichet, Perrot, and Perras. 3,017,401.

Perrot, André: *See*—
Bo, Gilbert, Fichet, Perrot, and Perras. 3,017,401.

Perry, Robert W., Jr., to E. I. du Pont de Nemours and Co. Microfiber and staple fiber batt. 3,016,599, 1–16–62, Cl. 28—78.

Persechino, Mario A., to United States of America, Navy. Valveless pulsejet smoke generator. 3,017,367, 1–16–62, Cl. 252—359.

Persinger, Laverne O.: *See*—
Persinger, Merle L. and L. O. 3,016,816.
Persinger, Merle L. and L. O. 3,016,817.

Persinger, Merle L. and L. O., to Seidelhuber Steel Rolling Mill Corp. Outdoor barbecue with slanting grill. 3,016,816, 1–16–62, Cl. 99—339.

Persinger, Merle L. and L. O., to Seidelhuber Steel Rolling Mill Corp. Indoor barbecue with slanting grill. 3,016,817, 1–16–62, Cl. 99—339.

Personal Products Corp.: *See*—
Burgeni, Alfred A. 3,017,304.

Pet Kitchens, Inc.: *See*—
Marvin, John, and Anderson. 3,017,273.

Peterman, Milton J., and K. D. Miller, to North American Aviation, Inc. Tool and display box. 3,017,023, 1–16–62, Cl. 206—65.

Petersen, Otto, to Kurt Korber & Co. K.G. Device for loosening and distributing of tobacco or the like material. 3,016,906, 1–16–62, Cl. 131—108.

Peterson, Ruben O., to The Osborn Mfg. Co. Brush material and brush. 3,016,554, 1–16–62, Cl. 15—159.

Peterson, Walter G., and E. Cadwallader, 1/6 to Gadget-of-The-Month Club, Inc. Device for attracting wild geese and ducks. 3,016,647, 1–16–62, Cl. 43—3.

Petracek, Francis J., and M. D. Draper, to Riker Laboratories, Inc. Process for producing polysulfuric acid esters of polysaccharides. 3,017,407, 1–16–62, Cl. 260—234.

Petrolite Corp.: *See*—
Hughes, William B., and Stromberg. 3,017,352.
Hughes, William B., and Stromberg. 3,017,356.

Pettibone Mulliken Corp.: *See*—
Lado, Anthony L. 3,016,636.

Pezzopane, Herman A. Vehicle lamp. 3,017,500, 1–16–62, Cl. 240—8.2.

Pfizer, Chas. & Co., Inc.: *See*—
Gordon, Philip N., Stephens, Noseworthy, and Teare. 3,017,323.
Ursprung, Joseph J. 3,017,322.

Philco Corp.: *See*—
Schnable, George L., and Javes. 3,017,332.

Phillips, Paul C., to United States of America, Navy. Electronic method for generation of a single cycle of a trigonometric function. 3,017,580, 1–16–62, Cl. 331—166.

Phillips Petroleum Co.: *See*—
Allyn, Robert M., and Elliott. 3,016,970.
Carr, Donald E. 3,017,168.
Doyle, Robert. 3,017,315.
Franz, Richard D., and Warner. 3,017,320.
Herring, Lilles G. 3,017,300.
Huxley, Edward E. 3,017,247.
Marsh, Donald A. 3,017,249.
Marx, John W. 3,016,953.
Reed, Edwin E. 3,017,057.
Simmons, Bill J. 3,017,252.

Pierce, Earl W., to General Motors Corp. Igniter plug. 3,017,530, 1–16–62, Cl. 313—11.5.

Piergiovanni, Augie A. Mailbox signal. 3,017,073, 1–16–62, Cl. 232—35.

Pietsch, Joseph A., to General Electric Co. Thermoelectric assembly. 3,016,715, 1–16–62, Cl. 62—3.

Pinkney, Agnes C. No-tie bib. 3,016,544, 1–16–62, Cl. 2—49.

Piper, Douglas E., to Eastman Kodak Co. Photographic emulsions sensitized with alkylene oxide polymers and quaternary ammonium salts. 3,017,271, 1–16–62, Cl. 96—107.

Pirelli Societa per Azioni: *See*—
Priaroggia, Paolo G. 3,017,306.

Pitney-Bowes, Inc.: *See*—
Bernart, William F., Hanson, and Schmeck. 3,016,820.

Platz, Elwood T., and W. H. Frank, to I-T-E Circuit Breaker Co. Plug-in connector. 3,017,605, 1–16–62, Cl. 339—252.

Pliskin, William A., to Texaco Inc. Wedge for a double beam spectrophotometer. 3,016,800, 1–16–62, Cl. 88—61.

Pollitzer, Ernest L., to Universal Oil Products Co. Stabilization of burner oil. 3,017,258, 1–16–62, Cl. 44—72.

Pollitzer, Ernest L., to Universal Oil Products Co. Preventing heat exchange deposits. 3,017,343, 1–16–62, Cl. 208—47.

Pollitzer, Ernest L., to Universal Oil Products Co. Hydrocarbon oil composition. 3,017,358, 1–16–61, Cl. 252—32.5.

Pollock, Daniel D.: *See*—
Finch, Donald I., Korostoff, and Pollock. 3,017,269.

Pollock, John S.: *See*—
Gnage, Oliver W., and Pollock. 3,017,132.

Polster, Norman E., to Leeds and Northrup Co. Transistor switching circuits. 3,017,560, 1–16–62, Cl. 321—45.

Poly Choke Co., Inc., The: *See*—
Grahn, Arne Y. 3,016,613.

Polymer Corp. Ltd.: *See*—
Welch, Donald H., McKenzie, and Killey. 3,017,398.

Ponchel, Basil M.: *See*—
Vanderburgh, David G., Binger, and Ponchel. 3,016,885.

Pond, James W., to The B. F. Goodrich Co. Method of providing a valve in an inflatable tire. 3,017,308, 1–16–62, Cl. 156—120.

Pondexter, Kenneth S. Sharpener and driving means therefor. 3,016,658, 1–16–62, Cl. 51—159.

Porter, H. K., Co., Inc.: *See*—
Robinson, Samuel R. 3,017,539.

Posselt, Edward J.: *See*—
Newman, John M., and Posselt. 3,017,555.

Potash Co. of America: *See*—
Schoeld, Edmund A., and Egbom. 3,017,028.

Potter, Ralph M., and M. Aven, to General Electric Co. Electroluminescent phosphor and treatment. 3,017,366, 1–16–62, Cl. 252—301.6.

Pounders, Jimmie F. Mobile support for an electric hedge trimmer. 3,016,674, 1–16–62, Cl. 56—236.

Powell, Flavious M.: *See*—
Rent, Edward F., and Powell. 3,017,092.

Powell, James L. Safety closure for containers. 3,017,049, 1–16–62, Cl. 215—44.

Practical Mfg. Co.: *See*—
Albertson, Victor N. and R. V. 3,016,841.

Precise Engineering Co., The: *See*—
Sell, Frank A., Jr. 3,016,668.

Prevost, Bruno E., and P. N. St. Onge, to John W. Bolton & Sons, Inc. Knife changing board. 3,017,177, 1–16–62, Cl. 269—205.

Priaroggia, Paolo G., to Pirelli Societa per Azioni. Construction of the insulation in joints for high tension electric cables. 3,017,306, 1–16–62, Cl. 156—48.

Price, Edison. Lighting louvers. 3,016,997, 1–16–62, Cl. 189—82.

Price, Edward M., to Tung-Sol Electric Inc. Shipping and display carton. 3,017,018, 1–16–62, Cl. 206—45.31.

Pridham, Thomas G.: *See*—
Craveri, Renato, Shotwell and Pridham. 3,017,327.

Priestly, Frank P. Hot-wire cutter. 3,017,487, 1–16–62, Cl. 219—29.

Probescope Co.: *See*—
Hoffmann, Richard R. 3,017,573.

Promislow, Albert L., and M. H. Waldman, to Canadian Industries Ltd. Cohesion tester for textile yarns. 3,016,743, 1–16–62, Cl. 73—160.

Prymek, Milton C.: *See*—
Nadherny, Frank J., and Prymek. 3,017,175.

Puzar, Vincent D.: *See*—
Ruffing, Norman R., Amos and Puzar. 3,017,426.

Pyrexon Ray Co. Ltd.: *See*—
Cooke, James R. 3,017,493.

Pyle-National Co., The: *See*—
Nava, Joseph A., and Archer. 3,017,597.

Quade, Edward A., to International Business Machines Corp. Magnetic transducer. 3,017,617, 1–16–62, Cl. 340—174.1.

Quail, Bernard W.: *See*—
Thomsen, William A. V., Morgan, and Quail. 3,016,920.

Quaker Stretcher Co.: *See*—
Klein, Edward. 3,017,034.

Rabbitt, John. Fuel burner. 3,016,949, 1–16–62, Cl. 158—104.

Rabinow, Jacob, ½ to M. L. Labman. Safety automatic regulator for timepieces. 3,016,687, 1–16–62, Cl. 58—109.

Rader, William E., to Shell Oil Co. Slimicide. 3,017,319, 1–16–62, Cl. 162—161.

Radio Corp. of America: *See*—
Booth, Grant W. 3,017,099.
Eaton, Robert F. 3,017,504.
Johnson, Edward O. 3,017,533.
Miller, James C. 3,017,613.
Mitchell, Thompson, Harris, and Zekaria. 3,017,461.
Rajchman, Jan A. 3,017,614.
Smith, Lloyd B., and Childress. 3,017,615.

Radio Engineering Laboratories, Inc.: *See*—
Brack, Werner. 3,017,579.

Ralbourn, Paul. Low frequency video signal attenuation in color receiver. 3,017,453, 1–16–62, Cl. 178—5.4.

Raidl, Frank. Turreted headstock for transmission test stands. 3,016,740, 1–16–62, Cl. 73—118.

Rajchman, Jan A., to Radio Corp. of America. Magnetic storage device. 3,017,614, 1–16–62, Cl. 340—174.

Rakhorst, Albertus. Ring spinning machine for spinning a sliver directly into yarn. 3,016,679, 1–16–62, Cl. 57—36.

Randall, Harold O.: *See*—
Werner, Frank R., Randall, and Flint. 3,017,078.

Ransom, George P.: *See*—
Friant, James E., McWilliams, and Ransom. 3,017,120.

Rapaport, Myron S., to Kenco Products Corp. Filling mechanism for glasses. 3,016,920, 1–16–62, Cl. 141—263.

Rapson, William H., to Hooker Chemical Corp. Method of bleaching wood pulp with chlorine dioxide and sodium borohydride. 3,017,316, 1–16–62, Cl. 162—80.

Rasch, Arthur A.: *See*—
Tregillus, Leonard W., and Rasch. 3,017,270.

Ratcliff, Daniel. Device for recovering fish lures and the like. 3,016,649, 1–16–62, Cl. 43—17.2.

Rauland Corp., The: *See*—
Niklas, Wilfrid F. 3,017,517.

Raulerson, Joseph G.: *See*—
Smathers, Ralph L., and Raulerson. 3,016,996.

Raytheon Co.: *See*—
Guterman, Sadia S. 3,017,084.
Low, Russell C. 3,017,598.
Markow, Elliott W. 3,017,583.
Warner, Gerald L. 3,017,581.

Recherche et Industrie Therapeutiques: *See*—
Van Dijck, Paul, and Eyssen. 3,017,272.

Red, Harold V., to Borg-Warner Corp. Clutch. 3,017,003, 1–16–62, Cl. 192—48.

Redfern, John T., and G. M. Coleman, to United States of America, Navy. Electrical phase shifter. 3,017,574, 1–16–62, Cl. 324—89.

Reed, Edwin E., to Phillips Petroleum Co. Liquid flow control system. 3,017,057, 1–16–62, Cl. 222—318.

Reese, James H., to Hamilton Watch Co. Electric watch. 3,016,685, 1–16–62, Cl. 58—28.

Ref Mfg. Corp.: *See*—
Dziedziula, Edward J., Pecoraro, and Sinatra. 3,016,930.

Rehels Co., Inc.: *See*—
Beekman, Stewart M. 3,017,324.

Rehfeld, George W. Motorcycle with wide tread wheels. 3,016,967, 1–16–62, Cl. 180—30.

Reichard-Coulston, Inc.: *See*—
Bennetch, Leonard M., West, and Leiner. 3,017,283.

Reid, William P. Grommet. 3,016,562, 1–16–62, Cl. 16—2.

Reimers-Getriebe K.G.: *See*—
Dittrich, Otto. 3,016,755.

Reindl, Harold J., to General Motors Corp. Material for metal surfaces upon which ice adheres. 3,016,719, 1–16–62, Cl. 62—357.

Renier, James J.: *See*—
Keller, Roger P., and Renier. 3,017,592.

Renner, Glen R., and L. A. Rice, to General Motors Corp. Motor vehicle power generation. 3,017,563, 1–16–62, Cl. 322—90.

Rent, Edward F., and F. M. Powell, to International Business Machines Corp. Program control for data storage and processing machine. 3,017,092, 1–16–62, Cl. 235—153.

Republic Flow Meters Co.: *See*—
Smoot, Charles H. 3,017,556.

Research Corp.: *See*—
Luke, George W. 3,017,585.
Von Hippel, Arthur R. 3,017,516.

Reuter, Luke N. Air duct jack. 3,017,174, 1–16–62, Cl. 269—126.

Reynolds, Eugene E.: *See*—
Edwards, Richard A., and Reynolds. 3,017,088.

Reynolds, Eugene E., to Smith-Corona Marchant, Inc. Spring powered key mechanism. 3,017,089, 1–16–62, Cl. 235—145.

Rice, Lyman A.: *See*—
Renner, Glen R., and Rice. 3,017,563.

Richardson, James T., to Esso Research and Engineering Co. Control of catalytic conversion of hydrocarbons. 3,017,256, 1–16–62, Cl. 23—288.

Riddiford, Reginald L., and F. Salisbury, to The General Electric Co. Ltd. Devices for sensing punched cards, tapes or other members. 3,017,082, 1–16–62, Cl. 235—61.11.

Riggert, Karlheinz, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process of preparing shrinkproof filaments from low-pressure polyethylene. 3,016,577, 1–16–62, Cl. 18—48.

Riggs, Olen L., Jr., to Continental Oil Co. Oil well inhibitor. 3,017,354, 1–16–62, Cl. 252—8.55.

Riker Laboratories, Inc.: *See*—
Petracek, Francis J., and Draper. 3,017,407.

Ringold, Howard J., J. A. Zderic, E. Batres, and G. Rosenkranz, to Syntex S.A. 11a-methyl-androstane derivatives. 3,017,419, 1–16–62, Cl. 260—397.45.

Rinkewich, Isaac, and H. Chow, to International Patent Research Corp. Lawn sprinkler. 3,017,123, 1–16–62, Cl. 239—230.

Rise, William E., to General Motors Corp. Apparatus for manufacturing pre-aimed lamps. 3,016,657, 1–16–62, Cl. 51—134.

Ritchie, Malcolm L., to United States of America, Air Force. Drag indicator for aircraft cockpits. 3,017,609, 1–16–62, Cl. 340—27.

Ritzerfeld, Gerhard: *See*—
Ritzerfeld, Wilhelm and G. 3,016,821.
Ritzerfeld, Wilhelm and G. 3,016,822.
Ritzerfeld, Wilhelm and G. 3,016,824.
Ritzerfeld, Wilhelm and G. 3,016,825.

Ritzerfeld, Wilhelm and G. Moistening method and apparatus for duplicators. 3,016,821, 1–16–62, Cl. 101—132.5.

Ritzerfeld, Wilhelm and G. Moistening device for duplicating machines. 3,016,822, 1–16–62, Cl. 101—132.5.

Ritzerfeld, Wilhelm and G. Lithographic printing form and method of preparing the same. 3,016,824, 1–16–62, Cl. 101—149.2.

Ritzerfeld, Wilhelm and G. Copy sheet transporting apparatus for printing machines. 3,016,825, 1–16–62, Cl. 101—234.

Roach, Charles D. Bow and stern construction of barges or like vessels adapted to be towed. 3,016,862, 1–16–62, Cl. 114—62.

Robb, Walter Y., to Crompton & Knowles Corp. Harness motion for loom. 3,016,923, 1–16–62, Cl. 139—46.

Robert Hosiery Mills, Inc.: *See*—
Servin, Robert S. 3,016,631.

Roberts, Hobart V., Jr.: *See*—
Lens, Emory W., and Roberts. 3,016,968.

Roberts, Louis W., to Microwave Electronic Tube Co., Inc. High power microwave switching device. 3,017,534, 1–16–62, Cl. 315—39.

Robinson, Donald W., Jr., and C. B. Packard, to The Kaman Aircraft Corp. Aerial device having rotor for retarding descent. 3,017,147, 1–16–62, Cl. 244—138.

Robinson, Samuel R., to H. K. Porter Co., Inc. Electrical disconnector for lightning arresters. 3,017,539, 1–16–62, Cl. 317—66.

Rockwell-Standard Corp.: *See*—
Mather, Glenn E. 3,017,171.

Rodgers, George H., to Marco Industries Co. Glow discharge light assembly with resistor. 3,017,594, 1–16–62, Cl. 338—219.

Rodman, Clarke A., to Fram Corp. Air conditioner filters having germicidal properties. 3,017,239, 1–16–62, Cl. 21—58.

Roe, A. V., & Co., Ltd.: *See*—
Rowley, Geoffrey C. 3,017,093.

Rogers, Emery H.: *See*—
Kane, Ralph W., Nelson, and Rogers. 3,017,544.

Rogovin, Arthur: *See*—
Gardel, Robert, and Rogovin. 3,016,652.

Rohe, Frederick W. Moldable insert panel and method of assembly. 3,016,578, 1–16–62, Cl. 18—59.

Rohm & Haas Co.: *See*—
Bortnick, Newman M. 3,017,425.
Lo, Chien-Pen and Orsage. 3,017,416
McLaughlin, Paul J., and Toy. 3,017,291
Rosenthal, Isadore, and McLaughlin. 3,017,290.

Roland, Georges E. R.: *See*—
Granet, Charles, Roland, and Craue. 3,017,197.

Rongved, Leif, to Bell Telephone Laboratories, Inc. High pressure seals for lead-in conductors. 3,017,452, 1–16–62, Cl. 174—152.

Rooney, William A. Disposable ash tray packet. 3,017,063 1–16–62, Cl. 229—1.5.

Root, Mitchell S. Process for preserving yellow peppers. 3,017,277, 1–16–62, Cl. 99—156.

Root, Richard C.: *See*—
Artman, Robert A., Root, and Turner. 3,017,115.

Roots, Edward J.: *See*—
Barber, Harry A., Burns, and Roots. 3,016,632.

Rosen, Milton. Purlin arrangements. 3,016,995, 1–16–62. Cl. 189—36.

Rosenberg, Sheldon, and O. K. Schmidt, to International Cigar Machinery Co., Inc. Manufacture of tobacco. 3,016,907, 1–16–62, Cl. 131—140.

Rosenblum, Philip: *See*—
Oxspring, Ronald E. N., and Rosenblum. 3,016,810.

Rosenboom, Werner: *See*—
Kebekus, Alfred, and Rosenboom. 3,017,314.

Rosenfeld, Morton M. Luminescent coaster. 3,017,051. 1–16–62, Cl. 215—100.5.

Rosenkaimer G.m.b.H.: *See*—
Rosenkaimer, Karl. 3,016,910.

Rosenkaimer, Karl, to Rosenkaimer G.m.b.H. Self-opening umbrella. 3,016,910, 1–16–62, Cl. 135—22.

Rosenkranz, George: *See*—
Ringold, Howard J., Zderic, Batres, and Rosenkranz. 3,017,419.

Rosenthal, Isadore, and P. J. McLaughlin to Rohm & Haas Co. Modified papers and methods for preparing them. 3,017,290. 1–16–62, Cl. 117—106.

Rossire, Francis H. S., to The Bendix Corp. Manual controller. 3,017,142, 1–16–62, Cl. 244—77.

Roth, Howard T.: *See*—
Bernardi, Dominic J., Tringal, Roth, and Engle. 3,017,374.

Rotol Ltd.: *See*—
Strand, George F. 3,016,911.

Roucayrol, Jean-Claude, E. Oberhausen, and R. Schussler to Centre National de la Recherche Scientifique. Measurement of radioactivity emitting compounds. 3,017,510. 1–16–62, Cl. 250—71.5.

Rowles, William T., to Universal Button Co. Hook. 3,016,593, 1–16–62, Cl. 24—227.

Rowley, Geoffrey C., to A. V. Roe & Co., Ltd. Electrical counting. 3,017,093, 1–16–62, Cl. 235—155.

Roxburgh, Albert, and A. Leigh, to The British Thomson-Houston Co. Ltd. Air or gas blast electric circuit breakers. 3,017,482, 1–16–62, Cl. 200—148.

Rubens, Sidney M., and G. White. Acoustic impedance detecting apparatus. 3,017,607, 1–16–62, Cl. 340—5.

Rueger, Herman, to Hamilton Watch Co. Hairspring stud. 3,016,688, 1–16–62, Cl. 58—115.

Ruegg, Fllimer W.: *See*—
Duncan, Richard L., Miller, Caldwell, Ruegg, and Flock. 3,016,704.

Ruf, Walter. Track-chain link. 3,017,225, 1–16–62, Cl. 305—51.

Ruffing, Norman R., J. L. Amos, and V. D. Puzar, to The Dow Chemical Co. Removal of phenolic inhibitors from alkenyl monomers. 3,017,426, 1–16–62, Cl. 260—465.9.

Ruggles, Percy C., to English Electric Valve Co. Ltd. High frequency electron discharge tubes. 3,017,535, 1–16–62, Cl. 315—39.

Ruiz, Luis A. Baler twine package. 3,017,021, 1–16–62, Cl. 206—59.

Runci, Joseph O., and R. J. Bernotas, to General Motors Corp. Bucket position indicator. 3,017,046, 1–16–62, Cl. 214—140.

Runyan, Raymond A., to Electro-Mechanical Research, Inc. Systems for processing recorded information. 3,017,616, 1–16–62, Cl. 340—174.1.

Rutland, Thomas C., Jr. Jack for endless track. 3,016,603. 1–16–62, Cl. 29—252.

Ryan, John W. Multiple speech phonograph. 3,017,187, 1–16–61, Cl. 274—14.

Ryan, Kelly P., to Blair Mfg. Co., Inc. Cattle treating device. 3,016,879, 1–16–62, Cl. 119—157.

S & S Corrugated Paper Machinery Co., Inc.: *See*—
Sheilds, Albert F. 3,016,874.

Saarivirta, Matti J., to American Metal Climax, Inc. Copper base alloys. 3,017,268, 1–16–62, Cl. 75—154.

Sabasteanski, John H.: *See*—
Hawkes, Howard T., Gunn, and Sabasteanski. 3,017,041.

Safeway Stores, Inc.: *See*—
Dahlstrom, Allan T. 3,017,274.

Sage, Earl M. Printing press cleaning apparatus. 3,016,826, 1–16–62, Cl. 101—425.

St. Onge, Paul N.: *See*—
Prevost, Bruno E., and St. Onge. 3,017,177.

Sakaki, Yoshinobu. Illuminating device for motion picture projecting. 3,017,538, 1–16–62, Cl. 315—241.

Salem, William J.: *See*—
Arond, Lester H., Salem, Wechsler, and Makower. 3,017,396.

Salisbury, Frank: *See*—
Riddiford, Reginald L., and Salisbury. 3,017,082.

Salvajor Co., The: *See*—
Sherman, George O. 3,017,125.

Salzer, John L.: *See*—
Wittel, Otto, and Salzer. 3,016,620.

Sanders, Kenneth R. Amusement device. 3,017,181, 1–16–62, Cl. 272—76.

Sarett, Lewis H., and H. D. Brown, to Merck & Co., Inc. Certain benzimidazoles carrying thiazolyl, thiadiazolyl and isothiazolyl substituents in the 2-position. 3,017,415, 1–16–62, Cl. 260—302.

Sass, Dale H., to Fairmont Foods Co. Folding advertising display. 3,016,644, 1–16–62, Cl. 40—312.

Sausele, George J. H., to Harris-Intertype Corp. Matrix delivery mechanism for typographical line composing machines. 3,017,015, 1–16–62, Cl. 199—18.

Saykay, Joseph J., to Fairchild Camera and Instrument Corp. Coding apparatus. 3,017,459, 1–16–62, Cl. 178—17.

Scarpetti, Lorenzo P. Masonry shelf bracket. 3,017,155, 1–16–62, Cl. 248—235.

Schaeffer, William D., to Union Oil Co of California. Preparation of organic isocyanates. 3,017,420, 1–16–62, Cl. 260—453.

Scharmann & Co. G.m.b.H.: *See*—
Schraub, Willi. 3,016,803.

Schätzschock, Adolf, and A. Weitzl, to The Stanley Works. Filing tool. 3,016,600, 1–16–62, Cl. 29—78.

Schilling, Edmund F., to General Electric Co. Electron gun electrode supports. 3,017,531, 1–16–62, Cl. 313—82.

Schlage Lock Co.: *See*—
Kendrick, Marron. 3,017,213.

Schlegel, John C., Jr., to American Cyanamid Co. Heat resistant polyester of a dicarboxylic acid, a polyhydric alcohol, and a s-triazine having at least two N-alkenyloxy groups and reaction product of ethylenically unsaturated monomer therewith. 3,017,381, 1–16–62, Cl. 260—45.4.

Schlicht, Raymond C.: *See*—
Arnold, George B., Kluge, Schlicht and Smolin. 3,017,430.
Morris, John R., Schlicht, Adams, and Lawrence. 3,017,861.

Schlinger, Warren G.: *See*—
Eastman, Du Bois, and Schlinger. 3,017,345.

Schlitzkus, Robert F., to Smith-Corona Marchant Inc. Method of molding indicia wheels. 3,016,579, 1–16–62, Cl. 18—59.

Schlumberger Well Surveying Corp.: *See*—
Schuster, Nick A. 3,017,566.

Schmeck, Robert E.: *See*—
Bernart, William F., Hanson, and Schmeck. 3,016,820.

Schmerling, Louis, to Universal Oil Products Co. Polyhalooctahydroalkanonaphthalenedicarboxylic acids and method of preparation thereof. 3,017,431, 1–16–62, Cl. 260—514.

Schmermund, Alfred. Method and equipment suitable for the formation of cut tobacco strands in cigarette making machines. 3,016,904, 1–16–62, Cl. 131—66.

Schmid, Otto, to Etablissement Aeromix. Process and contrivance for separating solid or liquid particles from gases or vapours. 3,016,979, 1–16–62, Cl. 183—7.

Schmidt, Karl, G.m.b.H.: *See*—
Bertram, Eduard, and Diez. 3,017,042.

Schmidt, Otto K.: *See*—
Rosenberg, Sheldon, and Schmidt. 3,016,907.

Schmidt, Paul. Device for extracting jammed rockdrills. 3,016,964, 1–16–62, Cl. 175—136.

Schnable, George L., and J. G. Javes, to Philco Corp. Method of jet plating indium lead alloy electrodes on germanium. 3,017,332, 1–16–62, Cl. 204—15.

Schneider, Ernest W.: *See*—
Barrett, Edward L. 3,017,449.

Schneider, Jos., & Co.: *See*—
Klemt, Gunter, and Macher. 3,016,799.

Schnell, Hermann: *See*—
Meyer, Karl-Heinrich, and Schnell. 3,017,424.

Schoeld, Edmund A., and C. W. Egbom, to Potash Co. of America. Clay depressant. 3,017,028, 1–16–62, Cl. 209—167.

Schoen, Walter A., and G. J. Herrick, to Milprint, Inc. Art of producing multiple compartment bags. 3,016,806, 1–16–62, Cl. 93—35.

Schramm, Carl, to The Smyth Mfg. Co. Book forming and pressing machine. 3,016,550, 1–16–62, Cl. 11—1.

Schraub, Willi, to Scharmann & Co. G.m.b.H. Mounting of face plates for boring and milling machines. 3,016,803, 1–16–62, Cl. 90—11.

Schreiber, August. Improved grid for filling material. 3,017,033, 1–16–62, Cl. 210—293.

Schreiber, William F., to Technicolor Corp. Bandwidth reduction system for television signals. 3,017,456, 1–16–62, Cl. 178—6.

Schrock, Louise A. Hair curlers. 3,016,909, 1–16–62, Cl. 132—40.

Schulenburg, Wilhelm: *See*—
Steppe, Vollrad, and Schulenburg. 3,017,348.

Schussler, Richard: *See*—
Roucayrol, Jean-Claude, Oberhausen, and Schussler. 3,017,510.

Schuster, Edwin C.: *See*—
Erickson, Bruce G., Metcalf, and Schuster. 3,016,690.

Schuster, Nick A., to Schlumberger Well Surveying Corp. Apparatus for investigating earth formations. 3,017,566, 1–16–62, Cl. 324—1.

Schutt, Lester E., to Dura Corp. Operator for convertible tops. 3,016,919, 1–16–62, Cl. 137—621.

Schwab, Helmut, T. O. Anderson, and S. E. Beale, to Applied Development Corp. Printed circuit board file. 3,017,232, 1–16–62, Cl. 312—223.

Schwarzer, Carl G., and P. H. Williams, to Shell Oil Co. Polyepoxy ethers of polyhydric phenols and cured products obtained therefrom. 3,017,387, 1–16–62, Cl. 260—47.

Schweitzer, Carl E.: *See*—
Langsdorf, William P., Jr., MacDonald and Schweitzer. 3,017,389.

Schweitzer, Gunther: *See*—
Hebel, Martin, and Schweitzer. 3,017,095.

Schweitzer, Roy C., and C. R. Anspach, to Thompson Ramo Wooldridge Inc. Oil tank assembly. 3,016,977, 1–16–62, Cl. 183—2.5.

Schwend, Fred N., to Clary Corp. Read-out system. 3,017,080, 1–16–62, Cl. 235—60.

Schwing, Ronald F., to Beaumont Birch Co. Coal handling apparatus. 3,017,039, 1–16–62, Cl. 214—2.

Scott Paper Co.: *See*—
McCarty, Clifford E., and Holak. 3,017,104.

Scott, Platho P., Jr.: *See*—
Lummus, James L., and Scott. 3,016,962.

Scott, Platho P., Jr., D. B. Anderson, and A. Park, to Pan American Petroleum Corp. Shale hydration inhibitors for clear water drilling fluids. 3,017,351, 1–16–62, Cl. 252—8.5.

Scozzafava, Milton V., J. K. Linn, R. E. Busch, and R. E. Boyden, to Clary Corp. Sales transaction registering apparatus. 3,017,081, 1–16–62, Cl. 235—60.31.

Scragg, Ernest, & Sons Ltd.: *See*—
Nesbitt-Dufort, Timothy. 3,016,678.

Scripto, Inc.: *See*—
Bogle, Kenneth H., and Lovejoy. 3,017,035.

Searle, G. D., & Co.: *See*—
Dodson, Raymond M., and Goldkamp. 3,017,418.
Pappo, Raphael. 3,017,410.

Sechrist, Roy H. Wheelchair steering arrangement. 3,017,199, 1–16–62, Cl. 280—269.

Sedlacsik, John, Jr., to Interplanetary Research & Development Corp. Apparatus for electrostatically spray coating articles. 3,016,876, 1–16–62, Cl. 118—631.

Seidelhuber Steel Rolling Mill Corp.: *See*—
Persinger, Merle L. and L. O. 3,016,816.
Persinger, Merle L. and L. O. 3,016,817.

Sein, Roberto, to Pan American Laboratories, Inc. Injector for subcutaneous implantation of solids. 3,016,895, 1–16–62, Cl. 128—217.

Selas Corp. of America: *See*—
Hull, John R. 3,016,978.

Selco Exploration Co. Ltd.: *See*—
Barringer, Anthony R. 3,017,567.

Sell, Frank A., Jr., to The Precise Engineering Co. Article packaging machine. 3,016,668, 1–16–62, Cl. 53—186.

Servco Equipment Co.: *See*—
Gates, Earl J. 3,017,233.

Servin, Robert S., to Robert Hosiery Mills, Inc. Slipper. 3,016,631, 1–16–62, Cl. 36—3.

Sessions Clock Co., The: *See*—
Fox, William C. 3,016,686.

Shakeshaft, Frederick, to Babcock & Wilcox Ltd. Steam turbine power plant. 3,016,711, 1–16–62, Cl. 60—67.

Shannon, William H.: *See*—
Harrer, Paul H., and Shannon. 3,016,675.

Shanok, Abraham, V. and J. P. Decorative trim strip assembly. 3,016,590, 1–16–62, Cl. 24—73.

Shanok, Jesse P.: *See*—
Shanok, Abraham, V. and J. P. 3,016,590.

Shanok, Victor: *See*—
Shanok, Abraham, V. and J. P. 3,016,590.

Shaw, Robert F.: *See*—
Auerbach, Albert A., Beresin, Lubkin, and Shaw. 3,017,610.

Sheard, Anthony R.: *See*—
Goldamid, Hiroshi J., and Sheard. 3,017,446.

Sheets, Charles E., to FMC Corp. Article feed mechanism. 3,017,013, 1–16–62, Cl. 198—102.

Sheilds, Albert F., to S & S Corrugated Paper Machinery Co., Inc. Doctor roll. 3,016,874, 1–16–62, Cl. 118—262.

Sheldahl, David B., and T. O. Counts, to Sinclair Refining Co. Anti-corrosive mineral oil compositions. 3,017,257, 1–16–62, Cl. 44—66.

Shell Oil Co.: *See*—
Engel, Willem F. 3,017,402.
Rader, William E. 3,017,319.
Schwarzer, Carl G., and Williams. 3,017,387.

Sherman, George O., to The Salvajor Co. Garbage grinder. 3,017,125, 1–16–62, Cl. 241—46.

Shero, Ronald D. Automobile window screen. 3,016,952, 1–16–62, Cl. 160—354.

Sherwin-Williams Co., The: *See*—
Gehring, Harvey T. 3,017,375.
Kuhn, Joseph M. 3,017,377.
Penoyer, Charles E. 3,016,555.

Shotwell, Odette L.: *See*—
Craveri, Renato, Shotwell, and Pridham. 3,017,327.

Sigmond, David. Machine for simultaneously photographing a document and the bearer. 3,017,235, 1–16–62, Cl. 346—107.

Silsby, Christopher C., Jr.: *See*—
Butler, Clarence A., Jr., and Silsby. 3,017,338.

Simmons, Bill J., to Phillips Petroleum Co. Composition analyzer utilizing radiation. 3,017,252, 1–16–62, Cl. 23—260.

Simmons Co.: *See*—
Johnson, Nels. 3,016,852.

Simon, Wayne E., to North American Aviation, Inc. Temperature probe. 3,016,745, 1–16–62, Cl. 73—349.

Simpson, James S., to Columbian Rope Co. Blended fiber rope. 3,016,683, 1–16–62, Cl. 57—140.

Simpson, Verne G., to General Electric Co. Rubber compositions. 3,017,378, 1–16–62, Cl. 260—37.

Sinatra, Angelo S.: *See*—
Dziedziula, Edward J., Pecoraro, and Sinatra. 3,016,930.

Sinclair, Charles H.: *See*—
Holmes, George B., Sinclair, Alexander, and Vernon. 3,016,663.

Sinclair Refining Co.: *See*—
Sheldahl, David B., and Counts. 3,017,257.
Thomas, Owen H., and Hettinger. 3,017,441.
Watson, William B. 3,017,346.

Singer, Jerome R., to National Scientific Laboratories, Inc. Method and apparatus for storing information. 3,017,612, 1–16–62, Cl. 340—173.

Singer Mfg. Co., The: *See*—
Hacklander, Hans. 3,016,851.
Happe, Reynold, and Lubas. 3,016,659.
Parry, Frank. 3,017,498.

Singer, Samuel. Price tag mount. 3,016,638, 1–16–62, Cl. 40—5.

Slansted, Raymond S., and P. J. Kohler, to Modine Mfg. Co. Heat exchanger. 3,017,161, 1–16–62, Cl. 257—245.

Sloyan, Jerome J. Supports. 3,017,226, 1–16–62, Cl. 308—3.

Smathers, Ralph L., and J. G. Raulerson. Multiple window anchoring device. 3,016,996, 1–16–62, Cl. 189—64.

Smith, Benjamin H., to Heinemann Electric Co. Relay structure. 3,017,475, 1–16–62, Cl. 200—103.

Smith-Corona Marchant Inc.: *See*—
Edwards, Richard A., and Reynolds. 3,017,088.
Reynolds, Eugene E. 3,017,089.
Schlitzkus, Robert F. 3,016,579.

Smith, Herbert G., to American Air Filter Co., Inc. Gas burners. 3,016,950, 1–16–62, Cl. 158—116.

Smith, John E., to Holley Carburetor Co. Pumps. 3,016,843, 1–16–62, Cl. 103—170.

Smith, John W., to Eastman Kodak Co. Apparatus for opening continuous multifilament crimped tow. 3,016,581, 1–16–62, Cl. 19—65.

Smith, Joseph B. Split coupling. 3,017,204, 1–16–62, Cl. 285—373.

Smith Kline & French Laboratories: *See*—
Cook, Leonard. 3,017,326.
Hompe, Robert W., Trezona, and Whitecar. 3,016,672.
Kerwin, James F. 3,017,408.

Smith, Lloyd B., and J. D. Childress, to Radio Corp. of America. Matrix frame. 3,017,615, 1–16–62, Cl. 340—174.

Smith, Merle E. Rock processing machine. 3,016,656, 1–16–62, Cl. 51—72.

Smith, Traver J., ½ to G. I. Magnuson and ½ to G. I. and R. Magnuson and L. J. Fox, as trustees. Methods and apparatus for color grading of fruits and vegetables. 3,016,788, 1–16–62, Cl. 88—14.

Smith, Walter H. B., deceased, by K. B. Groves, executrix. Hammer assembly for a pistol. 3,016,646, 1–16–62, Cl. 42—69.

Smith, William J.: *See*—
Downing, Richard M., Mortberg, and Smith. 3,016,576.

Smith, William M.: *See*—
Holdsworth, Robert S., and Smith. 3,017,399.

Smolin, William: *See*—
Arnold, George B., Kluge, Schlicht, and Smolin. 3,017,430.

Smoot, Charles H., to Republic Flow Meters Co. Electrical servosystem control circuit. 3,017,556, 1–16–62, Cl. 318—448.

Smyser, James A. Wheel supporting apparatus. 3,016,934, 1–16–62, Cl. 144—288.

Smyth Mfg. Co., The: *See*—
Schramm, Carl. 3,016,550.

Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A.: *See*—
Muench, Werner, Notarbartolo, and Messina. 3,017,394.

Snyder, William: *See*—
Heller, Kenneth G., and Snyder. 3,017,588.

Sobey, Albert J., to General Motors Corp. Bypass engine. 3,016,698, 1–16–62, Cl. 60—35.6.

Societe de Prospection Electrique, Procedes Schlumberger: *See*—
Berthelin, Bruno P. 3,016,959.

Societe des Usines Chimiques Rhone-Poulenc: *See*—
Bo, Gilbert, Fichet, Perrot, and Perras. 3,017,401.
Fournet, Andre, and Lemoine. 3,017,397.
Normant, Henri. 3,017,437.

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
Bertin, Jean H., Kadosch, and Maunoury. 3,016,699.

Soehl, John, and W. C. Huffman. Silage cutting and collecting apparatus. 3,017,045, 1–16–62, Cl. 214—17.

Sorensen, Harald M.: *See*—
Krabbe, Ulrik H., and Sorensen. 3,017,591.

Soulier, Eugene E. Fish scaling device. 3,016,564, 1–16–62, Cl. 17—5.

Southworth Machine Co.: *See*—
Hawkes, Howard T., Ginn, and Sabasteanski. 3,017,041.

Sparr, Anders V. Milk pipe line. 3,016,877, 1–16–62, Cl. 119—14.03.

Specialties Development Corp.: *See*—
Olandt, John W. 3,016,956.
Parsons, Floyd B., and Then. 3,017,157.
Thomsen, William A. V., Morgan, and Quail. 3,016,920.

Speed, Kenneth O., and L. A. Wilson. Adjustable measuring instrument. 3,016,618, 1–16–62, Cl. 33—143.

Sperath, Ervin J. Humidifier. 3,016,892, 1–16–62, Cl. 126—113.

Sperry-Sun Well Surveying Co.: *See*—
Kielman, Fred S., Jr. 3,016,621.

Spiegelberg, Hans, and B. P. Vateriaus, to Hoffmann-La Roche Inc. Reduction of diphenimide. 3,017,337, 1–16–62, Cl. 204—75.

Sprung, Murray M., and F. O. Guenther, to General Electric Co. Novel organopolysiloxanes. 3,017,385, 1–16–62, Cl. 260—46.5.

Square D Co.: *See*—
Karch, Walter C. 3,017,471.
Lister, Charles A. 3,017,481.

Sramek, Elmer D.: *See*—
Engleson, Harry E., and Sramek. 3,016,670.

Stalter, Neil J., to E. I. du Pont de Nemours and Co. Hydrogen peroxide-alkali metal bicarbonate acidic bleaching process. 3,017,236, 1–16–62, Cl. 8—111.

Stanley Works, The: *See*—
Schlitzschock, Adolf, and Weitzl. 3,016,600.

Stary, Walter E. Tube-expanding device. 3,016,944, 1–16–62, Cl. 153—82.

Steeves, Robert W.: *See*—
Baer, Charles A., Clough, and Steeves. 3,016,873.

Stein, Louis: *See*—
Lipp, Donald, and Nash. 3,016,902.

Stemme, Nils G. E., to Telefonaktiebolaget L M Ericsson. Assembly for counting marking impulses in an automatic telephone system. 3,017,611, 1–16–62, Cl. 340—172.5.

Stenvall, Carl B. Surgical instrument. 3,016,899, 1–16–62, Cl. 128—348.

Stephen, William F., to Western Electric Co., Inc. Apparatus for distributing an article to one of several receiving locations. 3,017,025, 1–16–62, Cl. 209—81.

Stephens, Charles R., Jr.: *See*—
Gordon, Philip N., Stephens, Noseworthy, and Teare. 3,017,323.

Steppe, Vollrad, and W. Schulenburg, to Chemische Fabrik Grumau Aktiengesellschaft. Fire extinguishing compositions. 3,017,348, 1–16–62, Cl. 252—2.

Sternberg, Marvin, and E. A. Neu, Jr., to Curtiss-Wright Corp. Rocket engine swivel mount. 3,016,697, 1–16–62, Cl. 60—35.6.

Sterner, Melvin F., to Holley Carburetor Co. Accelerating pump. 3,017,166, 1–16–62, Cl. 261—34.

Stevens, Joel B.: *See*—
Crawford, Robert T., and Stevens. 3,017,309.

Stewart, Meredith M.: *See*—
Elliott, George E., Jr., McKinley, and Stewart. 3,017,368.

Stott, Frank T., to John Holroyd & Co. Ltd. Tabletting machines. 3,016,572, 1–16–62, Cl. 18—20.

Stoughton, George H.: *See*—
Bayer, Robert J., Cole, and Stoughton. 3,016,689.

Straat, Harold W.: *See*—
De Grave, Charles J., Jr., and Straat. 3,016,795.

Strachey, Christopher, and D. B. Gillies, to International Business Machines Corp. Overflow control means for electronic digital computers. 3,017,090, 1–16–62, Cl. 235—153.

Strachey, Christopher, and D. B. Gillies, to International Business Machines Corp. Order control arrangements for electronic digital computers. 3,017,094, 1–16–62, Cl. 235—157.

Straka, Oldřich: *See*—
Dubský, Bořivoj, Straka, and Bican. 3,017,575.

Strand, George F., to Rotol Ltd. Fluid operated prime movers. 3,016,911, 1–16–62, Cl. 137—33.

Streit, Alfons, and A. Stwiorok. Valve gear. 3,016,887, 1–16–62, Cl. 123—90.

Stremke, William F. and W. F., Jr., and R. R. Pazderski. Wrapping machine with return conveyor. 3,016,671, 1–16–62, Cl. 53—206.

Stremke, William F., Jr.: *See*—
Stremke, William F. and W. F., Jr., and Pazderski. 3,016,671.

Strier, Murray P.: *See*—
Arquette, Gordon J., Dixler, and Strier. 3,017,260.

Stromberg, Verner L.: *See*—
Hughes, William B., and Stromberg. 3,017,352.
Hughes, William B., and Stromberg. 3,017,356.

Studebaker-Packard Corp.: *See*—
McFarland, Forest R. 3,017,196.

Studiengesellschaft Kohle m.b.H.: *See*—
Wilke, Gunther, and Weslau. 3,017,439.

Studley Paper Co., Inc.: *See*—
Studley, Lester J. 3,016,983.

Stuckens, Leo J., to American Photocopy Equipment Co. Sheet separator device. 3,017,179, 1–16–62, Cl. 271—64.

Studley, Lester J., to Studley Paper Co., Inc. Bag. 3,016,983, 1–16–62, Cl. 183—51.

Stwiorok, Alfons: *See*—
Streit, Alfons, and Stwiorok. 3,016,887.

Styner, Fritz, and A. Chlouba, deceased; G. A. Erni, executor. Visual indicating device for cash registers. 3,017,079, 1–16–62, Cl. 235—23.

Sullivan, Jay E.: *See*—
Chatlain, Robert R. 3,016,812.

Sun Oil Co.: *See*—
Bennett, John D., and Mayes.
Patterson, Omar L. 3,017,106.

Sunbeam Corp.: *See*—
Jepson, Ivar. 3,017,492.

Sussman, Ernst. Adjustable torque sensitive couplings. 3,016,724, 1–16–62, Cl. 64—29.

Svensson, John E. W.: *See*—
Groth, Otto I., Carlson, and Carlsson. 3,017,218.

Swain, Howard W.: *See*—
Gottshall, Ralph I., and Swain. 3,017,359.

Swaney, Robert C. Cooled rotary joint having a plurality of concentrically arranged conduits. 3,017,202, 1–16–62, Cl. 285—41.

Swank, Richard E. Automatic display device. 3,016,640, 1–16–62, Cl. 40—36.

Sweeney, Frank B. Fuel injector. 3,016,889, 1–16–62, Cl. 123—119.

Sweet, Ronald L.: *See*—
Minnich, John W., and Sweet. 3,017,414.

Sylvania Electric Products Inc.: *See*—
Bates, Grayson F., and De Simone. 3,017,549.
Judy, Harold A. 3,017,506.
Lambert, Robert L., and McKeirnan. 3,017,281.
Lambert, Robert L., and McKeirnan. 3,017,284.

Symer, Donald G.: *See*—
Cope, Geoffrey W., and Symer. 3,017,038.

Symington Wayne Corp.: *See*—
Cope, Geoffrey W., and Symer. 3,017,038.

Synchro Machine Co.: *See*—
Bruestle, Carl O. 3,017,017.

Syntex S.A.: *See*—
Ringold, Howard J., Zderic, Batres, and Rosenkranz. 3,017,419.

Taborsky, Stanley, to Martin-Marietta Corp. Proximity limit position detector. 3,017,621, 1–16–62, Cl. 340—282.

Tadewald, Albert O., to The Trane Co. Heat exchange fin element. 3,016,921, 1–16–62, Cl. 138—38.

Talmey, Paul, to General American Transportation Corp. Electrical elements. 3,017,532, 1–16–62, Cl. 313—141.

Talon, Inc.: *See*—
Manning, Harry F. 3,016,592.

Tantlinger, Keith W., to Fruehauf Trailer Co. Trailer clearance and marker light. 3,017,501, 1–16–62, Cl. 240—8.2.

Tauschek, Max J., J. M. Cherrie, and R. O. Beutell, to Thompson Ramo Wooldridge Inc. Method of making hollow valves. 3,016,601, 1–16–62, Cl. 29—156.7.

Taylor, John E., to Foster Wheeler Corp. Method and apparatus for preheating boiler feed wafer for steam power plants. 3,016,712, 1–16–62, Cl. 60—67.

Taylor, Nelson A., Co., Inc.: *See*—
Taylor, Willard H. 3,016,548.

Taylor-Winfield Corp., The: *See*—
Woodward, Foster R. 3,017,495.

Taylor, Willard H., to Nelson A. Taylor Co., Inc. Two part glass windshield to rest on a crowned boat deck. 3,016,548, 1–16–62, Cl. 9—1.

Taynton, Ralph, to Melpar, Inc. Wafer feed and positioning mechanism for stapling machine. 3,016,540, 1–16–62, Cl. 1—321.

Teare, Fred W.: *See*—
Gordon, Philip N., Stephens, Noseworthy, and Teare. 3,017,323.

Technicolor Corp.: *See*—
Schreiber, William F. 3,017,456.

Telefonaktiebolaget LM Ericsson: *See*—
Stemme, Nils G. E. 3,017,611.

Tendick, Frank H., P. E. Thompson, and E. F. Elslager, to Parke, Davis & Co. Fungicidal agents and means of producing the same. 3,017,413, 1–16–62, Cl. 260—279.

Texaco Inc.: *See*—
Arnold, George B., Kluge, Schlicht, and Smolin. 3,017,430.
Atwell, Harold V. 3,017,244.
Dille, Roger M., Chapman, and Ahlborn. 3,016,986.
Eastman, Du Bois. 3,017,259.
Eastman, Du Bois, and Schlinger. 3,017,345.
Egan, Edmond F., and Hubby. 3,016,767.
Hall, Hugh E., Jr. 3,016,960.
Kluge, Herman D., Wisner, and Lacoste. 3,017,405.
McKay, Alexander S., and Hall. 3,016,961.
Morris, John R., Schlicht, Adams, and Lawrence. 3,017,361.
Myers, Charles E., and Linson. 3,016,776.
Pliskin, William A. 3,016,800.
Woodle, Robert A. 3,017,344.
Texas Instruments Inc.: *See*—
Drollinger, Clarence O., and Yarnall. 3,017,595.
Textile Rubber Co., Inc.: *See*—
Albert, John R. 3,016,763.
Then, Joseph L.: *See*—
Parsons, Floyd B., and Then. 3,017,157.
Thiokol Chemical Corp.: *See*—
Lovingham, Joseph J. 3,016,695.
Thomas, Owen H., and W. P. Hettinger, Jr., to Sinclair Refining Co. Process for nuclear alkylation of aromatic hydrocarbons. 3,017,441. 1–16–62. Cl. 260—671.
Thomas, Paul P., to American Metal Products Co. Low friction dampened bearing. 3,017,209. 1–16–62. Cl. 287—87.
Thompson, Paul E.: *See*—
Tendick, Frank H., Thompson, and Elslager. 3,017,413.
Thompson, Ralph B., to Universal Oil Products Co. Composition of matter. 3,017,422. 1–16–62. Cl. 260—461.
Thompson Ramo-Wooldridge Inc.: *See*—
Amato, Carmelo J. 3,017,557.
Briggs, Vernon R. 3,017,109.
Eichenberger, Hans P. 3,016,865.
Schweitzer, Roy C., and Anspach. 3,016,977.
Tauschek, Max J., Cherrie, and Beutell. 3,016,601.
Thompson, Wendell S., to FMC Corp. Weight checking apparatus. 3,017,026. 1–16–62. Cl. 209—121.
Thomsen, William A. V., C. B. Morgan, and B. W. Quall, to Specialties Development Corp. Solenoid operated valve unit. 3,016,920. 1–16–62. Cl. 137—625.27.
Thornton, Isaiah V. Ball bearing guides. 3,017,227. 1–16–62. Cl. 308—3.8.
Thorpe Insulation Co.: *See*—
Glasoe, Karl M., Jr. 3,016,999.
Thurlow, John E., to Fitchburg Paper Co. Lithographic printing plate and method of making the same. 3,016,823. 1–16–62. Cl. 101—149.2.
Tiekner, Raymond G., to General Motors Corp. Combustion shell, heat exchanger and burner assembly. 3,016,946. 1–16–62. Cl. 158—7.
Tillotson, George A.: *See*—
Daglish, Anthony F., Vonderwahl, and Tillotson. 3,017,412.
Timber Truss Connectors, Inc.: *See*—
Atkins, Wyman B. 3,016,586.
Tisdale, Ernest R. Snap tie for concrete forms. 3,016,596. 1–16–62. Cl. 25—131.
Title, Jack. Garment. 3,016,900. 1–16–62. Cl. 128—528.
Todnem, Odd to Landbruksteknisk Institutt. Apparatus for determining the moisture in cereals, grass, straw and other products. 3,016,737. 1–16–62. Cl. 73—76.
Topanelian, Edward, Jr.: *See*—
En Dean, Howard J., Jones, and Topanelian. 3,016,733.
Toulis, William J. Spherical acoustical lens system for focusing underwater sound. 3,017,608. 1–16–62. Cl. 340—5.
Touton, Rush D., to Wurton Machine Co. Cigar. 3,016,903. 1–16–62. Cl. 131—11.
Towns, Truman W., to Ford Motor Co. Self-adjusting brake. 3,016,990. 1–16–62. Cl. 188—79.5.
Townson, William D., Jr. Pallet-formed storage rack. 3,017,151. 1–16–62. Cl. 248—120.
Toy, Walter W.: *See*—
McLaughlin, Paul J., and Toy. 3,017,291.
Trane Co., The: *See*—
Lee, Ralph E., and Eckelnert. 3,017,160.
Lejk, Joseph R., and Merta. 3,017,071.
Tadewald, Albert O. 3,016,921.
Trbojevich, Nikola J. High speed universal joint. 3,016,720. 1–16–62. Cl. 64—18.
Tregillus, Leonard W., and A. A. Rasch, to Eastman Kodak Co. Photographic silver halide diffusion transfer process. 3,017,270. 1–16–62. Cl. 96—29.
Trezona, Charles: *See*—
Hompe, Robert W., Trezona, and Whitecar. 3,016,672.
Trico Products Corp.: *See*—
Deibel, Raymond A. 3,016,558.
Horton, Erwin C. 3,016,557.
Lenz, Emory W., and Roberts. 3,016,968.
Trimble, Lyne S., M. J. Markakis, J. L. Nishball, and M. C. Leinberger, to The National Cash Register Co. Electromagnetic printer. 3,017,234. 1–16–62. Cl. 346—74.
Tringal, Alfred M.: *See*—
Bernardi, Dominic J., Tringal, Roth, and Engle. 3,017,374.
Trost, Wayne C., to Barber-Colman Co. Thread positioning mechanism. 3,017,128. 1–16–62. Cl. 242—35.6.
Trost, Wayne C., to Barber-Colman Co. Winder. 3,017,129. 1–16–62. Cl. 242—35.6.
Trost, Wayne C. Mechanism for tying weavers' knots. 3,017,211. 1–16–62. Cl. 289—3.
Tru-Fit Screw Products Corp.: *See*—
Becka, Paul N. 3,017,476.
Tru-Scale Models, Inc.: *See*—
Kniff, August A. 3,017,503.
Truscheit, Ernst: *See*—
Elter, Karl, and Truscheit. 3,017,432.
Tung-Sol Electric Inc.: *See*—
Price, Edward M. 3,017,018.
Turner, Allen H.: *See*—
Artman, Robert A., Root and Turner. 3,017,115.
Turner, Paul A.: *See*—
Chial, Stanley M. 3,016,585.
Twiggs, Robert D., Jr. Shoes. 3,016,630. 1–16–62. Cl. 36—2.5.
Ullman, Frederick E.: *See*—
Wiggins, Richard F., Maltas and Ullman. 3,017,010.
Ulrich, Werner, to Bell Telephone Laboratories, Inc. Digital error correcting systems. 3,017,091. 1–16–62. Cl. 235—153.
Union Carbide Corp.: *See*—
Allan, Stewart. 3,016,947.
Frick, Charles E. 3,016,840.
Gottzmann, Christian F. 3,016,717.
Union Oil Co. of California: *See*—
Fischer, Paul W. 3,017,349.
Fischer, Paul W. 3,017,350.
McKinnis, Art C., and Wasley. 3,017,433.
Schaeffer, William D. 3,017,420.
United Aircraft Corp.: *See*—
Gamble, Richard F., and Lanctot. 3,016,706.
United Aircraft Products, Inc.: *See*—
Klank, Walter C., Jr., and Hughes. 3,016,912.
United-Carr Fastener Corp.: *See*—
Del Camp, Scipione M. 3,017,604.
Johnson, Lester B. 3,017,596.
Parkin, Leslie, and Brealey. 3,016,784.
United Kingdom Atomic Energy Authority: *See*—
Ashley, James W., and Knight. 3,016,765.
United Shoe Machinery Corp.: *See*—
Bowler, Raymond M., and Bray. 3,016,551.
U.S. Electrical Motors, Inc.: *See*—
Corey, Robert W. 3,016,754.
Luenberger, Frederick O. 3,017,526.
United States of America
Agriculture: *See*—
Bullock, Austin L., and Guthrie. 3,017,237.
Craveri, Renato, Shotwell, and Pridham. 3,017,327.
Hanrahan, Francis P. 3,016,815.
Air Force: *See*—
Arnold, James S., and Kochly. 3,016,735.
Garbuny, Max. 3,017,458.
Huebner, Edward J. 3,016,609.
Huebschmann, Eugene C. 3,016,752.
Ritchie, Malcolm L. 3,017,609.
Army: *See*—
Boyd, William H. A. 3,016,827.
Fikes, Joseph E. 3,016,742.
Atomic Energy Commission: *See*—
Ames, Lloyd L. 3,017,242.
Kane, James S., Carpenter, and Krikorian. 3,017,286.
National Aeronautics and Space Administration: *See*—
Jack, John R., and Moeckel. 3,016,693.
Johnson, Virgil E., Jr. 3,016,863.
Navy: *See*—
Bowersett, Charles F. 3,016,828.
Duncan, Richard L., Miller, Caldwell, Ruegg, and Flock. 3,016,704.
Kern, Dale B., and Conger. 3,017,587.
Lawrence, Robert E. 3,016,798.
Menzel, Wolfgang A. 3,016,736.
Mitchell, Drury K. 3,017,053.
Nadir, Mark T. 3,017,537.
Persechino, Mario A. 3,017,367.
Phillips, Paul C. 3,017,580.
Redfern, John T., and Coleman. 3,017,574.
Van Inwagen, Charles L., Jr. 3,016,791.
Walker, Harold R. 3,016,716.
Weinhardt, Robert A., and Barnes. 3,016,588.
Woolley, Francis L. 3,016,628.
United States Steel Corp.: *See*—
Ballentine, William I., Jr., and Lottes. 3,016,875.
United Steel Companies Ltd., The: *See*—
Murray, Joseph D. 3,017,266.
Universal Button Co.: *See*—
Rowles, William T. 3,016,593.
Universal Mfg. Co., Inc.: *See*—
Horowitz, Isadore. 3,017,198.
Universal Oil Products Co.: *See*—
Bloch, Herman S. 3,017,400.
Chenicek, Joseph A., and Cox. 3,017,443.
Cyba, Henryk A. 3,017,357.
Cyba, Henryk A. 3,017,360.
Cyba, Henryk A. 3,017,362.
Henry, Robert C. 3,017,364.
Nixon, William G. 3,017,309.
Pollitzer, Ernest L. 3,017,258.
Pollitzer, Ernest L. 3,017,343.
Pollitzer, Ernest L. 3,017,358.
Schmerling, Louis. 3,017,431.
Thompson, Ralph B. 3,017,422.
Watkins, Charles H. 3,017,250.
University of California, Regents of the: *See*—
Jorgensen, Eugene C. 3,017,428.
University of Minnesota, Regents of The: *See*—
Coulter, Samuel T. 3,017,275.
Upjohn Co., The: *See*—
Magerlein, Barney J., and Kagan. 3,017,423.
Urdanoff, Howard D., to Le Chaude, Inc. Filter. 3,017,032. 1–16–62. Cl. 210—236.
Ursprung, Joseph J., to Chas. Pfizer & Co., Inc. 5-fluorouracil compositions for treating coccidiosis. 3,017,322. 1–16–62. Cl. 167—53.1.

VEB Deutsches Hydrierwerk Rodleben: *See*—
Engelbrecht, Heins-Joachim, Lenke, and Müller. 3,017,411.
Vadas, Leslie, to FMC Corp. Control system for case loading machine. 3,016,664. 1–16–62. Cl. 53—62.
Van Alstyne, Alvin G., and G. M. Moore, Jr., to Gilfillan Bros. Inc. System for radar positional data. 3,017,105. 1–16–62. Cl. 235—186.
Vandale Corp.: *See*—
Buschbom, Floyd E. 3,017,043.
Engelmann, Milton E. 3,017,044.
Vanden Boom, Robert F., and R. M. Anderson, to General Electric Co. Flash lamp. 3,016,727. 1–16–62. Cl. 67—31.
Vandenburgh, David G., W. W. Binger, and B. M. Ponchel, to Aluminum Co. of America. Elevated temperature closed liquid heating systems. 3,016,885. 1–16–62. Cl. 122—17.
Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. 3,016,676.
Van der Lely, Cornelis and A. Side delivery rake. 3,016,676. 1–16–62. Cl. 56—377.
Van Dijck, Paul, and H. Eyssen, to Recherche et Industrie Therapeutiques. Feed compositions. 3,017,272. 1–16–62. Cl. 99—2.
Van Dolah, Harry J., and O. C. Linhart, to Eagle Picher Co. Color stable white porcelain enamel and method of producing same. 3,017,279. 1–16–62. Cl. 106—48.
Van Inwagen, Charles L., Jr., to United States of America, Navy. Target indicating systems. 3,016,791. 1–16–62. Cl. 88—24.
Van Patten, Charles D. Rudder and propeller drive shaft support assembly. 3,016,870. 1–16–62. Cl. 115—35.
Van Sickle, Wilton E. Disposable hypodermic syringe. 3,016,896. 1–16–62. Cl. 128—218.
Van Wicklin, Warren A., Jr.: *See*—
Kurz, Alvin M., and Van Wicklin. 3,016,710.
Van Zelm Associates Inc.: *See*—
Van Zelm, Willem D., and Jackson. 3,017,163.
Van Zelm, Willem D., and M. A. Jackson; said Jackson assor. to Van Zelm Associates Inc. Aerial cargo delivery system. 3,017,163. 1–16–62. Cl. 258—1.2.
Varian Associates: *See*—
Kane, Ralph W., Nelson, and Rogers. 3,017,544.
Vasey, Joseph V. Cigarette holder. 3,016,908. 1–16–62. Cl. 131—240.
Vaterlaus, Bruno P.: *See*—
Spiegelberg, Hans, and Vaterlaus. 3,017,337.
Verger, Nathan. Magnetic switch. 3,017,473. 1–16–62. Cl. 200—87.
Vernet, Sergius: *See*—
Asakawa, George, and Vernet. 3,016,601.
Vernet, Sergius, to Antioch College. Squeeze-push power element. 3,016,747. 1–16–62. Cl. 73—368.3.
Vernet, Sergius. Squeeze-push power element. 3,016,748. 1–16–62. Cl. 73—368.3.
Vernon Roy L.: *See*—
Holmes, George B., Sinclair, Alexander, and Vernon. 3,016,663.
Vickers Inc.: *See*—
Gordon, Richard O., and Keir. 3,016,708.
Vidoni, Francis J.: *See*—
Lutz, John A., and Vidoni. 3,016,654.
Vincent, Renie P., to Pan American Petroleum Corp. Gas lift apparatus. 3,016,844. 1–16–62. Cl. 103—232.
Vogel, David A. Therapeutic composition for topical application and method of applying the same. 3,017,325. 1–16–62. Cl. 167—58.
Vogel, Fred J., to Allis-Chalmers Mfg. Co. Apparatus for testing a transformer to determine its ability to withstand voltage surges. 3,017,572. 1–16–62. Cl. 324—55.
Vogt, Lester H., Jr.: *See*—
Brown, John F., Jr., and Vogt. 3,017,386.
Voigtlander A.G.: *See*—
Papke, Friedrich. 3,016,786.
Voigtman, Edward H., H. F. Donnelly, and C. A. Lamb, to Kimberly-Clark Corp. Method of creping tissue and product thereof. 3,017,317. 1–16–62. Cl. 162—111.
Volksdorf, Hans: *See*—
Kardon, Emanuel S., and Volksdorf. 3,017,069.
Volpe, Joseph C.: *See*—
Werme, John V., Newbold, Parnell, and Volpe. 3,017,097.
Von Bomhard, Josef, to Fichtel & Sachs A.G. Automotive clutch control system. 3,017,001. 1–16–62. Cl. 192—3.5.
Vonderwahl, Rodolphe: *See*—
Daglish, Anthony F., Vonderwahl, and Tillotson. 3,017,412.
Von Hippel, Arthur R., to Research Corp. Method and apparatus for producing and controlling electron emission. 3,017,516. 1–16–62. Cl. 250—211.
Von Kannen, Toni: *See*—
Kabelitz, Hans, and von Kannen. 3,016,734.
Vyzkumny a zkusebni letecky ustav: *See*—
Dubsky, Borivoj, Straka, and Bican. 3,017,575.
Wagner, Eleanor I. Jet engine blast fence. 3,017,146. 1–16–62. Cl. 244—114.
Wagner, Otto, to Grob & Co., A.G. Leno heald. 3,016,924. 1–16–62. Cl. 139—51.
Wagner, Raphael J.: *See*—
Kogan, Philip, Wolanek, and Wagner. 3,017,486.
Wahlberg, Roger R.: *See*—
Crosby, Charles H., Hicks, and Wahlberg. 3,017,450.
Wainer, Eugene, to Horizons Inc. Method of writing on anodized aluminum. 3,017,285. 1–16–62. Cl. 117—8.
Waite, Virgil H., and B. P. Martin, to McGean Chemical Co. Self-leveling bright nickel plating bath and process. 3,017,333. 1–16–62. Cl. 204—49.
Waldman, Maurice H.: *See*—
Promislow, Albert L., and Waldman. 3,016,743.
Walker, Harold R., to United States of America, Navy. Liquid oxygen cooler for airborne infrared cells. 3,016,716. 1–16–62. Cl. 62—52.
Walker, Harry H. Buoyant pressure vessels for gases. 3,016,866. 1–16–62. Cl. 114—74.
Wall Rope Works, Inc.: *See*—
Gaston, Dexter W. 3,016,682.
Wallace & Tiernan Inc.: *See*—
Mehr, Louis. 3,017,406.
Warnant, Julien: *See*—
Joly, Robert, and Warnant. 3,017,409.
Warner, Gerald L., to Raytheon Co. Reactance tube circuits. 3,017,581. 1–16–62. Cl. 331—180.
Warner, Paul F.: *See*—
Franz, Richard D., and Warner. 3,017,320.
Warnock, Moses, ½ to J. & T. Boyd Ltd. Driving arrangement for spinning, twisting and like textile machines. 3,016,680. 1–16–62. Cl. 57—88.
Wash, Frank: *See*—
Henry, Richard E., and Wash. 3,017,216.
Wasley, William L.: *See*—
McKinnis, Art C., and Wasley. 3,017,433.
Wathen, Ernest L. Display device. 3,017,148. 1–16–62. Cl. 248—35.
Watkins, Charles H., to Universal Oil Products Co. Continuous process for the production of hydrogen. 3,017,250. 1–16–62. Cl. 23—214.
Watson, George R., D. G. Perkins, and I. J. P. James, to Electric & Musical Industries Ltd. Pick-up devices for colour television. 3,017,455. 1–16–62. Cl. 178—5.4.
Watson, William B., to Sinclair Refining Co. Solvent extraction process using dimethyl hydrogen phosphite. 3,017,346. 1–16–62. Cl. 208—322.
Watt, Robert E., and C. L. Deeken, to Electric Eye Equipment Co. Steering roll construction with slidable pivot. 3,017,062. 1–16–62. Cl. 226—180.
Wechsberg, Heinz E.: *See*—
Hohenberg, Paul M., James, and Wechsberg. 3,017,371.
Wechsler, Harry: *See*—
Arond, Lester H., Salem, Wechsler, and Makower. 3,017,396.
Weinhardt, Robert A., and P. T. Barnes, to United States of America, Navy. Contact bands for rockets. 3,016,588. 1–16–62. Cl. 22—203.
Weir, Willard H. Workpiece holding apparatus. 3,017,169. 1–16–62. Cl. 266—5.
Weitzl, Alois: *See*—
Schätzschock, Adolf, and Weitzl. 3,016,600.
Welch, Albert B., to Fairchild Camera and Instrument Corp. Photoelectric unsharp-masking apparatus. 3,017,515. 1–16–62. Cl. 250—209.
Welch, Donald H., C. A. McKenzie, and R. F. Killey, to Polymer Corp. Ltd. Temperature control in low temperature polymerizations. 3,017,398. 1–16–62. Cl. 260—85.3.
Wellekens, John F. Torque valves. 3,016,839. 1–16–62. Cl. 103—41.
Weller, Edward F., Jr.: *See*—
Hanysz, Eugene A., and Weller. 3,016,732.
Welsh Mfg. Co.: *See*—
Lindblom, Frank W. 3,016,542.
Lindblom, Frank W. 3,016,543.
Wendell Coffee: *See*—
Crowell, Carl C. 3,016,954.
Wentworth, Milo R., to Minneapolis-Honeywell Regulator Co. Self contained diaphragm valve. 3,016,918. 1–16–62. Cl. 137—620.
Wenzel, William J.: *See*—
Knight, Kenneth K., and Wenzel. 3,017,130.
Werme, John V., W. F. Newbold, J. Parnell, and J. C. Volpe, to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,017,097. 1–16–62. Cl. 235—168.
Werner, Frank R., H. O. Randall, and K. C. Flint, to The National Cash Register Co. Selective drawer control mechanism for cash registers and accounting machines. 3,017,078. 1–16–62. Cl. 235—22.
Westcott, William B., Jr., to Cleveland Pneumatic Industries, Inc. Temperature compensated liquid spring. 3,017,170. 1–16–62. Cl. 267—1.
Weslau, Hermann: *See*—
Wilke, Gunther, and Weslau. 3,017,439.
West, Charles P.: *See*—
Bennetch, Leonard M., West, and Leiner. 3,017,283.
Western Electric Co., Inc.: *See*—
Adams, George P. 3,016,571.
Crosby, Charles H., Hicks, and Wahlberg. 3,017,450.
Miller, Robert K. 3,017,060.
Nadherny, Frank J., and Prymek. 3,017,175.
Stephen, William F. 3,017,025.
Western Union Telegraph Co., The: *See*—
Boughtwood, John E., and Grybowski. 3,017,464.
Westinghouse Electric Corp.: *See*—
Hagg, Arthur C., and Cametti. 3,017,072.
Howarth, Wesley L., and Moy. 3,016,694.
West Virginia Pulp and Paper Co.: *See*—
Ball, Frank J. 3,017,404.
Carlson, Arne B. 3,017,373.
Wexler, Vernon K., to Eastman Kodak Co. Method and apparatus for forming tobacco smoke filters. 3,016,945. 1–16–62. Cl. 154—1.7.
White, Gale: *See*—
Rubens, Sidney M., and White. 3,017,607.
White, John R., to Hazeltine Research, Inc. Dual gain amplifier. 3,017,576. 1–16–62. Cl. 330—46.
White-Rodgers Co.: *See*—
Lemberger, Robert A. 3,017,156.
White Sewing Machine Corp.: *See*—
Archbold, Ralph L. 3,016,541.
Whitecar, Alten E.: *See*—
Hompe, Robert W., Trezona, and Whitecar. 3,016,672.
Whitmore, Robert A., to FMC Corp. Apparatus for preserving food products in sealed containers of vitreous material. 3,016,666. 1–16–62. Cl. 53—112.

Wiegand, Edwin L., Co.: *See*—
McOrlly, Joseph, and Ammerman. 3,017,490.
Wiegand, Edwin L., Co., The: *See*—
Ammerman, George E. 3,017,491.
Wiggins, Richard F., J. A. Maltas, and R. L. Gann, to The Gyromat Corp. Machine for positioning the handles of containers. 3,017,009, 1–16–62, Cl. 198—29.
Wiggins, Richard F., J. A. Maltas, and F. E. Ullman, to The Gyromat Corp. Apparatus for transferring objects between conveyors. 3,017,010, 1–16–62, Cl. 198—31.
Wilde, Frank S Portable conveyor assembly. 3,017,012, 1–16–62, Cl. 198—95.
Wilhelm, Frank R., and R. H. Jordan, to American Machine & Foundry Co. Bowling ball cleaning and polishing apparatus. 3,016,553, 1–16–62, Cl. 15—21.
Wilke, Gunther, and H. Weslau, to Studiengesellschaft Kohle m.b.H. Process for the production of nitrocyclododecane and cyclododecane oxim. 3,017,439, 1–16–62, Cl. 260—644.
Wilkens, Carl E., and R. H. Bauman, to General Motors Corp. Brake booster unit. 3,016,881, 1–16–62, Cl. 121—41.
Wilkins, Dennis M.: *See*—
Hoy, Herbert R., Wilkins, and Johnson. 3,016,566.
Williams, Albert J., Jr., to Leeds and Northrup Co. Electrical converter. 3,017,561, 1–16–62, Cl. 321—45.
Williams, La Vergne H., to The Gunver Mfg. Co. Fastener for wires. 3,017,205, 1–16–62, Cl. 287—40.
Williams, Lynn A., to Anocut Engineering Co. Electrolytic applicator. 3,017,340, 1–16–62, Cl. 204—217.
Williams, Paul H.: *See*—
Schwarzer, Carl G., and Williams. 3,017,387.
Williamson, Floyd M. Hydraulic system for fabricating dies. 3,016,707, 1–16–62, Cl. 60—51.
Williamson, William A., to Clark Equipment Co. Lift truck. 3,016,973, 1–16–62, Cl. 182—14.
Williamson, William A., to Clark Equipment Co. Pivoted vehicle steering mechanism. 3,016,987, 1–16–62, Cl. 187—9.
Wilson, Clifford K., R. H. Mount, and R. O. Jabbusch, to FMC Corp. Apparatus for loosening tomato skins. 3,016,936, 1–16–62, Cl. 146—47.
Wilson, Clifford K., R. H. Mount, and R. O. Jabbusch, to FMC Corp. Tomato peeling method. 3,017,298, 1–16–62, Cl. 146—234.
Wilson, James A.: *See*—
Jonach, Frederick L., Edson, and Wilson. 3,016,739.
Wilson, James H., to Lever Bros. Co. Detergent composition. 3,017,363, 1–16–62, Cl. 252—152.
Wilson, John H. Stabilizer for fluid cylinder plungers of high slenderness ratio. 3,016,992, 1–16–62, Cl. 189—14.
Wilson, Lawrence A.: *See*—
Speed, Kenneth O., and Wilson. 3,016,618.
Wimmer, Rudolph A., to Foster Wheeler Corp. Alignment and welding device. 3,016,855, 1–16–62, Cl. 113—102.
Windsor, Harold F., to General Electric Co. Method for filming phosphor screens. 3,017,288, 1–16–62, Cl. 117—33.5.
Wintriss, George. Pressure sensor. 3,017,472, 1–16–62, Cl. 200—83.
Wisner, Jackson W., Jr.: *See*—
Kluge, Herman D., Wisner, and Lacoste. 3,017,405.
Witt, Elwin O., to Clary Corp. Punch apparatus. 3,017,075, 1–16–62, Cl. 234—39.
Witt, Everette E.: *See*—
Berry, John M., and Witt. 3,017,287.
Wittel, Otto, and J. L. Salzer, to Eastman Kodak Co. Footage indicator mechanism. 3,016,620, 1–16–62, Cl. 33—172.
Wolanek, Hilardy: *See*—
Kogan, Philip, Wolanek, and Wagner. 3,017,486.
Wolbert, Harris J., to American Can Co. Coating thickness gauge. 3,017,512, 1–16–62, Cl. 250—83.3.
Wolfe, William R., Jr., to E. I. du Pont de Nemours and Co. Electrolytic production of fluorocarbons and metallic sodium. 3,017,335, 1–16–62, Cl. 204—62.
Wolfskill, John M. Mounting support for piezoelectric crystal units. 3,017,525, 1–16–62, Cl. 310—9.40.
Wollner, Herbert J., to ACH Fiber Service, Inc. Tool for sampling batches of fibrous material. 3,016,749, 1–16–62, Cl. 73—425.
Wood, Garfield A., Jr. Fishing reel. 3,017,135, 1–16–62, Cl. 242—84.54.
Woodall-Duckman Construction Co. Ltd.: *See*—
Horsfall, Timothy E. S. 3,017,622.
Woodfield, Vinson L. Boat construction. 3,016,864, 1–16–62, Cl. 114—66.5.
Woodle, Robert A., to Texaco Inc. Serial reforming of hydrocarbons. 3,017,344, 1–16–62, Cl. 208—65.
Woods, Robert G. Predetermined torque release wrench. 3,016,773, 1–16–62, Cl. 81—52.4.
Woodward, Foster R., to The Taylor-Winfield Corp. Limited overlap travel-type series strip welder. 3,017,495, 1–16–62, Cl. 219—82.
Woolley, Francis L., to United States of America, Navy. Slide rule trainer. 3,016,628, 1–16–62, Cl. 35—30.
Wooster, Philip A. Paper towel dispenser. 3,017,131, 1–16–62, Cl. 242—55.53.
World Wide Helicopters, Inc.: *See*—
Flint, Knute W. 3,017,138.
Wrighton, Robert J., and C. E. Cushman, to Pacific Scientific Co. Control line regulators. 3,016,760, 1–16–62, Cl. 74—501.5.
Wrighton, Robert J., and C. E. Cushman, to Pacific Scientific Co. Control line regulator. 3,016,760, 1–16–62, Cl. 74—501.5.
Wszolek, Walter R., to W. R. Grace & Co. Ethylene polymerization. 3,017,403, 1–16–62, Cl. 260—94.9.
Wurton Machine Co.: *See*—
Touton, Rush D. 3,016,903.
Wyse, Wilbur M., to Bil-Jax, Inc. Brace lock for modular scaffolding. 3,017,208, 1–16–62, Cl. 287—53.5.
Xerox Corp.: *See*—
Crumrine, Herbert E., and Huber. 3,017,509.
Yarber, Gordon W. Control system for vehicle wheel brake. 3,017,145, 1–16–62, Cl. 244—111.
Yarder Mfg. Co., The: *See*—
Kowalski, Joseph J. 3,016,642.
Yarnall, Richard L.: *See*—
Drollinger, Clarence O., and Yarnall. 3,017,595.
Yoder Co., The: *See*—
Mackey, Eugene L. 3,017,494.
Yudelson, Joseph, to Eastman Kodak Co. Hardening of coatings of polymers containing carboxyl groups. 3,017,280, 1–16–62, Cl. 106—125.
Zanki, Frank, and J. G. Osburn, to Kearney & Trecker Corp. Program control system. 3,016,804, 1–16–62, Cl. 90—15.
Zarbock, Donald T., to General Electric Co. Stems for electrical devices. 3,017,451, 1–16–62, Cl. 174—50.57.
Zatloukal, Antonín, to Závody přesného strojírenství Gottwaldov, národní podnik. Machine for folding the edges of shoe uppers. 3,016,552, 1–16–62, Cl. 12—55.
Závody přesného strojírenství Gottwaldov, národní podnik: *See*—
Zatloukal, Antonín. 3,016,552.
Zderic, John A.: *See*—
Ringold, Howard J., Zderic, Batres, and Rosenkranz. 3,017,419.
Zekaria, David: *See*—
Mitchell, Thompson, Harris, and Zekaria. 3,017,461.
Ziegler, Eugene R., to General Motors Corp. Windshield wiper drive mechanism. 3,016,753, 1–16–62, Cl. 74—95.
Ziegler, Eugene R., to General Motors Corp. Windshield washer control system. 3,016,836, 1–16–62, Cl. 103—26.

CLASSIFICATION OF PATENTS

ISSUED JANUARY 16, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 3: 3,016,538
44.5: 3,016,539
321: 3,016,540
2— 3: 3,016,541
14: 3,016,542
3,016,543
49: 3,016,544
199: 3,016,545
4— 172: 3,016,546
185: 3,016,547
8— 111: 3,017,236
120: 3,017,237
9— 1: 3,016,548
14: 3,016,549
11— 1: 3,016,550
12— 12: 3,016,551
55: 3,016,552
15— 21: 3,016,553
159: 3,016,554
209: 3,016,555
229: 3,016,556
250.12: 3,016,557
250.16: 3,016,558
312: 3,016,559
510: 3,016,560
565: 3,016,561
16— 2: 3,016,562
139: 3,016,563
17— 5: 3,016,564
8: 3,016,565
18— 2.4: 3,016,566
6: 3,016,567
8: 3,016,568
17: 3,016,569
3,016,570
19: 3,016,571
20: 3,016,572
26: 3,016,573
30: 3,016,574
48: 3,016,575
3,016,576
3,016,577
54: 3,017,238
59: 3,016,578
3,016,579
3,016,580
19— 65: 3,016,581
156: 3,016,582
20— 1: 3,016,583
57.5: 3,016,584
3,016,585
92: 3,016,586
21— 58: 3,017,239
22— 140: 3,016,587
203: 3,016,588
23— 14: 3,017,240
14.5: 3,017,241
25: 3,017,242
63: 3,017,243
78: 3,017,244
89: 3,017,245
153: 3,017,246
165: 3,017,247
204: 3,017,248
209.4: 3,017,249
214: 3,017,250
223.5: 3,017,251
260: 3,017,252
270.5: 3,017,253
284: 3,017,254
288: 3,017,255
3,017,256
24— 3: 3,016,589
73: 3,016,590
81: 3,016,591
205.14: 3,016,592
227: 3,016,593
25— 118: 3,016,594
131: 3,016,595
3,016,596
156: 3,016,597
3,016,598
28— 78: 3,016,599
29— 78: 3,016,600
156.7: 3,016,601
190: 3,016,602
252: 3,016,603
255: 3,016,604
453: 3,016,605
480: 3,016,606
30— 6.3: 3,016,607
114: 3,016,608
240: 3,016,609
31— 48: 3,016,610
33— 30: 3,016,611
32: 3,016,612
47: 3,016,613
33— 80: 3,016,614
3,016,615
87: 3,016,616
137: 3,016,617
143: 3,016,618
172: 3,016,619
3,016,620
205: 3,016,621
34— 48: 3,016,622
50: 3,016,623
57: 3,016,624
85: 3,016,625
182: 3,016,626
187: 3,016,627
35— 39: 3,016,628
46: 3,016,629
36— 2.5: 3,016,630
3: 3,016,631
37— 97: 3,016,632
129: 3,016,633
144: 3,016,634
3,016,635
156: 3,016,636
170: 3,016,637
40— 5: 3,016,638
25: 3,016,639
36: 3,016,640
70: 3,016,641
152: 3,016,642
302: 3,016,643
312: 3,016,644
42— 42: 3,016,645
69: 3,016,646
43— 3: 3,016,647
15: 3,016,648
17.2: 3,016,649
44— 66: 3,017,257
72: 3,017,258
45— 60: 3,016,650
46— 141: 3,016,651
149: 3,016,652
47— 1.7: 3,016,653
60: P.P.2,122
61: P.P.2,121
48— 216: 3,017,259
49— 48: 3,016,654
50— 418: 3,016,655
51— 72: 3,016,656
134: 3,016,657
159: 3,016,658
166: 3,016,659
184.3: 3,016,660
206: 3,016,661
209: 3,016,662
53— 32: 3,016,663
62: 3,016,664
73: 3,016,665
112: 3,016,666
182: 3,016,667
186: 3,016,668
191: 3,016,669
194: 3,016,670
206: 3,016,671
373: 3,016,672
390: 3,016,673
56— 236: 3,016,674
341: 3,016,675
377: 3,016,676
57— 34: 3,016,677
3,016,678
36: 3,016,679
88: 3,016,680
106: 3,016,681
140: 3,016,682
3,016,683
157: 3,016,684
58— 28: 3,016,685
80: 3,016,686
109: 3,016,687
115: 3,016,688
60— 13: 3,016,689
16: 3,016,690
23: 3,016,691
30: 3,016,692
35.5: 3,016,693
3,016,694
35.54: 3,016,699
3,016,700
35.6: 3,016,695
3,016,696
3,016,697
3,016,698
39.08: 3,016,701
39.29: 3,016,702
39.65: 3,016,703
39.72: 3,016,704
39.74: 3,016,705
60—39.82: 3,016,706
51: 3,016,707
52: 3,016,708
54: 3,016,709
54.5: 3,016,710
67: 3,016,711
3,016,712
61— 1: 3,016,713
41: 3,016,714
62— 3: 3,016,715
52: 3,016,716
55: 3,016,717
137: 3,016,718
357: 3,016,719
64— 18: 3,016,720
21: 3,016,721
23: 3,016,722
27: 3,016,723
29: 3,016,724
66— 140: 3,016,725
177: 3,016,726
67— 31: 3,016,727
68— 177: 3,016,728
183: 3,016,729
70— 150: 3,016,730
73— 3: 3,016,731
15: 3,016,732
40.5: 3,016,733
55: 3,016,734
67.1: 3,016,735
71.4: 3,016,736
76: 3,016,737
112: 3,016,738
116: 3,016,739
118: 3,016,740
143: 3,016,741
147: 3,016,742
160: 3,016,743
337.5: 3,016,744
349: 3,016,745
362.3: 3,016,746
368.3: 3,016,747
3,016,748
425: 3,016,749
432: 3,016,750
468: 3,016,751
517: 3,016,752
74— 95: 3,016,753
230.17: 3,016,754
3,016,755
234: 3,016,756
243: 3,016,757
473: 3,016,758
475: 3,016,759
501.5: 3,016,760
3,016,761
527: 3,016,762
551.9: 3,016,763
552: 3,016,764
579: 3,016,765
588: 3,016,766
589: 3,016,767
677: 3,016,768
732: 3,016,769
75— 24: 3,017,261
28: 3,017,262
67: 3,017,263
97: 3,017,264
126: 3,017,265
128: 3,017,266
130: 3,017,267
154: 3,017,268
159: 3,017,269
76— 4: 3,016,770
13: 3,016,771
80— 36: 3,016,772
81— 52.4: 3,016,773
54: 3,016,774
57: 3,016,775
180: 3,016,776
82— 5: 3,016,777
14: 3,016,778
83— 242: 3,016,779
417: 3,016,780
633: 3,016,781
84— 453: 3,016,782
464: 3,016,783
85— 47: 3,016,784
88— 1: 3,016,785
2.4: 3,016,786
14: 3,016,787
3,016,788
3,016,789
16: 3,016,790
24: 3,016,791
3,016,792
3,016,793
88— 28.9: 3,016,794
40: 3,016,795
41: 3,016,796
43: 3,016,797
57: 3,016,798
3,016,799
61: 3,016,800
3,016,801
89— 40: 3,016,802
90— 11: 3,016,803
15: 3,016,804
93— 35: 3,016,806
49: 3,016,807
53: 3,016,808
94— 46: 3,016,809
95— 10: 3,016,810
3,016,811
11: 3,016,812
96— 29: 3,017,270
107: 3,017,271
98— 1: 3,016,813
99— 2: 3,017,272
7: 3,017,273
116: 3,017,274
121: 3,017,275
136: 3,017,276
156: 3,017,277
235: 3,016,814
251: 3,016,815
339: 3,016,816
3,016,817
100— 75: 3,016,818
163: 3,016,819
101— 94: 3,016,820
132.5: 3,016,821
3,016,822
149.2: 3,016,823
3,016,824
234: 3,016,825
425: 3,016,826
102— 3: 3,016,827
13: 3,016,828
18: 3,016,829
20: 3,016,830
22: 3,016,831
41: 3,016,832
103— 1: 3,016,833
4: 3,016,834
5: 3,016,835
26: 3,016,836
37: 3,016,837
38: 3,016,838
41: 3,016,839
44: 3,016,840
87: 3,016,841
94: Re.25,116
128: 3,016,842
170: 3,016,843
232: 3,016,844
104— 148: 3,016,845
105— 270: 3,016,846
106— 13: 3,017,278
48: 3,017,279
125: 3,017,280
185: 3,017,281
287: 3,017,282
304: 3,017,283
107— 1: 3,016,847
109— 23: 3,016,848
110— 18: 3,016,849
112— 135: 3,016,850
200: 3,016,851
262: 3,016,852
113— 48: 3,016,853
93: 3,016,854
102: 3,016,855
3,016,856
114— 23: 3,016,857
39: 3,016,858
3,016,859
3,016,860
61: 3,016,861
62: 3,016,862
66.5: 3,016,863
3,016,864
67: 3,016,865
74: 3,016,866
79: 3,016,867
235: 3,016,868
115— 17: 3,016,869
35: 3,016,870
42: 3,016,871
116— 106: 3,016,872
117— 5.1: 3,017,284
8: 3,017,285
22: 3,017,286
33.5: 3,017,288
117— 34: 3,017,289
72: 3,017,287
106: 3,017,290
119.6: 3,017,291
137: 3,017,292
138.8: 3,017,293
139.5: 3,017,294
155: 3,017,295
201: 3,017,296
216: 3,017,297
118— 49.1: 3,016,873
262: 3,016,874
306: 3,016,875
631: 3,016,876
119—14.03: 3,016,877
155: 3,016,878
157: 3,016,879
121— 41: 3,016,880
3,016,881
3,016,882
3,016,883
48: 3,016,884
122— 17: 3,016,885
123— 27: 3,016,886
90: 3,016,887
119: 3,016,888
3,016,889
122: 3,016,890
124— 22: 3,016,891
126— 113: 3,016,892
116: 3,016,893
137: 3,016,894
128— 217: 3,016,895
218: 3,016,896
3,016,897
249: 3,016,898
348: 3,016,899
528: 3,016,900
548: 3,016,901
131— 10: 3,016,902
11: 3,016,903
66: 3,016,904
94: 3,016,905
108: 3,016,906
140: 3,016,907
240: 3,016,908
132— 40: 3,016,909
135— 22: 3,016,910
136— 4: 3,017,444
3,017,445
5: 3,017,446
26: 3,017,447
3,017,448
90: 3,017,449
306: 3,016,875
631: 3,016,876
137— 33: 3,016,911
43: 3,016,912
312: 3,016,913
515: 3,016,914
595: 3,016,915
604: 3,016,916
620: 3,016,917
3,016,918
621: 3,016,919
625.27: 3,016,920
138— 38: 3,016,921
94: 3,016,922
139— 46: 3,016,923
51: 3,016,924
92: 3,016,925
93: 3,016,926
122: 3,016,927
141— 45: 3,016,928
263: 3,016,929
361: 3,016,930
143— 46: 3,016,931
68: 3,016,932
144— 35: 3,016,933
288: 3,016,934
146— 28: 3,016,935
47: 3,016,936
72: 3,016,937
234: 3,017,298
148— 13.1: 3,017,299
149— 41: 3,017,300
45: 3,017,301
60: 3,017,260
150— .5: 3,016,938
33: 3,016,939
40: 3,016,940
151— 38: 3,016,941
153— 4: 3,016,942
40: 3,016,943
82: 3,016,944
154— 43: 3,017,302
45.9: 3,017,303
54: 3,017,304
156— 40: 3,017,305
48: 3,017,306
72: 3,017,307
120: 3,017,308
161: 3,017,309
200: 3,016,945
248: 3,017,310
357: 3,017,311
361: 3,017,312
446: 3,017,313
498: 3,017,314
581: 3,017,315
158— 7: 3,016,946
27.4: 3,016,947
36.3: 3,016,948
104: 3,016,949
116: 3,016,950
160— 126: 3,016,951
354: 3,016,952
162— 80: 3,017,316
111: 3,017,317
152: 3,017,318
161: 3,017,319
166— 11: 3,016,953
98: 3,016,954
224: 3,016,955
167— 22: 3,017,320
30: 3,017,321
53.1: 3,017,322
55: 3,017,324
58: 3,017,325
65: 3,017,323
3,017,326
3,017,327
87.1: 3,017,328
95: 3,017,329
169— 11: 3,016,956
172— 42: 3,016,957
639: 3,016,958
174— 34: 3,017,450
50.57: 3,017,451
152: 3,017,452
175— 4: 3,016,959
41: 3,016,960
3,016,961
66: 3,016,962
92: 3,016,963
136: 3,016,964
178— 5.4: 3,017,453
3,017,454
3,017,455
6: 3,017,456
3,017,457
6.8: 3,017,458
17: 3,017,459
3,017,460
26: 3,017,461
69.5: 3,017,462
79: 3,017,463
88: 3,017,464
179— 22: 3,017,465
100.1: 3,017,466
100.41: 3,017,467
180— 5: 3,016,965
26: 3,016,966
30: 3,016,967
82: 3,016,968
3,016,969
181— .5: 3,016,970
33: 3,016,971
56: 3,016,972
182— 14: 3,016,973
33: 3,016,974
48: 3,016,975
194: 3,016,976
183— 2.5: 3,016,977
4.1: 3,016,978
7: 3,016,979
3,016,980
27: 3,016,981
43: 3,016,982
51: 3,016,983
73: 3,016,984
115: 3,016,985
121: 3,016,986
187— 9: 3,016,987
17: 3,016,988
19: 3,016,989
188— 79.5: 3,016,990
90: 3,016,991
189— 14: 3,016,992
34: 3,016,993
36: 3,016,994
3,016,995
64: 3,016,996
82: 3,016,997

180—	85: 3,016,998	218—	42: 3,017,052	240—	2: 3,017,497	260—	18: 3,017,374	272—	58: 3,017,180	317—	234: 3,017,550
	3,016,999	219—	9.5: 3,017,483		2.14: 3,017,498		22: 3,017,375		76: 3,017,181	318—	29: 3,017,551
	92: 3,017,000		10.53: 3,017,484		6.4: 3,017,499		23: 3,017,376	273—	1: 3,017,182		39: 3,017,552
192—	3.5: 3,017,001		10.79: 3,017,485		8.2: 3,017,500		29.6: 3,017,377		1.5: 3,017,183		199: 3,017,553
	45: 3,017,002		19: 3,017,486		3,017,501		37: 3,017,378		43: 3,017,184		239: 3,017,554
	68: 3,017,003		29: 3,017,487		10.68: 3,017,502		41: 3,017,379		90: 3,017,185		380: 3,017,555
	105: 3,017,004		37: 3,017,488	241—	46: 3,017,125		45.3: 3,017,380		146: 3,017,186		448: 3,017,556
	3,017,005		3,017,489		77: 3,017,126		45.4: 3,017,381	274—	14: 3,017,187		467: 3,017,557
	113: 3,017,006		3,017,490		257: 3,017,127		45.5: 3,017,382		15: 3,017,188	321—	14: 3,017,558
193—	40: 3,017,007		3,017,491	242—	35.6: 3,017,128		45.85: 3,017,383	275—	8: 3,017,189		45: 3,017,559
195—	11: 3,017,330		44: 3,017,492		3,017,129		46.5: 3,017,384	277—	32: 3,017,190		3,017,560
198—	7: 3,017,008		46: 3,017,493		47.09: 3,017,130		3,017,385		82: 3,017,191		3,017,561
	29: 3,017,009		67: 3,017,494		55.53: 3,017,131		3,017,386	279—	2: 3,017,192	322—	46: 3,017,562
	31: 3,017,010		82: 3,017,495		71.9: 3,017,132		47: 3,017,387	280—	1.14: 3,017,193		90: 3,017,563
	33: 3,017,011		124: 3,017,496		3,017,133		65: 3,017,388		18: 3,017,194	323—	9: 3,017,564
	95: 3,017,012	220—	24.5: 3,017,053		84.44: 3,017,134		67: 3,017,389		104.5: 3,017,195		74: 3,017,565
	102: 3,017,013		113: 3,017,054		84.54: 3,017,135		77.5: 3,017,390		124: 3,017,196	324—	1: 3,017,566
	131: 3,017,014	221—	34: 3,017,055		129: 3,017,136		78: 3,017,391		3,017,197		6: 3,017,567
199—	18: 3,017,015	222—	164: 3,017,056	244—	2: 3,017,137		3,017,392		202: 3,017,198		18: 3,017,568
200—	32: 3,017,468		318: 3,017,057		3: 3,017,138		3,017,393		269: 3,017,199		29: 3,017,569
	52: 3,017,469	223—	91: 3,017,058		12: 3,017,139		3,017,394		477: 3,017,200		29.5: 3,017,570
	64: 3,017,470		3,017,059		15: 3,017,140		3,017,395	281—	34: 3,017,201		51: 3,017,571
	76: 3,017,471	226—	10: 3,017,060		76: 3,017,141		78.5: 3,017,396	285—	41: 3,017,202		55: 3,017,572
	83: 3,017,472		177: 3,017,061		77: 3,017,142		79.3: 3,017,397		256: 3,017,203		77: 3,017,573
	87: 3,017,473		180: 3,017,062		102: 3,017,143		85.3: 3,017,398		373: 3,017,204		89: 3,017,574
	93: 3,017,474	229—	1.8: 3,017,063		110: 3,017,144		92.8: 3,017,399	287—	49: 3,017,205		99: 3,017,575
	103: 3,017,475		16: 3,017,064		111: 3,017,145		94.9: 3,017,400		52.08: 3,017,206	330—	46: 3,017,576
	104: 3,017,476		17: 3,017,065		114: 3,017,146		3,017,401		53: 3,017,207		56: 3,017,577
	122: 3,017,477		28: 3,017,066		138: 3,017,147		3,017,402		53.5: 3,017,208		87: 3,017,578
	138: 3,017,478		48: 3,017,067	246—	415: 3,017,503		3,017,403		87: 3,017,209	331—	38: 3,017,579
	144: 3,017,479		52: 3,017,068	248—	35: 3,017,148		124: 3,017,404		114: 3,017,210		166: 3,017,580
	146: 3,017,480		57: 3,017,069		39: 3,017,149		139: 3,017,405	289—	3: 3,017,211		180: 3,017,581
	147: 3,017,481		62: 3,017,070		45: 3,017,150		192: 3,017,406	292—	202: 3,017,212	332—	14: 3,017,582
	148: 3,017,482	230—	116: 3,017,071		120: 3,017,151		234: 3,017,407		357: 3,017,213		22: 3,017,583
202—	71: 3,017,331		118: 3,017,072		148: 3,017,152		239.5: 3,017,408	294—	31: 3,017,214	333—	6: 3,017,584
204—	15: 3,017,332	232—	35: 3,017,073		189: 3,017,153		239.55: 3,017,409		31.2: 3,017,215		7: 3,017,585
	49: 3,017,333	234—	23: 3,017,074		205: 3,017,154		3,017,410		86: 3,017,216		17: 3,017,586
	55: 3,017,334		39: 3,017,075		235: 3,017,155		247.2: 3,017,411	296—	97: 3,017,217		31: 3,017,587
	62: 3,017,335		78: 3,017,076	250—	16: 3,017,504		250: 3,017,412		106: 3,017,218	336—	135: 3,017,588
	3,017,336		128: 3,017,077		20: 3,017,505		279: 3,017,413	297—	135: 3,017,219		136: 3,017,589
	75: 3,017,337	235—	22: 3,017,078		3,017,506		3,017,414		390: 3,017,220		3,017,590
	98: 3,017,338		23: 3,017,079		3,017,507		302: 3,017,415		397: 3,017,221		215: 3,017,591
	165: 3,017,339		60: 3,017,080		3,017,508		326.5: 3,017,416		3,017,222	338—	28: 3,017,592
	217: 3,017,340		60.31: 3,017,081		49.5: 3,017,509		346.8: 3,017,417	301—	5: 3,017,223		143: 3,017,593
	242: 3,017,341		61.11: 3,017,082		71.5: 3,017,510		397.4: 3,017,418		3,017,224		219: 3,017,594
205—	13: 3,017,016		91: 3,017,083		83.3: 3,017,511		397.45: 3,017,419	305—	51: 3,017,225	339—	8: 3,017,595
	20: 3,017,017		92: 3,017,084		3,017,512		453: 3,017,420	307—	58: 3,017,518		14: 3,017,596
206—	45.31: 3,017,018		117: 3,017,085		3,017,513		456: 3,017,421		88.5: 3,017,519		64: 3,017,597
	46: 3,017,019		3,017,086		106: 3,017,514		461: 3,017,422		3,017,520		75: 3,017,598
	59: 3,017,020		122: 3,017,087		209: 3,017,515		3,017,423		3,017,521		91: 3,017,599
	3,017,021		145: 3,017,088		211: 3,017,516		463: 3,017,424		3,017,522		149: 3,017,600
	60: 3,017,022		3,017,089		213: 3,017,517		465.4: 3,017,425		3,017,523		157: 3,017,601
	65: 3,017,023		153: 3,017,090	251—	54: 3,017,156		465.9: 3,017,426		3,017,524		174: 3,017,602
208—	11: 3,017,342		3,017,091		66: 3,017,157		470: 3,017,427	308—	3: 3,017,226		186: 3,017,603
	47: 3,017,343		3,017,092		84: 3,017,158		471: 3,017,428		3.8: 3,017,227		194: 3,017,604
	65: 3,017,344		155: 3,017,093	252—	2: 3,017,348		489: 3,017,429		20: 3,017,228		252: 3,017,605
	210: 3,017,345		157: 3,017,094		8.5: 3,017,349		505: 3,017,430		122: 3,017,229	340—	3: 3,017,606
	322: 3,017,346		159: 3,017,095		3,017,350		514: 3,017,431		187: 3,017,230		5: 3,017,607
209—	74: 3,017,024		160: 3,017,096		3,017,351		3,017,432	310—	9.4: 3,017,525		3,017,608
	81: 3,017,025		168: 3,017,097		8.55: 3,017,352		522: 3,017,433		60: 3,017,526		27: 3,017,609
	121: 3,017,026		172: 3,017,098		3,017,353		526: 3,017,434		94: 3,017,527		172.5: 3,017,610
	3,017,027		175: 3,017,099		3,017,354		583: 3,017,435		191: 3,017,528		3,017,611
	167: 3,017,028		3,017,100		3,017,355		601: 3,017,436		248: 3,017,529		173: 3,017,612
210—	63: 3,017,347		176: 3,017,101		3,017,356		611: 3,017,437	311—	110: 3,017,231		3,017,613
	108: 3,017,029		3,017,102		32.5: 3,017,357		632: 3,017,438	312—	223: 3,017,232		174: 3,017,614
	138: 3,017,030		3,017,103		3,017,358		644: 3,017,439		322: 3,017,233		3,017,615
	222: 3,017,031		185: 3,017,104		32.7: 3,017,359		649: 3,017,440	313—	11.5: 3,017,530		174.1: 3,017,616
	236: 3,017,032		186: 3,017,105		34: 3,017,360		671: 3,017,441		82: 3,017,531		3,017,617
	293: 3,017,033		194: 3,017,106		35: 3,017,361		681.5: 3,017,442		141: 3,017,532		213: 3,017,618
211—	2: 3,017,034		3,017,107		51.5: 3,017,362		810: 3,017,443		189: 3,017,533		3,017,619
	70: 3,017,035		3,017,108		152: 3,017,363	261—	19: 3,017,165	315—	39: 3,017,534		248: 3,017,620
	87: 3,017,036		3,017,109		188: 3,017,364		34: 3,017,166		3,017,535		282: 3,017,621
	114: 3,017,037		3,017,110		301.3: 3,017,365		3,017,167		83: 3,017,536		3,017,622
213—	64: 3,017,038		197: 3,017,111		301.6: 3,017,366	262—	3: 3,017,168		230: 3,017,537		322: 3,017,623
214—	2: 3,017,039	236—	10: 3,017,112		350: 3,017,367	266—	5: 3,017,169		241: 3,017,538		324: 3,017,624
	6: 3,017,040		34: 3,017,113		439: 3,017,368	267—	1: 3,017,170	317—	66: 3,017,539		3,017,625
	8.5: 3,017,041	239—	3: 3,017,114		441: 3,017,369		3,017,171		98: 3,017,540		347: 3,017,626
	10.5: 3,017,042				450: 3,017,370		64: 3,017,172		3,017,541		350: 3,017,627
	17: 3,017,043		15: 3,017,116	253—	39.15: 3,017,159	268—	119: 3,017,173		140: 3,017,542	343—	5: 3,017,628
	3,017,044		52: 3,017,117	257—	137: 3,017,160	269—	126: 3,017,174		148.5: 3,017,543		3,017,629
	3,017,045		61: 3,017,118		245: 3,017,161		130: 3,017,175		158: 3,017,544		17.1: 3,017,630
	140: 3,017,046		81: 3,017,119		290: 3,017,162		157: 3,016,805		159: 3,017,545		225: 3,017,631
215—	13: 3,017,047		117: 3,017,120	258—	1.2: 3,017,163		185: 3,017,176		190: 3,017,546		819: 3,017,632
	40: 3,017,048		129: 3,017,121	259—	151: 3,017,164		205: 3,017,177		191: 3,017,547		853: 3,017,633
	44: 3,017,049		135: 3,017,122	260—	2.5: 3,017,371	271—	63: 3,017,178		231: 3,017,548	346—	74: 3,017,234
	48: 3,017,050		230: 3,017,123		3,017,372		64: 3,017,179		234: 3,017,549		107: 3,017,235
	100.5: 3,017,051		456: 3,017,124		6: 3,017,373						

CLASSIFICATION OF DESIGNS

D 3—	13: 192,070	D18—	2: 192,077	D33—	14: 192,084	D40—	1: 192,091	D48—	24: 192,098	D61—	1: 192,104
	192,071	D19—	1: 192,078		19: 192,085	D41—	1: 192,092		32: 192,099		192,105
D 5—	5: 192,072	D22—	2: 192,079	D34—	3: 192,086	D42—	8: 192,093	D52—	2: 192,100	D71—	1: 192,106
D13—	1: 192,073		192,080		5: 192,087	D44—	21: 192,094	D54—	13: 192,101	D83—	1: 192,107
	192,074		3: 192,081		15: 192,088		29: 192,095	D55—	1: 192,102	D86—	10: 192,108
D15—	1: 192,075	D28—	1: 192,082		192,089	D45—	1: 192,096	D58—	6.5: 192,103	D88—	3: 192,109
D17—	6: 192,076	D33—	3: 192,083	D37—	1: 192,090	D47—	6: 192,097				

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

January 16, 1962 Volume 774 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 25,598 (SWIFT'S ORIOLE AND DESIGN), Swift Provision Co., Hams, bacon and lard; **Reg. No. 28,452** (SWIFT AND DESIGN), Swift & Company, Certain meats, shortenings and other provisions; **Reg. No. 56,977** (SWIFT'S WINCHESTER), same, Smoked or cured hams, bacon and shoulders; **Reg. No. 122,828** (SWIFT'S PREMIUM), same, Oleomargarin; **Reg. No. 140,225**, same, Lard, ham, bacon and oleomargarin; **Reg. No. 261,221**, same, Gelatin; **Reg. No. 269,663** (SWIFT'S LA PRIMERA AND DESIGN), same, Lard; **Reg. No. 278,221** (SWIFT'S), same, Fresh, prepared, dried, cured, smoked and canned lamb, mutton, veal and poultry, etc.; **Reg. No. 288,958**, same, Soap; **Reg. No. 299,483**, same, Ice cream; **Reg. No. 432,503**, same, Fertilizers; **Reg. No. 669,720** (SWIFT'S ARROW AND DESIGN), same, Soap; **Reg. No. 691,021** (SWIFT'S), same, Peanut butter and baby foods, **filed** Nov. 21, 1961, D.C.N.J. (Camden), Doc. 1000/61, *Swift & Company* v. *Swift Economy Home Food Service et al.*

Reg. No. 28,452. (See Reg. No. 25,598.)

Reg. No. 56,977. (See Reg. No. 25,598.)

Reg. No. 122,828. (See Reg. No. 25,598.)

Reg. No. 140,225. (See Reg. No. 25,598.)

Reg. No. 261,221. (See Reg. No. 25,598.)

Reg. No. 269,663. (See Reg. No. 25,598.)

Reg. No. 278,221. (See Reg. No. 25,598.)

Reg. No. 288,958. (See Reg. No. 25,598.)

Reg. No. 297,369. (See Reg. No. 25,598.)

Reg. No. 299,483. (See Reg. No. 25,598.)

Reg. No. 327,895, N. Gennett, doing business as Central Quilt and Mattress Manufactory, **filed** Dec. 4, 1961, D.C. Mass. (Boston), Doc. 61/937–F, *Sleepmaster Products Co., Inc.* v. *Sleepmaster, Inc.*

Reg. No. 333,110 (BURROUGHS), Burroughs Adding Machine Company, Electric motors, interference eliminators, etc.; **Reg. No. 343,430**, same, Adding machines, listing machines, calculating machines, key operated and automatic calculators, etc.; **Reg. No. 505,174**, same; **Reg. No. 518,895**, same; **2,698,399**, Orr and Sands, Magnetic deflection means for electron discharge services; **2,719,228**, I. L. Auerback, Binary computation circuit; **2,721,955**, Sin-Pih Fan et al., Multi-position beam tube, **filed** Oct. 24, 1961, D.C. Conn. (New Haven), Doc. 9009, *Burroughs Corporation* v. *Burroughs Electronics, Inc.*

Reg. No. 343,430. (See Reg. No. 333,110.)

Reg. No. 432,503. (See Reg. No. 25,598.)

Reg. No. 505,174. (See Reg. No. 333,110.)

Reg. No. 509,417 (VORNADO), The O. A. Sutton Corporation, Inc., Electric fans for domestic and commercial use; **Reg. No. 594,890**, same, Air conditioning units; **Reg. No. 627,795**, same, Thermostats and switches, **filed** Nov. 20, 1961,

CONDITION OF TRADEMARK APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,100
Date of oldest new application	April 10, 1961
Date of oldest amended application	May 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	4-10-61	5-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	5-17-61	6-1-61
Renewals (All Classes)	11-7-61	11-20-61
Sec. 12 (c) Publications (All Classes)	11-6-61	11-24-61

Applications filed during the month of November 1961—2,018

Registrations Issued	230—No. 726,385 to No. 726,614
Renewals Issued	61

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

D.C.N.J. (Newark), Doc. 965/61, *Vornado Auto Air Conditioning Corporation* v. *Vornado, Inc.*

Reg. No. 518,895. (See Reg. No. 333,110.)

Reg. No. 537,763 (BANTHINE), G. D. Searle & Co., Medicinal agent for the treatment of abnormal conditions of the gastro-intestinal system in tablet and liquid form; **Reg. No. 575,266** (PRO-BANTHINE), same; **Reg. No. 703,821** (PRO-BANTHINE P.A.), same, filed Nov. 15, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1952, *G. D. Searle & Co.* v. *A. H. Robins Company, Inc.*

Reg. No. 575,266. (See Reg. No. 537,763.)

Reg. No. 591,926 (PACIFIC), Pacific Pumps, Inc., Centrifugal pumps for permanent installation, filed Nov. 30, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1521/61-K, *Dresser Industries, Inc.* v. *Pacific Pumping Company.*

Reg. No. 594,890. (See Reg. No. 509,417.)

Reg. No. 617,477 (M Mc AND DESIGN), R. V. Bibbero, Bookkeeping, accounting and general office forms and ledgers; **Reg. No. 633,331**, same, Advice and consultation in connection with bookkeeping and accounting practice and other office management procedures, filed Mar. 9, 1960, D.C., N.D. Calif. (San Francisco), Doc. 38/964, *Medical Management Control* v. *Medical Management, Inc. et al.* Defendants enjoined Aug. 24, 1960.

Reg. No. 627,795. (See Reg. No. 509,417.)

Reg. No. 633,331. (See Reg. No. 617,477.)

Reg. No. 669,720. (See Reg. No. 25,598.)

Reg. No. 691,021. (See Reg. No. 25,598.)

Reg. No. 703,821. (See Reg. No. 537,763.)

Notice of Tentative Recordation of a Trade Name

[T.D. 55528]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., Dec. 8, 1961

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"GOJAX HOUSEWARES, INC.," a corporation organized under the laws of the State of Florida, located and doing business at 38 S.E. 8th Street, Miami 32, Florida. This trade name is used in connection with cutlery, china, housewares, etc., manufactured in Japan.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after January 15, 1962, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after January 15, 1962, of any opposition proceeding.

Until 45 days after January 15, 1962, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 106,693. Coast Manufacturing and Supply Co., Livermore, Calif. Filed Oct. 19, 1960.

TREVARNO

Owner of Reg. No. 538,985.
For Molding Compounds Used in Forming Plastic Products.
First use Jan. 7, 1959.

SN 112,246. Four Winds Growers, Mission San Jose, Alameda County, Calif. Filed Jan. 23, 1951.

FOUR WINDS

For Growing Trees and Shrubs.
First use Feb. 5, 1946.

SN 112,423. West Coast Evergreen Company, Portland, Oreg. Filed Jan. 24, 1961.

WESCO

For Bunches of Evergreens Consisting of Salal (Lemon), Ferns, Huckleberry, Juniper, Fir, Cedar, or Pine.
First use Sept. 1, 1959.

SN 112,525. Cobon Plastics Corp., Newark, N.J. Filed Jan. 26, 1961.

COBOFLOW

For Plastic Tubing for General Use in the Industrial Arts for Conveying Liquids.
First use Aug. 1, 1955.

SN 114,441. Colorite Plastics, Inc., Paterson, N.J. Filed Feb. 27, 1961.

ABLEX

For Plastic Compounds From Which Plastic Extrusions Are Made.
First use Nov. 23, 1960.

SN 121,657. Walter Marx Gardens, Inc., Boring, Oreg. Filed June 8, 1961.

MARHIGO

For Japanese Iris Bulbs.
First use Mar. 16, 1956.

SN 123,515. Amalgamated Leather Companies, Inc., Wilmington, Del. Filed July 7, 1961.

A·O·K·

For Leather.
First use June 22, 1961.

SN 125,243. Penobscot Chemical Fibre Co., Old Town, Maine. Filed Aug. 2, 1961.

GLO-WHITE

For Wood Pulp.
First use Sept. 24, 1960.

Class 2—Receptacles

SN 105,955. Canton-Son, Inc., New York, N.Y. Filed Oct. 7, 1960.

Crestline



For Lacquered Wooden Boxes Used as Jewel Boxes for Storage of Jewelry and Various Personal Items.
First use Sept. 1, 1958.

SN 108,995. N.V. Plasticlining, Valthermond, Odoorn, Netherlands. Filed Nov. 23, 1960.



Applicant claims no exclusive rights in the words "Plastic Lining" and the representation of the goods, apart from the mark as shown. Owner of Dutch Reg. No. 122,878, dated Sept. 23, 1955.
For Tanks and Casks for Storage, Transport, and Distribution of Liquids.

SN 115,823. The Metal Box Company Limited, London, England. Filed Mar. 16, 1961.

SELLEX

Owner of British Reg. No. 798,702, dated Dec. 2, 1959.
For Cardboard Containers and Packaging Material of Paper and Cardboard.

SN 118,241. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Apr. 20, 1961.

SPIFFY

For Insulated Jugs and Other Portable Food and Beverage Containers.
First use Jan. 12, 1960.

SN 118,741. Van Brode Milling Co., Inc., Clinton, Mass. Filed Apr. 26, 1961.

TROPICAL

Owner of Reg. No. 700,315.
For Plastic Dishes.
First use Feb. 1, 1961.

SN 119,251. West Virginia Pulp and Paper Company, New York, N.Y. Filed May 3, 1961.

RAKSAK

For Paper Bags.
First use Apr. 13, 1961.

SN 122,387. Stone Container Corporation, Chicago, Ill. Filed June 19, 1961.

STONE

Owner of Reg. Nos. 572,916, 664,580, and others.
For Paperboard Containers.
First use on or about Apr. 18, 1961.

SN 122,648. Service Station Equipment Co., St. Paul, Minn. Filed June 22, 1961.

SPACE MASTER

For Waste Receptacles and Waste Receptacles Having Display Shelves Mounted Thereon.
First use Apr. 15, 1961.

SN 122,670. Waldorf Paper Products Company, St. Paul, Minn. Filed June 22, 1961.

MARBLEWALD

For Containers Made of Corrugated Paperboard and Fibre.
First use Mar. 7, 1960.

SN 123,081. Container Corporation of America, Chicago, Ill. Filed June 29, 1961.

BIKINI

For Folding Cartons.
First use Nov. 13, 1960.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 117,193. Koret, Inc., New York, N.Y. Filed Apr. 5, 1961.

Miss Koret

The name "Miss Koret" does not identify any particular living individual. Owner of Reg. Nos. 301,022, 634,499 and 671,654.

For Ladies' Purses, Pocketbooks, Handbags, French Purses, and Clutch Handbags; Ladies' and Men's Billfolds, Key Cases, and Coin Purses.
First use on or about Aug. 26, 1960.

Class 4 — Abrasives and Polishing Materials

SN 122,332. Macklin Company, Jackson, Mich. Filed June 19, 1961.

DYNA-GRADED

For Grinding Wheels.
First use June 12, 1961.

SN 122,477. The Shetland Co., Inc., Salem, Mass. Filed June 20, 1961.



Owner of Reg. Nos. 554,787, 627,689, and 671,787.
For Liquid Floor Wax and Paste Wax Impregnated Pads.
First use April 1961 on liquid floor wax.

Class 6 — Chemicals and Chemical Compositions

SN 111,440. Sole Chemical Corporation, Chicago, Ill. Filed Jan. 6, 1961.

SOLE-MULSE

Owner of Reg. No. 680,616.
For Organic Surface Active Agents—Namely, Emulsifiers and Solubilizers.
First use May 3, 1957.

SN 111,441. Sole Chemical Corporation, Chicago, Ill. Filed Jan. 6, 1961.

SOLE-TERGE

Owner of Reg. No. 680,616.
For Organic Surface Active Agents—Namely, Detergents, Foamers, Defoamers, Emulsifiers, Demulsifiers, Wetting Agents, Penetrants, Thickeners, Foam Stabilizers, and Dispersing Agents.
First use June 14, 1957.

SN 112,724. Hodag Chemical Corporation, Chicago, Ill. Filed Jan. 30, 1961.

CAT

For Surface Active Agents.
First use Mar. 28, 1960.

SN 118,188. United Glass Tinting Corporation, Westfield, N.J. Filed Apr. 19, 1961.

RAY-NO

For Liquid, Aldehyde Resin Plastic To Be Applied to Window Glass Which Forms a Transparent Tinted Film To Shield Against Sun Glare.
First use Apr. 3, 1961.

SN 119,072. Thriftway Foods, Inc., King of Prussia, Pa. Filed May 1, 1961.

MONTCO

Owner of Reg. No. 387,547.
For Ammonia and Bluing.
First use spring of 1919.

SN 121,542. Commercial Solvents Corporation, New York, N.Y. Filed June 7, 1961.

TRIS AMINO

For Tris(hydroxymethyl)aminomethane.
First use Feb. 18, 1959.

SN 121,544. Commercial Solvents Corporation, New York, N.Y. Filed June 7, 1961.

TRIS NITRO

For Tris(hydroxymethyl)nitromethane.
First use Mar. 4, 1959.

Class 10 — Fertilizers

SN 116,110. Farmers Cotton Oil Company, Wilson, N.C. Filed Mar. 21, 1961.

FAR-MEL

For Commercial Fertilizer Ingredient—Namely, Agriculture Minerals.
First use Mar. 31, 1959.

SN 116,556. Nutrilite Products, Inc., Buena Park, Calif. Filed Mar. 27, 1961.

GARD'N BLOOM

For Plant Mix for House Plants.
First use Mar. 1, 1961.

Class 12 — Construction Materials

SN 104,361. Beaver Products Incorporated, McMurray, Pa. Filed Sept. 13, 1960.



BEAVER
Perma Seal

For Dry, Powdered Composition To Be Admixed With Water To Provide a Water Repellant and Decorative Coating Material for Masonry Structures.
First use about Aug. 9, 1957.

SN 107,617. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Nov. 1, 1960.

ConTact Acoustical Tile

Applicant disclaims exclusive right to use of the words "Acoustical Tile" except as part of the mark shown. Owner of Reg. Nos. 424,988 and 692,926.
For Polystyrene Acoustical Tiles.
First use on or about Oct. 14, 1960.

SN 108,117. A. C. Deering Company, Inc., Dedham, Mass. Filed Nov. 9, 1960.

ALUMA-BOARD

For Aluminum Clapboards and Siding With Baked Enamel Surface Coating.
First use June 3, 1960.

SN 109,351. Reynolds Metals Company, Richmond, Va. Filed Nov. 30, 1960.

REYNOTHERM

Owner of Reg. Nos. 512,256 and 662,070.
For Composite Aluminum Panels Provided With Insulation Between the Panels.
First use on or before Oct. 7, 1960.

SN 109,352. Reynolds Metals Company, Richmond, Va. Filed Nov. 30, 1960.

REYNOCORE

Owner of Reg. Nos. 512,256 and 662,070.
For Composite Aluminum Panels.
First use on or before Aug. 22, 1960.

SN 110,472. The C. Schmidt Company, Cincinnati, Ohio. Filed Dec. 19, 1960.

DARI-DRIV

For Prefabricated Roadside Stand for Sale of Food Products.
First use on or about Nov. 16, 1960.

SN 116,255. Plastering Development Center, Inc., Chicago, Ill. Filed Mar. 22, 1961.

TUFCON

For Gypsum Lath.
First use Feb. 16, 1961.

SN 116,316. Klip-Lock Fastening Devices, Inc., Philadelphia, Pa. Filed Mar. 23, 1961.

POWERLOCK

For Flooring and Parts Thereof for Assembly.
First use Mar. 6, 1961.

SN 116,750. Quality Marble & Granite Co., North Hollywood, Calif. Filed Mar. 29, 1961.

QUAMAGRA

For Ceramic Tiles, Mosaic Tiles, and Marble Tiles.
First use Feb. 1, 1957, on mosaics and marble tiles.

SN 116,842. The Ruberoid Co., New York, N.Y. Filed Mar. 30, 1961.

TIMBERGRAIN

For Asphalt Shingles.
First use on or about July 7, 1939.

SN 118,705. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Apr. 26, 1961.

OLIN GOLDEN PINE

The words "Golden Pine" are disclaimed when used apart from the trademark. Owner of Reg. No. 614,171.
For Lumber.
First use on or about Mar. 8, 1961.

SN 122,239. The Youngstown Sheet and Tube Company, Youngstown, Ohio. Filed June 16, 1961.



Owner of Reg. Nos. 418,302 and 684,730.
For Electric Power Transmission Towers; Radio, Television and Microwave Transmission Towers; Utility Houses; and Floodlight Towers.
First use Sept. 4, 1959.

SN 124,174. John C. Dolph Company, Monmouth Junction, N.J. Filed July 18, 1961.

DOLPHON

For Sealing Compounds.
First use on or about June 18, 1954.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 104,562. Speedfast Corporation, Long Island City, N.Y. Filed Sept. 20, 1960.

LOAD-O-MATIC

For Staples in Flexible Strip Form.
First use Aug. 3, 1960.

SN 110,905. United-Carr Fastener Corporation, Cambridge, Mass. Filed Dec. 27, 1960.

LIFT THE DOT

For Fasteners, Connectors, and Attaching Devices of Various Types Used in Household Construction and Industrial Arts for Mounting and Connecting Various Parts, Whether of Plastic, Wood, Metal, Fabric or Fibre Board.
First use Mar. 25, 1914.

SN 110,906. United-Carr Fastener Corporation, Cambridge, Mass. Filed Dec. 27, 1960.

PULL THE DOT

For Fasteners, Connectors, and Attaching Devices of Various Types Used in Household Construction and Industrial Arts for Mounting and Connecting Various Parts, Whether of Plastic, Wood, Metal, Fabric or Fibre Board.
First use Aug. 25, 1950.

SN 118,755. Aluminum Housewares Company, Inc., St. Louis, Mo. Filed Apr. 27, 1961.

HEART SAVER

For Kitchen Utensils, Such as Frying Pans, Skillets, Sauce Pans, and the Like.
First use Apr. 24, 1961.

SN 118,827. J. W. Thompson, d.b.a. Thompson Equipment Machine Company, York, Pa. Filed Apr. 27, 1961.

TEMCO

For Foot Valves and Check Valves.
First use June 2, 1960.

SN 122,237. The Youngstown Sheet and Tube Company, Youngstown, Ohio. Filed June 16, 1961.



Owner of Reg. Nos. 418,302 and 684,730.
For Tank Car and Tank Truck Loading Platforms, Swivels, Swivel Fittings, and Pressure Control Valves.
First use Dec. 1, 1958, on swivels and swivel fittings.

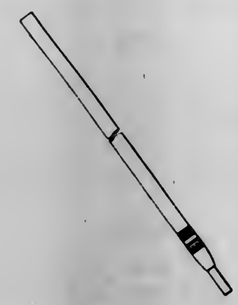
Class 14—Metals and Metal Castings and Forgings

SN 108,544. Engelhard Industries, Inc., Newark, N.J. Filed Nov. 16, 1960.

SPECTROPURE

Owner of Reg. No. 334,818.
For Pure Precious Metals Including Metals of the Platinum Group, Gold and Silver.
First use Nov. 9, 1960.

SN 115,678. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Mar. 15, 1961.



No claim is made to the representation of the goods. The trademark consists of an electric arc symbol and the letter "E" on closely spaced, varicolored bands around the electrode, near one end as shown. The drawing is lined for red and yellow but the colors indicated are not claimed as a feature of the mark.
For Metallic Welding Electrodes.
First use Jan. 16, 1961.

SN 115,679. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Mar. 15, 1961.



No claim is made to the representation of the goods. The trademark consists of the letter "E" and a torch flame symbol on closely spaced, varicolored bands around the rod near one end as shown. The drawing is lined for red and yellow but the colors indicated are not claimed as a feature of the mark.
For Metallic Welding Rods.
First use Jan. 16, 1961.

SN 118,874. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Apr. 28, 1961.

QUENCHARC

Owner of Reg. Nos. 706,880, 718,460, and others.
For Metallic Welding Rods.
First use Apr. 17, 1961.

Class 15—Oils and Greases

SN 111,617. Simpson Oil Company, Inc., St. Louis, Mo. Filed Jan. 10, 1961.

Simpson

The words "Premium Products" are disclaimed apart from the mark as shown. The drawing is lined for red and blue.
For Gasolines, Motor Oils, Greases, Lubricating Oils, Fuel Oils, and Propane.
First use Apr. 14, 1959.

SN 119,036. Murphy Corporation, El Dorado, Ark. Filed May 1, 1961.

SPUR

Owner of Reg. No. 291,502.
For Gasoline and Lubricating Oils.
First use February 1961.

SN 120,690. Bel-Ray Company, Inc., Farmingdale, N.J. Filed May 24, 1961.

Molylube

Owner of Reg. No. 573,653.
For Lubricating Compounds Comprising Molybdenum Disulfide Suspended in Vehicles of Selected Viscosity To Provide Compounds of Either Liquid or Paste Consistency.
First use June 7, 1950.

Class 16—Protective and Decorative Coatings

SN 106,224. Rich Art Color Company, Inc., New York, N.Y. Filed Oct. 11, 1960.

RICH GLO

Owner of Reg. No. 588,144.
For Artists' Daylight Fluorescent Water Colors.
First use on or about Aug. 1, 1960.

SN 107,099. American-Marietta Company, Pittsburgh, Pa. Filed Oct. 25, 1960.

VITRA-TINT

For Lacquer.
First use on or about June 15, 1960.

SN 117,334. Beautykote Corporation, Newark, N.J. Filed Apr. 7, 1961.

BELLE-TONE

For Paints, Varnishes, and Enamels.
First use Mar. 20, 1961.

SN 119,640. The Polymer Corporation, Reading, Pa. Filed May 9, 1961.

CORVEL

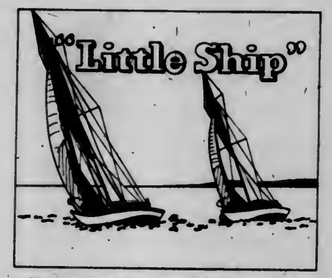
Owner of Reg. No. 676,220.
For Primers, Primer Reducers and Patching Compounds for Use in Connection With Fusion Bond Finishes and Fusion Coating Processes.
First use Mar. 17, 1958.

SN 121,029. L. Reusche & Co., Newark, N.J. Filed May 29, 1961.

ELARCOAT

For Gold-Containing Coating of the Paint Type for Use in Coating Glass Surfaces and Ceramic Surfaces.
First use May 12, 1961.

SN 123,600. British Paints Limited, Newcastle-on-Tyne, England. Filed July 10, 1961.



Owner of British Reg. No. B801,612, dated Feb. 12, 1960; and U.S. Reg. No. 711,733.
For Paints, Varnishes (Other Than Insulating Varnish), Lacquers and Enamels (in the Nature of Paint), and Anti-Corrosive and Anti-Fouling Compositions.

SN 124,426. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed July 21, 1961.

FIRE-FROST

For Flake Pigments Incorporated in Acrylic Lacquer.
First use May 31, 1961.

SN 124,559. Lithcote Corporation, Melrose Park, Ill. Filed July 24, 1961.

LITHCOTE

For Synthetic Resin, in Liquid Form for Use in Lining Metal Tanks or Coating Other Articles.
First use Dec. 20, 1935.

Class 17—Tobacco Products

SN 121,666. Queen City Stogie Company, Inc., Clarksville, Tenn. Filed June 8, 1961.

LITTLE LUIGI'S FAVORITES

For Cigars.
First use May 20, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 85,438. The Upjohn Company, Kalamazoo, Mich. Filed Nov. 16, 1959.

SYMA

For Sustained Release Capsules Containing Various Pharmaceuticals.
First use July 17, 1959.

SN 101,623. Hadensa Gesellschaft Richard Morsch & Co., Berlin-Friedenau, Germany. Filed July 28, 1960.



The word "Trade Mark" is disclaimed apart from the mark as shown.
For Pharmaceutical Preparations for Treatment of Piles, Itching, Hemorrhoidal Complaints, Distention of Bowel, Pin Worms, Eczema, Lichen, Ulcus Cruris, Neurodermitis, Otitis Externa.
First use 1933; in commerce 1933.

SN 119,568. Smith Kline & French Laboratories, Philadelphia, Pa. Filed May 8, 1961.

TUSS-ORNADE

Owner of Reg. No. 699,323.
For Cough-Cold Preparation.
First use Jan. 17, 1961.

SN 120,471. Anasco Arznei- und Gesundheitspflegemittel GmbH, Wiesbaden, Germany. Filed May 22, 1961.

FLORILAXAN

Owner of German Reg. No. 744,607, dated Jan. 13, 1961.
For Laxatives.

SN 120,858. Le Roy H. Cederberg, d.b.a. Kross Kit Products Co., Long Beach, Calif. Filed May 26, 1961.



The term "Kit" is disclaimed apart from the mark as shown. The drawing is lined for red.
For Medicines, Pharmaceutical Preparations, and First Aid Cabinets Containing the Same.
First use May 10, 1961.

SN 121,433. Richardson-Merrell Inc., New York, N.Y. Filed June 5, 1961.

MEDIFURAN

For Medicinal Preparation for Aid in the Prevention of Early Chick and Poult Mortality and Morbidity Due To Pullorum, Paratyphoid, Dehydration Due To Lack of Water Consumption and Treatment of Omphalitis, Pullorum, Mushy Chick Disease and Paratyphoid.
First use Mar. 29, 1960.

SN 122,547. Charley Notter, d.b.a. Dr. Rudolf Reiss Chemische Werke, Berlin, Germany. Filed June 21, 1961.

ESTIL

Owner of German Reg. No. 106,789, dated Apr. 11, 1908.
For Pharmaceutical for Use as Anesthetic.

Class 19—Vehicles

SN 104,983. Bel-Craft Inc., Linkwood, Md. Filed Sept. 22, 1960.

Bel-Craft

For Small Boats.
First use Apr. 6, 1960.

SN 107,705. Scopinich Brothers, East Quogue, N.Y. Filed Nov. 2, 1960.

Columbia

For Cabin Cruisers.
First use on or about Dec. 1, 1956.

SN 110,125. Westholt Manufacturing, Inc., Wichita, Kans. Filed Dec. 12, 1960.

WESTHOLT

For Camping Trailers.
First use in or about January 1960.

SN 117,273. Goodman Manufacturing Company, Chicago, Ill. Filed Apr. 6, 1961.

GOODMAN

For Shuttle Cars, Locomotives, Trucks for Kerf-Cutting Machines, Utility Trucks, Cable Reel Trucks, and Parts Thereof.
First use at least as early as June 28, 1907, on a kerf-cutting machine.

SN 119,363. Dura Corporation, Oak Park, Mich. Filed May 5, 1961.

DURA

Owner of Reg. Nos. 149,907, 666,566, and others.
For Plated Die Cast Automotive Trim Including Inside and Outside Door Handles, Window Regulator Handles, Instrument Knobs, Grilles, Stone Shields, Lamp Housings, Ornaments and Medallions.
First use January 1940.

SN 122,310. Holly Mobile Homes Manufacturing, Inc., Grand Rapids, Mich. Filed June 19, 1961.

HOLLY

For House Trailers.
First use Apr. 15, 1954.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 106,207. Leeds and Northrup Company, Philadelphia, Pa. Filed Oct. 11, 1960.

TEMTIP

For Thermocouple Unit Designed To Be Discarded After Use for a Single Temperature Measurement.
First use August 1960.

SN 108,790. Kabushiki Kaisha Kurosawa Shoten, d.b.a. Kurosawa & Co., Ltd., Chuo-ku, Tokyo-to, Japan. Filed Nov. 21, 1960.

MIMEOFAX

For Electronic Stencil Cutting Machine and Parts Thereof (Also Known as Electronic Stencil Duplicating Machine and Parts Thereof).
First use Aug. 19, 1959; in commerce Nov. 10, 1959.

SN 108,885. Electrostar G.m.b.H., Reichenbach (Fils), Wurttemberg, Germany. Filed Nov. 22, 1960.



Priority claimed under Sec. 44(d) on German application filed June 1, 1960; Reg. No. 738,776, dated July 29, 1960.
For Apparatus and Devices for Illumination, Heating, Cooking, Cooling, Drying and Ventilating Purposes; Electrically Operated Hot Air Generators; Electric Motors; Dish Washers; Vacuum Cleaners; Floor Polishing and Waxing Devices; Electrically Operated Machines, Devices and Containers for Mixing, Cutting, Comminuting, Beating, Stirring, Juice Extracting, Pressing, Cleaning, Polishing, Peeling and Ice Cream Making for Home and Industrial Use; and Electrical Driving Apparatus for Operating the Aforementioned Apparatus and Devices.

SN 106,886. Electrostar G.m.b.H., Reichenbach (Fils), Wurttemberg, Germany. Filed Nov. 22, 1960.

★ELECTROSTAR★

Priority claimed under Sec. 44(d) on German application filed June 1, 1960; Reg. No. 739,119, dated Aug. 10, 1960.
For Apparatus and Devices for Illumination, Heating, Cooking, Cooling, Drying and Ventilating Purposes; Electrically Operated Hot Air Generators; Electric Motors; Dish Washers; Vacuum Cleaners; Floor Polishing and Waxing Devices; Electrically Operated Machines, Devices and Containers for Mixing, Cutting, Comminuting, Beating, Stirring, Juice Extracting, Pressing, Cleaning, Polishing, Peeling and Ice Cream Making for Home and Industrial Use; and Electrical Driving Apparatus for Operating the Aforementioned Apparatus and Devices.

SN 108,887. Electrostar G.m.b.H., Reichenbach (Fils), Wurttemberg, Germany. Filed Nov. 22, 1960.



Priority claimed under Sec. 44(d) on German application filed June 1, 1960; Reg. No. 738,777, dated July 29, 1960.
For Apparatus and Devices for Illumination, Heating, Cooking, Cooling, Drying and Ventilating Purposes; Electrically Operated Hot Air Generators; Electric Motors; Dish

Washers; Vacuum Cleaners; Floor Polishing and Waxing Devices; Electrically Operated Machines, Devices and Containers for Mixing, Cutting, Comminuting, Beating, Stirring, Juice Extracting, Pressing, Cleaning, Polishing, Peeling and Ice Cream Making for Home and Industrial Use; and Electrical Driving Apparatus for Operating the Aforementioned Apparatus and Devices.

SN 109,871. Richard Hirschmann, d.b.a. Firma Richard Hirschmann Radiotechnisches Werk, Esslingen am Neckar, Germany. Filed Dec. 8, 1960.



Priority claimed under Sec. 44(d) on German application filed June 24, 1960; Reg. No. 750,385, dated June 27, 1961.

For Radio Transmission and Receiving Devices, Television Transmission and Receiving Devices, Electrical Sound Recording and Sound Reproducing Devices; Apparatus and Accessories for Use in Connection With Radio and Television Devices—Namely, Antennas, Antenna Cables, Antenna Amplifiers, Antenna Insulators, Antenna Distributing Boxes; Antenna Connecting Boxes, Antenna Relays, Antenna Rotors, Antenna Transformers, Antenna Masts, Antenna Couplers, Receiver Dividing Filters; Mounting Devices for Antennas, Antenna Cables and Antenna Masts—Namely, Mounting Clips, Mounting Clamps, Brackets, Supports, Supporting Insulators; Electrical Connectors for Low-Voltage and Power Installations—Namely, Plugs, Sockets, Outlet Boxes, Terminals, Connecting Clips, Coupling Connectors.

SN 112,061. Sony Corporation of America, New York, N.Y. Filed Jan. 18, 1961.

EXECUTIVE

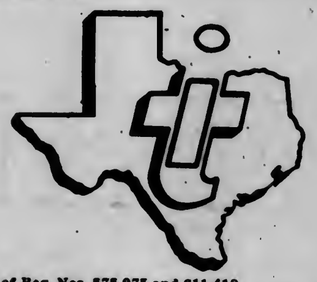
For Radios.
First use Dec. 27, 1960.

SN 116,230. I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed Mar. 22, 1961.

TREND-LINE

For Power Electrical Switchgear.
First use Dec. 30, 1960.

SN 117,241. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 10, 1961.



Owner of Reg. Nos. 575,975 and 611,418.
For Voice and Code Communications Systems, Electrical Components—Namely, Transistors, Diodes, Solar Cells, Rectifiers, Capacitors, Resistors, Infrared Cells, Photo Cells, and Power Supplies.
First use Jan. 2, 1952.

SN 117,272. Goodman Manufacturing Company, Chicago, Ill. Filed Apr. 6, 1961.

GOODMAN

For Armature Coils, Contactors and Circuit Breakers, Distribution Boxes, Electrical Meters, Lights, Motors, Motor Starters, Motor Controllers, Rheostats, Resistance Units, Relays, and Switches, and Parts Thereof.
First use at least as early as June 28, 1907, on a motor.

SN 117,469. The Electric Storage Battery Company, Philadelphia, Pa. Filed Apr. 10, 1961.

ESB

Owner of Reg. No. 708,276.
For Electric Batteries and Parts Thereof.
First use Mar. 9, 1961.

SN 118,403. Bourns, Inc., Riverside, Calif. Filed Apr. 24, 1961.

KNOBPOT

Owner of Reg. Nos. 602,968, 660,104, and others.
For Electrical Apparatus, Machines, and Supplies—Namely, Variable Resistors.
First use Sept. 30, 1960.

SN 118,950. Burgess Vibrocrafters, Inc., Grayslake, Ill. Filed May 1, 1961.



For Electrically Driven Can Openers.
First use Oct. 20, 1960.

SN 119,038. Northwest Manufacturing Co., Mitchell, S. Dak. Filed May 1, 1961.



For Electrically Operated Signal Horn.
First use Nov. 1, 1929.

SN 120,240. The Shetland Co., Inc., Salem, Mass. Filed May 17, 1961.



Owner of Reg. Nos. 554,787, 627,689, and 671,787.
For Electric Floor Polishers and Rug Cleaners and Electric Vacuum Cleaners and Floor Washers and Attachments Therefor.
First use in July 1960 on electric floor polishers and rug cleaners.

SN 122,238. The Youngstown Sheet and Tube Company, Youngstown, Ohio. Filed June 16, 1961.



Owner of Reg. Nos. 418,302 and 684,730.
For Electric Motors for Pumps and Controls Therefor.
First use July 1957.

SN 122,382. Air Products and Chemicals, Inc., Allentown, Pa., assignee of Southern Oxygen Company, Bladensburg, Md. Filed June 19, 1961.

SOXCO-MIGWELD

For Electric Arc Welding Machines and Component Parts Thereof.
First use June 12, 1961.

SN 122,390. Sunbeam Corporation, Chicago, Ill. Filed June 19, 1961.

PDQ

For Electric Vacuum Cleaners and Parts Therefor.
First use June 7, 1961.

SN 122,786. Erie Resistor Corporation, Erie, Pa. Filed June 26, 1961.



Owner of Reg. Nos. 574,330, 628,248, and 670,851.
For Electric Circuit Components.
First use January 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 108,674. Schick Incorporated, Lancaster, Pa. Filed Nov. 17, 1960.

SCHICK

For Electric Shavers.
First use in or about 1930.

SN 109,691. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Dec. 6, 1960.

MISTY ROSE

For Stainless Steel Flatware.
First use Oct. 1, 1960.

SN 110,808. Wheel Trueing Tool Company, Detroit, Mich. Filed Dec. 23, 1960.



No claim is made to the expression "Drill in any position around the clock," or to the representation of the goods, apart from the mark as shown. Owner of Reg. Nos. 402,353, 553,007, and 602,353.

For Masonry Cutting and Drilling Machines—Namely, Masonry Saws and Masonry Drilling Machines.

First use July 1960; Dec. 19, 1955, as to "Truco"; November 1958 as to representation of man using drilling machine; and August 1959 as to representation of man using saw.

SN 117,250. Atlas Supply Company, Newark, N.J. Filed Apr. 6, 1961.

ATLAS

Owner of Reg. Nos. 331,672, 527,854, and 627,759.
For Mufflers, Tail Pipes, and Tire Changer.
First use June 20, 1944, on mufflers and tail pipes.

SN 117,271. Goodman Manufacturing Company, Chicago, Ill. Filed Apr. 6, 1961.

GOODMAN

For Cable Reels; Continuous Mining and Tunneling Machines, and Parts Thereof; Belt, Chain and Shaker Conveyors, and Parts Thereof; Conveyor Idlers and Rollers; Chain Conveyor Sub-Assemblies and Flights; Conveyor Loading Stations; Crawler Treads and Parts Thereof; Cutter Chains, and Parts Thereof Including Cutter Bits; Mobile Crawler-Tread-Mounted, Track-Mounted, Rubber-Tire-Mounted and Skid-Mounted Kerf Cutting Machines for Mining and Tunneling, and Parts Thereof Including Cutter Bars, Cutter Chains and Cutter Bits; Bugdusters—Namely, Apparatus Associated With Kerf-Cutting Machines, for Transferring Cuttings Away From the Cutter Chain; Mobile Crawler-Tread-Mounted, Track-Mounted and Rubber-Tire-Mounted Coal, Ore and Rock Loading Machines for Mining and Tunneling, and Parts Thereof; Percussive Drills, and Parts Thereof; Sheet Metal Processing Equipment—Namely, Cleaning Machines, Scrubbers, Dryers, Brushing Units, Roller Levelers, Stretcher Levelers, Shears, Slitters, Coilers, Tension Reels, Blockers, Coil Openers, Stitchers, Pinch Roll Stands, Mill Tables and Furnace Tables, and Parts Thereof; and Surface Plates and Layout Tables.

First use at least as early as June 28, 1907, on a kerf-cutting machine.

SN 117,324. Motec Industries, Inc., Hopkins, Minn. Filed Apr. 6, 1961.

MOTEC

Owner of Reg. No. 721,873.
For Agricultural and Industrial Machinery, Implements and Accessories—Namely, Internal Combustion Engines and Power Units, Agricultural and Industrial Tractors, Combines, Balers, Corn Shellers, Lift Trucks, Chain Saws, Harrows, Plows, Hay Rakes, Rotary Hoes, Planters, and Manure Spreaders.
First use Mar. 7, 1961.

SN 118,772. Coglift Industries, Inc., Butler, Wis. Filed Apr. 27, 1961.

HILLIFT

For Outdoor Passenger and Freight Elevators.
First use Aug. 2, 1960.

SN 118,885. Independent Lock Company, Fitchburg, Mass. Filed Apr. 28, 1961.

QUICKEY

For Key Cutting Machine.
First use July 22, 1960.

SN 119,003. The Jaeger Machine Company, Columbus, Ohio. Filed May 1, 1961.

SLIM JIM

For Submersible Pumps.
First use Apr. 7, 1961.

SN 119,004. S. C. Johnson & Son, Inc., Racine, Wis. Filed May 1, 1961.

PERMASTAMP

Owner of Reg. No. 597,299.
For Marking Stamps.
First use on or about July 2, 1952.

SN 119,197. Arthur Ettlinger, d.b.a. Pro Floor Machines, New York, N.Y. Filed May 3, 1961.

PRO FLOOR MACHINES

Applicant disclaims the right to the term "Floor Machines" except as the same is used in connection with the mark.
For Floor Cleaning and Waxing Machines for Commercial Use.
First use Feb. 1, 1961.

SN 122,058. Brother International Corporation, Long Island City, N.Y. Filed June 15, 1961.

VALIANT

For Typewriters.
First use on or about Sept. 26, 1960.

SN 122,059. Brother International Corporation, Long Island City, N.Y. Filed June 15, 1961.

VALIANT

For Electric Shavers.
First use on or about Aug. 8, 1960.

SN 122,262. Richard C. Bradley, d.b.a. Plastic Engineering and Chemical Co., Fort Lauderdale, Fla. Filed June 19, 1961.

MICRO-MATE

Owner of Reg. No. 711,197.
For Injection Guns for Spray Depositing Foam Plastics, and Component Parts Thereof.
First use May 12, 1961.

Class 24 — Laundry Appliances and Machines

SN 116,454. Reggiani S.p.A. Divisione Macchine, Bergamo, Italy. Filed Mar. 22, 1961.

CYCLONEJET

Owner of Italian Reg. No. 150,182, dated July 16, 1960.
For Clothes Washing Machine.

SN 117,718. MM Distributing Company, Incorporated, St. Paul, Minn. Filed Apr. 12, 1961.

BLOZER KLEEN

For Washing Machines Utilizing Water, Detergent, and Air Under Pressure.
First use Sept. 27, 1960.

SN 118,200. ALD, Inc., Chicago, Ill. Filed Apr. 20, 1961.

POSI-TEMP

For Plumbing Systems and Thermostatic Controls Therefor for Use in Self-Service Laundries, Said Plumbing Systems Including the Following Components: Conduit; Water Heating and Storage Equipment; Temperature Guages; Electrical Components, Such as Switches, Wiring and Connectors; Circulating Pumps; and Gate and Check Valves.
First use Apr. 15, 1959.

Class 26 — Measuring and Scientific Appliances

SN 104,717. General Aniline and Film Corporation, New York, N.Y., assignee of Grant Photo Products, Incorporated, Lakewood, Ohio. Filed Sept. 19, 1960.

LINATRACE

For Photo-Sensitive Materials—Namely, Photographic Paper.
First use December 1956.

SN 104,718. General Aniline and Film Corporation, New York, N.Y., assignee of Grant Photo Products, Incorporated, Lakewood, Ohio. Filed Sept. 19, 1960.

AUTOPRINT

For Photo-Sensitive Materials—Namely, Photographic Papers of Kinds Used for Direct Duplication or as Intermediates for Printing, Photographic Tracing Cloth, Photographic Film, Etc.
First use October 1953.

SN 104,764. Robert C. Scott, Belmont, Mass. Filed Sept. 19, 1960.

MAGNEDYNE

For Hardness Testers.
First use May 4, 1960.

SN 104,765. Robert C. Scott, Belmont, Mass. Filed Sept. 19, 1960.

INTRODYNE

For Hardness Testers.
First use June 20, 1960.

SN 105,668. Polytronic Research, Incorporated, Rockville, Md. Filed Oct. 3, 1960.

PORTOLAB

For Test Equipment for Aligning and Testing Transceiver Units.
First use July 15, 1960.

SN 107,774. Landis & Gyr, A.G., Zug, Switzerland. Filed Nov. 3, 1960.

PRINTO-MAXIGRAPH

Owner of Swiss Reg. No. 81,293, dated Apr. 1, 1953.
For Electrical Measuring and Recording Instruments and Parts Thereof, Including Electrical Average Demand Recorders and Printers.

SN 109,703. Kimble Glass Company, Toledo, Ohio. Filed Dec. 6, 1960.

RAY-SORB

For Chemical, Scientific and Laboratory Glassware.
First use Nov. 16, 1960.

SN 117,221. Photoptic Import Corp., New York, N.Y. Filed Apr. 5, 1961.

HELIOTRON

For Electronic Flash Guns.
First use Feb. 1, 1961.

SN 117,242. Texas Instruments Incorporated, Dallas, Tex. Filed Apr. 10, 1961.

TI

Owner of Reg. Nos. 575,975 and 611,418.
For Radar, Microwave Assemblies and Components, Electro-Acoustic Systems Such as Sonar, Data Link and Telemetry Systems, Magnetic and Radiation Sensors, Infrared Systems, Electronic and Electro Mechanical Tactical Weapons Command, Control and Information Systems, Special Purpose Computers, Infrared Optical Elements, Industrial Electronic and Electro-Mechanical Command and Control Systems Including Programmers and Timers, Missile-Guidance Systems, Missile-Guidance Components, Timing Systems, Magnetic Detection Systems, Seismic Exploration Systems, Seismometers, Seismic Data Time-Correcting and Display Systems, Automatic Test Equipment Such as Capacitor Testers, Semi-Conductor Diode Testers, Resistor Testers, Transistor Testers, and Transistor Curve Tracers, Electro-Mechanical and Oscillograph Recorders and Cameras, Seismographs, Gravity Meters, Optical Reticles, Flat Spherical and Aspherical Lenses and Reflective Optical Elements.
First use in 1954.

SN 117,933. Ankh Laboratories, Inc., Fairborn, Ohio. Filed Apr. 17, 1961.

ANKH

For Apparatus for Conducting Qualitative and Quantitative Assays, Particularly Assays of the Activity of Chemical Agents in Relation to Micro-Organisms.
First use Feb. 2, 1961.

SN 118,358. Meter-All Mfg. Co. Inc., Dallas, Tex. Filed Apr. 21, 1961.

DROP-COIN

For Coin Operated Timers Used in Conjunction With Laundry Equipment Such as Washers, Dryers and the Like.
First use Apr. 4, 1961.

SN 118,402. Bourns, Inc., Riverside, Calif. Filed Apr. 24, 1961.

KNOBPOT

Owner of Reg. Nos. 602,968, 660,104, and others.
For Measuring and Scientific Appliances—Namely, Potentiometers.
First use Sept. 30, 1960.

SN 118,439. Xerox Corporation, Rochester, N.Y., by change of name from Haloid Xerox Inc., Rochester, N.Y. Filed Apr. 24, 1961.

914

Owner of Reg. No. 718,433.
For Electrophotographic Copying Machines and Components Thereof Including Plates and Filters.
First use Feb. 25, 1960.

SN 119,789. Polaroid Corporation, Cambridge, Mass. Filed May 11, 1961.

POLACOLOR

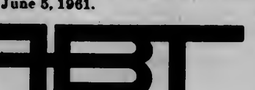
Owner of Reg. Nos. 337,404, 707,490, and others.
For Photographic Products and More Specifically, Sensitized Photographic Film and Sensitized Photographic Papers.
First use in December 1960 on sensitized photographic film.

SN 121,097. Hamilton Manufacturing Company, Two Rivers, Wis. Filed May 31, 1961.

STRATA-CORE

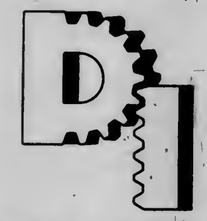
For Drafting Tables and Drafting Boards.
First use Apr. 10, 1961.

SN 121,344. Automatic Canteen Company of America, Chicago, Ill. Filed June 5, 1961.



For Coin and Currency Controlled Merchandising and Dispensing Machines, Cup Dispensers, and Coin and Currency Handling Devices Including Coin Chutes, Totalizers, Change-Makers, Testers, Accumulators, Paper and Currency Testers, and Separators.
First use Feb. 1, 1961.

SN 121,368. Dresser Industries, Inc., Dallas, Tex. Filed June 5, 1961.



For Rotary Positive Gas Displacement Meters.
First use at least as early as Mar. 1, 1960.

SN 122,057. Brother International Corporation, Long Island City, N.Y. Filed June 15, 1961.

VALIANT

For Cameras.
First use on or about Jan. 24, 1961.

SN 122,088. Information Systems, Inc., Los Angeles, Calif. Filed June 15, 1961.

ISI

For Digital Computer and Data Handling Systems for Industrial and Commercial Applications.
First use March 1960.

SN 122,211. National Clay Pipe Research Corporation, Crystal Lake, Ill. Filed June 16, 1961.

CONSISTODYNE

For Measuring and Scientific Appliances Including Sensing Devices for Developing Signals Corresponding to the Consistency of Clay or Other Material Being Processed and Systems Utilizing Such Sensing Devices.
First use Oct. 31, 1957.

SN 122,857. Thompson Ramo Wooldridge Inc., Canoga Park, Calif. Filed June 26, 1961.



For Visual Graphic Data Storage and Processing Devices.
First use Jan. 27, 1961.

SN 123,013. IDL Manufacturing and Sales Corporation, New York, N.Y. Filed June 28, 1961.



For Postal Scales.
First use on or about Jan. 26, 1925.

SN 123,066. Bar Automation, Inc., Chicago, Ill. Filed June 29, 1961.

BAR-GENIE

For Liquid Measuring, Mixing and Dispensing Apparatus.
First use on or about May 1, 1960.

SN 123,235. August Sauter of New York, Inc., Albertson, N.Y. Filed June 30, 1961.

TOPPAN

For Weighing Scales.
First use Feb. 27, 1960.

SN 123,320. Ing. C. Olivetti & Co., S.p.A., Ivrea, Italy. Filed July 3, 1961.

AUDIT

For Accounting and Bookkeeping Machines, Tape Punch Units and Parts Therefor.
First use October 1932.

SN 123,323. Keuffel & Esser Company, Hoboken, N.J. Filed July 3, 1961.

DECILON

For Slide Rules.
First use May 9, 1961.

SN 123,371. Servel, Inc., Freeport, Ill. Filed July 3, 1961.

SWING-CHRONIZER

For Audio-Visual Timers for Indicating the Force Developed During the Swing of a Golf Club.
First use June 14, 1961.

SN 123,393. American Systronics, Inc., Los Angeles, Calif., assignee of Allied Learning Laboratory Companies, Santa Monica, Calif. Filed June 26, 1961.

ALLCO

For Language and Learning Laboratories.
First use on or about Dec. 12, 1960.

SN 123,479. Roger Gilmont Instruments, Inc., Great Neck, N.Y. Filed July 6, 1961.

RGI

For Glass Laboratory Instruments.
First use June 12, 1961.

SN 123,638. Hydropoise, Incorporated, Scottsdale, Ariz., assignee of Francisco Engineering Co., Inc., Calabassas, Calif. Filed July 10, 1961.

HYDROPOISE

For Turbine Flow Transducers and Meters, Electrical Pick-ups and Electronic Readout Equipment.
First use Dec. 3, 1960.

SN 123,696. James M. Spencer, Jr., Fort Lauderdale, Fla. Filed July 10, 1961.

NAV-I-LOG

For Combined Nautical Speedometer and Odometer.
First use June 21, 1961.

SN 123,722. American Magnetic Film Striping Corp., New York, N.Y. Filed July 11, 1961.

LAMNATRACK

For Motion Picture Film Including Laminated Magnetic Recording Media.
First use June 12, 1961.

SN 123,728. Computer Control Company, Inc., Framingham, Mass. Filed July 11, 1961.

SONILINE

For Magnetostrictive Delay Lines.
First use June 15, 1961.

SN 123,777. Societe pour l'Etude et la Realisation des Procedes Electroniques de Calcul "Analac," Paris, France. Filed July 11, 1961.



The drawing is lined for red. Owner of French Reg. No. 488,074, dated May 11, 1960 (Seine); Natl. Inst. No. 144,288.
For Electronic Calculating Devices.

SN 123,899. Keystone Ferrule & Nut Corp., Burlington, Wis. Filed July 13, 1961.

KENCO

For Movie Film Reels and Cans.
First use May 26, 1961.

SN 123,931. Standard Gage Company, Inc., Poughkeepsie, N.Y. Filed July 13, 1961.



For Air Gages Including Gaging Stands, Plug Gages, Ring Gages, Comparator Gages, Bore Gages, Etc.
First use Apr. 3, 1961.

SN 123,988. Kamar, Inc., Steamboat Springs, Colo. Filed July 14, 1961.



For Pressure Responsive Devices for Use in the Detection of Heat in Cows.
First use Jan. 21, 1961.

SN 124,077. Flex Electric Products, Inc., Brooklyn, N.Y. Filed July 17, 1961.

"PORTABLE SUNSHINE"

For Photographic Lights.
First use June 15, 1961.

SN 124,254. Bear Manufacturing Company, Rock Island, Ill. Filed July 19, 1961.

CHECK-O-MATIC

For Replaceable or Interchangeable Indicators for Wheel Alignment Gauges.
First use Apr. 26, 1961.

SN 124,256. Continental Can Company, Inc., New York, N.Y. Filed July 19, 1961.

SEAMSCOPE

For Microscopes.
First use June 13, 1961.

SN 124,266. Oscar Fisher Company, Inc., Newburgh, N.Y. Filed July 19, 1961.

AUTOTRAC

For Automatic Photographic Film and Paper Processing Units.
First use Jan. 31, 1961.

Class 27 — Horological Instruments

SN 108,054. Le Porte-Echappement Universel S.A. (The Universal Escapement Ltd.), La Chaux-de-Fonds, Switzerland. Filed Nov. 8, 1960.

TRIOSTAT

Owner of Swiss Reg. No. 175,192, dated Jan. 29, 1959.
For Regulating Device for Watches.

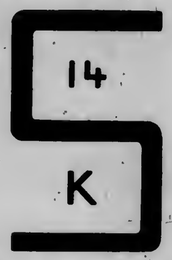
SN 119,760. Elgin National Watch Company, Elgin, Ill. Filed May 14, 1961.

DURAPOWER

For Horological Mainsprings.
First use Sept. 28, 1946.

Class 28 — Jewelry and Precious-Metal Ware

SN 107,978. Shari Enterprises, Inc., New York, N.Y. Filed Nov. 7, 1960.



No claim is made to the numeral "14" and the letter "K" apart from the mark as shown.
For Jewelry for Personal Wear.
First use Aug. 25, 1960.

SN 117,078. Nicholas G. Anitole, d.b.a. Janel Manufacturing Co., Fort Lauderdale, Fla. Filed Apr. 4, 1961.



For Bracelets, Neck Chains, Charms, Key Chains, Tie Clasps, Earrings, Pendants, Medallions, and Other Similar Items.
First use Sept. 1, 1960.

SN 119,656. Verité Jewels Ltd., New York, N.Y. Filed May 9, 1961.

Verité

For Precious and Semi-Precious Gemstones and Jewelry for Personal Wear or Adornment.
First use Apr. 12, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 108,987. Leisure Devices Incorporated, Huntington, N.Y. Filed Nov. 23, 1960.

FLIPSTIK

For Cleaning Applicator Which Has Devices for Storing and Metering Cleaning Liquids, and Which Also Has a Cleaning Head Fed by the Metered Liquid, Said Head Being for the Purpose of Rubbing Against the Surface To Be Cleaned.
First use Nov. 10, 1960.

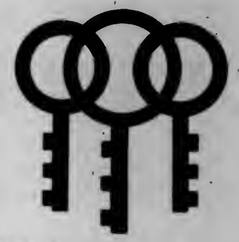
SN 118,186. Star Brush Manufacturing Co. Inc., Boston, Mass. Filed Apr. 19, 1961.

Color Gleem

For Varnish Brushes and Paint Brushes.
First use Feb. 8, 1961.

Class 30 — Crockery, Earthenware, and Porcelain

SN 108,759. E-Z-Cook, Inc., Lakeville, Ind. Filed Nov. 21, 1960.



For China Dinnerware.
First use Oct. 24, 1960.

SN 122,049. L. W. Wirth, Inc., New York, N.Y. Filed June 5, 1961.

MAJESTIC

For Chinaware—Namely, Tableware.
First use Apr. 21, 1961.

Class 31 — Filters and Refrigerators

SN 119,479. Copeland Refrigeration Corporation, Sidney, Ohio. Filed May 8, 1961.

COPELAWELD

For Filters and Refrigerators.
First use 1952.

Class 32 — Furniture and Upholstery

SN 109,378. S. Blickman, Inc., Weehawken, N.J. Filed Dec. 1, 1960.

SIMPLICITY

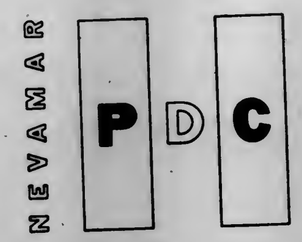
For Food Service Equipment—Namely, Storage Cabinets and Parts Thereof for Serving Hot and Cold Foods in Schools, Hospitals, Cafeterias and the Like.
First use Sept. 27, 1960.

SN 109,379. S. Blickman, Inc., Weehawken, N.J. Filed Dec. 1, 1960.

WHEEL—A—WAY

For Food Service Equipment—Namely, Storage Cabinets and Parts Thereof for Serving Hot and Cold Foods in Schools, Hospitals, Cafeterias and the Like.
First use Oct. 5, 1960.

SN 122,633. Nevamar Carefree Kitchens, Inc., Odenton, Md. Filed June 22, 1961.



Owner of Reg. No. 666,597.
For Cabinets, Cupboards, and Chests of Drawers.
First use Apr. 16, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 110,570. April Showers Company Inc., Washington, D.C. Filed Dec. 20, 1960.

SUN SHOWERS

For Evaporative Type Air Conditioning Roof Coolers.
First use Aug. 30, 1958.

SN 119,818. Vapor Heating Corporation, Chicago, Ill. Filed May 11, 1961.



For Liquid Phase Heater, Hot Oil Heaters, Air or Steam Superheaters, and Hot Water Heaters.
First use Mar. 17, 1961.

SN 119,996. The Metal Specialty Company, Cincinnati, Ohio. Filed May 15, 1961.



For Portable Grills.
First use May 5, 1961.

SN 120,106. Lucas-Rotax Limited, Toronto, Ontario, Canada. Filed May 16, 1961.

PULSAMATIC

Owner of Canadian Reg. No. 120,700, dated Dec. 30, 1960.
For Heaters and Combustion Systems—Namely, Hot Air Furnaces, Hot Water Boilers and Steam Generators.

SN 120,164. R. P. Adams Company, Inc., Buffalo, N.Y. Filed May 17, 1961.

ADAMS ECONOMAT

For Gas Purifying Apparatus.
First use Jan. 23, 1961.

SN 120,227. Rheem Manufacturing Company, Richmond, Calif. Filed May 17, 1961.

METEOR

For Gas Fired Forced Draft Furnaces.
First use Mar. 4, 1957.

SN 120,283. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed May 18, 1961.

REMOTAIRE

For Room Air Conditioners.
First use Apr. 25, 1952.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 118,878. Fibreflex Packing & Manufacturing Company, Inc., Philadelphia, Pa. Filed Apr. 28, 1961.



Applicant disclaims the representation of the gasket except in the association shown.
For Gasket Packing Material.
First use Jan. 2, 1938.

SN 119,637. The Paine & Williams Company, Cleveland, Ohio. Filed May 9, 1961.



The term "Quality" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 677,457 and 708,973.
For Rubber Tires for Automobiles and Other Vehicles.
First use Mar. 23, 1961.

SN 122,236. The Youngstown Sheet and Tube Company, Youngstown, Ohio. Filed June 16, 1961.



Owner of Reg. Nos. 418,302 and 684,730.
For Slush Pump Discharge and Suction Hose and V-Belts.
First use January 1958.

SN 122,278. Crandall Oil Company, Inc., Monroe, Wis. Filed June 19, 1961.

GO-KAPS

For Vehicle Tires.
First use Apr. 11, 1961.

SN 122,496. Jean Gachot, Enghien, Seine-et-Oise, France. Filed June 20, 1961.

TRITEF

Owner of French Reg. No. 3,305, dated Oct. 15, 1960 (Pontoise); Natl. Inst. No. 153,689.
For Packing and Seals for Ensuring Tightness Especially in Pipes, Cocks Valves, Tanks, Boilers, Pumps.

SN 122,935. Jointine Products Company Limited, Lincoln, England. Filed June 27, 1961.

SIZOID

Owner of British Reg. No. B670,175, dated June 10, 1948.
For Jointing Materials (Packings) in Sheet or Roll Form.

SN 123,016. Jointine Products Company Limited, Lincoln, England. Filed June 28, 1961.

FLEXOID

Owner of British Reg. No. 670,176, dated June 10, 1948.
For Jointing (Packing) Material.

SN 123,537. The Firestone Tire & Rubber Company, Akron, Ohio. Filed July 7, 1961.

BESTOLOY

Owner of Reg. No. 537,709.
For Brake Linings and Clutch Facings.
First use Dec. 23, 1958.

Class 36 — Musical Instruments and Supplies

SN 109,626. Recco Enterprises, Inc., Brooklyn, N.Y. Filed Dec. 5, 1960.

SOUNDTASTIC

For Sound Recording and Transcribing Equipment.
First use November 1958.

SN 118,960. Chicago Musical Instrument Co., Chicago, Ill. Filed May 1, 1961.

DURATONE

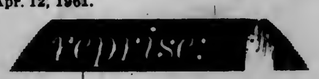
For Clarinets.
First use Mar. 24, 1961.

SN 119,267. Bernardo Music, Inc., New York, N.Y. Filed May 4, 1961.

BEACH

For Phonograph Records.
First use on or about Apr. 17, 1961.

SN 119,822. Essex Productions, Inc., Beverly Hills, Calif. Filed Apr. 12, 1961.



For Phonograph Records.
First use Feb. 1, 1961.

SN 119,894. Rondo Record Corporation, West New York, N.J. Filed May 12, 1961.



For Grooved Phonograph Records.
First use Apr. 24, 1961.

SN 119,946. Eastman Kodak Company, Rochester, N.Y. Filed May 15, 1961.

KODAK

Owner of Reg. Nos. 85,423, 692,796, and others.
For Sound Recording Tape.
First use Dec. 7, 1960.

SN 120,558. Original Sound Record Co., Inc., Los Angeles, Calif. Filed May 22, 1961.

ORIGINAL SOUND

No claim is made to the word "Sound" apart from the other features of the mark.
For Phonograph Records.
First use Mar. 1, 1958.

SN 126,419. Kay Musical Instrument Co., Chicago, Ill. Filed Aug. 22, 1961.

KAY

For Musical Instruments and Parts Therefor—Namely, Guitars, Mandolins, Banjos, Bass Viols, Cellos, and Amplifiers for Musical Instruments.
First use in July 1931.
Subj. to Intf. with SN 126,581.

SN 126,451. Kay Musical Instrument Co., Chicago, Ill. Filed Aug. 22, 1961.



For Musical Instruments and Parts Therefor—Namely, Guitars, Mandolins, Banjos, Bass Viols, Cellos, and Amplifiers for Musical Instruments.
First use on or about July 17, 1961; July 1956 as to the letter "K."
Subj. to Intf. with SN 126,581.

SN 126,581. Dorn & Kirschner Band Instrument Company, Inc., Newark, N.J. Filed Aug. 24, 1961.

DE KAY

For Stringed Musical Instruments, Wood Wind and Metal Wind Instruments With or Without Reeds (Exclusive of Organs), All Types of Accessory Orchestral and Band Instruments, Such as Percussion Instruments, Xylophones, Etc., and Parts for All the Foregoing and Accessories Such as Stringed Instrument Bows, Picks, Etc., Music Stands, Pitch Pipes, Tuning Forks, Megaphones, Etc.
First use Nov. 29, 1937.
Subj. to Intf. with SN 126,419 and SN 126,451.

Class 37 — Paper and Stationery

SN 112,228. Crown Zellerbach Corporation, San Francisco, Calif. Filed Jan. 23, 1961.

SNOWTEX

Owner of Reg. Nos. 362,596 and 423,018.
For Freezer Wrapping Paper.
First use Oct. 2, 1959.

SN 119,458. American Kleer-Vu Plastics, Inc., New York, N.Y. Filed May 8, 1961.

VULAR

For Transparent Sheet Protectors, Plastic Page Protectors, Catalog Sheet Holders, Billfold Inserts, Job Ticket Holders, Microfilm Jackets, and Photo Albums.
First use Nov. 8, 1960.

Class 38 — Prints and Publications

SN 100,897. Walter E. Ensor, Rahway, N.J. Filed July 15, 1960.

YOT-Z IKATCHER

The word "Ikatcher" is disclaimed.
For Design Prints for Attachment to Bulletin Boards and the Like To Catch Readers' Attention.
First use Dec. 15, 1959.

SN 120,988. Harman-Slocum Publishing Company, Inc., Cleveland, Ohio. Filed May 29, 1961.

MISSOURI RURALIST

For Semi-Monthly Magazine.
First use 1848.

SN 120,992. Home State Farm Publications, Inc., Cleveland, Ohio. Filed May 29, 1961.

THE KENTUCKY FARMER

For Monthly Magazine.
First use 1864.

SN 123,648. I.R. Systems, Inc., West Springfield, Mass. Filed July 10, 1961.



For Cards Used in Connection With Information Retrieval Machines.
First use June 1, 1961.

Class 39 — Clothing

SN 106,831. Oakmont Hosiery Mills, Greensboro, N.C. Filed Oct. 20, 1960.

OAKMONT SUGAR BEE

Owner of Reg. No. 616,588.
For Hosiery for Women.
First use Sept. 30, 1960.

SN 108,420. Vanette Hosiery Mills, Dallas, Tex. Filed Nov. 14, 1960.

Contemporaries

For Ladies' Hosiery.
First use Nov. 1, 1960.

SN 109,207. Sport Specialty Shoemakers, Inc., St. Louis, Mo. Filed Nov. 28, 1960.



The words "Golf Shoe" are disclaimed apart from the mark as shown.
For Women's Golf Shoes.
First use Nov. 23, 1960.

SN 115,704. Linsk of Philadelphia Inc., Philadelphia, Pa. Filed Mar. 15, 1961.

CAROL LEE

"Carol Lee" is not the name of any particular designer or other living individual. Owner of Reg. No. 386,644.
For Children's, Misses', and Women's Dresses.
First use on or about Aug. 25, 1939.

SN 115,888. Sidney Blumenthal & Co., Inc., d.b.a. The Adler Company, New York, N.Y. Filed Mar. 17, 1961.

ADLON

For Men's, Women's, and Children's Socks.
First use Feb. 15, 1958.

SN 116,109. 88 Originals Incorporated, New York, N.Y. Filed Mar. 21, 1961.

AT8 Eighty Eight Originals

The word "Originals" is disclaimed.
For Women's Coats.
First use Dec. 2, 1960.

SN 116,163. Smart Novelty Blouse Co., Inc., New York, N.Y. Filed Mar. 21, 1961.

Smart Miss

Owner of Reg. No. 710,301.
For Ladies' and Misses' Blouses and Shirts.
First use Mar. 15, 1960.

SN 116,404. June Fair, Inc., New York, N.Y. Filed Mar. 24, 1961.

THE SHIRTNIK

For One Piece Shirtwaist Dress or Smock To Be Worn Over Lounging Pants, Bermudas and Swimwear.
First use on or about Feb. 21, 1961.

SN 116,569. Research for Infants, Inc., New York, N.Y. Filed Mar. 27, 1961.

EV-R-DRY

For Disposable Diaper Liners.
First use Nov. 17, 1960.

SN 116,570. Research for Infants, Inc., New York, N.Y. Filed Mar. 27, 1961.

NEVA-RASH

For Disposable Diaper Liners.
First use Oct. 28, 1960.

SN 116,648. Georges Kaplan, New York, N.Y. Filed Mar. 28, 1961.

E. P. B. Q.

For Fur Garments—Namely, Coats, Capes, Stoles, Jackets, and Scarfs.
First use Jan. 9, 1961.

SN 117,035. Morcosia Coats Limited, Manchester, England. Filed Apr. 3, 1961.

MORCOSIA

Owner of British Reg. No. B744,668, dated Feb. 21, 1958.
For Coats, Suits, Dresses, and Raincoats, All for Women and Girls; and Coats, Raincoats, Jackets and Trousers All for Men and Boys.

SN 118,886. Jaymar-Ruby, Inc., d.b.a. Jaymar, Michigan City, Ind. Filed Apr. 28, 1961.

JAYMAR ALUMNUS

Owner of Reg. Nos. 546,057 and 610,752.
For Men's Slacks.
First use Mar. 21, 1961.

SN 120,256. Sears, Roebuck and Co., Chicago, Ill. Filed May 17, 1961.

HONEY BEAU

For Children's Clothing—Namely, Slacks, Shirts, Playsuits, Overalls, Snowsuits, Jackets, Caps, Hats, Pajamas, Stockings, Underwear.
First use May 22, 1959.

SN 120,325. Clarence L. O'Kell, Kansas City, Mo. Filed May 18, 1961.

NOWETO

For Rainwear, Particularly Waterproof Pant Legs.
First use Jan. 9, 1961.

SN 120,353. John B. Stetson Company, Philadelphia, Pa. Filed May 18, 1961.

FUN & FROLIC

For Hats and Caps for Men and Boys.
First use May 10, 1961.

SN 120,380. Camp and McInnes, Inc., Reading, Pa. Filed May 19, 1961.

BUOYANT 7

For Men's Hosiery.
First use May 10, 1961.

SN 120,454. Stelzer Belt Corp., New York, N.Y. Filed May 19, 1961.

BUTTERHIDE

For Apparel Belts.
First use Apr. 3, 1961.

SN 120,757. Sears, Roebuck and Co., Chicago, Ill. Filed May 24, 1961.

GIDGETS

For Misses' and Girls' Shoes.
First use on or about Oct. 16, 1959.

SN 121,199. Huth-James Shoe, Inc., Milwaukee, Wis. Filed June 1, 1961.

SCORE-MORE

For Men's and Women's Bowling Shoes.
First use May 16, 1961.

SN 121,361. Clover Knitting Mills, Inc., Philadelphia, Pa. Filed June 5, 1961.

BRAEDON

For Men's and Boys' Knitted Sweaters, Caps, Scarfs, Gloves, and Hosiery.
First use Mar. 24, 1948.

SN 121,485. Jaymar-Ruby, Inc., d.b.a. Jaymar, Michigan City, Ind. Filed June 6, 1961.

LAST-O-CREASE

For Men's Slacks.
First use Apr. 21, 1961.

SN 121,547. Di Fini Originals, Inc., New York, N.Y. Filed June 7, 1961.

Trim Golfer by DI FINI

Owner of Reg. No. 632,919.
For Men's Slacks, Shorts, and Belts.
First use May 6, 1960.

SN 121,553. The Enro Shirt Company, Inc., Louisville, Ky. Filed June 7, 1961.

Valentogs

For Shirts, Pajamas, and Sport Shirts.
First use Jan. 3, 1961.

SN 121,648. Jordan Manufacturing Corporation, New York, N.Y. Filed June 8, 1961.

SEA IMPS

For Children's Bathing Suits, Trunks and Caps.
First use May 25, 1953.

SN 121,798. Best Wear Hosiery Company, Philadelphia, Pa. Filed June 12, 1961.

BEST GIRL

For Ladies' Hosiery.
First use May 8, 1961.

SN 121,882. Towne and King, Inc., Redwood City, Calif. Filed June 12, 1961.

ROMAGORA

For Men's Sweaters.
First use Nov. 17, 1960.

SN 122,008. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

SCROLL

For Foundation Garments.
First use May 31, 1961.

SN 122,010. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

AFTER 10

For Foundation Garments.
First use May 5, 1961.

SN 122,011. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

FRAME-UP

For Foundation Garments.
First use May 31, 1961.

SN 122,012. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

MAIDEN VOYAGE

For Foundation Garments.
First use May 12, 1961.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 111,135. John Yellott Engineering Associates, Inc., Phoenix, Ariz. Filed Dec. 30, 1960.

SOLARON

For Curtain and Drapery Fabrics.
First use Dec. 21, 1959.

SN 116,981. Courtaulds, Limited, London, England. Filed Apr. 3, 1961.

WONDANA

Priority claimed under Sec. 44(d) on British Reg. No. 817,609, dated Mar. 1, 1961.
For Textile Fabrics (Containing Cotton, Rayon, and Other Cellulosic Fibres) Which Have Been Treated To Impart Dimensional Stability and Other Properties for Use in Wearing Apparel, Household Goods, and Industrial Products.

SN 121,170. L. H. Butcher Co., Los Angeles, Calif. Filed June 1, 1961.

Aqua-Glas

For Fiber Glass Cloth.
First use Dec. 2, 1957.

SN 123,726. Cannon Mills Company, Kannapolis, N.C. Filed July 11, 1961.

CANNON

Owner of Reg. Nos. 111,711, 638,103, and others.
For Towels and Toweling, Sheets and Sheeting, Pillow Cases, Bed Spreads and Coverlets, Blankets, Table Cloths and Napkins, Drapes and Curtains, Shower Curtains, Decorative and Drapery Fabrics, Play Rugs, Bath Mats and Bath Rugs, Toilet Seat Covers, Wash Cloths, Household Utility Cloths, Pot Holders, Diapers, Cotton Piece Goods and Terry Cloth.
First use January 1916 on towels.

SN 123,727. Cannon Mills Company, Kannapolis, N.C. Filed July 11, 1961.

CANNON

Owner of Reg. Nos. 111,711 and 147,948.
For Towels and Toweling, Sheets and Sheeting, Pillow Cases, Bed Spreads and Coverlets, Blankets, Table Cloths and Napkins, Drapes and Curtains, Shower Curtains, Decorative and Drapery Fabrics, Play Rugs, Bath Mats and Bath Rugs, Toilet Seat Covers, Wash Cloths, Household Utility Cloths, Pot Holders, Diapers, Cotton Piece Goods and Terry Cloth.
First use January 1916 on towels.

Class 43 — Thread and Yarn

SN 123,756. Metal Film Company, Inc., New York, N.Y. Filed July 11, 1961.

NL

For Metallized Yarn.
First use Nov. 30, 1956.

Class 44 — Dental, Medical, and Surgical Appliances

SN 121,961. American Porcelain and Plastic Tooth Co., Ltd., Nahlat Yizhak, near Tel Aviv, Israel. Filed June 14, 1961.

BELRAY

Owner of Israeli Reg. No. 17,759, dated June 3, 1959.
For Artificial Teeth.

SN 122,324. Kenson Tooth Mfg. Corporation, Seattle, Wash. Filed June 19, 1961.

CERAMATYPE

For Artificial Teeth for Dental Appliances.
First use on or about Oct. 1, 1960.

SN 122,325. Kenson Tooth Mfg. Corporation, Seattle, Wash. Filed June 19, 1961.

KENSON

For Artificial Teeth for Dental Appliances.
First use in or about April 1955.

SN 122,590. American Cyanamid Company, New York, N.Y. Filed June 22, 1961.

DERMALON

Owner of Reg. No. 392,088.
For Surgical Ligatures and Sutures.
First use Apr. 7, 1941.

SN 122,738. Zenith Radio Corporation, Chicago, Ill. Filed June 23, 1961.

FREEDOM RING

For Magnetic Ear Mold Couplers for Wearable Electronic Hearing Aids.
First use at least as early as May 11, 1961.

SN 122,837. Professional Chemical Corporation, Rochester, N.Y. Filed June 26, 1961.

PARALLAID

For Dental Cutting Apparatus Consisting of a Mounting of Three Sets of Interhinged Levers Attached at One End to a Wall or Floor Pedestal and Supporting the Adjustable Burr at the Other End.
First use Feb. 17, 1961.

SN 122,952. The Realistic Company, Cincinnati, Ohio. Filed June 27, 1961.

SIESTA

For Electrically Heated Hood-Type Hair Dryers.
First use on or about Apr. 6, 1961.

SN 123,141. Southwestern Drug Corporation, d.b.a. Raco, Waco, Tex. Filed June 29, 1961.

RACO

For Rubber Sundries—Namely, Fountain Syringes, Combination Syringes, Water Bottles and Travel Syringes.
First use Mar. 27, 1961.

SN 123,396. Fraser Sweatman, Inc., Buffalo, N.Y. Filed June 29, 1961.

QUANTIFLEX

For Anesthetic Administering Machines.
First use Dec. 7, 1960.

Class 46 — Foods and Ingredients of Foods

SN 113,212. G. P. Gundlach & Company, Cincinnati, Ohio. Filed Feb. 7, 1961.

KNIBBLES

For Snack Cheese Curd.
First use Dec. 29, 1960.

SN 115,429. Campbell Soup Company, Camden, N.J. Filed Mar. 13, 1961.

SWANSON

Owner of Reg. Nos. 416,793, 704,075, and others.
For Frozen Prepared Meals, Meal Courses and Dishes, Composed Principally of One or More of the Following: Meats; Fish; Shellfish; Poultry; Cheese; Alimentary Paste; and Vegetables.
First use before February 1954 on frozen prepared meals.

SN 118,565. Craddock Food Manufacturing Company, d.b.a. Craddock Food Mfg. Co., Inc., Garland, Tex. Filed Apr. 25, 1961.

CRADDOCK'S BETTY

For Pickles and Relishes.
First use Mar. 30, 1961; 1932 as to "Betty."

SN 118,638. Arkansas Valley Industries, Inc., Dardanelle, Ark. Filed Apr. 26, 1961.

AVI

For Fresh Dressed Poultry and Particularly Chickens Dressed and Prepared for Cooking.
First use on or about July 1, 1960.

SN 122,062. Chicago Macaroni & Food Products, Chicago, Ill. Filed June 15, 1961.

COUNTRY RUN

For Canned Vegetables.
First use Jan. 3, 1928.

SN 122,098. Marshall Fruit, Inc., Marshall, Minn. Filed June 15, 1961.

MFI

For Fresh Fruit and Vegetables—Namely, Tomatoes, Grapefruit, Oranges, Tangerines, and Onions.
First use May 1955.

SN 125,624. Savannah Sugar Refining Corporation, Savannah, Ga. Filed Aug. 8, 1961.

DIXIE CRYSTALS

Owner of Reg. Nos. 122,345 and 649,018.
For Sugar.
First use July 25, 1917.

Class 47 — Wines

SN 119,592. The Taylor Wine Company, Inc., Hammondsport, N.Y. Filed May 8, 1961.

TAYLOR

Owner of Reg. Nos. 373,137, 651,282, and others.
For Wines.
First use Feb. 17, 1961.

SN 119,606. The Taylor Wine Company, Inc., Hammondsport, N.Y. Filed May 8, 1961.

ROYAL NEW YORK STATE FERMENTED IN THIS BOTTLE QUALITY

All wording is disclaimed apart from the mark as shown.
Owner of Reg. Nos. 392,914, 392,916, and 599,170.
For Wine.
First use Mar. 25, 1961.

Class 48 — Malt Beverages and Liquors

SN 119,618. Arthur Guinness Son & Company Limited, London, England. Filed May 9, 1961.

HARP

Owner of U.S. Reg. Nos. 63,040 and 63,041.
For Stout.
First use in or about June 1926; in commerce on or about Feb. 28, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 122,091. Ralph W. Kenyon and Dan A. Regan, Grandview, Wash. Filed June 15, 1961.

ARKAY

For Pallet Frames.
First use May 15, 1961.

SN 122,385. Spincraft, Inc., Milwaukee, Wis. Filed June 19, 1961.

Ballerina

For Tree Stands.
First use Apr. 19, 1961.

SN 122,386. Spincraft, Inc., Milwaukee, Wis. Filed June 19, 1961.

Heiress

For Tree Stands.
First use May 26, 1961.

SN 122,491. United Shoe Machinery Corporation, d.b.a. O. A. Miller Company, Boston, Mass. Filed June 20, 1961.

PAK-LITE

For Shoe Trees.
First use on or about Mar. 31, 1961.

SN 123,245. Testrite Instrument Co., Inc., Newark, N.J. Filed June 30, 1961.

AUTO-LOCK

For Canvas Holding Clamps for Easels.
First use Apr. 20, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 111,822. The Theon Company, Inc., New York, N.Y. Filed Jan. 13, 1961.

BRUSH-A-MATIC

Owner of Reg. No. 707,294.
For Applicator for Simultaneous Applying of Mascara to Eyelashes and Curling the Same.
First use Aug. 1, 1960.

SN 116,798. Botany Industries, Inc., d.b.a. Rolley Co., Reno, Nev. Filed Mar. 30, 1961.

TANSATION PLUS

Owner of Reg. Nos. 686,462, 649,848, and 717,295.
For Suntan Lotion.
First use Feb. 28, 1961.

SN. 116,930. George Stalnaker Company, Riverside, Calif. Filed Mar. 31, 1961.

Lila Dené

The name "Lila Dené" is fictitious and does not identify any known individual.
For Line of Cosmetic Products—Namely, a Skin Cleanser; a Skin Freshener; a Liquid Powder; Avocado Enriched Emulsion.
First use Nov. 19, 1959.

SN 117,525. Nurolin Research Laboratories, Inc., Bethpage, N.Y. Filed Apr. 10, 1961.

B-SIX

For Beauty Skin Cream and a Beauty Skin Lotion.
First use Feb. 21, 1961.

SN 117,660. Adele K. Thompson, Hadlyme, Conn. Filed Apr. 11, 1961.

BLENDON

For Mixture of Dried Flower Petals and Herbs, Sometimes Known as Pot-Pourri.
First use Feb. 10, 1961.

SN 117,721. The Mennen Company, Morristown, N.J. Filed Apr. 12, 1961.

MAGIC SCRUB BOAT

For Bath Powder.
First use Mar. 13, 1961.

SN 117,813. Shulton, Inc., Clifton, N.J. Filed Apr. 13, 1961.

ALLODRIN

For Bromosalicylbromanilide, Incorporated as an Ingredient in a Body Deodorant.
First use Mar. 30, 1961.

SN 119,215. MacGregor Men's Toiletries, Inc., New York, N.Y. Filed May 3, 1961.

MAC GREGOR

Owner of Reg. No. 405,725.
For Cologne, Personal Deodorants, Shaving Soap, Hair Dressing, Brilliantine, and Cosmetic Sets.
First use Dec. 28, 1942.

SN 119,986. The Charles Marchand Company, New York, N.Y. Filed May 15, 1961.

TOUCH OF GOLD

Owner of Reg. No. 590,161.
For Hair Rinse and Tints; Hair Bleach.
First use Mar. 1, 1961.

SN 120,080. Dante Laboratories, Detroit, Mich. Filed May 16, 1961.

DEN-DISC

For Dentifrice in Tablet Form.
First use May 4, 1961.

Class 52 — Detergents and Soaps

SN 111,896. The Lea Manufacturing Company, Waterbury, Conn. Filed Jan. 16, 1961.

Synstrip

For Enamel and Lacquer Stripper.
First use early part of 1941.

SN 115,164. The Procter & Gamble Company, Cincinnati, Ohio. Filed Mar. 8, 1961.

HEAD & SHOULDERS

For Hair Shampoo.
First use Jan. 3, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 101,809. Pizza Hut, Inc., Wichita, Kans. Filed Aug. 1, 1960.



For Restaurant Services.
First use on or about Sept. 1, 1958.

SN 111,618. Simpson Oil Company, Inc., St. Louis, Mo. Filed Jan. 10, 1961.



The words "Premium Products" are disclaimed apart from the mark as shown. The drawing is lined for red and blue.
For Filling and Service Station Services—Namely, Miscellaneous Servicing and Repairing of Automotive Vehicles, Oil Changes, Lubrication, Tire Repairs, Battery Recharging and Testing, Spark Plug Inspection and Cleaning, and Maintenance.
First use Apr. 14, 1959.

Class 101 — Advertising and Business

SN 126,677. Partake, Inc., Oak Brook, Ill. Filed Aug. 25, 1961.

partake

For Recruitment of Local Business Representatives for Clients.
First use July 1960.

Class 102 — Insurance and Financial

SN 92,290. Pan American Trade Development Corp., New York, N.Y. Filed Mar. 7, 1960.

ICC

For Arranging for Domestic and Foreign Letters of Credit, Purchasing and Financing Drafts, Orders, Accounts and Notes Receivable for Domestic, Import, Export and Overseas Business, Converting Currencies, Extending Loans to and Supplying Working Capital for Businesses, Administering and Financing Consignment Shipments and Stocks of Goods, and Collecting Accounts Receivable.
First use in 1951.

Class 105 — Transportation and Storage

SN 82,506. Garber's Travel Service, Inc., Brookline, Mass. Filed Oct. 1, 1959.

GIFTRIP

Owner of Reg. No. 659,154.
For Travel Agency Services, Including the Procuring of Bookings for Air, Water and Ground Transportation, Food and Lodging, and Guide Services; and the Creation, Conducting, and Booking of Tours Comprising Some or All of the Foregoing Services, Especially Tours Purchased as Gifts.
First use on or about Jan. 31, 1957.

SN 118,218. Bonanza Air Lines, Inc., Las Vegas, Nev. Filed Apr. 20, 1961.

SILVER DART

For Air Transportation Service.
First use Mar. 29, 1959.

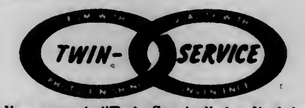
Class 106 — Material Treatment

SN 113,763. Roanoke Double Service Film Co., Inc., Roanoke, Va. Filed Feb. 15, 1961.



All wording except "Double Service" is disclaimed, apart from the mark as shown.
For Photo Finishing Services.
First use Dec. 1, 1960.

SN 113,764. Roanoke Double Service Film Co., Inc., Roanoke, Va. Filed Feb. 15, 1961.



All wording except "Twin-Service" is disclaimed, apart from the mark as shown.
For Photo Finishing Services.
First use Dec. 1, 1960.

Class 107 — Education and Entertainment

SN 98,054. Belafonte Presents, Inc., New York, N.Y. Filed May 31, 1960.

THE BELAFONTE FOLK SINGERS

Applicant disclaims the words "Folk Singers" apart from their use with the word "Belafonte."

For Entertainment Services Through the Medium of a Group of Singers in the Employ of the Applicant.

First use June 10, 1957.

SN 114,780. National Multiple Sclerosis Society, Washington, D.C. Filed Mar. 2, 1961.



For Entertainment in the Form of a Christmas Variety Show.

First use December 1958.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

726,385. WELP-LINE. Welp's Breeding Farm, d.b.a. Welp's Hatchery. SN 53,447. Pub. 5–17–60. Filed 6–12–58.

726,386. ETHAFOAM. The Dow Chemical Company. SN 103,113. Pub. 3–14–61. Filed 8–22–60.

Class 2 — Receptacles

726,387. PB AND DESIGN. Celanese Corporation of America. SN 95,810. Pub. 10–31–61. Filed 4–26–60.

726,388. SHOW CUP. Gilbert Plastics, Inc. SN 99,023. Pub. 10–31–61. Filed 9–11–59.

726,389. POLYFFIN. Hoerner Boxes, Inc. SN 107,261. Pub. 10–31–61. Filed 10–27–60.

726,390. CAPCOTE PE WITHIN AN OVAL. St. Regis Paper Company. SN 109,362. Pub. 10–31–61. Filed 11–30–60.

726,391. MANOVER. S.a.r.l. Manover. SN 109,369. Pub. 10–31–61. Filed 11–21–60.

726,392. COLEMAN AND DESIGN. The Coleman Company, Inc. SN 110,600. Pub. 10–31–61. Filed 12–21–60.

726,393. COLEMAN AND DESIGN. The Coleman Company, Inc. SN 112,224. Pub. 10–31–61. Filed 1–23–61.

726,394. SPIFFY DOT. Hamilton-Skotch Corporation. SN 112,845. Pub. 10–31–61. Filed 1–31–61.

726,395. STERIL SIL AND DESIGN. The Steril-Sil Company. SN 114,146. Pub. 10–31–61. Filed 2–21–61.

726,396. CAL-DAK. The Cal-Dak Company. SN 115,892. Pub. 10–31–61. Filed 3–17–61.

726,397. HI-TIDE. Hamilton-Skotch Corporation. SN 116,639. Pub. 10–31–61. Filed 3–28–61.

726,398. SANI-PAC. Guild Plastics, Inc. SN 117,002. Pub. 10–31–61. Filed 4–3–61.

726,399. SUNTIDE. Hamilton-Skotch Corporation. SN 118,242. Pub. 10–31–61. Filed 4–20–61.

726,400. RIGI-TRAY. Container Corporation of America. SN 120,184. Pub. 10–31–61. Filed 5–17–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

726,401. MAGNA-TITE. Hugo Bosca Company, Inc. SN 97,169. Pub. 10–31–61. Filed 5–16–60.

726,402. AMELIA EARHART. Samuel Orenstein, d.b.a. Amelia Earhart Travel Wares. SN 108,077. Pub. 10–31–61. Filed 11–8–60.

726,403. CAMBRIDGE. Fran Stef Corporation. SN 115,851. Pub. 10–31–61. Filed 3–16–61.

726,404. MAR-KAM. Marjorie Kammerer, d.b.a. Marjorie Kammerer Associates. SN 117,112. Pub. 10–31–61. Filed 4–4–61.

Class 4 — Abrasives and Polishing Materials

726,405. EZE-CUT. Super-Cut, Inc. SN 106,660. Pub. 10–31–61. Filed 10–18–60.

Class 5 — Adhesives

726,406. PENFORD. Penick & Ford, Ltd., Incorporated. SN 87,072. Pub. 10–31–61. Filed 12–10–59.

726,407. STICK-A-SEAL. United Mineral & Chemical Corp. SN 117,744. Pub. 10–31–61. Filed 4–12–61.

Class 6 — Chemicals and Chemical Compositions

726,408. LUXAPOLE. Jacques Wolf & Co. SN 80,473. Pub. 10–31–61. Filed 8–28–59.

726,409. HUMKEM. National Dairy Products Corporation. SN 87,896. Pub. 10–31–61. Filed 12–23–59.

726,410. KEMSTRENE. National Dairy Products Corporation. SN 87,897. Pub. 10–31–61. Filed 12–23–59.

726,411. CRC SEAL COTE. Corrosion Reaction Consultants, Inc., d.b.a. C.R.C. Corporation, as C.R.C., Inc., and as Corrosion Reaction Consultants. SN 90,313. Pub. 3–21–61. Filed 2–4–60.

726,412. CRC SEAL COAT. Corrosion Reaction Consultants, Inc., d.b.a. C.R.C. Corporation, as C.R.C., Inc., and as Corrosion Reaction Consultants. SN 90,314. Pub. 3–21–61. Filed 2–4–60.

726,413. SULFACEL. Eastman Kodak Company. SN 93,059. Pub. 10–31–61. Filed 3–17–60.

726,414. UNI-VERSOL. Vaughn, Incorporated. SN 94,030. Pub. 4–4–61. Filed 3–30–60.

726,415. STAPH. 12. General Chemical Corporation. SN 99,511. Pub. 10–31–61. Filed 6–22–60.

726,416. ROCKLAND CRC AND DESIGN. Rockland Chemical Co., Inc. SN 99,873. Pub. 10–31–61. Filed 6–28–60.

Class 7 — Cordage

726,417. LOTUS AND DESIGN. Frank W. Winne & Son Incorporated. SN 116,776. Pub. 10–31–61. Filed 3–29–61.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

726,418. STUN SAFE. Remington Arms Company, Inc. SN 103,356. Pub. 10–31–61. Filed 8–24–60.

726,419. PLINKERS AND DESIGN. Vernon D. Speer, d.b.a. Speer Products Company. SN 116,929. Pub. 10–31–61. Filed 3–31–61.

Class 10 — Fertilizers

726,420. BLUE CHIP. Hercules Powder Company. SN 104,974. Pub. 10–31–61. Filed 9–21–60.

Class 11 — Inks and Inking Materials

726,421. ULTRAFAST. Standard Ultramarine & Color Co. SN 115,637. Pub. 10–31–61. Filed 3–14–61.

Class 12—Construction Materials

726,422. STEP-TRIM AND DESIGN. Reynolds Aluminum Supply Company. SN 100,291. Pub. 3-21-61. Filed 7-5-60.

726,423. BURK-O AND DESIGN. Spee Dee Sales Company. SN 112,325. Pub. 10-31-61. Filed 1-23-61.

726,424. TRYTON. Theodore Efron Mfg. Co. SN 114,456. Pub. 10-31-61. Filed 2-27-61.

726,425. STICK-A-SEAL. United Mineral & Chemical Corp. SN 117,745. Pub. 10-31-61. Filed 4-12-61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

726,426. USE ME NEXT—I'M READY FOR SERVICE. Wisconsin Wire Works. SN 53,448. Pub. 10-31-61. Filed 6-12-58.

726,427. RAINBO. John Henry George Charbonneau. SN 94,813. Pub. 10-31-61. Filed 4-11-60.

726,428. CUISINE CENTRE. Elkay Manufacturing Company. SN 101,313. Pub. 10-31-61. Filed 7-22-60.

726,429. CUISINE CENTRE. Elkay Manufacturing Company. SN 101,314. Pub. 10-31-61. Filed 7-22-60.

726,430. SHAMROCK. Sperzel Company, d.b.a. Shamrock Plastics Company and Shamrock Plastics, Division of Sperzel Company. SN 103,060. Pub. 10-31-61. Filed 8-19-60.

726,431. SINKRONIZE. Elkay Manufacturing Company. SN 109,861. Pub. 10-31-61. Filed 12-8-60.

726,432. GIBRALTAR. Flat Metal Manufacturing Co., Inc. SN 116,492. Pub. 10-31-61. Filed 3-27-61.

726,433. MONTEREY. Flat Metal Manufacturing Co., Inc. SN 116,493. Pub. 10-31-61. Filed 3-27-61.

726,434. DYNASEAL. Industrial Corporation of America. SN 117,367. Pub. 10-31-61. Filed 4-7-61.

Class 14—Metals and Metal Castings and Forgings

726,435. TALARON. Dr. Eugen Dürrwächter Doduco. SN 106,191. Pub. 10-31-61. Filed 10-11-60.

726,436. FLEX-KOLOR. National Distillers and Chemical Corporation, by merger from Bridgeport Brass Company. SN 113,485. Pub. 10-31-61. Filed 2-13-61.

726,437. FLEX-COLOR. National Distillers and Chemical Corporation, by merger from Bridgeport Brass Company. SN 113,486. Pub. 10-31-61. Filed 2-13-61.

Class 15—Oils and Greases

726,438. TYPO/SEAL. Manlius W. Noble, d.b.a. Noble Oil Products Co. SN 117,987. Pub. 10-31-61. Filed 4-17-61.

Class 16—Protective and Decorative Coatings

726,439. PERMACLAD. Sharp Industries, Inc., assignee of Moberg Laboratories, Inc. SN 62,583. Pub. 9-29-59. Filed 11-17-58.

726,440. REDWOOD MAGIC. Shawinigan Resins Corporation. SN 87,730. Pub. 10-31-61. Filed 12-21-59.

726,441. COLOR FLEX. Master-Krete, Inc. SN 90,542. Pub. 10-31-61. Filed 2-8-60.

726,442. AQUABOND. A & S Paints, Inc. SN 93,118. Pub. 11-8-60. Filed 3-18-60.

726,443. NYWELD. Ironside Manufacturing Co. SN 99,218. Pub. 1-31-61. Filed 6-17-60.

726,444. MOPLEN. Montecatini, Società Generale per l'Industria Mineraria e Chimica. CONSOLIDATED CERTIFICATE. SN 108,803, pub. 10-24-61, filed 11-21-60, Cl. 16; SN 108,804, pub. 10-24-61, filed 11-21-60, Cl. 19; SN 108,805, pub. 10-24-61, filed 11-21-60, Cl. 21; SN 108,806, pub. 7-4-61, filed 11-21-60, Cl. 44.

726,445. SUBURBAN SPAR. West Paint & Varnish Company. SN 117,579. Pub. 10-31-61. Filed 4-11-61.

Class 17—Tobacco Products

726,446. TOKAY AND DESIGN. Louis Dobbelmann N.V. SN 109,083. Pub. 10-31-61. Filed 11-25-60.

Class 18—Medicines and Pharmaceutical Preparations

726,447. FA ONE DAY PAC AID AND DESIGN. William B. Fitzgerald, d.b.a. Fitzgerald Associates. SN 69,632. Pub. 10-31-61. Filed 3-16-59.

726,448. NICO-METRAZOL. Knoll Pharmaceutical Company. SN 100,263. Pub. 10-31-61. Filed 7-5-60.

726,449. HYDROMOX. American Cyanamid Company. SN 116,187. Pub. 8-15-61. Filed 3-22-61.

Class 19—Vehicles

726,444. CONSOLIDATED CERTIFICATE. See Class 16.

726,450. RAZORBACK. Razorback Fiberglass Corporation. SN 106,839. Pub. 10-31-61. Filed 10-20-60.

726,451. TABLE HOP. Vogel-Peterson Co. SN 117,316. Pub. 10-31-61. Filed 4-6-61.

Class 21—Electrical Apparatus, Machines, and Supplies

726,444. CONSOLIDATED CERTIFICATE. See Class 16.

726,452. CHAMP. M. Ten Bosch, Inc. SN 42,081. Pub. 7-14-59. Filed 12-9-57.

726,453. TELECOM. Webster Electric Company. SN 93,569. Pub. 11-22-60. Filed 3-23-60.

726,454. MAXI-WATT. Wincharger Corporation. SN 96,056. Pub. 10-31-61. Filed 4-28-60.

726,455. SPEEDBUS. H. K. Porter Company, Inc. SN 104,476. Pub. 10-31-61. Filed 9-14-60.

726,456. KEN-TRON. Ken-Tron Corporation. SN 105,171. Pub. 10-31-61. Filed 9-26-60.

726,457. KT AND DESIGN. Ken-Tron Corporation. SN 105,172. Pub. 10-31-61. Filed 9-26-60.

726,458. T POWER. Motorola Inc. SN 105,659. Pub. 10-31-61. Filed 10-3-60.

726,459. AMPHENOL BORG AND DESIGN. Amphenol-Borg Electronics Corporation. SN 108,249. Pub. 10-31-61. Filed 11-14-60.

726,460. GRAMERCY. Raygram Corporation. SN 110,359. Pub. 10-31-61. Filed 12-16-60.

726,461. AIRELBE. Lucien Blanchet. SN 111,643. Pub. 10-31-61. Filed 1-11-61.

726,462. NE AND DESIGN. Northeast Scientific Corporation. SN 112,912. Pub. 10-31-61. Filed 2-1-61.

726,463. TIC AND DESIGN. Technology Instrument Corporation. SN 118,737. Pub. 10-31-61. Filed 4-26-61.

Class 22—Games, Toys, and Sporting Goods

726,464. LIFEGARD. West Coast Chemicals and Solvents Corporation, d.b.a. Swimaster. SN 67,718. Pub. 10-31-61. Filed 2-13-59.

726,465. PROTECTO. City Linen, Inc. SN 104,477. Pub. 3-21-61. Filed 9-14-60.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

726,466. KISI. Kalamazoo Industrial Services, Inc. SN 96,228. Pub. 10-31-61. Filed 5-2-60.

726,467. STRIPPIT FABRICATOR. Houdaille Industries, Inc. SN 98,483. Pub. 10-31-61. Filed 6-6-60.

726,468. INGERSOLL. Borg-Warner Corporation. SN 99,715. Pub. 10-31-61. Filed 6-27-60.

726,469. CIRCLE AND TRIANGLE DESIGN. Volkmann & Co. SN 105,319. Pub. 10-31-61. Filed 9-27-60.

726,470. DART. J. Wiss & Sons Co. SN 108,850. Pub. 8-8-61. Filed 11-21-60.

726,471. DURALAST. Dale Marking Equipment Co., Inc. SN 114,604. Pub. 10-31-61. Filed 2-28-61.

726,472. LIP-GRIP. Cornelius R. Lipka. SN 115,066. Pub. 10-31-61. Filed 3-7-61.

726,473. TEL-GO. Tel-Go Manufacturing Corporation. SN 117,742. Pub. 10-31-61. Filed 4-12-61.

726,474. TWISTO. Benjamin A. Williamson, d.b.a. Woodson Nut Machinery Co. SN 118,523. Pub. 10-31-61. Filed 4-24-61.

Class 25—Locks and Safes

726,475. TOUCH-O-MATIC. Hartmann Luggage Company. SN 117,491. Pub. 10-31-61. Filed 4-10-61.

Class 26—Measuring and Scientific Appliances

726,476. VARI-FLOW. Dunham-Bush, Inc. SN 38,441. Pub. 12-13-60. Filed 10-7-57.

726,477. "EYE-FIDELITY" EYE-FI AND DESIGN. De Jur-Amsco Corporation. SN 73,900. Pub. 7-4-61. Filed 5-18-59.

726,478. GAMMASCAN. The Budd Company. SN 103,010. Pub. 10-31-61. Filed 8-19-60.

726,479. BIOTRONIC AND DESIGN. Roland W. Gubisch. SN 105,077. Pub. 10-31-61. Filed 9-23-60.

726,480. METRO AND DESIGN. Metropolitan Telecommunications Corp. SN 107,494. Pub. 10-31-61. Filed 10-31-60.

726,481. PANCOLAR. VEB Carl Zeiss Jena. SN 108,101. Pub. 8-22-61. Filed 11-8-60.

726,482. DATAQUICK. Siemag Feinmechanische Werke G.m.b.H. SN 109,904. Pub. 10-31-61. Filed 12-8-60.

726,483. T AND DESIGN. Tasker Instruments Corporation. SN 112,418. Pub. 10-31-61. Filed 1-24-61.

726,484. POWR PROB AND DESIGN. Supply Service, Inc. SN 114,646. Pub. 10-31-61. Filed 2-28-61.

726,485. ART-O-GRAPH. Art-O-Graph Inc. SN 118,640. Pub. 10-31-61. Filed 4-26-61.

726,486. PHOTRONIC INDICATOR. Butler Bin Company. SN 119,927. Pub. 10-31-61. Filed 5-15-61.

726,487. FLAMON. Bailey Meter Company. SN 120,408. Pub. 10-31-61. Filed 5-25-61.

726,488. MELPAR. Melpar, Inc. SN 121,014. Pub. 10-31-61. Filed 5-29-61.

726,489. MELPAR M IN A TRIANGLE. Melpar, Inc. SN 121,016. Pub. 10-31-61. Filed 5-29-61.

Class 27—Horological Instruments

726,490. OMICHRON. Simon Golub & Sons, Inc. SN 39,058. Pub. 11-4-58. Filed 10-17-57.

726,491. IDEAL. The Ideal Watch Company, Inc. SN 117,870. Pub. 10-31-61. Filed 4-14-61.

726,492. MEDALLION. Hamilton Watch Company. SN 118,149. Pub. 10-31-61. Filed 4-19-61.

Class 28—Jewelry and Precious-Metal Ware

726,493. MAISON D'OR AND DESIGN. Litwin and Sons, Inc. SN 45,584. Pub. 11-4-58. Filed 2-10-58.

726,494. DIAMOND RINGS OF ECSTACY. Perkel & Klein, Inc. SN 104,096. Pub. 10-31-61. Filed 9-8-60.

726,495. THE JEWEL BOX. George R. Kenney, d.b.a. The Jewel Box. SN 105,170. Pub. 10-31-61. Filed 9-26-60.

726,496. LUSTRA-GEMS. Albert Koehler. SN 106,609. Pub. 10-31-61. Filed 10-18-60.

726,497. NINA RICCI. Nina Ricci S.A.R.L. SN 110,223. Pub. 10-31-61. Filed 12-14-60.

Class 29—Brooms, Brushes, and Dusters

726,498. HAMILTONS. Hamilton & Co. (London) Limited. SN 102,762. Pub. 10-31-61. Filed 8-16-60.

726,499. SOFT STROKE. Star Brush Manufacturing Co., Inc. SN 115,087. Pub. 10-31-61. Filed 3-7-61.

726,500. "BEAUT-TEASE." All-American Brush Mfg. Co. SN 115,286. Pub. 10-31-61. Filed 3-10-61.

Class 31—Filters and Refrigerators

726,501. SEITZ. Republic Seitz Filter Corporation. SN 95,766. Pub. 9-20-60. Filed 4-25-60.

726,502. CRYODYNE. Arthur D. Little, Inc. SN 102,774. Pub. 10-31-61. Filed 8-16-60.

726,503. FRIGISTOR. Needco of America Incorporated. SN 103,948. Pub. 10-31-61. Filed 9-6-60.

726,504. REPRESENTATION OF FOUR LIGHTNING ARROWS. Tornado-France. SN 108,922. Pub. 10-31-61. Filed 11-22-60.

Class 32—Furniture and Upholstery

726,505. NAB-A-NAP AND DESIGN. Mark Manufacturing Company. SN 106,335. Pub. 10-31-61. Filed 10-13-60.

726,506. CIRE AND DESIGN. Earl B. Barnawell, d.b.a. Barney Industries. SN 106,977. Pub. 10-31-61. Filed 10-24-60.

726,507. ARTISAN. American Seating Company. SN 114,824. Pub. 10-31-61. Filed 3-3-61.

726,508. DUROCRAFT. American Seating Company. SN 114,825. Pub. 10-31-61. Filed 3-3-61.

726,509. PRINCESS POSTUREPEDIC. Sealy, Incorporated. SN 117,540. Pub. 10-31-61. Filed 4-10-61.

726,510. ALISCO. The Allen Iron & Steel Company. SN 117,597. Pub. 10-31-61. Filed 4-11-61.

726,511. PLASTI-QUEEN. Interstate Metal Products Co. SN 118,447. Pub. 10-31-61. Filed 4-24-61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

726,512. CHILL AIR. The Steam-O-Matic Corporation. SN 104,648. Pub. 10–31–61. Filed 9–16–60.

726,513. KOMO. Komo Corporation. SN 106,504. Pub. 10–31–61. Filed 10–17–60.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

726,514. MAGROTITE. MacGregor-Comarain. SN 114,236. Pub. 10–31–61. Filed 2–23–61.

Class 36 — Musical Instruments and Supplies

726,515. DUOMATIC. Morse Sewing Machine and Supply Corp. SN 89,186. Pub. 12–27–60. Filed 1–18–60.

726,516. EXPLORER. Sued-Atlas Werke G.m.b.H. SN 115,194. Pub. 10–31–61. Filed 3–8–61.

726,517. ALEGRE AND DESIGN. Alegre Recording Corp. SN 117,596. Pub. 10–31–61. Filed 4–11–61.

726,518. TUNE-RITE. Kenlon Productions, Inc. SN 118,085. Pub. 10–31–61. Filed 4–18–61.

Class 37 — Paper and Stationery

726,519. SOENNECKEN AND DESIGN. F. Soennecken (a Kommanditgesellschaft). SN 71,313. Pub. 10–31–61. Filed 4–10–59.

726,520. BIRO. Biro Swan Limited. SN 100,685. Pub. 10–31–61. Filed 7–12–60.

Class 38 — Prints and Publications

726,521. PAR AND DESIGN. Programs for Achievement in Reading, Inc. SN 98,525. Pub. 10–31–61. Filed 6–6–60.

Class 39 — Clothing

726,522. HANDI-PANTI. The Warren Featherbone Company. SN 101,653. Pub. 10–31–61. Filed 7–28–60.

726,523. YOUR FOOTPRINTS IN FOAM AND DESIGN. Lissak & Company. SN 101,959. Pub. 10–31–61. Filed 8–3–60.

726,524. DOUBLEWEAR SHOES. Double-Wear Shoe Co. SN 103,708. Pub. 10–31–61. Filed 8–31–60.

726,525. ANTHONY GESTURE ETC. AND DESIGN. New York Pants Co., Inc. SN 104,849. Pub. 10–31–61. Filed 9–20–60.

726,526. EAGLE AND DESIGN. Eagle Clothes, Inc. SN 104,600. Pub. 11–7–61. Filed 9–16–60.

726,527. DOUBLEWEAR. M. Hoffman & Co., Inc. SN 107,451. Pub. 10–31–61. Filed 10–31–60.

726,528. FRAYNE SPORTSWEAR AND DESIGN. Frayne Sportswear Mfgrs., Inc. SN 111,793. Pub. 10–31–61. Filed 1–13–61.

726,529. DONNIS OF DALLAS. Donnis of Dallas. SN 112,136. Pub. 10–31–61. Filed 1–19–61.

726,530. BLUE SKY U.S.A. AND DESIGN. Paul Hughes, d.b.a. USA Mills. SN 112,148. Pub. 10–31–61. Filed 1–19–61.

726,531. PALCO-PEAK. Paperlynen Company. SN 112,303. Pub. 10–31–61. Filed 1–23–61.

726,532. COOLSHIELD. The Lincoln Electric Company. SN 112,625. Pub. 10–31–61. Filed 1–27–61.

726,533. DO-ALL. Do-All Bra, Inc. SN 112,699. Pub. 10–31–61. Filed 1–30–61.

726,534. TU-WAY-TEE. Cluett, Peabody & Co., Inc. SN 112,829. Pub. 10–31–61. Filed 1–31–61.

726,535. OLE SAFETY SAM. Genesco Inc. SN 112,962. Pub. 10–31–61. Filed 2–2–61.

726,536. PIETRO. Neiman-Marcus Company. SN 113,237. Pub. 10–31–61. Filed 2–7–61.

726,537. FLEXELF. Robert Bruce, Inc. SN 113,394. Pub. 10–31–61. Filed 2–10–61.

726,538. SQUARE "B" AND DESIGN. The Kendall Company. SN 114,774. Pub. 10–31–61. Filed 3–2–61.

726,539. PROM-DEB. The H. W. Gossard Co. SN 116,020. Pub. 10–31–61. Filed 3–20–61.

Class 40 — Fancy Goods, Furnishings, and Notions

726,540. "HI-MEG." American Velcro, Inc. SN 112,822. Pub. 10–31–61. Filed 1–31–61.

726,541. AIRLON. S. & S. Industries, Inc. SN 116,080. Pub. 10–31–61. Filed 3–20–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

726,542. SWEDENMARK. AB Limhamns Textil. SN 109,226. Pub. 10–31–61. Filed 11–29–60.

726,543. "HI-MEG." American Velcro, Inc. SN 112,823. Pub. 10–31–61. Filed 1–31–61.

726,544. CAYO. Mission Valley Mills, Inc. SN 114,625. Pub. 10–31–61. Filed 2–28–61.

726,545. JURADO. Mission Valley Mills, Inc. SN 114,626. Pub. 10–31–61. Filed 2–28–61.

726,546. CAPTIVEX. United States Rubber Company. SN 114,657. Pub. 10–31–61. Filed 2–28–61.

726,547. NAP GUARD. Pepperell Manufacturing Company. SN 114,786. Pub. 10–31–61. Filed 3–2–61.

726,548. PYRA-KNIT. Pyramid Knit Sales Corp. SN 114,999. Pub. 10–31–61. Filed 3–6–61.

726,549. HESS, GOLDSMITH. Hess, Goldsmith & Co., Inc. SN 115,056. Pub. 10–31–61. Filed 3–7–61.

726,550. BALTONE. John Wolf Textiles, Inc. SN 116,944. Pub. 10–31–61. Filed 3–31–61.

726,551. SANPAN. Shirley Fabrics Corporation. SN 119,058. Pub. 10–31–61. Filed 5–1–61.

726,552. WONDA QUILT ETC. AND DESIGN. Carlee Corporation. SN 119,101. Pub. 10–31–61. Filed 5–2–61.

726,553. SURESTEP. E. T. Barwick Mills, Inc. SN 119,264. Pub. 10–31–61. Filed 5–4–61.

726,554. SKYBURY. Turner Halsey Company. SN 119,440. Pub. 10–31–61. Filed 5–5–61.

726,555. PARLAY. Shirley Fabrics Corporation. SN 119,645. Pub. 10–31–61. Filed 5–9–61.

726,556. VISTA. Shirley Fabrics Corporation. SN 119,646. Pub. 10–31–61. Filed 5–9–61.

Class 43 — Thread and Yarn

726,557. VELDO. Aberfoyle Manufacturing Company. SN 59,235. Pub. 4–14–59. Filed 9–22–58.

726,558. QUICK-KNIT. Spinnerin Yarn Co., Inc. SN 115,267. Pub. 10–31–61. Filed 3–9–61.

726,559. VELICREN. Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A. SN 116,166. Pub. 10–3–61. Filed 3–21–61.

726,560. BOB-O-GERMANTOWN. Emile Bernat & Sons Company. SN 116,467. Pub. 10–31–61. Filed 3–27–61.

726,561. BOB-O-MEADOWSPUN. Emile Bernat & Sons Company. SN 116,468. Pub. 10–31–61. Filed 3–27–61.

726,562. CENTIPED. Edward P. Stabel & Co., Inc. SN 119,900. Pub. 10–31–61. Filed 5–12–61.

Class 44 — Dental, Medical, and Surgical Appliances

726,444. CONSOLIDATED CERTIFICATE. See Class 16.

726,563. MULLER. The Texal Company, Inc. SN 96,765. Pub. 10–31–61. Filed 5–9–60.

726,564. MD CO AND DESIGN. Midwest Dental Mfg. Co. SN 114,984. Pub. 10–31–61. Filed 3–6–61.

Class 46 — Foods and Ingredients of Foods

726,565. MARMITTA CASERA. Elaboraciones Pesqueras del Cantabrico, S.A. SN 72,816. Pub. 10–31–61. Filed 5–4–59.

726,566. "MARMITTA MARINERA." Elaboraciones Pesqueras del Cantabrico, S.A. SN 72,817. Pub. 10–31–61. Filed 5–4–59.

726,567. TASTER'S OWN. John Joseph G. Randazzo. SN 80,355. Pub. 10–31–61. Filed 8–27–59.

726,568. PARAMOUNT. The Glidden Company, d.b.a. Durkee Famous Foods. SN 80,548. Pub. 8–8–61. Filed 8–31–59.

726,569. LOUISIANA PURCHASE ETC. AND DESIGN. Gulf South Advertising Specialties, Inc. SN 84,306. Pub. 10–31–61. Filed 10–30–59.

726,570. SPECIAL OCCASION. Sterling Industries Inc., by change of name from Sacramento Freezers Inc. SN 88,810. Pub. 10–31–61. Filed 1–11–60.

726,571. LANCER. J. A. Folger & Company. SN 93,303. Pub. 10–31–61. Filed 3–21–60.

726,572. BETTY BURNS. Burns-Alton Corporation, by change of name from Alton Canning Co., Inc. SN 93,580. Pub. 10–31–61. Filed 3–24–60.

726,573. DAD'S. Dad's Root Beer Company. SN 93,769. Pub. 10–31–61. Filed 3–28–60.

726,574. KETCHARD. Frieda A. Harris, d.b.a. The Ketchard Kitchens. SN 97,487. Pub. 10–31–61. Filed 5–19–60.

726,575. JUAN VALDEZ AND DESIGN. National Federation of Coffee Growers of Colombia. SN 97,511. Pub. 10–31–61. Filed 5–19–60.

726,576. THRIFTIES. Miller's Pre-Pared Potato Company, Inc. SN 98,666. Pub. 10–31–61. Filed 6–8–60.

726,577. RIPPLES. E. J. Brach & Sons. SN 103,440. Pub. 8–29–61. Filed 8–26–60.

726,578. FARRO-LAC. Walnut Grove Products Company, Inc. SN 107,533. Pub. 10–31–61. Filed 10–31–60.

726,579. FRENCH TREAT. Tillie Lewis Foods, Inc., by change of name from Flotill Products, Incorporated. SN 110,149. Pub. 8–1–61. Filed 12–13–60.

Class 47 — Wines

726,580. HENKELL TROCKEN AND DESIGN. Henkell & Co. SN 79,062. Pub. 10–31–61. Filed 8–5–59.

726,581. Z. Eduardo Reynales. SN 81,939. Pub. 10–31–61. Filed 12–9–60.

726,582. THE CHRISTIAN BROTHERS CHATEAU LA SALLE. De La Salle Institute. SN 88,977. Pub. 10–31–61. Filed 1–14–60.

Class 50 — Merchandise Not Otherwise Classified

726,583. PAPER-SCULPT. Loroco Industries, Inc. SN 94,320. Pub. 10–31–61. Filed 4–4–60.

726,584. MATHERSON-SELIG. Matherson-Selig Co. SN 95,908. Pub. 10–31–61. Filed 4–27–60.

726,585. CLIFF ARQUETTE. Cliff Arquette. SN 105,610. Pub. 10–31–61. Filed 10–3–60.

726,586. TOTE-STEP. Tote-Step Corporation. SN 118,302. Pub. 10–31–61. Filed 4–20–61.

726,587. SUPREME. Eugene G. Danner Manufacturing, Inc. SN 118,338. Pub. 10–31–61. Filed 4–21–61.

726,588. TRANS PARENT HEN. Lyon Rural Electric Company. SN 119,395. Pub. 10–31–61. Filed 5–5–61.

Class 51 — Cosmetics and Toilet Preparations

726,589. GRAY BAN. Gray Ban Corp. SN 80,988. Pub. 10–31–61. Filed 9–8–59.

726,590. HARPERGLEAM. Harper Method, Incorporated. SN 100,250. Pub. 10–31–61. Filed 7–5–60.

726,591. HOUSE OF FULLER. The Fuller Brush Company. SN 110,840. Pub. 9–19–61. Filed 12–27–60.

Class 52 — Detergents and Soaps

726,592. BEAM. Beam Chemical Company. SN 84,637. Pub. 10–31–61. Filed 11–5–59.

726,593. JOHNSON'S. S. C. Johnson & Son, Inc. SN 88,466. Pub. 10–31–61. Filed 1–5–60.

726,594. WYPIT. Lyla H. Snella, d.b.a. Wypit Company. SN 100,308. Pub. 10–31–61. Filed 7–5–60.

726,595. SYNTHENE. Western Chemical Company. SN 101,912. Pub. 2–14–61. Filed 8–2–60.

Service Marks

Class 100 — Miscellaneous

726,596. UNITED STATES TESTING CO., INC., ETC. AND DESIGN. United States Testing Company, Inc. SN 93,566. Pub. 10–31–61. Filed 3–23–60.

726,597. SAVE. Service Activities of Volunteer Engineers. SN 94,922. Pub. 10–31–61. Filed 4–12–60.

726,598. DIPPSY DOGGIE. LeBaron E. Stockford. SN 96,994. Pub. 10–31–61. Filed 5–12–60.

726,599. UTC AND DESIGN. United Technology Corporation. SN 100,319. Pub. 10–31–61. Filed 7–5–60.

Class 101 — Advertising and Business

726,600. S & Q ETC. AND DESIGN. Janney, Semple, Hill & Company. SN 90,842. Pub. 10–31–61. Filed 2–12–60.

726,601. BARRY PROCESS. Barry Process Co., Inc. SN 91,585. Pub. 10–31–61. Filed 2–25–60.

Class 102 — Insurance and Financial

726,602. EVER-READY-CHEKS. Seaboard Finance Company. SN 90,863. Pub. 10–31–61. Filed 2–12–60.

726,603. IB IN FORM OF MONOGRAM, ETC. Insurance Budget, Incorporated. SN 101,003. Pub. 10–31–61. Filed 7–18–60.

Class 103 — Construction and Repair

726,604. ORDONT ETC. AND DESIGN. Ordont Orthodontic Laboratories, Inc., d.b.a. Ordont Laboratories, Inc. SN 99,648. Pub. 10–31–61. Filed 6–24–60.

Class 105 — Transportation and Storage

726,605. WONDERS OF THE WORLD TOURS. Hal Linker Travel Service, Inc., d.b.a. Wonders of the World Tours. SN 93,616. Pub. 10–31–61. Filed 3–24–60.

Class 106 — Material Treatment

726,606. DYALON. Thombert Incorporated. SN 100,316. Pub. 10–31–61. Filed 7–5–60.

Class 107 — Education and Entertainment

726,607. LA PLAYA SEXTET. La Playa Sextet. SN 38,964. Pub. 10–31–61. Filed 10–16–57.

726,608. FTD AND WREATH, TORCH AND SEAL DESIGN. Florists' Telegraph Delivery Association. SN 93,783. Pub. 10–31–61. Filed 3–28–60.

Certification Mark

Class A — Goods

726,609. TUNISIA ETC. AND DESIGN. Secrétariat d'Etat aux Finances et au Commerce. SN 96,062. Pub. 10–31–61. Filed 4–15–60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

726,610. Specialty Sheet Metal Manufacturing Co., Chicago, Ill. SN 102,702. Filed P.R. 8–15–60; Am. S.R. 8–28–61.

BIN-KANISTER

For Household Storage and Dispensing Containers—Namely, Bread Cabinets, Condiment Cabinets, Canister Cabinets, and Dispensers for Rolled Materials Such as Paper Towels, Aluminum Foil, Wax Paper, and Plastic Wrappings.
First use July 1, 1960.

Class 7 — Cordage

726,611. Samson Cordage Works, Boston, Mass. SN 100,807. Filed P.R. 7–13–60; Am. S.R. 11–10–61.

QUIK-SPLICE

For Braided Rope.
First use June 29, 1960.

Class 24 — Laundry Appliances and Machines

726,612. Bishop Freeman Co. (new corporation), Evanston, Ill., by change of name from Bishop David Freeman Co. (Illinois corporation), Evanston, Ill. SN 58,506. Filed P.R. 9–8–58; Am. S.R. 10–26–61.

SUPERSPRAY

For Spray Guns Used for Moistening in Textile and Fabric Finishing.
First use on or about June 10, 1958.

Class 32 — Furniture and Upholstery

726,613. G. C. Hosch, Lake Worth, Fla. SN 104,267. Filed P.R. 9–12–60; Am. S.R. 11–14–61.

Hosch FILE-A-CHEK SYSTEM

For Box Container for Filing and Retaining Checks.
First use May 25, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

726,614. East Texas Engineering & Manufacturing Company, Tyler, Tex. SN 69,880. Filed P.R. 3–19–59; Am. S.R. 11–8–61.

PORTABLE KITCHEN

For Charcoal Grills of the Outdoor Barbecue Type for Domestic Use.
First use in July 1953.

TRADEMARK REGISTRATIONS RENEWED

146,717. AMBREINE. Cl. 51. 9–20–21.
146,719. EAU DE COTY. Cl. 51. 9–20–21.
146,974. LORIGAN. Cl. 51. 9–27–21.
146,975. LA ROSE JACQUEMINOT. Cl. 51. 9–27–21.
146,976. LE VERTIGE. Cl. 51. 9–27–21.
146,977. L'OR. Cl. 51. 9–27–21.
146,978. L'EFFLEURT. Cl. 51. 9–27–21.
146,979. LA VIOLETTE POURPRE. Cl. 51. 9–27–21.
146,980. AMBRE ANTIQUE. Cl. 51. 9–27–21.
146,981. STYX. Cl. 51. 9–27–21.
148,173. NATIONAL AND EAGLE DESIGN. Cl. 37. 11–8–21.

148,487. BURCO. Cl. 13. 11–15–21.
148,669. FRANCETTE. Cl. 39. 11–22–21.
149,117. IR MONOGRAM. Cl. 23. 12–6–21.
150,292. LUSTERLITE AND DESIGN. Cl. 16. 1–3–22.
150,512. PALATOL. Cl. 18. 1–3–22.
150,936. CUTLESS BEARINGS AND DESIGN. Cl. 23. 1–10–22.
151,745. ESCOLITE. Cl. 52. 2–14–22.
151,746. ES CO. Cl. 52. 2–14–22.
151,803. HECKERS' AND DESIGN. Cl. 46. 2–14–22.
152,409. GOODRICH. Cl. 50. 2–28–22.
152,674. ATLANTIC. Cl. 24. 3–7–22.
153,811. SOTA AND DESIGN. Cl. 46. 3–28–22.
153,812. O'BRIENS MASTER. Cl. 16. 3–28–22.
154,001. COASTMADE. Cl. 37. 4–4–22.
154,038. G–R. Cl. 34. 4–4–22.
154,141. AEROPLANE. Cl. 29. 4–4–22.
154,188. PANEL DESIGN. Cl. 19. 4–4–22.
154,214. AIRCO. Cl. 26. 4–11–22.
154,364. PHELAN'S SPREDLITE. Cl. 16. 4–11–22.
154,505. BARBARA BROWN AND DESIGN. Cl. 39. 4–4–22.
154,591. WINESAP. Cl. 46. 4–18–22.
390,919. PROTECTO. Cl. 24. 10–14–41.
391,613. CONFETTI. Cl. 51. 11–18–41.
391,650. CHEMICLEAN. Cl. 1. 11–18–41.
391,696. TRIPLE XXX. Cl. 45. 11–18–41.
391,724. BEWITCHING. Cl. 51. 11–18–41.
391,954. RANGER. Cl. 18. 12–2–41.
392,108. CANTEEN AND DESIGN. Cl. 39. 12–9–41.
392,121. MASCULINIZED. Cl. 39. 12–9–41.
392,122. GART-TOP. Cl. 39. 12–9–41.
392,610. BIOLAC. Cl. 18. 1–6–42.
392,790. NORRIS PEACHTREE. Cl. 46. 1–13–42.
392,835. ELEMENT HYDROVIZED. Cl. 42. 1–13–42.
392,927. LAMIPHANE. Cl. 37. 1–20–42.
392,975. QUIKY. Cl. 45. 1–20–42.
392,988. LAKE SHORE. Cl. 46. 1–20–42.
392,992. COMMODORE. Cl. 35. 1–20–42.
393,347. THOMPSON. Cl. 13. 2–3–42.
393,830. RAYMIX. Cl. 23. 3–3–42.
393,970. TABU. Cl. 52. 3–10–42.
394,083. EVANGELINE MAID AND DESIGN. Cl. 46. 3–17–42.
394,192. MOVADO AND DESIGN. Cl. 27. 3–24–42.
394,265. PET. Cl. 46. 3–31–42.
394,330. HANDYAID. Cl. 50. 3–31–42.
394,464. TALL GALS! Cl. 39. 4–7–42.
394,537. WALNUT GROVE. Cl. 46. 4–14–42.
394,559. MICCRO SUPREME. Cl. 16. 4–14–42.
394,670. STERLING AND DESIGN. Cl. 48. 4–21–42.
394,757. LECO. Cl. 26. 4–28–42.
394,793. STARLET AND DESIGN. Cl. 46. 4–28–42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

328,008. XL AND DESIGN. Cl. 27. 9–10–35.
328,910. TP AND DESIGN. Cl. 13. 10–8–35.
440,208. CALIRABIAN. Cl. 50. 8–17–48.
444,420. LAND O'LAKES ETC. AND DESIGN. Cl. 46. 2–20–51.

The following registrations issued Nov. 29, 1955

616,693. SY-LOY. Cl. 1.
616,697. VESTONE. Cl. 1.
616,699. DIACRON. Cl. 1.
616,701. MODGLENE. Cl. 1.
616,708. STEEPOLATOR. Cl. 2.
616,709. GEOMETRIC DESIGN. Cls. 2 and 37.
616,714. STOR-KOLD BOARD AND DESIGN. Cl. 2.
616,716. DOMINO AND DESIGN. Cl. 4.
616,718. NOVANTHRENE. Cl. 6.
616,728. GULF IN AN ORANGE AND BLUE CIRCLE DESIGN. Cl. 6.
616,733. TYMATIC. Cl. 7.
616,740. LUMICEL. Cl. 12.
616,741. BROWNE WINDOWS AND DESIGN. Cl. 12.
616,742. BROWNE FOLDING TYPE WINDOWS AND DESIGN. Cl. 12.
616,743. BROWNE FOLDING FLUE WINDOWS AND DESIGN. Cl. 12.
616,744. BROWNE BI-FOLDING FACADES AND DESIGN. Cl. 12.
616,745. UW CO AND DESIGN. Cl. 14.
616,747. STC/100 AND DESIGN. Cl. 15.
616,749. HOLY FLAME AND DESIGN. Cl. 15.
616,754. DELLAY. Cl. 16.
616,762. NEAT-LAC. Cl. 16.
616,771. VITALOSE. Cl. 18.
616,778. PANTHER DAYTONA. Cl. 19.
616,779. KOOL-RITE AND DESIGN OF BIRD. Cl. 19.
616,786. VIXEN (DIAMOND DESIGN). Cl. 21.
616,788. BEAM AND DESIGN (CIRCLES). Cl. 21.
616,793. TURCHAN HYDRO-ROUTER. Cl. 23.
616,794. CLETEX. Cl. 23.
616,795. GEM SET. Cl. 23.
616,796. THE DOROTHY DAHL GEM SET AND DESIGN. Cl. 23.
616,806. 600. Cl. 25.
616,808. RED T APPLE. Cl. 26.
616,810. ULTRABLITZ. Cl. 26.
616,812. FROG-EYE. Cl. 26.
616,816. BEKO AND DESIGN. Cl. 26.
616,819. ALWAC. Cl. 26.
616,823. COLLEGIAN AND DESIGN. Cl. 29.
616,824. PEACOCK. Cl. 29.
616,825. PAINT-O-MATIC. Cl. 29.
616,833. HIDE-A-WAY TABLE DRAWER AND DESIGN. Cl. 32.
616,837. FEED 'N FUN. Cl. 32.
616,838. RECLIN-O-MATIC. Cl. 32.
616,840. STUR-D-STAC. Cl. 32.
616,841. SLIDE-O-MATIC. Cl. 32.
616,844. ZENITH. Cl. 34.
616,845. KUNIFER. Cl. 34.
616,847. V HYDRO TWIN. Cl. 34.
616,850. THERMAJET. Cl. 34.
616,853. ROCKOR. Cl. 37.
616,858. ZW AND DESIGN. Cl. 37.
616,861. SOENNECKEN. Cl. 37.
616,862. PERMA-BUTTON. Cl. 37.
616,879. MISS CALIFORNIA. Cl. 39.
616,882. FEATHER STEP ETC. AND DESIGN. Cl. 39.
616,885. DOLLY VARDEN. Cl. 39.
616,886. STAND-MOLD. Cl. 39.
616,889. FABULOUS FLORIDA. Cl. 39.
616,890. SKYWATCHER. Cl. 39.
616,893. TOP SECRET. Cl. 38.
616,896. ARNOLD TOWNSTYLE. Cl. 39.
616,899. SPORTSCAR. Cl. 39.
616,904. TOPSEES AND DESIGN. Cl. 39.
616,905. PRETTY COORDINATES. Cl. 39.
616,908. VARILACE. Cl. 40.
616,909. ARISTOCRAT OF THE KITCHEN. Cl. 42.
616,910. PLISAIL. Cl. 42.
616,915. ILE DE FRANCE. Cl. 42.
616,917. BROAD-TUFT AND DESIGN. Cl. 42.
616,924. P.T. Cl. 43.
616,925. FLEXCEL. Cl. 43.
616,927. MONOPLAST. Cl. 44.
616,931. HELTRON. Cl. 44.
616,932. 75–X. Cl. 44.
616,937. TROPI AND DESIGN. Cl. 46.
616,939. RADIO AND TV STARS. Cl. 46.
616,945. WESGLO. Cl. 46.
616,950. SPUDDIES. Cl. 46.
616,970. LA COQUILLE AND DESIGN. Cl. 52.
616,972. GULF. Cl. 52.
616,973. GULF AND DESIGN. Cl. 52.
616,980. THE TRANS-AMERICAN TRAVELERS. Cl. 100.
616,981. AIDCO. Cl. 100.
616,982. MOMAG. Cl. 100.
616,984. THE SYMPATHETIC EAR. Cl. 100.
616,993. CENTITE. Cl. 103.
616,997. WRITE YOU ARE. Cl. 107.

616,998. STARS OVER ICE. Cl. 107.
616,999. JAY HOLIDAY. Cl. 107.
617,000. KELLY BARTON. Cl. 107.
617,004. PITTSBURGH-ACETATE. Cl. 6.
617,005. PITTSBURGH-VAT. Cl. 6.
617,006. BUSADA. Cl. 13.
617,009. CUSHING ORIGINALS. Cl. 26.
617,010. CASUAL. Cl. 33.
617,011. KOOGLE. Cl. 46.
617,013. CROCK LINED DEEP DISH. Cl. 46.
617,015. CALFOOD AND DESIGN. Cl. 46.
617,017. HARRIS HAIR CONDITIONER. Cl. 51.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

191,828. SUPERIOR FEED AND DESIGN. Cl. 46. Eddie Mill & Elevator Co. 11–18–24. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

313,683. ALL IN ONE AND DESIGN. Cl. 46. Superior Feed Mills. 6–5–34. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

400,428. VI-TA-FIED FOR HIGH PRODUCTION AND DESIGN. Cl. 46. Superior Feed Mills. 3–9–43. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

411,080. ALL IN ONE. Cl. 46. Superior Feed Mills. 1–2–45. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

511,453. SUNSET. Cl. 38. Lane Publishing Co. 6–21–49. New Cert. Sec. 7(c) to Lane Magazine Company, Menlo Park, Calif.

614,051. YUM-BURGER MIX. Cl. 46. Yum-Burger. 10–11–55. New Cert. Sec. 7(c) to Council Manufacturing Corporation, Fort Smith, Ark.

620,151. SUPERIOR AND DESIGN. Cl. 46. Superior Feed Mills, Inc. 1–24–56. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

621,482. SUPERIOR ETC. AND DESIGN. Cl. 46. Superior Feed Mills, Inc. 2–14–56. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

624,680. SUPERIOR AND DESIGN. Cl. 46. Superior Feed Mills, Inc. 4–3–56. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

626,634. ALL-IN-ONE. Cl. 46. Superior Feed Mills, Inc. 5–8–56. New Cert. Sec. 7(c) to Mid-America Corporation, Oklahoma City, Okla.

627,930. CLIMAX. Cl. 45. Home Brewing Company, Inc., d.b.a. Climax Beverage Company. 5–29–56. New Cert. Sec. 7(c) to Climax-Tru-Ade Bottling Corporation, Richmond, Va.

634,131. SEVEN SEAS AND DESIGN. Cl. 46. Roberts Pacific, Ltd. 9–4–56. New Cert. Sec. 7(c) to Anderson, Clayton & Co., Dallas, Tex.

692,564. INGRAM AND DESIGN. Cl. 103. Ingram Products Company, now by change of name Ingram Oil and Refining Company, assignee of Ingram Oil Company. 2–2–60. New Cert. Sec. 7(c) to Murphy Corporation, El Dorado, Ark.

692,570. INGRAM AND DESIGN. Cl. 105. Ingram Products Company, now by change of name Ingram Oil and Refining Company. 2–2–60. New Cert. Sec. 7(c) to Murphy Corporation, El Dorado, Ark.

693,712. INGRAM AND DESIGN. Cl. 15. Ingram Products Company, d.b.a. Ingram Oil and Refining Co. 3–1–60. New Cert. Sec. 7(c) to Murphy Corporation, El Dorado, Ark.

718,825. INGRAM. Cl. 15. Ingram Oil and Refining Company. 7–25–61. New Cert. Sec. 7(c) to Murphy Corporation, El Dorado, Ark.

INDEX OF REGISTRANTS

JANUARY 16, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AB Limhamns Textil, Malmo SV., Sweden. 726,542, pub. 10–31–61. Cl. 42.
A & S Paints, Inc., Beverly Hills, Calif. 726,442, pub. 11–8–60. Cl. 16.
Aberfoyle Mfg. Co., Philadelphia, Pa. 726,557, pub. 4–14–59. Cl. 43.
Air Reduction Co., Inc., to Air Reduction Co., Inc., New York, N.Y. 154,214, ren. 1–16–62. Cl. 26.
Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden, to Astra Pharmaceutical Products, Inc., Worcester, Mass. 616,927, canc. Cl. 44.
Alegre Recording Corp., New York, N.Y. 726,517, pub. 1–31–61. Cl. 36.
All-American Brush Mfg. Co., New York, N.Y. 726,500, pub. 10–31–61. Cl. 29.
Allen Iron & Steel Co., The, Norristown, Pa. 726,510, pub. 10–31–61. Cl. 32.
Alton Canning Co., Inc.: *See*— Burns-Alton Corp.
Anderson, Clayton & Co.: *See*— Roberts Pacific, Ltd.
Animal Industry Development Co., Sunland, Calif. 616,981, canc. Cl. 100.
American Beauty Macaroni Co., Kansas City, Mo. 617,011, canc. Cl. 46.
American Cyanamid Co., New York, N.Y. 726,449, pub. 8–15–61. Cl. 18.
American Laundry Machinery Co., The, Cincinnati, Ohio, to McGraw-Edison Co., Elgin, Ill. 390,919, ren. 1–16–62. Cl. 24.
American Seating Co., Grand Rapids, Mich. 726,507–8, pub. 10–31–61. Cl. 32.
American Velcro, Inc., Manchester, N.H. 726,540, pub. 10–31–61. Cl. 40.
American Velcro, Inc., Manchester, N.H. 726,543, pub. 10–31–61. Cl. 42.
Ames Harris Neville Co., San Francisco, Calif. 440,208, canc. Cl. 50.
Amphenol-Borg Electronics Corp., Chicago, Ill. 726,459, pub. 10–31–61. Cl. 21.
Arquette, Cliff, Gettysburg, Pa. 726,585, pub. 10–31–61. Cl. 50.
Artloom Carpet Co., Inc., Philadelphia, Pa. 616,754, canc. Cl. 16.
Artmark Associates, Inc., New York, N.Y. 616,716, canc. Cl. 4.
Art-O-Graph Inc., Minneapolis, Minn. 726,485, pub. 10–31–61. Cl. 26.
Astra Pharmaceutical Products, Inc.: *See*— Aktiebolaget Astra, Apotekarnes Kemiska Fabriker.
Atlantic Stamping Co., Rochester, N.Y. 152,674, ren. 1–16–62. Cl. 24.
Bailey Meter Co., Cleveland, Ohio. 726,487, pub. 10–31–61. Cl. 26.
Balance Engineering Co., The, Chicago, Ill. 616,816, canc. Cl. 26.
Barnawell, Earl B., d.b.a. Barney Industries, Berkeley, Calif. 726,506, pub. 10–31–61. Cl. 32.
Barney Industries: *See*— Barnawell, Earl B.
Barry Process Co., Inc., Brooklyn, N.Y. 726,601, pub. 10–31–61. Cl. 101.
Barwick, E. T., Mills, Inc., Chamblee, Ga. 726,553, pub. 10–31–61. Cl. 42.
Beam Chemical Co., Oconto Falls, Wis. 726,592, pub. 10–31–61. Cl. 52.
Beam Distributing, Inc., Chicago, Ill. 616,788, canc. Cl. 21.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 726,560–1, pub. 10–31–61. Cl. 43.
Berry, Ansel P., d.b.a. Farr Co., Fort Lauderdale, Fla., to Mission of California, Inc., New Haven, Conn. 392,975, ren. 1–16–62. Cl. 45.
Biro Swan Ltd., London, England. 726,520, pub. 10–31–61. Cl. 37.
Blanchet, Lucien, Seine, France. 726,461, pub. 10–31–61. Cl. 21.
Blaupunkt Elektronik G.m.b.H., Berlin-Wilmersdorf, Germany. 616,810, canc. Cl. 26.
Borden Co., The, New York, N.Y. 392,610, ren. 1–16–62. Cl. 18.
Borg-Warner Corp., Chicago, Ill. 726,468, pub. 10–31–61. Cl. 23.
Bosch, M. Ten, Inc., Pleasantville, N.Y. 726,452, pub. 7–14–59. Cl. 21.
Brach, E. J., & Sons, Chicago, Ill. 726,577, pub. 8–29–61. Cl. 46.
Bridgeport Brass Co.: *See*— National Distillers and Chemical Corp.
Brown Shoe Co., Inc., St. Louis, Mo. 154,505, ren. 1–16–62. Cl. 39.
Bruce, Robert, Inc., Philadelphia, Pa. 726,537, pub. 10–31–61. Cl. 39.
Budd Co., The, Philadelphia, Pa. 726,478, pub. 10–31–61. Cl. 26.
Burlington Mills Corp., Greensboro, N.C. 616,733, canc. Cl. 7.
Burns-Alton Corp., by change of name from Alton Canning Co., Inc., Alton, N.Y. 726,572, pub. 10–31–61. Cl. 46.
Burrus Mills, Inc., d.b.a. Texas Star Flour Mills, Fort Worth, Tex. 617,015, canc. Cl. 46.
Busada Mfg. Corp., Maspeth, N.Y. 617,006, canc. Cl. 13.
Butler Bin Co., Waukesha, Wis. 726,486, pub. 10–31–61. Cl. 26.
C.R.C. Corp.: *See*— Corrosion Reaction Consultants, Inc.
C.R.C., Inc.: *See*— Corrosion Reaction Consultants, Inc.
Cal-Dak Co., The, Los Angeles, Calif. 726,396, pub. 10–31–61. Cl. 2.
California Hosiery Co., Anaheim, Calif. 616,879, canc. Cl. 39.
Canton Glass Co., Inc., Marion, Ind. 617,010, canc. Cl. 33.
Carlee Corp., Rockleigh, N.J. 726,552, pub. 10–31–61. Cl. 42.
Celanese Corp. of America, New York, N.Y. 726,387, pub. 10–31–61. Cl. 2.
Celotex Corp., The: *See*— Cepco, Inc.
Central Ironite Waterproofing Co., Maywood, Ill. 616,993, canc. Cl. 103.
Cepco, Inc., also d.b.a. Daylight Ceiling Co., San Francisco, Calif., to The Celotex Corp., Chicago, Ill. 616,740, canc. Cl. 12.
Certified Creations, Inc., New York, N.Y. 616,882, canc. Cl. 39.
Charbonneau, John H. G., Calimesa, Calif. 726,427, pub. 10–31–61. Cl. 12.
Chicago Vitreous Enamel Product Co., Cicero, Ill., to The Eagle-Picher Co., Cincinnati, Ohio. 150,292, ren. 1–16–62. Cl. 16.
City Linen, Inc., Duncanville, Tex. 726,465, pub. 3–21–61. Cl. 22.
Clasp Envelope Co., Inc., New York, N.Y. 616,862, canc. Cl. 37.
Cleveland, Clarence E., Reading, Vt. 394,330, ren. 1–16–62. Cl. 50.
Clevite Corp., Cleveland, Ohio. 616,794, canc. Cl. 23.
Climax Beverage Co.: *See*— Home Brewing Co., Inc.
Climax-Tru-Ade Bottling Corp.: *See*— Home Brewing Co., Inc.
Cluett, Peabody & Co., Inc., New York, N.Y. 726,534, pub. 10–31–61. Cl. 39.
Coast Envelope Co., Los Angeles, Calif., to Hammermill Paper Co., Erie, Pa. 154,001, ren. 1–16–62. Cl. 37.
Coleman Co., Inc., The, Wichita, Kans. 726,392–3, pub. 10–31–61. Cl. 2.
Combustion Engineering Co., Inc., d.b.a. Raymond Pulverizer Division, Combustion Engineering Co., Inc., New York, N.Y., & Chicago, Ill., to Combustion Engineering, Inc., New York, N.Y. 393,830, ren. 1–16–62. Cl. 23.
Combustion Engineering, Inc.: *See*— Combustion Engineering Co., Inc.
Connelly Containers, Inc.: *See*— Haelan Laboratories, Inc.
Container Corp. of America, Chicago, Ill. 726,400, pub. 10–31–61. Cl. 2.
Cooper's Inc., Kenosha, Wis. 392,121–2, ren. 1–16–62. Cl. 39.
Corrosion Reaction Consultants: *See*— Corrosion Reaction Consultants, Inc.
Corrosion Reaction Consultants, Inc., d.b.a. C.R.C. Corp. as C.R.C., Inc., and as Corrosion Reaction Consultants, Philadephia, Pa. 726,411–12, pub. 3–21–61. Cl. 6.
Coty, Francois J. de S., Suresnes, France, to Coty, Inc., New York, N.Y. 146,717, ren. 1–16–62. Cl. 51.
Coty, Francois J. de S., Suresnes, France, to Coty, Inc., New York, N.Y. 146,719, ren. 1–16–62. Cl. 51.
Coty, Francois J. de S., Suresnes, France, to Coty, Inc., New York, N.Y. 146,974–81, ren. 1–16–62. Cl. 51.
Coty, Inc.: *See*— Coty, Francois J. de S.
Council Mfg. Corp.: *See*— Yum-Burger.
Cowman Products Co., Inc., Sacramento, Calif. 616,840, canc. Cl. 32.
Cowles Chemical Co.: *See*— Electric Smelting & Aluminum Co. Inc., The.
Curtis, Helene, Industries, Inc.: *See*— Lentheric, Inc.
Dad's Root Beer Co., Chicago, Ill. 726,573, pub. 10–31–61. Cl. 46.
Dahl, Dorothy, Inc., Chicago, Ill. 616,795–6, canc. Cl. 23.
Dale Marking Equipment Co., Inc., Brooklyn, N.Y. 726,471, pub. 10–31–61. Cl. 23.
Danner, Eugene G., Mfg., Inc., Brooklyn, N.Y. 726,587, pub. 10–31–61. Cl. 50.
Daylight Ceiling Co.: *See*— Cepco, Inc.
De Jur-Amsco Corp., Long Island City, N.Y. 726,477, pub. 7–4–61. Cl. 26.
De La Salle Institute, Napa, Calif. 726,582, pub. 10–31–61. Cl. 47.

Diplomat Products, Inc., North Bergen, N.J. 617,013, canc. Cl. 46.
Do-All Bra, Inc., Brooklyn, N.Y. 726,533, pub. 10–31–61. Cl. 39.
Dobbelmann, Louis, N.V., Dordrecht, Netherlands. 726,446, pub. 10–31–61. Cl. 17.
Donnis of Dallas, Dallas, Tex. 726,529, pub. 10–31–61. Cl. 39.
Double-Wear Shoe Co., Minneapolis, Minn. 726,524, pub. 10–31–61. Cl. 39.
Dow Chemical Co., The, Midland, Mich. 726,386, pub. 3–14–61. Cl. 1.
Drug Enterprises, Inc., Winston-Salem, N.C. 616,771, canc. Cl. 18.
Dunham-Bush, Inc., West Hartford, Conn. 726,476, pub. 12–13–60. Cl. 26.
Dunhill, Alfred, of London, Inc.: *See*—
Dunhill, Mary, Inc.
Dunhill, Mary, Inc., to Alfred Dunhill of London, Inc., New York, N.Y. 391,724, ren. 1–16–62. Cl. 51.
Durkee Famous Foods: *See*—
Glidden Co., The.
Durrwachter, Dr. Eugen, Doduco, Pforzheim, Germany. 726,435, pub. 10–31–61. Cl. 14.
Eagle Clothes, Inc., Brooklyn, N.Y. 726,526, pub. 11–7–61. Cl. 39.
Eagle-Picher Co., The: *See*—
Chicago Vitreous Enamel Product Co.
Earhart, Amelia, Travel Wares: *See*—
Orenstein, Samuel.
East Texas Engineering & Mfg. Co., Tyler, Tex. 726,614. Cl. 34.
Eastman Kodak Co., Rochester, N.Y. 726,413, pub. 10–31–61. Cl. 6.
Efron, Theodore, Mfg. Co., Chicago, Ill. 726,424, pub. 10–31–61. Cl. 12.
Elaboraciones Pesqueras del Cantabrico, S.A., Bilbao, Spain. 726,505–6, pub. 10–31–61. Cl. 46.
Electric Smelting & Aluminum Co. Inc., The, Lockport, N.Y., to Cowles Chemical Co., Cleveland, Ohio. 151,745–6, ren. 1–16–62. Cl. 52.
Elgin National Watch Co., Chicago, Ill. 328,008, canc. Cl. 27.
Elkay Mfg. Co., Chicago, Ill. 726,428–9, pub. 10–31–61. Cl. 13.
Elkay Mfg. Co., Chicago, Ill. 726,431, pub. 10–31–61. Cl. 13.
Espanola Equipment Ltd., Espanola, Ontario, Canada. 616,825, canc. Cl. 29.
Farr Co.: *See*—
Berry, Ansel P.
Flat Metal Mfg. Co., Inc., Plainview, N.Y. 726,432–3, pub. 10–31–61. Cl. 13.
Fishkin, Morris, Bradford, Pa. 616,890, canc. Cl. 39.
Fitzgerald Associates: *See*—
Fitzgerald, William B.
Fitzgerald, William B., d.b.a. Fitzgerald Associates, Chicago, Ill. 726,447, pub. 10–31–61. Cl. 18.
Florists' Telegraph Delivery Association, Detroit, Mich. 726,608, pub. 10–31–61. Cl. 107.
Flotill Products, Inc.: *See*—
Lewis, Tillie, Foods, Inc.
Folger, J. A., & Co., Kansas City, Mo. 726,571, pub. 10–31–61. Cl. 46.
Francette Foundations, Inc.: *See*—
Hoy, F. P., Inc.
Frayne Sportswear Mfgrs., Inc., Tampa, Fla. 726,528, pub. 10–31–61. Cl. 39.
Freeman, Bishop, Co., by change of name from Bishop David Freeman Co., Evanston, Ill. 726,612. Cl. 24.
Freeman, Bishop David, Co.: *See*—
Freeman, Bishop, Co.
Fuller Brush Co., East Hartford, Conn. 726,591, pub. 9–19–61. Cl. 51.
Galveston-Houston Breweries, Inc., to Triple "XXX" Corp., Galveston, Tex. 391,696, ren. 1–16–62. Cl. 45.
General Chemical Corp., Washington, D.C. 726,415, pub. 10–31–61. Cl. 6.
General Tire & Rubber Co., The, Akron, Ohio. 616,693, canc. Cl. 1.
Genesco Inc., Nashville, Tenn. 726,535, pub. 10–31–61. Cl. 39.
Gibraltar Corrugated Paper Co., Inc., North Bergen, N.J. 616,853, canc. Cl. 37.
Gilbert Plastics, Inc., Kenilworth, N.J. 726,388, pub. 10–31–61. Cl. 2.
Glidden Co., The, d.b.a. Durkee Famous Foods, Cleveland, Ohio. 726,568, pub. 8–8–61. Cl. 46.
Golub, Simon, & Sons, Inc., Seattle, Wash. 726,490, pub. 11–4–58. Cl. 27.
Goodrich, B. F., Co., The, Akron, Ohio. 152,409, ren. 1–16–62. Cl. 50.
Goodrich, B. F., Co., The, Akron, Ohio. 392,092, ren. 1–16–62. Cl. 35.
Goodrich, B. F., Co., The: *See*—
Oliver-Sherwood Co., The.
Gossard, H. W., Co., The, Chicago, Ill. 726,539, pub. 10–31–61. Cl. 39.
Gray Ban Corp., Wilkes-Barre, Pa. 726,589, pub. 10–31–61. Cl. 51.
Griscom-Russell Co., The, Massillon, Ohio. 154,038, ren. 1–16–62. Cl. 34.
Gubisch, Roland W., Chicago, Ill. 726,479, pub. 10–31–61. Cl. 26.
Guild Plastics, Inc., Cambridge, Mass. 726,398, pub. 10–31–61. Cl. 2.
Gulf Oil Corp., Pittsburgh, Pa. 616,728, canc. Cl. 6.
Gulf Oil Corp., Pittsburgh, Pa. 616,972–3, canc. Cl. 52.
Gulf South Laboratories, Inc., Baton Rouge, La. 726,569, pub. 10–31–61. Cl. 46.
Haelan Laboratories, Inc., now by change of name Connelly Containers, Inc., Philadelphia, Pa. 616,939, canc. Cl. 46.
Halpert, Edith G., Waltham, Mass. 617,009, canc. Cl. 26.
Halsey, Turner, Co., New York, N.Y. 726,554, pub. 10–31–61. Cl. 42.
Hamilton & Co. (London) Ltd., Wealdstone, England. 726,498, pub. 10–31–61. Cl. 29.
Hamilton-Skotch Corp., Hamilton, Ohio. 726,394, pub. 10–31–61. Cl. 2.
Hamilton-Skotch Corp., Hamilton, Ohio. 726,397, pub. 10–31–61. Cl. 2.
Hamilton-Skotch Corp., Hamilton, Ohio. 726,399, pub. 10–31–61. Cl. 2.
Hamilton Watch Co., Lancaster, Pa. 726,492, pub. 10–31–61. Cl. 27.
Hammermill Paper Co.: *See*—
Coast Envelope Co.
Harper Method, Inc., Rochester, N.Y. 726,590, pub. 10–31–61. Cl. 51.
Harris, Frieda A., d.b.a. The Ketchard Kitchens, Southampton, N.Y. 726,574, pub. 10–31–61. Cl. 46.
Harris, Verna, Dresden, Ontario, Canada. 617,017, canc. Cl. 51.
Harrison, Henry B., Brooklyn, N.Y. 616,886, canc. Cl. 39.
Hartmann Luggage Co., Racine, Wis. 726,475, pub. 10–31–61. Cl. 25.
Hecker-Jones-Jewell Milling Co., New York, N.Y., to Standard Milling Co., Kansas City, Mo. 151,803, ren. 1–16–62. Cl. 46.
Heltron Co., The, Chicago, Ill. 616,931, canc. Cl. 44.
Henkell & Co., Wiesbaden-Biebrich, Germany. 726,580, pub. 10–31–61. Cl. 47.
Hercules Powder Co., Wilmington, Del. 726,420, pub. 10–31–61. Cl. 10.
Hess, Goldsmith & Co., Inc., New York, N.Y. 726,549, pub. 10–31–61. Cl. 42.
Hettrick Mfg. Co., The, Toledo, Ohio. 616,838, canc. Cl. 32.
Hoerner Boxes, Inc., Keokuk, Iowa. 726,389, pub. 10–31–61. Cl. 2.
Hoffman, M., & Co., Inc., Boston, Mass. 726,527, pub. 10–31–61. Cl. 39.
Holmes, Archibald, & Son, Philadelphia, Pa. 616,917, canc. Cl. 42.
Home Brewing Co., Inc., d.b.a. Climax Beverage Co., to Climax-Tru-Ade Bottling Corp., Richmond, Va. 627,930, new cert. Cl. 45.
Hosch, G. C., Lake Worth, Fla. 726,613. Cl. 32.
Houdaille Industries, Inc., Buffalo, N.Y. 726,467, pub. 10–31–61. Cl. 23.
Hoy, F. P., Inc., to Francette Foundations, Inc., New York, N.Y. 148,669, ren. 1–16–62. Cl. 39.
Hughes, Paul, d.b.a. USA Mills, Hickory, N.C. 726,530, pub. 10–31–61. Cl. 39.
Hugo Bosca Co., Inc., Springfield, Ohio. 726,401, pub. 10–31–61. Cl. 3.
Huval Baking Co., Inc., Lafayette, La. 394,083, ren. 1–16–62. Cl. 46.
Ideal Watch Co., Inc., The, New York, N.Y. 726,491, pub. 10–31–61. Cl. 27.
Ile de France Fabrics, Inc., New York, N.Y. 616,915, canc. Cl. 42.
Imperial Chemical Industries Ltd., London, England. 616,845, canc. Cl. 34.
Industrial Corp. of America, Quakertown, Pa. 726,434, pub. 10–31–61. Cl. 13.
Ingersoll-Rand Co., New York, N.Y. 149,117, ren. 1–16–62. Cl. 23.
Ingram Oil Co.: *See*—
Ingram Products Co.
Ingram Oil and Refining Co.: *See*—
Ingram Products Co
Ingram Products Co., now by change of name Ingram Oil and Refining Co., assignee of Ingram Oil Co., to Murphy Corp., El Dorado, Ark. 692,564, new cert. Cl. 103.
Ingram Products Co., now by change of name Ingram Oil and Refining Co., to Murphy Corp., El Dorado, Ark. 692,570, new cert. Cl. 105.
Ingram Products Co., d.b.a. Ingram Oil and Refining Co., to Murphy Corp., El Dorado, Ark. 693,712, new cert. Cl. 15.
Ingram Oil and Refining Co., to Murphy Corp., El Dorado, Ark. 715,825, new cert. Cl. 15.
Insurance Budget, Inc., Toledo, Ohio. 726,603, pub. 10–31–61. Cl. 102.
Interstate Metal Products Co., Chicago, Ill. 726,511, pub. 10–31–61. Cl. 32.
Ironside Mfg. Co., Warren, Mich. 726,443, pub. 1–31–61. Cl. 16.
Janney, Semple, Hill & Co., Hopkins, Minn. 726,600, pub. 10–31–61. Cl. 101.
Jay Ann Co., Inc., San Antonio, Tex. 616,904, canc. Cl. 39.
Jewel Box, The: *See*—
Kenney, George R.
Johnson-Layne Coffee Co., The, to Manhattan Coffee Co., St. Louis, Mo. 154,591, canc. Cl. 46.
Johnson, S. C., & Son, Inc., Racine, Wis. 726,593, pub. 10–31–61. Cl. 52.
Kalamazoo Industrial Services, Inc., Kalamazoo, Mich. 726,466, pub. 10–31–61. Cl. 23.
Kamm, Abraham R., also d.b.a. Abraham R. Kamm Kaminsky, White Sulphur Springs, W. Va. 616,997, canc. Cl. 107.
Kamm, Abraham R., Kaminsky: *See*—
Kamm, Abraham R.
Kammerer, Marjorie, Associates: *See*—
Kammerer, Marjorie.
Kammerer, Marjorie, d.b.a. Marjorie Kammerer Associates, New York, N.Y. 726,404, pub. 10–31–61. Cl. 3.
Kendall Co., The, Walpole, Mass. 726,538, pub. 10–31–61. Cl. 39.
Kenlon Productions, Inc., New York, N.Y. 726,518, pub. 10–31–61. Cl. 36.
Kenney, George R., d.b.a. The Jewel Box, Sioux Falls, S. Dak. 726,495, pub. 10–31–61. Cl. 28.

Ken-Tron Corp., Lynn, Mass. 726,456–7, pub. 10–31–61. Cl. 21.
Ketchard Kitchens, The: *See*—
Harris, Frieda A.
Knoll Pharmaceutical Co., Orange, N.J. 726,448, pub. 10–31–61. Cl. 18
Koehler, Albert, Foley, Ala. 726,496, pub. 10–31–61. Cl. 28.
Komo Corp., Kokomo, Ind. 726,513, pub. 10–31–61. Cl. 34.
Kraft, Arthur, New York, N.Y. 616,984, canc. Cl. 100.
Kress, S. H., and Co. New York City, N.Y. 616,885, canc. Cl. 39.
Kucinskas, Brazilius, d.b.a. Religious Candles Mfg. Co., Brooklyn, N.Y. 616,749, canc. Cl. 15.
Kwikset Locks, Inc., Anaheim, Calif. 616,806, canc. Cl. 25.
Laboratory Equipment Corp., Benton Harbor, Mich. 394,757, ren. 1–16–62. Cl. 2b.
La Brea Securities Co., d.b.a. Rosemary Packing Co., Los Angeles and Santa Maria, Calif., to Oceano Packing Co., Oceano, Calif. 394,793, ren. 1–16–62. Cl. 46.
Lamport, Alexander, & Bro., New York, N.Y. 616,910, canc. Cl. 42.
Land O'Lakes Creameries, Inc., Minneapolis, Minn. 444,420, canc. Cl. 46.
Lane Magazine Co.: *See*—
Lane Publishing Co.
Lane Publishing Co., to Lane Magazine Co., Menlo Park, Calif. 511,453, new cert. Cl. 38.
La Plays Sextet, Brooklyn, N.Y. 726,607, pub. 10–31–61. Cl. 107.
Lentheric, Inc., New York, N.Y., to Helene Curtis Industries, Inc., Chicago, Ill. 391,613, ren. 1–16–62. Cl. 51.
Les Parfums de Dana, Inc.: *See*—
Younghusband, James L.
Lewis, Tillie, Foods, Inc., by change of name from Flotill Products, Inc., Stockton, Calif. 726,579, pub. 8–1–61. Cl. 46.
Lincoln Electric Co., The, Cleveland, Ohio. 726,532, pub. 10–31–61. Cl. 59.
Linker, Hal, Travel Service, Inc., d.b.a. Wonders of The World Tours, Los Angeles, Calif. 726,605, pub. 10–31–61. Cl. 105.
Lipka, Cornelius K., Kennett Square, Pa. 726,472, pub. 10–31–61. Cl. 23.
Lissak & Co., New Bedford, Mass. 726,523, pub. 10–31–61. Cl. 39.
Little, Arthur D., Inc., Cambridge, Mass. 726,502, pub. 10–31–61. Cl. 31.
Litwin and Sons, Inc., Cincinnati, Ohio. 726,493, pub. 11–4–58. Cl. 28.
Logistics Research Inc., Redondo Beach, Calif. 616,819, canc. Cl. 26.
Loroco Industries, Inc., Reading, Ohio. 726,583, pub. 10–31–61. Cl. 50.
Lyon Rural Electric Co., San Diego, Calif. 726,588, pub. 10–31–61. Cl 50.
Mac Gregor-Comarain, Paris, France. 726,514, pub. 10–31–61. Cl. 35
Manhattan Coffee Co.: *See*—
Johnson-Layne Coffee Co., The.
Mark Mfg. Co., Salem, Oreg. 726,505, pub. 10–31–61. Cl. 32.
Marshall-Wells Co., to Marshall-Wells Co., Duluth, Minn. 616,844, canc. Cl. 34.
Master-Krete, Inc., Kansas City, Mo. 726,441, pub. 10–31–61. Cl. 16.
Matherson-Selig Co., Harwood Heights, Ill. 726,584, pub. 10–31–61. Cl. 50.
McCafferty and Hunt, Hollywood, Calif. 616,998, canc. Cl. 107.
McClatchy Broadcasting Co., Sacramento, Calif. 616,999–617,000, canc. Cl. 107.
McGraw-Edison Co.: *See*—
American Laundry Machinery Co., The.
Melpar, Inc., Falls Church, Va. 726,488–9, pub. 10–31–61. Cl. 26.
Metal Mfg. Co., Chicago, Ill. 726,610. Cl. 2.
Metropolitan Telecommunications Corp., Plainview, N.Y. 726,480, pub. 10–31–61. Cl. 26.
Michigan Chrome & Chemical Co., Detroit, Mich. 394,559, ren. 1–16–62. Cl. 16.
Mid-America Corp.: *See*—
Superior Feed Mills, Inc.
Mill, Eddie, & Elevator Co.
Superior Feed Mills.
Midwest Dental Mfg. Co., Melrose Park, Ill. 726,564, pub. 10–31–61. Cl. 44.
Mill, Eddie, & Elevator Co., to Mid-America Corp., Oklahoma City, Okla. 191,828, new cert. Cl. 46.
Miller's Pre-pared Potato Co., Inc., Blue Island, Ill. 726,576, pub. 10–31–61. Cl. 46.
Mission of California, Inc.: *See*—
Berry, Ansel P.
Mission Valley Mills, Inc., New Braunfels, Tex. 726,544–5, pub. 10–31–61. Cl. 42.
Moberg Laboratories, Inc.: *See*—
Sharp Industries, Inc.
Modern Coffees, Inc.: *See*—
Per-Cup Coffee Corp.
Modglin Co., Inc., Los Angeles, Calif. 616,701, canc. Cl. 1.
Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. 726,444. Pub. 10–24–61. Cl. 16, Cl. 19. Cl. 21; pub. 7–4–61. Cl. 44. (Consolidated certificate, Classes 16, 19, 21, and 44.)
Morse Sewing Machine and Supply Corp., New York, N.Y. 726,515, pub. 12–27–60. Cl. 36.
Motorola Inc., Chicago, Ill. 726,458, pub. 10–31–61. Cl. 21.
Movado Watch Agency, Inc., New York, N.Y. 394,192, ren. 1–16–62. Cl. 27.
Murphy Corp.: *See*—
Ingram Oil and Refining Co.
Ingram Products Co.
Murphy, G. W. J., Co., Amesbury, to United Carr Fastener Corp., Boston, Mass. 148,487, ren. 1–16–62. Cl. 13.
National Blank Book Co., to National Blank Book Co., Holyoke, Mass. 148,173, ren. 1–16–62. Cl. 37.
National Dairy Products Corp., New York, N.Y. 726,409–10, pub. 10–31–61. Cl. 6.
National Distillers and Chemical Corp., by merger from Bridgeport Brass Co., Bridgeport, Conn. 726,436–7, pub. 10–31–61. Cl. 14.
National Federation of Coffee Growers of Colombia, New York, N.Y. 726,575, pub. 10–31–61. Cl. 46.
Needco of America Inc., Princeton, N.J. 726,503, pub. 10–31–61. Cl. 31.
Neiman-Marcus Co., Dallas, Tex. 726,536, pub. 10–31–61. Cl. 39.
New York Pants Co., Inc., New York, N.Y. 726,525, pub. 10–31–61. Cl. 39.
Noble Oil Products Co.: *See*—
Noble, Manlius W.
Noble, Manlius W., d.b.a. Noble Oil Products Co., Jacksonville, Fla. 726,438, pub. 10–31–61. Cl. 15.
Norris, Inc., Atlanta, Ga. 392,790, ren. 1–16–62. Cl. 46.
Northeast Scientific Corp., Acton, Mass. 726,462, pub. 10–31–61. Cl. 21.
Northwestern Consolidated Milling Co., The, Minneapolis, Minn., and New York, N.Y., to Standard Milling Co., Kansas City Kans. 153,811, ren. 1–16–62. Cl. 46.
Nova Chemical Corp., New York, N.Y. 616,718, canc. Cl. 6.
O'Brien Corp., The: *See*—
O'Brien Varnish Co.
O'Brien Varnish Co., to The O'Brien Corp., South Bend, Ind. 153,812, ren. 1–16–62. Cl. 16.
Oceano Packing Co.: *See*—
La Brea Securities Co.
Oliver-Sherwood Co., The, San Francisco, Calif., to The B. F. Goodrich Co., Akron, Ohio. 150,936, ren. 1–16–62. Cl. 23.
Ordont Laboratories, Inc.: *See*—
Ordont Orthodontic Laboratories, Inc.
Ordont Orthodontic Laboratories, Inc., d.b.a. Ordont Laboratories, Inc., St. Louis, Mo. 726,604, pub. 10–31–61. Cl. 103.
Orenstein, Samuel, d.b.a. Amelia Earhart Travel Wares, Maplewood, N.J. 726,402, pub. 10–31–61. Cl. 3.
Pacific Seven, Inc., Seattle, Wash. 616,945, canc. Cl. 46.
Packard Motor Car Co., now by change of name Studebaker-Packard Corp., Detroit, Mich. 616,778, canc. Cl. 19.
Paperlynen Co., Columbus, Ohio. 726,531, pub. 10–31–61. Cl. 39.
Parke, Davis & Co., Detroit, Mich. 150,512, ren. 1–16–62. Cl. 18.
Paulson Mfg. Corp., Fallbrook, Calif. 616,812, canc. Cl. 26.
Peacock Broom Co., San Francisco, Calif. 616,824, canc. Cl. 29.
Pelton's Spudnuts, Inc., Salt Lake City, Utah. 616,950, canc. Cl. 46.
Penick & Ford, Ltd., Inc., New York, N.Y. 726,406, pub. 10–31–61. Cl. 5.
Pepperell Mfg. Co., Boston, Mass. 726,547, pub. 10–31–61. Cl. 42.
Per-Cup Coffee Corp., to Modern Coffees, Inc., Boston, Mass. 616,708, canc. Cl. 2.
Perkel & Klein, Inc., New York, N.Y. 726,494, pub. 10–31–61. Cl. 28.
Pet Milk Co., St. Louis, Mo. 394,265, ren. 1–16–62. Cl. 46.
Phelan-Faust Paint Mfg. Co., to Phelan-Faust Paint Mfg. Co., St. Louis, Mo. 154,364, ren. 1–16–62. Cl. 16.
Phelon, R. E., Co., Inc., East Longmeadow, Mass. 616,786, canc. Cl. 21.
Phoenix Metal Products, Brooklyn, N.Y. 616,833, canc. Cl. 32.
Picture Detective Publishing Co., The, Derby, Conn. 616,893, canc. Cl. 35
Piedmont Throwsters, Inc., Charlotte, N.C. 616,924, canc. Cl. 43.
Pittsburgh Coke & Chemical Co., Pittsburgh, Pa. 617,004–5, canc. Cl. 6.
Porter, H. K., Co., Inc., Pittsburgh, Pa. 726,455, pub. 10–31–61. Cl. 21.
Premier-Hall Mfg. Co., Inc., Chicago, Ill. 616,841, canc. Cl. 32.
Pre-Vest, Inc., Cleveland, Ohio. 616,697, canc. Cl. 1.
Prima Footwear, Inc., Columbus, Ohio. 616,899, canc. Cl. 39.
Programs For Achievement in Reading, Inc., Providence, R.I. 726,521, pub. 10–31–61. Cl. 38.
Pyramid Knit Sales Corp., New York, N.Y. 726,548, pub. 10–31–61. Cl. 42.
Ramsdell, L. B., Co., Gardner, Mass. 616,837, canc. Cl. 32.
Randazzo, John J. G., Clayton, Mo. 726,567, pub. 10–31–61. Cl. 46.
Ranger Products Co., Inc., New Haven, Conn. 391,954, ren. 1–16–62. Cl. 15.
Raygram Corp., Mt. Vernon, N.Y. 726,460, pub. 10–31–61. Cl. 21.
Raymond Pulverizer Division, Combustion Engineering Co., Inc.: *See*—
Combustion Engineering Co., Inc.
Razorback Fiberglass Corp., Malvern, Ark. 726,450, pub. 10–31–61. Cl. 19.
Remington Arms Co., Inc., Bridgeport, Conn. 726,418, pub. 10–31–61. Cl. 9.
Republic Seltz Filter Corp., Newark, N.J. 726,501, pub. 9–20–60. Cl. 21.
Reynales, Eduardo, Bogota, Colombia. 726,581, pub. 10–31–61. Cl. 47.
Reynolds Aluminum Supply Co., Atlanta, Ga. 726,422, pub. 3–21–61. Cl. 12.
Ricci, Nina, S.A.R.L., Paris, France. 726,497, pub. 10–31–61. Cl. 28.

Roberts Pacific, Ltd., to Anderson, Clayton & Co., Dallas, Tex. 634,131, new cert. Cl. 46.
Rockland Chemical Co., Inc., West Caldwell, N.J. 726,416, pub. 10–31–61. Cl. 6.
Rosemary Packing Co.: *See*—
La Brea Securities Co.
Rubon Inc.: *See*—
Rubon Wood Finishing and Products Co.
Rubon Wood Finishing and Products Co., Kansas City, Mo., to Rubon Inc., Independence, Mo. 154,141, ren. 1–16–62. Cl. 29.
S.a.r.l. Manover, Paris, France. 726,391, pub. 10–31–61. Cl. 2.
S. & S. Industries, Inc., New York, N.Y. 726,541, pub. 10–31–61. Cl. 40.
Sacramento Freezers Inc.: *See*—
Sterling Industries Inc.
St. Regis Paper Co., New York, N.Y. 726,390, pub. 10–31–61. Cl. 2.
Samson Cordage Works, Boston, Mass. 726,611. Cl. 7.
Schwerzler, Charles F., Hudson Heights, N.J. 616,908, canc. Cl. 40.
Sea Island Mills, Inc., New York, N.Y. 392,835, reh. 1–16–62. Cl. 42.
Seaboard Finance Co., Los Angeles, Calif. 726,602, pub. 10–31–61. Cl. 102.
Sealy, Inc., Chicago, Ill. 726,509, pub. 10–31–61. Cl. 32.
Secretariat d'etat aux Finances et au Commerce, Tunis, Tunisia. 726,609, pub. 10–31–61. Cl. A.
Service Activities of Volunteer Engineers, Association, Chicago, Ill. 726,597, pub. 10–31–61. Cl. 100.
Sesco Products, Inc., to Clinton C. Schoonover and Samuel Fox d.b.a. The Kool-Rite Sales Co., Wichita, Kans. 616,779, canc. Cl. 19.
Shamrock Plastics Co. and Shamrock Plastics, div. of Sperzel Co.: *See*—
Sperzel Co.
Sharp Industries, Inc., Huntington Park, Calif., from Moberg Laboratories, Inc., Los Angeles, Calif. 726,439, pub. 9–29–59. Cl. 16.
Shawinigan Resins Corp., Springfield, Mass. 726,440, pub. 10–31–61. Cl. 16.
Shirley Fabrics Corp., New York, N.Y. 726,551, pub. 10–31–61. Cl. 42.
Shirley Fabrics Corp., New York, N.Y. 726,555–6, pub. 10–31–61. Cl. 42.
Shoecraft, Inc., New York, N.Y. 392,108, ren. 1–16–62. Cl. 39.
Shoecraft, Inc., New York, N.Y. 394,464, ren. 1–16–62. Cl. 39.
Shull, Edward, Miami, Fla. 616,889, canc. Cl. 39.
Siemag Feinmechanische Werke, G.m.b.H., Elserfeld/Sieg, Germany. 726,482, pub. 10–31–61. Cl. 26.
Snella, Lyla H., d.b.a. Wypit Co., Burbank, Calif. 726,594, pub. 10–31–61. Cl. 52.
Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.P.A., Milan, Italy. 726,559, pub. 10–31–61. Cl. 43.
Societe Nouvelle de Savonnerie, Marseilles, France. 616,970, canc. Cl. 52.
Soennecken, F. (A Kommanditgesellschaft), Bonn (Rhine), Germany. 726,519, pub. 10–31–61. Cl. 37.
Soennecken, F., Bonn, Germany. 616,861, canc. Cl. 37.
Southern Missionary College, Collegedale, Tenn. 616,823, canc. Cl. 29.
Southland Co., The, Yazoo City, Miss. 616,747, canc. Cl. 15.
Spartan Mills, Spartanburg, S.C. 616,909, canc. Cl. 42.
Spee Dee Sales Co., Walnut Creek, Calif. 726,423, pub. 10–31–61. Cl. 12.
Speer Products Co.: *See*—
Speer, Vernon D
Speer, Vernon D., d.b.a. Speer Products Co., Lewiston, Idaho. 726,419, pub. 10–31–61. Cl. 9.
Sperzel Co., d.b.a. Shamrock Plastics Co. and Shamrock Plastics, div. of Sperzel Co., Minneapolis, Minn. 726,430, pub. 10–31–61. Cl. 13.
Spinnerin Yarn Co., Inc., South Hackensack, N.J. 726,558, pub. 10–31–61. Cl. 43.
Stahel, Edward P., & Co., Inc., New York, N.Y. 726,562, pub. 10–31–61. Cl. 43.
Standard Milling Co.: *See*—
Hecker-Jones-Jewell Milling Co.
Northwestern Consolidated Milling Co., The.
Standard Ultramarine & Color Co., Huntington, W. Va. 726,421, pub. 10–31–61. Cl. 11.
Star Brush Mfg. Co., Inc., Boston, Mass. 726,499, pub. 10–31–61. Cl. 29.
Steam-O-Matic Corp., The, Sedalia, Mo. 726,512, pub. 10–31–61. Cl. 34.
Stef, Fran, Corp., New York, N.Y. 726,403, pub. 10–31–61. Cl. 3.
Steril-sil Co., The, Boston, Mass. 726,395, pub. 10–31–61. Cl. 2.
Sterling Brewers, Inc., Evansville, Ind. 394,670, ren. 1–16–62. Cl. 48.
Sterling Industries Inc., by change of name from Sacramento Freezers Inc., Sacramento, Calif. 726,570, pub. 10–31–61. Cl. 46.
Stetson Shoe Co., Inc., The, South Weymouth, Mass. 616,896, canc. Cl. 39.
Stewart Mfg. Co., Inc., Cedar Grove, N.J. 616,850, canc. Cl. 34.
Stockford, LeBaron E., Westboro, Mass. 726,598, pub. 10–31–61. Cl. 100.
Straub, W. F., & Co., Chicago, Ill. 392,988, ren. 1–16–62. Cl. 46.
Strecher-Traung Lithograph Corp., Rochester, N.Y. 392,927, ren. 1–16–62. Cl. 37.
Sued-Atlas Werke G.m.b.H., Mulheim (Ruhr), Germany. 726,516, pub. 10–31–61. Cl. 36.
Super-Cut, Inc., Chicago, Ill. 726,405, pub. 10–31–61. Cl. 4.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 313,683, new cert. Cl. 46.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 400,428, new cert. Cl. 46.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 411,080, new cert. Cl. 46.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 620,151, new cert. Cl. 46.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 621,482, new cert. Cl. 46.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 624,680, new cert. Cl. 46.
Superior Feed Mills, to Mid-America Corp., Oklahoma City, Okla. 626,634, new cert. Cl. 46.
Supply Service, Inc., Hutchinson, Kans. 726,484, pub. 10–31–61. Cl. 26.
Swimaster: *See*—
West Coast Chemicals and Solvents Corp.
Sydney-Thomas Corp., The, Cincinnati, Ohio. 616,709, canc. Cl. 2 and 37.
Tandy Leather Co., Fort Worth, Tex. 616,762, canc. Cl. 16.
Tasker Instruments Corp., Van Nuys, Calif. 726,483, pub. 10–31–61. Cl. 26.
Technology Instrument Corp., Acton, Mass. 726,463, pub. 10–31–61. Cl. 21.
Tel-Go Mfg. Corp., Houston, Tex. 726,473, pub. 10–31–61. Cl. 23.
Texal Co., Inc., The, Minneapolis, Minn. 726,563, pub. 10–31–61. Cl. 44.
Texas Star Flour Mills: *See*—
Burrus Mills, Inc.
Thombert Inc., Newton, Iowa. 726,606, pub. 10–31–61. Cl. 106.
Thompson Products, Inc., Cleveland, Ohio. 328,910, canc. Cl. 13.
Thompson Products, Inc., to Thompson Ramo Wooldridge Inc., Cleveland, Ohio. 393,347, ren. 1–16–62. Cl. 13.
Thompson Ramo Wooldridge Inc.: *See*—
Thompson Products, Inc.
Tornado-France, Paris, France. 726,504, pub. 10–31–61. Cl. 31.
Tote-Step Corp., Milwaukee, Wis. 726,586, pub. 10–31–61. Cl. 50.
Trans-American Traveler, Inc., Daytona Beach, Fla. 616,980, canc. Cl. 100.
Triple "XXX" Corp.: *See*—
Galveston-Houston Breweries, Inc.
Tropi Distributors, Newark, N.J. 616,937, canc. Cl. 46.
Turchan Follower Machine Co., Detroit, Mich. 616,793, canc. Cl. 23.
United-Carr Fastener Corp.: *See*—
Murphy, G. W. J., Co.
United Device Corp., Great Neck, N.Y. 616,808, canc. Cl. 26.
United Geophysical Co., Inc., to United Geophysical Corp., Pasadena, Calif. 616,982, canc. Cl. 100.
United Geophysical Corp.: *See*—
United Geophysical Co., Inc.
United Mineral & Chemical Corp., New York, N.Y. 726,407, pub. 10–31–61. Cl. 5.
United Mineral & Chemical Corp., New York, N.Y. 726,425, pub. 10–31–61. Cl. 12.
United States Rubber Co., New York, N.Y. 726,546, pub. 10–31–61. Cl. 42.
United States Testing Co., Inc., Hoboken, N.J. 726,596, pub. 10–31–61. Cl. 100.
United Technology Corp., Sunnyvale, Calif. 726,599, pub. 10–31–61. Cl. 100.
United Welding Co., The, Middletown, Ohio. 616,745, canc. Cl. 14.
Universal Corp., Dallas, Tex. 616,741–4, canc. Cl. 12.
USA Mills: *See*—
Hughes, Paul.
Vaughn, Inc., Memphis, Tenn. 726,414, pub. 4–4–61. Cl. 6.
Veb Carl Zeiss Jena, Jena, Germany. 726,481, pub. 8–22–61. Cl. 26.
Viking Superior Corp., Brooklyn, N.Y. 616,847, canc. Cl. 34.
Virginia Maid Hosiery Mills, Inc., Pulaski, Va. 616,905, canc. Cl. 39.
Vogel-Peterson Co., Elmhurst, Ill. 726,451, pub. 10–31–61. Cl. 19.
Volkmann & Co., Krefeld, Germany. 726,469, pub. 10–31–61. Cl. 23.
Walnut Groove Products Co., Inc.: *See*—
Walnut Grove Products Co.
Walnut Grove Products Co., to Walnut Grove Products Co., Inc., Atlantic, Iowa. 394,537, ren. 1–16–62. Cl. 46.
Walnut Grove Products Co., Inc., Atlantic, Iowa. 726,578, pub. 10–31–61. Cl. 46.
Warren Featherbone Co., The, Gainesville, Ga. 726,522, pub. 10–31–61. Cl. 39.
Waterloo Corrugated Box Co., Waterloo, Iowa. 616,714, canc. Cl. 2.
Webster Electric Co., Racine, Wis. 726,453, pub. 11–22–60. Cl. 21.
Welp's Breeding Farm, d.b.a. Welp's Hatchery, Bancroft, Iowa. 726,385, pub. 5–17–60. Cl. 1.
Welp's Hatchery: *See*—
Welp's Breeding Farm.
West Coast Chemicals and Solvents Corp., d.b.a. Swimaster, Los Angeles, Calif. 726,464, pub. 10–31–61. Cl. 22.
West Paint & Varnish Co., Everett, Mass. 726,445, pub. 10–31–61. Cl. 16.
Western Chemical Co., St. Joseph, Mo. 726,595, pub. 2–14–61. Cl. 52.
Western Ventures, Inc., Spokane, Wash. 616,699, canc. Cl. 1.
Weyerhaeuser Co.: *See*—
Weyerhaeuser Timber Co.

Weyerhaeuser Timber Co., to Weyerhaeuser Co., Tacoma, Wash. 391,650, ren. 1–16–62. Cl. 1.
Wincharger Corp., Minneapolis, Minn. 726,454, pub. 10–31–61. Cl. 21.
Williamson, Benjamin A., d.b.a. Woodson Nut Machinery Co., St. Louis, Mo. 726,474, pub. 10–31–61. Cl. 23.
Wilson, Pen, Co. *See*—
Wilson, Penrhyn.
Wilson, Penrhyn, d.b.a. Pen Wilson Co., Charlotte, N.C. 616,925, canc. Cl. 43.
Winne, Frank W., & Son Inc., Philadelphia, Pa. 726,417, pub. 10–31–61. Cl. 7.
Wisconsin Wire Works, Appleton, Wis. 726,426, pub. 10–31–61. Cl. 13.
Wiss, J., & Sons Co., Newark, N.J. 726,470, pub. 8–8–61. Cl. 23.
Wolf, Jacques, & Co., Newark, N.J. 726,408, pub. 10–31–61. Cl. 6.
Wolf, John, Textiles, Inc., New York, N.Y. 726,550, pub. 10–31–61. Cl. 42.
Wonders of The World Tours: *See*—
Linker, Hal, Travel Service, Inc.
Woodson Nut Machinery Co.: *See*—
Williamson, Benjamin A.
Wypit Co.: *See*
Snella, Lyla H.
Yale & Towne Mfg. Co., The, Stamford, Conn. 154,188, ren. 1–16–62. Cl. 19.
Younghusband, James L., Chicago, Ill., to Les Parfums de Dana, Inc., New York, N.Y. 393,970, ren. 1–16–62. Cl. 52.
Yum-Burger, to Council Mfg. Corp., Fort Smith, Ark. 614,051, new cert. Cl. 46.
Zellstoffabrik Waldhof Mannheim-Waldhof, Germany. 616,858, canc. Cl. 37.
Zenith Radio Corp., Chicago, Ill. 616,932, canc. Cl. 44.

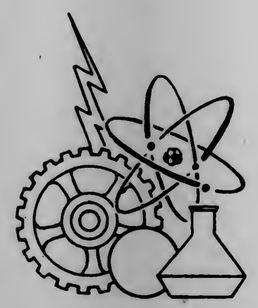
U.S. GOVERNMENT PRINTING OFFICE: O—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

January 23, 1962 • Volume 774 • Number 4



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of January 23, 1962	725
New Applications Received	725
Notices	
Notice of Tentative Recordation of a Trade Name	725
Adverse Decisions in Interferences	725
Disclaimers	725
Applications—Filing Dates	725
Board of Appeals Decisions Rendered in the Month of December 1961	725
Condition of Patent Applications	726
Decisions in Patent and Trademark Cases	
In re Malecki	728
Patent Suits	730
Plant Patents Granted	732
Patents Granted	
General and Mechanical	733
Chemical	882
Electrical	916
Design Patents Granted	963
Index of Patentees	i
Classification of Patents	xxi

Trademarks

Issue of January 23, 1962	TM 115
Applications Filed	TM 115
Condition of Trademark Applications	TM 115
Notices	
Notice of Tentative Recordation of a Trade Name	TM 115
Trademark Suits	TM 115
Public Law 87–354	TM 116
Marks	
Marks Published for Opposition (333)	TM 117
Registrations Issued	
Principal Register	TM 144
Supplemental Register	TM 148
Registrations Renewed	TM 150
Registrations Canceled	TM 151
Registrations Amended, Disclaimed, Corrected, etc.	TM 151
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

Notice of Tentative Recordation of a Trade Name

[T.D. 55528]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., Dec. 8, 1961

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"GOJAX HOUSEWARES, INC.," a corporation organized under the laws of the State of Florida, located and doing business at 38 S.E. 8th Street, Miami 32, Florida. This trade name is used in connection with cutlery, china, housewares, etc., manufactured in Japan.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after January 15, 1962, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after January 15, 1962, of any opposition proceeding.

Until 45 days after January 15, 1962, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,752,791, J. J. Jarosh, C. A. Haskell, and W. W. Dunnell, Jr., Gyroscopic apparatus, decided Nov. 9, 1961, Interference No. 88,604, claims 1 through 3 and 6 through 11.

Pat. 2,778,807, J. K. Boggs, F. P. Ford, and J. H. McAteer, Oil extended synthetic rubber compositions, decided Oct. 30, 1961, Interference No. 90,403, claim 2.

Pat. 2,827,571, H. A. Klasens and W. J. Oosterkamp, Intensifying screen for making X-ray registrations, decided Sept. 28, 1961, Interference No. 90,090, claims 1 and 2.

Pat. 2,850,361, W. E. Austin, Power recovery system, decided Dec. 14, 1961, Interference No. 89,872, claims 2, 3, 5, 6, and 7.

Pat. 2,859,276, J. J. Saykay, Apparatus for key operated mechanics, decided Oct. 12, 1961, Interference No. 90,872, claims 1, 2, and 3.

Pat. 2,862,556, M. R. Tek, Water flooding method, decided Nov. 27, 1961, Interference No. 90,870, claims 1, 2, and 5.

Pat. 2,883,990, J. Nichols, Cigarette element for tobacco smoke, decided July 25, 1961, Interference No. 90,437, claims 1 through 7.

Pat. 2,884,197, A. Whittell, Jr., Thermostatic flow governor, decided Aug. 10, 1961, Interference No. 90,722, claims 1, 2, 4, and 7.

Pat. 2,926,221, W. A. Kagdis, Loudspeaker construction, decided Nov. 15, 1961, Interference No. 91,327, claims 1 and 2.

Pat. 2,953,285, H. P. McKelvey, Extension nozzle, decided Nov. 30, 1961, Interference No. 91,803, claims 1 and 2.

Disclaimers

2,831,264.—*Ira A. Weaver*, Springfield, Ill. WHEEL ALIGNMENT GAUGE. Patent dated Apr. 22, 1958. Disclaimer filed Dec. 8, 1961, by the assignee, *Dura Corporation.*

Hereby enters this disclaimer to claims 1 through 16 of said patent.

2,868,897.—*Douglas J. Hamilton*, Santa Monica, Calif. LOW OUTPUT IMPEDANCE SEMICONDUCTOR AMPLIFIER. Patent dated Jan. 13, 1959. Disclaimer filed Dec. 11, 1961, by the assignee, *Hughes Aircraft Company.*

Hereby enters this disclaimer to claims 1, 2 and 3 of said patent.

Applications—Filing Dates

On and after February 1, 1962, the Application Branch will accord a filing date as of the date of receipt in the Office to application papers which include all of the necessary components of a complete application, even though there appear to have been omitted therefrom either:

(a) one or more figures of the drawing
(b) one or more pages of the specification
(c) one or more claims.

The apparent omission will be noted on the filing receipt mailed to applicant so that he may take any action in the matter which he deems appropriate or necessary.

Dec. 22, 1961. EDWIN L. REYNOLDS,
First Assistant Commissioner.

Board of Appeals Decisions Rendered in the Month of December 1961

Examiner affirmed	286
Examiner affirmed in part	34
Examiner reversed	72
Total	392

New Applications Received During November 1961

Patents	7,043
Designs	429
Plant Patents	7
Reissues	21
Total	7,500

Issue

Patents	847	No. 3,017,634 to No. 3,018,480, incl.
Designs	25	No. 192,110 to No. 192,134, incl.
Plant Patents	1	No. 2,123
Total	873	

CONDITION OF PATENT APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of pending applications (excluding Designs)	196,777
Total number of pending Design applications	5,445
Total number of applications awaiting action (excluding Designs)	95,028
Total number of Design applications awaiting action	1,432
Date of oldest new application	Aug. 31, 1960
Date of oldest amended application	July 11, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 55, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	3-30-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-4-61	5-17-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	12-2-60	12-19-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-3-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-13-61	2-2-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	4-24-61	4-18-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-2-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-61	1-13-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-5-60	12-9-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-13-60	11-29-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-22-60	10-14-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-6-60	12-16-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	9-13-60	11-10-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-1-61	4-26-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	3-6-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-7-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-24-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-25-61	5-9-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	2-6-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	1-11-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-61	1-30-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	11-15-60	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Commutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	4-24-61	4-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	11-3-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	1-30-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-6-61	3-22-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	12-27-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-19-60	1-11-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	11-25-60	12-1-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-9-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	12-16-60
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	11-17-60	11-21-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	8-31-60	7-11-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	5-8-61	5-25-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-10-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-9-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-20-60	9-16-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-6-61	1-6-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-23-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	11-1-60	11-2-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-1-61	5-1-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-6-61	3-17-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-3-60	10-14-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-8-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-29-60	12-5-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	1-3-61	12-20-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-3-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-8-60	11-10-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-30-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-11-61	4-4-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-23-60	12-9-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-1-60	12-2-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	10-14-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	10-19-60	10-13-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-4-60	9-16-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-21-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	12-6-60	12-5-60
81. (III) MONCURE, J. A., Industrial Arts	8-8-61	7-28-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-1-61	8-7-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	11-18-60	11-18-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	6-30-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	1-30-61	1-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-8-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during January 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1961*.

Patents.....Numbers 2,966,154 to 2,968,612 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE MALECKI

No. 6729. Decided December 18, 1961

[—CCPA—: —F.2d—: —USPQ—]

1. PATENTABILITY—PARTICULAR SUBJECT MATTER—METHOD OF PRESERVING EDIBLE PLANT PRODUCTS AND THE RESULTING PRODUCTS.

The decision of the Board of Appeals refusing certain claims to a method of preserving edible plant products and to the resulting products as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 398,410.

AFFIRMED.

Pennie, Edmonds, Morton, Barrows and Taylor, Clarence M. Fisher (*W. B. Morton*, of counsel) for appellant.

Clarence W. Moore (*Raymond E. Martin*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals affirming the Primary Examiner's rejection of claims 16 to 21, inclusive, as indefinite and functional at the point of novelty, and all the claims, 16 to 25, inclusive, as unpatentable over certain prior art.

Claims 16 and 22 are illustrative and read:

16. The method of preserving edible plant products which consists in treating the product to remove from a portion of its surface substantially all dead plant tissue and coating the surface while consisting essentially of living plant tissue with a gelatinous film adhering to and protecting the surface.

22. A new food product consisting of a fresh edible plant product having a portion of its surface exposed by removal of overlying plant tissue, said surface being substantially free of dead plant tissue and coated with a gelatinous film adhering to such surface and covering the same.

The references relied on are:

Elion, 2,298,933, October 13, 1942.
Ferguson, 2,532,489, December 5, 1950.
Stoloff, 2,567,085, September 4, 1951.

The claimed invention relates to treating vegetables and fruits for the purpose of inhibiting or retarding discoloration and deterioration. The process consists of two steps: first, treating the produce by peeling and slicing to remove substantially all dead plant tissue from the surface; and second, while the surface is still essentially living plant tissues, coating it with a gelatinous film.

Numerous peeling operations are disclosed in appellant's specification. The basic requirement is stated as follows:

The principle of the peeling according to my methods is the removal of the skin in such a manner and at such conditions that the potato flesh underneath is not killed and the obtained peeled surface is devoid of dead cells or parts thereof, and consists essentially of only living cells.

One such peeling operation disclosed by appellant utilizes large grain abrasives together with a reducing agent, such as water soluble sulfite, bisulfite or thiosulfate.

In describing the second step, appellant's specification states:

My preferred treatment of pre-peeled potatoes consists in covering them with a coating of an aqueous dispersion of some high molecular, non-toxic to potato cells, hydrophile polymer or mixture of polymers, such as for instance methylcellulose, carboxymethylcellulose, watersoluble ethylcellulose, polyvinylalcohol, agar, carageen (Irish moss), pectin, algin, or alginates, Iceland moss, gums of tragacant, arabic, senegal, karaya, karya, guar, locust beam, etc. etc.

The Elion patent relates to a method of treating cut surfaces of fruits and vegetables to retard or inhibit discoloration. The treatment consists of immersing the peeled and cut produce in a dilute solution, 0.05 to 0.5%, of sodium thiosulfate. Although Elion exemplifies the treatment as being applied after the peeling and cutting operation, he adds that: "My treatment may be applied at any convenient time so long as the thiosulfate is present when the darkening normally occurs." He further states: "The treatment may be combined with other known treatments for inhibiting the discoloration of cut surfaces of fruits and vegetables * * *."

The Ferguson patent relates to a method of surface-coating fresh perishable foods for the purpose of retarding decay, preventing undue loss of natural moisture, and retarding the development of undesirable changes resulting from oxidative processes. The coating composition comprises an aqueous solution including a colloidal substance such as gelatine, agar-agar, pectin or Irish moss. No mention is made of peeling the fruit or vegetable.

The Stoloff patent relates primarily to a process of extending the life of frozen fish fillets by treating them, prior to freezing, with a solution of Irish moss and ascorbic acid. But Stoloff also reveals that:

* * * fresh vegetables may be dipped, immediately after picking, in these solutions whereby said vegetables are protected from deterioration and retain their fresh-picked flavor even after prolonged storage time required for shipment and marketing thereof. Likewise fruits such as apples which are ordinarily peeled and cut prior ot baking may be treated after the peeling and cutting operations with these coating solutions and the resulting treated fruit stored for a prolonged period of time without any substantial discoloration or deterioration of the fruit taking place. * * *

Appellant contends the Board erred in affirming the rejection of all claims on the prior art, as well as the rejection of only certain claims as indefinite and functional. We find it necessary to consider only the art rejections, as it applies to all the claims on appeal, the absence of error in that respect obviating the necessity of considering the rejection on functionality.

With regard to the art rejection, appellant's brief before this court sets forth two alleged errors by the Board. The first contention is that the Board *speculated* that some of the coated fruit obtained by the Stoloff process would be free of dead tissue. The second contention is that the Stoloff patent does not disclose a protective gelatinous film. These will be treated in order.

The Board, in affirming the Examiner's rejection on the art, stated:

It is therefore apparent to us that in those instances in the prior art where the peeling was deep enough inherently to remove all of the dead tissue, and in those instances where the vegetables were peeled soon enough after picking, appellant's results of an undiscolored product were obviously attained. * * * While discolored products may also have been obtained, appellant's claims nevertheless are completely anticipated by those portions of the prior art product which were not discolored * * *.

In that regard, appellant's brief states:

The Board's theory seems to be that the Stoloff patent discloses the application of a gelatinous coating to the surfaces of freshly peeled fruit and that although

the patent makes no mention of dead tissue and the necessity of removing such tissue, there would necessarily be some pieces which did not have dead tissue on the surfaces and that those particular pieces would be the same as the product of applicants [sic] process. This, of course, is mere speculation • • •.

We find that the Board's statement was not "mere speculation" on its part but, rather, was a reliance on admissions made by appellant. It is noted that the Board prefaced its remarks with the following statement:

The appellant has admitted • • • the prior art knowledge of plant products coated with gelatin, as exemplified by Stoloff, and the presence in the prior products of certain portions which do not exhibit discoloration while others exhibit partial discoloration. Appellant also admits • • • the possibility of removing all dead tissues by any method of peeling and cutting, and • • • it is pointed out that freshly gathered vegetable products do not have dead tissues.

Appellant's second contention is:

The patent [to Stoloff] does not disclose the application of a protective gelatinous film to a freshly peeled surface of a fruit or vegetable, with said film adhering to and covering said surface • • •. The treating liquid is water containing 1% Irish moss extract and 0.2% ascorbic acid. • • • A treatment of this kind will not produce a protective film.

That contention appears to overlook Stoloff's disclosure that his advantageous effect is due to the fact that the viscosity of the solution causes the product "to be completely coated with a film of appreciable dimensions."

[1] Finding none of the errors alleged by appellant with respect to the rejection on the art, the decision is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,324,416, E. E. Murray, Buffing or polishing machine, **filed** Feb. 1, 1960, D.C., E.D. Mich. (Detroit), Doc. 19/814, *Murray-Way Corporation et al. v. Acme Manufacturing Co.* Order holding claims 2, 4, 7, 8 and 9 of patent infringed Nov. 16, 1961.

2,410,793, Winnek and Roblin, Jr., Sulfonamido pyrimidines, **filed** Mar. 6, 1961, D.C.N.J. (Newark), Doc. 166/61, *American Cyanamid Company v. Edgar Ostrander Company.* Consent judgment; injunction granted Nov. 24, 1961.

2,502,151, R. J. Horclois, Dimethylaminoalkylamino antihistaminic compounds, **filed** Nov. 15, 1961, D.C., E.D. Mo. (St. Louis), Doc. 61–C–362(2), *Merck & Co., Inc. et al. v. The Pfeiffer Company.* Same, **filed** July 12, 1961, D.C., S.D.N.Y., Doc. 61/2460, *Merck & Co., Inc. et al. v. Herman Wittelshefer et al.* Consent judgment; patent held valid and infringed Nov. 27, 1961.

2,650,284, K. Berger, Lamp harp, **filed** Aug. 16, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. C–20111, *Kornel Berger et al. v. Angel Harp Manufacturing Corp. et al.* Dismissed by stipulation Nov. 20, 1961.

2,711,391, H. L. Kahler, Phosphate-chromate corrosion protection in water systems, **filed** Nov. 18, 1961, D.C. Del. (Wilmington), Doc. 2395, *Betz Laboratories, Inc. v. Avisun Corporation.*

2,715,909, N. Rosenstein et al., Synthetic continuous filament yarn in the continuous filament yarn state, **filed** Nov. 22, 1961, D.C. Md. (Baltimore), Doc. 13/435, *Spunize Company of America, Inc. v. Textured Yarn Company, Inc.*

2,730,414, C. H. Cleveland, Knockdown toy glider, **filed** Nov. 21, 1961, D.C. Oreg. (Portland), Doc. 61/498, *North Pacific Products Company v. American Junior Aircraft Company.*

2,740,379, R. A. Collins, Farrowing pen, **filed** July 30, 1959, D.C., N.D. Iowa (Cedar Rapids), Doc. 669, *Robert A. Collins et al. v. Foster Owen.* Order holding patent invalid: complaint dismissed with prejudice Nov. 16, 1961.

2,792,572, Rosenbaum and Harvey, Knit garment, **filed** Nov. 27, 1961, D.C., S.D.N.Y., Doc. 61/4184, *Mock Fashioning Associates v. Aimcee Wholesale Corporation.*

2,802,698, P. Chilo, Lamp harp, **filed** June 27, 1958, D.C., E.D.N.Y. (Brooklyn), Doc. C–18/825, *Chilo Manufacturing and Plating Co., Inc. v. Angel Harp Manufacturing Corporation.* Complaint and counterclaim dismissed by stipulation Nov. 17, 1961.

2,963,736, F. C. Osten, Automatically-locking sash balance for removable sash windows, **filed** Nov. 27, 1961, D.C., E.D. Mich. (Detroit), Doc. 21/913, *Malta Manufacturing Company v. Fred C. Osten, Sr. et al.*

2,917,329, W. F. Laser, Rotary seal, **filed** Nov. 15, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1950, *Cartriseal Corporation v. Chicago Rawhide Manufacturing Company.*

2,917,843, W. M. Scholl, Foot cushioning device with secured pad, **filed** Nov. 14, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1942, *The Scholl Manufacturing Co., Inc. v. Fairmark Manufacturing Company et al.*

2,920,371, J. C. Shoemaker, Tie wires for concrete forms, **filed** Apr. 4, 1960, D.C., W.D. Wis. (Madison), Doc. 3307, *Simplex Forms System, Inc. v. O. James Elifritz et al.* Consent judgment; defendants enjoined Oct. 6, 1961.

2,977,902, E. H. L. Johannes, Apparatus for trimming and cutting predetermined lengths of spaghetti, **filed** Nov. 27, 1961, D.C.N.J. (Camden), Doc. 1005/61, *De Francisci Machine Corporation et al. v. Campbell Soup Company.*

2,978,151, E. P. Sundholm, Multi-fill grease gun, **filed** Nov. 21, 1961, D.C. Minn. (Minneapolis), Doc. 4/61/304, *Edwin P. Sundholm et al. v. K.-P. Manufacturing Company.*

2,967,568, Weininger and Liebhafsky, Cells and batteries, **filed** Aug. 19, 1959, D.C., N.D. Calif. (San Francisco), Doc. 38/462, *Smith-Blair, Inc. v. Dresser Industries, Inc.* Declaratory judgment holding claims 1 to 8 of patent invalid Nov. 24, 1961.

2,987,855, R. C. Singleton et al., Composite T-beam, **filed** Nov. 21, 1961, D.C.N.J. (Newark), Doc. 967/61, *KSM Products, Inc. v. Gregory Industries, Inc.*

2,991,327, F. G. Belick, Junction box, **filed** Nov. 9, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1918, *Belt Electric Company v. Slater Electric, Inc. et al.*

2,993,106, Maudlin and McKinzie, Heating control system, **filed** Nov. 29, 1961, D.C., S.D. Ohio (Columbus), Doc. 6261, *Stewart-Warner Corporation v. Midland-Ross Corporation.*

3,009,512, L. Guay, Method and means for forming ribbon composed of separable extruded rubber threads, **filed** Nov. 21, 1961, D.C.R.I. (Providence), Doc. 2870, *Precision Thread Co., Inc. v. Jade Rubber Corporation.*

Re. 24,166, B. Stiller, Self-closing container, **filed** C.C.A., 6th Cir., Doc. 14/411, *Benjamin Stiller et al. v. Squeez-A-Purse Corporation.* Order directing District Court to strike paragraphs 2, 2(a) and 4 from the judgment of Aug. 17, 1960, as amended Sept. 27, 1960 and substitute therefor: (2) "The plaintiffs' complaint is dismissed and (2a) the defendants are awarded judgment of validity and infringement on their counterclaim." (4) "Reissue Patent No. 24,166 of the United States is valid at law. Claim 3 of the patent constitutes invention."

Des. 172,545, E. F. Kumpf, Game board, **filed** June 29, 1959, D.C., N.D. Ohio (Toledo), Doc. 8229, *Northwestern Mail Box Company v. Ohio Art Company.* Stipulation and order dismissing cause June 13, 1961.

Des. 184,029, E. E. Schaefer, Furniture leg bracket, **filed** Nov. 21, 1961, D.C., E.D. Mo. (St. Louis), Doc. 61–C–370(3). *Edward E. Schaefer v. Gerber Wrought Iron Products, Inc.*

Des. 190,421, W. B. Parker, Chair, **filed** June 19, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1027, *Daystrom, Inc. v. National Metalcares, Inc.* Patent held valid; defendant enjoined (notice Nov. 27, 1961).

PLANT PATENTS

GRANTED JANUARY 23, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,123
ROSE PLANT
Joshua Howard Thompson, Jr., Kennett Square, Pa., assignor to J. H. Thompson's Sons, Kennett Square, Pa., a partnership
Filed Mar. 6, 1961, Ser. No. 93,822
1 Claim. (Cl. 47—61)

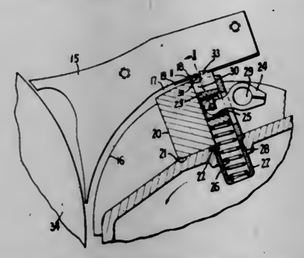
A new and distinct variety of rose plant of the hybrid polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of general similarities to its parent variety "Garnette" (unpatented), but being essentially distinguished therefrom by a more vigorous habit of growth, a distinctive luminescent Dark Rose Red general color tonality of the flowers, and a greater depth of color on both surfaces of the flower petals which gives the flowers a darker red general coloration as compared with the dark pink general coloration of the flowers of "Garnette."

PATENTS

GRANTED JANUARY 23, 1962

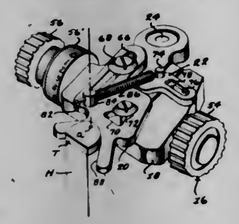
GENERAL AND MECHANICAL

3,017,634
STAPLE WIRE CUTTING DEVICE FOR PRINTING PRESS STITCHING APPARATUS
Michael Haück and Martin Wieser, Augsburg, Germany, assignors to Maschinenfabrik Augsburg-Nurnberg A.G., Augsburg, Germany
Filed Mar. 24, 1959, Ser. No. 801,506
Claims priority, application Germany Apr. 19, 1958
2 Claims. (Cl. 1—7))



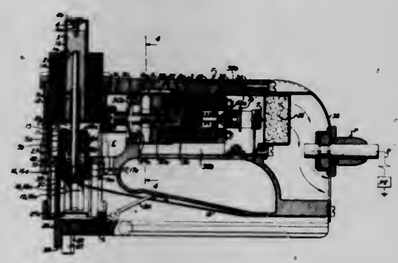
1. In a printing press folding apparatus having a rotary stitching cylinder and a stationary stitching horn overlying said cylinder, means for feeding wire to form staples onto the under face of said horn, a radially movable staple forming plunger mounted on the periphery of said cylinder, said plunger having spaced projections for bending said wire, a circular knife loosely rotatable in one of said projections for cutting a length of wire to be formed into a staple, means on said horn for guiding said wire and cooperating with said knife for cutting said wire, and additional means on said horn for holding said wire after being cut and cooperating with said projections for forming a staple.

3,017,635
FASTENER LOCATING MEANS
John G. Wright, Atlanta, Ga., assignor to The Auto-Soler Company, a corporation of Georgia
Filed June 14, 1960, Ser. No. 35,959
4 Claims. (Cl. 1—19)



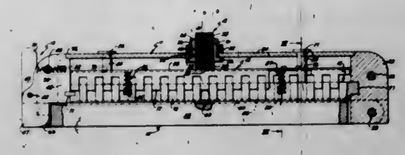
1. A work positioning device for a fastener inserting machine comprising a bracket member, a slide member carried on said bracket member, means for adjusting the position of said slide member on said bracket member, a work guiding member having a work receiving recess and lost motion connections with both said bracket member and said slide member, a lever member pivoted intermediate its length on said slide member and having a lost motion connection adjacent one end thereof with said bracket member, means biasing said work guiding member away from said lever member to the farthest position allowed by the lost motion connection of said work guiding member with said slide member, and the other end of said lever member limiting opposite motion of said work guiding member against the bias thereon in accordance with the adjusted position of said slide member on said bracket member.

3,017,636
STAPLING APPARATUS
Wolfgang Koennecke, Eberbach, Neckar, Germany, assignor to Elastic Aktiengesellschaft vormals M. Vogel A.G., Frankfurt am Main, Germany
Filed Nov. 4, 1957, Ser. No. 694,252
Claims priority, application Germany Nov. 3, 1956
5 Claims. (Cl. 1—49)



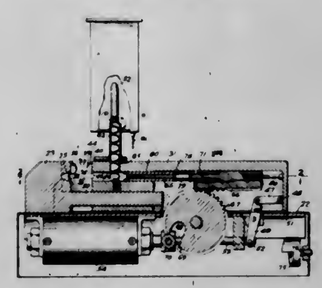
1. Apparatus for driving a fastener into a body by means of a plurality of hammering strokes comprising a frame including means for accommodating the fastener and means for driving the fastener and having a fastener driving channel adjacent thereto for the ejecting of said fastener, an anvil movably supported on said frame adjacent said channel for ejecting the fastener out of said channel, a hammer movable independently of said anvil, and electromagnetic coil encompassing the hammer, said hammer being of ferrous material and being responsive to said coil for making forcible contact with the anvil for ejecting the fastener, a source of electrical power coupled to said coil for activating the same and a switch on the frame responsive to the pressure of the latter against said body for coupling the source to said coil, the hammer having a normal position of rest, and comprising contacts respectively positioned on the hammer and on the frame, said contacts being engaged with the hammer in its normal position, a further set of contacts on the anvil, an electromagnetic relay on the frame, said source being coupled via said relay to said further set and from the latter via the first said contacts to said hammer, the hammer being grounded to complete a first circuit, said coil being connected to ground and connectible via said relay to said source, the engagement of the first said contacts actuating said relay to couple the coil to said source, the engagement of the hammer and anvil controlling said further set of contacts to disconnect the source and coil.

3,017,637
SURGICAL SUTURING INSTRUMENT
Arnold Sampson, Churchill, Pa.
(3445 Ridgewood Drive, Pittsburgh, Pa.)
Filed July 10, 1959, Ser. No. 826,244
4 Claims. (Cl. 1—50)



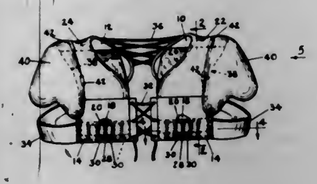
1. A stomach suturing instrument for stapling tissue comprising a clamp having a pair of elongated jaws, means pivotally connecting said jaws on one end, means for automatically locking said jaws in closed relation at the other end, one of said jaws having a pair of staple-aligning openings with a longitudinal groove between said openings extending from said pivotal connection to immediately adjacent said locking means, the other of said jaws having a longitudinal series of indentations with a corresponding longitudinal groove between said indentations and screw actuated means for driving staples through said aligning openings into said indentations.

3,017,638
MACHINE FOR TYING CASINGS
Howard Kelem, Far Rockaway, N.Y. (% Global Industrial Machinery Corp., 415 Beach 72nd St., Arverne 92, N.Y.)
Filed Apr. 11, 1960, Ser. No. 21,481
19 Claims. (Cl. 1—329)



1. In a machine for applying a fastener to a casing, means for compacting the end portion of a casing, means for advancing a U-shaped fastener having legs each ending in a flat edge to a position around and in outward spaced relation to the compacted casing end, a first air-operated means for actuating the casing-compacting means and the fastener-advancing means, a second air-operated means operated by the exhaust from the first air-operated means, a hopper, means actuated by the second air-operated means for rotating the hopper, a chute leading from the hopper to the fastener-advancing means, means in the hopper and extending into the chute for aligning fasteners in a row, means for turning the leading fastener of the row in the hopper about the end edge of one leg as a pivot and for restraining the movement of said one leg as the fastener leaves the aligning means thereby to permit the fastener to turn and to drop by gravity out of the hopper and into the chute in a predetermined position.

3,017,639
PROTECTIVE ARMOR FOR ATHLETIC USE
John Mark Foley, West Boylston, Mass.
(23 Carmela Terrace, Thompsonville, Conn.)
Filed Apr. 24, 1959, Ser. No. 808,836
6 Claims. (Cl. 2—2)



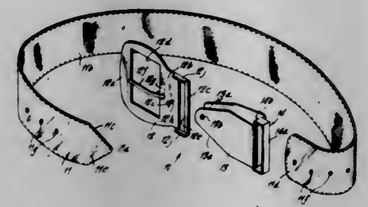
1. A protective shoulder pad for athletic use comprising a supporting member mounted on the shoulders of the user, means forming pockets on said supporting member, said pockets being arranged on said supporting member and adapted to lie at the chest and back of the body of the user, resilient means located in said pockets a protective member, terminal portions thereof slidably mounted within said pockets and resting on and being supported by said resilient means, said protective member being held by said resilient means in spaced relation with respect to the supporting member, the protective member being located exteriorly with relation to said supporting member and being in a position to absorb a blow thereon, the supporting member conforming closely to the shoulders of the user thereof, said protective member being bodily displaced by said blow against the action of the resilient means toward the supporting member and absorbing the blow, said resilient means returning the protective member to original spaced condition relative to the supporting member.

3,017,640
NOVELTY SOCKS
Mintaetta Winn Cardwell, 830 W. 9th, and Bertha Brown Powers, 1123 Powers Drive, both of Tyler, Tex.
Filed Apr. 3, 1959, Ser. No. 803,999
5 Claims. (Cl. 2—239)



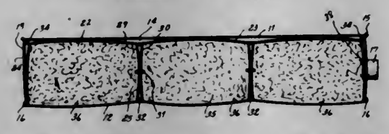
1. A novelty sock including, a sock foot having a sole portion terminating in a toe and an instep portion, an ankle portion adjoining the sock foot, the sock foot being divided transversely of the toe to separate the sole portion and the instep portion, the forward part of the instep portion extending rearwardly over and above the rearward part of the instep portion and toward the ankle portion, and an ornamental flexible member extending from the toe rearwardly over the rearwardly-extending part of the instep portion and being adjoined to the toe and rearwardly-extending part of the instep portion.

3,017,641
INTERCHANGEABLE AND SIZE ADJUSTABLE BELT CONSTRUCTION
Harry E. Stollman, West Englewood, N.J., assignor to Better Belts, Inc., West New York, N.J., a corporation of New Jersey
Filed Aug. 20, 1959, Ser. No. 835,019
5 Claims. (Cl. 2—322)



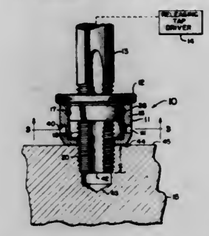
1. A belt buckle of the harness type having a forward, an intermediate and a rearward transverse bar, each spaced from the other, the forward and intermediate bars being separated by a relatively large opening, the intermediate and rearward bars being separated by a relatively narrow slot, a tongue pivotally mounted on said intermediate bar to extend across said large opening and contact said forward bar, a post upstanding from said intermediate bar adjacent said tongue pivotal mounting, a pair of longitudinally extending upturned flanges interconnecting said intermediate and rearward bars at opposite ends of said slot, a keeper strap and keeper, said strap being looped through the keeper and having opposite ends thereof formed with through-openings engaging said post, said strap extending under said rearward bar and through said slot.

3,017,642
SELF-INFLATING CUSHION
David Rosenberg, Bronx, and Louis Mirando, New York, N.Y., assignors to The Holiday Line, Inc., New York, N.Y., a corporation of New York
Filed Nov. 27, 1959, Ser. No. 855,772
14 Claims. (Cl. 5—349)



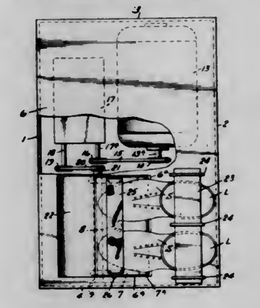
1. A self-inflatable cushion comprising a sealed outer block envelope of flexible material defining an airtight and watertight collapsible chamber, said outer envelope including a top wall, a bottom wall and a side wall connected to the top and bottom walls, an inner block envelope formed within said outer envelope and defining a collapsible compartment, said inner envelope substantially filling said chamber and including a top sheet and a side sheet one edge of which is joined to said top sheet and the other edge of which is joined to the junction of said side wall and said bottom wall whereby said bottom wall is common to said inner and outer envelopes and said inner envelope is substantially free to float within said chamber, cellular filler material disposed in said compartment in a quantity filling said inner envelope to provide a compressible cushion, and valve means attached to said outer envelope in communication with said compartment and operable to permit air to be drawn from said compartment when said filler material is compressed and to permit air to be drawn into said compartment as said filler expands after pressure has been released therefrom whereby said cushion assumes substantially its original shape.

3,017,643
ADJUSTABLE TAP STOP MEANS FOR LIMITING DEPTH OF THREADING
John W. Lebde, Jr., Chicago, Ill., assignor to Scully-Jones and Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 9, 1959, Ser. No. 798,165
3 Claims. (Cl. 10—129)



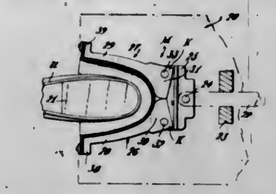
1. Tap stop means for adjustably limiting the effective length of a tap having a flute extending longitudinally thereof, comprising a nut member threadedly engageable on said tap for adjustable positioning longitudinally thereof and having a longitudinally extending recess projecting radially outwardly from its central opening, said recess being disposable in opposed relation to said flute by rotation of the nut member, a locking member slidable longitudinally of the tap having a portion engaged with the flute and engageable with the nut member recess to prevent rotation of the nut member, and means for detachably connecting the locking member and nut member said connecting means adapted to hold the locking member alternatively in said nut-engaging position and in another nut-engaging position allowing relative rotation of the nut member.

3,017,644
DEVICE FOR FLEXING SHOES
Frank W. Mulhollan, 230 Kellman St., Dyer, Ind.
Filed Mar. 13, 1961, Ser. No. 95,342
15 Claims. (Cl. 12—41.1)



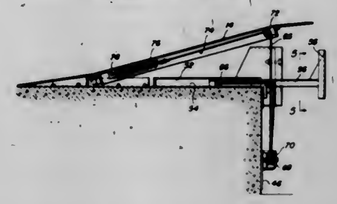
1. Means for flexing a shoe comprising a base of width greater than that of a shoe, a plate hinged to the base adjacent one edge thereof; a shaft on said base below the end of the plate opposite from the hinge; a cam on said shaft adapted to contact the underside of the plate and maintain same substantially normally in the plane of said base; means yieldably depressing the plate; means for rotating the shaft whereby the cam will pivot the plate upwardly with respect to the base; means for holding a shoe at the heel portion thereof firmly down on the base and other means for holding the vamp portion of the shoe held firmly down on said plate during rotation of the shaft.

3,017,645
SHOE UPPER MOLDING APPARATUS
William F. Herlihy, Haverhill, Mass., assignor to Lowell Counter Company, Lowell, Mass., a copartnership
Filed June 23, 1960, Ser. No. 38,285
8 Claims. (Cl. 12—54.3)



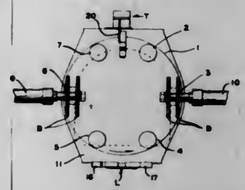
1. A mold unit for use in shaping the rear portion of a shoe upper, said mold unit comprising a rear member and relatively movable rigid wings having portions which collectively define the side and rear walls of a mold cavity, means so pivotally connecting said wings to said rear member of the mold unit that they may rock in opposite directions, respectively, about spaced parallel axes, each wing comprising a rigid bell-crank lever having a long arm and a short arm, the levers being so arranged that the free ends of the short arms of the levers are adjacent to each other, the long arms of the levers being shaped to define the side walls of the mold cavity and the short arms of the levers being shaped so as collectively to define the rear wall of the mold cavity, and resilient means normally urging said levers to rock in opposite directions, thereby to expand the mold cavity and to position the short arms of the levers so that they converge forwardly at an obtuse angle, whereby rearwardly directed force, applied to the free ends of the short arms of the levers, rocks the levers in opposition to said resilient means and moves the side walls of the cavity towards each other.

3,017,646
DOCKBOARD
Garrett P. Kelley, 4973 N. Newhall St., Milwaukee, Wis.
Filed May 14, 1958, Ser. No. 735,334
2 Claims. (Cl. 14—71)



1. An automatically adjustable dockboard adapted for installation upon an existing dock comprising: a stationary ramp securable to the top of an existing dock; a movable ramp having front and rear edges and a flat deck secured to and covering a frame structure; means hingedly connecting the ramps so that upon securement of the stationary ramp to the top of a dock the movable ramp may be swung from a lowered position with its frame structure resting upon the dock and its deck substantially flush with the top of the stationary ramp to a raised position at which its front edge is at an elevation above that of the bed of any carrier that may be brought into loading or unloading position in front of the dockboard, the front edge portion of the movable ramp projecting beyond the edge of the dock when the stationary ramp is properly located on the dock so as to come down upon and rest on the bed of a carrier in position in front of the dockboard as the movable ramp is lowered; biasing means to react between the dock and the movable ramp to bias the movable dock to its raised position; a ramp lowering arm; means securable to the top of the dock to mount the arm for movement to and from a position projecting beyond the edge of the dock and into the path of a carrier being backed into position; cable anchoring means adapted to be fixed to the dock near the edge thereof; a pulley on the arm; a pulley adapted to be mounted at the edge of the dock adjacent to the projecting end of the arm; a pulley at the underside of the movable ramp near its front edge; a pulley adapted to be mounted on the dock below said second named pulley; a cable having one end secured to said cable anchoring means, reeved about said pulleys and having its other end portion extending from the pulley which is at the underside of the movable ramp towards the hinge connection between the ramps; and a spring mounted within the frame structure of the movable ramp beneath the deck thereof and connected between one of the ramps and the adjacent end of the cable to hold the cable taut and enable lowering of the movable ramp by inward movement of the arm in consequence of a carrier engaging the same and moving toward the dock, said spring yielding in the event of continued inward movement of the arm after descent of the movable ramp is arrested as by its front edge portion coming to rest upon the bed of the carrier.

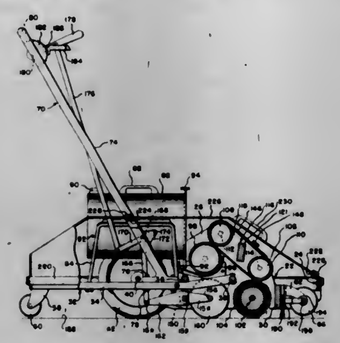
3,017,647
WORK TURNOVER MECHANISM
Edwin H. Brauer, Jr., Cleveland, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 6, 1959, Ser. No. 832,064
8 Claims. (Cl. 15—21)



1. In work processing mechanism including a turntable adapted to be rotated to index work thereon from station to station, means operative to load unprocessed work-pieces on said turntable and to unload processed work-pieces therefrom, and at least two work processing stations; a work turnover station intermediate said work processing stations comprising an arm mounted adjacent said turntable for rocking movement about an axis radial of said turntable, a clamp carried by said arm overlying said turntable and adapted to grip a work-piece on said turntable when said arm is in one horizontal position and to release such work-piece on said turntable when said arm has been rocked 180° to its other horizontal position, and power means operative thus to rock said arm.

3,017,648
SPREADER FOR WAX OR THE LIKE
Ross D. Wilson, 4139 Swift St., San Diego 4, Calif., and George A. Deardorff, 217 Milden Road, Martinez, Calif.
Filed Aug. 24, 1959, Ser. No. 835,505
9 Claims. (Cl. 15—50)

1. A spreader for spreading wax or the like in fluid form on a floor, comprising in combination, a vehicle; a tank for fluid carried by the vehicle; a trough for receiving fluid from the tank; means for conveying the fluid from the tank to the trough; a rotatable drum immersed in the trough for lifting fluid therefrom; a rotatable brush for spreading the fluid onto the floor surface over which the vehicle is being moved; and means above the trough and in contact with the rotatable drum for conveying fluid from the rotatable drum to the brush.

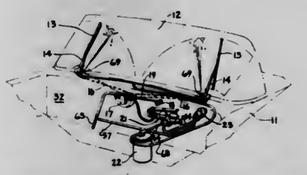


3,017,649
MULTI-PART COLLAPSIBLE SNOW AND ICE REMOVING DEVICE
Albert R. Racicot, Aurora, Ill., assignor to National Brush Company, Aurora, Ill., a corporation of Illinois
Filed Apr. 4, 1956, Ser. No. 576,111
3 Claims. (Cl. 15—105)



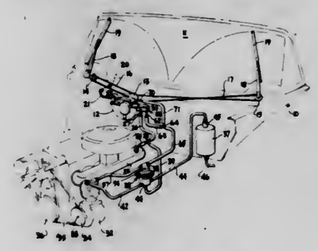
1. A collapsible device for removing snow and ice from an auto vehicle window, said device being rigid and elongated when completely assembled for use in reaching all window portions including the remote portions thereof and being collapsible into a disassembled condition for storage in the vehicle glove compartment after the device has been used, said device including in combination, scraper and squeegee means having an outwardly flared portion with a transverse chisel edge at the maximum flared dimension thereof and having a squeegee spaced rearwardly from said chisel edge, with said flared portion being progressively reduced in a transverse dimension and merging longitudinally into a handle portion having a longitudinally extending cavity therein which is rectangular in transverse cross-section, first handle means having a protuberance at one end which is of a cross-section corresponding to that of said cavity telescopingly connectible to the scraper and squeegee means at said handle-portion-cavity so that said scraper and squeegee means and said handle portion are maintained together and against movement including twisting relative to one another, and with said handle portion merging into said first handle means when it is assembled and facilitating grasping and manipulating of the device, and second handle means separate from said scraper means and said first handle means and having an elongated portion, said elongated portion of said second handle means and said first handle means including complementary connecting portions adapted to be fitted together in a rigid bayonet-type connection but in a removable relation, with said scraper and squeegee means and said first and said second handle means each individually being of a size and in the collapsed condition of the device being packaged in an overall size such that the package can be received in an auto vehicle glove compartment for convenient storage thereof within a vehicle and for ready accessibility when snow and ice collect on the outside of an auto vehicle window and which is adapted for ready assembly to be used for removing the snow and ice from the vehicle window.

3,017,650
WINDSHIELD CLEANING SYSTEM
Earl V. Schaal, East Aurora, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Nov. 28, 1956, Ser. No. 624,878
9 Claims. (Cl. 15—250.02)



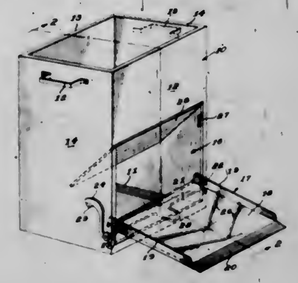
1. A windshield cleaning system comprising a liquid container arranged for response to a force to cause an ejection of liquid therefrom for spraying upon the windshield, a motor means operable in response to a fluid pressure differential to generate a force applicable to the liquid container for liquid ejection therefrom, force multiplying means interconnecting said motor means and said container, means responsive to operation of the motor means to initiate operation of a windshield wiper motor, a reservoir having conduit means for the supply of liquid to said container, and a control means for the establishment of a fluid pressure differential to cause operation of the motor means.

3,017,651
WINDSHIELD WIPER SYSTEM
Martin Bitzer, Kenmore, and Anthony R. D'Alba, Buffalo, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Nov. 13, 1958, Ser. No. 773,618
13 Claims. (Cl. 15—250.12)



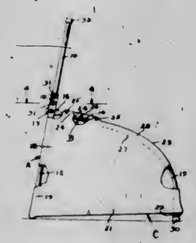
1. In combination in a vehicle having a compressor therein for supplying compressed air for operating accessories, a windshield wiper system comprising a windshield wiper, a wiper motor for driving said wiper, a source of vacuum for providing energy for driving said wiper motor in a first range of operating speeds, and control means for operatively coupling the intake side of said compressor to said wiper motor when the vacuum in said source falls to a value which would cause said wiper motor to operate in a second range of speeds which is lower than said first range of speeds, whereby the air pumping characteristic of said compressor is selectively utilized to provide a second source of vacuum for operation of said wiper motor.

3,017,652
WASTE COLLECTING DEVICE
Daniel T. Morabito, Post Road, Sudbury, Mass.
Filed Mar. 24, 1961, Ser. No. 98,224
3 Claims. (Cl. 15—257.5)



1. A transportable waste collecting device, comprising a rectangular open top box having a horizontal bottom wall and right angularly disposed vertical side walls, a back wall and a front wall, said front wall being provided with a rectangular opening whose upper horizontal edge is disposed substantially intermediate the said bottom wall and the top of the box, a sweepings loader of generally rectangular form pivotally supported adjacent one edge thereof with opposed side walls of said box adjacent the lower edge of said rectangular opening, a foot lever engaged with one end of said pivotal support and being disposed adjacent the outer face of one of said side walls for swinging said sweepings loader with a resulting control of said opening, a rectangular baffle having one edge thereof secured to said one of said side walls at the upper edge of said rectangular opening in said front wall, said baffle extending downwardly from said edge thereof into the box with the free edge thereof disposed substantially midway of said one of said side walls and an opposing side wall, and said free edge being disposed above and in spaced relation to said horizontal bottom wall.

3,017,653
PORTABLE TRASH COLLECTING DEVICES
Charles A. Bird, 5341 Grand Ave., Minneapolis 19, Minn.
Filed Jan. 25, 1960, Ser. No. 4,362
4 Claims. (Cl. 15—257.8)



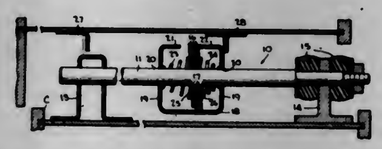
1. In a portable trash collecting device, the combination of a front frame, a back frame, a bag and a handle, the front frame comprising a base member for footing on the ground, and side members upraised from said base member; and converging at their upper portions toward each other, said side members having upwardly continuing coextensive terminal portions, the back frame being an elongated member extending rearwardly and downwardly from the front frame, said back frame having a ridge portion received at its forward end between said terminal portions of the front frame and pivotally attached thereto, said back frame having a leg portion in continuation of its ridge portion for footing on the ground, said bag having a hem at the mouth thereof in which the base member and side members of the front frame are received, said bag having a second hem extending along its upper portion in which the back frame member is received, said handle upstanding from the front frame, the lower end of said handle being received between said terminal portions of the front frame and attached thereto.

3,017,654
VACUUM CLEANERS
William F. Allenby, Stratford, and Gustaf E. Lofgren, Riverside, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed July 20, 1959, Ser. No. 828,276
7 Claims. (Cl. 15—327)



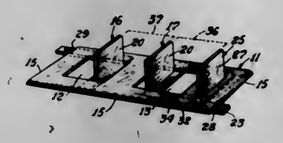
1. In a vacuum cleaning device, structure including means for producing flow of air, means for movably supporting said structure on a substantially horizontal surface, a suction cleaning tool, a flexible hose secured to said structure for establishing a fluid connection between said tool and said first-mentioned means and for transmitting force to said structure to move the latter about on said surface, and a swivel connection disposed at an intermediate point in said hose for permitting one end of said hose to turn on its axis relative to the other end thereof, the length of said hose from said swivel connection to the end of the hose adjacent to said tool being not substantially longer than said tool.

3,017,655
DRAWER CONTROL
Mathias M. Check, Valley Forge, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Dec. 7, 1959, Ser. No. 857,926
7 Claims. (Cl. 16—82)



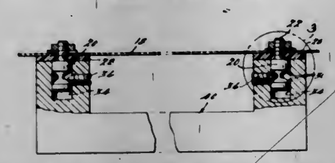
4. In a device of the class described for controlling the movements of a drawer relatively to a cabinet, a shaft secured to the cabinet and extending along the direction of drawer movement, a washer assembled on the shaft and acting when tilted to grip said shaft, spring means pressing the washer to a position normal to the shaft so that said washer can slide freely along said shaft, means through which said drawer acts against an edge portion of the washer to slide the washer during the drawer movement, and a portion of said spring means yielding so that the washer tilts when the drawer acts with predetermined pressure against the edge portion of the washer, whereby the washer then grips said shaft to oppose the drawer movement.

3,017,656
SLIDING DOOR GUIDE
Frank Hillson, 48 Brentwood Drive, Verona, N.J., and Rubin Krivisky, 4 Sherman Drive, Spring Valley, N.Y.
Filed Oct. 20, 1959, Ser. No. 847,610
7 Claims. (Cl. 16—90)



1. A sliding door guide comprising a base plate having a narrow slot and an elongated opening, a stationary vertical guide member projecting upwardly through the narrow slot, a base formed on the stationary vertical guide member positioned beneath the base plate and dimensioned larger than the slot, a longitudinally movable vertical guide member projecting upwardly through the elongated opening, a lateral base leg formed on the movable guide member dimensioned wider than the elongated opening, a longitudinal base leg formed on the lateral base leg dimensioned to project beyond a lateral edge of the base plate, and means to secure the movable guide member against relative movement with respect to the base plate.

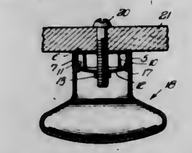
3,017,657
REMOVABLE HANDLE ASSEMBLY FOR STOVE DOORS
Herbert E. Mills, Detroit, Mich., assignor to Mills Products, Inc., Walled Lake, Mich., a corporation of Michigan
Filed Aug. 19, 1959, Ser. No. 834,738
2 Claims. (Cl. 16—114)



1. In a stove door having an outer exposed porcelain sheet metal panel, a handle assembly on the outer side of said panel and comprising a stud projecting from said panel, means concealed within the door for securing said stud thereto, an insulating washer between said stud and panel, said stud having a tapered annular groove, a handle seated against said washer and having a recess into which said stud projects, said stud and recess being of such size and shape so that the stud has a close fit in said recess, and a set screw on the handle and having a cone point bearing against the tapered groove for removably and positively securing the handle on said stud and for drawing said handle axially inwardly along said stud against said insulating washer.

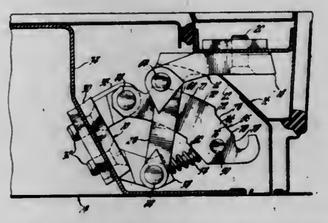
3,017,658
INSERTS FOR NECKS OF HOLLOW KNOBS AND THE LIKE
Forrest H. McMeen, Temple City, Bruno Aston, West Covina, and George R. Stucka, Arcadia, Calif., assignors to Vol-Shan Industries, Inc., Los Angeles, Calif., a corporation of Illinois
Filed Dec. 11, 1959, Ser. No. 858,977
5 Claims. (Cl. 16—121)

1. A hollow button-like insert of the class described for retained locking engagement within the interior surface of a tubular section comprising, a cylindrical cup-shaped member providing snug telescopic frictional engagement within said tubular section and having a central opening in its bottom portion and a plurality of L-shaped slots each of which completely severs the sidewall portion of said cup-shaped member and extends radially part way into the bottom portion thereof so as to divide said member into a plurality of flexible segments integrally interconnected in said bottom portion, the combined widths of said slots being small in comparison with the outer circumference of said cup-shaped member, a separate flexible concavo-convex member



locked within the rim of said cup-shaped member so as to be retained in spaced relation with said bottom portion and having an internally threaded nipple co-axial with said central bottom opening whereby upon applying a force on said nipple in the co-axial direction tending to flatten said concavo-convex member the latter tends to distend said flexible side wall segments into tighter locking engagement within said tubular section, said central bottom opening being large enough to permit a screw having threaded engagement within said nipple to slide through said opening.

3,017,659
DOOR HINGE ASSEMBLY
Robert T. Paik, Inkster, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,799
8 Claims. (Cl. 16—146)



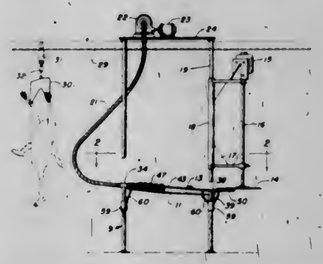
1. A door hinge check and hold open comprising, in combination, a pair of hinge members, means pivotally interconnecting said members for movement of one hinge member relative to the other hinge member through a predetermined angle, a detent member pivoted adjacent one end thereof on said one hinge member for movement therewith, said detent member being provided with a cam edge facing away from the pivotal axis of said hinge members and terminating in a hold open depression adjacent the other end of said detent member, an abutment member on said other hinge member adapted to continuously engage said cam edge upon swinging movement of said one hinge member relative to said other hinge member and to be received within said depression when said hinge members have moved relative to each other through said predetermined angle, resilient means extending between said one hinge member and said detent member to continuously urge the cam edge of said detent member into engagement with said abutment member, means securing one end of said resilient means to said one hinge member for movement therewith, and means

pivotally securing the other end of said resilient means to said detent member to cause said resilient means to move as a unit with said one hinge member and pivot relative to said detent member as said detent member pivots relative to said one hinge member.

3,017,660
POULTRY HEAD REMOVER

Willard D. Reeves, P.O. Box 773, Center, Tex., assignor of one-third to C. S. Thomas and one-third to St. Elmo Cross, both of Center, Tex.

Filed July 22, 1959, Ser. No. 828,807
5 Claims. (Cl. 17—12)

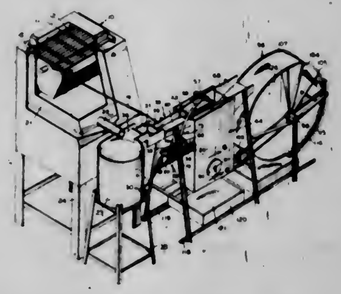


1. A decapitator for poultry comprising tapering rolls, means for feeding necks of poultry between the rolls, breaking blocks positioned in combination with the rolls, said breaking blocks being positioned to break bones of necks of poultry as the necks are drawn through the blocks, means positioned above and extending transversely of said rolls for increasing tension in the necks with the bones broken whereby the neck bone is drawn away from the head, arcuate spring fingers extended over the rolls for retarding passage of the necks of the poultry through the rolls, and a horizontally disposed knife positioned at the ends of said rolls for cutting the stretched skin of the neck at the base of the head.

3,017,661
METHOD FOR SEPARATION OF MEAT AND BONE

Wilmar A. Zartman, Atlanta, Ga., assignor to Meat Separator Corporation, Atlanta, Ga.

Filed Mar. 16, 1959, Ser. No. 799,717
5 Claims. (Cl. 17—45)

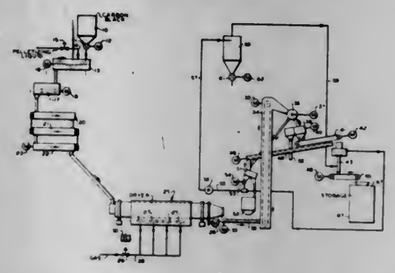


1. The method of separating meat from bone comprising mechanically removing meat and bone fragments from the main portion of the bone, washing the meat and bone fragments into a drum, rotating the water with the meat and bone fragments within the drum in order to maintain lighter particles of meat and bone fragments in the outer portion thereof, adding water to cause the drum to overflow, agitating the water and the meat and bone fragments which have overflowed in order to promote their separation, and slowly flowing the water with the separated meat and bone fragments into a reservoir of substantial depth, producing gentle upward currents of water across the reservoir, regulating the magnitude of the upward currents to permit all of the bone and only a small portion of the meat to sink, discharging the water and the lighter particles of meat from the reservoir, and separating the meat from the water.

3,017,662
PROCESS CONTROL SYSTEM

Donald A. Marsh, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 6, 1959, Ser. No. 811,366
9 Claims. (Cl. 18—1)



1. Pelleting apparatus comprising a mixing conveyor driven by a first motor; a second conveyor driven by a second motor to deliver material to be pelleted to said mixing conveyor; means to introduce a pelleting liquid into said mixing conveyor; a rotary dryer driven by a third motor; first conveyor means driven by a fourth motor to deliver pellets to said dryer; a weighing conveyor driven by a fifth motor to deliver pellets from said mixing conveyor to said first conveyor means; second conveyor means driven by a sixth motor to remove pellets from said dryer; means responsive to rotation of said sixth motor being terminated to stop said fourth, fifth, first and second motors in sequence; and means responsive to rotation of said third motor being terminated to stop said fourth, fifth, first and second motors in sequence.

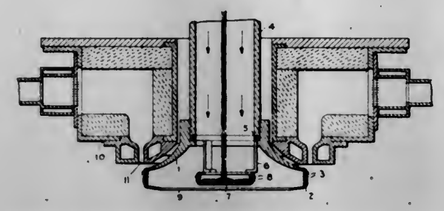
3,017,663
APPARATUS FOR PRODUCING FIBERS FROM THERMOPLASTIC MATERIAL

Marcel Levecque, Saint-Gratien, and Maurice Charpentier, Rantigny, France, assignors to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France, a corporation of France

Filed Feb. 21, 1956, Ser. No. 567,028
Claims priority, application France June 6, 1955
8 Claims. (Cl. 18—2.5)

1. In apparatus for producing fibers from viscous material, the combination of a centrifugal body having a peripheral wall provided with a plurality of superposed rows of orifices therein, a distributor within said body and rotating therewith with the discharge areas of said distributor being spaced a substantial distance from said peripheral wall and being disposed substantially at an intermediate level of said superposed rows of orifices therein, to receive a supply of viscous material from above and discharge the same laterally and uniformly upon the inside surface of the peripheral wall and simultaneously upon all of the superposed rows of orifices therein, said

centrifugal body being provided with an opening at its base of such large area as to render said centrifugal body substantially bottomless, means for delivering hot gases to the interior of the centrifugal body for the uniform

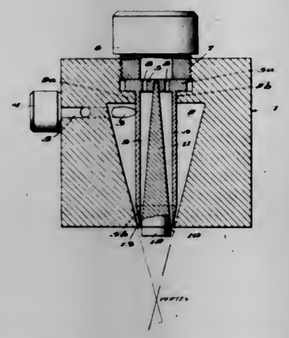


heating of the same and the material therein, said opening at the base of the centrifugal body permitting the hot gases to escape at slow speed through said opening to a zone below said centrifugal body.

3,017,664
FIBER-FORMING NOZZLE AND METHOD OF MAKING FIBERS

Rolf K. Ladisch, 255 Windermere Ave., Lansdowne, Pa.

Filed Aug. 1, 1957, Ser. No. 675,710
12 Claims. (Cl. 18—2.5)

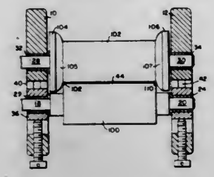


5. A nozzle for forming curly fibers from fiber-forming liquids comprising, in combination, a body having a frusto-conical chamber whose smaller end is open and terminates at one face of the body; means for introducing a stream of elastic fluid under pressure tangentially into said chamber at its larger end, which is closed, so that said elastic fluid moves in a spiral path with ever increasing velocity down to and out of the smaller end of said chamber; a hollow feed tube fixed to said body and lying within and extending axially of said chamber; means for passing a fiber-forming liquid through said hollow feed tube; the discharge end of said feed tube being about in the plane of said smaller chamber end but spaced from and surrounded by the walls thereof so that a narrow annular opening is provided therebetween for discharge of the elastic fluid; and means fixed inside said hollow feed tube to provide a narrow annular discharge opening for the liquid flowing through said feed tube; said fixed means also projecting beyond the last named discharge opening and providing a rounded solid surface for the fiber-forming liquid to flow over as a film, said rounded surface lying on the inside of the conical path of the spiraling elastic fluid flowing from said chamber.

3,017,665
ROLLING MILL

John Dasher and Melvin C. Chang, Pittsburgh, Pa., assignors to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey

Filed Jan. 13, 1958, Ser. No. 708,530
8 Claims. (Cl. 18—9)

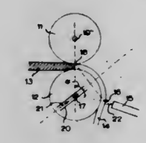


8. Means for continuously compacting and forming metal powder into sheet having edge portions of uniform density comprising: a pair of rolls spaced apart to define a roll gap therebetween, an integral flanged portion on an end of one of said rolls and extending therefrom across said roll gap to provide a powder-retaining abutment at an extremity of said roll gap, said flanged portion being so constructed and arranged as to form a substantially frictionless line-contact seal with an opposing face of the other roll.

3,017,666
APPARATUS FOR PRODUCING A SMOOTH-SURFACED BODY CONSISTING OF A GRANULAR MATERIAL

Freerk J. Fontein, Heerlen, and Bauke S. Sieswerda, Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands

Filed Mar. 25, 1959, Ser. No. 801,861
Claims priority, application Netherlands Mar. 29, 1958
2 Claims. (Cl. 18—9)



1. Apparatus for measuring properties of granular material by reflecting on the material electron, electromagnetic, light, X-ray beams, and the like, comprising: means for producing a smooth-surfaced body of the granular material, said means consisting of two cooperating rollers mounted for rotation about substantially parallel axes; means for rotating at least one of said rollers, one of said rollers being provided with means for retaining the body on it through part of its revolution, and the other of said rollers having a smooth outer surface; a radiation source arranged to direct a beam on a predetermined area of the body on said one roller; and means for maintaining constant the distance between said radiation source and said area irrespective of variations in the thickness of said body.

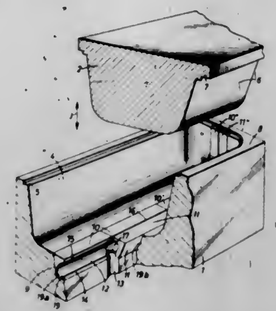
3,017,667
INJECTION MOLDING APPARATUS

Georg Heinrich Kins, 119 Hauptstrasse, Hainstadt (Main), Germany

Filed June 23, 1958, Ser. No. 743,785
Claims priority, application Germany June 25, 1957
6 Claims. (Cl. 18—42)

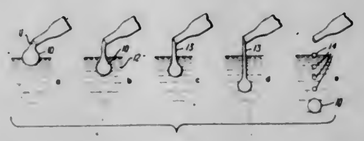
1. A mold arrangement for injection molding a container having a wall of a thickness which is a small fraction of the major dimensions of height, width and length

of the cavity defined by the container wall, comprising two mold portions releasably assembled and having respective opposite mold faces jointly defining a mold space substantially conforming to said wall, one of said portions being formed with an elongated groove having an open longitudinal side extending in the mold face thereof over a distance corresponding to more than one of said major dimensions, and said one mold portion being



formed with an opening therethrough communicating with said groove, and a plurality of duct forming members releasably arranged in said groove and substantially filling the same, said members jointly defining a substantially closed elongated duct communicating with said opening, said duct extending over substantially said distance and having outlet means communicating with said mold space at a plurality of locations spaced along said distance.

3,017,668
METHOD OF PREPARING PEARLS
Knut Jacobus Sundman, Helsingfors, Finland, assignor to Oy Medica AB, Helsingfors, Finland
Filed Mar. 27, 1959, Ser. No. 802,553
8 Claims. (Cl. 18—47.2)



1. A method of preparing homogeneous medicated pearls which comprises, dispersing a predetermined quantity of a medicinal preparation in a solution of a gelable colloid, adding said dispersion from an orifice by drops into a congealing liquid, momentarily retaining said drops just below the surface of said liquid after separation of said drops from said orifice and congealing said drops as they sink in said liquid to form pearls with said medicine dispersed therethrough.

3,017,669
TIRE CORD STRESS EQUALIZATION PROCESS
William G. Mikell, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 20, 1957, Ser. No. 666,998
1 Claim. (Cl. 18—53)

A process for minimizing the thump of a nylon cord tire which comprises subjecting the said tire, after complete vulcanization and while in an unrestrained condition outside of the tire-forming mold in which it has been shaped and otherwise free of restrictive forces, to a temperature above the vulcanization temperature and be-



tween about 325° F. and 360° F. for a period of about 15 minutes and thereafter cooling the said tire.

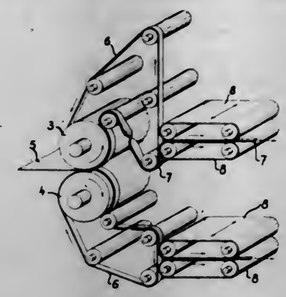
3,017,670
PROCESS FOR PRODUCING PLASTIC ARTICLES
Samuel Zweig, Chicago, Ill., assignor to The Borden Company, a corporation of New Jersey
Filed Apr. 4, 1957, Ser. No. 650,759
3 Claims. (Cl. 18—59)



1. In making, within a mold, an article including polyvinyl chloride and migratory plasticizer therefor and protecting the article against exudation of plasticizer from the outer surface of the article, the process which comprises coating the interior of the mold with an unplasticized sealing film about 0.00005-0.001 inch thick of thermoplastic material that is soluble in the said plasticizer and that, without becoming tacky, tolerates the said plasticizer in proportion thereof in excess of the proportion tolerated by the polyvinyl chloride and that is of intrinsic viscosity at least 0.8 in cyclohexanone at 20° C., molding against the sealing film a mixture of the said polyvinyl chloride and migratory plasticizer therefor, heating the whole to a temperature of fluidizing the said mixture and softening and surface union of the sealing film to the resulting plasticized polyvinyl chloride plastic, and then cooling the product before the said plasticizer penetrates through the sealing film, the plasticized polyvinyl chloride plastic after the cooling having an intrinsic viscosity substantially less than that of the material of the said film.

3,017,671
FIBRE WEB DIVIDING TAPE
Rudolf Poeschl, 135 Mariahilferstrasse, Vienna, Austria
Filed Apr. 4, 1955, Ser. No. 499,131
Claims priority, application Austria Apr. 10, 1954
1 Claim. (Cl. 19—151)

In a spinning machine having a plurality of conveyor tape runs with a twist of 180° arranged initially in a substantially edge-to-edge contact for receiving a web of textile fibres and then separated alternately to divide the web into sharply cut apart strips of rove fibres, a fibre web conveying and dividing tape comprising an endless tape strip of a stretched polyamide having its molecules oriented in the direction of stress on the tape and having a tensile strength of at least 500 kgs. per square centimeter which is dimensioned to resist the tensile force and prevent any material stretching and narrowing of the tape during normal use, a leather layer fully covering both sides of the tape, said layer having a coefficient of friction of at least 0.3 and serving for conveying the fibres, and an adhesive intimately securing the leather layer on the tape strip, said tape having parallel side faces and sharp corner



edges of leather and serving to divide and convey a layer of the textile fibres in a substantially uniform distribution.

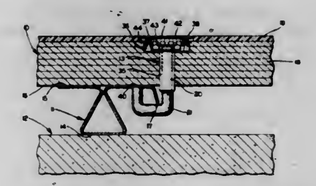
3,017,672
NON-LOAD BEARING DRY WALL PARTITION CONSTRUCTION
Wayne W. Vaughan, Malibu, Calif., assignor to Vaughan Movable Interior Walls, Inc., Los Angeles, Calif., a corporation of California
Filed Mar. 18, 1958, Ser. No. 722,300
2 Claims. (Cl. 20—4)



2. A runner construction for a readily removable dry wall partition comprising: a U-section channel member provided with a longitudinally extending first wall and a parallel longitudinally extending second wall of greater height than said first wall, said first and second walls being in slightly converging relation; a closure member overlying said first wall and having a height corresponding to the height of said second wall whereby a panel member may be assembled or disassembled in sidewise relation with respect to said channel member and secured by said closure member; a wall means interconnecting said first and second walls; and lateral adjustment means on said wall means for varying the spacing between said first and second walls.

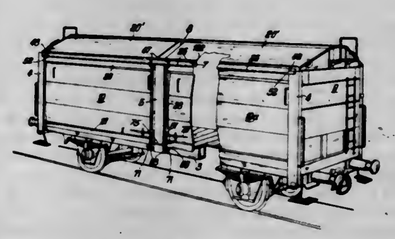
3,017,673
FLOOR PANEL FASTENING CONSTRUCTION
John Biris, Jr., 3907 Ashwood Drive NW., Canton, Ohio
Filed Feb. 14, 1958, Ser. No. 715,399
3 Claims. (Cl. 20—6)

1. Floor panel fastening construction including generally horizontally extending flooring having an upper and lower surface, support means underlying and supporting the flooring, the support means having a generally horizontal flange abutting the flooring lower surface, said support means horizontal flange having an under surface and being connected to a downwardly extending flange terminating spaced downwardly from said horizontal flange under surface, a nut member having a head portion and a generally cylindrical elongated sleeve portion, said nut member sleeve portion having a smooth cylindrical outer surface, the head and sleeve portions extending co-axially with the head portion projecting radially from the sleeve portion, the nut member being positioned with the head portion engaged with the flooring upper surface with the sleeve portion extending downwardly from the head por-



tion within the flooring and the sleeve portion smooth outer surface abutting the flooring in a close rotatable fit, a generally J-shaped bolt member having a generally vertically extending shank portion and a hook portion connected to said shank portion, the bolt member shank portion being engaged with the nut member with the bolt member hook portion extending beneath the support means downwardly extending flange, the hook portion telescoping the support means downwardly extending flange and extending upwardly engaging the support means under surface to firmly secure the generally horizontal flooring tightly to the support means horizontal flange, and the bolt member hook portion being free of contact with the support means downwardly extending flange.

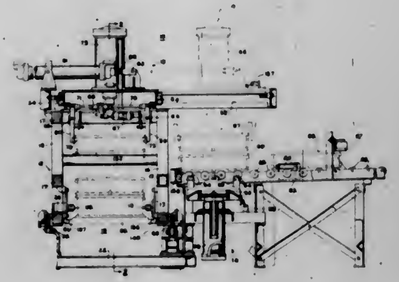
3,017,674
SLIDING DOOR ARRANGEMENT FOR VEHICLES SUCH AS RAILROAD CARS
Friedrich Emil Brill, Siegen, Germany, assignor to Rheinstahl Siegener Eisenbahnbedarf A.G., Kreis Siegen, Germany
Filed Oct. 1, 1958, Ser. No. 764,627
Claims priority, application Germany Oct. 2, 1957
16 Claims. (Cl. 20—23)



1. A sliding door arrangement comprising, in combination, substantially vertical frame means; a pair of substantially vertical doors located in a common inner plane in engagement with said frame means when both of said doors are in a closing position; a single elongated rail supported by said frame means, being substantially coextensive with said pair of doors and located outwardly thereof in a plane substantially parallel to said common

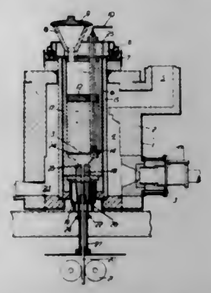
plane; and means carried by said frame means and cooperating with said doors for optionally moving either one of said doors outwardly away from said inner plane toward said rail; rail engaging means carried by said doors to cooperate with said rail when either one of said doors is moved outwardly toward said rail by said moving means for supporting the doors on said rail and for guiding said doors for movement therealong, whereby the door which is moved toward said rail by said moving means can cooperate with said rail to move therealong to a position overlapping the other door for uncovering the space which is occupied by the moved door when the latter is in said common plane.

3,017,675
MOLD CLOSER APPARATUS
Lester C. Young, Cleveland, Ohio, assignor to Spo, Inc., a corporation of Ohio
Filed May 22, 1958, Ser. No. 737,021
13 Claims. (Cl. 22—31)



1. Apparatus for positioning a cope flask on a drag flask including in combination first and second tracks positioned on either side of a drag mold conveyor, a framework mounted on said tracks and adapted for back and forth movement between first and second positions along the length of said drag mold conveyor, means for moving said framework on said back and forth movement between said first and second positions, a cope transfer mechanism mounted by said framework and adapted for movement between first and second positions relative to said framework and in a direction generally transverse to the movement of said framework and to said mold conveyor, means for moving said cope transfer mechanism between said first and second positions, said cope transfer mechanism including first and second pairs of spaced fingers movable between open and closed positions and adapted to secure a cope flask in said closed position, an elevator positioned adjacent said first track and positioned beneath said cope transfer mechanism in the first positions of said framework and said cope transfer mechanism respectively, a conveyor for transporting a cope flask to said elevator, means for raising and lowering said elevator, alignment means for positioning a cope flask in a predetermined position on said elevator, means for raising and lowering said cope transfer mechanism, lateral alignment means for aligning a drag flask within said framework, longitudinal alignment means carried by said framework and adapted to cooperate with a drag flask to cause said framework and drag flask to travel at the same rate during at least a portion of the travel of the framework from said first to said second position, over-travel protection means carried by said framework and adapted to cooperate with the drag mold conveyor to insure that said longitudinal alignment means does not push the drag flask from the drag mold conveyor.

3,017,676
APPARATUS FOR PROVIDING GAS-FREE LIQUID METAL TO A CASTING MOULD FOR THE CONTINUOUS CASTING OF METAL
Ian E. Ewen, Edinburgh, Scotland, assignor to The United Wire Works Limited, Edinburgh, Scotland, a British company
Filed Sept. 3, 1958, Ser. No. 758,776
Claims priority, application Great Britain Sept. 6, 1957
4 Claims. (Cl. 22—57.2)



1. In an apparatus for providing gas-free liquid metal to a casting mould for the continuous casting of metal, a closed inner container for the liquid metal, a fuel fired burner exterior of said container for heating the same and the metal contained therein, a guard tube of refractory material surrounding said container in spaced relation thereto and interposed between said container and said burner to protect said container from direct heating by said burner, the walls of said container and of said guard tube having a porosity which permits a limited passage of gases therethrough, the space between said container and said surrounding guard tube being vented to atmosphere and being sufficiently narrow to permit the container and the metal therein to be heated by heat from the burner passing through said guard tube and through said space to the wall of said container, and means for introducing an inert gas under pressure into said container and into the liquid metal therein for removing soluble gases from the said liquid metal and for maintaining within said container a positive pressure slightly greater than the pressure of the combustion gas which permeates the wall of said guard tube and enters said space, whereby combustion gas entering said space through the wall of said guard tube will be vented to atmosphere and whereby said inert gas will permeate the wall of said container to oppose passage of said combustion gas into said container through the wall thereof, said inert gas and the soluble gases removed from the liquid metal by said inert gas permeating the wall of said container and entering said space from which it is vented to atmosphere along with the combustion gas which permeates the wall of said guard tube and enters said space.

3,017,677
COMPOSITION AND METHOD OF FORMING CERAMIC CORES
Herbert Greenewald, Jr., 5725 Ridgetown Circle, Dallas, Tex.
No Drawing. Filed July 20, 1959, Ser. No. 828,046
11 Claims. (Cl. 22—194)

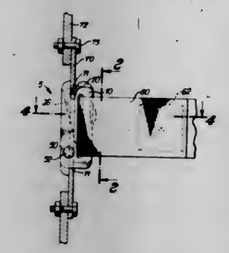
1. The method of forming a ceramic core or the like which consists of mixing together silica flour and Lumnite cement to form a granular refractory composite constituting approximately 646 parts by weight of the total ingredients and in which the Lumnite cement constitutes at least 5% by weight of the total ingredients, adding from 3½ parts to 65 parts by weight of non-acidic bentonite, separately forming an emulsion consisting of 12 parts to 97 parts by weight of silicone oil, 26 parts to 176 parts by weight of sodium silicate solution and 0 to 91 parts by weight of water, then adding the liquid emulsion to the dry ingredients to form a putty-like material, injecting said material into a die heated to from 150° F. to 450° F., allowing the mixture to cure in the die for a period of time dependent upon the mass of the article, and removing the article from the die; the Lumnite cement reacting with the sodium silicate during curing to form a bonding agent for the article.

3,017,678
CABLE LOCK
Byron C. Christensen, 808 SW. 30, Oklahoma City, Okla., assignor of one-half to Marion J. Clearman, Oklahoma City, Okla.
Filed Aug. 1, 1960, Ser. No. 46,723
6 Claims. (Cl. 24—134)



1. A cable lock, comprising: a thin walled body doubled back upon itself to form a pair of spaced-apart cable receiving apertures and a pair of arms extending laterally of one said aperture defining a recess in communication with one said aperture, the other said aperture being enlarged adjacent one end of said body for anchoring a cable end; a cable secured at one end portion in the aperture having the enlarged end and slidably received by its opposite free end portion through the other said aperture; a lever member pivotally connected at one end to one of said arms and releasably connected at its other end to the other one of said arms; and a clamp member pivotally connected to said lever intermediate its ends, said clamp member having a convex surface formed on a radius substantially greater than the radial distance between the pivotal connection of said clamp member and the medial portion of the convex surface and engageable with that portion of said cable between said arms for preventing movement of the latter in either direction through said body when said lever is pivoted toward said body.

3,017,679
SELF-LOCKING RELEASABLE FASTENER
Edwin C. Elsner, Pasadena, Calif., assignor to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed Nov. 12, 1959, Ser. No. 852,313
11 Claims. (Cl. 24—201)



1. A fastener comprising: a first plate having an elongate slot; a relatively short outwardly extending flange at one corner of said first plate; a longer outwardly extending flange at the opposite corner of said first plate; a relatively longer second plate superimposed on said first plate, and having a triangular elongate slot substantially aligned with the slot of the first plate; a third plate superimposed on said second plate, having an elongate slot substantially aligned with the elongate slots of the first and second plates; a relatively short outwardly extending flange at one corner of said third plate, aligned with the short flange of the first plate; a longer outwardly extending flange at the opposite corner of said third plate, aligned with the longer flange of the first plate; said three plates having an aligned bore disposed adjacent to the relatively short flanges on said first and third plates; and a pin loosely disposed in said bore so as to permit the pivotal movement of said plates on said pin.

3,017,680
ZIPPER OPERATING DEVICE
Ellsworth N. Duncan, 316 E. Piedmont St., Ravenna, Nebr.
Filed Nov. 4, 1959, Ser. No. 850,965
1 Claim. (Cl. 24—205.15)

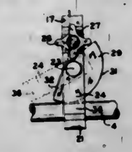


An operating device for zippers comprising a long shank, a flattened inwardly concaved relatively short blade on one end of said shank, a ring on the other end of said shank, there being a bore in said shank adjacent the juncture of said blade and said shank, and a vertically disposed foot fabricated of a single piece of wire bent upon itself to provide two parallel contacting wire parts having a bight portion, a hook portion on one end of said bight portion extending toward said blade, and a shank having one end connected to the other end of said bight portion, a pair of angularly disposed shank portions diverting from the other end of said shank, a pair of parallel portions extending from said shank portions, and an inwardly bent right angled portion on the upper end of each of said parallel portions receivably engaged in said bore and connecting said hook to said elongated shank for swinging movement of said hook toward and away from said blade.

3,017,681
ROD PULLER
Robert A. Miller, Culver, Ind., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 16, 1959, Ser. No. 787,255
1 Claim. (Cl. 24—254)

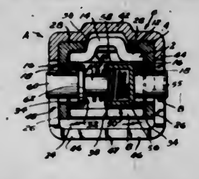
A drill rod gripping device comprising a support, and a rod gripping means on said support comprising a reversible rod gripping element in the form of a segment of a circle and having an offset pivot to provide oppositely extending gripping surfaces eccentrically disposed

with respect to the pivot, wherein said gripping element has relatively inclined upper plane surfaces, and an adjustable spring means is provided having oppositely ex-



tending spring portions selectively engageable with said plane surfaces to urge said gripping element toward rod gripping position in either reversed position thereof.

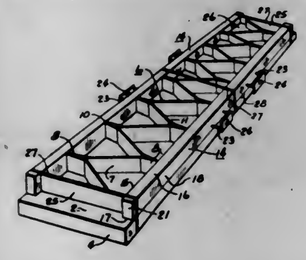
3,017,682
TELESCOPING-TYPE EXPANSIBLE BRACELET WITH DETACHABILITY FEATURE AND SPRING PIN FOR USE THEREIN
George Vollet, Freeport, N.Y., assignor to Jacoby-Bender, Inc., Woodside, N.Y., a corporation of New York
Filed Oct. 6, 1958, Ser. No. 765,356
3 Claims. (Cl. 24—265)



1. A spring pin comprising first and second parts with a spring adapted to be interposed therebetween, said first part comprising from one end to the other, a tip, an enlarged portion, and a cup-like trailing portion, said second part comprising from one end to the other, a tip, an enlarged portion, and a trailing portion smaller than said enlarged portion and receivable in said cup-like portion of said first part with appreciable clearance thereabout, said spring being receivable within said cup-like portion and adapted to surround said trailing portion of said second part, to be retained in compression between said cup-like portion of said first part and said enlarged portion of said second part, and active to urge said parts away from one another, said spring comprising a tapering coil spring, the end thereof adapted to be directed toward said first part having an inside cross-section at least slightly smaller than the outside cross-section of at least a segment of the trailing portion of said second part, the end thereof adapted to be directed toward said second part having an inside cross-section larger than the outside cross-section of the trailing portion of said second part, said spring being axially compressible by relative movement of said first part toward said second part for a distance such that said trailing portion of said second part is received within said end of said spring which is adapted to be directed toward said first part, and is adapted to be engaged frictionally thereby.

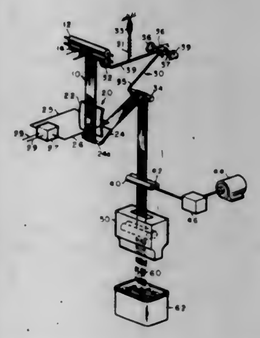
3,017,683
APPARATUS FOR PRODUCING WALL BLOCK FORMS
Carl W. Huch and Carl W. Huch, Jr., McCandless Township, Allegheny County, Pa. (both of 118 Venango Place, Pittsburgh 37, Pa.)
Filed May 28, 1959, Ser. No. 816,447
10 Claims. (Cl. 25—121)

1. An upwardly open mold for a plurality of concrete units comprising a flat base plate, dividing means on said base plate including a series of directly interconnected sections having their opposite sides defining the adjacent sides of concrete units, said dividing means having outer edges lying in longitudinal planes along the longitudinal sides of said base plate, opposed removable mold sides extending longitudinally of said base plate and connecting said outer edges on said dividing means to complete



with said base plate the mold forms for the concrete units, means securing said mold sides to said dividing means and to said base plate to hold the concrete mix in said mold until it sets sufficiently for removal, and said connected sections of said dividing means includes a web section having on its opposite ends a series of lateral sections, and a transverse section on each end of said web.

3,017,684
TEXTILE MATERIALS AND METHOD OF MAKING THE SAME
Edgar Henry Pittman, Clemson, S.C., assignor to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Jan. 24, 1956, Ser. No. 560,963
4 Claims. (Cl. 28—72)

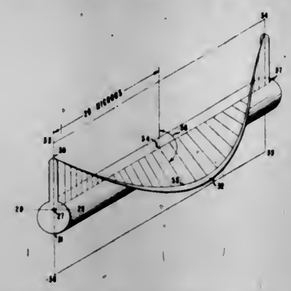


1. The method which comprises placing, while at an elevated temperature, a plurality of continuous thermoplastic textile filaments in a tensioned and substantially straightened condition but not under a tension of more than about 1 gram per denier, said filaments in each instance having a pronounced tendency to assume a crimped configuration, cooling said filaments while in said straightened and tensioned condition to thereby result in said filaments being partially heat-set in said condition, chopping said filamens into staple fibers, and thereafter heating said staple fibers while in a positionally relaxed condition to at least partially eliminate the effect of said heat-setting and to cause said fibers to develop a more pronounced crimp.

3,017,685
PROCESS FOR THE PRODUCTION OF FABRICS FROM SPECIALLY PREPARED YARNS
Georg Heberlein, Wattwil, Switzerland, assignor to Heberlein Patent Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 15, 1958, Ser. No. 735,392
Claims priority, application Austria May 25, 1957
5 Claims. (Cl. 28—72)

1. A process which comprises heating a twisted, heat-set and detwisted stretch yarn of synthetic resin polymer under low tension at a lower temperature than that employed for heat-setting the twisted yarn to reduce temporarily the tendency to crimp of the yarn and cause it to lie flat for fabrication, forming a fabric therefrom, and subjecting the fabric to a moist heat treatment to restore a substantial part of its original crimp character.

3,017,686
TWO COMPONENT CONVOLUTED FILAMENTS
Alvin L. Breen, West Chester, Pa., and Walter E. Jordan, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,727
3 Claims. (Cl. 28—82)



1. An improved bulked composite filament comprising a first longitudinally extending stem portion of a first synthetic linear polymeric composition in a substantially rounded constant area transverse cross section, and at least one additional portion of a second synthetic linear polymeric composition longitudinally disposed along and joined with said first portion, said second portion having a wide thin ribbon-like form with two longitudinally extending side edges, said second portion joined to said first portion along one of said two side edges, the thickness of said first portion significantly greater than the thickness of said ribbon-like second portion, the other of said two side edges of said second portion arranged in a random undulated configuration relative to said first portion of said filament to form a non-uniform ruffle disposed along the length of said filament to increase its bulk, said other side edge having an angular variation with respect to the filament of at least 0.1° per micron of filament length and at least 30 reversals of direction per inch of filament length.

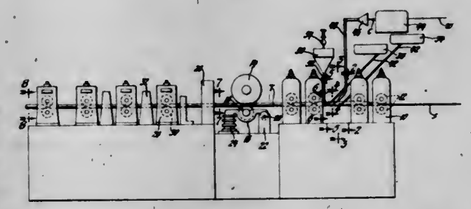
3,017,687
METHOD OF MAKING BOWL-SHAPED FINE MESH SCREENS FOR ELECTRON DISCHARGE TUBES
Cyril L. Day, Huntington, Ind., assignor to International Telephone and Telegraph Corporation
Filed Sept. 3, 1957, Ser. No. 681,497
2 Claims. (Cl. 29—25.18)

1. The method of making a bowl-shaped fine mesh metal screen comprising the steps of: providing a blank formed of a transparent material; ruling a fine mesh grid on one side of said blank; deforming said blank into bowl-shape to form a first bowl; filling the ruled grooves in said blank with opaque material; providing a second bowl having a conductive inner surface; coating the inner surface of said second bowl with photosensitive material; placing said first bowl with said grid thereon within said second bowl; exposing said bowls to light; removing said first bowl from said second bowl;



developing said photosensitive material; removing the unexposed portion of said photosensitive material to expose said conductive surface; depositing metal on said conductive surface in the lines from which said photosensitive material has been removed thereby to form a fine mesh metal screen; removing the exposed portion of said photosensitive material; and dissolving said second bowl thereby leaving said fine mesh metal screen.

3,017,688
METHOD AND APPARATUS OF MAKING ELECTRICAL HEATING ELEMENTS
Frederick W. Cummings, Pittsford, and Henry D. Mowers, Spencerport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 28, 1957, Ser. No. 643,145
15 Claims. (Cl. 29—155.66)

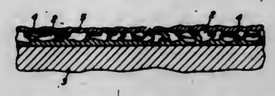


1. A method of forming electrical elements continuously from metal stock having substantially a U-shaped cross section comprising, continuously depositing a series of lower insulating half-washers in said stock, inserting a continuous run of coiled wire upon said washers, continuously depositing a series of upper insulating half-washers above said wire and lower washers, depositing a powdered insulating material about said washers and along the walls of said stock, bending the upstanding legs of said stock about said upper washers into substantially abutting engagement to form a tube substantially circular in cross section, and welding the edges of said tube.

3,017,689
ANTI-SKID TREAD PLATE
Harold S. Link and William H. Schultz, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 27, 1958, Ser. No. 724,476
1 Claim. (Cl. 29—194)

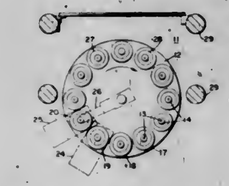
An anti-skid tread plate comprising a steel base providing a tread surface area on one side thereof, a hot-dipped coating of spelter covering said area in an amount from about 2.0 to about 6.0 ounces per square foot of said area, and abrasive particles of a mixed size from 20 to 80 mesh

uniformly distributed over said coating area, said particles being embedded in and substantially entirely covered by



the spelter in said coating and being anchored thereby against movement relative to said steel base.

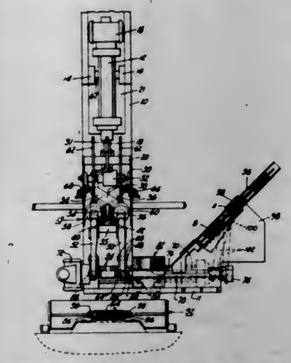
3,017,690
OBJECT INSERTING MACHINE
David Kalish, Alliance, Ohio, assignor to Consolidated Electronics Industries Corporation, a corporation of Delaware
Filed Dec. 22, 1958, Ser. No. 782,002
12 Claims. (Cl. 29—205)



1. A machine to insert a plurality of objects into a plurality of holes in a receiver, comprising, in combination, means on said machine for carrying a receiver having an axis and having a plurality of holes disposed in a first annular path around said axis, a rack having a plurality of sockets, feed means to establish a plurality of objects in said sockets with said sockets encompassing approximately half of the respective objects, a rotary magazine cooperating with said rack and having a plurality of pockets disposed in a second annular path substantially identical to said first annular path, power means to relatively reciprocate said rack and said magazine from a retract position to an advanced position to move said objects out of said rack sockets into said magazine pockets with said pockets encompassing approximately half of the respective objects, said pockets and said receiver holes alignable on an axis substantially parallel to said receiver axis, and means to axially transfer said objects out of said magazine pockets into said receiver holes.

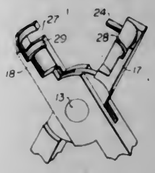
3,017,691
SPRING ASSEMBLING MECHANISM
Leonard E. Austin and Arthur K. Brown, Jr., South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Dec. 19, 1958, Ser. No. 781,558
9 Claims. (Cl. 29—211)

1. A workpiece assembly mechanism for transferring workpieces from one location to another said mechanism including a vertically mounted standard having spaced apart ear members projecting outwardly from the upper end of the standard, a motor including a casing and a power element said casing being pivotally mounted on the other ends of the ear members, a support structure connected to the power element of the motor, a workpiece handling pair of relatively movable first lever members pivotally mounted on said support structure and pair of second lever members each of which is pivotally mounted on one of said first lever members and movable in a plane normal to the plane of movement of said first lever members, power means for operating the pair of second lever members to thereby grip said workpiece between said first and second lever members, power means for operating the relatively movable first lever members to thereby stretch said workpiece to facilitate its being coupled to structure with which it cooperates, means for effecting an angular movement of the support structure when the motor is en-



ergized, and means for transferring workpieces from a chute to a position immediately adjacent said first and second lever members when the latter is in position to pick up said workpieces.

3,017,692
OPERATING TOOL FOR SPRING CLIP
Floyd Edward Burnell, Frankfort, N.Y., assignor to Kelsey-Hayes Company
Filed Aug. 31, 1959, Ser. No. 837,209
2 Claims. (Cl. 29—229)



1. A plier device adapted to expand a split cylindrically shaped clip, the clip having a pair of spaced ears projecting on one side of said split, said clip having a single ear projecting from the other side of said split, and positioned between the pair of ears, said plier device having first and second levers, pivot means joining said levers, each of said levers having a handle portion, said first and second levers having respectively first and second mated jaw portions, said device having an open position wherein said jaw portions are relatively widely spaced and a closed position wherein said jaw portions are relatively closely spaced, each of said jaw portions having a wall having an arcuate configuration, said walls defining a containment housing when in said closed position, each of said walls having a semi-circular shape, said first jaw portion having a projection projecting therefrom toward said second jaw portion said projection terminating at a flat end substantially normal to the axis of the projection, said second jaw portion having a receiving aperture, said aperture being shaped and positioned to receive said projection, said second jaw portion having a pair of backup surfaces on opposite sides of said aperture, said aperture terminating at a flat back wall substantially parallel to the end of said projection when the device is in the closed position, said back wall lying wholly on one side of a plane tangential to the arcuate surface of the second jaw and parallel with said back up surfaces, each

of said jaw portions having a shoulder formed therein concentric with said arcuate configuration, and normal to the arcuate segments, said jaw portions being relatively swingable around the said pivot means, in said open position said projection being in spaced relationship with respect to said aperture, in said closed position said projection being positioned in said aperture, whereby the clip may be gripped by said jaw portions when in said open position and the inside diameter of said clip be expanded as said device is moved to said closed position.

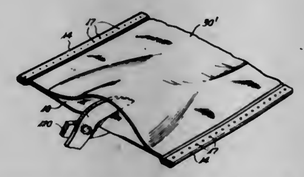
3,017,693
METHOD AND MATERIALS FOR OBTAINING LOW RESISTANCE BONDS TO BISMUTH TELLURIDE
Vincent Haba, Beverly, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 14, 1956, Ser. No. 609,940
14 Claims. (Cl. 29—473.1)



1. The method for providing a bismuth telluride body with a low electrical resistance contact comprising tinning at least a surface of said body with an alloy consisting essentially of 40–50% bismuth, 1.5 to 3.5% antimony, balance tin at a temperature between 266° and 274° C.

5. The method of soldering a copper body to a bismuth telluride body to achieve a low electrical resistance bond therebetween comprising the steps of: tinning at least one surface of said copper body; tinning at least one surface of said bismuth telluride body with a solder consisting essentially of from 40 to 50% bismuth, 1.5 to 3.5% antimony, balance tin at a temperature between 266° and 274° C.; contacting said tinned surfaces of said bodies together while maintaining the temperature of said copper body substantially above the melting point of said solder; and rapidly cooling said bodies.

3,017,694
METAL BENDING METHOD AND PRODUCT
Morris Goldsmith, Port Chester, N.Y., assignor to Elgen Manufacturing Corporation, Long Island City, N.Y., a corporation of New York
Filed Jan. 10, 1958, Ser. No. 708,145
13 Claims. (Cl. 29—509)



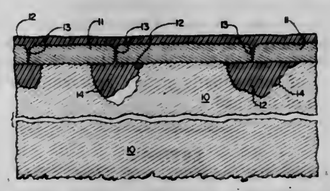
1. A method of continuously producing flexible duct connector material having two elongated metal strips each having a side marginal portion bent into securement with an opposite side margin of a fabric strip in which the free width of the fabric strip is at least equal to the combined widths of the metal strips that may be positioned within the opposite side boundaries of said free width comprising: longitudinally advancing a single elongated strip of metal; placing an elongated strip of fabric on said strip of metal; roll forming the metal strip to progressively bend over the side marginal portions of said metal strip upon the side margins of said fabric strip to secure the side margins of said fabric strip to the side margins of said metal strip whereby the opposite side margins of said fabric strip are secured to said metal strip, the free width of fabric is in non-adhesive contact with and at least equal to the combined widths of the metal strip within the opposite side boundaries of said free width, and said metal strip is substantially uniformly distorted across its width by said bending thereof; and cutting said metal strip in a line along the length thereof between the sides of both the fabric and metal strip to form two separate metal strips.

3,017,695
METHOD OF SIZING BELLS AND SPIGOTS OF STEEL-CYLINDER CONCRETE PIPE
Kenneth E. James, Covina, Calif., assignor to United Concrete Pipe Corporation, Baldwin Park, Calif., a corporation of California
Filed Jan. 31, 1957, Ser. No. 637,381
2 Claims. (Cl. 29—523)



1. The method of sizing two annular metal parts with reference to a nominal diameter which parts are ultimately to be telescoped together and which parts each consists of two annular metal sections concentrically arranged which consists of loosely arranging the metal sections of each part in concentric relationship, expanding the inner section of each part independently of the section of the other part into engagement with the outer section of its part to take out all looseness between the sections, continuing the expansion of the inner section sufficiently so as to create an overstressed condition in the metal thereof occasioned by exceeding the elastic limit or yield point of the metal from which the inner section is formed, and also sufficiently so that the external diameter of one part and the internal diameter of the other part exceed the nominal diameter by approximately the same amount, and discontinuing and removing the expansion effort.

3,017,696
CORROSION-RESISTANT SURFACE
Luther E. Vaaler, Columbus, Ohio, assignor to The Griscom-Russell Company, Massillon, Ohio, a corporation of Delaware
Filed Mar. 11, 1957, Ser. No. 645,287
2 Claims. (Cl. 29—527)



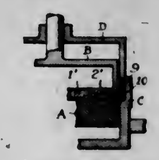
1. The method of forming a corrosion-resistant article which consists in depositing a protective metal coating upon a surface of a metal base in such a manner as to provide a plurality of pores in said protective metal coating, widening said pores and forming reservoirs at the interface between the metal base and the protective metal coating by acid etching, and coating said protective metal coating and impregnating said pores and reservoirs with a viscous noncorrosive, corrosion-resistant material capable of migrating from the pores to the surface of the protective metal coating.

3,017,697
METHODS FOR DIFFERENTIAL PLASTIC DEFORMATION OF METAL AND OTHER PLASTIC MATERIALS
Tadeusz W. Wlodek, 297 5th Ave., Ottawa, Ontario, Canada
Filed Dec. 6, 1955, Ser. No. 551,455
Claims priority, application Canada June 11, 1953
4 Claims. (Cl. 29—552)



1. A method of improving the fatigue resistance of structural metal members having a heat treated portion comprising subjecting at least adjoining parts of the heat treated and untreated portions of said members to pressures beyond the elastic limit of said portions and at spaced intervals sufficient to provide plastically deformed depressions between one-thousandth of an inch and one-sixteenth of an inch deep, said intervals being interspaced with substantially undeformed portions to provide locked-in residual stresses which resist fatigue, the distance between said depressions being between about one-eighth of an inch and about one-sixty-fourth of an inch, said distance being greater than the depth of said depressions.

3,017,698
AIR FILTER WITH INTEGRAL FRAME
Albert H. Hambrecht, Fred L. Bartels, Larrie L. Isenring, and Carl B. Rowe, all of Madison, Wis., assignors to Research Products Corporation, Madison, Wis., a corporation of Wisconsin
Filed Mar. 25, 1958, Ser. No. 723,897
2 Claims. (Cl. 29—552)



1. The method of making an air filter unit which method comprises assembling a pad of fabricated interstitial malleable metal, gathering said pad together at selected locations to bring between opposite surface unit areas more material than was between them before the gathering, and compressing said pad so gathered at said locations throughout the thickness thereof to form coherent structural parts of substantially greater apparent density than the balance of said pad.

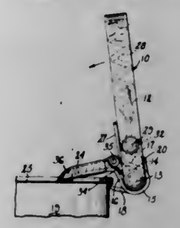
3,017,699
METHOD OF MAKING BOLTING COLLARS
Harry E. Schroeder, Cleveland Heights, Ohio, assignor to Mondie Forge Company, a corporation of Ohio
Original application Apr. 13, 1954, Ser. No. 422,809. Divided and this application May 1, 1958, Ser. No. 732,211
3 Claims. (Cl. 29—556)

1. The method of making an adapter for the purpose set forth which comprises forging a collar-shaped member comprising a short tubular portion provided with an outwardly extending flange and having a plurality of external ribs thereon spaced apart around the tubular portion and extending therealong from one end thereof to the said flange, the said ribs having respective outwardly opening notches extending longitudinally of the tubular portion for at least a portion of the lengths of the ribs from the said end of the tubular portion, and then undercutting the said ribs through a portion only of their notched extent adjacent said flange to transform the said



notched ribs into slotted lugs having through slots therein, the said undercutting of the ribs being extended to a depth sufficient to permit the heads of fastening bolts inserted in said slots to be caught behind the slotted lugs formed by the undercut ribs.

3,017,700
CAN OPENER OR THE LIKE
Gennaro Civitelli, 36 Bradley Ave., Hamden, Conn.
Filed June 20, 1960, Ser. No. 37,134
4 Claims. (Cl. 30—16)



1. A tool for opening containers, said tool comprising a U-shaped handle portion having spaced legs, a tool portion pivoted to the legs of the handle member adjacent the open end thereof, said tool portion having spaced leg members, the ends of which are bent in diverging relation, one of said ends being shaped for use as a cutting tool and the other serving as a stop member to limit rotation of the tool portion in one direction with respect to the handle.

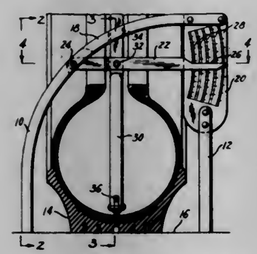
3,017,701
MASON'S MULTIPURPOSE IMPLEMENT AND ANCHORING MEANS
Robert N. Jernigan, P.O. Box 7797, Orlando, Fla.
Filed Nov. 18, 1958, Ser. No. 774,693
4 Claims. (Cl. 33—85)



1. For use in plumbing corners, running lines, and coursing wall units; a masonry device comprising, in

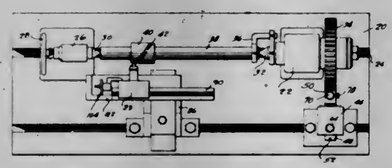
combination, at least one elongated linearly straight upright having complemental flanges at right angles to each other and disposed parallel to adjacent vertical surfaces of a masonry wall corner, said flanges being provided with lengthwise abutments having straight edges to abut said vertical surfaces, an anchor designed to be embedded in a mortar joint, and means for removably and adjustably bracketing and interconnecting said upright and said anchor, said upright comprising an angle iron the flanges of which are edged with a lengthwise runner the longitudinal edges of which are flat and function as selectively usable straight-edges, said runners constituting and providing the aforementioned abutments, each runner presenting a channel on one side thereof and being of a cross-sectional dimension greater than the cross-section of said flange, the latter being joined centrally to a side of each runner opposite to said one side thereof, the channel serving to permit said bracketing means to be fittingly mounted and slidingly keyed on said runner.

3,017,702
TIRE TREAD SAFETY GAUGE
Christopher De J. Hercules, 4640 Q St. NW., Washington, D.C.
Filed Dec. 11, 1959, Ser. No. 858,960
5 Claims. (Cl. 33—172)



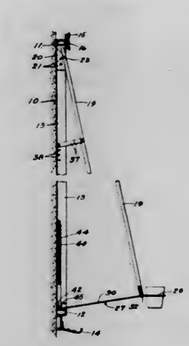
1. A tire tread safety gauge comprising a U-shaped frame having an indicator scale plate forming the base portion of one of the legs of the U-shaped frame, an indicator lever pivotally supported at one end on the other leg and having its other end sweeping over said scale-plate, and a probe rod hinged to said indicator lever and adapted for insertion inside a tire casing to sense the thickness of the tire tread of a casing resting on a flat surface when the gauge frame is held upright with its legs straddling said casing and resting on said surface.

3,017,703
MEASURING HELICAL LEADS
Russell I. Van Houten, Ormond Beach, Fla. (3920 S. Congress, Lake Worth, Fla.)
Filed Aug. 27, 1959, Ser. No. 836,441
9 Claims. (Cl. 33—199)



2. In a lead measuring apparatus, a base, a spur gear rotatably supported on said base, a setting and gauging means adjacent said gear and mounted on said base for movement toward and away from said spur gear, said means including a vertically movable toothed rack element intermeshingly engageable with the teeth of said spur gear responsive to movement of said setting and gauging means toward said spur gear, hand actuable means operatively connected to said rack element and operable, when the toothed rack element is in intermeshing engagement with the teeth of said spur gear, to effect vertical movement of said toothed rack element and thereby cause corresponding rotary movement of said spur gear, a stylus mounted on said base for longitudinal movement therealong, and indicator means operatively connected to said stylus and base for measuring the distance of travel of said stylus.

3,017,704
SCHOOLBOARD COMBINATION
Albert M. Masters, P.O. Box 155, Pen Argyl, Pa.
Filed Feb. 29, 1960, Ser. No. 11,507
10 Claims. (Cl. 35—63)

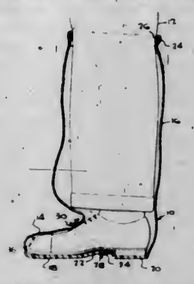


1. A board combination such as used in schools comprising a frame, a vertical board having a functional surface on at least one face thereof, mounting means carried by the frame and board to hingedly mount the board on the frame adjacent to the upper edge thereof, a palette having opposite edges, and cooperating separable attaching means carried by the palette spaced a substantial distance from and between opposite parallel edges thereof and by the bottom of the vertical board to removably mount the palette on the bottom of the vertical board with a portion of the palette forming a shelf in front of the vertical board and with the rearward edge of the palette engaging another part of the combination to hold the vertical board at an angle with respect to the frame.

3,017,705
FOOT AND LEG APPAREL ARTICLE
John Peters, 4852 S. Michigan Ave., Apt. 2, Chicago, Ill.
Filed Apr. 8, 1960, Ser. No. 20,871
2 Claims. (Cl. 36—7.3)

1. An article of foot and leg apparel comprising a foot portion and a leg portion, said foot portion being fabricated of thick plastic sheet and including a sole, a heel, and an instep connecting the sole to the heel, said leg portion being fabricated wholly of flexible and transparent material and constructed to loosely encompass the leg of a wearer, the upper end of said leg portion being turned back upon itself and secured to the adjacent part of said leg portion to form a closed circular loop, an elastic ring within and extending about said loop, said foot portion being of a size to encompass the foot of a wearer, and a strap having the intermediate part thereof

extending about and secured to the external surface of the instep and having cooperating releasable fastening



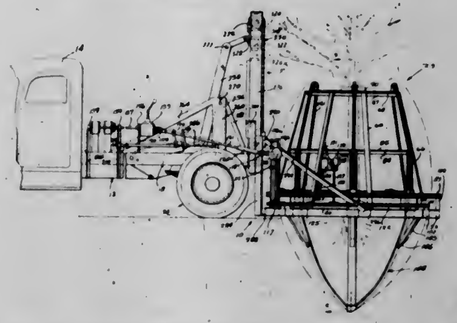
means on the opposite ends for securement of said foot portion to the foot of the wearer.

3,017,706
HEEL FOR FOOTWEAR
Jean Maunoury, 19 Rue Coutant, Gagny, Seine et Oise, France
Filed Dec. 8, 1959, Ser. No. 858,173
Claims priority, application France Dec. 10, 1958
3 Claims. (Cl. 36—34)



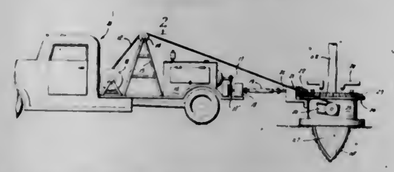
1. A heel arrangement for a shoe comprising an outer metallic heel part provided with an outwardly opening recess, a plug of relatively softer material in said recess, and rim means integral with said heel part and distributed about the entire periphery of said recess, said rim means engaging said plug and constituting the sole essential means to retain said plug in said recess.

3,017,707
EXCAVATION MACHINE
Richard J. Sigler and John J. Schnellbacher, Houston, Tex., assignors, by mesne assignments, to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Jan. 4, 1960, Ser. No. 352
17 Claims. (Cl. 37—2)



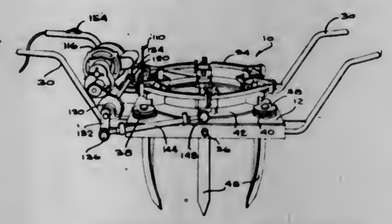
17. An apparatus for digging a section of earth from the ground comprising: a non-rotatable support, a rotatable blade carrying member, a plurality of circumferentially spaced cutting blades mounted on said member, first means for moving said blades arcuately relative to said support, second means for feeding said blades downwardly into the ground as they are moved arcuately to thereby cut a section of earth, said second means being selectively operable to retract said blades from their lowered position, a power source mounted on said support, and power transmission means interconnecting said power source and said first and second means for selective operation thereof.

3,017,708
TREE EXCAVATOR AND TRANSPLANTER
Jack R. Gardner, Clute, Tex., assignor, by mesne assignments, to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Mar. 24, 1958, Ser. No. 723,170
7 Claims. (Cl. 37—2)



2. A tree excavating machine comprising a vertically split annular outer table mounted about a vertical axis, arms with ends adjacent said outer table pivotally connected at opposite locations thereon and with their other ends pivotally connected to an engine powered vehicle, a hoisting means carried by said vehicle and attached to said arms adjacent said pivotal connections to lift and to guy said arms, a split rotary annular table within said outer table and supported thereby to rotate with relation thereto about said vertical axis, a drive on said vehicle connected to rotate said rotary table, and blades carried by said inner table and extending downwardly therefrom for excavating a tree and the like during said rotation, the connection between the inner table and the blades being such that the blades may be moved downwardly and toward said axis of rotation.

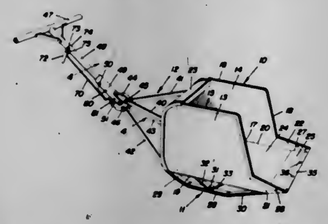
3,017,709
TREE OR SHRUB REMOVER
Richard J. Sigler, Houston, Tex., assignor, by mesne assignments, to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed June 5, 1959, Ser. No. 818,425
9 Claims. (Cl. 37—2)



8. An apparatus for digging a section of earth comprising: a supporting platform, an annular ring carried by said platform for oscillatory movement with respect thereto, a plurality of longitudinally arcuately curved earth digging and cutting blades carried by said ring and mounted for radial movement with respect thereto

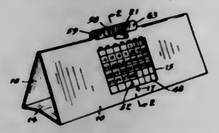
whereby the lower ends of said blades may move radially inwardly with respect to the vertical longitudinal axis of said ring and said platform as said ring and platform move downwardly toward the ground, means on said platform maintaining said ring and said platform in coaxial alignment, a power source mounted on said platform, and power transmission means interconnecting said power source and said ring for effecting said oscillatory movement.

3,017,710
SNOW MOVER AND UTILITY CART
Carl P. Carlson, Duthie, Idaho
(P.O. Box 394, Murray, Idaho)
Filed May 28, 1958, Ser. No. 738,505
3 Claims. (Cl. 37—123)



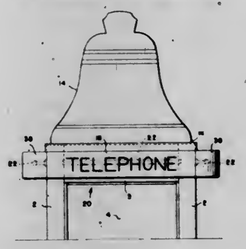
1. A scoop-type cart comprising a body in the form of a receptacle having an open front and provided thereat with a scoop blade, a handle assembly attached to the rear of said body for manipulating the cart, and a supporting frame beneath said body and rigidly attached thereto, said frame including side rails extending along opposite sides of said body and having ground engaging forward portions substantially coplanar with said scoop blade so that said cart may be tilted forwardly to engage said forward portions of the side rails with the ground so as to position said scoop blade for gathering material, said handle assembly including rearwardly extending braces carrying a vertical pivot plate, a hand grip member including a shank pivotally attached to said plate and means selectively latching said shank in a plurality of pivoted positions with respect thereto, a stand fixed to said handle and extending downwardly therefrom, a base on the lower end of the stand in approximate alignment with the ground engaging portions of the frame, said base being selectively movable to a plurality of positions by said handle and being selectively secured in any one of said positions by said last mentioned means whereby said scoop blade may be maintained in contact with the ground surface regardless of irregularities in said surface.

3,017,711
PERPETUAL CALENDARS
Walter C. Boggiss, 203 Donalda Bldg., Winnipeg, Manitoba, Canada
Filed Apr. 2, 1959, Ser. No. 803,729
4 Claims. (Cl. 40—109)



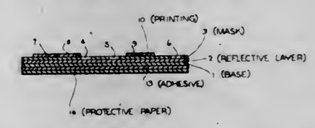
1. In a perpetual calendar, having a frame casing and a number plate slidably mounted together to expose columns of day-of-the-month numbers, positioned on said plate, through a window in said casing for a series of registrations of said columns with day-of-the-week indicia, carried by said casing, in the movement of said casing and said plate in relation to each other; a masking plate slidably mounted between said casing and said number plate for manual positioning of selected said day-of-the-month numbers in and from behind same; manually operable means for releasably locking said masking plate to said number plate at pre-determined positions of said selected numbers with said masking plate, for joint sliding of the two plates as a unit, when moved; a roller positioned on said casing; an endless belt carried by said casing, passing around said roller, and having the names of the months thereacross, in spaced relation therealong; resilient means on said casing for tensioning said belt and frictionally locking said roller thereto; said roller manually liftable, against said resilience, for manual movement of said belt thereby, to separately expose each of said names in relation with said registered columns of numbers.

3,017,712
ILLUMINATED TELEPHONE BOOTH
Percival H. Sherron, Jamaica, N.Y. (% Sherron Metallic Corp., 1201 Flushing Ave., Brooklyn, N.Y.)
Continuation of application Ser. No. 419,963, Mar. 31, 1954. This application Oct. 6, 1958, Ser. No. 765,676
5 Claims. (Cl. 40—130)



4. In an outdoor telephone booth, means for lighting up and identifying the same comprising vertically extending booth side walls having horizontally extending narrow edges at the upper terminals thereof, a top member in the form of an indicia bearing dome covering the top of said booth and having a planar horizontally extending peripheral flange seated upon said narrow booth side wall edges, an elongated indicia bearing enclosure embracing the top of said booth and having extending horizontally inwardly therefrom a flange overlying said flange of the dome, said booth side walls and said enclosure being conjointly operative to secure said dome against being lifted from the top of said booth or shifted horizontally relative thereto, and means within said dome and enclosure for illuminating the same, thereby to prominently display the indicia borne thereby.

3,017,713
DISPLAY DEVICE
Joseph F. Butler, 544 Campbell, Kalamazoo Township, Kalamazoo County, Mich.
Filed Jan. 11, 1960, Ser. No. 1,553
1 Claim. (Cl. 40—135)



In a laminated, selectively reflective advertising and

high-light signalling device for use on the rear of automotive vehicles, the combination comprising:

(*a*) a relatively narrow base strip,
(*b*) a continuous, coextensive layer of highly light reflective material on said base strip,
(*c*) a coextensive layer of opaque masking material of substantially the same color under ordinary daylight conditions as said reflective material overlying said reflective layer,
(*d*) said masking material being shaped to provide spaced openings exposing such portions of said reflective material as will define desired first signalling indicia in readable continuity along said strip,
(*e*) means providing a second indicia in readable continuity along said strip on said masking material,
(*f*) said second indicia being disposed between the openings in said masking layer which define said first signalling indicia,
(*g*) said second indicia further being of a material having a highly contrasting color under ordinary daylight conditions with respect to said masking material,

whereby under ordinary daylight conditions said first signalling indicia will be substantially invisible and said second indicia will be highly visible, but under conditions of point-source illumination, such as from automobile headlights, said first signalling indicia will become highly visible as a high-light signalling indicia and said second indicia will be unnoticeable.

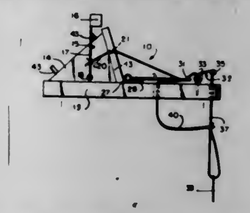
3,017,714
METHOD OF MAKING PLASTIC TERRAZZO AND RESULTANT PRODUCT
David K. Slosberg, Yardley, and Edward Nakonieczny, Philadelphia, Pa., assignors to Bonafide Mills, Inc., Winthrop, Maine, a corporation of Maine
No Drawing. Filed Nov. 7, 1958, Ser. No. 772,414
6 Claims. (Cl. 41—17)

1. A plastic sheet formed to present a surface for display, said sheet comprising throughout a cellular structure of individual elements of solid chips of a vinyl polymer that are deformed under heat and pressure so that said elements are separated each from others by a separate and distinct hairline border structure comprised of a vinyl compound, said elements and border structures being visibly exposed at the display surface and extending in depth in the sheet, and said border structure being common to contiguous elements and forming a sharp delineation between said elements, whereby the appearance of the display surface closely resembles terrazzo.

5. The method of producing a plastic sheet having a surface which resembles terrazzo in appearance, which comprises the steps of covering solid chips of a material comprising a vinyl polymer with a thin coating of a vinyl compound, applying pressure to a mass of said coated chips to reduce them to sheet form, heating said sheet while maintaining it under pressure until said chips under the influence of said heat and said pressure have been deformed and said chips and said coating have bonded together to form an integrated substantially self-supporting sheet, and then removing the coating from one surface of the sheet to expose the surfaces of the chips which were covered by said removed coating.

3,017,715
FISH CATCHER
George A. Kennedy, 1314 Michigan Ave., Gladstone, Mich.
Filed July 10, 1958, Ser. No. 747,637
1 Claim. (Cl. 43—16)

A fish catcher comprising, a rigid base having a line hole extending through the center thereof, a wire frame being downwardly bowed at one end, spring means hingedly supporting said wire frame upon said base, a main line extending through said hole in the base, a fish hook connected to one end of said main line, the opposite end of said line being connected to said frame, said spring biasing said wire frame for rotation in a direction away from said rigid base, latch means releasably securing said frame in a position adjacent to said base against the action of said spring means, an operator line connected at one end to said fish hook and secured at the opposite end to said latch means for effecting release of said frame in response to a pull upon said hook, said rigid base includes an upwardly and rearwardly inclined plate defining an obtuse angle with said base, said wire frame being rotatable between an initial set position in



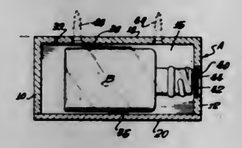
substantially parallel engagement with said base and an extreme tripped position in substantially parallel engagement with said inclined plate, and an indicator arm pivoted upon said base in rear of said inclined plate and operable between raised and lowered positions, said inclined plate having a hole therethrough, an activator line being looped about the bowed frame end thereby to be maintained at the center of the frame end and extending through said hole in the inclined plate, said activator line being connected to said indicator arm thereby connecting the indicator arm and the wire frame and serving to hold the indicator arm in the raised position against gravity when the indicator arm and the wire frame are in the set position, said indicator arm falling by gravity as the frame is released and assumes the extreme trip position.

3,017,716
FISH LURE
Huron B. Hawks, Hollis, Ark.
(Hollis Rte., Plainview, Ark.)
Filed Aug. 5, 1960, Ser. No. 47,725
9 Claims. (Cl. 43—42.16)



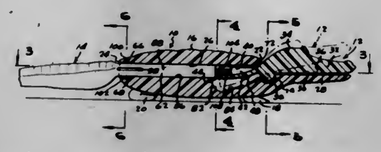
1. A fish lure comprising an elongated body formed of a soft elastic and flexible material and including a forward body section and a rear body or tail section, a first pair of fishhooks including a front fishhook and a rear fishhook embedded in said forward body section and loosely connected in tandem to one another and having barbed ends protruding from said forward body section, said front fishhook having an eye located adjacent the forward end of said forward body section and adapted to be attached to a fishing line or leader extension, a second pair of fishhooks embedded in said tail section and loosely connected to one another in tandem and having barbed ends protruding from said tail section, the forward one of the fishhooks of said second pair having an eye at its forward end protruding from the forward end of the tail section, and a swivel connected to said last mentioned eye and to a rearmost bend portion of the rear fishhook of said first pair for swivelly connecting the tail section to the forward body section.

3,017,717
ANT VAULT
David H. Caubre, 4122 W. 162nd St., Lawndale, Calif.
Filed Jan. 5, 1960, Ser. No. 670
3 Claims. (Cl. 43—131)



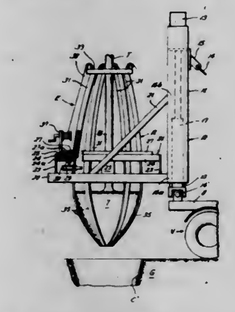
1. A safety container for a poison bottle comprising a box open on one side wherein said bottle can be disposed, a side wall hingedly connected to said box and adapted to be moved to a position to close said open side, said box having a bore formed therein that terminates at a location adjacent said side wall when said side wall is in a closed position, said box also having an opening formed therein through which insects can pass to reach said poison bottle and contents thereof a magnetically attractable pin of such transverse cross section and length as to be slidably insertable within the confines of said bore and project inwardly beyond the interior surface of that portion of said box in which said bore is formed and when said pin is so disposed, all but the upper end surface thereof is concealed; engageable means on said side wall for interlocking with said inwardly projecting portion of said pin to maintain said side wall in a closed and locked position relative to said box; and spring means positioned within said box, which spring means exerts sufficient laterally directed force on said pin to maintain said pin in said bore and engageable means due to frictional contact therewith until said pin is subjected to a sufficiently strong magnetic field as to be withdrawn from said bore to permit said side wall to be moved to a position to allow access to the interior of said box and said bottle contained therein.

3,017,718
SECTIONAL MECHANICAL TOY
Clarence L. Estes, Tanana, Alaska
Filed June 5, 1959, Ser. No. 818,447
7 Claims. (Cl. 46—123)



1. A sectional mechanical toy comprising a relatively stationary body having a longitudinal bore extending therethrough, said body having forward and rear ends to which said bore opens, a fixed lower jaw on and extending forwardly from said forward end of the body, a head member overlying said lower jaw, said head member comprising a forward upper jaw portion and a rearward head portion, a shank on and extending rearwardly from said head portion and a fixed cam follower on said shank having a transversely and concavely curved cam surface, said shank and said cam follower extending rearwardly into the body bore, a tail member having a rear tail-simulating portion and a forwardly extending shank on said tail-simulating portion, said tail member shank extending forwardly in said bore from the rear end of the body, said tail member shank having a fixed cam on its forward end, said cam having a transversely curved convex surface engaged upon said concave cam surface, first pivot means pivoting said head member to swing toward and away from said lower jaw on an axis extending crosswise of the body at the forward end of the body and at a point intermediate the ends of said head member, second pivot means pivoting said tail member to swing on a vertical axis crosswise of the body at the rear end of the body and at a point intermediate the ends of the tail member.

3,017,719
METHOD OF TRANSPLANTING TREES
Richard J. Sigler and John J. Schnellbacher, Houston, Tex., assignors, by mesne assignments, to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Mar. 29, 1960, Ser. No. 18,377
10 Claims. (Cl. 47—58)

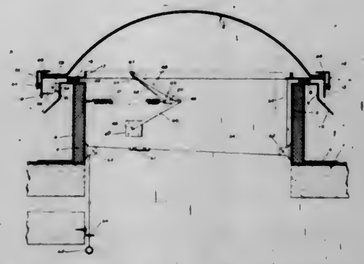


1. A method for transplanting trees, comprising the steps of, excavating a cavity of geometric configuration at the site of transplantation, enclosing said tree within an excavating machine having ground engaging blades adapted for vertical and rotary movement relative to the trunk of said tree, oscillating said blades laterally about a longitudinal axis to cut away the ground adjacent said trunk and effect a cutting of the roots therearound, enclosing said cut-away earth and said severed roots within said blades for lifting same from the ground, transporting said tree, roots and surrounding earth to said site by means of said excavating machine, and reversing said machine to withdraw said blades from said enclosing relationship relative to said tree and said roots in said surrounding earth whereby said tree is positioned at the site of transplantation.

3,017,720
SOIL STABILIZATION AND SEEDING
Thomas N. Busch, Daphne, Ala., assignor to International Paper Company, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 23, 1958, Ser. No. 782,356
4 Claims. (Cl. 47—58)

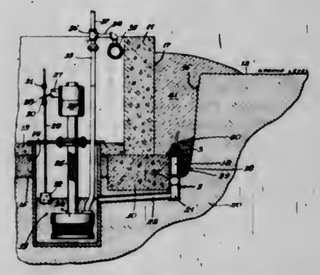
1. A method of soil stabilization which comprises the steps of forming an aqueous slurry consisting essentially of discrete cellulose pulp fibers in preponderance as a mat forming ingredient and including plant seeds and applying the slurry on the soil surface, thereby forming a continuous mat of interwoven said fibers containing and covering said seed.

3,017,721
FIRE VENTING ROOF STRUCTURE
Max Wasserman, Newton, Mass., assignor, by mesne assignments, to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Mar. 17, 1958, Ser. No. 722,061
3 Claims. (Cl. 50—10)



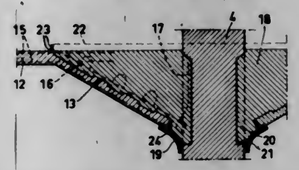
1. A roof covering construction comprising sidewalls forming an enclosed well, a cover positioned over said well, means hinging said cover at one of said sidewalls, a lever system pivotally interengaging said cover, and a second sidewall comprising a pair of lever arms pivotally interengaged at adjacent ends, and hinged at the remote ends one to the cover and one to said second sidewall, said levers forming an acute angle when said cover is closed, a projection pivotally engaged at one end to the point of pivotal interconnection of said lever arms, a helical compression spring secured at one end to the other end of said projection and at the other end to a sidewall adapted upon release to widen said acute angle and thereby open said cover, said spring in the closed position of said cover substantially bisecting said angle, and means including a fusible link maintaining said cover closed against the tension of said spring until failure of said link.

3,017,722
COMBINATION HOLLOW FOOTING STRINGER AND FOUNDATION DRAIN DUCT
Frederick A. Smith, Homewood, Ill.
Filed Feb. 28, 1958, Ser. No. 718,339
1 Claim. (Cl. 50—100)



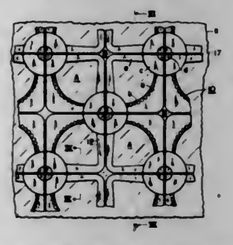
In a building structure which includes an exterior wall separating a space inside the building from an exterior space where the ground level is higher than it is in said inside space, the combination of a foundation for said wall which comprises a monolithic concrete footing having an exterior side face, and a top face for supporting said wall, and a unitary ground water draining conduit extending alongside and in contact with said exterior face of the footing below ground level, the top of said conduit being substantially at the same level as the top face of the footing, said conduit having (*a*) an imperforate inner face which during the pouring of said footing has served as a stringer for defining the said exterior face of the footing and (*b*) an outer face which contacts the ground and which is perforated to admit ground water to the conduit for subsequent removal through said conduit.

3,017,723
LIFT-SLAB CONSTRUCTION OF BUILDINGS
Erik Johan von Heidenstam, 58 Regeringsgatan, Stockholm, Sweden
Filed Mar. 17, 1958, Ser. No. 722,051
12 Claims. (Cl. 50—140)



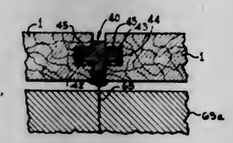
1. The method of constructing buildings having a plurality of concrete floors secured to vertical columns passing through holes in said floorings, comprising, forming a mold having downwardly tapering depressions at those positions where the columns are to be erected, forming in said mold a concrete floor slab having downwardly tapering depressions therein and having uniform thickness measured vertically, and having a hole extending therethrough at the bottoms of said depressions, repeating said casting procedure using the first slab as a bottom mold, again repeating said slab-forming procedure until a stack of floor slabs is formed, erecting columns passing through said holes in said floors, raising said slabs successively to their final levels, by force exerted between said slabs and said columns, and casting concrete in said depressions in said slabs in contact with said columns thereby securing said slabs to said columns.

3,017,724
TILE WALL CONSTRUCTION
John N. Frank, Sapulpa, Okla., assignor to Frankoma Pottery, Sapulpa, Okla., a corporation of Oklahoma
Continuation of application Ser. No. 751,457, July 28, 1958. This application Apr. 28, 1960, Ser. No. 25,486
9 Claims. (Cl. 50—265)



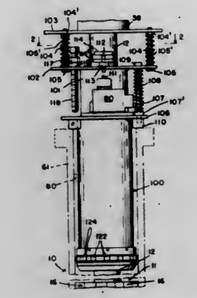
1. In a composite building wall construction having an upright glass backing member supported along its bounding edges and having an assembly of closely adjacent tile members mounted on and substantially fully along at least one face thereof in a substantially parallel aligned relation therewith, the combination of framing members supporting the tile assembly on the glass backing member in the direction of the parallel alignment of its tile members and at least along top and bottom sides of the assembly, each of the tile members having a relatively rigid body of a material such as ceramic material and of one-piece construction, said body having an outwardly-positioned front face portion defining a central open portion on the glass backing member of greater area than said face portion, a pair of backwardly-projecting and transversely spaced-apart leg portions of substantially planar section connected by said face portion and of lesser extent than said face portion, one of said leg portions extending continuously about and defining a framing wall for said open portion on the glass backing member and the other leg portion extending continuously about and defining an outer peripheral side wall about the tile member, bonding means securing said pair of leg portions of each tile member to the face of the backing member with outer leg portions of the tile members of the assembly in a closely adjacent relation with respect to each other, the construction being characterized by expanding and contracting substantially less than the normal expansion and contraction of the glass backing member alone and as controlled by a plurality of continuous and transversely spaced-apart framing edge contacts along the face of the backing member as defined by said spaced-apart legs of the tile members, and being further characterized by a series of localized expansion and contraction areas along the backing member between the framing edge contacts of and at the central open portions of the tile members.

3,017,725
SOLID GROUTING BAR AND HANGER ELEMENT FOR SETTING SLABS AND METHOD
John Larry Murphy, 10100 S. Leavitt St., Chicago, Ill.
Filed Mar. 27, 1957, Ser. No. 648,916
7 Claims. (Cl. 50—418)



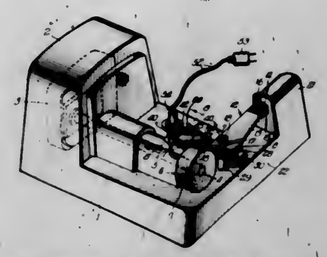
1. A combined solid metal grouting and hangar unit adapted for use in water-tight and strain-free assembly of a plurality of veneer-like, rectangular facing slabs whose edges are fully mortised and which slabs are non-load bearing in spaced apart relation and assembled from a load bearing wall structure; said grouting unit comprising a grouting strip of cruciform cross-section and load-bearing non-yielding, structurally rigid dimension; the vertical pair of oppositely disposed legs of said cruciform cross-section of such width as to be slideably insertable as tenons in adjacent mortises of adjacent slabs when assembled and the depth thereof to substantially fill said mortises, and a horizontal pair of oppositely disposed legs of said cruciform section integral with said vertical pair of legs, the thickness of the horizontal legs defining substantially the distance apart of adjacent slabs in assembly; the horizontal faces of the horizontal pair of legs and the vertical faces of the vertical pair of legs and the length of said grouting strip forming an extended and complete seal between the front and rear faces of said slabs in assembly; and extending outwardly from the rearward face of the horizontal leg of said cruciform grouting strip a manually bendable anchor and plate hanger means the extension of said anchor and plate hanger being such that the free end thereof may be readily deformed for attachment to load-bearing supporting wall means, to permit differential shifting by way of settlement of the load bearing wall without transfer of the full strain thereof to the assembled facing slabs of the non-load bearing wall, and to permit slap assembly with the free end of said anchor means fixed in the load bearing wall.

3,017,726
AUTOMATIC GAUGING DEVICE
Maynard C. Yeasting, Elmore, Ohio, and Manly A. Magsig, Ovid, Mich.; said Magsig assignor to Mid-West Abrasive Company, Owosso, Mich., a corporation of Delaware
Filed June 24, 1958, Ser. No. 744,289
2 Claims. (Cl. 51—34)



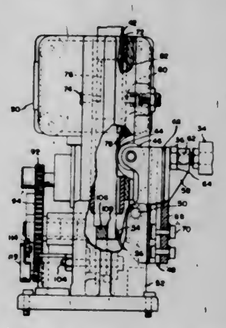
1. Honing apparatus comprising a honing tool supported for reciprocation relative to a workpiece and having a head carrying abrading elements for engaging and removing excess material from the surface of a bore in the workpiece, means for reciprocating said tool together with said head axially relative to the bore to remove the excess material from the surface thereof, a gage for said surface including a tubular member movable in an axially inward direction into said bore and supporting a circular series of gaging balls for movement radially outwardly to engage the surface of the bore, stop means limiting such movement of said tubular member into said bore, a second member carried by said tool for reciprocation therewith and telescoped axially within said tubular member normally free of contact therewith, said second member having an annular camming surface engageable with said balls upon movement relative to said tubular member in an axially inward direction to move said balls radially outwardly toward said surface and into engagement therewith, means connecting said members together for relative axial movement comprising spaced axial guide pins carried by one of said members slidably engaging the other, spring means opposing movement of said second member relative to said tubular member in an inward direction, means positively limiting movement of said second member relative to said tubular member in an outward direction, the distance said balls are moved by said second member being proportional to the movement of said second member relative to said tubular member so that such relative movement of said second member is a measure of the amount of material removed from said surface, and a yielding connection between said tool and second member permitting movement of said tool in an inward direction relative to said second member following engagement of said balls by said surface, said yielding connection between said tool and second member comprising spaced axial guide pins carried by the one and slidably engaging the other, spring means opposing movement of said tool relative to said second member in an inward direction, and means positively limiting movement of said tool relative to said second member in an outward direction, said second mentioned spring means having a greater preload than said first mentioned spring means, said yielding connection between said tool and second member and said connecting means between said members permitting a limited lateral movement of said second member relative to said tubular member to enable said camming surface to center itself with respect to the circular series of balls.

3,017,727
GRINDING MACHINE
Raymond H. Georg, 424 E. Edwards St., Springfield, Ill., and Philip E. Kopp, Springfield, Ill.; said Kopp assignor to said Georg
Filed Sept. 8, 1958, Ser. No. 759,461
10 Claims. (Cl. 51—96)



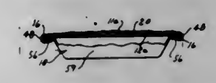
1. A grinding machine comprising, in combination, a frame, a spindle journaled for rotation in said frame, a grinding wheel fixed on said spindle for rotation therewith and having a peripheral grinding surface, a guide member having rectilineal sliding movement in a chamber in a portion of said frame at right angles to the axis of said grinding wheel, a non-rotatable flat blade holding bar pivoted in a slot in said guide member on a pivot pin for oscillation transversely of the peripheral grinding surface, a spring urging said blade holding bar, said pivot pin and said guide member toward said peripheral grinding surface, a shaft journaled for rotation in said frame, a driving connection between said spindle and said shaft, a crank pin on said shaft, a crank roller sleeve on said pin, a pivoted bell crank member having a pin on which is a second roller sleeve coacting with an adjacent edge of said blade holding bar, and a spring connected between said frame and said blade holding bar and acting yieldingly to maintain said edge of said blade holding bar against said second roller sleeve for oscillation of said blade holding bar about its pivot under the action imparted to said bell crank member by said crank roller sleeve on said crank pin.

3,017,728
PRESSURE FEEDING APPARATUS FOR A GEAR HONING MACHINE
Kenneth J. Davis, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed June 1, 1959, Ser. No. 817,405
16 Claims. (Cl. 51—165)



1. In a machine tool, a base, a work support, a tool support, means on said base mounting one of said supports for movement toward and away from the other, motive means for applying an accurately controlled force to said one support for determining the pressure between a work piece and tool carried by said supports, said motive means comprising a housing fixed to said base, a friction bushing in said housing, a cam rod slidable in said bushing, means for applying a constant bias to said rod to urge said rod axially, a cam on said cam rod, a cam follower engaging said cam and movably mounted on said housing, coupling means to connect said cam follower to said one support, and motor actuated abutment means operated to release said rod for slow longitudinal movement.

3,017,729
SHRINKABLE CONTAINER CLOSURE AND MANUFACTURE THEREOF
William E. Cheeley, Bon Air, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed May 26, 1959, Ser. No. 815,990
20 Claims. (Cl. 53—27)

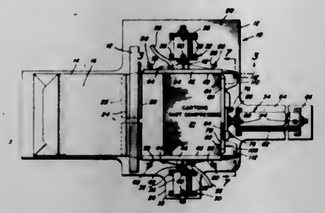


1. The method of covering a series of receptacles having opening perimeters which comprises: forming a strip with a protective outer foil and a heat shrinkable inner film in which the foil and film are secured together only in a series of zones substantially corresponding in pattern to said opening perimeters, said foil and film being free from each other inside said zones; severing said strip into sheets each provided with one of said zones and being of a size to cover one of said openings; serially placing said sheets with said zones adjacent said perimeters; curling said sheets around said perimeters; and heating said receptacles when covered by sheets to cause the central portion of said film to pull and seal said film to said perimeters.

2. An apparatus for covering a series of receptacles having opening perimeters which comprises: means for forming a strip with a protective outer foil and a heat shrinkable inner film with the foil and film secured together only in a series of zones substantially corresponding in pattern to said opening perimeters, said foil and film being free from each other inside said zones; means for severing said strip into sheets each provided with one of said zones and being of a size to cover one of said openings; means for serially placing said sheets with said zones adjacent said perimeters, means for curling said sheets around said perimeters; and means for heating said receptacles when covered by said sheets to cause the central portion of said film to pull and seal said film to said perimeters.

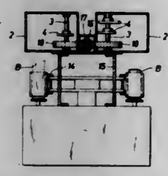
3,017,730
CARTON COMPRESSING AND PACKAGING MACHINE
John Rodish, Middletown, Ohio, assignor to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,364
6 Claims. (Cl. 53—124)

1. Apparatus for compressing and moving a plurality of flat, juxtaposed articles to a receiving station comprising support means, opposed presser means on said support means for compressing juxtaposed articles together, and pusher means on said support means and including a portion movable between said presser means for moving compressed articles toward the receiving station, said presser means including opposed surface portions including aperture means communicating with a source of pneu-



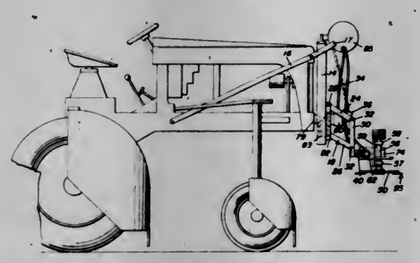
matic pressure for "pneumatically lubricating" movement of the compressed articles toward the receiving station.

3,017,731
BAG CLOSING MACHINES
Paul Lohse, Stuttgart-Bad Cannstatt, Germany, assignor to Firma Fr. Hesser, Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Mar. 15, 1960, Ser. No. 15,102
Claims priority, application Germany Mar. 24, 1959
4 Claims. (Cl. 53—201)



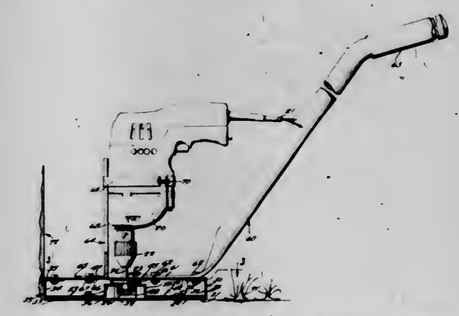
1. A a bag closing machine having several working stations, said machine comprising a conveyor device for transporting a bag to the working stations, a tool at each of the working stations adjacent the conveyor device, each of said tools including drive and control members in operative association for controllably driving each said tool, said control member being identically positioned in each of said tools, and drive means adapted for the connection with the control member of each of said tools to drive the same, each of said tools being independent of one another and interchangeable by virtue of the identical positioning of the control members in the tools.

3,017,732
COTTON TOPPER
Andy A. Keyes, 895 S. 15th St., Raymondville, Tex.
Filed Sept. 4, 1959, Ser. No. 838,133
3 Claims. (Cl. 56—25.4)



1. A cotton topper attachment for a tractor, said attachment comprising a frame adapted to be fastened to the front of the tractor, a transverse beam, mechanical means including a chain adjustably securing said beam to said frame so that the elevation of the beam is adjustable, a plurality of substantially vertical spindles, means securing said spindles for rotary movement about their axes on said beam at laterally spaced places, blades secured to said spindles to top the cotton, and means connecting said spindles and for rotating said spindles thereby rotating said blades, said spindles connecting and rotating means including a separate belt operatively connecting each adjacent spindle, a hydraulic fluid motor system centrally carried by said frame and drivingly connected with two adjacent spindles on each side thereof by a separate belt.

3,017,733
LAWN EDGER
Elmer E. Evans, 1007 W. Idlewild Drive, Evansville, Ind.
Filed Oct. 27, 1959, Ser. No. 849,033
4 Claims. (Cl. 56—25.4)



1. In a lawn edger, a power source including a chuck; an adapter including a shank connected to said chuck, there being an annular groove in the lower portion of said shank, an enlarged shoulder below said groove, the lower end of the shank being threaded and having an oblong formation, a cutting mechanism including a base of generally circular formation provided with a cutout therein, said cutout including a curved section, an edge of said base adjacent said curved section being provided with an upwardly extending lip, L-shaped apertured lugs above said base, a circular top plate fastened to said lugs; there being a central well in said plate which includes a vertically disposed cylindrical wall section provided with an annular groove, inner and outer snap rings arranged so that the outer periphery of the outer ring engages the groove in said wall section, and the inner periphery of the inner ring engages the groove in said shank, said well further including a lower wall portion having an opening therein for the projection therethrough of the shoulder of the adapter, a ball bearing assembly positioned in said well and surrounding said shoulder, a rotary cutting blade including end portions provided with cutting edges thereon, said blade further including vertically disposed portions and a connecting web portion provided with a slot for the projection therethrough of the lower oblong end of the shank, and a securing element arranged below said web portion and threadedly engaging the lower end of the adapter.

3,017,734
PICKING SPINDLE FOR COTTON PICKER
Albert J. Scholtes, 714 Ohio Ave., Corpus Christi, Tex.
Filed June 2, 1960, Ser. No. 33,435
11 Claims. (Cl. 56—50)

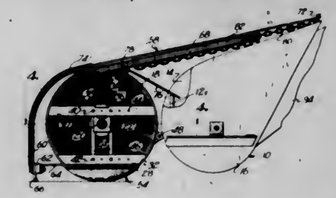
1. A spindle for cotton pickers comprising a substantially solid body having a longitudinal slot open through

the outer surface, barb units in the slot comprising barbs and elastic means for yieldably projecting the barbs from



the slot, and locking means confining the barb units in place in the slot.

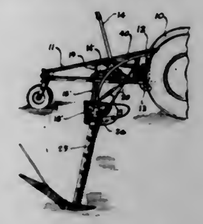
3,017,735
GRASS SEED HARVESTER
Francis M. Jordan and Lawrence M. Jordan, Pritchett, Colo.
Filed Sept. 28, 1959, Ser. No. 842,667
3 Claims. (Cl. 56—128)



1. For use with a grass seed pickup having an elongated, cylindrical brush provided with a longitudinally extending axle thereon and adapted to be operably coupled with a movable combine having an elongated, forwardly projecting, open top, walled hopper disposed thereon transverse to the direction of motion thereof, the improvement of which comprises means for rotatably mounting said axle on said combine forwardly of said hopper and comprising a pair of annular bands mounted on the front wall of said hopper in horizontally spaced relationship for swinging movement about horizontal axes, a pair of spaced, horizontally disposed bars for each band and secured thereto at opposed ends thereon, a pair of spaced uprights secured to the bars of each band, a bearing block positioned between and slidably mounted on each pair of said uprights for movement along a substantially vertical path between the corresponding bars, and screw means on the block and one of said corresponding bars for adjustably positioning said block on said uprights, each of said blocks being provided with a central opening therethrough, said blocks being adapted to receive within the openings thereof the ends of said axle for journaling the latter for rotation about a horizontal axis.

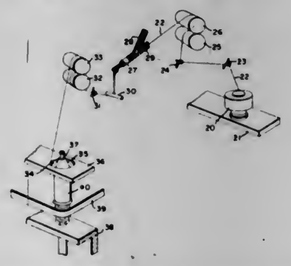
3,017,736
DOUBLE SICKLE MOWER CONSTRUCTION
George B. Hill, Mansfield, Ohio
(7615 Winterberry Place, Bethesda 14, Md.)
Original application Apr. 13, 1955, Ser. No. 501,107. Divided and this application Feb. 2, 1959, Ser. No. 790,747
9 Claims. (Cl. 56—297)

1. In a mower mechanism including supporting means for two oppositely reciprocating sickles adapted to be driven through a fixed drive and return cycle, a drive means therefor including a cam, means to rotate said cam, motion transmitting means operatively connected between said cam and said sickles to effect said reciprocation thereof in opposite directions, said motion transmitting means including a pair of cam followers co-operating respectively with said cam to be moved through said fixed sickle drive and return cycle and said followers co-operating respectively with each of said sickles to drive said sickles in one direction, a pivot means disposed to co-operate with both of said cam followers of said motion transmitting means, a pivot support therefor, said followers each co-operating with the cam in a manner such that one follower is being driven over a peak while the other follower is returning into a valley, and said pivot means being driven about its support by reason of its co-



operation with the motion transmitting means that includes the cam follower that is being driven whereby said pivot serves to urge said other follower to return, the drive means functioning to positively move one sickle outwardly during the drive portion of said fixed cycle while the pivot means urges the other sickle inwardly during the return portion of said fixed cycle.

3,017,737
METHOD AND APPARATUS FOR PRODUCING BULKY CONTINUOUS FILAMENT YARN
Alvin L. Breen, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 25, 1958, Ser. No. 744,592
6 Claims. (Cl. 57—34)



1. Apparatus for making novelty yarns, which comprises a zone for separating and whipping about the filaments of a bundle of filaments supplied thereto to form convolutions in said filaments, means for supplying said bundle of filaments in the form of yarn to said zone, means for withdrawing said filaments from said zone and for reforming them into yarn under a tension sufficiently low to prevent said convolutions from straightening out whereby to form a bulky yarn, and means for intermittently increasing the tension on the filaments passing through said zone to produce a yarn the bulkiness of which varies intermittently along its length.

3,017,738
METHOD AND APPARATUS FOR FORMING CORD
Jeno Beyer and Conrad Joseph Gonsalves, Arnhem, Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed June 25, 1953, Ser. No. 364,174
Claims priority, application Netherlands Nov. 21, 1952
13 Claims. (Cl. 57—58.3)

1. A method for the manufacture of a two-element twisted thread product wherein one element balloons around another element resulting in the elements being twisted together at a point of joining which comprises withdrawing a first element from a source of supply, passing said first element under tension to a false-twist device including a storage disk, ballooning said first element by rotation of said false-twist device and said storage disk whereby the tension required for ballooning is



generated in the ballooning element between the source of supply and the starting point of the balloon, simultaneously withdrawing a second element from a yarn package under a pre-tension adapted to the tension of the ballooning element, winding said ballooning element around said second element at a free point of joining, and withdrawing the resultant two-element twisted thread product from said free point of joining.

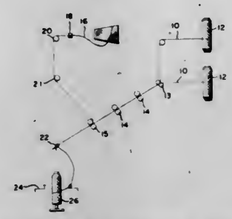
3,017,739
LONG SPLICE AND METHOD OF MAKING SAME
David W. Gathman, Williamsport, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Jan. 2, 1959, Ser. No. 784,639
27 Claims. (Cl. 57—142)



1. In a wire rope having an independent wire rope core, a long splice comprising tucks formed by two outer strands from which a substantial number of wires have been removed tied together in a double knot, a portion of the loose ends of the tied strands being laid into the said independent wire rope core for substantially two lays to replace one or more cut out wires of the independent wire rope core, the cut off ends of the core wires being annealed and abutted against the loose end of the tied strands at the end of the said two lays.

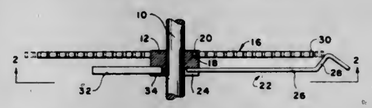
3,017,740
PROCESS FOR CORE-SPINNING SMOOTH ELASTIC YARN
Charles R. Humphreys, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,742
10 Claims. (Cl. 57—163)

1. A process of spinning smooth elastic yarn comprising the steps of: drafting at least one roving of staple fibers; stretching at least one continuous filament of a segmented elastomer to increase its length substantially; gathering the drafted roving and the stretched filament; twisting the filament and roving, using a twist multiplier of more than about 4.4, to produce a composite yarn having the filament as a core and the roving as a sheath; permitting appreciable contraction of the composite yarn



from its initially stretched condition; heating the composite yarn at a temperature less than the degradation temperature of the core; and cooling the composite yarn at a length substantially equal to the length at which it was heated.

3,017,741
OVERBANKING PREVENTIVE MEANS FOR A BALANCE WHEEL
Fred Koehler, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1959, Ser. No. 799,952
3 Claims. (Cl. 58—107)



2. An electric timepiece comprising an oscillatable balance staff driven by a source of motive power, a hairspring having one end fixed relative to said staff, an elongated motion-limiting member rigidly supported at one end by said staff and having means carried at its free end engageable with the outer coil of said hairspring to prevent overbanking of said timepiece, said motion-limiting member being flexible whereby said member is able to yield in a direction parallel with the axis of said balance staff in response to a predetermined force applied to it by the outer coil of said hairspring.

3,017,742
ESCAPEMENT FOR A TIME RATE MECHANISM
Joseph A. Reinhardt, Wheaton, Ill., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed July 28, 1958, Ser. No. 751,237
1 Claim. (Cl. 58—116)

An isochronous escapement comprising a framework, an escape wheel mounted for rotation on said framework, means providing input energy to said wheel, said wheel having a plurality of spatulate teeth peripherally thereof, each tooth having a straight leading edge lying on a tangent to a base circle concentric with the rotational axis of the wheel and of less diameter than the base circle of the teeth, a member supported for oscillatory motion on said framework for intermittent locking relation with said wheel to pulse the same, said member being constituted at least in part as a longitudinally truncated hollow cylinder, the free edges presented thereby having tooth-contacting convex surfaces, both surfaces comprising longitudinal segments symmetrical about a diameter of the member, each segment comprising two arcuate portions, one having a curvature of radius substantially

greater than the exterior diameter of the member and the other portion having a radius of curvature substantially less than the diameter of said member, the portions of larger radius being struck from a common center and disposed adjacent the outer periphery of the member and



the portions of smaller radius merging therewith and being disposed adjacent the inner periphery of the member, and resiliently deformable means secured between the member and framework for restoring the member after each excursion thereof.

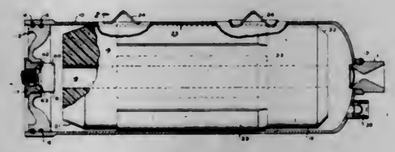
3,017,743
ROCKET AND PROPELLANT CHARGE THEREFOR
Barnet R. Adelman, Los Angeles, Calif., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 20, 1956, Ser. No. 560,351
10 Claims. (Cl. 60—35.6)



6. A jet-propelled device comprising, in combination, an exhaust nozzle, a casing defining a combustion chamber, and a composite solid propellant charge disposed in said chamber, said charge generally cylindrical in form and having an axial perforation, said charge comprising a plurality of concentric cylindrical strata of propellant material, each of said strata comprising a plurality of cylindrical imperforate segments bonded together and to other strata contiguous therewith with a propellant mortar, said axial perforation defined by the exposed inner surface of the innermost strata, said charge being restricted at its ends and at its outer surface, the latter surface being bonded to said casing, said propellant material comprising a mixture of an inorganic oxidizing salt and a rubbery copolymer formed by polymerizing a vinyl pyridine and a conjugated diene having 4 to 6 carbon atoms per molecule.

3,017,744
PROPELLANT GRAIN AND ROCKET MOTOR
James A. Jett, McGregor, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed July 11, 1957, Ser. No. 671,364
4 Claims. (Cl. 60—35.6)

1. A rocket motor comprising: a cylindrical case having one end closed and an exhaust nozzle positioned in the other end; an igniter extending into said case at said closed end; a cylindrical internal-external burning grain of solid propellant positioned within said case with its outer wall spaced apart a substantial distance from the inner wall of said case; and a plurality of resilient bonding and supporting pads spaced apart from each other around the periphery of said grain between said grain and



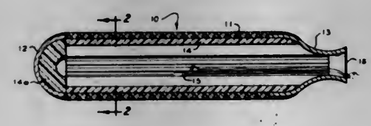
said inner wall for bonding said grain to said inner wall and supporting said grain within said case, said pads each having a width at least equal to one web thickness of said grain and a length at least equal to one web thickness of said grain so as to bond and support said grain throughout the burning thereof, and said pads being the sole means of bonding and supporting said grain in said case.

3,017,745
FUEL SUPPLY SYSTEMS FOR ROCKET ENGINES
Walter Shirley, Bedfordshire, Philip Ramsden, Wibsey, Bradford, and Geoffrey Herbert Nixon, Kenton, Harrow, England, assignors to D. Napier & Son Limited, London, England, a company of Great Britain
Filed Aug. 14, 1957, Ser. No. 678,250
Claims priority, application Great Britain Aug. 31, 1956
1 Claim. (Cl. 60—35.6)

A rocket motor fuel supply system for a rocket engine comprising a main combustion unit including a combustion chamber and a catalytic decomposition chamber, a turbo-pump having two pump sections, one of said pump sections being arranged to deliver hydrogen peroxide through a main supply line to the decomposition chamber, whence the decomposition products issue into the combustion chamber, and means for supplying an organic fuel to the combustion chamber, the fuel supply system including a branch passage from the main supply line on the downstream side of the pump section of the turbo-pump, an auxiliary catalytic decomposition chamber connected to this branch passage, a conduit connected between the auxiliary decomposition chamber and the turbine section of the turbo-pump, and a starting circuit including a pressure generator, said pressure generator comprising a starter pump and an electric motor driving said pump, an inlet connection to the pressure generator from a source of hydrogen peroxide, and an outlet connection between the starter pump and the auxiliary decomposition chamber, a pressure responsive switch responsive to the pressure in the main supply line and controlling the flow of hydrogen peroxide from the starter pump and arranged to shut off this flow when the pressure in the main supply line exceeds a predetermined value, the other pump section of said turbo-pump having an

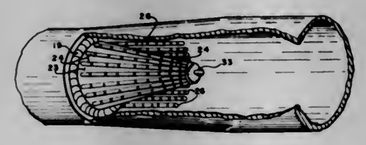
inlet connected to a source of organic fuel and an outlet connected to the main combustion unit, a control valve in the delivery side of said other pump section, and a pressure sensitive device responsive to the pressure in the main combustion chamber and operatively connected to the control valve to open this valve and admit the organic fuel to the combustion unit when the pressure in the main combustion chamber reaches a predetermined value.

3,017,746
DISPOSABLE ELASTIC ROCKET CASE
Otta W. Kiphart, McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 16, 1958, Ser. No. 742,433
4 Claims. (Cl. 60—35.6)



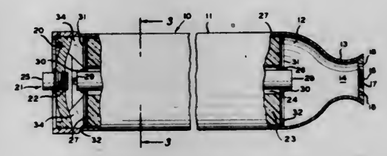
1. A rocket motor which is entirely consumed at burnout of the propellant consisting essentially of a cylindrical longitudinally perforated solid propellant charge closed at one end; an exhaust nozzle fabricated from solid propellant operatively secured to the open end of said charge; a casing consisting essentially of a plurality of layers of rubberized fabric reinforced with metal wire and wrapped about the outer surface of said propellant and cured with said propellant so as to be bonded thereto; and means to ignite said propellant within said perforation.

3,017,747
JET ENGINE THRUST AUGMENTATION SYSTEM
Alan E. Steele, Middletown, Conn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 10, 1958, Ser. No. 773,117
3 Claims. (Cl. 60—35.6)



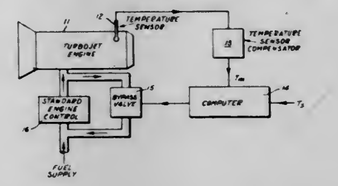
1. In a jet-reaction propulsion unit for aircraft, an air inlet, a compressor stage for increasing the density of the air entering the inlet, a diffuser section into which the compressed air is directed said diffuser section having an outer wall and an inner wall, an inner body comprising a rearwardly extending frusto-conical surface forming said inner wall terminating at the rear of said diffuser section, the conical surface of said inner wall and the outer wall of said diffuser section having a plurality of axially and circumferentially spaced orifices therein, said orifices oriented to inject fuel into the entire area of said diffuser section in an upstream direction into the stream of expanding air to support combustion, increasing the temperature and accelerating the velocity of the air stream through said diffuser section of the propulsion unit, said accelerating heated air stream resulting in the development of thrust output of the propulsion unit.

3,017,748
COMBINATION LIQUID AND SOLID PROPELLANT SPIN-STABILIZED ROCKET MOTOR
Charles H. Burnside, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 2, 1959, Ser. No. 784,816
11 Claims. (Cl. 60—35.6)



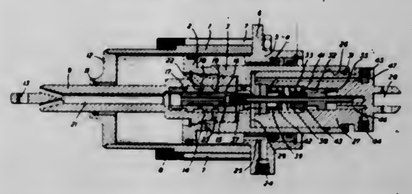
1. A rocket motor comprising a casing defining a combustion chamber, a reaction nozzle, a cylindrical charge of solid rocket propellant loaded within said chamber and having an axial perforation defined by an exposed burning surface, a perforated tube suspended within said perforation and adapted to contain a liquid combustion reactant, and means adapted to impart rotation to said motor during its flight and exert centrifugal force upon said liquid combustion reactant to cause the same to be injected into said perforation.

3,017,749
TEMPERATURE RESPONSIVE GAS TURBINE FUEL CONTROL WITH MULTI-RATE FEEDBACK
Herbert Heppler, 10469 Deborah Drive, Parma, Ohio, and Paul M. Stiglic, 17400 Woodford Ave., Lakewood, Ohio
Filed June 10, 1957, Ser. No. 664,861
4 Claims. (Cl. 60—39.28)
(Granted under Title 35, U.S. Code (1952), sec. 266)



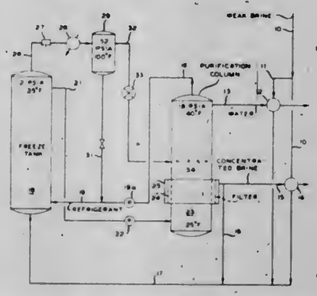
1. A control system for correcting a stall condition in a gas turbine engine having a fuel line connected thereto comprising, temperature responsive means operably connected to said gas turbine engine for measuring internal gas temperatures, a computing means responsive to measurements derived by said temperature responsive means for comparing the value of the temperature to be measured with a preset temperature value to provide a temperature difference value, means responsive to said temperature difference value for providing an output signal that increases rapidly in one direction when the value of said temperature to be measured exceeds the value of said preset temperature and means responsive to said temperature difference value for providing an output which decreases slowly to zero after the value of said temperature to be measured is reduced below the value of said preset temperature and means responsive to said output signal for reducing the fuel flow in said fuel line as a direct function of said output signal in said one direction and increasing the fuel flow as a direct function of said output signal in the opposite to said one direction.

3,017,750
HYDRAULIC APPARATUS
Bertram Carl Kempson, St. Marks, Cheltenham, England, assignor to Dowty Hydraulic Units Limited, Tewkesbury, England, a British company
Filed July 7, 1960, Ser. No. 41,296
Claims priority, application Great Britain July 13, 1959
8 Claims. (Cl. 60—52)



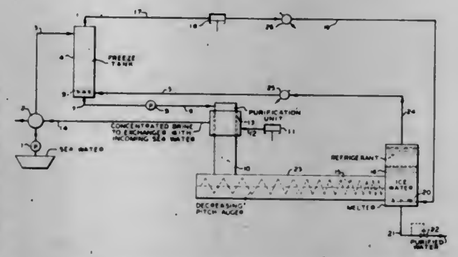
1. A servomotor including a power driven member, a main control slidably carried by and having a lost motion connection to the power driven member, an operative connection extending directly between the power driven member and the main control, a control unit forming part of the operative connection arranged so that movement of the main control member operates on the control unit to cause movement of the power driven member in the sense to cancel the effect of main control movement on the control unit, and an auxiliary control also forming part of said operative connection and capable of applying movement to the control unit independently of the main control to cause power movement of the power driven member which is not cancellable by relative movement of the main control within its lost motion connection.

3,017,751
CONCENTRATION OF AQUEOUS SOLUTIONS
Harold M. Hawkins, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 25, 1960, Ser. No. 24,510
13 Claims. (Cl. 62—58)



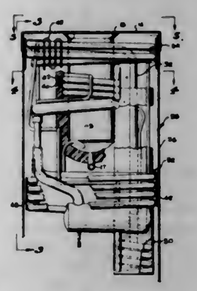
6. A process for concentrating an aqueous solution which comprises passing a stream of said solution to a freeze zone; passing a stream of liquid refrigerant into the lower portion of said freeze zone; maintaining the pressure in said freeze zone about 3 to 10 p.s.i.a. below the vapor pressure of the refrigerant at 32° F.; withdrawing a slurry of ice crystals in concentrated solution from said freeze zone; passing said slurry to the lower portion of a purification zone; passing said slurry upwardly through said purification zone; maintaining a pulsating pressure in said purification zone about 3 to 10 p.s.i.a. above the vapor pressure of the refrigerant at 32° F.; separating and withdrawing concentrated solution from said slurry in said purification zone; withdrawing vaporized refrigerant from said freeze zone; introducing vaporized refrigerant to said purification zone above the point of withdrawal of concentrated solution; removing liquid water from the upper portion of said purification zone; and removing liquid refrigerant from the upper portion of said purification zone.

3,017,752
DESALTING SEA WATER
Robert A. Findlay, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 28, 1959, Ser. No. 836,739
6 Claims. (Cl. 62—58)



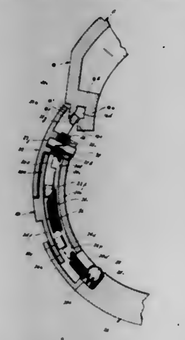
1. A method for the purification of salt water which comprises injecting a refrigerant into a body of salt water, chilling said salt water by evaporation of said refrigerant therein, recovering refrigerant vapors thus formed, passing an ice-containing slurry thus obtained to a fractional crystallization operation, therein purifying ice crystals to reduce the salt content thereof, passing purified ice crystals thus obtained to a melting zone, therein heat exchanging ice crystals and said refrigerant vapors, forming purified water, maintaining a pressure in said melting zone sufficient to cause purified water to flow countercurrent to the ice crystals in said fractional crystallization operation, and removing purified water from said melting zone as a product of the process.

3,017,753
WATER COOLER
Wilhelm Schirp, Gummersbach, Germany, and Max Alex, Pasadena, Calif., assignors to Alaska-Werk, Bergneustadt, Rhineland, Germany
Filed June 30, 1959, Ser. No. 824,083
3 Claims. (Cl. 62—395)



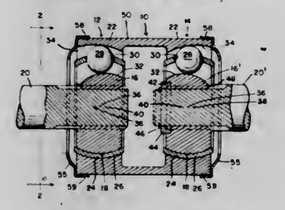
2. In a device for cooling a substance by refrigeration, a metal casing of generally rectangular cross-sectional shape forming the exterior walls of the device and including a front panel and two parallel side panels normal thereto, a container for the substance to be cooled disposed within the casing substantially on the vertical central axis thereof and spaced inwardly of the casing panels, and an absorption-type refrigeration system within the casing including an evaporator associated with the container, a condenser tubing coil adapted to be cooled by the ambient atmosphere having its convolutions closely adjacent the panels of the casing, an absorber tubing coil adapted to be cooled by the ambient atmosphere spaced below said condenser coil and having a major portion of each of its convolutions closely adjacent the panels of the casing, said absorber tubing coil having a flattened side opposite one corner of the casing leaving a substantial space therebetween, and an upright generator in said space, said condenser and absorber coils being disposed about the central vertical axis of the casing.

3,017,754
RING WITH EXPANDABLE, SEPARABLE SELF-CONTAINED SHANK
Moe Manne, 220 Central Ave., Lawrence, N.Y., and Henry Peterson, 160 Central Park S., New York, N.Y.
Filed May 28, 1959, Ser. No. 816,589
6 Claims. (Cl. 63—15.45)



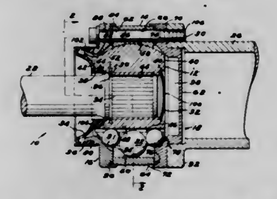
1. An improved finger ring comprising a ring head, a ring shank including at least a shank section, a first curved connecting section extending from one end of said shank section and providing a continuation thereof, a second curved connecting section extending from the other end of said shank section and providing a continuation thereof, means adjustably connecting said one end of said shank section to the adjacent end of said first connecting section, means adjustably connecting the other end of said shank section to the adjacent end of said second connecting section, a first spring extending through said first connecting section and connected under tension between said one end of said shank section and the other end of said first connecting section, a second spring extending through said second connecting section and connected between said other end of said shank section and the other end of said second connecting section, said connecting sections each including at least one pair of slidably interconnected links, said sections and said springs cooperating to provide a self-contained expandible shank having a substantially continuous outer periphery and adjustable over a range of sizes from a retracted position to various extended positions, said first and second springs normally biasing said shank into said retracted position independently of said ring head, said shank when in assembled relation intermediate the ends of said ring head forming an annulus adjustable over said range of sizes, said shank section and said ring head being substantially opposite each other in said annulus and said connecting sections being substantially opposite each other in said annulus, and coacting means on each end of said ring head and the adjacent other ends of said connecting sections for releasably securing said shank to said ring head without deformation of said shank and ring head such that said shank may be readily removed for replacement by a further shank, said coacting means providing connections between said ring head and said other ends of said first and second connecting sections such that said ring head together with the adjacent connected links of said first and second connecting sections provides an elongated non-expandible head segment for said annulus which extends substantially 180° thereof, expansion and contraction of said annulus occurring between the respective slidably interconnected links of said first and second connecting sections and at the opposite ends of said elongated head segment.

3,017,755
DOUBLE CONSTANT VELOCITY UNIVERSAL JOINT
Fred F. Miller, Berkley, Mich., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed May 31, 1960, Ser. No. 32,866
5 Claims. (Cl. 64—21)



1. A double constant velocity universal joint comprising axially spaced first and second universal joint units, said first universal joint unit including inner and outer races relatively angularly movable with respect to each other, registering generally axially extending ball race grooves in said races and balls in said grooves for transmitting torque between said races, said second universal joint unit including inner and outer races relatively angularly movable with respect to each other, registering generally axially extending ball race grooves in the races of said second unit and balls in said last-mentioned grooves for transmitting torque between the races of said second unit, said outer races being formed as integral portions of a single rigid tube of one-piece construction to facilitate machining and grinding the internal race surfaces, said outer races being located at the opposite ends of said tube and the grooves thereof formed in the interior surface of said tube, said outer races being spaced apart axially and integrally joined by an annular web portion of said tube.

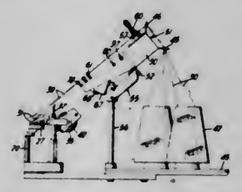
3,017,756
UNIVERSAL JOINT
Everett H. Sharp, Berkley, Mich., assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed July 6, 1959, Ser. No. 825,149
32 Claims. (Cl. 64—21)



1. A ball type universal joint, comprising an inner ball race, an outer ball race operably associated with said

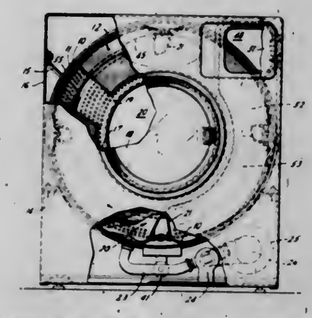
inner ball race, driver balls positioned between said inner and outer ball races for transferring torque therebetween, and pilot balls engaging said driver balls for positioning said driver balls in the homokinetic plane during operation of said universal joint.

3,017,757
YARN TAKE-UP MEANS FOR KNITTING MACHINES
James D. Moyer, Wyomissing, Pa., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Oct. 16, 1957, Ser. No. 690,572
9 Claims. (Cl. 66—146)



1. In a knitting machine having needles, a yarn carrier for feeding a yarn to said needles, and means for moving said yarn carrier between active and inactive positions, in combination with a take-up arm for said yarn, and electrical means controlled by the movement of said carrier between active and inactive positions for moving said take-up arm between active and inactive positions.

3,017,758
LAUNDERING MACHINES
Julius J. Haverstock, St. Joseph, and Raymond M. Goodman, Benton Harbor, Mich., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 12, 1957, Ser. No. 677,720
6 Claims. (Cl. 68—19)



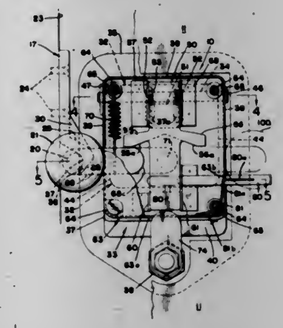
1. In a laundering machine: a rotary drum of the type wherein fabrics tumble onto the inside of a peripheral wall which substantially consists of substantially freely extending sheeting, held by the sides of the drum in a substantially cylindrical but generally loose and flexible form and made of fabric adapted to absorb and carry liquid; means to rotate the drum; and a tub surrounding said drum and having an inner bottom surface area substantially consisting of rigid metal, curved in general accordance with said substantially cylindrical form, extending gradually into contact with said drum, and disposed in slidingly supporting contact with substantial outer surface of said sheeting.

3,017,759
METHOD FOR MAKING FLUID SEALING ELEMENTS
Richard J. Bagdon, Los Altos, Calif., assignor to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Original application July 6, 1956, Ser. No. 596,328, now Patent No. 2,990,206, dated June 27, 1961. Divided and this application May 24, 1957, Ser. No. 666,259
9 Claims. (Cl. 69—21)



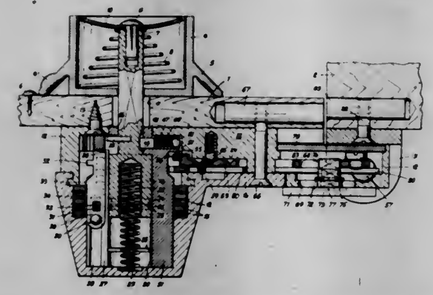
1. A method for making a radially flanged frusto-conical annular leather sealing element, comprising the steps of disking out leather washers with concentric inner and outer peripheries; holding the annular radially outer portion of said washer stationary while axially deflecting the unclamped annular radially inner portion into a frusto-conical portion; and applying a force substantially normal to the walls of the frusto-conical portion to compression mold it to a permanent shape.

3,017,760
SLIDING DOOR LATCH
William B. Jones, South Euclid, Ohio, assignor to H. K. Porter Company, Cleveland, Ohio, a corporation of Delaware
Filed Oct. 28, 1959, Ser. No. 849,359
9 Claims. (Cl. 70—97)



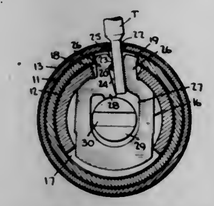
1. In a latch mechanism, an inside latch handle having a shank portion adapted to engage with and be held by a keeper, frame means, a bolt having a driving element, guide means secured to said frame means, said bolt being slidably supported and guided by said guide means, an arm interconnecting said bolt and said shank portion of said inside latch handle in such a manner that when said bolt is moved a predetermined rectilinear distance said shank portion is released from the keeper, an outside latch handle pivotally connected to said frame means, arm means interconnecting said outside latch handle with said bolt in such a manner that upon pulling said outside latch handle outwardly said bolt is moved the predetermined rectilinear distance to unlatch position.

3,017,761
CODE LOCK
Friedrich Pleterski, Muhlgasse 9/12, Vienna IV, Austria
Filed Apr. 30, 1957, Ser. No. 656,052
Claims priority, application Austria May 15, 1956
17 Claims. (Cl. 70—133)



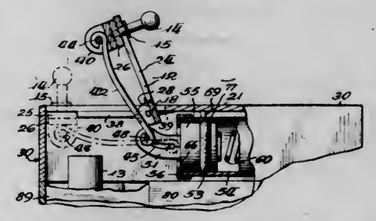
1. In a combination lock, a casing, a plurality of discrete rings stacked in said casing in end-to-end relation coaxial of a common axis, each said ring having a notch in its inner periphery and being independently adjustable about said axis, means fixing each said ring relatively to said casing, in a selected one of a plurality of positions of rotational adjustment about said axis a plate shiftable axially along and within said rings, said plate having an abutment and a sequence of recesses extending parallel with the axis of said rings, first means carried by said casing and manually operable to rotate said plate to align said abutment with the notch in each said ring in succession, and pawl means manually operable to engage each said recess in sequence, to advance said plate through said rings, step by step, when said abutment is correctly aligned with the notch in each respective ring.

3,017,762
KNOB RETAINER FOR LOCK
Paul P. Kublik, Ambler, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Feb. 25, 1960, Ser. No. 11,021
6 Claims. (Cl. 70—224)



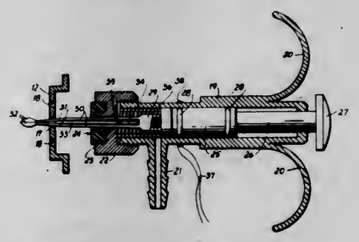
1. In a combination of the class described, a spindle sleeve, a knob retainer mounted for movement to knob retaining and releasing positions on said spindle sleeve, a part on said knob retainer adapted to be engaged by a tool, said part having a portion that is formed to be relatively yieldable as compared with further parts of the retainer, said yieldable portion having sufficient strength to accept a predetermined amount of force that the tool need apply for normally moving the retainer to knob releasing position, a locking member mounted relatively to the spindle sleeve for movement into opposed relation to one of said further parts on the knob retainer to lock said retainer in knob retaining position, and the yieldable portion of said retainer part yielding when the tool applies a force exceeding said predetermined amount, so that the retainer when locked by said locking member will not be moved to knob releasing position through deforming of a part of said retainer or locking member.

3,017,763
CLOSURE TIMING ARRANGEMENT
Mack W. Weil, 5047 Oakton Ave., Skokie, Ill.
Filed Jan. 26, 1960, Ser. No. 4,670
5 Claims. (Cl. 70—269)



1. In a container of the type having a body member and a rotatable closure member secured thereto for enclosing a number of small articles which are to be removed at different time intervals, the improvement comprising a latching means longitudinally movable with respect to said closure member for latching said closure member to said body member, timing means controlling said latching means, said timing means including a hollow member having a port at one end, a piston in said hollow member, spring means for biasing said piston, a valve in said hollow member for closing said port responsive to the pressure of air expelled from said hollow member by reciprocation of said piston toward said one end, a connection between said piston and said latching means arranged to reciprocate said piston toward said one end on the longitudinal displacement of said latching means in one direction, said valve thereafter returned under air pressure exerted through said port to control said spring means and said piston for moving said piston and latching member in the other direction for unlatching said latching means in a predetermined time period whereby said closure member is rotatable to its open position, and means controlled on return of said piston for permitting the entry of air into said hollow member between said piston and said valve.

3,017,764
TEST ADAPTER FOR AIRCRAFT STATIC VENT AND SYSTEM
John Gilday, 1665 Guertin St., St. Laurent, Quebec, Canada
Filed May 9, 1960, Ser. No. 27,879
8 Claims. (Cl. 73—4)



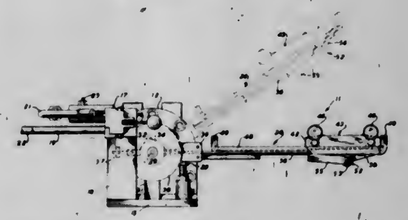
1. An adapter for pepper pot type vents of an aircraft static system comprising a flat sealing gland adapted to cover the holes of said vent and having an opening

registering with one of said holes, a member having a pair of jaws extending through said hole of said gland, resilient means urging said member away from said gland, a pin mounted between said jaws in a fixed position with respect to said sealing gland, said jaws having enlarged end portions adapted to enter said one of said holes when said jaws clear said pin in a position of said member near said sealing gland, said jaws being distensible by said pin when said member is pushed away from said sealing gland by said resilient means, said enlarged end portions, when said jaws are distended, being engageable with said one of said holes, and a chamber sealed on said member and on said sealing gland.

3,017,765
APPARATUS FOR TESTING FRICTIONAL CHARACTERISTICS OF MATERIALS

Domenico C. Frate, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Mar. 1, 1960, Ser. No. 12,165
9 Claims. (Cl. 73—9)



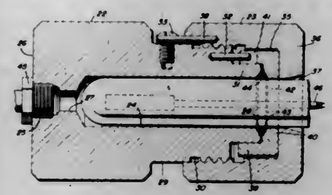
1. Apparatus for testing frictional characteristics of materials, which comprises a pivotally mounted table having a substantially planar surface designed to support a specimen of a material to be tested in sliding contact therewith, weight means of a predetermined mass for maintaining the specimen in contact with said surface, means for pivoting the table about an axis parallel to said surface through progressively increasing angles of inclination of the surface with respect to a horizontal reference plane, said specimen being normally positioned adjacent one end of the table to be elevated relative to the opposite end of the table, movable indicating means, means responsive to the presence of the specimen in said normal position thereof for normally connecting the indicating means operatively to said table for movement therewith, the displacement of the indicating means, relative to a position thereof corresponding to a position of the table whereat said surface is in parallel relationship with the horizontal reference plane, being proportional to the angular inclination of said surface with respect to the horizontal reference plane, said connecting means being instantaneously responsive to sliding movement of the specimen relative to the surface of the table for discontinuing the operative connection between the indicating means and the moving table, and means for resistively retaining the indicating means at the displaced position occupied thereby when sliding movement of the specimen commenced.

3,017,766
NOSE PROBE CHUCK

Vernon S. Foote, Jr., Marblehead, Mass., assignor to the United States of America as represented by the Secretary of the Navy

Filed Jan. 26, 1959, Ser. No. 789,217
3 Claims. (Cl. 73—40)

1. In combination with a nose probe, an apparatus for testing the probe under simulated conditions, a chuck including a body provided with a centrally disposed bore, said bore defining a chamber for receiving the end portion of the probe, a cap in threaded engagement with said body and rotatable with respect thereto, said cap having an internal recess formed therein, a sleeve integrally formed on one end of the body and disposed within said recess, a collar disposed within said recess and movably mounted on said sleeve, an end wall on the cap in engagement with said collar for moving the collar upon rotation of the cap on the body, means carried by

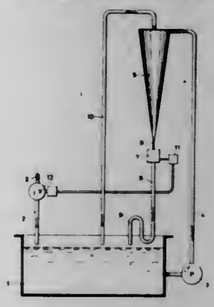


the body in engagement with the collar for causing the collar to move slidably along said sleeve as the cap is rotated, a chamfered surface on the terminal end of the sleeve, a complementary chamfered surface on said collar, and a normally expanded O-ring disposed between said chamfered surface on the sleeve and the complementary chamfered surface on the collar and movable into sealing engagement with the chamfered surfaces on the sleeve and the collar and with the probe as the collar is moved along the sleeve by said end wall on the cap.

3,017,767
AUTOMATIC CONTROL OF THE CONCENTRATION IN SUSPENSIONS SUCH AS CELLULOSE, PAPER PULP, AND THE LIKE

Karl Evert Mossberg, Johanneshov, Sweden, assignor to Aktiebolaget Calor & Sjögren, Stockholm, Sweden

Filed Dec. 4, 1957, Ser. No. 700,691
Claims priority, application Sweden Dec. 6, 1956
3 Claims. (Cl. 73—54)

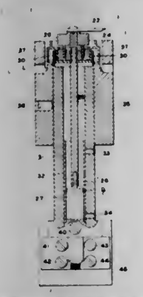


1. In a device which is sensitive to variations in viscosity of a suspension consisting of a liquid and particles of varying weight therein, a hydrocyclone comprising an inverted hollow cone, a tangentially directed peripheral inlet adjacent the upper end of said hollow cone for the supply of suspension thereto under pressure so the suspension will take a rotary path in the hollow cone, a first outlet at the extreme lower end of the hollow cone for the discharge from the cone of liquid with heavy particles therein, a second outlet at the top of the hollow cone for the discharge from the cone of liquid with lighter particles therein, means defining a chamber of greater cross sectional area than said first outlet beneath the cone and connected to said first outlet to receive the discharge from the lower end of the cone, outlet means leading from the chamber of a smaller cross sectional area than the chamber, said outlet means being provided with liquid trap means so as to maintain a liquid seal in the outlet means, the rotating suspension in the hollow cone having a core region free of liquid and at sub-atmospheric pressure, and said first outlet being of large enough size to maintain the core region in the cone in direct uninterrupted communication with the said chamber whereby the pressure in the chamber will be indicative of the viscosity of the suspension.

3,017,768
VIBRATION PICKUP MEANS

Karl F. Frank, Garden City, N.Y., assignor to Micro Balancing Incorporated, Garden City Park, N.Y., a corporation of Delaware

Filed Mar. 24, 1958, Ser. No. 723,403
3 Claims. (Cl. 73—71.4)

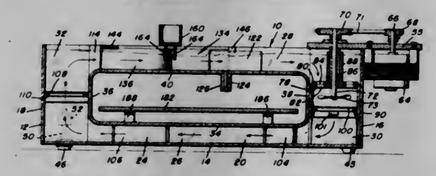


1. Vibration detector means for detecting vibration of a source of horizontal vibration, comprising actuator means rigidly connected to said source, a vertical rod, pickup means comprising a cup mounted on top of said rod and partially filled with a liquid open to atmospheric pressure said actuator means being suspended in said liquid whereby horizontal motion of said actuator means is communicated through said liquid to said cup and said vertical rod transmits said motion.

3,017,769
HYDRAULICALLY SIMULATED WIND TUNNEL

William J. Orlin, Monteagle, Tenn., assignor to Amrad, Inc., Sewanee, Tenn., a corporation of Tennessee

Filed Nov. 14, 1956, Ser. No. 622,076
6 Claims. (Cl. 73—147)

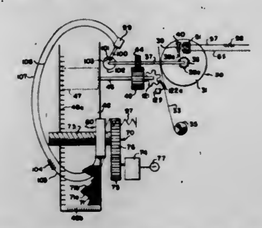


1. Hydraulic analogy apparatus comprising, elongated frame means including an upper open channel portion and a lower closed return channel portion disposed parallel to each other and end, flow-quieting connecting passageways of larger cross-sectional dimension than the upper and lower channel portions interconnecting said channel portions, variable orifice means mounted in one of said passageways, impeller means disposed within said one passageway below the orifice means, drive means supported by the frame means drivingly connected to said impeller means and control means operatively connected to said variable orifice means and movable with respect to calibrated flow scale means on the frame means to position the variable orifice means.

3,017,770
DRILLING RATE RECORDER

William G. Green, Tulsa, Okla. (3210 46th Ave. N., St. Petersburg, Fla.)

Filed June 26, 1957, Ser. No. 668,233
3 Claims. (Cl. 73—151.5)

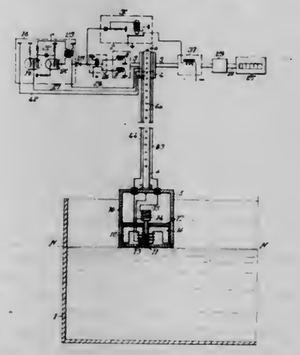


1. A drilling rate recorder of the character described comprising a frame, chart drive means mounted in said frame for advancing a chart strip in one direction at a rate proportional to downward movement of a well drilling member, a lead screw extending transverse to said one direction, means for rotating said lead screw at a constant speed, stylus operating means supporting a stylus and engageable with said lead screw for moving said stylus at a constant rate from an initial position across said chart strip while holding said stylus out of marking engagement therewith, said stylus operating means being releasable from said lead screw for return movement of said stylus across said chart to said initial position while holding said stylus in marking engagement with said chart strip, spring means acting between said frame and stylus operating means for effecting said return movement, and control means connected between said chart drive means and said stylus operating means so as to effect momentary release of the latter from said lead screw upon predetermined increments of chart advancement.

3,017,771
LIQUID LEVEL INDICATORS

Francois Robert Bonhomme, 337 Blvd. Saint-Denis, Courbevoie, France

Filed July 27, 1959, Ser. No. 829,720
Claims priority, application France July 28, 1958
4 Claims. (Cl. 73—290)



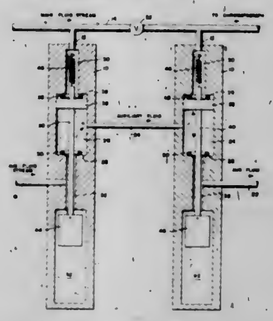
4. In a liquid level indicating system, a detector apparatus which comprises, in combination, a liquidtight closed casing movable vertically with respect to the liquid level, said casing having a rigid portion and a deformable portion, this deformable portion being a horizontal end wall of said casing forming a diaphragm capable of vibrating with a substantial amplitude in a gaseous medium

but undergoing a sudden and great reduction of amplitude when it passes from a gaseous medium to a liquid medium, electro-magnetic means in said casing for vibrating said diaphragm, said electro-magnetic means comprising an electro-magnet carried by said rigid portion in the immediate vicinity of said diaphragm to act thereon, said diaphragm being made of a ferro-magnetic material, an electro-magnetic generator located wholly in said casing on the other side of said electro-magnet from said diaphragm, said generator having a magnetic circuit element and an electric circuit element, one of said elements being fixed with respect to said rigid portion and the other one being movable with respect to said rigid portion, means for mechanically connecting said last mentioned generator element with the central zone of said diaphragm, screening means interposed between said electro-magnet and said generator to prevent parasitic coupling between said electro-magnet and said generator, means for feeding electrical energy to said electro-magnetic means to vibrate said diaphragm and means for collecting from said electro-magnetic generator an electrical energy which is different according as said diaphragm is in a gaseous medium or is in contact with a liquid, whereby the sudden variation of said last mentioned electrical energy is indicative of the position, in the vertical direction, of said casing with respect to the liquid level.

3,017,772
FLUID SAMPLING VALVE

J Rondle Wright, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Aug. 25, 1958, Ser. No. 756,927
8 Claims. (Cl. 73—422)

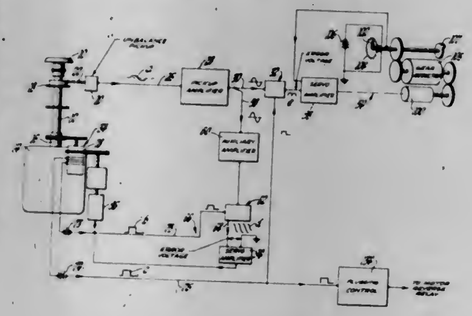


1. Apparatus for injecting into a stream of fluid in a main conduit a predetermined fluid volume from a stream of fluid in an auxiliary conduit, comprising a pair of chambered valve body sections, means connecting one end of each respective chamber directly into said main conduit by way of an opening in one end wall of each respective chamber, means connecting the other end of the first chamber into the upstream section of said auxiliary conduit by way of an opening in the other end wall of said first chamber, means connecting the other end of the second chamber into the downstream section of said auxiliary conduit by way of an opening in the other end wall of said second chamber, a first valve member reciprocable in the first chamber between the ends thereof, sealing means interposed between each end wall of said first chamber and the respective cooperating face of said first valve member, a second valve member reciprocable in the second chamber between the ends thereof, sealing means interposed between each end wall of said second chamber and the respective cooperating face of said second valve member, an intermediate section of said auxiliary conduit connected at one end to said first chamber between the ends thereof and connected at its other end to said second chamber between the ends thereof; and means for operating said valve members respectively to sealing positions at the said other ends of the respective chambers, thereby to seal off both ends of said intermediate conduit section from said auxiliary fluid stream and to place the ends of said intermediate conduit section in communication with said main fluid stream.

3,017,773
BALANCING MACHINE

Joseph F. Lash, Ferndale, and Philip K. Trimble, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 7, 1956, Ser. No. 589,947
3 Claims. (Cl. 73—462)

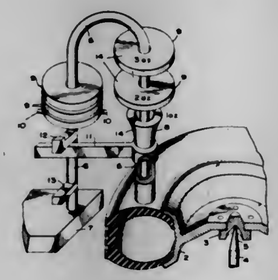


1. In a balancing machine including reversible drive motor means for rotating a part to be balanced, control means for said drive motor means including start means for energizing said drive motor means for forward operation to rotate said part in a forward direction and stop means for energizing said drive means for reverse operation to slow forward rotation of said part to a stop in a predetermined stopping time, means for controlling said start means to actuate or deactuate the same, an unbalance signal generator for developing a signal voltage having amplitude and phase corresponding respectively to the magnitude and angular location of unbalance of said part, a reference signal generator being synchronized with said drive means for developing a reference signal voltage, means connected with the unbalance and reference signal generators and responsive to said signal voltages for adjusting the phase relation thereof to a predetermined angle whereby the angular location of said unbalance relative to said reference signal voltage is known, a stopping pulse developing circuit, connecting means operative upon deactuation of said start means for connecting said stopping pulse developing circuit with said reference signal generator for developing a sharp pulse corresponding in time to a predetermined increment of said reference signal voltage, relay means connected with said stopping pulse developing circuit and including adjustable time delay means for manual adjustment of the time lapse between the occurrence of the sharp pulse and the actuation of the relay means, said relay means connected to said stop means and operable upon actuation by said sharp pulse to cause reverse energization of said drive means to slow rotation of said part at a predetermined rate to effect stopping of forward rotation of the same in said predetermined stopping time, and speed responsive means operable to deenergize said stop means to prevent reverse rotation of said part by said reverse energization of said drive means; said time lapse and said predetermined stopping time of said stop means being effective to stop said part with the angular location of the unbalance substantially in a known position.

3,017,774
WEIGHT APPLICATOR FOR USE IN BALANCING VEHICULAR TIRES

Francis C. L. Thompson, Roseville, Ohio

Filed Oct. 14, 1959, Ser. No. 846,368
2 Claims. (Cl. 73—487)

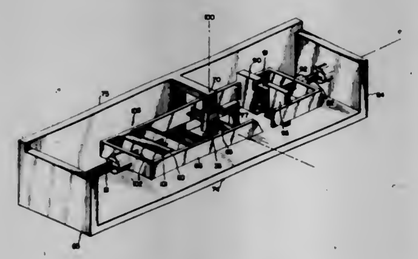


1. In a weight applicator used in balancing vehicular tires and wheels pivotally mounted in a generally horizontal position for tilting about a vertical axis, the combination of a platform rigidly fixed in a horizontal plane, a U shaped guide shaft mounted on said platform, one arm of said guide shaft fixed at right angles to said platform, the free end of said guide shaft being held rigid in a vertical position, an axially concentric tube free to slide on the free end of said guide shaft, weights having a central perforation adapted to slide freely on the guide shaft placed on the upper end of said tube, the combined weight of tube and weights being sufficient to cause the tire and wheel to assume a true horizontal position.

3,017,775
OSCILLATORY INERTIAL REFERENCE

Leonard P. Entin, Wayland, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Mar. 27, 1958, Ser. No. 724,301
14 Claims. (Cl. 73—505)

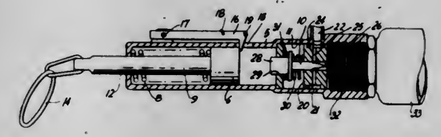


10. An inertial rate sensing apparatus comprising: a mass; a support for said mass; means including resilient means pivotally connecting said mass to said support for limited oscillatory rotation relative thereto about only a first axis, said pivotal connection means being arranged so that said first axis passes substantially through the center of mass of said mass; a base member; resilient means mounting said support on said base for oscillatory movement relative thereto about only a second axis normal to said first axis; means adapted to oscillate said mass relative to said support about said first axis at a first frequency; and transducer means including a member resiliently connected to said support and tuned to have a resonant frequency substantially the same as said first frequency, said transducer means being responsive to movement of said support relative to said base.

3,017,776
AUTOMATIC RELEASING DEVICE FOR TRIGGERING MECHANISMS

Albert Roby, Sr., Montreal, Quebec, Canada, assignor to Leslie Roby, Montreal, Quebec, Canada

Filed Sept. 22, 1960, Ser. No. 57,708
2 Claims. (Cl. 74—2)



1. A device for releasing the pawl of a spring trigger upon contact with water, comprising a U-shaped spring mounted on said mechanism by its bight portion and having one arm backed by said mechanism and the other arm in proximity of said pawl and movable against said pawl for disengagement of said pawl with said spring trigger, and an endless strip of paper surrounding said arms of said U-shaped spring to hold them in compression, said endless strip of paper having the bond between its fibres formed of a highly water soluble chemical which disintegrates substantially instantaneously upon contact with water to release said spring under compression.

2. A device for releasing the pawl of a spring trigger as set forth in claim 1, in which the said bond between the fibres of said endless strip of paper is formed by having steeped a paper in a hot solution of borax to remove its original bond, then steeped in a hot solution of sodium bicarbonate and then pressed under heat to bond the fibres with the highly soluble sodium bicarbonate.

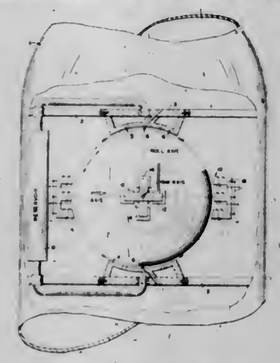
3,017,777
SPACE VEHICLE ATTITUDE CONTROL MECHANISM

Walter Haeussermann, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army

Filed Oct. 14, 1960, Ser. No. 62,811
10 Claims. (Cl. 74—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

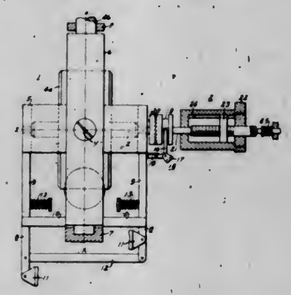
1. A device of the character described comprising: a space vehicle element; a support fixed to said element; low-friction bearing means carried by said support; a spherical, rotary, flywheel mass floatingly supported on said bearing means; means, fixed to said element, for selectively influencing a part of said spherical mass and urging said mass to rotate about a selected one of a multiplicity of axes thru the center of said mass, and for changing the attitude of said element in space due to the reaction from the rotary influence on said mass; means for supplying energy to said means, fixed to said element, for selectively influencing a part of said spherical mass and urging said mass to rotate about a selected one of a multiplicity of axes thru the center of said mass, and for changing the attitude of said element in space due to the

reaction from the rotary influence on said mass; and an attitude-sensitive means, responsive to a change in the



attitude of said element, for controlling said energy-supplying means.

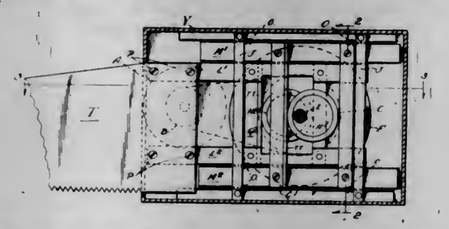
3,017,778
CONTROL DEVICES
Lawrence B. Lynn, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 8, 1946, Ser. No. 653,186
7 Claims. (Cl. 74—5.12)



1. Caging mechanism for a gyroscope mounted in a pair of gimbals so as to have freedom of movement about a torque axis and a precession axis comprising, in combination, latch mechanism operable to positions engaging and disengaging both of said gimbals for releasably locking both of the gyro gimbals to prevent movement thereof, spring means biasing said latch mechanism to a position disengaging said gyro gimbals, trigger means normally engaging said latch mechanism and holding said latch mechanism in a position engaging said gyro gimbals, and means responsive to a predetermined number of revolutions of said gyroscope for actuating said trigger means to release said latch mechanism and provide freedom of movement of the gyroscope about the torque and precession axes thereof.

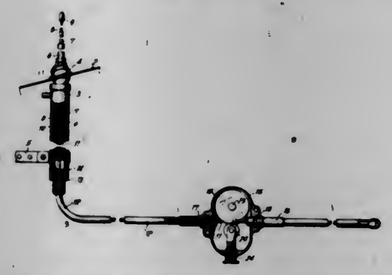
3,017,779
RECIPROCATING DRIVE MECHANISM
Albert P. Beals, Indianapolis, Ind.
(4428 Malden, Chicago 40, Ill.)
Filed July 10, 1957, Ser. No. 671,077
6 Claims. (Cl. 74—50)

1. In a reciprocating drive mechanism, an eccentric cam and means for rotating it, a yoke positioned adjacent said cam so as to be reciprocated thereby, a second eccentric cam mounted for rotation with said first cam, a yoke positioned adjacent said second cam so as to be reciprocated thereby, a counterbalance secured to each of said yokes, said cams and said yokes reciprocating said counterbalances in a single plane and a housing containing and supporting said first and second cams, said yokes and



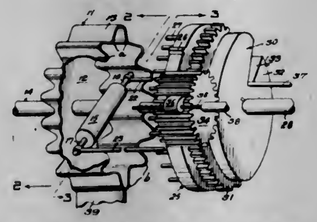
said counterbalances, said housing serving also as guide means for said yokes, said cams and yokes being positioned to cause movement of their respective counterbalances in opposite directions whereby the counterbalance secured to each of said yokes serves as a counterbalance to the cam and yoke combination associated with the other counterbalance.

3,017,780
ELASTICALLY YIELDING CONVEYING MEANS FOR TELESCOPIC ANTENNAE
Klaus Kienhöfer, Niefern, Baden, Germany, assignor to Wilhelm Sihn, Jr. K.G., Niefern, Baden, Germany, a firm
Filed Sept. 22, 1953, Ser. No. 381,540
Claims priority, application Germany Mar. 9, 1953
12 Claims. (Cl. 74—95)



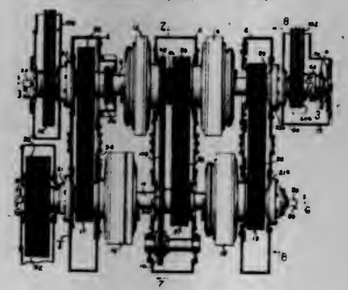
1. In a device for the actuation of telescopic antennae used on motor vehicles the combination with the telescopic tubes and rod means of an antenna, of a drive rod of elastically yielding plastic material fastened at one end to said antenna rod; a rotatable actuating member for said drive rod, said actuating member consisting of a rotatably mounted wheel provided with a circumferential groove, the sidewalls embracing said groove being formed in such a manner that contact portions of one sidewall for exerting pressure on said drive rod confront recessed non-contacting portions of the other sidewall so as to generate alternating pressure regions and regions free from pressure on opposite sides of said drive rod; pressure exerting means cooperating with said rotatable actuating member and forcing said elastically yielding drive rod into frictional gripping engagement with said alternating contact portions of said rotatable actuating member; a casing in which said actuating member and pressure exerting means are accommodated; and tubular guiding means for said drive rod connected to said casing and an antenna part.

3,017,781
GEARED TIMING MECHANISM
John F. Toomey, Chilmark, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 25, 1960, Ser. No. 17,718
2 Claims. (Cl. 74—125.5)



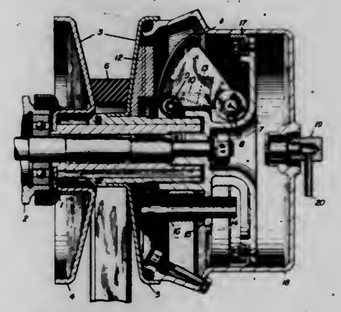
2. In a geared timing device, the combination comprising, a stationary cup having a circular undulated wall, a first shaft axially rotatable in said cup, a reciprocating member slidably mounted on and disposed in transverse relation with said first shaft in said cup for reciprocation by said wall upon rotation of said first shaft, a second shaft, spaced from and in axial alignment with said first shaft, a wheel mounted on said second shaft, said wheel having a single gear tooth on its circumferential surface, means carried by said reciprocating member and said wheel for intermittently rotating said wheel upon rotation of said reciprocating member by said first shaft, a third shaft, spaced from and in axial alignment with said first and second shafts, a first gear mounted on said third shaft, a fourth shaft spaced from and arranged parallel with said third shaft and a second gear mounted on said fourth shaft, said second gear meshing continuously with said first gear and meshing with said single tooth on said wheel each full revolution of said wheel, whereby said first gear is intermittently rotated.

3,017,782
MULTI-SPEED TRANSMISSIONS
John Hart Wilson, % Wilson Manufacturing Co., P.O. Box 1031, Wichita Falls, Tex.
Original application Nov. 26, 1956, Ser. No. 624,307, now Patent No. 2,912,882, dated Nov. 17, 1959. Divided and this application Mar. 2, 1959, Ser. No. 796,337
3 Claims. (Cl. 74—218)



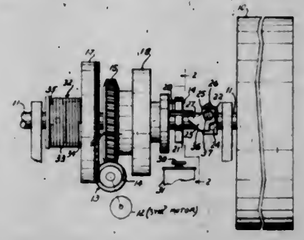
1. A multi-speed transmission for drilling rigs and the like comprising; a base, at least two spaced apart, independent transmission cases mounted on said base, pairs of spaced apart, axially aligned bearings mounted on the outer sidewall only of the respective transmission cases, the axes of said bearings being parallel, the inner walls of said respective transmission cases having holes formed therein and lying within the respective axes of said bearings, at least a first and a second shaft journaled in said respective pairs of axially aligned bearings and extending through the holes in said inner walls of said transmission cases so that the axes of said shafts will be parallel, at least four sprockets mounted on said shafts with at least two of said sprockets being fixedly secured to at least one of said shafts on which said sprockets are mounted, the other two of said sprockets being journaled on at least one of said shafts on which they are mounted in aligned, complementary, driving relation with said fixedly secured sprockets, transmission chains surrounding respective pairs of sprockets in aligned, complementary, driving relation, each said pairs of sprockets with the surrounding transmission chain being encased within the respective cases, clutches mounted on the shaft on which said respective sprockets are journaled, which clutches are exterior of the respective cases and adjacent said respective journaled sprockets, means fixedly securing an element of said respective clutches on said shaft on which the respective clutches are mounted, means fixedly connecting another element of the respective clutches with the respective journaled sprockets, air actuating means within the respective clutches to selectively connect said clutch elements thereof in driving relation, remote air actuating means interconnected with the means within the respective clutches to selectively actuate said clutch engaging elements within said clutches to connect said clutch elements in driving relation, drive means connected to one of said shafts, and driven means connected to the other of said shafts.

3,017,783
VARIABLE SPEED TRANSMISSION
Joan van der Brugghen and Wilhelm Frans Maria Hendriks, Eindhoven, Netherlands, assignors to Van Doorne's Automobielfabriek N.V., Eindhoven, Netherlands, a limited liability company of the Netherlands
Filed Jan. 12, 1959, Ser. No. 786,296
Claims priority, application Netherlands Jan. 20, 1958
2 Claims. (Cl. 74—230.17)



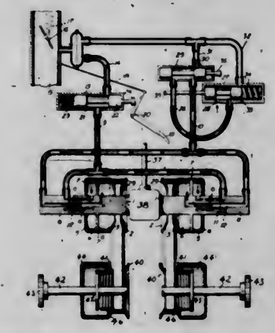
1. Axially expandable and contractable pulley elements in combination with a driving shaft comprising a first element of said pulley slidably mounted on said shaft, a second element of said pulley fixed to said shaft, a piston fixedly secured to said shaft, a cylinder fixed to said slidable element adapted to reciprocate together with said first element with respect to said piston, sealing means between said piston and said cylinder, a bottom on said cylinder spaced from said slidable element, a nipple rotatively mounted in the center of said bottom, a tube fixed to said nipple outside of said cylinder, spring means arranged between said slidable element and said piston urging them apart, at least two pivots arranged in an extension of said piston in a plane perpendicular to said shaft, a centrifugal weight pivoted on each of said pivots having a curved face, substantially radial faces on said slidable element coacting with the curved faces of said weights to move said slidable element to said second element of said pulley.

3,017,784
PHASED SYNCHRONOUS DRIVE FOR RECORDERS AND THE LIKE
Hugh M. Monaghan, Bronx, N.Y., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland
Filed Apr. 1, 1960, Ser. No. 19,282
6 Claims. (Cl. 74—395)



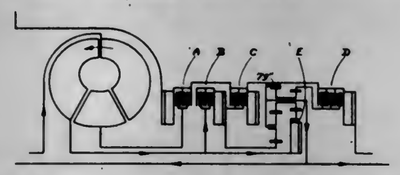
1. A synchronous drive and phasing arrangment for facsimile recorders and the like, comprising, a shaft to be driven at synchronous speed when properly phased, a pair of gears concentric with said shaft and rotatably mounted thereon, the first gear being arranged to drive the shaft at synchronous speed and the second gear being arranged to maintain said shaft at slightly different speed until said phasing is accomplished, a clutch for coupling the first gear to said shaft, another uni-directional drive coupling between the second gear and said shaft, a phasing member arranged to be stopped and released for rotation by a phasing signal and effective in one position to stop the driven element of said clutch while permitting the said shaft to be driven through the said drive coupling at said different speed, means coupling said phasing member to said shaft, and a common driving gear arranged to be driven at a rate correlated with said synchrouous speed and in mesh with both said first gear and said second gear.

3,017,785
AUTOMATIC TRANSMISSION
Joan van der Brugghen and Wilhelm F. M. Hendriks, Eindhoven, Netherlands, assignors to Van Doorne's Automobielfabriek N.V., Eindhoven, Netherlands
Filed Mar. 17, 1960, Ser. No. 15,670
Claims priority, application Netherlands Mar. 21, 1959
7 Claims. (Cl. 74—472)



1. A transmission for a motor vehicle having a suction tube with a throttle valve therein, spring means normally urging said throttle valve to closed position, a gas control member connected with said throttle valve to open said throttle valve against said spring means, said transmission comprising a driven shaft, an axially expandable belt pulley comprising a pulley-half fixed to said shaft and a pulley-half axially movable relative to said shaft, a second pulley operatively connected with means to drive said motor vehicle, a belt cooperating with said pulleys, a cylinder secured to said movable pulley-half, a partition fixed to said shaft dividing said cylinder into two chambers, a first valve cooperating with said gas control member having communication with the atmosphere and said suction tube, one of said chambers having communication with said suction tube or with the atmosphere through said valve, said valve when said gas control member opens said throttle valve placing said chamber in communication with said suction tube and when said throttle valve moves to closed position placing said chamber in communication with the atmosphere, a second valve controlled independently of said gas control member having communication with the atmosphere and said suction tube, which when manually placed in one position places said second chamber of said cylinder in communication with the atmosphere and when manually placed in a second position closes the communication between said second chamber and the atmosphere and opens communication between said chamber and said suction tube.

3,017,786
VARIABLE SPEED PLANETARY GEAR TRANSMISSION AND VEHICLE DRIVE ARRANGEMENT
George F. Karow, P.O. Box 1, Saginaw, Mich.
Original application Dec. 14, 1950, Ser. No. 200,725, now Patent No. 2,877,665, dated Mar. 17, 1959. Divided and this application Dec. 22, 1958, Ser. No. 782,089
38 Claims. (Cl. 74—677)

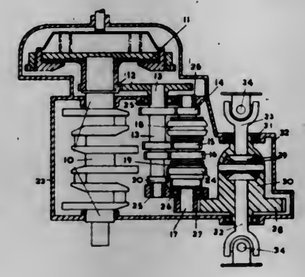


35. A torque transmitting mechanism comprising the combination of planetary gearing including a plurality of driving elements having hollow-axis construction, and a driven element, supported for rotation on a common axis, said gearing also having means including planetary gears for interconnecting the aforesaid elements thereof; a power-input element extending coaxially through said driving elements, supported for rotation relative thereto; and means adapted for independent engagement for transmitting torque through said power-input element to the aforesaid driving elements.

3,017,787
MOTOR VEHICLE POWER PLANTS
Eric Richard Payne, Northfield, Birmingham, England, assignor to The Austin Motor Company Limited, Birmingham, England
Filed Mar. 11, 1959, Ser. No. 798,756
Claims priority, application Great Britain Mar. 24, 1958
2 Claims. (Cl. 74—701)

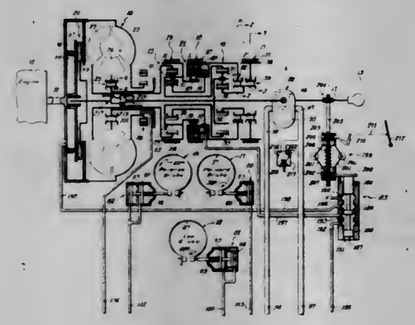
1. A power unit or assembly of the kind referred to and adapted to be mounted with the engine crankshaft transversely of the vehicle, comprising in combination an engine having a change-speed gear and a differential gear both mounted in the engine crankcase, and both to one side of the engine crankshaft, the change-speed gear being disposed between the crankshaft and the differential gear with the axes of the change-speed gear and the axis of the differential gear all parallel to one another

and to the crankshaft, said change-speed gear including separate and spaced apart parallel input and output shafts, means for rotating the input shaft from said crankshaft comprising, a driven gear fixed to the input shaft and a driving gear coaxially arranged with respect to said crankshaft and rotatable thereby, said driving and driven gears lying in a common plane normal to the axis of the crankshaft and being positively driveably interconnected, and means for operatively connecting said output shaft to said input shaft to rotate the former solely in response



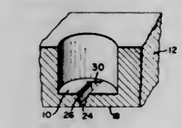
to rotation of the latter to establish a plurality of change speed ratios, said last named means comprising a plurality of driving pinions secured to the input shaft, a plurality of driven pinions rotatably mounted on the output shaft and in constant mesh with the respective driving pinions, and coupling sleeves for selectively coupling the driven pinions with the output shaft, an output pinion fixed to said output shaft, and said differential gear including a planet carrier having its crown wheel in constant mesh with said output pinion.

3,017,788
BRAKING SYSTEM
John B. Polomski, Detroit, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed June 8, 1951, Ser. No. 230,489
7 Claims. (Cl. 74—732)



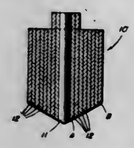
1. In transmission mechanism for an automotive vehicle having a driving engine, the combination of a drive shaft adapted to be driven by the vehicle engine, a driven shaft, a hydrodynamic coupling device connected with said drive shaft to be driven thereby, means for completing a power train between said hydrodynamic device and said driven shaft, and means for temporarily holding said driven shaft from rotation due to torque transmitted through said hydrodynamic device and said power train at vehicle engine idling speeds and including means for simultaneously completing another different power train between said hydrodynamic device and said driven shaft, said last named means including a wrapping friction brake for completing said last named power train when engaged and arranged to be unwrapping or self-deenergizing for the drive of said driven shaft provided by said first named power train.

3,017,789
SPINNERET PRODUCTION
James S. Cobb, Martinsville, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,585
7 Claims. (Cl. 76—107)



1. In the production of spinnerets, the steps of: stamping a blind hole in one face of a blank with a punch tapered in the direction of its advance to produce a protuberance on the opposite face; polishing the protuberance from the blank to present an orifice; and finishing the hole and orifice by punching through said orifice, from said opposite face of the blank, with a straight punch having cross-sectional dimensions slightly greater than those of said orifice.

3,017,790
CUTTING TOOL AND METHOD OF MAKING SAME
Otto Phillip Werle, Oxon Hill, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 29, 1960, Ser. No. 46,317
6 Claims. (Cl. 77—70)
(Granted under Title 35, U.S. Code (1952), sec. 266)

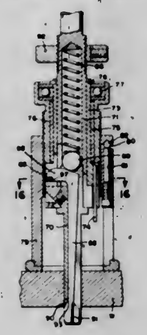


1. A method of forming a cutting tool and comprising the steps of assembling a plurality of preformed circular walls concentrically about a core member in telescoping and abutting relationship and having varying cutting characteristics, subjecting the walls and member to a sintering operation to provide a homogeneous mass containing a plurality of circular surfaces according to the varying cutting characteristics of the walls, grinding the mass to the desired shape, and thereafter honing the mass to provide suitable cutting edges thereon.

3,017,791
TOOL FOR DEBURRING, CHAMFERING, BACK SPOT-FACING, GROOVING, ETC.
Joseph W. Fried, 6860 Farmdale Ave., North Hollywood, Calif.
Filed Feb. 15, 1960, Ser. No. 8,695
17 Claims. (Cl. 77—73.5)

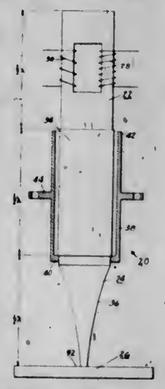
1. A device of the class described comprising a pilot adapted to be inserted into a hole in a piece of work and rotated therein, a cutter normally occupying a recess in the pilot and rotatable therewith, means engageable with the work for holding the cutter against longitudinal

movement relatively thereto, means for moving the pilot longitudinally relatively to the cutter, and mutually engaging means between the cutter and pilot located closely



adjacent the cutting edge of the cutter for moving the cutter laterally relatively to the pilot so as to project the cutting edge therefrom into engagement with the work.

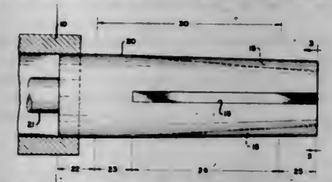
3,017,792
VIBRATORY DEVICE
William C. Elmore, Los Alamos, N. Mex., and Carmine F. De Prisco, Glen Mills, Pa., assignors to Aeroprojects Incorporated, West Chester, Pa., a corporation of Pennsylvania
Filed July 8, 1958, Ser. No. 747,254
8 Claims. (Cl. 78—82)



1. A vibratory device comprising means for generating vibratory energy of a predetermined frequency and a tip comprising a circular plate for delivering vibratory energy from an edge surface thereof to a workpiece, said tip being coupled to said means for generating vibratory energy solely at the center of one of the faces of said plate, with said tip having a sufficient radial dimension and thickness to be resonant at said predetermined frequency and so as to vibrate in a normal mode of vibration about its axis.

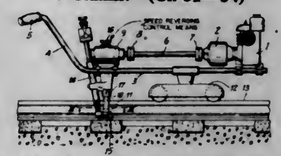
3,017,793
FORMING TOOLS, MACHINES AND METHODS
Gerhard H. Appel, Belle River, Ontario, Canada, assignor to Appel Process, Ltd., Oshawa, Ontario, Canada
Filed Feb. 16, 1959, Ser. No. 793,490
1 Claim. (Cl. 78—103)

A mandrel having a longitudinally grooved working portion whose grooves extend the entire length of the working portion; each groove being of uniform width throughout its lengths; each groove being uniformly increased in depth from a zero depth at its forward end to



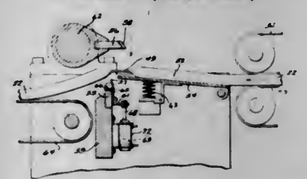
a maximum depth at its rear end; the rate of increase of groove depth being greater than the taper, if any, of the mandrel working portion.

3,017,794
APPARATUS FOR SETTING SLEEPER SCREWS OR TRACK BOLTS TO A PREDETERMINED DEGREE OF TIGHTNESS
Edmond Pouget, 190 Bis, Ave. de Stalingrad, Saint Ouen, France
Filed June 6, 1960, Ser. No. 33,987
Claims priority, application France June 13, 1959
5 Claims. (Cl. 81—54)



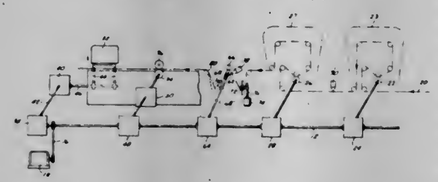
1. In an apparatus for tightening sleeper screws on means attaching a rail to a sleeper, the combination of a support, a feeler adjustably carried by said support and including a tip adapted to engage the rail shoe and a rod carrying said tip and carried in a vertically slidable condition by the support, a contact member adapted to engage the attaching means for the rail and carried by the support, a power unit, a wrench for the tightening of sleeper screws, a circuit controlling operation of the wrench, an electromagnetic clutch operatively connecting said power unit with the circuit, a switch in said circuit controlled by the feeler to open said circuit and to stop operation of the wrench whenever the feeler tip has reached a predetermined level with reference to the member in contact with the rail attaching means.

3,017,795
METHOD AND APPARATUS FOR FORMING INDIVIDUAL WRAPPED PADS FROM OTHERWISE CONTINUOUS BATT STRIPS
Curt G. Joa, Town of Ocean Ridge, Fla., assignor to Falls Paper & Power Company, Chester, Pa., a corporation of Wisconsin
Filed June 6, 1957, Ser. No. 664,063
2 Claims. (Cl. 83—129)



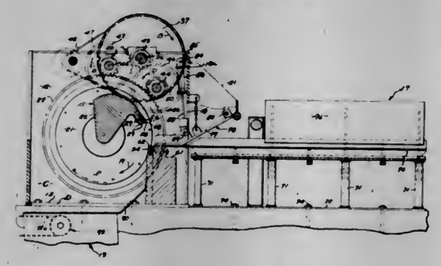
1. In a device of the character described a pad severing knife comprising co-acting serrated knife blades, one of said blades having a clearing bar mounted for reciprocation thereon.

3,017,796
INTERMITTENT WEB FEED MECHANISM
Frederick G. Auer, Teaneck, and Morris Sorkin, Bergenfield, N.J., assignors to Champlain Company, Inc., Bloomfield, N.J., a corporation of New York
Filed June 26, 1957, Ser. No. 668,224
8 Claims. (Cl. 83—263)



4. Apparatus for use with a reciprocating press having an intermittent web feed mechanism operating in rapidly repeated feed cycles, said web feed mechanism including a feed roll, a drive shaft which rotates at uniform velocity, and mechanism between said drive shaft and said feed roll to rotate the latter intermittently in a cycle which includes acceleration, deceleration and dwell, said apparatus comprising a hydraulic unit adapted to act as a driving motor or as a driven pump, means gearing said unit to said feed roll, an accumulator having a spring pressed piston and a cylinder, a reservoir, a four-way valve, a cam driven by said drive shaft in synchronism with the press to operate said valve to connect said hydraulic unit to pump liquid from said reservoir to said accumulator during deceleration, and to connect said hydraulic unit to act as a motor driven by liquid flowing from said accumulator to said reservoir during acceleration.

3,017,797
MATERIAL SHEARING APPARATUS
Lad L. Hercik, Lakewood, Ohio (% The Hill Acme Co., 1201 W. 65th St., Cleveland 2, Ohio)
Filed July 30, 1959, Ser. No. 830,556
6 Claims. (Cl. 83—349)



1. A rotary shear for shearing metallic plates, bars and the like, comprising a housing defining a shearing chamber, said housing being formed with means defining an inlet communicating with said shearing chamber, a vibratable conveyor connecting at its one end with said inlet and shearing chamber and extending approximately horizontally outwardly therefrom, said conveyor being vibratable to and fro of said housing inlet to continuously feed material to said shearing chamber, shearing means comprising an anvil carried on said housing having a knife-like edge extending across said chamber to define a shearing plane, a blade carrier parabolic in cross-sectional configuration disposed in said chamber and extending thereacross and rotatably mounted at its vertex to opposite sides of said housing and above said shearing plane, a shearing blade carried on the leading edge of said blade carrier, the cross sectional configuration of said blade carrier being of such parabolic form as to concentrate its mass within an area bounded on one side by a straight line connecting the center of rotation of said carrier and said shearing blade and on the opposite side by a straight line extending outwardly from said center and radially displaced not more than 90 degrees about said center rearwardly from said shearing blade, drive means for rotatably driving said blade carrier in a predetermined direction of rotation at a velocity of approximately 12 revolutions per minute thereby carrying said shearing blade through a circular shearing stroke and through said plane effective to shear said metallic material between said blade and anvil, said blade carrier being rotatably mounted as to locate substantially all of its mass rearwardly of said shearing blade as said blade passes through said shearing plane to thereby provide a maximum shearing force to said blade.

3,017,798
CLARINETS
Jack W. Robbins, 6340 N. Wayne Ave., Chicago, Ill.
Filed Mar. 18, 1959, Ser. No. 800,224
3 Claims. (Cl. 84—382)



3. A clarinet having a conventional Boehm system of fingering, said clarinet having a second F sharp tone hole, said tone hole being closed by a normally closed pad and a pair of control levers cooperating with said pad to open same, one of said control levers being adjacent the E tone hole and the other of said levers being adjacent said F sharp tone hole.

3,017,799
ANCHORING DEVICE
Marcel Camille Jean Lemoine, Saverne, France, assignor to Anciens Etablissements Goldenberg & Cie, Saverne, France, a corporation of France
Filed Apr. 2, 1958, Ser. No. 725,845
Claims priority, application France Apr. 19, 1957
2 Claims. (Cl. 85—2.4)

1. Anchoring device comprising two shells constituting a tube segmented along a first axial plane thereof, said shells being provided along the portion thereof facing said first axial plane with a first group of ramps and being split longitudinally at one of their ends spaced from said first group of ramps, thereby forming slots which extend along a second axial plane of said tube substantially perpendicular to said first axial plane, said shells being provided on their inner face with a second group of ramps disposed on each side of said slots, said second group of ramps being secured to said first group of ramps by a bendable neck portion, a traction rod disposed inside said

tube, traction means for exerting a traction on one end of said rod and moving the latter axially in said tube, said traction rod comprising in different regions thereof a wedge, two opposed lateral faces of which constitute a first group of cams, and a block convergent toward said one end of the rod and having a quadrangular cross section, the four lateral faces of which constitute a second group of cams, whereas the longitudinal edges of said block limiting said four lateral faces are disposed alternately in said first axial plane and in said second axial



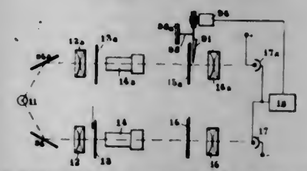
plane, each of said groups of cams being adapted to face its corresponding group of ramps, said parts being so constructed and arranged that, upon axial movement of said rod, the cooperation of said first group of cams with said first group of ramps effects a separation of said shells in a direction parallel with said first axial plane, and the cooperation of said second group of cams with said second group of ramps causes a bending movement thereof about said neck portion to effect a circumferential expansion of said shells.

3,017,800
ANCHOR BOLT WITH EXPANDING SLEEVE
Irvin Cohen, 900 N. 26th St., Reading, Pa.
Filed Aug. 15, 1958, Ser. No. 755,347
3 Claims. (Cl. 85—2.4)



1. For use in combination with a pair of asbestos panels that have aligned holes, a fastener comprising a bolt having a head, a nut on said bolt, a resilient and compressible sleeve on said bolt, a clip having a pair of spreadable fingers and a base to which said fingers are fastened, said base having an opening through which said bolt is passed, a washer having a convex surface and a concave surface, said sleeve having a convex flange at one end, said washer concave surface engaging an end surface of said sleeve and at least partially overlying said flange, said washer in contact with the head of the bolt, said washer being larger than the bolt head and smaller than the flange, said clip base contacting the opposite end of said sleeve and said fingers adjacent to the sides of the lower part of said sleeve, said nut engaging said base, means on the clip for preventing said nut from rotating with respect to said clip whereby said nut is moved axially on said bolt in response to rotation of said bolt with respect to said nut, said flange adapted to spread over an area of one of said panels in response to movement of said nut axially onto said bolt at which time the portion of said sleeve adjacent to said nut mushrooms over an area adjacent the other hole in the other of said panels whereby said sleeve lower portion and said flange constitute weather seals at opposite ends of said fastener, the distortion of the lower part of said sleeve being in a laterally outward direction with reference to the longitudinal axis of said bolt so that said fingers of said clips are spread by the spreading action of said portion of said sleeve and form a lock to prevent withdrawal of said fastener from said holes, said fingers spaced from each other, and means on said sleeve projecting from the surface thereof and in between said fingers to form stops against which opposite edges of said fingers abut to prevent mutual rotation between said clip and said sleeve.

3,017,801
DEVICE FOR MEASURING THE WIDTH OR DIAMETER OF FIXED OR MOVABLE TAPES AND WIRES
Oscar Henri Ingber, 15 Blvd. du General Koenig, Neuilly-sur-Seine, France
Filed Nov. 25, 1958, Ser. No. 776,307
Claims priority, application France Nov. 29, 1957
3 Claims. (Cl. 88—14)

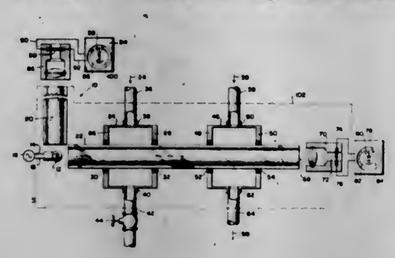


1. An apparatus for measuring the apparent transverse dimension of an object such as a wire, cable, tubing, tape, and the like to which a longitudinal motion is imparted, comprising, an emitter of a luminous flux, at least one photoelectric receiver of said luminous flux passing through a field occupied by the object, said luminous flux received by said photoelectric receiver being variable as a consequence of variations in the transverse dimension of said object, at least one main diaphragm disposed between the emitter and the receiver, at least one optical system forming the image of the object to be measured on the main diaphragm, electrical circuit means for converting the variable luminous flux received by said photoelectric receiver into a variable electrical quantity, means for amplifying said variable electrical quantity, servomotor means energized by the output of said amplifying means, means actuated by said servo-motor means for modifying the luminous flux transmitted through said main diaphragm to restore the luminous flux received by said photoelectric receiver to a fixed value, and means for displaying simultaneously the magnitude of the actuation of said luminous flux modifying means and indicating the measure of the apparent transverse dimension of said object as a function of said magnitude of actuation.

3,017,802
OPTICAL APPARATUS FOR DETECTING SUBSTANCES IN FLUIDS
Walter Witt, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 10, 1959, Ser. No. 826,232
11 Claims. (Cl. 88—14)

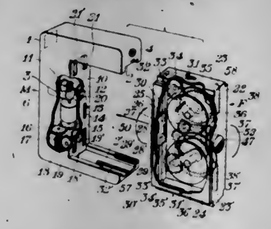
1. Means for detecting the presence of an impurity in a continuously flowing fluid, comprising, a solid first

and second elongated radiant energy conducting member, each having a first and second end and a peripheral side wall, a radiant energy emitting means for directing radiant energy at various angles into, through and out of each of said members, a first means for retaining a reference fluid of a preselected purity in contact with a first portion of said peripheral side wall of said first member, a second means for directing said flowing fluid into contact



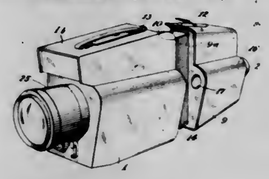
with a second portion of said peripheral side wall of said first member that is spaced from said first portion of said peripheral side wall, and radiant energy responsive means for measuring the radiant energy passing out of one end of each of said members wherein any difference in the ratio of said measurements of said responsive means represents the presence of an undesired impurity in said continuously flowing fluid.

3,017,803
MINIATURE MOTION PICTURE CAMERA
Yoshinobu Sakaki, 5 Kikusakacho 1-chome, Nagoya, Japan
Filed Jan. 19, 1959, Ser. No. 787,726
Claims priority, application Japan Jan. 17, 1958
3 Claims. (Cl. 88—16)



1. A motion picture camera comprising, a U-shaped camera body portion having two substantially parallel legs provided with inner guide ways, and including a lens, a film feeding mechanism comprising two axially spaced power transmission gears mounted to be driven from said drive means, said body portion having an end wall spanning an inner end of each of the two legs with the opposite end of the legs being open, said inner wall having an exposure aperture, a shutter mechanism operable to control picture-taking through said lens and aperture, drive means for driving the shutter mechanism, said wall having two spaced openings, said two gears having respective pitch circles disposed substantially in the plane of a respective one of the openings, said plane substantially corresponding to said wall of said U-shaped camera body portion, a detachable film magazine having top and bottom slides and positionable in a first position and a second upended position with said slides disposed in said guide ways so that the magazine is accommodated between the two legs of said camera body portion, said film magazine including two spool shafts each having a drive gear to alternatively drive its respective shaft alternatively in dependence upon the film magazine being in its first or upended second position and disposed to mesh with a respective one only of said two power transmission gears in the camera body portion when the film magazine is mounted in the camera body portion in the first position or the second position, said film magazine having a front end wall provided with two spaced openings through which the last-mentioned gears partially protrude and two offset exposure apertures positionable alternatively in registry with the first-mentioned exposure aperture so that only one of the two exposure apertures registers therewith when the magazine is in one of its two positions, means in said magazine cooperative with said guide ways for automatically masking said two exposure apertures when the magazine is removed from the camera body portion and for automatically unmasking a respective one of the exposure apertures corresponding to the position in which the magazine is positioned in said guide ways.

3,017,804
MOTION PICTURE CAMERA AND ATTACHMENT THEREFOR
Josef Bönisch, Herbert Gopfert, and Wolfgang Planert, all of Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed Sept. 25, 1959 Ser. No. 842,270
12 Claims. (Cl. 88—17)

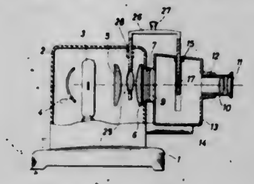


1. In a motion-picture camera, in combination: a camera body having a rear wall and an open chamber extending inwardly from said rear wall; an attachment releasably connectable to said body and defining a second chamber communicating with the first mentioned chamber through said rear wall, the dimensions of said first mentioned chamber being such as to receive a comparatively small film magazine, and the combined dimensions of said first mentioned and second chambers being such as to receive a comparatively large film magazine; means for releasably connecting the camera body with said attachment; a direct vision finder carried by said camera body and having an ocular adjacent to said rear wall; and an extension for said finder carried by said attachment and aligned with the finder when the attachment is connected to the camera body.

3,017,805
PROJECTOR
Rudolf Kremp and Paul Frost, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Dec. 4, 1958, Ser. No. 778,216
Claims priority, application Germany Jan. 11, 1958
2 Claims. (Cl. 88—26)

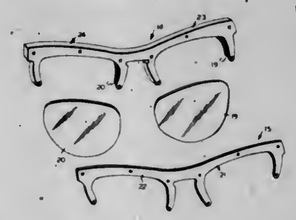
1. A projector comprising a source of light, a projecting lens, means for mounting a picture transparency between said source of light and said projecting lens, means for movably mounting a magnifying optical element between said means for mounting a picture transparency and said projecting lens said movable mounting means being adjustable in different directions to permit any selected area of said transparency to be magnified, said magnifying element including a magnifying lens mounted upon a carrier which is movably interposed between said means

for mounting a picture transparency and said projecting lens, adjusting means being provided for moving said carrier in different directions perpendicular to the optical axis of said projector, light concentrating elements being disposable between said light source and said transparency to be projected within the path of illuminating light rays, said light concentrating elements being movable in different directions in accordance with the position of said



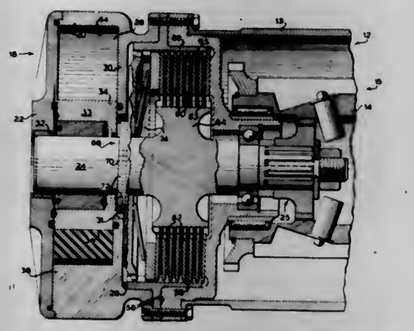
magnifying element for increasing the brightness of said selected area of said transparency being projected to compensate for the loss of brightness which occurs when a magnified image of said selected area is projected, and a single adjusting device being provided for simultaneously adjusting the positions of said magnifying element and said light concentrating element in line with each other within the path of said projecting light rays and said illuminating light rays.

3,017,806
EYEGLASS FRAMES OF THE SEMI-RIMLESS TYPE
Harry Stolper, New York, N.Y., assignor to Stolper & Voice Optical Co., Inc., New York, N.Y., a corporation of New York
Filed Mar. 15, 1960, Ser. No. 15,116
8 Claims. (Cl. 88—41)



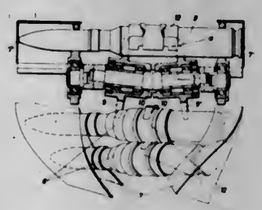
1. In an eyeglass frame of the character described, a member having some resilient quality, comprising a nose piece intermediate and connecting two U-shaped elements, each of which is adapted to straddle a lens and receive it into channel structure along the inside surface of such element, two U-shaped, non-resilient stiff elements, each positioned against a face of one of said resilient U-shaped elements respectively to lie in like position therewith; the arms of each resilient U-shaped element being initially apart somewhat more than the arms of its associated non-resilient U-shaped element so that when a lens of predetermined size and shape is entered into the channel, the arms of said resilient U-shaped element need be brought towards each other to have the lens tightly fitted in said channel and means to secure the arms of the non-resilient U-shaped elements to the arms of their respectively associated resilient elements when the arms of each resilient U-shaped element are brought towards each other to tightly hold the lens; each of the U-shaped non-resilient elements being shaped so as to substantially match the face of its associated U-shaped resilient element when the lens associated with said U-shaped resilient element is tightly held thereby.

3,017,807
ROTARY PISTON CHARGER-BRAKE MECHANISM
Donald P. Grover, Chicago, Ill., assignor to the United States of America as represented by the Secretary of the Army
Filed June 24, 1960, Ser. No. 38,686
7 Claims. (Cl. 89—12)



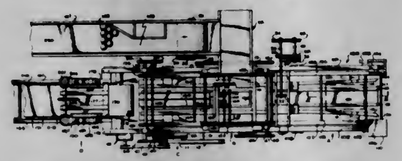
1. In a machine gun having a rotary mass with a rotor contained within a casing, a starter-brake device comprising a cylindrical housing mounted to the rear end of the casing, an annular flange disposed within said housing integral with the inside periphery thereof for forming a front-cavity, a rear-cavity and a hole to provide communication therebetween, a cover for closing the rear end of said housing, a shaft journaled in said cover and connected to the rotor for rotation in axial alignment therewith, a piston mounted over said shaft in said rear-cavity, a clutch disposed between said shaft and piston to mount said piston for oscillating rotation, said clutch being adapted to transfer movement of said piston in the direction of operation of said rotor to said shaft while permitting free movement of said piston relative to said shaft when moved in the opposite braking direction, a multi-disc friction brake disposed in said front-cavity for releasably engaging said shaft to said housing to stop the rotation of the rotary mass, and cam means interposed between said piston and said shaft in said hole formed by said flange for converting rotation of said piston counter to the direction of rotation of the rotor to actuation of said brake.

3,017,808
LONGITUDINAL ALIGNMENT OF CARTRIDGES IN A CARTRIDGE BELT BEFORE ENTERING THE BREECH OF A GUN
Siegfried Uhl, Augsburg, Germany, assignor to Keller & Knappich G.m.b.H., Augsburg, Germany, a corporation of Germany
Filed Mar. 9, 1960, Ser. No. 13,813
Claims priority, application Germany Mar. 11, 1959
6 Claims. (Cl. 89—33)



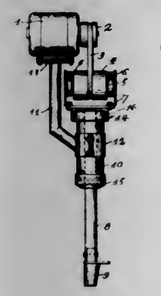
1. Apparatus for guiding to an automatic gun an ammunition belt composed of cartridges interconnected by links, said apparatus comprising a pair of spaced guides for engaging opposite ends of cartridges and maintaining the alignment of cartridges, and a rotor assembly about which an ammunition belt is adapted to pass, said rotor assembly including a pair of relatively inclined star wheels having opposed link engaging faces for engaging opposite edges of links and shifting the links relative to associated cartridges guided by said spaced guides through the convergence of opposed portions of said star wheel faces as said star wheels rotate.

3,017,809
CARTON FORMING DEVICE AND METHOD
Ernest E. Evans, 1425 11th St., Riverside, Calif.
Filed Sept. 14, 1959, Ser. No. 839,946
6 Claims. (Cl. 93—36)



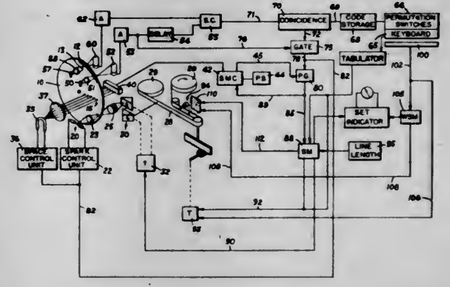
1. In apparatus for adhering together adhesive coated superimposed bottom closure flaps of an open-topped paperboard carton, means operative simultaneously to exert downward pressure on said flaps and outward pressure against the interior surfaces of the side walls of said carton during the setting of said adhesive, comprising separate rigid spherical weights, weight deposit means for introducing said weights into said carton through the open top thereof, spring loaded pressure plates disposed to impose inward pressure against the exterior surfaces of said side walls, creasing rollers rotatably engaging the exterior surfaces of said walls at the bottom edge portions thereof, and conveyor means for supporting and moving said carton relative to said plates and creasing rollers during the setting of said adhesive.

3,017,810
TAMPING DEVICE
Stan E. Jacklin, Nipawin, Saskatchewan, Canada
Filed Dec. 13, 1957, Ser. No. 702,700
1 Claim. (Cl. 94—48)



A tamping device comprising a tube, a shaft concentrically arranged in the tube and extending below and above the lower and upper ends thereof, a tamping shoe on the lower end of the shaft, a guide member embracing the upper end of the tube, resilient members located between the shaft and the inner wall of the guide, a rotation resisting member on the shaft engaging the resilient members, a lower guide embracing the lower end of the tube, a resilient member located between the shaft and the inner face of the tube, a second resilient member located between the shaft and the inner peripheral wall of the lower guide, a flange carried by the shaft and co-acting with the two last said resilient members, and vibrating means operatively connected to the upper end of the shaft, said vibrating means comprising a bracket mounted on the upper end of the shaft, a rotor eccentrically mounted in the bracket and formed with a peripheral groove, a drive pulley formed with a peripheral groove, a flexible belt co-acting with the grooves in the rotor and drive pulley, a bracket clamped to the tube in position to tension said belt, a prime mover mounted on the upper end of said bracket, said prime mover being operatively connected to the drive pulley and means for rotating said drive pulley.

3,017,811
PHOTOGRAPHIC TYPE COMPOSITION
Richard C. O'Brien, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 4, 1959, Ser. No. 857,385
12 Claims. (Cl. 95—4.5)

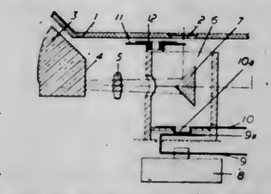


1. A tabulating device for phototypesetting apparatus comprising means for producing a spacing control according to the spacing requirements of each character used during composition of a line, means producing a first analogue signal varying with and related in magnitude to the space used while composing a line of given length, means for producing a second analogue signal related in magnitude to the space between the beginning of a line and a desired tabulating position in the line, means comparing said signals and adapted to produce an output signal only when said first and second signals differ in magnitude, and a tabulation spacing connection between the output of said comparing means and said spacing control means operative to produce spacing control in accordance with said output signal with consequent change in the magnitude of said first signal toward a coincidence with said second signal.

3,017,812
PHOTOGRAPHIC CAMERA
Horst Kodalle and Gerhard Seifert, Dresden, Germany, assignors to VEB Kamera- und Kinowerke Dresden, Dresden, Germany
Filed May 9, 1960, Ser. No. 27,836
6 Claims. (Cl. 95—10)

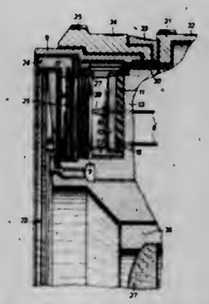
1. In a monocular reflex camera having a housing, a pentahedral roof prism viewfinder mounted in the housing, an adjustable diaphragm mounted in the housing, a photo-electric moving coil exposure meter mounted in the housing and an exposure time setting device mounted in the housing, the provision of a light diffusing and viewing surface on the pentahedral prism, said surface being arranged within the range of sight and accommodation of

the viewing eye, an indicator operatively connected to the moving coil, a follow-up indicator pivotally mounted in the housing and movable to coincide with the indicator on the moving coil, a transparent diaphragm aperture scale rotatably mounted in the housing, a transparent exposure time scale rotatably mounted in the housing and coaxial with the diaphragm aperture scale, means for transmitting adjustments of the diaphragm and of the



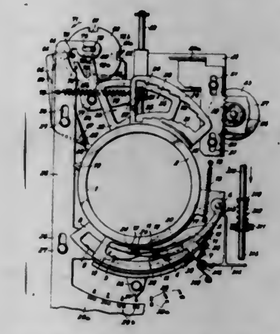
exposure time setting device to the follow-up pointer and to the diaphragm aperture scale and exposure time scale respectively, means for reproducing images of the exposure meter indicator and the follow-up indicator on the light diffusing and viewing surface and means for reproducing images of the diaphragm aperture scale and of the exposure time scale on the light diffusing and viewing surface.

3,017,813
PHOTOGRAPHIC CAMERA HAVING AN ELECTRIC EXPOSURE METER
Paul Greger, Gotthard Kinder, and Richard Sommer, Braunschweig, Germany, assignors to Voigtländer A.G., Braunschweig, Germany, a corporation of Germany
Filed June 14, 1960, Ser. No. 35,931
Claims priority, application Germany Dec. 3, 1959
3 Claims. (Cl. 95—10)



1. In a photographic camera: an objective; an electric exposure meter including a fixedly positioned light-sensitive cell exposed to incident light; a first exposure condition setting means adjustable for a variable exposure condition; a second exposure condition setting means adjustable for a fixed and predetermined exposure condition; and a pair of coaxial independently rotatable light screens arranged in tandem in front of said cell in the path of light incident thereupon so that the light reaching said cell must pass through both of said light screens; the light reducing zone of one screen including radially adjacent arcuate wedge shape areas substantially concentric with the screen axis; the light reducing zone of the other screen including circumferentially adjacent truncated sector areas of progressively increasing angular extent; each of said screens being coupled to a different one of said setting means, whereby the light incident upon said cell is determined conjointly by the adjustments of said setting means.

3,017,814
PHOTOGRAPHIC CAMERA
Paul Greger, Braunschweig, Germany, assignor to Voigtländer A.G., a corporation of Germany
Filed Nov. 12, 1958, Ser. No. 773,504
18 Claims. (Cl. 95—10)

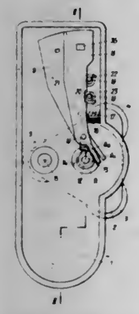


1. In a photographic camera, the combination comprising a first component for setting the shutter speed; a second movable component for setting the diaphragm opening; an exposure meter mounted in said camera; an indicator operable by said meter in accordance with the light value measured thereby; normally latched scanning means operable, when released, to scan the position of said indicator, and biased to move in a scanning direction; manual operating means effective to adjust the position of said indicator relative to said scanning means; an adjustable mechanical coupling mechanism operatively associated with both of said components, said scanning means, said manual operating means, and said indicator; said coupling mechanism being selectively operable, in one position, to mechanically couple said first component to said scanning means and said second component to said manual operating means, in a second position to mechanically couple said second component to said scanning means and said first component to said manual operating means, and in a third position to mechanically uncouple both of said components from said scanning means and from said manual operating means, and to operatively disassociate said indicator from said scanning means, for independent manual operation of said components; whereby, in said one position of said mechanical coupling mechanism, the shutter speed is selected manually and the diaphragm opening is set in accordance with the selected shutter speed and the reading of said meter, in the second position of said mechanical coupling mechanism, the diaphragm opening is set manually and the shutter speed is set in accordance with the selected diaphragm opening and the reading of said meter, and in said third position of said mechanical coupling means, the shutter speed and the diaphragm opening are manually settable independently of each other and of the reading of said meter.

3,017,815
CAMERA, MORE PARTICULARLY SUBSTANDARD FILM CAMERA
Eduard Kezmicki, Vienna, Austria, assignor to Alois Handler and Karl Vockenhuber, both of Vienna, Austria
Filed Feb. 17, 1960, Ser. No. 9,292
5 Claims. (Cl. 95—44)

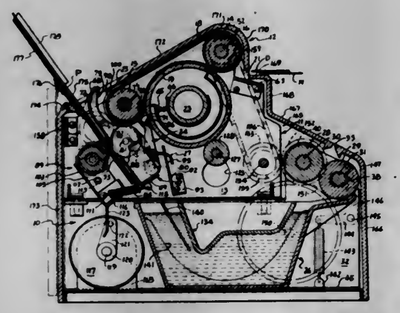
1. In a camera having at least two objectives of different focal length, a viewfinder, at least one carrier movably mounted on said camera and carrying said objectives positionable selectively in operating position by optional

displacement of said carrier, the improvement which comprises field changing means for the viewfinder operably controlled by moving the objective carrier comprising in combination, at least one field mask insertable into the field of view of said viewfinder suitably defining the field of view of the respective objective which is in operating position, elastic elements which engage said masks and tend to move said masks into the field of view of the viewfinder, an adjustable stop for each mask, means on the camera for automatically moving the mask out of



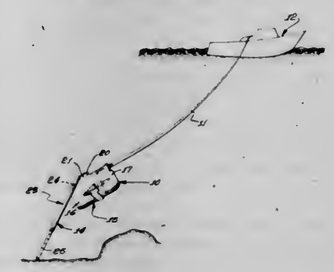
the field of view of said viewfinder to a ready position when said carrier is displaced to move the respective objective out of the operative position and means to release the mask when said carrier is displaced to move the respective objective into said operative position, said mask being inserted into the field of view of the viewfinder by the action of the elastic element, said mask abutting the respective adjustable stop, so that the accurate position of the mask inserted into the viewfinder is defined by the respective adjustable stop.

3,017,816
PHOTOCOPY APPARATUS
Leo J. Stuckens, Ingleside, Ill., assignor to American Photocopy Equipment Company, Evanston, Ill., a corporation of Illinois
Filed Aug. 13, 1959, Ser. No. 833,537
5 Claims. (Cl. 95—73)



1. An apparatus for automatically producing photocopies, said apparatus comprising exposure means, a first means for moving a pair of stacked superimposed negative and document sheets along a joint path running past said exposure means to produce a latent photographic image in said negative sheet, means for containing a developer solution, means for separating said moving superimposed sheets following said exposure thereof and for directing said moving document sheet along a second path leading out of said apparatus and for directing said moving negative sheet along a third path leading into said developer solution to develop said latent image, means for holding a positive sheet, means responsive to said movement of one of said sheets along one of said paths for moving said positive sheet into said developer solution substantially simultaneously to the movement of said negative sheet thereinto, and means for transferring said developed image from said negative sheet to said positive sheet following said movement of said sheets into said developer solution and for ejecting said sheets from the apparatus, said positive sheet moving means comprising means actuable in response to said movement of the negative sheet along said third path, said positive sheet moving means comprising a pair of oppositely driven rollers each disposed on a respective opposite side of said positive sheet held in said holding means, a first of said rollers being mounted for movement between first and second positions thereof, said rollers drivingly engaging said positive sheet therebetween when said first roller is in said first position, said rollers being disengaged from said positive sheet when said first roller is in said second position, means normally urging said first roller towards its second position, and means for moving said first roller to its first position in response to said movement of said negative sheet along said third path.

3,017,817
STABILIZING DEVICE FOR UNDERWATER CAMERA
Herbert F. Sampson, 1604 Newport Blvd., Costa Mesa, Calif.
Filed Apr. 6, 1959, Ser. No. 804,427
6 Claims. (Cl. 95—86)

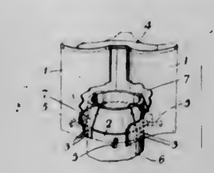


1. In combination with a camera means adapted to be submerged in a body of water: a cable means connected to the camera means and adapted to be varied in length to change the scope of the cable in water; and means to protect and stabilize said camera means in the body of water, said protective and stabilizing means extending from said camera means intermediate ends thereof and in a direction opposite to said cable and having elongated spaced members terminating in longitudinal and lateral spaced relation to the camera means whereby said camera means is selectively positionable at a selected angle and distance above the bottom of said body of water.

3,017,818
CHIMNEY COWLS AND VENTILATING DEVICES
Clifford Edmund Brewer, "Lucky Stars," Lagoon Road, Lilliput, Parkstone, Dorset, England
Filed Mar. 27, 1959, Ser. No. 802,372
Claims priority, application Great Britain Apr. 3, 1958
2 Claims. (Cl. 98—82)

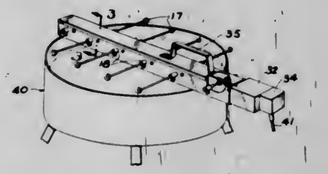
1. A cowl comprising a hollow body having vertically extending side walls, a top wall closing the upper end of

the body, and lengthwise extending apertures in the side walls; the said body being open at its lower end for receiving therein the upper end of a chimney pot and the open lower end being larger than the chimney pot to define therewith an opening surrounding the chimney pot and leading to the interior of the body; and means wholly located within the body for supporting the body on the



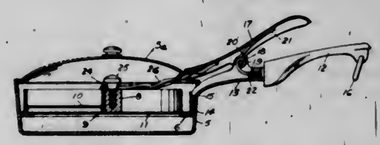
chimney pot so that the pot extends a substantial distance into the body, the said supporting means including radially adjustable means accessible through the said apertures for locking the body to the chimney pot so that the body can be secured to chimney pots having different external dimensions.

3,017,819
PORTABLE BARBECUE MACHINE
Nick Paul Manteris, 10310 Saratoga, Oak Park, Mich.
Filed Dec. 3, 1959, Ser. No. 857,028
9 Claims. (Cl. 99—421)



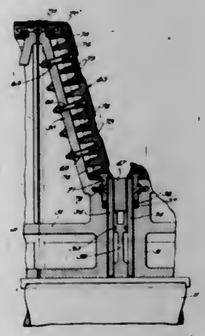
1. In a portable barbecue grill, the combination comprising a portable hollow tubular housing having a substantially greater length than width, a plurality of skewer holders mounted in the opposite sides of said housing, a skewer individual to each said skewer holder removably mounted in each said skewer holder with its axis extending generally laterally of the longitudinal axis of the housing, and drive means at least partially within said housing and drive means at least partially within said housing operatively connected to said skewer holders for rotating said skewer holders.

3,017,820
EGG POACHER
Thomas Henry Richards, Blenheim, Ontario, Canada (1780 Grand Marais W., Windsor, Ontario, Canada)
Filed Nov. 2, 1959, Ser. No. 850,292
3 Claims. (Cl. 99—436)



1. An egg carrying assembly comprising a base plate, a plurality of bosses upstanding from the face of the base plate, said bosses being of circular form and having beveled edges extending substantially throughout the height thereof, and entirely therearound, a ring mold assembly consisting of a plurality of open bottom elastic rings, a central uniting member by which said rings are united, said rings corresponding in number to the bosses and being of such diameter that the lower edges of said rings engage the beveled edge portions of the bosses at points intermediate the tops and bottoms of said beveled edge portions, a handle carried by and projecting outwardly from the base plate, a spring actuated member carried by said handle and interengaging connections between the spring actuated member and the central uniting member through which the spring actuated member causes the elastic rings to forcibly engage the said beveled edges of the bosses.

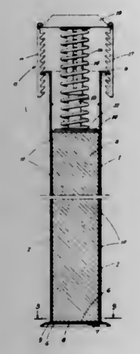
3,017,821
FRUIT JUICE EXTRACTOR
Frank W. Bireley, North Hollywood, and Harry A. Foss, Sunland, Calif., assignors, by direct and mesne assignments, to Brown Citrus Machinery Corp., Whittier, Calif., a corporation of California
Filed June 26, 1956, Ser. No. 593,991
31 Claims. (Cl. 100—97)



31. In a fruit juice extractor: a pair of opposed members for advancing in one direction fruit of different sizes in different paths according to the size of the fruit; resilient means on one of said members providing thereon a yieldable fruit engaging surface opposed to a fruit engaging surface of the other of said members along said paths; said opposed fruit engaging surfaces converging in said direction as well as transversely of said direction; and said resilient means being constructed and arranged so that said yieldable surface varies in yieldability transversely of said direction for simultaneously subjecting the fruit of different sizes to different juice extracting pressures during said advance.

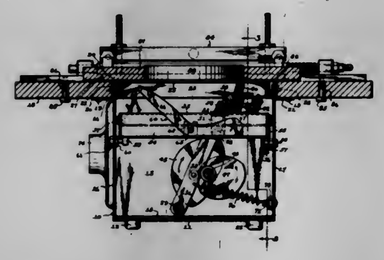
3,017,822
MOLD FOR FOOD PRODUCTS
Richard A. Hawley, Oakland, Calif., assignor to Meat Packers Equipment Co., Oakland, Calif., a corporation of California
Filed Feb. 8, 1960, Ser. No. 7,171
2 Claims. (Cl. 100—240)

1. In a meat loaf pressing apparatus, a mold body of multi-sided form in section and providing corners at the junction of the sides of the body with each other, the body being closed at one end and open at the other end for the insertion into the body of a meat product to be compressed, and means including a body fitting plate to engage the product at said other end of the body and compress such product by longitudinal movement thereof into the body; the sides of the body being imperforate



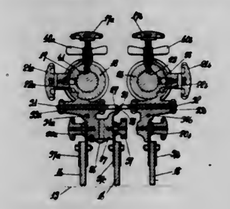
but there being a series of vent holes in each corner of the body of a restricted size to permit fluid matter but not meat to pass therethrough.

3,017,823
SCREEN STENCILLING MACHINE
Harry Russell Farwell, Grand Rapids, Mich., assignor to James A. Black, Grand Rapids, Mich.
Filed Mar. 30, 1959, Ser. No. 802,916
11 Claims. (Cl. 101—123)



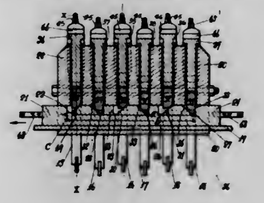
1. In a screen stencilling machine: upwardly extending substantially parallel side walls; a top mounted at the upper ends of the side walls and having a stock-supporting upper surface and an opening therethrough in registry with the opening between said side walls; a screen stencil mounted in the opening in said top; a pair of tracks pivotally mounted on said side walls respectively near corresponding ends thereof; and a squeegee assembly extending transversely between said side walls and having elements at its opposite ends reciprocable longitudinally on said tracks to effect print and non-print strokes of the squeegee beneath said stencil, said tracks being swingable about their pivotal mountings on the side walls to elevated positions wherein the squeegee forces coating material upwardly through the stencil and onto stock placed on the stock-supporting upper surface of the top during the squeegee's print strokes, and said tracks being swingable to lowered positions wherein the squeegee is lowered out of contact with the stencil during the squeegee's non-print strokes.

3,017,824
TRI-PRINTING SQUEEGEE MOVING MECHANISM OF AN AUTOMATIC SCREEN PRINTING MACHINE
Hisakichi Ichinose, 175 2-chome, Koushienguchi Hyogo Prefecture, Koushien, Nishinomiya City, Japan
Filed Dec. 15, 1959, Ser. No. 859,609
Claims priority, application Japan May 26, 1959
3 Claims. (Cl. 101—123)



1. In a screen printing machine having a screen with apertures therein in the pattern to be printed, the combination of a first beam and a second beam movable back and forth along said screen with the leading beam in a position higher than the trailing beam, an end squeegee fixedly mounted on said first beam and an end squeegee fixedly mounted on said second beam, said squeegees being fixed in a position perpendicular to said screen, a central squeegee mounted on one of said beams perpendicular to said screen and movable perpendicularly to said screen, and adjusting means associated with each end squeegee and engageable with the top of said central squeegee for adjusting said central squeegee vertically, the adjusting means associated with the end squeegee on the other of said beams engaging said central squeegee and moving it to the lower position when said one of said beams is in the upper position, whereby said central squeegee is always in the lower position when the beams move back and forth along the screen.

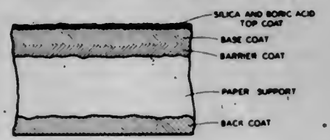
3,017,825
MULTIPLE PRINTING SQUEEGEE MOVING MECHANISM OF AN AUTOMATIC SCREEN PRINTING MACHINE
Hisakichi Ichinose, 175 2-chome, Koushieguchi Hyogo Prefecture, Koushien, Nishinomiya City, Japan
Filed Dec. 15, 1959, Ser. No. 859,610
Claims priority, application Japan May 27, 1959
3 Claims. (Cl. 101—123)



1. In an automatic screen printing machine, the combination of a plurality of printing squeegees each having side wings projecting from the ends thereof, said squeegees being positioned in the vertical position and being substantially parallel to each other and parallel to the longitudinal direction of the machine, a plurality of pairs of elevating members, the elevating members of each pair being under the respective side wings of a printing squeegee and supporting the squeegee, a pair of cam members, one cam member being beneath the elevating members at one end of the squeegees and the other cam member being beneath the elevating members

at the other end of the squeegees, said cam members being movable perpendicular to the longitudinal direction of the machine and to the direction in which the squeegees extend, said cam members each having a plurality of grooves therein extending transversely to the direction in which the cam members are movable, there being one groove for each elevating member, each groove in a portion of said grooves having an inclined surface on one side thereof and a surface perpendicular to the length of the cam member on the other side thereof, and each groove of the remainder of said grooves having an inclined surface on the other side thereof and a surface perpendicular to the length of the cam member on the one side thereof, said elevating members having inclined surfaces on the ends thereof bearing on the inclined surfaces of the sides of said grooves, and a reciprocating bed reciprocating in the direction in which said cam members are movable and on which said cam members are mounted, and spring means bearing on said squeegees urging said elevating members downwardly against said cam members.

3,017,826
PLANOGRAPHIC PRINTING PLATE
Harold K. Salzberg, Bainbridge, N.Y., assignor to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed May 26, 1960, Ser. No. 32,036
9 Claims. (Cl. 101—149.2)



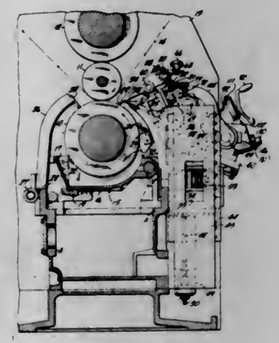
6. A planographic printing plate that is resistant to deterioration on being wetted repeatedly with water, the said plate including a paper sheet, a base coat thereon comprising a protein selected from the group consisting of casein, soy protein and gelatin and a chemically inert, finely divided, solid filler dispersed in the protein, and a top coat of finely divided silica and boric acid applied over and adhered to the said base coat.

3,017,827
AQUEOUS COATING COMPOSITION COMPRISING WATER SOLUBLE POLYETHYLENEPOLYAMINE-DIHALOALKANE UREA-FORMALDEHYDE REACTION PRODUCT AND PLANOGRAPHIC PAPER BASE FORMED WITH SAME
George S. McKnight, Jr., Rumford, and Glenn Harold Perkins, Mexico, Maine, assignors to Oxford Paper Company, Rumford, Maine, a corporation of Maine
No Drawing. Filed Aug. 29, 1957, Ser. No. 680,926
16 Claims. (Cl. 101—149.2)

1. An aqueous coating composition comprising an adhesive containing a reactive hydroxyl group comprising at least one member of the group consisting of a starch and a cellulose material, an inorganic pigment, and a water soluble polyethylenepolyamine-dihaloalkane-urea-formaldehyde reaction product.

3,017,828
DOCTOR BLADE MECHANISM
Alfred C. Behringer, Ringwood, N.J., assignor, by mesne assignments, to Miehle-Goss-Dexter, Incorporated, Chicago, Ill., a corporation of Delaware
Filed Mar. 12, 1959, Ser. No. 798,923
20 Claims. (Cl. 101—157)

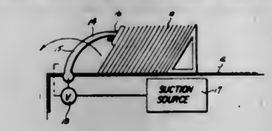
1. A doctor blade apparatus for a rotary printing press which includes a rotary cylinder comprising a frame mounted adjacent the cylinder for movement toward and away from the cylinder, means for moving the frame toward and away from the cylinder, a doctor blade clamp carried by the frame, means for opening and closing the clamp, and an adjustable stop device to facilitate positioning of the frame relative to the cylinder, said adjustable stop device including a housing, a member accommodated within said housing for both rotary and axial displacement, a stop carried by the member eccentrically of the axis of rotation thereof, a threaded disc accommodated within the housing, means urging the rotary and axially displaceable member into engagement with said threaded disc, a control means for imparting rotation to the threaded disc to axially displace the member and the stop, and control means to impart rotation to the stop to move it between operative and inoperative positions.



8. A method of adjusting a doctor blade in a clamping jaw of a frame which is movable toward and away from the cylinder of a printing press comprising the steps of moving the frame away from the cylinder to a position in which the clamping jaw is upwardly disposed, placing a protective sheath on the wiping edge of the doctor blade, inserting the doctor blade in the open clamping jaw, registering the doctor blade therein by bringing the protective sheath into abutment with the edge of the clamping jaw, closing the clamping jaw, removing the protective sheath, moving the frame toward the cylinder, bringing the edge of the blade into close proximity with the cylinder, setting an adjustable stop for the frame to a position to attain the desired protrusion of the doctor blade from the clamping jaw, loosening the clamping jaw to permit the blade to slip therein, moving the frame toward the cylinder, bringing the edge of the blade into registration with the cylinder to produce parallelism between the edge of the blade and the surface of the cylinder, continuing the movement of the frame toward the cylinder until the frame comes into engagement with the stop, and closing the clamping jaw to prevent slipping movement of the doctor blade relative to the clamping jaw.

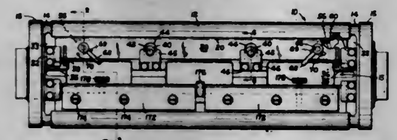
3,017,829
COMBINED VACUUM PICK UP AND PRINTER
Robert G. Brown, Clarksville, Md., assignor, by mesne assignments, to Rabinow Engineering Co., Inc., Rockville, Md., a corporation of Maryland
Filed June 17, 1960, Ser. No. 36,804
10 Claims. (Cl. 101—327)

1. In combination, a pneumatic transfer device having a flat surface for article contact, a suction passageway opening through said surface to provide a suction opening, and a self-contained printing unit including a printing substance supply secured to said device and having a printing face held immovable with respect to said sur-



face, and said face being disposed near said surface to be engaged by the article attracted to the surface.

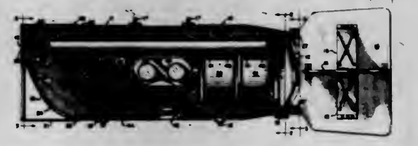
3,017,830
PLATE CLAMP FOR PRINTING PRESS
Arthur H. Penner, Dayton, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 57,937
7 Claims. (Cl. 101—415.1)



1. In combination with a cylinder of a printing machine, a clamp for securing one end of a sheet member to said cylinder, comprising means forming a first clamping surface on said cylinder, a clamping bar adapted to engage one end of a sheet member, means mounting said bar on said cylinder for limited movement with respect to said clamping surface between clamping and releasing positions parallel to said surface and also providing for limited non-parallel motion of said bar with respect to said surface, means biasing said bar toward engagement with said surface along essentially the full extent thereof to clamp one end of a sheet member between said bar and said surface, clamp release means including reaction surfaces formed on said cylinder and on said bar, one of said reaction surfaces being a shoulder and the other an annular socket, a roller engageable with said shoulder, a cylindrical mounting pin extending from said roller parallel to and offset from the axis of rotation thereof, said pin being mounted in said socket providing for arcuate movement of said roller with respect to said socket, a handle on said pin for manual rotation thereof to swing said roller against said shoulder causing retraction of said bar from said clamping surface, and stop means limiting pivoting of said handle to a position where the component of force from said biasing means tending to cause rolling motion of said roller along said shoulder and concurrent arcurate movement of said roller about said socket is insufficient to overcome the frictional force between said pin and said socket.

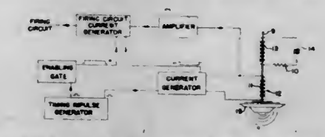
3,017,831
AERIALLY LAUNCHED MARINE MINE
Adelbert Barry, 2123 Kingston Drive, Houston 6, Tex.
Filed Aug. 24, 1948, Ser. No. 45,961
5 Claims. (Cl. 102—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In an aerially launched marine mine, a tylindrical casing, cylindrical frangible means immovably secured to the forward end of said casing and having a cross sectional portion circular in configuration and of the same diameter as the diameter of the casing to which it is secured for guiding the mine in a predetermined path of flight through the air and detachable therefrom in response to the impact of the mine with the water, and means on said casing for sharply changing the direction of the travel of the mine upon entry into the water and comprising a shell having an ogival end the apex thereof off-center with respect to said casing, the surfaces of the ogival end being curved rearwardly from said apex along predetermined



different arcs of curvature, said curved surfaces merging into and forming a cylindrical portion secured to said cylindrical casing, said ogival end of the shell being disposed within said frangible means until the frangible means is detached from said casing.

3,017,832
ECHO FIRING DEVICE FOR A DEPTH CHARGE
Waldron S. MacDonald, Concord, Mass. (Belmont, Mass.)
Filed Dec. 13, 1950, Ser. No. 200,681
6 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)

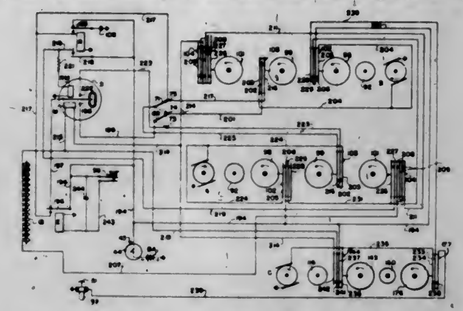


1. In a depth charge, the combination comprising, an explosive charge, an electroresponsive detonator for said charge, means for generating oscillatory energy in discrete intervals periodically, a transducer for radiating said energy into the surrounding water and responsive to echo signals received at said depth charge, an amplifier for said signals, means selectively responsive to the amplified signals for energizing said detonator, means intercoupled in circuit relation between said generating means and said transducer for applying a disabling potential to said energizing means during said intervals, and means responsive to the output of said generating means applying an enabling potential to said energizing means for rendering said energizing means operable in response to amplified signals greater than a predetermined amplitude received during a predetermined period of time after said intervals.

3,017,833
MAGNETIC FIRING CONTROL MECHANISM FOR A MINE
Seth W. Booth, Hyattsville, Md. (Los Angeles, Calif.); John F. Toomey, Floral Park, N.Y. (On Top o' The Hill, Chilmark, Mass.); and Ellis M. Brown, 4134 Wilada, Dallas 20, Tex.
Filed June 8, 1943, Ser. No. 490,044
18 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)

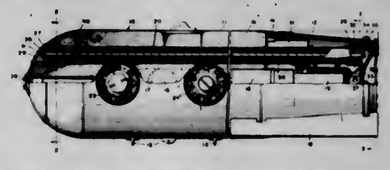
1. In a system for firing a mine in response to a predetermined number of pairs of signals received through the surrounding water, signal receiving means including a relay, said relay having a contact element movable selectively to an initial unoperated position and to a circuit closing position, a timing device adapted to be set in operation by said relay as the contact element thereof moves to said circuit closing position, a second timing device, means controlled by the first named timing device for establishing a control connection between the relay and said second timing device during a cycle of operations of the first named timing device, detonating

means, and means for firing said detonating means when said second timing device has been set in operation by



said relay during a cycle of operations of the first named timing device.

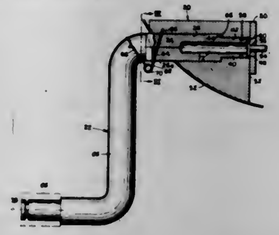
3,017,834
MAGNETIC DETECTING DEVICE
Robert H. Park, Pluckemin, N.J. (Corporation Road, Dennis, Mass.), and Wilson R. Maltby, Arlington County, Va. (9319 Cedar Lane, Bethesda, Md.)
Filed Aug. 28, 1943, Ser. No. 500,400
11 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a magnetic mine having a sensing device for detecting the movement of a vessel containing magnetic material in a magnetic field, the combination of a mine casing, an explosive charge within said casing, a firing control mechanism for firing said charge, a search coil having ends for external electrical connection, a core of magnetic material disposed within said coil, means including a pair of non-magnetic resilient pads in engagement with said casing for supporting the core at the ends thereof an L-shaped bar of magnetic material connected to one end only of said core in substantial abutting relation with said coil for increasing the effective length of the core and the coupling between the coil and said magnetic field, and an electrical connecting means connecting said search coil to said firing control mechanism.

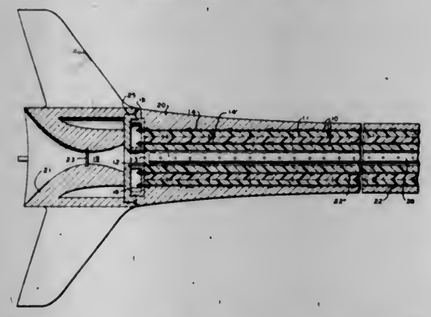
3,017,835
EJECTION APPARATUS
Walter E. Holtz, Pomona, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 12, 1958, Ser. No. 754,695
1 Claim. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)

Slipper ejection apparatus for a missile comprising a source of fluid under pressure, a slipper support receivable in part within a cylindrical recess in the body of said missile, that portion of said slipper support receivable within the said cylindrical recess being in the form of a piston having an elongated cavity coaxially formed therein, means for admitting fluid under pressure from said source to said recess and thence to the cavity formed in said piston to fill the latter, means for restraining movement of said piston in said recess until after the fluid received by said cavity from said source has reached a predetermined pressure, the fluid filling said cavity becoming effective through expansion upon removal of the restraint imposed by said last-mentioned means to produce a sus-



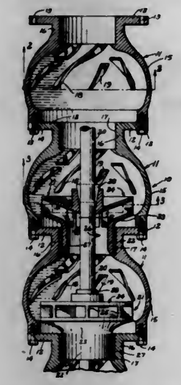
tained force on said piston during the initial phase of its movement and thereby ensure the complete ejection thereof from the body of said missile.

3,017,836
ROCKET MOTOR
Roland H. Guay, Waco, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 757,879
9 Claims. (Cl. 102—49)



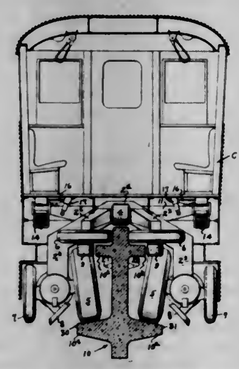
9. A rocket motor comprising: a plurality of concentrically arranged annular layers of propellant material, each of said layers being formed of a plurality of elongated truncated wedges of said propellant material bonded together at their adjoining sides and to wedges of adjoining layers at their inner and outer surfaces with a propellant mortar to form an assembly with the inner surface of the innermost of said layers being exposed and defining an annulus forming the combustion chamber of said motor; means comprising a pair of annular end plates each covering one end of said assembly and a plurality of longitudinally disposed reinforcing rods mounted along the outer surface of at least one of said layers for reinforcing and applying longitudinal compression to said assembly; means comprising a plurality of circumferential reinforcing bands surrounding the outer circumference of the outermost of said layers for reinforcing and applying radial compression to said assembly; an axially disposed exhaust nozzle; and a layer of restrictor material covering said outermost layer to form the outer skin of said motor, the outer diameter of said motor decreasing uniformly from a first point of maximum diameter adjacent the forward end of said motor, through a point of minimum diameter intermediate the ends of said motor, and then increasing uniformly from said point of minimum diameter to a second point of said maximum diameter adjacent the after end of said motor.

3,017,837
MULTI STAGE CENTRIFUGAL PUMP
Thomas E. Judd, 1506 S. 21 East, Salt Lake City, Utah
Filed Feb. 17, 1959, Ser. No. 793,877
3 Claims. (Cl. 103—102)



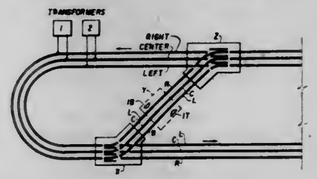
1. In a multistage centrifugal pump, a plurality of bowl elements arranged in end-to-end alined relation with respect to each other and connected together, a shaft extending longitudinally through said bowl elements, impellers rotatably arranged in said bowl elements and affixed to said shaft, each of said impellers including an elongated neck, and cavities in said bowl elements for receiving said necks, the impeller forming a bearing and seal between the neck and cavity, spaced apart vanes of different lengths affixed to the inner surfaces of said bowl elements, the different lengths of said vanes reducing skin friction effects in said pump by reason of minimized exposed area, the impellers on said shaft being of similar configuration to each other and each having a flaring section terminating in a circular body portion, each of said impellers being hollow and having a plurality of spaced apart ribs therein.

3,017,838
SYMMETRIC TRUCK FOR OVER-RUNNING MONORAIL CARS
Sidney H. Bingham, 109 E. 35th St., New York, N.Y.
Filed Feb. 26, 1960, Ser. No. 11,307
10 Claims. (Cl. 104—120)



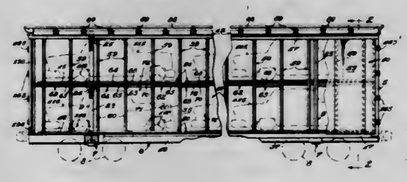
1. A symmetrical over-running monorail car system comprising in combination a track beam having a vertically positioned web and pairs of vertically spaced horizontal flanges projecting from opposite sides of said web, said web extending above said upper pair of flanges, a truck frame shaped to straddle said beam from above, pairs of fore and aft running wheels journaled on said truck frame and riding on the upper faces of the lower flanges, means on said truck frame for driving at least two of said wheels, guide wheels journaled on said truck frame and positioned to engage opposite faces of said web above the upper flanges and skid wheels journaled on said truck adjacent the edge faces of said upper pair of flanges and the top edge face of said web.

3,017,839
TOY ELECTRIC TRAIN CONTROL SYSTEM
Raymond L. Brundage, 24 E. Park View Drive, North Lake, Ill.
Filed Apr. 11, 1960, Ser. No. 21,462
7 Claims. (Cl. 104—149)



1. A toy electric train system having a loop of track wherein the outer track rail and the center rail are included in a circuit with one transformer to control the same, and the inner track rail and the center rail are included in a second circuit with a second transformer to control said second circuit, a locomotive having the usual motor and means for completing the circuit of the motor to the wheels so that the same may be controlled over either track circuit, a cross over track extending from one side of the loop to the other with means for routing a locomotive over said cross over in such a manner that it will run forward in an opposite direction in the loop, an insulated section in both outer rails of said cross over track, together with means located adjacent said section for automatically switching the motor circuit of the locomotive to the opposite wheels of the locomotive so that the motor will be controlled by the same transformer after it passes over the section and as it moves along the loop in said opposite direction.

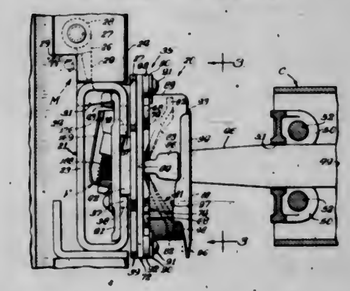
3,017,840
RAILWAY CARS FOR TRANSPORTATION OF VEHICLES
Starr W. Fairweather, Montreal, Quebec, Canada, assignor to Canadian National Railway Company, Montreal, Quebec, Canada
Filed Oct. 17, 1957, Ser. No. 690,650
6 Claims. (Cl. 105—368)



1. A railway box car for the transportation of vehicles, said box car including an under-frame, side walls extending upwardly from said under-frame and a roof structure carried by said side walls, means for securing adjacent side margins of said roof structure to upper mar-

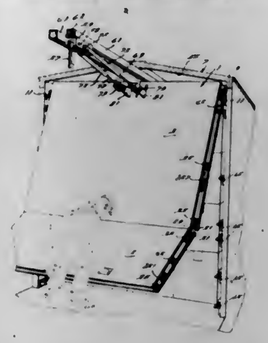
gins of said side walls, said box car being provided at each end with an opening through which the vehicles may be passed into and out of the car, a pair of rigid cross frames, one of the said pair being located inwardly a substantial distance from one end of the car and the other of the said pair being located inwardly a substantial distance from the remaining end of the car, each cross frame being rigidly supported by said under-frame and in spaced relation to said side walls and roof structure, said means for securing the side margins of said roof structure to upper margins of said side walls being further secured to said cross frames and door structures for opening and closing said end openings when said car is coupled to an adjacent car, each of said door structures including a first door extending across a substantial width of said opening and having its outer side margin hingedly connected to one side of said box car to swing outwardly about a vertical axis, and a second door extending across the remaining width of said opening and having its outer side margin hingedly connected to the remaining side of said box car to swing outwardly about a vertical axis, said first door comprising a pair of vertically extending panel sections arranged in side-by-side relation with the adjacent side of each panel section hingedly connected to swing about a separate vertical axis for folding said panel sections inwardly as the first door is swung outwardly about its hinged connection to the first mentioned side of the car, and said second door comprising a pair of vertically extending panel sections arranged in side-by-side relation with the adjacent side of each of said last mentioned panel sections hingedly connected to swing about a separate vertical axis for folding said panel sections inwardly as the second door is swung outwardly about its hinged connection to said remaining side of the car.

3,017,841
END CONNECTION FOR THE CROSSBARS OF A FREIGHT SUPPORTING AND RESTRAINING SYSTEM
Donald E. Miller, Mount Prospect, Ill., assignor, by mesne assignments, of one-fourth to The Atchison, Topeka and Santa Fe Railway Company, a corporation of Kansas, one-fourth to The New York Central Railroad Company, a corporation of Delaware, one-fourth to The Pennsylvania Railroad Company, a corporation of Pennsylvania, and one-fourth to Union Pacific Railroad Company, a corporation of Utah
Filed Dec. 5, 1958, Ser. No. 778,421
31 Claims. (Cl. 105—369)



1. A crossbar end connection for adjustably connecting a load sustaining crossbar to a support structure carried by a wall, said support structure having pairs of elongated transversely spaced coplanar flanges arranged in intersecting horizontal and vertical paths, said end connection comprising slider means adapted to engage said flanges in embracing relation at opposite faces thereof, means mounted on said slider means and cooperable with the flanges of the horizontal paths for releasably locking said slider means at a selected position in a horizontal path, and fall retarder means mounted on said slider means and cooperable with the flanges of the vertical paths for resisting only downward movement of said slider means in a vertical path.

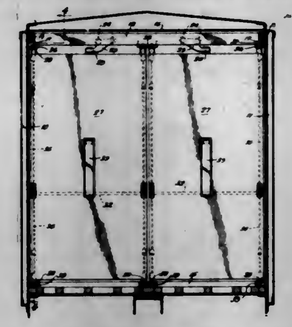
3,017,842
BULKHEAD
Sulo Michael Nampa, Detroit, Mich., assignor to Evans Products Company, a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,170
11 Claims. (Cl. 105—376)



1. In a railroad freight car having a pair of spaced side walls, a plurality of belt rails mounted on and spaced vertically of each of said side walls, a bulkhead extending transversely of said car and including an upper section, a lower section, and means connecting said lower section to said upper section for pivotal movement about an axis perpendicular to said side walls between a first position in the plane of said upper section and a second position parallel to and overlying a portion of said upper section, wheel means mounted on said bulkhead on an axis adjacent the upper edge thereof and extending at right angles to said side walls, said wheel means engaging an upper one of said belt rails at each of said side walls and supporting said bulkhead thereon for rolling movement therealong and for pivotal movement about said last named axis between a vertical operative position and a substantially horizontal stowed position, a trolley track mounted on said car between said side walls and above said bulkhead, a trolley mounted on said trolley track for movement therealong, a fixed length rod connected to said trolley and pivotally connected to said bulkhead to permit said bulkhead to pivot relative thereto about said last named axis, and force applying means connected to said trolley and to said bulkhead and effective during movement of said bulkhead between said positions to produce a moment urging said bulkhead toward said stowed position.

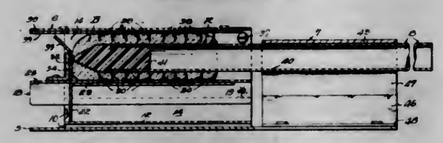
3,017,843
LADING SEPARATING MEANS
Russell M. Loomis, Palos Heights, Adolph G. Kuellmar, Chicago, and John S. Lundvall, Park Ridge, Ill., assignors to Union Asbestos & Rubber Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 6, 1959, Ser. No. 804,328
5 Claims. (Cl. 105—376)

1. In a car having spaced side walls, a floor and a roof, lading separating means comprising tracks extending longitudinally in the car adjacent to the roof and projecting inwardly from the car side walls, a transversely extending beam supported on the tracks for movement therealong longitudinally of the car, a carriage mounted on the beam for movement lengthwise thereof, the carriage including an upper head portion movably supported on the beam and an offset arm extending below the beam and laterally toward the adjacent side wall of the car, a door pivoted at its top centrally of its width to the free end of the offset arm, the door being swingable from a



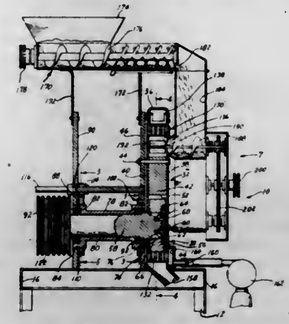
closed position transverse to the car to an open position parallel to the side wall and being movable in its open position substantially into flat contact with the adjacent side wall of the car with the offset arm extending beneath the adjacent track and closely adjacent to the side wall, and latch means to latch the door in its open and closed positions.

3,017,844
BUN OR THE LIKE TREATING APPARATUS
Thomas A. Reilly, 1616 21st St. S., Lot 302, St. Petersburg, Fla.
Filed Aug. 10, 1959, Ser. No. 832,610
3 Claims. (Cl. 107—1)



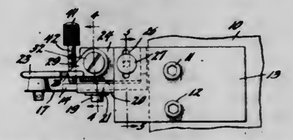
3. A bun processing apparatus comprising in combination, a bun holding structure including two opposed spaced walls one of which is movable toward and from the other to receive a bun therebetween, a multiplicity of closely spaced pin-like elements projecting from said walls toward the other wall for piercing opposite sides of a bun placed between said walls when said one wall is moved toward the other, said pin-like elements being closely spaced substantially throughout the length and breadth of said walls engaging the bun to pierce the bun in a grid-like pattern, a recess forming member of substantially cylindrical configuration and of a diameter approximately one-half the diameter of the bun and adapted to be moved longitudinally and parallel to said walls and between the inner ends of said pin-like elements to press form a recess in a bun contained between said walls, the diameter of said forming member being such as to displace and compress approximately half of the bun body outwardly and between the said pin-like elements whereby said elements are effective to block longitudinal movement of the bun walls and thereby permit compacting of the bun material laterally by longitudinal movement of said forming member without appreciable longitudinal distortion of the bun, and means to guide said forming member longitudinally in a predetermined path between said walls.

3,017,845
PELLET MILL
Paul Bonnafoux, 44409 Stanridge Ave., Lancaster, Calif., assignor of twenty percent to Thomas P. Maboney, Los Angeles, Calif., twenty-six percent to Marie B. Bonnafoux, Lancaster, Calif., and twenty-six percent to Yvonne Bonnafoux
Filed Aug. 25, 1958, Ser. No. 757,078
8 Claims. (Cl. 107—14)



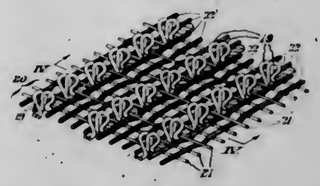
6. In a pellet mill, the combination of: a housing defining a chamber; a plurality of extrusion rollers mounted in said chamber and having drive shafts connected thereto; common drive means connected to said shafts; a rotary die mounted in said chamber and supported upon said rollers, said die including a track on the interior periphery thereof for the reception of the peripheries of said rollers; and exhaust means connected to said housing and communicating with said chamber for exhausting surplus material from said chamber.

3,017,846
SEWING MACHINE ATTACHMENT
Edward Lakatta, Wilkes-Barre, Pa., assignor to Harris-Hogan Company, Wilkes-Barre, Pa.
Filed Feb. 25, 1957, Ser. No. 642,233
4 Claims. (Cl. 112—114)



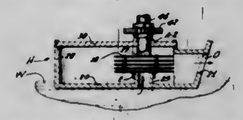
1. A sewing machine attachment for sewing shanked fasteners having sewing apertures therein to a base material comprising a base plate adapted to be secured to the bed of the sewing machine, a blade secured to said plate and projecting forwardly therefrom and having a bifurcated freely movable free end for the reception of the shank of said fastener, and a rigid clamping arm pivoted to said base plate and engaging said fastener and maintaining the shank thereof with the aperture therein in alignment with a sewing machine needle, said blade and arm being yieldable to resiliently clamp the fastener and permit movement thereof transversely of the base plate to automatically align the shank aperture and sewing machine needle, said clamping arm being adjustably secured to said base plate for movement transversely thereof for varying the space between the arm and blade to accommodate fasteners of various sizes, the adjustment for said clamping arm comprising a mounting plate to which said arm is pivoted, said base being provided with an elongated slot extending transversely thereof, and a clamping screw extending through said slot and threaded into said mounting plate to clamp the mounting plate against said base in any of its adjusted positions.

3,017,847
TUFTED FABRICS AND METHODS OF MAKING SAME
William Rollin Keen, Media, Pa., assignor to Collins & Aikman Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 13, 1956, Ser. No. 571,207
1 Claim. (Cl. 112—266)



A method of forming a tufted pile fabric comprising forming a backing material having highly shrinkable yarns extending in one direction, continuously needle tufting pile yarns in said backing and continuously subjecting said tufted backing material to shrinking treatment to shrink said shrinkable yarns and to reduce the dimension of said fabric in the direction of said shrinkable yarns so as to bring said tufts closer together.

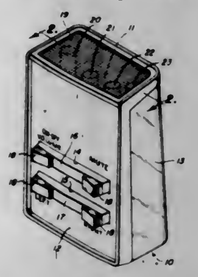
3,017,848
BOAT PROPULSION UNIT
Charles R. Bishop, 10342 Hill Road, Garden Grove, Calif., assignor, by mesne assignments, to said Charles R. Bishop and Muriel Bishop, Garden Grove, Calif., as joint tenants with right of survivorship
Filed Nov. 14, 1960, Ser. No. 69,120
8 Claims. (Cl. 115—16)



1. A boat propulsion unit comprising, in combination: a horizontally disposed housing having a substantially flat bottom wall, the main portion of said housing forming a double involute configuration in a parallel plane above said bottom wall; a pair of vertically disposed shafts each being rotatably supported from said housing at the focal point of one of said involute portions thereof; a pair of turbine wheels that during operation thereof tend to throw fluid radially outwardly from the entire wheel circumference, each of said turbine wheels being concentrically supported from a corresponding one of said shafts; drive means operatively coupled to said shafts for rotating said turbine wheels concurrently in opposing directions, the action being such that fluid streams flowing radially outwardly from said turbine wheels converge in a space between said turbine wheels into a single rearwardly flowing stream; a separate inlet opening formed in said housing bottom wall for each of said turbine wheels; and a single discharge port formed in the rearward part of said housing intermediate to said turbine wheels.

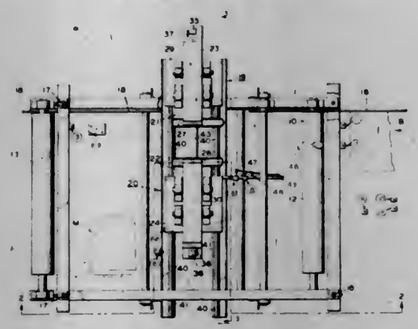
3,017,849
ULTRASONIC TRANSMITTER
Howard Grossenheider, Deerfield, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed June 12, 1959, Ser. No. 820,003
5 Claims. (Cl. 116—137)

1. In a mechanical portable ultrasonic transmitter of the type having a support structure, two mechanically excitable resonators mounted on said support structure in spaced relation to each other and two exciters individually resiliently mounted on said support structure adjacent an assigned one of said resonators, an operating mechanism for said exciters comprising: two actuator assemblies mounted on said support structure, said actuator assemblies each including an actuating member aligned with a respective one of said exciters, each of said actuating members being movable along a predetermined path from a rest position effectively disengaged from the associated exciter through a cocking position in which



said actuating member engages and cocks the associated exciter, to an actuated position in which said actuating member releases the associated exciter to strike its resonator; a bar extending between said actuator assemblies and being effectively pivoted at its opposed ends; and means included in each of said actuator assemblies for engaging said bar and completing a mechanical connection between said bar and said actuating members to displace one of said actuating members from its rest position to its actuated position in response to pivotal movement of said bar about a given end thereof.

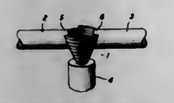
3,017,850
AUTOMATIC THICKNESS INDICATOR FOR ROUGH LUMBER
Gordon D. Whittier, Redmond, Oreg., assignor to Whittier Molding Co., Redmond, Oreg., a partnership firm composed of Gordon D. Whittier and Robert D. Whittier
Filed Nov. 24, 1958, Ser. No. 776,044
8 Claims. (Cl. 118—9)



1. In a device for indicating the minimum thickness of a board passing through the device, a lower arm hinged on a base support to swing in a vertical plane, a shoe supported at one end of said arm, spring means urging said end of said arm and said shoe upwardly, an upper arm hinged on said lower arm to swing in the same vertical plane, a shoe mounted at one end of said upper arm in

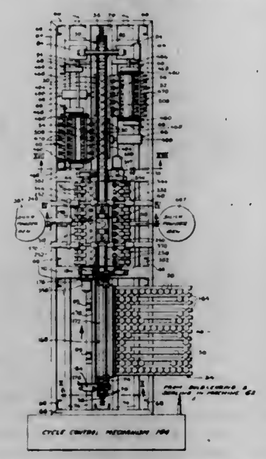
substantial vertical registration with said lower arm shoe, spring means connected with said upper arm urging said end of said upper arm and said upper shoe downwardly, means for moving a board along between said shoes, a plurality of separate electrical segments mounted on the upper end of one of said arms, a conductor pointer mounted on the other end of the other of said arms for movement over said electrical segments, and indicator means operated through the circuits completed by the contact of said conductor pointer with said segments separately for indicating the relative positions of said shoes and therewith the variations in thickness of said board.

3,017,851
VAPOR DEPOSITION APPARATUS
John T. Krause, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 21, 1959, Ser. No. 860,747
3 Claims. (Cl. 118—49)



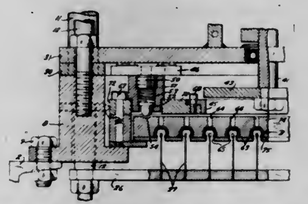
1. A vapor deposition apparatus comprising a vacuum chamber defined by a bell jar and a base member, and a wire wound resistance heated container consisting of successive convolutions of a wire refractory metallic material forming a cone positioned within said vacuum chamber together with provision for supporting and applying a current to said container including three metallic members, one of said metallic members contacting the apex of said cone and the other said metallic members contacting said cone at at least two points on the periphery of a convolution spaced from the apex of said cone.

3,017,852
ARTICLE FABRICATING MACHINE
Hugo Bauer, Newark, Frederick T. May, Verona, and Stanley A. Lopenski, Pompton Plains, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 5, 1958, Ser. No. 732,858
11 Claims. (Cl. 118—49.5)



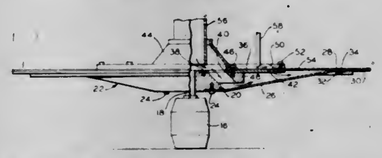
9. A transfer device for a machine for fabricating successive groups of articles and having a plurality of article-fabricating lines disposed adjacent an article-transfer zone of the machine, comprising a plurality of article-transfer heads one for each article in a group, normally disposed adjacent the article-transfer zone, each article-transfer, head being operable to secure an article therein, and operating means connected to said article-transfer heads and operable to cause said article-transfer heads to engage and secure one group of unfabricated articles in said article-transfer zone and to transfer said one group of unfabricated articles to one article-fabricating line, said operating means being further operable to cause said article-transfer heads to engage and secure a group of fabricated articles on another article-fabricating line and to transfer said one group of fabricated articles to said article-transfer zone.

3,017,853
MACHINE FOR APPLYING A COATING TO THE INTERIOR OF SMALL HOLLOW OBJECTS
Robert J. Hunt, Raytown, Mo., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Sept. 10, 1958, Ser. No. 760,198
2 Claims. (Cl. 118—215)



1. Apparatus for simultaneously coating the interior of a plurality of hollow articles comprising in combination a frame, a reservoir in said frame for holding the coating material, a first movable plate mounted in said frame and carrying a plurality of coating applying elements, a motor to move said plate between a first position and a second position, said plate and said coating elements submerged in said coating material in said first position, a second movable plate mounted in said frame, said second plate carrying a plurality of hollow articles, said coating applying elements positioned within said articles when said first plate is moved to said second position, a circular ring element secured to said second plate, a roller eccentrically positioned within said ring element whereby rotation of said roller causes said second plate to move in a relative circular sweeping motion with respect to said coating elements.

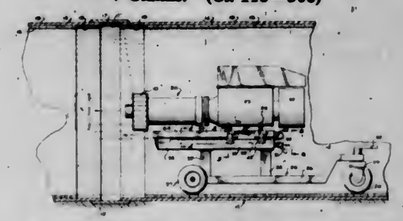
3,017,854
CENTRIFUGAL COATING APPARATUS
Edward D. O'Brien, 585 Woodside Drive, Woodside, Calif.
Filed Mar. 20, 1959, Ser. No. 800,730
30 Claims. (Cl. 118—303)



4. A coating apparatus comprising, in combination, a horizontally disposed rotatable mixing plate concave at its upper side, means for depositing a first material upon the upper surface of the mixing plate a substantial distance outwardly from the axis of plate rotation and for directing

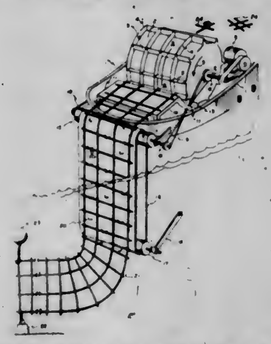
said material radially outward of the mixing plate, means for depositing a second material upon the upper surface of the mixing plate outwardly of the location of deposition of the first material for commingling therewith, and means for driving the mixing plate in rotation at a speed sufficient to uniformly distribute the second material about the upper surface of the plate and to cause the outward movement of the first material into commingling relationship with the deposited second material, said mixing plate upper surface having a horizontal dimensional component in excess of its vertical dimensional component.

3,017,855
APPARATUS FOR APPLYING A COATING TO JOINTS IN PIPELINES
William T. Ranker, Norwalk, Calif., assignor to American Pipe and Construction Co., South Gate, Calif., a corporation of Delaware
Filed June 15, 1959, Ser. No. 820,511
7 Claims. (Cl. 118—306)



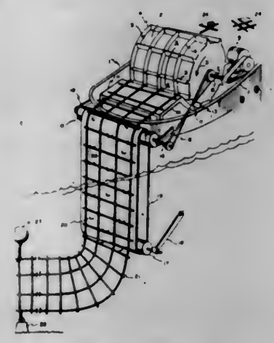
1. In apparatus for applying a plastic coating material to the inner surface of a pipeline or the like in an uncoated area of limited extent axially of the pipeline as at a region of the joint between two pipe sections thereof having an internal coating except in the joint area, a carriage adapted to be moved along in the pipeline, said carriage having a bed constructed and arranged to extend parallel to the direction of movement of the carriage whereby the bed normally extends axially of the pipeline; a pipe coating machine mounted on said bed for limited movement thereon, and means carried by one of said machine and carriage engageable with the other for effecting relative movement between said machine and said carriage in the direction of said limited movement.

3,017,856
SEA FARMING
Otto John Munz, Rte. 3, Harness Creek, Annapolis, Md.
Original application Jan. 31, 1957, Ser. No. 637,545, now Patent No. 2,922,393, dated Jan. 26, 1960. Divided and this application May 28, 1958, Ser. No. 738,410
25 Claims. (Cl. 119—4)



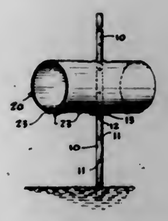
1. As a mollusk propagation article for submersion in an oyster growing area, a net comprising a plurality of longitudinal and crosswise strands of flexible material and a plurality of spot attractive cultch portions at spaced intervals on said material.

3,017,857
SEA FARMING
Otto John Munz, Rte. 3, Harness Creek, Annapolis, Md.
Filed Dec. 21, 1959, Ser. No. 861,049
21 Claims. (Cl. 119—4)



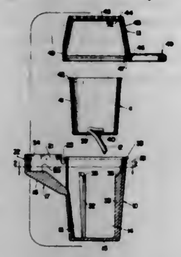
1. An article for mollusk propagation by submersion in a mollusk growing area comprising a length of a flexible strand and a plurality of solid globule-like cultch portions at spaced intervals thereon, forming a unitary body integral therewith, whereby mollusks attached to said cultch portions may be transplanted on and with said line from oyster-spat grounds to oyster fattening grounds and whereby mollusks may be separated from said line by drawing said line through a die of a shape and diameter slightly larger than the shape and diameter of said line.

3,017,858
BIRD NESTING AND SHELTERING DEVICE
Robert P. Brown, Rte. 1, Box 134, Wadsworth, Ill.
Filed June 8, 1960, Ser. No. 34,696
13 Claims. (Cl. 119—23)



1. A sheltering device for birds which comprises a generally tubular housing section having entrance openings at opposite longitudinal ends thereof, and having a retaining means within the said housing section adjacent one end thereof with the other end being free substantially of obstructions, said housing section being pivotally mounted on a support means adapted to space the said housing from the earth surface with the longitudinal axis of said housing section extending generally horizontally, and said housing section being rotatable by the pressure of air passing thereover so that said other end is maintained downwind.

3,017,859
BIRD FEEDING DEVICES
Leonard Stern, New York, N.Y., assignor to Hartz Mountain Products Corp., New York, N.Y., a corporation of Delaware
Filed Nov. 17, 1960, Ser. No. 70,052
9 Claims. (Cl. 119—51)



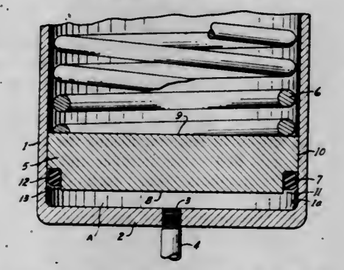
1. In a greens feeder for birds, a water container, a soil container, water conducting means between said containers, and a cover member; said cover member having a roof with apertured portions therein, an annular wall depending from said roof, and a bottom peripheral portion defining a bottom opening, said soil container being detachably connected to the interior portion of said cover member, said soil container having a lateral annular wall and a base adapted to contain therein a mass of seeded soil, the upper portion of said soil container being open and disposed in substantial registry with said apertured portions of said roof, said water container having an upper annular portion and a lower water reservoir portion communicating therewith, said peripheral portion of said cover member being in detachable engagement with said upper annular portion of said water container, the soil container being so proportioned and positioned that the lower portion thereof is disposed within said upper annular portion of said water container, said annular wall of said cover member enveloping that portion of the soil container extending above said water container.

3,017,860
BARRIER FOR USE IN AN ANIMAL RACE OR PEN
Eric Stewart Wilson, "Cross Hills," Kimbolton, New Zealand
Filed Dec. 29, 1958, Ser. No. 783,543
Claims priority, application New Zealand Jan. 10, 1958
10 Claims. (Cl. 119—99)



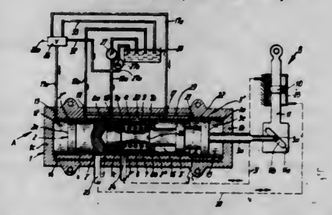
1. A movable barrier for an animal race or pen comprising at least one vertical fence-like structure having top and bottom rails, an outwardly projecting barrier frame adjustably and movably mounted on said rails, a tray-like mounting means supporting the upper portion of said barrier frame, said tray-like mounting means having positioning means mounted thereon selectively engaging said top rail, and a supporting member mounted on the lower portion of said barrier frame in movable contact with said bottom rail whereby said barrier frame is movably and adjustably positioned along said fence-like structure.

3,017,861
PISTON CONSTRUCTION
Harold L. Dobrikin, Chicago, Ill., assignor to Berg Airlectro Products Company, Chicago, Ill., a corporation of Illinois
Filed June 29, 1959, Ser. No. 823,512
1 Claim. (Cl. 121—38)



In a cylinder and piston assembly, a cylinder, means for admitting fluid under pressure to said cylinder, a piston having a fluid pressure-receiving surface opposed to said fluid pressure admitting means, said surface having a diameter substantially less than the inner diameter of said cylinder, said piston having a diameter substantially equal to the inner diameter of said cylinder, said piston having a circumferential wall surface in sliding contact with the inner wall of said cylinder, said piston having a second circumferential wall surface extending axially from said pressure-receiving surface to the remaining portion of said piston, said piston having an annular surface joining said circumferential wall surfaces, a flexible seal ring surrounding said pressure-receiving surface and having one side exposed to said fluid under pressure, the normal cross-sectional diameter of said seal ring being greater than the width of said annular piston surface whereby the normal cross-sectional configuration of said seal ring is deformed when said seal ring is positioned between said second circumferential piston wall surface and the inner wall of said cylinder, said second annular piston wall surface being of an axial extension greater than the normal cross-sectional diameter of said seal ring.

3,017,862
CONTROL VALVE ASSEMBLY FOR FLUID OPERATED SYSTEMS
Manfred Freist, Karl-Marx-Stadt, Germany, assignor to VEB Industriewerke Karl-Marx-Stadt, Karl-Marx-Stadt, Germany
Filed July 22, 1960, Ser. No. 44,785
2 Claims. (Cl. 121—41)

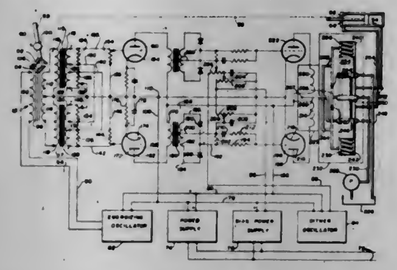


1. An arrangement of the character described comprising, in combination, a fluid operated system comprising

double-acting cylinder means, piston means reciprocably received in said cylinder means for movements between a neutral position and two end positions, piston rod means connected with said piston means and extending from said cylinder means, and first and second fluid line means communicating with said cylinder means at the opposing sides of said piston means; and a control valve assembly comprising a housing rigidly mounted with respect to and located in close proximity of said cylinder means, said housing formed with a bore and having a first and a second end wall, a first valve member having a first end face defining a first pressure chamber with said first end wall, a second end face formed with a blind bore, and four flanges slidably received in the bore of said housing, said flanges defining a first, a second and a third annular recess each surrounding the periphery of said first valve member, a second valve member having an end face defining a second pressure chamber with said second end wall, an extension projecting into said blind bore, and a stem slidably extending through said second end wall, said valve members defining a compartment therebetween, tensioned resilient means for coupling said extension with said first valve member and for constantly biasing said valve members toward each other, stop means for limiting the movements of said valve members under and against the bias of said resilient means, an operative connection between said piston rod means and said valve stem for shifting said second valve member at a rate proportional with the movements of said piston means, a source of pressure fluid, first conduit means connecting said source with said second recess, distributor valve means, second conduit means connecting said source with said valve means, third conduit means connecting said valve means with said first chamber, fourth conduit means connecting said valve means with said compartment, and actuating means for said valve means, said valve means operable to admit fluid from said source to said first chamber and to permit discharge of fluid from said compartment, and vice versa, said housing formed with channel means for connecting said chambers, with outlet port means communicating with said first and third recesses, and with two spaced bores each communicating with one of said line means and each sealable by selected flanges of said first valve member when the piston means is in said neutral position and when no pressure prevails in said first chamber and in said compartment, said first valve member shifted toward and away from said second valve member when fluid is admitted into said first chamber and said compartment, respectively, to move said selected flanges from said bores and to admit fluid from said central recess to one of said line means for moving the piston means in said cylinder means, the other of said line means discharging fluid through one of said first and third recesses and said second valve member following the movements of said piston means and entraining said first valve member to seal said bores when the piston means reaches one of said end positions.

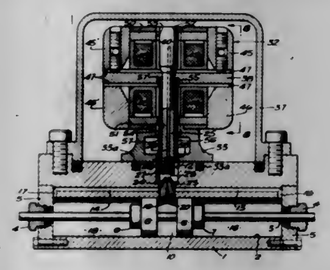
3,017,863
ELECTRICAL CONTROL SYSTEM
Wayne H. Ulman and Nagle V. Gusching, Sidney, Ohio, assignors to The Monarch Machine Tool Company, a corporation of Ohio
Filed Feb. 15, 1957, Ser. No. 640,422
7 Claims. (Cl. 121—41)

1. An electrical control system, comprising, a variable transformer actuatable in a first direction from a neutral and having first and second outputs, said first output being arranged so that a signal emitted therefrom decreases with increasing actuation in said first direction, said second output being arranged so that the signal emitted therefrom increases with increasing actuation in said first direction, said first and second outputs being respectively serially connected to the primaries of second and third transformers, said second and third transformers each having two secondaries with one of the secondaries of said second transformer being serially connected to one of the secondaries of the third transformer and the other secondary of said third transformer being serially connected to the other secondary of said second transformer, said first and second outputs of said variable transformer being substantially one hundred eighty electrical degrees apart so that the voltages of the serially connected secondaries of said second and third transformers electrically subtract from each other and the



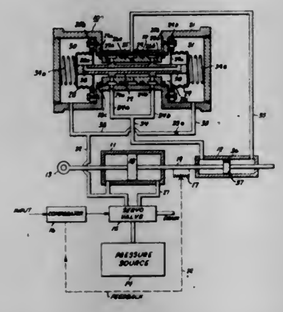
voltage values of said secondaries are arranged so that when the variable transformer is in said neutral position, the output of one of the secondary series combinations is at a maximum and the output of the other secondary series combination is substantially zero and when the variable transformer is actuated to a maximum in said first direction, the output of the said one of the secondary series combination is substantially zero and the output of the said other secondary series combination is substantially maximum to provide two inversely varying signals, and means connecting said inversely varying signals to actuate said variable transformer.

3,017,864
VALVE
Raymond D. Atchley, Los Angeles, Calif., assignor, by mesne assignments, to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,534
16 Claims. (Cl. 121—41)



1. A valve comprising a pair of stationary receptor jets, a fluid connection from each of said jets, means for connecting said fluid connection to a fluid pressure receiving means, a movable ejector jet in fluid communication with said stationary jets, said receptor jets being angularly disposed at an acute angle to each other, and said movable jet being positioned with its axis bisecting the angle of said angularly disposed jets, a fluid communicating passageway to said movable jet, and means forming an enclosure for the space about said ejector jet and said receptor jets, a fluid motor comprising a cylinder, a piston in said cylinder, one of said stationary jets in fluid communication with said cylinder on one side of said piston and the other of said stationary jets in fluid communication with said cylinder on the other side of said piston, a force feedback connection between said piston and said movable jet, and means for discharging and recirculating fluid from said enclosure.

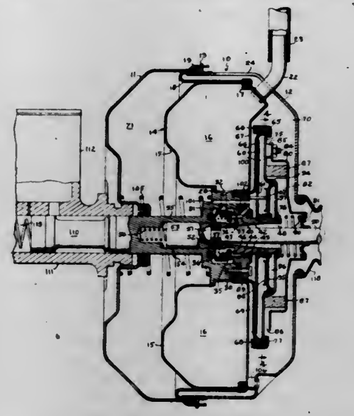
3,017,865
INFINITELY VARIABLE HYDRAULIC DAMPER AND LOCKING MECHANISM
William Frantz, Tanglewood, and James G. Johnston, Orlando, Fla., assignors to Martin-Marietta Corporation, a corporation of Maryland
Filed Feb. 16, 1959, Ser. No. 793,533
13 Claims. (Cl. 121—41)



1. In a fluid servo actuator system employing a compressible fluid, the combination including a servo actuator sensitive to a command signal and adapted to be connected in operative relationship with a load, damping means employing a damping fluid, arranged to prevent undesirable oscillations in said system, and a damping rate selector for controlling the amount of damping effect presented by said damping means, said damping rate selector comprising a housing having therethrough a passage for damping fluid, a valve member movable in sealed relation in said housing and arranged to control the flow of damping fluid through said fluid passage, and means for moving said valve member in response to a command signal to reduce the damping effect presented by said damping means and thereby permit rapid response by said servo actuator to said command signal.

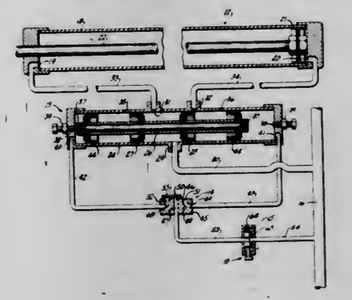
3,017,866
FLUID PRESSURE OPERATED MOTOR
William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Aug. 3, 1959, Ser. No. 831,246
10 Claims. (Cl. 121—41)

1. A fluid pressure motor mechanism comprising a casing, a pressure responsive unit therein dividing said casing to form a constant pressure chamber and a control chamber, said pressure responsive unit having a fluid reservoir therein connectible to a source of pressure different from the atmosphere, and a control valve mechanism comprising a body and having connection with said chambers and with said reservoir and normally connecting said chambers to each other to balance pressures on opposite sides of said pressure responsive unit, said reservoir being of relatively small internal diameter and having its inner periphery fixed to said valve body, said reservoir being of relatively large external diameter and of substantial length axially of the motor mechanism, said valve mecha-



nism being operable to disconnect said chambers from each other and connect said control chamber to said reservoir to effect a rapid motor-energizing change of pressure in said control chamber.

3,017,867
APPARATUS FOR OPENING AND CLOSING MILKING BARN DOORS
Rollo E. Brunsell, Evansville, Wis.
Filed May 13, 1960, Ser. No. 29,070
3 Claims. (Cl. 121—44)



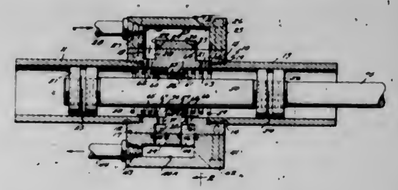
1. Means for automatically moving a door, at the will of an operator, first in one direction and then in the other, said means comprising: a double acting vacuum jack comprising a cylinder adapted to be secured to a fixed structure and a piston movable in opposite directions in the cylinder and having a piston rod projecting from one end of the cylinder and adapted to be connected to a door to be operated, said cylinder having port means opening to its opposite ends; a pilot valve comprising a body having a pair of outlet ports, a pair of air inlet ports opening to the air, and a vacuum inlet port connectable with a vacuum source, and a valve member movable in the body in opposite directions to a pair of defined positions, at each of which said valve member defines two port connecting passages through the

valve body, said valve member in one of its positions providing for commuuication of one air inlet port with one outlet port and the vacuum inlet port with the other outlet port, and in the other of its positions providing for communication of said other outlet port with the air inlet port and the vacuum port with said first designated outlet port; duct means connecting each of the outlet ports in the pilot valve body with one of the port means on the cylinder of the vacuum jack; a pair of power means on the pilot valve body each cooperable with the valve member to move the same to each of its defined positions; selector means connected with said power means on the pilot valve body and including an element movable to either of two positions at each of which the selector means provides for energization of one of said power means to propel the valve element of the pilot valve to one of its said positions; cooperating means movable with the piston of the vacuum jack and on the movable element of the selector means providing a lost motion connection between them whereby movement of the piston in each direction moves the movable element of the selector means from one to the other of its positions; a manual control member; and means connecting the manual control member between a source of energizing medium and the selector means for controlling the application of power to said power means on the pilot valve in order to propel the valve element of the pilot valve in the direction determined by the position of the movable element of the selector means.

3,017,868
OIL MOTOR

Raymond M. Ginder, 1218 N. 9th St., Salina, Kans.

Filed Mar. 1, 1960, Ser. No. 12,204
4 Claims. (Cl. 121—164)

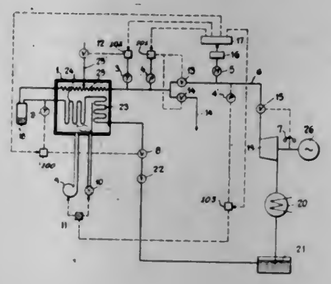


3. An oil motor having a body portion including a pair of tubular members, a reciprocable piston rod in said body portion, a valve body coupling said tubular members in axial alignment, said valve body including a substantially centrally disposed inwardly projecting web sealingly engaging said piston rod, said valve body further including axially extending cylindrical walls having portions defining first and second pairs of openings therein in communication with the interior of said tubular members, said first pair of openings disposed on one side of said inwardly extending web and said second pair of openings disposed on the other side of said web, one each of said pairs of openings being fluid inlets, the other of said pairs of openings being fluid outlets, a pair of substantially cup-shaped valves disposed on opposite sides of said inwardly extending web and in engagement with the inner surface of the axially extending cylindrical walls of said valve body, means interconnecting said valves, said valves including inwardly projecting flange portions defining an opening through which said piston rod may pass, spring means engaging said flanges on each of said valves, pistons on each end of said piston rod adapted to engage said spring means when said piston rod is reciprocated whereby each of said valves is moved simultaneously to allow a flow of fluid through the inlet opening on one side of said inwardly projecting web and a flow of fluid through the outlet opening on the other side of said web respectively and manifold means secured to said valve body in overlying relation to each of said pairs of openings in said valve body.

3,017,869
CONTROL SYSTEM

Paul Profos, Winterthur, Switzerland, assignor to Sulzer Frères, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed Feb. 14, 1957, Ser. No. 640,196
Claims priority, application Switzerland Feb. 15, 1956
7 Claims. (Cl. 122—479)

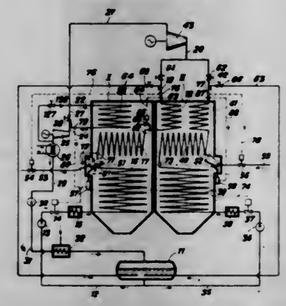


1. In a steam generating plant comprising a steam generator having a tube system for evaporating water and superheating the evaporated water, a live steam conduit connected to the outlet of said tube system, a device connected to the inlet of said tube system for controlling the feedwater supply thereto, and a device for supplying fuel and air for combustion to the steam generator; a control system including a pressure responsive control pulse generator connected to said live steam conduit and producing control pulses corresponding to the pressure of the live steam produced by the steam generator, a temperature responsive control pulse generator connected to said tube system and producing control pulses corresponding to the temperature of the produced steam, regulators individually connected to said devices for controlling the operation thereof and individually connected to said pulse generators for receiving control pulses therefrom to be actuated thereby for increasing the water supply to said tube system upon an increase of the temperature of the steam in said tube system and for increasing the fuel and air supply upon a decrease of the live steam pressure, and vice versa, said regulators individually including adjusting means for changing the control pulses received from said pulse generators and thereby altering the effect of the control pulses on said regulators, a steam flow responsive control pulse producing means connected to said live steam conduit and producing pulses corresponding to the amount of live steam flowing through said conduit, and a pulse delaying means connected to said steam flow responsive control pulse producing means for delaying the control pulses produced by said steam flow responsive control pulse producing means relatively to the control pulses produced by said pulse generators, said pulse delaying means being connected to all of said adjusting means for transmitting the delayed pulses to said adjusting means for actuating the latter after elapse of a period of time after the pulses produced by said pulse generators have actuated the respective regulators for increasing the pressure and temperature affecting said regulators after an increase of steam flow and vice versa.

3,017,870
STEAM OR VAPOR GENERATOR HAVING AT LEAST TWO FIRING SYSTEMS

Paul Profos, Winterthur, Switzerland, assignor to Sulzer Frères, S.A., Winterthur, Switzerland, a corporation of Switzerland

Filed Mar. 12, 1959, Ser. No. 798,940
Claims priority, application Switzerland Mar. 12, 1958
4 Claims. (Cl. 122—479)

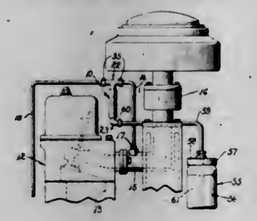


1. A steam generator comprising two separate chambers, a separate fuel firing means in each of said chambers, two separate tube systems, separate means individually connected to said tube systems, for separately feeding water at a relatively high pressure into said tube systems, each tube system having a steam generating section having an inlet and a superheating section connected in series relation to said steam generating section with respect to the flow of the operating medium through the respective tube system and having an outlet, each of said tube systems forming a flow path for the operating medium from the respective inlet to the respective outlet, said flow paths being physically separated throughout the entire lengths of the flow paths, the superheating section of one of said tube systems having a first superheater and a final superheater connected in series relation to said first superheater, and a reheater for reheating relatively low pressure steam, the entire reheater, the entire steam generating section and the entire first superheater of the first tube system being located in one of said chambers and adapted to receive heat exclusively from said fuel firing means in the first chamber, the entire final superheater of the first tube system and the entire second tube system being located in the second of said chambers to receive heat exclusively from said fuel firing means in the second chamber.

3,017,871
AUTOMATIC VALVE

James T. McKinney, 285 E. Hawthorne, Coalinga, Calif.

Filed Apr. 26, 1960, Ser. No. 24,790
6 Claims. (Cl. 123—25)

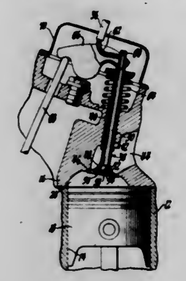


1. A device adapted to introduce fluid additive into an internal combustion engine, the engine having a carburetor and a combustion chamber interconnected by a conduit which is at reduced pressure less than atmospheric during operation of the engine comprising a valve housing, a valve in the valve housing having predetermined open and closed positions, means urging the valve into closed position, and a source of fluid additive at atmospheric pressure, the valve housing being connected at one side to the source of fluid and at the other side to the conduit between the carburetor and the combustion chamber, the pressure difference between the source of additive and the conduit urging the valve in a direction opposite to force exerted by the urging means and causing a flow of the fluid additive from the source to the conduit.

3,017,872
AIR INJECTION SYSTEM FOR AN INTERNAL COMBUSTION ENGINE

Alfred Candelise, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 4, 1960, Ser. No. 12,858
1 Claim. (Cl. 123—26)



Means for introducing compressed air into an internal combustion engine combustion chamber and comprising an engine valve normally operative to permit fluid flow into or out of the combustion chamber and having a tubular stem and a head secured to said stem, said head being provided with an outwardly flared passage connecting with the interior of said stem and opening into the engine combustion chamber, flexible conduit means attached to the end of staid stem opposite said head and adapted to receive compressed air therethrough and discharge compressed air into said tubular stem, check valve means received in said head outwardly flared passage and movable to open and close said passage, and check valve retaining means secured in said head and positioned to retain said check valve within said passage and having passages formed therethrough permitting compressed air flow from said tubular stem and said flared passage around said check valve and into the combustion chamber when said check valve is open and permitting combustion gases to enter said flared passage and act on said check valve to close said check valve when combustion gas pressures exceed the air pressure in said tubular stem.

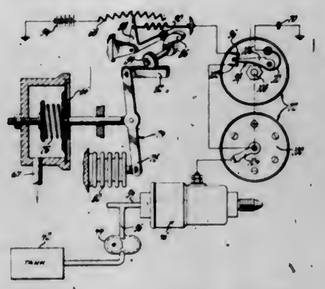
3,017,873
FUEL INJECTION SYSTEM

Howard H. Dietrich, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 17, 1956, Ser. No. 598,387
13 Claims. (Cl. 123—119)

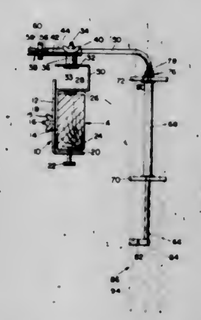
1. A fuel injection system for an internal combustion engine comprising energy storage means, means responsive to the fuel demands of said engine operatively interconnected with said energy storage means for charging said energy storage means proportional to said fuel demands, fuel means operatively interconnected with said

energy storage means and adapted to discharge metered fuel into the charge for said engine, said fuel means being



adapted to dissipate said energy and to meter said metered fuel in proportion thereto.

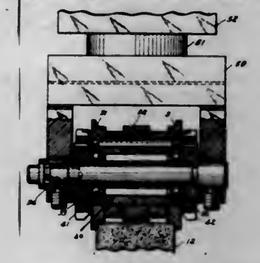
3,017,874
BOW MAGAZINE
Peter J. Gubash, 76 W. Fairfield Ave., St. Paul, Minn.
Filed Aug. 26, 1959, Ser. No. 836,286
2 Claims. (Cl. 124—23)



2. A magazine for supporting a plurality of arrows for use in combination with a bow, said magazine including means attaching it to a bow, a support bracket adjustably connected to said attaching means, an arm rotatably mounted on said support bracket, a sleeve on said support bracket for rotatably mounting said arm, cooperable means on said support bracket and on said arm for controlling rotation of said arm, an extension on said arm extending at a right angle from said arm to a position normally forward of the bow, rotatable means on said extension for detachably supporting a plurality of arrows, said cooperable means including a plunger slidably supported on said support bracket for reciprocal movement parallel with said arm and a notched disc on the end of said rotatable arm engageable with portions of said plunger for locking said arm in one selected position.

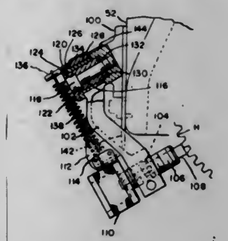
3,017,875
FORM DRESSING DEVICE
Alvin J. Jones, Waynesboro, Pa., assignor to Landis Tool Company, Franklin, Pa.
Filed Apr. 17, 1957, Ser. No. 653,418
7 Claims. (Cl. 125—11)

1. A wheel dressing device for dressing a predetermined form on a grinding wheel comprising a holder, a dressing roller mounted for free rotation on said holder, said roller being formed to correspond to the shape to be produced on the grinding wheel, and means for effecting a



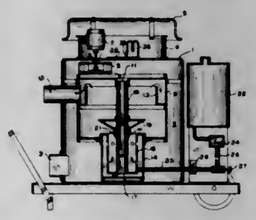
preliminary rotation of said roller before it engages the grinding wheel.

3,017,876
TOOL TRIMMER
Arthur B. Bassoff, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 23, 1959, Ser. No. 801,093
10 Claims. (Cl. 125—11)



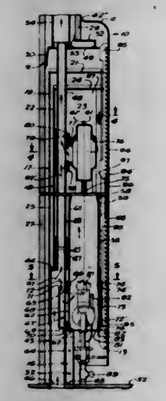
1. Trimming mechanism for a rotary gear-like honing tool having circumferentially spaced tooth portions formed of a resin compound including abrasive particles, comprising means mounting a gear-like hone for rotation about its axis, a trimmer having a cylindrical trimming element having its end engageable with the crests of the teeth of said hone during rotation of said hone, and means mounting said trimming element for movement in a plane parallel to the hone axis and in a direction traversing the hone from side to side.

3,017,877
APPARATUS FOR HEATING AIR
Robert G. Hicks, Bettendorf, Iowa, assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,784
4 Claims. (Cl. 126—110)



1. In air heater apparatus including a heating cabinet and an inner heating unit having a vaporizing type fuel burner and a combustion chamber, said unit being disposed in said cabinet in spaced relationship therewith, an air control system for said heating cabinet comprising air inlet and air outlet means for said cabinet, blower means cooperating with said air inlet means for supplying air therethrough to said cabinet to be heated, means diverting part of the air delivered by said blower means to said combustion chamber for combustion purposes, damper means cooperable with said air inlet means to control the flow of air therethrough and ambient air temperature responsive damper control means connected to said damper means to regulate said damper means in direct proportion to the absolute temperature of the ambient air supplied to said cabinet to maintain a substantially constant air poundage rate delivered to said heating cabinet.

3,017,878
WALL HEATER
Lynn B. Cayot, Alhambra, Calif., assignor to Commonwealth Company, Los Angeles, Calif., a co-partnership
Filed Jan. 5, 1959, Ser. No. 785,006
5 Claims. (Cl. 126—116)



1. A hot air furnace comprising means defining an air heating chamber, a combustion chamber positioned near the lower end of said furnace within said air heating chamber, a combustion gas flue extending upwardly in said air heating chamber, one end of said flue being connected to said combustion chamber, means defining an air inlet at the bottom of said furnace below said air heating chamber, means forming a first air passageway communicating with said air inlet and extending upwardly alongside and separately from said air heating chamber, means forming an inlet for combustion air to said combustion chamber, last named inlet communicating with said passageway and being positioned above said first named inlet, baffle means mounted adjacent said air inlet to said combustion chamber, said baffle means providing a restricted air passage from said passageway to said last named inlet, and permitting only a portion of the air in said passageway to be introduced into said combustion chamber, sufficient only to produce substantially complete combustion of the fuel in said combustion chamber without any substantial amount of excess air, means forming a second passageway at the upper end and forming an extension of said first passageway and extending upwardly from said last named inlet along said air heating chamber separately therefrom, the other end of said flue being connected to said second passageway, a gas discharge conduit connected to said second passageway, means forming an air inlet in communication with said air heating chamber, and means forming a heated air outlet from said air heating chamber, said outlet being spaced from said last named air inlet.

3,017,879
FERTILITY TESTER
Donald T. Sapit and Frank J. Ewers, Jr., Ottawa, Ill., assignors to Weston Laboratories, Inc., Ottawa, Ill., a corporation of Illinois
Filed Oct. 3, 1958, Ser. No. 765,078
3 Claims. (Cl. 128—2)



1. An apparatus especially adapted for insertion in a body cavity to effect a test of conditions existing some distance therewithin in freedom from contamination by fluids along the inner walls of said cavity leading to the site of the desired test which apparatus comprises an outer tube open at both ends, a plunger of length greater than said tube which is adapted for movement within said tube and for projection therefrom, the test end of said plunger being adapted for attachment of a test paper and the other end adapted to be grasped in the hand of the person moving the plunger within said tube, limit means for fixing the stroke of said plunger within said tube to permit the test end of said plunger to project only a predetermined distance therefrom, a testing material covering the test end of said plunger which is sensitive to the presence of a preselected body fluid, which testing material extends from the tip of said test end back along said plunger to a location such that when the plunger is moved to the forward limit of its stroke a significant portion of said testing material stays within said tube and is thereby free from contact with the interior of said body opening and removable means clamping said testing material on said plunger within said tube.

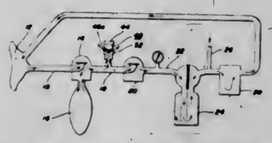
3,017,880
RESUSCITATOR
Morris H. Brook, Saskatoon, Saskatchewan, Canada, assignor to Brook Airway Ltd., Saskatoon, Saskatchewan, Canada, a company incorporated of Canada
Filed Nov. 4, 1958, Ser. No. 771,804
Claims priority, application Canada Sept. 16, 1958
1 Claim. (Cl. 128—29)



A resuscitator for blowing air into a patient's lungs comprising a primary tube defining an air passage, said tube having opposing open ends, one of said ends being adapted to be in communication with the mouth of the rescuer, an arcuate, flexible oro-pharyngeal tube adapted to be inserted into a patient's mouth and to provide an unobstructed air passage to the patient's lungs, said oropharyngeal tube having a straight outer end, a flange on said end providing a mouth guard to overlie the patient's mouth, a relatively short, corrugated, non-collapsible, flex-

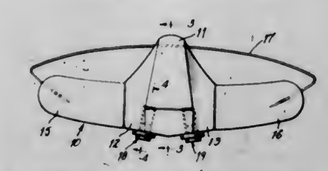
ible tube connecting said outer end of said oro-pharyngeal tube adjacent the flange to the other end of said primary tube and permitting relative angular movement between said tubes without obstructing the air flow therebetween, a non-return valve disposed in the air passage and said primary tube having an outlet communicating the air passage with the atmosphere downstream of and cooperating with the valve which permits expelled air of the victim to pass to the atmosphere before reaching the end of the primary tube at the rescuer's mouth, a suction tube disposed in the oro-pharyngeal tube for removing mucus and secretions from the patient's throat and suction means operatively connected to said suction tube.

3,017,881
ANESTHESIA MACHINES
Robert H. Smith, Augusta, Ga.
(314 Parnassus Ave., San Francisco, Calif.)
Filed Oct. 14, 1959, Ser. No. 846,447
3 Claims. (Cl. 128—188)



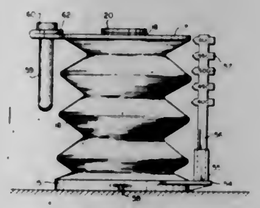
1. In a semi-closed, partial rebreathing-type anesthesia machine, the combination of a patient's breathing mask, means providing a continuous gas-flow circuit extending from and leading to the mask, exhalation and inhalation check valves and a reservoir bag connected in said circuit, said reservoir bag being operative when squeezed to pump gases through the circuit to the patient via the mask, and normally open pressure-responsive valve means connected in the circuit intermediate said valves for normally maintaining said circuit open to atmosphere but being operative automatically to close said circuit to atmosphere responsive to initial squeeze of the bag whereby continued squeeze thereon causes the full volume of gas contained in the bag to move to the patient, said pressure-responsive valve means comprising a valve element, biasing means operative normally to maintain said valve element in a first position in which it opens said gas-flow circuit to atmosphere, and pressure-responsive means for causing said valve element to move to a second position in which it closes said circuit to atmosphere responsive to an increase in pressure in the circuit resulting from initial squeeze on the bag as aforesaid.

3,017,882
INHALATION APPARATUS
Samuel Lewis, 23—35 100th St., East Elmhurst, N.Y.
Filed Sept. 16, 1960, Ser. No. 56,378
3 Claims. (Cl. 128—198)



1. In an apparatus for inhalation therapy and, the like, in combination, a support being of pliable material and shaped substantially to conform to the nose of the wearer, when secured to his face and being formed with two openings therein, two hollow cartridge members engaging said openings, respectively, and being mounted on said support and having respective portions spacedly projecting from the latter, each of said cartridges having a cover portion engageable with said projecting portion thereof to jointly enclose a cavity in said cartridge member, each of said two portions of each cartridge member having a shoulder abutting against said support from respective opposite sides of the latter adjacent the opening engaged by the respective cartridge member, one of said two portions partially passing through said opening for engagement with the other one of said two portions, each of said two portions being formed with an aperture for passage of air from the atmosphere through said cavity into a nostril of the wearer, and means for securing said support in an operative position to the face of a wearer with said projecting portions respectively inserted in the nostrils of said face.

3,017,883
VENOCLYSIS ASSEMBLY
Fairleigh S. Dickinson, Jr., Ridgewood, N.J., assignor to Becton, Dickinson and Company, Bergen, N.J., a corporation of New Jersey
Filed Aug. 12, 1957, Ser. No. 677,746
2 Claims. (Cl. 128—214)



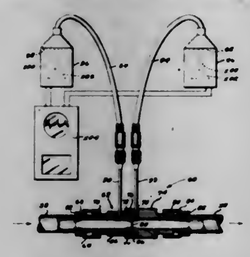
2. In a venoclysis assembly, in combination, a collapsible receptacle, a corrugated side wall therefor, a graduated volume-indicating member, means supporting said member adjacent said receptacle, a portion of the receptacle registering with the graduations of said member to disclose the fluid volume within said receptacle, a base forming a part of said receptacle and said supporting means comprising a bracket detachably engaging and bearing within the valley portion of a side wall corrugation adjacent said base.

3,017,884
APPARATUS FOR INJECTING OR INFUSING FLUIDS INTO PATIENTS AND METHOD OF MAKING SAME
George O. Doherty, 835 Teller Ave., Grand Junction, Colo., and Dale H. Ballard, 2230 S. State St., Salt Lake City, Utah
Filed May 1, 1958, Ser. No. 732,265
5 Claims. (Cl. 128—214)



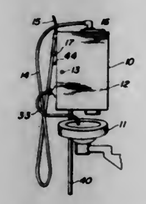
1. Apparatus of the character described comprising a hollow needle provided on one end with a hub, a ferrule fitted over said hub, a sleeve fitted over said ferrule, a pliable sac covering said sleeve and having one end confined between said sleeve and ferrule, and a flexible catheter positioned within said hollow needle and pliable sac and being shiftable in said needle by manual manipulation through said pliable sac.

3,017,885
BLOOD FLOW METER
Francis Robicsek, 1239 Salem Drive, Charlotte, N.C.
Filed Mar. 30, 1959, Ser. No. 802,721
3 Claims. (Cl. 128—214)



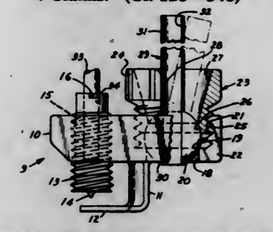
1. In an artificial heart-lung pumping system in which the blood of a patient is withdrawn before entering the heart and lungs and is oxygenated and returned through a conduit to the patient beyond the heart and lungs, a blood flow meter comprising a section of conduit located directly in the pumping system conduit in which blood is returned to the patient, an orifice plate mounted in said section of conduit and having an annular orifice through which the blood flows, the orifice being of a diameter less than the diameter of said section of conduit on either side of said orifice plate, means for comparing the fluid pressure of the blood on both sides of said orifice to determine the pressure drop as the blood flows through said orifice, and means for indicating said pressure drop in terms of the rate of flow proportional to the pressure drop.

3,017,886
EVACUATIVE SUCTION APPARATUS
Elbert O. Thompson, Salt Lake City, Utah, assignor to Vacudent Manufacturing Company, Salt Lake City, Utah, a corporation of Utah
Continuation of application Ser. No. 522,590, July 18, 1955. This application Apr. 30, 1958, Ser. No. 736,654
14 Claims. (Cl. 128—276)



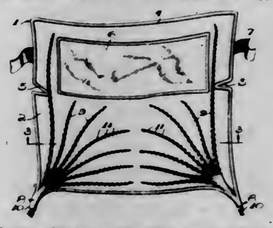
1. In combination with exacuative suction apparatus which includes a suction power unit, fluid-conducting tube means leading into said suction power unit, and an entrapment device embodying a catch receptacle interposed in said tube means intermediate the length thereof; a drain line leading from said catch receptacle; check valve means interposed in said drain line for closing said line when the suction power unit is operating and for opening said line when said power unit is idle; an auxiliary entrapment device embodying a second catch receptacle interposed in said tube means between the first-named entrapment device and said suction power unit; and control means disposed at a predetermined level in the auxiliary catch receptacle for shutting off operation of said suction power unit if and when a body of liquid collects within the auxiliary catch receptacle to the height of said predetermined level.

3,017,887
STEREOTAXY DEVICE
William T. Heyer, 411 N. Wilson Ave., Pasadena, Calif.
Filed Jan. 19, 1960, Ser. No. 3,446
4 Claims. (Cl. 128—348)



1. A stereotaxy device comprising: a base having an opening therethrough and a slot through the side of said base extending for the full length of the opening; a ball seat in said opening; clamping means on the base for attaching it to a skull at an opening therein; threaded means on said base; a retainer having a passage therethrough and a slot through the side of the retainer extending for the full length of the passage; a ball seat in the retainer; threaded means on said retainer engageable with the base, whereby with the retainer threaded onto the base, the ball seats may be brought toward each other; and a swivel member comprising a ball-like portion adapted to be placed between the ball seats so as to be swivelly movable therein and to be held in an adjusted position by tightening said threaded means together, said swivel member including a channel portion integral with and extending away from said ball-like portion and passing through the passage in the retainer, said swivel member having an open slot along its entire length, whereby the retainer, base, and swivel member may be so rotationally oriented in a first condition with respect to one another that the slots are not all simultaneously aligned, and whereby there is a second condition of their rotational orientation wherein they are all aligned, whereby with the base installed over an opening in a human skull, the swivel member may be placed in some desired geometrical orientation and retained there by tightening the retainer's ball seat against the ball-like member, and whereby with the retainer, base, and swivel member in said first condition, a catheter passed through the swivel member into the skull is retained and guided by the stereotaxy device, and with them in said second condition, the stereotaxy device is removable from the skull, still leaving the catheter in place in the head.

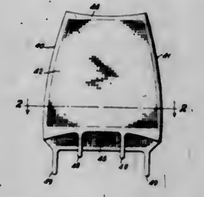
3,017,888
SYSTEM FOR COOLING A HOT WEATHER FACE MASK
Louis I. Weiner, West Newton, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Feb. 5, 1959, Ser. No. 791,503
5 Claims. (Cl. 128—400)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A self-contained automatically cooling face mask comprising a sheet of opaque flexible and liquid-absorbent

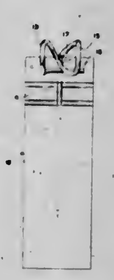
material, a transparent window disposed in the flexible sheet, means for suspending the sheet across the face of the wearer with the window aligned with the wearer's eyes, wicking material extending across and secured to the sheet, and other wicking material attached to the first-named wicking material and having a free end adapted to be associated with a source of liquid.

3,017,889
DEPOSITED LATEX ARTICLES
Wilbur A. Miller and Edwin B. Glenger, Jr., Dover, Del., assignors to International Latex Corporation, Dover, Del., a corporation of Delaware
Filed Aug. 5, 1957, Ser. No. 676,325
3 Claims. (Cl. 128—521)



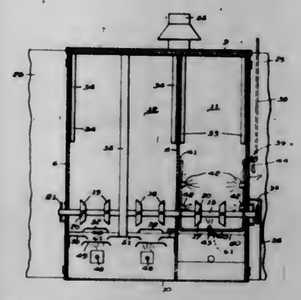
1. An elastic figure-controlling garment adapted when on the body to encircle and constrict the torso between the waist and upper thigh regions, said garment comprising a breathable seamless rubber sheath having a side outline approximating the female body contour between an upper relatively narrow waist opening and a lower relatively wider leg opening, said sheath being formed with laterally peripherally continuous surfaces and having a thickness built up by deposit of a plurality of layers of latex, each layer having formed therein a network of small closely spaced holes with smooth surfaces shaped by the surface tension of the deposited latex, the holes in said layers being in registry and extending through the thickness of said sheath and having projections thereabout on at least one surface of said sheath, said holes being disposed over a major portion of the sheath, and having a size and spacing such that the sheath has a fine open mesh-like breathing construction.

3,017,890
CIGARETTE HOLDER PIN
Hans H. Nelson, Rte. 2, Box 1018, Troutdale, Oreg.
Filed Sept. 22, 1960, Ser. No. 57,775
2 Claims. (Cl. 131—259)



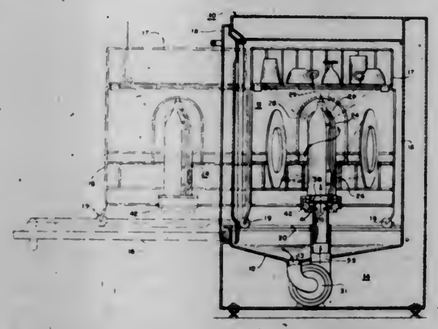
2. A cigarette holder pin comprising a length of wire forming a pair of spaced generally parallel loops arranged to grip a cigarette therebetween, a straight, pointed shank on one end of said wire directed away from said loops, a flat plate impaled on said shank, and a transverse portion on the opposite end of said wire lying across said shank and clamping said plate thereagainst.

3,017,891
TIRE TREATING APPARATUS
Joseph A. Tomchak, 600 Broadway, McKees Rocks, Pa.
Filed May 27, 1960, Ser. No. 32,355
5 Claims. (Cl. 134—86)



1. Tire cleaning and drying apparatus comprising a pair of side-by-side chambers that have perpendicularly-spaced vertical side and end walls, and a partition wall intermediate the end walls, a pair of laterally-spaced shafts extending through the end and partition walls, pairs of rolls non-rotatbly carried by the shafts in position to support tires in upright positions in the respective chambers, tire-spraying means in one of the chambers, and heating means for drying tires in the other chamber, and a common driving means for the shafts, there being two pairs of rolls for supporting each tire upon the two shafts, and the rolls of each pair being adjustable relatively to one another on their shafts, longitudinally of the shafts.

3,017,892
FRONT OPENING DISHWASHER
Joseph L. Mixon, Columbus, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1958, Ser. No. 714,747
1 Claim. (Cl. 134—176)



Dishwashing apparatus comprising a vat having a front opening therein, a door for closing said front opening movable to an open position, upper and lower dish storage racks in said vat movable out of and returnable into the vat through said front opening, a liquid distributor disposed in a central region of the vat for spraying liquid

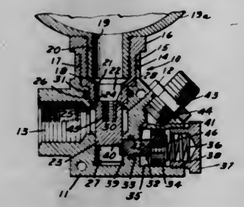
to the upper and lower racks, said distributor having an entrance passage in its lower end for admitting liquid and discharge passages for directing streams of liquid toward the upper and lower racks, a liquid pump remotely positioned with respect to said distributor, an upwardly extending conduit having an inlet connected to the outlet of said pump and an outlet interiorly of said vat facing the distributor entrance passage, and means for conveying the entire liquid output of said pump from the conduit outlet to the distributor entrance passage, said means including a coupling member carried by one of said racks for rotatably supporting said distributor and for conducting liquid from a lower end of said coupling member to the distributor entrance passage, said distributor being movable with said one of said racks into and out of said vat, and a tubular head for said conduit, said head being movable relative to said conduit and having a restriction therein which causes upward movement of said head into registering engagement with said coupling member when said racks are in operating position and liquid flows upwardly through said head, said head being movable to a lower position when liquid is not passing therethrough.

3,017,893
COLLAPSIBLE BUILDING STRUCTURE
Barrie B. Greenble, Greenfield Center, N.Y., assignor to Portapavilion Structures, Ltd., New York, N.Y., a corporation of New York
Filed Sept. 2, 1958, Ser. No. 758,502
7 Claims. (Cl. 135—7.1)



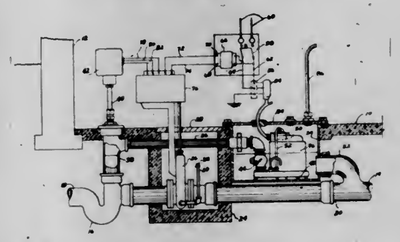
3. A portable building structure comprising a plurality of trusses, means at the inner ends of said trusses hingedly connecting said trusses together, a plurality of posts, one of said posts being hingedly connected to each of said trusses inwardly spaced from the outer ends thereof, and a plurality of extensible and retractable braces, one of said braces being pivotally secured to each of said trusses outwardly of said posts for pivotally lifting the inner end of each truss upon retracting of each of said braces while each of said posts acts as a fulcrum for said truss.

3,017,894
VALVE
Murray A. Chilcoat, Monterey Park, Calif., assignor to Futurecraft Corporation, El Monte, Calif., a corporation of California
Filed Apr. 4, 1960, Ser. No. 19,844
6 Claims. (Cl. 137—69)



1. A valve for use in connection with a container of pressurized fluid whereby the contents of said container may be usable in a system in which the valve is connected and whereby said container can be maintained leakproof comprising: a valve body having a valve chamber and an outlet communicating with said chamber; a one-piece insert comprising an inlet, a diaphragm and a poppet insertable in said valve chamber; a piston chamber; a slidable piston in said piston chamber having means so that said poppet is held in one position to reinforce said diaphragm against a pressurized fluid in said inlet; and a squib chamber communicating with said piston chamber whereby when said squib is ignited the explosive gases move said piston and free said poppet thereof and whereby the pressure acts to burst said diaphragm and move said poppet so that the pressurized fluid will flow out said outlet.

3,017,895
FLOOD CONTROL SYSTEM
Harry Portner, 2030 Puritan, Detroit, Mich.
Filed Feb. 26, 1958, Ser. No. 717,604
6 Claims. (Cl. 137—115)



1. A flood control system comprising a main passageway for disposal in a normally downstream direction of water, sewage or the like, a gate valve in said main passageway for interrupting flow through said passageway, a by-pass passageway positioned completely above and communicating with said main passageway on opposite sides of said gate valve, electric motor means operatively connected to said gate valve for moving the latter to its open and closed positions, fluid pressure responsive switch means extending into said by-pass passageway and operatively connected to said electric motor means for energizing the latter in response to pressure conditions in said by-pass passageway so that the gate valve will be closed and opened respectively at predetermined maximum and minimum pressure conditions in the by-pass passageway, a check valve in said by-pass passageway in a normally upstream direction of said fluid pressure responsive switch means preventing return flow through said by-pass passageway, an electrically driven pump in said by-pass passageway in a normally upstream direction of said check valve for pumping water, sewage or the like downstream, pressure responsive switch means extending into said by-pass passageway in a normally upstream direction of said pump for energizing the latter when the last-named switch means is subjected to a predetermined fluid pressure.

3,017,896
SANITARY FROSTPROOF HYDRANT
Frank C. Papacek, Rte. 1, Box 368, West Chicago, Ill.
Filed May 11, 1959, Ser. No. 812,448
1 Claim. (Cl. 137—282)

A sanitary frostproof hydrant comprising, in combination, an outer casing having a water supply end for burying in the ground beneath the frost-line and a delivery end above the ground, a conduit within the casing movable axially therein, a water supply conduit in the lower end portion of the casing having a delivery end upstanding therein and terminating in a valve seat, said conduit having its lower end telescoping over said upstanding

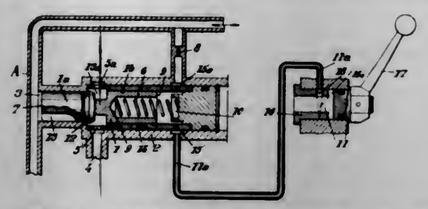
delivery end and equipped with a water seal acting against the peripheral surface of said delivery end, a water delivery nozzle connected to the upper end of the conduit, means operable for lowering and raising the conduit relatively in the casing, a valve member fixed within the conduit above said water seal and coacting with said valve seat to close and open the flow of water from said upstanding delivery end into the conduit by lowering and raising said conduit, a water reservoir at the lower end of the casing beneath said upstanding delivery end, means providing communication between interior of the conduit and the reservoir for drainage of water from the former into the latter, the reservoir being of a capacity to hold the full drainage of water from within the conduit after the valve has been seated, said communication being constructed and arranged so that said valve and seal will



be located substantially above the reservoir when the reservoir is filled to capacity, and ejector means including an ejector nozzle within the casing above the valve member and means providing a conduit communication between the suction end of the ejector nozzle and the bottom of the reservoir and including valve means for allowing flow of water upwardly through the last named conduit from the reservoir to the ejector when the first mentioned conduit is raised to open the valve and prevent flow of water downwardly through said last named conduit when the valve is closed, whereby all the drainage water is retained within the reservoir beneath the water seal and such drainage water is withdrawn from the reservoir through the ejector-reservoir conduit by action of the ejector and delivered into the water supply flow when the valve is opened.

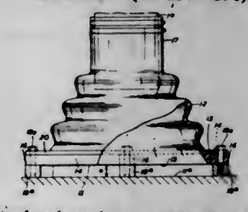
3,017,897
VALVE MEANS FOR CONTROLLING THE PRESSURE OF A FLUID SYSTEM
Gabriel Jean Seguenot, Paris, France, assignor to Sertec Societe d'Etudes et de Recherches Techniques, Paris, France
Filed Aug. 28, 1957, Ser. No. 680,757
Claims priority, application France Aug. 29, 1956
2 Claims. (Cl. 137—529)

1. A valve device including a hollow cylindrical housing, an inlet port in one end of said housing, an outlet port in said cylindrical portion of said housing adjacent said one end of said housing, piston means slidable within said housing forming with said other end of said housing a chamber, and being responsive to fluid pressure within said inlet port, spring means within said chamber biassing said piston to a position covering said outlet port, passage means including a throttled portion communicating said inlet port to said chamber, further passage means in communication with said chamber including manually settable valve means adjustable to a selected constant flow area, adjustment of the manually



settable valve means effecting the magnitude of the pressure within said chamber to vary the total force exerted by the spring and fluid pressure within said chamber.

3,017,898
END FITTINGS FOR SUCTION PIPES
Eric Dott Hobson, Shandon, Scotland, assignor to Yarrow and Company Limited, Glasgow, Scotland, and Andre Rubber Company Limited, Surbiton, England, jointly
Filed June 4, 1957, Ser. No. 663,482
Claims priority, application Great Britain June 15, 1956
2 Claims. (Cl. 137—590)



2. In a tank adapted to contain liquid and having a bottom wall area subject to upward flexing movement, conduit means for substantially completely evacuating liquid from the tank regardless of such normal flexure, said means comprising a substantially rigid suction pipe extending downwardly through the interior of the tank and directed substantially perpendicularly toward said bottom wall area, an inlet orifice forming member comprising a relatively inflexible annular part carried by said bottom wall area and means for fixedly securing the rim of said annular part at intervals around its periphery to said bottom wall area so that said rim is maintained at a predetermined short distance from the said wall area to provide relatively thin inlet orifices between said rim and said bottom wall area surface, the total cross-sectional area of said orifices being substantially greater than that of said suction pipe, such orifices providing means whereby substantially all of the available liquid may be withdrawn from the tank; said inlet orifice member further comprising a hollow flexible body portion extending from said fixed inlet part to the lower end of said rigid suction pipe and having a neck portion connected thereto, and at least one circumferentially extending corrugation in the wall of said flexible body portion, whereby any inward flexing of the bottom wall area will be taken up by the flexing of said flexible hollow body portion at said corrugations without disturbing the predetermined position of the lower open end relative to the floor of the tank, the means for fixedly securing the rim of the orifice member to the bottom wall of the tank comprising a flange integral with the said rim, circumferentially spaced pads interposed between said flange and the bottom wall area and secured to the latter, a clamping ring positioned over the flange, and means for securing said clamping ring to said pads.

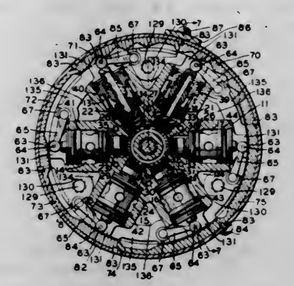
3,017,899
SWIVEL UNITS AND DAMPER ASSEMBLIES USING SAME
Morris Goldsmith, Port Chester, and Robert R. Stein, Mamaroneck, N.Y., assignors to Elgen Manufacturing Corporation, Long Island City, N.Y., a corporation of New York
Filed July 11, 1958, Ser. No. 747,975
2 Claims. (Cl. 137—601)



1. The combination with a damper assembly having:
a damper frame;
and at least two damper blades pivotally mounted on said frame for movement between open and closed positions; of a flutter-preventing linkage between said blades; said linkage comprising:
a longitudinally extending tubular housing;
flange means at one end of said housing for mounting said housing to one of said blades on a first side of a reference plane defined by said frame and on a first relative side of the blade's pivotal axis;
a ball;
socket means at the other end of said housing for swivelly mounting said ball;
spring means within said housing, normally urging said ball outwardly in said socket means, and permitting depression of said ball along the longitudinal axis of said housing;
a shank having one end connected to said ball;
a bracket connected to the other of said two blades;
said bracket being located on the same relative side of said reference plane and on the same relative side of its blade's pivotal axis as is said housing when said blades are in said closed positions;
a rod;
means connecting one end of said rod to said bracket;
means at the other end of said shank for engaging said connecting rod;
an element slideably mounted along the outside of said housing for back-and-forth movement in the direction of said housing axis;
shank-abutting means at one end of said slideable element;
and means for securing said slideable element in a predetermined position in which said shank-abutting means engages said shank when the latter extends at a pre-determined angle to the axis of the housing, whereby fluttering of said blades is prevented.

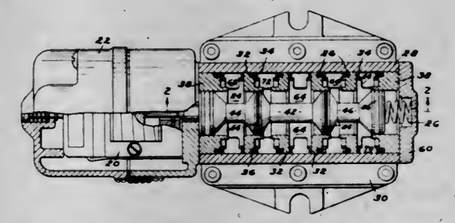
3,017,900
MANUAL CONTROL VALVE DEVICE
Paul E. Olson, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Nov. 17, 1959, Ser. No. 853,616
11 Claims. (Cl. 137—620)

1. A manually operated control valve device, comprising in combination a casing means having radially arranged therein a plurality of bores, a plurality of on-off valve units one mounted in each of said bores, each valve unit being operable either to a fluid pressure supplying position or to a fluid pressure releasing position, a cam ring having on the interior thereof a cam surface, said cam ring being arranged in surrounding relation to



said valve units with said cam surface cooperating with said valve units to control all the valve units simultaneously to cause each individual valve unit to be operated to either of its two positions in a certain chosen sequence in response to rotary movement of the cam ring, and manually operated means connected to said cam ring to rotate said cam ring to different operating positions.

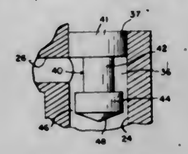
3,017,901
VALVE ASSEMBLY
Frederick W. Hicks, Jr., Detroit, Mich., assignor to Air Valves Company, Warren, Mich., a corporation of Michigan
Filed June 15, 1959, Ser. No. 820,167
10 Claims. (Cl. 137—622)



1. A valve structure comprising a body having an interior chamber provided with an annular valve seat, a valve stem assembly supported for reciprocation within the chamber through the valve seat, said valve stem assembly including a resilient annular valve seating element shiftable therewith through the valve seat, said sealing element having an external diameter greater than the internal diameter of the valve seat and having a marginal portion resistingly flexible to travel through and over the valve seat and form fluid-tight contact therewith, said valve stem assembly characterized in that it includes an axial portion and two radially projecting axially spaced-apart valve seal supporting portions defining therebetween a channel encircling said axial portion, and further characterized in that the valve seal is supported upon said axial portion within said channel and has an axial base portion of substantially greater thickness than the marginal portion of the seal and said marginal portion of the seal tapers from the base portion toward the periphery of the marginal portion and the base portion

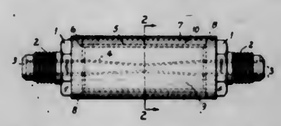
of the seal has an axial dimension less than the axial dimension of the channel whereby the seal has limited axial shiftable movement within the channel.

3,017,902
FLOW CONTROL
Charles R. Goodyear, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Jan. 16, 1956, Ser. No. 559,306
2 Claims. (Cl. 138—37)



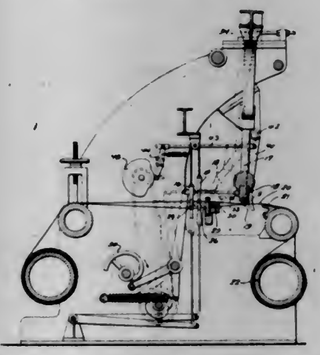
1. A carburetor body having a cylindrical bore the wall of which forms a first straight passage and a second cylindrical bore the wall of which forms a second straight passage intercepted by said first passage and into which a fuel-air mixture or emulsion flows from said first passage, means to prevent separation of the components of said mixture or emulsion upon a change in direction occasioned by passing from said first passage to said second passage, said means comprising a cylindrical stem disposed axially within said first passage and in alignment with the axis of said passage, said stem and the wall of said first bore forming an annular chamber at the interception of said passages, said chamber being in communication with the end portions of said passages, other wall means closing the end of said first passage and defining one side of said chamber and lying in a plane which is substantially tangent to said second passage, one end of said stem being fixedly secured to said other wall means, and an enlarged head on the other end of said stem and disposed in said first passage upstream of said chamber, said head defining with a wall of said first bore a restricted annular port concentric to and communicating with said chamber, said head being closely adjacent to said second passage and providing a wall portion which defines the side of said chamber opposite said other wall means, said second passage having an unrestricted outlet portion extending radially from said annular chamber.

3,017,903
FLOW CONTROL VALVE
Eugene Walter Steffens, 420 Lake Ave., St. Louis 8, Mo.
Filed Aug. 17, 1960, Ser. No. 50,210
1 Claim. (Cl. 138—45)



A valve comprising a casing, end heads at the ends of the casing, each end head having an axial passage, a conduit extending between said end heads and having its ends sealed in said passages, said conduit having a deformable central portion of elliptical cross section, a deformable tubular member of elliptical cross section surrounding said conduit extending between said end heads and having its ends sealed thereto, the major axis of the elliptical cross section of the central portion of the conduit being substantially coincident with the minor axis of the elliptical cross section of said tubular member and the inside of the latter being contiguous to the outside of the central portion of the conduit at points on the minor axis of the tubular member and the major axis of the central portion of the conduit, and a fluid confined in the space between the tubular member and casing.

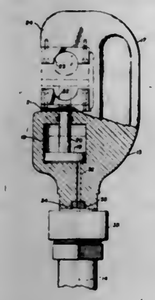
3,017,904
LOOM BEAT UP MECHANISMS
Malcolm J. Mackay, Kalamazoo, Mich., assignor to Wisconsin Wire Works, Appleton, Wis., a corporation of Wisconsin
Filed Feb. 3, 1958, Ser. No. 712,793
10 Claims. (Cl. 139—191)



4. In a loom, the combination with a set of shed harnesses and means for reciprocating a selected harness, the said harnesses having warp strands passing through them and subject to shed forming manipulation in the movement of the selected harness, of a relatively fixed reed having warp strand positioning members disposed beyond the harnesses, a shute strand threading shuttle reciprocable through the shed, means for passing a shuttle through the shed and comprising firing means at opposite ends of the shed, a lay having means mounting it for movement along the warp strands toward the fell end of the shed, a beat-up reed mounted on the lay and including beat-up members disposed between the paths of movement of the warp strands to engage a shute strand threaded through the shed by the shuttle, and means for actuating the lay, finger means disposed beside the shed and having supporting means mounting the finger means for movement toward the end of the shed, the finger means being disposed to intersect the path upon which the shute strand is threaded through the shed by the shuttle, the said finger means being adapted to advance toward the fell end of the shed a shute strand so fed, and means whereby the finger means is actuated for said shute strand advance prior to beat-up of said strand by the lay, whereby slack is removed from the shute strand before it is engaged by the beat-up reed of the lay.

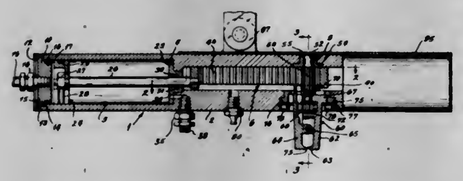
3,017,905
HOT LINE STICK
Charles H. Klein, Cleveland, Ohio, assignor to The National Telephone Supply Company, a corporation of Ohio
Filed Mar. 5, 1957, Ser. No. 644,148
2 Claims. (Cl. 140—113)

1. A fluid operated tool comprising, a working head, compression clamp jaws removably carried on said head, a reciprocable fluid motor in said head connected to relatively move said jaws toward and away from engagement to clamp a compression sleeve upon a high voltage conductor, an elongated relatively rigid insulated handle having first and second ends, means fixedly mounting said head on said handle first end to permit maneuvering said head by said handle, a small bore longitudinally in said handle, conduit means communicating said bore and said fluid motor, fluid pump means, a flexible conduit connecting said pump means and said bore at said handle second



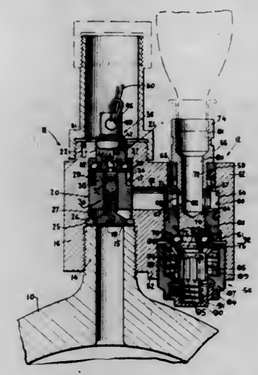
end for fluid communicaion from said pump means to said motor, whereby said tool may be operated in safety on said high voltage conductor by an operator operating said tool by said handle second end and when said operator and pump means are established at a high potential difference relative to said conductor.

3,017,906
WIRE TWISTING AND CUT-OFF DEVICE
Frank S. Korski, Brentwood, and Raymond E. Martin, Maplewood, Mo., assignors to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed Dec. 22, 1958, Ser. No. 782,023
5 Claims. (Cl. 140—119)



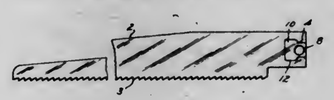
1. A wire twisting and cut-off device, comprising a rotatable jaw assembly having first and second jaw members, said first jaw member being mounted pivotally on said second jaw member for rotation therewith and for movement between wire-admitting and wire-gripping positions, means for biasing said first jaw member into wire gripping position, a rotatably mounted spindle on one axial end of which said second jaw member is mounted for rotation therewith, and a pinion on said spindle; a rack engaging said pinion; a rack carriage, carrying said rack; and power means for reciprocatingly driving said rack carriage, said jaw members having a gripping and shearing part on one side of the place at which the first jaw member is pivoted on the second jaw member, and said first jaw member having a ring on the other side thereof, said ring extending around and clear of said spindle, and said rack carriage having a part engaging said ring at one extreme of the travel of said carriage, to move said first jaw member, against the bias of the means biasing the first jaw member toward wire gripping position, to wire-admitting position, and a part engaging said ring at the other extreme of the travel of said carriage, to administer a shearing force to said first jaw member.

3,017,907
INFLATION EQUIPMENT
Bernard W. Quail, Scotch Plains, and Carrel B. Morgan, Packanack Lake, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Sept. 30, 1959, Ser. No. 843,438
7 Claims. (Cl. 141—197)



1. Apparatus for inflating an inflatable unit comprising in combination means providing a limited supply of gaseous medium under pressure; a valve attached to said supply means to initiate the flow of gas from said supply means; and a device for disconnecting the inflatable unit from said supply means and said valve when the pressure of the gas flowing to the unit from said supply means decreases to a predetermined value, said device including a member adapted to be attached to the valve, a second member adapted to be attached to the inflatable unit, said members being separably united, means for latching said members against separation, means responsive to the pressure of the gaseous medium for placing said latch means in unlatching condition and holding said latch means latched when said pressure is of a predetermined value, and means for operating said latch means to unlatch said members in response to a decrease in said pressure below a predetermined pressure.
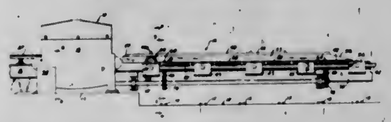
3,017,908
UNIVERSAL SAW BLADE
Earl V. Higbee, New Britain, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed Aug. 20, 1959, Ser. No. 835,024
2 Claims. (Cl. 143—133)



1. A replaceable saw blade for mounting in different types of holders for saws of the reciprocating type comprising a saw blade formed of sheet metal and having a shank portion at the rear thereof, an irregularly shaped knock-out piece in said sheet extending inwardly from the rear edge thereof and having a transversely enlarged portion spaced inwardly of the rear edge, said knock-out piece being defined by a severance line in said sheet and upon removal providing an irregularly shaped slot opening at the rear edge of the blade and of the same configuration as the knock-out piece, the cooperating walls of said slot and said knock-out piece being in tight-fitting

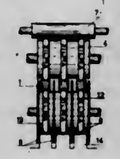
engagement throughout to normally retain said knock-out piece against inadvertent disassembly and to permit detachment by movement of the knock-out piece transversely of the blade axis, said knock-out piece having an aperture therein spaced inwardly of the rear edge of the blade, whereby the blade may be secured selectively in a holder both by a headed member engaged in the enlarged portion of the slot formed by removing the knock-out piece and by a member extending transversely through the aperture in the unremoved knock-out piece.

3,017,909
AUTOMATIC EDGING PICKER FOR SAWMILLS
Robert T. Bowling and William G. Edward, Lewiston, Idaho, and Harold A. Keller and Gerald F. Scheelke, Clarkston, Wash., assignors to Potlatch Forests Inc., Lewiston, Idaho, a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,211
6 Claims. (Cl. 143—157)



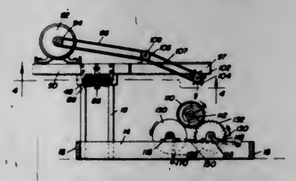
1. An automatic edging picker for sawmills adapted to segregate edgings from the finished portions of boards emerging from an edger equipped with work support rolls and a plurality of individually positionable saws, comprising a receiving table located elevationally below the edger support rolls, a pair of transversely spaced vertical blades extending longitudinally along said receiving table at an elevation vertically spaced above its upper surface and intersecting the elevation of materials emerging from the edger, individual clearance means fixed to said blades and respectively extending outwardly therefrom, and individual support means mounted on said receiving table respectively carrying the outer ends of said clearance means, said individual support means for each of said blades being mounted on said receiving table for movement relative to one another and being operatively connected to the edger saws whereby one of said blades is maintained in a position with its end edge adjacent the edger in longitudinal alignment with a first saw and the remaining blade is maintained in a position with its end edge adjacent the edger in longitudinal alignment with a second saw.

3,017,910
DEVICE FOR THE MANUFACTURE OF IMPRINTED MATCHES
Edwin Zilver, The Hague, Netherlands, assignor to N.V. Inland, Rotterdam, Netherlands, a corporation of the Netherlands
Filed June 30, 1958, Ser. No. 745,415
Claims priority, application Netherlands July 2, 1957
3 Claims. (Cl. 144—50)



1. A device for the manufacture of imprinted matches comprising a rotatable cutting means including a series of rotatable, laterally spaced apart parallel cutting knives, printing means arranged in confronting relation to the cutting means with material in strip form being passed between the cutting means and the printing means, said printing means including printing types laterally spaced apart in parallel relationship and interposed between the cutting knives so as to imprint the material and simultaneously support the material during the cutting of the material into individual splints and an inking means disposed adjacent the printing means for engagement with the printing types.

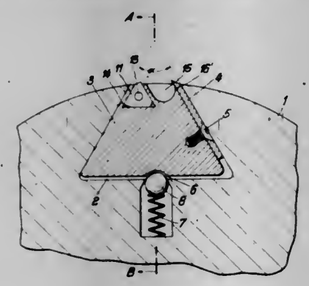
3,017,911
LOG-DEBARKING MACHINE
Oscar T. Fulghum, Wadley, Ga.
Filed Mar. 11, 1958, Ser. No. 720,599
1 Claim. (Cl. 144—208)



A log-debarking machine comprising an elongated stationary frame, cradle means on said frame rotatably supporting a non-traveling log thereon, said means including drive means for rotating the log about its longitudinal axis, means mounted on said frame for kicking a log off the log supporting means, a longitudinal guide assembly, upstanding means supporting the guide assembly above one edge of said frame, said guide assembly including a pair of spaced parallel guide members, end plates rigidly interconnecting said guide members, means pivotally supporting the end plates from the upstanding support means for pivotal movement about a longitudinal axis generally parallel to a log supported on the cradle means, a cutterhead assembly slidably mounted on said guide members, means connected to the cutterhead assembly and supported from the upstanding support means for moving the cutterhead assembly longitudinally of the guide members, said cutterhead assembly including a laterally elongated support frame, a driven cutter mounted on the support frame for selective engagement with the periphery of a log when the guide assembly is pivoted about the pivot axis, one of said end plates having a laterally extending arm rigidly carried thereby, and a double acting fluid pressure operated piston and cylinder assembly interconnecting said stationary frame and said frame in laterally spaced relation to the pivot axis of the guide assembly and forming the sole means for swinging the guide assembly and the cutterhead assembly about the longitudinal pivot axis of the guide assembly and moving the cutterhead in relation to the log, a fluid pressure cushioning assembly interconnecting the frame and arm for resisting movement of the asm and guide assembly in one direction about the longitudinal axis of the guide assembly, said cushioning assembly being operative to resist movement of the cutterhead toward the log whereby the cutterhead will move slowly toward the log, said cushioning means assisting in the movement of the cutterhead away from the log thereby causing rapid movement of the cutterhead to a position remote from the log, said cradle supporting means including a plurality of circular plates arranged in pairs in adjacent relation with the pairs forming cradles for supporting the log, parallel shafts supporting said plates, one of each pair of circular plates having serrated edges and being driven whereby the log will be rotated, said means for kicking the log off of the cradle means includes an arm disposed alongside of one of the plates, said arm having one end freely pivotally supported on one of said shafts and normally separated

from said one plate whereby the arm will be disposed in dependent relation due to the force of gravity, normally spaced interengaging means on the arm and said one plate, and means shifting said interengaging means on the arm into locking engagement with the interengaging means on the rotatable plate whereby the arm will rotate with the plate, said arm being longer than the radius of the plate for engaging the log supported by the plate and pushing the log off of both plates of each pair.

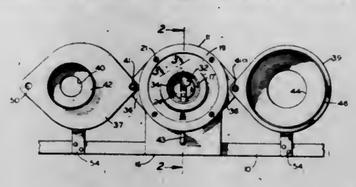
3,017,912
BLADE STRUCTURE AND MOUNTING MEANS FOR A CYLINDER TYPE CUTTER
Gustav Johannes Sybertz and Johannes Franziskus Sybertz, Bad Kreuznach, and Peter Rudolf Heinrich Voelskow, Holle (Hannover), Germany, assignors to Hombak Maschinenfabrik K.G., Bad Kreuznach, Germany
Filed Sept. 22, 1959, Ser. No. 841,517
Claims priority, application Germany Oct. 1, 1958
8 Claims. (Cl. 144—230)



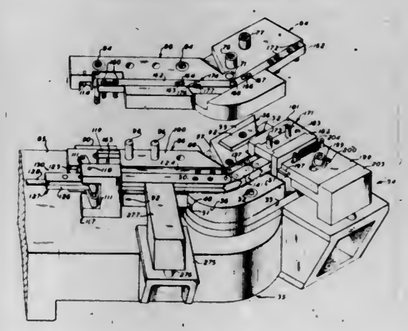
1. A cylinder type cutter serving to cut shavings and chips from wood and similar material, comprising a cylindrical cutter body provided at its peripheral surface with at least one V-shaped groove with outwardly converging side walls extending axially over the entire length of said cutter body; mounting means for cutter blades radially projecting with their cutting edges beyond the peripheral surface of said cutter body and rigidly attached to the mounting means, said mounting means having a cross sectional shape substantially corresponding to that of said groove; and locking means provided at the bottom surface of said groove resiliently biasing said mounting means radially outward in said groove, to releasably engage recesses provided in the bottom surface of said mounting means, said mounting means being wedged between said side walls of said groove by centrifugal force, when said cutter body is rotating.

3,017,913
VEGETABLE TRIMMING APPARATUS
Nicholas D. Sintetos, San Bernadino, Calif., assignor, by mesne assignments, of one-half to Genevieve I. Magnuson, and one-half to Genevieve I. Magnuson, Robert Magnuson, and Lois J. Fox, as trustees
Filed Oct. 22, 1958, Ser. No. 768,964
6 Claims. (Cl. 146—81)

1. In a vegetable trimming apparatus, a housing having a discharge opening and a feed opening, a shaft journaled in said housing at a location opposite to said feed opening and having an axis of rotation, drive means for said shaft, a fly wheel on said shaft within said housing, an L-shaped knife mount carried by said fly wheel including a projecting arm portion offset from said axis of rotation and having knife mounting means at the outer end of said arm portion, said mounting means providing a knife receiving slot, a knife in said slot extending generally radially outwardly from said axis to provide a circular cutting path upon rotation thereof, the plane of said knife being angled slightly to a plane perpendicular to said axis of rotation, a resilient apertured diaphragm secured to said housing to partially close said feed opening and provide a yieldable guard means for said knife, the aperture in said diaphragm being symmetrical with said axis and being at least as small in area as said circular cutting path, an apertured recessed guard member pivotally mounted on said apparatus for selective positioning in front of said diaphragm having a cone to guide a vegetable into engagement with the knife and providing a guard to prevent injury to the hands of the operator, and said housing having a stop for said guard member.

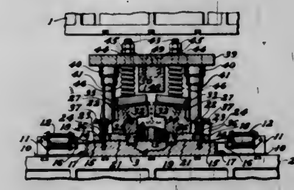


3,017,914
APPARATUS FOR MAKING ZERO RADIUS BENDS IN RECTANGULAR TUBING
Francis J. Fuchs, Jr., Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 12, 1957, Ser. No. 695,774
9 Claims. (Cl. 153—20)



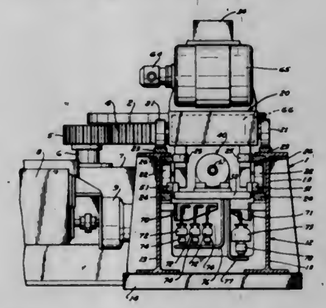
1. Apparatus for effecting a bend in a tube comprising a base, a forming die pivotably mounted on said base, a wiper die secured to said base and having one extremity thereof adjacent to one extremity of said forming die, means for securing a portion of the tube adjacent to said wiper die, means for supporting the interior of the tube during the bending operation, means for pivoting said forming die, spring-biased tube clamping means secured to said base pivotably with said forming die and slidably with respect to said forming die, a booster block positioned adjacent to the portion of the tube in contact with said wiper die, and means for connecting operatively said booster block to said clamping means for maintaining the tube of constant length along the longitudinal axis of the tube during the bending operation whereby said clamping means will return to the original clamping position with respect to the extremity of said forming die at the completion of the bending operation.

3,017,915
BEAM BENDING MACHINE
James L. Walmsley, Bethlehem, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Apr. 30, 1956, Ser. No. 581,482
9 Claims. (Cl. 153—33)



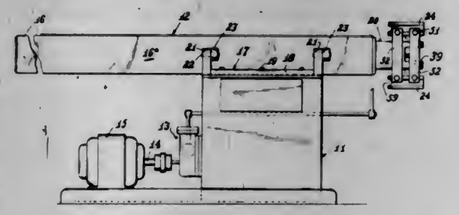
4. A beam bending apparatus comprising a base plate, a press ram adapted to travel in vertical relation to said base plate, means on said base plate for initially supporting a beam, a pair of female dies rockably mounted on the base plate, means for tilting said dies toward each other, said dies having inwardly projecting portions for engaging the upper portion of the web and finally supporting the top flange of the beam, a forming punch movable by the press ram into engagement with the upper surface of the top flange of the beam, and a pair of fingers depending from the forming punch and bending the bottom flange of the beam while the beam is being pressed against said pair of female dies.

3,017,916
STRETCH FORMING MACHINE WITH TROLLEY SUPPLIED POWER UNIT ON STRETCH CARRIAGE
Pius J. Nasvytis, Cleveland, Ohio, assignor to The Cyril Bath Company, Aurora, Ohio, a corporation of Ohio
Filed Dec. 21, 1959, Ser. No. 860,796
3 Claims. (Cl. 153—40)



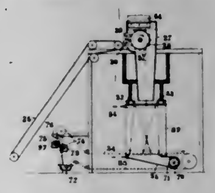
1. In a stretch forming machine, a frame, a power driven turntable rotatably mounted thereon and adapted to support a side face die, a stretch forming carriage mounted on the frame for movement toward and away from the table, a stretch forming head adapted for connection to an end of a length of stock for applying tension to the stock endwise for stretch forming it about the die, means connecting the head and carriage for movement together toward and away from the turntable, power means for controlling the movement of the carriage toward the table, clamp means for connecting the stock, at a location spaced from said end, for movement with the table, a hydraulic pump on the carriage, an electric motor on the carriage operable for driving the pump, hydraulic motor means connected to the head for effecting a predetermined operation of the head, hydraulic circuit means on the carriage and connecting the pump to the hydraulic motor means for operating the hydraulic motor means, conductor means for supplying electric power to the electric motor, said conductor means including a trolley movable with the carriage and electrically connected to the motor, and trolley line means connecting the trolley to a source of electrical power.

3,017,917
TUBE BENDING MACHINE
Clarence T. Streit, Aurora, Ill., assignor to Pines Engineering Co., Inc., Aurora, Ill., a corporation of Illinois
Filed Dec. 10, 1959, Ser. No. 858,699
7 Claims. (Cl. 153—45)



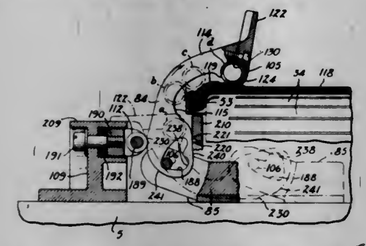
1. In a tube bending machine including a base structure and a top assembly, said assembly comprising an elongated casing having a pair of bending forms, clamp die holders and pressure die holders operably associated therewith, and hinge means connecting the top assembly to the base structure adapting the former to be swung into positions permitting use of one or the other of said pair of bending forms, clamp die holders and pressure die holders.

3,017,918
APPARATUS FOR MANUFACTURING NON-WOVEN TEXTILE ARTICLES
Frederic Georges Maillard, Paris, France, assignor of one-half to Societe Anonyme dite, La Manufacture de Feutres de Mouzon (Anciens Etablissements Roger Sommer & Ses Fils), Paris, France
Filed July 28, 1958, Ser. No. 751,563
Claims priority, application France July 29, 1957
5 Claims. (Cl. 156—370)



1. An installation for manufacturing non-woven textile articles which comprises a card adapted to form a veil of textile fibres, a veil cutting machine adapted to project the fibres and cause them to fall freely in a substantially vertical plane extending transversely to the plane of said veil, a movable endless conveyor belt adapted to receive said fibres on its top surface to form a sheet carried along in a longitudinal direction, and two sets of spraying apparatus disposed in rows parallel to said veil, said sheet and the aforesaid transverse plane of free-falling fibres, on either side of said transverse plane, and adapted to spray a binding agent onto said free-falling fibres, the jets issuing from said spraying apparatus of said two sets of apparatus crossing each other on said transverse plane.

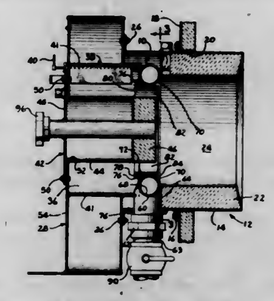
3,017,919
IMPROVED TIRE BUILDING MACHINE
Thomas J. McMahon and Virgil E. Henley, Akron, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 17, 1959, Ser. No. 820,954
16 Claims. (Cl. 156—400)



1. A tire building machine comprising a tire building drum mounted for rotation about a fixed axis, means for expanding and contracting a stitching ring over the shoulder of the drum comprising a series of circumferentially spaced curved turn-over fingers connected at its radially outer ends to said stitching ring, and an actuating member pivotally connected to the radially inner ends of said fingers and mounted for axial movement, a series of pivot pins carried by said actuating member, said fingers being connected to said stitching ring at their radially outer ends, each finger having a slot at its radially inner end for receiving one of said pivot pins and having curved radially inner and outer cam surfaces, a first cam means for engaging one of said cam surfaces of each finger to swing the stitching ring over the drum shoulders to a predetermined advanced position against the drum in response to axial outward movement of said actuating member away from said drum, and second cam means for engaging the other of said cam surfaces to swing the stitching ring from said advanced position to a predetermined retracted position adjacent said second cam means, and means for holding the radially inner end portion of each finger against the first cam means when the finger is in said advanced position and for resisting movement of said inner end portion past said cam means as retracting movement of the finger is initiated to cause the finger to pivot generally where the finger engages said first cam means as said actuating means is moved axially inwardly toward the drum.

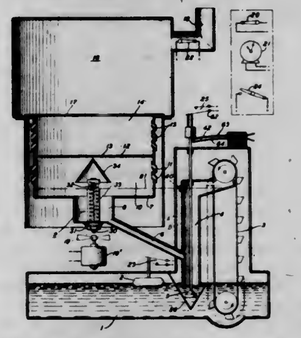
3,017,920
RING BURNER WITH FLAME RETENTION SHIELD
Eugene T. Blockley and Wilbur E. Stone, Chattanooga, Tenn., assignors to Eclipse Fuel Engineering Co., Rockford, Ill., a corporation of Illinois
Filed Feb. 26, 1959, Ser. No. 795,716
3 Claims. (Cl. 158—7)

1. In a gas burner construction of the character described, in combination, a tubular burner housing defining an open-ended combustion chamber, a hollow tubular gas ring positioned at the rear end of said combustion chamber and having its outer peripheral region sealed to the rear rim of the latter coextensively therewith, said gas ring having a series of circumferentially spaced jet-producing gas discharge openings formed therein, the axes of said openings being uniformly inclined forwardly and radially inwardly relative to the longitudinal axis of the gas ring, said openings being in communication with the combustion chamber and with the openings being arranged to discharge respective jets of gas into the combustion chamber in a generally forward direction, a substantially cylindrical imperforate open-ended flame retention shield having its axis coincident with the longitudinal axis of the ring, said shield projecting through and making tangential and coextensive sealing line contact with the inner periphery of said ring so that the ring encircles the shield, the forward region of said shield extending forwardly of the tangential line of contact between the shield and ring and defining, in combination with the inner peripheral region of the ring, an annular flame retention pocket which is substantially



V-shape in radial cross section and which opens forwardly into the combustion chamber, the forward open rim of the shield being coincident with a circle which intersects all of the axes of said gas discharge openings, means for supplying gas to said gas ring, and means for directing a stream of high velocity air axially and forwardly through said cylindrical shield, and consequently through the ring.

3,017,921
POT TYPE OIL BURNER
Hans Stierlin, Rainweg 15, Schlieren, Zurich, Switzerland
Filed Nov. 18, 1957, Ser. No. 697,219
Claims priority, application Switzerland Nov. 20, 1956
6 Claims. (Cl. 158—28)



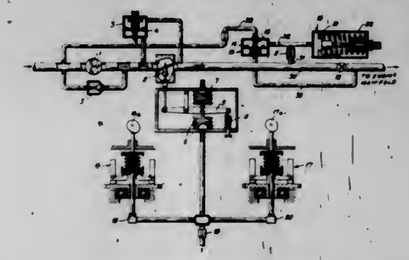
1. A fuel burner and control arrangement comprising a furnace having a chimney and means in the furnace forming a mixing chamber for air and fuel vapor, means to supply fuel oil to the mixing chamber, means included in the supply means to drain fuel oil from the mixing chamber, means to supply air to the mixing chamber and an igniter within the mixing chamber, comprising a first thermally responsive means positioned in the room to be heated for controlling on shut down of the burner the oil supply means and the oil drain means so that above a first predetermined temperature in the heated room the drain means is actuated to its position at which oil drains from the mixing chamber while the supply means remains stopped, and a second thermally responsive means

positioned in the furnace chimney serially connected to the first thermally responsive means in such manner that when the second thermally responsive means after a shutdown is still at a temperature above a second predetermined temperature in the furnace higher than the first predetermined temperature in the heated room the supply means remains unactuated irrespective of the state of operation of the first thermally responsive means while when at a temperature below the second predetermined temperature, the first thermally responsive device being at a temperature below the first predetermined temperature, the supply means is actuated to supply oil to the mixing chamber and the drain means remains actuated to closure preventing the drainage of oil from the mixing chamber.

3,017,922
FUEL SUPPLY SYSTEM WITH PRESSURE BALANCED ACCUMULATOR TO CONTROL FUEL SURGES

Gudmundur Peter Peterson, St. Hilaire, Quebec, Canada, assignor to Canadian Pratt & Whitney Aircraft Company Limited, Montreal, Quebec, Canada

Filed Apr. 28, 1960, Ser. No. 25,323
Claims priority, application Great Britain Apr. 30, 1959
4 Claims. (Cl. 158—36.3)



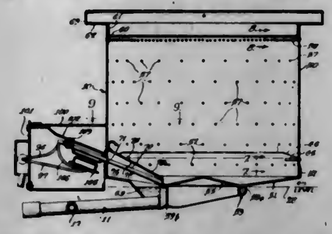
4. In a fuel metering system for an engine and in combination with a fuel pump connected to a fuel manifold and a metering valve system between said pump and fuel manifold; an accumulator system pressure balanced to said engine fuel manifold and comprising, a spring-loaded piston within a cylinder, a first conduit leading to said accumulator cylinder from said engine manifold, a pressure sensitive check valve in said first conduit bypassing excess metered fuel to said accumulator cylinder and preventing return flow from said accumulator cylinder to said engine manifold, a second conduit leading from said accumulator cylinder to the inlet of said fuel pump, a pressure balancing valve in said second conduit controlling the flow from said accumulator cylinder to said pump inlet, said pressure balancing valve being regulated by a pressure signal conveyed by a third conduit leading directly from said balancing valve to said engine manifold, said pressure balancing valve maintaining the pressure within said cylinder no greater than the pressure within said fuel manifold, whereby any excess stored fuel in said accumulator cylinder will be returned to said pump inlet to provide a ready capacity within said accumulator cylinder to absorb excess metered fuel delivered from said metering valve system to said engine manifold.

3,017,923
POT TYPE BURNER APPARATUS

Kenneth S. Jenson and Frederick W. Suhr, Wisconsin Rapids, Wis., assignors to Preway, Inc.

Filed Feb. 19, 1958, Ser. No. 716,152
8 Claims. (Cl. 158—91)

1. In a burner for liquid fuels, an open top burner pot having a cylindrical side wall and a circular bottom wall joined thereto and closing the same at the bottom thereof, said bottom wall having a single concentric annular depression therein providing a well for liquid fuel, said annular depression having side walls and being spaced approximately midway between the center of the pot and the pot side wall, and having a relatively narrow width as compared to the radius of the bottom wall to thereby hold only a limited quantity of liquid fuel, means forming a fuel inlet to the well, the central portion of

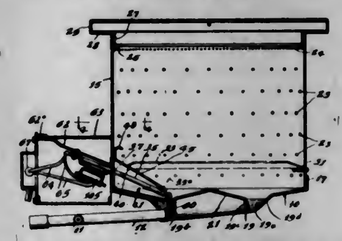


said bottom wall being free of obstructions and sloping from the inner edge of the fuel well upwardly to the center of the pot at an inclination less than that of the adjacent depression side wall, the outer portion of said bottom wall sloping from the outer edge of the fuel well upwardly toward the pot side wall at an inclination less than that of the adjacent depression side wall and meeting the side wall at substantially the level of the center of the bottom wall, and the space above the central portion of the bottom wall being open.

3,017,924
POT TYPE BURNER APPARATUS

Kenneth S. Jenson, Wisconsin Rapids, Wis., assignor to Preway, Inc., a corporation of Wisconsin

Filed Dec. 24, 1958, Ser. No. 782,887
4 Claims. (Cl. 158—91)

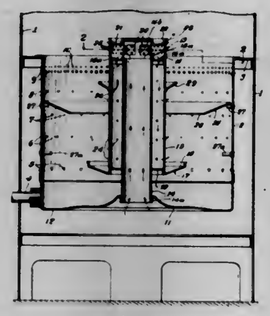


2. In a burner apparatus for liquid fuel, a burner pot having side walls and a bottom wall and open at the top, said bottom wall having a continuous depression therein surrounding the center of the pot and spaced between the center of the pot and the side walls, an igniter element projecting through a burner pot side wall and having an end portion overlying the fuel well at one side of the center of the pot, an igniter element enclosure including spaced side walls along opposite sides of the igniter element, a top wall over the igniter element and a bottom wall underlying substantially the entire portion of the igniter element disposed in the pot between said entire portion and the fuel well, said enclosure being closed at the outer end adjacent the burner pot side wall and open at the inner end adjacent said igniter element end portion to provide a chamber ventilated during combustion at high temperatures thereby to enable consumption of soot in the chamber, the inner ends of said enclosure top and side walls being disposed outwardly from the center of the pot at least as far as the inner end of the bottom wall so that the igniter element is shielded from collection of carbon during sooty stages of burner operation, and said enclosure bottom wall being horizontally disposed to a degree sufficient to catch and hold soot against falling into the fuel well.

3,017,925
BURNER UNITS AND METHODS

James L. Breese, deceased, late of Santa Fe, N. Mex., by Richard F. Van Tubergen and James L. Breese III, executors, and Milton D. Huston, all of Santa Fe, N. Mex., assignors to Controls Company of America, Milwaukee, Wis., a corporation of Delaware

Filed Aug. 28, 1959, Ser. No. 838,818
11 Claims. (Cl. 158—91)

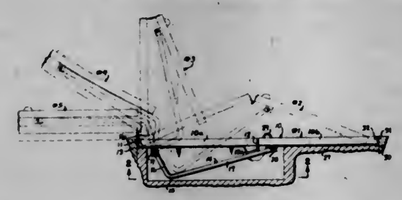


1. A method of controllably vaporizing and burning liquid hydrocarbon fuels in a confined chamber which includes the steps of admitting liquid hydrocarbon fuel to a lower portion of the chamber, vaporizing and oxidizing the liquid fuel without cracking, at a temperature substantially below the final combustion temperature, by admitting primary air to the chamber in volume insufficient to form a fully combustible mixture, while protecting the rich primary mixture of air and vaporized fuel thus formed from direct subjection to the radiant heat of combustion taking place elsewhere in the burner, simultaneously heating the rising rich mixture of vaporized fuel and air by maintaining limited localized combustion jets along the path of flow of the rising mixture, the air for said combustion jets being delivered at a pressure substantially below the pressure of the primary air and inducing final combustion of the now homogeneous and heated mixture of air and fuel by the admission of secondary air to the rising mixture adjacent the upper portion of the burner.

3,017,926
BI-FOLD DOOR ASSEMBLY

George R. Kauppila, 2926 2nd Ave. N., Seattle, Wash., assignor of one-half to Robert L. Dickerson, Seattle, Wash.

Filed May 5, 1959, Ser. No. 811,071
6 Claims. (Cl. 160—213)

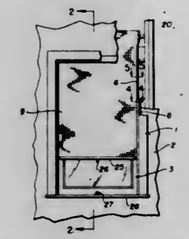


1. A bi-fold door assembly comprising, a door frame, inner and outer bi-fold door sections hingedly connected together to collapse in a forward direction, said inner section being hingedly connected to a side jamb of said door frame for forward swinging movement between open and closed positions, and a bent one-piece swing arm adapted to flex and pivotally mounted at its ends to the back of said outer section and to said door frame for swinging movement, said end pivots of the swing arm being spaced apart when said door is in its said closed position a distance greater than when said door is partly open.

3,017,927
PLASTIC SCREEN AND USE

Charles Demko, 1355 Burkhardt Ave., Akron, Ohio

Filed Oct. 8, 1959, Ser. No. 845,206
3 Claims. (Cl. 160—271)

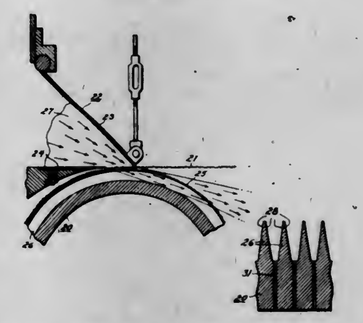


1. The combination of a screen in a frame, the screen being flexible with at least one selvedge composed in part of plastic and stiffer than the adjacent screen portion but not substantially thicker than the adjacent screen portion so that when the screen is rolled into a roll the end at which said selvedge is located is not substantially thicker than the balance of the roll, at least one edge of the frame being straight and having a channel defined in said edge of the frame, said channel being comprised of two diversely directed parts, said parts having a common edge along which the parts are joined, with the selvedge in one part and the screen extending out of the other part, the screen being longitudinally movable in the channel.

3,017,928
PAPER MACHINE BREAST ROLL

John L. Pedrick, Milmont Park, Pa., assignor to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania

Filed Sept. 26, 1956, Ser. No. 612,178
3 Claims. (Cl. 162—289)



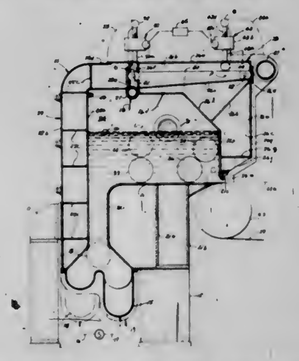
1. In a Fourdrinier paper machine having a slice and a traveling forming wire for receiving paper stock from said slice, an improved breast roll supporting said wire beneath said slice, said breast roll comprising a substan-

tially smooth surface cylindrical shell, a plurality of substantially annular fins around the periphery of said shell and spaced axially along the shell, and a cylindrical cover wire on said fins, said fins constituting the sole means for spacing said cover wire from said shell, whereby a plurality of substantially unobstructed passageways are provided beneath said cover wire and extending transversely of said breast roll.

3,017,929
HEAD BOX WITH BALANCED SLICE BODY

Edward D. Beachler, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Jan. 7, 1959, Ser. No. 785,439
14 Claims. (Cl. 162—340)

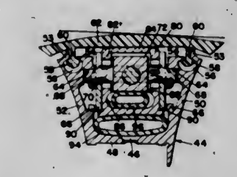


1. In a paper machine having a looped forming wire, stock flow means comprising a bottom wall having a leading edge extending laterally of and in close proximity to the wire, a rear wall defining with the bottom wall an inlet for stock into said flow means, a top wall having a leading edge extending laterally of and in close proximity to the wire, said top wall leading edge being spaced from said bottom wall leading edge to define a stock outlet from said stock flow means onto said wire, a plurality of tie bars pivotally connected to said rear wall and to a forward portion of said top wall resisting pressures exerted by stock against the top wall in the direction of stock flow from within the stock flow means, and vertically adjustable means pivotally connected to the forward portion of said top wall cooperating with said tie bars to effect vertical movement of the top wall leading edge.

3,017,930
ADJUSTABLE SUPPORTS FOR FOURDRINIER SCREEN WIRES

Harold E. Dunlap, Dudley, Mass., assignor to Lodding Engineering Corporation, Auburn, Mass., a corporation of Massachusetts

Filed June 24, 1959, Ser. No. 822,556
10 Claims. (Cl. 162—352)

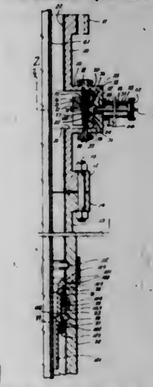


1. A deflector for a paper-making machine having a traveling web comprising an elongated support adapted to extend across the machine transversely to the direction of travel of the web, an elongated flexible deflector board on the support, said support including a bottom member and a pair of arms extending upwardly from said bottom member, means releasably securing said deflector board to the arms said deflector board extending directly transversely across the support from one edge to the other of the support, and a bar located in said support between the arms for applying an upward pressure to the deflector board, said bar extending generally longitudinally of and for substantially the length of the deflector board.

3,017,931
PIPE HANGER

John G. Jackson, Jr., Angleton, and Allen F. Rhodes, Houston, Tex., assignors to McEvoy Company, Houston, Tex., a corporation of Texas

Filed June 23, 1958, Ser. No. 743,784
9 Claims. (Cl. 166—208)



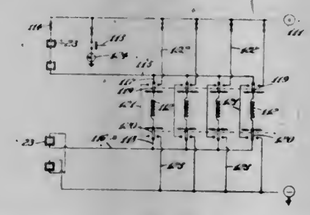
1. Apparatus for supporting a pipe in a well conduit, comprising chamber means opening from opposite sides of the well conduit, hanger engaging means within said chamber means at opposite sides of the well conduit each for releasably supporting a hanger half, hydraulic means for moving each said hanger engaging means radially with respect to the well conduit, a hanger half releasably supported by each said hanger engaging means, means associated with each said hanger engaging means for releasably supporting a said hanger half, means for connecting the two hanger halves about a said pipe disposed therebetween when the hanger halves are brought together about the pipe by inward radial movement of said hanger engaging means with respect to said well conduit, and seat means in the well conduit below said chamber means for supporting said connected hanger halves to support the pipe.

3,017,932
CONTROL SYSTEMS FOR AIRCRAFT PROPELLERS

John Alfred Chilman, Gloucester, England, assignor to Rotol Limited, Gloucester, England, a British company

Filed Nov. 18, 1957, Ser. No. 697,070
Claims priority, application Great Britain Jan. 10, 1957
3 Claims. (Cl. 170—135.29)

1. In a multi-engined aircraft having a plurality of gas turbines, a plurality of variable pitch propellers one driven by each engine, a plurality of constant speed units one connected to each propeller to control the speed thereof by pitch variation, a plurality of pitch stops one in each propeller and each movable between an operative position in which it sets a limit on the reduction of pitch of its propeller and an inoperative position, and a plurality of pitch stop withdrawal means one connected to each pitch stop and each operable to move its pitch stop to the inoperative position; a pitch stop control system having an electric circuit comprising a source of electric power, a plurality of electro-magnetic means one connected with each of said pitch stop withdrawal means so that operation of each of said pitch stop withdrawal means is initiated when its electro-magnetic means is energized by said source of electric power, said plurality of electro-magnetic means being all connected in parallel with one another, a plurality of electric switches in series with one another and with said source of electric power and said plurality of electro-magnetic means, said plurality of switches being connected one with each of said plurality of propellers to be closed when the pitch of its propeller is reduced to a predetermined pitch at least approaching that set by the pitch stop of the propeller and to remain closed if and when the pitch of its propeller is further reduced, and said plurality of electric switches being arranged in two banks, one bank in series between said source of electric power and said plurality of electro-magnetic means on one side of said plurality of electro-magnetic means and the other bank in series between said source of electric power and said plurality of electro-magnetic means on the other side of said plurality of electro-magnetic means, said system further comprising a plurality of pairs of electric conductors one pair for each electro-magnetic



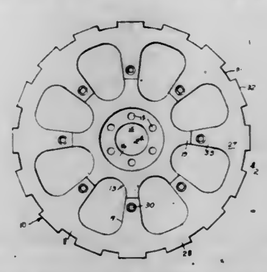
means, one conductor of each pair being connected between its electro-magnetic means and said source of electric power in parallel with one of said banks and the other conductor of each pair being connected between its electro-magnetic means and said source of electric power in parallel with the other of said banks, and a manually operable switch means in series between said source of electric power and said plurality of electro-magnetic means, which manually operable switch means comprises a plurality of pairs of switches one pair for each electro-magnetic means, which switches are all ganged together for simultaneous operation, between a first position and a second position, one switch of each pair being connected so that in the first position it connects one end of its electro-magnetic means in series with one of said banks and in the second position it connects the one end of its electro-magnetic means in series with one conductor of the one of said plurality of pairs of electric conductors which is associated with its electro-magnetic means, and the other switch of each pair being connected so that in the first position it connects the other end of its electro-magnetic means in series with the other of said banks and in the second position it connects the other end of its electro-magnetic means in series with the other conductor of the one of said plurality of pairs of electric conductors which is associated with its electro-magnetic means.

3,017,933
DIGGING WHEEL FOR SUGAR BEET HARVESTERS

Heinz Carl Oppel, 212 S. 5th St., Boise, Idaho

Filed Nov. 19, 1959, Ser. No. 854,137
2 Claims. (Cl. 171—58)

1. A digging wheel for sugar beet harvesters comprising a central hub having a plurality of dished spokes whose ends are axially displaced from the center of the hub, the axial thickness of the spokes being increasingly thick from their outer extremity to their connection with the center of the hub, dished webs connecting the spokes adjacent the center of the hub and forming a smooth continuous concave inner surface with the center of the hub and the spokes, a detachable dished rim comprising a circular ring of an inner diameter greater than the



spokes of the hub, thin lugs formed about the outer periphery of the rim on its outer surface, a plurality of spokes radiating inwardly from the ring and corresponding in number and contour to the spokes of the hub, means to rigidly connect the spokes of the hub to the spokes of the rim to thereby form a wheel having continuous smooth surfaced spokes and a smooth inner surface for engaging beets.

3,017,934
CASING SUPPORT

Aaron D. Rhodes, Arcadia, and Hal Stratton, La Habra, Calif., assignors to Shell Oil Company and Continental Oil Company, both of Los Angeles, Calif., corporations of Delaware, and The Superior Oil Company and Union Oil Company of California, both of Los Angeles, Calif., corporations of California

Filed Sept. 30, 1955, Ser. No. 537,738
3 Claims. (Cl. 175—7)

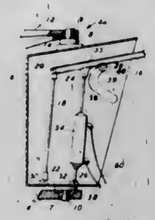


1. A buoyantly supported casing extending upwardly from the bottom of an open water body comprising a generally upright, elongated and laterally flexible tubular member, means anchoring the lower end of the tubular member to the bottom, a plurality of separate buoyancy chambers disposed a substantial distance below the water surface, and means for connecting the buoyancy chambers to the tubular member at longitudinally spaced points, the separate buoyancy chambers being of progressively greater buoyancy per unit length in a direction along the longitudinal axis of the member with increasing water depth.

3,017,935
DRILLING APPARATUS FOR TRACTORS

Sidney W. Galbraith, 1929 Hilltop Drive, Garland, Tex.; Robert G. Perkins, Eastland, Tex.; and Hubert C. Westfall, Frederick, Okla.

Filed Feb. 18, 1958, Ser. No. 715,885
5 Claims. (Cl. 175—123)

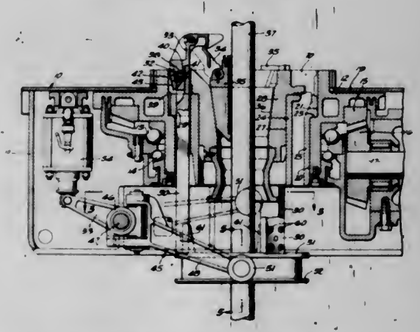


1. In mechanism for drilling accurately placed holes, the combination comprising, a tractor, a frame secured to said tractor, said frame having two bearing means each suitable to hold a vertical shaft, a housing with five generally rectangular sides and one open side comprising three vertical sides and top and bottom horizontal sides, a first vertical shaft secured to the exterior of said top horizontal side for turning in one of said frame bearing means, a second vertical shaft secured to the exterior of said bottom horizontal side for turning in the second said frame bearing means, a constant length boom having a pivot end within said housing and extending out through said open side in said housing to an outer end for supporting a drill mechanism, a tie rod pivotally attached at one end of said boom and pivotally attached at its other end to the interior of the bottom horizontal side, a hydraulic cylinder to move said constant length boom pivotally attached at one end to said boom and pivotally attached at its other end to the interior of the bottom horizontal side, means between said housing and said boom for guiding the motion of said boom outer end in a straight vertical line.

3,017,936
ROTARY MACHINE WITH REMOVABLE POWER SLIP UNIT

Spencer W. Long, Inglewood, Calif., assignor, by mesne assignments, to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Oct. 18, 1957, Ser. No. 691,102
7 Claims. (Cl. 175—197)

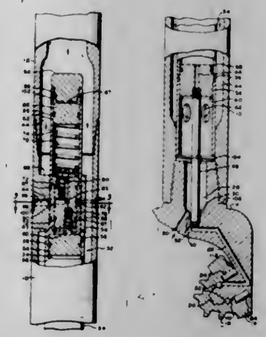


1. A rotary machine, comprising in combination: a base, a table rotatably mounted upon the base and provided with a central aperture and a concentric enlarged bore thereabove, a sleeve member insertable into the aperture to rest upon the table and provided with a central opening, said sleeve member having an enlargement at its upper end received within said enlarged bore, the enlargement being provided with a plurality of guide openings, a slip bowl mounted in said opening and having a central taper bore, a plurality of pipe-supporting slips received within the slip bowl, a plurality of longitudinally movable parallel posts guided for sliding movement within said guide openings, linkage means above the table removably connecting the posts to said pipe-supporting slips, to permit upward removal of the slips from the slip bowl and a lift ring positioned below the sleeve member and fixed rigidly to said posts, said lift ring having an outer diameter smaller than the central aperture of the table, whereby the sleeve member, posts and lift ring may be withdrawn upwardly as a unit through the table aperture.

3,017,937
LUBRICATOR FOR EARTH BORING BIT

Roy A. Bobo, Houston, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Nov. 10, 1958, Ser. No. 773,055
10 Claims. (Cl. 175—228)



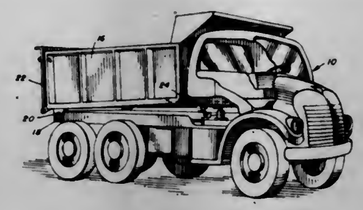
1. In well drilling apparatus including a drill string and a drill head on said drill string having at least one roller cutter thereon, a lubricating mechanism within said drill string comprising a lubricant barrel connected at the drill head end with lubricant ducts leading thru said drill head to the bearings of said cutter; a tubular lubricant reservoir connected at its outlet end to the end of said lubricant barrel remote from said drill head; a lubricant plunger in said reservoir forming a seal therewith; plunger-actuating means on the end of said lubricant reservoir remote from said lubricant barrel for forcing said plunger toward said lubricant barrel upon first decreasing and thereafter increasing fluid pressure in said drill string; conduit means for bypassing fluid around said lubricating mechanism to said drill head; and means for supporting said lubricating mechanism in said drill string.

3,017,938
METHOD AND APPARATUS FOR WEIGHING

Anthony Polich, Jr., 9228 W. 47th St., Brookfield, Ill.

Filed Oct. 28, 1957, Ser. No. 692,628
3 Claims. (Cl. 177—141)

1. In an apparatus for weighing, means for supporting an article to be weighed for tilting movement about one edge thereof, a lifting device to engage an article to be weighed about the opposite edge thereof, means to indicate the weight of the article when lifted at one edge, and mounting means for pivoting the lifting means to swing with that portion of the article to be lifted maintaining the axial contact distance constant through the

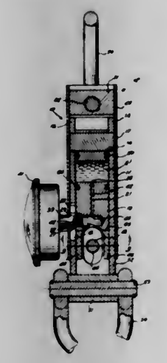


angle lifted, the lifting device being connected to the support through a fixed pivotal connection and having means tending to maintain the lifting device resiliently in fixed upright position against tilting in opposite directions.

3,017,939
FLUID PRESSURE MEASURING DEVICE

Lester S. Vegors, 2107 Country Club Blvd., Ames, Iowa

Filed Feb. 23, 1960, Ser. No. 10,181
3 Claims. (Cl. 177—208)

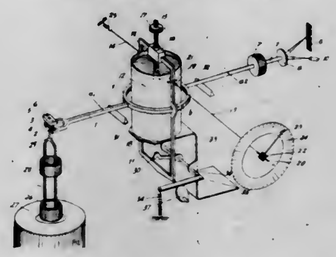


1. A fluid pressure measuring device adapted to be connected between a first member, on which a load is to be applied, and a second member which applies the load, to measure the load applied on said first member by said second member, said device comprising a cylinder closed at one end, a piston for said cylinder forming with said closed end a fluid chamber in said cylinder, a tubular sleeve for slidably receiving said cylinder therein, transverse means inserted through said sleeve and piston and loosely through said cylinder to provide for the longitudinal movement of said piston and sleeve as a unit relative to said cylinder, said piston being formed with a fluid passage having one end open to said fluid chamber and the other end terminating in the side surface of said piston, said sleeve and cylinder having openings therein aligned with said other end of the fluid passage, with the opening in said cylinder being elongated longitudinally of the cylinder, a pressure indicating gauge having a fluid connection extended through said openings and connected with the other end of said fluid passage, means on said sleeve adjacent the closed end of said cylinder connectible with said first member, and means on the end of said cylinder remote from the closed end thereof connectible with said second member.

3,017,940
TORSION BALANCE FOR THE DETERMINATION OF SMALL VARIATIONS OF THE APPARENT WEIGHT OF SAMPLES

Alexandru Baltac, Bucharest, Rumania, assignor to Ministry for Petroleum Industry and Chemistry, Bucharest, Rumania

Filed Aug. 28, 1959, Ser. No. 836,676
3 Claims. (Cl. 177—246)

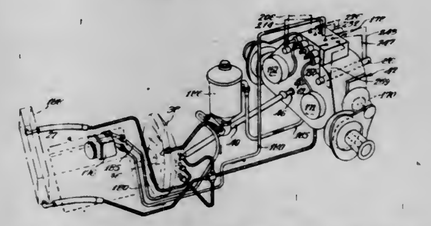


1. A torsion balance for the determination of small changes in weight of samples under test comprising oscillatable mobile elements, a suspension system for the sample under test carried by said elements, a counterweight for balancing said suspension system and the sample under test carried by said elements and a horizontal torsion thread attached to said elements subject to oscillations thereof, in combination with a fixed container, a body of liquid in said container, a float submerged in said body of liquid, and an adjustable rod connected to said float extending upwardly therefrom and connected to said elements to support them from the submerged float, the center of gravity of said elements, the suspension system and the counterweight being substantially at the center of bouyancy of said float, and the free surface of said liquid being at the level of the point of attachment of said torsion thread to said elements, whereby said torsion thread is not subject to the weight of said elements, said suspension system and said counterweight.

3,017,941
VEHICLE DRIVE MEANS

Malvern S. Baker, Fort Wayne, Ind., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

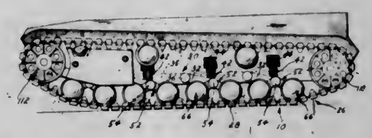
Filed Feb. 27, 1958, Ser. No. 718,075
5 Claims. (Cl. 180—6)



3. In a vehicle including an engine, a final drive means, a hydraulically operated brake means for said final drive, a power transmission unit connecting said engine with said final drive, and including speed change gearing, hydraulically operated clutch means associated with said speed change gearing and operable to selectively control the flow of power through said gearing, and control means for said clutch means comprising a control valve housing having fluid communication with a source of pressure fluid through an intake port in said housing and having fluid communication with said clutch means

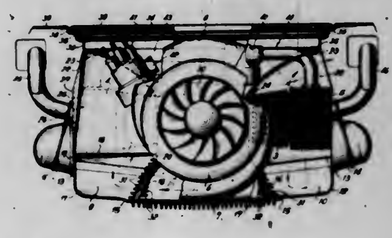
through a discharge port in said housing, a manually operable control valve in said housing which is movable to control the flow of pressure fluid from said intake port to and from said clutch means through said discharge port, a second valve in said housing in controlling relation to the flow of pressure fluid from said intake port to said control valve, and means connecting said second valve with said hydraulically operated brake in a manner such that the introduction of pressure fluid to said brake to thereby halt said final drive is also effective to move said second valve to a position blocking the flow of pressure fluid from said intake port to said control valve, thereby releasing said clutch means and halting the flow of power from said speed change gearing to said final drive means.

3,017,942
TRACK LAYING VEHICLE
Roger L. Gamaunt, P.O. Box 55, Fawnskin, Calif.
Filed Aug. 25, 1958, Ser. No. 757,074
2 Claims. (Cl. 180—9.2)



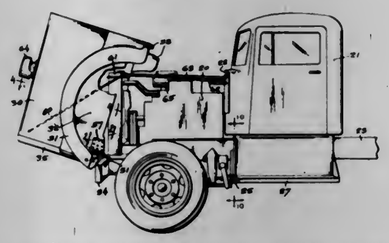
1. In a track supporting suspension system for a track laying vehicle having a body, the combination of: a plurality of trailing suspension arms pivotally mounted on opposite sides of said body, each of said arms having a spring seat on the rearward extremity thereof and incorporating a supporting stud at said rearward extremity; a bogie arm pivotally mounted on said stud intermediate its extremities, said bogie arm having an axle at its opposite extremities; a pair of track supporting bogie wheels mounted on each of the extremities of said bogie arm, each of said pairs of wheels being mounted on a single shaft encompassing an associated axle and said shaft being reversible with respect to said axle to locate the treads thereof on different centers with respect to said bogie arm; and compression means interposed between said body and said seat for urging said trailing arms and said bogie arm downwardly toward said track.

3,017,943
AIR-COOLED MULTI-CYLINDER INTERNAL COMBUSTION ENGINE
Egon Forstner, Stuttgart-Degerloch, Wurttemberg, and Robert Binder, Stuttgart-Zuffenhausen, Wurttemberg, Germany, assignors to Dr.-Ing. h.c.F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed May 4, 1959, Ser. No. 810,638
Claims priority, application Germany May 31, 1958
11 Claims. (Cl. 180—54)



1. An air-cooled internal combustion engine with a crankshaft, particularly for motor vehicles, comprising crank case means, engine cylinders disposed laterally of said crankshaft, cooling air blower means to provide air for cooling said cylinders, duct means for guiding cooling air past said cylinders, said duct means including first duct means located substantially below said blower means to receive air discharged by said blower means, said first duct means including first wall means disposed below said cylinders and simultaneously forming means for protecting said engine against dirt and particles thrown thereagainst from the road, second duct means effectively forming a continuation of said first duct means to pass cooling air upwardly past said cylinders, and third duct means above said second duct means including further wall means extending angularly to the direction of cooling air flow in said second duct means to deflect cooling air which has passed said cylinders to the atmosphere.

3,017,944
HOOD-AND-FENDER ASSEMBLY FOR AUTOMOTIVE TRUCKS
Robert C. Norrie, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington
Filed Apr. 9, 1959, Ser. No. 805,195
6 Claims. (Cl. 180—69)

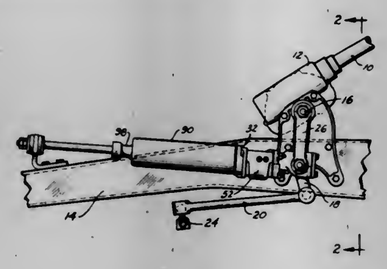


2. In combination with an automotive truck of the conventional type having its engine mounted to the front of the driver's cab and with steerable front wheels at opposite sides of said engine, a unitized housing molded from fiberglass-reinforced resin to a form providing a hood for the engine together with a fender at each side thereof for the two steerable front wheels, and a hinge attachment at the lower front end of said housing connecting the same to the frame of the truck and permitting said housing to be tilted about a transverse horizontal axis between a lowered closed position and an elevated open position, the truck frame including a rearwardly facing transverse channel member at the front of the vehicle presenting at each of the two ends a prolongation extending laterally beyond a respective one of two spaced apart longitudinal frame principals, the hinge connection comprising, for each side of the housing, a respective strap which is secured to the hood and presents a depending eyed end arranged to occupy the interstice between two transversely spaced vertical plate members rigid with the back wall of the related frame prolongation and engaged by a horizontal hinge pin traversing said plate members and made removable therefrom so that the unitized housing may be detached from the truck.

3,017,945
POWER STEERING ACTUATOR
Stanley I. MacDuff, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,901
3 Claims. (Cl. 180—79.2)

1. In a power steering system having a power cylinder, a spool type valve for controlling the operation of

said power cylinder, and a valve actuator for actuating said valve, means for interconnecting said valve and valve actuator comprising a housing having a substantially rectangular passage formed therein, a substantially rectangular shaped member operatively connected to said actuator



and slidable in said passage, and means for pivotally connecting said member to the spool of said control valve, said connecting means including a floating pin, and two arcuate surfaces centered about said floating pin and disposed on opposite sides of said member for contact with the walls of said passage.

3,017,946
VEHICULAR SPEED CONTROL SYSTEM
James E. Davis and Wallace A. Roos, Houston, Tex., assignors to Otis I. McCullough, Houston, Tex.
Filed Dec. 19, 1958, Ser. No. 781,794
10 Claims. (Cl. 180—82.1)



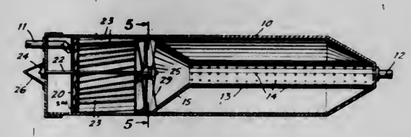
1. Motor vehicle speed control apparatus comprising a plurality of strips of radioactive material closely spaced along a highway at the entrance end of each controlled highway zone, there being successively a reset strip and a number of additional strips corresponding with the speed limit of each zone at the entrance end of that zone, radiation-detection means in a vehicle operable to develop a pulse of voltage for each radioactive strip passed by the vehicle, speed governor means in the vehicle movable from a reset position corresponding to minimum controlled-speed of the vehicle successively to positions corresponding with increasing controlled-speeds, and means connected to said radiation detection means operable to move said governor means to said reset position when the detection means responds to said reset strip and then to move said governor means through its said successive positions corresponding to the number of said other radioactive strips responded to by the detection means, at the entrance end of each speed zone.

3,017,947
ACOUSTICAL MATERIAL AND METHOD OF MAKING THE SAME
Lewis W. Eckert, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed June 18, 1957, Ser. No. 666,407
2 Claims. (Cl. 181—33)



1. A method of producing sound absorbing material, the steps comprising forming a water-laid mat of fibrous material with suitable binder constituents, drying said mat to form a sheet of intertwined fibers having sound absorbing interstices throughout and having a relatively smooth impervious surface, coating one flat surface of said sheet with a dark dye, urging a plurality of irregularly shaped elongated projections into engagement with the dyed surface of said sheet to push certain areas of said surface into the body of the sheet exposing sound absorbing interstices in the interior of the sheet and forming irregularly shaped elongated openings on the surface of said sheet, and simultaneous with the forcing of the irregularly shaped elongated projections into the surface of the sheet embossing a pattern on the back of said sheet.

3,017,948
MUFFLER
Ben L. Shepherd and Bob G. Shepherd, both of 4408 Pineridge Road, Columbia, S.C.
Filed Sept. 12, 1960, Ser. No. 55,259
4 Claims. (Cl. 181—64)

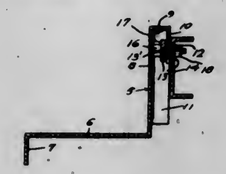


1. A muffler for internal combustion engines comprising: an elongated closed housing having exhaust gas entry and exit ports at opposite ends thereof; a baffle tube of smaller cross-section than and mounted within said housing, communicating with said exit port at one end and flaring outwardly at its opposite end into engagement with the inner surface of said housing; a drive turbine wheel rotatably mounted within said housing adjacent said entry port; a fan wheel also rotatably mounted within said housing, on the same axis as said turbine wheel, spaced axially therefrom adjacent the flared end of said baffle tube; a plurality of blade members joining said fan and turbine wheels at the periphery thereof; and means communicating with said entry port for directing exhaust gases on said turbine wheel.

3,017,949
REMOVABLE BUMPER SUPPORTED STEP FOR TRUCK BODIES
J. Way Harlan, 5134 Saratoga Ave., San Diego, Calif.
Filed July 29, 1960, Ser. No. 46,305
3 Claims. (Cl. 182—92)

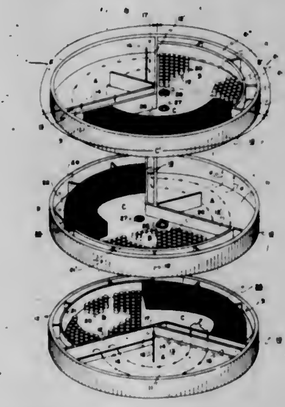
1. A detachable step for attachment to a vehicle bumper having spaced openings, comprising a substantially rectangular plate constructed to provide a tread portion, a depending flange integral with and disposed along one edge of said rectangular plate, an integral vertical supporting portion disposed along the opposite edge and terminating in a rearwardly and downwardly extending

flange, said flange having wall portions defining openings therein adapted to be aligned with the spaced openings in said bumper, integral rearwardly extending portions



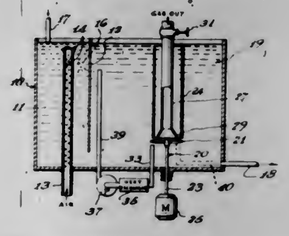
formed along each edge of said vertical supporting member and in contact with said bumper to prevent downward displacement of said step.

3,017,950
BUBBLE-PLATE STRUCTURE FOR RECTIFICATION COLUMNS
Henry F. Koshoot, 111 S. 8th E., Salt Lake City, Utah
Filed Dec. 30, 1960, Ser. No. 79,795
15 Claims. (Cl. 183—2)



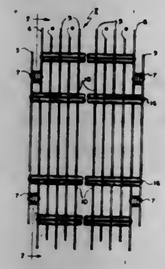
1. In a rectifying column, in combination, a plurality of coaxially aligned, stacked bubble plates of like construction, each of said bubble plates being divided into at least three equal sectors, arbitrarily designated respectively as A, B, and C, proceeding in a clockwise direction, with the plates being displaced with respect to each other so that registered sectors of adjacent plates will follow the sequential order, proceeding upwardly of A, B, C, A, B, C, etc., each of said plates comprising a floor extending in all three of said sectors, a peripheral side circumscribing said floor, the sides of said plates being in engagement with each other, said floor being provided with an upcomer, vapor admittance aperture disposed adjacent said side in sector C and an upcomer vapor conduit aperture adjacent said side in sector B; a plurality of conduit means extending from said conduit apertures of sectors B of respective ones of said plates to said upcomer, vapor admittance apertures of sectors C of adjacent ones of said plates directly thereabove, sectors A of others of said plates immediately below said respective ones of said plates being in vapor communication with said conduit means and, thereby, with sectors C superimposed thereabove; a plurality of partitions each being disposed in proximity with the respective boundaries of sectors A and B of respective plates and extending upwardly therefrom, from the respective floors thereof, to the respective floors of adjacent plates thereabove; each of said plates having a weir disposed upon its respective floor in sector A and spaced from said partition, said respective floor being provided with a fluid downcomer aperture disposed between said weir and said partition; a plurality of fluid downcomer conduit means respectively disposed between and separatingly partitioning sectors C from A of the several plates, each conduit means circumscribing a respective one of said downcomer apertures and opening into sector A of the next, lowermost respective plate; said floor of each of said plates being provided with at least one, disentrained fluid downcomer aperture in one of sectors B and C; a plurality of conduit means respectively communicating with and extending from respective disentrained fluid downcomer apertures and opening into sectors A of lower plates in registry therewith; said floor of each plate being provided with a multiplicity of bubble tube mounting apertures in sector B, each of said plates being provided with a multiplicity of bubble tubes disposed in said apertures and extending downwardly into sector A of the plate therebelow and beneath the level of said weir thereof; and means for securing said bubble plates together.

3,017,951
TRANSFER OF GASES INTO AND FROM LIQUID MEDIA
Averill J. Wiley, Appleton, Wis., assignor to Sulphite Products Corporation, Appleton, Wis., a corporation of Wisconsin
Filed July 31, 1958, Ser. No. 753,391
4 Claims. (Cl. 183—2.5)



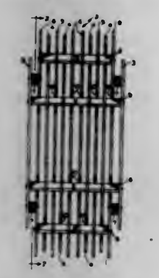
3. A process for injecting gases at a controlled rate into a liquid system to promote desired reactions in the system and for simultaneously removing, at a controlled rate, from the system undesired, undissolved gases resulting from reactions within the system, said process including the steps of establishing a zone of agitation and aeration generally in one plane, said agitation establishing in said plane a zone of radially increasing centrifugal force in the liquid system, said aeration being effected at the periphery of said zone of increasing centrifugal force, establishing a generally vertical zone extending upwardly from said plane adjacent the periphery of said zone of agitation, the outer boundary of said generally vertical zone being inwardly of said periphery and in close proximity thereto, and flowing liquid downwardly through said generally vertical zone, which zone is in coacting relation with said zone of agitation to cause undissolved gases in said system to move to the central region of said zone of agitation centrally of said generally vertical zone, simultaneously with said aeration collecting said gases immediately above said zone of agitation in said central region and conducting said collected gases from said central region upwardly through a degassing zone disposed medial of said generally vertical zone out of said system and out of contact with the liquid, and controlling the rate of removal of said gases from said central region to maintain a desired balance within said system.

3,017,952
ELECTROSTATIC PRECIPITATOR
Karl L. Westlin, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Feb. 3, 1960, Ser. No. 6,543
2 Claims. (Cl. 183—7)



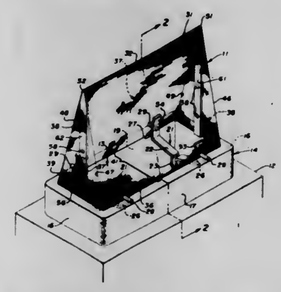
1. A plate electrode assembly for an electrostatic precipitator comprising a plurality of plates spaced from each other a predetermined distance, said plates having openings therein of preselected contour and a spacer bar of cross-sectional contour conforming substantially to the contour of said openings to permit passage of said spacer bar through said openings, said spacer bar having sets of slots extending diagonally transverse the longitudinal axis of said spacer bar on opposite sides thereof with the slots of each set being spaced from each other substantially the same distance as said plates and including flared entrances to insure ready engagement of said slots with said plates, said slots being of sufficient depth and breadth to permit rotation of said spacer bar about its longitudinal axis from one position to another when said spacer bar has been passed through said plate openings and said slots are aligned with said plates wherein said plates engage in said slots to be maintained in spaced relation, the slots of one set extending in a diagonal direction opposite to the diagonal direction in which the corresponding slots of an adjacent set extend with corresponding points along corresponding slots in opposite sets resting in common planes normal to the longitudinal axis of the spacer bar.

3,017,953
ELECTROSTATIC PRECIPITATORS
Richard D. Rivers, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,647
4 Claims. (Cl. 183—7)



1. A plate electrode assembly for an electrostatic precipitator comprising a plurality of spaced plates, said plates having openings therein, a spacer bar extending through said openings, said spacer bar having a cross-sectional contour peripherally conforming with said openings except for a groove on one side of said spacer bar extending parallel the longitudinal axis of said spacer bar, the opposite side of said spacer bar having spaced transverse slots therein engageable with said plates adjacent the edges of said openings upon lateral translational movement of said spacer bar, and a key bar extending in said groove of said spacer bar parallel thereto to hold said slots of said spacer bar in engagement with said plates after said spacer bar has been so laterally moved to lock the plate assembly into desired position.

3,017,954
SPARK ARRESTER
Edward K. Kruckewitt, 433 North St., Woodland, Calif.
Filed Jan. 12, 1960, Ser. No. 1,944
1 Claim. (Cl. 183—74)

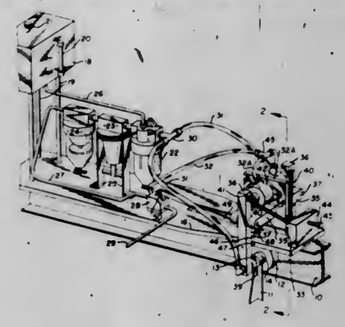


A spark arrester for use with a chimney having a pair of opposed side walls and a pair of opposed end walls defining an upper opening of predetermined form, said spark arrester comprising: a concavo-convex cover member formed of screen-like material, said member including a pair of triangular end walls each having a base located substantially coincident with the corresponding one of said pair of chimney end walls and extending vertically upwardly to a central apex located at an altitude at least one and one-half times the length of said base, said member further including a pair of sloping side walls each projecting outwardly and downwardly from a peak extending between said apices of said triangular end walls to a location substantially coincident with the corresponding one of said pair of chimney side walls; and a spaced pair of adjustable spreading clamps each including an elongated metal bar secured adjacent the extremities thereof to the opposite of said cover member side walls, each of said bars being downwardly bowed for resilient compressive engagement with the adjacent one of said chimney side walls; and a pair of studs mounted adjacent the extremities of each of said bars and projecting oppositely outwardly for supporting engagement with the adjacent top of said chimney side walls and for limiting the penetration of said spark arrester into said chimney opening.

3,017,955
LUBRICATING DEVICE FOR OVERHEAD CONVEYORS
Celso Tassile, 66 Lauderdale Ave., Youngstown, Ohio; Rose Tassile, executrix of said Celso Tassile, deceased
Filed May 3, 1960, Ser. No. 26,511
5 Claims. (Cl. 184—15)

1. A lubricating device for an overhead conveyor having a rail and means including wheels moving therealong, and comprising a base member and devices for mounting said base member on said overhead rail, ap-

paratus for supplying a mixture of air and oil mounted on said member and a fixed body member mounted on said base member, said body member having a pair of oppositely disposed outwardly extending bifurcated members, a pair of arms pivotally mounted one in each of said bifurcated members, spring means interconnecting said arms and said body member for normally urging the lower ends of said arms outwardly and away from said base member and air actuated means on said body member for moving the upper ends of said arms out-



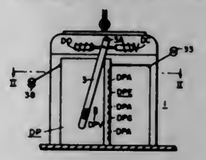
wardly with respect to said body member, lubricant delivery fittings on the lower ends of said arms and flexible tubes connecting said lubricant delivering fittings with said apparatus supplying said air and oil mixture, a trigger member mounted on said base for engagement with said conveyor wheels, an air valve on said base controlling an air supply source in communication with said air and oil mixture delivering apparatus and with said air actuated means on said body member, said air valve being responsive in operation to said trigger.

3,017,956
CARGO HOISTS
Ewan Christian Brew Corlett, Coach House, Worting Park, Basingstoke, England
Filed Oct. 19, 1959, Ser. No. 847,265
Claims priority, application Great Britain Oct. 29, 1958
6 Claims. (Cl. 187—6)



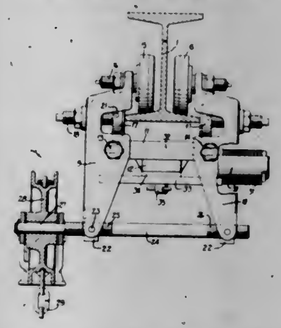
1. A hoisting device for loading and unloading a space comprised in a ship, a silo and the like mounted on at least one opening formed in a side wall thereof, comprising a panel for opening and closing said opening, substantially horizontally extending hinge means on the lower edge portion of said opening for pivotally mounting said panel therein and allowing it to be swung in a substantially horizontal position, a detachable connection between said panel and said hinge means, flexible means for supporting said panel when it has been swung into its substantially horizontal position and for controlling its up and down motion along said side wall upon the release of said detachable connection, winding control means for said flexible means and guiding roller means for same located over said opening.

3,017,957
DOOR PROTECTIVE EDGE
Alvin O. Lund, Little Falls, N.J., and David J. Vanderzee, Valley Falls, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1958, Ser. No. 763,354
10 Claims. (Cl. 187—48)



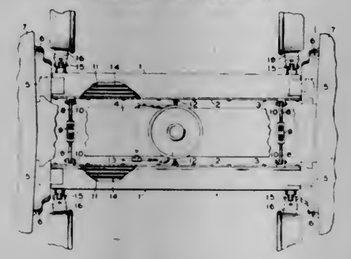
1. In an elevator system, a structure having a hoistway provided with a landing, a hoistway door for the landing, and an elevator car for transporting load, said car having a door, said car being disposed for movement in the hoistway from a position displaced from the landing to a predetermined position adjacent the landing to serve the landing, door-operating means for opening and closing said doors, each of said doors being provided with separate antenna means having a changeable electrical property dependent upon the proximity of load to said antenna means, means adjacent said doors for coupling the antenna means provided for the hoistway door to the antenna means provided for the car door substantially during a door closing movement by said door-operating means when the car is in said predetermined position, and means carried by the car responsive to a predetermined change in said property when said car and hoistway door antenna means are so coupled for modifying said door closing movement.

3,017,958
TRACK CLAMP FOR HOISTS
Walter E. Richter, Muskegon, Mich., assignor to Manning, Maxwell & Moore, Inc., Muskegon, Mich., a corporation of New York
Filed Dec. 11, 1958, Ser. No. 779,754
6 Claims. (Cl. 188—43)



1. In a track clamp, a connecting link having a transverse head, an arm pivoted at an intermediate point to each end of said head, confronting clamp shoes carried by said arms on one side of the pivot points, track wheels carried by said arms on the same side of the pivot points, and means to selectively separate or move toward each other the ends of said arms on the opposite side of the pivot points, connecting means for connecting the clamp to a mechanism travelling the same track, and a vertical pivot pin joining said connecting means to said link.

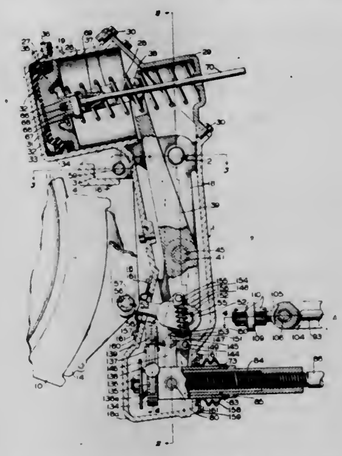
3,017,959
FOUNDATION BRAKE APPARATUS
Clarence R. Baechtel, Bay Village, Ohio, assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Apr. 29, 1959, Ser. No. 809,730
13 Claims. (Cl. 188—52)



1. Foundation brake apparatus for use with a railway car truck of the multi-wheel type having side frames, said apparatus comprising a pair of spaced hollow beam members extending transversely of the truck adjacent the wheels and supported adjacent their ends on said side frames, at least one resilient expansible bellows-like element disposed in each of said beam members and being chargeable with fluid under pressure, said expansible elements each being arranged in said respective beam members against one wall thereof so as to provide an expansion force in the direction of the adjacent wheels, a push rod for each of the wheels, each push rod being slidably supported by a corresponding beam member and having within the beam member one end subject to the expansion force of a corresponding expansible element, and a brake shoe for each of the wheels, each brake shoe being operatively connected to the other end of a corresponding push rod and being operated into braking engagement with its associated wheel by the expansion of the corresponding expansible element upon charging of the latter with fluid under pressure.

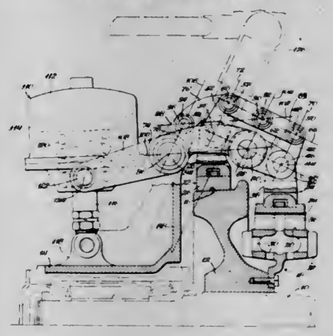
3,017,960
WHEEL TREAD BRAKE UNIT FOR RAILWAY CAR TRUCKS
Thomas F. Hursen, Monroeville, and Glenn T. McClure, McKeesport, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 31, 1959, Ser. No. 863,339
9 Claims. (Cl. 188—52)

1. A brake unit for applying a braking force to two wheels on the same side of a railway car truck having a pair of side frames, said unit comprising a vertically disposed casing having a chamber therein, a first pivot means pivotally mounting said casing on one of the side frames of the truck, a brake cylinder portion forming a part of said casing, said brake cylinder portion being disposed above said pivot means and having a piston operable in a bore therein that opens into the chamber in the casing, two brake shoes, one for each of the two wheels on the same side of the truck, means carried by the said one side frame for movably supporting each of said brake shoes, a link operatively connected at one end to said casing and at the opposite end to one of said two brake shoes, and a substantially vertically disposed brake lever, carried entirely within said casing, a second pivot means rockably mounting said brake lever on said casing, at a point below said first pivot means, said brake lever being operatively connected at its lower end below said second pivot means to the other of said two brake shoes



and at its upper end above said first pivot means to said brake cylinder piston whereby movement of said brake shoes into and out of braking contact with the tread surface of the corresponding car wheels is effected by rocking movement of said brake lever and said casing in opposite directions responsively to supply of pneumatic pressure to and subsequent release of pneumatic pressure from said brake cylinder piston respectively.

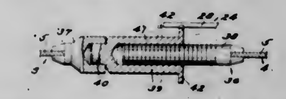
3,017,961
COMBINATION BRAKE
William Mann and Bernard Maloney, Gary, Ind., assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed Nov. 29, 1956, Ser. No. 625,155
15 Claims. (Cl. 188—57)



1. A brake arrangement for a railway car truck including a wheel and axle assembly having a wheel and a disc coaxial and rotatable therewith, comprising a pair of brakes engageable with the wheel and disc, respectively, a pair of floating parallel links pivotally connected to

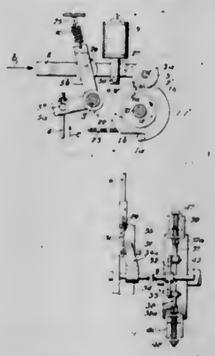
both the brakes at corresponding ends of the links, means pivoted to the links at corresponding points spaced from said first mentioned connections and operable to support the parallel links for movement radially of the wheel and disc for applying and releasing the brakes, power means for so moving the parallel links and brakes, and means for retaining the parallel links in relative positions with the brakes facing the respective wheel and disc.

3,017,962
LIMITING DEVICE FOR AUTOMATIC BRAKE SHOE ADJUSTER
Jeannot G. Ingres, Dearborn, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,923
2 Claims. (Cl. 188—79.5)



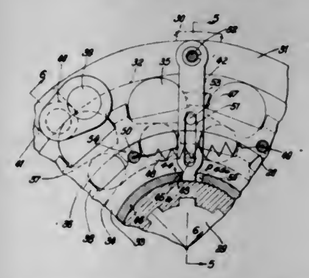
1. A brake comprising a brake drum, a pair of brake shoes within and engageable with said drum and having adjacent ends, a device extending between said adjacent ends of said shoes and including first and second members threaded together, means providing a non-rotatable connection between said first member and said end of one of said shoes and means providing a rotatable connection between said second member and said end of the other of said shoes, said second member having a ratchet wheel thereon, automatic adjustment means including an element operatively connected to said one of said shoes for movement circumferentially therewith and engageable with said wheel to rotate the latter for relatively axially moving said first and second members to adjust said shoes and compensate for wear, said element extending toward the other of said shoes axially with respect to said device a predetermined distance beyond said wheel to establish the limit of adjustment before said wheel moves beyond the end of said element and out of engagement therewith preventing further adjustment.

3,017,963
MOVING STAIRWAYS, ESCALATORS AND THE LIKE
Ernst A. Landschulze, Hamburg, Germany, assignor to Rheinstahl Hamburg Stahlbau Eggers & Friedrich Kehrhahn G.m.b.H., Hamburg, Germany
Filed Nov. 5, 1959, Ser. No. 851,127
11 Claims. (Cl. 188—82.34)



1. Apparatus for preventing unintentional reverse operation of a selectively reciprocably driven mechanism, such as a moving stairway, comprising: a member driven selectively forwardly and rearwardly in accordance with the movement of the mechanism and having a shoulder facing in the rearward direction of movement thereof; a pawl adjacent the path of movement of said shoulder; a normally inoperative brake; linkage connecting said pawl and said brake arranged to operate said brake when said pawl is disposed in a first preselected position; and means urging said pawl to a second position spaced forwardly from said first position, said pawl being disposed in said path of movement of the shoulder to be moved rearwardly to said first position by a rearward movement of said shoulder.

3,017,964
ONE-WAY BRAKE OR CLUTCH MECHANISM, PARTICULARLY FOR FREE WHEELING DEVICES AND ANTI-ROLLBACK DEVICES
Hubert Freiherr von Thuengen, Friedrichshafen, Germany, assignor to Zahnradfabrik Friedrichshafen, Friedrichshafen a.B., Germany
Filed Nov. 26, 1956, Ser. No. 624,390
Claims priority, application Germany Nov. 30, 1955
14 Claims. (Cl. 188—82.84)

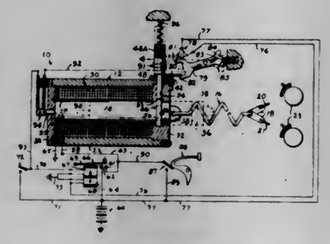


11. A device of the class described comprising a first inner set of rollers arranged in a ring, an inner rotary gripping element, said ring concentrically surrounding said inner rotary element and said rollers being engageable with the surface thereof; a second set of outer rollers arranged in a ring concentrically surrounding said first set; each roller of said first set being engageable with a respective roller of said second set to form a roller pair, a concentric outer rotatively shiftable gripping element surrounding said second set of rollers and engageable therewith, said gripping elements having a radial spacing less than the combined diameters of each roller pair whereby the rollers of each pair are effective to engage each other to transmit rotary motion from one gripping element to the other, the rollers of one set of roller clements having a foreshortened radius at the point of engagement with respective rollers of the other set to assure a safe gripping engagement between the gripping parts, and means for normally urging the rollers of said sets into engagement with each other, the rollers of said one set having flattened areas to effect said foreshortened radius, and means for rotatively shifting said outer gripping element.

3,017,965
VEHICLE EMERGENCY BRAKE APPARATUS
Ira W. Hill, 3004 SW. 50th, Oklahoma City, Okla., assignor of one-half to Arggie C. Hoffman, Oklahoma City, Okla.
Filed Sept. 28, 1959, Ser. No. 842,786
5 Claims. (Cl. 188—163)

1. A brake setting device for a vehicle having a brake pedal and having an emergency brake mechanism associated with at least two wheels of the vehicle, including:

a solenoid carried by the vehicle and having a movable core provided with a recess adjacent one end thereof, said solenoid having a laterally open slot co-operatingly aligned with the recess when the core is retracted; a spring interposed between and connected at its respective ends to one end of said solenoid core and said emergency brake mechanism; electric wiring connecting said solenoid with a source of electrical energy; a first switch means interposed in said electrical wiring for energizing said solenoid and applying said emergency brakes; a cylindrical housing connected with said solenoid around the open end of the slot; a piston within said cylindrical housing; a locking plunger axially connected to said piston and adapted to enter the recess in said core when the solenoid is energized; a tubular member extending



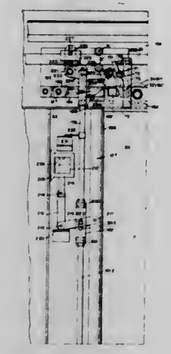
between and connected with the outwardly disposed end of said cylindrical housing and the apertured end of said solenoid for communication between the interior of said solenoid and the bore of said cylindrical housing, whereby said solenoid core forces air under pressure against said piston for moving said locking plunger into the recess of said core when said solenoid is energized to set said emergency brakes; and means for releasing said emergency brakes, said means comprising, a spring interposed between said piston and said solenoid for removing said locking plunger from within the recess in said core when said solenoid is re-energized, and a second switch interposed in said electrical wiring and adapted to be closed by the movement of said piston away from said core for interrupting the current to said solenoid.

3,017,966
BRAKE SHOE AND METHOD OF MAKING SAME
Karl Betz, Frankfurt am Main, Germany, assignor to Mitteldeutsche Kuehlerfabrik G.m.b.H., Frankfurt am Main, Germany
Filed July 31, 1958, Ser. No. 752,685
5 Claims. (Cl. 188—252)



4. A brake shoe comprising a flange member provided with a pair of parallel ribs extending in longitudinal direction of said flange member and defining a groove therebetween, and a web member having an edge and a plurality of recesses spaced along said edge and convergingly open toward the latter, said web member being received in said groove with said edge contacting the bottom of said groove, said ribs being deformed at spaced locations into positive locking engagement with said recesses, thereby permanently fastening said web member to said flange member.

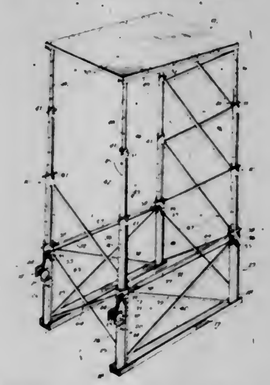
3,017,967
JAIL LOCKING DEVICES AND THE LIKE
Folger Adam, % The Folger Adam Co., 700 Railroad Ave., Joliet, Ill.
Original application July 2, 1956, Ser. No. 595,495, now Patent No. 2,899,027, dated Aug. 11, 1959. Divided and this application Dec. 30, 1958, Ser. No. 784,842
5 Claims. (Cl. 189—7)



1. In a jail locking device, the combination with a vertical cell door and means to support the same for horizontal travel between a door closed and a door open position, of means to lock the door at said closed position, comprising a first top door lock engaging element having an upwardly extending abutment facing in the direction of door opening movement, a bottom second door lock engaging element comprising a downwardly extending flange on the bottom portion of the door and having an abutment facing in the direction of door opening movement, a first top door locking hook pivoted to a stationary part adjacent to the top door lock engaging element at the door closed position for rocking movement between a lowered door locking position and a raised door unlocking position, said first top door locking hook having a hook portion movable into the path of travel of the abutment of the first top door engaging element when the top door locking hook is in its lowered door locking position, and movable above said path of travel when said hook is in its raised door unlocking position, a second locking hook pivoted to a stationary part adjacent to the bottom second door lock engaging element at a location in alignment with the second door lock engaging element flange and at a location adjacent to said flange when the door is in closed position and at the side of said flange opposite to the abutment face of the flange, said second locking hook being movable between a second door lock element engaging position and a position of non-engagement with said second door lock element and having a curved hook portion below the pivotal point of said hook and having a flange engageable end portion, said hook being of form to extend beneath the second door lock engaging element flange and upwardly with its flange engageable end portion into the path of travel of said flange when said curved hook portion is rocked into door lock engaging position and to rock down and below the lock engaging element flange with said hook end portion below the path of travel of the flange for door opening movement, a vertical lock operating bar adjacent to the door closed position, means to support said bar for movement in vertical direction, said lock operating bar comprising a link element unit extending between the top door locking hook and the second locking hook, said link element unit including at least one lost motion lock operating bar section between the top door locking hook and the second locking hook, said lost motion section including a lost motion driving element and a lost motion driven element constituted for movement of the driving element in the

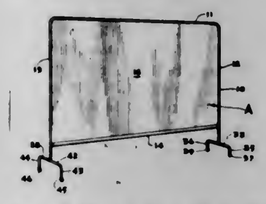
unlocking direction without movement of the driven element, by an amount of movement permitted by said lost motion section, operating connections between the driving element and the first top door locking hook constituted for raising movement of said first top door locking hook into unlocking position when the driving element is raised, operative connections between the driven element and the second locking hook constituted for movement of said second locking hook in the unlocking direction to its unlocked position when the lost motion driven element is moved in the unlocking direction by movement of the driving element an amount more than said permitted lost motion, said lost motion driving and driven elements being constituted for permitting movement of the second locking hook and the lost motion driven element in the unlocking direction without movement of the lost motion driving element in said unlocking direction, together with means to move the lost motion driving element in the unlocking direction and to permit movement of said driving element in the locking direction, selectively.

3,017,968
SCAFFOLD
William Horice McMahon, 3902 Spring Garden St., Greensboro, N.C.
Filed Jan. 14, 1957, Ser. No. 634,124
6 Claims. (Cl. 189—14)



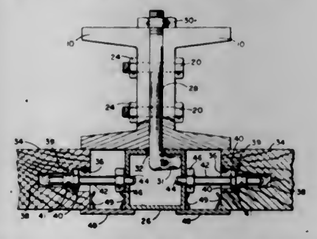
1. An elevating scaffold of the character described comprising, in combination, a first assemblage having a base, a pair of spaced apart vertical outer tubular leg members mounted on the base, cross-brace members for retaining said pair of leg members in spaced vertical relation to each other, each of said tubular leg members having telescopically nested therein a plurality of inner slidable tubular extension members, said outer and certain inner tubular leg members having a longitudinally extending closed end slot reaching for substantially the length of each slotted leg member, the inner leg members each having a hook receiving opening in spaced relation to the lower end of the slot, a manually operable winch mounted on at least one of the outer leg members, cable guide means mounted on the outer leg member in spaced relation to the winch, a cable reaching from the winch and through the cable guide means and having a hook thereon for engaging the hook receiving opening in the leg members whereby upon rotating said winch the inner nested leg members may be raised for substantially the length of a single leg member, a second assemblage similar to said first assemblage in spaced lateral relation and parallel to the first assemblage, and cross-brace members reaching between said assemblages and releasably connected thereto.

3,017,969
PORTABLE PARTITIONS
Harold R. Nielsen, Mendota, Minn.
Filed May 28, 1956, Ser. No. 587,601
7 Claims. (Cl. 189—34)



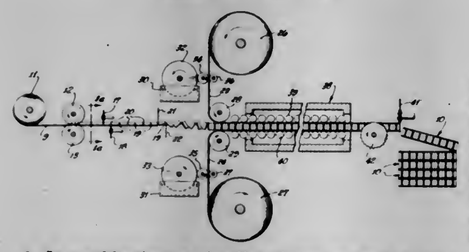
5. A portable partition including a generally rectangular frame, a panel supported to said frame, inverted generally U-shaped leg units supporting opposite ends of said frame and arranged on planes at substantially right angles to the plane of said frame, each leg unit including a central generally horizontal portion and downwardly projecting legs at opposite ends of said central portion, the legs of one leg unit being materially longer than the legs of the other unit to permit the leg unit having the shorter legs to extend beneath a similar leg unit having longer legs when two partitions are brought together.

3,017,970
BUILDING CONSTRUCTION SYSTEM
John E. Nickols, 82 Walden St., Concord, Mass.
Filed Oct. 9, 1957, Ser. No. 689,157
1 Claim. (Cl. 189—34)



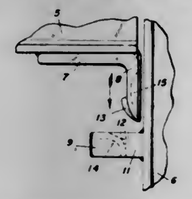
Apparatus for supporting and anchoring building wall panels comprising a generally rectilinear building frame including vertical members, said vertical members being composed of U-shaped metal beams and means for fastening said beams in a back to back position with approximately a ¼" to 1" space between them, said means being bolts and nuts; wall panel supporting posts, said posts being vertical hollow metal posts, walls forming first holes in the side of said panel supporting posts adjacent to said frame, means for fastening said supporting posts to said vertical building frame members, said latter means consisting of fastening pins having leg segments and foot segments, said leg segments having a threaded portion at one end, a middle portion passing through the open space in the vertical building frame members, and a portion at the other end passing through holes in one side of the panel supporting posts, said foot segments being inside said panel supporting posts, said foot segments being sufficiently long so as to be unable to make a complete revolution inside the panel supporting post; nuts on said threaded end portion of said leg segment; wall panels located between said panel supporting posts, said wall panels having horizontal and vertical edges, said supporting posts being closely adjacent to said wall panel vertical edges; walls forming holes in said wall panel vertical edges, said holes consisting of two sections, a first, adjacent to the wall panel edge, with a larger perimeter, and a second coaxial with the first extending further inside said wall panel with a smaller perimeter; walls forming second holes in the side of said panel supporting post adjacent to said wall panel vertical edge, said second holes being adjacent to and in alignment with said holes in said wall panel; threaded metal pins having flat sides to accommodate a wrench located between and extending into said second supporting post holes and said wall panel holes, said pins extending through said first section of said wall panel hole and into said second section of said wall panel hole, means associated with said threaded pins for holding said wall panel in place under compression between said panel supporting posts, said means consisting of first nuts threadably affixed to said metal pin and adjacent to said panel supporting posts, and second nuts threadably affixed to said metal pin, said second nuts having two sections a first lying within said first section of said wall panel hole and a second coaxial with the first lying within said second section of said wall panel hole.

3,017,971
CELLULAR CORED PANELS AND CONTINUOUS PROCESS FOR MANUFACTURING SAME
Charles W. Christman, Los Angeles, Calif., assignor to Formacel, Inc., Los Angeles, Calif., a corporation of California
Filed Mar. 24, 1958, Ser. No. 723,372
7 Claims. (Cl. 189—34)



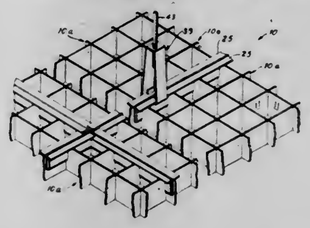
1. In combination: a plurality of sinuous strips having crests on one side and troughs on the other, said strips also having top and bottom edges; a plate for each alternate strip, and secured to the bottom edge of the corresponding strip; a plate for each other alternate strip, and secured to the top edge of the corresponding strip; the plates and strips being serially joined in staggered sequence so that successive strips are located in side-by-side relationship to form cells, and so that the plates form top and bottom enclosures for the cells.

3,017,972
CONNECTION UNITS
Van Rensselaer P. Saxe, 1701 St. Paul St., Baltimore 2, Md.
Continuation of application Ser. No. 475,097, Dec. 14, 1954. This application Nov. 12, 1959, Ser. No. 852,903
4 Claims. (Cl. 189—36)



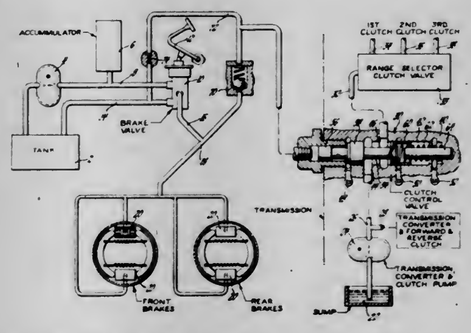
1. An erection seat connecting structural elements constituted by a beam and a column, comprising, in combination, a bracket including a beam attaching leg and a right angularly disposed locking leg provided on its outer face with an offset lug having a shoulder facing toward the attaching leg and also provided on its face opposite the lug with a cavity of greater area than the lug to give it resiliency, and a U-shaped yoke including a bar portion having its ends secured to the column and the medial section of the bar portion having a horizontally disposed recess providing a thinned keeper portion adapted to yield upon engagement by the lug to place its shoulder behind said thinned keeper portion.

3,017,973
LOUVRE AND HANGER THEREFOR
Robert A. D. Schwartz, 1081 Annerley Road, Piedmont, Calif.
Filed May 21, 1958, Ser. No. 736,905
6 Claims. (Cl. 189—88)



1. A louvre of the character described comprising a first set of parallel slats and a second set of parallel slats arranged in transverse, meshing relation to the first set to form a grid with projecting slat ends, and a rim for said grid comprising a strip for each side of the grid formed with slots to form transverse tabs, said projecting slat ends being bent transversely and said tabs being bent back upon the respective strips to form securing tabs, said transversely bent slat ends and said tabs being interlocked.

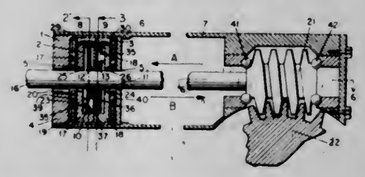
3,017,974
TRANSMISSION CLUTCH CONTROL
Harold L. Lasley, West Des Moines, Iowa, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,793
10 Claims. (Cl. 192—4)



1. In a vehicle, the combination comprising fluid pressure-operated vehicle brakes, a fluid pressure brake system including means for supplying fluid under pressure to said brakes to engage the latter, a power transmission including fluid pressure-actuated drive means engageable

to conduct drive through said transmission and disengageable to interrupt drive therethrough, a fluid pressure transmission system for supplying fluid under pressure to said drive means, a fluid pressure-operated control valve in said transmission system controlling the flow of fluid through the latter to said drive means and having a first position permitting flow of fluid through said transmission system and a second position interrupting said flow, means connecting said brake system to said control valve to adjust the latter from said first position to said second position in response to the application of a predetermined braking pressure in said brake system in excess of the pressure required to adjust said control valve from said first position to said second position, and means connected to said control valve for exhausting fluid pressure from and automatically shifting the latter to said first position at any time that the pressure in said brake system is less than said predetermined pressure.

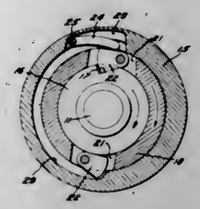
3,017,975
AUTOMATIC SHAFT BRAKE MECHANISM
Vernon Kinser, 11025 Goethe, Detroit, Mich.
Filed June 18, 1958, Ser. No. 742,844
5 Claims. (Cl. 192—8)



1. An automatic shaft brake mechanism comprising a driving shaft, a housing member having an inner wall and being disposed surroundingly of said shaft in radially outwardly spaced relationship thereto, a pair of annular friction members rotatably mounted on said shaft in spaced-apart relationship, a flexible thrust member the plane of which is in normal relationship to the axis of said shaft disposed intermediate said friction members, a pair of annular carrier members, one each of which is fixedly mounted on said shaft between a friction member and the flexible member, a plurality of coupling elements mounted on each carrier member, being disposed circumferentially thereof, for slidable movement longitudinally of said shaft, means for maintaining said carrier members in predetermined spaced relationship, detent means provided on the peripheral portion of each of said friction members for engagement with the inner wall of said housing, said detent means being adapted for opposed action, said coupling elements having enlarged portions at one end for engagement with the adjacent face of said flexible member, and said elements being adapted for engaging on their other ends the confronting portion of the adjacent friction member upon axial movement of said shaft and means provided outwardly of each friction member for enclosing the ends of said housing.

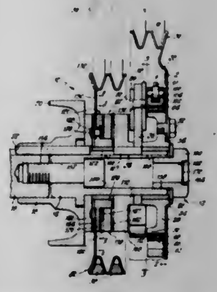
3,017,976
UNI-DIRECTIONAL CLUTCH
Leroy E. Uffman, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,540
2 Claims. (Cl. 192—46)

1. In a clutch mechanism for translating oscillatory motion to intermittent rotary movement, a rotatable driving member having notch means therein, a driven member rotatable coaxially with said driving member and having pawl means thereon cooperable with said notch means, said driving member being oscillatory through a prescribed angle of rotation to drive said driven member intermittently in one direction through said notch means and said pawl means, and a fixed cam member extending along



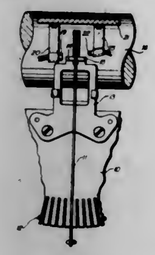
the path of travel of said notch means for holding said pawl means firmly within said notch means substantially throughout the common movement of said driving and driven members.

3,017,977
TRANSMISSION
Sylvan J. Becker, Lombard, and Raymond J. Settimi, Bellwood, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 27, 1958, Ser. No. 711,319
8 Claims. (Cl. 192—48)



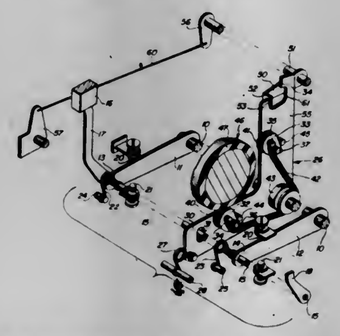
1. A two speed transmission for automotive accessories comprising an input shaft, a first output member, a clutch for drivingly connecting said first output member to said input shaft at relatively low vehicle speeds, a second output member adapted to be drivingly connected to said input shaft at relatively high vehicle speeds, a second clutch interposed between said second output member and said shaft, said second clutch being maintained at relatively low vehicle speeds in overrunning relation with respect to said shaft by said first output member, said first clutch being disengageable at a predetermined vehicle speed, driving means mounted on said input shaft, said second clutch comprising two sections rotatably mounted on said input shaft and relatively movable axially to establish a driving relation between said shaft and said second output member when said first clutch is disengaged, and ramp means on each of said sections for effecting said relative axial movement means connecting said two sections for effecting initial engagement between said driving means connected to said input shaft and said output member.

3,017,978
FAULT SENSING APPARATUS
Herman R. Schulz, Simsbury, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Dec. 15, 1960, Ser. No. 76,024
3 Claims. (Cl. 197—17)



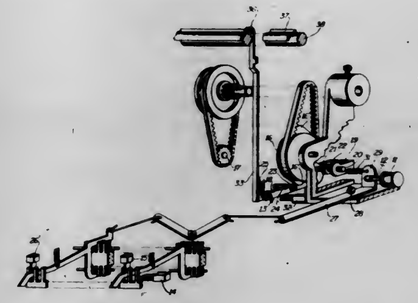
1. In combination with a machine having serially power actuated cyclic mechanisms, apparatus for monitoring the time of passage through a predetermined zone in the path of motion of said mechanisms comprising a light source and a photoconductive cell positioned respectively on opposite sides of the path of motion of said mechanisms, said light source being located to direct a beam of light on the photosensitive area of said cell, circuit means responsive to changes in conductivity of said cell comprising, a condenser for accumulating energy over the interval said beam is blocked by said mechanisms, and means operative in response to a predetermined energy level stored by said condenser for preventing actuation of subsequent mechanisms.

3,017,979
CASE SHIFT MECHANISM
Ernest G. Hoffman, Storrs, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Nov. 25, 1960, Ser. No. 71,529
8 Claims. (Cl. 197—74)



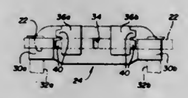
1. In an electric typewriter having a printing element support member mounted for case shifting movement, and a rotatably driven power roll; the improvement comprising operating means for shifting said member, crank means connected to said operating means, a pair of roll cams operatively mounted on said crank means and adapted to be alternately biased into operative frictional engagement with said power roll so as to thereby power shift said member, and a key controlled lever for controlling the movement of said roll cams into engagement with said power roll.

3,017,980
SYSTEM FOR AUTOMATICALLY CONTROLLING LINE FEEDING MECHANISM IN TYPEWRITERS OR LIKE MACHINES
Anthony D'Onofrio, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Oct. 22, 1959, Ser. No. 847,966
12 Claims. (Cl. 197—114)



1. In a typewriter having a carriage adapted for movement in letter feed and carriage return directions including a platen adapted to be indexed whereby a worksheet supported by said carriage may be fed in vertical direction, said worksheet bearing vertically aligned aperiodically spaced marks on predetermined typing lines in accordance with a predetermined worksheet format, means for initiating an incremental platen indexing movement, means for detecting said marks at the typewriter printing station, and means responsive to each detected mark for effecting a subsequent indexing movement of said platen.

3,017,981
RIBBON SHIELD
Douglas L. Keith, Stanford, Calif.
(353 Tennessee Lane, Palo Alto, Calif.)
Filed Dec. 5, 1960, Ser. No. 73,634
6 Claims. (Cl. 197—170)



4. In a machine of the type described, a ribbon shield for protecting the paper to be printed upon from contact with the inking ribbon of the machine, said shield being formed by a thin elongated plate of polytetrafluoro-ethylene having an aperture, guide loops for the guidance of the inking ribbon past said aperture at either side of said aperture, and loops for the reception of supporting arms at its opposite ends.

3,017,982
METHOD AND APPARATUS FOR HANDLING CHARGED PARTICLES
Karl Sittel, Philadelphia, Pa., assignor to Walsco Company, a partnership
Filed July 12, 1957, Ser. No. 671,632
16 Claims. (Cl. 198—1)

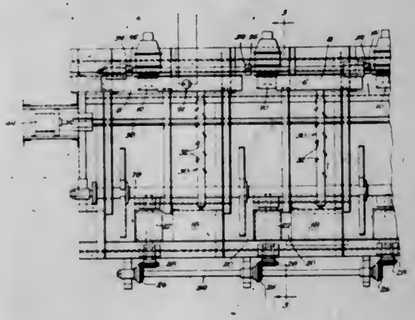
5. A method of handling charged particles of a substantially dielectric material, comprising moving said particles on a two-layer moving belt of a substantially dielectric material and separating the layers of said belt at a pre-

determined point thereby causing the layer of said belt adjacent the particles to acquire the same charge as said



particles propelling said particles from the surface of said belt.

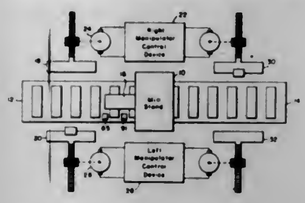
3,017,983
MILL HOTBED
Leonard C. Pietsch, Joliet, Ill., assignor to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 31, 1959, Ser. No. 803,292
3 Claims. (Cl. 198—21)



1. In a hotbed arrangement for a bar rolling mill, a first track means, a second track means spaced from said first track means, movable bar support means interconnecting said first and second track means, pivotally mounted means for collecting a group of said bars at the lower end of said bar support means and movable from operative positions to inoperative positions, said means being cooperatively related to said second track means to effect the transfer of groups of said bars from said movable bar support means to said second track means, stop means for positioning said collecting means in its operative positions, and means for releasing said stop means to permit said collecting means to move under the weight of the bars from its operative position to its inoperative position to transfer said group of said bars to said second track means.

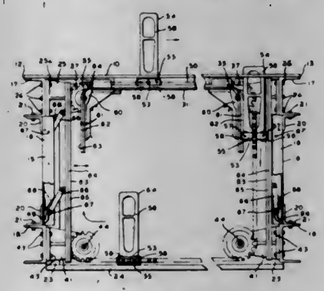
3,017,984
WORKPIECE POSITION CONTROL APPARATUS
Frank G. Willard, Clarence, and Eugene P. Ross, Tonawanda Township, Erie County, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 13, 1959, Ser. No. 826,776
15 Claims. (Cl. 198—29)

1. In workpiece position control apparatus operative with first and second workpiece positioning members for positioning a workpiece, the combination of a first signal providing device for providing a predetermined position reference signal, a second signal providing device for providing a separation control signal for controlling the separation distance between said first and second workpiece positioning members, a first control device operatively connected to said first workpiece positioning member and responsive to at least said predetermined position reference signal and said separation control signal for providing a first position control signal for controlling the position of said first workpiece positioning member, and a second control device operatively connected to said second workpiece positioning member and responsive to at



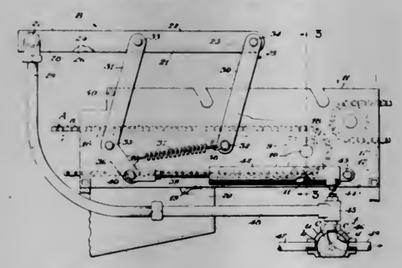
least said first position control signal and said separation control signal for providing a second position control signal for controlling the position of said second workpiece positioning member.

3,017,985
CONVEYORS FOR MACHINES
Walter Kiwi, Torresdale Manor, Pa., assignor to R. H. Hood Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 27, 1960, Ser. No. 5,068
3 Claims. (Cl. 198—170)



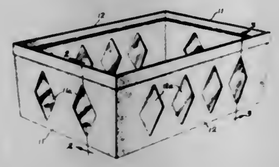
1. A conveyor comprising a frame, said frame including end frame members, a member on said frame having a work surface extending horizontally between said end frame members and providing a work table with a longitudinal conveyor peg opening therealong, and a lower frame plate extending between said end frame members, longitudinally spaced pairs of upper shafts supported by said frame below said work surface, the ends of the shafts of each pair being in separated relation, aligned pairs of sprockets on said shafts, additional longitudinally spaced lower shafts parallel to said first pair of shafts and disposed therebelow in spaced relation thereto, sprockets on said additional shafts in alignment with the sprockets on said first pair of shafts, a pair of transversely spaced endless chains carried by said sprockets, a conveyor peg having a base with spaced pairs of rollers at each end thereof, said base between said pairs of rollers having a shaft connected to said chains for pivotally mounting said peg between said chains, said peg having an impelling arm extending through said opening for longitudinal movement with respect to said work surface, said additional shafts being in pairs and spaced for the passage of the arm of the peg therebetween, upper horizontal guide members engaging said rollers and said chains and retaining said peg with said arm disposed upwardly through said peg opening and having cams at the ends engaged by said rollers for retaining said peg with said arm disposed upwardly, fixed vertical guide members extending downwardly from said cams engaged by one pair of said rollers, and resiliently urged endwise movable guide members engaged by an opposite pair of said rollers for retaining said peg with said arm disposed upwardly, said lower plate providing a support for said peg and said chains.

3,017,986
CONVEYOR WASHING MECHANISM
Virgil E. Ackles, 841 E. 4th St., Los Angeles, Calif.
Filed Mar. 10, 1961, Ser. No. 94,837
9 Claims. (Cl. 198—230)



1. In a mechanism for washing horizontal conveyors, a sprayer extending over the conveyor, means for supporting said sprayer for downward movement toward said conveyor and for upward movement away therefrom, valve controlled means for delivering cleansing liquid to said sprayer under pressure, mechanism operable by pressure of the cleansing liquid being delivered to said sprayer to move said sprayer to a lowered position proximate the conveyor and to retain it in such position, and automatic means for moving the sprayer upward to an elevated position relative to the conveyor and holding it in such position on termination of the delivery of the liquid to said sprayer.

3,017,987
CONTAINER WITH TRANSPARENT WINDOWS
Ernest P. Moslo, 2443 Prospect Ave., Cleveland 15, Ohio
Filed Apr. 3, 1958, Ser. No. 726,172
1 Claim. (Cl. 206—45.31)



A container having an uninterrupted bottom and uninterrupted upstanding side walls extending completely around said bottom, said walls having window portions integral therewith, said walls outside of said window portions being of polyethylene and of a thickness too great to be seen through, said window portions being of the same polyethylene and of a thickness to be seen through sufficiently to recognize the contents of the container, said walls outside of and adjacent said window portions being at least approximately .035 inch thick, said window portions being between approximately .015 to .025 inch thick, whereby said container may be molded in a single operation between male and female molds conforming to the inside and outside faces of said walls, said container having sufficient flexibility to permit said window portions to be stripped from said mold after the polyethylene is set, said walls having sufficient rigidity to generally maintain a box-like shape to the container.

3,017,988
COMBINATION CIGARETTE AND MATCH PACK
Peter Hardychuk, 11785 96th Ave., North Surrey, British Columbia, Canada
Filed May 10, 1960, Ser. No. 28,055
10 Claims. (Cl. 206—48)



1. A combination cigarette and match pack comprising an outer casing having at least one open end, a transverse slot on one portion of said casing, said slot being defined by opposite lips at least one of which extends inwardly of said casing to provide a cam surface, and the other of which overlaps said one lip, a retaining means slidably positioned within said casing and movable through said open end, said retaining means being constructed to hold a plurality of cigarettes in stacked arrangement and having secured thereto the corresponding ends of a packet of matches, the opposite ends of the matches extending freely toward said slot and against said cam lip surface and behind said overlapping lip and actuating means to slidably move said retaining means relative to said casing.

3,017,989
PRESSURE SENSITIVE ADHESIVE TAPE
Jack S. Swenson, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Mar. 3, 1960, Ser. No. 12,512
4 Claims. (Cl. 206—59)

2. Pressure-sensitive adhesive sheet material capable of being wound in roll form and unwound therefrom in normal use, and of being adhered to the surface of automobile tires and subjected to outdoor conditions for long periods of time without embrittling, distorting, or delaminating, said sheet material comprising a flexible hydrophobic cellulosic ester film backing having a melting point in excess of 200° F. and essentially containing acyl groups which have at least three carbon atoms, and a coating of rubbery-base pressure-sensitive adhesive firmly adherently bonded thereto by a thin intervening primer layer comprising in uniform admixture the dried deposition product of an aqueous emulsion of (*a*) a polymeric alkyl acrylate ester which is capable of forming a substantially tackfree film and (*b*) a soft, readily deformable rubbery polymeric material which is compatible with said pressure-sensitive adhesive.

3,017,990
STERILE PACKAGE FOR SURGICAL FABRIC
Sol Singerman, Newtown, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Oct. 31, 1958, Ser. No. 771,084
4 Claims. (Cl. 206—63.2)

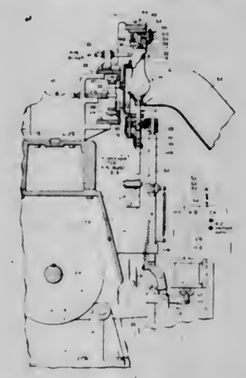
1. A sterile surgical dressing package comprising: a thin, flat, smooth, folded surgical fabric dressing adapted for application directly in contact with a wound surface, and which in such contact is non-adherent to regenerating tissues; a single folded paper shield open on three sides in contact with and surrounding said dressing, said paper shield extending beyond the area of the dressing in all directions, and having one edge extend beyond the

other opposite the fold line, whereby the folded shield may be readily opened; and an outer envelope in which said dressing in said shield is enclosed, which envelope is formed of an adhesively united seamed paper tube, with said seam in one face of the envelope, an adhesively united fold at one end, in which the tube is folded back upon itself and adhesively united to itself, and a heat sealed closure at the other end, in which the two opposing faces of the envelope are heat sealed to each other,



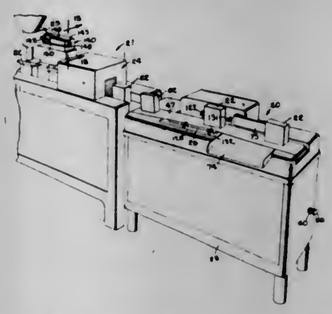
said envelope being longer than said folded paper shield, and having a tear line on one face of the envelope on that portion which extends beyond said folded paper shield, the co-efficient of friction between said shield and said envelope being such that by vigorous tapping said shield may be moved with respect to said envelope, and the co-efficient of friction between said shield and said dressing being such that said dressing maintains its relationship with said shield during such tapping.

3,017,991
ARTICLE INSPECTION DEVICE
Bernard Chauvin, Cedar Grove, and Frederick T. May, Verona, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 25, 1959, Ser. No. 801,809
5 Claims. (Cl. 209—88)



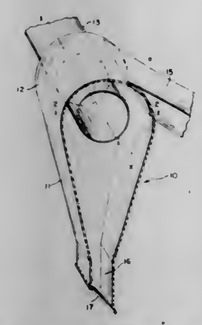
5. A solder-inspection device for a solder-inspection station of a conveyor-type basing machine having a basing head movable from station to station and from which a portion of a lamp base on a lamp projects including an eyelet-solder connection, said solder-inspection device comprising a body, a movable datum member pivoted on said body and provided with a first arcuate-shaped contact member and a pair of datum contacts, said first contact member being engageable by the basing head as the latter moves into the inspection station to adjust the position of the datum contacts with respect to the basing head and thereby compensate for variations in the position of the basing head as the latter enters the inspection station, a first resilient means connected to said datum member for biasing said first contact member toward the path of movement of the basing head into the inspection station, ejecting means for ejecting said lamp, a movable detecting member also pivoted on the body and provided with a second arcuate-shaped contact member and a pair of detecting contacts disposed in operative relation to the datum contacts to indicate the height of the eyelet-solder connection above the basing head by the relative position of such detecting contacts with respect to the datum contacts, said second contact member being engageable by the eyelet-solder connection when the basing head moves into the inspection station to cause movement of the detecting contacts relative to the datum contacts so that if the height of the eyelet-solder connection above the basing head is not within predetermined limits, a detecting contact will engage a datum contact to cause actuation of said ejecting means and the ejection of the defective lamp, and a second resilient means connected to said detecting member for biasing the second contact member toward the path of movement of the eyelet-solder connection into the inspection station.

3,017,992
MACHINE FOR CLASSIFYING PACKAGES ACCORDING TO WEIGHT
Leo F. Matti, Rockford, Ill., assignor, by mesne assignments, to Bartelt Engineering Company, Inc., Rockford, Ill., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,478
11 Claims. (Cl. 209—121)



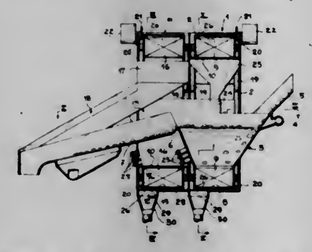
1. A machine for weighing successive packages comprising a frame, a horizontal scale platform having a normal position and operable to deflect vertically under the weight of a package on the platform, means responsive to the deflection of said platform and operable to produce a signal corresponding to the amount of deflection, two stationary platforms, one disposed at each end of said scale platform and each spaced from the adjacent end of the scale platform, an endless belt having a generally horizontal run extending across said three platforms, said stationary platforms being inclined upwardly toward said scale platform to cause said belt to bear against the edges of said stationary platforms adjacent said scale platform whereby the stationary platforms uniformly support the belt throughout the weighing operation, said scale platform and said edges of said stationary platforms being substantially in a common horizontal plane when the scale platform is in said normal position, and means to drive said belt endwise thereby to advance packages across said scale platform.

3,017,993
AIR CLASSIFICATION SYSTEM
Arthur R. MacPherson and Robert R. Turner, Toronto, Ontario, Canada, assignors to Aerofall Mills Inc., Columbus, Ohio
Filed Dec. 31, 1958, Ser. No. 784,129
6 Claims. (Cl. 209—144)



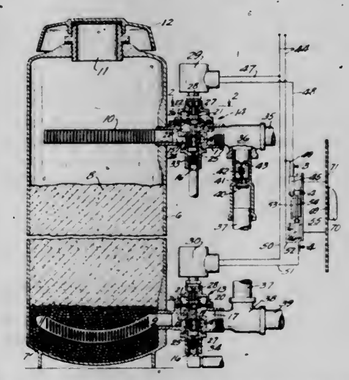
1. A method of separating a coarse solids fraction from a product-laden airstream comprising a mixture of coarse and fine particles emanating from a grinding mill zone while minimizing the attrition of said coarse particles which comprises confining and conducting said airstream immediately emanating from said grinding zone along an unobstructed substantially straight line path of flow tangentially directed to the upper side of a zone of cyclonic flow about a horizontal axis disposed transversely to the direction of flow of said stream, whereby said coarse particles are selectively and centrifugally urged to the outer periphery of said zone, collecting said coarse particles gravimetrically at the lower periphery of said zone of cyclonic flow below the horizontal axis thereof, conducting said airstream with entrained fine solid particles substantially still remaining therein substantially along the horizontal axis of said zone of cyclonic flow from one end thereof and withdrawing the same away from the other end along said axis.

3,017,994
HEAVY MEDIUM SEPARATION APPARATUS
Omer Petit, Ganshoren, Belgium, assignor to CRIBLA Societe Anonyme, Brussels, Belgium
Filed Dec. 14, 1959, Ser. No. 859,250
Claims priority, application Belgium Dec. 22, 1958
2 Claims. (Cl. 209—172)



1. Plant for the separation of granular products of different specific gravities by means of dense liquids comprising first and second containers each having a washing bed for granular products at the upstream side thereof, means feeding dense liquid into said first container, means feeding said granular products into said first container on the whole width of the washing bed on the upstream side thereof, an overflow for the products floating on said dense liquid at the downstream end of said first container, a discharge passage of the overflowed products, a first annular rotary drum around said first container, an opening at the bottom of said first container permitting the sunken products to be discharged into said first rotary drum, vanes in said rotary drum conveying upwardly the sunken products fallen between the vanes, a hopper receiving the sunken products conveyed upwardly by said vanes, guide plates maintaining these products between the vanes until the products arrive at said hopper with its discharge end positioned to discharge the products into the second container on the whole width of the washing bed at the upstream side thereof, said second container having its upstream end positioned out of alignment with the downstream end of the first container, means feeding said second container with liquid denser than the dense liquid with which the first container is fed, a second overflow for the products floating on this last dense liquid, a second discharge passage at the downstream end of said second container of the products floating on this last dense liquid, a second annular rotary drum around said second container and alongside the first drum, said second rotary drum having the same axis as the first drum and through which the discharge passage of the overflowed products of the first container extends in a direction substantially the same as that of said second discharge passage, an opening at the bottom of said second container permitting the sunken products to be discharged into said second rotary drum, vanes in this second rotary drum conveying upwardly the sunken products fallen between the vanes, and a discharge passage receiving these last products, disposed beside the discharge passages for the flotation products of the first and second containers.

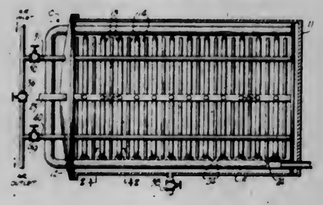
3,017,995
WATER SOFTENER CONTROLS
Benjamin H. Kryzer, St. Paul, Minn., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 8, 1956, Ser. No. 614,639
4 Claims. (Cl. 210—138)



1. A flow control comprising, a first valve having a movable head, a tank connecting port, a waste outlet connecting port and a third port connected to a source of fluid under pressure; a second valve having a movable head, a tank connecting port, a waste outlet connecting port and a third port, means biasing each of said valve heads to a first position in which said waste outlet connecting ports are closed, said third port of the first valve is in communication with the tank connecting port of the first valve, and the tank connecting port of the second

valve is in communication with its third port; independently activatable fluid pressure responsive means operatively connected to said first and second valve heads respectively for selectively actuating said heads to a second position, said first valve head when in the second position closing its third port and placing its tank connecting port in communication with its waste outlet connecting port and the second valve head when in the second position placing its tank connecting port in communication with its waste outlet connecting port and closing its third port; a conduit connecting said third port of the first valve to said third port of said second valve, valve means controlling flow through said conduit; and electro-magnetic means for selectively activating said fluid pressure responsive means to severally move said valve heads to said second positions.

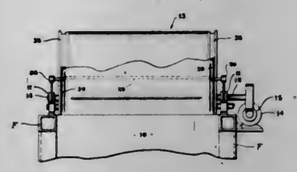
3,017,996
FILTRATION APPARATUS
Clay W. Riley, Palos Heights, Ill., assignor to Industrial Filter & Pump Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed July 14, 1958, Ser. No. 748,281
1 Claim. (Cl. 210—346)



A filter comprising a pressure tank enclosing a filter chamber, a plurality of hollow, filter leaves mounted in said tank in spaced-apart, face-to-face relationship, the faces of said leaves each including a perforate surface area on which a filter cake is adapted to be deposited during operation of said filter, a plurality of inflatable bladders respectively disposed between said leaves, each of said bladders being spaced a sufficient distance from the adjacent leaves to provide space, when deflated, for said cakes to build up, said bladders having facial areas on opposite sides respectively exceeding the area of perforations on the adjacent leaf, the peripheral edges of each said leaf extending outwardly beyond the corresponding edges of the area of perforation on the adjacent leaves, and means to inflate said bladders to compress said cakes whereby the peripheral portions of said bladders, when inflated, extend at least partially over the edges of said cakes to maintain said filter cakes intact on said leaves.

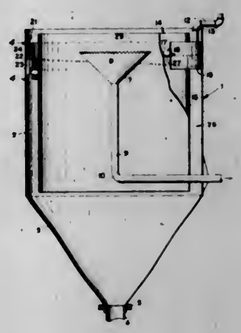
3,017,997
ENDLESS BELT AND DRUM TYPE VACUUM FILTER
Ralph O. Hawkes, Harold G. Hawkes, and Robert M. Morrison, Arlington Heights, Ill., and Aden R. Sirles, Mendham, N.J., assignors to Komline-Sanderson Engineering Corporation, a corporation of New Jersey
Filed Mar. 21, 1960, Ser. No. 16,482
6 Claims. (Cl. 210—401)

1. In an endless belt and drum type vacuum filter unit, a filter drum, means mounting said drum for rotation about a horizontal axis, annular edge seals on said drum, means for rotating said drum, annularly grooved guide sheaves of different diameters than said drum mounted for rotation coaxially with said drum, a discharge roll spaced horizontally from said drum, means supporting said roll for rotation about an axis parallel to the rotational axis of the drum, further guide sheaves of different diameters than said roll mounted for rotation coaxially to said roll adjacent its opposite ends, an endless porous filter belt disposed for movement in an endless circuit around said drum and said roll, relatively parallel tracking elements disposed along the opposite edges of said belt, and each guided for movement respectively around one of said first-mentioned sheaves and one of said further sheaves, said sheaves being arranged to permit substantially free movement of the tracking elements with



the belt, despite differences in diameter between said sheaves and their respectively associated drum and roll, each said tracking element comprising a tubular sheath secured along one edge of the belt and normally of the same length as the belt, and a resiliently stretchable core of lesser length than the belt when the core is in repose and before its disposition around said sheaves, said core being slidably housed in the sheath and stretched around said sheaves to provide tensioned supports for said belt.

3,017,998
APPARATUS FOR SEPARATION OF SOLIDS FROM A LIQUID
Weld E. Conley, Wauwatosa, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 12, 1958, Ser. No. 780,093
7 Claims. (Cl. 210—519)



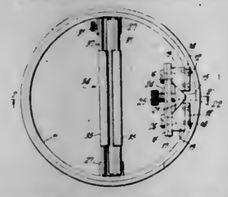
3. Apparatus for the gravity-separation of suspended material from a liquid, comprising a tank having side and bottom walls, means for withdrawing the separated solids and the clarified liquid from the tank, a unitary inner assembly mounted inside the tank and including an upper, annular channel adapted to receive the liquid and suspended solids, a lower cylindrical skirt, means supporting the unit for vertical adjustment within the tank and with the unit spaced from the walls of the tank to form an annular chamber beneath the channel and opening downwardly into the tank and means for distributing the incoming flow throughout the length of the annular channel, said channel having an outer over-flow weir and lower ports both being disposed to discharge into said chamber.

3,017,999
RECORD ALBUM RACK WITH IMPROVED HINGE
Luis C. Cano, Ave. de La Paz 659, Guadalajara, Jalisco, Mexico
Filed Apr. 20, 1960, Ser. No. 23,549
3 Claims. (Cl. 211—40)



2. A selector-type phonograph record album rack comprising a flat base frame having coplanar upper and lower frame members channel-shaped in cross-section with their respective channels opening toward each other, and a slide-away record album holding frame having axially alined outstanding upper and lower studs, said studs being rotatably keyed in their respective channels, the upper stud being cylindrical in cross-section and of a length about equal to the depth of the channel in which it is pivotally keyed, the lower stud being substantially semi-spherical in form and also of a length corresponding to the depth of the channel in which it is removably keyed.

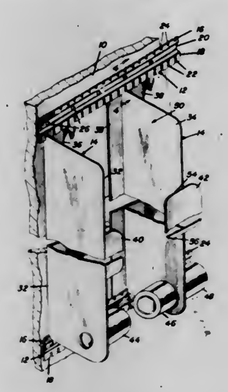
3,018,000
SUPPORTS FOR USE IN CHROMATOGRAPHY AND FOR OTHER PURPOSES
Joseph Kopp, 7013 35th Road, Jackson Heights, N.Y.
Filed Jan. 21, 1959, Ser. No. 788,223
6 Claims. (Cl. 211—45)



1. In combination, a container having vertical inside walls, a support for use in chromatography secured inside the container against said walls and a filter paper holder having horizontal supporting portions, said support comprising a split collar mounted in the container, the collar having juxtaposed ends adjacent the split therein, releasable means secured to said ends for increasing the distance between said ends to expand the collar, the collar having substantially diametrically opposed upright aligned U-shaped brackets spaced from said releasable means, said supporting portions of the filter paper holder having cross-sections complementary to said brackets and registering therein.

3,018,001
ADJUSTABLE DISPLAY AND STORAGE RACK
Clyde M. Combs, San Diego, Calif.
(9250 Brookshire Ave., Downey, Calif.)
Filed July 26, 1960, Ser. No. 45,510
9 Claims. (Cl. 211—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A rack for holding packages or cans in upright stacks comprising a flat backing member adapted to be disposed in a vertical plane, a plurality of anchor rails fixed to the flat side of said backing member in parallel horizontally extending relation, the opposed edges of adjacent rails being outwardly offset from the plane of said backing member and being uniformly notched to provide a corresponding number of elongated notches in the said opposed offset edges the longitudinal axes of which are in end-to-end alignment, a plurality of side-wall panels, structure on the rear edge of said side-wall panels slidably to engage in and hook behind the notched offset edges of opposed anchor rails when said panels are at one position of transverse adjustment relative to



said rails releasably to anchor the said panels to said backing member, there being sufficient play between said panels and said rails and the notches in the upper of said rails being deep enough to allow said panels to be raised far enough in the upper notches to permit the lower edges thereof to be held clear of said lower rail thereby permitting the top end of panels so held to be withdrawn from or brought into engagement with said upper rail and means at least partially spanning the space between the front edges of adjacent panels to cooperate therewith in defining channels to receive packages or cans in vertical stacks including structure to define an inlet to said channels and an outlet therefor.

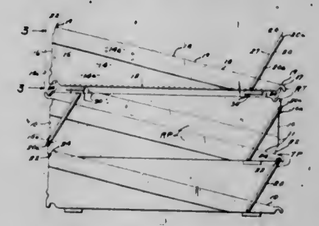
3,018,002
ADAPTER FOR STACKING CONTAINERS
Lewis E. Glezen, Cleveland, Ohio, assignor to Nestaway Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 4, 1960, Ser. No. 124
20 Claims. (Cl. 211—126)



1. In combination, two receptacles of like construction adapted for assembling in stacking relationship including tiering or nesting relationship; each receptacle comprising a bottom load supporting member, and comprising stacking support members rigidly connected to said bottom load supporting member, said stacking support members including upper tiering support members and lower tiering support members, whereby the lower support members of the upper of said receptacles are adapted to engage and

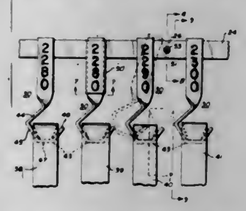
rest upon the corresponding upper support members of the lower of said like receptacles in tiering relationship, there being clearways provided between some of said aforementioned members enterable by said load supporting member of the upper like receptacle by manipulation after which said load supporting member of said upper receptacle may pass downwardly in said clearways to nesting relationship in said lower receptacle; and an adapter of different construction than said receptacles, located between the upper and the lower of said receptacles, and having elements operatively spaced apart a distance different than the corresponding distance between said upper and lower tiering support members and respectively engaged with some of the stacking support members on upper and lower receptacles in another stacking relationship of said receptacles having a height between said receptacles different than said tiering and nesting relationships.

3,018,003
REVERSIBLE AND TILTABLY NESTABLE CONTAINERS
Warren H. Lockwood, 1329 Granvia Altamira, Palos Verdes Estates, Calif.
Filed July 8, 1960, Ser. No. 41,585
13 Claims. (Cl. 211—126)



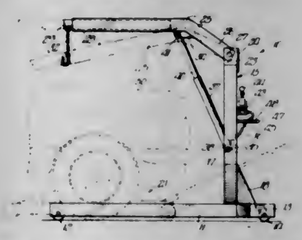
1. A tray adapted for tiering and nesting with trays of like construction comprising a bottom load supporting part, upper edge parts, and side parts rigidly connected with said bottom part and with said upper edge parts, said bottom load supporting part and upper edge parts and side parts including upper tray tiering support elements rigidly connected with said upper edge and side parts, said bottom load supporting part and upper edge parts and side parts including lower tray tiering support elements rigidly connected with said side parts and said bottom part, said upper support elements being each vertically directly above a corresponding lower support element, said parts and elements being so constructed that the lower support elements of one tray are adapted to engage and rest upon the corresponding upper support elements of a second like tray with the bottom parts of the two trays in horizontal orientation in tray tiering position with the perimeter of said first tray vertically aligned directly above the perimeter of said second tray, there being one clearway provided between said bottom load supporting part and upper edge parts and side parts downwardly from one of said upper support elements and enterable by said corresponding lower support elements of an upper like tray in like orientation only by manipulation after which said lower support elements of said upper tray may pass downwardly in said clearway to a nested position in said lower tray, and said parts being so constructed and arranged that the parts of an upper tray nest with like parts of a lower tray in like orientation, said clearway being dimensioned so that it is enterable by an upper tiering support element of an upper like upside down tray after which said upper like tray may pass downwardly in said clearway into receptacle forming position with the lower tray.

3,018,004
ARTICLE SUPPORT
George G. Nesbitt, Denver, Colo., assignor to Denver Wood Products Company, Denver, Colo., a corporation of Colorado
Filed Sept. 22, 1958, Ser. No. 762,335
3 Claims. (Cl. 211—170)



1. A support assembly including a thin flat strip supporting a plurality of article engaging members, and means for supporting said assembly with said strip in spaced relationship to a surface, each of said plurality of article engaging members being formed of a thin strip of material bent at one end to form an elongated loop having a lower restricted opening therein and detachably clipped over said flat strip, said loop being sufficiently long to allow sidewise tilting of a said article engaging member for removal of articles carried thereon without detaching said elements from said flat strip, an article engaging hook formed in the other end of said thin strip of material in a position at right angles to said elongated loop, thereby forming a support assembly in which the individual article support elements are movable sidewise with respect to the said flat strip for removal of articles.

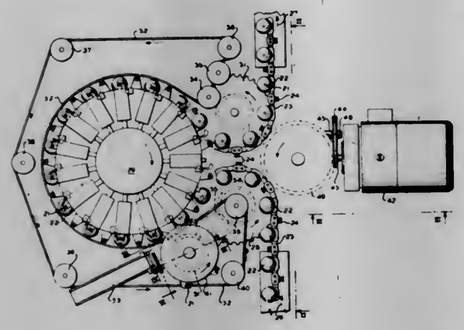
3,018,005
MOBILE CRANE
Robin Renshaw, West Chicago, Ill., assignor to Modern Hydraulics, Inc., West Chicago, Ill., a corporation of Illinois
Filed July 6, 1959, Ser. No. 825,098
4 Claims. (Cl. 212—8)



1. A mobile crane or hoist comprising, a pair of elongated, horizontally extending base members slidably supported slightly above a floor surface, a vertically disposed rigid frame structure having a pair of upwardly and inwardly inclined side members secured together at their upper ends and a horizontally extending brace member secured between the side members intermediate the upper and lower ends thereof, means securing the lower ends of said side members to adjacent ends of said pair of base members whereby said base members are rigidly held in spaced apart, parallel alignment, a boom member having one end pivotably mounted on the upper end of said frame structure, a hydraulic piston and cylinder device pivotably connected between the horizontal brace member of said frame structure and said boom member, and means for actuating said piston and cylinder device to pivotably raise and lower said boom member, said horizontal brace

member of said frame structure being disposed a substantial distance above the upper surfaces of said base members and the opposite ends of said base members being disconnected whereby to provide an unobstructed passageway of substantial height sufficient for relatively low devces to pass between said base members from end to end thereof.

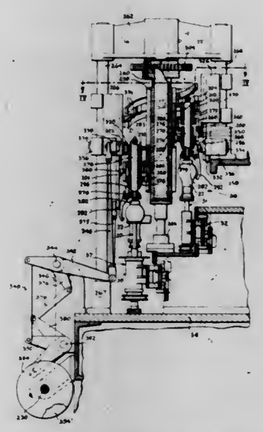
3,018,006
ARTICLE TRANSFER MECHANISM
Edward Z. Zilahy, Nutley, N.J., assignor to Standard Tool and Manufacturing Co., Kearney, N.J., a corporation of New Jersey
Filed Nov. 14, 1957, Ser. No. 696,482
15 Claims. (Cl. 214—1)



1. In article transfer mechanism, means for holding articles of substantially uniform length and diameter, in position for being picked up for transfer by said mechanism, comprising an adjustably mounted guide device, a hopper thereabove, mechanism for feeding one by one such articles upended from said hopper to said guide device, a swivel pin stud formed as an upstanding portion adapted to interfit with respect to the lower end of each of said articles and a depending cylindrical portion, a swivel block pivotally carried beneath and holding the depending portion of said stud, a spring biasing said block to an adjusted position against a stop and means to adjustably shroud a portion thereof and act as a stop for the lower end portion of an article resting thereon, the lower end portion of said guide device being cut away so that it supports each article at only one side, so that the article may be gripped and readily removed at said cutaway portion by virtue of the swivel support of the stud.

3,018,007
TRANSFER APPARATUS
William J. Williams, Bloomfield, N.J., and Richard A. Rehberg, deceased, late of Livingston, N.J., by Henrietta M. Rehberg, executrix, Livingston, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Original application May 5, 1958, Ser. No. 733,077. Divided and this application Apr. 14, 1959, Ser. No. 811,245
3 Claims. (Cl. 214—1)

1. Apparatus for transferring articles from a first movable member disposed in one plane of movement to a second movable member disposed in another plane of movement, comprising a body, an upper casting rotatable with and reciprocable in said body, a pick-up head carried by said upper casting and disposed in a first reference plane, a lower casting reciprocable with respect to said upper casting and said pick-up head and rotatable therewith, operating means connecting said upper casting and said lower casting and operable to reciprocate said lower casting with respect to said upper casting and said pick-up head, said pick-up head being operable by movement of said lower casting with respect to said upper casting to close about an article, means connected to said body for indexing the pick-up head through a plurality of work stations including a pick-up station adjacent said first movable member and a discharge station adjacent said second movable member, cam means disposed between said pick-up station and said discharge station and engageable by said pick-up head during movement of the latter therebetween, said cam means being operable to move said pick-up head from said first reference plane to a second reference plane, a first slide means at such pick-up station engageable by said upper casting, a second slide frictionally engageable with said first slide, a first drive means connected to said second slide and operable to cause movement of said pick-up head from said

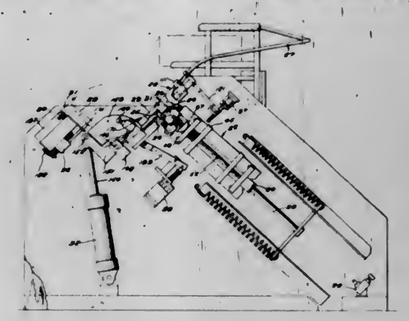


first reference plane and toward said first movable member to juxtapose such pick-up head about an article on said first movable member, a first stop means engageable by said first slide to prevent further movement of said upper casting and said pick-up head, said first drive means being further operable to then move said second slide thereby actuating said operating means and causing movement of said lower casting relative to said upper casting to cause attendant securing of such article by such pick-up head, and reciprocating means at said discharge station engageable by said upper casting and operable to cause movement of said pick-up head from said second reference plane toward said second movable member with attendant deposition of the article on said second movable member, said second reciprocating means being further operable to actuate said operating means and cause said pick-up head to release such article deposited on the second movable member.

3,018,008
RACK LOADING MACHINE
Edward F. Eger, Indianapolis, Ind., and Warren O. Simpson, Findlay, Ohio, assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 9, 1957, Ser. No. 633,297
22 Claims. (Cl. 214—6)

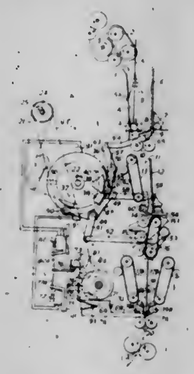
1. An apparatus for loading parts into a rack, means for cyclically advancing groups of parts to the rack, a magazine of spacer members, means for cyclically advancing spacer members from said magazine onto a

group of parts positioned within the rack to hold each group of parts in the rack, and means for cyclically advancing a guiding member to the rack for holding the



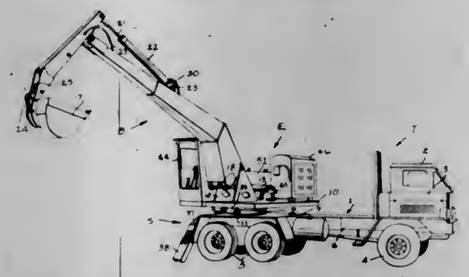
parts on the rack after retraction of the parts advancement means and before application of the spacer member.

3,018,009
LETTER SORTING MACHINES
Howard Osborn and John Douglas Gould, Bristol, England, assignors to The Thrissell Engineering Company Limited, Bristol, England, a British company
Filed July 6, 1959, Ser. No. 825,261
Claims priority, application Great Britain July 21, 1958
8 Claims. (Cl. 214—11)



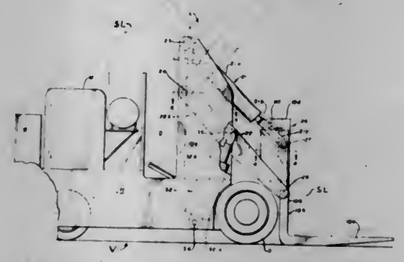
1. A letter sorting machine of the kind having superimposed rows of compartments, conveyor systems therefor, a device for feeding letters from a pile and controls for determining to which compartment a letter is to be delivered, said machine comprising means for diverting successive letters fed to the machine to a different position of at least two possible positions, where a letter waits, a device operated in timed relationship with the conveyor movements to release the letter from said position to a conveyor of the conveyor system, a timing device consisting of a movable member on a rotating drum, and means operated in timed relationship with the conveyor movements to set said timing device, the second said means being arranged to control said device which releases the letter to the conveyor so that release of the letter to the said conveyor is effected simultaneously with the setting of the timing device which device causes the discharge of the letter into said compartment.

3,018,010
HYDRAULIC SYSTEM FOR DIGGING MACHINES
Daniel F. Przybylski, Winona, Minn., assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 23, 1957, Ser. No. 691,906
2 Claims. (Cl. 214—138)



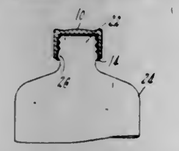
1. In an excavating unit; a rotatable platform; a boom pivoted on the platform, a dipper stick pivoted on the outer end of the boom, and the lower end of said dipper stick being adapted for pivotally receiving an earth working implement, hydraulic motors for rotating the platform, for tilting the boom on the platform, for tilting the dipper stick on the boom, and for tilting the implement on the dipper stick, a tandem hydraulic pump on the platform and a driving engine therefor, a bank of remotely placed valves pertaining to each section of the pump and each bank of valves controlling predetermined ones of the motors of said excavating unit, and control lever means for actuation by the operator of the unit to control the movements thereof, a first group of said valves controlling rotation of said platform, and movement of said dipper stick in one direction, and the other bank of said valves controlling movements of said implement, the movements of said boom, and the movements of said dipper stick in the opposite direction.

3,018,011
INDUSTRIAL TRUCK
Joseph A. Ackermann, Cleveland Heights, Ohio, assignor to The Elwell-Parker Electric Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 29, 1957, Ser. No. 681,009
5 Claims. (Cl. 214—140)



1. An industrial truck comprising: a dirigible vehicle chassis including front and rear paired wheels and an operator's station spaced rearwardly of and proximate to the front wheels; a pair of upright structures located between the said station and front wheels and projecting vertically above said chassis, two like parallelogram-type linkages mounted on the respective upright structures and projecting forwardly therefrom in spaced parallel relation; each linkage including a rigid front link element and generally parallel elongated upper and lower arms with rear ends and front ends connected respectively to the top portion of a corresponding upright structure on the truck and to the rigid front link element by respective like spaced sets of vertically spaced transverse pivots, the two linkages being adapted to swing in respective parallel vertical planes; said linkages being structurally independent and said upright structures being mutually, laterally spaced to afford an operator in said station clear unimpeded vision therebetween forward and also downward to the vehicle supporting area immediately in front of the truck; load engaging means supported on the said rigid front link elements; main power actuators for the linkages including hydraulic cylinder units each operatively disposed between the truck chassis and the lower arm of a corresponding linkage said cylinder units being simultaneously operable to swing the linkages in unison as a single means for raising or lowering a load, said load engaging means being connected to said front link elements by vertically operated hydraulic cylinder means whereby the load engaging means may be lifted vertically while the linkages remain stationary.

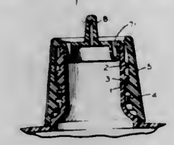
3,018,012
PILFER-PROOF CONTAINER AND CAP THEREFOR
Albert Safianoff, Chicago, Ill., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed June 6, 1958, Ser. No. 740,270
1 Claim. (Cl. 215—7)



A container having a screw-threaded neck portion including an outwardly projecting camming shoulder positioned immediately below the screw-threaded portion, the peripheral edge of said shoulder having a diameter equal to the largest diameter of said screw-threaded portion, and a pilfer-proof screw cap having a main depending skirt portion including an integral lower marginal zone of reduced thickness along the periphery of said skirt of at least 25% less than the main portion, said zone extending radially inwardly from said skirt and closely engaging the lower portion of said shoulder when said cap is fully screwed on the neck portion and positioned to be engaged by said shoulder during removal of the cap, said skirt being made of a thermoplastic composition which has an elongation at break of at least 10% and which is permanently deformable under stress, said engagement of the marginal zone with said shoulder serving to deform said marginal zone outwardly from its inwardly extending position, said marginal zone retaining its deformed position and remaining integrally attached to the remainder of said skirt after removal from said container to provide tangible evidence of said removal when said cap is replaced.

3,018,013
SCREW-TYPE BOTTLE CLOSURE WITH LOCKING DEVICE
Erich Golde, Geretsried via Wolfratshausen, Upper Bavaria, Germany
Filed Oct. 23, 1959, Ser. No. 848,400
Claims priority, application Germany Nov. 17, 1958
7 Claims. (Cl. 215—73)

1. A screw-type bottle closure with locking device made from elastic thermoplastic material for bottles and similar containers equipped with a corresponding thread on the bottle neck, characterized in this, that the thread on the bottle neck on its lower end and the thread on the closure on its upper end each connect into annular protrusions, and that the interior wall of the closure is cut outward



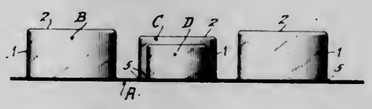
to the core diameter above the upper end of the annular closure protrusion, so that during the application of the closure the closure protrusion is pulled over the bottle neck protrusion and the threads are disengaged in the final position of the closure on the bottle.

3,018,014
DISPOSABLE SAUCER INSERT
Arthur Opolion, 895 West End Ave., New York 25, N.Y.
Filed Mar. 30, 1961, Ser. No. 99,505
3 Claims. (Cl. 215—100.5)



1. A disposable saucer insert comprising in combination, a top member and a liquid absorbtive bottom member shaped for placement within a saucer, said top member having a dished central area concave with respect to the bottom of a saucer, a hollow raised portion peripherally located with respect to said concavely dished central area, openings positioned adjacent said peripherally located raised portion, said absorbtive bottom member having a top side and a bottom side, a peripheral shoulder integral with the said top side, said shoulder being securely receivable within said hollow raised portion and in registry with said openings, said top side being spaced with respect to said concavely dished central area of said top member and said bottom side being adapted to fit within a saucer bottom.

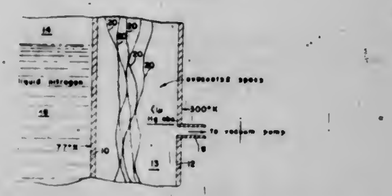
3,018,015
RESILIENT PACKING SHEET
Norton Agriss, 9 White Terrace, Nutley, N.J., and Julius L. Fallick, 15 Chester Ave., Irvington, N.J.
Filed Oct. 2, 1957, Ser. No. 687,787
1 Claim. (Cl. 217—53)



Packing material comprising a single, thin, flexible, foldable sheet of material of substantially uniform thickness throughout having inherent resiliency and a plurality of hollow integral protuberances projecting from the sheet each including a cylindrical side wall of approximately the same thickness as the sheet joined at one end to one side of the sheet and having at its other end an integral flat wall approximately parallel to and above

the general plane of said side of the sheet in a plane approximately perpendicular to said side wall, the protuberance being open at its other end, providing for resilient yielding of said side wall bodily under its inherent resiliency laterally about the juncture of said wall with the sheet and also bellows-fashion in a direction parallel and in directions oblique to its axis, there being a plurality of series of protuberances with the cylindrical walls of the protuberances of each series different in height and in diameter from the other protuberances and in alternately spaced relation thereto.

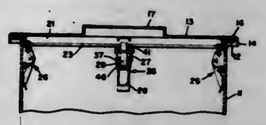
3,018,016
VACUUM DEVICE
Milo P. Hnilicka, Jr., Concord, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Sept. 24, 1959, Ser. No. 842,139
3 Claims. (Cl. 220—10)



1. An insulated vessel comprising an inner chamber to be maintained at a predetermined low temperature, said inner chamber being defined by a first wall, a second wall outside of said first wall and spaced therefrom, said walls being sealed together to form a space between said walls which is evacuated to a total pressure of less than 1 micron Hg abs. when said first wall is at a temperature less than about 100° K., said space containing at least 30 layers of metal-coated-nonmetallic, flexible plastic material surrounding the inner wall, said plastic material being essentially free of any substance having an equilibrium vapor pressure at 20° C. of greater than 10 microns Hg abs., there being between 12 and 120 layers of flexible material per cm. of thickness of insulation space, the metal coating on the flexible material having a thickness less than .25 micron and being sufficiently thick to have an emissivity less than .06, the flexible material having a low heat conductivity to give a low lateral heat conductivity to the metal-coated flexible material of less than 10×10^{-6} watts per square per ° K. at 300° K., the layers of flexible material being permanently deformed, as by crumpling, so that they are free of extensive areas of planar contact while having numerous point contacts therebetween, said layers being essentially free of spacer elements therebetween, the major portions of said layers being held in spaced relation by said point contacts between layers, the apparent thermal conductivity of the insulation being less than about 1 microwatt/cm. ° K.

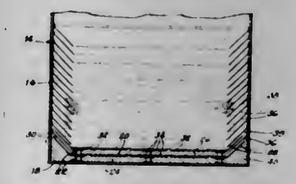
3,018,017
RETAINER FOR TRANSFORMER CASING COVER
Max E. Hill, Woodside, Calif., assignor to Hill Transformer Co., Inc., San Carlos, Calif.
Filed Jan. 12, 1959, Ser. No. 786,220
2 Claims. (Cl. 220—55)

2. In a transformer casing assembly, an open top tank, an apertured cover having a peripheral rim overhanging and resting upon the top of said tank, a cylindrical, short sleeve permanently secured to the underside of said cover and extending continuously around the inside of the upper end of said tank, said sleeve having an inwardly turned curled lip, and a plurality of latches each fixed to the inside of the upper end of said tank and spaced around the inside of said tank, each said latch having an operative and an inoperative position, each said latch having a hook to hook over said lip when said latch is in opera-



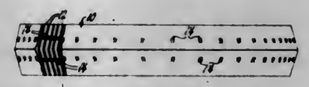
tive position and being disengageable from said lip when said latch is in operative position to permit lifting of said cover from said tank, said latches being manually operable through said aperture.

3,018,018
TANK FOR STORING LOW BOILING TEMPERATURE LIQUIDS
Sterling Beckwith, Lake Forest, Ill., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed July 1, 1958, Ser. No. 745,984
17 Claims. (Cl. 220—63)



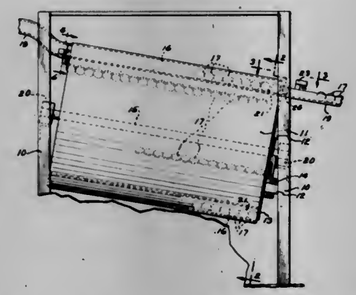
1. In a tank for storing liquefied gas having a boiling point far below ambient temperature, a body having side walls and a bottom impervious to gas and liquid, a pan supported on the lower portion of the tank body in upwardly spaced relation from the bottom of the tank body, the outer peripheral portion of the pan being turned upwardly and outwardly at an angle less than 90° from the bottom of the tank body to hold liquid in the pan, and a louvre secured around the inner periphery of the tank body above the pan and extending inwardly and downwardly into the outer peripheral portion of the pan and in about parallel relationship therewith to overlap the upturned outer peripheral portion of the pan to form a gas pocket extending into the outer peripheral portion of the pan from which vapors are incapable of escape at a rate greater than the introduction of vapors from the liquid to build up back pressure which prevents the rise of liquid beyond the edge of the pan thereby to prevent liquid from flowing over the edges of the pan.

3,018,019
COILED FLAME ARRESTER
George L. Gibbs, Jr., Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1959, Ser. No. 832,213
1 Claim. (Cl. 220—88)



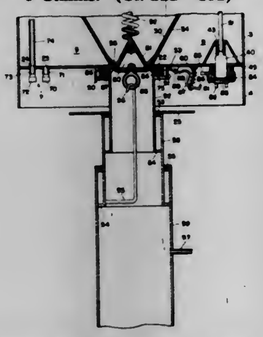
A flame arrester coil comprising a continuously wound metal strip having a plurality of convolutions, said convolutions having a chevron shape cross section, a plurality of circumferentially aligned integral tab members extending along one side of said strip so as to have aligned ends free from the strip, said strip having a plurality of circumferentially aligned openings therein adjacent said tab members, said tabs abutting against and spacing adjacent coil convolutions, said free ends of said tab members being offset axially from said openings to prevent the free end of any tab member in any convolution from registering with any opening in an adjacent convolution.

3,018,020
ARTICLE STORAGE AND DISPENSING APPARATUS
Robert A. Lancaster, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,620
12 Claims. (Cl. 221—10)



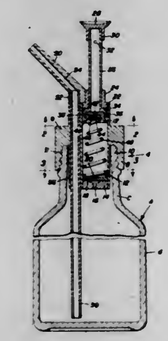
1. A device which receives an intermittent supply of articles and dispenses said articles at a constant rate comprising a storage means, means for mounting said storage means on an incline, said mounting means having supply and discharge chutes secured thereto, normally ineffective gate means within the chutes for allowing the advancement of articles in said chutes, means responsive to the last article in the filled storage means for operating the gate means in the supply chute to render said gate means effective, and means responsive to the filling of the discharge chute with articles for operating the gate means in the discharge chute to render said gate means effective.

3,018,021
SHIPPING CONTAINER
Alfred J. Gorand, Ridley Park, and Charles H. Brooks, Swarthmore, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Mar. 9, 1959, Ser. No. 798,050
5 Claims. (Cl. 222—152)



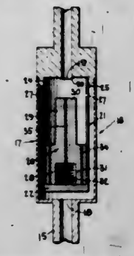
1. In combination, an air-tight container, said container having a filling opening therein; means adapted to close said opening after said container is filled, an emptying valve in said container, means normally biasing said valve to a closed position, valve opening means manually operable to open said valve and thereby allow emptying of said container, conduit means surrounding said valve opening means and adapted to sealingly engage said container and enclose said valve, means for introducing a stream of an inert gas into said conduit means, and separate means operable to supply a pressurized inert gas to the interior of said container.

3,018,022
CLOSURE HAVING AIR PUMP MOUNTED THEREIN
Frank Jones, 1208 Huntington Ave., Sandusky, Ohio
Filed Apr. 2, 1959, Ser. No. 803,753
3 Claims. (Cl. 222—340)



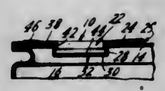
1. A dispensing closure for use on the discharge neck of a ketchup bottle or the like comprising a cap which may be readily attached to and detached from the bottle neck, said cap being provided at a top portion thereof with an outstanding discharge spout, an elongated contents lifting and delivery tube communicatively connected at its upper end to the intake of said spout and having a lower end portion that will descend through the contents of the bottle and assume an intake position close to the level of the bottom of the bottle, and a manually actuatable and controllable mechanical air pump embodied in and constituting an integral and complemental part of said cap, said pump comprising a cylinder, a plunger slidable in the cylinder and provided with a centrally ported piston reciprocable in said cylinder, said plunger having a hollow stem provided with an air vent and normally assuming an elevated ready-to-descend position, said stem being provided on its upper end with a presser knob, said piston embodying a cup having a ported washer seated in the cup portion therein and constituting a first valve, the bottom of said cylinder having a recessed air passage, a second washer located in the bottom portion of the cylinder and having an orifice registering with said passage and constituting a second valve, and a coil spring confined in the chamber of the cylinder and having its lower end resting upon said second valve and its upper end urged and pressing yieldingly against the first valve, said spring functioning to elevate the plunger and piston and to normally close said top valve and serving to automatically return the plunger to its normal elevated position after each downward stroke of the plunger has been completed.

3,018,023
FLUID DISPENSING APPARATUS
Rudolph D. Talarico, 604 Mount Prospect Ave., Newark, N.J.
Filed Feb. 27, 1959, Ser. No. 796,046
14 Claims. (Cl. 222—394)



1. In a fluid dispensing apparatus, the combination of a receptacle for containing a liquid and a gas for pressurizing the liquid to effect discharge of the liquid from said receptacle, said liquid and said gas for pressurizing the liquid being disposed in separate layers, a discharge passageway including an outlet for said receptacle, a manually operable closure for controlling flow of liquid through said passageway, and a valve having an inlet for establishing fluid flow communication between the interior of said receptacle and said outlet when the receptacle is positioned so that the liquid, under pressure of the gas, is in direct communication with said inlet, and said valve having means for closing said outlet when the receptacle is positioned so that the pressurizing gas is in communication with said inlet, said valve being formed with passageway means pervious to gas and impervious to liquid.

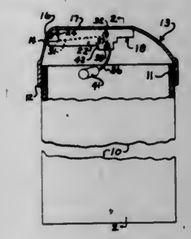
3,018,024
CONTAINER CLOSURE
Delbert Charles Foord, Garden City, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 13, 1959, Ser. No. 852,735
3 Claims. (Cl. 222—498)



1. A container closure for removable insertion into a dispensing opening in a wall of the container, comprising an inner cup-shaped sifter plug resiliently insertable into said opening and having a flat bottom wall provided with sifter perforations, and an outer cup-shaped sealing plug hingedly connected to and removably resiliently insertable into nested relation with said inner sifter plug, said outer plug having a flat imperforate bottom wall for flatly engaging the bottom wall of said inner plug to close and seal said sifter perforations, the hinge connection between said plugs comprising integral flatly folded web portions projecting therefrom to constitute a lifter tab for removing both of said plugs as a unit from said container wall opening.

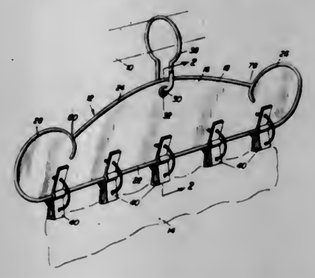
3,018,025
SUGAR DISPENSER
Ted R. Wynn, Rte. 1, Helena, Ala.
Filed May 11, 1959, Ser. No. 812,300
2 Claims. (Cl. 222—500)

1. A sugar dispenser comprising a container, a removable cover member for introducing sugar into said container, there being a dispensing opening through said cover member adjacent one side thereof, a generally horizontal guideway carried by the inner surface of said cover member in alignment with said opening and projecting inwardly of said cover member, a closure member adapted for movement longitudinally of said guideway and disposed to engage said opening inwardly of the cover member, an elongated actuating member attached at one end to said closure member and adapted for movement longitudinally of said guideway, a depending arm



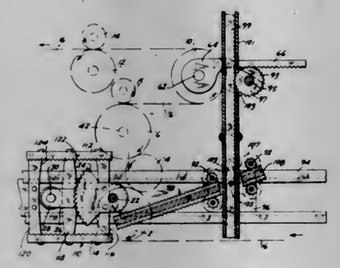
pivotally connected at its upper end to the other end of said elongated actuating member, means pivotally supporting said arm intermediate its ends, and a weight member carried by the lower end of said arm, whereby the elongated actuating member and the closure member are urged in a direction for the closure member to engage said opening while the container is in a non-dispensing vertical position and the closure member is withdrawn from said opening upon tilting the container to dispensing position from the vertical position.

3,018,026
LINGERIE DRYER
William J. Binkley, Minneapolis, Minn. (121 E. Del Rio Drive, Tempe, Ariz.); Clifford T. Binkley, 3758 Lyndale N., Minneapolis, Minn.; and Ralph V. Packer, Robbinsdale, Minn.; said Packer assignor to said William J. Binkley and said Clifford T. Binkley
Filed Sept. 29, 1959, Ser. No. 843,180
4 Claims. (Cl. 223—91)



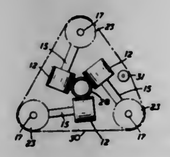
1. A support adapted to function as a dryer, said support comprising a flat plate-like body having a bead along the lower edge thereof and an aperture therethrough intermidate the ends thereof, means extending through said aperture by which to support the body on a supporting structure, and a plurality of clamps engaged with said bead and spaced longitudinally thereof and adapted to grip an object to hold the object fastened to said body, said body being provided with openings above said bead, one for each clamp, each clamp including a pair of arms having upper and lower parts, the lower parts constituting jaw forming parts, the upper parts extending upwardly and outwardly from said body, and resilient means for each clamp extending through the associated opening in said body and engaging the lower parts of the clamp arms for maintaining the lower parts in a closed position, said arms having bearing surfaces intermediate the upper and lower ends thereof, said bead being engaged between said bearing surfaces and said bearing surfaces being held by said resilient means in engagement with said bead.

3,018,027
WEB-FEEDING MACHINE WITH WEB-STOP FEATURE
Arthur Evers, 136 Hicks St., Brooklyn, N.Y.
Filed Jan. 8, 1960, Ser. No. 1,214
15 Claims. (Cl. 226—113)



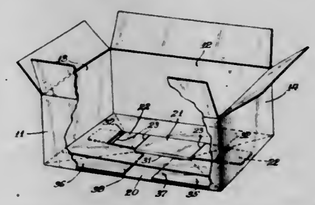
1. Web-feeding apparatus comprising a frame, driving means, web-feeding means on said frame and comprising web-engaging elements operatively connected to said driving means and driven thereby at a speed related to the speed of operation of said driving means, said web-feeding means further comprising a web-speed-varying member adapted to be engaged by said web and movable relative to said frame, and an operative connection between said driving means and said member for moving the latter, said operative connection comprising two alternately operatively engageable sets of parts, one part of each set being driven by said driving means and the other part of each set being drivingly connected to said member, one of said sets of parts driving said member at a substantially constant speed related to the speed of operation of said driving means and the other of said sets of parts driving said member at a variable speed related to the speed of operation of said driving means.

3,018,028
RELATING TO APPARATUS FOR TRANSPORTING ELONGATE OBJECTS
Harry Shaw, Hill Hurst, Healey, Whitworth, Rochdale, England
Filed June 2, 1960, Ser. No. 33,590
Claims priority, application Great Britain June 2, 1959
10 Claims. (Cl. 226—172)



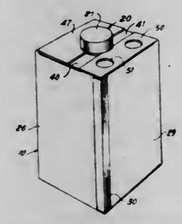
1. Apparatus for conveying elongate objects, said apparatus comprising at least three spaced apart endless conveyor means arranged to define between them a conveying path and to support and convey an object along said path in the direction of the longitudinal axis of said object, drive means for driving said conveyor means in conveying motion, and at least three spaced apart pivotal mounting means each mounting one of said conveyor means about an axis extending parallel to the direction of conveying movement of said conveyor means towards and away from said conveying path whereby to accommodate objects of different cross-sectional areas.

3,018,029
COLLAPSIBLE CONTAINER
John E. Fellowes, Wheaton, Ill., assignor to Bankers Box Company, Franklin Park, Ill., a corporation of Illinois
Filed Oct. 13, 1958, Ser. No. 766,805
3 Claims. (Cl. 229—39)



1. A collapsible container which comprises in combination two side walls and two end walls, a tongued flap connecting to the bottom edge of one of said side walls, said flap terminating in a tongue having two laterally extendable interlocking extensions, each of the latter being in length from about ⅓ to about 1 times the width of said tongue, a slotted flap attached to the bottom edge of the other of said side walls, said slotted flap containing a tongue-receiving slot whose axis is parallel to the plane of said side wall and two interlocking extension-receiving slots spaced to either side of the long dimension of said tongue-receiving slot and whose axes run parallel to the plane of said end walls, flaps connected to each of said end walls shaped to extend to points between said interlocking extension-receiving slots and said tongue-receiving slot when all of said flaps are folded perpendicular to said side and end walls and toward the center of said container and a top closure flap connected to one of said side and end walls.

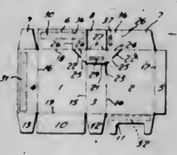
3,018,030
CONTAINERS
Milton Carlos Schnee, 600 Van Horn Drive, Irving, Tex.
Filed June 10, 1959, Ser. No. 819,362
3 Claims. (Cl. 229—39)



1. A container including: a bottom and side walls extending upwardly from the bottom and joined along their lateral edges, said side walls having upper flaps at their upper ends spaced from the bottom and separately foldable inwardly in a substantially common plane parallel to the bottom to extend inwardly and substantially perpendicularly from the side walls, two opposed flaps of

said flaps being of lengths to overlap the inner end portions of each other when extending inwardly, each of said two opposed flaps having a recess in its inner edge of a depth greater than the lengths of the overlapped end portions whereby said recesses are disposed to receive the neck of a receptacle deposited in the carton, one of the other of said flaps extending inwardly from the side wall a distance not greater than half the distance to the opposite side wall of the container and having an arcuate recess in its inner edge for receiving and engaging the neck of a receptacle adapted to be received in the carton, another of said flaps being of a dimension less than half the distance to the opposite side wall and having finger hole means formed therein, said inner edge of the another of said flaps being disposed adjacent the neck of a receptable adapted to be received in the carton when extending inwardly from the side wall and being pivotal outwardly of its side wall.

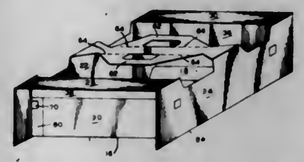
3,018,031
BOXES
Valter A. Ahlbor and Hans O. Neumann, Bromma, Sweden, assignors to Arenco Aktiebolag, Stockholm, Sweden, a Swedish joint-stock company
Filed Nov. 3, 1958, Ser. No. 771,280
Claims priority, application Sweden Nov. 25, 1957
4 Claims. (Cl. 229—44)



1. A carton formed from a single blank of sheet material and including a lid as an integral part thereof, consisting essentially of a substantially rectangular blank scored to provide front, rear and side panels, one of said side panels being between said front and rear panels, a glue flap for retaining said panels in generally tubular form, bottom end flaps extending from one free edge of said front, rear and side panels, and top end flaps extending equal distances from the other free edge of said front and rear panels and from the other of said side panels, a top end flap on said one side panel extending from said panel no further than the top end flaps on the other panels, said one side panel having a transverse slit therethrough, said slit being spaced from said other free edge of said one side panel a distance less than the dimension of the top end flap on said one side panel in the direction of its extension from said one side panel, the corners of said front and rear panels adjacent said one side panel having diagonal slits therein between the ends of the slit in said one side panel and said other free edges of said front and rear panels, and said top end flaps extending from said front and rear panels being hinged thereacross extending from the ends of said diagonal slits, the bottom end flaps being folded and closing one end of said carton, the top end flap extending from said one side panel being folded down against said side panel and being adhered thereto between said transverse slit and said other free edge, and said other top end flaps being folded over and adhered to each other and closing the top end of said carton.

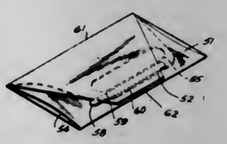
3,018,032
BASKET-TYPE CARTON
Sydney Thomas Butterfill, 56 Handfield Circle, Dorval, Quebec, Canada
Filed June 19, 1959, Ser. No. 821,602
1 Claim. (Cl. 229—52)

A blank for the formation of a basket-type carton, said blank comprising: a single sheet of double faced corrugated board, said sheet being scored parallel to the corrugations to define in part end wall forming panels and being die-cut in part parallel and in part transverse of said corrugations to define a central handle portion delimited in part by said end wall forming panels and in part by side wall forming panels formed by combined scoring and die-cutting transverse said corrugations and a bottom forming panel adjacent one of said side wall



panels defined by a score line transverse said corrugations, said side wall forming panels being cut and scored adjacent their outer margins to provide anchorage for said end wall forming panels when said blank is assembled and erected to rectilinear form, the material of said blank being removed from both said side wall panels adjacent both said end wall panels and adjacent each end of said handle portion.

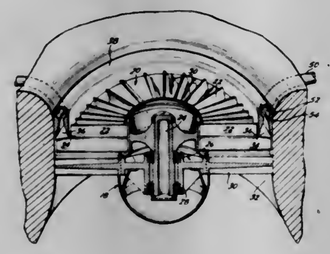
3,018,033
DIRECT AND RETURN MAILING ENVELOPE
Beulah Louise Henry, % Hotel Seville, Madison Ave. and 29th St., New York, N.Y.
Filed Feb. 20, 1959, Ser. No. 794,661
1 Claim. (Cl. 229—73)



A mailing envelope including front and rear walls connected together in closed relation at the bottom and opposite side edges thereof and with an opening into the envelope at the top, said front wall having a window through which the name and address on the letter contained therein is visible, said window being laterally offset in greater spaced relation from one side edge of the envelope than the other, a closure flap integrally connected with said front wall along the open top of the envelope by a weakened tearable line and constituting the direct mailing closure flap and said direct mailing closure flap being tearable along said tearable line for freeing the same from the front wall of the envelope, a closure flap integrally connected with said rear wall along the open top of the envelope and constituting the return mailing closure flap, said return mailing closure flap being of a width greater than the length of said window and of a length from the top to the bottom edge thereof greater than the distance from the upper edge of the envelope to the bottom edge of said window whereby said closure flap covers the window in said front wall when said closure flap is sealed for return mailing, said return mailing closure flap having a side edge which is inwardly curved from an upper corner of the envelope defined by the upper edge and said side edge of the envelope, said inwardly curved edge extending downwardly to a point adjacent the lower edge of the flap, said point being spaced inwardly from said side edge of the envelope a distance about one-third the length of the envelope, said inwardly curved edge being disposed in greater spaced relation from said one side edge of the envelope than

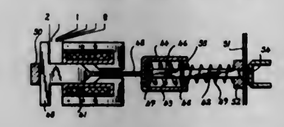
the spacing of the opposite edge of the return mailing closure flap from the other side edge of the envelope to permit the insertion of a finger under the inwardly curved side edge of the return mailing closure flap when the latter flap is disposed within the envelope for convenient withdrawal thereof for use as a return mailing closure flap.

3,018,034
PROPULSION DEVICE FOR VERTICAL TAKEOFF AIRCRAFT
Antonio Ferri, Rockville Centre, N.Y., assignor to General Applied Science Laboratories, Inc., Hempstead, N.Y., a corporation of New York
Filed Nov. 17, 1959, Ser. No. 853,574
4 Claims. (Cl. 230—116)



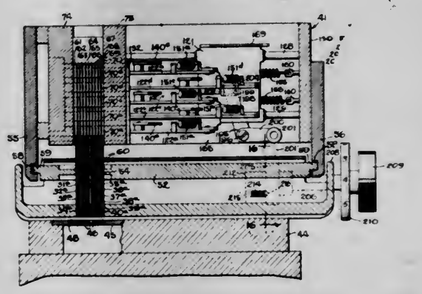
4. An improved propulsion device for an aircraft and the like, said device comprising a multi-blade compressor adapted to rotate around a hub with super-sonic tip velocity, each of said compressor blades having a short integral portion along its length shaped as a turbine blade, and at least one annular nozzle extending in an arc coaxial with said hub closely above said turbine blade portions, said nozzle being adapted to direct a high speed flow of gas onto said portions to drive said compressor, said blades being generally S shaped in cross-section with said turbine blade comprising approximately only half the width of its respective compressor blade.

3,018,035
ELECTRO-MAGNETIC ACTUATING MEANS
Pierre C. Pinton, Paris, France, assignor to Compagnie des Machines Bull (Societe Anonyme), Paris, France
Filed Sept. 27, 1957, Ser. No. 686,711
Claims priority, application France Oct. 5, 1956
2 Claims. (Cl. 234—108)



1. Mechanism for punching record cards or tapes comprising an electro-magnet having an armature, a hollow member fixed with said armature, said member being opened in its upper part, a punching organ comprising a punch adapted to slide in said hollow member, an inside abutment in said hollow member adapted to lean against its upper surface, and a stop member located inside said hollow member thus limiting the displacement of said hollow member in relation to the punch, a first spring of slight resistance, concentric to said punch and connected at one end to a fixed organ near the cutting end of said punch, and at the other end to said punching organ, a second spring of stronger resistance connected at one end to said punching organ, and at the other end to the interior face of said hollow member.

3,018,036
PERFORATING APPARATUS
Donald R. Snowdon and Glenn R. Andersen, Chicago, Ill., assignors to Cummins-Chicago Corp., Chicago, Ill., a corporation of Illinois
Filed Sept. 14, 1960, Ser. No. 55,947
33 Claims. (Cl. 234—111)

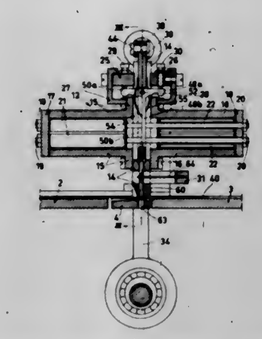


3. In a perforation machine, the combination comprising, a base for supporting an article to be perforated, a supporting head mounted on said base for relative movement with respect to said article, a plurality of elongated punches arranged in a rectangular array of columns and stepped rows with one end of each punch disposed in a common punch plane over an article to be perforated, said punches carried by said head for independent endwise movement, a stepped row of interposers associated with each of the stepped rows of punches, a row of hammers carried by said head and translatable with respect thereto, power means adapted to selectively actuate different combinations of said hammers for driving selected interposers in one of said stepped rows into a position overlying their associated punches, and means mounted on said head effecting incremental translation of said row of hammers so that each of said stepped rows of interposers are selectively and successively positioned.

3,018,037
HOLE PUNCHING DEVICE
Nils Gustaf Erik Stemme, Nasbypark, Sweden, assignor to Aktiebolaget Atvidabergs Industrier, Atvidaberg, Sweden, a Swedish joint-stock company
Filed June 9, 1959, Ser. No. 819,075
Claims priority, application Sweden June 17, 1958
2 Claims. (Cl. 234—119)

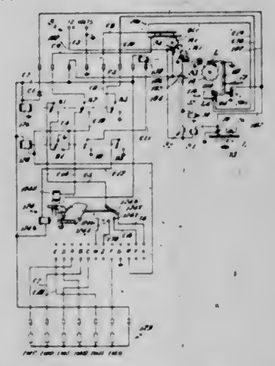
1. In a record perforating apparatus, a frame including a punch guiding portion, means for feeding a record past said punch guiding portion, a die part located opposite to the punch guiding portion on the other side of the record, a slide member slidably supported in said frame, means for imparting a reciprocating motion to said slide member in a plane substantially perpendicular to the record path, a plurality of punches slidably supported in said punch guiding portion, resilient means for holding said punches off the record in a position which is fixed in relation to the frame, a plurality of actuating members one individual to each punch, each said actuating member being mounted in said slide member for movement into and out of position to actuate its corresponding punch, means on said frame for positively moving all said actuating members into punch actuating position at a point in each reciprocation, a selectively energizable

electromagnet for each said actuating member, each said electromagnet being mounted adjacent its corresponding actuating member, and resilient means for urging each said actuating member out of punch actuating position at all other points in each reciprocation of said slide



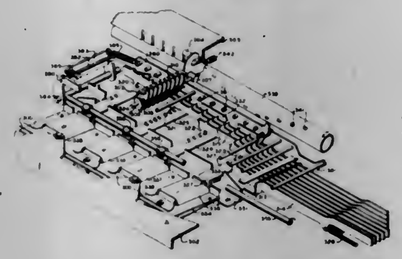
when the respective electromagnet is not energized, whereby said actuating member acts as an armature for the electromagnet and is retained in punch actuating position by said electromagnet during an additional portion of the reciprocation of said slide sufficient to perforate the record.

3,018,038
FARE COLLECTION AND CATEGORIZING APPARATUS
Gardner L. Grant, Providence, R.I., and James C. Hosken, Jamaica Plain, Mass., assignors, by mesne assignments, to Universal Controls, Inc., New York, N.Y., a corporation of Maryland
Filed May 28, 1957, Ser. No. 662,098
28 Claims. (Cl. 235—29)



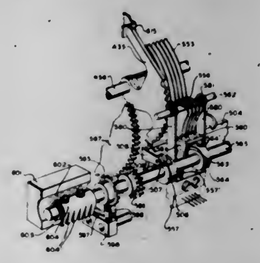
1. In a fare collection and registering apparatus designed to receive fares of different amount and different composition, a memory device, means operable by the coins of a deposit of coins to cause the memory device to store up the total of the coins making up the deposit, counters corresponding in number to the several fares the apparatus is designed to receive, and means operable after the last coin of a given deposit of coins to effect operation of said first means to transfer the total fare stored up in the memory device as a unit to the counter corresponding to that fare.

3,018,039
CODE READ-IN TRANSLATOR FOR CONTROLLING LISTER-CALCULATING MACHINES
Charles A. Parker, East Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed June 25, 1956, Ser. No. 593,508
20 Claims. (Cl. 235—60)



1. In a computer or the like having registering and printing devices and actuator means therefor adapted for movement to and from differentially predetermined positions; the combination therewith of coded read-in translator devices including decoding means displaceable in selective combinations in accordance with coded read-in signals, a plurality of settable stop members for controlling an extent of movement of said actuator means corresponding to a related of said predetermined positions, a shiftable support means for said plurality of stop members, setting means for each of said stop members and moveable normally ineffective thereof, means for effecting a displacement of said shiftable support means to bring said stop members into active position for adjustment by the said setting means, and wherein said setting means is adapted for cooperation with said decoding means for adjusting said stop members selectively to an active position for controlling an extent of movement of said actuator.

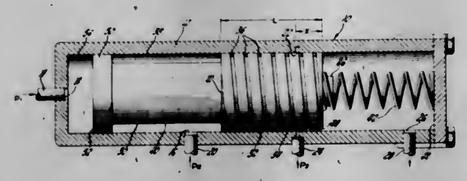
3,018,040
COMBINED BUSINESS MACHINE AND TAPE PERFORATOR
Nathaniel B. Wales, Jr., New York, N.Y., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Jan. 27, 1956, Ser. No. 561,759
32 Claims. (Cl. 235—60.4)



2. In a combined lister calculator and tape punching machine the combination of register/printing devices, differentially movable actuators for controlling digit value operations thereof, cyclic operating devices therefor, value translating means including encoding plates settable in accordance with digit value operations of

the related order actuators and wherein said plates are provided with a plurality of uniformly raised areas and a plurality of uniformly depressed areas, a plurality of sensing fingers related to each order of said plates and co-operable therewith for selective displacement in accordance with said areas presented to said fingers by a digit value setting of said encoding plates, a plurality of punch members adapted for effecting perforations coded in accordance with selective operations of said sensing fingers under control of said encoding plates, and cyclically driven cam means adapted during a cycle of operation thereof to sequentially displace successive orders of said fingers for reading out said encoding plates whereby to sequentially translate into coded circuits the successive orders of digit values and thereby effect a successive series of coded perforations as in accordance with the denominational orders of selected digit values.

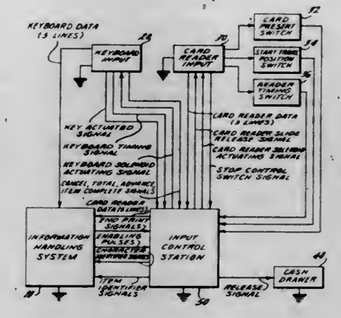
3,018,041
HYDRAULIC FUNCTION GENERATOR
Joseph B. Bidwell, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 24, 1957, Ser. No. 661,505
3 Claims. (Cl. 235—61)



1. A fluid pressure system including first, second and third conduit means each adapted to contain a fluid under a varying pressure, and means connecting said first and second conduits for producing a continuously variable pressure in said second conduit that varies as a function of the changes in pressures in said first and third conduits, said connecting means comprising movable restrictor means having connections with said first and second conduits, said restrictor means being of a shape as to vary the pressure between said first and second conduits from a maximum to a minimum proportionately in accordance with its length, said restrictor means being movable automatically by the varying pressure in said third conduit, the varying pressure in said third conduit being independent from the varying pressure in said first conduit.

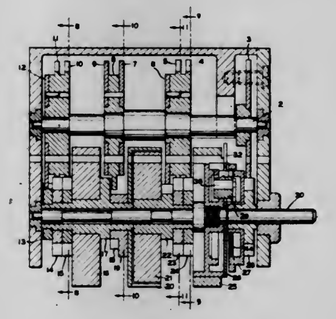
3,018,042
DATA INPUT SYSTEM
David L. Nettleton, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 26, 1955, Ser. No. 484,234
9 Claims. (Cl. 235—61.6)

6. A system for providing characters comprising sales transaction information, and for identifying separate characters and an item class to which said characters belong, said system comprising item identifier means having a plurality of discrete states, character identifier means having a plurality of discrete states including a starting state, keyboard input means providing a plurality of selectable character signals including special control signals, card reader input means providing character signals, circuit means responsive to said character signals for controlling the state of said item identifier means, circuit means responsive to said character signals for advancing said character identifier from state to state in a regular order, and circuit means responsive to said



character signals for resetting said character identifier means to said starting state.

3,018,043
DIGITAL TYPE ANGLE COUNTER
Morgan L. Dring, Belleville, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 13, 1957, Ser. No. 658,714
11 Claims. (Cl. 235—117)



1. A counter mechanism comprising a shaft the unit movements of which are to be counted, a series of index members carrying designations indicating respectively units, tens and hundreds, means connecting said shaft to the units index member to advance said unit member one step for each unit movement of said shaft, a second shaft, means drivingly connecting the first mentioned shaft to the second shaft, second means drivingly connecting the second shaft to the tens index member, third means drivingly connecting the second shaft to the hundreds index member, a shield having an index area covering a portion of the index area of the tens index member and normally positioned out of registration therewith, means adjustably positioned by said second shaft to selectively render the second and third connecting means ineffective, said tens and hundreds index members being selectively driven through said second and third connecting means by said second shaft in a predetermined relation to said units index member, and means operatively connecting the shield integral with the hundreds index member so

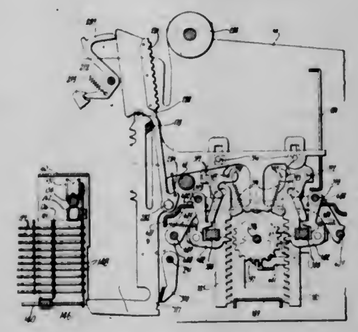
that said shield is adjustably positioned through said hundreds index member in a predetermined relation with said tens index member.

3,018,044
TENS TRANSFER MECHANISM FOR AN ADDING MACHINE

Walter A. Anderson, Trumbull, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware

Original application Dec. 29, 1955, Ser. No. 556,217, now Patent No. 2,942,776, dated June 28, 1960. Divided and this application Dec. 14, 1959, Ser. No. 2,795

5 Claims. (Cl. 235—137)



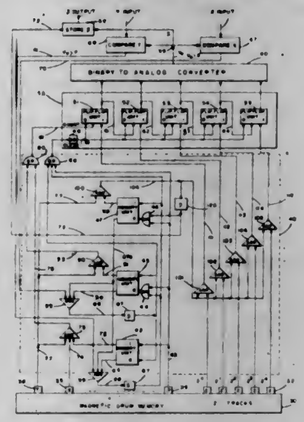
1. The combination with an adding machine having a plurality of register wheel driving racks, a set of register wheels with which said driving racks are adapted to be meshed, actuators individual to said racks, movable each from normal sub-zero position to different digit value positions, a machine cycling mechanism and means including said cycling mechanism whereby said actuators are movable first to the different digit value positions and then are restored to said sub-zero positions; of a cycling-mechanism-controlled means to engage said racks with said register wheels for the duration of the restoration of said actuators, means individually associating said racks with their related actuators so that while said actuators are being restored, the racks are urged to move in resiliently distended relations thereto equivalent to a tens-transfer suppressing stop element on each rack, a related counterstop element associated with each stop element and normally in cooperative alignment therewith for intercepting its associated rack against movement while said actuators during their restorations move from zero to sub-zero position, said counterstop elements severally mounted for movement to ineffective positions, tens-transfer tooth means on said register wheels, means individual to each register wheel and actuatable by the tens-transfer tooth means thereof to move in respect to the rack of next higher order the stop element and counterstop element relatively out of cooperative alignment, whereby only such of said register wheels as require tens-carry transfer movements will receive such movements, cycling-mechanism-controlled means effective before the actuators are being moved from normal sub-zero position to zero position to render the register disengaged and additional cycling mechanism controlled means thereafter to cause said stop elements relatively to the counterstop elements to resume cooperative alignment substantially by the time the actuators become moved beyond zero position and in association therewith to cause all the actuatable means to restore.

3,018,045
SIGNAL TRANSLATING SYSTEMS

William L. Poland, Bethel, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed May 19, 1955, Ser. No. 509,520

14 Claims. (Cl. 235—154)



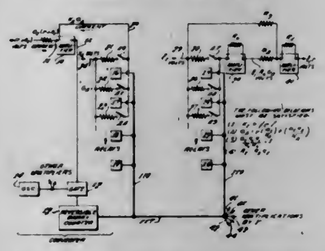
1. In a signal translating system, means for storing information in digital form, a source of timing pulses, a counter for counting and registering said timing pulses, means for converting the digital value registered in said counter into an analog signal, means for generating a compare signal when said analog signal compares in a predetermined manner to a variable input signal, and means for supplying said counter with a digital signal representative of a portion of said stored information selected in accordance with the value registered in said counter when said compare signal is generated.

3,018,046
COMPUTING DEVICE

Arthur W. Vance, Cranbury, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Continuation of abandoned application Ser. No. 90,360, Apr. 29, 1949. This application Dec. 29, 1955, Ser. No. 556,195

14 Claims. (Cl. 235—164)



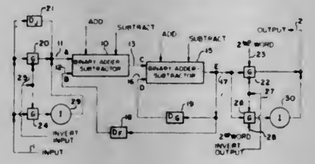
1. In a device for multiplying a multiplicand *l* by a multiplier *r*, the combination of a current summing amplifier, means for supplying to the input of said amplifier a current proportional to the value of *r*, means including a gate responsive to the output of said amplifier for transmitting pulses only when the output of said amplifier exceeds a predetermined minimum, a counter responsive to said last-mentioned means for adding the transmitted pulses when said amplifier output is one polarity and subtracting said transmitted pulses when said amplifier output is the opposite polarity, means for supplying a fixed voltage, a plurality of variable networks, a first one of said networks being connected from said fixed voltage means to said summing amplifier input, means coupling said first and a second of said networks to said counter to be varied responsive to the condition of said counter for establishing in said networks conductances proportional to the value of *r*, and means for applying to said second one of said networks a voltage proportional to the value of *l*.

3,018,047
BINARY INTEGER DIVIDER

Richard J. La Manna, Whippany, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware

Filed Feb. 11, 1957, Ser. No. 639,469

10 Claims. (Cl. 235—165)



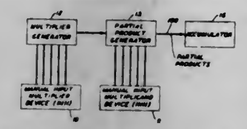
1. A circuit arrangement for obtaining the integral portion of the number of times an integer value is contained in a quantity to be divided represented by a serial train of pulses in the binary notation, comprising a plurality of serial binary adder-subtractor circuits each having an augend-minuend input, an addend-subtrahend input and a sum-difference output connected in chain fashion such that the sum-difference output of each of said adder-subtractors is connected to the augend-minuend input of the adder-subtractor next in line, delay means having a plurality of outputs equal in number to said plurality of adder-subtractor circuits for delaying transmission to each of said outputs of a pulse train applied at its input for an integral number of pulse times related to said integer value, the sum-difference output of said adder-subtractor last in said series being connected to the input of said delay means, each of the outputs of said delay means being connected to the addend-subtrahend input of one of said adder-subtractors, respectively, and means for separately controlling said adder-subtractor circuits to add or to subtract, a pulse train related to said quantity to be divided being presented to the augend-minuend input of the adder-subtractor first in said series and a pulse train related to the number of times said integer value is contained in said quantity appearing at the sum-difference output of said adder-subtractor last in said series.

3,018,048
GATED ACCUMULATOR

Gustav A. Backman, Franklin Township, Somerset County, and William C. G. Ortel, Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 21, 1959, Ser. No. 807,852

2 Claims. (Cl. 235—176)



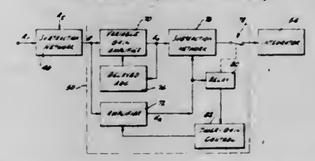
1. In combination in an accumulator, means for supplying partial products which are spaced apart by N digit intervals, first means responsive to said partial products for generating intermediate sum and first carry signals, second means for generating second carry and sum signals, directional coupler means, first coupling means coupling said intermediate sum signals to said second generating means, second coupling means coupling said second carry signals to said directional coupler means, carry signal path means extending between said first generating means and said directional coupler for coupling said first carry signals to said directional coupler, means for propagating first and second carry signals interconnecting said directional coupler means and said second generating means, output path means interconnecting said first and second generating means, each of said first coupling, second coupling, propagating, and output path means including delay means, which delay means are so proportioned that carry signals generated by said second generating means are returned thereto in an accumulator cycle next following the one in which they are generated, and means connected to said output path means for periodically gating the final product digits out of said accumulator at an interdigit spacing of N digit intervals during the time in which partial products are being supplied to said accumulator.

3,018,049
PROBABILITY CURVE AND ERROR LIMIT COMPUTER

David J. Green, Pacific Palisades, Calif., assignor to Lear, Incorporated, Santa Monica, Calif.

Filed Apr. 3, 1956, Ser. No. 575,869

2 Claims. (Cl. 235—184)



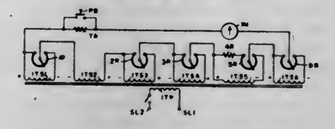
1. A data weighting device comprising a linear amplifier and a variable gain amplifier means to apply a signal to both amplifiers, a subtraction network coupled to the output of said amplifiers, an output circuit to receive the output of said subtraction network, switch means coupling said output circuit to said subtraction network, gain control means for said linear amplifier, means to control said switch means coupled to the output of said linear amplifier and to said gain control means, said switch control means being operative when the output of said linear amplifier exceeds a predetermined level to open said switch means and cause said gain control means to increase the gain of said linear amplifier, and said switch control means being operative upon increase in the gain of said linear amplifier to close said switch.

3,018,050
ECONOMIC DATA COMPUTER

Robert F. Barrell, Lancaster, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 29, 1958, Ser. No. 731,708

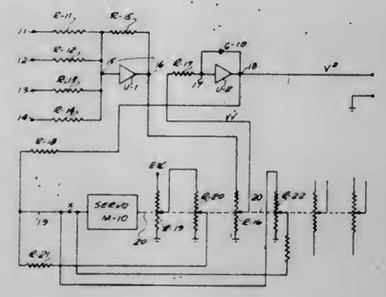
4 Claims. (Cl. 235—193)



1. A computer particularly for computing economic data from an equation expressible as the algebraic sum of

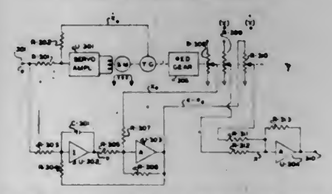
a plurality of terms equated to zero, at least one of said terms being the product of at least two factors, one of the factors of said one term being a variable parameter derivable by solving said equation, said computer comprising conductors for supplying an alternating potential, a plurality of transformers each having primary winding means and secondary winding means, at least one of said transformers being of the variable type, each of said secondary winding means corresponding to one of said terms and the secondary winding means of said variable transformer corresponding to said one term, means connecting said primary winding means to said conductors, a variable resistor corresponding to each of said terms, means connecting each of said variable resistors to the corresponding secondary winding means so that the voltage of each secondary winding means is impressed across the corresponding resistor, a meter, and means connecting in a series network said variable resistors and said meter, each of said variable resistors being poled in said network so that its potential has a polarity corresponding to the sign of the corresponding term in said equation, the turns of the primary and secondary winding means of each transformer being so related that the potential of each secondary winding means corresponds to the range of magnitudes of the corresponding terms and the potential of the secondary winding means of said variable transformer corresponds to the range of magnitudes of said one factor, said secondary winding means of said variable transformer and its corresponding variable resistor being so related that said one factor is registerable on said secondary winding means and the other factor on said last-named variable resistor.

3,018,051
ANALOG COMPUTER APPARATUS
Harold S. Hemstreet, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Oct. 17, 1958, Ser. No. 767,975
5 Claims. (Cl. 235—193)



1. Analog computer apparatus for providing an output potential which varies in accordance with the square of an independent variable from an input potential which varies in accordance with the time rate of change of said variable, in which said output potential is substantially free from "noise" caused by mechanical limitations comprising in combination; a first potentiometer connected to be excited by said input potential and having a contact positioned to derive a first voltage; an electronic integrator comprising an electronic amplifier having a feedback capacitor, said integrator being connected to integrate said first voltage with respect to time to provide said output voltage, a position servomechanism responsive to said output voltage and to a rebalancing potential and operative to provide an output shaft position commensurate with said independent variable, said servomechanism including non-linear squaring potentiometer means operable in accordance with said shaft output position to provide said rebalancing potential, said rebalancing potential varying in accordance with the square of said output shaft position, said contact of said first potentiometer being mechanically connected to be positioned by said output shaft position.

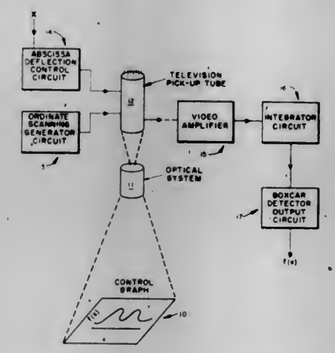
3,018,052
SERVO FUNCTION GENERATOR
Laurence E. Fogarty, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Dec. 13, 1956, Ser. No. 628,136
4 Claims. (Cl. 235—197)



1. Analog computer function generating apparatus for deriving an output potential commensurate with a desired function of an independent variable, comprising, in combination: an electrical velocity servo-mechanism responsive to an input potential commensurate with the time rate of change of said independent variable and operative to move an output shaft at a rate substantially commensurate with said input potential toward a mechanical output position commensurate except for an instantaneous position error with said independent variable; a plurality of potentiometers positioned by said servomechanism, each of said potentiometers being operable to provide a voltage commensurate with an individual term of a power series expressing the value of said desired function, a first of said potentiometers being provided with a voltage versus mechanical position characteristic commensurate with said desired function of said independent variable, a second of said potentiometers being provided with a voltage versus mechanical position characteristic commensurate with the first derivative of said desired function with respect to said independent variable; means for deriving a position error potential commensurate with said instantaneous position error, said second potentiometer being connected to modify said position error potential; and means for combining the voltages from said potentiometers to provide said output potential; said servo-mechanism providing a steady-state mechanical output position commensurate except for said instantaneous position error with the time integral of said input potential, said means for deriving said position error potential comprising means for deriving a first potential commensurate with instantaneous servo output position, an electronic integrator responsive to said input potential for integrating said input potential with respect to time to provide a second potential, and potential comparing means responsive to said first and second potentials for providing a position error potential commensurate with the difference between said first and second potentials.

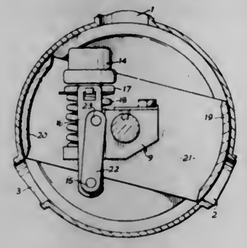
3,018,053
FUNCTION GENERATOR USING TELEVISION-TYPE SCANNING
Frederick C. Alpers, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 4, 1958, Ser. No. 753,165
2 Claims. (Cl. 235—198)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A function generator for generating an output voltage that is directly proportional to a plotted function of an independent input variable comprising a television pick-up tube, means for focussing the image of a plotted function on the face of said tube, scanning generator circuit means coupled to said pick-up tube for deflecting the beam of said tube to scan said face in the ordinate direction of said plotted function, a second means for



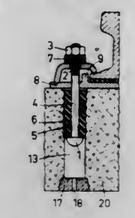
deflecting said beam parallel to the abscissa of said plotted function whereby video signals are generated as said beam crosses said abscissa and said function curve, and circuit means for integrating the time between said signals whereby a voltage output is directly proportional to the instantaneous value of the plotted function.

3,018,054
THERMALLY SENSITIVE VALVES
Frederick Arnold Simpson, Poynings, Penn Road, Beaconsfield, England
Filed Nov. 9, 1959, Ser. No. 851,622
4 Claims. (Cl. 236—34.5)



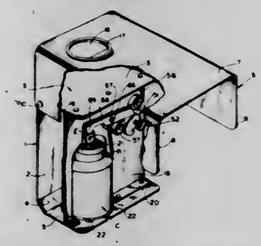
1. A valve comprising a cylindrical enclosed casing, said casing having three ports therein, at least two of which are angularly spaced around its curved periphery, a stationary spindle extending axially between opposed ends of said casing, a port-controlling rotor rotatably mounted on said spindle, said rotor having two arcuate port-controlling shutter members and at least two cross webs holding said arcuate shutter members in spaced relation, a linearly expanding wax-filled thermosensitive element having a piston rod forced outwardly by thermal expansion of wax held in an enclosed chamber and a return spring opposing the piston rod, said element being secured to said spindle at a position between the pair of cross webs on said rotor, a movable head piece on said thermosensitive element, pivot means supported on said head piece, and connecting means pivotally coupled between said head piece and to said webs for transmission of motion from said piston rod to said rotor.

3,018,055
DETACHABLE SCREW CONNECTION FOR RAILS ON CONCRETE TIES
Hermann Oskar Meier, Arcisstrasse 21, Munich, Germany
Filed May 27, 1959, Ser. No. 816,137
6 Claims. (Cl. 238—371)



1. In a detachable screw connection for connecting rails to a concrete tie provided with a plurality of substantially vertical threaded bores extending into the tie from the upper surface thereof: a plurality of dowels respectively located completely within said bores and detachably threadedly engaging the same, each of said dowels having an axial bore therethrough of a polygonal cross section, a plurality of threaded bolts respectively extending through the bores of said dowels, each of said bolts having a shank with a cross section substantially corresponding to the cross section of the respective axial bore receiving the respective bolt and longer than said bore and each bolt being provided with a head resting from below against the lower end of the respective adjacent dowel, said bolts being availed of for threading the dowels into their respective bores, each said bore having a bottom and the length of said bolts being such as respectively to protrude upwardly beyond the upper end of said dowel, and non-rotatable means for securing said bolts above each said dowel having a polygonal aperture receiving the respective bolt to hold the bolt against rotation.

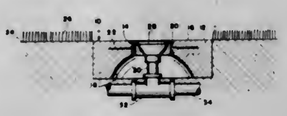
3,018,056
TIMED SPRAY DISPENSERS
Arvid N. Montgomery, Owensville, Ind., assignor to Montgomery Manufacturing Company, Inc., Owensville, Ind., a corporation of Indiana
Filed Sept. 29, 1960, Ser. No. 59,293
10 Claims. (Cl. 239—70)



1. A spray dispenser comprising a frame having means for holding an aerosol container which is provided with a push-type valve, clock means operatively carried by the frame, a cam operatively driven by the clock means, said cam having a relatively quick drop-off shoulder defining a high point, first lever means actuated by the cam for actuating the valve to open position, and second lever means also actuated by the cam, said second lever means being substantially longer than the first lever means and having an extended end, said second lever being positioned to have its extended end ride on the cam so as to

drop from the high point of the cam at a predetermined successive time increment following opening of the valve, whereby to close the valve.

3,018,057
SPRINKLER HEAD SHIELD
August Anderson, 2405 Adams Ave., San Diego, Calif.
Filed July 28, 1959, Ser. No. 830,022
3 Claims. (Cl. 239—201)



2. A sprinkler head shield, comprising:

a unitary, shallow, generally cylindrical block of molded material having a flat upper surface positioned flush with the ground level;

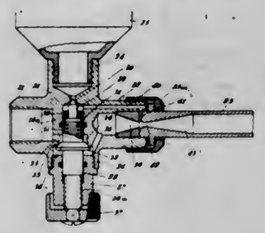
said block having a substantially central inverted funnel-shaped opening extending downwardly from said upper surface;

a unitary cylindrical sleeve fixed in the narrow portion of said funnel-shaped opening;

a reinforcing web attached to and extending radially outwardly from said sleeve into said block; and

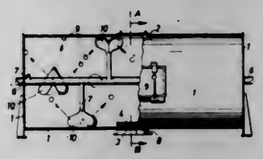
a sprinkler head positioned in said sleeve with its uppermost surface normally below the flat upper surface of said block.

3,018,058
CROP SPRAYERS
Hans Koller, Muhletalstrasse 34, Zofingen, Switzerland
Filed Apr. 22, 1959, Ser. No. 808,235
Claims priority, application Switzerland Apr. 24, 1958
6 Claims. (Cl. 239—318)



1. A sprayer for spraying crops; comprising a hollow distributor body having a liquid inlet defined on one side with a discharge passage defined on a substantially opposite side, a mixing material inlet defined on another distinct side with a valve chamber defined in the center and extending outwardly on a substantially opposite side from said mixing material inlet and being in communication with said liquid inlet, wall means defining a valve seat in said valve chamber adjacent said liquid inlet and a needle valve opening connecting said valve chamber with said mixing material inlet, a first relatively small sized passage defined in said body communicating with the lower end of said valve chamber and said discharge passage, a second relatively small sized passage defined in said body communicating with the upper end of said valve chamber and said discharge passage, nozzle means in said discharge passage downstream of said first small passage connection, said nozzle means including a through passage with a portion of reduced cross-section, and said second passage being connected to said discharge passage at such location, and a combination needle and plate valve disposed in said valve chamber with a needle valve upper end portion closing said needle valve opening and an outstanding plate valve portion intermediate its length closing the communication between said inlet, said valve chamber and said discharge passage, and means to adjust the positions of said needle and plate valve portions to selectively admit liquid and mixing material to said discharge passage.

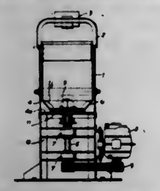
3,018,059
PROCESS AND AN APPARATUS FOR MIXING AND COMMINUTING MATERIALS
Wilhelm Lödige, 9c Elsener Strasse; Fritz Lödige, 9b Elsener Strasse; and Josef Lücke, 13 Im Lohfeld, all of Paderborn, Germany
Filed Jan. 5, 1959, Ser. No. 784,958
Claims priority, application Germany Jan. 8, 1958
6 Claims. (Cl. 241—25)



1. A method of mixing and comminuting a material in a stationary cylindrical drum in which a plurality of mixing instrumentalities are arranged for rotation about the drum axis and in which the distal ends of said instrumentalities are adjacent to the drum and, when rotated, direct loose substances contained in the drum toward said axis, said method comprising the steps of introducing into said drum loose substantially spherical comminuting elements until the elements fill between about 10 and 50 percent of the interior of said drum, introducing into said drum the material to be mixed and comminuted in such quantities that the elements and the material together fill about 70 percent of the interior of said drum, and then subjecting the elements and the material to the action of said mixing instrumentalities by rotating said instrumentalities at a constant supercritical peripheral speed in the range of about 2.5–14 meters per second, based on a drum diameter of 1 meter, whereby the material and the comminuating elements are continuously deflected from the wall and thrown toward the axis of said drum and a comminuting action takes place upon impact of the material against said comminuting elements, against said deflecting instrumentalities and against the interior of said drum.

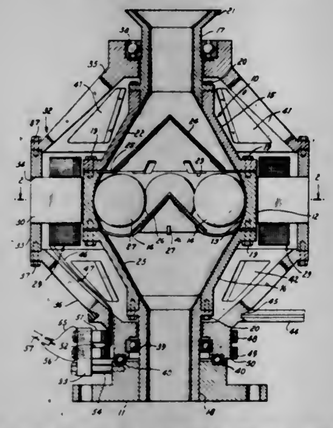
3,018,060
TREATMENT OF MATERIALS IN LIQUID SUSPENSION SUCH AS PAPER PULP
Marc Lamort de Gail, Rue de la Tour, Vitry-le-Francois, France, and Raoul Marie Francois Chagrin de Saint-Hilaire, 30 Ave. du President Wilson, Paris, France
Filed Apr. 1, 1958, Ser. No. 725,712
Claims priority, application France Apr. 9, 1957
4 Claims. (Cl. 241—74)

4. Apparatus for treating fibrous material in suspension comprising, in combination, a tank having a bottom wall; a basket adapted to contain the fibrous material to be treated and being located within and spaced from said tank, said basket having perforated side walls and a bottom wall spaced from said bottom wall of said tank; at least one agitator means located within said basket for agitating the fibrous materials therein and for propelling the material through the perforations in the side wall thereof into the space between said basket and said tank; drive means operatively connected to said agitator means for driving the same and including a drive shaft passing through aligned openings formed in said bottom wall of said tank and said bottom wall of said basket; annular resilient support means interposed between said bottom wall of said tank and said bottom wall of said basket for resiliently supporting said basket in said tank, said annular resilient support means surrounding said drive shaft and



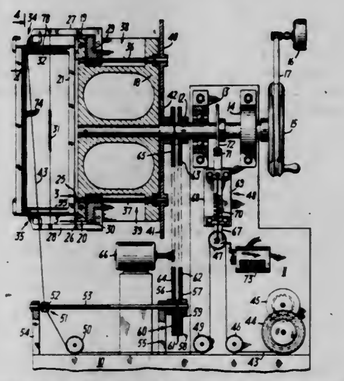
sealingly engaging said bottom walls; vibrator means operatively connected to said basket for vibrating the same so as to prevent clogging of said perforations by said fibrous material; carrying means fixedly connected to said basket and projecting therefrom outside said tank for carrying said vibrator means on said basket; and means for withdrawal of the treated material from said tank.

3,018,061
BALL MILL
Myron S. Mischanski, 27 Englewood Road, Clifton, N.J.
Filed Nov. 12, 1959, Ser. No. 852,348
4 Claims. (Cl. 241—172)



2. In a ball mill for comminuting solid material, a casing arranged on a vertical axis and having an opening for feeding the material to be comminuted and another opening for discharging the comminuted material therefrom, said casing having an annular inner face intermediate said openings against which the solid material is comminuted, a plurality of magnetically attractable balls arranged within said casing for rolling engagement against said annular face for comminuting the solid material, means carried by said casing supporting said balls in adjacent relation to said annular face when the balls are at rest, means carried by said casing for directing the material to be comminuted toward said annular face, a plurality of electromagnets corresponding in number to the number of said balls arranged with their cores disposed radially about said annular portion of said casing, a driven rotatable frame on which said electromagnets are mounted, means rotatably supporting said frame on said casing, and conductor means connected with said electromagnets adapted to be connected to a source of current supply to energize said plurality of electromagnets simultaneously and continuously during the rotation of the same frame to thereby establish magnetic fields passing continuously through said balls respectively for causing said balls to rotate against said annular face with the rotation of said frame.

3,018,062
WINDING MACHINE
Roger P. Rice, Jr., Darien, Conn., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 2, 1959, Ser. No. 850,451
9 Claims. (Cl. 242—50)

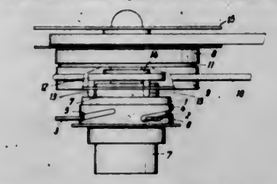


1. A machine for winding wire on a frame member to provide a plurality of parallel wire strands extending from one end of the frame member to the other and laterally spaced by a predetermined distance comprising frame support means for supporting a frame member for rotation about an axis transverse to the longitudinal direction of wire strands to be mounted thereon, wire feed means for feeding wire toward the frame member from a point spaced from the axis of rotation of the frame member, and wire guide means movable with the frame member and positioned adjacent to each end of the frame member adapted to pass the wire around both ends of the frame member with selected lateral displacements so that the wire strands on each side of the frame member are spaced by the predetermined distance.

3,018,063
TAPE REEL DRIVE SYSTEM
Siegmund Loewe, 68 Ridge Road, Yonkers, N.Y., and Robert Erich Schulz, Berlin, Germany; said Schulz assignor to said Loewe
Filed July 18, 1955, Ser. No. 522,506
Claims priority, application Germany July 27, 1954
4 Claims. (Cl. 242—55.12)

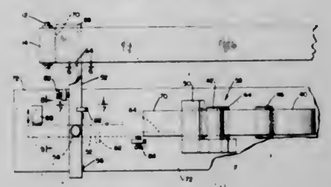
1. A sound record tape driving mechanism including means for high-speed operation, said mechanism comprising in combination: a disc-shaped tape reel carrier, a rotatable, motor-driven first disc frictionally coupled with said tape reel carrier, a first friction layer arranged between said tape reel carrier and said first disc, a second disc parallel to said first disc, a second friction layer arranged on the surface of said second disc, said second friction layer having a smaller surface than said first friction layer, said first and said second disc being coaxially arranged on a non-rotatable shaft in such a manner that said first friction layer is normally in contact with said tape reel carrier, and said second friction

layer being arranged at a small distance from said tape reel carrier, means for axially shifting one of said discs along said shaft into a position in which said tape reel carrier is lifted from said first friction layer and lying on said second friction layer, said shifting means consisting of two concentric cylinders surrounding said shaft,



several circumferentially uniformly spaced guiding surfaces being arranged on one of said cylinders obliquely to said shaft, several radial pins being arranged on the other cylinder each of which lies on one of said guiding surfaces, one of said cylinders being rotatable, and the other of said cylinders being shiftable along said shaft and connected with said second disc.

3,018,064
CAPACITOR TAB INSERTION
William Dubilier, New Rochelle, N.Y., assignor to Cornell-Dubilier Electric Corporation, South Plainfield, N.J., a corporation of Delaware
Filed July 10, 1957, Ser. No. 671,001
3 Claims. (Cl. 242—56.1)



1. Apparatus for inserting rectangularly shaped terminal tab members in a convolutely wound capacitor section as the same is being framed by winding a plurality of converging conducting and dielectric strips upon a mandrel and wherein said converging strips form a bite area adjacent the point of convergence thereof comprising a pair of pivotally connected clamping surfaces for releasably and selectively grasping an edge portion of a rectangularly shaped tab element, means for displacing said clamping surfaces and a tab element releasably grasped thereby toward said mandrel to introduce the edge of said terminal tab element disposed substantially parallel to and remote from the grasped edge thereof into the bite area of said section in substantial parallelism with the longitudinal axis of said convolutely wound section and means for limiting displacement of said clamping surfaces at a predetermined location wherein engagement of said introduced edge of said terminal tab by said converging conducting and dielectric strips being convolutely wound effects removal thereof from said clamping surfaces.

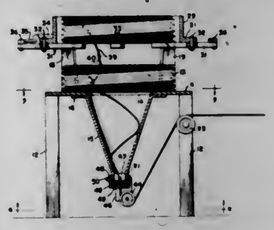
3,018,065
SAFETY HARNESS DEVICE
Clifford E. Cushman, Santa Ana, and Robert J. Wrighton, Tarzana, Calif., assignors, by mesne assignments, to Pacific Scientific Company, San Francisco, Calif., a corporation of California
Filed Mar. 6, 1957, Ser. No. 644,270
20 Claims. (Cl. 242—107.4)

20. An inertia-operated safety device for mounting in a vehicle to restrain the movement of a body within the vehicle when the body is subjected to accelerated movements relative to the vehicle, comprising a tension member for coupling to the body, a reel on which said tension member is wound, yieldable resilient means coupled to said reel tensioned so as to urged said reel in the direction to wind up said tension member thereon, the reel being rotatable against the tension of the resilient means in a direction to unwind the tension member from the reel responsive to movements of the body, and inertia-operated locking means mounted in said device in axial alignment with said reel and a portion of which is arranged for both rotational and longitudinal movement relative to the reel, said inertia-operated locking means including



a flywheel mounted for rotational movement with said reel and yieldable means yieldably coupling said inertia-operated locking means to said reel to rotate said flywheel in unison with said reel during rotation thereof in the unwind direction below a certain acceleration, said yieldable means yielding during rotation of said reel at said certain acceleration whereby said reel rotates relative to said flywheel to produce longitudinal movement of said portion of said inertia-operated locking means relative to said reel, and means operated in response to the longitudinal movement of said inertia-operated locking means for locking said reel against further rotation in the unwind direction.

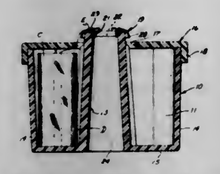
3,018,066
HIGH SPEED UNCOILER
Eben Jefferson Crum, P.O. Box 6763, Towson, Md.
Filed Feb. 12, 1959, Ser. No. 792,757
10 Claims. (Cl. 242—128)



1. An uncoiler comprising a hollow truncated cone member, means supporting the member in a stationary inverted position, means for supporting a first coil of material to be uncoiled above said member, and means for releasably supporting a reserve coil of material to be uncoiled in spaced relation above and independent and free of the first coil.

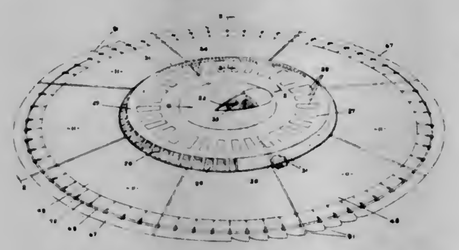
3,018,067
MAGAZINE FOR SEWING THREAD
Norman F. Vandervoort, Ridgewood, N.J., assignor to The Mason Silk Company, Winsted, Conn., a corporation of Connecticut
Filed Dec. 16, 1960, Ser. No. 76,335
4 Claims. (Cl. 242—137)

1. In a magazine for sewing thread for domestic or other sewing machines, a holder having inner and outer peripheral walls and a bottom wall, the inner faces of said inner and outer peripheral walls being fluted to provide arcuately spaced cells, each cell being formed by confronting reversely curved arcuate portions of said inner and outer peripheral walls for receiving in said cells a plurality of cops of thread arranged in supported relation on the said bottom wall, said inner peripheral wall



providing a central opening for receiving a spindle of a sewing machine for rotatably mounting the holder thereon, and a cover removably arranged in covering relation on said outer peripheral wall and having a central opening through which opening the threads from the several cops are dispensed.

3,018,068
DISC AIRCRAFT WITH MULTIPLE RADIALLY DISPOSED GAS TURBINE ENGINES
John Carver Meadows Frost and Thomas Desmond Earl, Georgetown, Ontario, Canada, assignors, by mesne assignments, to Avro Aircraft Limited, Malton, Ontario, Canada, a corporation
Filed May 9, 1955, Ser. No. 507,100
Claims priority, application Great Britain May 11, 1954
12 Claims. (Cl. 244—15)



1. An aircraft comprising a generally lentiform structure sheathed by opposed aerofoil surfaces which provide lift developing surfaces, a group of gas turbine engines positioned between the aerofoil surfaces in a generally radial arrangement with their intakes directed towards the centre of the structure and their outlets directed towards its perimeter, and means encompassing the engine outlets and directing the products of combustion ejected therefrom to provide a propulsive thrust.

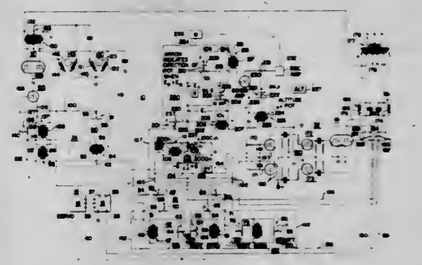
3,018,069
BALLOON FLIGHT CONTROL
Raymond W. Maas, Kalamazoo, Mich., and Rudolph B. Thorness, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 27, 1957, Ser. No. 699,431
8 Claims. (Cl. 244—32)

3. In combination with a high altitude balloon adapted to reach ceiling altitude and having a line suspending a load, apparatus supported by the balloon for programming the balloon flight, the apparatus comprising ballast, electrically fired devices for dumping predetermined quantities of ballast and for severing the load line, a switch contact arm, an aneroid bellows for sweeping the arm in one direction or the other respectively with ascent and descent of the balloon, contacts connected to the several devices and arranged in a series coextensive with the part of the sweep of the arm corresponding to positions of the balloon up to an altitude substantially below ceiling altitude, means biasing the arm toward the series of contacts, a source of electric energy connected to each of the devices and to the arm, and means preventing engagement of the arm with any contact during substantially sustained ascent of the balloon from launching to ceiling altitude and until the balloon has undergone a predetermined magnitude of descent, the contact con-



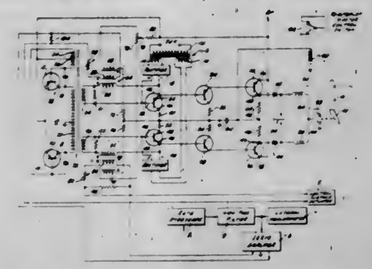
nected to the line-severing device being located at the bottom altitude end of the series of contacts, whereby, on each descent of the balloon from ceiling altitude sufficient to bring the arm into engagement for the first time with any of the ballast-controlling contacts, the corresponding device will operate to dump ballast, enabling the balloon on each such dumping to ascend toward ceiling altitude, and, on descent of the balloon sufficient to effect engagement of the arm with the load line severing device controlling contact, the load will be released from the balloon.

3,018,070
AUTOMATIC CONTROL SYSTEMS
Robert F. Helfinstine, Coon Rapids, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Jan. 23, 1957, Ser. No. 635,867
15 Claims. (Cl. 244—77)



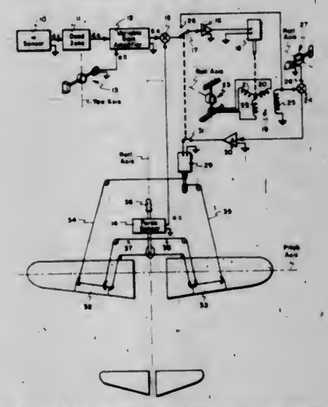
1. Control apparatus for a dirigible craft having an operable means for controlling longitudinal attitude thereof comprising: servo means positioning said operable means; a balanceable control circuit having output points and normally controlling said servo means including sources of control signals; signal generating means having output points and including means responsive to the altitude and air speed of said craft providing one signal and means responsive to the normal acceleration of said craft along its vertical axis for providing a further signal; means for comparing the magnitudes of the outputs of the signal generating means and the balanceable control circuit; and additional means responsive to said comparing means upon a predetermined difference of magnitude of said control signals for rendering the balanceable control circuit ineffective and the signal generating means effective to control said servo means, to limit the signal applied by said control circuit to said servo means.

3,018,071
TRIM CONTROL SYSTEM FOR AUTOPILOTS
William F. Horton, Malibu, and Robert G. Engman, Santa Monica, Calif., assignor to Lear, Incorporated
Filed Aug. 1, 1957, Ser. No. 675,595
5 Claims. (Cl. 244—77)



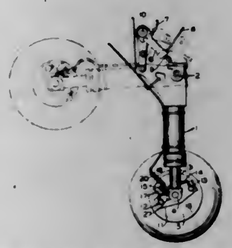
4. For use in a trim surface control system for aircraft, wherein the trim surface control motor is to be operated in response to time-modulated pulses, the combination comprising reactor means having a bias winding, a control winding and a load winding all in mutually inductive relation, a transistor having emitter, base and collector electrodes, said load winding being connected in circuit with the emitter-base current path of said transistor, said reactor means together with the emitter-base connection with said load winding forming a magnetic amplifier, means to apply a cyclical voltage to said load winding, means connected to said bias winding to limit emitter-base current flow to a minimum level when said control is not energized, means to apply a direct current control voltage to said control winding, and said magnetic amplifier in the presence of a direct current control voltage across said control winding effecting emitter-base current flow through said transistor during a predetermined portion of each cycle of said cyclical voltage to establish at said collector electrode voltage pulses of constant magnitude and of a duration corresponding to the magnitude of the direct current voltage applied to said control winding.

3,018,072
AIRCRAFT ROLL STABILIZING APPARATUS
Raymond I. Meyers, Rockford, Mich., and Kenneth C. Kramer, Woodland Hills, Calif., assignors to Lear, Incorporated
Filed Sept. 21, 1959, Ser. No. 841,215
4 Claims. (Cl. 244—77)



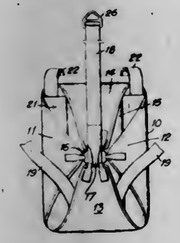
1. In an aircraft having roll control surfaces and roll control actuating apparatus, roll stabilizing apparatus comprising a first means for generating a first electrical signal in response to the angle of attack of said aircraft, second means for generating a second electrical signal proportional to the rate of turn of said aircraft, variable gain amplification means connected and responsive to the output of said first and second means such that said first electrical signal determines the amplification of said second electrical signal when said first electrical signal amplitude exceeds a given amplitude and means for transmitting said amplified second signal to said roll control actuating apparatus.

3,018,073
AIRCRAFT BRAKE STABILIZING ARRANGEMENT
Arthur J. Bent, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Oct. 7, 1957, Ser. No. 688,466
4 Claims. (Cl. 244—111)



1. In a hydraulic brake system for controlling braking of an aircraft landing wheel, the combination with a landing gear that operatively carries the landing wheel and is flexibly "walkable" backward and forward when brakes are applied and released, a control line in which hydraulic fluid is provided at a pressure corresponding to a degree of brake application desired, a brake cylinder, and an anti-wheel slide controller device including valve means normally in one position to connect said brake cylinder with said control line and operable to another position to disconnect the brake cylinder from the control line and connect the brake cylinder to a release communication in bypass of the control line, and including retardation sensing means operatively connected to the wheel and operably responsive to a rate of retardation of the wheel exceeding a predetermined permissive rate to actuate said valve means to its said other position and operably responsive to a retardation rate less than said permissive rate to actuate said valve means to its said one position, of an accumulator device including a casing communicating at one end only with said brake cylinder line and said brake cylinder, displaceable and imperforate means in said casing defining a first chamber at said one end of said casing and a second chamber on the other end of said casing, yieldable means in said second chamber for applying to said displaceable means in one position thereof a predetermined biasing force corresponding to a fraction of maximum brake line pressure in said brake cylinder oppositely to said pressure in said first chamber corresponding to said pressure in said brake line and said brake cylinder, said displaceable means being responsive to braking pressure in said brake cylinder exceeding said predetermined biasing force to increase the volume of said first chamber relative to said second chamber and thereby to vary the effective volume of the brake cylinder so that the release and application of brake line pressure to said brake cylinder caused by the operation of said valve means is delayed and out of phase with the flexure frequency of the landing gear.

3,018,074
PARACHUTE PACK
John Raymond Cuthbert Quilter, Woking, England, assignor to G. Q. Parachute Company Limited, Woking, England, a British joint-stock company
Filed Sept. 5, 1958, Ser. No. 759,198
Claims priority, application Great Britain Sept. 9, 1957
4 Claims. (Cl. 244—147)



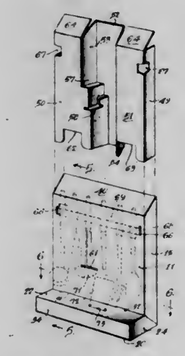
1. A parachute pack comprising a main parachute, a first container for said main parachute, an auxiliary parachute, a second container for said auxiliary parachute, a first connecting means for securing said second container to a load, said first connecting means being releasably attached to said second container, a second connecting means for securing said auxiliary parachute to said first container, a third connecting means for securing said main parachute to the load, a delay-action mechanism connecting said first connecting means to said auxiliary parachute and adapted to release said first connecting means, and a static line adapted to release said second container for deployment of said auxiliary parachute, said auxiliary parachute then affording a relatively weak support to said load by said first connecting means until said delay-action mechanism operates to release said first connecting means, whereupon said auxiliary parachute causes said second connecting means to remove said first container from said main parachute, the latter then descending with the load supported by said third connecting means.

3,018,075
KITE FRAME ASSEMBLY
James C. Bowers, 1506 E. Kiowa St., Colorado Springs, Colo.
Filed Sept. 8, 1958, Ser. No. 759,467
3 Claims. (Cl. 244—153)



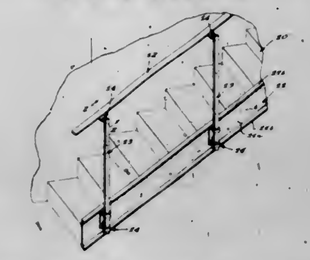
1. A frame assembly for making a plurality of different types of kites comprising a cylindrical base member having a plurality of series of stick-engageable holes peripherally in said base, said holes being arranged in generally two closely spaced series peripherally around the base, the first series of holes having their axes generally parallel with a plane and radiating outwardly from a central point in the base, the second series of holes having their axes at a slight, predetermined angle to the said plane, a plurality of sticks mounted in a predetermined group of holes in the first series, a second plurality of sticks mounted in a selected group of the second series of holes, a cover mounted on the two selected groups forming two flat planing surfaces one on each side of a main spar composed of the sticks of the first group, and the sticks of the second group arranged to support said cover forming said planing surfaces at a predetermined dihedral to the sticks of the first group forming said main spar.

3,018,076
MERCHANDISE PACKAGING ASSEMBLY
Richard E. Paige, New York, N.Y., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,974
3 Claims. (Cl. 248—37.3)



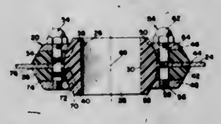
2. A merchandise packaging assembly including a collapsible tubular display unit, said unit having a front panel and a rear panel and a pair of side panels to which said front and rear panels are joined for collective movement between a collapsed position and an erected position wherein said panels define a hollow body of rectangular cross section, a base for supporting said walls in upright position, said base including a bottom section to which said rear panel is joined by a transverse hinge, said bottom section being of such dimension as to extend in forwardly projecting relation to said front panel when bent about said hinge into a position in angularly forwardly extending relation to said rear panel, a separate stiffening member interposed between said front and rear panels, said stiffening member including a pair of side panels with which the inner surface of the front panel of the display unit is engageable, and an intermediate panel offset rearwardly of said side panels of the stiffening member for engagement with the inner surface of the rear panel of the display unit, said intermediate panel and said side panels being joined by connecting wings along spaced apart hinge lines parallel to the hinge lines about which the panels of the display unit are joined for collective movement, one of said connecting wings having a transverse cut to define a lower section and a second section above said lower section, said lower section being joined to the panels of the stiffening member connected thereby along spaced parallel hinge lines in such deviating relation to the hinge lines between the second section of the connecting wings and said panels of the stiffening member joined thereby as to define an upwardly facing edge extending in forwardly offset relation to said intermediate panel, and a slot in the front panel of the display unit in alignment with said upwardly facing edge of the connecting wing section.

3,018,077
STAIR RAILING
Albert E. Buehler, Chicago, Ill., assignor to B-W Metal Works, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 11, 1959, Ser. No. 832,995
2 Claims. (Cl. 248—43)



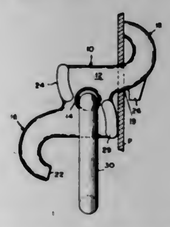
2. A stair rail post support for mounting on a stair stringer and adapted for fitting between the flanges of a channel beam type stringer against the web of said channel beam type stringer which comprises a narrow metal base strip having flat faces including a back face for mating with the stair stringer and a front face opposed to the back face, a first pair of bolt holes near the ends of the strip, a second pair of bolt holes in the intermediate portion of the strip, a pair of collars having laterally projecting bosses, first fasteners bottomed on the back face of said strip projecting through said first bolt holes and threaded in the bosses of said collars to unite the collars to the strip in fixed position when tightened and to accommodate rotation of the collars on the strip for correcting misalignments when loosened, the end faces of said bosses and the front face of said strip having confronting flat surfaces adapted to be thrust against opposite sides of spacers surrounding the first fasteners for controlling the projection of the collars from the strip, second fasteners in said second bolt holes bottomed on the front face of said strip for threading into the stringer to mount the strip on the stringer, set screws threaded through said collars adapted to project into the collar apertures in biting engagement with a post carried by said collars to lock the post to the collars whereby said post can be moved to any desired level relative to the stringer and on the job adjustments can be made to align the post relative to the stringer.

3,018,078
DEVICE FOR MOUNTING A CONDUIT TO A TANK
Donald R. Holdren, West Liberty, Ohio, assignor to Holdren Brothers, Inc., West Liberty, Ohio, a corporation of Ohio
Filed Jan. 21, 1960, Ser. No. 3,793
7 Claims. (Cl. 248—56)



7. A mount for a tube extended through an opening in the wall of a tank, said mount comprising, in combination, a resilient bushing having a spherical outer surface; first and second spaced resilient body portions having inner spherical surfaces conforming with and engaging said outer spherical surface; first and second rigid washers overlying said resilient body portions, each of said washers including a hole forming an inwardly facing annular edge conforming with and engaging said spherical outer surface; and clamping means for moving said rigid washers towards one another and for pressing said annular edges against said spherical surface to form crevice free seals for applying a radially inwardly directed force to said resilient bushing whereby said bushing frictionally grips said tube, and for urging said resilient body portion into sealed engagement with said tank wall.

3,018,079
TIE DOWN DEVICE
Gerald D. Stough, Detroit, and Harry V. Collins, Birmingham, Mich., assignors to Whitehead & Kales Company, River Rouge, Mich., a corporation of Michigan
Filed Mar. 26, 1956, Ser. No. 573,748
1 Claim. (Cl. 248—119)



The combination with an upright plate-like anchorage member provided with a horizontally extending elongated opening, of a tie down hook having an upright body portion upon one side of said anchorage member and provided intermediate the upper and lower ends thereof with an opening for receiving a part of a tensioning element, the side of said body portion adjacent said anchorage member being provided at the lower end thereof with an integral horizontally extending crossbar and provided at the upper end thereof with an integral outwardly projecting substantially C-shaped hook portion, said crossbar being substantially parallel to and engageable with said one side of said anchorage member, said hook portion projecting through said elongated opening and extending upwardly upon and curving toward the opposite side of said anchorage member, said hook portion being provided on the underside thereof with an integral elongated downwardly projecting spur disposed upon and substantially parallel to said other side of said anchorage member, the free end of said C-shaped hook portion and one side of said downwardly projecting elongated spur being engageable with said opposite side of said anchorage member and cooperating with the crossbar aforesaid to interlock the hook with said anchorage member, the combined extent of said elongated spur and of the cross sectional area of said hook portion adjacent said spur being greater than the vertical width of said horizontally extending opening to prevent accidental withdrawal of said hook portion and elongated spur through said horizontally extending opening, said hook portion and elongated spur being manually withdrawable as a unit through said horizontally extending opening only when said body portion, hook portion and elongated spur as a unit are turned to a position in which said hook portion and elongated spur are in horizontal alignment with said horizontally extending opening.

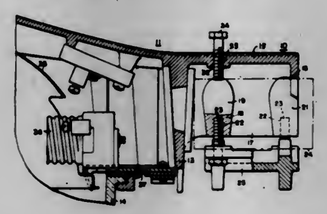
3,018,080
SCISSOR-CLIP
James Loudon, Arlington Heights, Ill., assignor to Mineraltac Electric Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 18, 1959, Ser. No. 800,133
5 Claims. (Cl. 248—228)

5. In combination with an inverted T-shaped rail having a vertically disposed leg member and a transverse member at the lower end thereof, which transverse member is provided with rolled edges on its upper surfaces, a scissor-clip disposed in releasable clamping engagement with the transverse member comprising, a pair of generally flat arms, the center of each of said arms having a cup-shaped offset portion, means pivotably interconnecting said arms at their centers with said offset portions internested one in the other whereby to provide co-operative bearing surfaces facilitating relative rotation of said arms, a pair of flange portions on each arm with each located adjacent an opposite end thereof and with each turned inwardly from an opposite side edge of the arm whereby to define a pair of longitudinally extending



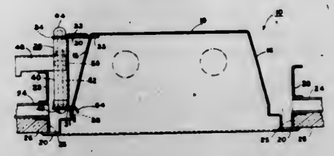
grooves on each arm, and a pair of dimple-like projections on each arm with each projection extending inwardly of one of said groves from the associated flange portion thereof, said arms underlying the lower surface of the transverse member of the T-shaped rail in their closed clamping condition with one flange portion of each arm clamped over one edge of the transverse member and the other flange portion of each arm clamped over the other edge of the transverse member, said dimple-like projections on said flange portions being releasably engaged behind the rolled edges of the transverse member of the T-shaped rail.

3,018,081
MOUNTING FOR LUMINAIRES
Walter M. Waldbauer, North Olmsted, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 27, 1958, Ser. No. 724,392
2 Claims. (Cl. 248—230)



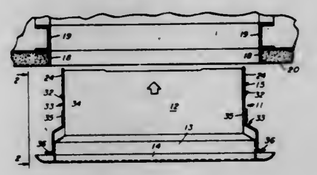
1. In a luminaire housing, a slipfitter at one side for mounting said housing on a bracket, said slipfitter including a hood having spaced depending walls disposed to carry the housing, a clamping member extending between the depending walls of the hood, bosses formed integrally with the depending walls and having threaded openings extending upwardly from their lower ends, a clamping plate having openings therethrough aligning with the openings in the bosses, a plurality of spaced jaws carried by the clamping plate and extending to opposite sides, the spaced jaws on the opposite sides of the clamping plate being adapted to engage brackets of different sizes, screw bolts fitting through the openings in the clamping plate and engaged in the threaded openings provided in the bosses for drawing the desired jaws on the clamping plate into cooperative relationship with the clamping member provided on the hood for setting the luminaire housing in position on the bracket.

3,018,082
LIGHT FIXTURE MOUNTING
Leonard G. Berger, 1403 Stephens Drive NE., Atlanta, Ga.
Filed Oct. 27, 1958, Ser. No. 769,694
7 Claims. (Cl. 248—343)



7. In a fixture having sidewalls, the provision of a supporting assembly connected to at least one of the sidewalls and comprising in combination pivot means including a screw member, means for mounting said pivot means to one of the sidewalls to locate the axis of the pivot means in a substantially fixed position which is substantially vertical in the normal mounting of the fixture in a ceiling, a supporting arm threadably connected to said screw member for axial movement relative thereto upon rotation of said screw member, and means acting between said pivot means and said supporting arm for insuring lateral movement of said supporting arm away from the sidewall about said pivot means axis as well as insuring lateral movement of said supporting arm back toward the sidewall about said pivot means axis.

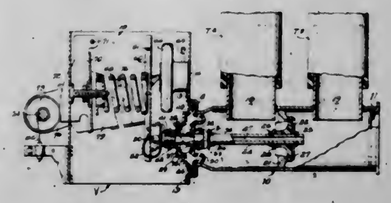
3,018,083
AUTOMATIC MOUNTING MEANS FOR A CEILING LIGHT FIXTURE
Mitchell Bobrick, Pacific Palisades, Calif., assignor to Sunbeam Lighting Company, Los Angeles, Calif., a firm
Filed Apr. 24, 1959, Ser. No. 808,636
1 Claim. (Cl. 248—343)



In a box-type light fixture arranged to be mounted in a ceiling recess framed on at least two opposed walls by ceiling structural members so that the fixture, except for a light dispersing face and a marginal trim, is substantially concealed, means for mounting said fixture comprising flag-tabs mounted at support positions on said fixture, each of said flag-tabs being rotatably mounted on a threaded vertical pin on which each of said flag-tabs is rotatable from a position parallel to the walls of said fixture to a position at right angles thereto; bracket means on said figure for rotatably mounting said threaded vertical pin, means accessible from the said light dispersing face of said fixture for rotating each of said threaded vertical pins whereby to adjust the elevation of said flag-tabs relative to the lower trim edge of said fixture defining said light dispersing face; said flag-tabs being spring biased to project normally at right angles to the fixture walls; vertically movable trigger means attached to said fixture below said flag tab disposed to releasably hold said flag-tabs in position against the fixture sidewalls; and foot means extending from said trigger means adapted to engage the edge of the ceiling open-

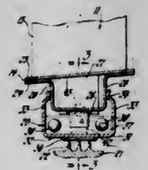
ing when the fixture is elevated into said opening whereby to actuate said trigger means to release said flag-tabs over the ceiling structural members framing said opening.

3,018,084
BALANCED VALVE
Roland B. Caldwell, Worthington, Ohio, assignor to Ranco Incorporated, Columbus, Ohio, a corporation of Ohio
Filed Jan. 13, 1959, Ser. No. 786,584
8 Claims. (Cl. 251—282)



1. In an internal combustion engine driven vehicle having a sealed liquid circulating heat exchange system for cooling the engine, valve means to control flow of liquid in said system comprising a valve body having an opening in one end thereof, a liquid inlet spaced from said opening inwardly from said end of said body, a liquid outlet and a valve port between said inlet and said outlet, a valve member movable to and from said port for controlling the liquid flow through said body, connecting means extending through said opening in said body for moving said valve member, two fluid impervious confronting movable walls having substantially equal opposed areas forming hermetic seals between the walls of said body about said opening through said body and said connecting means, and means to maintain fluid pressure between said walls comprising a fluid passage from the downstream side of said valve port to the space between said movable walls, said passage providing the only communication with said space.

3,018,085
FLOATING LABYRINTH SEAL
Harvey W. Welsh, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 25, 1957, Ser. No. 649,588
17 Claims. (Cl. 253—39)



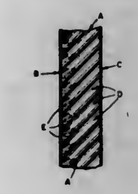
1. In a rotary fluid dynamic machine, in combination, a stator ring, a rotor rotatable adjacent the stator ring and coaxial therewith, the rotor including a labyrinth seal member, a closed labyrinth seal ring coaxial with and adjacent to the labyrinth seal member and cooperating therewith to provide a labyrinth seal, means frictionally mounting the seal ring on the stator ring with freedom for translation in a plane normal to the axis of the seal ring, and interengaging abutment means on the seal ring and the stator ring limiting rotation of the seal ring about its axis.

3,018,086
TRACTOR DEVICE FOR CONDUITS AND THE LIKE
William E. Raney, Rocky River, Ohio, assignor to Raney Products Incorporated, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 14, 1957, Ser. No. 690,083
11 Claims. (Cl. 254—134.5)



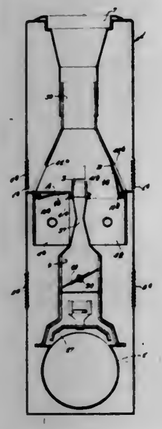
1. A tractor device adapted to be propelled through a conduit and the like comprising a motor housing having a drive motor therein; wheel mounts at the respective ends of said housing; a pair of wheels carried by each mount for rotation about parallel axes and arranged to frictionally engage the walls of a conduit, means for relatively rotatively adjusting one wheel mount with respect to the other, the pair of wheels at one end being rotatively displaced with respect to the pair of wheels at the other end so as to support said housing clear of the conduit walls; and drive shafts coupled to the respective ends of said drive motor and operatively connected to the respective pairs of wheels to drive the latter.

3,018,087
HEAT TRANSFER PANEL
Roger C. Steele, Oakland, Calif., assignor to Hexcel Products Inc., Berkeley, Calif., a corporation of California
Filed Apr. 11, 1958, Ser. No. 727,837
2 Claims. (Cl. 257—1)



1. A panel structure characterized by its ability to transfer heat more rapidly in one direction through its thickness than in the opposite direction: a sandwich structure comprising a section of cellular core defining unidirectionally extending open ended cells through its thickness, and first and second flat parallel substantially vertically disposed face sheets affixed to opposite sides of said section closing and hermetically sealing opposite open ends of said cells; a volatile liquid only partially filling each cell; the axes of said unidirectionally extending cells obliquely angularly disposed from horizontal to cause said liquid in each cell to normally gravitationally flow and form into a pool in contact with the interior surface of said first face sheet and out of contact and spaced from the interior surface of said second face sheet; the interior of said second face sheet defining a potential condensing surface for vaporized molecules of the liquid in each partially filled cell.

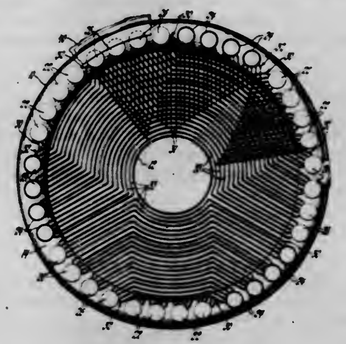
3,018,088
ROOM UNIT FOR AIR CONDITIONING
Claes Allander, Sodra Angby, and Birger Lärkfeldt, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Nacka, Sweden
Filed Jan. 20, 1960, Ser. No. 3,642
Claims priority, application Sweden Jan. 26, 1959
6 Claims. (Cl. 257—137)



1. In a room unit for air conditioning having a primary air inlet duct, a central passage connected at its lower end to said inlet duct and terminating at its upper end in an ejection nozzle, two heat-exchanger units mounted on opposite sides of said central passage, secondary air inlets to introduce secondary air into the room unit for mixing with said primary air by ejection, said secondary air inlets including an upper opening operable to bypass the air in a passage around said exchanger units to mix with said primary air at said ejection nozzle and a lower opening operable to direct the air in a passage through said heat-exchanger units to mix with said primary air at said ejection nozzle, and a damper for each unit operable to proportion the flow of secondary air through said bypass and heat-exchanger passages, the damper in its first limit position opening said bypass passage and closing said heat-exchanger passage and in its second limit position closing said bypass passage and opening said heat-exchanger passage, a conduit supplying heat-exchange medium to said heat-exchanger units and a valve regulating the flow of heat-exchange medium through said units, the improvement comprising a single operating mechanism for said dampers and said valve operable during operation of said valve from closed to open position to first displace one of said dampers from its first to its second position while retaining the other damper in its first position and thereafter during said operation of said valve to displace the other damper from its first to its second position while retaining said one damper in its second position.

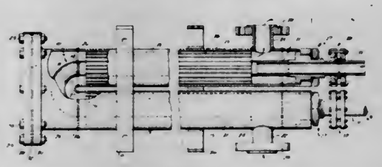
3,018,089
CYLINDRICAL HEAT EXCHANGER WITH TUBE BANKS
Robert F. Caughill and Frank A. Disinger, Lockport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 30, 1958, Ser. No. 771,708
5 Claims. (Cl. 257—235)

1. A cylindrical heat exchanger comprising a casing in the form of a conduit, said exchanger including an annular inlet duct and an annular outlet duct, said ducts lying in spaced planes extending transverse to the axis of said casing, multiple banks of tubes forming a grill across a substantial portion of the space extending between said planes, spaced groups of short inlet headers connected to said inlet duct, spaced groups of short outlet headers connected to said outlet duct, spaced groups of long intermediate headers arranged parallel with said inlet and outlet headers and terminating short of said annular ducts, said



inlet and outlet headers in each of their respective groups being sequentially arranged along the lengths of the said inlet and outlet ducts, each group of short inlet headers communicating with a group of said long intermediate headers by means of one of said banks of tubes, and said long intermediate headers communicating with a group of said short outlet headers by another of said banks of tubes.

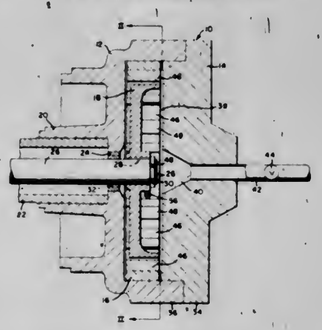
3,018,090
HEAT EXCHANGER FITTINGS
Robert W. Kaase, Bay Village, and William C. Sessions, Lakewood, Ohio, assignors to Fintube Company, Elyria, Ohio, a corporation of Ohio
Continuation of abandoned application Ser. No. 242,952, Aug. 21, 1951. This application June 2, 1955, Ser. No. 512,614
7 Claims. (Cl. 257—247)



1. In a heat exchanger having a pair of outer tubes and an inner hairpin tube having straight portions concentric with the outer tube and extending within the outer tubes for a substantial portion of their length and being substantially non-rotatable with respect to the outer tube, unions for non-rotatably connecting the straight portions of the inner tubes to the outer tubes each union comprising a stop within and near the end of the outer tube having a continuous annular inwardly facing surface extending at a substantial angle to the axis of the outer tube and an outwardly facing sealing surface permanently secured in leakproof relation to the outer tube, an enlarged end fitting on the inner tube having a stop adapted to engage and radially overlap the continuous annular surface of the stop on the outer tube to limit outward movement of the inner tube with respect to the outer tube, said fitting having an outwardly facing sealing sur-

face of lesser diameter than and disposed adjacent the sealing surface on the outer tube when said stops are in engagement with each other, a portion of lesser diameter than the sealing surface on said fitting extending outwardly away from said sealing surfaces, a clamping element removably disposed on said portion, means engaging said fitting to draw said element toward said sealing surfaces, a sealing ring engaged by said element and engaging both said sealing surfaces whereby when said element is drawn toward said sealing surfaces said sealing ring is sealed against both said sealing surfaces and said stops are clamped together, the maximum outer dimensions of said portion of lesser diameter and the minimum internal diameters of said element and said sealing ring being such that said element and said sealing ring can be removed from said portion, and said fitting and said inner tube can be moved inwardly with respect to said outer tube to permit removal of said inner tube from said outer tube.

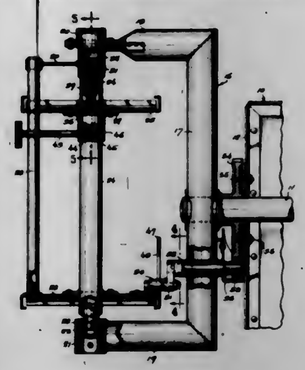
3,018,091
PRECIPITATION APPARATUS
Ray B. Duggins, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 10, 1959, Ser. No. 805,440
5 Claims. (Cl. 259—9)



1. An apparatus for treating precipitating particles, said apparatus comprising: a vessel having an enclosed chamber therein; stator means in said chamber, said stator means including a plurality of spaced elements; a rotor; means mounting the rotor for rotation in said chamber with its periphery passing in close proximity to said elements; there being inlet conduit means provided on one side of said rotor for introducing a precipitant into the chamber; a solution-injecting spinneret extending radially into said chamber between a pair of said elements and terminating adjacent the periphery of said rotor; and outlet conduit means on the opposite side of said rotor for discharging slurry from the chamber.

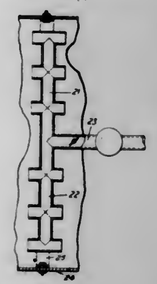
3,018,092
PAINT-CAN SHAKER
Harold T. Johnson, 9010 W. Shorewood, Mercer Island, Wash.
Filed June 12, 1958, Ser. No. 741,568
12 Claims. (Cl. 259—54)

8. In a paint can shaker, a yoke presenting a cross-arm with side arms at each end thereof and rigidly stemming from a rotary shaft which extends from the cross-arm in a direction opposite the side arms and approximately midway between the two, a can carrier supported for rocker movement from the side arms of the yoke to occupy a position in the open throat of the yoke, means for rotating the shaft, a planetary spindle movable bodily with the cross-arm of the yoke and receiving a journal therefrom for rotation about an axis lying in offset paralleling relation to the rotary axis of the shaft, a pinion on one end of said spindle meshing a stationary ring gear



mounted in surrounding concentric relation to the shaft, a crank arm on the other end of said spindle, and a roller mounted on the free end of said crank arm working in a slot presented by the can carrier so as to rock the can carrier simultaneously with rotation of the yoke.

3,018,093
LIQUID DISTRIBUTION SYSTEM
Kenneth Stanley Powell, Bristol, England, assignor, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed May 2, 1958, Ser. No. 732,642
Claims priority, application Great Britain May 9, 1957
6 Claims. (Cl. 261—41)



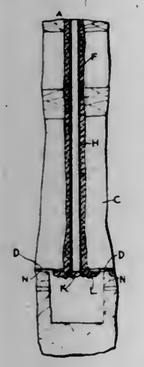
1. Apparatus for dispersing liquid into a stream of gaseous fluid flowing in a predetermined direction, comprising a main conduit, means for supplying liquid into one end of the main conduit, a first straight cross conduit intersecting the main conduit, at least one second straight cross conduit intersecting the main conduit at a distance from the said end greater than the distance of the first conduit from the said end, whereby liquid in order to reach the second conduit from the said end must cross the first conduit, all the cross conduits being open at both ends and having a common axial direction and each cross conduit having at its intersection with the main conduit a flow path width, normal to the axes of both conduits, not substantially less than that of the main conduit, and each cross conduit extending on each side of the main conduit a distance not substantially less than the flow path width of the main conduit, means for aligning the axial direction of the cross conduits with the flow direction of the stream, and means for controlling the flow of the liquid into the main conduit.

3,018,094
GAS OR VAPOR TO LIQUID CONTACTING TRAY
John E. Mikkelson, deceased, late of 2295 Francisco St., San Francisco, Calif., by Magda Mikkelson, special administratrix, San Francisco, Calif.
Filed Apr. 29, 1958, Ser. No. 731,830
1 Claim. (Cl. 261—113)



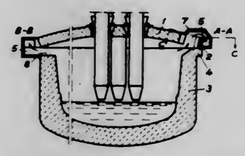
A bubble tray for a liquid vapor contact apparatus comprising a plate having alternate upper horizontal perforated portions and lower horizontal perforated portions, said upper portions forming vapor risers through which vapors pass unimpeded, vertical walls connecting the perimeter of said upper portions to the perimeter of said lower portions to form liquid downcomers for holding a column of liquid therein, said walls having a row of apertures disposed in the bottom thereof to direct a discharge of liquid in a horizontal direction across the flow path of any vapor moving upwardly toward said risers, said walls having another row of apertures disposed in the top thereof to direct vapor across the top of said downcomer, the upright walls having continuous imperforate intermediate sections between the upper and lower rows of apertures, the imperforate sections constituting the major portions of said upright walls.

3,018,095
METHOD OF HYDRAULIC FRACTURING IN UNDERGROUND FORMATIONS
Jacob F. Redlinger, Kansas City, Kans., assignor, by mesne assignments, to FMC Corporation, New York, N.Y., a corporation of Delaware
Filed July 23, 1958, Ser. No. 750,404
2 Claims. (Cl. 262—3)



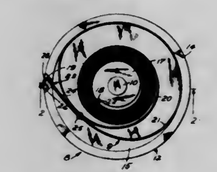
1. The method of directing a fracture produced by hydraulic fracturing of an underground formation initially in a substantially horizontal plane between two wells which comprises drilling two wells into the formation to the desired point of fracture, circulating a drilling mud through the wells during the drilling, underreaming one of the wells below the desired point of fracture and leaving drilling mud in the underreamed section, casing the well, cementing the casing in the well, spreading the cement horizontally along the top of the drilling mud in the underreamed section, washing out the drilling mud in the underreamed sections and applying a hydraulic fracturing pressure to the underreamed section to cause separation of the formation at substantially the top of the underreamed section and spread of the fracture to the adjacent well.

3,018,096
DEVICE FOR THE EXHAUSTION OF FLUE-GASES FROM ARC FURNACES
Mats Rydinger, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Dec. 3, 1959, Ser. No. 857,155
Claims priority, application Sweden Dec. 8, 1958
4 Claims. (Cl. 263—10)



1. In an arc furnace having a furnace roof, means for exhausting flue gases from the furnace comprising a hollow water-cooled roof ring provided on the periphery of the roof, a circular collecting duct for the flue gases arranged about the roof ring, the roof ring having an outer wall which constitutes the inner wall of said duct, an exterior exhaust system connected to said duct, and boxes arranged in the periphery of said duct and communicating with the interior of the furnace and with said duct for leading the flue gases from the interior of the furnace through said duct to the exhaust system.

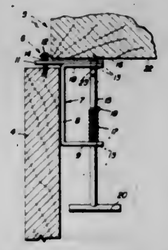
3,018,097
POWER SPRINGS
Oscar E. Johansson, Fair Lawn, N.J., assignor to Sandvik Steel, Inc., Fair Lawn, N.J., a corporation of New York
Filed Apr. 8, 1959, Ser. No. 804,952
8 Claims. (Cl. 267—1)



1. In a power spring of the spiral type which is adapted to be wound from an expanded to a tightly coiled condition around a central arbor, the combination of a resilient retaining ring, a spiral spring enclosed within said retaining ring and held thereby in its expanded condition with its outer end attached to said retaining ring, a central arbor attached to the inner end of said spring, anchor means exterior of said retaining ring and spaced radially outwardly therefrom, said central arbor and anchor means being relatively rotatable to wind the spring in a tight coil around the arbor, an elongated attaching

means extending from the retaining ring at its point of attachment to the outer coil of the spring and having a looped end attached to said anchor means for pivotal rocking movement thereon, said point at which the looped end of the extension is anchored being related to its point of attachment to the retaining ring so that the extension at all times extends substantially tangent to said retaining ring at its point of attachment to the spring, and anvil means exterior of said retaining ring and adapted to be engaged thereby diametrically opposite said zone of tangency whereby said retaining ring is flexed and deformed between said point of tangency and the anvil means during the winding of the spring on the arbor to progressively flatten the surface of the ring and produce a force on the outer coil to hold it spaced from the next adjacent coil.

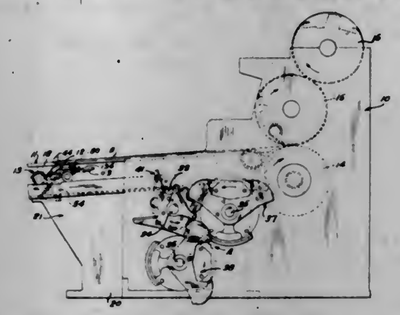
3,018,098
DOOR HOLDER
Rufus T. Hunt, 419 N. Chester Ave., Compton, Calif.
Filed July 23, 1959, Ser. No. 829,083
2 Claims. (Cl. 269—91)



1. A holder for securing a door in a frame, said holder comprising: a bracket for mounting on a marginal portion of the door, said bracket comprising a generally U-shaped bar including a flat bight portion for abutting a face of the door and further including a pair of parallel legs having aligned openings therein, an arm fixed longitudinally on one of said legs and projecting beyond said bight portion of the bar, a screw threadedly mounted for adjustment on the free end portion of said arm and adapted to penetrate an edge of the door for mounting the bracket thereon, a spike slidably mounted in the openings parallel with said door face and including a point on one end adapted to penetrate the frame for retaining the door against movement relatively thereto, a coil spring encircling the spike and operatively connected thereto for yieldingly urging the same toward an operative position, a handle on the other end of the spike for manually retracting the same against the tension of said spring, said spike having spaced openings therein adjacent one end of the spring, and a pin selectively insertable in the openings and engaged with the spring for adjusting the tension thereof, said spike further having spaced openings in an end portion thereof adapted to receive a stop pin for releasably securing the spike in one of a plurality of retracted positions.

3,018,099
SHEET FEEDING AND REGISTERING MECHANISM
Howard J. Seel, Chagrin Falls, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Nov. 6, 1958, Ser. No. 772,255
13 Claims. (Cl. 271—46)

1. In a feeding and registering mechanism comprising a back-gauging pusher adapted to engage the back edge of a sheet to push the sheet forwardly in a feed direction and to simultaneously effect registration of the sheet against the pusher, means for advancing the pusher in a feed direction, and side-gauging mechanism for registering the sheet as it is advanced by said pusher, the combination of a gripping element adapted to effectively grip said sheet as it is being pushed by said pusher, means supporting said element for limited universal movement and for advancing said element in said feed direction with said pusher, means for controlling the gripping action of said



element in relationship to the advancement of the pusher in a feed direction to effect a gripping of the sheet in advance of the time the sheet is side registered by said side gauging mechanism, and means connected to said element tending to produce relative movement thereof in a direction to urge the sheet against the pusher after the sheet is gripped by said element and to hold the sheet against the pusher as it is being advanced by the pusher before and after side registration.

3,018,100
AMUSEMENT DEVICE
John L. Joseph, 259 Columbus Ave., Hasbrouck Heights, N.J.
Filed Apr. 14, 1959, Ser. No. 806,311
13 Claims. (Cl. 272—1)



1. An amusement device comprising a group of display sheets each bearing on its front surface a pictorial representation, a pair of rigid sheets, one normally at the front of said group and the other normally at the rear thereof, the periphery of said rigid sheets being at least coextensive with the peripheries of said display sheets normally located therebetween, means connecting said display and rigid sheets together so that selected sheets in front of a predetermined display sheet may be moved to and retained at the rear of the group, thereby exposing the front surface of said predetermined sheet, said display sheets having registering openings of a size such as to receive a face therethrough occurring at what would otherwise be the area of said pictorial representations where a face would appear and said rigid sheets having at least similar size openings registering therewith, said rigid sheets being provided with slots and said

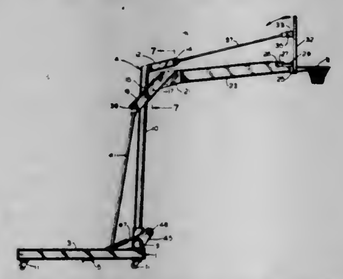
display sheets being provided with tabs adapted to be releasably inserted into said slots in order to retain said display sheets close to said rigid sheets, and a pair of handle means formed from and bent rearwardly out of the plane of one of said rigid sheets and located inside the periphery of at least some of said display sheets, said some of said display sheets having openings therethrough through which said handle means can pass when said sheets are located behind the rigid sheet carrying said handle means.

3,018,101
OCCUPANT PROPELLED MERRY-GO-ROUND
William G. Mir, Box 328, Wendover, Utah, and Jerry Brewster, Sr., 231 W. 1st S., Brigham City, Utah
Filed Nov. 10, 1959, Ser. No. 852,027
10 Claims. (Cl. 272—33)



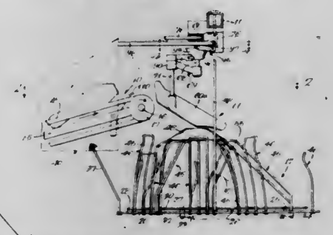
1. An occupant propelled merry-go-round comprising a post, a base at the bottom of said post and a thrust bearing connected with said post, a rotor, a pair of elongate bearings secured to said rotor, said rotor mounted for rotation on said thrust bearing, a pair of torque tubes journaled on and enclosing said elongate bearings, occupant supports, means for coupling said occupant supports to said torque tubes by which to rock said torque tubes, and engaged ratchet drive means connected to said post and said torque tubes to rotate said rotor in response to oscillation of said torque tubes.

3,018,102
FOLDING BASKETBALL GOAL-STRUCTURES
Raymond J. Murphy, Affton, Mo., assignor, by mesne assignments, to Medart Lockers, Inc., a corporation
Filed Mar. 20, 1959, Ser. No. 800,683
7 Claims. (Cl. 273—1.5)



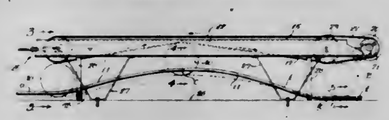
4. A basketball goal structure comprising a flat base, a first boom element pivotally mounted on said base, a second boom element pivotally mounted on the first boom element, a goal-forming means pivotally mounted on said second boom element, and reversible means for simultaneously causing the pivoting of said first boom element with respect to said base, the pivoting of said second boom element with respect to said first boom element and the pivoting of said goal-forming means with respect to said second boom element whereby when said reversible means operates in one direction the goal-forming means will be elevated for use and when said reversible means is operated in the other direction the goal-forming means and the elements will be folded together in compact overlying relation with respect to said base.

3,018,103
PIN DISTRIBUTOR
Alexander J. Albrecht, West Englewood, N.J., assignor to The Brunswick Automatic Pinsetter Corporation, a corporation of Delaware
Filed Dec. 22, 1958, Ser. No. 782,297
16 Claims. (Cl. 273—43)



1. A pin distributing mechanism, comprising, a rotatably indexable bracket, a pair of chute halves pivotable on the bracket toward and away from each other between a closed position forming a pin support and an open position for dropping the pin, means for pivoting the halves toward and away from each other, and means for indexing the bracket between a pin receiving position and an angularly spaced pin discharge position.

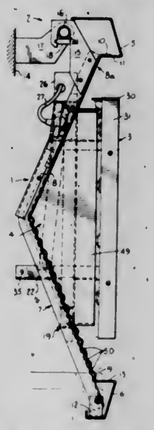
3,018,104
BALL SPEED CONTROLLING DEVICE
Michael G. Gautraud, North Massapequa, and William F. Huck, Forest Hills, N.Y., assignors to Brunswick Automatic Pinsetter Corporation, a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,258
3 Claims. (Cl. 273—49)



1. A ball speed controlling device for altering the speed of a bowling ball between entrance and exit ends thereof, comprising, a generally horizontally disposed ball track having a pair of laterally spaced ball supporting rails, an endless belt over the track, a pair of horizontally spaced pulleys supporting the belt with one pulley adjacent a ball entry end of the track and the other adjacent a ball exit end of the track and each spaced from the track to provide a generally horizontal belt reach therebetween to engage a ball on the track from end to end, means for driving at least one pulley to advance the ball engaging reach of the belt in the direction of ball travel, said track including an elevated midportion continuously convexly curved toward the belt to carry a ball into firm engagement with the belt and increase the angle of contact therebetween and said track including opposite continuously concavely curved end portions joined respectively to opposite ends of the convex portion and disposed respectively adjacent the pulleys, said track rails having a predetermined lateral spacing therebetween adjacent the top of said convex midportion and gradually reducing lateral spacing therefrom

toward the track end of greater ball speed so that a ball on the track tends to have a relatively great angular velocity with minimum linear advance at the midportion, and a relatively greater linear advance at the track end of greatest ball speed.

3,018,105
BOWLING ALLEY MASKING UNITS
William Grogoza, Shelby, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Feb. 10, 1960, Ser. No. 7,803
12 Claims. (Cl. 273—54)



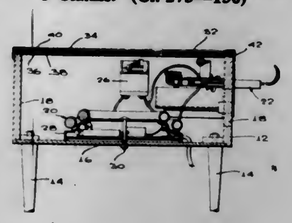
1. In a masking unit for masking the pit end of a bowling alley installation, the combination of masking wall means, support means for supporting said masking wall means above the alley floor in front of the pit of the alley, illuminated pin fall indicating means mounted on said masking wall means and spaced forwardly with respect thereto, and light means carried by said wall means and disposed behind said pin fall indicating means to direct light laterally onto portions of said wall means not hidden by said pin fall indicating means.

3,018,106
BOWLING PIN
Fred E. Satchell and Louis J. Trier, Muskegon, Mich., assignors to Brunswick Corporation, a corporation of Delaware
Filed May 6, 1959, Ser. No. 811,465
11 Claims. (Cl. 273—82)



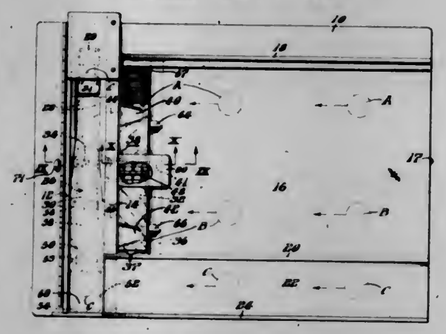
1. An impact withstanding article of the character described, comprising: a wooden body having a thin resilient cover adhered thereto, said cover including within itself and under the surface thereof a non-stress transmitting area located at about the normal impact receiving portion of said article and arranged to prevent slabbing of said wooden body comprising unconnected layers of cover material.

3,018,107
COIN OPERATED GAME BOARD
Cecil John Erickson, Salina, Kans.; Roy C. Erickson, administrator of said Cecil John Erickson, deceased
Filed Jan. 10, 1958, Ser. No. 708,326
3 Claims. (Cl. 273—136)



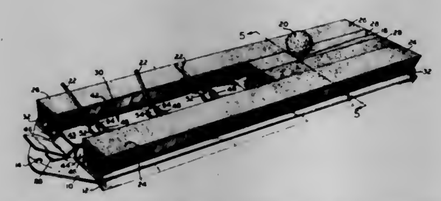
1. A game board comprising a housing having a top wall which comprises a transparent bottom panel provided with a playing pattern and a transparent frosted glass top panel overlying the bottom panel and preventing the playing pattern from being visible; illumination means in the housing below the bottom panel and operative to cast light rays through the panels to expose the playing pattern to view through the top panel so that game pieces may be moved in direct contact with the top panel in accordance with the playing pattern on the bottom panel, and anti-glare means interposed between and the top and bottom panels.

3,018,108
GOLF GAME DEVICE
Charles A. Selzle, Sr., 3907 N. 10th St., Philadelphia, Pa.
Filed July 21, 1960, Ser. No. 44,313
16 Claims. (Cl. 273—180)



1. A golf game apparatus comprising: a barrier having first and second slots therethrough, each of a size to pass a standard size golf ball; a balanced rocker shelf positioned adjacent and in front of said barrier and below said slots, said rocker shelf having a horizontal center pivot point; a pair of seats on said rocker shelf, one on each side of the center pivot, one seat being more remote from the pivot than the other, each seat being so shaped as to tend to discharge any golf ball therein toward the barrier, said seats having such positions relative to the slots in the barrier that when a first golf ball is first rolled into the seat closer to the pivot and then a second similar golf ball is next rolled into the seat more remote from the pivot, the rocker shelf in response to the weight of the second ball will turn on its pivot to lift the first ball to the level of the first slot in the barrier to effect discharge of said first ball therethrough; a rack behind said barrier fixed to a pivot pin, said rack being positioned to receive said first ball when it passes through said first slot; means including an arm fixed to said rack pivot pin, for counterbalancing said rack against the weight of said first ball; means, including a ramp in front of said barrier, leading to a position beyond said barrier and above said rack for guiding a third similar golf ball which is rolled up said ramp to a position on said rack, said rack under the weight of said first and third balls moving downwardly, thereby rotating its pivot pin, said arm fixed to said pivot pin moving upward when said rack moves downward, said arm being positioned and adapted to lift that end of said rocker shelf having the second ball in its seat to the level of the second slot in said barrier, thereby to discharge said second ball through said second slot; indicator means; and means actuable by said second ball behind said barrier for actuating said indicator means.

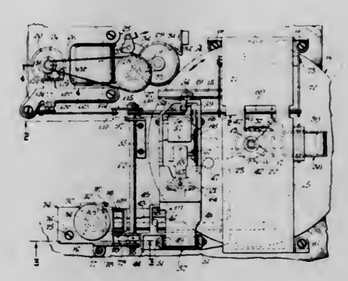
3,018,109
SPORT PRACTICE DEVICE
Arthur M. Starck, % A.M.S. Corp., 4 Taft St., Norwalk, Conn.
Filed July 24, 1958, Ser. No. 750,693
4 Claims. (Cl. 273—186)



3. A golf practice device comprising in combination a substantially rectangular flat base plate having downwardly projecting peripheral flanges, a golf tee-suporting sleeve centrally mounted on said base plate near one end thereof, a re-erecting mechanism centrally secured to said base plate near the opposite end thereof, said mechanism having an upper face incorporating a plurality of resiliently damped ball and socket joints, a corresponding plurality of posts secured in said joints, each having a fixed end projecting therefrom within said mechanism and a free end projecting therefrom above said mechanism, said posts thus being adapted to project upwardly substantially in line with said tee-supporting sleeve along the longitudinal axis of said device and to be moved to a variety of knocked-down positions where they will be held by the damping action of said resiliently damped ball and socket joints, a resiliently-restrained member slidably mounted within said mechanism provided with a corresponding plurality of notches adapted to engage the projecting fixed ends of said posts, a foot pedal mounted at one end of said re-erecting mechanism and adapted to actuate said member, whereby said posts may be simultaneously re-erected from said knocked-down position to said upwardly projecting position, and a plurality of rows of upwardly projecting stiff bristles mounted upon said base plate and surrounding said tee-supporting sleeve and said re-erecting mechanism, whereby only the free ends of said posts and a tee mounted in said sleeve will project above said bristles.

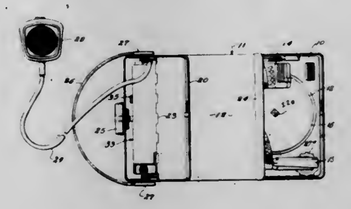
3,018,110
SPEED SHIFT CONTROL FOR PHONOGRAPHS
Jack W. Brown, Elizabeth, N.J., assignor, by mesne assignments, to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed May 9, 1956, Ser. No. 583,766
1 Claim. (Cl. 274—9)

In a phonograph having a movable record support, translating means for embossing a record on said support during recording and for tracking the embossed groove during reproducing, and an operable mechanism for providing a scanning movement between said record and translating means: the combination of a drive motor for said operable mechanism tending to have a lower speed during an embossing operation and a relatively higher speed during a tracking operating; means shiftable for conditioning said phonograph for recording and reproducing; a drive transmission coupling said motor to said



mechanism including a speed-regulating means shiftable to higher and lower transmission ratios; and means intercoupling said speed-regulating means and conditioning means for changing the transmission ratio of said drive coupling by a predetermined amount as said phonograph is shifted between recording and reproducing conditions adapted to compensate for the different load conditions on said motor during recording and reproducing whereby to cause the signals reproduced by the phonograph to have substantially the same pitch as the original.

3,018,111
LIGHTWEIGHT BATTERY OPERATED TRANSISTORIZED DICTATING MACHINE
Donald F. Balmer, East River, and William H. Lyon, Orange, Conn., assignors to The Soundscriber Corporation, North Haven, Conn., a corporation of Connecticut
Filed Jan. 27, 1958, Ser. No. 711,282
13 Claims. (Cl. 274—9)



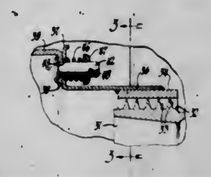
1. A turntable friction drive mechanism providing a driving connection between a rotatably mounted driven member and a rotatably mounted turntable comprising, in combination, a supporting chassis, a rotatable idler member movably mounted on said chassis, resilient means urging said idler member into frictional engagement at a first point of tangency with said turntable and urging said idler member into frictional engagement at a second point of tangency with said driven member, the two radial planes respectively defined by the rotation-axis of said idler member and said two points of tangency being substantially normal planes, thereby isolating said turntable from the vibration of said driven member.

3,018,112
SEALING DEVICES BETWEEN A ROTATING PART AND A FIXED PART
Maxime Amirault, 4 Impasse des Saubergeaux, Antony, France, and Paul Destoumieux, 46 Blvd. Inkermann, Neuilly-sur-Seine, France
Filed July 31, 1957, Ser. No. 675,402
Claims priority, application France Aug. 14, 1956
5 Claims. (Cl. 277—42)



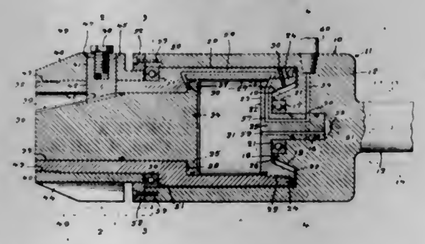
1. A sealing joint between two coaxial relatively rotatable parts, comprising an annular elastic diaphragm having two coaxial circular contours, means fixedly mounting a first one of said contours on a first one of said parts to rotate therewith, a friction ring mounted on the second of said contours, spring means urging said friction ring into sealing engagement with the second of said parts, an annular casing surrounding said second contour and rotatable with said second contour and sealing ring, spaced abutments on said first part and a tongue on said casing interposed between and normally spaced from both of said abutments whereby said friction ring is normally rotationally connected with said first part only by said elastic diaphragm, said tongue being engageable with one or another of said abutments when the reaction torque on said diaphragm exceeds a selected value to provide temporarily a positive driving connection between said first part and said friction ring.

3,018,113
FLOATING LABYRINTH SEAL
Russell S. Hall, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 14, 1957, Ser. No. 660,021
2 Claims. (Cl. 277—53)



1. A labyrinth seal comprising, in combination, a body, an inner annular member rotatable therein, and an outer annular member mounted on the body adjacent to the first member and cooperating therewith to provide a labyrinth seal, at least one of said members having a ribbed seal surface, and means mounting the outer member on the body locating the outer member axially thereof, providing freedom of movement of the outer member transverse to the axis thereof in response to contact between said members, and providing a frictional restraint against transverse movement thereof, the said means comprising a part of the body having a radial face; circumferentially spaced pins extending from the part; a flange extending radially from the outer member and fixed thereto, the flange defining a radial face abutting the radial face on the body, one of said radial faces being plane; a ring extending axially from the outer member and connecting it to the said flange, the ring being of substantial axial length and of thin section relative to the thickness of the outer member so as to provide a poor heat conduction path from the outer member to the said flange and the body; the flange having openings therein receiving the pins with clearance for transverse movement of the second member, the pins extending through the flange openings; and compression springs retained on the pins engaging the flange and biasing the flange against the body.

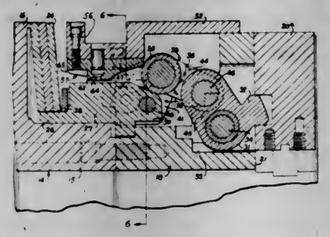
3,018,114
SPIDER CENTER
Arthur O. Hanson, 9845 E. La Rosa Drive, Temple City, Calif.
Filed Dec. 16, 1958, Ser. No. 780,833
1 Claim. (Cl. 279—4)



A spider center comprising a body member embodying a main body portion, a shank extending from said body member and provided with an inner recessed portion which embodies a first section, there being a second section communicating with said first section, a shoulder adjacent said second section provided with an outer inclined surface, there being a third section adjacent said shoulder, a base adjacent said shoulder and embodying a stem which extends into said first section, said base embodying a flat portion and an annular lip which projects into said third section, a support member provided with an inner end positioned within the recessed portion of said body member, there being a chamber in said support member, the outer end of the support member being provided with an inner bore which communicates with said chamber, a piston including a head slidably positioned in said chamber, said piston embodying a plunger slidably arranged in said bore, said plunger being provided with keyways, a collar mounted on the outer end of said support member, there being registering openings in said collar and support member, movable jaws arranged in said openings and connected to said keyways, screw members arranged in engagement with said jaws, there being spaced apart channels in said body member communicating with said first recessed section, there being an annular groove in said stem registering with said channels, and connecting passageways in said base and support member.

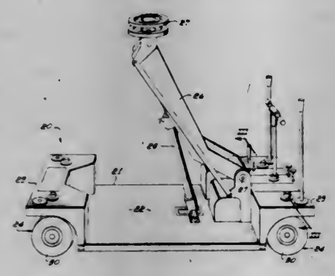
3,018,115
TOGGLE ACTUATED CHUCK
Charles T. Blake, Shaker Heights, and Rudolf Vetsch, Walton Hills, Ohio, assignors to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 1, 1960, Ser. No. 5,908
15 Claims. (Cl. 279—118)

1. A chuck comprising a rocker member rockable about an axis to rock a work-gripping jaw between a work-gripping and work-releasing positions, a reciprocable member, link means extending transversely of said axis and connecting said reciprocable member to said rocker member including pivotal connections connecting said link means to said members, said link means comprising a toggle link pivotally connected to said rocker member and movable in directions toward and away from a dead center position to respectively lengthen and shorten the effective length of said link means between said connections, the movement of said link effecting a rocking of said rocker member when said reciprocable member is held against movement, a chuck control member, means supporting said chuck control member adjacent said link means for reciprocation relative thereto, cam means on said control member, cam follower means on said link means and engaged by said cam means to move said toggle link in one of its said directions with respect to its dead center position when said control member is moved in one direction, a spring means for yieldably opposing movement of said reciprocable member due to



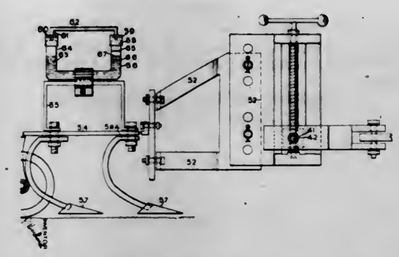
the force applied to said reciprocable member by movement of said link by said cam means, said reciprocable member and spring means yielding when said rocker member is held and said link means moved by said cam means, and means independent of said spring means for actuating and controlling the movement of said toggle link in a direction opposite to its said one direction upon reciprocation of said control member in a direction opposite to its said one direction.

3,018,116
STEERING MECHANISM FOR A CAMERA DOLLY
Virgil H. Summers, Glendale, Ralph C. McClure, Northridge, and George H. Kuntze, Burbank, Calif., assignors to Universal Pictures Company, Inc., Universal City, Calif., a corporation of Delaware
Filed June 25, 1956, Ser. No. 593,435
13 Claims. (Cl. 280—91)



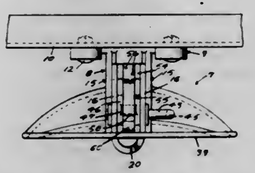
1. A steering mechanism for a dolly, comprising: a steering post; a pair of wheel spindles on opposite sides of said steering post; a pair of chain and sprocket means lying in spaced planes and each interconnecting an associated spindle and the steering post; a pair of movable idle sprockets for each chain and sprocket means located between the steering post and the associated spindle; a pair of idler sprockets, each positioned between a movable sprocket and a spindle; a pair of cam plates, each cam plate interconnecting a movable sprocket of each pair with a diagonally opposite movable sprocket of the other pair; and cam means on the steering post operably connected to the pair of cam plates for simultaneously moving said interconnected sprockets.

3,018,117
ADJUSTABLE BRIDLE AND CLEVIS
Jerome Bechard, Lajord, Saskatchewan, Canada
Filed June 29, 1960, Ser. No. 39,697
4 Claims. (Cl. 280—490)



3. An adjustable linkage device for connection between power driven vehicles having a draw bar and implements having a drag bar, the combination of a clevis having a central body portion with jaws extending from one end of said body portion and straps extending from the other end of the body, said jaws being adapted for mounting to a drag bar, a bridle member having wing portions at one end and vertical spaced bars at the other end, said bars being receivable between said clevis straps, and an upright screw mounted between said bar and rotatably connected to said bridle member, a block threadably mounted to said screw, pins mounted to said block and extending radially and outward in opposed relation, said straps pivotally mounting said block pins, and a handle at the upper end of said screw for rotating said screw whereby the rotation of the screw will cause the block to threadably travel upward and downward on said screw and raise and lower said clevis straps to thereby raise and lower the drag bar with respect to the draw bar.

3,018,118
SEMIAUTOMATIC SAFETY HITCH
John E. Raidel, 15002 Dunton Drive, Whittier, Calif.
Filed Oct. 7, 1960, Ser. No. 61,215
6 Claims. (Cl. 280—506)



1. A semiautomatic safety hitch comprising a hitch body adapted to be secured to and disposed behind a rear draft vehicle frame member, said hitch body having an upwardly projecting hook adapted to be engaged by a trailer vehicle drawbar eye, a lever, pivot means swingably mounting said lever at a lower end thereof in the hitch body in front of said hook for swinging movement toward and away from the hook, a locking member, pivot means swingably mounting said locking member, adjacent an upper end thereof, in said hitch body and above the hook, a push rod extending slidably through a part of said hitch body and engaging a part of said lever which is disposed above and spaced from the lever pivot means for swinging said lever rearwardly within the hitch body toward said hook for confining a part of the drawbar eye between said hook and a part of the lever, and said locking member and lever having detachably interengaging portions causing said locking

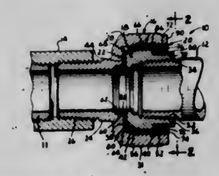
member to swing with the lever downwardly and rearwardly to position a part of the locking member against an upper part of the hook as the lever is swung rearwardly toward the hook.

3,018,119

TAMPER-PROOF INSULATED PIPE COUPLING

Ronald H. Champion, Rockford, Ill., assignor to Eclipse Fuel Engineering Co., Rockford, Ill., a corporation of Illinois

Filed Jan. 16, 1961, Ser. No. 82,766
2 Claims. (Cl. 285—50)



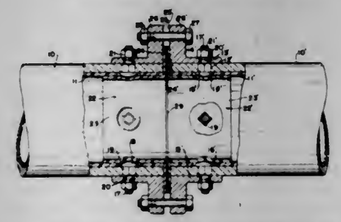
1. A pipe coupling adapted releasably to connect and electrically to insulate the opposed adjacent ends of a pair of axially aligned, metallic, fluid-conducting members in close proximity to and in fluid communication with each other, said coupling comprising a tubular metallic head embodying at its rear end a head proper of enlarged internal diameter and from which there extends forwardly an integrally formed threaded sleeve portion of reduced diameter designed for threaded cooperation with an end of one of said fluid-conducting members, said head proper being provided with an inner surface presenting a series of internal threads, said head presenting an internal rearwardly facing radial shoulder in the region of juncture between the sleeve portion and the head proper, a tubular metallic tailpiece in axial alignment with said head and at least partially nested within the head proper, said tailpiece having a flat annular radial end surface which is disposed in opposition to said rearwardly facing radial shoulder on the head, a medial cylindrical section and a rear cylindrical section of reduced diameter immediately rearwardly of the medial cylindrical section, said tailpiece presenting a radial annular shoulder at the juncture between the medial cylindrical section and the rear cylindrical section, said tailpiece being internally threaded for reception therein of an end of the other of said fluid-conducting members, a tubular insulating and sealing sleeve formed of a deformable insulating material possessing a considerable degree of resistance to compressional forces encompassing said tailpiece and having a flat radial portion interposed between said shoulder on the head and said radial end surface on the tailpiece, a medial portion surrounding the medial cylindrical section of the tailpiece, a rear cylindrical portion surrounding the rear cylindrical section of the tailpiece, and a narrow radial portion in contact with the radial annular shoulder on the tailpiece, said sleeve being axially coextensive with the tailpiece and being coextensively bonded thereto, said medial cylindrical portion of the sleeve being formed with a series of external threads in threaded engagement with the internal threads on the head proper, and a metallic locking ring disposed within said head proper and surrounding at least a portion of the rear cylindrical portion of the insulating sleeve, said locking ring presenting a radial end face bearing against the flat radial portion of the insulating and sealing sleeve, said locking ring being provided with a series of external threads in threaded engagement with the internal threads on the head proper, said locking ring serving to compress the narrow radial portion of the insulating and sealing sleeve against said radial shoulder on the tailpiece and thus bias the tailpiece as a whole bodily forwardly within the head proper against the restraining action of the threads on the insulating and sealing sleeve and to, in turn, compress the flat radial portion of the insulating and sealing sleeve between the radial end surface of the tailpiece and the internal rearwardly facing radial shoulder of the head.

3,018,120

PIPE JOINT AND METHOD OF MAKING THE SAME

Clifton B. Vann, Wilmington, N.C., assignor to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware

Filed Jan. 22, 1958, Ser. No. 710,491
3 Claims. (Cl. 285—55)



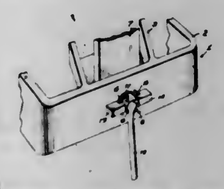
1. A plastic lined pipe joint comprising a pair of pipe sections arranged end to end, said pipe sections having plastic linings extending subtantially throughout their lengths, flanged coupling members received over the adjacent ends of the pipe sections and having end faces substantially flush with the ends of said pipe sections, said coupling members and the walls of said pipe sections including the plastic lining thereof defining a plurality of radially aligned holes, a plurality of bolt-like fasteners received in said holes and rigidly attaching said coupling members to the ends of said pipe sections, said bolt-like fasteners having enlarged heads received substantially entirely within the circumferential extent of the holes in said lining and bearing directly upon the inner walls of the pipe sections, flanged insert means of plastic material received in the adjacent ends of said pipe sections, said insert means being adapted to cover end portions of said pipe lining and said insert means having flange means extending radially outwardly and at least partially covering said end faces, said insert means being bonded to said lining entirely about the circumferential extent of said holes, and means for fastening the flanges of said coupling members together to draw said pipe sections axially toward each other.

3,018,121

SPIRAL WIRE PIN RETAINER

David R. Correll, 602 Colaine Drive, Aberdeen, Md.

Filed Mar. 29, 1961, Ser. No. 99,324
2 Claims. (Cl. 287—20)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The combination comprising, a coupling including a U-shaped clevis having a bore therein and a channel shaped guideway secured to the inner side of said clevis, said guideway having a bore therein, said last named bore being in axial alignment with said bore in said clevis, a pin for insertion through said bores in said clevis and said guideway for retaining an apertured tongue therebetween, said pin having a diametrical bore therethrough and disposed near the outer end of said pin, a handle fixed to the outer end of said pin, means for retaining said pin in a locked position in said coupling comprising, a pair of diametrically opposed lugs fixed to the outer end of said clevis, each lug having an undercut portion at the inner end thereof and terminating adjacent the edge of said bore in said clevis, and a length of straight wire in said bore in said pin, the protruding ends of said wire being adapted to engage against said lugs when said pin is rotated in said coupling, said wire coiling about said pin when said pin is rotated, the terminal ends of said wire being nested under said undercut portions when said pin has been rotated approximately 180°.

3,018,122

TROUSERS STRETCHER AND CREASER LOCK

John Frei, Lake Geneva, and Carl F. Hasse, Pall Lake, Wis., assignors, by mesne assignments, to Ekco Products Company

Filed Oct. 5, 1959, Ser. No. 844,500
2 Claims. (Cl. 287—58)



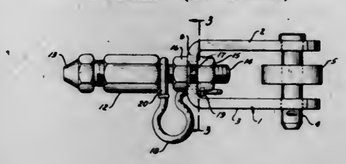
1. In an extensible coupled-rod retainer-held construction; a first linearly straight rod member having a sleeve-like coupling fixed at an end portion thereof, a second companion rod member similar to said first rod member and having a linearly straight body portion passing slidingly through said coupling and overlapping and slidingly contacting a portion of said first bar member, a straight end coplanar with the body portion and provided with a sleeve-like coupling corresponding to and aligned with the first coupling and embracing and slidingly supporting the embraced portion of said first bar member, said body portion and end portion of the second bar member being separated by an area offset away from said first bar member to define first and second bridge portions, said first bridge portion being abruptly closer to the first bar member than said second bridge portion to define a shoulder between said first and second bridge portions, a locking key having a first wing and an opening in said first wing in which said first bridge portion of the second bar member is passed, said key having a second wing and an opening in said second wing for receiving the section of said first bar member opposite said bridge portions of the second bar member, said openings in the wings of the key being of such size as to allow the locking member to have canting movement about the edge of the opening in the first wing of the locking key as fulcrum between a first position wherein the first bar member has binding engagement with the edges of the opening in the second wing and thereby locked against sliding movement in one direction relative to the second bar member, and a second position wherein the first bar member is free to slide in said opening in the second wing of the key, and a spring coiled about the first bridge portion of the second bar member with which the first wing of the key is engaged and yieldably urged against the shoulder between said first and second bridge portions of the second bar member to normally bias said key toward said first position.

3,018,123

CONNECTOR DEVICE

Harold L. Dobrikin, Chicago, Ill., assignor to Berg Airlectro Products Company, Chicago, Ill., a corporation of Illinois

Filed Dec. 1, 1959, Ser. No. 856,406
2 Claims. (Cl. 287—59)



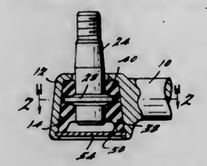
1. A quick-disconnect cable connector device comprising a first fitting and a second fitting, a slot in said first fitting, said slot having a pair of parallel walls intersecting an edge of said first fitting and a circular portion intersecting said parallel walls, the diameter of said circular portion being greater than the distance between said parallel walls, said second fitting having a threaded shaft, said threaded shaft having a diameter less than the distance between said parallel walls, a pair of nut elements threadably engaging said shaft on opposite sides of said first fitting and adapted to bear thereagainst, one of said nut elements having a circular extension thereon, said circular extension being positioned within said circular slot portion and having a diameter greater than the distance between said parallel walls, said one nut element adapted to be backed off on said shaft so as to move said circular extension out of said circular slot portion and permit said shaft to be removed from said slot, and a securing means comprising a flexible cable connected to said first fitting and said second fitting and having a normal length greater than the shaft, said flexible cable being coiled upon itself when said fittings are engaged one with the other.

3,018,124

RESILIENT STEERING LINKAGE CONNECTOR

William A. Flumerfelt, Columbus, Ohio, assignor to The Columbus Auto Parts Company, Columbus, Ohio, a corporation of Ohio

Filed Mar. 4, 1960, Ser. No. 12,805
7 Claims. (Cl. 287—85)



3. In a flexible joint construction, a housing member having a cavity, a stud having a flange thereon disposed in said cavity, a pair of elastomeric bearing members disposed one on each side of said flange, one of said bearing members having an integral annular portion of reduced lateral thickness disposed at one end of said cavity, and means at said one end of said cavity engaging and compressing said annular portion in a direction axially of said stud.

3,018,125

FLEXIBLE LINK ASSEMBLY FOR TRANSMITTING LINEAR MOTION

Dallas E. Cain, Scotia, N.Y., assignor to General Electric Company, a corporation of New York

Filed Sept. 30, 1959, Ser. No. 843,541
12 Claims. (Cl. 287—86)

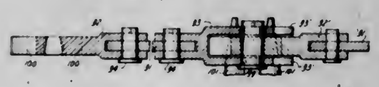
1. In a flexible link adapted to transmit linear motion, the combination of a first member, a second member, a

tension spring adapted to connect the first and second members, a pin mounted between said first and second members and being disposed in the same general direction as said members, a joint connecting the pin and one of said members, said joint comprising means defining a re-



cess, means defining a surface having substantially the same geometric contour as the recess, the contour of the recess being substantially larger than the contour of the surface whereby only a small portion of the contour of the surface engages the contour of the recess.

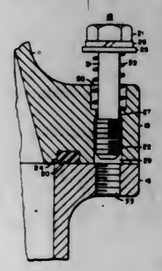
3,018,126
CONNECTING STRUCTURE FOR BEAMS OF A ROOF SUPPORT OR THE LIKE
Aloys Vanwersch, Angermund, Bezirk Dusseldorf, Peter Vanwersch, Aachen, and Ludwig Vanwersch, Eschweiler, near Aachen, Germany, assignors to Firma Eisenwerk Wanheim G.m.b.H., Duisburg-Wanheim, Germany
Original application May 23, 1955, Ser. No. 510,204, now Patent No. 2,991,097, dated July 4, 1961. Divided and this application Dec. 24, 1958, Ser. No. 782,853
In France July 8, 1948
Public Law 619, Aug. 23, 1954
Patent expires July 8, 1968
3 Claims. (Cl. 287—99)



1. In a supporting structure, in combination a first beam having a bifurcated end piece provided with a pair of spaced walls each of which is formed with an opening, the opening of one of said walls being aligned with that of the other of said walls; a second beam having an end piece freely extending between said walls of said bifurcated end piece of said first beam and formed with an opening aligned with said openings in said walls, at least one of said end pieces on said first and second beam being removably connected to the respective beam; a pivot pin extending through said openings in said end pieces of said first and said second beam for turnably fastening said beams to each other; locking means for securing the relative angular position of said beams; and connecting means for releasably securing said removable end piece to the respective beam against relative axial displacement.

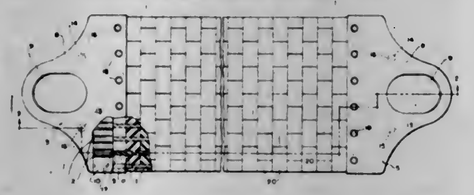
3,018,127
ENCLOSED DEVICE WITH COVER-MOUNTING MEANS
Stephen S. Dobrosielski and William L. Lang, Beaver, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 30, 1958, Ser. No. 770,796
4 Claims. (Cl. 292—251)

1. In combination, an explosion-proof enclosure comprising a cabinet and an openable cover, said cabinet having an open side with a peripheral flange exteding thereabout, a plurality of spaced threaded openings through said peripheral flange, said cover having a registering peripheral flange with a plurality of spaced boss portions, each boss portion of the peripheral flange of the cover having a hole extending therethrough registering with a corresponding opening in the cabinet, a threaded portion in each one of said holes in the boss portions of the cover, said threaded portion being integral with the cover and spaced from the ends of the hole in the cover, said threaded portion being of the same diameter and threads as the corresponding threaded opening in the cabinet, the portions of the hole on opposite sides of the threaded portion being of a larger diameter than the threaded portion, a fastening member rotatably disposed in each hole, each fastening member having a head portion at one end and a threaded portion at the other end of the same diameter and threads as the corresponding opening in the cabinet, a portion of the fastening member between its



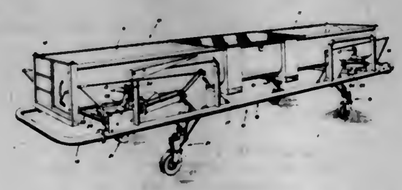
head portion and its threaded poriton being of a smaller diameter than the threaded portion in the hole, resilient means disposed on the small diameter portion of said rotatable fastening member, said resilient means being disposed in one of the larger diameter portions of the hole between the head portion of the rotatable fastening member and the threaded portion of the hole to bias the rotatable fastening member away from the cabinet, and the head portion of the rotatable fastening member having a greater diameter than the internal diameter of said one larger-diameter portion of the hole, whereby said resilient means will not be compacted and mounting pressure will be applied directly to said boss portions of the openable cover.

3,018,128
FLAT TYPE SLING
John R. Nelson, Wilbraham, and Maurice J. Gosselin, Springfield, Mass., assignors to The Colorado Fuel and Iron Corporation, Denver, Colo., a corporation of Colorado
Filed Sept. 25, 1959, Ser. No. 842,286
1 Claim. (Cl. 294—74)



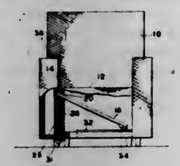
The improved flat sling which comprises a plurality of individual ropes of substantially equal length and arranged in a flat position, a multiplicity of load-bearing rubber blocks through which the ropes are threaded, each rope having a swaged head secured on each end, each head being considerably larger in diameter than the rope and having a tension bearing means, a fixture at each end of the ropes having lift-engaging means, each fixture consisting of two parts and a channel therebetween for securing the heads, and a hole for each rope between the parts connecting with the channel which holds the ropes in proper spaced relation, said parts of the fixture being removably connected together for securing the heads in the channel where the tension-bearing means engage the fixture, said fixture being flat and not appreciably thicker than the rubber blocks.

3,018,129
MISSILE TRANSFER DOLLY
Eugene S. Culver, Arlington, Va., assignor to the United States of America as represented by the Secretary of the Navy
Original application Mar. 20, 1959, Ser. No. 800,901, now Patent No. 2,996,310, dated Aug. 15, 1961. Divided and this application Mar. 30, 1960, Ser. No. 18,789
7 Claims. (Cl. 296—35)



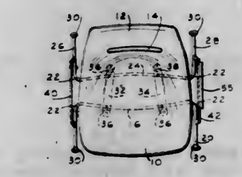
1. A transfer dolly including a frame having side rails and supports extending transversely of the frame and connected to the side rails, leg assemblies supporting the frame above a surface, a cradle releasably attached to the frame for supporting a load, saddles carried by said cradle and provided with spaced walls, cradle mounts carried by said supports, shear blocks resiliently connecting the cradle mounts to the supports, linkages pivotally mounted on said cradle mounts, latches pivotally mounted on the linkages and movable between said spaced walls, means carried by said linkages at one end thereof for mounting the latches for pivotal movement, locking means carried by said latches and movable between said spaced walls into engagement therewith for releasably locking the cradle to the mounts, and means carried by said latches in the path of travel of said locking means for controlling the movement of said locking means as the locking means are actuated to a release position.

3,018,130
CHAIR ARM SHELF
Madeo C. Juliano, 6 Preston Ave., Cranford, N.J.
Filed Mar. 28, 1960, Ser. No. 18,154
4 Claims. (Cl. 297—144)



1. A chair or the like having a back and a seat and comprising a frame, a side panel having a top forming an arm rest, said frame having a portion at one side of said back and aligned with the arm rest of said side panel in closed position, a hinge secured to the outer edges of said aligned frame portion and said side panel away from said back to pivot said panel on a vertical axis near said back to swing away from said seat, a shelf pivoted to the inside of said panel on a horizontal axis, said shelf in the closed position having a substantially quadrant portion housed below said seat and a substantially rectangular rearward extension lying at one side of said frame portion, and means actuated by swinging said panel about said vertical axis for swinging said shelf about said horizontal axis into horizontal position with said rearward extension bridging the gap between said hinge and said seat.

3,018,131
SEATS COUPLED SIDE-BY-SIDE
Allison F. Krueger, 226 Mir Mar Drive, Green Bay, Wis.
Filed Sept. 27, 1960, Ser. No. 58,686
5 Claims. (Cl. 297—248)



1. Seating equipment comprising a plurality of identical chairs; each chair including a seat member and four supporting legs; said legs being laterally separated by a distance greater than the width of said seat; the space between said legs being unobstructed to permit the seat of another chair to lie between the legs of a superposed chair; whereby chairs placed in side by side abutment on the same level have their seats laterally spaced apart; and separate quick-detachable clamping means insertable from above through the space between the seats of chairs arranged side by side, for clamping the chair frames to hold the chairs in alignment with each other; the two legs on each side of a chair being interconnected by a side brace running from a front leg to a back leg; said side braces lying outside the fore-and-aft plane of the braced legs, to permit the legs of a chair below to be received between the front and rear legs of a chair above; said clamping means clamping the main portions of the adjacent side braces of two juxtaposed chairs in parallelism with each other and with said clamping means; said braces each comprising a main portion parallel to the fore-and-aft plane of the braced legs; offset end portions offset in the same direction and extending into abutment with the braced legs and permanently affixed to said legs, as by spot-welding; said clamping means having parallel, spaced flanges positioned to receive between them the main portions of the adjacent side braces of two juxtaposed chairs; and locking means adapted to pass through both of said flanges and both of the side braces clamped thereby, in a direction normal to the planes of said flanges and braces, to lock said flanges and both said chairs against relative fore-and-aft movement; said flanges and braces having registering apertures to receive said locking means.

3,018,132
FOLDING LOUNGE SEAT
Kenneth R. Baker, 8 Hawes St., Fitchburg, Mass., and Edward J. Rahaim, 218 Woodland Ave., Gardner, Mass.
Filed May 12, 1960, Ser. No. 28,578
4 Claims. (Cl. 297—377)

1. A folding lounge seat comprising a pair of U-shaped frames each having an open end, a pair of links interpivoting the legs forming said U-shaped frames at their respective ends, said frames being spaced by the links and being movable into extended or folded relationship, a solid panel secured to each frame, said solid panels facing each other in contacting relation when said frames are in folded condition, a carrying handle pivoted to one of said frames, a third U-shaped frame pivoted adjacent the links, interengaging means for said handle and third

frame for adjustable positioning of the U-shaped frame to which the handle is mounted for use of its panel as a backrest in adjustable raised position from the third named frame, another panel being used as a seat.



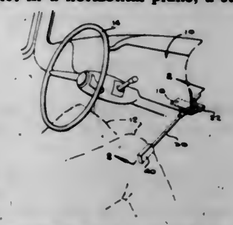
3,018,133
HEAD REST FOR AUTOMOBILE SEAT
Maurice A. Mills, 2725 Bailey St., Dearborn, Mich.
Filed Mar. 7, 1960, Ser. No. 13,225
2 Claims. (Cl. 297—397)



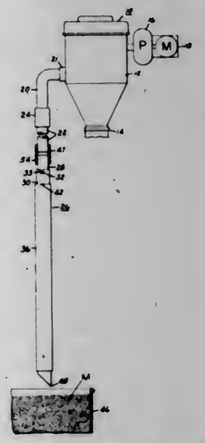
1. In an automobile seat construction having an upright seat back extending upwardly from a horizontally disposed seat member; a transverse rigid frame member at the rear bottom edge of the horizontally disposed seat member; the front portion of the seat back being resilient to cushion an occupant; the improvement comprising a head support mounted on said seat back; said head support comprising a compressible head support element mounted on a rigid backing plate; said support element being positioned above the seat back; a relatively wide rigid lip extending downwardly from the backing plate into engagement with the resilient front upper edge of the seat back to support and stabilize the head support element; a rigid elongated brace detachably fastened at one end to the head support element and extending rearwardly from the head support element to a point beyond the back surface of the seat back and thence downwardly and inwardly to a point where the lower end of said brace engages the transverse rigid frame member at the rear bottom edge of the horizontal seat member; and a fabric covering for said head support element having flaps extending over the rear surface of said backing plate, a pocket portion enclosing said lip, and fastening means fixed to the lower edge of said flaps and the upper edge of said pocket portion to join said pocket portion and said flaps.

3,018,134
KNEE REST FOR AUTOMOBILES
Lester D. Shiplett, 9018 St. Andrews Place, Silver Spring, Md., and Berthold H. Ochterbeck, Takoma Park, Md. (2723 Nicholson St., West Hyattsville, Md.)
Filed Mar. 1, 1960, Ser. No. 12,058
3 Claims. (Cl. 297—427)

1. The combination with a vehicle instrument panel, of a knee rest assembly comprising a plate fixedly secured to said panel, a mounting means embodying a bracket positioned below and adjacent to said plate, means connecting said bracket to said plate for swinging movement of said bracket in a horizontal plane, a support embodying a sleeve dependingly connected intermediate its ends to said bracket for tilting movement in a vertical plane, and a rod element having a resilient pad on one end, said rod element being slidably and rotatably and projectably and retractably supported in said support.



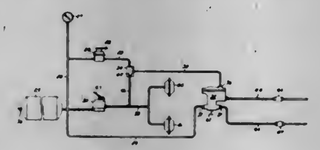
3,018,135
MATERIAL TRANSFER METHOD AND APPARATUS
John C. Reib, R.D. 2, Franklin, Pa.
Filed Oct. 16, 1958, Ser. No. 767,628
5 Claims. (Cl. 302—58)



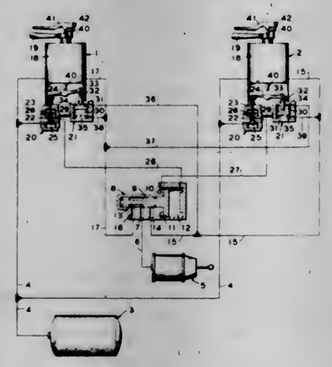
1. A device for transferring particles from a mass thereof which comprises, a tubular first member, a second member having a tubular portion telescopically supported by said first member to move outwardly from one end of said first member, said second member having a passageway extending longitudinally therein, said passageway having an outlet at a location spaced longitudinally from the end of said second member which moves outwardly from said one end, said tubular portion having at least one opening therein connecting said passageway to the interior thereof, and said first member being securable to a suction source.

3,018,136
ADJUSTABLE DIFFERENTIAL AIR PRESSURE RELAY
Norman C. Williams, Portland, Oreg., assignor to Power Brake Equipment Company, a corporation of Oregon
Filed Mar. 21, 1960, Ser. No. 16,276
17 Claims. (Cl. 303—6)

1. For use in an air brake system for an automotive train, a differential pressure air relay including in an axial line a main valve, an exhaust valve and a valve stem, said valves being overlappingly operable by one end of said stem on movement of said stem in one direction first to close one of said valves and then to open the other and in the other direction first to close the other of said valves and then to open the one, said relay including a pair of parallel supported spaced diaphragms with a parallel spaced diaphragm plate secured therebetween to move axially therewith in response to the differential of the opposed pressures applied to the opposite faces of said diaphragm plate by the outer faces of said diaphragms and means securing said plate to the other end of said stem to operate said valves to maintain said differential, said air relay including means for subjecting the outer face of one of said diaphragms to a pilot air pressure in a space and means for subjecting the outer face of the other of said diaphragms to the pressure of air required to be maintained a preset differential from said pilot air pressure, means adapting said main valve when open to admit air from a higher pressure source to said differential pressure space and said exhaust valve when open to bleed air from said differential pressure air space, means for inversely varying the effective diameters of said two diaphragms as said diaphragm plate is moved with said stem axially away from the mid-spaced position of said plate between the mounting planes of said diaphragms and said relay includes a valve barrel axially movable with said valves toward and away from said valve stem to vary said differential.



3,018,137
DUAL STATION BRAKE CONTROL SYSTEM
Charles F. B. Shattock and Cyril J. Stone, King's Cross, London, England, assignors to Westinghouse Brake & Signal Company, Ltd., London, England
Filed June 9, 1960, Ser. No. 34,983
Claims priority, application Great Britain Sept. 29, 1959
5 Claims. (Cl. 303—14)

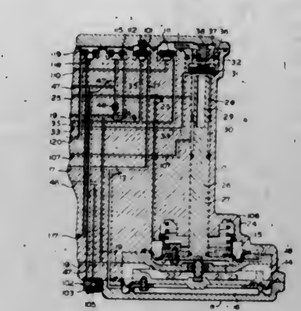


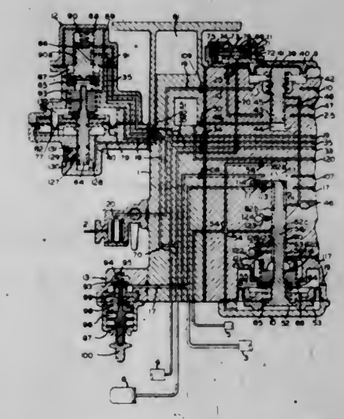
1. A fluid pressure brake control system for controlling braking of a locomotive from a plurality of control stations, said system comprising a fluid pressure storage reservoir, a fluid pressure actuated device operative to effect a brake application and a brake release on the locomotive, a manually operable control valve device for each of a plurality of separated control stations, each operable to effect the supply of fluid under pressure from said storage reservoir to said fluid pressure actuated device to effect a brake application and the release of fluid under pressure from said fluid pressure actuated device to effect a brake release, a multi-position change-over valve means effective in one position to establish a first fluid pressure communication between the manually operable control valve device located at one of the control stations and said fluid pressure actuated device and effective in another position to close said first fluid pressure communication and to establish a second fluid pressure communication between the manually operable control valve device located at another of the control stations and said fluid pressure actuated device, valve means at each of the control stations operable to control the operation of said multi-position change-over valve means from one of its positions to another of its positions, and fluid pressure responsive means at each of the control stations subject in opposing relation to the pressures of the fluid supplied respectively by said manually operable control valve devices for preventing operation of the said valve means at the corresponding control station unless the pressure supplied by the manually operable control valve device at the corresponding control station exceeds the pressure supplied by the manually operable control valve device at the other control station.

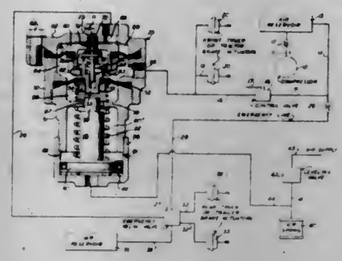
3,018,138
FLUID PRESSURE BRAKE APPARATUS HAVING SELECTABLE GRADUATED AND DIRECT RELEASE ARRANGEMENT
Richard L. Wilson, Pittsburgh, and William B. Jeffrey, Irwin, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Sept. 12, 1957, Ser. No. 683,661
15 Claims. (Cl. 303—36)

1. In a fluid pressure brake apparatus, the combination of a brake pipe, a selector volume, and valve means forming part of and controlling a charging communication through which fluid under pressure may normally flow from the brake pipe to the selector volume and also forming part of and controlling two release communications of different flow capacities via which fluid under pressure may be released respectively from the brake pipe at a relatively slow rate and from the selector volume at a faster rate, said valve means being subject opposingly to brake pipe pressure and selector volume pressure and responsive to an initial operator-effected reduction in brake pipe pressure at a service rate below selector volume pressure to close said charging communication and open said release communications, said valve means being responsive to a consequent reduction in selector volume pressure to substantially the existing value of brake pipe pressure to close said release communications to terminate such release of fluid under pressure from the brake pipe and selector volume while continuing to maintain said charging communication closed for thereby conditioning said valve means to effect further local releases of brake pipe pressure upon successive further operator-effected reductions in brake pipe pressure, said valve means being responsive to an increase in brake pipe pressure above selector volume pressure to move to a normal position for permitting flow through said charging communication, said valve means being responsive to an emergency rate of reduction in brake pipe pressure relative to selector volume pressure to bottle up fluid in said selector volume at substantially the value of brake pipe pressure existing at the time said emergency reduction in brake pipe pressure was initiated for thereby deferring return of said valve means to nor-

mal position following an emergency rate of reduction in brake pipe pressure until brake pipe pressure has been restored to a value exceeding the value of selector volume pressure.







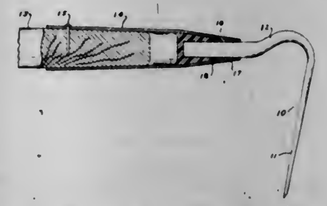
of said diaphragm structures to limit pressure in said first chamber, and means for preventing said movement of said second diaphragm structure to prevent closing of said normally open valve to thus maintain communication between said chambers to maintain equal pressures therein.

3,018,139
PRESSURE CONTROL MECHANISM FOR VEHICLE BRAKES
William Stelzer, Bloomfield Hills, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Apr. 1, 1958, Ser. No. 725,587
13 Claims. (Cl. 303—60)

1. A control valve mechanism comprising a casing, first and second diaphragm structures in said casing, said first diaphragm structure forming with said casing a first chamber for connection with a pressure line, said first diaphragm structure forming with said second diaphragm structure a second chamber for connection with a pressure control valve, said first diaphragm structure having a passage therethrough connecting said chambers, a normally open valve controlling said passage, said first diaphragm structure having lost motion connection with said second diaphragm structure whereby the admission of pressure into said second chamber effects movement of both of said diaphragm structures, resilient means opposing such movement of said second diaphragm structure, said first diaphragm structure being engageable with said normally open valve to close it and close communication between said chambers upon said movement

---

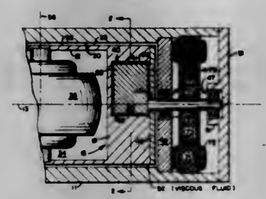
3,018,140
ADHESIVE CONNECTION FOR TOOL HANDLE
William E. Portz, Geneva, and George W. Yearley, North Madison, Ohio, assignors to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 12, 1959, Ser. No. 812,725
5 Claims. (Cl. 306—22)



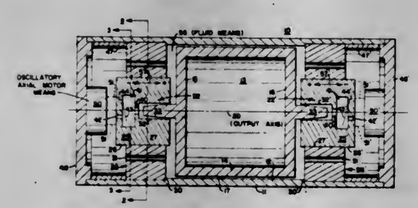
1. In a handled tool, the combination with an elongated handle, a tubular metallic sleeve therefor and secured thereto, said tool having a work edge and a shank, a ferrule telescoped over the shank of the tool, a portion of said tool shank projecting therethrough into the sleeve and encircled thereby, the shank being circumferentially spaced throughout its sleeve encircled portion from the sleeve, said ferrule being provided with portions of lesser and greater diameters, said portion of lesser diameter being wedgingly disposed within the said sleeve and said portion of greater diameter abutting the outer end of said sleeve acting as a centering device for said shank during attachment, adhesive material disposed within said space between said shank and said sleeve to secure said shank to said sleeve, the handle being secured within the opposite end of said sleeve.

3,018,141
CONTROL APPARATUS
Lyle F. Warnock, Jr., Grand Rapids, Mich., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 21, 1961, Ser. No. 90,681
6 Claims. (Cl. 308—9)

1. In a floated inertial instrument: a housing member; a gimbal member positioned within said housing member; fluid means in said housing member and surrounding said gimbal member, said fluid means having a density substantially equal to the density of said gimbal member; and means rotatably connecting said gimbal member to said housing member for relative rotation therewith about an axis comprising a pair of axially spaced bearing assemblies each including chamber means in one of said members, pivot means on the other of said members and having at least a portion thereof positioned in said chamber means, first vane means on said one of said members extending radially in said chamber toward said pivot means defining therebetween restrictive gap means, second vane means on said portion of said pivot means extending radially toward said one of said members defining therebetween restrictive gap means, and means for rotationally oscillating said pivot means relative to said one of said members so that said first vane means is rotationally oscillated relative to said second vane means, said vane means coacting with said fluid means to pump said fluid means through said restrictive gap means upon relative rotation between said first and second vane means.

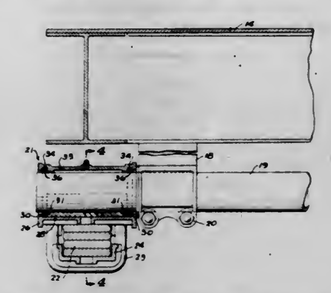


3,018,142
CONTROL APPARATUS
Lyle F. Warnock, Jr., Grand Rapids, Mich., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 21, 1961, Ser. No. 90,682
6 Claims. (Cl. 308—9)



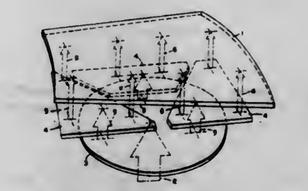
1. In a floated inertial instrument: a housing member; a gimbal member positioned within said housing member; fluid means in said housing member and surrounding said gimbal member, said fluid means having a density substantially equal to the density of said gimbal member; and means rotatably connecting said gimbal member to said housing member for relative rotation therewith about an axis comprising a pair of axially spaced bearing assemblies each including a pivot receiving element connected to one of said members and having a recess, a pivot element connected to the other of said members and having at least a portion thereof positioned in said recess, a radial gap being defined between said elements, and said radial gap decreasing in dimension along said axis, and means for axially oscillating said elements relative to one another and for pumping said fluid means between said elements only in the direction of decreasing radial gap.

3,018,143
BEARING STRUCTURE FOR A ROCKABLE VEHICLE AXLE OR TRUNNION
Lloyd D. Masser, Muskegon, Mich., assignor to Neway Equipment Company, Muskegon, Mich., a corporation of Michigan
Filed Feb. 17, 1958, Ser. No. 715,767
9 Claims. (Cl. 308—21)



1. In a vehicle wherein pay load is supported by a shaft such as an axle, trunnion, or the like and a member in rockable load bearing relation therewith, bearing means formed of a generally non-metallic material and having portions lying on a substantially cylindrical surface, said portions extending angularly not substantially more than 180°, means securing said bearing means substantially non-rotatably to said member, said shaft rockably engaging said portions of said bearing means in load bearing relation, said shaft and member having portions displaced angularly from said bearing means which are spaced apart relative to each other to define a space around the periphery of said portion of said shaft, said space being adequate to accommodate relative shifting of said portions of said shaft and member incidental to dimensional variations of the parts including said bearing means due to changes in temperature, humidity and the like, and yieldable means in said space compressed between said portions of said shaft and member so that the compressed material exerts force on said shaft in a direction toward said bearing means, said force being adequate to hold said shaft against said bearing surface in opposition to forces tending to disengage said shaft from said bearing surface incidental to operation of said vehicle, said material being yieldable to shifting of said shaft portion toward said member portion upon occurrence of said dimensional variations.

3,018,144
THRUST BEARING ASSEMBLY
Rene A. Baudry, Pittsburgh, and Eugene C. Whitney, Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 29, 1960, Ser. No. 11,674
8 Claims. (Cl. 308—160)



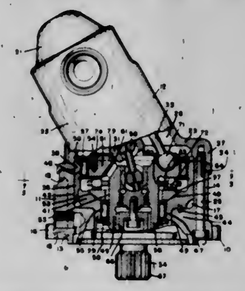
1. A thrust bearing assembly for a vertical shaft having a rotating thrust runner thereon, said bearing assem-

bly comprising a plurality of segmental bearing pads having bearing surfaces for engaging the thrust runner, a stationary pivot member for each bearing pad, support means for individually supporting each bearing pad on its pivot, each of said support means including a lower support member resting on the pivot, a plurality of intermediate support members each supported, at one point on the lower support member, and a plurality of supports resting on each of the intermediate support members for supporting the bearing pad thereon.

3,018,145
BEARING

Richard T. Cornelius, Minneapolis, Minn., assignor, by mesne assignments, to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed May 4, 1959, Ser. No. 810,720
3 Claims. (Cl. 308—174)



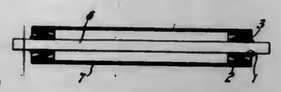
1. A bearing comprising an outer race and an inner race received within said outer race, one of said races being fixed and the other rotatable, said outer race having two inner cylindrical coaxial surfaces spaced axially from one another and facing inwardly, one being of greater diameter than the other, and an arcuate surface therebetween with its center in the axis of the bearing and extending outwardly from said inner surface of lesser diameter and toward the inner surface of greater diameter, said inner race having two cylindrical coaxial outer surfaces facing said inner surfaces and spaced therefrom, antifriction rolling members disposed between said inner and outer surfaces and slidable relative thereto in an axial direction and transmitting radial thrust, said inner race having a flat end surface normal to the axis of the bearing disposed at the end of the outer race of greater diameter and facing said arcuate surface and spaced therefrom, a floating race received between said inner and outer races and having an arcuate surface engaging the arcuate surface of the outer race and being supported thereby for rocking transverse movement, said floating race having a flat end surface facing and spaced from the end surface of said inner race, substantially parallel to the end surface on said inner race and antifriction rolling members disposed between said end surfaces and slidable relative thereto in a radial direction and transmitting end thrust.

3,018,146
BEARING

Gerrit Evert Euwe, Vlaardingen, and Cornelis Johannes Adrianus Cleremans, Rotterdam, Netherlands, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

Filed Nov. 28, 1958, Ser. No. 776,935
Claims priority, application Great Britain Dec. 6, 1957
5 Claims. (Cl. 308—238)

1. A bearing of plastics material comprising two cylindrical sleeves positioned coaxially relative to each other about a common axis to form a space therebetween, a connecting member in said space to connect opposite ends



of said sleeves, and said member being formed integral with said sleeves and being inclined at an angle to the axis.

3,018,147
COLLAPSIBLE TABLE

Adrian G. Hoek, 1052 E. 38th, and Michael N. Vessio, 2713 Albemarle Road, both of Brooklyn, N.Y.

Filed July 2, 1959, Ser. No. 824,524
9 Claims. (Cl. 311—41)

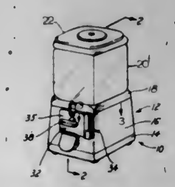


1. A collapsible table-like platform attachment for a central support comprising a mounting ring, means detachably securing said mounting ring to the central support, a plurality of pivotal support devices attached peripherally about said mounting ring to provide pivot axes parallel to but spaced from that of said mounting ring, a plurality of discs carried one each by said pivotal support devices, each disc including means located adjacent the periphery of the respective disc and cooperating with one of the pivotal support devices attached to said mounting ring to permit pivotal movement of each disc from a nested position wherein all of said discs are in superposed parallel relationship to an active position wherein all of said discs are coplanar and peripherally spaced with respect to said central support.

3,018,148
DISPENSER

Harold T. Probasco, Burbank, Calif., assignor to Oak Manufacturing Co., Inc., Culver City, Calif., a corporation of California

Filed July 7, 1958, Ser. No. 746,968
5 Claims. (Cl. 312—35)

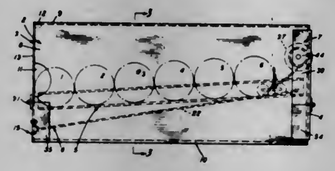


1. In a dispenser, the combination of: an enclosure having a base incorporating a front wall, said front wall having an elongated opening therein which is open at its upper edge; a coin receiver having a perimetrical groove engageable with one edge of said opening, said coin receiver having an operating handle thereupon and a dispensing gear operable thereby; a primary, rotary dispensing plate in said enclosure operatively connected to said dispensing gear; and an auxiliary dispensing head mounted in said opening, said dispensing head including a housing having edge portions engageable, respectively, with the perimetrical groove of said coin receiver and an adjacent edge of said opening to retain said housing in said opening, said housing incorporating a driven gear engaged by said dispensing gear and a rotatable dispensing member operable by said driven gear to cause conjoint movement of said rotary dispensing plate and rotatable dispensing member.

3,018,149
STORAGE CONTAINER FOR UNIFORM SIZED ARTICLES

John T. Parker, 1341 Degge Circle, Garland, Tex.

Filed Feb. 28, 1957, Ser. No. 643,035
9 Claims. (Cl. 312—45)

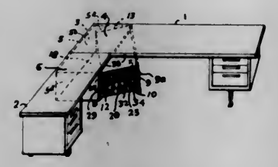


1. A storage container unit comprising: a main body, a front end member, a rear end member, a pair of inclined rails within said body to support a plurality of identical storage items, and means associated with the interior of said unit and with said front end member for indicating at the front of said container unit the quantity of items within the closed container unit, said front indicating means being actuated to its indicated position by the weight of the rearmost storage item on said rails.

3,018,150
MAP STORAGE UNIT

Louis D. Wright, 2066 Earl St., Beaumont, Tex.

Filed Feb. 23, 1960, Ser. No. 10,289
3 Claims. (Cl. 312—197)

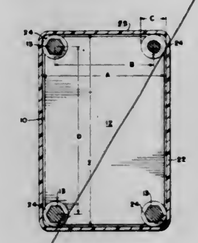


1. A desk having a movable storage unit pivotally mounted on a cabinet attached to said desk, said movable storage unit pivotally operable to opened and closed position with respect to said cabinet, end sections having tops converging with cabinet attached to said end sections, said storage unit having a rear end and an opposed open end thereto with the rear end pivotally mounted on said cabinet, said cabinet having three sides closed and one open side, said movable storage unit having a side that forms a door for said open side of said cabinet to provide means for closing said cabinet and containing said movable storage unit within said cabinet, said storage unit operable to swing to opened position so that the open end thereof is accessible to remove and restore the contents thereof.

3,018,151
HOUSING STRUCTURE FOR INSTRUMENT MECHANISMS OR THE LIKE

Ronald G. Nicholson, Tomaston, Conn., assignor to Consolidated Electronics Industries Corp., Waterbury, Conn., a corporation of Delaware

Filed Mar. 24, 1958, Ser. No. 723,349
5 Claims. (Cl. 312—352)

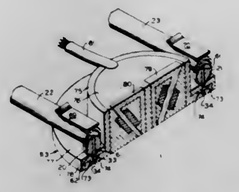


1. A housing structure for instruments and the like comprising a housing member having a tubular body of uniform cross section over a predetermined length, a frame member telescopically received in said housing member, said frame member comprising a plurality of longitudinally disposed posts disposed adjacent sidewalls of said tubular body and transversely projecting spaced sets of semi-resilient washers carried on said posts engaging said tubular body at longitudinally spaced points to support said frame within said housing member, said washers being so arranged with respect to said tubular body as to be compressed thereby when said housing and frame members are telescopically assembled.

3,018,152
MOUNTING AND OPERATING MEANS FOR A PNEUMOSTATIC TRANSDUCER HEAD

Tyson G. Cowan, Campbell, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 30, 1958, Ser. No. 783,876
14 Claims. (Cl. 346—74)



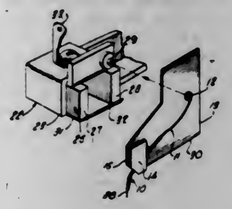
1. In a mechanism for magnetic recording including a record having a moving magnetic recording surface thereon, a transducer having a surface thereof formed to conform with the recording surface, and having a plurality of air bearing orifices in said transducer surface; transducer support means including a pair of flexible tubular arm members, a bearing ball interposed between each tubular member and a transducer and having an opening therethrough communicating the interior of said each tubular member with the transducer orifices, each bearing ball being free for universal swivel movement with one of the members between which it is interposed, and means interconnecting the arm members and the transducer for retaining said arm members and transducer against separation.

3,018,153
STYLUS AND SUPPORT FOR ELECTRIC RECORDERS

Hans F. Steen, Jamaica, N.Y., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland

Filed Jan. 15, 1959, Ser. No. 787,076
6 Claims. (Cl. 346—139)

1. A stylus device for electric recorders and the like and through which stylus electric current passes to a recording surface, comprising an elongated flexible stylus member carrying a pointed stylus tip at one end, and means to dampen the tendency of said stylus to freely vibrate when the stylus tip rides over a rough surface, the last mentioned means including a coating of a high temperature resistant resin extending along the length of the stylus, the resin being of a kind which leaves substantially negligible carbon residue when decomposed by the heat at the recording stylus, and which inhibits the build-up of carbon particles on the stylus tip which tends



to result from the passage of the recording current from said stylus to said recording surface.

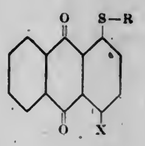
CHEMICAL

3,018,154
COLORED AROMATIC POLYESTER MATERIAL AND PROCESS OF MAKING SAME

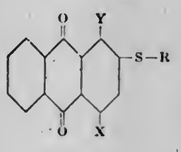
John F. Downey, Cheektowaga, and Robert C. Hoare, Hamburg, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 24, 1959, Ser. No. 841,937
13 Claims. (Cl. 8—55)

1. Aromatic polyester material of the polyalkylene terephthalate type colored with an anthraquinone mono-arylthioether selected from the group consisting of α-mono-arylthioethers having the formula



and β-mono-arylthioethers having the formula



wherein

R represents a mononuclear aryl radical,
X represents a member selected from the group consisting of H, OH and lower alkoxy, and
Y represents a member selected from the group consisting of H and NH_2.

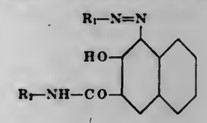
12. A process for coloring an aromatic polyester of the polyalkylene terephthalate type which comprises applying to the polyester an aqueous dispersion of an anthraquinone mono-arylthioether selected from the group defined in claim 1.

3,018,155
PROCESS FOR THE MANUFACTURE OF SOLUTIONS

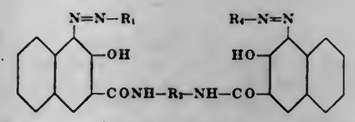
Hans Gaertner, Basel, and Ernst Reich, Muttenz, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed Mar. 4, 1957, Ser. No. 643,528
Claims priority, application Switzerland Mar. 5, 1956
4 Claims. (Cl. 8—83)

1. A solution of an azo dyestuff selected from the group consisting of azo dyestuffs of the formulae



and



wherein R_1 and R_4 each stands for a benzene radical, R_2 stands for a radical selected from the group consisting of benzene and naphthalene radicals, and R_3 stands for a radical selected from the group consisting of phenylene and diphenylene radicals, all the radicals R_1, R_2, R_3 and R_4 being free from ionizing groups; the said solution comprising in addition to the said dyestuff a substance of strongly basic action selected from the group consisting of ammonia, an alkali metal hydroxide and an alkali metal alcoholate, and an organic liquid which has a dielectric constant of at least 6 and an acidity less than that of methyl alcohol and ethyl alcohol.

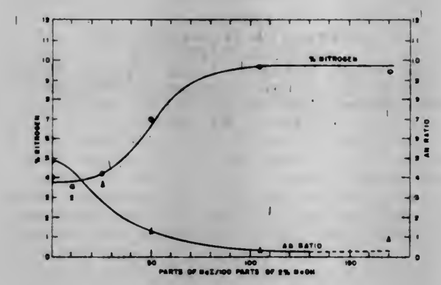
3,018,156
PROCESS OF CYANOETHYLATING CELLULOSE IN THE PRESENCE OF SALTS

Norbert M. Bikales, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Jan. 6, 1958, Ser. No. 709,430
10 Claims. (Cl. 8—116.2)

1. In a process of partially cyanoethylating cellulose fibers wherein said fibers are reacted with acrylonitrile simultaneously with and in the presence of an aqueous solution of an alkali metal hydroxide under known conditions capable of producing the desired nitrogen content;

the improvement whereby (*a*) the rate of introduction of cyanoethyl groups is selectively increased without increasing the rate of hydrolysis and (*b*) in obtaining the desired degree of cyanoethylation the weight of acrylonitrile consumed in side reactions is decreased; said improvement comprising: adding to said aqueous solution a



water-soluble salt in amount by weight of from about one part of salt to about twenty parts of said aqueous solution up to a sufficient amount to substantially saturate said aqueous solution in said salt; said salt being a hydrotropic alkali metal salt of an anion selected from the group consisting of iodide, thiocyanate, benzenesulfonate, toluenesulfonate and xylenesulfonate.

3,018,157
PROCESS OF PRODUCING UNIFORMLY DYEING POLYACRYLONITRILE FILAMENTS BY HEAT STRETCHING THE WATER WETTED FILAMENTS

Frank J. Kovarik and Carl Ernest Latschar, Waynesboro, Va., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 28, 1954, Ser. No. 465,355
6 Claims. (Cl. 18—54)



1. The process for the production of a filament having improved dyeing properties and being capable of being drawn at least two times which comprises dry spinning a solution in an inert organic solvent of a copolymer having at least an 85% acrylonitrile content and up to 15% of an ethylenically unsaturated monomer copolymerized therewith, winding the as-spun filament into a package, extracting the organic solvent from the filament while on the package with water, unwinding and saturating the said filament containing not more than about 2% of the aforesaid organic solvent with water by passing it under low uniform tension insufficient to produce appreciable permanent stretching through an aqueous medium inert to the said filament and in which the polymer is insoluble, and immediately thereafter drawing the resulting wet filament at least 2 times its original length in an atmosphere of low pressure steam.

3,018,158
VISCOSE PROCESS

Reid Logan Mitchell, Morristown, N.J., James Wesley Berry, Tucson, Ariz., and William Hughes Wadman, Stockton, Calif., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

Filed May 5, 1959, Ser. No. 811,044
5 Claims. (Cl. 18—54)

1. In the viscose process the improvement which comprises forming a viscose spinning solution containing from 4% to 13% of cellulose of relatively uniform chain length at a degree of polymerization level of from 300 to 800 and sodium hydroxide varying from 5% to 13% and having a salt index of from 4 to 20, incorporating in the viscose from 0.05% to 1% based on the viscose of formaldehyde as a regeneration retardant, spinning the viscose into an acid coagulating-regenerating spin-bath containing sulfuric acid in which the retardation of regeneration is effected essentially by the formaldehyde and stretching the resulting filaments during regeneration at least 70% producing high strength thick-skin filaments.

3,018,159
METHOD OF REMOVING RADIOACTIVE IODINE FROM GASES

Leslie Silverman, Dover, Mass., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Apr. 16, 1959, Ser. No. 806,983
1 Claim. (Cl. 23—2)

A method of removing radioactive iodine from a gaseous medium comprising the steps of adjusting the temperature of said medium to an elevated temperature not exceeding 400° C., and passing said medium through a copper fibrous pad having deposited thereon a coating of cupric sulphide causing an ionic exchange resulting in release of sulphur and the formation on said pad of cupric iodide.

3,018,160
ADDUCTS OF DIBORANE WITH METAL SALTS

Henry C. Miller, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,196
7 Claims. (Cl. 23—14)

1. Compounds represented by the formula

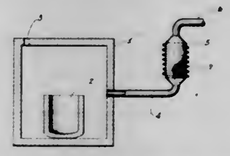
$$\frac{M_1(BH_3)SCN}{z}$$

wherein M is a metal having an atomic number of 3–56, inclusive, and is selected from metals of the class consisting of metals of groups I–A and II of the periodic table, and *z* represents the valence of the metal M.

3,018,161
REMOVAL OF RUTHENIUM AND CESIUM

Woodland E. Erlebach and Danny T. Nishimura, Deep River, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a company of Canada

Filed Nov. 25, 1958, Ser. No. 776,373
7 Claims. (Cl. 23—35)



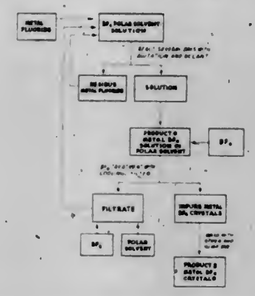
1. The method of removing radioactive ruthenium and cesium elements from gases containing them which com-

prises flowing the gases in contact with at least one of a group of reagents consisting of a metal oxide from the group consisting of iron oxide, nickel oxide, chromium oxide, cobalt oxide and titanium oxide which reacts with ruthenium to form a thermally stable compound and a refractory silicate which reacts with cesium to form a thermally stable compound, the reagents being in a form to provide wide surface contact with the gases, heating the contacting reagent at a temperature of 120 to 1350° C. during passage of the gases in contact therewith to insure formation of the thermally stable reaction product containing the radio active element and separating the decontaminated gases from the reaction compound.

3,018,162
ANHYDROUS METAL FLUOBORATES

Harold S. Halbedel, Euclid, and Walter B. Field, Cleveland, Ohio, assignors to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 15, 1960, Ser. No. 22,447
6 Claims. (Cl. 23—59)

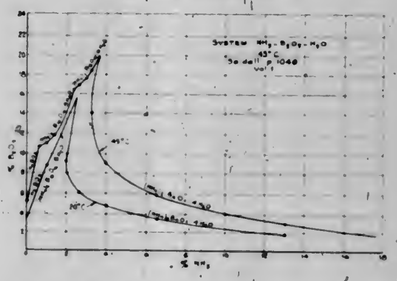


5. A process for the preparation of an anhydrous metal fluoborate comprising mixing a metal fluoride selected from the group consisting of zinc fluoride and barium fluoride with a 5% to 50% solution of BF_3 in an anhydrous oxygen containing polar solvent, agitating the mixture, removing unreacted metal fluoride, adding additional BF_3 and filtering off crystals of anhydrous metal fluoborate.

3,018,163
RECOVERY OF BORATE VALUES FROM CALCIUM BORATE ORES

Frank H. May and Vladimir V. Levasheff, Whittier, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

Filed Aug. 1, 1958, Ser. No. 752,517
4 Claims. (Cl. 23—59)



1. A process for recovering boron values from calcium borate ore comprising: leaching said ore with a hot aqueous solution of ammonia and a hot aqueous solution of carbon dioxide, said hot aqueous solutions being maintained at a temperature less than 83° C., the ratio of ammonia to carbon dioxide falling within the range 2:1 to 1:1 to form ammonium borate in solution and solid calcium carbonate; separating the liquor so formed from said solid calcium carbonate and said ore; and cooling said liquor to precipitate said ammonium borate.

3,018,164
METHOD FOR STABILIZING OF AMMONIUM NITRATE

Eugene D. Guth, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 28, 1958, Ser. No. 777,143
10 Claims. (Cl. 23—103)

1. A method for phase stabilizing ammonium nitrate with less than 8 weight percent of potassium nitrate, which method comprises, in combination, the steps of: forming a stabilized solid solution of ammonium nitrate and potassium nitrate containing from about 90 to about 85 weight percent of ammonium nitrate and from about 10 to about 15 weight percent of potassium nitrate; admixing an aliquot portion of said solid solution with essentially pure additional ammonium nitrate which is to be stabilized, said aliquot portion being an amount sufficient to form a mixture containing less than 8 weight percent but sufficient potassium nitrate to prevent the appearance of phase IV of ammonium nitrate after said mixture has been heated as described hereinafter; and heating said mixture to a temperature above the melting point of said solid solution but below the melting point of said additional ammonium nitrate for a period of time sufficient to stablize said unstabilized ammonium nitrate.

3,018,165
PHOSPHORUS-NITROGEN COMPOUNDS

Morris L. Nielsen, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 2, 1959, Ser. No. 856,655
4 Claims. (Cl. 23—106)

1. Process for the preparation of tetrasodium imidodiphosphate which comprises heating disodium phosphoramidate in the presence of a molten salt selected from the group consisting of potassium formate, cesium formate, sodium phenoxide, potassium phenoxide, and mixtures thereof at a temperature in the range of from 200° C. to 250° C. the said salt being present in the proportion of at least 10% by weight relative to the weight of the said disodium phosphoramidate, and thereafter recovering a tetrasodium imidodiphosphate from the reaction mixture.

3,018,166
METHOD FOR THE REGENERATION OF WASTE SOLUTIONS OF SULFURIC ACID

William Ward Powell, Jr., R.F.D. 1, Clinton, Pa.

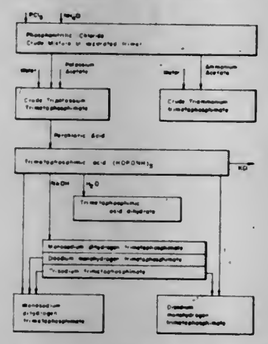
No Drawing. Filed Mar. 8, 1960, Ser. No. 13,441
11 Claims. (Cl. 23—126)

1. Method for the regeneration of a waste solution of sulfuric acid which comprises evaporating a body of the acid solution at its boiling point at subatmospheric pressure, separating water vapor from said acid solution, withdrawing said separated water vapor to achieve said subatmospheric pressure and compressing said separated water vapor to achieve a temperature difference between said compressed water vapor and said boiling acid solution of about 10° F. above the temperature of said acid solution, supplying heat to said acid solution by condensation of said compressed water in indirect heat exchange with said body of acid solution, and continuing to evaporate said acid solution while maintaining said acid solution at a concentration between about 35% and about 45% H_2SO_4 by weight.

3,018,167
METHOD FOR PRODUCING TRIMETAPHOSPHIMIC ACID

Morris L. Nielsen, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Oct. 17, 1957, Ser. No. 690,865
3 Claims. (Cl. 23—165)

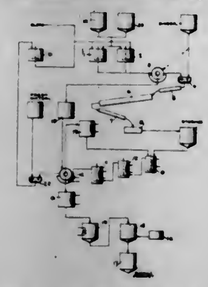


3. Method for the preparation of trimetaphosphimic acid which comprises hydrolyzing trimeric phosphonitrilic chloride in aqueous solution in the presence of potassium acetate to form the tripotassium salt of trimetaphosphimic acid and thereafter acidifying the said tripotassium salt of trimetaphosphimic acid with perchloric acid to precipitate potassium perchlorate, removing the said potassium perchlorate and evaporating the residual solution to dryness to obtain trimetaphosphimic acid as monoclinic platelets having an X-ray diffraction pattern in which the interplanar distances are 6.41 Angstroms, 3.31 Angstroms and 6.11 Angstroms.

3,018,168
PROCESS FOR PRODUCTION OF BARIUM SILICATES CONTAINING WATER-SOLUBLE BARIUM VALUES FROM BARITE

Manley C. Marcellus, Maplewood, Minn., and John A. Scarlett, Modesto, Calif., assignors to FMC Corporation, a corporation of Delaware

Filed Oct. 20, 1958, Ser. No. 768,140
6 Claims. (Cl. 23—186)

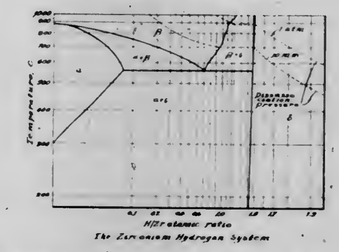


6. A continuous process for the production of water-soluble barium values from barium sulfate containing ore comprising mixing barium sulfate containing ore reduced to a —50 mesh particle size with sufficient silicon dioxide containing material reduced to a —200 mesh particle size so that a ratio of barium to silicon of between 2.2 to 1 and 2.7 to 1 is maintained in the mixture, pelletizing the mixture, continuously feeding said mixture to a calcining zone maintained at a temperature from about 1400° C. to about 1500° C. and in the presence of a slightly reducing atmosphere so that only small amounts up to 0.5% of barium sulfide are formed in the barium silicate reaction product, said mixture in said calcining zone being in contact with a refractory lining containing from 70% to 90% alumina and no free silica, continuously removing said barium silicate reaction product from the calcining zone, leaching the water-soluble barium values from the barium silicate reaction product, separating the water-insoluble barium silicate residue and recycling the said water-insoluble barium silicate residue as a source of said starting silicon dioxide containing material, while discarding sufficient of said recycled water-insoluble barium silicate residue so that Fe_2O_3 content of the barium silicate reaction product is maintained below 2% by weight.

3,018,169
METHOD OF MAKING DELTA ZIRCONIUM HYDRIDE MONOLITHIC MODERATOR PIECES

James B. Vetrano, Reseda, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 7, 1959, Ser. No. 785,542
3 Claims. (Cl. 23—204)

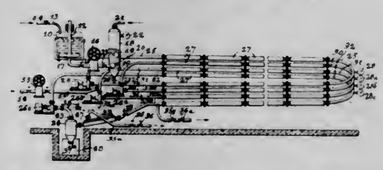


3. A method of preparing large, sound shaped bodies of delta zirconium hydride comprising heating a zirconium body of the desired shape and size to a temperature of not less than 1000° C., providing an atmosphere consisting of hydrogen around the zirconium bodies at a pressure not greater than one atmosphere to form beta zirconium hydride, reducing the temperature slowly to 800° C. at a rate inversely related to the size of the body to be hydrided such that cracks do not form in the body while maintaining the hydrogen pressure within a limited pressure range below but in the vicinity of one atmosphere whereby transformation from the beta phase to the delta phase occurs, and cooling to room temperature in an atmosphere of hydrogen without adding additional hydrogen.

3,018,170
PRESSURE LEACHING APPARATUS

Nicolas Soloducha, 4202 St. Urbain St., Montreal, Quebec, Canada

Filed July 13, 1959, Ser. No. 826,798
5 Claims. (Cl. 23—260)



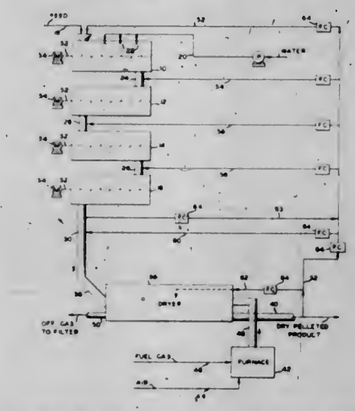
1. An apparatus for effecting continuous leaching, digestion or hydrolysis of titaniferous ores at high temperatures and pressure above boiling point pressure, said apparatus including in combination, a plurality of solution conducting pipes arranged in substantially horizontal

alignment and in superimposed separate circuit systems interconnected one to the other by valved by-pass pipes, each of said separate circuit systems being provided with a separate circulation pump to maintain circulation and pressure therein, heating means connected to said interconnected circuit systems and cooling means connected to at least one of the systems and cooling the heated mixture which has previously travelled through said systems prior to being introduced to a separating means, separating means receiving said cooled mixture and discharging liquid and solid constituents, an expansion tank connected to said heated pipe circuit systems, a main feed pump connected to said expansion tank and adapted to feed ore and acid mixture to said tank, a mixing tank for premixing raw materials connected to said main feed pump, and a pipe connected to said expansion tank from an exterior source of pressure adapted to apply an overpressure above boiling point pressure to the entire system.

3,018,171
WET PELLETING PROCESS AND APPARATUS

Lyle W. Pollock and James Q. Wood, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 4, 1957, Ser. No. 637,907
11 Claims. (Cl. 23—314)



2. A process for pelleting carbon black which comprises passing dry flocculent carbon black into the first of a series of wet pelletizers; admixing water with the black in said pelletizers; agitating the resulting wet mixture while passing same thru said pelletizers in series so as to form wet pellets; passing at least the major portion of said wet pellets to a dryer and contacting same therein with a drying gas so as to produce dry pellets; removing a substantial proportion of the pellets from the process at a point downstream of the pelletizers; and recycling withdrawn pellets substantially in the form and condition withdrawn to an upstream point in the process at least one process step above the withdrawal point.

3,018,172
ALUMINUM-CONTAINING ADDITIVE FOR FUEL OIL COMPOSITIONS AND METHOD OF PREPARING THE SAME

Richard M. Tillman, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

Filed May 13, 1957, Ser. No. 658,661
25 Claims. (Cl. 44—51)

1. A corrosion inhibitor adapted to be added to a fuel oil composition containing sodium and vanadium compounds, said corrosion inhibitor having been prepared by a process which consists essentially of:

(*a*) forming a solution of aluminum alkoxide in a volatile hydrocarbon solvent wherein the alkoxide radical is derived from an alkanol containing from 1 to 8 carbon atoms;

(*b*) adding the aluminum alkoxide solution to a mixture containing an oleaginous liquid selected from the group consisting of vegetable, mineral lubricating, and synthetic oils, an oil-soluble dispersing agent selected from the group consisting of metal alkaryl sulfonates, alkaryl sulfonic acids, oil-soluble metal soaps of carboxylic acids and carboxylic acids containing at least 8 carbon atoms, and a quantity of water in excess of that required for the hydrolysis of said aluminum alkoxide, the amount of aluminum alkoxide varying from about 1½ to 6 times that required to react with the acid where an acid is used as dispersing agent and ½ to 5 times the number of chemical equivalents of the dispersing agent where said dispersing agent is a salt of an acid;

(*c*) condensing from said mixture oil-insoluble aluminum hydroxide in particles the diameter of which are less than 0.25 micron by heating said mixture whereby said alkoxide is completely hydrolyzed, volatile solvents and water are removed and a uniform mixture is obtained.

3,018,173
STABILIZATION OF HYDROCARBONS

Henry A. Cyba, Chicago, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 26, 1957, Ser. No. 655,199
8 Claims. (Cl. 44—71)

5. A hydrocarbon distillate normally tending to deteriorate containing a stabilizing concentration of an inhibitor prepared first by the reductive alkylation at a temperature of from about 80° to about 300° C. of an equimolar proportion of a ketone containing from 8 to about 40 carbon atoms and an aminoalkyl alkanolamine of the following general formula

$$H_2N(CHR)_nN(CHR)_nOH$$

where *n* is from 2 to 4 and R is selected from the group consisting of hydrogen and an alkyl group of from 1 to 8 carbon atoms, and then reacting from one to two mols of the reductive alkylation product at a temperature of from about 80° to about 200° C. with one mol of a compound selected from the group consisting of an aliphatic dicarboxylic acid, anhydride thereof and the reaction product formed at a temperature of from about 150° to about 300° C., of a terpene having the formula $C_{10}H_{16}$ and a boiling point within the range of from about 150° to about 185° C. and a compound selected from the group consisting of an alpha,beta-unsaturated aliphatic dicarboxylic acid, anhydride and ester thereof.

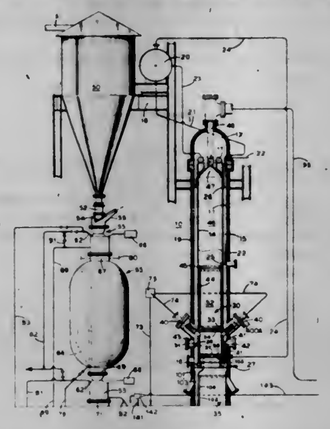
3,018,174
HIGH PRESSURE PULVERIZED COAL GASIFIER

Andrew B. Steever, Old Greenwich, Conn., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed July 21, 1958, Ser. No. 749,999
8 Claims. (Cl. 48—63)

1. Apparatus for continuously producing a synthesis gas at a substantial superatmospheric pressure by the reaction at high temperatures and substantial superatmospheric pressure of oxygen and steam with a solid fuel containing carbon; said apparatus comprising, in combination, an upright sealed pressure vessel; a circular row of water wall tubes with sealed inter-tube spaces forming

a sealed reaction chamber within said pressure vessel having a synthesis gas outlet, said tubes being radially inward of the inner surface of the pressure vessel to form therein an annulus space; a steam and water drum in communication with opposite ends of said tubes to supply water thereto and receive steam therefrom; a connection from the steam space of said drum to the lower end of said annulus space to provide a pressure-equalizing steam blanket between said water wall tubes and the wall of the pressure vessel; means establishing com-



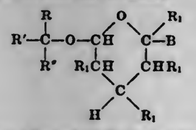
munication between the upper end of said annulus space and said gas outlet for discharge of steam from said annulus space into the synthesis gas; burner means mounted through said vessel in fluid-tight relation therewith and having a discharge end within said chamber; pressurized means for supplying fuel and steam to said burner means at a pressure in excess of such substantial superatmospheric pressure; and means for supplying an oxygen-containing gas to said reactor adjacent said burner means for reaction therein with the fuel and steam to form the synthesis gas.

3,018,175
PROCESS OF DESTROYING UNDESIRED PLANTS

Margaret D. Cameron, Beaumont, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application June 4, 1956, Ser. No. 588,989. Divided and this application Feb. 29, 1960, Ser. No. 11,477
5 Claims. (Cl. 71—2.5)

1. The process of destroying undesired plants which comprises exposing said plants to a toxic quantity of a tetrahydropyranyl ether of the formula



where R is a lower alkynyl radical, R′ and R″ taken together with the carbon atom to which they are attached represent the carbon atoms necessary to complete a cycloaliphatic nucleus having from 5 to 7 carbon atoms in the cycloaliphatic ring and containing a total of from 5 to 10 carbon atoms, any substituents on the said cycloaliphatic nucleus being alkyl substituents, R_1 is selected from the class consisting of hydrogen and lower alkyl radicals, and B is selected from the class consisting of hydrogen, the carboxaldehyde radical, lower alkyl radicals, and lower alkoxy radicals.

3,018,176
ELUTION OF PRECIOUS METAL SALTS AND ELUANTS THEREFOR

Herbert Zima, Darmstadt, Germany, assignor to Röhm & Haas G.m.b.H., Darmstadt, Germany

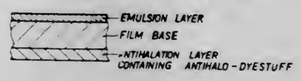
No Drawing. Filed Feb. 26, 1958, Ser. No. 717,545
Claims priority, application Germany Feb. 27, 1957
14 Claims. (Cl. 75—118)

1. Process for extracting a salt of a noble metal from a solid, amorphous, brown-to-black polymer prepared by polymerizing hydrocyanic acid in the presence of an alkali, said polymer containing said salt, which comprises elution thereof with a liquid eluant comprising a minor portion of an aqueous hydrogen chloride solution and a major portion of an organic component miscible with said aqueous hydrogen chloride solution.

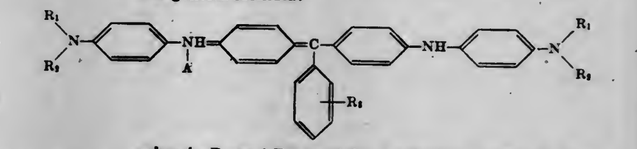
3,018,177
PHOTOGRAPHIC FILM WITH ANTIHALATION LAYER

Julius Geiger and Armin Ossenbrunner, Leverkusen, and Max Coenen, Uerdingen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Mar. 17, 1958, Ser. No. 722,086
Claims priority, application Germany Mar. 29, 1957
2 Claims. (Cl. 96—84)



1. A photographic element comprising in combination a film base, a silver halide emulsion layer on said base, and an antihalation dye carried by said base and having the general formula:



wherein R_1 and R_2 stand for a substituent selected from the group consisting of hydrogen, lower alkyl, hydroxyalkyl, carboxyalkyl, and phenyl; R_3 stands for a member selected from the group consisting of hydrogen, halogen, and lower alkyl; and A stands for a member of the group consisting of the anion of an acid when the compound is otherwise free of carboxyalkyl groups, and an internal linkage to such carboxyalkyl groups when at least one of the substituents R_1 and R_2 contains such group.

3,018,178
COATING PHOTOGRAPHIC MATERIAL

Benjamin R. Harriman, Rochester, N.Y.

No Drawing. Filed Oct. 29, 1956, Ser. No. 618,709
3 Claims. (Cl. 96—94)

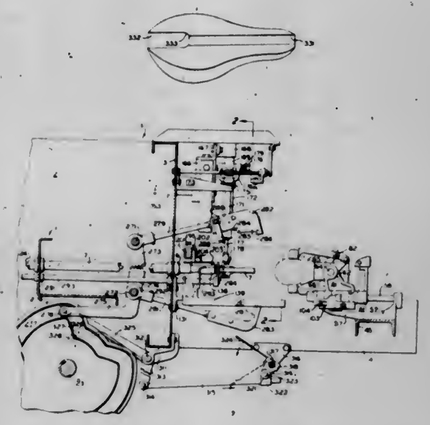
1. A photographic element comprising a support consisting of a single integral film and a uniform layer consisting essentially of a gelatin-colloidal silver suspension containing a surfactant consisting essentially of the amides from the condensation of an aliphatic ethanolamine hav-

ing at least one reactive hydrogen atom on the nitrogen atom thereof and a fatty acid having from 12 to 22 carbon atoms in direct contact with said film and firmly adhered thereto.

3,018,179
PEAR PEELING, CORING AND TRIMMING MACHINE AND METHOD AND PRODUCT THEREOF

Burton C. Coons, San Jose, Calif. (Hawaiian Village Hotel, Waikiki, Honolulu, Hawaii), and Willard B. Coons, 30 Alviso-Santa Clara Road, Santa Clara, Calif.

Filed Nov. 25, 1955, Ser. No. 549,009
11 Claims. (Cl. 99—100)



8. A pear processing machine comprising: a frame; a spindle journaled in said frame and provided intermediate its ends with a plurality of radially extending pear keying fins, said fins being formed intermediate their ends with peripherally aligned notches; a carriage mounted adjacent said spindle for movement in axial parallelism with said spindle; a seed-cell pod coring knife mounted on said carriage in parallelism with said spindle and radially spaced from the axis of said spindle a distance slightly greater than the maximum radius of said fins; and a finger pivoted to said frame for movement in a plane substantially containing the axis of said spindle, said finger being arranged to move into the said notches of said fins.

9. The method of preparing a pear for canning comprising: impaling said pear coaxially on a hollow spindle, thereby to make a cylindrical axial cut in said pear circumscribing its stem core; rotating said spindle and pear and simultaneously causing a peeling knife to travel along the length of said pear in conformation with the contour thereof; advancing a seed-cell coring knife into the calyx end of said pear in parallelism with the axis of said spindle and radially spaced therefrom a distance substantially equal to the radius of the seed-cell pod of said pear while rotating said pear, thereby to form a cylindrical seed-cell pod core; trimming the stem and calyx ends of said pear while rotating said pear; arresting the rotation of said pear and while said pear is stationary, severing said cylindrical seed-cell pod core from the body of said cell and finally pushing the resulting processed pear from and off said spindle.

11. A whole peeled pear having a cylindrical core cavity extending axially into the pear from the stem end substantially as far as the cell pod, and a coaxial cylindrical cavity of larger diameter than said first cavity extending from said first cavity through the blossom end of said pear.

3,018,180
GELATIN FOOD PRODUCT

Robert M. Lauck and Arthur Dock Fon Toy, Park Forest, Ill., assignors to Victor Chemical Works, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 3, 1959, Ser. No. 850,544
5 Claims. (Cl. 99—130)

1. A gelatin food product containing phenylphosphonic acid as an acidulent.

3,018,181
GELATIN DESSERT AND METHOD OF PREPARING THE SAME

Leo D. Corben, Oak Park, and William H. Hatch, Allen Park, Mich., assignors to The American Agricultural Chemical Company, New York, N.Y., a corporation of Delaware

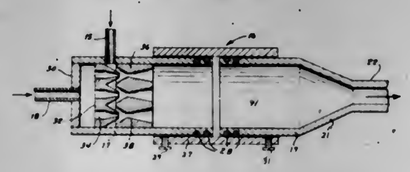
No Drawing. Filed Nov. 6, 1959, Ser. No. 851,265
12 Claims. (Cl. 99—130)

1. A gelatin dessert product consisting essentially of gelatin, sugar material and acidifying material, the gelatin content of the product being from 12% to 15% by weight and consisting of gelatin having a Bloom value of 220 to 250.

3,018,182
PROCESS AND APPARATUS FOR TREATING MATERIALS

John M. Leach, 17 Monfort Road, Port Washington, N.Y.

Filed July 25, 1960, Ser. No. 44,934
20 Claims. (Cl. 99—134)



1. A process of treating material which expands during treatment comprising projecting a stream of treating fluid, projecting the material to be treated into the stream of treating fluid, compresing the treating fluid and material together into close intercontacting relationship to bring about expansion of the material, and releasing the compression gradually to compensate for the expansion but maintaining the treating fluid and material in close intermixed relationship.

3,018,183
MARSHMALLOW DRY MIX

Hubert A. Downey, 476 Sheridan Road, Evanston, Ill.

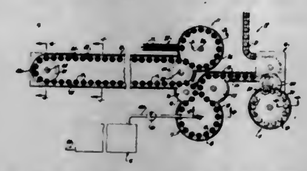
No Drawing. Filed Sept. 23, 1959, Ser. No. 841,674
1 Claim. (Cl. 99—134)

A homogeneous dry marshmallow mix comprising, in finely divided form, approximately 73½ parts of corn sugar, about 14 parts of powdered gelatin, about 10 parts of cornstarch, about 2 parts of vanillin, about 0.25 part of sodium phosphates, and about 0.25 part of sorbitol, said gelatin being composed of pig gelatin and bone gelatin in approximately equal amounts, said parts being expressed in parts by weight.

3,018,184
ASEPTIC CANNING PROCESS AND APPARATUS

William McK. Martin, 457 Virginia Ave., San Mateo, Calif.

Filed Dec. 23, 1958, Ser. No. 782,994
39 Claims. (Cl. 99—182)

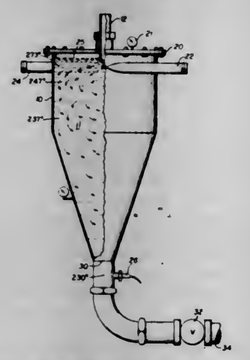


1. A method for the sterilization and filling of containers for sterile food products comprising: continuously transporting in a sterile atmosphere open, empty, upright containers through a series of four treating zones, all at atmospheric pressure, said treating zones comprising; first, a container heating zone wherein the major portions of said containers are heated to at least a sterilizing temperature; second, a temperature equalizing and holding zone wherein said heated containers are maintained in at atmosphere at said sterilizing temperature for a period of time sufficient to cause all portions of said containers to reach said sterilizing temperature and to sterilize the same; third, a filling zone wherein said heated sterilized containers are filled with presterilized food products; and fourth, a closing and sealing zone wherein said filled containers are covered and the covers subsequently sealed thereto.

3,018,185
PROCESS FOR HEATING LIQUIDS

Henry Klaessig, New Brunswick, N.J., John R. Pennie, Fort Scott, Kans., and Frederick E. Clay, Valhalla, N.Y., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 1, 1959, Ser. No. 843,845
1 Claim. (Cl. 99—216)



In preheating milk that is to be subsequently concentrated by evaporation, the process which comprises introducing, in subdivided form and downwardly, warmed liquid milk to be further heated at a position adjacent to and below the upper surface of a heated continuous mass of liquid milk, injecting pressure steam substantially horizontally and generally tangentially within the said heated mass adjacent to the said position, so as to produce a cyclonic action that is largely horizontal and to heat the resulting mixture, continuing the introduction of the subdivided milk and injection of the steam, and withdrawing the heated mixture from the lower part of the mass at a rate approximately equal to the rate of introduction of the said subdivided milk.

3,018,186
LAMINAR TITANIUM DIOXIDE

Russell L. Jenkins, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

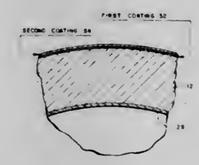
No Drawing. Filed Mar. 20, 1957, Ser. No. 647,215
9 Claims. (Cl. 106—253)

9. A coating composition comprising a liquid vehicle containing a laminar form of titanium dioxide, the particles of which are laminar in shape and have an average particle diameter of from 1 to 20 microns and an average particle thickness of from 0.01 to 0.50 micron, the said particles resulting from the decomposition of an atomized solution of a titanium sulfate in water, the said solution containing from 5% to 20% by weight of free sulfuric acid, the said decomposition being conducted by means of a non-reducing flame at a flame temperature of 800° C. to 1,600° C., for a period of time of from 0.5 second to 0.01 second.

3,018,187
METHOD OF COATING A FLUORESCENT TYPE TUBE AND THE COATED ARTICLE

Walter A. Boyce, West Orange, and Vernon L. Plagge, East Orange, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 20, 1959, Ser. No. 800,819
11 Claims. (Cl. 117—33.5)

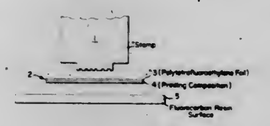


1. The method of stabilizing throughout life the starting voltage of a low-pressure positive-column mercury-discharge device, which method comprises applying to the exterior surface of the envelope of said device a first coating composition and coating vehicle comprising a water solution of the reaction product of one mole part of octadecylsilicon trichloride and three mole parts of diethanolamine, and thereafter applying over said first-applied coating composition and coating vehicle a second coating composition and coating vehicle comprising a water emulsion of trimethylsilyl end-blocked polydimethylsiloxane.

3,018,188
PROCESS FOR PRINTING ON FLUOROCARBON RESIN SURFACES

William Andrew Nicoll, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 10, 1958, Ser. No. 727,615
1 Claim. (Cl. 117—38)



In a process for marking fluorocarbon resin surfaces, the step which comprises applying a printing foil consisting of a polytetrafluoroethylene film having a thickness of less than 5 mils, coated with a fused layer of a

homogeneous mixture of a pigment and a copolymer of tetrafluoroethylene and hexafluoropropylene in combination with a stamp heated to a temperature above 327° C., to a fluorocarbon resin surface in contact with the said mixture of pigment and copolymer, said stamp being applied to the polytetrafluoroethylene film of said printing foil.

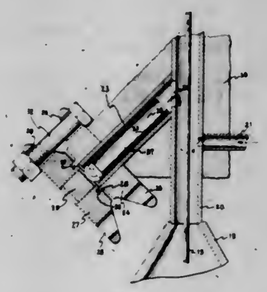
3,018,189

WITHDRAWN

3,018,190
METHOD AND APPARATUS FOR TREATING METALLIC STRANDS IN HOT DIP COATING

Earle L. Knapp, Kansas City, Mo., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio

Filed Sept. 26, 1960, Ser. No. 58,270
6 Claims. (Cl. 117—51)



6. In a process of coating a metal strand with molten aluminum, wherein the strand, after undergoing a pretreatment, is caused to move vertically upward and through a hole in the bottom of a coating pot containing molten aluminum, and wherein said strand, in passing from the pretreatment portion of the apparatus to the coating pot, passes through a tubular member into which a non-oxidizing gas is fed; the steps of enhancing the wettability of said strand by said aluminum and thus improving the quality and appearance of the aluminum coated strand, which include causing said strand while hot and before it enters said coating pot, to melt and vaporize metallic sodium, causing said vaporized sodium to contact the strand in admixture with said non-oxidizing gas, and protecting said strand from the atmosphere up to its entry into the coating metal.

3,018,191
PROCESS OF GOLD COATING CERAMIC SURFACES AND ARTICLES PRODUCED THEREBY

Louis Caban, Little Falls, and Frank L. Reusche, Livingston, N.J., assignors to L. Reusche & Co., Newark, N.J., a corporation of New Jersey

No Drawing. Filed June 1, 1959, Ser. No. 817,033
7 Claims. (Cl. 117—70)

6. In a process of gold coating a ceramic article, the steps of preparing a liquid bright gold composition having a rhodium compound wherein the ratio of the respective Rh and Au parts is from 0.45/100 to 5.68/100 by weight, applying a thin layer of said composition to a surface of said ceramic article, firing the coated surface to produce a gold decorative film, applying a thin layer of a glass boron-containing coating to the fired gold decorative film, and again firing the coated surface to produce a protective glass cover coating thereon.

3,018,192
CELLULOSIC SPONGE MANUFACTURE

Georg Hennemann, Velp, and Albertus Gerardus Lutgerhorst, Arnhem, Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware

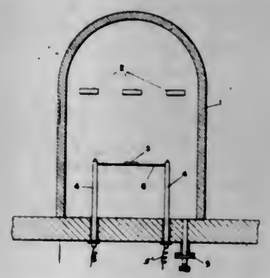
No Drawing. Filed July 30, 1958, Ser. No. 751,832
Claims priority, application Netherlands Aug. 16, 1957
4 Claims. (Cl. 117—98)

1. In a process for the production of artificial sponges of regenerated cellulose, the improvement comprising treating the sponges with a material selected from the group consisting of reaction products of carboxy methyl cellulose and a quaternary ammonium compound of high molecular weight, and reaction products of an alkali metal salt of carboxy methyl cellulose and a quaternary ammonium compound of high molecular weight.

3,018,193
PRECISION THICKNESS CONTROL FOR VACUUM DEPOSITION OF TITANIUM AND OTHER METALS FOR OPTICAL SURFACES

Allen J. Eshner, 901 Brighton St., Philadelphia, Pa., and Raymond W. Boydston, 1306 Prospect Drive, Kynlyn Apartments, Wilmington, Del.

Filed Aug. 13, 1958, Ser. No. 757,172
2 Claims. (Cl. 117—107)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for depositing a titanium film of predetermined thickness with readily reproducible close approach to accuracy which comprises supporting a weighed amount of discontinuous ribbon of titanium upon an electrical resistance element of tungsten, exhausting gas from around said titanium and its support to a pressure lower than about 5×10^{-6} millimeters of mercury, electrically heating said electrical resistance element and said titanium supported thereby to a temperature well above the boiling temperature of titanium to vaporize the titanium rapidly to avoid the appearance of any liquid state and any spatter in the titanium, but below the boiling temperature of the tungsten support, and depositing gaseous molecules of titanium upon solid supporting optical surfaces all parts of which to be coated are a substantially uniform distance for gaseous molecules of titanium to travel while maintaining the heating circuit through the tungsten support closed in such a manner that the titanium appears to be vaporized in an explosive manner in about a minor fraction of a second.

3,018,194
METAL PLATING PROCESS

Vello Norman and Thomas P. Whaley, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 3, 1959, Ser. No. 831,077
6 Claims. (Cl. 117—107)

1. In a process for metal plating a substrate by decomposition of a metal containing compound in contact with said substrate, the improvement which comprises employing as said metal containing compound a bimetallic organometallic compound, containing at least two different metals and wherein said organo group is an unsubstituted hydrocarbon group containing between about 1–20 carbon atoms, and conducting said process in an inert atmosphere, essentially devoid of free hydrogen.

3,018,195
METHOD OF TREATING POLYETHYLENE STRUCTURES

Pennell C. Kelly and Norman L. Hardwicke, Texas City, Tex., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 15, 1958, Ser. No. 735,398
8 Claims. (Cl. 117—138.8)

1. The method of preventing slipping between polyethylene film surfaces which comprises applying to one of said film surfaces a coating of a viscous aqueous solution of a hydrolyzed copolymer of an olefin containing from 1 to 8 carbon atoms and maleic anhydride, wherein the concentration of said copolymer is in the range from about 15 to about 40% by weight, and bringing the coated surface into contact with another of said polyethylene film surfaces.

3,018,196
TREATMENT OF CELLULOSIC MATERIALS TO RESIST FUNGICIDAL ATTACK

George M. Wagner, Lewiston, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Dec. 4, 1959, Ser. No. 857,277
3 Claims. (Cl. 117—143)

1. The method of treating cellulosic materials to resist the growth of fungi thereon which comprises applying to the cellulosic materials about 0.1% to 5% by weight of the reaction product of a water-soluble cupric salt and a water-soluble hydrazide of an organic acid selected from the group consisting of

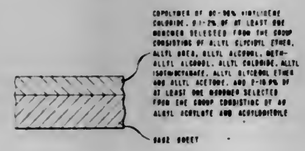
$(CONHNH_2)_2$, $R(CONHNH_2)_2$, $R'(CONHNH_2)_2$, and $R''(CONHNH_2)_2$

wherein R is an alkylene chain of not over 6 carbon atoms, R' is an alkylene chain of not over 6 carbon atoms which is interrupted by an oxygen atom in the form of an ether linkage and R'' is an alkylene chain of not over 6 carbon atoms which is interrupted by a sulfur atom in the form of a thioether linkage.

3,018,197
PACKAGING FILM AND PROCESS FOR PREPARATION THEREOF

Edward Royals Covington and John Warren Meier, Madison, Tenn., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed July 23, 1957, Ser. No. 673,581
20 Claims. (Cl. 117—145)

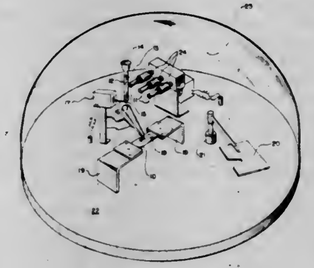


1. A packaging material comprising a base sheet having at least one surface coated with a composition comprising essentially a copolymer obtained from 80–96% by weight of vinylidene chloride, 0.1–2.0% by weight of at least one polymerizable monomer containing an allyl grouping selected from the group consisting of allyl glycidyl ether, allyl urea, allyl alcohol, methallyl alcohol, allyl chloride, allyl isothiocyanate, allyl glycerol ether and allyl acetone and 2–19.9% by weight of at least one other polymerizable mono-olefinic monomer copolymerizable with vinylidene chloride selected from the group consisting of an alkyl acrylate and acrylonitrile.

3,018,198
FILM RESISTOR AND METHOD OF MAKING SAME

Earl R. Olson, Rolling Hills, Calif., and Charles M. Chapman, Columbus, Ohio, assignors, by mesne assignments, to Resistance Products Company, Harrisburg, Pa., a corporation of Pennsylvania

Filed Aug. 13, 1959, Ser. No. 833,557
8 Claims. (Cl. 117—227)

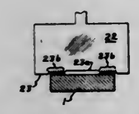


6. A method of manufacturing film-type resistors which comprises: evaporating in vacuum at a temperature of at least 2000° C. a metallic charge onto an insulating base to form a metalic film on said base, said film having a thickness of from about 50 angstroms to about 1500 angstroms, and said metallic charge consisting essentially of from about 10 percent to about 75 percent copper, by weight, the balance platinum; and heat-treating said film in an oxidizing atmosphere at a temperature of from about 150° C. for at least about one hour to about 350° C. for at least about one minute.

3,018,199
METHOD OF COATING WIRE AND APPARATUS THEREFOR

Harry B. Lit, Pittsfield, Mass., and Robert E. Dunton, Canaan, N.Y., assignors to General Electric Company, a corporation of New York

Filed Nov. 22, 1957, Ser. No. 698,169
17 Claims. (Cl. 117—231)

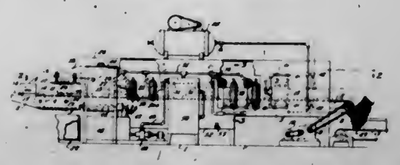


1. The method of coating wire or the like having at least one flat side which comprises applying a film of hardenable liquid coating material on the wire so that the thickness of the liquid film on the flat side is substantially greater in the central portion thereof than on the remaining portions thereof, and hardening the liquid coating material on the wire after the thus applied liquid film merges to a uniform thickness around the wire.

3,018,200
METHOD AND APPARATUS FOR CLEANING BOTTLE CASES AND THE LIKE

Harley E. Huddle, % Cincinnati Cleaning & Finishing Machine Co., 2000 Hageman St., Cincinnati, Ohio

Filed June 3, 1958, Ser. No. 739,556
5 Claims. (Cl. 134—6)



1. A method for cleaning bottle cases and the like which have cover flaps hingedly connected to opposite walls thereof, which comprises inverting the cases and continuously moving them in a path of travel with the cover flaps open, and thereafter subjecting the cases to a plurality of successive cleaning operations employing a foam cleaning agent which is essentially dry when applied, one of said cleaning operations comprising the application of the foam cleaning agent to the walls of the cases adjacent the walls to which the cover flaps are connected and the formation thereon of an adherent-non-migratory layer of foam, followed by the scrubbing of the walls to which the foam has been applied, another of said cleaning operations comprising the simultaneous application of the foam cleaning agent to the walls of the cases to which the cover flaps are connected and to the outer surfaces of the cover flaps and the formation of an adherent, non-migratory layer of foam thereon, followed by the scrubbing of the last named walls and cover flaps, said last named cleaning operation being conducted with the cases turned at a horizontal plane at substantially right angles with respect to the postion they occupied during said first named cleaning operation.

5. In a device for cleaning bottle cases and the like having a bottom, side and end walls, and cover members hingedly connected to the upper edges of the side walls, an elongated hood having an entrance end and an exit end, guideways extending through said hood and projecting outwardly beyond both the entrance and exit end thereof along which the cases are adapted to move in inverted position in a horizontal path of travel, continuously moving conveyor means for moving the cases along said guideways in spaced apart relation with opposite body walls thereof extending parallel to their path of travel, the portion of the guideways projecting from the entrance end of said hood being positioned to receive the cases with their cover members lying in out-folded position and extending transversely of their path of travel, shaker means in advance of the entrance end of said hood for shaking the cases to remove loose dirt therefrom, said shaker means overlying the path of travel of the cases and positioned to contact the inverted bottoms thereof, a first cleaning station within said hood, spray means at said first cleaning station for applying a foam cleaning agent to the end walls of the cases, rotary brush means immediately beyond said spraying means for contacting and scrubbing the end walls of the cases, an indexing station beyond said first cleaning station, means at said indexing station for turning said cases through substantially 90° in a horizontal plane so as to bring the side walls of the cases into parallel relation to the said path of travel, means for folding the cover members of the cases downwardly into co-planar relationship with the side walls to which they are articulated, a second cleaning station beyond said indexing station, spraying means at said second cleaning station for applying a foam cleaning agent to the side walls of the cases and the other surfaces of the downwardly extending cover members, rotary brush means immediately beyond said last named spraying means for contacting and scrubbing both the side walls of the cases and the outer surfaces of the cover members, means for thereafter spraying the scrubbed surfaces of the cases with water, including means for stripping excess moisture from the cases and for outfolding the said cover members, whereby the cases are delivered from said device in cleaned condition ready to be filled, said device including means associated with one of said cleaning stations for applying foam cleaning agent and scrubbing the bottom of the inverted cases.

3,018,201
GELATINOUS EXPLOSIVE COMPOSITION

Jack M. Downard, Florence, N.J., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 6, 1951, Ser. No. 204,815
9 Claims. (Cl. 149—19)

1. A detonative, gelatinous explosive composition comprising high explosive material of the group consisting of liquid explosive nitric esters, nitrocellulose, nitrostarch and crystalline high explosives; and from about 1 to about 10% of a nonexplosive gel containing (1) at least one substantially nonvolatile, water-insoluble petroleum hydrocarbon of the group consisting of petrolatum, paraffin base oils, naphthene base oils, intermediate base oils, cylinder oil, and bright stock, and (2) a vulcanized copolymer of isobutylene and isoprene.

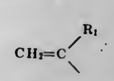
7. A process for preparing high strength detonative gelatinous explosive compositions which comprises dissolving a copolymer of isobutylene and isoprene in a substantially nonvolatile, water-insoluble petroleum hydrocarbon of the group consisting of petrolatum, paraffin base oils, naphhene base oils, intermediate base oils, cylinder oil and bright stock; dispersing a vulcanizing agent in the resulting solution, heating the solution at a vulcanizing temperature until thickening is obtained, cooling the resulting nonexplosive gel and admixing high explosive material with the gel to form a gelatinous explosive containing between 1 and 10% of the nonexplosive gel.

3,018,202
HIGH IMPULSE PROPELLANTS

Winston E. Brown, Lake Jackson, and Marshall W. Mabry, McGregor, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 9, 1957, Ser. No. 677,408
15 Claims. (Cl. 149—19)

1. A propellant composition consisting essentially of, in parts by weight of said composition: from 4 to 16 parts of a binder component comprising (1) from 2 to 10 parts of a copolymer prepared by copolymerizing (*a*) a conjugated diene containing from 4 to 8 carbon atoms per molecule with (*b*) a



substituted heterocyclic nitrogen base selected from a group consisting of pyridine, quinoline, alkyl substituted pyridine, and alkyl substituted quinoline, wherein the total number of carbon atoms in the nuclear alkyl substituents is not more than 15 and wherein R_1 is selected from the group consisting of a hydrogen atom and a methyl radical, and (2) from 2 to 6 parts of a liquid polybutadiene; from 88 to 94 parts of a solid inorganic oxidizing salt as an oxidant component; and from 4 to 12 parts of activated charcoal.

3,018,203
SOLID PROPELLANT AND A PROCESS FOR ITS PREPARATION

Eugene D. Guth, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 725,453
13 Claims. (Cl. 149—19)

8. The method of producing a solid propellant which comprises intimately admixing about 70 to about 87 parts by weight of a solid inorganic oxidizing salt and about 13 to about 30 parts by weight of a binder comprising about 60 to about 85 parts by weight of liquid polybutadiene having a SFV viscosity at 100° F. of about 1,500 to about 10,000 and about 15 to about 40 parts by weight of a ferric salt of a strong inorganic acid and curing the composition at a temperature in the range of about 150 to about 280° F. for a time in the range of about 4 hours to about 48 hours.

3,018,204
PROPELLANTS WITH IMPROVED BURNING RATE

Charles C. Bice, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 23, 1958, Ser. No. 743,957
8 Claims. (Cl. 149—19)

1. A propellant composition containing the following in parts by weight

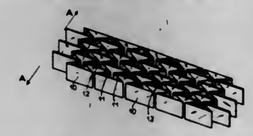
Binder	3–25
Solid inorganic oxidizing salt	97–75

wherein said binder is selected from the group consisting of asphalt and rubber, the amount of binder and oxidizing salt being sufficient to total 100 parts by weight, 0.1 to 30 parts by weight of boron carbide per 100 parts by weight of binder plus oxidizing salt, and 0.1 to 10 parts by weight of activated charcoal per part by weight of boron carbide, the total weight of boron carbide plus charcoal not exceeding 110 parts by weight per 100 parts by weight of binder plus oxidizing salt.

3,018,205
CELLULAR STRUCTURE AND METHOD OF MANUFACTURE

Victor Jacques Barut, 4 Rue de Civry, Paris, France

Filed Feb. 9, 1959, Ser. No. 792,134
Claims priority, application France Feb. 25, 1958
6 Claims. (Cl. 154—45)

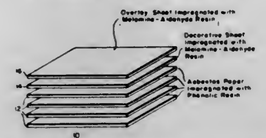


1. A cellular structure comprising a plurality of strips each having a plurality of elongated sides of equal length in one plane, a plurality of further elongated sides of the same equal length as said elongated sides in another plane parallelly spaced from said one plane, angular sides which are half the length of said elongated sides connecting one end of each of said elongated sides with an adjacent end of said further elongated sides to form box pleats, each strip of box pleats placed adjacent a succeeding strip of box pleats such that said elongated sides of each strip are attached throughout their entire area to said further elongated sides of an adjacent strip thereby forming a plurality of flexible areas in said structure consisting of an elongated side of one strip, a coextensive further elongated side of an adjacent strip, and their respective angular sides, and said structure being expansible simultaneously in two directions at right angles to each other through triangular, rectangular, and hexagonal configurations.

3,018,206
FIRE-RESISTANT DECORATED COMPOSITE LAMINATE MEMBERS AND METHOD OF PRODUCING SAME

William C. Hood, Varnville, and David E. Baldwin, Hampton, S.C., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 31, 1957, Ser. No. 706,348
5 Claims. (Cl. 154—45.9)



1. In the process of preparing a fire-resistant decorated composite laminate member, the steps comprising (1) impregnating asbestos paper sheeting with a solution of a thermosettable resinous composition consisting of (A) from 2 parts to 4 parts by weight of a phenolic resin derived by reacting 1.0 mol of a phenol and from 0.9 mol to 1.7 mols of formaldehyde under reflux conditions for at least one hour, the reaction being catalyzed with an alkaline catalyst, and then vacuum dehydrated at a temperature not exceeding 100° C. and (B) one part by weight of the resinous reaction product derived by reacting one mol of a phenol, from 0.8 mol to 2.0 mols of dicyandiamide, and from 0.9 mol to 1.5 mols of formaldehyde per mol of the combined phenol and dicyandiamide in the presence of water, the mixture being refluxed for at least ½ hour, and then vacuum dehydrated at a temperature not exceeding 100° C., the resin impregnated sheet fibrous material being heated to drive off the solvent and to advance the cure of the resin to a condition where its greenness is from 0.3% to 6%, the asbestos paper sheeting carrying from 0.35 to 0.80 times its weight of the resin after drying, (2) superimposing a plurality of layers of the resin treated asbestos paper sheeting to provide a stack, (3) superimposing a decorated sheet of fibrous material impregnated with a potentially thermosettable clear melamine-aldehyde resin on top of the stack to provide a composite member, and (4) molding the composite member at a pressure of from 500 to 1500 pounds per square inch at temperature of from 135° C. to 165° C.

3,018,207
ADHERING TEXTILE MATERIALS TO RUBBER

Arthur C. Danielson, Royal Oak, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

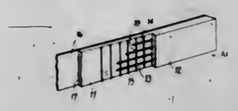
No Drawing. Filed July 1, 1960, Ser. No. 40,190
13 Claims. (Cl. 154—52)

1. In the method of adhering textile material to rubber by applying a vulcanizable rubber coating to a textile material and heating the assembly to vulcanize the rubber, the step which comprises incorporating in at least the portion of the assembly adjacent the interface of the textile material and rubber coating before vulcanization trimeric methyleneaminoacetonitrile and a compound selected from the group consisting of 1,5-naphthalenediol and meta disubstituted benzenes in which each of the substituents is selected from the group consisting of OH, NH_2 and $OCOCH_3$ radicals, said vulcanizable rubber coating comprising rubber selected from the group consisting of natural Hevea rubber and conjugated diolefine polymer synthetic rubbers which are polymers of material selected from the group consisting of butadiene-1,3-isoprene, 2,3-dimethyl butadiene-1,3, and mixtures thereof, and mixtures of such butadienes-1,3 with up to 50% of the mixtures of compounds which contain a $CH_2{=}C<$ group and which are copolymerizable with butadienes-1,3.

3,018,208
REINFORCED SEALING TAPE

Alfred F. Werner, Saddle Brook, and George Stepien, Jr., Passaic, N.J., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed July 16, 1958, Ser. No. 748,963
7 Claims. (Cl. 154—53.5)

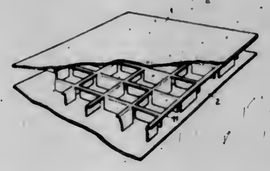


1. A reinforced sealing tape comprising a non-woven fibrous scrim sandwiched between bonded layers of tacky electomeric material having adhesive properties, said scrim having a first set of laterally spaced yarns aligned with the longitudinal axis of said tape, a second set of axially spaced yarns aligned with the transverse axis of said tape, said yarns being adhered together at their crossover points with a bond which is substantially weaker than the tensile strength of said yarns, thus to permit said bond to break and said yarns to readjust themselves when said tape is bent in its plane.

3,018,209
PANEL WITH CELLULAR INSIDE STRUCTURE

Fokko Dijksterhuis, Oosternieland, Friesland, and Heertjen Ubbes Dijksterhuis, Zijldijk, Friesland, Netherlands

Filed Jan. 15, 1958, Ser. No. 709,047
Claims priority, application Netherlands Feb. 19, 1957
6 Claims. (Cl. 154—45.9)



4. A panel structure comprising three sandwiched cardboard sheets; a middle sheet of said sandwich having a plurality of tongues projecting substantially perpendicularly therefrom; said tongues being formed from a plurality of H-shaped incisions in said middle sheet and oriented in a pattern such that the connecting beam of any H-shaped incision is always substantially perpendicular to connecting beams of adjacent H-shaped incisions; a first outside sheet of said sandwich being adhesively secured to the ends of said projecting tongues; and a second outside sheet of said sandwich being secured to a side of said middle sheet opposite said projecting tongues.

3,018,210
BALLISTIC HELMET AND METHOD OF MAKING SAME

Leonard P. Frieder, Great Neck, N.Y., and Michael John Fryer, Carbondale, Pa., assignors to Gentex Corporation, New York, N.Y., a corporation of Delaware

Filed May 9, 1955, Ser. No. 506,955
11 Claims. (Cl. 156—228)

1. A method of making a ballistic helmet including the steps of preforming an outer shell to the shape of said helmet from resin impregnated fibrous material, placing a layer of flexible multi-layer penetration resistant fabric within said outer shell, placing a film of material impervious to a resinous impregnating material over said



fabric layer, placing a mat of fibrous material impregnated with said resinous impregnating material over said film, and curing said mat.

3,018,211
COMPOSITION AND PROCESS FOR BRIGHTENING ALUMINUM AND ITS ALLOYS

Edward M. Duke, Jr., Richland, Wash., assignor, by mesne assignments, to Purex Corporation, Ltd., a corporation of California

Filed Jan. 26, 1959, Ser. No. 788,876
7 Claims. (Cl. 156—21)

1. A chemical brightener bath for aluminum, which comprises an acid aqueous solution consisting essentially of about .60 to about 2.00 mols per liter of hydrogen ions, about .60 to about 3.00 mols per liter of nitrate ions, a concentration of hexavalent chromium-containing ion equivalent to about .05 to about 0.40 mol per liter of hexavalent chromium, about .01 to about .10 mol per liter of complex fluoride ions selected from the group consisting of the SiF_6, TiF_6, ZrF_6, BF_4 and AlF_4 ions, and about .02 to about .20 mol per liter of aluminum cations, the pH of said solution being not greater than about 0.5.

5. A process for chemically brightening aluminum. which comprises treating said aluminum in an aqueous acid solution consisting essentially of about .60 to about 2.00 mols per liter of hydrogen ions, about .60 to about 3.00 mols per liter of nitrate ions, a concentration of hexavalent chromium-containing ion equivalent to about .05 to about 0.40 mol per liter of hexavalent chromium, about .01 to about .10 mol per liter of complex fluoride ions selected from the group consisting of the SiF_6, TiF_6, ZrF_6, BF_4 and AlF_4 ions, and about .02 to about .20 mol per liter of aluminum cations, the pH of said solution being not greater than about 0.5.

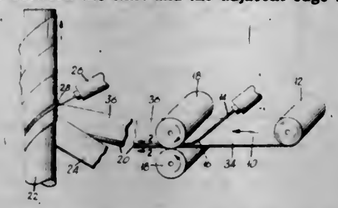
3,018,212
THERMOPLASTIC BONDING AND COATING

Hyman G. Chinn, Somerville, N.J., assignor to Union Carbide Corporation, a corporation of New York

Filed July 17, 1958, Ser. No. 749,274
4 Claims. (Cl. 156—195)

2. A method of forming spiral wound containers comprising the steps of placing on one edge margin of a sheet material web a bead of thermoplastic melt, flattening the bead causing a portion to extend outwardly from said edge margin as a skirt, wrapping the skirted web around a mandrel, placing the edges of successive turns

of said web in abutting relation, and placing a bead of adhesive between the skirt and the adjacent edge margin



of the web to form a joint between successive turns of sheet material web.

ERRATA

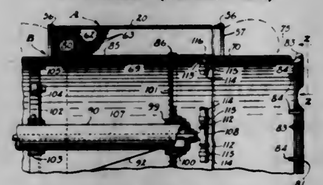
For Class 156—370 see:
Patent No. 3,017,918

For Class 156—400 see:
Patent No. 3,017,919

3,018,213
EXPANSIBLE BAG

Herman T. Kraft, Akron, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed June 4, 1958, Ser. No. 739,869
17 Claims. (Cl. 156—416)



1. In apparatus of the character described having a cylinder with an axial length greater than its external diameter, an inflatable elastic rubber tube of axially elongated cross section having means for mounting the tube on said cylinder, said tube when deflated having inner and outer cylindrical parts and when inflated and expanded radially having an axial length several times its radial height, a multiplicity of circumferentially closely spaced cords embedded in the walls of said tube generally parallel to the axis of said cylinder for reinforcing said tube, said tube being substantially free of circumferentially extending cords, and a pair of inextensible bead rings holding the inner cylindrical part of the tube against said cylinder, each bead ring being spaced inwardly 2 to 8 inches from the end of the tube when the tube is deflated, the end portions of the tube axially outwardly of the bead rings assuming generally cylindrical shapes when the tube is deflated, said cords reinforcing said end portions throughout the periphery thereof and resisting axial forces without restraining radial expansion of said end portions.

3,018,214
METHOD FOR WET-CREPING PAPER SHEET

Conrad T. Waldie, Jr., Gorham, and Walter L. Hearn, Berlin, N.H., assignors to Brown Company, Berlin, N.H., a corporation of Maine

No Drawing. Filed Apr. 15, 1958, Ser. No. 728,531
6 Claims. (Cl. 162—112)

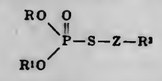
1. In the process of wet-creping freshly-formed unsized paper sheet which comprises temporarily adhering said wet sheet to a smooth surface, creping the sheet while scraping it from said surface, and subsequently drying said creped sheet, the step which comprises applying to said paper sheet, prior to its adherence to said smooth surface, from 0.005% to 0.015% by weight, based on the dry weight of the paper fibers, of a water-insoluble metal soap.

3,018,215
THIOPHOSPHORIC ACID ESTER COMPOUNDS

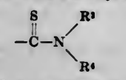
Max Planka, St. Albans, England, assignor to The Murphy Chemical Company Limited, St. Albans, England, a company of Great Britain

No Drawing. Filed Jan. 14, 1960, Ser. No. 2,354
Claims priority, application Great Britain Jan. 20, 1959
18 Claims. (Cl. 167—22)

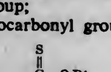
1. As new compounds, compounds of the general formula:



in which Z is selected from the group consisting of sulphur and $—SO_2—$ groups;
R and R^1 are alkyl groups containing 1–4 carbon atoms and
R^2 is selected from the group consisting of:
(i) substituted thiocarbamoyl groups



in which R^3 is selected from the group consisting of hydrogen and alkyl groups and R^4 is an alkyl group;
(ii) alkoxythiocarbonyl groups



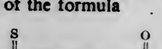
where R^5 is an alkyl group;
(iii) a member selected from the group consisting of alkylthioalkyl and furfuryl groups; and
(iv) where $Z=—SO_2—$, a halogenophenyl group.

3,018,216
2-(O,O - DIALKYLPHOSPHORO - DITHIOYL-METHYLMERCAPTO)-CARBAMATES AND CARBANILATES

Richard C. Maxwell, San Jose, and Donald G. Stoffey, El Cerrito, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 3, 1961, Ser. No. 99,997
14 Claims. (Cl. 167—22)

1. A compound of the formula



wherein R^1 is a lower alkyl radical, R^2 and R^3 is selected from the group consisting of hydrogen, lower alkyl radicals, and phenyl.

3,018,217
INSECT REPELLENT WAX COMPOSITION AND METHOD OF TREATING AREAS THEREWITH

Willis N. Bruce, Champaign, Ill., assignor to Lee Ratner, Chicago Ill.

No Drawing. Filed Nov. 21, 1957, Ser. No. 697,804
3 Claims. (Cl. 167—22)

2. A method of repelling insects from a surface comprising placing on the surface a polishing wax composition containing homogeneously dispersed therein from about 0.2% to about 50% by weight on the basis of the solid content of the composition of an alkyl di-ester of a four-carbon atom dicarboxylic acid, the alkyl radicals

being selected from a group consisting of n-propyl and n-butyl, said composition being applied in an amount to give from 20 to 500 mgs. of ester per square foot of surface, and buffing said surface when the repellency thereof diminishes whereby active repellency is restored.

3,018,218
DIHALOGENOPROPYNES AS SOIL FUMIGANTS
William E. Duggins, Berkley Heights, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 31, 1958, Ser. No. 712,291
6 Claims. (Cl. 167—22)

1. The method of protecting chlorophyllaceous plants against soil nematodes which comprises contacting said nematodes with a nematocidal amount of a nematocide having the following general formula:

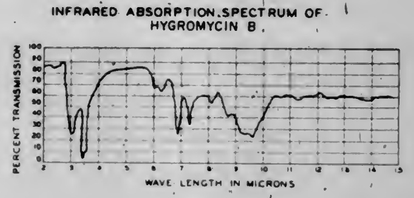
$$XC{\equiv}CCH_2Br$$

wherein X represents a halogen selected from the group consisting of chlorine, bromine and iodine.

3,018,219
METHOD OF ATTRACTING MALE GYPSY MOTH WITH 12-ACETOXY-1-HYDROXY-9-OCTADECENE
Martin Jacobson, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Aug. 11, 1960, Ser. No. 49,108
3 Claims. (Cl. 167—48)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for detecting infestations of gypsy moths which comprises baiting a trap with an attractant for the male gypsy moth comprising 12-acetoxy-1-hydroxy-9-octadecene and placing the trap in a suspected area.

3,018,220
HYGROMYCIN B, ITS PRODUCTION AND TREATMENT OF INTESTINAL PARASITES
James M. McGuire and Robert L. Mann, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
Filed Oct. 15, 1957, Ser. No. 690,399
7 Claims. (Cl. 167—53)



1. A method of producing hygromycin B which comprises cultivating a hygromycin B-producing strain of *Streptomyces hygroscopicus* in a culture medium containing mold-assimilable sources of carbohydrate, nitrogen and inorganic salts, under submerged aerobic conditions until a substantial amount of hygromycin B is produced by said organism in said culture medium, and recovering and isolating substantially free from other antibiotic substances the hygromycin B from said culture medium.

2. A method according to claim 1 in which the organism is *Streptomyces hygroscopicus* NRRL 2387.

3. A method according to claim 1 in which the organism is *Streptomyces hygroscopicus* NRRL 2388.

4. A method according to claim 1 in which the organism is *Streptomyces hygroscopicus* NRRL 2389.

3,018,221
PENICILLIN-SULFONAMIDE TABLET
John F. Millar, Valois, Quebec, and Gerhard Lindner, Montreal, Quebec, Canada, assignors to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of Canada
Filed Mar. 28, 1958, Ser. No. 724,764
12 Claims. (Cl. 167—65)

1. A penicillin-sulfonamide tablet consisting of a core tablet consisting of compressed granules of penicillin, at least one substantially water-insoluble sulfonamide drug and ammoniated polyvinyl acetate phthalate, and a compressed concentric shell consisting essentially of a granular mixture of penicillin and at least one substantially water-insoluble sulfonamide drug.

3,018,222
CENTRAL STIMULANT AND APPETITE DEPRESSANT COMPOSITION
Harm Siemer, Konstanz, and Otto Hengen, Wehr, Baden, Germany, assignors to Ravensberg G.m.b.H., Chemische Fabrik, Konstanz, Germany, a corporation of Germany
No Drawing. Filed Aug. 28, 1956, Ser. No. 606,547
11 Claims. (Cl. 167—67)

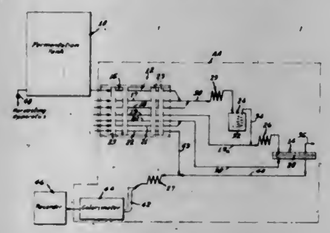
1. A central stimulant and appetite depressant composition comprising, as active ingredients, the α-phenyl-α-ethyl acetic acid ester of 2-phenyl-3-methyl-4-(β-hydroxy ethyl) tetrahydro-1,4-oxazine and the addition compound of 8-chloro theophylline and 2-phenyl-3-methyl tetrahydro-1,4-oxazine, said active ingredients being present in said composition in the proportion of about 2:3 of ester to addition compound.

3,018,223
ALUMINUM DIHYDROXY-TITANIUM DILACTATE ANTIPERSPIRANT
Bernard Siegal, Elizabeth, N.J., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 24, 1958, Ser. No. 716,836
7 Claims. (Cl. 167—90)

1. Aluminum dihydroxytitanium dilactate.

2. An antiperspirant composition comprising aluminum dihydroxytitanium dilactate and a carrier therefor.

3,018,224
ANALYSIS AND PRODUCTION-MONITORING METHODS AND APPARATUS
Andrés Ferrari, Jr., Scarsdale, N.Y., assignor, by mesne assignments, to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Aug. 23, 1957, Ser. No. 679,977
36 Claims. (Cl. 195—103.5)



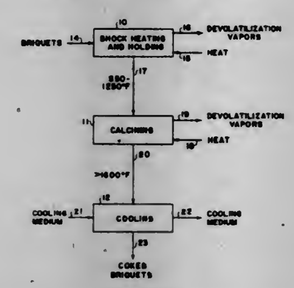
4. The method of monitoring a process of producing an antibiotic substance in a liquid in which the quantity of the antibiotic substance varies as the process proceeds, comprising withdrawing test liquid as the process continues, transmitting said test liquid in the form of a stream and a reagent therefor through a dialyzer and concurrently forming a diffusate containing a derivative substance resulting from the effect of said reagent on said liquid and which is proportionately representative quantitatively of said antibiotic substance undergoing production in said first-mentioned liquid at the time of withdrawal, and analyzing said representative derivative substance to obtain a quantitative indication of the antibiotic substance under production in said liquid substantially concomitantly with said production at the time of the withdrawal of the test liquid.

10. In apparatus including a tank containing a liquid for the production of a substance in said liquid which in its process of production progressively increases to a maximum quantity in said liquid and is thereafter subject to impairment if said process is not discontinued; automatic analysis means for quantitatively monitoring the substance in said tank, said analysis means being connected to said tank for receiving said liquid therefrom during the operation of said apparatus, and means connected with and automatically operable under the control of said analysis means for effecting a discontinuance of said process of production when the quantity of said substance increases to said maximum.

3,018,225
PRODUCTION OF VITAMIN B_{12}
Robert A. Long, Parlin, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 9, 1959, Ser. No. 797,832
10 Claims. (Cl. 195—114)

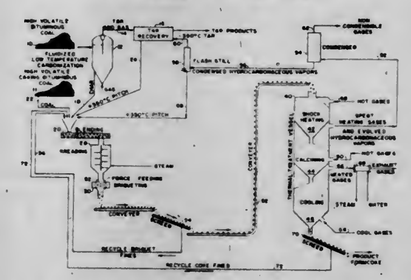
1. The process of producing vitamin B_{12}-active substances that comprises fermenting a nutrient medium containing a source of cobalt ion with a vitamin B_{12} activity producing strain of *Pseudomonas denitrificans* and recovering vitamin B_{12}-active substances therefrom.

3,018,226
METHOD FOR PREPARING COKED BRIQUETS FROM CAKING COALS
James D. Batchelor, Springfield, Va., and Robert J. Friedrich, Finleyville, and Paul M. Yavorsky, Monongahela, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 7, 1960, Ser. No. 61,318
10 Claims. (Cl. 202—26)



1. The method for preparing calcined, coked briquets from finely divided caking bituminous coal and from porous non-agglomerative carbonaceous solids prepared by a low-temperature carbonization fluidization process which comprises forming shaped briquets from the starting materials, controllably shock heating the surface of the shaped briquets to a temperature in the range of 900 to 1250° F. and maintaining the surface of the briquets at a temperature of 900 to 1250° F. until the briquets attain throughout a temperature in the range of 900 to 1250° F., thereafter heating the surface of the briquets to a temperature above 1550° F. and maintaining the surface of the briquets at a temperature above 1550° F. until the briquets attain throughout a temperature above 1550° F. and the volatile matter content of the briquet is less than 2 percent by weight, thereafter cooling the briquets to a temperature below about 600° F. and recovering calcined, coked briquets.

3,018,227
PREPARATION OF FORMCOKE
Kurt Baum, Essen, Germany, and Robert J. Friedrich, Library, Pa., assignors to Consolidation Coal Company, a corporation of Pennsylvania
Filed Jan. 22, 1957, Ser. No. 635,421
11 Claims. (Cl. 202—26)



11. A method for preparing formcoke from high volatile caking coal comprising subjecting a portion of high volatile caking coal to low temperature carbonization under fluidized conditions, recovering evolved hydrocarbonaceous LTC vapors and particulate fluidized LTC char having a bulk density less than 30 pounds per cubic foot, recovering low carbon pitch from said evolved hydrocarbonaceous LTC vapors, substantially homogeneously intermixing a briquet formulation comprising 10 to 35 percent by weight of finely divided high volatile caking coal, 80 to 45 percent by weight of said fluidized LTC char, 6 to 20 percent by weight of pitch including at least 1 to 12 percent by weight of a high carbon pitch and up to 15 percent by weight of said low carbon pitch, pressing a shaped briquet from the resulting mixture at a temperature slightly above the melting point of said pitch, coking the said shaped briquet by first shock heating to a temperature above the plastic temperature of the coal, retaining the briquet at a temperature below about 1250° F. until the entire briquet has attained a temperature above the plastic temperature of the coal, thereafter continuing to heat the resulting coked briquet to a calcining temperature above 1550° F., recovering evolved hydrocarbonaceous vapors from the coking and calcining treatments, recovering high carbon pitch from said last-mentioned hydrocarbonaceous vapors for use as the high carbon pitch component in said briquet formulation, and recovering a calcined coked briquet as product.

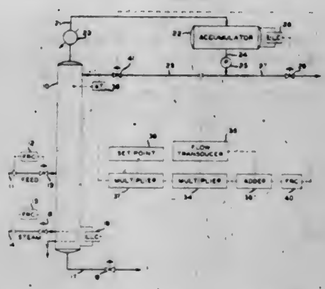
3,018,228
EXTRACTIVE DISTILLATION PROCESS
David Cornell, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,147
5 Claims. (Cl. 202—39.5)

1. The method of separating styrene and ethylbenzene from a crude hydrocarbon fraction containing the same which comprises subjecting such crude mixture to extractive distillation in the presence of ethylene carbonate, withdrawing a vapor fraction comprising ethylbenzene, and a liquid fraction comprising the said ethylene carbonate containing styrene, and stripping the styrene from the said ethylene carbonate.

3,018,229
INTERNAL REFLUX COMPUTER FOR FRACTIONATION CONTROL

Lyman W. Morgan, Golden, Colo., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Mar. 4, 1959, Ser. No. 797,240
8 Claims. (Cl. 202—40)



8. In a fractionation process wherein a feed mixture of two or more components is directed to a fractionation zone, a vapor stream is removed from the top of said zone, said vapor stream is cooled to condense at least a part of same, and at least a part of the resulting condensate is returned to said fractionation zone as external reflux; a control method which comprises the steps of measuring the rate of flow of said external reflux and establishing a first signal R_e representative thereof, measuring the temperature difference between said vapor stream and said external reflux and establishing a second signal ΔT representative thereof, combining said first and second signals so as to establish a third signal R_i which is equal to the quantity:

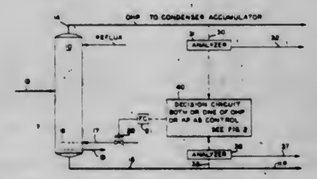
$$R_e + R_e \frac{C_p}{\lambda} \Delta T$$

where C_p is a constant representative of the specific heat of said external reflux and λ is a constant representative of the heat of vaporization of liquid in the top of said fractionation zone, said third signal being representative of internal reflux in said fractionation zone, decreasing the flow of said external reflux when the measured internal reflux R_i increases, and increasing the flow of said external reflux when the measured internal reflux R_i decreases.

3,018,230
FRACTIONATOR CONTROL SYSTEM

Lyman W. Morgan, Golden, Colo., and Lawrence R. Freeman, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed July 13, 1959, Ser. No. 826,638
12 Claims. (Cl. 202—40)

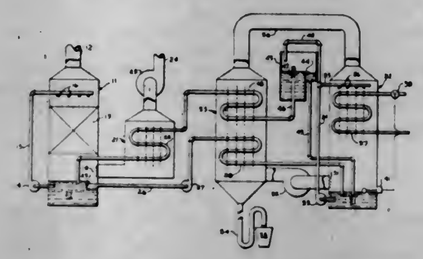


12. In a process for controlling a fractionation process wherein a differential measurement is made of an operating variable at two regions of the process and the process is regulated in response to the measurement; the improvement comprising regulating the process in response to the differential measurement as long as the variable at each of said regions remains within respective preselected ranges, discontinuing the step of regulating in response to the differential measurement when the variable at one of said regions exceeds its range, and thereafter regulating the process in response to the variable which has exceeded its range.

3,018,231
AIR CONDITIONING FOR REMOTE SPACES

Dale M. Valentine, Des Plaines, Ill., and Gilbert A. Kelley, Toledo, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 22, 1957, Ser. No. 691,623
2 Claims. (Cl. 202—158)



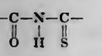
1. A chemical dehumidifying system for dehumidifying air for a space to be conditioned comprising, in combination: a contactor; means for passing a first stream of air through said contactor for conditioning therein; means for directing conditioned air into the space; means for passing absorbent liquid through said contactor in contact with said first stream of air passing therethrough; a regenerator; a condensing chamber; duct means for passing a second stream of air from said regenerator through said condensing chamber and back to said regenerator in a substantially closed air flow circuit; means for passing absorbent liquid through said regenerator in contact with said second stream of air passing therethrough; means for passing a first stream of absorbent liquid from said regenerator to said contactor; means for passing a second stream of absorbent liquid from said contactor to said regenerator; indirect heat exchange means comprising a tubular heat exchanger disposed in said condensing chamber and pipe means for passing said second stream of absorbent liquid from said contactor through said tubular heat exchanger before passing said second stream of absorbent liquid to said regenerator for absorbing heat from said second air stream, whereby moisture is condensed from said second air stream in said condensing chamber; means for passing said first stream of absorbent liquid in heat exchange relationship with said second air stream after said second air stream has been cooled by said heat exchanger; and means for discharging condensed moisture from said condensing chamber.

3,018,232
ADDITION AGENT FOR CYANIDE PLATING BATHS

Robert W. Bishoff, Pittsburgh, and Richard P. Cope, Jr., Wilkinsburg, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 5, 1958, Ser. No. 740,040
2 Claims. (Cl. 204—44)

1. A process for preparing a metal electrodeposition solution which comprises mixing together in an aqueous medium a soluble compound of a metal selected from the group consisting of gold, silver, copper, bronze, brass, zinc and cadmium, an alkali cyanide in an amount sufficient to provide at least about 0.5 ounce per gallon of alkali hydroxide and free cyanide, and from 0.005 to 0.5 ounce per gallon of the product obtained by reacting substantially equimolar quantities of at least one compound having the nucleus



with at least one compound selected from the group consisting of (A) monocyclic unsubstituted aromatic compounds containing in the ring structure from 4 to 6 carbon atoms and from 1 to 2 nitrogen atoms per molecule and (B) amines having the formula

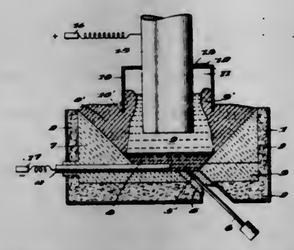


wherein R is a radical selected from the group consisting of hydrogen, not more than one R being hydrogen; monovalent and divalent saturated aliphatic hydrocarbon radicals having from 1 to 4 carbon atoms and in which the substituents are selected from the group consisting of $—NH_2$ and —OH radicals; monovalent and divalent alicyclic radicals containing from 5 to 6 carbon atoms in the ring in which the substituents are selected from the group consisting of $—CH_3$, $—NH_2$ and —OH radicals; monovalent and divalent heterocyclic radicals having from 5 to 6 carbon atoms in the ring and in which hetero atoms occur only in the ring structure and the substituents occur only on the carbon atoms and are selected from the group consisting of $—NH_2$ and —OH radicals; phenyl radicals; and aminophenyl radicals.

3,018,233
PRODUCING MANGANESE BY FUSED SALT ELECTROLYSIS, AND APPARATUS THEREFOR

Jay Y. Welsh, Marlyn W. Milberg, and Harold R. Peterson, Brainerd, Minn., assignors to Manganese Chemicals Corporation, Minneapolis, Minn., a corporation of Minnesota

Filed Feb. 9, 1960, Ser. No. 7,586
12 Claims. (Cl. 204—64)

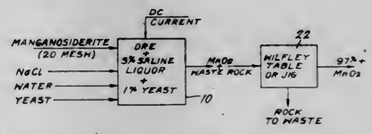


3. A process for the production of low-carbon, low-silicon manganese from a lower oxide of manganese, which comprises establishing a fused electrolytic bath consisting essentially of calcium fluoride, a lower oxide of manganese and a mixture of inorganic oxides including an acid-acting oxide whose free energy change of reaction with manganese at 1327° C. to form MnO is greater than zero, and a basic-acting oxide whose free energy change of reaction with manganese at 1327° C. to form MnO is greater than zero, said mixture of inorganic oxides having an overall acidic character sufficiently acidic to facilitate the dissolution of a lower oxide of manganese but having a sufficient alkaline content to prevent the substantial electrolysis of silicon, the fused bath containing from about 50% to about 90% by weight of calcium fluoride, and from about 0.5% to about 10% by weight of manganese as a lower oxide of manganese, and having a melting range of from about 1150° C. to about 1300° C., the bath composition being stable against decomposition and volatilization within said temperature range, confining said bath within a solid skull of its own composition above and contiguous to a pool of molten manganese, adding a material containing a manganese oxide to said bath, passing an electric current through said bath from an anode to the surface of said underlying pool of molten manganese as cathode, maintaining the bath at a temperature above the melting point of manganese and at such temperature, within said range, as to maintain molten at least the upper surface of said underlying pool of manganese, and intermittently tapping molten manganese from said pool, said process being further characterized in that said pool of molten manganese is supported on a carbon-free layer composed essentially of relatively electrically non-conductive refractory oxide which is non-reactive to manganese.

3,018,234
PROCESS FOR TREATING A MANGANESE CONTAINING ORE FOR THE RECOVERY OF MANGANESE VALUES THEREFROM

Peter S. Litt, 10 S. Ogden St., Denver, Colo.

Filed Feb. 9, 1959, Ser. No. 792,095
4 Claims. (Cl. 204—83)

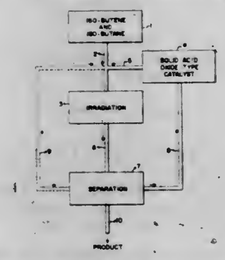


1. A process of treating a manganese containing siderite ore to recover the manganese values therefrom comprising the steps of: finely grinding the ore, slurrying the finely ground ore with a dilute saline solution, adding an amount of yeast to the slurry, passing a direct current through the slurry for a period of time sufficient to liberate the manganese values as manganese dioxide and recovering the liberated values.

3,018,235
RADIOCHEMICAL HYDROCARBON CONVERSION PROCESS

Barry L. Tarmy, Cranford, and Robert B. Long, Wanamassa, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 26, 1956, Ser. No. 593,891
4 Claims. (Cl. 204—154)



1. A process comprising irradiating a hydrocarbon stream containing isobutane and isobutene, the ratio of isobutane-isobutene being in the range of from 1:1 to 100:1, with at least 10^4 roentgens of high intensity ionizing radiation comprising gamma rays at a temperature in the range of —50 to 800° F. and a pressure in the range of 0 to 5000 p.s.i.g., and in the presence of a cat-

alyzing amount of a solid acid oxide catalyst selected from the class consisting of silica, alumina, magnesia, titania, zirconia, boria, and mixtures thereof having a surface area over 50 square meters per gram and recovering a total product, the 330/430° F. fraction thereof being predominantly naphthenes.

3,018,236
RADIATION INDUCED ETHYLENE POLYMERIZATION

James E. Shewmaker, Fanwood, and Joseph F. Nelson, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

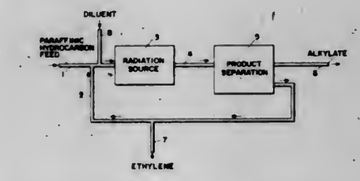
No Drawing. Filed Dec. 18, 1956, Ser. No. 628,969
5 Claims. (Cl. 204—154)

1. A process which comprises polymerizing ethylene in the presence of less than 100 p.p.m. of free oxygen by exposure to high energy ionizing radiation at a dose rate above 100 equivalent roentgens per hour at a temperature above 0° C. and in the presence of a promoting amount of water sufficient to saturate the ethylene vapor at the temperature used up to a maximum of 15 wt. percent.

3,018,237
RADIOETHYLATION OF PARAFFIN HYDROCARBONS

Peter J. Lucchesi, Cranford, and Barry L. Tarmy, Summit, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Feb. 26, 1958, Ser. No. 717,662
7 Claims. (Cl. 204—154)



1. A hydrocarbon conversion process which comprises subjecting a hydrocarbon mixture consisting essentially of a paraffin having from 2 to about 8 carbon atoms per molecule and in the range of 0.1 to 30 weight percent of ethylene to a total dosage of high energy ionizing radiation in the range of about 10^{-6} to 10^{3} kwh. of radiation energy per pound of said hydrocarbon mixture at a temperature in the range of about 500° to 800° F. and a pressure in the range of about 150 to 600 p.s.i.g., and recovering a higher molecular weight branched-chain homolog of said paraffin with a radiation yield in the range of about 200 to 10,000 molecules per 100 ev. absorbed by said mixture.

3,018,238
METHOD OF FORMING A FUEL ELEMENT FOR A NUCLEAR REACTOR

Edwin H. Layer, Jr., Columbus, and Charles S. Peet, Galena, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

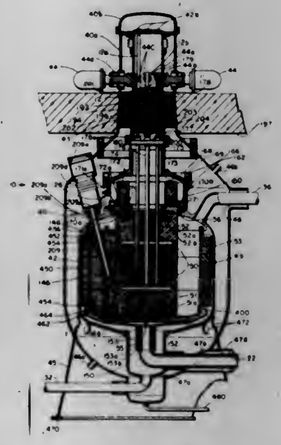
No Drawing. Filed Dec. 29, 1959, Ser. No. 862,737
4 Claims. (Cl. 204—154.2)

4. A method of forming a fuel element for a nuclear reactor comprising forming a plurality of sintered, compact wafers of uranium dioxide, sandblasting the wafers to roughen the surface thereof, exposing the wafers to methane gas at 1025° C. for twenty minutes whereby a coating of crystalline carbon 15 to 40 microinches thick is formed thereon, inserting the wafers in a receptacle plate of an alloy consisting predominantly of zirconium, covering the receptacle plate with cladding plates of the same alloy, fusion welding the edges of the cladding plates to the receptacle plate, and pressure bonding the fuel element with helium in an autoclave at a pressure of 10,000 p.s.i. for four hours at about 1500° F.

3,018,239
EXPERIMENTAL LIQUID METAL FUEL REACTOR

John J. Happell, George Richard Thomas, Richard P. Denise, and John L. Bunts, Jr., all of Lynchburg, Va., assignors to the United States of America as represented by the United States Atomic Energy Commission

Continuation of application Ser. No. 767,245, Oct. 14, 1958. This application Feb. 21, 1961, Ser. No. 90,894
3 Claims. (Cl. 204—193.2)

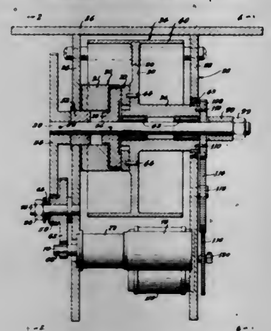


1. In a liquid metal fuel neutronic reactor, a graphite segmented reactive core, top and bottom graphite reflectors for said core forming a central core assembly, an annular reflector surrounding and contacting said central core assembly constructed of segmented graphite members, main flow passageways formed in said core assembly for permitting primary liquid flow through said reactive core in critical amounts of said fuel, means for supporting said assembly and said annular reflector to permit relative movement therebetween due to difference in thermal expansion thereby relieving tensile stresses in said core assembly and annular reflector, the latter said means including a core support plate having a thickened annular ring with an inner annular shoulder and a thin central section, a plurality of stacked annular ring plates set within said ring on said support plate with the outer edge of the bottom ring plate supported by said inner shoulder and the inner edge of the top annular ring plate having a lip in contact with and supporting said central core assembly to contain primary liquid flow within said central core assembly, said stacked ring plates being mounted to flex independently of each other to support said core assembly without inducing excessive stresses in said core assembly and ring plates, and an annular flexible metallic diaphragm extending between said lip and said thickened annular ring to form a positive seal at the juncture of said stacked ring plates and thickened annular ring.

3,018,240
SPRING DRIVEN ACTUATING MECHANISM FOR NUCLEAR REACTOR CONTROL

Frank Bevilacqua, Clearwater, Fla., and Donald F. Uecker, Lisle Township, Du Page County, and Edward F. Groh, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Jan. 21, 1958, Ser. No. 710,370
3 Claims. (Cl. 204—193.2)

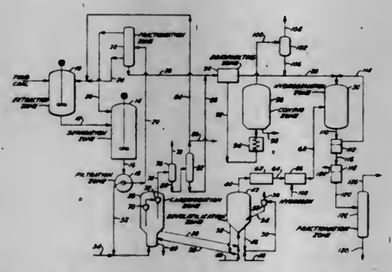


1. An assembly comprising a nuclear reactor, a straight channel extending thereinto, a rotatable drum positioned adjacent an end of the channel, a neutron absorber, a spring strip carrying the neutron absorber and having a free end extending into the channel, means attaching the other end of this spring strip to the drum, means for rotating the drum in one direction to wind the spring strip on the drum and to withdraw it from the channel, and anti-friction means close to and spaced about the drum, and means for releasing the drum to make it and the attached end of the spring strip freely rotatable in the opposite direction and thus to enable the straightening tendency of the spring strip under the confining influence of the anti-friction means to project the spring strip into the channel.

3,018,241
PRODUCTION OF HYDROGEN-RICH LIQUID FUELS FROM COAL

Everett Gorin, Pittsburgh, Pa., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 10, 1960, Ser. No. 61,517
5 Claims. (Cl. 208—8)

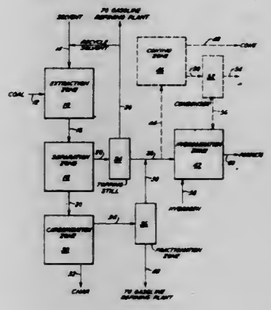


1. A combination process for the production of hydrogen-enriched liquid fuels from coal which comprises subjecting the coal to solvent extraction under conditions to dissolve less than 80 percent by weight of the m.a.f. coal, whereby an extract containing both benzene-soluble and benzene-insoluble material is obtained, separating from the products of extraction undissolved coal residue and a first and a second extract fraction, said first fraction being richer in benzene-insoluble material than said second fraction and said second fraction amounting to less than 65 percent by weight of the m.a.f. coal, subjecting said residue and said first extract fraction to carbonization under conditions yielding liquid distillates, combining at least a portion of said second extract fraction with at least a portion of said distillates, subjecting the resulting mixture to hydrogenation under conditions to yield a gasoline feedstock, and recovering said gasoline feedstock.

3,018,242
PRODUCTION OF HYDROGEN-ENRICHED HYDROCARBONACEOUS LIQUIDS

Everett Gorin, Pittsburgh, Pa., assignor to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Oct. 10, 1960, Ser. No. 61,518
5 Claims. (Cl. 208—10)



1. A combination process for the production of hydrogen-enriched hydrocarbonaceous liquid from bituminous coal, which comprises subjecting the coal to solvent extraction under conditions to yield an extract amounting to between 50 and 70 percent by weight of the MAF coal, separating the extract from the residue, subjecting at least a portion of said residue to devolatilization under conditions to yield a tar distillate, subjecting at least a portion of said extract and at least a portion of said tar distillate to catalytic hydrogenation under conditions to yield a hydrogen-enriched hydrocarbonaceous liquid, and thereafter recovering said hydrogen-enriched hydrocarbonaceous liquid.

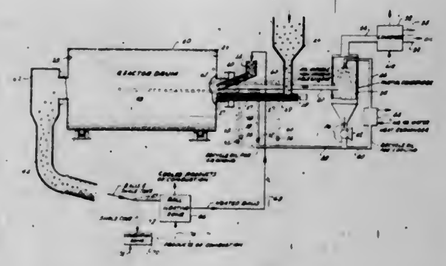
3,018,243
PLANT AND PROCESS FOR PRODUCTION OF LOW TEMPERATURE PUMPABLE OIL FROM OIL SHALE AND THE LIKE

Thomas D. Nevens, Denver, Colo., assignor, by mesne assignments, to The Oil Shale Corporation, Beverly Hills, Calif., a corporation of Nevada

Filed Mar. 9, 1959, Ser. No. 798,083
10 Claims. (Cl. 208—11)

1. An continuous process for producing a low temperature pumpable oil from attritionable solid material which upon heating leaves a combustible carbonaceous residue which comprises contacting the solid material in particulate form in a heating zone in solid-to-solid milling contact with hot, solid, heat-carrying bodies larger in particle size than said combustible residue, to produce oil vapors and gases, said vapors containing a heavier oil fraction and a lighter oil fraction; condensing at least part of the heavier oil fraction in said oil vapors; returning at least a portion of said condensed heavier oil frac-

tion to the heating zone to thermally crack and vaporize said fraction; condensing said thermally cracked oil vapors and said lighter oil fraction to produce at least one oil

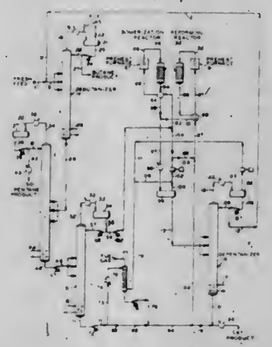


product; burning said combustible residue to produce hot products of combustion; and employing heat produced by the burning of said combustible residue to reheat said heat-carrying bodies.

3,018,244
COMBINED ISOMERIZATION AND REFORMING PROCESS

George W. Stanford, Linden, and William R. Partridge, Livingston, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Filed Dec. 18, 1958, Ser. No. 781,393
8 Claims. (Cl. 208—79)



1. A process which comprises in combination the steps of passing a fraction containing C_8 and C_8 hydrocarbons to an isomerization zone, contacting said fraction with a solid isomerization catalyst under conditions such that said C_8 and C_8 hydrocarbons are converted to more highly branched compounds, withdrawing effluent from said isomerization zone and combining said effluent with an effluent comprising C_7 and higher boiling reformed liquid product from a reforming zone in combination with said isomerization zone, separating from the combined effluent a normally gaseous hydrocarbon fraction, and passing said normally gaseous hydrocarbon fraction to an absorption zone wherein it is contacted with a fraction comprising C_7 and higher boiling hydrocarbons passing to said reforming zone to effect removal therefrom of normally liquid hydrocarbons.

3,018,245
TREATMENT OF STARCHES AND GUMS, AND COMPOSITIONS THEREOF

William L. Owen, 1924 Cherokee Ave., Baton Rouge, La.

No Drawing. Original application June 6, 1957, Ser. No. 663,865, now Patent No. 2,908,597, dated Oct. 13, 1959. Divided and this application May 27, 1959, Ser. No. 816,030
6 Claims. (Cl. 252—8.5)

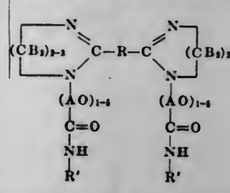
1. An aqueous drilling fluid comprising water as continuous phase and from about 1 to about 25 lbs. per barrel thereof of a comminuted material chosen from the class consisting of water dispersible starches and water dispersible gums intimately coated with a chlorinated hydroxydiphenyl having the formula $C_{12}H_9OCl(CH_3)_n$, where n is a digit from 0 to 2 inclusive, incorporated therein.

3,018,246
PROCESS OF PREVENTING CORROSION

William B. Hughes and Verner L. Stromberg, St. Louis, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Original application Feb. 3, 1958, Ser. No. 712,662, now Patent No. 2,987,515, dated June 6, 1951. Divided and this application Dec. 4, 1959, Ser. No. 857,263
22 Claims. (Cl. 252—8.55)

1. A method of inhibiting the corrosion of ferrous metals in hydrocarbon systems which is characterized by contacting such metals with a compound of the formula:



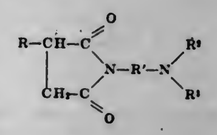
where B is selected from the group consisting of hydrogen and a lower alkyl group, A is a lower alkylene group having at least two carbon atoms, R is a hydrocarbon having 1–36 carbon atoms, and R' is a hydrocarbon moiety of a hydrocarbon isocyanate having 1–30 carbon atoms, R' being in both instances the same.

3,018,247
LUBRICATING OIL COMPOSITIONS CONTAINING METAL DITHIOPHOSPHATE - N - DIALKYLAMINOALKYL ALKENYL SUCCINIMIDE BLENDS

Robert G. Anderson, Novato, Frank A. Stuart, Orinda, and Alan Y. Drummond, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

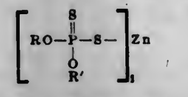
No Drawing. Filed Mar. 15, 1960, Ser. No. 15,063
4 Claims. (Cl. 252—32.7)

1. A lubricating oil composition consisting essentially of an oil of lubricating viscosity, and from about 0.1% to 80% by weight of an N-dialkylaminoalkyl monoalkenyl succinimide of the formula



wherein R is a polyolefin radical containing from 30 to about 200 carbon atoms, R', R^2 and R^2 are hydrocarbon radicals containing a total of 3 to 10 carbon atoms, and in combination with said succinimide, from about 5

mM./kg. to about 35 mM./kg. of a metal dithiophosphate of the formula



wherein R and R' alkyl radicals containing a total of 7 to 50 carbon atoms, and wherein the succinimide-dithiophosphate mol ratio is from about 1:2 to about 3:1.

3,018,248
OXIDATION INHIBITED MINERAL OIL COMPOSITIONS

Edward G. Foehr, San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Jan. 20, 1960, Ser. No. 3,481
8 Claims. (Cl. 252—37)

2. A lubricating oil composition comprising a major proportion of an oil of lubricating viscosity, from 0.02% to 10%, by weight, of a tertiary butyl phenol selected from the group consisting of 2,6-di-t-butyl-p-cresol and 2,6-di-t-butyl phenol, and an oil-soluble cobalt naphthenate in amount such that the cobalt is present in said lubricating oil composition in amount from 1 to 200 p.p.m.

6. A lubricating oil composition comprising a major proportion of an oil of lubricating viscosity from 0.1% to 1%, by weight, of a tertiary butyl phenol selected from the group consisting of 2,6-di-t-butyl-p-cresol and 2,6-di-t-butyl phenol, and cobalt naphthenate in amount such that the cobalt is present in said oil composition in amount from 1 to 200 p.p.m.

3,018,249
PROCESS FOR MAKING AN IMPROVED LUBRICANT CONTAINING SALTS OF CARBOXYLIC ACIDS

Arnold J. Morway, Clark, N.J., and Cloyce R. Daniels, Bridgeville, and Robert P. Spray, Pittsburgh, Pa., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 29, 1959, Ser. No. 849,432
6 Claims. (Cl. 252—39)

1. A method for the preparation of a fluid lubricating composition comprising a major amount of mineral lubricating oil and about 2 to 25 wt. percent of mixed calcium salts of acetic acid and C_7 to C_{12} fatty acid, said salts being in a molar ratio of about 4 to 20 moles of salt of acetic acid per mole of salt of C_7 to C_{12} fatty acid, said method comprising neutralizing at a temperature below 225° F. a slurry of commercial lime containing calcium carbonate in at least a portion of said oil by the addition of an excess of said acids to completely neutralize said lime including the calcium carbonate present, adding metal base to complete the neutralization of the excess acid and provide an alkaline product, and dehydrating the lubricant by heating at a temperature of about 250 to 400° F.

3,018,250
LUBRICATING OIL COMPOSITIONS CONTAINING N-DIALKYLAMINOALKYL ALKENYL SUCCINIMIDES

Robert G. Anderson, Novato, Frank A. Stuart, Orinda, and Alan Y. Drummond, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,390
8 Claims. (Cl. 252—51.5)

1. A lubricating oil composition comprising a major proportion of an oil of lubricating viscosity, and, in an amount to impart detergency thereto, an N-dialkylaminoalkyl monoalkenyl succinimide, wherein said alkenyl radical contains from 30 to about 200 carbon atoms, and said dialkylaminoalkyl radical contains no more than 10 carbon atoms.

3,018,251
DRY CLEANING COMPOSITIONS

Raymond L. Mayhew, Phillipsburg, and John P. Miller III, Bloomfield, N.J., and Marvin Kopp, Lenox, Mass., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 11, 1957, Ser. No. 633,545
6 Claims. (Cl. 252—152)

1. A composition adapted for use in the dry cleaning of textile and fibrous materials consisting essentially of a surface active agent mixture for each 100 parts of which there are present at least 25 parts of a polyoxyalkylated dialkenoid fatty amine containing from about 14 to about 53% alkylene oxide and 30 to 75 parts of an anionic surface active agent.

3,018,252
LIQUID GELLING AGENT FOR GASOLINE

James S. Carson, Havre de Grace, Md., George B. Feild, New Castle, Del., Robert E. Kegan, Ballston Lake, N.Y., William H. Markwood, Jr., Wilmington, Del., and Frank Carl Whitney, Army Chemical Center, Md., assignors to the United States of America as represented by the Secretary of the Army

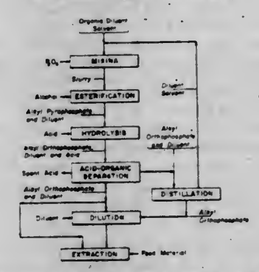
No Drawing. Filed Nov. 24, 1958, Ser. No. 776,155
11 Claims. (Cl. 252—316)

1. A composition for gelling hydrocarbons consisting essentially of a suspension of an aluminum salt of a single fatty acid containing from 6 to 12 carbon atoms in a liquid selected from the group consisting of: isopropanol, butyl acetate, isopropanol containing from one to 2.5 percent ethyl cellulose, mixtures of isopropanol and ethylene chloride, mixtures of isopropanol and ethylene glycol, mixtures of isopropanol and carbon disulfide, mixtures of isopropanol and nitrobenzene, mixtures of butyl acetate and ethylene chloride, mixtures of n-butanol and ethylene chloride, and mixtures of ethylene glycol and hexylene glycol, each of the components of each of said mixtures being present in substantial proportions, such that the solid content of said composition lies in the range 10–40 percent by weight.

3,018,253
PROCESS FOR PRODUCING ALKYL ORTHOPHOSPHORIC ACID EXTRACTANTS

Robert R. Grinstead, Concord, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Original application June 29, 1956, Ser. No. 595,034, now Patent No. 2,860,031, dated Nov. 11, 1958. Divided and this application Sept. 16, 1958, Ser. No. 761,445
10 Claims. (Cl. 252—364)



1. In a process for producing alkyl orthophosphoric acid extractants, the steps comprising slurrying phosphorus

pentoxide in a solvent-diluent selected from the group consisting of aliphatic hydrocarbons, aromatic hydrocarbons, halogenated hydrocarbons, ethers, and petroleum solvents, then adding to said slurry an aliphatic alcohol having from 9 to 17 carbon atoms and in which the OH group is situated inward of the terminal carbon atoms while maintaining a reaction temperature below about 60° C., and wherein the mole ratio of alcohol to P_2O_5 is about 2:1, thereby forming a pyrophosphate reaction product in said solvent, hydrolyzing said reaction product with dilute mineral acid to produce said alkyl orthophosphoric acid ester in said solvent, and separating the solution of extractant from said acid.

3,018,254

RUBBER ANTIOXIDANT DISPERSIONS

Earl Kaplan, North Plainfield, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,111
8 Claims. (Cl. 252—403)

1. A fluid, high-solids content dispersion of a 2,2'-methylene-bis(4-alkyl-6-t-alkyl phenol) in which the alkyl and t-alkyl moieties contain 1–3 carbons and 4–8 carbons respectively, in an essentially aqueous medium, said dispersion having incorporated therein from about 0.5 to about 5.0 weight percent of the weight of said bis-dialkyl phenol of an agent selected from the group consisting of the self-condensation products of dimethylolethyleneurea having a molecular weight of from about 200 to about 400 and of polyvinylpyrrolidone having a molecular weight of from about 20,000 to about 40,000 and said dispersion being further characterized by remaining fluid for an extended period of time, at a solids content of fifty weight percent of said bis-dialkyl phenol.

3,018,255

VANADIUM OXIDE CATALYST FOR PRODUCTION OF SOLID POLYMERS

Robert L. Banks, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 26, 1958, Ser. No. 744,682
5 Claims. (Cl. 252—455)

1. A method of preparing a catalyst useful in the polymerization of ethylene to a normally solid polymer which comprises impregnating a silica-alumina support with a vanadium salt of an organic acid convertible to the oxide upon heating, said salt being selected from the group consisting of vanadium oxalate, vanadium malonate, vanadium formate, vanadium acetate, vanadium citrate and vanadium tartrate, and activating the impregnated catalyst by heating in an oxygen-containing atmosphere at a temperature in the range 1100 to 1600° F. for a period of time sufficient to convert the salt to the oxide.

3,018,256

PRODUCTION OF RIGID FOAMED POLYESTERURETHANE PLASTICS

Mitchell Borr and Kenneth E. MacPhee, Guelph, Ontario, Canada, assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed July 10, 1958, Ser. No. 747,597
3 Claims. Cl. 260—2.5)

1. A method of making a rigid polyurethane foam comprising providing a modified polyester in which one mole of an acidic material selected from the group consisting of adipic acid, mixture of adipic acid with phthalic anhydride and mixture of adipic acid with chlorendic anhydride was first esterified with one-third mole of a trihydride alcohol selected from the group consisting of trimethylolethane and trimethylolpropane to provide an intermediate polyester having terminal carboxyl groups and a hydroxyl number of zero, and one-third mole of the said intermediate polyester was thereafter further esterified with from 1.0 to 1.2 moles of a glycol selected from the group consisting of ethylene glycol and diethylene glycol to provide a modified polyester having an acid number not greater than 30 characterized by lower viscosity and more uniform molecular weight than would be obtained by esterifying said acidic material with both said trihydric alcohol and said glycol simultaneously, thereafter mixing one-third mole of said modified polyester with 6 to 10 isocyanate equivalents of an organic polyisocyanate, thereby providing a prepolymer composition, and subsequently mixing one isocyanate equivalent of the thus-produced prepolymer composition with an additional 0.03 to one-third mole of said modified polyester and 0.05 to 0.5 mole of water, whereby a rigid polyurethane foam is produced.

3,018,257

METHOD OF PREPARING EXPANDABLE RESINS COMPRISING DISSOLVING SAID RESIN IN A MISCIBLE BLEND OF ORGANIC LIQUIDS

Frank R. Spencer, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 26, 1959, Ser. No. 848,555
8 Claims. (Cl. 260—2.5)

1. A method of preparing expandable resins from solid synthetic thermoplastic polymers selected from the group consisting of monocyclic vinyl aromatic polymers and polyesters of 2,2-bis(carboxyphenyl)alkanes which comprises dissolving said polymer in a miscible blend of organic liquids, at least one of which has a solubility parameter below and at least one of which has a solubility parameter above that of the polymer, said blend comprising at least two organic liquids, each of which liquids individually is a non-solvent for said polymer, the liquid of lower solubility parameter for the polymer being an expanding agent, and precipitating said polymer from said solvent blend by the addition of a non-solvent for said polymer selected from the group consisting of aliphatic alcohols containing from 1 to 4 carbon atoms and water.

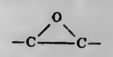
3,018,258

NEW CURING AGENTS FOR POLYEPOXIDES AND METHOD FOR THEIR PREPARATION

Dale J. Meier and Allan Kahn, El Cerrito, Calif., assignors to Shell Oil Company, a corporation of Delaware

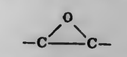
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,391
20 Claims. (Cl. 260—6)

1. A new curing agent for liquid polyepoxides possessing a plurality of



group comprising small particles of material having groups reactive with 1,2-epoxy groups, which particles are encapsulated in a hardened protective colloid material which is insoluble in the polyepoxide and contains no group reactive with epoxy groups at 20° C. to 50° C.

14. A process for curing liquid polyepoxides possessing a plurality of



group which comprise mixing and reacting at a temperature between 60° C. and 200° C. the polyepoxide with a curing agent comprising small particles of a material having groups reactive with epoxy groups which are encapsulated in hardened protective colloid which is insoluble in the polyepoxide and contains no group reactive with epoxy groups at 20° C. to 50° C., said curing agent being employed in sufficient amount to furnish at least .6 equivalent of curing agent per equivalent of the polyepoxide.

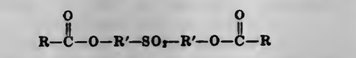
3,018,259

DIEPOXY SULFONE COMPOSITIONS

Frederick C. Frostick, Jr., and Benjamin Phillips, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,820
63 Claims. (Cl. 260—18)

1. A polyepoxy sulfone characterized by the general formula:



wherein each R, individually represents a member selected from the class consisting of (*a*) a vic-epoxyalkyl radical, (*b*) a vic-epoxycycloalkyl radical, (*c*) a vic-epoxycycloalkylalkyl radical, and (*d*) a 3-oxatricyclo[3.2.1.$0^{2,4}$]oct-6-yl radical; and wherein each R', individually, represents a divalent saturated aliphatic hydrocarbon radical containing at least two carbon atoms.

3,018,260

ROOM TEMPERATURE CURING MOLDING AND FORMING COMPOSITION

Albert M. Creighton, Jr., Manchester, Mass., assignor to Chemical Development Corporation, Danvers, Mass., a corporation of Massachusetts

No Drawing. Filed Sept. 29, 1958, Ser. No. 763,847
2 Claims. (Cl. 260—18)

1. A room temperature curing resinous molding and forming composition comprising: a mixture of finely divided metal particles and a liquid resin in a volumetric metal-to-resin ratio of approximately 32%–90% metal to 68%–10% resin; said metal being in the relatively pure elemental state and having characteristics of specific heat, thermal conductivity and surface texture of materials belonging to the class consisting of steel, iron, copper, aluminum and lead, said resin comprising a condensation product of bis-phenol and epichlorohydrin together with a room temperature curing agent therefor comprising a lower aliphatic polyamine, and a toughening agent; said curing agent being present in a quantity sufficient substantially completely to combine with and cure said resin, and said toughening agent having the characteristics of chemically combining with and toughening said resin of the class consisting in a condensation product of unsaturated fatty acid and polyalkyl amine, a liquid polythiodithiol polymer, and a dehydroabiethylamine; said metal being uniformly distributed throughout said resin; a thickening agent in said mixture comprising solid particles of finely divided, highly adsorptive material in quantity sufficient to hold said metal in suspension prior to said curing; and said mixture being 100% volatile free.

3,018,261

PROCESS FOR THE MANUFACTURE OF SHAPED BODIES

Adolf von Friedrich, Leverkusen-Bayerwerk, and Gottfried Scriba, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed June 11, 1957, Ser. No. 664,915
3 Claims. (Cl. 260—23)

1. In a process wherein an additive in the form of a finely divided powder is to be uniformly distributed throughout a high molecular weight plastic to improve the physical properties thereof, and wherein said finely divided additive is converted into larger aggregates in order to facilitate its storage and handling before use, said agglomerates being formed by mixing a binder with the finely divided powder and extruding the resulting paste through an orifice to form granules which are then dried, the improvement comprising employing as the binder an aqueous solution of polyacrylic acid amide, the latter being at least 1% water-soluble and having a molecular weight of 1,000 to 500,000, the resulting dried granules being stable and resistant to rubbing but having the property of breaking down into the original powdery form by the pressure employed in mixing the granules with the high molecular weight plastic, the proportion of the polyacrylic acid amide to the powder being 0.1–20% by weight based on the powder.

3,018,262

CURING POLYEPOXIDES WITH CERTAIN METAL SALTS OF INORGANIC ACIDS

Carl W. Schroeder, Orinda, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 1, 1957, Ser. No. 656,187
8 Claims. (Cl. 260—29.2)

1. A composition suitable for use in treating textiles comprising an aqueous medium containing a glycidyl polyether of a polyhydric alcohol having an epoxy equivalency between 1.1 and 3 and a molecular weight between 170 and 800, and from 0.1% to 30% by weight of the said glycidyl polyether of a curing agent consisting of a salt of (1) a metal of the group consisting of zinc, magnesium, copper, aluminum, nickel, cadmium, cerium, strontium, calcium, iron, cobalt, chromium, mercury, beryllium, zirconium, lead, tin, and selenium, and (2) an inorganic acid of the group consisting of sulfuric, sulfurous, persulfuric, fluoboric, fluoberyllic, nitric, boric, fluosilicic, phosphoric, phosphorous, perchloric, and chloric acid.

3,018,263

PROCESS FOR THE MANUFACTURE OF LOW BRITTLE POINT POLYPROPYLENE COMPOSITIONS

Abraham Schneider, Overbrook, Hills, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Nov. 14, 1957, Ser. No. 696,330
6 Claims. (Cl. 260—45.5)

1. A process for preparing polypropylene compositions having a brittle point of not more than about —5° C. which comprises melting together, at a temperature up to 30° C. above the melting point of the higher melting material, crystalline polypropylene and from 5% to 25% by weight of a different polymer selected from the group consisting of polymers of aliphatic olefins having from 4 to 8 carbon atoms, polystyrene, polyethylene, and amorphous polypropylene, mechanically working the molten polymer mixture whereby a substantially homogeneous blend is obtained, and shock cooling the blend to a temperature of not greater than 100° C. in a time not exceeding 10 minutes, whereby the homogeneity of the blend is preserved.

3,018,264

POLYEPOXIDE COMPOSITIONS

William G. Colclough, Jr., Somerville, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,359
16 Claims. (Cl. 260—37)

1. A polyepoxide composition containing a polyepoxide having an average of more than one epoxy group per molecule wherein each epoxy oxygen atom is attached to adjacent carbon atoms and a latent chemical acting system comprising a curing agent for curing said composition to an infusible, insoluble state, a molecular zeolite sieve carrier into which said curing agent is adsorbed and

a normally solid material coating the said curing agent containing molecular sieve said coating acting as a mechanical barrier between the polyepoxide and the curing agent.

3,018,265

METHOD OF FORMING A RESIN FROM A NITROGEN COMPOUND, FORMALDEHYDE, AN ALCOHOL AND AN UNSATURATED MONOCARBOXYLIC ACID, AND PRODUCT THEREOF

Klaus Tessmar, Darmstadt, Germany, assignor to Röhm & Haas G.m.b.H., Darmstadt, Germany

No Drawing. Filed Dec. 17, 1956, Ser. No. 628,478

Claims priority, application Germany Dec. 16, 1955

9 Claims. (Cl. 260—45.2)

1. The method which comprises condensing at least one nitrogen compound selected from the group consisting of urea, melamine, thiourea, biuret, guanidine, cyanamide, dicyanamide, hydantoin, melam, melem, ammeline, and ammelide with from 1 to 3 mols of formaldehyde per each amido and amidino group in said compound in the presence of an alcohol having up to 5 carbon atoms, and selected from the group consisting of lower alkyl primary and secondary monohydric alcohols, lower alkylene glycols, and lower alkoxy alkanols, and between 2 and 20 percent by weight, based on the weight of condensation product, of an unsaturated, polymerizable aliphatic monocarboxylic acid.

3,018,266

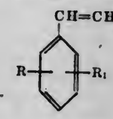
POLYMERIZABLE ELASTOMER-VINYL AROMATIC COMPOUND COMPOSITION CONTAINING A CATALYST PROMOTER SYSTEM AND METHOD OF POLYMERIZING SAME

Lennart A. Lundberg, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Continuation of application Ser. No. 743,482, June 20, 1958. This application July 29, 1960, Ser. No. 46,048

14 Claims. (Cl. 260—45.4)

1. A polymerizable composition comprising (A) from 75% to 94% by weight of a polymerizable compound having the formula:



wherein R and R_1 are substituents selected from the group consisting of hydrogen and methyl and ethyl radicals, (B) from 5% to 20% by weight of a rubbery elastomer selected from the group consisting of natural rubber and a synthetic rubbery polymer of a conjugated diolefin, (C) from 1% to 15% by weight of a nonconjugated bivinyl polymerizable cross-linking agent, (D) from about 0.1% to 5% by weight of a peroxide polymerization catalyst and (E) from about 0.005% to about 0.5% by weight of a catalyst promoter selected from the group consisting of (i) a compound selected from the group consisting of isomelamines, amidines, and salts thereof, (ii) a quaternary ammonium salt of a nonoxidizing acid at least as strong as acetic acid and (iii) mixtures of a member selected from the group consisting of (i) and (ii) with a copper salt containing copper in amounts of from about 0.001 to about 10 parts by weight per million based on the total weight of the composition wherein the percentages of each of (D) and (E) is based on the total weight of (A), (B) and (C).

3,018,267

COMPOSITION AND PROCESS FOR BINDING GLASS FIBERS WITH AN UNSATURATED POLYESTER, POLY-N-VINYL IMIDAZOLE AND A VINYL MONOMER

Robert Stockler, Chagrin Falls, Ohio, and Jesse Werner, Hollswood, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 11, 1958, Ser. No. 720,566

6 Claims. (Cl. 260—45.4)

1. A thermosetting composition of matter for bonding glass and fibrous glass material comprising a resinous mixture of 40–45% by weight of an unsaturated polyester resin of a polycarboxylic acid and a polyhydric alcohol and 60–55% by weight of a polymerizable monomer selected from the class consisting of styrene, α-methyl styrene, methyl methacrylate, isopropyl methacrylate, n-butyl methacrylate, methyl acrylate, ethyl acrylate, n-propyl acrylate, butyl acrylate, acrylonitrile, methacrylonitrile, acrylamide, methacrylamide, N-n-butyl acrylamide, methyl vinyl ether, isopropyl vinyl ether and isopropyl vinyl ether, said resinous mixture containing from 5 to 30% by weight thereof of a homopolymer of N-vinyl imidazole.

3,018,268

THERMOPLASTIC COMPOSITIONS OF VINYL CHLORIDE RESIN, GRAFT COPOLYMER OF STYRENE AND METHYL METHACRYLATE UPON BUTADIENE-STYRENE RUBBER, AND STYRENE-METHYL METHACRYLATE RESIN, AND METHOD OF MAKING SAME

Lawrence E. Daly, South Bend, Ind., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 17, 1958, Ser. No. 742,492

12 Claims. (Cl. 260—45.5)

1. A thermoplastic composition comprising a homogeneous mixture of 51% to 98% of (*a*) a resinous vinyl chloride polymer selected from the group consisting of polyvinyl chloride and copolymers consisting of from 75% to 99% of vinyl chloride with correspondingly from 25% to 1% of a copolymerizable monoolefinically unsaturated monomer, and correspondingly 49% to 2% of (*b*) a graft copolymer of from 10 to 200 parts of a mixture of styrene and methyl methacrylate in ratio of 33:67 graft copolymerized upon 100 parts of a rubbery copolymer, in aqueous emulsion form, of butadiene and styrene in ratio of from 70:30 to 85:15, and (*c*) a resinous copolymer of styrene and methyl methacrylate in ratio of 33:67, the amounts of (*b*) and (*c*) ranging from 75 to 25 parts of (*b*) and correspondingly from 25 to 75 parts of (*c*) per 100 parts of (*b*) plus (*c*), the said percentages and parts being by weight.

3,018,269

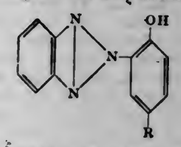
POLYMERIC COMPOSITIONS, SHAPED ARTICLES THEREFROM AND PROCESS OF PREPARATION

Michael Francis Bruno, Grand Island, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 29, 1960, Ser. No. 46,065

12 Claims. (Cl. 260—45.8)

1. A composition of matter comprising polyvinyl fluoride and a stabilizing amount of a triazole of the formula



wherein R is an alkyl group having from 8 to 16 carbon atoms, at least two of said carbon atoms being tertiary carbon atoms.

3,018,270

PROCESS FOR PRODUCING SILICONE RESINS

John B. Toogood, Tonawanda, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 28, 1960, Ser. No. 45,782

11 Claims. (Cl. 260—46.5)

1. The method for preparing a silicone resin of a predetermined hydroxyl content which comprises hydrolyzing and condensing at least one silane having monovalent hydrocarbon and readily-hydrolyzable radicals attached to the silicon atom thereof to a partially condensed hydroxyl-containing silicone hydrolyzate containing a ratio of monovalent hydrocarbon radicals to silicon atoms of from about 1.0 to about 1.7, sufficient water being employed in the hydrolysis to hydrolyze all the readily-hydrolyzable radicals, and heating a solution of said hydrolyzate in an inert solvent in the presence of water, said water being present in an amount of from about 1/11 to about ¼ of the weight of hydrolyzate present, to a temperature of from at least about 150° C. to about 300° C. under a pressure of from at least about 400 p.s.i. to about 20,000 p.s.i., in order to simultaneously condense the silanol groups of said hydrolyzate to form Si—O—Si bonds and hydrolytically cleave the Si—O—Si bonds of said hydrolyzate to form Si—OH bonds, said heating being continued until equilibrium has been attained.

3,018,271

CROSSLINKING CONDENSATION POLYMERS WITH INTRALINEAR CYCLOBUTENE RINGS

John Lynde Anderson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 16, 1955, Ser. No. 528,812

5 Claims. (Cl. 260—47)

1. Polyhexamethylene 1-cyclobutene-1,2-dicarboxylate.

3,018,272

SULFONATE CONTAINING POLYESTERS DYEABLE WITH BASIC DYES

John Malcolm Griffing, Grifton, N.C., and William Roscoe Remington, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 19, 1956, Ser. No. 622,811

18 Claims. (Cl. 260—75)

1. A linear carbonyl-oxy polyester composed of repeating ester units wherein the carbonyl-oxy linkages are an integral part of the polymer chain, having an intrinsic viscosity of at least about 0.20 in a mixture of 58.8 parts of phenol and 41.2 parts of trichlorophenol; the said polyester consisting of from about 0.5 mol percentage to about 10 mol percentage, based on the said ester units of the said polyester, of a basic dye sensitizing unit which is a metallic salt of the structure



wherein



is a divalent radical of the class consisting of (1) an $—SO_3H$ substituted alkylene radical of such character that —X— is separated from the $—SO_3H$ group by at least 3 carbon atoms and (2) an $—SO_3H$ substituted arylene radical; —X— is a divalent member of the class consisting of carbonyl - oxy, oxy-polymethylene - oxy, poly(oxy-polymethylene)-oxy (carbonyl-oxy-polymethylene-oxy, and carbonyl-poly(oxy-polymethylene)-oxy, the said polymethylene groups containing from 2 to 10 carbon atoms; and —Y is a member of the class consisting of —X— and hydrogen; the remainder of the radicals of the said polyester which are joined by the said carbonyl-oxy linkages being selected from the group consisting of (1) divalent hydrocarbon radicals and (2) carbocyclic hydrocarbon radicals joined through oxaalkylene to the said carbonyl-oxy linkage; with the proviso that in at least about 80 mol percentage of the said repeating ester units in the said polyester, there is at least one divalent carbocyclic hydrocarbon ring containing at least six carbon atoms present as an integral part of the polymer chain and having a minimum of four carbon atoms between the points of attachment of the said ring in the polymer chain.

3,018,273

PROCESS OF POLYMERIZING HIGHER LACTAMS

John Mann Butler, Ross M. Hedrick, and Edward H. Mottus, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 21, 1958, Ser. No. 729,509

18 Claims. (Cl. 260—78)

1. A process for effecting the polymerization of a lactam containing at least 5 carbon atoms in the ring, in addition to the amide group, comprising heating the lactam under substantially anhydrous conditions at a temperature of from about the melting point thereof up to about 250° C. in admixture with a catalytic amount of from about 0.05 to about 5 mol percent, based on the lactam, of an organomagnesium compound selected from the group consisting of a Grignard reagent, the reaction product of a Grignard reagent with an amide, the reaction product of a Grignard reagent with a hydrocarbyl primary amine, dihydrocarbylaminemagnesium, dihydrocarbylmagnesium compounds, and magnesium alcoholates, said organomagnesium compounds being characterized by a molecular weight up to about 600, and from about 0.05 to about 5 mol percent, based on the lactam, of a nitrogen-containing promoter compound in which the nitrogen atoms are trivalent and in which at least one nitrogen atom is directly attached to at least two radicals selected from the group consisting of carbonyl, thiocarbonyl, sulfonyl, and nitroso radicals and no promoter compound has more than one nitroso radical directly attached to said nitrogen atom, the remaining bonds of said nitrogen atom being attached to a member from the group consisting of said radicals and carbon, the remainder of said promoter compound being composed of organic radicals sufficient to satisfy the remaining available valences and no nitrogen atom in said organic radicals has more than one hydrogen atom attached directly thereto, and said promoter compound is characterized by a molecular weight of up to about 1000.

3,018,274

VINYL ACETATE COPOLYMERS

Alio J. Buselli, New Providence, N.J., and Sidney Ariemma, Staten Island, N.Y., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 5, 1957, Ser. No. 643,932

4 Claims. (Cl. 260—80.5)

1. A method for preparing a chewing gum base which comprises copolymerizing by suspension polymerization in the presence of α,α'-azodiisobutyronitrile as a polymerization catalyst vinyl acetate, from about 5 percent to about 30 percent by weight of total monomers of a vinyl ester selected from the group consisting of vinyl stearate and vinyl pelargonate and an amount of a chain transfer agent such that the copolymer formed has an intrinsic viscosity of about 0.28 to 0.38, said chain transfer agent being allyl acetate.

4. The chewing gum base prepared according to the method of claim 1.

3,018,275

HALOGENATION OF LOW UNSATURATION RUBBERY POLYMERS IN THE PRESENCE OF OXIDIZING AGENT

Delmer L. Cottle, Highland Park, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,655
5 Claims. (Cl. 260—85.3)

1. A process for modifying low unsaturation rubbery copolymer of a major portion of a C_4 to C_7 isoolefin and a minor portion of a C_4 to C_8 multiolefin which comprises contacting a solution of said copolymer with hydrogen halide in the presence of a solution of hydrogen peroxide at a temperature of 20 to 80° C. until said copolymer contains at least 0.5 wt. percent combined halogen but not more than 3 atoms of combined halogen per double bond in said copolymer.

3,018,276

PROCESS FOR POLYMERIZING CHLOROTRIFLUOROETHYLENE AND MIXTURES THEREOF WITH VINYLIDENE FLUORIDE

Selwyn Bandes, Hanover Township, Morris County, N.J., assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Filed Oct. 3, 1956, Ser. No. 613,612
9 Claims. (Cl. 260—87.7)

1. The process which comprises polymerizing a member of the group consisting of chlorotrifluoroethylene and mixtures containing chlorotrifluoroethylene and up to about 50% by weight of vinylidene fluoride in an aqueous suspension medium consisting essentially of water, a water-soluble perphosphate and a water-soluble reducing agent selected from the group consisting of bisulfites, hydrosulfites, sulfides, thiosulfates, hydrazine and hydroxylamine, at a temperature of about 0° to about 50° C. for a period of at least about 3½ hours, maintaining said aqueous suspension medium at a pH between 6.5 and 8.5 during the course of the polymerization, thereby producing a polymer in at least about 80% yield, and separating said polymer as product.

3,018,277

EXTRACTING A LIQUID DIENE POLYMER WITH A LIQUID HYDROCARBON AND METHOD OF PREPARING CASTING OF SAID EXTRACTED DIENE POLYMER

Charles E. Wheelock, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Jan. 31, 1955, Ser. No. 485,050
11 Claims. (Cl. 260—93.5)

2. A method of preparing a polymer having improved gelling characteristics from a liquid polymer selected from the group consisting of homopolymers of conjugated dienes having 4–8 carbon atoms per molecule and copolymers of conjugated dienes having 4–8 carbon atoms per molecule and ethylenically unsaturated monomers copolymerizable therewith, said method comprising contacting said liquid polymer with a liquid selected from the group consisting of paraffins containing 1 to 5 carbon atoms per molecule and monoolefins containing 1 to 5 carbon atoms per molecule under liquid-liquid extraction conditions, separating the resulting mixture into a raffinate and an extract phase, said extract phase containing from 15 to 35 volume percent of said polymer and recovering the polymer having improved gelling properties from said raffinate phase.

3,018,278

THREE-COMPONENT CATALYST CONTAINING POLYMERIC METHYL HALIDE-METAL REACTION PRODUCT AND TITANIUM COMPOUND FOR OLEFIN POLYMERIZATION

Newton H. Shearer, Jr., and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,919
11 Claims. (Cl. 260—93.7)

7. As a composition of matter, a polymerization catalyst containing (1) a polymer made by reaction of a methylene halide with a metal selected from the group consisting of aulminum, zinc and magnesium, (2) a titanium compound selected from the group consisting of titanium halides, titanium alkoxides and titanium oxides, and (3) an organophosphorus compound selected from the group consisting of lower-alkyl phosphites, lower-alkyl phosphates and hexa-lower alkyl phosphoramides, the molar ratio of components (1) and (2) in said catalytic mixture being within the range of 1:4 to 16:1 and said catalytic mixture containing from 0.1 to 1 mole of said organophosphorus compound.

3,018,279

POLYMERIZATION OF ETHYLENE WITH CATALYST OF TITANIA ON SILICA-ALUMINA

Donald R. Witt, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Sept. 13, 1957, Ser. No. 683,710
8 Claims. (Cl. 260—94.9)

1. A process which comprises contacting ethylene at a temperature in the range 100 to 550° F. with a catalyst active for ethylene polymerization and consisting essentially of titania, in an amount of about 1 to about 10 weight percent of total catalyst, associated with a silica and alumina composite, and recovering a normally solid polymer of ethylene as a product of the process.

3,018,280

SEEDMEAL PROTEIN COMPOSITION

Harold K. Salzberg and Milton R. Simonds, Bainbridge, N.Y., assignors to The Borden Company, a corporation of New Jersey

No Drawing. Filed July 8, 1958, Ser. No. 747,122
4 Claims. (Cl. 260—119)

1. In separating a protein from non-proteins, the process which comprises stirring and dispersing about 3–20 parts by weight of cow's milk casein in 100 parts dry weight of an aqueous extract of protein of a meal selected from the group consisting of soybean, peanut, cottonseed and corn meals and containing an admixed alkali in amount to establish the pH at least as high as about 8 and above the isoelectric point of the said protein, introducing into the resulting composition an acid in amount to lower the pH to the said isoelectric point within the range about 4.4–4.7, whereupon the said protein and the casein coprecipitate, and filtering the coprecipitate from the remaining liquid.

3,018,281

PROCESS FOR PRODUCING SURFACE-ACTIVE AGENTS FROM SUCROSE

Samuel B. Crecelius, St. Paul, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,948
2 Claims. (Cl. 260—209)

1. The process of producing a surface active compound from sucrose, which comprises reacting one mol of sucrose dissolved in water with from three to eight mols of an epoxide selected from the group consisting of butylene oxide and propylene oxide at a temperature of from 75° C. to 80° C. and reacting the resulting product with about one mol of dodecene oxide at temperatures of from 100° C. to 110° C. and thereby producing a water soluble surfactant compound.

3,018,282

PRODUCTION OF LIQUID FATTY ACID ESTERS OF SUCROSE ADDITION COMPOUNDS

Samuel B. Crecelius, St. Paul, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Mar. 21, 1958, Ser. No. 722,865
5 Claims. (Cl. 260—234)

1. The process of producing a liquid fatty acid ester of a sucrose addition compound which comprises reacting sucrose with from 2 to 8 times an equimolar quantity of an aliphatic epoxide compound having from 3 to 18 carbon atoms in water and with a strong acid catalyst to form an addition compound, reacting the addition compound with an unsaturated fatty acid chloride having from 12 to 18 carbon atoms at a temperature of from 40° to 100° C., diluting the resulting ester with a solvent, neutralizing the resulting hydrochloric acid and separating the resulting liquid fatty acid ester of the sucrose addition compound.

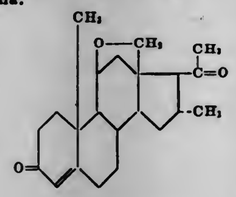
3,018,283

NEW OXYGENATED DERIVATIVES OF STEROIDS AND PROCESS OF THEIR PREPARATION

Georges Muller, Nogent-sur-Marne, and André Poittevin, Les Lilas, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed July 6, 1961, Ser. No. 122,086
Claims priority, application France July 29, 1960
3 Claims. (Cl. 260—239.55)

1. 16α-methyl-11β,18-oxido-Δ^4-pregnene-3,20-dione having the formula:



3,018,284

16,17-OXIDO-ALLOPREGNANE-3,20-DIONE-DERIVATIVES

George Rosenkranz, Mexico City, Mexico, and Carl Djerassi, Birmingham, Mich., assignors, by mesne assignments, to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Original application Feb. 17, 1953, Ser. No. 337,431, now Patent No. 2,773,887, dated Dec. 11, 1956. Divided and this application Sept. 17, 1956, Ser. No. 614,332
9 Claims. (Cl. 260—239.55)

1. 16α,17α-oxido-allopregnan-3β,11α-diol-20-one.

3,018,285

20-ETHYLENE DIOXY-PREGNANE-3-ONE DERIVATIVES

Howard J. Ringold and George Rosenkranz, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed Nov. 12, 1957, Ser. No. 695,496
2 Claims. (Cl. 260—239.55)

1. 4-hydroxymethylene - 20 - ethylenedioxy-pregnan-3-one.

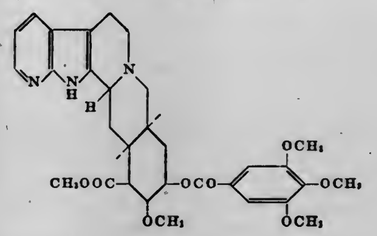
3,018,286

12-AZA-DESERPIDINE AND INTERMEDIATES AND PROCESS THEREFOR

Leon Velluz, Paris, Georges Muller, Nogent-sur-Marne, and Andre Allais, Paris, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed Jan. 26, 1960, Ser. No. 4,621
Claims priority, application France Feb. 4, 1959
14 Claims. (Cl. 260—240)

1. Levorotatory in chloroform 18β-(3',4',5'-trimethoxy-benzoyloxy)-17α-methoxy - 16β - carbomethoxy-12-aza-3β,20α-yohimbane having the formula



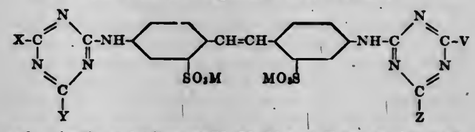
3,018,287

OPTICAL BRIGHTENERS FOR USE WITH PAPER

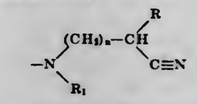
Fritz Fleck, Bottmingen, Switzerland, assignor, by mesne assignments, to Fidelity Union Trust Company, executive trustee under Sandoz Trust

No Drawing. Filed Nov. 3, 1959, Ser. No. 850,524
Claims priority, application Switzerland Nov. 5, 1958
9 Claims. (Cl. 260—240)

1. A water-soluble compound of the formula



wherein the substituents V, X, Y and Z are amine radicals each of which is attached by its amino nitrogen atom to the respective triazine ring, and at least one of which substituents has the formula



R is a member selected from the group consisting of hydrogen and methyl; R_1 is a member selected from the group consisting of hydrogen, alkyl, hydroxyalkyl, cyanoalkyl and alkoxyalkyl, each of the last four members having at most 4 carbon atoms; *n* is an integer ranging from 0 to 1; and M is a cation selected from the group consisting of hydrogen and alkali metal cations; remaining substituents being amine radicals selected from the group consisting of —NH_2, unsubstituted primary and secondary lower alkyl-amino, hydroxy-lower alkyl-amino, cyano-lower alkyl-amino, sulfo-lower alkyl-amino, alkoxyalkyl-amino having a total of 3 to 4 carbon atoms, morpholino, piperidino, pyrrolidino, anilino, chloroanilino, toluidino, o- and p-anisidino, sulfoanilino, sulfoanisidino, sulfotoluidino, sulfonamido-anilino, sulfonamido-anisidino and sulfonamido-toluidino.

3,018,288
PROCESS FOR PRODUCTION OF CYANURIC CHLORIDE

Masakata Tokime and Michiomi Kimura, Tokyo, Japan

No Drawing. Filed Feb. 20, 1959, Ser. No. 794,500
Claims priority, application Japan Jan. 9, 1959
2 Claims. (Cl. 260—248)

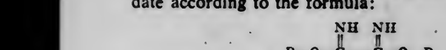
1. In a process for the production of cyanuric chloride by passing cyanogen chloride over an active carbon, the improvement which comprises using as said active carbon one which has been treated with an acid selected from the group consisting of hydrochloric, acetic, fluoric, propionic, lactic and sulfuric acids until the oxides, hydroxides, and salts of the metals belonging to groups 2 and 1 of the periodic table contained in said active carbon are removed by said acid treatment and the pH of an aqueous extract obtained by the extraction of the combustion ash of said active carbon with water in an amount about 100 times by weight thereof reaches within the range that is not perceptible in phenolphthalein.

3,018,289
PROCESS FOR PREPARING OXAMIDINES

John D. Behun, Southgate, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Feb. 10, 1960, Ser. No. 7,769
14 Claims. (Cl. 260—296)

1. A process for preparing oxamidines which comprises interacting about 1 mol of a di-lower alkyl oxalimidate according to the formula:



wherein R is an aliphatic hydrocarbon radical having from 1 to 5 carbon atoms with about 2 mols of a primary amine of the formula:

$$R'NH_2$$

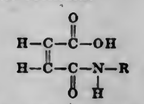
wherein R' is a radical selected from the group consisting of phenyl, alkyl-substituted phenyl in which the alkyl portion has from 1 to about 12 carbon atoms, phenyl-substituted alkyl in which the alkyl portion has from 1 to about 3 carbon atoms and aromatic heterocyclics having 5 and 6 atoms in which the hetero atom is nitrogen, in the presence of an activating alcohol and an acid catalyst selected from the group consisting of mineral acids and electron acceptor salts at a temperature from about 15° C. to about the reflux temperature of the mixture.

3,018,290
PREPARATION OF MALEIMIDES

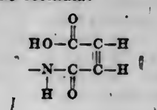
Carol K. Sauers, Middlebush, and Robert J. Cotter, New Brunswick, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,236
10 Claims. (260—326.3)

1. Process for the preparation of an N-substituted maleimide which comprises admixing an N-substituted maleamic acid of the formula:



wherein R is selected from the group consisting of a monovalent hydrocarbon radical and a divalent hydrocarbon radical having as a substituent on its terminal carbon atom a radical of the formula:



with at least about 2 moles of an organic tertiary amine of the formula $(R')_3N$ wherein R' is a hydrocarbon radical free of ethylenic and acetylenic unsaturation, per mole of said maleamic acid and with at least about a stoichiometric amount of an anhydride of a saturated lower fatty acid, said acid having a maximum of four carbon atoms, for a period of time sufficient to produce the corresponding N-substituted maleimide.

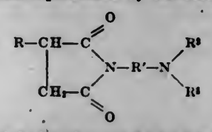
5. Process as defined in claim 1 wherein the said maleamic acid is N,N'-hexamethylene bis-malemic acid.

3,018,291
N-DIALKYLAMINOALKYL ALKENYL SUCCINIMIDES

Robert G. Anderson, Novato, Frank A. Stuart, Orinda, and Alan Y. Drummond, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Aug. 24, 1959, Ser. No. 835,400
3 Claims. (Cl. 260—326.5)

1. The compound represented by the formula:



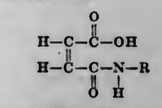
wherein R is a polyisobutylene radical of from 30 to 200 carbon atoms, R' is a divalent alklyene radical of from 1 to 3 carbon atoms, R^2 and R^3 are alkyl radicals of from 1 to 3 carbon atoms, and R', R^2 and R^3 combined contain a total of no more than 10 carbon atoms.

3,018,292
PREPARATION OF MALEIMIDES

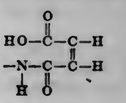
Carol K. Sauers, Middlebush, and Robert J. Cotter, New Brunswick, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,231
7 Claims. (Cl. 260—326.5)

1. Process for the preparation of an N-substituted maleimide which comprises admixing an N-substituted maleamic acid of the formula:



wherein R is selected from the group consisting of a monovalent hydrocarbon radical and a divalent hydrocarbon radical having as a substituent on its terminal carbon atom a radical of the formula:



with at least about 2 moles of an organic tertiary amine of the formula $(R')_3N$ wherein R' is a hydrocarbon radical free of olefinic and acetylenic unsaturation, per mole of said maleamic acid and with at least about a stoichiometric amount of an acyl halide of the formula:



wherein R^2 is an alkyl radical having a maximum of three carbon atoms and X is a halogen atom, for a period of time sufficient to produce the corresponding N-substituted maleimide.

4. Process as defined in claim 1 wherein the maleamic acid is N-n-butyl maleamic acid.

3,018,293
NOVEL 18-NOR-PREGNANIC DERIVATIVE AND PROCESS FOR ITS PREPARATION

Gaston Amiard, Noisy-le-Sec, and Rene Heymes, Romainville, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed Dec. 16, 1960, Ser. No. 76,155
Claims priority, application France Dec. 24, 1959
16 Claims. (Cl. 260—339)

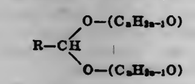
10. The ozonide of 17-methyl-18-nor-D-homo-Δ^{16}-etiocholene-3,11-dione.

3,018,294
EPOXY ACETALS

Benjamin Phillips and Paul S. Starcher, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 17, 1959, Ser. No. 820,871
6 Claims. (Cl. 260—348)

1. An epoxy acetal of the formula:



wherein R contains from 1 to 22 carbon atoms and is a member selected from the class consisting of alkyl, alkenyl, cycloalkyl, carbocyclic aryl, and epoxyalkyl; $-(C_nH_{2n-1}O)$ represents an epoxyalkyl group wherein O is oxirane oxygen; and *n* is an integer from 3 to 18.

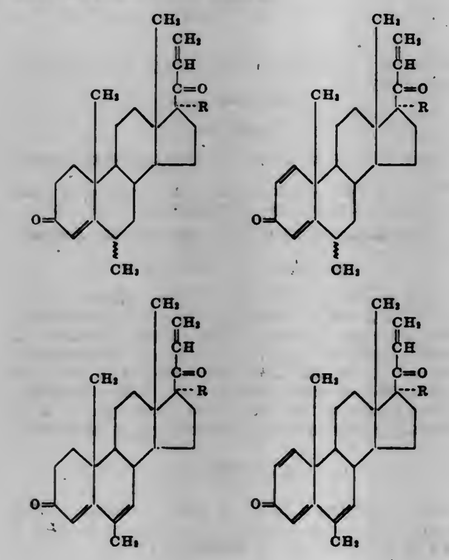
6. Acetalaldehyde diglycidyl acetal.

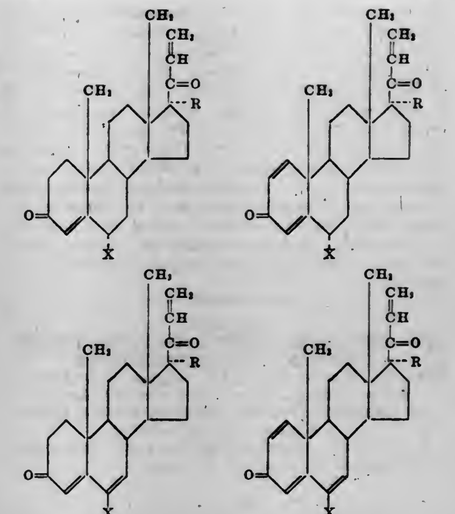
3,018,295
21-METHYLENE STEROID COMPOUNDS

Rudolph G. Berg, Groton, Sanford K. Figdor, Gales Ferry, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,182
7 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of those represented by the formulas:





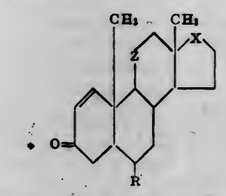
wherein X is selected from the group consisting of hydrogen, fluorine, chlorine and bromine; R is selected from the group consisting of hydrogen, hydroxyl and acylated hydroxyl, an acyl group being derived from mono- and dicarboxylic acids containing up to ten carbon atoms and alkali metal and alkaline earth metal salts of dicarboxylic acid derivatives.

3,018,296
PROCESS FOR THE PURIFICATION OF 3-KETO-Δ^1-STEROIDS

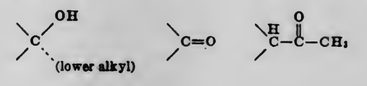
Paul D. Klimstra, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,738
7 Claims. (Cl. 260—397.3)

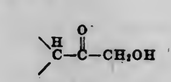
1. A process for the purification of a compound of the structural formula



wherein X is selected from the group consisting of



and



radicals, R is selected from the group consisting of hydrogen and methyl radicals, and Z is selected from the group consisting of methylene and β-hydroxymethylene radicals, the steps which comprise treating a mixture containing that compound together with the correspond-

ing 3-keto-Δ^4-compound, the corresponding 3-keto- compound, and the corresponding 2-bromo-3-keto-Δ^1-compound, with a source of bisulfite ions in an aqueous polar organic solvent medium at a temperature of 15–30°, extracting the resulting aqueous mixture with a water-immiscible organic solvent, evaporating the organic solvents, treating the resulting residue with a source of bisulfite ions in an aqueous polar organic solvent medium at a temperature of 40–80°, extracting said aqueous mixture with a water-immiscible organic solvent, treating said aqueous mixture with an inorganic base, extracting the resulting mixture with a water-immiscible organic solvent, and concentrating the resulting organic solution to afford the purified compound of the structural formula.

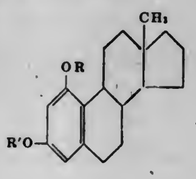
3,018,297

1,3- AND 1,4-BISOXYGENATED ESTRA-1,3,5(10)-TRIENES AND INTERMEDIATES

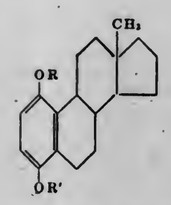
James Jiu, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,425
6 Claims. (Cl. 260—397.4)

1. A member selected from the group consisting of compounds of the structural formulae



and



wherein R and R' are selected from the group consisting of hydrogen and lower alkanoyl radicals.

3. 10β-hydroxyestra-1,4-dien-3-one.

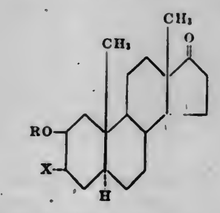
3,018,298

17-OXYGENATED 3α-HALO-5α-ANDROSTAN-2β-OLS AND DERIVATIVES THEREOF

Paul D. Klimstra and Raymond E. Counsell, Skokie, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 14, 1961, Ser. No. 95,500
7 Claims. (Cl. 260—397.4)

1. A compound of the structural formula



wherein X is a halogen atom and R is selected from the group consisting of hydrogen and lower alkanoyl radicals.

3,018,299

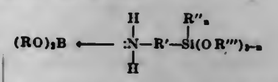
ARYL BORATE ADDITION COMPOUNDS OF AMINO HYDROCARBON SILICON COMPOUNDS

Ronald M. Pike, Chelmsford, Mass., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 1, 1960, Ser. No. 40,169
15 Claims. (Cl. 260—448.2)

1. A triaryl borate amino hydrocarbon silicon compound selected from the class consisting of:

(1) silanes of the formula:

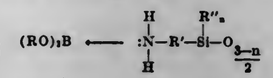


wherein R is a member of the class consisting of aryl groups and aryl groups substituted with a member of the class consisting of halogen, nitro, alkyl, cycloalkyl, aryl and alkoxy groups, R' is a divalent group selected from the class consisting of arylene groups, alkylene groups of the formula $-C_aH_{2a}-$ wherein a is an integer of from 3 to 18 and groups of the formula

$$-(C_bH_{2b}NH-)_c-C_aH_{2a}-$$

wherein a is as above defined, b is an integer of from 2 to 6 and c is an integer of from 1 to 4, R'' is a monovalent hydrocarbon radical, R''' is an alkyl group and n is an integer of from 0 to 2.

(2) siloxanes consisting essentially of units of the formula:



wherein R, R', R'' and n have the above-defined meanings, and

(3) copolymeric siloxanes consisting essentially of the units as defined in (2) and units of the formula:

$$R''_mSiO_{\frac{4-m}{2}}$$

wherein R'' is as above defined and m is an integer of from 0 to 3.

3,018,300

PROCESS OF MAKING CYANOALKYLSILANES

Roscoe A. Pike, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,746
13 Claims. (Cl. 260—448.2)

1. A process for preparing a cyanoalkylsilane wherein the cyano group is interconnected to silicon through at least two carbon atoms, which comprises reacting an alkene nitrile with a silane having one silicon-bonded hydrogen atom and three silicon-bonded hydrolyzable groups selected from the class consisting of halogen, alkoxy groups, aryloxy groups and acetoxy groups in the presence of a tertiary silyl amine catalyst of the formula:

$$A_{4-y}Si(NR_2)_y$$

where A is selected from the class consisting of alkyl groups, aryl groups, halogen and an alkoxy group, R is an alkyl group and y is an integer from 1 to 4.

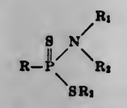
3,018,301

DITHIOPHOSPHONIC ACID AMIDES AND PROCESS FOR THEIR PRODUCTION

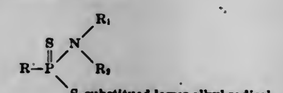
Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 13, 1960, Ser. No. 21,880
Claims priority, application Germany Apr. 16, 1959
14 Claims. (Cl. 260—461)

8. A dithiophosphonic acid ester amide of the following general formula

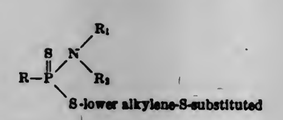


in which R stands for a member selected from the group consisting of lower alkyl and cyclohexyl radicals, R_1 and R_2 each stand for lower alkyl radicals and when taken together with —N< stand for a member selected from the group consisting of piperidino and morpholino; and R_3 stands for a member selected from the group consisting of a phenyl-mercapto-substituted lower alkyl radical, a lower alkyl-mercapto-substituted lower alkyl radical, a lower dialkyl-amino-substituted lower alkyl radical, a lower alkoxy carbonyl-substituted lower alkyl radical, a lower dialkyl amino-carbonyl-substituted lower alkyl radical, a cyano-substituted lower alkyl radical, a phenyl-carbonyl-substituted lower alkyl radical, benzyl, chloro-substituted benzyl, lower alkyl-mercapto-substituted benzyl, lower alkyl-mercapto-substituted- lower alkyl-substituted benzyl, another



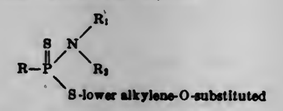
S-substitued lower alkyl radical,

another



S-lower alkylene-S-substituted

lower alkylene radical and another



S-lower alkylene-O-substituted

lower alkylene radical.

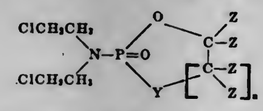
3,018,302

NOVEL CYCLIC PHOSPHORIC ACID ESTER AMIDES, AND THE PRODUCTION THEREOF

Herbert Arnold, Bielefeld, Norbert Brock, Wadersloh, and Friedrich Bourseaux, Bielefeld, Germany, assignors to Asta-Werke Aktiengesellschaft Chemische Fabrik, Brackwede, Germany

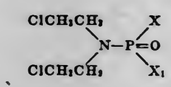
No Drawing. Filed Apr. 15, 1958, Ser. No. 728,568
Claims priority, application Germany Feb. 10, 1956
9 Claims. (Cl. 260—461)

1. Novel products of the following general formula



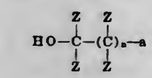
wherein Y represents a member of the group consisting of the bivalent radicals —O—, —NH— and —NZ—, each Z is a member of the group consisting of the hydrogen atom, the alkyl radicals having a chain of 1–6 carbon atoms and the derivatives of such alkyl radicals being substituted by substituents of the group consisting of the hydroxy, methoxy, ethoxy, carboxy, carboxymethyl, carboxyethyl, dimethylamino and diethylamino-groups, and n is a whole number from 1–4.

8. A process for the production of novel cyclic compounds containing a phosphorus atom in the ring, wherein a compound of the general formula



wherein X and X_1 are members of the group consisting of the halogen atoms, the alkoxy-, aralkoxy- and aryloxy-groups

is reacted with a compound of the general formula



wherein each Z is a member of the group consisting of the hydrogen atom, the alkyl radicals having a chain of 1–6 carbon atoms and the derivatives of such alkyl radicals being substituted by substituents of the group consisting of the hydroxy, methoxy, ethoxy, carboxy, carboxymethyl, carboxyethyl, dimethylamino and diethylamino-groups, n is a whole number from 1–4, and a is a member of the hydroxy- and the amino-group and the group —NH—Z,

in an inert solvent in the presence of an acid-binding agent at a temperature of about 10° C. to the boiling point of the inert solvent.

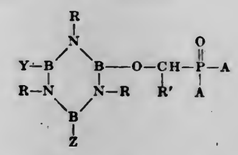
3,018,303

ORGANIC COMPOUNDS OF BORON, NITROGEN AND PHOSPHORUS

Gail H. Birum and James L. Dever, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

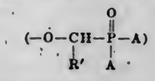
No Drawing. Filed July 22, 1959, Ser. No. 828,678
20 Claims. (Cl. 260—461)

1. Compounds of the formula



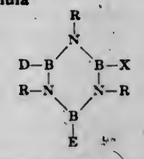
where R is selected from the group consisting of hydrogen, and alkyl and aryl groups having from 1 to 10-carbon atoms, R' is selected from the group consisting of hydrogen, and hydrocarbyl radicals of from 1 to 12 carbon atoms, A is selected from the group consisting of hydrocarbyl, hydrocarbyloxy, halohydrocarbyl, and halohydrocarbyloxy radicals which are free from aliphatic unsaturation and have from 1 to 12 carbons, and Y and Z are each selected from the group consisting of bromine,

chlorine, halohydrocarbyloxy radicals having from 2 to 12 carbons, and the



radical.

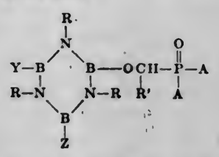
12. The method which comprises contacting a compound of the formula



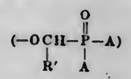
wherein R is a member selected from the group consisting of hydrogen, and aryl and alkyl radicals having from 1 to 10 carbon atoms, X is a halogen selected from the group consisting of bromine and chlorine, D and E are each selected from the group consisting of X, and halohydrocarbyloxy radicals having from 2 to 12 carbon atoms, with an aldehyde of the formula R'CHO wherein R' is a member selected from the group consisting of hydrogen, and hydrocarbyl radicals having from 1 to 12 carbon atoms and a trivalent phosphorus compound of the formula



wherein T is a member selected from the group consisting of alkyl and haloalkyl radicals having from 1 to 12 carbon atoms, and each A is selected from the group consisting of hydrocarbyl, hydrocarbyloxy, halohydrocarbyl, and halohydrocarbyloxy radicals which are free from aliphatic unsaturation and have from 1 to 12 carbon atoms, and recovering from the resulting reaction a compound of the formula



wherein R, R', and A are as defined above, Y and Z are



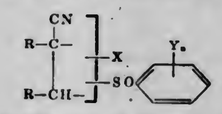
only when D and E respectively were halogens.

3,018,304
TOXIC ARYLSULFINYL HALOALKANENITRILES

Samuel Allen Heininger and Gail H. Birum, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Dec. 31, 1957, Ser. No. 706,238
6 Claims. (Cl. 260—465)

1. An arylsulfinyl haloalkanenitrile of the formula



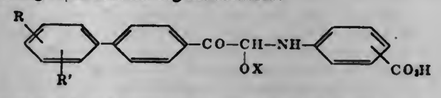
wherein R is selected from the class consisting of hydrogen and hydrocarbon radicals free of aliphatic unsaturation and containing from 1 to 6 carbon atoms, provided at least one R is hydrogen, X represents a halogen atom taken from the class consisting of chlorine and bromine, Y is selected from the class consisting of chlorine, bromine, iodine, fluorine, hydrogen and alkyl radicals having from 1 to 6 carbon atoms, and *n* is an integer from 1 to 5.

3,018,305
α-PHENYLBEN-ZOYL-α-ARYLAMINOCARBINOL DERIVATIVES

Guido Cavallini and Elena Massarani, Milan, Italy, assignors to Francesco Vismara S.p.A., Casatenovo, Italy, a firm

No Drawing. Filed July 6, 1959, Ser. No. 824,927
Claims priority, application Great Britain May 21, 1959
8 Claims. (Cl. 260—519)

1. A chemical compound selected from the group consisting of an acid having the formula:



in which R is a member selected from the group consisting of hydrogen, halogen having an atomic weight less than 80, hydroxy, lower alkoxy of 1 to 4 carbon atoms, lower alkyl of 1 to 4 carbon atoms and benzyloxy; R^1 is a member selected from the group consisting of hydrogen and halogen; and X is a member selected from the group consisting of hydrogen, an aliphatic hydrocarbon radical of 1 to 12 carbon atoms and a monocyclic hydrocarbon radical containing no more than 12 carbon atoms; and pharmaceutically acceptable alkali metal salts of said acids.

3,018,306
PRODUCTION OF BUTYRYL HALIDES

Richard F. Sweeney and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed June 9, 1959, Ser. No. 819,004
6 Claims. (Cl. 260—544)

1. The process for decarbonylating a fluorinated organic starting material of the formula $CR(CF_2)_nCOX$ in which R is selected from the group consisting of OX and XF_2, *n* is an integer from 2 to 3, and X is selected from the group consisting of chlorine and fluorine, which process comprises subjecting said starting material in gas phase to heating at temperature substantially in the range of 225–500° C. while in the presence of solid anhydrous aluminum fluoride catalyst for a time sufficient to decarbonylate a substantial amount of said starting material, said catalyst having crystallite size not substantially greater than 500 Angstrom units radius and having been derived by reaction of aluminum chloride and HF, and recovering reaction product containing less CO than said starting material and being of the formula

$$CXF_2(CF_2)_pCR$$

in which *p* is an integer from 1 to 2, and R and X are as above.

3,018,307
PROCESS FOR PRODUCING PURIFIED BORAZOLES

Donald S. Taylor, Whittier, Joseph G. Bower, Orange, and Robert E. Bohm, Fullerton, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Filed Dec. 17, 1959, Ser. No. 860,108
2 Claims. (Cl. 260—551)

1. The method of purifying crude B-trichloroborazole which comprises dissolving impure B-trichloroborazole at a temperature of no more than about 85° C., in anhydrous mineral oil having a boiling point of at least about 300° C., separating the mineral oil solution of B-trichloroborazole from undissolved matter under anhydrous conditions and distilling substantially pure B-trichloroborazole under anhydrous conditions from said solution at a temperature range of from about 80° to about 200° C. at below atmospheric pressure.

3,018,308
PRODUCTION OF ALIPHATIC ALCOHOLS

Irving E. Levine, Berkeley, and Everett Clippinger, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

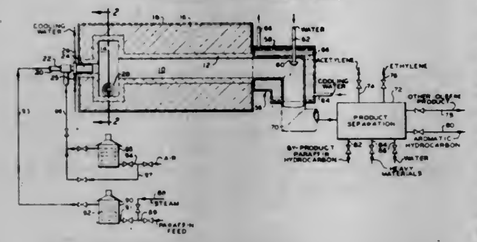
No Drawing. Filed Sept. 24, 1956, Ser. No. 611,765
7 Claims. (Cl. 260—640)

1. A process for hydrolyzing a primary alkyl halide containing from 5 to 20 carbon atoms in the molecule selected from the group consisting of alkyl bromides and chlorides to produce the corresponding primary alcohols with a minimum of undesirable side reaction products, which comprises hydrolyzing in a confined zone at autogenous pressure and at a temperature within about the range 190° C. to 250° C. the alkyl halide in the presence of acetone, water and a base capable of maintaining the pH above 7 and below about 12, the proportions, by volume, of acetone and water ranging from about 40% to 80% acetone and 20% to 60% water, the acetone and water combined being present in an amount sufficient to keep the alkyl halide in solution during the reaction.

3,018,309
PYROLYTIC CONVERSION OF PARAFFINS

Joseph C. Krejci, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Sept. 21, 1959, Ser. No. 841,380
9 Claims. (Cl. 260—679)

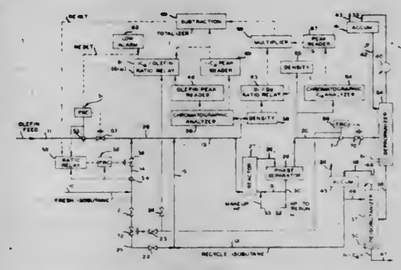


1. In a process wherein a hydrocarbon feed is preheated in a tube cracker and passed in vapor form axially into a first cylindrical reaction zone of greater diameter than its length, contiguous to and coaxial with a second cylindrical reaction zone of lesser diameter and greater length; a combustible mixture of gaseous fuel and oxidant are injected tangentially into said first reaction zone; said mixture is burned to form hot combustion gases for heating said feed; said feed is passed, initially surrounded by a helically moving annular blanket of said combustion gases, into said second reaction zone; said feed is heated by said combustion gases to a temperature in the range of 1500 to 3500° F. to cause same to react and form predominantly unsaturated hydrocarbons; the effluent from said second reaction zone is quenched in a quench zone to a temperature below reaction temperature; and said unsaturated hydrocarbons are recovered; the improvement comprising including at least 50 volume percent of aliphatic paraffin hydrocarbon in said feed; heating said feed in the preheating step to a temperature in the range of about 1000° to 1600° F. in admixture with steam in the range of 10 to 125 volume percent of the hydrocarbon feed so as to crack and convert a greater proportion of said paraffin-hydrocarbon to olefin hydrocarbon than would occur without said steam before passing the preheated feed and steam to said first reaction zone, whereby the amount of unsaturates in said effluent is increased and carbon deposition in said tube cracker, in said second reaction zone and in said quench zone is reduced.

3,018,310
CONTROL OF ALKYLATION OPERATION

Joe Van Pool, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed July 27, 1960, Ser. No. 45,717
7 Claims. (Cl. 260—683.48)



1. A method for maintaining a uniform ratio of isoparaffin hydrocarbon to olefin hydrocarbon in the feed to an isoparaffin-olefin alkylation operation comprising mixing an isoparaffin hydrocarbon feed stock with an olefin hydrocarbon feed stock, passing this mixture into an alkylation zone maintained under isoparaffin-olefin alkylation conditions, withdrawing effluent from the alkylation zone and separating the withdrawn effluent into a heavy liquid phase and a hydrocarbon phase, feeding this hydrocarbon phase into a distillation zone and therein producing an unconverted isoparaffin hydrocarbon fraction and an alkylate fraction, adding this unconverted isoparaffin hydrocarbon fraction to the original isoparaffin hydrocarbon feed stock, adding additional isoparaffin hydrocarbon feed stock to the first mentioned fraction, determining the rate of feeding of said hydrocarbon phase into the distillation zone, upon sensing a decrease in said rate of feeding increasing the rate of adding of the additional isoparaffin hydrocarbon feed stock to said first mentioned fraction in response to the sensed decrease in said rate of feeding, and upon sensing an increase in said rate of feeding decreasing the rate of adding of said additional isoparaffin hydrocarbon feed stock to said first mentioned fraction thereby maintaining a uniform ratio of isoparaffin hydrocarbon to olefin hydrocarbon in the feed to the alkylation zone.

6. In an isoparaffin-olefin hydrocarbon alkylation system having first and second conduits for passage of the isoparaffin hydrocarbon feed and the olefin hydrocarbon feed, respectively, said conduits joining with a third conduit leading to an alkylation contactor, said contactor being provided with a fourth and outlet conduit communicating with a phase separation vessel, this vessel also being provided with a fifth and outlet conduit communicating with a fractional distillation column of limited capacity comprising, in combination, a first rate of flow controller in operative communication with said first conduit, a second rate of flow controller in operative communication with said second conduit, a first ratio relay in operative communication with the flow sensing portions of said first and second flow controllers, said first ratio relay operatively communicating with said first flow controller, a first analyzer means communicating

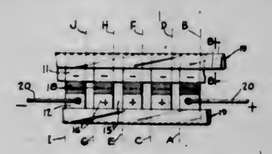
operably with said third conduit, said first analyzer means being adapted to analyze a fluid from said third conduit for an olefin hydrocarbon and an isoparaffin hydrocarbon, a second ratio relay communicating operatively with said first analyzer and being adapted to emit a signal proportional to the ratio of concentrations of isoparaffin to olefin as determined by said first analyzer, said second ratio relay operatively communicating with said second flow controller to reset same, a second analyzer means communicating operatively with said fifth conduit, said second analyzer means being adapted to analyze a fluid from said fifth conduit for said isoparaffin hydrocarbon, first and second density indicating means operatively communicating with said third and fifth conduits, respectively, said first and second density indicating means being adapted to emit signals proportional to the density of fluids flowing through said third and fifth conduits, respectively, a third ratio relay operatively communicating with said first and second density sensing means and being adapted to emit a signal proportional to the ratio of the density indicated by the first density sensing means to the density indicated by the second density sensing means, a multiplier means operatively communicating with said third ratio relay and with said second analyzer and being adapted to emit a signal proportional to the product of the signals from said second ratio relay and said second analyzer, a subtracting relay operatively communicating with said first analyzer and with said multiplier means and being adapted to emit a signal proportional to the difference between signals from said first analyzer and said multiplier, said subtracting relay also operatively communicating with said first ratio relay and being adapted to reset the setpoint of said first ratio relay, a sixth conduit leading from said fractional distillation column to said third conduit for recycle of isoparaffin, a seventh conduit leading from said first conduit to said third conduit at a point intermediate the juncture of said first and second conduits with said third conduit and the point of communication of said first analyzer with the third conduit, a third rate of flow controller operatively in said fifth conduit and a throttle valve operatively in said seventh conduit, said throttle valve communicating operatively with the flow sensing portion of said third rate of flow controller and being adapted to open in response to a decrease of fluid flow in said fifth conduit and to throttle said valve in response to an increase of fluid flow in said fifth conduit below the flow corresponding to said limited capacity of said distillation column as sensed by the flow sensing portion of said third rate of flow controller.

ELECTRICAL

3,018,311
THERMOPILE

Samuel M. Bagno, Belleville, N.J., and John H. Fasal, New York, N.Y., assignors to Walter Kidde & Company, Inc., Belleville, N.J., a corporation of New York

Filed Sept. 1, 1959, Ser. No. 837,452
13 Claims. (Cl. 136—4)



5. The method of making a thermopile from a strip composed of two edgewise joined lengthwise extending sections of dissimilar metals, which method comprises forming staggered slots at opposite edges of the strip extending beyond the junction of the sections to provide intermediate portions having a junction thereon, and pleating and folding the strip lengthwise to cover the junction on alternate intermediate portions on the side facing in the direction in which the thermopile is to be exposed to provide alternate hot and cold junctions on the strip.

3,018,312
THERMOELECTRIC MATERIALS

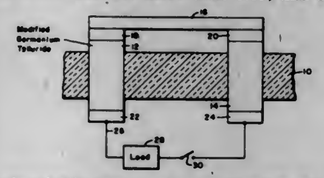
Albert J. Cornish, Forest Hills Boro, and Robert C. Miller, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 4, 1959, Ser. No. 831,504
6 Claims. (Cl. 136—5)

1. In a thermoelectric device a first member consisting of a homogeneous essentially single phase crystalline material having a formula

$$Ge_{1-x}A_xTe_{1\ to\ 1.06}$$

wherein A is at least one element selected from the group consisting of bismuth, gallium, indium, iron, scandium, lanthanum, lead, yttrium, ruthenium and thallium and x is at least 0.001 and not more than 0.15, and a second



member electrically connected to one portion of said first member.

3,018,313
LIGHT GATHERING POWER CONVERTER

Daniel H. Gattone, 4409 Dermond Road, Drexel Hill, Pa.

Filed Jan. 4, 1961, Ser. No. 80,686
7 Claims. (Cl. 136—89)



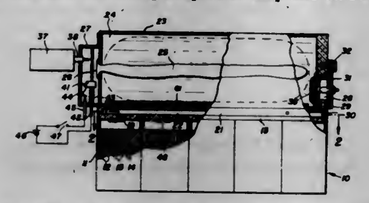
1. A power pack unit for converting light into electric energy comprising a plurality of superimposed plates formed with light convergent lenses arranged in cascade, a plurality of series connected light sensitive voltage producing cells positioned below said lenses, a holder for said plates, whereby said light convergent lenses are positioned for selective light impingement on each of said cells, and a protective transparent elongated covering extending around the said holder and over the said lenses.

3,018,314
FILLING MECHANISM FOR DEFERRED-ACTION BATTERIES

Emanuel Cooper, New York, and Charles M. Gold, Franklin Square, N.Y., assignors, by mesne assignments, to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Mar. 16, 1954, Ser. No. 416,468
11 Claims. (Cl. 136—90)

1. A mechanism for introducing a liquid into a container, comprising a chamber filled with said liquid, said chamber having an outlet leading to said container, seal means in said outlet normally preventing the escape of said liquid from said chamber, said seal means comprising a diaphragm member having a preshaped central bulge of reversible curvature, said bulge curving inwardly toward said chamber and being adapted to snap into an outwardly

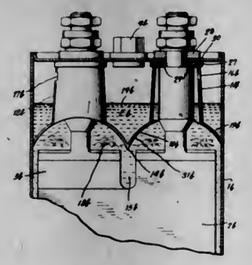


curved shape in response to greater-than-normal pressure from said liquid, fixed diaphragm-piercing means in said outlet so positioned adjacent said member as to rupture same upon inversion of its bulge, and means for exerting sufficient pressure upon said liquid to invert the bulge of said member.

3,018,315
ELECTRIC STORAGE CELLS, THEIR CONSTRUCTION AND PROCESS FOR THEIR OPERATION

Philippe Benoit Jean Hebben, Montmorency, France, assignor to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme), Romainville, France, a French company

Filed June 26, 1959, Ser. No. 823,046
Claims priority, application France July 12, 1958
2 Claims. (Cl. 136—163)

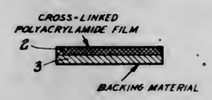


1. In an electric storage cell having an enclosing casing, a cover for the casing provided with a vent, electrodes of differing polarity with spacing between them, spaced apart electrode terminals within the casing and depending from the cover and electrolyte within the casing whose uppermost surface lies spaced from the cover and vent, a baffling member within the casing of material substantially unalterable in the electrolyte, said baffling member including a plate portion submerged in the electrolyte to provide an uppermost quiescent zone of electrolyte directly adjacent the surface of the latter, a portion depending from the plate portion and extending downwardly between the electrodes and having an aperture to facilitate filling of the cell with electrolyte, and tubular portions extending upwardly from the plate portion and surrounding the electrode terminals within the casing and with the outer ends of said tubular portions engaging the cover, said tubular portions having iters therein located within the cell above the surface of the electrolyte and remote from the vent to provide gas escape passages into a space within the cell above said quiescent zone and in an indirect path to said vent so that gases evolved in the cell by-pass said quiescent zone of electrolyte and thereby preclude transit outwardly of the vent of electrolyte from the cell as a result of turbulence thereof by said evolved gases.

3,018,316
BATTERY SEPARATORS AND METHOD FOR PRODUCING THE SAME

Thomas W. Higgins, Philadelphia, Pa., Leon Capsuto, Woodbury, N.J., and Paul F. Bruins, Douglaston, N.Y., assignors to Polytechnic Institute of Brooklyn, a corporation of New York

Filed Dec. 23, 1957, Ser. No. 704,398
14 Claims. (Cl. 136—144)

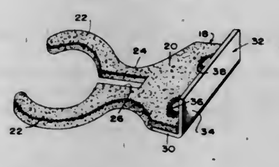


10. A composition of matter comprising a zinc base and a film thereon, said film comprising a hydrophilic, substantially insoluble, partially cross-linked polyacrylamide gel.

3,018,317
PROTECTIVE DEVICE

Theodore Salis, 3115 S. Llewellyn, Dallas, Tex.

Filed July 25, 1958, Ser. No. 751,034
5 Claims. (Cl. 136—181)

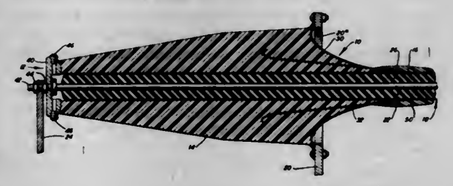


1. A protective device comprising an insulating body impervious to battery acid bifurcated at one end to define a pair of resilient jaws adapted to yieldably embrace a battery terminal, and a metal electrode subject to battery acid corrosion secured to said body remote from said jaws to shield said terminal from battery acid.

3,018,318
HIGH VOLTAGE CABLE TERMINAL WITH STRESS CONES

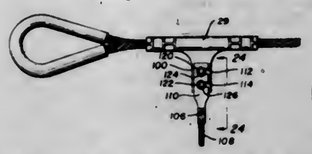
Le Roy H. Franklin, Los Altos, Calif., assignor to Components for Research, Inc., Palo Alto, Calif., a corporation of California

Filed July 15, 1957, Ser. No. 672,048
4 Claims. (Cl. 174—73)



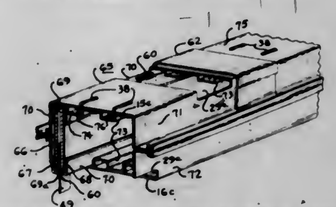
3. A prefabricated terminal for a high voltage coaxial cable which comprises an insulator composed of solid, void-free material and having a hollow generally cylindrical form to enable telescopic insertion of the end of a cable thereinto, conductive means including a lug secured in direct sealing contact with one end of said insulator to enclose the hollow end thereof and adapted for removable connection to the inner conductor of the inserted cable, an annular conductor in direct sealing contact with the other end of said insulator and means sealingly connecting said annular conductor to the outer conductor of the cable.

3,018,319
COMPRESSION DEAD END SPLICE
Jackson C. Quayle, 919 Caledonia Ave., Cleveland Heights, Ohio
Filed Sept. 25, 1959, Ser. No. 842,318
10 Claims. (Cl. 174—79)



1. A dead end for a cable comprising: a member having a center portion and end portions, said center portion being doubled back upon itself to define a bight, said end portions being preformed to define a hollow core; a cylindrical core member received and enclosed within said hollow core; and a compression sleeve, one-half of which receives said enclosed core member and the other half of which receives the end portion of a cable therein, said compression sleeve being compressed to grip said enclosed core member and said cable end portion.

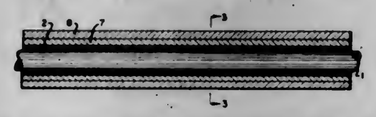
3,018,320
ELECTRICITY DISTRIBUTING CONDUIT APPARATUS
Raymond N. Rowe, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Filed June 13, 1955, Ser. No. 514,926
13 Claims. (Cl. 174—99)



1. Electricity distributing conduit apparatus comprising elongated metal housing sections abutting in end-to-end relation each enclosing a plurality of longitudinally extending parallel insulated bus bar assemblies, each insulated bus bar assembly comprising a pair of closely-spaced bus bar wall portions with opposed bare inner flat surfaces and insulating members surrounding the outer surfaces of said wall portions, said insulating members terminating flush with the ends of said housing sections and said bus bar wall portions terminating short of said ends, conductive coupling strips having each end thereof slideably inserted longitudinally into the close spaces between the bus bar wall portions of aligned bus bar assemblies of abutting housing sections and in tight frictional engagement with the bare inner surfaces of said wall portions, and insulation surrounding the central portion of each coupling strip thereby to overlap the abutting ends of said sections.

3,018,321
ARTICLE OF MANUFACTURE COMPRISING AN INSULATED ELECTRICAL CONDUCTOR AND METHOD OF MAKING
Hermann C. N. Heckel, Oxford, and Robert T. Jefferson, Jr., Dayton, Ohio, assignors, by mesne assignments, to Rea Magnet Wire Company, Inc., Fort Wayne, Ind., a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 757,755
2 Claims. (Cl. 174—110)

1. An insulated electrical conductor having an electrical insulating covering loosely mounted thereon and comprising an electrically conductive copper coil structure which expands with temperature rise, said coil structure consisting of a solid core of copper metal and a winding of copper wire spirally wound in closely packed turns on said copper metal core and providing expansion cavities thereon and between said winding of copper wire, an inner covering of fluffy resilient silica fiber material surrounding said winding and core structure and forming a slippable sleeve covering insulation over said coil structure and forming a slidable covering relative to said



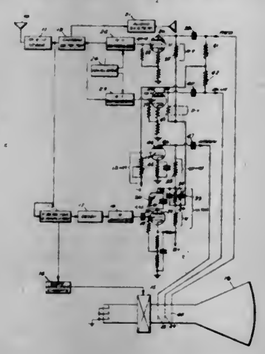
winding, said cavities providing said core with a capacity for expansion without the formation of substantial stress on the insulating material, and an outer sheath of fibrous siliceous insulation material integrally united with the outer filaments of said covering, said outer sheath of siliceous fibrous insulation material having a softening temperature of about 825° C. and lower than the softening temperature of said inner covering material, and said outer sheath of siliceous material being sintered to said inner covering fiber material.

3,018,322
ELECTRODE PROBE
Allan R. Goellner, Parma Heights, Ohio, assignor to Reliance Gauge Column Co.
Filed Apr. 28, 1960, Ser. No. 25,456
11 Claims. (Cl. 174—151)



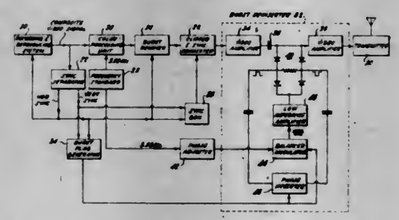
1. An electrode probe assembly comprising, in combination, a body, a tapered aperture in said body having inner and outer ends with the inner end being larger, a plastic insultor sleeve having inner and outer surfaces with said outer surface disposed in said aperture and in engagement therewith, a metal probe rod having a tapered portion in engagement with the inner surface of said sleeve and extending outwardly from said body aperture, the diameter of the larger inner end of said rod tapered portion exceeding the inside diameter of the outer end of said body aperture to positively prevent extrusion of said rod outwardly through said body aperture, said sleeve between said tapered body aperture and rod portion having an uncompressed thickness in the order of twice the radial spacing between said rod and said body aperture outer end, and means to maintain an axially outward force on said rod relative to said body to maintain axially compressed said sleeve.

3,018,323
COLOR TELEVISION MATRIX SYSTEMS
Howard J. Gronemeier, Lombard, Ill., assignor to Raytheon Company, a corporation of Delaware
Filed Jan. 24, 1956, Ser. No. 561,030
10 Claims. (Cl. 178—5.4)



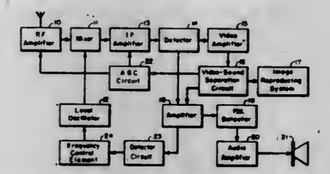
10. A color television system comprising means for producing a pair of independent color signals, which signals are each produced across separate load resistors, means for producing a monochrome signal across still another load resistor, and means for connecting each of said color signals in series with said monochrome signal in a manner to provide voltage summation of said color signals with said monochrome signal thereby algebraically combining by summation said monochrome signal with each of said color signals.

3,018,324
STABILIZATION IN TAPE RECORDING AND REPRODUCTION
Eric M. Leyton, Princeton, and George A. Olive, Lawrenceville, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed July 25, 1958, Ser. No. 751,063
10 Claims. (Cl. 178—5.4)



1. In a color television system for processing a composite color television signal, said composite signal including a color subcarrier synchronously modulated in phase and amplitude by chrominance information, a burst color synchronizing component, a luminance component, and a deflection synchronizing component, the combination of a source of a new color subcarrier signal having the same frequency as said color subcarrier, heterodyning means responsive to said burst color synchronizing component and to the new color subcarrier signal derived from said source for effectively removing said chrominance information from said color subcarrier and effectively modulating said new color subcarrier therewith thus reforming said composite color television signal, burst removing means coupled to the output of said heterodyning means for removing said burst color synchronizing component from said reformed composite color television signal, and means coupled to said burst removing means and to said new color subcarrier source for adding bursts of said new color subcarrier to said reformed composite color television signal from which said burst color synchronizing component has been removed.

3,018,325
TELEVISION AUTOMATIC FREQUENCY CONTROL APPARATUS
Charles W. Baugh, Jr., Montgomery Township, Mercer County, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 20, 1958, Ser. No. 722,735
4 Claims. (Cl. 178—5.8)



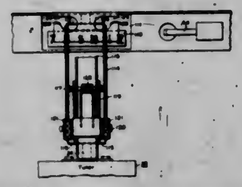
1. An intercarrier sound television receiver for utilizing a picture carrier of a first frequency amplitude modulated with video information and an associated sound carrier of a second frequency having a predetermined relation to said first frequency and frequency modulated with sound information, said receiver comprising: a first detector means including a tunable local oscillator for developing a separate intermediate frequency for each of said carriers; an intermediate frequency circuit means coupled to said first detector means of sufficient bandpass to transmit said two intermediate frequency carriers and having a response characteristic so as to transmit said intermediate frequency sound carrier at an amplitude less than the amplitude of said intermediate frequency picture carrier when said intermediate frequency carriers are located at desired positions on said response characteristic; a second detector means coupled to said intermediate frequency circuit means; said local oscillator being tuned at times to cause said intermediate frequency sound carrier to be transmitted by said intermediate frequency circuit means at an amplitude greater than the amplitude of said intermediate frequency picture carrier to cause said second detector means at such times to develop a first direct current output potential which is a function primarily of the average amplitude of said intermediate frequency sound carrier; and a control circuit coupled to said second detector and to said local oscillator, said control circuit comprising an electron discharge device having an output circuit including a rectifier, said electron discharge device being responsive to said first direct current output potential to develop in said output circuit a first control signal which is a function of the amplitude of said first direct current output potential, said control circuit also comprising means responsive to said first control signal for changing the tuning of said local oscillator to cause said intermediate frequency picture carrier to be transmitted by said intermediate frequency circuit means at an amplitude greater than the amplitude of said intermediate frequency sound carrier thereby causing said second detector means to develop a second direct current output potential which is a function primarily of the average amplitude of said intermediate frequency picture carrier and to develop an intercarrier sound signal having an amplitude varying as a function of the amplitudes of said intermediate frequency picture and sound carriers, said electron discharge device being responsive to said second direct current output po-

tential to translate said intercarrier sound signal for rectification by said rectifier so as to develop in said output circuit a second control signal which is a function of the amplitudes of said second direct current output potential and said intercarrier sound signal, with said means for changing the tuning of said local oscillator responsive to said second control signal to cause said intermediate frequency picture and sound carriers to be located at said desired positions on the response characteristic of said intermediate frequency circuit means.

3,018,326
TELEVISION RECEIVER TUNING APPARATUS

William R. Petrick, Kenilworth, and Lawrence R. Travis, Fanwood, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 13, 1958, Ser. No. 741,820
15 Claims. (Cl. 178—5.8)



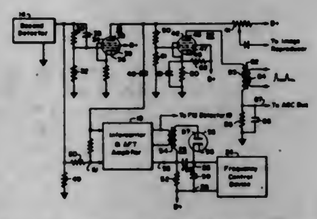
8. A television receiver having a chassis, a channel selecting tuner having a rotary shaft, means for supporting said tuner with said shaft vertical from said chassis above the back portion thereof, said shaft having a lower portion extending below said tuner, a horizontally extending programming wheel attached to said lower portion of said shaft, means including an electric motor below said wheel for rotating said shaft to successive channel positions, means including a swtich at the front of said receiver for energizing said motor, means including a cam driven by said motor and a holding switch closed by said cam while said tuner shaft is moving between channel positions for establishing a holding circuit across said first mentioned switch for maintaining said motor energized until said tuner shaft has been moved to a channel position, and for causing said holding switch to open when said tuner shaft is at a channel position, said programming wheel having slides corresponding in number to the number of channel positions of said tuner, said slides being slidable to holding switch closing positions, said holding switch having lever means for contacting those of said slides in said switch closing positions, said lever means holding said holding switch closed while said lever means is in contact with a slide, said receiver having an audio amplifier muting circuit, including a switch for closing said circuit, and means for closing said last mentioned switch when said holding switch is closed.

3,018,327
TUNING SYSTEM FOR TELEVISION RECEIVERS

Charles W. Baugh, Jr., Montgomery Township, Somerset County, and Charles A. Kingsford-Smith, Metuchen, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 1, 1958, Ser. No. 745,952
4 Claims. (Cl. 178—5.8)

1. In a television receiver, the combination of converter means for producing separate intermediate frequency picture and sound carriers, a detector for heterodyning and amplitude detecting said intermediate frequency carriers to produce an intercarrier sound wave and a composite detected signal including a video intelligence signal, and a direct current component, frequency selective amplifier means coupled between said converter means and said detector, said amplifier means having a frequency response characteristic such that the amplitude of said intermediate frequency sound carrier as applied to said detector will normally be less than the amplitude of the picture carrier at maximum modulation thereof and such that the amplitude of said sound carrier increases in response to increase in the frequency thereof and at times exceeds the amplitude of said picture carrier, a composite signal translation channel including a video amplifier circuit having an input and an output, a gain control circuit coupled to said video amplifier output and responsive to signals at said output to produce a gain control potential which varies as a function of the amplitude of the larger carrier applied to said detector, circuit means connected between said gain control circuit and said frequency selective amplifier means for applying said gain control potential to control the gain of said amplifier means so as to maintain the magnitude of said direct current component of the composite signal substantially



at a first level during times when the picture carrier amplitude at the detector exceeds the sound carrier amplitude and at a second level when the sound carrier has the greater amplitude with said first level being dependent upon an average magnitude of said composite detected signal and with said second level being dependent upon the sound carrier amplitude at said detector, a voltage divider connected between said detector and said video amplifier for translating signals to said video amplifier, said divider having the property of dividing alternating current voltages according to a first output-input ratio and dividing direct current voltages in accordance with a second output-input ratio, means connected to said detector for deriving a first direct current control signal which varies as a function of the average amplitude of said composite detected signal, means connected to said composite signal translation channel for producing a second direct current control signal varying in accordance with the amplitude of said intercarrier sound wave, and means connected to said converter means for utilizing said first and second control signals to control the frequencies of said intermediate frequency carriers.

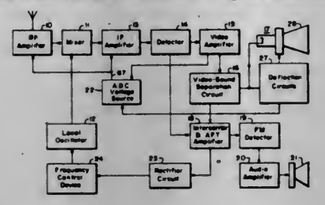
3,018,328
TUNING SYSTEM FOR TELEVISION RECEIVERS

Kenneth E. Farr, Rockefeller Township, Northumberland County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 1, 1958, Ser. No. 745,986
4 Claims. (Cl. 178—5.8)

1. In a superheterodyne receiver including a source of first and second signals having frequencies to be controlled and an intermediate frequency amplifier having an output and a non-linear frequency response characteristic such that said first signal is normally located at a predetermined point on a sloping portion of said characteristic, and such that the amplitude of said first signal at said output varies as a function of the frequency thereof in accordance with said characteristic

and such that the amplitude of said second signal varies as a function of the gain of said intermediate frequency amplifier; the combination of: means coupled to said amplifier output for amplitude demodulating and heterodyning said signals to provide a composite signal including amplitude demodulation products proportional to the amplitude of said first and second signals and an intercarrier wave having an amplitude varying as a function of the amplitude of said signals, first control means coupled between said amplitude demodulating means and said source for controlling the frequencies of

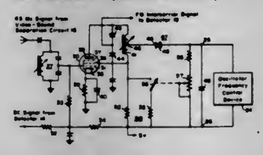


said first and second signals in accordance with the amplitude level of said composite signals; second control means coupled between said demodulating means and said intermediate frequency amplifier for controlling the gain thereof in response to the amplitude of said composite signal; means connected to said intermediate frequency amplifier for producing a direct current control signal of a magnitude which varies as a function of the gain thereof, and means responsive to said direct current control signal and connected with said first control means to vary the frequencies of said first and second signals in inverse relation to said gain.

3,018,329
TELEVISION TUNING APPARATUS

Kenneth R. Skinner and Leon J. Sienkiewicz, Metuchen, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 1, 1958, Ser. No. 745,987
8 Claims. (Cl. 178—5.8)

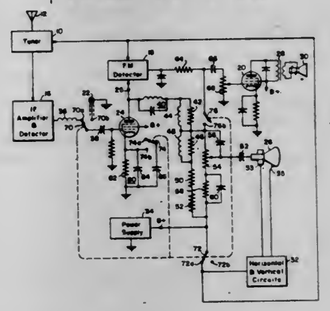


1. A receiver comprising in combination a source adapted to supply at least two carrier frequencies, a first detector to which said carrier frequencies are supplied, a local oscillator, the output of said local oscillator being coupled to said first detector so as to produce at least two intermediate carrier frequency carriers, an intermediate frequency amplifier connected to the output of said first detector, said intermediate frequency amplifier being adapted to pass at least some energy of two of the intermediate frequency carriers supplied by said first detector, a second detector coupled to the output of said intermediate frequency amplifier for producing an intercarrier beat frequency signal, an intercarrier signal amplifier stage coupled to said second detector, means coupled to said amplifier stage for deriving a direct current control potential having a magnitude related to the amplitude of said intercarrier signal, variable reactance means coupled to said local oscillator for controlling the frequency thereof in response to said control potential, a variable resistance device connected to said variable reactance means so as to control the reactance thereof independently of said control potential, switch means commonly operable with said variable resistance device for rendering said control potential deriving means inoperative and causing said amplifier stage to function as an intercarrier signal amplitude limiter during control of said reactance by said resistance device.

3,018,330
COMBINATION TELEVISION RECEIVER AND AUDIO SYSTEM

Matthew Soja, South Plainfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 31, 1959, Ser. No. 830,836
6 Claims. (Cl. 178—5.8)



2. A combination television receiver and audio amplifier comprising a first signal source of demodulated television signals including picture intelligence components and a frequency modulated sound intercarrier component; a second signal source of audio frequency signals having amplitude variations corresponding to sound intelligence; a wide band amplifier comprising a discharge device having at least a cathode, a control electrode and an output circuit; first switch means for selectively connecting said control electrode to said first and second signal sources; a cathode ray tube; a frequency modulation detector having input and output circuits; an audio amplifier and a sound reproducer coupled in cascade to the output circuit of said frequency modulation detector; circuit means connected to said discharge device output circuit for separately applying said sound intercarrier component and said picture intelligence components respectively to said frequency modulation detector and to said cathode ray tube; second switch means commonly operable with said first switch means for selectively connecting the input circuit of said audio amplifier to the output circuit of said discharge device when said first switch means is conditioned to apply said second signal to the control electrode.

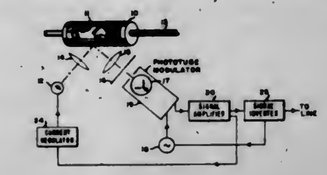
3,018,331
TRANSMISSION LEVEL LIMIT AND CONTRAST CONTROL FOR FACSIMILE SYSTEMS AND THE LIKE

Kenneth R. McConnell, New Shrewsbury, N.J., assignor, by mesne assignments, to Litton Systems, Inc., Beverly Hills, Calif., a corporation of Maryland

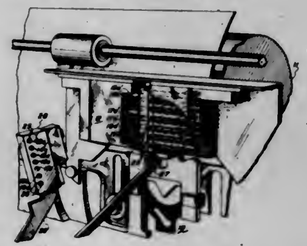
Filed July 15, 1957, Ser. No. 671,766
16 Claims. (Cl. 178—7.1)

13. Facsimile scanning apparatus for transmitting subject matters having respective backgrounds of different average shade values, comprising a light source and phototube combination to scan the subject matter to produce corresponding signals representing the average shade background of the subject matter, means including a cir-

cuit for supplying said light source with voltage, and means for automatically adjusting the current of said circuit to vary the light intensity and automatically maintain a substantially uniform light reflection from the background shades of the subject matter regardless of the average shade of said background.

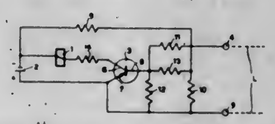


3,018,332
TRANSMITTING TYPEWRITER APPARATUS
Reynold B. Johnson, Palo Alto, and Jacob J. Hagopian, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 25, 1958, Ser. No. 744,581
8 Claims. (Cl. 178—17)



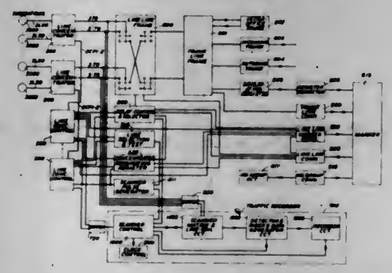
1. In combination, a typewriter having a platen and a plurality of type bars, said type bars having on the heads thereof adjacent the typeface a plurality of coding elements having coded positions corresponding to the particular character on said typeface, and a transducer positioned adjacent said platen astride the path of each of said heads when said type bars are actuated, said transducer being responsive to the positions of said coding elements on said heads for producing an output signal upon actuation of any one of said type bars corresponding to the coded representation of the character on the actuated type bar.

3,018,333
TRANSISTORIZED TELEGRAPH RECEIVING UNIT
Michele Tonelli, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Filed Mar. 11, 1958, Ser. No. 720,633
Claims priority, application Italy Mar. 13, 1957
1 Claim. (Cl. 178—88)



Telegraph receiving unit comprising a pair of input terminals for receiving telegraph signals, including positive marking pulses, negative spacing pulses and zero level spacing pulses, a single transistor having an emitter electrode, a collector electrode and a base electrode, a direct current source supplying the emitter-collector circuit of said transistor, a neutral selector magnet, said current source and said magnet being connected in series with each other between said emitter and collector electrodes, a first and a second resistance connected in series with each other across said source, the junction between said first and second resistance being connected to said base electrode through a third resistance, a fourth and a fifth resistance connected in series with each other across said input terminals, said fourth resistance being connected between said emitter electrode and said base electrode, said first, second, third and fourth resistances having such a value, that by receiving said zero level spacing pulses said source produces through said fourth resistance a first voltage drop which biases the emitter-base circuit of said transistor to saturate said transistor for energizing said magnet, and said fifth resistance having such a value with respect to the other resistances that in response to said positive marking pulses a second opposite voltage drop is produced through said fourth resistance which biases said emitter-base circuit to cut-off said transistor for deenergizing said magnet, said first voltage drop being further increased in response to said negative spacing pulses.

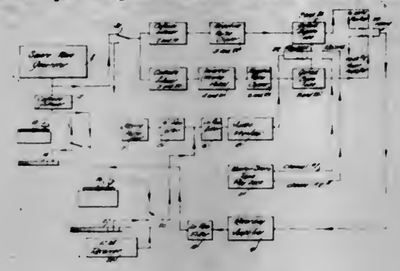
3,018,334
AUTOMATIC TRAFFIC SAMPLER AND RECORDER
Jack K. Middaugh, Metuchen, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 31, 1956, Ser. No. 619,424
24 Claims. (Cl. 179—8)



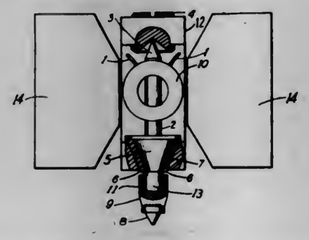
21. In combination a plurality of subscriber lines having idle and busy conditions, means for periodically recording a coded representation of the condition of each of said lines, means responsive to a change in condition of any one of said lines for preventing the operation of said recording means, and means effective during the periodic operation of said recording means for inhibiting the operation of said preventing means.

3,018,335
BI-PLEX STEREOPHONIC RECORDING AND REPRODUCING SYSTEM
Adrian L. De Rosa, 1809 Missouri Ave., Las Cruces, N. Mex.
Filed Apr. 16, 1958, Ser. No. 728,915
3 Claims. (Cl. 179—100.11)

1. In a bi-plex stereophonic recording system, a square wave generator, first and second cathode followers connected in parallel to one another and in series with the square wave generator, a negative pulse clipper connected to said first cathode follower, a gated beam tube connected to said negative pulse clipper, an inverter connected to said second cathode follower, a negative pulse clipper connected to said inverter, a gated beam tube connected to said last named negative pulse clipper, a master stereo reproducer connected to said pair of gated beam tubes, a recording amplifier connected to the output of said pair of gated beam tubes, a low pass filter connected to said recording amplifier, and a cathode follower connected to said square wave generator and having its output connected to the output of the low pass filter.

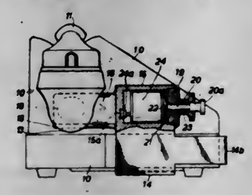


3,018,336
PHONOGRAPH TRANSDUCER
Joseph F. Grado, 641 46th St., Brooklyn 20, N.Y.
Filed Mar. 6, 1957, Ser. No. 644,370
16 Claims. (Cl. 179—100.41)



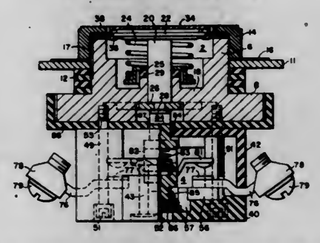
1. Means for generating voltage in a phonograph pickup comprising an oscillatable unit in a magnetic field, said oscillatable unit having a tapered end on its upper portion, an adjustable bearing having a cone surface therein on its lower portion, said tapered end positioned in and movable in said cone surface of the bearing and a bushing at the opposite end of said oscillatable unit for adjusting the compliance and damping of said unit.

3,018,337
MEANS OR APPLIANCES FOR USE IN THE DISINFECTING OF TELEPHONES
Walter Orrell, 14 Frankby Road, Greasby, Wirral, England
Filed June 5, 1959, Ser. No. 818,342
Claims priority, application Great Britain June 11, 1958
3 Claims. (Cl. 179—185)



1. An appliance for use in disinfecting a telephone comprising a cylindrical chamber, a container of pressurized disinfectant having a discharge valve and slidably positioned in said chamber with the ends thereof adjacent the ends of said chamber, an extension on one end of said chamber having a flared duct therein in communication with said discharge valve of said disinfectant container and said duct terminating in an enlarged lateral discharge opening, means for connecting said chamber with a telephone body for locating said enlarged discharge opening in register with the mouthpiece of said telephone, a detachable cap connected to the other end of said chamber, and a push rod extending slidably through said cap for engaging and displacing said container within said chamber so as to actuate said discharge valve thereof.

3,018,338
CONTROL SWITCHES
John H. Mullen, Brighton Township, Beaver County, and William F. Born, Beaver, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 18, 1958, Ser. No. 781,377
8 Claims. (Cl. 200—16)

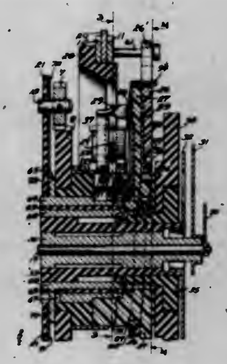


1. In a control switch, in combination, an operating unit having a manually operable operating member therein, a plurality of separately enclosed contact units attachable to the operating unit in either side-by-side relation or in tandem relation, each contact unit comprising an enclosure having a laterally extending mounting projection thereon, said projections overlapping when the contact units are in side-by-side relation, a pair of spaced contact members disposed inside the enclosure, a bridging contact member for engaging said spaced contact members, a contact carrier for movably supporting the bridging contact member, said carrier having a portion projecting from said enclosure for actuation by said operating member, and the dividing line between said overlapping projections being substantially on a centerline through said operating member and said carriers when the contact units are in side-by-side relation.

3,018,339
CONDUCTIVE SYSTEM FOR TIME SWITCHES WITH WIPING CONTACTS
Raymond D. Smith, 37 Ridgeway Road, Easton, Conn.
Filed July 11, 1960, Ser. No. 41,847
16 Claims. (Cl. 200—37)

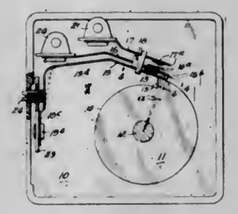
1. In a time controlled load circuit governing switch the combination of frame structure, a hollow bearing post fixed on and projecting forward from said frame structure, two relatively insulated axially offset perimetrical conductive surfaces carried by said bearing post, a circuit governing traveling conductive contact member supported to revolve about said post, a time driven rotor connected to impel said member, helically interleaved split discal elements respectively having axially directed surfaces and supported for individual adjustment to selective rotary positions about said post, a conductive switch track carried on the axially directed surface of one of said elements facing said traveling contact member in position to be wiped thereby, the axially directed surface of the other of said elements presenting a second switch

track facing said contact member and intervening in variable circular extents between said conductive switch track and said traveling contact member, electric circuit connections including wipingly engaged conductors leading



current from one of said post carried conductive surfaces to said conductive switch track, and continuing electrical connections including additional wipingly engaged conductors one of which is the other of said post carried conductive surfaces.

3,018,340
ELECTRIC SWITCH MECHANISM
Lewis J. Eggert, Worthington, and William S. Tufts, Columbus, Ohio, assignors to Ranco Incorporated, Columbus, Ohio, a corporation of Ohio
Filed July 2, 1959, Ser. No. 824,518
3 Claims. (Cl. 200—38)



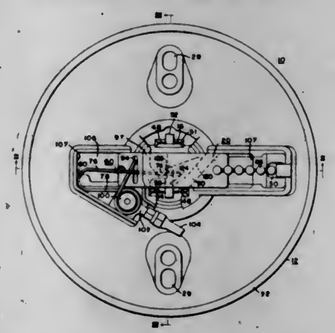
1. In an electric switching mechanism comprising a base, a cam rotatably supported on said base and having a switch actuating surface including a rise portion and a step, a pair of contact arms each arranged to have one end ride on said surface and to sequentially move between the extremities of said step as said cam is rotated to move said step beyond the end edges of said contact arms engaging said cam, one of said arms comprising a blade type spring member having one section at an angle of substantially less than 180° with the other section thereof, means to anchor said one section to said base whereby said other section extends tangentially of said cam and bears on said surface of said cam so that said one section may flex and shift said other section longitudinally, and means adjacent to said anchored end of said blade for adjustably flexing said section to shift the end of said one other section tangentially relative to said cam surface.

3,018,341
LOCKING AND SAFETY DEVICE FOR ELECTRIC SWITCHES
Ermanno Bassani, Milan, Italy, assignor to Societa per Azioni Bassani, Milan, Italy, an Italian joint-stock company
Filed Feb. 9, 1959, Ser. No. 792,191
Claims priority, application Italy Feb. 10, 1958
5 Claims. (Cl. 200—50)



1. A switch comprising a base, spaced contacts on said base, a pivotal member on said base and adapted to connect said contacts, at least one electrical component on said base in operative association with said contacts, a hooked member on said pivotal member and having an outer end, two dogs on said outer end, a spring on said base and provided with an opening accommodating the passage of said dogs, a cover shielding said component, and a stirrup on said cover and engaged by one of said dogs for locking the cover on said base, said stirrup bearing, under the influence of said one dog, against said spring and maintaining the latter in a position whereby unimpeded movement of said hooked member and pivotal member is permitted with the cover in position, said spring assuming, upon removal of said cover and release by said stirrup, a position of interference with the other of said dogs to prevent movement of the pivotal member and a resulting actuation of the switch with the cover removed.

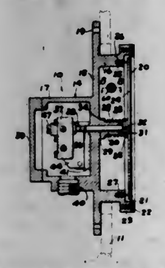
3,018,342
CIRCUIT INTERRUPTING MEANS FOR A WIRING DEVICE
Earl Bullis, Jr., Fairfield, Conn., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1959, Ser. No. 845,349
11 Claims. (Cl. 200—51.16)



1. A wiring device comprising a housing of insulating material, a terminal being supported relative to said housing, circuit interrupting means positioned for operation in said housing, said interrupting means including movable contact means, and cam means for actuating said movable contact means into and out of engagement

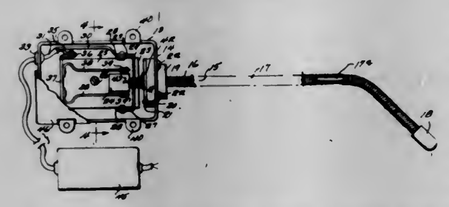
with said terminal, said contact means being biased toward one position and said cam means being movable in one direction both to effect movement of said contact means into a second position and return of the same to said one position, said terminal being electrically engaged with said contact means in one of said positions, and means for biasing said cam means in the direction opposite said one direction.

3,018,343
BIN LEVEL INDICATOR
Norman L. Grostick, Lexington, Mich., assignor to The Bin-Dicator Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 26, 1959, Ser. No. 802,058
13 Claims. (Cl. 200—61.21)



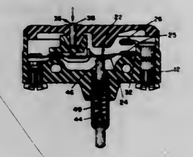
12. A bin level indicator comprising a housing having an open face, a diaphragm means closing the face of said housing, said diaphragm means including a central relatively rigid portion, a switch mounted on said housing and adapted to be actuated by movement of said central portion, and a plurality of circumferentially spaced springs mounted on said housing and acting on the periphery of said central portion.

3,018,344
ELECTRIC CURBGUARD
Ignatius R. Vinci, 120 Lake St., Le Roy, N.Y.
Filed June 8, 1960, Ser. No. 34,796
4 Claims. (Cl. 200—61.44)



1. In a curbguard for a motor vehicle, a switch including the combination of a receptacle adapted to be positioned on the underside of the motor vehicle adjacent a wheel thereof, said receptacle having an opening in one end wall thereof, an apertured rubber plug in said opening, a relatively long spring finger extending through the aperture in said rubber plug and adapted to extend outwardly of the vehicle, a rubber cap on the outer end of said finger, a plate interiorly of said casing, a pair of spaced apart lugs extending upwardly from said plate, oppositely disposed contacts on said lugs, a flange on said plate extending transversely to said lugs, a pair of spaced apart spring arms on said flange, a contact on each arm confronting a contact on one of said lugs, a block on the inner end of said spring finger positioned between said arms whereby tilting of said finger in either direction will engage a contact on the spring arm with the contact on the adjacent lug for completing and breaking a circuit to a remotely positioned electric indicator.

3,018,345
SWITCH APPARATUS
Gordon W. Gustafson, Mound, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 15, 1960, Ser. No. 75,970
6 Claims. (Cl. 200—67)

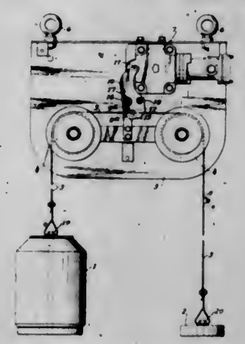


1. A trip-free reset arrangement for a non-self return snap switch including a snap acting system having a neutral plane and having cantilever supported compression and tension members disposed on a support member, an operating plunger for driving said snap acting system through its neutral plane from a first side thereof to the second side thereof so as to cause snap movement of the unsupported interconnected extremities of said compression and tension members from a first stop portion to a second stop portion provided on said support member, the combination comprising: a bushing fixed in said support member; a reset plunger supported in and partially disposed beyond said bushing in a first direction; a driven member supported in and partially disposed beyond said bushing in a second direction and limited in movement in said second direction; and a coil spring disposed in said bushing and between said reset plunger and said driven member; a portion of said snap acting system arranged to engage the extremity of said driven member beyond said bushing upon said snap acting system being driven past its neutral plane and toward said second stop portion thereby causing movement of said driven member against the bias of said coil spring; subsequent movement of said reset plunger against the bias of said coil spring and the bias of said snap acting system ultimately resulting in the energy stored in said coil spring being sufficient to overcome the force of said snap acting system thereby causing movement of said driven member and said snap acting system towards said first stop portion, the energy stored in said coil spring imparting momentum to said snap acting system to cause movement thereof through its neutral plane from the second side thereof to the first side thereof, with said operating plunger in its actuated position and said reset plunger in its ultimate reset position, said driven member being located in its ultimate position in said second direction with the extremity thereof a finite distance removed from the neutral plane of said snap acting system and said snap acting system being located to the second side of its neutral plane so that further movement of said snap acting system does not arise upon said operating plunger assuming its unactuated position.

3,018,346
FLOAT CONTROLLED SWITCH ASSEMBLIES
Robert McAulay, Edgware, and William George Richardson, London, England, assignors to Megator Pumps and Compressors Limited, London, England
Filed Feb. 25, 1960, Ser. No. 10,988
Claims priority, application Great Britain Mar. 5, 1959
6 Claims. (Cl. 200—84)

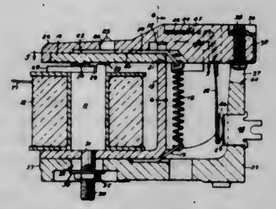
1. A float controlled switch assembly comprising a mounting plate, a pair of horizontally spaced pulleys ly-

ing in substantially the same plane and revolvably mounted about parallel axes extending from said mounting plate, an electric switch carried by said mounting plate and including an operating lever depending downwardly between said pulleys, a flat belt of non conductive and non corrosive material passing over both pulleys with the ends of said belt depending downwardly without



lateral restraint, a float carried by one end of said belt, a counterweight carried by the opposite end of said belt, a projection on the outer surface of said flat belt situated at a point intermediate its ends, and a stop member on said operating lever of said switch engageable by said projection as a result of linear movement of said flat belt to move said operating lever to actuate said switch.

3,018,347
ELECTRIC RELAY
James W. Deer and Anthony E. Sprando, Portland, Oreg., assignors to Iron Fireman Manufacturing Company, Portland, Oreg., a corporation of Oregon
Filed May 12, 1960, Ser. No. 28,682
6 Claims. (Cl. 200—87)



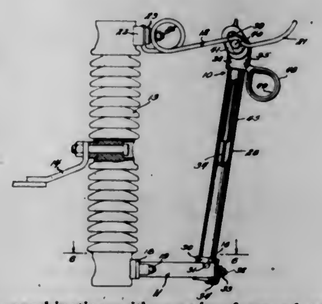
1. An electromagnetic operator for an electric switch, said operator comprising a two pole U-shaped magnet, an armature for completing the magnetic circuit between the two poles of said magnet, one end of said armature including hinging means axially non-tippably supported on one end of said magnet, electric means encircling part of said magnet to energize said magnet and said armature to close said armature across the ends of said magnet when said electric means is energized, a shading coil around part of the other end pole face of said magnet, an armature return spring engaged at its respective ends to said one end of said magnet and said one end of said armature to urge said armature to rotate about said hinging means to separate the other end of said armature from the other end of said magnet, stop means secured on said magnet to limit the movement of said other end of said armature from said other end of said magnet, and a small topped magnetic pole tip means raised from the pole face of said other end of said armature to abut said other end of said magnet to give said armature at its other end an unstrained support at a single point on said other end of said magnet when said magnet is energized.

3,018,348
ELECTRIC SWITCHING DEVICE
Alvar Lenning, Stockholm, Sweden, assignor to AB Inreco, Stockholm, Stockholm, Sweden, a registered manufacturing corporation
Filed June 5, 1959, Ser. No. 818,398
8 Claims. (Cl. 200—104)



1. An electrical switching device comprising, in combination, a pair of stationary contacts, a pair of movable contacts one adapted to engage each of said stationary contacts, a pair of resilient blade members each carrying one of said movable contacts, said blades forming an angle with each other and the resilience of said blades biasing said blades toward each other, a link member pivotally interconnecting the free ends of said blades, said link member comprising a stop limiting the movement of said member to a predetermined angle beyond dead center position with respect to each blade, to thereby move one of said movable contacts into engagement with its associated stationary contact at each end position of said link, whereby the resilience of the blade whose contact is in non-engaging position serves to hold the contact of the other blade in engaging position, and operating means for rocking said link member through its dead center position.

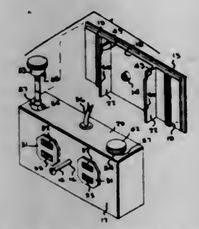
3,018,349
FUSE CONSTRUCTION
Edwin A. Link, Waukesha, Wis., assignor to RT & E Corporation, Waukesha, Wis., a corporation of Wisconsin
Filed Apr. 8, 1960, Ser. No. 20,941
6 Claims. (Cl. 200—114)



1. The combination with a pair of spaced terminals of a fuse tube assembly adapted for removable positioning between the terminals to establish an electrical connection therebetween, said fuse tube assembly comprising an open ended tubular member formed of insulating material, a sleeve element fixedly positioned on one end of said tubular member, a current carrying member fixedly positioned on the other end of said tubular member, a renewable fuse link releasably retained in fixed position within said tubular member, said fuse link having one

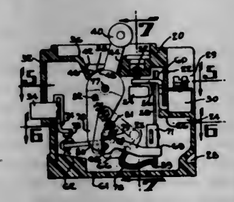
end in exposed position within said fixedly positioned sleeve element and its other end electrically connected to said current carrying member disposed on the opposite end of said tubular member, and a movable contact member overlying the exposed end of said fuse link disposed within said fixed positioned sleeve element whereby the positioning of said fuse tube assembly between the spaced terminals serves to establish and maintain electrical connection between said movable contact member and the exposed end of said fuse link disposed within said sleeve element.

3,018,350
SAFETY SOCKET
Arthur Gail Jensen, 3826 N. Sacramento, Chicago, Ill.
Filed July 8, 1960, Ser. No. 41,583
5 Claims. (Cl. 200—115.5)



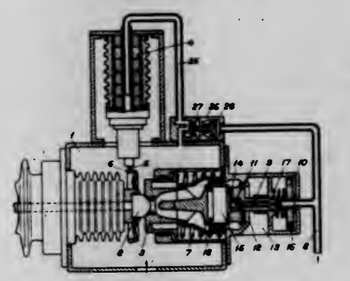
1. A safety fuse device comprising a housing, a two-terminal female socket mounted in said housing and having a pair of prong-receiving resilient contact elements, a spring arm connected to one terminal of said socket, a conductor bar rigidly mounted in said housing, an insulating abutment element mounted in said housing transverse to and supportingly engaging said conductor bar and terminating rearwardly adjacent said resilient contact elements, a removable cap member extending into said housing opposite said spring arm, a conductive clip element mounted in said cap member and being lockingly and conductively engageable with said conductor bar, a fuse mounted between and conductively connecting said clip element and said spring arm, and a two-conductor line cord having one conductor thereof connected to said conductor bar and the other conductor thereof connected to the remaining terminal of said female socket.

3,018,351
CIRCUIT BREAKER HAVING CAM CONTROLLED CONTACT BAR
William H. Middendorf, Covington, Ky., assignor to The Wadsworth Electric Manufacturing Company, Inc., Covington, Ky., a corporation of Kentucky
Filed July 24, 1958, Ser. No. 750,612
15 Claims. (Cl. 200—116)



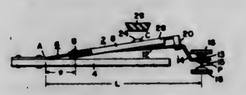
1. A circuit breaker comprising, a frame, a contact fixed to said frame, a latch movable in said frame and spaced from said fixed contact, a movable contact bar having a contact at one end and a latch engaging surface at the other end thereof, an operator pivotally mounted in said frame and engageable with said contact bar, cam means engaged by said bar to guide said bar and to permit movement of said bar in directions transverse and longitudinal to said bar, said bar having a "closed" position in which its contact engages said fixed contact and its latch engaging surface engages said latch, and spring means urging said bar toward said fixed contact when said bar is in closed position, said operator being engageable with said bar to move said bar longitudinally away from said latch whereby to unlatch said bar and open said contacts.

3,018,352
HIGH TENSION AIR BLAST CIRCUIT BREAKERS WITH A PLURALITY OF SERIES CONNECTED BREAKING GAPS PER POLE
Richard Schulz, Friedberg, Hessen, Germany, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed Sept. 29, 1959, Ser. No. 843,130
Claims priority, application Germany Oct. 10, 1958
2 Claims. (Cl. 200—148)



1. A high tension air blast circuit breaker comprising a container for compressed air, a main breaking gap, a resistance and an auxiliary breaking gap connected in series with each other and in parallel with the main breaking gap, means forming a passage extending from the container past the auxiliary gap to free air, blast valve means in said passage on the opposite side of the auxiliary gap from the container operable by the pressure in the container to close the passage after connection of the passage to free air, and stop valve means for selectively connecting the part of the passage on the opposite side of the blast valve from the container to free air and to the container, said auxiliary breaking gap having a movable contact, a movable piston housing rigid with the blast valve, a piston movably arranged in said housing and rigid with the movable contact, said contact and piston, when said part of the passage is connected with free air, being moved relative to said housing to open the auxiliary breaking gap and means for returning said contact and piston to their original position in the housing when said blast valve is closed.

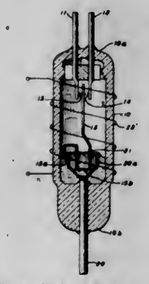
3,018,353
CURRENT CARRYING SPRING MEMBER
William H. Mitchell, Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 19, 1959, Ser. No. 787,506
6 Claims. (Cl. 200—166)



1. In a switching device, a support member, a conducting spring member secured at one end to the support

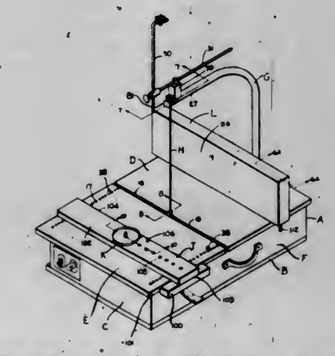
member, contact means at the free end of the spring member, a rigid member extending longitudinally of the spring member and secured thereto adjacent said one end of the spring member, the rigid member overlying the spring member and being shorter than the spring member so that the rigid member is longitudinally spaced from the free end of the spring member, said spring member being formed to bias the free end thereof away from the rigid member, and means for limiting the maximum separation between the rigid member and the free end of the spring member.

3,018,354
MEANS FOR PREVENTING CONTACT STICKING IN MERCURY CONTACT SWITCHES
Charles E. Pollard, Jr., Hohokus, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 22, 1959, Ser. No. 848,028
5 Claims. (Cl. 200—166)



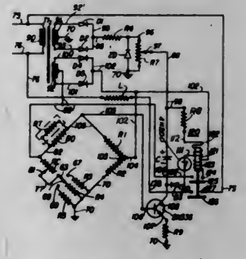
1. In an electric switch of the type employing engageable wetted contacts, an agent for wetting the contacts comprising a mercury-tin-copper solution.

3,018,355
APPARATUS FOR SHAPING AND CUTTING PLASTIC MATERIALS
Lawrence B. Wallerstein, 87 Daisy Farms Road, New Rochelle, N.Y.
Filed Jan. 2, 1958, Ser. No. 706,662
14 Claims. (Cl. 219—19)



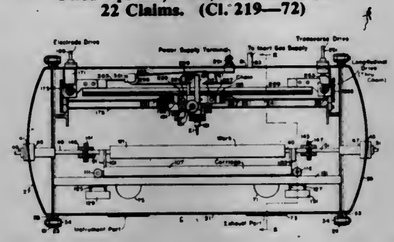
1. A hot wire cutting arrangement of the type having a vertical hot wire having top and bottom structural supports permitting the wire to be maintained in taut condition and to be supplied with electric current for a porous plastic block having the properties of foam styrene, having a flat portable rectangular carrier case, one side wall of said case constituting a table for carrying and supporting the arrangement when in use, and said table having a fixed element carrying an adjustable transverse guide bar member and said table also having a swing element hinged to said fixed element and carrying an adjustable transverse base member provided with a rotatable mouth for the plastic block, and said members adjustably mounted on said elements to give the desired shape and size to the porous plastic upon rotary and transverse movement of the plastic across the hot wire and swinging adjustable means for varying the length of the hot wire and the temperature thereof and consisting of a short circuit bar mounted above the upper end of the hot wire and means to swing said bar into contact with an intermediate point on the hot wire and short circuit the same.

3,018,356
TEMPERATURE CONTROL SYSTEMS
Floyd H. Busch, Flossmoor, and Fred H. Sawada, Wheaton, Ill., assignors to General Electric Company, a New York corporation
Filed Aug. 24, 1960, Ser. No. 51,633
12 Claims. (Cl. 219—20)



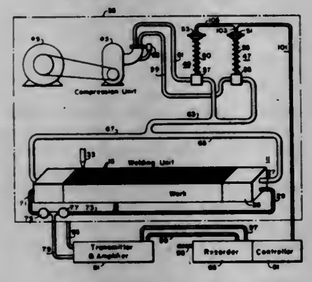
1. In an electric heating system including an electric heater, a temperature sensing unit arranged to sense the temperature of a medium heated by said heater, a manually operable controller selectively operative to set different desired temperatures of the medium heated by said heater, and a source of alternating electric power having a frequency $f1$; the combination comprising a power switch operative between an open position disconnecting said heater from said source and a closed position connecting said heater to said source, an electromagnetic actuator including a winding and having a restored position actuating said power switch into its open position and an operated position actuating said power switch into its closed position and having a restoration time that is a small proportion of a cycle of the frequency $f1$, a control circuit operated from said power source and jointly governed by said temperature sensing unit and said controller and operative to produce control signals in response to a difference between the temperature sensed by said temperature sensing unit and the temperature setting of said controller and occurring at a frequency of $f2$ and persisting until the potential of said power source is substantially zero and terminating therewith, wherein $f2=Nf1$ and $N=1$ or 2, and means for impressing the control signals produced by said control circuit upon the winding of said actuator in order to govern the movements of said actuator between its restored and operated positions at the frequency $f2$ and so that said actuator is returned to its restored position when the potential of said power source is substantially zero, whereby said power switch is operated substantially synchronously with said actuator and is thus returned into its open position when the potential of said power source is substantially zero so as to minimize arcing therein.

3,018,357
WELDING APPARATUS AND METHOD
Lloyd B. Kramer, Mount Lebanon, Alvin H. Kasberg, Jr., Bethel Borough, and John G. Landkrohn, North Huntington Township, Westmoreland County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 11, 1955, Ser. No. 500,354
22 Claims. (Cl. 219—72)



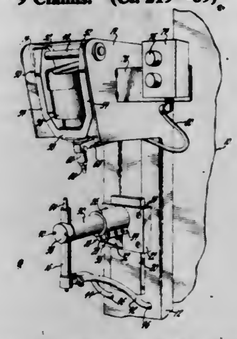
1. The method of arc welding an object of a material of the class consisting of zirconium and hafnium and their alloys, copper, titanium, nickel alloys, uranium alloys, molybdenum, palladium and stainless steel with a nonconsumable electrode in a gas tight chamber which comprises mounting said electrode and object in said chamber in a position such that a welding arc may be produced between said electrode and object, evacuating said chamber, filling said chamber with an inert gas at a substantial pressure and producing an arc between said electrode and object to weld said object, the said method being characterized by the fact that said chamber was previously evacuated to a pressure of the order of 10^{-6} millimeters of mercury and by the further fact that said inert gas has a purity of the order of 99.999%.

3,018,358
METHOD OF AND APPARATUS FOR WELDING
Bernard W. Schaaf, Jr., Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 28, 1959, Ser. No. 809,572
6 Claims. (Cl. 219—72)



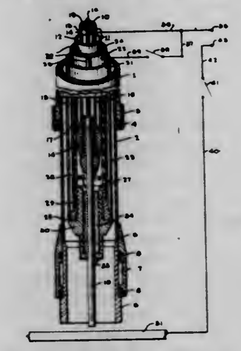
1. The method of joining, in an enclosed atmosphere of a shielding gas, adjacently disposed parts of the wall of an enclosure, said parts extending from one side to another side of said wall, the region between said parts communicating between the inside of said enclosure and said atmosphere, the said method comprising compressing said shielding gas, conducting said compressed shielding gas to the inside of said enclosure to maintain a pressure differential between the inside of said enclosure and said atmosphere, welding said parts in the region between them progressively from said one side to said other side, measuring the shielding gas pressure within said enclosure near said one side, and responsive to said measurement maintaining said pressure differential at a predetermined magnitude.

3,018,359
ELECTRODE MOUNTING ASSEMBLY
Walter S. Roboski, Columbus, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,405
9 Claims. (Cl. 219—89)



1. In a welding machine having a frame and a lower electrode secured thereto, an upper electrode assembly comprising an upper electrode, first power means mounted on said frame and operably secured to said upper electrode for moving said upper electrode in a vertical direction with respect to said frame, and second power means pivotally mounted on said frame and operably connected to said upper electrode for tilting said upper electrode toward said frame when said upper electrode is in its uppermost position to facilitate loading and removal of workpieces in said welding machine.

3,018,360
ARC WELDING TORCH
Ralph D. Engel, Cranford, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 25, 1960, Ser. No. 24,463
6 Claims. (Cl. 219—130)



1. In arc welding apparatus wherein the resistance heating and arc melting rate of an electrode is increased by increasing a stickout beyond its contact means by which arc welding current is normally supplied thereto, an elongated guide for said electrode stickout, means for fluid cooling the body portion of said guide to protect it from the heat of the welding arc and of the workpiece to which said arc is applied, and a sleeve of thermally and electrically insulating material interposed between the body portion of said fluid cooled guide and the resistance heated electrode stickout in said guide, said sleeve extending lengthwise of said fluid cooled guide except at

its discharge end which engages said electrode stickout extending through said guide and constitutes a second contact means for supplying welding current to said electrode.

3,018,361
WELDING APPARATUS AND METHOD OF WELDING

Martin Rebuffoni, Williamsville, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 29, 1959, Ser. No. 816,782
10 Claims. (Cl. 219—131)

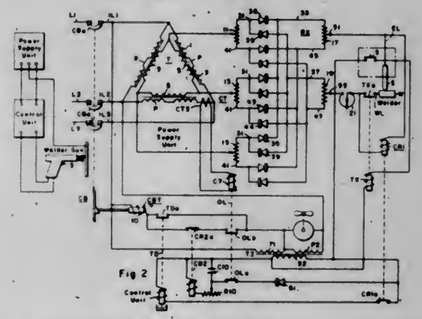


Fig 2

1. Arc welding apparatus for welding work with a welding electrode comprising power-supply conductors, switch means, rectifier means of the silicon-diode type, means including said switch means connecting said rectifier means to said conductors so that when said switch means is closed power is supplied to said rectifier means by said conductors, means connected to said rectifier means for connecting said rectifier means to said electrode and work for supplying direct current to a welding arc between said electrode and work, first timing means connected to said rectifier means and said switch means and responsive to the welding current between said electrodes and work during the whole interval during which it flows for opening said switch means if welding current of a predetermined first magnitude flows for a predetermined first interval between said electrode and work, said first interval being substantially larger than the interval during which a weld is produced by current of said first magnitude, and second timing means connected to said switch means and responsive to the current flow between said electrode and work for opening said switch means if current of a second magnitude substantially higher than said first magnitude flows through said rectifier means for at least a second interval substantially smaller than said first interval.

3,018,362
DECORATIVE LIGHT FIXTURE

Taylor C. Joyce, 903 N. Wayne St., Arlington, Va.

Filed July 16, 1959, Ser. No. 827,648
2 Claims. (Cl. 240—10)

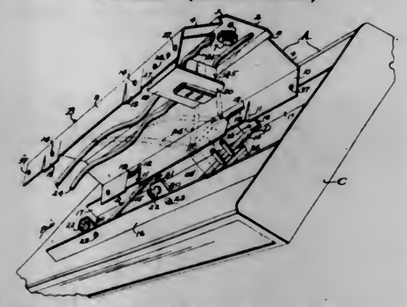
1. A decorative light fixture comprising a translucent hollow flexible spherical shell provided with a plurality of spaced bores, a threaded fitting extending into said shell, a tubular conduit having a portion adjacent one end provided with external threads positioned exteriorly of said shell and having said one end portion threadably engaged in said fitting, a light emitting bulb supported in said one end of said conduit, means connected to the other end of said conduit for dependingly supporting said conduit from an overhead support, a bushing mounted in each of said bores, and an elongated cylindrical light transmitting plastic rod mounted in each of said bushings with said rods arranged in light transmitting relation to the light bulb supported in said fixture, said flexible plastic shell supporting said bushings and therethrough said plastic rods to permit limited movement between said plastic rods and said shell to prevent breakage of said rods, circular color screens supported on said bushings adjacent the inner ends of said light transmitting plastic rods, translucent spherical plastic light transmitting balls integrally secured to the ends of at least some of said light transmitting rods opposite said plastic shell.



3,018,363
LIGHTING FIXTURE

Richard R. Gibson and Guy C. Rhoad, Atlanta, Ga., assignors to Gibson Manufacturing Company, Atlanta, Ga., a corporation of Georgia

Continuation of applications Ser. No. 373,633, Aug. 11, 1953, and Ser. No. 752,378, July 31, 1958. This application Mar. 27, 1961, Ser. No. 107,611
6 Claims. (Cl. 240—51.11)

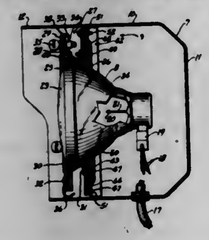


6. Fluorescent lighting fixture means of the character described comprising a ceiling raceway of trough-like form and extended length arranged for inverted mounting at a fixed overhead position, a conventional lighting power circuit suitable for operating fluorescent lamp units, said circuit comprising only electrical wiring housed in said raceway and wired in parallel to a plurality of connector fittings carried by said raceway in spaced relation lengthwise thereof, at least one separately constituted fluorescent lamp unit incorporating all components required for operation upon energizing connection to the lighting power circuit housed by said raceway and further incorporating a complementary connector fitting engageable with any of said plurality of connector fittings carried by said raceway for such energizing connection, the spacing of any two adjacent raceway connector fittings not being less than the length of said lamp unit, and means for removably attaching said lamp unit on said raceway selectively in relation to any of said plurality of raceway connector fittings so that the complementary connector fitting incorporated in said lamp unit is engaged in connecting relation with the selected raceway connector fitting as an incident of the attachment of said lamp unit on said raceway, so that said lamp unit may be attached on said raceway in contiguous relation to another like lamp unit when the spacing of said raceway connector fittings is equal to the length of said lamp unit, and so that said lamp unit remains separately disconnectable from said lighting power circuit as an incident of detachment from said raceway without affecting the operation or disposition of any other like lamp unit attached thereon.

3,018,364
RESILIENT LAMP MOUNTING

William A. Wenman, Milwaukee, Wis., assignor to Phoenix Products Company, Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Feb. 27, 1961, Ser. No. 92,093
13 Claims. (Cl. 240—90)



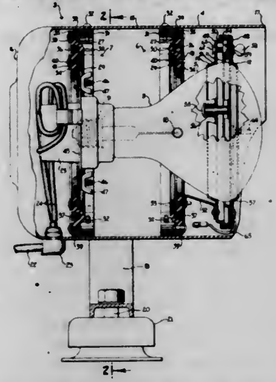
1. A resilient lamp mounting comprising: a casing having an open front end; means to mount the casing upon a support; an electric lamp having a filament contained within an envelope which has a lens circumscribed by a peripheral rim with well defined front and rear edges; a lamp receptacle to readily removably receive and mount the lamp, said receptacle comprising a locating ring member engaged by the rear edge of the peripheral rim on the lamp and having an outer portion encircling the rim, a clamping ring member engaging the front edge of the peripheral rim and overlying said outer portion of the locating ring member, and fastening means removably securing the clamping ring member in place and drawing said two members together to clamp the rim of the lamp therebetween; and means resiliently mounting the lamp receptacle in the casing with the lamp facing the open end of the casing, said mounting means comprising an annulus of rubber-like material having an inner edge portion and an outer edge portion connected by an intermediate portion which is doubled back upon itself in cross section, so as to be radially yieldable; means securing one of said edge portions of the annulus to the lamp locating ring member; and means securing the other edge portion of the annulus to the casing.

3,018,365
SHOCK RESISTANT MOUNTING FOR LAMPS

William A. Wenman and James F. Morton, Milwaukee, Wis., assignors to Phoenix Products Company, Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Oct. 3, 1960, Ser. No. 60,175
6 Claims. (Cl. 240—90)

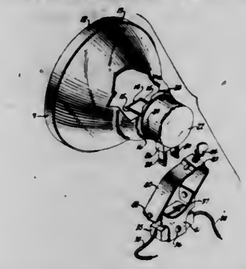
5. An anti-vibration mounting for a lamp of the type having an envelope which has a maximum diameter portion and coaxial portions forwardly and rearwardly adjacent to its maximum diameter portion which respectively face toward the front and rear of the lamp, said mounting comprising: a casing having a maximum diameter larger than the maximum diameter of the lamp envelope and which is open at its front; a rear retaining ring having a forwardly facing surface adapted to circumferentially engage said rearwardly facing portion of the lamp envelope; a front retaining ring having a rearwardly facing surface adapted to circumferentially engage said forwardly facing portion of the lamp envelope; means resiliently mounting one of said rings coaxially in the casing, intermediate the ends thereof; cooperating means on said rings providing a bayonet connection between them whereby the other ring is coaxially carried by said one ring, said means also mounting said other ring in a manner constraining it to axial movement toward and from said one ring when the bayonet connection is established; and means including biasing means reacting between the front and rear retaining rings when the bayonet connection between them is established to urge said other ring axially toward said one ring so that the maximum diameter portion of the lamp envelope is clampingly confined between said retaining rings.



3,018,366
MOUNTING FOR ELECTRIC LAMPS

Eugene M. O'Keefe, Wauwatosa, Wis., assignor to Phoenix Products Company, Inc., Milwaukee, Wis., a corporation of Wisconsin

Filed Dec. 24, 1959, Ser. No. 861,813
2 Claims. (Cl. 240—41)

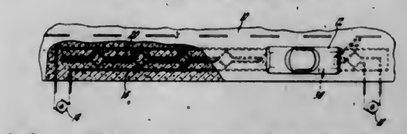


1. In combination: an electric lamp having a glass envelope with an integral glass base, filament leads entering the envelope through the glass base and having ends disposed externally of the base, a metal shell tightly fitted to the exterior of the glass base and enclosing the external ends of the filament leads, terminal prongs for the lamp, means mounting said prongs with their inner ends inside the metal shell and their outer end portions outside the shell, and in a manner which leaves them free to vibrate with respect to the shell and the glass base, and means physically and electrically securing the prongs to said external ends of the filament leads; a receptacle having sockets in which the prongs are tightly received, and by which the prongs are connectible with current supply lines; and clamping means carried by the receptacle and engaging the metal shell remote from the receptacle to draw the receptacle against the shell and thereby secure the receptacle as well as the prongs and their connections to said external ends of the filament leads against vibratory motion with respect to the shell and the glass base.

3,018,367
SPEED CONTROL SYSTEM UTILIZING FREQUENCY CHANGE FROM INDUCTIVE PICKUP

Garrard Mountjoy, Little Rock, Ark., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 6, 1959, Ser. No. 811,489
15 Claims. (Cl. 246—182)

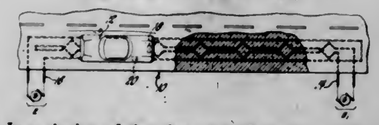


1. In combination with a vehicle, a command signal generator developing a command speed signal voltage having a frequency corresponding to a desired speed, the frequency of the command speed signal voltage being selectively variable remotely of the vehicle, a vehicle road speed generator developing a vehicle road speed signal voltage having a frequency corresponding to the actual road speed of the vehicle, the command signal and road speed generators being positioned also remotely of the vehicle, counting means for correlating the frequencies of the signal voltages so as to produce an output voltage corresponding to the difference in the frequencies of the signal voltages, and means responsive to the output voltage and adapted to cause vehicle road speed to be controlled in accordance with the output voltage.

3,018,368
SPEED CONTROL SYSTEM UTILIZING FREQUENCY CHANGE FROM INDUCTIVE PICKUP

Garrard Mountjoy, Little Rock, Ark., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 6, 1959, Ser. No. 811,490
14 Claims. (Cl. 246—182)



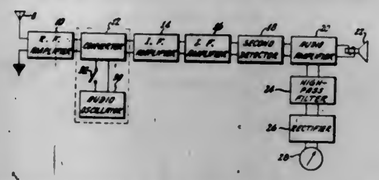
1. In a device of the class described, the combination of a roadway having plural sources of signal energy therealong, one source being variable so as to produce a command signal corresponding to a desired road speed, another source producing a vehicle road speed signal, a vehicle carried command speed and road speed pickup means, each pickup means being so positioned on the vehicle as to respond to the signal energy from one of the plural sources as the vehicle travels along the roadway and thereby develop signals corresponding, respectively, to the desired vehicle command speed and the actual vehicle road speed, and means responsive to the command speed and road speed signals and adapted so as to cause vehicle movement to be controlled so that the road speed is in some predetermined proportion to the command speed.

3,018,369
TRANSISTORIZED DIRECTION FINDER RECEIVER HAVING A LOCAL AUDIO SIGNAL MODULATED ON THE MIXER

David D. Holmes, Stony Brook, N.Y., assignor to Radio Corporation of America, a corporation of Delaware

Filed Mar. 12, 1958, Ser. No. 720,856
9 Claims. (Cl. 250—8)

9. A direction finder comprising a superheterodyne receiver, a mixer, means for applying a received radio signal to said mixer, means for producing local oscillations and for applying them to said mixer whereby intermediate frequency signals are produced, an output circuit for said intermediate frequency signals, means for producing an audio frequency tone signal, means for applying said tone signal directly to said mixer whereby said

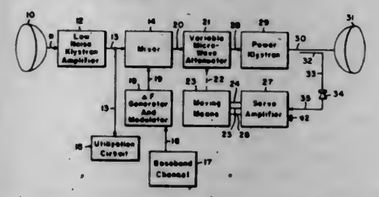


intermediate frequency is modulated by said tone signal, a detector connected to said output circuit and to which said tone modulated intermediate frequency signal is applied whereby said tone signal is derived having an amplitude that is a function of the strength of said received radio signal, a utilization device, and means for applying said tone signal to said utilization device.

3,018,370
SIMPLIFIED MICROWAVE REPEATER

Andrew J. Lipinski, Alberton, Ontario, Canada, assignor to Canadian Westinghouse Company, Limited, Hamilton, Ontario, Canada

Filed Oct. 30, 1959, Ser. No. 849,933
7 Claims. (Cl. 250—15)

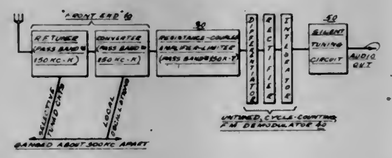


1. Microwave repeater apparatus comprising, in combination, receiving antenna means, low noise klystron amplifier means having the signal of the receiving antenna means applied thereto, mixer means having the output of the low noise klystron amplifier means applied thereto, the receiving antenna means receiving a microwave signal of frequency F, generator means for applying to the mixer means a signal having a frequency ΔF whereby the mixer means provides an output signal having frequency components of F plus ΔF and F minus ΔF, variable microwave attenuator means adapted to have the attenuation therein varied in accordance with movement of an adjusting means and having the output of the mixer means applied thereto, power klystron means operatively connected to the variable microwave attenuator means and having the output signal of the variable microwave attenuator means supplied thereto, said power klystron means including a klystron with at least first and second resonant cavities, each of said first and second resonant cavities having a predetermined frequency-attenuation characteristic, said first and second resonant cavities substantially eliminating a selected one of the frequency components F plus ΔF and $F-\Delta F$, the signal to be amplified being applied to the first resonant cavity, transmitting antenna means, means connecting the transmitting antenna means to the second resonant cavity, power monitor means operatively connected to said means connecting the transmitting antenna means to the second resonant cavity, servo amplifier and reference signal obtaining means operatively connected to the power monitor means, and moving means operatively connected to the servo amplifier means to have the output of the servo amplifier means supplied thereto, said moving means being operatively connected to the adjusting means of the attenuator means, said moving means and servo amplifier means adjusting the value of the attenuation to increase the value thereof when the output of the power monitor means exceeds a predetermined value in accordance with the value of the reference signal, said servo amplifier means and moving means adjusting the attenuator means to decrease the attenuation therein when the output of the power monitor means falls below a predetermined value established by said reference signal.

3,018,371
RADIO RECEIVERS

Kerim Onder, 615 W. 113th St., New York, N.Y., assignor of 15/100 to Arthur L. Tirico, Glen Ridge, N.J.

Filed Sept. 17, 1953, Ser. No. 380,845
1 Claim. (Cl. 250—20)



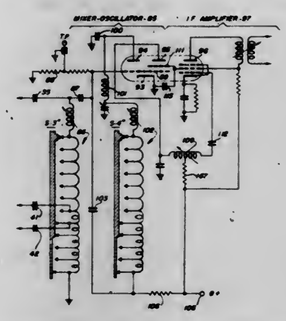
A radio receiver comprising a front end for effecting preliminary frequency selection of a desired frequency modulated signal by adjusting tunable circuit means so that the frequency pass-band of the front end will pass with substantially equal amplification all of the significant spectral components of the desired signal and all similar components of any additive wave into which said signal may have lost its individual identity due to co-channel interference; means for heterodyning the components of said signal after it has been preliminarily selected into a relatively low frequency range, such as a range between zero and one million cycles per second wherein it is possible to achieve broad band amplification and limiting using resistive rather than tuned impedances; means for amplifying and limiting the heterodyned components in circuits comprising a plurality of stages of resistance coupled amplifying devices; means for differentiating the train of frequency modulated square waves into which the selected and heterodyned signal will have been transformed by the last-mentioned means to convert it into a train of spike-shaped waves of substantially equal energy content regardless of any variations in the durations of the square waves; means for rectifying the differentiated signal so as to pass to its output side only ones of said spike-shaped waves which are of a same predetermined polarity; means, connected to the output side of the differentiating means, for integrating the spike-shaped waves of said polarity in a circuit having an appropriate RC time constant to produce an A.C. output component corresponding in its frequency and amplitude variations to those of the intelligence-bearing wave with which the carrier of said desired signal was modulated.

3,018,372
HIGH FREQUENCY TUNER

Alarico A. Valdettaro, Chalmer H. Lewis, Jr., and John C. Robinson, Bloomington, Ind., assignors to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana

Filed Feb. 17, 1958, Ser. No. 715,744
4 Claims. (Cl. 250—20)

1. In a television tuner, a single electron discharge device having a mixer oscillator section, an isolation section and an IF amplifier section, said mixer-oscillator section having a first cathode, a signal grid and a first anode, means for coupling a signal modulated RF signal to said signal grid, a positive feedback path including an oscillatory tank circuit connected between said first anode and said signal grid, said isolation section comprising said cathode, said signal grid and a second anode, where-

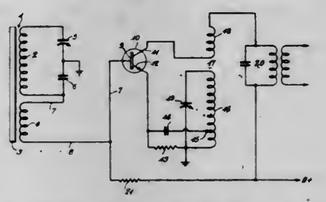


by an IF signal is developed at said signal grid which is transmitted through said isolation section, said IF amplifier section comprising a second cathode, a control grid and a third anode, means for coupling said IF signal from said second anode to said control grid, and tuned circuit means in circuit with said third anode for deriving therefrom an amplified IF signal.

3,018,373
ANTENNA COUPLING CIRCUIT

James L. Nygaard, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed July 10, 1958, Ser. No. 747,705
6 Claims. (Cl. 250—20)



6. An antenna circuit comprising an antenna coil, a first capacitor and a second capacitor connected in a first closed series circuit with said antenna coil, said second capacitor having a large value of capacity relative to the capacity of said first capacitor, the reactance of one of said antenna coil and said first capacitor being variable, a pick-up coil inductively coupled to said antenna coil to receive energy therefrom, signal utilization means, said pick-up coil and said second capacitor being connected in a second closed series circuit with said signal utilization means.

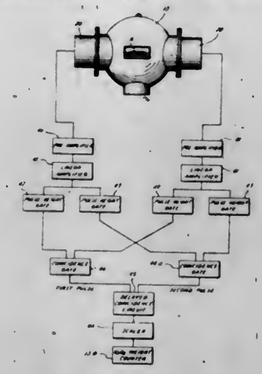
3,018,374
METHODS OF AND MEANS FOR ASSAYING MATERIAL HAVING A FISSIONABLE COMPONENT

Ray A. Pritchett, Dallas, Tex., assignor to Floyd V. Richardson, Dallas, Tex.

Filed July 18, 1958, Ser. No. 750,069
22 Claims. (Cl. 250—71.5)

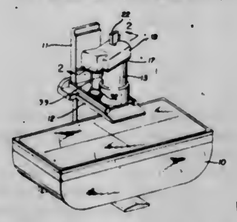
15. An apparatus for determining the uranium content of uranium ore, including a neutron source surrounded

by a thermal shield which is further enclosed in cadmium-loaded liquid phosphor, means for moving an ore sample past said neutron source in close proximity thereto whereby said ore is bombarded by thermal neutrons to cause fission of the U^{235} isotopes of said ore, the fission neutrons producing twin pulses, the first of which is due to recoil protons and fission gamma radiation, and the second of which is due to the gamma rays emitted by the cadmium nucleus which captures the neutron after it



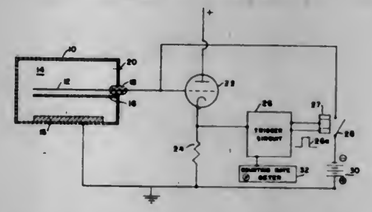
has been slowed down, a detector for detecting the pulses and for converting the same into electrical signals, means for directing the signal which is representative of the recoil proton to a coincidence circuit, means for directing the second signal which is representative of the neutron-capture gamma to a similar coincidence circuit, and a delayed coincidence circuit electrically connected to the first two mentioned coincidence circuits to effect a fission count.

3,018,375
VIEWING APPARATUS FOR AMPLIFIED X-RAY IMAGES
Edward B. Graves, South Euclid, and Edgar J. Bastin, Chesterland, Ohio, assignors to Picker X-Ray Corporation, Waite Mfg. Div., Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 19, 1959, Ser. No. 854,205
13 Claims. (Cl. 250—77)



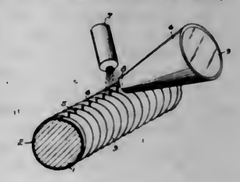
1. In an X-ray device including an amplifying image means having an output end, the improvement which comprises a viewing carriage connected to the image means, a camera mounted on the carriage and aligned with the image means output end, an optic system mounted on the carriage for directing an image to an operator observable position, an optical image carrier member reciprocably mounted on the carriage and supporting mirror and beam splitter reflection bodies, the carrier member having an optic position with the mirror positioned between the output end and the camera and forming a part of the optic system, the carrier member having a second position with the beam splitter positioned between the output end and the camera and forming a part of the optic system, an electronic pickup member pivotally mounted on the carriage and shiftable to and from storage and pickup positions, the pickup member having an image receiving portion between said output end and the positioned one of said reflection bodies when the electronic member is in the pickup position and operator controlled selection means operably connectable to said members to shift each of said members into selected positions.

3,018,376
GAS DENSITY MEASUREMENT
George F. Vanderschmidt, Belmont, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Nov. 29, 1957, Ser. No. 699,860
8 Claims. (Cl. 250—83.6)



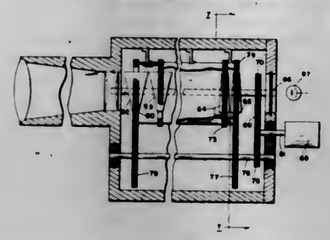
1. Apparatus capable of measuring gas density under widely varying conditions of temperature comprising a radioactive source of ionizing agent activity whose emission of ionizing agents is substantially independent of temperature and electric field, a pair of electrodes for collecting ions generated by the ionizing agents, means for applying a charge to the pair of electrodes by impressing a predetermined initial voltage across said pair of electrodes, means for isolating the pair of electrodes, means for determining the time at which said isolation of the electrodes is effected, and means for determining the time at which the charge across said electrodes has been decreased by a given amount due to flow of ion current between said pair of electrodes, the elapsed interval between said two times indicating the gas density and varying as an inverse function of said gas density.

3,018,377
PHOTOELECTRIC DEVICE
John Lamont, North Arlington, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 20, 1959, Ser. No. 828,373
4 Claims. (Cl. 250—222)



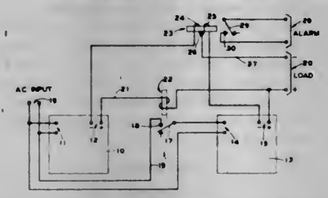
1. A photoelectric device for detecting anomalous areas of a discrete minimum size which progress through a relatively much larger area comprising a plurality of photoresponsive elements electrically connected in series, the ratio of the areas of one element to the sum of the areas of the entire plurality of elements being approximately equal to the ratio of the area of discrete minimum size to the larger area, means for projecting an image of the anomalous areas on the photoresponsive elements, and means for responding to the change of electrical condition in one element due to passage through the larger area of an anomalous area of at least the discrete minimum size.

3,018,378
RADIANT ENERGY SCANNING SYSTEM
Victor A. Miller, Long Beach, and Robert B. Horsfall, Jr., Whittier, Calif., assignors to North American Aviation, Inc.
Filed Sept. 20, 1954, Ser. No. 457,087
14 Claims. (Cl. 250—236)
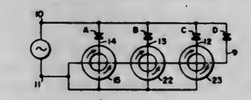


1. Means for scanning an image of an optical field comprising means forming a small hole positioned substantially in the image plane of said optical field, an optical detecting device positioned to receive light from the portion of the image passing through said means forming a small hole, and means for producing relative motion of said means forming a small hole and said image, said relative motion being in a closed roulette pattern whereby said optical detecting device scans said optical field.

3,018,379
ALARM SYSTEM
George H. Pohm, Lorain, Ohio, assignor to Lorain Products Corporation, a corporation of Ohio
Filed June 3, 1959, Ser. No. 817,921
13 Claims. (Cl. 307—46)



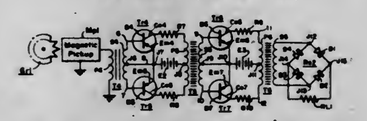
1. In an electrical circuit adapted to be connected between a source of electrical energy and a load, a first current passing device having input and output terminals, a second current passing device having input and output terminals and operable on demand of said first device when the latter passes current substantially equal to its rated output, means for connecting the input terminals of said devices in parallel with the source of electrical energy, means for connecting output terminals of said devices in parallel with each other and to the load, first electro-magnetic means connected in series with and between similarly poled output terminals of said devices, a switch connected in series with said source and between input terminals of said devices, said first electro-magnetic means being arranged to operate upon passage of a magnitude of current substantially equal to the rated current output of said first device to close said switch and connect said second device into the circuit, second electro-magnetic means including a winding having two sections and an intermediate tap disposed therebetween, means connecting said intermediate tap to the load terminals, the ends of said winding being connected respectively to similarly poled output terminals of said devices whereby one of said winding sections is serially connected between the output of one of said devices and the load and the other section is serally connected between the output of the other of said devices and the load, an alarm circuit, a switch connected serially therein for operation by said second electro-magnetic means, said second electro-magnetic means being arranged so that said winding section connected to said first device operates said second electro-magnetic means to close said alarm switch when the second device is inoperative and current through the first device to the load is substantially equal to its rated current output, said winding section connected to the second device being arranged to oppose the electro-magnetic effect of said other winding section when current through the load terminals is passed by both said first and said second device.

3,018,380
CURRENT BALANCING APPARATUS
Richard L. Bright, Hempfield Township, Westmoreland County, Pa., and Robin R. Jackson, Ottawa, Ontario, Canada, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 31, 1958, Ser. No. 771,087
2 Claims. (Cl. 307—58)



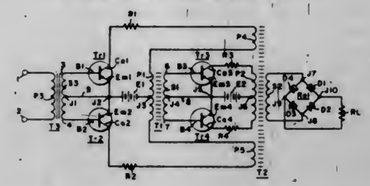
1. Apparatus for balancing current comprising; a plurality of semiconductor rectifier units connected in parallel circuit relationship by a like plurality of conductors; one of said plurality of conductors being a reference conductor; each of said plurality of conductors, with the exception of said reference conductor, being disposed inductively with one of a like plurality of magnetic cores; said reference conductor being disposed in inductive relationship with each of said plurality of magnetic cores.

3,018,381
WIDE RANGE HIGH OUTPUT FREQUENCY DETECTOR
James C. Carroll, North Huntingdon Township, Westmoreland County, Francis T. Thompson, Verona, and Clarence I. Jones, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 24, 1959, Ser. No. 801,659
4 Claims. (Cl. 307—88)



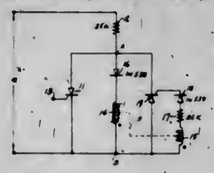
1. In an electric control circuit, in combination, an input terminal, alternating current generating means connected to said terminal to provide a signal to said terminal whose pulse repetition rate is proportional to the frequency of the current generated by the alternating current generating means; a monostable multivibrator connected to said terminal to be triggered by said generating means; a saturable transformer having a primary winding and a secondary winding and whose primary winding is interconnected with the monostable multivibrator to receive the output of said monostable multivibrator; and a suitable load circuit connected to the transformer secondary winding to receive the output from the secondary winding of said saturable transformer.

3,018,382
FREQUENCY DETECTOR
James C. Carroll, North Huntingdon Township, Westmoreland County, and Francis T. Thompson, Penn Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 30, 1959, Ser. No. 830,525
3 Claims. (Cl. 307—88)



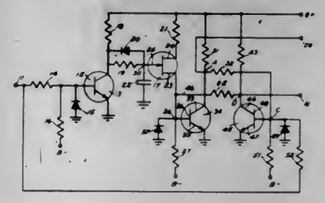
1. In control circuitry, in combination, generating means, including a transformer having primary windings and secondary windings, to provide a signal whose pulse repetition rate is proportional to the frequency to be detected, a first transistor power amplifier which is driven by the output from the secondary winding of said transformer; a first saturating transformer having primary windings and secondary windings and whose primary windings receive the output of said first transistor power amplifier; a second transistor power amplifier which receives the output from the secondary windings of said first saturable transformer; a second saturable transformer having primary windings and secondary windings and whose primary winding receives the output of said second transistor power amplifier and whose core has additional windings so arranged as to be energized by said generating means which energizes the first saturable transformer; and a siutable load circuit to receive the output from the secondary winding of said second saturable transformer.

3,018,383
ELECTRICAL MASTER SLAVE AMPLIFIER CIRCUIT EMPLOYING SILICON CONTROLLED RECTIFIERS
Frederick J. Ellert, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 26, 1960, Ser. No. 24,763
5 Claims. (Cl. 307—88.5)



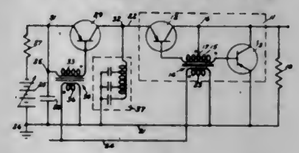
1. A symmetrical slaving circuit including in combination a master controlled unidirectional conducting device having a control gate element coupled to a single-ended source of electric control signals, a load device connected in series circuit relationship with said master controlled unidirectional conducting levice with the series circuit thus formed being adapted to be connected across the terminals of a source of alternating current potential, a charging device connected in parallel circuit relationship with said master controlled unidirectional conducting device, and at least one slave controlled unidirectional conducting device connected in parallel circuit relationship with said charging device and in circuit relationship with a load device and having a control gate element operatively coupled to the charging device whereby said charging device is charged to an energy level dependent upon the period of time that the master controlled unidirectional conducting device is nonconducting during one-half cycle of the alternating current supply and the charging device holds off firing of the slave controlled unidirectional conducting device for an equal period of the remaining half cycle of the alternating current supply.

3,018,384
TRANSISTOR CIRCUIT FOR CONVERTING PULSE INFORMATION INTO BISTABLE INFORMATION
William E. Zrubek, Glen Burnie, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 13, 1960, Ser. No. 35,854
1 Claim. (Cl. 307—88.5)



A transistor switching circuit for converting pulse information into bistable information comprising: an input terminal for receiving signal pulses; an output terminal; first and second junction transistors, each having emitter, collector, and base electrodes, said base electrodes being connected to said input terminal whereby said signal pulses cause conduction in said first and second junction transistors; a sawtooth generator comprising a capacitor, and a unijunction transistor having an emitter electrode and first and second ohmic contacts, said emitter electrode of said unijunction transistor being connected to said collector electrode of said first junction transistor; a third junction transistor having emitter, collector, and base electrodes, said base electrode of said third junction transistor being connected to said first ohmic contact of said unijunction transistor; and a source of direct voltage connected to said second ohmic contact of said unijunction transistor and to each said collector electrode of said first, second and third junction transistors, said capacitor being connected to charge from said source of direct voltage and to discharge through said unijunction transistor.

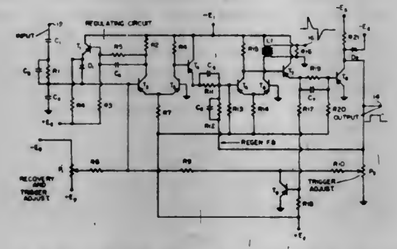
3,018,385
LOW LEVEL ASYMMETRICAL TRANSISTOR CHOPPER
William A. O'Berry, Glen Burnie, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 13, 1960, Ser. No. 35,855
3 Claims. (Cl. 307—88.5)



1. A low level asymmetrical transistor chopper comprising:
(a) a source of direct current voltage to be chopped,
(b) a first transistor having emitter, collector and base electrodes,

(c) a symmetrical chopper comprised of a pair of junction transistors, each having emitter, collector and base electrodes, and a transformer having a primary and a secondary winding, said base electrodes of said junction transistors being connected to different ends of said secondary winding,
(d) said first transistor and said symmetrical chopper being connected in series with said source,
(e) a source of square wave chopping voltage connected to said base electrode of said first transistor and to said primary winding of said transformer,
(f) a pulse forming network shunted across said direct current source, and
(g) a means for charging said pulse forming network when said chopper is in an off condition.

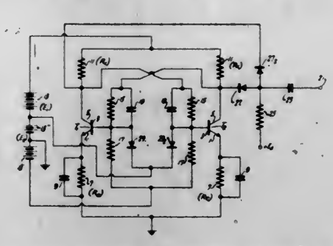
3,018,386
AMPLITUDE DISCRIMINATOR HAVING SEPARATE TRIGGERING AND RECOVERY CONTROLS UTILIZING AUTOMATIC TRIGGERING CONTROL DISABLING CLAMP
Robert L. Chase, Blue Point, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 11, 1960, Ser. No. 62,062
8 Claims. (Cl. 307—88.5)



1. An amplitude discriminator comprising in combination an active element having a control electrode, means for biasing said control electrode to maintain said element in an active state in the absence of a signal pulse on said electrode, the latter said means including first and second separate voltage selector means for together adjusting the bias on said electrode, input means to said discriminator for delivering signal pulses to said control electrode in opposite polarity to said bias whereby a pulse exceeding a firing threshold of said discriminator as established by said bias on said electrode will terminate conduction in said element, and means responsive to the termination of conduction in said element for clamping the voltage of said second selector means at some predetermined level thereby effectively making said first selector means solely selective in determining the recovery threshold of said discriminator and said second selector means solely selective in determining the firing threshold of said discriminator.

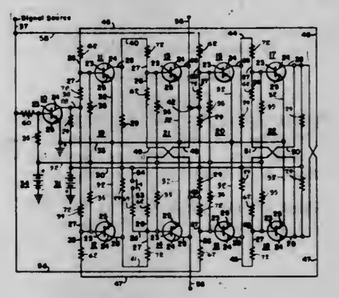
3,018,387
NON-SATURATING TRANSISTOR CIRCUIT
John W. Beck, Santa Clara, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 4, 1957, Ser. No. 638,099
9 Claims. (Cl. 307—88.5)

1. In a circuit employing a transistor having an emitter, a base and a collector and wherein positive feedback tends to cause carrier-saturation of said transistor at one phase of its operation, means for preventing such carrier-saturation comprising a rectifier connected between said base and emitter and poled to conduct from said base control currents flowing to said base in the direction that tends to cause increased conduction by said transistor, and a potential source connected in series with the rectifier and



a point of fixed potential to bias said rectifier to prevent current flow therethrough until the potential of said base approaches a value that would cause carrier saturation.

3,018,388
BINARY COUNTER WITH ISOLATION MEANS BETWEEN FLIP-FLOP STAGES
William D. Rowe, Snyder, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 19, 1957, Ser. No. 672,903
9 Claims. (Cl. 307—88.5)

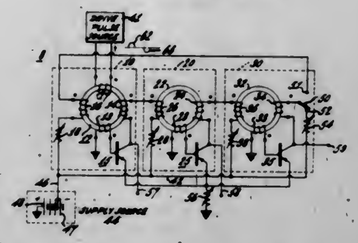


1. In a binary counter system which responds to signals from a signal source, in combination, a plurality of transistor NOR circuits having input and output leads, one of said NOR circuits comprising an inversion circuit, said inversion circuit being disposed to receive signals from the signal source and transmit certain of them to the other NOR circuits, a certain plurality of the NOR circuits being connected in circuit relationship in pairs to provide a plurality of isolation circuit systems, the remaining plurality of the NOR circuits being connected in circuit relationship in pairs with the output lead of each NOR circuit in a pair connected to the input lead of the other NOR circuit of the pair to provide a plurality of flip-flop circuit systems, the isolation circuit systems and the flip-flop circuit systems being connected in alternative circuit relationship with the input leads of one connected to the output leads of another, an isolation circuit system leading in the alternatively connected circuit system, the leading isolation circuit system having one input lead of each of its NOR circuits connected to an output lead of the NOR type inversion circuit disposed to receive signals from the signal source, and the other isolation circuit system having one input lead of each of its NOR circuits connected to receive signals from the signal source.

3,018,389
DELAY CIRCUIT USING MAGNETIC CORES AND TRANSISTOR STORAGE DEVICES

Marvin B. Herscher, Philadelphia, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Filed June 3, 1958, Ser. No. 739,616
11 Claims. (Cl. 307—88.5)

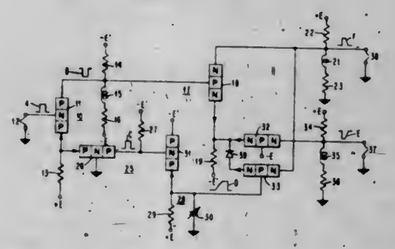


1. A delay circuit comprising a plurality of cores of rectangular loop material arranged in ordered fashion, a like plurality of transistor devices each having base, emitter and collector electrodes, said transistors being changed between their cut-off and saturated conditions by base input signals, and each said transistor exhibiting a storage time during which said saturated condition is maintained after said base input signal is removed, said cores each having base, collector and input windings linked thereto, said base and collector windings of any one core being connected in regenerative fashion to a different one of said transistors, said collector winding of any one core being connected to the input winding of the next succeeding one of said cores, and means for controlling the said storage times of said transistors.

3,018,390
PULSE SHORTENING GENERATOR

Hannon S. Yourke and William G. Strohm, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 31, 1958, Ser. No. 752,310
12 Claims. (Cl. 307—88.5)

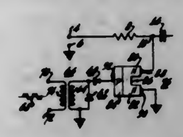


1. A transistor pulse generator comprising transistor means responsive to applied triggering pulses for deriving a pair of pulse-type output signals representative of said triggering pulses; a first transistor channel coupled to said means for translating one of said output signals; a second channel including a non-saturating transistor circuit having an adjustable time-constant network therein and responsive to the other of said output signals for deriving a pulse-type output signal having modified predetermined edge portions which are controlled by the adjustment of said network; and means conjointly responsive to said one output signal and to said modified edge portions for developing a resultant pulse-type signal during said edge portions.

3,018,391
SEMICONDUCTOR SIGNAL CONVERTER APPARATUS

James E. Lindsay, Williamsville, N.Y., and Thomas B. Martin, Collingswood, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Apr. 29, 1959, Ser. No. 809,868
6 Claims. (Cl. 307—88.5)

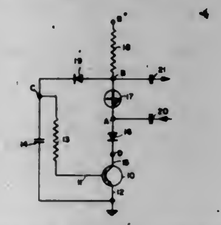


1. In combination with a signal translating path, a pair of input terminals, a pair of output terminals, and a point of reference potential connected to one of said input terminals and to one of said output terminals, said path being connected between the others of said input and said output terminals: a shunt switch comprising a first semiconductor body of one conductivity type material, a second semiconductor body of opposite conductivity type contiguous with said first body and forming a rectifying junction therebetween, a pair of ohmic contacts affixed to said first body near opposite ends of said rectifying junction, one of said pair of contacts being connected to said reference point, the other of said pair of contacts being connected to said signal translating path at a point between said others of said input and said output terminals, a third ohmic contact affixed to said second body, means operatively connected with said third ohmic contact for alternately varying the reverse bias across said rectifying junction between a first limit of zero volts and a second limit close to the "pinch-off" voltage of said first body, and a unidirectional conducting means connected externally between said third ohmic contact and said one of said pair of contacts to prevent forward biasing of said rectifying junction.

3,018,392
MONOSTABLE MULTIVIBRATOR EMPLOYING FOUR ZONE SEMICONDUCTIVE GATE IN SERIES WITH AT LEAST A TRANSISTOR

Clarence S. Jones, Los Altos, and Frank P. Lewandowski, Mountain View, Calif., assignors to General Precision Inc., Wilmington, Del., a corporation of Delaware

Filed July 2, 1959, Ser. No. 824,581
26 Claims. (Cl. 307—88.5)

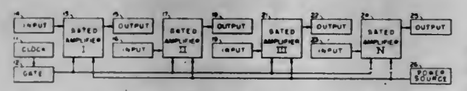


1. A monostable multivibrator comprising: a transistor having base, collector and emitter electrodes; a four-layer PNPN switching diode; a first unidirectional current conducting means serially coupled to said switching diode and defining therewith a circuit element having first and second terminal electrodes, said first terminal electrode being connected to said collector electrode; circuit input means for applying an operating pulse coupled to said circuit element intermediate between said PNPN switching diode and said first unidirectional current conducting means; a first resistive impedance means; a source of voltage referenced to said emitter electrode having its output terminal connected to said second terminal electrode through said first impedance means; a second resistive impedance means connected to said base electrode; a capacitive impedance means connected to said emitter electrode; and a second unidirectional current conducting means for connecting said second terminal electrode to said second and third impedances.

3,018,393
REGENERATIVE BROADENING CIRCUIT

Harold H. Levy, 7501 Chesapeake St., East Columbia Park, Landover, Md., and Joseph L. Tinsley, 6227 Allentown Road, Camp Springs, Md.

Filed Oct. 30, 1959, Ser. No. 850,003
4 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

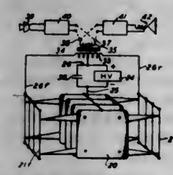


3. A regenerative broadening circuit comprising a plurality of pulse lengthening circuits each having separate input and separate output terminals, a common switch means connected in series with all of said pulse lengthening circuits to simultaneously enable and simultaneously prevent current flow in all said pulse lengthening circuits, means for generating clock pulses connected to and controlling said switching means, said pulse lengthening circuits being adapted to lengthen any input pulse to the length of the clock pulse, whereby all output pulses are quantized to the back edge of said clock pulses.

3,018,394
ELECTROKINETIC TRANSDUCER

Thomas Townsend Brown, Umatilla, Fla., assignor to Whitehall-Rand, Inc., Washington, D.C., a corporation of Delaware

Filed July 3, 1957, Ser. No. 669,831
11 Claims. (Cl. 310—5)



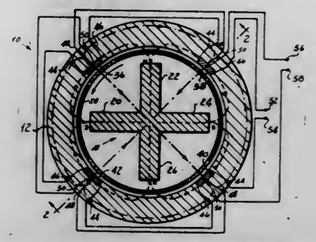
1. An electromechanical transducer comprising a plurality of electrodes connected in first and second groups, said groups being secured together, a source of direct current potential having one terminal connected to said first group and another terminal connected to said second group and alternating current means connected to said first and said second groups, one of said groups comprising electrodes of substantially greater surface area than the other of said groups.

3,018,395
TACHOMETER GENERATOR

Joseph Carlstein, East Meadow, N.Y., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed July 15, 1960, Ser. No. 43,223
7 Claims. (Cl. 310—40)

1. A tachometer for measuring the speed of a moving element including in combination a magnet for producing a magnetic field, a member formed of conductive material, means responsive to motion of said element for moving said conductive member through said magnetic field to cause eddy currents to be generated in said conductive member whereby said eddy currents produce a secondary magnetic field having a strength which is proportional to the speed of movement of said element, a semi-conductor crystal, means mounting said crystal in a position at which

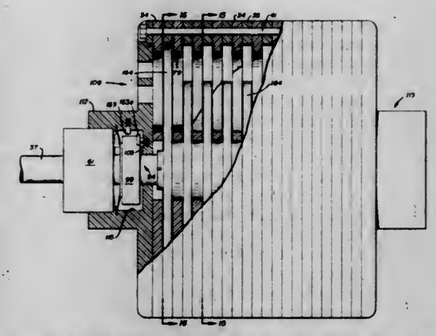


said secondary magnetic field passes through said crystal in the direction of a first axis and means for passing current through said crystal along a second axis substantially perpendicular to said first axis to cause said crystal to produce an output voltage proportional to the speed of movement of said element.

3,018,396
SOLENOID STATOR DYNAMOELECTRIC MACHINES

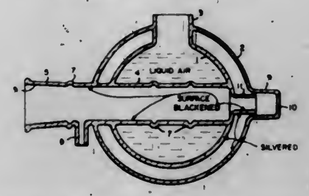
Stirling A. Colgate, 134 Estates St., Livermore, Calif., assignor of fifty percent to Richard M. Colgate, Oldwick, N.J.

Filed Mar. 13, 1958, Ser. No. 721,144
23 Claims. (Cl. 310—268)



21. In a resonant synchronous dynamoelectric machine, the combination comprising a rotor shaft, a plurality of like flat conductors secured thereon in perpendicular relationship thereto, said flat conductors being spaced apart along said rotor shaft and having a radial dimension which varies with azimuth, alternate sectors of said conductors extending further from said rotor shaft than the intervening sectors of said conductors, a plurality of solenoid coils distributed around the azimuth of said rotor shaft in parallel alignment therewith, said solenoid coils being displaced from said rotor shaft a distance less than the maximum radial length of said conductors and exceeding the minimum radial length of said conductors, each said solenoid coil being segmented into a plurality of spaced apart series connected coil sections which coil sections alternate with said conductors whereby said conductors sweep across the interior of said coils as said rotor shaft revolves, and terminal means for connecting said solenoid coils with an alternating current system.

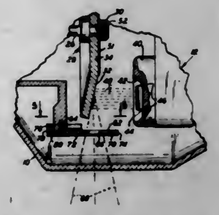
3,018,397
DEMOUNTABLE PHOTOMULTIPLIER REFRIGERATOR
Charles J. Bronco, Grand Prairie, Tex., and Robert M. St. John, Norman, Okla., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 9, 1959, Ser. No. 851,926
3 Claims. (Cl. 313—22)



1. Refrigerating apparatus for a photomultiplier tube comprising: an inner spherical container and an outer spherical container of greater radius than said inner container and having a common center therewith, whereby a space is defined between the outer surface of the inner container and the inner surface of the outer container; a port for introducing liquid air into said inner container and venting gases from said inner container, said port being an open tube extending from said inner container and passing through and sealed to the wall of said outer container and having an axis passing through said common center; a light input tube extending a short distance from said outer container and having its outer end closed by a transparent window, said light input tube having an axis passing through said common center normal to said port axis; a light trap tube coaxial with said light input tube, having an outside diameter less than the inside diameter of said light input tube and extending from said inner container to a point within said light input tube; means forming a cylindrical refrigerated chamber within said inner container, said means being an open tube of greater diameter than said light trap tube and coaxial therewith, said chamber tube having one end ring sealed to the inner surface of said inner container near said light trap tube and, at a diametrically opposite point, passing through and sealed to the walls of said inner and outer containers so that its other end is outside said outer container; a photomultiplier tube; a probe-like means having said photomultiplier tube attached to one end for supporting said tube in said chamber adjacent to said light trap tube, said means being attached to said chamber tube at its outer end by a gas tight demountable joint; and an opening in said chamber tube outside said outer container for evacuating said chamber and the space between said inner and outer containers.

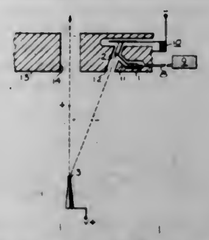
3,018,398
X-RAY GENERATOR
Zed J. Atlee, Chicago, Ill., assignor to Dunlee Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 27, 1958, Ser. No. 769,651
11 Claims. (Cl. 313—59)

1. An X-ray tube comprising an envelope, a cathode and a rotary anode mounted in opposite ends of said envelope, diaphragm means spaced from said anode and disposed in the path of the useful X-ray beam from said anode, said diaphragm means comprising a body of a material substantially opaque to X-rays having an aperture therethrough for the passage of said X-ray beam, said aperture being of a size such as to provide a sight of substantially only the focal spot of said anode from any point from within a predetermined useful field of the X-rays generated at said focal spot, said body extending radially of such opening by a distance such as to obscure substantially all of the remainder of said target portion from any point within said useful field, means supporting said body with said aperture concentric of said X-ray beam, and means for shielding the surface



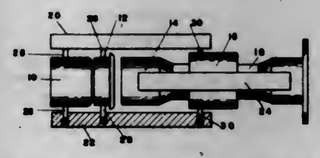
of said body facing away from said anode from bombardment by secondary electrons comprising a lamina of a material of low atomic number disposed adjacent to and covering said body surface.

3,018,399
CHARGED PARTICLE EJECTION MEANS
Haywood Shelton, Woodland Hills, Calif., assignor to Thompson Ramo Wooldridge Inc., Canoga Park, Calif., a corporation of Ohio
Filed Feb. 1, 1960, Ser. No. 6,032
15 Claims. (Cl. 313—63)



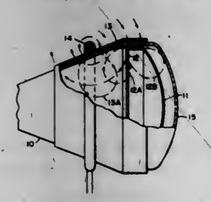
1. A high velocity particle ejection device comprising: a particle reservoir means; a plurality of particles in said reservoir; positively charged electrode means; injector means for providing an electric field for charging said particles to cause random displacement of a portion of said particles into an area adjacent said electrode means; an accelerator means for providing an accelerating potential for positively charged particles; each of said particles being positively charged on contact with said positively charged electrode.

3,018,400
CATHODE RAY TUBE
Cono S. Navatta, Clifton, George E. Smith, Lincoln Park, and Henry L. Etlinger, Newark, N.J., assignors to Thomas Electronics, Inc., Passaic, N.J., a corporation of New Jersey
Filed Aug. 24, 1959, Ser. No. 835,643
4 Claims. (Cl. 313—82)



1. An electron gun comprising a plurality of electron emitting and electron beam focusing elements, a plurality of insulating rods extending along said elements to attach said elements together, and a plurality of substantially radial metallic studs extending from said elements into said insulating rods, said studs having enlarged spade-shaped flat terminal portions embedded in said rods, said terminal portions having opposed broad surfaces roughened to form lands and recesses therein.

3,018,401
COLOR TELEVISION APPARATUS
Harry T. Stanley, Red Bank, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 5, 1959, Ser. No. 797,435
4 Claims. (Cl. 313—85)



1. In combination, a color television picture tube having a face plate, having an aperture mask back of said face plate, and having a frame of magnetizable metal supporting said mask, and means including a field neutralizing coil around the envelope of said tube on the opposite side of said frame from said face plate, for neutralizing axial components of the earth's magnetic field within said tube.

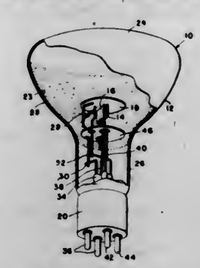
3,018,402
ELECTROLUMINESCENT LAMP STRUCTURES
Charles W. Lewis, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 6, 1957, Ser. No. 657,356
4 Claims. (Cl. 313—108)



1. In an electroluminescent lamp structure comprising a phosphor-bearing layer disposed between an electrically conductive layer and a light transmitting electrically conductive layer, the improvement which consists of embedding said phosphor in a layer of cyanoethyl cellulose.

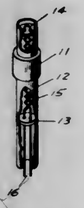
3,018,403
REFLECTOR LAMP
Robert G. Young, Nutley, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 5, 1958, Ser. No. 719,289
9 Claims. (Cl. 313—114)

2. A reflector-type lamp comprising: a sealed and evacuated envelope; a window forming a portion of said envelope and intended to be maintained radiation transmitting during lamp operation; a flat member included within the confines of said envelope and having a surface intended to be maintained radiation reflecting during useful operation of said lamp; a pair of spaced, flattened, massive, electrically-conducting and refractory electrodes within said envelope and adapted to be maintained by alternating electrical potential in an incandescent state during lamp operation by electron bombardment therebetween and at such temperature as to cause such electrodes to vaporize at a predetermined rate; a shield between said electrodes and said window; and said electrodes, said shield, said window and the flat surface of said member having such size and configuration and so positioned with respect to one another that during useful operation of said lamp direct radiations from said electrodes toward said window



are intersected by said shield and a substantial portion of direct radiations from said electrodes toward the flat surface of said member having such angles of incidence thereon that reflections therefrom will be directed toward said window and not intersected by said shield.

3,018,404
ELECTRON TUBE CATHODES
Kenneth W. Dudley, South Sudbury, and Joseph H. Apelbaum, West Newton, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Mar. 27, 1958, Ser. No. 724,283
3 Claims. (Cl. 313—346)

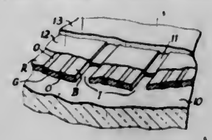


1. A method of forming an electron tube cathode assembly including the steps of placing a compact of porous highly refractory material in contact with a surface of a supporting member of highly refractory material, sintering said porous compact of highly refractory material to said supporting member of highly refractory material while in surface contact by heating at an elevated temperature, placing a substance having high electron-emissivity in contact with said sintered compact, and thereafter impregnating said porous material with said substance of high electron emissivity by heating said compact and said substance to a relatively lower temperature sufficient to cause said substance to flow into said porous material by capillary action.

3,018,405
COLOUR TELEVISION TUBE
John Kenneth Oxenham, London, England, assignor to Sylvania-Thorn Colour Television Laboratories Limited, London, England
Filed Aug. 12, 1958, Ser. No. 754,583
3 Claims. (Cl. 315—12)

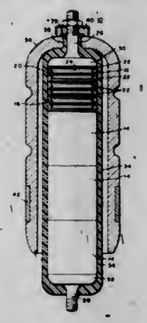
1. A viewing screen for a colour television cathode ray tube comprising a transparent base; recurrent groups of parallel stripes on said base, each group including a plurality of colour stripes adapted to provide light of different colours under cathode ray bombardment, adjacent groups being separated by stripe shaped spaces; a first layer of

conductive material applied over said groups and said spaces, said first layer providing an electrically conductive coating over each of said spaces and an electrically discontinuous coating over each of said stripes; a second layer applied over said first layer, said second layer consisting of a material of high secondary electron emissivity,



first means electrically interconnecting the odd numbered ones of said conductive coatings in said spaces to form one set, and second means electrically interconnecting the even numbered ones of said conductive coatings in said spaces to form another set, the two sets being electrically insulated from each other.

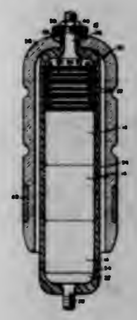
3,018,406
LIGHTNING ARRESTER
Robert T. Innis, Richland Township, Monroe County, Ind., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 17, 1958, Ser. No. 749,290
3 Claims. (Cl. 315—36)



1. A spark gap device comprising a stack of spark gaps connected in series relation, each of said gaps comprising a pair of electrodes spaced apart to form a spark gap between them, an inner gap housing comprising a pair of pre-molded semicylindrical shells having means on their inner surface for supporting and spacing said electrodes, said housing completely enclosing the space between the electrodes, each shell having shaped longitudinal edges for interlocking engagement with the other shell of said pair, said shells positioned with their opposing longitudinal edges in engagement about said electrodes and a molded plastic outer housing completely enclosing and sealing said gaps and said shells.

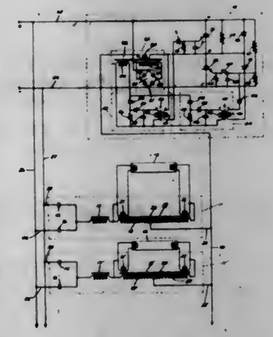
3,018,407
LIGHTNING ARRESTER
Robert T. Innis, Richland Township, Monroe County, Ind., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 23, 1959, Ser. No. 788,686
6 Claims. (Cl. 315—36)

1. A spark gap device comprising a stack of spark gaps in series, each of said gaps comprising a pair of spaced electrodes and a molded plastic housing of resilient material comprising a thermoplastic resin and a quantity of mica filler sufficient to render said housing substantially opaque to ultraviolet radiation enclosing said



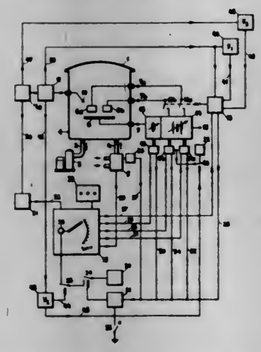
gaps, whereby said housing is arc resistant, weather resistant, and free from ultraviolet penetration.

3,018,408
HIGH FREQUENCY LIGHTING SYSTEMS AND BALLAST CIRCUITS THEREFOR
Luther L. Gesuit, Danville, Ill., assignor to General Electric Company, a corporation of New York
Filed May 18, 1960, Ser. No. 29,982
14 Claims. (Cl. 315—95)



1. A ballast circuit for starting and operating an arc discharge lamp with high frequency alternating current produced by said ballast in conjunction with an external switching network energized from a direct current power source, said ballast circuit comprising: a pair of input leads for connection across the direct current power source, a switching network output lead, a pair of capacitors connected in series circuit relation across said input leads, an inductor connected in circuit with said capacitors, and a transformer having a primary and at least one secondary winding, said primary winding being connected in series circuit relation with said inductor and said switching network output lead, said capacitors being alternately charged and discharged at alternate half cycles of the alternating current and said capacitors, said inductor and the magnetizing reactance of said transformer being associated in tuned circuit relation with said switching network to maintain oscillations at a predetermined frequency and comprising a half monocyclic network for the purpose of limiting the current supplied to the arc discharge lamp.

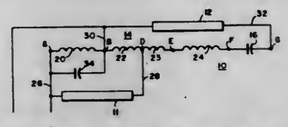
3,018,409
CONTROL OF GLOW DISCHARGE PROCESSES
Bernhard Berghaus and Hans Bucek, Zurich, Switzerland, assignors to Elektrophysikalische Anstalt Bernhard Berghaus, Vaduz, Liechtenstein
Filed Dec. 7, 1956, Ser. No. 626,934
Claims priority, application Switzerland Dec. 9, 1953
15 Claims. (Cl. 315—111)



1. In a starting process for stabilizing the operation of an electric glow discharge chamber for the production of an electrical gas and glow discharge of high current strength and high energy density at least at one surface of an object to be treated in a gaseous atmosphere for carrying out metallurgical, chemical, or other technical operations on such surface, said object being arranged as an electrode and insulated from a counter-electrode in the discharge chamber, said chamber having means for charging a gas thereinto and means for regulating the pressure of the gas in the chamber, said object being connected by way of an insulated current lead-in passing through the chamber wall with an at least periodically negative pole of a regulatable source of tension whose other pole is connected to the counter-electrode, the steps which comprise regulating the source of tension during a first time interval to a first voltage level and the gas pressure to a first pressure value, for such time until at the prevailing starting temperature at said object a gas or glow discharge of a lower intensity than corresponds to the operating condition is produced as much as possible at all the voltage-carrying constructional parts in the discharge chamber, said glow discharge effecting an at first incomplete elimination of disturbing areas on the surfaces of said voltage-carrying parts, and thereupon increasing the gas pressure and voltage to greater and greater values, so that with the thereby increased discharge energy an increasingly more complete elimination of said disturbing areas occurs, until finally at predetermined voltage and pressure values the surfaces of the voltage-carrying parts are entirely free of disturbing areas and are electrically homogenized, whereupon the starting interval is terminated and the operating interval for the carrying out of the treating process is begun.

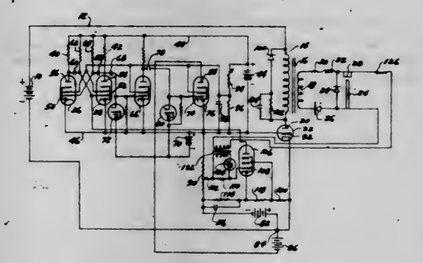
3,018,410
CIRCUIT ARRANGEMENT FOR ENERGIZING LOAD APPARATUS
Archie R. Cornell, Avon Lake, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 5, 1960, Ser. No. 20,110
7 Claims. (Cl. 315—138)

1. A circuit arrangement for energizing a plurality of discharge devices, said arrangement comprising inductive means being energized by a voltage source and including a primary winding and at least a pair of secondary windings, said primary winding and one of said secondary windings being connected in aiding voltage relation across at least one of said discharge devices, the other of said secondary windings being connected in bucking voltage relation with said one secondary winding to energize the remainder of said discharge devices, said primary and said one secondary windings providing sufficient voltage to initiate a discharge in said one discharge device, said one and said other secondary windings providing sufficient voltage to initiate a discharge in said remainder of said discharge devices subsequent to the commencement of



the discharge in said one discharge device, said one and said remainder of said discharge devices being substantially serially related with said voltage source when energized, and means for ballasting the current through said one and said remainder of said discharge devices including capacitance means, said capacitance means being connected serially with said one and said other secondary windings and said remainder of said discharge devices to preclude the occurrence of oscillatory effects which would otherwise occur if physical variables pertinent to the oscillatory effects were to attain otherwise critical values.

3,018,411
PER PULSE CUT-OFF CIRCUIT
Robert S. Webb, Bloomfield Hills, Mich.
Filed May 3, 1960, Ser. No. 26,526
18 Claims. (Cl. 315—163)

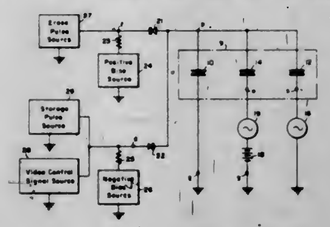


1. In an apparatus for machining a conductive workpiece by intermittent electrical discharge across a gap between an electrode and said workpiece, a power source, an electronic switch connected to said power source operable to deliver power pulses of preselected normal voltage characteristic to said gap, a pulser operatively associated with said switch for pulsing said switch, and a cut-off device operatively associated with said pulser operable in response to predetermined deviation of gap voltage to interrupt an abnormal pulse within ten percent of the period of pulse duration.

3,018,412
ELECTRICAL SYSTEMS EMPLOYING NONLINEAR DIELECTRIC CAPACITIVE ELEMENTS
Juris A. Asars, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 4, 1960, Ser. No. 12,712
13 Claims. (Cl. 315—166)

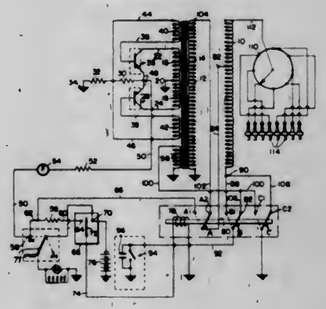
1. In an electrical system employing a control signal and pulse signals, load means to be variably energized in

accordance with the amplitude of sampled portions of said control signal, at least one nonlinear dielectric capacitive element having first and second electrodes and exhibiting an alternating current impedance which varies as a function of applied electric field, a source of periodic current power having an output voltage which includes an alternating component, means for apportioning the alternating component of said voltage to said element and said load means in accordance with their relative impedances, at least one nonlinearly conductive switching device having first and second terminals with said first terminal con-



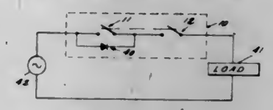
nected to said first electrode, means for applying said control signal to said second terminal, means for nonconductively conditioning said switching device, means for maintaining the average direct-current potential of said second electrode at a reference potential level so that the periodic potential variations of said first electrode relative to said level depend upon the relative impedances of said elements and said load means, and means utilizing said pulse signals for recurrently charging said capacitive element to an average value of applied electric field in accordance with a function of said control signal.

3,018,413
TRANSISTORIZED IGNITION SYSTEM
Nicholas T. Neapolitakis, Chicago, Ill., assignor to Shurhit Products, Inc., Waukegan, Ill., a corporation of Illinois
Filed Jan. 21, 1960, Ser. No. 3,763
6 Claims. (Cl. 315—206)



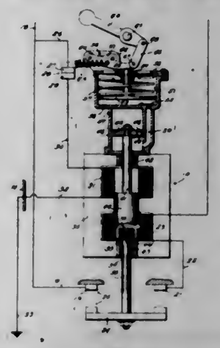
1. In an ignition breaker circuit system for combustion engines, a battery source of electric current, an ignition coil for the engine, a transformer, a circuit and switch means therein for connecting the source of current through the transformer to the coil, a transistorized push-pull oscillator connected to the source of current and to the transformer primary for exciting the coil to high voltage, the switch means comprising a relay having an energizing winding and a plurality of two-way switches with circuit connectors and operated thereby in one position to connect the ignition coil to the battery, the coil to the ignition breakers, and a portion of the transformer winding to its ground in starting the engine.

3,018,414
INDIVIDUAL ONE-HALF CYCLE INTERRUPTING DEVICE
Roy H. Albright, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 13, 1958, Ser. No. 741,757
5 Claims. (Cl. 317—11)



1. An A.-C. circuit breaker for controlling the flow of current in an A.-C. circuit; said A.-C. circuit breaker comprising a first pair of cooperating contacts and a second pair of cooperating contacts and a rectifier; said first and second pair of cooperating contacts being movable between an engaged and disengaged position; circuit connections for connecting said rectifier in series with said first pair of cooperating contacts and said A.-C. circuit and for connecting said rectifier in parallel circuit relation with respect to said second pair of cooperating contacts; an operating means for operating said first and second pair of cooperating contacts from their said engaged position to their said disengaged position; said operating means being connected to said first and second pair of cooperating contacts and being operable to first move said second pair of cooperating contacts to their said disengaged position and to thereafter move said first pair of cooperating contacts to their said disengaged position; said rectifier being rated to be capable of conducting the full load current of said A.-C. circuit for at least one-half cycle in series with said first pair of cooperating contacts; at least one of said first or second pair of cooperating contacts conducting the full alternating current of said A.-C. circuit when closed.

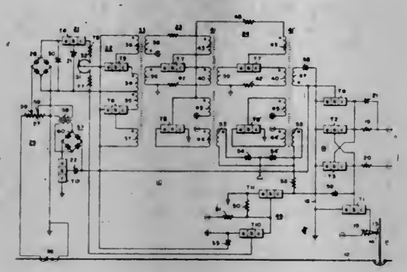
3,018,415
CIRCUIT RECLOSER
Edwin A. Link, Waukesha, Wis., assignor to R T & E Corporation, Waukesha, Wis., a corporation of Wisconsin
Filed Dec. 31, 1956, Ser. No. 631,677
10 Claims. (Cl. 317—23)



1. A circuit recloser comprising a line contact, a load contact, a movable contact bridging member, biasing means for normally maintaining said contact bridging member in open position, an operating member for said movable contact bridging member, a line voltage responsive means for imposing a force on said operating member proportionate to the line voltage for biasing said operating member and movable contact bridging member

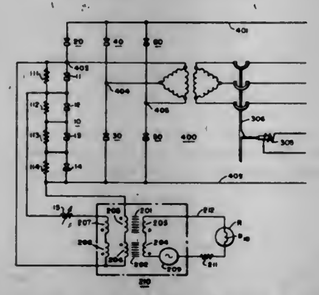
to closed position when the line voltage reaches a predetermined potential, and load current responsive means for imposing an opposing force on said operating member proportionate to the load current for biasing said operating member and movable contact bridging member to open position to interrupt said load current in response to a load current which is of sufficient magnitude to overcome the biasing force of said line voltage responsive means on said operating member.

3,018,416
STATIC OVERCURRENT TRIP DEVICE
Robert F. Karlicek, Lombard, Ill., and Jerome Sandin, Forest Hills, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 19, 1959, Ser. No. 794,375
8 Claims. (Cl. 317—36)



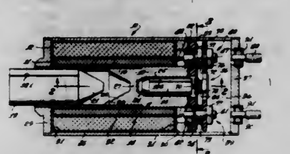
1. A control circuit for a circuit breaker comprising: means for providing a voltage having a magnitude which varies in accordance with the magnitude of an overcurrent in the circuit; means for providing an output signal having a frequency which varies directly with the magnitude of the voltage; and means for providing a control signal in response to a predetermined number of cycles of said output signal to trip the breaker.

3,018,417
DETECTION CIRCUIT
August P. Colalaco, Forest Hill, Lalan G. Miller, Pittsburgh, and Edward J. Cham, Irwin, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 19, 1958, Ser. No. 762,094
3 Claims. (Cl. 317—52)



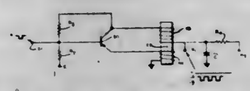
3. In combination, a plurality of semiconductor rectifier units connected in series circuit relationship, a resistor connected in parallel circuit relationship with each of said rectifier units, means for applying a supply voltage to said series connected rectifier units, means for detecting the failure of said rectifier units, said means comprising a magnetic amplifier having first and second control windings and an output winding, said first control winding being connected across at least one of said resistors and being responsive to the voltage across said one resistor, said second control winding being connected across all of said resistors and being responsive to the voltage across all of said resistors, means for balancing the voltage applied to said control windings for normal operation of all of said rectifiers, said voltage on said control windings becoming unbalanced upon failure of one of said rectifiers, said magnetic amplifier delivering an output voltage to said output winding when the voltage on said control windings becomes unbalanced.

3,018,418
SOLENOID
Thomas W. Conrad, Altadena, Calif., assignor to Cannon Electric Company, Los Angeles, Calif., a corporation of California
Filed Apr. 30, 1958, Ser. No. 732,071
8 Claims. (Cl. 317—123)



1. A magnetic device comprising a pulling coil and a holding coil, the coils being tubular and having forward ends and rearward ends, the coils being arranged one around the other whereby the inner coil defines a space extending axially therethrough, a core body of magnetic material extending into said space from the rearward ends of the coils and leaving a central cavity within the inner coil disposed forwardly of the core body and open in the forward end of said space, a first plunger movable axially in said cavity toward said core body in response to energization of the pulling coil, the core body having a well formed therein open in the rearward end of the core and closed to the said cavity, a second plunger movable axially in said well during the period of energization of the pulling coil, switch means electrically connected to said coils and operatively connected to said second plunger and adapted to be electrically connected to a source of power for controlling energization of said coils in response to movement of said second plunger into the well, and means defining a housing containing said switch means and hermetically sealing the switch means from the space in said cavity.

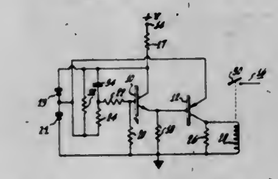
3,018,419
REGENERATIVE ACTUATOR DRIVE CIRCUITS
Theodore H. Bonn, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 26, 1955, Ser. No. 536,386
21 Claims. (Cl. 317—148.5)



18. In a control circuit, an electromechanical actuator device having a core of magnetic material, a mechanical element movable between first and second predetermined positions in response to flux changes in said core, first and second windings on said core inductively coupled to one another, drive means coupled to said first

winding, signal means coupled to said drive means for selectively causing said drive means to produce an output thereby to effect a flux change in said core, the power output produced by said drive means in response to operation of said signal means normally being insufficient to move said element from said first to said second position when said element is in said first position, but being sufficient to hold said element in said second position when said element is in said second position, and means coupling potentials induced in said second winding, in response to flux changes in said core, to said drive means thereby to increase the power output of said drive means when said flux change in said core is of a sense tending to move said element from said first to said second position whereby said signal means and said potentials in said second winding cooperate to effect a power output from said drive means of sufficient magnitude to move said element from said first to said second position.

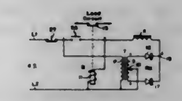
3,018,420
TIME DELAY CIRCUIT
Myron E. Norris, Haddonfield, N.J., assignor, by mesne assignments, to American Bosch Arma Corporation, Hempstead, N.Y., a corporation of New York
Filed July 16, 1959, Ser. No. 827,645
4 Claims. (Cl. 317—148.5)



4. A time delay circuit for operating a relay circuit comprising a pair of semi-conductor devices, said pair including a first semi-conductor device of the NPN type having an input circuit and a second semi-conductor of the PNP type having an output circuit, each said semiconductor including a base, an emitter and a collector electrode, means for connecting the emitter of said first semiconductor device to the base of said second semi-conductor device to compensate for differences in base-to-emitter junction potentials resulting from temperature changes, means for biasing said first semi-conductor device to a normally conducting state and said second semiconductor device to a normally non-conducting state when operating potentials are applied thereto, a resistive capacitive network connected in the input circuit of said first semi-conductor device, and means for applying a control voltage across said resistive capacitive network to switch the operating states of said first and second semi-conductor devices when said voltage exceeds a predetermined level, said control voltage providing the operating potentials for said first and second semi-conductor devices.

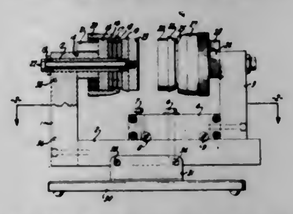
3,018,421
A.C.-D.C. ELECTROMAGNET
Alfred W. Hodgson, Orchard Park, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 26, 1959, Ser. No. 795,629
9 Claims. (Cl. 317—154)

1. Relay apparatus including an electromagnet having a coil and operable means, said operable means on actuation of said electromagnet being operable from a first position to a second position, first means for supplying alternating current, second means for supplying direct-current, means connected to said coil for connecting said coil in energizing relationship with said first means, said electromagnet being actuated on energization of said coil by said alternating current of said first means, reactance means having a high impedance to alternating current and a low resistance to direct-current and means connected to said coil and to said reactance means for connecting said



coil to said second means through said reactance means, energization of said coil by the direct-current of said second means being insufficient to actuate said electromagnet but being sufficient to hold said electromagnet actuated once it is actuated.

3,018,422
VARIABLE-FIELD PERMANENT MAGNET
Norman T. Seaton, 2230 Prince St., Berkeley, Calif.
Filed Nov. 16, 1959, Ser. No. 853,342
5 Claims. (Cl. 317—201)



4. An adjustable-field permanent magnet comprising a C-shaped magnetic yoke comprising two L-shaped portions each composed of a leg and a back, means connecting said backs together in parallel, sliding relation, said legs being parallel and adjustably spaced, two axially alined, non-magnetic tubes attached to and extending inward toward each other from respective ones of said legs, two discs having an externally threaded outer edge and having a central bore receiving a respective one of said non-magnetic tubes, said externally threaded discs being mounted upon said tubes in magnetic connection with respective ones of said legs, two permanently, longitudinally magnetized cylinders, each having an axial bore receiving a respective one of said non-magnetic tubes, said cylinders being mounted upon said tubes between and adjacent to respective ones of said externally threaded discs, two internally threaded sleeves of ferromagnetic material in mating screw engagement with respective ones of said externally threaded discs, said internally threaded sleeves thereby being in longitudinally adjustable, coaxial relation to respective ones of said longitudinally magnetized cylinders, two additional ferromagnetic discs mounted upon respective ones of said tubes between and adjacent to respective ones of said cylinders, two non-magnetic screws extending inward through respective ones of said tubes, and two removable pole pieces attached to the inner ends of respective ones of said screws.

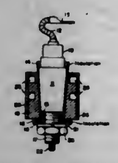
3,018,423
SEMICONDUCTOR DEVICE
Melvin W. Aarons, Baltimore, John W. Dzimianski, Catonsville, and John M. Bentley, Glen Burnie, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 16, 1960, Ser. No. 29,464
16 Claims. (Cl. 317—234)

1. A two-terminal three-zone semiconductor device which displays a negative resistance due to quantum mechanical tunneling over a portion of the I-V characteristic curve while the device has a potential of predetermined polarity applied thereto and which displays a different I-V characteristic curve of predetermined characteristics while the potential across the terminals is reversed in polarity, comprising a first region of a semiconductor material of a first type of semiconductivity, the material of said first region being doped to a high concentration of carriers whereby the material is degenerate, a second region of a material of a second type of semiconductivity having one surface thereof disposed upon and contiguous with one surface of said first-named region and forming therewith a first narrow p-n junction characterized by quantum mechanical tunneling of electrons while a small potential difference exists thereacross, the second region having a gradient in the carrier



concentration therein between two portions thereof, the portion of the second region adjacent the first-named region being doped to a high degree of carrier concentration whereby the material of the last-named portion is degenerate, a third region of a semiconductor material of the first type of semiconductivity disposed upon and contiguous with the surface of the other portion of said second region and forming therewith a second p-n junction, the portion of the second region adjacent the third region being doped to a carrier concentration whereby the last-named portion of the second region is almost degenerate, said third region being doped to a carrier concentration whereby the material of the third region is degenerate, and ohmic contacts disposed upon and contiguous with one surface of said first region and one surface of said third region.

3,018,424
RECTIFIER APPARATUS
August P. Colaiaco, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 28, 1959, Ser. No. 816,638
5 Claims. (Cl. 317—234)



1. A rectifier assembly comprising a water-cooled, metal bus having a plurality of openings extending therethrough, said openings being spaced apart longitudinally of said bus, a plurality of semiconductor diodes having terminals of one polarity extending beyond one side of said bus, said diodes having terminal bases of the opposite polarity in said openings, said bases having extensions extending from said openings beyond the opposite side of said bus, electrical insulation around said buses and spacing said bases from said bus in said openings, means for clamping said bases to said bus, electrical insulation spacing said means from said bus, and means connecting a terminal of said one polarity of one of said diodes to the terminal base extension of an adjacent one of said diodes.

3,018,425
CURRENT RECTIFIER ASSEMBLY
Howard A. Wagner, North Huntingdon, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 25, 1959, Ser. No. 842,397
4 Claims. (Cl. 317—234)



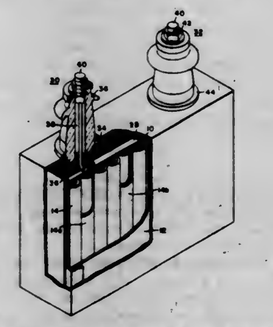
1. Current rectifying apparatus comprising: a thermally and electrically conductive plate having an aperture therethrough; a solid state rectifying element having a first face and a second face; an insulating member substantially enclosing said rectifying element except for said first and second faces; said first face being conductively attached to said plate around said aperture by solder placed in said aperture; an electrically conductive strap member having a first portion conductively attached to said second face of said rectifying element; said insulating member being fixedly disposed between said plate and said strap.

3,018,426
ELECTRIC CONTACTS
Wolfgang Ruppel, Zurich, Switzerland, assignor to Radio Corporation of America, a corporation of Delaware
Filed Oct. 19, 1959, Ser. No. 847,166
16 Claims. (Cl. 317—237)



15. An electrical device comprising a single crystal of insulating cadmium sulfide having a resistivity greater than 10^{10} ohm-cm. and being relatively free of trapping imperfections, a first electrode consisting essentially of crystalline tellurium contacting said crystal, said first electrode providing ohmic contact for hole current flow between said first electrode and said crystal, and a second electrode consisting essentially of a member of the group consisting of indium, gallium, tin, lead and combinations thereof, contacting said crystal, said second electrode providing ohmic contact for electron current flow between said second electrode and said crystal.

3,018,427
POWER CAPACITOR UNITS
Ralph E. Marbury, Bloomington, Ind., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 13, 1958, Ser. No. 754,812
7 Claims. (Cl. 317—242)



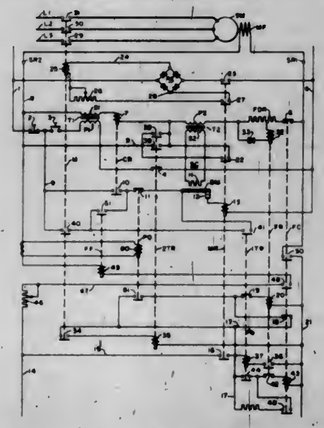
1. A capacitor unit comprising a rectangular case, an insulating liner in said case, a plurality of capacitor sec-

tions, each section comprising alternating layers of conducting foil and dielectric sheet material rolled together into a unitary, elongated cylindrical structure having flat side faces and end faces, said sections disposed in said case with their side faces adjacent each other and their end faces abutting said insulating liner, said sections being electrically connected together and each section having a plurality of alternate layers of conducting material and insulating material wrapped therearound.

3,018,428
FIELD WINDING CONTINUITY CHECK CIRCUITS

Emil H. Peters, Smicksburg, Ind., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 29, 1960, Ser. No. 25,763
8 Claims. (Cl. 318—176)



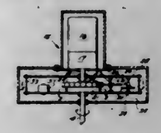
1. In an electric system of control for a synchronous motor, in combination, a source of alternating current for the stator winding of the motor; a source of direct current for the field winding of the motor; and synchronous motor starting means including, among other elements, a main contactor and a field contactor, and which synchronous starting means, when energized, first effects through the main contactor the connection of the stator winding to the source of alternating current and, thereafter, when the proper speed condition of the rotor of the motor has been attained for proper synchronization, to connect the field winding, by means of said field contactor, to the source of direct current; a source of potential, switching means for connecting the source of potential to the field winding circuitry of the synchronous motor to cause an electric current to flow in said circuitry, means responsive to the current caused to flow in said circuitry for energizing the synchronous motor starting means, and means, responsive to the actuation of the synchronous motor starting means, for disconnecting the source of potential from the field winding.

3,018,429
CONSTANT SPEED MOTOR SYSTEM

John H. Andresen, Jr., Greenwood Lake, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York

Filed Apr. 6, 1959, Ser. No. 804,318
11 Claims. (Cl. 318—312)

1. A constant speed motor system of the character described, comprising an electric motor with a winding connectible to a power source, an output shaft driven by said motor, a time-based escapement mechanism having an escapement wheel rotatable at a predetermined rate, means coupling said escapement wheel with said output shaft including a torque spring, a support for said mechanism, and a pressure variable impedance element in circuit relation with said winding, said support rotatably mounted to said output shaft, said support constructed

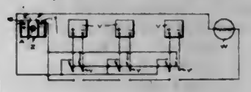


and operatively positioned to engage said element and thereby exert a pressure on said element in accordance with speed differentials between said escapement wheel and said output shaft to correspondingly change current through said motor winding and maintain the output shaft speed.

3,018,430
THERMOELECTRIC GENERATOR WITH FEEDBACK FOR INCREASING EFFICIENCY

Herschel G. Pack, 4308 Modoc Road, Santa Barbara, Calif.

Original application Mar. 2, 1959, Ser. No. 796,403, now Patent No. 2,979,551, dated Apr. 11, 1961. Divided and this application Sept. 3, 1959, Ser. No. 837,905
5 Claims. (Cl. 322—2)



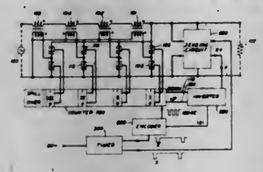
1. In combination: a thermoelectric generator having at least one thermocouple in which a heat transfer element is positioned between and contacted by a positive current-producing element and a negative current-producing element; the positive and negative elements being formed of materials that offer a resistance to a current flowing through the three elements; the materials having the characteristic that as the voltage is increased the resistance of the positive and negative elements is lowered and therefore a greater amount of current will flow through the elements and the heat transfer element for increasing the temperature of the latter; said positive and negative elements generating a greater current when there is a greater temperature gradient across them; current storing means; a double throw switch and circuit for connecting the three elements in series with the current storing means for causing the current output of the elements to be stored in the current storing means when the switch is in one position; and a second circuit placing the three elements in series with the current storing means and with a work load when the switch is moved into its other position so that the current storing means will discharge through the three elements and increase the temperature of the heat transfer element and cause the positive and negative elements to generate a greater amount of current that will flow to the load.

3,018,431
ALTERNATING CURRENT VOLTAGE REGULATOR

Hans L. Goldstein, Hanover Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 4, 1960, Ser. No. 329
9 Claims. (Cl. 323—45)

1. In a regulator for interconnecting a source of alternating voltage and a load circuit, a plurality of transformers the voltage ratios of which are different from each other and are related according to a predetermined plan, said transformers having their secondary windings connected in series between said source and said load circuit, individual switching means normally short-circuiting the primary windings of each of said transformers, a reference source proportional to the voltage required

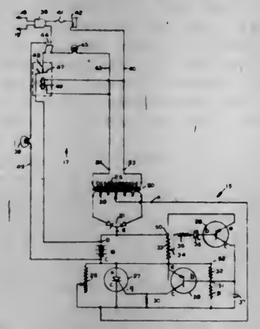


across said load, means for comparing the output voltage across said load with said reference source to produce an error signal, and means responsive to said error signal in accordance with said plan to selectively open-circuit said primary windings of said transformers and connect them to receive current from said source of alternating voltage.

3,018,432
VOLTAGE REGULATOR

Max Palmer, 12 Midwood Road, Rockville Centre, N.Y.

Filed June 17, 1959, Ser. No. 820,957
7 Claims. (Cl. 323—66)

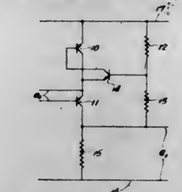


1. In a voltage regulator means for supplying current from a current source to a load device, a controlled electronic rectifier of the type having an anode and cathode and also a gate electrode, which latter when subjected to a predetermined electrical charge, makes said rectifier conductive so that current is allowed to flow from the anode to the cathode, two output terminals for connection respectively to the terminals of the load, a first resistance; the first ouput terminal being connected to said anode and to one terminal of said first resistance; the second output terminal being for connection to one terminal of the current source; said cathode being connected to the other terminal of said first resistance and adapted for connection to the other terminal of the current source, whereby when said controlled rectifier is non-conductive, said first resistance will allow only a trickle current to be available at said output terminals and when the gate electrode is excited, said controlled rectifier will allow substantially all of the energy from the current source to be available at said output terminals, first and second transistors, means actuated by the potential existing at said output terminals, making the first transistor conductive and holding the second transistor non-conductive while said potential is above a predetermined value, and making the first transistor non-conductive and making the second transistor conductive when said potential falls below said value and means including the second transistor for charging said gate electrode to make said controlled rectifier conductive when said second transistor is conductive; each of the transistors having a base, emitter and collector electrodes; the means for controlling the conductivity of said transistors comprising a second resistance having a tap intermediate its ends, third, fourth and fifth resistances and a diode rectifier; one terminal of the second resistance being connected to the second output terminal and to the emitter of the first transistor; the other terminal of the second resistance being connected to the emitter of the second transistor, one terminal of the third resistance to the anode of the controlled rectifier; said tap on the second resistance being connected to one terminal of the diode rectifier; the other terminal of said diode rectifier being connected to the base of the first transistor; said diode rectifier being arranged that the current is allowed to pass therethrough to the base of the first transistor; the collector of the first transistor, the base of the second transistor, the other terminal of the third resistance and one terminal of the fourth resistance being connected together; the collector of the second transistor, the gate of the controlled rectifier and one terminal of the fifth resistance being connected together and the other terminals of the fourth and fifth resistances and the cathode of the controlled rectifier being electrically connected together.

3,018,433
SERIES TRANSISTOR CIRCUIT

John Stone IV, Pennsauken, N.J., assignor to The Franklin Institute of the State of Pennsylvania, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 2, 1959, Ser. No. 837,696
19 Claims. (Cl. 323—79)



1. A series circuit whereby a pair of transistors may be connected in series with the voltage across one held to a predetermined ratio of the voltage across the other comprising a pair of transistors of the same type connected in series, a pair of resistors having resistances in proportion to the predetermined ratio of voltages across the series transistors connected in series and connected to the transistors at their ends, and a bridging transistor of opposite type from the series transistors coupling the point between the series resistors with the common series connection of the transistors and the base of the series transistor whose voltage is to be corrected whereby a signal applied to one of the series transistors produces an error signal in the bridging transistor which corrects the voltage in the other series transistor through its base connection until the voltages across both series transistors are approximately in the predetermined ratio.

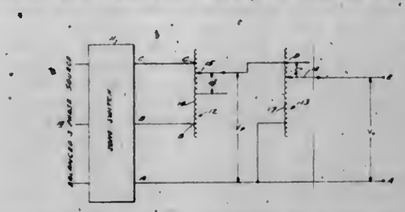
3,018,434
BAR LINKAGE FOR VOLTAGE COMPENSATED PHASE SHIFTER

Stanley E. Zocholl, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 29, 1957, Ser. No. 693,063
3 Claims. (Cl. 323—120)

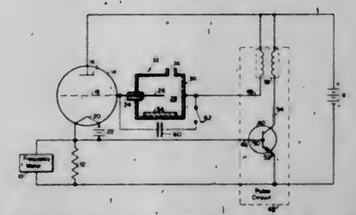
1. An electrical phase shift circuit having an input circuit and an output circuit, said input circuit being ener-

gized from a three phase voltage source, said electrical phase shift circuit being comprised of a phase shift transformer and a voltage compensating transformer, one phase of said three phase source energizing the primary winding of said phase shift transformer, said voltage compensating transformer energized by a second phase of said three phase source and by the secondary winding of said phase shift transformer, means to transmit non-linear



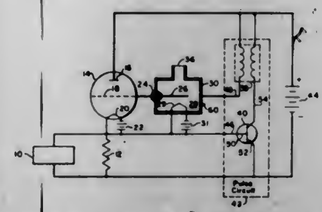
motion to said voltage compensating transformer from said phase shift transformer, said means maintaining the magnitude of voltage at said output at a constant magnitude for all degrees of phase shift; said means comprising a plurality of links and movable pivots operatively connecting said plurality of links together; means for journaling the movement of said pivots comprising a straight slot for each of said movable pivots.

3,018,435
MEASURING
George F. Vanderschmidt, Cambridge, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Oct. 15, 1958, Ser. No. 767,312
7 Claims. (Cl. 324—33)



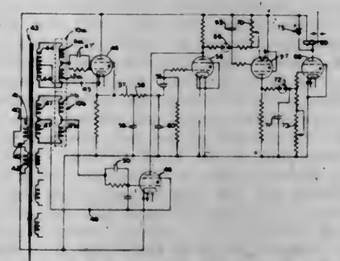
1. An ionization gauge comprising an ion chamber containing a negative electrode for collecting positive ions, a positive electrode for collecting negative ions, and an ionization agent, an electrometer tube having a grid, cathode, and plate, and a direct current voltage source maintaining said plate at a positive potential with respect to said cathode, said grid being connected to said negative electrode, said grid and said negative electrode being substantially completely insulated from ground, so that the node comprising the grid and negative electrode retains a negative electrostatic charge, means for capacitively applying to said node a pulse which is positive with respect to said cathode to cause electrons to be collected by said grid from said cathode so that the ion chamber is caused to store an electrostatic charge and said grid assumes a large negative voltage when said positive pulse is removed, said means for applying said positive pulse being energized when said large negative voltage on the grid is decreased a predetermined amount by the collection of positive ions by said negative electrode, said means for applying said pulse comprising a pulse forming circuit capable of generating a pulse having a duration which is substantially shorter than the time during which the large negative grid voltage normally remains on said electrometer tube, and means for measuring the frequency of application of said large potential difference.

3,018,436
APPARATUS FOR MEASURING PHYSICAL QUANTITIES
George F. Vanderschmidt, Cambridge, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 13, 1959, Ser. No. 799,203
3 Claims. (Cl. 324—33)



1. An apparatus comprising an input transducer having an electrical output, said input transducer being responsive to external physical stimulus and comprising a current source whose output of current is substantially independent of voltage across the transducer, the transducer having a negative electrode and a positive electrode, an electrometer tube having a grid, cathode, and plate, a source of plate voltage connected to said plate, said grid being connected to said negative electrode, said grid and said negative electrode being substantially completely insulated from ground, so that the node comprising the grid and negative electrode retains a negative electrostatic charge, means for applying a large positive potential difference between said positive electrode and said cathode to cause electrons to be collected by said grid from said cathode so that said transducer is caused to store an electrostatic charge and said grid assumes a large negative voltage when said large positive potential difference is removed from said cathode and positive electrode, said means for applying said large potential difference being energized only when said large negative voltage on the grid is decreased a predetermined amount by current flow through said transducer from said negative electrode, and means for measuring the frequency of application of said large potential difference.

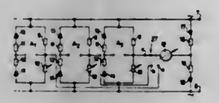
3,018,437
MOTION AND VOID CONTROL DEVICE
Edmond R. Dudley, Santa Clara, Calif., assignor to Peerless Equipment Company, Mountain View, Calif., a corporation of California
Filed Dec. 19, 1958, Ser. No. 781,742
5 Claims. (Cl. 324—34)



1. A control system of the character described for sensing motion of a line of metal objects such as cans and for also sensing the presence of a void in such line, said system comprising: A first electromagnetic sensing head pulsing at a frequency determined by the motion of such metal objects in its vicinity and a second electromagnetic sensing head pulsing when a void in such line

of metal objects exists; said system also comprising an electrical element having a first state to be maintained during normal motion of metal objects past the sensing heads and also during the existence of a void in the vicinity of said heads, said electrical element having also a second state to be maintained in the event of stoppage of motion of said line of metal objects; said system also comprising a circuit linking the output of said heads to said electrical element to maintain the same in its first state during normal motion of metal objects and during the existence of a void therein adjacent the sensing heads and to maintain said electrical element in its second state during stoppage of motion of such objects adjacent said head.

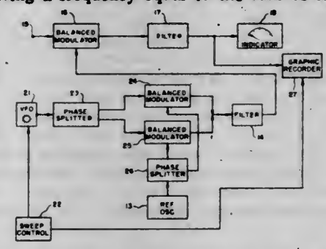
3,018,438
MULTIPLE HALF-WAVE DOUBLE BRIDGE CONNECTION HAVING ALTERNATING CURRENT SUPPLY AND DIRECT CURRENT OUTPUT
Rudolf Mustert, Oberwil, Zug, Switzerland, assignor, by mesne assignments, to N.V. Apparatenfabriek Plaisier, The Hague, Netherlands
Filed June 12, 1959, Ser. No. 819,901
Claims priority, application Switzerland June 21, 1958
1 Claim. (Cl. 324—57)



Apparatus comprising: first and second energizing terminals for receiving an alternating current; a plurality of half-wave bridges connected between said energizing terminals, each of said half-wave bridges including first and second branches connected in series between said energizing terminals and third and fourth branches connected in series between said energizing terminals, said first and second branches each including an impeder and a unidirectional conducting device, each of said unidirectional conducting devices being polarized to conduct current only in a direction from said first energizing terminal to said second energizing terminal, each of said third branches being an impeder, each of said fourth branches being a variable impeder, first output terminal means connected to the junction of said first and second branches and second output terminal means connected to the junction of said third and fourth branches; fifth and sixth branches connected in series between said first and second energizing terminals, each of said fifth and sixth branches including an impeder and a unidirectional conducting device, said unidirectional conducting devices being polarized to conduct current only in a direction from said second energizing terminal to said first energizing terminal; a bridge balance detecting means having first and second input terminals; means for connecting said first input terminal to the junction of said fifth and sixth branches; a switch having one moving contact and a plurality of fixed contacts; means for connecting the moving contact of said switch to said second input terminal; and means for connecting each of said fixed contacts to each of said second output terminal means respectively.

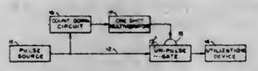
3,018,439
AUTOMATIC WAVE ANALYZER
Laurie R. Burrow, Fort Worth, Tex., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Nov. 20, 1958, Ser. No. 775,317
5 Claims. (Cl. 324—77)

1. A complex wave analyzer comprising a variable frequency oscillator and a first phase splitter producing a first pair of signals at a first frequency, a fixed frequency reference oscillator and a second phase splitter producing a second pair of signals at a second frequency, a first balanced modulator connected to said first phase splitter and said second phase splitter, a second balanced modulator connected to said first phase splitter and said second phase splitter, a first filter connected to said first and second balanced modulators for producing a third signal having a frequency equal to the sum of said first



and second frequencies, a third balanced modulator connected to said first filter and to an input terminal for combining said third signal and a complex wave applied to said input terminal to produce a fourth signal having a frequency equal to the difference between a frequency component of said complex wave and the frequency of said third signal, a second filter connected to said third balanced modulator and tuned to said second frequency for passing said fourth signal, and an indicator connected to said second filter for indicating the amplitude of said fourth signal.

3,018,440
COHERENT PULSE RATE DIVIDER CONSISTING OF COUNTER, MONOSTABLE MULTIVIBRATOR, AND PENTODE COINCIDENCE GATE
Richard G. Cumings, 2716 Ramblewood Drive, District Heights, Md.
Filed Mar. 10, 1959, Ser. No. 798,566
3 Claims. (Cl. 328—41)
(Granted under Title 35, U.S. Code (1952), sec. 266)

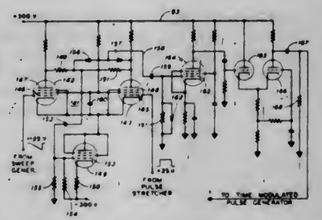


1. A coherent pulse rate divider circuit comprising, a first transmission path having an input to which information pulses are applied, an output, normally closed unipulse gate means positioned in said path to block transmission therethrough, control means to open said gate in response to a control signal, said gate means being characterized in that the output pulses therefrom the same relative shape and time position as the input pulses which produce them, pulse forming means for generating a control signal, said pulse forming means including a triggered one-shot multivibrator having an output coupled to said control means and an input, and at least one pulse frequency divider coupling the input of said first transmission path to the input of said one-shot multivibrator.

3,018,441
AMPLITUDE COMPARATOR CIRCUIT
Calvin M. Clark, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Original application June 28, 1957, Ser. No. 668,781, now Patent No. 2,968,724, dated Jan. 17, 1961. Divided and this application Sept. 28, 1959, Ser. No. 842,890
1 Claim. (Cl. 328—148)

An amplitude comparator circuit for indicating equality between a sloping sawtooth waveform and a rectangu-

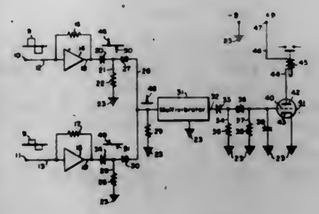
lar pulse waveform comprising a first electronic tube having an anode, a cathose and a control grid; a second electronic tube having an anode, a cathode and a control grid; a third electronic tube having an anode, a cathode and a control grid; means connecting the cathodes of each of said first and second electronic tubes together and to the anode of said third electronic tube; means connecting the anodes of said first and second electronic tubes to a source of positive potential, means for connecting the cathode of said third electronic tube to a source of negative potential whereby current flow through said first and second electronic tubes is controlled by current flow through said third electronic tube, a pair of series connected resistors connected between the anodes of said first and second electronic tubes, a capacitor connected between the junction of said pair of resistors and the control electrode of said third electronic tube, said capacitor providing a feedback circuit to maintain the current flow through said third electronic tube substantially constant, a voltage divider network for applying a bias voltage to the control



electrode of said third electronic tube to control the current flow through said third electronic tube; means for applying a decreasing sawtooth waveform to the control electrode of the first electronic tube, means for applying a rectangular pulse to the control electrode of the second electronic tube, said sawtooth waveform initially having a more positive potential than said rectangular pulse whereby current flow through said connected electronic tubes is initially through said first electronic tube with said second electronic tube in nonconductive condition, said second electronic tube being energized so as to become conductive upon the occurrence of equality between the amplitude of said decreasing sawtooth waveform on the control grid of said first electronic tube and the amplitude of said rectangular pulse on the control electrode of said second electronic tube, and means connected to the junction between said pair of resistors for detecting the occurence of current flow through said second electronic tube as an indication of said equality between said sawtooth and rectangular waveform.

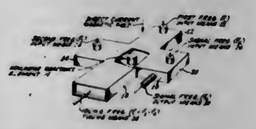
3,018,442
PLURAL CHANNEL AMPLITUDE DISCRIMINATOR HAVING DIFFERENTIATOR MEANS IN EACH CHANNEL AND A COMMON OUTPUT
Joseph L. Goodman, Glen Burnie, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 12, 1958, Ser. No. 760,673
7 Claims. (Cl. 328—150)

2. In null detector apparatus, in combination, first and second input circuit means having first and second out-of-phase square wave signals simultaneously applied thereto, said second signal being of lesser amplitude than said first signal, first and second differentiator means for differentiating the leading and trailing edges of the first and second square wave signals respectively, each of said differentiator means providing an output consisting of a series of spaced pulses of alternating polarity having amplitudes proportional to the amplitude of the square wave signal applied thereto, the first differentiator means providing a pulse of positive polarity simultaneously with a pulse of negative polarity provided by the second differentiator means, first and second rectifier means poled in the same direction and operatively connected to said first and second differentiator means respectively, common output lead means for said first and second rectifier means, the first rectifier means passing to the common output lead means pulses of predetermined polarity in the output of the first differentiator means, the second rectifier means passing to the common output lead means pulses of the same polarity as said last-named pulses, the pulses passed
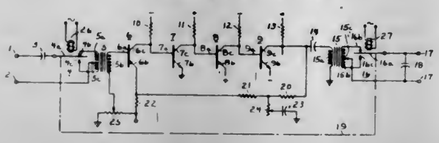


by the second rectifier means being of lesser amplitude than the pulses passed by the first rectifier means, signal generator means connected to said common output lead means for generating a control signal when a first rectifier output pulse of at least a predetermined amplitude occurs on said common output lead means, and utilization means operatively connected to said signal generator means and having said control signal applied thereto, second rectifier means output pulses applied to said common output lead means being of insufficient amplitude to cause said signal generator means to generate a control signal.

3,018,443
PARAMETRIC AMPLIFIER WITH LOWER FREQUENCY PUMPING
Stanley Bloom, Plainfield, and Kern K. N. Chang, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 20, 1958, Ser. No. 736,573
5 Claims. (Cl. 330—5)



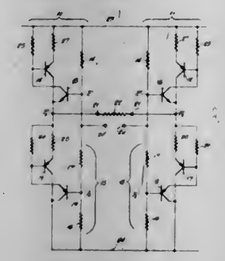
1. An amplifying device comprising an element having a nonlinear reactance characteristic with an odd-order of nonlinearity greater than one, means for applying signal energy to be amplified to said element, means for applying to said element a plurality of signals each having a frequency lower than the frequency of said signal energy to be amplified, said element operating with an order of nonlinearity at least equal to the number of signals in said plurality of signals plus one, a single resonant circuit coupled to said element and tuned to a signal having an idling frequency equal to the sum of the frequencies of said plurality of signals minus the frequency of said signal energy, the interaction of said idling frequency signal and said plurality of signals across said element producing a negative resistance in the path of said signal energy, and means coupled to said element for deriving said signal energy amplified by the operation of said element.

3,018,444
TRANSISTOR AMPLIFIER
Franklin F. Offner, % Offner Electronics Inc., 5320 N. Kedzie Ave., Chicago 25, Ill.
Filed Apr. 29, 1954, Ser. No. 426,325
5 Claims. (Cl. 330—10)



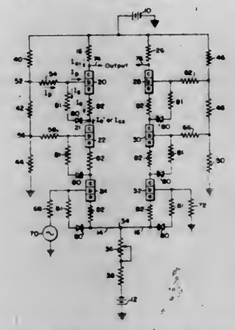
1. A multiple-stage amplifier circuit having an odd-numbered plurality of stages; a transistor in each of said stages, each of said transistors having at least base, emitter, and collector electrodes, the successive stages being provided alternately with P-N-P and N-P-N type transistors; means for operatively biasing said transistors; each of said transistors having an input circuit between said base and emitter electrodes, and an output circuit between said collector and emitter electrodes, the collector electrode of each of said transistors being direct current coupled directly to the base electrode of a succeeding transistor; a direct current negative feedback path connected over more than one stage from the direct current collector load in the output circuit of the last transistor stage to the base electrode of the first transistor stage; and gain control means coupled to the base electrode of said first transistor stage.

3,018,445
TRANSFORMERLESS TRANSISTORIZED POWER AMPLIFIER
John Stone IV, Pennsauken, N.J., assignor to The Franklin Institute of the State of Pennsylvania, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 12, 1959, Ser. No. 845,775
9 Claims. (Cl. 330—13)



1. A transformerless transistorized amplifier comprising a pair of bridge networks each containing first and second series transistors of the same type series connected with the emitter of the second to the collector of the first, a pair of resistors series connected to each other and to the collector of the second and emitter of the first transistor at the respective ends of the bridges, a third bridging transistor of opposite type from the first and second transistors said third transistor having its base connected between the resistors, its collector connected to the base of said first series transistor and its emitter connected to the common emitter-collector connection of the first and second series transistors and a fourth transistor having its base connected between the resistors, its collector connected to the collector of the second series transistor and its emitter connected to the base of the second series transistor, a pair of input terminals each one connected between the respective series resistance of each of the bridge networks, a pair of output terminals each one attached to the respective common series connection of the series transistors and common biasing potential supply lines for corresponding resistor series transistor connections at the respective ends of the bridges.

3,018,446
SERIES ENERGIZED TRANSISTOR AMPLIFIER
Brenton C. Knudson, Glen Burnie, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 14, 1956, Ser. No. 609,996
6 Claims. (Cl. 330—14)

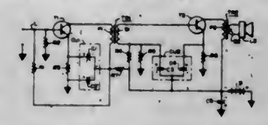


6. In a stabilized transistor amplifier employing a plurality of series-connected transistors in which the emitter of one transistor is operatively connected to the collector of the next succeeding transistor and in which the bases of the transistors are biased at least in part by voltage drops across resistors connected to the bases and carrying base currents, the improvement which comprises a stabilizing resistor connected in series with the emitter of each transistor, the stabilizing resistor having a value large in comparison with the dynamic emitter resistance of the transistor to reduce the effect of variations in the dynamic emitter resistance on the gain of the amplifier, and shunting circuit means including a series-connected shunting resistor and forward biased diode connected from the base of each transistor in parallel with the current path through the stabilizing resistor and emitter-base junction of the transistor, the diode and shunting resistor insuring a substantially constant ratio of shunt current to emitter current, the shunt current reducing the effective amplification factor α of the transistor whereby the effects on the gain of the amplifier of variations in α are reduced, the value of the shunting resistor being selected in accordance with the value of the stabilizing resistor to provide a predetermined ratio of shunt current to emitter current.

3,018,447
TRANSISTOR AMPLIFIER WITH A MULTI-SECTION ELECTROLYTIC CAPACITOR
Hsin Hsu Wei, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 3, 1958, Ser. No. 765,123
6 Claims. (Cl. 330—22)

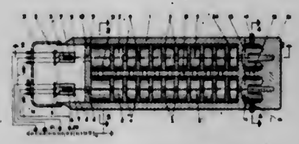
1. An amplifier comprising a first P-N-P transistor having an input circuit connected to its base, and having an output circuit connected to its collector, a second P-N-P transistor having an input circuit connected to its base and coupled to said output circuit, said second transistor having an output circuit connected to its collector, said first transistor having a stabilizing resistor connected to its emitter and to ground, a direct current source for said transistors having its positive terminal

connected to ground, and having its negative terminal connected to said output circuit of said second transistor, a decoupling resistor connected at one end to said negative terminal, and connected at its other end to said output circuit of said first transistor, a multi-section capacitor unit including a first electrolytic bypass capacitor for said decoupling resistor having its cathode connected



to said end of said decoupling resistor which is connected to said output circuit of said first transistor, and having its anode connected to ground, and a second electrolytic bypass capacitor for said stabilizing resistor having its anode connected to said emitter, and having its cathode commonly connected with said cathode of said first capacitor.

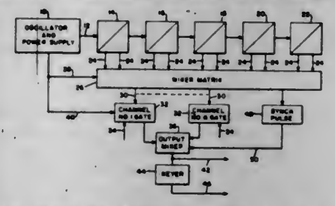
3,018,448
TRAVELLING WAVE AMPLIFIER
Robert R. Warnecke, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, Paris, France
Filed Mar. 24, 1959, Ser. No. 801,491
Claims priority, application France Apr. 30, 1958
6 Claims. (Cl. 330—43)



1. A travelling wave amplifier comprising a plurality of systems each comprising a delay circuit having an input and an output for ultra-high frequency waves, input signal connection means coupled to said delay circuit input, cathode means for propagating a respective electron beam in coupled relationship with each said delay circuit, at least one cavity resonator located on the path of each said beam, output signal connection means coupled to at least one cavity resonator, and means for uncoupling each said cavity resonator with respect to the output of its respective delay circuit, means defining a unitary enclosure for supporting said systems in side-by-side relation, means for laterally mutually coupling said delay circuits, means for mutually coupling said cavity resonators, and means for imparting respectively different velocities to different respective electron beams.

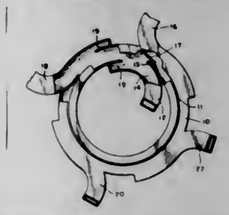
3,018,449
ELECTRONIC COMMUTATOR
Richard J. Farrelly, Riverton, N.J., assignor to General Electric Company, a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,291
10 Claims. (Cl. 332—1)

2. In an electronic commutator, a multi-vibrator chain consisting of a plurality of multi-vibrators connected in cascade, a combined oscillator and power supply providing a source of timing pulses connected to the input of said chain, a matrix for providing an output on a separate lead in a given sequence for each count of said chain connected to the outputs of said chain, a reset circuit connected to said chain for returning said multi-vibrators to their initial state after a predetermined count is reached, a plurality of channel gates each having an input, means connecting said oscillator and power supply to supply bias voltages to said matrix, an output mixer, a synchronizing pulse network connected from said mixer matrix to said



mixer for providing frame information, said separate leads being connected to said channel gates to gate said channel gates on in said sequence, means connecting the outputs of said channel gates to the inputs of said mixer whereby said channel gate inputs are connected to the output of said mixer in said sequence, and a keyer connected to the output of said mixer for transforming the fixed time variable amplitude output signals from said mixer to a fixed amplitude variable time signal.

3,018,450
WAVE GUIDE SWITCH JUNCTION
John S. Hollis, Atlanta, Ga., assignor to the United States of America as represented by the Secretary of the Army
Filed Oct. 30, 1959, Ser. No. 849,994
6 Claims. (Cl. 333—9)



1. A waveguide coupling member comprising a first waveguide of rectangular cross-section having a coupling aperture in one narrow wall thereof, an inbranching valve wave guide of rectangular cross-section of like dimensions as said first waveguide cross-section having a terminal coupling section of one half normal width extending in substantial parallelism with said first waveguide along said apertured narrow wall with the respective broad faces of said terminal section and said first waveguide substantially coplanar, and forming along said aperture an enlargement of said first waveguide into a coupling chamber having a uniform width approximately one and one half times the width of said waveguides.

3,018,451
PIEZOELECTRIC RESONATOR WITH OPPOSITELY POLED RING AND SPOT
Oskar Mattiat, Santa Barbara, Calif., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 4, 1958, Ser. No. 778,270
5 Claims. (Cl. 333—72)

1. A piezoelectric ceramic high frequency electric resonator dimensioned to operate at an overtone of its

fundamental resonant frequency and having two main faces, an outer and an inner electrode on each main face, the ceramic body between the inner electrodes being axially polarized in one direction and between the outer



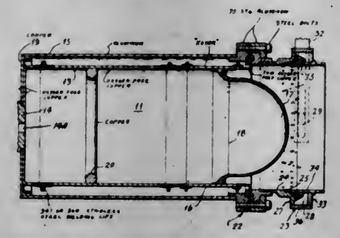
electrodes in an opposite direction, said outer and said inner electrodes being located on the vibrational antinodes induced by said overtone, and means for interconnecting said inner and said outer electrodes on each of said main faces.

3,018,452
HELIX WAVE GUIDE
Harald T. Friis, Rumson, and Hans-Georg Unger, Lincroft, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1959, Ser. No. 862,664
5 Claims. (Cl. 333—95)



1. A transmission medium for electromagnetic wave energy in the circular electric wave mode comprising an elongated member of conductive material wound in the form of a helix having a longitudinal axis with adjacent turns of said helix electrically insulated from each other, and means exhibiting anisotropic conductivity comprising a layer of lossy coated conductors overlaying the outer surface of said helix.

3,018,453
HIGH POWER WAVEGUIDE WINDOWS
Ernest C. Okress, Montclair, and Leo C. Werner, Cedar Grove, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 11, 1953, Ser. No. 397,806
21 Claims. (Cl. 333—98)



1. A waveguide comprising a waveguide section having an inlet at one end through which waves are received, a window sealed across said section at a part thereof remote from said inlet in the direction in which the waves travel, means located in said section beyond said window in the direction of wave travel and solely along the passage of the section, for directing jets of air against the adjacent face of said window to limit increases in the temperature of said window during use and to sweep away from said window any ionized air that may be accumulated there.

3,018,454
MICROWAVE ATTENUATOR SWITCH
Peter J. Sferrazza, Wantagh, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed May 16, 1955, Ser. No. 508,711
3 Claims. (Cl. 333—98)



3. Apparatus comprising a section of wave guide having unequal cross-sectional dimensions whereby the wave guide is above cut-off for energy polarized in one plane and below cut-off for energy polarized in another plane, a plane of polarization rotator disposed within said wave guide section for rotating the plane of polarization of the electric vector of the microwave energy propagating in the wage guide, and attenuator means comprising a body of dissipative material within said wave guide for attenuating the resulting component of energy having the electric vector parallel to the broad walls of the wave guide.

3,018,455
APPARATUS FOR ENCASING MAGNETIC CORES
James Campbell Brandon, Jr., and Theodore Henry Frank, Jr., Butler, and Robert Howard Rahiser, Evans City, Pa., assignors to Magnetics, Inc., Butler, Pa., a corporation of Pennsylvania
Filed May 24, 1955, Ser. No. 510,635
8 Claims. (Cl. 336—100)



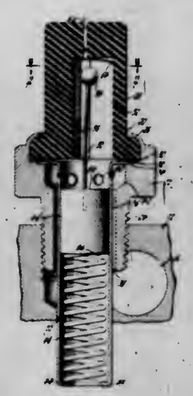
1. An enclosed magnetic core device comprising an encasement, a magnetic core within the encasement, and cushioning means disposed within the encasement separating all surfaces of the magnetic core from the encasement; the encasement including a non-magnetic metallic container partially enclosing the core, non-magnetic closure means joined to the container to complete enclosing the core, and sealing means between the container and the closure means.

3,018,456
SWITCHING DEVICES
Marshall P. White, Cheektowaga, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 18, 1957, Ser. No. 672,819
5 Claims. (Cl. 336—110)



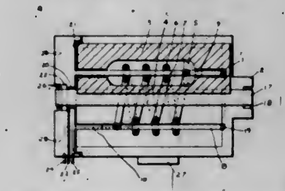
1. In a switching assembly, in combination, a core composed of a magnetic material, a coil disposed on said core, an unattached magnet freely movable a predetermined distance from a position in the magnetic circuit for the core to a position out of said magnetic circuit, a member composed of magnetic material movable to a position to attract the magnet from its position in the magnetic circuit for the core to its position out of said magnetic circuit, and a non-magnetic enclosure for limiting the movement of the magnet between said positions to prevent the magnet from engaging said member and said core.

3,018,457
CLOSED SYSTEM RESISTANCE UNITS
Bertil H. Clason, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 22, 1959, Ser. No. 822,029
1 Claim. (Cl. 338—39)



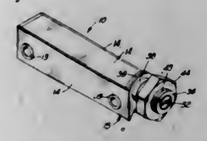
A closed system resistance unit in combination with a support, the latter being adapted to serve as a ground and having two enclosed pressure zones, said unit including a body with threaded neck portion detachably secured to said support, a resistance coil located within said unit and insulated from said support, a terminal connected to one end portion of said coil, a piston slidable in said unit in a given path, a contact carried by one end of said piston and resiliently engaging said coil, spring means acting in said path against the other end of said piston, said unit further including a sleeve fixed within said body and slidably retaining the said piston and enclosing said spring means, said sleeve having perforations near one end, a passage in said threaded neck portion connecting one of said pressure zones by said perforations to said one end of said piston, a port at the other end of said sleeve connecting the other of said pressure zones to the said other end of said piston, and the arrangement being such that differential pressures in said pressure zones acting against said piston may move the latter in said path and said contact along said coil to vary resistance to a current passing through said unit by way of said terminal, coil, piston and threaded neck.

3,018,458
ELECTRICAL POTENTIOMETER
Stephen A. Slenker, River Edge Road, Billerica, Mass.
Filed Mar. 14, 1960, Ser. No. 14,603
5 Claims. (Cl. 338—143)



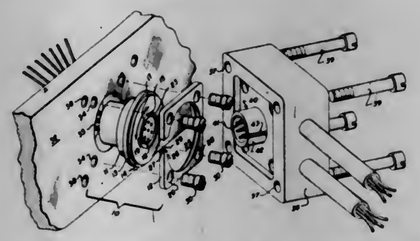
1. In a variable passive element, a coil member composed of two coaxial helices and contact means, part of which is moveable to make electrical contact with the coil member at any point on a line perpendicular to all cross section lines of the passive element, part of said contact means remaining stationary for a wire to be attached thereto.

3,018,459
VARIABLE RESISTOR
Wilbur T. Hardison and Warren D. Hulbert, Riverside, Calif., assignors to Bourns, Inc., Riverside, Calif., a corporation of California
Filed June 7, 1960, Ser. No. 34,394
5 Claims. (Cl. 338—180)



1. A variable resistor adapted for mounting on the back side of a panel with adjusting means projecting through an aperture in the panel to the front side thereof, comprising an elongate leadscrew-actuated potentiometer having an elongate body and having an adjusting leadscrew head projecting from one end of the body; a U-shaped mounting bracket having opposed elongate limbs attached to said body and a bight portion extending across the said one end of the body; an externally threaded stud secured to said bracket and projecting therefrom substantially coaxially with said leadscrew head, said stud having a central bore into which said leadscrew head projects; a member rotatably disposed within said bore and having a driving engagement at one end thereof with said leadscrew head, said member having its other end exposed for engagement by an adjusting tool; and a mounting nut cooperating with the thread of said stud.

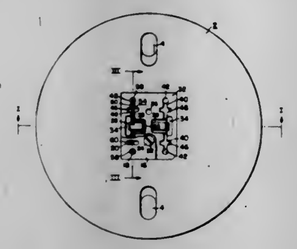
3,018,460
CONNECTOR
Don J. Stevens, Overland Park, Kans., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Dec. 21, 1959, Ser. No. 861,158
1 Claim. (Cl. 339—92)



An electrical connector of the character described comprising in combination a stationary base member having an aperture therethrough, connector means disposed at least partially within said aperture including a first set of spaced apart contacts surrounded by an insulating member and an annular metal member encircling said insulating member in spaced relationship to provide an annulus therebetween, the portion of said annular member disposed within said aperture having a diameter less than the diameter of said aperture to provide for ready rotation of said annular member and insulating member as a unit with respect to the base member, said annular member having an annular laterally outwardly extending integral flange adjacent an end thereof with a

diameter substantially greater than said aperture and overlapping and abutting an outwardly disposed surface of said base member and having an inwardly extending key projecting into said annulus fixedly attached to said insulating member, an outwardly disposed reduced portion around the periphery of said flange forming an outwardly facing uninterrupted seating ledge, a clamping ring having a centrally disposed bore exposing said key and contacts with an inwardly disposed counterbore thereabout forming an inwardly facing seating surface generally complementary to and abutting said outwardly facing seating ledge, bolt means positioned outside the periphery of said annular member for normally securing said clamping ring and said annular member to the base member against rotation, said clamping ring being of a thickness less than the thickness of said flange to provide a space between said ring and said base member when said flange is clamped rigidly against said base member by said ring, a detachable connector plug of insulating material, a second set of spaced contacts centrally disposed in said plug to operatively connect with said first set of contacts when the plug is in the engaged position, a protective cylindrical barrel attached to said plug surrounding the second set of contacts and protruding from the inner face of said plug adapted to interfit in said annulus when the plug is in the engaged position; a slot in the barrel to accommodate said key, a recess in the inner face of said plug surrounding the barrel to accommodate said clamping ring and means to firmly secure the connector plug to the base member with the contacts in the connected position.

3,018,461
WIRING DEVICE
Clarence M. Smith, Trumbull, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut
Filed Feb. 26, 1957, Ser. No. 642,580
11 Claims. (Cl. 339—95)



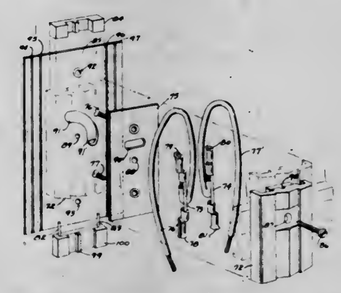
1. A wiring device comprising a support of insulating material, at least one contact member mounted on said support, a plurality of openings in said support each adapted for the insertion of a lead wire, said support having a plurality of walls each located adjacent to one of said openings a separate solid wire spring terminal having a centrally located offset portion engaging said contact, a pair of wire engaging legs of said terminal extending from opposite sides of said offset portion and each of said wire engaging legs extending across at least a portion of one of said openings to a point adjacent the associated wall so that said lead wire when extended through said one opening beyond said wire engaging leg deflects said wire engaging leg and becomes lodged between said wire engaging leg and said wall and thus so that when removal of said lead wire is attempted said wire engaging leg frictionally engages said lead wire holding said lead wire in firm engagement therewith.

3,018,462
SOCKET
Wade E. Barre, Jr., Warren, Pa., and William H. Morgan, Jr., Beverly, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed June 20, 1957, Ser. No. 666,849
1 Claim. (Cl. 339—112)



A socket for holding electrical devices including devices having thermal radiation energy loss comprising a body of insulating material of given thickness having a plurality of contact holding apertures arranged in the circumference of a circle in a central portion of the socket and a plurality of circumferentially spaced radial saddle connection lugs extending from the central portion, with a vertical groove in the central portion between each pair of adjacent lugs, the circumference of the circle which passes through the circumferentially arranged apertures in the central portion running close to the grooves, whereby cooling air may pass up through the grooves and onto the lower face of the base of a tube inserted in said socket and thence alongside the sidewalls of the tube, a generally tubular saddle terminating on its upper end in a plurality of resilient finger members and terminating at its lower end in a generally annular flange having sufficient diameter and depth to receive said socket body lugs, said saddle being attached to said socket body by crimping said annular flange adjacent at least two of said socket body lugs.

3,018,463
CONNECTING MEANS FOR ELECTRICAL CONDUCTORS EMBEDDED IN AN INSULATING HOUSING
John Cataldo, Birmingham, Mich., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 23, 1956, Ser. No. 599,392
3 Claims. (Cl. 339—164)



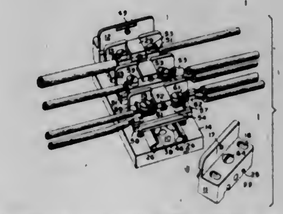
1. A connecting means connectible to a first and second pair of conductors embedded in a first and second insulating housing respectively; said connecting means comprising a first and second electrical connector, an insulating housing, a back plate and means to fasten said back plate to said connecting means insulating housing; each end of said first and second electrical connectors having clip connectors of spring type current carrying material for cooperating with one of said conductors of said first and second pair of conductors in spring biasing en-

gagement; said connecting means insulating housing being constructed to position and maintain said first and second electrical connectors in a predetermined relationship when said back plate is fastened to said connecting means insulating housing; a wall plate; means adjustably mounting said connecting means to said wall plate; said wall plate being mountable to an outlet box; individual flexible conductors connected to each of said first and said second electrical connectors for connecting same to a power source; said flexible conductors extending through said back plate and an arcuate slot in said wall plate.

3,018,464
TERMINAL BLOCK

Stephen A. Mrenna and Donald G. Portman, both of Brighton Township, Beaver County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 15, 1959, Ser. No. 840,118
4 Claims. (Cl. 339—198)

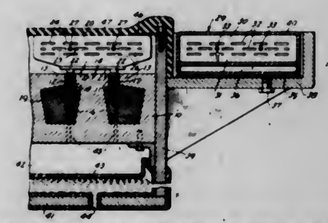


1. In a multiple terminal block assembly, in combination, a plurality of terminal block sections assembled in side-by-side relation, each section comprising a base and a barrier perpendicular to the base, an end block at each end of the assembly, supporting means for said sections and said end blocks, a terminal member on each section, each section having two spaced downwardly extending projections thereon for releasably engaging said supporting means, complementary recessed and projecting portions on opposite sides of each section for interlocking said sections, a clamp on each end block for retaining it on said supporting means, and each section being removable with its terminal member from the assembly by first releasing the clamp on one end block then sliding the section and the end block along the supporting means parallel to the plane of the base to disengage said recessed and projecting interlocking portions and then moving the section in a direction parallel to the plane of the barrier to disengage said spaced projections from the supporting means.

3,018,465
COMPLIANT ACOUSTIC RADIATING MEANS

Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Southbury, Conn., a corporation of Connecticut

Filed May 4, 1954, Ser. No. 427,630
25 Claims. (Cl. 340—8)

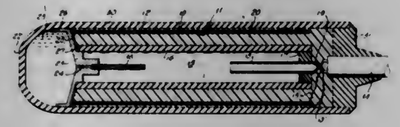


1. In combination, for underwater acoustic radiation, diaphragm means comprising two spaced surfaces and a compliance therebetween, and electromechanical means in driving relation with one of said surfaces at a location laterally remote from one edge of said diaphragm means, whereby said edge and the other surface of said diaphragm means near said edge may be essentially uncoupled to said electromechanical means except through the liquid acoustic medium but may nevertheless resonate parasitically.

3,018,466
COMPENSATED HYDROPHONE

Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut

Filed Oct. 21, 1955, Ser. No. 541,981
16 Claims. (Cl. 340—8)

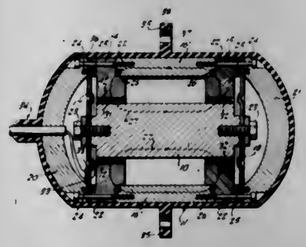


1. An electroacoustic transducer, comprising an elongated cylindrical radially strictive element electrically responsive to incident pressure, a fluid reservoir within said cylinder and in pressure-transmitting relation with the inner wall of said cylinder, a relatively compressible fluid in said reservoir, envelope means carried at one longitudinal end of said cylinder and including a yieldable wall portion, and means including a restrictive orifice substantially closing said reservoir from the space defined by said envelope, the space defined by said envelope being also filled with said relatively compressible fluid.

3,018,467
RESONANT REACTIVELY OPERATING VARIABLE POSITION TRANSDUCER

Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut

Filed Nov. 7, 1955, Ser. No. 545,306
15 Claims. (Cl. 340—12)



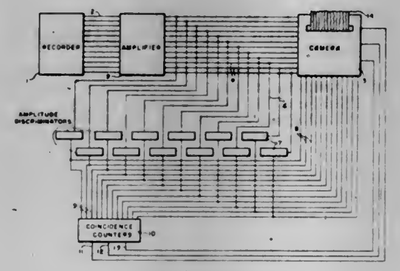
1. A mechanically resonant two-way-acting electroacoustic transducer, comprising an elongated cylindrical ferromagnetic armature mass, an elongated annular ferromagnetic stator mass surrounding said armature mass and substantially coextensive therewith, one of said masses including at each of the longitudinal ends thereof a radially extending pole piece extending into close clearance relation with the other of said members, whereby an annular magnetic gap is defined at each of said ends, so that a generally toroidal flux path may be established through both gaps and both masses, separate non-

magnetic resilient disc diaphragms reactively connecting the corresponding longitudinal ends of said masses to each other for axial reactively coupled resonant oscillation of said masses, said diaphragms being the only means connecting said masses, and electrodynamic-coil means carried by one of said masses in one of said gaps for exciting said masses in mutually reactive resonant relative longitudinal oscillation.

3,018,468
APPARATUS FOR REDUCING AND RECORDING DATA

Hal J. Jones and J. Fred Bucy, Jr., Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Dec. 12, 1955, Ser. No. 552,327
7 Claims. (Cl. 340—15)



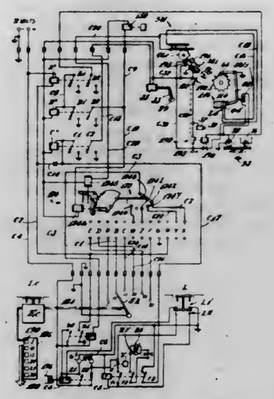
4. A seismic data reduction system comprising a plurality of signal channels, a plurality of means inducing seismic signals in said signal channels, means receiving signals from each of said signal channels and recording said signals, means selecting signals from each of said signal channels and producing in a second plurality of signal channels signals indicative of the times at which the peak amplitudes of said selected signals exceeding a specified amplitude level occur, means receiving signals from each of said second plurality of signal channels and recording the signals received, other means for receiving signals from each of said second plurality of signal channels and producing in at least one other signal channel signals indicating the occurrence of signals in a specified minimum number of channels of said second plurality of signal channels within a prescribed time interval and means for receiving signals from said at least one other signal channel and recording the signals received.

3,018,469
FARE COLLECTION AND SIGNAL SYSTEM FOR TOLL ROADS

Gardner L. Graut, Providence, R.I., and James C. Hosken, Jamaica Plain, Mass., assignors, by mesne assignments, to Universal Controls, Inc., New York, N.Y., a corporation of Maryland

Filed May 28, 1957, Ser. No. 662,099
17 Claims. (Cl. 340—31)

1. In a toll collecting system of the kind wherein vehicles of different classifications, travelling along the highway, pass a toll collecting station at which they are required to pay a prescribed fare which may vary according to their classification, and including adjustable mechanism operative, in response to deposit of a fare equalling or exceeding the prescribed fare to give the vehicle clearance to proceed, or in response to failure to deposit a fare equalling or exceeding the prescribed fare to forbid the vehicle to proceed, in combination, means operable instantaneously and without interfering with the normal flow of traffic to adjust said mechanism to respond to

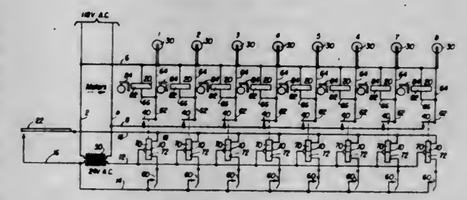


different fares according to the classification of the vehicle.

3,018,470
ADMISSION CONTROL SYSTEM

Joseph E. Stancher, Chicago, Ill., assignor to Essaness Theater Corporation, Chicago, Ill., a corporation of Delaware

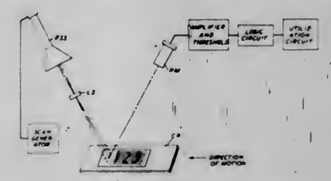
Filed Aug. 24, 1960, Ser. No. 51,600
8 Claims. (Cl. 340—51)



1. An admission control system for use with an admission center through which vehicles normally pass and wherein a predetermined fare is normally collected, a plurality of switches corresponding to the plurality of fares that entering vehicles are charged, said plurality of switches normally positioned adjacent said admission center, a viewing panel comprising a plurality of indicating elements corresponding to said plurality of switches, said viewing panel positioned in full view of said vehicles, a vehicle operated switch normally positioned in a roadway adjacent said admission center on the side of said admission center through which said vehicles pass through last, a plurality of contact activating means having associated therewith a plurality of contacts corresponding to said plurality of switches, said plurality of contact activating means being connected to said plurality of switches, said vehicle operated switch and a first power source, said plurality of contacts being connected to said plurality of indicating elements and a second power source, the activation of any of said plurality of switches connecting said first power source to the contact activating means of said plurality of contact activating means corresponding to the activated switch of said plurality of switches thereby causing the contacts of said plurality of contacts corresponding to the activated switch to connect said second power source to the indicating element in said viewing panel corresponding to the activated

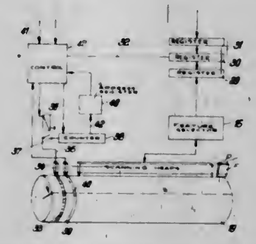
switch whereby the indicating element corresponding to the activated switch is activated, the subsequent activation of said vehicle operated switch element connecting said plurality of contact activating means to said first power source in such a manner as to cause the associated contacts of said plurality of contact activating means to disconnect said second power source from the indicating element corresponding to the activated switch.

3,018,471
CHARACTER RECOGNITION SYSTEM
Louis A. Kamentsky, Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 19, 1960, Ser. No. 43,820
9 Claims. (Cl. 340—149)



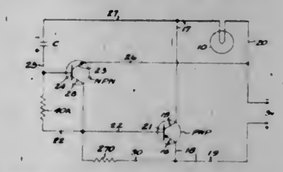
3. In a character recognition system the combination comprising scanning means for scanning a field which includes a character to be recognized, means for controlling said scanning means to scan repeatedly in a polar scan pattern comprising a plurality of radial scan line segments extending from a center, means for moving said center sequentially in each of a plurality of vertical spots of a column, and means for scanning a plurality of vertical columns for each character to be recognized.

3,018,472
ELECTRONIC PROGRAM-CONTROLLED DATA-PROCESSING INSTALLATION
Robert Piloty, Munich, Germany, assignor to Stifterverband fur Die Deutsche Wissenschaft, Essen, Germany, a corporation
Filed Dec. 23, 1955, Ser. No. 555,158
Claims priority, application Germany Dec. 23, 1954
12 Claims. (Cl. 340—172.5)



1. Apparatus for processing crude information in the form of a number of multi-place information elements, each of which includes a plurality of multi-place identifying features, said apparatus comprising storage means having a multiplace cell for each such element to be processed, each such cell having an address and additional places for receiving information; means for scanning the cells of the storage means, one by one; means for simultaneously comparing each of said plurality of multi-place features with a corresponding one of a plurality of predetermined feature standards; means for producing a coincidence signal whenever a multiplace feature of the element being scanned coincides with its corresponding feature standard; means for inserting each such coincidence signal in an additional place of said cell occupied by the element being scanned, each cell having a plurality of additional places, one for each feature compared to a feature standard; means for scanning said coincidence signals, cell by cell; means for comparing the combination of coincidence signals in the cell being scanned with a predetermined combination standard; means for indicating the address of each cell whose combination of coincidence signals conforms with said combination standard; register means for retaining the addresses of such conforming cells; distributor means for breaking down the multi-place information elements whose addresse re in said register means into sub-elements having fewer places; computers means and means for transferring said sub-elements to said computer means.

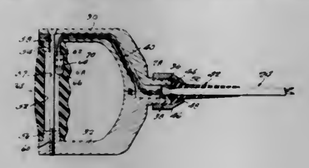
3,018,473
LOW-VOLTAGE TRANSISTORIZED ELECTRIC LIGHT FLASHER CIRCUIT FOR BARRICADE LIGHTS, ETC.
George H. Rodgers, Elsinore, Calif., assignor to Marco Industries, Anaheim, Calif., a corporation of California
Filed Sept. 16, 1958, Ser. No. 761,351
3 Claims. (Cl. 340—331)



1. In a low voltage electric light flasher apparatus, in combination: a lamp; positive and negative terminals for connection to a low voltage source; a PNP transistor arranged with its emitter and collector connected in series with and connected respectively to said lamp and positive terminal; an NPN transistor having a direct connection, without substantial resistance, between its emitter and the negative terminal; means including a low value resistor in series connecting the collector of said NPN transistor to the PNP emitter and to said positive terminal; a direct connection, without substantial resistance, between said NPN collector and the base of the PNP transistor; a capacitor having a negative side connected to said lamp by a direct connection without substantial resistance, with the lamp in series between said capacitor and the negative terminal; a direct connection, without substantial resistance, between the positive side of said capacitor and the base of said NPN transistor; and means including a high resistance value resistor providing a connection between said last mentioned direct connection and said low value resistor and providing a parallel connection between said last mentioned direct connection and said PNP base, providing a weak current path from said source through said lamp, said capacitor, and said high and low value resistors, for charging said capacitor while positive potential is built up on the PNP base for rendering the PNP transistor non-conducting.

3,018,474
TOW LINE HANDLE AND SIGNAL ASSEMBLY FOR WATER SKIERS
Howard O. Cluck, 3709 E. Camerino St., Lakewood, Calif., and Tommy G. Harris, 11812 S. Louise Ave., Compton, Calif.
Filed Feb. 26, 1960, Ser. No. 11,322
11 Claims. (Cl. 340—366)

7. A tow line handle and signal assembly comprising an energized electrical signal device for mounting on a ski tow boat, a tow line having a rear end, handle means secured to said rear end, gravity-operated switch means on said handle means, and conductor means extending along the tow line and connecting said switch means to the signal device, said handle means comprising a loop handle having a U-shaped form having a bight portion and upper and lower legs extending rearwardly from the bight portion, a hand grip cross bar extending between the legs, means securing the cross bar to the legs, a boss extending forwardly from the bight portion, means connecting the tow line to said boss, said conductor means extending rearwardly through the tow line and through said boss, said upper handle leg having a bore extending therealong through which the conductor means extends, said



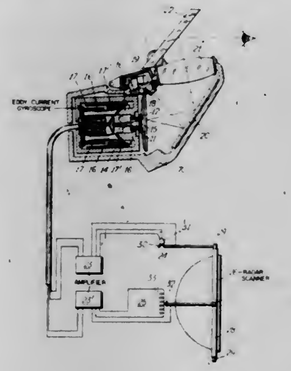
cross bar having an axial bore communicating with the leg bore, a vertical mercury switch mounted in the cross bar bore having upper and lower ends, contacts in the upper end of the switch to which the conduit means are connected, and a free body of mercury in the lower end of the switch, said mercury body being out of contact with the contacts in the normal erect position of the handle and being in bridging contact with the contacts in a horizontal position of the handle, said upper end lower handle legs having opposed laterally inwardly extending bosses, said cross bar being tubular and flexible with its ends engaged over related bosses, and a bolt extending through one leg boss and the bore of the cross bar and threaded in the other leg boss.

3,018,475
RESPONDER DEVICE
Robert A. Kleist, Sunnyvale, and Clarence S. Jones, Los Altos, Calif., assignors to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,723
12 Claims. (Cl. 343—6.8)



1. A passive responder device for use in an interrogator-responder signalling system having an interrogator unit for providing a radio frequency carrier signal and a plurality of associated radio frequency sideband signals, said responder device and said interrogator unit being capable of relative movement and said interrogator being operative to induce operating power into said responder device when said device and said unit are within a certain distance of each other, said responder device comprising in combination: a tuned circuit tuned to receive said radio frequency carrier and sideband signals to provide a first composite voltage having carrier and sideband components; radio frequency filter means connected to said tuned circuit, said filter means being tuned to eliminate at least one of said sideband components from said first composite voltage; demodulation means for demodulating said first composite voltage to provide a second composite voltage having a direct component and low frequency components derived from those of said sideband components not eliminated by said filter means; and a response oscillator operated by said second composite voltage for providing a response carrier signal which is modulated by said low frequency components.

3,018,476
APPARATUS FOR DISPLAYING TO A GUNNER OR PILOT IN AN AIRCRAFT AN ARTIFICIAL IMAGE AT INFINITY OF A GRATICULE
Mallinson Powley, Edinburgh, Scotland, and Ben Sykes, Farnborough, Hampshire, England, assignors to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland
Filed Sept. 21, 1956, Ser. No. 611,388
4 Claims. (Cl. 343—7)

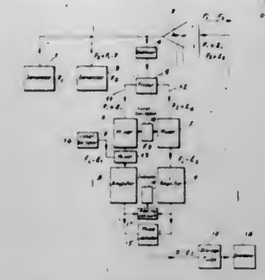


1. Apparatus for displaying in an aircraft an artificial image at infinity of a graticule comprising a graticule and collimating optical means, including a mirror and a lens so positioned that the length of the path of a light ray between said graticule and said mirror is equal to the length of the path between said mirror and said lens, for forming an artificial image at infinity of said graticule, the direction of said image being dependent upon the position of said mirror relative to a datum direction, a gyroscope rotor having its axis normally coincident with the direction of a reference line fixed in relation to the airframe of the aircraft, means for mounting said mirror in a fixed position relative to said gyroscope rotor whereby said mirror is tilted relative to said datum direction and thereby changes the direction of said image in dependence upon deviation of the axis of said gyroscope rotor from said reference line, radar means including a scanner for producing signals indicative of the direction of an object ahead of the aircraft, and means responsive to said signals for applying such rates of precession to said gyroscope rotor as to maintain at least near coincidence between the direction of said image and that of said object.

3,018,477
ELECTROMAGNETIC DETECTOR DEVICES
Yves Brault and Jean Cauchois, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed May 22, 1957, Ser. No. 660,784
Claims priority, application France May 29, 1956
5 Claims. (Cl. 343—7.7)

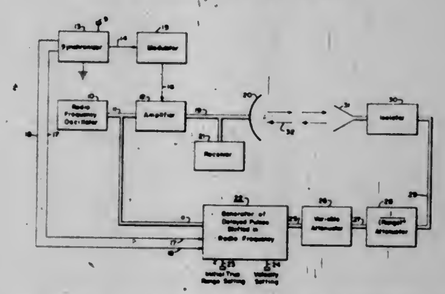
1. A pulse modulated radar system for radiating two signals of respective first and second frequencies having a fixed difference and comprising: two narrow band reception channels for separating the echo signals respectively corresponding to said signals; respective means in said channels for changing said echo signals to respective intermediate frequency signals which have a common

frequency for fixed echoes and frequencies which, for mobile echoes, differ from said common frequency by amounts corresponding to the Doppler effect on said



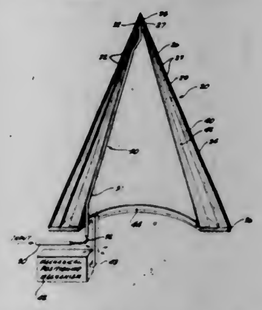
first and second frequencies; a phase detector coupled to both said channels; means for comparing any two consecutive output signals of said detector; and indicator means coupled to said comparing means.

3,018,478
PULSE DOPPLER MOVING TARGET SIMULATOR
William A. Skillman, Linthicum Heights, and Walter Evanus and David H. Mooney, Jr., Glen Burnie, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 5, 1957, Ser. No. 677,182
9 Claims. (Cl. 343—17.7)



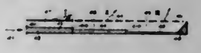
6. Target simulator apparatus for simulating the echoes of a moving radar target produced by pulsed radar apparatus having a predetermined pulse repetition frequency comprising, in combination, first klystron tube amplifier means, said first klystron tube amplifier means being adapted to have applied thereto continuous wave radio frequency energy of a predetermined radio frequency corresponding to the radio frequency of a radar transmitter, means including pulse position modulator means having a signal corresponding to the true range of the simulated target applied thereto and providing recurrent gate pulses at said pulse repetition frequency for pulse modulating said first klystron tube amplifier means, second klystron tube amplifier means having the output of the first klystron tube amplifier means applied thereto, sawtooth voltage generator means, means connecting said sawtooth voltage generator means to said second klystron tube amplifier means for utilizing the sawtooth voltage to phase modulate said second klystron tube amplifier means to thereby shift the radio frequency therein a preselected amount from said predetermined radio frequency, said amount corresponding to the Doppler shift in frequency of an echo signal from a radar target moving at a preselected velocity, means operatively connected to said second klystron tube amplifier means for generating a signal corresponding to change in range, signal adding means having said change in range signal applied thereto and having an initial range signal applied thereto for obtaining a true range signal for application to said pulse position modulator means, and radio wave energy transmission means operatively connected to said second klystron tube amplifier means.

3,018,479
SCANNING ANTENNA
Kenneth C. Kelly, Gardena, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,765
12 Claims. (Cl. 343—762)



1. An antenna array for scanning with respect to a given axis and comprising in combination a conical waveguide structure having an inner cone movable with respect to the outer cone, the outer cone being apertured with radiating slots; and dielectric wave slowing means positioned in the space between the cones of the conical waveguide for selectively slowing propagation of energy therein in dependence upon the relative positions of the cones of the conical waveguide.

3,018,480
IMPROVEMENTS IN AERIALS OF THE COSECANT-SQUARED TYPE
Léo Thourel, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Dec. 1, 1959, Ser. No. 856,442
Claims priority, application France Dec. 19, 1958
5 Claims. (Cl. 343—771)



1. An aerial comprising a wave-guide having two large and two small sides and two ends and including a plurality of guide portions of the same cross section, one of said large sides having equally spaced slots; and respective dielectric bodies having respective constant cross-sections in said guide portions, the volume of said bodies decreasing from one end of said guide to the other.

DESIGNS

JANUARY 23, 1962

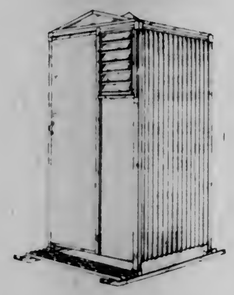
192,110
FURNITURE PULL OR THE LIKE
Vytant P. Aleks, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 62,251
Term of patent 14 years
(Cl. D10—8)



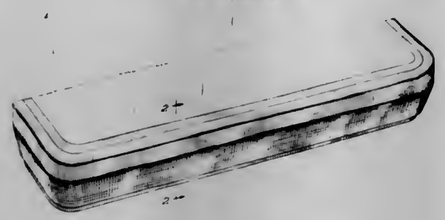
192,111
PULL OR THE LIKE
Nolan Kent Rhoades, Beloit, Wis., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed June 14, 1961, Ser. No. 65,583
Term of patent 14 years
(Cl. D10—8)



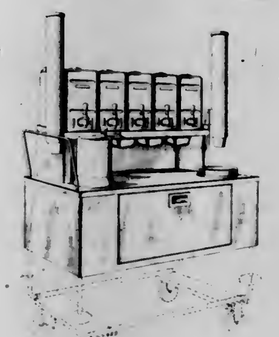
192,112
PORTABLE TOILET HOUSING UNIT
James M. Kulka, 1623 S. Jefferson St., Chicago, Ill.
Filed Sept. 22, 1961, Ser. No. 66,803
Term of patent 14 years
(Cl. D13—1)



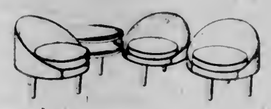
192,113
MOLDING FOR A DESK OR SIMILAR ARTICLE
Pehr J. Anderson, St. Charles, Ill., assignor to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
Filed July 5, 1960, Ser. No. 61,237
Term of patent 14 years
(Cl. D13—6)



192,114
MOBILE BEVERAGE DISPENSER
Margaret Anne Brosnan, now known as Sister Mary Brigid, C.S.A., 2222 Central Ave., Cleveland, Ohio
Filed Jan. 25, 1960, Ser. No. 59,154
Term of patent 14 years
(Cl. D14—3)



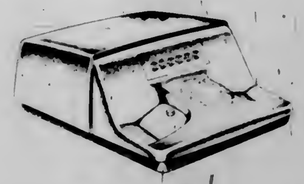
192,115
COMBINED TABLE AND MULTIPLE SEATING UNIT
Truman S. Ziegenfuss, 6940 Los Tilos Road, Los Angeles, Calif.
Filed Apr. 26, 1961, Ser. No. 64,913
Term of patent 14 years
(Cl. D15—1)



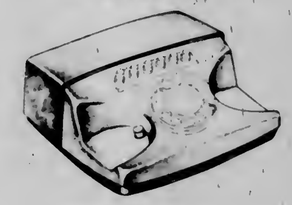
192,116
CASING FOR AN ELECTRONIC TESTING INSTRUMENT OR SIMILAR ARTICLE
Eric Allen Inhelder, Menlo Park, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Mar. 16, 1960, Ser. No. 59,766
Term of patent 14 years
(Cl. D26—5)



192,117
INTEGRATED VOICE AND DATA TELECOMMUNICATIONS DESK STAND
Henry Dreyfuss, South Pasadena, Calif., and Robert H. Hose, Mountainside, and Herbert C. Illium, Jr., Edison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 15, 1961, Ser. No. 64,304
Term of patent 14 years
(Cl. D26—14)



192,118
INTEGRATED VOICE AND DATA TELECOMMUNICATIONS DESK STAND
Henry Dreyfuss, South Pasadena, Calif., and Robert H. Hose, Mountainside, and Herbert C. Illium, Jr., Edison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 15, 1961, Ser. No. 64,305
Term of patent 14 years
(Cl. D26—14)



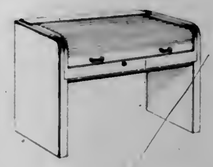
192,119
SPEAR GUN
Johnie L. Carroll, 611 Wilshire Blvd., Hawthorne, Calif.
Filed Feb. 13, 1961, Ser. No. 63,931
Term of patent 14 years
(Cl. D30—1)



192,120
STAND FOR PHONOGRAPH RECORDS
Paul Heling, Radevormvald, Germany, assignor to Gebruder Merten, Gummersbach, Germany
Filed Jan. 4, 1961, Ser. No. 63,471
Term of patent 14 years
Claims priority, application Germany July 22, 1960
(Cl. D33—3)



192,121
CABINET
Norman J. Spindler, Lakewood, N.Y., assignor to Watson Manufacturing Company, Inc., Jamestown, N.Y., a corporation of New York
Filed Aug. 20, 1957, Ser. No. 47,457
Term of patent 14 years
(Cl. D33—19)



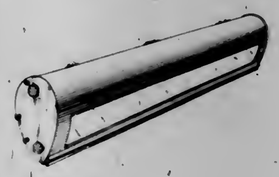
192,122
BRACELET OR SIMILAR ARTICLE
Lillian Braun, 333 E. 51st St., Long Beach, Calif.
Filed June 1, 1961, Ser. No. 65,421
Term of patent 14 years
(Cl. D45—4)



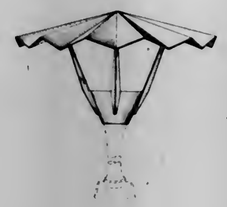
192,123
EXPANSIBLE LINK CHAIN FOR A BRACELET OR SIMILAR ARTICLE
Murray L. Cowan, Boston, Mass., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed June 23, 1961, Ser. No. 65,701
Term of patent 14 years
(Cl. D45—4)



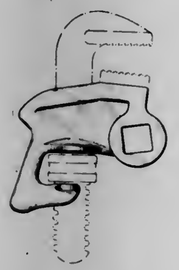
192,124
FLUORESCENT LIGHTING FIXTURE
Albert J. Michaud, Salem, Mass., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Dec. 31, 1959, Ser. No. 58,880
Term of patent 14 years
(Cl. D48—23)



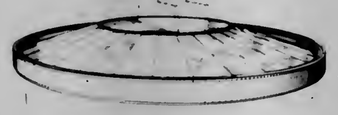
192,125
POST LAMP
Martin Lasker, Flushing, N.Y., assignor to McPhilben Lighting Inc., Brooklyn, N.Y., a corporation of New York
Filed June 8, 1961, Ser. No. 65,520
Term of patent 14 years
(Cl. D48—31)



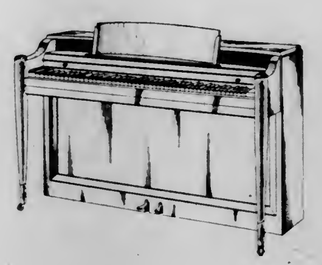
192,126
MONKEY WRENCH
Julian W. McManus, 3733 Delmas Terrace, Los Angeles, Calif.
Filed Apr. 20, 1960, Ser. No. 60,257
Term of patent 14 years
(Cl. D54—16)



192,127
ROTARY DISTRIBUTOR FOR BAGGAGE OR THE LIKE
Herbert Sutcliffe Winfield, Port Hope, Ontario, Canada, assignor to Mathews Conveyer Company, Ellwood City, Pa., a corporation of Pennsylvania
Filed June 7, 1961, Ser. No. 65,502
Term of patent 14 years
(Cl. D55—1)

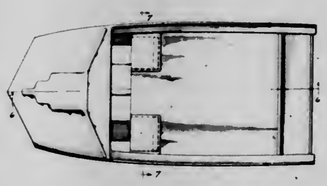


192,128
PIANO CASE
William G. Pollack, Yonkers, N.Y., assignor to Aeolian American Corporation, Rochester, N.Y., a corporation of New York
Filed Aug. 23, 1960, Ser. No. 61,858
Term of patent 14 years
(Cl. D56—9)



192,129
COMPARTMENTED TRAY
Herbert A. Clemens, Fort Wayne, Ind., assignor to National Packaging Corporation, Fort Wayne, Ind.
Filed Sept. 4, 1959, Ser. No. 57,447
Term of patent 14 years
(Cl. D58—13)

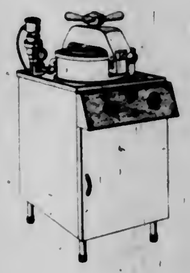
192,130
CATAMARAN
Robert Perry Nelson, San Antonio, and Clifford O. Pounds, Corpus Christi, Tex., assignors to Industrial Engineering & Erection Corporation, San Antonio, Tex.
Filed Feb. 26, 1960, Ser. No. 59,541
Term of patent 3½ years
(Cl. D71—1)



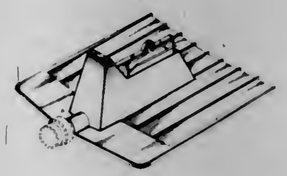
192,131
CAKE OF SOAP
Leslie Weiss, Bronx, N.Y., assignor to Schwartz Engraving & Die Works, Inc., New York, N.Y., a corporation of New York
Filed Apr. 4, 1961, Ser. No. 64,607
Term of patent 14 years
(Cl. D73—1)



192,132
PRESSURE COOKER
Edward J. Nelson, Omaha, Nebr., assignor, by mesne assignments, to Ballantyne Instruments and Electronics, Inc., Omaha, Nebr., a corporation of Delaware
Filed Nov. 14, 1960, Ser. No. 62,803
Term of patent 14 years
(Cl. D81—10)



192,133
LAWN SPRINKLER
George L. Turner, Hickory Corners, Mich., assignor to H. B. Sherman Manufacturing Company, Battle Creek, Mich., a corporation of Michigan
Filed Sept. 30, 1960, Ser. No. 62,326
Term of patent 14 years
(Cl. D91—1)



192,134
PORTABLE ELECTRIC JIG SAW
Marshall B. Johnson, Bel Air, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Apr. 21, 1961, Ser. No. 64,852
Term of patent 14 years
(Cl. D93—3)

LIST OF PLANT PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Thompson's, J. H., Sons: *See*—
Thompson, Joshua H., Jr. 2,123.

Thompson, Joshua H., Jr., to J. H. Thompson's Sons. Rose plant. 2,123, 1–23–62, Cl. 47—61.

LIST OF DESIGN PATENTEES

Aeolian American Corp.: *See*—
Pollack, William G. 192,128.
Aleks, Vytant P., to National Lock Co. Furniture pull or the like. 192,110, 1–23–62, Cl. D10—8.
All-Steel Equipment Inc.: *See*—
Anderson, Pehr J. 192,113.
Anderson, Pehr J., to All-Steel Equipment Inc. Molding for a desk or similar article. 192,113, 1–23–62, Cl. D13—6.
Ballantyne Instruments and Electronics, Inc.: *See*—
Nelson, Edward J. 192,132.
Bell Telephone Laboratories, Inc.: *See*—
Dreyfuss, Henry, Hose, and Illium. 192,117.
Dreyfuss, Henry, Hose, and Illium. 192,118.
Black and Decker Mfg. Co., The: *See*—
Johnson, Marshall B. 192,134.
Braun, Lillian. Bracelet or similar article. 192,122, 1–23–62, Cl. D45—4.
Brigid, Sister Mary, C.S.A.: *See*—
Brosnan, Margaret A., and Brigid. 192,114.
Brosnan, Margaret A., now known as Sister Mary Brigid, C.S.A. Mobile beverage dispenser. 192,114, 1–23–62, Cl. D14—3.
Carroll, Johnie L. Spear gun. 192,119, 1–23–62, Cl. D30—1.
Clemens, Herbert A., to National Packaging Corp. Compartmented tray. 192,129, 1–23–62, Cl. D58—13.
Cowan, Murray L., to Speidel Corp. Expandible link chain for a bracelet or similar article. 192,123, 1–23–62, Cl. D45—4.
Dreyfuss, Henry, R. H. Hose, and H. C. Illium, Jr., to Bell Telephone Laboratories, Inc. Integrated voice and data telecommunications desk stand. 192,117, 1–23–62, Cl. D26—14.
Dreyfuss, Henry, R. H. Hose, and H. C. Illium, Jr., to Bell Telephone Laboratories, Inc. Integrated voice and data telecommunications desk stand. 192,118, 1–23–62, Cl. D26—14.
Gebruder Merten: *See*—
Heling, Paul. 192,120.
Heling, Paul, to Gebruder Merten. Stand for phonograph records. 192,120, 1–23–62, Cl. D33—3.
Hewlett-Packard Co.: *See*—
Inhelder, Eric A. 192,116.
Hose, Robert H.: *See*—
Dreyfuss, Henry, Hose, and Illium. 192,117.
Dreyfuss, Henry, Hose, and Illium. 192,118.
Illium, Herbert C., Jr.: *See*—
Dreyfuss, Henry, Hose, and Illium. 192,117.
Dreyfuss, Henry, Hose, and Illium. 192,118.
Industrial Engineering & Erection Corp.: *See*—
Nelson, Robert P., and Pounds. 192,130.
Inhelder, Eric A., to Hewlett-Packard Co. Casing for an electronic testing instrument or similar article. 192,116, 1–23–62, Cl. D26—5.
Johnson, Marshall B., to The Black and Decker Mfg. Co. Portable electric jig saw. 192,134, 1–23–62, Cl. D93—3.
Kulka, James M. Portable toilet housing unit. 192,112, 1–23–62, Cl. D13—1.
Lasker, Martin, to McPhilben Lighting Inc. Post lamp. 192,125, 1–23–62, Cl. D48—31.
Mathews Conveyer Co.: *See*—
Winfield, Herbert S. 192,127.
McManus, Julian W. Monkey wrench. 192,126, 1–23–62, Cl. D54—16.
McPhilben Lighting Inc.: *See*—
Lasker, Martin. 192,125.
Michaud, Albert J., to Sylvania Electric Products Inc. Fluorescent lighting fixture. 192,124, 1–23–62, Cl. D48—23.
National Lock Co.: *See*—
Aleks, Vytant P. 192,110.
Rhoades, Nolan K. 192,111.
National Packaging Corp.: *See*—
Clemens, Herbert A. 192,129.
Nelson, Edward J., to Ballantyne Instruments and Electronics, Inc. Pressure cooker. 192,132, 1–23–62, Cl. D81—10.
Nelson, Robert P., and C. O. Pounds, to Industrial Engineering & Erection Corp. Catamaran. 192,130, 1–23–62, Cl. D71—1.
Pollack, William G., to Aeolian American Corp. Piano case. 192,128, 1–23–62, Cl. D56—9.
Pounds, Clifford O.: *See*—
Nelson, Robert P., and Pounds. 192,130.
Rhoades, Nolan K., to National Lock Co. Pull or the like. 192,111, 1–23–62, Cl. D10—8.
Schwartz Engraving & Die Works, Inc.: *See*—
Weiss, Leslie. 192,131.
Sherman, H. B., Mfg. Co.: *See*—
Turner, George L. 192,133.
Speidel Corp.: *See*—
Cowan, Murray L. 192,123.
Spindler, Norman J., to Watson Mfg. Co., Inc. Cabinet. 192,121, 1–23–62, Cl. D33—19.
Sylvania Electric Products Inc.: *See*—
Michaud, Albert J. 192,124.
Turner, George L., to H. B. Sherman Mfg. Co. Lawn sprinkler. 192,133, 1–23–62, Cl. D91—1.
Watson Mfg. Co., Inc.: *See*—
Spindler, Norman J. 192,121.
Weiss, Leslie, to Schwartz Engraving & Die Works, Inc. Cake of soap. 192,131, 1–23–62, Cl. D73—1.
Winfield, Herbert S., to Mathews Conveyer Co. Rotary distributor for baggage or the like. 192,127, 1–23–62, Cl. D55—1.
Ziegenfuss, Truman S. Combined table and multiple seating unit. 192,115, 1–23–62, Cl. D15—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Ireco, Stockholm: *See*—
Lenning, Alvar. 3,018,348.

Aarons, Melvin W., J. W. Dzimianski, and J. M. Bentley, to Westinghouse Electric Corp. Semiconductor device. 3,018,423, 1-23-62, Cl. 317—234.

Ackermann, Joseph A., to The Elwell-Parker Electric Co. Industrial truck. 3,018,011, 1-23-62, Cl. 214—140.

Ackles, Virgil E. Conveyor washing mechanism. 3,017,986, 1-23-62, Cl. 198—230.

Adam, Folger. Jail locking devices and the like. 3,017,967, 1-23-62, Cl. 189—7.

Adelman, Barnet R., to Phillips Petroleum Co. Rocket and propellant charge therefor. 3,017,743, 1-23-62, Cl. 60—35.6.

Aerofall Mills Inc.: *See*—
MacPherson, Arthur R., and Tugner. 3,017,993.

Aeroprojects Inc.: *See*—
Elmore, William C., and De Prisco. 3,017,792.

Aeroquip Corp.: *See*—
Elsner, Edwin C. 3,017,679.

Agfa Aktiengesellschaft: *See*—
Geiger, Julius, Ossenbrunner, and Coenen. 3,018,177.
Kremp, Rudolf, and Frost. 3,017,805.

Agriss, Norton, and J. L. Pallick. Resilient packing sheet. 3,018,015, 1-23-62, Cl. 217—53.

Ahlbor, Valter A. and H. O. Neumann, to Arenco Aktiebolag. Boxes. 3,018,031, 1-23-62, Cl. 229—44.

Air Reduction Co., Inc.: *See*—
Buselli, Allo J., and Artemma. 3,018,274.
Engel, Ralph D. 3,018,360.

Air Valves Co.: *See*—
Hicks, Frederick W., Jr. 3,017,901.

Aktiebolaget Atvidabergs Industrier: *See*—
Steenne, Nils G. E. 3,018,037.

Aktiebolaget Calor & Sjogren: *See*—
Mossberg, Karl E. 3,017,767.

Aktiebolaget Svenska Flaktfabriken: *See*—
Allander, Claes, and Lärkfeldt. 3,018,088.

Alaska-Werk: *See*—
Schirp, Wilhelm, and Alex. 3,017,753.

Albrecht, Alexander J., to The Brunswick Automatic Pinsetter Corp. Pin distributor. 3,018,103, 1-23-62, Cl. 273—43.

Albright, Roy H., to I-T-E Circuit Breaker Co. Individual one-half cycle interrupting device. 3,018,414, 1-23-62, Cl. 317—11.

Alex, Max: *See*—
Schirp, Wilhelm, and Alex. 3,017,753.

Allais, Andre: *See*—
Veliuz, Leon, Muller, and Allais. 3,018,286.

Allander, Claes, and B. Lärkfeldt, to Aktiebolaget Svenska Flaktfabriken. Room unit for air conditioning. 3,018,088, 1-23-62, Cl. 257—137.

Allenby, William F., and G. E. Lofgren, to Electrolux Corp. Vacuum cleaners. 3,017,654, 1-23-62, Cl. 15—327.

Allied Chemical Corp.: *See*—
Bandes, Selwyn.
Downey, John F., and Hoare. 3,018,154.
Sweeney, Richard F., and Woolf. 3,018,308.

Allmanna Svenska Elektriska Aktiebolaget: *See*—
Rydinger, Mats. 3,018,096.
Schulz, Richard. 3,018,352.

Alpers, Frederick C., to United States of America, Navy. Function generator using television-type scanning. 3,018,053, 1-23-62, Cl. 235—199.

American Agricultural Chemical Co., The: *See*—
Corben, Leo D., and Hatch. 3,018,181.

American Air Filter Co., Inc.: *See*—
Hicks, Robert G. 3,017,877.
Rivers, Richard D. 3,017,953.
Westlin, Karl L. 3,017,952.

American Bosch Arma Corp.: *See*—
Norris, Myron E. 3,018,420.

American Brake Shoe Co.: *See*—
Atchley, Raymond D. 3,017,864.

American Can Co.: *See*—
Foord, Delbert C. 3,018,024.

American Cyanamid Co.: *See*—
Bikales, Norbert M. 3,018,156.
Kaplan, Earl. 3,018,254.
Lundberg, Lennart A. 3,018,266.
Singerman, Sol. 3,017,990.
Spencer, Frank R. 3,018,257.
Wasserman, Max. 3,017,721.

American Enka Corp.: *See*—
Beyer, Jeno, and Gonsalves. 3,017,738.
Hennemann, Georg, and Lutgerhorst. 3,018,192.

American Machine & Foundry Co.: *See*—
Grogoza, William. 3,018,105.

American Photocopy Equipment Co.: *See*—
Stuckens, Leo J. 3,017,816.

American Pipe and Construction Co.: *See*—
Ranker, William T. 3,017,855.

American Potash & Chemical Corp.: *See*—
May, Frank H., and Levasheff. 3,018,163.

American Steel Foundries: *See*—
Mann, William, and Maloney. 3,017,961.

Amiard, Gaston, and R. Heymes, to Les Laboratoires Francais de Chimiotherapie. Novel 18-nor-pregnanic derivative and process for its preparation. 3,018,203, 1-23-62, Cl. 260—339.

Amirault, Maxime, and P. Destoumieux. Sealing devices between a rotating part and a fixed part. 3,018,112, 1-23-62, Cl. 277—42.

Amrad, Inc.: *See*—
Orlin, William J. 3,017,769.

Anciens Etablissements Goldenberg & Cie: *See*—
Lemoine, Marcel C. J. 3,017,799.

Andersen, Glenn R.: *See*—
Snowdon, Donald R., and Andersen. 3,018,036.

Anderson, August. Sprinkler head shield. 3,018,057, 1-23-62, Cl. 239—201.

Anderson, John L., to E. I. du Pont de Nemours and Co. Crosslinking condensation polymers with intralinear cyclobutene rings. 3,018,271, 1-23-62, Cl. 260—47.

Anderson, Robert G., F. A. Stuart, and A. Y. Drummond, to California Research Corp. Lubricating oil compositions containing metal dithiophosphate-N-dialkylaminoalkyl alkenyl succinimide blends. 3,018,247, 1-23-62, Cl. 252—32.7.

Anderson, Robert G., F. A. Stuart, and A. Y. Drummond, to California Research Corp. Lubricating oil compositions containing N-dialkylaminoalkyl alkenyl succinimides. 3,018,250, 1-23-62, Cl. 252—51.5.

Anderson, Robert G., F. A. Stuart, and A. Y. Drummond, to California Research Corp. N-dialkylaminoalkyl alkenyl succinimides. 3,018,291, 1-23-62, Cl. 260—326.5.

Anderson, Walter A., to Underwood Corp. Tens transfer mechanism for an adding machine. 3,018,044, 1-23-62, Cl. 235—137.

Andre Rubber Co. Ltd.: *See*—
Hobson, Eric D. 3,017,898.

Andresen, John H., Jr., to Kollsman Instrument Corp. Constant speed motor system. 3,018,429, 1-23-62, Cl. 318—312.

Apelbaum, Joseph H.: *See*—
Dudley, Kenneth W., and Apelbaum. 3,018,404.

Appel, Gerhard H., to Appel Process, Ltd. Forming tools, machines and methods. 3,017,793, 1-23-62, Cl. 78—103.

Appel Process, Ltd.: *See*—
Appel, Gerhard H. 3,017,793.

Arenco Aktiebolag: *See*—
Ahlbor, Valter A., and Neumann. 3,018,031.

Ariemma, Sidney: *See*—
Buselli, Allo J., and Ariemma. 3,018,274.

Armco Steel Corp.: *See*—
Knapp, Earle L. 3,018,190.
Long, Spencer W. 3,017,936.

Armstrong Cork Co.: *See*—
Eckert, Lewis W. 3,017,947.

Arnold, Herbert, N. Brock, and F. Bourseaux, to Asta-Werke Aktiengesellschaft Chemische Fabrik. Novel cyclic phosphoric acid ester amides, and the production thereof. 3,018,302, 1-23-62, Cl. 260—461.

Asars, Juris A., to Westinghouse Electric Corp. Electrical systems employing nonlinear dielectric capacitive elements. 3,018,412, 1-23-62, Cl. 315—166.

Asta-Werke Aktiengesellschaft Chemische Fabrik: *See*—
Arnold, Herbert, Brock, and Bourseaux. 3,018,302.

Aston, Bruno: *See*—
McMeen, Forrest H., Aston, and Stucka. 3,017,658.

Atchison, Topeka and Santa Fe Railway Co., The: *See*—
Miller, Donald E. 3,017,841.

Atchley, Raymond D., to American Brake Shoe Co. Valve. 3,017,864, 1-23-62, Cl. 121—41.

Atlee, Zed J., to Dunlee Corp. X-ray generator. 3,018,398, 1-23-62, Cl. 313—59.

Atomic Energy of Canada Ltd.: *See*—
Erlebach, Woodland E., and Nishimura. 3,018,161.

Auer, Frederick G., and M. Sorkin, to Champlain Co., Inc. Intermittent web feed mechanism. 3,017,796, 1-23-62, Cl. 83—263.

Austin, Leonard E., and A. K. Brown, Jr., to The Bendix Corp. Spring assembling mechanism. 3,017,691, 1-23-62, Cl. 29—211.

Austin Motor Co. Ltd., The: *See*—
Payne, Eric R. 3,017,787.

Auto-Soler Co., The: *See*—
Wright, John G. 3,017,635.

Avro Aircraft Ltd.: *See*—
Frost, John C., and Earl. 3,018,068.

B-W Metal Works, Inc.: *See*—
Huehler, Albert E. 3,018,077.

Babcock & Wilcox Co., The: *See*—
Steever, Andrew B. 3,018,174.

Backman, Gustav A., and W. C. G. Ortel, to Bell Telephone Laboratories, Inc. Gated accumulator. 3,018,048, 1-23-62, Cl. 235—176.

Baechtel, Clarence R., to Westinghouse Air Brake Co. Foundation brake apparatus. 3,017,959, 1-23-62, Cl. 188—52.

Bagdon, Richard J., to Federal-Mogul-Bower-Bearings, Inc. Method for making fluid sealing elements. 3,017,759, 1-23-62, Cl. 09—21.

Bagno, Samuel M., and J. H. Fasal, to Walter Kidde & Co., Inc. Thermopile. 3,018,311, 1-23-62, Cl. 136—4.

Baker, Kenneth R., and E. J. Rahaim. Folding lounge seat. 3,018,132, 1-23-62, Cl. 297—377.

Baker, Malvern S., to J. I. Case Co. Vehicle drive means. 3,017,941, 1-23-62, Cl. 180—6.2.

Baldwin, David E.: *See*—
Hood, William C., and Baldwin. 3,018,206.

Ballard, Dale H.: *See*—
Doherty, George O., and Ballard. 3,017,884.

Balmer, Donald F., and W. H. Lyon, to The Soundscriber Corp. Lightweight battery operated transistorized dictating machine. 3,018,111, 1-23-62, Cl. 274—9.

Baltac, Alexandru, to The Ministry for Petroleum Industry and Chemistry. Torsion balance for the determination of small variations of the apparent weight of samples. 3,017,940, 1-23-62, Cl. 177—246.

Bandes, Selwyn, to Allied Chemical Corp. Process for polymerizing chlorotrifluoroethylene and mixtures thereof with vinylidene fluoride. 3,018,276, 1-23-62, Cl. 260—87.7.

Bankers Box Co.: *See*—
Fellows, John E. 3,018,029.

Banks, Robert L., to Phillips Petroleum Co. Vanadium oxide catalyst for production of solid polymers. 3,018,255, 1-23-62, Cl. 252—455.

Barre, Wade E., Jr., and W. H. Morgan, Jr., to Sylvania Electric Products Inc. Socket. 3,018,462, 1-23-62, Cl. 339—112.

Barrell, Robert F., to Westinghouse Electric Corp. Economic data computer. 3,018,050, 1-23-62, Cl. 235—193.

Barry, Adelbert. Aerially launched marine mine. 3,017,831, 1-23-62, Cl. 102—10.

Bartels, Fred L.: *See*—
Hambrecht, Albert H., Bartels, Isenring, and Rowe. 3,017,698.

Bartelt Engineering Co., Inc.: *See*—
Mattl, Leo F. 3,017,992.

Barut, Victor J. Cellular structure and method of manufacture. 3,018,205, 1-23-62, Cl. 154—45.

Bassani, Ermanno, to Societa per Azioni Bassani. Locking and safety device for electric switches. 3,018,341, 1-23-62, Cl. 200—50.

Bassoff, Arthur B., to National Broach & Machine Co. Tool trimmer. 3,017,876, 1-23-62, Cl. 125—11.

Bastin, Edgar J.: *See*—
Graves, Edward B., and Bastin. 3,018,375.

Batchelor, James D., R. J. Friedrich, and P. M. Yavorsky, to Consolidation Coal Co. Method for preparing coked briquets from caking coals. 3,018,226, 1-23-62, Cl. 202—26.

Baudry, Rene A., and E. C. Whitney, to Westinghouse Electric Corp. Thrust bearing assembly. 3,018,144, 1-23-62, Cl. 308—160.

Bauer, Hugo, F. T. May, and S. A. Lopenski, to Westinghouse Electric Corp. Article fabricating machine. 3,017,852, 1-23-62, Cl. 118—49.5.

Baugh, Charles W., Jr., to Westinghouse Electric Corp. Television automatic frequency control apparatus. 3,018,325, 1-23-62, Cl. 178—5.8.

Baugh, Charles W., Jr., and C. A. Kingsford-Smith, to Westinghouse Electric Corp. Tuning system for television receivers. 3,018,327, 1-23-62, Cl. 178—5.8.

Baum, Kurt, and R. J. Friedrich, to Consolidation Coal Co. Preparation of formcoke. 3,018,227, 1-23-62, Cl. 202—26.

Beachler, Edward D., to Beloit Iron Works. Head box with balanced slice body. 3,017,929, 1-23-62, Cl. 162—340.

Beals, Albert P. Reciprocating drive mechanism. 3,017,779, 1-23-62, Cl. 74—50.

Bechard, Jerome. Adjustable bridle and clevis. 3,018,117, 1-23-62, Cl. 280—490.

Beck, John W., to International Business Machines Corp. Non-saturating transistor circuit. 3,018,387, 1-23-62, Cl. 307—88.5.

Becker, Sylvan J., and R. J. Settimi, to Borg-Warner Corp. Transmission. 3,017,977, 1-23-62, Cl. 192—48.

Beckwith, Sterling, to Conch International Methane Ltd. Tank for storing low boiling temperature liquids. 3,018,018, 1-23-62, Cl. 220—63.

Becton, Dickinson and Co.: *See*—
Dickinson, Fairleigh S., Jr. 3,017,883.

Behringer, Alfred C., to Miehle-Goss-Dexter, Inc. Doctor blade mechanism. 3,017,828, 1-23-62, Cl. 101—157.

Behun, John D., to Wyandotte Chemical Corp. Process for preparing oxamidines. 3,018,289, 1-23-62, Cl. 260—296.

Bell Telephone Laboratories, Inc.: *See*—
Backman, Gustav A., and Ortel. 3,018,048.
Friis, Harald T., and Unger. 3,018,452.
Goldstein, Hans L. 3,018,431.
Kamentsky, Louis A. 3,018,471.
Krause, John T. 3,017,851.
Middaugh, Jack K. 3,018,334.
Pollard, Charles E., Jr. 3,018,354.

Beloit Iron Works: *See*—
Beachler, Edward D. 3,017,929.

Bendix Corp., The: *See*—
Austin, Leonard E., and Brown. 3,017,691.
Dring, Morgan L. 3,018,043.
MacDuff, Stanley I. 3,017,945.

Bent, Arthur J., to Westinghouse Air Brake Co. Aircraft brake stabilizing arrangement. 3,018,073, 1-23-62, Cl. 244—111.

Bentley, John M.: *See*—
Aarons, Melvin W., Dzimianski, and Bentley. 3,018,423.

Berg Airlectro Products Co.: *See*—
Dobrikin, Harold L. 3,017,861.
Dobrikin, Harold L. 3,018,123.

Berg, Rudolph G., S. K. Figdor, and G. D. Laubach, to Chas. Pfizer & Co., Inc. 21-methylene steroid compounds. 3,018,295, 1-23-62, Cl. 260—397.3.

Berger, Leonard G. Light fixture mounting. 3,018,082, 1-23-62, Cl. 248—343.

Berghaus, Bernhard, and H. Bucek, to Elektrophysikalische Anstalt Bernhard Berghaus. Control of glow discharge processes. 3,018,409, 1-23-62, Cl. 315—111.

Berry, James W.: *See*—
Mitchell, Reid L., Berry, and Wadman. 3,018,158.

Bethlehem Steel Co.: *See*—
Gathman, David W. 3,017,739.
Walmsley, James L. 3,017,915.

Better Belts, Inc.: *See*—
Stollman, Harry E. 3,017,641.

Betz, Karl, to Mitteldeutsche Kuehlerfabrik G.m.b.H. Brake shoe and method of making same. 3,017,966, 1-23-62, Cl. 188—252.

Bevilacqua, Frank, D. F. Uecker, and E. F. Grob, to United States of America, Atomic Energy Commission. Spring driven actuating mechanism for nuclear reactor control. 3,018,240, 1-23-62, Cl. 204—193.2.

Beyer, Jeno, and C. J. Gonsalves, to American Enka Corp. Method and apparatus for forming cord. 3,017,738, 1-23-62, Cl. 57—58.3.

Bice, Charles C., to Phillips Petroleum Co. Propellants with improved burning rate. 3,018,204, 1-23-62, Cl. 149—19.

Bidwell, Joseph B., to General Motors Corp. Hydraulic function generator. 3,018,041, 1-23-62, Cl. 235—61.

Bikales, Norbert M., to American Cyanamid Co. Process of cyanoethylating cellulose in the presence of salts. 3,018,156, 1-23-62, Cl. 8—116.2.

Binder, Robert: *See*—
Forstner, Egon, and Binder. 3,017,943.

Bin-Dicator Co., The: *See*—
Grostick, Norman L. 3,018,343.

Bingham, Sidney H. Symmetric truck for over-running monorail cars. 3,017,838, 1-23-62, Cl. 104—120.

Binkley, Clifford T.: *See*—
Binkley, William J. and C. T., and Packer. 3,018,026.

Binkley, William J. and C. T., and R. V. Packer; said Packer assor. to said W. J. and C. T. Binkley. Lingerie dryer. 3,018,026, 1-23-62, Cl. 223—91.

Bird, Charles A. Portable trash collecting devices. 3,017,653, 1-23-62, Cl. 15—257.8.

Bireley, Frank W., and H. A. Foss, to Brown Citrus Machinery Corp. Fruit juice extractor. 3,017,821, 1-23-62, Cl. 100—97.

Biris, John, Jr. Floor panel fastening construction. 3,017,673, 1-23-62, Cl. 20—6.

Birum, Gail H.: *See*—
Heininger, Samuel A., and Birum. 3,018,304.

Birum, Gail H., and J. L. Dever, to Monsanto Chemical Co. Organic compounds of boron, nitrogen and phosphorus. 3,018,303, 1-23-62, Cl. 260—461.

Bishoff, Robert W., and R. P. Cope, Jr., to Westinghouse Electric Corp. Addition agent for cyanide plating baths. 3,018,232, 1-23-62, Cl. 204—44.

Bishop, Charles R., to C. R. and M. Bishop, as joint tenants with right of survivorship. Boat propulsion unit. 3,017,848, 1-23-62, Cl. 115—16.

Bishop, Muriel: *See*—
Bishop, Charles R. 3,017,848.

Bitzer, Martin, and A. R. D'Alba, to Trico Products Corp. Windshield wiper system. 3,017,651, 1-23-62, Cl. 15—250.12.

Black, James A.: *See*—
Farwell, Harry R. 3,017,823.

Blake, Charles T., and R. Vetsch, to The Warner & Swasey Co. Toggle actuated chuck. 3,018,115, 1-23-62, Cl. 279—118.

Blockley, Eugene T., and W. E. Stone, to Eclipse Fuel Engineering Co. Ring burner with flame retention shield. 3,017,920, 1-23-62, Cl. 158—7.

Bloom, Stanley, and K. K. N. Chang, to Radio Corp. of America. Parametric amplifier with lower frequency pumping. 3,018,443, 1-23-62, Cl. 330—5.

Bobo, Roy A., to Phillips Petroleum Co. Lubricator for earth boring bit. 3,017,937, 1-23-62, Cl. 175—228.

Bobrick, Mitchell, to Sunbeam Lighting Co. Automatic mounting means for a ceiling light fixture. 3,018,083, 1-23-62, Cl. 248—343.

Boggiss, Walter C. Perpetual calendars. 3,017,711, 1-23-62, Cl. 40—109.

Bohm, Robert E.: *See*—
Taylor, Donald S., Bower, and Bohm. 3,018,307.

Bonafide Mills, Inc.: *See*—
Slosberg, David K., and Nakonieczny. 3,017,714.

Bonhomme, Francois R. Liquid level indicators. 3,017,771, 1-23-62, Cl. 73—290.

Bonisch, Josef, H. Gopfert, and W. Planert, to VEB Kamera- und Kinowerke Dresden. Motion picture camera and attachment therefor. 3,017,804, 1-23-62, Cl. 88—17.

Bonn, Theodore H., to Sperry Rand Corp. Regenerative actuator drive circuits. 3,018,419, 1-23-62, Cl. 317—148.5.

Bonnafoux, Marie B.: *See*—
Bonnafoux, Paul. 3,017,845.

Bonnafoux, Paul, 20% to T. P. Mahoney, 26% to M. B. Bonnafoux, and 26% to Y. Bonnafoux. Pellet mill. 3,017,845, 1-23-62, Cl. 107—14.

Bonnafoux, Yvonne: *See*—
Bonnafoux, Paul. 3,017,845.

Booth, Seth W., J. F. Toomey, and E. M. Brown. Magnetic firing control mechanism for a mine. 3,017,833, 1-23-62, Cl. 102—18.

Borden Co., The: *See*—
Klaessig, Henry, Pennie, and Clay. 3,018,185.
Salzberg, Harold K. 3,017,826.
Salzberg, Harold K., and Simonds. 3,018,280.
Zweig, Samuel. 3,017,670.

Borg-Warner Corp.: *See*—
Becker, Sylvan J., and Settimi. 3,017,977.
Polomski, John B. 3,017,788.

Born, William F.: *See*—
Mullen, John H., and Born. 3,018,338.

Borr, Mitchell, and K. E. MacPhee, to United States Rubber Co. Production of rigid foamed polyesterurethane plastics. 3,018,256, 1-23-62, Cl. 260—2.5.

Bourns, Inc.: *See*—
Hardison, Wilbur T., and Hulbert. 3,018,459.

Bourseaux, Friedrich: *See*—
Arnold, Herbert, Brock, and Bourseaux. 3,018,302.

Bower, Joseph G.: *See*—
Taylor, Donnald S., Bower, and Bohm. 3,018,307.

Bowers, James C. Kite frame assembly. 3,018,075, 1-23-62, Cl. 244—153.

Bowling, Robert T., W. G. Edward, H. A. Keller, and G. F. Scheelke, to Potlach Forests Inc. Automatic edging picker for sawmills. 3,017,909, 1-23-62, Cl. 143—157.

Boyce, Walter A., and V. L. Plagge, to Westinghouse Electric Corp. Method of coating a fluorescent type tube and the coated article. 3,018,187, 1-23-62, Cl. 117—33.5.

Boydston, Raymond W.: *See*—
Eshner, Allen J., and Boydston. 3,018,193.

Brandon, James C., Jr., T. H. Frank, Jr., and R. H. Rahiser, to Magnetics, Inc. Apparatus for encasing magnetic cores. 3,018,455, 1-23-62, Cl. 336—100.

Brauer, Edwin H., Jr., to The Osborn Mfg. Co. Work turnover mechanism. 3,017,647, 1-23-62, Cl. 15—21.

Brault, Yves, and J. Cauchois, to Compagnie Generale de Telegraphie Sans Fil. Electromagnetic detector devices. 3,018,477, 1-23-62, Cl. 343—7.7.

Breen, Alvin L., and W. E. Jordan, to E. I. du Pont de Nemours and Co. Two component convoluted filaments. 3,017,686, 1-23-62, Cl. 28—82.

Breen, Alvin L., to E. I. du Pont de Nemours and Co. Method and apparatus for producing bulky continuous filament yarn. 3,017,737, 1-23-62, Cl. 57—34.

Breese, James L., deceased (by R. F. Van Tubergen and J. L. Breese, III, executors), and M. D. Huston, to Controls Co. of America. Burner units and methods. 3,017,925, 1-23-62, Cl. 158—91.

Breese, James L., III: *See*—
Breese, James L., and Huston. 3,017,925.

Brewer, Clifford E. Chimney cowls and ventilating devices. 3,017,818, 1-23-62, Cl. 98—82.

Brewster, Jerry, Sr.: *See*—
Mir, William G., and Brewster. 3,018,101.

Bright, Richard L., and R. R. Jackson, to Westinghouse Electric Corp. Current balancing apparatus. 3,018,380, 1-23-62, Cl. 307—58.

Brill, Friedrich E., to Rheinstahl Siegener Eisenbahnbedarf A.G. Sliding door arrangement for vehicles such as railroad cars. 3,017,674, 1-23-62, Cl. 20—23.

Bristol-Myers Co.: *See*—
Siegal, Bernard. 3,018,223.

Bristol Siddeley Engines Ltd.: *See*—
Powell, Kenneth S. 3,018,093.

Brock, Norbert: *See*—
Arnold, Herbert, Brock, and Bourseaux. 3,018,302.

Bronco, Charles J., and R. M. St. John, to United States of America, Air Force. Demountable photomultiplier refrigerator. 3,018,397, 1-23-62, Cl. 313—22.

Brook Airway Ltd.: *See*—
Brook, Morris H. 3,017,880.

Brook, Morris H., to Brook Airway Ltd. Resuscitator. 3,017,880, 1-23-62, Cl. 128—29.

Brooks, Charles H.: *See*—
Gorand, Alfred J., and Brooks. 3,018,021.

Brown, Arthur K., Jr.: *See*—
Austin, Leonard E., and Brown. 3,017,691.

Brown Citrus Machinery Corp.: *See*—
Bireley, Frank W., and Foss. 3,017,821.

Brown Co.: *See*—
Waldie, Conrad T., Jr., and Hearn. 3,018,214.

Brown, Ellis M.: *See*—
Booth, Seth W., Toomey, and Brown. 3,017,833.

Brown, Jack W., to McGraw-Edison Co. Speed shift control for phonographs. 3,018,110, 1-23-62, Cl. 274—9.

Brown, Robert G., to Rabinow Engineering Co., Inc. Combined vacuum pick up and printer. 3,017,829, 1-23-62, Cl. 101—327.

Brown, Robert P. Bird nesting and sheltering device. 3,017,858, 1-23-62, Cl. 119—23.

Brown, Thomas T., to Whitehall-Rand, Inc. Electrokinetic transducer. 3,018,394, 1-23-62, Cl. 310—5.

Brown, Winston E., and M. W. Mabry, to Phillips Petroleum Co. High impulse propellants. 3,018,202, 1-23-62, Cl. 149—19.

Bruce, Willis N., to L. Ratner. Insect repellent wax composition and method of treating areas therewith. 3,018,217, 1-23-62, Cl. 167—22.

Bruins, Paul F.: *See*—
Higgins, Thomas W., Capsuto, and Bruins. 3,018,316.

Brundage, Raymond L. Toy electric train control system. 3,017,839, 1-23-62, Cl. 104—149.

Brunnsell, Rollo E. Apparatus for opening and closing milking barn doors. 3,017,867, 1-23-62, Cl. 121—44.

Bruno, Michael F., to E. I. du Pont de Nemours and Co. Polymeric compositions, shaped articles therefrom and process of preparation. 3,018,269, 1-23-62, Cl. 260—45.8.

Brunswick Automatic Pinsetter Corp., The: *See*—
Albrecht, Alexander J. 3,018,103.
Gautraud, Michael G., and Huck. 3,018,104.

Brunswick Corp.: *See*—
Satchell, Fred E., and Trier. 3,018,106.

Bryant Electric Co., The: *See*—
Smith, Clarence M. 3,018,461.

Bucek, Hans: *See*—
Berghaus, Bernhard, and Bucek. 3,018,409.

Bucy, J. Fred, Jr.: *See*—
Jones, Hal J., and Bucy. 3,018,468.

Buehler, Albert E., to B-W Metal Works, Inc. Stair railing. 3,018,077, 1-23-62, Cl. 248—43.

Builis, Earl, Jr., to Westinghouse Electric Corp. Circuit interrupting means for a wiring device. 3,018,342, 1-23-62, Cl. 200—51.16.

Bunts, John L., Jr.: *See*—
Happell, John J., Thomas, Denise, and Bunts. 3,018,239.

Burnell, Floyd E., to Kelsey-Hayes Co. Operating tool for spring clip. 3,017,692, 1-23-62, Cl. 29—229.

Burnside, Charles H., to Phillips Petroleum Co. Combination liquid and solid propellant spin-stabilized rocket motor. 3,017,748, 1-23-62, Cl. 60—35.6.

Burrow, Laurie R., to General Dynamics Corp. Automatic wave analyzer. 3,018,439, 1-23-62, Cl. 324—77.

Busch, Floyd H., and F. H. Sawada, to General Electric Co. Temperature control systems. 3,018,356, 1-23-62, Cl. 219—20.

Busch, Thomas N., to International Paper Co. Soil stabilisation and seeding. 3,017,720, 1-23-62, Cl. 47—58.

Buselli, Alio J., and S. Ariemma, to Air Reduction Co., Inc. Vinyl acetate copolymers. 3,018,274, 1-23-62, Cl. 260—80.5.

Butler, John M., R. M. Hedrick, and E. H. Mottus, to Monsanto Chemical Co. Process of polymerizing higher lactams. 3,018,273, 1-23-62, Cl. 260—78.

Butler, Joseph F. Display device. 3,017,713, 1-23-62, Cl. 40—135.

Butterfill, Sydney T. Basket-type carton. 3,018,032, 1-23-62, Cl. 229—52.

CRIBLA Societe Anonyme: *See*—
Petit, Omer. 3,017,994.

Caban, Louis, and F. L. Reusche, to L. Reusche & Co. Process of gold coating ceramic surfaces and articles produced thereby. 3,018,191, 1-23-62, Cl. 117—70.

Cain, Dallas E., to General Electric Co. Flexible link assembly for transmitting linear motion. 3,018,125, 1-23-62, Cl. 287—86.

Caldwell, Roland B., to Ranco Inc. Balanced valve. 3,018,084, 1-23-62, Cl. 251—282.

California Research Corp.: *See*—
Anderson, Robert G., Stuart, and Drummond. 3,018,247.
Anderson, Robert G., Stuart, and Drummond. 3,018,250.
Anderson, Robert G., Stuart, and Drummond. 3,018,291.
Clark, Calvin M. 3,018,441.
Foehr, Edward G. 3,018,248.
Levine, Irving E., and Clippinger. 3,018,308.

Cameron, Margaret D., to Monsanto Chemical Co. Process of destroying undesired plants. 3,018,175, 1-23-62, Cl. 71—2.3.

Canadian Bratt & Whitney Aircraft Co. Ltd.: *See*—
Peterson, Gudmundur P. 3,017,922.

Canadian National Railway Co.: *See*—
Fairweather, Starr W. 3,017,840.

Canadian Westinghouse Co., Ltd.: *See*—
Lipinski, Andrew J. 3,018,370.

Candeline, Alfred, to General Motors Corp. Air injection system for an internal combustion engine. 3,017,872, 1-23-62, Cl. 123—26.

Cannon Electric Co.: *See*—
Conrad, Thomas W. 3,018,418.

Cano, Luis C. Record album rack with improved hinge. 3,017,999, 1-23-62, Cl. 211—40.

Capsuto, Leon: *See*—
Higgins, Thomas W., Capsuto, and Bruins. 3,018,316.

Cardwell, Mintaetta W., and B. B. Powers. Novelty socks. 3,017,640, 1-23-62, Cl. 2—239.

Carlson, Carl P. Snow mover and utility cart. 3,017,710, 1-23-62, Cl. 37—123.

Carlstein, Joseph, to United Aircraft Corp. Tachometer generator. 3,018,395, 1-23-62, Cl. 310—40.

Carroll, James C., F. T. Thompson, and C. I. Jones, to Westinghouse Electric Corp. Wide range high output frequency detector. 3,018,381, 1-23-62, Cl. 307—88.

Carroll, James C., and F. T. Thompson, to Westinghouse Electric Corp. Frequency detector. 3,018,382, 1-23-62, Cl. 307—88.

Carson, James S., G. B. Feild, R. E. Kegan, W. H. Markwood, Jr., and F. C. Whitney, to United States of America, Army. Liquid gelling agent for gasoline. 3,018,252, 1-23-62, Cl. 252—316.

Case, J. I., Co.: *See*—
Baker, Malvern S. 3,017,941.

Cataldo, John, to I-T-E Circuit Breaker Co. Connecting means for electrical conductors embedded in an insulating housing. 3,018,463, 1-23-62, Cl. 339—164.

Caubre, David H. Ant vault. 3,017,717, 1-23-62, Cl. 43—131.

Cauchois, Jean: *See*—
Brault, Yves, and Cauchois. 3,018,477.

Caughill, Robert F., and F. A. Disinger, to General Motors Corp. Cylindrical heat exchanger with tube banks. 3,018,089, 1-23-62, Cl. 257—235.

Cavallini, Guido, and E. Massarani, to Francesco Vismara S.p.A. γ-phenylbenzoyl-γ-arylaminocarbinol derivatives. 3,018,305, 1-23-62, Cl. 260—319.

Cayot, Lynn B., to Commonwealth Co. Wall heater. 3,017,878, 1-23-62, Cl. 126—116.

Chagrin de Saint-Hilaire, Raoul M. F.: *See*—
Lamort de Gail, Marc, and Chagrin de Saint-Hilaire. 3,018,060.

Chain Belt Co.: *See*—
Conley, Weld E. 3,017,998.

Cham, Edward J.: *See*—
Colaiaco, August P., Miller, and Cham. 3,018,417.

Champion, Ronald H., to Eclipse Fuel Engineering Co. Tamper-proof insulated pipe coupling. 3,018,119, 1-23-62, Cl. 285—50.

Champlain Co., Inc.: *See*—
Auer, Frederick G., and Sorkin. 3,017,796.

Chang, Kern K. N.: *See*—
Bloom, Stanley, and Chang. 3,018,443.

Chang, Melvin C.: *See*—
Dasher, John, and Chang. 3,017,665.

Chapman, Charles M.: *See*—
Olson, Earl R., and Chapman. 3,018,198.

Charpentier, Maurice: *See*—
Levecque, Marcel, and Charpentier. 3,017,663.

Chase, Robert L., to United States of America, Atomic Energy Commission. Amplitude discriminator having separate triggering and recovery controls utilizing automatic triggering. 3,018,386, 1-23-62, Cl. 307—88.5.

Chauvin, Bernard, and F. T. May, to Westinghouse Electric Corp. Article inspection device. 3,017,991, 1-23-62, Cl. 206—88.

Check, Mathias M., to The Yale and Towne Mfg. Co. Drawer control. 3,017,655, 1-23-62, Cl. 16—82.

Cheeley, William E., to Reynolds Metals Co. Shrinkable container closure and manufacture thereof. 3,017,729, 1-23-62, Cl. 53—27.

Chemical Development Corp.: *See*—
Creighton, Albert M., Jr. 3,018,260.

Chilcoat, Murray A., to Futurecraft Corp. Valve. 3,017,894, 1-23-62, Cl. 137—69.

Chilman, John A., to Rotol Ltd. Control syatems for aircraft propellers. 3,017,932, 1-23-62, Cl. 170—135.29.

Chinn, Hyman G., to Union Carbide Corp. Thermoplastic bonding and coating. 3,018,212, 1-23-62, Cl. 156—195.

Christensen, Byron C., ½ to M. J. Clearman. Cable lock. 3,017,678, 1-23-62, Cl. 24—134.

Christman, Charles W., to Formacel, Inc. Cellular cored panels and continuous process for manufacturing same. 3,017,971, 1-23-62, Cl. 189—34.

Ciba Ltd.: *See*—
Gaertner, Hans, and Reich. 3,018,153.

Cieremans, Cornelis J. A.: *See*—
Euwe, Gerrit E., and Cieremans. 3,018,146.

Civitelli, Gennaro. Can opener or the like. 3,017,700, 1-23-62, Cl. 30—16.

Clark, Calvin M., to California Research Corp. Amplitude comparator circuit. 3,018,441, 1-23-62, Cl. 328—148.

Clason, Bertil H., to General Motors Corp. Closed system resistance units. 3,018,457, 1-23-62, Cl. 338—39.

Clay, Frederick E.: *See*—
Klaessig, Henry, Pennie, and Clay. 3,018,185.

Clearman, Marion J.: *See*—
Christensen, Byron C. 3,017,678.

Clippinger, Everett: *See*—
Levine, Irving E., and Clippinger. 3,018,308.

Cluck, Howard O., and T. G. Harris. Tow line handle and signal assembly for water skiers. 3,018,474, 1-23-62, Cl. 340—366.

Cobb, James S., to E. I. du Pont de Nemours and Co. Spinneret production. 3,017,789, 1-23-62, Cl. 76—107.

Coenen, Max: *See*—
Geiger, Julius, Ossenbrunner, and Coenen. 3,018,177.

Cohen, Irvin. Anchor bolt with expanding sleeve. 3,017,800, 1-23-62, Cl. 85—2.4.

Colaiaco, August P., L. G. Miller, and E. J. Cham, to Westinghouse Electric Corp. Detection circuit. 3,018,417, 1-23-62, Cl. 317—52.

Colaiaco, August P., to Westinghouse Electric Corp. Rectifier apparatus. 3,018,424, 1-23-62, Cl. 317—234.

Colclough, William G., Jr., to Union Carbide Corp. Polyepoxide compositions. 3,018,264, 1-23-62, Cl. 260—37.

Colgate, Richard M.: *See*—
Colgate, Stirling A. 3,018,396.

Colgate, Stirling A., 50% to R. M. Colgate. Solenoid stator dynamoelectric machines. 3,018,396, 1-23-62, Cl. 310—268.

Collins & Aikman Corp.: *See*—
Keen, William R. 3,017,847.

Collins, Harry V.: *See*—
Stough, Gerald D., and Collins. 3,018,079.

Colorado Fuel and Iron Corp., The: *See*—
Nelson, John R., and Gosselin. 3,018,128.

Columbus Auto Parts Co., The: *See*—
Flumerfelt, William A. 3,018,124.

Combs, Clyde M. Adjustable display and storage rack. 3,018,001, 1-23-62, Cl. 211—49.

Commonwealth Co.: *See*—
Cayot, Lynn B. 3,017,876.

Compagnie des Machines Bull (Societe Anonyme): *See*—
Pinton, Pierre C. 3,018,035.

Compagnie Generale de Telegraphie Sans Fil: *See*—
Brault, Yves, and Cauchois. 3,018,477.
Thourel, Leo. 3,018,480.
Warnecke, Robert R. 3,018,448.

Components for Research, Inc.: *See*—
Franklin, Le Roy H. 3,018,318.

Conch International Methane Ltd.: *See*—
Beckwith, Sterling. 3,018,018.

Conley, Weld E., to Chain Belt Co. Apparatus for separation of solids from a liquid. 3,017,998, 1-23-62, Cl. 210—519.

Conrad, Thomas W., to Cannon Electric Co. Solenoid. 3,018,418, 1-23-62, Cl. 317—123.

Consolidated Electronics Industries Corp.: *See*—
Kalish, David. 3,017,690.
Nicholson, Ronald G. 3,018,151.

Consolidation Coal Co.: *See*—
Batchelor, James D., Friedrich, and Yavorsky. 2,018,226.
Baum, Kurt, and Friedrich. 3,018,227.
Gorin, Everett. 3,018,241.
Gorin, Everett. 3,018,242.

Continental Oil Co.: *See*—
Rhodes, Aaron D., and Stratton. 3,017,934.
Tillman, Richard M. 3,018,172.

Controls Co. of America: *See*—
Breese, James L., and Huston. 3,017,925.

Coons, Burton C. and W. B. Pear peeling, coring and trimming machine and method and product thereof. 3,018,179, 1-23-62, Cl. 99—100.

Coons, Willard B.: *See*—
Coons, Burton C. and W. B. 3,018,179.

Cooper, Manuel, and C. M. Gold, to Yardney International Corp. Filling mechanism for deferred-action batteries. 3,018,314, 1-23-62, Cl. 136—90.

Coover, Harry W., Jr.: *See*—
Shearer, Newton H., Jr., and Coover. 3,018,278.

Cope, Richard P., Jr.: *See*—
Bishoff, Robert W., and Cope. 3,018,232.

Corben, Leo D., and W. H. Hatch, to The American Agricultural Chemical Co. Gelatin dessert and method of preparing the same. 3,018,181, 1-23-62, Cl. 99—130.

Corlett, Ewan C. B. Cargo hoists. 3,017,956, 1-23-62, Cl. 187—6.

Cornelius, Richard T., to Stewart-Warner Corp. Bearing. 3,018,145, 1-23-62, Cl. 308—174.

Cornell, Archie R., to Westinghouse Electric Corp. Circuit arrangement for energizing load apparatus. 3,018,410, 1-23-62, Cl. 315—138.

Cornell, David, to Monsanto Chemical Co. Extractive distillation process. 3,018,228, 1-23-62, Cl. 202—39.5.

Cornell-Dubilier Electric Corp.: *See*—
Dubilier, William. 3,018,064.

Cornish, Albert J., and R. C. Miller, to Westinghouse Electric Corp. Thermoelectric materials. 3,018,312, 1-23-62, Cl. 136—5.

Correll, David R. Spiral wire pin retainer. 3,018,121, 1-23-62, Cl. 287—20.

Cotter, Robert J.: *See*—
Sauers, Carol K., and Cotter. 3,018,290.
Sauers, Carol K., and Cotter. 3,018,292.

Cottle, Delmer L., to Esso Research and Engineering Co. Halogenation of low unsaturation rubbery polymers in the presence of oxidizing agent. 3,018,275, 1-23-62, Cl. 260—85.3.

Counsell, Raymond E.: *See*—
Klimstra, Paul D., and Counsell. 3,018,298.

Covington, Edward R., and J. W. Meier, to E. I. du Pont de Nemours and Co. Packaging film and process for preparation thereof. 3,018,197, 1-23-62, Cl. 117—145.

Cowan, Tyson G., to International Business Machines Corp. Mounting and operating means for a pneumostatic transducer head. 3,018,152, 1-23-62, Cl. 346—74.

Crecelius, Samuel B., to Economics Laboratory, Inc. Process for producing surface-active agents from sucrose. 3,018,281, 1-23-62, Cl. 260—209.

Crecelius, Samuel B., to Economics Laboratory, Inc. Production of liquid fatty acid esters of sucrose addition compounds. 3,018,282, 1-23-62, Cl. 260—234.

Creighton, Albert M., Jr., to Chemical Development Corp. Room temperature curing molding and forming composition. 3,018,260, 1-23-62, Cl. 260—18.

Cross, St. Elmo: *See*—
Reeves, Willard D. 3,017,660.

Crucible Steel Co. of America: *See*—
Dasher, John, and Chang. 3,017,665.

Crum, Eben J. High speed uncoiler. 3,018,066, 1-23-62, Cl. 242—128.

Culver, Eugene S., to United States of America, Navy. Missile transfer dolly. 3,018,129, 1-23-62, Cl. 296—35.

Cumings, Richard G. Coherent pulse rate divider consisting of counter, monostable multivibrator and pentode coincidence gate. 3,018,440, 1-23-62, Cl. 328—41.

Cummings, Frederick W., and H. D. Mowers, to General Motors Corp. Method and apparatus of making electrical heating elements. 3,017,688, 1-23-62, Cl. 29—155.66.

Cummins-Chicago Corp.: *See*—
Snowdon, Donald R., and Andersen. 3,018,036.

Cushman, Clifford E., and R. J. Wrighton, to Pacific Scientific Co. Safety harness device. 3,018,065, 1-23-62, Cl. 242—107.4.

Cyba, Henry A., to Universal Oil Products Co. Stabilization of hydrocarbons. 3,018,173, 1-23-62, Cl. 44—71.

Cyril Bath Co., The: *See*—
Nasvytis, Pius J. 3,017,916.

D'Alba, Anthony R.: *See*—
Bitzer, Martin, and D'Alba. 3,017,651.

Daly, Lawrence E., to United States Rubber Co. Thermoplastic compositions of vinyl chloride resin, graft copolymer of styrene and methyl methacrylate upon butadiene-styrene rubber and styrene methyl methacrylate resin, and method of making same. 3,018,268, 1-23-62, Cl. 260—45.5.

Dana Corp.: *See*—
Miller, Fred F. 3,017,755.
Sharp, Everett H. 3,017,756.

Daniels, Cloyce R.: *See*—
Morway, Arnold J., Daniels, and Spray. 3,018,249.

Danielson, Arthur C., to United States Rubber Co. Adhering textile materials to rubber. 3,018,207, 1-23-62, Cl. 154—52.

Dasher, John, and M. C. Chang, to Crucible Steel Co. of America. Rolling mill. 3,017,665, 1-23-62, Cl. 18—9.

Davis, James E., and W. A. Roos, to O. I. McCullough. Vehicular speed control system. 3,017,946, 1-23-62, Cl. 180—82.1.

Davis, Kenneth J., to National Broach & Machine Co. Pressure feeding apparatus for a gear honing machine. 3,017,728, 1-23-62, Cl. 51—165.

Day, Cyril L., to International Telephone and Telegraph Corp. Method of making bowl-shaped fine mesh screens for electron discharge tubes. 3,017,687, 1-23-62, Cl. 29—25.18.

Deardorff, George A.: *See*—
Wilson, Ross D., and Deardorff. 3,017,648.

Deer, James W., and A. E. Sprando, to Iron Fireman Mfg. Co. Electric relay. 3,018,347, 1-23-62, Cl. 200—87.

Deering Milliken Research Corp.: *See*—
Pittman, Edgar H. 3,017,884.

Demko, Charles. Plastic screen and use. 3,017,927, 1-23-62, Cl. 160—271.

Denise, Richard P.: *See*—
Happell, John J., Thomas, Denise, and Bunts. 3,018,239.

Denver Wood Products Co.: *See*—
Nesbitt, George G. 3,018,004.

De Prisco, Carmine F.: *See*—
Elmore, William C. and De Prisco. 3,017,792.

De Rosa, Adrian L. Bi-plex stereophonic recording and reproducing system. 3,018,335, 1-23-62, Cl. 179—100.11.

Destoumieux, Paul: *See*—
Amirault, Maxime, and Destoumieux. 3,018,112.

Dever, James L.: *See*—
Birum, Gail H., and Dever. 3,018,303.

Diamond National Corp.: *See*—
Rodish, John 3,017,730.

Dickerson, Robert L.: *See*—
Kaupplia, George R. 3,017,926.

Dickinson, Fairleigh S., Jr., to Becton, Dickinson and Co. Venoclysis assembly. 3,017,883, 1-23-62, Cl. 128—214.

Dietrich, Howard H., to General Motors Corp. Fuel injection system. 3,017,873, 1-23-62, Cl. 123—119.

Dijksterhuis, Fokko and H. U. Panel with cellular inside structure. 3,018,209, 1-23-62, Cl. 154—45.9.

Dijksterhuis, Heertjen U.: *See*—
Dijksterhuis, Fokko and H. U. 3,018,209.

Disinger, Frank A.: *See*—
Caughill, Robert F., and Disinger. 3,018,089.

Djerassi, Carl: *See*—
Rosenkranz, George, and Djerassi. 3,018,284.

Dobrikin, Harold L., to Berg Airlectro Products Co. Piston construction. 3,017,861 1-23-62, Cl. 121—38.

Dobrikin, Harold L., to Berg Airlectro Products Co. Connector device. 3,018,123, 1-23-62, Cl. 287—59.

Dobrosielski, Stephen S., and W. L. Lang, to Westinghouse Electric Corp. Enclosed device with cover-mounting means. 3,018,127, 1-23-62, Cl. 292—251.

Dock Fon Toy, Arthur: *See*—
Lauck, Robert M., and Dock Fon Toy. 3,018,180.

Doherty, George O., and D. H. Ballard. Apparatus for injecting or infusing fluids into patients and method of making same. 3,017,884, 1-23-62, Cl. 128—214.

D'Onofrio, Anthony, to Royal McBee Corp. System for automatically controlling line feeding mechanism in typewriters or like machines. 3,017,980, 1-23-62, Cl. 197—114.

Downard, Jack M., to Hercules Powder Co. Gelatinous explosive composition. 3,018,201, 1-23-62, Cl. 149—19.

Downey, Hubert A. Marshmallow dry mix. 3,018,183, 1-23-62, Cl. 99—134.

Downey, John F., and R. C. Hoare, to Allied Chemical Corp. Colored aromatic polyester material and process of making same. 3,018,154, 1-23-62, Cl. 8—55.

Dowty Hydraulic Units Ltd.: *See*—
Kempson, Bertram C. 3,017,750.

Dring, Morgan L., to The Bendix Corp. Digital type angle counter. 3,018,043, 1-23-62, Cl. 235—117.

Drummond, Alan Y.: *See*—
Anderson, Robert G., Stuart, and Drummond. 3,018,247.
Anderson, Robert G., Stuart, and Drummond. 3,018,250.
Anderson, Robert G., Stuart, and Drummond. 3,018,291.

Dubilier, William, to Cornell-Dubilier Electric Corp. Capacitor tab insertion. 3,018,064, 1-23-62, Cl. 242—56.1.

Dunlee Corp.: *See*—
Atlee, Zed J. 3,018,398.

Dudley, Edmond R., to Peerless Equipment Co. Motion and void control device. 3,018,437, 1-23-62, Cl. 324—34.

Dudley, Kenneth W., and J. H. Apelbaum, to Raytheon Co. Electron tube cathodes. 3,018,404, 1-23-62, Cl. 313—346.

Duggins, Ray B., to E. I. du Pont de Nemours and Co. Precipitation apparatus. 3,018,091, 1-23-62, Cl. 259—9.

Duggins, William E., to General Aniline & Film Corp. Dihalogenopropynes as soil fumigants. 3,018,218, 1-23-62, Cl. 167—22.

Duke, Edward M., Jr., to Purex Corp., Ltd. Composition and process for brightening aluminum and its alloys. 3,018,211, 1-23-62, Cl. 156—21.

Duncan, Ellsworth N. Zipper operating device. 3,017,680, 1-23-62, Cl. 24—205.15.

Dunlap, Harold E., to Lodding Engineering Corp. Adjustable supports for fourdrinier screen wires. 3,017,930, 1-23-62, Cl. 162—352.

Dunton, Robert E.: *See*—
Lit, Harry B., and Dunton. 3,018,199.

Du Pont de Nemours, E. I., and Co.: *See*—
Anderson, John L. 3,018,271.
Breen, Alvin L. 3,017,737.
Breen, Alvin L., and Jordan. 3,017,686.
Bruno, Michael F. 3,018,269.
Cobb, James S. 3,017,789.
Covington, Edward R., and Meier. 3,018,197.
Duggins, Ray B. 3,018,091.
Griffing, John M., and Remington. 3,018,272.
Humphreys, Charles R. 3,017,740.
Kovarik, Frank J., and Latschar. 3,018,157.

Du Pont de Nemours, E. I., and Co.: *See*—Continued
Mikell, William G. 3,017,669.
Miller, Henry C. 3,018,160.
Nicoll, William A. 3,018,188.

Dzimianski, John W.: *See*—
Aarons, Melvin W., Dzimianski, and Bentley. 3,018,423.

Earl, Thomas D.: *See*—
Frost, John C. M., and Earl. 3,018,068.

Eastman Kodak Co.: *See*—
Shearer, Newton H., Jr., and Coover. 3,018,278.

Eckert, Lewis W., to Armstrong Cork Co. Acoustical material and method of making the same. 3,017,947, 1-23-62, Cl. 181—33.

Eclipse Fuel Engineering Co.: *See*—
Blockley, Eugene T., and Stone. 3,017,920.
Champion, Ronald H. 3,018,119.

Economics Laboratoryy, Inc.: *See*—
Crecelius, Samuel B. 3,018,281.
Crecelius, Samuel B. 3,018,282.

Edward, William G.: *See*—
Bowling, Robert T., Edward, Keller, and Scheelke. 3,017,909.

Eger, Edward F., and W. O. Simpson, to Western Electric Co., Inc. Rack loading machine. 3,018,008, 1-23-62, Cl. 214—6.

Eggert, Lewis J., and W. S. Tufts, to Ranco Inc. Electric switch mechanism. 3,018,340, 1-23-62, Cl. 200—38.

Ekco Products Co.: *See*—
Frei, John, and Haase. 3,018,122.
Paige, Richard E. 3,018,076

Elastic Aktiengesellschaft vormals M. Vogel A.G.: *See*—
Koennecke, Wolfgang. 3,017,636.

Electrolux Corp.: *See*—
Allenby, William F., and Lofgren. 3,017,654.

Elektrophysikalische Anstalt Bernhard Berghaus: *See*—
Berghaus, Bernhard, and Bucek. 3,018,409.

Elgen Mfg. Corp.: *See*—
Goldsmith, Morris. 3,017,694.
Goldsmith, Morris, and Stein. 3,017,899.

Ellert, Frederick J., to General Electric Co. Electrical master slave amplifier circuit employing silicon controlled rectifiers. 3,018,383, 1-23-62, Cl. 307—88.5.

Elmore, William C., and C. F. De Prisco, to Aeroprojects Inc. Vibratory device. 3,017,792, 1-23-62, Cl. 78—82.

Elsner, Edwin C. to Aeroquip Corp. Self-locking releasable fastener. 3,017,679, 1-23-62, Cl. 24—201.

Elwell-Parker Electric Co., The: *See*—
Ackermann, Joseph A. 3,018,011.

Emerson Electric Mfg. Co., The: *See*—
Korski, Frank S., and Martin. 3,017,906.

Engel, Ralph D., to Air Reduction Co., Inc. Arc welding torch. 3,018,360, 1-23-62, Cl. 219—130.

Engman, Robert G.: *See*—
Horton, William F., and Engman. 3,018,071.

Entin, Leonard P., to Minneapolis-Honeywell Regulator Co. Oscillatory inertial reference. 3,017,775, 1-23-62, Cl. 73—505.

Erickson, Cecil J., deceased; R. C. Erickson, administrator. Coin operated game board. 3,018,107, 1-23-62, Cl. 273—136.

Erickson, Cecil J.: *See*—
Erickson, Roy C. 3,018,107.

Erlebacher, Woodland E., and D. T. Nishimura, to Atomic Energy of Canada Ltd. Removal of ruthenium and cesium. 3,018,161, 1-23-62, Cl. 23—355.

Eshner, Allen J., and R. W. Boydston. Precision thickness control for vacuum deposition of titanium and other metals for optical surfaces. 3,018,193, 1-23-62, Cl. 117—107.

Essaness Theater Corp.: *See*—
Stancher, Joseph E. 3,018,470.

Esso Research and Engineering Co.: *See*—
Cottle, Delmer L. 3,018,275.
Lucchesi, Peter J., and Tarmy. 3,018,237.
Morway, Arnold J., Daniels, and Spray. 3,018,249.
Shewmaker, James E., and Nelson. 3,018,236.
Tarmy, Barry L., and Long. 3,018,235.

Estes, Clarence L. Sectional mechanical toy. 3,017,718, 1-23-62, Cl. 46—123.

Ethyl Corp.: *See*—
Norman, Vello, and Whaley. 3,018,194.

Etlinger, Henry L.: *See*—
Navatta, Cono S., Smith, and Etlinger. 3,018,400.

Euwe, Gerrit E., and C. J. A. Clereuans, to Lever Brothers Co. Bearing. 3,018,146, 1-23-62, Cl. 308—238.

Evans, Elmer E. Lawn edger. 3,017,733, 1-23-62, Cl. 56—25.4.

Evans, Ernest E. Carton forming device and method. 3,017,809, 1-23-62, Cl. 93—36.

Evans Products Co.: *See*—
Nampa, Sulo M. 3,017,842.

Evanus, Walter: *See*—
Skillman, William A., Evanus, and Mooney. 3,018,478.

Evers, Arthur. Web-feeding machine with web-stop feature. 3,018,027, 1-23-62, Cl. 226—113.

Ewen, Ian E., to The United Wire Works Ltd. Apparatus for providing gas-free liquid metal to a casting mould for the continuous casting of metal. 3,017,676, 1-23-62, Cl. 22—57.2.

Ewers, Frank J., Jr.: *See*—
Sapit, Donald T., and Ewers. 3,017,879.

FMC Corp.: *See*—
Marcellus, Manley C., and Scarlett. 3,018,168.
Redlinger, Jacob F. 3,018,095.

Fairweather, Starr W., to Canadian National Railway Co. Railway cars for transportation of vehicles. 3,017,840, 1-23-62, Cl. 105—368.

Fallick, Julius L.: *See*—
Agriss, Norton, and Fallick. 3,018,015.

Falls Paper & Power Co.: *See*—
Joa, Curt G. 3,017,795.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Schrader, Gerhard. 3,018,301.
Von Friedrich, Adolf, and Scriba. 3,018,261.

Farr, Kenneth E., to Westinghouse Electric Corp. Tuning system for television receivers. 3,018,328, 1-23-62, Cl. 178—5.8.

Farrelly, Richard J., to General Electric Co. Electronic commutator. 3,018,449, 1-23-62, Cl. 332—1.

Farwell, Harry R., to J. A. Black. Screen stencilling machine. 3,017,823, 1-23-62, Cl. 101—123.

Fasal, John H.: *See*—
Bagno, Samuel M., and Fasal. 3,018,311.

Feild, George B.: *See*—
Carson, James S., Feild, Kegan, Markwood, and Whitney. 3,018,252.

Federal-Mogul-Bower Bearings, Inc.: *See*—
Bagdon, Richard J. 3,017,759.

Fellowes, John E., to Bankers Box Co. Collapsible container. 3,018,029, 1-23-62, Cl. 229—39.

Ferranti, Ltd.: *See*—
Powley, Mallinson, and Sykes. 3,018,476.

Ferrari, Andrés, Jr., to Technicon Instruments Corp. Analysis and production-monitoring methods and apparatus. 3,018,224, 1-23-62, Cl. 195—103.5.

Ferri, Antonio, to General Applied Science Laboratories, Inc. Propulsion device for vertical takeoff aircraft. 3,018,034, 1-23-62, Cl. 230—116.

Fidelity Union Trust Co.: *See*—
Fleck, Fritz. 3,018,287.

Field, Walter B.: *See*—
Halbedel, Harold S., and Field. 3,018,162.

Figdor, Sanford K.: *See*—
Berg, Rudolph G., Figdor, and Laubach. 3,018,295.

Findlay, Robert A., to Phillips Petroleum Co. Desalting sea water. 3,017,752, 1-23-62, Cl. 62—58.

Fintube Co.: *See*—
Kaase, Robert W., and Sessions. 3,018,090.

Firma Elsenwerk Wanheim G.m.b.H.: *See*—
Vanwersch, Aloys, P., and L. 3,018,126.

Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft: *See*—
Lohse, Paul. 3,017,731.

Fleck, Fritz, to Fidelity Union Trust Co., executive trustee under Sandoz Trust. Optical brighteners for use with paper. 3,018,287, 1-23-62, Cl. 260—240.

Flumerfelt, William A., to The Columbus Auto Parts Co. Resilient steering linkage connector. 3,018,124, 1-23-62, Cl. 287—85.

Foehr, Edward G., to California Research Corp. Oxidation inhibited mineral oil compositions. 3,018,248, 1-23-62, Cl. 252—37.

Fogarty, Laurence E., to General Precision Inc. Servo function generator. 3,018,052, 1-23-62, Cl 235—197.

Foley, John M. Protective armor for athletic use. 3,017,639, 1-23-62, Cl. 2—2.

Fontein, Freerk J., and B. S. Sieswerda, to Stamicarbon N.V. Apparatus for producing a smooth-surfaced body consisting of a granular material. 3,017,666, 1-23-62, Cl. 18—9.

Foord, Delbert C., to American Can Co. Container closure. 3,018,024, 1-23-62, Cl. 222—498.

Foote, Vernon S., Jr., to United States of America, Navy. Nose probe chuck. 3,017,766, 1-23-62, Cl. 73—40.

Formacel, Inc.: *See*—
Christman, Charles W. 3,017,971.

Forstner, Egon, and R. Binder, to Dr.-Ing. h.c.F. Porsche, K.G. Air-cooled multi-cylinder internal combustion engine. 3,017,943, 1-23-62, Cl. 180—54.

Foss, Harry A.: *See*—
Bireley, Frank W., and Foss. 3,017,821.

Fox, Lois J.: *See*—
Sintetos, Nicholas D. 3,017,913.

Francesco Vismara S.p.A.: *See*—
Cesallini, Guido, and Massarani. 3,018,305.

Frank, John N., to Frankoma Pottery. Tile wall construction. 3,017,724, 1-23-62, Cl. 50—265.

Frank, Karl F., to Mircro Balancing, Inc. Vibration pickup means. 3,017,768, 1-23-62, Cl. 73—71.4.

Frank, Theodore H., Jr.: *See*—
Brandon, James C., Jr., Frank, and Rahiser. 3,018,455.

Franklin Institute of the State of Pennsylvania, The: *See*—
Stone, John, IV. 3,018,435.
Stone, John, IV. 3,018,445.

Franklin, Le Roy H., to Components for Research, Inc. High voltage cable terminal with stress cones. 3,018,318, 1-23-62, Cl. 174—73.

Frankoma Pottery: *See*—
Frank, John N. 3,017,724.

Frantz, William, and J. G. Johnston, to Martin-Marietta Corp. Infinitely variable hydraulic damper and locking mechanism. 3,017,865, 1-23-62, Cl. 121—41.

Frate, Domenico C., to Western Electric Co., Inc. Apparatus for testing frictional characteristics of materials. 3,017,765, 1-23-62, Cl. 73—9.

Freeman, Lawrence R.: *See*—
Morgan, Lyman W., and Freeman. 3,018,230.

Frei, John, and C. F. Haase, to Ekco Products Co. Trousers stretcher and creaser lock. 3,018,122, 1-23-62, Cl. 287—58.

Freist, Manfred, to VEB Industriewerke Karl-Marx-Stadt. Control valve assembly for fluid operated systems. 3,017,862, 1-23-62, Cl. 121—41.

Fried, Joseph W. Tool for deburring, chamfering, back spotfacing, grooving, etc. 3,017,791, 1-23-62, Cl. 77—73.5.

Frieder, Leonard P., and M. J. Fryer, to Gentex Corp. Ballistic helmet and method of making same. 3,018,210, 1-23-62, Cl. 156—228.

Friedrich, Robert J.: *See*—
Batchelor, James D., Friedrich, and Yavorsky. 3,018,226.
Baum, Kurt, and Friedrich. 3,018,227.

Friis, Harald T., and H.-G. Unger, to Bell Telephone Laboratories, Inc. Helix wave guide. 3,018,452, 1-23-62, Cl. 333—95.

Frosst, Charles E., & Co.: *See*—
Millar, John F., and Lindner. 3,018,221.

Frost, John C. M., and T. D. Earl, to Avro Aircraft Ltd. Disc aircraft with multiple radially disposed gas turbine engines. 3,018,068, 1-23-62, Cl. 244—15.

Frost, Paul: *See*—
Kremp, Rudolf, and Frost. 3,017,805.

Frostick, Frederick C., Jr., and B. Phillips, to Union Carbide Corp. Diepoxy sufone compostions. 3,018,259, 1-23-62, Cl. 260—18.

Fryer, Michael J.: *See*—
Frieder, Leonard P., and Fryer. 3,018,210.

Fuchs, Francis J., Jr., to Western Electric Co., Inc. Apparatus for making zero radius bends in rectangular tubing. 3,017,914, 1-23-62, Cl. 153—20.

Fulghum, Oscar T. Log-debarking machine. 3,017,911, 1-23-62, Cl. 144—208.

Futurecraft Corp.: *See*—
Chilcoat, Murray A. 3,017,894.

G.Q. Parachute Co. Ltd.: *See*—
Quilter, John R. C. 3,018,074.

Gaertner, Hans, and E. Reich, to Ciba Ltd. Process for the manufacture of solutions. 3,018,155, 1-23-62, Cl. 8—83.

Galbraith, Sidney W., R. G. Perkins, and H. C. Westfall. Drilling apparatus for tractors. 3,017,935, 1-23-62, Cl. 175—123.

Gamaunt, Roger L. Track laying vehicle. 3,017,942, 1-23-62, Cl. 180—9.2.

Gardner, Jack R., to Reed Roller Bit Co. Tree excavator and transplanter. 3,017,708, 1-23-62, Cl. 37—2.

Gathman, David W., to Bethlehem Steel Co. Long splice and method of making same. 3,017,739, 1-23-62, Cl. 57—142.

Gattone, Daniel H. Light gathering power converter. 3,018,313, 1-23-62, Cl. 136—89.

Gautraud, Michael G., and W. F. Huck, to Brunswick Automatic Pinsetter Corp. Ball speed controlling device. 3,018,104, 1-23-62, Cl. 273—49.

Geiger, Julius, A. Ossenbrunner, and M. Coenen, to Agfa Aktiengesellschaft. Photographic film with antihalation layer. 3,018,177, 1-23-62, Cl. 96—84.

General Aniline & Film Corp.: *See*—
Duggins, William E. 3,018,218.
Mayhew, Raymond L., Miller, and Kopp. 3,018,251.
Steckler, Robert, and Werner. 3,018,267.

General Applied Science Laboratories, Inc.: *See*—
Ferri, Antonio. 3,018,034.

General Dynamics Corp.: *See*—
Burrow, Laurie R. 3,018,439.

General Electric Co.: *See*—
Busch, Floyd H., and Sawada. 3,018,356.
Cain, Dallas E. 3,018,125.
Ellert, Frederick J. 3,018,383.
Farrelly, Richard J. 3,018,449.
Genult, Luther L. 3,018,408.
Lit, Harry B., and Dunton. 3,018,199.
Rowe, Raymond N. 3,018,320.

General Motors Corp.: *See*—
Bidwell, Joseph B. 3,018,041.
Candelise, Alfred. 3,017,872.
Caughill, Robert F., and Disinger. 3,018,089.
Clason, Bertil H. 3,018,457.
Cummings, Frederick W., and Mowers. 3,017,688.
Dietrich, Howard H. 3,017,873.
Gibbs, George L., Jr. 3,018,019.
Hall, Russell S. 3,018,113.
Lash, Joseph F., and Trimble. 3,017,773.
Lasley, Harold L. 3,017,974.
Mountjoy, Garrard. 3,018,367.
Mountjoy, Garrard. 3,018,368.
Polk, Robert T. 3,017,659.
Roboski, Walter S. 3,018,359.
Welsh, Harvey W. 3,018,085.

General Precision Inc.: *See*—
Fogarty, Laurence E. 3,018,052.
Hemstreet, Harold S. 3,018,051.
Jones, Clarence S., and Lewandowski. 3,018,392.
Kleist, Robert A., and Jones. 3,018,475.

General Tire & Rubber Co., The: *See*—
Kraft, Herman T. 3,018,213.
McMahon, Thomas J., and Henley. 3,017,919.

Gentex Corp.: *See*—
Frieder, Leonard P., and Fryer. 3,018,210.

Genult, Luther L., to General Electric Co. High frequency lighting systems and ballast circuits therefor. 3,018,408, 1-23-62, Cl. 315—95.

Georg, Raymond H., and P. E. Kopp; said Kopp assor. to said Georg. Grinding machine. 3,017,727, 1-23-62, Cl. 51—96.

Gibbs, George L., Jr., to General Motors Corp. Coiled flame arrester. 3,018,019, 1-23-62, Cl. 220—88.

Gibson Mfg. Co.: *See*—
Gibson, Richard R., and Rhoad. 3,018,363.

Gibson, Richard R., and G. C. Rhoad, to Gibson Mfg. Co. Lighting fixture. 3,018,363, 1-23-62, Cl. 240—51.11.

Glenger, Edwin B., Jr.: *See*—
Miller, Wilbur A., and Glenger. 3,017,889.

Gillette Co., The: *See*—
Safianoff, Albert. 3,018,012.

Gilday, John. Test adapter for aircraft static vent and system. 3,017,764, 1-23-62, Cl. 73—4.

Ginder, Raymond M. Oil motor. 3,017,868, 1-23-62, Cl. 121—164.

Giezen, Lewis E., to Nestaway Inc. Adapter for stacking containers. 3,018,002, 1-23-62, Cl. 211—126.

Goellner, Allan R., to Reliance Gauge Column Co. Electrode probe. 3,018,322, 1–23–62, Cl. 174—151.

Gold, Charles M.: *See*—
Cooper, Manuel, and Gold. 3,018,314.

Golde, Erich. Screw-type bottle closure with locking device. 3,018,013, 1–23–62, Cl. 215—73.

Goldsmith, Morris, to Elgen Mfg. Corp. Metal bending method and product. 3,017,694, 1–23–62, Cl. 29—509.

Goldsmith, Morris, and R. R. Stein, to Elgen Mfg. Corp. Swivel units and damper assemblies using same. 3,017,899, 1–23–62, Cl. 137—601.

Goldstein, Hans L., to Bell Telephone Laboratories, Inc. Alternating current voltage regulator. 3,018,431, 1–23–62, Cl. 323—45.

Gonsalves, Conrad J.: *See*—
Beyer, Jeno, and Gonsalves. 3,017,738.

Goodman, Joseph L., to Westinghouse Electric Corp. Plural channel amplitude discriminator having differentiator means in each channel and a common output. 3,018,442, 1–23–62, Cl. 328—150.

Goodman, Raymond M.: *See*—
Haverstock, Julius J., and Goodman. 3,017,758.

Gopfert, Herbert: *See*—
Bonisch, Josef, Gopfert, and Planert. 3,017,804.

Goodyear, Charles R., to Holley Carburetor Co. Flow control. 3,017,902, 1–23–62, Cl. 138—37.

Gorand, Alfred J., and C. H. Brooks, to Sun Oil Co. Shipping container. 3,018,021, 1–23–62, Cl. 222—152.

Gorin, Everett, to Consolidation Coal Co. Production of hydrogen-rich liquid fuels from coal. 3,018,241, 1–23–62, Cl. 208—8.

Gorin, Everett, to Consolidation Coal Co. Production of hydrogen-enriched hydrocarbonaceous liquids. 3,018,242, 1–23–62, Cl. 208—10.

Gosselin, Maurice J.: *See*—
Nelson, John R., and Gosselin. 3,018,128.

Gould, John D.: *See*—
Osborn, Howard, and Gould. 3,018,009.

Grado, Joseph F. Phonograph transducer. 3,018,336, 1–23–62, Cl. 179—100.41.

Grant, Gardner L., and J. C. Hosken, to Universal Controls, Inc. Fare collection and categorizing apparatus. 3,018,038, 1–23–62, Cl. 235—29.

Grant, Gardner L., and J. C. Hosken, to Universal Controls, Inc. Fare collection and signal system for toll roads. 3,018,469, 1–23–62, Cl. 340—31.

Graves, Edward B., and E. J. Bastin, to Picker X-Ray Corp., Waite Mfg. Div., Inc. Viewing apparatus for amplified X-ray images. 3,018,375, 1–23–62, Cl. 250—77.

Green, David J., to Lear, Inc. Probability curve and error limit computer. 3,018,049, 1–23–62, Cl. 235—184.

Green, William G. Drilling rate recorder. 3,017,770, 1–23–62, Cl. 73—151.5.

Greenbie, Barrie B., to Portapavilion Structures, Ltd. Collapsible building structure. 3,017,893, 1–23–62, Cl. 135—7.1.

Greenewald, Herbert, Jr. Composition and method of forming ceramic cores. 3,017,677, 1–23–62, Cl. 22—194.

Greger, Paul, G. Kinder, and R. Sommer, to Voigtlander A.G. Photographic camera having an electric exposure meter. 3,017,813, 1–23–62, Cl. 95—10.

Greger, Paul, to Voigtlander A.G. Photographic camera. 3,017,814, 1–23–62, Cl. 95—10.

Griffing, John M., and W. R. Remington, to E. I. du Pont de Nemours and Co. Sulfonate containing polyesters dyeable with basic dyes. 3,018,272, 1–23–62, Cl. 260—75.

Grinstead, Robert R., to United States of America, Atomic Energy Commission. Process for producing alkyl orthophosphoric acid extractants. 3,018,253, 1–23–62, Cl. 252—364.

Griscom-Russell Co., The: *See*—
Vnaler, Luther E. 3,017,696.

Grogoza, William, to American Machine & Foundry Co. Bowling alley masking units. 3,018,105, 1–23–62, Cl. 273—54.

Groh, Edward F.: *See*—
Revilacqua, Frank, Uecker, and Groh. 3,018,240.

Gronemeier, Howard J., to Raytheon Co. Color television matrix systems. 3,018,323, 1–23–62, Cl. 178—5.4.

Grossenheider, Howard, to Zenith Radio Corp. Ultrasonic transmitter. 3,017,840, 1–23–62, Cl. 116—137.

Grostick, Norman L., to The Bin-Dicator Co. Bin level indicator. 3,018,343, 1–23–62, Cl. 200—61.21.

Grover, Donald P., to United States of America, Army. Rotary piston charger-brake mechanism. 3,017,807, 1–23–62, Cl. 89—12.

Guay, Roland H., to Phillips Petroleum Co. Rocket motor. 3,017,826, 1–23–62, Cl. 102—49.

Gubash, Peter J. Bow magazine. 3,017,874, 1–23–62, Cl. 124—23.

Gusching, Nagle V.: *See*—
Ulman, Wayne H., and Gusching. 3,017,863.

Gustafson, Gordon W., to Minneapolis-Honeywell Regulator Co. Switch apparatus. 3,018,345, 1–23–62, Cl. 200—67.

Guth, Eugene D., to Phillips Petroleum Co. Method for stabilizing of ammonium nitrate. 3,018,164, 1–23–62, Cl. 23—103.

Guth, Eugene D., to Phillips Petroleum Co. Solid propellant and a process for its preparation. 3,018,203, 1–23–62, Cl. 149—19.

Haase, Carl F.: *See*—
Frei, John, and Haase. 3,018,122.

Haba, Vincent, to Radio Corp. of America. Method and materials for obtaining low resistance bonds to bismuth telluride. 3,017,693, 1–23–62, Cl. 29—473.1.

Haeussermann, Walter, to United States of America, Army. Space vehicle attitude control mechanism. 3,017,777, 1–23–62, Cl. 74—5.

Hagopian, Jacob J.: *See*—
Johnson, Reynold B., and Hagopian. 3,018,332.

Halbedel, Harold S., and W. B. Field, to The Harshaw Chemical Co. Anhydrous metal fluoborates. 3,018,162, 1–23–62, Cl. 23—59.

Hall, Russell S., to General Motors Corp. Floating labyrinth seal. 3,018,113, 1–23–62, Cl. 277—53.

Hambrecht, Albert H., F. L. Bartels, L. L. Isenring, and C. B. Rowe, to Research Products Corp. Air filter with integral frame. 3,017,698, 1–23–62, Cl. 29—552.

Hamilton Watch Co.: *See*—
Koehler, Fred. 3,017,741.

Handler, Alois: *See*—
Keznicki, Eduard. 3,017,915.

Hanson, Arthur O. Spider center. 3,018,114, 1–23–62, Cl. 279—4.

Happell, John J., G. R. Thomas, R. P. Denise, and J. L. Bunts, Jr., to United States of America, Atomic Energy Commission. Experimental liquid metal fuel reactor. 3,018,239, 1–23–62, Cl. 204—193.2.

Hardison, Wilbur T., and W. D. Hulbert, to Bourns, Inc. Variable resistor. 3,018,459, 1–23–62, Cl. 338—180.

Hardwicke, Norman L.: *See*—
Kelly, Pennell C., and Hardwicke. 3,018,195.

Hardychuk, Peter. Combination cigarette and match pack. 3,017,988, 1–23–62, Cl. 206—48.

Harlan, J. Way. Removable bumper supported step for truck bodies. 3,017,949, 1–23–62, Cl. 182—92.

Harriman, Benjamin R. Coating photographic material. 3,018,178, 1–23–62, Cl. 96—94.

Harris-Hogan Co.: *See*—
Lakatta, Edward. 3,017,846.

Harris-Intertype Corp.: *See*—
O'Brien, Richard C. 3,017,811.
Penner, Arthur H. 3,017,830.
Seel, Howard J. 3,018,099.

Harris, Tommy G.: *See*—
Cluck, Howard O., and Harris. 3,018,474.

Harris Transducer Corp., The: *See*—
Harris, Wilbur T. 3,018,465.
Harris, Wilbur T. 3,018,466.
Harris, Wilbur T. 3,018,467.

Harris, Wilbur T., to The Harris Transducer Corp. Compliant acoustic radiating means. 3,018,465, 1–23–62, Cl. 340—8.

Harris, Wilbur T., to The Harris Transducer Corp. Compensated hydrophone. 3,018,466, 1–23–62, Cl. 340—8.

Harris, Wilbur T., to The Harris Transducer Corp. Resonant reactively operating variable position transducer. 3,018,467, 1–23–62, Cl. 340—12.

Harshal Chemical Co., The: *See*—
Halbedel, Harold S., and Field. 3,018,162.

Hartx Mountain Products Corp.: *See*—
Stern, Leonard. 3,017,859.

Hatch, William H.: *See*—
Corben, Leo D., and Hatch. 3,018,181.

Haßck, Michael, and M. Wiese, to Maschinenfabrik Augsburg-Nurnberg AG. Staple wire cutting device for printing press stitching apparatus. 3,017,634, 1–23–62, Cl. 1—7.

Haverstock, Julius J., and R. M. Goodman, to Philco Corp. Laundering machines. 3,017,758, 1–23–62, Cl. 68—19.

Hawkes, Harold G.: *See*—
Hawkes, Ralph O. and H. G., Morrison, and Sirles. 3,017,997.

Hawkes, Ralph O. and H. G., R. M. Morrison, and A. R. Sirles, to Komline-Sanderson Engineering Corp. Endless belt and drum type vacuum filter. 3,017,997, 1–23–62, Cl. 210—401.

Hawkins, Harold M., to Phillips Petroleum Co. Concentration of aqueous solutions. 3,017,751, 1–23–62, Cl. 62—58.

Hawks, Huron B. Fish lure. 3,017,716, 1–23–62, Cl. 43—42.16.

Hawley, Richard A., to Meat Packers Equipment Co. Mold for food products. 3,017,822, 1–23–62, Cl. 100—240.

Hearn, Walter L.: *See*—
Waldle, Conrad T., Jr., and Hearn. 3,018,214.

Hebben, Philippe B. J., to Societe des Accumulateurs Fixes et de Traction (Societe Anonyme). Electric storage cells, their construction and process for their operation. 3,018,315, 1–23–62, Cl. 136—163.

Heberlein, Georg, to Heberlein Patent Corp. Process for the production of fabrics from specially prepared yarns. 3,017,685, 1–23–62, Cl. 28—72.

Heberlein Patent Corp.: *See*—
Heberlein, Georg. 3,017,685.

Heckel, Hermann C. N., and R. T. Jefferson, Jr., to Rea Magnet Wire Co., Inc. Article of manufacture comprising an insulated electrical conductor and method of making. 3,018,321, 1–23–62, Cl. 174—110.

Heininger, Samuel A., and G. H. Birum, to Monsanto Chemical Co. Toxic arylsulfinyl haloalkanenitriles. 3,018,304, 1–23–62, Cl. 260—465.

Heilmstine, Robert F., to Minneapolis-Honeywell Regulator Co. Automatic control systems. 3,018,070, 1–23–62, Cl. 244—77.

Hemstreet, Harold S., to General Precision Inc. Analog computer apparatus. 3,018,051, 1–23–62, Cl. 235—193.

Hedrick, Ross M.: *See*—
Butler, John M., Hedrick, and Mottus. 3,018,273.

Hendriks, Wilhelm F. M.: *See*—
Van der Brugghen, Joan, and Hendriks. 3,017,785.
Van der Brugghen, Joan, and Hendriks. 3,017,783.

Hengen, Otto: *See*—
Stiemer, Harm, and Hengen. 3,018,222.

Henley, Virgil E.: *See*—
McMahon, Thomas J., and Henley. 3,017,919.

Hennemann, Georg, and A. G. Lutgerhorst, to American Enka Corp. Cellulosic sponge manufacture. 3,018,192, 1–23–62, Cl. 117—98.

Henry, Beulah L. Direct and return mailing envelope. 3,018,033, 1–23–62, Cl. 229—73.

Heppler, Herbert, and P. M. Stiglic. Temperature responsive gas turbine fuel control with multi-rate feedback. 3,017,749, 1–23–62, Cl. 60—39.28.

Hercik, Lad L. Material shearing apparatus. 3,017,797, 1–23–62, Cl. 83—349.

Hercules, Christopher D. Tire tread safety gauge. 3,017,702, 1–23–62, Cl. 33—172.

Hercules Powder Co.: *See*—
Downard, Jack M. 3,018 201.

Herlihy, William F., to Lowell Counter Co. Shoe upper molding apparatus. 3,017,645, 1–23–62, Cl. 12—54.3.

Herscher, Marvin B., to Radio Corp. of America. Delay circuit using magnetic cores and transistor storage devices. 3,018,389, 1–23–62, Cl. 307—88.5.

Hexcel Products Inc.: *See*—
Steele, Roger C. 3,018,087.

Heyer, William T. Stereotaxy device. 3,017,887, 1–23–62, Cl. 128—348.

Heymes, Rene: *See*—
Amiard, Gaston, and Heymes. 3,018,293.

Hicks, Frederick W., Jr., to Air Valves Co. Valve assembly. 3,017,901, 1–23–62, Cl. 137—622.

Hicks, Robert G., to American Air Filter Co., Inc. Apparatus for heating air. 3,017,877, 1–23–62, Cl. 126—110.

Higbee, Earl V., to The Stanley Works. Universal saw blade. 3,017,908, 1–23–62, Cl. 143—133.

Higgins, Thomas W., L. Capsuto, and P. F. Bruins, to Polytechnic Institute of Brooklyn. Battery separators and method for producing the same. 3,018,316, 1–23–62, Cl. 136—144.

Hill, George B. Double sickle mower construction. 3,017,736, 1–23–62, Cl. 56—297.

Hill, Ira W., ½ to A. C. Hoffman. Vehicle emergency brake apparatus. 3,017,965, 1–23–62, Cl. 188—163.

Hill, Max E., to Hill Transformer Co., Inc. Retainer for transformer casing cover. 3,018,017, 1–23–62, Cl. 220—55.

Hill Transformer Co., Inc.: *See*—
Hill, Max E. 3,018,017.

Hillson, Frank, and R. Krivisky. Sliding door guide. 3,017,656, 1–23–62, Cl. 16—90.

Hnilicka, Milo P., Jr., to National Research Corp. Vacuum device. 3,018,016, 1–23–62, Cl. 220—10.

Hoare, Robert C.: *See*—
Downey, John F., and Hoare. 3,018,154.

Hobson, Eric D., to Yarrow and Co. Ltd. and Andre Rubber Co. Ltd. End fittings for suction pipes. 3,017,898, 1–23–62, Cl. 137—590.

Hodgson, Alfred W., to Westinghouse Electric Corp. A.C.-D.C. electromagnet. 3,018,421, 1–23–62, Cl. 317—154.

Hoek, Adrain G., and M. N. Vessio. Collapsible table. 3 018,147, 1–23–62, Cl. 311—41.

Hoffman, Argyle C.: *See*—
Hill, Ira W. 3,017,965.

Hoffman, Ernest G., to Royal McBee Corp. Case shift mechanism. 3,017,979, 1–23–62, Cl. 197—74.

Holdren Bros., Inc.: *See*—
Holdren, Donald R. 3,018,078.

Holdren, Donald R., to Holdren Bros., Inc. Device for mounting a conduit to a tank. 3,018,078, 1–23–62, Cl. 248—56.

Holiday Line, Inc., The: *See*—
Rosenberg, David, and Mirando. 3,017,642.

Holley Carburetor Co.: *See*—
Goodyear, Charles R. 3,017,902.

Hollis, John S., to United States of America, Army. Wave guide switch junction. 3,018,450, 1–23–62, Cl. 333—9.

Holmes, David D., to Radio Corp. of America. Transistorized direction finder receiver having a local audio signal modulated on the mixer. 3,018,369, 1–23–62, Cl. 250—8.

Holtz, Walter E., to United States of America, Navy. Ejection apparatus. 3,017,835, 1–23–62, Cl. 102—49.

Hombak Maschinenfabrik K.G.: *See*—
Sybertz, Gustav J. and J. F., and Voelskow. 3,017,912.

Hood, R. H. Co.: *See*—
Kiwi, Walter. 3,017,985.

Hood, William C., and D. E. Baldwin, to Westinghouse Electric Corp. Fire-resistant decorated composite laminate members and method of producing same. 3,018,206, 1–23–62, Cl. 154—45.9.

Horsfall, Robert B., Jr.: *See*—
Miller, Victor A., and Horsfall. 3,018,378.

Horton, William F., and R. G. Engman, to Lear, Inc. Trim control system for autopilots. 3,018,071, 1–23–62, Cl. 244—77.

Hosken, James C.: *See*—
Grant, Gardner L., and Hosken. 3,018,038.
Grant, Gardner L., and Hosken. 3,018,469.

Huch, Carl W., and C. W. Huch, Jr. Apparatus for producing wall block forms. 3,017,683, 1–23–62, Cl. 25—121.

Huch, Carl W., Jr.: *See*—
Huch, Carl W., and C. W. Huch, Jr. 3,017,683.

Huck, William F.: *See*—
Gautraud, Michael G., and Huck. 3,018,104.

Huddle, Harley E. Method and apparatus for cleaning bottle cases and the like. 3,018,200, 1–23–62, Cl. 134—6.

Hughes Aircraft Co.: *See*—
Kelly, Kenneth C. 3,018,479.

Hughes, William B., and V. L. Stromberg, to Petrolite Corp. Process of preventing corrosion. 3,018,246, 1–23–62, Cl. 252—8.55.

Hulbert, Warren D.: *See*—
Hardison, Wilbur T., and Hulbert. 3,018,459.

Humphreys, Charles R., to E. I. du Pont de Nemours and Co. Process for core-spinning smooth elastic yarn. 3,017,740. 1–23–62, Cl. 57—163.

Hunt, Robert J., to Remington Arms Co., Inc. Machine for applying a coating to the interior of small hollow objects. 3,017,853, 1–23–62, Cl. 118—215.

Hunt, Rufus T. Door holder. 3,018,098, 1–23–62, Cl. 269—91.

Hursen, Thomas F., and G. T. McClure, to Westinghouse Air Brake Co. Wheel tread brake unit for railway car trucks. 3,017,960, 1–23–62, Cl. 188—52.

Huston, Milton D.: *See*—
Breese, James L., and Huston. 3,017,925.

I-T-E Circuit Breaker Co.: *See*—
Albright, Roy H. 3,018,414.
Cataldo, John. 3,018,463.
Zocholl, Stanley E. 3,018,434.

Ichinose, Hisakichi. Tri-printing squeegee moving mechanism of an automatic screen printing machine. 3,017,824, 1–23–62, Cl. 101—123.

Ichinose, Hisakichi. Multiple printing squeegee moving mechanism of an automatic screen printing machine. 3,017,825, 1–23–62, Cl. 101—123.

Industrial Filter & Pump Mfg. Co.: *See*—
Riley, Clay W. 3,017,996.

Ingber, Oscar H. Device for measuring the width or diameter of fixed or movable tapes and wires. 3,017,801, 1–23–62, Cl. 88—14.

Ingres, Jeannot G., to Kelsey-Hayes Co. Limiting device for automatic brake shoe adjuster. 3,017,962, 1–23–62, Cl. 188—79.5.

Innis, Robert T., to Westinghouse Electric Corp. Lightning arrester. 3,018,406, 1–23–62, Cl. 315—36.

Innis, Robert T., to Westinghouse Electric Corp. Lightning arrester. 3,018,407, 1–23–62, Cl. 315—36.

Inserring, Larrie L.: *See*—
Hambrecht, Albert H., Bartels, Inserring, and Rowe. 3,017,698.

International Business Machines Corp.: *See*—
Beck, John W. 3,018,387.
Cowan, Tyson G. 3,018,152.
Johnson, Reynold B., and Hagopian. 3,018,332.
Yourke, Hannon S., and Strohm. 3,018,390.

International Latex Corp.: *See*—
Miller, Wilbur A., and Glenger. 3,017,889.

International Paper Co.: *See*—
Busch, Thomas N. 3,017,720.

International Telephone and Telegraph Corp.: *See*—
Day, Cyril L. 3,017,687.

Iron Fireman Mfg. Co.: *See*—
Deer, James W., and Sprando. 3,018,347.

Jacklin, Stan E. Tamping device. 3,017,810, 1–23–62, Cl. 94—48.

Jackson, John G., Jr., and A. F. Rhodes, to McEvoy Co. Pipe hanger. 3,017,931, 1–23–62, Cl. 166—208.

Jacobson, Martin, to United States of America, Agriculture. Method of attracting male gypsy moth with 12-acetoxy-1-hydroxy-9-octadecene. 3,018,219, 1–23–62, Cl. 167—48.

Jackson, Robin R.: *See*—
Bright, Richard L., and Jackson. 3,018,380.

Jacoby-Bender, Inc.: *See*—
Vollet, George. 3,017,682.

James, Kenneth E., to United Concrete Pipe Corp. Method of sizing bells and spigots of steel-cylinder concrete pipe. 3,017,695, 1–23–62, Cl. 29—523.

Jefferson, Robert T., Jr.: *See*—
Heckel, Hermann C. N., and Jefferson. 3,018,321.

Jeffrey, William B.: *See*—
Wilson, Richard L., and Jeffrey. 3,018,138.

Jenkins, Russell L., to Monsanto Chemical Co. Laminar titanium dioxide. 3,018,186, 1–23–62, Cl. 106—253.

Jensen, Arthur G. Safety socket. 3,018,350, 1–23–62, Cl. 200—115.5.

Jenson, Kenneth S., and F. W. Suhr, to Preway, Inc. Pot type burner apparatus. 3,017,923, 1–23–62, Cl. 158—91.

Jenson, Kenneth S., to Preway, Inc. Pot type burner apparatus. 3,017,924, 1–23–62, Cl. 158—91.

Jernigan, Robert N. Mason's multipurpose implement and anchoring means. 3,017,701, 1–23–62, Cl. 33—85.

Jett, James A., to United States of America, Air Force. Propellant grain and rocket motor. 3,017,744, 1–23–62, Cl. 60—35.6.

Jiu, James, to G. D. Searle & Co. 1,3- and 1,4-bisoxygenated estra-1,3,5(10)-trienes and intermediates. 3,018,297, 1–23–62, Cl. 260—397.4.

Joa, Curt G., to Falls Paper & Power Co. Method and apparatus for forming individual wrapped pads from otherwise continuous batt strips. 3,017,795, 1–23–62, Cl. 83—129.

Johansson, Oscar E., to Sandvik Steel, Inc. Power springs. 3,018,097, 1–23–62, Cl. 267—1.

Johnson, Harold T. Paint-can shaker. 3,018,092, 1–23–62, Cl. 259—54.

Johnson, Reynold B., and J. J. Hagopian, to International Business Machines Corp. Transmitting typewriter apparatus. 3,018,332, 1–23–62, Cl. 178—17.

Johnston, James G.: *See*—
Frantz, William, and Johnston. 3,017,865.

Jones, Alvin J., to Landis Tool Co. Form dressing device. 3,017,875, 1–23–62, Cl. 125—11.

Jones, Clarence I.: *See*—
Carroll, James C., Thompson, and Jones. 3,018,381.

Jones, Clarence S.: *See*—
Kleist, Robert A., and Jones. 3,018,475.

Jones, Clarence S., and F. P. Lewandowski, to General Precision Inc. Monostable multivibrator employing four zone semiconductive gate in series with at least a transistor. 3,018,392, 1–23–62, Cl. 307—88.5.

Jones, Frank. Closure having air pump mounted therein. 3,018,022, 1–23–62, Cl. 222—340.

Jones, Hal J., and J. F. Bucy, Jr., to Texas Instruments Inc. Apparatus for reducing and recording data. 3,018,468, 1–23–62, Cl. 340—15.

Jones, William B., to H. K. Porter Co. Sliding door latch. 3,017,760, 1–23–62, Cl. 70—97.

Jordan, Francis M. and L. M. Grass seed harvester. 3,017,735, 1–23–62, Cl. 56—128.

Jordan, Lawrence M.: *See*—
Jordan, Francis M. and L. M. 3,017,735.

Jordan, Walter E.: *See*—
Breen, Alvin L., and Jordan. 3,017,686.

Joseph, John L. Amusement device. 3,018,100, 1–23–62, Cl. 272—1.

Joy Mfg. Co.: *See*—
Miller, Robert A. 3,017,681.

Joyce, Taylor C. Decorative light fixture. 3,018,362, 1–23–62, Cl. 240—10.

Judd, Thomas E. Multi stage centrifugal pump. 3,017,837, 1–23–62, Cl. 103—102.

Juliano, Madeo C. Chair armsshelf. 3,018,130, 1–23–62, Cl. 297—144.

Kaase, Robert W., and W. C. Sessions, to Fintube Co. Heat exchanger fittings. 3,018,090, 1–23–62, Cl. 257—247.

Kahn, Allan: *See*—
Meier, Dale J., and Kahn. 3,018,258.

Kalish, David, to Consolidated Electronics Industries Corp. Object inserting machine. 3,017,690, 1–23–62, Cl. 29—205.

Kamentsky, Louis A., to Bell Telephone Laboratories, Inc. Character recognition system. 3,018,471, 1–23–62, Cl. 340—149.

Kaplan, Earl, to American Cyanamid Co. Rubber antioxidant dispersions. 3,018,254, 1–23–62, Cl. 252—403.

Karlicek, Robert F., and J. Sandin, to Westinghouse Electric Corp. Static overcurrent trip device. 3,018,416, 1–23–62, Cl. 317—36.

Karrow, George F. Variable speed planetary gear transmission and vehicle drive arrangement. 3,017,786, 1–23–62, Cl. 74—677.

Kasberg, Alvin H., Jr.: *See*—
Kramer, Lloyd B., Kasberg, and Landkrohn. 3,018,357.

Kauppila, George R., ½ to R. L. Dickerson. Bi-fold door assembly. 3,017,926, 1–23–62, Cl. 160—213.

Keen, William R., to Collins & Aikman Corp. Tufted fabrics and methods of making same. 3,017,847, 1–23–62, Cl. 112—266.

Kegan, James E.: *See*—
Carson, James S., Feild, Kegan, Markwood, and Whitney. 3,018,252.

Keith, Douglas L. Ribbon shield. 3,017,981, 1–23–62, Cl. 197—170.

Kelem, Howard. Machine for tying casings. 3,017,638, 1–23–62, Cl. 1—329.

Keller, Harold A.: *See*—
Bowling, Robert T., Edward, Keller, and Scheelke. 3,017,909.

Keller & Knappich G.m.b.H.: *See*—
Uhl, Siegfried. 3,017,808.

Kelley, Garrett P. Dockboard. 3,017,646, 1–23–62, Cl. 14—71.

Kelley, Gilbert A.: *See*—
Valentine, Dale M., and Kelley. 3,018,231.

Kellogg, M. W., Co., The: *See*—
Stanford, George W., and Partridge. 3,018,244.

Kelly, Kenneth C., to Hughes Aircraft Co. Scanning antenna. 3,018,479, 1–23–62, Cl. 343—762.

Kelly, Pennell C., and N. L. Hardwicke, to Monsanto Chemical Co. Method of treating polyethylene structures. 3,018,195, 1–23–62, Cl. 117—138.8.

Kelsey-Hayes Co.: *See*—
Burnell, Floyd E. 3,017,692.
Ingres, Jeannot G. 3,017,962.
Stelzer, William. 3,017,866.
Stelzer, William. 3,018,139.

Kempson, Bertram C., to Dowty Hydraulic Units Ltd. Hydraulic apparatus. 3,017,750, 1–23–62, Cl. 60—52.

Kennedy, George A. Fish catcher. 3,017,715, 1–23–62, Cl. 43—16.

Keyes, Andy A. Cotton topper. 3,017,732, 1–23–62, Cl. 56—25.4.

Kezniecki, Eduard, to A. Handler and K. Vockenhuber. Camera, more particularly substandard camera. 3,017,815, 1–23–62, Cl. 95—44.

Kidde, Walter, & Co., Inc.: *See*—
Bagno, Samuel M., and Fasal. 3,018,311.

Kienhofer, Klaus, to Wilhelm Sihn, Jr., K.G. Elastically yielding conveying means for telescoping antennae. 3,017,780, 1–23–62, Cl. 74—95.

Kimura, Michiomi: *See*—
Tokime, Masakata, and Kimura. 3,018,288.

Kinder, Gotthard: *See*—
Gregor, Paul, Kinder, and Sommer. 3,017,813.

Kingsford-Smith, Charles A.: *See*—
Baugh, Charles W., Jr., and Kingsford-Smith. 3,018,327.

Kins, Georg H. Injection molding apparatus. 3,017,667, 1–23–62, Cl. 18—42.

Kinser, Vernon. Automatic shaft brake mechanism. 3,017,975, 1–23–62, Cl. 192—8.

Kiphart, Otta W., to Phillips Petroleum Co. Disposable, elastic rocket case. 3,017,746, 1–23–62, Cl. 60—35.6.

Kiwi, Walter, to R. H. Hood Co. Conveyors for machines. 3,017,985, 1–23–62, Cl. 198—170.

Klaessig, Henry, J. Pennie, and F. E. Clay, to The Borden Co. Process for heating liquids. 3,018,185, 1–23–62, Cl. 99—216.

Klein, Charles H., to The National Telephone Supply Co. Hot line stick. 3,017,905, 1–23–62, Cl. 140—113.

Kleist, Robert A., and C. S. Jones, to General Precision, Inc. Responder device. 3,018,475, 1–23–62, Cl. 343—6.8.

Klimstra, Paul D., to G. D. Searle & Co. Process for the purification of 3-keto-Δ⁴-steroids. 3,018,296, 1–23–62, Cl. 260—397.3.

Klimstra, Paul D., and R. E. Counsell, to G. D. Searle & Co. 17-oxygenated 3α-halo-5α-androstan-2β-ols and derivatives thereof. 3,018,298, 1–23–62, Cl. 260—397.4.

Knapp, Earle L., to Armco Steel Corp. Method and apparatus for treating metallic strands in hot dip coating. 3,018,190, 1–23–62, Cl. 117—51.

Knudson, Brenton C., to Westinghouse Electric Corp. Series energized transistor amplifier. 3,018,446, 1–23–62, Cl. 330—14.

Kodalle, Horst, and G. Seifert, to VEB Kamera- und Kinowerke Dresden. Photographic camera. 3,017,812, 1–23–62, Cl. 95—10.

Koehler, Fred, to Hamilton Watch Co. Overbanking preventive means for a balance wheel. 3,017,741, 1–23–62, Cl. 58—107.

Koennecke, Wolfgang, to Elastic Aktiengesellschaft vormals M. Vogel A.G. Stapling apparatus. 3,017,636, 1–23–62, Cl. 1—49.

Koller, Hans. Crop sprayers. 3,018,058, 1–23–62, Cl. 239—318.

Kollsman Instrument Corp.: *See*—
Andresen, John H., Jr. 3,018,420.

Komline-Sanderson Engineering Corp.: *See*—
Hawkes, Ralph O. and H. G., Morrison, and Sirles. 3,017,997.

Kopp, Joseph. Supports for use in chromatography and for other purposes. 3,018,000, 1–23–62, Cl. 211—45.

Kopp, Philip E.: *See*—
Georg, Raymond H., and Kopp. 3,017,727.

Korski, Frank S., and R. E. Martin, to The Emerson Electric Mfg. Co. Wire twisting and cut-off device. 3,017,906, 1–23–62, Cl. 140—119.

Koshoot, Henry F. Bubble-plate structure for rectification columns. 3,017,950, 1–23–62, Cl. 183—2.

Kovarik, Frank J., and C. E. Latschar, to E. I. du Pont de Nemours & Co. Process of producing uniformly dyeing polyacrylonitrile filaments by heat stretching the water wetted filaments. 3,018,157, 1–23–62, Cl. 18—54.

Kraft, Herman T., to The General Tire & Rubber Co. Expansible bag. 3,018,213, 1–23–62, Cl. 156—416.

Kramer, Kenneth C.: *See*—
Meyers, Raymond I., and Kramer. 3,018,072.

Kramer, Lloyd B., A. H. Kasberg, Jr., and J. G. Landkrohn, to Westinghouse Electric Corp. Welding apparatus and method. 3,018,357, 1–23–62, Cl. 219—72.

Krause, John T., to Bell Telephone Laboratories, Inc. Vapor deposition apparatus. 3,017,851, 1–23–62, Cl. 118—49.

Krejci, Joseph C., to Phillips Petroleum Co. Pyrolytic conversion of paraffins. 3,018,309, 1–23–62, Cl. 260—679.

Kremp, Rudolf, and P. Frost, to Agfa Aktiengesellschaft. Projector. 3,017,805, 1–23–62, Cl. 88—26.

Krivisky, Rubin: *See*—
Hillson, Frank, and Krivisky. 3,017,656.

Kruckewitt, Edward K. Spark arrester. 3,017,954, 1–23–62, Cl. 183—74.

Krueger, Allison F. Seats coupled side-by-side. 3,018,131, 1–23–62, Cl. 297—248.

Kryzer, Benjamin H., to Union Tank Car Co. Water softener controls. 3,017,995, 1–23–62, Cl. 210—138.

Kubik, Paul F., to The Yale and Towne Mfg. Co. Knob retainer for lock. 3,017,762, 1–23–62, Cl. 70—224.

Kuellmar, Adolph G.: *See*—
Loomis, Russell M., Kuellmar, and Lundvall. 3,017,843.

Kuntze, George H.: *See*—
Summers, Virgil H., McClure, and Kuntze. 3,018,116.

Ladisch, Rolf K. Fiber-forming nozzle and method of making fibers. 3,017,664, 1–23–62, Cl. 18—2.5.

Lakatta, Edward, to Harris-Hogan Co. Sewing machine attachment. 3,017,846, 1–23–62, Cl. 112—114.

La Manna, Richard J., to Monroe Calculating Machine Co. Binary integer divider. 3,018,047, 1–23–62, Cl. 235—165.

Lamont, John, to Western Electric Co., Inc. Photoelectric device. 3,018,377, 1–23–62, Cl. 250—222.

Lamort de Gail, Marc, and R. M. F. Chagrin de Saint-Hilaire. Treatment of materials in liquid suspension such as paper pulp. 3,018,060, 1–23–62, Cl. 241—74.

Lancaster, Robert A., to Western Electric Co., Inc. Article storage and dispensing apparatus. 3,018,020, 1–23–62, Cl. 221—10.

Landis Tool Co.: *See*—
Jones, Alvin J. 3,017,875.

Landkrohn, John G.: *See*—
Kramer, Lloyd B., Kasberg and Landkrohn. 3,018,357.

Landschulze, Ernst A., to Rheinstahl Hamburg Stahlbau Eggers & Friedrich Kehrhahn G.m.b.H. Moving stairways, escalators and the like. 3,017,963, 1–23–62, Cl. 188—82.34.

Lang, William L.: *See*—
Dobrosielski, Stephen S., and Lang. 3,018,127.

Lärkfeldt, Birger: *See*—
Allander, Claes, and Lärkfeldt. 3,018,088.

Lash, Joseph F., and P. K. Trimble, to General Motors Corp. Balancing machine. 3,017,773, 1–23–62, Cl. 73—462.

Lasley, Harold L., to General Motors Corp. Transmission clutch control. 3,017,974, 1–23–62, Cl. 192—4.

Latschar, Carl E.: *See*—
Kovarik, Frank J., and Latschar. 3,018,157.

Laubach, Gerald D.: *See*—
Berg, Rudolph G., Figdor, and Laubach. 3,018,295.

Lauck, Robert M., and A. Dock Fon Toy, to Victor Chemical Works. Gelatin food product. 3,018,180, 1–23–62, Cl. 99—130.

Layer, Edwin H., Jr., and C. S. Peet, to United States of America, Atomic Energy Commission. Method of forming a fuel element for a nuclear reactor. 3,018,238, 1–23–62, Cl. 204—154.2.

Leach, John M. Process and apparatus for treating materials. 3,018,182, 1–23–62, Cl. 99—134.

Lear, Inc.: *See*—
Green, David J. 3,018,049.
Horton, William F., and Engman. 3,018,071.
Meyers, Raymond I., and Kramer. 3,018,072.

Lehde, John W., Jr., to Scully-Jones and Co. Adjustable tap stop means for limiting depth of threading. 3,017,643, 1–23–62, Cl. 10—129.

Lemoine, Marcel C. J., to Anciens Etablissements Goldenberg & Cie. Anchoring device. 3,017,799, 1–23–62, Cl. 85—2.4.

Lenning, Alvar, to AB Inreco, Stockholm, Electric switching device. 3,018,348, 1–23–62, Cl. 200—104.

Lea Laboratoires Francais de Chimiotherapie: *See*—
Amiard, Gaston, and Heymes. 3,018,293.
Muller, Georges, and Poittevin. 3,018,283.
Velluz, Leon, Muller, and Allais. 3,018,286.

Levasheff, Vladimir V.: *See*—
May, Frank H., and Levasheff. 3,018,163.

Levecque, Marcel, and M. Charpentier, to Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey. Apparatus for producing fibers from thermoplastic material. 3,017,663, 1–23–62, Cl. 18—2.5.

Lever Bros. Co.: *See*—
Euwe, Gerrit E., and Cieremans. 3,018,146.

Levine, Irving E., and E. Clippinger, to California Research Corp. Production of aliphatic alcohols. 3,018,308, 1–23–62, Cl. 260—640.

Levy, Harold H., and J. L. Tinsley. Regenerative broadening circuit. 3,018,393, 1–23–62, Cl. 307—88.5.

Lewandowski, Frank P.: *See*—
Jones, Clarence S., and Lewandowski. 3,018,392.

Lewis, Chalmer H., Jr.: *See*—
Valdettaro, Alarico A., Lewis, and Robinson. 3,018,372.

Lewis, Charles W., to Westinghouse Electric Corp. Electroluminescent lamp structures. 3,018,402, 1–23–62, Cl. 313—108.

Lewis, Samuel. Inhalation apparatus. 3,017,882, 1–23–62, Cl. 128—198.

Leyton, Eric M., and G. A. Olive, to Radio Corp. of America. Stabilization in tape recording and reproduction. 3,018,324, 1–23–62, Cl. 178—5.4.

Lilly, Eli, and Co.: *See*—
McGuire, James M., and Mann. 3,018,220.

Lindner, Gerhard: *See*—
Millar, John F., and Lindner. 3,018,221.

Lindsay, James E., and T. B. Martin, to Radio Corp. of America. Semiconductor signal converter apparatus. 3,018,391, 1–23–62, Cl. 307—88.5.

Link, Edwin A., to R T & E Corp. Fuse construction. 3,018,349, 1–23–62, Cl. 200—114.

Link, Edwin A., to R T & E Corp. Circuit recloser. 3,018,415, 1–23–62, Cl. 317—23.

Link, Harold S., and W. H. Schultz, to United States Steel Corp. Anti-skid tread plate. 3,017,680, 1–23–62, Cl. 29—194.

Lipinski, Andrew J., to Canadian Westinghouse Co., Ltd. Simplified microwave repeater. 3,018,370, 1–23–62, Cl. 250—15.

Lit, Harry B., and R. E. Dunton, to General Electric Co. Method of coating wire and apparatus therefor. 3,018,199, 1–23–62, Cl. 117—231.

Litt, Peter S. Process for treating a manganese containing ore for the recovery of manganese values therefrom. 3,018,234, 1–23–62, Cl. 204—83.

Litton Systems, Inc.: *See*—
McConnell, Kenneth R. 3,018,331.
Monaghan, Hugh M. 3,017,784.
Steen, Hans F. 3,018,153.

Lockwood, Warren H. Reversible and tiltably nestable containers. 3,018,003, 1–23–62, Cl. 211—126.

Lodding Engineering Corp.: *See*—
Dunlap, Harold E. 3,017,930.

Lodige, Fritz: *See*—
Lodige, Wilhelm and F., and Lucke. 3,018,059.

Lodige, Wilhelm and F., and J. Lucke. Process and an apparatus for mixing and comminuting materials. 3,018,059, 1–23–62, Cl. 241—25.

Loewe, Siegmund, and R. E. Schulz; said Schulz assor. to said Dr. S. Loewe. Tape reel drive system. 3,018,063, 1–23–62, Cl. 242—55.12.

Lofgren, Gustaf E.: *See*—
Allenby, William F., and Lofgren. 3,017,654.

Lohse, Paul, to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft. Bag closing machines. 3,017,731, 1–23–62, Cl. 53—201.

Long, Robert A., to Merck & Co., Inc. Production of vitamin B_{12}. 3,018,225, 1–23–62, Cl. 195—114.

Long, Robert B.: *See*—
Tarmy, Barry L., and Long. 3,018,235.

Long, Spencer W., to Armco Steel Corp. Rotary machine with removable power slip unit. 3,017,936, 1–23–62, Cl. 175—197.

Loomis, Russell M., A. G. Kuellmar, and J. S. Lundvall, to Union Asbestos & Rubber Co. Lading separating means. 3,017,843, 1–23–62, Cl. 105—376.

Lopenski, Stanley A.: *See*—
Bauer, Hugo, May, and Lopenski. 3,017,852.

Lorain Products Corp.: *See*—
Pohm, George H. 3,018,379.

Loudon, James, to Mineraliac Electric Co. Scissor-clip. 3,018,080, 1–23–62, Cl. 248—228.

Lowell Counter Co.: *See*—
Herlihy, William F. 3,017,645.

Lucchesi, Peter J., and B. L. Tarmy, to Esso Research and Engineering Co. Radioethylation of paraffin hydrocarbons. 3,018,237, 1–23–62, Cl. 204—154.

Lucke, Josef: *See*—
Lodige, Wilhelm and F., and Lucke. 3,018,059.

Lund, Alvin O., and D. J. Vanderzee, to Westinghouse Electric Corp. Door protective edge. 3,017,957, 1–23–62, Cl. 187—48.

Lundberg, Lennart A., to American Cyanamid Co. Polymerizable elastomer-vinyl aromatic compound composition containing a catalyst-promoter system and method of polymerizing same. 3,018,266, 1–23–62, Cl. 260—45.4.

Lundvall, John S.: *See*—
Loomis, Russell M., Kuellmar, and Lundvall. 3,017,843.

Lutgerhorst, Albertus G.: *See*—
Hennemann, Georg, and Lutgerhorst. 3,018,192.

Lynn, Lawrence B., to Westinghouse Electric Corp. Control devices. 3,017,778, 1–23–62, Cl. 74—5.12.

Lyon, William H.: *See*—
Balmer, Donald F., and Lyon. 3,018,111.

Maas, Raymond W., and R. B. Thorness, to United States of America, Navy. Balloon flight control. 3,018,069, 1–23–62, Cl. 244—32.

Mabry, Marshall W.: *See*—
Brown, Winston E., and Mabry. 3,018,202.

MacDonald, Waldron S. Echo firing device for a depth charge. 3,017,832, 1–23–62, Cl. 102—18.

MacDuff, Stanley I., to The Bendix Corp. Power steering actuator. 3,017,945, 1–23–62, Cl. 180—79.2.

Mackay, Malcolm J., to Wisconsin Wire Works. Loom beat up mechanisms. 3,017,904, 1–23–62, Cl. 139—191.

MacPhee, Kenneth E.: *See*—
Borr, Mitchell, and MacPhee. 3,018,256.

MacPherson, Arthur R., and R. R. Turner, to Aerofall Mills Inc. Air classification system. 3,017,993, 1–23–62, Cl. 209—144.

Magnetics, Inc.: *See*—
Brandon, James C., Jr., Frank, and Rahiser. 3,018,455.

Magnuson, Genevieve I.: *See*—
Sintetos, Nicholas D. 3,017,913.

Magnuson, Robert: *See*—
Sintetos, Nicholas D. 3,017,913.

Magsig, Manly A.: *See*—
Yeasting, Maynard C., and Magsig. 3,017,726.

Mahoney, Thomas P.: *See*—
Bonnafoux, Paul. 3,017,845.

Maillard, Frederic G., ½ to Societe Anonyme dite, La Manufacture de Feutres de Mouzon (Anciens Etablissements Roger Sommer & Ses Fils). Apparatus for manufacturing non-woven textile articles. 3,017,918, 1–23–62, Cl. 156—370.

Maloney, Bernard: *See*—
Mann, William, and Maloney. 3,017,961.

Maltby, Wilson R.: *See*—
Park, Robert H., and Maltby. 3,017,834.

Manganese Chemicals Corp.: *See*—
Welsh, Jay Y., Milberg, and Peterson. 3,018,233.

Mann, Robert L.: *See*—
McGuire, James M., and Mann. 3,018,220.

Mann, William, and B. Maloney, to American Steel Foundries. Combination brake. 3,017,961, 1–23–62, Cl. 188—57.

Manne, Moe, and H. Peterson. Ring with expandable, separable self-contained shank. 3,017,754, 1–23–62, Cl. 63—15.45.

Manning, Maxwell & Moore, Inc.: *See*—
Richter, Walter E. 3,017,958.

Manteris, Nick P. Portable barbecue machine. 3,017,819, 1–23–62, Cl. 99—421.

Marbury, Ralph E., to Westinghouse Electric Corp. Power capacitor units. 3,018,427, 1–23–62, Cl. 317—242.

Marcellus, Manley C., and J. A. Scarlett, to FMC Corp. Process for production of barium silicates containing water-soluble barium values from barite. 3,018,168, 1–23–62, Cl. 23—186.

Marco Industries: *See*—
Rodgers, George H. 3,018,473.

Markwood, William H., Jr.: *See*—
Carson, James S., Feild, Kegan, Markwood, and Whitney. 3,018,252.

Marsh, Donald A., to Phillips Petroleum Co. Process control system. 3,017,662, 1–23–62, Cl. 18—1.

Martin-Marietta Corp.: *See*—
Frantz, William, and Johnston. 3,017,865.

Martin, Raymond E.: *See*—
Korski, Frank S., and Martin. 3,017,906.

Martin, Thomas B.: *See*—
Lindsay, James E., and Martin. 3,018,391.

Martin, William McK. Aseptic canning process and apparatus. 3,018,184, 1–23–62, Cl. 99—182.

Maschinenfabrik Augsburg-Nurnberg AG: *See*—
Hafick, Michael, and Wiese. 3,017,634.

Mason Silk Co., The: *See*—
Vandervoort, Norman F. 3,018,067.

Massarani, Elena: *See*—
Cavallini, Guido, and Massarani. 3,018,305.

Masser, Lloyd D., to Neway Equipment Co. Bearing structure for a rockable vehicle axle or trunnion. 3,018,143, 1–23–62, Cl. 308—21.

Masters, Albert M. Schoolboard combination. 3,017,704, 1–23–62, Cl. 35—63.

Matti, Leo F., to Bartelt Engineering Co., Inc. Machine for classifying packages according to weight. 3,017,992, 1–23–62, Cl. 209—121.

Mattiat, Oskar, to United States of America, Army. Piezoelectric resonator with oppositely poled ring and spot. 3,018,451, 1–23–62, Cl. 333—72.

Maunoury, Jean. Heel for footwear. 3,017,706, 1–23–62, Cl. 36—34.

Maxwell, Richard C., and D. G. Stoffey, to Stauffer Chemical Co. 2 - (0,0 - dialkylphosphoro - dithioyl - methylmercapto)-carbamates and -carbanilates. 3,018,216, 1–23–62, Cl. 167—22.

May, Frank H., and V. V. Levasheff, to American Potash & Chemical Corp. Recovery of borate values from calcium borate ores. 3,018,163, 1-23-62, Cl. 23—59.

May, Frederick T.: *See*—
Bauer, Hugo, May, and Lopenski. 3,017,852.
Chauvin, Bernard, and May. 3,017,991.

Mayhew, Raymond L., J. P. Miller, III, and M. Kopp, to General Aniline & Film Corp. Dry cleaning compositions. 3,018,251, 1-23-62, Cl. 252—152.

McAjulay, Robert, and W. G. Richardson, to Megator Pumps and Compressors Ltd. Float controlled switch assemblies. 3,018,346, 1-23-62, Cl. 200—84.

McClure, Glenn T.: *See*—
Hursen, Thomas F., and McClure. 3,017,960.

McClure, Ralph C.: *See*—
Summers, Virgil H., McClure, and Kuntze. 3,018,116.

McConnell, Kenneth R., to Litton Systems, Inc. Transmission level limit and contrast control for facsimile systems and the like. 3,018,331, 1-23-62, Cl. 178—7.1.

McCullough, Otis I.: *See*—
Davis, James E., Roos, and McCullough. 3,017,946.

McEvoy Co.: *See*—
Jackson, John G., Jr., and Rhodes. 3,017,931.

McGraw-Edison Co.: *See*—
Brown, Jack W. 3,018,110.

McGuire, James M., and R. L. Mann, to Eli Lilly and Co. Hygromycin B, its production and treatment of intestinal parasites. 3,018,220, 1-23-62, Cl. 167—53.

McKiney, James T. Automatic valve. 3,017,871, 1-23-62, Cl. 123—25.

McKnight, George S., Jr., and G. H. Perkins, to Oxford Paper Co. Aqueous coating composition comprising water soluble polyethylenepolyamine-dihaloalkane ureaformaldehyde reaction product and pianographic paper base formed with same. 3,017,827, 1-23-62, Cl. 101—149.2.

McMahon, Thomas J., and V. E. Henley, to The General Tire & Rubber Co. Improved tire building machine. 3,017,919, 1-23-62, Cl. 156—400.

McMahon, William H. Scaffold. 3,017,968, 1-23-62, Cl. 189—14.

McMeen, Forrest H., B. Aston, and G. R. Stucka, to Vol-Shan Industries, Inc. Inserts for necks of hollow knobs and the like. 3,017,658, 1-23-62, Cl. 16—121.

Meat Packers Equipment Co.: *See*—
Hawley, Richard A. 3,017,822.

Meat Separator Corp.: *See*—
Zartman, Willmar A. 3,017,661.

Medart Lockers, Inc.: *See*—
Murphy, Raymond J. 3,018,102.

Megator Pumps and Compressors Ltd.: *See*—
McAjulay, Robert, and Richardson. 3,018,346.

Meier, Dale J., and A. Kahn, to Shell Oil Co. New curing agents for polyepoxides and method for their preparation. 3,018,258, 1-23-62, Cl. 260—6.

Meier, Hermann O. Detachable screw connection for rails on concrete ties. 3,018,055, 1-23-62, Cl. 238—371.

Meier, John W.: *See*—
Covington, Edward R., and Meier. 3,018,197.

Merck & Co., Inc.: *See*—
Long, Robert A. 3,018,225.

Meyers, Raymond L., and K. C. Kramer, to Lear, Inc. Aircraft roll and stabilizing apparatus. 3,018,072, 1-23-62, Cl. 244—77.

Middaugh, Jack K., to Bell Telephone Laboratories, Inc. Automatic traffic sampler and recorder. 3,018,334, 1-23-62, Cl. 179—8.

Middendorf, William H., to The Wadsworth Electric Mfg. Co., Inc. Circuit breaker having cam controlled contact bar. 3,018,351, 1-23-62, Cl. 200—116.

Midland-Ross Corp.: *See*—
Valentine, Dale M., and Kelley. 3,018,231.

Mid-West Abrasive Co.: *See*—
Yeasting, Maynard C., and Magsig. 3,017,726.

Miehle-Goss-Dexter, Inc.: *See*—
Behringer, Alfred C. 3,017,828.

Mikell, William G., to E. I. du Pont de Nemours and Co. Tire cord stress equalization process. 3,017,669, 1-23-62, Cl. 18—53.

Mikkelson, John E., deceased, by M. Mikkelson, special administratrix. Gas or vapor to liquid contacting tray. 3,018,094, 1-23-62, Cl. 261—113.

Mikkelson, Magda: *See*—
Mikkelson, John E. 3,018,094.

Milberg, Marlyn W.: *See*—
Welsh, Jay Y., Milberg, and Peterson. 3,018,233.

Millar, John F., and G. Lindner, to Charles E. Frosst & Co. Penicillin-sulfonamide tablet. 3,018,221, 1-23-62, Cl. 167—65.

Miller, Donald E., ¼ to The Atchison, Topeka and Santa Fe Railroad Co., ¼ to New York Central Railway Co., ¼ to The Pennsylvania Railroad Co., and ¼ to Union Pacific Railroad Co. End connection for the crossbars of a freight supporting and restraining system. 3,017,841, 1-23-62, Cl. 105—369.

Miller, Fred F., to Dana Corp. Double constant velocity universal joint. 3,017,755, 1-23-62, Cl. 64—21.

Miller, Henry C., to E. I. du Pont de Nemours and Co. Adducts of diborane with metal salts. 3,018,160, 1-23-62, Cl. 23—14.

Miller, John P., III: *See*—
Mayhew, Raymond L., Miller, and Kopp. 3,018,251.

Miller, Lalan G.: *See*—
Colalaco, August P., Miller, and Cham. 3,018,417.

Miller, Robert A., to Joy Mfg. Co. Rod puller. 3,017,681, 1-23-62, Cl. 24—254.

Miller, Robert C.: *See*—
Cornish, Albert J., and Miller. 3,018,312.

Miller, Victor A., and R. B. Horsfall, Jr., to North American Aviation, Inc. Radiant energy scanning system. 3,018,378, 1-23-62, Cl. 250—236.

Miller, Wilbur A., and E. B. Glenger, Jr., to International Latex Corp. Deposited latex articles. 3,017,889, 1-23-62, Cl. 128—521.

Mills, Herbert E., to Mills Products, Inc. Removable handle assembly for stove doors. 3,017,657, 1-23-62, Cl. 16—114.

Mills, Maurice A. Head rest for automobile seat. 3,018,133, 1-23-62, Cl. 297—397.

Mills Products, Inc.: *See*—
Mills, Herbert E. 3,017,657.

Mineraliac Electric Co.: *See*—
Loudon, James. 3,018,080.

Ministry for Petroleum Industry and Chemistry, The: *See*—
Baltac, Alexandru. 3,017,940.

Minneapolis-Honeywell Regulator Co.: *See*—
Entin, Leonard P. 3,017,775.
Gustafson, Gordon W. 3,018,345.
Helfinstine, Robert F. 3,018,070.
Warnock, Lyle F., Jr. 3,018,141.
Warnock, Lyle F., Jr. 3,018,142.
Witt, Walter. 3,017,802.

Minnesota Mining and Mfg. Co.: *See*—
Swenson, Jack S. 3,017,989.

Mir, William G., and J. Brewster, Sr. Occupant propelled merry-go-round. 3,018,101, 1-23-62, Cl. 272—33.

Mirando, Louis: *See*—
Rosenberg, David, and Mirando. 3,017,642.

Mircro Balancing, Inc.: *See*—
Frank, Karl F. 3,017,768.

Mischanski, Myron S. Ball mill. 3,018,061, 1-23-62, Cl. 241—172.

Mitchell, Reid L., J. W. Berry, and W. H. Wadman, to Rayonier Inc. Viscose process. 3,018,158, 1-23-62, Cl. 18—54.

Mitchell, William H., to Westinghouse Electric Corp. Current carrying spring member. 3,018,353, 1-23-62, Cl. 200—166.

Mitteldeutsche Kuehlerfabrik G.m.b.H.: *See*—
Betz, Karl. 3,017,966.

Mixon, Joseph L., to Westinghouse Electric Corp. Front opening dishwasher. 3,017,892, 1-23-62, Cl. 134—176.

Modern Hydraulics, Inc.: *See*—
Renshaw, Robin. 3,018,005.

Monaghan, Hugh M., to Litton Systems, Inc. Phased synchronous drive for recorders and the like. 3,017,784, 1-23-62, Cl. 74—395.

Monarch Machine Tool Co., The: *See*—
Ulman, Wayne H., and Gusching. 3,017,863.

Mondie Forge Co.: *See*—
Schroeder, Harry E. 3,017,699.

Monroe Calculating Machine Co.: *See*—
La Manna, Richard J. 3,018,047.
Parker, Charles A. 3,018,039.
Wales, Nathaniel B., Jr. 3,018,040.

Monsanto Chemical Co.: *See*—
Birum, Gail H., and Dever. 3,018,303.
Butler, John M., Hedrick, and Mottus. 3,018,273.
Cameron, Margaret D. 3,018,175.
Cornell, David. 3,018,228.
Heininger, Samuel A., and Birum. 3,018,304.
Jenkins, Russell L. 3,018,186.
Kelly, Pennell C., and Hardwicke. 3,018,195.
Nielsen, Morris L. 3,018,165.
Nielsen, Morris L. 3,018,167.

Montgomery, Arvid N., to Montgomery Mfg. Co., Inc. Timed spray dispensers. 3,018,056, 1-23-62, Cl. 239—70.

Montgomery Mfg. Co., Inc.: *See*—
Montgomery, Arvid N. 3,018,056.

Mooney, David H., Jr.: *See*—
Skillman, William A., Evanus, and Mooney. 3,018,487.

Morabito, Daniel T. Waste collecting device. 3,017,652, 1-23-62, Cl. 15—257.5.

Morgan, Carrel B.: *See*—
Quail, Bernard W., and Morgan. 3,017,907.

Morgan, Lyman W., to Phillips Petroleum Co. Internal reflux computer for fractionation control. 3,018,229, 1-23-62, Cl. 202—40.

Morgan, Lyman W., and L. R. Freeman, to Phillips Petroleum Co. Fractionator control system. 3,018,230, 1-23-62, Cl. 202—40.

Morgan, William H., Jr.: *See*—
Barre, Wade E., Jr., and Morgan. 3,018,462.

Morrison, Robert M.: *See*—
Hawkes, Ralph O. and H. G., Morrison, and Sirles. 3,017,997.

Morton, James F.: *See*—
Wenman, William A., and Morton. 3,018,365.

Morway, Arnold J., C. R. Daniels, and R. P. Spray, to Esso Research and Engineering Co. Process for making an improved lubricant containing salts of carboxylic acids. 3,018,249, 1-23-62, Cl. 252—39.

Moslo, Ernest P. Container with transparent windows. 3,017,987, 1-23-62, Cl. 206—45.31.

Mossberg, Karl E., to Aktiebolaget Calor & Sjogren. Automatic control of the concentration in suspensions such as cellulose, paper pulp, and the like. 3,017,767, 1-23-62, Cl. 73—54.

Mottus, Edward H.: *See*—
Butler, John M., Hedrick, and Mottus. 3,018,273.

Mountjoy, Garrard, to General Motors Corp. Speed control system utilizing frequency change from inductive pickup. 3,018,367, 1-23-62, Cl. 246—182.

Mountjoy, Garrard, to General Motors Corp. Speed control system utilizing frequency change from inductive pickup. 3,018,368, 1-23-62, Cl. 246—182.

Mowers, Henry D.: *See*—
Cummings, Frederick W., and Mowers. 3,017,688.

Moyer, James D., to Textile Machine Works. Yarn take-up means for knitting machines. 3,017,757, 1-23-62, Cl. 66—146.

Mrenna, Stephen A., and D. G. Portman, to Westinghouse Electric Corp. Terminal block. 3,018,464, 1-23-62, Cl. 339—198.

Mulhollan, Frank W. Device for flexing shoes. 3,017,644, 1-23-62, Cl. 12—41.1.

Mullen, John H., and W. F. Born, to Westinghouse Electric Corp. Control switches. 3,018,338, 1-23-62, Cl. 200—16.

Muller, Georges: *See*—
Velluz, Leon, Muller, and Allais. 3,018,286.

Muller, Georges, and A. Poitrevin, to Les Laboratoires Francais de Chimiotherapie. New oxygenated derivatives of steroids and process of their preparation. 3,018,283, 1-23-62, Cl. 260—239.55.

Munz, Otto J. Sea farming. 3,017,856, 1-23-62, Cl. 119—4.

Munz, Otto J. Sea farming. 3,017,857, 1-23-62, Cl. 119—4.

Murphy Chemical Co. Ltd., The: *See*—
Planka, Maz. 3,018,215.

Murphy, John L. Solid grouting bar and hanger element for setting slabs and method. 3,017,725, 1-23-62, Cl. 50—418.

Murphy, Raymond J., to Medart Lockers, Inc. Folding basketball goal-structures. 3,018,102, 1-23-62, Cl. 273—1.5.

Mustert, Rudolf, to The N.V. Apparatenfabriek Plaisier. Multiple half-wave double bridge connection having alternating current supply and direct current output. 3,018,438, 1-23-62, Cl. 324—57.

N.V. Apparatenfabriek Plaisier, The: *See*—
Mustert, Rudolf. 3,018,438.

N.V. Inland: *See*—
Zliver, Edwin. 3,017,910.

Nakonieczny, Edward: *See*—
Slosberg, David K., and Nakonieczny. 3,017,714.

Nampa, Sulo M., to Evans Products Co. Bulkhead. 3,017,842, 1-23-62, Cl. 105—376.

Napier, D., & Son Ltd.: *See*—
Shirley, Walter, Ramsden, and Nixon. 3,017,745.

Nasvytis, Pius J., to The Cyril Bath Co. Stretch forming machine with trolley supplied power unit on stretch carriage. 3,017,916, 1-23-62, Cl. 153—40.

National Broach & Machine Co.: *See*—
Bassoff, Arthur B. 3,017,876.
Davis, Kenneth J. 3,017,728.

National Brush Co.: *See*—
Racicot, Albert R. 3,017,649.

National Research Corp.: *See*—
Hnilicka, Milo J., Jr. 3,018,016.
Vanderschmidt, George F. 3,018,376.
Vanderschmidt, George F. 3,018,435.
Vanderschmidt, George F. 3,018,436.

National Telephone Supply Co., The: *See*—
Klein, Charles H. 3,017,905.

Navatta, Cono S., G. E. Smith, and H. L. Etlinger, to Thomas Electronics, Inc. Cathode ray tube. 3,018,400, 1-23-62, Cl. 313—82.

Neapolitakis, Nicholas T., to Shurhit Products, Inc. Transistorized ignition system. 3,018,413, 1-23-62, Cl. 315—206.

Nelson, Hans H. Cigarette holder pin. 3,017,890, 1-23-62, Cl. 131—259.

Nelson, John R., and M. J. Gosselin, to The Colorado Fuel and Iron Corp. Flat type sling. 3,018,128, 1-23-62, Cl. 294—74.

Nelson, Joseph F.: *See*—
Shewmaker, James E., and Nelson. 3,018,236.

Nesbitt, George G., to Denver Wood Products Co. Article support. 3,018,004, 1-23-62, Cl. 211—170.

Nestaway Inc.: *See*—
Glezen, Lewis E. 3,018,002.

Nettleton, David L., to Radio Corp. of America. Data input system. 3,018,042, 1-23-62, Cl. 235—61.6.

Neumann, Hans O.: *See*—
Ahlbor, Valter A., and Neumann. 3,018,031.

Nevens, Thomas D., to The Oil Shale Corp. Plant and process for production of low temperature pumpable oil from oil shale and the like. 3,018,243, 1-23-62, Cl. 208—11.

New York Central Railroad Co.: *See*—
Miller, Donald E. 3,017,841.

Neway Equipment Co.: *See*—
Masser, Lloyd D. 3,018,143.

Nicholson, Ronald G., to Consolidated Electronics Industries Corp. Housing structure for instrument mechanisms or the like. 3,018,151, 1-23-62, Cl. 312—352.

Nickols, John E. Building construction system. 3,017,970, 1-23-62, Cl. 189—34.

Nicoll, William A., to E. I. du Pont de Nemours and Co. Process for printing on fluorocarbon resin surfaces. 3,018,188, 1-23-62, Cl. 117—38.

Nielsen, Harold R. Portable partitions. 3,017,969, 1-23-62, Cl. 189—34.

Nielsen, Morris L., to Monsanto Chemical Co. Phosphorus-nitrogen compounds. 3,018,165, 1-23-62, Cl. 23—106.

Nielsen, Morris L., to Monsanto Chemical Co. Method for producing trimetaphosphimic acid. 3,018,167, 1-23-62, Cl. 23—165.

Nishimura, Danny T.: *See*—
Erlebach, Woodland E., and Nishimura. 3,018,161.

Nixon, Geoffrey H.: *See*—
Shirley, Walter, Ramsden, and Nixon. 3,017,745.

Norman, Vello, and T. P. Whaley, to Ethyl Corp. Metal plating process. 3,018,194, 1-23-62, Cl. 117—107.

Norrie, Robert C., to Pacific Car and Foundry Co. Hood-and-fender assembly for automotive trucks. 3,017,944, 1-23-62, Cl. 180—69.

Norris, Myron E., to American Bosch Arma Corp. Time delay circuit. 3,018,420, 1-23-62, Cl. 317—148.5.

North American Aviation, Inc.: *See*—
Miller, Victor A., and Horsfall. 3,018,378.

Nygaard, James L., to Texas Instruments Inc. Antenna coupling circuit. 3,018,373, 1-23-62, Cl. 250—20.

Oak Mfg. Co., Inc.: *See*—
Probasco, Harold T. 3,018,148.

O'Berry, William A., to United States of America, Navy. Low level asymmetrical transistor chopper. 3,018,385, 1-23-62, Cl. 307—88.5.

O'Brien, Edward D. Centrifugal coating apparatus. 3,017,854, 1-23-62, Cl. 118—303.

O'Brien, Richard C., to Harris-Intertype Corp. Photographic type composition. 3,017,811, 1-23-62, Cl. 95—4.5.

Ochterbeck, Berthold H.: *See*—
Shiplett, Lester D., and Ochterbeck. 3,018,134.

Offner, Franklin F. Transistor amplifier. 3,018,444, 1-23-62, Cl. 330—10.

Oil Shale Corp., The: *See*—
Nevens, Thomas D. 3,018,243.

O'Keefe, Eugene M., to Phoenix Products Co., Inc. Mounting for electric lamps. 3,018,366, 1-23-62, Cl. 240—41.

Okress, Ernest C., and L. C. Werner, to United States of America, Navy. High power waveguide windows. 3,018,453, 1-23-62, Cl. 333—98.

Olin Mathieson Chemical Corp.: *See*—
Wagner, George M. 3,018,196.

Olive, George A.: *See*—
Leyton, Eric M., and Olive. 3,018,324.

Olivetti, Ing. C., & C., S.p.A.: *See*—
Tonelli, Michele. 3,018,333.

Olson, Earl R., and C. M. Chapman, to Resistance Products Co. Film resistor and method of making same. 3,018,198, 1-23-62, Cl. 117—227.

Olson, Paul E., to Westinghouse Air Brake Co. Manual control valve device. 3,017,900, 1-23-62, Cl. 137—620.

Onder, Kerim, 15/100 to A. L. Tirico. Radio receivers. 3,018,371, 1-23-62, Cl. 250—20.

Opolion, Arthur. Disposable saucer insert. 3,018,014, 1-23-62, Cl. 215—100.5.

Oppel, Heinz C. Digging wheel for sugar beet harvesters. 3,017,933, 1-23-62, Cl. 171—58.

Orlin, William J., to Amrad, Inc. Hydraulically simulated wind tunnel. 3,017,769, 1-23-62, Cl. 73—147.

Orrell, Walter. Means or appliances for use in the disinfecting of telephones. 3,018,337, 1-23-62, Cl. 179—185.

Ortel, William C. G.: *See*—
Backman, Gustav A., and Ortel. 3,018,048.

Osborn, Howard, and J. D. Gould, to The Thrissell Engineering Co. Ltd. Letter sorting machines. 3,018,009, 1-23-62, Cl. 214—11.

Ossenbrunner, Armin: *See*—
Geiger, Julius, Ossenbrunner, and Coenen. 3,018,177.

Osborn Mfg. Co., The: *See*—
Brauer, Edwin H., Jr. 3,017,647.

Owen, William L. Treatment of starches and gums, and compositions thereof. 3,018,245, 1-23-62, Cl. 252—8.5.

Oxenham, John K., to Sylvania-Thorn Colour Television Laboratories Ltd. Colour television tube. 3,018,405, 1-23-62, Cl. 315—12.

Oxford Paper Co.: *See*—
McKnight, George S., Jr., and Perkins. 3,017,827.

Oy Medica AB: *See*—
Sundman, Knut J. 3,017,668.

Pacific Car and Foundry Co.: *See*—
Norrie, Robert C. 3,017,944.

Pacific Scientific Co.: *See*—
Cushman, Clifford E., and Wrighton. 3,018,065.

Pack, Herschel G. Thermoelectric generator with feedback for increasing efficiency. 3,018,430, 1-23-62, Cl. 322—2.

Packer, Ralph V.: *See*—
Binkley, William J., Binkley, and Packer. 3,018,026.

Paige, Richard E., to Ekco Products Co. Merchandise packaging assembly. 3,018,076, 1-23-62, Cl. 248—37.3.

Palmer, Max. Voltage regulator. 3,018,432, 1-23-62, Cl. 323—66.

Papacek, Frank C. Sanitary frostproof hydrant. 3,017,896, 1-23-62, Cl. 137—282.

Park, Robert H., and W. R. Maltby. Magnetic detecting device. 3,017,834, 1-23-62, Cl. 102—18.

Parker, Charles A., to Monroe Calculating Machine Co. Code read-in translator for controlling lister-calculating machines. 3,018,039, 1-23-62, Cl. 235—60.

Parker, John T. Storage container for uniform sized articles. 3,018,149, 1-23-62, Cl. 312—45.

Partridge, William R.: *See*—
Stanford, George W., and Partridge. 3,018,244.

Payne, Eric R., to The Austin Motor Co. Ltd. Motor vehicle power plants. 3,017,787, 1-23-62, Cl. 74—701.

Pedrick, John L., to Scott Paper Co. Papermachine breast roll. 3,017,928, 1-23-62, Cl. 162—289.

Peerless Equipment Co.: *See*—
Dudley, Edmond R. 3,018,437.

Peet, Charles S.: *See*—
Layer, Edwin H., Jr., and Peet. 3,018,238.

Penner, Arthur H., to Harris-Intertype Corp. Plate clamp for printing press. 3,017,830, 1-23-62, Cl. 101—415.1.

Pennie, John: *See*—
Klaessig, Henry, Pennie, and Clay. 3,018,185.

Pennsylvania Railroad Co., The: *See*—
Miller, Donald E. 3,017,841.

Perkins, Glenn H.: *See*—
McKnight, George S., Jr., and Perkins. 3,017,827.

Perkins, Robert G.: *See*—
Galbraith, Sidney W., Perkins, and Westfall. 3,017,935.

Peters, Emil H., to Westinghouse Electric Corp. Field winding continuity check circuits. 3,018,428, 1-23-62, Cl. 318—176.

Peters, John. Foot and leg apparel article. 3,017,705, 1-23-62, Cl. 36—7.3.

Peterson, Gudmundur P., to Canadian Pratt & Whitney Aircraft Co. Ltd. Fuel supply system with pressure balanced accumulator to control fuel surges. 3,017,922, 1-23-62, Cl. 158—36.3.

Peterson, Harold R. : *See*—
Welsh, Jay Y., Milberg, and Peterson. 3,018,233.
Peterson, Henry : *See*—
Manne, Moe, and Peterson. 3,017,754.
Petit, Omer, to CRIBLA Societe Anonyme. Heavy medium separation apparatus. 3,017,994, 1–23–62, Cl. 209—172.
Petrick, William R., and L. R. Travis, to Westinghouse Electric Corp. Television receiver tuning apparatus. 3,018,326, 1–23–62, Cl. 178—5.8.
Petrolite Corp. : *See*—
Hughes, William B., and Stromberg. 3,018,246.
Pfizer, Chas., & Co., Inc. : *See*—
Berg, Rudolph G., Figdor, and Laubach. 3,018,295.
Philco Corp. : *See*—
Haverstock, Julius J., and Goodman. 3,017,758.
Phillips, Benjamin : *See*—
Frostick, Frederick C., Jr., and Phillips. 3,018,259.
Phillips, Benjamin, and P. S. Starcher, to Union Carbide Corp. Epoxy acetals. 3,018,294, 1–23–62, Cl. 260—348
Phillips Petroleum Co. : *See*—
Adelman, Barnet R. 3,017,743.
Banks, Robert L. 3,018,255.
Rice, Charles C. 5,018,204.
Bobo, Roy A. 3,017,937.
Brown, Winston E., and Mabry. 3,018,202.
Burnside, Charles H. 3,017,748.
Findlay, Robert A. 3,017,752.
Guay, Roland H. 3,017,826.
Guth, Eugene D. 3,018,164.
Guth, Eugene D. 3,018,203.
Hawkins, Harold M. 3,017,751.
Kiphart, Otta W. 3,017,746.
Krejcl, Joseph C. 3,018,309.
Marsh, Donald A. 3,017,662.
Morgan, Lyman W. 3,018,229.
Morgan, Lyman W., and Freeman. 3,018,230.
Pollock, Lyle W., and Wood. 3,018,171.
Van Pool, Joe. 3,018,310.
Wheelock, Charles E. 3,018,277.
Witt, Donald R. 3,018,279.
Phoenix Products Co., Inc. : *See*—
O'Keefe, Eugene M. 3,018,366.
Wenman, William A. 3,018,364.
Wenman, William A., and Morton. 3,018,365.
Pianka, Max, to The Murphy Chemical Co. Ltd. Thiophosphoric acid ester compounds. 3,018,215, 1–23–62, Cl. 167—22.
Picker X-Ray Corp., Waite Mfg. Div., Inc. : *See*—
Graves, Edward B., and Bastin. 3,018,375.
Pietsch, Leonard C., to Union Tank Car Co. Mill hotbed. 3,017,983, 1–23–62, Cl. 198—21.
Pike, Ronald M., to Union Carbide Corp. Aryl borate addition compounds of amino hydrocarbon silicon compounds. 3,018,299, 1–23–62, Cl. 260—448.2.
Pike, Roscoe A., to Union Carbide Corp. Process of making cyanoalkylsilanes. 3,018,300, 1–23–62, Cl. 260—448.2.
Piloty, Robert, to Stifterverband fur Die Deutsche Wissenschaft. Electronic program-controlled data-processing installation. 3,018,472, 1–23–62, Cl. 340—172.5.
Pines Engineering Co., Inc. : *See*—
Streit, Clarence T. 3,017,917.
Pinton, Pierre C., to Compagnie des Machines Bull (Societe Anonyme). Electro magnetic actuating means. 3,018,035, 1–23–62, Cl. 234—108.
Pittman, Edgar H., to Deering Milliken Research Corp. Textile materials and method of making the same. 3,017,684, 1–23–62, Cl. 28—72.
Plagge, Vernon L. : *See*—
Boyce, Walter A., and Plagge. 3,018,187.
Planert, Wolfgang : *See*—
Bonisch, Josef, Gopfert, and Planert. 3,017,804.
Pleterski, Friedrich. Code lock. 3,017,761, 1–23–62, Cl. 70—133.
Poeschl, Rudolf. Fibre web dividing tape. 3,017,671, 1–23–62, Cl. 19—151.
Polm, George H., to Lorain Products Corp. Alarm system. 3,018,379, 1–23–62, Cl. 307—46.
Poittevin, André : *See*—
Muller, Georges, and Poittevin. 3,018,283.
Poland, William L., to Schlumberger Well Surveying Corp. Signal translating systems. 3,018,045, 1–23–62, Cl. 235—154.
Polich, Anthony, Jr. Method and apparatus for weighing. 3,017,938, 1–23–62, Cl. 177—141.
Pollard, Charles E., Jr., to Bell Telephone Laboratories, Inc. Means for preventing contact sticking in mercury contact switches. 3,018,354, 1–23–62, Cl. 200—166.
Pollock, Lyle W., and J. Q. Wood, to Phillips Petroleum Co. Wet pelleting process and apparatus. 3,018,171, 1–23–62, Cl. 23—314.
Polomski, John B., to Borg-Warner Corp. Braking system. 3,017,788, 1–23–62, Cl. 74—732.
Polytechnic Institute of Brooklyn : *See*—
Higgins, Thomas W., Capsuto, and Bruins. 3,018,316.
Porsche, Dr.-Ing. h.c.F., K.G. : *See*—
Forstner, Egon, and Binder. 3,017,943.
Portapavilion Structures, Ltd. : *See*—
Greenble, Barrie B. 3,017,893.
Porter, H. K., Co. : *See*—
Jones, William B. 3,017,760.
Portman, Donald G. : *See*—
Mrenna, Stephen A., and Portman. 3,018,464.
Portner, Harry. Flood control system. 3,017,895, 1–23–62, Cl. 137—115.
Portz, William E., and G. W. Yearley, to True Temper Corp. Adhesive connection for tool handle. 3,018,140, 1–23–62, Cl. 306—22.
Potlatch Forests Inc. : *See*—
Bowling, Robert T., Edward, Keller, and Scheelke. 3,017,909.
Pouget, Edmond. Apparatus for setting sleeper screws or track bolts to a predetermined degree of tightness. 3,017,794, 1–23–62, Cl. 81—54.
Powell, Kenneth S., to Bristol Siddeley Engines Ltd. Liquid distribution system. 3,018,093, 1–23–62, Cl. 261—41.
Powell, William Ward, Jr. Method for the regeneration of waste solutions of sulfuric acid. 3,018,166, 1–23–62, Cl. 23—126.
Power Brake Equipment Co. : *See*—
Williams, Norman C. 3,018,136.
Powers, Bertha B. : *See*—
Cardwell, Mintaetta W., and Powers. 3,017,640.
Powley, Maillinson, and B. Sykes, to Ferranti, Ltd. Apparatus for displaying to a gunner or pilot in an aircraft an artificial image at infinity of a graticule. 3,018,476, 1–23–62, Cl. 343—7.
Preway, Inc. : *See*—
Jenson, Kenneth S. 3,017,924.
Jenson, Kenneth S., and Suhr. 3,017,923.
Pritchett, Ray A., to F. V. Richardson. Methods of and means for assaying material having a fissionable component. 3,018,374, 1–23–62, Cl. 250—71.5.
Probasco, Harold T., to Oak Mfg. Co., Inc. Dispenser. 3,018,148, 1–23–62, Cl. 312—35.
Profos, Paul, to Sulzer Freres, S.A. Control system. 3,017,869, 1–23–62, Cl. 122—479.
Profos, Paul, to Sulzer Freres, S.A. Steam or vapor generator having at least two firing systems. 3,017,870, 1–23–62, Cl. 122—479.
Przybylski, Daniel F., to The Warner & Swasey Co. Hydraulic system for digging machines. 3,018,010, 1–23–62, Cl. 214—138.
Psik, Robert T., to General Motors Corp. Door hinge assembly. 3,017,659, 1–23–62, Cl. 16—146.
Purex Corp., Ltd. : *See*—
Duke, Edward M., Jr. 3,018,211.
Quail, Bernard W., and C. B. Morgan, to Specialties Development Corp. Inflation equipment. 3,017,907, 1–23–62, Cl. 141—197.
Quayle, Jackson C. Compression dead end splice. 3,018,319, 1–23–62, Cl. 174—79.
Quilter, John R. C., to G.Q. Parachute Co. Ltd. Parachute pack. 3,018,974, 1–23–62, Cl. 244—147.
R T & E Corp. : *See*—
Link, Edwin A. 3,018,349.
Link, Edwin A. 3,018,415.
Rabinow Engineering Co., Inc. : *See*—
Brown, Robert G. 3,017,829.
Racicot, Albert R., to National Brush Co. Multi-part collapsible snow and ice removing device. 3,017,649, 1–23–62, Cl. 15—105.
Radio Corp. of America : *See*—
Bloom, Stanley, and Chang. 3,018,443.
Haba, Vincent. 3,017,693.
Herscher, Marvin B. 3,018,389.
Holmes, David D. 3,018,369.
Leyton, Eric M., and Olive. 3,018,324.
Lindsay, James E., and Martin. 3,018,391.
Nettleton, David L. 3,018,042.
Ruppel, Wolfgang. 3,018,426.
Vance, Arthur W. 3,018,046.
Rahaim, Edward J. : *See*—
Baker, Kenneth R., and Rahaim. 3,018,132.
Rahiser, Robert H. : *See*—
Brandon, James C., Jr., Frank, and Rahiser. 3,018,455.
Raidel, John E. Semiautomatic safety hitch. 3,018,118, 1–23–62, Cl. 280—506.
Ramsden, Philip : *See*—
Shirley, Walter, Ramsden, and Nixon. 3,017,745.
Ranco Inc. : *See*—
Caldwell, Roland B. 3,018,084.
Eggert, Lewis J., and Tufts. 3,018,340.
Raney Products Inc. : *See*—
Raney, William E. 3,018,086.
Raney, William E., to Raney Products Inc. Tractor device for conduits and the like. 3,018,086, 1–23–62, C. 254—134.5.
Ranker, William T., to American Pipe and Construction Co. Apparatus for applying a coating to joints in pipelines. 3,017,855, 1–23–62, Cl. 118—306.
Ratner, Lee : *See*—
Bruce, Willis N. 3,018,217.
Ravensberg G.m.b.H., Chemische Fabrik : *See*—
Siemer, Harm, and Hengen. 3,018,222.
Rayonier Inc. : *See*—
Mitchell, Reid L., Berry, and Wadman. 3,018,158.
Raytheon Co. : *See*—
Dudley, Kenneth W., and Apelbaum. 3,018,404.
Gronemeier, Howard J. 3,018,323.
Rea Magnet Wire Co., Inc. : *See*—
Heckel, Hermann C. N., and Jefferson. 3,018,321.
Rebuffoni, Martin, to Westinghouse Electric Corp. Welding apparatus and method of welding. 3,018,361, 1–23–62, Cl. 219—131.
Redlinger, Jacob F., to FMC Corp. Method of hydraulic fracturing in underground formations. 3,018,095, 1–23–62, Cl. 262—3.
Reed Roller Bit Co. : *See*—
Gardner, Jack R. 3,017,708.
Sigler, Richard J. 3,017,709.
Sigler, Richard J., and Schnellbacher. 3,017,707.
Sigler, Richard J., and Schnellbacher. 3,017,719.
Reeves, Willard D., ⅛ to C. S. Thomas and ⅛ to S. E. Cross. Poultry head remover. 3,017,660, 1–23–62, Cl. 17—12.

Rehberg, Henrietta M. : *See*—
Williams, William J., and Rehberg. 3,018,007.
Rehberg, Richard A. : *See*—
Williams, William J., and Rehberg. 3,018,007.
Reib, John C. Material transfer method and apparatus. 3,018,135, 1–23–62, Cl. 302—58.
Reich, Ernst : *See*—
Gaertner, Hans, and Reich. 3,018,155.
Reilly, Thomas A. Run or the like treating apparatus. 3,017,844, 1–23–62, Cl. 107—1.
Reinhardt, Joseph A., to United States of America, Atomic Energy Commission. Escapement for a time rate mechanism. 3,017,742, 1–23–62, Cl. 58—116.
Reliance Gauge Column Co. : *See*—
Goellner, Allan R. 3,018,322.
Remington Arms Co., Inc. : *See*—
Hunt, Robert J. 3,017,853.
Remington, William R. : *See*—
Griffing, John M., and Remington. 3,018,272.
Renshaw, Robin, to Modern Hydraulics, Inc. Mobile crane. 3,018,005, 1–23–62, Cl. 212—8.
Research Products Corp. : *See*—
Hambrecht, Albert H., Bartels, Isenring, and Rowe. 3,017,698.
Resistance Products Co. : *See*—
Olson, Earl R., and Chapman. 3,018,198.
Reusche, Frank L. : *See*—
Caban, Louis, and Reusche. 3,018,191.
Reusche, L., & Co. : *See*—
Caban, Louis, and Reusche. 3,018,191.
Reynolds Metals Co. : *See*—
Cheeley, William E. 3,017,729.
Rhoad, Guy C. : *See*—
Gibson, Richard R., and Rhoad. 3,018,363.
Rheinstahl Hamburg Stahlbau Eggers & Friedrich Kehrhahn G.m.b.H. : *See*—
Landschulze, Ernst A. 3,017,963.
Rheinstahl Siegener Eisenbahnbedarf A.G. : *See*—
Brill, Friedrich E. 3,017,674.
Rhodes, Aaron D., and H. Stratton, to Shell Oil Co., Continental Oil Co., The Superior Oil Co., and Union Oil Co. of California. Casing support. 3,017,934, 1–23–62, Cl. 175—7.
Rhodes, Allen F. : *See*—
Jackson, John G., Jr., and Rhodes. 3,017,931.
Rice, Roger P., Jr., to Time, Inc. Winding machine. 3,018,062, 1–23–62, Cl. 242—50.
Richards, Thomas H. Egg poacher. 3,017,820, 1–23–62, Cl. 99—436.
Richardson, Floyd V. : *See*—
Pritchett, Ray A. 3,018,374.
Richardson, William G. : *See*—
McAjulay, Robert, and Richardson. 3,018,346.
Richter, Walter E., to Manning, Maxwell & Moore, Inc. Track clamp for hoists. 3,017,958, 1–23–62, Cl. 188—43.
Riegel Paper Corp. : *See*—
Vann, Clifton B. 3,018,120.
Riley, Clay W., to Industrial Filter & Pump Mfg. Co. Filtration apparatus. 3,017,996, 1–23–62, Cl. 210—346.
Ringold, Howard J., and G. Rosenkranz, to Syntex S.A. 20-ethylene dioxy-pregnane-3-one derivatives. 3,018,285, 1–23–62, Cl. 260—239.55.
Rivers, Richard D., to American Air Filter Co., Inc. Electrostatic precipitators. 3,017,953, 1–23–62, Cl. 183—7.
Robbins, Jack W. Clarinets. 3,017,798, 1–23–62, Cl. 84—382.
Robicsek, Francis. Blood flow meter. 3,017,885, 1–23–62, Cl. 128—214.
Robinson, John C. : *See*—
Valdettaro, Alarico A., Lewis, and Robinson. 3,018,372.
Roboski, Walter S., to General Motors Corp. Electrode mounting assembly. 3,018,359, 1–23–62, Cl. 219—89.
Roby, Albert, Sr., to L. Roby. Automatic releasing device for triggering mechanisms. 3,017,776, 1–23–62, Cl. 74—2.
Roby, Leslie : *See*—
Roby, Albert, Sr. 3,017,776.
Rodgers, George H., to Marco Industries. Low-voltage transistorized electric light flasher circuit for barricade lights, etc. 3,018,473, 1–23–62, Cl. 340—331.
Rodish, John, to Diamond National Corp. Carton compressing and packaging machine. 3,017,730, 1–23–62, Cl. 53—124.
Röhm & Haas G.m.b.H. : *See*—
Tessmar, Klaus. 3,018,265.
Zima, Herbert. 3,018,176.
Roos, Wallace A. : *See*—
Davis, James E., and Roos. 3,017,946.
Rosenberg, David, and L. Mirando, to The Holiday Line, Inc. Self-inflating cushion. 3,017,642, 1–23–62, Cl. 5—349.
Rosenkranz, George : *See*—
Ringold, Howard J., and Rosenkranz. 3,018,285.
Rosenkranz, George, and C. Djerassi, to Syntex S.A. 16,17-oxido-allopregnane-3,20-dione-derivatives. 3,018,284, 1–23–62, Cl. 260—239.55.
Ross, Eugene P. : *See*—
Willard, Frank G., and Ross. 3,017,984.
Rotol Ltd. : *See*—
Chilman, John A. 3,017,932.
Rowe, Carl B. : *See*—
Hambrecht, Albert H., Bartels, Insenring, and Rowe. 3,017,698.
Rowe, Raymond N., to General Electric Co. Electricity distributing conduit apparatus. 3,018,320, 1–23–62, Cl. 174—99.
Rowe, William D., to Westinghouse Electric Corp. Binary counter with isolation means between flip-flop stages. 3,018,388, 1–23–62, Cl. 307—88.5.
Royal McBee Corp. : *See*—
D'Onofrio, Anthony. 3,017,980.
Hoffman, Ernest G. 3,017,979.
Schulz, Herman R. 3,017,978.
Ruppel, Wolfgang, to Radio Corp. of America. Electric contacts. 3,018,426, 1–23–62, Cl. 317—237.
Rydinger, Mats, to Allmanna Svenska Elektriska Aktiebolaget. Device for the exhaustion of flue-gases from arc furnaces. 3,018,096, 1–23–62, Cl. 263—10.
Saflanoff, Albert, to The Gillette Co. Pilfer-proof container and cap therefor. 3,018,012, 1–23–62, Cl. 215—7.
St. John, Robert M. : *See*—
Bronco, Charles J., and St. John. 3,018,397.
Sakaki, Yoshinobu. Miniature motion picture camera. 3,017,803, 1–23–62, Cl. 88—16.
Salis, Theodore. Protective device. 3,018,317, 1–23–62, Cl. 136—181.
Salzberg, Harold K., to The Borden Co. Planographic printing plate. 3,017,826, 1–23–62, Cl. 101—149.2.
Salzberg, Harold K., and M. R. Simonds, to The Borden Co. Seedmeal protein composition. 3,018,280, 1–23–62, Cl. 260—119.
Sampson, Arnold. Surgical suturing instrument. 3,017,637, 1–23–62, Cl. 1—50.
Sampson, Herbert F. Stabilizing device for underwater camera. 3,017,817, 1–23–62, Cl. 95—86.
Sandin, Jerome : *See*—
Karlicek, Robert F., and Sandin. 3,018,416.
Sandoz Trust : *See*—
Fleck, Fritz. 3,018,287.
Sandvik Steel, Inc. : *See*—
Johansson, Oscar E. 3,018,097.
Saplit, Donald T., and F. J. Ewers, Jr., to Weston Laboratories, Inc. Fertility tester. 3,017,879, 1–23–62, Cl. 128—2.
Sarkes Tarzian, Inc. : *See*—
Valdettaro, Alarico A., Lewis, and Robinson. 3,018,372.
Satchell, Fred E., and L. J. Trier, to Brunswick Corp. Bowling pin. 3,018,106, 1–23–62, Cl. 273—82.
Sauers, Carol K., and R. J. Cotter, to Union Carbide Corp. Preparation of maleimides. 3,018,290, 1–23–62, Cl. 260—326.3.
Sauers, Carol K., and R. J. Cotter, to Union Carbide Corp. Preparation of maleimides. 3,018,292, 1–23–62, Cl. 260—326.5.
Sawada, Fred H. : *See*—
Busch, Floyd H., and Sawada. 3,018,356.
Saxe, Van Rensselaer P. Connection units. 3,017,972, 1–23–62, Cl. 189—36.
Scarlett, John A. : *See*—
Marcellus, Manley C., and Scarlett. 3,018,168.
Schaaf, Bernard W., Jr., to Westinghouse Electric Corp. Method of and apparatus for welding. 3,018,358, 1–23–62, Cl. 219—72.
Schaal, Earl V., to Trico Products Corp. Windshield cleaning system. 3,017,650, 1–23–62, Cl. 15—250.02.
Schleelke, Gerald F. : *See*—
Bowling, Robert T., Edward, Keller, and Scheelke. 3,017,909.
Schirp, Wilhelm, and M. Alex, to Alaska-Werk. Water cooler. 3,017,753, 1–23–62, Cl. 62—395.
Schlumberger Well Surveying Corp. : *See*—
Poland, William L. 3,018,045.
Schnee, Milton C. Containers. 3,018,030, 1–23–62, Cl. 229—39.
Schneider, Abraham, to Sun Oil Co. Process for the manufacture of low brittle point polypropylene compositions. 3,018,263, 1–23–62, Cl. 260—45.5.
Schnellbacher, John J. : *See*—
Sigler, Richard J., and Schnellbacher. 3,017,707.
Sigler, Richard J., and Schnellbacher. 3,017,719.
Scholtes, Albert J. Picking spindle for cotton picker. 3,017,734, 1–23–62, Cl. 56—50.
Schrader, Gerhard, to Farbenfabriken Bayer Aktiengesellschaft. Dithiophosphonic acid amides and process for their production. 3,018,301, 1–23–62, Cl. 260—461.
Schroeder, Carl W., to Shell Oil Co. Curing polyepoxides with certain metal salts of inorganic acids. 3,018,262, 1–23–62, Cl. 260—29.2.
Schroeder, Harry E., to Mondie Forge Co. Method of making bolting collars. 3,017,699, 1–23–62, Cl. 29—556.
Schultz, William H. : *See*—
Link, Harold S., and Schultz. 3,017,689.
Schulz, Herman R., to Royal McBee Corp. Fault sensing apparatus. 3,017,978, 1–23–62, Cl. 197—17.
Schulz, Richard, to Allmänna Svenska Elektriska Aktiebolaget. High tension air blast circuit breakers with a plurality of series connected breaking gaps per pole. 3,018,352, 1–23–62, Cl. 200—148.
Schulz, Robert E. : *See*—
Loewe, Siegmund, and Schulz. 3,018,063.
Schwartz, Robert A. D. Louvre and hanger therefor. 3,017,973, 1–23–62, Cl. 189—88.
Scott Paper Co. : *See*—
Pedrick, John L. 3,017,928.
Scriba, Gottfried : *See*—
Von Friedrich, Adolf, and Scriba. 3,018,261.
Scully-Jones and Co. : *See*—
Lehde, John W., Jr. 3,017,643.
Searle, G. D., & Co. : *See*—
Jiu, James. 3,018,297.
Kilmstra, Paul D. 3,018,296.
Kilmstra, Paul D., and Counsell. 3,018,298.
Seaton, Norman T. Variable-field permanent magnet. 3,018,422, 1–23–62, Cl. 317—201.
Seel, Howard J., to Harris-Intertype Corp. Sheet feeding and registering mechanism. 3,018,099, 1–23–62, Cl. 271—46.

Seguenot, Gabriel J., to Sertec Societe d'Etudes et de Recherches Techniques. Valve means for controlling the pressure of a fluid system. 3,017,897, 1-23-62, Cl. 137—529.

Seifert, Gerhard: *See*—
Kodalle, Horst, and Seifert. 3,017,812.

Selzle, Charles A., Sr. Golf game device. 3,018,108, 1-23-62, Cl. 273—180.

Sertec Societe d'Etudes et de Recherches Techniques: *See*—
Seguenot, Gabriel J. 3,017,897.

Sessions, William C.: *See*—
Kaase, Robert W., and Sessions. 3,018,090.

Settimi, Raymond J.: *See*—
Becker, Sylvan J., and Settimi. 3,017,977.

Sferrazza, Peter J., to Sperry Rand Corp. Microwave attenuator switch. 3,018,454, 1-23-62, Cl. 333—98.

Sharp, Everett H., to Dana Corp. Universal joint. 3,017,756, 1-23-62, Cl. 64—21.

Shattock, Charles F. B., and C. J. Stone, to Westinghouse Brake & Signal Co., Ltd. Dual station brake control system. 3,018,137, 1-23-62, Cl. 303—14.

Shaw, Harry. Relating to apparatus for transporting elongate objects. 3,018,028, 1-23-62, Cl. 226—172.

Shearer, Newton H., Jr., and H. W. Coover, Jr., to Eastman Kodak Co. Three-component catalyst containing polymeric methyl halide-metal reaction product and titanium compound for olefin polymerization, 3,018,278, 1-23-62, Cl. 260—93.7.

Shell Oil Co.: *See*—
Meier, Dale J., and Kahn. 3,018,258.
Rhodes, Aaron D., and Stratton. 3,017,934.
Schroeder, Carl W. 3,018,262.

Shelton, Haywood, to Thompson Ramo Wooldridge Inc. Charged particle ejection means. 3,018,399, 1-23-62, Cl. 313—63.

Shepherd, Ben L. and B. G. Muffler. 3,017,948, 1-23-62, Cl. 181—64.

Shepherd, Bob G.: *See*—
Shepherd, Ben L. and B. G. 3,017,948.

Sherron, Percival H. Illuminated telephone booth. 3,017,712, 1-23-62, Cl. 40—130.

Shewmaker, James E., and J. F. Nelson, to Esso Research and Engineering Co. Radiation induced ethylene polymerization. 3,018,236, 1-23-62, Cl. 204—154.

Shiplett, Lester D., and B. H. Ochterbeck. Knee rest for automobiles. 3,018,134, 1-23-62, Cl. 297—427.

Shirley, Walter, P. Ramsden, and G. H. Nixon, to D. Napier & Son Ltd. Fuel supply systems for rocket engines. 3,017,745, 1-23-62, Cl. 60—35.6.

Shurhit Products, Inc.: *See*—
Neapolitakis, Nicholas T. 3,018,413.

Siegal, Bernard, to Bristol-Myers Co. Aluminum dihydroxytitanium dilactate antiperspirant. 3,018,223, 1-23-62, Cl. 167—90.

Siemer, Harm, and O. Hengen, to Ravensberg G.m.b.H., Chemische Fabrik. Central stimulant and appetite depressant composition. 3,018,222, 1-23-62, Cl. 167—67.

Sienkiewicz, Leon J.: *See*—
Skinner, Kenneth R., and Sienkiewicz. 3,018,329.

Sieswerda, Bauke S.: *See*—
Fonteln, Freerk J., and Sieswerda. 3,017,666.

Sigler, Richard J., to Reed Roller Bit Co. Tree or shrub remover. 3,017,709, 1-23-62, Cl. 37—2.

Sigler, Richard J., and J. J. Schnellbacher, to Reed Roller Bit Co. Excavation machine. 3,017,707, 1-23-62, Cl. 37—2.

Sigler, Richard J., and J. J. Schnellbacher, to Reed Roller Bit Co. Method of transplanting trees. 3,017,719, 1-23-62, Cl. 47—58.

Sihn, Wilhelm, Jr., K.G.: *See*—
Kienhofer, Klaus. 3,017,780.

Silverman, Leslie, to United States of America, Atomic Energy Commission. Method of removing radioactive iodine from gases. 3,018,159, 1-23-62, Cl. 23—2.

Simonds, Milton R.: *See*—
Salzberg, Harold K., and Simonds. 3,018,280.

Simpson, Frederick A. Thermally sensitive valves. 3,018,054, 1-23-62, Cl. 236—34.5.

Simpson, Warren O.: *See*—
Eger, Edward F. and Simpson. 3,018,008.

Singerman, Sol, to American Cyanamid Co. Sterile package for surgical fabric. 3,017,990, 1-23-62, Cl. 206—63.2.

Sintetos, Nicholas D.; ½ to G. I. Magnuson, and ¼ to G. I. and R. Magnuson and L. J. Fox, trustees. Vegetable trimming apparatus. 3,017,913, 1-23-62, Cl. 146—81.

Sirles, Aden R.: *See*—
Hawkes, Ralph O. and H. G., Morrison, and Sirles. 3,017,997.

Sittel, Karl, to Walsco Co. Method and apparatus for handling charged particles. 3,017,982, 1-23-62, Cl. 198—1.

Skillman, William A., W. Evanus, and D. H. Mooney, Jr., to Westinghouse Electric Corp. Pulse doppler moving target simulator. 3,018,478, 1-23-62, Cl. 343—17.7.

Skinner, Kenneth R., and L. J. Sienkiewicz, to Westinghouse Electric Corp. Television tuning apparatus. 3,018,329, 1-23-62, Cl. 178—5.8.

Slenker, Stephen A. Electrical potentiometer. 3,018,458, 1-23-62, Cl. 338—143.

Slosberg, David K., and E. Nakonieczny, to Bonafide Mills, Inc. Method of making plastic terrazzo and resultant product. 3,017,714, 1-23-62, Cl. 41—17.

Smith, Clarence M., to The Bryant Electric Co. Wiring device. 3,018,461, 1-23-62, Cl. 339—95.

Smith, Frederick A. Combination hollow footing stringer and foundation drain duct. 3,017,722, 1-23-62, Cl. 50—100.

Smith, George E.: *See*—
Navatta, Cono S., Smith, and Etlinger. 3,018,400.

Smith, Raymond D. Conductive system for time switches with wiping contacts. 3,018,339, 1-23-62, Cl. 200—37.

Smith, Robert H. Anesthesia machines. 3,017,881, 1-23-62, Cl. 128—188.

Snowdon, Donald R., and G. R. Andersen, to Cummins-Chicago Corp. Perforating apparatus. 3,018,036, 1-23-62, Cl. 234—111.

Societa per Azioni Bassani: *See*—
Bassani, Ermanno. 3,018,341.

Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey: *See*—
Levecque, Marcel; and Charpentier. 3,017,663.

Societe Anonyme dite, La Manufacture de Feutres de Mouzon (Anciens Etablissements Roger Sommer & Ses Fils): *See*—
Maillard, Frederic G. 3,017,918.

Societe des Accumulateurs Fixes et de Traction (Societe Anonyme): *See*—
Hebben, Philippe B. J. 3,018,315.

Soja, Matthew, to Westinghouse Electric Corp. Combination television receiver and audio system. 3,018,330, 1-23-62, Cl. 178—5.8.

Soloducha, Nicolas. Pressure leaching apparatus. 3,018,170, 1-23-62, Cl. 23—260.

Sommer, Richard: *See*—
Greger, Paul, Kinder, and Sommer. 3,017,813.

Sorkin, Morris: *See*—
Auer, Frederick G., and Sorkin. 3,017,796.

Soundscriber Corp., The: *See*—
Balmer, Donald F., and Lyon. 3,018,111.

Specialties Development Corp.: *See*—
Quail, Bernard W., and Morgan. 3,017,907.

Spencer, Frank R., to American Cyanamid Co. Method of preparing expandable resin comprising dissolving said resin in a miscible blend of organic liquids. 3,018,257, 1-23-62, Cl. 260—2.5.

Sperry Rand Corp.: *See*—
Bonn, Theodore H. 3,018,419.
Sferrazza, Peter J. 3,018,454.

Spo, Inc.: *See*—
Young, Lester C. 3,017,675.

Sprando, Anthony E.: *See*—
Deer, James W., and Sprando. 3,018,347.

Spray, Robert P.: *See*—
Morway, Arnold J., Daniels, and Spray. 3,018,249.

Stamicarbon N.V.: *See*—
Fonteln, Freerk J., and Sieswerda. 3,017,666.

Stancher, Joseph E., to Essaness Theater Corp. Admission control system. 3,018,470, 1-23-62, Cl. 340—51.

Standard Tool and Mfg. Co.: *See*—
Zllaby, Edward Z. 3,018,006.

Stanford, George W., and W. R. Partridge, to The M. W. Kellogg Co. Combined isomerization and reforming process. 3,018,244, 1-23-62, Cl. 208—79.

Stanley, Harry T., to Westinghouse Electric Corp. Color television apparatus. 3,018,401, 1-23-62, Cl. 313—85.

Stanley Works, The: *See*—
Higbee, Earl V. 3,017,908.

Starcher, Paul S.: *See*—
Phillips, Benjamin, and Starcher. 3,018,294.

Starck, Arthur M. Sport practice device. 3,018,109, 1-23-62, Cl. 273—186.

Stauffer Chemical Co.: *See*—
Maxwell, Richard C., and Stoffey. 3,018,216.

Steckler, Robert, and J. Werner, to General Aniline & Film Corp. Composition and process for binding glass fibers with an unsaturated polyester, poly-N-vinyl imidazole and a vinyl monomer. 3,018,267, 1-23-62, Cl. 260—45.4.

Steele, Alan E., to United States of America, Air Force. Jet engine thrust augmentation system. 3,017,747, 1-23-62, Cl. 60—35.6.

Steele, Roger C., to Hexcel Products Inc. Heat transfer panel. 3,018,087, 1-23-62, Cl. 257—1.

Steen, Hans F., to Litton Systems, Inc. Stylus and support for electric recorders. 3,018,153, 1-23-62, Cl. 346—139.

Steever, Andrew B., to The Babcock & Wilcox Co. High pressure puverized coal gasifier. 3,018,174, 1-23-62, Cl. 48—63.

Steffens, Eugene W. Flow control valve. 3,017,903, 1-23-62, Cl. 138—45.

Stein, Robert R.: *See*—
Goldsmith, Morris, and Stein. 3,017,899.

Stelzer, William, to Kelsey-Hayes Co. Fluid pressure operated motor. 3,017,866, 1-23-62, Cl. 121—41.

Stelzer, William, to Kelsey-Hayes Co. Pressure control mechanism for vehicle brakes. 3,018,139, 1-23-62, Cl. 303—60.

Stemme, Nils G. E., to Aktiebolaget Atvidabergs Industrier. Hole punching device. 3,018,037, 1-23-62, Cl. 234—119.

Stepien, George, Jr.: *See*—
Werner, Alfred F., and Stepien. 3,018,208.

Stern, Leonard, to Hartz Mountain Products Corp. Bird feeding devices. 3,017,859, 1-23-62, Cl. 119—51.

Stevens, Don J., to United States of America, Atomic Energy Commission. Connector. 3,018,460, 1-23-62, Cl. 339—92.

Stewart-Warner Corp.: *See*—
Cornelius, Richard T. 3,018,145.

Stierlin, Hans. Pot type oil burner. 3,017,921, 1-23-62, Cl. 158—28.

Stifterverband fur Die Deutsche Wissenschaft: *See*—
Pilofy, Robert. 3,018,472.

Stiglic, Paul M.: *See*—
Heppler, Herbert, and Stiglic. 3,017,749.

Stoffey, Donald G.: *See*—
Maxwell, Richard C., and Stoffey. 3,018,216.

Stollman, Harry E., to Better Belts, Inc. Interchangeable and size adjustable belt construction. 3,017,641, 1-23-62, Cl. 2—322.

Stolper, Harry, to Stolper & Voice Optical Co., Inc. Eyeglass frames of the semi-rimless type. 3,017,806., 1-23-62, Cl. 88—41.

Stolper & Voice Optical Co., Inc.: *See*—
Stolper, Harry. 3,017,806.

Stone, Cyril J.: *See*—
Shattock, Charles F. B., and Stone. 3,018,137.

Stone, John, IV, to The Franklin Institute of the State of Pennsylvania. Series transistor circuit. 3,018,433, 1-23-62, Cl. 323—79.

Stone, John, IV, to The Franklin Institute of the State of Pennsylvania. Transformless transistorized power amplifier. 3,018,445, 1-23-62, Cl. 330—13.

Stone, Wilbur E.: *See*—
Blockley, Eugene T., and Stone. 3,017,920.

Stough, Gerald D., and H. V. Collins, to Whitehead & Kales Co. Tie down device. 3,018,079, 1-23-62, Cl. 248—119.

Stratton, Hal: *See*—
Rhodes, Aaron D., and Stratton. 3,017,934.

Streit, Clarence T., to Pines Engineering Co., Inc. Tube bending machine. 3,017,917, 1-23-62, Cl. 153—45.

Strohm, William G.: *See*—
Yourke, Hannon S., and Strohm. 3,018,399.

Stromberg, Verner L.: *See*—
Hughes, William B., and Stromberg. 3,018,246.

Stuart, Frank A.: *See*—
Anderson, Robert G., Stuart, and Drummond. 3,018,247.
Anderson, Robert G., Stuart, and Drummond. 3,018,250.
Anderson, Robert G., Stuart, and Drummond. 3,018,291.

Stucka, George R.: *See*—
McMeen, Forrest H., Aston, and Stucka. 3,017,658.

Stuckens, Leo J., to American Photocopy Equipment Co. Photocopy apparatus. 3,017,816, 1-23-62, Cl. 95—73.

Suhr, Frederick W.: *See*—
Jenson, Kenneth S., and Suhr. 3,017,923.

Sulphite Products Corp.: *See*—
Wiley, Averill J. 3,017,951.

Sulzer Freres, S.A.: *See*—
Profos, Paul. 3,017,869.
Profos, Paul. 3,017,870.

Summers, Virgil H., R. C. McClure, and G. H. Kuntze, to Universal Pictures Co., Inc. Steering mechanism for a camera dolly. 3,018,116, 1-23-62, Cl. 280—91.

Sun Oil Co.: *See*—
Gorand, Alfred J., and Brooks. 3,018,021.
Schneider, Abraham. 3,018,263.
Wright, J Rondie. 3,017,772.

Sunbeam Lighting Co.: *See*—
Bobrick, Mitchell. 3,018,083.

Sundman, Knut J., to Oy Medica AB. Method of preparing pearls. 3,017,668, 1-23-62, Cl. 18—47.2.

Superior Oil Co., The: *See*—
Rhodes, Aaron D., and Stratton. 3,017,934.

Sweeney, Richard F., and C. Woolf, to Allied Chemical Corp. Production of butyryl halides. 3,018,306, 1-23-62, Cl. 260—544.

Swenson, Jack S., to Minnesota Mining and Mfg. Co. Pressure sensitive adhesive tape. 3,017,989, 1-23-62, Cl. 206—59.

Sybertz, Gustav J. and J. F., and P. R. H. Voelskow, to Hombak Maschinenfabrik K.G. Blade structure and mounting means for a cylinder type cutter. 3,017,912, 1-23-62, Cl. 144—230.

Sybertz, Johannes F.: *See*—
Sybertz, Gustav J. and J. F., and Voelskow. 3,017,912.

Sykes, Ben: *See*—
Powley, Mallinson, and Sykes. 3,018,476.

Sylvania Electric Products Inc.: *See*—
Barre, Wade E., Jr., and Morgan. 3,018,462.

Sylvania-Thorn Colour Television Laboratories Ltd.: *See*—
Oxenham, John K. 3,018,405.

Syntex S.A.: *See*—
Ringold, Howard J., and Rosenkranz. 3,018,285.
Rosenkranz, George, and Djerassi. 3,018,284.

Talarico, Rudolph D. Fluid dispensing apparatus. 3,018,023, 1-23-62, Cl. 222—394.

Tarmy, Barry L.: *See*—
Lucchesi, Peter J., and Tarmy. 3,018,237.

Tarmy, Barry L., and R. B. Long, to Esso Research and Engineering Co. Radiochemical hydrocarbon conversion process. 3,018,235, 1-23-62, Cl. 204—154.

Tassile, Celso, deceased (R. Tassile, executrix of said C. Tassile). Lubricating device for overhead conveyors. 3,017,955, 1-23-62, Cl. 184—15.

Tassile, Rose: *See*—
Tassile, Celso. 3,017,955.

Taylor, Donald S., J. G. Bower, and R. E. Bohm, to United States Borax & Chemical Corp. Process for producing purified borazoles. 3,018,307, 1-23-62, Cl. 260—551.

Technicon Instruments Corp.: *See*—
Ferrari, Andrés, Jr. 3,018,224.

Tessmar, Klaus, to Rohm & Haas G.m.b.H. Method of forming a resin from a nitrogen compound, formaldehyde, an alcohol and an unsaturated monocarboxylic acid, and product thereof. 3,018,265, 1-23-62, Cl. 260—45.2.

Texas Instruments Inc.: *See*—
Jones, Hal J., and Bucy. 3,018,408.
Nygaard, James L. 3,018,373.

Textile Machine Works: *See*—
Moyer, James D. 3,017,757.

Thomas, C. S.: *See*—
Reeves, Willard D. 3,017,660.

Thomas Electronics, Inc.: *See*—
Navatta, Cono S., Smith, and Etlinger. 3,018,400.

Thomas, George R.: *See*—
Happell, John J., Thomas, Denise, and Bunts. 3,018,239.

Thompson, Elbert O., to Vacudent Mfg. Co. Evacuative suction apparatus. 3,017,886, 1-23-62, Cl. 128—276.

Thompson, Francis C. L. Weight applicator for use in balancing vehicular tires. 3,017,774, 1-23-62, Cl. 73—487.

Thompson, Francis T.: *See*—
Carroll, James C., and Thompson. 3,018,382.
Carroll, James C., Thompson, and Jones. 3,018,381.

Thompson Ramo Wooldridge Inc.: *See*—
Shelton, Haywood. 3,018,399.

Thorness, Rudolph B.: *See*—
Maas, Raymond W., and Thorness. 3,018,069.

Thourel, Leo, to Compagnie de Generale de Telegraphie Sans Fil. Improvements in aerials of the cosecant-squared type. 3,018,480, 1-23-62, Cl. 343—771.

Thrisseli Engineering Co. Ltd., The: *See*—
Osborn, Howard, and Gould. 3,018,009.

Tillman, Richard M., to Continental Oil Co. Aluminum-containing additive for fuel oil compositions and method of preparing same. 3,018,172, 1-23-62, Cl. 44—51.

Time, Inc.: *See*—
Rice, Roger P., Jr. 3,018,062.

Tinsley, Joseph L.: *See*—
Levy, Harold H., and Tinsley. 3,018,393.

Tirico, Arthur L.: *See*—
Onder, Kerim. 3,018,371.

Tokime, Masakata, and M. Kimura. Process for production of cyanuric chloride. 3,018,288, 1-23-62, Cl. 260—248.

Tomchak, Joseph A. Tire treating apparatus. 3,017,891, 1-23-62 Cl. 134—86.

Tonelli, Michele, to Olivetti, Ing. C. & C., S.p.A. Transistorized telegraph receiving unit.. 3,018,333, 1-23-62, Cl. 178—88.

Toogood, John B., to Union Carbide Corp. Process for producing silicone resins. 3,018,270, 1-23-62, Cl. 260—46.5.

Toomey, John F.: *See*—
Booth, Seth W., Toomey, and Brown. 3,017,833.

Toomey, John F., to United States of America, Army. Geared timing mechanism. 3,017,781, 1-23-62, Cl. 74—125.5.

Travis, Lawrence R.: *See*—
Petrick, William R., and Travis. 3,018,326.

Trico Products Corp.: *See*—
Bitzer, Martin, and D'Alba. 3,017,651.
Schaal, Earl V. 3,017,650.

Trier, Louis J.: *See*—
Satchell, Fred E., and Trier. 3,018,106.

Trimble, Philip K.: *See*—
Lash, Joseph F., and Trimble. 3,017,773.

True Temper Corp.: *See*—
Portz, William E., and Yearley. 3,018,140.

Tufts, William S.: *See*—
Eggert, Lewis J., and Tufts. 3,018,340.

Turner, Robert R.: *See*—
MacPherson, Arthur R., and Turner. 3,017,993.

Uecker, Donald F.: *See*—
Bevilacqua, Frank, Uecker, and Groh. 3,018 240.

Uffman, Leroy E., to Western Electric Co., Inc. Uni-directional clutch. 3,017,976, 1-23-62, Cl. 192—46.

Uhl, Siegfried, to Keller & Knappich G.m.b.H. Longitudinal alignment of cartridges in a cartridge belt before entering the breech of a gun. 3,017,808, 1-23-62, Cl. 89—33.

Ulman, Wayne H., and N. V. Gusching, to The Monarch Machine Tool Co. Electrical control system. 3,017,863, 1-23-62, Cl. 121—41.

Underwood Corp.: *See*—
Anderson, Walter A. 3,018,044.

Unger, Hans-Georg: *See*—
Friis, Harald T., and Unger. 3,018,452.

Union Asbestos & Rubber Co.: *See*—
Loomis, Russell M., Kuellmar, and Lundvall. 3,017,843.

Union Carbide Corp.: *See*—
Chinn, Hyman G. 3,018,212.
Colclough, William G., Jr. 3,018,264.
Frostick, Frederick C., Jr., and Phillips. 3,018,259.
Phillips, Benjamin, and Starcher. 3,018,294.
Pike, Ronald M. 3,018,299.
Pike, Roscoe A. 3,018,300.
Sauers, Carol K., and Cotter. 3,018,290.
Sauers, Carol K., and Cotter. 3,018,292.
Toogood, John B. 3,018,270.

Union Oil Co. of California: *See*—
Rhodes, Aaron D., and Stratton. 3,017,934.

Union Pacific Railroad Co.: *See*—
Miller, Donald E. 3,017,841.

Union Tank Car Co.: *See*—
Kryzer, Benjamin H. 3,017,995.
Pietsch, Leonard C. 3,017,983.

United Aircraft Corp.: *See*—
Carlstein, Joseph. 3,018,395.

United Concrete Pipe Corp.: *See*—
James, Kenneth E. 3,017,695.

United States Borax & Chemical Corp.: *See*—
Taylor, Donald S., Bower, and Bohm. 3,018,307.

United States of America
Agriculture: *See*—
Jacobson, Martin. 3,018,219.
Air Force: *See*—
Bronco, Charles J., and St. John. 3,018,397.
Jett, James A. 3,017,744.
Steele, Alan E. 3,017,747.
Army: *See*—
Carson, James S., Feild, Kegan, Markwood, and Whitney. 3,018,252.
Grover, Donald P. 3,017,807.
Haeussermann, Walter. 3,017,777.
Hollis, John S. 3,018,450.
Mattiat, Oskar. 3,018,451.
Toomey, John F. 3,017,781.
Weiner, Louis I. 3,017,888.
Atomic Energy Commission: *See*—
Bevilacqua, Frank, Uecker, and Groh. 3,018,240.
Chase, Robert I. 3,018,386.
Grinstead, Robert R. 3,018,253.
Happell, John J., Thomas, Denise, and Bunts. 3,018,239.
Layer, Edwin H., Jr. and Peet. 3,018,238.
Reinhardt, Joseph A. 3,017,742.
Silverman, Leslie. 3,018,159.
Stevens, Don J. 3,018,460.
Vetrano, James B. 3,018,169.

United States of America—Continued
Navy: *See*—
Alpers, Frederick C. 3,018,053.
Culver, Eugene S. 3,018,129.
Foote, Vernon S., Jr. 3,017,766.
Holtz, Walter E. 3,017,835.
Maas, Raymond W., and Thorness. 3,018,069.
O'Berry, William A. 3,018,385.
Okress, Ernest C., and Werner. 3,018,453.
Werle, Otto P. 3,017,790.
Zrubek, William E. 3,018,384.
United States Rubber Co.: *See*—
Horr, Mitchell, and MacPhee. 3,018,256.
Daly, Lawrence E. 3,018,268.
Danielson, Arthur C. 3,018,207.
Werner, Alfred F., and Stepien, George, Jr. 3,018,208.
United States Steel Corp.: *See*—
Link, Harold S., and Schultz. 3,017,689.
United Wire Works Ltd., The: *See*—
Ewen, Ian E. 3,017,676.
Universal Controls, Inc.: *See*—
Grant, Gardner L., and Hosken. 3,018,038.
Grant, Gardner L., and Hosken. 3,018,469.
Universal Oil Products Co.: *See*—
Cyba, Henry A. 3,018,173.
Universal Pictures Co., Inc.: *See*—
Summers, Virgil H., McClure, and Kuntze. 3,018,116.
VEB Industriewerke Karl-Marx-Stadt: *See*—
Freist, Manfred. 3,017,862.
VEB Kamera- und Kinowerke Dresden: *See*—
Bonisch, Josef, Gopfert, and Planert. 3,017,804.
Kodalle, Horst, and Seifert. 3,017,812.
Vaaler, Luther E., to The Griscom-Russell Co. Corrosion-resistant surface. 3,017,696, 1–23–62, Cl. 29—527.
Vacudent Mfg. Co.: *See*—
Thompson, Elbert O. 3,017,886.
Valdettaro, Alarico A., C. H. Lewis, Jr., and J. C. Robinson, to Sarkes Tarzian, Inc. High frequency tuner. 3,018,372, 1–23–62, Cl. 250—20.
Valentine, Dale M., and G. A. Kelley, to Midland-Ross Corp. Airconditioning for remote spaces. 3,018,231, 1–23–62, Cl. 202—158.
Vance, Arthur W., to Radio Corp. of America. Computing device. 3,018,046, 1–23–62, Cl. 235—164.
Van der Brugghen, Joan, and W. F. M. Hendriks, to Van Doorne's Automobielfabriek N.V. Variable speed transmission. 3,017,783, 1–23–62, Cl. 74—230.17.
Van der Brugghen, Joan, and W. F. M. Hendriks, to Van Doorne's Automobielfabriek N.V. Automatic transmission. 3,017,785, 1–23–62, Cl. 74—472.
Vanderschmidt, George F., to National Research Corp. Gas density measurement. 3,018,376, 1–23–62, Cl. 250—83.6.
Vanderschmidt, George F., to National Research Corp. Measuring. 3,018,435, 1–23–62, Cl. 324—33.
Vanderschmidt, George F., to National Research Corp. Apparatus for measuring physical quantities. 3,018,436, 1–23–62, Cl. 324—33.
Vandervoort, Norman F., to The Mason Silk Co. Magazine for sewing thread. 3,018,067, 1–23–62, Cl. 242—137.
Vanderzee, David J.: *See*—
Lund, Alvin O., and Vanderzee. 3,017,957.
Van Doorne's Automobielfabriek N.V.: *See*—
Van der Brugghen, Joan, and Hendriks. 3,017,785.
Van der Brugghen, Joan, and Hendriks. 3,017,783.
Van Houten, Russell I. Measuring helical leads. 3,017,703, 1–23–62, Cl. 33—199.
Vann, Clifton B., to Riegel Paper Corp. Pipe joint and method of making the same. 3,018,120, 1–23–62, Cl. 285—55.
Van Pool, Joe, to Phillips Petroleum Co. Control of alkylation operation. 3,018,310, 1–23–62, Cl. 260—683.48.
Van Tubergen, Richard F.: *See*—
Breese, James L., and Huston. 3,017,925.
Vanwersch, Aloys, P. and L., to Firma Eisenwerk Wanheim G.m.b.H. Connecting structure for beams of a roof support or the like. 3,018,126, 1–23–62, Cl. 287—99.
Vanwersch, Ludwig: *See*—
Vanwersch, Aloys, P. and L. 3,018,126.
Vanwersch, Peter: *See*—
Vanwersch, Aloys, P. and L. 3,018,126.
Vaughan Movable Interior Walls, Inc.: *See*—
Vaughan, Wayne W. 3,017,672.
Vaughan, Wayne W., to Vaughan Movable Interior Walls, Inc. Non-load bearing dry wall partition construction. 3,017,672, 1–23–62, Cl. 20—4.
Vegors, Lester S. Fluid pressure measuring device. 3,017,939, 1–23–62, Cl. 177—208.
Velluz, Leon, G. Muller, and A. Allais, to Les Laboratoires Francois de chimiotherapie. 12-aza-deserpidine and intermediates and process therefor. 3,018,286, 1–23–62, Cl. 260—240.
Vessio, Michael N.: *See*—
Hoek, Adrian G., and Vessio. 3,018,147.
Vetrano, James B., to United States of America, Atomic Energy Commission. Method of making delta zirconium hydride monolithic moderator pieces. 3,018,169, 1–23–62, Cl. 23—204.
Vetsch, Rudolf: *See*—
Blake, Charles T., and Vetsch. 3,018,115.
Victor Chemical Works: *See*—
Lauck, Robert M., and Dock Fon Toy. 3,018,180.
Vinci, Ignatius R. Electric curbguard. 3,018,344, 1–23–62, Cl. 200—61.44.
Vockenhuber, Karl: *See*—
Kecnicki, Eduard. 3,017,815.
Voelskow, Peter R. H.: *See*—
Sybertz, Gustav J. and J. F., and Voelskow. 3,017,912.
Voigtlander A.G.: *See*—
Greger, Paul. 3,017,814.
Greger, Paul, Kinder, and Sommer. 3,017,813.
Vol-Shinn Industries, Inc.: *See*—
McMeen, Forrest H., Aston, and Stucka. 3,017,658.
Vollet, George, to Jacoby-Bender, Inc. Telescoping-type expansible bracelet with detachability feature and spring pin for use therein. 3,017,682, 1–23–62, Cl. 24—265.
Von Friedrich, Adolf, and G. Scriba, to Farbenfabriken Bayer Aktiengesellschaft. Process for the manufacture of shaped bodies. 3,018,261, 1–23–62, Cl. 260—23.
Von Heidenstam, Erik J. Lift-slab construction of buildings. 3,017,723, 1–23–62, Cl. 50—140.
Von Thuengen, Hubert F., to Zahnradfabrik Friedrichshafen. One-way brake or clutch mechanism, particularly for free wheeling devices and anti-rollback devices. 3,017,964, 1–23–62, Cl. 188—82.84.
Wadman, William H.: *See*—
Mitchell, Reid L., Berry, and Wadman. 3,018,158.
Wadsworth Electric Mfg. Co., Inc., The: *See*—
Middendorf, William H. 3,018,351.
Wagner, George M., to Olin Mathieson Chemical Corp. Treatment of cellulosic materials to resist fungicidal attack. 3,018,196, 1–23–62, Cl. 117—143.
Wagner, Howard A., to Westinghouse Electric Corp. Current rectifier assembly. 3,018,425, 1–23–62, Cl. 317—234.
Waldbauer, Walter M., to Westinghouse Electric Corp. Mounting for luminaires. 3,018,081, 1–23–62, Cl. 248—230.
Waldie, Conrad T., Jr., and W. L. Hearn, to Brown Co. Method for wet-creping paper sheet. 3,018,214, 1–23–62, Cl. 162—112.
Wales, Nathaniel B., Jr., to Monroe Calculating Machine Co. Combined business machine and tape perforator. 3,018,040, 1–23–62, Cl. 235—60.4.
Wallerstein, Lawrence B. Apparatus for shaping and cutting plastic materials. 3,018,355, 1–23–62, Cl. 219—19.
Walmsley, James L., to Bethlehem Steel Co. Beam bending machine. 3,017,915, 1–23–62, Cl. 153—33.
Walsco Co.: *See*—
Sittel, Karl. 3,017,982.
Warnecke, Robert R., to Compagnie Generale de Telegraphie Sans Fil. Travelling wave amplifier. 3,018,448, 1–23–62, Cl. 330—43.
Warner & Swasey Co., The: *See*—
Blake, Charles T., and Vetsch. 3,018,115.
Przybylski, Daniel F. 3,018,010.
Warnock, Lyle F., Jr., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,018,141, 1–23–62, Cl. 308—9.
Warnock, Lyle F., Jr., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,018,142, 1–23–62, Cl. 308—9.
Wasserman, Max, to American Cyanamid Co. Fire venting roof structure. 3,017,721, 1–23–62, Cl. 50—10.
Webb, Robert S. Per pulse cut-off circuit. 3,018,411, 1–23–62, Cl. 315—163.
Wei, Hsin H., to Westinghouse Electric Corp. Translator amplifier with a multi-section electrolytic capacitor. 3,018,447, 1–23–62, Cl. 330—22.
Weil, Mack W. Closure timing arrangement. 3,017,763, 1–23–62, Cl. 70—269.
Weiner, Louis L., to United States of America, Army. System for cooling a hot weather face mask. 3,017,888, 1–23–62, Cl. 128—400.
Welsh, Harvey W., to General Motors Corp. Floating labyrinth seal. 3,018,085, 1–23–62, Cl. 253—39.
Welsh, Jay Y., M. W. Milberg, and H. R. Peterson, to Manganese Chemicals Corp. Producing manganese by fused salt electrolysis, and apparatus therefor. 3,018,233, 1–23–62, Cl. 204—64.
Wenman, William A., to Phoenix Products Co., Inc. Resilient lamp mounting. 3,018,364, 1–23–62, Cl. 240—90.
Wenman, William A., and J. F. Morton, to Phoenix Products Co., Inc. Shock resistant mounting for lamps. 3,018,365, 1–23–62, Cl. 240—90.
Werle, Otto P., to United States of America, Navy. Cutting tool and method of making same. 3,017,790, 1–23–62, Cl. 77—70.
Werner, Alfred F., and G. Stepien, Jr., to United States Rubber Co. Reinforced sealing tape. 3,018,208, 1–23–62, Cl. 154—53.5.
Werner, Jesse: *See*—
Steckler, Robert, and Werner. 3,018,267.
Werner, Leo C.: *See*—
Okress, Ernest C., and Werner. 3,018,453.
Western Electric Co., Inc.: *See*—
Eger, Edward F., and Simpson. 3,018,008.
Frate, Domenico C. 3,017,765.
Fuchs, Francis J., Jr. 3,017,914.
Lamont, John. 3,018,377.
Lancaster, Robert A. 3,018,020.
Uffman, Leroy E. 3,017,976.
Westfall, Hubert C.: *See*—
Galbraith, Sidney W., Perkins, and Westfall. 3,017,935.
Westinghouse Air Brake Co.: *See*—
Baechtel, Clarence R. 3,017,959.
Bent, Arthur J. 3,018,073.
Hursen, Thomas F., and McClure. 3,017,960.
Olson, Paul E. 3,017,900.
Wilson, Richard L., and Jeffrey. 3,018,138.
Westinghouse Brake & Signal Co., Ltd.: *See*—
Shattock, Charles F. B., and Stone. 3,018,137.

Westinghouse Electric Corp.: *See*—
Aarons, Melvin W., Dzimianski, and Bentley. 3,018,423.
Asars, Juris A. 3,018,412.
Barrell, Robert F. 3,018,050.
Baudry, Rene A., and Whitney. 3,018,144.
Bauer, Hugo, May, and Lopenski. 3,017,852.
Baugh, Charles W., Jr. 3,018,325.
Baugh, Charles W., Jr., and Kingsford-Smith. 3,018,327.
Bishoff, Robert W., and Cope. 3,018,232.
Boyce, Walter A., and Plagge. 3,018,187.
Bright, Richard L., and Jackson. 3,018,380.
Bullis, Earl, Jr. 3,018,342.
Carroll, James C., and Thompson. 3,018,382.
Carroll, James C., Thompson, and Jones. 3,018,381.
Chauvin, Bernard, and May. 3,017,991.
Colalaco, August P. 3,018,424.
Colalaco, August P., Miller, and Cham. 3,018,417.
Cornell, Archie R. 3,018,410.
Cornish, Albert J., and Miller. 3,018,312.
Dobroslejski, Stephen S., and Lang. 3,018,127.
Farr, Kenneth E. 3,018,328.
Goodman, Joseph L. 3,018,442.
Hodgson, Alfred W. 3,018,421.
Hood, William C., and Baldwin. 3,018,206.
Innis, Robert T. 3,018,406.
Innis, Robert T. 3,018,407.
Karlicek, Robert F., and Sandin. 3,018,416.
Knudson, Brenton C. 3,018,446.
Kramer, Lloyd B., Kasberg, and Landkrohn. 3,018,357.
Lewis, Charles W. 3,018,402.
Lund, Alvin O., and Vanderzee. 3,017,957.
Lynn, Lawrence B. 3,017,778.
Marbury, Ralph E. 3,018,427.
Mitchell, William H. 3,018,353.
Mixon, Joseph L. 3,017,892.
Mrenna, Stephen A., and Portman. 3,018,464.
Mullen, John H., and Born. 3,018,338.
Peters, Emil H. 3,018,428.
Petrick, William R., and Travis. 3,018,326.
Rebuffoni, Martin. 3,018,301.
Rowe, William D. 3,018,388.
Schaaf, Bernard W., Jr. 3,018,358.
Skillman, William A., Evanus, and Mooney. 3,018,478.
Skinner, Kenneth R., and Sienkiewicz. 3,018,329.
Soja, Matthew. 3,018,330.
Stanley, Harry T. 3,018,401.
Wagner, Howard A. 3,018,425.
Waldbauer, Walter M. 3,018,081.
Wei, Hsin H. 3,018,447.
White, Marshall P. 3,018,456.
Willard, Frank G., and Ross. 3,017,984.
Williams, William J., and Rehberg. 3,018,007.
Young, Robert G. 3,018,403.
Westlin, Karl L., to American Air Filter Co., Inc. Electrostatic precipitator. 3,017,952, 1–23–62, Cl. 183—7.
Weston Laboratories, Inc.: *See*—
Sapit, Donald T., and Ewers. 3,017,879.
Whaley, Thomas P.: *See*—
Norman, Vello, and Whaley. 3,018,194.
Wheelock, Charles E., to Phillips Petroleum Co. Extracting a liquid diene polymer with a liquid hydrocarbon and method of preparing casting of said extracted diene polymer. 3,018,277, 1–23–62, Cl. 260—93.5.
White, Marshall P., to Westinghouse Electric Corp. Switching devices. 3,018,456, 1–23–62, Cl. 336—110.
Whitehall-Rand, Inc.: *See*—
Brown, Thomas T. 3,018,394.
Whitehead & Kales Co.: *See*—
Stough, Gerald D., and Collins. 3,018,079.
Whitney, Eugene C.: *See*—
Baudry, Rene A., and Whitney. 3,018,144.
Whitney, Frank C.: *See*—
Carson, James S., Feild, Kegan, Markwood, and Whitney. 3,018,252.
Whittier, Gordon D., to Whittier Molding Co. Automatic thickness indicator for rough lumber. 3,017,850, 1–23–62, Cl. 118—9.
Whittier Molding Co.: *See*—
Whittier, Gordon D. 3,017,850.
Wiese, Martin: *See*—
Hauck, Michael, and Wiese. 3,017,634.
Wiley, Averill J., to Sniphite Products Corp. Transfer of gases into and from liquid media. 3,017,951, 1–23–62, Cl. 183—2.5.
Willard, Frank G., and E. P. Ross, to Westinghouse Electric Corp. Workpiece position control apparatus. 3,017,984, 1–23–62, Cl. 198—29.
Williams, Norman C., to Power Brake Equipment Co. Adjustable differential air pressure relay. 3,018,136, 1–23–62, Cl. 303—6.
Williams, William J., and R. A. Rehberg, deceased (by H. M. Rehberg, executrix), to Westinghouse Electric Corp. Transfer apparatus. 3,018,007, 1–23–62, Cl. 214—1.
Wilson, Eric S. Barrier for use in an animal race or pen. 3,017,860, 1–23–62, Cl. 119—99.
Wilson, John H. Multi-speed transmissions. 3,017,782, 1–23–62, Cl. 74—218.
Wilson, Richard L., and W. B. Jeffrey, to Westinghouse Air Brake Co. Fluid pressure brake apparatus having selectable graduated and direct release arrangement. 3,018,138, 1–23–62, Cl. 303—36.
Wilson, Ross D., and G. A. Deardorff. Spreader for wax or the like. 3,017,648, 1–23–62, Cl. 15—50.
Wisconsin Wire Works: *See*—
Mackay, Malcolm J. 3,017,904.
Witt, Donald R., to Phillips Petroleum Co. Polymerization of ethylene with catalyst of titania on silica-alumina. 3,018,279, 1–23–62, Cl. 260—94.9.
Witt, Walter, to Minneapolis-Honeywell Regulator Co. Optical apparatus for detecting substances in fluids. 3,017,802, 1–23–62, Cl. 88—14.
Wlodek, Tadeusz W. Methods for differential plastic deformation of metal and other plastic materials. 3,017,697, 1–23–62, Cl. 29—552.
Wood, James Q.: *See*—
Pollock, Lyle W., and Wood. 3,018,171.
Woolf, Cyril: *See*—
Sweeney, Richard F., and Woolf. 3,018,306.
Wright, J Rondle, to Sun Oil Co. Fluid sampling valve. 3,017,772, 1–23–62, Cl. 73—422.
Wright, John Q., to The Auto-Soler Co. Fastener locating means. 3,017,635, 1–23–62, Cl. 1—19.
Wright, Louis D. Map storage unit. 3,018,150, 1–23–62, Cl. 312—197.
Wrighton, Robert J.: *See*—
Cushman, Clifford E., and Wrighton. 3,018,065.
Wyandotte Chemicals Corp.: *See*—
Behun, John D. 3,018,289.
Wynn, Ted R. Sugar dispenser. 3,018,025, 1–23–62, Cl. 222—500.
Yale and Towne Mfg. Co., The: *See*—
Check, Mathias M. 3,017,655.
Kubik, Paul P. 3,017,762.
Yardney International Corp.: *See*—
Cooper, Manuel, and Gold. 3,018,314.
Yarrow and Co. Ltd.: *See*—
Hobson, Eric D. 3,017,898.
Yavorsky, Paul M.: *See*—
Batchelor, James D., Friedrich, and Yavorsky. 3,018,226.
Yearley, George W.: *See*—
Portz, William E., and Yearley. 3,018,140.
Yeasting, Maynard C., and M. A. Magsig; said Magsig assor. to Mid-West Abrasive Co. Automatic gauging device. 3,017,726, 1–23–62, Cl. 51—34.
Young, Lester C., to Spo, Inc. Mold closer apparatus. 3,017,675, 1–23–62, Cl. 22—31.
Young, Robert G., to Westinghouse Electric Corp. Reflector lamp. 3,018,403, 1–23–62, Cl. 313—114.
Yourke, Hannon S., and W. G. Strohm, to International Business Machines Corp. Pulse shortening generator. 3,018,390, 1–23–62, Cl. 307—88.5.
Zahnradfabrik Friedrichshafen: *See*—
Von Thuengen, Hubert F. 3,017,964.
Zartman, Willmar A., to Meat Separator Corp. Method for separation of meat and bone. 3,017,661, 1–23–62, Cl. 17—45.
Zenith Radio Corp.: *See*—
Grossenheider, Howard. 3,017,849.
Zlinby, Edward Z., to Standard Tool and Mfg. Co. Article transfer mechanism. 3,018,006, 1–23–62, Cl. 214—1.
Zilver, Edwin, to N.V. Inland. Device for the manufacture of imprinted matches. 3,017,910, 1–23–62, Cl. 144—50.
Zima, Herbert, to Röhm & Haas G.m.b.H. Elution of precious metal salts and eluants therefor. 3,018,176, 1–23–62, Cl. 75—118.
Zocholl, Stanley E., to I-T-E Circuit Breaker Co. Bar linkage for voltage compensated phase shifter. 3,018,434, 1–23–62, Cl. 323—120.
Zrubek, William E., to United States of America, Navy. Translator circuit for converting pulse information into bistable information. 3,018,384, 1–23–62, Cl. 307—88.5.
Zweig, Samuel, to The Borden Co. Process for producing plastic articles. 3,017,670, 1–23–62, Cl. 18—59.

CLASSIFICATION OF PATENTS

ISSUED JANUARY 23, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 7: 3,017,634
19: 3,017,635
49: 3,017,636
50: 3,017,637
329: 3,017,638
2— 2: 3,017,639
239: 3,017,640
322: 3,017,641
5— 349: 3,017,642
8— 55: 3,018,154
83: 3,018,155
116.2: 3,018,156
10— 129: 3,017,643
12— 41.1: 3,017,644
54.3: 3,017,645
14— 71: 3,017,646
15— 21: 3,017,647
50: 3,017,648
105: 3,017,649
250.02: 3,017,650
250.12: 3,017,651
257.5: 3,017,652
257.8: 3,017,653
327: 3,017,654
16— 82: 3,017,655
90: 3,017,656
114: 3,017,657
121: 3,017,658
146: 3,017,659
17— 12: 3,017,660
45: 3,017,661
18— 1: 3,017,662
2.5: 3,017,663
3,017,664
9: 3,017,665
3,017,666
42: 3,017,667
47.2: 3,017,668
53: 3,017,669
54: 3,018,157
3,018,158
59: 3,017,670
19— 151: 3,017,671
20— 4: 3,017,672
6: 3,017,673
23: 3,017,674
22— 31: 3,017,675
57.2: 3,017,676
194: 3,017,677
23— 2: 3,018,159
14: 3,018,160
35: 3,018,161
59: 3,018,162
3,018,163
103: 3,018,164
106: 3,018,165
126: 3,018,166
165: 3,018,167
186: 3,018,168
204: 3,018,169
260: 3,018,170
314: 3,018,171
24— 134: 3,017,678
201: 3,017,679
205.15: 3,017,680
254: 3,017,681
265: 3,017,682
25— 121: 3,017,683
28— 72: 3,017,684
3,017,685
82: 3,017,686
29—25.18: 3,017,687
155.66: 3,017,688
194: 3,017,689
205: 3,017,690
211: 3,017,691
229: 3,017,692
473.1: 3,017,693
509: 3,017,694
523: 3,017,695
527: 3,017,696
552: 3,017,697
3,017,698
556: 3,017,699
30— 16: 3,017,700
33— 85: 3,017,701
172: 3,017,702
199: 3,017,703
35— 63: 3,017,704
36— 7.3: 3,017,705
34: 3,017,706
37— 2: 3,017,707
3,017,708
3,017,709
123: 3,017,710
40— 109: 3,017,711
130: 3,017,712
40— 135: 3,017,713
41— 17: 3,017,714
43— 16: 3,017,715
42.16: 3,017,716
131: 3,017,717
44— 51: 3,018,172
71: 3,018,173
46— 123: 3,017,718
47— 58: 3,017,719
3,017,720
61: P.P.2,123
48— 63: 3,018,174
50— 10: 3,017,721
100: 3,017,722
140: 3,017,723
265: 3,017,724
418: 3,017,725
51— 61: 3,017,726
96: 3,017,727
165: 3,017,728
53— 27: 3,017,729
124: 3,017,730
201: 3,017,731
56— 25.4: 3,017,732
3,017,733
50: 3,017,734
128: 3,017,735
297: 3,017,736
57— 34: 3,017,737
58.3: 3,017,738
142: 3,017,739
163: 3,017,740
58— 107: 3,017,741
116: 3,017,742
60— 35.6: 3,017,743
3,017,744
3,017,745
3,017,746
3,017,747
3,017,748
39.28: 3,017,749
52: 3,017,750
62— 58: 3,017,751
3,017,752
395: 3,017,753
63—15.45: 3,017,754
64— 21: 3,017,755
3,017,756
66— 146: 3,017,757
68— 19: 3,017,758
69— 21: 3,017,759
70— 97: 3,017,760
133: 3,017,761
224: 3,017,762
269: 3,017,763
71— 2.5: 3,018,175
73— 4: 3,017,764
9: 3,017,765
40: 3,017,766
54: 3,017,767
71.4: 3,017,768
147: 3,017,769
151.5: 3,017,770
260: 3,017,771
422: 3,017,772
462: 3,017,773
487: 3,017,774
505: 3,017,775
74— 2: 3,017,776
5: 3,017,777
5.12: 3,017,778
50: 3,017,779
95: 3,017,780
125.5: 3,017,781
218: 3,017,782
230.17: 3,017,783
395: 3,017,784
472: 3,017,785
677: 3,017,786
701: 3,017,787
732: 3,017,788
75— 118: 3,018,176
76— 107: 3,017,789
77— 70: 3,017,790
73.5: 3,017,791
78— 82: 3,017,792
103: 3,017,793
81— 54: 3,017,794
83— 129: 3,017,795
263: 3,017,796
349: 3,017,797
84— 382: 3,017,798
85— 2.4: 3,017,799
3,017,800
88— 14: 3,017,801
3,017,802
16: 3,017,803
88— 17: 3,017,804
26: 3,017,805
41: 3,017,806
89— 12: 3,017,807
33: 3,017,808
93— 36: 3,017,809
94— 48: 3,017,810
95— 4.5: 3,017,811
10: 3,017,812
3,017,813
3,017,814
44: 3,017,815
73: 3,017,816
86: 3,017,817
96— 84: 3,018,177
94: 3,018,178
98— 82: 3,017,818
99— 100: 3,018,179
130: 3,018,180
3,018,181
134: 3,018,182
3,018,183
182: 3,018,184
216: 3,018,185
421: 3,017,819
436: 3,017,820
100— 97: 3,017,821
240: 3,017,822
101— 123: 3,017,823
3,017,824
3,017,825
149.2: 3,017,826
3,017,827
157: 3,017,828
327: 3,017,829
415.1: 3,017,830
102— 10: 3,017,831
18: 3,017,832
3,017,833
3,017,834
49: 3,017,835
3,017,836
103— 102: 3,017,837
104— 120: 3,017,838
149: 3,017,839
105— 368: 3,017,840
369: 3,017,841
376: 3,017,842
3,017,843
106— 253: 3,018,196
107— 1: 3,017,844
14: 3,017,845
112— 114: 3,017,846
266: 3,017,847
115— 16: 3,017,848
116— 137: 3,017,849
117— 33.5: 3,018,187
38: 3,018,188
51: 3,018,190
70: 3,018,191
98: 3,018,192
107: 3,018,193
3,018,194
138.8: 3,018,195
143: 3,018,196
145: 3,018,197
227: 3,018,198
231: 3,018,199
118— 9: 3,017,850
49: 3,017,851
49.5: 3,017,852
215: 3,017,853
303: 3,017,854
306: 3,017,855
119— 4: 3,017,856
3,017,857
23: 3,017,858
51: 3,017,859
99: 3,017,860
121— 38: 3,017,861
41: 3,017,862
3,017,863
3,017,864
3,017,865
3,017,866
44: 3,017,867
164: 3,017,868
122— 479: 3,017,869
3,017,870
123— 25: 3,017,871
26: 3,017,872
119: 3,017,873
124— 23: 3,017,874
125— 11: 3,017,875
3,017,876
126— 110: 3,017,877
126— 116: 3,017,878
128— 2: 3,017,879
29: 3,017,880
188: 3,017,881
198: 3,017,882
214: 3,017,883
3,017,884
3,017,885
276: 3,017,886
348: 3,017,887
400: 3,017,888
521: 3,017,889
131— 259: 3,017,890
134— 6: 3,018,200
86: 3,017,891
176: 3,017,892
135— 7.1: 3,017,893
136— 4: 3,018,311
5: 3,018,312
89: 3,018,313
90: 3,018,314
144: 3,018,316
163: 3,018,315
181: 3,018,317
137— 69: 3,017,894
115: 3,017,895
282: 3,017,896
529: 3,017,897
590: 3,017,898
601: 3,017,899
620: 3,017,900
622: 3,017,901
138— 37: 3,017,902
45: 3,017,903
139— 191: 3,017,904
140— 113: 3,017,905
119: 3,017,906
141— 197: 3,017,907
143— 133: 3,017,908
157: 3,017,909
144— 50: 3,017,910
208: 3,017,911
230: 3,017,912
146— 81: 3,017,913
149— 19: 3,018,201
3,018,202
3,018,203
3,018,204
153— 20: 3,017,914
33: 3,017,915
40: 3,017,916
45: 3,017,917
154— 45: 3,018,205
45.9: 3,018,206
3,018,209
52: 3,018,207
53.5: 3,018,208
156— 21: 3,018,211
195: 3,018,212
228: 3,018,210
370: 3,017,918
400: 3,017,919
416: 3,018,213
158— 7: 3,017,920
28: 3,017,921
36.3: 3,017,922
91: 3,017,923
3,017,924
3,017,925
160— 213: 3,017,926
271: 3,017,927
162— 112: 3,018,214
289: 3,017,928
340: 3,017,929
352: 3,017,930
166— 208: 3,017,931
167— 22: 3,018,215
3,018,216
3,018,217
3,018,218
48: 3,018,219
53: 3,018,220
65: 3,018,221
67: 3,018,222
90: 3,018,223
170—135.29: 3,017,932
171— 58: 3,017,933
174— 73: 3,018,318
79: 3,018,319
99: 3,018,320
110: 3,018,321
151: 3,018,322
175— 7: 3,017,934
123: 3,017,935
197: 3,017,936
228: 3,017,937
177— 141: 3,017,938
177— 208: 3,017,939
246: 3,017,940
178— 5.4: 3,018,323
3,018,324
5.8: 3,018,325
3,018,326
3,018,327
3,018,328
3,018,329
3,018,330
7.1: 3,018,331
17: 3,018,332
88: 3,018,333
179— 8: 3,018,334
100.11: 3,018,335
100.41: 3,018,336
185: 3,018,337
180— 6: 3,017,941
9.2: 3,017,942
54: 3,017,943
69: 3,017,944
79.2: 3,017,945
82.1: 3,017,946
181— 33: 3,017,947
64: 3,017,948
182— 92: 3,017,949
183— 2: 3,017,950
2.5: 3,017,951
7: 3,017,952
3,017,953
74: 3,017,954
184— 15: 3,017,955
187— 6: 3,017,956
48: 3,017,957
188— 43: 3,017,958
52: 3,017,959
3,017,960
57: 3,017,961
79.5: 3,017,962
82.34: 3,017,963
82.84: 3,017,964
163: 3,017,965
252: 3,017,966
189— 7: 3,017,967
14: 3,017,968
34: 3,017,969
3,017,970
3,017,971
36: 3,017,972
88: 3,017,973
192— 4: 3,017,974
8: 3,017,975
46: 3,017,976
48: 3,017,977
195—103.5: 3,018,224
114: 3,018,225
197— 17: 3,017,978
74: 3,017,979
114: 3,017,980
170: 3,017,981
198— 1: 3,017,982
21: 3,017,983
29: 3,017,984
170: 3,017,985
230: 3,017,986
200— 16: 3,018,338
37: 3,018,339
38: 3,018,340
50: 3,018,341
51.16: 3,018,342
61.21: 3,018,343
61.44: 3,018,344
67: 3,018,345
84: 3,018,346
87: 3,018,347
104: 3,018,348
114: 3,018,349
115.5: 3,018,350
116: 3,018,351
148: 3,018,352
166: 3,018,353
3,018,354
202— 26: 3,018,226
3,018,227
39.5: 3,018,228
40: 3,018,229
3,018,230
158: 3,018,231
204— 44: 3,018,232
64: 3,018,233
83: 3,018,234
154: 3,018,235
3,018,236
3,018,237
154.2: 3,018,238
193.2: 3,018,239
3,018,240
206—45.31: 3,017,987
48: 3,017,988
59: 3,017,989
63.2: 3,017,990
208— 8: 3,018,241
10: 3,018,242
11: 3,018,243
79: 3,018,244
209— 88: 3,017,991
121: 3,017,992
144: 3,017,993
172: 3,017,994
210— 138: 3,017,995
346: 3,017,996
401: 3,017,997
519: 3,017,998
211— 40: 3,017,999
45: 3,018,000
49: 3,018,001
126: 3,018,002
3,018,003
170: 3,018,004
212— 8: 3,018,005
214— 1: 3,018,006
3,018,007
6: 3,018,008
11: 3,018,009
138: 3,018,010
140: 3,018,011
215— 7: 3,018,012
73: 3,018,013
100.5: 3,018,014
217— 53: 3,018,015
219— 19: 3,018,355
20: 3,018,356
72: 3,018,357
3,018,358
89: 3,018,359
130: 3,018,360
131: 3,018,361
220— 10: 3,018,016
55: 3,018,017
63: 3,018,018
88: 3,018,019
221— 10: 3,018,020
222— 152: 3,018,021
340: 3,018,022
394: 3,018,023
498: 3,018,024
500: 3,018,025
223— 91: 3,018,026
226— 113: 3,018,027
172: 3,018,028
229— 39: 3,018,029
3,018,030
44: 3,018,031
52: 3,018,032
73: 3,018,033
230— 116: 3,018,034
234— 108: 3,018,035
111: 3,018,036
119: 3,018,037
235— 29: 3,018,038
60: 3,018,039
60.4: 3,018,040
61: 3,018,041
61.6: 3,018,042
117: 3,018,043
137: 3,018,044
154: 3,018,045
164: 3,018,046
165: 3,018,047
176: 3,018,048
184: 3,018,049
193: 3,018,050
3,018,051
197: 3,018,052
198: 3,018,053
236— 34.5: 3,018,054
238— 371: 3,018,055
239— 70: 3,018,056
201: 3,018,057
318: 3,018,058
240— 10: 3,018,362
41: 3,018,366
51.11: 3,018,363
90: 3,018,364
3,018,365
241— 25: 3,018,050
74: 3,018,060
172: 3,018,061
242— 50: 3,018,062
55.12: 3,018,063
56.1: 3,018,064
107.4: 3,018,065
128: 3,018,066

242— 137: 3,018,067
244— 15: 3,018,068
32: 3,018,069
77: 3,018,070
3,018,071
3,018,072
111: 3,018,073
147: 3,018,074
153: 3,018,075
246— 182: 3,018,367
3,018,368
248— 37.3: 3,018,076
43: 3,018,077
56: 3,018,078
119: 3,018,079
228: 3,018,080
230: 3,018,081
343: 3,018,082
3,018,083
250— 8: 3,018,369
15: 3,018,370
20: 3,018,371
3,018,372
3,018,373
71.5: 3,018,374
77: 3,018,375
83.6: 3,018,376
222: 3,018,377
236: 3,018,378
251— 282: 3,018,084
252— 8.5: 3,018,245
8.55: 3,018,246
32.7: 3,018,247
37: 3,018,248
39: 3,018,249
51.5: 3,018,250
152: 3,018,251
316: 3,018,252
364: 3,018,253
403: 3,018,254
455: 3,018,255
253— 39: 3,018,085
254—134.5: 3,018,086
257— 1: 3,018,087
137: 3,018,088

257— 235: 3,018,089
247: 3,018,090
259— 9: 3,018,091
54: 3,018,092
260— 2.5: 3,018,256
3,018,257
6: 3,018,258
18: 3,018,259
3,018,260
23: 3,018,261
29.2: 3,018,262
37: 3,018,264
45.2: 3,018,265
45.4: 3,018,266
3,018,267
45.5: 3,018,263
3,018,268
45.8: 3,018,269
46.5: 3,018,270
47: 3,018,271
75: 3,018,272
78: 3,018,273
80.5: 3,018,274
85.3: 3,018,275
87.7: 3,018,276
93.5: 3,018,277
93.7: 3,018,278
94.9: 3,018,279
119: 3,018,280
209: 3,018,281
234: 3,018,282
239.55: 3,018,283
3,018,284
3,018,285
240: 3,018,286
3,018,287
248: 3,018,288
296: 3,018,289
326.3: 3,018,290
326.5: 3,018,291
3,018,292
339: 3,018,293
348: 3,018,294
397.3: 3,018,295
3,018,296

260—397.4: 3,018,297
3,018,298
448.2: 3,018,299
3,018,300
461: 3,018,301
3,018,302
3,018,303
465: 3,018,304
519: 3,018,305
544: 3,018,306
551: 3,018,307
640: 3,018,308
679: 3,018,309
683.48: 3,018,310
261— 41: 3,018,093
113: 3,018,094
262— 3: 3,018,095
263— 10: 3,018,096
267— 1: 3,018,097
269— 91: 3,018,098
271— 46: 3,018,099
272— 1: 3,018,100
33: 3,018,101
273— 1.5: 3,018,102
43: 3,018,103
49: 3,018,104
54: 3,018,105
82: 3,018,106
136: 3,018,107
180: 3,018,108
186: 3,018,109
274— 9: 3,018,110
3,018,111
279— 4: 3,018,114
118: 3,018,115
280— 91: 3,018,116
490: 3,018,117
506: 3,018,118
285— 50: 3,018,119
55: 3,018,120
286— 10: 3,018,113
11: 3,018,112
287— 20: 3,018,121
58: 3,018,122
59: 3,018,123

287— 85: 3,018,124
86: 3,018,125
99: 3,018,126
292— 251: 3,018,127
294— 74: 3,018,128
296— 35: 3,018,129
297— 144: 3,018,130
248: 3,018,131
377: 3,018,132
397: 3,018,133
427: 3,018,134
302— 58: 3,018,135
303— 6: 3,018,136
14: 3,018,137
36: 3,018,138
60: 3,018,139
306— 22: 3,018,140
307— 46: 3,018,379
58: 3,018,380
88: 3,018,381
3,018,382
88.5: 3,018,383
3,018,384
3,018,385
3,018,386
3,018,387
3,018,388
3,018,389
3,018,390
3,018,391
3,018,392
3,018,393
308— 9: 3,018,141
3,018,142
21: 3,018,143
160: 3,018,144
174: 3,018,145
238: 3,018,146
310— 5: 3,018,394
40: 3,018,395
268: 3,018,396
311— 41: 3,018,147
312— 35: 3,018,148
45: 3,018,149

312— 197: 3,018,150
352: 3,018,151
313— 22: 3,018,397
59: 3,018,398
63: 3,018,399
82: 3,018,400
85: 3,018,401
108: 3,018,402
114: 3,018,403
346: 3,018,404
315— 12: 3,018,405
36: 3,018,406
3,018,407
95: 3,018,408
111: 3,018,409
138: 3,018,410
163: 3,018,411
166: 3,018,412
206: 3,018,413
317— 11: 3,018,414
23: 3,018,415
36: 3,018,416
52: 3,018,417
123: 3,018,418
148.5: 3,018,419
3,018,420
154: 3,018,421
201: 3,018,422
234: 3,018,423
3,018,424
3,018,425
237: 3,018,426
242: 3,018,427
318— 176: 3,018,428
312: 3,018,429
322— 2: 3,018,430
323— 45: 3,018,431
66: 3,018,432
79: 3,018,433
120: 3,018,434
324— 33: 3,018,435
3,018,436
34: 3,018,437
57: 3,018,438

324— 77: 3,018,439
328— 41: 3,018,440
148: 3,018,441
150: 3,018,442
330— 5: 3,018,443
10: 3,018,444
13: 3,018,445
14: 3,018,446
22: 3,018,447
43: 3,018,448
332— 1: 3,018,449
333— 9: 3,018,450
72: 3,018,451
95: 3,018,452
98: 3,018,453
3,018,454
336— 100: 3,018,455
110: 3,018,456
338— 39: 3,018,457
143: 3,018,458
180: 3,018,459
339— 92: 3,018,460
95: 3,018,461
112: 3,018,462
164: 3,018,463
198: 3,018,464
340— 8: 3,018,465
3,018,466
12: 3,018,467
15: 3,018,468
31: 3,018,469
51: 3,018,470
149: 3,018,471
172.5: 3,018,472
331: 3,018,473
366: 3,018,474
343— 6.8: 3,018,475
7: 3,018,476
7.7: 3,018,477
17.7: 3,018,478
762: 3,018,479
771: 3,018,480
346— 74: 3,018,152
139: 3,018,153

CLASSIFICATION OF DESIGNS

D10— 8: 192,110
192,111
D13— 1: 192,112
6: 192,113
D14— 3: 192,114

D15— 1: 192,115
D26— 5: 192,116
14: 192,117
192,118

D30— 1: 192,119
D33— 3: 192,120
19: 192,121
D45— 4: 192,122

D45— 4: 192,123
D48— 23: 192,124
31: 192,125
D54— 16: 192,126

D55— 1: 192,127
D56— 9: 192,128
D58— 13: 192,129
D71— 1: 192,130

D73— 1: 192,131
D81— 10: 192,132
D91— 1: 192,133
D93— 3: 192,134

OFFICIAL GAZETTE ✦ UNITED STATES PATENT OFFICE
January 23, 1962 Volume 774 Number 4

TRADEMARKS

NOTICES

Notice of Tentative Recordation of a Trade Name

[T.D. 55528]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., Dec. 8, 1961

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"GOJAX HOUSEWARES, INC.," a corporation organized under the laws of the State of Florida, located and doing business at 38 S.E. 8th Street, Miami 32, Florida. This trade name is used in connection with cutlery, china, housewares, etc., manufactured in Japan.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after January 15, 1962, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after January 15, 1962, of any opposition proceeding.

Until 45 days after January 15, 1962, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) PHILIP NICHOLS, JR.,
Commissioner of Customs.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 232,093 (INTERWOVEN), Interwoven Stocking Company, Hosiery; **Reg. No. 351,849,** same; **Reg. No. 360,141** (INTERWOVEN AND DESIGN), same; **Reg. No. 423,062** (INTERWOVEN), same; **Reg. No. 568,547,** same, Bow-ties, regular and pre-tied, and four-in-hands, **filed** Oct. 15, 1961, D.C., S.D.N.Y., Doc. 151/345, *Interwoven Stocking Company* v. *Burlington Industries, Inc.* Order dismissing action for lack of prosecution Dec. 4, 1961.

Reg. No. 282,358 (ARPEGE), Lanvin Parfums, Inc., Perfume extract; **Reg. No. 313,722** (MY SIN), same, Perfumes, toilet water, face powder, talcum powder, sachet, lipsticks and rouge; **Reg. No. 556,672** (LANVIN), same, Perfumes and toilet water; **Reg. No. 697,885** (LANVIN), same, Dusting powder, talcum powder and bath oil; **Reg. No. 698,279** (ARPEGE), same, Toilet water, dusting powder, talcum powder and bath oil, **filed** Dec. 5, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 2253-ND, *Lanvin Parfums, Inc.* v. *Haener's et al.*

Reg. No. 313,722. (See Reg. No. 282,358.)

Reg. No. 351,849. (See Reg. No. 232,093.)

Reg. No. 360,141. (See Reg. No. 232,093.)

Reg. No. 414,492 (CHIPS), B. Schwartz & Co., Juvenile and boys' suits, sportcoats, and outer wearing apparel—namely, top-coats and snow-suits, **filed** Dec. 6, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/367, *Chips 'N Twigs* v. *Mr. Chips.*

Reg. No. 423,062. (See Reg. No. 227,532.)

Reg. No. 556,672. (See Reg. No. 282,358.)

Reg. No. 568,547. (See Reg. No. 232,093.)

CONDITION OF TRADEMARK APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 15,100
Date of oldest new application ..... April 10, 1961
Date of oldest amended application ..... May 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	4-10-61	5-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	5-17-61	6-1-61
Renewals (All Classes)	11-7-61	11-20-61
Sec. 12 (c) Publications (All Classes)	11-6-61	11-24-61

Applications filed during the month of November 1961—2,018

Registrations Issued ..... 229—No. 726,615 to No. 726,843
Renewals Issued 60

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 570,329 (RELSKA), G. F. Heublein & Bro., Inc., Vodka, filed Dec. 4, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/358, *Heublein, Inc., doing business as L. Relsky & Cie v. Marchese Bros. Inc., doing business as Distiller Products, Ltd.*

Reg. No. 643,728 (THE PLAINSMAN), W. H. Anderson, Entertainment rendered through the medium of a television show, filed Sept. 28, 1959, D.C., S.D.N.Y., Doc. 151/43, *Warren H. Anderson v. National Broadcasting Company, Inc.* Order of dismissal for lack of prosecution Dec. 4, 1961.

Reg. No. 697,885. (See Reg. No. 282,358.)

Reg. No. 698,279. (See Reg. No. 282,358.)

Reg. No. 715,184 (BEN FRANKLIN), City Products Corporation, Retail variety store services, filed Dec. 1, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/353, *City Products Corporation et al. v. Franklin 5 & 10 Incorporated—Plaza.* Same, filed same, Doc. 40/354, *City Products Corporation et al. v. Franklin 5 & 10 Incorporated—Lakewood.* Same, filed same, Doc. 40/355, *City Products Corporation et al. v. Franklin 5 & 10 Incorporated—Villa.*

Public Law 87-354
[87th Congress, S. 1186]
October 4, 1961

AN ACT

75 Stat. 775.

To facilitate the protection of consumers of articles of merchandise composed in whole or in part of gold or silver from fraudulent misrepresentation concerning the quality thereof, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) section 4 of the Act entitled "An Act forbidding the importation, exportation, or carriage in interstate commerce of falsely stamped articles of merchandise made of gold or silver or their alloys, and for other purposes", approved June 13, 1906 (34 Stat. 260; 15 U.S.C. 294 et seq.), is amended by— Gold or silver articles. Misrepresentation of quality.

(1) inserting therein, immediately after the section number "SEC. 4.", the subsection designation "(a)"; and

(2) adding at the end thereof the following new subsection:

"(b) Whenever any person, firm, corporation, or association, being a manufacturer or dealer subject to the first section of this Act—

"(1) applies or causes to be applied to any article of merchandise intended for sale or customarily sold as a complete product to consumers in any State, by stamping, branding, engraving, or otherwise, any quality mark or stamp indicating or purporting to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal; or

"(2) imports into any State any such article of merchandise bearing any such quality mark or stamp which indicates or purports to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal,

such person, firm, corporation, or association, before depositing any such article manufactured or imported after six months after the effective date of this Act in the United States mails, or causing such article to be so deposited, for transmission thereby, or delivering such article or causing such article to be delivered to any common carrier for transportation from one State to any other State, or transporting such article or causing such article to be transported from one State to any other State, shall—

"(A) apply or cause to be applied to that article a trademark of such person, firm, corporation, or association duly registered or applied for within thirty days after an article bearing the trademark is placed in commerce or imported under the laws of the United States or the name of such person, firm, corporation, or association; and Identifying trademark.

"(B) if such article of merchandise is composed of two or more parts which are complete in themselves but which are not identical in quality, and any one of such parts bears such a quality mark or stamp, apply or cause to be applied to each other part of that article of merchandise a quality mark or stamp of like pattern and size disclosing the quality of that other part.

Each identifying trademark or name applied to any article of merchandise in compliance with clause (A) of this section shall be applied to that article by the same means as that used in applying the quality mark or stamp appearing thereon, in type or lettering at least as large as that used in such quality mark or stamp, and in a position as close as possible to that quality mark or stamp. For the purposes of this subsection, the term 'State' includes the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the District of Columbia." "State."

75 Stat. 776.

SEC. 2. The amendments made by this Act shall take effect on the first day of the third month beginning after the date of enactment of this Act. Effective date.

Approved October 4, 1961.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 92,803. Poloron Products, Inc., New Rochelle, N.Y. Filed Mar. 14, 1960.

VACUCEL

For Polystyrene Heat Insulating Material for General Use in the Industrial Arts.
First use Jan. 1, 1960.

SN 110,872. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Dec. 27, 1960.

DUTRAL

Priority claimed under Sec. 44(d) on Italian application filed July 4, 1960; Reg. No. 152,625, dated Dec. 14, 1960.
For Synthetic Resins, Elastomers Obtained From Synthetic Resinous Materials, and Synthetic Rubber.

SN 110,873. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Dec. 27, 1960.

DUVRAL

Priority claimed under Sec. 44(d) on Italian application filed July 4, 1960; Reg. No. 152,623, dated Dec. 14, 1960.
For Synthetic Resins, Elastomers Obtained From Synthetic Resins, Synthetic Rubber.

SN 113,439. Northrup, King & Co., Minneapolis, Minn. Filed Feb. 10, 1961.

CALAPOOYA

For Rye Grass Seed.
First use Oct. 25, 1960.

SN 117,835. Barzen of Minneapolis, Inc., Minneapolis, Minn. Filed Apr. 14, 1961.

SNOSHOE

Owner of Reg. No. 636,303.
For Alfalfa, Sweet Clover, Red Clover, Alsike, Timothy and Grass Seeds.
First use Apr. 5, 1955.

SN 117,993. Pont du Gard, Inc., New York, N.Y. Filed Apr. 17, 1961.

PONT DU GARD

For Epoxy Based Resins.
First use Feb. 7, 1961.

SN 120,153. L. Teweles Seed Co., Milwaukee, Wis. Filed May 16, 1961.

FORMULA 88 BRAND

Applicant disclaims any rights in the word "Brand" apart from the mark as shown.
For Grass Seed.
First use May 2, 1961.

SN 120,313. Jayhawk Charcoal Co., Inc., Chetopa, Kans. Filed May 18, 1961.



The drawing is lined for red and blue.
For Charcoal Briquets.
First use Mar. 8, 1961.

SN 123,344. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 3, 1961.

THERMO-FAX

Owner of Reg. No. 560,098.
For Plastic Film Useful for Attachment to Other Sheet Material To Produce a Lamination.
First use July 29, 1960.

SN 123,569. Seton Leather Company, Newark, N.J. Filed July 7, 1961.

RUMSON

For Leather.
First use Dec. 8, 1955.

Class 2—Receptacles

SN 100,017. FMC Corporation, San Jose, Calif., by change of name from Food Machinery and Chemical Corporation, San Jose, Calif. Filed June 30, 1960.

FLITE-N LINE

For Food Boxes Used in Connection With the Storage and Transporting of Meals to Airplanes.
First use Sept. 23, 1958.

SN 117,432. William Andren, Northridge, Calif. Filed Apr. 10, 1961.



No claim is made to the representation of the boxed material apart from the mark as shown.
For Dispenser Containers for Stationery Items Such as Printed Forms, Pen-Ruled Pads, File Holders, Duplicator Masters, Envelopes, Bond Paper, and Other Sheet Material.
First use Apr. 1, 1961.

SN 118,341. Federal Paperboard Company, Inc., Bogota, N.J. Filed Apr. 21, 1961.

SAF-T-CELL

For Bottle Carriers.
First use Nov. 1, 1955.

SN 121,193. Hawley Products Company, St. Charles, Ill. Filed June 1, 1961.

MISSILE FIBRE

No claim is made to the exclusive use of the term "Fibre" apart from the mark.
For Trash Can.
First use on or about Apr. 1, 1961.

SN 121,468. Dillon-Beck Manufacturing Co., Hillside, N.J. Filed June 6, 1961.

JERRY JUG

The term "Jug" is disclaimed apart from the mark.
For Capped Plastic Containers for Holding and Dispensing Liquids.
First use Mar. 1, 1961.

Class 5 — Adhesives

SN 119,086. Virginia Chemicals & Smelting Company, West Norfolk, Va. Filed May 1, 1961.

VASCOCEL

For Adhesive Used Upon Insulation, Cork, Plastics, Vapor Barrier Paper, Metal Fabrics, and Like Composite Materials.
First use Mar. 21, 1958.

SN 132,930. Mystik Adhesive Products, Inc., Chicago, Ill. Filed Nov. 28, 1961.

MYSTIK

For Pressure Sensitive Adhesive Tapes and Rubber and Resin Adhesives.
First use on about Jan. 1, 1935, on pressure sensitive adhesive tapes.

Class 6 — Chemicals and Chemical Compositions

SN 80,475. G. H. Wood and Company Limited, Toronto, Ontario, Canada. Filed Aug. 28, 1959.

OZOWICK

Priority claimed under Sec. 44(d) on application filed July 18, 1959; Reg. No. 117,081, dated Feb. 26, 1960.
For Air Deodorant and Disinfectant for Freshening the Air in Houses and Other Buildings.

SN 93,806. Hysan Products Company, Chicago, Ill. Filed Mar. 28, 1960.

HY-KIL

For Insecticide for Flies and Roaches.
First use May 1958.

SN 101,211. Texize Chemicals, Inc., Greenville, S.C. Filed July 20, 1960.

TEX-SIZE

Owner of Reg. Nos. 444,672, 674,305, and others.
For Textile Softeners.
First use 1955.

SN 103,486. Harley C. Setterberg, Davenport, Iowa. Filed Aug. 26, 1960.



Applicant disclaims the words "Radiator Seal" and the picture of the radiator.
For Compound for Use in Automobile Radiators To Seal Them Against Leakage and Commonly Called Radiator Seal.
First use Apr. 9, 1957.

SN 103,841. Diamond Alkali Company, Cleveland, Ohio. Filed Sept. 2, 1960.



Owner of Reg. Nos. 658,914, 680,981, and others.
For Basic Alkali Products—Namely, Soda Ash and Caustic Soda; Chlorine; Chromium Chemicals—Namely, Sodium Bichromate; Silicate Products—Namely, Sodium Metasilicate; Chlorinated Products—Namely, Chlorinated Paraffin Wax; and Agricultural Chemicals—Namely, Pesticides.
First use Aug. 2, 1960; Jan. 24, 1957, in a different display.

SN 106,028. Alloyd Engineering Laboratory, Inc., Verona, Wis. Filed Oct. 10, 1960.

ALLOLYTE

For Liquid Electrolytes for Cardiograph Electrodes.
First use Sept. 12, 1960.

SN 110,871. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Dec. 27, 1960.

DUVRAL

Priority claimed under Sec. 44(d) on Italian application filed July 4, 1960; Reg. No. 152,623, dated Dec. 14, 1960.
For Industrial Chemicals—Namely, Constituents, Modifiers and Additives for Use in the Manufacture of Rubber, Plastics, Ebonite, Asphalts, Adhesives and Varnishes.

SN 110,874. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Dec. 27, 1960.

DUTRAL

Priority claimed under Sec. 44(d) on Italian application filed July 4, 1960; Reg. No. 152,625, dated Dec. 14, 1960.
For Industrial Chemicals—Namely, Constituents, Modifiers and Additives for Use in the Manufacture of Rubber, Plastics, Ebonite, Asphalts, Adhesives and Varnishes.

SN 113,680. Bohme Fettchemie, GmbH, Dusseldorf, Germany. Filed Feb. 15, 1961.

NONAX

Owner of German Reg. No. 683,655, dated Nov. 2, 1955.
For Auxiliary Agents for the Textile Industry.

SN 115,116. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Mar. 8, 1961.

PERAPRET

Owner of U.S. Reg. No. 711,060.
For Finishing Agents for the Textile Industry.
First use Oct. 2, 1941; in commerce June 28, 1960.

SN 115,885. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Mar. 17, 1961.

TEXAPRET

Owner of U.S. Reg. No. 711,060.
For Sizing and Finishing Agents for the Textile Industry.
First use June 2, 1950; in commerce June 28, 1960.

SN 117,179. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Apr. 5, 1961.

OUST

For Lawn Herbicide and Insecticide.
First use Mar. 7, 1961.

SN 117,465. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Apr. 10, 1961.

VAZO

For Vinyl Polymerization Catalyst.
First use Mar. 13, 1961.

SN 117,598. American Alcolac Corporation, Baltimore, Md. Filed Apr. 11, 1961.

SIPON

Owner of Reg. Nos. 553,565, 661,515, and others.
For Surfactants.
First use 1947.

SN 123,711. Universal Oil Products Company, Des Plaines, Ill. Filed July 10, 1961.

LOMAX

For Hydrocarbon Conversion Catalyst.
First use June 2, 1961.

SN 123,786. Union Carbide Corporation, New York, N.Y. Filed July 11, 1961.

Linde

Owner of Reg. Nos. 434,784, 648,057, and others.
For Acetylene.
First use on or about Mar. 15, 1961.

SN 124,705. Barr Chemical Products, Inc., Berkeley, Calif. Filed July 26, 1961.

HI-CON

For Photographic and Lithographic Processing Chemicals.
First use Sept. 30, 1959.

Class 10 — Fertilizers

SN 118,097. The Newcomer Corporation, Columbia, Mo. Filed Apr. 18, 1961.

DUO

For Fertilizers.
First use Mar. 29, 1961.

SN 118,586. International Minerals & Chemical Corporation, Skokie, Ill. Filed Apr. 25, 1961.

SUPER RAINBOW

Owner of Reg. No. 78,690.
For Fertilizer.
First use Jan. 19, 1960.

Class 12 — Construction Materials

SN 84,184. Thermotank, Inc., St. Clair Shores, Mich. Filed Oct. 28, 1959.



For Ceiling Constructions Which May Be Illuminated.
First use Nov. 15, 1958.

SN 93,215. Silcoa Products Inc., New York, N.Y. Filed Mar. 18, 1960.

AQUA-KLEAR

For Water Repellent Silicone Type Coating for Masonry Surfaces.
First use Jan. 31, 1960.

SN 97,432. Chester I. Williams, Grand Rapids, Mich. Filed May 18, 1960.



The dominant portion of the mark comprises the letters "WF."
For Concrete Forms and Components Therefor.
First use May 1959.

SN 98,148. Joseph Robb & Co., Limited, Montreal, Quebec, Canada. Filed May 31, 1960.

PERMATHANE

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 25, 1960; Reg. No. 119,058, dated Aug. 5, 1960.
For Forming Boards and Suction Box Covers for Paper Making Apparatus.

SN 112,004. William C. Heirich, d.b.a. Sunco Manufacturing Company, Muskogee, Okla. Filed Jan. 17, 1961.

SunCrest

For Aluminum Awnings, Metal Walls, Roofs, and Partitions for Buildings and the Like.
First use Sept. 2, 1960.

SN 112,399. Pittsburgh Corning Corporation, Pittsburgh, Pa. Filed Jan. 24, 1961.



For Acoustical Slabs.
First use Mar. 1, 1960.

SN 113,018. Kemlite Corporation, Joliet, Ill. Filed Feb. 3, 1961.

KEMDOT

For Fiber Glass Reinforced Plastic Sheets Intended for Use as Acoustical Tile, Ceilings, Walls, Partitions, Panels, or the Like.
First use July 12, 1960.

SN 114,613. Herculite Corporation, Chester, Pa. Filed Feb. 28, 1961.



For Cast Stone and Cast Concrete Products.
First use Mar. 1, 1960.

SN 114,996. H. K. Porter Company, Inc., Pittsburgh, Pa. Filed Mar. 6, 1961.

FIRMCAST

For Hydraulic Setting Castable Refractory.
First use Oct. 30, 1960.

SN 115,224. Filtered Rosin Products Company, St. Louis, Mo. Filed Mar. 9, 1961.

WEATHER-HAVEN

For Dome-Shape Shelters.
First use Feb. 24, 1961.

SN 119,087. Virginia Chemicals & Smelting Company, West Norfolk, Va. Filed May 1, 1961.

VASCOCEL

For Tubing and Pipe Insulation.
First use Jan. 21, 1958.

SN 120,930. AB Statens Skogsindustrier, Stockholm, Sweden. Filed May 29, 1961.

ROYAL BOARD

No claim is made to the word "Board" apart from the mark as shown.
For Wall Board.
First use in 1950; in commerce in 1950.

SN 121,338. The Alumiline Corporation, Pawtucket, R.I. Filed June 5, 1961.

CONSTELLATION

For Sliding Aluminum and Glass Doors.
First use in April 1961.

SN 121,487. Johns-Manville Corporation, New York, N.Y. Filed June 6, 1961.

ULTRA-MATIC

For Asphalt Shingles.
First use May 1, 1961.

SN 121,626. Armco Steel Corporation, Middletown, Ohio. Filed June 8, 1961.

TUF-LOCK

For Metallic Wire and Metallic Wire Strand for Use in Prestressed Concrete Structures.
First use Apr. 28, 1961.

SN 121,656. Martin Fireproofing Corporation, Buffalo, N.Y. Filed June 8, 1961.

FIBROPLANK

For Roof Deck and Wall Slabs Composed of Wood Excelsior Bonded With Portland Cement.
First use June 1, 1961.

SN 121,830. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed June 12, 1961.

LO-SIL

For Refractory Bricks and Castable Refractory Products.
First use on or about Oct. 25, 1960.

SN 123,247. Unit Structures, Inc., Peshtigo, Wis. Filed June 30, 1961.

UNITRUSS

Owner of Reg. Nos. 443,340, 693,029, and others.
For Beams and Trusses.
First use February 1958; in 1942 as to the word "Unit."

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 111,641. Alfonso Bialetti & C.—S.p.A., Crusinallo-Omegna, Novara, Italy. Filed Jan. 11, 1961.



The drawing is lined for blue and pink. Owner of Italian Reg. No. 148,948, dated May 3, 1960.
For Coffee Pots and Other Portable Non-Electric Cooking Vessels for Domestic and Kitchen Use.

SN 113,169. Ernest R. Workman, Chicago, Ill. Filed Feb. 6, 1961.

CLIPTIE

For Bale and Package Tie—Namely, a Wire Fastener for the Ends of a Metal Band.
First use on or before Oct. 1, 1953.

SN 119,774. Lafayette Radio Electronics Corporation, Jamaica, N.Y. Filed May 11, 1961.

Lafayette

Owner of Reg. No. 187,851.
For Reamers, Tool Kits, Screw Drivers, Multi-Purpose Pocket Tool, Nut and Screw Driver Sets, Wrench and Screw Driver Sets, Screw Extractor, Pliers, Plier Sets, Vise Wrench, Wrench Sets, File Sets, Tap and Die Sets, Wire Strippers, Tubing Cutter, Tin Snips, Hedge Trimming Shears, Punch Sets, Soldering Iron, Hammers, Saws, Utility Knife-Saw Set, Chisels, Measuring Tape.
First use June 9, 1958, on reamers.

Class 14—Metals and Metal Castings and Forgings

SN 112,059. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Jan. 18, 1961.

SPARKONITE

For Electrical Discharge Machining Electrodes and Contacts.
First use June 7, 1960.

SN 118,314. Alchemize Corporation, Chicago, Ill. Filed Apr. 21, 1961.

SIMIGOLD

For Alloy Plating.
First use Dec. 16, 1959.

SN 119,344. Anaconda Aluminum Company, Louisville, Ky. Filed May 5, 1961.

CHEF-WRAP

For Aluminum Foil.
First use Dec. 16, 1960.

Class 15—Oils and Greases

SN 122,768. Candle-Lite Inc., Cincinnati, Ohio. Filed June 26, 1961.

GāLite

For Candles.
First use June 20, 1961.

SN 123,534. El Paso Natural Gas Products Company, El Paso, Tex. Filed July 7, 1961.

EL PASO
EL-TON

Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Industrial Oils—Namely, Lubricating and Power Transmission Oils.
First use June 1, 1960.

SN 123,535. El Paso Natural Gas Products Company, El Paso, Tex. Filed July 7, 1961.

EL PASO

PASOCHAS

Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Greases.
First use July 5, 1960.

SN 123,536. El Paso Natural Gas Products Company, El Paso, Tex. Filed July 7, 1961.

EL PASO

PASODA

Owner of Reg. Nos. 653,295, 698,429, and 698,430.
For Greases.
First use July 5, 1960.

Class 16—Protective and Decorative Coatings

SN 90,853. The Mearl Corporation, New York, N.Y. Filed Feb. 12, 1960.

MEARLITE

For Nacreous Pigments.
First use Dec. 2, 1959.

SN 97,923. Carter Paint Company, Inc., Liberty, Ind. Filed May 26, 1960.

ARMORIZE

For Paints for Use on Wood, Metal, Concrete, Masonry, and Paved Surfaces for Affording Protection Against Rust, Corrosion, Heat, Acids and Acid Fumes, Alkalies, Brine and Salt Air, Smoke Fumes, Atmospheric Gases, and Water.
First use in the year 1925.

SN 99,692. Permaglaze Company, Dearborn, Mich. Filed June 20, 1960.

PERMALITE

For Plastic Vitreous Surface Coating for Masonry Surfaces.
First use July 1957.

SN 100,032. Lenoir Wood Finishing Company, Lenoir, N.C. Filed June 30, 1960.

DURAGUARD

For Synthetic Liquid Surface Coating.
First use May 4, 1960.

SN 103,271. The Flood Company, Hudson, Ohio. Filed Aug. 23, 1960.

E-B

Owner of Reg. Nos. 331,671 and 707,995.
For Wetting and Penetrating Liquid Additive for Finish Coating Materials—Namely, Vinyl, Acrylic and Other Latex Paints, for Conditioning the Surface To Be Finished and Promoting Bonding of the Coating Material Therewith.
First use July 1960.

SN 103,675. Overall Paint & Lead Co., Inc., Cleveland, Ohio. Filed Aug. 30, 1960.

COAT OF BUTY

The applicant hereby disclaims any right to the use of the word "Coat" apart from the mark as shown.
For Roof and Siding Paint.
First use Aug. 22, 1960.

SN 112,400. Precision Paint Corporation, Chamblee, Ga. Filed Jan. 26, 1961.

ACRYLIN INSTANT-COAT

The words "Instant-Coat" are disclaimed apart from the mark as shown.
For Paint.
First use Dec. 14, 1960.

SN 113,204. Great Lakes Paint and Varnish Company, Chicago, Ill. Filed Feb. 7, 1961.

SUPER SOLAREX

For Paints, Varnishes, Enamels, and Undercoaters.
First use on or about Jan. 15, 1924.

SN 113,365. Red Spot Paint & Varnish Co., Inc., Evansville, Ind. Filed Feb. 9, 1961.

Urethal

For Paints, Varnishes, Lacquers.
First use Nov. 10, 1960.

SN 114,179. Bridgton Distributing Company, d.b.a. The Bridgton Company, Providence, R.I. Filed Feb. 23, 1961.

LUSTRE-WOOD

For Clear Finishes for Wood and Paints.
First use Jan. 31, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 104,741. Moreba Pharmaceutical Corporation, Gardena, Calif. Filed Sept. 19, 1960.

ANDUVAL HIVITES

For Vitamin and Mineral Preparation for Human Consumption.
First use Aug. 2, 1956.

SN 107,475. The Mennen Company, Morristown, N.J. Filed Oct. 31, 1960.

TENDERAIDE

For Baby Rash Ointment.
First use June 21, 1960.

SN 108,607. Bristol-Myers Company, New York, N.Y. Filed Nov. 17, 1960.

TELOMYCIN

For Antibiotic Pharmaceutical Preparation.
First use Oct. 13, 1960.

SN 117,289. Michael S. Michaels, d.b.a. Warren Wayne Products, Chicago, Ill. Filed Apr. 6, 1961.

NOR-KELP

For Medicinal Preparation Containing Kelp and Vitamins and Used as a Dietary Supplement.
First use May 18, 1960.

SN 119,122. C. H. Boehringer Sohn, Ingelheim, Germany, assignee of Geigy Chemical Corporation, Ardsley, N.Y. Filed May 2, 1961.

MYLUDIN

Owner of U.S. Reg. No. 714,364.
For Anorexiants.
First use Apr. 10, 1961; in commerce Apr. 10, 1961.

SN 120,679. The Wellcome Foundation, Ltd., London, England. Filed May 23, 1961.

COVEXIN

Priority claimed under Sec. 44(d) on British Reg. No. 813,846, dated Nov. 24, 1960.
For Medicinal Veterinary Preparation.

SN 121,687. The Wellcome Foundation, Ltd., London, England. Filed June 8, 1961.

SUBOVAX

Priority claimed under Sec. 44(d) on British Reg. No. 816,778, dated Feb. 9, 1961.
For Veterinary Hoof and Mouth Disease Vaccine.

SN 124,231. Smith, Miller & Patch Inc., New York, N.Y. Filed July 18, 1961.

VASOCON

For Decongestant Solution.
First use June 1, 1961.

SN 124,649. Hoffmann-La Roche Inc., Nutley, N.J. Filed July 25, 1961.

GANTANOL

For Antibacterial Sulfa Agent.
First use June 19, 1961.

SN 124,662. McNeil Laboratories, Incorporated, Fort Washington, Pa. Filed July 25, 1961.

CO-TYLENOL

Owner of Reg. No. 637,957 and others.
For Pediatric Cold Preparations.
First use Feb. 8, 1961.

SN 124,747. The Norwich Pharmacal Company, Norwich, N.Y. Filed July 26, 1961.

VEEN

Owner of Reg. No. 390,765.
For Pharmaceutical Preparation for Use as a Vaginal Douche.
First use Nov. 15, 1937.

SN 124,795. Alfred Bergeron, d.b.a. Remedy Company, Dallas, Tex. Filed July 27, 1961.

Drs. Choice

For Liniment for External Use.
First use Jan. 1, 1959.

SN 124,835. Ormont Drug & Chemical Company, Inc., Long Island City, N.Y. Filed July 27, 1961.

GESTADE

For Remedy To Be Taken Through the Mouth for the Relief of Heartburn, Gas, Nausea and General Stomach Distress Due to Excess Acidity.
First use January 1941 in liquid form.

SN 124,870. American Cyanamid Company, New York, N.Y. Filed July 28, 1951.

AMICAR

For Plasmin Inhibitor.
First use July 10, 1961.

SN 124,947. Schering Corporation, Bloomfield, N.J. Filed July 28, 1961.

UTOCIN

For Antibacterial Preparation for Veterinary Use.
First use July 13, 1961.

SN 124,959. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed July 28, 1961.

PERIFENIL

For Cardiovascular Preparation.
First use July 13, 1961.

SN 125,241. Parke, Davis & Company, Detroit, Mich. Filed Aug. 2, 1961.

BODRYL

Owner of Reg. No. 545,889.
For Preparation for the Relief of Symptoms Associated With Upper Respiratory Infections.
First use Mar. 14, 1961.

SN 125,324. Rexall Drug and Chemical Company, d.b.a. Rexall Drug Company, Los Angeles, Calif. Filed Aug. 3, 1961.

TRI-SALVE

For Antibiotic Topical Ointment for Use in the Treatment of Minor Cuts, Wounds, Burns, and Abrasions.
First use Apr. 14, 1961.

SN 125,444. White Laboratories, Inc., Kenilworth, N.J. Filed Aug. 4, 1961.

PERMIQUEL

For Preparation for the Treatment of Disorders of the Gastrointestinal Tract.
First use on or about May 15, 1961.

SN 125,502. Jones and Vaughan Inc., Richmond, Va. Filed Aug. 7, 1961.

FURATE

For Hematinic Plus Vitamin C and B$_6$.
First use Feb. 2, 1960.

SN 125,505. Jones and Vaughan Inc., Richmond, Va. Filed Aug. 7, 1961.

PACONAL

For Analgesic Plus Sedative Spasmolytic.
First use Jan. 24, 1956.

SN 125,510. Lakeside Laboratories, Inc., Milwaukee, Wis. Filed Aug. 7, 1961.

METATENSIN

For Hypotensor Medication.
First use June 2, 1961.

SN 125,925. Burt Krone Company, Springfield, Mo. Filed Aug. 14, 1961.

LAXSATIN

For Laxative Preparation.
First use Dec. 5, 1954.

SN 125,926. Burt Krone Company, Springfield, Mo. Filed Aug. 14, 1961.

PROATRIC

For Steroid Vitamin Mineral Preparation.
First use Dec. 20, 1957.

SN 125,927. Burt Krone Company, Springfield, Mo. Filed Aug. 14, 1961.

BILAX

For Laxative Preparation.
First use 1940.

SN 125,932. The S. E. Massengill Company, Bristol, Tenn. Filed Aug. 14, 1961.

PREDSEM

For Pharmaceutical—Namely, an Anti-Inflammatory, Anti-Rheumatic Tablet.
First use Feb. 10, 1958.

Class 19—Vehicles

SN 66,176. Fruehauf Trailer Company, d.b.a. Strick Trailers and Strick Trailers Division, Philadelphia, Pa. Filed Jan. 20, 1959.

WIDE SLIDE

For Trailers, Trailer Running Gear, Trucks and Tractors.
First use on or about Feb. 24, 1958.

SN 112,096. Westholt Manufacturing, Inc., Wichita, Kans. Filed Jan. 18, 1961.



The drawing is lined for red and gray.
For Camping Trailers.
First use on or about Nov. 23, 1960.

SN 117,693. The De Havilland Aircraft Company, Limited, Hatfield, England. Filed Apr. 12, 1961.

TRIDENT

Priority claimed under Sec. 44(d) on British Reg. No. 811,946, dated Oct. 13, 1960.
For Aircraft and Parts Thereof.

SN 123,192. Globe Rubber Products Corp., Philadelphia, Pa. Filed June 30, 1961.

EAGLE

For Rubber Floor Mats for Automobiles.
First use Sept. 22, 1960.

SN 123,339. Michigan Fiberglass Company, Zeeland, Mich. Filed July 3, 1961.

PORPOISE

For Boats.
First use June 28, 1961.

SN 123,481. K. D. Hall Mfg., Inc., North Hollywood, Calif. Filed July 6, 1961.



Applicant disclaims exclusive right to use of the wording "The Camper It Raises It Lowers" except as shown.
For Telescoping Cabins for Trucks and Similar Vehicles.
First use Jan. 27, 1961; 1958 as to the moose rack design.

Class 20—Linoleum and Oiled Cloth

SN 111,376. Armstrong Cork Company, Lancaster, Pa. Filed Jan. 6, 1961.

AURORA

For Resilient Hard Surface Floor Covering.
First use Dec. 29, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 95,555. Bolt, Beranek & Newman, Inc., Cambridge, Mass. Filed Apr. 22, 1960.

bbn

For Electrical and Electronic Acoustic and Communication Apparatus Including Micro-Phones, Electric Networks, Integrating Circuits, Lighting Equipment, Sound Recording and Reproducing Equipment, Sirens, Whistles and Horns, Vibration Damping and Sound Silencing Apparatus, Amplifiers for Audio and Radio Frequencies.
First use in or about January 1950.

SN 111,642. Alfonso Bialetti & C.—S.p.A., Crusinallo-Omegna, Novara, Italy. Filed Jan. 11, 1961.



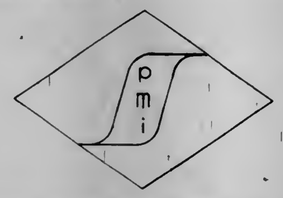
The drawing is lined for blue and pink. Owner of Italian Reg. No. 148,948, dated May 3, 1960.
For Electric Coffee Pots, Electric Mixers, Electric Coffee Grinders, Electric Scrubbers and Vacuum Cleaners, Electric Brushes, and Electric Graters.

SN 112,163. Pioneer Magnetics Incorporated, Santa Monica, Calif. Filed Jan. 19, 1961.

MAGACYCLER

For Frequency and Pulse Rate Converter, Frequency and Pulse Rate Comparator, Frequency and Pulse Rate Meter and Frequency and Pulse Rate Transducer.
First use June 5, 1958.

SN 112,164. Pioneer Magnetics Incorporated, Santa Monica, Calif. Filed Jan. 19, 1961.



For Electronic Amplifiers, Frequency Comparators, Frequency Indicators, Frequency to Voltage Converters, Inverters, Power Supplies, Voltage to Frequency Converters and Pulse Rate Meters.
First use June 5, 1958.

SN 112,165. Pioneer Magnetics Incorporated, Santa Monica, Calif. Filed Jan. 19, 1961.

MAGAVERTER

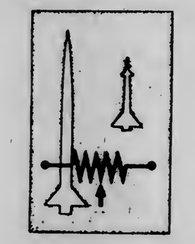
For Voltage to Frequency Converter.
First use May 19, 1960.

SN 112,474. Microdot Inc., South Pasadena, Calif. Filed Jan. 25, 1961.

LERCO

For Electrical Components—Namely, Electrical Terminals and Manually Operated Control Knobs.
First use September 1949.

SN 113,000. Bourns, Inc., Riverside, Calif. Filed Feb. 3, 1961.



For Electrical Apparatus and Supplies—Namely, Potentiometers for Radios, Television Sets, and Like Transmitters and Receivers; and Electrical Resistors.
First use Sept. 1, 1960.

SN 113,456. Swiveller Company, Inc., Nanuet, N.Y. Filed Feb. 10, 1961.

BALI

For Shades for Adjustable Electrical Lighting Fixtures.
First use Nov. 18, 1960.

SN 114,569. Raymond Persch Wolgast, Berkley, Mich. Filed Feb. 27, 1961.

CARBIDON

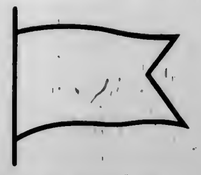
For Welding Machine Utilizing Electrical and Electronic Principles To Facilitate the Welding of Metallic Carbides To Tool Steel Surfaces.
First use Aug. 31, 1960.

SN 114,733. Weldotron Corporation, Newark, N.J. Filed Mar. 1, 1961.

SENSOMATIC

For Electronic Feed Control for Monitoring the Feed Systems of Automatic Machinery.
First use Nov. 18, 1960.

SN 122,742. All-Steel Equipment Inc., Aurora, Ill. Filed June 26, 1961.



Owner of Reg. Nos. 523,001 and 532,326.
For Electrical Conduit and Cable Fittings.
First use Dec. 1, 1960.

Class 22—Games, Toys, and Sporting Goods

SN 95,314. Professional Golf Company, Chattanooga, Tenn. Filed Apr. 18, 1960.

GREEN MASTER

For Golf Clubs.
First use Feb. 15, 1960.

SN 98,946. Earl L. Sullivan, Bellevue, Wash. Filed June 13, 1960.



The drawing is lined for red and brown, but color is not claimed as a feature of the mark.
For Toy Shoes for Simulating Pony Hoofbeats.
First use Mar. 26, 1960.

SN 101,870. Healthways, Los Angeles, Calif. Filed Aug. 2, 1960.



For General Line of Skin Diving, Spear Fishing, Water Skiing, Exercising and Golf Equipment, Apparatus and Parts Therefor; Inflatable Toys, Floats and Sportsmen's and Swimmers' Air Mattresses; and Pitching Horseshoes.
First use January 1958.

SN 101,907. Uneeda Doll Co., Inc., Brooklyn, N.Y. Filed Aug. 2, 1960.

FRECKLES

For Dolls.
First use Dec. 23, 1959.

SN 104,161. Jan Bar Sales Co., Providence, R.I. Filed Sept. 9, 1960.

JANBAR

For General Line of Inexpensive Toys.
First use Mar. 3, 1953.

SN 107,777. Mattel, Inc., Hawthorne, Calif. Filed Nov. 3, 1960.

BLAZE

For Toy Horses.
First use Oct. 3, 1960.

SN 108,484. Helin Tackle Company, Detroit, Mich. Filed Nov. 15, 1960.

FLATFISH

For Fishing Lure.
First use on or about Sept. 12, 1933.

SN 109,308. Herbert P. Fields, d.b.a. H. F. Enterprises, Palos Heights, Ill. Filed Nov. 30, 1960.

PRO STARS

For Cards, Score Sheets and Similar Equipment for Playing a Baseball Game.
First use Oct. 21, 1960.

SN 110,160. Wilbur-Ellis Company, Fresno, Calif., assignee of Bradford Mattson, d.b.a. Party-Tote Co., Madison, N.J. Filed Dec. 13, 1960.

FUN-TOTE

For Toy Play Kits Containing Toys, Puppets, Surprise Balls, Puzzles, Paint Sets, Coloring Books, and Similar Toy Items.
First use June 17, 1957.

SN 111,504. Kingbird Products, Inc., El Monte, Calif. Filed Jan. 9, 1961.



The words "Products Inc." are disclaimed apart from the mark as shown.
For Inflatable Toys, Inflatable Splash Pools, Floats, Surf Boards, Paddle Boards, Air Mattresses, Water Toys, Toy Boats, Safety Belts, Safety Vests, Safety Cushions, Swimming Masks, Swimming Fins, Sand Boxes, Balls, Back Boards, Nets, Paddles, Shuttlecocks, and Apparatus for Playing a Marble Game.
First use Dec. 3, 1959.

SN 111,592. Paul Robert Dubois, Sanary-sur-Mer, Var, France. Filed Jan. 10, 1961.



Priority claimed under Sec. 44(d) on French Reg. No. 1,798, dated Aug. 16, 1960 (Toulon); Natl. Inst. No. 150,126. The French word "Squale," when translated, means "shark."
For Skin Diving Equipment and Parts and Accessories Therefor.

SN 111,611. J. Rock & Co., Allentown, Pa. Filed Jan. 10, 1961.

MAGIC-SEAL

For Toy Balloons.
First use Aug. 18, 1959.

SN 112,746. McBurneys, Corvallis, Oreg. Filed Jan. 30, 1961.



No claim of exclusive right is made to "Water Skis" or to the geographic designation "Corvallis, Oregon."
For Water Skis.
First use May 7, 1960.

SN 112,861. Professional Golf Company, Chattanooga, Tenn. Filed Jan. 31, 1961.

SHOT-MASTER

For Golf Clubs.
First use Nov. 15, 1960.

SN 113,387. Alexander Doll Company, Inc., d.b.a. Madam Alexander, New York, N.Y. Filed Feb. 10, 1961.

JACQUELINE

For Dolls.
First use Jan. 30, 1961.

SN 117,546. South Bend Toy Manufacturing Company, Inc., South Bend, Ind. Filed Apr. 10, 1961.



For Croquet Sets, Portable Swimming Pools for Children and Playhouses.
First use Oct. 21, 1960, on croquet sets.

SN 117,641. Margon Corporation, Newark, N.J. Filed Apr. 11, 1961.

GLAMOUR EYES

No claim of exclusive right is made to "Eyes" as used on doll eyes.
For Doll Eyes.
First use Mar. 31, 1961.

SN 119,150. John Reuter, Jr. Inc., Phoenix, Ariz. Filed May 2, 1961.

BULLS EYE

Owner of Reg. No. 442,260.
For Golf Clubs.
First use June 6, 1947.

SN 119,577. Universal Manufacturing Company, Inc., Bossier City, La. Filed May 8, 1961.

PACER

For Child's Wheeled Vehicle.
First use in February 1961.

SN 121,326. Seneca Tackle Co., Inc., New York, N.Y. Filed June 2, 1961.

SIDE WINDER

For Fish Lures.
First use Jan. 1, 1951.

SN 121,333. Triangle Leather Goods Company, Chicago, Ill. Filed June 2, 1961.

BALL-A-VATOR

For Bowling Ball Bags.
First use Apr. 1, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 103,913. Eaton Manufacturing Company, Cleveland, Ohio. Filed Sept. 6, 1960.

SIGNALINE

For Lubricant Pressure Sensing Systems for Controlling the Lubrication of Machine Parts.
First use Apr. 15, 1960.

SN 103,914. Eaton Manufacturing Company, Cleveland, Ohio. Filed Sept. 6, 1960.

TANWAY

For Lubricating Systems for Machine Applications Which Selectively Control and Distribute Measured Amounts of Lubricants.
First use Oct. 3, 1958.

SN 111,664. General Packaging Equipment Co., Houston, Tex. Filed Jan. 11, 1961.

GENERAL

For Automatic Machinery for the Manufacture of Flexible, Consumer Type, Form-Fill Packages of Heat Sealable Materials.
First use in 1956.

SN 114,914. Bar-Master, Inc., Los Angeles, Calif. Filed Mar. 6, 1961.

DISPENSER-KING

For Electrically Operated Soft Drink Dispensing Units.
First use Oct. 20, 1960.

SN 115,440. The Cowles Dissolver Company, Inc., Trackside, Cayuga, N.Y. Filed Mar. 13, 1961.

HI-SHEAR

For Dissolver of the Mechanical Type.
First use Feb. 17, 1961.

SN 116,106. C.I.C. Machinery, Inc., Boston, Mass. Filed Mar. 21, 1961.

MERLIN

For High Pressure Molding Machines and Accessories for Use in the Manufacture of Rubber Soled Shoes.
First use in or about January 1961.

SN 117,880. Kearney & Trecker Corporation, West Allis, Wis. Filed Apr. 14, 1961.

MILWAUKEE-MATIC

Owner of Reg. Nos. 539,404 and 656,793.
For Machine Tools.
First use May 14, 1959.

SN 118,392. Activation, Inc., Birmingham, Ala. Filed Apr. 24, 1961.

ACTIVATION

For Hydraulic Machines as Power Units, and Parts Thereof.
First use Oct. 1, 1959.

SN 119,767. Goerlich's, Inc., Toledo, Ohio. Filed May 11, 1961.

Dyna-Glas

For Exhaust Mufflers for Motor Vehicles.
First use Feb. 17, 1955.

SN 120,213. Milwaukee Metal Products Company, Milwaukee, Wis. Filed May 17, 1961.

CAN RAM

The lining in the drawing represents a design rather than the color blue.
For Hydraulic Crusher for Scrap Metal Items.
First use May 5, 1961.

SN 120,366. Applied Power Industries, Inc., West Allis, Wis. Filed May 19, 1961.

POWER-DOZER

Owner of Reg. Nos. 669,238 and 697,425.
For Vehicle Body and Frame Straightening Tools.
First use on or about Dec. 8, 1960.

SN 120,635. Helmlich Brothers, Inc., New York, N.Y. Filed May 23, 1961.

KARPET-KING

For Sewing Machines.
First use Feb. 2, 1961.

SN 120,721. William C. N. Hopkins, d.b.a. American Metal Products Company and American Metal Products International Co., Portland, Oreg. Filed May 24, 1961.

BILL HOPKINS

The name "Bill Hopkins" is used by proprietor as his own name.
For Mufflers, Exhaust Systems and Parts Thereof for Automotive Vehicles.
First use 1947.

Class 24 — Laundry Appliances and Machines

SN 118,431. Frantz Electric Industries Inc., Cleveland, Ohio. Filed Apr. 24, 1961.

Frantz Foldrier

Owner of Reg. Nos. 700,447 and 702,535.
For Clothes Driers and Parts Thereof.
First use Dec. 21, 1960.

Class 26 — Measuring and Scientific Appliances

SN 76,265. The Ryan Aeronautical Co., San Diego, Calif. Filed June 22, 1959.

RYAN

For Electrical and Electronic Components and Navigational Equipment for Missiles, Aircraft and Spacecraft—Namely, Target Seeker Systems, Doppler Systems, Inertial Guidance Systems, Directional Control Devices, Ground Speed Indicators, Attitude and Altitude Control Devices, Position Indicating Devices and Radar Seeker and Tracking Devices.
First use Dec. 15, 1934.

SN 82,167. Vault Meter Corporation of America, Newark, N.J. Filed Sept. 25, 1959.

VAULT METER

For Coin Boxes for Vending Machines, Such as Cigarette and Music Machines.
First use May 1959.

SN 83,467. Continental Optical Company, Inc., Indianapolis, Ind. Filed Oct. 19, 1959.

ANCHOR-LOC

For Spectacle Eyeglass Frames Characterized by the Presence of Studs for Use in Attaching and Detaching the Removable Top Arms.
First use [illegible], 1959.

SN 86,028. Fuji Photo Film Co., Ltd., Ashigarakamigun, Kanagawa, Japan. Filed Nov. 25, 1959.

VARIOMATIC

Priority claimed under Sec. 44(d) on Japanese application filed Sept. 14, 1959; Reg. No. 559,218, dated Oct. 27, 1960.
For Binoculars.

SN 95,554. Bolt, Beranek & Newman, Inc., Cambridge, Mass. Filed Apr. 22, 1960.

bbn

For Electrical and Electronic Measurement and Communication Measurement Instruments—Namely, Sound Level Meters, Vibration Measuring and Calibrating Instruments, Acoustic Wave Generators, Sound Detection Systems, Telemetering Systems, Sound Attenuating and Vibration Damping Apparatus, Signal Monitoring Systems Including Consoles for the Same, Meters, Analogue Electronic Correlators, and Electrical and Electronic Computing Equipment.
First use in or about January 1950.

SN 100,746. Air Reduction Company, Incorporated, New York, N.Y. Filed July 13, 1960.

Unimatic

For Universal Control Cabinet for Hospital Pipeline Service.
First use on or about June 10, 1960.

SN 101,277. Pyles Industries, Inc., Detroit, Mich. Filed July 21, 1960.

DUO-FLO

For Apparatus for Pumping and Metering Flowable Plural-Part Components as, for Example, Epoxies, Polyurethanes, Polyesters, and Foams.
First use on or about June 23, 1960.

SN 109,830. Rayex Corporation, Flushing, N.Y. Filed Dec. 5, 1960.

MONACO

For Sunglasses.
First use Nov. 9, 1960.

SN 118,986. Fullerton Electronics, Inc., Pomona, Calif. Filed May 1, 1961.

SERV U CENTER

For Display Cabinets for Electronic Equipment Incorporating Radio Tube Testing Apparatus.
First use Apr. 19, 1961.

SN 123,345. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 3, 1961.

THERMO-FAX

Owner of Reg. No. 577,845.
For Plastic Film Used for Making Projection Transparencies.
First use Aug. 11, 1960.

SN 124,144. Triangle Business Machines, Inc., Los Angeles, Calif. Filed July 17, 1961.

DRI MATE

For Photocopy Machines.
First use Feb. 20, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 114,322. Jack J. Felsenfeld, Inc., New York, N.Y. Filed Feb. 24, 1961.

ONDINE GODDESS OF THE SEA

For Cultured Pearls and Jewelry Made With Cultured Pearls—Namely, Bracelets, Brooches, Chokers, Clips, Earrings, Lavaliers, Lockets, Necklaces, Pendants, Pins and Watch Bands.
First use on or about Nov. 18, 1960.

SN 122,132. Speidel Corporation, Providence, R.I. Filed June 15, 1961.

GOLDEN FACET

No claim is made to the word "Golden" apart from the mark.
For Watch Bracelets.
First use May 12, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 112,031. Samuel M. Dell & Co., Inc., Baltimore, Md. Filed Jan. 18, 1961.



The mark consists of a silver band on the paint brush handle. No claim is made to the representation of the paint brush handle apart from the mark shown. Owner of Reg. Nos. 366,034, 384,659, and others.
For Paint Brushes.
First use May 9, 1938.

SN 112,032. Samuel M. Dell & Co., Inc., Baltimore, Md. Filed Jan. 18, 1961.



The drawing is lined for gold. No claim is made to the representation of the paint brush handle apart from the mark as shown. Owner of Reg. Nos. 366,034, 384,659, and others.
For Paint Brushes.
First use May 9, 1938.

SN 115,142. Herbert Glatt, d.b.a. Magla Products, Newark, N.J. Filed Mar. 8, 1961.

TDI

For Plastic Foam Sponges.
First use Feb. 8, 1961.

Class 31 — Filters and Refrigerators

SN 118,891. Kingbird Products, Inc., El Monte, Calif. Filed Apr. 28, 1961.

KINGBIRD

For Swimming Pool Filter Units.
First use Oct. 20, 1960.

SN 121,105. The Koby Corporation, Boston, Mass. Filed May 31, 1961.

KOBY

For Air, Oil and Water Filters and Cartridges Therefor.
First use at least Jan. 1, 1944.

SN 121,315. Precipitator Corporation of America, Boston, Mass. Filed June 2, 1961.

PCA

For Electrostatic and Mechanical Air Cleaning Devices.
First use July 1960.

Class 32 — Furniture and Upholstery

SN 111,797. Thomas R. Hunt, d.b.a. Cribdrawer Company, Ambler, Pa. Filed Jan. 13, 1961.

CRIBDRAWER

For Metal Racks Having Extensible Shelving.
First use Nov. 17, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 94,772. Jet-Heet, Inc., Englewood, N.J. Filed Apr. 11, 1960.



The colors are red, black and silver. The drawing is lined for red and silver. Owner of Reg. Nos. 591,171 and 597,301.
For Oil or Gas-Burning Heating Furnace of the Warm Air Type.
First use in or about November 1959; in or about December 1946 as to "Jet-Heet."

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 79,288. Repco Limited, Carlton, Victoria, Australia. Filed Aug. 10, 1959.

REPCO

Owner of Australian Reg. Nos. 107,922, 107,925, and 107,926, all dated Oct. 25, 1951.
For Piston Rings, Oil Seals, Hydraulic Hoses (Including Hose Ends and Couplings) and Rubber Buffers, Bushings and Grommets.
First use 1924; in commerce October 1958.

SN 79,289. Repco Limited, Carlton, Victoria, Australia. Filed Aug. 10, 1959.

Repco

Owner of Australian Reg. Nos. 107,922, 107,933, and 107,934, all dated Oct. 25, 1951.
For Piston Rings, Oil Seals, Hydraulic Hoses (Including Hose Ends and Couplings) and Rubber Buffers, Bushings and Grommets.
First use 1924; in commerce October 1958.

SN 120,694. Carmac, Inc., Houston, Tex. Filed May 24, 1961.

CARMAC

For Metallic Alloys of Various Compositions, Particularly Mechanical Pump-Seals Having Tungsten Carbide Facings.
First use Mar. 3, 1961.

Class 36 — Musical Instruments and Supplies

SN 119,775. Lafayette Radio Electronics Corporation, Jamaica, N.Y. Filed May 11, 1961.

Lafayette

Owner of Reg. No. 187,851.
For Radio Sets; Amplifiers: Public Address, Hi Fi, Stereo, Preamplifiers; Radio Tuners, Stereo Tuners, Record Turntables; Pick Up Arms; Record Player and Changer Pickup, Accordian Pickup, Harmonica Pickup, Guitar Pickup; Speakers, Microphones, Tape Recorders, Speaker Enclosures, Recording Tape.
First use October 1928 on radio sets.

SN 120,738. The Music Guild, Inc., New York, N.Y. Filed May 24, 1961.

Music Guild

For Phonograph Records.
First use Mar. 3, 1961.

SN 120,897. Orion Records, Inc., Evanston, Ill. Filed May 26, 1961.

ORION

For Phonograph Records.
First use Dec. 6, 1959.

Class 37 — Paper and Stationery

SN 28,943. International Paper Company, New York, N.Y. Filed Apr. 26, 1957.

PREFORM

For Multi-Wall Paper Bags.
First use Mar. 27, 1952.

SN 78,346. Ezyindex Products Corporation, Flushing, N.Y. Filed July 24, 1959.

EZYINDEX

For Stationery Supplies—Namely, Index Tabs and Signals, Looseleaf Dividers, Eyelets, Ring Hole Enforcements.
First use July 1948.

SN 84,710. Lindy Pen Co., Inc., Culver City, Calif. Filed Oct. 30, 1959.

2'N'1

For Ballpoint Pens.
First use July 23, 1959.

SN 97,674. Theodore Liebman, Rye, N.Y. Filed May 23, 1960.

INSTANT-BRIK

For Die-Cut Stencil for Simulating Brick on Painted Surfaces.
First use May 17, 1960.

SN 98,784. Flash Manufacturing Company, Newark, N.J. Filed June 10, 1960.

FLASHDRY

For Felt Tipped Marking Pens.
First use July 1959.

SN 103,349. Nekoosa-Edwards Paper Company, Port Edwards, Wis. Filed Aug. 24, 1960.

NEKOOSA COMMUNICATION PAPERS

The words "Communication Papers" are disclaimed apart from the mark. Owner of Reg. Nos. 515,060, 624,084, and 680,474.
For Paper—Namely, Bond, Duplicator, Ledger, Offset, Manifold, Copying, Mimeograph, Printing, and Index.
First use June 5, 1960.

SN 105,828. Old Town Corporation, Brooklyn, N.Y. Filed Oct. 5, 1960.

TOWN-MARK

For Marking Ink Sold in Containers Having a Felt Nib Adapted To Serve as a Marking Brush.
First use Feb. 12, 1960.

SN 117,504. Kehr Products Company, d.b.a. Kehr Products Co., Willow Grove, Pa. Filed Apr. 10, 1961.

PROTO WRAP

The applicant disclaims the word "Wrap" alone and apart from the mark as shown. Owner of Reg. No. 581,266.
For Paper Wraps.
First use on or about Mar. 8, 1951.

SN 117,748. West Virginia Pulp and Paper Company, New York, N.Y. Filed Apr. 12, 1961.

PINNACLE BOND

No registration rights are claimed for the word "Bond" apart from the mark as shown, but applicant waives none of its common law rights in the mark shown, or any features thereof. Owner of Reg. Nos. 82,940, 658,530, and 714,402.
For Bond Paper.
First use Feb. 17, 1961.

SN 117,842. Champion Papers Inc., Hamilton, Ohio, by change of name from The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Apr. 14, 1961.

BALLADE

For Greetings Paper and Writing Paper.
First use Apr. 4, 1961.

SN 119,681. Crown Zellerbach Corporation, San Francisco, Calif. Filed May 10, 1961.

GRANADA GLOSS

Applicant disclaims "Gloss" apart from the mark as shown.
For Printing Paper.
First use June 16, 1960.

SN 120,582. Sterling Pulp & Paper Company, Eau Claire, Wis. Filed May 22, 1961.

BOUDOIR

For Paper Toilet Tissue.
First use May 18, 1961.

SN 122,276. Consolidated Paper Company, Monroe, Mich. Filed June 19, 1961.

CONCOTE

For Paperboard.
First use in or about October 1954.

SN 123,222. New York & Pennsylvania Co., Inc., New York, N.Y. Filed June 30, 1961.

PENN/BRITE

For Offset Printing Paper.
First use on or about Oct. 11, 1956.

SN 124,775. United Crayon Co., Inc., Brooklyn, N.Y. Filed July 26, 1961.

REGENT

Owner of Reg. Nos. 555,319 and 564,255.
For Chalk in Stick Form.
First use on or about Feb. 15, 1947.

SN 124,805. The Drackett Company, Cincinnati, Ohio. Filed July 27, 1961.

WINDEX WIPES

No claim is made to the word "Wipes" apart from the mark as shown. Owner of Reg. Nos. 300,651 and 531,055.
For Paper Towels for Cleaning Windows, Dusting, Polishing and Other Uses.
First use Mar. 27, 1961.

SN 126,184. Potlatch Forests, Inc., Lewiston, Idaho. Filed Aug. 17, 1961.

FOREST-BLEND

For Paperboard.
First use July 24, 1961.

SN 126,867. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Aug. 29, 1961.

CELLO-SHEEN

For Decorative Wrapping Paper.
First use June 9, 1961.

Class 38 — Prints and Publications

SN 88,436. E. G. Stanforth, d.b.a. Stanforth Enterprises, Jefferson City, Mo. Filed Jan. 4, 1960.

TOP TIPS

For Desk Cards Having a Printed Message Thereon Together With Holders for Such Cards.
First use July 23, 1959.

SN 92,191. Young Development Corporation, Philadelphia, Pa. Filed Mar. 4, 1960.

THE BIG IDEA

For Audio-Visual Films Dealing With the Subject Matter of Inventors and Their Inventions, for Presentation on Television and Other Visual Media.
First use Dec. 10, 1959.

SN 104,184. Plus Publications, Inc., Washington, D.C. Filed Sept. 9, 1960.



The drawing is lined to indicate two shades of blue.
For Magazine To Provide News, Information and Advice of Specific Value and Interest to People 50 and Older, With Heavy Emphasis on Retirement and Retirement Planning.
First use May 28, 1960.

SN 107,356. Marquis—Who's Who, Inc., Chicago, Ill. Filed Oct. 28, 1960.

WHO'S WHO OF AMERICAN WOMEN

Owner of Reg. Nos. 378,389, 696,101, and others.
For Publications in the Nature of a Directory Published From Time to Time.
First use on or about Dec. 15, 1958.

SN 107,795. Shepard's Citations, Inc., Colorado Springs, Colo. Filed Nov. 3, 1960.



Applicant disclaims any right to the exclusive use of the words "Cases and Statutes" and "Always Up To Date" apart from the mark as shown.
For Books and Pamphlets Comprising Legal Indices and Other Legal Information Compilations.
First use Mar. 16, 1955.

SN 118,531. Michael L. Green, d.b.a. Redi-Reference Co., Milwaukee, Wis. Filed Apr. 24, 1961.

REDI-REFERENCE

For Educational Reference Charts.
First use Mar. 26, 1961.

SN 120,048. Dan D. Weiner, Fairborn, Ohio. Filed May 15, 1961.

JR. PROM

For Magazine for Teenagers.
First use Feb. 7, 1960.

SN 120,991. Home State Farm Publications, Inc., Cleveland, Ohio. Filed May 29, 1961.

THE TENNESSEE FARMER AND HOMEMAKER

For Monthly Magazine.
First use September 1954.

SN 121,089. Fansteel Metallurgical Corporation, North Chicago, Ill. Filed May 31, 1961.

CONFACTS

For Newsletter Distributed to the Electrical Industry.
First use on or about Apr. 28, 1961.

SN 121,639. The Dealers Digest Publishing Company, Inc., New York, N.Y. Filed June 8, 1961.

Investment DEALERS' Digest

Owner of Reg. No. 574,109.
For Financial News Magazine.
First use May 21, 1935.

SN 122,200. Indiana General Corporation, Valparaiso, Ind. Filed June 16, 1961.

MAGNETOPICS

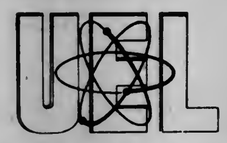
For Company News Magazine.
First use in or about May 1959.

SN 122,292. Eastern Stainless Steel Corporation, Baltimore, Md. Filed June 19, 1961.

STAINLESS WORLD

For Quarterly Company Magazine.
First use Jan. 9, 1961.

SN 122,400. United Electronics Laboratories, Inc., Louisville, Ky. Filed June 19, 1961.



For Newsletter and Textbooks in the Electronic Field.
First use July 10, 1956.

SN 123,200. Home State Farm Publications, Inc., Cleveland, Ohio. Filed June 30, 1961.

THE INDIANA FARMER

For Monthly Magazine.
First use 1958; December 1917 as to "The Indiana Farmer's Guide."

SN 128,756. Polaroid Corporation, Cambridge, Mass. Filed Sept. 27, 1961.

POLAROID

Owner of Reg. Nos. 426,802, 579,986, and others.
For Greeting Cards.
First use September 1955.

Class 39 — Clothing

SN 64,338. Redi-Knot, Inc., Pittsburgh, Pa. Filed Dec. 15, 1958.

Redi-Knot

For Men's Neckwear.
First use in 1956.

SN 100,351. Chadbourn Gotham, Inc., Charlotte, N.C. Filed July 6, 1960.

LIFT

For Women's and Girls' Hosiery.
First use May 19, 1960.

SN 111,182. Glensder Textile Corp., New York, N.Y. Filed Jan. 3, 1961.

DESIGNED BY BONCHI

The name "Bonchi" is fanciful. The words "Designed by" are disclaimed apart from the mark as shown.
For Ladies' and Misses' Outerwear—Namely, Sweaters, Scarfs, Hats, Caps, Stoles, and Hat and Scarf Combinations.
First use Nov. 15, 1960.

SN 113,563. M. C. Schrank Company, Bridgeton, N.J. Filed Feb. 13, 1961.

EXTRAVAGANCE

For Women's and Misses' Sleepwear—Namely, Pajamas, Nightgowns and Housecoats.
First use June 1, 1959.

SN 114,094. Clarks Overseas Shoes Limited, Street, Somerset, England. Filed Feb. 21, 1961.



Owner of U.S. Reg. Nos. 540,599 and 691,307.
For Footwear—Namely, Boots, Shoes, for Men, Women, and Children.
First use approximately 1952; in commerce approximately 1952.

SN 114,315. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Feb. 24, 1961.

HUGGINS

For Ladies' Briefs.
First use June 1958.

SN 117,318. The Warner Brothers Company, Bridgeport, Conn. Filed Apr. 6, 1961.

LITTLE GODIVA

For Girdles and Panty Girdles.
First use Feb. 7, 1961.

SN 118,306. Van Raalte Company, Inc., New York, N.Y. Filed Apr. 20, 1961.

CHECKERETTE

For Women's, Misses', and Children's Underwear.
First use Nov. 29, 1940.

SN 118,944. British Nylon Spinners Limited, Pontypool, England. Filed May 1, 1961.

BRI-NYLON

Owner of U.S. Reg. Nos. 690,032, 722,024, and others.
For Articles of Clothing of All Kinds Made Wholly or in Substantial Part of Nylon.
First use May 1959; in commerce on or before Feb. 14, 1961.

SN 120,304. Filatures Prouvost & Cie, La Lainiere de Roubaix, Roubaix, Nord, France. Filed May 18, 1961.

PROUVOST

No claim is made to the word "Fil" apart from the mark as shown. Owner of French Reg. No. 8,540, dated July 15, 1960 (Roubaix); Natl. Inst. No. 148,931.

For Outer and Under Clothing—Namely, Coats, Overcoats, Suits, Frocks, Dresses, Skirts, Waistcoats, Hats, Bodices, Shirts, Underwear, Neckties, Stockings, Socks, Gloves, Bathing Suits, Corsets and Girdles.

SN 120,566. Henry Pollak, Inc., New York, N.Y. Filed May 22, 1961.

MYSTERE

For Berets.
First use July 2, 1956.

SN 120,837. Winer Sportswear, Inc., Paterson, N.J. Filed May 25, 1961.

POLAR PRUF

For Ski Pants, Snowsuits, and Jackets for Men, Women, and Children.
First use Feb. 17, 1961.

SN 120,919. Thomas Textile Co., Inc., New York, N.Y. Filed May 26, 1961.

TODDETTE

For Children's Clothing—Namely, Crawlers, Shirts, Coveralls, Jackets, Hats and Butcher Boy Smocks or Blouses, Sold Separately or in Sets.
First use Aug. 2, 1960.

SN 122,005. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

OUTSMART

For Foundation Garments.
First use May 31, 1961.

SN 122,006. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

SCOPE

For Foundation Garments.
First use May 31, 1961.

SN 122,007. Maidenform, Inc., New York, N.Y. Filed June 14, 1961.

RISING STAR

For Foundation Garments.
First use May 12, 1961.

SN 122,142. Wembley, Inc., New Orleans, La. Filed June 15, 1961.

WEMLON

For Neckties.
First use Jan. 1, 1961.

SN 122,258. Battelstein's, Inc., Houston, Tex. Filed June 19, 1961.

PRO-MASTER

For Men's Clothing—Namely, Men's Slacks, Shorts, Shirts and Jackets.
First use June 5, 1961.

SN 122,319. Junior Forum, Inc., New York, N.Y. Filed June 19, 1961.

JUNIOR FORUM

For Ladies' Dresses.
First use May 1, 1961.

SN 122,629. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed June 22, 1961.

ROYAL OAK

For Boys' Clothing—to wit, Coats, Slacks, Blazers, Shirts, Shorts, Caps, Suits, Vests, Pajamas, Robes and Jackets.
First use January 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 95,261. Exclusive Carpets Inc., New York, N.Y. Filed Apr. 18, 1960.

ANOTHER Exclusive CARPET

The drawing is lined to reproduce the lines in the mark as shown on the specimens.
For Wool Carpets.
First use on or about May 1, 1954.

SN 102,327. Manufacture d'Impression de Wesserling, Paris, France. Filed Aug. 9, 1960.

ROMANEX

Owner of French Reg. No. 391,122, dated Jan. 14, 1949 (Paris); Natl. Inst. No. 443,318.
For Printed Fabrics for Draperies and Upholstery Made From Cotton, Silk, Rayon and Synthetic Fiber Material.

SN 110,377. The Spring Cotton Mills, Lancaster, S.C. Filed Dec. 16, 1960.

SPRINGSTAY

Owner of Reg. Nos. 303,762, 624,554, and others.
For Wrinkle and Soil Resistant Finish Applied to Cotton Piece Goods.
First use Oct. 12, 1960.

SN 110,793. The Springs Cotton Mills, Lancaster, S.C. Filed Dec. 23, 1960.

TACT

For Wrinkle and Soil Resistant Finish Applied to Cotton Fabrics.
First use Nov. 17, 1960.

SN 118,945. British Nylon Spinners Limited, Pontypool, England. Filed May 1, 1961.

BRI-NYLON

Owner of U.S. Reg. Nos. 690,032, 722,024, and others.
For Woven, Knitted, and Netted Fabrics Made Wholly or in Substantial Part of Nylon, To Be Used for Making Dresses, Coats, Suits, Blouses, Lingerie, Foundation Garments, Overalls, Aprons, Pinafores, Housecoats, Scarves, Sheets, Pillow Cases, Shirts, Articles of Rainwear, Sportswear, Swim-Suits, Tablecloths, Umbrellas, and Chair-Covers.
First use May 1959; in commerce on or before Feb. 14, 1961.

SN 120,305. Filatures Prouvost & Cie, La Lainiere de Roubaix, Roubaix, Nord, France. Filed May 18, 1961.

PROUVOST

No claim is made to the word "Fil" apart from the mark as shown. Owner of French Reg. No. 8,540, dated July 15, 1960 (Roubaix); Natl. Inst. No. 148,931.

For Textile Fabrics for Making Clothing of All Kinds, Draperies, and Upholstery.

SN 121,284. Fulton Industries, Inc., Atlanta, Ga. Filed June 2, 1961.

Fulton DurLap

Owner of Reg. No. 712,197.
For Knitted or Woven Paper Yarn Fabric.
First use May 9, 1961.

SN 122,108. Pepperell Manufacturing Company, Boston, Mass. Filed June 15, 1961.

PEPPERELL FABRICS

Applicant makes no claim to exclusive right to use the word "Fabrics" apart from the mark as shown. Owner of Reg. Nos. 68,697, 631,852, and others.
For Sheets, Pillowcases, Blankets, and Piece Goods of Cotton and Synthetic Fibers.
First use May 25, 1961, on blankets; 1852 as to the heraldic dragon design; and 1852 as to "Pepperell."

SN 123,331. Lowndes Products, Inc., Philadelphia, Pa. Filed July 3, 1961.

LOWNDEX

For Non-Woven Fabrics for Use as Backing and Interlining.
First use June 13, 1961.

SN 123,360. Raybestos-Manhattan, Inc., Manheim, Pa. Filed July 3, 1961.

Polybestos

For Asbestos Cloth, Woven From Asbestos Yarns, Being Incombustible, With Thermal Stability, and Insulation Qualities.
First use May 31, 1961.

Class 43—Thread and Yarn

SN 118,946. British Nylon Spinners Limited, Pontypool, England. Filed May 1, 1961.

BRI-NYLON

Owner of U.S. Reg. Nos. 690,032, 722,024, and others.
For Textile Yarns and Thread Made Wholly or in Substantial Part of Nylon.
First use May 1959; in commerce on or before Feb. 14, 1961.

SN 120,303. Filatures Prouvost & Cie, La Lainiere de Roubaix, Roubaix, Nord, France. Filed May 18, 1961.

PROUVOST

No claim is made to the word "Fil" apart from the mark as shown. Owner of French Reg. No. 8,540, dated July 15, 1960 (Roubaix); Natl. Inst. No. 148,931.

For Yarns and Threads Made of Cotton, Linen, Silk, Rayon, and Synthetic and Artificial Fibers.

Class 44—Dental, Medical, and Surgical Appliances

SN 94,334. Robert A. Nathanson, Cleveland, Ohio. Filed Apr. 4, 1960.

dispos-a-Pac

For Hypodermic Injection Syringes, Hypodermic Needles, Stomach Tubes, Oxygen Catheters, Oxygen Connecting Tubes, Feeding Tubes, Rectal Tubes, Penothal Tubes, Bedside Drainage Tubes, Suction Catheters, Connecting Tubes, Surgical Blades, Surgical Gloves, Retention Catheters, Intravenous Administering Sets, Hypodermoclysis Sets, Recipient Sets, Hemotrol Donor Set, and Blood Donor Set.
First use Feb. 11, 1960, on syringes.

SN 117,543. Shampaine Industries, Inc., St. Louis, Mo. Filed Apr. 10, 1961.

SURG-A-POWER

Owner of Reg. No. 674,676.
For Surgical Operating Tables.
First use Mar. 1, 1960.

SN 119,167. Abbott Laboratories, North Chicago, Ill. Filed May 3, 1961.

SURGICAL VENOPAK

The word "Surgical" is disclaimed apart from the mark as shown. Owner of Reg. No. 537,404.
For Disposable Venoclysis Set.
First use Aug. 3, 1959.

SN 119,169. American Sterilizer Company, Erie, Pa. Filed May 3, 1961.

BIOGEN

For Apparatus for Continuous or Batch Culturing of Pure Microorganisms for Research and Industrial Uses.
First use June 9, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 89,131. Thomas Carvel, Yonkers, N.Y. Filed Jan. 18, 1960.

Carvel

Owner of Reg. Nos. 687,695, 614,138, and others.
For Soft Drinks and Carbonated Waters, Syrups, and Flavoring Bases for Making and Flavoring Soft Drinks, and Carbonated Sodas.
First use June 1958.

SN 121,749. The Nestle Company, Inc., White Plains, N.Y. Filed June 9, 1961.

NESTLE'S Keen

Owner of Reg. Nos. 74,832, 712,225, and others.
For Instant Soft Drink Mix.
First use May 3, 1961.

Class 46—Foods and Ingredients of Foods

SN 79,150. The Dawg House Inc., Atlanta, Ga. Filed Aug. 7, 1959.



DAWG HOUSE

For Frankfurters, Red Pepper Relish, Sweet Pickle Relish, Ice Cream, Orange Food Drink Syrup, and Prepared Mustard.
First use Apr. 3, 1959.

SN 93,422. Farley Manufacturing Company, Skokie, Ill. Filed Mar. 22, 1960.

Farley's

Orna Mints

Applicant claims no exclusive rights in the word "Mints." Owner of Reg. No. 554,909.
For Candies of Assorted Flavors Including Mint.
First use on or about Nov. 6, 1958.

SN 98,854. Burt Bell, d.b.a. Pat's Pie Company, Birmingham, Ala. Filed June 13, 1960.

PAT'S

For Frozen and Non-Frozen Fruit, Custard and Pizza Pies.
First use Feb. 19, 1960.

SN 104,724. J. S. Hoffman Company, Chicago, Ill. Filed Sept. 19, 1960.

HOFFMAN'S

For Salami, Hams, Dried Beef and Cheese.
First use prior to 1913.

SN 105,026. The Signet Corporation, d.b.a. Nuracel Distributing Co., Evanston, Ill. Filed Sept. 22, 1960.

NURACAL

For Low Calorie Concentrated Vitamin, Mineral, and Protein Food in Powder Form for Use as a Weight Reducing Diet.
First use June 22, 1960.

SN 107,516. Stewart In-Fra-Red, Inc., d.b.a. Stewart In-Fra-Red Commissary, Harvard, Ill. Filed Oct. 31, 1960.

STEWART SERVE E-Z

Owner of Reg. Nos. 618,387 and 636,647.
For Pre-Packaged Frozen Sandwiches.
First use on or about Oct. 6, 1960.

SN 110,123. Vitamins for Industry, Inc., Los Angeles, Calif. Filed Dec. 12, 1960.

CAL-CUTTA

For Dietary Food Supplement Containing as Some of Its Principal Ingredients Carbohydrates and Proteins, With Vitamins and Minerals Added.
First use Oct. 17, 1960.

SN 111,184. The Hartford Sugar Company, Hartford, Conn. Filed Jan. 3, 1961.

SUGAR HEART

For Canned Fruits, Vegetables, Fish, and Meats.
First use Dec. 1, 1935.

SN 112,514. Ben F. Adamek, d.b.a. Sunrise Packing Company, Blythe, Calif. Filed Jan. 26, 1961.

DESERT RANCH

Owner of Reg. No. 660,418.
For Fresh Vegetables and Fresh Melons.
First use June 13, 1957, on fresh melons.

SN 113,337. Harry and David, Medford, Oreg. Filed Feb. 9, 1961.



The drawing is lined for brown and gold. The word "Pears" and the representation of pears are disclaimed apart from the mark as shown. Owner of Reg. No. 144,343.
For Fresh Pears.
First use Oct. 8, 1960.

SN 113,919. Hilton Products, Inc., Beverly Hills, Calif. Filed Feb. 17, 1961.

Hilton's

For Candy.
First use Oct. 31, 1953.

SN 114,452. De Jean Packing Company, Biloxi, Miss. Filed Feb. 27, 1961.

Gulf Regent

For Canned Shrimp.
First use July 1, 1960.

SN 115,909. General Foods Corporation, White Plains, N.Y. Filed Mar. 17, 1961.

Post Brim

Owner of Reg. Nos. 27,402, 655,328, and others.
For Food Concentrate Mix for Making a Food Drink for Use Principally as a Breakfast Substitute.
First use on or about Jan. 20, 1961.

SN 116,826. Mead Johnson & Company, Evansville, Ind. Filed Mar. 30, 1961.

PABLUM

Owner of Reg. Nos. 297,897, 591,358, and others.
For Biscuits, Canned and Packaged Fruit and Vegetable Juices With and Without the Added Ingredients of Fruit and/or Vegetable Concentrates and Purees, Especially Processed for Infants and Children.
First use Mar. 3, 1958, on biscuits especially processed for babies.

SN 117,036. National Dairy Products Corporation, Chicago, Ill. Filed Apr. 3, 1961.

CUISINE

Owner of Reg. Nos. 522,286 and 654,279.
For Soup Bases, Sweet Relish and Barbecue Sauce.
First use in February 1956 on soup bases.

SN 117,147. Frank M. Wilson Company, Stockton, Calif. Filed Apr. 4, 1961.

COBBLER

Owner of Reg. No. 569,836.
For Canned Fruits.
First use Oct. 1, 1927.

SN 117,438. Arnold Pickle & Olive Co., Phoenix, Ariz. Filed Apr. 10, 1961.

ARNOLD'S

For Pickles, Pickle Relishes, Olives, Vinegar, Olive Oil, Sauces—Namely, Louisiana Hot Sauce and Salsa Picante; and Chili Peppers.
First use in or about 1910.

SN 117,442. Azar Bros., El Paso, Tex. Filed Apr. 10, 1961.

AZAR

For the Following Named Nuts in the Shell: Pecan, Mixed Nuts, Brazil, Walnut, Almond, Pistachio and Pinon; and the Following Named Nuts in a Shelled or Processed Form: Pecan, Walnut, Almond, Brazil, Cashew, Mixed Nut, Spanish Peanut, Virginia Peanut, Black Walnut and Filbert.
First use on or about Jan. 1, 1920, on pecan nuts.

SN 117,696. Duchess Pretzel Corporation, Bluffton, Ind. Filed Apr. 12, 1961.

THE BRATS

For Pretzels.
First use Apr. 3, 1961.

SN 117,710. Hoffman Candy Company, Los Angeles, Calif. Filed Apr. 12, 1961.

CUP-O-GOLD

Owner of Reg. No. 682,630.
For Candy.
First use Dec. 2, 1935.

SN 118,477. Nutrena Mills, Inc., Minneapolis, Minn. Filed Apr. 24, 1961.

TRIPLE G

For Fresh Eggs.
First use Dec. 2, 1960.

SN 119,008. Spencer Kellogg and Sons, Inc., Buffalo, N.Y. Filed May 1, 1961.

BE-CO-NURSE

Owner of Reg. No. 671,914.
For Dry, Mixed Food Capable of Being Reconstituted With Water and Used as a Feed for Young Livestock, Pigs, Puppies, and Kittens, Particularly as a Substitute for Whole Milk.
First use on or about Aug. 17, 1956.

SN 119,024. The Mar-Gold Corporation, Atlanta, Ga. Filed May 1, 1961.

SOUTHLAND'S SUPREME

For Margarine.
First use Apr. 26, 1961.

SN 119,045. The Pillsbury Company, Minneapolis, Minn. Filed May 1, 1961.

GRAND NATIONAL

For Cake Mix.
First use Nov. 1, 1960.

SN 119,392. Little Crow Milling Company, Inc., Warsaw, Ind. Filed May 5, 1961.

SESA MAIZE

Applicant disclaims exclusive right to use of the word "Maize" apart from the mark shown.
For Sesame Corn Muffin Mix.
First use Apr. 22, 1961.

SN 120,291. Continental Enterprises, Inc., Jacksonville, Fla. Filed May 18, 1961.

PROPEL-PAK

For Syrups and Concentrates in Pressurized Dispensing Containers for Making Food Beverages.
First use Apr. 4, 1961.

SN 121,442. Jim Stimpson, d.b.a. Meat Operations Advisory Service, Chicago, Ill. Filed June 5, 1961.

VER-RAY

For Meat Products—Namely, Fresh Beef.
First use Apr. 3, 1961.

SN 126,037. Mocha Coffee Co., Atlanta, Ga. Filed Aug. 15, 1961.

HOTEL PLAZA

For Coffee.
First use at least as early as 1928.

SN 126,066. Meurisse Limited, Antwerp, Belgium. Filed Aug. 10, 1961.



No claim is made to the representation of the goods except as shown. Owner of Belgian Reg. No. 17,671, dated Oct. 28, 1959.
For Candy and Chocolate Bars or Slabs.

Class 47—Wines

SN 113,595. Roger Louis Myers, d.b.a. Monopoles Alfred Rothschild, Beaune, France. Filed Feb. 13, 1961.



For Wine and Champagne.
First use 1875; in commerce Apr. 21, 1953.

SN 120,362. Agudat Hakormim Hacooperativit Shel Yekvei Richon Le Zion V'Zichron Yaakov B.M., Richon Le Zion, Israel. Filed May 19, 1961.

CARMEL ORIGINAL

Owner of U.S. Reg. Nos. 686,441 and 697,547.
For Wines.
First use Apr. 14, 1961; in commerce Apr. 14, 1961.

Class 49—Distilled Alcoholic Liquors

SN 91,342. Coates & Co., (Plymouth) Limited, Plymouth, England. Filed Feb. 23, 1960.

PLYMOUTH

Owner of U.S. Reg. Nos. 358,958 and 572,201.
For Gin.
First use Jan. 1, 1882; in commerce Jan. 1, 1882.

SN 122,724. Schenley Distillers, Inc., Schenley, Pa. Filed June 23, 1961.

OCEAN GLOW

For Whiskey.
First use May 8, 1961.

Class 50—Merchandise Not Otherwise Classified

SN 98,839. Benjamin H. Adler, Los Angeles, Calif. Filed June 13, 1960.

"Snap-Lok"

For Sign Letters.
First use Oct. 15, 1954.

SN 102,964. James F. Wall, Incorporated, Wethersfield, Conn. Filed Aug. 18, 1960.

E-Z PLATE

The word "Plate" is disclaimed apart from the mark as shown.
For Laminated Plastic Plates Reinforced With Metal for Use in the Manufacture of Printing Plates.
First use July 27, 1960.

SN 110,161. Wilbur-Ellis Company, Fresno, Calif., assignee of Bradford Mattson, d.b.a. Party-Tote Co., Madison, N.J. Filed Dec. 13, 1960.

PARTY-TOTE

For Party Favor Kits Comprising Paper Cups, Plates, Napkins, Table Cloth, Party Hats, Horns, a Game, Balloons, Candles and Candle Holders, Invitations, Place Cards, Favors, Forks and Spoons.
First use June 17, 1957.

Class 51—Cosmetics and Toilet Preparations

SN 74,635. Viviane Woodard Corporation, Panorama City, Calif, by change of name from Viviane Woodard Cosmetics, Panorama City, Calif. Filed May 27, 1959.

KEY TONE

For Skin Freshener.
First use Dec. 11, 1958.

SN 74,823. Associated Brands, Inc., Brooklyn, N.Y. Filed June 1, 1959.

The French Touch

Owner of Reg. No. 671,000.
For Perfumes, Colognes, and Toilet Waters.
First use Oct. 15, 1946.

SN 87,764. Jenesee, Inc., Glen Ridge, N.J. Filed Nov. 27, 1959.

Jenesee
THE BIRTH OF BEAUTY

For Skin Cleansing Cream, Skin Lotion Freshener, Skin Astringent, Skin Cleansing Lotion, Honey and Almond Cream, Skin Lubricating Cream, Skin Moisturizing Cream, Liquid Powder, Liquid Rouge, Cake Powder, Perfume, Eye Shadow Wax Sticks, Liquid Eye Liner, Eyebrow Pencils, Mascara Cream, Lubricating Oil, Lipstick (Cream), Eyebrows (Hair), Eyelashes (Hair), Astringent Cream.
First use Feb. 11, 1959.

SN 102,053. Pyrrole Chemical Corporation, Portsmouth, Ohio. Filed Aug. 4, 1960.

Softee

For Hand Cream.
First use Jan. 1, 1956.

SN 107,149. John Robert Powers Products Co., Inc., New York, N.Y. Filed Oct. 25, 1960.

BIO MASQUE

The word "Masque" is disclaimed apart from the mark as shown.
For Cosmetic Skin Cream.
First use June 30, 1960.

SN 108,032. Delavelle (G.B.) Limited, London, England. Filed Nov. 8, 1960.

DELAVELLE

Owner of British Reg. No. 498,451, dated Dec. 22, 1928.
For Perfumes, Toilet Waters, Preparations for the Hair—Namely, Hair Washes, Brilliantine, Hair Cream, Hair Waving Lotion, Hair Setting Lotion; Face Powders; Toilet and Body Powders; Preparations for the Bath—Namely, Bath Salts, Bath Essence, Bath Oils, Bath Water Softener in Cube Form; Liquid Preparation Which Resembles Stockings When Applied; After Shave Lotions and Creams, Astringent Face Lotions and Creams.

SN 113,261. Barnängens Tekniska Fabrikers Aktiebolag, Stockholm-Bromma, Sweden. Filed Feb. 8, 1961.

ROYAL SWEDEN

Applicant disclaims the word "Sweden" apart from the mark as shown. Priority claimed under Sec. 44(d) on French Reg. No. 72,548, dated Sept. 28, 1960 (Seine); Natl. Inst. No. 151,558.
For Perfumes, Eau de Cologne, Hair Lotion, After-Shave Lotion, and Deodorants.

SN 115,300. John M. Clinton, d.b.a. Tri Clean Laboratories, Oklahoma City, Okla. Filed Mar. 10, 1961.

Tri Clean

The drawing is lined for red. Applicant disclaims the word "Clean" apart from the mark.
For Teeth and Denture Cleansing Powder.
First use Mar. 7, 1961.

SN 118,370. M. Pier Company, Inc., Crystal Lake, Ill. Filed Apr. 21, 1961.

PIER'S FORMULA

The word "Formula" is disclaimed apart from the mark as a whole, within the terms of Section 6 of the Trademark Act of 1946, and for no other purpose.
For Preparation for Conditioning the Hair, Correcting and Removing Yellow Streaks, Casts and Unwanted Discolorations From the Hair for Use by Men.
First use Jan. 4, 1961.

SN 120,167. Ambel Laboratories, Inc., Brooklyn, N.Y. Filed May 17, 1961.

MISS ELAINE

For Perfume Sticks, Lipsticks, Make-Ups, Nail Polish, Rouge, Mascara, Eye Shadow, Face Powder, and Eyebrow Pencil.
First use Apr. 26, 1961.

Class 52 — Detergents and Soaps

SN 63,793. The Angelique and Company, Incorporated, Wilton, Conn. Filed Dec. 8, 1958.



For Soap.
First use Nov. 7, 1958.

SN 110,405. The Chemithon Corporation, Seattle, Wash. Filed Dec. 19, 1960.

LIQUISOL

For Household and Industrial Detergents.
First use in or about July 1959.

SN 122,938. Maid-Easy Cleansing Products Corp., Mount Vernon, N.Y. Filed June 27, 1961.

M-E

For Cleaning Compound for Use on Metal Coffee Makers, Plastic Dinnerware and China.
First use in or about March 1950.

SERVICE MARKS

Class 100 — Miscellaneous

SN 67,908. Heisdorf & Nelson Farms, Inc., Kirkland, Wash. Filed Jan. 30, 1959.

H & N

Owner of Reg. Nos. 612,380 and 698,320.
For Advice and Consultation and Supervision to Others Concerning Poultry Breeding and Hatching and the Marketing and Care and Feeding of Baby Chicks.
First use May 1, 1951.

SN 82,295. Slimmette Salons, Inc., New York, N.Y. Filed Sept. 28, 1959.

SLIMORAMA

For Slenderizing Service Rendered Through the Medium of Coin-Operated Salons and Technical Assistance in the Operation of Said Slenderizing Salons.
First use July 30, 1959.

SN 99,780. Pizza Hut, Inc., d.b.a. Pizza Hut, Wichita, Kans. Filed June 27, 1960.

PIZZA HUT

No claim of exclusive right is made to the word "Pizza" as the name of the goods.
For Restaurant Services.
First use on or about Sept. 1, 1958.

SN 114,376. Varifab Incorporated, High Falls, N.Y. Filed Feb. 24, 1961.

VARIFAB

For Mechanical and Electro-Mechanical Engineering, Tool and Die Making, Model and Prototype Making, Machine Designing, Research and Development, Production and Assembly, Contract Manufacturing and Toolroom Services.
First use Jan. 26, 1960.

SN 117,811. Albert H. Sheldon, d.b.a. Oriole Drafting Co., Mount Rainier, Md. Filed Apr. 13, 1961.



For Mechanical Drawing Services.
First use Jan. 1, 1960.

SN 120,829. The Soft Ice Cream Corp. of America, Atlanta, Ga. Filed May 25, 1961.

PETER PLENTY

Owner of Reg. No. 691,376.
For Distribution, Dispensing and Serving of Ice Cream Products From Mobile Fountain Vehicles.
First use January 1959.

Class 101 — Advertising and Business

SN 85,182. Trionics Corporation, Madison, Wis. Filed Nov. 12, 1959.

TRIONICS

For Contracted Research and Experimental Engineering in Its Own Laboratories in the Fields of Electronics, Solid State Physics, Chemistry, and Electronic Ceramics.
First use Mar. 1, 1957.

SN 89,242. Bradfute Corporation, New York, N.Y. Filed Jan. 19, 1960.

TARGET

For Sales Promotion Services—Namely, Advising Merchants How To Increase the Sales of Their Goods or Services Primarily by Means of a Game or Contest Supervised by the Applicant.
First use Dec. 30, 1959.

SN 102,493. Monroe Calculating Machine Company, Inc., Orange, N.J. Filed Aug. 11, 1960.

FIGURES UNLIMITED

For Leasing of Business Machines Such as Calculating Machines, Adding Machines, Accounting Machines, Cash Registers, Electronic Computers, Data Processing Equipment.
First use April 1959.

SN 102,758. General Composition Co., Boston, Mass. Filed Aug. 16, 1960.



No claim is made to the words "Service in the Graphic Arts" apart from the mark shown, for the purposes of this registration.
For Typographical Services.
First use in or about January 1960.

SN 105,747. M & P Management Co., d.b.a. M & P Auto Parks Ltd., Beverly Hills, Calif. Filed Oct. 4, 1960.



The words "Auto Parks Ltd." are disclaimed apart from the mark as shown.
For Automobile Parking Lot Management Services.
First use on or before Nov. 30, 1950.

SN 113,049. Tracy H. Allen, San Francisco, Calif. Filed Feb. 6, 1961.



The word "Quality" is disclaimed apart from the mark as shown.
For Printing Services.
First use July 1, 1960.

SN 114,563. Leroy Van Dyke, Springfield, Mo. Filed Feb. 27, 1961.

AUCTION JUBILEE

For Promotion of the Sale of the Goods of Others Through the Issuance of Script Money by Retailer-Subscribers and the Redemption of the Script Through Auctions.
First use Feb. 13, 1961.

SN 117,451. The Certif-A-Gift Company, Schiller Park, Ill. Filed Apr. 10, 1961.

CERTIF-A-GIFT

For Gift Merchandise Selection Service.
First use Jan. 2, 1954.

SN 121,000. Keystone Readers' Service, Inc., Bryn Mawr, Pa. Filed May 29, 1961.

BEN FRANKLIN READING CLUB

The name "Ben Franklin" is intended to refer to Benjamin Franklin, a famous figure in American history. No exclusive claim is made to the words "Reading Club" apart from the mark as shown.
For Subscription Service Authorized To Sell Subscriptions for Various Magazines on a Cash or Installment Basis.
First use Sept. 2, 1960.

SN 121,443. Jim Stimpson, d.b.a. Meat Operations Advisory Service, Chicago, Ill. Filed June 5, 1961.



For Consultation Services in Connection With the Sale and Distribution of Meat Products.
First use Apr. 3, 1961.

Class 102 — Insurance and Financial

SN 67,935. Insur-A-Trip, Inc., Charlotte, N.C. Filed Feb. 18, 1959.



The mark consists of the fanciful letters "IT," utilizing a telephone dial as the dot over the "I" and a telephone receiver as the cross bar of the "T."
For Insurance Brokerage Services.
First use Dec. 24, 1958.

SN 84,896. International Credit Card Corporation, San Mateo, Calif. Filed Nov. 9, 1959.

NCS

For Credit Card Services—Namely, Extending Credit to Customers of Retailers Participating in a Central Charge Plan and Providing a Central Billing to the Customers.
First use Sept. 19, 1958.

Class 103 — Construction and Repair

SN 96,229. Kalamazoo Industrial Services, Inc., Kalamazoo, Mich. Filed May 2, 1960.

KISI

For Designing and Servicing of Mechanical, Electrical and Hydraulic Industrial Equipment.
First use in April 1958.

SN 109,478. Durabilt Homes Corp., Little Falls, N.J. Filed Dec. 2, 1960.

DURABILT

For Construction of Houses.
First use May 1, 1950.

SN 115,380. Saia Plumbing & Heating Company, Takoma Park, Md. Filed Mar. 10, 1961.



For Plumbing and Heating Services.
First use on or about Aug. 20, 1960.

SN 118,776. Figlia & Sons, Inc., New York, N.Y. Filed Apr. 27, 1961.



No claim is made to the words "Fast Friendly Service" apart from the mark as shown.
For Installation, Inspection, and Repair of Home Air Conditioners and of Components and Adjuncts Thereof.
First use Apr. 2, 1961.

Class 105 — Transportation and Storage

SN 109,170. Supermarket Travel, Pittsburgh, Pa. Filed Nov. 28, 1960.

SUPERMARKET TRAVEL

For Travel Services—Namely, Arranging Accommodations and Transportation, Organizing and Conducting Tours.
First use Nov. 23, 1960.

SN 116,777. Grace Yokouchi, Berkeley, Calif. Filed Mar. 29, 1961.

JAPANORAMA

For Escorted Travel Tours Services.
First use Mar. 1, 1959.

SN 118,219. Bonanza Air Lines, Inc., Las Vegas, Nev. Filed Apr. 20, 1961.



For Air Transportation Service.
First use Sept. 1, 1957.

SN 118,964. Compass Van and Storage Corporation, Hempstead, N.Y. Filed May 1, 1961.

COMPASS

For Packing, Crating, Storage and Truck Transportation of Household Goods and General Merchandise.
First use Oct. 10, 1960.

SN 122,452. Norfolk and Western Railway Company, Roanoke, Va. Filed June 20, 1961.



Owner of Reg. No. 505,511.
For Service of Railroad Transportation of Passengers and Freight.
First use in May 1960.

Class 106 — Material Treatment

SN 107,244. Champion Plating, Incorporated, Cleveland, Ohio. Filed Oct. 27, 1960.



For Commercial and Custom Plating of Metals.
First use Aug. 1, 1960.

Class 107 — Education and Entertainment

SN 97,769. Harold N. Linker, d.b.a. Hal Linker, Los Angeles, Calif. Filed May 24, 1960.

WONDERS OF THE WORLD

For Title of a Television Program.
First use Jan. 16, 1957.

SN 98,828. Otto F. Wiesmann, New York, N.Y. Filed June 10, 1960.

THE HOME CHURCH

For Title of a Radio Program.
First use May 14, 1960.

SN 107,871. Frank Meyers, Redondo Beach, Calif. Filed Nov. 4, 1960.

JUMPIN' GYMINY

For Recreational Services—Namely, Hourly Rental of Rebound Tumbling Units To Gymnastic Enthusiasts.
First use July 29, 1959.

SN 108,175. Robert Hecksher, d.b.a. Public Services Broadcasting, West Palm Beach, Fla. Filed Nov. 10, 1960.

TOP CASH QUIZ

For Title of a Radio Program in the Nature of a Quiz Contest.
First use Aug. 19, 1960.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 109,810. National Reloading Manufacturers Association, Inc., Ithaca, N.Y. Filed Dec. 7, 1960.



The lining shown in the drawing is for shading purposes only. Owner of Reg. No. 711,361.
For Indicating Membership in Applicant Organization.
First use Sept. 15, 1960.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 2—Receptacles

726,615. NA WITHIN A CIRCLE. North American Van Lines, Inc. SN 115,652. Pub. 11–7–61. Filed 2–24–61.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

726,616. ORIGINAL BY HOLZMAN AND DESIGN. Holzman Handbags Inc. SN 109,590. Pub. 11–7–61. Filed 12–5–60.

Class 4—Abrasives and Polishing Materials

726,617. KEGLITE. Pierce & Stevens Chemical Corp. SN 108,374. Pub. 11–7–61. Filed 11–14–60.

Class 6—Chemicals and Chemical Compositions

726,618. BUGONEX. Hydroponic Chemical Company, Inc. SN 102,026. Pub. 11–7–61. Filed 8–4–60.

726,619. FESOLV. Cowles Chemical Company. SN 104,069. Pub. 11–7–61. Filed 9–8–60.

726,620. DOWCARB. The Dow Chemical Company. SN 104,243. Pub. 11–7–61. Filed 9–12–60.

726,621. JEFFERSON ISLAND. Diamond Crystal Salt Company. SN 106,702. Pub. 11–7–61. Filed 10–19–60.

726,622. PGS AND DESIGN. Societe Anonyme Dite: Nobel-Bozel. SN 107,157. Pub. 11–7–61. Filed 10–25–60.

726,623. DALAWET. The Dow Chemical Company. SN 107,416. Pub. 11–7–61. Filed 10–31–60.

726,624. MORROCID. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. SN 107,561. Pub. 11–7–61. Filed 11–1–60.

726,625. ECR. Stanbio Laboratory, Inc. SN 108,091. Pub. 11–7–61. Filed 11–8–60.

726,626. STA-SOFT. Crown Industrial Products Company. SN 111,589. Pub. 11–7–61. Filed 1–10–61.

726,627. 76. Union Oil Company of California. SN 112,866. Pub. 11–7–61. Filed 1–31–61.

726,628. MOON GLOW. James Varley & Sons, Inc. SN 113,162. Pub. 11–7–61. Filed 2–6–61.

726,629. BARRIER. L. Teweles Seed Co. SN 114,648. Pub. 11–7–61. Filed 2–28–61.

726,630. FINISH. L. Teweles Seed Co. SN 114,649. Pub. 11–7–61. Filed 2–28–61.

726,631. VANO. B. T. Babbitt, Inc. SN 114,673. Pub. 11–7–61. Filed 3–1–61.

726,632. GRO-ALL STOPP AND DESIGN. Central Chemical Corporation. SN 115,582. Pub. 11–7–61. Filed 3–14–61.

726,633. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 118,071. Pub. 11–7–61. Filed 4–18–61.

726,634. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 118,073. Pub. 11–7–61. Filed 4–18–61.

Class 8—Smokers' Artides, Not Including Tobacco Products

726,635. REPRESENTATION OF A HUMAN MALE HEAD. Cliff Arquette. SN 105,597. Pub. 11–7–61. Filed 10–3–60.

726,636. SMOKER'S CADDY. Distinguished Gift Manufacturers, Inc. SN 107,924. Pub. 11–7–61. Filed 11–7–60.

Class 10—Fertilizers

726,637. ZINC-EL-IZER. Bennett Chemical Company. SN 115,990. Pub. 11–7–61. Filed 3–20–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

726,638. A SINKRONIZE PRODUCT. Elkay Manufacturing Company. SN 101,316. Pub. 11–7–61. Filed 7–22–60.

726,639. JEWEL RAY. M & H Industries, d.b.a. Hyer Hardware Mfg. Co. SN 104,736. Pub. 11–7–61. Filed 9–19–60.

726,640. GOLDEN BANTAM. Henry Valve Company. SN 105,896. Pub. 11–7–61. Filed 10–6–60.

726,641. PEP. Cook Machinery Co., Inc. SN 107,835. Pub. 11–7–61. Filed 11–4–60.

726,642. SPEEDCON AND DESIGN. Horace T. Potts Company. SN 114,640. Pub. 11–7–61. Filed 2–28–61.

726,643. E-Z-LOK. Dayco Corporation. SN 123,620. Pub. 11–7–61. Filed 7–10–61.

726,644. PATRIOT WARE ETC. AND DESIGN. Revere Copper and Brass Incorporated. SN 125,248. Pub. 11–7–61. Filed 8–2–61.

Class 14—Metals and Metal Castings and Forgings

726,645. LIHLITE. Eugen Wuster, d.b.a. Wuster & Co. SN 114,816. Pub. 11–7–61. Filed 3–2–61.

Class 15—Oils and Greases

726,646. MOTOR MOLY. Pan-American Laboratories, Inc. SN 98,393. Pub. 11–7–61. Filed 6–3–60.

Class 16—Protective and Decorative Coatings

726,647. BEE. Bee Chemical Company. SN 105,947. Pub. 11–7–61. Filed 10–7–60.

726,648. RUBBA-MARK. Harbor Specialties, Inc. SN 121,729. Pub. 11–7–61. Filed 6–9–61.

726,649. CHROMSAVER AND DESIGN. Restorz Products, Inc. SN 124,845. Pub. 11–7–61. Filed 7–27–61.

Class 17—Tobacco Products

726,650. JOHN COTTON OF EDINBURGH AND DESIGN. John Cotton Limited. SN 94,744. Pub. 11–7–61. Filed 4–11–60.

Class 18—Medicines and Pharmaceutical Preparations

726,651. CAPITONIC AND DESIGN. Robert R. Bischoff, d.b.a. Rollins. SN 108,868. Pub. 11–7–61. Filed 11–22–60.

726,652. EUDRAGIT. Röhm & Haas G.m.b.H. SN 109,736. Pub. 11–7–61. Filed 12–5–60.

726,653. HI-G MIST. Hi-G, Inc. SN 110,335. Pub. 11–7–61. Filed 12–16–60.

726,654. PALMABEADS. Hoffmann-La Roche Inc. SN 111,275. Pub. 11–7–61. Filed 1–4–61.

726,655. HYPNAZOL. Societe d'Exploitation des Laboratoires Jacques Logeais, societe à responsabilité limitée. SN 111,294. Pub. 11–7–61. Filed 1–4–61.

726,656. MEGOBAR. Nicholas International Limited. SN 112,066. Pub. 11–7–61. Filed 1–18–61.

726,657. BONE TONE. Poul-An Laboratories, Inc. SN 112,770. Pub. 11–7–61. Filed 1–30–61.

726,658. ANANASE. William H. Rorer, Inc. SN 117,808. Pub. 11–7–61. Filed 4–13–61.

726,659. QUANTI-VITE. Hoyt Pharmaceutical Corporation. SN 117,868. Pub. 11–7–61. Filed 4–14–61.

726,660. BLUE CHIP. Kalash Vitamin Corporation. SN 118,028. Pub. 11–7–61. Filed 4–17–61.

726,661. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 118,072. Pub. 11–7–61. Filed 4–18–61.

726,662. TRIPHYSAN. A/S Dumex (Dumex Limited). SN 118,203. Pub. 11–7–61. Filed 4–20–61.

726,663. HALINONE. U.S. Vitamin & Pharmaceutical Corporation. SN 118,624. Pub. 11–7–61. Filed 4–25–61.

726,664. HARMONYL-N. Abbott Laboratories. SN 118,633. Pub. 11–7–61. Filed 4–26–61.

726,665. TETRALYTE. Northern States Poultry Service and Laboratories, Inc., d.b.a. Northern States Laboratories. SN 119,037. Pub. 11–7–61. Filed 5–1–61.

726,666. CORSODIL. Imperial Chemical Industries Limited. SN 119,291. Pub. 11–7–61. Filed 5–4–61.

726,667. CITRALYTE. Seymour M. Gluck. SN 119,513. Pub. 11–7–61. Filed 5–8–61.

726,668. DIMERCET. Schering Corporation. SN 119,641. Pub. 11–7–61. Filed 5–9–61.

726,669. SUNICE AND DESIGN. Benjamin Green, d.b.a. Citroleum Co. SN 119,695. Pub. 11–7–61. Filed 5–10–61.

726,670. ENZY-LAX. S.C.S. Club, Inc. SN 120,012. Pub. 11–7–61. Filed 5–15–61.

726,671. VORTEL. Eli Lilly and Company. SN 120,319. Pub. 11–7–61. Filed 5–18–61.

726,672. VENOCURAN. Knoll A.G. Chemische Fabriken. SN 120,726. Pub. 11–7–61. Filed 5–24–61.

726,673. HEXANICOTOL. Philadelphia Laboratories, Inc. SN 120,742. Pub. 11–7–61. Filed 5–24–61.

726,674. PERITHIAZIDE SA. Warner-Lambert Pharmaceutical Company. SN 121,519. Pub. 11–7–61. Filed 6–6–61.

726,675. TEDRAL SA. Warner-Lambert Pharmaceutical Company. SN 121,520. Pub. 11–7–61. Filed 6–6–61.

726,676. ATHA-POWDER. Youngs Rubber Corporation. SN 121,889. Pub. 11–7–61. Filed 6–12–61.

726,677. ATHA-POWDER AP AND DESIGN. Youngs Rubber Corporation. SN 121,890. Pub. 11–7–61. Filed 6–12–61.

726,678. MENSERENE. Olin Mathieson Chemical Corporation. SN 122,831. Pub. 11–7–61. Filed 6–26–61.

Class 19—Vehides

726,679. MONON. Monon Trailer & Body Mfg. Corp. SN 93,450. Pub. 11–7–61. Filed 3–22–60.

726,680. NEW MOON. New Moon Homes, Inc. SN 119,548. Pub. 11–7–61. Filed 5–8–61.

Class 21—Electrical Apparatus, Machines, and Supplies

726,681. ERSA. Ernst Sachs, Erste Spezialfabrik Elektrischer Lotkolben und Lotbader K.G. SN 106,194. Pub. 11–7–61. Filed 10–11–60.

726,682. REDI-CHARGE. The Goodyear Tire & Rubber Company. SN 115,689. Pub. 10–31–61. Filed 3–15–61.

Class 22—Games, Toys, and Sporting Goods

726,683. REPRESENTATION OF A HUMAN MALE HEAD. Cliff Arquette. SN 105,598. Pub. 11–7–61. Filed 10–3–60.

726,684. REPRESENTATION OF MAN. Cliff Arquette. SN 105,603. Pub. 11–7–61. Filed 10–3–60.

726,685. SUP-MATIC. S.A. Frank & Pignard. SN 107,124. Pub. 11–7–61. Filed 10–25–60.

726,686. KEEP YOUR BALANCE AND DESIGN. Erickson and Frederick. SN 108,163. Pub. 11–7–61. Filed 11–10–60.

726,687. WAZOO. Derbie Line Limited. SN 110,260. Pub. 11–7–61. Filed 12–15–60.

726,688. HUMMELWERK. W. Goebel Porzellanfabrik. SN 114,209. Pub. 11–7–61. Filed 2–23–61.

726,689. EVA HARTA. W. Goebel Porzellanfabrik. SN 114,213. Pub. 11–7–61. Filed 2–23–61.

726,690. V AND DESIGN. W. Goebel Porzellanfabrik. SN 114,216. Pub. 11–7–61. Filed 2–23–61.

726,691. CHEWEY BOB. David A. De Long, d.b.a. De Long Lures. SN 115,311. Pub. 11–7–61. Filed 3–10–61.

726,692. SAF-T-TURF. Nissen Trampoline Company. SN 116,743. Pub. 11–7–61. Filed 3–29–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

726,693. KWIKLOK. Falcon Tool Company. SN 105,349. Pub. 11–7–61. Filed 9–28–60.

726,694. SNAP-OUT. Jack W. Pyland. SN 107,786. Pub. 11–7–61. Filed 11–3–60.

726,695. SATURN. Solar Aircraft Company. SN 110,188. Pub. 11–7–61. Filed 11–25–60.

726,696. QUIKORE. The Osborn Manufacturing Company. SN 113,941. Pub. 11–7–61. Filed 2–17–61.

726,697. PENNY PLUMBER. General Wire Spring Company. SN 115,049. Pub. 11–7–61. Filed 3–7–61.

726,698. FAIRLANE. Williams Products Corporation. SN 115,103. Pub. 11–7–61. Filed 3–7–61.

726,699. VACSORB. Varian Associates. SN 115,550. Pub. 11–7–61. Filed 3–13–61.

726,700. MIL-A-TIL. Frank E. Miller, SN 118,160. Pub. 11–7–61. Filed 4–19–61.

726,701. BTF. Bedford Tool and Forge Company. SN 118,215. Pub. 11–7–61. Filed 4–20–61.

726,702. BEDCO. Bedford Tool and Forge Company. SN 118,321. Pub. 11–7–61. Filed 4–21–61.

Class 26—Measuring and Scientific Appliances

726,703. STYLIZED LETTER P. Photostat Corporation. SN 84,090. Pub. 11–7–61. Filed 10–27–59.

726,704. Y-COR. Daystrom, Incorporated. SN 94,967. Pub. 11–7–61. Filed 4–13–60.

726,705. TORQUOMETER. B. and F. Instruments, Inc., d.b.a. B & F Instruments, Inc. and B & F. SN 97,444. Pub. 11–7–61. Filed 5–19–60.

726,706. GAMMAPROBE. The Budd Company. SN 101,069. Pub. 11–7–61. Filed 6–27–60.

726,707. ACCU-LITE. Accu-Tech Corp. SN 106,873. Pub. 11–7–61. Filed 10–21–60.

726,708. MOTOTHERM AND DESIGN. Motometer Hermann Schlaich. SN 107,037. Pub. 11–7–61. Filed 10–24–60.

726,709. MOTOCO. Motometer Hermann Schlaich. SN 107,038. Pub. 11–7–61. Filed 10–24–60.

726,710. LINCE. Ferrania Società per Azioni. SN 107,122. Pub. 11–7–61. Filed 10–25–60.

726,711. DEKAMATIC. Electro Scientific Industries, Inc. SN 107,423. Pub. 11–7–61. Filed 10–31–60.

726,712. VISTAMATIC AND DESIGN. Empisal (Proprietary) Limited, d.b.a. Empisal Textile Machinery Corporation and as Home Industries Schools. SN 107,748. Pub. 11–7–61. Filed 11–3–60.

726,713. SALDOQUICK. Siemag Feinmechanische Werke G.m.b.H. SN 109,902. Pub. 11–7–61. Filed 12–8–60.

726,714. MULTIQUICK. Siemag Feinmechanische Werke G.m.b.H. SN 109,903. Pub. 11–7–61. Filed 12–8–60.

726,715. SHIFT-O-MATIC. Autophon A.G. SN 111,153. Pub. 11–7–61. Filed 1–3–61.

726,716. TLC. Robertshaw-Fulton Controls Company. SN 113,765. Pub. 11–7–61. Filed 2–15–61.

726,717. AUSTINE LA MAR. General Features Corporation. SN 115,684. Pub. 11–7–61. Filed 3–15–61.

726,718. CAROUSEL. Eastman Kodak Company. SN 117,850. Pub. 11–7–61. Filed 4–14–61.

726,719. COCKTAILMATIC. American Machine and Metals, Inc. SN 117,938. Pub. 11–7–61. Filed 4–17–61.

726,720. WOLF. Wolf X-Ray Products Inc. SN 118,627. Pub. 11–7–61. Filed 4–25–61.

726,721. REGENT. General Aniline & Film Corporation. SN 118,680. Pub. 11–7–61. Filed 4–26–61.

726,722. PLASTI-CORDER. C. W. Brabender Instruments, Inc. SN 118,761. Pub. 11–7–61. Filed 4–27–61.

726,723. VISCO-CORDER. C. W. Brabender Instruments, Inc. SN 118,762. Pub. 11–7–61. Filed 4–27–61.

726,724. UVISCAN. Buchler Instruments, Inc. SN 118,857. Pub. 11–7–61. Filed 4–28–61.

Class 27—Horological Instruments

726,725. RACINE ROYALE. Jules Racine & Company, Inc. SN 116,426. Pub. 11–7–61. Filed 3–24–61.

726,726. RACINE ROYALE AND DESIGN. Jules Racine & Company, Inc. SN 116,427. Pub. 11–7–61. Filed 3–24–61.

Class 28—Jewelry and Precious-Metal Ware

726,727. CTO. O. C. Tanner Jewelry Co. SN 116,763. Pub. 11–7–61. Filed 3–29–61.

Class 30—Crockery, Earthenware, and Porcelain

726,728. REPRESENTATION OF A HUMAN MALE HEAD. Cliff Arquette. SN 105,599. Pub. 11–7–61. Filed 10–3–60.

Class 32—Furniture and Upholstery

726,729. "PASHA-PILLOW." Fine Art Products, Inc. SN 115,462. Pub. 11–7–61. Filed 3–13–61.

Class 37—Paper and Stationery

726,730. MONEY MANAGER AND DESIGN. Damil Company. SN 114,451. Pub. 11–7–61. Filed 2–27–61.

726,731. SPACEWEIGHT. Radio Frequency Laboratories, Inc. SN 118,194. Pub. 11–7–61. Filed 4–19–61.

726,732. CASTELL PARAPINK. A. W. Faber-Castell Pencil Co., Inc. SN 119,276. Pub. 11–7–61. Filed 5–4–61.

726,733. TRI ANGLE. Triangle Business Machines, Inc. SN 119,575. Pub. 11–7–61. Filed 5–8–61.

726,734. AIRCO AND DESIGN. Air Reduction Company, Incorporated. SN 119,736. Pub. 11–7–61. Filed 5–11–61.

726,735. FAMILY VUE. General Products. SN 119,961. Pub. 11–7–61. Filed 5–15–61.

726,736. BOUNCEBACK. Ernest Hazel, Jr., Inc., d.b.a. Hazel County Record Binders. SN 119,967. Pub. 11–7–61. Filed 5–15–61.

726,737. RING-O-RAMA. A. J. Siris Products Corp. SN 120,025. Pub. 11–7–61. Filed 5–15–61.

726,738. PHOTO-TINTS. L & H Envelope Corp. SN 120,317. Pub. 11–7–61. Filed 5–18–61.

726,739. ZIPCARD. The Standard Register Company. SN 120,350. Pub. 11–7–61. Filed 5–18–61.

726,740. TEMPO-TRONIC. Milo Harding Company. SN 120,551. Pub. 11–7–61. Filed 5–22–61.

726,741. KEY AND DESIGN. Springfield Tablet Manufacturing Company. SN 120,915. Pub. 11–7–61. Filed 5–26–61.

Class 38—Prints and Publications

726,742. HOWARD W. SAMS AND DESIGN. Howard W. Sams & Co., Inc. SN 105,384. Pub. 11–7–61. Filed 9–28–60.

726,743. REFRACTOGRAM. Holophane Company, Inc. SN 107,263. Pub. 11–7–61. Filed 10–27–60.

726,744. JEEPERS AND CREEPERS. Paramount Pictures Corporation. SN 107,580. Pub. 11–7–61. Filed 11–1–60.

726,745. MODERN MADCAP. Paramount Pictures Corporation. SN 107,581. Pub. 11–7–61. Filed 11–1–60.

726,746. BARACA-PHILATHEA. World Wide Baraca and Philathea Union. SN 108,731. Pub. 11–7–61. Filed 11–2–60.

726,747. BARACA PHILATHEA ETC. AND DESIGN. World Wide Baraca and Philathea Union. SN 108,732. Pub. 11–7–61. Filed 11–2–60.

726,748. THE JEWELERS' COMBINE. Khen Klassics Advertising, Inc. SN 109,801. Pub. 11–7–61. Filed 12–7–60.

726,749. INTERNATIONAL MANAGEMENT. McGraw-Hill Publishing Company, Inc. SN 114,980. Pub. 11–7–61. Filed 3–6–61.

726,750. REPRESENTATION OF SIGN OF HERMES. The Trustees of Columbia University in the City of New York. SN 117,661. Pub. 11–7–61. Filed 4–11–61.

726,751. FANCIFUL DESIGN. Worley Publishing Co., Inc. SN 117,826. Pub. 11–7–61. Filed 4–13–61.

726,752. JTC SITE-A-CARD SYSTEM. Jersey Tab Card Corporation. SN 118,888. Pub. 11–7–61. Filed 4–28–61.

Class 39—Clothing

726,753. BOULE D'OR AND DESIGN. Theodore Wachtel, d.b.a. Dassenfabriek Boule d'Or. SN 103,748. Pub. 11–7–61. Filed 8–31–60.

726,754. MILLION MILE. McGregor-Doniger Inc. SN 106,919. Pub. 5–16–61. Filed 10–21–60.

726,755. MELBROKE. Spiegel Neckwear Co., Inc. SN 108,400. Pub. 11–7–61. Filed 11–14–60.

726,756. THERE IS A MAIDENFORM FOR EVERY TYPE OF FIGURE. Maidenform, Inc. SN 115,362. Pub. 11–7–61. Filed 3–10–61.

Class 40—Fancy Goods, Furnishings, and Notions

726,757. "SNAP-ON." Wilson Manufacturing Corporation, by change of name from Wilson Products, Incorporated. SN 46,789. Pub. 3–8–60. Filed 2–27–58.

Class 43—Thread and Yarn

726,758. SPRINGSET. United States Rubber Company. SN 90,961. Pub. 11–7–61. Filed 2–15–60.

Class 45—Soft Drinks and Carbonated Waters

726,759. PURITAS. Arrowhead and Puritas Waters, Inc. SN 117,942. Pub. 11–7–61. Filed 4–17–61.

Class 46—Foods and Ingredients of Foods

726,760. MAMMA MIA. D'Amico Macaroni Company, assignee of G. D'Amico Macaroni Company. SN 54,744. Pub. 9–29–59. Filed 7–3–58.

726,761. HAPPY TIME. Illinois Baking Corporation. SN 76,214. Pub. 1–24–61. Filed 6–22–59.

726,762. VELTEX. Hunt Foods and Industries, Inc., by merger from Wesson Oil & Snowdrift Company, Inc. SN 99,684. Pub. 10–31–61. Filed 6–24–60.

726,763. ROSE. Fnibish Corporation. SN 104,914. Pub. 11–7–61. Filed 9–21–60.

726,764. DEBORAH ROSS AND DESIGN. The B. Manischewitz Company. SN 105,446. Pub. 11–7–61. Filed 9–29–60.

726,765. CHARLEY WEAVER AND REPRESENTATION OF MAN'S HEAD. Cliff Arquette. SN 105,607. Pub. 11–7–61. Filed 10–3–60.

726,766. CHARLIE WEAVER'S FOR "MY PEOPLE" AND MAN'S PORTRAIT. Cliff Arquette. SN 105,608. Pub. 11–7–61. Filed 10–3–60.

726,767. CHARLEY WEAVER'S MT. IDY CANDIES AND HUMAN PORTRAIT. Cliff Arquette. SN 105,609. Pub. 11–7–61. Filed 10–3–60.

726,768. ICEBERG. Aunt Jane's Foods, Inc. SN 105,614. Pub. 11–7–61. Filed 10–3–60.

726,769. HOLANSTAR. August C. Kirchhoff & Co. SN 105,988. Pub. 11–7–61. Filed 10–7–60.

726,770. LE SUEUR. Green Giant Company. SN 106,257. Pub. 11–7–61. Filed 10–12–60.

726,771. HONEYCOMB. C. J. Van Houten & Zoon, N.V. SN 106,363. Pub. 11–7–61. Filed 10–13–60.

726,772. DIAMOND CRYSTAL. Diamond Crystal Salt Company. SN 106,481. Pub. 11–7–61. Filed 10–17–60.

726,773. RED-T-KWIK. Texas Meat Packers, Inc., assignee of Texas Meat and Provision Co. SN 110,384. Pub. 7–18–61. Filed 12–16–60.

726,774. TOBIN'S BLUE RIBBON. Tobin Packing Co., Inc. SN 110,901. Pub. 11–7–61. Filed 12–27–60.

726,775. DAINTY BISCUIT AND DESIGN. Randolph Mills, Inc. SN 111,290. Pub. 11–7–61. Filed 1–4–61.

726,776. HOT ROD. Corel Food Products Co. SN 111,588. Pub. 11–7–61. Filed 1–10–61.

726,777. HUSMAN'S. The Frank Herschede Company, d.b.a. Husman Potato Products Company. SN 112,259. Pub. 11–7–61. Filed 1–23–61.

726,778. UNCLE BEN'S. Uncle Ben's Inc. SN 112,339. Pub. 11–7–61. Filed 1–23–61.

726,779. INVINCIBLE. The Procter & Gamble Company. SN 112,859. Pub. 11–7–61. Filed 1–31–61.

726,780. SENTRY'S. Sentry Markets, Inc. SN 113,566. Pub. 11–7–61. Filed 2–13–61.

726,781. SWANSON S AND DESIGN IN A TRIANGLE. Campbell Soup Company. SN 113,906. Pub. 11–7–61. Filed 2–17–61.

726,782. TV. Campbell Soup Company. SN 113,907. Pub. 11–7–61. Filed 2–17–61.

726,783. FRIENDLY. Bruce Church, Inc. SN 117,453. Pub. 11–7–61. Filed 4–10–61.

726,784. MAYZEE. E. C. Mazzle, d.b.a. Mazzle Farms. SN 117,515. Pub. 11–7–61. Filed 4–10–61.

726,785. FRIENDLY. Lee Patten Seed Company. SN 118,165. Pub. 11–7–61. Filed 4–19–61.

726,786. AKIVA. Asche-Bandor Corporation. SN 118,205. Pub. 11–7–61. Filed 4–20–61.

726,787. SUNNYBRAE. San Jose Canning Co. SN 120,468. Pub. 11–7–61. Filed 4–17–61.

Class 47—Wines

726,788. WINCARNIS. Coleman & Co. Limited. SN 116,291. Pub. 11–7–61. Filed 3–23–61.

Class 49—Distilled Alcoholic Liquors

726,789. BOURBONVILLE. Schenley Distillers, Inc. SN 118,106. Pub. 11–7–61. Filed 4–18–61.

Class 50—Merchandise Not Otherwise Classified

726,790. PEETZA PETE. Albert Selsky, d.b.a. Selcraft Products Company. SN 83,246. Pub. 11–7–61. Filed 10–14–59.

726,791. BE-BE-KEW. Albert Selsky, d.b.a. Selcraft Products Company. SN 83,247. Pub. 11–7–61. Filed 10–14–59.

726,792. KATRINA. Albert Selsky, d.b.a. Selcraft Products Company. SN 83,248. Pub. 11–7–61. Filed 10–14–59.

726,793. ALBERT STAEHLE. W. Goebel Porzellanfabrik. SN 114,220. Pub. 11–7–61. Filed 2–23–61.

726,794. PRESTO-DAB. Irving W. Rice & Co., Inc. SN 115,526. Pub. 11–7–61. Filed 3–13–61.

Class 51—Cosmetics and Toilet Preparations

726,795. ELEGANT TOUCH. Earl G. Schwarz. SN 101,223. Pub. 11–7–61. Filed 7–18–60.

726,796. MISSLYN. Ivo Lechner. SN 103,154. Pub. 11–7–61. Filed 8–22–60.

726,797. MR. TILFORD. Park & Tilford. SN 103,951. Pub. 11-7-61. Filed 9-6-60.

726,798. MARIPOSA THE ARISTOCRAT OF LIPSTICK. Mariposa Products Co. SN 106,616. Pub. 11-7-61. Filed 10-18-60.

726,799. FINISHING TOUCH. Lehn & Fink Products Corporation, d.b.a. Tussy Cosmetics. SN 108,645. Pub. 11-7-61. Filed 11-17-60.

726,800. GLIMMER. John H. Breck, Inc. SN 113,795. Pub. 11-7-61. Filed 2-16-61.

726,801. ENDAC. Helene Curtis Industries, Inc., d.b.a. Helene Curtis Laboratories. SN 116,888. Pub. 11-7-61. Filed 3-31-61.

726,802. SUN UP. The Gillette Company. SN 117,188. Pub. 11-7-61. Filed 4-5-61.

726,803. ECLIPSE. The Mennen Company. SN 117,722. Pub. 11-7-61. Filed 4-12-61.

Class 52 — Detergents and Soaps

726,804. SCALP BRACER. The Mennen Company. SN 113,745. Pub. 11-7-61. Filed 2-15-61.

726,805. HARTZ MOUNTAIN. Hartz Mountain Products Corp. SN 118,074. Pub. 11-7-61. Filed 4-18-61.

Service Marks

Class 100 — Miscellaneous

726,806. GROTESQUE PICTURE OF POLICEMAN. National Corporation Service, Inc. SN 102,497. Pub. 11-7-61. Filed 8-11-60.

726,807. PREMIERE AND DESIGN. Premiere Motels, Inc. SN 103,479. Pub. 11-7-61. Filed 8-26-60.

726,808. MP ETC. AND DESIGN. The Metal Products Company. SN 111,343. Pub. 11-7-61. Filed 1-5-61.

726,809. AROUND THE WORLD AND DESIGN. Hilton Hotels Corporation. SN 111,496. Pub. 11-7-61. Filed 1-9-61.

726,810. HARVEY'S FAMOUS RESTAURANT. Harvey's, Inc. SN 113,643. Pub. 11-7-61. Filed 2-14-61.

726,811. NEDICKS. Nedick's Stores, Inc. SN 115,838. Pub. 11-7-61. Filed 3-16-61.

Class 101 — Advertising and Business

726,812. SAMUEL E. BOGLEY INC. AND DESIGN. Samuel E. Bogley, Incorporated. SN 107,731. Pub. 11-7-61. Filed 11-3-60.

726,813. INTERVENCO. International Vending Corp. SN 113,921. Pub. 11-7-61. Filed 2-17-61.

726,814. THE COMPETITIVE EDGE. Warwick & Legler, Inc. SN 114,379. Pub. 11-7-61. Filed 2-24-61.

Class 102 — Insurance and Financial

726,815. THE EXPRESSWAY BANK. The Mid-City National Bank of Chicago. SN 113,124. Pub. 11-7-61. Filed 2-6-61.

726,816. LIBERTY LIFE AND DESIGN. Liberty Life Insurance Company. SN 114,232. Pub. 11-7-61. Filed 2-23-61.

Class 105 — Transportation and Storage

726,817. REPRESENTATION OF A BEAVER AND DESIGN. National Marine Service Incorporated. SN 106,215. Pub. 11-7-61. Filed 10-11-60.

726,818. AAA INTERNATIONAL TRAVEL SERVICE AND DESIGN. The American Automobile Association (Incorporated). SN 112,820. Pub. 11-7-61. Filed 1-31-61.

726,819. AAA WORLD-WIDE TRAVEL SERVICE AND DESIGN. The American Automobile Association (Incorporated). SN 112,821. Pub. 11-7-61. Filed 1-31-61.

726,820. NA AND DESIGN. North American Van Lines, Inc. SN 115,651. Pub. 11-7-61. Filed 2-24-61.

Class 107 — Education and Entertainment

726,821. BLACK SHEEP CLUB AND DESIGN. Black Sheep Club, Inc. SN 101,725. Pub. 11-7-61. Filed 7-28-60.

Collective Membership Marks

Class 200

726,822. OIL HEAT ETC. AND DESIGN. Oil Heat Institute of Long Island, Inc. SN 68,511. Pub. 4-19-60. Filed 2-26-59.

726,823. AMERICAN INSTITUTE OF CERTIFIED PUBLIC ACCOUNTANTS. American Institute of Certified Public Accountants. SN 114,395. Pub. 11-7-61. Filed 2-27-61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

726,824. Standard Pressed Steel Co., Jenkintown, Pa. SN 92,509. Filed P.R. 3-9-60; Am. S.R. 8-29-61.

SLEEV-LOCK

For Aircraft Fasteners, Otherwise Known as Blind Fasteners.
First use Aug. 7, 1959.

Class 16 — Protective and Decorative Coatings

726,825. Lenoir Wood Finishing Company, Lenoir, N.C. SN 89,177. Filed P.R. 1-18-60; Am. S.R. 11-27-61.

GENUINE CRYSTAL PLASTIC

For Liquid Polyester Plastic Finish for Furniture.
First use Oct. 12, 1959.

Class 18 — Medicines and Pharmaceutical Preparations

726,826. Reid Laboratories, Inc., Atlanta, Ga. SN 83,241. Filed P.R. 10-14-59; Am. S.R. 10-30-61.

REID

For Medicinal Preparations.
First use Dec. 6, 1956.

Class 22 — Games, Toys, and Sporting Goods

726,827. Mason Tackle, Otisville, Mich. SN 68,289. Filed P.R. 2-24-59; Am. S.R. 10-11-61.

QUICK CHANGE

For Fishing Line Leaders.
First use in 1938.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

726,828. Worthington Corporation, Harrison, N.J. SN 107,396. Filed P.R. 10-28-60; Am. S.R. 10-11-61.

MULTI-WEDGE DRIVE

For Power-Transmission Machinery Comprising Belt Drives Consisting of Rotary Sheaves Having Flexible Belts Cooperating Therewith To Transmit Rotary Motion From One Sheave to the Other.
First use September 1960.

Class 37 — Paper and Stationery

726,829. Pak-Well Paper Products Company, Portland, Oreg. SN 72,350. Filed P.R. 4-27-59; Am. S.R. 10-20-61.

PUT A SMILE IN YOUR LUNCH

For Lunch Bags.
First use Apr. 13, 1959.

726,830. Leafsaver Company, New York, N.Y. SN 112,965. Filed P.R. 2-2-61; Am. S.R. 10-25-61.

LEAFSAVERS

For Reinforcements for Looseleaf Pages.
First use Dec. 1, 1953.

Class 38 — Prints and Publications

726,831. Union Carbide Corporation, New York, N.Y. SN 90,664. Filed P.R. 2-9-60; Am. S.R. 10-25-61.

NEWS AND TRENDS

For Periodical for Working Editors Interested in the Activities of the Chemical Industry.
First use on or about July 1, 1959.

726,832. Ceramic Publications, Inc., Cleveland, Ohio. SN 95,420. Filed P.R. 4-20-60; Am. S.R. 10-24-61.

NONMETALLIC MINERALS PROCESSING

For Publication Published From Time to Time.
First use Apr. 11, 1960.

Class 39 — Clothing

726,833. Leslie Fay, Inc., New York, N.Y. SN 95,991. Filed P.R. 4-28-60; Am. S.R. 10-24-61.

FOR THE TYPICAL AMERICAN SIZE

For Ladies' Suits, Jackets, and Skirts.
First use October 1957.

Class 46 — Foods and Ingredients of Foods

726,834. Fleetwood Company, d.b.a. Wallace, Chicago, Ill. SN 94,579. Filed P.R. 4-7-60; Am. S.R. 1-16-61.

WALLACE SUPER DIETARY MEALZ

For Food Concentrate in Powdered Form Consisting Principally of Milk Solids, Vegetable Proteins, Etc., With Vitamins and Minerals Added for Use in Weight Control.
First use Jan. 2, 1960.

726,835. Pilz-Konserven AG. vorm. Stofer & Söhne, Pratteln, Switzerland. SN 101,198. Filed P.R. 7-20-60; Am. S.R. 11-17-61.



The English translation of the word "Steinpilze" is "yellow boletus."
For Canned Mushrooms.
First use in January 1952; in commerce May 14, 1952.

726,836. Pilz-Konserven AG. vorm. Stofer & Söhne, Pratteln, Switzerland. SN 101,199. Filed P.R. 7-20-60; Am. S.R. 11-17-61.



The English translation of the word "Pfifferlinge" is "trifles."
For Canned Mushrooms.
First use in October 1951; in commerce in October 1951.

Class 51 — Cosmetics and Toilet Preparations

726,837. Richard Hudnut, Morris Plains, N.J. SN 81,819. Filed P.R. 9-22-59; Am. S.R. 11-9-61.

COLOR FOAM

For Hair Coloring.
First use Aug. 31, 1959.

726,838. Richard Hudnut, Morris Plains, N.J. SN 82,583. Filed P.R. 10-2-59; Am. S.R. 8-22-61.

GOLDEN WEAVE

For Lipstick.
First use Sept. 10, 1959.

726,839. Shulton, Inc., Clifton, N.J. SN 114,359. Filed 2-24-61.



The mark comprises the contour or conformation of a white pottery glass bottle in which the goods are sold.

For After Shave Lotion.

First use about April 1938.

Service Marks

Class 100 — Miscellaneous

726,840. Crane Rental Company, Inc., Washington, D.C. SN 106,311. Filed P.R. 10-13-60; Am. S.R. 11-6-61.



For Rental of Truck Cranes.

First use Feb. 21, 1958.

Class 101 — Advertising and Business

726,841. Enterprise Expositions, Inc., New York, N.Y. SN 70,456. Filed P.R. 3-30-59; Am. S.R. 6-21-60.

THE START YOUR OWN BUSINESS EXPOSITION

For Exhibitions for Firms Offering Business Opportunities and Individuals Who Want To Start Their Own Business.

First use Mar. 11, 1959.

726,842. National Downtown Week, Inc., New York, N.Y. SN 86,895. Filed P.R. 12-8-59; Am. S.R. 7-26-61.

NATIONAL DOWNTOWN WEEK

For Advertising, Publicity, and Promotion of the Business of Others in Downtown Sections of Cities Through Dissemination of Promotional Literature to the General Public and Through Sponsoring a National Contest.

First use June 19, 1958.

Class 106 — Material Treatment

726,843. Cranston Print Works Company, New York, N.Y. SN 107,916. Filed P.R. 11-7-60; Am. S.R. 11-1-61.

CRANSTON *FINISHED*

The word "Finished" is disclaimed apart from the mark as shown.

For Printing and Chintzizing Textile Fabrics of Others, and Applying a Spot and Wrinkle Resistant and Water Repellent Finish Thereto.

First use Oct. 1, 1960.

TRADEMARK REGISTRATIONS RENEWED

147,762. GREASE-OFF "IT CLEANS EVERYTHING." Cl. 52. 11-1-21.
147,916. HARRIET HUBBARD AYER. Cl. 52. 11-8-21.
148,153. CHAR-MING. Cl. 42. 11-8-21.
148,715. TRIPLE XXX. Cl. 45. 11-22-21.
149,108. QURET. Cl. 18. 12-6-21.
149,252. HOME WEVE. Cl. 37. 12-6-21.
149,488. RED WING AND DESIGN. Cl. 46. 12-13-21.
149,925. RAY-O-VAC. Cl. 21. 12-27-21.
150,045. CLENSEL. Cl. 51. 12-27-21.
150,046. CLENSEL. Cl. 6. 12-27-21.
150,116. CIBANIT. Cl. 6. 12-27-21.
151,231. DIAMOND EDGE IS A QUALITY PLEDGE. Cl. 22. 1-24-22.
151,233. TANITE. Cl. 16. 1-24-22.
152,977. AJAX. Cl. 46. 3-7-22.
153,751. BETTY BRAND AND DESIGN. Cl. 46. 3-28-22.
153,803. HEART DESIGN. Cl. 46. 3-28-22.
153,886. UNION. Cl. 26. 3-28-22.
154,053. EFFICO. Cl. 34. 4-4-22.
154,577. BOWEY AND DESIGN. Cl. 46. 4-18-22.
154,626. MARX MADE. Cl. 39. 4-18-22.
154,655. BUTTER-NUT. Cl. 46. 4-18-22.
154,718. TYSON. Cl. 39. 4-18-22.
154,913. LINKS AND DESIGN OF CHAIN. Cl. 17. 5-16-22.
155,128. TI-TALL. Cl. 16. 5-16-22.
387,951. ENGAVATONE ETC. AND DESIGN. Cl. 38. 6-10-41.
390,272. GOLDEN BAR. Cl. 46. 9-16-41.
391,061. CHATEAU THIERRY. Cl. 47. 10-21-41.
391,244. RENEX. Cl. 6. 10-28-41.
391,352. ELECTRESTEEM. Cl. 34. 11-4-41.
391,524. LIBERTY. Cl. 24. 11-11-41.
391,692. JOCKEY. Cl. 39. 11-18-41.
391,785. CHM ETC. AND DESIGN. Cl. 23. 11-25-41.
391,786. LINE DESIGN. Cl. 23. 11-25-41.
391,799. FERROX. Cl. 12. 11-25-41.
391,821. SUPERMAN AND DESIGN. Cl. 38. 11-25-41.
391,972. BEAU CATCHER. Cl. 51. 12-2-41.
392,016. PERMAVAR. Cl. 16. 12-2-41.
392,017. SUNRUCO SPUNFOAM AND DESIGN. Cl. 32. 12-2-41.
392,100. SUNRUCO. Cl. 22. 12-9-41.
392,224. PACA-POINT. Cl. 39. 12-16-41.
392,380. SOFT FOCUS. Cl. 51. 12-23-41.
392,950. ANGEL MAID AND DESIGN. Cl. 46. 1-20-42.
393,081. BONNIE BELL NITE & DAY FOUNDATION. Cl. 51. 1-27-42.
393,135. MEJORAL. Cl. 18. 1-27-42.
393,302. "SUNBABE." Cl. 22. 2-3-42.
393,549. DESIGN OF LITTLE MAN. Cl. 45. 2-17-42.
393,738. IMPERMEX. Cl. 12. 3-3-42.
393,886. B-E-T-S. Cl. 18. 3-10-42.
394,041. WA MONOGRAM. Cl. 2. 3-17-42.
394,042. WA MONOGRAM. Cl. 31. 3-17-42.
394,090. HILL TOP GOLD. Cl. 46. 3-17-42.
394,250. TAM TAM. Cl. 46. 3-31-42.
394,338. WA MONOGRAM. Cl. 23. 4-7-42.
394,455. DESIGN OF LITTLE MAN. Cl. 46. 4-7-42.
394,545. WA MONOGRAM. Cl. 13. 4-14-42.
394,759. SILVER STREAK. Cl. 39. 4-28-42.
394,841. ORTHO-FUSOR. Cl. 26. 4-28-42.
394,974. DELECTA. Cl. 49. 5-5-42.
395,151. VEROCALATE. Cl. 18. 5-12-42.
395,220. HYDRO-MAGMA. Cl. 6. 5-19-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

128,191. UNION. Cl. 15. 12-23-19.

Section 8

396,831. SWORD BRAND AND DESIGN. Cl. 23. 8-4-42.
428,834. KNIGHT K AND DESIGN. Cl. 3. 4-8-47.

The following registrations issued Dec. 6, 1955

617,021. POLY-SQUEEZE. Cl. 2.
617,023. GLOMITE. Cl. 4.
617,024. PO-LITE. Cl. 4.
617,031. WESTERN. Cl. 6.
617,032. SUPER X. Cl. 6.
617,034. HYDRO-TOMIC AND DESIGN. Cl. 6.
617,039. KANGA-RETTE AND DESIGN. Cl. 8.
617,040. DECOR AND DESIGN. Cl. 12.
617,041. TRI-FORGED AND DESIGN. Cl. 12.
617,042. PRESTOSEAL. Cl. 12.
617,044. TUBDOR. Cl. 12.
617,048. DESERT CAST AND DESIGN. Cl. 12.
617,050. PINE-TIQUE AND DESIGN. Cl. 12.
617,052. YOUNG SUBURBIA. Cl. 12.
617,061. ACOUSTIKIL. Cl. 12.
617,066. GLIDE-O-MATIC AND DESIGN. Cl. 12.
617,067. GILSOTHERM. Cl. 12.
617,072. WEATHERMASTERMIND. Cl. 13.
617,081. PYRASEAL. Cl. 13.
617,084. SODA FOUNT'NETTE. Cl. 13.
617,088. MALLORY TI SHARON AND DESIGN. Cl. 14.
617,089. SUPRAL. Cl. 14.
617,093. BRUSH-CRETE AND DESIGN. Cl. 16.
617,096. HY-FLOW. Cl. 16.
617,097. SOL-TAK. Cl. 16.
617,098. VINEM. Cl. 16.
617,099. ACRYGLAS. Cl. 16.
617,101. FORDE'S WONDER LINIMENT. Cl. 18.
617,102. SYNOZID. Cl. 18.
617,103. NUTRI-X. Cl. 18.
617,104. TROPINOX. Cl. 18.
617,106. E-V-M. Cl. 18.
617,107. HYPOSIN. Cl. 18.
617,108. DANTOBROM. Cl. 18.
617,118. MYOCITIN. Cl. 18.
617,122. BIOCITIN. Cl. 18.
617,123. PACTOGEN. Cl. 18.
617,125. PLANETS AND DESIGN. Cl. 18.
617,126. AFAC. Cl. 18.
617,136. "V" LOC AND DESIGN. Cl. 19.
617,138. AQUALINE AND DESIGN. Cl. 19.
617,139. DURASAN. Cl. 19.
617,145. "MINI-BEAN." Cl. 21.
617,153. TRANSITRON INC. AND DESIGN. Cl. 21.
617,155. REGCO AND DESIGN. Cl. 21.
617,165. SIGNATURE. Cl. 21.
617,169. SIGNATURE. Cl. 21.
617,170. KAYWOODIE. Cl. 23.
617,173. MALL WITHIN DESIGN. Cl. 23.
617,181. LAND-MASTER AND DESIGN. Cl. 23.
617,184. LITTLE MINT. Cl. 23.
617,189. BECO AND DESIGN. Cl. 26.
617,190. CALICOUNT. Cl. 26.
617,205. AIR ASSOCIATES, INC. AND DESIGN. Cl. 26.
617,211. SPORTORAMA. Cl. 26.
617,212. ARCON. Cl. 26.
617,214. REFLECTOSCREEN AND DESIGN. Cl. 26.
617,217. SEQU-MATIC. Cl. 26.
617,224. ALMANAC OF LIFE. Cl. 28.
617,225. BOND-LOK. Cl. 28.
617,231. EMERSON ELECTRIC AND PYRAMID DESIGN. Cl. 34.
617,234. DRYS-ON-YA. Cl. 39.
617,236. AYRELOOM. Cl. 39.
617,237. QUILTAREES. Cl. 39.
617,238. KING BEE AND CROWN DESIGN. Cl. 39.
617,244. TEN THOUSANDS YEARS WEAR. Cl. 39.
617,246. LYKASHMERE. Cl. 39.
617,248. PERMA SUN. Cl. 40.
617,251. ORATONE. Cl. 44.
617,252. FUN WITH GUM. Cl. 46.
617,254. TREAT THE KIDS. Cl. 46.
617,258. MRS. MILLER'S CARAMEL CUP AND DESIGN. Cl. 46.
617,264. THIS AND DESIGN. Cl. 46.
617,269. WIKI WIKI DINNER ETC. Cl. 46.
617,271. OVENGLO. Cl. 46.
617,272. PEL-PAK. Cl. 46.
617,276. DUO-METAL. Cl. 50.
617,289. TOPPER AND DESIGN. Cl. 52.
617,291. DU-O-SO. Cl. 52.
617,294. LIQUID CHARM. Cl. 52.
617,295. SWEATER BRITE AND DESIGN. Cl. 52.
617,302. SOW THE SEEDS OF SALES AND DESIGN. Cl. 101.
617,303. DERBY DAYS. Cl. 101.
617,306. WEEK END OF THE MONTH AND DESIGN. Cl. 105.
617,310. SQUARE-FRY. Cl. 13.
617,312. SKY-LITE. Cl. 19.

Section 18

623,601. FIOCCO. Cl. 42. 3-20-56.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

148,174. NCR. Cl. 38. 11-8-21. The National Cash Register Company, Dayton, Ohio. Amended: In the certificate, lines 10 and 11, in the heading, and in the statement, column 2, lines 1 and 2, "weekly or oftener" is deleted and *as often* is inserted, and the drawing is amended to appear:

NCR

619,262. SKRAM. Cl. 6. 1-17-56. Magna, Inc. Hot Shot Quality Products, Inc., Memphis, Tenn. Amended to appear:

SKRAM

635,186. SALEM AND DESIGN. Cl. 30. 10-2-56. The Salem China Company, Salem, Ohio. Amended: In the statement, column 2, lines 3 and 4 are deleted, and the drawing is amended to appear:



700,790. PORCE-COTE. Cl. 12. 7–12–60. Porce-Cote Corp. Porce-Cote Research & Development Corp., Freeport, N.Y. Amended: In the statement, column 1, after line 1 , *now by change of name Porce-Cote Research & Development Corp., 106 Commercial St., Freeport, N.Y.* is inserted.

703,007. GLENSPUN. Cl. 43. 8–16–60. Glen Raven Cotton Mills, Inc., Glen Raven, N.C. Amended: In the statement, column 2, line 1, after "yarn" *of natural or synthetic fibers, or combinations thereof, manufactured on an industrial scale, and sold and used industrially for the production of fabrics or garments on an industrial scale.* is inserted.

720,191. PHENCAPTON. Cl. 6. 8–22–61. Geigy Chemical Corporation, Ardsley, N.Y. Corrected: In the statement, column 2, line 3, "herbicides" should be deleted and *insecticides* should be inserted.

721,863. KELONITE. Cl. 23. 9–26–61. Kearney Industries, Delanium Graphite Div., Raritan, N.J. Corrected: In the statement, column 1, line 1, after "Industries," *, Delanium Graphite Div.* should be inserted.

723,315. REPRESENTATION OF HUMAN FIGURE. Cl. 37. 10–31–61. Marcel Louis Michel Antoine Bich, Clichy (Seine), France. Corrected: In the statement, column 1, line 1, "Antonie" should be deleted and *Antoine* should be inserted.

723,848. HYDROFIX. Cl. 26. 11–14–61. Tellurometer (Proprietary) Limited, Plumstead, Cape Province, Union of South Africa. Corrected: In the statement, column 2, line 5, "May 70," should be deleted and *May 10*, should be inserted.

INDEX OF REGISTRANTS

JANUARY 23, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A/S Dumex (Dumex Ltd.), Copenhagen S, Denmark. 726,662, pub. 11–7–61. Cl. 18.
Abbott Laboratories, North Chicago, Ill. 726,664, pub. 11–7–61. Cl. 18.
Accu-Tech Corp., New York, N.Y. 726,707, pub. 11–7–61. Cl. 26.
Adorn Co., Chicago, Ill. 617,021, canc. Cl. 2.
Air Associates, Inc., Teterboro, N.J. 617,205, canc. Cl. 26.
Air Reduction Co., Inc., New York, N.Y. 726,734, pub. 11–7–61. Cl. 37.
Alamo Enterprises, Inc., San Antonio, Tex. 617,084, canc. Cl. 13.
American Abrasive Metals Co., Irvington, N.J. 391,799, ren. 1–23–62. Cl. 12.
American Automobile Association, The, Washington, D.C. 726,818–19, pub. 11–7–61. Cl. 105.
American Gilsonite Co., Salt Lake City, Utah. 617,067, canc. Cl. 12.
American Grease Stick Co., Muskegon Heights, Mich. 617,023, canc. Cl. 4.
American Institute of Certified Public Accountants, New York, N.Y. 726,823, pub. 11–7–61. Cl. 200.
American Machine and Metals, Inc., Sellersville, Pa. 726,719, pub. 11–7–61. Cl. 26.
Aqualine Boat Corp., Elkton, Md. 617,138, canc. Cl. 19.
Arquette, Cliff, Gettysburg, Pa. 726,635, pub. 11–7–61. Cl. 8.
Arquette, Cliff, Gettysburg, Pa. 726,728, pub. 11–7–61. Cl. 30.
Arquette, Cliff, Gettysburg, Pa. 726,765–7, pub. 11–7–61. Cl. 46.
Arquette, Cliff, Gettysburg, Pa. 726,683–4, pub. 11–7–61. Cl. 22.
Arrowhead and Puritas Waters, Inc., Los Angeles, Calif. 726,759, pub. 11–7–61. Cl. 45.
Asche-Bandor Corp., Freeport, N.Y. 726,786, pub. 11–7–61. Cl. 46.
Atlas Chemical Industries, Inc.: *See*—
Atlas Powder Co.
Atlas Powder Co., to Atlas Chemical Industries, Inc., Wilmington, Del. 391,244, ren. 1–23–62. Cl. 6.
Aunt Jane's Foods, Inc., Dearborn, Mich. 726,768, pub. 11–7–61. Cl. 46.
Autophon A.G., Solothurn, Switzerland. 726,715, pub. 11–7–61. Cl. 26.
Ayer, Harriet H., to Harriet Hubbard Ayer, Inc., New York, N.Y. 147,916, ren. 1–23–62. Cl. 52.
Ayer, Harriet Hubbard, Inc.: *See*—
Ayer, Harriet H.
B. and F. Instruments, Inc., d.b.a. B & F Instruments, Inc., and B & F, Philadelphia, Pa. 726,705, pub. 11–7–61. Cl. 26.
Babbitt, B. T., Inc., New York, N.Y. 726,631, pub. 11–7–61. Cl. 6.
Barrel Service and Engineering Co., Monrovia, Calif. 617,136, canc. Cl. 19.
Bausch & Lomb Inc.: *See*—
Bausch & Lomb Optical Co.
Bausch & Lomb Optical Co., to Bausch & Lomb Inc., Rochester, N.Y. 394,841, ren. 1–23–62. Cl. 26.
Bedford Tool and Forge Co., Bedford, Ohio. 726,701–2, pub. 11–7–61. Cl. 23.
Bee Chemical Co., Lansing, Ill. 726,647, pub. 11–7–61. Cl. 16.
Bennett Chemical Co., Denver, Colo. 726,637, pub. 11–7–61. Cl. 10.
Berkeley Sweater Wash: *See*—
Healy, Frank D.
Bich, Marcel Louis Michel Antoine, Clichy (Seine), France. 723,315, cor. Cl. 37.
Bischoff, Robert R., d.b.a. Rollins, Atlanta, Ga. 726,651, pub. 11–7–61. Cl. 18.
Black Sheep Club, Inc., Chicago, Ill. 726,821, pub. 11–7–61. Cl. 107.
Bogley, Samuel E., Inc., Chevy Chase, Md. 726,812, pub. 11–7–61. Cl. 101.
Bond Diamond Co., Newark, N.J. 617,225, canc. Cl. 28.
Bonne Bell, Inc., Cleveland, Ohio. 393,081, ren. 1–23–62. Cl. 51.
Borden Co., The: *See*—
Red Wing Corp. Co., The.
Borden Co., The, New York, N.Y. 390,272, ren. 1–23–62. Cl. 46.
Bowey's, Inc.: *See*—
Horine & Bowey Co.
Brabender, C. W., Instruments, Inc., South Hackensack, N.J. 726,722–3, pub. 11–7–61. Cl. 26.
Breck, John H., Inc., Springfield, Mass. 726,800, pub. 11–7–61. Cl. 51.
British Aluminum Co. Ltd., The, London, England. 617,089, canc. Cl. 14.
Brown Electro-Measurement Corp., Portland, Oreg. 617,189, canc. Cl. 26.
Buchler Instruments, Inc., New York, N.Y. 726,724, pub. 11–7–61. Cl. 26.
Budd Co., The, Philadelphia, Pa. 726,706, pub. 11–7–61. Cl. 26.
Butter-Nut Foods Co.: *See*—
Paxton & Gallagher Co.
Byer-Rolnick Co., to Byer-Rolnick Hat Corp., Garland, Tex. 394,759, ren. 1–23–62. Cl. 39.
Byer-Rolnick Hat Corp.: *See*—
Byer-Rolnick Co.
California Foresteering, Placerville, Calif. 617,050, canc. Cl. 12.
Camillus Cutlery Co., New York, N.Y. 396,831, canc. Cl. 23.
Campbell Soup Co., Camden, N.Y. 726,781–2, pub. 11–7–61. Cl. 46.
Carrier Corp., Syracuse, N.Y. 617,072, canc. Cl. 13.
Carver, Harold J., Washington, D.C. 617,306, canc. Cl. 105.
Caton, Thomas R., d.b.a. Reproduction Research Laboratories, Lynbrook, N.Y. 617,276, canc. Cl. 50.
Central Chemical Corp., Hagerstown, Md. 726,632, pub. 11–7–61. Cl. 6.
Ceramic Publications, Inc., Cleveland, Ohio. 726,832. Cl. 38.
Chemical Utilities Co., The, to S. R. Levi, Cincinnati, Ohio. 147,762, ren. 1–23–62. Cl. 52.
Church, Bruce, Inc., Salinas, Calif. 726,783, pub. 11–7–61. Cl. 46.
Ciba Ltd.: *See*—
Society of Chemical Industry In Basle.
Citroleum Co.: *See*—
Green, Benjamin.
Cleveland Hobbing Machine Co., The, to Textron Inc., Cleveland, Ohio. 391,785–6, ren. 1–23–62. Cl. 23.
Coleman & Co. Ltd., Norwich, England. 726,788, pub. 11–7–61. Cl. 47.
Cook Machinery Co., Inc., Dallas, Tex. 726,641, pub. 11–7–61. Cl. 13.
Cooper's Inc., Kenosha, Wis. 391,692, ren. 1–23–62. Cl. 39.
Corel Food Products Co., Philadelphia, Pa. 726,776, pub. 11–7–61. Cl. 46.
Coro, Inc., New York, N.Y. 617,224, canc. Cl. 28.
Cotton, John, Ltd., Edinburgh, Scotland. 726,650, pub. 11–7–61. Cl. 17.
Cowles Chemical Co., Cleveland, Ohio. 726,619, pub. 11–7–61. Cl. 6.
Crane Rental Co., Inc., Washington, D.C. 726,840. Cl. 100.
Cranston Print Works Co., New York, N.Y. 726,843. Cl. 106.
Crown Industrial Products Co., Woodstock, Ill. 726,626, pub. 11–7–61. Cl. 6.
Cumberland Tobacco Works, Inc., Nashville, Tenn. 154,913, ren. 1–23–62. Cl. 17.
Curtis, Helene, Industries, Inc.: *See*—
Lentheric, Inc.
Curtis, Helene, Industries, Inc., Chicago, Ill. 726,801, pub. 11–7–61. Cl. 51.
Curtiss-Wright Corp., Carlstadt, N.J. 617,211, canc. Cl. 26.
D'Amico, G., Macaroni Co.: *See*—
D'Amico Macaroni Co.
D'Amico Macaroni Co., from G. D'Amico Macaroni Co., Steger, Ill. 726,760, pub. 9–29–59. Cl. 46.
Damil Co., Los Angeles, Calif. 726,730, pub. 11–7–61. Cl. 37.
Dassenfabriek Boule d'or: *See*—
Wachtel, Theodore.
Dayco Corp., Dayton, Ohio. 726,643, pub. 11–7–61. Cl. 13.
Daystrom, Inc., Murray Hill, N.J. 726,704, pub. 11–7–61. Cl. 26.
De Kuyper, John, & Son, Inc., New York, N.Y. 394,974, ren. 1–23–62. Cl. 49.
DeLong, David A., d.b.a. DeLong Lures, Cleveland, Ohio. 726,691, pub. 11–7–61. Cl. 22.
DeLong Lures: *See*—
DeLong, David A.
Derbie Line Ltd., Montreal, Quebec, Canada. 726,687, pub. 11–7–61. Cl. 22.
Derby Days Service, Inc., Washington, D.C. 617,303, canc. Cl. 101.
Detective Comics, Inc., to National Periodical Publications, Inc., New York, N.Y. 391,821, ren. 1–23–62. Cl. 38.
Diamond Crystal Salt Co., St. Clair, Mich. 726,621, pub. 11–7–61. Cl. 6.
Diamond Crystal Salt Co., St. Clair, Mich. 726,772, pub. 11–7–61. Cl. 46.
Diamond Match Co., The, to Diamond National Corp., New York, N.Y. 391,524, ren. 1–23–62. Cl. 24.
Diamond National Corp.: *See*—
Diamond Match Co., The.
Dietrick Corp., The: *See*—
Luden's Inc.
Distinguished Gift Manufacturers, Inc., Waterloo, Iowa. 726,636, pub. 11–7–61. Cl. 8.
Doniger, David D., & Co. Inc., New York, N.Y. 617,234, canc. Cl. 39.
D'Orsay, Marcelle, d.b.a. D'Orsay Products, New York, N.Y. 617,039, canc. Cl. 8.
D'Orsay Products: *See*—
D'Orsay, Marcelle.
Dow Chemical Co., The, Midland, Mich. 726,620, pub. 11–7–61. Cl. 6.
Dow Chemical Co., The, Midland, Mich. 726,623, pub. 11–7–61. Cl. 6.
Eastman Kodak Co., Rochester, N.Y. 726,718, pub. 11–7–61. Cl. 26.

Electric Steam Radiator Corp., Detroit, Mich., to Electric Steam Radiator Corp., Paris, Ky. 391,352, ren. 1–23–62. Cl. 34.
Electric Storage Battery Co., The: *See*— French Battery & Carbon Co.
Electro Scientific Industries, Inc., Portland, Oreg. 726,711, pub. 11–7–61. Cl. 26.
Elkay Mfg. Co., Chicago, Ill. 726,638, pub. 11–7–61. Cl. 13.
Emerson Electric Mfg. Co., The, St. Louis, Mo. 617,281, canc. Cl. 34.
Empisal (Proprietary) Ltd., d.b.a. Empisal Textile Machinery Corp. and as Home Industries Schools, Johannesburg, Union of South Africa. 726,712, pub. 11–7–61. Cl. 26.
Enterprise Expositions, Inc., New York, N.Y. 726,841. Cl. 101.
Erickson and Frederick, San Fernando, Calif. 726,686, pub. 11–7–61. Cl. 22.
Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 726,732, pub. 11–7–61. Cl. 37.
Fabrex Corp.: *See*— Mallinson, H. R., & Co. Inc.
Faibish Corp., New York, N.Y. 726,763, pub. 11–7–61. Cl. 46.
Falcon Tool Co., Detroit, Mich. 726,693, pub. 11–7–61. Cl. 23.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt/Main, Germany. 726,624, pub. 11–7–61. Cl. 6.
Fay, Leslie, Inc., New York, N.Y. 726,833. Cl. 39.
Fenway Coats, Inc., New York, N.Y. 392,224, ren. 1–23–62. Cl. 39.
Ferrania Societa per Azioni, Milan, Italy. 726,710, pub. 11–7–61. Cl. 26.
Fine Art Products, Inc., New York, N.Y. 726,729, pub. 11–7–61. Cl. 32.
Fleck, William J., d.b.a This Enterprises, Spokane, Wash. 617,264, canc. Cl. 46.
Fleer, Frank H., Corp., Philadelphia, Pa. 617,252, canc. Cl. 46.
Fleer, Frank H., Corp., Philadelphia, Pa. 617,254, canc. Cl. 46.
Fleetwood Co., d.b.a. Wallace, Chicago, Ill. 726,834. Cl. 46.
Forde, George E., d.b.a. George Edmond Forde's Medicine Co., Waco, Tex. 617,101, canc. Cl. 18.
Forde's, George Edmond, Medicine Co.: *See*— Forde, George E.
Frank, S.A. & Pignard, Cluses, France. 726,685, pub. 11–7–61. Cl. 22.
French Battery & Carbon Co., Madison, Wis., to The Electric Storage Battery Co., Philadelphia, Pa. 149,925, ren. 1–23–62. Cl. 21.
Gaylord Products, Inc.: *See*— Rosenfeld, Al, Inc.
Geigy Chemical Corp., Ardsley, N.Y. 720,191, corr. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 726,721, pub. 11–7–61. Cl. 26.
General Features Corp., New York, N.Y. 726,717, pub. 11–7–61. Cl. 26.
General Products, Chicago, Ill. 726,735, pub. 11–7–61. Cl. 37.
General Wire Spring Co., Pittsburgh, Pa. 726,697, pub. 11–7–61. Cl. 23.
Gillette Co., The, Boston, Mass. 726,802, pub. 11–7–61. Cl. 51.
Glen Raven Cotton Mills, Inc., Glen Raven, N.C. 703,007, ren. 1–23–62. Cl. 43.
Gluck, Seymour M. Far Rockaway, N.Y. 726,667, pub. 11–7–61. Cl. 18.
Goebel, W., Porzellanfabrik, Oeslau, near Coburg, Bavaria, Germany. 726,688–90, pub. 11–7–61. Cl. 22.
Goebel, W., Porzellanfabrik, Bavaria, Germany. 726,793, pub. 11–7–61. Cl. 50.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 726,682, pub. 11–7–61. Cl. 21.
Grand Life Champagne Winery: *See*— Reichmuth, Anton.
Green, Benjamin, d.b.a. Citroleum Co., Miami, Fla. 726,669, pub. 11–7–61. Cl. 18.
Green Giant Co., Le Sueur, Minn. 726,770, pub. 11–7–61. Cl. 46.
Griswold Mfg. Co., Erie, Pa. 617,310, canc. Cl. 13.
H & G Mfg. Corp., Dexter, Mo. 617,181, canc. Cl. 23.
Hague & McKenzie, Ltd., Birmingham, England. 617,081, canc. Cl. 13.
Haines City Citrus Growers Association, Haines City, Fla. 394,090, ren. 1–23–62. Cl. 46.
Harbor Specialties, Inc., Santa Ana, Calif. 726,648, pub. 11–7–61. Cl. 16.
Harrower Laboratory, Inc., The, Jersey City, N.J. 617,104, canc. Cl. 18.
Hartz Mountain Products Corp., New York, N.Y. 726,661, pub. 11–7–61. Cl. 18.
Hartz Mountain Products Corp., New York, N.Y. 726,633–4, pub. 11–7–61. Cl. 6.
Hartz Mountain Products Corp., New York, N.Y. 726,805, pub. 11–7–61. Cl. 52.
Harvey's, Inc., Washington, D.C. 726,810, pub. 11–7–61. Cl. 100.
Hazel, Ernest, Jr., Inc., d.b.a. Hazel County Record Binders, Washington, Mo. 726,736, pub. 11–7–61. Cl. 37.
Healy, Frank D., Berkeley, Calif. 617,295, canc. Cl. 52.
Henderson, John Wm., Charleston, W. Va., to Quret Mfg. Co., Muskegon, Mich. 149,108, ren. 1–23–62. Cl. 18.
Henry Valve Co., Melrose Park, Ill. 726,640, pub. 11–7–61. Cl. 13.
Herschede, Frank, Co., The, d.b.a. Husman Potato Products Co. 726,777, pub. 11–7–61. Cl. 46.
Hi-G, Inc., Long Island City, N.Y. 726,653, pub. 11–7–61. Cl. 18.
Hilton Hotels Corp., Chicago, Ill. 726,809, pub. 11–7–61. Cl. 100.
Hirschman-Pohle Co., Inc.: *See*— Hirschman, W. F., Inc.
Hirschman, W. F., Inc., Buffalo, to Hirschman-Pohle Co., Inc., Le Roy, N.Y. 154,053, ren. 1–23–62. Cl. 34.
Hoffmann-La Roche Inc., Nutley, N.J. 726,654, pub. 11–7–61. Cl. 18.
Holland Food Corp., New York, N.Y., to Koninklijke Hollandia Fabrieken Van Melkprodukten en Voedingsmiddelen N.V., Vlaardingen, Netherlands. 153,751, ren. 1–23–62. Cl. 46.
Holophane Co., Inc., New York, N.Y. 726,743, pub. 11–7–61. Cl. 38.
Holzman Handbags Inc., New York, N.Y. 726,616, pub. 11–7–61. Cl. 3.
Horine & Bowey Co., to Bowey's, Inc., Chicago, Ill. 154,577, ren. 1–23–62. Cl. 46.
Hot Shot Quality Products, Inc.: *See*— Magna, Inc.
Hoyt Pharmaceutical Corp., Newton, Mass. 726,659, pub. 11–7–61. Cl. 18.
Hudnut, Richard, Morris Plains, N.J. 726,837–8. Cl. 51.
Hunt Foods and Industries, Inc., Wilmington, Del., by merger from Wesson Oil & Snowdrift Co., Inc., New Orleans, La. 726,762, pub. 10–31–61. Cl. 46.
Husman Potato Products Co.: *See*— Herschede, Frank, Co., The.
Hutton, Glenn E., Phoenix, Ariz. 617,048, canc. Cl. 12.
Hydroponic Chemical Co., Inc., Copley, Ohio. 726,618, pub. 11–7–61. Cl. 6.
Hyer Hardware Mfg. Co.: *See*— M & H Industries.
Illinois Baking Corp., Chicago, Ill. 726,761, pub. 1–24–61. Cl. 46.
Imperial Chemical Industries Ltd., London, England. 726,666, pub. 11–7–61. Cl. 18.
Industrial Development Corp.: *See*— Society Brand Clothes, Inc.
International Vending Corp., Boston, Mass. 726,813, pub. 11–7–61. Cl. 101.
Jersey Tab Card Corp., Union, N.J. 726,752, pub. 11–7–61. Cl. 38.
Kalash Vitamin Corp., Pasadena, Calif. 726,660, pub. 11–7–61. Cl. 18.
Kaufmann, William I., Johnstown, Pa. 617,052, canc. Cl. 12.
Kearney Industries, Delanium Graphite Div., Raritan, N.J. 721,863, cor. Cl. 23.
Khen Klassics Advertising, Inc., New York, N.Y. 726,748, pub. 11–7–61. Cl. 38.
Kings Footwear Inc., New York, N.Y. 617,238, canc. Cl. 39.
Kings Footwear Inc., New York, N.Y. 617,244, canc. Cl. 39.
Kirchhoff, August C., & Co., Chicago, Ill. 726,769, pub. 11–7–61. Cl. 46.
Kirsee Products Co., Elizabeth, N.J. 617,291, canc. Cl. 52.
Knight Leather Products Co., Inc., Boston, Mass. 428,834, canc. Cl. 3.
Knoll A.G. Chemische Fabriken, Ludwigshafen (Rhine), Germany. 726,672, pub. 11–7–61. Cl. 18.
Koninklijke Hollandia Fabrieken Van Melkprodukten en Voedingsmiddelen N.V.: *See*— Holland Food Corp.
Kordell Sportswear, Inc., New York, N.Y. 617,237, canc. Cl. 39.
L & H Envelope Corp., New York, N.Y. 726,738, pub. 11–7–61. Cl. 37.
Leafsaver Co., New York, N.Y. 726,830. Cl. 37.
Lear, Inc., Grand Rapids, Mich. 617,212, canc. Cl. 26.
Lechner, Ivo, Milan, Italy. 726,796, pub. 11–7–61. Cl. 51.
Lehn & Fink Products Corp., Bloomfield, N.J. 726,799, pub. 11–7–61. Cl. 51.
Lenoir Wood Finishing Co., Lenoir, N.C. 726,825. Cl. 16.
Lentheric, Inc., New York, N.Y., to Helene Curtis Industries, Inc., Chicago, Ill. 392,380, ren. 1–23–62. Cl. 51.
Levi, Sigmund R.: *See*— Chemical Utilities Co., The.
Liberty Life Insurance Co., Greenville, S.C. 726,816, pub. 11–7–61. Cl. 102.
Lilly, Eli, and Co., Indianapolis, Ind. 726,671, pub. 11–7–61. Cl. 18.
Little Mint Food Dispenser Inc., Camp Hill, Pa. 617,184. Cl. 23.
Lloyd, Randall E., d.b.a. Regulator Engineering and Development Co., Culver City, Calif. 617,155, canc. Cl. 21.
Luden's Inc., now by change of name The Dietrick Corp., to Luden's, Inc., Reading, Pa. 617,258, canc. Cl. 46.
M & H Industries, d.b.a. Hyer Hardware Mfg. Co., Anaheim, Calif. 726,639, pub. 11–7–61. Cl. 13.
MacCosham, J. A., and Co.: *See*— MacCosham, J. A.
MacCosham, J. A., d.b.a. J. A. MacCosham and Co., Honolulu, Hawaii. 617,269, canc. Cl. 46.
Magna, Inc. Hot Shot Quality Products, Inc., Memphis, Tenn. 619,262. Am. 7(d). Cl. 6.
Maidenform, Inc., New York, N.Y. 726,756, pub. 11–7–61. Cl. 39.
Mall Tool Co., Chicago, Ill. 617,173, canc. Cl. 23.
Mallinson, H. R., & Co. Inc., to Fabrex Corp., New York, N.Y. 148,153, ren. 1–23–62. Cl. 42.
Mallory-Sharon Titanium Corp., Niles, Ohio. 617,088, canc. Cl. 14.
Manischewitz, B., Co., The, Newark, N.J. 394,250, ren. 1–23–62. Cl. 46.
Manischewitz, B., Co., The, Newark, N.J. 726,764, pub. 11–7–61. Cl. 46.
Marcy Laboratories, Inc., New York, N.Y., to Standard Laboratories, Inc., Morris Plains, N.J. 395,151, ren. 1–23–62. Cl. 18.
Marine Magnesium Products Corp., South San Francisco, Calif., to Merck & Co., Inc., Rahway, N.J. 395,220, ren. 1–23–62. Cl. 6.

Mariposa Products Co., Brooklyn, N.Y. 726,798, pub. 11–7–61. Cl. 51.
Marx & Haas Clothing Co., to Marx & Haas Clothing Co., St. Louis, Mo. 154,626, ren. 1–23–62. Cl. 39.
Mason Tackle, Ottisville, Mich. 726,827. Cl. 22.
Mazzie, E. C., d.b.a. Mazzie Farms, Arvin, Calif. 726,784, pub. 11–7–61. Cl. 46.
Mazzie Farms: *See*— Mazzie, E. C.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 726,749, pub. 11–7–61. Cl. 38.
McGregor-Doniger Inc., New York, N.Y. 726,754, pub. 5–16–61. Cl. 39.
Mennen Co., The, Morristown, N.J. 726,803, pub. 11–7–61. Cl. 51.
Mennen Co., The, Morristown, N.J. 726,804, pub. 11–7–61. Cl. 52.
Merck & Co., Inc.: *See*— Marine Magnesium Products Corp.
Metal Products Co., The, Niles, Ohio. 726,808, pub. 11–7–61. Cl. 100.
Mid-City National Bank of Chicago, The, Chicago, Ill. 726,815, pub. 11–7–61. Cl. 102.
Midwest Noise Control, Indianapolis, Ind. 617,061, canc. Cl. 12.
Miller, Frank E., Portland, Oreg. 726,700, pub. 11–7–61. Cl. 23.
Mills, Randolph, Inc., Concord, N.C. 726,775, pub. 11–7–61. Cl. 46.
Milo Harding Co., Monterey Park, Calif. 726,740, pub. 11–7–61. Cl. 37.
Mobley, Julia C., Atlanta, Ga. 617,024, canc. Cl. 4.
Monon Trailer & Body Mfg. Corp., Monon, Ind. 726,679, pub. 11–7–61. Cl. 19.
Morrell, John, & Co., Chicago, Ill. 153,803, ren. 1–23–62. Cl. 46.
Moss, Hal, Co.: *See*— Moss, Hal.
Moss, Hal, d.b.a. Hal Moss Co., New York, N.Y. 617,302, canc. Cl. 101.
Motometer Herrmann Schlaich, Stuttgart, Germany. 726,708–9, pub. 11–7–61. Cl. 26.
National Cash Register Co., The, Dayton, Ohio. 148,174. Am. 7(d). Cl. 38.
National Corp. Service, Inc., New Orleans, La. 726,806, pub. 11–7–61. Cl. 100.
National Downtown Week, Inc., New York, N.Y. 726,842. Cl. 101.
National Lead Co., New York, N.Y. 393,738, ren. 1–23–62. Cl. 12.
National Marine Service Inc., New York, N.Y. 726,817, pub. 11–7–61. Cl. 105.
National Periodical Publications, Inc.: *See*— Detective Comics, Inc.
Nedick's Stores, Inc., New York, N.Y. 726,811, pub. 11–7–61. Cl. 100.
Nepera Chemical Co., Inc., Yonkers, N.Y. 617,102, canc. Cl. 18.
New City Printing Co., to New City Printing Co., Union City, N.J. 387,951, ren. 1–23–62. Cl. 38.
New Moon Homes, Inc., Dallas, Tex. 726,680, pub. 11–7–61. Cl. 19.
Nicholas International Ltd., Toronto, Ontario, Canada. 726,656, pub. 11–7–61. Cl. 18.
Nissen Trampoline Co., Cedar Rapids, Iowa. 726,692, pub. 11–7–61. Cl. 22.
North American Van Lines, Inc., Fort Wayne, Ind. 726,615, pub. 11–7–61. Cl. 2.
North American Van Lines, Inc., Fort Wayne, Ind. 726,820, pub. 11–7–61. Cl. 105.
Northern States Laboratories: *See*— Northern States Poultry Service and Laboratories, Inc.
Northern State Poultry Service and Laboratories, Inc., d.b.a. Northern States Laboratories, Luverne, Minn. 726,665, pub. 11–7–61. Cl. 18.
Oil Heat Institute of Long Island, Inc., Hempstead, N.Y. 726,822, pub. 4–19–60. Cl. 200.
Olin Industries, Inc., now by merger and change of name Olin Mathieson Chemical Corp., East Alton, Ill. 617,031–2, canc. Cl. 6.
Olin Mathieson Chemical Corp.: *See*— Olin Industries, Inc.
Olin Mathieson Chemical Corp., New York, N.Y. 726,678, pub. 11–7–61. Cl. 18.
Osborn Mfg. Co., The, Cleveland, Ohio. 726,696, pub. 11–7–61. Cl. 23.
Ovenglo Distributing Corp., Milwaukee, Wis. 617,271, canc. Cl. 46.
Pacific States Laboratories, Inc., San Francisco, Calif. 617,122–3, canc. Cl. 18.
Pak-Well Paper Products Co., Portland, Oreg. 726,829. Cl. 37.
Paliton Inc., New York, N.Y. 617,169, canc. Cl. 21.
Pan-American Laboratories, Inc., Angola, Ind. 726,646, pub. 11–7–61. Cl. 15.
Paramount Pictures Corp., New York, N.Y. 726,744–5, pub. 11–7–61. Cl. 38.
Park & Tilford, New York, N.Y. 726,797, pub. 11–7–61. Cl. 51.
Paterson, John, & Co., Ltd., to John Paterson & Co., Ltd., Glasgow, Scotland. 150,045–6, ren. 1–23–62. Cl. 51.
Patten, Lee, Seed Co., Jersey City, N.J. 726,785, pub. 11–7–61. Cl. 46.
Paxton & Gallagher Co., to Butter-Nut Foods Co., Omaha, Nebr. 154,655, ren. 1–23–62. Cl. 46.
Peavey, F. H., & Co.: *See*— Russell-Miller Milling Co.
Pelolan Fruit Distributors, Dinuba, Calif. 617,272, canc. Cl. 46.
Pharmaceuticals, Inc., Newark, N.J. 617,251, canc. Cl. 44.
Philadelphia Laboratories, Inc., Philadelphia, Pa. 726,673, pub. 11–7–61. Cl. 18.
Photostat Corp., Rochester, N.Y. 726,703, pub. 11–7–61. Cl. 26.
Pierce Electric Co., Medford, Oreg. 617,217, canc. Cl. 26.
Pierce & Stevens Chemical Corp., Buffalo, N.Y. 726,617, pub. 11–7–61. Cl. 4.
Pilz-Konserven AG. Vorm. Stofer & Sohne, Pratteln (BL), Switzerland. 726,835–6. Cl. 46.
Planet Laboratories, Inc., Sumter, S.C. 617,125, canc. Cl. 18.
Porce-Cote Corp. Porce-Cote Research & Development Corp., Freeport, N.Y. 700,790. Am. 7(d). Cl. 12.
Porce-Cote Research & Development Corp.: *See*— Porce-Cote Corp.
Potts, Horace T., Co., Philadelphia, Pa. 726,642, pub. 11–7–61. Cl. 13.
Poul-An Laboratories, Inc., Kansas City, Mo. 726,657, pub. 11–7–61. Cl. 18.
Premiere Motels, Inc., New York, N.Y. 726,807, pub. 11–7–61. Cl. 100.
Prescription Products Co., Inc., New Hyde Park, N.Y. 617,294, canc. Cl. 52.
Prestomix Paint Products, Inc., Detroit, Mich. 617,042, canc. Cl. 12.
Procter & Gamble Co., The, Cincinnati, Ohio. 726,779, pub. 11–7–61. Cl. 46.
Prop Products, Los Angeles, Calif. 617,106, canc. Cl. 18.
Pyland, Jack W., Dallas, Tex. 726,694, pub. 11–7–61. Cl. 23.
Quret Mfg. Co.: *See*— Henderson, John Wm.
Racine, Jules, & Co., Inc., New York, N.Y. 726,725–6, pub. 11–7–61. Cl. 27.
Radio Frequency Laboratories, Inc., Boonton, N.J. 726,731, pub. 11–7–61. Cl. 37.
Rayco Mfg. Co., Paterson, N.J. 617,139, canc. Cl. 19.
Ready-crete, Inc., Milwaukee, Wis. 617,093, canc. Cl. 16.
Red Wing Corp. Co., The, Dayton, Ohio, to The Borden Co., New York, N.Y. 149,488, ren. 1–23–62. Cl. 46.
Regulator Engineering and Development Co.: *See*— Lloyd, Randall E.
Reichmuth, Anton, d.b.a. Tony's Winery and Grand Life Champagne Winery, San Francisco, to Weibel, Inc., Mission San Jose, Calif. 391,061, ren. 1–23–62. Cl. 47.
Reid Laboratories, Inc., Atlanta, Ga. 726,826. Cl. 18.
Reise-Premier Corp., The, West New York, N.J. 617,170, canc. Cl. 23.
Reliance Varnish Co., Los Angeles, Calif. 617,098–9, canc. Cl. 16.
Reproduction Research Laboratories: *See*— Caton, Thomas R.
Restorz Products, Inc., Prospect, Conn. 726,649, pub. 11–7–61. Cl. 16.
Revere Copper and Brass Inc., New York, N.Y. 726,644, pub. 11–7–61. Cl. 13.
Rice, Irving W., & Co., Inc., New York, N.Y. 726,794, pub. 11–7–61. Cl. 50.
Richardson Corp., Rochester, N.Y. 393,549, ren. 1–23–62. Cl. 45.
Richardson Corp., Rochester, N.Y. 394,455, ren. 1–23–62. Cl. 46.
Robertshaw-Fulton Controls Co., Richmond, Va. 726,716, pub. 11–7–61. Cl. 26.
Rogers Paint Products, Inc., Detroit, Mich. 617,096–7, canc. Cl. 16.
Rohm & Haas Gm.b.H., Darmstadt, Germany. 726,652, pub. 11–7–61. Cl. 18.
Rorer, William H., Inc., Philadelphia, Pa. 726,658, pub. 11–7–61. Cl. 18.
Rosenfeld, Al, Inc., New York, N.Y., to Gaylord Products, Inc., Chicago, Ill. 391,972, ren. 1–23–62. Cl. 51.
Ross, Sydney, Co., The, New York, N.Y. 393,135, ren. 1–23–62. Cl. 18.
Russell-Miller Milling Co., to F. H. Peavey & Co., Minneapolis, Minn. 152,977, ren. 1–23–62. Cl. 46.
S.C.S. Club, Inc., Chicago, Ill. 726,670, pub. 11–7–61. Cl. 18.
Sachs, Ernst, Erste Spezialfabrik Elektrischer Lotkolben und Lotbader K.G., Werthelm (Main), Germany. 726,681, pub. 11–7–61. Cl. 21.
Salem China Co., The, Salem, Ohio. 635,186. Am. 7(d). Cl. 30.
Sams, Howard W., & Co., Inc., Indianapolis, Ind. 726,742, pub. 11–7–61. Cl. 38.
San Jose Canning Co., San Jose, Calif. 726,787, pub. 11–7–61. Cl. 46.
Schaffner, Hart, & Marx: *See*— Society Brand Clothes, Inc.
Schenley Distillers, Inc., New York, N.Y. 726,789, pub. 11–7–61. Cl. 49.
Schenley Laboratories, Inc., New York, N.Y. 617,126, canc. Cl. 18.
Schering Corp., Bloomfield, N.J. 726,668, pub. 11–7–61. Cl. 18.
Schwartz, Bart, International Textiles Ltd., New York, N.Y. 623,601, canc. Cl. 42.
Schwarz, Earl G., New York, N.Y. 726,795, pub. 11–7–61. Cl. 51.
Scully, Frank P., Cambridge, Mass. 617,190, canc. Cl. 26.
Selcraft Products Co.: *See*— Selsky, Albert.
Selsky, Albert, d.b.a. Selcraft Products Co., Brooklyn, N.Y. 726,790–2, pub. 11–7–61. Cl. 50.
Sentry Markets, Inc., Milwaukee, Wis. 726,780, pub. 11–7–61. Cl. 46.
Shapleigh Hardware Co., St. Louis, Mo. 151,231, ren. 1–23–62. Cl. 22.
Sherwin-Williams Co., The, Cleveland, Ohio. 151,233, ren. 1–23–62. Cl. 16.

Shulton, Inc., Clifton, N.J. 726,839. Cl. 51.
Siemag Feinmechanische Werke G.m.b.H., Elserfeld/Sieg, Germany. 726,713-14, pub. 11-7-61. Cl. 26.
Sioux Industries, Inc., Sioux City, Iowa. 617,103, canc. Cl. 18.
Siris, A. J., Products Corp., New York, N.Y. 726,737, pub. 11-7-61. Cl. 37.
Societe Anonyme Dite: Nobel Bozel, Paris, France. 726,622, pub. 11-7-61. Cl. 6.
Societe d'Exploitation des Laboratoires Jacques Logeais, societe a responsabilite limitee, Issy-les-Moulineaux (Seine), France. 726,655, pub. 11-7-61. Cl. 18.
Society Brand Clothes, Inc., now by change of name Industrial Development Corp., to Hart Schaffner & Marx, Chicago, Ill. 617,236, canc. Cl. 39.
Society of Chemical Industry In Basle, to Ciba Ltd., Basle, Switzerland. 150,116, ren. 1-23-62. Cl. 6.
Solar Aircraft Co., San Diego, Calif. 726,695, pub. 11-7-61. Cl. 23.
Southern Beverage Co., to Triple "XXX" Corp., Galveston, Tex. 148,715, ren. 1-23-62. Cl. 45.
Spiegel Neckwear Co., Inc., New York, N.Y. 726,755, pub. 11-7-61. Cl. 39.
Springfield Tablet Mfg. Co., Springfield, Mo. 726,741, pub. 11-7-61. Cl. 37.
Stanbio Laboratory, Inc., Hallettsville, Tex. 726,625, pub. 11-7-61. Cl. 6.
Standard Laboratories, Inc.: *See*—
Marcy Laboratories, Inc.
Standard Pressed Steel Co., Jenkintown, Pa. 726,824. Cl. 13.
Standard Register Co., The, Dayton, Ohio. 726,739, pub. 11-7-61. Cl. 37.
Steiger, Daniel P., Wellesley, Mass. 617,214, canc. Cl. 26.
Sterling Drug Inc.: *See*—
Winthrop Chemical Co., Inc.
Stevens & Thompson Paper Co., Greenwich, N.Y. 149,252, ren. 1-23-62. Cl. 37.
Stiffel Co., The, Chicago, Ill. 617,165, canc. Cl. 21.
Stiles, Inc., Grand Rapids, Mich. 617,040, canc. Cl. 12.
Summit Mills Corp., New York, N.Y. 617,246, canc. Cl. 39.
Sun Rubber Co., The, Barberton, Ohio. 392,017, ren. 1-23-62. Cl. 32.
Sun Rubber Co., The, Barberton, Ohio. 392,100, ren. 1-23-62. Cl. 22.
Sun Rubber Co., The, Barberton, Ohio. 393,302, ren. 1-23-62. Cl. 22.
Sun Vertikal Blind Co., Grand Rapids, Mich. 617,248, canc. Cl. 40.
Tanner, O. C., Jewelry Co., Salt Lake City, Utah. 726,727, pub. 11-7-61. Cl. 28.
Tellurometer (Proprietary) Ltd., Plumstead, Cape Province, Union of South Africa. 723,848, cor. Cl. 26.
Telrex, Inc., Asbury Park, N.J. 617,145, canc. Cl. 21.
Teweles, L., Seed Co., Milwaukee, Wis. 726,629-30, pub. 11-7-61. Cl. 6.
Texas Meat Packers, Inc., from Texas Meat and Provision Co., Dallas, Tex. 726,773, pub. 7-18-61. Cl. 46.
Texas Meat and Provision Co.: *See*—
Texas Meat Packers, Inc.
Textron Inc.: *See*—
Cleveland Hobbing Machine Co., The.
This Enterprises: *See*—
Fleck, William J.
Tobin Packing Co., Inc., Rochester, N.Y. 726,774, pub. 11-7-61. Cl. 46.
Tony's Winery: *See*
Reichmuth, Anton.
Tops Mothproofing, Inc., St. Louis, Mo. 617,289, canc. Cl. 52.
Trailmobile, Inc., Cincinnati, Ohio. 617,312, canc. Cl. 19.
Transitron Inc., New York, N.Y. 617,153, canc. Cl. 21.
Tremco Mfg. Co., The, Cleveland, Ohio. 392,016, ren. 1-23-62. Cl. 16.
Triangle Business Machines, Inc., Los Angeles, Calif. 726,733, pub. 11-7-61. Cl. 37.
Tri-Lok Co., The, Pittsburgh, Pa. 617,041, canc. Cl. 12.
Triple "XXX" Corp.: *See*—
Southern Beverage Co.
Trustees of Columbia University in the City of New York, The, New York, N.Y. 726,750, pub. 11-7-61. Cl. 38.
Tudor, Inc., Sacramento, Calif. 617,044, canc. Cl. 12.
Tyson Shirt Co., Norristown, Pa. 154,718, ren. 1-23-62. Cl. 39.
Uncle Ben's Inc., Houston, Tex. 726,778, pub. 11-7-61. Cl. 46.
Union Carbide Corp., New York, N.Y. 726,831. Cl. 38.
Union Oil Co. of California, Los Angeles, Calif. 726,627, pub. 11-7-61. Cl. 6.
Union Petroleum Co., Philadelphia, Pa. 128,191, canc. Cl. 15.
Union Tool Co., to Union Tool Co., Orange, Mass. 153,886, ren. 1-23-62. Cl. 26.
United States Rubber Co., New York, N.Y. 726,758, pub. 11-7-61. Cl. 43.
U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 726,-063, pub. 11-7-61. Cl. 18.
Urban, George, Milling Co., Buffalo, N.Y. 392,950, ren. 1-23-62. Cl. 46.
Van Houten, C. J., & Zoon, N.V., Weesp, Netherlands. 726,-771, pub. 11-7-61. Cl. 46.
Varian Associates, Palo Alto, Calif. 726,699, pub. 11-7-61. Cl. 23.
Varley, James, & Sons, Inc., St. Louis, Mo. 726,628, pub. 11-7-61. Cl. 6.
Wachtel, Theodore, d.b.a. Dassenfabriek Boule d'Or, The Hague, Netherlands. 726,753, pub. 11-7-61. Cl. 39.
Wallace: *See*—
Fleetwood Co.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 726,674-5, pub. 11-7-61. Cl. 18.
Warwick & Legler, Inc., New York, N.Y. 726,814, pub. 11-7-61. Cl. 101.
Weather-Seal, Inc., Barberton, Ohio. 617,066, canc. Cl. 12.
Weibel, Inc.: *See*—
Reichmuth, Anton.
Wesson Oil & Snowdrift Co., Inc.: *See*—
Hunt Foods and Industries, Inc.
Westinghouse Air Brake Co.: *See*—
Westinghouse Air Brake Co., The.
Westinghouse Air Brake Co., The, to Westinghouse Air Brake Co., Wilmerding, Pa. 394,041-2, ren. 1-23-62. Cl. 2.
Westinghouse Air Brake Co., The, to Westinghouse Air Brake Co., Wilmerding, Pa. 394,438, ren. 1-23-62. Cl. 23.
Westinghouse Air Brake Co., The, to Westinghouse Air Brake Co., Wilmerding, Pa. 394,545, ren. 1-23-62. Cl. 13.
Wick and Fry, Inc., Cumberland, Ind. 617,118, canc. Cl. 18.
Williams Products Corp., Ypsilanti, Mich. 726,698, pub. 11-7-61. Cl. 23.
Wilson Mfg. Corp., by change of name from Wilson Products, Inc., New York, N.Y. 726,757, pub. 3-8-60. Cl. 40.
Wilson Products, Inc.: *See*—
Wilson Mfg. Corp.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N.Y. 393,886, ren. 1-23-62. Cl. 18.
Wolf X-Ray Products Inc., Brooklyn, N.Y. 726,720, pub. 11-7-61. Cl. 26.
Woolsey, C. A., Paint & Color Co. Inc.: *See*—
Woolsey, C. A., Paint & Color Co.
Woolsey, C. A., Paint & Color Co., Jersey City, N.J., to C. A. Woolsey Paint & Color Co. Inc., New York, N.Y. 155,128, ren. 1-23-62. Cl. 16.
World Business Enterprises, Inc., Asheville, N.C. 617,034, canc. Cl. 6.
World Wide Barnes and Philathea Union, Mount Vernon, Va. 726,746-7, pub. 11-7-61. Cl. 38.
Worley Publishing Co., Inc., New York, N.Y. 726,751, pub. 11-7-61. Cl. 38.
Worthington Corp., Harrison, N.J. 726,828. Cl. 23.
Wuster & Co.: *See*—
Wusler, Eugen.
Wuster, Eugen, d.b.a. Wuster & Co., Wieselburg a.d. Erlauf, Austria. 726,645, pub. 11-7-61. Cl. 14.
Wynlit Pharmaceuticals, Inc., New York, N.Y. 617,108, canc. Cl. 18.
Yamanouchi Pharmaceutical Co., Ltd., Chuo-ku, Tokyo-to, Japan. 617,107, canc. Cl. 18.
Youngs Rubber Corp., New York, N.Y. 726,676-7, pub. 11-7-61. Cl. 18.

U.S. GOVERNMENT PRINTING OFFICE 0—1962

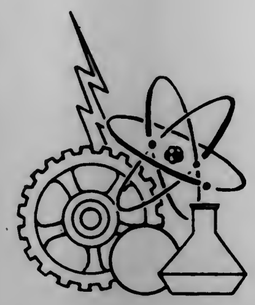
7

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

January 30, 1962 • Volume 774 • Number 5



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of January 30, 1962	967
New Applications Received	967
Notices	
Foreign Patents Received in the Scientific Library as of Dec. 31, 1961	967
Microfilm Lists of Organic Phosphorus Compounds	967
Applications—Filing Dates	967
Board of Appeals Decisions Rendered in the Month of December 1961	967
Disclaimers	967
Condition of Patent Applications	968
Decisions in Patent and Trademark Cases	
In re David Crystal, Inc. (Izod Ltd., Assignee, Substituted)	970
Reissue Patents Granted	973
Plant Patents Granted	974
Patents Granted	
General and Mechanical	975
Chemical	1147
Electrical	1184
Design Patents Granted	1230
Index of Patentees	i
Classification of Patents	xxiii

Trademarks

Issue of January 30, 1962	TM 153
Applications Filed	TM 153
Condition of Trademark Applications	TM 153
Notices	
Public Law 87–354	TM 153
Marks	
Marks Published for Opposition (304)	TM 155
Registrations Issued	
Principal Register	TM 180
Supplemental Register	TM 185
Registrations Renewed	TM 186
Registrations Canceled	TM 186
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

Foreign Patents Received in the Scientific Library as of Dec. 31, 1961

Source	Date received	Highest number
Australia:		
(*Abstracts*)	Apr. 18, 1961	63,890
(*Patents*)	Dec. 27, 1961	234,617
Austria	Dec. 12, 1961	217,950
Belgium	Dec. 26, 1961	571,000
Canada	Dec. 11, 1961	632,396
Czechoslovakia	Nov. 15, 1961	99,506
Denmark	Sept. 25, 1961	90,840
East Germany	Dec. 26, 1961	22,380
Egypt	Dec. 19, 1961	2,438
Finland	Nov. 16, 1961	31,555
France:		
(*Patents*)	Dec. 29, 1961	1,267,450
(*Additions*)	Dec. 26, 1961	75,600
Germany:		
(*Auslegeschriften*)	Nov. 1, 1961	1,113,670
(*Patents*)	Dec. 12, 1961	1,104,872
Great Britain	Dec. 19, 1961	884,210
India	Dec. 6, 1961	75,131
Ireland	Dec. 18, 1961	22,900
Italy	June 20, 1961	579,100
Japan	Dec. 4, 1961	20,800/61
Netherlands	Dec. 8, 1961	99,799
Norway	Dec. 12, 1961	98,723
Pakistan	June 9, 1961	108,699
Poland	Nov. 27, 1961	45,174
Rumania	Aug. 10, 1961	41,482
Sweden	Nov. 1, 1961	176,544
Switzerland	Dec. 18, 1961	357,687
U.S.S.R.	Dec. 13, 1961	140,757

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Not received between 81,300/1952 and 91,901/1959
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 149,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Philippine Republic: Latest 217/1956
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Microfilm Lists of Organic Phosphorus Compounds

The Patent Office offers the following subject matter on 16 mm. microfilm:

OPCP 1. The specification and claims of U.S. Patents classified in Class 260, subclass 461, Organic Phosphorus Compounds which have been coded for mechanized searching by the CAMP system. This search system is described in Patent Office Research and Development Report No. 18, Mechanized Searching of Phosphorus Compounds, which may be purchased from the U.S. Department of Commerce, Washington 25, D.C., for 25 cents. Consists of two reels.

OPCP 2. A list of the compounds named in each patent in Class 260, subclass 461 arranged alphabetically under the patent number in which they appear. Consists of two reels.

OPCP 3. An inverted file of the named compounds in the patents in Class 260, subclass 461, listing the names of the compounds and thereunder the patent number of each patent containing the compound. Consists of two reels.

The complete set of six reels is priced at $60.00 and may be obtained under order addressed to the Commissioner of Patents, Washington 25, D.C. Each set of two reels may be ordered separately at $20.00 a set.

C. A. KALK,
Director of Administration.

Applications—Filing Dates

On and after February 1, 1962, the Application Branch will accord a filing date as of the date of receipt in the Office to application papers which include all of the necessary components of a complete application, even though there appear to have been omitted therefrom either:

(*a*) one or more figures of the drawing
(*b*) one or more pages of the specification
(*c*) one or more claims.

The apparent omission will be noted on the filing receipt mailed to applicant so that he may take any action in the matter which he deems appropriate or necessary.

EDWIN L. REYNOLDS,
Dec. 22, 1961. *First Assistant Commissioner.*

Board of Appeals Decisions Rendered in the Month of December 1961

Examiner affirmed	286
Examiner affirmed in part	34
Examiner reversed	72
Total	392

Disclaimer

2,523,085.—*Eugene F. Albert*, Turtle Creek, Pa., and *Albert W. Kimball*, Buffalo, N.Y. MOTOR CONTROL SYSTEM. Patent dated Sept. 19, 1950. Disclaimer filed Dec. 20, 1961, by the assignee, *Westinghouse Electric Corporation.*

Hereby enters this disclaimer to claim 2 of said patent.

New Applications Received During November 1961

Patents	7,043
Designs	429
Plant Patents	7
Reissues	21
Total	7,500

Issue

Patents	959	No. 3,018,481 to No.	3,019,439, incl.
Designs	21	No. 192,135 to No.	192,155, incl.
Plant Patents	6	No. 2,124 to No.	2,129, incl.
Reissues	3	No. 25,117 to No.	25,119, incl.
Total	989		

CONDITION OF PATENT APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of pending applications (excluding Designs)	196,777
Total number of pending Design applications	5,445
Total number of applications awaiting action (excluding Designs)	95,028
Total number of Design applications awaiting action	1,432
Date of oldest new application	Aug. 31, 1960
Date of oldest amended application	July 11, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	3-30-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-4-61	5-17-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	12-2-60	12-19-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-3-61	1-9-61
7. (IV) ANDERSON, E. O., Optics	2-13-61	2-2-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps: Fans; Turbines	4-24-61	4-18-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-2-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	1-23-61	1-13-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-5-60	12-9-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-13-60	11-29-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	11-22-60	10-14-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-6-60	12-16-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	9-13-60	11-10-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-1-61	4-26-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	3-6-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-7-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	1-24-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-25-61	5-9-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	2-6-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	1-11-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-61	1-30-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	11-15-60	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	4-24-61	4-24-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	11-3-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	1-30-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-6-61	3-22-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	12-27-60
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-19-60	1-11-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	11-25-60	12-1-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-9-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	12-16-60
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	11-17-60	11-21-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	8-31-60	7-11-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	5-8-61	5-25-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-10-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	3-9-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-20-60	9-16-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-6-61	1-6-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-23-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space-Discharge Device Systems; Transistor and Nonlinear Conductor Systems	11-1-60	11-2-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-1-61	5-1-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-6-61	3-17-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-3-60	10-14-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-8-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-29-60	12-5-60
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	1-3-61	12-20-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-3-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	11-8-60	11-10-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-30-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-11-61	4-4-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-23-60	12-9-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-1-60	12-2-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	10-14-60
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	10-19-60	10-13-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-4-60	9-16-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-21-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	12-6-60	12-5-60
81. (III) MONCURE, J. A., Industrial Arts	8-8-61	7-28-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-1-61	8-7-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	11-18-60	11-18-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	6-30-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	1-30-61	1-3-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-8-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during January 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents.....Numbers 2,366,154 to 2,368,612 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE DAVID CRYSTAL, INC. (IZOD LTD., ASSIGNEE, SUBSTITUTED)

No. 6699. Decided December 18, 1961

[—CCPA—: —F.2d—: 132 USPQ 1]

1. TRADEMARKS—REGISTRABILITY—ORNAMENTAL DESIGN.

"Merely because a design is ornamental does not preclude it from becoming a valid trademark capable of distinguishing the goods upon which it is placed. * * * But unless the design is of such nature that its distinctiveness is obvious, convincing evidence must be forthcoming to prove that in fact the purchasing public does recognize the design as a trademark which identifies the source of the goods."

2. EVIDENCE—AFFIDAVIT OF AN INTERESTED PARTY.

"The affidavit of the president of the applicant-company comes from an interested party and we give it little weight."

APPEAL from the Patent Office. Serial No. 37,072.

AFFIRMED.

Arthur H. Seidel for appellant.

Clarence W. Moore for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Trademark Trial and Appeal Board, 125 USPQ 423, affirming the Examiner's refusal to allow registration of a mark on the Principal Register.

The mark sought to be registered is depicted below and consists of the two parallel colored bands, the upper band red and the lower blue as shown by the vertical and horizontal lines in the drawing, when used as shown in connection with "Men's Ribbed Socks."

The application states that this alleged trademark was first used in commerce in April 1956. An affidavit of Vincent Draddy, president of David Crystal, Inc., states that 4,500 dozen pairs of socks with red and blue bands were sold by appellant at a retail sales price of about $78,750 between April 1956, and September 1957, with an additional 4,200 dozen with a retail value of about $73,500 sold thereafter through the end of July 1958.



The record includes 12 affidavits from retail store presidents and owners, buyers for retail stores, and two men's fashion editors, all expressing opinions in various ways that the "spaced colored bands at the top"[1] indicate to those associated with the retail trade and to the purchasing public that the socks are the product of Izod and/or David Crystal.

The record also includes two advertisements which depict appellant's socks with words and an illustration. These advertisements are stated in the Draddy affidavit to be "characteristic of the way in which our socks are advertised." One advertisement contains a sketch of a pair of ribbed, banded socks with the following words below the sketch:

Sport Socks
by Izod of cotton, wool and
nylon; cushion sole; one size
fits all; in white colored
top stripings.
2.50

The other advertisement comprises a photograph showing among several other items a single sock on a foot and ankle form with a second sock stuffed in the ankle of the first so that the bands of both are visible. To the left of the photograph are the following words:

IZOD CREW SOX . . . Cushion sole wool Olympic sox with red and blue blazer tops. By IZOD, importers of the famous La Coste Golf Shirt. $2.50.

The Examiner in his final refusal to register was of the opinion that "the matter presented for registration is nothing more than mere ornamentation and, as such, is not registrable as a trademark."

The Board affirmed the Examiner, stating that "the design in question would be regarded by purchasers only as an ornamental feature of applicant's socks rather than as an indication of origin thereof." The Board stated that the advertisements "feature the word mark 'IZOD' and in no way emphasize or otherwise promote as a trademark the red and blue band design appearing thereon." With regard to the affidavits, the Board stated that the record contains nothing to show that purchasers have come to know and recognize the design as a trademark for appellant's socks and that the statements in this regard by retailers of appellant's goods "being mere conclusions, are insufficient as proof thereof."

[1] Merely because a design is ornamental does not preclude it from becoming a valid trademark capable of distinguishing the goods upon which it is placed. *In re Todd Co., Inc.*, 48 CCPA 1009, 290 F.2d 597, 129 USPQ 408. But unless the design is of such nature that its distinctiveness is obvious, convincing evidence must be forthcoming to prove that in fact the purchasing public does recognize the design as a trademark which identifies the source of the goods. The affidavits introduced in evidence in this case do not fulfill this requirement.

[2] The affidavit of the president of the applicant-company comes from an interested party and we give it little weight. None of the other affidavits specify that the bands are red and blue which is an important factor of the alleged trademark. None of them are from the purchasing public except in the case of two of the affiants who wear the socks and who are buyers for stores in which the socks are sold.

At best, these affidavits merely assert that affiants believe that what amounts to a very small portion of the purchasing public identify

[1] Eight of the 12 affidavits recite this particular phrase.

these socks as those of applicant because of colored bands. For this most inadequate proof, applicant asks us to give it the exclusive right to use red and blue bands on men's white, ribbed socks—that we cannot do.

For the above reasons we affirm the decision of the Trademark Trial and Appeal Board.

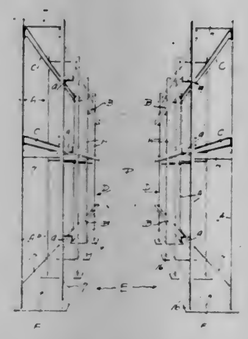
AFFIRMED.

REISSUES

JANUARY 30, 1962

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

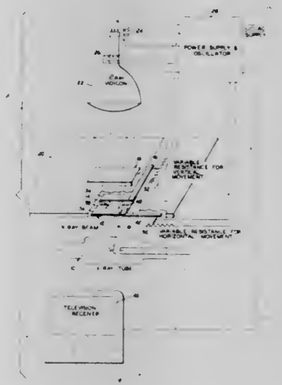
25,117
STORAGE RACK
Landon B. Edwards, Jr., 1018 Ridge Top Road, Richmond, Va.
Original No. 2,894,641, dated July 14, 1959, Ser. No. 678,632, Aug. 16, 1957. Application for reissue June 19, 1961, Ser. No. 125,894
8 Claims. (Cl. 211—134)



2. In a merchandising storage rack assembly, a pair of skeleton frame [elements] *members* laterally spaced apart from each other and cooperating to provide an open-ended aisleway therebetween, each of said frame [elements] *members* including a series of upright supports spaced longitudinally of said frame [elements] *members* and of a cross-sectional shape to provide a medial channel having a bottom wall whose outer face is disposed toward said aisleway, and whose side walls connect with said bottom wall and project at right angles thereto, webs connected to the terminal portions of said side walls and disposed at right angles thereto, inverted channel shaped brackets each comprising a horizontal web portion and vertical depending side flanges having portions adjacent the side walls of the upright to embrace the same, and foot portions disposed at right angles to said depending side walls and secured to the webs of the [uprights] *upright supports*, [and] load carrying channel shaped supporting rails telescopically fitting over the aisle [end] *ends* of the [bracket] *brackets* and rigidly secured thereto, *and channel shaped braces disposed longitudinally of said upright supports in vertically spaced, off-set relation to said brackets and rigidly secured to the webs of the upright supports.*

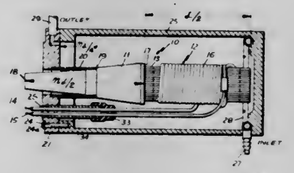
25,118
X-RAY APPARATUS
Edward B. Graves, South Euclid, Ohio, assignor to Picker X-Ray Corporation, Waite Manufacturing Div., Inc., Cleveland, Ohio, a corporation of Ohio
Original No. 2,905,827, dated Sept. 22, 1959, Ser. No. 698,994, Nov. 26, 1957. Application for reissue Sept. 21, 1960, Ser. No. 57,599
8 Claims. (Cl. 250—93)

5. In a mechanism including a support for an object to be studied, a source of X-ray energy positioned on one side of the support and a movable diaphragm positioned between the source of X-ray energy and the support, said diaphragm being adjustably positionable to delimit an energy beam of a selected size, the combination of, a pick-up tube having an input screen positioned on a side of the support opposite the source and positioned for activation by an object affected flow of energy initiated by said



source, a picture tube having a picture producing screen, electronic circuit means connected to the tubes to transmit output of the pickup tube to the picture tube, and control means actuated by said diaphragm and electrically connected to said circuit means to vary the magnification and clarity of a picture on said picture producing screen in response to adjustment of the diaphragm while maintaining the area essentially constant.

25,119
SUPPORTS FOR VIBRATORY DEVICES
Burton R. Rawding, Walpole, Mass., assignor to Raytheon Company, a corporation of Delaware
Original No. 2,866,911, dated Dec. 30, 1958, Ser. No. 614,007, Oct. 4, 1956. Application for reissue Aug. 11, 1960, Ser. No. 49,113
11 Claims. (Cl. 310—26)



1. In combination, an [elongated] *elongate* mechanical vibrator and means attached to one end thereof to set said vibrator into longitudinal oscillation, said vibrator having a length [equal] substantially *equal* to one or more integral half wavelengths of the *longitudinal*

vibrations therein and having antinodes at its ends, and support means for said vibrator comprising [.] a substantially rigidly cylinder *one end of which is* attached to said vibrator in the vicinity of a node of the [natural resonant frequency] *longitudinal vibration* of said vibrator, said support means being of a length [equal] substantially *equal* to an odd integral number of [quarter wavelengths of said natural resonant frequency] *quarters of the wavelength of propagation of radial vibration along the length of the cylinder.*

PLANT PATENTS

GRANTED JANUARY 30, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,124
PEACH TREE
Robert L. Brown, New Park, Pa., assignor to Stark Bro's Nurseries & Orchards Company, Louisiana, Mo., a corporation of Missouri
Filed Mar. 6, 1961, Ser. No. 93,823
1 Claim. (Cl. 47—62)

A new and distinct variety of peach tree of the freestone yellow-fleshed fruit type, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of fruit size, shape and texture generally resembling that of the variety "J. H. Hale" (unpatented), firm fruit of exceptionally good quality, high coloration of the fruit which develops from a week to 10 days before the fruit ripens, a habit of ripening from 2 to 3 weeks later than the variety "Elberta" (unpatented) and about 10 days later than "J. H. Hale," and a better fruit flavor than that of the fruit of "J. H. Hale."

2,125
CHRYSANTHEMUM PLANT
Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Mar. 17, 1961, Ser. No. 96,627
1 Claim. (Cl. 47—60)

A new and distinct variety of chrysanthemum plant of the decorative class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an early blooming habit, a floriferous habit, a distinctive blooming habit in which successive new blooms are produced above the older flowers from late August to frost, a large flower size, and a distinctive and attractive general color tonality of the flowers corresponding to Light Salmon Orange, lightly overcast with Salmon Orange, and which is unusual in combination with a low and compact plant form.

2,126
CHRYSANTHEMUM PLANT
Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Mar. 17, 1961, Ser. No. 96,628
1 Claim. (Cl. 47—60)

A new and distinct variety of chrysanthemum plant of the shaggy decorative class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an early blooming habit, a compact habit of growth, good hardiness, large flower size, wide flower petals, and a distinctive and attractive general color tonality of the flowers corresponding to La France Pink, lightly overcast with Eosine Pink.

2,127
CHRYSANTHEMUM PLANT
Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Mar. 17, 1961, Ser. No. 96,629
1 Claim. (Cl. 47—60)

A new and distinct variety of chrysanthemum plant of the decorative class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a very large foliage size, a habit of the flower petals in curling quill-fashion at the finish, a very sweet flower fragrance, and a distinctive general color tonality of the flowers corresponding to Thulite Pink, lightly overcast with Spinel Pink, and with the lower half of the petals lightly overcast with Ivory Yellow.

2,128
ROSE PLANT
Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Mar. 17, 1961, Ser. No. 96,630
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of very fine, dark green foliage, long individual flower stems, prolific flower production, medium flower size, firm and long-lasting flower petals in both the bud and open flower stages, a distinctive Pure White general color tonality of the flowers in the open stage, and very long-lasting qualities of the flowers both on the plant and as cut flowers.

2,129
ROSE PLANT
Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Mar. 17, 1961, Ser. No. 96,631
1 Claim. (Cl. 47—61)

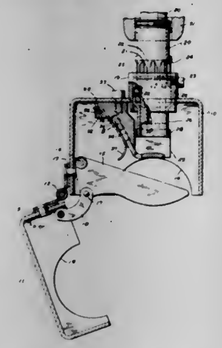
A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of prolific flower production throughout the growing season, excellent cutting value as greenhouse bench plants, long lasting flower qualities, and a distinctive and unusual general color tonality of the flowers corresponding to Brilliant Scarlet Red, lightly overcast with Spectrum Red.

PATENTS

GRANTED JANUARY 30, 1962

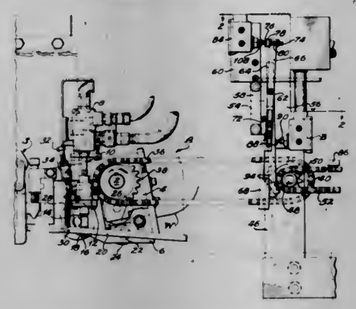
GENERAL AND MECHANICAL

3,018,481
SAFETY SHIELD FOR EXPLOSIVELY DRIVEN TOOLS
John W. Brooks, Bridgeport, Conn., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Mar. 2, 1955, Ser. No. 491,749
11 Claims. (Cl. 1—44.5)



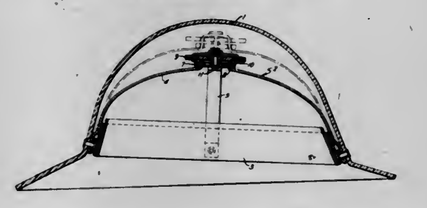
1. A guard for encircularly enclosing a longitudinal section of a workpiece comprising relatively movable complementary housing members forming in abutting relation a workpiece enclosure, means connecting said members for relative movement, said connecting means including an element displaced by impingement upon a workpiece for moving said members into abutting relation, and means on one of said housing members for mounting said guard on a powder actuated tool.

3,018,482
CONTROL MECHANISM FOR WIREBOUND BOX-MAKING MACHINES
Thomas L. Voorhees, Morris Plains, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Filed July 22, 1960, Ser. No. 44,762
4 Claims. (Cl. 1—147)



1. In a wirebound box-making machine of the type having conveyor bands for moving assembled box parts past a transverse row of stapling units, drive means for driving said conveyor bands and said stapling units including an electrically controlled stapling clutch for controlling the driving of said stapling units, wirefeed mechanism driven through said stapling clutch for feeding wire to said stapling units, and electrically controlled wirefeed control means for selectively controlling the feeding of wire by said wirefeed mechanism to the respective stapling units, the combination therewith of improved staple pattern control means comprising an endless, movable stapling pattern carrier and means for driving the same in synchronism with said conveyor bands, adjustably positioned stapling control switch actuating members carried by said stapling pattern carrier, stapling control switch means actuated by said stapling control switch actuating members and connected for control of said stapling clutch, first stop switch means having an actuating element positioned adjacent said stapling pattern carrier, a stop switch actuating member mounted on said stapling pattern carrier at such position as to actuate said first stop switch means upon each revolution of said stapling control carrier, an endless, movable wirefeed pattern carrier and means for driving the same through said stapling unit clutch, adjustably positioned wirefeed control switch actuating members carried by said wirefeed pattern carrier, wirefeed control switch means actuated by said wirefeed control switch actuating members and connected for control of said wirefeed control means, second stop switch means having a control element positioned adjacent said wirefeed pattern carrier, a stop switch actuating element mounted on said wirefeed pattern carrier at such position as to actuate said second stop switch means upon each revolution of said wirefeed pattern carrier, said first and second stop switch means being so interconnected with said stapling control switch means for control of said stapling clutch that actuation of said second stop switch means before actuation of said first stop switch means deenergizes said stapling clutch whereas actuation of said first stop switch means before actuation of said second stop switch means results in maintaining said clutch energized despite actuation of said stapling control switch means and until actuation of said second stop switch means.

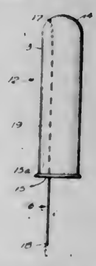
3,018,483
ADJUSTABLE HELMET SHELL SUSPENSION
Harry W. Austin Monroeville, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 24, 1958, Ser. No. 782,699
10 Claims. (Cl. 2—3)



1. A helmet shell suspension comprising a head cradle formed from straps crossing each other at the top of the cradle and having lower ends adapted to be connected to

the lower part of a helmet shell in a position to support the shell with its top spaced from the top of the cradle, a slide at the top of the cradle having a top and a bottom, the slide being perforated for receiving the straps which extend up through it to form crossed loops above the slide, and means on top of said slide disposed in said loops for varying their size, whereby to change the elevation of the slide on the straps in order to vary the size of the cradle, said straps crossing above said means and engaging the top thereof.

3,018,484
FINGER COTS
Wilbur R. Koehn, New York, N.Y. (Sherwood Drive, Sands Point, L.I., N.Y.)
Filed July 29, 1958, Ser. No. 751,783
1 Claim. (Cl. 2—21)



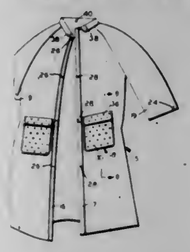
A finger cot of the type used by physicians for examining body cavities and consisting of a cylindrical tube of a thin, flexible material closed at one end and open at the opposite end to adapt it to be applied over the finger, the combination with said finger cot of an actuator for stripping the cot from the finger comprising a flexible pull cord positioned within the cot between the cot and finger when the cot is applied and having one end only attached to the cylindrical tube of the cot adjacent its closed end and its opposite free end extending beyond the open end of the cot whereby to roll the cot along the finger when the free end of the cord is pulled in a direction toward the attached end.

3,018,485
CONVERTIBLE GARMENT OF PILE MATERIAL
Werner Schüler, Renngasse 14, Vienna, Austria
Filed June 5, 1958, Ser. No. 739,999
Claims priority, application Germany Sept. 4, 1957
3 Claims. (Cl. 2—70)



1. A garment which comprises, in combination, at least two sections of material having a pile on one side and having adjacent edges forming a joint, the said pile extending to the said edges and engaging across the joint, and spacing means carried by both said sections on the side opposite the pile near said adjacent edges of the material, the facing edges of said spacing means on the two sections being spaced apart to provide a rearwardly opening groove therebetween, the edges of said groove being positioned one on each side of the joint, and a separable fastener having tapes overlying said spacing means on the side opposite the sections and secured thereto and having interengaging fastener elements carried by said tapes, the width of the groove being at least as great as the width of the fastener elements and the fastener elements coinciding with the groove.

3,018,486
SHELL COATS
Joseph Bukspan, Lawrence, N.Y., assignor to Hygrade Rainwear Mfg. Corp., New York, N.Y., a corporation of New York
Filed Dec. 24, 1959, Ser. No. 861,951
1 Claim. (Cl. 2—87)

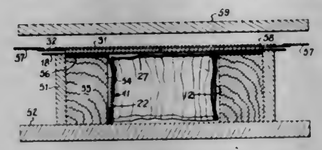


In a garment of the character described, an outer, wholly waterproof, transparent plastic coat and an inner fabric coat, lining the outer coat and separable therefrom; the outer surface of the inner coat being in appearance which is in contrast to the material of the outer coat and a patch pocket on the outer surface of the outer coat, comprising two substantially identical sheets, each having a closed-ended slot across it nearer to its top edge; said sheets being set with said slots in register and each being of transparent plastic material, a first fabric piece interposed between said plastic sheets below said aligned slots and a second fabric piece interposed between said plastic sheets above said slots; said fabric pieces being within the perimetral confines of said plastic sheets; such plastic sheets being heat seamed together around their perimeters and around the perimeter of said slots and positioned against the outer surface of the outer coat and heat seamed thereto along all the seams of said plastic sheets which are below the upper edges of said slots and along the upper edges of said slots, whereby said joined slots serve as the mouth into the pocket formed and the portion of said plastic sheets which is above said mouth, being adapted to be bent downward to serve as a flap of such pocket; the exposed surfaces of said fabric pieces, having the appearance like that of the exterior of the inner coat.

3,018,487
METHOD OF MAKING MORTAR BOARD CAP
Edward J. O'Reilly, New London, Ohio, assignor to The C. E. Ward Company, New London, Ohio, a corporation of Ohio
Original application Feb. 3, 1954, Ser. No. 407,842, now Patent No. 2,880,423, dated Apr. 7, 1959. Divided and this application Feb. 6, 1959, Ser. No. 791,693
2 Claims. (Cl. 2—192)

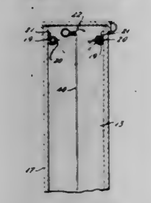
1. A method of manufacturing mortar board caps comprising forming a crown of sheet plastic, seam welding the upper portion of said crown to a first flat sheet of plastic, laying a sheet of relatively rigid material of

lesser dimension than said first sheet of plastic on said first sheet of plastic, positioning a second flat sheet of plastic on the other side of said relatively rigid material with the edges of said second plastic sheet projecting past the edge of said relatively rigid material, applying tension to said second plastic sheet, and applying heat



and pressure to the edges of said flat sheets to weld them together and simultaneously applying pressure to the edge portions of the rigid stiffening material so as to cause the stiffening material to deform one of said sheets and cause it to embrace said stiffening material under tension.

3,018,488
DIAPER CLEANSING WATER CLOSET
June Liles Snead, Box 891, Rockingham, N.C.
Filed Dec. 31, 1959, Ser. No. 863,351
3 Claims. (Cl. 4—1)

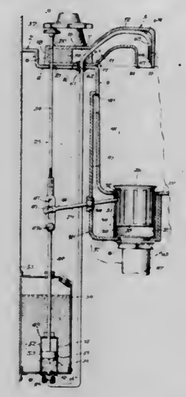


1. In a water closet the combination of a bowl and a two-compartment tank with a discharge from each compartment of said tank into the bowl, a water supply into each of said compartments, the admission and discharge of water into one compartment and from said compartment into the bowl being controlled, spray means connected with the supply of water to the other compartment, said spray means including at least two spaced sprays directed generally toward each other, means for supporting said sprays in said compartment, and releasable holding means between said sprays for suspending articles therebetween.

3. An article clamping device comprising a first elongated bar having means for attachment to supporting structure, a second elongated bar, means to mount said second elongated bar for generally parallel movement relative to said first elongated bar, means urging said elongated bars toward each other to grippingly engage articles therebetween, and at least two handles spaced from each other, and attached to said second elongated bar for moving said second elongated bar away from said first elongated bar.

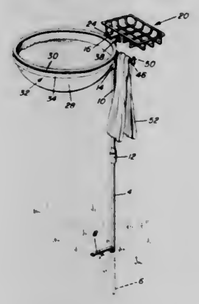
3,018,489
COMBINED LAVATORY ACCESSORY AND SOAP DISPENSER
Edward F. Saflarski, 2158 19th St., Chicago, Ill.
Filed Apr. 6, 1960, Ser. No. 20,336
10 Claims. (Cl. 4—166)

1. In a lavatory having a wash bowl with a drain, a stopper therefor movable to open and closed positions for respectively opening and closing the drain, operating linkage for the stopper carried by the basin, means connecting the linkage to the stopper, and a faucet assembly supported from the lavatory and providing a spout extending over the bowl, a liquid-soap dispenser supported beneath the lavatory and comprising a reservoir and a pump connected with the reservoir to discharge liquid soap therefrom, conduit means extending from the pump



and through the spout and having a discharge end at the discharge of the spout, and lost-motion connecting means between said operating linkage and said pump for operating the latter in response to movement of the former.

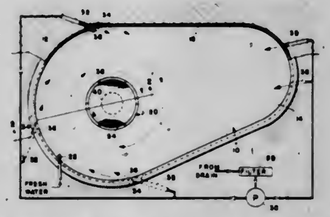
3,018,490
OUTDOOR WASHSTAND
Herman H. Eichorst, Hollydale, Calif. (8119 Long Beach Blvd., South Gate, Calif.)
Filed Nov. 12, 1959, Ser. No. 852,338
3 Claims. (Cl. 4—170)



1. For use as a component part of an outdoor washstand, a rigid tubular socket member of predetermined length having one end closed, said socket member being open at an opposite end and adapted to telescopically and removably receive an insertable and removable part of a portable support post, said socket member being provided intermediate its ends with an opening, a rod member of a length considerably greater than the cross-section of said socket member having a median portion thereof mounted in said opening, a flat faced cleat having a median portion thereof superimposed upon and secured substantially tangent to an outer surface of the socket member adjacent to but spaced a distance from the closed end of the socket member, said cleat being of a length greater than the cross-section diameter of the socket member and having end portions extending beyond diametrically opposite surfaces of said socket member, and a complemental ring-like frame adapted to re-

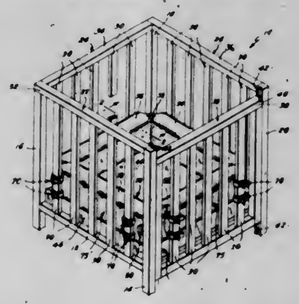
movably receive and support an insertable and removable basin and provided on one side with a pair of outstanding ears, said frame and ears normally extending in a plane normal to the axis of said socket and to said cleat, said ears each having an edge extending over and supported on an edge of said cleat, pivot means connecting said ears to said socket on an axis parallel to and spaced from said cleat, said socket and cleat being rotatable 270° about said pivot axis in one direction whereby said cleat contacts another edge of at least one of said ears and stops said socket and rod member within said frame.

3,018,491
WATER CIRCULATING SYSTEM FOR CLEANING SWIMMING POOLS
Robert L. Read, 10751 Louisa Drive, La Mesa, Calif.
Filed Sept. 1, 1959, Ser. No. 837,398
7 Claims. (Cl. 4—172)



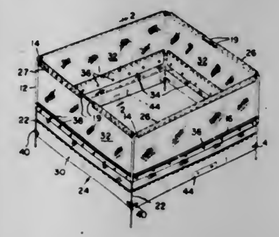
1. In a swimming pool having a side wall and a floor: a drain in said floor at substantially the deepest portion of the pool; means for causing the water in said swimming pool to assume a vertically downwardly spiraling circulation that takes the form of a vortex substantially centered on said drain, said means comprising a plurality of primary inlet pipes disposed in said wall around said drain and connected to a source of water; said primary inlet pipes being downwardly inclined and vertically staggered in an interrupted spiral pattern leading downwardly toward said floor, said inlet pipes directing incoming water into the pool in corresponding directions and causing a generally downwardly spiralling flow toward said drain, each inlet pipe discharging inwardly of the pool at an acute angle with reference to an adjacent wall surface portion of the pool.

3,018,492
PROTECTIVE BUMPER DEVICE
Norman Rosen, 128 Isabelle St., Metuchen, N.J.
Filed Apr. 22, 1959, Ser. No. 808,127
8 Claims. (Cl. 5—93)



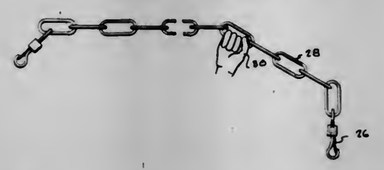
1. The combination comprising an infant enclosure device, such as a crib or the like, including means providing a plurality of upstanding side surfaces forming an enclosure; protective bumper means associated with said surfaces, said bumper means including a plurality of sections; means releasably securing each one of said plurality of sections to a respective one of said surfaces, each of said plurality of sections being formed of fluid impervious resilient material providing portions adapted to be inflated; inflating means operatively associated with said plurality of inflatable portions, at least a portion of one surface of one of said plurality of sections being disposed for engagement with a part of the respective enclosure surface to which said one section is releasably secured; said portion of said one surface having frictional means for frictionally maintaining said portion of said one surface in engagement with said part of the said respective surface to limit relative sliding movement therebetween; the cross-sectional shape of said one of said plurality of sections being substantially rectangular and each of said plurality of sections of said bumper means comprising an individually inflatable, separate unit; and means releasably connecting adjacent ones of said plurality of sections.

3,018,493
BABY BED PLAY PEN
Gertrude Wittbrodt, 11573 Whithorn, Detroit, Mich.
Filed June 9, 1960, Ser. No. 35,027
1 Claim. (Cl. 5—99)



A multiple purpose, self-supporting, foldable baby crib comprising a frame including a pair of longitudinally extending, rectangularly shaped rigid side members made from tubular material, said members each including upper and lower horizontal rails and a pair of vertical elements which are adapted to receive legs which telescope therein to adjust the height of the crib above the supporting surface and a pair of upper and lower tubular end rails connecting said side members and arranged in the form of linkages, said linkages each comprising a pair of links having their inner ends pivoted together and their outer ends pivoted to said side members, a basket made from lightweight material carried entirely by said upper rails, said basket including side and end walls and a bottom, said walls having their outer edge portions connected to the upper rails of the frame for supporting said basket a suitable distance above the supporting surface, means for adjusting the depth of said basket, said means including a flap extending longitudinally along the inner surface of each of said side walls and connected on one longitudinal edge to the side wall along a line which lies in a horizontal plane containing said lower rails, said flap being adapted to be lifted and carried over the upper rail corresponding to the side wall for folding the excess material in a serpentine path and thereby arranging the folded excess material in an elongated bundle, and fastening means including a plurality of gripper snaps along the other longitudinal edge of the flap for securing the flap to the outer surface of the corresponding side wall, thereby firmly holding the bundle against the corresponding rail.

3,018,494
LIFE SAVING APPARATUS FOR BOATS
George A. Guido, 1148 Cannon St., Syracuse, N.Y.
Filed May 28, 1957, Ser. No. 662,259
1 Claim. (Cl. 9—14)



A life saving device for use in attachment to a boat comprising an elongated chain having opposing ends, one of said ends having means for detachably securing the chain to a boat, the other end portion of the chain being adapted to encircle the waist of an occupant of the boat with the end thereof having means for attachment to the chain to secure the end portion around the waist of the user, said chain having links of a length and width to permit the entire hand of the user to be inserted therein so that the links can be gripped in hand over hand fashion to enable a user in the water to pull himself back to the boat.

3,018,495
LOADING DOCK
Hugh Warren Hosbein, Fort Wayne, Ind., assignor to Symington-Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Sept. 14, 1956, Ser. No. 609,957
4 Claims. (Cl. 14—71)



1. An automatically adjustable ramp for bridging the space between two separated surfaces of changing relative height comprising a movable power support means, hinge means connecting said ramp adjacent to the edge of one of said surfaces, an extension for contacting the other of said surfaces, motion-permitting means movably supporting said extension at the end of said ramp adjacent said other of said surfaces for causing said extension to move upwardly and downwardly in contact with said other surface relative to said ramp, a control element, a movable connection mounting said control element upon said ramp, coupling means operatively connecting said extension with said control element for moving said control element to and fro in response to upward and downward movement of said extension relative to said ramp, a pair of contact switches mounted upon said ramp adjacent said control element, a switch actuating arm attached to each of said contact switches, electrical circuit means connecting said switches to said movable power support means, one of said switches when actuated causing said power support means to lower said ramp thereby constituting it as a lowering switch, the other of said switches when actuated causing said power support means to raise said ramp thereby constituting it as a raising switch, said power support means holding said ramp motionless when both of said switches are unactuated, a pair of actuating projections mounted upon said control element at a spacing greater than the distance between said switch actuating arms, said coupling means being arranged to maintain said actuating projections with said switch actuating arms disposed unactuated between them when said other surface is substantially aligned with said ramp, said switches remaining unactuated when their actuating arms are not contacted by said actuating projections, said actuating projections respectively disposed adjacent said lowering and said raising switch actuating arms being respectively designated as lowering and raising actuating projections, said coupling means moving said lowering actuating projection into actuating contact with said lowering switch actuating arm when said extension is moved downwardly relative to said ramp, the rate of said power support means being gradual when said ramp is being lowered to allow said lowering actuating projection to remain in actuating contact with said lowering switch actuating arm when said extension moves slowly downwardly at a controlled speed, said coupling means moving said raising actuating projection into actuating contact with said raising switch actuating arm when said other surface moves upwardly relative to said ramp, and said lowering actuating projection being movable past said lowering switch actuating arm to cause said lowering actuating projection to slip past said lowering switch actuating arm to cause it to assume the unactuated condition upon a sudden downward relative movement of said other surface relative to said ramp caused by said extension moving downwardly faster than said power support means is lowering said ramp whereby said power support means is stopped to hold said ramp motionless when said extension is moving downwardly too fast for safety.

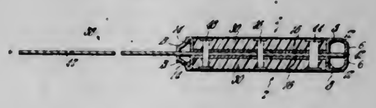
3,018,496
MOBILE RAMP
Hugh Warren Hosbein, Fort Wayne, Ind., assignor to Symington-Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed Aug. 27, 1957, Ser. No. 680,532
11 Claims. (Cl. 14—71)



1. A mobile ramp for bridging a space between first and second surfaces comprising a supporting frame, transport means mounting said frame to move laterally adjacent the edge of said first surface, a platform for bridging said surfaces including adjacent approach and bridging parts which respectively contact said first and said second surfaces in bridging them, said approach part including an approach plate over-hanging said first surface and a vertically-movable connecting means, guide means coupling said vertically-movable connecting means to said frame whereby said approach part is laterally restrained and made movable from a position resting upon said first surface to one raised above said first surface, hinge means connecting the adjacent ends of said bridging part and said approach part whereby the remote end of said bridging part is movable toward and away from

said second surface, extensible support means reacting between said frame and said platform for lifting said approach and said bridging parts away from contact with said surfaces and supporting them upon said frame whereby the lateral movement of said ramp is facilitated, and said extensible support means being sufficiently retractable to drop said approach and bridging parts into respective contact with said first and said second surfaces whereby the principal component of the weight of said approach part and a portion of the weight of said bridging part together with any load imposed upon them is transmitted to said first surface with the remainder of said weights and said load transmitted to said second surface under the lateral restraint of said frame exerted upon said platform through said vertically-movable connecting means.

3,018,497
TOOL HAVING A HAND GRIP CONSTRUCTION
Elchanan Echikson, South Orange, N.J., assignor to Red Devil Tools, Union, N.J., a corporation
Filed Dec. 14, 1959, Ser. No. 859,332
1 Claim. (Cl. 15—143)



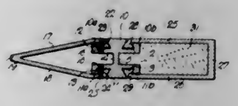
The combination with the flat tang portion of a hand scraper of a hand grip construction comprising a pair of elongated similar shells, each said shell formed from relatively thin, rigid metal and having vertically disposed longitudinally extending side walls and a vertically disposed outer rear end wall and a forward inner end bolster portion, said side walls of said shells relatively inwardly converging from the outer rear ends thereof, said outer rear and side walls curving inwardly to form a generally horizontally extending upper wall provided with an elongated slot, rear and forward portions of said upper wall extending downwardly from said upper wall and terminating in horizontally-extending bottom wall portions contiguous with opposite faces of said tang portion, said slot and rear and forward portions of said upper wall and bottom wall portions providing an elongated recess, inserts seated in the recesses of the shells, and means extending through said inserts and bottom wall portions of the shells and tang securing them in rigid grip forming relation to said tang.

3,018,498
FINGER BRUSH
Bernard H. Wasserman, 38 Rose Ave., Great Neck, N.Y.
Filed June 28, 1960, Ser. No. 39,329
9 Claims. (Cl. 15—167)



1. A finger brush comprising a flexible finger cot, and a strip of bristle fabric providing a brushing surface fastened longitudinally to one side of the outer surface of said finger cot adjacent to the closed end thereof, the portion of the finger cot to which said bristle fabric is attached being substantially transversely stiff and planar and only capable of bending on at least one transverse axis at least about ½ to ¾" from the said closed end.

3,018,499
PLASTERER'S TOOL
Alex A. Levy, 618 W. 67th St., Kansas City, Mo.
Filed Feb. 10, 1958, Ser. No. 714,299
4 Claims. (Cl. 15—235.4)



1. A plasterer's tool comprising, in combination, a relatively rigid elongated rib substantially rectangular in transverse cross-sectional form, a pair of channels formed in each of two opposed sides thereof spaced from one another in said sides and extending longitudinally of the rib, the channels of greater width adjacent their bases than adjacent their outward portions in transverse cross section, a pair of hollow, elongate tube members each having a pair of elongate, opposed, substantially rectangular sides, the sides of each said member connected with one another at one edge and free at the other, a flange connected adjacent each free edge of each said side extending inwardly of said member, each said flange in transverse cross section formed to slidably fit in and positively engage one of said channels, the sides of at least one of the tube members being parallel with an edge member extending substantially normal to said tube sides joining the edges of said sides not engaged with said rib, and the portion of the rib between the channels in each opposed side thereof raised so as to be flush with the tube member side faces when the latter are engaged with the rib.

3,018,500
WINDSHIELD WIPER BLADE
John W. Anderson, 578 Broadway, Gary, Ind.
Filed Sept. 6, 1960, Ser. No. 54,252
7 Claims. (Cl. 15—250.42)



1. A wiper assembly for cleaning a surface comprising a blade having an elongate flexible wiper element, an elongate resiliently flexible backing member connected to said wiper and flexible in unison therewith in a single plane, said backing member having a notch cut into a side edge thereof, and articulated pressure-distributing means connected to said blade at points adjacent the ends thereof and at at least one other point intermediate said ends, said point intermediate said ends being spaced from said notch in said backing member during normal use of the wiper assembly and being adapted to be aligned with said notch when said backing member is distorted away from said pressure means whereby said pressure means is removable from said blade.

3,018,501
WINDSHIELD WIPER
John R. Oishei, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Oct. 7, 1959, Ser. No. 844,950
3 Claims. (Cl. 15—250.42)

1. A windshield wiper blade comprising a superstructure, a flexible backing strip, connection means between said backing strip and said superstructure, a wiping element having a central portion with a wiping lip extending

therefrom mounted on said backing strip, a reinforcing bead extending continuously along each side of the central portion of said wiping element substantially throughout the entire length thereof, and means operatively associated with said wiping element located proximate said connection means for permitting portions of said beads to



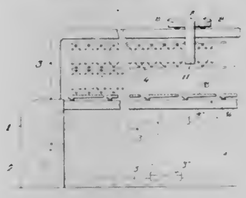
be distorted by said connection means during operation of said blade while preventing this distortion from being transmitted to the remainder of said wiping element, said continuity of said beads maintaining a uniform reinforcement of said wiping element against lateral distortion throughout the length thereof.

3,018,502
DUST PAN AND COMBINATION THEREOF WITH A BROOM
Allan R. Lossius, 132 Anza St., San Francisco, Calif.
Filed May 4, 1959, Ser. No. 810,634
8 Claims. (Cl. 15—257.2)



1. In combination with a broom having a head of elongated bristles substantially inflexibly secured together in side by side relation at one of their corresponding end portions to provide a relatively rigid body of said end portions and the remainders of said bristles being substantially free for flexing and terminating in free floor engageable outer ends; an elongated broom handle secured to said body; a dust pan, an elongated pan handle, means connecting one end of said pan handle with said pan for movement of said pan from an operative position extending angularly relative to said pan handle to an inoperative position generally in alignment with the axis of said pan handle, and means including a spring for yieldably urging said pan from said inoperative position to said operative position, means for restricting said pan against movement past said operative position upon movement of said pan thereto from said inoperative position, means for releasably securing said pan handle to said broom handle in substantially parallel side by side relation with the latter with said pan held by said body in said inoperative position and against the tension of said spring tending to move said pan to said operative position whereby said pan will automatically move under the tension of said spring to said operative position when said pan handle is released from said broom handle and the pan is moved away from said body.

3,018,503
FRAME CLEANING DEVICE UTILIZING EXHAUST AIR FROM A SUCTION CLEANER IN SPINNING AND LIKE OPERATIONS
Kenji Hijiya, Amagasaki City, and Kazuyoshi Okawa, Suita City, Japan, assignors to Nihon Spindle Seizo Kabushiki Kaisha, Amagasaki City, Japan
Filed Dec. 27, 1956, Ser. No. 630,907
7 Claims. (Cl. 15—312)



1. In combination with textile machinery including an elongated upright support frame, a suction duct extending longitudinally of said frame beneath the top thereof for suction cleaning of debris from the machinery, a suction blower connected to said suction duct, and a separator connected to the outlet for air under pressure from the suction blower: blow cleaning apparatus comprising a relatively rigid duct extending longitudinally of said frame and connected at one end to the discharge outlet of said separator to receive such air under pressure therefrom; a carriage reciprocable longitudinally of the upper portion of said frame substantially parallel to said duct in support relation with the latter, said carriage having air inlet means in continuous communication with the interior of said duct throughout the range of movement of said carriage and constituting the sole operative outlet of said duct; flexible sealing means maintaining an airtight seal between said duct and said inlet means during relative movement of said duct and said inlet means and secured to one thereof; and discharge nozzle means on said carriage in communication with said air inlet means and effective to discharge the air under pressure, received from said duct through said air inlet means, onto the textile machinery to blow clean the latter.

3,018,504
COMBINED SUCTION OPERATED FLOOR WASHER AND WAX APPLIER
William D. Hart, Toledo, Ohio, assignor, by mesne assignments, to The Regina Corporation, Rahway, N.J., a corporation of Delaware
Filed Feb. 3, 1960, Ser. No. 6,526
4 Claims. (Cl. 15—320)

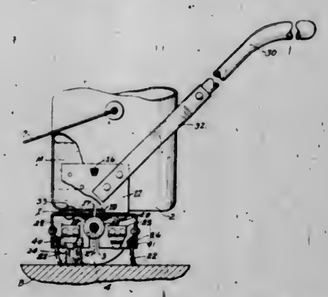
2. A suction operated floor tool comprising a tubular housing closed at opposite ends, a floor tool at the lower end of the housing, a suction tube extending from the floor tool inside the housing and terminating in the region of the upper end thereof, partition means separating the inside of the housing into a lower and an upper chamber, a valve controlled outlet to the outside from the lower chamber to enable liquid to flow therefrom directly onto a floor surface, there being holes in the upper end portion of said tube for discharging liquid into the upper chamber and the portion extending through the lower chamber being imperforate, means for militating against the creation of a partial vacuum in the lower chamber, controllable valve means in said partition means for enabling

liquid to flow from the upper chamber to the lower chamber, a suction fan for creating a suction at the upper end



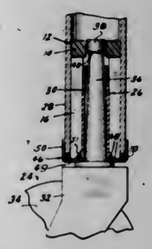
of the housing, and a multi-speed electric motor for selectively driving the fan at different speeds.

3,018,505
STRIPING DEVICE
William George Baird, East St. Louis, Ill., and William Hrach, Rock Hill, Mo., assignors to H-B Manufacturing Co., St. Louis, Mo., a corporation of Missouri
Filed Sept. 29, 1958, Ser. No. 764,156
11 Claims. (Cl. 15—503)



1. A device for applying coating material to a surface in the form of a stripe comprising a base frame, means yieldably mounted on said frame for pivotal movement relative thereto and for positioning said frame in operative spaced relationship with respect to said surface, means engaged with said frame for applying a force to said frame for yielding movement of said positioning means together with propelling movement of the device along the path of the stripe to be applied, means urging said positioning means against said yielding movement, a coating material reservoir mounted on the upper side of said frame, a substantially closed array of depending striping applicators mounted on the opposite side under said frame and of sufficient stiffness for acting together with said urging means against said force while maintaining wiping engagement with said surface and defining a substantially enclosed paint distributing passage between a predetermined portion of said surface and said frame, conduit means providing communication between said passage and said reservoir and defining an outlet orifice within said passage, valve means for said outlet orifice, said valve means comprising a depression having a wall including said outlet orifice and a form fitting member carried by the positioning means for closely engaging with said depression wall, said form fitting member being actuated by said positioning means for opening said outlet orifice responsive to said movements and being actuated by said urging means to close said outlet orifice on cessation of at least the first of said yielding and propelling movements.

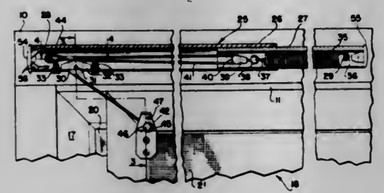
3,018,506
CASTER INSERT SOCKET
Raymond Haydock, 6711 Lightfoot Ave., Chicago 46, Ill., assignor to Raymond Haydock, trustee, Chicago, Ill.
Filed May 9, 1958, Ser. No. 734,192
1 Claim. (Cl. 16—20)



A caster assembly combination comprising a furniture leg element, a caster, a sleeve and an insert socket, said furniture leg element having a recess of predetermined diameter, said caster having a pintle of predetermined length, said sleeve surrounding the caster pintle and being of less length than the pintle, said insert socket including a single integral sleeve-like member of universally resilient material including an upper continuous annular portion defining a central hole opening in at least downward direction and circumferentially spaced downwardly extending legs, and an outwardly extending flange at the lower ends of the legs, said insert socket being fitted in said recess in the furniture leg element and having a common outer surface of substantially cylindrical shape defined by said annular portion and legs of such diameter relative to that of the recess and having sufficient friction with the wall of the recess as to retain the assembly in the recess, and said flange engaging the lower end surface of the furniture leg element and serving to limit insertion of the socket into the recess, said sleeve frictionally engaging the inner surface of said legs and the sleeve and socket being of such relative dimensions as to provide sufficient friction to retain the sleeve in the socket, the insert socket, including the annular portion and legs, being of substantial thickness in radial direction and the material thereof yielding so as to be varied in thickness in response to forces applied on opposite sides of an element thereof in thickness direction, said sleeve extending a substantial distance into the insert socket but terminating short of said annular portion, the sleeve having a constricted upper end portion and the pintle having an enlarged head on its upper end projecting beyond the sleeve and forming a shoulder engaged by said constricted end portion of the sleeve whereby the caster is held in assembly with the pintle in the sleeve, and the upper end of the pintle extending at least as far as into the hole in said annular portion, said hole and enlarged head being so relatively dimensioned as to provide snug fit therebetween, whereby the annular portion provides a bearing element for the upper end of the pintle, and the caster is enabled to assume limited misalignment relative to the furniture leg element due to the resilience of the insert socket and in the movement of the caster into various positions of misalignment, the pintle has

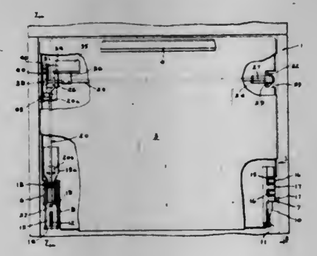
widely spaced points of reaction at the upper end of the insert socket in the annular portion and at the lower end of the insert socket through the lower end of the sleeve.

3,018,507
PANEL RETRACTOR
Sol J. Launer, 20367 Gault St., Canoga Park, Calif.
Filed Jan. 26, 1959, Ser. No. 788,926
6 Claims. (Cl. 16—78)



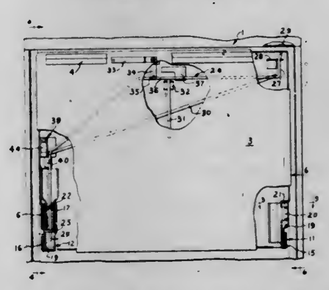
1. A retraction device for a panel slidably mounted in a frame comprising a housing having a pair of telescopic hollow tubes, an expansion spring having one end continually located within one of said telescopic tubes and expandable within said housing, a pulley fixed to the other end of said spring, a cable having one end continually located within the other of said tubes and extending over said pulley and through an opening in said other tube, a second pulley fixed to said other tube located at said opening for guiding said cable through said opening, a bracket secured to said panel adjacent the front edge of said panel, means carried by the other end of said cable for quickly attaching said cable to said bracket, first attachment means for securing one end of said other tube to said frame and for securing said one end of said cable, and second attachment means for securing one end of said one tube to said frame and for anchoring said one end of said spring after the other ends of said tubes have been telescoped into one another and into a relative position which provides for an initial tension on said spring sufficient to completely close the panel.

3,018,508
DUAL AXIS OVEN DOOR STRUCTURE
Kermit B. Keeling, Sr., Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 27, 1959, Ser. No. 816,139
4 Claims. (Cl. 16—147)



1. A door structure for a range oven or the like comprising a body defining a front opening, a door adapted to close said opening, first and second hinges connecting the bottom edge of said door to said body adjacent the bottom edge of said opening for pivotal movement about a horizontal axis, said hinges being respectively positioned adjacent a first side edge and second side edge of said door, said first hinge including means for supporting said door for pivotal movement about a vertical axis as well as said horizontal axis, means for securing said door in releasable engagement with said second hinge, a rod mounted on said door for limited horizontal movement, said rod including an end portion adjacent said first side edge, a pivot element secured to said body adjacent said first side edge, said pivot element being arranged to form an opening in alignment with the axis of said end portion of said rod substantially larger than the cross-sectional area thereof, said rod being movable from a first position in which said end portion is out of engagement with said pivot element to a second position in which it extends through said opening, a bracket on said door having an aperture adapted to engage said end portion of said rod when the rod is moved to its second position so as to form with said pivot element and said rod a pivotal connection between the upper portion of said first side edge of said door and said body, manually operable means carried by said door for actuating said door securing means so as to disengage the door from said second hinge and also actuating said rod from its first position to its second position, and latch means carried by said door for rendering said manually operable means inoperative, said latch means including means cooperable with said body for effecting movement thereof from an unlatched position when said door is closed to a latched position when the door is open.

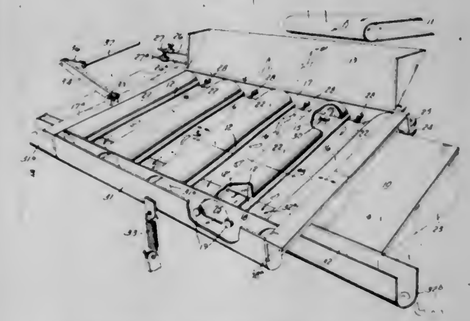
3,018,509
DUAL AXIS OVEN DOOR STRUCTURE
George R. Sherman, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 27, 1959, Ser. No. 816,255
5 Claims. (Cl. 16—147)



2. A door structure for a range oven or the like comprising a body defining a front opening, a door adapted to close said opening, first and second hinges connecting the bottom edge of said door to said body adjacent the bottom edge of said opening for pivotal movement about a horizontal axis, said hinges being respectively positioned at the two side edges of said door, said first hinge including means for supporting said door for pivotal movement about a vertical axis as well as said horizontal axis, said second hinge being pivoted horizontally to the body and including holding means for releasably supporting said door a reciprocating connecting member carried by said door for limited vertical sliding movement between upper and lower positions when the door is closed, said connecting member having a holding element engageable with said holding means of the second hinge only when said connecting member is in its lower position, said connecting member also having a hinge element adjacent the top edge of said door engageable with said body only when said connecting member is in its upper position; said hinge element being aligned with said vertical axis of the said first hinge and arranged to pivotally

support the door when it swings about said vertical axis, and a single manually operable means carried by the door for shifting said connecting member between its upper and lower positions.

3,018,510
SHRIMP PEELING MACHINE
Fernand S. Lapeyre, James M. Lapeyre, and Le Roy E. Demarest, New Orleans, La., assignors to The Peelers Company, Houma, La., a partnership
Continuation of application Ser. No. 690,275, Oct. 15, 1957. This application Aug. 17, 1960, Ser. No. 50,556
15 Claims. (Cl. 17—2)



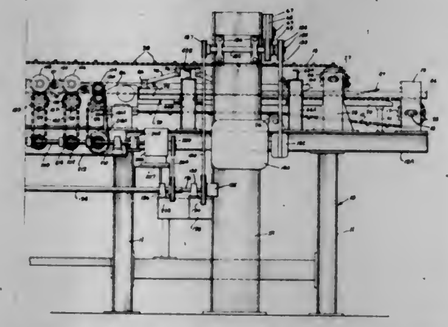
1. A machine for separating the hulls from the meat of shrimp comprising a shrimp support including a substantially flat surface supporting the shrimp during the separating operation, spaced rotary separating members positioned relatively to the flat surface to form separating nips, means associated with one of said members and said support to cause relative bodily reciprocatory movement between said members and said flat surface of said support whereby to separate the hulls from the meat of said shrimp, said shrimp support being inclined, means at the high end of the support for introducing raw shrimp thereto, and means at the lower end of the inclined shrimp support for receiving the peeled meat and the separated hulls.

3,018,511
TIRE APPARATUS
Victor St. C. Monteith and Charles G. Wyman, Dayton, Ohio, assignors, by mesne assignments, to The Dayton Tire & Rubber Company, Dayton, Ohio, a corporation of Ohio
Filed Nov. 19, 1959, Ser. No. 854,187
4 Claims. (Cl. 18—2)



1. Apparatus for inflating tires after curing, comprising a support, a rim on said support, valve means associated with said rim and adapted to transmit air to said rim, and a guard mounted on said support and spaced axially from said rim, said guard comprising a portion pivotal transversely of said rim and having means to actuate said valve when said portion is pivoted, to transmit air to said rim.

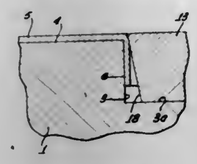
3,018,512
SEALING APPARATUS
Harold V. Kindseth, Minneapolis, Minn., assignor to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Oct. 15, 1956, Ser. No. 615,815
11 Claims. (Cl. 18—4)



1. Sheet sealing apparatus comprising a frame, upper and lower conveying means mounted on said frame for moving sheet material longitudinally through the apparatus, punch means mounted on one side of said frame in the path of the edges of said sheet material to form a plurality of spaced perforations adjacent the edges of the sheets, an extrusion die mounted on the same side of said frame downstream from said punching means, said extrusion die comprising narrow transverse horizontal slots for forming a narrow ribbon of resinous sealing material on both sides of the perforated edges of the sheets as they move through the apparatus, a plurality of pairs of pressure rolls mounted on the same side of said frame downstream from said extrusion die in the path of the edges of the sheets carrying ribbons of resinous sealing material to force part of the resinous sealing material through the perforations in the edges of the sheets, at least one of the pairs of pressure rolls next following the extrusion die being provided with cooperating peripheral circumferential grooves overlying the perforations in said sheets to provide an excess of resinous sealing material over said perforations.

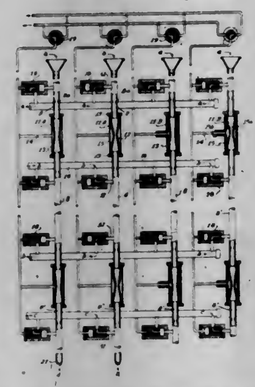
3,018,513
CLAMP FOR MATRICES FOR MOLDING PHONOGRAPH RECORDS
Robert W. Adams, Reseda, Calif. (1062 N. Orange Grove Ave., Los Angeles, Calif.), and Allan R. Ellsworth, 1011 N. Fuller Ave., Los Angeles, Calif.
Filed Oct. 4, 1960, Ser. No. 60,425
4 Claims. (Cl. 18—5.3)

4. In a molding device for stamping disc records: a die having a central cylindrical recess and a flat bottom surface; a stamper overlying the die having a tubular central portion or flange received in said recess, the exterior surface of said flange fitting the interior cylindrical surface of the recess; a center plate having a depth corresponding to the depth of the recess so that when the plate engages said bottom surface, the exposed surface of the plate is substantially on the same plane as the exposed surface of the stamper; said center plate having a tapered edge for clamping only the upper portion of the flange against the wall of the recess; and means for tightening said center plate against the bottom surface of the die and



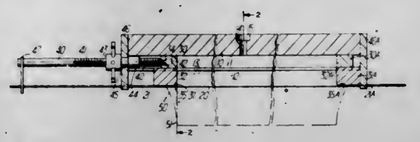
for tightening said tapered edge into clamping contact with said upper portion of the interior surface of the flange.

3,018,514
APPARATUS FOR THE CONTINUOUS SPINNING AND TREATMENT OF SYNTHETIC FILAMENTS
Tomas Nino Salgado, Agrarismo 68, Mexico City, Mexico
Filed June 24, 1958, Ser. No. 746,311
1 Claim. (Cl. 18—8)



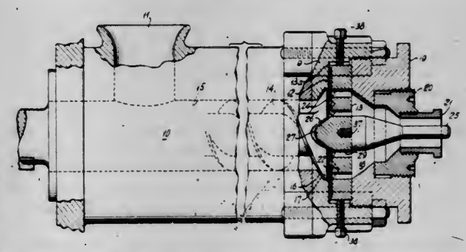
Apparatus for the continuous spinning and treatment of a synthetic thread such as viscose, comprising means for uninterruptedly forming thread, at least two collecting units for treated thread disposed below said thread forming means, and continuous treatment means interconnecting the thread forming means and said units whereby the thread is formed, treated and collected substantially without interruption and in a continuous, sequential fashion, said treatment means comprising a vertically disposed pipe defining a lengthy, continuous tubular passage, a plurality of sealed tubular chambers interposed at spaced points within said pipe, each chamber having an inner resilient tube adapted for constriction and expansion upon variation of pressure within each chamber to divide said pipe into a plurality of substantially isolated sections, conduit means including a pressure responsive control valve for circulating different treatment fluid within each of said pipe sections between adjacent members, and pressure means for simultaneously controlling said control valve and said resilient tubes so that said control valve is open when the tubes are constricted and vice versa, and means for flowing fluid the full length of said pipe when said resilient tubes are expanded to initially feed thread from said thread forming means to one of said collection units, said collection units being separately usable to obviate interruption of the thread forming and treatment processes when one collection unit becomes full of treated thread.

3,018,515
MANUFACTURE OF PLASTIC SHEETS
Thomas Sneddon, East Kilbride, Scotland, assignor to Clyde Paper Company Limited, Rutherglen, Great Britain, a British company
Filed Dec. 16, 1958, Ser. No. 780,779
Claims priority, application Great Britain Dec. 23, 1957
8 Claims. (Cl. 18—12)



1. An extrusion die for extruding hot molten plastic downwards as a sheet, the die comprising in combination a block, there being formed in said block a longitudinal channel to receive the molten plastic and a deep narrow longitudinal slit extending from said channel to the underside of the block, said slit having a constricted mouth which determines the thickness of the sheet, a blockage device which is a precise fit within the channel and slit so as to form a complete end closure to the channel and slit except only that there is provided underneath said device a fine inter-jaw space which projects laterally beyond the otherwise completely closed end of the slit, and means underneath the blockage device defining an end to said space.

3,018,516
PLASTIC EXTRUDING MACHINE
James W. Clinefelter, 618 Ridgecrest Road, Akron 3, Ohio
Filed May 2, 1958, Ser. No. 732,626
4 Claims. (Cl. 18—14)



1. In or for a plastic extruding machine of the rotary screw conveyor type, a perforated unit through which the plastic material is forced by the rotary screw conveyor and comprising an open mesh screen and a supporting plate making face contact therewith and formed with a multiplicity of through holes distributed over its effective area, said supporting plate also having a solid center portion for supporting a die core on the outlet side of the perforated unit as well as a cone shaped protuberance on the entrance side thereof and extending upstream therefrom, said cone shaped protuberance having its conical surface terminating in a base which covers the whole area of the solid center portion of the supporting plate, said screw conveyor terminating in an impeller cooperating with the perforated unit to force the material therethrough and having a cutting edge which severs the material on the entrance side of the perforated unit as it enters the perforations thereof, said impeller being formed with a center recess to accommodate the cone shaped protuberance, said recess affording enough clearance to avoid contact with the protuberance under all conditions of use of the machine, said conical surface

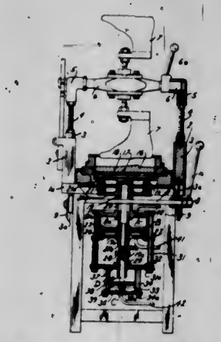
being free throughout its whole area to permit the material advanced under the propelling force of the screw conveyor to come in contact therewith throughout said whole area and to cause thereby the contacting material to be advanced downstream and along said conical surface towards the perforations in said unit by the propelling force of the screw conveyor, thus preventing the material in the dead area of the perforated unit from becoming static and burning.

3,018,517

APPARATUS FOR FORMING FOAMED PLASTIC SOLES WITH CLOSED PORES AND FOR CONNECTING SAME TO ARTICLES OF FOOTWEAR

Herbert Ludwig, Desmastrasse 112, Uesen, Post Achim, near Bremen, Germany

Original application Feb. 26, 1959, Ser. No. 795,780. Divided and this application Nov. 16, 1959, Ser. No. 859,829
Claims priority, application Germany Mar. 4, 1958
3 Claims. (Cl. 18—17)



1. An apparatus for forming soles of foamed plastic and for connecting the soles to articles of footwear which comprises, in combination: a mold defining a cavity and including a ram reciprocable in directions to alternately enlarge and reduce the volume of said cavity; at least one last; means for supporting said last and for moving same with respect to said mold; means for reciprocating said ram including a rod connected for movements with said ram; means for controlling the movements of said rod and of said ram in the direction to enlarge the volume of said cavity, said last mentioned means comprising a cylinder, a piston reciprocable in said cylinder, a second rod connected with said piston and coaxially aligned with said first mentioned rod, and means for introducing a pressure medium into said cylinder whereby to move said second rod in a direction toward said first mentioned rod and to thereby control the extent to which said first mentioned rod is movable in a direction to enlarge the volume of said cavity; and means for limiting the movements of said second rod in a direction toward said first mentioned rod.

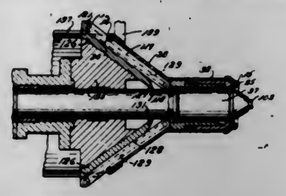
3,018,518

APPARATUS FOR EXPANDING ONE END OF A CYLINDRICAL AIR SPRING INTO FLARED FORM

Alexander G. Jefferys, Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Dec. 17, 1956, Ser. No. 628,854
4 Claims. (Cl. 18—19)

1. A mechanism for expanding one end of an initially cylindrical air spring body into flared form, comprising a plurality of circumferentially spaced bars initially arranged in cylindrical form to support said air spring body internally, means engaging said bars to expand them and the overlying air spring body outwardly into flaring form



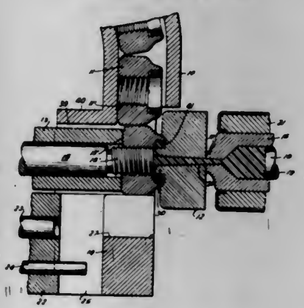
and means having surfaces intermeshing with said bars to form a circumferentially and axially continuous flared surface therewith and to give continuous internal support to said flared end.

3,018,519

APPARATUS FOR MOLDING PLASTIC INSERT IN THREADED LOCK NUT BLANKS

Louis H. Morin, Bronx, and Otto Gries, New Rochelle, N.Y.; said Gries assignor, by mesne assignments, to Coats & Clark Inc., a corporation of Delaware

Filed Mar. 6, 1958, Ser. No. 719,654
4 Claims. (Cl. 18—36)



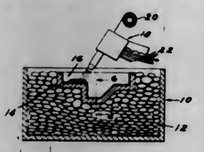
1. An apparatus for producing lock nuts of the character described, comprising a forming and molding station having a combination forming and molding die with a gate passage extending through the die, a forming plunger and threaded insert movable toward and from said die, said insert being rotatable and longitudinally movable relative to said plunger and means for holding a nut blank against rotation, means for delivering nut blanks to said station in a position between the die and said plunger and insert, each nut blank having a threaded bore and an enlarged chamber at one end, bordered by a reduced wall, the chamber and wall facing said die, when the blank is positioned at said station, said forming plunger being movable to advance the nut blank onto the die in shaping the reduced wall of the blank to partially close said chamber, said insert being moved longitudinally and rotated while holding the nut blank against rotation to thread the insert into the bore of the nut blank to a position adjacent to the surface of the die positioned in said chamber, means for pressure injecting heated plastic material through the gate of said die into the cavity formed by said chamber, die and surface of the insert to form a plastic washer in said chamber, a trimming station adjacent said first named station, the trimming station including means for definitely positioning a nut blank at the trimming station, with the bore of the nut blank in alinement with a trimming punch at said station, the nut blank moving to the trimming station upon release of the insert from the threaded bore of the blank, and said trimming punch being actuated to remove the gate portion formed integrally with said washer from the washer to produce the resulting lock nut end product.

3,018,520

METHOD OF MOLDING BY SPRAYING MOLTEN METAL AND HEAT-REACTIVE BONDING AGENT

Harold E. Renaud, Okemos, Mich., assignor to Ren Plastics, Inc., Lansing, Mich., a corporation of Michigan

Filed Feb. 12, 1959, Ser. No. 792,915
20 Claims. (Cl. 18—48)



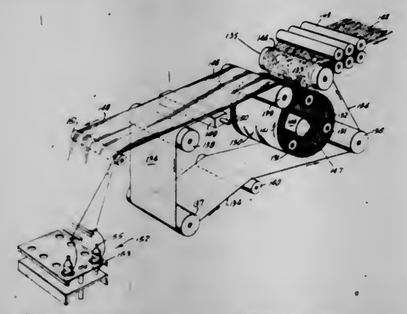
5. A method of making a facing or like product, comprising the steps of applying to a mold which is contoured reversely of said product a surface of a heat-reactive bonding agent in a fluid condition, spraying hot molten metal particles on said surface to cause said agent to progress toward a cured and bonding condition and the particles to become bonded by said agent in a layer, and continuing said spraying of the mold until substantially all of said bonding agent is absorbed in said particle bonding function.

3,018,521

APPARATUS FOR MAKING STRANDS, YARNS, AND THE LIKE

Carlyle Harmon, Scotch Plains, N.J., assignor to Chicopee Manufacturing Corporation, a corporation of Massachusetts

Filed June 27, 1958, Ser. No. 745,163
9 Claims. (Cl. 19—150)



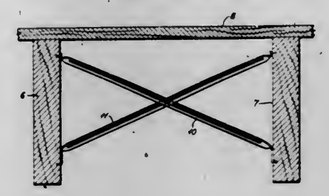
1. Apparatus for converting a fibrous web containing fibers capable of movement under the influence of an applied fluid force into fibrous strands containing longitudinally aligned fibers which comprises: endless, movable foraminous means for supporting said web and said strands said supporting means having a surface free of obstacles to the movement of fibers therealong under the influence of fluid deflecting forces; spaced annular rotatable separating means adjacent said foraminous means and defining a plurality of elongated open zones; means for positioning a fibrous web between said annular separating means and said foraminous supporting means; means for rotating said foraminous supporting means and said annular separating means with said web supported therebetween; and means to pass a fluid between said annular separating means, through said fibrous web and through said foraminous supporting means, whereby said fibrous web is separated into a plurality of substantially separate fibrous strands.

3,018,522

METAL BRIDGING FOR JOISTS

John A. Reidelbach, Jr., Fairfax County, Va., assignor to Timber Engineering Company, Washington, D.C., a corporation of Delaware

Filed Nov. 9, 1959, Ser. No. 851,680
1 Claim. (Cl. 20—9)



A metal bridging adapted to extend diagonally between adjacent surfaces of spaced, parallel joists, comprising an elongated body portion of generally V-shape in cross-section with reinforcing ribs extending longitudinally of said body portion, the upper end of said body portion having a central flat tongue extending upwardly at an angle therefrom, a pointed upper tooth on said upper end of said body portion on each side of said central tongue, the bases of said teeth lying substantially in the plane of said central flat tongue, said upper teeth lying in a common plane passing through the longitudinal axis of said body portion and being adapted to be driven into a joist adjacent the upper edge thereof until said central tongue engages such joist to act as a stop, the lower end of said body portion terminating in a flat heel portion extending downwardly at approximately a right angle to the longitudinal axis of said body portion and a tooth portion extending outwardly at approximately a sixty degree angle from the lower end of said flat heel portion, said body portion having sharp outwardly facing corners at the upper end of said flat heel portion, said corners lying in said common plane passing through the longitudinal axis of said body portion and being adapted to jam into the surface of a second joist adjacent the lower edge thereof to temporarily hold the bridging in place, and said tooth portion having a plurality of outwardly facing teeth thereon to facilitate driving said tooth portion into such second joist whereupon the lower end of said bridging will be elevated relative to such second joist and said bridging will become tightly wedged between such joists.

3,018,523

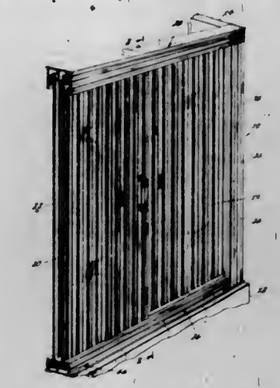
SLIDING PANEL AND ASSEMBLY MOUNT

Charles S. Wilson, 470 Park Place, Long Beach, N.Y.

Filed July 25, 1955, Ser. No. 524,206
10 Claims. (Cl. 20—19)

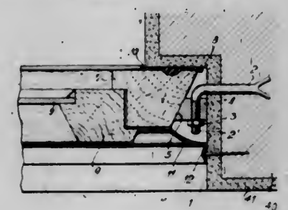
1. In assembly, a mounting fixture including an abutment, and a supporting rail extending towards said abutment and terminating in a leading edge spaced from said abutment, and a corrugated sheet of a synthetic material having lubric properties, said sheet having side by side ridge and furrow sections, said ridge sections being formed with aligned cutouts defining an open-ended guideway across said corrugated sheet having an open side and a base, said supporting rail being received within said guideway with its leading edge bearing against said base and confining said corrugated sheet against lateral displacement in one direction, said abutment be-

ing adjacent the face of said corrugated sheet remote from said guideway and limiting said corrugated sheet



against lateral displacement in the opposite direction, said supporting rail and guideway cooperating to mount said corrugated sheet for sliding movement.

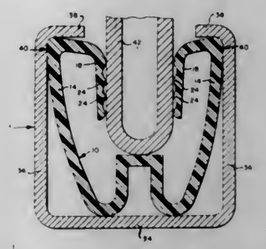
3,018,524
WINDOW
Werner Schlegel, Kastanienallee 3, Essen, Germany
Filed Mar. 23, 1960, Ser. No. 16,996
Claims priority, application Germany Mar. 28, 1959
15 Claims. (Cl. 20—40)



1. In a window assembly fitted into an embrasure, in combination, abutment means at said embrasure, a window frame received with clearance in said embrasure and bearing upon said abutment means, anchor means in said embrasure; centering means inserted between said frame and said embrasure, said centering means being displaceably engaged by said anchor means for firmly clamping said frame in said embrasure by movement in a direction transverse to the plane of the window, tightening means for displacing said centering means in said direction relatively to said frame, said centering means having an inclined surface adapted to exert upon a complementary frame surface a wedging action for shifting said frame within said plane upon a displacement of said centering means by said tightening means, and a pane-carrying sash in said frame.

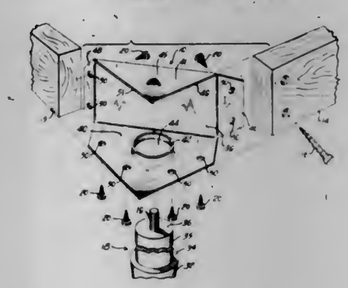
3,018,525
GLASS RUN FOR WINDOWS
Robert J. Deisenroth, 165 Marshall Blvd., Elkhart, Ind.
Filed May 5, 1960, Ser. No. 27,071
6 Claims. (Cl. 20—52)

2. A glass run for windows comprising a continuous strip fabricated from an organic polymeric material; said strip having a channel-shaped cross-sectional contour comprising a bottom wall and a pair of side walls extending therefrom; said side walls being spaced further apart at their outer ends than at the point of their attachment with the bottom wall; said side walls each having an inwardly extending lip portion at its outer end; and a flange having a gradually reduced thickness extending from each lip towards the bottom wall; said flanges being spaced closer together at their free ends than at their points of



attachment with the lip portions; a plurality of spaced longitudinally extending ribs on the oppositely disposed faces of the flanges; said bottom wall being formed with a projection extending towards the lip portions whereby said glass run is adapted to receive a member between the side walls and abutting against the projection with the flange ribs seating thereagainst in sealing engagement.

3,018,526
LEG SUPPORT AND CORNER BRACKET
Fred J. Riebel, Chicago, Ill., assignor to Fred Riebel & Company, a partnership
Filed Jan. 7, 1960, Ser. No. 1,035
13 Claims. (Cl. 20—92)

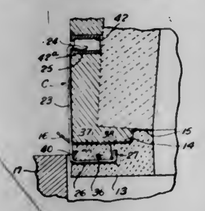


1. A leg bracket comprising, in combination, a brace portion, said brace portion having parallel sides and ends, a fixed support portion extending from one side of said brace portion, a second support portion extending from the other side of said brace portion, each said support portion having converging edges, the first of said support portions extending beyond the projection of the second said support portion, leg alignment means in said first support, internally threaded second leg alignment means in said second support, and flange means extending from the ends of said brace portion.

3,018,527
INTEGRATED BOTTOM RING AND ATTACHING CLIP UNIT
Joel C. Carpenter, Chagrin Falls, Ohio, assignor to Ogle-bay Norton Company, Cleveland, Ohio, a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,573
12 Claims. (Cl. 22—147)

1. An integrated single use refractory bottom ring and attaching clip unit for a reusable composite hot top having

a metal casing and a refractory lining; said unit comprising a refractory bottom ring having a planar upper surface portion and outer and inner sides separated transversely of the ring substantially the same distance as the combined thickness of the casing and lining of the hot top at the lower end thereof, said ring interiorly thereof and intermediate its inner and outer sides being provided with a cavity therein below said upper surface portion thereof, and a wire attaching clip for securing the ring to the lower end of the hot top casing including a straight pivot portion extending transversely of the ring from said cavity to the outer side of said ring and rotatably em-



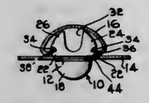
bedded in said ring, said pivot portion having on its end within said cavity in said ring retaining means movable with said pivot portion, said pivot portion at the outer side of said ring having a straight tension attaching portion extending therefrom substantially at a right angle thereto and provided at its free end with a hook adapted to engage in a recess in the casing of the hot top when the ring is secured to the lower end thereof, said attaching clip being swingable on the axis of the embedded pivot portion thereof from an inoperative position wherein said attaching portion extends longitudinally of the outer side of the ring to an operative position wherein said attaching portion extends substantially vertically.

3,018,528
METHOD OF FORM REMOVAL FROM PRECISION CASTING SHELLS
Robert A. Horton, Willowick, Ohio, assignor to Precision Metalsmiths, Inc., Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 7, 1960, Ser. No. 12,899
4 Claims. (Cl. 22—195)

1. The process of producing a molding shell for the casting of shapes therein, comprising the steps of providing a synthetic resin, providing an agent capable of softening said synthetic resin after it is molded and hardened, said agent being capable of producing a condition of softness wherein the softened synthetic resin has a low degree of expansion force under heat of an intensity to volatize the synthetic resin, molding said synthetic resin into the form of a desired casting, providing a porous refractory shell coating over said synthetic resin, said shell having a strength greater than said low degree of softened synthetic resin expansion force, thereafter softening said synthetic resin by applying said softening agent through said porous shell coating, and finally heating the softened form above the heat volatilization temperature thereof until fully dispersed from the shell coating.

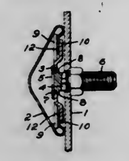
3,018,529
MOLDING FASTENER
Jean Perrochat, Basel, Switzerland, assignor to A. Raymond, Grenoble, France, a firm
Filed May 28, 1958, Ser. No. 738,477
Claims priority, application Switzerland May 29, 1957
1 Claim. (Cl. 24—73)

A fastener for molding trim and like installations, said fastener being in itself a complete device for holding a molding in place on a support free of any other elements and being formed only as a single piece of elastic molded plastic material, said fastener having a support engaging stud portion, adjacent to one end, provided with a preformed yieldable head and a neck to hold the fastener in position relative to a support, a bifurcated, yieldable molding engaging flanged means portion located adjacent to an opposite end of the fastener, said molding



engaging flanged means portion having yieldable flanges provided with external groove means formed therein for receiving portions of a molding and said yieldable flanges cooperating with said external groove means for snapping into engagement with and holding the molding in place, and said fastener being shaped and arranged to provide moisture-tight sealing means when engaged with a support.

3,018,530
FASTENING INSTALLATION
Lloyd G. Pender, Sr., Detroit, Mich., assignor to United-Carr Fastener Corporation, a corporation of Delaware
Filed July 23, 1959, Ser. No. 829,033
3 Claims. (Cl. 24—73)

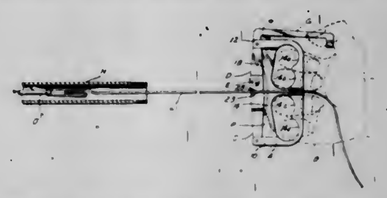


1. A molding fastener assembly comprising, in combination, an apertured support, a molding for the support, and fastening means extending through the aperture of said support for attaching the molding to the support, said molding having reversely turned, inwardly extending side edge portions along its opposite edges in engagement with said support, each reversely turned edge portion having a flange portion at its free end extending inwardly in the direction of the other flange portion and in spaced relation to said support, said fastening means having a molding-engaging, elongated plate portion, the opposite ends of said plate portion in engagement with said molding each having at least one integral first finger portion and a pair of integral second finger portions lying in planes susbtantially parallel to and spaced from one another thereby defining an outwardly extending slot at each end thereof spaced from said support, said flange portions of said molding each being positioned within the respective formed slots of said elongated plate portion, and fastening element means secured at one end to said plate portion and extending through the aperture of said support to secure said plate and said molding in tight engagement to said support.

3,018,531
LINE PULLER
Jean Jacques Arsenault, Rolling Hills, Calif. (24250½ Hawthorne Blvd., Walteria, Torrance, Calif.)
Filed Sept. 12, 1960, Ser. No. 55,330
6 Claims. (Cl. 24—134)

1. A portable device adapted to be grasped by the fingers of a user's hand to frictionally contact parallel

opposing sides of an elongate member to permit exertion of either a pulling or pushing force thereon, including: a flat rigid frame having at least one opening formed in the rear portion thereof for permitting said frame to be grasped by said fingers; first and second gripping members having adjacently disposed curved ends that can frictionally contact said opposing sides of said member; first means for pivotally supporting said gripping members on the forward portion of said frame in such positions thereon that said curved ends are separated from one another by a distance greater than the thickness of the thickest of said members which will be pulled or pushed by said device; a rigid extension affixed to said first gripping member and which extends therefrom to cover at least a part of one surface of said second gripping member; second means for pivotally connecting said extension to said second gripping member; spring means which at all times maintain said first and second gripping members in a first position wherein said curved ends



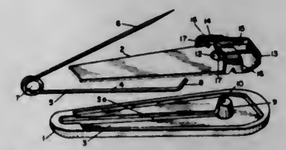
are separated; and means operable by the thumb of said hand that is gripping said device for concurrently pivoting said first gripping member counterclockwise and said second gripping member clockwise to a second position wherein said curved ends frictionally contact opposing sides of said member to be pulled, which gripping members thereafter remain in said frictional contact with said elongate member without further use of said thumb-operated means so long as said device is moved by said hand in a first direction parallel to said elongate member to exert a pulling action thereon, said gripping members when said thumb-operated means is not in use being disengaged from said frictional contact with said elongate member by movement of said device relative thereto in a second direction opposite from that of said first direction, with said gripping members being adapted to be held in said second positions to permit a pushing action to be exerted on said elongate member in said second direction by movement of said device in said second direction during actuation of said thumb-operated means.

3,018,532
PASS CASE BINDERS
Nicholas Rinaldi, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed Oct. 20, 1959, Ser. No. 847,566
5 Claims. (Cl. 24—153)



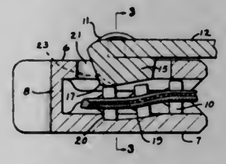
1. A pass case binder for securing wing envelopes to a foldable pass case, said binder comprising a holder bar having an elongated base with upstanding posts at its opposite ends, said bar base adapted to be disposed against the outer surface of the fold area of said pass case with the posts projecting through openings in the fold area of said case, a spring clip for holding envelopes in said case comprising a base having upstanding arms at its opposite ends, said arms being spaced apart slightly less than the distance between the inside of said posts of the holder bar so that the clip fits between said posts, an envelope holding finger formed as an integral spring extension of one of said upstanding arms and overlying a portion of said spring clip base for clamping the envelopes therebetween, and means for connecting said holder clip upstanding arms with holder bar posts whereby said spring clip base will be disposed against the inner surface of the fold area of said pass case thereby locking said holder bar and spring clip firmly to said pass case.

3,018,533
SAFETY PIN
Dante V. Bagnasco, 70 Harbor Hills Drive, Port Washington, N.Y.
Filed July 22, 1960, Ser. No. 44,606
3 Claims. (Cl. 24—161)



1. A safety pin comprising a substantially flat body member having a cutout in one face to receive a plate, a flat plate within said cutout to lie parallel to said body member, said body member having a longitudinal slot beneath said plate of a shape to receive a pin, a bifurcated spring pin having one leg lying within said slot and said leg being held in position by said plate said plate having an opening through it, an upwardly extending post on said body member passing through said opening in said plate a second leg overlaying said plate, said post having a vertical groove in the same plane as said slot, said one leg member having a bent up end lying in said groove in said post, a socket on the end of said plate having a spring closed opening on its side to receive the free end of said second leg.

3,018,534
LOCK SLIDER FOR ZIPPER FASTENER
Otto J. Huelster, Plymouth, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Filed June 10, 1959, Ser. No. 819,383
1 Claim. (Cl. 24—205.14)



An improved lock slider for zipper fasteners comprising front and back wings defining a Y-shaped channel, a pull tab pivotally attached to the front wing of the slider on a relatively fixed axis, a pair of laterally spaced elongated cams formed as a part of said pull tab and arranged in transverse alignment on opposite sides of the pivotal attachment of the pull tab, both cams extending in the lengthwise direction of the pull tab to each side of said axis of the tab, one cam having a high point at a greater distance from the pull tab axis than any portion of the other cam, said high point being in that portion adjacent the corner of the cam which lies beyond a plane perpendicular to the pull tab through said axis in the direction

opposite the free end of the pull tab, said front wing having openings through which said cams pass into pressure engagement with fastener elements in the slider channel when the tab is moved down to locking position, and an internal recess in the back wing of the slider into which some of the fastener elements are forced by such pressure engagement to lock the slider in place, the high point of said one cam adapted to be engaged by a corner of one of the fastener elements when the pull tab is partly lowered to lever the tab into full locking position on application of a force on the fastener tending to move the slider downwardly, said other cam in that region beyond the aforesaid plane extending in a wide curve so that it does not lodge against one of the fastener elements on one side of the zipper when the high point of said one cam enters the space between two of the elements on the opposite side of the zipper.

3,018,535
CLOSURE MEMBER
Theodore R. Griffin, Wilton, N.H., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Feb. 10, 1959, Ser. No. 792,378
3 Claims. (Cl. 24—213)



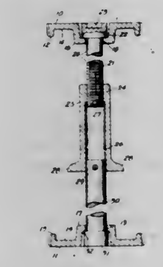
1. An article of manufacture having a number of yieldable attaching arms cooperating with each other to permit attachment of said article to supports having substantial variations in arm receiving aperture diameters, each of said arms having a main support engaging portion extending away from said article, and having at least one other yieldable support engaging portion formed from the main support engaging portion, having one end secured thereto, said yieldable support engaging portions extending in other planes than the planes of the main portions to receive the initial yielding movement when pressed into an aperture in a support and to remain in frictional engagement therewith, the said other yieldable support engaging arms providing the holding means in supports with large apertures and the said main support engaging portions providing the holding means in supports with minimum size apertures, said arms entering into frictional engagement with the walls of said aperture to retain the closure in assembly.

3,018,536
HOSIERY SUPPORTER
Edward A. Rodgers, 389 N. Los Robles Drive, Pasadena, Calif.
Filed July 6, 1959, Ser. No. 825,226
2 Claims. (Cl. 24—243)



1. In a supporter adapted to support a hose from a body encircling garment, a garment engaging component comprising a yoke-shaped member formed from resilient sheet metal and having, in position of use, means at the upper end thereof affording detachable engagement with a loop on a body encircling garment and a pair of laterally spaced depending arms each terminating in a bearing and said bearings being disposed on a common horizontally axial line disposed substantially in the plane of the face of said member which in use is adjacent to the body of the user, and a hose engaging component rotatable in said bearings incident to engagement and disengagement with the welt of a hose and comprising, in position of use, a sheet metal, yoke-shaped member having a pair of generally vertically extending arms each terminating at its upper end in a laterally extending journal portion, one each of said journal portions being disposed in one each of said bearings, and said vertically extending arms being off-set laterally whereby the major portion of the surface of said hose engaging component is disposed in co-planar relationship with the face of the garment engaging component which is remote from the face thereof adjacent the body of the user whereby said faces present no protuberances observable through overlying garments; said journaled portions of said hose engaging component being each disposed with the axial lines thereof disposed at opposite acute angles relative to the axial line of the bearings engaged thereby and in a plane which is parallel to the planes of the side surfaces of the arms of said garment engaging component whereby movement of said hose engaging component out of said co-planar relationship is yieldingly resisted by the torsion produced in the arms of said garment engaging component by said journal portions and whereby said components are resultantly yieldingly urged by the engagement of said bearings and journals normally to maintain said co-planar relationship; said bearings being generally spherical and said journal portions of said hose engaging component disposed within said bearings being enlarged in one direction to an extent which is larger than the portions thereof entering said bearings with resultant securing of said hose engaging component therein against play endwise of said bearings.

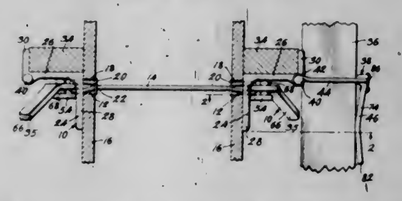
3,018,537
ROD ADJUSTMENT CLAMPS
Jack G. Imparato, 1121 82nd St., Brooklyn, N.Y.
Filed Sept. 17, 1958, Ser. No. 761,516
4 Claims. (Cl. 24—263)



1. A clamp of the character described, comprising a pair of flat clamp plates having flanges at side edges thereof extending at right angles to the plates, said plates having central integral socket portions with apertures centrally thereof, said socket portions being of greater depth than said flanges, means adjustable between the plates to control spacing of the plates one with respect to the other, said means comprising a separate member operating in the aperture of the socket of each of said plates, said members having enlarged heads at one end

disposed and housed within said sockets for checking displacement of the plates from one end of said members, the head of one member being fixed in its socket, said members having interengaging threaded portions, and the head of the other of said members being rotatable in its socket and including in its outer surface a tool receiving socket facilitating rotation thereof in drawing the plates toward each other.

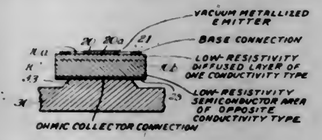
3,018,538
COMBINED TIE LOCK AND REINFORCING TIMBER CLAMP
Harris Gordon Gates, Englewood, Colo., assignor to Gates & Sons, Inc., Denver, Colo., a corporation of Colorado
Filed Oct. 12, 1959, Ser. No. 845,960
5 Claims. (Cl. 25—131)



1. A combined tie lock and reinforcing timber clamp for use with concrete form ties having wall-engaging stops to attach a pair of form walls together in fixed spaced relation which comprises: a generally Z-shaped bracket including a web of a length corresponding to the width of a reinforcing waler, an upturned flange located on the outer end of the web in substantially normal relation thereto, a downturned flange located on the inner end of the web in substantially normal relation thereto and in spaced parallel relation to the upturned flange but extending in the opposite direction, said downturned flange having an opening therethrough sized and adapted to pass the end of a concrete form tie into position underneath the web, and a pivot pin depending from the web extending downwardly therefrom opposite the opening in the downturned flange; and, a latch element mounted on the pin for pivotal movement between an unlocked position and a locked position releasably connected to that end of the form tie projecting through the opening in the downturned flange, said latch element including a hub rotatable on the pivot pin, at least one generally arcuate finger curving transversely across the opening in the downturned flange with one end depending from the hub and the free end thereof positioned to receive the projecting end of the form tie, said finger including a cam surface on the edge thereof opposite the opening in the downturned flange adapted to engage the projecting end of the form tie and pull the wall-engaging stop up snug against the form wall upon pivotal movement of the latch element from unlocked to locked position, and handle-forming means depending from the hub adapted upon actuation to move the finger between locked and unlocked positions.

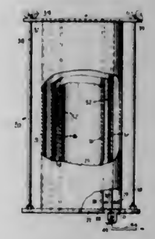
3,018,539
DIFFUSED BASE TRANSISTOR AND METHOD OF MAKING SAME
William E. Taylor and Clement J. Kevane, Phoenix, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 6, 1956, Ser. No. 620,673
2 Claims. (Cl. 29—25.3)

1. A method of forming a rectifying contact and an ohmic contact which are each of accurately controlled size, configuration and position on one face of a semiconductor crystal element which has a rectifying junction therein displaced from said face of such crystal element a micrometric depth, said method including placing said crystal element in vacuum evaporation apparatus, vapor depositing a predetermined amount of rectifying-junction-forming impurity material on to a predetermined portion of said face of said crystal element by projecting such impurity material through an apertured mask which defines the resulting deposit on said crystal element as to area, configuration and position, vapor depositing a predetermined amount of ohmic-contact-forming metallic material on to another predetermined portion of said face of said crystal element by projecting such metallic material through an apertured mask which defines the resulting deposit on said crystal element as to area, configuration



and position, said vapor depositings being accomplished in a selected sequence with said crystal element remaining in said vacuum evaporation apparatus until both of said vapor depositings are completed, physically removing said crystal element with said deposits thereon from said vacuum evaporation apparatus upon completion of said vapor depositings, and subsequently alloying both of said deposits with said crystal element in a single alloying operation by placing said crystal element in an alloying apparatus and in a heated region thereof which is maintained at a selected temperature sufficient to cause alloying of said deposit of impurity material and said deposit of metallic material with said crystal element to a controlled depth measured from said face of said crystal element that is less than the depth of the rectifying junction which initially existed in said crystal element.

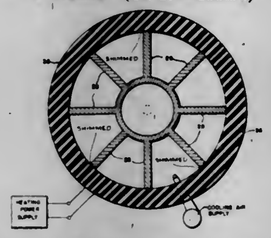
3,018,540
METHODS FOR MAKING EMBOSSING ROLLERS
Marc A. Chavannes, Brooklyn, N.Y., assignor to Sealed Air Corporation, Hawthorne, N.J.
Filed Nov. 18, 1957, Ser. No. 697,157
12 Claims. (Cl. 29—148.4)



1. The method of making an embossing roller for embossing thermoplastic sheet material to reproduce the surface texture of a porous fabric, comprising the steps of: sizing the fabric which has the surface to be reproduced, curing the sized fabric, adhering said fabric upon the inner surface of a pervious hollow cylinder, with the opposite

ends of said fabric butted together to form a continuous casting pattern, inserting into said cylinder in contact with said fabric a tube of polyethylene having a wall thickness of approximately one and one-half mill, subjecting the outside of said cylinder to a negative pressure to bring the polyethylene into direct and intimate surface contact with the fabric to achieve a cylinder assembly, heating said cylinder assembly to between about 180° F. and about 230° F. while being subjected to said negative pressure at which temperature said polyethylene is sufficiently softened to mold itself intimately against said fabric, cooling the cylinder assembly while said negative pressure is maintained, inserting concentrically into said cylinder assembly a demountable inner shell, the outside diameter of which is somewhat less than the inner diameter of the polyethylene-covered pattern fabric to provide a uniform cylindrical space between said inner shell and the covered pattern, pouring epoxy resin casting material into said space while said negative pressure is maintained, permitting said casting material to set to form a roller, curing said roller at progressive temperatures of about 150° F. for about one and one-half hours and of about 180° F. for about two hours, dismounting said cylinder assembly, completing said curing of said roller at 250° F. for two hours and at 350° F. for two hours, dismounting said inner shell to remove said roller, and perforating the wall of said roller with fine air holes.

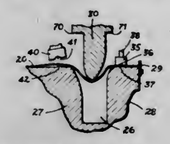
3,018,541
ARMATURE ASSEMBLY AND METHOD OF MAKING THE SAME
Frederick C. Hunt, East Dennis, and Edward P. Klein, Cambridge, Mass., assignors, by mesne assignments, to Ling-Temco Electronics, Inc., a corporation of Delaware
Filed May 11, 1956, Ser. No. 584,273
6 Claims. (Cl. 29—155.56)



1. The process of bonding a current carrying coil to a rigid supporting structure to form a unitary assembly comprising the steps of concentrically arranging the coil with respect to the supporting structure, causing a relative temperature differential between the coil and the supporting structure to expand the clearance therebetween to at least those encountered at the maximum operating temperature of the assembly, securing the coil with respect to the supporting structure to maintain substantially equal clearances therebetween, flowing an adhesive resin compound into the expanded clearances between the coil and the structure to form a bond therebetween, and maintaining the relative temperature differential until the adhesive resin compound is cured.

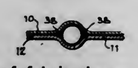
3,018,542
METHOD OF MAKING HOLLOW BLADES
Daniel Jarvis Clarke and Edward A. Stalker, Bay City, Mich., assignors to The Stalker Corporation, a corporation of Michigan
Original application Apr. 12, 1952, Ser. No. 282,012. Divided and this application Apr. 17, 1957, Ser. No. 653,341
6 Claims. (Cl. 29—156.8)

1. A process of forming integral hollow blade envelopes from a single relatively thin metal sheet for use in high speed axial flow compressors, turbines and the like with precisely formed predetermined blade contours having controlled internal stress over the entire upper and lower blade surfaces such as to be substantially free of internal distortion-producing stress and with a high degree of dimensional stability under the high temperature and centrifugal forces encountered in use and capable of maintaining close running clearance with a casing, which comprises bringing a male die member having a shape corresponding to the nose and forward portions of the blade into contact with a sheet of metal and pressing against said sheet to deform the sheet against cooperating die surfaces at the sides thereof having a predetermined shape corresponding to the contours of the upper and lower rearward portions of the



blade surfaces, gripping said sheet at said sides outwardly beyond said cooperating die surfaces to cause stretching of the metal on said male and side dies providing said precisely predetermined contours for the blade surfaces throughout the chord and span thereof leaving said surfaces substantially free of internal distortion-producing stress, thereafter folding the sides of said precisely formed sheet toward each other by bending about the leading edge in a narrow zone confined to the portions of the sheet immediately adjacent said leading edge to bring the trailing edges of said surfaces immediately adjacent each other while retaining said predetermined contours and said controlled stress in said surfaces rearward of said narrow nose zone, and securing the ends of said sheet together to form the trailing edge of said blade.

3,018,543
CHAMBERED SHEET METAL LAMINATES AND METHOD OF MAKING
Edward G. Beck, Fort Thomas, Ky., assignor to The Stolle Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed July 13, 1955, Ser. No. 521,677
20 Claims. (Cl. 29—157.3)

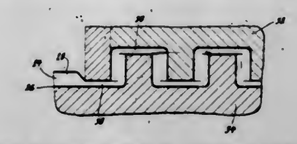


1. The method of fabricating an integral, chambered sheet metal laminate from a metal sandwich sheet constituted by at least two sheets of metal bonded together by a brazing core over opposed facial areas of the sheets, said method comprising heating the sandwich sheet to brazing temperature and confining part of the surface area thereof between dies to maintain the bond between the brazing core and the sheets over the areas thus confined, and disrupting the brazing core over the remaining area by applying fluid pressure between the metal sheets to separate them while maintaining the sheets at brazing temperature.

3,018,544
REFRIGERATING APPARATUS
Charles C. Whistler, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,725
2 Claims. (Cl. 29—157.3)

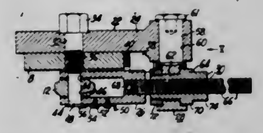
1. The method of manufacturing a heat exchanger which comprises holding a set of parallel wires in spaced

parallel relationship by means of non-metallic heat decomposable material, forming corrugations in said set of wires and simultaneously flattening the base portions of said corrugations, placing said set of wires adjacent the outside wall of a conduit with base portions of said



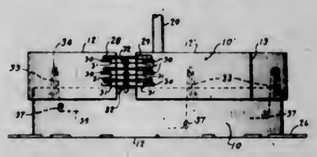
corrugations in contact with the external surface of said conduit in the presence of a fusible brazing material, and thereafter applying heat to said asembly so as to decompose said wire holding material and fuse said wires to the walls of said conduit.

3,018,545
DEVICE FOR ALIGNING OPERATING LINKAGE OF HYDRAULIC TURBINE WICKET GATE
Charles F. Ambroz, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 27, 1957, Ser. No. 661,851
7 Claims. (Cl. 29—256)



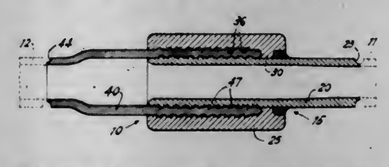
2. In a tool for providing relative rotation between a first lever moved by a gate operating ring of a hydraulic turbine and a second lever that is fixed to a wicket gate, to align a shear pin opening in said first lever with a shear pin opening in said second lever, the combination comprising: a first support; means adapted to rigidly connect said first support to said first lever; a second support, said first and second supports lying in nonintersecting planes; means adapted to pivotally connect said second support to said second lever; a reaction member pivotally connected to said first support, said reaction member connection being on the remote side of said rigid connection relative to said pivotal connection of said second support to said second lever when said shear pin openings are out of alignment; and force transmitting means connecting said second support to said reaction member, the connection of said force transmitting means to said reaction member being in the plane of said second support.

3,018,546
METHOD OF MAKING A STORAGE TANK CONSTRUCTION
Henry Dewese, Weston, Ohio
Original application Aug. 2, 1956, Ser. No. 601,663. Divided and this application Dec. 22, 1958, Ser. No. 782,169
2 Claims. (Cl. 29—431)



1. A method for producing and installing a portion of a liquid storage tank which comprises providing a tank foundation, assembling a base ring on said foundation, securing said base ring to said foundation, successively positioning in aligned, abutting relationship, a plurality of curved metal sheets around and concentric with respect to said base ring, welding together abutting sheet edges to form a sprung ring having an effective diameter greater than that of the tank portion it is to form by virtue of a separation between two edges which will ultimately abut, raising the sprung ring to a desired height relative to the tank, drawing the two separated edges into abutment and welding them in such condition to form the tank portion, welding the tank portion to a previously fabricated lower tank pert, and repeating the latter six steps until a tank of desired height is produced.

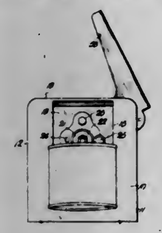
3,018,547
METHOD OF MAKING A PRESSURE-TIGHT MECHANICAL JOINT FOR OPERATION AT ELEVATED TEMPERATURES
Walter G. Marskell, Kilmacolm, Scotland, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New York
Filed July 29, 1953, Ser. No. 370,926
Claims priority, application Great Britain July 30, 1952
6 Claims. (Cl. 29—507)



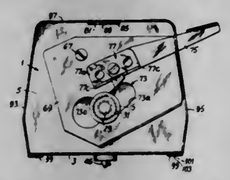
1. The method of making a pressure tight joint, for long time service at elevated temperatures of the order of 1000° F. and greater, uniting two tubular elements respectively of steels having different coefficients of thermal expansion comprising forming the element having the lower coefficient of thermal expansion with an annular, axially extending pocket having an integrally sealed base; circumferentially grooving the inner surface of the radially outer wall of the pocket and the inner surface of a length of the other element having the higher coefficient of thermal expansion; inserting such grooved length of the other element into the pocket; and plastically expanding the inner wall of the pocket to flow the metal in the outer surface thereof into the grooves in the inner surface of the length of said other element and to flow the metal in the outer surface of the length of said other element into the grooves in the inner surface of the outer wall of the pocket whereby a joint is produced that when subjected to a temperature increase said second element having the higher coefficient of expansion will expand within the pocket and form a tighter seal with the inner surface of the outer wall of the pocket and when subjected to a temperature decrease said second element having the higher coefficient of expansion will contract within the pocket and form a tighter seal about the outer surface of the inner pocket wall.

3,018,548
WALL-TYPE POWER-OPERATED CAN OPENER
Ezra S. Rogers, Parkville, and Robert J. Scott, Blue Springs, Mo., assignors to John C. Hockery, Independence, Mo.
Filed Dec. 27, 1960, Ser. No. 78,520
7 Claims. (Cl. 30—4)

1. In a power-operated can opener, a plate having front and rear faces and upper and lower ends, a substantially vertical slideway formed in the front face of said plate, a slide received in said slideway adapted to move vertically therein, a bearing received in and extending through an opening through said plate and having a portion thereof extending through a slot in said slide, a drive shaft rotatably received in said bearing and extending entirely therethrough, a feed wheel on the end of said drive shaft next to said slide, a cutter wheel rotatably mounted on said slide for vertical movement therewith, means for driving said drive shaft positioned adjacent to said plate, a first lever arm mounted on the rear side of said plate, a slide-lever engaging shaft extending through a slot in said plate, attached to the slide at one end thereof, and connected to the first lever arm substantially centrally thereof, a second lever arm, means mounting the second lever arm on the rear face of said plate for pivotal movement around one end thereof adjacent one end of the first lever arm, means engaging the pivotal end of the second lever arm with the adjacent end of the first lever arm whereby pivotal movement of the second arm in one direction raises the engaged end of the first lever arm and pivotal movement in the opposite direction lowers the engaged end of the first lever arm, and actuating means operated by the first lever arm for starting and stopping said driving means.



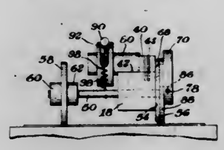
3,018,549
CAN OPENER
Warren L. Spielman, 7301 Overbrook, Normandy, Mo.
Filed Feb. 6, 1961, Ser. No. 87,128
17 Claims. (Cl. 30—4)



1. In an electric can opener, a can driving wheel, an electric motor and speed reducer unit for driving said wheel, said unit being mounted for movement away from and back to a retracted position, a blade for cutting a can which is being driven by the wheel, and a switch for controlling the motor operable in response to movement of the unit away from retracted position, said unit being held in switch-actuating position in response to resistance to rotation of the wheel caused by cutting action.

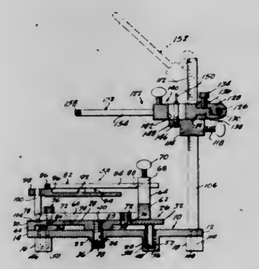
3,018,550
FABRIC CUTTING TOOL
Lloyd E. Lefevre, Bay City, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Aug. 4, 1960, Ser. No. 47,423
5 Claims. (Cl. 30—140)

1. A cutting and fiber edge sealing tool for use with synthetic fabrics, comprising a hollow, elongated body member having a handle secured to one end part thereof and a block-like member having an axial bore telescoped over another end part in close fitting sliding relationship therewith, said block-like member being rigidly secured to said body member, an electrical resistance element, said resistance element being disposed within said body member and contiguous to said block-like member, lead means for said resistance elements, said block-like member having a transverse bore extending therethrough which is generally perpendicular to said axial bore, said transverse bore having a rotatable shaft slidably extending therethrough, a cutting disc, said cutting disc being rotatably



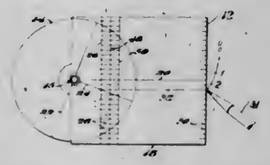
carried on said transverse shaft contiguous to said block-like member, a pivot arm having an upper and lower end, means for rotatably securing the upper end part of said pivot arm to said block-like member on the side of said cutting disc which is remote from said block-like member, said lower end part having a short shaft extending towards said cutting disc, a pressure disc, said pressure disc being axially and rotatably mounted on said short shaft and in sliding contact with said cutting disc, and resilient means for maintaining said pressure disc under pressure when said cutting disc and said pressure disc bear against a surface.

3,018,551
ARTICULATOR
Saul G. Weiss, 411 Barnes Bldg., Muskogee, Okla.
Filed July 21, 1960, Ser. No. 44,480
10 Claims. (Cl. 32—32)



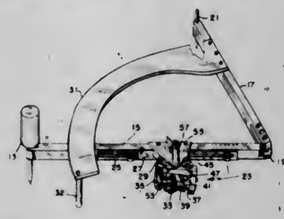
1. A dental articulator comprising a horizontal frame, a base plate overlying and resting upon the frame, spring means urging the base plate upwardly away from the frame, vertical combined tension adjusting and locking screw means connecting the base plate with the frame for optionally locking the base plate to the frame and releasing the base plate above the frame under tension of said spring means, a lower denture carrier mounted upon said base plate for limited endwise, lateral, and rotational movements relative to the base plate, means for limiting the endwise movement of the carrier relative to the base plate, means for limiting the rotational movement of the carrier relative to the base plate, means for limiting the lateral movement of the carrier relative to the base plate, and locking screw means for holding the carrier to the base plate in a centered position.

3,018,552
NOMOGRAPHIC INSTRUMENTS
Douglas P. Adams, 6 Bellevue Ave., Cambridge, Mass.
Filed Mar. 29, 1957, Ser. No. 649,445
9 Claims. (Cl. 33—1)



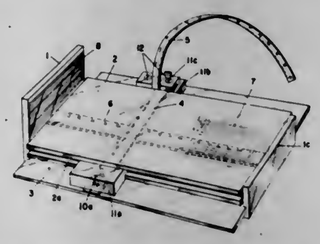
1. A nomographic instrument for translating a family of curves plotted against the ordinates and abscissas of a Cartesian diagram into an alignment diagram, comprising a flat base having a horizontal edge for sliding engagement with a rectilinear guide supported on an underlying plane surface, a transparent disc, means for mounting the disc for rotation about a concentric axis on the base, a diametric scanner line scribed on one surface of the disc and arranged to be registered successively with the curves, the ordinates and abscissas of the Cartesian diagram upon rotation of the disc and shift of the base along the rectilinear guide, index means on said disc normal to its scanner line, and a perpendicular on the base at a fixed distance from the rotational axis of the disc, in combination with means on the base for locating points on the underlying plane surface determined by intersections of the index means on the disc with the perpendicular on the base to define curves, each forming a locus for all points corresponding to the family of curves, and scales corresponding to the ordinates and abscissas of the Cartesian diagram.

3,018,553
MECHANICAL INTEGRATOR
Truman L. Franklin and Jean R. Williams, Albuquerque, N. Mex., assignors to the United States of America as represented by the Secretary of the Air Force
Filed May 29, 1959, Ser. No. 817,003
4 Claims. (Cl. 33—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



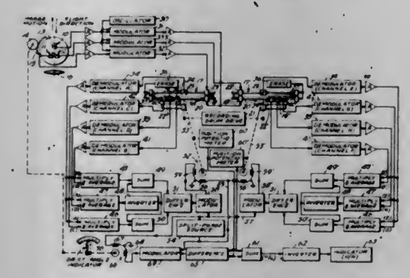
1. A mechanical integrator for evaluating a polar diagram comprising, a pair of elongated pivotally connected arms joined to each other to form a hinged joint, one of said arms being a pole arm, the other of said arms being a tracing arm, a pointed center pivot affixed to the free end of said pole arm, a tracing point affixed to the free end of said tracing arm, a counter assembly pivotally attached to said pole arm near the hinged joint, a changeable cam member attached to said tracing arm near said tracer point and extending toward and across said pole arm, a cam follower engaging said cam member and attached to said pole arm, and means for varying the relative angular position of said counting assembly with respect to a radial line from said pole point as the tracing point is guided around the perimeter of the polar diagram.

3,018,554
FOOT MEASURING DEVICE
Peggie Ruth Heard Roberson, San Francisco, Calif. (1306 E. Firestone Blvd., Los Angeles 1, Calif.)
Filed Mar. 3, 1958, Ser. No. 718,926
4 Claims. (Cl. 33—3)



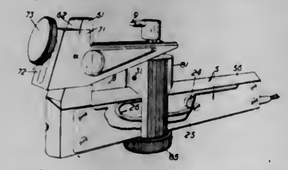
1. A foot measuring device comprising in combination: a first vertical member; a second vertical member; a transparent horizontal member for receiving said foot interposed between and having its opposite end portions rigidly connected to said first and second vertical members, respectively; longitudinally movable laterally extending measuring means coupled to said horizontal member in slidable relationship for measuring the width of various portions of said foot, said longitudinally movable laterally extending measuring means having a scale portion underlying said horizontal member; and, laterally movable longitudinally extending measuring means coupled in slidable relationship to said first and second vertical members for measuring the length of various portions of said foot.

3,018,555
AIRCRAFT VELOCITY-ALTITUDE RATIO METER
Frank G. Willey, Roslyn, and Thomas A. Westover, Hempstead, N.Y., assignors to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed Dec. 12, 1956, Ser. No. 627,810
12 Claims. (Cl. 33—46.5)



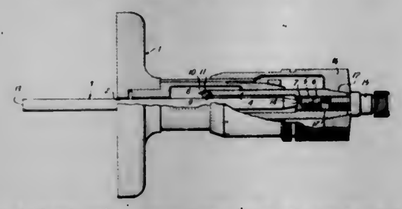
1. An aircraft velocity-altitude ratio meter, comprising two energy-responsive elements spaced generally in the aircraft-flight direction, optical means for imaging the ground on said elements such that, due to the motion of the aircraft, the image received by one element substantially trails the image received by the other element, whereby the video output of said one element trails that of the other element with a delay representative of the instantaneous image velocity at said elements, and said instantaneous image velocity is related to instantaneous aircraft velocity inversely as the instantaneous aircraft altitude, adjustably variable delay means accepting the video output of said other element to the exclusion of the video output of said one element, polarity-sensitive correlation-computer means responsive simultaneously to the output of said delay means and to the output of said other element and developing a signal reflecting the sense of incremental corrective delay necessary to achieve correlation, and means responsive to said last-defined means and in adjustably controlling relation with said delay means, whereby upon adjustment of said delay means to achieve maximum correlation, the delay represented by said adjustment may reflect said image velocity at said elements and therefore the velocity-altitude function of the aircraft.

3,018,556
MEASURING AND GAUGING DEVICES
Rory Morgan O'Brien, Welwyn Garden City, England, assignor to Watton Engineering Co. Limited
Filed Nov. 17, 1958, Ser. No. 774,394
31 Claims. (Cl. 33—147)



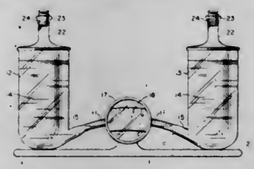
12. A measuring device of the comparator type comprising a body portion, a member slidable on said body portion, a displaceable feeler on said slidable member adapted co-operatively to engage a workpiece positioned between said feeler and the body portion to provide an electric signal variable according to the position of said feeler, indicator means responsive to said signal and two independently adjustable and independently operative zero adjusting means adapted to zeroise circuit elements of said responsive indicator means, one of said zero adjuster means being uncalibrated and the other being calibrated in length units.

3,018,557
DEPTH MICROMETER
Sigemi Nakata, 263 1-chome, Nishiosaki, Shinagawaku, Tokyo, Japan
Filed Oct. 24, 1960, Ser. No. 64,358
Claims priority, application Japan Mar. 26, 1960
2 Claims. (Cl. 33—170)



1. A depth micrometer comprising an elongated hollow base member open at one end, a hollow spindle pipe screwed into the other end of said base member for longitudinal adjustment relative thereto, resilient gripping means seated within the end of said spindle pipe nearest the open end of said base, a small hard, wear-resistant ball stop mounted in said spindle pipe away from said resilient gripping means, and an insertion rod dimensioned to be inserted into said spindle pipe and held softly by said gripping means with one end resting against said ball stop and the other projecting outwardly from said base member, so as to rotate with said spindle pipe as it is adjusted within said base member until further rotation of said insertion member is prevented by frictional contact between its outwardly projecting end and an object to be measured, said spindle pipe and base carrying a cooperating scale and indicator to indicate the position of said spindle pipe relative to said base.

3,018,558
DEVICE FOR DETECTING SMALL CHANGES IN LEVEL
Patrick J. Hannan, 3632 Veazy St. NW., Washington, D.C., and John M. Leonard, 3718 Williams Lane, Chevy Chase, Md.
Filed Apr. 29, 1960, Ser. No. 25,804
7 Claims. (Cl. 33—209)
(Granted under Title 35, U.S. Code (1952), sec. 266)

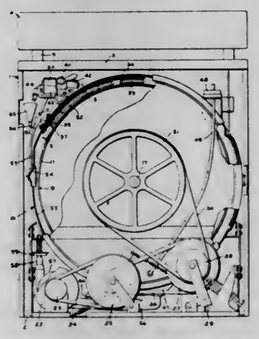


1. A device for detecting small changes in level comprising a transversely disposed hollow member, a pair of liquid reservoirs, said member connected between said reservoirs substantially below the top thereof, a liquid medium contained in said reservoirs and said member, and visibly discrete particles suspended in said liquid medium.

3,018,559
ART OF DEHYDRATING APPLES
William R. Dorsey, Orinda, and Robert E. Kalbaugh, Sebastopol, Calif., assignors to Vacu-Dry Company, Oakland, Calif., a corporation of California
No Drawing. Filed Jan. 23, 1958, Ser. No. 710,603
7 Claims. (Cl. 34—28)

6. The method for dehydrating sliced fresh apple pieces including forming said sliced fresh apple pieces into a continuously moving layer; and passing heated air downwardly through said moving layer of apple pieces and maintaining the relative humidity of said air at not less than 1½% until the major portion of the moisture content of the said apple pieces has been evaporated.

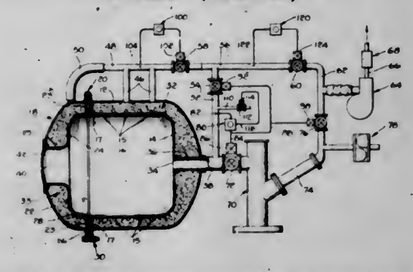
3,018,560
CLOTHES DRYING MACHINE
Everett D. Morey, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 19, 1959, Ser. No. 834,854
6 Claims. (Cl. 34—45)



1. A clothes drying machine comprising a drum rotatable on a non-vertical axis having a perforated sub-

stantially cylindrical wall, said drum including means for tumbling clothes therein and for circulating air during rotation, means for rotating said drum in a predetermined direction, heating means adjacent the outer surface of said wall for heating clothes in said drum, temperature sensitive means positioned adjacent the outer surface of said wall and in substantial radial alignment with the leading edge of said heating means relative to the direction of drum rotation, and means controlled by said temperature sensitive means and arranged to operate at a predetermined high temperature of said sensitive means, said controlled means in turn controlling said heating means and shutting off said heating means when said predetermined temperature is sensed by said temperature sensitive means, said heating means when operating heating said temperature sensitive means to said predetermined temperature unless said temperature sensitive means is cooled by the circulating air.

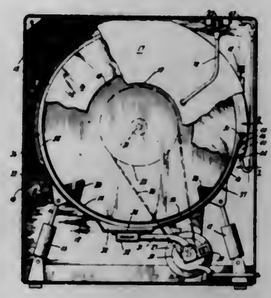
3,018,561
HIGH VACUUM SYSTEM
Earl P. Wells, Los Angeles, Calif., assignor to Industrial Refrigeration Co., Inc., Los Angeles, Calif., a corporation of California
Filed Dec. 15, 1958, Ser. No. 780,413
3 Claims. (Cl. 34—51)



1. A high vacuum system comprising: a double walled structure, the walls being spaced apart to form an insulating space therebetween and the inner wall defining a chamber; thermal insulating material in said space; first and second exhaust pumps, each having intake and discharge sides, said second pump being capable of maintaining a working pressure below that at which said insulatnig material releases substantial quantities of gas; a first conduit connecting the intake side of the first pump with the space, a second conduit including a first valve, normally open, connecting the intake side of the first pump with the chamber, a third conduit including a second valve, normally closed, connecting the intake side of the second pump with the chamber and a fourth conduit including a third valve, normally closed, connecting the discharge side of the second pump with the intake side of the first pump; sensing means responsive to pressure within the chamber; and means controlled by the sensing means for closing said first valve and opening said second and third valves when the pressure in the chamber is drawn down by the first pump to a predetermined value whereby the first and second pumps in series draw the pressure in the chamber down to a working pressure substantially below that in the space.

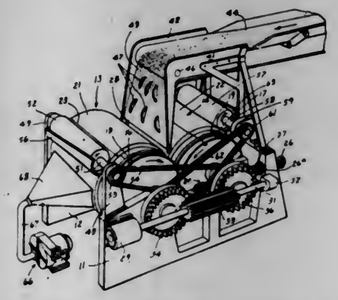
3,018,562
CLOTHES DRYING APPARATUS WITH MOISTURE CONDENSING MEANS
Ernest G. Orr, Willow Grove, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 5, 1958, Ser. No. 740,103
12 Claims. (Cl. 34—75)

9. Drying apparatus comprising a tub, a perforated drum rotatably mounted within said tub to tumble wet articles, heating means for raising the temperature within said tub and drum to evaporate the moisture in said articles, liquid-feeding outlet means located within an upper region of said tub, absorbent material overlying an interior wall surface of said tub below said region to



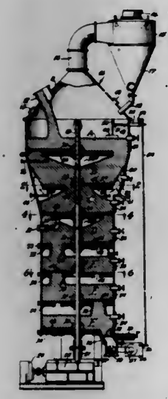
absorb and to sustain liquid coolant for heat exchange relation with the evaporated moisture to condense the same, said outlet means being located to feed liquid coolant into the space between said interior wall surface and the overlying absorbent material, and liquid-draining inlet means located within a lower region of said tub.

3,018,563
COAL DEWATERING APPARATUS
Raymond H. Bridges, Steelville, and Frederick D. Alexander, Chicago, Ill.; said Bridges assignor to Southwestern Illinois Coal Corporation, Indianapolis, Ind., a corporation
Filed July 27, 1959, Ser. No. 829,786
8 Claims. (Cl. 34—95)



1. A coal dewatering apparatus comprising a frame, dual dewatering rolls supported within said frame on horizontal parallel rotational axes, each of said dewatering rolls including a cylindrical outer sheath of sponge-like material and positioned so that said sheaths are compressed as said dewatering rolls move through their area of tangency, power means for driving said rolls in opposite directions and at equal speed, means for releasing coal to be dewatered at a height above the area of tangency of said rolls such that the velocity of the coal is substantially equal to the linear velocity of said dewatering rolls as the coal enters the area of tangency between said dewatering rolls, power driven squeeze rolls spaced from the area of tangency of said dewatering rolls and adapted to compress the sponge-like sheaths of said dewatering rolls to remove moisture therefrom, and means for applying a pressure less than atmospheric to said dewatering rolls for purging them of dust accumulated during coal dewatering.

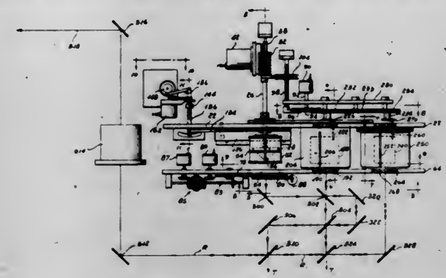
3,018,564
APPARATUS FOR TREATING FLOWABLE MATERIALS
Norman F. Kruse and Norman H. Witte, Decatur, Ind., assignors to Central Soya Company, Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Aug. 1, 1957, Ser. No. 675,641
6 Claims. (Cl. 34—173)



6. In apparatus for treating free-flowing material, a casing providing a vertical chamber, trays supported in said casing in fixed spaced-apart relation to divide said chamber into a plurality of superposed compartments having communicating passageways therebetween, whereby material extends from the bottom of said chamber to the top level of the material in the uppermost compartment, rotating means adjacent the upper surface of said trays for moving the material to the passageway, one of said trays in an upper compartment being spaced from said casing and having a horizontal annular shape providing a large central passageway for flow of material therethrough, material-containing means comprising side louvers spaced from said casing and extending upwardly between said upper compartment tray and said casing to provide a passageway about said upper compartment communicating with the compartment immediately subjacent therebelow, and the tray in said last-mentioned compartment having a horizontal, centrally-located, supporting surface in spaced relation to said casing to provide an annular passage to another compartment immediately subjacent therebelow, said centrally-located supporting surface being provided with apertures and supporting said material in a central cone merging with the central passageway of said first-mentioned annular tray, and pipe means for supplying steam through the apertures of said centrally-located supporting surface into the bottom of said cone of material.

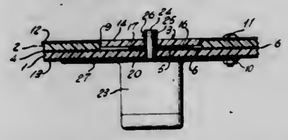
3,018,565
RADAR SWEEP SIMULATOR
Ferdinando P. De Negri, Fairlawn, N.J., assignor, by mesne assignments, to Cel Elevator Company, Inc., a corporation of New York
Filed Nov. 25, 1952, Ser. No. 322,441
10 Claims. (Cl. 35—10.4)

1. In a device of the character described, a mask formed with an aperture representing the face of a cathode-ray tube associated with a radar system, a conical reflecting surface having an axis, means for positioning the reflecting surface behind the mask with said surface axis generally perpendicular to the plane of the mask, a light source positioned above the reflecting surface, a shield formed with an elongated slot means positioning said shield between the light source and the reflecting surface with the longitudinal axis of said slot and said surface axis lying in a common plane, means for oscillating the shield transverse to the longitudinal axis of the slot, means



for controlling the speed of oscillation of the shield and means for controlling the amplitude of oscillation of the shield, the construction being such that a slit of light will pass through the shield slot and be reflected by the reflecting surface through the mask aperture to simulate the sweep line of a radar system.
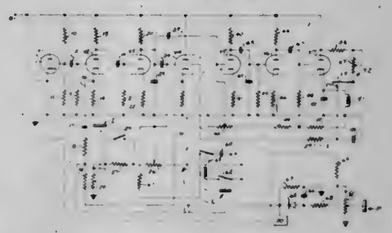
3,018,566
MODULATOR DEVICE
Donald Krueger, State College, Pa., assignor to HRB-Singer, Inc., State College, Pa., a corporation of Delaware
Filed June 25, 1959, Ser. No. 822,850
9 Claims. (Cl. 35—10.4)



2. A modulator for amplitude modulating radio frequency signals in accordance with a predetermined modulation pattern, said modulator comprising a discontinuous radio frequency transmission line having a signal input end and a signal output end and a discontinuity thereinbetween, a first annular capacitor plate attached to one section of said transmission line at the discontinuity therein, a substantially linear capacitor plate attached to the other section of said transmission line adjacent to said first annular capacitor plate, a rotary disc member mounted over said first annular capacitor plate and journaled for rotation around an axis passing through the center of said first annular capacitor plate, said rotary disc member being large enough in diameter to cover said linear capacitor plate, a second annular capacitor plate mounted on said rotary disc member in alignment with said first annular capacitor plate, a plurality of capacitor plate lobes extending radially from said second annular capacitor plate, each of said capacitor plate lobes being adapted to be aligned with said substantially linear capacitor plate in a corresponding angular position of said rotary disc member, said capacitor plate and lobe members being positioned to form a coupling capacitor adapted to capacitively couple radio frequency signals across said discontinuity in said transmission line, the capacitance between said first and second annular capacitor plates being relatively constant with respect to the angular position of said rotary disc member and the ca-

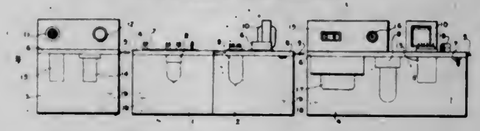
pacitance between said second annular capacitor plate and said substantially linear capacitor plate being variable with respect to the angular position of said rotary disc member in accordance with the dimensions and angular spacing of said capacitor plate lobes, the dimensions and angular spacing of said capacitor plate lobes being adapted to vary the capacitance across said discontinuity according to a predetermined capacitance versus rotary disc angle function when said rotary disc member is rotated, and said predetermined capacitance function being adapted to amplitude modulate radio frequency signals applied to the input end of said transmission line according to said predetermined modulation pattern when said disc member is rotated.

3,018,567
RADIO STATIC GENERATOR
Glenn H. Franck, District Heights, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 5, 1958, Ser. No. 733,181
9 Claims. (Cl. 35—12)



4. In a grounded aircraft trainer of the type having a simulated communication radio receiver, a system to provide an aural representation of the receiver noises normally heard during flight comprising in combination means including a discharge device for generating random low level voltages, a first circuit connecting said device and said receiver to transmit the voltage to the simulated receiver to represent internally generated receiver noise, an amplifier circuit connected to said device and including an output stage connected to said first circuit and having adjustable biasing means under the control of an instructor, a bias control means connected to the said output stage to momentarily change the output stage bias to thereby increase the voltage output to the simulaed receiver to simulate static, and circuit means under the control of an instructor to apply a biasing voltage pulse to the output circuit to thereby increase the voltage output to a high level to simulate a lightning discharge static burst.

3,018,568
ELECTRONIC PLASTIC BLOCK ARRANGEMENT
Morris Tischler, Baltimore, Md., assignor to Electronic Aids, Inc., Baltimore, Md., a corporation of Maryland
Filed Nov. 12, 1957, Ser. No. 695,604
1 Claim. (Cl. 35—19)



An electronic circuit lecture demonstration apparatus, comprising several major printed sub-circuits of an operable electronic system, a plurality of optically transparent tables having integral transparent panel-type legs which bear on their inner surfaces and affixed face out, said printed sub-circuits being individually mounted on said plurality of optically transparent tables in one plane, selectively spaced rigid electrical assembly connectors integrally mounted at the edges of said tables, for connecting said printed sub-circuit together to form said operable electronic system and schematic circuit diagrams of said printed sub-circuits, said printed sub-circuits terminating in said selectively spaced rigid electrical assembly connectors, said printed sub-circuits and schematic circuit diagrams when in operable position each forming continuity simultaneously, with each said schematic circuit diagram being arranged on t .e front of a panel-type leg of its corresponding transparent table to show the wiring and so arranged to add to the circuit of the adjacent transparent table.

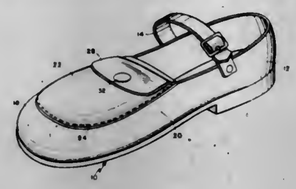
3,018,569
ELECTRICALLY OPERATED TIME INSTRUCTING DEVICE
John J. Petitto, Sr., 203 Hedge St., Clarksburg, W. Va.
Filed Nov. 14, 1958, Ser. No. 773,904
1 Claim. (Cl. 35—39)



An electrically operated time instructing device comprising a plate forming a base, a circular casing mounted on one end portion of said base, a clock dial mounted on said casing and having spaced peripheral indicia defining hours 1–12 thereon, hour and minute hands mounted in said casing for rotation relative to said dial, gearing connected to said hands for driving said hands at a relatively rapid rate and in proper hour-minute speed relationship, a vertical drive shaft coupled to said gearing and projecting radially from said casing in alignment with the designation for the hour "6," an electric motor mounted on said base and including a motor shaft extending in offset parallel relation to said drive shaft, a speed reducing driving connection between said motor shaft and said drive shaft, a source of power for said motor comprising a portable case containing batteries, a pushbutton switch on said portable case, a flexible conductor cable connecting said batteries and said motor through said switch whereby upon closing of said switch said hands will be operated by said motor and upon release of said switch due to coasting of said motor and said gearing said hands will stop at unpredictable locations.

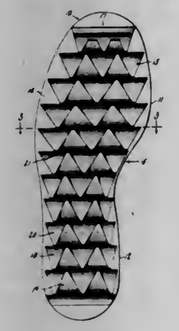
3,018,570
COMBINED SHOE AND PURSE
Dolores B. Bliese, 664 1st Ave., Chula Vista, Calif.
Filed Dec. 27, 1960, Ser. No. 78,783
4 Claims. (Cl. 36—1)

1. In combination: a shoe having an inset vamp panel; and a purse comprising a purse panel conforming substantially to the shape of said vamp panel; said purse panel being marginally secured to the outside of said shoe at the periphery of said vamp panel and having an open access portion; said vamp constituting the lower wall of



the purse; and closure means to close said open access portion.

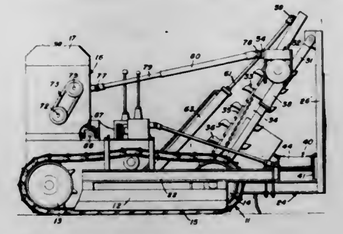
3,018,571
HIGH-TRACTION FOOTWEAR TREAD
Thomas H. Doherty, South Bend, Ind., assignor to Mishawaka Rubber Company, Inc., Mishawaka, Ind., a corporation of Indiana
Filed July 11, 1960, Ser. No. 42,002
14 Claims. (Cl. 36—59)



1. A resilient footwear sole formed of a layer of flexible resilient material, said layer having an outer face, a plurality of flexible resilient teeth integral with and projecting from said face disposed in a plurality of rows generally extending transversely and longitudinally of the sole, every other tooth in each of the transverse rows pointing in opposite longitudinal directions, and the teeth in alternate longitudinal rows pointing in the same longitudinal direction.

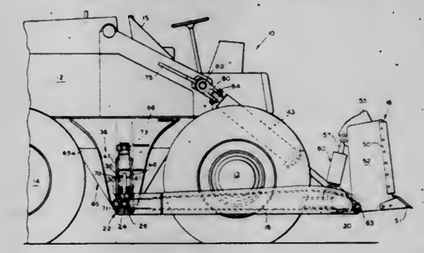
3,018,572
DITCHING MACHINE
Wade N. Zimmerman, Jr., 7052 Rhea Ave., Reseda, Calif.
Filed Jan. 13, 1959, Ser. No. 786,528
8 Claims. (Cl. 37—90)

1. A ditch digging machine comprising a mobile frame including means for propelling the same, a power source mounted transversely at one extremity of the frame, a horizontal, transverse conveyor mounted at the opposite extremity of said frame, a digger assembly mounted on said frame immediately behind said conveyor and having a discharge portion for depositing dirt thereupon and being spaced forwardly of said power source, power transmission means for said propelling means and said conveyor disposed between said power source and said digger and on one side of said frame, an operator's station at the opposite side of said frame between said power source and said digger, power transmission means mounted above said power source at said one side of the frame connected to said digger, said power source and said digger being spaced apart only by an amount sufficient to accommodate the first-mentioned transmission



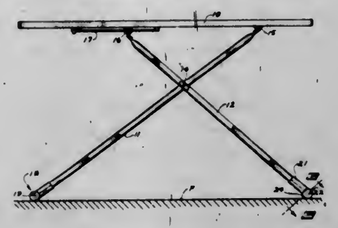
means therebetween so as to provide a close-coupled machine having a major portion of its weight concentrated at the opposite ends thereof.

3,018,573
TILTING BULLDOZER BLADE
Paul F. McAdams, St. Joseph, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed June 12, 1957, Ser. No. 665,327
2 Claims. (Cl. 37—144)



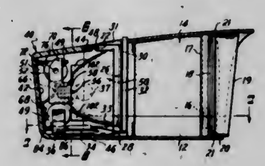
1. In a bulldozer vehicle having an operator's station and having a U-shaped frame comprising parallel side arms and a transverse base portion rigidly connecting said side arms forwardly of the vehicle body, means for pivotally mounting the rearward end of each of said parallel side arms on the vehicle, a blade structure pivotally mounted on the front end of said side arms forwardly of the transverse base portion, first double-acting power actuated hydraulic jack means operatively connected to the transverse base portion and the blade structure for adjusting the pitch of the blade, second double-acting power actuated hydraulic jack means operatively connected to the center part of the transverse base portion and to the vehicle for raising and lowering the transverse base portion and the blade structure relative to the vehicle, and third double-acting power actuated hydraulic jack means for moving each of the first-mentioned means upwardly and downwardly with respect to the vehicle, all of said hydraulic jack means being controlled from the operator's station, said second jack means in any adjusted position thereof restraining the center of said transverse base portion against vertical movement, said first and third jack means in any adjusted position thereof comprising substantially rigid struts whereby actuation of either of said third jack means causes tilting of said frame and said blade structure and whereby movement of said blade structure except by said jack means causes warping of said frame so that said frame maintains a downward pressure on the end portion of the blade performing the principal amount of the work.

3,018,574
IRONING TABLE FOOT CONSTRUCTION
Donald J. Munson, Minneapolis, and Edward L. Nubson, Excelsior, Minn., assignors to The J. R. Clark Company, Spring Park, Minn., a corporation of Minnesota
Filed Apr. 28, 1958, Ser. No. 731,459
1 Claim. (Cl. 38—121)



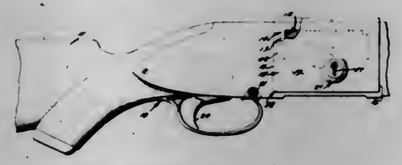
In an ironing table, an elongated top, a pair of legs connected to the top and extending downwardly therefrom and longitudinally thereunder in diagonally intercrossing relation to support the top over a floor surface, said legs being pivotally interconnected at their point of intercrossing and each having a cross foot at its lower end, the pivot axis and cross feet extending transversely with respect to the top for relative movement of the legs about said pivot between a first position wherein the feet are spaced at a maximum distance below the top and relatively close together to support the top at a standing working elevation and a second position wherein the feet are raised relative to the top and spread apart to support the top at a sitting working elevation, one of said cross feet having contact members spaced transversely of the top and having portions extending downwardly from the foot for engagement with the floor surface when the legs are in said first position, a roller mounted on said one cross foot for rotation on an axis parallel to the pivot axis and having a peripheral rolling surface disposed below said cross foot and longitudinally between said contact member portions and the other cross foot to move downwardly relative to the said one foot into engagement with the floor surface and support the contact members in spaced relation to the floor surface when the legs are moved to the second position.

3,018,575
TRANSPARENCY PREVIEWER
Wade E. Barre and Jack B. Clarkson, Warren, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 19, 1959, Ser. No. 854,157
10 Claims. (Cl. 40—63)



1. A transparency viewing device comprising a tubing having a lens at one end thereof, the tubing having a transverse slot on its upper side and near the end thereof remote from the lens, a light diffusing plate within said tubing at said remote end, the upper edge of which is movable in said slot, spring means below the plate reacting between the tubing and plate to project the upper edge of the plate through the slot, said slot being wide enough to accommodate a transparency with the lower end of the transparency resting on the spring means, and a cap detachably secured to said remote end of the tubing, said cap having mounted therein a source of illumination, a switch for the same and a reflector for said source, and a part on the light diffusing plate engageable with the switch to close the same on depression of the plate.

3,018,576
LOCKING SAFETY DEVICE FOR FIREARMS
William H. Riechers, R.D. 2, Box 399, Endicott, N.Y.
Filed Jan. 4, 1961, Ser. No. 80,663
4 Claims. (Cl. 42—1)



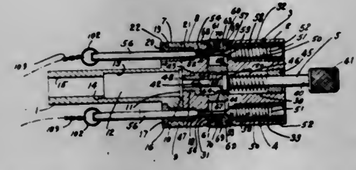
4. In a firearm locking safety device, a hollow housing including horizontally disposed spaced apart top and bottom walls, spaced parallel vertically disposed end walls and a vertically disposed side wall, a flanged portion on the upper end of the housing, a vertically disposed plate positioned in spaced parallel relation with respect to said side wall, said plate being secured to said bottom and end walls, a sealing strip affixed to said housing, a key operated lock projecting through said side wall and said lock including a stationary casing and a rotary pin, a movable cam affixed to said pin and said cam including a recessed portion defining a pair of spaced apart fingers, a guide element including end portions affixed to the inner surface of said plate, said guide element further including an intermediate offset portion, a slide member including a main straight section slidably mounted in the offset portion of said guide element, a transverse lip on the inner end of said slide member for engagement by said fingers, a transverse end portion on said slide member terminating in a lug, a bar affixed to the outer surface of said plate and said bar including an offset end portion defining a tab, a horizontal disposed flange extending along the upper edge portion of said bar and said housing being positioned over the opening in the receiver of the firearm and retained in fixed relation to the opening to prevent loading of said firearm.

3,018,577
TUBULAR MAGAZINE FIREARM WITH LOADING PORT IN SIDE OF MAGAZINE
Paul A. La Violette, Jr., Hamden, Conn., assignor to The High Standard Manufacturing Corporation, Hamden, Conn., a corporation of Connecticut
Filed Oct. 20, 1959, Ser. No. 847,494
2 Claims. (Cl. 42—6)



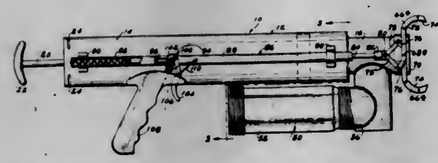
1. In a tubular magazine type of firearm, the combination comprising a barrel, a magazine tube adjacent said barrel and extending substantially parallel thereto, said barrel and magazine tube forming between their outer surfaces a trough capable of receiving and longitudinally guiding cartridges to be loaded into said magazine tube, a wall of said magazine tube having a cartridge loading port opening into said trough whereby cartridges cradled in said trough are positively guided between said barrel and magazine tube substantially into said loading port.

3,018,578
PISTOL TO BE WORN ON THE WRIST
Edward T. Hill, 2221 S. Hoover St., Los Angeles 7, Calif.
Filed Dec. 7, 1959, Ser. No. 857,940
5 Claims. (Cl. 42—13)



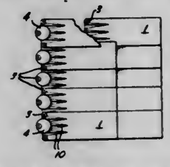
1. A pistol, including: a two-part casing of substantially parallelopiped form, means for securing the two casing parts together whereby the casing parts may be pivotably separated, one of said casing parts provided with a barrel extending forwardly therefrom, the second casing part provided with a firing pin assembly, the pin of which is positioned to strike a head of a cartridge positioned within the barrel, a safety lock assembly and a trigger assembly positioned in the same plane with and on opposite sides of the firing pin assembly in the second casing part and separate sears to be moved first to release the safety lock assembly followed by release of the trigger assembly to free the firing pin assembly for striking engagement with the head of the cartridge.

3,018,579
DEVICE FOR CATCHING FISH AND OTHER SUBMARINE LIFE
Barney B. Girden, 32 W. 76th St., New York 23, N.Y.
Filed June 13, 1960, Ser. No. 35,485
10 Claims. (Cl. 43—4)



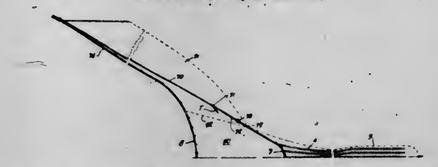
1. A device for catching submarine life comprising a cylinder having an opening at one end, a piston movable axially in said cylinder, means for axially displacing said piston relative to said cylinder, a sample container, means connecting said sample container to said cylinder adjacent said one end of the latter, valve means at said one end of the cylinder and between said container and cylinder, said valve means operating to close the communication between said container and cylinder during movement of said piston away from said one end so that, when at least said one end of the cylinder is submerged in water, a flow of water is drawn into the cylinder, and to close said one end of the cylinder during movement of the piston toward said one end so that the water previously drawn into the cylinder is pumped into said container along with any submarine life in such water small enough to pass through said opening, gripping jaws movably mounted on said cylinder at said one end of the latter to move between open extended positions and closed positions where said jaws are operative to grasp a relatively large specimen of submarine life drawn against said one end of the cylinder by the flow of water into the latter, and actuating means for said gripping jaws operative to rapidly displace the latter from said open positions to said closed positions.

3,018,580
CHAFING GEAR FOR TRAWL NETS
Frank J. Luketa, 5567 Greenwood Ave., Seattle, Wash.
Filed May 31, 1960, Ser. No. 33,000
12 Claims. (Cl. 43—9)



1. Chafing gear for a trawl net codend such as is distensible circumferentially or contractible, comprising a plurality of sheets of protective material of an aggregate width to cover the bottom of the codend when the latter is substantially fully distended circumferentially, a plurality of laterally spaced anchorage means interengageable between the net and the forward edge of each sheet, at intervals permitting full lateral distention, but to approach upon lateral contraction, and a flap similarly engageable with the net ahead of such sheets, and underlapping the forward edges of the sheets at all times, to retain those edges against bellying while the codend is contracted and the laterally spaced anchorage means are in positions of close approach.

3,018,581
TRAWL LINES
Frank J. Luketa, 5567 Greenwood Ave., Seattle, Wash.
Filed Oct. 12, 1959, Ser. No. 845,799
14 Claims. (Cl. 43—9)

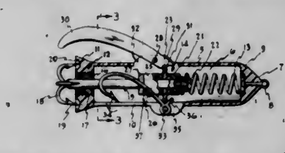


1. In combination with a trawl net of mesh, which by reaction between the opposed forces of pulling the net through the water and of drag resisting such pulling tends to assume a given orientation in each local area, a line for connection to the mesh, and means interengageable between said line and the mesh to secure together the line and mesh, said means including means to orient the line at a selected angular orientation about its axis, and mounting means for an accessory, carried by said line and, when the line is so oriented, being itself so oriented angularly about the axis of the line as to orient the accessory automatically in an intended orientation relative to the mesh.

3,018,582
FISHING LURE
Martin T. Anderson, Spring St., Hope Valley, R.I.
Filed Feb. 25, 1960, Ser. No. 11,004
1 Claim. (Cl. 43—35)

An artificial lure of the character described that comprises an elongated molded cylindrical body portion that is chambered for its major length, the chamber having a forward closed end wall and a rear closure wall that is

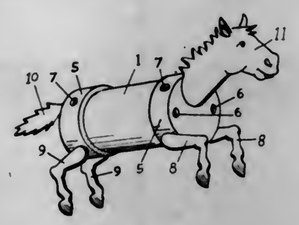
provided with a relatively large threaded aperture, a plug threaded into the aperture to be flush with the inner and outer faces of the wall, the forward end of the lure being provided with a line attaching eye, a plunger movable axially of the chamber, the plunger being biased to an operative position by a compressible coil spring, the plunger having a shaft that is axially arranged with respect to the lure and that extends through a guide opening formed in the plug to extend outwardly of the lure for attachment to a plurality of spaced apart hook devices, the opposite side walls of the chamber being formed flat, a pair of collars fixed upon the inner end of the shaft, an actuating flat plate that is clamped between the collars, the opposite edges of the plate being formed straight and parallel for traverse engagement with the flat side walls of the chamber whereby to prevent rotation of the plate and the plunger with respect to the lure, a trigger device that comprises an elongated flat arcuately formed arm that is pivotally connected to the lure intermediate its length and with its major portion overlying the body of the lure and extending rearwardly to be disposed in a position to receive the mouth of a fish, the inner end of the arm being notched, the inner end of the arm extending through a slot formed in the upper side of the lure whereby the notch will have latching engagement with the plate and maintaining the plate and the plunger in a set position against the tension of the spring, a transverse shaft on the bottom portion of the lure and with the



shaft being journaled at its ends in the body for rotation, a pair of auxiliary hook devices that are fixed upon the transverse shaft and that are adopted to move into and out of the chamber, the lure upon its bottom wall being slotted for the lateral movement of the last named hooks, the last named hooks being parallel with respect to each other, the hooks adapted to be moved in unison to and from a recessed position within the lure, shank portions of the last named hooks when in a recessed position being disposed in the path of the movement of the plate whereby the rearward movement of the plunger and the plate cams the last named hooks laterally outwardly from the body of the lure, the second named hooks when in recessed position being disposed upon opposite sides of the plunger, each of the last named hooks adjacent their points of connection with the transverse shaft having tail extensions that are disposed in the path of movement of the plate when the plunger is to be set against the tension of the spring and whereby the plate causes the last named hooks to be swung upwardly to recess position within the lure, a shock absorbing bumper carried by the plunger for engagement with the rear closure wall when the lure is actuated to project the plunger and its associated hooks, the rear closure wall upon its outer side having an annular groove for the reception of the pointed ends of the barbs of the first named hooks when the plunger is fully shifted to a latch position with respect to the arm and against the tension of the spring.

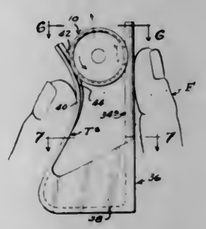
3,018,583
TOY
Frank A. Novotney, Streator, Ill. (Rte. 1, Tonica, Ill.)
Filed Sept. 4, 1957, Ser. No. 681,977
1 Claim. (Cl. 46—11)

In combination with a container characterized by two end closure members, a plurality of cuplike members additional to and adapted to be fitted over said container, said cuplike members shaped to provide a plurality of sockets in their sides and ends, a plurality of parts adapted to be inserted and removably retained in said



sockets whereby said container serves as the body of an overall construction, said insertable parts serve as the members of said construction and said cups serve as the joining parts.

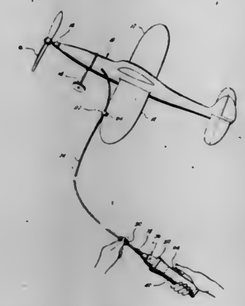
3,018,584
PINCH-SPIN TOPS
Angelo G. Passariello, 3416 Ross SE., Albuquerque, N. Mex.
Filed June 5, 1959, Ser. No. 818,424
2 Claims. (Cl. 46—72)



1. A pinch-spun top comprising a top body having an external circumferential concave groove spaced from its ends, and spinning means for the top comprising a hand-held rigid pinching round rod of the cross section of said groove and adapted to be engaged in the groove at one side of the top body and a hand-held thumb element adapted to be engaged with the opposite side of the top body, said spinning means comprising a U-shaped frame having a bight portion having said pinching rod fixed on one end thereof, said thumb element comprising a flexible flat pinch bar fixed on the other end of the bight portion and spaced laterally from said pinch rod.

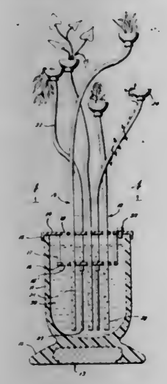
3,018,585
REMOTELY POWERED PROPULSION AND CONTROL MECHANISM FOR MODEL AIRCRAFT
Victor Stanzel, P.O. Box 171, Schulenburg, Tex.
Filed Feb. 28, 1958, Ser. No. 718,254
6 Claims. (Cl. 46—77)

6. In a flying model aircraft of the type which is solely aerodynamically supported in flight and having laterally extending wings and a propeller rotatably mounted on the aircraft, the combination of an elongated, flexible, power transmitting element having a driving connection with the propeller to rotate the propeller upon rotation of said element, an elongated, flexible, solid walled tubular member surrounding said element attached to said aircraft at a point spaced laterally from the longitudinal axis of the aircraft to yieldingly hold the aircraft against lateral tilting movement in flight and to cause the member to exert a rotational force on said aircraft about the lateral axis of said aircraft upon rotational movement of



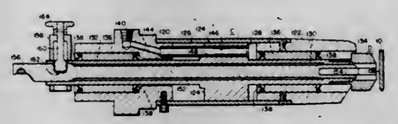
the member about its axis to change the direction of flight of the aircraft.

3,018,586
ORNAMENTAL APPARATUS FOR SOILLESS HYDROPONIC CULTIVATION
Barbara Lane Farley, 1117 Nantucket Drive, Houston 27, Tex.
Filed May 26, 1959, Ser. No. 815,879
5 Claims. (Cl. 47—1.2)



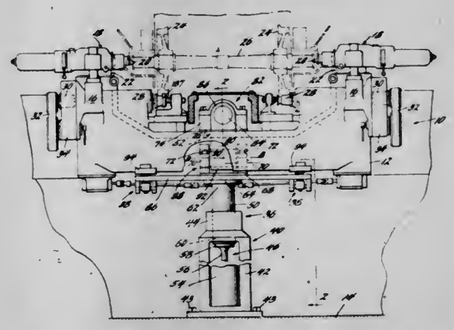
1. Apparatus for employment in the soilless hydroponic culture of plants comprising a container having water therein, a closure therefor having openings therethrough, a plurality of tubes having perforate lower portions, said tubes extending sealably through said openings a substantial distance above said closure and in guidably supporting frictional contact with said openings, said container being of sufficient height to contain enough water to substantially attain the upper level of said perforations, a liquid including water filling said container to substantially the upper level of said perforations, a porous wick material filling said tubes from the lower portions thereof upwardly through the tops thereof, cups installable upon the tops of said tubes, said tubes forming the support means for said cups and being sufficiently rigid therefor, and mesh plant supporting means in said cups to support plants above said wick material with roots thereof extending downwardly through the mesh for access to said wick material whereby the plants are nourished for growth by inorganic nutrient material passing upwardly through said porous wick material.

3,018,587
GLASS CUTTER TROLLEY UNIT
Thomas A. Insollo, Jeannette, Pa., and Peter J. Magrini, Sr., Reno Carini, and Zayman C. Clements, Okmulgee, Okla., assignors to American Window Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 31, 1957, Ser. No. 662,656
14 Claims. (Cl. 49—48)



1. In apparatus for cutting a sheet of glass or the like, a cutting tool, a double-acting cylinder operatively mounting a shiftable member for supporting said cutting tool, means having a control element for controlling the same to apply an initial shifting force to said cylinder-shiftable member sufficient to shift the cutting tool into light initial contact with the sheet, and regulated pressure means including a control element effective to apply an ultimate force to said member superimposing full cutting pressure on the cutting tool.

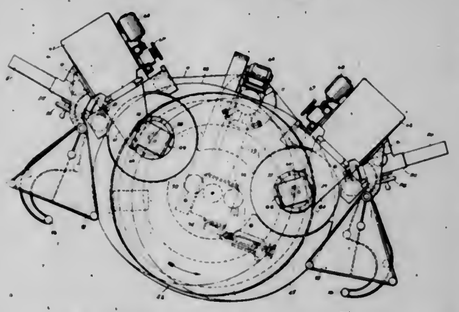
3,018,588
WHEEL TRUING DEVICE
Carl O. Long, 521 E. Williams St., Barstow, Calif., assignor of one-half to Raymond A. Walsh, Washington, D.C.
Filed Feb. 15, 1960, Ser. No. 8,610
14 Claims. (Cl. 51—104)



1. In a metallic wheel truing apparatus, the combination of a generally horizontally disposed, frame structure, cutter means movable relative to said frame structure adapted to cut a tread surface on a metallic wheel, support means movably supporting the frame structure for movement in a generally vertical direction to enable the cutter means to engage and disengage such tread surface during a cutting operation, said support means including an elongated, upstanding jack type device having a ground supported guide, a fluid operated jack mounted within said guide, a piston extension member actuated by said jack and projecting generally vertically upwardly beyond the guide, a plate member rigidly secured to the upper end portion of the piston extension member for movement therewith, said plate member being generally horizontally disposed below the frame structure in vertically spaced relationship thereto and extending generally laterally from said piston extension member, connecting means connecting the frame structure to the support means, said connecting means including a generally vertically disposed upwardly projecting elongated rigid member, first

pivot means pivotally connecting the upper end portion of the rigid member to the frame structure to enable the frame structure to be pivotally movable relative to the rigid member and the support means about a first generally horizontally disposed pivot axis, second pivot means pivotally connecting the lower end portion of the rigid member to the one end portion of the piston extension member to enable the frame structure and the rigid member to be pivotally movable relative to the support means about a second generally horizontally disposed pivot axis that extends substantially normal to the said first pivot axis, and stabilizer means disposed in the space between the plate member and the frame structure for said stabilizer means including a plurality of elongated pivotally mounted pins extending between and connected to the plate member and the frame structure and a plurality of spring means interposed between the plate member and the frame structure for normally urging said frame struuture against said relative pivotal movement about said pivot axes.

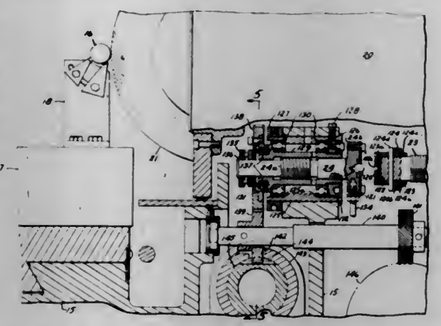
3,018,589
VERTICAL SPINDLE DISC GRINDER
Ralph E. Price, Waynesboro, Pa., assignor to Gardner Machine Company, Beloit, Wis.
Filed June 17, 1958, Ser. No. 742,595
10 Claims. (Cl. 51—115)



1. In a vertical spindle disc grinder, a base, a tool supporting column on said base, a slide member mounted for vertical movement on said column, a spindle housing on said slide member, a spindle rotatably mounted therein, an abrasive disc on said spindle, a rotatable carrier and means for supporting said carrier in operative relation to said abrasive disc comprising a pedestal on said base, a vertical shaft in said pedestal, a supporting arm extending horizontally from said pedestal and having one end oscillatably mounted on said vertical shaft, means for rotatably supporting said carrier at the other end of said arm, said supporting means being in the form of a driving member, an eccentric actuated by said driving member, and a connection between said eccentric and said base to effect an oscillatory movement of said carrier during grinding.

3,018,590
GRINDING MACHINE FEED MECHANISM
Jacob Decker and Bertram H. Steinhard, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 13, 1959, Ser. No. 846,195
27 Claims. (Cl. 51—165)

1. In a grinding machine having one member to rotatably support a grinding wheel and another member to support a workpiece, one of said members being movable relative to the other to effect grinding of the workpiece, the combination comprising a first shaft operatively connected to said one member and supported solely thereby for movement of said member on axial movement of said first shaft, said shaft and said member being relatively adjustable to adjust the zone of movement of said one member on movement of said first shaft, a feed shaft aligned with said first shaft at one end thereof, means operatively connected to said feed shaft to move axially



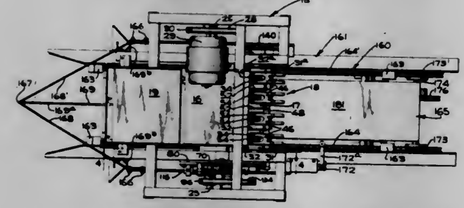
the feed shaft in controlled feeding movement, a rapid advance shaft aligned with said first shaft at the opposite end thereof, and means to move axially said rapid advance shaft toward the feed shaft to advance said first shaft to said feed shaft and clamp the first shaft between the feed shaft and rapid advance shaft for feeding movement of said one member.

3,018,591
DEVICE FOR THE WORKING IN STAGES OF THE SURFACES OF WORKPIECES ON A GRINDING OR POLISHING TRAIN
Werner Wrobbel, Nurtingen, Germany, assignor to Firma Metabowerk Closs, Rauch & Schnizler K.G., Nurtingen, Wurttemberg, Germany
Filed June 9, 1958, Ser. No. 740,807
Claims priority, application Germany June 15, 1957
11 Claims. (Cl. 51—217)



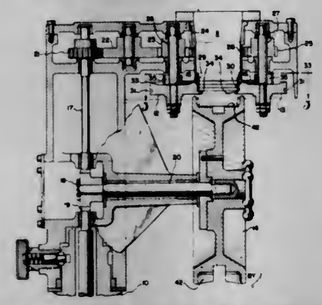
1. Workpiece conveying arrangement, comprising, in combination, support means; rail means mounted on said support means, said rail means having in longitudinal direction thereof different cam portions; first truck means guided along said support means for movement in direction of said rail means, said first truck means having a portion located adjacent said rail means; second truck means mounted on said portion of said first truck means for movement with the same in said longitudinal direction, said second truck means having a mounting part turnable about two axes transverse to each other, said second truck means including follower means in engagement with said cam portions of said rail means; holding means mounted on said mounting part of said second truck means for holding a workpiece in engagement with stationary machining tool means; and means for moving said first truck means with said second truck means and said workpiece holding means in said longitudinal direction so that said mounting part of said second truck means turns about said two transverse axes when said follower means move along different cam portions of said rail means so that a surface of the workpiece having a contour corresponding to said cam portions is held in contact with machining tool means.

3,018,592
CONTAINER FILLING APPARATUS
Wilber C. Belk and Samuel H. Ellison, Jr., Lakeland, Fla., assignors to FMC Corporation, a corporation of Delaware
Filed Oct. 30, 1958, Ser. No. 770,821
14 Claims. (Cl. 53—61)



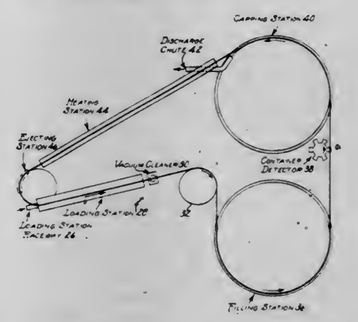
4. Apparatus for filling articles into containers, comprising a hopper having an outlet for discharging articles therefrom, article discharge means positioned adiacent said outlet, article counting means operable by said article discharge means, an electric switch adapted for actuation by said article counting means, conveyor means operative to conduct a container into position for filling from said outlet and to conduct away a container after filling thereof, and control means in circuit with said electric switch, said control means being adapted to check operation of said article discharge means and to initiate operation of said conveyor means when said electric switch is operated by said article counting means.

3,018,593
RELEASE AND TRANSFER DEVICE
David G. Nelson, Richmond, Ind., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1960, Ser. No. 8,346
5 Claims. (Cl. 53—67)



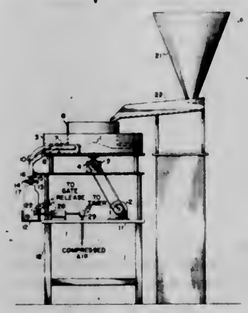
1. A release and transfer device for nested cup-shaped articles, each having a laterally extending formation on its skirt, comprising a pair of driven shafts each carrying a cylindrical cam presenting a cam track for withdrawing engagement with opposite arcuate portions of said formation on one of the nested articles and an edge portion for retaining engagement with opposite arcuate portions of said formation on an adjacent nested article, a retaining member mounted on each of said shafts above the cam carried thereby and laterally movable with respect to said shaft and said cam into position beneath said formation on an article to prevent engagement of said formation with said cam track, and means for receiving and conveying articles withdrawn by said cams.

3,018,594
CONTAINER FILLING AND SEALING MACHINES
Harry Phillips, Hamilton, John J. Maciejowski, Wenham, Wayne A. Shafer, Jr., Hamilton, Robert D. Tucker, Beverly, and George A. Fuller, Jr., Wenham, Mass., assignors, by mesne assignments, to Ekco-Alcoa Containers, Inc., Wheeling, Ill., a corporation of Illinois
Filed Nov. 12, 1959, Ser. No. 852,562
36 Claims. (Cl. 53—72)



9. In a machine for applying caps to discrete flanged containers, an endless conveyor mounting a plurality of spaced container carriers, each container carrier comprising an open-top body having a hollow interior and having annular supporting means defining the opening in the top and engageable with the flange of a container to support the flange with the container extending into the carrier body, a cap applying head associated with each carrier and having an apertured surface connected to a source of vacuum, means for moving the head into engagement with a supply of caps to remove a cap therefrom by vacuum, means to urge the head against the carrier thereby to press the removed cap against the flange for sealing the cap to the container, photoelectric means for detecting the absence of a container from the body, and means responsive to the photoelectric detection means for disconnecting the head from the source of vacuum, whereby no cap will be removed if no container is present in the body.

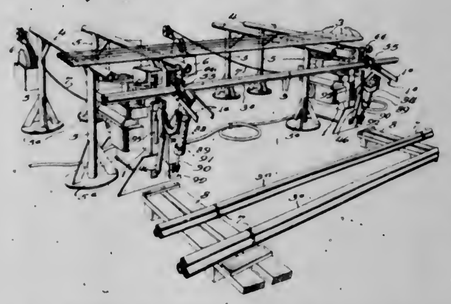
3,018,595
PACKAGE FILLING APPARATUS
Sidney Ernest Harris, Wayne, and William George Rausch, Verona, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
Filed Mar. 25, 1959, Ser. No. 801,917
3 Claims. (Cl. 53—78)



1. A package filling apparatus which comprises in combination a supply means which delivers tablets to be

packaged to a substantially horizontal rotatable disc surrounded by a vertical fence, guides to direct said tablets from the surface of said disc through openings in the fence into a substantially enclosed delivery chute removably attached to said fence and adapted to deliver tablets from the disc in a substantially vertical direction to containers for said tablets on a conveyor below said chute adapted to deliver and remove receptacles from beneath said chute, a stop means adapted to extend into said chute through an opening therein from a normally withdrawn position, a solenoid, an electrical circuit, a photoelectric means attached adjacent to said chute close below said stop means which counts the tablets passing through the chute and interrupting a beam of light directed at said photoelectric means, said stop means being actuated by said electrical circuit through said solenoid in response to the passage of a predetermined number of tablets past said photoelectric means and said electrical circuit also actuating means controlling the entry and removal of containers by the conveyor.

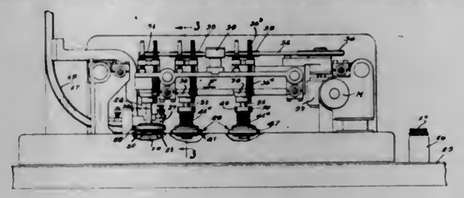
3,018,596
PIPE BUNDLING MACHINE
William W. Dvorak, South Holland, and James L. Gibson, Riverdale, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 4, 1959, Ser. No. 838,268
16 Claims. (Cl. 53—198)



1. A machine for binding together elongated objects comprising, a storage rack for storing a supply of the objects, a yoke for receiving and supporting a plurality of the objects dropped by the force of gravity from said storage rack, said yoke being shaped to guide the objects as they fall from the storage rack into a predetermined arrangement in the yoke, a flexible sling suspended to hang in an approximate U-shape about the vicinity of the yoke, actuating means connected to the sling for closing the sling into a substantially closed loop about said plurality of objects in the yoke and clamping them into a close bundle in fixed positions relative to each other, a strap guide pivotally mounted for movement between a first position providing for clear passage of the objects into said yoke and a second position encircling the bundle of objects in the yoke, and strap feed means aligned to direct and feed strap into said strap guide and guide the strap into a closed loop about the bundle when the strap guide is in its second position.

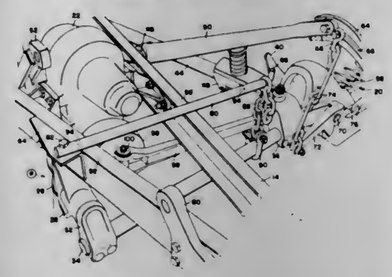
3,018,597
CONTAINER CLOSING APPARATUS
John Hohl, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Aug. 14, 1958, Ser. No. 755,051
2 Claims. (Cl. 53—314)

1. In a container closing apparatus for affixing screw-threaded skirted closure-caps to jars having threaded necks comprising, means for conveying filled upright jars along a horizontal path, means for placing closure caps in partially telescoped relationship over the necks of successive jars as they move past a closure cap receiving station, a pair of continuously rotating primary spinning rolls adjacent the cap receiving station between which the closure caps pass with advancing movement of the jars, said rolls spaced apart transversely of said path such distance that they firmly grip the skirt portions of the closure caps and at least partially thread the caps onto the jars, a pair of tightening rolls positioned beyond the primary rolls, and said tightening rolls being engageable with diametrically



opposed portions of a cap skirt; the improvement which comprises a friction-disk slip-clutch for driving each tightening roll, each such roll and its clutch including coaxial clamping disks forming a holder for a resilient collar-like tightening roll, a roll driving disk coaxial with one of the clamping disks, a driven frictional ring coaxial with the driving disk, said driven ring contacting one face of the driving disk and secured to said one of the clamping disks, axially adjustable yielding means for regulably controlling the degree of frictional engagement between the driving disk and driven ring, and a generally vertical driven shaft connected to and rising coaxially from said driving disk.

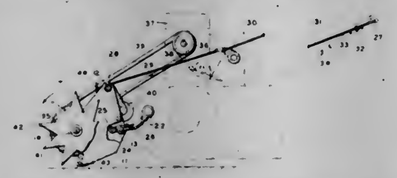
3,018,598
MOWER ATTACHMENT
Ellsworth T. Johnson, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,811
10 Claims. (Cl. 56—25)



1. High-cut mechanism for a mower having a generally fore-and-aft frame, an obstruction-releasable cutter means swingable rearwardly relative to the frame about an upright axis on the frame from a normal lateral cutting position and also vertically swingable relative to the frame for adjustment as to cutting height, and lift means on the frame for swinging the cutter means vertically, said mechanism comprising: a cross member having inner and outer ends and including upright pivot means at its inner end mountable on the frame adjacent to the aforesaid upright axis to extend normally laterally with its outer end in overhanging relation to the cutter means; track means rigid on the frame between the inner and outer ends of the cross member and sustaining said

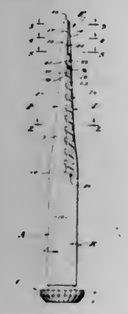
member for fore-and-aft swinging about said pivot means; and means connected directly between the outer end of the cross member and the cutter means for suspending the cutter means at an elevated cutting height spaced above the ground.

3,018,599
EDGER AND LAWN TRIMMER
Chester G. Rambo, 1334 NE. 53rd St., Portland, Oreg.
Filed Apr. 3, 1959, Ser. No. 803,980
3 Claims. (Cl. 56—26)



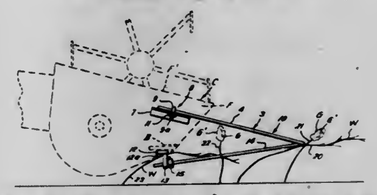
1. An edger and trimmer attachment for lawn mowers of the type including a power drive unit comprising a pair of frame plates, a pair of spacer rods rigidly securing said plates in spaced parallel relation, means extending rearwardly from one of said rods for detachably and pivotally securing said plates to the power lawn mower, a horizontal cutter bar secured at its opposite ends to the lower portions of said plates, a horizontal shaft journalled in said plates overlying said horizontal cutter bar, a plurality of cutter blades fixedly secured to said shaft and arranged for shearing cooperation with said cutter bar on rotary movement of said shaft, an upright cutter bar rigidly secured to the outermost of said frames, a toothed cutter disk fixedly secured to said shaft and arranged for cooperative shearing contact with said upright cutter blade upon rotary movement of said shaft, and means for driving said shaft from said power drive unit comprising a pulley on said shaft and a belt for connecting said pulley to said power drive unit, and an adjustable tension roller mounted on one of said frame plates for engaging said belt and maintaining said belt in taut condition.

3,018,600
SHUTTLE-POINT COTTON PICKING SPINDLE
Maurice E. Lindsay, Bakersfield, Calif., assignor, by mesne assignments, to Spindle Specialty Co., Bakersfield, Calif., a corporation of California
Filed Sept. 19, 1958, Ser. No, 762,033
10 Claims. (Cl. 56—50)



1. A cotton picking spindle of the character described, including, an elongate body having a picking portion, picking means in the said portion and comprising a longitudinally extending series of circumferentially pointed barbs and said portion having a longitudinally extending recessed lead face extending ahead of the barbs to the periphery of the picking portion, and a substantially elongate cylindrical tip portion with a rounded exterior wall projecting longitudinally from and substantially tangent with the said lead face of the picking portion.

3,018,601
APPARATUS FOR SEPARATING GRAIN FROM WEEDS (WEED DEFLECTOR)
Carl T. Griffin and Ross A. Griffin, both % General Delivery, Mathis, Tex.
Filed Oct. 26, 1959, Ser. No. 848,658
5 Claims. (Cl. 56—119)



1. An apparatus for deflecting weeds away from the cutting blades of a harvesting machine and the like, including a substantially U-shaped member mounted on the harvesting machine in advance of the cutting blades of the harvesting machine for depressing the weeds prior to their reaching the cutting blades of the harvesting machine, said U-shaped member including side legs joined by a member extending therebetween, support means on each side of the harvesting machine for receiving one of said legs of said U-shaped member, locking and release means on each of said support means for slidably receiving each of said legs of said U-shaped member whereby the position of said center member in advance of the cutting blades of the harvesting machine may be varied, a horizontal support member mounted on the harvesting machine below the cutting blades of the harvesting machine, support means on said U-shaped member extending angularly therefrom, said horizontal support member having slot means thereon for slidably receiving said angularly extending support means, and adjustable stop means on said angularly extending support means for limiting the travel of said angularly extending support means through said slot means.

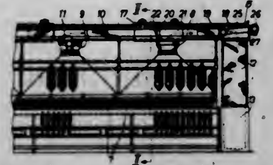
3,018,602
LAWN EDGER
Roland Earl Diesterweg, 2022 W. Broadway, Enid, Okla.
Filed Jan. 26, 1959, Ser. No. 788,950
4 Claims. (Cl. 56—295)



1. A cutting element for a power operated lawn mower or the like comprising, a rotatable support having an outer face, wire-like cutter elements pivotally and radially attached to said support and engaging said face, a plate member contacting said cutter elements, means having a head extending through said plate and axially se-

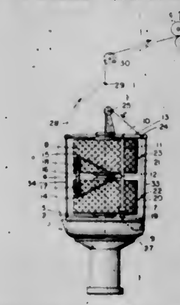
cured to said support, and spring means between said head and said plate for resiliently urging said plate against said cutter elements.

3,018,603
AIR SUCTION SYSTEM FOR REMOVING THREADS, FLY AND DUST FROM SPINNING MACHINES
Hans Rutz and Rudolf Huber, Winterthur, Switzerland, assignors to Actiengesellschaft Joh. Jacob Rieter & Cie., Winterthur, Switzerland, a corporation of Switzerland
Filed Sept. 19, 1960, Ser. No. 56,897
Claims priority, application Switzerland Sept. 25, 1959
7 Claims. (Cl. 57—56)



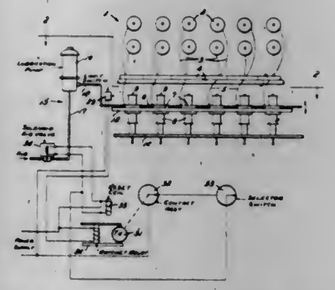
1. In an oblong spinning machine, air suction duct means having inlets extending longitudinally of the machine and upright portions, a horizontal duct extending longitudinally of the machine, said upright portions terminating in said horizontal duct, suction fans individually placed in said upright portions for drawing air through said inlets into said upright portions and delivering the air into said horizontal duct, the latter having perforated wall portions permitting air to escape to the outside of the horizontal duct and retaining threads, fly and dust within said horizontal duct, a carriage movably supported by said horizontal duct to move lengthwise of said horizontal duct, said carriage including means covering said perforated wall portions for impeding flow of air therethrough, and means operatively connected to said carriage for moving said carriage along said duct for periodically interrupting pressing of fly and dust to the inside of said perforated wall portions by the air escaping to the outside of the horizontal duct and promoting flow of air and of fly and dust inside said horizontal duct.

3,018,604
DEVICE FOR DRAWING OFF EQUAL THREAD LENGTHS FROM TWO FEED SPOOLS
Wilhelm Lenk, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Filed Dec. 16, 1959, Ser. No. 859,943
Claims priority, application Germany Dec. 24, 1958
5 Claims. (Cl. 57—58.52)



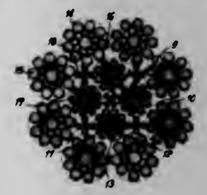
1. Apparatus for drawing equal lengths of thread from a pair of bobbins independently rotating on the same axis which comprises: a spindle upon which said bobbins are rotatably mounted; a stationary frame adjacent to said spindle and bobbins; roller means connected to said frame and including for each bobbin a substantially cylindrical roller; means to resiliently urge each of said cylindrical rollers for rotation tangentially against an outer circumferential surface of its respective bobbin; and means interconnecting said cylindrical rollers independently of said bobbins for synchronization of their rate of revolution.

3,018,605
TEXTILE LUBRICATING APPARATUS
Price Elias Sherrill and Clyde Emanuel Moss, Gastonia, N.C., assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 15, 1959, Ser. No. 840,136
4 Claims. (Cl. 57—120)



1. Textile machinery for twisting yarn, comprising a reciprocating frame carrying an annular member, a traveler member spinning on said annular member, a fixed lubricant pump, fluid pressure means adapted to charge said pump, means connecting said fixed pump to said annular member, interrupter means contacted by said frame during each traverse thereof, a relay advancing a contact assembly when said interrupter means is contacted by said frame, selector means connected to said contact assembly and causing a current to flow when said contact assembly has advanced a number of times corresponding to the setting of said selector means, a valve in said fluid pressure means activated by said current to charge said pump and force lubricant through said connecting means to said traveler member.

3,018,606
STRANDED METAL ROPES
Gerhard Dietz, 190 Friedrich-Ebertstrasse, Monchroden, near Coburg, Germany
Filed Apr. 21, 1959, Ser. No. 807,838
Claims priority, application Germany Apr. 24, 1958
11 Claims. (Cl. 57—148)



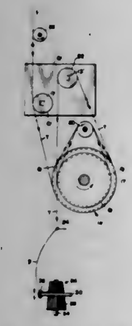
1. A helical stranded wire rope comprising an inner series of at least three parallel helically wound strands of wires, a contiguous outer series of a greater number of parallel helically wound strands of wires, the strands of the outer series lying parallel to the strands of the inner series, each strand of the inner series comprising an inner and outer series of parallel wires arranged in parallel lay, the strands of the inner series defining between them a center zone of smaller cross sectional area than any of said strands.

3,018,607
WIRE ROPES
Alfred Dietz, 30 Damaschkestrasse, Neustadt, near Coburg, Germany, and Gerhard Dietz, 190 Friedrich-Ebertstrasse, Monchroden, near Coburg, Germany
Filed Apr. 27, 1959, Ser. No. 809,209
11 Claims. (Cl. 57—148)



1. A helical stranded wire rope comprising a core section, a protective layer covering and confining said core section, and an outer layer of wire strands helically laid on said protective layer, said protective layer being nondeformable by strains on the rope and being formed peripherally with a series of rigid helical ridges respectively lying between and holding separate the adjacent strands of said outer layer so that no notching contact can occur between said wire strands and the rope cannot untwist under strain.

3,018,608
PROCESS FOR THE PRODUCTION OF LOW-SHRINKAGE POLYETHYLENE TEREPHTHALATE THREADS
Fritz Kleekamm, Obernburg (Main), and Erhard Siggel, Laudenbach (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken A.G., Wuppertal-Elberfeld, Germany
Filed May 5, 1958, Ser. No. 733,179
Claims priority, application Germany May 8, 1957
6 Claims. (Cl. 57—157)



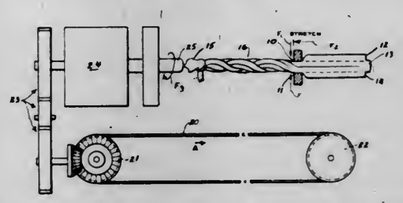
3. In the processing of polyethylene terephthalate threads for subsequent twisting on a ring-twist device, stretching polyethylene terephthalate thread running at high linear velocity over a stationary surface heated to about 80–135° C., and passing the stretched thread over a second stationary surface heated to about 180–210° C. at a linear velocity about 5–10% less than the aforesaid linear velocity to partially relax the tension in said thread.

3,018,609
PROCESS FOR THE HOT STRETCHING OF YARNS OF SYNTHETIC MATERIALS
Walter Maier and Kurt Bernklau, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed July 16, 1958, Ser. No. 748,937
Claims priority, application Germany July 26, 1957
3 Claims. (Cl. 57—157)



1. In a process for hot stretching yarns of synthetic materials selected from the group consisting of polyacrylonitrile and copolymers containing at least 85% acrylonitrile, the step which comprises imparting to the travelling yarn a high drawing speed in combination with a low false twist of from about 12–22 turns per meter during the stretching operation, and collecting the stretched yarn in an uncrimped condition and of uniform denier.

3,018,610
METHOD OF MANUFACTURING FILAMENTARY STRUCTURES
Felix Kleinekathöfer, Endorf, Upper Bavaria, Germany
Filed Apr. 28, 1959, Ser. No. 809,392
Claims priority, application Germany Apr. 29, 1958
6 Claims. (Cl. 57—157)

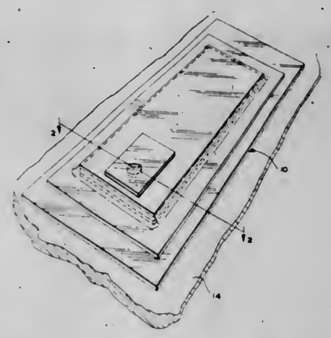


1. A method for manufacturing filamentary structures comprising the steps of drawing a filamentary material comprising at least two unstretched, unset filaments consisting of stretchable and thereby crystallizable plastic substance through a die wherein a profile smaller than the total cross sectional area of the filamentary material is enforced on the latter, twisting and simultaneously stretching the filamentary material in a zone subsequent to said die so as to deform the filaments in said filamentary material to substantially fill the profile enforced upon said material, and to generate sufficient heat in said filamentary material to set the latter.

3,018,611
TIMER DEVICE AND METHOD FOR DETERMINATION

Laszlo F. Biritz, Chicago, Ill., assignor, by mesne assignments, to Felix D. Kolben

Filed Aug. 31, 1959, Ser. No. 837,001
13 Claims. (Cl. 58—1)

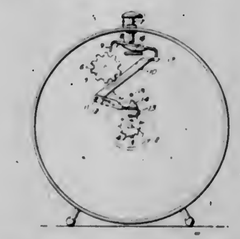


1. A temperature insensitive device for measuring time intervals comprising an oxygen-reactive material having a substantially insignificant activation energy for combination with oxygen to produce a reaction product visually contrastable with unreacted material, a transparent hermetically sealed container for said oxygen-reactive material, means forming a part of said container and defining an air inlet for said container and proportioned of a size providing inflow of air at a rate inversely to temperature, said oxygen-reactive material being combinable with inflowing air which is diffused within said container at a rate proportional to temperature and substantially counterbalancing the temperature induced variation of air inflow through said inlet, said oxygen-reactive material being thereby visually converted as a function of time and insensitively to temperature, and means for removably sealing said air inlet prior to usage of said device.

3,018,612
ALARM REPEATING MECHANISM FOR AN ALARM CLOCK

Paul Frans Christiaan Sierhuis, Keizersgracht 243–245, Amsterdam, Netherlands

Filed Dec. 9, 1957, Ser. No. 701,649
Claims priority, application Netherlands Dec. 19, 1956
2 Claims. (Cl. 58—21.12)

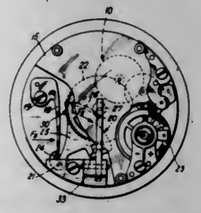


1. In an alarm repeating mechanism for an alarm clock of the type having a toothed wheel in an alarm train, a knob for manual operation and a brake arm secured to said knob to interengage at one end with said toothed wheel to stop the alarm operation, a ratchet wheel fixed to a spindle of the time mechanism, an additional arm pivoted to said brake arm and extending across said ratchet wheel and normally held in engagement therewith by gravity, a tooth formed on said additional arm to engage the ratchet, whereby upon pressing the knob to engage said brake arm to terminate the alarm action, the said tooth engages behind a tooth of said ratchet wheel to initially hold the brake arm in interengaging relation with said toothed wheel and to subsequently release the brake arm when the ratchet wheel has rotated toward said brake arm with the time mechanism, and a second tooth formed on said additional arm, a detent fixed to the clock and disposed normally above the ratchet wheel whereby upon inverting the clock with the knob depressed the said second tooth engages the said detent to hold the brake arm in interengaging relation with the toothed wheel until the next succeeding alarm cycle.

3,018,613
TIME-METER

René-Philippe Jaccard, Petit-Lancy, Geneva, Switzerland, assignor to Samuel Jack Kaufman, New York, N.Y.

Filed Aug. 25, 1959, Ser. No. 835,888
Claims priority, application Switzerland Sept. 1, 1958
2 Claims. (Cl. 58—22.9)



1. In a time-meter, the combination of a clockwork mechanism including a plurality of gears lying in parallel planes, a toothed sector adapted to pivot round an axis perpendicular to said planes and engaging one of said gears, said sector being provided with an opening near one of its edges at a distance from its pivot, a driving spring engaged by said sector and urging the latter into pivotal motion, a stop defining the ultimate position to be occupied by the toothed sector under the action of said spring and a two-arm lever pivoting round an axis parallel with said planes and one arm of which engages the opening in said sector, means for shifting the other arm of said lever in a predetermined direction to shift the sector away from its stop and tension the driving spring, and an abutment for the lever defining the end of its path when shifting said other arm in said predetermined direction.

3,018,614
WATCH DIAL ILLUMINATING DEVICE

Andre Brien, 2507 Bohle St., Montreal, Quebec, Canada

Filed Dec. 12, 1960, Ser. No. 75,353
3 Claims. (Cl. 58—50)



3. A watch glass adapted to be mounted over the dial of a watch comprising: a cup-shaped body having a base portion and a skirt forming a lateral edge facing outward-

ly; a cavity in the base portion of said body, closed under vacuum, adjacent the lateral edge and overlying said dial; an illuminating filament in said cavity, said filament being fixed to the wall of said cavity and two lead-in wires separately joined to the filament and extending to the lateral edge of said body; one of said wires projecting freely out of said glass body at the upper part of said lateral edge and having a plug-in member at the free end thereof, the other wire being connected to a metallic member embedded in the lower part of the lateral edge; in combination with a metallic casing over which said glass is mounted with said metallic member in physical contact with said casing; a metallic hollow container as a part of a wrist band; an aperture through the wall of said container adjacent said glass body; an insulating sleeve fixed in said aperture and a metal tube concentric to and joined to said insulating sleeve inwardly thereof, said tube adapted to receive said plug-in member at the outer end thereof; at least one battery within said hollow container connected to the inner end of said tube; said metallic container being in physical contact with said casing.

3,018,615
AUTOMATIC CANCELLING OR RE-SETTING PARKING METER UNIT

Warren B. Minton, Shrewsbury, George W. Bryan, Belmar, and Harry J. Van Gorden, Manasquan, N.J., assignors to Time Stop, Inc., Newark, N.J., a corporation of New Jersey

Filed Sept. 26, 1957, Ser. No. 686,329
4 Claims. (Cl. 58—142)

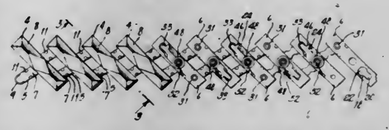


1. An automatic re-setting unit attachable to a parking meter having a timing mechanism provided with a zero reset device, said unit comprising a magnetic switching element operatively sensitive to the presence of a vehicle in the parking space assigned to the meter to cause a switching action upon the movement of a vehicle relative to said parking space, shielding means formed of a material which blocks magnetic fields and being disposed relative to said magnetic switching element to direct the field thereof toward said parking space whereby said element is unaffected by traffic in the adjacent areas, said material having a relatively high permeability and a low residual magnetism, and electrical means operatively coupled to said element and responsive to said switching action to actuate said reset device to zero set said meter upon the entry and exit of a vehicle into and from said parking space, said electric connecting means including a source of electric current, a condenser of large capacity, a condenser of smaller capacity, a resistor, a relay, and a solenoid, all in circuit, and subject to being operated by movement of the magnet when the latter is activated by the presence of a vehicle in said parking space.

3,018,616
EXPANSIBLE LINKAGE WITH REMOVABLE LINKS AND MEANS TO PREVENT INADVERTENT SEPARATION OF THE LATTER

Henry Ebert, Brooklyn, N.Y., assignor to Ebert & Co. Inc., Brooklyn, N.Y., a corporation of New York

Filed May 23, 1958, Ser. No. 737,282
1 Claim. (Cl. 59—79)

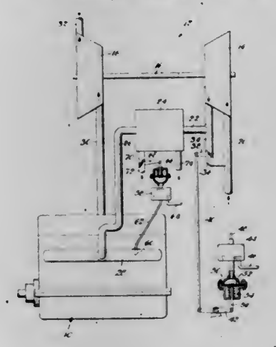


An expansible link bracelet comprising a plurality of detachable top and bottom links pivotally joined at the centers and ends thereof, each of said bottom links having headed, hollow studs projecting from both ends thereof and a headed eyelet projecting from its center, each of said top links being formed with an aperture at its center to receive an eyelet and an aperture at one end to receive one of the studs from a corresponding bottom link, each of said top links also being formed with a slot at its other end for receiving a stud from a corresponding bottom link, said slot having an enlarged section with a diameter greater than the head of the stud and a narrow section having a diameter less than the diameter of the stud head, said stud normally being positioned in said narrow section of said slot, a raised heel fixed to said top link adjacent said slot between the center aperture and the end of the top link, a fastening member having an annular ring at one end thereof, said annular ring being placed around and under the head of said eyelet, the other end of said fastening member being formed with a finger which extends across said heel and is spaced therefrom in a direction away from said central aperture when the bracelet is in a collapsed condition, said fastening member also having a bent over portion at its extremity, said bent over portion extending over the head of the stud into the hollow section thereof thereby engaging said stud to keep it positioned in said narrow section of said slot and said finger engaging said heel when the bracelet is expanded.

3,018,617
TEMPERATURE RESPONSIVE APPARATUS FOR CONTROLLING TURBOCHARGED ENGINES

Erik Kelgard, Kamloops, British Columbia, Canada, assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin

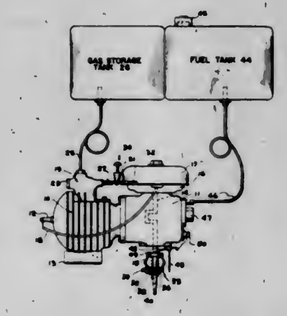
Filed Mar. 3, 1958, Ser. No. 718,882
2 Claims. (Cl. 60—13)



1. An internal combustion engine having a supercharger with a compressor and a turbine, the compressor

being connected to the engine so as to supply relatively high pressure air for combustion, the turbine being connected to the engine so as to receive exhaust gases from the engine to drive the turbine, the turbine being connected to the compressor to drive it, the supercharger being constructed and arranged to supply the proper weight of air for the most efficient engine operation at a predetermined rated ambient temperature, an intercooler between the compressor and the engine constructed to cool the inlet air supplied by the compressor to an approximately constant temperature regardless of ambient temperature, and means responsive to ambient temperatures below the rated temperature of the supercharger for varying the volume of air supplied by the compressor to maintain the inlet pressure of the air supplied to the engine approximately constant at ambient temperatures below the predetermined rated temperature of the supercharger.

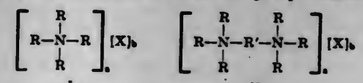
3,018,618
STARTING AND STOPPING MECHANISM FOR INTERNAL-COMBUSTION ENGINES
Russell F. Williams, 28495 Joy Road, Garden City, Mich., and Phillip R. Morgan, 28025 Rosewood Drive, Inkster, Mich.
Filed Mar. 31, 1959, Ser. No. 803,316
7 Claims. (Cl. 60—16)



1. In a starting mechanism for an internal-combustion engine including a cylinder, inlet and exhaust ports in said cylinder, a piston adapted for reciprocating motion in said cylinder in an engine cycle, a piston rod affixed to said piston, and a crankshaft driven by said piston rod, the combination comprising: bleeding means for bleeding gaseous products of combustion at elevated pressure from said engine cylinder during operation of said engine; storage means for receiving said gaseous products of combustion at elevated pressure during operation of said engine and for storing them during shut-down of said engine; admission means for admitting said gaseous products of combustion at elevated pressure from said storage means to said engine cylinder during start-up of said engine thereby forcing said piston to move and to start said engine; and means cooperating with said admission means for limiting the admission of said gaseous products of combustion at elevated pressure to said engine cylinder substantially to the stage of said engine cycle in which said piston is beyond top dead center and in which said exhaust ports remain closed, said means cooperating with said admission means being automatically responsive to the position of said piston rod and crankshaft to render said admission means operable only at the aforesaid stage of said engine cycle.

3,018,619
MONOPROPELLANTS CONTAINING QUATERNARY AMMONIUM COMPOUNDS
Richard C. Doss and William B. Reynolds, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed July 17, 1959, Ser. No. 827,976
16 Claims. (Cl. 60—35.4)

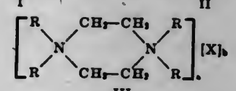
9. In the method for development of thrust by the combustion of a monopropellant in the combustion chamber of a reaction motor, the step comprising injecting into said combustion chamber a mixture of (1) an oxidant selected from the group consisting of nitric acid containing at least 70 weight percent HNO_3 and mixtures of said nitric acid with perchloric acid wherein said mixtures contain up to about 50 weight percent $HClO_4$ and not more than about 30 weight percent water, and (2) at least one quaternary ammonium compound characterized by a formula selected from the group consisting of



I

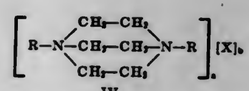


II



III

and



IV

wherein: each R is selected from the group consisting of alkyl, cycloalkyl, alkenyl, and cycloalkenyl radicals containing from 1 to 8 carbon atoms wherein when more than one carbon atom is present the carbon atom attached to the quaternary nitrogen atom is attached to adjoining carbon atoms by single valence bonds, and said radicals substituted with a substituent selected from the group consisting of nitro, nitrato, and cyano radicals, the total number of said substituents in said R groups being not greater than one-half the total number of carbon atoms in said R groups; R′ is selected from the group consisting of alkylene radicals containing from 1 to 12 carbon atoms, and alkenylene radicals containing from 4 to 12 carbon atoms wherein the carbon atoms attached to the quaternary nitrogen atom is attached to adjoining carbon atoms by single valence bonds; X is an anion selected from the group consisting of nitrate, perchlorate, monohydrogen phosphate, dihydrogen phosphate, hydrogen sulfate, sulfate, hydroxyl, orthoborate, dihydrogen borate, and tetraborate anions; *a* and *b* are each integers of from 1 to 4, and the product of *a* multiplied by the number of quaternary nitrogen atoms is equal to the product of *b* multiplied by the valence of said anion X; and wherein the ratio of said quaternary ammonium compound to said oxidant is within the range of 0.75 to 1.25 times that of the stoichiometric amount.

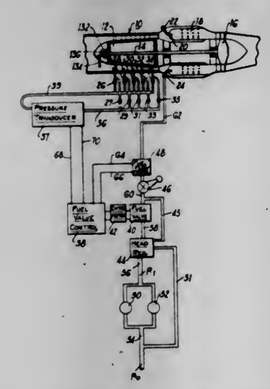
3,018,620
THRUST REVERSER TAILORING TABS
Robert E. Meyer, Jupiter, Fla., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 22, 1959, Ser. No. 815,071
1 Claim. (Cl. 60—35.54)

In combination, an engine having an outer case concentric about an axis and terminating in an exhaust outlet and which generates thrust by developing a propulsive exhaust gas jet which is discharged to atmosphere through said outlet, a thrust reverser comprising axisymmetric duct means attached to said case adjacent said outlet and including two half-duct units movable between a retracted position wherein said half-duct units are positioned adjacent said case and radially outboard and on opposite sides of said outlet and an operable position wherein said half-duct units abut downstream of said outlet to intercept said propulsive jet and redirect gas flow thereof into two axisymmetric forwardly directed paths



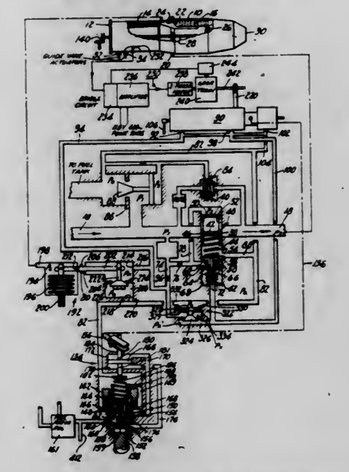
defined by said half-duct units whereby reverse thrust is produced, said half-duct units having downstream edges when in said operable position shaped to establish the peripheral contour of said forwardly directed paths, and readily attachable and detachable flow diverting tabs attached to said half-duct units at selected positions along said downstream edges and positioned to locally intercept and locally alter the shape of said peripheral contour toward said axis.

3,018,621
CONTROL APPARATUS FOR INTERNAL COMBUSTION ENGINE
Samuel E. Arnett and Harry E. Starr, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed July 26, 1956, Ser. No. 600,183
6 Claims. (Cl. 60—39.28)



1. In fuel control apparatus for a combustion engine including a compressor: the combination of a fuel conduit for supplying fuel to the engine; a fuel valve operative with said conduit for controlling the fuel flow through said conduit; means for controlling the operation of said fuel valve and thus fuel flow to the engine in accordance with the relationship $W_f = \dot{P}_N - K_1 \dot{W}_f$ wherein W_f designates the total fuel supply to the engine, P_N designates the rate of change of a compressor generated pressure, K_1 designates a constant and $\dot{W}_f$ designates the rate of change of fuel flow to the engine W_f, said last named means including first control means responsive to the fuel flow through said conduit, second control means responsive to the compressor generated pressure, and fuel valve control means operatively connected to said first and second control means for comparing and differentiating the response of said first and second control means and for producing a resultant control signal which varies as a function of the difference between the rate of change of said fuel flow through said conduit and the rate of change of said compressor generated pressure to actuate said fuel valve.

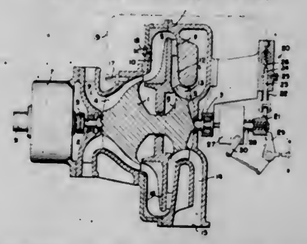
3,018,622
CONTROL APPARATUS
Wayne E. Werts, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed July 11, 1958, Ser. No. 748,043
6 Claims. (Cl. 60—39.28)



2. In a fuel control system for a combustion engine having a burner and a control lever for controlling the operation of the engine, a source of fuel, a fuel conduit for delivering fuel from said source to said burner, a valve in said conduit for controlling the fuel flow therethrough to said burner, and servo mechanism responsive to a control fluid pressure operatively connected to said valve for controlling the operation thereof, the combination of means for controlling said control fluid pressure including a conduit connected between a source of relatively high fluid pressure and said servo mechanism, a first valve member in said conduit, said first valve member being connected to said control lever and actuated as a function of control lever position, a second valve member in said conduit, means responsive to a temperature in said engine operatively connected to said second valve member for controlling the operation thereof, a third valve member in said conduit concentrically arranged with said first and second valve members, means responsive to engine speed operatively connected to said third valve member for controlling the operation thereof, a fourth valve member in said conduit concentrically arranged with said third valve member, means responsive to a fluid pressure in said engine which varies with engine power output operatively connected to said fourth valve member for controlling the operation thereof, said first and third valve members having first and second valve ports, respectively, movable relative to one another to form a first variable area restriction so as to vary the effective flow area of said conduit as a function of control lever position and engine speed, said second and third valve members having third and fourth valve ports, respectively movable relative to one another to form a second variable area restriction so as to vary the effective flow of said conduit as a function of temperature and engine speed, said third and fourth valve members having fifth and sixth valve ports, respec-

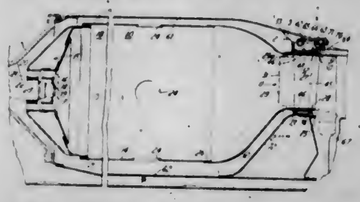
tively, movable relative to one another so as to vary the effective flow area of said conduit as a function of said fluid pressure.

3,018,623
EXPLOSION GAS TURBINES
Rudolph Birmann, Highland Farm, Newtown, Pa.
Filed Nov. 4, 1960, Ser. No. 67,290
18 Claims. (Cl. 60—39.36)



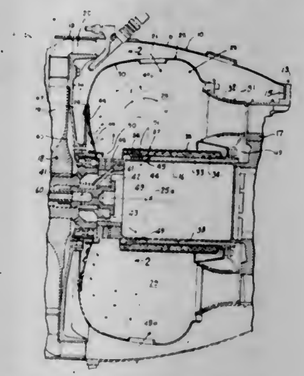
1. An explosion gas turbine power unit comprising a centrifugal impeller, a combustion chamber receiving air directly from said impeller, nozzles receiving combustion gases from said combustion chamber, a gas turbine having passages defined by blades receiving, and driven by, gases from said nozzles, means connecting said gas turbine to said centrifugal impeller to drive the latter, said impeller having blade discharge angles directing the relative flow of air therethrough backwardly with respect to its rotation at an angle between 10° and 25° and having its minimum passage area between adjacent blades in the vicinity of the discharge ends of its passages, means for intermittently injecting finely atomized fuel into the inlet portion of said combustion chamber, with each injection prolonged through a period corresponding approximately to the time required for the flow of air to travel through the combustion chamber from the impeller to said nozzles so that said combustion chamber is substantially filled with explosive mixture during each injection period, and means for igniting the explosive mixture at approximately the end of each injection period.

3,018,624
FLAME TUBES FOR USE IN COMBUSTION SYSTEMS OF GAS TURBINE ENGINES
Frank Bonsall and Bernard Sidney Massey, Bristol, England, assignors, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed Feb. 28, 1955, Ser. No. 491,098
Claims priority, application Great Britain Mar. 2, 1954
3 Claims. (Cl. 60—39.37)



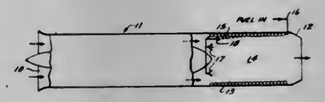
1. A flame tube for a gas turbine engine constructed to be one of a circular series of such flame tubes for symmetrical disposition around a common axis, comprising a flame tube body part having an outlet passage portion permanently connected to the body part and of section defined by two substantially radial walls, concentric inner and outer arcuate walls, and a plurality of turbine nozzle blades extending between and carried by said inner and outer walls, said spaced concentric walls of the outlet passage part, each subtending to a common angle, and the body part being so shaped, dimensioned and arranged in relation to the outlet passage part, that a number of the flame tubes, the concentric walls of the outlet passage parts of which, subtend angles which together make up 360° can be arranged with their outlet passage parts in juxtaposition to form a complete annulus with all the outlets from the outlet passage parts facing in the same direction, and each flame tube also comprising a pair of attachment lugs upstanding from the outer concentric wall of the outlet passage part, said lugs each being bored to receive bolts for attaching the flame tube to each of its adjacent flame tubes when a number of the flame tubes are arranged in juxtaposition as aforesaid, one of said attachment lugs having a part which provides a pair of opposed surfaces directly transversely of the flame tube whereby the flame tube may be located transversely.

3,018,625
INTERNAL COMBUSTION TURBINE ENGINE
Carl F. Bachle, Grosse Pointe, Mich., assignor to Continental Aviation and Engineering Corporation, Detroit, Mich., a corporation of Virginia
Filed June 27, 1960, Ser. No. 38,831
5 Claims. (Cl. 60—39.65)



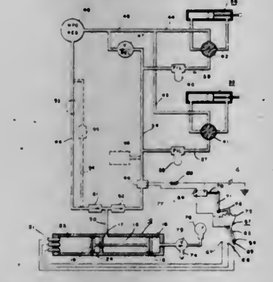
1. In an internal combustion turbine engine comprising an engine casing, having a front wall and a rear wall, a power shaft supported by said casing, an air compressor and a turbine wheel mounted on said shaft, a fixed annular combustion chamber concentrically disposed about said shaft between said compressor and turbine wheel and having an outer wall of revolution spaced inwardly of said casing to provide an annular air chamber connected with the air compressor outlet and having a radially extending portion axially spaced from said casing front wall to provide an inwardly radially extending air passage, said combustion chamber radially extending wall portion provided with air inlet openings communicating with the aforesaid air passage and comprising the sole means for introducing air into said combustion chamber, a fuel induction means comprising a fuel slinger secured to said shaft and connected with said fuel induction means and having a fuel outlet orifice, said combustion chamber having an inner imperforate wall of revolution disposed substantially parallel with and closely adjacent to said shaft, said inner and outer walls of said annular combustion chamber arranged to provide an annular gap radially aligned with respect to the fuel outlet orifice of said fuel slinger, said fuel slinger arranged to inject fuel in a spray adjacent to but spaced to the rear of the radially extending portion of said outer wall of said combustion chamber, said air inlet openings of said combustion chamber constructed to direct said air toward said fuel spray, and means for flowing air into the space between said shaft and said inner wall of revolution of said combustion chamber and by-passing said combustion chamber to shield the shaft from the heat generated in said combustion chamber.

3,018,626
VAPOR COMBUSTION SYSTEM
James H. Chestek, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Feb. 2, 1960, Ser. No. 6,312
13 Claims. (Cl. 60—39.71)



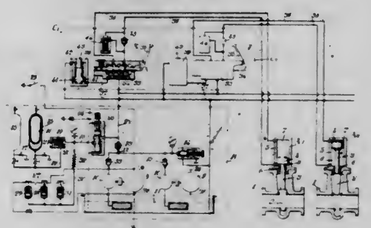
1. A vapor combustion system comprising, heat exchanger means surrounding and forming a combustion zone, means connected to and directing fuel through said exchanger to be vaporized therein, vapor injection means connected to said exchanger and directing the vaporized fuel into said zone for burning, and additional controlled profile fuel injection means directing fuel for burning along the heat exchanger surface to provide temperature control of said heat exchanger independently of the normal combustion in said zone and change the temperature profile across the combustion zone by changing the temperature at the periphery of said zone.

3,018,627
RECHARGEABLE ACCUMULATOR
Thomas G. Perricci, Fullerton, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Apr. 17, 1958, Ser. No. 729,149
14 Claims. (Cl. 60—51)



1. An intermittently-operable pump-accumulator device for supplying hydraulic fluid on a demand basis comprising a hollow vessel, a piston member operable therein over a portion of the length of the vessel, an aperture in said vessel through which a charge of hydraulic fluid may be drawn into said vessel as a result of piston travel in the direction away from said aperture, biasing means in the form of a charge of compressible fluid trapped in a closed portion of said vessel, said biasing means being arranged to act upon a portion of said piston and thereby tend to pressurize said hydraulic fluid, and actuating means arranged to drive said piston in the charging direction to draw hydraulic fluid into said vessel and at the same time cause potential energy to be stored in said biasing means, said actuating means being isolated from said piston to avoid contaminating said hydraulic fluid, whereby a charge of hydraulic fluid under pressure can be furnished for use in a system to which said pump-accumulator device is connected.

3,018,628
REMOTE CONTROL INSTALLATIONS FOR THE VALVES OF MARINE TANKERS
Victor Pomper, Paris, France, assignor to Société Industrielle Générale de Mecanique Appliquée S.I.G.M.A., Paris, France, a corporation of France
Filed Dec. 16, 1958, Ser. No. 780,698
Claims priority, application France Dec. 27, 1957
2 Claims. (Cl. 60—51)

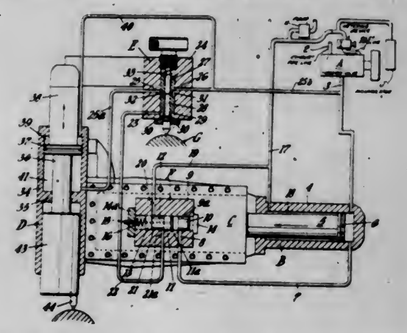


1. A hydraulic remote control system which comprises, in combination, a double acting hydraulic jack, said jack including parts forming two variable volume chambers, so that expansion of one of said chambers and retraction of the other corresponds to operation of said jack in one direction whereas retraction of said first mentioned chamber and expansion of the other corresponds to operation of said jack in the opposed direction, a conduit starting respectively from each of said two chambers, a source of power liquid under pressure, a feed pipe leading from said source, a discharge conduit, valve means interposed between said two first mentioned conduits, said feed pipe and said discharge conduit, said valve means being capable of connecting either of said two first mentioned conduits with said feed pipe and the other with said discharge conduit, and liquid flow indicator means inserted in said discharge conduit, said source of power liquid under pressure comprising pumping means having the delivery thereof in communication with said feed pipe, accumulator means, a connecting conduit between said feed pipe and the delivery of said accumulator means, a valve in said connecting conduit for opening and closing the communication between said feed pipe and said accumulator means, and electric motor for driving said pumping means, an electric circuit comprising a source of current for operating said motor, electromagnet means for controlling said valve arranged, when energized, to place said valve in the communication closing position, said valve being in the communication opening position when said electro-magnet means is not energized, an electric circuit including a current source for energizing said electromagnetic means, said two electric circuits having a portion in common, and a switch in said electric circuit portion adapted, in a first position thereof, to be used to operate the hydraulic jack, to close both of said electric circuits and, in a second position thereof, to be used to keep said hydraulic jack in stationary position, to open both of said electric circuits.

3,018,629
HYDRAULIC FEED SYSTEM OF METALS AND OTHER CUTTING MACHINES
James Anderson, Glasgow, Scotland, assignor to Vertimax Limited, Glasgow, Scotland
Filed Apr. 8, 1959, Ser. No. 804,982
Claims priority, application Great Britain Apr. 18, 1958
5 Claims. (Cl. 60—97)

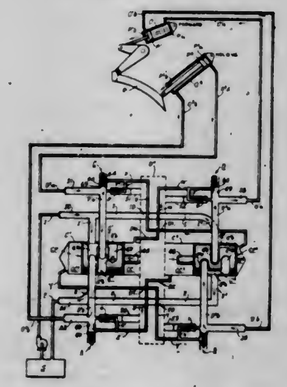
1. In a hydraulic feed for the tool of a metal and other machine, including a template, a first slide, a hydraulic piston and cylinder assembly for feeding and retracting

said slide with respect to a work-piece on which the tool is operating, a second slide carried by the first slide and to which the tool can be secured, a hydraulic cylinder and differential piston for feeding the second slide at right angles to the movement of the first slide, the improved hydraulic system comprising tubes and at least one valve by which hydraulic pressure fluid is delivered simultaneously to the piston of the first slide and to a smaller area of the differential piston of the second slide, said valve being a tracer valve influenced by said template and by which valve the fluid acting on a larger area of the differ-



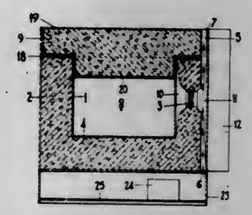
ential piston can be exhausted, held, or by which pressure fluid can be admitted to act on the larger area of the piston to move said second slide according to the shape of said template, the construction and arrangement being such that when said fluid is being exhausted the second slide is moved in one direction relative to the work-piece, when the exhaust is cut off pressure builds up on the piston of the first slide which is then fed at right angles to the movement of the second slide, and when pressure fluid is admitted to act on the larger area of the differential piston the movement of said piston is reversed.

3,018,630
AUTOMATIC VALVE
Cletus F. Bamber, Forest Hills, N.Y., assignor to City Tank Corporation, Corona, N.Y., a corporation of New York
Filed Feb. 25, 1960, Ser. No. 10,987
13 Claims. (Cl. 60—97)



1. For use in connection with a hydraulic operating cylinder having an operating piston reciprocably mounted therein and dividing said cylinder into two chambers, a valve and control assembly adapted to control pressurized fluid in a pressure line of a hydraulic system so as to automatically reciprocate said operating piston in said operating cylinder, comprising a control valve adapted to connect the pressure line to one said chamber and an exhaust line to the other said chamber, said control valve being shiftable to reverse said connections, a control cylinder having a control piston reciprocably mounted therein and dividing said control cylinder into two chambers, said control piston forming a part of said valve and adapted to reverse said connections upon being reciprocated from one end to the other end of said control cylinder, each chamber of said operating cylinder being connected to a chamber of said control cylinder through composite valve means comprising a normally closed primary pressure relief valve shiftable to open position responsive to predetermined unseating pressure in said operating cylinder, and a normally closed secondary valve connected in parallel with said primary valve, adapted to open when the pressure at the control cylinder side of said secondary valve exceeds the pressure at the operating cylinder side of said secondary valve.

3,018,631
THERMOELECTRIC COOLING DEVICES
Harry Bury, Ickenham, Roy Claydon, London, and Reggie Smith, Kenton, England, assignors to The General Electric Company Limited, London, England
Filed July 23, 1959, Ser. No. 829,036
Claims priority, application Great Britain July 28, 1958
10 Claims. (Cl. 62—3)

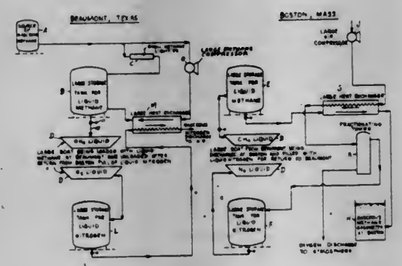


1. A thermoelectric cooling device comprising a cooling chamber, said chamber having a thermally insulating wall, a thermocouple assembly mounted in said wall, said assembly comprising alternately disposed p-type and n-type semiconductor elements assembled in a compact array and connected to provide hot junctions and cold junctions on its opposite sides, first and second heat exchange means disposed on opposite sides of said wall, and first and second conducting transition members connecting said first and second heat exchange means in conductive relation to said hot junctions and cold junctions respectively, each said transition member providing a thermally conductive path of increasing cross section from the junctions to the respective heat exchange means, and at least one of said heat exchange means being constituted by a metal casing member forming a part of said wall and constituting a thermally conducting surface thereof.

3,018,632
CYCLIC PROCESS FOR TRANSPORTING METHANE
Percival C. Keith, Peapack, N.J., assignor to Hydrocarbon Research, Inc., New York, N.Y., a corporation of New Jersey
Filed May 11, 1959, Ser. No. 812,495
1 Claim. (Cl. 62—9)

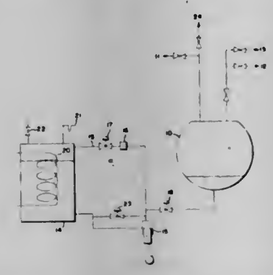
A cyclic process for producing and liquefying methane at a source near the point of production and delivering

and gasifying the methane at a distant point of use, which comprises the following steps: initially accumulating a large quantity of liquid methane at the point of origin by using a relatively small make-up liquefier for an extended time, transferring a large quantity of the liquid methane so accumulated to an insulated transport vehicle, transporting said vehicle to the distant point of use, discharging the liquid methane from the transport vehicle at the point of use, liquefying a large quantity of air by compression and by heat exchange with the liquid methane from



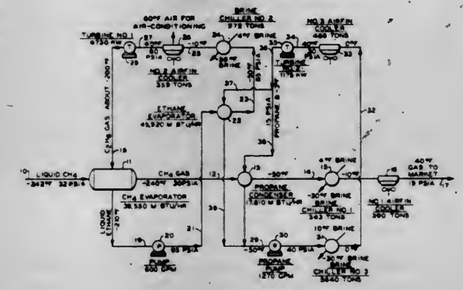
said transport vehicle at the point of use, making the resulting gaseous methane available for current use, fractionating the liquid air from said heat exchange and transferring the liquid nitrogen to said transport vehicle and back to the point of origin, liquefying large quantities of methane independently of said small make-up liquefier and in parallel therewith by compression and by heat exchange with liquid nitrogen drawn from the transport vehicle at the point of origin to complete the cycle and continuing to use the small make-up liquefier in its independent capacity to compensate for cold lost in transit.

3,018,633
METHOD FOR CHARGING FLUOROCARBON GASES
Ronald Harry Halliwell, Parkersburg, W. Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 21, 1960, Ser. No. 16,524
6 Claims. (Cl. 62—48)



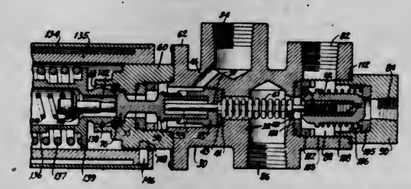
1. A method for transferring unsaturated fluorinated hydrocarbons, which comprises displacing said fluorinated hydrocarbon in liquid form, with an aqueous solution of a zinc halide, wherein the halogen has an atomic number of 17 to 53 inclusive, said aqueous solution having a density greater and a freezing point lower than the density and temperature of the fluorinated hydrocarbon when transferred.

3,018,634
METHOD AND APPARATUS FOR VAPORIZING LIQUEFIED GASES AND OBTAINING POWER
Forrest E. Gilmore, Independence, Kans., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 11, 1958, Ser. No. 727,870
11 Claims. (Cl. 62—52)



3. A method of vaporizing a liquefied natural gas comprising subjecting a stream of said liquefied gas to heat interchange with a heat exchange fluid warmer than said liquefied gas in a plurality of successive indirect heat exchange zones and thereby vaporizing said liquefied gas, heating at least two of said heat exchange zones with expanded heat exchange fluids being cycled in adjacent closed heat exchange circuits and wherein said heat exchange fluids in each of said circuits arranged in cascade relation are condensed by heat interchange with said liquefied gas in said heat exchange zones, said circuits being adapted to recover refrigeration and power obtainable during said heat interchange, and recovering as a product of the method said liquefied gas as a gas.

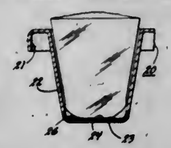
3,018,635
COMBINATION VALVE FOR OXYGEN CONVERTERS
John W. Keckler, Bryan, Ohio, assignor to The Aro Equipment Corporation, Bryan, Ohio, a corporation of Ohio
Filed May 5, 1958, Ser. No. 732,879
12 Claims. (Cl. 62—55)



1. A valve comprising an elongated body, a pair of interconnecting ports near one end of said body, the first port of said pair extending axially of the body and terminating at said one end in a filler opening, sealing means surrounding said opening for cooperation with an external nozzle engaging said opening, a first valve member for closing the connection between said ports normally being biased to closed position toward said one end, said first valve member having an actuating stem disposed within said first port for engaging said external nozzle, a pair of interconnecting ports within said body near the other end thereof, a second valve member for closing the connection between said second pair of ports, an actuating rod mounted for axial movement within said body and in compression between said first valve member and said second valve member, and means for normally biasing said second valve member toward said

one end and compressing said rod, whereby said external nozzle when connected to said first port will engage said actuating stem and simultaneously move both said first and said second valve members against their biasing forces.

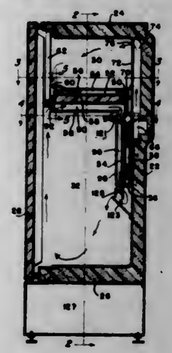
3,018,636
FREEZING DEVICE
Harry O. Waag and Raymond C. Davis, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,130
2 Claims. (Cl. 62—135)



2. In combination, a refrigerator having a refrigerating system associated therewith and provided with a refrigerated support within a chamber of the refrigerator, a freezing device comprising walls immovable with respect to one another forming upstanding sides converging toward a generally flat bottom compartment adapted to contain a body of water to be frozen, said freezing device being placeable in an upright position upon said refrigerated support with said flat bottom of the compartment in direct contact therewith, the flat bottom and a part of the sides of said compartment extending a short distance upwardly from said bottom, interposed between water in the compartment and said support, having a rate of heat transfer from the water to the support below that of the upstanding compartment sides whereby a solid block of ice is frozen in the upper portion of said compartment before water in the lower portion thereof freezes, and said immovability of the bottom and sides of said device causing final freezing of the body of water to expand and react against said bottom of the compartment for self-loosening said ice block from walls of said compartment and for simultaneously shifting the block of ice upwardly relative to the bottom of the compartment.

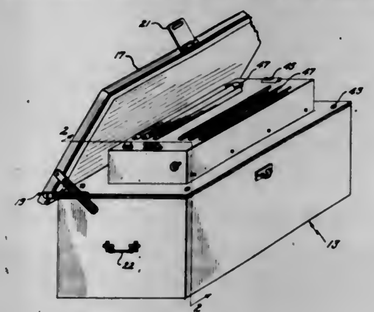
3,018,637
REFRIGERATOR WITH DEFROST MEANS
Leonard J. Mann and John J. O'Connell, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 17, 1960, Ser. No. 9,361
8 Claims. (Cl. 62—155)

1. A refrigerator including an insulated cabinet having upright and transverse insulated walls enclosing an above freezing compartment and a below freezing compartment above the above freezing compartment, said below freezing compartment being provided with a false bottom wall providing a first air passageway beneath and having openings adjacent the front thereof providing communication between said passageway and the below freezing compartment, an upright substantially imperforate plate type refrigerant evaporating means within said above freezing compartment substantially parallel to but spaced from an upright wall thereof, means cooperating with said evaporating means and said upright wall forming a first duct communicating with the rear of said first air passageway enclosing said below freezing compartment air and keeping said below freezing compartment air separated from the above freezing compartment air, fan means having an inlet communicating with said first duct and an outlet, a discharge duct extending from said outlet to the upper rear portion of said below freezing compartment for returning air cooled in said first duct by said evaporating means to said below freezing compartment, the front face of said evaporating means being exposed to the air in the above freezing



compartment for cooling said above freezing compartment.

3,018,638
PORTABLE REFRIGERATION APPARATUS
Eric H. Winkler, 1004 Elm St., Rome, N.Y.
Filed Nov. 13, 1959, Ser. No. 852,917
5 Claims. (Cl. 62—237)
(Granted under Title 35, U.S. Code (1952), sec. 266)

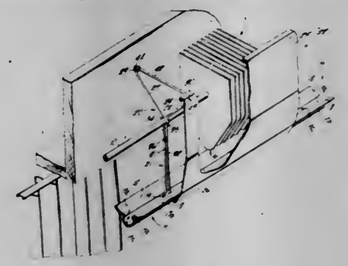


4. In a portable refrigerator including a storage receptacle of rectangular formation, insulated side walls and insulated bottom, a shoulder provided on the top edge of said insulated side walls, a refrigeration unit having lip portions dimensioned to rest on said shoulders, said refrigeration unit including separable top and bottom sections, refrigeration mechanism disposed in said top section, containers of refreezable refrigerant disposed in said bottom section, an insulated lid dimensioned to be substituted for said top section after said containers of refreezable refrigerant have been frozen allowing the storage receptacle to operate as a refrigerator without connection to any energy source.

3,018,639
HEAT EXCHANGE FOR STRUCTURE WITH TROUGH MEANS
George B. Bailey, Orange, Conn., assignor to John B. Pierce Foundation, New Haven, Conn., a corporation of New York
Filed Mar. 9, 1959, Ser. No. 797,995
10 Claims. (Cl. 62—285)

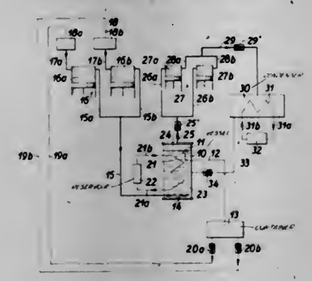
1. An extended fin surface structure arranged to be positioned adjacent to a wall surface comprising a tube

adapted to conduct a heat exchange fluid, a plurality of substantially vertical fins attached to said tube, each fin in the portion thereof below said tube being tapered in width downwardly from its outermost extremity toward about the center of the lowermost discharge portion of the fin at an angle of from about 55° to about 70° with the horizontal, hanger means having a portion attached to said tube to support said tube and plurality of fins, a trough extending the length of the structure, said hanger means having further a portion extending from said first



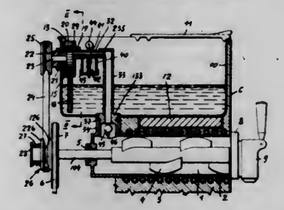
mentioned portion to a point beneath said fin lowermost portion and attached to said trough for supporting said trough below and spaced from said fin lowermost portion, and means disposed in front of said structure adjacent to but spaced from the side thereof removed from said wall adapted to cover said side of said structure, said hanger means comprising also a portion adapted to engage and support said last named means as so disposed, said structure thereby providing a system for optimum transfer of heat and optimum efficiency in the collection of moisture condensed on the fins.

3,018,640
APPARATUS FOR UTILIZING THE HEAT WHICH IS OBTAINED WITH THE PRODUCTION OF COLD IN REFRIGERATING PLANTS
László Heller and Gyula Faragó, Budapest, Hungary, assignors to Licencia Talalmanyokat Ertekesitae Vallalet, Budapest V, Hungary
Filed Dec. 30, 1958, Ser. No. 783,978
9 Claims. (Cl. 62—335)



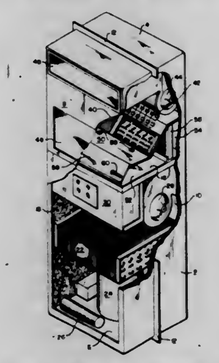
1. In combination, a refrigerating machine comprising evaporator means, first compressor means and first condenser means connected in series with one another, and a heat pump comprising said first condenser means, second compressor means and second condenser means connected in series with one another, said first condenser means comprising a vessel adapted to contain the working medium for said refrigerating machine, overflow means establishing the connection between the interior of said vessel and said evaporator means and positioned so as to maintain a predetermined level of liquid working medium in said vessel and so as to maintain a vapor space above the liquid level, and a cooling coil located within said vessel and adapted to conduct a fluid coolant therethrough in heat exchange relationship with said working medium, said second compressor means being connected to said vessel in the region of said vapor space, and said second condenser means being connected to said vessel at a point below said liquid level therein.

3,018,641
CONTINUOUS ICE CREAM FREEZER AND DISPENSER
Poerio Carpigiani, 50 Viale Carducci, Bologna, Italy
Filed Mar. 31, 1959, Ser. No. 803,303
Claims priority, application Italy Nov. 28, 1958
6 Claims. (Cl. 62—342)



5. In an ice cream freezer, a cabinet, at least one freezing cylinder in said cabinet, a freezing coil surrounding said cylinder, means in said cylinder for forcing the contents of the cylinder towards one wall thereof, outlet means on said one wall for communication with the cylinder, a liquid supply tank in said cabinet, pump means including a liquid intake in communication with said supply tank and an air intake in communication with the atmosphere, means for controlling said intakes, delivery means in communication with said pump and another wall of said cylinder opposite said one wall, said pump means being disposed in said supply tank, and a heat conductive layer disposed between said supply tank and the freezing coil, whereby the liquid from the supply tank to the cylinder is precooled.

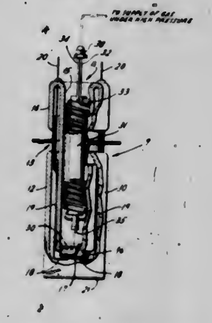
3,018,642
AIR CONDITIONER
Harold F. Lathrop, Milan, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,758
9 Claims. (Cl. 62—427)



1. In an air conditioner assembly: an upright rectangular cabinet adapted to be sealably mounted in an

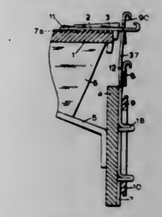
exterior wall of a space to be conditioned; a first partition extending horizontally across the interior of said cabinet to divide said cabinet into an upper compartment and a lower compartment; a recirculation air inlet in the inner wall of said upper compartment adjacent the lower part thereof; a conditioned air outlet in the upper part of said upper compartment; heat exchange means extending across the upper compartment interior in the path of air flow therethrough; first blower means in said upper compartment for inducing said air flow through said heat exchange means; a second partition in the upper compartment having its inner edge spaced from said recirculation air inlet and extending horizontally and rearwardly in spaced relation above said first partition to form therebetween an air duct in communication at its rear end with an air filter plenum; a damper in said upper compartment disposed between the front end of said air duct and said recirculation air inlet, said damper being pivotally supported along its lower edge and disposed for selective positioning between one extreme position closing said front end of said air duct, and an opposite extreme position opening said front end and partially closing off said recirculation air inlet; an outdoor air inlet in the lower part of the outer wall of said lower compartment; an air outlet in the outer wall of said lower compartment and spaced upwardly from said outdoor air inlet; a refrigeration condenser extending horizontally across said lower compartment between said lower compartment air inlet and air outlet and having its rear edge spaced from said outer wall to define a space therebetween; second blower means in said lower compartment adapted to induce air flow through said lower compartment; a vertical air duct having an open bottom end in communication with the space in said lower compartment below said condenser and extending upwardly in the space defined between said condenser and said outer wall and through said first partition for communication at its open top end with said filter plenum.

3,018,643
CRYOGENIC REFRIGERATING MEANS
Dundred D. Evers, Fort Washington, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 15, 1959, Ser. No. 840,786
2 Claims. (Cl. 62—467)



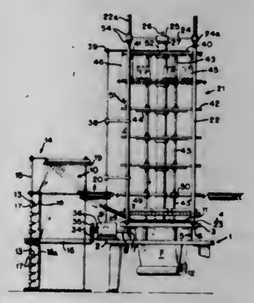
1. A gas-liquifying cryostat comprising: a pair of tubes in mutual heat exchange relation constructed to transport gaseous media under high pressure to a common outlet through which said media is expansively cooled; means for regeneratively cooling the incoming gas stream by counterflowing gaseous portions of the expanded fluid over said tubes to reduce the temperature of said incoming gas to a value permitting liquifaction thereof; and means providing for a substantial differential rate of heat transfer between the outgoing gas stream and each of said tubes to permit operation of said tubes at different temperature levels.

3,018,644
FLAT HAND KNITTING MACHINE WITH A DETACHABLE AUXILIARY NEEDLE BED
Herbert Schurich, 1 Mudrackzelle, Berlin-Reinickendorf, Germany
Filed Apr. 29, 1959, Ser. No. 809,728
11 Claims. (Cl. 66—64)



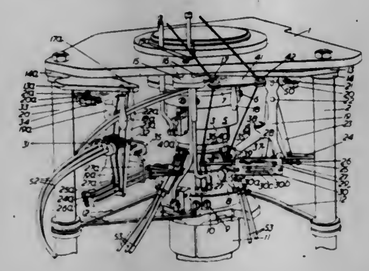
1. In a flat knitting machine, in combination, a first needle bed provided with a set of hooked main needles reciprocally guided in a first plane, and a second needle bed provided with a set of hooked auxiliary needles reciprocally guided in a second plane generally perpendicular to said first plane, the needles of each set being reciprocable beyond the plane of the other set, said auxiliary needles being each provided with a flexible hook-bearing extremity resiliently bent out of said second plane in a direction away from said first needle bed for deflection toward said first needle bed by its engagement with a loop in a fabric held on said main needles upon retraction of each auxiliary needle through said loop, said auxiliary needles being each provided with a pivoted latch adapted to overlie its hook upon withdrawal through said loop whereby said extremity is liberated from said loop and resiliently moves away from said first needle bed for clearing said loop upon its next reciprocation.

3,018,645
YARN STORAGE AND FEEDING SYSTEM FOR CIRCULAR KNITTING MACHINES
Benjamin Fried, 2375 Arthur Ave., New York 58, N.Y.
Filed July 6, 1959, Ser. No. 825,209
15 Claims. (Cl. 66—125)



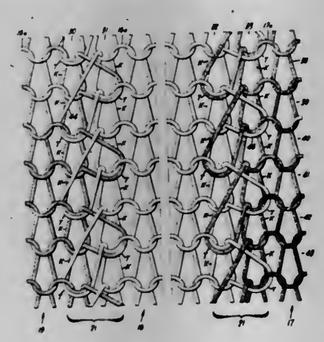
1. In combination with a circular knitting machine having a revolving cylinder with knitting needles: a wale yarn storage and feeding system comprising a rotatable superstructure mounted above said revolving knitting cylinder, said superstructure including means for supporting yarn holders, means connecting the cylinder and the superstructure for substantially synchronously driving the superstructure with the revolving cylinder, and means positioned peripherally of said yarn holder supporting means for guiding yarn outside said superstructure from said holders to selected ones of said knitting needles.

3,018,646
FEEDING ATTACHMENTS FOR CIRCULAR KNITTING MACHINES
Carlyle Herbert Wainwright, Leicester, England, assignor to The Bentley Engineering Company Limited, Leicester, England
Filed Feb. 29, 1960, Ser. No. 11,639
Claims priority, application Great Britain Feb. 28, 1959
8 Claims. (Cl. 66—140)



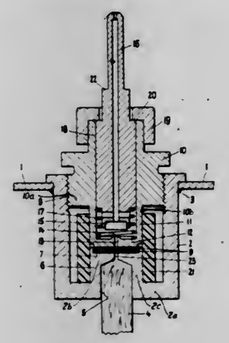
1. For a circular knitting machine, a feeding attachment comprising a feeder carrier, a plurality of alternative feeding fingers mounted on said carrier movable into and out of operative settings, means on said carrier for so moving said fingers and pivotal mounting means for said carrier to permit it to be swung bodily between an operative position adjacent to a needle cylinder of the machine and an inoperative position away from such cylinder.

3,018,647
KNIT SUTURE FOR PATTERNED FABRIC
Nathan Levin, Trenton, N.J., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Original application May 13, 1957, Ser. No. 658,642. Divided and this application Oct. 26, 1959, Ser. No. 848,851
7 Claims. (Cl. 66—179)



1. Knit fabric having at least a pair of suture-joined pattern sections having end wales wherein the suture structure between said pattern sections is contained within said end wales of said pattern sections, the body yarn of one of said pattern sections being incorporated in the rear face of only the said end wale of the other of said pattern sections while the body yarn of the other of said pattern sections is incorporated in the rear face of only the said end wale of the said one of said pattern sections, to form the suture structure.

3,018,648
GAS LIGHTER
Horst Todtenhöfer, Augsburg, Germany, assignor to Augusta-Zunder Feuerzeugfabrik Mayer & Co., Augsburg, Germany, a firm
Filed Aug. 10, 1959, Ser. No. 832,534
Claims priority, application Germany Aug. 8, 1958
6 Claims. (Cl. 67—7.1)



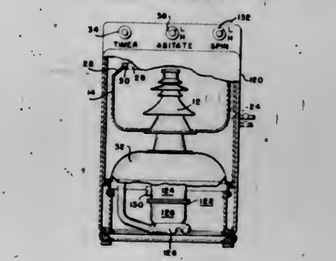
1. In a gas lighter, in combination, an outer housing adapted to be carried by the top wall of a fuel container, said outer housing having an open top and having an outer bottom wall portion, an inner bottom wall portion located nearer to said open top than said outer bottom wall portion, and an annular wall portion extending between and interconnecting said outer and inner bottom wall portions, said inner bottom wall portion of said outer housing being formed with an opening passing therethrough; an inner housing located at least in part within said outer housing and having also an outer bottom wall portion and an inner bottom wall portion, the latter being located nearer to said inner bottom wall portion of said outer housing than said outer bottom wall portion of said inner housing, and said inner housing having also an annular wall portion extending between and interconnecting said outer and inner bottom wall portions of said inner housing, said inner bottom wall portion of said inner housing being located over and adjacent said inner bottom wall portion of said outer housing and also being formed with an opening passing therethrough; at least one throttle disc located between said inner bottom wall portions of said housings and extending across said openings thereof; means cooperating with said housings for adjusting the distance between said inner bottom wall portions thereof so as to regulate the compression of said throttle disc between said inner bottom wall portions; an annular sealing member surrounding and fluid-tightly engaging said annular bottom wall portions of said housings and extending across the space between said inner bottom wall portions thereof for preventing fuel from escaping from said space irrespective of the adjusted position of said inner bottom wall portions relative to each other; and valve means in said inner housing for opening and closing said opening of said inner bottom wall portion of said inner housing.

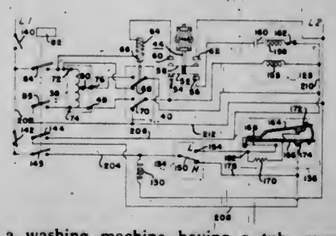
3,018,649

AUTOMATIC WASHER HAVING CONTROL MEANS REGULATING THE SPEED AND TORQUE OF THE DRIVE MOTOR

Daniel J. Barbulesco, West Carrollton, and Francis H. McCormick and Krell E. Spires, Jr., Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 27, 1958, Ser. No. 745,078
11 Claims. (Cl. 68—12)





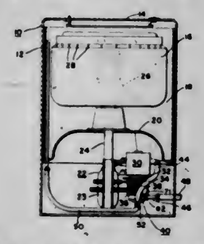
1. In a washing machine having a tub, means for spinning said tub, said means including a spin mechanism and a motor connected directly to said mechanism and adapted to multi-speed operation and a control circuit, said motor having a plurality of windings and centrifugally actuated means for deenergizing one of said windings, said circuit including means for initiating a spin cycle by energizing said windings for high speed, high torque operation to bring the spin speed up to a predetermined value, and means for automatically selectively controlling said windings for low speed, high torque operation at a delayed time after initiation of said spin cycle.

3,018,650

WASHING MACHINE WITH DRAIN PUMP HAVING MEANS TO REDUCE THE POWER REQUIREMENTS OF THE PUMP WHEN OPERATING AT HIGH SPEED

Lyle L. V. Schmidt, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 15, 1960, Ser. No. 36,338
10 Claims. (Cl. 68—23)



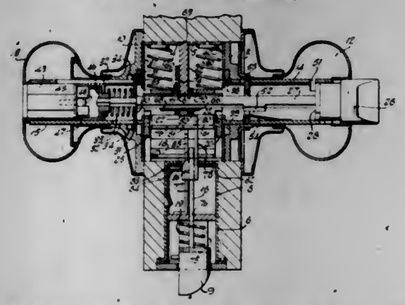
10. In combination with a washing machine having a liquid containing tub and prime mover means for spinning said tub at high and low speeds, a pump for removing liquid from said machine and comprising, means forming a chamber having a liquid inlet communicating with said tub and a liquid outlet, means in said chamber drivably connected to said prime mover means for impelling liquid from said liquid inlet to said liquid outlet, and means for reducing the power requirements of said pump on said prime mover means during high speed spin.

3,018,651

LOCK

David Morrison, Jr., 240 Dorchester Road, Garden City South, N.Y.

Filed July 29, 1957, Ser. No. 674,801
6 Claims. (Cl. 70—146)



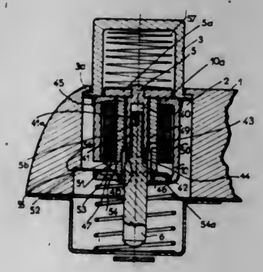
2. In a lock of the character indicated, a lock case, a latch case, latch and dead bolts in said latch case, knob means for retracting said latch bolt, a spindle extending through said latch case and having a push-and-turn button at the inside end and having key-actuable means at the outside end, means actuated by said spindle for projecting said dead bolt to dead locking position, means for latching said dead bolt in full forward position, and a member actuable by said spindle for releasing said means latching said dead bolt.

3,018,652

LOCKABLE PUSH-BUTTON ARRANGEMENT

André Dubonnet, Havana, Cuba, assignor to Societe Anonyme pour l'Exploitation de Brevets d'Appareils Electroniques Codelec, Vaduz, Liechtenstein, a body corporate of Liechtenstein

Filed Nov. 30, 1959, Ser. No. 856,275
Claims priority, application France Dec. 3, 1958
11 Claims. (Cl. 70—218)



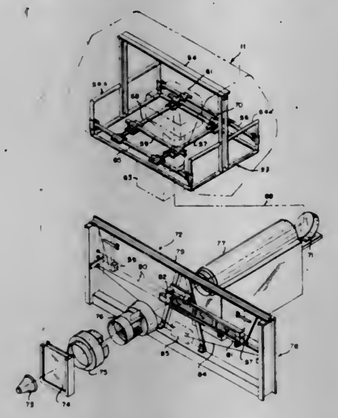
1. In a push-button arrangement for controlling mechanical elements, a handle formed with a hole, a button slidably mounted in said hole and having an inner cavity, an electromagnet coil, a fixed armature integral with said coil and connected to said push-button, a movable armature located in said cavity, said movable armature being when in its rest position in loose contact with said fixed armature whereby the energization of said coil causes said movable armature to be magnetically maintained by said fixed armature, a sleeve member secured to said fixed armature coaxially to said coil, said sleeve member having internal abutment means, a driving member displaceable within said sleeve member and consisting of two rigid portions with a deformable resilient means between said portions, one of said portions being carried by said movable armature, the other portion being in contact with said mechanical elements, said resilient means being adapted to engage said abutment means when the thrust exerted on the button exceeds a predetermined value.

3,018,653

DYNAMIC ANALYZER FOR ADVANCED RECONNAISSANCE SYSTEMS

James C. Haley, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed May 6, 1960, Ser. No. 27,461
11 Claims. (Cl. 73—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



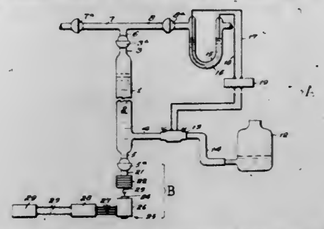
1. In a dynamic analyzer for testing the performance characteristics of reconnaissance and other systems and sub-systems prior to their operational use, a base frame, yaw frame pivotally mounted on said base frame for movement about a pivot disposed on a vertical axis, a pitch frame pivotally mounted on said yaw frame for movement about a pivot disposed on a horizontal axis extending transverse to said yaw pivot, a roll frame pivotally mounted on said pitch frame for movement about a pivot disposed on a horizontal axis extending transverse to the pitch frame pivot axis, a capsule adapted to contain a reconnaissance sub-system to be tested and an optical, photographic window vertically aligned therewith, and a ground target simulator device including optical means for simulating altitude and ground targets moving at a predetermined speed and reflecting images thereof vertically upward through said optical, photographic window, each of said roll, pitch and yaw frames having eccentric drive means operatively engaged therewith for imparting angular movements thereto resulting in the application of roll, pitch and yaw characteristics to said capsule and the reconnaissance sub-system positioned therein.

3,018,654

AUTOMATIC ELECTRONIC BURET

Saul Gordon and Clement Campbell, Dover, N.J., assignors to the United States of America as represented by the Secretary of the Army

Filed Sept. 19, 1958, Ser. No. 762,190
3 Claims. (Cl. 73—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)



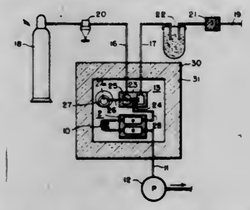
1. A system for automatic volumetric analysis of gases including a gas buret having liquid therein, said gas buret having a gas port for communication with a reacting system and a liquid port for communication with a liquid reservoir, means controlling the level of liquid in said buret through said liquid port to maintain constant gas pressure in said buret, a measuring port in the bottom of said gas buret, and pressure measuring means communicating with said liquid through said measuring port to automatically measure and record the change in weight exerted by the column of liquid in the gas buret as a measure of the change in gas volume.

3,018,655

APPARATUS AND METHOD FOR ANALYSIS OF FLUIDS

Marcel Cogniat, Pierre-Benite, France, assignor to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France

Filed Dec. 21, 1959, Ser. No. 860,927
Claims priority, application France Dec. 29, 1958
2 Claims. (Cl. 73—27)

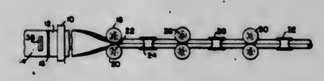


1. Apparatus for analysis of fluids, comprising a differential analysis cell having a first and a scond analysis chamber of substantially identical volume, a detector in each chamber sensitive to a characteristic property of the fluid to be analyzed, each of said chambers having an inlet orifice and an outlet orifice, a delay volume device connecting the outlet orifice of said first analysis chamber with the entrance orifice of said second analysis chamber, means for alternately supplying equal volume charges of fluid to be analyzed and a reference fluid to the inlet of said first analysis chamber, the volume of said delay volume device plus the volume of one of said analysis chambers being equal to the volume of one of said charges so that at the completion of the supplying cycle each of said analysis chambers and said delay volume device are filled with only one of said two fluids, means for circulating fluids through said cell, a bridge circuit, said detectors being connected in said bridge circuit, and means for measuring the periodic signals produced by said detectors.

3,018,656
METHOD FOR IDENTIFYING DEFECTS IN WELDED TUBING

Richard A. McCreanor, Pittsburgh, and Russel L. Uphoff, Murrysville, Pa., assignors to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 25, 1959, Ser. No. 822,834
7 Claims. (Cl. 73—37)

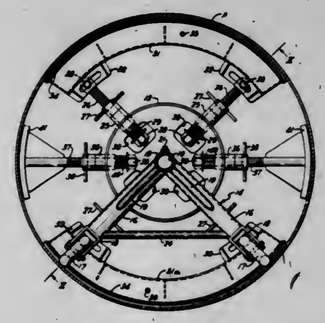


1. A method for detecting the presence of defects which are not readily discernible in welded tubing formed from flat strip, which comprises the steps of producing a raised discontinuity adjacent a defect on the side of the flat strip which forms the inside of the tube, said raised discontinuity being large enough to be readily detected within the subsequently formed tubing, forming the strip into a continuous welded tubular article, cutting said continuous tubular article into sections of predetermined length, and detecting the tubular section containing the aforesaid discontinuity whereby the section containing the discontinuity may be rejected as scrap.

3,018,657
DEVICE FOR TESTING CIRCUMFERENTIAL WELDS IN PIPE LINES

George Yevick, Duquesne, Pa., assignor to United States Steel Corporation

Filed Dec. 4, 1958, Ser. No. 778,140
3 Claims. (Cl. 73—46)

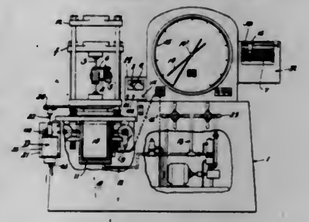


1. A device for testing circumferential welds connecting sections of a large diameter pipe line whose walls tend to sag out of round comprising a shaft, portable frame means mounting said shaft, support means journaled on said shaft, a pair of opposed arcuate tanks mounted on said support means and having open circumferential faces, sealing means on said tanks around said open faces, arcuate stabilizing means mounted on said support means intermediate said tanks, means for moving said tanks and said stabilizing means on said support means radially with respect to said shaft and thereby forcing said sealing means and said stablizing means into engagement with portions of the inside wall of a pipe line and forcing these portions into round, and means for admitting compressed air into said tanks.

3,018,658
APPARATUS FOR CONTROLLING RATE OF CHANGE OF CONDITION

Warren M. Gruber, Horsham, Pa., assignor to Tinius Olsen Testing Machine Company, Willow Grove, Pa., a corporation of Pennsylvania

Filed Nov. 5, 1954, Ser. No. 467,165
14 Claims. (Cl. 73—90)

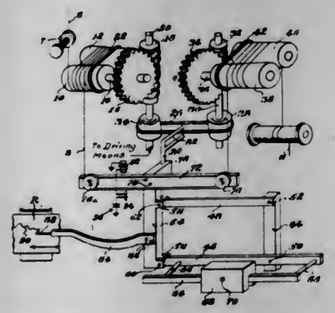


1. In a testing machine, apparatus for indicating rate of change of condition comprising; an indicating member adapted to be movable to any of a plurality of fixed positions, each position being in accordance with a desired rate of change of condition; means for driving said indicating member to any of said positions including a magnet element and a coil element both connected with the testing machine and mounted for relative linear movement with respect to one another whereby said coil develops a D.C. signal; and mechanism connected between said coil and said indicating member for effecting movement thereof in accordance with said signal.

3,018,659
YARN TESTING DEVICE

Hugh M. Brown, Clemson, S.C., assignor to Clemson Agricultural College of South Carolina, Clemson, S.C., a corporation of South Carolina

Filed Apr. 26, 1957, Ser. No. 655,264
2 Claims. (Cl. 73—95.5)

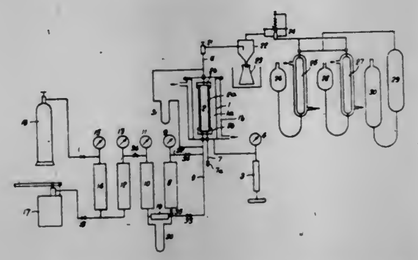


1. Strand testing apparatus comprising: a first pair of snubbing rolls for feeding a strand past a first point; a second pair of snubbing rolls for feeding the strand past a second point, the rolls in each pair of snubbing rolls being spaced apart and having said strand wound several times about the two rolls, the axes of the two rolls in each pair being horizontal and being inclined to each other to prevent piling of the strand on the rolls, means driving the two rolls of each pair in the same direction of rotation and comprising two vertical drive shafts, one for each pair of rolls, one of said shafts being a driven shaft, a pair of reversely tapered rolls mounted on said two shafts respectively, a belt trained over said tapered rolls for driving the second shaft from said driven shaft, a belt shifter mounted to move said belt vertically on said tapered rolls to vary the speed of rotation of the second pair of snubbing rolls with respect to the first pair of rolls, loop-forming means forming a loop in said strand between said two points and in a vertical plane adjacent said drive shafts, means mounting said loop-forming means for movement vertically in response to changes in size of said loop, loading means for applying an adjustable downward pull on said loop, and a mechanical connection between said belt-shifter and said loop-forming means to effect shifting of said belt upon changes in the length of said loop.

3,018,660
METHOD OF AND APPARATUS FOR FLOODING SAMPLE CORES TAKEN FROM OIL-BEARING ROCK STRATA

Christoph W. Schmid, Wietze, Kreis Celle, Germany, assignor to Deutsche Erdöl-Aktiengesellschaft, Hamburg, Germany

Filed June 4, 1956, Ser. No. 589,067
Claims priority, application Germany June 7, 1955
7 Claims. (Cl. 73—153)



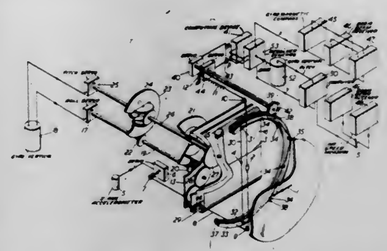
1. A method of carrying out a flooding test on a strata oil-containing rock core sample taken from an oil-bearing rock formation comprising enclosing the rock sample within a closely contacting casing of yieldably plastic soft metal, introducing the casing containing the sample within a fluid medium, maintaining said fluid medium throughout the test at a higher pressure than the pressure within the sample core so that said casing closely and conformably contacts said core, bringing the pressure and temperature within the core and the temperature of said fluid medium to the pressure and temperature existing in said rock formation, introducing a liquid into said core under sufficient pressure to force the strata oil from the pores of said core, and collecting said extracted oil.

3,018,661
AIRCRAFT INSTRUMENTS

Frederick William Meredith, "Ardvarna," Cleeve Hill, Cheltenham, England, and Alastair Michael Adair Majendie, High Ridge, Winter Hill, Cookham Dean, England

Filed Mar. 4, 1957, Ser. No. 643,835
11 Claims. (Cl. 73—178)

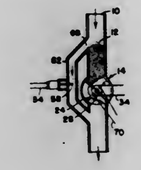
8. An aircraft instrument comprising means to define a viewing aperture, a first index supported for movement and positioned to be viewed through the aperture, datum position defining means for said first index, driving means connected to the first index, means connected to control said driving means in accordance with the component of normal plane absolute acceleration of the aircraft in the direction of its Z axis so that the displacement of the first index from the said datum position is proportional to the said component of the normal plane absolute acceleration, a second index supported for movement and positioned to be viewed through the aperture and means connected to displace said second index relative to said datum position defining means in accordance with a demanded vector value of the normal plane absolute acceleration, said demanded value being that required by a desired flight path and a maneuver of the aircraft in bank and pitch to superpose said indices giving an indication that the desired flight path of the plane has been attained.



3,018,662
APPARATUS FOR MEASURING FLOW RATE

Rolf Moen, Hopkins, Minn., assignor to General Mills, Inc., a corporation of Delaware

Original application June 27, 1952, Ser. No. 295,978, now Patent No. 2,913,901, dated Nov. 24, 1959. Divided and this application May 27, 1959, Ser. No. 816,095
2 Claims. (Cl. 73—218)



1. A device for measuring the rate of flow of a material comprising means forming a chamber for receiving the material flow, apparatus for removing the material from the chamber at a controllable rate of speed, mechanism for controlling the speed of operation of said removing apparatus, a material by-pass means for conducting the material past the removing apparatus when the amount of material in the chamber reaches a certain amount, and means responsive to the presence of material operatively associated with said control means and positioned in the by-pass means to increase the rate of removal of material from the chamber when it flows through said by-pass and to decrease the speed of removal of the material from the chamber when it falls below said certain amount and does not flow through the by-pass, and means for indicating the speed of the removal means, such speed being indicative of the rate of flow of the material.

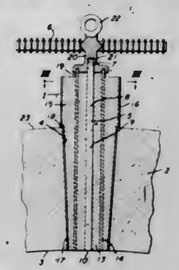
3,018,663
FURNACE LINING TEMPERATURE-THICKNESS MEASURING APPARATUS

George E. Dunlop, Greensburg, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Sept. 13, 1956, Ser. No. 609,702
25 Claims. (Cl. 73—341)

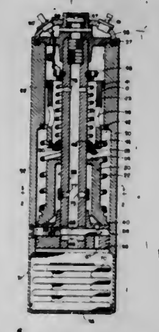
1. A thermoelectric pyrometer comprising a body having one end subjected to a changing temperature and its other end at a lower temperature, a pair of thermocouples at spaced points between said ends, circuit means in

which said thermocouples are connected and for producing a voltage varying with the slope of the temperature



gradient between said ends, and means responsive to said voltage for indicating the temperature of said one end.

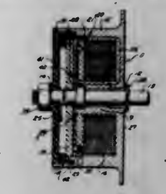
3,018,664
ACCELEROMETERS
John A. Humble, Davenport, Iowa, assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,834
6 Claims. (Cl. 73—503)



1. An integrating accelerometer comprising two accelerometer systems including movable masses one of which experiences greater displacement in response to an acceleration than the other, means responsive to at least one degree of relative displacement of said masses for providing a signal indicative of attainment of a given corresponding velocity, and means responsive to a condition effective to alter the degree of damping in said accelerometer systems for adjusting the degree of damping in one of said systems substantially sufficient to compensate for the change in damping in both systems.

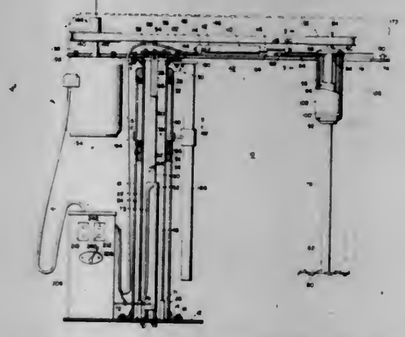
3,018,665
MOTION CONVERSION MECHANISM
Chris A. Christoff, San Gabriel, Calif., assignor to Clary Corporation, San Gabriel, Calif., a corporation of California
Filed Oct. 21, 1960, Ser. No. 64,054
20 Claims. (Cl. 74—99)

1. A device for changing linear motion to rotary motion comprising a pair of spaced parallel members, means supporting one of said members for movement toward the other, actuator means forming a plurality of toggle linkage units arranged end-to-end intermediate said members and located in at least a substantially arcuate pattern, each of said toggle linkage units being extended in length by said members upon movement of said one member toward the other, means movable about an axis coincident with an approximate center of said pattern, and



means operable by said actuator means upon elongation thereof for moving said last mentioned means.

3,018,666
ROTATIONAL SPEED CONTROL FOR A DRIVEN SHAFT
Harold J. Hoffman, Fort Wayne, Ind., assignor to Shar Dispersion Equipment Co., Inc., Fort Wayne, Ind., a corporation of Indiana
Filed Nov. 21, 1960, Ser. No. 70,791
8 Claims. (Cl. 74—217)

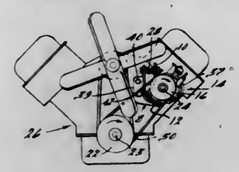


7. Dispersing apparatus comprising: a flat base plate member; a first elongated cylindrical hollow column having one end secured to said base member and extending vertically upwardly therefrom; a second elongated cylindrical hollow column disposed within said first column defining an annular space therewith and having one end projecting beyond the other end of said first column; first and second vertically spaced sleeve bearings in said space attached to said first column and supporting said second column for vertical movement with respect to said first column; annular lubricant-absorbent means in the space between said sleeve bearings for lubricating said second column, the second sleeve bearing being at the other end of said first column and having means for selectively locking said second column against vertical movement; a first elongated hydraulic cylinder having one end supported on said base member and extending vertically upwardly within said second column, said first cylinder being substantially shorter than said columns and having a piston with an end projecting from its other end and movable vertically upwardly in response to application of hydraulic pressure thereto; an elongated horizontally disposed flat bridge plate member secured intermediate its ends to said one end of said second column, said bridge member having an opening therein in alignment with said first cylinder piston; a plate member secured to the upper side of said bridge member and covering said opening; a piston extender member having one end attached to said piston end and its other end extending through said bridge member

opening and attached to said plate member whereby said second column and bridge member are moved upwardly in response to application of hydraulic pressure to said first cylinder and downwardly in response to release of said pressure; said bridge member having a longitudinally elongated rectangular opening formed therein adjacent one end thereof; a rotatable dispersing shaft extending vertically downwardly through said elongated opening; first and second vertically spaced pillow blocks for rotatably supporting said shaft respectively above and below said bridge member, a flat rectangular plate member horizontally disposed above said bridge member and having an opening therein with said dispersing shaft extending therethrough, said first pillow block being secured to the upper side of said rectangular plate member; spacing members connecting said second pillow block to said rectangular plate member and extending through said elongated slot; a pair of elongated spaced parallel longitudinally extending guide rails secured to said bridge member on opposite sides of said elongated opening for supporting and guiding said rectangular plate member for longitudinal movement whereby said shaft is moved toward and away from said column; a second elongated hydraulic cylinder having one end secured to the upper side of said bridge member and its other end extending toward said shaft, said second cylinder having a piston extending from said other end and attached to said rectangular plate member for moving the same and said shaft from a first position toward a second position away from said column responsive to application of hydraulic pressure thereto; a first pulley secured to the end of said shaft above said first pillow block; a motor secured to the lower side of the other end of said bridge member and depending therefrom and having a shaft extending vertically upwardly through an opening in said bridge member; an adjustable speed pulley secured to the end of said motor shaft above said bridge member and having flanges normally spring biased toward each other, an endless belt trained around said pulleys; said movement of said dispersing shaft and first pulley toward said second position thereof causing said belt to separate said adjustable speed pulley flanges and to move inwardly therebetween thereby to reduce the speed of said dispersing shaft, said adjustable speed pulley flanges acting upon said belt to move the same outwardly therebetween and to move said dispersing shaft and first pulley toward the first position thereof thereby to increase the speed of said shaft responsive to release of hydraulic pressure on said second cylinder; a source of hydraulic fluid under pressure; valve means for selectively connecting said source to said first and second cylinders thereby respectively to raise said bridge member and to decrease the speed of said dispersing shaft; and means for releasing the hydraulic pressure thereby respectively to lower said bridge member and to increase the speed of said dispersing shaft.

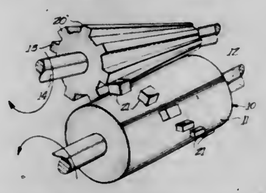
3,018,667
BELT TIGHTENER
Frederick C. Spietz, Northville, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Feb. 20, 1958, Ser. No. 716,419
5 Claims. (Cl. 74—242.9)

1. In an automotive conveyance having a drive pulley operatively connected by a flexible drive belt to the pulley of a power steering pump wherein the output pressure varies between a minimum value at straight ahead steering position and a maximum value of many times said minimum value during full load steering conditions, a mounting for said pump comprising pump supporting means carried by said conveyance, and support engaging means carried by said pump and movably carried by said pump supporting means to provide a pivot for said pump, said supporting and engaging means cooperating to automatically allow pivotal movement of said pump in a direction moving said pump pulley away from said drive pulley in response to an increase in fluid pressure in said



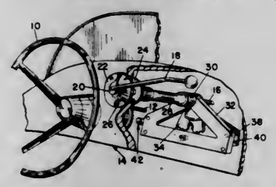
pump to thereby increase the tension on said drive belt, said pivot and the centers of said pulleys being approximately in line.

3,018,668
VARYING SPEED RATIO GEARING
Bruce S. Berquist, 1925 N. Washington St., Wheaton, Ill.
Filed Sept. 19, 1960, Ser. No. 56,837
9 Claims. (Cl. 74—393)



1. A starter gear mechanism comprising a drive shaft and a driven shaft extending in non-parallel relation along the same plane, one of said shafts being provided with a generally cylindrical gear and the other of said shafts being provided with an axially-elongated conical gear, one of said gears having teeth extending longitudinally from one end to the other end thereof, and the other of said gears being provided with a series of tooth segments extending in a spiral of less than 360 degrees thereabout for intermeshing with the teeth of said one gear at different points along the length thereof, the tooth segments at the ends of said series being spaced circumferentially apart a distance sufficient to permit free rotation of said one of said gears when the space between the end segments faces said one gear.

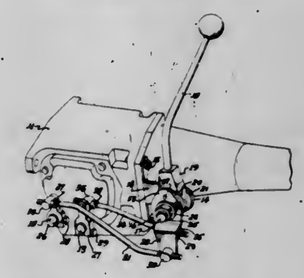
3,018,669
DASHBOARD SHIFT FOR MOTORBOATS
William N. Bennett, County of Sullivan, Charlestown, N.H.
Filed Jan. 26, 1960, Ser. No. 4,682
7 Claims. (Cl. 74—473)



1. A dash-mounted, manual gear shift actuator for outboard motors comprising a bracket adapted for mounting on a dashboard of a boat, a gear shift lever in the form of a rod extending through the bracket and dashboard and projecting to both sides of the dashboard, a base. means mounting said base on said dashboard at the forward aspect thereof in substantially concealed position, a rack-like member mounted for rectilinear motion on

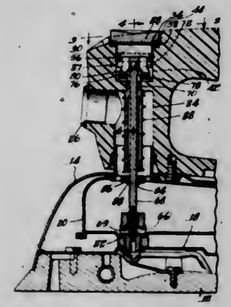
said base, means for moving said rack in either direction, said rack moving means being connected with respect to said rod for motion thereby, and a detachable connection from said rack-like member to a cable for securement to the usual shift on the conventional outboard motor.

3,018,670
SHIFT MECHANISM
Edwin E. Lohn, 231 S. Peck Drive, Beverly Hills, Calif.
Filed Jan. 11, 1961, Ser. No. 82,116
12 Claims. (Cl. 74—477)



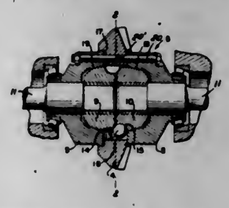
1. An in-line shifting mechanism for use in combination with a vehicle transmission having at least three forward and one reverse drive positions and a neutral position, said mechanism comprising: a pivot member; first and second shift-arm means pivotally mounted upon said pivot member for movement about a common pivot point; shift means including a shift-lever and a shift-body mounted upon said pivot member for swinging movement about first and second pivot points; locking means rigidly interconnecting one of said first and second shift-arm means and said shift-means at all times; and means for interconnecting said shift-arm means and said transmission whereby said transmission is placed in various gear positions by swinging movement of said shift means.

3,018,671
CONTROL KNOB CONSTRUCTION
James A. Ogle, Jr., Woodstock, and John R. Gomersall, Elgin, Ill., assignors to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed July 7, 1958, Ser. No. 747,004
9 Claims. (Cl. 74—504)



1. In an electric iron the combination of a member having a cylindrical open-end cavity, a control knob rotatable in said cavity, said knob having a circumferential groove in the part within said cavity, and a resilient ring loosely disposed in said groove and frictionally gripping the walls of said cavity for retaining said knob therein, said knob being thereby rotatable in said cavity and in said ring, said ring being harder than the wall of the cavity and having a projecting edge that indents the wall of the cavity for increasing the force required for its withdrawal.

3,018,672
DIFFERENTIAL GEAR
Werner E. Altmann, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Aug. 26, 1957, Ser. No. 680,310
Claims priority, application Germany Sept. 1, 1956
15 Claims. (Cl. 74—650)



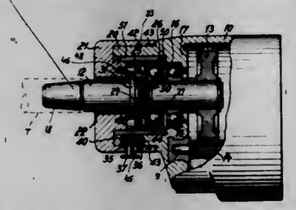
1. A differential gear particularly for motor vehicles comprising a centrally disposed driving gear provided with axially extending and radially inwardly facing openings, sleeve means secured on both sides of said driving gear to form therewith a unitary housing, driven members, means for supporting said driven members within said housing, each of said driven members being provided with a sinusoidally-shaped track, said tracks having respectively unequal numbers of high and low points, the portion of said driving gear which defines the radially inwardly facing openings being arranged to generally encircle the tracks of said driven members, and means including rolling bodies guided partially within said openings and in bearing contact with said tracks to transmit torque from said driving gear to said driven members while simultaneously therewith enabling differential adjustment between said driven members by axial movement of said rolling bodies in said openings.

3,018,673
TRANSMISSION
Otis D. Hitt, Bryan, and Elwood F. Knapp, Brecksville, Ohio, and Leonard L. Johnson, Chicago, and Robert A. Rosenblum, Skokie, Ill., assignors, by mesne assignments, to The Aro Equipment Corporation, Bryan, Ohio, a corporation of Ohio
Filed Jan. 13, 1958, Ser. No. 708,419
3 Claims. (Cl. 74—785)



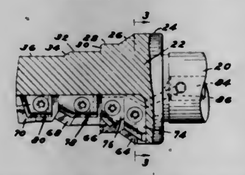
1. A transmission for a tool or the like comprising a first planetary gear set including a sun gear connected to be driven by a motor or the like, a ring gear fixed against rotation and a planet carrier carrying pinions meshing with the sun and ring gears, a second gear set including a second sun gear connected to the first carrier, a second ring gear, and a second carrier carrying pinions meshing with the second sun and ring gears and adapted to be connected to a load, a hub on the second carrier having a cylindrical surface coaxial with and adjacent to a cylindrical surface on the second ring gear, the first and second ring gears having coaxial adjacent cylindrical surfaces spaced axially from the first named surfaces, a pair of axially spaced spiral coupling elements overlying and engageable respectively with the pairs of adjacent surfaces, and an axially movable actuator lying axially between the coupling elements and selectively engageable therewith energize said coupling elements selectively.

3,018,674
PORTABLE DRILL
Heinrich Köhler, Stuttgart-Degerloch, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Dec. 19, 1960, Ser. No. 76,553
Claims priority, application Germany Dec. 24, 1959
8 Claims. (Cl. 77—32.3)



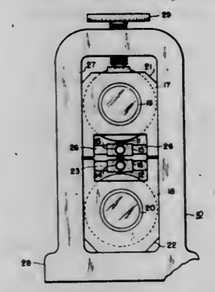
1. A motor-driven portable drill comprising, in combination, housing means; rotary spindle means axially movably received in said housing means; a striking arrangement comprising a first component connectable with said housing means and a second component connected with said spindle means for imparting to said spindle means at least one axial impulse during each revolution thereof, one of said components comprising a cam and the other of said components comprising a follower; a bearing member axially movably receiving said spindle means and shiftable with respect to said spindle means between a first position in which the spindle means is free to perform axial movements and a second position in which the spindle means is restricted to rotary movements; manually operable locking means mounted in said housing means and comprising a locking member for selectively retaining said bearing member in each of said positions; and means for releasably connecting said first component to said housing means so that said spindle means is axially movable with respect to said housing means and with respect to said bearing member when the latter is in said second position.

3,018,675
BORING BAR
Christian L. Klages and Jack O. Sullivan, Brighton, Mich., assignors, by mesne assignments, to Wesson Corporation, Ferndale, Mich., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,889
2 Claims. (Cl. 77—58)



1. In a boring bar having a driving shank and a head portion provided with axial segmental gashes distributed circumferentially around the boring bar to provide flat supporting surfaces for cutting elements, that improvement which comprises a plurality of flat gashing plates disposed on a flat, substantially radial surface of the boring bar facing the direction of rotation, means for accurately locating said plates on said surfaces, each of said plates having on its outwardly facing edge a plurality of open-sided notches each having at least two sides for the support of an insert, an insert to be disposed in each of said notches having a thickness greater than that of said plates, each of said inserts having a plurality of cutting edges, each of which will project from said notches beyond the circumferential boundaries of said head, and a common clamping means for retaining said inserts in said notches and for retaining said plates on said boring bar comprising a plurality of individual clamping elements, one for each insert, each having a heel portion to fulcrum on said plates and a toe portion to overlie said notches and rest on an insert in each notch, and a screw means transfixing each of said clamps and said respective plate on which it is mounted anchored in said boring bar to exert a clamping force on said plates and said inserts.

3,018,676
APPARATUS FOR ROLLING STRIP METAL
Natalis H. Polakowski, 5007 Northcote Ave., East Chicago, Ind.
Filed Dec. 31, 1956, Ser. No. 631,600
3 Claims. (Cl. 80—32)



1. In apparatus for rolling strip material, including a stand for mounting a pair of work rolls and at least one backing roll for each work roll, said stand having a receptacle on each side thereof, a pair of work rolls, at least one backing roll for each work roll and means on one side of the stand for winding up strip material rolled on said apparatus and for applying a forward tension to the material, the combination comprising supporting means for the ends of each of said work and backing rolls, said supporting means being positioned in the receptacles of said stand, the supporting means for at least one of said backing rolls having side projections extending past and one to each side of its corresponding supporting means for its work roll, two members responsive to forces which tend to deflect said work rolls in substantially a horizontal plane, one of said members being positioned on one side of a work roll and the other of said members being positioned on the other side of said work roll, each of said members being disposed substantially adjacent an end of a work roll in a receptacle of said stand, being interposed in a horizontal plane between said side projections of said supporting means for a backing roll and the supporting means for said work roll engaging said side projection at one end and said supporting means for its work roll at the other end, and said members being arranged to sense said forces which tend to deflect said work rolls in substantially a horizontal plane, means connecting said two members to cooperating means for controlling the operation of said means for winding up strip and applying a forward tension thereon, so that the winding and tension means increases and decreases the amount of forward tension applied to

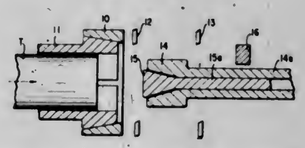
strip rolled on said stand in accordance with the direction said work rolls tend to deflect in substantially the horizontal plane.

3,018,677
CARTRIDGE-TYPE SPRING-BIAS MEANS FOR A PREDETERMINED TORQUE RELEASE WRENCH
Peter J. Mutolo, Buffalo, and Eric G. Boehm, Orchard Park, N.Y., assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of New York
Filed Mar. 8, 1960, Ser. No. 13,575
4 Claims. (Cl. 81—52.4)



1. In a torque wrench including a housing having a tool part pivotally mounted therein and having a block mounted for axial movement therein, means pivotally interconnecting adjacent ends of said block and said part, the improvement of replaceable means for biasing said block toward said part comprising a casing insertable within said housing, an axially movable seat disposed within said casing adjacent one end thereof and abutting said block, containing means confining said seat within said casing, and means within said casing biasing said seat toward said one end of said casing.

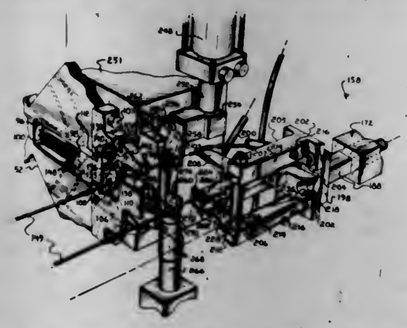
3,018,678
MECHANISM FOR END CROPPING AND TEST SAMPLING WELDED SEAM TUBING
Ralph L. Hankin, Holland, Ohio, assignor to Abbey Etna Machine Company, Perrysburg, Ohio, a corporation of Ohio
Filed Apr. 2, 1958, Ser. No. 725,977
1 Claim. (Cl. 82—101)



Apparatus for cutting tube sections comprising a pair of longitudinally spaced revolving cutting elements, an inside collet chuck including an elongate split sleeve for engagement with the interior wall of the tubing for holding the tubing rigidly during the cutting of the tube sections, said split sleeve having a first portion engaging the interior wall of the tubing through a substantial portion of the space between said spaced cutting elements and a second portion of reduced transverse dimension, said first portion of said chuck adapted to positively retain at least one severed tube section after a cutting operation and said second portion of said chuck adapted to loosely hold at least one severed tube section after a cutting operation.

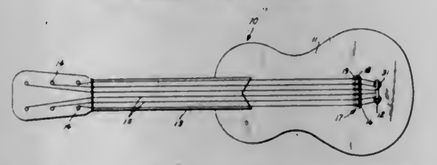
3,018,679
APPARATUS FOR SEVERING ELECTRICAL LEADS FROM A CONTINUOUS WIRE SOURCE
Daniel J. Crowley, Steelton, Earl E. Folkenroth, Paxtang, and Damon R. Packard, Mount Joy, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed Feb. 6, 1957, Ser. No. 638,550
3 Claims. (Cl. 83—154)

2. In a lead making machine, the combination of a pair of axially aligned and spaced-apart lead grippers, means for intermittently moving said grippers in unison from a first position along a closed circuit and back to said first position, said grippers being closed during movement along said closed circuit, means for opening said grippers during movement and immediately prior to arrival at said first position, latch means for holding said grippers in open position, a wire carrying member movable from a rest position along a path extending parallel to the axis of and past both of said grippers to feed said wire when said grippers are in said first position, said wire carrying member being movable in the opposite direction to its rest position after feeding of said wire, said wire carrying member having a wire holding portion extending towards the axis of said grippers for holding the end of a wire in alignment with said grippers, means on said wire carrying member for gripping said wire during movement in the wire feeding direction and for releasing said wire during movement in the opposite direction, means



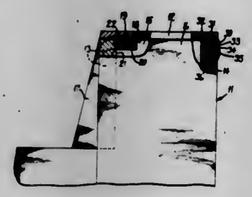
on said wire carrying member engageable with said latch means during movement in said opposite direction to disengage said latch means to permit closure of said grippers, a pair of normally open wire severing blades disposed on said path and between said rest position of said wire carrying member and the first one of said grippers which said wire carrying member passes during movement thereof in said wire feeding direction, whereby wire is pulled from an endless source and positioned in said grippers during movement of said wire holding member in a feeding direction, and said grippers are engaged with said wire during movement of said wire carrying member in said opposite direction and means responsive to movement of said wire carrying member for closing said severing blades to sever said wire after return movement of said wire carrying member to said rest position.

3,018,680
ELECTRICAL MUSICAL INSTRUMENT
Les Paul, Deerhaven Road, Mahwah, N.J.
Filed Dec. 3, 1959, Ser. No. 857,116
2 Claims. (Cl. 84—1.16)



2. A magnetic pick-up for an instrument having a body and neck and means on each between which a plurality of strings are stretched in spaced relation to the body, the pick-up comprising a bridge having string retaining means spaced along an upper edge thereof for individually seating each of said strings in proper spaced relation to each other with said bridge extending substantially perpendicularly of said strings, the location of said string retaining means along said upper bridge edge relative to said spaced strings being such that the strings are located on opposite sides of the center of said bridge causing said strings, when tensioned, to exert opposing pressures on said string retaining means to support the bridge in spaced relation to the body, means for creating a magnetic field secured across the body beneath said strings and in close proximity to the lower edge of said bridge, and a coil surrounding the magnetic field creating means affixed to said bridge along its lower edge and otherwise free from contact with any parts of the instrument, whereby string vibration causes movement of the coil through the magnetic flux of the magnetic field inducing currents in the coil characteristic of the string vibration.

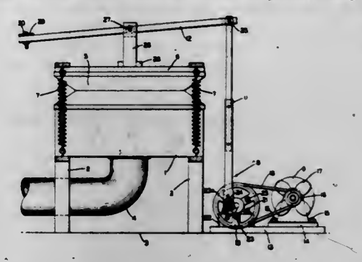
3,018,681
PIANO CASE
Albert Anthony Diebold, Fennville, Mich., assignor to Meridan Corporation, Chicago, Ill., a corporation of Washington
Filed Dec. 1, 1958, Ser. No. 777,284
1 Claim. (Cl. 84—177)



In a piano case for an upright piano, said case having a rectangular arrangement of vertical front, rear and side walls and a cover disposed at the upper edges of said walls for enclosing only the piano action therein, the improvement for precluding access to the interior of the piano case while the piano is in a playable condition, said improvement comprising in combination therewith: a block secured to the lower surface of the cover adjacent to the inner side of the front wall; means on the inner side of said front wall defining an aperture disposed adjacent to and extending parallel to said cover; a horizontal pin secured in said block and freely slidably received in said aperture; a rigid angle bracket disposed totally remote from the top surface of the cover and having a leg secured to the lower surface of the cover adjacent to said rear wall of said case, and a second leg; means securing said second leg to said rear wall, said means being detachable solely with a special tool; said bracket and said means being operative to preclude disengagement of said pin, whereby said cover is normally immovable; said securing means being removable by the special tool only in a direction parallel to and away from said pin.

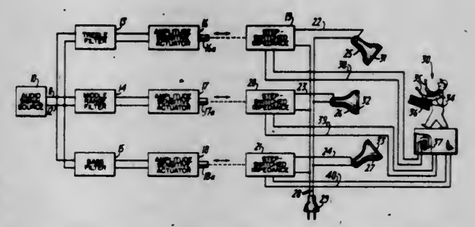
3,018,682
TREMOLO FOR ORGAN
Albert W. Imhoff, Orrville, Ohio, assignor to Schantz Organ Company, Orrville, Ohio, a corporation of Ohio
Filed June 11, 1959, Ser. No. 819,584
1 Claim. (Cl. 84—348)

In an organ of the type having pipes and having an air reservoir with bellows mounted on a base and connected to the pipes; the combination of a bellows-protecting tremolo-producing device including a rotatable wheel cam on the base spaced from the bellows, a lever pivotally mounted intermediate its length centrally of the bellows, a connecting rod extending between the wheel cam and the lever and being pivotally connected to one end of the lever, and a weight mounted on the other end of the lever remote from the connecting rod,



whereby the central connection of the lever to the bellows as well as the weight on the end of the lever provide movement of the bellows without transverse vibrations.

3,018,683
AUDIO SIGNAL-RESPONSIVE DEVICE
Frederick L. Way, Whitestone, N.Y., assignor to Mobilcolor, Inc., New York, N.Y.
Filed Mar. 7, 1960, Ser. No. 13,325
10 Claims. (Cl. 84—464)

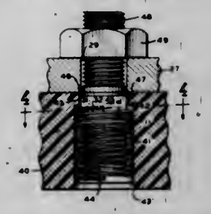


1. A device for producing high fidelity visual representations of audio signals comprising electric light source means, circuit means for connecting the light source means to an electrical energy source, impedance means connected in series with the light source means having a value selected to maintain the light source means at a threshold operating condition, mechanical switch means for reducing the impedance of the impedance means in selected steps to provide substantially uniform changes in light intensity, and electromechanical actuator means comprising fixed magnet means, coil means supported for oscillatory motion in the magnetic field of the fixed magnet means connected to an audio signal input, and linking means mechanically linking the coil means to the switch means, to activate the switch means in accordance with changes in audio signal amplitude.

3,018,684
WIRE COIL THREAD CONNECTION IN SOFT MATERIALS
Leo J. Brancato, Danbury, Conn., assignor to Heli-Coil Corporation, Danbury, Conn., a corporation of Delaware
Filed Dec. 27, 1955, Ser. No. 555,586
1 Claim. (Cl. 85—1)

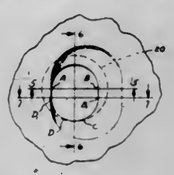
A screw thread connection comprising a boss or nut element of a relatively soft material, a relatively hard metal wire coil screw thread insert, and a male screw-thread provided member, said boss being provided with a throughgoing smooth walled cylindrical hole having a first entrance end for said male member and a second entrance end for said insert at the end opposite said entrance for said male member, said male member being a

stud having a flange-like collar to bear on said boss on the side of said first entrance end, said insert being from end to end of constant cross-section having an inner screw thread forming portion of standard shape, an outer sharp edged portion and straight lands between said portions, the convolutions of said insert bearing with their lands upon one another, the thread groove of said male member having a gradual relatively short run-out extending around at least a quarter of the circumference of said



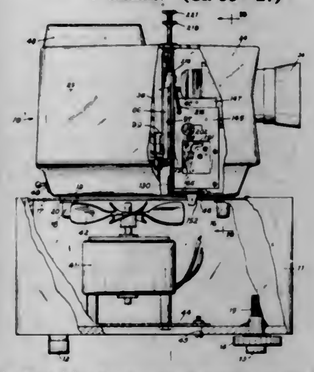
member but less than 360 degrees, the angle between the thread groove flanks in the run-out being the same as in the remainder of said thread groove of said male member, the hole of said boss being provided with an inner shoulder for engagement by the insert end adjacent said hole entrance and abutment means effective between said male member and said boss so as to limit the depth to which said member can enter said insert when the latter engages said shoulder, thereby to ensure registering of said run-out and said insert end.

3,018,685
SHEET METAL NUT HAVING DEPRESSED OVAL OPENING PROVIDING THREAD MEANS
Herbert D. Squire, Galesburg, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 727,476
3 Claims. (Cl. 85—36)



1. In combination with a threaded screw and parts to be secured thereby, a threadless fastener including a body portion having a flat mating surface adapted for close engagement with at least one of said parts and a thread engaging portion, said thread engaging portion having an oblong opening providing an uninterrupted margin for receiving the threaded shank of said screw, said opening having a major dimension substantially equal to the root to crest diameter of said complementary screw, said opening having a minor dimension substantially equal to the root to root diameter of said screw, said thread engaging portion located on a deflected part of said body portion in the vicinity of said opening, said deflection being in the direction away from said complementary mating surface and along said minor dimension, substantially one-half of the edge of said opening in the deflected body portion being inclined at an angle to the plane of the body from a point in the plane of the body to a diametrically opposite point, the remaining half of said edge being inclined from said opposite point to said point in the plane of the body, said angle being substantially equal to the helix angle of the thread of said screw, the half angle of the screw thread being at least equal to the helix angle.

3,018,686
TACHISTOSCOPE
Karl F. Kurz, Portland, Oreg., assignor to Sawyer's Inc., Progress, Oreg., a corporation of Oregon
Filed Jan. 10, 1961, Ser. No. 81,756
7 Claims. (Cl. 88—27)



1. In a tachistoscope comprising a projector including means to receive and rotatably guide a disc holding a concentric row of transparencies, disc feeding means movable from a rest position to an advanced position for rotating said disc one step during each such movement thereof whereby successively to place said transparencies at a projecting aperture, and means to return said feeding means to its rest position; a pair of shutters, a mounting structure in said projector including means for maintaining said shutters in planes parallel to and adjacent said disc, said shutters being normally at rest positions and being movable therefrom to cocked positions, connecting means operatively connecting said feeding means and said shutters during each disc advancing movement of said feeding means for advancing said shutters simultaneously to their cocked positions at each step movement of the disc, a pair of shutter latching means mounted on said mounting structure and including a pair of latches respectively engageable with said shutters to hold them at their cocked positions, means operatively connecting said feeding means to said latching means during advancing movement of said feeding means for effecting latched engagement of said latches with said shutters at their cocked positions, said shutters masking said projecting aperture while at their rest positions, while moving to their cocked positions and while at their cocked positions, other connecting means operatively connecting said feeding means and one of said latching means during return movement of said feeding means to its rest position for effecting release of one of said latches from latching engagement with one of said shutters, a pair of resilient means respectively biased between said shutters and said mounting structure and individually operative to return said shutters to their rest positions when released by said latching means, and timing mechanism operatively associated with said pair of latching means for effecting release of the other of said latches from its shutter at a time interval after release of said one shutter, said projecting aperture being unmasked after said one shutter has returned to its rest position and while said other shutter remains at its cocked position.

3,018,687
EYEGLASS RETAINING ASSEMBLY
Leo Sadel, 305 W. 86th St., New York, N.Y.
Filed Oct. 24, 1960, Ser. No. 64,483
6 Claims. (Cl. 88—52)

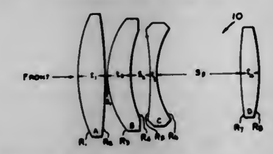
1. In an eyeglass frame of the type including a front frame and a pair of rearwardly extending temple pieces

having an ear-piece at their rearward ends, a retaining assembly comprising an earlobe-encircling member adapted to be engaged with the lower portion of the wearer's ear, a flexible cable assembly secured at one end to said earlobe-encircling member, and a cable mounting device within said temple piece to which is secured the other end of said cable assembly, said cable mounting device including a cable mounting drum and spring means to bias said drum for rotation to wind said cable there-



upon, and releasable blocking means normally effective to oppose said bias on said drum, said releasable blocking means being selectively and manually releasable for allowing the rotation of said drum in response to said spring bias, said temple piece being formed with a cable channel between said mounting device and said ear-piece in which is contained said cable, said bias means being effective to draw said earlobe-encircling member towards said ear-piece thereby to retain said eyeglasses on the head of the wearer.

3,018,688
PROJECTION OPTICAL SYSTEM
John D. Hayes, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed Mar. 28, 1960, Ser. No. 17,942
3 Claims. (Cl. 88—57)

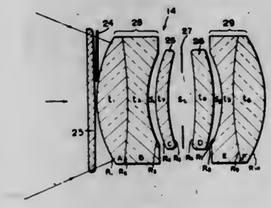


1. A projection objective and the like having a relative aperture as great as $f/2.5$ and working at finite conjugates; said objective forming an image of an object upon a suitable receptive device, said objective comprising four optically aligned single lens members formed from cerium bearing glasses which are resistant to coloration effects when exposed to gamma radiation, said members being identified in their positional order from the front or entrant side of said objective as a positive double concave lens, a positive meniscus lens which is convex toward the front, a double concave negative lens, and a double convex positive lens, said objective being constructed according to the constructional data given in the statements of inequalities herebelow:

$$.434F<R_1<.478F$$
$$2.58F<-R_2<2.86F$$
$$.284F<R_3<.314F$$
$$.361F<R_4<.397F$$
$$2.27F<-R_5<2.51F$$
$$.254F<R_6<.281F$$
$$.923F<R_7<1.02F$$
$$.569F<-R_8<.629F$$
$$.078F<t_1<.086F$$
$$.070F<t_2<.077F$$
$$.016F<t_3<.020F$$
$$.063F<t_4<.070F$$
$$.004F<S_1<.005F$$
$$.056F<S_2<.068F$$
$$.243F<S_3<.295F$$

wherein R_1 to R_8 designate the radius of curvature of the lens surfaces, named in order from the front of the objective rearwardly, t_1 to t_4 designate the axial thicknesses of the lens members A to D respectively, S_1 to S_3 designate the air spaces between said respective lens members A to D, and F represents the equivalent focus of said objective.

3,018,689
OPTICAL SYSTEM FOR ELECTRO-OPTICAL SWITCHING APPARATUS
Douglas M. Saxe, Rochester, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed May 28, 1959, Ser. No. 816,492
1 Claim. (Cl. 88—57)



An optical system for relaying information through an electro-optical switching apparatus by the use of ultraviolet radiation of substantially 4047 A., said system comprising two similar compound meniscus lenses which are arranged concave to each other, a pair of single meniscus lenses arranged with their concave sides directed toward a diaphragm situated therebetween and said pair of lenses being optically aligned between the two compound lenses, said system having constructional data as specified in the table herebelow wherein R_1 to R_{10} designate the lens radii numbering from the front of the system, t_1 to t_6 designate the thicknesses of the lens elements, S_1 to S_3 designate the air spaces between certain of said elements, n_D and ν represent the refractive index and the Abbe number respectively of the lens materials,

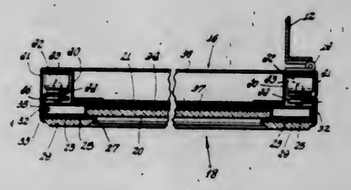
[f/8.0 F.L.=100 50° field angle]

Lens	Curvatures	Thickness	Spacing	n_D	ν
A	$R_1=+21.579$	$t_1=5.61$		1.6170	54.9
	$R_2=-95.948$				
B	$R_3=+16.369$	$t_2=1.87$		1.5585	45.5
	$R_4=+22.389$		$S_1=1.40$		
C	$R_5=+31.771$	$t_3=2.34$		1.5585	45.55
	$R_6=-47.647$		$S_2=5.02$		
D	$R_7=-28.976$	$t_4=3.46$		1.5585	45.5
	$R_8=-18.968$		$S_3=1.40$		
F	$R_9=+92.474$	$t_5=1.96$		1.5585	45.5
F	$R_{10}=-25.944$	$t_6=5.86$		1.6170	54.9

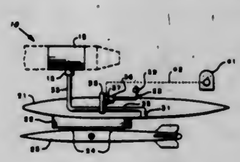
3,018,690
MIRROR FOR CHEST DOOR, WALL, OR SIMILAR USE
Andrew G. Magrauth, Fox Run Road, New Canaan, Conn.
Filed Mar. 27, 1959, Ser. No. 802,423
5 Claims. (Cl. 88—97)

1. A vertically movable mirror construction for accommodating the individual requirements of either a short or tall person comprising a base structure adapted to be supported on a vertical supporting wall, a holding device having opposed upright edge portions, a mirror carried by said holding device, cooperating slide means on said holding device and base structure for providing

edgewise movement of said holding device and mirror carried thereby relative to said base structure so that said mirror can be lowered a substantial distance below the lower portion of said base structure and raised accordingly, said cooperating slide means including a rail having an inturned flange connected to each opposed upright edge portions of said holding device, a plurality of vertically spaced guide rollers rotatably connected to said base structure opposite each edge portion of said holding device, each of said rollers having a circumferentially extending groove formed about the respective peripheries thereof, said rollers being disposed with respect to said rails so that the inturned flanges of said rails are received in the grooves of the adjacent rollers to provide a frictionless slide, and means for counterbalancing the weight of said holding device and mirror carried thereby to facilitate the raising and lowering of said holding device and for maintaining the same in any disposed position thereof.

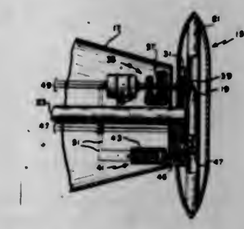


3,018,691
JET-STREAM SPOILER
Eugene Merkin, Huntingdon Valley, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 20, 1957, Ser. No. 667,059
4 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



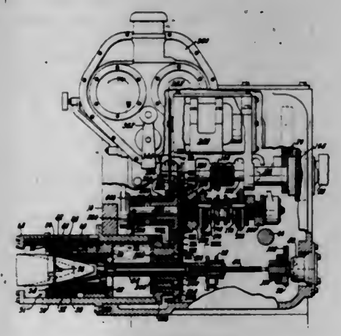
4. An aerodynamic jet-stream spoiler device for an aircraft adapted to carry an externally mounted store comprising, means forming an outlet orifice located in the aircraft and communicating with the exterior undersurface of the aircraft adjacent the externally mounted store, said outlet orifice means being arranged to direct a stream of air substantially perpendicular to the slip stream of the externally mounted store and thence against the afterend portion of the externally mounted store, means forming a duct communicating with said outlet orifice means and adapted to continuously communicate with a supply of high velocity air, means adjacent said duct means for heating the air transmitted through said duct means and said outlet orifice means to a temperature level substantially higher than the temperature of the slip stream air, and normally closed remote controlled valve means interposed in said duct means and adapted to be opened prior to and during the release of the externally mounted store from the aircraft for the purpose of countering adverse aerodynamic characteristics of the externally mounted store during release.

3,018,692
ROTATABLE ROCKET LAUNCHER
Andrew G. Bilek, Valparaiso, Fla. (Hdq. APGC, Director of Ballistics PGRE, Eglin AFB, Fla.)
Filed Aug. 25, 1959, Ser. No. 836,040
2 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



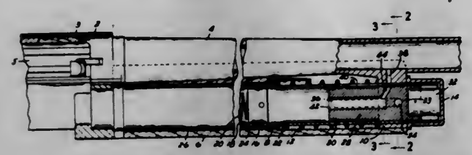
1. In an aircraft having a fire control system, a body portion having wings extending outwardly therefrom, a rocket launching device rotatably attached to the outer extremity of the aircraft wing, comprising, a generally circular and streamlined pod having spaced walls for containing a plurality of rocket tubes, a plurality of rockets disposed within said rocket tubes, said rocket tubes serving to initially guide said rockets on launching from said pod, means for rotating said pod around a central axis substantially parallel to the wing member of said aircraft and generally perpendicular to the longitudinal axis of the fuselage of said aircraft including a drive system installed in the wing tip adjacent to said launching device, said drive system including a motor and a reduction gear transmission, a pinion gear extending from said transmission into said pod, a ring gear integral with said pod for engaging said pinion gear, said ring and pinion gears interacting to rotate said pod to a predetermined angular position, means for positively locking said pod in the predetermined angular firing position, and means for firing the rockets in response to a signal.

3,018,693
FUSE-SETTING MECHANISM
Harry B. Patten, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Apr. 4, 1946, Ser. No. 659,548
16 Claims. (Cl. 89—6)



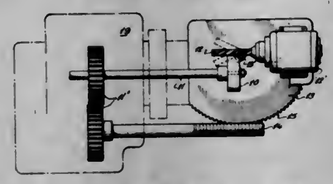
8. Fuse-setting apparatus comprising a fuse cutter head movable into and out of engagement with the nose of a shell, positive drive means for moving said head a portion of the distance toward the shell, and spring means for completing said movement.

3,018,694
RECOIL ABSORBING MECHANISM FOR FIREARMS
Val A. Browning, Ogden, Utah, assignor to Browning Industries, Inc., Ogden, Utah, a corporation of Utah
Filed May 7, 1959, Ser. No. 811,699
8 Claims. (Cl. 89—159)



1. In a repeating firearm, a frame, a barrel movable in recoil relative to the frame, and a recoil absorbing mechanism interconnecting the frame and barrel comprising a cylinder fixed to the frame and a piston slidable in said cylinder and fixedly connected to the barrel for reciprocal movement with the barrel, and means forming a gas passageway from an intermediate portion of the barrel to the cylinder and means on the cylinder for closing the passageway during final recoil movement of the barrel.

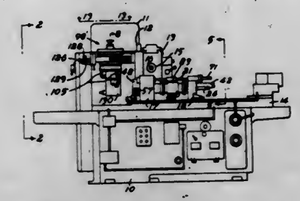
3,018,695
MEANS FOR PRODUCING SPECIAL CAMS
Howard A. George, 19 Maxwell Ave., Oyster Bay, N.Y.
Original application Mar. 31, 1954, Ser. No. 420,031. Divided and this application Apr. 18, 1958, Ser. No. 729,301
1 Claim. (Cl. 90—15)



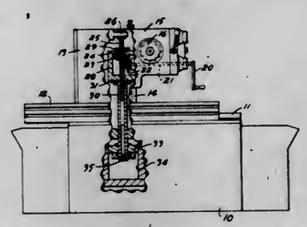
Means for making, independently of other cams or templates, a cam having a heart shaped cross-section at one end and a circular cross-section at the other end comprising, a rotatably mounted spindle adapted to rotate a cam blank, a motor driven cutting tool mounted on a rotatable table, the normal position of said cutter being parallel to said spindle, the center of rotation of said table being in the plane of one face of said cam blank, and gear means directly connecting said table, and said spindle comprising a worm gear connected to rotate said table, and a pair of meshing gears connecting said spindle and said worm gear.

3,018,696
KEYWAY CUTTING MACHINE
Lawrence A. Attermeyer, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 8, 1957, Ser. No. 676,960
5 Claims. (Cl. 90—16)

1. In a keyway milling machine having a slidable work table and a cutter spindle carrier advanceable toward and retractable from said table, the combination of means to effect alternate movement of the table and carrier, said alternate table movements being unidirectional and comprising alternate cutting and non-cutting strokes and said carrier movements being successively in opposite directions, said means including power operable means to advance said carrier toward said table and means responsive to each of said movements to stop one and start the other in continuous succession to mill a plurality of keyways longitudinally of the workpiece, means to vary the length of the successive advancing strokes of the carrier including an indexible turret mounted on the carrier and having a plurality of stop members thereon, a positive stop engageable by one of said stop members when the spindle carrier is advanced toward the table, power operable means to index said turret a source of power, and means to connect said source of power in parallel to said power operable means for both the carrier and the turret whereby each time the carrier is advanced the turret stop will be indexed.



3,018,697
COUNTERBALANCE CONTROL DEVICE
Walter Schroeder and Albert H. Dall, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Jan. 7, 1959, Ser. No. 785,428
10 Claims. (Cl. 90—16)

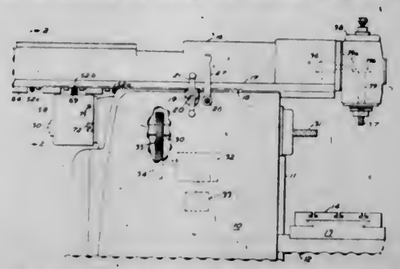


1. In a machine tool structure having a support, a member mounted for vertical movement on said support, and means for moving said member on said support, the combination of means for counterbalancing said member including a pressure actuated device operatively connected between said member and said support, a source of pressure, a circuit connecting said source to one side of said device to cause the latter to apply to said member an upward counterbalancing force greater than the weight of said member, and means responsive to the downward movement of said member by said moving means for causing said circuit to connect the source of pressure to the other side of said device whereby substantially equal pressures will be applied to both sides of said device thereby removing the counterbalancing force supplied to said member by said device.

3,018,698
MACHINE TOOL AUXILIARY SPINDLE DRIVE
John E. Lynch, James E. Brennan, and Richard C. Brasington, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 22, 1959, Ser. No. 841,473
2 Claims. (Cl. 90—16)

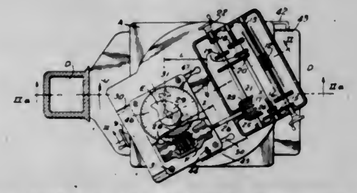
1. In a milling machine having an upstanding column, a main spindle rotatably mounted in the column, and

means to drive the main spindle at selected speeds, the combination of an elongated housing mounted on the column for longitudinal movement parallel to the main spindle, said housing having a plurality of longitudinally spaced slots therein, an auxiliary spindle rotatably mounted in the housing for movement therewith, a plurality of



driven gears mounted in the housing and extending, respectively, through the slots therein, said gears operatively connected to the auxiliary spindle, a drive gear mounted on the main spindle, and a swingable arm having an idler gear mounted thereon, said arm selectively swingable from an inoperative position to a position connecting said drive gear to one of said driven gears.

3,018,699
DEVICE FOR THE REALIZATION OF CAMS, ESPECIALLY FOR CONTROLLING AUTOMATIC TOOLS AND THE LIKE
Mario Buffoli, Via Alberto Mario 29, Brescia, Italy
Filed May 31, 1957, Ser. No. 662,931
Claims priority, application Italy June 5, 1956
3 Claims. (Cl. 90—20)



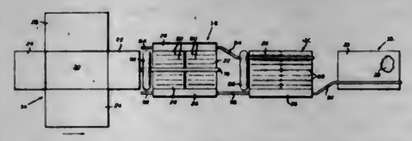
1. An apparatus for machining cams, comprising a base, a supporting slide movably mounted upon said base, a circular plate carried by said slide, a table mounted upon said plate and rotatable relatively thereto, a worm carried by said slide, a rack supported by said table and movable along its longitudinal axis, an oscillating lever having a longitudinal guide, said rack being connected to an end of said oscillating lever, a toothed ring meshing with said worm and said rack, a threaded block, a pin carried by said block and engaging said guide, a screw carrying said block, another threaded block, another pin carried by the second-mentioned block and engaging said guide, another screw carrying the second-mentioned block and extending substantially perpendicularly to the first-mentioned screw, an intermediate shaft, a second shaft, variable transmission means connecting the second-mentioned screw with said intermediate shaft and connecting said intermediate shaft with said second shaft, a telescoping shaft, variable bevel gear means connecting said second shaft with said telescoping shaft, a worm reducing gear driven by said telescoping shaft, a cam blank-carrying shaft driven by said worm reducing gear, means supporting said worm reducing gear for movement in the direction of said telescoping shaft, a cutter-carrying shaft, and means supporting said cutter-carrying shaft upon said base.

3,018,700
PEELING APPARATUS AND METHOD
Frank J. Cerwin, McKeesport, and James A. Scott, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 15, 1959, Ser. No. 840,138
1 Claim. (Cl. 90—24)



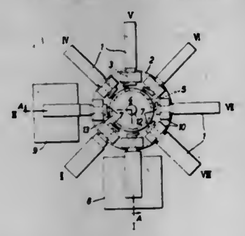
An apparatus for peeling surface layers from a succession of tube rounds while the rounds are at a temperature of about 1200 to 1900 F. comprising a conveyor adapted to receive each round, a ram adapted to abut one end of the round received on said conveyor and to push the round in an axial direction, a plurality of fixed cutting tools which are arranged in spaced apart first and second rings aligned with said ram, means abutting the back end of each tool and positively supporting the tool in a fixed position in its respective ring, said tools being engageable with the surface of the round throughout its full length to peel longitudinal surface layers to a depth of 1/16 to 3/16 inch therefrom as said ram pushes the round thereagainst, the tools of the second ring being arranged to peel areas left unpeeled by the tools of the first ring, and guide means located between said conveyor and the tools of the first ring for initially guiding the round into engagement with the tools of the first ring, said tools thereafter being themselves adapted to apply forces to the round in a direction and of a magnitude to maintain the round in a central position.

3,018,701
METHOD OF SEALING SANDWICH TYPE CARTON ENDS
Clifford D. Keely, West Englewood, N.J., assignor to General Corrugated Machinery Company, Palisades Park, N.J., a corporation of New Jersey
Filed Apr. 7, 1958, Ser. No. 726,899
4 Claims. (Cl. 93—36)



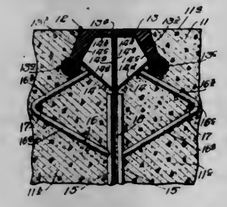
1. The method of folding and sealing an end of a box which comprises a body, a first pair of opposed relatively large leading and trailing end flaps each of a size and shape adapted substantially to cover the entire end of the box and a second pair of relatively small opposed end flaps adapted to be folded into a common plane and having a combined area which is not greater than the area of the box end, which method comprises folding the flaps of the first pair down into a common plane, one into a position to extend across the box end and the other into position to extend rearwardly from the first, advancing the box with the second pair of flaps upstanding at the sides of the path of advance and with the first pair of end flaps positioned to travel beneath gluing instrumentalities, discharging wet glue onto the upper faces of the down-folded flaps one after another as an incident of the advance, then while continuing the advance, folding the second pair of flaps down and in onto the glued flap which extends across the end of the box, and finally folding the other glue moistened flap over and down onto the infolded flaps of the second pair, thereby to adhere the first and second flaps of the first pair respectively to the inner faces and the outer faces of both flaps of the second pair.

3,018,702
MACHINE FOR FORMING LINED CONTAINERS
Ulrich Bauder, Stuttgart, Germany, assignor to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft, Stuttgart-Bad Cannstatt, Germany, a corporation of Germany
Filed Feb. 11, 1960, Ser. No. 8,162
Claims priority, application Germany Feb. 19, 1959
3 Claims. (Cl. 93—44.1)



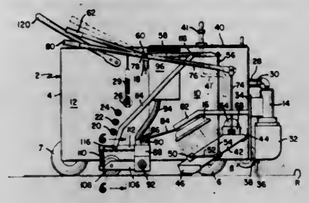
1. A machine for forming lined containers comprising a hub intermittently rotatable about a vertical axis, a plurality of container-forming mandrels each having a cross-section equal to the internal cross-section of a lined container, a stub shaft rotatably mounting each mandrel on said hub to extend radially therefrom along the longitudinal axis of the mandrel, a crank arm rigidly fixed to the end of each stub shaft nearest said hub, said crank arm having a roller at its free end, and a stationary cylindrical cam member mounted coaxially above said hub and having a cam track about its periphery engaging the roller of each crank arm, the cam track of said cam member being adapted to turn said stub shafts through an angle of substantially 90° during their intermittent passage about said cam member, whereby a liner blank may be folded about each mandrel in one position thereof and the edges of the liner blank may be sealed along one longitudinal face of said mandrel and a box blank may be folded about each mandrel having a liner folded thereon and its edges sealed along a longitudinal face of said mandrel at substantially 90° to that along which the edges of the liner are sealed.

3,018,703
JOINT SEALING DEVICE
Yoshiki Fujihara, Lyons, Ill., assignor to Servicised Products Corporation, a corporation of Delaware
Filed May 23, 1958, Ser. No. 737,274
3 Claims. (Cl. 94—18)



2. A joint sealing device for a masonry joint having masonry bodies on opposite sides of the joint, comprising: a sealing member having a pair of side portions adapted to be located in said masonry bodies on opposite sides of said joint and a resilient stretchable joint spanning portion adapted to extend between said side portions and across said joint, said side portions and sealing portion having inner surfaces defining an inner cavity; a pair of filler members adapted to be located on opposite sides and having parts extending into said cavity to bear against said inner surfaces for supporting the respective portions in substantially fixed relation to said masonry bodies; means for attaching one of said filler members to one masonry body on one side of said joint to retain a sealing member side portion against said one masonry body; and means for attaching the other filler member to the other masonry body on the other side of said joint to retain the other side portion against said other masonry body, said bearing of said filler members against said spanning portion inner surface serving to aid in holding said spanning portion against substantial inward displacement to subject said spanning portion to tension forces on movement of said bodies relatively away from each other.

3,018,704
STRIPE APPLICATOR FOR PAVEMENTS
Charles E. Searight, Jackson, Miss., assignor to Cataphote Corporation, Toledo, Ohio, a corporation of Ohio
Filed Dec. 15, 1958, Ser. No. 780,367
3 Claims. (Cl. 94—44)

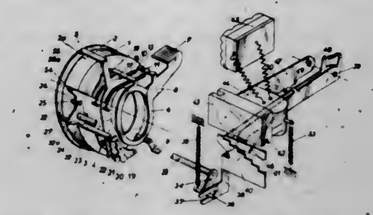


1. In a stripe applicator for pavements, a tank adapted to contain stripe-forming material, outlet means for said tank, a discharge chute having input and output ends, a pivot mounting said input end of said chute adjacent the outlet means of the tank for receiving said material therefrom, the output end of said chute being vertically swingable about said pivot between lowered and raised positions, a gate for closing the chute, a pivot means pivotally mounting the gate on said chute adjacent the output end thereof, a lever rigid with said gate and swinging therewith about said pivot means, a control member movably mounted on said applicator and being movable between lower, intermediate and upper positions, and means connecting said control member to the end of said lever to swing the gate from open to closed position when said operating member is moved from said lower to said intermediate position and whereby further raising of said control member from said intermediate position to said upper position swings the output end of the chute upwardly about said pivot from said lowered position to said raised position.

3,018,705
SETTING DEVICES FOR PHOTOGRAPHIC APPARATUS
Jules Louis Eugène Morelle, Paris, France, assignor to Optique et Precision de Levallois, Levallois-Perret, France, a company of France
Filed Dec. 28, 1960, Ser. No. 78,939
Claims priority, application France Jan. 11, 1960
11 Claims. (Cl. 95—10)

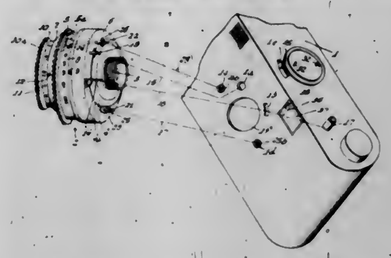
1. In a photographic apparatus having a built-in exposure meter comprising a photo-electric cell and an associated needle galvanometer, and including in particular a member controlling the speed of opening of the lens, a member for controlling the lens diaphragm and a photographic shutter provided with a release, a device

for automatically adjusting the exposure time comprising a movable stop, a first means coupling said exposure meter to said movable stop, the position of which is fixed by said exposure meter in dependence on the light intensity, a second means for causing said speed control member and said diaphragm control member to pivot



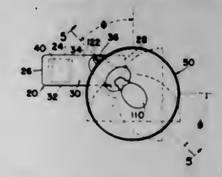
separately with independent angular distances of travel up to the point of contact with said movable stop, said angular distances of travel of the two said control members being determined in such manner that there is a suitable correspondence between the value of the speed and the value of the diaphragm aperture determined at the point of contact with said movable stop.

3,018,706
PHOTOGRAPHIC CAMERA WITH AUTOMATIC EXPOSURE REGULATOR
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Dec. 15, 1959, Ser. No. 859,734
Claims priority, application Germany Dec. 16, 1958
5 Claims. (Cl. 95—10)



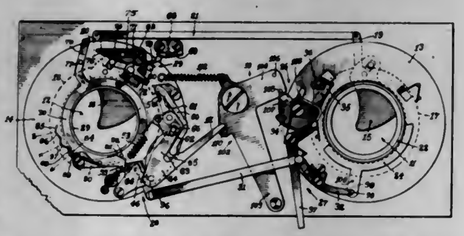
1. In a photographic camera of the type having an automatic exposure regulator, in combination, a camera housing; an intra-lens shutter assembly removably mounted on the front of the camera housing with the rear of the shutter assembly facing and juxtaposed to the front of the said housing, said assembly having adjustable speed and diaphragm setting members for changing the exposure factors of shutter speed and diaphragm aperture; an exposure meter carried by the camera housing, said exposure meter having a measuring mechanism including a movable control portion; a setting device on the camera housing, influencing the position of the movable control portion to take into account additional exposure factors; drive means coupling one of said setting members of the shutter assembly to said setting device to effect a drive thereto; and drive means for effecting adjustment of the other of said setting members of the shutter assembly in response to positioning of the movable portion of the measuring mechanism, both said drive means including two-part separable couplings carried by both the shutter assembly and the camera housing, certain elements of said couplings which are located on the assembly being engaged respectively with the speed and diaphragm setting members of the assembly to move therewith, said certain elements projecting from the rear of the shutter assembly so as to be normally disposed adjacent the front of the camera housing at the part thereof which is covered by the shutter assembly, and other elements of said couplings which are cooperable with the first-mentioned certain elements being carried by the camera housing at the said covered part thereof whereby the said separable couplings are substantially enclosed and concealed.

3,018,707
PHOTOGRAPHIC LIGHTING APPARATUS
Sidney B. Whittier, Concord, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Aug. 7, 1958, Ser. No. 753,784
22 Claims. (Cl. 95—11.5)



1. A lighting apparatus comprising, in combination, a housing means mountable upon a camera having an objective lens axis, and a reflecting means mounted on said housing means for rotation with respect thereto about only a single axis for directing light in a plurality of directions each having substantially the same invariant angular relationship to said single axis, said directions including at least three directions mutually and approximately perpendicular to one another, said housing means being mountable upon said camera with said single axis inclined at a predeterminedly fixed angle to said lens axis.

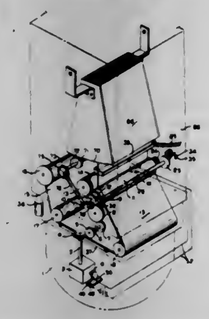
3,018,708
PHOTOGRAPHIC SHUTTER
Karl F. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Nov. 29, 1955, Ser. No. 549,826
Claims priority, application Germany Dec. 3, 1954
9 Claims. (Cl. 95—18)



1. In a photographic shutter construction for a stereo camera, an assembly plate and a pair of bases carried by said plate and adapted to be disposed adjacent the two spaced separate lens systems respectively of the camera; a pair of separate, spaced movable shutters mounted respectively on said bases, associated respectively with said lens systems for admitting or shutting out the light of said lens systems; positive reversibly operative shutter link means coupling said shutters for simultaneous movement, said link means having a positive driving action on each shutter in both of opposite directions; spring-powered shutter-drive means carried by one base and

connected to the associated shutter for driving the same, said other shutter being driven through said coupling means by said spring-powered means and said spring-powered means being remote from the other of said bases and not dependent on said other base for its support; an exposure-time escapement device carried by said one base, for effecting different shutter speeds of both said shutters in part through the medium of the said positive link means; a release mechanism on said one base, controlling said spring-powered driving means; and means comprising a delayed action device carried by the other base and connected solely to the shutter mounted on said other base, for controlling the movement of the said shutter and its coupled shutter upon release of the said shutter driving means.

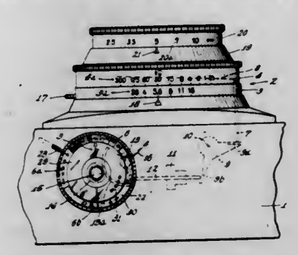
3,018,709
CAMERA FILM FEEDING, CUTTING AND STORING APPARATUS
Zoltan Takats, Vestal, and Carl H. Jacobson, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,514
13 Claims. (Cl. 95—31)



1. An apparatus of the class described comprising in combination a camera, storage means for storing photographic film after it has been exposed comprising a hopper having a plurality of individual pockets therein and an opening at one end, means for intermittently advancing a continuous strip of photographic film from a roll thereof through said camera and past the lens thereof, where it is exposed, and deposited into said hopper, cutting means adjacent said hopper for severing the portion of the film therewithin from the remainder of the film, means for advancing said hopper step by step to align the opening of each pocket thereof successively with the cut end of said film and means cooperating with said camera to form a light-proof enclosure for said hopper, and means to prevent leakage of light to said film before and after exposure thereof and while stored in said hopper.

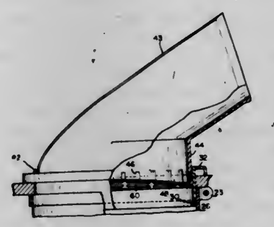
3,018,710
PHOTOGRAPHIC CAMERA
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Mar. 5, 1959, Ser. No. 797,368
Claims priority, application Germany May 6, 1958
7 Claims. (Cl. 95—64)

1. In a photographic camera of the type wherein the settings are referred to different exposure symbols, the combination of a movable setting member and means for effecting simultaneous speed and diaphragm adjustment in response to movement of said member; a movable tracing member movably carried by the camera body adjacent the surface thereof and visible from the exterior thereof; a control device comprising a follow-up type of transmission, connected between the setting member and tracing member to effect movement of the latter in response to actuation of the setting member; and a scale on the camera to which the tracing member may be referred, said scale consisting of a number of exposure symbols; an auxiliary focussing scale on the camera in a location adjacent the symbol scale for cooperation with said tracing member in



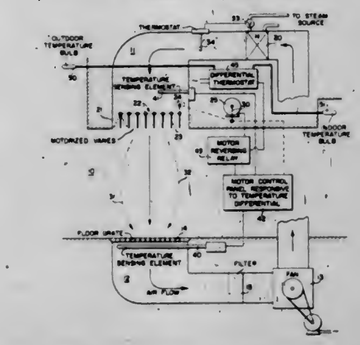
addition to the said symbol scale, said auxiliary focussing scale being organized for use alternately with the symbol scale while utilizing the same tracing member, and being viewable at the same time that the tracing member is viewed, for the purpose of effecting exposure settings for flash exposures, said tracing member having two arms, one arm cooperating with the symbol scale and the other arm cooperating with the focussing scale, said scales being disposed in different arcs.

3,018,711
DUCT STRUCTURE
Lewis Wellington Welch, Detroit, and Alfred F. Millington, Northville, Mich., assignors to Novi Equipment Company, Novi, Mich., a corporation of Michigan
Filed Apr. 7, 1958, Ser. No. 726,737
7 Claims. (Cl. 98—2)



4. In a vehicle having a rear package tray having an opening therein, a mounting flange overlying said opening and having a tubular portion extending downwardly through the opening for connection to an air conduit, said tubular portion having a radially inwardly extending annular bead therewithin, an air directing duct having an inclined nozzle portion and a tubular portion extending within the tubular portion of said mounting flange, the lower end of the tubular portion of said duct being formed to provide axially extending circumferentially spaced resilient fingers, circumferentially aligned and extending grooves in said fingers located intermediate the ends of said fingers on their radially outer surfaces shaped to receive said bead, and a lug on the inner surface of the tubular portion of said flange dimensioned to fit in the spaces between the fingers at the end of the tubular portion of said duct operable to prevent accidental turning of said nozzle, said lug being shaped with reference to the edges of said fingers so as to provide an audible click when said nozzle is turned.

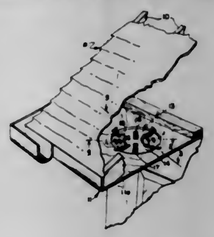
3,018,712
CONTROL SYSTEM FOR A ROOM CLOSING AIR CURTAIN
Robert J. Wacker, Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 12, 1958, Ser. No. 734,514
3 Claims. (Cl. 98—36)



1. In an air curtain control system, fan means for circulating air from a discharge duct above an opening between two areas having two different air temperatures to a floor intake duct below said discharge duct and back through air circulating closed loop, rotatable flow control vanes in said discharge duct for changing the direction of the flow of air from a vertical flow to a flow direction at an angle with respect to the vertical, motor means, mechanical means connecting said motor means to said vanes, first temperature responsive means responsive to the temperature of the air leaving said discharge duct, second temperature responsive means responsive to the temperature of the air entering said intake duct, said air entering said intake duct normally comprising substantially air from said discharge duct, control means connecting said first and second temperature responsive means to said motor means so that the flow control vanes are positioned to increase said air flow angle in one direction in opposition to the infiltration of colder air from one of the areas as the temperature between said first and second means changes a predetermined amount due to the in filtration of colder air from one of the areas into said intake duct, motor reversing means connected between said control means and said motor for changing the direction of movement of said vanes to increase said air flow angle in a direction opposite said one direction and thus the flow of air to an opposite direction when an infiltration of colder air is from another of said areas to change the temperature between said first and second means said predetermined amount, third temperature responsive means responsive to outdoor temperature, fourth temperature responsive means responsive to indoor temperature, and means connecting said third and fourth responsive means to said reversing means to control said reversing means in response to whether the outdoor temperature is colder or warmer than the indoor temperature.

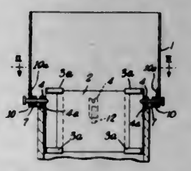
3,018,713
VENTILATOR FOR BUILDING EAVES
Chester A. Anderson, New London, Minn., assignor of two-ninths each to Marvin O. Edman, August Erickson, and John C. Lepler
Filed Aug. 23, 1960, Ser. No. 51,361
3 Claims. (Cl. 98—37)

1. Ventilator apparatus for use in ventilating building eaves, said apparatus comprising substantially flat, rigid metallic member having a plurality of apertures formed therein and being adapted to be disposed in closing relation to a ventilating opening of a roof eave construction, said member having a plurality of spaced-apart bridge elements struck upwardly from one surface thereof and each being associated with one of said apertures, each of said bridge elements defining a louver cooperating with its associated apertures for causing air passing through the latter to be directed laterally when said ventilator apparatus is connected to a roof eave construction, and a



plurality of similar, resilient, flexible attachment elements, each having a portion thereof underlying certain of said bridge members and being frictionally engaged thereby and being detachable therefrom, each attachment element extending upwardly from said one surface of said member being adapted to frictionally engage a roof eave construction and cooperating therewith for securing the member in closing relation with the ventilating opening of such a roof eave construction.

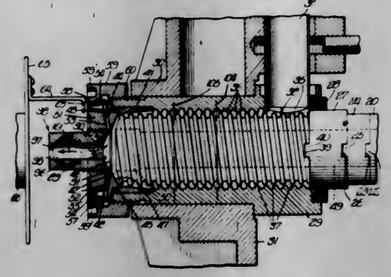
3,018,714
CHIMNEY COWLS AND VENTILATING DEVICES
Clifford Edmund Brewer, Lucky Stars, Lagoon Road, Lilliput, Parkstone, Dorset, England
Filed Sept. 2, 1958, Ser. No. 758,537
Claims priority, application Great Britain Dec. 23, 1957
2 Claims. (Cl. 98—66)



1. A cowl for a chimney or like flue, comprising a plurality of curved segmental members arranged one adjacent to the other to form a tubular sleeve, guide means on one of each adjacent pair of segmental members whereby the latter are circumferentially slidable in relation to each other to permit variation of the diameter of the sleeve, the sleeve having a first portion engageable within the chimney or like flue, and a second portion extending outwardly of the chimney or like flue when the first portion is engaged therein, a tubular band surrounding the second portion of the sleeve in spaced relation thereto, radially adjustable radially extending means securing the tubular sleeve to the tubular band in such manner that radial adjustment of the radially extending means produces relative sliding movement of the segmental members to vary the diameter of the sleeve, in which said radially adjustable securing means comprises a plurality of first bracket-like members equal in number to the number of segmental members of the tubular sleeve, each first bracket being attached to the tubular band at a location opposite the longitudinal centre line of a segmental member, an aperture extending through each said first bracket and the tubular band, a plurality of second brackets, one secured on each segmental member and

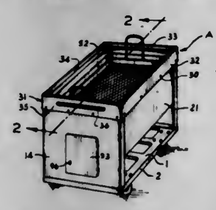
centred on the longitudinal centre line thereof, a screw threaded aperture in each of said second brackets, bolts extending through the said first brackets and the tubular band and having screw threaded portions engaging in the screw threaded apertures in said second brackets whereby rotation of said bolts in one direction or the other moves the segmental members radially towards or away from the tubular head to vary the diameter of the sleeve member, in which an axially directed slot is formed in each segmental member, and in which the second brackets are adjustably secured to the segmental members by fixing elements extending through the brackets and the slots whereby the tubular band can be axially displaced relative to the tubular sleeve.

3,018,715
FOOD MACHINERY
Eugene J. McCleary, Jr., and Cyrus H. Heigl, Beloit, Wis., assignors to Adams Corporation, Korn Kurls Division, Beloit, Wis., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,323
13 Claims. (Cl. 99—238)



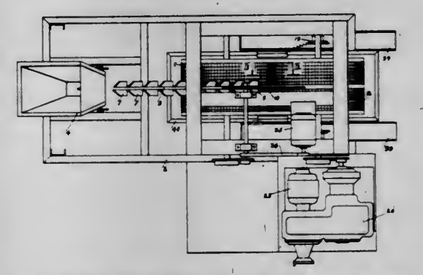
2. A machine for converting a starchy grain mix into a puffed food product comprising, in combination, a hollow stator having a longitudinal axis, means for feeding the mix to said stator, a feed screw mounted for rotation about said longitudinal axis within said stator for moving the mix out of one end thereof, die means extending transversely of said longitudinal axis and closing off said one end of said stator and having a plurality of openings extending transversely therethrough along a circle the center of which lies along said longitudinal axis and through which the mix is extruded into the atmosphere where it expands and solidifies on contact with the air, means providing an orifice into said one end of said stator, and valve means for controlling the flow of the mix through said orifice.

3,018,716
DEEP WELL FRYER
Carl Pass, 33 Briarcliff, Ladue 24, Mo.
Filed Dec. 15, 1958, Ser. No. 780,484
8 Claims. (Cl. 99—331)



1. A deep well fryer comprising a plurality of marginally interconnected wall-forming members, insulation means mounted on the inside faces of said members, an insulated cap member mounted on the upper ends of said members and projecting upwardly therefrom, said cap member also projecting inwardly from the juncture with the wall-forming members, a cooking well attached to the inwardly extending portion of the cap member and projecting downwardly into the space between said members so that the walls of said cooking well are confined completely within said fryer in spaced juxtaposed relation with said insulation means, burner means disposed in downwardly displaced relation to said cooking well, and valve means for controlling said burner means, said valve means including a thermostat and sensing bulb for temperature sensing and located in such a position that heat generated by the burners will not affect the temperature sensing means.

3,018,717
APPARATUS FOR SEPARATING FRUIT PULP FROM SKINS
James B. Anderson, Mount Lebanon Township, Allegheny County, Pa., assignor to H. J. Heinz Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 6, 1958, Ser. No. 719,567
10 Claims. (Cl. 100—97)

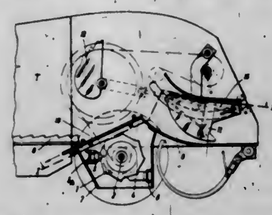


1. Apparatus for separating the flesh from the skin of fruit comprising a cutter for severing the fruit into two pieces, a pair of opposed squeezing drums below the cutter from which the pieces fall from the cutter, said drums being of generally cylindrical form and rotatable about horizontal axes, said drums having their peripheral surfaces formed of coarse screens, means for driving the drums in opposite directions, and a knife in each drum bearing against the interior of the screen just below the point where the peripheries of the drums are closest together for severing the protruding flesh of the fruit which is forced through the mesh of the screen from the skins which are restrained on the exterior of the drums.

3,018,718
BALER AND STRAW CUTTER FOR HARVESTER THRESHER
Alfred Wenzel, Wolfenbuttel, Germany, assignor to Gebruder Welger, Wolfenbuttel, Germany
Filed Jan. 23, 1959, Ser. No. 788,666
Claims priority, application Germany Feb. 18, 1958
3 Claims. (Cl. 100—103)

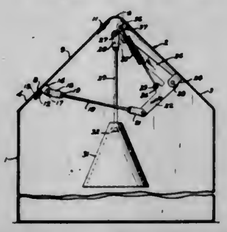
1. In the combination of a baler and a straw cutter for a harvester thresher having a baling chamber provided with a feed opening, a press plunger movable therein, there being a first guiding path extending between the end of a shaker and the feed opening of said baling chamber, a feed conveyor being arranged above said first guiding path and driven in synchronism with said plunger for conveying the straw from said shaker towards and into the feed opening of said baling chamber, there being a second guiding path for the straw delivered from the shaker by passing said baling chamber and opening di-

rectly towards the field, a cutter being rotatably mounted within said second guiding path and arranged beneath said first guiding path and lower than the feed opening



of said baling chamber, and means for interrupting the first guiding path and providing direct access from said shaker to said second guiding path and towards the cutter mounted therein.

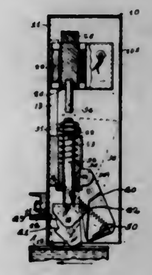
3,018,719
RECEPTACLES WITH SWINGING DOOR ON THE TOP
Frank P. Watson, Menlo Park, Calif., assignor to Mipro Metal Products Co., South San Francisco, Calif., a corporation
Filed Aug. 17, 1959, Ser. No. 834,202
4 Claims. (Cl. 100—265)



1. In combination with the top of a waste receptacle having an intake opening on a side thereof, and a door therefor, a waste tamping and door closing device comprising suspension means fulcrumed on a side of said receptacle, a weight suspended from said fulcrumed suspension means in said receptacle, resiliently yieldable means anchored in said receptacle and connected to said suspension means to normally hold said suspension means and weight in an initial position, connecting means between said suspension means and said door to urge said door into closed position by the action of said resiliently yieldable means and to swing said suspension means and said weight inwardly of the receptacle and toward the bottom of said receptacle whenever said door is swung open, said suspension means including a bellcrank lever pivoted between its ends, and said weight being suspended from the upper end of said bellcrank lever from a point above the fulcrum of said bellcrank lever, and said connecting means being pivoted on the lower end of said bellcrank lever below said fulcrum.

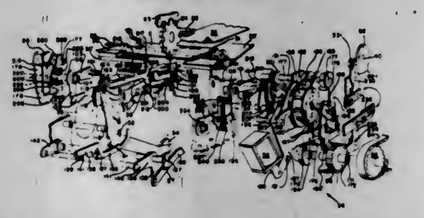
3,018,720
DEVICE FOR STAMPING CODE NUMBERS
Peter F. Nichols, Montreal, Quebec, Canada, assignor to Bowers Machine Company Limited, Montreal, Quebec, Canada
Filed June 12, 1959, Ser. No. 820,043
4 Claims. (Cl. 101—41)

1. An automatic stamping apparatus adapted to apply a stamp code indicia in sequence to each of a plurality of articles continuously fed past said apparatus along a conveying path, said apparatus comprising a supporting standard member mounted across the conveying path, a plunger supporting and actuating member mounted on said standard above and in alignment with said conveying path, a plunger slidably mounted in said actuating member for driven reciprocal movement towards said conveying path, means controlled by contact of each of said articles adapted to intermittently actuate said plunger actuating member, a bearing block mounted on said standard and a spindle slidably mounted in said bearing block in spaced axial alignment from and in axial alignment with said plunger with one terminal end of said spindle separate from and directly opposed to one terminal end of said plunger, a spring connected to and resiliently biasing said spindle terminal end towards said plunger terminal end, an indicia bearing stamp mounted for restricted pivotal



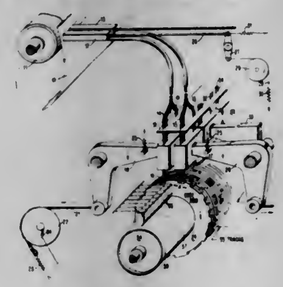
movement on the terminal end of said spindle remote from said plunger, and resiliently biased compression members to align a forward edge of said stamp indicia bearing surface with the moving surface of an article to be stamped, said indicia bearing stamp forward edge supporting a resilient contact bar whereby on the downward stroke of said spindle the frictional engagement of said contact bar on said article is adapted through the movement of said article against said frictional engagement to pivot said indicia bearing stamp about said spindle connection progressively applying said indicia bearing surface to said article in a direction opposed to the movement of said article, and stop means on said standard adapted to engage and return said indicia bearing stamp to ready position on the upward stroke of said spindle.

3,018,721
RECORDING APPARATUS
William A. Monticello, Detroit, and Thomas N. Yesowich, Roseville, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 31, 1960, Ser. No. 33,017
19 Claims. (Cl. 101—93)



1. Recording apparatus comprising a plurality of recording means each including an interposer; means for feeding a record medium into recording position with respect to said interposers; a plurality of hammers each cooperable with one of said interposers for recording on said record medium; means for driving said apparatus through cycles of operation; means operative during a cycle of operation for moving at least some of said interposers into relatively light contact with the record medium; and means operative during the cycle for firing the hammers cooperable with the moved interposers so they strike their respective interposers with a recording impact at a time in the cycle after the interposers have moved into contact with the record medium.

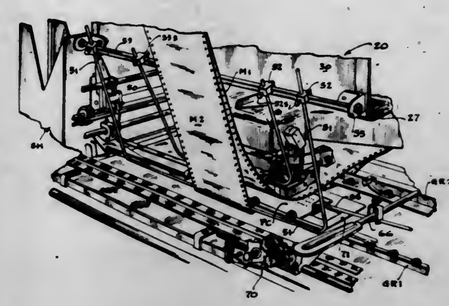
3,018,722
WIRE PRINTER
Fred Saltz, Binghamton, and Edward J. Grenchus, Johnson City, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,098
13 Claims. (Cl. 101—93)



1. A wire printer comprising a bundle of print wires arranged in an orderly pattern at the control ends thereof, a plurality of wire displacing element groups each arranged in a similar pattern to said print wire pattern, means for continuously moving successive ones of said groups past the control ends of said wires, successive groups being adapted to displace said print wires differently so as to form different character patterns therein, means for generating a representation of the character formable by each of said groups as it approaches said print wires, means for storing a representation of a character to be printed, means for comparing said representations so as to produce a signal indicative of like character representations, means for selectively effecting contact between each of said groups and said print wires, and means responsive to said signal for operating said contact effecting means.

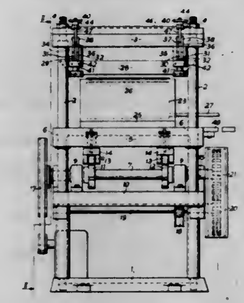
3,018,723
PRINTING MACHINES
Albert F. Wike, Shaker Heights, and Arnold R. Beaver, Euclid, Ohio, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,292
11 Claims. (Cl. 101—134.5)

1. A method of printing related sets of data simultaneously on opposite sides of cards or the like by a movable heated platen and a fixed anvil at a printing station and comprising, preparing a pair of transfer master strips to have the related data for each such card delineated column-wise respectively thereon in an imaging material transferable to said cards by heat and pressure, feeding the cards to be printed individually to the printing station, feeding the masters through said printing station at the same rate by a feed means common to both masters and with the mirror-imaged sides thereof respectively facing the opposite side of a card at the printing station and in timed relation such as to bring into registry related sets of data and the card to be printed thereby, causing the platen and anvil to effect heat and pressure contact of opposite sides of a card to be printed with said registered data to thereby print said card, and stripping one of the



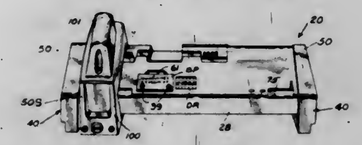
masters away from the anvil after each imprint as an incident to movement of the platen.

3,018,724
APPARATUS FOR THE DEPOSITION OF VISCOUS LIQUID MATERIALS
James Gentle Nash, Harrow, England, assignor to McCorquodale Colour Display Limited, London, England, a British company
Filed Feb. 9, 1959, Ser. No. 791,977
Claims priority, application Great Britain Feb. 13, 1958
6 Claims. (Cl. 101—171)



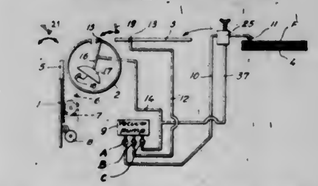
1. Apparatus for the deposition of thin layers of paints, inks and other viscous liquid material in accurately defined areas on the surface of a work piece, said apparatus comprising a rigid frame structure including a rigid head frame, a vertically reciprocable platen making up and down movements of substantially constant amplitude within said frame structure and below said head frame, a cavitated matrix engageable by the surface of a work piece carried on said platen in the raised position of said platen, a plurality of matrix-supporting bars extending across and beneath said head frame, a plurality of spaced bell-cranks each having one limb supported on the head frame, a member extending vertically through each of the limbs, means mounting one end of each of the members at one end of a respective matrix-supporting bar, means cooperating with the vertically extending members and the limbs for adjusting the vertical position of the matrix-supporting bars and the matrix-supported thereby in relation to the platen, and abutment screws in threaded engagement with said matrix-supporting bars and abutting the underside of said head frame for maintaining the adjusted position of the matrix-supporting bars and the matrix supported thereby.

3,018,725
PRINTING MACHINES
John A. Maul, Lyndhurst, Walter J. Brugge, Cleveland, and David D. Anderson, Chesterland, Ohio, assignors to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Feb. 10, 1960, Ser. No. 7,877
31 Claims. (Cl. 101—269)



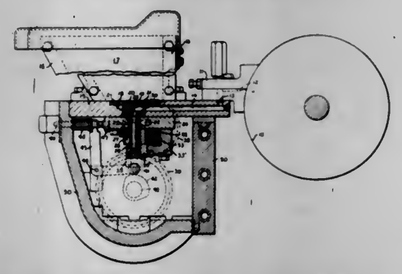
2. In a hand operated printing machine wherein an impression is to be made on a sheet disposed over printing means having type characters thereon and which is supported in position to enable an impression to be made as aforesaid, a bed formed of rigid one-piece sheet material and affording a generally rectangular planar top plate adapted to support said printing means in position to have an imprint made therefrom, elongated side portions integral with and bent downwardly from spaced opposite sides of said top plate and terminating in flat downwardly facing surfaces that are spaced one from another and which terminate in substantially the same place to afford a pair of fixed rail surfaces for a platen carriage, attaching lugs integral with and bent downwardly from each of the remaining opposite sides of said top plate at spaced locations to serve as elements which afford the supporting leg structure of the machine, and a platen carriage and associated platen roller related to the bed for reciprocal movement.

3,018,726
VALVE FOR EFFECTING AUTOMATIC DOUBLE INKING OF THE PRINTING PLATE IN A VERTICAL PRESS
Joseph Adelmar Ethier, 6513 De Normanville St., Montreal, Quebec, Canada
Filed Feb. 2, 1961, Ser. No. 86,700
5 Claims. (Cl. 101—280)



1. In a printing press including a vertical printing plate, an impression cylinder cooperating with said printing plate in a vertical up and down movement, a transfer table associated with said cylinder, a feeder table mounted on said press at substantially the level of said transfer table in the topmost position of the latter, means for transferring a blank sheet to be printed from said feeder table to said transfer table, means for transferring a blank sheet from said transfer table to said cylinder, a vacuum supply, a first valve and a first tubing connecting said first named means to said supply, said transfer table having holes at its surface, a second valve and a second tubing connecting said holes of said transfer table to said vacuum supply, said cylinder having a series of holes at its periphery, a third valve and a third tubing connecting said cylinder holes to said vacuum supply whereby a sheet on said cylinder blocks said cylinder holes and produces an increase of vacuum in said third tubing, the combination with said press of a valve mounted in series with said first tubing and comprising an element movable between a first position and a second position blocking and opening said first tubing, respectively, by-pass tubing connecting said third tubing to said valve, said movable element taking its blocking position under an increase of vacuum in said third tubing and in said by-pass tubing, that is when a sheet blocks the holes of said cylinder, and said movable element taking its opening position of said first tubing upon a decrease of vacuum in said third tubing and by-pass tubing, that is when said cylinder holes are opened to atmosphere.

3,018,727
INKING MECHANISM FOR PRINTING MACHINES
Andrew R. Hegeman, Yonkers, and Carl H. Ringe, Harrison, N.Y., assignors to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed Apr. 4, 1956, Ser. No. 576,071
6 Claims. (Cl. 101—366)



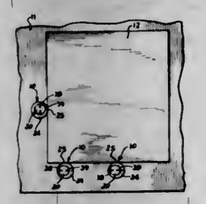
1. Printing machine ink pumping mechanism comprising an ink reservoir, an aligned plurality of pumps and discharge conduits for pumping ink therefrom to an ink rail, each pump comprising reciprocating piston and cylinder pumping means, and a valve body rotatable about the piston axis and having an axial port communicating with the cylinder and a port in its upper surface connecting the pumping means to the reservoir in one position of the valve body and a second port in its side surface connecting the pumping means to a discharge conduit in another position, each valve body comprising a gear for rotating it, a rack meshing with the said gears, means for reciprocating the rack to move the valve bodies between the two said positions, and means for operating the pumping means in timed relation to the valve bodies.

3,018,728
TYPE HOLDER STRIP AND TYPE HOLDING ACCESSORY THEREFOR
Harry J. Devon, Pittsburgh, and Charles H. Davis, Monroeville, Pa., assignors to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 21, 1960, Ser. No. 16,455
6 Claims. (Cl. 101—381)



1. A clip for holding character elements in position in a holder of channel form, the holder having parallel sides with inwardly-turned lips at the top thereof for retaining block-like elements in the holder, said clip having parallel legs attached at one end to a transverse connector portion with the legs and connector portion being in a common plane, one leg having a ratchet-like barb at one end projecting laterally therefrom, the barb being sloped to permit the clip to slide in one direction when it is inserted in the holder, but resist movement in the opposite direction, said legs being resiliently movable toward each other for releasing the barb from engagement with the holder.

3,018,729
GUIDE FOR PRINTING
Louis C. Cerullo, 4130 Clarendon, Chicago, Ill.
Filed Sept. 2, 1960, Ser. No. 53,721
5 Claims. (Cl. 101—415)



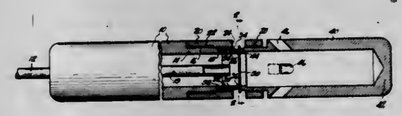
1. For use in locating sheet material on a support for printing, an adjustable guide comprising a disc fastenable to the support, and a split ring of uniformly varying width snugly surrounding said disc and adjustable relative thereto for selectively varying the distance between the edge of said disc and the edge of said ring along a selected disc radius.

3,018,730
PERFORATING GUNS
Jacques H. Castel, Houston, Tex., assignor, by mesne assignments, to PGAC Development Company, Houston, Tex., a corporation of Texas
Filed July 29, 1953, Ser. No. 370,990
14 Claims. (Cl. 102—20)



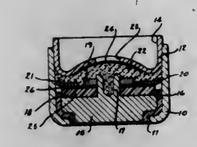
12. A perforating gun for shooting wells comprising an elongated cartridge carrier, a plurality of cylindrical hollow pivot pins fixedly supported on said carrier at spaced points therealong, each of said pins having means defining an aperture for accommodating a detonating cord, cartridges having openings adapted to respectively receive said pins pivotally supported on said carrier by said pins in retracted positions such that they will pass through a tube having a lesser diameter than the length of the cartridges as said carrier is lowered through the tube into a well, said cartridges being adapted for pivotal movement from their retracted positions to extended perforating positions after they emerge from the tube, booster charges of explosive material respectively disposed within the hollow pivot pins, a detonating cord extending through said apertures connecting said pivot pins establishing an efficient detonating relationship between the cord and the respective booster charges carried within the pivot pins which is unaltered by pivotal movement of the cartridges due to the fixed support arrangement of said pivot pins, and means including said detonating cord for detonating said cartridges.

3,018,731
SHEAR MEMBER FOR GAS OPERATED BLASTING CARTRIDGE
Edward C. Filstrup, Jr., St. Joseph, Mich., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, Wilmington, Del., a corporation of Virginia
Filed Nov. 17, 1951, Ser. No. 256,877
11 Claims. (Cl. 102—25)



1. A blasting device comprising a container open at one end, a cap having lateral discharge openings, a collar encircling and projecting longitudinally from the open end of said container, said collar having a lateral opening intermediate its ends and having an interiorly threaded portion threadedly receiving said cap, and a rupturable plate slidable in said collar opening and clamped between said container and cap in alignment with said collar opening.

3,018,732
IGNITION MEANS FOR AMMUNITION PRIMER OR THE LIKE
Tullio Tognola, Sidney, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 30, 1954, Ser. No. 459,380
19 Claims. (Cl. 102—70.2)

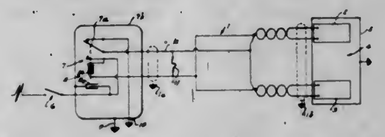


1. An ammunition primer or the like comprising a casing, an electrically non-conductive combustible charge in said casing, and a shunted-surface gap assembly in said casing, whereby said charge may be ignited by impressing a sufficient voltage across the electrodes of said gap, at least a substantial portion of the entire space between said electrodes being spanned by means having a substantially flat electrically semi-conductive surface connecting the electrodes and being substantially co-extensive with the cross-sectional area of said space in a plane parallel to and adjacent said surface, and the space between said electrodes being filled solely by said charge.

3,018,733
MULTIPURPOSE SAFETY FOR IGNITER CIRCUITS
Francis M. Johnson, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 31, 1956, Ser. No. 607,530
2 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

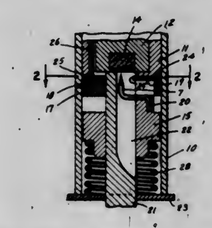
1. A destructor system comprising a main charge, a pair of igniting units in contact with and on opposite

sides of said main charge, a weatherproof casing housing said main charge and said igniting units, an electrical firing circuit for igniting said igniting units, a primary source of power, a main safety switch connecting said firing circuit to said primary source of power, said circuit having a relay switch positioned as near as mechanically feasible to said igniting units, said relay switch normally actuated by a predetermined signal to its closed position to fire said igniting units, and a plurality of safety features incorporated in said system to prevent inadvertent firing of said charge, said safety features consisting of a shield to protect said firing circuit from outside radiation, a



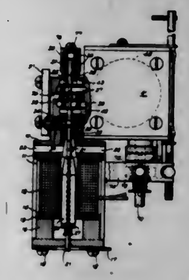
filter consisting of a reactance normally operating said relay switch when energized by said primary source of power and a capacitance tuned thereto and electrically interconnected between a common connection of said main safety switch and said relay switch and ground to protect the latter from conducted noises induced by transients, and a quick-blow fuse connected across said pair of igniting units to form a by-pass circuit protecting said units from transient currents imposed on said circuit from outside sources, said relay switch being enclosed in a shielded relay can to protect said switch from spurious signals.

3,018,734
DELAY FIRING MECHANISM
Max Earl Eggman, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation
Filed Nov. 30, 1955, Ser. No. 549,919
6 Claims. (Cl. 102—75)



1. A delayed impact firing mechanism comprising a casing, an explosive charge holder in the rear end of said casing for holding an explosive charge and a primer, a locking pin slidably mounted in said holder, a shaft mounted in said casing in alignment with said primer and including a locking disk mounted thereon adjacent said holder and having a notch normally out of alignment with said locking pin and movable into alignment therewith when said shaft is rotated to a certain position, a longitudinal slot in said shaft aligned with said primer, a slider movably mounted on said shaft and having a spacing lug projecting therefrom toward said locking plate, a firing pin mounted in said lug and projecting into said shaft slot and toward said primer, a stop member fixed to said casing between said locking plate and said slider and normally engaging said lug to prevent contact between said firing pin and said primer, said stop member including a slot disposed in a position to receive said lug when said shaft is rotated to align the notch in the locking disk with said locking pin, thereby to permit movement of said firing pin into stabbing contact with said primer, and spring means disposed between the front end of said casing and said slider for permitting spring compressional movement of said slider in response to impact of said casing with a target and delayed return movement of said slider and therewith said firing pin into stabbing engagement with said primer.

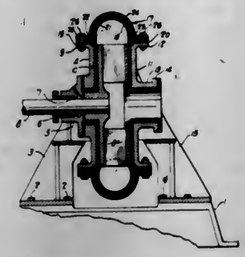
3,018,735
ELECTROMAGNETIC VIBRATORY PUMP
Carl Schindler, Wauwatosa, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed June 17, 1959, Ser. No. 821,027
7 Claims. (Cl. 103—53)



1. In an alternating current electromagnetic vibratory pump adapted to be immersed in a liquid and having a body portion defining a pumping chamber, said body portion having first and second passages registering with said pumping chamber, an outlet valve in said first passage, a pumping piston reciprocable within said second passage and extending into said pumping chamber, said electromagnetic pump including a pole structure, an energizing winding on said pole structure, and an armature connected to said piston and adapted for magnetic suspension within said pole structure and arranged to vibrate in response to fluctuations of the magnetic flux in said pole structure incident to a source of alternating current being impressed on said energizing winding for rapidly vibrating said pumping piston to thereby force fluid under pressure out of said first passage, said pumping piston having an axial opening constituting the inlet passage to said pumping chamber and also having an inlet aperture registering with said axial opening and in continuous communication with the liquid in which the pump is immersed, said piston also having a valve seat at the end of said axial opening within said pumping chamber, a valve disposed against said valve seat, and means within said axial opening for resiliently holding said valve against said valve seat, whereby said pump is self-priming even if gas evolved by said liquid accumulates within said pumping chamber when said pump is idle.

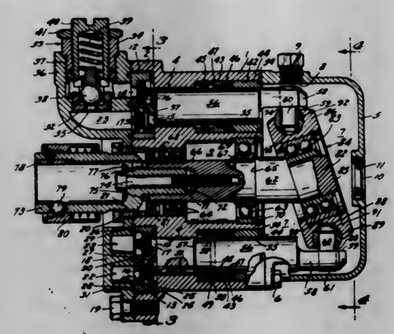
3,018,736
DREDGE PUMP
Arthur T. Clay, Indianapolis, Ind., assignor to Hetherington & Berner Inc., Indianapolis, Ind., a corporation of Indiana
Filed Jan. 4, 1954, Ser. No. 402,068
3 Claims. (Cl. 103—103)

1. In a pump of the class described, in combination, an impeller housing section, an impeller in said section, a shaft supporting said impeller for rotation in the section, a volute comprised of self-supporting resilient material fixed to said housing section, and a shell member enclosing said volute and fixed to the housing section, said member thereby providing a sealed space between the



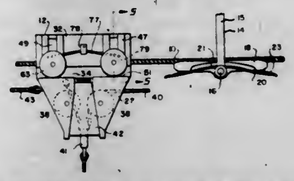
volute and said member, said space constituting a chamber confining a fluid, and inlet means for said space.

3,018,737
PUMP STRUCTURE
Ernest E. Cook and Harry J. Sadler, both % Hypro Engineering Co., 700 3rd Ave. NE., Minneapolis, Minn.
Filed Jan. 24, 1958, Ser. No. 711,081
3 Claims. (Cl. 103—173)



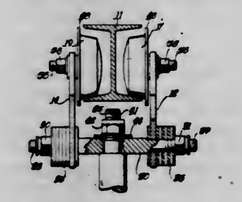
1. In a fluid pressure apparatus including, a cylinder block, a piston mounted for reciprocatory movements in said cylinder block, and a shaft journalled for rotation in said block in spaced parallel relation to said piston and having a crank portion disposed at an oblique angle to the axis of rotation of said shaft; a wobble member, means journalling said wobble member on said crank portion, said wobble member defining a radially outwardly opening generally cylindrical recess, the axis of said recess being tangent to a circle substantially concentric with said shaft, a generally cylindrical wrist pin journalled in said recess for oscillatory movements on the axis of said recess and having a transverse opening through its central portion, a piston pin extending through a transverse opening in said piston and said opening in the wrist pin and rotatable and axially slidable in one of said openings, and stop elements on said wrist pin and engaging spaced portions of said wobble member to positively hold said wrist pin against axial movement in said recess whereby to lock said wobble member against common rotation with said shaft, said stop elements comprising a pair of radially outwardly projecting circumferential flanges, one on each end of said wrist pin, said flanges each engaging an adjacent wall portion of said wobble member at an opposite end of said recess to limit axial movement of said wrist pin in a different direction.

3,018,738
SKYLINE CARRIAGE LOCKING MEANS AND RELEASE THEREFOR
Ernest O. Naud, Bowen Island, British Columbia, Canada
Filed June 20, 1960, Ser. No. 37,117
7 Claims. (Cl. 105—151)



1. In a carriage adapted to travel along a skyline supported by a hanger, said carriage having a side member provided with a groove through which the skyline longitudinally extends, a guide carried by the carriage side member, a plunger slidably mounted in the guide and normally extending across the groove, means for locking the plunger against movement relative to the guide, a cam member, means pivotably connecting the cam member to the plunger, means operatively connecting the cam member to the plunger locking means and a cam track carried by the hanger adapted to coact with the cam member to release the locking means and actuate the plunger.

3,018,739
MONORAIL TROLLEY
Charles Carroll, Danville, Ill., assignor to Duff-Norton Company, Pittsburgh, Pa.
Filed Jan. 2, 1958, Ser. No. 706,683
1 Claim. (Cl. 105—154)



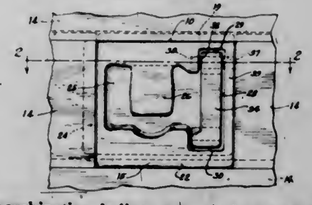
A monorail trolley comprising a pair of parallel side plates having a plurality of opposed matched holes, pairs of opposed flanged wheels, each flanged wheel having an end threaded axle extending from the flanged portion for mounting in the upper portion of the side plate at opposed stations and perpendicular with the side plates, a yoke, said yoke having axle end portions threaded at the extremities, a central circlar bilaterally symmetrical flat portion in said yoke terminating in a pair of shoulders at the axle portions, means defining a rectangular opening in the center of the circular portion, said opening having its long axis perpendicular to the flanged wheel axle ends; a plurality of spacers removably attached along the yoke axis selectively inside or outside of the side plates, first removable fastening means for securing the flanged wheel axle ends to the side plates and perpendicular thereto, second removable fastening means for securing the yoke axle ends in perpendicular relation with the side plates and centrally beneath the flanged wheel axles; and a hanger shaft, said shaft having a rectangular boss proportioned to mate with the rectangular opening in the yoke, a threaded locking shaft extending above the rectangular boss, and third removable fastening means mating with the threaded locking shaft thereby securing the hanger shaft to the yoke, when the flat portion of the yoke is horizontal, the elements being proportioned in such combination that upon removing said hanger shaft from said yoke,

and rotating said yoke 90°, the trolley can engage a variety of loads suspended from a hook engaging the yoke rectangular opening.

3,018,740
COMBINED LADING STRAP ANCHOR AND FLOOR RACK HOLDER

Gilbert F. Oakley, Chicago, Ill., assignor, by mesne assignments, to MacLean-Fogg Lock Nut Co., Chicago, Ill., a corporation of Delaware

Filed Jan. 12, 1959, Ser. No. 786,419
2 Claims. (Cl. 105—369)

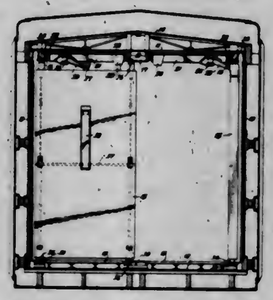


1. A combination lading strap anchor and floor rack holder comprising, in combination, an integral metal body having a back surface and a front face and openly adjoined recessed portions of different shapes and dimensions opening outwardly through the front face thereof and serving as lading strap anchor and hook retaining recesses, an anchor post integral with the body and overlying the mid-portion of the lading strap anchor recess, said anchor post being spaced from said back surface of the body to provide space for connecting a lading strap thereto, a hook element of a shape and size to fit into the hook retaining recess in spaced relationship to said anchor post and having a normal position substantially flush with said front face of the body, said hook element, when in said normal position, serving as a side wall of said lading strap anchor recess and substantially equalizing the widths of the recessed areas on opposite sides of the anchor post, and means supporting the hook element relative to the body for swinging movements between said normal position and a projecting position in which the hook element extends outwardly from the hook retaining recess and away from said front face of the body, said hook element being accessible through the lading strap anchor recess for moving the hook element to the projecting position.

3,018,741
LADING SEPARATING MEANS

Russell M. Loomis, Palos Heights, Adolph G. Kuellmar, Chicago, and John S. Lundvall, Park Ridge, Ill., assignors to Union Asbestos & Rubber Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 26, 1959, Ser. No. 836,288
5 Claims. (Cl. 105—376)

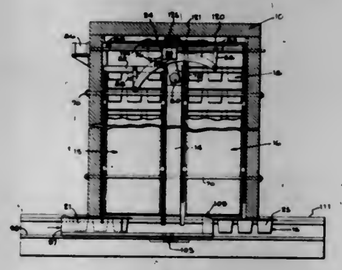


1. In a car having spaced side walls, a floor and a roof, lading separating means comprising tracks extending longitudinally of the car adjacent to the roof and projecting inwardly from the side walls of the car, a transversely extending beam mounted on the tracks for movement longitudinally of the car, a generally horizontal arm underlying the beam and pivoted at one end on the beam on a vertical axis spaced from one side wall of the car, the other end of the arm being swingable from a position adjacent to said one side wall and beneath the adjacent track to a position between said vertical axis and the other side wall, and a door pivoted at its top centrally of its width to said other end of the arm on a vertical axis and supported thereby above the floor of the car.

3,018,742
APPARATUS FOR PROOFING AND BAKING BREAD

Paul S. Ward, 111 Court St., Cynthiana, Ky.

Filed Feb. 10, 1958, Ser. No. 714,670
10 Claims. (Cl. 107—55)



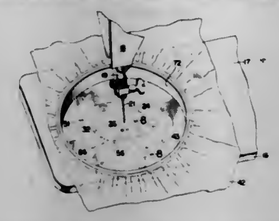
1. In a vertical oven, means for supporting a plurality of pans in vertically spaced relationship to one another and moving said pans vertiaclly in a step by step movement, said means including a hold ladder and lift ladder, said hold ladder and lift ladder including a plurality of vertically spaced pan engaging elements each adapted to simultaneously engage an edge of a baking pan of a series of superposed vertically spaced pans in the oven, the pan engaging elements associated with said hold ladder being spaced from one another the same distance as the pan engaging elements on said lift ladder, means mounting said hold ladder for horizontal movement into and out of engagement with said pans, means mounting the lift ladder for horizontal movement into and out of engagement with said pans and for vertical movement while the hold ladder is disengaged from the pans to move same vertically, driving means for moving said ladders whereby said hold ladder engages said pans when said lift ladder is withdrawn from engagement therewith and said lift ladder moves vertically in one direction a distance equal to the spacing of a pair of adjacent pan engaging elements when in engagement with said pans for displacing same vertically, said hold ladder being removed from engagement with said pans when said lift ladder is moved in said one direction vertically, said lift ladder being moved an equal amount in the opposite direction vertically when removed from contact with said pans.

3,018,743
ATTACHMENT GUIDING DEVICE FOR SEWING MACHINES

Ralph E. Johnson, Mountainside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Mar. 11, 1960, Ser. No. 14,248
5 Claims. (Cl. 112—102)

1. An attachment guiding device for use with a sewing machine having a work supporting surface and throat-plate mounted with the upper surface of said throat plate above the level of said work-supporting surface, said attachment guiding device comprising an annular member having a flat bottom surface adapted to rest on said work-supporting surface, an inner wall having a height

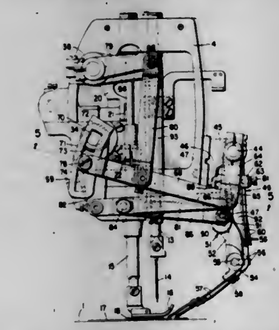


substantially equal to the difference in elevation between said work-supporting surface and the upper surface of said throat plate, and a top surface meeting with the top edge of said inner wall and curved downwardly to merge with the flat bottom surface at the outer edge of said annular member.

3,018,744
RUFFLING MECHANISMS FOR SEWING MACHINES

Hans Hacklander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed July 15, 1957, Ser. No. 671,913
15 Claims. (Cl. 112—132)

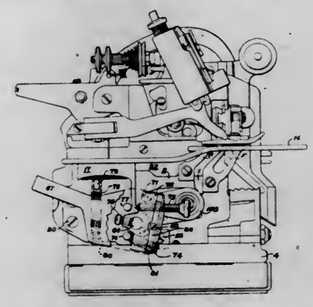


1. In a sewing machine having a bed, a main shaft journaled longitudinally in said bed, a standard rising from one end of said bed, a bracket arm carried by said standard and terminating in a head overhanging said bed, said bracket arm being angled relatively to said main shaft to position said head forwardly of said standard with respect to said main shaft, a pair of vertically spaced parallel shafts comprising a ruffler actuating shaft and a control shaft journaled longitudinally of said bracket arm parallel to said main shaft with one end of said shafts being disposed adjacent to the front of said standard and the other end of said shafts disposed adjacent to the rear of said head, operative connections between said main shaft and said ruffler actuating shaft for imparting oscillation to said ruffler actuating shaft upon rotation of said main shaft, a ruffler shaft journaled on said brack arm, a ruffler blade carrier arm mounted on said ruffler shaft, an adjustable connection between said ruffler actuating shaft and said ruffler shaft for imparting variable oscillation to said ruffler shaft upon oscillation of said ruffler actuating shaft, and operative connections between said adjustable connection and said control shaft for effecting adjustment thereof upon actuation of said control shaft.

3,018,745
SEWING MACHINE FEED MECHANISM

John M. Washburn, West Hartford, Conn., assignor to The Merrow Machine Company, Hartford, Conn., a corporation of Connecticut

Filed Nov. 16, 1959, Ser. No. 853,356
7 Claims. (Cl. 112—209)

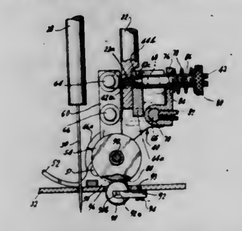


1. In a sewing machine having a frame, first support means on said frame defining a first pivotal axis, a feed dog carrier supported at one end upon said first support means for angular and radial movement relative to said first axis, drive means for driving said carrier in angular oscillation about said first axis, second support means on said frame defining a second pivotal axis parallel to said first axis, a link supported at one end on said second support means for pivotal movement about said second axis, means connected between said drive means and said link for oscillating said link in pivotal movement of constant amplitude about said second axis in synchronism with the angular oscillations of said carrier about said first axis, coupling means connecting said link to said carrier for pivotal movement relative to said carrier about a third axis extending parallel to said first axis at a fixed location on said carrier and for sliding movement relative to said carrier radially of said third axis to oscillate said carrier radially of said first axis when said link is pivotally oscillated about said second axis with an amplitude of radial oscillation proportional to the distance between said second axis and said third axis, and means for shifting said second support means relative to said frame to vary the distance between said second axis and said third axis to thereby vary the amplitude of radial oscillation of said carrier.

3,018,746
COMBINED PRESSER FOOT AND FEEDER

Ragnar W. Winberg, 115 W. Elder Ave., Floral Park, N.Y.

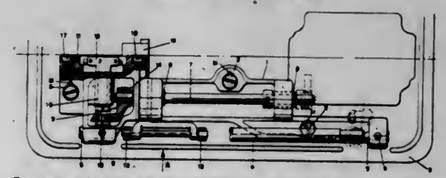
Filed Nov. 24, 1959, Ser. No. 855,105
15 Claims. (Cl. 112—211)



1. A feeding attachment for use on a sewing machine of the type including a throat plate over which material passes along a feed path, a needle moving through a stitch-forming stroke along said feed path, a presser foot bar

adapted to mount a presser foot, and a feed-dog operative to engage the bottom of said material and advance same along said feed path, said attachment comprising a presser foot assembly adapted to be mounted on said presser foot bar and including a presser foot having a material-contacting surface adapted to contact said material as it passes over said throat plate, a rotary feed wheel having a material-contacting periphery, means to journal said feed wheel for rotation about an axis transverse to said feed path, means operatively connected to the journaling means for mounting said feed wheel for vertical movement in relation to said presser foot, means for biasing said feed wheel towards said throat plate, and a drive means for rotating said feed wheel.

3,018,747
SUPPORT ARRANGEMENT FOR MOUNTING THE MECHANISM LOCATED UNDER THE BASE OF SEWING MACHINES
Antonio Moro, Milan, Italy
Filed Apr. 3, 1956, Ser. No. 575,799
Claims priority, application Italy Apr. 14, 1955
1 Claim. (Cl. 112—258)



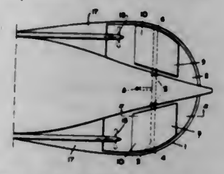
In a sewing machine having a support member provided with means for detachably and adjustably mounting said support member to the underside thereof, said support member carrying a driving shaft for driving a feed claw, a hook-drive shaft disposed parallel to said driving shaft, a half-bevel gear mounted on one end of said hook-drive shaft, a hook-actuating shaft mounted in a bearing and disposed perpendicular to said hook-drive shaft, a bevel gear mounted on one end of said hook-actuating shaft meshing with said half-bevel gear, and a seat body having a circular seat for the hook of the sewing machine including a hook-operating sector mounted on the other end of said hook-actuating shaft, said seat body being detachably mounted on said support member, said seat body and said bearing being formed into an integral unit.

3,018,748
DEVICE FOR THE TRANSPORT OF FREIGHT, AND IN PARTICULAR LIQUID OR POWDERED LOADS OF COMMERCIAL VALUE, IN WATER AND ESPECIALLY IN SEA WATER
Louis Denis, Pierre Benjamin Wolff, and Joseph Jean Marie Rodolphe Brocard, Paris, France, assignors to Societe d'Etudes pour le Stockage et le Transport sous-marins des Fluides (S.O.M.A.F.), Paris, France, a corporation of France
Filed Oct. 7, 1957, Ser. No. 688,726
Claims priority, application France Oct. 8, 1956
20 Claims. (Cl. 114—74)



20. Device for under-water transport of freight, comprising an elongated flexible main container composed of a material which is resistant to the action of sea water, flexible fluid-tight secondary containers disposed inside said main container and adapted to contain said freight and composed of a material which is resistant to the action of the product constituting said freight, motive means and a housing enclosing the latter and detachably combined with said main container, said housing being formed in one end of said container.

3,018,749
ANTI-PITCH STABILIZERS FOR SHIPS
Johannes de Beurs, Adriaen Beijerkade 15, Utrecht, Netherlands
Filed June 27, 1958, Ser. No. 745,104
Claims priority, application Great Britain Sept. 9, 1957
2 Claims. (Cl. 114—126)



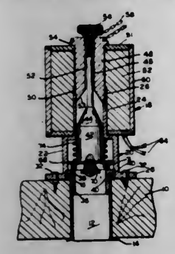
1. In apparatus for stabilizing the motion of ships equipped with bow propellers, an anti-pitch stabilizer device formed as a streamlined body of a shape generally comparable to that of a balanced rudder, means for operatively positioning said stabilizer device at the bow of the ship, with portions of said device on either side of the hull of the ship, said positioning means including a common transverse axis member, said axis member being mounted for rotation with respect to said hull, said portions being mounted on said axis and said axis dividing said portions into forward and aft substantially balanced parts, said forward of said parts exerting a slightly greater turning moment on said axis when engaged by a water current than the moment exerted by said aft part, bow propellers carried by said hull and positioned aft of, but closely adjacent to, said portions, shafts carrying said propellers and shaft bosses supporting said shafts, said shaft bosses being secured to said hull and extending forwardly with respect to the same, a guard frame for protecting said portions and said bow propellers, said guard frame extending outwardly from said hull across the front of said portions down past the sides of said portions and having terminating ends supported by said shaft bosses, the forward part of said guardframe being secured to said hull and said guardframe at positions alongside said portions being formed with bearing means in alignment with said axis member, said axis member being engaged with said bearing means for rotation therein, a control lever operatively connected to said stabilizer device and resilient devices engaged by said lever for controlling the motion thereof, said resilient devices being formed to maintain said lever and thus said stabilizing device in a neutral position when at rest for limiting the movement of said stabilizing device for a cavitation-free action thereof, said resilient means providing resilient resistance to the movement of said device in response to different sea conditions, and abutments carried by said hull and limiting the stroke of said lever to a small movement beyond said normal cavitation-free action thereof.

3,018,750
MERCURY SWITCH CONTROL FOR ELECTRICALLY GOVERNED RUDDER
Arthur D. Hill, Newport Beach, Orange County, Calif.
Filed May 2, 1958, Ser. No. 732,495
1 Claim. (Cl. 114—144)

In combination with automatic piloting apparatus including electric circuits for selectively causing a rudder to swing in either of two directions, a mercury switch having an elongated mercury-containing chamber and having a handle adapted to be held manually with the long axis of said chamber in a vertical position, a first terminal in said switch adapted to connect the contained mercury with a source of power when the long axis of said chamber is substantially in either possible vertical position, a second terminal adjacent one end of said chamber and arranged when in contact with said mercury to place said source of power in circuit with said automatic piloting apparatus, and two terminals adjacent the other end of said chamber and at opposite sides of said chamber in circuit respectively with that part of said apparatus causing said rudder to swing in one and the other of said two directions and affording with said source of power circuits over-riding the automatic control of said apparatus.

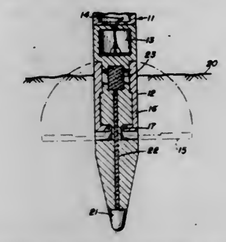


3,018,751
ELECTRICAL BOAT BAIL DEVICE
A D Spurlock, Dawson, Ga.
Filed May 27, 1959, Ser. No. 816,222
2 Claims. (Cl. 114—197)



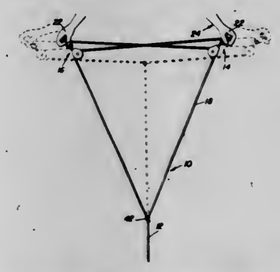
1. In an electrically controlled boat bail device for attachment on the stern of a boat in conjunction with an open drain opening form therein, a cylindrical housing having an opening therein, and provided with a base member thereon which is seated against the boat at the drain opening, to be attached thereto, a short barrel member projecting from said housing, a reciprocating drain closure plunger mounted within said cylinder and said barrel and adapted to reciprocate therein, said plunger having a conical end portion thereon extending to form a rod-like tail member projecting outwardly therefrom a solenoid pole member rigidly attached on said tube and having an open bore therein in which said rod-like tail member moves, said pole having a complementary depression formed therein facing said conical portion of said plunger, a washer assembly on said plunger member including an inner metal washer and an outer retaining member retaining a pressure seal washer thereagainst, and a spring member interposed between said base member and said washer assembly normally urging said pressure washer member into sealed position in said drain tube, electrical solenoid winding means mounted on said base member in an electrical position with said pole member to energize same when said windings are energized from an electrical source whereby said solenoid windings may be energized to lift said plunger member with said pressure seal washer thereon, thereby opening said drain tube to receive water therein through the opening in said main base housing.

3,018,752
PROJECTILE ANCHORS AND ANCHORING EMPLACING DEVICES
Ray T. Sorrell, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 24, 1959, Ser. No. 822,704
6 Claims. (Cl. 114—206)



1. In an anchor having forward and after portions and a longitudinal axis, the combination of an anchor casing, a cable secured to said casing and initially stored in a chamber in the after portion of said casing, a time-delay fuse forming the nose of said anchor and adapted to ignite subsequent to launching of the anchor, an explosive charge within the casing adapted to be detonated by said fuse, a plurality of plate members abutting said charge, each of said plate members being provided with an aperture to permit the exit of gases, a plurality of sleeve members integrally connected to said plates and lying normal to the longitudinal axis of said anchor, a vane within each of said sleeves and adapted to be thrust laterally by the detonation of said charge and thereby secure said anchor against lateral and vertical forces.

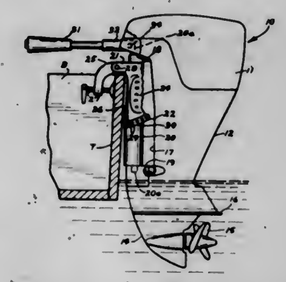
3,018,753
WATER SKI TOW ROPE
Roland C. Price, 9 Ray St., Manchester, N.H.
Filed Oct. 19, 1960, Ser. No. 63,533
1 Claim. (Cl. 115—6.1)



A water ski tow rope assembly comprising a tow rope, a pair of separate handles each adapted to be grasped by a hand of a skier, two pulley assemblies, a first carried by one of said handles and a second carried by the other, and an interconnecting means comprising two elongated, flexible member segments, one segment passing through the first pulley assembly and secured at one end to the handle carrying the second pulley assembly, the other segment passing through the second pulley assembly and secured at one end to the handle carrying said first pulley assembly, the other end of each segment being secured

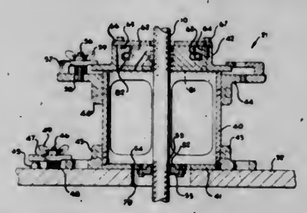
to said tow rope whereby during skiing, by moving said handles apart in a lateral direction relative to the axis of the tow rope, the portion of the tow rope to which the segments are attached is drawn toward the skiier enabling take-up of slack in the rope.

3,018,754
OUTBOARD MOTOR
Merton F. Snyder, Minneapolis, and Leslie W. Foster, St. Paul, Minn., assignors to McCulloch Corporation, Marine Products Division, Minneapolis, Minn., a corporation of Minnesota
Filed Sept. 12, 1960, Ser. No. 55,327
2 Claims. (Cl. 115—18)



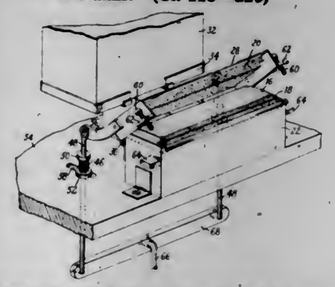
1. In an outboard motor, an elongated motor housing enclosing a motor drive shaft, said housing having a pair of facing bosses spaced longitudinally of the housing, an elongated steering column extending generally parallel to the drive shaft and having its ends journaled in said bosses, a boat bracket pivoted to the steering column for mounting the housing in upright position on a boat transom with the steering column in substantially vertical position and said steering column having a pistol grip handle formed on the exterior thereof, said handle being located horizontally opposite the longitudinal center of weight of the motor to serve as a balanced carrying handle for the motor when it is dismounted.

3,018,755
METHOD AND APPARATUS FOR MAKING HOSE
Emerson D. Metcalf, Salem, N.H., assignor to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 27, 1958, Ser. No. 769,879
3 Claims. (Cl. 118—125)



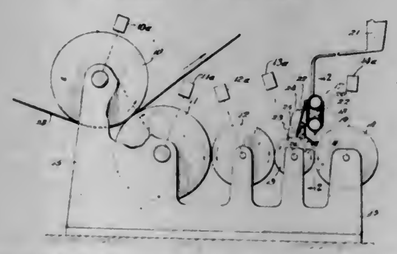
1. In a wiper die for controlling the thickness of a liquid outer coating on a core passing therethrough, the combination of: a laterally movable body having an axial passage for movement of the core therethrough; a plurality of die plates positioned in said body adjacent the exit end of said passage for radial movement relative to said axial passage, each of said die plates having a spacing face and a wiping face axially disposed along the inner surface of the plate, with said faces separated by a liquid reservoir, and with said wiping face positioned downstream from said spacing face, and with said spacing face having at least one axial edge projecting inward beyond said wiping face for engaging the core passing through the die and having at least one axial groove adjacent said edge; a core guide plate carried on said body adjacent the entrance end of said passage and having an opening therein aligned with said passage through which the core passes for positioning the core within said passage; means for draining said reservoirs, and an annular tension spring in engagement with said die plates for urging said die plates toward said axial passage to bring said edges into contact with the core as it moves along said passage.

3,018,756
FLUID APPLYING MACHINES
Charles O. Kilham, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Aug. 7, 1958, Ser. No. 753,743
6 Claims. (Cl. 118—226)



1. In a machine of the type in which fluid from a reservoir is applied to porous sheet material by pressing the sheet material against dispensing pads, a first porous elastic dispensing pad and a second such pad, the two pads together defining a total application area, said pads being of the type characterized by the fact that dispensation of fluid therefrom is effected by compression, the first pad being a structure of high porosity capable of receiving by capillary attraction a major charge of fluid per unit of application area and the second pad being a structure of low porosity capable of receiving by capillary attraction only a minor charge of fluid per unit of application area.

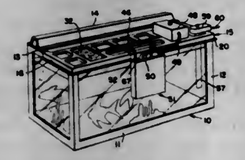
3,018,757
PAPERMAKING MACHINE
Frank B. Loppnow, Appleton, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed June 1, 1959, Ser. No. 817,221
8 Claims. (Cl. 118—262)



1. A device for coating a web of sheet material comprising a pair of rotatable rolls having a nip between

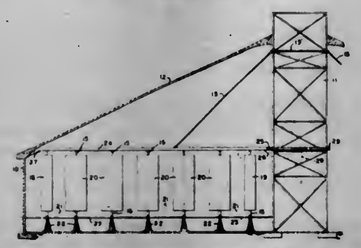
them for confining a pond of coating liquid, means for driving said rolls in counter-rotation, means for transferring coating from one of said rolls to a web of sheet material, and a coating deflector baffle extending downwardly toward said nip and into and below the surface of said pond for minimizing turbulence in the pond of coating as said rolls rotate.

3,018,758
MULTI-PURPOSE FISH AQUARIUM COVER
Marcel M. Arnould, East Orange, N.J., assignor to Metal Frame Aquarium Company, Pinebrook, N.J.
Filed Apr. 2, 1958, Ser. No. 725,971
2 Claims. (Cl. 119—5)



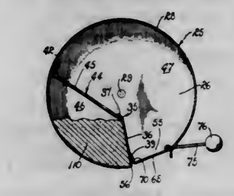
1. A fish aquarium storage cover of thin sheet flexible and resilient plastic-like material that can be easily cut to accommodate and support various pieces of equipment used in the operation of a fish aquarium, comprising an upwardly depressed U-shaped in cross-section resilient flange around the periphery of the cover adapted to tightly and resiliently fit over the top edge of the aquarium, other upwardly depressed means constituting rib portions extending at spaced intervals throughout the top of the cover and joining said flange to provide stiffening means therefor, said rib portions defining tray sections upon the cover, said tray sections adapted to be cut to provide openings through which pieces of equipment can be extended and a substantially horizontal strengthening rib extending outwardly from along the outer portion of the upwardly depressed U-shaped flange constituting a reinforcement for the flange.

3,018,759
POULTRY HOUSING
Jim D. Helbig, Arvada, Colo., assignor, by mesne assignments, to Gates Cyclo International, Inc., Denver, Colo., a corporation of Colorado
Filed May 5, 1960, Ser. No. 27,112
21 Claims. (Cl. 119—21)



1. Poultry housing comprising a building, a plurality of tiers of cages connected together in annular rows to form a plurality of annular rows, the plurality of said rows of tiers of cages having different diameters and being located concentrically relatively to each other and to a single axis, said annular rows being spaced apart radially to provide annular aisles between facing rows, means movably supporting said rows of tiers of cages, means rotating said annular rows of tiers of cages in different concentric paths about said single axis, a service area comprising a floor extending radially from the innermost to the outermost annular row of tiers of cages, and a service unit movable radially of the housing and longitudinally of said service area into aisle positions from which all the cages of facing rows of tiers of cages are accessible to said unit when the plurality of rows of tiers of cages are rotated across said service area.

3,018,760
DUST BATHING APPARATUS
Herbert L. Tate, 444 Blackstone Ave., Fresno, Calif.
Filed May 16, 1960, Ser. No. 29,249
9 Claims. (Cl. 119—159)



1. An apparatus for enabling a fur bearing animal to clean its fur at predetermined intervals comprising a cylindrical housing adapted to contain an animal bathing dust and having a passageway therein large enough for such an animal to enter or leave the housing, means supporting the housing for movement between bathing and non-bathing positions with the passageway located respectively upwardly and downwardly relative to the housing, a door, means connecting the door to the housing for movement between a closed position over the passageway in said non-bathing position and an open position extended away from the housing and from the passageway in said bathing position, and means mounted within the housing for filtering the dust and retaining the same in the housing during movement into non-bathing position and making the dust available for bathing purposes during movement into bathing position.

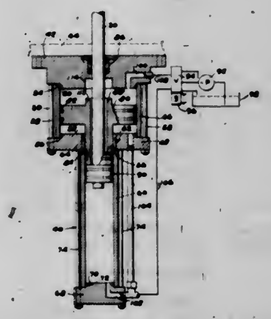
3,018,761
BALL-POINT PEN WITH TANDEM CARTRIDGES
Charles D. Ashcroft, 1219 Oak Circle Drive, Glendale 8, Calif.
Filed Oct. 2, 1957, Ser. No. 688,103
6 Claims. (Cl. 120—42.1)



1. A cartridge for use in a ball-point pen comprising two similar aligned cartridge sections, each having a ball-point writing end and an end opposite said writing end, each section having an ink carrying chamber in communication with said writing end and with said op-

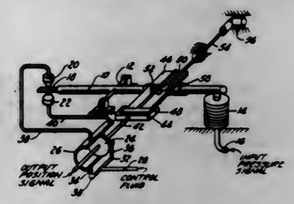
posite end, said opposite end being open, each of said ink carrying chambers being generally tubular and terminating at one end thereof in a small diameter portion forming the writing end, each of said writing ends terminating in the ball point, each section having an integral stop portion extending transversely therefrom and the stop portions of both sections being similarly spaced from the respective ends, a sleeve connector slidably engaged with both sections and having one end in limiting engagement with the stop portion of one of the sections, said one section having its opposite end within said connector and its writing end extending outwardly of said connector, said connector being provided with an integral limiting shoulder intermediate its ends engaged with the other section to space the sections, and means to vent said opposite end and said chamber of said one section through said connector.

3,018,762
DOUBLE PISTON ARRANGEMENT
Karl W. Korb, Hazel Park, Mich., assignor to Permanent Mold Die Co., Inc., Hazel Park, Mich., a corporation of Michigan
Filed May 2, 1960, Ser. No. 26,356
6 Claims. (Cl. 121—38)



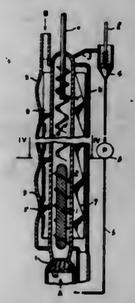
1. A double piston power unit for high breakaway force and low volume sustained motion which comprises a composite cylinder having a main head, a secondary head, and a base head, cylinders locked between said heads to form connected operating cylinder chambers, said primary and secondary heads having a diameter substantially greater than that of the base, and the primary cylinder chamber between said main head and said secondary head being substantially greater in diameter than the secondary cylinder formed between the secondary head and the base head, a piston in said primary cylinder intended to have a very short stroke and a piston in the secondary cylinder intended to have a prolonged stroke relative to the first piston, a piston rod on said second piston extending through said first and second heads and through said first piston, and an annular chamber surrounding said piston rod within said first piston providing communication between the primary cylinder chamber adjacent said main head and said second piston, and means for directing pressure to said first head for shifting both of said pistons within the cylinder chambers simultaneously as a unit until said first piston reaches the end of its stroke and thereafter shifting said second piston independently of said first piston in said secondary cylinder, and means for directing pressure selectively to the base head and the secondary head for shifting both of said pistons back to an original position.

3,018,763
SERVO CONTROL APPARATUS
James R. Goerke, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 20, 1960, Ser. No. 23,522
10 Claims. (Cl. 121—41)



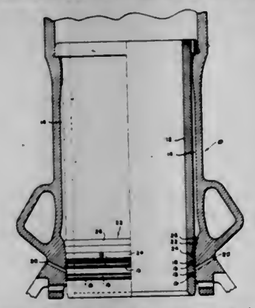
1. In a servo mechanism the combination of a movable beam having a fixed pivotable support intermediate to the ends thereof, means for applying a variable input force to said movable beam at a point a substantially fixed distance from said fixed pivotable support, a hydraulic servo motor having a pilot control valve controlled by said movable beam, a movable platform having an inclined track formed thereon connected to said servo motor and movable in position therewith, a substantially constant force producing means operative to urge said movable platform into contactive sliding engagement with said movable beam along said inclined track.

3,018,764
MARINE BOILER EXHIBITING SMALL VARIATIONS OF LEVEL
André Huet, 48 Ave. du President Wilson, Paris, France
Filed June 13, 1958, Ser. No. 741,815
Claims priority, application France June 27, 1957
6 Claims. (Cl. 122—34)



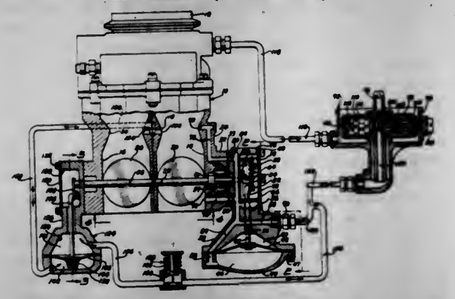
1. A marine boiler effective to undergo only small variations of water level in response to movements of the ship in which it is mounted comprising, in combination, a shell, a plurality of vertical double-circuit heat-exchanging tubes disposed in said shell and adapted to be fed by the heating fluid and by the water to be vaporized, each heat-exchanging tube comprising a single unidirectional inner tube and an outer coaxial tube defining an annular space between them providing a flow passage for the heating fluid, the inner tube being formed with an inlet at its lower end to receive the water to be vaporized and the outer tube being formed with an inlet at its upper end to receive the heating fluid and an outlet at its lower end for evacuation of said heating fluid, said heating fluid thereby being adapted to enter said outer tube at its upper end, to circulate through said annular space between the two coaxial tubes and to leave said outer tube at its lower end, means providing helical surfaces interiorly of the inner tube to impart a gyratory movement to the mixture of water and steam contained in the inner tube, and steam outlet means in the upper portion of said inner tube for withdrawing steam directly from the upper portion of said inner tube, headers to admit the heating fluid to the inlet at the top of each of the outer tubes, headers to collect the heating fluid at the bottom of the outer tubes, tubes to admit water to the inlet at the bottom of each of the inner tubes, said steam outlet means comprising a separator of steam and water at the top of each inner tube, means to recirculate the separated water, and headers to collect the steam from said steam outlet means.

3,018,765
SEAL FOR ENGINE CYLINDER LINER
Alton Bayne Neild, Jr., 1007 Fitzallen Road, Glen Burnie, Md.
Filed Sept. 15, 1959, Ser. No. 840,209
8 Claims. (Cl. 123—41.83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



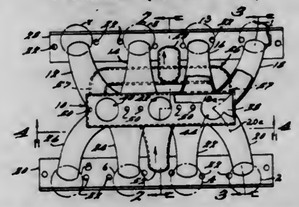
1. In an internal combustion engine having means for preventing cavitation on the block of said engine, a wet cylinder liner spaced inwardly of the bore of the engine block and provided therewith a downwardly converging annular space at the lower end portion of the cylinder liner, the lower outer surface of said liner being formed with a plurality of longitudinally spaced O-ring grooves, and an O-ring formation positioned in each groove, the uppermost O-ring formation having an upwardly extending seal band free to follow the movement of the cylinder liner and keep the coolant out of the zone of the engine block.

3,018,766
FOUR-BARREL GOVERNOR CARBURETOR
Joseph E. Francis, Utica, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed June 25, 1956, Ser. No. 593,459
23 Claims. (Cl. 123—119)



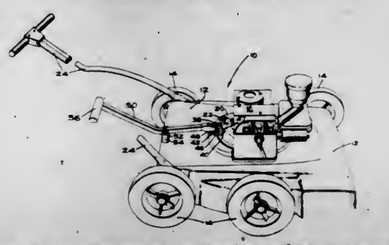
1. A two-stage fuel control for an internal combustion engine, comprising primary and secondary valves for controlling the flow of separate charges of motive fluids to said engine and governor means for closing both of said valves when governed speed is reached.

3,018,767
ENGINE INTAKE MANIFOLD
John W. Sailler, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed May 26, 1959, Ser. No. 815,868
3 Claims. (Cl. 123—122)



2. In an internal combustion engine having a bank of cylinders arranged in a row longitudinally thereof each including an intake passage for each cylinder; intake manifold means for feeding a combustible charge to said intake passages of said cylinders comprising a single level elongated primary distribution passage means of generally rectangular section extending longitudinally of said engine adjacent said bank of cylinders, said primary passage means having a top wall, a bottom wall and opposite side walls, individual branch passage means spaced apart longitudinally of said primary passage means and extending transversely thereof, said branch passage means having inlets in a side wall of said primary passage means and outlets connecting with the said intake passages of said cylinders, a plurality of riser means opening into said primary passage means through the top wall thereof for delivering a combustible charge to said primary passage means, a heating chamber of generally rectangular section underlying said primary passage means and extending longitudinally of said engine substantially contiguously with said primary passage means, said heating chamber having as its top wall the bottom wall of said primary passage means, a single inlet port opening into said heating chamber generally centrally longitudinally thereof through which to deliver a heating medium to said heating chamber and a pair of discharge ports opening into said heating chamber through which to discharge said heating medium, said discharge ports being located adjacent the opposite longitudinal ends of said heating chamber.

3,018,768
ENGINE STARTING APPARATUS
Howard H. Thompson, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed Feb. 9, 1960, Ser. No. 7,633
5 Claims. (Cl. 123—185)



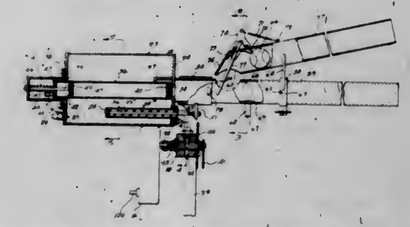
1. In a gardening machine having a frame, an engine mounted on said frame, and a cranking mechanism con-

nected to said engine, the combination of a cable having one end thereof operatively connected to said cranking mechanism and the other end thereof fixed to the frame, and a foot-operated lever mounted for movement relative to said frame and having a portion operatively engaged with said cable intermediate said cable ends and movable along a path transverse to a line passing through said points of connection for imparting a starting impulse to the engine.

3,018,769
BASEBALL PITCHING AND FIELDING PRACTICE DEVICE

Frank L. Parsoneault, 725 Bungalow St., El Segundo, Calif.

Filed July 2, 1959, Ser. No. 824,713
6 Claims. (Cl. 124—11)



1. A ball projecting device comprising a support, a compressed gas tank mounted on said support, a source of compressed gas connected to said tank, said tank being formed in one wall thereof with an aperture, a tubular barrel secured to said tank around said aperture, an inclined tubular magazine mounted on said barrel and communicating therewith to supply balls thereto, a piston rigidly secured in said tank in alignment with said aperture, a hollow plunger member sealingly and slidably supported on said piston and defining therewith an expansible chamber located opposite said one wall and being of substantially the same cross-sectional area as said plunger member, whereby to retract the plunger member responsive to expansion of the chamber, means biasing said plunger member into sealing contact with said one wall around said aperture, a valve, means alternately opening and closing said valve, and conduit means connecting said source of compressed gas to said chamber through said valve.

3,018,770
SLING BOW

Charles A. Saunders, 313 Morton Road, Columbus, Nebr.

Filed May 15, 1958, Ser. No. 735,633
4 Claims. (Cl. 124—20)

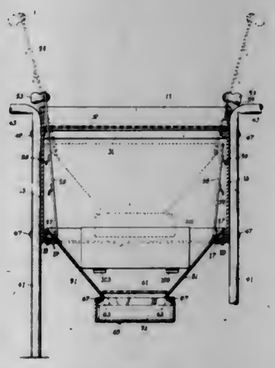


1. A sling bow comprising a frame having a hand-grip portion from which similar opposed prongs extend, tubular elastic power links attached at one end respectively to the prongs, a cross tie connecting the other end of the power links and adapted to operatively engage the nock of an arrow to be shot from the sling bow, a pull-cord also connecting said other end of the power links rearwardly of the cross tie, a pair of bifurcated pull studs, each tubular link having an end portion remote from said prongs and receiving the diverging arms of the pull stud and compressing them together, said cross tie being gripped between the compressed arms of each pull stud, said pull-cord extending rearwardly from the non-bifurcated end of each pull stud.

3,018,771
PORTABLE AND ADJUSTABLE CHARCOAL GRILL

Harold F. Curtis, Irondequoit, N.Y. (9 Country Club Drive, Rochester 19, N.Y.)

Filed Aug. 5, 1955, Ser. No. 526,678
2 Claims. (Cl. 126—25)

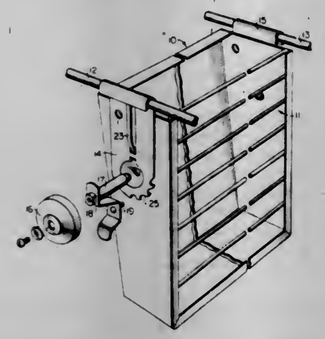


1. A grill comprising an upright body having four deep vertical walls substantially enclosing the body in a substantially airtight manner on all sides thereof and being open at the top and bottom and defining edges thereat, a foraminous grilling surface extending horizontally within said body near the top thereof, inwardly extending ledges at the bottoms of said side walls, a firebox structure movable vertically within said body below said grilling surface, said firebox structure having four substantially airtight sidewalls downwardly inclined from a large upper end substantially snugly filling the horizontal cross-sectional area of said body to a lower end materially smaller than said area of said body, a fuel supporting foraminous grate only slightly larger than the area of said lower and smaller end of said firebox, said grate resting in said firebox substantially at the lower end thereof, said firebox movable vertically within the said body to adjust said grate to different distances from said grilling surface and being so shaped that said large upper end of said firebox is in relatively close contact on all four sides with the four walls of said body in all vertically adjusted positions of said firebox and is in substantially airtight contact with and resting upon said ledges of said body when said firebox is in its lowest adjusted position, a draft-regulating and ash-receiving drawer supported from said firebox below the smaller end thereof and slidable horizontally with respect to said firebox, said drawer and the adjacent parts of said firebox being so shaped that when said drawer is in a closed position of adjustment it forms a substantially airtight closure for the small end of said firebox and when it is moved horizontally to an open position of adjustment gaps are created between a front wall of said drawer and a front wall of said firebox and between a rear wall of said drawer and a rear wall of said firebox to allow air to flow over said front and rear walls of the drawer and into the drawer and thence upwardly into said small end of said firebox, said drawer having a bottom wall extending between said front and rear walls of said drawer and continuing horizontally rearwardly a substantial distance beyond said rear wall of said drawer to constitute an ash-catching surface lying beneath said small end of said firebox when said drawer is adjusted forwardly to its open position allowing a flow of air, a pair of hanger links attached by hinges to opposite sides of said firebox and rising therefrom substantially vertically along and parallel to the opposite side walls of said body and having handle portions accessible above the top edges of said side walls of said body and a plurality of hook portions on each of said hanger links to to have any selected pair of hook portions on the two links selectively hooked over and supported by said top edges of said side walls of said body to hold said firebox selectively at various elevations within said body, both of said hanger links being unconnected to said side walls of said body, aside from said hook connections, and capable of moving freely relative to said body so that the range of vertical adjustment of said firebox within said body is limited only by engagement of said firebox itself with said ledges of said body when said firebox is in its lowest adjusted position and by engagement of said firebox itself with said foraminous grilling surface when said firebox is in its highest adjusted position, said grilling surface having notches or openings along two opposite sides thereof for permiting the movement of said hanger links therethrough.

3,018,772
CHARCOAL BURNER MEANS FOR COOKING GRILLS

Lawrence E. Blazey, Bay Village, Ohio, assignor to Terra Industries, Inc., Cleveland, Ohio, a corporation of Ohio

Filed May 26, 1958, Ser. No. 737,719
2 Claims. (Cl. 126—25)

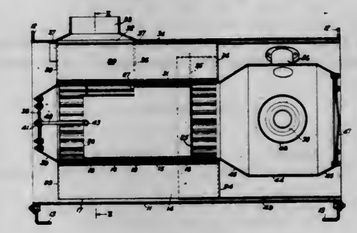


1. Outdoor grill apparatus comprising means defining a barbecue zone, strap supporting means at opposite upper sides of said zone, said apparatus including two pairs of straps with the straps of each pair depending from said strap supporting means at opposite upper sides of said zone, said straps each being horizontally translatable along the side from which it depends, a pair of charcoal baskets within the zone, each basket being hangingly and pivotally supported between its own pair of said two pairs of straps, and detent means between each of said baskets and one of the straps from which it depends for defining horizontal, intermediate and vertical positions of each basket.

3,018,773
FURNACE AND HEAT EXCHANGER FOR HEATING GASES

James Oldaker Donnison, Earls Colne, England, assignor to Air Exchangers Limited, London, England, a British company

Filed Aug. 28, 1958, Ser. No. 757,811
Claims priority, application Great Britain Aug. 30, 1957
6 Claims. (Cl. 126—110)



1. A continuous type heater for indirectly heating gases comprising an elongated casing of substantially constant cross section, an elongated tubular wall forming a main baffle of similar but smaller cross section and of shorter length than said casing, and longitudinally disposed within said casing spaced therefrom, a corrugated wall in the space between said main baffle and said casing and occupying approximately three quarters of the space peripherally and set with its ridges and valleys longitudinally, its ridges being at least nearly in contact with said casing and its valleys being at least nearly in contact with said main baffle, said corrugated wall extending at both ends beyond said main baffle but not beyond the ends of said casing, means forming a combustion chamber discharging combustion gases towards one end of said main baffle, said main baffle being imperforate and having those portions thereof which face the combustion chamber and face said corrugated wall so formed that the combustion gases are directed by it into the space inside said corrugated wall and outside said main baffle, means at both ends of said corrugated wall closing the ends of the space between said corrugated wall and said main baffle and thereby restricting the combustion gases discharged by said combustion chamber to the spaces inside the ridges of said corrugated wall without impeding flow of gas to be heated in the space between said corrugated wall and said casing, and walls defining lateral passages extending radially from the space within said corrugated wall and to an opening in said casing for carrying the combustion gases out of said casing, said passages being located in the space between said main baffle and said casing in that part of the periphery not occupied by said corrugated wall and extending substantially over the same length as said corrugated wall, and spaces being left between said walls for the flow of a proportion of the gas to be heated.

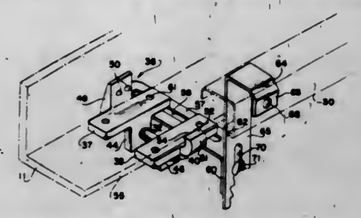
3,018,774
ADJUSTABLE MOUNTING APPARATUS

Gerald E. Rubens, 334 Comstock Ave., Los Angeles 24, Calif.

Filed Sept. 26, 1957, Ser. No. 686,425
7 Claims. (Cl. 126—202)

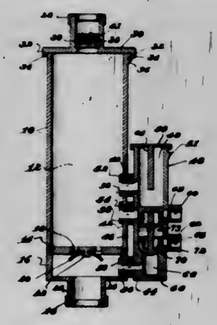
5. In an upright fireplace construction having an opening, a lintel spanning said opening adjacent the upper edge thereof, clamping means readily detachably gripped to the lintel, extension means adjustably connected to the clamping means to be moved in a horizontal plane with respect

to the fireplace construction, fastening means securing the extension means to the clamping means, a firescreen and



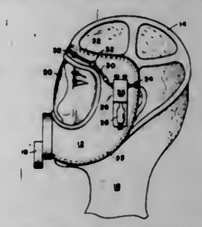
vertical adjustable means attached to the upper end of the firescreen for securing the firescreen to the extension means.

3,018,775
RESUSCITATOR APPARATUS
Porter C. Wilson, 320 E. Elvira, and Maxwell R. Palmer, 2516 E. 4th St., both of Tucson, Ariz.
Filed Sept. 10, 1959, Ser. No. 839,135
2 Claims. (Cl. 128—29)



1. A mouth to mouth resuscitator apparatus comprising a large main cylinder and a smaller secondary cylinder, said large cylinder being formed with upper and lower chambers connected by a downwardly opening valve and with upper and lower tubular neck portions providing communication to the exterior and with a plurality of vertically spaced ports formed in the wall, two above and one below said valve, said smaller cylinder being formed with two external vertically spaced ports and also with tubular extensions snapped into the ports of said larger cylinder to connect said cylinders together and to provide communication between the two chambers of said larger cylinder and said smaller cylinder, a valve seat in the lower end of the smaller cylinder communicating with the lower tubular extension and lower port of said larger cylinder and an abutment in said smaller cylinder spaced above said valve seat, a sliding valve in said smaller cylinder movable between its lower position in engagement with said valve seat and its upper position in engagement with said abutment with its upper end formed to close the intermediate port of said larger cylinder to communication with the upper of said external ports and its lower end formed to close the opening in said valve seat and the lower port of said larger cylinder to communication with the lower of said external ports when said valve is in its lowermost position, said valve in its upper position uncovering said intermediate port and valve seat opening so that said intermediate and lower ports communicate with said upper and lower external ports, respectively, the upper of the ports in said larger cylinder opening in said smaller cylinder above said valve in its upper position, so that as an operator inhales at the upper tubular neck portion fresh air is brought into the apparatus and, upon exhalation, the valve is forced into its lower position to close said intermediate and lower ports of said larger cylinder to said external ports and the air is forced through the lower tubular extension into the lungs of the patient.

3,018,776
TOXIC CHEMICALS MASK
Vincent F. Saitta, 53 Elmira St. SW., Washington, D.C., and Thomas W. McConville, 3114 St. Luke Lane, Baltimore, Md.
Filed July 17, 1958, Ser. No. 749,308
3 Claims. (Cl. 128—141)
(Granted under Title 35, U.S. Code (1952), sec. 266)

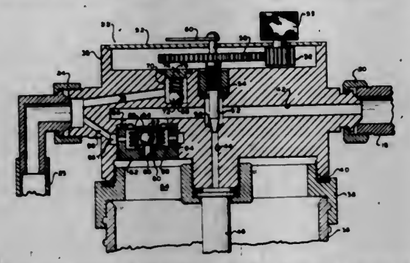


1. A toxic chemicals mask comprising a face-piece adapted to be placed on the face of a person subject to chemical attack, a pneumatic seal attached to the inner periphery of said face-piece for providing an air tight seal between said mask and said face, an air flushing tube attached to said mask and having one end extending inside said face-piece for flushing said face-piece of poisonous gas, a valve system attached to said face-piece and connected to said seal and said air flushing tube for selective operation thereof, said valve system further comprising an inlet port having a conical needle mounted therein and channel connections between said port and said seal flushing tube, a compressed gas supply comprising a cylinder having a small neck with a soft metallic cap to seal said cylinder inserted in said inlet port, a U-shaped yoke attached to said valve system by a pair of hinges at the open end of said yoke, an adjustable bolt mounted on the central part of said yoke forcing said cylinder into said inlet port and against said needle, a first valve in a first of said channel connections between said port and said seal operated by a spring loaded plunger having a square knob for adjustably inflating said seal, and a second valve in a second of said channel connections between said port and said flushing tube operated by a spring loaded plunger having a round knob for selectively flushing said face-piece with compressed gas from said supply.

3,018,777
ANESTHETIC VAPORIZER AND ADMINISTERING APPARATUS
Harold A. Dietrich, Madison, Wis., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 17, 1958, Ser. No. 781,013
10 Claims. (Cl. 128—188)

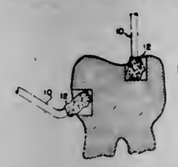
1. An anesthetic vaporizer apparatus having an inlet adapted to receive varying flows of a carrier gas, a vaporizing chamber adapted to contain a liquid anesthetic agent to be volatilized, a delivery outlet, means for dividing the carrier gas delivered to the vaporizer inlet such that a portion thereof is passed through said vaporizing chamber and subsequently recombined with the remainder of the carrier gas for discharge from said delivery outlet,

and means in communication with the carrier gas inlet, and including a member actuated by gas pressure differential acting thereon, operative in response to the delivery



of a predetermined flow rate of the carrier gas to said vaporizer to prevent the passage of carrier gas through said vaporizing chamber to said delivery outlet.

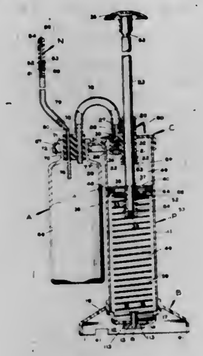
3,018,778
SWAB
Herbert Brilliant, 6612 Torresdale Ave., Philadelphia 35, Pa.
Filed Feb. 16, 1960, Ser. No. 9,037
2 Claims. (Cl. 128—269)



1. A dental swab for use in treating dental cavities, said swab including an applicator and a pellet of a predetermined dry-state size secured to one end of said applicator, said pellet being made of a resilient, porous and absorbent material which, when wetted, becomes soft and expands considerably beyond said dry-state size, said pellet being impregnated with a metallic component which reacts with mercury whereby, when mercury is applied to said pellet, an amalgam is formed.

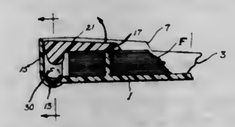
3,018,779
BODY CAVITY EVACUATING APPARATUS
Tracy B. Tyler, 7936 Byron Ave., and Arthur F. Alders, 2530 Shelter Ave., Sunset Island 2, both of Miami Beach, Fla.
Filed July 28, 1959, Ser. No. 830,093
4 Claims. (Cl. 128—278)

1. A suction pump for evacuating body cavities comprising a substantially vertically disposed cylindrical body member, a closure cap mounted on the top portion of said cylindrical body member, said closure cap having a centrally disposed bore and a second bore, a piston rod slidably mounted in said centrally disposed bore, check valve means mounted in said second bore, said check valve means comprising a valve seat, a ball valve, a coil spring yieldingly urging said ball valve onto said valve seat and securing means for said coil spring, said piston rod having a peripheral shoulder adjacent its lower end within said cylindrical member, a backing plate mounted on said piston rod in abutting relation with said peripheral shoulder, said backing plate having a plurality of bores, a valve body having a hub portion in contact relation with said backing plate, a peripheral portion in spaced relation to said backing plate, a cup washer mounted between said backing plate and said valve body, said valve body having a substantially circular channel portion connecting said hub portion and said peripheral portion and communicating with said bores in said backing plate, a plurality of vents in said channel portion, a valve plate, spring means urging said valve plate into contact relation with said valve body for closing said vents, a base closure member mounted at the bottom portion of said cylindrical body member, said base closure member comprising a substantially cup-shaped body portion extending across said cylindrical member, said body portion having a substantially centrally disposed bore and an exhaust port, an outwardly extending and downwardly flared side wall for supporting said body portion in a plane above the bottom portion of said side wall, a valve stem slidably mounted in said bore, a valve head mounted on said valve stem and normally in contact relation with the lower surface of said body portion for closing said exhaust port, a coil spring mounted on said valve stem extending upwardly of the



upper surface of said body portion and yieldingly urging said valve head to its closed position, said side wall having a plurality of openings for the discharge of air to the atmosphere, said closure cap means having a pair of spaced apart arm portions, a receptacle having a neck portion insertably mounted between said arm portions and supported by a flared lip portion, a spring clip pivotally mounted on one of said arm portions, the other of said arm portions having means for engaging said spring clip and securing said receptacle on said closure cap means, duct means connecting said receptacle and second bore in said closure cap means, nozzle means and a flexible conduit connecting said receptacle and said nozzle means for evacuating a body cavity, said piston rod having an annular groove at its upper portion, pivoted latch means mounted on said closure cap engaging said annular groove for securing said piston rod at its lower position on said cylindrical body member.

3,018,780
LOOSE-LEAF BINDER
Sidney R. Greenblatt and Richard A. Guthman, Jr., Atlanta, Ga., assignors to Montag, Inc., Atlanta, Ga., a corporation of Ohio
Filed May 15, 1961, Ser. No. 110,088
3 Claims. (Cl. 129—23)



1. In a binder structure for loose-leaf sheets having at least a pair of openings therein disposed adjacent a

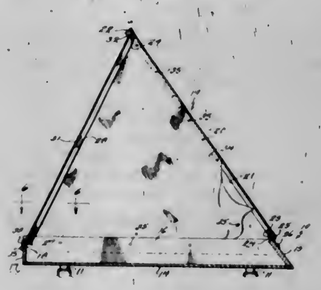
marginal edge, a base underlying said sheets, a pair of sheet engaging pins on said base for receiving the opening in said sheets, said pins being spaced from a marginal edge of said base, a cover means for holding the sheets on said pins, said cover means comprising a plate-like member pivotally mounted on said base and being swingable from a position overlying said pins to a position spaced away from said pins, a pair of vertical ears on said base disposed adjacent said first mentioned marginal edge, normal thereto and in parallel spaced relation, a vertical wall defining said first mentional marginal edge and defining with said ears and the marginal edges of the sheets and said cover, a closed receptacle, an aperture in one of said ears, an elongated well disposed adjacent the vertical wall defining the edge of said base, said well tapering toward said aperture, and means adjacent said aperture and movable with said cover for covering said aperture to prevent dislodgement of articles disposed in said well through the aperture in said ear.

3,018,781
METHOD AND APPARATUS FOR CIGARETTE ROD FORMING
Oswald E. Eissmann, Richmond, Va., assignor to American Machine & Foundry Company
Filed Dec. 22, 1958, Ser. No. 782,005
27 Claims. (Cl. 131—64)



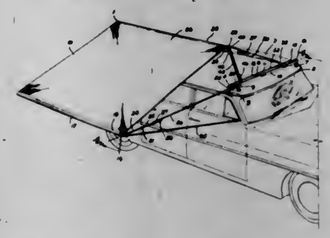
1. An apparatus for cigarette filler forming comprising means to propel tobacco forwardly, means to shred and boost the tobacco forward, stationary means for spiralling the forward movement of said shredded tobacco to cause the tobacco to twist into a spirally formed cigarette filler, and means for discharging the so formed cigarette filler.

3,018,782
CAR TOP SLEEPER
Roman E. Hershberger, 111 S. 13th St., Fort Dodge, Iowa
Filed Aug. 31, 1959, Ser. No. 837,082
1 Claim. (Cl. 135—1)



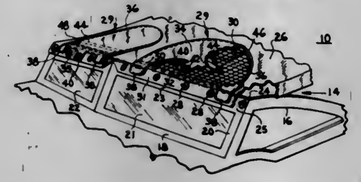
A car top sleeper comprising an open top box, including a bottom, side walls, and front and rear walls, attachment means positioned in aligned spaced relation along said side and rear walls, a pair of transversely positioned supporting bars secured to said bottom for mounting the box on a car top, suction cups at the opposite ends of said supporting bars for holding the latter in place on the car top, a cover having side flanges and a flange at one end and pivotally attached at the other end to the front wall of the box and swingable from a position closing the top of the box to an elevated position extending upwardly at an angle thereto, a waterproof seal between the latter end of said cover and the front wall of the box, attachment means positioned in aligned spaced relation on the side flanges of said cover, a pair of braces pivotally secured on the opposite sides of said cover and adjacent the flange on the end of the latter and adapted to rest with their free ends on the rear wall of the box to hold the cover in the elevated position, a flexible waterproof canvas panel formed in three parts including a rectangular center section secured at its top by a waterproof joint to the flange at the first end of the cover and adapted to be positioned across the braces and secured at its bottom to the rear wall of the box by the attachment means on the latter, and triangular sections each integral along one lateral side with the respective side of the center section and adapted to be secured on their other lateral sides to the respective side flanges of the cover by the atttachment means on the latter and on their base sides to the sides of the box by the attachment means on the latter.

3,018,783
COLLAPSIBLE SHELTER DEVICE
Raymond K. Tyson, Kansas City, Mo.
Filed Mar. 6, 1959, Ser. No. 797,766
6 Claims. (Cl. 135—5)



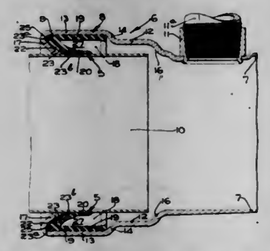
1. A collapsible and extensible shelter device comprising, a support frame including spaced elongate parallel rails, a plurality of generally U-shaped hoops each including spaced leg members and a bar connecting the leg members at one end, said bars each being of a length substantially corresponding to the spacing of said rails, each of said hoops having free ends of its respective leg portions pivotally mounted on said rails, the leg portions of the respective hoops being of different lengths with the pivotal mounting of the free ends of said leg portions having different spacing longitudinally of said rails and the pivotal mounting of one hoop being adjacent one end of said rails and in collapsed positions the bars of each of the hoops are adjacent the other end of the rails and the leg portions are substantially longitudinally of said rails, the leg portions of one of the other hoops having slidably connected sections for contracting the length of said leg portions, and an elongate flexible means having one end connected to the bar of said one hoop having pivotal mounting of its leg portions adjacent said one end of the rails and having the other end connected adjacent the other end of said rails with an intermediate portion connected to the bar of the hoop having slidably connected leg sections, said flexible means being of a length to be taut and cooperate with said hoops to support same when said hoops are swung to erected position wherein the hoop with the slidably connected leg sections has same contracted and said one hoop extends substantially horizontally outwardly from said one end of the rails.

3,018,784
VENTILATED ROOFS FOR BOATS
Richard Louis Buxman, Howe St., Point Pleasant, N.J.
Filed Sept 29, 1958, Ser. No. 764,030
3 Claims. (Cl. 135—6)



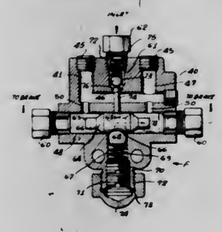
1. A roof for an open cockpit on a boat which has a windshield having
a top edge to which the roof is secured,
said roof comprising a large-area sheet of air-tight material having a front end including an edge portion adapted to fit over the top of the windshield and adapted to be secured thereto,
a screen panel in said sheet near the front end thereof,
a movable flap covering said screen panel and having a front edge adjacent to the front end of said sheet,
all of the edge of said flap except the portion comprising the front end being secured to said sheet,
a pocket formed in said flap at the front thereof adjacent to and parallel to said edge portion,
a normally curved flexible metal strip disposed within said pocket and adapted to bend away from the sheet and to hold the front edge of said flap up and away from said screen to allow air to pass therethrough,
said strip also being capable of being straightened out to allow said flap to meet and cover said screen panel to prevent air from flowing therethrough,
a pair of tabs spaced apart at the front end of the flap and extending forwardly therefrom,
said tabs being secured to the edge portion of the large-area sheet which overlays the top of the windshield,
said tabs serving to prevent the movable flap from collapsing under the pressure of air when the boat is running at high speed against a strong wind,
and a locking tab fastened to said flap and adapted to be secured to said sheet to hold said flap down and closed over said screen.

3,018,785
PIPE COUPLING
William J. Adams, Jr., Campbell, and Donn B. Furlong, Santa Clara, Calif., assignors to FMC Corporation, a corporation of Delaware
Filed Apr. 5, 1957, Ser. No. 650,903
9 Claims. (Cl. 137—107)



7. In a pipe coupling which automatically locks and releases in response to fluid pressure and having a housing adapted to receive therein the end of a pipe having a smooth outer surface, the improvement which comprises a resilient sealing and locking gasket of generally V-shaped cross section disposed in said housing and having an inner leg extending longitudinally of the pipe and inwardly toward the pipe and normally spaced from the outer surface of the pipe, and a rigid member embedded in said gasket having one end terminating in the bight portion of the gasket abutting said housing and the other end disposed in the inner leg of the gasket and projecting inwardly therefrom whereby the longitudinal axis of said locking member is inclined relative to the longitudinal axis of said pipe section, said rigid member being normally spaced from the pipe section whereby the introduction of fluid pressure in said housing causes the inner leg of said gasket to deflect so that said rigid member is forced into gripping engagement with the smooth surface of the pipe to prevent axial movement of the pipe relative to said housing and said gasket forms a seal between said housing and said pipe but, upon termination of fluid pressure in said housing, said inner leg resiliently returns to a spaced position allowing the pipe to drain and the end of the pipe to be withdrawn.

3,018,786
SAFETY BRAKE VALVE
James L. Stratton, Los Angeles, Calif.
Filed Jan. 23, 1959, Ser. No. 788,589
7 Claims. (Cl. 137—118)

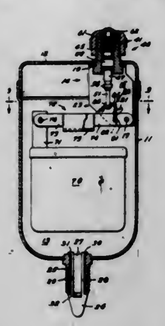


5. In a brake valve: a valve body formed with a fluid inlet, a valve chamber with opposite end outlets and distributing passages to interconnect opposite ends of said chamber to said inlet; a valve member movably mounted in said chamber to alternatively close one of said outlets; valve means in said fluid inlet means; and means to hold said valve means in an open position, said valve means being responsive to movement of said valve member to a closed position on one of said outlets to close said fluid inlet.

3,018,787
AIR RELIEF DEVICE
Chester Howard Kirk, Jr., 14 Glen Ave., Cranston, R.I.
Filed Oct. 25, 1960, Ser. No. 64,794
3 Claims. (Cl. 137—202)

1. An air relief valve comprising a circular casing, a bonnet permanently fastened to one end of said casing, means at the other end of said casing for connecting said casing to a liquid containing system, a float, provided with a projection, disposed interiorly of said casing, a bracket having two parallel sides connected by a base, said base secured to the interior surface of said bonnet, a pin secured on opposite ends to said two parallel sides, each parallel side having a slit consisting of a vertical path terminating in a base area located at an angle of forty-five degrees to said vertical path, said pin being equidistant from both said vertical path and said base area, an adjustable, vertically disposed valve sleeve mounted in and extending through said bonnet and the base of said bracket, a valve stem in said valve sleeve having an enlarged shoulder portion in said circular cas-

ing, said valve stem located mid-way between and in parallel alignment with said two parallel sides, a float lever a pintle pivotally connecting one end of said float lever to said projection on said float, the other end of said float lever pivotally connected to said pin, an actuator consisting of a member having means pivotally connecting said actuator to said float lever, said member having guide



means slidably engaging the slit in each parallel side of said bracket, said slits being sufficiently wide to provide free sliding movement for said guide means, said actuator having a shoulder, and means on said shoulder to engage and disengage the shoulder portion of said valve stem upon movement from the upright to the inverted position of said tubular casing.

3,018,788
FLUID BRANCH SWITCHING SYSTEM
David B. Perlis, 8631 Morehart Ave., Sun Valley, Calif.
Filed Sept. 29, 1959, Ser. No. 843,268
4 Claims. (Cl. 137—331)



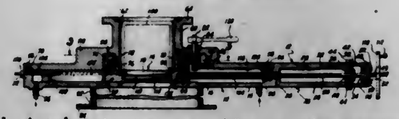
1. A cycling valve for controlling fluid flow comprising, in combination:

a hollow body with a fluid inlet and a fluid outlet at opposite ends thereof; a valve means within the body movable toward and away from the fluid outlet for controlling fluid flow therethrough;

a piston member coupled to the valve means, the piston member being movable axially within the body in response to fluid pressure thereon between a first position in which the valve means is spaced from the fluid outlet and a second position in which the valve means covers and closes the fluid outlet;

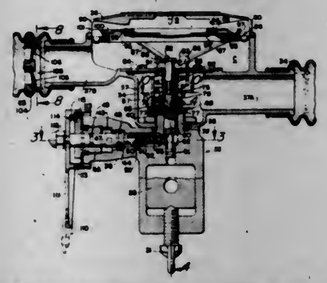
cam and follower means rotating the piston member during said axial movement to successive ones of a plurality of rotational positions; and abutment means limiting axial travel of the piston member in at least one of the last mentioned rotational positions to stop the piston member and valve means short of the second position closing the fluid outlet.

3,018,789
VALVE
George Aristos Pagonis, San Jose, Calif., assignor to Light Metals Research Laboratory, Inc., San Jose, Calif.
Filed Dec. 31, 1959, Ser. No. 863,289
11 Claims. (Cl. 137—341)



1. A valve structure comprising: a valve housing including a flow passage; a valve seat surrounding said flow passage; a slide valve having a solid portion and an apertured portion; means for moving said valve from a position in which the solid portion registers with the valve seat and the apertured portion is remote therefrom, and vice versa; means guiding said slide valve in a plane parallel to said valve seat; and a heating element carried by said solid portion in a position to register with said flow passage when the slide valve is in its closing position.

3,018,790
RESPIRATION APPARATUS
Robert Kimes, Culver City, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed June 18, 1956, Ser. No. 591,914
1 Claim. (Cl. 137—454.6)

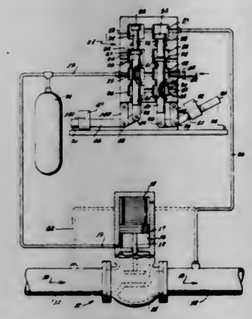


A diaphragm assembly for breathing apparatus comprising: a substantially rigid disklike plate having concentrically spaced inner and outer annular holding means and a plurality of openings extending through the plate between said holding means; an annular valve seating surface on said plate at the outer side of said openings; an annular flange surrounding said seating surface and extending outwardly and upwardly from said surface; a first resilient annular member having its inner edge portion arranged to be received and retained in said inner annular holding means, said first annular member extending over said openings and engaging said seating surface; and a second resilient annular member having its inner edge portion arranged to be received and retained in said outer annular holding means, the peripheral portion of said second annular member being formed for clamping engagement by separable parts of a housing structure, the intermediate portion of said second annular member having a transverse length in excess of the actual distance between said peripheral and inner edge portions.

3,018,791
VALVE CONTROL APPARATUS
Granville S. Knox, Glendale, Calif., assignor to Hydril Company, Los Angeles, Calif., a corporation of Ohio
Filed Aug. 8, 1958, Ser. No. 754,001
18 Claims. (Cl. 137—458)

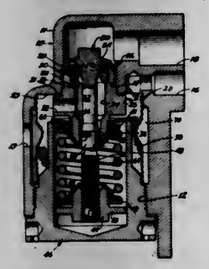
1. Control apparatus of the character described, comprising a container for constant auxiliary fluid pressure

in a line to be exerted on a safety valve part operable to close the safety valve shutting off flow therethrough of main stream fluid pressure subject to variation, a housing having inlet and outlet passages, first and second means in the housing communicating with said container and each being operable to block escape of auxiliary fluid pressure through said passages and individually movable to unblock auxiliary fluid pressure escape in response to application on said respective means of main stream pressure increased above and decreased below a predeter-



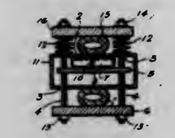
mined main stream pressure range, said housing having an inlet for said main stream pressure and each of said means including a piston communicating with said main stream pressure inlet and against which said main stream pressure is applicable, and force applying means including first and second levers and weights acting through said respective levers on said first and second movable means for opposing said main stream pressure application thereon thereby to establish the upper and lower limits of said main stream pressure range.

3,018,792
DUAL ORIFICE VALVE
James R. Brucker, West Des Moines, Iowa, assignor to Delavan Manufacturing Company, West Des Moines, Iowa, a corporation of Iowa
Filed Feb. 16, 1959, Ser. No. 793,434
3 Claims. (Cl. 137—469)



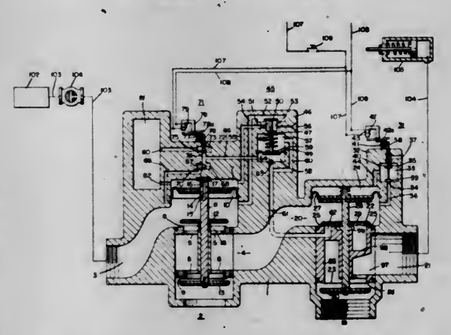
1. In a flow divider valve for supplying fluid to a dual orifice nozzle, said valve comprising a body having an inlet port, a primary outlet port and a secondary outlet port adapted to supplement fluid flow through said primary port upon attainment of a predetermined pressure drop across said valve, the improvement comprising in combination a ring-like valve seat disposed within said secondary outlet, a stem mounted for axial movement within said body and terminating at its outer end in a frusto-conical plug which begins to flare from the stem and terminates in an impactor head on the downstream side of said seat, a curved groove in the underside of said head tangentially joined with the frusto-conical surface of said plug to form a smooth fluid-diverting surface from the stem to the periphery of said head, said valve seat flaring outwardly in a direction away from said head to provide an annular space of progressively increasing width upstream from the line of contact between said plug and said seat, and spring means for biasing said plug toward said seat.

3,018,793
FLUID THROTTLING VALVE
Fridtjof Aagaard, Rahway, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Aug. 5, 1958, Ser. No. 753,359
2 Claims. (Cl. 137—595)



1. A fluid throttling valve comprising in combination a box having two parallel outer walls with two sets of aligned openings therein, a floating control plate within said box having a pair of bolts attached thereto and passing through and freely movable in said openings, one of said parallel walls constituting a clamping plate carrying on its outer surface and passing between said bolts a deformable conduit for said fluid, an arbor attached across one pair of the protruding ends of said bolts and engaging said conduit on the side opposite said clamping plate, the other parallel wall carrying spring means attached to the opposite ends of said bolts and tending to cause them to move said arbor towards said clamping plate, means including an expandable chamber attached to the control plate and located between said plate and said other parallel wall for moving said arbor away from the clamping plate in opposition to the thrust of said spring means, and means for varying the volume of said expandable chamber and thereby actuating said valve.

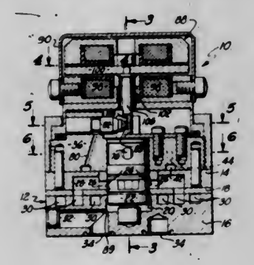
3,018,794
VALVES AND SAFETY CONTROLS THEREFOR
Robert H. Hoge, Gates Mills, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 31, 1959, Ser. No. 803,242
15 Claims. (Cl. 137—620)



1. A valve apparatus for controlling the supplying of fluid pressure from a fluid pressure source to an appara-

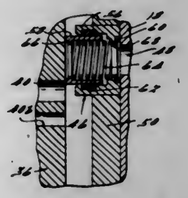
tus served thereby, and for exhausting the fluid pressure from the served apparatus; the valve apparatus comprising a first and second valve unit serially connected between the source of fluid pressure and the served apparatus; a first and second operating means for independently operating said first and second valve units respectively by pressure derived from the source; a feedback circuit connected to communicate fluid pressure between said second valve unit and said first operating means; a pilot valve connected in said feedback circuit normally maintaining it open and operable to close it; check valve means disposed in the feedback circuit between said pilot valve and second valve unit and arranged to permit the flow of fluid through it only in the direction toward said pilot valve; said first operating means normally maintaining said first valve unit continuously operated and connecting the source to said second valve unit and said first operating means to cause said first valve unit to disconnect the source and exhaust the served apparatus, said second operating means normally maintaining said second valve unit unoperated to exhaust the served apparatus and operable to cause said second valve unit to connect the served apparatus to the source, said pilot valve operable in unison with said second operating means, and means disposed in said feedback circuit between said pilot valve and first operating means to make the fluid flowing to said first operating means through said feedback circuit ineffective to cause said first valve unit to operate only when said second valve unit exhausts the served apparatus.

3,018,795
ELECTRO-HYDRAULIC SERVO VALVES
Carroll G. Gordon, 3 William Court, Menlo Park, Calif.
Filed Sept. 12, 1960, Ser. No. 55,244
10 Claims. (Cl. 137—623)



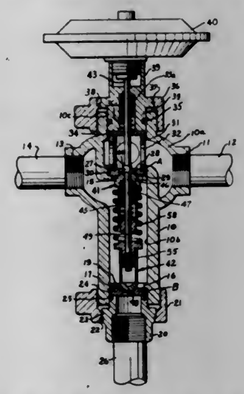
1. A mechanical feed back servo valve which includes: rotary valve means including a housing having a pressure passage and other passages formed therein and a valve rotor rotatably mounted in said housing, said rotor being capable of being rotated so as to place said pressure passage in communication with some of said other passages; mechanical feedback means operatively associated with said rotary valve means, said feed back means including means for dividing hydraulic fluid into two separate streams and for creating a pressure differential between said streams, said means for dividing being operatively connected to said pressure passage, means for rotating said rotor in accordance with said pressure differential operatively associated with said rotor and said means for dividing, and means for varying said pressure differential operatively associated with said rotor and said means for dividing; said torque motor means operatively associated with said feed back means, said torque motor means including flapper means for actuating said means for varying operatively associated with said means for varying.

3,018,796
VALVE PORT ARRANGEMENT
Ronald L. Loup, Manchester, Mich., assignor to Double A Products Company, Manchester, Mich., a corporation of Michigan
Filed Nov. 24, 1958, Ser. No. 775,849
4 Claims. (Cl. 137—625.12)



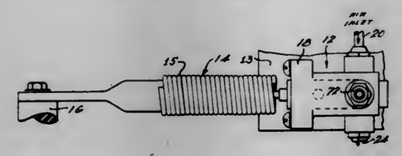
1. A valve having a movable disc therein, and a seal seat therein seated against one face of said movable disc, said seal seat being loosely retained in a hollow passage portion of the valve with means to seal the seal seat relative to the passage portion and being self-biased or urged against said face by fluid pressure within the valve acting on the differential area between the portions of the surface of said seal seat exposed to the fluid pressure, a plurality of ports opening on said movable disc and alignable with said seal seat by relative movement between said seal seat and movable disc, said ports being closely spaced relative to one another so that at least a portion of each port can be simultaneously aligned with said seal seat in one position of the seal seat relative to said movable disc.

3,018,797
VALVES
Asbury S. Parks, 3 E. Rivercrest Drive, Houston, Tex.
Filed July 28, 1958, Ser. No. 751,205
5 Claims. (Cl. 137—627.5)



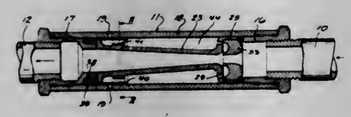
1. A valve including, a valve body having a lower tubular portion and an enlarged upper portion, the tubular portion having a bore open at its lower end, a valve seat support within the enlarged upper portion, said body having an access opening aligned with the valve seat support, an upper valve seat insertable through the access opening and engageable with the support, retaining means also insertable through the access opening and engageable with the valve seat and having its end portion projecting outwardly from the body, means for securing the retaining means to the valve body, a lower valve seat mounted in the lower end of the tubular portion of the valve and in axial alignment with the upper valve seat, a pair of valve members between said seats, each valve member co-acting with one of the valve seats to control flow therethrough, resilient means acting upon said valve members to constantly urge the members toward engagement with their respective seats, the valve member co-acting with the upper valve seat being tubular, the valve member co-acting with the lower valve seat having a solid valve head which has its external surface substantially free of projections, whereby no limitation as to minimum size is placed upon the opening through the lower valve seat, an operating stem extending into the body and through the upper tubular valve member and having is lower end connected to the lower valve member, means on the stem engageable with the tubular valve member when the stem is moved in one direction to unseat said tubular valve and additional means on the stem engageable with the lower valve member when the stem is moved in an opposite direction to unseat said other valve member.

3,018,798
LEVELING VALVE
Omer E. Bowlus, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,997
11 Claims. (Cl. 137—627.5)



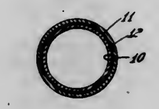
1. A fluid regulating valve comprising a body having a cavity therein, a fluid inlet port and a fluid exhaust port in said body communicating with said cavity, a working outlet in said body communicating with said cavity, porting means in said cavity simultaneously resiliently urged toward each said port to simultaneously restrict the flow area of each said port, said porting means comprising a unitary resilient strip having leg portions disposed adjacent each said port and a spring portion integral with and connecting said leg portions, a porting means actuator extending into said cavity and into juxtaposition to said leg portions and adapted to selectively engage each thereof, and resilient sealing means secured to said actuator and said body to hermetically seal said porting means and said actuator in said cavity and to provide a resilient pivotal mounting for said actuator.

3,018,799
WATER SURGE ARRESTER
Willy B. Volkmann, 3928 N. Frederick Ave., Milwaukee 11, Wis., and Earl F. Hartzell, deceased, late of Miami, Fla., by Carol Hartzell, administratrix, 5705 SW. 39th St., Miami 44, Fla.
Filed Feb. 20, 1958, Ser. No. 716,375
12 Claims. (Cl. 138—26)



1. In a device for damping pressure waves in liquid flow in a pipeline conveying liquid under pressure, a housing to be inserted into the pipeline in liquid-tight relation at the pressures produced by said waves, a tube in the housing and having a throat section and a diffuser section increasing in area from the area of the throat section, the housing and tube forming a reservoir and the tube having orifices therethrough of substantially less area than the tube throat for flow or liquid from and into the reservoir, the orifices restricting flow into and out of the reservoir to a relatively small fraction of the total flow through the tube, and a nozzle in the housing for directing a jet of the liquid into the tube throat, the nozzle having a cavity connecting with the tube orifices, the nozzle terminating adjacent the tube throat and co-acting therewith in providing an opening from the cavity for aspirating the liquid from and forcing the liquid into the reservoir through the orifices.

3,018,800
HOSE PIPES
Gustave Jean Julien Hanssens, Forest, Brussels, Belgium, assignor to Plastidry Societe Anonyme, Brussels, Belgium, a Belgian body corporate
Filed Oct. 25, 1955, Ser. No. 542,674
Claims priority, application Great Britain Apr. 4, 1955
17 Claims. (Cl. 138—125)



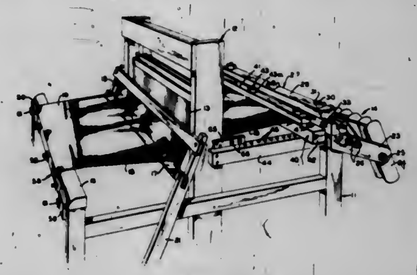
1. A method of making flexible hose pipe capable of being rolled flat, which comprises the steps of impregnating an artificial-fibre fabric tube throughout with a mixture of a thermoplastic polyvinyl compound, drying the fabric tube during an independent step of the method to remove volatile liquids which will vaporise at the uniting temperature of the compound, applying at least one tube composed of a thermoplastic polyvinyl compound to the impregnated fabric tube and applying heat and pressure to unite the impregnated fabric and the thermoplastic polyvinyl tubes through the medium of the polyvinyl impregnating compound.

14. A flexible hose pipe, capable of being rolled flat as a fire hose, comprising a seamlessly woven tubular fabric consisting of warp threads and weft threads of at least one artificial fibrous material, and extending longitudinally and circumferentially respectively relative to said hose pipe, said circumferentially extending threads having a stretch under tensile load greater than that of the longitudinally extending threads, a layer of solidified thermoplastic material, embedding said woven fabric and filling the interstices between said warp threads and said weft threads, and at least one layer of a preformed seamless extruded tube of a thermoplastic polyvinyl compound being fusedly connected to, and forming a continuous, blister free bond with, said layer of solidified thermoplastic material embedding said woven fabric.

3,018,801
LOOM FOR CIRCULAR WEAVING
Gertrude V. Coon and Howard A. Coon, Los Gatos, Calif., assignors to Coon Development Company, Los Gatos, Calif., a corporation of California
Filed June 20, 1957, Ser. No. 666,838
12 Claims. (Cl. 139—29)

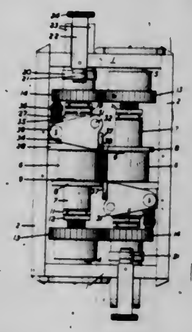
2. In a loom for weaving cloth comprising a heddle assembly for manipulating warp threads and a reed for beating weft threads into position, the improvement which comprises a warp feed clamp for clamp-

ing warp threads and feeding them forwardly by increments, said warp feed clamp being movable in the di-



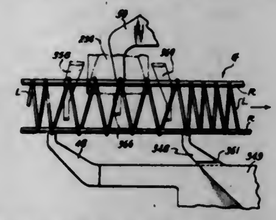
rection of the warp and being also diagonally adjustable in the plane of the warp.

3,018,802
MANUFACTURE OF TRANSPOSED MULTIPLE STRIP CONDUCTOR
Ronald Hinds, Stockton Heath, England, assignor to British Insulated Callender's Cables Limited, London, England, a British company
Filed Feb. 24, 1959, Ser. No. 795,124
Claims priority, application Great Britain Feb. 27, 1958
12 Claims. (Cl. 140—71)



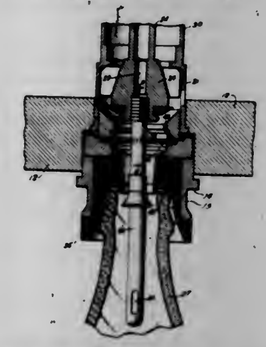
1. For the manufacture of transposed multiple strip conductor, a transposing head comprising a closing die of substantially rectangular cross-section of which two opposite side walls each have a rectilinear generatrix and are relatively reciprocable in a direction parallel to their generatrices and of which the two end walls are each formed in part by a member constrained to move with one of the side walls and in part by a member movable with the other of the side walls in the direction of reciprocation, a pair of rotary cams at diagonally opposite corners of the die aperture, each cam being rotatable about an axis parallel to the direction of reciprocation of the two side walls, the two cams serving gradually to engage two diagonally opposite wires of a substantially rectangular group of wires of rectangular cross-section as the group approaches the closing die and force them laterally by a distance corresponding to the width of one of the component wires towards the opposite side walls of the die, and means for reciprocating the two side walls each in a direction parallel to its generatrix through a distance corresponding to the thickness of one of the component wires.

3,018,803
DOUBLE LOOSE TURN PICKER
Herbert Peter Hasselman, Lock Haven, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Feb. 11, 1959, Ser. No. 792,663
5 Claims. (Cl. 140—71.5)



1. In a winder for winding a wire about a pair of side rods with loose turns intermediate tight turns, cutters for cutting away the ends of the loose turns at the juncture with the tight turns, an additional cutter arranged substantially midway between the first two cutters for cutting the loose turns medially of its length to form two loose turn sections and picker mechanism having two sets of turn engaging devices for engaging both loose turn sections and removing them from the remainder of the wire wound about the side rods.

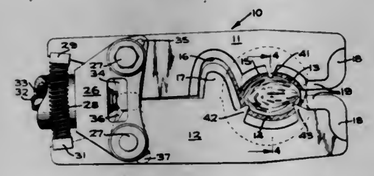
3,018,804
FILLER VALVES FOR PULP DRINKS OR THE LIKE
Hector J. Granier, Vergeze, France, assignor to Geo. I. Meyer Manufacturing Company, Cudahy, Wis., a corporation of Wisconsin
Filed Feb. 16, 1959, Ser. No. 793,455
4 Claims. (Cl. 141—286)



2. In a beverage filling machine including a filler bowl, a counter-pressure filler valve having a passage therein, a liquid valve adapted to control the flow of liquid therethrough to a container to be filled, and a vent tube carried by and passing through said liquid valve and adapted to supply counter-pressure gas to said container at substantially the desired height of the liquid in the filled bottle, the improvement comprising, a cut-off valve to stop the flow of liquid to the container and to prevent the escape of gas through the liquid passage and through the filler bowl at the conclusion of the filling operation, said cut-off valve comprising, a disc of flexible material supported in the liquid passage about the periphery of the liquid passage below the liquid valve and above the bottom of the vent tube, said disc comprising an outer ring, and a plurality of substantially truncated segmental sections formed integrally on the inner edge of the ring

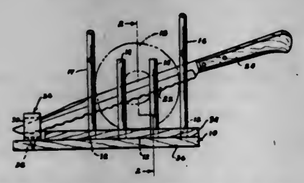
and extending inwardly toward the center, and defining a circular opening to receive the vent tube, said sections being spaced apart from each other and from said vent tube sufficiently to permit flexing of the sections downward to fill the bottle and to return to horizontal position and stop flow of liquid downward when gas pressure from the bottle exceeds the downward pressure of the liquid in the liquid passage to stop the downward flow of liquid in the bottle, utilizing the surface tension of the liquid to prevent passage of the liquid through the spaces separating the sections.

3,018,805
PIT GRIPPING DEVICE
Sylvio Puccinelli, San Jose, Calif., assignor to FMC Corporation, a corporation of Delaware
Filed June 12, 1959, Ser. No. 819,884
4 Claims. (Cl. 146—28)



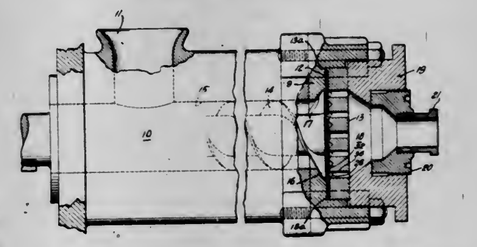
1. A fruit cutting and pit gripping apparatus comprising a pair of sharpened blades mounted for pivotal movement between an open and a closed position, each of said blades having a recess with the recess of one blade cooperating with the recess of the other to define a pit receiving opening, a pit gripping tooth rigid with one of said blades and projecting into said pit receiving opening to grip the pit near its longitudinal midpoint, a pair of longitudinally spaced pit gripping teeth rigid with the other of said blades and projecting into said opening to grip the pit near the ends thereof, said three teeth being the sole pit gripping members and having longitudinally extending V-shaped grooves therein arranged to cooperate to firmly grip the pit at three points on each side of the suture plane of the pit when said blades are moved to a closed position, and means for moving said blades to a closed position, said three point pit gripping engagement adapting the fruit cutting and pit gripping apparatus to operate with fruit having pits which vary considerably in size and shape.

3,018,806
APPARATUS FOR CUTTING BAGELS OR THE LIKE
Norman Moore, 84—09 35th Ave., Jackson Heights, N.Y.
Filed Jan. 6, 1958, Ser. No. 707,222
5 Claims. (Cl. 146—150)



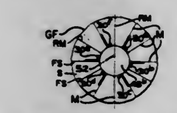
1. Apparatus for cutting bagels or the like including in combination a base having an area on which the bagel is supported, and having a plurality of sockets in the base on both sides of said area, posts having lower end portions that fit into said sockets and having upper portions which extend for a substantial distance above the top of the base, different posts on both sides of the area being independent of one another, said posts including forward posts at the front end of the area and closely spaced from one another throughout most of their length, the forward posts having their upper portions flaring outwardly away from one another in an upward direction to provide a flaring entrance for a guideway between the forward posts for a slicing knife, and a pair of rearward posts at the back of said area, closely spaced but having clearance between them for receiving the knife.

3,018,807
PERFORATED UNIT FOR PLASTIC EXTRUDING MACHINES
James W. Clinefelter, 618 Ridgecrest Road, Akron 3, Ohio
Filed May 2, 1958, Ser. No. 732,625
6 Claims. (Cl. 146—174)



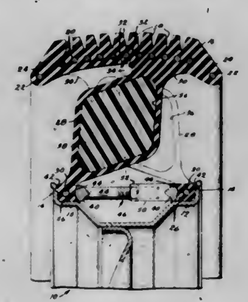
1. In or for a plastic extruding machine of the rotary screw conveyor type, a perforated unit through which the plastic material is pressed under the propelling force of the rotary screw conveyor and comprising an open mesh screen and a supporting plate making face contact therewith and formed with a multiplicity of through-holes distributed over the effective area of the screen, said holes being arranged in a series of concentric circular rows and said supporting plate being formed on its screen contacting face with a series of V-shaped grooves arranged in concentric circles to match the rows of holes and thereby relieve the holes at their entrance ends, the holes extending through the sloping side walls of the V-shaped grooves and starting adjacent the screen contacting face of the supporting plate.

3,018,808
METHOD OF SECTIONIZING GRAPEFRUIT
Wilber C. Belk, Lakeland, Fla., assignor to FMC Corporation, a corporation of Delaware
Filed Apr. 23, 1958, Ser. No. 730,299
6 Claims. (Cl. 146—236)



1. A method of removing the meat segments of a peeled grapefruit from the enclosing radial membranes comprising the steps of holding a peeled grapefruit in fixed position, rupturing the bond between one radial face and the adjacent radial membrane of each of a plurality of meat segments, rupturing approximately one half the bond between the opposite face of the meat segment and the adjacent radial membrane of a portion of said plurality of segments, rupturing the bond between the opposite face of the meat segment and the adjacent radial membrane of the remainder of said plurality of segments, and stripping all segments from the associated membranes.

3,018,809
FLEXIBLE NON-PNEUMATIC TIRE
Lucien A. Bernard, 11 Rue St. Leonard, Nantes, France, assignor of one-half to Jules E. Briche, Fort Lauderdale, Fla.
Filed Nov. 10, 1959, Ser. No. 852,042
1 Claim. (Cl. 152—41)



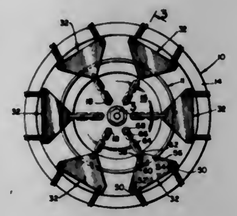
In combination with an annular tire rim having radially extending flange portions and peripheral flange portions joined thereto defining a generally rectangular and annular recess about the periphery of said tire rim, a resilient tire wheel including an annular ground engaging portion having tire tread in its outer peripheral face, a plurality of axially spaced internal reinforcing members disposed in said annular ground engaging portion, a pair of annular wheel rim engaging portions each having an annular reinforcing member disposed therein and outside walls generally perpendicular to the axis of the said tire rim, said wheel rim engaging portions fitting in the axially opposed ends of the rectangular recess about the periphery of said tire rim, a plurality of radially extending integral spokes connecting said annular wheel rim and ground engaging portions, said spokes extending diagonally across each other from said annular wheel rim engaging portions to the opposite side of the inner peripheral face of said annular ground engaging portion, each of said spokes having an enlarged portion, said enlarged portions being filled with a resilient material different from the tire, and means to firmly engage said annular wheel rim engaging portions in the annular peripheral recess of said tire rim including axially extending telescoping brace members joined to said pair of engaging portions providing an axial engagement of the outside surfaces thereof with the inside surfaces of said radially extending flange portions.

3,018,810
PNEUMATIC TIRE WITH SEPARATE TREAD RINGS
Carlo Barassi, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed Oct. 19, 1959, Ser. No. 847,237
Claims priority, application Italy Feb. 25, 1959
8 Claims. (Cl. 152—176)



1. In a pneumatic tire having a radial carcass and a separate tread mounted thereon, said tread being composed of a plurality of tread rings provided with resistance elements arranged adjacent their inner surfaces and parallel to the latter, said inner surfaces of said tread rings being of equal and constant diameters such that all points on the inner surfaces of all of said tread rings are at the same distance from the axis of rotation of the tire, said carcass having a plurality of annular peripheral grooves for receiving said tread rings, the bottom surfaces of the laterally outermost grooves being constituted by conical surfaces whose axes are coincident with the axis of rotation of the tire and whose diameters increase progressively towards the sidewalls of the tire carcass.

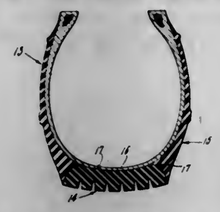
3,018,811
ANTI-SKID ASSEMBLY
Joseph G. Deponai, 4103 Rollins Ave., Baltimore, Md.
Filed Mar. 8, 1961, Ser. No. 94,223
4 Claims. (Cl. 152—233)



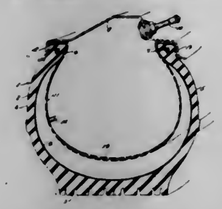
1. In a wheel assembly including a rim for receiving a tire thereon and including mounting means for removably mounting the rim, anchor means on one side of said rim, and an anti-skid assembly including a first portion detachably connected to said anchor means, anti-skid means fixed to said first portion for disposition transversely of the tread of the tire, a second portion connected to said anti-skid means and disposed on the other side of said rim, and means connected to said second portion and detachably connected to said rim mounting means, said anchor means comprising a laterally projecting cleat portion fixed to said rim adjacent the outer periphery thereof, said first anti-skid assembly portion comprising an apertured plate removably anchored on said cleat portion, said rim mounting means comprising outwardly projecting mounting studs, said second portion of said anti-skid assembly being detachably connected to one of said mounting studs, said anti-skid means comprising elongated elements anchored at terminal ends in spaced relationship with respect to said cleat portion and second portion connected to said mounting stud, said second anti-skid assembly portion comprising a plate including a flexible mounting element anchored at one end in triangular relationship to terminal ends of said elongated elements, said flexible mounting portion including means at its other end detachably engageable on the wheel stud.

3,018,812
ADHERING VINYLPYRIDINE-BUTADIENE RUBBERS TO OTHER RUBBERS
Henry E. Haxo, Wayne, Bernard C. Barton, Butler, and Irwin J. Schaffner, Hohokus, N.J., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 25, 1958, Ser. No. 756,842
10 Claims. (Cl. 152—330)

8. A pneumatic tire having an enhanced adhesive bond between a highly abrasion-resistant tread stock and a highly unsaturated hydrocarbon rubber carcass material wherein said tread stock comprises a vinylpyridine-butadiene rubber; that surface of said carcass material which is to be bonded to said tread stock being suffused, before curing, with an aniline-aldehyde condensation product formed by reacting aniline with an aliphatic aldehyde having 4 to 7 carbon atoms.



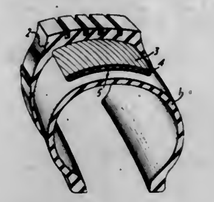
3,018,813
DIAPHRAGM FOR TUBELESS TIRES
Robert C. Koch and Robert P. Whipple, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Jan. 28, 1958, Ser. No. 711,681
6 Claims. (Cl. 152—341)



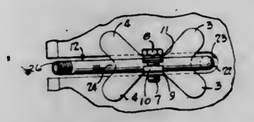
1. The combination of an open-bellied tubeless tire having axially spaced annular beads for mounting on a wheel rim, an annular extensible safety diaphragm of less radial extent than the radial extent of the inner wall of said tire and having radially inner margins anchored adjacent said beads in fluid tight relation therewith and adapted to define with such rim a radial inner chamber and with said tire a radial outer chamber, and means for controlled passage of fluid to both said inner and outer chambers, said diaphragm in unstretched state having a circumferential dimension of from 85% to 50% of the circumferential dimension of said inner wall of said tire, and said diaphragm being capable of stretching correspondingly from no more than 15% to no more than 50% of its unstretched circumferential dimension, and said diaphragm having a modulus of at least 300 pounds per square inch when fully stretched in the tire.

3,018,814
TIRE MANUFACTURE
Jean Louis Robert Saint-Paul, Paris, France, assignor to Société anonyme dite: Pneumatiques et Caoutchouc Manufacture Kleber-Colombes, Colombes (Seine), France, a corporation of France
Filed July 1, 1958, Ser. No. 745,868
Claims priority, application France July 2, 1957
14 Claims. (Cl. 152—361)

1. A tire comprising a tire casing, a tire tread surrounding the outer periphery of said casing, and a protective laminate assembly extending circumferentially around said casing between it and said tread, said assembly comprising at least one strip of rubber composition having parallel spaced reinforcing strands incorporated therein and extending at an angle of about 10° to about 50° with respect to the midline of the tire carcass, said strip having side portions thereof folded laterally inwards into substantially mating engagement to define a two-ply structure having radially inner and outer faces, and a layer of rubber composition having reinforcing fibre incorporated therein, said fibre extending substantially transversely of the strip, said layer having radially inner and outer faces with at least one of its faces in engagement with a face of said structure.

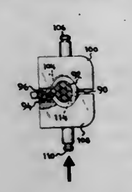


3,018,815
VALVE STEM RETAINER
Frank B. Robb, 1351 Mayfield Road, and Samuel J. Kosik, Jr., 6146 Landerhaven Drive, both of Mayfield Heights, Ohio
Filed Oct. 28, 1958, Ser. No. 770,160
4 Claims. (Cl. 152—427)



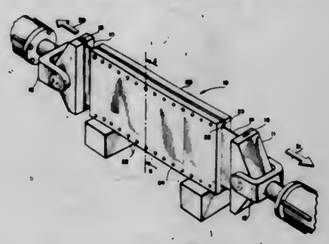
1. In a valve stem retainer of the class described, in combination, a valve stem, a body adapted to be positioned beneath said stem, arms integral with the body and extending outwardly therefrom some distance from the stem, and clamping instrumentalities integral with the body and extending therefrom so as to surround the stem and retain the stem in position with respect to a rim or the like, said instrumentalities including parts to actuate the same for clamping action.

3,018,816
DIES FOR CRIMPING TOOL
Robert F. Cobaugh, Harrisburg, and Frederick W. Wahl, Hummelstown, Pa., assignors to AMP Incorporated
Filed Oct. 6, 1958, Ser. No. 765,358
4 Claims. (Cl. 153—1)



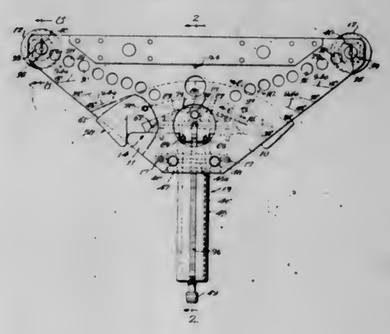
1. A pair of dies for crimping and locking electrical connectors of the type having a locking tab onto conductors including a first die having an arcuate working surface with a kerf in one side thereof, and a second die having a complementary working surface with a raised abutment on one side and a clinching surface on the other side, whereby the abutment locates the connector in the dies, the working surfaces crimp the conductor to the connector and the clinching surface locks the connector in place.

3,018,817
STRETCH LEVELING APPARATUS AND METHOD
Walter G. Wheeler, Los Angeles, and Olaf B. Wendell, El Segundo, Calif., assignors to The Hufford Corporation, El Segundo, Calif., a corporation of California
Filed Mar. 1, 1960, Ser. No. 12,194
9 Claims. (Cl. 153—35)



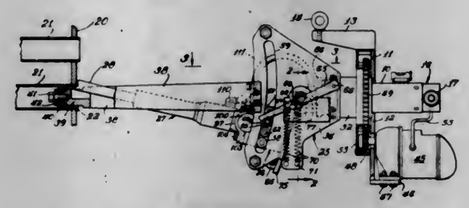
1. Stretching apparatus for leveling sheet metal material, the combination comprising, movable means for engaging the opposite material edges, means in spaced relationship to the material to be leveled for housing the material and confining the material during leveling, and means for moving the movable means to stretch level the panel while so confined.

3,018,818
PIPE BENDER
Edwin C. Swanson, Rockford, Ill., assignor to Greenlee Bros. & Co., a corporation of Illinois
Filed Feb. 27, 1957, Ser. No. 642,839
8 Claims. (Cl. 153—48)



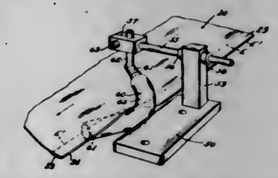
1. In a pipe bender having a reciprocable force applying ram, in combination, an adapter connected to the ram, a bending shoe detachably connected to the adapter and having a pipe engaging face curved to produce a desired pipe bend and recessed transversely throughout its length, semi-circularly, to receive substantially half the outer circumference of the pipe to be bent, and means for removing bent pipe from the semi-circular recess in the bending shoe when the shoe and pipe wedged therein are detached from the adapter and removed from the bender, comprising, means defining a pair of bores in the bending shoe, each transverse to and intersecting the semi-circular recess in the pipe engaging face substantially tangentially at the bottom of the recess, and a pair of knockout pins, one receivable in each bore, and each having a tapered end portion engageable tangentially with pipe in the bending shoe, so that when delivered an impact blow, the pin is effective to dislodge the pipe.

3,018,819
TUBE BEADING APPARATUS
Hugo H. Grobecker, Milwaukee, Wis., assignor to Cleaver-Brooks Company, a corporation of Wisconsin
Filed Oct. 13, 1959, Ser. No. 846,204
5 Claims. (Cl. 153—81)



1. A tube beading apparatus, comprising, a support, a tool carrier rotatably mounted on the support, a beading tool on the carrier having a reciprocable forked tube engaging portion for forming a bead on the tube end progressively about the tube periphery, means for rotating the carrier on the support to move the tool around the tube periphery, means mounting the tool for limited pivotal movement on the carrier about an axis enabling movement of the tube engaging portion of the tool radially of the tool carrier axis during rotation of the carrier thereby to enable the tube engaging portion of the tool to conform to irregularities in the diameter of the tube, and cooperable stop means on the tool and the carrier for limiting said last mentioned movement to a predetermined amount in opposite directions.

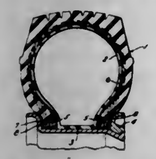
3,018,820
FABRIC EDGE TURNING DEVICE
Horace D. Stevens, Sarasota, Fla., assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Mar. 28, 1958, Ser. No. 724,571
2 Claims. (Cl. 156—465)



2. A device for shaping the edge area of a longitudinally moving web having a self-adhesive insulating coating, said coating having a longitudinally aligned lower edge and an overlying thin fin extending laterally of said edge, comprising a sickle-shaped core element adjustably supported so that one end is above and the other end is below said web inwardly of said edge and a woven fabric sleeve fitted over said element, said core element and sleeve providing a curved working surface for turning said fin around said edge to a condition of adherence with said edge and web.

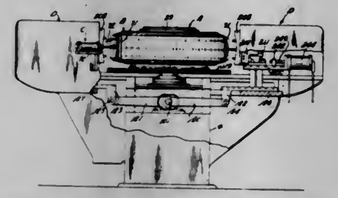
3,018,821
CHAFER FOR TIRE BEAD AREA PROTECTION
James M. Willis, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 24, 1958, Ser. No. 776,004
1 Claim. (Cl. 156—135)

A method of providing chafer elements on a tire comprising incorporating from 60 to 110 parts by weight of silica into 100 parts by weight of rubber by the steps of mixing in an internal mixer at least 30 parts by weight of said silica with said 100 parts by weight of rubber to produce a first rubber batch, allowing said first batch to cool, mixing in an internal mixer at least 30 additional parts by weight of said silica with said first batch to form a second batch, allowing said second batch to cool, mixing in an internal mixer the balance of said silica, if any,



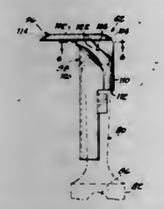
with said second batch together with vulcanizing ingredients to form a third batch, allowing said third batch to cool, forming said third batch into thin strips and applying as a chafer element one of said strips to each of the bead areas of an unvulcanized tire, and vulcanizing said tire.

3,018,822
TIRE SIPING MACHINE
Michael W. Noall, Jr., Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Mar. 25, 1959, Ser. No. 801,826
7 Claims. (Cl. 157—13)



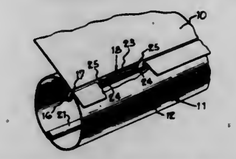
2. An apparatus for siping a tread of a tire as it continuously rotates about its axis comprising means for mounting the inflated tire, cutting means mounted adjacent said mounting means and adapted for movement towards and away from the tread surface, means connected to said mounting means and to the cutting means and adapted to rotate said tire about its axis and simultaneously to reciprocate said cutting means radially with respect to the tire into and out of contact with said tread.

3,018,823
FLAME SHAPERS
Jerry T. Alger, Chicago, Ill., assignor, by mesne assignments, to Configured Tube Products Co., St. Louis, Mo., a corporation of Missouri
Filed Apr. 28, 1958, Ser. No. 731,176
4 Claims. (Cl. 158—113)



1. In a burner, the combination comprising a burner tube having an axial discharge port therein, an outer flame deflector comprising a generally L-shaped angle member having first and second angle flanges with an angular bend therebetween, said first angle flange having mounting means thereon secured to one side portion of said burner tube, said first angle flange extending outwardly from the end of said burner tube and generally parallel thereto, said second angle flange extending across and generally perpendicular to the axis of said discharge port and being spaced outwardly therefrom, a curved inclined deflecting wall portion formed into said bend and into portions of said angle flanges, said deflecting wall portion being disposed at an oblique angle in front of said discharge port with the convex side of said deflecting wall portion directed toward said port to spread the fuel mixture therefrom laterally under said second angle flange, and an inner cylindrically curved deflector secured to said burner tube in opposed relation to said first angle flange and extending outwardly from the end of said burner tube toward said second angle flange, the concave side of said inner cylindrically curved deflector being directed toward said outer flame deflector, said inner deflector having an inclined upper margin opposite said curved deflecting wall portion to form an exit slot therebetween for the discharge of the fuel mixture.

3,018,824
WINDOW SHADE FASTENING MEANS
James A. Anderson and Sterling S. Bushnell, Jr., Muskegon, Mich., assignors to Breneman-Hartshorn, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 1, 1957, Ser. No. 649,813
2 Claims. (Cl. 160—394)

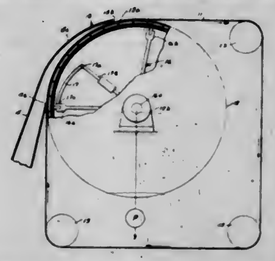


1. The combination of a roller having a body portion configuration to form a longitudinal undercut groove, said groove having a narrow portion adjacent to the periphery of said roller and an enlarged portion disposed inwardly of said periphery, a strip of shade material, said strip of shade material having a fold disposed within said groove, and a plurality of fastening clips disposed within said folded material interiorly of said groove, each of said clips comprising a flat strip of resilient material, the width of said flat strip being greater than the narrow portion of said groove, said strip including bent portions adapted to extend across said groove, the cross-sectional dimensions of each of said clips being smaller than the enlarged portion of said groove, whereby when force is applied to said shade material said clips are rotated within said groove to bring the width dimension of said clips across the narrow portion of said groove to provide a mechanical lock effective to prevent outward withdrawal of said shade material from said groove.

3,018,825
DRAINAGE CONTROL MECHANISM
Shu Tang Han and Jerome P. Brezinski, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed July 24, 1958, Ser. No. 750,720
3 Claims. (Cl. 162—319)

1. In a paper machine, in combination, a rotatably mounted foraminous cylinder, an inlet feeding stock onto the up-running side of the cylinder for depositing a fibrous web thereon, first sealing means within the cylinder opposite the bottom of the inlet, second sealing means within the cylinder opposite the top of the cylinder, means creating suction within the cylinder opposite

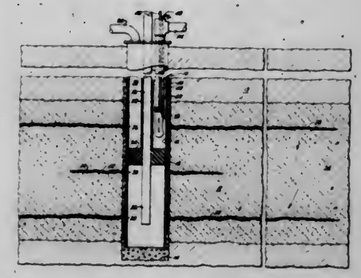
said inlet between said sealing means, and baffle means mounted on said first sealing means and extending upwardly therefrom in close running relation to the inner periphery of said cylinder.



3,018,826
METHOD FOR INCREASING THE PERMEABILITY OF SUBTERRANEAN FORMATIONS
Burton B. Sandiford, Placentia, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed June 16, 1958, Ser. No. 742,080
12 Claims. (Cl. 166—9)

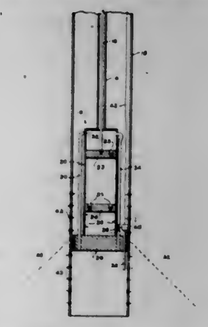
1. The process for increasing the permeability with respect to water of a subterranean formation traversed by a well bore which comprises introducing into said well bore an aqueous solution of a water-soluble polymer of an alkylene oxide selected from the class consisting of ethylene oxide, a propylene oxide, and a butylene oxide, and forcing said solution into said formation, said solution having a viscosity less than 1 centipoise at the formation temperature and containing between about 0.05 and about 10 parts per million of said polymer, and said polymer having a molecular weight such that a 5 percent by weight aqueous solution thereof has a viscosity of at least about 200 centipoises at 20° C.

3,018,827
SINGLE WELL VERTICAL DRIVE IN-SITU COMBUSTION PROCESS
James H. Henderson, Gibsonia, and Malcolm R. J. Wyllie, Allison Park, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed June 17, 1957, Ser. No. 665,989
3 Claims. (Cl. 166—39)



2. A process utilizing a single well for the recovery of oil from a pay zone penetrated by the well comprising forming a top fracture extending substantially horizontally from the well into the pay zone near the upper boundary thereof, displacing a propping agent into the top fracture to prop it open, forming a bottom fracture extending substantially horizontally from the well into the pay zone near the bottom boundary thereof, displacing a propping agent into the bottom fracture to prop it open, each of said top and bottom fractures extending from the borehole of the well radially at least about 50 feet, fracturing the pay zone between the top and bottom fractures to form an intermediate fracture having a radius between a minimum of about 10 feet and a maximum of about one-fourth of the radius of the top and bottom fractures, squeezing a cement into the intermediate fracture and allowing the cement to set therein to form a thin substantially horizontal impermeable solid barrier extending from the well radially outward into the pay zone, setting packing means in the well between the top and bottom fractures, running tubing through the packing means whereby the tubing and the wall of said well define an annulus above the packing means communicating with the top fracture and the opening through the tubing communicates with the bottom fracture, injecting an oxygen-containing gas down the well into one of the top and bottom fractures, heating the pay zone adjacent the fracture into which the oxygen-containing gas is injected to ignite oil in the pay zone, continuing the injection of an oxygen-containing gas to burn oil in the pay zone, and delivering oil through the fracture other than the fracture into which the oxygen-containing gas is injected into the well for lifting to the well head.

3,018,828
PREVENTION OF WATER AND GAS CONING
Spencer S. Prentiss, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 15, 1957, Ser. No. 671,978
10 Claims. (Cl. 166—53)

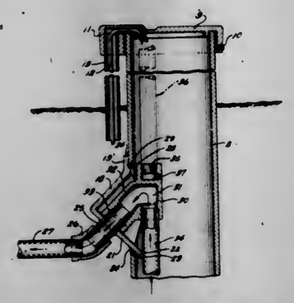


1. In a well having a tubing and a pump on the lower end of said tubing which delivers fluid to said tubing, said pump being adjacent an oil-bearing formation located above and adjacent a water-containing formation, the combination of a packer across said well below said pump; a conduit communicating at one end with the delivery side of said pump and at the opposite end with the area subjacent said packer; a valve in said conduit for opening and closing said conduit to flow; sensing means for sensing the presence of water in said area; actuating means sensitive to said sensing means connected therewith and structurally and actuatably connected with said valve to open same when water is sensed by said sensing means and close same when water recedes from said area.

3,018,829
PITLESS WELL ADAPTORS
Herbert W. Maass, 10940 W. Congress St., Milwaukee, Wis.
Filed Feb. 8, 1960, Ser. No. 7,392
6 Claims. (Cl. 166—88)

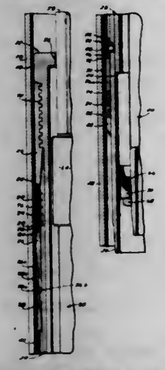
1. In a well casing having an underground hollow section with an opening in its wall, an edge of which forms

a sill, a laterally extending box of ovate contour rigidly secured to the casing section in registration with said opening with the lowermost wall of the box forming an acute angle to the axis of the casing section and having a peripheral laterally extending ledge with an inwardly spaced rib terminating at the lower end of the box in a downwardly inwardly inclined tongue extending beyond the ledge and rib and being interposed between the ends



of the same, said tongue and said rib extending into said casing section opening with the tongue engaging said sill, a flow pipe within said casing section, a chambered, oblique lateral fitting having its main portion connected to and in communication with the flow pipe, a nipple rigidly mounted in the lower wall of said box and connected at its inner end to a portion of the fitting, and a supply pipe connected to the outer end portion of the nipple.

3,018,830
MECHANICAL LINER HANGER
Albert L. Springer, 1426 W. 12th St., Long Beach 21, Calif.
Filed Mar. 10, 1958, Ser. No. 720,357
13 Claims. (Cl. 166—124)



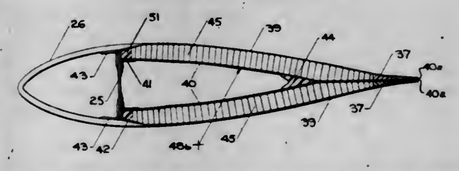
3. A hanger for use in a casing, comprising: a tubular mandrel formed with a through opening in its side wall; a slip cage mounted for axial movement on said mandrel having a ring formed with a through opening in the side wall thereof; a slip cone on said mandrel; spring means constantly urging said ring axially of said mandrel for moving said slip cage into engagement with said cone for wedging engagement with said casing; a lock ball disposed in the trough openings in the side walls of said ring and mandrel when said openings are coaxially aligned to thereby prevent movement of said slip cage into engagement with said cone; adjustable means in the through opening of said ring to position said ball such that the center thereof is within the through opening in said mandrel whereby axial relative movement of said cage and mandrel cams said ball radially inwardly out of engagement with said ring; and an elongated tubular setting tool insertable in said mandrel to prevent such displacement of said ball from within the opening in said ring, said tool having engagement with said mandrel and being movable with respect thereto for movement out of retaining engagement with said ball, whereby the force of said spring means cams said ball radially inwardly out of the opening in the side wall of said ring and urges said slip cage into wedging engagement with said casing.

3,018,831
WELL BORE SCRATCHER
Fred Morgan Gist, 103 V & J Tower, Midland, Tex.
Filed July 21, 1958, Ser. No. 749,705
9 Claims. (Cl. 166—173)



1. A well bore scratcher including a collar for mounting on a well casing, a plurality of independent resilient fingers attached to the collar in spaced relation to one another, each finger having a portion coiled in a relatively small helix, and a plurality of upright pins on said collar for confining the helices to loosely pivot the fingers for movement relative to one another about axes substantially parallel to the longitudinal axis of the casing, each finger being coiled in a loop of relatively large diameter extending laterally outward of said collar and casing, and having a curved medial portion for engagement with the wall of a well bore, the loops of the fingers being spaced from one another to provide flow paths therebetween, each loop having a free end portion terminating adjacent said collar for bearing thereagainst to urge the medial portion of said loop into engagement with the wall of the well bore and for increasing the flexibility of the finger.

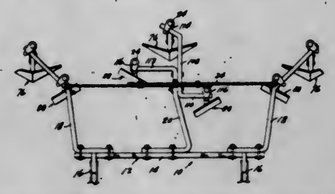
3,018,832
AIRCRAFT STRUCTURE
Richard H. Prewitt, Wallingford, Pa., assignor to Prewitt Aircraft Company, Clifton Heights, Pa., a corporation of Pennsylvania
Filed June 30, 1955, Ser. No. 519,127
24 Claims. (Cl. 170—159)



1. A rotor blade having a substantially hollow nose section comprising a laminated spar shell shaped to form the forward external contour of the blade and made up

of a plurality of layers of thin sheets of material and adhesive bonding material therebetween, a vertical spar web enclosing the aft portion of said spar shell and joint angles and adhesive material bonding said web to said shell, the outer layer of said thin sheets of materials comprising part of the external skin of the blade and extending aft of the web, successive inner layers of said thin sheets of material extending progressively lesser distances aft of the web to form a tapered structure having tapered stiffness, a substantially hollow aft section having upper and lower sandwich type panels with inner and outer face sheets and relatively low density filler material therebetween, said outer face sheets comprising the balance of the external skin of the blade, the forward portion of said panels being tapered to reduce the distance between the outer and inner face sheets and to match the said tapered structure of the nose section forming in contact therewith a smooth external contour, and joint angles and adhesive material bonding the outer and inner faces of the panels to the spar web.

3,018,833
CULTIVATOR
John J. Semoes, 5951 Ave. 236, Tulare, Calif.
Filed June 3, 1960, Ser. No. 33,709
6 Claims. (Cl. 172—159)



1. In a cultivator, a frame having a transverse portion, an intermediate arm fixed to and extending rearwardly from said transverse portion, a first lateral member on the rear end of said intermediate arm, a supplemental arm extending along said intermediate arm and fixed intermediate its ends to said intermediate arm, said supplemental arm having a second lateral member on its forward end extending in a direction opposite to said first lateral member, said second member being spaced forwardly from said first member, a sweep mounted on and extending downwardly from the rear end of said supplemental arm behind said first lateral member, and vertical bars secured to and extending downwardly from said first and second members and carrying edger blades, the blades being located at opposite sides of the vertical center line of said sweep.

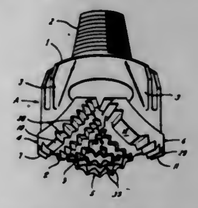
3,018,834
FLUID-ACTUATED PERCUSSION DRILL
Evin L. Cook, Dallas, Tex., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Dec. 9, 1959, Ser. No. 858,459
8 Claims. (Cl. 175—92)

1. In a fluid-actuated drilling device the combination which comprises a tubular housing, bit securing means including a fluid flow path therethrough positioned in the lower end of said housing, means interconnecting said bit securing means and said housing to permit said bit securing means to be rotated by and slidable longitudinally relative to said housing, valve means supported by said bit securing means adapted to abruptly close when fluid flowing through said device exceeds a predetermined velocity, and connecting means for securing said housing to a drilling string, said connecting means including an elongated flow path having a cross-sectional area less than the cross-sectional area of the flow passage through said drilling string to conduct fluid to said drilling device at



a velocity in excess of the fluid velocity in said drilling string.

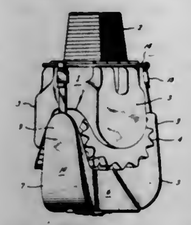
3,018,835
DRILL BIT FOR PRODUCING AN IRREGULAR INDENTATION PATTERN ON THE BOTTOM OF A WELL BORE
Clement M. Kucera, Houston, Tex., assignor to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Nov. 1, 1956, Ser. No. 619,808
3 Claims. (Cl. 175—378)



1. The drill bit having a plurality of rotatable cutters mounted thereon, each of the said cutters having circumferential rows of cutting teeth thereon, at least one of the said rows of cutting teeth on at least one of the cutters comprising a set of conventional chisel shaped teeth arranged consecutively and having a substantially uniform pitch and tooth crest, and at least one tooth having a crest width extending axially for a distance substantially equal to the width of the row as well as extending circumferentially and equal to at least half the pitch distance of the conventional teeth in the same row, to produce an irregular pattern on the bottom of the hole being drilled.

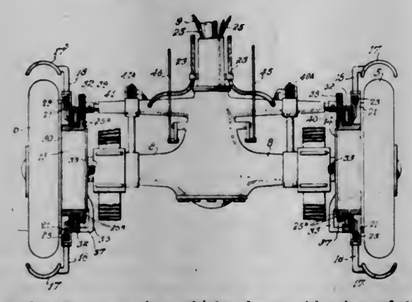
3,018,836
ROCK BIT GUIDE
Robert G. Peter and Clement M. Kucera, Houston, Tex., assignors to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed June 20, 1956, Ser. No. 592,651
1 Claim. (Cl. 175—408)

In a drill bit having a head having bearing extensions in the lower portion thereof and a plurality of roller cutters rotatably mounted on the said bearing extensions, a guide comprising a central portion with legs extending radially therefrom, the said central portion being disposed below the said cutters, each of the said legs being disposed between the lower portions of adjacent cutters and extending outwardly substantially to the gage of the bit and upwardly to a point substantially above the lowermost portions of the said cutters, the said guide being formed of a drillable material, each of the said legs having a hole therethrough, a strap extending through each of said



holes, the lower ends of the straps being secured to a ring at the lower surface of said central portion, and the upper ends of said straps being secured to a retaining ring disposed on the drill bit.

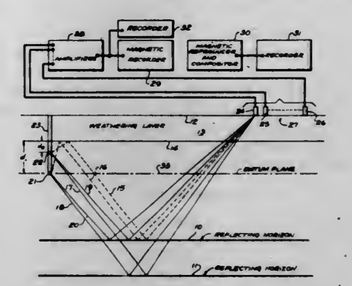
3,018,837
TRACTION MECHANISM
John Chauvin, 67 Roosevelt Ave., West Orange, N.J., assignor of small percentages to various assignees
Filed July 11, 1958, Ser. No. 747,862
4 Claims. (Cl. 180—7)



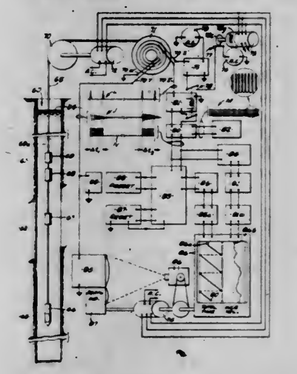
1. In an automotive vehicle, the combination of drive wheels, axle housing, a drive axle in the housing, a brake drum fixedly secured to the inner side of each driving wheel, a supporting structure rotatably mounted on each of said drums, a plurality of radially disposed shoes mounted on each supporting structure over only the upper part of each wheel and adapted to move radially to and from the treads of the wheel tires in straight line motion, and means for actuating said shoes, a ring gear mounted on each of said supporting structures and of large radius relative to the drive axle radius, to provide a relatively large torque, a pinion engaging each ring gear, and auxiliary drive shafts for turning said pinions.

3,018,838
METHOD OF SEISMIC PROSPECTING
Joseph William Hammond, Tulsa, Okla., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed Jan. 12, 1956, Ser. No. 558,717
2 Claims. (Cl. 181—.5)

1. The method of seismic prospecting which comprises profiling a subsurface layer disposed beneath a reflecting interface by generating seismic waves from at least two vertically displaced shot points located below said interface, receiving said seismic waves at a detecting position spaced from said shot points, the received waves including true reflections from said layer, vertically displacing said shot points by such distance that ghost reflection energy arriving at said detecting position from one of said points as a result of reflection from both said interface and said layer is displaced in phase with respect to similar energy arriving at said detecting position from the other of said shot points, producing separate phonographically reproducible records on a per shot basis of the energy received at said detecting position from each of said shot points, reproducing and compositing said phonographically reproducible records in order to produce a composite record, and relatively time shifting the recorded signals prior to compositing in order to introduce a time displacement to the signals on at least one of said records having a value equal to the phase displacement between said ghost reflections, thereby substantially eliminating ghost reflections from the composite record and accentuating the true reflections.



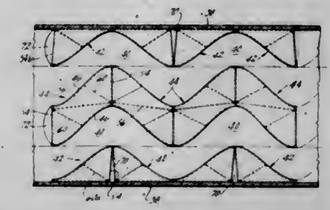
3,018,839
ACOUSTIC WAVE WELL LOGGING SYSTEM
Walter P. Isaacson, Los Angeles, Calif., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Sept. 6, 1956, Ser. No. 608,359
17 Claims. (Cl. 181—.5)



1. An earth borehole logging system comprising, in combination: an electric conductor cable; means connected to said cable for traversing at least one end portion of said cable through an extent of an earth borehole; an acoustic wave transmitter connected to said end portion for traverse therewith through an equivalent extent of borehole; first and second acoustic wave receiver-transducers connected to said end portion of said cable for traverse therewith, and each spaced a substantially constant distance from one side of said transmitter and spaced a constant unit distance each from the other, during such traverse; means connected to said transmitter for causing said transmitter to initiate during such traverse

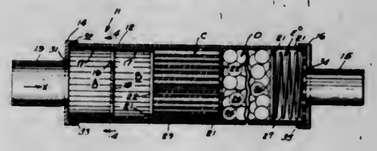
an acoustic wave at each of a series of borehole stations separated such constant unit distance apart; means electrically connected with said acoustic wave receiver-transducers to receive the outputs thereof and to produce in response thereto and corresponding to each such borehole station, first and second electrical pulses whose time-separation is substantially equal to the interval elapsing between arrival of an acoustic wave, initiated by said transmitter, at said first and second receiver-transducers, respectively, whereby to provide a measure of acoustic wave travel time for each such unit distance of borehole-encircling earth formation traversed; and means responsive to said means providing a measure of acoustic wave travel time for adding each such measure to all previously provided measures, and recording the results of successive additions, to provide a log of total time of acoustic wave travel for said extent of earth borehole.

3,018,840
ACOUSTIC DUCT AND PANEL CONSTRUCTION THEREFOR
Roland B. Bourne, West Hartford, and John P. Tyskewicz, Hartford, Conn., assignors, by mesne assignments, to American Machine & Foundry Company, Inc., New York, N.Y., a corporation of New Jersey
Filed Aug. 28, 1959, Ser. No. 836,809
12 Claims. (Cl. 181—33)



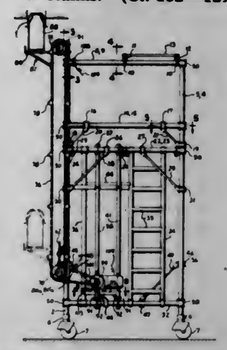
1. A sound absorbing device comprising a hollow panel which can be packed with a sound absorbing material and which has a pair of generally longitudinally extending substantially parallel and acoustically transparent side walls, a pair of substantially parallel acoustically opaque end walls respectively connected to opposite ends of the side walls, acoustically opaque top and bottom wall means closing the openings defined by said side walls and end walls, and an acoustically opaque septum disposed within the panel and extending between said end walls and said top and bottom wall means, said septum being disposed generally diagonally of the panel and engaging one end wall along a line which is adjacent one side wall but which is nonetheless spaced therefrom and engaging the other end wall along a line which is adjacent the other side wall but which is nonetheless spaced therefrom.

3,018,841
MUFFLER
Stephen Gerlich, 4120 W. 63rd St., Chicago, Ill.
Filed Jan. 4, 1960, Ser. No. 259
5 Claims. (Cl. 181—56)



1. A muffler for quieting gases flowing therethrough comprising, a generally tubular outer casing, inlet and outlet conduit means attached to opposite ends of said casing, baffle means defining a plurality of longitudinally aligned chambers within said outer casing and between said inlet and outlet conduit means, coiled strip means disposed within one of said chambers with the axis of said coiled strip means disposed generally parallel to the longitudinal axis of said outer casing, said coiled strip means effectively defining a plurality of arcuately shaped passageways within said one chamber, and multiple channel producing means comprising a multiplicity of lightweight hollow ball elements disposed in random arrangement within another of said chambers immediately adjacent said one chamber, said ball elements defining a plurality of channels of varied configuration and orientation for breaking up and dispersing sound-producing pulsations in said exhaust gases.

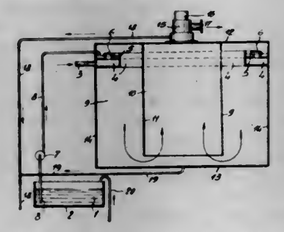
3,018,842
MOTOR DRIVEN FIXTURE SCAFFOLD
Cornelius W. Abrell, La Grange Highlands, Ill. (300 W. Washington St., Chicago 6, Ill.)
Filed Aug. 31, 1959, Ser. No. 837,177
9 Claims. (Cl. 182—129)



1. A scaffold for use in the installation of lighting fixtures and the like, said scaffold comprising an upstanding framework, a pair of spaced flexible members extending upwardly along one side of the framework, a fixture-supporting bar mounted on each member and normally projecting outwardly therefrom with the bar on one member in alignment with the bar on the other member to constitute a support for a lighting fixture extending therebetween, means for driving the flexible members to shift the bars and fixture thereon upwardly along the frame to a position at which the fixture is to be mounted and to hold the fixture at said position, and control means at the upper end of the frame for stopping, starting and reversing the direction of travel of the flexible members.

3,018,843
MEANS ENSURING CONTACT BETWEEN GASIFORM FLUIDS AND LIQUIDS
Robert M. Mercier, 174 Blvd. du Montparnasse, Paris, France
Filed Apr. 24, 1959, Ser. No. 808,765
Claims priority, application France Apr. 30, 1958
7 Claims. (Cl. 183—2.5)

1. An apparatus for intimately contacting a gaseous fluid with a liquid by forming a froth of the fluid and liquid in which the physico-chemical reactions therebetween are promoted, comprising at least one cell having a top and bottom and substantially vertical partition means therebetween dividing the interior of said cell into a plurality of compartments including at least an inlet compartment and an outlet compartment, froth forming means located near the top of said inlet compartment, means for supplying the gaseous fluid and liquid to be contacted to said froth forming means, froth breaking means disposed near the top of said outlet compartment, and conduit means extending from said froth breaking means to separately convey the gaseous fluid and liquid separated from each other by destruction of the froth, said partition means dividing each of said inlet and outlet compartments from the next adjacent compartment being spaced upwardly from said bottom of the cell so that the froth leaves said inlet compartment at the bottom of the latter



and enters said outlet compartment at the bottom of the latter, thereby to travel a path between said froth forming means and said froth breaking means having at least one U-shaped bend therein so that the required period of contact of the gaseous fluid with the liquid in the froth can be obtained in a cell of relatively small height and with a relatively small distance between the levels of said froth forming and froth breaking means, thereby to reduce the energy required to move the froth along said path.

3,018,844
ELECTROSTATIC PRECIPITATOR
Don J. Gonzalez, Valley Station, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Feb. 3, 1960, Ser. No. 6,544
5 Claims. (Cl. 183—7)



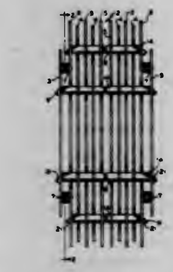
1. A plate electrode assembly for an electrostatic precipitator comprising a plurality of plates spaced from each other a predetermined distance, said plates having openings therein of preselected contour and spacer bar means of cross-sectional contour conforming substantially to the contour of said openings to permit passage of said spacer bar means through said openings, said spacer bar means having sets of corresponding slots with the side walls of said slots extending normally transverse the longitudinal axis of said spacer bar means with the slots of each set being spaced from each other substantially the same distance as said plate, said slots being of sufficient depth and breadth to permit rotation of said spacer bar means about the longitudinal axis from one position to another when said spacer bar means has been passed through said plate openings and said slots are aligned with said plates wherein said plates engage in said slots to be maintained in spaced relation, the slots of one set being offset slightly from the corresponding slots of an adjacent set to effect a firm plate-in-slot engagement and a preselected curvature of said plates.

3,018,845
FILTERS
Milton A. Powers, 655 Bedford, Grosse Pointe 30, Mich.
Filed Dec. 12, 1957, Ser. No. 702,306
4 Claims. (Cl. 183—7)



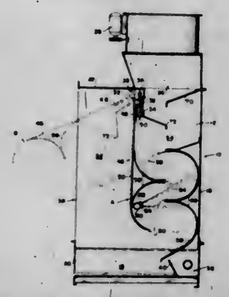
1. A filtering assembly comprising a grid-like support, means adhesively supporting a first filter of flocking material of individual positively electrostatically charged fibers upon and substantially entirely over one side of said support and a second filter of flocking material of individual negatively electrostatically charged fibers adhesively secured upon and substantially entirely over the other side of said support.

3,018,846
ELECTROSTATIC PRECIPITATORS
Lawrence J. Czerwonka and Richard D. Rivers, Louisville, Ky., assignors to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,646
2 Claims. (Cl. 183—7)



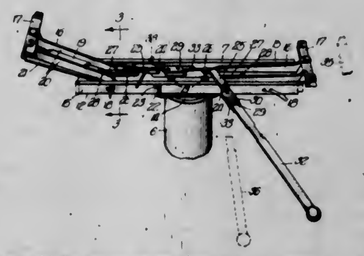
1. A collector plate electrode assembly for an electrostatic precipitator wherein charged particles are removed from a gaseous stream comprising a plurality of plates, said plates having rectangular openings therein, flat, thin sheet-like spacer bars extending through said rectangular openings, said spacer bars having an overall breadth slightly less than the distance between diagonally opposite corners of said rectangular openings to permit snug diagonal insertion of said spacer bars in said openings with the planes determining the flat sheet surfaces of said spacer bars at an angle to the sides of said rectangular openings, said spacer bars having transverse slots therein into which said plates extend when said bars are turned, said slots having sufficient depth to permit said bars to be turned through an angle to rest on the sides of said rectangular openings with the plates extending into the slots of said bars, and thin U-shaped key bars extending through said openings to hold said plates in the transverse slots of said spacer bars and lock the plate assembly into desired position.

3,018,847
SPRAYING BOOTH
Henry J. Stanly, Metuchen, N.J., assignor to Metalwash Machinery Company, Elizabeth, N.J., a copartnership
Filed July 1, 1959, Ser. No. 824,312
5 Claims. (Cl. 183—22)



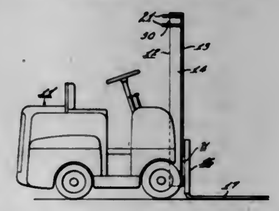
1. In a spray booth of the type having a lower tank portion, a rear wall, a top wall, a vent opening defined in said top wall, a trough connected to said top wall and arranged to depend therefrom, a liquid supply pipe arranged above said trough having discharge apertures therein, a water wall apron connected to said trough and arranged to substantially divide said spray booth into a forward portion and a rear air cleaning portion, said forward portion communicating with said air cleaning portion at the bottom of said apron and above said tank, and means to circulate liquid from said tank to said supply pipe; the improvement comprising a pivotal mounting for said trough and water wall apron, said mounting including a plurality of vertically disposed bracket members secured at their lower portions to the rear wall of said trough and pivotally connected at their upper ends to said top wall over said forward portion of said spray booth, flexible hose means extending from the discharge apertures in said supply pipe into the lower portion of said trough, and sealing means formed by the abutment of the upper rear edge of said trough with a portion of said top wall.

3,018,848
ADAPTER ADJUSTING MEANS FOR VEHICLE LIFTS
William A. Ross, Springfield, Ill., assignor, by mesne assignments, to Dura Corporation, Oak Park, Mich., a corporation of Michigan
Filed July 25, 1958, Ser. No. 750,981
5 Claims. (Cl. 187—8.75)



1. In a vehicle support structure for use with a vehicle lift having a vertically movable plunger; a transverse lifting saddle having a base and fixedly attached to the upper end of said plunger for vertical movement therewith and against movement relative to said plunger in a longitudinal direction with respect to the vehicle, said saddle having longitudinally spaced and transversely extending upright flanges, a pair of adapter members having planar sliding movements transversely on said saddle adjacent the opposite ends thereof and between the upright flanges of said saddle, guide means carried by said upright flanges and projecting inwardly therefrom, said adapter members having transversely extending guide flanges slidable transversely between the base of said saddle and said guide means, a transversely disposed integral seat member at the outer end of each adapter member, said seat members being positioned solely by transverse planar sliding movements of said adapter members for engagement with opposite ends of a wheel axle in close proximity to the opposite wheels associated with the axle, a pair of levers pivoted for horizontal swinging movements on vertically disposed and transversely spaced pivots carried by said saddle, a first pivotal connection between one end of one lever and one adapter member, a second pivotal connection between one end of the other lever and the other adapter member, and a handle selectively cooperable with the other ends of said levers and adapted for horizontal swinging movement for swinging said levers horizontally with accompanying transverse movements of said adapter members.

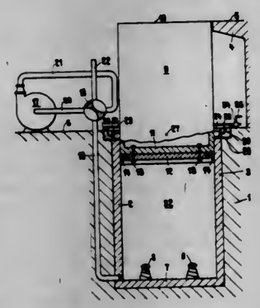
3,018,849
ANTISPREAD DEVICE FOR INDUSTRIAL TRUCK MASTS
Theodore G. Kush, Park Forest, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 14, 1960, Ser. No. 68,935
4 Claims. (Cl. 187—9)



1. In a lift truck mast the combination comprising: a pair of laterally spaced upright channels, a load transporting carriage supported for vertical reciprocating movement on said channels including a plurality of rollers rotatably secured to the rear of said carriage and having rolling contact with one of said channels and a plurality of rollers rotatably secured to the rear of said carriage and having rolling contact with the other of said channels, a first vertically extending guide rail fixedly secured to the rear of said carriage in sliding engagement with the laterally outer side of one of said channels and a second vertically extending guide rail fixedly secured to the rear of said carriage in sliding engagement with the laterally outer side of the other of said channels, said guide rails bearing against said channels, respectively, when said carriage is subjected to predetermined eccentric loading.

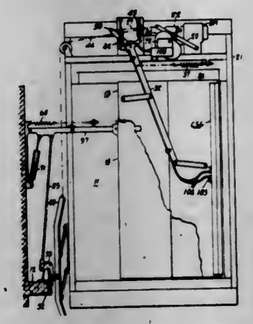
3,018,850
ELEVATING PLANT
Hans Beat Fehlmann, Thunstrasse 130, Muri, near Bern, Switzerland
Filed June 16, 1958, Ser. No. 742,198
Claims priority, application Switzerland June 28, 1957
9 Claims. (Cl. 187—17)

1. A pressure medium operated elevating plant comprising a sunken elongate casing closed at one end, a movable hollow body in said casing in tight contact with the side walls thereof to substantially seal the chamber defined by the closed casing end and the body, pressure means for moving the pressure medium having a pressure outlet and an exhaust inlet, a conduit system for transporting the pressure medium, valve means, said conduit system including a first conduit communicating with the chamber, a second conduit communicating with the atmosphere, a third conduit communicating with said pressure outlet, and a fourth conduit communicating with said exhaust inlet, said four conduits all being in communication with said valve means, said valve means selectively communicating; the first and third, and second and fourth conduits to supply gas pressure medium under



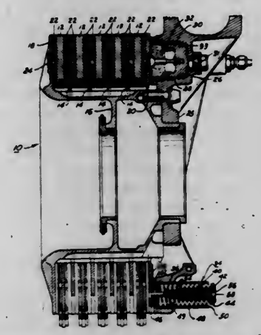
pressure to said chamber for raising said body; and the first and fourth, and second and third conduits to permit the pressure means to remove pressure from said chamber for lowering said body; means for automatically locking the body to the casing at preselected levels, said locking means being pressure actuated to unlock the body from the casing so that upon pressure failure locking will take place, and automatic means operatively associated with said automatic locking means for permitting automatic unlocking only when the pressure in said chamber is sufficient to sustain said body.

3,018,851
CONTROL MECHANISM FOR DOORS
Lew H. Diamond, Massapequa, and Robert André Couturier, New York, N.Y., assignors to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 19, 1957, Ser. No. 697,370
13 Claims. (Cl. 187—48)



1. In an elevator system in which the elevator car is provided with a closure, in which power mechanism is provided for operating said closure, and in which a plurality of antennae are mounted in spaced relation along the leading edge of said closure; a first bridge circuit having as two oppositely disposed arms thereof a pair of said antennae directly connected to opposite ends of the bridge diagonal; a second bridge circuit having as two oppositely disposed arms thereof another pair of said antennae directly connected to opposite ends of the diagonal of that bridge, the antennae of each pair having another antenna positioned between them; a source of periodic voltage for each bridge; and means responsive to a change in impedance to ground of one antenna with respect to the other of either bridge due to the proximity of a person to such antennae to prevent the closing of the closure by said power mechanism.

3,018,852
COMBINATION RETRACTING MECHANISM AND WEAR INDICATOR
George E. Stanton, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Mar. 10, 1958, Ser. No. 720,359
2 Claims. (Cl. 188—72)

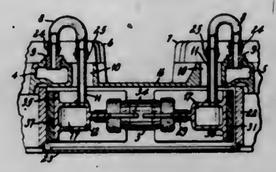


1. A combination brake retractor and wear indicator received in a fixed mounting plate located adjacent the relatively movable and engageable brake members, said retractor comprising a pull-rod secured to an outermost brake member and arranged to exert retracting effort thereon, a movable first stop adjustably secured to said stem, a fixed second stop axially spaced from said first stop, an adjustable third stop which engages said outermost brake member to establish the retracted position thereof, a resilient member compressed between said first and second stops and loaded by an amount determined from the relative spacing therebetween, said spacing being adjustable to maintain the loading force on said spring to a predetermined amount while varying the effective length of said stem to provide for different size brake members, and a fixed tubular member which is calibrated to provide an indication of brake wear according to the distance traversed by said movable first stop relatively thereto, said resilient member being fitted within said tubular member to confine the resilient member against buckling or the like movement as it is loaded by movement of said movable stop.

3,018,853
FLUID COOLED VEHICLE DRUM BRAKE
Thomas G. Thomas, Bedford, Walter E. Taylor, Seymour, and Thaylus Embree, Mitchell, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 6, 1958, Ser. No. 772,231
2 Claims. (Cl. 188—78)

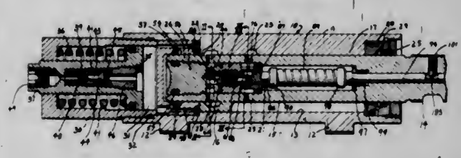
1. A vehicle brake structure comprising in combination, a unitary backing plate structure, hollow chamber means extending vertically of said backing plate structure and inboard thereof with the outboard wall of the cham-

ber means constituted by a portion of the backing plate, a plurality of external radiating fins on the inboard wall of said chamber means, a rotatable brake drum positioned adjacent to and concentric with said backing plate structure and forming therewith a brake shoe enclosing structure, a brake shoe positioned generally vertically within the confines of said brake drum for frictionally engaging said drum, a wheel cylinder within the confines of said drum operatively engaging one end of said brake shoe, shoe adjusting means cooperating with the opposite end of said shoe, said shoe including spaced wall means



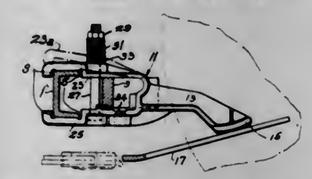
forming passage means within said brake shoe extending generally longitudinally of said shoe, flexible conduit means connecting the vertically disposed lower portion of said passage means with the vertically disposed lower portion of said chamber means, other conduit means connecting the vertically disposed upper portion of said passage means with the vertically disposed upper portion of said chamber means to provide thereby a closed generally vertically circulating thermal convection fluid circuit for cooling fluid contained therein for cooling of said brake shoe.

3,018,854
FLUTTER DAMPER
Paul E. Gies and Rollin Douglas Rumsey, Buffalo, N.Y., assignors to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Mar. 26, 1959, Ser. No. 802,135
8 Claims. (Cl. 188—93)



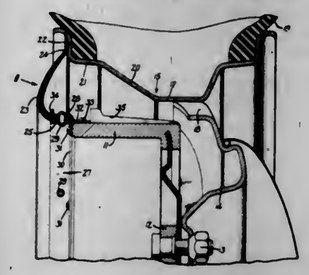
1. In a mechanical flutter damper for damping high frequency airfoil vibration, an elongated housing having an inner wall defining a damping chamber normally filled with hydraulic fluid, a rotary piston rotatably mounted within said damping chamber and cooperating therewith to form a plurality of working chambers therein, an orifice spool mounted within said rotary piston and having an orifice slot leading therethrough and opening to the periphery thereof and affording communication between said damping chambers, an orifice control valve rotatably mounted within said orifice spool and cooperating with said orifice slot to vary the cross-sectional area thereof under varying temperature conditions, said orifice slot being a sharp edged slot of varying cross-sectional area throughout the length thereof, and said orifice control valve cooperating with said slot to progressively open and increase the cross-sectional area of said slot throughout a temperature range from a closed position at predetermined maximum high temperature conditions to a wide open position at predetermined low temperature conditions, and to maintain said slot in its wide open position throughout the predetermined low temperature conditions.

3,018,855
RAILWAY BRAKE BEAM SUPPORT CHAIR STRUCTURE
Irvin J. Spaeth, Chicago, Ill., assignor, by mesne assignments, to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 695,089
4 Claims. (Cl. 188—210)



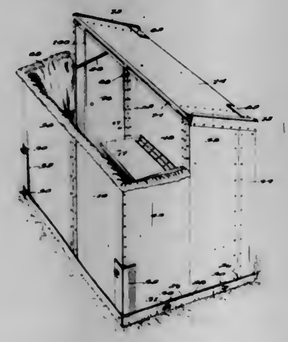
1. A railway truss type brake beam and fourth point chair assembly comprising beam main compression and tension members converging toward each other at their ends, a one-piece chair structure near but spaced from the converging ends of said members and having a shoe at one end for slidably engaging a support member and having vertically spaced jaws at its other end movable endwise over said members near their convergence and toward each other to engage respectively upwardly and downwardly facing parts of both of said members, and an upright bolt extending through said jaws and positioned between said beam main members and including a head element at one end, having a seat on one of said jaws, and a nut element at the other end having a seat on the other of said jaws, one of said seats comprising a spring coiled about the bolt and compressed between one of said jaws and one of said elements.

3,018,856
BRAKE DRUM COOLING DEVICE
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Nov. 29, 1957, Ser. No. 699,628
9 Claims. (Cl. 188—264)



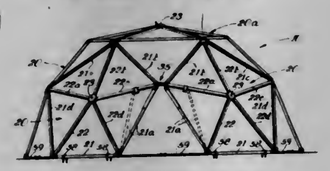
1. In a wheel structure including a tire rim and a brake drum with air circulation passage through the wheel past the brake drum, a pumping ring structure comprising an arched non-metallic flexible ring member having a generally axially inwardly extending thickened attachment flange on its radially inner margin, rigid generally axially extending opposed attachment flange members engaging said axial flange of the ring member therebetween, means securing said flange members to said attachment flange, said flange members having attachment flange structure projecting beyond said attachment flange of the flexible ring member, and means securing said attachment flange structure of the flange members rigidly to the wheel radially inwardly from said passage and with the flexible ring member extending generally radially into overlying relation to the adjacent end of the passage and arched generally axially away from the wheel but with a free end normally biased to lie closely adjacent to the wheel radially outwardly from said passage, said flexible ring member normally resisting straightening out and thus movement of said free edge away from the wheel, but being responsive to strong centrifugal thrust in the upper forward sector of the wheel while running at high speed to swing open progressively as circumferential portions of the ring member enter said sector but said portions moving back to the normal position upon leaving said sector in the continuing movement of the wheel forward and rotatably to thereby move air axially through said passage.

3,018,857
PORTABLE HUNTING BLIND
Roy P. Parham, 303 NE. 60th St., Oklahoma City, Okla.
Filed Mar. 25, 1959, Ser. No. 801,816
10 Claims. (Cl. 189—2)



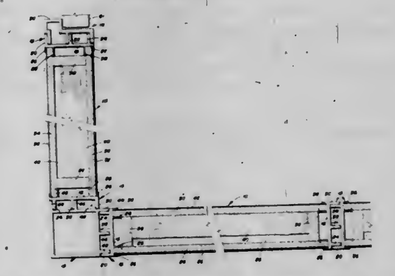
1. A portable hunting blind comprising a foldable base, hingedly connected a foldable unit including upstanding side and end walls, said unit in its vertical unfolded position being adapted to be removably secured to the base in the unfolded position of the base, one side wall and a portion of each end wall having a continuous shooting opening therein, a removable retractable roof mounted on the upper portion of the walls, a movable closure curtain for the shooting opening, and means operable by the retraction of said roof for simultaneously operating said curtain to open said shooting opening.

3,018,858
SHELTER FRAME
Thomas R. Finlayson, Milwaukee, Wis., assignor to Gleason Reel Corp., Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 26, 1959, Ser. No. 836,254
8 Claims. (Cl. 189—2)



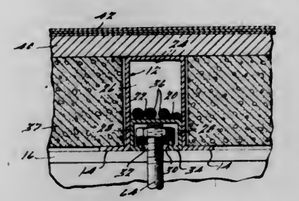
1. A structural unit for use with other such units in forming a shelter frame, comprising a plurality of linear radial strut means commonly joined at one end, linear peripheral strut means extending between and pivotally connected to the other ends of said radial strut means to define a polygonal base periphery for the unit, the said radial and peripheral strut means forming a regular polyhedron, means on at least one of said strut means for breaking the same intermediate its ends to provide two linear portions including means extending one of said portions, and means interlocking the other linear portion and extending means in selected angular intersecting positions.

3,018,859
INTERLOCKING EXTRUSIONS
Francis L. Struben, 8303 Philadelphia Road, Baltimore, Md., assignor of one-half to Jean C. Struben, Baltimore, Md.
Filed Aug. 27, 1959, Ser. No. 836,443
2 Claims. (Cl. 189—34)



1. A panel framing structural side member **16**, comprising, a main web **18** having a flush mating flange **20** at one end thereof, a central mating flange **22**, an offset mating flange **24** near the opposite end of said main web **18**, said flush, central and offset mating flanges all being positioned on the same side of said main web, and a pair of retaining flanges **26** at opposite ends of said main web and located on the opposite side of said main web from said flush, central and offset mating flanges, said offset mating flange **24** being located so as to engage the inner side of a flush mating flange of an identical side member **16**, with said central mating flange **22** being arranged to engage with corresponding sides of a central mating flange **22** of said other side member **16**.

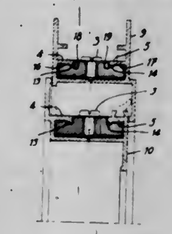
3,018,860
STRUCTURAL ELEMENT FOR BUILDINGS
Otis L. Johnson, Detroit, Mich., assignor to Farnworth-Johnson Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 8, 1959, Ser. No. 838,573
2 Claims. (Cl. 189—34)



2. In a roof or floor construction for a building; a load-supporting structural element comprising a U-shaped channel member, the opposing sides of said member having laterally outwardly extending flanges, and an elongated strut at the open side of said U-shaped member, said strut being parallel to said member and confined between and secured to the sides of said member, said strut

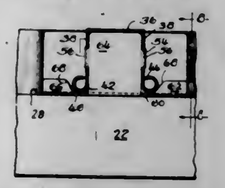
being generally rectangular in cross section and having one side thereof parallel to and in the plane of the flanges on said U-shaped member, said strut having a longitudinal slot in said one side extending throughout the length of said strut and inwardly turned flanges defining the longitudinal edges of said slot, said strut having the side opposite said slot disposed in spaced relation to the connecting web of said U-shaped member to define therewith an elongated enclosed tunnel for containing electrical conduits or the like, said lateral flanges on said U-shaped member being adapted to support the side edges of construction material, said inwardly turned flanges on said strut being adapted to support a nut at a selected position along the length of said slot whereby a bolt may be threaded into said nut for suspending articles from said structural element.

3,018,861
DEVICE FOR ASSEMBLING AND/OR FIXING ELEMENTS OF METAL FRAMES
Charles A. Somville, Burcht, Belgium, assignor to A.V.R., Achat, Ventes, Representations, Societe Anonyme, Brussels, Belgium
Filed Dec. 9, 1958, Ser. No. 779,217
Claims priority, application Belgium Mar. 31, 1958
1 Claim. (Cl. 189—36)



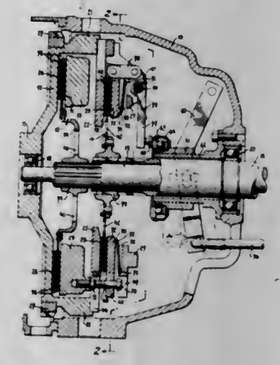
In combination with two frame portions extending at right angles to each other, each of said frame portions comprising at least one rail having a bottom, side walls connected with said bottom and at least two wing portions carried by said side walls, said wing portions extending toward each other and being spaced from and parallel to said bottom, whereby a channel is formed by said bottom, said side walls and said wing portions; the rail bottoms of the two frame portions being located in planes which are perpendicular to each other and joining each other in a plane extending perpendicularly to the longitudinal directions of said two frame portions, the wing portions of the two frame portions joining each other in the last-mentioned plane, whereby the channels of the two frame portions have bottoms extending in perpendicular planes and open top portions located between said wing portions and also extending in perpendicular planes, an angular pressure shoe located in said channels and having the shape of substantially an inverted T in cross-section, said pressure shoe having surfaces engaging at least some of the inner surfaces of the rails, and a plurality of screws screwed into said pressure shoe, at least one of said screws extending perpendicularly to one other screw, each of said screws having a head located outside of said pressure shoe and an integral threaded portion having an end located outside of said pressure shoe and engaging one of said rail bottoms, each of the wing portions of at least one of said rails comprises at least one longitudinal rib located upon an inner surface of the wing portion and extending toward the bottom of the rail, said pressure shoe having at least two coplanar surfaces engaging said inner surfaces of the wing portions and having grooves containing said ribs.

3,018,862
STRUCTURAL ELEMENT
Silas Litteral and Francis E. Step, Quincy, Ill., assignors to Storage Products Corporation, Skokie, Ill., a corporation of Illinois
Filed June 2, 1959, Ser. No. 817,511
6 Claims. (Cl. 189—37)



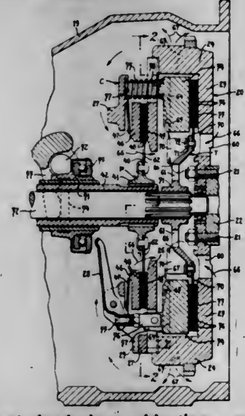
6. A structural element comprising, in combination, a longitudinal load supporting U-shaped channel with a pair of depending flanges, each flange having a tubular edge adapted to reinforce said U-shaped channel, a spacing plate which engages said channel, the ends of the said tubular flanges overlying a portion of said spacing plate, said spacing plate comprising an L-shaped member, the longer leg of said L-shaped member adapted to receive in an abutting relationship the end of said channel, the base of said spacing plate adapted to support the edges adjacent the ends of the said flanges of the U-shaped channel, an intermediate section and side sections extending from the base of said spacing plate in a generally spaced apart relationship to said longer leg, the said intermediate section extending within the said U-shaped channel, means on said intermediate section for engaging said channel, and means on said side sections adjacent the edges of said flanges, and which are positioned to engage the edges of said flanges, whereby said channel and said spacing plate are retained in a locked relationship.

3,018,863
FRICTION CLUTCH MECHANISM
Lee E. Elfes, Birmingham, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed May 29, 1958, Ser. No. 738,861
Claims priority, application Great Britain Oct. 14, 1957
2 Claims. (Cl. 192—48)



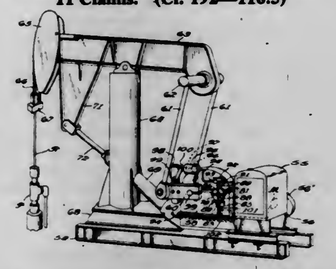
1. In a dual clutch mechanism, in combination, a front rotary driving member presenting an annular friction driving surface on one face, an annular peripheral flange extending from said member, an intermediate flat annular member rigidly fixed to said flange in spaced parallel relation to said driving member and having an annular friction driving surface on its one face corresponding to said driving surface on said driving member, a rear annular support member fixed to said flange in spaced relation to both said driving faces, front and rear annular pressure plates disposed respectively between said front and intermediate members and between said intermediate and rear members and being shiftable axially of the driving member, a first shaft extending rearwardly from said mechanism and having its forward end piloted in said front driving member, a tubular shaft extending over said first shaft, said annular intermediate member having an inner edge spaced radially from said shafts, a clutch disc nonrotatably mounted on said first shaft and having its marginal edge portion interposed between the forward friction surface of the driving member and the front pressure plate, a second clutch disc nonrotatably mounted on said tubular shaft and having its marginal edge portion interposed between the friction surface on said intermediate annular member and the rear pressure plate, said clutch discs both having a plurality of openings extending axially through their central portions, said intermediate plate having outer marginal openings therethrough, a set of helical coil springs extending through the outer marginal openings of said intermediate member and acting between said rear annular support member and the front pressure plate, and a Belleville spring acting between said rear annular support member and the rear pressure plate, said springs all acting against the rear annular support to yieldingly urge said plates toward their respective friction surfaces thereby to drivingly engage both of said clutch discs, and means for retracting said pressure plates successively against the force of said springs to disengage said clutch discs.

3,018,864
DUAL CLUTCH
Lee E. Elfes, Detroit, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed May 27, 1958, Ser. No. 738,168
Claims priority, application Great Britain May 30, 1957
3 Claims. (Cl. 192—113)



3. In a dual clutch, in combination, a rotatably driven flywheel having a peripheral flange, an annular abutment member secured at its outer marginal edge to said flange and extending inwardly therefrom, a back plate secured to said flange in spaced relation to said abutment member, a first driven clutch member and cooperating pressure plate disposed between said abutment member and said flywheel, a second driven clutch member and cooperating pressure plate disposed between said back plate and said abutment member, spring means interposed between said back plate and said pressure plates yieldably urging the respective driven clutch members into frictional engagement with said flywheel and with said abutment member, means for retracting said pressure plates to disengage said driven members, said flywheel and said driven members having openings located closely adjacent their rotational axes for admitting air to the interior of the clutch, and said flywheel flange and the pressure plate cooperating with said first driven clutch member having openings disposed outwardly from said first mentioned openings defining peripherally opening ducts for the discharge of air from the interior of the clutch, and impeller elements mounted on said first driven member intermediate the inner and outer sets of openings operative in the rotation of the clutch to induce a continuous flow of air through said openings and said ducts to effectively dissipate the heat generated in the clutch.

3,018,865
DEEP WELL PUMP JACK COUNTERBALANCE CONTROL MEANS
Luther A. Blackburn, Los Angeles, Calif. (4919 Highland View Ave., Eagle Rock, Calif.)
Filed June 22, 1956, Ser. No. 593,152
11 Claims. (Cl. 192—116.5)

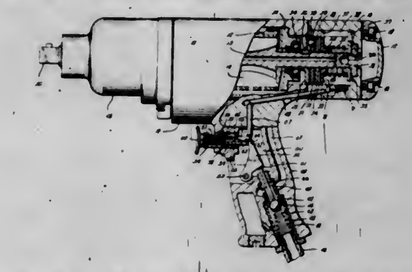


1. In an oil well pump jack, a frame structure including guidance means for a vertically reciprocating crosshead mounted thereon, means carried by said crosshead adapted to be operatively connected to a sucker rod string with resultant suspension of the sucker rod string therefrom, a stationary piston supported above the path of reciprocation of said crosshead, a cylinder connected to said crosshead for reciprocation therewith; said cylinder having a closed upper end and an open lower end slidingly engaging said piston, means for supplying said cylinder with a pressurized foam with sufficient pressure to form a counterbalance for the weight of the sucker rod string suspended from said crosshead, a prime mover and devices actuated thereby including a rotatable shaft and means actuated by said shaft for imparting reciprocation to said crosshead on said guidance means, and other devices including means on said shaft responsive to abnormal speed of rotation of said shaft deriving from disconnection of at least part of the sucker rod string from said crosshead during operation of said jack effective to dissipate the pressure in said cylinder and simultaneously disable said prime mover.

3,018,866
MECHANISM TO CONTROL THE TORQUE DELIVERED BY IMPACT WRENCHES
Charles H. Elliott and Richard E. Eckman, Houston, Tex., assignors to Reed Roller Bit Company, Houston, Tex., a corporation of Texas
Filed Sept. 17, 1958, Ser. No. 761,627
3 Claims. (Cl. 192—150)

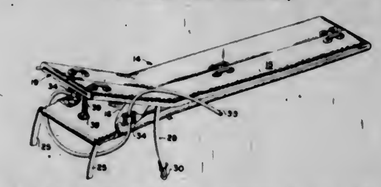
1. In a pressure fluid actuated tool for running and impacting a threaded element, the combination of a fluid actuated motor including a drive spindle subjected to sudden deceleration under certain conditions of operation, a passageway conveying motive fluid to the motor to actuate same, a valve controlling said passageway, a spring nor-

mally urging and maintaining said valve closed relative to said passageway, an operator for said valve movable relative thereto in valve open or closed positions an operating connection between said operator and valve to open the valve upon movement of said operator to said valve open position, said connection capable of release to enable said valve to close by virtue of said spring even though said operator is in said valve open position, a flywheel on said spindle rotatable relative thereto, a first disc on



one side of said flywheel fixed on said spindle, a second disc on the other side of said flywheel axially movable on said spindle, cam means between said first disc and flywheel operatively associated with said second disc to impart axial movement thereto in one direction by virtue of a predetermined inertia of said flywheel upon said deceleration of said spindle and means responsive to the axial movement of said second disc in said one direction automatically effecting the release of said connection.

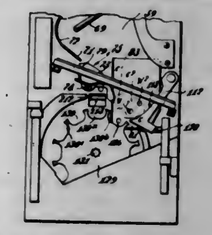
3,018,867
INFLATABLE ESCAPE CHUTE
William L. Heyniger, Levittown Township, Burlington County, N.J., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Original application Sept. 30, 1957, Ser. No. 686,951, now Patent No. 2,936,056, dated May 10, 1960. Divided and this application Mar. 3, 1960, Ser. No. 12,617
7 Claims. (Cl. 193—25)



1. A slide for a structure, comprising: an inflatable member presenting a slide-way surface and having sufficient strength when inflated to support the weight of a load carried on said slide-way surface; means for supporting one end of the slide at the structure; and breakable means for retaining one end of the inflatable member contiguous the other end of the member, said breakable means being adapted to be broken by the distending forces when the member is inflated.

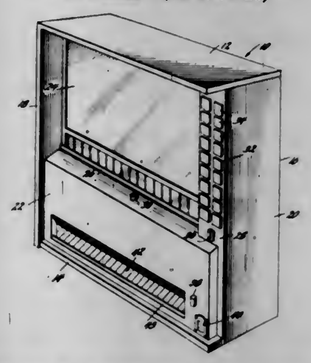
3,018,868
MEANS FOR BREAKING A JAM OF COINS IN MOTOR-DRIVEN, FARE-COLLECTING APPARATUS
Walter Antonoff, Coventry, R.I., assignor, by mesne assignments, to Universal Controls, Inc., New York, N.Y., a corporation of Maryland
Filed Feb. 24, 1958, Ser. No. 716,940
6 Claims. (Cl. 194—9)

1. In an apparatus of the class described which comprises an intermittently movable coin-transfer device having coin-receiving pockets, a motor for driving the coin-transfer device, a motor-starting switch in the motor circuit, means responsive to the presence of a deposited coin, disposed within said pocket of the coin-transfer device for closing said starting switch and thereby starting the motor, and means automatically operative to stop the motor when the coin-transfer device has moved a distance of one pocket, the apparatus also having a chamber through which the coins pass on their way to the coin-receiving pocket of the coin-transfer device, and coin-



agitating means within said chamber normally driven by the motor to agitate coins within said chamber to facilitate their free movement toward the pocket in the coin-transfer device; the combination with the motor, of auxiliary means for closing the motor circuit, said auxiliary circuit-closing means comprising a detector which is responsive to the presence of coins lodged in said chamber on their way to the transfer device and before reaching the coin-receiving pocket of the coin-transfer device, and means actuated by said detector for closing the motor circuit thereby to start the motor.

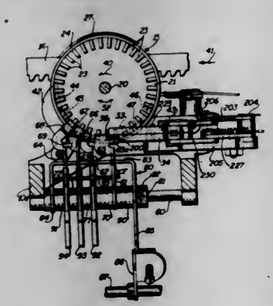
3,018,869
VENDING MACHINE
Robert T. Cozart, 107-9 S. Willow Ave., Tampa, Fla.
Filed July 25, 1957, Ser. No. 674,201
13 Claims. (Cl. 194—10)



1. Coin-control for controlling an intermittently electrically actuated device including a normally open operating circuit, including in series the actuated device, a source of voltage, a manually actuated switch and a coin-controlled switch; a coin chute, means for holding a coin at a predetermined point in said chute, means for closing said coin controlled switch when a coin is held at said position, means for releasing said coin from said position to open said coin-controlled switch immediately after said manually actuated switch has been closed, a coin receptacle, a coin return chute, electromagnetically operated coin guiding means for routing said coin to said receptacle or said return chute alternatively, means including a coin return switch for positively breaking said circuit to said actuated

device and then operating said coin release means to release said coin while concurrently operating said coin guiding means to route said coin to said coin return chute, said coin return switch including a blade connected to said source, and a pair of alternatively engaged contacts connected to said dispensing and coin guiding electromagnets, respectively, said coin guiding means routing coins to said receptacle when its electromagnet is de-energized.

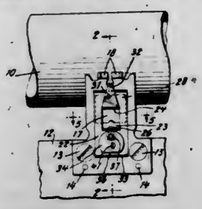
3,018,870
PROPORTIONAL SPACING MECHANISM
Harry L. Lambert, West Hartford, and Paul F. Page, Newington, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Aug. 18, 1959, Ser. No. 834,597
21 Claims. (Cl. 197—84)



1. In a machine of the class described having a frame; a carriage movably mounted on said frame; a mechanism for driving said carriage in at least one direction; and means for controlling the feed movement of said carriage in said one direction under the action of said drive mechanism: said means comprising a carrier movably mounted on said frame and operatively connected to said carriage; a plurality of stop members movably mounted on said carrier; a stop mounted on said frame; said stop members each being movable to a set position so as to be cooperable with said stop thereby preventing movement of said carriage in said one direction, and to an unset position so as to by-pass said stop thereby permitting a movement of said carriage in said one direction; means for moving each successive stop member to a set position as said stop members respectively approach said stop; and selectively operable means for sequentially displacing said set stop members to unset positions so as to successively permit said carriage to intermittently partake of predetermined feed movements in said one direction under the action of the carriage driving mechanism.

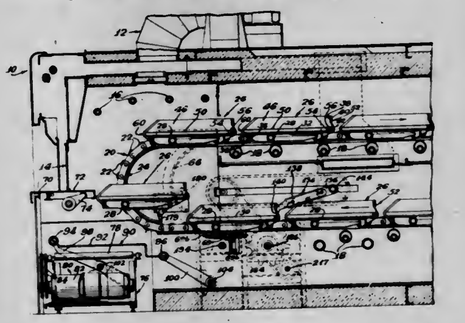
3,018,871
TYPING BLOCK-OUT MECHANISM FOR WRITING MACHINES
Joseph W. Barker, Monroe, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 18, 1959, Ser. No. 834,548
8 Claims. (Cl. 197—180)

3. A combination guide and typing block-out means for a writing machine including a guide member having spaced ears and a seat portion, a slide movable on said seat portion, elastic type bar buffer means on said slide adapted to be positioned against and between said ears to intercept the type bars in movement toward the printing point and means for moving said slide into inter-



cepting position against the yieldable resistance of said buffer means.

3,018,872
TRAY FOR BAKING OVEN
Wallace W. Wittenberger, Chicago, Ill., assignor to The Petersen Oven Company, Franklin Park, Ill., a corporation of Illinois
Original application Aug. 22, 1955, Ser. No. 529,688, now Patent No. 2,847,132, dated Aug. 12, 1958. Divided and this application Mar. 17, 1958, Ser. No. 722,069
10 Claims. (Cl. 198—24)

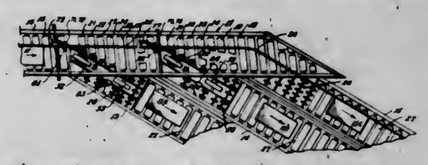


1. A tray adapted for travel in a baking oven or the like comprising a plurality of elongated parallel bars terminating adjacent the longitudinal ends of the tray and defining a bottom therefor, an upright barrier at one end of the tray extending above said bottom, the opposite end of the tray being unobstructed above said bottom, and an elongated discharge member on the bottom of the tray between said ends and normally located adjacent said upright barrier at the one end of the tray, means mounting the tray for movement, said elongated discharge member being adapted to be moved across the bottom of the tray from adjacent the barrier to adjacent said opposite end of the tray while the tray is moving, to discharge from said tray articles carried on the bottom thereof.

3,018,873
CONTAINER SORTING APPARATUS
Robert V. Burt, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 7, 1959, Ser. No. 804,779
7 Claims. (Cl. 198—38)

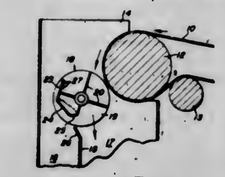
1. In a conveyor system wherein a plurality of classes of containers are advanced in indifferent order along a main roller conveyor in essentially end to end abutting relation, a container sorter for continuously and selectively diverting such containers by classes onto a plurality of branch conveyors so that each such branch conveyor will contain only containers of a predetermined class, said sorter comprising a main conveyor section in alignment

with said main roller conveyor so as to receive containers therefrom, a plurality of branch conveyor sections mounted at substantially less than right angles with respect to said main conveyor section and in container receiving relation thereto, a first friction wheel mounted beneath said main conveyor section in slantwise relation to the path of travel of containers moving along said main conveyor section and in general alignment with the longitudinal axis of the leading branch conveyor section, means for raising and lowering said first friction wheel from an inoperative position in which its uppermost surface lies below the bearing surface of said main conveyor section to an operative position in which its upper surface lies in container contacting position, whereby when said first friction wheel is in the operative position the leading end of a container contacted thereby will be diverted onto said leading branch conveyor section, a second friction wheel mounted beneath said leading branch conveyor section in alignment with said first friction wheel and lying just beyond the adjacent side edge of said main conveyor



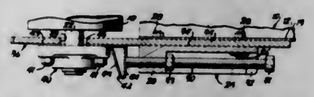
section, said second friction wheel having its uppermost surface positioned to frictionally engage the bottom surface of a container as it is diverted onto said branch conveyor section by said first friction wheel, power means for rotating said first and second friction wheels, container sensing means in advance of said first friction wheel for actuating said raising and lowering means so as to move said first friction wheel from the inoperative to the operative position when a container advancing along said main conveyor section is of the class to be diverted onto the said leading branch conveyor section, means operative to return said first friction wheel to the inoperative position upon movement of the diverted container onto the said leading branch conveyor section and before the next succeeding container moving along said main conveyor section reaches a position overlying said first friction wheel, and means operative to override said last named means and maintain said first friction wheel in the operative position in the event the container next succeeding the diverted container is of the same class as the diverted container.

3,018,874
GATE FOR DIVERTING MATERIALS
Wendell L. Bunnell, Cedar City, Utah, assignor to Columbia Iron Mining Company, a corporation of Utah
Filed May 23, 1960, Ser. No. 30,888
3 Claims. (Cl. 198—69)



1. The combination, with a head chute, a pair of receivers extending downwardly from said chute, a partition separating said receivers, and means for discharging material into said chute, of a diverting gate comprising a pair of spaced-apart vertical side plates, means pivotally supporting said plates within said chute in spaced relation above said partition, a central bottom wall section fixed to said plates and extending therebetween, second and third bottom wall sections fixed to said plates and extending therebetween, said second and third sections being located at opposite edges of said central section and separated from each other by the width of said central section and forming obtuse angles therewith, and means for turning said plates between a position in which said second section is substantially horizontal and said central section slopes upwardly therefrom to direct material into one of said receivers, and another position in which said third section is substantially horizontal and said central section slopes upwardly therefrom to direct material into the other receiver.

3,018,875
TIGHTENER FOR CONVEYER BELTS
George M. Greenberger, 90 Hallam Road, Buffalo 16, N.Y.
Filed Apr. 12, 1960, Ser. No. 21,743
8 Claims. (Cl. 198—208)



1. A belt tightener for a belt travelling over the deck of a sheet metal box having upright side flanges at the opposite edges of said deck and the end of the belt passing around a roller arranged beyond one end of the box with its axis generally parallel with said deck and journalled in bearings at its opposite ends, comprising a single metal body member fixed to a vertical side face of each of said vertical flanges at said one end of said box and having a external groove in its face opposing and enclosed by the vertical flange and opening at its end toward said roller whereby said groove in said body and vertical side face of said flange jointly provide a laterally enclosed slideway, a bearing holder having an outboard end fixed to a corresponding one of said bearings and having a tongue slidingly fitted in said slideway, a nut fixed to the face of said body opposite that containing said external groove on an axis directed toward the adjacent one of said bearings, a screw in said nut, and an abutment member interposed between the end of each screw and the corresponding bearing.

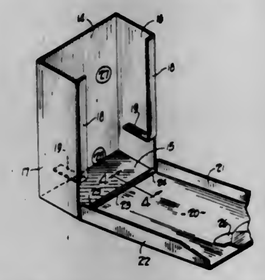
3,018,876
DRILL HOLDING CASE
Henry E. Huot, St. Paul, Minn., assignor to Huot Manufacturing Company, St. Paul, Minn., a corporation of Minnesota
Filed Aug. 19, 1959, Ser. No. 834,737
1 Claim. (Cl. 206—17)



A drill holding case having in combination, a casing substantially parallelepiped in form comprising a base portion and a cover portion, means for hinging said cover portion to said base portion, said cover portion having an open rear end portion supported in upstanding position against the rear end of said base portion, a first and second holding member in said casing in superposed relation, means respectively pivotally securing said holding members at their lower end portions in said casing, said first holding member being substantially rectangular in plan and comprising a pair of side walls of uniform height having therebetween a plurality of transversely

spaced longitudinally extending partition members, said partition members being successively reduced in height transversely of said first holding member at one side thereof, a pair of spaced ribs extending transversely substantially centrally of said partition members across said one side of said holding member, a plate member extending between said ribs bearing indicia thereon having specific relation to the respective slots formed between said partition members, a pair of plate members extending transversely across the other side of said holding member spaced longitudinally thereof overlying the opposite end portions of said partition members and bearing indicia thereon having specific relation to the respective slots formed between said partition members, an end wall extending across and enclosing the lower ends of said side walls and partition members, and a transverse rib overlying the upper end portions of said partition members on the first mentioned side of said holding member whereby a plurality of graduated slots are formed to respectively accommodate certain different sized drills.

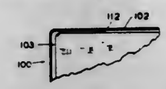
3,018,877
POCKET ASH TRAY AND CIGARETTE PACKAGE CASE
Michael J. Posavic, 4202 S. Medina Road, Barberton, Ohio
Filed Nov. 2, 1960, Ser. No. 66,870
1 Claim. (Cl. 206—38)



A pocket ash tray and cigarette package case, comprising in combination, a unitary body having bottom, rear, and side walls open to the top, the side walls having flanges along their forward edges defining two spaced and aligned front wall sections, both of the front wall sections being bent inwardly toward the rear wall, at a point spaced upwardly of the bottom wall, to provide cigarette package supporting brackets defining an upper cigarette package retaining compartment and a lower ash receiving compartment, both open to the front, the bottom surface of a so retained cigarette package forming the top wall of the ash receiving compartment, and a tray pivotally mounted at the front edge of the bottom wall with freedom of limited outward swinging movement, between a first, or closed position flat against the front wall, and a second, or open position, substantially in the plane of the bottom wall.

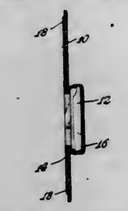
3,018,878
CIGARETTE PACKAGE
Richard E. Watkins, 1917 Westway, Garland, Tex.
Filed Nov. 7, 1957, Ser. No. 695,015
6 Claims. (Cl. 206—41.2)

4. An improvement in cigarette packages, comprising: side panels of flexible and fire resistant materials forming a hollow shell of rectangular configuration with an access opening at one end, an inner wrapper containing a plurality of cigarettes inserted in said shell, an opening in a side panel connecting with the interior of said shell, a flap of said flexible material having a free end, an attached end hinged about an axis transverse to the shell axis adapted to normally cover said opening, the hinge axis of the flap being on the side of the opening toward the shell access opening, and a folding adhesive tab connecting the underside of the free end of said flap to said wrapper to permit said flap to automatically open and



expose the interior of said package shell for use as an ash receptacle when said wrapper is partially withdrawn from said package, and said flap being so constructed relative to the space between said flexible material and said inner wrapper that movement of said inner wrapper to its initial position will automatically return said flap to its initial position.

3,018,879
COMBINATION THREE-DIMENSIONAL ARTICLE AND DISPLAY PACKAGE THEREFOR, AND METHOD OF PACKAGING SAID ARTICLE
William B. Crane, Jr., New York, N.Y., assignor of one-half to The Nevins Company, Clifton, N.J., a corporation of New Jersey
Filed Dec. 15, 1958, Ser. No. 780,611
8 Claims. (Cl. 206—45.31)

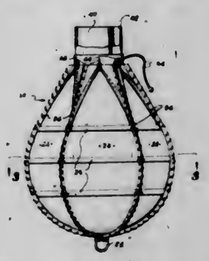


1. In combination, a three-dimensional article which is to be displayed; and a display package containing said article, comprising a stiff supporting sheet extending adjacent the rear of the article and having a cut-out portion forming an opening extending through the sheet at a location wholly behind the article, said opening having a width which is less than the maximum of at least one dimension of the said article, said package further comprising a thin transparent plastic membranous heat shrinkable sheet folded around the front and sides of said article and conforming at least in part to the contour thereof, said plastic sheet passing through the opening of the stiff supporting sheet and having anchored edge portions adhered to the back of said supporting sheet, and said article and enclosing portion of the plastic sheet being disposed against the front of the supporting sheet, in front of the said opening therein, the enclosed article being disposed wholly in front of the said stiff supporting sheet and the enclosing portion of the plastic sheet being taut around the article and taut and under continuous tension between portions of the article and the anchored edge portions of the plastic sheet.

3,018,880
STABILIZED CONCRETE MIX AND METHOD OF USE THEREOF
John B. Brugmann, La Habra, Calif., assignor to San Gabriel Ready Mixed, Pasadena, Calif., a corporation of California
Filed Dec. 30, 1957, Ser. No. 706,053
22 Claims. (Cl. 206—47)

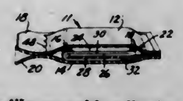
1. A package of a moisture stabilized aggregate for use in making concrete comprising: a predetermined amount

of sand; and gravel wetted by a predetermined amount of water; and a container made of a pliable waterproof material enclosing said sand, gravel, and water and having means through which said aggregate of sand, gravel and



water can be introduced and evacuated, said container when said means is closed defining a moisture-proof enclosure whereby a predetermined ratio of sand, gravel, and water is maintained.

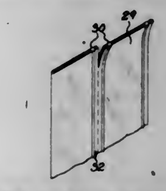
3,018,881
ADHESIVE BANDAGE PACKAGE UNIT
Thomas H. Wall, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed June 2, 1960, Ser. No. 33,528
6 Claims. (Cl. 206—56)



1. A sealed, readily openable adhesive bandage package unit comprising a package having an adhesive bandage situated therewithin in such manner that the package serves as a protective liner for the bandage adhesive and provides a means for applying the bandage during opening of the package to expose the bandage, said package comprising a pair of panels enveloping said bandage and being breakably sealably attached to one another about a periphery surrounding said bandage, one of said panels including a flap extending into the interior of said package, at least one end portion of said bandage being folded under an intermediate portion thereof and having its adhesive surface strippably adhered to said flap, the other end portion of said bandage having its adhesive surface strippably adhered to said other panel, and means on said package for separating said panels from one another about their sealably attached periphery whereby as the panels are separated from one another the adhesive bandage is unfolded and positioned for application to the skin as the adhesive surfaces thereof are stripped from said panels.

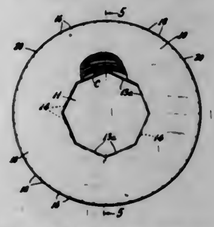
3,018,882
SPIRAL ROLL OF PERFORATED THERMOPLASTIC MULTIPLE TUBING AND METHOD AND APPARATUS FOR PRODUCING SAME
Joe S. Ferguson, Terre Haute, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 1, 1957, Ser. No. 693,885
10 Claims. (Cl. 206—56)

1. An article of manufacture comprising a spiral roll of a longitudinally continuous length of integral flattened tubing of thermoplastic material having an integral peripheral wall with longitudinal folds at each side thereof extending throughout said continuous length of tubing in the roll and a plurality of parallel pockets transversely spaced between said side folds and extending longitudinally throughout said continuous length of tubing in the roll, each pocket being separated from an adjacent pocket by a parallel seam between opposed wall portions and extending throughout said continuous length of tubing in the roll, each of said parallel seams comprising two parallel spaced continuous heat seals between said opposed wall portions separated by unsealed portions of said tubing



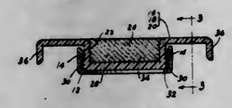
walls and extending longitudinally throughout said continuous length of tubing in the roll, and a row of perforations extending longitudinally of at least one of said parallel seams throughout said continuous length of tubing in the roll and passing through said unsealed portions of the tubing walls between the two continuous heat seals of said seam.

3,018,883
PACKAGING OF COILED TUBES
Ralph L. Wohlforth, Red Bank, N.J., assignor to Phelps Dodge Copper Products Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 12, 1960, Ser. No. 8,265
3 Claims. (Cl. 206—59)



1. A carton for packaging an annular-shaped article, such as a coil of tubing, which comprises a pair of opposed and substantially identical sheet-like members each having a central opening and inner and outer peripheral portions, the inner peripheral portion of each member having cuts defining a series of inner tabs and also having straight fold lines forming a polygonal figure at the corners of which said cuts terminate, the tabs of each member being folded on said lines toward the opposing member and overlapping the tabs thereof, means securing each tab of each member in overlapping relation to a corresponding tab of the opposing member and with said inter-secured tabs extending in opposite directions from their respective members, said inter-secured inner tabs defining an open space forming a polygonal center opening through the carton, the outer peripheral portion of each member having cuts defining a series of outer tabs and also having outer fold lines forming a generally circular figure at which said last cuts terminate, each member having a smooth annular surface extending continuously around said polygonal figure and extending radially outward from said polygonal figure to said circular figure, the outer tabs of each member being folded on said outer lines toward the opposing member, and a tape engaging said outer tabs of at least one of said members and forming the outer periphery of the carton, the number of said outer tabs being a multiple of the number of said inner tabs, and said outer tabs having substantially shorter fold lines than said inner tabs, to provide said generally circular figure and said straight-sided polygonal figure.

3,018,884
ARTIFICIAL TOOTH HOLDER
Carroll S. Fritz, York, Pa., assignor to The Dentists' Supply Company of New York, York, Pa., a corporation of New York
Filed Feb. 23, 1960, Ser. No. 10,459
8 Claims. (Cl. 206—83)

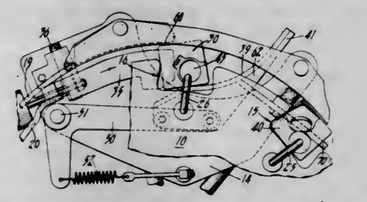


7. A holder for artificial teeth comprising in combination, a base member having a channel extending longitudinally thereof, a plurality of tooth-holding members respectively shaped to have channeled portions complementary externally to said channel in said base member and detachably received within said channel to position said holding members substantially in longitudinal alignment with each other, at least some of said members having means to secure artificial teeth detachably thereto, and flanges extending substantially perpendicularly from opposite edges of said tooth-holding members in the same direction from the upper surfaces thereof and laterally beyond the channel of said base member, thereby to prevent overlapping of said tooth holder with another when pushed against the side thereof.

3,018,885
EXTRUSION AND STRETCH-STRAIGHTENING APPARATUS AND METHOD
Leonard H. Trautman, Venetia, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 2, 1958, Ser. No. 732,666
3 Claims. (Cl. 207—1)

2. Apparatus for extruding stock and stretch-straightening the same, comprising: an extrusion press having a container adapted to receive a billet and provided with a pressure exerting ram for extruding less than the axial length of the billet through a female extrusion die associated therewith in axial alignment with the axes of the ram and billet container; an extrusion stretching mechanism in axial alignment with the axes of the ram, billet container and stock extruded through the female extrusion die, which mechanism comprises two pairs of axially separated stock grasping jaws, one pair of which jaws being axially fixedly located adjacent the discharge face of the extrusion press out of accessible interference therewith, and the other pair of jaws being remote therefrom and axially translatable in respect thereto, each pair of jaws being adapted for lateral sliding adjustment into and out of clamping engagement with the exterior surface of extruded stock axially disposed and guided thereby and therewithin during extrusion, means for axially adjusting and maintaining registry of the pair of jaws remote from the female extrusion die with the leading end of the extruded stock at completion of an extrusion stroke of the ram and thereafter laterally adjusting the last-mentioned pair of jaws into surface clamping relationship with the leading end of the extruded stock therewithin; and means for shearing the extruded stock adjacent the female extrusion die while its leading end is thus clamped, means for axially translating the leading end pair of jaws and clamped extruded stock while guiding the sheared end of the stock into axial registry with the pair of open jaws adjacent the discharge face of the extrusion press, means for laterally adjusting the open pair of jaws into closed surface clamping relationship adjacent the sheared end of the extruded stock, means for axially translating the leading end pair of jaws in surface clamping engagement with the extruded stock against the axial restraining engagement of the jaws in surface engagement with the sheared end of the stock thereby to stretch-straighten the stock, whereafter the stock is released from the two pairs of axially separated jaws and removed therefrom.

3,018,886
TESTING MECHANISM
John Michael Matejek, Plainfield, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Dec. 24, 1959, Ser. No. 861,874
8 Claims. (Cl. 209—72)

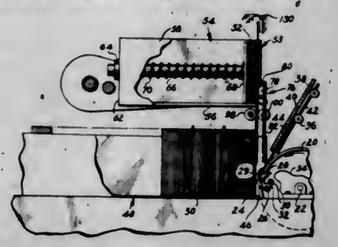


1. In a machine for testing containers to pass only normal containers each having an unobstructed filling opening properly positioned in its upper end, the combination of a feeding device for advancing normal and abnormal containers along a predetermined path of travel, a depending detector pin positioned to move along and above each container for a predetermined distance along the path of travel, said feeding device having yieldable means to raise each container as it passes a predetermined point along the predetermined distance with the detector pin entering the filling opening of a normal container, said yieldable means being movable downward upon physical contact between an abnormal container and the associated detector pin to prevent the abnormal container from rising as it passes the predetermined point with the closure element closed, and a spring loaded ejector element positioned to be cocked and triggered only by an unraised container passing the predetermined point and operable when triggered to eject the unraised container from the path of travel.

3,018,887
CARD FILE MARKING DEVICE
George B. Heddendorf, Mount Vernon, Maine, and Herman A. Speh, East Williston, N.Y., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 4, 1958, Ser. No. 726,469
4 Claims. (Cl. 209—73)

1. In a data processing machine adapted to feed record bearing media sequentially to a receiving bin to form

a stack the combination comprising a magazine, a stack of markers supported by said magazine, said magazine having an open end positioned to permit the feeding of said markers to said receiving bin, a gate slidably coupled to the open end of said magazine operable to feed an end positioned marker to said receiving bin without in-

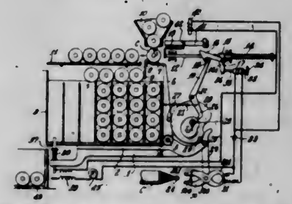


terrupting the feeding of said record bearing media, drive means to actuate said gate, and electrical sensing means to detect desired corrections in said record bearing media operable to actuate said drive means to cause said gate to feed an end positioned marker to said receiving bin, said end positioned marker being located in said receiving bin to give an indication of the desired correction.

3,018,888
METHOD AND APPARATUS FOR AUTOMATICALLY SORTING AND COLLECTING YARN COILS FOR WINDING OR WEAVING OPERATIONS

Walter Reiners, Peter-Nonnenmuhlen-Allee 54, M. Gladbach, Germany, and Stefan Fürst, M. Gladbach, Germany; said Fürst assignor to said Reiners

Filed Feb. 26, 1957, Ser. No. 642,529
Claims priority, application Germany Feb. 27, 1956
5 Claims. (Cl. 209—74)

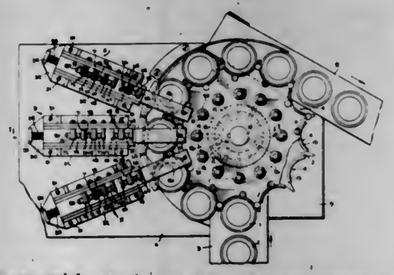


5. An apparatus for automatically sorting and collecting yarn coils, comprising means to supply in sequence unsorted yarn coils of two types, one of which has a reserve yarn winding at one end and the other of which does not, a compartmented magazine for storing the coils having the reserve winding, the compartments having upwardly open inlet openings, a member pivotally mounted and having a coil arresting portion positionable for temporarily retaining said coils one at a time at a coil arresting position between the supply means and one compartment of the magazine; the pivoted member also having a coil pusher portion, means to sense whether said additional length of reserve winding is present on the coil arrested on said arresting portion, coil transfer means having drive means operably connected to said sensing means for displacing the coil from said arresting on the coil arresting means to another position where the coil is not accessible to the magazine if said reserve winding is not present on that coil, the pivoted member being connected to said drive means for movement by said drive means out of said coil arresting position, the coil pusher portion upon pivoting of said pivoted member pushing the coil to a location above the compartment next to said one compartment upon return of said member to coil arresting position, if said one compartment is full, the means to sense comprising a gauge having jaws adapted to be automatically passed over the end of the yarn coil in said coil arresting position to determine, by the resulting positions of the jaws, whether the reserve winding is present, electric circuit operated means operably connected to said sensing means for controlling the displacement of the coil from said coil arrested position to said other position where said coil is not accessible to the magazine, said circuit means including electric contact means carried by said gauge jaws and openable and closable in accordance with positions of said jaws, said coil transfer means comprising a reciprocable pusher rod, actuating means for operably connecting said pusher rod to said drive means, and linking means between the actuating means and the pusher rod operably connected to said electric circuit operated means for adjustment into linking and non-linking position by said electric circuit operated means, said pusher rod actuating means being pivoted, said drive means including rotary cam means operatively connected to pivot the pivoted member, move the swingable gauge, and pivot the actuating means for the pusher rod.

3,018,889
GAUGING MACHINE

Frederick Z. Fouse, Lancaster, Ohio, assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware

Filed Oct. 11, 1956, Ser. No. 615,306
15 Claims. (Cl. 209—88)



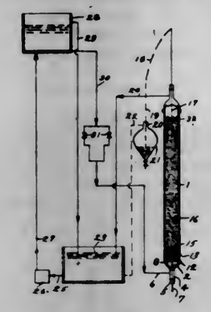
2. In an article gauging machine, the combination of means for holding an article to be gauged, means for gauging a portion of said article, said gauging means comprising a slidable carrier having a plurality of gauging fingers fixedly mounted thereon and a plurality of gauging fingers slidable relative thereto, means for relatively moving said article-holding means and said gauging means to place an article into engagement with said gauging fingers to be gauged thereby, means for creating a vacuum in article-holding means for retaining a defective article therein to carry it past the point of delivery of commercial articles, said vacuum-creating means being operable by said gauging fingers, and means for shutting off the vacuum in said article-holding means to permit said defective article to be ejected therefrom after it has passed said point of delivery.

3,018,890
METHOD AND APPARATUS FOR OBTAINING POWDERS OF UNIFORM SIZE

Robert Charles Chuffart, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Jan. 7, 1959, Ser. No. 785,519
Claims priority, application Great Britain Jan. 15, 1958
12 Claims. (Cl. 209—158)

1. Apparatus for obtaining at least one fraction of particles of limited size distribution from a powder composed of particles having a greater size distribution comprising a substantially vertical wall-enclosed elongated tube having substantially uniform cross-sectioned upper part and a reduced cross-section lower part, fluid inlet means for introducing liquid into said reduced cross-section lower part, a liquid permeable support within said tube, in the lower end of said uniform cross-sectioned upper section and disposed transverse to the axis thereof, a bed of particles on said liquid-permeable support to be fluidized by upwardly flowing liquid in said tube and



to regulate the uniformity of liquid velocity in said upper uniform cross-section part, a perforated plate within said tube, positioned beneath said liquid-permeable support, above said fluid inlet means, and extending transverse to the axis of said tube, the perforations of said plate being radially outside the projection of the inlet means onto said perforated plate, exit means for withdrawing said liquid and a limited portion of the powder to be segregated from the upper portion of the elongated tube and means for separating the solid matter from the liquid withdrawn.

3,018,891
PUNCH PLATE SCREENS

Frank S. Bergstrom, Eveleth, Minn., assignor to Drill Development Company, Biwabik, Minn., a corporation of Minnesota

Original application Feb. 1, 1954, Ser. No. 407,522. Divided and this application Feb. 1, 1957, Ser. No. 640,998

1 Claim. (Cl. 209—397)



An abrasion-resistant punch plate screen of the flexible vibrating type comprising, a metal supporting plate formed with a multiplicity of perforations of substantially uniform width for the passage of the undersize material and a face sheet of abrasion-resistant flexible elastic material of thickness within the range approximately 83% to 140% of the thickness of said supporting plate permanently bonded to and covering the normally upper side of said plate and formed with a multiplicity of perforations which at the upper side of the sheet are within the range approximately 60% to 85% of the width of those of the supporting plate, the elements defining the walls of the several perforations in said sheet being convexly curved and forming in each perforation an annular zone of maximum restriction and substantial depth extending downwardly from the upper face of said sheet, the perforations of said sheet at the lower side thereof being of equal width and in registry with the several perforations of said plate, the thicknesses of said plate and face sheet and the widths of said perforations therein being correlated and within the range as follows:

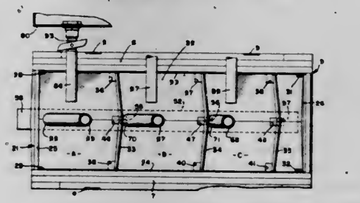
	Thickness		Widths of perforations	
	Plate, inch	Face sheet, inch	Plate, inch	Face sheet, inch
Minimum	.0598	.0625	.085	.055
Maximum	.1793	.250	.400	.340

whereby said supporting plate is adapted to be flexed at limited, non-destructive amplitudes and frequencies incident to the vibration of the screen in use and such vibration and flexing causes substantial expansion and contraction of said annular zones of the perforations in said face sheet.

3,018,892
ORE CONCENTRATING DEVICE

Richard N. White, 5317 Harcourt Ave., Los Angeles, Calif.

Filed Apr. 18, 1960, Ser. No. 23,023
11 Claims. (Cl. 209—441)



1. An ore concentrating device comprising a receptacle having a bottom surface inclined with respect to the horizontal plane, side walls projecting upwardly from either side of said bottom surface, and a plurality of partitions projecting upwardly from said bottom surface and extending transversely across said receptacle in spaced relationship with each other, said bottom surface being inclined downwardly toward the longitudinal central portion thereof, said partitions being inclined toward the central portions thereof and arranged to point downwardly, said bottom surface having a closable aperture in said central portion thereof adjacent and above each of said partitions, said bottom surface further having a side outlet above each of said partitions adjacent the intersection of the side wall thereof and the partitions, said bottom surface being continuous other than at said apertures and conduit means for receiving material from said side apertures and from said central apertures.

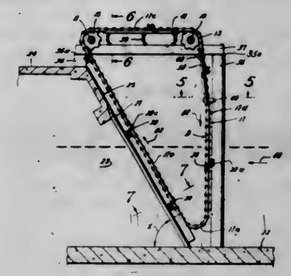
3,018,893
MECHANICAL TRASH RAKE

Robert M. Collie, 6158 Del Monte, Houston 27, Tex., and Herbert B. Jackson, 1518 Pine Chase, Houston 24, Tex.

Filed Apr. 25, 1960, Ser. No. 24,447
2 Claims. (Cl. 210—159)

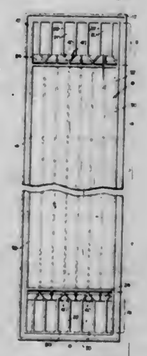
1. An apparatus for removing debris, trash and other material from a moving body of water comprising a platform above the body of water for receiving debris, trash and other material, a screen adapted to be submerged in said body of water and below said platform for screening the water, said screen being inclined rearwardly and sloping upwardly and including at least two guide members adjacent and substantially parallel thereto, a drive unit, means for supporting said drive unit, a pair of endless chains, means for supporting said endless chains in a spaced apart parallel relationship extending vertical-

ly before said screen and approximately adjacent thereto, said means for supporting said endless chains including a pair of spaced inner and outer sprockets aligned with each other and positioned above the water for supporting each of said endless chain whereby each of said endless chains forms a continuous path in the shape substantially of a right triangle perpendicular to said screen with the hypotenuse side of said triangle being parallel to said screen and the legs of the triangular path being substantially parallel and vertical in relation to the water, horizontal guide means positioned between each sprocket of said pair of spaced apart sprockets and in



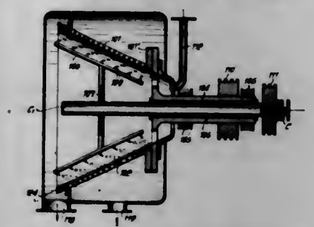
substantial alignment therewith whereby said endless chains are maintained substantially horizontal along the leg of the triangular path which is parallel to the water, vertical guide means extending below and aligned with said opter sprockets above the water whereby the leg of the triangular path is formed, a plurality of raking members secured between said endless chains whereby said raking members are moved on said guide member over the face of said screen so as to collect the debris, trash or other material deposited therebefore and move the debris, trash or other material on to said platform, and means for operably connecting said drive unit to said sprockets for said endless chains.

3,018,894
FILTER FRAME AND FILTER PRESS
Judson G. Brown, 18 Park Ave., Wakefield, Mass.
Filed Sept. 23, 1960, Ser. No. 58,042
7 Claims. (Cl. 210—231)



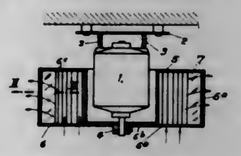
1. A filter frame comprising end walls and side walls of substantial depth; a thin reinforcing plate positioned adjacent one face of said frame and extending from one to the other of said side walls, said plate being shorter than the length of said side walls and being so positioned as to provide an open area depthwise of said frame between each end of said plate and the adjacent end wall of said frame; a first plurality of substantially parallel, depthwise partitions positioned in each said open area and extending from an end wall of said frame to provide a plurality of depthwise conduits at each end of said frame; a second plurality of partitions, affixed to the inner surface of said plate, and positioned lengthwise of said frame and substantially parallel to said first plurality of partitions to provide a plurality of side-by-side channels of substantially equal width, said first-mentioned plurality of partitions being positioned substantially along the median lines of said channels; and baffle means connecting each end of alternate ones of said second plurality of partitions to the ends of two adjacent ones of said first plurality of partitions.

3,018,895
DEVICE FOR FLOATING UP AND WASHING OUT OF GROUND PRODUCTS OR MATERIALS
Ludwig Schmiedel, Wunstorf-Hannover, Germany, assignor to Starcosa Machinen- und Apparatebau G.m.b.H., Wunstorf-Hannover, Germany, a firm
Filed Dec. 28, 1955, Ser. No. 555,962
3 Claims. (Cl. 210—374)



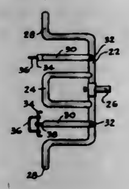
1. An apparatus for washing ground material, especially disintegrated raw material for the production of starch comprising a casing, a conical centrifugal screening member mounted for rotation in said casing, means for supplying the material to be washed to one end of said member and receiving the material as it is discharged from the other end of the member, said material being rotated with the member and advanced lengthwise therethrough by centrifugal force, a nozzle carrier mounted in the interior of said member for differential rotation relative thereto, a plurality of nozzles arranged in the form of a screw on said carrier each nozzle being directed upstream of the normal direction of movement of the material, and means for supplying water under pressure to said nozzles.

3,018,896
FLUID PROPELLING AND FILTERING APPARATUS
Lucien Victor Gewiss, 20 Rue de Sevres, Ville d'Avray, France
Filed Mar. 12, 1958, Ser. No. 720,908
8 Claims. (Cl. 210—403)



1. An apparatus for imparting motion to a fluid and simultaneously extracting foreign particles carried by the latter, comprising a cylindrical drum having a continuous bottom base wall, a second upper base wall provided with an opening for the passage of said fluid and further having a perforated peripheral wall, said drum being adapted to be immersed into said fluid, means for driving said drum into rotation around its geometrical axis, and a continuous annulus fitted within said drum against the lateral perforated peripheral wall of said drum, made of a filtering sheet material pleated to form radial folds adapted to act as fan blades through which the fluid is aspirated and propelled from the inside to the outside of said drum and is simultaneously filtered.

3,018,897
SKI RACK
Walter L. Carlyle, 219 E. 17th St., Grand Island, Nebr.
Filed Mar. 22, 1960, Ser. No. 16,824
4 Claims. (Cl. 211—60)



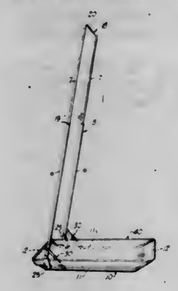
1. A ski rack comprising, in combination, a main frame, mounting means securing said main frame upon a supporting object, said main frame having positioning means for supporting a plurality of skis in spaced apart parallel relationship upon said frame, and retaining means releasably securing said skis upon said frame, said main frame being of substantially rectangular configuration having a pair of end pieces, a pair of side pieces, said end pieces extending below the level of said side pieces and defining a longitudinal extending cradle, said skis being received within said cradle of said frame substantially parallel to said longitudinal axis thereof extending normally through said end pieces.

3,018,898
PORTABLE BRACKET POLE
Jay B. Frazelle, 1543 Belleville Way, Sunnyvale, Calif., assignor of one-third each to John G. Molek, Santa Clara, and Ralph F. Long, Sunnyvale, Calif.
Filed Mar. 14, 1960, Ser. No. 14,781
5 Claims. (Cl. 211—86)



4. A portable bracket device comprising at least one inner and one outer telescoping tubular member, bracket means attached to said tubular members and extending outwardly therefrom for adjustably securing said members against longitudinal relative motion, a spring biased adjustment section means secured to the free end of at least one of said tubular members for rapidly adjusting the overall length of the composite structure, said adjustment section means comprising an open-ended tubular adjustment section which is telescoped over the free end of one of said tubular members, an inwardly turned flange on one end of said adjustment section, and a compression spring within said adjustment section abutted at one end by said flange and at the other by said free end of said tubular member, a resilient end cap covering the end of said adjustment section, a central body portion extending from said end cap into said adjustment section and into resilient engagement with the end coils of said compression spring, whereby said spring and said end cap each cooperate to retain the other within said adjustment section.

3,018,899
CLOTHES DRYING RACK
Arthur L. Groo, Northbrook, Ill., assignor to Welmaid Products Inc., Chicago, Ill., a corporation of Illinois
Filed July 6, 1959, Ser. No. 825,133
7 Claims. (Cl. 211—123)

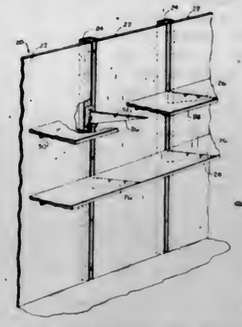


1. A clothes drying rack comprising a frame-like base of generally rectangular form having a pair of generally parallel side members located in the same plane and a pair of generally parallel and unobstructed end members connected to said side members and located above the plane of said side members, a generally U-shaped upright pivotally connected at the free ends of its arms to said base for movement between a folded position substantially in the plane of the base and an upstanding position wherein the closed side of the upright is above the base, and means for releasably retaining said upright in upstanding position.

3,018,900
ADJUSTABLE SHELF SUPPORT
Edward C. Huet, Coldwater, Mich., assignor to L. A. Darling Company, Bronson, Mich., a corporation of Delaware
Filed July 24, 1959, Ser. No. 829,428
17 Claims. (Cl. 211—148)

1. A supporting structure comprising, in combination, a longitudinally extending upright supporting member having opposed walls and a connecting web, a bracket having a generally L-shaped part engaged with said upright member and extending longitudinally thereof, with at least a lower portion of said L-shaped part bearing against a portion of one of the walls of said member and with at least an upper portion of said L-shaped part bearing against a portion of the opposed one of said walls to support at least a substantial portion of a load on said bracket directly through said upright, and a positioning member having a portion spaced from said web and from

said lower portion of said L-shaped part associated with said supporting member effective to maintain said bracket



in said engaged relationship with said supporting member.

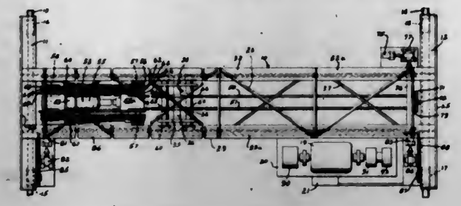
3,018,901
FLOATING CRANE
Hellmut Ernst, Nurnberg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg A.G., Nurnberg, Germany
Filed Sept. 12, 1960, Ser. No. 55,448
Claims priority, application Germany Sept. 22, 1959
3 Claims. (Cl. 212—3)



1. In a rotary floating crane having a vertical mast rotatably mounted upon a vessel, a derrick boom attached to said mast, and a boom counterbalancing engine platform extending from the foot of said mast, the improvement comprising a journal post joined to the foot of said mast and extending into a thrust bearing positioned in the interior of said vessel, and a flanged ring bearing secured to said post at the foot of said mast.

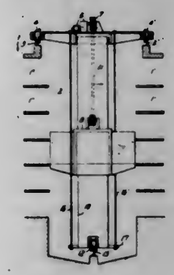
3,018,902
HYDRAULIC CRANE
John E. Minty, Muskegon, Mich., assignor to Manning, Maxwell & Moore, Inc., Muskegon, Mich., a corporation of New Jersey
Original application Dec. 6, 1955, Ser. No. 551,398, now Patent No. 2,906,413, dated Sept. 29, 1959. Divided and this application July 27, 1959, Ser. No. 829,777
7 Claims. (Cl. 212—20)

1. In combination in a crane, a hydraulic hoisting motor system, comprising a fluid motor, a source of fluid under pressure, a valve having a first port leading to said source and a second port leading to a sump, a first conduit connecting said valve to a first load-lifting chamber in said motor, a second conduit connecting said valve to a load lowering chamber in said motor, means in said valve whereby movement of said valve selectively connects said source to said sump or said first conduit to said source and said second conduit to said sump or said second conduit to said source and said first conduit to said sump, and fluid blocking means in said first conduit



preventing flow from said first chamber unless a positive load lowering pressure exists in said second chamber.

3,018,903
VEHICLE PARKING SYSTEM
Edoardo Giuseppe Bianca, Rosenweg 11, Zollikon, Zurich, Switzerland
Filed Jan. 6, 1959, Ser. No. 785,252
Claims priority, application Austria Jan. 8, 1958
9 Claims. (Cl. 214—16.1)

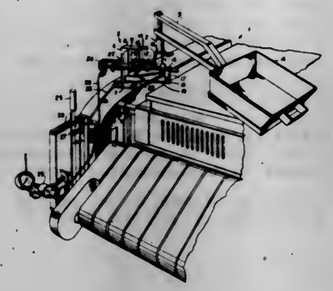


1. An elevator system for a building having a plurality of floors with compartments arranged laterally of an elevator shaft, comprising, in combination, a top carriage adapted to be supported on the building for horizontal movement above the elevator shaft; an elevator cage suspended from said top carriage movable in vertical direction relative to said top carriage and movable in horizontal direction with said top carriage; drive means on said top carriage including means for moving said carriage, and means for raising and lowering said cage; a single upright guide mast located on one side of said cage and having guide means for guiding said cage during vertical movement; means connecting said guide mast to said top carriage for vertical movement relative to the same; and other drive means at the lower end of said guide mast adapted to engage the bottom of the elevator shaft for moving the lower end of said guide mast in direction of movement of said top carriage and at the speed at which the top end of said guide mast moves with said carriage.

3,018,904
REVERSIBLE CARRIER FOR LAUNDRY MANGLE MACHINES
Edward W. Malunowe, 2020 Beach, and Adwin B. Sweet, 3547 Kingsbury Ave., both of Fort Worth, Tex.
Filed Nov. 21, 1958, Ser. No. 775,426
1 Claim. (Cl. 214—151)

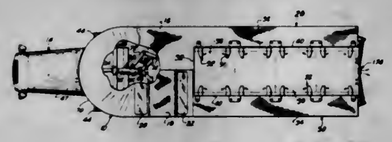
In combination with a machine having operating stations positioned at opposite sides thereof, an upstanding support at one end of the machine, between the stations,

extending upwardly above the machine, an elongated supporting member pivotally connected at one end to the upstanding support and capable of being swung in a horizontal plane, above the machine, a receptacle supported on the end of the supporting member opposite its pivot whereby the receptacle is movable in opposite directions to and from the respective stations, resilient means at each of the stations for abutting engagement with the supporting member to limit its swinging move-



ment in one direction, means at each of the stations for latching engagement with the supporting member to prevent it from being swung in the opposite direction, fluid operable means at each of the stations for imparting a horizontal thrust to the supporting member to move it pivotally from one side of the machine to the other, and manually operable means for simultaneously releasing the latching means and actuating the thrust imparting means.

3,018,905
MOBILE POWER-OPERATED BIN HANDLING AND TRANSPORTING VEHICLE
Walter E. Thornton-Trump, Box 160, Oliver, British Columbia, Canada
Filed Mar. 23, 1959, Ser. No. 801,248
6 Claims. (Cl. 214—390)



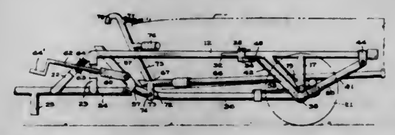
1. A mobile bin handling and transporting vehicle comprising a wheel supported carrier including a forward section and a pair of spaced, elongated, upright structures extending rearwardly from said sections, the rear end of said carrier defined by the rear margins of said structures being open and said structures being spaced a sufficient distance to receive a bin therebetween while the latter is on the ground and as the carrier is backed over the same; power-operated means carried by each of the structures and engageable with said bin for lifting the latter to a transportable, elevated position within the carrier; and gate means mounted on said rear end of the carrier for closing said opening defined by the rear margins of the structure and adapted to maintain said bin within the carrier during transportation of the same, said gate means including an assembly swingably mounted on each of said rear margins of the structures for rotation on vertical axes, the normally outermost extremities of said assemblies overlapping and interlocking when said gate means is closed to assure retention of said bin in the carrier.

3,018,906
BOAT TRAILER
Godfrey Franklin, 2555 2nd Ave., Merced, Calif.
Filed Dec. 23, 1957, Ser. No. 704,659
1 Claim. (Cl. 214—505)



A trailer comprising a load carrying frame adapted at its forward end for connection to a draft vehicle, a pair of bellcranks disposed in transversely spaced relation, means pivoting the bellcranks on the frame for independent swinging movement, each bell crank including a forwardly projecting arm and an upstanding arm, wheels mounted on the forwardly projecting arm, a winch mounted on the frame ahead of the bellcranks, a cable engaging and projecting rearwardly from the winch, a clevis disposed rearwardly of the cable, a vertical-axis pulley supported in the clevis, another cable engaged about the pulley and extending thence in the form of diverging runs connected at their rear ends to the upstanding bellcrank arms, and a tension spring connecting the clevis and the rear end of the first named cable.

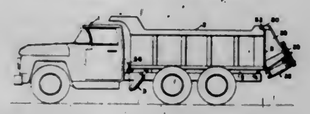
3,018,907
TRAILER STRUCTURE
Theodore L. Gail, P.O. Box 194, Fairhope, Ala.
Filed Aug. 7, 1958, Ser. No. 753,766
5 Claims. (Cl. 214—506)



1. In a trailer a main frame comprising two rails parallel at their rear extremities converging and joined at their forward extremities, arms depending from the forward point of juncture of said rails, a longitudinal tongue horizontally supported between the lower extremities of said arms lying in a plane beneath and parallel to the plane of said rails and extending forwardly and rearwardly beneath beneath the forward point of juncture of said rails, depending wheel brackets vertically disposed toward the rear extremities of said rails, stub axles mounted at a right angle to the lower extremities of said brackets, wheels rotatably mounted on said axles outwardly of said wheel brackets, a toggle pivotally affixed at its lower extremities over the rear extremity of said tongue and extending upwardly therefrom, a movable inner frame centrally disposed within said main frame comprising a central beam member upwardly curved at its forward extremity, a rectangularly disposed axle housing mounted at the rear extremity of said central beam extending the width of the rear portion of said main frame beneath said wheel brackets, an axle rotatably mounted within said axle housing, angularly disposed support arms mounted at their apices on the extremities of said axle movable therewith and extending upwardly therefrom closely fitting under said wheel brackets, U-shaped brackets depending from the rear extremities of said main rails rearwardly of said wheel brackets, pivotal connections between said U-shaped brackets and the upper extremities of the rearmost of said support arms, pivoted latch means on said main rails engaging the upper extremities of the forward of said support arms when they are flush against the under surface of said

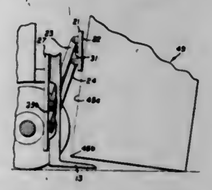
main rails, nut means pivotally mounted between said depending arms at the forward extremity of said main frame, a screw threaded jack working through said nut engaging the threads thereof, a crank on the forward extremity of said jack, a rearwardly open U-shaped collar pivotally affixed at its forward extremity over the rear extremity of said jack member and pivotally engaging the upper extremities of said toggle at its rear extremities, a pivotal connection between the upper extremities of said toggle and the forward curved portion of said central beam of said inner frame, a removable auxiliary frame comprising forwardly converging parallel arms, a forwardly disposed riser member and a rear lateral beam removably affixed at its lower forward and rear extremities to said central beam of said inner frame whereby when the upper extremities of the forward of said support arms are not engaged by said latches appropriate rotation of said jack in said nut will result in swinging said toggle rearwardly or forwardly with respect to the rear extremity of said tongue to impart vertical movement to said inner frame and said auxiliary frame as the support arms of said inner frame pivot beneath the rear extremities of said main frame rails.

3,018,908
CONVEYOR FOR DISPENSING CONTENTS OF DUMP TRUCKS
Herbert C. Wilton, 7800 SE. Luther Road, Portland, Oreg., and Robert D. Costelloe, Portland, Oreg., assignors, by direct and mesne assignments, of seventy-six percent to said Herbert C. Wilton, and twenty-four percent to Barbara J. Wilton
Substituted for abandoned application Ser. No. 726,224, Apr. 3, 1958. This application Jan. 21, 1959, Ser. No. 788,234
1 Claim. (Cl. 214—508)



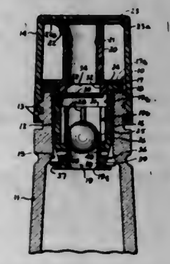
In a vehicle having a dumping body with parallel vertical side walls and means for elevating the forward end of the body to dump the load at the rear; the improvement comprising a replacement tailgate for said body, said tailgate comprising a frame and backing plate integrated therewith, a supporting member secured to each bottom corner of said frame and extending rearwardly therefrom, means swingably mounting the frame to the top rear corners of said side walls of the truck body, means carried by each bottom corner of said frame for removably securing the same to the corresponding corners of said side walls of the truck body, whereby, upon release of said bottom corner securing means, said tailgate will gravitationaly maintain a substantially vertical position as the truck body is elevated to said dumping position to thereby not interfere with normal dumping operations, a gate hingedly attached to the bottom edge of said plate, a roll frame comprising an outer rail and an inner rail and rollers supported therebetween, said roll frame secured to and supported by said supporting members, a driven roller and an idling roller carried by said supporting members at opposite ends thereof, an endless belt entrained over said driven and idling rollers, the top run of the belt supported by said rollers of the roll frame, a downwardly and rearwardly extending strut member secured at its top end to the top of said tailgate frame and secured at its bottom end to the outer rail of said roll frame, a hand lever pivotally attached at its forward end to said gate and provided at its opposite end with spaced apart detent means for selective engagement with said strut to thereby maintain said gate in a closed position relative to said backing plate or in various selective degrees of opening relative to the plate whereby to regulate the flow of material from the elevated truck body when said tailgate is secured to said truck body, a vertical frame carried by said roll frame, a platform hingedly attached at one of its ends to said vertical frame, means at the opposite end of said platform for locking the same in a horizontal position relative to said frame, a prime mover mounted upon said platform and provided with a driving pulley, a belt entrained over said driving pulley and operatively connected to said driven pulley whereby the prime mover may be lowered from a belt-tight operative position to a belt-slack inoperative position for engine idling or starting operations.

3,018,909
LIFT TRUCKS AND ATTACHMENTS THEREFOR
John P. Morrell, Elgin, Ill., assignor to Minneapolis Moline Company, Hopkins, Minn., a corporation of Minnesota
Filed Apr. 29, 1959, Ser. No. 809,864
8 Claims. (Cl. 214—654)



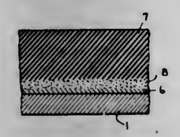
1. In a lift truck of the type including a lifting member insertable beneath an article to be lifted, the combination of tilting means pivotable with respect to said lifting member and having an article engaging surface extendible to a position in front of said lifting member adapted to grip said article to elevate one end of said article, means for maintaining said article engaging surface above the pivotal axis of said tilting means, and drive means for simultaneously moving said lifting member and said tilting means toward said article, whereby said tilting means engages said article and automatically pivots upwardly to lift said article over said lifting member.

3,018,910
NON-REFILLABLE POURING DEVICE FOR BOTTLES
Earl D. Unger, Louisville, Ky., assignor to Joseph E. Seagram & Sons, Inc., New York, N.Y., a corporation of Indiana
Filed Mar. 10, 1958, Ser. No. 720,116
5 Claims. (Cl. 215—22)



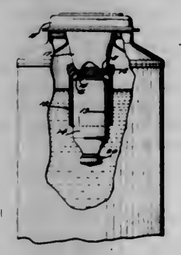
1. A closure device for a bottle having a neck terminating at its outer end in a constricted throat presenting a shoulder at its lower end, said device comprising, in combination, a generally cylindrical body received within and extending through the throat and having stepped bore therethrough defining longitudinally spaced internal annular ledges, a ball valving element received in said bore and of a diameter to seat within the opening defined by the inner one of said ledges to close said bore against entry of liquid into the bottle, an elongated spout having a bore therethrough fixed to the outer end of said body and mounting a disc on its inner end of a diameter larger than that of the spout bore, said spout having lateral openings therein adjacent said disc for dispensing of liquid from the bottle about the disc and through the spout bore, said disc limiting outward movement of said ball valving element in said body bore, circumferentially spaced ribs rigid with the body bore wall for guiding longitudinal ball movement to and from its seat and precluding lateral movement thereof within the body bore, and means on said body contacting the shoulder to prevent removal from the neck.

3,018,911
CLOSURE CAP AND METHOD OF MAKING SAME
Samuel C. Grumbles and William E. Risch, Lancaster, and William H. Gillen, Gahanna, Ohio, assignors to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Sept. 10, 1959, Ser. No. 839,188
21 Claims. (Cl. 215—40)



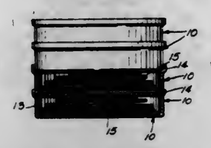
20. The method of inserting a gasket in a closure cap which comprises coating the inside of a closure with a primer, applying an adhesive to said primer and applying a gasket thereto, causing the primer coating and the rubber of the gasket to soften to permit the gasket to be securely bonded to the cap.

3,018,912
STOPPER ATTACHMENT FOR A VACUUM BOTTLE
Kleber Doyles Chumley, Tazewell, Tenn.
Filed Jan. 28, 1960, Ser. No. 5,238
3 Claims. (Cl. 215—100)



1. A medicament bottle support comprising a sleeve extended over a portion of the body of a bottle and having an inwardly disposed rib spaced from the upper end for suspending the sleeve with the bottle therein from a button on the lower end of a stopper of the bottle, the bottle being suspended in an inverted position within a vacuum bottle.

3,018,913
COASTER
Jack H. Lund, 5308 Glenwood Ave., Chicago 40, Ill.
Filed Feb. 23, 1960, Ser. No. 10,416
1 Claim. (Cl. 215—100.5)



As a new article of manufacture, a nest of coasters stacked one upon another and each comprising a generally cylindrical body including a bottom wall and an upright side wall having an open upper end, a resilient spiral helical coil spring including a lower portion of substantially the same diameter as the said generally cylindrical body and including an upper end portion substantially smaller in diameter than the said lower portion and normally disposed approximately in the same plane as the open upper end of the corresponding one of said coasters but adapted to be compressed by the weight of a drink container rested thereon into a flattened condition and when so compressed providing an air space between the bottom convolution of the said spiral helical coil spring and the bottom wall of the said coaster body, the said body of each of said coasters having an outwardly flared flanged portion formed in the upper end portion of the side wall thereof, and the bottom portion of the next succeeding coaster thereabove being arranged within the said outwardly flared flanged portion and resting upon the upper end portion of the said spiral helical coil spring in the next succeeding coaster therebelow.

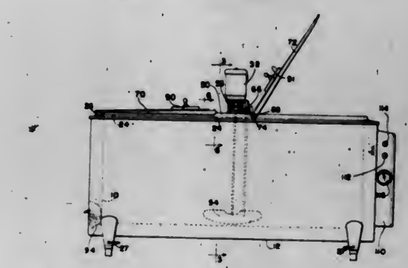
3,018,914
PRESSURE CONTAINER CONSTRUCTION
Milo E. Webster, Rochester, N.Y., assignor to Otto Bernz Company, Inc., Rochester, N.Y., a corporation of New York
Filed July 11, 1958, Ser. No. 747,974
3 Claims. (Cl. 220—3)



1. In a container for pressurized fluid, such as L.P. gas, having an outer wall and an opening defined therein with an associated bushing for attachment of a tap connection thereto, the improvement in the bushing construction which is formed of stamped sheet metal, comprising a substantially cylindrical annular outer wall provided with an external male screw thread, said outer wall being inwardly reversely bent at one end thereof and extending in the form of a central tubular stem coaxial with said outer wall and defining an annular space between it and said outer wall, said tubular stem extending

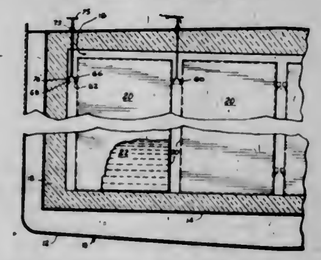
in said opening defined in said container and at least one of said stem and outer wall being connected in sealing engagement with the container wall.

3,018,915
BULK MILK TANK
Carl V. Larson, St. Paul, Minn., assignor to Sunset Equipment Co., St. Paul, Minn., a corporation of Minnesota
Filed May 27, 1957, Ser. No. 661,785
2 Claims. (Cl. 220—15)



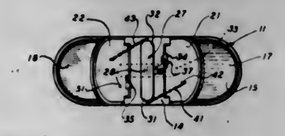
1. A bulk liquid storage tank, comprising: an insulated storage tank of U-shaped cross sectional form having an inner and an outer sheet metal shell, each having specially formed upper margins which extend entirely around said shells; a rigid supporting frame for said tank having a plurality of supporting legs disposed in pairs; each of said pairs of legs joined by a curved saddle adapted to support the bottom of said inner tank shell; the said upper margins of the inner and outer tank shell members each terminate in a return bend wherein the two walls thus formed are spaced a substantial distance apart; a substantially right angle bend provided in the inner tank shell and providing a substantially horizontal portion extending outwardly from the inner shell member; said inner and said outer tank shell members are fixedly joined together and formed to provide a vertical return bend-strengthening section and a horizontal return bend formed to provide a strengthening section and additionally to prevent distortion of the inner tank walls under varying loading.

3,018,916
TANK CONSTRUCTION
James J. Henry, New York, N.Y., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed June 23, 1958, Ser. No. 743,540
8 Claims. (Cl. 220—15)



1. In the storage and transportation of material in a tank which is subject to wide temperature changes in use, means for supporting the tank in spaced relation from an adjacent surface to minimize relative movements notwithstanding changes in dimension of the tank in response to temperature change comprising an abutment secured to a side wall of the tank, another abutment fixed to the adjacent surface spaced a short distance from and at the same level as the abutment on the tank, at least one of said abutments having an upwardly and outwardly inclined cam edge, an operating member shiftable vertically between said abutments and in operative engagement with the edges of the two abutments which face each other to take up the spaced relation between said edges, and means for adjusting the vertical position of said operating member.

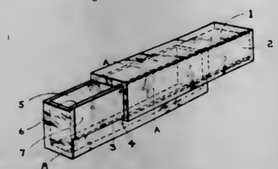
3,018,917
APPARATUS FOR LATCHING AND OPENING CONTAINER COVERS
Carl A. Breitmayer, 212 N. Grand, Monrovia, Calif.
Filed Oct. 22, 1959, Ser. No. 847,995
2 Claims. (Cl. 220—36)



2. A container comprising an open top body portion having a planar bottom and sidewalls extending upwardly from said bottom and terminating in a plane substantially parallel to said bottom, a closure for the open top of body portion comprising a planar cover mounting piece secured across the said open top with its plane paralleling the plane of said top and with parallel linear edges thereof transversing the open top and defining two openings, a cover member hinged to each of said linear edges for swinging movement between open and closed positions across the body portion top openings, an elongated carrying handle mounted on said mounting piece adjacent the hinge lines of the covers for rotation about an axis perpendicular to the plane of the mounting piece, said handle having a portion thereof rotatable over a portion of each hinged cover, a pair of elongated flexible links each having one of its ends fixed to a cover at a point remote from the cover hinge and the other of its ends fixed to a point on the handle remote from the axis of rotation of the handle, an elongated latch cam fixedly secured to each of said hinged covers in spaced parallel relation to the cover hinge line and on that portion of the cover over which the handle is rotatable, each of said latch cams having a sloping cam surface inclined to the top face of the cover in a direction parallel to the cover hinge line, limit stops on each cam, the lower faces of said handle on either side of the pivot being engageable with one of said cam surfaces for latching the covers in closed position when the carrying handle is rotated over the cover portions and the flexible links are adapted to draw the cover away from the container openings when the carrying handle is rotated away from the covers.

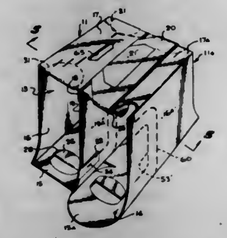
3,018,918
CONTAINERS WITH SLIDE COVERS
Samuel Tapper, 440 Baldwin Road, Maplewood, N.J.
Filed Feb. 2, 1960, Ser. No. 6,252
3 Claims. (Cl. 220—41)

1. A container and slide cover combination wherein the container has a flange projecting upward and extending along the entire length of the top edge of one side wall, said side wall having an undercut along its entire length, said undercut being parallel with the plane of the top of the container and placed directly below the aforementioned flange, but above the bottom edge of the container, and a co-operating slide cover having a top and one side, there being a longitudinal channel recessed in the under surface of the top portion of the said cover, said channel being defined by the said undersurface of the cover and the depending side wall, said channel being of a size and conformation to slideably accommodate the aforementioned flange in the above mentioned container, and there being a flange on the lower edge of the slide cover side wall, said flange extending in an inward direction, and wherein the con-



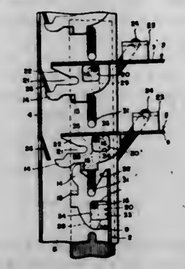
formation of the under surface of the top of the cover, the inner surface of the cover side wall, and the inward directed flange on the side wall of the slide cover conform to the conformation of the plane of the container top, the upward disposed flange along the longitudinal edge of the container top, the container side wall down to the aforementioned undercut, and said undercut of the co-operating container to effectuate a fastening and lateral sliding action between the cover and the container.

3,018,919
CAN CARRIER AND SINGLE CAN HOLDER
James D. Pelt, 642 N. Plymouth, Los Angeles 36, Calif.
Filed Aug. 2, 1960, Ser. No. 46,928
5 Claims. (Cl. 220—113)



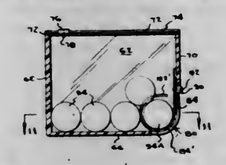
1. A carrier for chimed cans of a given size, comprising material, such as paperboard, formed to provide a bottom wall, a top wall, and opposite side walls connecting the bottom and top wall in spaced relation to one another to form a first carrier section, additional material, such as paperboard, formed to provide a bottom wall, a top wall, and opposite side walls connecting the bottom and top walls in spaced relation to one another to form a second carrier section, said sections being disposed immediately adjacent each other with a side wall of each section against a corresponding side wall of the other section, a handle projecting above the upper wall from said first section, a handle projecting above the upper wall of said second section, said handles being adapted to lie flat against the top wall of one section and the handle of the other section being formed with tabs at its side margins adapted to fold around and under the top wall of said one section and be received in the recessed ends, respectively, of cans in the carrier, and rupturable means securing the adjacent side walls of said first and second carrier sections whereby to enable said sections to be separated, upon separation of said handles, to form two independent carriers.

3,018,920
STORAGE AND VENDING APPARATUS
Carl Weber, Chicago, Ill., assignor to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,937
10 Claims. (Cl. 221—90)



1. Vending apparatus comprising supporting means, a plurality of shelves, means mounting said shelves on said supporting means for sliding and pivotal movement, said shelves being adapted to swing between a horizontally extending position and a vertically extending position, means urging said shelves toward said vertically extending position, latching means on said supporting means for releasably holding said shelves in said horizontally extending position, a cam surface on each of said shelves, complementary abutment means on each adjacent pair of said shelves, and slide means engageable with said cam surfaces for pressing said abutment means on one of said adjacent shelves against said abutment means on the other of said adjacent shelves to thereby free said other shelf from said latching means for swinging movement from said horizontally extending position to said vertically extending position.

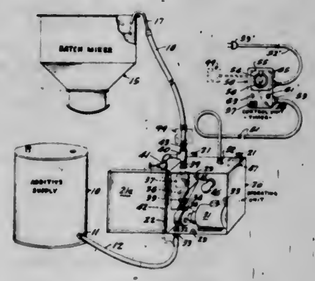
3,018,921
ARTICLE DISPENSING DEVICE
Edward H. Hermanson, Grand Marais, Mich.
Filed June 7, 1957, Ser. No. 664,292
2 Claims. (Cl. 221—281)



1. A dispensing receptacle for pills or tablets comprising an elongated substantially hollow rectangular device having a pair of oppositely disposed spaced and substantially parallel side walls, an end wall extending across and fixedly secured to each adjacent pair of ends of said side walls, a bottom wall, and a top wall extending substantially parallel to said bottom wall in spaced relation relative thereto, means slidably supporting said top wall on said device, one of said end walls having a portion thereof cut away adjacent said bottom wall, said bottom wall having a portion thereof cut away adjacent said one end wall, said cut away portions of said end and bottom walls forming an opening at a corner of said receptacle, each of said side walls having a groove formed therein adjacent the marginal edges thereof an arcuately shaped slot formed in each of said side walls to provide a chamber at said corner, said grooves at their respective lower ends being in open communication with said ar-

cuately shaped slot formed in each of said side walls, a flexible member including a forward and a trailing end mounted for sliding movement in said grooves, said flexible member normally extending across said open corner of said receptacle when said receptacle is in its inoperative condition, and a handle fixedly secured to said flexible member and positioned adjacent the lower end of said one end wall when said receptacle is in its non-dispensing condition, said handle being movable toward said bottom wall to effect a sliding movement of said flexible strip into said arcuately shaped slot to surround a tablet to be dispensed and simultaneously therewith to isolate said tablet being dispensed from other tablets disposed within said receptacle, the trailing end of the flexible member uncovering said opening whereby said isolated tablet may be discharged therethrough.

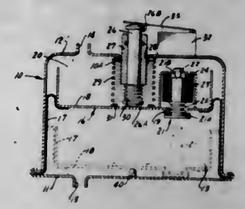
3,018,922
LIQUID DISPENSING SYSTEM
John Williamson, 440 S. Keyser, Holgate, Ohio
Filed Feb. 7, 1958, Ser. No. 713,955
11 Claims. (Cl. 222—25)



1. In a liquid dispensing device having: a source of liquid to be dispersed, a discharge element for said liquid remote from said source, a duct for said liquid between said source and said discharge, a motor driven pump in said duct for moving said liquid from said source to said discharge through said duct, the improvement comprising means for controlling said pump to discharge a pre-determined quantity of said liquid, said control means comprising: a flow detecting device in said duct between said pump and said discharge, said flow detecting device being responsive to variations of pressure in said duct, a switch operated by said flow detecting device, a timer connected to said motor for said pump for controlling the opeartion of said pump, means connected to said timer and said motor for initiating said timer and said motor, means connected to said flow detecting device to indicate flow of said liquid in said duct, means connected to said initiating device to indicate the energization of said timer and said motor, and an electric circuit interconnecting said flow detecting device, said timer, said motor, said initiating device, and both said indicating means, and means for connecting said circuit to an electrical power source.

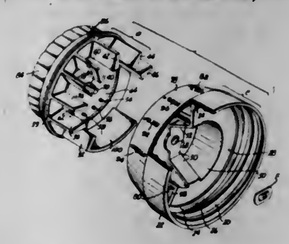
3,018,923
FLOW METERING DEVICE
John S. Michie, Springfield, Ohio; Amanda Ann Michie, executrix of said John S. Michie, deceased, assignor to herself
Filed Jan. 31, 1958, Ser. No. 712,542
15 Claims. (Cl. 222—41)

1. A flow metering device comprising a container having a fluid inlet and a fluid outlet, a wall movably received within said container between said fluid inlet and said fluid outlet and thereby dividing said container into a variable-volume inlet chamber and an inversely variable-volume outlet chamber, means yieldably biasing said wall toward movement in a direction to reduce the volume of said inlet chamber, said wall being provided with a fluid passage therethrough communicating between said inlet chamber and said outlet chamber, a valve controlling fluid flow



through said passage, manually manipulable means for closing said valve whereby fluid flowing into said fluid inlet will move said wall against the tendency of said biasing means, to force fluid from said fluid outlet, and means for opening said valve to allow flow between said chambers, said opening means actuated by said wall reaching a predetermined position relative to said container.

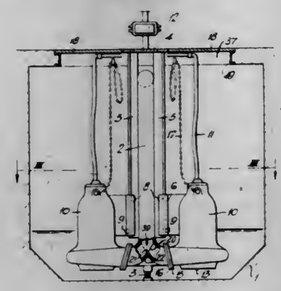
3,018,924
PARTICULATE MATERIAL DISPENSER MEANS
James C. Reed, Port Orchard, Wash., assignor of one-fourth to William C. Tennesen, one-fourth to Melvin A. Lovik, and one-fourth to Gary E. La Pore
Filed Nov. 3, 1958, Ser. No. 771,253
12 Claims. (Cl. 222—48)



1. A metering dispenser device comprising a cap attachable across the mouth of a container, and a rotor rotatably movable a limited degree on said cap about an axis intersecting the mouth of said container, said cap presenting across the face of said container mouth an annularly disposed filling-measuring-discharge section comprising an open segment and a shield segment having a flat, generally radially extending portion and a curved, generally axially extending portion, said rotor element having rotatably movable compartment forming partitions, said partitions when rotated into the open segment of said filling-measuring-discharging section being exposed to the contents of said container for ready filling in directions both radially and axially of said container mouth when the axis thereof is disposed substantially horizontally.

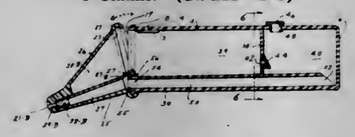
3,018,925
DISPENSING PUMP AND COUPLING
Sixten Englesson, Djursholm, Sweden, assignor of one-half to Aktiebolaget Flygts Pumpar, Stockholm, Sweden, a Swedish company
Filed Oct. 7, 1955, Ser. No. 539,228
3 Claims. (Cl. 222—180)

1. A pumping plant, for use in connection with a sump for accumulating sewage or the like, comprising vertical guide means fixedly mounted in said sump, a pump unit including an immersible casing and a pump and motor therein, a guide member on said casing in operable co-operating engagement with said vertical guide means, flexible means connected to said casing for lowering and lifting said pump unit along said vertical guide means in cooperation therewith, said pump unit having a free inlet opening and a lateral outlet opening provided with plane flange means inclined downwardly and outwardly from



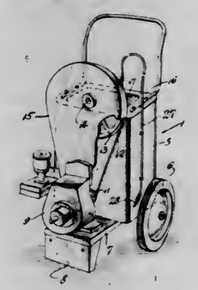
said guide means, a discharge tube fixedly mounted in said sump and having a free infeed opening and plane flange means on said discharge tube at said infeed opening, said plane flange means on said tube being inclined downwardly and outwardly with respect to said vertical guide means in parallel relation with said flange means on said pump unit and located so as to be engaged by said latter flange means on said tube.

3,018,926
SEED DISPENSER
Aretta E. Gilstrap, Rte. 1, Prosser, Wash.
Filed July 8, 1959, Ser. No. 825,727
5 Claims. (Cl. 222—193)



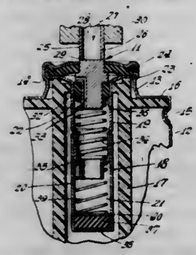
5. A dry seed dispenser comprising two members having the forward end portion of one member detachably connected within the rear end portion of the other member, one member being a cup shaped body member with cylindrical flexible concave interior side walls and closed at its rear end by a vertical wall, its opposite end being open as defined by said side walls, said side walls of said body member being flexible when pressed and adapted by their inherent resiliency to return to their normal original position when pressure is released, the other member being a substantially cone shaped hollow nozzle of right triangular cross-section, a transverse vertical wall arranged within said body member providing a cylindrical compression chamber and a dry seed chamber, said cylindrical compression chamber arranged between said nozzle and said dry seed chamber, the interior of said hollow nozzle forming a hollow chamber and which joins said cylindrical compression chamber of said body member effecting a joint compression chamber with a cylindrical closed rear end portion and a cone shaped forward end portion, a suitable air valve in the wall of said compression chamber, a suitable air valve in said transverse vertical wall, a channel within and arranged along the bottom of said body member, a channel within and arranged along the bottom of said nozzle, the adjacent ends of said channels connected together whereby seeds from said dry seed chamber are pneumatically conveyed to the outlet opening in the forward end of said nozzle when said cylindrical wall of said compression chamber is pressed by the user.

3,018,927
SPRAYING APPARATUS
August H. Pinke and John E. Oys, Hastings, Minn., assignors to H. D. Hudson Manufacturing Company, Chicago, Ill., a corporation of Minnesota
Filed Aug. 21, 1958, Ser. No. 756,485
6 Claims. (Cl. 222—333)



1. A spraying apparatus comprising a portable tank, a motor mounted adjacent thereto, a pump unit mounted in said tank consisting of a vertical supporting column, a pump having reciprocating pumping elements and pump operating mechanism mounted on said column, said pump having a head slidably mounted in the pump operating mechanism, a horizontal slot in said pump head, a slidable block mounted in the slot for horizontal movement, a drive shaft in said pump operating mechanism, an eccentrically mounted pin on one end of said shaft and mounted in said slidable block to permit vertical movement of said pumping elements without horizontal movement thereof, a pulley mounted on the opposite end of said shaft, detachable drive means between said motor and said pulley, a holding member provided with an opening located in the top of said tank, a holding member provided with an opening located in the bottom of said tank, and studs carried by said pump unit in position to engage in the openings of said members whereby said unit is detachably positioned in said tank.

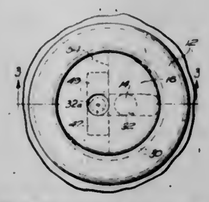
3,018,928
METERING VALVE
Philip Meshberg, 290 Euclid Ave., Fairfield, Conn.
Filed Nov. 24, 1958, Ser. No. 775,827
21 Claims. (Cl. 222—335)



1. A metering valve for dispensing a material from a container under pressure of an immiscible gas in said container comprising a valve housing for holding a predeter-

mined quantity of said material, means for mounting said housing on said container, said housing having an inlet port for communicating said housing with said container and sealing means for sealing said housing from the atmosphere, a reciprocable valve stem cooperating with said sealing means and mounted in said housing for movement relative thereto, said stem including an upper stem portion normally projecting outwardly of said housing and having passage means therein for bypassing the sealing means and communicating said housing with the atmosphere when said stem is displaced from its normal position inwardly of said housing for dispensing material from the housing to the exterior of the container, means for closing said inlet port when said housing is communicated with said atmosphere and ejection means disposed between said housing and container and acted upon by the pressure in said container to force said material outwardly of said housing through said upper stem portion when a pressure differential is created between said housing and said container.

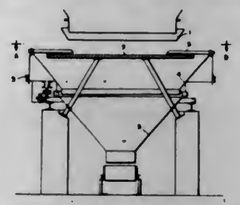
3,018,929
AEROSOL VALVE
Charles J. Obst, Barrington, R.I., assignor to Joseph J. Vastano, Providence, R.I.
Filed Sept. 3, 1959, Ser. No. 837,882
3 Claims. (Cl. 222—394)



1. An aerosol valve for containers in which the container is formed with an open mouth, said valve comprising a valve cup adapted to be sealingly received on the mouth of the container, said valve cup having a central wall formed with an outwardly offset cylindrical valve-receiving portion said cylindrical portion having a cavity and a flat end wall formed with an elongate radial slot, a rubber-like body received in and substantially filling the cavity of said cylindrical portion, said body having an opening radially offset from the axis thereof adapted to be aligned with the outer end of said slot, said body being formed with a longitudinal shoulder at one side of said offset opening, a valve member comprising a finger-engageable portion with a discharge aperture, a post portion extending from said finger-engageable portion and received in said opening of said body, said post being provided with an entry aperture communicating with said opening but normally covered by said body, said post portion having a bore providing communication between said entry and discharge apertures, and said post having at least one laterally extending projection, said slot affording entry of the projection, said projection being disposed parallel to and non-removably held to one side by said shoulder.

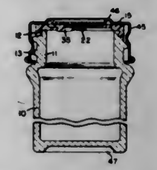
3,018,930
DELIVERY APPARATUS FOR LUMPY GOODS
Guenther Hamprecht, Limburgerhof, Pfalz, Heinrich Bellmuth, Bad Durkheim, and Friedrich Lorenz, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
Filed July 30, 1958, Ser. No. 752,129
Claims priority, application Germany Aug. 2, 1957
5 Claims. (Cl. 222—410)

1. Apparatus for delivering lumpy goods from a receptacle having an outlet opening in its lower portion which comprises: a stationary surface member of greater diameter than the diameter of the outlet opening arranged beneath and at a distance from said outlet opening; a conically shaped bunker capable of being rotated about its axis arranged beneath the outlet opening of said



receptacle, the upper part of said bunker widening upwards at an angle sufficient to provide an opening at about the level of said surface member greater than the diameter of said surface member; and at least one stripper bar attached to said bunker and arranged immediately above said surface member.

3,018,931
CLOSURE FOR CONDIMENT CONTAINERS AND THE LIKE
Oscar L. Westgate, Pittsford, N.Y., assignor to The R. T. French Company, Rochester, N.Y., a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,563
5 Claims. (Cl. 222—480)

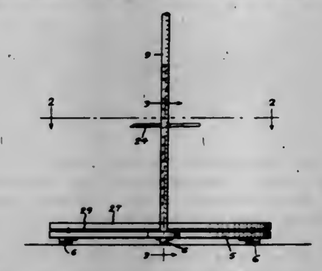


1. A fitment for a condiment container or the like, said fitment being round and being made of a single piece of resilient plastic and having a circular top wall which is recessed in its under face along a diametral line, said top wall having an approximately semi-circular opening therethrough at one side of said diametral line, a flap integral with said top wall and lying at said one side of said diametral line, said flap being approximately semi-circular in shape and being foldable over the part of said top wall which lies at the opposite side of said diametral line to uncover said opening through said fitment, said recess forming a flexible diametral hinge line in said top wall along which said flap can be folded.

3,018,932
GARMENT TRIMMER
Robert Foster Davis, 1474 S. Towne Ave., Pomona, Calif., assignor of one-half to Evelyn M. Ogelvie, Fontana, Calif.
Filed Aug. 10, 1960, Ser. No. 48,777
1 Claim. (Cl. 223—1.1)

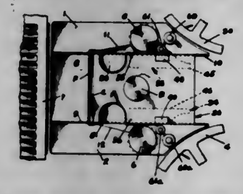
A skirt trimming device comprising a stationary base, a circular rotatable platform mounted on said base on which the person wearing the skirt to be shortened stands, said base and said platform having aligned annular grooves therein, an annular ring of ball bearings in said aligned grooves, a vertical hollow graduated standard having a slot disposed longitudinally thereof, an adjustable scissors bracket embodying a shank having a curved end fitted against said standard, a lug extending from said curved end of said shank fitted in said slot, a headed

bolt secured to said shank, extending through said slot, the head thereof contacting the inner surface of said tubular standard, a lever having one end thereof pivotally mounted on said bolt within said hollow standard, the other end of said lever extending laterally through said slot in contact with said shank, a coiled spring disposed between said head and lever normally biasing said lever against said shank, normally holding said scissors bracket



in its positions of adjustment along said standard, and a clamp mounted on said shank in line with the periphery of said platform for clamping scissors in position for trimming a skirt worn by a person standing on said platform, said scissors clamp embodying a horizontal U-shaped member in which the scissors are held, and a threaded bolt extending upwardly through said shank and scissors clamp, securing said scissors in said U-shaped scissors clamp at the pivot point thereof.

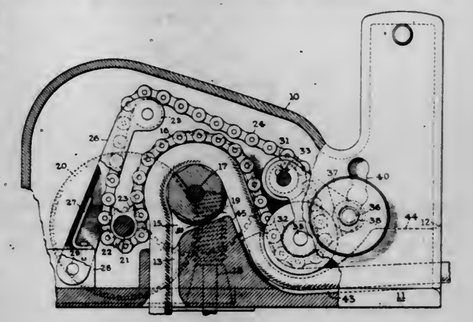
3,018,933
FILM PROJECTOR
James E. Rookus, 305 Hillmount Apt., Grand Rapids, Mich., assignor of five percent to Edward H. Daverman, Grand Rapids, Mich.
Filed Jan. 23, 1959, Ser. No. 788,541
8 Claims. (Cl. 226—76)



3. In a motion picture projector, apparatus for forming loops in the film to be shown comprising: means for intermittently advancing a film; a movable member adapted in a first position to provide engagement with said means for intermittent movement of the film and in a second position releasing the film from said engagement; a cavity in said movable member for manually receiving the film when said movable member is in said second position, whereby release of the film after said movable member is moved to said first position forms loops in the film.

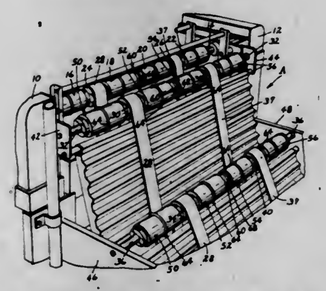
3,018,934
WINDLASS
Fred C. Good, Cheltenham, Pa., assignor to Fred C. Good & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 28, 1958, Ser. No. 711,705
6 Claims. (Cl. 226—171)

1. An anchor line windlass comprising: a housing having line entry and exit ports therein, a drum member within said housing having its peripheral surface grooved to receive a line to be handled; means for positively rotating said drum; an endless sprocket chain; means for supporting said chain within said housing in the plane of said drum including a plurality of idler pulleys and a posi-



tively driven sprocket all aligned with the drum, said chain being supported so that one flight overlies said drum and contacts the line thereon to exert a tractive force on the line as the drum and chain are simultaneously positively driven.

3,018,935
FILM STRAND ROLLERS FOR FILM PROCESSING MACHINE
Ralph B. Maddock, Minneapolis, Minn., assignor to Pako Corporation, Minneapolis, Minn.
Filed Nov. 4, 1960, Ser. No. 67,324
4 Claims. (Cl. 226—190)

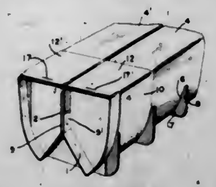


4. In a multiple roller for transporting a film strand in a film processing machine, a shaft, a pair of strand rollers mounted on said shaft, and a central strand roller positioned on said shaft between said strand rollers having a diameter greater than the major diameter of said strand rollers to center and transport a single strand having a width up to the combined width of said pair of strand rollers and said central roller.

3,018,936
EGG CARTON WITH REINFORCING AND ADVERTISING MEANS
Manuel G. Rodriguez, G.P.O. Box 188, New York 1, N.Y.
Filed July 2, 1957, Ser. No. 669,514
16 Claims. (Cl. 229—1.5)

1. In an egg carton having side, top and bottom walls, a central partition and cross members forming end walls and intermediate partitions which, with the central partition, divide the carton into a plurality of cells for eggs, and in which the bottom wall of the carton has transversely-extending slots through which portions of the cross members protrude; a separate member at at least one

end of the carton, and means for holding said separate member to the carton, said separate member having a part thereof underlying a portion of the bottom of the carton



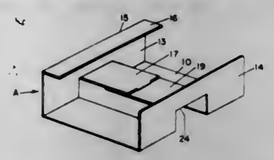
and a panel section connected at one side thereof to said part and passing upwardly through one of the transverse slots in the bottom wall of the carton through which one of the cross members of the carton passes.

3,018,937
BOX CONSTRUCTION FOR POP-OUT SURPRISE TOYS
John A. Frampton, 144 E. Beechwold Blvd., Columbus 14, Ohio
Filed June 14, 1960, Ser. No. 36,007
1 Claim. (Cl. 229—37)



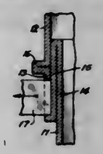
A box adapted to releasably retain and conceal therein a spring-type "pop-out" toy, said box comprising a generally rectangular, hollow body defining an internal compartment, said body being substantially permanently closed at one end thereof and formed at its opposite end with a pair of relatively opposed, inwardly foldable end closure flaps, one of said end closure flaps having a length dimension substantially equal to the width dimension of said body and being foldable inwardly to substantially fully close the said opposite end of said body, the other of said end closure flaps having a length dimension substantially greater than the width dimension of said body and terminating at the outer end thereof in a hinged tab portion, said last-named end closure flap being foldable inwardly across the said opposite end of said body and upon said first-named end closure flap to retain the latter in a closed position, the hinged tab portion of said last-named end closure flap being arranged to partially overlie an outer side of said body when said last-named end closure flap is folded inwardly over said first-named end closure flap; and a removable lid member arranged to frictionally telescope over the said opposite end of said body when said end closure flaps are folded inwardly and to frictionally engage the hinged tab portion of said last-named end closure flap to clamp said tab against a side of said body.

3,018,938
PRODUCT ENCIRCLING BAND
William M. Tolaas and Arthur H. Durand, St. Paul, Minn., assignors to Waldorf Paper Products Co., Ramsey County, Minn., a corporation of Minnesota
Filed Dec. 10, 1958, Ser. No. 779,330
5 Claims. (Cl. 229—40)



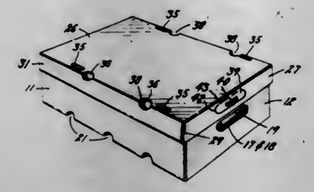
1. A product enclosing band including a strip of sheet material cut and folded to comprise a base panel and a pair of side wall panels foldably connected to opposite edges thereof, and a pair of straps each cut from the lower central portion of a corresponding side wall and from an adjoining central portion of the base panel and foldably connected to said side walls and means connecting said straps, said straps forming a partial partition parallel to said base panel and substantially spaced from the upper edges of said side walls panel, said straps holding said side walls in substantially parallel relation, and a flange hingedly connected to the upper edge of one of said side wall panels along a line of fold substantially parallel to the fold lines connecting said base panel to said side wall panels.

3,018,939
CARTON
James F. Barnes, Van Nuys, Calif., assignor to Foil Process Corporation, Van Nuys, Calif., a corporation of California
Filed July 23, 1958, Ser. No. 750,475
2 Claims. (Cl. 229—44)



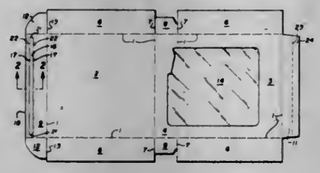
1. A rectangular carton formed from a single sheet of foldable and deformable board material and having integrally formed cover and body sections, said cover section having lower side wall portions receiving in telescoping relation the upper side wall portions of the body section, a connecting segment formed integrally with said cover and body sections and extending between the upper side wall portions of said body section and the lower side wall portions of said cover section, the side walls of said cover section being folded to provide a perimetrically and outwardly extending rib disposed below the top of said body section, said lower side wall portions of said cover section being provided with a removable tear portion directly below said rib and above the bottom of said cover section along three sides of said carton, said tear portion being removable for severing the connection between said cover and body sections along three sides of said carton, said connecting segment providing a hinge along a fourth side of said carton and below said rib for pivoting said cover upwardly after said tear portion has been removed, whereby, said rib defines said hinge line and also reinforces the lower edge of said cover after said carton has been opened, said rib thereby reducing stretching and deformation of said cover and promoting a snug frictional fit between the cover and body sections when the carton is reclosed.

3,018,940
CARTON
Edwin F. Deline, 224 W. Alameda, Denver, Colo.
Filed Oct. 29, 1959, Ser. No. 849,668
3 Claims. (Cl. 229—45)



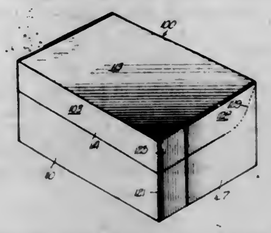
1. A carton comprising: a container formed by folding a first corrugated board to form a bottom, two upwardly extending sides and two upwardly extending ends; a lid for said container formed by folding a second corrugated board to form a lid top, two downwardly depending lid sides and two downwardly depending lid ends telescopically engaging the sides and ends, respectively, of said container; means securing the adjacent edges of each adjacent pair of walls at each corner of the lid and the container; a pad area in each of said lid ends; a die cut border line completely outlining each of said pad areas, said line providing a weakened connection between each pad and the adjacent material of the lid end wall; a staple passing through and attaching each of said pad areas to an end of said container so that removal of said lid will necessitate separation of said pad areas from said lid ends along the die cut border lines of the former to form locking pads on the ends of said container engageable with the holes in said lid ends to relock said lid in place.

3,018,941
CARTON CLOSURE FLAP CONSTRUCTION
Merle L. Wagaman, Lynwood, Calif., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Feb. 24, 1960, Ser. No. 10,808
4 Claims. (Cl. 229—51)



3. A paperboard carton blank scored to provide a plurality of carton wall forming panels including,
- a hinged panel at one end of the blank and a hinged closure flap at the opposite end of the blank adapted to engage in overlapping relation in the set up carton,
- an adhesive adapted when said panel and said closure flap are overlapped to secure the overlapping faces together over an area of adhesive union,
- a pair of parallel cuts partially penetrating one of said overlapping faces,
- an adhesive repellent coating on one of said panel and said closure flap adapted to define the area of adhesive union on said one face as the space between said cuts, and
- a tuck-in flap hingedly connected to each end of said hinged panel.

3,018,942
CARTON
Edwin L. Arneson, Morris, Ill., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed Jan. 30, 1961, Ser. No. 85,893
13 Claims. (Cl. 229—51)



1. A generally rectangular carton formed from a single paperboard blank which is adapted to be formed into a tube and closed at one end for filling through the other end, said other end being adapted to be closed after the carton is filled, said carton in its final closed condition having body and cover forming portions with the cover forming portion normally closing a top forming side wall and being adapted to be opened by a hinging movement, said carton body portion comprising a bottom wall, adjoining front and back side walls and upstanding end walls which end walls are each formed by an inner flap member integrally hinged to the end edge of the bottom wall and folded into upstanding relation thereto and a pair of outer flap members integrally hinged to the end edges of oppositely disposed side walls and secured in inwardly folded, overlapping relation, said cover portion comprising a top wall, front and back side walls and end walls depending from the end edges of the top wall, the back side wall of said cover portion being integrally hinged to the top edge of the back side wall of the body portion and being in the plane of the latter when the carton cover portion is closed, the front side wall of said cover portion overlapping the top marginal portion of the front side wall of the body portion and being secured thereto by a separable fastening means, the end walls of said cover portion each comprising an inner flap member integrally hinged to the end edge of the top wall and a pair of outer flap members integrally hinged to the end edges of the front and back side walls of said cover portion and inwardly folded into overlapping relation, the one said end flap member being taken from the top marginal portion of the corresponding end flap member of the body end wall and lying in the plane thereof when the cover portion is closed.

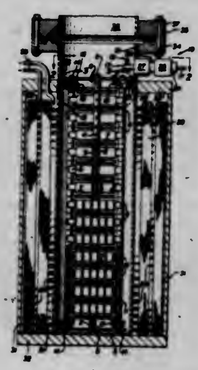
3,018,943
BAG
Alexander F. Keating, Flemington, N.J., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed July 27, 1959, Ser. No. 829,571
8 Claims. (Cl. 229—62.5)



1. A bag comprising a rectangular blank of material consisting of an outer layer of burlap, an intermediate layer of paper and an outer layer of flexible sheet polyethylene laminated by means of asphalt, said blank being

folded in half on a fold line which constitutes one side of the bag with the polyethylene layer on the inside and having sewn seams at the bottom, the top and the other side, said blank having a strip of paper laminated to the polyethylene by means of asphalt extending completely around the upper margin of the bag on the inside thereof, said bag having a valve constituted by an intucked valve flap at the corner thereof situated at the upper end of the folded side of the bag and a paper sleeve extending from the valve flap, said valve flap having a central fold spaced from the upper end of the bag, said sleeve being folded in half on a generally central fold in line with the central fold of the valve flap, an end portion of the sleeve lapping said paper strip and being secured thereto by adhesive, the upper margins of the sleeve being stitched together by the bag top seam.

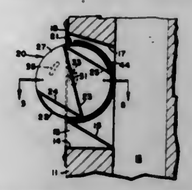
3,018,944
ELECTRICAL VACUUM PUMP APPARATUS
Renn Zaphiropoulos, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed June 16, 1958, Ser. No. 742,274
9 Claims. (Cl. 230—69)



1. In an electrical vacuum pump apparatus including, means forming an anode, means forming a cathode, said anode means having a plurality of members, said cathode having a plurality of members made of a reactive material, said anode members being interleaved with said cathode members to form a stack of alternately spaced apart anode and cathode members, means for providing a magnetic field directed longitudinally of the stack of said anode and cathode members, means for applying a positive potential to said anode means with respect to said cathode means for initiating a glow discharge therebetween, means extending longitudinally of the stack of said anode and cathode means for mounting said anode means slidably therefrom, means for preventing inadvertent slippage of said anode means with respect to said mounting means and being removable as desired whereby said anode means may be readily removed from said anode mounting means for replacement and cleaning as desired.

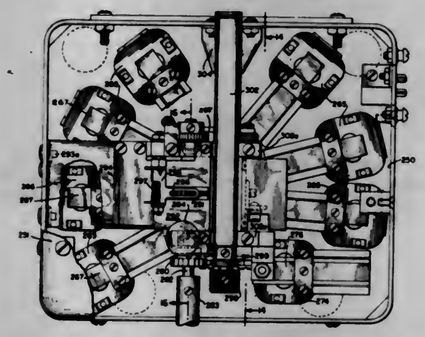
3,018,945
BARREL RUBBISH DISPOSAL UNIT
Charles F. Day, 262 Argyle Road, Brooklyn 18, N.Y.
Filed May 12, 1960, Ser. No. 28,616
5 Claims. (Cl. 232—44)

1. A self-sealing chute opening apparatus comprising in combination: a frame for installation in the wall of a chute, a hopper member adapted for rotation about a horizontal axis, said hopper member being removably mounted in said frame, comprising, a barrier extending through said horizontal axis defining a cylinder when rotated about said axis, a first plate joining one end of said barrier at an acute angle to form an upwardly facing pocket and a second plate joining the other end of said



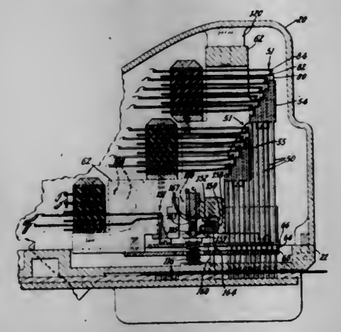
barrier at an acute angle and on the opposite side thereof to form a downwardly facing pocket, a pair of plates affixed to opposite ends of said barrier transverse to said axis, and a pair of shaft members extending outwardly from said end plates and rotatably supported by said frame.

3,018,946
PUNCHED TAPE EDITING MEANS
Joseph J. Ackell, Amityville, Herbert L. Paulding, Port Washington, and Richard T. Yu, New York, N.Y., assignors to Dow Jones & Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1957, Ser. No. 703,788
18 Claims. (Cl. 234—25)



1. Apparatus for producing a revised control tape having lines of signal control means across the same representing information in accordance with a predetermined code system and having interspersed lines of signal control means representing code numbers for different portions of said information in accordance with said code system, which comprises means for separately advancing and analyzing successive lines of signal control means in an existing tape to be revised and in an editing tape carrying lines of signal control means indicating the revisions to be made in the existing tape, said editing tape being provided with code number designations corresponding with those in the existing tape at points at which revisions are to be made in the existing tape, means for first causing said analyzing means to analyze a code number designation in the editing tape, means controlled by said analyzing means for storing said code number designation, means controlled by said editing tape upon analysis of certain signal control means therein for initiating operation of the analyzing means for the existing tape, means for effecting a comparison of successive digits of the code number designation in the existing tape with those stored from said editing tape, said last-mentioned means including a plurality of current responsive devices connected in series with each other and adapted to complete an electrically conductive circuit path in response to the comparison of identical code number designations, means for forming signal control means in a revised tape under control of said existing tape to duplicate the entries therein until the code number designation therein coincides with that stored from said editing tape, and means responsive to the completion of said path for then controlling the formation of signal control means in the revised tape in accordance with the change from the existing tape which is indicated by the signal control means in the editing tape.

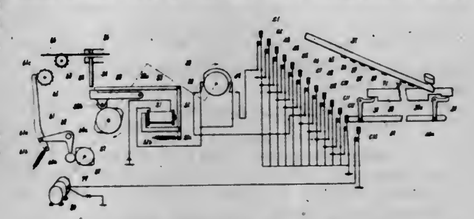
3,018,947
PORTABLE RECORD SENSING APPARATUS
Ray W. Harruff, Xenia, and William S. Touchman, Cedarville, Ohio, assignors to A. Kimball Company, Brooklyn, N.Y., a corporation of New York
Filed Sept. 1, 1959, Ser. No. 837,521
4 Claims. (Cl. 234—30)



4. In a record sensing device, a support for a record to be sensed, means for sensing data indications on a record on the support, a punch for punching a certification hole in said record, said punch being adapted to pass freely through a previously punched certification hole if present, punch actuating means, a frame mounting the sensing means and resiliently mounting the punch actuating means for limited movement relative to the frame, spaced electrical contacts fixed to the frame, said contacts forming part of a control circuit for reading data indications sensed, means carried by said actuating means for closing the contacts, said closing means being normally spaced from the contacts whereby the contacts are normally open, and means for moving the frame relative to the support for causing the sensing means to sense the record and the punch to move into the plane of the record whereby if the punch is arrested by the record the actuating means is moved relative to the frame to close the contacts and whereby if a certification hole exists in the tag then the punch passes freely through said hole without causing the contacts to be closed.

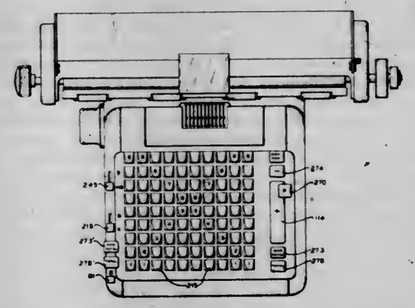
3,018,948
APPARATUS FOR PRODUCING PUNCHED TAPE FOR TELEPRINTER FOR TRANSMISSION OF CHARACTERS OF CHINESE ALPHABET
Teiji Yamura, 23 Jonai Hanamaki-shi, Hanamaki-shi, Japan
Filed Jan 16, 1961, Ser. No. 82,922
3 Claims. (Cl. 234—123)

1. In an apparatus for punching a pattern of holes in a tape for use in a teleprinter transmitter, the combination of a keyboard having a first plurality of keys in rows with the keys in the rows arranged in columns, said keyboard having a second plurality of keys, means for punching a tape having a plurality of punches for punching a first plurality of holes in the tape to indicate a row of said first plurality of keys, for punching a second plurality of holes in said tape to indicate a column of said first plurality of keys, and for punching a third plurality of holes for indicating a key of said second plurality of keys, the number of said punches being a fraction of the number of holes in said first, second and third pluralities of holes,



said fraction being a reciprocal of a whole number, means actuated by a key in said first plurality of keys and the simultaneous action of a key in said second plurality of keys for actuating said plurality of punches a number of times equal to the said whole number, and indexing means actuated by said keys simultaneously with said means for punching said tape for indexing said tape a number of times equal to the said whole number at times between the action of said means for punching said tape.
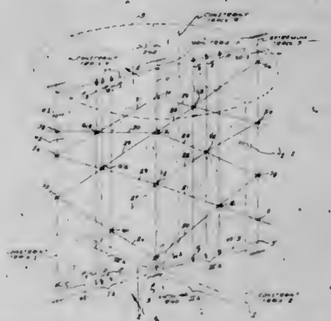
3,018,949
REGISTER SELECTION CONTROL DEVICES
Thomas Sparks, Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed May 10, 1957, Ser. No. 658,262
26 Claims. (Cl. 235—60)



1. In a listing calculator, the combination with support frames, register means including a plurality of shafts mounted in said frames each shaft having accumulator wheels mounted thereon, cyclic operating devices, actuator means for said register means operable by said cyclic devices for effecting and recording a registration, cam elements on said register shafts, and related cam members mounted in said frames for cooperation with said cam elements whereby the registers are adapted for operation into and out of engagement with said actuator means; of register engaging and disengaging mechanism including an operating member in common with a pair of said register shafts and adapted to condition said cam elements thereon whereby one of said registers is held in engagement with the said actuator means and another of the registers is held free from engagement therewith, a member having uniform movement in a first part of an opera-

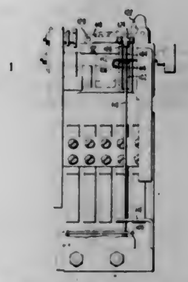
tion of the cyclic devices and being restored thereafter in a last part of said operation, control means for said operating member adapted for adjustment to active and inactive positions relative to engagement with the uniform movement member, means manually settable to alternative positions for effecting said adjustment of said control means and to selectively predetermine thereby in a subsequent operation of the cyclic devices a uniform movement of the said operating member, and wherein said movement of said operating member will adjust the said cam elements and thereby shuttle the register shafts to reverse the said condition of the registers with respect to the actuator means.

3,018,950
PROGRAMMING CALCULATOR
L. R. Verschoyle, Minneapolis, Minn., assignor to International Milling Company, Minneapolis, Minn., a corporation of Delaware
Filed July 25, 1958, Ser. No. 750,953
9 Claims. (Cl. 235—61)



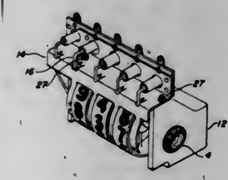
1. A mechanical analogue computer panel comprising a frame having proximal and distal ends, having thereon in succession, a main track, K plus one proportionality track and a constraint track, where K is a desired number, all of said tracks being parallel in spaced side-by-side relation and extending from the proximal end to the distal end of the frame, at least said proportionality and constraint tracks being in substantially the same plane, said main and constraint tracks being mounted on the frame in fixed positions and said proportionality tracks being mounted on the frame so as to be adjustably held in spaced parallel positions between the main and constraint tracks; proximal, K intermediate and distal fixtures on the main track, all except the proximal fixture being slidable along said main track; a slider on each proportionality track; proximal, K intermediate and distal sliders on the constraint track; a first set of rods pivotally connected to the proximal and intermediate fixtures on the main track, each rod extending outwardly and angularly toward the distal end of the frame and so as to cross the proportionality tracks and cross and extend beyond the constraint track; a second set of rods pivoted to the distal and intermediate fixtures on the main track, each rod extending outwardly and angularly toward the proximal end of the frame and so as to cross the proportionality tracks, and cross and extend beyond the constraint track, the rods of the two sets being, respectively, in closely spaced parallel planes, the said rods in pairs composed of one rod from each set intersecting a common crossing point on one only of each of the proportionality tracks, the sliders on the proportionality tracks being formed slidably to receive each rod at said common crossing point; the sliders on the constraint tracks being formed slidably to receive the rods where they cross the constraint track, said pairs of rods being stacked so that one rod of each pair coupled by a slider on a proportionality track crosses and is coupled to a rod of an adjacent pair where it crosses the constraint track.

3,018,951
MULTI-CHANNEL TAPE DETECTOR
Wayne W. Harris, Binghamton, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 6, 1958, Ser. No. 719,670
9 Claims. (Cl. 235—61.11)



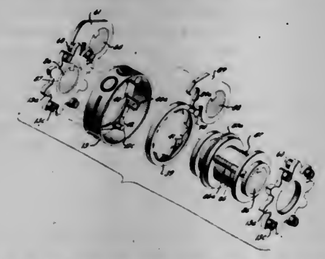
1. In a mechanism for processing both wide and narrow control tapes, a guide block having a tape supporting face, a plurality of aligned tape pins mounted for movement through said face of said guide block, means for feeding a control tape and for guiding the same in a fixed path in contact with said face of said guide block, a control means for sensing the presence or absence of a control tape mounted in the face of said guide block outside the path of a narrow tape passing over said guide block but within the path of a wider tape passing over said guide block, and means under control of said control means for rendering ineffective a selected number of said pins when a narrow tape is being fed over said guide block.

3,018,952
DIGITAL INDICATOR AND DECIMAL POINT INDICATING MEANS
Warren W. White, Sierra Madre, Calif., assignor, by mesne assignments, to Motec Industries, Inc., Hopkins, Minn., a corporation of Minnesota
Filed Nov. 23, 1955, Ser. No. 548,705
7 Claims. (Cl. 235—117)



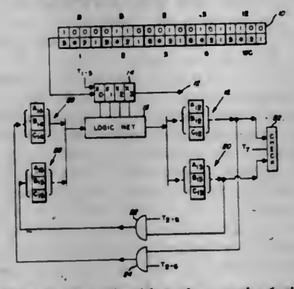
1. A digital indicator comprising a digital mechanical counter including a base having a front side and a plurality of coaxial, axially spaced digit wheels on the base having peripheral portions exposed to view at the front side of the base for registering a multi-digit number, a support member fixed to the base and extending axially across said wheels, said member having a flange parallel to the axis of said wheels and a row of openings closely adjacent said flange which are approximately aligned with the spaces between said digit wheels, respectively, a light conducting rod extending through each opening and into the space between the adjacent digit wheels, the ends of said rods within said spaces being located adjacent the peripheries of the wheels and having end faces presented to view at said side of the base in positions corresponding, respectively, to different decimal point positions in the number registered by the digit wheels, a spring tab on said member adjacent each opening engaging the adjacent rod to yieldably urge the latter against said flange whereby said rods are frictionally secured to the member, and a lamp opposite the other end of each rod for illuminating said end face of the respective rod.

3,018,953
RESETTING MECHANISM
Fritz A. Deutsch, East Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Nov. 15, 1957, Ser. No. 696,813
5 Claims. (Cl. 235—144)



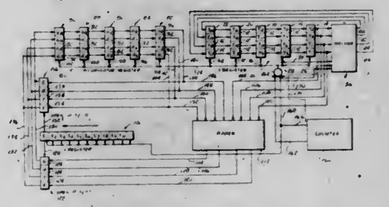
1. In a calculating machine having a register comprising an ordinal series of numeral wheels: first resetting mechanism for each of said wheels comprising a resetting device for said wheel, means for coupling said wheel and said device for simultaneous rotation and permitting angular adjustment therebetween, and first control means for controlling restoration of said device to a predetermined angular position; second resetting mechanism for each of said wheels comprising a resetting member coupled to said wheel in fixed angular relation therewith, and second control means for controlling restoration of said member to a predetermined angular position corresponding to zero registering position of said wheel; and means for selectively enabling said first or second resetting mechanism.

3,018,954
ERROR CHECKING DEVICE EMPLOYING TRISTABLE ELEMENTS
Joseph J. Eachus, Cambridge, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 18, 1959, Ser. No. 860,456
10 Claims. (Cl. 235—153)



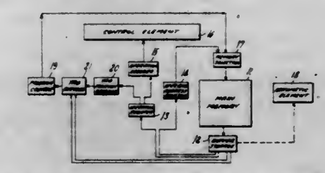
1. In apparatus for checking the manipulation of data processing words wherein each such word includes a plurality of data bits and a satellite check bit representation in the form of the modulo *n* sum of the data bits, the combination comprising a pair of tristable circuits, input means connected to said tristable circuits to set said circuits in accordance with the modulo *n* sum of the input data bits and the check bit representation, and check means connected to the outputs of said tristable circuits.

3,018,955
APPARATUS FOR PERFORMING ARITHMETIC OPERATIONS
Myron J. Mendelson, Los Angeles, Calif., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 27, 1958, Ser. No. 724,413
23 Claims. (Cl. 235—155)



1. Apparatus for multiplying a multiple digit natural binary coded operand represented by signals indicating a group of bits the significance of which is defined by a binary point by a binary coded decimal operand represented by signals indicating the bits of groups corresponding to the respective digits of the binary-coded-decimal number including in combination a first register for receiving signals representing the bits of the binary operand, a second register for receiving signals representing the bits of the binary coded decimal operand, an accumulator register, means for successively halving one of the operands in a number of cycles, means connecting said halving means to one of said first and second registers, means for doubling the other operand in each of said cycles, means connecting said doubling means to the other of said first and second registers, means responsive to the signal representing the bit next to the binary point in the binary representation of the operand in the first register for gating the output of the second register to the accumulator register and means connecting said output gating means between said second register and said accumulator register.

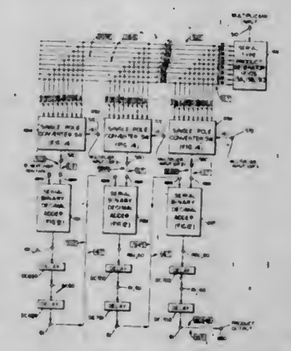
3,018,956
COMPUTING APPARATUS
William A. Hosler and Thomas A. Puorro, Stoneham, Mass., assignors, by direct and mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Filed Dec. 3, 1957, Ser. No. 700,427
5 Claims. (Cl. 235—157)



1. In a digital computer having storage means for sets of digital signals representing operands and for other sets of signals representing instructions, means for normally retrieving said instructions successively from storage in

predetermined order, and means for sensing certain signals of said retrieved instructions and to cause, according to the sense of such signals, transfer of selected operands from storage to a device for utilizing the same in computation operations of the computer, the combination including operand sensing means for selectively sensing a plurality of signals in said operands transferred from said storage means, control means for sensing certain signals in said instructions retrieved from said storage means for controlling by the sense thereof the selective operation of said operand sensing means, program modifying means variably operable to cause different alterations in said predetermined order of ensuing retrieval of instructions by said instruction retrieving means, and circuit means connecting said operand sensing means to operate said program modifying means in accordance with the sense of said operand signals sensed thereby.

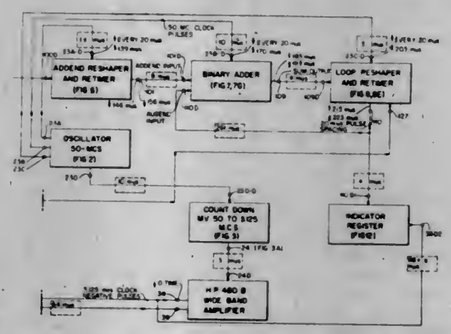
3,018,957
ELECTRONIC MULTIPLIER-DIVIDER
Byron L. Havens, Closter, N.J., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 22, 1954, Ser. No. 470,160
50 Claims. (Cl. 235—159)



1. An electronic parallel binary-coded decimal multiplier for obtaining the product of a multiplicand and a multiplier, said multiplier including; first means for simultaneously forming the one through nine multiples of said multiplicand, each of said multiples being formed serially by decimal digit, and beginning with the decimal digit occupying the lowest decimal digit positon of each multiple; selecting means, under control of said multiplier, for simultaneously selecting, for each decimal digit of the multiplier the one of said multiples corresponding thereto; second means for simultaneously summing, serially by decimal digit, the selected multiples; and said second means including time delay means whereby read out of the decimal digit occupying the nth decimal digit position of the product occurs simultaneously with the forming of the decimal digits occupying the $(n+1)^{th}$ decimal digit position of said multiples.

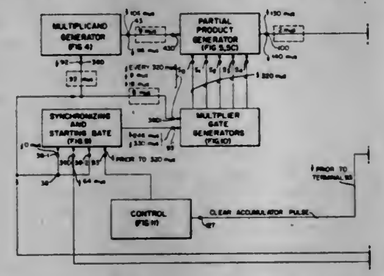
3,018,958
VERY HIGH FREQUENCY COMPUTING CIRCUIT
Robert M. Walker, Closter, N.J., and Arthur G. Anderson, New York, and Donald E. Rosenheim, Long Beach, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 31, 1956, Ser. No. 607,970
8 Claims. (Cl. 235—164)

1. In a calculator, operable at a pulse repetition rate of 50 megacycles, means for obtaining the product of a first number and a second number by adding successively obtained partial products including; first circuit means connected to receive variable phase clock pulses at a pulse repetition rate of 3.125 megacycles and provide therefrom serial pulses, ten millimicroseconds in duration, at a pulse repetition rate of 50 megacycles, representative of said first number, said first circuit means including multiplicand generator means, said multiplicand generator means consisting of an input terminal for receiving said variable phase clock pulses at a pulse repetiton rate of 3.125 megacycles, a first order binary gate including an input and an output and employing a settable bistable device and a high transconductance triode, a direct connection between the input of said multiplicand generator means and said input of said first order binary gate, a second order binary gate identical to said first order binary gate, a first twenty millimicrosecond delay connected between said input of said multiplicand generator means and said input of said second order binary gate, a third order binary gate identical to said first order binary gate, a second twenty millimicrosecond delay connected between said input of said second order binary gate and said input of said third order binary gate, a fourth order binary gate identical to said first order binary gate, a third twenty millimicrosecond delay connected between said input of said third order binary gate and said input of said fourth order binary gate, a fifth order binary gate



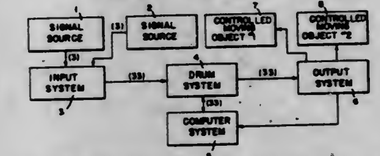
identical to said first order binary gate, a fourth twenty millimicrosecond delay connected between said input of said fourth order binary gate and said input of said fifth order binary gate, a resistor connected between said input of said fifth order binary gate and ground, an OR circuit having an output terminal and first through fifth input terminals respectively connected to said outputs of said first through fifth binary order gates, a grounded-grid amplifier having an input connected to said output of said OR circuit and employing a secondary emission tube of the EFP 60 type, said grounded-grid amplifier having an output connected to the dynode of said secondary emission tube; grid controlled circuit means connected to said output of said grounded-grid amplifier for receiving each of said serial ten millimicrosecond pulses and including electrical conductive means connected to undergo a change in electrical condition to thereby limit the amplitude of each of said serial ten millimicrosecond pulses; second circuit means, synchronized with said first circuit means, for successively providing an electrical representation of the digit of each order of said second number at a pulse repetition rate of 3.125 megacycles, said second circuit means including multiplier gate generator means, said multiplier gate generator means consisting of first, second, third, fourth and fifth binary order delay circuit means, said first, second, third, fourth and fifth delay circuit means being respectively serially interconnected, first,

second, third, fourth and fifth settable bistable devices respectively responsive to said first, second, third, fourth and fifth binary order delay circuit means, sync and clamp generator means coupled to said first, second, third, fourth and fifth delay circuit means and connected to receive variable phase clock pulses at a pulse repetition rate of 3.125 megacycles, said first, second, third, fourth and fifth delay circuit means each comprising a triode having an anode, a grid and a cathode, a first resistor, an inductance, and a second resistor serially connected in the order recited between a source of positive potential and said anode of said triode, a first capacitor connected between ground and the juncture of said first resistor and said inductance, a second capacitor and a third resistor connected between said anode and said cathode of said triode; nine millimicrosecond delay means receiving the serial ten millimicrosecond pulses from said grid controlled circuit means; and coincident circuit means for receiving each electrical representation of said second number and the output of said delay means to successively provide said partial products, in the form of serial pulses, ten millimicroseconds in duration, and at a pulse repetition rate of 50 megacycles, said coincident circuit means including partial product generator means, said partial product generator means consisting of an input terminal for receiving said serial ten millimicrosecond pulses from said nine millimicrosecond delay means and an output terminal for providing said succession of partial products,



a limiter amplifier, a first cathode follower, a fifth twenty millimicrosecond delay, a sixth twenty millimicrosecond delay, a seventh twenty millimicrosecond delay, an eighth twenty millimicrosecond delay and a resistor serially connected in the order recited between said input terminal of said partial product generator means and ground; an OR circuit having first, second, third, fourth and fifth input terminals and an output terminal, first, second, third, fourth and fifth AND circuits, each of said AND circuits having first and second inputs and an output, said first, second, third, fourth and fifth AND circuits having their second inputs respectively connected to said first, second, third, fourth and fifth settable bistable devices of said multiplier gate generator means, a second cathode follower coupling said first input of said first AND circuit to said first cathode follower, a third cathode follower coupling said first input of said second AND circuit to the juncture of said fifth and sixth twenty millimicrosecond delays, a fourth cathode follower coupling said first input of said third AND circuit to the juncture of said sixth and seventh twenty millimicrosecond delays, a fifth cathode follower coupling said first input of said fourth AND circuit to the juncture of said seventh and eighth twenty millimicrosecond delays, a sixth cathode follower coupling said first input of said fifth AND circuit to the juncture of said eighth twenty millimicrosecond delay and said resistor, sixth, seventh, eighth, ninth, tenth and eleventh cathode followers respectively coupling said output of said first, second, third, fourth and fifth AND circuits to said first, second, third, fourth and fifth inputs of said OR circuit, a limiter amplifiers and a twelfth cathode follower serially interconnected between the output of said OR circuit and the output of said partial product generator means.

3,018,959
COMPUTING DEVICE
Walker H. Thomas, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 26, 1956, Ser. No. 612,267
7 Claims. (Cl. 235—167)

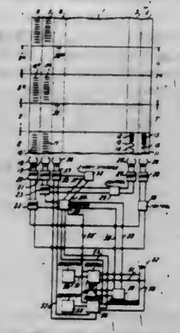


1. A computing device comprising a memory element having a plurality of signal storage registers and responsive to memory control signals for delivering signals from the signal storage register identified by received memory address signals, a first arithmetic element and a second arithmetic element each being responsive to received signals representative of data for producing signals representative of the result of an arithmetic operation performed on said received signals representative of data, time pulse generating and distributing means for producing a plurality of time pulses, memory control means responsive to said time pulses and signals received from said memory element for producing said memory control signals, memory address signal producing means responsive to said time pulses and signals received from said memory element for producing said memory address signals, command generating means responsive to said time pulses and signals received from said memory element for generating commands causing a first signal representative of a first function and a second signal representative of a second function to be delivered respectively to said first arithmetic element and to said second arithmetic element and causing a third signal representative of a third function to be delivered to each of said first arithmetic element and said second arithmetic element whereby said first arithmetic element and said second arithmetic element produce respectively a first arithmetic result and a second arithmetic result.

3,018,960
ELECTRONIC ADDER-SUBTRACTOR APPARATUS EMPLOYING A MAGNETIC DRUM
Gerhard Dirks, 44 Morfelder Landstrasse, Frankfurt am Main, Germany
Filed Feb. 26, 1957, Ser. No. 642,563
Claims priority, application Great Britain Jan. 29, 1957
11 Claims. (Cl. 235—176)

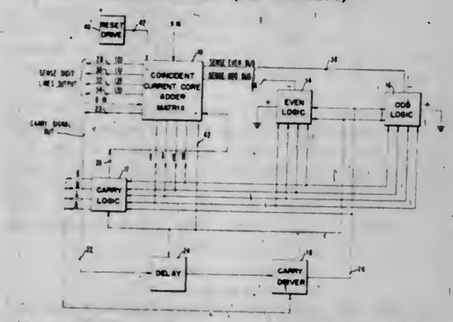
1. Calculating apparatus including a magnetic signal storage drum with a pair of circumferential number storage tracks, each track being divided into a plurality of denominational storage areas for digits of the number, signal transducing means for each track operable to sense the denominational areas of a track sequentially, a counting device having a counting capacity equal to the largest digit value which is to be stored in any one of said denominational areas and operable in response to pulses applied to an input thereof, means responsive to the sensing of a denominational area in each track by said transducing means to apply to the input of said counting device a single train of pulses equal in number to the sum of the digit values stored in said two areas, the pulses representing one digit value being interlaced and staggered in time with those representing the other digit value,

means operable to register a carry from said counting device, means operable to generate signals representing the digit value registered by said counting device before sensing of the next pair of denominational areas, and second signal transducing means operable by said generated



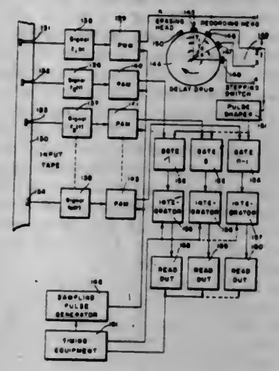
signals to effect recording of a representation of the registered digit value in one of the denominational areas before sensing of said next pair of denominational areas, whereby the sum of said two numbers is formed in a single sensing of the two numbers.

3,018,961
ARITHMETIC SWITCHING CIRCUIT
Robert L. Ward, Yorktown Heights, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1958, Ser. No. 783,807
25 Claims. (Cl. 235—176)



8. In an arithmetic system employing the radix R, a device for the addition of information representing input signals comprising a matrix of R^2 bistable magnetic cores, said matrix having input and output means coupled to each said core, said input means comprising a first group and a second group of R input lines having predetermined ones bussed at one end to form a first and a second set of common output lines, said output means including R output lines having predetermined ones bussed at one end to form a set of common output lines comprising a first common output line for manifestation of the true sum of said input signals and a second common output line for the manifestation of the true sum of said input signals plus one, the cores of said matrix being responsive to the energization of said input means to provide an output signal on the first and second common output lines, and further means coupled intermediate the first and second sets of common output lines and said set of common output lines responsive to the energization of said input means for inhibiting the output signal on one of said common output lines.

3,018,962
APPARATUS FOR DETERMINING THE CORRELATION COEFFICIENTS OF DATA
Hal J. Jones and John A. Morrison, Jr., Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 8, 1954, Ser. No. 461,234
9 Claims. (Cl. 235—181)

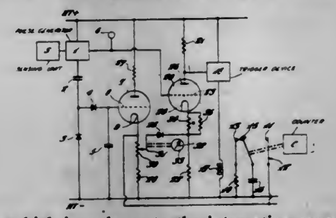


1. Apparatus for analyzing data in time series form whereby correlation coefficients are computed for equal time length portions of said data to indicate the degree of correlation therebetween, the combination comprising a reproducible medium having recorded thereon at least one set of data in time series form, at least two means associated with said reproducible medium for detecting said recorded data, pulse sampling means, modulating means actuated by pulses from said sampling means to produce a series of pulses whose widths are proportional to the data amplitude at the instant of detection by one of said at least two detecting means, means recording said width modulated pulses on time delay means, a plurality of detecting means associated with said time delay means, said recording and detecting means together being capable of producing time delays from zero to times greater than the periods between sampling pulse time intervals, modulating means actuated by pulses from said pulse sampling means to produce a series of pulses whose amplitudes are proportional to the data amplitude at the instant of detection by the other of said at least two detecting means, switching means connecting said plurality of time delay detecting means one at a time to multiplier means, said multiplier means multiplying said series of width modulated pulses detected by the connected one of said plurality of time delay detecting means and said series of amplitude modulated pulses, means summing said multiplied pulses for the time length of the data portions to be correlated to obtain thereby correlation coefficients, and means for reading the sums of said multiplied pulses.

3,018,963
TEMPERATURE COMPENSATING INTEGRATING CIRCUITS FOR COUNTING ELECTRICAL PULSES
Edgar Raymond Reginald Chappell, 121 Ynyswen Road, Treherbert, Wales, and Harold Barns, 38 Insole Grove, Cardiff, Wales
Filed Aug. 20, 1958, Ser. No. 756,161
Claims priority, application Great Britain Aug. 21, 1957
10 Claims. (Cl. 235—183)

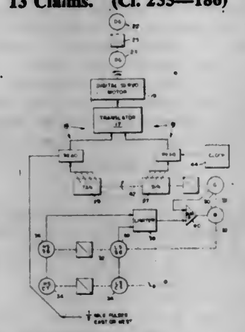
1. An electrical circuit to give an indication dependent on one factor only, which factor causes emission of electrical pulses at a rate dependent on the magnitude thereof, said rate being also affected by temperature to a

minor extent comprising an integrating capacitor, pulse feeding means to receive said pulses and feed them to the integrating capacitor to charge it from a first to a second level, a second capacitor, a normally interrupted low-impedance discharge path connecting the integrating capacitor and the second capacitor for effective charge equalization between said two capacitors, a normally closed path connecting opposite plates of the second capacitor to maintain them at a fixed relative potential, a relay having an operating coil and being capable of two alternative states, the relay in its normal state interrupting said first mentioned path and closing the second mentioned path and in its second state closing the first and interrupting the second path, operation of the relay from its normal to its second state thereby bringing the integrating capacitor charge level from its second to its first level, buffer and amplifier means connected to the integrating capacitor, the buffer means



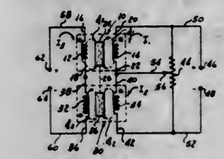
presenting high impedance to the integrating capacitor in the open condition of said first mentioned path, trigger means which has two alternative stable outputs and is connected to the output of the amplifier means whereby the integrating capacitor charge level determines the output of the trigger means, the trigger means having its output connected to the relay operating coil and maintaining the relay in its normal state until the integrating capacitor reaches the second charge level and then momentarily actuating the relay to its second state, counting means operable in every cycle, a potentiometer manually adjustable to set the number of pulses required for one count and a thermistor network connected to the amplifier means for varying the bias thereon in response to changes in temperature thereby altering said number of pulses in a direction to compensate for the effect of said temperature change on said pulse emission rate.

3,018,964
NAVIGATION COMPUTER
Frederic A. Foss, Binghamton, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 25, 1954, Ser. No. 405,977
13 Claims. (Cl. 235—186)



1. A navigation computer for use with a moving craft for determining an azimuth correction based on the earth's rate and on the craft's rate comprising first drum means for storing predetermined quantities representing a given increment times the sine of the craft's present latitude, second drum means for storing predetermined quantities representing a given increment times the tangent of the craft's present latitude, means for rotating both said first and second drum means to a position corresponding with the craft's present latitude, means for periodically reading said stored information from the drums in accordance with time and craft travel east or west, and means for translating the information as read directly into increments of azimuth correction.

3,018,965
MOVABLE MAGNETIC CORE FORCE VECTOR SUMMING DEVICE
Sidney Saslovsky, Bridgeport, Conn., and Carl Machover, Yorktown Heights, and Elliott J. Siff, Whitestone, N.Y., assignors, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 24, 1956, Ser. No. 560,982
4 Claims. (Cl. 235—189)

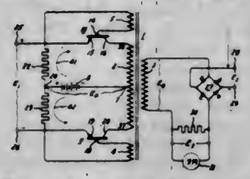


1. A device for producing a force which is a function of the vector sum of a pair of signals including in combination a first core forming an element of a first magnetic circuit, a first winding disposed adjacent the first core, a second winding disposed adjacent the first core, said first magnetic circuit providing a flux path for flux provided by current flow through said first and second windings, a second core forming an element of a second magnetic circuit having negligible coupling with said first magnetic circuit, means mechanically connecting said second core to the first core for movement therewith, a third winding disposed adjacent said second core, a fourth winding disposed adjacent said second core, said second magnetic circuit providing a flux path for flux produced by current flowing through said third and fourth windings, means electrically connecting said first and third windings in series-aiding relationship, means electrically connecting said second and fourth windings in series-opposed relationship, a source of a first electrical signal, means for applying said first electrical signal to said series-connected first and third windings, a source of a second electrical signal and means for applying said second electrical signal to said series-connected second and fourth windings to produce a force on said connected cores tending to displace said cores through a distance proportional to the vector sum of said first and second signals.

3,018,966
ELECTRIC FUNCTION NETWORK
William B. Zelina, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed May 3, 1955, Ser. No. 505,715
13 Claims. (Cl. 235—195)

1. An electric function network comprising a rectangular wave oscillator having an average full cycle output voltage equal to zero, means to apply a first unidirectional signal to said oscillator to change the ratio of the magnitude of the positive output voltage to the magnitude of the negative output voltage without affecting the value of the average output voltage, means for combining a second unidirectional voltage with the positive out-

put voltage and the negative output voltage to reduce the maximum excursion of each of said output voltages



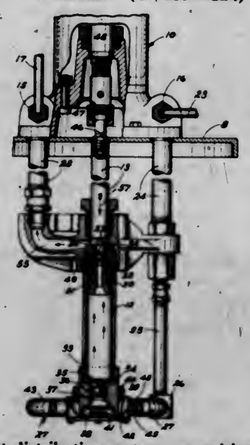
by a substantially equal amount, and means for sensing the integrated resulting voltage.

3,018,967
METHOD AND MEANS FOR THE INSTALLATION OF RAIL TRACK
Muhammad Khalil, Lahore, West Punjab, Pakistan (113–B, Gulberg II, Lahore, West Pakistan)
Filed Mar. 12, 1953, Ser. No. 341,965
7 Claims. (Cl. 238—349)



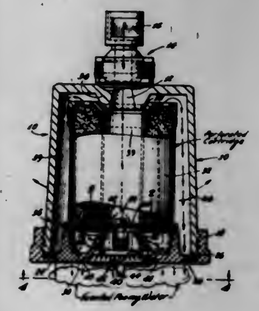
1. Clip means for securing rails to sleepers comprising a substantially planar base portion, said base portion having means for mounting same to the top surface of a sleeper in pivotal relationship in a horizontal plane with respect thereto, one end of said base portion having a camming edge for engagement with the side edge of the base of a rail, a resilient top portion secured at one end to the opposite end of said base portion in spaced relationship by an intermediate resilient portion substantially arcuate in its vertical plane, said top portion extending in the direction of the rail and being of a length greater than said base portion to engage the top surface of the base of said rail.

3,018,968
CLOSED SYSTEM RECIRCULATING ASSEMBLY
Gustave S. Levey, Houston, Tex., assignor to The Spec-Flo Manufacturing Corporation, Houston, Tex., a corporation of Texas
Filed Nov. 17, 1959, Ser. No. 853,638
8 Claims. (Cl. 239—124)



3. A paint distribution system comprising a paint storage container, a pump assembly comprising an air motor for reciprocating a piston rod, a cylinder, a piston within the cylinder connected to said piston rod, an outlet at the top of said cylinder and an inlet at the bottom of said cylinder, conduit means connecting said outlet to a spray gun, a reservoir at the bottom of said cylinder, conduit means connecting said paint storage container to said reservoir, return conduit means connecting said spray gun to said reservoir, said pump inlet being in communication with the interior of said reservoir, said reservoir having means to prevent the paint returning from the spray gun being mixed with paint in said storage container.

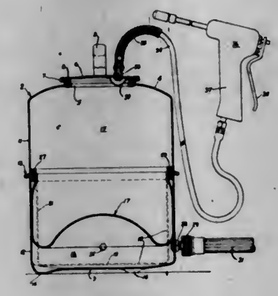
3,018,969
DUAL PURPOSE SHOWER HEAD ASSEMBLY
Leonard E. Gentry, 1515 Colorado Blvd., Los Angeles 41, Calif.
Filed Feb. 27, 1961, Ser. No. 91,935
6 Claims. (Cl. 239—312)



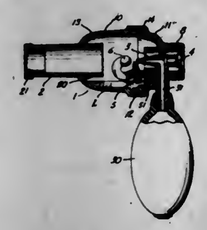
1. A shower head assembly including: a tubular-shaped housing defining an inner chamber and having a centrally positioned inlet means at its upper end for receiving water under pressure, a disc-shaped bottom member removably coupled to the lower end of said tubular shaped housing, said bottom member having a first set of orifices therein disposed in a circular path and said bottom member further having a central aperture therein, a diverter valve mounted in said central aperture and configured to form a second set of orifices in said bottom member disposed in a circular path and concentrically positioned within said first set of orifices, said diverter valve being rotatably adjustable between a first and a second angular position to open and close the orifices of the second set, supporting means in said housing, an annular-shaped perforated cartridge of crystals positioned in said housing on said supporting means and having a central by-passing passage extending therethrough in axial alignment with said inlet means when said cartridge is so supported in said housing, said diverter valve serving to divert water up through the perforated cartridge and down through said orifices of said first set when said valve is rotatably adjusted to its second angular position in which said orifices of said second set are closed.

3,018,970
FLUID-OPERATED LIQUID SPRAYERS
Edward H. Wittenberg and Jerome H. Chopa, both of P.O. Box 38, La Crosse, Wis.
Filed Nov. 18, 1959, Ser. No. 853,890
2 Claims. (Cl. 239—323)

1. In a sprayer of the class described, a tank having an annular inwardly facing groove in its cylindrical wall intermediately of its ends, a flexible diaphragm in said tank provided at its upper marginal edge with an annular bead of substantial cross-section, said annular bead having an annular outwardly extending V-shaped flange on its periphery receivable in the groove in the tank wall when the diaphragm is inserted into the tank and said bead is pressed firmly against the tank wall, said diaphragm dividing the interior of the tank into two chambers, the external diameter of said bead being so proportioned relative to the interior diameter of the tank that when the bead is pressed firmly into engagement with the tank wall, it is retained in such position by the inherent resiliency of the material from which the bead is made, thereby to prevent leakage between the two chambers.

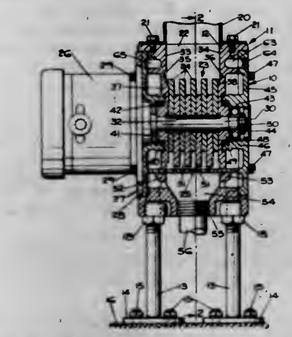


3,018,971
ATOMIZER
Ralph G. Cheney, Darlington Apt. 201, Rio Piedras, Puerto Rico
Filed May 15, 1959, Ser. No. 813,553
8 Claims. (Cl. 239—338)



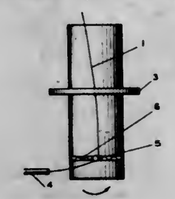
7. An atomizer comprising a body chambered to contain a liquid, a vapor discharge nozzle directed from one side thereof, an air jet within said chamber directed at its discharge end towards said nozzle, means for discharge of air under pressure through the discharge end of said air jet, a separate capillary tube of resiliently yieldable material, a non-circular shank projecting laterally from said capillary tube, said shank being formed with a longitudinally directed groove along at least one side, terminating short of the end of the shank, a socket within the chamber for the reception of said shank, shaped generally in correspondence with the shank to position the capillary tube's ends operatively relative to the liquid space and to the air jet, respectively, and a detent projecting from a wall of the socket in position to override the resiliently yieldable end of the shank, and to enter said groove as and when the shank is fully seated in its socket, as a detent against accidental removal of the shank from such socket, and thereby serving to retain the capillary tube in its intended relationship to the air jet.

3,018,972
MATERIALS REDUCING APPARATUS
Walter C. Steinmetz, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio
Filed June 15, 1960, Ser. No. 36,404
2 Claims. (Cl. 241—41)



2. Materials reducing apparatus comprising a housing formed with a materials reducing chamber, a materials reducing rotor disposed within the materials reducing chamber, bearing means rotatably mounting the materials reducing rotor in the housing, a materials feed chamber connected to the materials reducing chamber for feed of materials to the materials reducing rotor to be acted upon and reduced by said rotor, said materials reducing rotor comprising a plurality of materials reducing hammers for reducing materials, a reduced product chamber below the materials reducing chamber to receive the reduced product, a screen disposed between the materials reducing chamber and the reduced product chamber to control the size of the reduced product discharged to the reduced product chamber, a wash water manifold at each end of the reduced product chamber integrally formed in the housing, a plurality of water nozzles connected to each water manifold and directed into the reduced product chamber for injecting water therein to wash the product out of the reduced product chamber, a water duct formed in the housing and having its opposite ends each connected to a water manifold for supplying water to the water manifolds, said water duct extending in an arcuate path at one side of the housing around the materials reducing rotor to connect to the water manifolds, and means for connecting a water source to the water duct.

3,018,973
WINDING APPARATUS
Donald Gordon Bradley, Harrogate, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed June 26, 1959, Ser. No. 823,031
Claims priority, application Great Britain June 27, 1958
3 Claims. (Cl. 242—18)



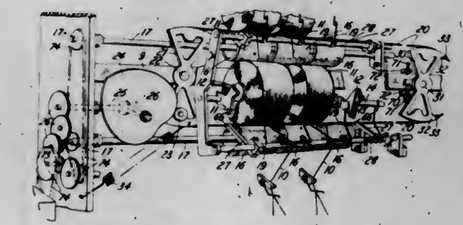
1. In a winding apparatus for filamentary material, said apparatus having a rotating receiving bobbin, a trav-

erse mechanism to guide the material for collection upon the bobbin, and a temporary collecting means for said material; an entrainment device comprising an elastic member encircling and secured by friction and its resilience to the bobbin in the region between the lower limit of the traverse mechanism path and the bottom of the bobbin, and means on said member for entraining the material and providing that collected on the receiving bobbin with a transfer tail, the resiliency of said member permitting its repositioning upon a formed transfer tail to hold the same in place upon the bobbin.

3,018,974
MULTIPLE BOBBIN WINDING APPARATUS FOR YARN AND THE LIKE

Denis Albert Edward Mattingly and Reginald Selby Gilchrist, London, England, assignors to The Klinger Manufacturing Company Limited, London, England, a British company

Filed Feb. 18, 1960, Ser. No. 9,600
Claims priority, application Great Britain Mar. 5, 1959
6 Claims. (Cl. 242—35.5)

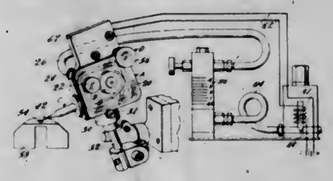


1. A multiple bobbin winding apparatus for yarns comprising an assemblage of rotatably and coaxially mounted bobbins, a transmission for simultaneously rotating said bobbins, a single oscillating lever pivotally mounted intermediate its ends on the apparatus at each end of said assemblage of bobbins to oscillate about an axis transverse to the axis of rotation of the bobbins, flexible inextensible stretches of material positively and directly connected to each lever on the opposite sides of the axis of rotation thereof, a number of yarn guides fixed to and spaced apart along said stretches at distances corresponding to the spacing of said bobbins, and means imparting oscillatory movement directly to one of said levers to an extent corresponding to the axial width required for each wound bobbin.

3,018,975
CONTINUOUS FINE WIRE FEEDING DEVICE

Frederick W. Kulicke, Jr., Philadelphia, Pa., assignor to Kulicke & Soffa Mfg. Co., Philadelphia, Pa., a corporation of Pennsylvania

Filed Apr. 12, 1960, Ser. No. 21,773
11 Claims. (Cl. 242—54)

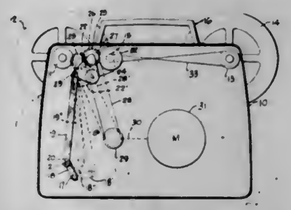


1. A device for the continuous feeding of extremely fine wire comprising a housing having a chamber therein, a wire carrying spool rotatably supported in said housing, a nozzle having a bore communicating with the chamber, means for introducing gas under pressure into the chamber, and means simultaneously rotating said spool and actuating the gas introducing means whereby wire wound on said spool will be dispensed through said nozzle under tension on a stream of the gas.

3,018,976
MOTION PICTURE PROJECTOR FILM FEEDING AND REWIND APPARATUS

Otto R. Nemeth, Santa Monica, Calif., assignor, by mesne assignments, to Mansfield Industries, Inc., Chicago, Ill., a corporation of Delaware

Filed Sept. 9, 1958, Ser. No. 759,905
9 Claims. (Cl. 242—55.12)

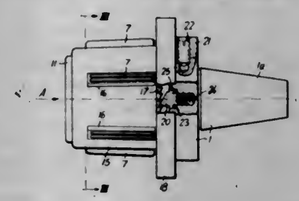


1. In a motion picture projector having spaced takeup rotary reel means and rewind rotary reel means and including a motor and lamp, the combination comprising: manually operable rotatable means coupled to said projector, said rotatable means being adapted for disposition in three given angular locations identified as rewind, off, and forward positions, said off position being disposed between said rewind and forward positions; pivotable shifting means having a given pivot point; linkage means interconnecting a first portion of said shifting means and said rotatable means, said linkage means actuating said shifting means from a first position to a second position in response to movement of said rotatable means from said forward to said rewind position, and said linkage means being constructed to pivot with respect to said shifting means without movement of said shifting means in response to movement of said rotatable means from said forward position to said off position; and, driving means coupled to a second portion of said shifting means spaced from said given pivot point, said driving means engaging said takeup rotary reel means in said first position and said rewind rotary reel means in said second position.

3,018,977
DRIVING MANDREL FOR ROLLS OF PAPER IN PRINTING AND SIMILAR MACHINES

Karl Sture Alvar Skallquist, Alvsjo, Sweden, assignor to Dagens Nyheters Aktiebolag, Stockholm, Sweden, a corporation of Sweden

Filed Aug. 24, 1959, Ser. No. 835,729
Claims priority, application Sweden Aug. 27, 1958
3 Claims. (Cl. 242—72)

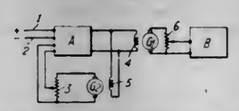


3. In a printing machine, a mandrel for a roll of material comprising a rotatably mounted core tapering at its free end and a sleeve turnably mounted on said core and having a number of apertures, said sleeve being such that it is adapted to enter the bore of the roll; gripping members pivotally mounted in grooves in said core to project through said apertures in said sleeve and adapted to be pivoted towards their dead centre position into firm engagement with said roll to connect said roll to said core by turning movement of said sleeve relatively to said core; said sleeve being slidable on said core in axial directions thereof; and a ratchet which comprises a ring of teeth on said sleeve and at least one dog on said core arranged to permit said sleeve to turn relatively to said core in one direction to enable said gripping members to engage said roll and to prevent said sleeve from turning relatively to said core in the opposite direction whereby the edges of said apertures in said sleeve engage said members to prevent them from moving out of firm engagement with said roll, and mouting of said roll on said sleeve slides said sleeve on said core in one axial direction to move said ring into engagement with said dog, and removal of said roll slides said sleeve in the opposite axial direction to move said ring out of engagement with said dog.

3,018,978
ELECTRICAL ANALOGUE COMPUTING APPARATUS

Peter Granean, London, and Zbigniew Bonikowski, Ealing, London, England, assignors to British Insulated Callender's Cables Limited, London, England, a British company

Filed Aug. 5, 1959, Ser. No. 831,821
Claims priority, application Great Britain Aug. 6, 1958
7 Claims. (Cl. 242—75.51)



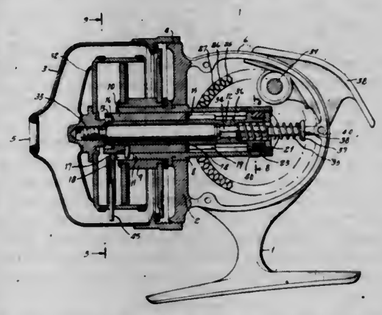
1. Electrical analogue computing apparatus for generating a potential substantially proportional to the ratio between the angular speeds of rotation of two shafts comprising an amplifier capable of giving an output potential which varies substantially linearly with its input potential, means for applying a constant reference potential to the amplifier input, two D.C. generators each capable of generating in its armature an output potential which varies, for any given input potential to its field coils, substantially linearly with the speed of rotation of its shaft, means for coupling said two shafts one to each of the shafts of said D.C. generators, means for applying the amplifier output to the input of the first of said generators, whose output is the required control potential, and to the input of the second of said generators, and means for connecting the output of the second of said generators to the amplifier input in such a way that it acts as a feedback to the amplifier.

3,018,979
LEVEL WIND FISHING REEL

Earle D. Clickner, Kalamazoo, Mich., assignor to Shakespeare Company, Kalamazoo, Mich., a corporation of Michigan

Filed May 15, 1959, Ser. No. 813,485
5 Claims. (Cl. 242—84.21)

5. In a fishing reel of the type having a central transverse support, a fixed spool disposed forwardly thereof on a longitudinally extending axis, a spooling member disposed coaxially with and around said spool and rotatable about and reciprocable along said axis and having line pickup means and means for retracting said line pickup means on forward movement of said spooling means and means for moving said line pickup means outwardly upon rearward movement of said spooling means, the improvement comprising means for supporting, rotating and reciprocating said spooling means both for actuating said pickup means and for effecting level winding of a line on said spool comprising a tubular guide bearing member disposed along said axis through and both forwardly and rearwardly of said transverse support and within said fixed spool, and a unit slidable in said tubular bearing member comprising a sleeve slidably and non-rotatably disposed in the forward portion of said tubular bearing member and a hollow shaft disposed rotatably in said sleeve and extending rearwardly there-

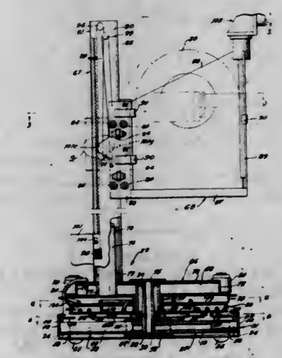


from and means for joining said sleeve and hollow shaft against relative axial motion, a guide bearing for the rear end of said hollow shaft slidable in said tubular guide bearing, means for rotating and reciprocating said hollow shaft, a slidable mounting shaft slidably but non-rotatably disposed in said hollow shaft and fixed at its forward end to said spooling member to support the same for rotation by said slidable shaft when it is rotated, and means for engaging the rear end of said slidable shaft for moving it forwardly in said sleeve and hollow shaft for providing forward movement of said spooling means, said means for moving said line pickup means outwardly being supported on said sleeve.

3,018,980
VEHICLE FOR SLAVE ROBOT

Raymond C. Goertz, Downers Grove, and John F. Lindberg, Elmhurst, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

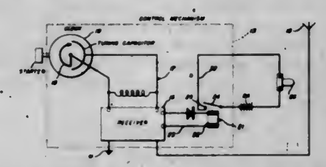
Filed Nov. 3, 1959, Ser. No. 850,744
1 Claim. (Cl. 242—86.5)



Apparatus comprising a first plate, a second plate parallel to and spaced from the first plate and having a slot

extending generally radially inwardly from the periphery and terminating in a spiral tail, a relatively large hub secured to and between the plates in spaced relation to the peripheries thereof and having a relatively narrow opening coinciding with a mid-portion of the slot in the second plate, a relatively small hub extending from the side of the second plate away from the first plate, a circular rim having a recess and closely approaching the second plate at its entire periphery on the side of the second plate away from the first plate, means mounted at the recess in the rim preventing lengthwise movement of the cable, a cable guide positioned adjacent the periphery of the first plate, an electrical cable extending from a power source through the cable guide, thence in a coil about the large hub, thence through the opening in the large hub and the slot in the second plate, thence in a coil about the small hub to and through the recess in the rim, the cable winding in a certain direction from the guide to the slot in the second plate and in the same direction from said slot to the recess in the rim, the spiral tail of the slot in the second plate extending in the said same direction, and means for urging the plates and the hubs to rotate at all times in the said certain direction with respect to the circular rim and cable guide about an axis coincident with that of the rim and means mounting the rim for angular movement about its own axis with respect to the cable guide so as to cause the cable-holding means at the rim recess also to be angularly movable with respect to the cable guide.

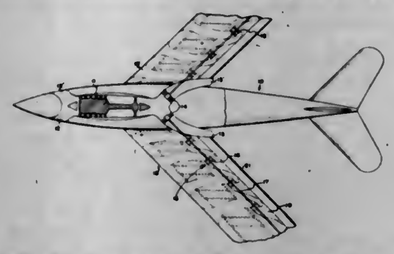
3,018,981
GUIDANCE CONTROL FOR MISSILE
Royal Weller, Silver Spring, Md.
(Rochester, N.Y.)
Filed June 3, 1949, Ser. No. 97,061
12 Claims. (Cl. 244—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. In a system for altering the course of a projectile, in combination, a transmitting station having means for transmitting radio signals selectively of different fixed frequencies, each of said signals having a frequency corresponding to a different incremental fractional portion of the trajectory of the projectile, a radio receiver carried by said projectile, means for continuously and progressively changing the tuning of said receiver at a predetermined fixed rate during the flight of the projectile whereby the receiver is responsive to a selected signal from said transmitting station during a selected portion of said trajectory corresponding thereto, an explosive steering charge carried by the projectile and arranged to exhaust from one side thereof as the charge is fired, and means including an electro-responsive detonator operatively connected to said receiver and controlled thereby for exploding said charge as a signal is received by the receiver.

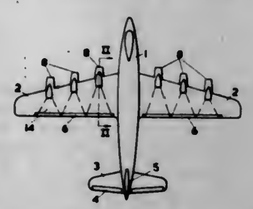
3,018,982
DUCTED FAN AIRCRAFT INCORPORATING A BLOWN FLAP ARRANGEMENT
Hans Multhopp, Overlea, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Feb. 25, 1957, Ser. No. 641,882
17 Claims. (Cl. 244—15)

1. A ducted fan arrangement for a jet engine aircraft having wings comprising a plurality of jet engines disposed in the fuselage of said aircraft, a plurality of air compressors arranged at spaced locations along each wing of the aircraft and driven by a common shaft, and a free turbine associated with the compressors of each wing, each of said free turbines being driven by the exhaust products of at least one of said jet engines and arranged



to drive the compressors of one wing, forwardly-directed inlet means in said wings, said compressors inhaling air from said forwardly directed inlet means, and exhausting the air rearwardly along the trailing edges of the wings so as to contribute materially to the propulsion of the aircraft.

3,018,983
JET AIRCRAFT WITH JET DEFLECTOR
Ivor Macaulay Davidson, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Oct. 10, 1958, Ser. No. 766,577
Claims priority, application Great Britain Oct. 16, 1957
5 Claims. (Cl. 244—15)

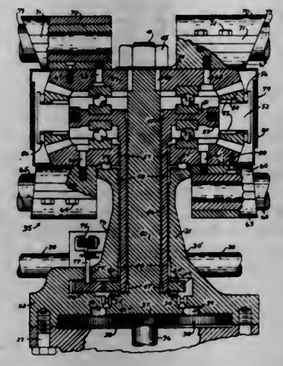


1. An aircraft comprising a wing, said wing comprising a wing flap at the wing trailing edge; at least one jet engine mounted on the wing, said engine having a rearwardly directed jet nozzle located above the wing upper surface, said nozzle being disposed to discharge a jet stream in a rearward direction above and clear of the wing upper surface; and a jet deflector operatively associated with said nozzle and movable between an inoperative position in which it is housed within the wing and an operative position in which it deflects the jet stream from said rearward direction to a direction downwardly inclined therefrom such that the stream impinges obliquely on said wing upper surface whereby the stream spreads out laterally across the surface in a spanwise sense and leaves the wing trailing edge as a long thin spanwise-extending jet sheets.

3,018,984
DEVICE FOR PRODUCING RELATIVE MOTION
John Le Beau Rust, 30 E. Philadelphia, Detroit 2, Mich., assignor of one-half to John W. Davidson, Detroit, Mich.
Filed June 20, 1960, Ser. No. 37,512
9 Claims. (Cl. 244—17.19)

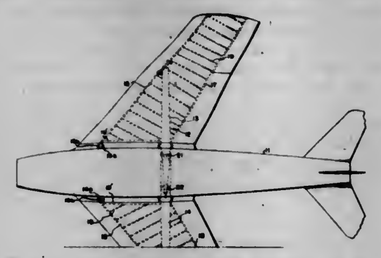
1. In combination, a transmission housing, an elongated sleeve journaled therein and projecting therefrom, an annular support plate mounted transversely on the

outer end of the sleeve, a power driven shaft journaled within said housing and sleeve and projecting from said sleeve, a pair of opposed spaced transverse first and second bevel gears, the first bevel gear secured to the free end of said shaft and the second bevel gear journaled on said sleeve and bearing on said housing, opposed bevel pinion gears journaled on said support plate for rotation on an axis at right angles to the shaft axis, said pinions interposed between and enmeshed with said bevel gears,



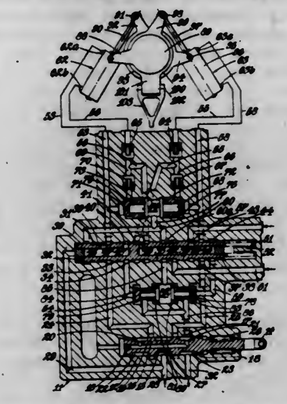
whereby the first gear causes rotation of the second gear at the same speed and in the opposite direction, an auxiliary reversible engine mounted on said housing including a driveshaft extending into said housing, and gear means interconnecting said latter driveshaft and said sleeve for effecting relative rotation of said support plate and pinions about the shaft axis, and producing a torque differential between the speeds of rotation of said bevel gears applied to said housing.

3,018,985
SWEPT WING WITH UNSWEPT SPAR
Woldemar Voigt, Towson, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Dec. 31, 1956, Ser. No. 631,638
16 Claims. (Cl. 244—46)



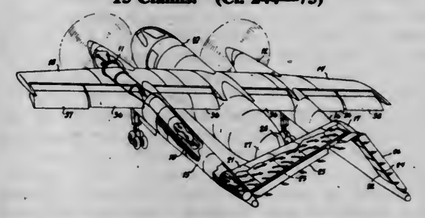
1. A swept aircraft wing comprising a main spar possessing substantially less sweep than the wing and arranged to function as the principal bending member of the wing, said wing being in two halves, a structural wing box in each wing half that includes at least one swept spar, a plurality of ribs connected to the swept spar, and upper and lower wing skins defining the external configuration of the wing, said main spar extending for a substantial distance into said structural wing box of each wing half and connecting to the swept spar thereof, the upper and lower wing skins of each wing half being connected to said main spar, whereby the bending loads of the wing are distributed over a substantial portion of said unswept spar.

3,018,986
FLUID OPERATED MECHANISM FOR STEERABLE AIRCRAFT WHEELS
Alan Cameron-Johnson, Gloucester, England, assignor to Dowty Rotol Limited, Gloucester, England
Filed Sept. 12, 1960, Ser. No. 55,451
Claims priority, application Great Britain Sept. 17, 1959
11 Claims. (Cl. 244—50)



1. A mechanism having two jack means, the first of which is intended for moving an angularly displaceable device to one side of a mean position and the second of which is intended for moving the device to the other side of its mean position and having three coaxially mounted elements which connect the jacks to the device, one of the elements being angularly displaceable about its axis and being connected at spaced points off-set from its axis to the angularly displaceable device and pivotally to one of the relatively movable parts of the first jack means, a second of the elements being angularly displaceable about its axis and being pivotally connected at spaced points off-set from its axis to the other of the relatively movable parts of the first jack means and to one of the relatively movable parts of the second jack means, the third element being fixed and being pivotally connected at a point off-set from its axis to the other of the relatively movable parts of the second jack means, and the first and second jack means having the axes of their movable parts tangential to the same or different circles, coaxial with the axis of the three elements and, when the angularly displaceable device is in its mean position, being in their extended position.

3,018,987
BLOWN TAIL ARRANGEMENT FOR LOW SPEED CONTROLLABILITY OF AN AIRCRAFT
Hans Multhopp, Overlea, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Sept. 29, 1958, Ser. No. 763,913
15 Claims. (Cl. 244—75)



1. A blown tail arrangement for a multi-engine aircraft comprising a tail assembly having inclined fixed

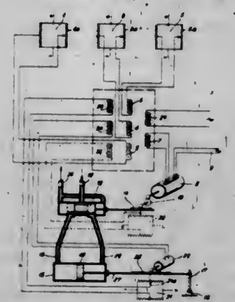
tail surfaces, and movable control surfaces bingedly attached to said fixed surfaces, nozzle means adjacent the underside of said tail surfaces, arranged to direct gases generated by said engines across the lower portions of said movable control surfaces to increase the normal forces on the underside of said tail, duct means for supplying certain portions of said tail assembly with gases from certain engines, the forces created at said tail assembly having downward vectorial components as well as lateral vectorial components due to the inclination thereof, said lateral vectorial components being substantially balanced when all of the engines of said aircraft are operational, but being unbalanced when an engine is not operational due to the portion of the tail assembly corresponding to that engine being deprived of engine generated gases, the unbalanced force created at the tail assembly under such circumstance being in the direction to compensate for a yawing tendency of the aircraft caused by unbalanced engine effect, whereby a corrective lateral force is created automatically at said tail assembly in the event of the loss of power of an engine of said aircraft.

3,018,988

ELECTRO-HYDRAULIC JACK DEVICE FOR CONTROLLING THE STABILITY OF AIRCRAFT

Günther Ernst and Gerhard Eggers, Dammarie Les Lys, France, assignors to Societe Nationale d'Etude et de Moteurs d'Aviation, Paris, France, a company of France

Filed Nov. 29, 1957, Ser. No. 699,682
Claims priority, application France Dec. 4, 1956
4 Claims. (Cl. 244—77)



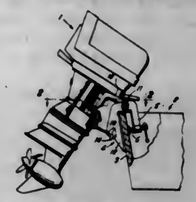
1. An electro-hydraulic jack device for controlling each of the control surfaces of an aircraft, comprising three Wheatstone bridges, each bridge including a potentiometer, a pilot's control connected to the slider of the first of said potentiometers, a gyroscope connected to the slider of the second of said potentiometers, and a gyrometer connected to the slider of the third of said potentiometers, for producing electric input signals of variable magnitude and sign under the action of said pilot's control, said gyroscope and said gyrometer, an amplifier receiving said input signals and supplying a resultant signal, a two-phase motor one of the phases of which is supplied in an invariable manner by an alternating source and the other phase of which is supplied as a function of said resultant signal whereby said motor turns in a direction which depends on the sign of said resultant signal, a distributor valve driven by said motor, a hydraulic jack connected to said distributor valve and acting on the control surfaces of the craft in a direction corresponding to the direction of rotation of said motor, and means responsive to position and means responsive to the speed of said control surfaces, said means producing follow-up signals applied to said amplifier where said follow-up signals and said input signals are mixed together for providing said resultant signal.

3,018,989

STABILIZING BRACKET FOR OUTBOARD MOTORS

James Dillard Gossett, 1201 Greenbriar St., Fort Worth, Tex.

Filed Nov. 1, 1960, Ser. No. 66,466
2 Claims. (Cl. 248—4)



1. In combination with an outboard motor including a clamping member adapted to be hooked over the upper edge of the transom of a boat, and having means for removably securing it thereto, a normally vertically disposed spindle arranged parallel to the drive shaft of the motor, forwardly thereof, and rigidly secured at its ends to the frame of the motor, a sleeve journaled on the spindle and providing a bearing for the motor whereby the motor is movable rotatively about the spindle, an enlongated supporting arm bent substantially right angularly intermediate its ends, and having one of its end portions overlying the sleeve and rigidly connected thereto, and having its opposite end pivotally connected to the clamping member, whereby the motor is adapted to be swung about a horizontal axis parallel to the upper edge of the transom, a pair of integral webs on the clamping member extending rearwardly from opposite sides thereof, in parallel, spaced apart relation to each other, the webs each having a plurality of spaced apart openings therein positioned at progressively greater distances from its rearward edge, the openings of the respective webs being arranged in pairs and the openings of each web being aligned with corresponding openings of the opposite web, a locking pin extending between the webs and selectively inserted through the openings of one pair, means carried by the sleeve for abutment against the locking pin in one position of the motor relative to the transom, and spring biased detent means carried by the sleeve and engageable with the locking pin to retain the locking pin in engagement with the abutment means, a substantially rectangular wire bail, interchangeable with the locking pin, having mutually aligned end portions receivable in the openings of one pair and having an intermediate portion arranged in parallel, spaced apart relation to its end portions, the bail having a second piece of angularly bent wire joined intermediate its ends to the intermediate portion of the bail, the second piece of wire having an intermediate portion arranged in parallel, spaced relation to the intermediate portion of the bail, and normally positioned above it, engageable with the abutment means and the detent means, and having horizontally spaced, rearwardly extending end portions engageable with the frame of the motor below the sleeve, whereby the motor is positively secured against rotative displacement relative to the sleeve and is adapted to be rigidly secured to the transom of the boat.

3,018,990

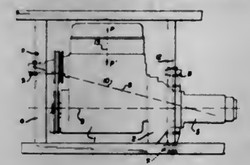
ELASTIC ENGINE SUSPENSION ESPECIALLY FOR MOTOR VEHICLES

Alfred H. Müller, Waiblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Filed July 13, 1959, Ser. No. 826,570
Claims priority, application Germany July 15, 1958
8 Claims. (Cl. 248—9)

5. An elastic suspension in combination with an internal combustion engine of the piston type provided with

cylinder means having horizontally disposed axes, a crankshaft driven by said engine, a vehicle superstructure, and elastic means for elastically suspending said engine from said vehicle superstructure including only one forward bearing provided with an elastic bushing extending through an axis passing through the center of gravity and two rearward bearings each provided with an elastic bushing disposed on both sides of the longitudinal crankshaft



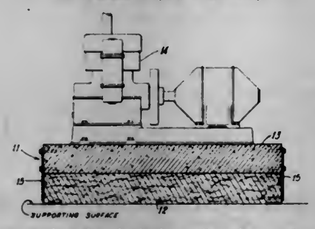
axis about equidistant therefrom, all three elastic bushings having their respective longitudinal axes parallel to those of said cylinder means, said bearings being relatively more stiff in the direction of the crankshaft longitudinal axis and in the direction of the moments about said crankshaft longitudinal axis as well in the direction of the gravitation forces than in the direction of the longitudinal axes of the cylinders.

3,018,991

DAMPING PAD

Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Feb. 20, 1959, Ser. No. 794,637
2 Claims. (Cl. 248—22)



1. A mounting for isolating vibrations of a machine or the like which constitutes a source of vibrations, said mounting comprising a pad of randomly disposed glass fibers densified to an apparent density of from 4 to 20 pounds per cubic foot, and held in shape by a suitable binder, said pad having many interstices among said fibers, a massive weight distributing, impervious element on said pad extending over substantially all of the upper surface thereof, and a wall resistant to the passage of air extending around at least all exposed edges of said pad and extending at least from the surface on which said pad rests to the lower surface of said element comprising fabric impregnated with a plastic substance whereby said wall and said element prevent flow of air into and out of the interstices in the pad so that the air in said pad remains therein and serves as a cushion against severe vibrations.

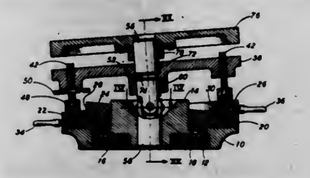
3,018,992

QUICK LEVEL TRIPOD TABLE CONTROL SYSTEM

Frank Lore, 822 Clayton St., San Francisco, Calif., assignor of one-half to Albert Lipp, San Francisco, Calif.

Filed Dec. 10, 1959, Ser. No. 858,786
9 Claims. (Cl. 248—180)

1. Adjusting means for universally adjusting the relative inclinations of first and second bodies with respect to each other which comprises a first adjusting member mounted on said first body for rotation about a first central axis and having a first cam surface thereon having parallel arcuate portions on opposite sides of said axis and inclined with respect to said axis, two cams mounted on said second body and positioned to contact said arcuate portions of said first cam surface at a first pair of points on opposite sides of said axis, a second adjusting member mounted on one of said bodies for rotation about a second central axis having at least a common point with said first axis, said second member having a second cam surface thereon radially spaced from said first cam surface and having parallel arcuate portions on opposite sides of said second axis and inclined with respect to said second axis, two cams mounted on the body other than the one on which said second member is mounted and positioned to contact said arcuate portions of said second cam surface at a second pair of points on opposite sides of said second axis, the plane including said first axis and said first pair of points being inclined to the plane including said second axis and said second pair of points.



3,018,993

SPRING WIRE FASTENING DEVICE

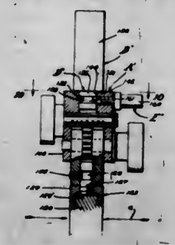
Lewis E. Glezen, Cleveland, Ohio, assignor to Nestaway Incorporated, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 7, 1959, Ser. No. 845,024
2 Claims. (Cl. 248—220.5)



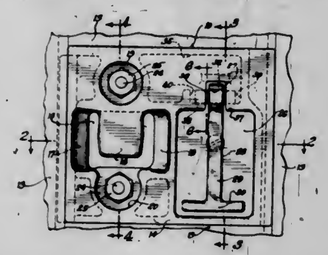
1. A fastening device consisting of a single length of spring wire having a central bowed portion and end portions on each side thereof, a hook at the free end of one of said portions and a detent at the free end of the other of said end portions which forms a generally L-shaped projection therewith, said central portion, hook and detent all lying in substantially the same plane, and a secured member fixed against movement axially inwardly of said end portions, there being a hump in said detent engageable and disengageable from said secured member only when said bowed portion is held against self-shortening and said hook being engageable and disengageable from said secured member only when the detent is disengaged from said secured member.

3,018,994
ADJUSTING DIAL INDICATOR MOUNTING
Harold J. Kaye, Los Angeles, Calif., assignor to Robert A. Edgcomb, Burbank, Calif.
Filed Oct. 20, 1958, Ser. No. 768,097
3 Claims. (Cl. 248—278)



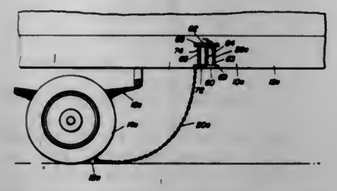
1. A dial indicator mounting for individual adjustment in two planes at right angles to each other, and including, a base having a vertically disposed shank and an eccentric stem depending from the lower end of the shank, a frame rotatably carried by the stem to pivot eccentrically in one plane, and a carrier for supporting the dial indicator and shiftably carried by the frame to move in a plane normal to the first mentioned plane.

3,018,995
COMBINED LADING STRAP ANCHOR AND FLOOR RACK HOLDER
Gilbert F. Oakley, Chicago, Ill., assignor, by mesne assignments, to MacLean-Fogg Lock Nut Co., Chicago, Ill., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,420
1 Claim. (Cl. 248—294)



In a combined lading strap anchor and floor rack holder, the combination comprising a substantially T-shaped floor rack holder of predetermined thickness having a stem portion with a cross bar portion extending laterally of one end of the stem portion and a hole in the other end thereof, said hole having an axis substantially parallel to the cross bar portion of the floor rack holder, a base having a front face with a recessed pocket therein which has top and bottom ends and opens forwardly of the front face, said recessed pocket having a depth substantially equal to the thickness of the floor rack holder, said base having an opening therein adjoining and extending upwardly from the top of the mid-portion of the recessed pocket and of a size for receiving the stem portion of the floor rack holder, said stem portion projecting through said opening with the cross bar portion extending laterally of the bottom end of the recessed pocket opposite the opening, and means comprising a pin extending through said hole in the stem and engaging the base on opposite sides of said opening and at opposite ends of the pin for supporting the floor rack holder for swinging movement relative to the base between positions in which the stem and cross bar are in said recessed pocket and in which the stem projects outwardly from the front face of the base.

3,018,996
WHEEL CHOCK HOLDER
Henry M. Gilbert, Jr., 210 N. Pedro St., Los Angeles, Calif.
Filed Aug. 12, 1958, Ser. No. 754,592
2 Claims. (Cl. 248—316)



1. A holder for an elongated vehicle wheel chock of generally triangular cross section, said holder comprising a vertically elongated metallic receptacle triangular in plan and open at its top for the reception of the chock, means for securing the receptacle on a vehicle, a generally U-shaped bracket mounted horizontally on the upper portion of the receptacle and having its bight portion affixed thereto, the legs of said bracket having vertically aligned openings therein, and means on the bracket for releasably securing the chock in the receptacle, said means including a horizontal arm comprising a downwardly offset, laterally angulated intermediate portion terminating in a downturned end portion slidably and rotatably engaged in the openings, a resilient pad on said angulated intermediate portion engageable on the upper end of the chock in the receptacle, and a coil spring in the bracket encircling said downturned end portion and operatively connected thereto for yieldingly urging same downwardly for engaging the pad with the chock.

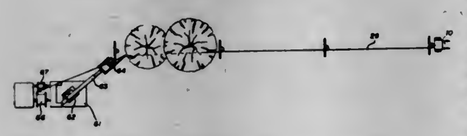
3,018,997
TURBINE UNIT FOR TURBODRILLS AND TURBOCORERS
Charles Gros, La Tronche, France, assignor to Etablissements Neyrpic, Grenoble, France, a corporation of France
Filed May 20, 1957, Ser. No. 660,405
Claims priority, application France May 28, 1956
4 Claims. (Cl. 253—3)

1. A hydraulic turbine having a casing member, a member disposed within said casing member, said members being disposed on a common axis and one of said members being rotatable on said axis relative to the other, a series of unitary turbine elements carried by each of said members, means removably connecting each of said series of elements to its associated member, each of the elements in both said series being composed of an annular set of radial blades and an annular ring concentric to and within said set of blades, said connecting means including means connecting each of said elements to its associated member so as to prevent axial movement of the blades thereof relative to said associated member, and said annular rings of the turbine elements in each of said series being arranged in stacked relation and in alternate separable arrangement with said annular rings of the turbine elements of the other of said series, the annular rings of the turbine elements connected to said inner member being spaced apart along said axis a distance greater than the dimension along said axis of the annular rings of the turbine elements connected to said casing member, and the inner peripheries of the annular rings of the turbine elements connected to said casing member being spaced radially outwardly from the inner peripheries of the annular rings of the turbine elements connected to said inner member, bearing material between the spaced annular rings of said alternately arranged elements so that the annular rings of the turbine elements in both said series are disposed in thrust bearing relation to each other to provide multiple axial support for said rotatable member, bearing material between



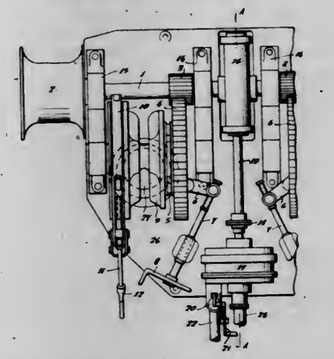
the inner peripheries of the annular rings of the turbine elements connected to said casing member and said inner member so that such elements provide multiple radial support for said rotatable member, driven means connected to said rotatable member, and means for supporting the other of said members for receiving therefrom the thrust transmitted to said other member through said sets of annular rings of said series of turbine elements.

3,018,998
CABLE STRINGING APPARATUS AND METHOD
Jay M. Eitel, 239 Frances Drive, Los Altos, Calif.
Filed Apr. 22, 1960, Ser. No. 24,149
6 Claims. (Cl. 254—134.3)



1. In a method for stringing a cable supported by a strand on a plurality of poles arranged in a pole line, placing sheaves on the poles, stringing a relatively light elongate flexible element under continuous and substantially uniform tension through the sheaves, attaching the flexible elongate element to the strand, pulling the strand under continuous and substantially uniform tension through the sheaves on the poles by withdrawing the flexible elongate element from the sheaves, dead ending one end of the strand, placing the strand under tension, dead ending the other end of the strand, removing the sheaves from the poles, attaching the strand to the poles, placing cable blocks on the strand, pulling the flexible elongate element under continuous and substantially uniform tension through the cable blocks, securing the end of the flexible elongate element to the cable, pulling the cable through the cable blocks under continuous and substantially uniform tension by withdrawing the flexible elongate element from the cable blocks, lashing the cable to the strand, and removing the cable blocks as the cable is lashed to the strand.

3,018,999
HAULING AND LIFTING APPARATUS
Myles Hutchinson, Gateshead, England, assignor of one-half to Clarke, Chapman & Co. Limited, Gateshead, England, a company of Great Britain
Filed Nov. 6, 1959, Ser. No. 851,460
Claims priority, application Great Britain Nov. 10, 1958
2 Claims. (Cl. 254—184)



1. A ship's windlass comprising a warping shaft, warpend drums on said shaft, two gear pinions on said shaft, two coaxial gear wheels each engaged with one of said pinions, two cable-lifters each co-axial and contiguous with one of said gear wheels, clutch means operable to connect and disconnect each of said cable-lifters to and from its contiguous gear wheel, and brake means associated with each cable-lifter, and having driving means comprising a worm reduction gear, a driven worm wheel in said reduction gear secured to said warping shaft between said pinions, a driving worm shaft of said reduction gear disposed in a plane perpendicular to said warping shaft between said gear wheels, a reversible steam turbine driving unit mounted at the side of said gear wheels remote from said warping shaft, a drive shaft of said turbine aligned with and coupled to said worm shaft, a single disc rotor mounted on said drive shaft, a casing affording a single chamber enclosing said rotor, two substantially equal systems of elements mounted for rotation upon said rotor and oppositely reactive to steam jets directed thereon, two nozzle systems within said casing each to direct steam upon one of said systems of oppositely reactive elements, two steam chests each communicating with one of said nozzle systems, and control means for the admission of steam to either of said steam chests while the other is closed to enable driving of said shaft with equal power output in either direction.

3,019,000
FLUE ARRANGEMENT
Frank Bork, 1460 W. Victoria, Chicago, Ill.
Filed Aug. 7, 1959, Ser. No. 832,196
1 Claim. (Cl. 257—164)

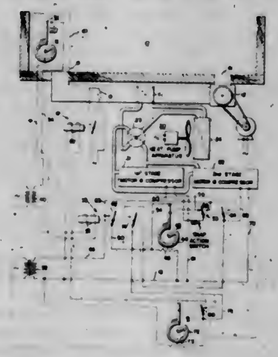
A flue arrangement for handling the natural flow of combustion products from a heating unit to the outside atmosphere, said flue arrangement comprising a plurality of generally straight, horizontally disposed elongated flue pipes disposed in relatively closely spaced-apart relation, a first header positioned at one end of said flue pipes in communication therewith, said first header comprising a box-like structure having connection through a

vertical wall thereof with said pipes and including an opening in the bottom thereof affording communication with a combustion chamber of a heating unit, a second header connected at the other end of said flue pipes in communication therewith, said second header comprising a box-like structure having connection through a vertical wall thereof with said pipes and including an opening at the upper portion thereof which has its axis generally at right angles to the direction of said flue pipes for placing said header in communication with a chimney, whereby the combustion products enter said first header at the bottom thereof and then turn at a right angle to flow horizontally through said flue pipes and into said second header where the direction of flow is again changed by a right angle turn to flow outwardly through the chimney opening, said flue pipes being exposed along



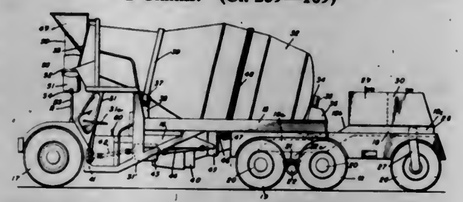
their lengths to the atmosphere surrounding the flue and having dimensions affording a throttling effect on the flow of the combustion products as the latter flow from said first header into said pipes, said pipes also being constructed and arranged to provide for a heat exchange with the surrounding atmosphere sufficient to cause condensation in said pipes of the moisture in the combustion gases, each of said headers having means defining an opening in a vertical wall thereof opposite said vertical wall having connection with said flue pipes, and a spring-biased cover plate for the last mentioned opening in each of said headers, whereby access is provided to the flue pipes and whereby excessive pressure in said flue system is relieved through movement of said cover plates to a position away from their normal position covering the openings.

3,019,001
TEMPERATURE CONTROL APPARATUS
Edward A. Myck, Jr., Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 23, 1957, Ser. No. 704,741
2 Claims. (Cl. 257—290)



1. In an air conditioning system, a heat pump for heating, means for obtaining supplemental heating, space temperature responsive switch means responsive to the heating needs of a space to be heated, switch actuator means, energization means to control said actuator means, a plurality of switches, means connecting said actuator means to said switches to operate said switches in sequence upon the energization of said energization means of said actuator, relay means, an energization winding for said relay means, said relay means having a first and a second switch which are closed when said energization winding of said relay means is energized, a source of power, circuit means including said temperature responsive switch means connecting said energization winding to said source of power, circuit means including said first switch for connecting said energization means of said actuator to said source of power, means including a first of said plurality of switches to connect said heat pump to said source of power, means including a second of said plurality of switches and said second switch connected in series to connect said supplemental heating means to said source of power upon a call for heat by said space responsive means whereby said heat pump and said heating means are turned on in sequence and no matter what the position of said switch actuator means upon a satisfaction of said space temperature responsive means, said heating means is de-energized when said second switch of the relay means is opened even though said actuator has not opened said second of said plurality of switches.

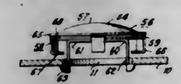
3,019,002
TRANSIT CONCRETE MIXERS
Evan S. Prichard, La Canada, Calif., assignor, by mesne assignments, to Challenge-Cook Bros., Incorporated, Los Angeles, Calif., a corporation of California
Filed Nov. 14, 1955, Ser. No. 546,566
2 Claims. (Cl. 259—169)



2. A transit concrete mixer, including: a truck having a frame; dirigible wheels supporting the front end of the frame; a supplemental frame pivotally connected at its forward end portion to and beneath the rear end of the truck frame so as to swing about a horizontal axis transversely of the truck frame; dual rear wheels suspended from the front end portion of the supplemental frame for oscillating movements about a horizontal axis transversely thereof and forwardly of the pivotal connection of the supplemental frame with the truck frame; a caster wheel supporting the rear end portion of the supplemental frame; and a mixing drum so mounted on the truck frame that its discharge end is at the forward end of the truck, while its rear end is supported on the truck frame at a point substantially directly above the pivotal connection of the supplemental frame with the truck frame.

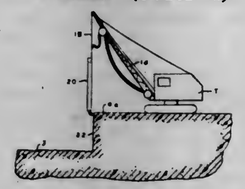
3,019,003
CLOSURES FOR FLUID CONTACT APPARATUS
Hans C. Glitsch, Dallas, Tex., assignor to Fritz W. Glitsch & Sons Inc., Dallas, Tex., a corporation of Delaware
Filed Feb. 9, 1959, Ser. No. 792,201
4 Claims. (Cl. 261—114)

1. A two-stage closure for the fluid flow orifice of a fluid contact tray comprising a cover element overlying the orifice, and means for limiting the upward movement of said cover element to at least two stages whereby the cover element is lifted initially during the first stage of operation for permitting a minimum and maximum rate of flow of the fluid through the orifice and is lifted additionally during the second stage of operation by a greater pressure to enlarge the area of the flow passage for accommodating a larger minimum and maximum flow rate of the fluid, said means comprising a ballast member overlying said cover element, said ballast member having spaced depending legs which space said ballast member above said



cover element prior to the first stage of operation of said cover element, said cover element being loosely confined within and freely movable upwardly into contact with said ballast member during the first stage of operation, and a travel stop depending from said cover element to limit the upward movement of said cover element and ballast member during the second stage of operation, said travel stop being spaced from said cover element a distance greater than the length of said legs depending from said ballast member.

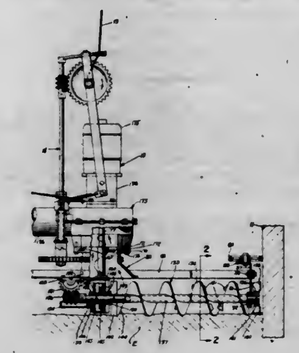
3,019,004
METHOD AND APPARATUS FOR FLAME CUTTING MINERAL BODIES AND OTHER MATERIAL
John F. Vasselin, Westford, Mass., assignor to H. E. Fletcher Co., West Chelmsford, Mass., a corporation of Massachusetts
Filed Nov. 26, 1958, Ser. No. 776,498
4 Claims. (Cl. 262—3)



2. A method of flame channeling by removing material from spallable rock masses, which consists in burning fluid fuel with an oxidant to form a flame, directing the flame in a generally downward direction but inclined from the vertical against the generally vertical end face of the rock mass to be channeled, said vertical end face constituting the end wall of a continuous open channel which forms a narrow passage in the rock body, said passage being open to the atmosphere and being bounded by generally parallel faces as well as by said end wall, raising and lowering the flame in successive passes along the substantially vertical end wall of the channel while maintaining the flame in the vertical plane of the channel, advancing the flame along a selected path to be treated and into said mass along the channel formed therein by removal of material therefrom by spalling, and continuing the channeling process inwardly for the distance corresponding to the part of the rock which is to be separated from the rock mass.

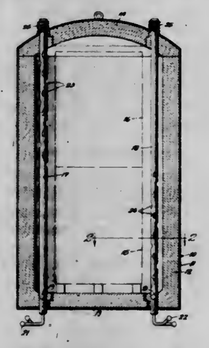
3,019,005
CONVEYING MEANS
Frederick E. Van Dusen, Wayzata, Minn., assignor, by mesne assignments, to Vandale Corporation, Long Lake, Minn., a corporation of Minnesota
Original application June 24, 1953, Ser. No. 363,750, now Patent No. 2,888,253, dated May 26, 1959. Divided and this application Jan. 8, 1959, Ser. No. 785,707
3 Claims. (Cl. 262—19)

1. In a silo unloader or the like, an elongated conveying means adapted to be positioned upon the surface of ensilage within a silo for conveying ensilage substantially radially of the silo, said conveying means having an outer end adapted to be positioned adjacent the wall of the silo and an inner end adapted to be positioned substantially centrally of the silo, means for rotating said conveying means about a vertical axis positioned substantially at its inner end, said conveying means including



a spiral flight, knife means secured to portions of the periphery of said spiral flight in spaced relation, at one side thereof and extending therebeyond and said knife means being generally inclined in a direction opposite to the direction of rotation of the spiral flight so that the cutting edge thereof intersects said spiral flight at its leading end and is in spaced relation thereto at its trailing end.

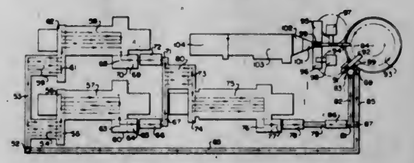
3,019,006
MULTIPLE ZONE HEATING FURNACE
August W. Lillenberg, Chicago, Ill., assignor to Lindberg Engineering Company, a corporation of Illinois
Filed July 28, 1958, Ser. No. 751,325
4 Claims. (Cl. 263—42)



3. A multiple zone heating furnace comprising a tubular vertical furnace body having top and bottom walls, a plurality of straight vertical combustion tubes extending through the top and bottom walls and distributed within the furnace body adjacent to the side walls thereof, each of the tubes being open at its bottom for flow of secondary air thereinto a burner mounted within the lower end of each tube and defining therewith coaxial passages for a primary fuel stream and a secondary air stream, means for supplying the burners with a primary fuel containing insufficient air for complete combustion, certain of the tubes having baffle means in their lower

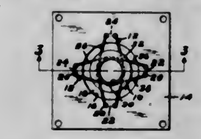
portions only and others of the tubes having baffle means in their upper portions only for progressively agitating and promoting mixing of the primary fuel and air to effect progressive combustion in said portions of the tubes thereby to effectively heat lower and upper zones in the furnace, a tubular liner in the furnace lying within the series of tubes and having openings for gas circulation centrally of its length, and gas circulating units at the top and bottom of the furnace to create circulating gas streams through the liner and opening therein and respectively upwardly and downwardly over the tubes.

3,019,007
METAL ARTICLE TREATING APPARATUS
Ernest G. de Coriolis, incompetent, Toledo, Ohio, by Pierre de Coriolis, guardian, and Clark C. Sykes, Toledo, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 5, 1958, Ser. No. 736,656
20 Claims. (Cl. 266—4)



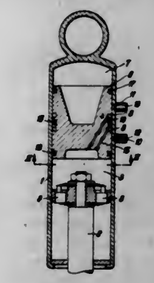
1. In combination, a furnace for heating first and second cooperating workpieces, a first quench press for first workpieces having a pair of quenching stations with a given spacing, a second quench press for second workpieces having a pair of quenching stations with said given spacing, a plurality of paired work supports for mounting pairs of said workpieces with a selectively variable spacing ranging from a minimum to said given spacing, a coupling between said paired work supports enabling selective variation of said spacing, means for conveying said paired work support mounted workpieces through said furnace, means for alternately introducing pairs of said first and second support mounted workpieces into said furnace with said minimum support spacing, means for withdrawing said support mounted workpiece from said furnace and substantially simultaneously altering the spacing of said supports to said given spacing, and means to transfer alternately from said withdrawing means, pairs of said first workpieces to said first quench press and pairs of said second workpieces to said second quench press.

3,019,008
WIRE SHOCK MOUNT
William J. Coyle, Waltham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Nov. 16, 1960, Ser. No. 69,598
3 Claims. (Cl. 267—1)



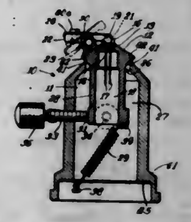
3. A shock mount comprising a mounting plate, a relatively movable supporting member and a wire damping spring, said damping spring comprising a U-shaped body having free terminal ends and a bight portion, said terminal ends and said bight portion movably engaging said mounting plate, said supporting member having means engaging an intermediate portion of said damping spring.

3,019,009
HYDRAULIC SHOCK ABSORBER
Hans Reifurth, Klutherstrasse 23, Ennepetal-Altenvoerde, Westphalia, Germany
Filed July 2, 1958, Ser. No. 746,184
Claims priority, application Germany Aug. 7, 1957
6 Claims. (Cl. 267—64)



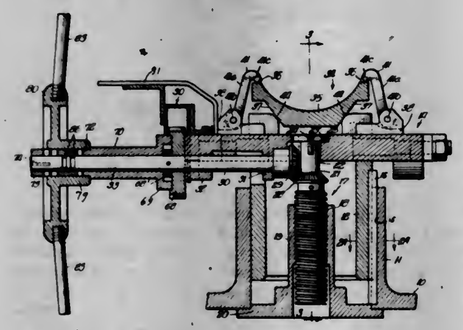
1. A hydraulic shock absorber for automotive vehicles and the like, comprising a cylinder, movable separating means in said cylinder axially subdividing the interior thereof into a normally closed dashpot chamber filled with a hydraulic liquid and a closed cushion chamber filled with a compressible gas, the volumes of said chambers being inversely variable by axial displacement of said separating means, a working piston in said dashpot chamber provided with a restricted passage for said liquid, said piston having a stem projecting outwardly from said cylinder for engagement with a load whereby said piston is axially displaceable in said dashpot chamber with damped motion in response to varying load conditions, valve means in said cylinder constituted at least in part by said separating means, said cylinder being provided with an inlet and an outlet for said hydraulic liquid, an external source of hydraulic liquid connected to said inlet, and an external reservoir for said liquid connected to said outlet, said inlet and said outlet being normally blocked by said valve means and being individually connectable by said valve means with said dashport chamber upon a displacement of said separating means beyond predetermined limits by thermal contraction and expansion, respectively, of said hydraulic liquid in said cylinder.

3,019,010
LEVELING APPARATUS
Harry Da Costa, Phoenix, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 23, 1960, Ser. No. 10,439
5 Claims. (Cl. 269—191)



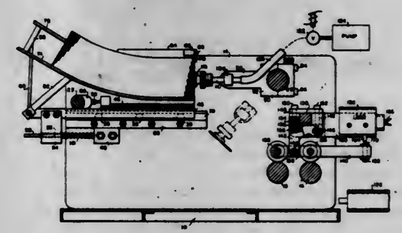
1. A device for supporting a workpiece and for adjusting the angular position of the workpiece, including in combination, a stand having a hollow portion and a circular bearing portion forming an opening leading to said hollow portion of said stand, a carrier rotatably supported on said circular bearing portion, said carrier having a mounting portion located outside said hollow portion of said stand and having an actuator portion located within said hollow portion of said stand, a conical surface on said carrier in sliding contact with said bearing portion of said stand for permitting rotary movement of said carrier to different angular positions with respect to said stand, said mounting portion of said carrier being located centrally of said conical surface and being adapted to support a workpiece with a surface thereof at the center of rotation of said carrier so that said surface moves only angularly with respect to said stand upon the aforesaid rotary movement of said carrier, a pair of adjustment screws engaging said actuator portion of said carrier and having portions outside said stand for manual actuation, said adjustment screws being spaced at a substantially 90° angle with respect to said actuator portion of said carrier for providing rotary movement of said carrier to different angular positions with respect to said stand, and means biasing said actuator portion against said adjustment screws.

3,019,011
MACHINE CONSTRUCTION
Nicholas H. Arnold, Chicago, Ill., and Alfred L. Thompson, Munster, Ind., assignors, by mesne assignments, to Pentron Electronics Corporation, Chicago, Ill., a corporation of Illinois
Filed July 30, 1958, Ser. No. 752,140
5 Claims. (Cl. 269—226)



1. In a machine for boring railway journal bearings and the like, in combination, a table, a support underneath said table, guide means between said table and support preventing relative rotation and permitting relative movement, a table elevating nut on said support, a table elevating screw at its upper end supporting said table and threaded into said table elevating nut at its lower end and having a bevel pinion gear secured thereto near said upper end, an elevating shaft journaled on the underside of said table and extending at one end beyond one end thereof and having a bevel pinion gear secured to its other end and engaging said bevel pinion gear on said table elevating screw, a pair of generally J-shaped clamps pivotally mounted at the ends of the longer arms on the upper side of said table and spaced from its sides and extending upwardly with the shorter arms for engaging a bearing on opposite sides and from above to prevent upward movement thereof, two pairs of centering jaws slidably mounted on said upper side of said table on opposite sides of said pairs of J-shaped clamps and having rounded shoulders for engaging said bearing on opposite sides and from underneath and oppositely threaded depending sections, a centering jaw screw for each pair of centering jaws journaled on said table and having oppositely threaded portions intermediate its ends engaging the respective oppositely threaded depending sections, one end of each centering jaw screw extending beyond said one end of said table and having a gear secured thereto, a drive gear rotatably mounted on said elevating shaft and engaging the gears on the centering jaw screws, an adapter telescoped over said one end of said elevating shaft and secured at one end to said drive gear and having clutch teeth at the other end, a clutch collar secured to the outer end of said one end of said elevating shaft and having clutch teeth facing and spaced endwise from said clutch teeth on said adapter, and a hand wheel slidably and rotatably mounted on said one end of said elevating shaft having a clutch insert secured to its hub having clutch teeth at its ends for selective engagement with said clutch teeth on said adapter and on said clutch collar.

3,019,012
COLLATOR
Charles A. Sanford, Segerstown, Pa., assignor to The American Paper Products Company, Youngstown, Ohio, a corporation of Ohio
Filed Mar. 25, 1960, Ser. No. 17,635
22 Claims. (Cl. 270—58)



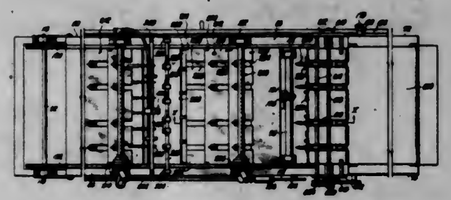
22. In a collator of the type having a conveyor adapted to receive flat articles at a plurality of receiving stations for the progressive forming of groups of articles on the conveyor, the combination of a table mounted for reciprocating movement along a horizontal path, a plurality of article-receiving inclined chutes arranged on said table in side-by-side relationship, a stop member at the bottom of each of said chutes and positioned to engage the upper portion of the foremost article in a stack of articles disposed in the chute, said chutes being positioned on the table whereby the foremost articles in the respective stacks of articles will all lie in a common horizontal plane, a shaft rotatable about a fixed horizontal axis extending parallel to the plane of said table, rocker arm assemblies carried on said shaft with one rocker arm assembly being positioned directly in front of each chute on said table, suction cups carried on the extremities of said rocker arm assemblies, a pair of rolls rotatable about axes lying in a common horizontal plane, said axes being parallel to the axis of said shaft, means for synchronizing movement of said table with the rotation of said shaft whereby the table will travel in one direction to move the foremost article in each stack of articles into contact with the suction cups on said rocker arm assemblies while the assemblies are rotated into a horizontal position where they may receive said foremost articles, the arrangement being such that after the foremost articles are secured to the suction cups the table will travel in the other direction while the rocker arm assemblies are rotated by said shaft to a position where said foremost articles may be transferred onto said rolls, first thickness sensing devices cooperatively associated with said rolls for producing an indication whenever an article from any one of said stacks of articles does not pass over said rolls, and second thickness sensing devices cooperatively associated with said rolls for producing an indication whenever two or more articles from any one

of said stacks of articles pass over said rolls, each of said thickness gages including a pair of movable rollers each of which is adapted to engage an associated one of said rollers whereby an article will pass between the rolls and the rollers in traveling to said conveyor, and limit switch means actuable by movement of said rollers when an article of a predetermined thickness or greater passes between both rolls and their associated rollers.

3,019,013
PAPER GATHERING AND TREATING APPARATUS

Carl W. Didde, 1629 Dover Road, and Donald A. Glaser, 1520 West St., both of Emporia, Kans.

Original application Jan. 24, 1955, Ser. No. 483,790, now Patent No. 2,937,868, dated May 24, 1960. Divided and this application May 5, 1958, Ser. No. 733,047
7 Claims. (Cl. 270—58)



1. Paper gathering apparatus comprising, in combination, means for supporting a first pile of sheets; means for supporting a second pile of sheets in spaced relation to said first pile; conveyor means provided with a series of sheet supporting structures movable therewith and spaced apart along the direction of mobility thereof; means for normally advancing the conveyor continuously; means including a vacuum-operated, sucker assembly for lifting a sheet from said first pile; means for detecting when other than a single sheet is lifted by said lifting means; means coupling said detecting means with said advancing means for automatically deactivating the latter when other than a single sheet is lifted by said lifting means; means for depositing said sheet lifted from said first pile upon one of said structures; means for applying a quantity of adhesive material to a portion of said sheet from said one first pile while the same is supported upon said one structure; means including a vacuum-operated, sucker assembly for lifting a sheet from said second pile; means for detecting when other than a single sheet is lifted by said last mentioned lifting means; means coupling said last mentioned detecting means with said advancing means for automatically deactivating the latter when other than a single sheet is lifted by said last mentioned lifting means; means for depositing said last mentioned sheet upon said first mentioned sheet after the latter has been deposited upon said structure; and means for removing said sheets deposited upon said structure together.

3,019,014
FOLDING ROLL

Edward J. Miksis, 6812 S. Talman Ave., Chicago, Ill.

Filed Mar. 20, 1961, Ser. No. 96,889
8 Claims. (Cl. 270—61)

1. In an apparatus for folding sheet material, a feed couple cooperating to feed said material, said couple including at least one roll, said roll comprising a rigid core having a folding portion provided with a cylindrical outer surface, and a molybdenum coating of substantially uniform thickness spray deposited over the outer cylindrical surface of the folding portion of the roll and forming an outer molybdenum material gripping surface over the outer surface of the folding portion of the roll, said outer molybdenum material gripping surface having a uniform and continuous roughening in all directions over the outer surface thereof and of a character incident solely to the spray deposit of said molybdenum coating over

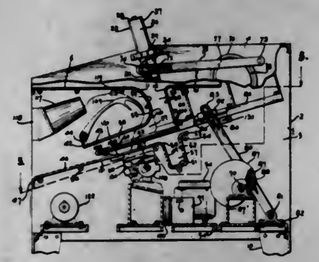


the outer cylindrical surface of the folding portion of the roll and without otherwise producing roughness in the outer coated surface of the roll, or grinding said outer coated surface.

3,019,015
PAPER FOLDING MACHINE WITH TYING MEANS

Marvin M. Potter, 7001 Cleveland Ave., Bethel, Kans., and Robert O. Hill, 26 W. 40th, Kansas City, Mo.

Filed June 20, 1960, Ser. No. 37,214
6 Claims. (Cl. 270—54)

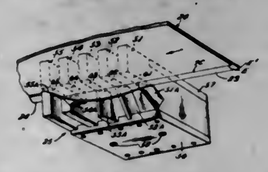


1. A folding machine comprising in combination, a rigid frame including a foldable material support, a first folding means, means adapted to guide said first folding means along a path intersecting said material support to produce a fold in the foldable material, a second folding means, means adapted to guide said second folding means along a path intersecting the path of said first folding means to produce a second fold in the foldable material, and string tying means positioned adjacent the path of said second folding means and actuated by said second folding means for tying a string around the folded foldable material.

3,019,016
PREPARATION OF COATED FABRIC MATERIAL

Wilhelm Brey, Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Nov. 18, 1957, Ser. No. 697,210
2 Claims. (Cl. 270—93)

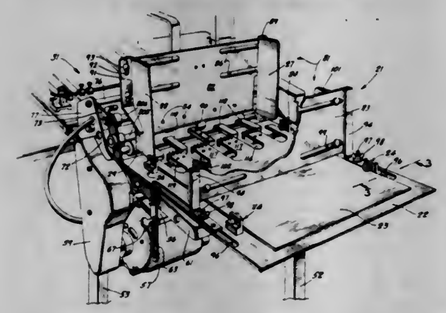


1. A die for shaping the edge area of a longitudinally moving web having a self-adhesive coating, said coating having a longitudinally aligned lower edge and an overlying thin fin extending laterally of said edge, comprising, a series of side-by-side spaced-apart bars rigidly positioned substantially transversely of said web, each of said bars having a stationary working surface contacting said fin at a predetermined angle, each said working surface intersecting a flat portion of said bar overlying said web, the intersection of said working surface and said flat portion of said bars being longitudinally aligned, the edge of each said work surface being progressively inclined with respect to said overlying portion from an obtuse angle to a zero angle, and each of said working surfaces having a beveled face adjacent said edge.

3,019,017
FEEDING MECHANISMS

Horace P. Brownsey, Willoughby, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Dec. 2, 1959, Ser. No. 856,705
14 Claims. (Cl. 271—44)



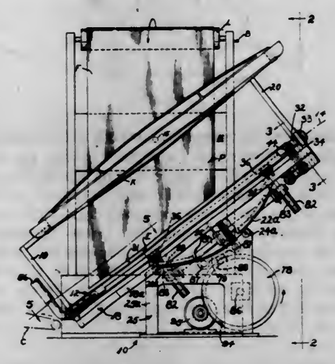
1. In a feeding mechanism of the kind having a shuttle plate movable in a forward feeding direction and a rearward direction beneath a stack of articles for separating a lowermost article from the stack and transporting the lowermost article to additional advancing apparatus on each forward movement of the shuttle plate, means at the forward end portion of said shuttle plate for insuring positive engagement of the shuttle plate with the lowermost article comprising a series of spaced fingers defining notches in the forward edge of the shuttle plate and a needle block assembly mounted beneath said notches, said needle block assembly including, a shaft rotatably mounted therein, a plurality of needles fixed to the shaft in a manner such that an individual needle is movable within each notch between a first projecting position and a second non-projecting position with respect to the shuttle plate, and spring means connected to effect rotation of the shaft and movement of the needles to said first position.

3,019,018
TRANSFER MECHANISM FOR BIAS CUT FABRIC PIECES

Victor H. Hasselquist, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Filed Nov. 28, 1960, Ser. No. 72,194
6 Claims. (Cl. 271—74)

1. Apparatus for receiving and transferring bias cut fabric pieces from the cutting mechanism of a bias cutter, said apparatus comprising a belt assembly pivotally mounted along one edge of the assembly for swinging motion toward and away from a fabric sheet at the bias cutter, said belt assembly including a stock-engaging side which is brought by said swinging motion of the assembly against said fabric to receive a piece of said fabric severed by the bias cutter; means for swinging said belt assembly which means include an arm pivotally connected to said assembly, a crank pivotally connected to said arm and rotatably mounted on a frame relative to which said belt assembly is mounted for said swinging motion, and means for rotating said crank to move said

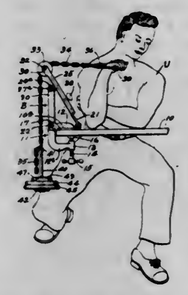


arm to swing said belt assembly, means for gripping and holding a bias cut fabric piece against said stock-engaging side of said belt assembly during said swinging motion of the belt assembly away from the bias cutter, and means for operating said belt assembly to advance said fabric piece lengthwise of the belt assembly when the belt assembly is swung to a position in which the fabric engaging side is remote from the bias cutter.

3,019,019
HAND WRESTLING APPARATUS

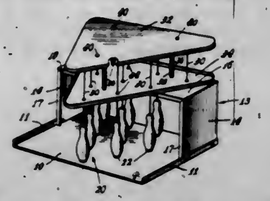
Francis C. Forte, 29 Essex Ave., Waterbury, Conn.

Filed Jan. 13, 1961, Ser. No. 82,538
4 Claims. (Cl. 272—81)



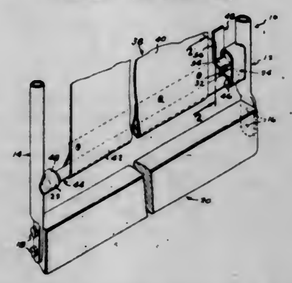
1. In an exercising apparatus, a bracket for attachment to one edge of a table, said bracket comprising a base, a U-shaped yoke secured to said base, an inclined strip at right angles to said yoke secured to said base and to said yoke, a pulley sheave holding member slidably mounted on said strip and having an elongated slot through which passes a thumb screw threaded into said strip for locking said sheave holding member at any desired adjusted elevation, a chain passing over said sheave and carrying weights at the lower end thereof, the top of said chain being provided with a handle adapted to be grasped by the user's hand and pulled forwardly for raising said weights.

3,019,020
BOWLING GAME
David Cohn, 123 Coleridge St., Brooklyn, N.Y.
Filed Oct. 20, 1958, Ser. No. 768,278
4 Claims. (Cl. 273—44)



4. A toy bowling game comprising a flat substantially rectangular shaped metal base plate having an extensive upper surface, said base plate having upstanding flanges integral with the opposite side edges thereof, an inverted U-shaped frame extending over said base plate in spaced relation thereto and having the lower opposite edges thereof in engagement with said flanges and secured to said base plate, a substantially triangular shaped guide plate having relatively spaced openings therein mounted on said U-shaped frame, a supporting member positioned above said guide plate and spaced therefrom, said supporting member being mounted for movement relative to said base plate, spring means positioned intermediate of said guide plate and said supporting member for normally urging said supporting member away from said base plate, a bowling pin carried by said supporting member, magnetic means for attracting the pin to the base plate to enable the pin to be supported on said base plate in upright position, an elastic string secured to the bowling pin and to said supporting member to position the bowling pin whereby the latter is lowered at a predetermined location on said base plate, said string having a length and strength such that when only slightly extended it will maintain the bowling pin raised above and out of contact with said base plate and when more fully extended will permit the base of the bowling pin to contact the metal base plate, said pin being supported thereby in upright position on said base plate when said supporting member is depressed toward said base plate and said magnetic means resisting removal of the pin from the base plate by said string when said supporting member is returned to its original position, and said spring means urging said supporting member to automatically return and retain it in normal spaced relation above said base plate.

3,019,021
BOWLING PINSETTER CURTAIN BRACKET
Roy E. Baker, Jr., 227 E. Adams St., Sandusky, Ohio
Filed Nov. 25, 1960, Ser. No. 71,786
4 Claims. (Cl. 273—53)



1. In combination, a bowling pinsetter having a curtain supporting frame composed of laterally spaced first and second vertical side members, a curtain cross bar socket on and extending inwardly from said second side member, a curtain cross bar release mounting bracket on and extending inwardly from said first side member in line with said socket, a horizontal bumper extending between and fixed to the frame side members beneath the socket and the mounting bracket, a flexible curtain sheet suspended on said frame and having a lower end spaced above the bumper bar, a curtain cross bar secured to and extending along the lower end of the curtain sheet and having ends severally engaged in the socket and the mounting bracket, said mounting bracket having a back wall formed with an opening through which the related end of the cross bar can be displaced, and a retaining bracket fixedly installed behind said back wall and rising across said opening.

3,019,022
GOLF CLUB HEAD
Murray H. Ehmke, 543 E. Grande Ave., Escondido, Calif.
Filed June 26, 1958, Ser. No. 744,704
1 Claim. (Cl. 273—163)



A precision putter for putting a golf ball toward the target area at or on the high side of the pin on a putting green, said putter comprising: a putter head having a striking face on the front thereof; a reflector in said head, in fixed relation to said striking face, and disposed at the level of and horizontally behind said striking face; that portion of the head between said striking face and said reflector being transparent and said reflector being disposed to reflect an image of the pin on the putting green generally upwardly toward the eyes of a player, said image appearing adjacent to the rear side of the ball and at the level of the ball; said head having upper and lower sights, the upper sight being capable of imposition directly upon said lower sight to establish an arbitrary fixed reference line of sight in a plane normal to said striking face and including the initial portion of the proposed path of the putted ball; said head including a prism of transparent material having a front face constituting said striking face and an inclined rear face with said reflector thereon; a reticle on said striking face, and said lower sight being an image of said reticle on said reflector; and said prism having a flat horizontal upper face and being a double reflecting pentaprism.

3,019,023
PUTTING PRACTICE DEVICE
Kenneth R. Westling, 716 Parkway Ave., Pittsburgh, Pa.
Filed Apr. 25, 1960, Ser. No. 24,581
2 Claims. (Cl. 273—177)



1. A golf putting home practice device simulating upon a floor surface actual playing conditions at the cup and flag pole of a standard putting green of a golf course, consisting of in combination

a ring shaped base portion defining an opening approximately the size of the cup opening in a golf course green,

an upright portion disposed at approximately the center of said ring opening and extending a substantial distance above said base portion simulating a cup flag pole,

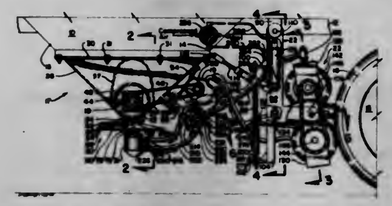
said base portion having a bottom surface shaped to lay flat upon a supporting surface and a top surface disposed a distance above the bottom surface providing a minimum of impedence to a golf ball rolling thereover, and

means connecting said upright portion to said base portion.

3,019,024
PHONOGRAPH TEST METHOD
Jack Feinstein, Hicksville, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed May 17, 1957, Ser. No. 660,014
2 Claims. (Cl. 274—46)
(Granted under Title 35, U.S. Code (1952), sec. 266)

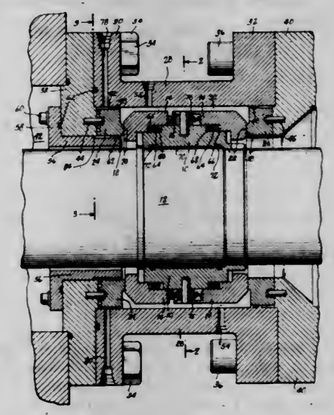
1. A method of cutting with a stylus a disk record for testing phonographic equipment to form a circular locked groove in said record of selected radius concentric with its axis of rotation to provide mechanical wavelength modulation along said groove that is substantially greater than the stylus point size of phonographic equipment to be tested through the use of said record, comprising driving said stylus with a selected tone signal, supporting and rotating said disk at a constant rate selected for recording at the desired linear wavelength, bringing said stylus into engagement with said record at a radius different from the radius selected for the groove, displacing said stylus to said selected radius at a selected rate for minimizing instantaneous loading flutter in said groove and retaining said stylus in engagement with said record at the selected radius for an interval long enough for said record to describe 360 degrees of rotation under said cutting stylus and then separating said stylus from said record.

3,019,025
APPARATUS FOR SPREADING GRANULAR MATERIAL USING HYDRAULIC POWER
Gerald V. Young, Gladwin, Mich., assignor to H. V. Young Oil Company, Gladwin, Mich., a corporation of Michigan
Filed Jan. 12, 1959, Ser. No. 786,269
13 Claims. (Cl. 275—8)



1. Apparatus for distributing granular material from a wheeled vehicle over a predetermined width of a surface comprising a wheeled vehicular container for said granular material, metering apparatus mounted on said wheeled vehicle and adapted to controllably discharge granular material from said wheeled vehicular container, hydraulic actuating means for the metering apparatus operatively engaged therewith, vaned rotating spreading means mounted on said wheeled vehicle and adapted to spread granular material being discharged from said wheeled vehicular container, constant speed hydraulic actuating means, including a hydraulic motor and a suitable flow control device, operatively engaged with said spreading means said flow control device being adapted to permit a preselected constant rate of flow of hydraulic fluid to the said hydraulic motor, means including a hydraulic pump coupled to said wheeled vehicle for deriving hydraulic power from the wheeled vehicle, and means for transmitting the derived hydraulic power sequentially to the hydraulic actuating means for the metering apparatus and thence via the flow control device to the hydraulic actuating means for the spreading means.

3,019,026
COOLED SEALING ASSEMBLY
Roger Schwing, Palmyra, N.Y., assignor to Garlock Inc., a corporation of New York
Filed Nov. 2, 1959, Ser. No. 850,170
2 Claims. (Cl. 277—16)



1. A fluid-cooled sealing assembly for effecting a seal between a machine casing and a rotary shaft extending through an opening in said casing, said assembly comprising a rotary sealing ring sealed to and constrained to turn with said shaft, and a stationary sealing ring, carried in said casing, having a sealing surface at one end of said stationary ring in sliding sealing engagement with a sealing surface of said rotary ring, said casing and said stationary ring being formed to provide interconnected fluid passages at the stationary ring's other end and about substantial portions of the stationary ring's inner and outer peripheries, said casing being formed with separate cooling-fluid inlet and outlet ducts leading to and from said passages, and said passages and ducts being defined solely by said casing and said stationary ring, and completely sealed against fluid communication with said shaft and said rotary ring.

3,019,027
FEED COLLET FOR SINGLE- AND MULTI-SPINDLE AUTOMATIC MACHINE TOOLS, TURRET LATHES, PRECISION LATHES AND THE LIKE MACHINE TOOLS
Karl Klein, Vienna, Austria, and Friedrich Pongracz, Hallergasse 31-33, Vienna XI, Austria; said Klein assignor to said Pongracz
Filed May 11, 1960, Ser. No. 28,347
Claims priority, application Austria May 19, 1959
8 Claims. (Cl. 279—30)

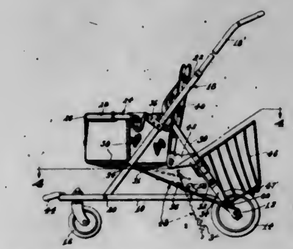
1. A machine-tool feed collet, comprising a guide sleeve adapted to receive with clearance a workpiece axially fed therethrough, said sleeve being provided with at least one

axial slot; a rollable gripping member disposed within said slot and extending into said clearance; a cam member connected to said guide sleeve and formed with a cam surface diverging in the direction of workpiece feed from



said slot; and spring means for displacing said gripping member relatively to said sleeve and said cam member oppositely to said direction of feed into concurrent engagement with said workpiece and said surface.

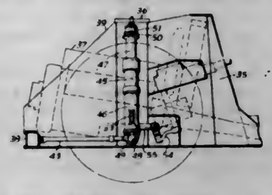
3,019,028
CONVERTIBLE BABY VEHICLES
Carl W. Hedstrom, Gardner, Mass., assignor to Hedstrom Union Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Aug. 19, 1958, Ser. No. 755,963
8 Claims. (Cl. 280—36)



1. In a convertible baby vehicle having a chassis including a rear axle and a seat on said chassis, the combination therewith of an articulated foot-rest pivoted on said chassis and swingable to a plurality of operative positions, one of said positions being a carriage position in which said foot-rest sections are extended horizontally in approximately the same plane, a second of said positions being a stroller position in which said adjacent foot-rest sections are right angularly related forwardly of said seat and a third of said positions being a walker position wherein said foot-rest sections are in the same general plane and are supported by said rear axle, a bumper member pivoted on said chassis and adjustable from a lower position in which it projects forwardly of said chassis to an upper position in which it supports said foot-rest in its said carriage position, and means on one of said foot-rest sections supportively engaging said chassis when said foot-rest is in its said stroller position.

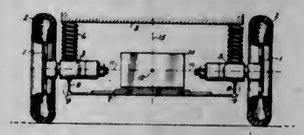
3,019,029
AUTOMOBILE WHEEL SUSPENSION SYSTEMS
Achille Carlos Sampietro, 286 Puritan, Birmingham, Mich.
Filed Dec. 18, 1957, Ser. No. 703,628
Claims priority, application Great Britain Dec. 21, 1956
8 Claims. (Cl. 280—124)

1. A telescopic spring unit comprising a cylinder member having one end thereof sealed and an inner circumferential recess at the other end, a plunger member having an internal cylindrical compartment, a collar secured in said recess, an outer bearing supported within a sleeve of resilient material carried by said collar, an inner bearing mounted in the inside wall of said cylinder member, said plunger member being slidably mounted in said inner and outer bearings for axial and angular movement relative to the cylindrical member, and said plunger member co-operating with said cylinder member to provide a first liquid chamber the volume of which increases upon telescopic extension of the unit, a piston slidably mounted in said internal cylindrical compartment and sub-dividing the compartment into a second liquid cham-



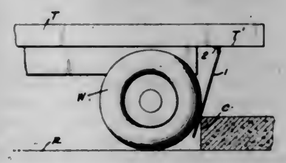
ber and a gas chamber, the plunger member being formed with metering orifices effecting communication between said first liquid chamber and said second liquid chamber, and a seal mounted in said recess in sliding engagement with the plunger member.

3,019,030
MECHANICAL VIBRATION DAMPING SYSTEM
Carlo Marchetti, Paris, France, assignor to Societe Industrielle de Mecanique et Carrosserie Automobile-Simca, Paris, France, a French company
Filed Dec. 8, 1958, Ser. No. 778,953
Claims priority, application France Dec. 7, 1957
2 Claims. (Cl. 280—124)



1. In an automotive vehicle; the combination of a chassis, a pair of road wheels, support means rotatably supporting said wheels from said chassis and being movable relative to the latter suspension spring means between said support means for each of said wheels and said chassis so that said wheels and the related suspension spring means form the mass and spring components of two mechanical vibrational systems having substantially equal natural frequencies, a leaf spring connected at its opposite ends only to said support means of the respective wheels, and a mass free to move relative to said chassis and loading said leaf spring substantially at the midpoint thereof so that said leaf spring and mass loading the latter form a vibrational damping arrangement for said two mechanical vibrational systems.

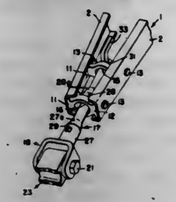
3,019,031
MUD FLAPS
Ralph C. Immel, 5530 Palomar Lane, Dallas, Tex.
Filed Nov. 14, 1960, Ser. No. 68,879
4 Claims. (Cl. 280—154.5)



1. In combination with a road vehicle having a body and having ground wheels; mud flaps suspended from the body adjacent and in rear of the said wheels, comprising a resilient sheet secured at its upper end to the underside

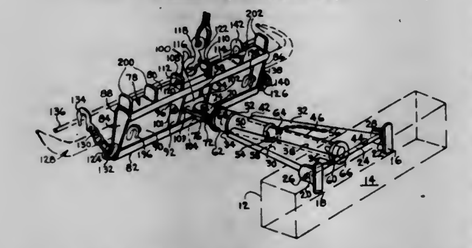
of said body and terminating above the ground, said sheet having offset slits therein to permit elongation and flexing of the sheet under stresses to prevent tearing thereof while maintaining same substantially impervious to gravel and water.

3,019,032
CONNECTION FACILITATING DRAFT CONNECTION
William P. Oehler and Harold V. Hansen, Moline, Ill., assignors to Deere & Company, a corporation of Delaware
Original application Oct. 31, 1957, Ser. No. 693,710. Divided and this application July 25, 1960, Ser. No. 44,933
4 Claims. (Cl. 280—478)



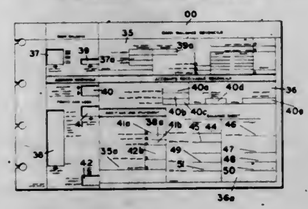
1. In an agricultural implement, a frame including a pair of bars, means interconnecting said bars including a pair of spaced apart apertured cross pieces, a hitch shank shiftably disposed in said apertured cross pieces and including an elongated member having enlarged and reduced sections spaced apart a distance corresponding to the distance between said cross pieces, whereby said shank may be positioned so that the enlarged sections are snugly disposed in said cross piece apertures or said reduced sections are loosely disposed in said cross piece apertures, and means insertable in selected openings in said shank for optionally holding said shank in either position.

3,019,033
TOWING DEVICES
Edward F. Wegener and Thure H. Wegener, both of Matawan Road, Laurence Harbor, N.J.
Filed Sept. 30, 1959, Ser. No. 843,459
7 Claims. (Cl. 280—482)



2. A towing device including a first cylinder adapted to be secured to a tow truck and rotatable with respect thereto about a horizontal axis, a second cylinder coaxial with and telescoping with said first cylinder and slidable with respect thereto and having a free end remote from said first cylinder, means associated therewith for locking said cylinders in different positions with respect to each other, a coupling bracket mounted in the free end of said second cylinder, a large-area generally rectangular plate having a top edge and large-area inner and outer surfaces and adapted to have the greater portion of its outer surface bear against a portion of a vehicle to be towed, a pair of plates secured to the inner surface of said large-area plate and spaced apart on opposite sides of the center thereof, a securing plate having a portion rotatably secured to said pair of plates approximately midway between the long edges of said large-area plate and rotatable about a horizontal axis, said securing plate also being rotatably coupled to said coupling bracket whereby said large-area plate is free to rotate in several planes, and a pair of hooks spaced apart and secured to said large-area plate near the ends thereof, said hooks being adapted to be coupled to a portion of a vehicle to be towed.

3,019,034
SIMPLIFIED ACCOUNTING SYSTEM
Richard F. McBride, Columbus, Ohio, assignor of ninety percent to Marion E. McBride, Columbus, Ohio, and ten percent to George D. Finneran, Worthington, Ohio
Filed Nov. 12, 1959, Ser. No. 852,421
1 Claim. (Cl. 283—66)

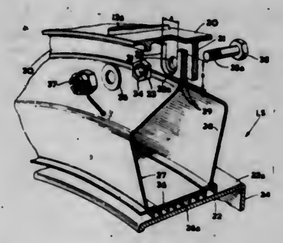


An accounting system comprising five sheets consisting of four entry sheets used in predetermined sequence in a superimposed grouped relationship and a master sheet used at the top of the group, said entry sheets consisting of a first general expense ledger sheet, a second payroll ledger sheet, a third accounts ledger sheet, and a fourth cash receipt sheet, and the master sheet being a reconcile sheet, and all the sheets being superimposed in that order from bottom to top, said first lowermost general expense ledger sheet being free of openings but having various entry boxes, said second payroll ledger sheet having openings exposing said entry boxes of the first sheet and additional entry boxes adjacent the openings, said payroll ledger sheet also having additional separate entry boxes, said third accounts ledger sheet having openings exposing the openings in the payroll ledger sheet and the additional entry boxes adjacent such openings and having still additional entry boxes associated with said openings and also having separated boxes for additional entries, said third accounts ledger sheet having an additional opening for exposing said additional separate entry boxes on the payroll ledger sheet, said fourth cash receipt ledger sheet having openings exposing said openings in the accounts ledger and the entry boxes associated therewith, additional openings exposing said separated entry boxes, and another opening corresponding to the said additional opening in the third sheet, said reconcile sheet having openings corresponding to all of said openings in said fourth sheet and having additional entry boxes associated with some of the openings.

3,019,035
MOUNTING MECHANISM FOR LABYRINTH SEAL DISC
Nicholas Klompas, North York, Ontario, Canada, assignor to Orenda Engines Limited, Malton, Ontario, Canada, a corporation
Filed Dec. 17, 1957, Ser. No. 703,453
2 Claims. (Cl. 285—18)

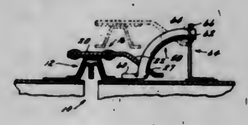
1. Mounting structure for securing a first annular member on a second annular member that is in coaxial alignment with the first annular member, while permitting differential expansion without misalignment, the first an-

nular member having more than two open ended, radially extending slots spaced around its periphery and adapted to be aligned with a plurality of correspondingly spaced holes in the second annular member, the slots being of a width greater than the diameter of the holes, and of a depth greater than their width, a bushing for each slot, each bushing having a finite number of parallel pairs of flats at a common distance apart, the common distance being substantially equal to the width of the slots so that the bushings may be fitted into the slots, each bushing having a hole eccentrically placed with respect to the centre of the bushing and equal in diameter to the diameter of the holes in the second member, alignment be-



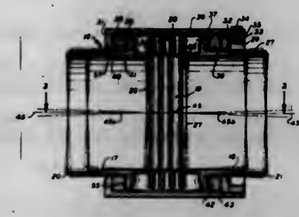
tween the holes in the bushings when the bushings are in the slots and the holes in the second annular member being achieved by selecting the appropriate pair of flat sides on the bushings to be in abutment with the sides of the slots, the bushings being of a thickness greater than the thickness of the first annular member, and threaded bolts adapted to pass through the holes in the second member and the bushings, receive washers of an outside diameter greater than the width of the slots and be secured by nuts thereby securing the second annular member to the first annular member while permitting relative sliding movement the adjacent surfaces of the bushings and the slots to accommodate differential expansion between the two annular members.

3,019,036
RETRACTABLE FLANGE COUPLING UNIT
Walter E. Stanger, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed Feb. 24, 1959, Ser. No. 795,019
7 Claims. (Cl. 285—18)



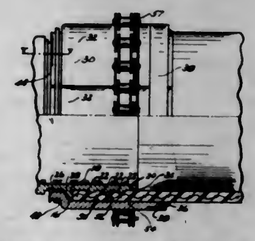
1. For use with first and second duct sections having outwardly-projecting endless flanges adapted to abut each other and a plurality of V-shaped flange clamping members, means for mounting said clamping members on said first duct for axial and radial movement relative thereto including: a plurality of guide members, which members curve outwardly away from the duct; a plurality of brackets having apertures adapted to receive the outwardly curved guide members, the brackets supporting at least one of said clamping members; controlling means connected to the clamping members to control relative movement of said members concentrically of said first duct; and operating means affixed to said controlling means, said operating means being adapted and operable to impart axial, as well as radial, movement to said V-shaped clamping members relative to said ducts.

3,019,037
UNIVERSALLY FLEXIBLE CONDUIT JOINT
Joseph M. Caldwell, 8256 San Fernando Road, Sun Valley, Calif.
Filed May 21, 1959, Ser. No. 814,768
3 Claims. (Cl. 285—226)



1. In a conduit joint structure for joining the confronting ends of adjoining lengths of a conduit, the combination of: a pair of conduit sections joined in a fluid tight manner to the terminals of said lengths of conduit at their confronting ends respectively; a bellows type connector between and joined in fluid tight relationship to said conduit sections at their other two ends; a pair of annular flanges rigidly secured to the conduit sections respectively, one on each side of the connector, and each having an annular plane surface extending outwardly from the wall of the conduit section and facing away from the connector; a cylindrical shell disposed longitudinally of the joint wholly outside said flanges and connector and having at its ends annular flanges surrounding said conduit sections, each shell flange having an annular plane surface extending inwardly of the cylindrical shell and facing toward the connector and disposed in opposed relation to said annular plane surface of the confronting conduit flange, a pair of rings, one being disposed about each of said conduit sections in the region at opposite ends of the joint structure between the opposed plane surfaces of the conduit flanges and the shell flanges respectively, each of said rings having on at least one face a pair of diametrically opposed axially extending protuberances which provide for rocking line contact between at least said one face and the confronting plane face of one of said flanges, the flanged shell being so constructed and arranged as to rigidly retain said rings against movement away from each other, whereby said rings function as axial extensions of the shell flanges to accommodate angular displacement of the conduit sections.

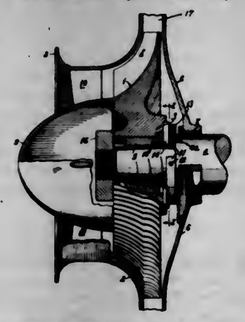
3,019,038
FITTING
William M. Cline, Rives Junction, and William G. Clemons, Jackson, Mich., assignors to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan
Filed May 26, 1958, Ser. No. 737,736
2 Claims. (Cl. 285—243)



1. A detachable, reuseable end fitting characterized by its relatively smooth outer contour, lightness of weight and adaptability to large size flexible hose comprising a

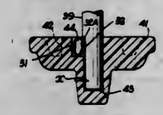
nipple having a generally cylindrical portion which is inserted into the hose end, radial projection structure carried on said nipple and axially spaced from said cylindrical portion of said nipple defining a radially extending hose end stop surface on the side of the projection adjacent said cylindrical portion and a conical blow off stop surface on the side of the projection remote from said cylindrical portion converging away from said cylindrical portion, a segmented socket for embracing and compressing a hose mounted on said nipple and embracing said hose end stop, said socket having generally cylindrical inner and outer surfaces and outer ledges at opposite ends to receive a pair of annular retaining members for supporting said socket assembled on said nipple in a contracted position, one of said members being a radially movable solid ring fulcrum band, having in cross section a convex inner periphery and the other retaining band, said socket being collectively defined by a plurality of independent segments, each of said segments at opposite ends defining an arcuate portion of said ledges, each of said segments having a fulcrum end having a radiused shoulder on its inner surface to engage said conical blow off stop surface to resist axial movement relative to said nipple in a blow off direction, the segment portion connecting said fulcrum end and the hose end embracing portion extending between said fulcrum band and radial projection, said arcuate portion of each segment at its fulcrum end engaging under the inner convex surface of said fulcrum band as a hinge point about which each segment is rocked to compress the hose upon said nipple and to dispose said arcuate portion of said ledge at the ends of said segments opposite said fulcrum end within a common cylindrical surface to receive said retaining band, said radiused shoulders engaging said conical blow off stop surface during rocking of said segments, the difference in the radial dimensions of the inner surface of said fulcrum band and the fulcrum band encompassed portion of said nipple being greater than the radial thickness of said fulcrum ends, said fulcrum end ledge being stepped radially inward to provide an outwardly facing, generally cylindrical surface of lesser outside diameter than the remaining portion of the socket which embraces the hose end and approximately the diameter of said inner surface of the socket which embraces the hose end, said ledge at the fulcrum end of each segment extending radially inwardly from the outer cylindrical surface of each segment and having a hooked edge forming a channel for engagement with said fulcrum band.

3,019,039
MEANS FOR MOUNTING A BODY ON A ROTATING SHAFT
Thomas W. Clavell, Hempstead, N.Y., assignor to Fairchild Stratos Corporation, a corporation of Maryland
Filed Apr. 9, 1956, Ser. No. 577,081
11 Claims. (Cl. 287—53)



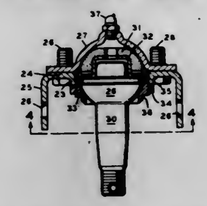
1. An apparatus comprising a rotatable shaft, a sleeve shrunk fit on said shaft and a driven element to be carried by the shaft shrunk fit on the sleeve, the coefficients of expansion of the sleeve and the driven element being greater than the coefficient of expansion of the shaft, but the difference between the coefficients of expansion of the materials of the sleeve and the driven element being less than the difference between the coefficients of expansion of the materials of the shaft and the driven element, and the material of the sleeve having a higher yield strength than the material of the driven element the sleeve being under greater shrink stress than the driven element.

3,019,040
FASTENER
Eric Birger Fernberg, Northwood, England, assignor to F. T. Products Limited, London, England, a British company
Filed Dec. 11, 1957, Ser. No. 702,053
Claims priority, application Great Britain Dec. 12, 1956
6 Claims. (Cl. 287—53)



1. A fastener comprising a flat strip of spring material bent so as to have at least a portion of its length in horseshoe shape with a web and two limbs, there being formed in one limb at least one sharply pointed prong having its point bent out of the general plane of the material surrounding the prong so as to be directed outwardly with respect to the horseshoe shaped fastener, the maximum width of the pronged limb being less than the maximum width of the other limb.

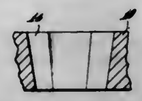
3,019,041
ADJUSTABLE BALL JOINT ASSEMBLY
William A. Scheublein, Jr., St. Louis, and Janis Dumpis, Overland, Mo., assignors to Moog Industries, Inc., St. Louis, Mo., a corporation of Missouri
Filed Aug. 25, 1958, Ser. No. 756,885
4 Claims. (Cl. 287—87)



4. In a ball joint device for operatively connecting a vehicle wheel to the vehicle to take tension or compression loads imposed by the vehicle reaction to loads and the wheel reaction to the ground: the improvement of a housing formed with an internal spherical seat surface and an open end opposed to said seat surface; a stud member having a headed end and a shank, the headed end bearing upon said spherical surface and the shank extending from said housing through the open end; adjustable positionable means to retain said stud member in said housing comprising a member threadedly mounted in said housing in the open end and over said stud shank, and means engaging with said housing and said threaded member to retain the latter in adjusted position; and mounting means on said housing to connect the latter to a portion of the vehicle, said mounting means including a flange on said housing adjacent to and surrounding said member threadedly mounted in

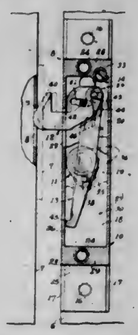
said housing, and means attaching the flange of the ball joint device to the vehicle with the open end free to expose said adjustable means.

3,019,042
COUPLING ELEMENT
Aaron H. Smith, Ipswich, Mass., assignor to Signal Manufacturing Co., Salem, Mass., a corporation of Massachusetts
Filed June 11, 1959, Ser. No. 819,691
4 Claims. (Cl. 287—108)



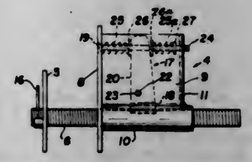
1. A coupling element for connecting a driving element within an opening in an element to be driven thereby, comprising a body having an outer side adapted to be non-rotatably disposed in the opening in the element to be driven, an axial hole therethrough and end flanges, said body and end flanges being integrally fabricated of a substantially rigid substance, said hole having portions of different cross-section, that of larger cross-section adapted non-rotatably to receive the driving element, said portion of larger cross-section extending from the outer side of the flange at one end substantially to the inner side of the flange at the other end, and said latter flange and the body inwardly thereof containing axially extending, radially disposed slots permitting expansion of that portion of the hole of smaller cross-section, said flanges being adapted to embrace the element to be driven marginally of the opening in it.

3,019,043
SLIDING DOOR LOCK
John A. Woodworth, Los Angeles, Richard J. Reeve, Sylmar, and George I. Noah, Baldwin Park, Calif., assignors, by mesne assignments, to Adams Rite Manufacturing Company, Glendale, Calif., a corporation of California
Filed Jan. 6, 1960, Ser. No. 904
6 Claims. (Cl. 292—113)



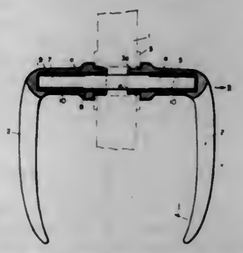
3. In a lock of the character described, a latch member comprising a hook portion and a body portion, said latter portion having a slot therein extending in a direction toward the hook portion, a fixed pivot pin extending through said slot, spring means biasing the latch member to project the hook portion thereof as limited by one end of said slot, manually operable latch actuating means including parts movable into a position to lock the latch member against rotation around said pin when the same is projected, said latch member being movable retractively against the bias of said spring means within the limits of said slot to move said parts from said locked position and release the latch member to pivot on said fixed pin to fully retracted position.

3,019,044
DOOR HOLDER
John Gulas, Sr., 4401 Wells St., Weirton, W. Va.
Filed Jan. 6, 1960, Ser. No. 753
5 Claims. (Cl. 292—275)



2. A holding device providing adjustable resistance to movement of a door hinged at one vertical edge within a supporting frame, comprising a body portion recessed into said vertical door edge and secured thereto, a flexible member secured to the adjacent portion of said frame and extending towards said body portion, aligned openings in said body portion receiving said flexible member for movement through the body portion, a friction member pivotally mounted within said body portion and continuously engaging said flexible member, and means on said body portion adjacent said door edge for imparting pivotal movement to the friction member for advancing the friction member into engagement with said flexible member.

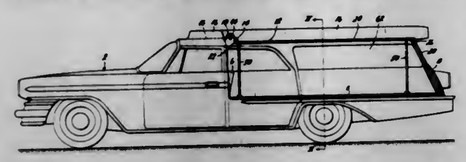
3,019,045
DOOR HANDLE ASSEMBLY
Emanuel Jaggi, 2 Hoenggerstrasse, Zurich, Switzerland
Filed June 4, 1959, Ser. No. 818,179
5 Claims. (Cl. 292—353)



1. A door handle assembly, comprising in combination: a pair of door handles each having a stem provided with a bore having at least one row of transverse serrations in the bore, a connecting bar having serrations complementary to the serrations in the bore in each door handle, and at least one compression spring attached to each end portion of said connecting bar on its face opposite to that upon which the serrations are formed and abutting the inner face of the bore of the associated door handle, said spring biasing the serrations of said connecting bar and of said door handle into engagement.

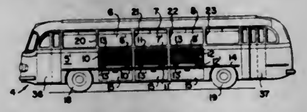
3,019,046
VEHICLE WITH ELEVATOR ROOF SECTION
Harold W. Laster, 54 S. 19th St., Kansas City, Kans.
Filed Feb. 24, 1960, Ser. No. 10,629
2 Claims. (Cl. 296—10)

1. A vehicle body defining a cargo-carrying space having a deck and a fixed roof spaced above said deck, said roof having an opening formed therein, a substantially horizontal movable roof section normally sealing said opening, and operating means for lowering said movable roof section vertically from said opening, whereby said opening is uncovered and a load supported on said movable roof section may extend upwardly through said opening, said operating means comprising a pair of drums carried rotatably by said body respectively adjacent opposite



sides of said opening, a pliable curtain wound on each of said drums and having its free edge secured to the corresponding edge of said movable roof section, said curtain having a horizontal width approximately equal to the length of the edge of said movable roof section to which it is attached, and means for rotating said drums, said curtains constituting protective walls rising from opposite edges of said movable roof section when said roof section is lowered.

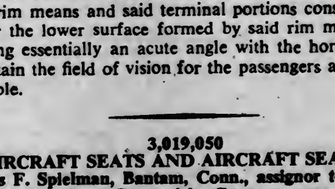
3,019,047
STORAGE AREA WITHIN MOTOR TRANSPORTS
Hermann H. F. Ahrens, Sindelfingen, Kreis Boeblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Aug. 7, 1959, Ser. No. 832,394
Claims priority, application Germany Aug. 7, 1958
19 Claims. (Cl. 296—28)



1. A motor vehicle, especially a large-apace motor vehicle intended to serve as a feeder-type vehicle provided with vehicle outer body walls, with a center aisle, with front and rear wheels and with windows having window railings, comprising means forming a storage space located to one side of said center aisle within the vehicle, at least a portion of said means projecting above said center aisle to a position adjacent said window railings and extending essentially within the region between respective front and rear wheels, said storage space being adapted to store therein the luggage pieces of the passengers, said means forming a storage space including a portion of the vehicle outer body wall disposed on the side of said storage space provided with aperture means to enable access to said storage space from the outside, and movable wall means adapted to be closed and covering said aperture means in the closed position thereof, and a plurality of wall portions defining said storage space within the vehicle interior space, at least some of said wall portions being provided with a plurality of spaced observation means enabling the passengers within the vehicle to observe the storage space.

3,019,048
WINDOW ASSEMBLY CONSTRUCTION
Mark J. Sturtevant, Grosse Pointe, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,505
8 Claims. (Cl. 296—44)

1. A vent window assembly for a vehicle having a passenger compartment, said assembly comprising a vent window secured in a bottom support, a vent window frame, said support being pivotally mounted in said frame and having a leading end adapted to be moved into said passenger compartment of said vehicle upon pivoting of said window and support, said frame being normally slanted inwardly from bottom to top with respect to the passenger compartment to provide a pivotal axis for said window and support that is also normally slanted inwardly with respect to said compartment, an upper drain surface on said support, means forming a lower drain



surface in said support underlying said upper surface, and a drain outlet in the bottom of said support connecting said lower surface to the exterior of said support, said surfaces being connected adjacent said leading end and diverging from each other from said end, said lower drain surface slanting downwardly from said leading end at a sufficient angle to allow drainage of water from said upper surface to said drain outlet when said leading end of said support is moved through any angle into the passenger compartment.

3,019,049
TOP FOR PASSENGER MOTOR VEHICLES
Béla Barenyi, Stuttgart-Vaihingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed May 31, 1957, Ser. No. 662,682
Claims priority, application Germany June 2, 1956
19 Claims. (Cl. 296—137)

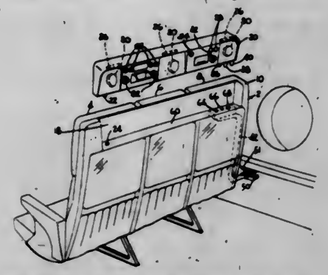


1. A sedan-type passenger motor vehicle having a lower body part and a closed top comprising a roof member closing said top and having an essentially flat portion, said member further having front, rear and side terminal portions merging with and forming continuations of said flat portion, and wall means formed at least in part by window panes surrounding and secured to said terminal portions rim means extending around the entire periphery of said roof member and inclined to and protruding outwardly and upwardly from said roof member and directly over the wall means of said top a predetermined distance, said rim means and said terminal portions constituting a gutter the lower surface formed by said rim means subtending essentially an acute angle with the horizontal to maintain the field of vision for the passengers as large as possible.

3,019,050
AIRCRAFT SEATS AND AIRCRAFT SEATING
James F. Spielman, Bantam, Conn., assignor to Aerotec Industries, Inc., Greenwich, Conn., a corporation of Connecticut
Filed Feb. 15, 1960, Ser. No. 8,853
4 Claims. (Cl. 297—217)

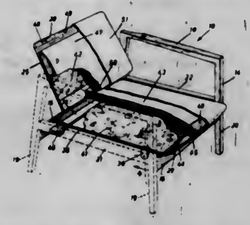
1. A multi-seat row of aircraft seats; an articulated backrest and seat bottom for each seat of the row; a fixed

seat back common to the several seats of said row; and a facilities unit mounted in the rear face of said fixed back for servicing the occupants of a multi-seat row immediately to the rear of said first-mentioned row, each backrest



and its articulated seat bottom being adjustable as a unit relative to said fixed back, whereby the angle of recline of the backrests can be varied independently of the facilities unit and without moving the facilities unit.

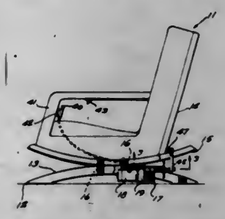
3,019,051
SITTING FURNITURE
Walter S. Nugent, 1048 Cedar Grove Blvd., Oakville, Ontario, Canada
Filed Jan. 11, 1960, Ser. No. 1,559
20 Claims. (Cl. 297—218)



1. In a furniture piece, a rigid base, a body supporting formation mounted on said base, the body supporting formation comprising a continuous unitary resilient frame having a substantially rigid outline and consisting of generally two side portions joined by two end portions, flexible substantially non-extensible body supporting means secured to said resilient frame in substantially taut relation and means securing said frame with said body supporting means secured thereto, to said rigid base at each of said side frame portions with said side frame portions sprung apart said securing means engaging said side frame portions in a manner to leave a substantial extent of same unsupported and free to move inwardly under the application of force to said taut flexible substantially non-extensible body supporting means.

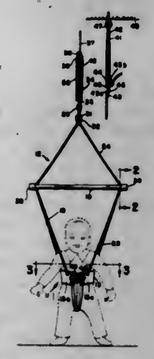
3,019,052
AUTOMATIC ROCKER AND GLIDER
Antoni Zawadzki, 43 "B" St., Buffalo, N.Y.
Filed July 3, 1958, Ser. No. 746,382
1 Claim. (Cl. 297—260)

In a rocking chair assembly of the type comprising an arcuate base and a rocking chair member movably mounted thereon and provided with a vertical rotary driving member rotating in a vertical plane substantially transverse to said base, means defining a driving connection between an exposed portion of the rocking chair member and said vertical rotary driving member, comprising a crank arm pivoted to and extending upwardly from said rotary driving member, said crank arm being formed at its top end with a notch defining a pair of spaced upwardly extending parallel arms, a block member disposed between said arms with the major portion thereof housed in said notch, a transverse pin extending through the upper portion of said block member and the upper portions of said arms, pivotally connecting the upper portion of said block member to said arms so that the block member is



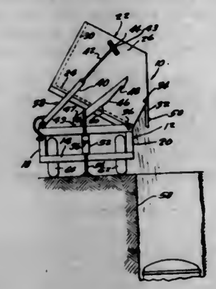
swingable in said notch around a transverse horizontal axis, a post member rotatably connected to said block member at a point spaced below said last-named transverse horizontal axis and being journaled to said block member on an axis contained in a vertical plane extending perpendicular to the plane of the block member, and means connecting said post member to the exposed portion of the rocking chair member.

3,019,053
BABY EXERCISING DEVICE
Frank A. Lambert, 443 St. John St., Pleasanton, Calif.
Filed Feb. 26, 1960, Ser. No. 11,220
7 Claims. (Cl. 297—275)



1. In a baby exercising device, a relatively wide waist band adapted to fit around the waist of the baby, said waist band having two end portions, a seat band, one end of the seat band being secured to the waist band intermediate the ends of the waist band so that the seat band depends from the waist band, the other end of the seat band being provided with cord receiving means, a spreader member, continuous cord means secured to opposite ends of the spreader member and extending through both end portions of the waist band adjacent the upper margin thereof and through the cord receiving means in the other end of the seat band, additional cord means secured to the opposite ends of the spreader member and to the waist band generally intermediate of the ends of the waist band and yieldable suspending means secured to the spreader member.

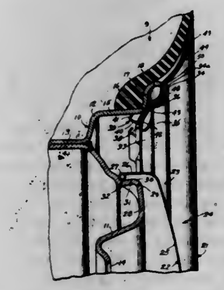
3,019,054
SIDE DELIVERY DUMP CART
John M. Stahly, 1304 Elm St., Atlantic, Iowa
Filed Apr. 18, 1958, Ser. No. 729,395
1 Claim. (Cl. 298—18)



A dump cart comprising a horizontally disposed frame having a forward end, a rearward end, and a pair of sides, a dump body including a bottom, a pair of end walls rising from the bottom, a rear wall extending between one of the adjacent ends of said end walls, said rear wall being of the same height as end walls, each of said end walls having a sloping surface beginning at a point spaced above the bottom of said dump body and ending in the top portion of the end wall spaced from the rear wall of said dump body, a shallow vertical gate member bridging the portion of the complemental other ends of said end walls below said points, means connecting the upper end of said gate member to said end walls for swinging movement of said gate member from the vertical position to a position swung away from said body, the sloping surfaces of said end walls and the unobstructed part above said gate member providing a shoveling space for loading said dump body, said dump body being positioned upon said frame so that the bottom is horizontally disposed upon said frame with the end walls adjacent the forward and rearward ends respectively of said frame, the rear wall adjacent one of the sides of the frame, and the gate member and sloping surfaces of the end walls adjacent the other of the sides of said frame, means pivotally connecting said dump body adjacent and extending along said gate member to said frame for movement of said body from the position in which said bottom is horizontally disposed to a tilted position in which said bottom is at an angle with respect to said frame, a pivot pin extending along and carried by the side of said frame opposite said gate member, a hydraulic cylinder assembly positioned contiguous to and along each of said end walls and having one end pivotally connected to said pivot pin, and an actuating arm extending out of the other end of each of said assemblies and fixedly attached to the adjacent end wall, a latch pin extending along said gate member intermediate the upper and lower ends and having end portions projecting from the opposite ends of said gate member, and latch arm pivotally connected to the forward and rearward ends of said frame and releasably engageable with the adjacent projecting end portion of said latch pin for holding the gate member in the vertical position.

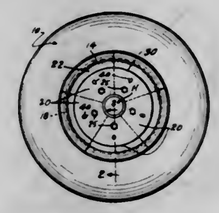
3,019,055
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,576
17 Claims. (Cl. 301—37)

7. In a wheel structure including a wheel having a multi-flanged tire rim, concentric radially outer ring and radially inner cover members nested one within the other, said ring member having an annular rim engaging shoulder on which the cover member is seated and retainingly held and resilient means on the cover member detachably and retainingly engageable with a flange of said rim and resiliently deflectable upon such engagement to draw said members together and to hold said shoulder tightly against said rim, the radially outer ring member being comprised of a synthetic material and having



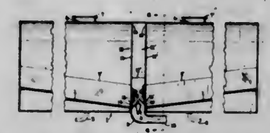
one of its radially inner and radially outer cover margins provided with circumferentially spaced slot areas, and the resilient means comprising circumferentially spaced resiliently deflectable cover retaining extensions which are telescoped through said slot areas to secure the synthetic ring and the cover member in assembly together and with the extensions engaged with a flange of the rim to hold the ring member and the cover member in assembly together on the wheel.

3,019,056
SEGMENTAL DISK WHEEL
James J. Keilman, Chicago, Ill., assignor to L. J. R. Corporation, Chicago, Ill., a corporation of Illinois
Filed July 29, 1959, Ser. No. 830,394
6 Claims. (Cl. 301—63)



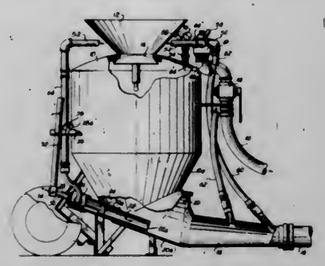
1. A disk wheel for pneumatic tires comprising a circular mounting ring having a medial opening, a circular collar surrounding said opening, a circular row of mounting bolt openings surrounding said collar, a second circular row of shouldered pins concentric to and radially aligned with said mounting bolt openings and a plurality of disk segments, each segment having an inner circular edge complementary to said collar, an opening aligned with one of the mounting bolt openings and an elongated opening aligned wtih the shouldered pin, each of said sector shaped members having a tire engaging rim portion thereon and capable when a plurality are mounted on said mounting ring to form a circular tire engaging rim.

3,019,057
CONVEYING APPARATUS
Richard Giehl Kramlich, Hokendauqua, Pa., assignor to Fuller Company, a corporation of Delaware
Filed June 22, 1959, Ser. No. 821,870
11 Claims. (Cl. 302—52)



1. Apparatus for discharging pulverulent material comprising a vessel having an inlet for pulverulent material and a discharge outlet in a lower portion thereof, a gas-permeable deck in the lower region of the vessel, means for passing a gas under pressure upwardly through the deck to fluidize overlying material, the vessel being substantially closed to the escape of gas and material except through the discharge outlet, a gas conduit in the vessel communicating with the upper portion of the vessel and its lower end enclosing the discharge outlet, the conduit having a material opening at one side thereof positioned to receive fluidized material into the lower end of the conduit, a gate at the material opening for regulating the flow of fluidized material therethrough, valve means for regulating the flow of gas through said conduit and permitting the vessel to be pressurized prior to delivery of material into the lower end of the conduit, said valve means being positioned in said conduit upstream, relative to the direction of gas flow through said conduit, of the lower portion of the material opening in said conduit, and means for actuating said valve means to permit flow of gas through the conduit in response to opening of the gate.

3,019,058
AIR CONTROL STRUCTURE FOR AGGREGATE HANDLING MACHINES
George M. Pro, Leawood, Kans., assignor to Air Placement Equipment Company, Kansas City, Mo., a corporation of Missouri
Filed Sept. 22, 1958, Ser. No. 762,456
9 Claims. (Cl. 302—53)

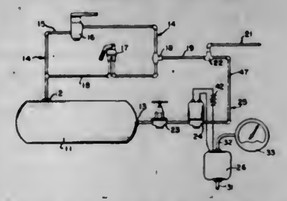


1. In a machine for conducting material to a point of use comprising a normally closed, hollow, material-receiving, pressure vessel provided with a material outlet line and an opposed, compressed air inlet pipe, said pipe adapted to be operably coupled with a source of air under pressure extending into the vessel in position to direct the air toward said line and being shiftable whereby to vary the distance between its innermost discharge end and said line; an air inlet conduct communicating with the line adjacent the vessel and disposed at an angle to the flow of material within the outlet line and in a direction for moving the material through the line away from the vessel; and a selector valve common to said pipe and to said conduit for directing the air to either the pipe or the conduit.

3,019,059
PROCESS FOR CONVEYING CARBONACEOUS SOLIDS THROUGH CONDUITS
Robert McMurtrie, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 28, 1960, Ser. No. 25,188
4 Claims. (Cl. 302—66)

1. In a process for transporting finely divided carbonaceous solids by forcing an aqueous slurry thereof through a conduit, the improvement which consists in incorporating a minor proportion of coal acids into said slurry.

3,019,060
GOVERNOR OPERATED BRAKING SYSTEM
Clarence C. Mallory, 4900 W. 6th Ave., Denver, Colo.
Filed Aug. 14, 1958, Ser. No. 755,091
4 Claims. (Cl. 303—21)



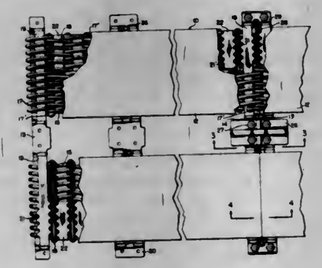
1. Apparatus for governing the speed of motor vehicles utilizing air pressure differential type of brake actuating apparatus which comprises a primary air system, an auxiliary air system, check valve means interconnecting both of said systems to the brake actuating apparatus of said vehicle, said check valve operating to selectively permit flow of air to and from the brake actuating apparatus and the one of said systems which has the highest pressure differential at that time, pressure responsive means in said auxiliary air system for assuring the preferential interconnection of said primary air system and brake actuating apparatus, and governor operated valving means for releasing the pressure influences of said auxiliary system selectively past said check valve means when the primary system is not activated and into the said brake actuating apparatus when the vehicle is exceeding a predetermined speed whereby the differential air pressure in said auxiliary system will actuate the brakes of said vehicle to slow the vehicle.

3,019,061
TRACK MECHANISM FOR VEHICLES
William H. Schomers, 1605 Wadsworth Ave., Lakewood, Colo.
Filed Mar. 20, 1958, Ser. No. 722,745
6 Claims. (Cl. 305—32)



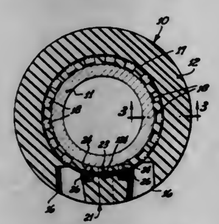
1. A track type suspension unit for vehicles comprising a longitudinal frame member, a plurality of wheel units mounted thereon for rotation, an extension member on said frame, at least one wheel member on said extension, pivot means on said extension member for alternately moving said extension member to a position of operative use in locked engagement with said frame and a further position of non-use away from locked engagement with said frame, a longitudinally resilient endless belt type track member adapted for tensioned engagement about said wheels for vehicle propelling movement therealong, said pivot means being positioned in off center relation with respect to said frame, extension member and the wheels on said frame and extension whereby tension forces in said belt will hold said extension in operating position.

3,019,062
TRACTOR TRACK
Omer M. Long, Frederick, Md., assignor to Aircraft Armaments, Inc., Cockeysville, Md., a corporation of Maryland
Filed Sept. 24, 1958, Ser. No. 763,031
27 Claims. (Cl. 305—37)



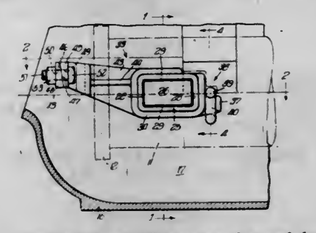
1. A track unit for use in an endless track comprising a transversely extending rigid bar positioned at each end of said unit, a plurality of helically wound wire links between each rigid bar, means to connect the links at each end to the rigid bar thereat, means to connect intermediate adjacent links together whereby said links connect the rigid bars together, and a body of rubber composition encasing said links and a portion of said bars, said bars adapted to be connected to adjacent bars on another unit to form an endless track.

3,019,063
PROTECTOR FOR WELL PIPE
Charles H. Collett, Burbank, Calif. (P.O. Box 411, Menlo Park, Calif.)
Filed Oct. 16, 1959, Ser. No. 846,897
10 Claims. (Cl. 308—4)



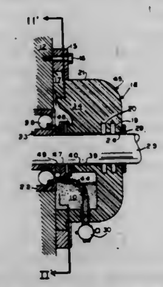
4. A well pipe protector comprising a body adapted to be placed about the pipe and having a lengthwise split, a pipe encircling member contained within the body and having terminal loops deflectable radially of the pipe at the location of said split, rigid spacer means carried by said member at opposite sides of the loops and engageable against the pipe to effect alinement of the loops radially of the pipe when the loops are brought together circularly about the pipe, and means carried by said member at opposite sides of said loops and engageable by a tool to press said spacer means against the pipe and constrict the member to loop-alined condition about the pipe.

3,019,064
JOURNAL BOX CONSTRUCTION FOR RAILWAY CARS
Theodore J. Sweger, Riverdale, Ill., assignor to Illinois Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 28, 1961, Ser. No. 92,312
7 Claims. (Cl. 308—38)



1. In combination, a railway car journal box having spaced vertical side walls and an axle journal spaced from said side walls, inner and outer holding means on at least one side wall in the form of lugs secured to and extending toward said axle journal from said one side wall, an elongated journal guide retainer on the inner side of said one side wall in horizontal aligned relation with the axis of rotation of said axle journal and spaced therefrom, said journal guide retainer having an extension at its inner end interfitting with the lug of said inner holding means and a locking portion at its outer end secured to the lug of said outer holding means, said journal guide retainer also having a journal guide receiving socket, and a journal guide in said socket with a bearing face on one side juxtaposed to said axle journal and the other side reacting against the inner side of said one wall, said journal guide being held in operative position with respect to said axle journal and urged toward said one side wall by said journal guide housing when said extension and locking portion thereof are held by said inner and outer holding means.

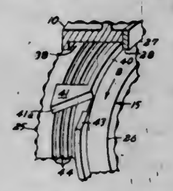
3,019,065
GREASE CONTAINER
Howard B. Neeley, 12 Carson St., Rte. 6, Borger, Tex.
Filed Nov. 9, 1959, Ser. No. 851,902
10 Claims. (Cl. 308—187)



1. An externally located grease container in combination with an anti-friction bearing located in a motor casing wall and wherein a rotatable shaft of cylindrical outline passes through and is supported by said anti-friction bearing, said grease container enclosing a space which is juxtaposed peripheral to said bearing and into which space said shaft projects and adjacent to which said bearing lies, said grease container being composed of a side wall extending axially parallel to yet spaced apart from said shaft and an end wall, said end wall being located on a plane substantially normal to the axis of said shaft, and

transparent in a direction along a radius of said shaft and containing a circular passage therethrough only slightly larger in cross section area than the cross-sectional area of said shaft and concentric therewith, said side wall and said end wall cooperating to form only one lubricant reservoir in said container, said reservoir being located at the bottom of said container, and a conduit passing through a wall of said container from said reservoir to the outside of said container for filling and emptying said reservoir.

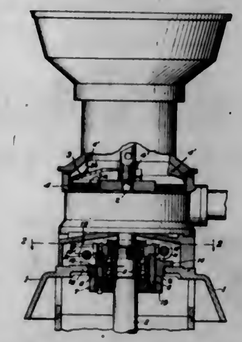
3,019,066
MACHINE TOOL SPINDLE CONSTRUCTION
Jacob Decker, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 23, 1959, Ser. No. 801,353
1 Claim. (Cl. 308—187.1)



In a machine tool having a housing and a bearing therein, said housing having an opening in registration with the bearing, the combination of a spindle having at least a portion thereof mounted for rotation in the bearing, the rotatable portion of the spindle extending forwardly out through said opening to define an annular gap between said spindle portion and the housing, means to rotate said spindle portion in a predetermined direction, means defining an annular trough inside the housing between the housing opening and the bearing having a base and walls extending radially inwardly from the base, one of said walls adjacent the housing opening and terminating at the annular gap, said trough encircling the rotatable portion of the spindle to collect solid foreign matter introduced through the gap and prevent the same from reaching the bearing, means in the housing defining a drain passage connected to the base of the trough at the bottom thereof, an annular rib on the rotatable portion of the spindle extending into the trough close to said one wall thereof to impede the entry of foreign matter through said gap, and a blade on the rotatable portion of the spindle behind the rib extending rearwardly therefrom in the trough to agitate foreign matter settled therein, said blade having a face sloping in said predetermined direction as it extends rearwardly from the rib to repel foreign matter entering the housing through the gap when said spindle portion is rotated in said predetermined direction, said rib having a cut adjacent the sloping face of the blade to pass foreign matter repelled by the blade.

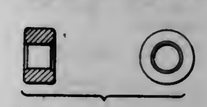
3,019,067
COMMINUTING MACHINE
Carl Schnell, Winterbach, near Schorndorf, Wurttemberg, Germany, assignor of one-half to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 10, 1959, Ser. No. 798,454
2 Claims. (Cl. 308—189)

1. In a machine having a frame and a shaft axially adjustable with reference to the frame, means for adjustably mounting the shaft comprising an internally threaded casing having a slot therein transverse to its axis and extending inwardly to the vicinity of the axis, one portion on one side of said slot being fixedly positioned in the machine frame, the remaining portion having a slot substantially at right angles to the first slot dividing the remaining portion of the casing into a split ring having two arms movable relative to each other and to the frame, a hollow screw threaded into said casing and rotatably mounting said shaft in axially fixed relation thereto, sec-



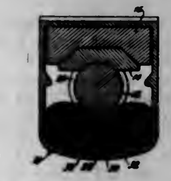
ond means for adjustably rotating the hollow screw within said casing axially to adjust the shaft, and third means connecting with said two arms of said split ring to vary the opening in said split-ring portion whereby to loosen and tighten the threaded engagement between said hollow screw and said casing.

3,019,068
BEARINGS
Albert Edward Sutherland White, London, England, assignor to The Morgan Crucible Company Limited, London, England, a corporation of Great Britain
Filed Mar. 5, 1959, Ser. No. 797,446
Claims priority, application Great Britain Mar. 7, 1958
17 Claims. (Cl. 308—237)



1. A bearing assembly comprising two relatively movable elements in contact, the contacting area of at least one of the elements containing at least 50% of at least one material selected from the group containing nickel oxide and cobalt oxide.
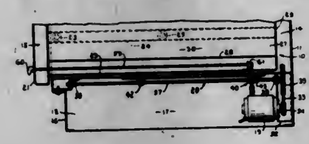
3,019,069
JOURNAL LUBRICATING PAD AND PROCESS OF MAKING SAME
Victor C. Barth, 4 N. 181 Church Road, Bensenville, Ill., and Thomas W. Timmis, Villa Park, Ill., assignors to said Victor C. Barth
Filed Apr. 22, 1959, Ser. No. 808,117
6 Claims. (Cl. 308—243)



1. A lubricating pad for use with railroad-car journal bearing surfaces comprising, in combination, a casing

having a pair of spaced, rectangular end panels whose peripheries are joined to a sleeve-like, flexible, oil-wicking, tufted cover, and a lubricating-pad-body of oil-absorbent material inserted in and enclosed in said casing, said body being initially in the form of an axially elongated, circular annulus consisting of oil-wicking waste fibers which are arranged and disposed in generally arcuate, overlapping relation to each other with said fibers pulled under tension in one general direction so as to yield an annulus which is firmed-up throughout its radial thickness and which tends to retain its initial annular shape, and said annular body being compressed and flattened diametrically within said casing, for entrance into an oil-retaining well of a car journal, to a point where diametric portions of said annulus abut each other, thereby reducing the flattened body's overall cross-sectional height from the diameter of the annulus to a dimension in the range of twice the thickness of the annular body, while increasing the flattened body's overall cross-sectional width to a dimension greater than the diameter of the annulus, and said flattened annular body being disposed in said casing with the ends thereof adjacent the end panels of the casing, so that the tendency of said flattened body to return to its original shape is transmitted to the tufted cover portion of the casing.

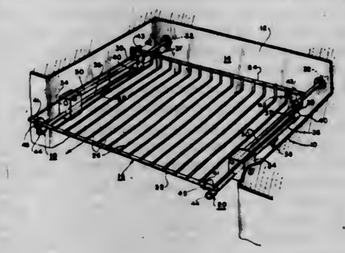
3,019,070
MOTION-TRANSMITTING DEVICE
Alfred J. Diebold, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed Aug. 28, 1958, Ser. No. 757,773
5 Claims. (Cl. 312—223)



3. A cabinet including walls defining a storage compartment having an opening therein, a drawer adapted to move within said compartment through said opening, a yieldable latch device fixed to said drawer, and motion-transmitting means carried by the cabinet in operative relationship with respect to the drawer for moving said drawer within the compartment comprising a rotatable threaded drive shaft disposed substantially parallel to the drawer and extending in the direction of movement of the drawer, a motion-transmitting nut member operatively associated with said shaft, said nut member including a portion on its periphery for snap connection with said yieldable latch device for transmitting motion to said drawer, and guide means for preventing rotation of said nut member for normally insuring said connection.

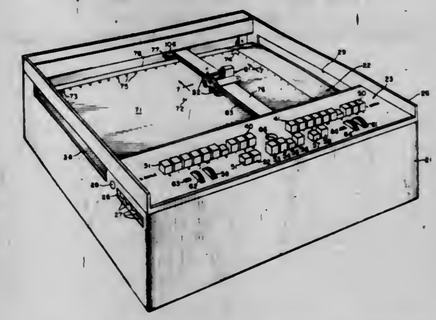
3,019,071
REFRIGERATION APPARATUS
Pearl C. Davis, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 5, 1959, Ser. No. 811,085
1 Claim. (Cl. 312—308)

In a refrigerator cabinet having side and rear walls, a pair of stationary guide rails rigidly supported at the back of the cabinet and extending along respective side walls from rear to front within the cabinet, means rigidly supporting the front ends of said guide rails, a shelf including a generally horizontal storage deck having a turned-up portion at the rear thereof to guard against objects falling from said shelf during movement thereof, and vertically and horizontally spaced, transversely extending elements carrying said deck, one of said shelf elements being rigidly connected to a front portion of said storage deck, the other of said shelf elements being disposed above said one shelf element and rigidly connected to the turned-up rear portion of said storage deck, a pair of slides on which said shelf is removably supported mounted respectively on said guide rails for slidable movement therealong, each slide including front



and rear shelf support members which project upwardly from said slide structure, each of said rear support members being laterally spaced from the other and provided with an upwardly opening slot, each of the front support members being laterally spaced from the other and provided with a forwardly opening slot which extends below said upwardly opening slots, each of said slots having a shelf element portion receivable therein.

3,019,072
X-Y PLOTTER
Norman J. Bose, North Hollywood, and Nolan R. Kroninger, Sepulveda, Calif., assignors to General Precision, Inc., a corporation of Delaware
Filed Aug. 8, 1960, Ser. No. 48,114
4 Claims. (Cl. 346—29)



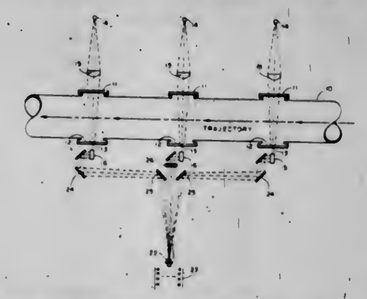
1. An X-Y plotter comprising a cabinet supporting a plot table, a pair of spaced parallel tracks extending across said plot table and a pair of spaced parallel end walls extending between said tracks and forming therewith a vacuum chamber, a removable platen supported on said tracks and end walls and provided with a plurality of peripheral openings adapted to hold graph paper in position on the plot area of said platen, an opening extending through said supporting structure below said vacuum chamber and a vacuum impeller mounted below said opening and adapted to evacuate said vacuum chamber, a Y arm having a plurality of guide wheels engaging said tracks and mounted for movement across the plot table in the direction of the X ordinate, said Y arm having an inverted U-shaped track with grooves formed in the op-

posite sides thereof, a carriage assembly having a plurality of guide wheels engaging the grooves in said U-shaped track and adapted to move along said Y arm in the direction of the Y ordinate, a recording device mounted on said carriage assembly, and means including a solenoid adapted to actuate said recording device into contact with graph paper on said platen, an X axis servo and drum and a Y axis servo and drum mounted on said supporting structure below one end of the plot table, at least one pair of pulleys mounted adjacent each corner of said plot table and at least two auxiliary pulleys mounted outboard of the two corners of the plot table adjacent said X axis drum, an X axis cable system having a portion connected to each of the opposite ends of said Y arm, said cable system having portions extending from each end of the Y arm around a pulley removed from the drum back around another corner pulley adjacent the drum and a portion having several turns around the Y axis drum and then around one of said auxiliary outboard pulleys back to the opposite end of the Y arm and another portion extending directly across to the other auxiliary outboard pulleys and back to the opposite end of the Y arm to provide a true parallel motion of the Y arm along the X ordinate, a pair of pulleys provided at each end of the Y arm and a pulley provided at each end of the carriage assembly, a Y axis cable system having several turns around the Y axis drum and extending in opposite directions around the adjacent corner pulleys and around one of the pulleys at each end of the Y arm and around the pulleys on the carriage assembly back around the other pulleys on the ends of the Y arm and around the two remote corner pulleys back to a pair of anchor points outboard of said Y drum, and an electrical system adapted to receive X and Y input signals and drive said servo motors to position said Y arm and said carriage assembly to positions along the X and Y coordinates corresponding to said X and Y inputs.

3,019,073
VELOCITY MEASURING DEVICE

Donald A. Hall, 515 Ridgely Ave., Annapolis, Md.

Filed Jan. 21, 1959, Ser. No. 788,245
3 Claims. (Cl. 346—38)
(Granted under Title 35, U.S. Code (1952), sec. 266)

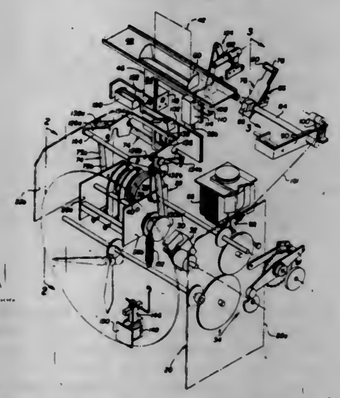


2. A system for determining the velocity of and recording an image of a high velocity object onto a film which comprises aligned optical projection means in at least two separate axially spaced optical image projection paths, said projection paths being across an object trajectory path, said optical projection means in each of said separate optical image paths including a light source and a condensing lens on one side of said trajectory path, a slit and an image rotator on the opposite side of said trajectory path said slit extending in a plane perpendicular to the axis of said trajectory path, a shutterless camera positioned in optical relationship with respect to said image rotators, a movable film in said camera with the direction of motion of said film being in a plane parallel to said slits, said image projection means of each of said optical paths adapted to project an image of said object passing through said trajectory path onto spaced parallel tracks each extending along the direction of motion of said movable film in said camera, said image projected onto each separate track of said film being displaced linearly along the length thereof, whereby the velocity of the obejct is determined by the speed of travel of said movable film and the linear displacement between said images projected onto said film by said optical projection means.

3,019,074
TIME RECORDING DEVICE AND CARD THEREFOR

H Edgar Leeser, 501 Taylor St., San Francisco 2, Calif.

Filed Sept. 28, 1959, Ser. No. 842,987
6 Claims. (Cl. 346—85)



1. The combination, with a time recording card having a side edge formed into a camming edge, of a time recording machine comprising a time printing mechanism settable from a position wherein it prints in a first color to a position wherein it prints in a second color; a frame adapted to receive the time recording card and present said card to said printing meechanism to mark a time thereon; cooperating card positioning means on said frame and on said card operative to hold said card at successively lower levels within said frame each time said same card is inserted into said frame, to present successively higher areas of the card to said printing mechanism; sensing means on said frame and in contact with said camming edge of the card within the frame effective to set said printing mechanism to said second position thereof for predetermined ones of said successively lower levels thereof within said frame; and means operative whenever the card is fully inserted into said frame to the depth determined by said card positioning means, to actuate said printing mechanism.

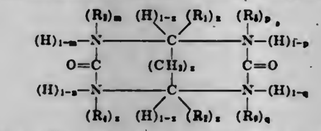
CHEMICAL

3,019,075
METHODS OF BLEACHING WITH HALO-GLYCOLURIL COMPOSITIONS

Irving Rosen and Frank B. Slezak, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed May 11, 1959, Ser. No. 812,132
5 Claims. (Cl. 8—108)

1. The method of bleaching which comprises contacting the fabric to be bleached with a composition of matter comprising a mixture of water, an alkaline buffer selected from the group consisting of alkali metal carbonates, silicates and phosphates and a compound having the formula:



wherein R_1 and R_2 are alkyl groups; R_3, R_4, R_5 and R_6 are halogen; x, m, n, p and q are each numbers from 0 to 1, inclusive.

3,019,076
TREATMENT OF TEXTILES WITH POLY-EPOXIDES AND POLYAMIDES

Clay E. Pardo, Jr., Albany, and Richard A. O'Connell, El Cerrito, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed July 22, 1958, Ser. No. 750,274
11 Claims. (Cl. 8—128)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The process of dimensionally stabilizing a wool-containing textile without impairing its hand which comprises impregnating a wool-containing textile with a polyepoxide containing at least two epoxy groups per molecule and a polyamide of a polyamine and a polycarboxylic acid, the total amount of polyepoxide and polyamide deposited on the textile being about from 0.5 to 10% of the weight of the textile, said deposit being insufficient to impair the hand of the textile but sufficient to give dimensional stabilization, and curing the impregnated textile by heating it at an elevated temperature to cure and insolubilize the deposit on the textile fibers.

3,019,077
CRYSTALLINE ISOTACTIC POLYSTYRENE FIBERS

Robert J. Carey, South Charleston, and Andrew T. Walter, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

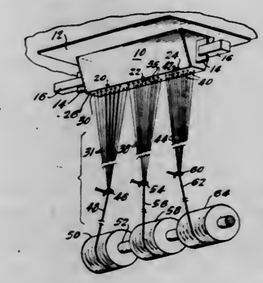
Filed Feb. 9, 1960, Ser. No. 7,555
7 Claims. (Cl. 18—54)

1. A process for the production of highly crystalline isotactic polystyrene filaments which comprises polymerizing styrene in an inert organic diluent to a solid, substantially insoluble, highly crystalline isotactic polystyrene; pyrolyzing said highly crystalline isotactic polystyrene at temperatures of from about 300° C. to about 450° C. to produce an amorphous isotactic polystyrene having a melt index in the range of from about 0.01 to about 5 decigrams per minute and immediately after the pyrolysis quenching the pyrolyzed isotactic polystyrene and recovering a soluble and substantially amorphous isotactic polystyrene having a melt index in said range; extruding an organic solvent solution of said amorphous isotactic polystyrene at a temperature of from about 50° C. to about 100° C., said solution having an amorphous isotactic polystyrene content of from about 15% to about 35% by weight and a solution viscosity of from about 1,000 to about 20,000 centipoises; coagulating the extruded amorphous isotactic polystyrene filaments in a coagulating bath containing a coagulant which is a solvent for the solvent of the amorphous isotactic polystyrene solution but which is not a solvent for the amorphous isotactic polystyrene, thereby producing filaments having from about 5% to about 20% residual solution solvent on the weight of the fiber in the extruded amorphous isotactic polystyrene filament; stretching the extruded amorphous isotactic polystyrene filament in an amount up to about 500% to orient the molecules and restore crystallinity to the isotactic polystyrene filament while it still contains from about 5% to about 20% by weight residual solution solvent in the amorphous isotactic polystyrene; and removing the residual solution solvent from the stretched substantially crystalline isotactic polystyrene filament at a temperature below the fusion temperature of the crystalline isotactic polystyrene filament.

3,019,078
METHOD OF FORMING FIBERS

Cletis L. Roberson, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Nov. 26, 1957, Ser. No. 699,102
7 Claims. (Cl. 18—54)



1. A method of processing heat-softenable mineral material to form continuous filaments suitable for textile uses including establishing a supply of molten mineral material, flowing at least two groups of streams in adjacent relation from the supply wherein the streams of one group are of different size than those of another group, and concomitantly attenuating the groups of streams to continuous filaments by winding each group of filaments on an individual collector.

3,019,079
METHODS AND APPARATUS FOR CONTINUOUS INTERACTION OF SOLIDS AND FLUIDS

William J. Donohue, Willoughby, Ohio
(432 East Drive, Baton Rouge 6, La.)

Filed Mar. 4, 1958, Ser. No. 719,083
11 Claims. (Cl. 23—1)

1. Apparatus for continuous interaction of solids and fluids, comprising a vertically elongated, columnar, hollow shell; a plurality of horizontal partitions disposed in vertically spaced relationship for respectively defining a corresponding plurality of solids-contacting chambers thereabove in said shell; a corresponding plurality of horizontally disposed solids supporting trays in said chambers, said trays being respectively associated with said partitions and each tray being disposed above its

associated partition in closely spaced relationship therewith; at least one pair of radially offset vertical openings respectively passing each tray and associated partition and connected for defining an outlet passageway from the bottom of each chamber, which passageway first passes the tray, then leads radially and horizontally over the associated partition, and then passes the partition; means for progressively feeding essentially solid particulate material, at a substantially uniform average rate in terms of quantity per unit of time, into the uppermost of said chambers adjacent the top thereof for movement downwardly by gravity to form a bed of the solid particles therein, means for progressively and positively moving solid particles from the bottoms of beds of such particles



in each of said chambers and through the outlet passageways at the bottoms of each of said chambers at substantially the same average rate, whereby a bed of said particles may be maintained in each of said chambers while progressively replacing the particles in each bed by movement of particles downwardly through said chambers from the top of the shell to the bottom thereof, and separate means associated with each of said chambers and independent of the aforesaid passageways between chambers for continuously passing a fluid stream into each of said chambers adjacent one end thereof, along a vertical path through a bed of solid particles therein, and out of the chamber adjacent the opposite end thereof, whereby said fluid streams may respectively flow through separate beds of solid particles that are being progressively moved downwardly through the apparatus.

3,019,080

PROCESS FOR THE PRODUCTION OF ALUMINA

George Clarkson Vincent, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a company of Great Britain

No Drawing. Filed Apr. 30, 1958, Ser. No. 731,888

Claims priority, application Great Britain May 16, 1957

6 Claims. (Cl. 23—143)

1. A process for the production of substantially pure alumina which comprises the steps of reacting aluminium with a monohydric alcohol containing from 2 to 4 carbon atoms to form a solution of an aluminum alkoxide in the alcohol, said aluminum containing impurities which exist in colloidal form upon reaction with said alcohol, adding to the solution at least one liquid hydrocarbon selected from the group consisting of pentane, hexane, benzene, toluene, xylene, and petroleum ether, to effect deposition of said impurities, separating said impurities from the solution, thereafter hydrolyzing the alkoxide, and recovering pure alumina therefrom.

3,019,081

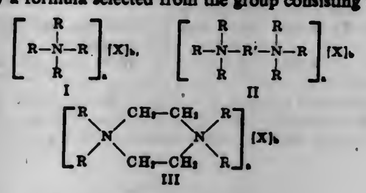
STABILIZED NITRIC ACID

Richard C. Doss and Jennings P. Blackwell, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

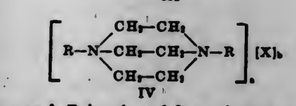
No Drawing. Filed July 17, 1959, Ser. No. 827,975

12 Claims. (Cl. 23—157)

1. A stabilized nitric acid consisting essentially of nitric acid and from about 0.1 to about 10 weight percent of at least one quaternary ammonium compound characterized by a formula selected from the group consisting of



and



wherein: each R is selected from the group consisting of alkyl, cycloalkyl, alkenyl, and cycloalkenyl radicals containing from 1 to 8 carbon atoms wherein when more than one carbon atom is present the carbon atom attached to the quaternary nitrogen atom is attached to adjoining carbon atoms by single valence bonds, and said radicals substituted with a substituent selected from the group consisting of nitro, nitrato, and cyano radicals, the total number of said substituents in said R groups being not greater than one-half the total number of carbon atoms in said R groups; R′ is selected from the group consisting of alkylene radicals containing from 1 to 12 carbon atoms, and alkenylene radicals containing from 4 to 12 carbon atoms wherein the carbon atom attached to the quaternary nitrogen atom is attached to adjoining carbon atoms by single valence bonds; X is an anion selected from the group consisting of nitrate, perchlorate, monohydrogen phosphate, dihydrogen phosphate, hydrogen sulfate, sulfate, hydroxyl, orthoborate, dihydrogen borate, and tetraborate anions; *a* and *b* are each integers of from 1 to 4, and the product of *a* multiplied by the number of quaternary nitrogen atoms is equal to the product of *b* multiplied by the valence of said anion X.

3,019,082

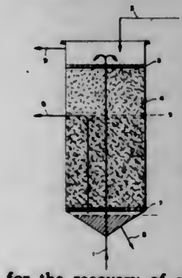
PRODUCTION OF CONCENTRATED ALKALI SOLUTIONS

Ewald Wygasch and Rolf Luehdemann, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed July 5, 1957, Ser. No. 670,271

Claims priority, application Germany July 19, 1956

3 Claims. (Cl. 23—184)



1. A process for the recovery of caustic alkali from an alkali metal amalgam which comprises passing said amalgam and an aqueous decomposing liquid in concurrent flow downwardly through a particulate and continuous catalyst bed, the first section of said catalyst bed being porous and gas filled, the second section of said continuous catalyst bed being submerged in a caustic liquor, and thereafter withdrawing the aqueous caustic solution from the said second section of the said catalyst bed at a point wherein the caustic concentration is at a maximum.

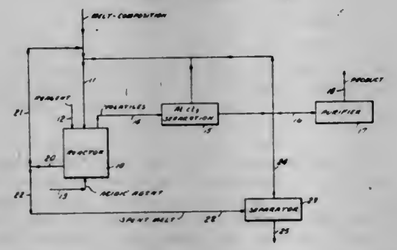
3,019,083

PROCESS FOR PREPARING DIBORANE

John P. Faust, Grand Island, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Nov. 10, 1953, Ser. No. 391,253

8 Claims. (Cl. 23—204)



1. A process for the production of diborane from an alkali metal borohydride which comprises adding the borohydride and an acid selected from the group consisting of hydrogen chloride and boron chloride to a fused salt system comprising an alkali metal chloride and an amphoteric chloride selected from the group consisting of aluminum chloride and zinc chloride.

3,019,084

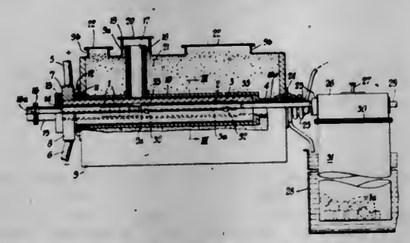
PRODUCTION OF REFRACTORY CARBIDES, BORIDES AND THE LIKE

Edmund Hollis Amstein, Wembley, England, assignor to The British Aluminum Company Limited, London, England, a British company

Filed Mar. 3, 1955, Ser. No. 491,912

Claims priority, application Great Britain Mar. 5, 1954

15 Claims. (Cl. 23—204)



1. A process for the continuous production of a refractory low free-carbon-content material consisting essentially of at least one of the compounds selected from the group consisting of the carbides of titanium, zirconium, niobium, tantalum and boron and the borides of titanium, zirconium, niobium and tantalum which comprises preparing a reaction mass into a self-supporting solid body from an intimate mixture of at least one oxide from the group consisting of the oxides of titanium, zirconium, niobium, tantalum and boron, with at least the first mentioned of the two non-metals, carbon and boron, continuously introducing said prepared reaction mass through an inlet portion of a reaction chamber having inlet and outlet portions, passing said reaction mass through a high temperature zone in said chamber wherein said reaction mass is heated to a selected temperature in the range of 2000 to 3000° C., while maintaining the mass as a self-supporting solid body, to cause at least part of the carbon to combine with the oxygen of said reaction mass to form carbon monoxide, removing the carbon monoxide gas out of contact with the reaction mass through a gas outlet at a point removed from said inlet and outlet portions of said reaction chamber and in a zone wherein the temperature is above approximately 1500° C., holding said reaction mass at said selected temperature until reaction equilibrium is reached, continuously passing the solid reaction products through said outlet portion, and then cooling said solid reaction products at a rate sufficient to prevent back reaction thereof.

3,019,085

METHOD FOR THE PRODUCTION OF DIBORANE

Carl D. Good, Niagara Falls, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed May 10, 1955, Ser. No. 507,734

11 Claims. (Cl. 23—204)

1. A method for the production of diborane which comprises introducing boron trichloride into a slurry of a hydride selected from the group consisting of sodium hydride, magnesium hydride and calcium hydride and a halide selected from the group consisting of aluminum tribromide, aluminum trichloride and gallium trichloride in a reaction medium selected from the group consisting of benzene and an alkyl benzene having a total of not more than six carbon atoms in the alkyl radical maintained at a temperature within the range from 0° to 92° C., and recovering diborane from the reaction mixture.

3,019,086

PREPARATION OF DIBORANE

Earl L. Muetterties, Chadds Ford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 1, 1957, Ser. No. 649,641

5 Claims. (Cl. 23—204)

1. A process of preparing diborane which comprises the steps of reacting boric oxide with hydrogen at a temperature of at least 800° C. in the presence of an electropositive metal selected from the group consisting of sodium, magnesium, aluminum, potassium, calcium and iron, and then cooling the gaseous reaction mixture to a temperature below about 300° C. in less than one minute.

3,019,087

PURIFICATION OF SILANE

Theodore A. Jacob and Nelson R. Trenner, Westfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 29, 1958, Ser. No. 763,819

2 Claims. (Cl. 23—204)

1. The process for the purification of silane contaminated with diborane which comprises contacting the contaminated silane with a metal catalyst selected from the group consisting of platinum and Raney nickel, in a reactor chamber and decomposing most of the diborane without decomposing any appreciable amount of the silane.

3,019,088
PROCESS FOR PRODUCING HEAVY WATER

Wolf Vielstich, Duisburg-Hamborn, Walter Rottig, Oberhausen-Sterkrade-Nord, and Herbert Spengler, Oberhausen-Holten, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany

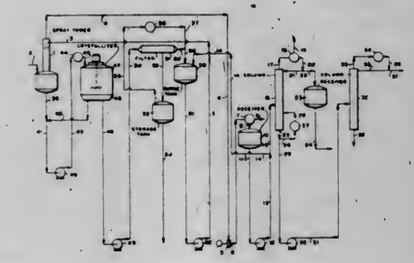
No Drawing. Filed Nov. 10, 1958, Ser. No. 772,719
Claims priority, application Germany Nov. 12, 1957
11 Claims. (Cl. 23—204)

1. A process for the production of heavy water, which comprises hydrogenating oxides of carbon in the presence of catalysts of the 8th group of the periodic tables, selected from the group consisting of iron, cobalt, and nickel, collecting the water of reaction formed during hydrogenation and being enriched in deuterium, and recovering the heavy water therefrom.

3,019,089
PRODUCTION OF BORON TRICHLORIDE

James B. O'Hara, Kenmore, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

Filed Jan. 19, 1956, Ser. No. 560,104
3 Claims. (Cl. 23—205)



1. In the production of boron trichloride by reacting an oxygen-containing boron compound selected from the group consisting of boric oxides, boric acids and sodium borates with chlorine and carbon at an elevated temperature to produce a gaseous mixture comprising boron trichloride which upon cooling to a temperature below about 250° C. deposits solids which consist primarily of a boron trichloride-boric oxide complex, the step of spraying said gaseous mixture at a temperature above about 250° C. with a liquid comprising essentially boron trichloride whereby boric oxide solids-forming constituents of said gaseous mixture are removed therefrom.

3,019,090
CORROSION TEST

William G. Renshaw, Natrona Heights, Roy C. Bongartz, Pittsburgh, and Jack M. Beiggy, Brackenridge, Pa., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

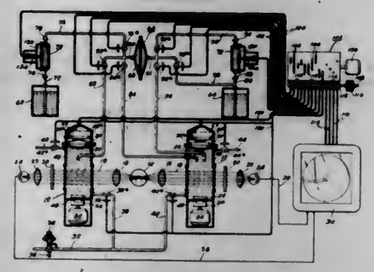
No Drawing. Filed Dec. 8, 1959, Ser. No. 858,038
5 Claims. (Cl. 23—230)

1. The method of determining the presence of potential corrosion on the surface of stainless steel which comprises contacting the surface of said steel with a material that is capable of absorbing liquids and an aqueous test solution that contains ferricyanide ions and from about .5% to 5% by weight, of a mixture of nitric and hydrochloric acid in a nitric acid to hydrochloric acid ratio range of from about 1:1 to 1:12 and separating said material from said stainless steel surface to permit the observance of blue spots appearing on said material and said steel surface that are indicative of potential corrosion.

3,019,091
PNEUMATIC PROGRAMMING SYSTEM FOR COLORIMETRIC ANALYZERS

George W. Schneider, Jr., St. Petersburg, Fla., assignor to Milton Roy Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Sept. 15, 1958, Ser. No. 760,953
7 Claims. (Cl. 23—253)

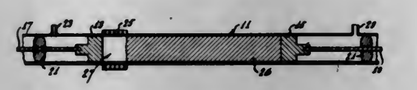


1. In a system for analysis of fluids for chemical constituents, a plurality of fluid test cells, a plurality of reagent reservoirs, a source of sample test fluid, conduits interconnecting said reagent reservoirs and said test fluid source with said test cells, pneumatic diaphragm valves in said conduits, pneumatic control tubes connecting a source of air under pressure to said valves for normally maintaining said valves closed and preventing fluid flow therethrough and a rotatable drum having a plurality of spaced slots and holes in the periphery thereof operable on rotation of said drum for selectively bleeding air pressure from predetermined ones of said tubes through said slots and holes to open selected ones of said valves in predetermined sequence to permit fluid flow through the conduit controlled thereby for pneumatically programming the operational cycle of said system from start to finish and thereafter repetitively recycling said system.

3,019,092
METHOD FOR PURIFYING MATERIALS

Fred D. Rosi, Plainsboro, and Leonard R. Weisberg, New Brunswick, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Filed Dec. 19, 1958, Ser. No. 781,720
6 Claims. (Cl. 23—294)

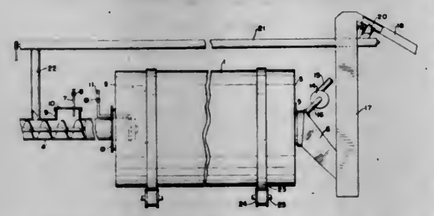


1. A method of refining volatile material comprising the steps of providing a charge of said material in an elongated vessel said charge having a length less than that of the vessel whereby to have at one end of said vessel a portion thereof unoccupied by said charge, evacuating said vessel, raising the temperature of the end of said charge adjacent the unoccupied portion of said vessel to at least the temperature of vaporization of said material to produce a vapor zone of said material, and raising the temperature of a progressively longitudinally-changing portion of said charge to at least said temperature of vaporization to cause said vapor zone to travel through the length of said charge in a direction away from said unoccupied portion of said vessel, said vapor zone having a length substantially equal to said unoccupied portion of said vessel.

3,019,093
CARBON BLACK BEADING PROCESS

Roy L. Gholson, Monroe, La., assignor to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

Filed Apr. 17, 1957, Ser. No. 653,331
3 Claims. (Cl. 23—314)



1. A process for the beading of carbon black by freely tumbling the black in a beading zone in the absence of recycle beads until it has formed into substantially spheroidal dustless beads, the steps which consist essentially of completely absorbing in the black, while the black is in a flocculent state, an amount of water insufficient visibly to wet the black and insufficient to destroy its flocculent characteristics, not less than 3% and not exceeding one-third the dry weight of the black, thereafter introducing the fluocculent black containing the absorbed water into the beading zone, and converting the black to beads in the beading zone without further addition of water.

3,019,094
FUEL COMPOSITIONS

Joseph Ray Boudreaux, Lake Jackson, and Fred Stephenson McDonald, Freeport, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

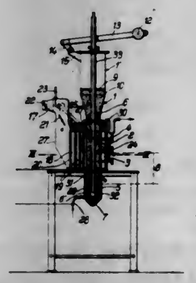
No Drawing. Filed Feb. 14, 1957, Ser. No. 640,074
7 Claims. (Cl. 44—56)

1. A fuel composition for spark ignition internal combustion engines, which consists substantially of gasoline and a small amount of 1,2-dimethoxy-1-phenylethane sufficient to decrease the octane requirement increase of the fuel.

3,019,095
GAS PRODUCER

Peter Prang, Mulheim (Ruhr), and Hans Dieter Textor, Dicke Hecke, Stolberg-Vicht, Germany, assignors to Ferdinand Lentjes Kesselschmiede u. Maschinenbau, Dusseldorf-Oberkassel, Germany

Filed Sept. 22, 1958, Ser. No. 762,574
Claims priority, application Germany Sept. 30, 1957
9 Claims. (Cl. 48—63)

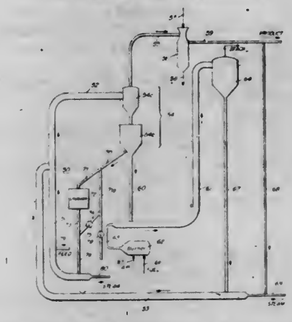


1. A gas producer for the production of CO-containing gas, comprising a reaction chamber, a substantially cylindrical series of spaced pipes, said pipes being spaced sufficiently to allow gas to pass between them and forming a fuel-retaining wall of said reaction chamber, a gas discharge chamber surrounding said wall, a fuel storage container disposed above said reaction chamber, means for passing a cooling medium through said pipes, a charging device whereby fuel may be continuously supplied to said storage container, means for compacting the fuel supplied to said storage container, a lance passing through said storage container and said reaction chamber for passing oxygen-containing gas at high speed through the fuel in said reaction chamber, and means for discharging slag and combustion residues from said reaction chamber.

3,019,096
PROCESS FOR FLUID CATALYTIC REFORMING OF HYDROCARBONS TO GAS

Charles G. Milbourne, Lansdowne, Pa., assignor to United Engineers & Constructors Inc., Philadelphia, Pa., a corporation of Delaware

Filed May 13, 1959, Ser. No. 812,889
11 Claims. (Cl. 48—213)



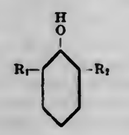
4. In a process for the catalytic reforming of solid and liquid hydrocarbonaceous materials, to form a product gas comprising normally gaseous hydrocarbons, the improvement which comprises forming a gasiform reaction stream comprising steam, recycled product gas and entrained finely divided reforming catalyst, and reforming said product gas in said stream to produce hydrogen, introducing a hydrocarbonaceous feed selected from the group consisting of solid and liquid hydrocarbonaceous materials into a gasiform volatilization stream of entrained hot finely divided catalytically inert solids and thereby volatilizing said hydrocarbonaceous feed with the deposition of a residue on said inert solids, introducing the volatilized feed into said reaction stream, reforming said volatilized feed in the presence of the newly produced hydrogen to give a product containing normally gaseous components and recovering said product.

3,019,097
JET FUEL COMPOSITIONS

George G. Ecke, Ferndale, Mich., and Alfred J. Kolka, Clairton, Pa., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

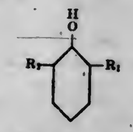
No Drawing. Filed Nov. 21, 1956, Ser. No. 623,542
8 Claims. (Cl. 44—78)

1. Distilled hydrocarbon jet fuel having an endpoint of at least about 480° F. containing from about 0.01 to about 0.2 percent by weight of a 2,6-dialkyl phenol having the formula:



wherein R_1 and R_2 are alkyl groups containing up to about 12 carbon atoms each.

5. A process for cooling the lubricating oil in a jet engine comprising using as a coolant for heat transfer with the lubricating oil a thermally stabilized jet fuel consisting essentially of a distilled hydrocarbon fuel having an end point of at least about 480° F. and containing from about 0.01 to about 0.2 percent by weight of a 2,6-dialkyl phenol having the formula:



wherein R_1 and R_2 are alkyl groups containing up to about 12 carbon atoms each.

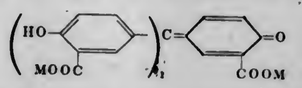
3,019,098

METHOD OF ENHANCING PLANT GROWTH EMPLOYING AURINTRICARBOXYLIC ACID AND SALTS THEREOF

John B. Hemwall, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 20, 1958, Ser. No. 775,112
7 Claims. (Cl. 71—1)

1. In agronomical practice, a method for enhancing plant growth which comprises adding to plant growth medium an aurintricarboxylic acid compound having the formula



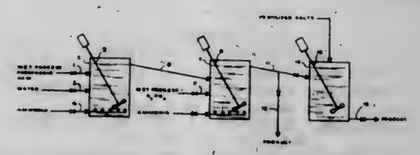
wherein M is selected from the group consisting of hydrogen and ammonium, wherein the aurintricarboxylic acid compound is added in an amount to give a concentration of from about 0.25 part to about 250 parts by weight per million parts by weight of growth medium.

3,019,099

MANUFACTURE OF FLUID FERTILIZER FROM WET-PROCESS PHOSPHORIC ACID

Henry K. Walters, Jr., Florence, Ala., assignor to Tennessee Valley Authority, a corporation of the United States

Filed June 10, 1959, Ser. No. 819,512
3 Claims. (Cl. 71—34)
(Granted under Title 35, U.S. Code (1952), sec. 266)



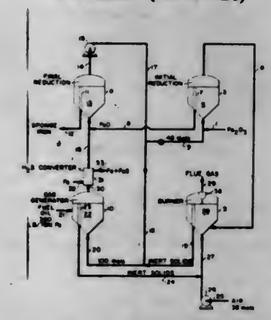
1. A process for the production of a stable suspension fertilizer of high sedimentation volume, low viscosity, and good pour characteristics which comprises adding a stream of ammonia to wet-process phosphoric acid; controlling the proportion of added ammonia to produce a pH of 7.5 to 8.5 in the resulting suspension; thereafter intimately mixing wet-process phosphoric acid with the suspension in proportion to lower the pH into the range from 5.5 to 7.3; and withdrawing as product the resulting stable suspension.

3,019,100

INTEGRATED PROCESS OF ORE REDUCTION AND GAS GENERATION

Harry Edwin Robson, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed June 24, 1960, Ser. No. 38,494
7 Claims. (Cl. 75—26)



1. In a continuous direct reduction of iron oxides by reducing gas in a fluidized bed wherein FeO is reduced to Fe in a final stage which receives a stream of hot reducing gas from a gas generating zone and higher oxides of Fe are reduced to FeO in a preliminary stage by a portion of intermediate partly spent reducing gas withdrawn from said final stage, the improvement which comprises passing a larger portion of said intermediate gas withdrawn from the final stage to the gas generating zone, said intermediate gas containing principally CO and H_2 with minor amounts of CO_2 and H_2O, converting CO_2 and H_2O components of the intermediate gas passed into said generating zone to enrich the resulting gas with CO and H_2 in forming the stream of hot reducing gas which said final stage receives.

3,019,101

ALUMINUM BASE ALLOY FOR DIE CASTINGS

Donald L. Colwell, Shaker Heights, Ohio, assignor to Apex Smelting Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,215
15 Claims. (Cl. 75—141)

1. An aluminum base alloy suitable for die castings, and consisting essentially of between 3.5 percent and 6.0 percent of zinc, between 0.6 percent and 2.0 percent of iron, and between 0.25 percent and 2.0 percent of antimony, the balance being substantially all aluminum, and characterized by an adaptability to acquire an excellent finish when oxide coated.

3,019,102

COPPER-ZIRCONIUM-HAFNIUM ALLOYS

Matti J. Saarivirta, Plainfield, N.J., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Aug. 19, 1960, Ser. No. 50,577
4 Claims. (Cl. 75—153)

1. An age hardenable copper base alloy containing from 0.02 to about 0.15% zirconium, from 0.1 to about 1.2% hafnium and the remainder oxygen-free copper.

3,019,103

PROCESS FOR PRODUCING SINTERED METALS WITH DISPERSED OXIDES

Guy B. Alexander, Brandywine Hundred, Del., and William H. Pasfield, Sayville, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 4, 1957, Ser. No. 694,086
8 Claims. (Cl. 75—206)

1. In a process for producing a metal of the group consisting of iron, cobalt and nickel and alloys of these metals with each other and with other metals whose oxides have a free energy of formation at 27° C. of from 30 to 70 kilocalories per gram atom of oxygen, said metal having improved properties by having uniformly dispersed therein a plurality of discrete, submicron-sized particles of a refractory oxide the steps comprising (*a*) precipitating a water-insoluble, hydrous, oxygen-containing compound of the metal to be improved, wherein the metal is in an oxidized state, as a coating around a plurality of substantially discrete, submicron sized particles of a metal-oxygen compound which, when heated to constant weight at 1500° C., is a refractory oxide having a melting point above 1000° C. and a free energy of formation at 1000° C. above 60 kilogram calories per gram atom of oxygen, and drying the precipitate-coated particles so produced, (*b*) thereafter reducing the deposited coating to the corresponding metal by bringing it into contact with a reducing gas while maintaining a temperature throughout the mass below the sintering temperature of the metal, and (*c*) sintering the reduced product to a dense mass at a temperature below the melting point of the metal.

3,019,104

PHOTOGRAPHIC PRODUCTS, PROCESSES, AND COMPOSITIONS

Gerald Oster, Brooklyn, N.Y., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Dec. 11, 1957, Ser. No. 701,991
9 Claims. (Cl. 96—29)

1. A photographic process comprising the steps of permeating a photosensitive element including an exposed silver halide emulsion layer with a free radical polymerizable vinyl monomer, developing the exposed silver halide emulsion with a benzenoid silver halide developer, which developer forms free radicals upon being oxidized as a function of development and polymerizing said polymerizable vinyl monomer with said free radicals in the exposed and developed areas.

3,019,105

TREATMENT OF DIAZO-SENSITIZED LITHOGRAPHIC PLATES

Dolor N. Adams, Cleveland Heights, Ohio, assignor to Harris-Intertype Corporation, a corporation of Delaware

No Drawing. Filed Feb. 28, 1957, Ser. No. 642,963
10 Claims. (Cl. 96—33)

8. A method of preparing for printing by treatment with a single liquid composition an exposed lithographic plate having printing areas coated with water-insoluble oleophilic light-decomposition products of a diazo compound and non-printing areas coated with a water-soluble diazo compound: comprising the steps of pouring on the plate an oil-in-water emulsion defining such single liquid composition having an oil phase comprising a film-former selected from the group consisting of aluminum stearate and asphalt, and an organic solvent for such film-former, and a water phase comprising water, a desensitizer selected from the group consisting of sodium carboxymethyl cellulose and gum arabic, and a liquid water-miscible glycol consisting essentially of liquid polyethylene glycol, rubbing such emulsion against the plate to remove the water-soluble diazo compound from the non-printing areas by the water phase while depositing at least some of such desensitizer on such non-printing areas to increase the water-attractiveness thereof, and separating the oil phase from the emulsion by such rubbing to deposit the film-former as a film over such printing areas to increase the ink-attractiveness thereof.

3,019,106

PROCESSING OF PRE-SENSITISED LITHOGRAPHIC PRINTING PLATES

Ronald Alfred Charles Adams, London, England, assignor to Algraphy Limited, London, England

No Drawing. Filed Jan. 10, 1961, Ser. No. 81,699
4 Claims. (Cl. 96—48)

1. In the processing of a presensitized photo-lithographic plate of the kind having a resinous, organic solvent soluble light-sensitive coating which is insoluble in water and aqueous solutions but which is initially soluble in an organic solvent and which becomes insoluble in the organic solvent after exposure to light; the step which consists in treating the plate after exposure to active light through an image transparency, with an emulsion consisting essentially of a water-insoluble organic solvent for the light sensitive coating on the non-image areas of the plate, which solvent forms the dispersed phase, an aqueous desensitizing solution rendering said non-image areas ink-repellant and a water-insoluble dye for the image areas, said dye being dissolved in the solvent and stable to the aqueous phase of the emulsion.

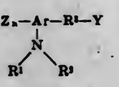
3,019,107

NOVEL PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS

Elkan R. Blout, Belmont, Milton Green, Newton Highlands, Howard G. Rogers, Weston, Myron S. Simon, Newton Centre, and Robert B. Woodward, Belmont, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Sept. 25, 1956, Ser. No. 612,051
7 Claims. (Cl. 96—66)

1. As a novel photographic developer composition for the formation of silver transfer prints, an aqueous solution comprising an alkaline material, a silver halide solvent fixer and a compound selected from the group consisting of compounds within the formula:



wherein R^1 and R^2 are each selected from the group consisting of hydrogen and alkyl groups, R^3 is an alkylene group, each Z is selected from the group consisting of alkyl and halogen groups, *n* is selected from the group consisting of 0, 1 and 2, Ar is an aryl nucleus and Y is selected from the group consisting of unsubstituted, alkyl-substituted and halogen-substituted 2,5-dihydroxyphenyl, 2,3-dihydroxyphenyl and 3,4-dihydroxyphenyl groups.

3,019,108

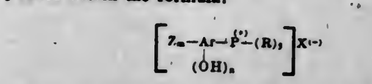
PHOTOGRAPHIC PROCESS, PRODUCTS AND COMPOSITIONS

Samuel Dershowitz, Brookline, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Mar. 18, 1959, Ser. No. 800,094
6 Claims. (Cl. 96—66)

1. The process of developing a latent image in a silver halide emulsion which comprises treating said emulsion with an aqueous alkaline solution in the presence of a

developer selected from the group consisting of compounds within the formula:



wherein Ar is an aryl nucleus selected from the group consisting of benzene and naphthalene, Z is selected from the group consisting of alkyl, alkoxy and halogen groups, *m* is an integer including zero, R is a phenyl group, *n* is at least two, and X is a halogen group, the hydroxy groups being in one of the positions ortho- and para- to each other.

3,019,109
STABILIZATION OF ANTIBIOTICS IN FEEDS AND FEED SUPPLEMENTS
Irving Klothen, Princeton, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 10, 1960, Ser. No. 28,013
6 Claims. (Cl. 99—2)

1. A process for the production of an animal feed composition comprising an edible animal feedstuff containing the growth-promoting factors produced by elaboration of the microorganism *Streptomyces aureofaciens* which comprises adding to an animal feed supplement containing said growth-promoting factors calcium hydroxide in an amount ranging from about .2 to 12% by weight of the feed supplement, and subjecting the so-treated supplement to a sizing operation so as to produce a particle size of between 10 and 60 mesh whereby the feed supplement when added to a major amount of an edible animal feedstuff will be stable against losses in antibiotic potency for extended periods of time.

3,019,110
HEAT TREATMENT OF HOMOGENIZED MATERIALS
Henry W. Bevarly, Louisville, Ky., assignor to Chemetron Corporation, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Oct. 28, 1959, Ser. No. 849,179
4 Claims. (Cl. 99—122)

1. A method of cooling, mixing and homogenizing a mixture of immiscible materials in a liquid carrier which comprises passing said mixture into an annular space defined by an outer tubular heat exchange surface and an inner shaft disposed within said tubular heat exchange surface wherein said outer surface is cooled by means of a low temperature material, applying a rotational component of movement to said material within said tubular heat exchanger, and applying a series of intermittent pressure pulsations to said material within the tubular heat exchanger whereby the material is moved in a slow spiral motion having imposed thereon a series of intermittent longitudinal backward and forward motions, passing said material longitudinally through the cylindrical heat exchange unit while it is subject to rotational and kneading action thereby to cool and homogenize the product into a stable, smooth, uniform, homogeneous material.

3,019,111
MARMALADE BASE AND PROCESS FOR ITS PREPARATION
Spencer A. Sproes, Plant City, Fla., assignor to Salada-Shirriff-Horsey Ltd., Don Mills, Ontario, Canada
No Drawing. Filed Mar. 23, 1960, Ser. No. 16,941
21 Claims. (Cl. 99—129)

1. A marmalade base product comprising depectinized, clarified, heat stabilized concentrated predominantly soluble citrus fruit solids at least substantially free of added sugar and having citrus pectin dispersed therein.

3,019,112
FRUIT SAUCE PROCESS
William Abner Rooker, Berryville, Va. (112 E. Piccadilly St., Winchester, Va.)
No Drawing. Filed Nov. 25, 1959, Ser. No. 855,272
2 Claims. (Cl. 99—154)

1. A process for preparing fruit sauces from fruit having a pH less than 4 which comprises: cooking the fruit under pressure to form a hot, cooked, sterile sauce; cooling under pressure the hot, cooked, sterile sauce to a temperature substantially above the minimum sterilization temperature for said fruit but below its normal boiling point at atmospheric pressure, thereby eliminating any substantial loss by volatilization of the aromatic constitutents present in the cooked product; and thereafter finishing the cooled, cooked sauce before it has cooled to a temperature below the minimum sterilization temperature for said fruit.

3,019,113
FRUIT SAUCES
William Abner Rooker, Berryville, Va. (112 E. Piccadilly St., Winchester, Va.)
No Drawing. Filed Dec. 1, 1959, Ser. No. 856,336
3 Claims. (Cl. 99—186)

1. A process for preparing fruit sauce having an enhanced graininess and flavor from fruits having a pH of less than 4, which comprises: comminuting the raw fruit into a raw pulp to produce a selected grain size in the finished sauce, heating the raw pulp to a temperature above its sterilization temperature but below the normal boiling point of the fruit at atmospheric pressure to eliminate the raw flavor and soften the fruit and not enough to destroy the desired graininess, and thereafter filling the sterile mixture into containers and effecting sterilization of the fruit sauce.

3,019,114
GAS EVOLVING PROTECTIVE COATING
Raymond Jack Grantham, Wexford, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Nov. 24, 1959, Ser. No. 855,004
8 Claims. (Cl. 106—13)

1. A protective gas-evolving film-forming composition consisting essentially of a protective film forming composition containing between about 0.1% to 10% of a compound selected from the group consisting of amine boranes, alkali metal borohydrides, and alkaline earth metal borohydrides, and mixtures thereof.

3,019,115
SURFACE COLORATION OF PERFLUOROHALOOLEFIN POLYMERS AND COLORANT COMPOSITION THEREFOR
Herman S. Kaufman, Teaneck, and Fred W. West, Wayne, N.J., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed July 23, 1958, Ser. No. 750,298
6 Claims. (Cl. 106—32)

1. In a process for coloring the surface of perfluorohaloolefinic polymeric material the improvement which comprises applying to said surface a colorant composition consisting essentially of between about 1 and about 50 weight percent of a colorant, between about 5 and about 75 weight percent of trichloroethylene, and a low molecular weight trifluorochloroethylene polymer having a softening point below 150° C., and setting said colorant at a temperature above about 170° C. and below the decomposition temperature of the polymer being colored for a period of between about one second and about thirty minutes.

3,019,116
CERAMIC BODY AND METHOD OF MAKING THE SAME
Lionel J. Doucette, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Oct. 11, 1957, Ser. No. 689,471
3 Claims. (Cl. 106—46)

1. A dense, non-porous glass-bonded alumina ceramic body formed by firing at a temperature of about 1250–1350° C. a mixture having the following approximate composition in percent by weight:

	Percent
Aluminum oxide	65–95
Alumina borosilicate glass frit	5–35

said mixture also including flux material comprising 0–12% of a calcium compound selected from the group consisting of calcium oxide and calcium carbonate, 0–3% of a potassium compound selected from the group consisting of potassium oxide and potassium carbonate, and 0–3% of a barium compound selected from the group consisting of barium oxide and barium carbonate, said glass frit having approximately the following composition in percent by weight:

	Percent
Silica	38.5–55
Alumina	15–25
Calcium oxide	8.5–17.5
Magnesium oxide	2.5–7.5
Boric oxide	12.5–25

3,019,117
REFRACTORY BLOCKS
Dominick Labino, Grand Rapids, Ohio, assignor, by mesne assignments, to Johns-Manville Fiber Glass Inc., Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Dec. 23, 1957, Ser. No. 704,297
5 Claims. (Cl. 106—66)

1. The method of producing a rigid, gas impervious refractory which comprises impregnating a mass of fine glass fiber with an aqueous solution wherein the solute is selected from the group consisting of cobalt nitrate, nickel nitrate, iron nitrate, chromium nitrate, and copper nitrate, heating and compacting the mass of impregnated glass fiber to remove the aqueous solvent and convert the solute to an oxide and to compress the mass of impregnated fiber into intimate contacting relation, fusing the compressed fiber and metal oxide into a gas impervious body by heating the compressed mass to a temperature within the approximate range of from 2900 to 3500° F., and cooling the fused mass to effect a rigid, solid refractory body.

3,019,118
COMPOSITION FOR ANTI-CORROSION COATING AND METHOD OF PREPARING SAME
Alphonse Raymond Wallen, Chicago, Ill., assignor to Dearborn Chemical Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed June 29, 1959, Ser. No. 823,331
7 Claims. (Cl. 106—123)

1. A coating composition consisting essentially of a thixotropic mixture of a liquid hydrocarbon vehicle and a reaction product of zinc oxide and a tall oil heads fraction having a titer between 75° and 120° F., said tall oil fraction containing from about 10% to 30% saturated fatty acids, from about 10% to 55% unsaponifiables, from about 40% to 80% unsaturated fatty acids, and rosin acids not in excess of about 2%, the amount of zinc oxide present being at least sufficient stoichiometrically for complete neutralization of the free fatty acids present.

3,019,119
CELLULOSE ACETATE SPINNING SOLUTIONS
Henry Allen Hoffman, Jr., and Leander Adair Sherbeck, Waynesboro, Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 29, 1958, Ser. No. 757,934
6 Claims. (Cl. 106—169)

1. A composition consisting essentially of at least 60% by weight of cellulose triacetate containing 2.7 to 3.0 acetyl groups per glucose unit and as minor components in amounts of from 5–25% each, a polymeric substance containing as part of the polymer structure sulfonic acid groups available for reaction with basic dyestuffs and a cellulose acetate containing from about 2.0–2.3 acetyl groups per glucose unit, there being at least about 10 milliequivalents of sulfonic acid groups present per kilogram of final composition.

3,019,120
ADHESIVE COMPOSITIONS
Jordan V. Bauer and Lee H. Elizer, Keokuk, Iowa, assignors to The Hubinger Company, Keokuk, Iowa, a corporation of Iowa
No Drawing. Filed Mar. 25, 1959, Ser. No. 801,711
10 Claims. (Cl. 106—213)

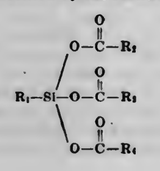
1. A cooked "in situ" type, potentially water-resistant adhesive composition consisting essentially of an alkaline mixture of ungelatinized starch, gelatinized starch, at least 0.5% by weight of the starch of a water-resistance imparting material selected from the group consisting of formaldehyde, paraformaldehyde, a formaldehyde bisulfite salt, a formaldehyde sulfoxalate salt, and a water soluble monomeric methylol compound formed from formaldehyde which is capable of polymerizing to a water insoluble state and at least about 0.5% by weight of the starch of a cyanamide compound selected from the group consisting of cyanamide and alkaline salts of cyanamide.

3,019,121
COLORED IRON-STAINED COAL AND A METHOD OF COLORING
Richard L. Newman, Flemington, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,121
14 Claims. (Cl. 106—286)

1. A process of treating iron-stained coal which comprises subjecting the coal surface to the action of an aqueous dispersion of a pigment and a water soluble ferrocyanide, the said ferrocyanide being used in amounts no less than 40 parts per million based on the coal, whereby portions of the coal are colored by the pigmented dispersion and the surface of the iron stains is transformed into a blue color.

3,019,122
GLASS FIBER SURFACE TREATMENT
George E. Ellerman, Perrysville, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,261
4 Claims. (Cl. 106—287)

1. A glass fiber treating solution consisting of 99 to 95 percent by weight of water and 1 to 5 percent by weight of a compound represented by the formula



wherein R_1 is an alkenyl radical selected from the group consisting of vinyl and allyl radicals and R_2, R_3 and R_4 are alkyl radicals containing from 1 to 5 carbon atoms.

3,019,123
PROCESS FOR IMPROVING THE SURFACE PROPERTIES OF POWDERS

Carl Boller, Giessen, Wolfgang Gündel, Duesseldorf-Oberkassel, and Alfred Kirstahler, Duesseldorf, Germany, assignors to Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany

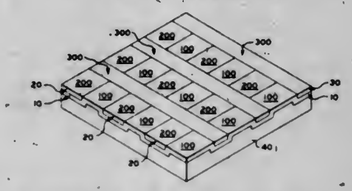
No Drawing. Filed May 26, 1959, Ser. No. 815,820
Claims priority, application Germany Nov. 21, 1952
3 Claims. (Cl. 106—308)

1. A process for the improvement of the wetting and floating properties of inorganic powdery substances which are substantially insoluble in water and in organic solvents, which are capable of absorbing a mixture of salts with which they are to be treated, which comprises grinding said powdery substances in the presence of water to form a paste with a mixture of salts from acid derivatives of sulfuric acid, said mixture containing a salt of said acid derivative component with a first base and a salt of said acid derivative component with a second base in proportions of 1:1 to 4:1 by weight, wherein said sulfuric acid derivative is selected from the group consisting of alkyl sulfates, alkyl sulfonates, and alkyl benzene sulfonates, each alkyl group containing from 4 to 18 carbon atoms, and wherein the components of the first base are selected from the group consisting of alkali metals, alkaline earth metals, and earth metals, and wherein the components for the second base are selected from the group consisting of ammonia and organic bases, and wherein said salt mixture is present in an amount of 0.05–10 percent by weight of the total mixture, and grinding is continued until the water evaporates and a homogeneous dry powder product is obtained, which is dispersible in organic solvents.

3,019,124
MULTICOLOR PHOTOSENSITIVE FILM AND PROCESS OF MAKING THE SAME

Howard G. Rogers, Weston, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Apr. 12, 1956, Ser. No. 577,711
6 Claims. (Cl. 117—8)



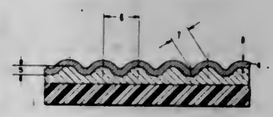
1. The method of manufacturing a photosensitive element having at least two sets of submacroscopic light-sensitive elemental portions systematically arranged in a screen pattern, said method comprising embossing the surface of a support to form a relief impression having systematically arranged spaced-apart elevated surface sections joined by depressed surface sections interspersed therebetween, forming a first light-sensitive layer of substantially uniform thickness on said embossed surface of said support, said first light-sensitive layer having a predetermined effective spectral sensitivity and containing a first color-providing substance selected from the class consisting of a first dye and intermediates for said first dye, and filling the depressions remaining in the surface of said element to the level of the raised sections thereof with a second light-sensitive material having a predetermined effective spectral sensitivity substantially different from the spectral sensitivity of said first light-sensitive layer and containing a color-providing substance selected from the class consisting of a second dye and intermediates for said second dye.

4. The method of manufacturing a photosensitive element having at least two sets of submacroscopic light-sensitive elemental portions systematically arranged in a screen pattern, said method comprising forming a first light-sensitive layer of substantially uniform thickness on the surface of said support, said first light-sensitive layer having a predetermined effective spectral sensitivity and containing a first color-providing substance selected from the class consisting of a first dye and intermediates for said first dye, embossing said element, including said light-sensitive layer, to form a relief impression having systematically arranged spaced-apart elevated surface sections joined by depressions interspersed therebetween, and filling said depressions to the level of said raised surface sections with a second light-sensitive material having a predetermined effective spectral sensitivity substantially different from the spectral sensitivity of said first light-sensitive layer and containing a color-providing substance selected from the class consisting of a second dye and intermediates for said second dye.

3,019,125
THIN MAGNETIC FILM

John S. Eggenberger, Wappingers Falls, and John C. Lloyd and Robert S. Smith, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 18, 1958, Ser. No. 774,656
4 Claims. (Cl. 117—8)



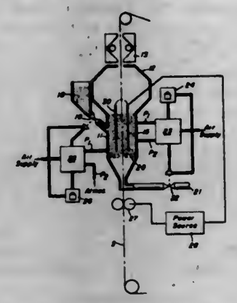
3. A magnetic storage element exhibiting an easy axis of magnetization defining opposite stable states of remanent flux orientation comprising a non-magnetizable substrate member formed with a plurality of surficial grooves having a predetermined depth and spacing relative to one another overlaid with a continuous metallic magnetic film having a thickness dependent upon the predetermined depth and distance of said grooves whereby the easy axis of said element is enabled by and directed along the grooves of said substrate member.

3,019,126
METHOD AND APPARATUS FOR COATING METAL STRIP AND WIRE

George A. Bartholomew, Penn Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 24, 1959, Ser. No. 801,626
3 Claims. (Cl. 117—17)

1. A method of coating elongated metal product which consists in drawing the product through a mass of particles of refractory coating material, fluidizing said mass by supplying a combustible mixture of gases thereto and igniting said mixture while passing through said bed



hereby heating the particles of coating material to promote their adherence to the product.

3,019,127
FILTERING MEDIUM AND METHOD OF MAKING THE SAME

Lawrence J. Czerwonka and Robert F. Logsdon, Louisville, Ky., assignors to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware

Filed Oct. 7, 1957, Ser. No. 688,732
17 Claims. (Cl. 117—33)



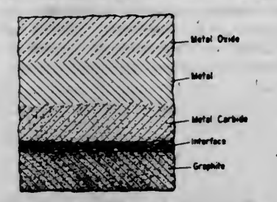
16. A method of making a fluid treating filtering medium comprising the steps of passing a fibrous pad of filter material into a spraying zone, spraying said pad with an amount of liquid adhesive sufficient to insure said pad is thoroughly treated with said adhesive, removing said pad from said spraying zone and exposing said pad to the atmosphere for a period of time sufficient to develop maximum tackiness of said adhesive, passing said pad to a particle impregnating zone, impregnating said pad with activated fluid treating particles, vibrating said pad to insure distribution of said particles in said pad, passing said pad to a heating zone, and curing said pad in said heating zone at temperatures sufficient to reactivate any of said fluid treating particles which might have been deactivated but below the decomposition temperature of said adhesive.

3,019,128
COATED CARBONACEOUS ARTICLES

William D. Smiley, Palo Alto, Calif., assignor, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York

Filed Sept. 17, 1957, Ser. No. 684,410
4 Claims. (Cl. 117—71)

1. An article protected against severe oxidation and erosion which comprises a carbonaceous core; the carbide of a refractory metal in substantially all the pores of the exposed surface of said core, said metal carbide substantially completely covering the exposed surface of said core; a coating of said refractory metal completely covering said metal carbide and any of the surface of said core which is exposed through said carbide, said metal being free of all metal carbide on the surface thereof; and a glass-like coating of a refractory oxide of said refractory metal totally covering said metal; each of said coating layers being bonded to the materials immediately adjacent

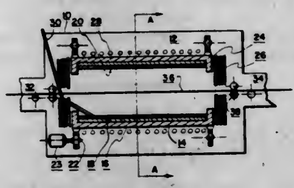


thereto, said protected article exhibiting only the refractory metal oxide material as its exposed surface.

3,019,129
APPARATUS AND PROCESS FOR COATING

Arthur G. Walsh, Essex Fells, N.J., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed Aug. 10, 1959, Ser. No. 832,705
11 Claims. (Cl. 117—101)

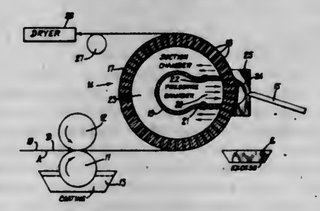


8. Apparatus for coating a sheet material with aluminum wherein aluminum is vaporized in vacuum and condensed on said sheet material, said apparatus comprising a vacuum chamber, means for introducing said sheet material into said chamber, means providing a source of aluminum vapors within said chamber, said source means comprising a cylindrical support having its axis horizontally positioned in said chamber and having an inner surface for supporting molten aluminum, means for rotating said support around its axis to hold the molten aluminum to the surface of said support by centrifugal force, means for heating said molten aluminum to vaporization temperature, and means for moving the substrate to be coated through said aluminum source generally parallel to the axis of rotation and within the cylinder of revolution defined by the rotating molten aluminum surface.

3,019,130
FLUID CUSHIONED COATING METHOD AND APPARATUS

Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Filed Oct. 2, 1958, Ser. No. 764,891
11 Claims. (Cl. 117—111)



1. A method of smoothing mobile coating composition on one side of a flexible web comprising, continuously

engaging a moving surface with the opposite side of said coated web to advance said web along a path defined thereby, yieldably moving a limited length of said advancing web away from said moving surface and held with its coated one side pressed against a rigid smoothing element by gas pressure acting across said limited length of said web to thereby smooth said coating composition on said one side of said web while it is yieldably supported by said gas pressure.

3,019,131

PLASTIC COATING PROCESSES

Howard C. Haas, Arlington, and Norman W. Schuler, Billerica, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,502
22 Claims. (Cl. 117—119.6)

1. In a process for producing plastic optical elements having mar-resistant surface coatings, wherein a thin coating solution comprising a polymerizable monomer of a diethylenic derivative of a polyalkyleneglycol is applied to the surface of said plastic optical element and said coating is polymerized in situ while said coating is held in contact with a heated element having an optically smooth surface; the improvement comprising using α-naphthoyl peroxide as a catalyst in said coating solution.

3,019,132

PROCESS FOR INCREASING THE FRICTIONAL RESISTANCE BETWEEN THREADS, YARNS AND THE LIKE OF SYNTHETIC LINEAR POLYAMIDES AND PRODUCT MADE THEREBY

Rudolf Gabler, Tamins, Switzerland, assignor to Inventa A.G. für Forschung und Patentverwertung, Lucerne, Switzerland

No Drawing. Filed Jan. 16, 1957, Ser. No. 634,420
Claims priority, application Switzerland Jan. 21, 1956
11 Claims. (Cl. 117—138.8)

1. A process for increasing the frictional resistance between filaments of a synthetic linear polyamide which comprises treating the filaments with a dispersion of a fine-grained powder composed of said polyamide and in solid particle form in fine liquid dispersion in an organic polyamide-binding adhesive and drying the filaments to bond said powder in solid particle form on said filaments to roughen thereby the surfaces of said filaments.

3,019,133

PROCESS FOR WATERPROOFING LEATHER

Rudi Heyden and Jürgen Plapper, Dusseldorf, Germany, assignors to Böhme Fettchemie G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed May 14, 1957, Ser. No. 658,956
Claims priority, application Germany May 14, 1956
8 Claims. (Cl. 117—142)

1. The process of waterproofing leather which comprises impregnating the leather with an inert organic solvent containing (1) from 0.5 to about 5% of a water-insoluble condensation product formed by a condensation reaction between about one mol of an alcoholate of a polyvalent metal selected from the group consisting of aluminum, magnesium, titanium and zirconium, and from about 0.5 to about 1.5 mols of a diacid phosphoric acid monoester of a high-molecular weight organic hydroxyl compound selected from the group consisting of alkanols having from 6 to 18 carbon atoms and alkylphenols having from 3 to 18 carbon atoms in the alkyl chain and (2) a small amount of a complex-stabilizing compound having a readily exchangeable hydrogen atom and drying said leather.

3,019,134

CELLULOSIC PRODUCT

John F. Hechtman and Edwin G. Greenman, Munising, Mich., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware

Filed Sept. 10, 1958, Ser. No. 760,152
7 Claims. (Cl. 117—155)

1. A cellulosic product comprising a sheet of loosely bonded cellulose fibers having prior to saturation an apparent density of about 1.0 to about 2.6, said sheet being saturated with from about 30 to 120 parts by weight on a solids weight basis per 100 parts by weight of dry fibers of a composition containing a copolymer of butadiene and acrylonitrile, said copolymer formed from 60–75 weight percent of butadiene and 40–25 weight percent of acrylonitrile and said copolymer characterized by having a Mooney viscosity (ML 4) of about 60–85, said product characterized by a high trapezoidal tear.

3,019,135

METHOD OF PRODUCING COATED GLASS ARTICLES

Leighton E. Orr, Tarentum, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

Original application May 19, 1955, Ser. No. 509,552. Divided and this application Oct. 17, 1957, Ser. No. 690,600
17 Claims. (Cl. 117—211)



1. In a method of providing a surface of a longitudinally extending refractory base with a metal oxide film formed as a heat reaction product of a hydrolizable metal salt, the improvement in forming a metal oxide film having a longitudinally extending thick area along a longitudinal edge portion of the base and a longitudinally extending thin area spaced from said longitudinal edge portion, which method comprises heating said refractory base to a temperature of above 400° F. and below the temperature at which the base becomes molten, dispensing toward the heated base a relatively cool spray of non-uniform density of a composition containing a heat reactive hydrolizable metal salt capable of forming a metal oxide film upon contacting a refractory base whose temperature is above 400° F. but incapable of forming a metal oxide film upon contacting the refractory base when the base is at a temperature substantially below 400° F., directed along a central axis thereof, said spray being relatively dense at one region and relatively sparse at another region, aligning the dense region of the spray with the one longitudinal edge portion of the heated base and the sparse region of the spray with the area of the base spaced from the longitudinal edge portion, establishing relative lateral movement between the heated refractory base and the central axis of the spray that increments of the longitudinal edge portion of the base are exposed in succession to the dense portion of the spray and increments of the longitudinally extending area spaced from said longitudinal edge portion of the base are exposed in succession to the sparse region of the spray to heat react said hydrolizable metal salt and thus form a thick metal oxide film on said base in each of said increments thereof exposed to the dense region of said spray and a thin metal oxide film on said base in each of said increments thereof exposed to the sparse region of said spray, and to cool the increments of said base exposed to the dense region of said spray at a different rate than the increments of said base exposed to the sparse region of said spray are cooled, and discontinuing the exposure to the spray of each increment of the surface of the heated refractory base and heat

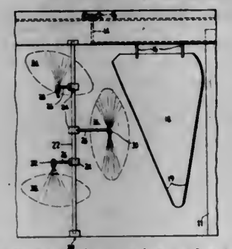
reaction of said hydrolizable metal salt after a period of time sufficient to form a continuous film of a metal oxide composition formed as the heat reaction product of said hydrolizable metal salt thereon having a relatively thick area at the longitudinal edge portion and a relatively thin area spaced therefrom, but before the temperature of any portion of the increment is cooled to below the minimum heat reaction film forming temperature.

3,019,136

TREATING GLASS SHEETS

James E. Auffenorde, Brackenridge, and Hugh P. Penone, Leechburg, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Filed Mar. 5, 1958, Ser. No. 719,362
7 Claims. (Cl. 117—211)



1. The improvement in coating refractory sheets of irregular outline with a continuous film containing metal oxide by heating a sheet to an elevated temperature above 400° F. and below the temperature at which the sheet becomes molten and spraying a dispersion of a hydrolyzable metal compound onto a surface of the heated sheet while providing relative movement between the sheet and the spray which comprises applying a plurality of discrete, sprays of metal oxide film forming material along divergent axes to intersect localized portions of the sheet surface to be coated along parallel paths of relative movement, the parallel paths of intersection combining to cover the entire sheet after the different portions of the sheet have been exposed to the divergent sprays from edge to edge along the paths of relative movement, each spray intersecting a portion of the surface of said heated sheet without intermingling with another spray prior to contacting said surface.

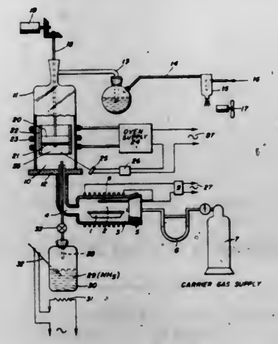
3,019,137

METHOD OF MANUFACTURING ELECTRICAL RESISTANCES AND ARTICLES RESULTING THEREFROM

Jacques Marie Noël Hanlet, Paris, France, assignor to Societe d'Electronique et d'Automatisme, Courbevoie, France

Filed Jan. 25, 1957, Ser. No. 636,410
Claims priority, application France Feb. 11, 1956
13 Claims. (Cl. 117—212)

1. A method of producing electrical resistor elements having a highly accurate, predetermined resistivity and temperature coefficient and a high degree of surface hardness which comprises mixing into a homogenous stream controlled amounts of vapors of the halides of at least two separate chemical elements, one of the components of said stream constituting at least 90% by weight of the stream and being a halide of an element selected from the group consisting of tin, silicon and titanium, the remainder of said stream being a minor component selected from the group consisting of the halides of niobium, bismuth, hafnium, tantalum, tungsten, zinc, nickel, copper and vanadium, carrying said mixture of vaporized halides into a gaseous stream comprised of an inert carrier gas and a reactive gas selected from the group consisting of water vapor, oxygen and ammonia, and mixtures thereof, contacting the resulting gaseous mixture stream with a dielectric base heated to a temperature high enough pyrolytically to decompose said halides into halogen and the free element and cause said reactive gas



to react with the base element forming a compound selected from the group consisting of the oxides and nitrides of said free elemens as a uniform deposit upon said dielectric base in intimate surface cohesion with said base and evacuating excess vapors from the zone surrounding said heated base.

3,019,138

MUCILAGE-PRODUCING MATERIAL

Roger H. Doggett, Natick, and Laurence R. B. Hervey, West Concord, Mass., and Charles E. Lanyon, Troy, N.Y., assignors, by direct and mesne assignments, to John A. Manning Paper Company, Inc., Troy, N.Y., a corporation of New York

Filed July 15, 1959, Ser. No. 827,233
3 Claims. (Cl. 127—29)

1. A dry product comprising friable aggregates, the aggregates consisting of dry, potentially mucilaginous material of mucilage-bearing plants bound in random fashion to alcohol-insoluble cellulosic matcrial contained therein to form a free-flowing divided material, said material being reducible to an active, stable flour-like powder having an apparent density of between about 0.1 and about 0.5 gm./cc. when ground at temperatures below about 210° F. to a particle size ranging between about 45 and 75 microns, the product being further characterized by its ability to quickly disperse in aqueous liquids by simple stirring to impart a stable, ropy-like character to said liquid.

3,019,139

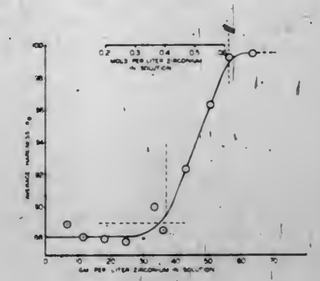
CHEMICAL PROCESS AND PRODUCT FORMED

Philip E. Lapat and Emanuel Gordon, New Haven, and Robert B. Holden, Orange, Conn., assignors, by mesne assignments, to United Nuclear Corporation, New Haven, Conn., a corporation of Delaware

Filed Dec. 2, 1960, Ser. No. 73,410
4 Claims. (Cl. 134—28)

1. The method of removing impurities from the surface of scrap metal specimens selected from the group consisting of titanium, hafnium, zirconium and alloys thereof which comprises treating a relatively large quantity of said specimens in a pickling bath comprising hydrofluoric acid and another inorganic acid, maintaining the hydrofluoric acid concentration between 0.1 and 0.5 normal, maintaining the other inorganic acid concentration be-

tween 0.5 and 8 normal, maintaining the temperature between 20° C. and 60° C. and maintaining the zirconium

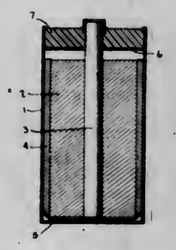


ion concentration in said bath at values below about 1.6 molar.

3,019,140
DESIZING PROCESS
William Kilby, Lancaster, and Wilfred Arthur Stephen White, Liverpool, England, assignors, by mesne assignments, to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
No Drawing. Filed Sept. 10, 1957, Ser. No. 683,017
Claims priority, application Great Britain Sept. 13, 1956
9 Claims. (Cl. 134—30)

1. A process for the removal of size from sized glass fiber textile material which comprises contacting said glass fiber textile material with a liquid organic solvent medium consisting essentially of a member of the group consisting of trichloroethylene and perchloroethylene and then contacting said material with hot water, whereby said size is removed.

3,019,141
GALVANIC DRY CELL AND ELECTROLYTE THEREFOR
Bodo Priebe, Ellwangen an der Jagst, Germany, assignor to Pertrix-Union G.m.b.H., Ellwangen an der Jagst, Germany, a company of Germany
Filed Aug. 20, 1959, Ser. No. 835,040
Claims priority, application Germany Sept. 12, 1958
13 Claims. (Cl. 136—155)



1. A galvanic dry cell having a soluble metal electrode, a depolarizer wetted with an electrolyte solution constituting an inner electrolyte, and an outer electrolyte paste, the inner and outer electrolyte consisting essentially of a zinc chloride solution of at least about 40%, by weight, of zinc chloride and the outer electrolyte also containing carob bean flour as a gelatinizing agent to thicken the solution to a pasty consistency.

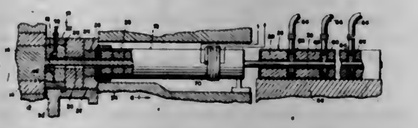
3,019,142
SEMICONDUCTOR DEVICE
Charles Z. Leinkram, Port Chester, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
No Drawing. Filed July 25, 1958, Ser. No. 750,893
4 Claims. (Cl. 148—1.5)

1. A method for fabricating a semiconductor device, comprising producing a saturated solution by dissolving a quantity of antimony trioxide in glacial acetic acid, coating a semiconductor wafer selected from the group consisting of germanium and silicon with the solution, air-drying said wafer, and firing at 900° C. for three hours.

3,019,143
PROCESS OF COLORING ANODIZED ALUMINUM
Rolf Dessauer, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 21, 1959, Ser. No. 847,703
5 Claims. (Cl. 148—6.1)

1. In the process of coloring anodized aluminum with a dye followed by sealing of the dye in the aluminum oxide coating, the improvement which comprises employing a dye solution containing from 5 to 100 percent by weight of the liquid portion thereof of a solvent for the dye, said solvent being a compound selected from the group consisting of dimethylformamide, diethylformamide, dimethylacetamide, diethylacetamide and dimethylsulfoxide.

3,019,144
EXTRUSION HEAT TREATING SYSTEM
Alfred Michael Murphy, Chester, Carl Martin Filak, Richmond, and Nicholas Alfon Wagner, Chester, Va., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Continuation of application Ser. No. 799,979, Mar. 17, 1959. This application Mar. 23, 1961, Ser. No. 99,009
8 Claims. (Cl. 148—12.7)

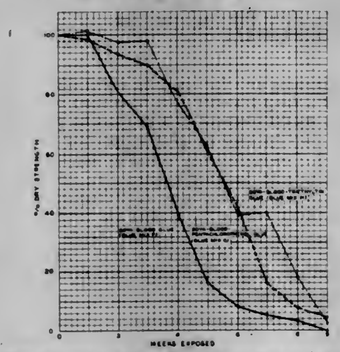


5. The method of producing a heat-treated extrusion having a predetermined cross-sectional shape from a heat-treatable aluminum alloy comprising the steps: heating an extrudable billet of heat-treatable aluminum alloy to solution heat treatment temperature; maintaining said solution heat treatment temperature for sufficient time to dissolve the soluble hardening constituents; extruding the billet through a die to produce an extrusion having said cross-sectional shape; maintaining the soluble hardening constituents of said alloy in solid solution subsequent to said extrusions; continuously quenching the extrusion while restraining the extrusion from warping; and precipitation hardening the quenched extrusion in substantially the size and shape in which it was extruded to increase the mechanical properties of the extrusion.

3,019,145
HIGH ENERGY HYDROCARBON FUEL CONTAINING MAGNESIUM ALLOYS
Lawrence Whitby, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 5, 1958, Ser. No. 732,790
14 Claims. (Cl. 149—87)

1. A fluid high energy fuel which consists essentially of a combustible hydrocarbon liquid containing a dispersant dissolved therein and a friable low ductility magnesium product selected from the group consisting of alloys and intermetallic compounds of magnesium with calcium, aluminum, silicon, and boron, in the form of relatively equiaxed particles less than 1.0 micron in size in an amount of from 20 up to 60 weight percent of the fuel, said dispersant being chemically inert with respect to the magnesium product and adsorbed upon surface of said equiaxed particles preventing agglomeration of said particles.

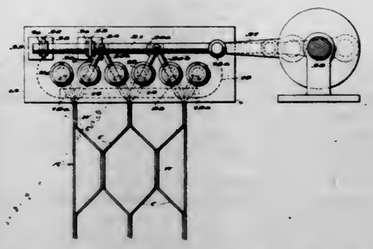
3,019,146
PRODUCTION OF BONDED CELLULOSE UNITS
Henry W. Haigh and Wallace M. Morgan, Seattle, Wash., assignors to American-Marietta Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 3, 1957, Ser. No. 681,818
21 Claims. (Cl. 154—45.9)



4. The process of bonding lignocellulose sheet materials with an adhesive material having a glue base to produce a consolidated product which resists the growth and deteriorating effects of microorganisms at the glue line, under conditions promoting such growth, the viscosity characteristics of said adhesive material normally sufficiently changing upon the addition of a fungicide to require the addition of a viscosity compensating agent, which comprises coating at least one of two opposed surfaces of lignocellulose sheet materials with an aqueous dispersion of said adhesive material containing an organo-tin compound having a tin-carbon bond, said organo-tin compound not sufficiently affecting the viscosity characteristics of said adhesive material to require the addition of a viscosity compensating agent, and then consolidating the sheets and setting the adhesive material thereby bonding the sheets and protecting the set adhesive material against attack from said microorganisms, said adhesive material comprising a glue base selected from the group consisting of starch and proteinaceous material, said organo-tin compound being selected from the group consisting of triethyltin p-nitro-phenoxide; triethyltin methane-sulphonamide; triethyltin toluene-p-sulphonamide; N-triethylstannyl-phthalimide and compounds of the formula R_3SnX where R is a radical linked directly to the tin radical by a tin-carbon bond and each R is independently selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl radicals, and X is an anion free of any tin carbon linkage.

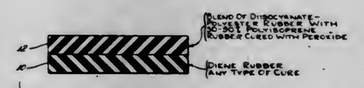
3,019,147
PLASTIC NETTING EXTRUSION APPARATUS WITH OSCILLATING CONTACTING DIE ELEMENTS AND PRODUCTS OF SUCH APPARATUS
George S. Nalle, Jr., 108 W. 2nd St., Austin, Tex.
Filed May 9, 1960, Ser. No. 27,662
15 Claims. (Cl. 154—46)

13. As an article of manufacture, a continuous meshed structure made up of a plurality of tubes of extrudable plastic material, adjacent tubes being in contact and welded together without crossing for a certain fraction of their length and then separating, and then being again



brought into contact and welded together, and so on; the welded portions being of a width nearly double the diameter of the tubes, and the separated portions being single tubes.

3,019,148
LAMINATED ARTICLE AND METHOD OF MAKING SAME
Walter R. Hansch, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 26, 1955, Ser. No. 542,849
9 Claims. (Cl. 154—48)



1. A laminate comprising (A) a diene rubber stock cured and adhered to (B) a stock comprising a blend of (1) a diisocyanate-chain-extended polyester rubber with (2) an isoprene rubber, said stock (B) containing from 50% to 75% of isoprene rubber, based on the weight of polyester rubber and isoprene rubber therein, and being cured by an organic peroxide curing agent.

3,019,149
TIRE AND METHOD OF MAKING SAME
Norman T. Bruber, Huntington Park, Calif., assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 20, 1957, Ser. No. 679,305
1 Claim. (Cl. 156—87)



A method of producing perforated tire ply material, comprising the steps of uniting a sheet of cord fabric with an unvulcanized rubbery material, thereafter positively moving the resulting unvulcanized, rubberized sheet into driving engagement with a plurality of piercing members, deflecting adjacent cords of said rubberized sheet in opposite directions and forming longitudinally extending openings therein, and displacing a portion of said rubbery material from between said deflected cords in a direction parallel to said cords, while maintaining said rubberized sheet in the unvulcanized state, whereby to provide in said unvulcanized, rubberized sheet a plurality of longitudinally extending voids between adjacent cords thereof.

ERRATUM

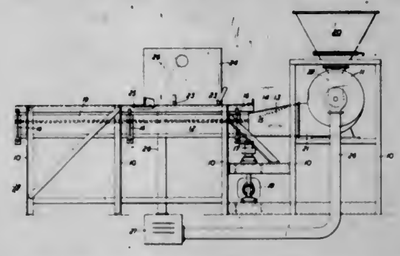
For Class 156—135 see:
Patent No. 3,018,821

3,019,150
TAPE CAPACITOR
Benjamin L. Davis, Washington, D.C., and Wilbur C. Nyberg, Youngstown, Ohio, assignors to the United States of America as represented by the Secretary of the Navy
Original application Mar. 15, 1955, Ser. No. 494,592. Divided and this application July 23, 1958, Ser. No. 750,542
13 Claims. (Cl. 156—184)
(Granted under Title 35, U.S. Code (1952), sec. 266)



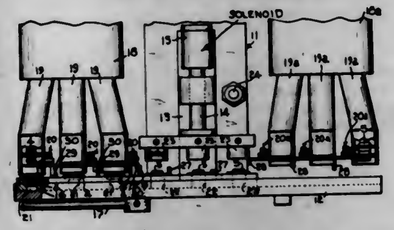
11. The method of making a capacitor comprising impregnating a porous tape with conductive material in a binder component and solvent, coating one side of the resulting conductive tape with a dielectric material in a binder, placing two lengths of said coated tape together with said coated sides adjacent one another said binder being in its uncured state, applying pressure urging said lengths of tape toward one another excluding all entrapped air, applying an insulating layer to one side of the combined lengths of tape, folding a portion of the resulting combination of layers over itself at least one time, curing the folded combination of layers under heat whereby said lengths of conductive tape and said coating of dielectric disposed therebetween become permanently bonded.

3,019,151
MACHINES FOR FORMING PADS OR PADDING FROM TEXTILE OR OTHER FIBRES
Albert Edward Callaghan, West Lavington, Midhurst, England, assignor to Birfield Engineering Limited, London, England
Filed May 11, 1959, Ser. No. 812,293
4 Claims. (Cl. 156—375)



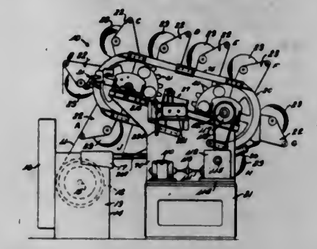
1. A machine for forming fibres into padding comprising a blower, means to deliver fibres to the blower, a duct leading away from the blower and terminating remote from the blower in a delivery end, a tray adjacent to the delivery end of the duct to receive fibres delivered along the duct by the blower, upstanding sides on the tray, a vented cover for the tray extending between said upstanding sides, the duct delivering the fibres to the tray between the sides and beneath the cover, and means to vibrate the tray to consolidate the fibres delivered thereto into padding and to move the latter towards a delivery point.

3,019,152
APPARATUS FOR APPLYING SNAP FASTENER ELEMENTS TO SUPPORTING MATERIALS
Walter I. Jones, Belmont, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,921
4 Claims. (Cl. 156—380)



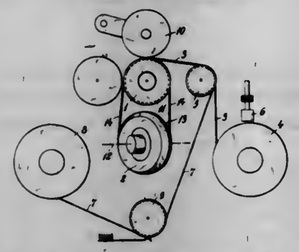
4. An attaching unit for applying a plurality of fastener elements of a snap fastener part consisting of a stud element and a socket element to a supporting part comprising at least two fastener element supporting means, feeding means for each fastener element, supporting means for dispensing said fastener elements to said supporting part, sealing apparatus including high frequency electrical energy producing means for sealing the fastener elements to the supporting part, and transfer means for carrying said fastener elements from each of said fastener supporting means to said sealing apparatus, and means to actuate said sealing apparatus.

3,019,153
APPARATUS FOR BUILDING TIRES
John Noall, Cuyahoga Falls, and Roy R. Putt, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Dec. 11, 1958, Ser. No. 779,580
1 Claim. (Cl. 156—406)



Apparatus for forming a number of rubberized fabric plies into a cylindrical tire body, comprising a tire building drum rotatable about its axis, an endless conveyor mounted adjacent said drum, a plurality of combination ply storage and dispensing devices mounted on said conveyor in spaced relation to each other and adapted for sequentially moving by movement of said conveyor into and out of position for dispensing fabric onto said drum, means for driving said drum at a predetermined controlled speed, means mechanically connected to said conveyor for sequentially moving each of said ply storage and dispensing devices into and out of fabric dispensing position with regard to said drum, a variable speed drive mounted on said conveyor and adapted for driving each said dispensing device when it is in said fabric dispensing position, and means linking said conveyor and said variable speed drive for sequentially varying the speed of said drive a predetermined amount dependent upon which of said storage and dispensing devices is in said dispensing position whereby all said fabric plies are applied to said drum with a predetermined constant tension.

3,019,154
APPARATUS FOR THE PRODUCTION OF FLEXIBLE TUBES OR HOSES HAVING HELICALLY EXTENDING REINFORCING ELEMENT
Leiv Helly-Hansen, Moss, Norway
Filed Nov. 19, 1958, Ser. No. 774,879
Claims priority, application Norway Dec. 9, 1957
1 Claim. (Cl. 156—429)



Apparatus for continuously forming flexible hose of the wire reinforced type having tape disposed helically in overlapping relationship comprising a winding drum and a guide roller disposed adjacent one another on axes extending at an acuate angle to each other in parallel planes, said winding drum having a pair of annular grooves at the periphery thereof in planes extending in spaced relationship normal to the drum axis, said guide roller having an annular groove at the periphery thereof in a plane extending normal to the roller axis, drive means for rotating each of said drum and said roller through engagement with a corresponding end of each, the other end of each of said drum and said roller being free and unobstructed, means for feeding the tape and the wire onto the drum with one edge of the tape in overlapping relationship with the wire in the drum groove remote from said free end thereof, whence the tape and the wire pass onto the roller with the wire and said edge in overlapping relationship in the groove thereon, said roller extending in the space between said planes of the drum grooves in such angular relationship with the drum that rotation of the roller and the drum carries the wire and said overlapping edge of the tape into the other of the drum grooves, whereby the other edge of the tape overlaps said wire and said first-named overlapping edge in the first-named drum groove, and means for welding the wire and the two overlapping edges of the tape together in the first-named drum groove.

ERRATUM

For Class 156—465 see:
Patent No. 3,018,820

3,019,155
DECORATIVE LAMINATES
Francis H. Snyder, Newtown, Conn., assignor to Francis H. Snyder and Associates, Incorporated, New Milford, Conn., a corporation of Connecticut
No Drawing. Filed Dec. 21, 1956, Ser. No. 629,791
10 Claims. (Cl. 162—149)

1. The process of making a felted fiber panel, bonded by thermosetting resin, which comprises obtaining fiber in a range of fiber lengths wherein the average length is 1 to 2 mm. and at least twenty percent of the fibers are of 3 to 5 mm. average length and wherein the uncured resin is distributed thinly upon individual fiber, substantially all of the resin required being distributed on substantially less than all of the fibers, forming the fibers into a felted sheet and pressing the sheet at an elevated temperature to cause the resin to flow throughout the felted mass to bond the same into a unitary panel.

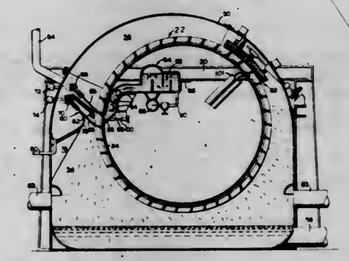
3,019,156
WET STRENGTH PAPER CONTAINING POLYAMIDE
Lennart A. Lundberg, Stamford, Conn., and Lucius H. Wilson, Valdosta, Ga., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Apr. 29, 1957, Ser. No. 655,488
8 Claims. (Cl. 162—168)

6. A process of manufacturing paper of improved wet strength which comprises forming a dilute aqueous suspension of papermaking cellulose fibers, adding thereto an effective amount of an aqueous solution of a cationic water-soluble methylenebisacrylamide-alkylenepolyamine condensate as wet-strength agent, whereby said condensate is adsorbed by said fibers, sheeting the fibers to form a waterlaid web, and drying said web.

3,019,157
WEB-FORMING FIBROUS SUSPENSIONS OF IMPROVED FREENESS
Walter F. Reynolds, Jr., and Norman T. Woodberry, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 6, 1958, Ser. No. 765,320
16 Claims. (Cl. 162—168)

5. A process of manufacturing paper which comprises forming an aqueous suspension of cellulose papermaking fibers, adding thereto between about 0.5% and 5% of a water-soluble aluminum metal salt based on the dry weight of fibers, thereby decreasing the pH of the suspension below 5, adding sufficient of a water-soluble alkali to decrease the acidity of the suspension by at least 0.1 of a pH unit but insufficient to raise the pH of the suspension above about 8, adding between about 0.0001% and 0.1% based on the dry weight of the fibers of a water-soluble anionic linear carbon chain polymer having a molecular weight in excess of 5 million substantially composed of carbamoylalkylene and carboxyalkylene linkages containing not more than 4 carbon atoms each, the number of carboxyalkylene linkages being between about 2% and 15% of the total number of carbamoylalkylene and carboxyalkylene linkages, sheeting said suspension on a papermaking screen to form a waterlaid web, draining free water from said web, and drying said web to form paper.

3,019,158
WEB FORMING METHOD AND APPARATUS
Ralph M. Newman, Jr., Romney, W. Va.
(R.D. 1, Cobbler's Knoll Farm, Kennett Square, Pa.)
Filed Dec. 8, 1959, Ser. No. 858,117
8 Claims. (Cl. 162—212)



1. An apparatus for forming a continuous fibrous web comprising: a rotatable drum having a foraminous cylin-

drical wall; means for depositing a fiber slurry on the interior of said wall, whereby rotation of said drum effects liquid extraction from said slurry leaving a fibrous web on the interior of said wall; a chute having a portion positioned inside and adjacent to said drum wall, said chute including bottom, side and top walls defining a plenum chamber adapted to receive fluid under pressure, said top wall being formed having apertures for discharging said fluid upwardly to support said web; and means for directing a jet of fluid inwardly through said drum to transfer the web of the interior of said drum to said chute.

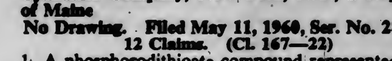
3,019,159

NOVEL PHOSPHORODITHIOATES AND METHODS FOR PREPARING THE SAME

Bernard Miller, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 11, 1960, Ser. No. 28,236
12 Claims. (Cl. 167—22)

1. A phosphorodithioate compound represented by the general formula:



wherein R is a radical selected from the group consisting of lower alkyl, phenyl and naphthyl and R_1 is a lower alkyl radical.

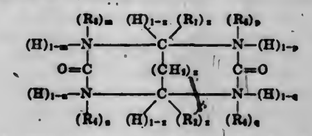
3,019,160

HALOGLYCOLURIL BACTERICIDAL COMPOSITIONS FOR DISINFECTING AND BLEACHING

Frank B. Slezak and Irving Rosen, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed May 11, 1959, Ser. No. 812,133
11 Claims. (Cl. 167—33)

1. A composition of matter comprising a mixture of an alkaline material selected from the group consisting of alkali-metal carbonates, silicates and phosphates and a compound of the formula:



wherein R_1 and R_2 are alkyl groups; R_3, R_4, R_5 and R_6 are halogen; *x*, *m*, *n*, *p* and *q* are each numbers from 0 to 1, inclusive.

8. The method of disinfecting and destroying bacteria which comprises contacting the material to be disinfected with the composition of claim 1.

3,019,161

METHOD OF TREATING MYCOTIC INFECTIONS

Frank Gerai, New York, N.Y., assignor to The Baker Castor Oil Company, Jersey City, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 28, 1958, Ser. No. 711,546
7 Claims. (Cl. 167—58)

1. The method of treating a mycotic infection which comprises applying to the locus of the infection an antimycotic composition comprising as an effective agent a compound selected from the group consisting of heptaldehyde and an addition product of heptaldehyde and a bisulfite selected from the group consisting of alkali metal bisulfites and alkali earth metal bisulfites, in a dispersing medium, the amount of said effective agent in the composition being from about .5% to about 30% by weight.

3,019,162

CINCHOPHEN-HYDROCORTISONE TOPICAL COMPOSITIONS

Matthew J. Brunner, Floanmoor, Paul Finkelstein, Wilmette, and Herbert E. Hibsick, Elmwood Park, Ill., assignors to The Gillette Company, Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 18, 1959, Ser. No. 813,678
4 Claims. (Cl. 167—58)

1. A composition for topical use which comprises: from about 0.5% to about 2% cinchophen and at least about 0.2% of a compound selected from the group consisting of hydrocortisone and hydrocortisone acetate; dispersed in a pharmaceutically acceptable dermatologic base.

3,019,163

HEMORRHOIDAL COMPOSITION

Lucien Hernist, Rua Aperana 117, Rio de Janeiro-Leblon, Brazil

No Drawing. Filed July 13, 1959, Ser. No. 826,400
5 Claims. (Cl. 167—63)

1. A composition adapted for the local treatment of hemorrhoids and the like, said composition consisting essentially as co-active ingredients of the aluminum salt of alpha-hydroxy-propionic acid, of a topical anesthetic selected from the group consisting of ethylamino benzoate, 2-diethyl aminoethyl ester of para-amino-benzoic acid, 2-butoxy-n-(2-diethyl aminoethyl) choninamide hydrochloride, 2-(isobutylamino)-ethyl para-amino-benzoate hydrochloride, and 2-dimethyl amino ether of para butyl-amino benzoic acid, and of a substance selected from the group consisting of sodium carboxymethylcellulose, methyl cellulose, dioctyl sodium sulphosuccinate, sodium lauryl sulphate, sorbitan mono-oleate and sorbitan mono-oleate polyester.

3,019,164

URETHAN AND 6 AZAURACIL IN CANCER THERAPY

George H. Hitchings, Tuckahoe, and Samuel Bieber, Mount Vernon, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Jan. 22, 1957, Ser. No. 635,083
4 Claims. (Cl. 167—65)

1. A process which comprises the concurrent administration of from approximately 1 to 5 parts of 6-azauracil and from 1 to 5 parts of urethan whereby the action of the latter is potentiated.

3,019,165

SUNBURN PREVENTIVE AND BURN REMEDY

Leo Mangor, Roslyn, Pa., assignor to Edgewood Laboratories, Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 9, 1958, Ser. No. 734,110
4 Claims. (Cl. 167—65)

3. A method of preventing and treating the effects of sunburn which comprises orally administering a solid composition consisting essentially of about 12 parts by weight acetyl salicylic acid, about 3 parts by weight para aminobenzoic acid and about 0.24–2 parts by weight of an antihistamine, the total daily dose of para aminobenzoic acid being not in excess of about 300 mg.

3,019,166

ANTIPHLOGISTIC AND CHOLERETIC COMPOSITIONS AND PROCESS OF THERAPEUTICALLY USING SAME

Hugo Zellner, Linz (Danube)-Ebelsberg, Austria, assignor to Byk-Gulden Lomberg Chemische Fabrik G.m.b.H., Konstanz (Bodensee), Germany, a corporation of Germany

No Drawing. Filed May 26, 1958, Ser. No. 737,543
6 Claims. (Cl. 167—65)

6. A choletetic and antiphlogistic composition in dosage unit form for administration to patients with decreased cholepoiesis, the essential active constituent thereof being selected from the group consisting of α-naphthyl acetic acid, its salts with pharmaceutically acceptable bases, and the molecular compounds of salts of said α-naphthyl acetic acid with antipyretic-analgetic pyrazolone bases, the said essential active constituent being combined with a vehicle therefor and the said dosage form being selected from the group consisting of oral, parenteral, and rectal dosage forms, each dosage unit containing between about 75 mg. and about 500 mg. of the essential active constituent, calculated as free α-naphthyl acetic acid.

3,019,167

METHOD OF ADMINISTERING STREPTOKINASE SYSTEMICALLY

Irving Innerfield, 20 Knickerbocker Road, Tenafly, N.J.

No Drawing. Filed May 1, 1959, Ser. No. 810,259
3 Claims. (Cl. 167—73)

1. The method of treating a body injury which comprises increasing fibrinolysis at the site of the injury through the systemic administration of streptokinase by placing a dosage quantity of streptokinase in contact with mucous membrane containing plasminogen, so that the streptokinase combines with plasminogen and permeates the mucous membrane.

3,019,168

HEAT AND ULTRA-VIOLET LIGHT ATTENUATION OF POLIO VIRUS

Alton R. Taylor, Grosse Pointe Park, Mich., assignor to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Feb. 20, 1956, Ser. No. 566,374
13 Claims. (Cl. 167—78)

1. Process for producing a poliomyelitis virus vaccine which comprises exposing a solid-free aqueous medium in which poliomyelitis virus is capable of existing but incapable of growth, which contains live poliomyelitis virus and has an infectivity titre of at least 10^{-6}, to exposure in a film not greater than 100 microns in thickness for not more than two seconds to a source of ultraviolet light emitting a high proportion of its energy at a wave length of 2537 angstrom units and having an intensity between 12,500 and 32,000 micro-watts per square centimeter of film surface exposed and then incubating the exposed solution at a temperature of 35 to 40° C. for a time sufficient to reduce the infectivity titre of the solution to zero.

3,019,169

SALICYLATE DRY SHELL COATING OF DRY 4-AMINOQUINOLINE CORE, AND DRY-COMPRESSING TABLET-MAKING PROCESS

Theodore G. Klumpp, Port Washington, J. Edward Wolff, South Schodack, and Leonard L. Kaplan, Albany, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed June 23, 1958, Ser. No. 744,014
10 Claims. (Cl. 167—82)

1. A stable medicinal composition in tablet form composed of a dry-compressed core comprising a 4-aminoquinoline-type antimalarial drug and adjuvants, and a dry-compressed shell coating comprising a salicylate and adjuvants, said finished tablet on storage retaining its original salicylate content, physical appearance and disintegration time of the order of 3 to 25 minutes.

3,019,170

METHOD OF INCREASING MICROBIAL ACTIVITIES

Elmer A. Weaver, Spring Mount, Pa., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Mar. 8, 1960, Ser. No. 13,670
6 Claims. (Cl. 195—51)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An improved process for the microbiological oxidation of progesterone to 11-alpha-hydroxyprogesterone which comprises suspending smooth-surfaced particles produced by attritively colliding crystalline particles of progesterone at supersonic velocity in water containing a small amount of a wetting agent, sterilizing the suspension, adding a quantity of the sterilized suspension to a vigorously growing culture of *Aspergillus ochraceus* diluted with at least about an equal volume of water to provide a concentration of progesterone of about from 20 to 50 grams per liter of diluted culture, incubating the resulting mixture whereby progesterone is oxidized by the growing culture to 11-alpha-hydroxyprogesterone, and recovering the 11-alpha-hydroxyprogesterone from the reaction mixture.

3,019,171

ACTIVATED ENZYME COMPOSITIONS

Alfred Bloch, Highland Park, and Ralph A. Messing, Somerville, N.J., assignors to Ethicon, Inc., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,366
16 Claims. (Cl. 195—68)

1. An activated enzyme composition adjusted to a pH of from about 3.0 to about 5.0 comprising a plant proteolytic enzyme selected from the group consisting of pinguinain, papain, ficin, bromelin, bromelain and asclepain and, in non-toxic concentration, at least one metal ion selected from the group consisting of calcium, magnesium, manganese and cobalt in the form of their non-toxic salts.

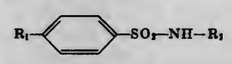
3,019,172

PRODUCTION OF 7-CHLORO-6-DEMETHYL-TETRACYCLINE

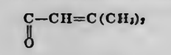
Joseph Jacob Goodman, Nanuet, and Mary Matrishin, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 14, 1960, Ser. No. 14,503
12 Claims. (Cl. 195—80)

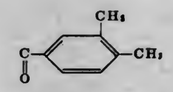
1. A process for producing 7-chloro-6-demethyltetracycline which comprises cultivating a chlortetracycline-producing microorganism of the genus Streptomyces in an aqueous nutrient medium containing assimilable sources of carbohydrate, nitrogen and inorganic salts under submerged aerobic conditions and in the presence of a small amount of a methylation inhibitor having the formula:



wherein R_1 is a member of the group consisting of H and NH_2 and R_2 is a member of the group consisting of phenyl, pyridinyl, triazinyl, pyridazinyl, pyrimadinyl,



and



whereby substantial quantities of 7-chloro-6-demethyltetracycline are produced.

3,019,173

METHOD FOR PREPARING TETRACYCLINE

Masao Arishima, Nakano-ku, Tokyo, and Yasuharu Sekizawa, Shibuya-ku, Tokyo, Japan, assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 4, 1956, Ser. No. 589,004
11 Claims. (Cl. 195—80)

1. In a process of preparing tetracycline by aerobic fermentation of an aqueous fermentation medium with microorganisms of the Streptomyces genus which produce chlortetracycline when chlorides are present the improvement which comprises the step of adding from about 5 to 500 parts per million of an organic compound which inhibits the formation of chlortetracycline said organic compound being selected from the group consisting of those five and six-membered heterocyclic compounds having the structure:



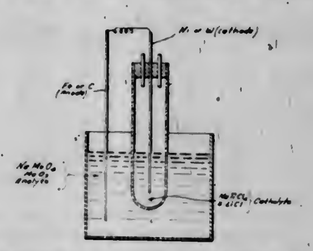
wherein X is a member of the group consisting of S, SH, SR, NH_2, NHR and NRR in which R is a member of the group consisting of a metal, alkyl, benzyl, phenyl and substituted phenyl radicals and wherein Y is a member of the group consisting of sulfur, oxygen and nitrogen.

3,019,174

PROCESS FOR ELECTROWINNING TITANIUM FROM LOWER VALENT TITANIUM ALKALI CHLORIDES

Abner Brenner, Chevy Chase, Md., and Joseph M. Sherfey, Arlington, Va., assignors to the United States of America as represented by the Secretary of the Army

Original application May 27, 1955, Ser. No. 511,819, now Patent No. 3,002,905, dated Oct. 3, 1961. Divided and this application Mar. 3, 1961, Ser. No. 125,289
2 Claims. (Cl. 204—64)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The process of electrowinning titanium from lower valent titanium alkali chlorides contained in the catholyte of an electrolytic cell in which the catholyte consists of a molten salt mixture containing divalent and trivalent sodium titanium chlorides as the solute and the anolyte consists of a low melting eutectic containing sodium ions, which process comprises maintaining a separation of said anolyte from said catholyte by means of a solid glass diaphragm impervious to the passage of the catholyte or anolyte, passing an electric current through said cell and said diaphragm and recovering titanium as a powder.

3,019,175

MANUFACTURE OF 1,1,1-TRICHLOROETHANE

Albert J. Haefner and Franklin Conrad, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 31, 1959, Ser. No. 863,180
4 Claims. (Cl. 204—163)

1. A process for the manufacture of 1,1,1-trichloroethane comprising reacting 1,1-dichloroethane and chlorine in a solvent selected from the group consisting of liquid aromatic hydrocarbons, liquid hydrocarbon sulfides and liquid inorganic sulfides, while maintaining the said reaction at a temperature of from about —10° C. to about 100° C. and in the presence of actinic light, and recovering a reaction product mixture having at least about a 9:1 ratio of 1,1,1-trichloroethane:1,1,2-trichloroethane.

3,019,176

FUEL ELEMENT

Andrew Wetherbee McReynolds, La Jolla, and Lieuwe J. Dijkstra, San Diego, Calif., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 21, 1957, Ser. No. 697,802
11 Claims. (Cl. 204—193.2)

1. A fuel element for a neutronic reactor comprising a mixture consisting essentially of a fissionable material in particulate form, substantially all of the fissionable material of said fuel element being in said mixture, a solid moderating material in particulate form substantially comprising a metal hydride having a low thermal neutron cross section and high temperature stability, and a solid supporting matrix substantially comprising radiation damage-resistant metal having a low thermal neutron absorption cross-section and high ductility and thermal conductivity, said particulate metal hydride and said particulate fissionable material being substantially uniformly dispersed within said matrix, and a closed, corrosion-resistant container formed of metal having low thermal neutron absorption cross-section and high thermal conductivity and structural strength encasing said matrix, said particulate metal hydride, said particulate fissionable material and said metal being chemically substantially non-reactive with said matrix metal, said matrix being bonded to said particulate metal hydride and to said container, whereby a fuel element of high structural strength and inherent safety is provided.

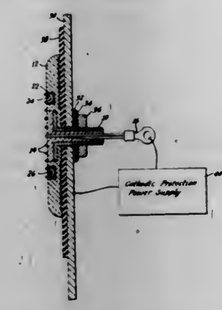
6. The method of fabricating a fuel element for a neutronic reactor, which comprises the steps of forming a mixture by uniformly dispersing particulate metal hydride having an average particle size between about 5 and about 1000 microns in an amount between about 60 percent and about 90 percent, by weight of said mixture, and particulate fissionable material having an average particle size between about 1 and about 50 microns in an amount between about 1 percent and about 10 percent within a supporting matrix substantially comprising radiation damage-resistant and corrosion-resistant aluminum having a low thermal neutron absorption cross-section and high ductility and thermal conductivity, said matrix being present in an amount of between about 10 percent and about 30 percent of said mixture, said metal hydride having a thermal neutron absorption cross section less than 1.5 barns and being stable at the operating temperature of the reactor in which it is to be used that is, above 300° C., encasing said mixture in a container formed of corrosion-resistant, high structural strength metal chemically substantially non-reactive with said matrix metal, said container metal having low thermal neutron absorption cross-section and high thermal conductivity, densifying said mixture within said container to provide a solid fuel element having a density of at least about 80 percent of theoretical density and high structural strength and inherent safety, wherein said fissionable material and said metal hydride are maintained in particle form and said particulate metal hydride and said container are bonded to said matrix, providing a hydrogen atmosphere in said container and sealing said container so as to render the same gas tight.

3,019,177

CATHODIC PROTECTION ANODE ASSEMBLY

Edward P. Anderson, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware

Filed Jan. 8, 1959, Ser. No. 785,680
5 Claims. (Cl. 204—196)



1. In an anode assembly for the cathodic protection of small craft, a generally flat, streamlined, fiberglass-reinforced, insulating support; a metallic tube having a flanged end embedded in said support and a threaded end extending from one side of said support for securing the anode assembly to the hull of said craft; and a wire serving as the anode and having one end extending through and insulated from said tube, the remainder of said wire being bent to form a plurality of generally straight parallel wire segments spaced from each other and forming an exposed grid on the other surface of said support, the portions of said wire which interconnect the ends of said segments being bent out of the plane of said grid and being embedded in said support.

3,019,178

ELECTRODE FOR ELECTROLYTIC SHAPING

Lynn A. Williams, Winnetka, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Oct. 29, 1959, Ser. No. 849,595
14 Claims. (Cl. 204—284)



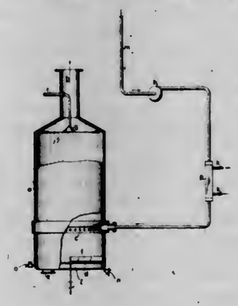
1. In an electrolyzing electrode the combination comprising, means providing a thin walled tubular structure, a corrugated member within said tubular structure with the corrugations thereof extending from side to side of said structure and secured to the internal walls thereof so as to cross brace said tubular structure against bulging under the application of internal hydraulic pressure, said corrugated member also serving to subdivide the passage through said tubular structure into a plurality of separate ducts of small transverse dimension and high aspect ratio, one end of said structure being finished to expose an end of said tubular structure and an edge of said corrugated member and providing the working end of said electrode adapted to be brought into close spacing relationship with a conductive workpiece to be shaped, and means connected to the other end of said structure to support said structure and to supply electrolyte under pressure to the ducts extending therethrough.

3,019,179

PROCESS OF SEPARATING WAX FROM WAX- AND OIL-CONTAINING MATERIALS

Alfred Hoppe, Hans Langner, and Heinrich Westerhoff, Frankfurt am Main, Herbert Wolke, Holstein, and Gunther Hauenstein, Hanau (Main), Germany, assignors to Edeleanu Gesellschaft m.b.H., Frankfurt am Main, Germany, a body corporate of Germany

Filed Sept. 15, 1953, Ser. No. 380,206
Claims priority, application Germany Sept. 15, 1952
4 Claims. (Cl. 208—33)



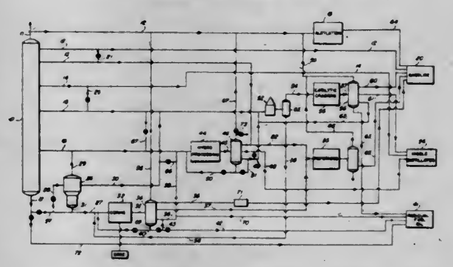
1. A process for separating wax from a wax-containing oil, which comprises spraying the liquid wax-containing oil at a temperature of approximately 40° C. in a finely divided state into a tower through which air at approximately atmospheric temperature and at least 10° C. below the pour point of the oil is passed in countercurrent to the finely divided particles of the sprayed mixture, whereby a solid granular mass is collected on the floor of the tower which floor is cooled to a temperature of —20° C., subsequently mixing and stirring said mass at —20° C. with 300% by volume of a mixture of dichlorethane and methylene chloride, separating the wax from the oil solution by filtration, mixing the wax with 100% by volume of a mixture of dichlorethane and methylene chloride, filtering the resulting solution to separate wax from the oil, washing the filter residue with the solvent consisting of dichlorethane and methylene chloride, and removing the solvent from the wax.

3,019,180

CONVERSION OF HIGH BOILING HYDROCARBONS

Max Schreiner, Jr., Woodbury, and Paul W. Snyder, Jr., Pitman, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

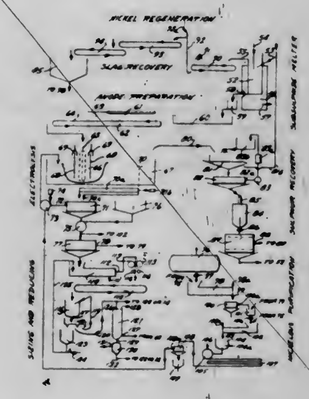
Filed Feb. 20, 1959, Ser. No. 794,650
1 Claim. (Cl. 208—51)



A process for producing gasoline and fuel oil from a crude petroleum charge, which comprises: maintaining a catalytic cracking zone under catalytic cracking conditions with a downwardly moving, substantially compact

reaction bed of granular cracking catalyst therein; separating a light straight run gas oil from said crude petroleum charge, which gas oil will vaporize entirely without substantial thermal conversion at the pressure maintained in said catalytic cracking zone; separating a heavy straight run gas oil from said charge; passing material from said charge boiling above heavy straight run gas oil to a confined coking zone and coking said material to produce coker naphtha and coker gas oil; passing the coker gas oil and heavy straight run gas oil into a hydroprocessing zone and reacting said gas oils with hydrogen therein to produce hydroprocessed naphtha and hydroprocessed gas oil; removing all of the straight run naphtha from said charge and passing all of said straight run naphtha, said coker naphtha and said hydroprocessed naphtha into a reforming zone and reforming said naphthas therein to produce high octane naphtha and hydrogen; passing hydrogen from the reforming zone to the hydroprocessing zone to supply the hydrogen consumed in the hydroprocessing zone; controlling the conditions in the hydroprocessing zone and the coking zone so that the hydrogen consumed in the hydroprocessing zone does not exceed the hydrogen produced in the reforming zone and the hydroprocessed gas oil may be entirely vaporized at the pressure maintained in the catalytic cracking zone without substantial thermal conversion; mixing the light straight run gas oil and the hydroprocessed gas oil with at least 10 volume percent of a higher boiling hydrocarbon material and flashing said gas oils from the mixture under conditions such that at least the major portion of the higher boiling hydrocarbon material remains in the liquid phase; separating the vaporized light straight run and hydroprocessed gas oils from the remaining liquid and passing this vapor into and through the catalytic cracking zone to be converted to lower boiling products, whereby the catalytic cracking zone operates only on vapor feed.

3,019,181
HYDROFINING AND CATALYST REGENERATION PROCESS
Marion Hayes Gwynn, Meslar Road, Morris Plains, N.J.
Filed Feb. 5, 1959, Ser. No. 791,302
11 Claims. (Cl. 208—217)

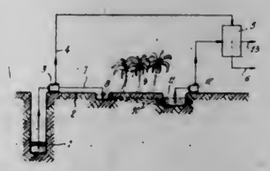


10. In the hydrofining of petroleum type fluids using catalytic nickel surfaces, the improvements that comprise conducting such hydrofining counter-currently under conditions to provide as spent catalyst sulphided nickel in which the proportion of sulphur to nickel is between about 0.3 and 0.4 by weight, and regenerating such spent catalyst by heating the same to form a melt and a floating slag containing impurities, casting the melt as a flat sheet, cooling the sheet both to solidify and anneal the same, connecting said sheet as anode in an aqueous solution of a nickel dissolving anolyte comprising chloride ion, passing direct current both to warm the solution and corrode the anode thereby releasing elemental sulphur and dissolving nickel which is retained as an oxidized compound, and processing the resulting oxidized compound as fresh catalytic material for reuse in the hydrofining of petroleum type fluids.

3,019,182
REGENERATION OF A NITROGEN BASE CONTAINING ION EXCHANGER
Jayarajan Chanmugam, Princeton, N.J., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Aug. 15, 1958, Ser. No. 755,145
Claims priority, application Netherlands Aug. 29, 1957
4 Claims. (Cl. 208—254)

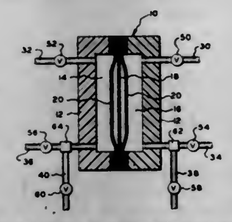
1. A process for refining a liquid hydrocarbon stream containing organic nitrogen bases comprising the steps of contacting the hydrocarbon stream with a sulfonated resin cation exchanger substantially in the hydrogen form and characterized by its high mobility protons whereby nitrogen bases are retained as organic ammonium ions by the exchanger, removing the resulting refined hydrocarbon stream from the exchanger and contacting the exchanger bearing organic ammonium ions with an aqueous solution containing 5–25% by weight of a proton donating material of the group consisting of strong mineral acids, alkali metal salts of strong mineral acids, inorganic ammonium salts of strong mineral acids and mixtures thereof, said aqueous solution also containing 0.001–1% by weight of a surface active agent of the group consisting of alkali metal salts of alkylated aromatic sulfonic acids and alkali metal salts of sulfated olefins to effect regeneration of said exchanger to the hydrogen form.

3,019,183
METHOD OF SOFTENING WATER BY ION EXCHANGE
Cyril Gomella, Alger, France, assignor to Societe d'Etudes pour le Traitement et l'Utilisation des Eaux—S.E.T.U.D.E., Alger, a French society
Filed Sept. 19, 1958, Ser. No. 762,141
Claims priority, application France Oct. 10, 1957
1 Claim. (Cl. 210—30)



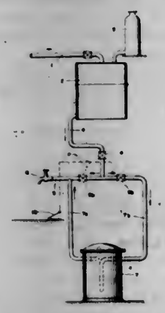
The method of obtaining soft water from a source of hard water containing at least sodium chloride and the carbonates and sulfates of calcium and magnesium and which is used for irrigating land in arid regions, comprising passing a quantity of hard water from said source through an ion exchanger, irrigating the land with another quantity of hard water from said source so that the carbonates and sulfates of calcium and magnesium precipitate before said sodium chloride by reason of evaporation of the water used for irrigating purposes and leaves a drainage water having an increased relative sodium chloride concentration, and contacting said drainage water with said ion exchanger for regenerating the latter.

3,019,184
FILTERING PROCESSES AND APPARATUS FOR USE IN CONNECTION THEREWITH
Judson G. Brown, Wilmette, Ill. (18 Park Ave., Wakefield, Mass.)
Filed July 27, 1954, Ser. No. 446,069
3 Claims. (Cl. 210—82)



3. A process for the cake filtration of low concentration suspensions of finely comminuted solids comprising passing the material to be filtered through a thin, sheet-like filtering medium with a pressure drop across said medium to cause the formation and deposit of cake on one surface of said medium and the discharge of clarified filtrate therethrough, cyclically reversing the direction of flow through said medium of said material, including a quantity of clear filtrate, to cause the formation and deposit of cake alternately on opposite surfaces of said medium and the discharge of previously deposited cake therefrom, the quantity of cake deposited on a surface of said filtering medium during each half cycle substantially exceeding the quantity of solids retained within the body of said medium during said half cycle, and utilizing unequal cake discharge from adjacent areas of said filtering medium with the reversal of the direction of flow of material therethrough to control the volume of flow of material through said medium and to cause corresponding inequality in the deposition of cake on adjacent areas of the opposite surface of said medium to ensure effective discharge of all cake from the first said surface thereof.

3,019,185
MEANS AND ARRANGEMENTS FOR DISTRIBUTING STERILIZED WATER AND THE LIKE LIQUIDS OF A WELL DEFINED GRADE
Claude Fouilland, Esubonne, and Jean Montagnon, La-Celle-Saint-Cloud, France, assignors to Procedes Industriels et Charbons Actifs (P.I.C.A.), Paris, France, a French company
Filed May 21, 1956, Ser. No. 586,157
Claims priority, application France May 25, 1955
7 Claims. (Cl. 210—205)



7. In combination, a chlorinating device, a dechlorinating apparatus, an outlet pipe from said device, a first connection from said outlet pipe to said apparatus, a second connection from said outlet pipe to a point of use, first and second valves in said first and second connections respectively, a third connection from said apparatus to said second connection at a point between said second valve and the point of use, and a control member operatively connected to said valves for simultaneously opening one and closing the other.

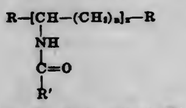
3,019,186
FLUID FILTERING MEDIUMS AND METHOD OF MAKING THE SAME
Milton A. Powers, 655 Bedford, Grosse Pointe 30, Mich.
Filed Dec. 12, 1957, Ser. No. 702,300
9 Claims. (Cl. 210—506)



1. A fluid filtering medium comprising a sheet member composed of a stiff material that is adapted to retain a given shape and having slits therethrough, the sheet being expanded in a direction to spread open said slits to provide fluid passageways therethrough and provide surfaces of said member along opposite edges of the passageways inclined angularly to the plane of the sheet member, and a fibrous flock material secured to said sheet member and extending across said passageways, the flock fibres being attached at one end to said inclined surfaces and the fibres on opposed surfaces extending toward and overlapping each other at said passageways.

3,019,187
LUBRICATING COMPOSITIONS
Jerome Panzer, Rahway, N.J., and Roy A. Westlund, Jr., Oxford, England, assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 6, 1957, Ser. No. 700,961
6 Claims. (Cl. 252—33.3)

1. A lubricating composition selected from the group consisting of solid lubricating compositions, semi-fluid lubricating compositions and fluid lubricating composition comprising about 0.5 to 50.0 wt. percent of a mixed-salt dispersed in a major proportion of naphthenic mineral lubricating oil and stabilized with about 0.01 to 5.0 wt. percent of a stabilizing agent, wherein said solid lubricant has been prepared by heating said mixed-salt at a temperature sufficient to form a complex and within the range of 300° to 500° F. and wherein said stabilizer is in the presence of said mixed-salt when the temperature has reached 300° F. in said heating, wherein said mixed-salt comprises in a molar proportion about 6 to 50 moles of an alkaline earth metal salt of a C_2 to C_4 fatty acid per mole of an alkaline earth metal salt of a sulfonic acid of about 200 to 700 molecular weight, and wherein said stabilizing agent is selected from the group of stabilizing agents consisting of: mono- and dialkylolamides of a C_9 to C_{21} saturated fatty acid wherein said alkyl groups contain 2 to 9 carbon atoms; alkylphenoxy polyoxyethylene and alkyl ethers thereof wherein said alkyl groups contain 1 to 12 carbon atoms and the number of oxyethylene groups in said polyoxyethylene chain is 5 to 30; and fatty acid condensates of polyamines of the general formula:



wherein R is a C_1 to C_6 akyl radical, R′ is a C_1 to C_{20} alkyl radical, n is 0 to 6 and x is 2 to 10.

3,019,188
LUBRICATING OIL COMPOSITIONS CONTAINING ESTERS OF POLYCARBOXYLIC AROMATIC ACIDS

William J. Craven, Elizabeth, Stephen J. Metro, Scotch Plains, and Alfred H. Matuszak, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Jan. 2, 1958, Ser. No. 706,593
5 Claims. (Cl. 252—57)

1. A lubricating oil composition suitable for lubrication of aircraft engines comprising a major amount of a synthetic aliphatic ester lubricating oil and about 0.25 to 10% by weight of a partial ester selected from the group consisting of monoalkyl pyromellitate and dialkyl pyromellitate, wherein said alkyl groups are alkyl groups of C_3 to C_{20} alcohols.

3,019,189
MIXED FERRITES BY A COPRECIPITATION PROCESS

Ernst Albers-Schoenberg, Metuchen, N.J., assignor to Steatite Research Corporation, Keasbey, N.J., a corporation of Delaware

No Drawing. Filed Apr. 7, 1958, Ser. No. 726,651
2 Claims. (Cl. 252—62.5)

1. In a co-precipitation process of preparing mixed ferrites of the formula $(MO,M'O).Fe_2O_3$, in which MO and M'O together comprise at least two bivalent metal oxides selected from the group consisting of copper, zinc, nickel, manganese, magnesium, cobalt, ferrous iron, cadmium, calcium, strontium and barium oxides, the steps comprising preparing an aqueous slurry of at least two finely divided compounds of at least two different bivalent metals, said compounds of said bivalent metals being selected from the class consisting of oxides, hydrates, and carbonates of said bivalent metal components, thereafter mixing oxalic acid with the slurry whereby metal oxalates of said bivalent metals substantially free of anionic impurities are precipitated, recovering the precipitated bivalent metal oxalates, thereafter mixing said mixed bivalent metal oxalates with ferric oxide to provide the ferric oxide component of the finished ferrite, and firing the resultant mixtures.

3,019,190
FIRE-RESISTANT HYDRAULIC FLUIDS

Rudolph J. Holzinger, North Merrick, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Jan. 19, 1959, Ser. No. 787,349
10 Claims. (Cl. 252—75)

1. A composition for use as hydraulic fluid consisting essentially of a water-in-oil emulsion containing about 0.1–5.0 percent by weight of oil soluble calcium petroleum sulfonate as an emulsifying agent and about 0.1–5.0 percent by weight of calcium soaps of aliphatic mono acids having carbon chains of about C_{18}–C_{20} as a stabilizing medium, the oil component of said emulsion being a hydrocarbon oil of viscosity range of about 50–400 Saybolt Universal seconds at 100° F., the water component of said emulsion being within the range of about 10–50 percent by weight and the ratio of sulfonate to soap being limited between 5/95 to 95/5.

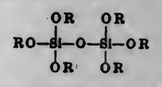
10. The method of preparation of a water-in-oil emulsion which comprises the steps: dissolving aliphatic mono acids having carbon chains of about C_{18}–C_{20} and oil soluble calcium petroleum sulfonate in the base oil, said oil being a hydrocarbon oil of viscosity range of about 50–400 Saybolt Universal seconds at 100° F., dispersing lime in the water, the amount of lime being limited between the stoichiometric ratio necessary to produce both the basic soap and the basic sulfonate and about 100 percent in excess of that amount, combining the oil phase with the aqueous phase in such a manner as to simultaneously effect both formation of basic calcium salts and emulsification, the water component of said emulsion being within the range of about 10–50 percent by weight, the final product containing about 0.1–5.0 percent by weight of oil soluble calcium pertroleum sulfonate, about 0.1–5.0 percent by weight of calcium soaps of aliphatic mono acids and the ratio of sulfonate to soap being limited between 5/95 to 95/5.

3,019,191
STABILIZED HYDRAULIC FLUID COMPOSITION

Neal W. Furby, Berkeley, and Charles D. Newman, Jr., San Pablo, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Sept. 28, 1954, Ser. No. 458,957
2 Claims. (Cl. 252—78)

2. A non-sludging hydraulic fluid composition consisting essentially of 85 to 97% by weight of a hexa-alkoxy disiloxane having the formula



in which the R's are alkyl groups of from 5 to 8 carbon atoms each, 3 to 15% by weight of a dialkyl silicone polymer having alkyl groups of 1 to 5 carbon atoms each and a viscosity of at least 1,000 centistokes at 77° F. and about 0.1 to 5.0% by weight of a secondary diarylamine having the formula



in which Ar is an aryl group selected from the class consisting of benzene and naphthalene groups and the R_1's and R_2's are members of the class consisting of hydrogen and alkyl groups, said secondary diarylamine having a total of from 8 to 24 carbon atoms in alkyl groups each containing from 1 to 16 carbon atoms positioned on the aromatic nuclei.

3,019,192
COPOLYMERS OF 2-CHLOROBUTADI-1,3-ENE AND α-CHLORACRYLONITRILE

Anton R. Heinz and Wilhelm Graulich, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 8, 1958, Ser. No. 778,591
Claims priority, application Germany Dec. 7, 1957
1 Claim. (Cl. 260—85.5)

An improved copolymerisation process which comprises subjecting a mixture of chloroprene and alpha-chloracrylonitrile to polymerization in an aqueous emulsion at a pH of 7–11 and a temperature of 5–60° C. in the presence of iodoform, the alpha-chloracrylonitrile being used in amounts of about 0.1–70% by weight of the above two monomers, and the iodoform being employed in quantites of about 0.2–2% based on the weight of monomers.

3,019,193
PROCESS OF TREATING THE RAW JUICE OF AGAVE PLANT LEAVES

Claude L. Spray, 4040 203rd St., Bayside, N.Y.

No Drawing. Filed Nov. 21, 1956, Ser. No. 623,538
6 Claims. (Cl. 252—87)

1. The process comprising heating the raw juice of Agave plant leaves containing the juicy and fleshy constituents thereof at a temperature of between about 200° F. and about 214° F. for a sufficient duration to concentrate the same to between about 15° and about 20° Baumé, centrifuging the concentrate to extract the solids content therefrom, adding sufficient alkaline material to the solids free juice to adjust the pH to between about 9 and about 11, heating the alkaline juice at a temperature of between about 180° F. and about 200° F. and for a sufficient duration to precipitate iron, calcium and magnesium ions contained in the juice, and centrifuging the liquor to remove the precipitate therefrom.

3,019,194
CLEANING COMPOSITION AND METHOD

Alan D. Brite, 335 S. Bentley, Los Angeles, Calif.

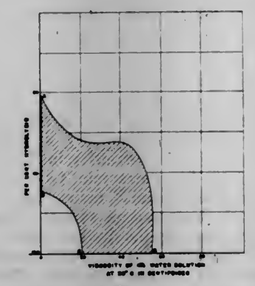
No Drawing. Filed Feb. 18, 1957, Ser. No. 640,580
6 Claims. (Cl. 252—142)

1. A cleaning composition for aluminum ware comprising an aqueous solution of from 1–20 percent of a fluoride salt selected from the group consisting of ammonium bifluoride and ammonium fluoride, and from 5–50 percent of glycolic acid.

3,019,195
METHOD AND COMPOSITION FOR TREATING COOLING WATER

Wayne L. Denman, Oak Park, and Herman Kerst, Des Plaines, Ill., assignors to Dearborn Chemical Company, Chicago, Ill., a corporation of Illinois

Filed May 1, 1959, Ser. No. 810,471
17 Claims. (Cl. 252—389)



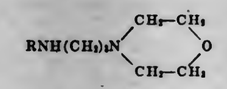
15. A composition for treating circulating water systems comprising a dry mixture of a water soluble polyphosphate, a water soluble chromate, a water soluble zinc compound, and a polyvinyl alcohol having a percent hydrolysis and viscosity relation contained within the curve bounded by the lines ABCDA of FIGURE 1.

3,019,196
PROCESS FOR INHIBITING CORROSION

Donald L. Anderson and Jean B. Thielen, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,299
4 Claims. (Cl. 252—392)

1. A method of preventing corrosion of metallic surfaces coming in contact with liquid media having corrosive properties comprising adding to said media a corrosion inhibiting amount of a compound selected from the group consisting of morpholino compounds represented by the structural formula

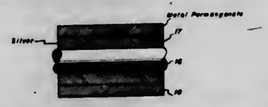


where R is an aliphatic hydrocarbon radical having from 8 to 22 carbon atoms, and the readily hydrolyzable carboxylic acid salts thereof.

3,019,197
CATALYST FOR THE DECOMPOSITION OF HYDROGEN PEROXIDE AND METHOD OF PREPARING SAID CATALYST

Charles E. Saunders, Washington, D.C.
(416 Valley Lane, Falls Church, Va.)

Filed Oct. 7, 1949, Ser. No. 120,209
5 Claims. (Cl. 252—477)
(Granted under Title 35, U.S. Code (1952), sec. 266)



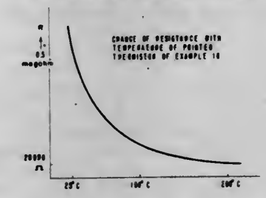
1. A catalyst for promoting quick starting and continuous activation of the decomposition of hydrogen peroxide comprising, a base, a porous plating of silver on said base, and a baked coating of metal permanganate on said plating.

5. The method of preparing a catalyst for decomposing hydrogen peroxide comprising the steps of electroplating a wire screen with silver whereby the plating is in a porous condition, coating said plated screen with a potassium permanganate solution, and drying said coated and plated screen in an oven at a temperature of 100° to 110° C.

3,019,198
THERMISTOR COMPOSITION

Maurice E. Dumesnil, Metuchen, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Jan. 18, 1961, Ser. No. 83,560
14 Claims. (Cl. 252—521)



1. As a new article of manufacture, a mixture of finely divided powder consisting essentially of a cerium compound, a strontium compound and a manganese compound, the mixture containing said compounds in such proportions that upon firing at a temperature of 1100° C. the resultant composition will be composed of between 10 and 90 mole percent MnO_2, between 1 and 70 mole percent SrO and between 1 and 89 mole precent CeO_2.

3,019,199
REGENERATION OF A NITROGEN BASE CONTAINING ION EXCHANGER

Jayarajan Chanmugam, Princeton, N.J., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 15, 1958, Ser. No. 755,121
Claims priority, application Netherlands Aug. 29, 1957
5 Claims. (Cl. 260—2.2)

1. A process for refining a liquid hydrocarbon stream containing organic nitrogen base comprising the steps of contacting the hydrocarbon stream with a solid organic sulfonated resin cation exchanger substantially in hydrogen form and characterized by its high mobility protons in such manner that said nitrogen bases are retained as organic ammonium ions by the cation exchanger, removing the resulting refined liquid hydrocarbon stream from the cation exchanger, contacting the exchanger at least

about 60% saturated with nitrogen bases relative to its ion exchange sites to regenerate the exchanger with an aqueous solution containing 5–25% of a salt of a mineral acid having positive ions selected from the group consisting of alkali metal and inorganic ammonium radicals to displace at least a portion of the organic ammonium ions with said positive ions and during the course of the regeneration in turn replacing at least a portion of the positive displacing ions with hydrogen ions applied by an aqueous solution containing 5–25% of a mineral acid to effect regeneration of said exchanger to the hydrogen form.

3,019,200

PREPARATION OF CELLULAR POLYESTER ORGANIC POLYISOCYANATE REACTION PRODUCT USING AMIDE CATALYST

Eric Gee, Herbert Gudgeon, and Kenneth Stephenson, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Nov. 29, 1956, Ser. No. 624,986
Claims priority, application Great Britain Dec. 1, 1955
2 Claims. (Cl. 260—2.5)

1. In the process of preparing a cellular polyurethane product produced by mixing a hydroxyl polyester with an organic polyisocyanate and water, said polyester being prepared by reacting a dihydric alcohol, a trihydric alcohol and a dicarboxylic acid, the improvement which comprises incorporating therein prior to the formation of a cellular product, a catalyst selected from the group consisting of N-(2-diethylaminoethyl)-benzamide, N-(2-diethylaminoethyl)-acetamide, N-(3-diethylaminopropyl)-acetamide and 3-diethylamino-propionamide.

3,019,201

METHODS OF MAKING POROUS APPLICATOR STRUCTURES

John J. Clancy, Westwood, John W. Rafferty, Marblehead, and Robert C. Wells, Arlington, Mass., assignors, by mesne assignments, to The Carter's Ink Company, Cambridge, Mass., a corporation of Massachusetts

Filed June 8, 1959, Ser. No. 818,785
6 Claims. (Cl. 260—2.5)

3. The method of making a porous applicator structure comprising forming a slurry of generally spherical particles of rubberlike material of which at least 90 percent by weight is constituted by particles between 0.001 and 0.01 inch diameter, and a liquid which does not substially coact with said particles to cause a change to their dimensions or shape, said liquid including a binder for said material, molding said slurry, removing said liquid from said slurry leaving the binder therein, and finally heating said particles and binder to cause the particles to adhere and become an integrated solid structure under sufficiently low pressure and temperature that the particles maintain their generally spherical character and form between them an intersphere region of capillary dimensions.

4. The method defined by claim 3 wherein the rubberlike material is a copolymer of butadiene and acrylonitrile, containing about 40 percent by weight of acrylonitrile, and the binder is a phenol formaldehyde resin.

3,019,202

DIEPOXY SULFONE COMPOSITIONS

Samuel W. Tinsley, South Charleston, Paul S. Starcher, Charleston, and Charles W. McGary, Jr., and Charles T. Patrick, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,816
45 Claims. (Cl. 260—18)

1. A copolymerizable composition comprising a diepoxy sulfone characterized by the formula

$$R—SO_2—R$$

wherein each R, individually, is selected from the group consisting of (*a*) a vic-epoxyalkyl radical in which the vic-epoxy group is at least one carbon atom removed from the sulfonyl group, (*b*) a vic-epoxycycloalkyl radical in which the vic-epoxy group is at least one carbon atom removed from the sulfonyl group, (*c*) a vic-epoxycycloalkylalkyl radical, (*d*) a 3-oxatricyclo[3.2.1.$0^{2,4}$]-oct-6-yl radical, and (*e*) a 3-oxatetracyclo[4.4.0.$1^{7,10}$.$0^{2,4}$]undec-8-yl radical; and a curing amount of an active organic hardener selected from the group consisting of polycarboxylic acids, polycarboxylic acid anhydrides, polyhydric alcohols, polyhydric phenols, polycarboxy polyesters, polythiols, polyisocyanates, polythioisocyanates, and polyacyl halides.

3,019,203

DIEPOXY SULFONE COMPOSITIONS

Charles T. Patrick, Jr., and Charles W. McGary, Jr., South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 31, 1960, Ser. No. 18,817
53 Claims. (Cl. 260—18)

1. A copolymerizable composition comprising a diepoxy sulfone characterized by the formula

$$R—O—X—SO_2—X—O—R$$

wherein each R, individually, is selected from the group consisting of (*a*) a vic-epoxyalkyl radical in which the vic-epoxy group is at least one carbon atom removed from the oxy group, (*b*) a vic-epoxycyclohexyl radical in which the vic-epoxy group is at least one carbon atom removed from the oxy group, (*c*) a vic-epoxycyclohexylalkyl radical, (*d*) a 3-oxatricyclo[3.2.1.$0^{2,4}$]-oct-6-yl radical, and (*e*) a 3-oxatetracyclo[4.4.0.$1^{7,10}$.$0^{2,4}$]unde-8-yl radical; and wherein each X, individually, is a divalent saturated aliphatic hydrocarbon radical which contains at least 2 carbon atoms in the divalent chain; and a curing amount of an active organic hardener selected from the group consisting of polycarboxylic acids, polycarboxylic acid anhydrides, polyhydric alcohols, polyhydric phenols, polycarboxy polyesters, polyfunctional amines, polythiols, polyisocyanates, polythioisocyanates, and polyacyl halides.

3,019,204

HARDENABLE POLYSILOXANE COMPOSITIONS AND CURING CATALYSTS THEREFOR

Jerome A. Preston, Toledo, Ohio, assignor to The Ranson & Randolph Company, Toledo, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 24, 1957, Ser. No. 692,026
13 Claims. (Cl. 260—18)

7. A method for producing a cured silicone material which comprises establishing a body of a hardenable polydimethylsiloxane, mixing with the polydimethylsiloxane a curing catalyst which is a solution comprising tin and lithium, said tin and lithium each being present as part of an organic compound which is soluble in the polydimethylsiloxane, and being added to the extent of from about 0.0001 percent to about 1 percent, based upon the weight of the polydimethylsiloxane, and in an amount sufficient to convert the said resin to a hardened, tack-free state, the weight ratio of lithium to tin being at least 1:3, but not greater than 6:1, shaping the resulting mixture into a desired configuration, and maintaining the mixture in such configuration until cure of the polydimethylsiloxane has proceeded to a required extent.

3,019,205

STABILIZED ASBESTOS FILLED POLYVINYL CHLORIDE RESINS

Robert A. Buckley, Bedford, and Baruch Zaremsky, South Euclid, Ohio, assignors to Ferro Corporation, Cleveland, Ohio

No Drawing. Filed May 27, 1959, Ser. No. 816,041
4 Claims. (Cl. 260—23)

1. An asbestos filled vinyl chloride containing resin containing at least 50% by weight vinyl chloride, having admixed therewith from 20 to 200 parts by weight of iron-containing asbestos, and containing in intimate admixture therewith from about 0.5 to about 20 parts by weight of boric acid which coacts therein to preserve stability of the asbestos filled vinyl chloride containing resin to heat.

3,019,206

POLYBLENDS OF A THERMOPLASTIC TETRAFLUOROETHYLENE POLYMER LATEX AND AN ELASTOMERIC FLUOROCARBON POLYMER LATEX AND ARTICLE COATED THEREWITH

Lester Eugene Robb, Westfield, N.J., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Sept. 24, 1958, Ser. No. 762,942
9 Claims. (Cl. 260—29.6)

1. A coating composition which comprises an admixture of an aqueous latex of a thermoplastic polymer, said polymer selected from the group consisting of tetrafluoroethylene homopolymer and a copolymer of tetrafluoroethylene and up to about 5 mole percent of a fluorinated olefin copolymerizable therewith, and an aqueous latex of an elastomeric copolymer of vinylidene fluoride and a member of the group consisting of perfluoropropene and trifluorochloroethylene, the weight ratio of said thermoplastic polymer to said elastomeric copolymer being from about 1:1 to about 1:200.

3,019,207

METHOD OF PRODUCING STABILIZED OIL EXTENDED BUTADIENE-STYRENE RUBBERY COPOLYMER

Grant Crane, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed May 21, 1956, Ser. No. 585,929
5 Claims. (Cl. 260—33.6)

1. Method of producing a stabilized oil-extended butadiene-styrene copolymer synthetic rubber consisting essentially in admixing a freshly polymerized aqueous dispersion of said synthetic rubber with 20 to 100 phr. of extending oil and from 0.1 to 5 phr. of a finely divided inorganic rubber pigment selected from the group consisting of zinc oxide, magnesium oxide, calcium silicate and silicon dioxide; coagulating the mixture of pigment and dispersion of oil-extended synthetic rubber; and drying the resulting coagulum, whereby an unvulcanized oil-extended synthetic rubber containing substantially no sulfur and accelerator is obtained exhibiting improved stability against loss of its initial Mooney plasticity value upon aging during storage for several months.

3,019,208

METHOD OF MAKING GRAFT COPOLYMERS OF VINYL CHLORIDE AND POLYACRYLATE

Robert J. Reid, Canal Fulton, and Chris E. Best, Franklin Township, Summit County, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 18, 1954, Ser. No. 404,806
6 Claims. (Cl. 260—45.5)

1. The method of forming a graft copolymer of a vinyl resin and an alkyl polyacrylate which comprises emulsifying 50 to 90 parts of monomer from the class consisting of (*a*) vinyl chloride and (*b*) a mixture of vinyl chloride and up to 15 percent of a copolymerizable monoethylenically unsaturated monomer, in an aqueous emulsion of 50 to 10 parts of an already formed homopolymer of an alkyl ester of acrylic acid, the alkyl group of which contains 1 to 10 carbon atoms, and heating the resulting emulsion to 30 to 70° C. in the presence of potassium persulfate, as catalyst, and producing the graft copolymer.

3,019,209

BLEND OF VINYL CHLORIDE POLYMER AND BUTADIENE-VINYLIDENE CHLORIDE COPOLYMER

Robert J. Reid, Canal Fulton, and Wendell R. Conard, Kent, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 16, 1957, Ser. No. 702,746
3 Claims. (Cl. 260—45.5)

1. A blend of 75 to 98 percent by weight of (1) vinyl chloride polymer, and (2) 25 to 2 percent of rubbery copolymer toughener, which toughener is a copolymer of 50 to 95 parts of butadiene and 40 to 5 parts of vinylidene chloride.

3,019,210

POLYAMIDE OXIDATION INHIBITING PROCESSES AND RESULTING PRODUCTS

Richard C. Gilles, Reading, Pa., assignor to The Polymer Corporation, Reading, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,211
9 Claims. (Cl. 260—45.7)

1. The method of forming a shape from high melting synthetic linear polyamide particles which comprises coating the particles with an alkali metal silicate and thereafter compacting the particles and subjecting the compacted particles to heat.

3,019,211

USE OF PHENYLENE DI-TERTIARY AMINES IN RUBBER

Harry E. Albert, Lafayette Hill, Pa., assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 5, 1958, Ser. No. 778,293
6 Claims. (Cl. 260—45.9)

1. Crosslinked butadiene-styrene rubber containing an antiozonant amount of N,N'-dialkyl-N,N'-di-sec-butyl-p-phenylenediamine of the class consisting of N,N'-dimethyl-N,N'-di-sec-butyl-p-phenylenediamine and N,N'-di-n-butyl-N,N'-di-sec-butyl-p-phenylenediamine, said rubber containing at least 50 percent of butadiene.

3,019,212

DIISOCYANATE-MODIFIED ACID-TREATED POLYETHERS

John A. Parker, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 7, 1958, Ser. No. 772,409
5 Claims. (Cl. 260—75)

1. In the method of making an organic diisocyanate-modified polyether by forming a polyether and reacting said polyether with an organic diisocyanate, the improved method of making a gelled product having a real, three-dimensional network which comprises adding to a polyether having the formula

$$HO\{(CH_2)_nO\}_{n'}H$$

wherein *n* is a number from 2–5 inclusive and *n'* is a number sufficiently large to give the polyether a molecular weight in the range of about 400–4000, an alpha-beta ethylenically unsaturated compound having 4–5 carbon atoms selected from the group consisting of maleic acid, fumaric acid, citraconic acid, itaconic acid, and anhydrides

thereof in an amount of 0.04–0.4 mole of said compound per mole of said polyether, maintaining the mixture of said compound and said polyether at a temperature in the range of 20°–115° C. to cause a carboxyl group on said compound to react with a hydroxyl group on said polyether and form a carboxylic-acid-terminated polyether, and subsequently adding to the resulting acid-modified polyether at a temperature in the range of 80°–150° C. an organic aromatic diisocyanate in an amount of 0.5–1 equivalent per equivalent of said acid-modified polyether at least sufficient to form a gel having a real, three-dimensional network.

3,019,213
POLYMERIZATION OF 2,5-DIMETHYL-2,4-HEXADIENE

Frank Baldwin Moody, West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 18, 1958, Ser. No. 761,683
7 Claims. (Cl. 260—94.2)

1. A method for preparing polymers of high melting point and high molecular weight which comprises contacting 2,5-dimethyl-2,4-hexadiene with a Lewis acid catalyst at a temperature of about —100° C.–0° C.

5. A high molecular weight, crystalline, homopolymeric 2,5-dimethyl-2,4-hexadiene having a melting point of at least 200° C.

3,019,214
ETHYLENE POLYMERISATION

Andrzej Pajaczkowski, Harpenden, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 5, 1960, Ser. No. 73,486
Claims priority, application Great Britain Feb. 14, 1958
10 Claims. (Cl. 260—94.9)

1. In a process for the production of ethylene polymers by polymerizing ethylene at an elevated pressure, the improvement that comprises carrying out said polymerization in the presence of an acyl peroxide selected from the group consisting of 3,5,5-trimethylhexanoyl peroxide, isovaleryl peroxide and mixtures of naphthenyl peroxides, said polymerization being carried out at a temperature between 90° C. and 250° C. and at a pressure between 1,000 and 3,000 atmospheres.

3,019,215
PRODUCTION OF TELOMERS FROM ETHYLENICALLY UNSATURATED COMPOUNDS

Hugo Kroeper, Heidelberg, Hans-Martin Weitz, Ludwigshafen (Rhine), and Rolf Platz, Mannheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed May 10, 1956, Ser. No. 583,939
Claims priority, application Germany May 14, 1955
16 Claims. (Cl. 260—94.9)

1. The process for the production of telomers which comprises heating at 50–250° C. and at a pressure of 50–500 atmospheres a lower olefin and a lower molecular weight, organic monomeric compound containing 1–4 halogen groups, said monomeric compound being free from non-aromatic unsaturation, in the presence of a hydrocarbon compound of an element selected from the group consisting of germanium, tin, lead, nitrogen, phosphorus, arsenic, antimony, and bismuth at a weight ratio of said hydrocarbon compound to said organic monomeric compound between 20:1 and 1:2, respectively, until a solid telomer having a melting point in the range of 75–120° C. is produced.

3,019,216
POLYMERIZATION OF OLEFINS INTO POLYMERS OF HIGH MELTING POINT

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 24, 1956, Ser. No. 630,096
9 Claims. (Cl. 260—94.9)

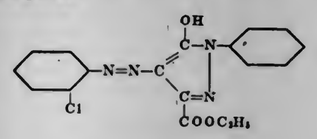
1. A process for producing a solid olefin polymer which comprises polymerizing a mono-olefinic hydrocarbon of from 2 to about 8 carbon atoms per molecule at a temperature of from about 20° C. to about 300° C. and a pressure of from atmospheric to about 3000 pounds per square inch in contact with catalytic amounts of titanium tetrachloride and aluminum metal and a diluent, in an amount of from about 0.1 to about 1000 parts by weight of said hydrocarbon, said diluent being a nuclearly halogen-substituted aromatic hydrocarbon, the aromatic hydrocarbon being selected from the group consisting of benzene, naphthalene and alkyl benzene and alkyl naphthalene hydrocarbons.

3,019,217
AZOPYRAZOLONE DYE FOR POLYESTER FIBERS

Asa W. Joyce, Millersville, Md., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 1, 1959, Ser. No. 803,370
1 Claim. (Cl. 260—163)

The compound



3,019,218
PROCESS FOR AMINATION OF ALPHA-HALO-EPSILON-CAPROLACTAMS

William C. Francis, Overland Park, Kans., assignor to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed Nov. 24, 1959, Ser. No. 855,028
11 Claims. (Cl. 260—239.3)

1. In the method for the preparation of alpha-amino-epsilon-caprolactam wherein an alpha-halo-epsilon-caprolactam is reacted with ammonia under liquid reaction conditions, the improvement which comprises conducting said reaction in the presence of an ammonium ion scavenger which reacts with ammonium ions to form an ammonia-insoluble ammonium compound, so that the ammonium ions are removed from said liquid reaction solution as they are formed thereby minimizing piperidine-2-carboxamide formation.

3,019,219
16,17-DISUBSTITUTED PROGESTERONES

Edward W. Cantrall, Pearl River, and Seymour Bernstein, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 14, 1960, Ser. No. 42,775
2 Claims. (Cl. 260—239.55)

1. The compound 3β-benzoyloxy - 5α,6α - epoxy-17α-hydroxy-16α-methylpregnan-20-one.

2. The compound 5α,17α-dihydroxy-16α-methylpregnane-3,20-dione.

3,019,220
ISOLATION OF SAPOGENINS

Percy L. Julian, Oak Park, Ill., assignor to The Julian Laboratories, Inc., Franklin Park, Ill., a corporation of Illinois

No Drawing. Filed July 17, 1958, Ser. No. 749,066
15 Claims. (Cl. 260—239.55)

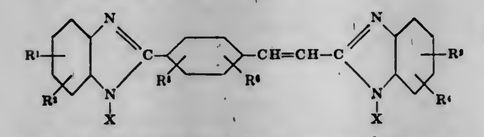
8. The process of isolating steroidal sapogenins from steroidal sapogenin glycoside-containing plant material which comprises the steps of comminuting the plant material, heating the comminuted plant material admixed with dilute aqueous mineral acid at above about 70° C. to effect substantially complete hydrolysis of the glycosides, extracting the freed steroidal sapogenins from the total hydrolysis mixture with a water immiscible organic solvent selected from the group consisting of liquid hydrocarbon solvents having from 5 to 10 carbon atoms and liquid halogenated hydrocarbon solvents having from 1 to 5 carbon atoms and from 1 to 4 halogen atoms, separating the solvent solution of the steroidal sapogenin from the total hydrolysis mixture and recovering the steroidal sapogenin from the said solvent solution.

3,019,221
STYRYL-BISBENZIMIDAZOLE BRIGHTENERS

Geza E. Schoen, Jr., Middlesex, and Julian J. Leavitt, Plainfield, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 15, 1959, Ser. No. 820,103
7 Claims. (Cl. 260—240)

1. A compound of the formula



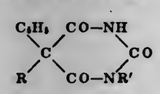
in which R^1, R^2, R^3, R^4, R^5 and R^6 are selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, chlorine and bromine, and each "X" is the same member selected from the group consisting of hydrogen, lower alkyl, allyl, hydroxyethyl, dihydroxypropyl and benzyl.

3,019,222
THERAPEUTIC SUBSTANCES AND COMPOSITIONS

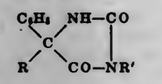
David Haler, West Weybridge, England, assignor to West Pharmaceutical Company Limited, Sussex, England, a company of Great Britain

No Drawing. Filed Sept. 1, 1959, Ser. No. 837,326
Claims priority, application Great Britain Sept. 9, 1958
5 Claims. (Cl. 260—242)

1. Compounds which are complexes of aluminum diglycinate and a compound selected from the group consisting of compounds of the formula



and compounds of the formula



and sodium salts thereof, wherein R is an alkyl group having less than three carbon atoms and R′ is selected from the group consisting of the hydrogen atom and the methyl group.

2. A complex of 5-phenyl-5-ethyl barbituric acid and aluminium diglycinate.

3,019,223
DEODORIZATION OF CYANURIC CHLORIDE

Edward H. Sheers, Kew Gardens Hills, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,742
6 Claims. (Cl. 260—248)

1. A process for preparing an improved cyanuric chloride free from obnoxious and offensive odors which comprises the steps of: dissolving crude cyanuric chloride in an anhydrous inert organic solvent; subjecting the latter solution to the treatment of a deodorization reagent selected from the group consisting of ketene and acetic anhydride, the latter being present in amounts of from 0.1 percent to about 10 percent by weight based on cyanuric chloride; and thereafter recovering cyanuric chloride substantially free from obnoxious and offensive odors.

3,019,224
6-THIOCYANOPURINES AND METHOD OF THEIR PREPARATION

George H. Hitchings, Yonkers, Gertrude B. Elion, Bronxville, and Lottie E. Mackay, Pleasantville, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Nov. 18, 1959, Ser. No. 853,685
Claims priority, application Great Britain Mar. 25, 1955
4 Claims. (Cl. 260—252)

2. 2-amino-6-thiocyanopurine.

3,019,225
SALT OF PIPERAZINE

James R. Anslow, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,139
5 Claims. (Cl. 260—268)

1. Dipiperazine sulfate.

5. A method which comprises the steps of preparing an aqueous solution of piperazine containing about 3 to 12 mols of water per mol of piperazine, adding not more than about 0.5 mol of ammonium sulfate per mol of piperazine with agitation at a temperature within the range of about 30° to 100° C., to thereby provide a crude solution of water in dipiperazine sulfate, whereby ammonia is liberated during said addition, stripping from about 0.3 to 5 mols of water per mol of piperazine from said dipiperazine sulfate solution to thereby remove substantially all of the dissolved ammonia, adding from about 0.5 to 10 wt. percent, based on the remaining solution, of a solid decolorizing agent and filtering the resultant mixture to thereby obtain a substantially colorless solution of water in dipiperazine sulfate.

3,019,226
PIPERAZINE SALT OF PHYTIC ACID

Jack Bernstein, New Brunswick, and William A. Lott, Maplewood, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 10, 1959, Ser. No. 805,375
1 Claim. (Cl. 260—268)

The piperazine salt of phytic acid.

3,019,227
ALKYL ACRIDINES

William E. Erner, Wilmington, Del., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 7, 1960, Ser. No. 958
4 Claims. (Cl. 260—279)

1. The method of producing acridine compounds containing an alkyl hydrocarbon substituent in the 9-posi-

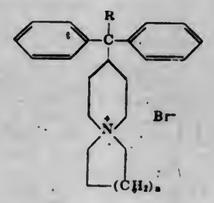
tion, which comprises passing a diphenylamine, free from additional functional substituents, and an alkyl carboxylic acid of 2 to 6 carbon atoms over solid acidic siliceous cracking catalyst, at a temperature in the range of 700–800° F., and condensing the obtained vapor effluent.

3,019,228
4-DIPHENYL(METHYL/HYDROXYMETHYL) SPIROPIPERIDINES AND PROCESS

Kurt J. Rorig, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,624
7 Claims. (Cl. 260—293)

1. A compound of the formula



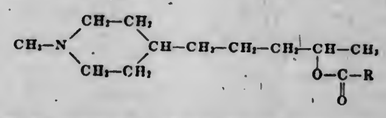
wherein R is selected from the group consisting of hydrogen and hydroxy radicals and *n* is a positive integer amounting to less than 3.

3,019,229
BASIC-5-[1'-METHYL-PIPERIDYL-(4')] - PENTYL - (2) ESTERS, SALTS THEREOF, AND PREPARATION

Anthony Mesnard Parsons, Welwyn Garden City, Herts, England, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed June 22, 1959, Ser. No. 821,667
Claims priority, application Great Britain July 23, 1958
6 Claims. (Cl. 260—294.3)

1. A compound selected from the group consisting of an ester of the formula



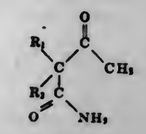
wherein R represents a radical selected from the group consisting of unsubstituted homocyclic aryl hydrocarbon radicals and nuclearly substituted homocyclic aryl hydrocarbon radicals wherein the substituent is selected from the group consisting of lower alkyl, lower alkoxy, nitro, amino and halo; and a salt of said ester with a compound of the formula R'A, wherein R' represents a member selected from the group consisting of hydrogen, lower alkyl and benzyl, and A represents an anion of a pharmaceutically acceptable acid.

3,019,230
METHOD FOR THE PREPARATION OF 2,4-DIOXO-TETRAHYDROPYRIDINES

Rudolf Hinderling, Riehen, and August Hans Lutz and Otto Schnider, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 4, 1960, Ser. No. 3
Claims priority, application Switzerland Feb. 6, 1959
9 Claims. (Cl. 260—297)

1. A method for the preparation of 2,4-dioxo-1,2,3,4-tetrahydropyridines which comprises reacting a compound having the formula



wherein R_1 represents a member of the group consisting of alkyl and alkenyl and R_2 represents a member of the group consisting of hydrogen, alkyl and alkenyl, with a lower alkyl ester of a lower alkanoic acid in the presence of an agent selected from the group consisting of alkali metals and alkali metal alcoholates.

3,019,231
METHOD OF TRANSVINYLATING

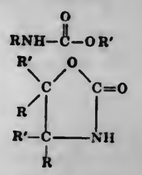
William J. Peppel and Joel D. Watkins, Austin, Tex., assignors to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed May 11, 1959, Ser. No. 812,099
8 Claims. (Cl. 260—307)

1. A method of vinylating a compound selected from the group consisting of

(1)

(2)



where R and R' are each a member selected from the group consisting of hydrogen, hydrocarbon alkly of from 1 to 18 carbon atoms, hydrocarbon cycloalkyl of from 5 to 6 carbon atoms in the ring and having from 5 to 18 carbon atoms, aryl hydrocarbon of from 6 to 10 carbon atoms, hydrocarbon alkaryl of from 7 to 18 carbon atoms and not more than 10 carbon atoms in the ring and hydrocarbon aralkyl of from 7 to 12 carbon atoms comprising reacting said compound with a vinyl ether of from 3 to 20 carbon atoms at a temperature between about 0 and 100° C. in the presence of a mercuric salt of a strong mineral acid to form the N-vinyl derivative of said compound, said vinyl ether having the formula:

$$R''OCH=CH_2$$

wherein R'' is a saturated C_1 to C_{18} member selected from the group consisting of alkyl hydrocarbons, aryl hydrocarbons and methoxy alkyl.

3,019,232
PROCESS FOR PRODUCING SYNTHETIC TRYPTOPHANE

Setsuji Sakurai, Fujisawa City, Yoshioki Komachiya, Tokyo, and Tamio Ito, Kawasaki City, Japan, assignors to Ajinomoto Co., Inc., Tokyo, Japan

No Drawing. Filed Nov. 24, 1959, Ser. No. 855,015
Claims priority, application Japan Dec. 18, 1958
7 Claims. (Cl. 260—319)

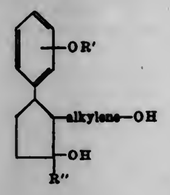
1. In a process of producing tryptophan, the steps of treating 2',3'- indo - 3,4-pyrone-(2)-carboxylic acid-(6) with an aqueous solution of caustic alkali, whereby β-[2-carboxy-indolyl-(3)]-pyruvic acid is formed; reacting said β-[2-carboxy-indolyl-(3)]-pyruvic acid with ammonia; and hydrogenating the reaction product obtained in the presence of a nickel hydrogenation catalyst to form β-[2-carboxy-indolyl-(3)-]-α-amino-propionic acid.

3,019,233
5-HYDROXY-2-OXYPHENYLCYCLOPENTANE-ALKANOLS AND INTERMEDIATES

Leland J. Chinn, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Feb. 8, 1960, Ser. No. 7,136
12 Claims. (Cl. 260—343.3)

1. A compound of the formula



wherein

(*a*) R' represents a member of the group consisting of

—H

and

—lower alkyl

(*b*) R'' represents a member of the group consisting of

—H
—lower alkyl
—CH=CH$_2$

and

—C≡CH

(c) the alkylene radical represented contains more than 1 and fewer than 5 carbon atoms.

3,019,234
METHOD OF RECOVERING BUTADIENE MONOXIDE

Malcolm Korach and Walker H. Rideout, Corpus Christi, Tex., assignors, by mesne assignments, to Pittsburgh Plate Glass Company

No Drawing. Filed May 26, 1959, Ser. No. 815,818
11 Claims. (Cl. 260—348)

1. A method of separating acetic acid from a mixture of butadiene monoxide and acetic acid which comprises washing a solution of said butadiene monoxide acetic acid mixture in inert water immiscible organic solvent, with a water solution of an inert alkali metal salt.

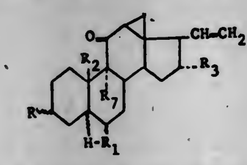
3. The process of claim 1 wherein the salt is sodium sulphate.

3,019,235
12β,13β-METHANO-18-NORSTEROIDS

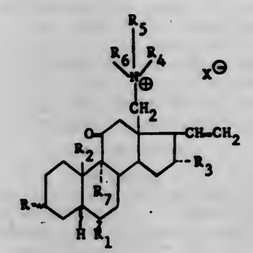
Vlasios Georgian, Belmont, Mass., James F. Kerwin, Broomall, Pa., and Manfred E. Wolff, San Bruno, Calif., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 10, 1961, Ser. No. 81,705
11 Claims. (Cl. 260—397.3)

1. The method of preparing novel 12β,13β-methano-18-norsteroids having the following structural formula:



in which ⟆ is a configurational position selected from the group consisting of α and β; R is a member selected from the group consisting of hydroxy and keto; R_1 is a member selected from the group consisting of hydrogen, methyl and fluoro; R_2 and R_3 are members selected from the group consisting of hydrogen and methyl; and R_7 is a member selected from the group consisting of hydrogen and fluoro, which comprises reacting a quaternary salt of an 18-diloweralkyl-amino-11-keto steroid having the following structural formula:



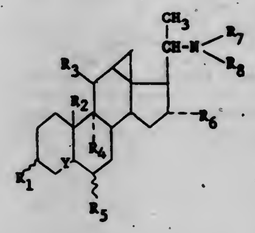
in which ⟆, R, R_1, R_2, R_3 and R_7 are as previously defined; R_4, R_5 and R_6 are lower alkyl having from 1–4 carbon atoms; and X ⊖ is an inorganic anion capable of forming a stable quaternary salt, with an alkaline reagent selected from the group consisting of an alkali metal lower alkoxide, an alkali metal amide, an alkali metal hydride and an alkali metal hydroxide in a polar, strongly ionizing organic solvent in which the reactants are substantially soluble and with which the reactants are unreactive.

3,019,236
20-AMINO-12,18-CYCLOPREGNANE DERIVATIVES

Vlasios Georgian, Belmont, Mass., and James F. Kerwin, Broomall, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 31, 1951, Ser. No. 127,825
12 Claims. (Cl. 260—397.3)

1. A chemical compound selected from the group consisting of a base, its acid addition and its quaternary ammonium salts, the base having the structural formula:



in which R_1 is a member selected from the group consisting of hydroxy and keto; R_2 and R_3 are members selected from the group consisting of hydrogen and methyl; R_4 is a member selected from the group consisting of hydrogen, hydroxy and keto; R_5 is a member selected from the group consisting of hydrogen, methyl and fluoro; R_7 and R_8 are members selected from the group consisting of hydrogen and lower alkyl having from one to four carbon atoms, at least one of which is lower alkyl; and Y is a member selected from the group consisting of ethylene and vinylene.

3,019,237
ALKYLATION OF 4-POSITION OF A Δ^4-11-OXYGENATED PREGNENE

Raymond L. Pederson, Kalamazoo, and John C. Babcock, Portage Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed June 2, 1958, Ser. No. 738,975
5 Claims. (Cl. 260—397.3)

1. The process which comprises reacting an 11-oxygenated-4-pregnene-3,20-dione selected from the group consisting of 4-pregnene-3,11,20-trione and 11β-hydroxy-4-pregnene-3,20-dione with (*a*) a secondary cyclic amine to produce the corresponding 3-enamine, (*b*) reacting the said 3-enamine with an alkyl halide to produce the 4-alkyl-3-enamine, (*c*) hydrolyzing the latter compound to produce 4-alkyl-11-oxygenated-4-pregnene-3,20-dione.

3,019,238
PROCESS FOR OXIDATION OF 11-HYDROXY-STEROIDS TO 11-KETOSTEROIDS

Edwin F. Whiting, Portage Township, Kalamazoo County, and Alexander W. Schneider, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Aug. 25, 1958, Ser. No. 757,097
13 Claims. (Cl. 260—397.3)

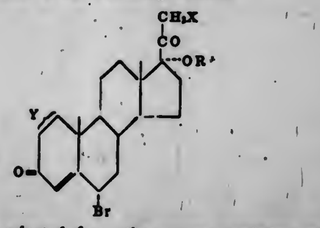
1. A process for converting an 11-hydroxy compound selected from the group consisting of 11α-hydroxyprogesterone, hydrocortisone 21-carboxylic acylates, 1-dehydrohydrocortisone 21-carboxylic acylates, nuclear 6-methyl, 16-methyl, 6-fluoro and 9α-halo substituted derivatives thereof, 5α,11α-dihydroxy-6-halopregnane-3,20-dione, and 5α,11α-dihydroxy-6-methylpregnane-3,20-dione into the corresponding 11-keto compound, which comprises oxidizing the said 11-hydroxy compound in a reaction mixture prepared by adding chromic acid to said 11-hydroxy compound in a reaction medium comprising a dialkyl ketone having from 3 to 4 carbon atoms, the 11-hydroxy compound-dialkyl ketone weight ratio being within the range of from about 1:20 to about 1:1.5 prior to the addition of chromic acid; and recovering the resulting 11-keto compound from the reaction mixture.

3,019,239
6α-BROMO PREGNANE COMPOUNDS

Howard J. Ringold, Octavio Mancera, George Rosenkranz, and John Edwards, all of Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed Feb. 13, 1959, Ser. No. 792,990
Claims priority, application Mexico Feb. 14, 1958
14 Claims. (Cl. 260—397.3)

1. 6α-bromo-21-fluoro-Δ^4-pregnene-3,20-dione.
2. 6α-bromo-$\Delta^{1,4}$-pregnadien-3,20-dione.
3. 6α-bromo-21-fluoro-$\Delta^{1,4}$-pregnadien-3,20-dione.
4. A compound of the following formula:



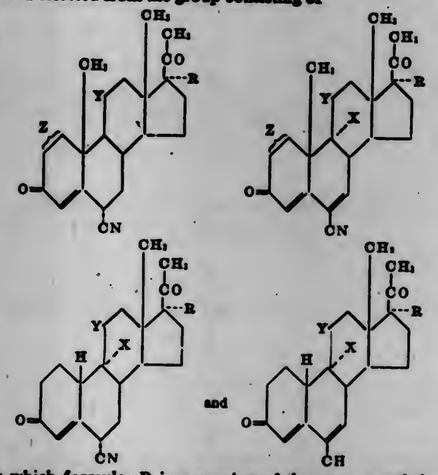
wherein Y is selected from the group consisting of a double bond between C–1 and C–2 and a saturated linkage, X is selected from the group consisting of hydrogen and fluorine and R is selected from the group consisting of hydrogen and a hydrocarbon carboxylic acyl group of less than 12 carbon atoms.

3,019,240
6α-CYANO PROGESTERONE AND DERIVATIVES THEREOF

Albert Bowers and Howard J. Ringold, Mexico City, Mexico, assignors to Syntex, S.A., Mexico City, Mexico, a corporation of Mexico

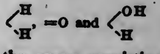
No Drawing. Filed Nov. 5, 1959, Ser. No. 850,995
Claims priority, application Mexico Nov. 6, 1958
27 Claims. (Cl. 260—397.3)

1. A new compound corresponding to a general formula selected from the group consisting of



and

in which formulas R is a member of the group consisting of hydrogen, hydroxy and the acyloxy radical of a hydrocarbon carboxylic acid having up to about 12 carbon atoms; in which Y is selected from the group consisting of



X is a member of the group consisting of hydrogen and fluorine and is hydrogen where Y is hydrogen, and fluorine where



and Z is a member of the group consisting of C—C and C=C.

2. 6α-cyano-progesterone.

3,019,241
PROCESS FOR THE PREPARATION OF ENOL-ETHERS OF Δ^4-3-KETOSTEROIDS

Alberto Ercoli, Via Circo 12, Milan, Italy

No Drawing. Filed May 4, 1960, Ser. No. 26,711
Claims priority, application Germany May 4, 1959
11 Claims. (Cl. 260—397.4)

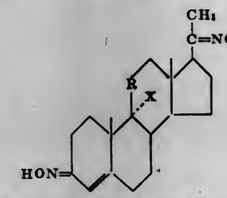
1. A process for the preparation of enolethers of Δ^4-3-ketosteroids selected from the group consisting of steroids of the androstane and pregnane series, which comprises reacting in a substantially non-polar organic solvent the ethyl enolether of said Δ^4-3-ketosteroid with a compound having the formula ROH in which R is a radical exchangeable for the ethyl group of the starting enolether and is a member selected from the group consisting of an aliphatic hydrocarbon radical containing more than two and not more than ten carbon atoms, a cycloaliphatic hydrocarbon radical, a lower aliphatic hydrocarbon radical containing a functional group selected from the group consisting of halo and carbalkoxy groups and an aryl radical in the presence of an acid enoletherification catalyst and thereafter recovering the resulting enolether from the reaction mixture.

3,019,242
3,20-DIOXIMES OF 11-HYDROXY-PROGESTERONES

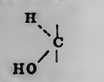
William J. Wechter, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed July 1, 1960, Ser. No. 40,143
14 Claims. (Cl. 260—397.5)

1. Substituted progesterone 3,20-dioximes of the formula:



wherein R and X are selected from the combinations consisting of the combination R is



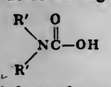
and X is selected from the group consisting of hydrogen, fluorine, chlorine, bromine and iodine, the combination R is



and X is hydrogen and the combination R is



and X is hydrogen wherein Ac is the acyl radical selected from the group consisting of hydrocarbon mono-and dicarboxylic acids having from 2 to 12 carbon atoms, inclusive, and carbamic acids having the formula:



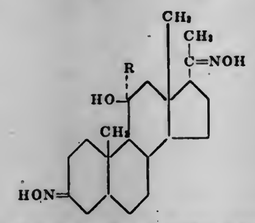
wherein R' is selected from the group consisting of hydrogen and alkyl radicals containing up to and including six carbon atoms, and phenyl.

3,019,243
11β-HYDROXY-5β-PREGNANE-3,20-DIONE BISOXIMES AND THE 11α-LOWER-ALKYL DERIVATIVES THEREOF

Gunther S. Fonken, Charleston, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed July 14, 1961, Ser. No. 124,022
3 Claims. (Cl. 260—397.5)

1. 11β-hydroxy-5β-pregnane-3,20-dione bisoximes of the formula:



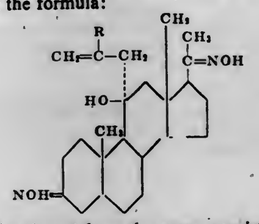
wherein R is selected from the group consisting of hydrogen and methyl.

3,019,244
11α-ALLYLATED 11β-HYDROXY-5β-PREGNANE-3,20-DIONE BISOXIMES AND PROCESS

John C. Babcock, Portage Township, Kalamazoo County, and William J. Wechter, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed June 12, 1959, Ser. No. 819,837
6 Claims. (Cl. 260—397.5)

1. 11α-allylated 11β-hydroxy-5β-pregnane-3,20-dione bisoxime of the formula:



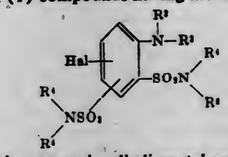
wherein R is selected from the group consisting of hydrogen and methyl.

3,019,245
HALO-DISULFAMYLANILINES

Frederick C. Novello, Berwyn, Pa., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Feb. 7, 1957, Ser. No. 638,701. Divided and this application Nov. 23, 1959, Ser. No. 854,565
7 Claims. (Cl. 260—397.7)

1. Disulfamylaniline derivatives selected from the group consisting of (1) compounds having the formula



and (2) their non-toxic alkali metal salts, wherein the radical $-SO_2N-R^4R^5$ is attached to a position selected from 4 and 5, and the Hal is attached to one of the unsubstituted positions selected from 6, 5 and 4; Hal is halogen; R^2 is selected from the group consisting of hydrogen and lower alkyl; R^3 is selected from the group consisting of hydrogen, lower alkyl, lower alkanoyl, benzoyl and phenyl-lower alkanoyl; and R^4 and R^5 respectively is selected from the group consisting of hydrogen, lower alkanoyl, lower alkyl and lower alkyl which are linked to form with the N-atom to which they are attached 1-piperidyl, 4-morpholinyl and 1-pyrroliydyl.

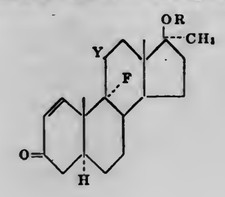
3. 5-chloro-2,4-disulfamylaniline.

3,019,246
17α-METHYL-9α-FLUORO-Δ^1-ANDROSTENE-17β-OL-3-ONE DERIVATIVES

George Rosenkranz, Mexico City, Mexico, assignor to Syntex, S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed Sept. 4, 1959, Ser. No. 838,064
Claims priority, application Mexico Sept. 6, 1958
5 Claims. (Cl. 260—397.45)

1. A Δ^1-androsten derivative having the general formula:



in which R is a member of the group consisting of hydrogen and of acyl radicals derived from hydrocarbon carboxylic acids having up to 12 carbon atoms, and Y is an arrangement selected from the group consisting of =O and

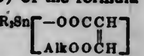


3,019,247
NEW ORGANOTIN DERIVATIVES

Gerry P. Mack, Jackson Heights, and Emery Parker, New York, N.Y., assignors to Carlisle Chemical Works, Inc., Reading, Ohio

No Drawing. Filed Jan. 29, 1957, Ser. No. 636,856
2 Claims. (Cl. 260—429.7)

1. As a new chemical compound, dialkyl tin di(alkyleneglycol maleate) of the formula



wherein R is alkyl and Alk is the radical of a glycol selected from the group consisting of monoethyleneglycol, diethyleneglycol, monopropyleneglycol and dipropyleneglycol and containing one free alcoholic hydroxyl group.

3,019,248
PROCESS FOR MAKING PHOSPHORUS-CONTAINING ORGANOSILICON COMPOUNDS

Frank Fekete, Verona, Pa., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 23, 1958, Ser. No. 782,377
7 Claims. (Cl. 260—448.8)

1. The process of making organosilicon compounds containing phosphorus interconnected to silicon through a divalent hydrocarbon group, which process comprises reacting a silicon compound selected from the class consisting of organosilanes containing at least one halohydrocarbyl group attached to silicon and at least one member of the class consisting of chlorine and alkoxy groups attached to silicon, each remaining valence of silicon being satisfied by a member of the class consisting of alkoxy and hydrocarbyl groups and organopolysiloxanes containing at least one halohydrocarbyl group attached to silicon, each remaining valence of silicon other than the valences making up the siloxane chain being satisfied by a member of the class consisting of hydroxy, alkoxy and hydrocarbyl groups, with a phosphorus compound selected from the class consisting of (*a*) compounds of trivalent phosphorus containing at least one member of the class consisting of hydrogen and alkali metal bonded to phosphorus the remaining valences of said trivalent phosphorus being satisfied by no other group then hydrogen, hydrocarbyl and hydrocarbyloxy groups, and (*b*) compounds of quinquevalent phosphorus containing at least one hydrogen bonded to phosphorus, the remaining valences of phosphorus being satisfied by no other groups than one oxo group, hydrogen, hydrocarbyl groups and hydrocarbyloxy groups.

3,019,249
SYNTHESIS OF PARTIAL ESTERS OF PHOSPHORUS ACIDS AND SALTS THEREOF

Frank C. Gunderloy, Jr., Menlo Park, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 22, 1959, Ser. No. 807,974
9 Claims. (Cl. 260—461)

1. A process for preparing phosphates selected from the group consisting of monosubstituted and disubstituted phosphates which comprises reacting a trisubstituted phosphate having the general formula

$$(RO)_3PO$$

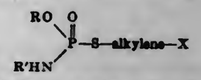
wherein R is a radical selected from the group consisting of C_1–C_{10} alkyl groups and phenyl, tolyl, xylyl, ethyl phenyl, nonyl phenyl and p-chlorophenyl groups, with aqueous phosphoric acid at temperatures below that temperature at which substantial hydrolytic side reactions occur.

3,019,250
THIOPHOSPHORIC ACID ESTERS AND A PROCESS FOR THEIR PRODUCTION

Heinrich Kayser and Walter Lorenz, Wuppertal-Vohwinkel, and Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 28, 1959, Ser. No. 829,992
Claims priority, application Germany Aug. 12, 1958
10 Claims. (Cl. 260—461)

7. A thiophosphoric acid ester of the following general formula



wherein R' stands for a member selected from the group consisting of hydrogen and a lower alkyl radical having up to 4 carbon atoms, R stands for a lower alkyl radical having up to 4 carbon atoms, alkylene stands for a lower alkylene radical having up to 4 carbon atoms, and X stands for a member selected from the group consisting of S-lower alkyl, and S-phenyl radical, N-di-lower alkyl, carbo-lower alkoxy, amino-carbonyl, a phenyl radical, benztriazolmethylene, a benzazimide radical, a phthalic acid imide radical, a naphtholic acid imide radical and a benzotriazol radical.

3,019,251
PRODUCTION AND USE OF SODIUM DIMETHOXYBORYL

Gilbert Gavlin, Morton J. Klein, and Richard G. Maguire, Chicago, Ill., assignors, by mesne assignments, to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed May 10, 1955, Ser. No. 507,722
9 Claims. (Cl. 260—462)

1. A method of preparing sodium dimethoxyboryl, $NaB(OCH_3)_3$, which comprises reacting, under anhydrous conditions, sodium with dimethoxychloroborane, $BCl(OCH_3)_2$, in a molar ratio of sodium to dimethoxychloroborane of at least 2:1 and recovering the sodium dimethoxyboryl formed.

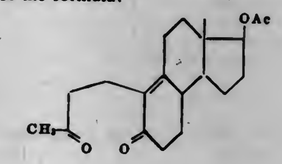
4. As a new composition of matter, the compound sodium dimethoxyboryl represented by the formula, $NaB(OCH_3)_3$.

3,019,252
PROCESS FOR THE PREPARATION OF NOVEL DERIVATIVES OF CYCLOPENTANONAPHTHALENE AND PRODUCTS OBTAINED THEREBY

Gerard Nomine, Noisy-le-Sec, and Daniel Bertin, Montrouge, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed June 15, 1960, Ser. No. 36,171
Claims priority, application France June 18, 1959
9 Claims. (Cl. 260—476)

1. The $\Delta^{8(9)}$-3-methyl-7-oxo-(3' - oxobutyl) - 3,4 - [3'-acyloxy-cyclopentano - (2',1')] - octahydronaphthalene compounds of the formula:



where Ac and acyl represent an acyl radical of an organic hydrocarbon carboxylic acid having from 1 to 18 carbon atoms.

3,019,253
ACETYL-4-TRIFLUOROMETHYL SALICYLIC ACID

Murray Hauptschein, Glenside, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 15, 1958, Ser. No. 735,642
1 Claim. (Cl. 260—479)

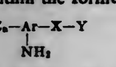
Acetyl-4-trifluoromethylsalicylic acid.

3,019,254
O-ACYL DERIVATIVES OF AMINO-ARALKYLENE-SUBSTITUTED HYDROQUINONES AND CATECHOLS

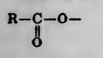
Milton Green, Newton Highlands, and Helen P. Husek, Lincoln, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,673
12 Claims. (Cl. 260—479)

1. Chemical compounds selected from the group consisting of compounds within the formula:



wherein Ar is an aryl nucleus selected from the class consisting of benzene and naphthalene nuclei; each Z is selected from the group consisting of halogen and alkyl groups; *n* is selected from the group consisting of 0, 1 and 2; X is an alkylene group containing no more than five carbons; Y is selected from the group consisting of 2,5-bis-acyloxy phenyl, 2,3-bis-acyloxy phenyl, 3,4-bis-acyloxy phenyl and alkyl and halogen substituted derivatives thereof; said acyloxy groups being represented by



wherein R is aliphatic and contains from one to five carbons.

3,019,255
ETHYL BIS-(2-CHLOROPROPYL)CARBAMATE

Harry Charles Murfitt, London, England, assignor to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Dec. 24, 1957, Ser. No. 704,874
Claims priority, application Great Britain Jan. 3, 1957
1 Claim. (Cl. 260—482)

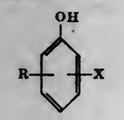
Ethyl bis-(2-chloropropyl)carbamate.

3,019,256
PROCESS FOR PRODUCING ACRYLIC ACID ESTERS

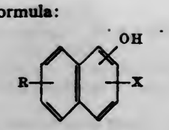
Jesse T. Dunn, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 23, 1959, Ser. No. 800,979
7 Claims. (Cl. 260—486)

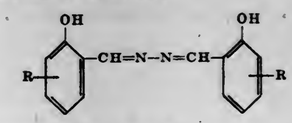
1. In the manufacture of an acrylic acid ester by the reaction of acetylene with carbon monoxide and an alcohol at elevated temperature and under increased pressure, the improvement which comprises carrying out said reaction in the presence of a catalyst complex of nickel halide and a member of the group of nitrogen-containing hydroxyl compounds selected from the group consisting of a phenol of the formula:



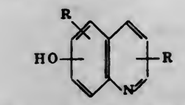
a naphthol of the formula:



a salicylaldazine of the formula:



and a quinolinol of the formula:



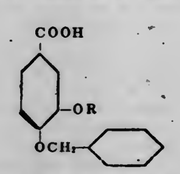
wherein R is a member selected from the group consisting of hydrogen and a lower alkyl radical containing from about 1 to about 6 carbon atoms; and X is a member selected from the group consisting of a nitroso radical, an amino radical, a lower alkyl substituted amino radical, an isonitrosomethyl radical, the carbamyl radical and the lower alkyl substituted carbamyl radical.

3,019,257
METHOD OF PREPARING 3-ALKOXY-4-HYDROXYBENZOIC ACIDS AND DIALKYLAMIDES THEREOF

Luigi Canonica, Milan, Italy, assignor to Istituto Biochimico Italiano, Milan, Italy

No Drawing. Filed Sept. 25, 1957, Ser. No. 686,033
4 Claims. (Cl. 260—520)

1. A method of preparing a compound having the formula



wherein R is alkyl of from 1–10 carbon atoms, comprising reacting an alkyl ester of 3,4-dihydroxy-benzoic acid with a benzyl halide to form an alkyl ester of 3-hydroxy-4-benzyloxy-benzoic acid, reacting said last-mentioned 4-benzyloxy compound with an alkyl halide of from 1–10 carbon atoms to form the corresponding alkyl ester of a 3-alkoxy-4-benzyloxybenzoic acid, and hydrolyzing said last-mentioned ester to form the free acid.

3,019,258
ORGANIC FLUORINE COMPOUNDS

Murray Hauptschein, Glenside, and Milton Braid, Philadelphia, Pa., and Francis E. Lawlor, Wilmington, Calif., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,662
3 Claims. (Cl. 260—543)

1. Compounds having the general formula

$$R[CF_2CFZ]_nSCl$$

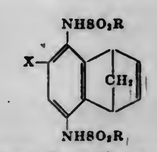
where R is selected from the class consisting of perfluoroalkyl and perfluorochloroalkyl groups having from 1 to 6 carbon atoms; where Z is selected from the class consisting of CF_3 and CF_2Cl radicals; and where *n* is an integer from 1 to about 10.

3,019,259
1,4-DIHYDRO-1,4-METHANONAPHTHALENE-5,8-DIAMINE

Joseph E. Dunbar, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,022
8 Claims. (Cl. 260—556)

1. A 1,4-dihydro-1,4-methanonaphthalene-5,8-diamine of the formula



wherein X is selected from the group consisting of bromo, chloro, fluoro, methylthio and cyclohexylthio, and R is selected from the group consisting of lower-alkyl, phenyl, chlorophenyl and tolyl.

3,019,260
PROCESS FOR THE CATALYTIC REDUCTION OF 6-HYDROXY HYDRONAPHTHACENES

Jerry Robert Daniel McCormick, New City, and Elmer Raymond Jensen, Nanuet, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 13, 1959, Ser. No. 812,790
8 Claims. (Cl. 260—559)

3. A process of preparing a 6-deoxytetracycline which comprises reducing a polar solvent solution of a tetracycline antibiotic selected from the group consisting of tetracycline, 7-chlorotetracycline, 7-bromotetracycline, 5-hydroxytetracycline, 6-demethyltetracycline, 7-chloro-6-demethyltetracycline and 7-bromo-6-demethyltetracycline with hydrogen in the presence of a finely-divided rhodium catalyst until about two moles of hydrogen have been absorbed for each mole of starting material used when the starting material is a member of the group consisting of 7-chlorotetracycline, 7-bromotetracycline, 7-chloro-6-demethyltetracycline and 7-bromo-6-demethyltetracycline and until about one mole of hydrogen has been absorbed for each mole of starting material used when the starting material is a member of the group consisting of tetracycline, 5-hydroxytetracycline and 6-demethyltetracycline, and recovering the 6-deoxytetracycline so formed.

3,019,261
N-FLUORINATEDALKYL-AMIDES OF ALKANOIC ACIDS AND PROCESS OF PREPARATION

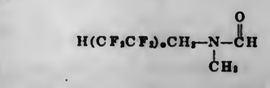
Ivan Pascal, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 12, 1959, Ser. No. 798,829
10 Claims. (Cl. 260—561)

1. The process for preparing N-methyl-1H,1H,ωH-polyfluoroalkylamides which comprises reacting tetrafluoroethylene with from 0.1 to about 20 parts by weight of a member of the group consisting of N,N-dimethylformamide and N,N-dimethylacetamide at a temperature of from about 75° C. to about 200° C. in the presence of a free radical generating agent.

4. The process for preparing N-methyl-1H,1H,ωH-polyfluoroalkylamines which comprises reacting tetrafluoroethylene with from 0.1 to about 20 parts by weight of a member of the group consisting of N,N-dimethylformamide and N,N-dimethylacetamide at a temperature of from about 75° C. to about 200° C. in the presence of a free radical generating agent, and hydrolyzing the resulting amide by heating it with an aqueous solution of a strong acid under reflux.

9. An N-methylpolyfluoroalkylformamide of the formula



where n represents an integer of from 1 to 6.

3,019,262
N-BENZYL-N'-PHENYL-p-PHENYLENEDIAMINE AND ITS MANUFACTURE

Joseph C. Ambelang, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Original application Jan. 9, 1956, Ser. No. 557,868. Divided and this application May 19, 1958, Ser. No. 735,996
1 Claim. (Cl. 260—570.9)

The process of producing N-benzyl-N'-phenyl-p-phenylenediamine, which comprises agitating at substantially room temperature N-benzal-N'-phenyl-p-phenylenediamine in an aliphatic solvent and treating the same during agitation with a substantially equimolecular amount of hydrogen with a hydrogenation catalyst of the class consisting of finely divided nickel, cobalt, copper chromite, platinum and palladium.

3,019,263
PROCESS FOR PREPARING 1-ACETYL-2,2,3-TRIMETHYLCYCLOBUTANE

Habib Emile Eschinazi, now, by judicial change of name, Emile Haviv Eschinasi, Montclair, N.J., assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,594
1 Claim. (Cl. 260—586)

The process for preparing 1-acetyl-2,2,3-trimethylcyclobutane, which comprises heating 2,2-dimethyl-3-acetylcyclobutylacetaldehyde in the presence of a catalyst selected from the group consisting of palladium and Raney nickel at a temperature from about 100° C. to about 300° C., while continuously withdrawing the desired 1-acetyl-2,2,3-trimethylcyclobutane from the reaction mixture.

3,019,264
2-(2,2,3-TRIMETHYLCYCLOBUTYL)-HEPTA-2,4-DIEN-6-ONE

Habib Emile Eschinazi, now, by judicial change of name, Emile Haviv Eschinasi, Montclair, N.J., assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,595
1 Claim. (Cl. 260—586)

The chemical product having the formula, 2-(2,2,3-trimethylcyclobutyl)-hepta-2,4-dien-6-one.

3,019,265
PROCESS FOR PREPARING IRONES

Habib Emile Eschinazi, now, by judicial change of name, Emile Haviv Eschinasi, Montclair, N.J., assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,596
2 Claims. (Cl. 260—587)

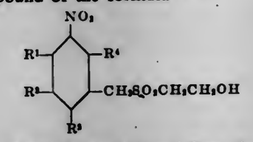
1. The process for preparing irones, which comprises reacting 2-(2,2,3-trimethylcyclobutyl)-hepta-2,4-dien-6-one in the presence of mineral acid proton-providing catalysts at a temperature within the range from about 0° to about 50° C.

3,019,266
NITROBENZYLSULFONYLETHANOL COMPOUNDS

Saul R. Buc, Easton, Pa., and David I. Randall, New Vernon, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,035
6 Claims. (Cl. 260—607)

1. A compound of the formula



wherein R^1, R^3 and R^4 are selected from the group consisting of H, chlorine, bromine, lower alkyl and lower alkoxy, and R^2 is selected from the group consisting of H, lower alkyl, lower alkoxy, chlorine, bromine and $-CH_2SO_2CH_2CH_2OH$.

3,019,267
THIOLS OF BICYCLO[2.2.1]HEPTA-2,5-DIENE AND METHOD OF PREPARATION

John E. Mahan and Rector P. Louthan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 26, 1959, Ser. No. 802,030
7 Claims. (Cl. 260—609)

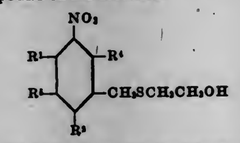
4. A method of preparing a thiol from bicyclo[2.2.1]hepta-2,5-diene which comprises reacting said compound with hydrogen sulfide in the presence of actinic light and recovering said thiol from the reaction mass thus obtained.

3,019,268
NITROBENZYLTHIOETHANOL COMPOUNDS

Saul R. Buc, Easton, Pa., and David I. Randall, New Vernon, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,037
10 Claims. (Cl. 260—609)

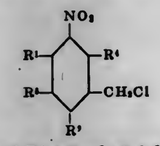
1. A compound of the formula



wherein R^1, R^3 and R^4 are selected from the group consisting of H, halogen, lower alkyl and lower alkoxy, and R^2 is selected from the group consisting of H, chlorine, bromine, lower alkyl, lower alkoxy and

$$-CH_2SCH_2CH_2OH$$

4. A process for producing a compound as defined in claim 1 comprising reacting one mole of a compound of the formula



wherein R^1, R^2 and R^4 are selected from the group consisting of H, chlorine, bromine, lower alkyl and lower alkoxy, and R^5 is selected from the group consisting of H, halogen, lower alkyl, lower alkoxy, and $-CH_2Cl$, with a molar amount of mercaptoethanol about equal to the number of $-CH_2Cl$ groups in said compound, in the presence of an acid binding agent.

3,019,269
STABILISATION OF PHENOLS

Harry Clough, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed June 25, 1957, Ser. No. 667,970
Claims priority, application Great Britain July 6, 1956
1 Claim. (Cl. 260—620)

A composition of matter consisting essentially of (1) at least one air-oxidizable phenol selected from the group consisting of phenol, unsubstituted phenyl monocyclic phenols, and unsubstituted lower-alkylated monocyclic phenols, in combination with (2) a stabilizing amount of the condensation product of octyl cresol with ethylene oxide.

3,019,270
STABILIZATION OF VINYL CHLORIDE

Edwin D. Hornbaker, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

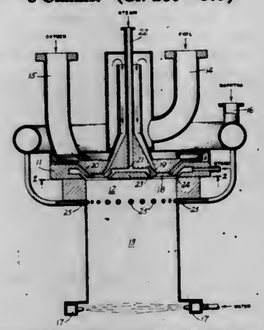
No Drawing. Filed July 22, 1960, Ser. No. 44,517
7 Claims. (Cl. 260—652.5)

1. A process for stabilizing vinyl chloride monomer against prepolymerization comprising contacting the vinyl chloride monomer with a compound selected from the group consisting of activated alumina, solid sodium hydroxide and mixtures thereof.

3,019,271
PROCESS AND APPARATUS FOR TREATMENT OF HYDROCARBONS

Frederic F. A. Braconier, Plainevaux, and Jean J. L. E. Riga, Liege, Belgium, assignors to Societe Belge de l'Azote et des Produits Chimiques du Marly, Liege, Belgium

Filed May 18, 1959, Ser. No. 813,772
Claims priority, application Belgium Sept. 8, 1958
8 Claims. (Cl. 260—679)

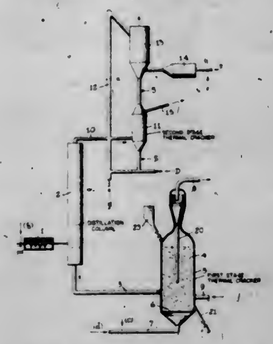


1. In a process for the preparation of unsaturated hydrocarbons by pyrolysis of hydrocarbons with hot combustion gases comprising forming a ring of flames in a combustion chamber by the combustion of a fluid fuel and a comburent gas introduced into said chamber through perforations distributed on a plurality of concentric rings, injecting the hydrocarbon to be pyrolyzed into the hot combustion gases originating from said ring of flames, to obtain pyrolysis products, and quenching the pyrolysis products, the steps comprising surrounding said ring of flames with a plurality of steam screens formed by pairs of opposing steam jets meeting to define a combustion zone of small volume wherein said combustion is first partially effected, mixing said steam and said hot combustion gases rapidly and homogeneously prior to completion of said combustion whereby said combustion is completed in the presence of steam, and thereafter injecting the hydrocarbon to be pyrolyzed into the hot gases originating from the completion of the combustion reaction in the presence of steam.

3,019,272
PROCESS OF THERMALLY CRACKING A PETROLEUM OIL

Adolf Steinhofer, Ludwigshafen (Rhine), Ernst Bartholome, Heidelberg, and Otto Frey and Helmut Nonnemacher, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed Aug. 2, 1957, Ser. No. 675,952
Claims priority, application Germany Aug. 2, 1956
13 Claims. (Cl. 260—683)

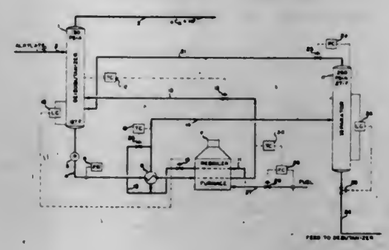


1. In a process for thermally cracking a crude petroleum oil on a granular solid substance selected from the group consisting of inert heat-resisting non-oxidizable solids and carbonaceous solids at temperatures of 630° C. to 900° C. for the production of gaseous olefines, the improvement which comprises separating the initial crude petroleum oil into essentially two components, a distillation residue and a distillate fraction, said distillate fraction amounting to about 20 to 70% by weight with reference to the initial oil and said residue constituting substantially the remaining portion by weight with reference to said initial oil, thermally cracking the distillation residue in a first stage at a temperature of about 680° C. to 760° C. in a fluidized layer of said granular solid substance having at least an outer shell formed from coke produced by said cracking in said first stage, and thermally cracking the distillate fraction in a second stage, also on a granular solid substance, at a temperature of about 750° C. to 870° C. but at least about 40° C. higher than the temperature in said first stage.

3,019,273
DEFLUORINATION OF HF ALKYLATE

Merritt V. De Lano, Jr., and William E. Plaster, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 11, 1958, Ser. No. 779,752
10 Claims. (Cl. 260—683.42)



1. In a process wherein an isoparaffin is alkylated with an olefin in the presence of a fluorine containing catalyst and the alkylate is separated from the major portion of unreacted isoparaffin in a fractionation column containing a reboiler section, the improvement comprising withdrawing column bottoms comprising alkylate and organic fluorides from said reboiler section, heating the withdrawn material, dividing the withdrawn material into two portions, returning all of one of said portions comprising alkylate and organic fluorides sufficient to maintain a desired temperature in said fractionation column to said column, heating the second portion of the withdrawn material to at least 400° F., thereby decomposing organic fluorides and forming hydrogen fluoride, separating said hydrogen fluoride from alkylate and recovering last said alkylate as product.

7. A product recovery system for hydrogen fluoride alkylation comprising in combination a fractionation column including a kettle portion, an external reboiler for said column, a vapor-liquid separator, a first conduit means for passing fluid from said kettle portion through said reboiler and to said fractionation column, a second conduit means for passing fluid from said first conduit means downstream from said reboiler back through said reboiler to said separator, means for withdrawing liquid product from said separator and means for supplying heat to said reboiler.

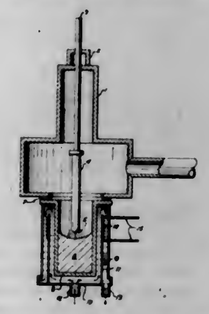
ELECTRICAL

3,019,274
WATER-COOLED CRUCIBLE FOR VACUUM ARC FURNACES

Helmut Gruber and Helmut Scheidig, Hanau (Main), Germany, assignors to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, a corporation of Germany

Filed June 6, 1958, Ser. No. 740,478
Claims priority, application Germany June 11, 1957
2 Claims. (Cl. 13—31)

1. A crucible for vacuum electric arc furnace comprising a container open at its upper end and closed at its bottom to form the crucible proper, a water jacket spaced from and disposed around the sides and bottom of the container, a partition disposed in the water jacket and around the container to divide the space between the jacket and container into an inner compartment and an outer compartment, the two compartments communicating with each other at one end of the partition and being closed to each other at the other end, a first conduit opening at its inner end into the inner compartment, a second

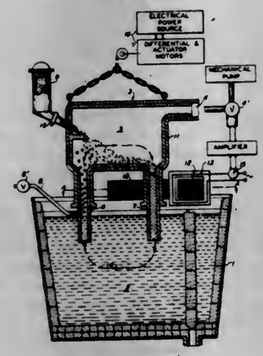


conduit opening at its inner end into the outer compartment, and a field coil mounted on the partition in the water jacket to be disposed around the crucible.

3,019,275
APPARATUS FOR HEATING MOLTEN METALS IN A VACUUM CHAMBER

Albert Lorenz, Hanau (Main), Germany, assignor to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, a corporation of Germany

Filed Nov. 24, 1958, Ser. No. 775,791
Claims priority, application Germany Nov. 26, 1957
10 Claims. (Cl. 13—31)

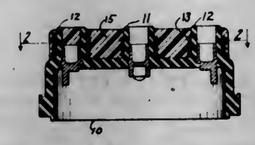


1. An apparatus for heating up molten metals comprising a container for holding a molten metal, a vacuum chamber having an inlet conduit and an outlet conduit thereon and extending downwardly therefrom, means for suspending said vacuum chamber above said container and for raising and lowering the same relative to said container and for immersing the free ends of said conduits into said molten metal, means for evacuating said chamber and the unimmersed parts of said conduits above the surface of said molten metal within said container, means for conveying the molten metal through said inlet conduit into said vacuum chamber, and means for inducing a strong electric current in the entire volume of molten metal circulating through said conduits and said vacuum chamber for increasing the temperature thereof.

3,019,276
COMBUSTION SYSTEMS FOR INTERNAL COMBUSTION ENGINES

Kenneth B. Harlow, 18192 Chipstead Drive, South Bend, Ind.

Filed June 6, 1960, Ser. No. 34,059
3 Claims. (Cl. 123—148)



1. A device for improving the combustion in the combustion chamber of an internal combustion engine having an ignition system including high-voltage wiring and spark plugs, said device comprising a distributor cover having the usual terminal sockets for receiving said high-voltage wiring, metallic coils about but insulated from said sockets, and a metallic interconnection between said coils.

3,019,277
THERMAL INSULATED COMBUSTION CHAMBERS

Thomas P. Rudy, Orinda, Calif., assignor to Shell Oil Company, New York, N. Y., a corporation of Delaware

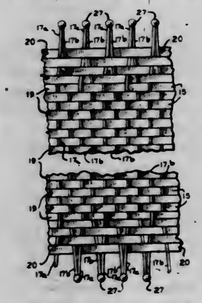
No Drawing. Filed Dec. 30, 1960, Ser. No. 79,539
5 Claims. (Cl. 123—191)

1. A spark ignition, internal combustion engine for use with a gasoline fuel and crankcase lubricating oil at least one of which contains a phosphorus compound, said engine having a piston crown, intake valve and cylinder head a substantial proportion of the surfaces of which is exposed to combustion is coated with a thermal insulating material having a thermal conductance of from about 130 B.t.u./hr./sq. ft./° F. to about 5000 B.t.u./hr./sq. ft./° F.

3,019,278
THERMOELECTRIC GENERATOR AND METHOD OF MAKING SAME

Harry C. Fischer, Montville, N.J., assignor to Thermo-Craft Corp., Montville, N.J., a corporation of New Jersey

Filed Dec. 30, 1959, Ser. No. 863,011
9 Claims. (Cl. 136—4)



1. A thermoelectric generator comprising a group of conductive wires disposed side by side in spaced relation as a warp, said wires being alternately of different thermoelectric properties, a group of flexible strips of insulating material woven as a woof back and forth across said wires, alternate strips respectively being above and below alternate individual wires to near their ends, the ends of said conductive wires projecting from the opposite ends of said group of strips, the pairs of the so projecting ends of said wires being positioned contiguous to one another and so held by the strips adjacent said ends being woven alternately first over and under and then under and over said pairs, the pairs at one end being reversed in order of thermoelectric properties, as compared with those at the other end, and junctions formed on said paired wires, thereby defining a thermoelectric generator consisting of thermocouples in cumulative series, so that upon maintaining a difference in temperature between projecting junctions at one end of the generator and those at the other end, a potential corresponding with the sum of the potentials developed in the thermocouples of the series will appear across the end wires at one end of the generator.

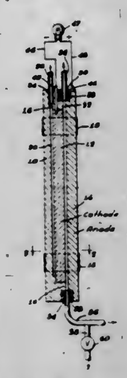
3,019,279
DEPOLARIZED PRIMARY CELL

Robert D. Blue, Midland, Mich., Norman P. Sweeny, Bloomington, Ind., and Marshall P. Neipert, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Mar. 20, 1958, Ser. No. 722,746
9 Claims. (Cl. 136—103)

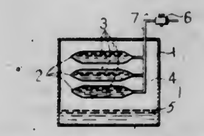
1. A primary cell consisting of an anode composed of a metal selected from the class consisting of mag-

nesium, magnesium-base alloys, zinc, and zinc-base alloys and electrically separated inwardly therefrom a porous carbon cathode defining an electrolytic chamber therebetween, said anode and cathode each having a broad face disposed opposite each other at a distance of be-



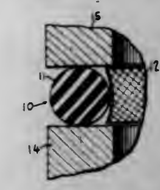
tween 0.05 and 0.5 inch; a distributing chamber exterior of said cathode at the top thereof; conduit means for admission of an electrolyte into said distributing chamber; an outlet at each end of said electrolytic chamber, and a pipe for conveying the electrolyte to a chlorinating means and back to said distributing chamber.

3,019,280
PRESSURE TYPE OIL FEEDING TANK FOR OIL FILLED CABLES AND OIL FILLED ELECTRICAL MACHINES AND APPLIANCES
Mitsuru Takada, Sumiyoshi-ku, Osaka, Japan, assignor to Sumitomo Electric Industries, Ltd., Kaphana-ku, Osaka, Japan, a company of Japan
Filed May 29, 1958, Ser. No. 738,668
Claims priority, application Japan Nov. 2, 1957
5 Claims. (Cl. 174—12)



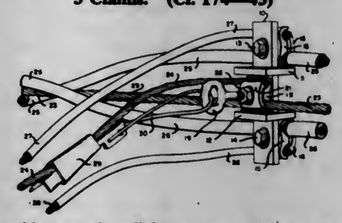
1. A pressure type oil feeding apparatus for oil filled appliances such as cables and oil filled electrical machines, including a closed container with a single chamber, an expansible and contractible impervious cell means mounted in said chamber of the container and occupying substantially all but incapable of filling said chamber when fully expanded thus leaving a space, a sealed connection from the appliance through said chamber to the interior of said cell means, an insulating oil completely filling the appliance and said cell means and said sealed connection therebetween to provide more insulating oil than is actually needed to fill the appliance, a fluid consisting of a liquid and the saturated vapor of said liquid sealed under pressure within said space in said chamber of said container and effective to exert pressure on said filled cell means, said liquid selected to repeatedly permit gasification and liquefaction within said chamber, and means to maintain said liquid at its conversion state of gasification and liquefaction to maintain the varying quantities of sealed insulating oil in said cell means under constant pressure.

3,019,281
ELECTRICAL SHIELDING AND SEALING GASKET
Ralf Lee Hartwell, Cranford, N.J., assignor to Technical Wire Products, Inc., Springfield, N.J., a corporation of New Jersey
Filed Mar. 4, 1960, Ser. No. 12,843
5 Claims. (Cl. 174—35)



1. A composite electrical shielding and fluid sealing gasket for closing an opening between two abutting conductive surfaces, comprising a compressible fluid sealing member and a bias cut woven conductive material attached thereto, said bias cut material being cut to a width and centrally positioned relative to a side of said sealing member so that upon compressing said gasket between said surfaces to form a fluid seal and an electrical shield therebetween the locus of the initial points of contact with said sealing member and the locus of the initial points of contact with said woven conductive material are spaced from one another.

3,019,282
MID-SPAN SERVICE TAKE OFF
Norris C. Husted, Richland Township, Allegheny County, Pa. (R.D. 1, Gibsonia, Pa.)
Filed Sept. 9, 1959, Ser. No. 838,914
3 Claims. (Cl. 174—43)



3. A mid-span take-off fixture comprising an elongated non-conductive member, spaced conductive clamp means fixed along the length of said member, each said clamp means conductively connecting a main conductor and a branch wire, one of said clamp means including an anchor means for fastening and anchoring branch wires, and wire engaging means connected to said anchor means and to a branch wire maintaining constant wire slack between said anchor means and the connection of the wire engaging means on the branch wire.

3,019,283
PRINTED CIRCUIT BOARD
Thomas Little, 2230 Gallatin St. SW., Huntsville, Ala.
Filed Apr. 29, 1959, Ser. No. 809,888
2 Claims. (Cl. 174—68.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. A board for fabrication of printed circuit patterns having terminal portions disposed in a rectangular grid pattern comprising: conducting and insulating plates secured together in coextensive relation with said insulating plate having a multiplicity of uniformly spaced preformed apertures therethrough disposed in accordance with said rectangular grid patterns and in coextensive relation with said insulating plate; and a sheet of insulating material secured between said plates; said conducting plate and said sheet of insulating material being continuous and closing one end of each of said preformed apertures; selective ones of the terminal portions of said conducting

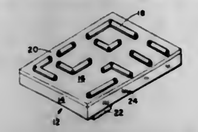
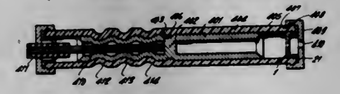


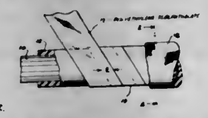
plate being adapted to be provided with holes to receive selective terminal elements to electrically connect electrical members thereto; and said insulating material sheet being provided with thickness for rupture responsive to insertion of said selective terminal elements in the holes corresponding thereto.

3,019,284
GRIPPING CUP TO RETAIN A CONDUCTOR IN A CONNECTOR
Irving F. Matthysse, Danbury, Conn., assignor to Burndy Corporation, a corporation of New York
Filed Dec. 29, 1959, Ser. No. 862,683
3 Claims. (Cl. 174—84)



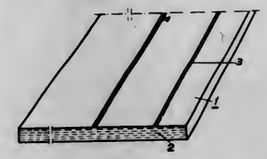
1. A connector comprising: a malleable metal barrel; a dielectric sleeve external and coaxial therewith and having ends thereof extending beyond the ends of said barrel; an end cap disposed on each end of said sleeve; a tubular insert disposed in at least one of the portions of said sleeve which extends beyond said barrel end; said insert having an end remote from said barrel end which includes an upstanding lip, said lip being disposed between the end of said sleeve and said cap; said insert having an end proximal to said barrel end which includes a radially slit closure which includes a center hole from which slits radiate to form resilient tabs in said closure; said tabs being adapted to grip and retain a conductor thrust freely into said barrel.

3,019,285
ELECTRICAL CABLE WITH PROTECTING LAYER OF POLYETHYLENE TEREPHTHALATE
Thomas Delutis, Corapolis, Pa., assignor, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,888
2 Claims. (Cl. 174—120)



1. Building wire comprising a single stranded conductor surrounded by a layer of rubber insulation that has a generally cylindrical outside surface, a protective layer over said outside surface of the rubber insulation and consisting of a thin, smooth and slippery strip of polyethylene terephthalate wound over the rubber insulation in a helix and with portions of each successive convolution overlapping a portion and only a portion of the next convolution of the helix whereby each convolution is in intimate contact with the rubber for a portion of the axial length of the convolution and is held away from the surface of the rubber along another portion of the axial length, the strip of polyethylene terephthalate being tightly wound about the rubber insulation, a woven braid of insulating material over the polyethylene terephthalate layer with strands of the braid that pass under other strands pressed tightly against the helically wound strip to produce local spot clamping of the strip against the rubber insulation to prevent axial movement of the strip relative to the surface of the rubber.

3,019,286
INSULATED ELECTRICAL CONDUCTORS AND PROCESS FOR PRODUCING SAME
Anders Ragnar Andersson and Per Torsten Ågren, Vasteras, Sweden, assignors to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed June 9, 1959, Ser. No. 819,094
Claims priority, application Sweden June 19, 1958
8 Claims. (Cl. 174—121)



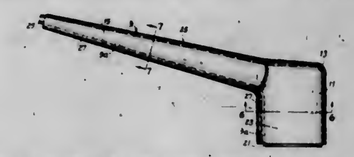
1. An insulated high voltage conductor comprising in combination, an electrical conductor; an insulating tape wrapped in at least two immediately superposed layers around the conductor comprising an originally binder-free, self-sustaining tape of small mica flakes overlapping each other, and a backing consisting of glass fibre threads which are attached to the mica tape parellel to the longitudinal direction of the tape and which cover only a small part of the surface of the mica tape and are pressed thereinto; and a solid resin derived from a completely liquid resinous composition applied to the conductor and the wrapping thereon impregnating and bonding the whole into a solid member, the major part of the surface of the mica of one layer contacting the surface of the mica in the adjacent layers.

5. In the process of producing an insulated high voltage electrical conductor, the steps comprising wrapping the conductor with a plurality of immediately superposed layers of an insulating tape consisting of a self-sustaining, binder-free tape built up of small mica flakes overlapping each other, and of glass fibre threads which are attached to the mica tape parallel to the longitudinal direction of the tape and which cover only a small part of the surface of the mica tape, vacuum impregnating the conductor provided with the wrapping of insulating tape with a completely polymerizable liquid resinous composition, and while subjecting the impregnated wrapping to sufficient pressure to press the glass fibre threads into the mica and to produce contact between the major part of the surface of the mica in any layer with the surface of the mica in adjacent layers, polymerizing the completely polymerizable liquid composition to a solid resin.

3,019,287
BUSHING COVER
Cyrus B. Newcomb, Jr., and Lawrence J. Renas, Dayton, Ohio, assignors to A. B. Chance Company, Centralia, Mo., a corporation of Missouri
Filed Sept. 17, 1959, Ser. No. 840,659
2 Claims. (Cl. 174—138)

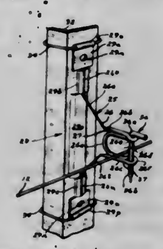
1. A cover for application to a transformer bushing and a conductor extending laterally from an end of the

bushing to provide protection against animals such as squirrels and birds, comprising a hollow body of flexible plastic material having an inverted cup shaped cap portion with a closed top adapted to cover said end of a bushing and an integral hollow stem portion of substantially smaller diameter than said cap portion extending laterally from the top of the cap portion, said hollow stem portion opening into the cap portion and being open at its outer end, said hollow stem portion being adapted to surround a conductor extending laterally from said end of the bushing, said hollow body being split from the edge of the cap portion to the junction of the stem with the cap and thence along the underside of the stem portion to its outer end, and having overlapping margins where split, said plastic material as formed into said hollow body having elastic memory whereby when deformed from its initial form it tends to revert to its



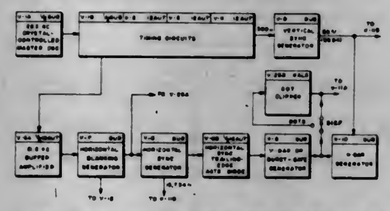
initial form, said hollow body being adapted to be spread open for application of said cap portion around said end of a bushing and for application of said stem portion around a conductor extending laterally from said end of the bushing and then adapted by reason of its elastic memory to return toward its initial form and wrap itself around said end of the bushing and the conductor, the overlap of said margins in the cap portion being sufficient for application thereof to bushings of different diameters, said flexible plastic material of said stem portion having a substantially smaller thickness than the thickness of the material of said cap portion and the thickness of the material of said stem portion decreasing substantially from the junction of the stem with the cap to the outer end of the stem, whereby said stem portion is adapted for bending up or down to accommodate conductors extending at an angle with the horizontal as well as to accommodate a horizontally extending conductor.

3,019,288
FENCE WIRE RETAINING INSULATING DEVICE
Jack F. Adamson, Eyota, Minn.
Filed Apr. 23, 1959, Ser. No. 808,516
1 Claim. (Cl. 174—158)



In connection with a fence wire to be charged with electricity and a post for forming an electric fence, a retainer for said fence wire comprising a length of wire reversely bent to have spaced parallel sides having a closed end portion at one end portion of said retainer and free end portions at the other end portion of said retainer, said closed end portion and adjacent parallel side portions being reversely bent to form a U-shaped portion having an open outer end, vertically aligned loops formed at the outer ends of said reversely bent parallel side portions with said parallel sides and the legs of said U-shaped portion being closely adjacent one another, an elongated plate member, said parallel sides of said wire at the other end portion of said retainer being secured to said plate member, means in connection with said plate member for fastening the same to said post, a closure member removably disposed through said aligned loops, and an insulating coating about said retainer.

3,019,289
COLOR BAR/DOT GENERATOR
Jerome Machlis, Granada Hills, Calif., assignor, by mesne assignments, to Motec Industries, Inc., Hopkins, Minn., a corporation of Minnesota
Filed Nov. 5, 1956, Ser. No. 620,262
15 Claims. (Cl. 178—5.4)

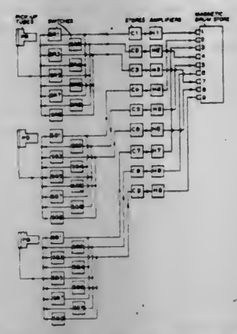


1. A signal generator for supplying precise test signals for alignment and troubleshooting of color television equipment, comprising: means for providing accurate horizontal and vertical timing signals; generators responsive respectively to the horizontal and vertical timing signals for providing horizontal and vertical synchronizing pulses, the vertical synchronizing pulses serving simultaneously as vertical blanking pulses; generators responsive to the horizontal timing signals for providing horizontal blanking pulses and a burst gate; a reference oscillator; delay means connected to said reference oscillator for providing a plurality of different signals of different phases, the different signals including chroma signals and a burst signal; encoding means including a plurality of adders each having one of the chroma and burst signals individually applied thereto, a plurality of gate generators responsive to the trailing edge of each horizontal blanking pulse for providing a series of control gates, output means connected to said adders for combining output signals therefrom, and means for selectively applying the burst and control gates to said adders to energize selected adders and produce an encoded color signal having a predetermined sequence of burst and chroma signals at predetermined phase intervals between signals, in said output means, said selective means including means for varying initial output time and duration of each of the control gates from said gate generators according to the sequence selected for the encoded color signal; and mixing circuit connecting with said synchronizing and blanking generators and said encoding means for providing a composite video signal from the generated synchronizing and blanking pulses and the encoded color signal.

3,019,290
CORRECTING FOR TRANSMISSION VARIATIONS IN TELEVISION
Denis Gordon Perkins, Gerrards Cross, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Filed Mar. 1, 1957, Ser. No. 643,425
Claims priority, application Great Britain Mar. 1, 1956
10 Claims. (Cl. 178—5.4)

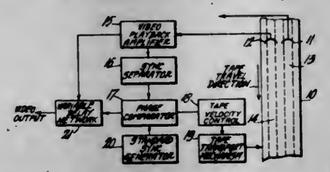
1. Television apparatus comprising at least two pick-up tubes each including a target to receive an image and

means for scanning a raster on said target to derive an electrical image signal corresponding to said image, said scanning means being predetermined to scan similar rasters on the different pick-up tube targets, a record storage medium, a plurality of signal transducers for



recording applied signals on parallel tracks, and gating means for selectively applying electrical signals derived from said pick-up tubes to said transducers, and means for timing operation of said gates to cause signal elements derived from similarly located elements of the different targets to be recorded adjacently on said record medium.

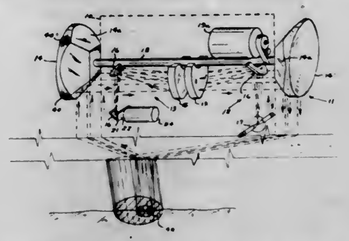
3,019,291
TAPE RECORDING SYSTEM
William D. Houghton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 23, 1954, Ser. No. 451,666
13 Claims. (Cl. 178—6.6)



1. In a system for reproducing signals including information components and synchronizing components which have been recorded on a movable medium, apparatus for compensating for phase variations introduced into said signals comprising: means for recovering and delivering said signals from said medium, variable signal delay means coupled to said recovering means for introducing variable delay into signals delivered by said recovering means, and a delay control means coupled to said delay means and said recovering means and responsive to phase variations in reproduced synchronizing components for controlling the amount of delay introduced by said delay means into said recovered signals according to said phase variations in the synchronizing components of said recovered signals.

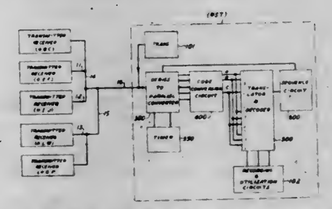
3,019,292
SELF-ILLUMINATED AERIAL CAMERA
Frank Thomas John, State College, Pa., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 16, 1956, Ser. No. 622
7 Claims. (Cl. 178—6.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A scanner apparatus for use in an aerial camera for the simultaneous illumination and viewing of a succession of transverse strips of terrain passing beneath the aircraft, comprising an illuminating optical system and a light receiving optical system, each illuminating optical system and light receiving optical system having an inclined flat rotating scanner mirror disposed on an axis coincident with the optical axis of each optical system and substantially parallel to the longitudinal axis of the aircraft; a high intensity light source to transmit a beam through said illuminating optical system to progressively illuminate transverse strips of each area of ground to be viewed, said illuminating optical system having means to control the direction and span of the beam onto the illuminating inclined scanner mirror for concentrated, predetermined reflection to the ground; an adjustable field stop placed on the optical axis and at the focus of the light receiving



optical system, said light receiving optical system having means to control the direction and span of the light path from the light receiving scanner mirror to the adjustable field stop; and drive means to rotate said scanner mirrors whereby said scanner mirrors will simultaneously illuminate and view each strip of terrain, said rotating scanner mirrors each comprising a plurality of corresponding mirrored surfaces defining a pyramidal-shaped scanner mirror, the corresponding mirror surface of each of said rotating pyramidal-shaped scanner mirror rotating at an angle of substantially 45° with respect to the longitudinal axis of the aircraft to establish substantially parallel light paths to the ground for simultaneously illuminating and viewing each area of the ground to be recorded by the aerial camera transversely to the longitudinal axis of the aircraft.

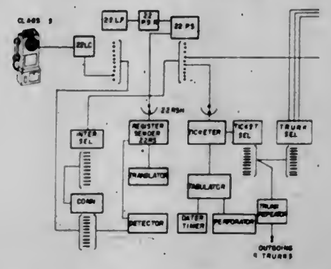
3,019,293
SELECTION CIRCUIT
Edward E. Schwenzfeger, Bayside, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 3, 1959, Ser. No. 817,820
7 Claims. (Cl. 178—26)



1. In a circuit for decoding characters represented by a multielement permutation code, each of said elements being represented by an impulse having either one of two states, register means for transposing sequentially received impulses appearing on a single line into simultaneously occurring impulses appearing on lines discretely representative of the time position of said sequentially received impulses, conversion means controlled by said register means upon receipt of a character for sensing said simultaneously occurring impulses and en-

ergizing one of two output leads per element in accordance with the state of each of said impulses, and gating means operative to produce an output upon application thereto of a fixed number of impulses, the inputs of said gating means being connected to the output leads of said conversion means to furnish a discrete output indication for each character decoded.

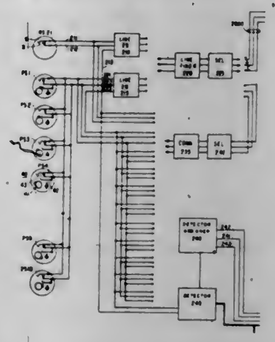
3,019,294
PAYSTATION CUSTOMER DIALLING IN A TOLL TICKETING TELEPHONE SYSTEM
Maurice H. Esperseth, Mount Prospect, and John E. Ostline, Elmwood Park, Ill., assignors to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed July 3, 1959, Ser. No. 824,805
16 Claims. (Cl. 179—6.3)



1. In a telephone system, an exchange including, a plurality of classes of subscribers, one of said classes including paystations, a first register-sender-translator, a second register-sender-controller, an operator position, means for temporarily storing in said first register a plurality of variable items of record information pertaining to a telephone connection and including the identification of the class of the calling station involved in the connection and the called station directory number, other means in said register-sender-translator responsive to the registration therein of an indication of a call from a paystation to send the route and rate information to said second register-sender-controller for the processing of the call, circuit means in said second register-sender-controller for operably connecting said calling paystation with said operator position, second circuit means in said second register-sender-controller effective to forward the rate information to the operator position whereby the calling paystation user may be orally informed of the cost of the attempted call, and keyswitch means at said operator position operative to effectuate the collection of coins deposited at said paystation.

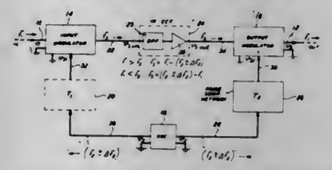
3,019,295
AUTOMATIC TOLL TICKETING TELEPHONE SYSTEM
John E. Ostline, Chicago, Ivan V. Coleman, Naperville, and Jack W. Taugner, Park Ridge, Ill., assignors to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Dec. 3, 1956, Ser. No. 628,474
8 Claims. (Cl. 179—7.1)

1. In an automatic toll ticketing telephone system, a first exchange, a second exchange, subscriber lines in each of said exchanges, switching apparatus in each of said exchanges, calling station identification means in each exchange, an outgoing repeater in said first exchange, an incoming repeater and toll ticketing equipment in said second exchange, and a two conductor trunk line connecting said repeaters, means including said switching apparatus and said line identification means and repeater of said first exchange and said toll ticketing equipment and repeater of said second exchange for completing a tool connection from said first exchange through said second exchange, means in said repeater in said first exchange operated to forward the calling subscriber line identification information over a first of said conductors of said trunk line to said incoming repeater in said second exchange simultaneously with a second means operated to forward impulses corresponding to the calling subscribers dialling of the called subscribers digits to said incoming repeater over a second of said conductors of said trunk



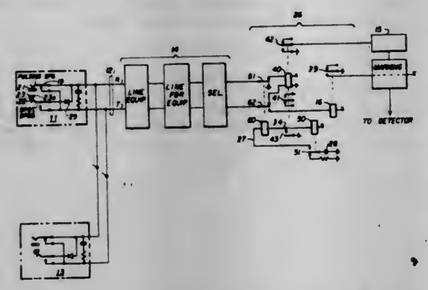
line, means in said incoming repeater responsive to said first and second means in said outgoing repeater to repeat said calling and called numbers to said toll ticketing equipment, storage means in said toll ticketing equipment controlled in response to said means in said incoming repeater to record said numbers and to store various other items of record information pertaining to each of said telephone connections including the directory number of said calling subscriber's line and the directory number of said called subscriber's line involved in each of said telephone connections.

3,019,296
PHASE STABILIZATION OF CIRCUITS WHICH EMPLOY A HETERODYNE METHOD
John C. Schelleng, Asbury Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 11, 1958, Ser. No. 754,392
7 Claims. (Cl. 179—15.5)
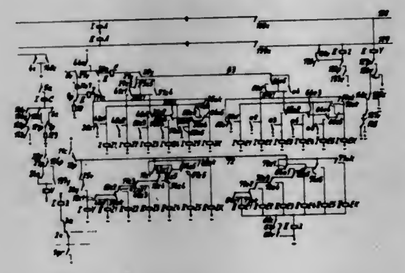


1. In combination, a first source of signals, signal utilization means, and a heterodyne circuit interconnecting said source and said utilization means; said circuit comprising first and second modulators and a local oscillator; means interconnecting said modulators and including an intermediate frequency circuit; means for connecting said local oscillator to said first modulator and to said second modulator; said means interconnecting said second modulator and said local oscillator including a circuit having a phase-shift versus frequency deviation characteristic which is substantially identical to the same characteristic of said intermediate frequency circuit over a predetermined range of frequencies.

3,019,297
PARTY LINE IDENTIFICATION APPARATUS
Hans P. Boswau, Los Altos, Calif., assignor to Leich Electric Company, Genoa, Ill., a corporation of Illinois
Filed June 22, 1959, Ser. No. 821,850
8 Claims. (Cl. 179—17)



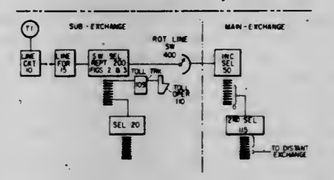
1. In a telephone system: a two-conductor party line including a plurality of subscriber stations, each having an individual designation in terms of a serial position of a spotter pulse; a line relay; a loop circuit completed over said two conductors for operating the line relay upon initiation of a call from one of said stations; normally closed pulse contacts electrically connected between said two conductors; normally open spotter contacts connected in parallel with the pulse contacts; a unidirectional conductor connected between said pulse contacts and said spotter contacts to block the normal flow of current in the line loop to said spotter contacts; dial means at said substation operated to open and close said pulse contacts at regular intervals to generate a series of regular impulses to alternately release and reoperate said line relay; means controlled by said dial means to close said spotter contacts in accordance with the individual designation of the dialing station; an operating circuit including said spotter contacts responsive to the operation and release of the line relay to reverse the polarity of the potential applied to said two conductors; and means controlled by said operating circuit for recording the serial position of each pulse during which said spotter contacts are closed.

3,019,298
TELEPHONE CONNECTOR SWITCH OF THE RELAY TYPE
Rudolf Kraüst and Walter Strobelt, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany
Filed Mar. 13, 1957, Ser. No. 645,870
Claims priority, application Germany Mar. 17, 1956
10 Claims. (Cl. 179—18)



1. A telephone connector switch of the relay type comprising, in combination, a single group including a plurality of coupling relays, each coupling relay assigned to one of a plurality of subscriber lines accessible to the connector, each coupling relay operative to effect connection of the subscriber line to which it is assigned when such line is involved as a called line in the extension of a call from a calling line, a counting chain for selectively controlling the operation of said coupling relays, said counting chain comprising a plurality of tens digit relays, which are operatively governed by tens digit pulses transmitted from a calling subscriber line and a plurality of units digit relays which are operatively governed by units digits pulses transmitted from said calling line, circuit means including contacts controlled by said tens and units digit relays responsive to digit pulses received thereby from a calling line for energizing the coupling relay which is assigned to the desired called line identified by said digit pulses, contact means actuated by the energized coupling relay for connecting the desired called line to the connector, a test circuit for ascertaining the idle or busy condition of the called line, and contact means controlled by the energized coupling relay for closing said test circuit.

3,019,299
SWITCHING SELECTOR REPEATER
Lester L. Smith, McHenry, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Aug. 26, 1959, Ser. No. 836,285
23 Claims. (Cl. 179—18)

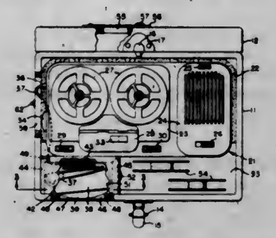


1. In a telephone system, a sub-exchange and a main exchange, a calling station in said sub-exchange, a switching selector-repeater in said sub-exchange, a rotary line switch for extending connections to said main exchange and linked incoming from said selector-repeater, means for extending a loop circuit from said calling station to said selector-repeater, pulsing means in said selector-repeater operative upon extension of said first loop circuit for extending a second loop circuit to said rotary line switch, checking means in said selector-repeater for checking dialled digits repeated by said pulsing means, said pulsing means effective to repeat all dialled digits to trunks via said rotary line switch, a plurality of two motion wipers in said selector-repeater accessible to a plurality of trunks in said sub-exchange, said checking means effective upon the receipt of a repeated first predetermined digit or combination of digits for causing said two-motion wipers to seize an idle trunk in said sub-exchange and releasing said rotary line switch, said checking means effective upon the receipt of a repeated second predetermined combination of digits for disabling said two-motion wipers and said checking means to thereby cause all subsequent dialled digits to be repeated to trunks in said main exchange.

3,019,300
CARRYING CASE FOR PORTABLE DICTATING MACHINES
Clarence James Gormel, 175 South Ave., Rochester, N.Y.
Filed Dec. 9, 1960, Ser. No. 74,871
1 Claim. (Cl. 179—100.1)

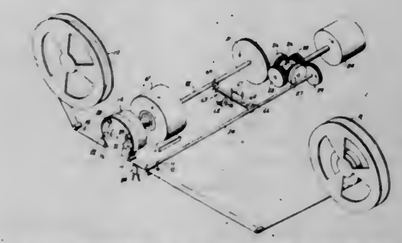
A carrying case for a portable battery-operated recording and transcribing unit and for the microphone used with said unit, said carrying case comprising a bot-

tom section which is generally rectangular in cross section and which has a bottom with side walls extending upwardly therefrom, a cover hingedly connected to said bottom section, and means for locking said cover in place, said bottom section having a first compartment therein which is of generally rectangular shape in cross-section and which is bounded on one side, at least, by one of the side walls of said bottom section, a partition wall bounding one other side of said first compartment, said first compartment being adapted to receive and hold the microphone, said one side wall having a screened opening therethrough through which sound may pass from the outside to said microphone, said partition wall cooperating with the other side walls of said bottom section to hold said combined recording and transcribing



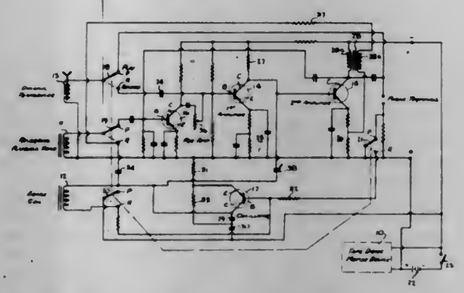
unit in said bottom section, said compartment and said unit cooperating with two of the side walls of said bottom section to form a second storage compartment, one of the walls of said first compartment having a hole therethrough through which an electrical cord, which is connected at one end to said microphone and at the other end to an electrical plug, may be passed, said unit having an electrical receptacle on one side adjoining one side wall of said bottom section and into which said plug may be plugged to connect the microphone to said unit, said adjoining one side wall having an aperture therein through which access may be had to said plug and receptacle, said unit having a start and stop switch, said cover having an aperture therethrough through which access may be had to said switch when said cover is closed, and means for releasably covering said apertures.

3,019,301
INTELLIGENCE STORING DEVICE FOR RECORDING EQUIPMENT
Thomas K. Aalund, Roslyn, and Herbert Sullivan, New York, N.Y., assignors to The Siegler Corporation, Long Island City, N.Y., a corporation of Delaware
Filed Aug. 19, 1960, Ser. No. 50,677
13 Claims. (Cl. 179—100.2)



1. A recorder adapted to record intelligence fed thereto at random times without wastage of recording medium comprising, in combination, recording heads adjacent said recording medium, said heads being mounted in a rotatable drum, means guiding the recording medium about a major portion of the circumference of said drum, means for transporting the recording medium through said circumferential path at a predetermined linear speed, means for rotating said drum at a circumferential linear speed equal to said predetermined speed and means for stopping one of said transporting means and said drum rotating means and starting the other thereof while maintaining the relative linear speed of said recording medium and said recording heads at a constant value.

3,019,302
MAGNETIC RECORDING TECHNIQUES
Ralph Westerfeld, Oceanside, and Kalju Meri, Elmhurst, N.Y., assignors to Mohawk Business Machines Corporation, Brooklyn, N.Y., a corporation of Maryland
Filed July 16, 1958, Ser. No. 748,907
4 Claims. (Cl. 179—100.2)



1. In a magnetic sound recording system for recording a signal on a magnetic medium, the combination of an electromagnetic erasure device and a recording head, said medium during recording travelling successively past said device and said head, a battery oscillator means coupled to said battery and incorporating said device as a frequency determining element to cause an intermittent direct current to flow through said device to effect erasure of a previous recording, and means to apply the signal to be recorded to said head together with a bias voltage having a direct-current component and an ultrasonic alternating current component.

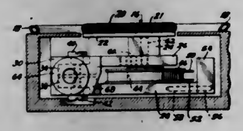
3,019,303
TAPE RECORDING-PLAYBACK HEAD
Benjamin B. Bauer and Harvey Sherman, Stamford, Conn., assignors to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed May 22, 1959, Ser. No. 815,150
4 Claims. (Cl. 179—100.2)



1. In a magnetic head for magnetic tape recording-reproducing apparatus, the combination of a pair of support members each having a base, each said base carrying a pair of substantially U-shaped laminated magnetic core portions disposed generally in the form of a V, each such core portion having spaced apart legs extending outwardly from the base and terminating in a pole face, the adjacent core portion legs at the apex of the V having rear surfaces defining an inclined plane intersecting said base in a line normal to a line bisecting the angle between said core portions, said plane also containing the colinear rear edges of the pole faces terminating said adjacent core portion legs, and said adjacent core portion legs in-

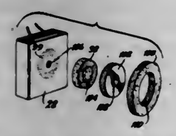
cluding curved front surfaces containing the colinear front edges of said pole faces, having a common axis of symmetry lying in the plane of said pole faces and parallel to the front and rear edges thereof, a layer of gap defining material on at least one pole face of each core portion, means retaining said support members in assembled relation with the pole faces on the core portions in substantial registry and with the layers of gap defining material in engagement to form two magnetic cores having adjacent closely spaced gaps at one end and widely spaced apart core portions at the opposite end, and windings carried by said widely spaced apart core portions.

3,019,304
ELECTROACOUSTIC TRANSDUCERS
Erwin Weiss, Chicago, Ill., assignor to Beltone Hearing Aid Company, a corporation of Illinois
Filed Feb. 20, 1961, Ser. No. 90,373
10 Claims. (Cl. 179—114)



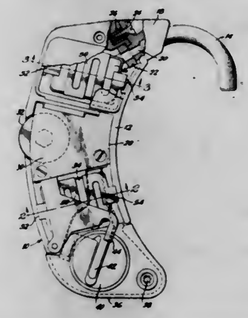
1. The improvement of an electroacoustic bone conduction receiver comprising first and second magnetic pole members, resilient hinge means connected to one end of each of said pole members to position said pole members in spaced, vibratable relation relative to each other, electrically energizable electromagnetic means positioned on said first pole member and in operative association with said second pole member such that energization of said electromagnet means provides vibration of said second pole member relative to said first pole member at a frequency determined by the energizing current, a reaction mass supported by said first pole member and relatively movable thereon for enabling adjustment of the low frequency response of said bone conduction receiver, a contact button mounted on said second pole member for vibration therewith against the skin of the wearer, said contact button comprising a resilient pouch filled with a plurality of small particles to enable said contact button to conform to the surface contour of the skin, selectively movable support means for supporting said contact button on said second pole member and for enabling adjustment of the high frequency response of said bone conduction receiver, and torsion mounting means attached to said receiver for mounting the latter within a case with a desired biasing force against the skin of the wearer.

3,019,305
TRANSDUCER MOUNTING MEANS
Stuart G. McCarrell, Chicago, Ill., assignor to Beltone Hearing Aid Company, a corporation of Illinois
Original application Aug. 19, 1957, Ser. No. 678,980. Divided and this application July 5, 1960, Ser. No. 40,889
6 Claims. (Cl. 179—146)



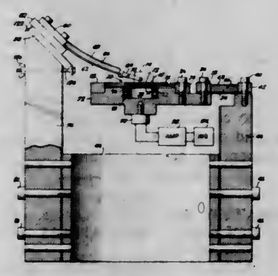
1. The improvement of a microphone support for a hearing aid comprising a base adapted to be worn by the hearing aid user and having an opening extending therethrough, a microphone, a first apertured member of deformable material secured to the sound receiving face of said microphone, an apertured second member of stiffer material secured to said first apertured member, a third apertured member of deformable material, means mounting said third apertured member in the opening of said base, and means mounting said second apertured member in the aperture of said third apertured member whereby said microphone is floatingly supported in the base by said first, second and third members to minimize acoustical and vibratory feedback to said microphone.

3,019,306
TRANSDUCER SUSPENSION
Erwin M. Weiss, Chicago, Ill., assignor to Beltone Hearing Aid Company, a corporation of Illinois
Filed July 11, 1960, Ser. No. 42,152
10 Claims. (Cl. 179—146)



1. The improvement of transducer mounting means for supporting a transducer within a hearing aid case comprising a plurality of sinuous, series connected beams secured to the walls of a transducer cavity within the case, a transducer, attachment means secured to said beams and supporting said transducer in non-contacting relation with said beams within said transducer cavity, said transducer also being supported by said attachment means in non-contacting relation with the walls of said transducer cavity.

3,019,307
ARTIFICIAL MASTOID
Erwin M. Weiss, Chicago, Ill., assignor to Beltone Hearing Aid Company
Filed Feb. 15, 1960, Ser. No. 8,556
17 Claims. (Cl. 179—175.1)



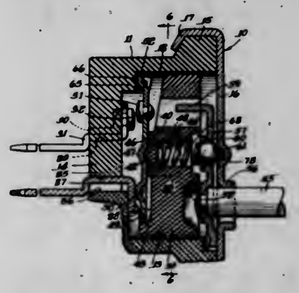
1. An artificial mastoid for measuring and testing the performance characteristics of bone conduction hearing aid devices comprising a low mass metal disk having a contoured surface adapted to receive a vibratable bone

conduction receiver, a resiliently mounted piston block having a piston formed of said low mass metal, compliant means supportingly mounting said disk for vibration on said piston block such that said disk and said piston are spaced from each other to define a fluid damping space therebetween whereby vibration of said disk by said bone conduction receiver causes said piston block to vibrate in a manner determined by the mass of said disk, the mass of said piston block, the compliance of said compliant means, and the damping action at said fluid damping space, and force measuring apparatus secured to said piston block for generating electrical signals representative of the force imparted to said force measuring apparatus by the vibratory action of said piston block.

3,019,308
ELECTRIC SWITCH

Gilbert S. Ellithorpe, Waterman, Ill., assignor to Littelfuse, Incorporated, Des Plaines, Ill., a corporation of Illinois

Filed July 31, 1957, Ser. No. 675,349
6 Claims. (Cl. 200—11)



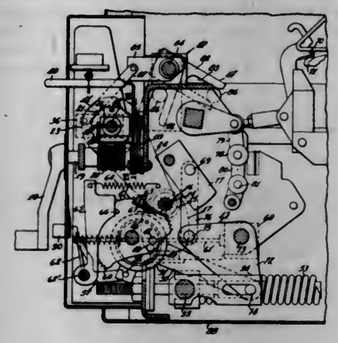
1. An electric switch comprising an insulating base member, a first contact carried by the base member, a second contact carried by the base member and laterally spaced from the first contact, a rigid contact bar continuously engaging the first contact and laterally movable in an operating plane between a first position where the contact bar is laterally spaced from the second contact and a second position where the contact bar engages the second contact, a carrier member movable in a plane parallel to said operating plane and in a direction normal to said operating plane, means for mounting the contact bar on the carrier member for movement thereby in said operating plane and including means for pivotally mounting the contact bar for movement in a direction normal to said operating plane, spring means urging the carrier member in a direction normal to said operating plane and hence said contact bar in said direction toward the contacts, and cam means on the base member engaged by the contact bar for moving the contact bar normal to said operating plane when the contact bar is laterally moved into and out of said second position for lowering and raising the contact bar into and out of engagement with the second contact with a wiping action upon such lateral movement of the contact bar.

3,019,309
INTEGRATED RACKING AND CONTACT CONTROLLING MECHANISM FOR CIRCUIT BREAKERS

Edwin C. Goodwin, Jr., Canton, Mass., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Feb. 1, 1960, Ser. No. 5,951
9 Claims. (Cl. 200—50)

1. A circuit breaker structure for mounting in a cubicle comprising a frame, a pair of cooperating movable arcing contacts mounted on said frame, means for causing relative movement between said contacts, a racking means mounted on said frame for cooperating with the cubicle for varying the position of said frame within the cubicle



upon actuation thereof, a dual purpose driving means for actuating said racking means and said contact movement means, and means for selectively connecting said driving means to said racking means and said contact movement means.

3,019,310
LEVEL INDICATOR FOR GRAIN BINS AND THE LIKE

Jean C. Hoff, Fergus Falls, Minn., assignor to Jenoff Inc., Fergus Falls, Minn., a corporation of Minnesota

Filed Nov. 23, 1959, Ser. No. 854,664
2 Claims. (Cl. 200—61.21)

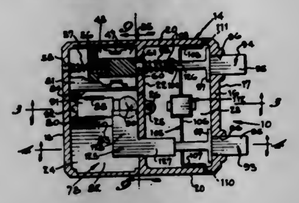


1. A level indicator for grain bins and the like comprising a housing secured near the top of the storage bin, said housing having an open bottom, a rear portion secured to the end wall of the bin and spaced side portions projecting forwardly from said rear portion, a horizontally disposed rod secured to and between said side portions in the upper and forward portions thereof, a cover for said housing having depending and spaced side flanges pivotally mounted near the forward portion thereof on said rod for pivotal movements of said cover about said rod, a vertically depending actuating blade formed to define a cross-sectionally generally inverted U-shaped upper portion having a frontal actuating portion and a depending rear flange portion spaced from and of a shorter length than said frontal actuating portion, said actuating blade pivotally hanging over said rod for swinging movements thereon, and means associated with said blade for energizing an alarm circuit when said blade is urged away from its normally vertical gravity biased position by the rising level of grain in the bin, said energizing means comprising a mercury switch secured to said rear flange portion of said actuating blade in a position establishing an open circuit when said blade is in its normally vertical gravity biased position and establishing a closed alarm energizing circuit when said blade is urged out of its normally vertical position by the rising level of grain in the bin.

3,019,311
PUSH BUTTON SWITCH UNIT FOR TURN SIGNAL INDICATORS

Thomas L. Moffitt and Ned C. Herrmann, Cincinnati, Ohio, assignors to Northeast Capital Corporation, New York, N.Y., a corporation of New York

Filed Mar. 10, 1959, Ser. No. 798,370
14 Claims. (Cl. 200—61.27)



1. A switch for turn signal indicators, said switch comprising a housing, a pair of movable contact plates, means mounting said contact plates for independent reciprocating movement within said housing, whereby said contact plates are shiftable between first and second positions, first and second selector push buttons mounted within said housing and in respective mechanical connection with each of said movable contact plates, spring means urging said contact plates to said first position, said selector push buttons when depressed being effective to shift said contact plates to said second position, a rotatable latching member disposed for engagement with each of said selector push buttons for releasably retaining said selector buttons in their depressed position, and a release button in mechanical connection with said latching member, said release button being movable in a direction perpendicular to the movement of said selector push buttons and being effective when depressed to rotate said latching member to disengage said latching member from said selector buttons and thereby release said selector buttons.

3,019,312
SNAP ACTION ELECTRICAL SWITCH

Henry G. Leupold, Arlington, Mass., assignor to United Electric Controls Company, Watertown, Mass., a corporation of Massachusetts

Filed Sept. 3, 1959, Ser. No. 837,974
8 Claims. (Cl. 200—67)

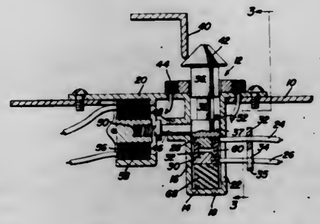


1. In a snap action electrical switch of the kind which comprises a rigid base and a removable cover, both of insulating material, opposed vertically spaced fixed contacts adjacent to one end of the base, a compression spring, a normally fixed abutment for one end of the compression spring, a tensioning element comprising a pair of narrow, generally parallel arms connected at their ends by transverse webs, means fixing one of said webs to said base, hinge means connecting that end of the tensioning element which is remote from the fixed web to the free end of the compression spring, a movable contact interposed between said fixed contacts, means for transmitting motion from the free end of the compression spring to said movable contact, and an actuating pin, in combination, means operative to distribute operative force, applied to the actuating pin, equally between the arms of the tensioning element without regard to their relative vertical disposition.

3,019,313
SWITCH

Loren H. Stites, 3114 Corunna Road, Flint, Mich.

Filed Nov. 13, 1958, Ser. No. 773,659
8 Claims. (Cl. 200—87)

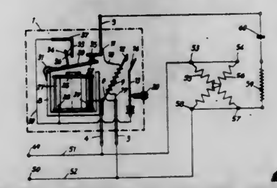


1. A switch comprising a switch case, a shank movable in said switch case, a first contact having a reduced terminal portion disposed in said switch case, a second contact having a reduced terminal portion disposed in said switch case, an annular resilient insulating bumper defining a central opening located between and in engagement with said contacts and holding said contacts spaced apart, said reduced terminal portions extending toward each other in said central opening said bumper being compressible so that said contacts may be brought together and touch in said central opening, a second rubber bumper located in said switch case and having said second contact seated thereon, said second bumper also compressible when said contacts are moved to a switch closed position, said shank being movable to the switch closed position so as to engage one of the contacts and force it into engagement with the other contact.

3,019,314
ELECTRIC MOTOR STARTING SWITCH

Jakob Ellenberger, Altdorf, near Nurnberg, Germany, assignor to Ellenberger & Poensgen G.m.b.H., Altdorf, near Nurnberg, Germany

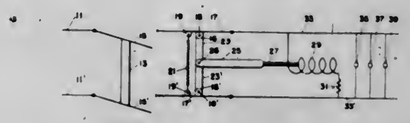
Filed Mar. 18, 1959, Ser. No. 800,264
Claims priority, application Germany Sept. 26, 1958
21 Claims. (Cl. 200—88)



1. A switch comprising, in combination: a bimetallic strip carrying a movable contact; a heating coil for heating said strip, said heating coil being connectible to an external circuit; an opposite contact normally spaced from and adapted to be engaged by said movable contact when said strip is heated due to current flowing through said heating coil and is thereby bent; and a relay incorporating a coil connected in series with said movable contact and said opposite contacts, an armature responding to excitation of said relay coil, a pair of operating contacts which are also connectible to the external circuit, and a pair of relay holding contacts connected

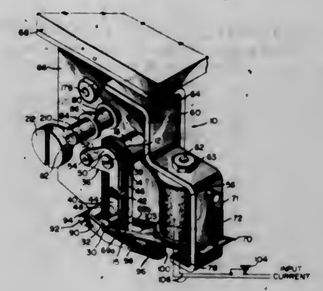
in parallel with said movable and said opposite contacts, both said pairs of contacts being controlled by said armature.

3,019,315
QUICK TRIP SWITCH
Alfred Adams Wolf, York Township, York County, Pa., assignor, by mesne assignments, to Atlas Chemical Industries, Inc., a corporation of Delaware
Filed June 24, 1958, Ser. No. 744,272
11 Claims. (Cl. 200—97)



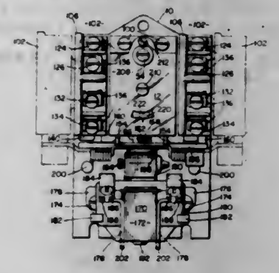
1. A switch means for allowing a short burst of electrical energy through an electrical circuit in which the switch is mounted comprising a quick trip switch having a pair of load terminals and a pair of line terminals, a pair of circuit contacts having an open position and a closed position, a trip mechanism therefor, and a solenoid coil, said solenoid coil being electrically shunted across the said switch at a point between said circuit contacts and said load terminals so as to be responsive to the imposition of an electrical potential on said switch when said electrical contacts are in a closed position, said trip mechanism being arranged so that activation of the solenoid coil actuates the trip mechanism which opens said circuit contacts.

3,019,316
INTERMITTENT MOTION APPARATUS
John Harduk, Haddon Heights, N.J., and Roland Lessig, Philadelphia, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 18, 1960, Ser. No. 3,044
12 Claims. (Cl. 200—105)



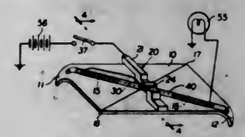
1. Apparatus for moving a pivoted lever comprising, a rotatable cam, means for coupling said cam to a source of torque, a rockable member disposed adjacent said cam and operably engageable therewith, a pivotally mounted member disposed adjacent said rockable member, means for rocking said rockable member in one direction into the path of movement of said cam whereby said cam is effective to rock said rockable member in the opposite direction, and means for coupling said rockable member to said pivotally mounted member whereby the latter is rocked about its pivotal mounting during movement of said rockable member in the opposite direction.

3,019,317
TIME DELAY RELAY
Alphonse P. Gauvreau, Cleveland, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 10, 1959, Ser. No. 805,577
16 Claims. (Cl. 200—168)



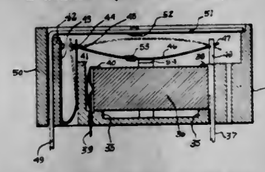
1. A time delay device comprising a timing mechanism and at least two electric switches; a latch means for holding at least one electric switch in a first position and actuable to operate said at least one electric switch to a second position; the remaining electric switch operable to a first and second position and biased to the second position; a plunger biased for actuating said latch means, said plunger connected to said timing mechanism to have its movement to the latch actuating position retarded; external means for moving and holding said plunger out of the latch actuating position and moving and holding said remaining electric switch to the first position and independently moving said at least one electric switch to the first position; and upon removal of said external means, said remaining electric switch instantaneously operate to the second position and said plunger moves retardedly to the latch actuating position to actuate said latch means and operate said at least one electric switch to the second position.

3,019,318
PULL RIBBON FOR SNAP ACTION VANE SWITCH
James W. Welsh, Summit, N.J., assignor to Signal-Stat Corporation, Brooklyn, N.Y., a corporation of New York
Filed Jan. 29, 1960, Ser. No. 5,512
13 Claims. (Cl. 200—122)



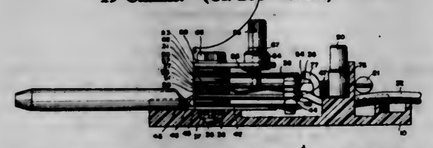
1. In a snap action electric switch, a snap action vane normally bent to a restored position about a first line thereacross; a heat-expansible, electrically conductive pull element secured in the cold and contracted condition, to the vane at the outer ends of said first line to bend the vane into a stress-deformed position about a second line substantially perpendicular to said first line, said vane, upon expansion of said pull element, snapping to its restored position; means mounting said vane at a fixed pivot point spaced laterally of said first line to provide a vane free portion having a relatively large amplitude of movement relative to said pivot point; said pull element, during snapping of said vane, having a relatively large amplitude of movement relative to said pivot point; an electric heating circuit for said pull element, including a first contact carried thereby and engaging a second contact, fixed relative to said pivot point, when the vane is in its stress-deformed position; and a layer of high-resistance carbonaceous material covering a localized area of said pull element, said first contact being in mechanical engagement with the outer surface of said layer and electrically connected to said pull element only through said layer; whereby due to such high-resistance carbonaceous material, the electric current heating effect is substantially all concentrated in such localized area of said pull element; said heating circuit including a high-resistance electric wire in transfer relation with said pull element.

3,019,319
THERMAL SNAP-ACTION SWITCH
Fred N. Anderson, Highland Park, Ill., assignor to Cherry Electrical Products Corp., Highland Park, Ill., a corporation of Illinois
Filed Aug. 3, 1959, Ser. No. 831,143
1 Claim. (Cl. 200—122)



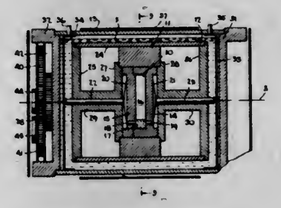
A thermal snap action switch comprising a substantially rectangularly shaped base provided with a plurality of slots extending transverse of its longitudinal length, with a slot adjacent each edge of said rectangularly shaped base, a heat emitting element carried by said base, a plurality of means carried in certain of the slots formed in said base for connecting said heat emitting element thereto, one of said means carried by certain of said slots providing an electrical conduit to one side of said heat emitting element, while the other of said means provides a fixed switch contact carried above and in spaced relation to said heat emitting element, a thermal responsive switch actuating member carried by said base above and in spaced relation to said heat emitting element, yieldable means carried in certain other of the slots formed in said base for pivotally engaging the opposite ends of said switch actuating member for supporting the same relative to said heat emitting element, with one of said yieldable means providing an electrical conduit for one side of said switch member, said switch actuating member having a longitudinal length greater than the distance between said yieldable means so that said switch actuating member will move with a snap-like action into and out of contact with the fixed contact when said switch actuating member is thermally responsively moved by the heat emitting from said heat emitting element.

3,019,320
THERMOSTAT
Raymond J. Braski and Walter W. Krause, Chicago, Ill., assignors, by mesne assignments, to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Filed July 9, 1958, Ser. No. 747,449
19 Claims. (Cl. 200—136.5)



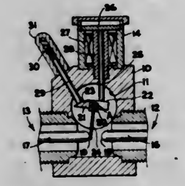
1. A thermostatic switch assembly comprising: means carrying first and second contacts and responsive to movement of said contacts a selected distance away from a first stable position to move the contacts further into a second stable position; means, including a primary contact engageable with said first contact only in said first position, responsive to a predetermined temperature change for moving the engaged first and primary contacts said selected distance; and means, including a secondary contact engageable with said second contact in said second position, responsive to cyclic temperature to move said second and secondary contacts alternately into and out of engagement while said second contact is in said second position.

3,019,321
MAGNETIC PROXIMITY SWITCHES
Warren B. Minton, Beechwood Drive, Shrewsbury, N.J.
Filed Apr. 8, 1959, Ser. No. 804,926
11 Claims. (Cl. 200—152)



1. A proximity switch comprising a mercury switch capsule, means supporting said capsule for rotation about a predetermined axis whereby a switching action occurs at a predetermined angular position of the capsule, and a ring magnet surrounding said capsule and polarized in a direction normal to said axis whereby said capsule is caused to rotate when a ferromagnetic body is proximate thereto.

3,019,322
DOUBLE THROW CO-AXIAL SWITCH
Donald H. Lanctot, Malibu, Calif., assignor to Don-Lan Electronics, Inc., a corporation of California
Filed Feb. 1, 1960, Ser. No. 5,777
5 Claims. (Cl. 200—153)



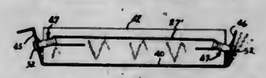
1. A double throw co-axial switch comprising: a switch body having an input connector and first and second output connectors; a contact means connected to said input connector, said contact means comprising a block member mounted for pivoting movement about a given pivot axis co-axial with said input connector within said body and including a flexible reed positioned to engage said first output connector when in a first position and to disengage said first output connector and engage said second output connector when pivoted to a second position, said block and reed being dimensioned for dynamic balancing with respect to said given pivot axis; and means for pivoting said contact means between said first and second positions.

3,019,323
ELECTRICAL SWITCH
Howard L. Daniels, West St. Paul, Minn., assignor to Telex, Inc., St. Paul, Minn., a corporation of Minnesota
Filed Mar. 21, 1960, Ser. No. 16,334
20 Claims. (Cl. 200—155)



1. In an electrical switch at least, two spaced apart insulating means, paired spaced-apart elongated and resilient conductors each of which extends between and has its respective end portions independently supported in the respective insulating means, the means being such as to permit movement of the respective supported conductors along their lengths as independent units, a movable contacting member interposed between the conductor members intermediate the means, two electrically conductive portions respectively on opposite sides of the movable member for being respectively juxtaposed to the conductor members whereby as the movable member is moved in a first direction the portions respectively engage the two members causing same to move along their respective lengths in one of the means.

3,019,324
ELECTRIC HEATER
John P. Sohn, Columbus, Ind., assignor to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Apr. 27, 1960, Ser. No. 25,066
9 Claims. (Cl. 219—34)



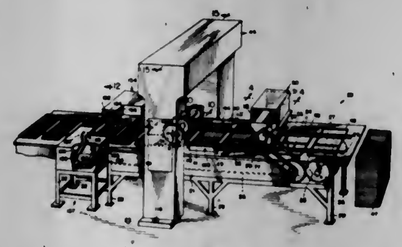
1. In an electric heater, a sheet-metal reflector mounted in a heater housing and directing heat outwardly therefrom, said reflector having a centrally disposed, generally planar reflective surface and a pair of flanges projecting forwardly from said surface along a pair of its opposed edges, each of said flanges being bendable about a rectilinear bend line, a plurality of insulators mounted on said pair of flanges and projecting inwardly therefrom, and an elongated heating element mounted on said insulators forwardly of said centrally disposed reflective surface and disposed wholly within the extent of the reflector, said element retaining the pair of flanges stressed toward each other when it is in its normal contracted state, whereby upon heating and cooling of said element with its resultant expansion and contraction said flanges will move away from and toward each other about said rectilinear bend lines for retaining said element taut in both its expanded and contracted positions.

3,019,325
FUEL HEATING DEVICE
Frank S. Clouse, 2702 Gallatin Road, Nashville, Tenn.
Filed Dec. 15, 1958, Ser. No. 780,416
2 Claims. (Cl. 219—38)



2. A vehicle comprising a carburetor, an instrument panel, a switch on said instrument panel, a fuel line, a fuel heating device electrically connected to said switch and said fuel heating device being interposed between said carburetor and fuel line, said fuel heating device embodying a fitting operatively connected to said fuel line, a tube connected to said fitting, said tube adapted to be connected to said carburetor, a first layer of glass insulating tape surrounding said tube, a heating wire coiled around said tape and said heating wire being electrically connected to said switch, a second layer of glass insulating tape surrounding said heating wire, and a third layer of tape surrounding said second layer of tape, said third layer of tape being plastic, and whereby by closing the switch, the electrical circuit to the heating wire will be completed so that the fuel passing through the tube will be preheated before it enters the carburetor.

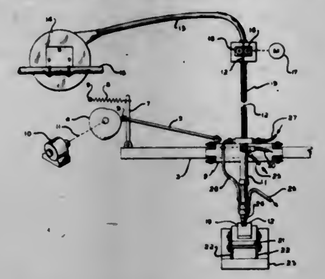
3,019,326
APPARATUS FOR ASSEMBLING WIRE GRATINGS
Samuel E. Kary, 2405 S. 57th Court, Cicero 50, Ill.
Filed Aug. 13, 1959, Ser. No. 833,637
11 Claims. (Cl. 219—56)



1. For use in the manufacture of wire gratings and the like having a plurality of wire rods welded to a preformed wire frame and in spaced relation thereon, an automatic multi-stage assembling apparatus comprising in combination a power driven movable conveyor, said conveyor having means positioned to receive said wire frame in engaging relation, a plurality of retaining means disposed on said conveyor positioned to receive and retain said rods in spaced relation abutting said wire frame and extending transversely across the frame, a wire rod dispenser disposed adjacent to said conveyor in first stage operating relation, said dispenser being adapted to deposit a wire rod in each of said retaining means, a guide means disposed adjacent to said conveyor along each side thereof in second stage operating relation, said guide means being adapted to shift said wire frame and said wire rods into uniform alinement with respect to said conveyor as said conveyor moves in said apparatus, a welding means disposed adjacent to said conveyor in third stage operating relation, said welding means being positioned operatively to weld said wire rods to said wire frame as said frame is transported by said conveyor, and means for synchronizing at least one of said stages in timed cyclic relation with the movement of said conveyor in said apparatus whereby said wire frame and said wire rods are assembled to form a unitary grating.

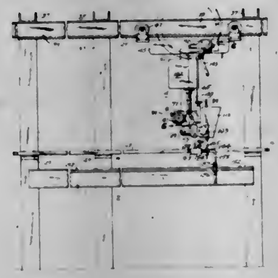
3,019,327
FUSION CLADDING
Ralph D. Engel, Cranford, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 22, 1960, Ser. No. 16,731
8 Claims. (Cl. 219—76)

1. In the formation of an overlay of a clad metal on a base metal by arc welding with a fusible electrode which is oscillated laterally of its travel along the base metal to form a wide bead deposit, the method of obtaining a substantially uniform depth of weld penetration and a substantially uniform dilution of the clad metal by the



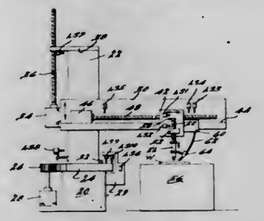
base metal which comprises imparting a linear constant velocity straight line oscillation to the arcing terminal of the electrode transversely to its direction of travel along the surface of the base metal.

3,019,328
LINK TRACK REFACING APPARATUS
Turner G. Brashear, Jr., El Cerrito, and Forest Leader, Oakland, Calif., assignors to L & B Welding Equipment, Inc., Berkeley, Calif., a corporation of California
Filed Apr. 14, 1958, Ser. No. 728,235
12 Claims. (Cl. 219—125)



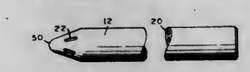
10. Welding apparatus for performing work on a row of aligned work surfaces spaced from one another, comprising a welding head, track means substantially paralleling such row of aligned work surfaces and guiding said welding head along a path of movement over such aligned work surfaces, means for aligning said welding head with a path to be traveled over such row of aligned work surfaces, and means determined by the lengths of surfaces and intervening spaces to be traversed by said welding head during movement of said welding head along said track means for energizing said welding head to establish and maintain an arc during travel over such aligned surfaces and de-energizing such welding head to extinguish such arc during travel across the spaces between such aligned surfaces, said last means including a plurality of successively arranged spaced patterns indicative of the length and spacing of said aligned work surfaces, a light source, a light responsive device, carrier means supporting said light source and said light responsive device in alignment with said light source to one side of said successively arranged patterns and said light responsive device to the other side of said successively arranged patterns, and means for moving said carrier means relative to said successively arranged patterns in accordance with movement of said welding head along said row of aligned work surfaces.

3,019,329
WELDING APPARATUS
Richard S. Zeller, Detroit, Mich., assignor to Weltronic Company, Detroit, Mich., a corporation of Michigan
Filed July 15, 1955, Ser. No. 522,264
4 Claims. (Cl. 219—131)



1. In a welding apparatus, power transformer means having three primary windings and three secondary windings, sensing transformer means having three primary windings and three secondary windings, a source of three-phase alternating current, each of said power transformer primary windings being connected in series with an individual one of said sensing transformer primary windings across an individual one of the phases of said three-phase source, means for developing a direct voltage having an amplitude which varies as a function of the current through said secondary windings of said sensing transformer means, control transformer means having three primary windings and three secondary windings, each of the primary windings of said control transformer means being serially interconnected with an individual one of said secondary windings of said power transformer means, load means drawing current from all of said secondary windings of said power transformer means through said primary windings of said control transformer means, and means responsive to the amplitude of said direct voltage for controlling the average current amplitude through said secondary windings of said control transformer means.

3,019,330
ELECTRODE FOR INERT GAS SHIELDED ELECTRIC WELDING AND CUTTING
Frank C. Guida, 144 Harryel Ave., Pittsfield, Mass.
Filed Oct. 19, 1960, Ser. No. 63,535
6 Claims. (Cl. 219—145)

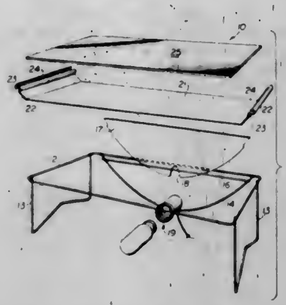


1. An electrode for electric welding, comprising a rod having an end portion of tungsten with a pointed tip, said rod having a circular series of longitudinal bores extending therethrough and opening at said end around said tip.

3,019,331
ILLUMINATED TABLE
Harold E. Geist, 11820 Edgewater Drive, Lakewood 7, Ohio
Filed Nov. 16, 1959, Ser. No. 853,095
3 Claims. (Cl. 240—2)

1. An illuminated table comprising a support including legs secured to an open rectangular frame, a downwardly bowed reflector within said frame, said reflector having resilient end portions extending part way around and resiliently grasping and pressing against the end mem-

bers of said frame to hold said reflector in assembled position within said frame, said resilient end portions extending above said frame and bent inwardly to form channels, a rigid translucent plate resiliently embraced

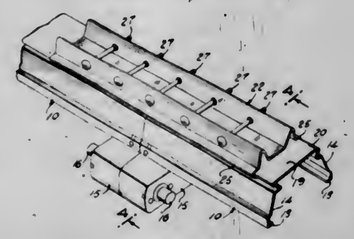


at its end edges and held between the end channel portions of said reflector above said frame, and a light secured to said support and positioned between said reflector and said plate.

3,019,332
LIGHTING FIXTURE AND CONNECTOR THEREFOR

Henry C. Schiffer, Cheshire, Conn., assignor to The Miller Company, Meriden, Conn., a corporation of Connecticut

Filed June 3, 1959, Ser. No. 817,780
3 Claims. (Cl. 240—9)



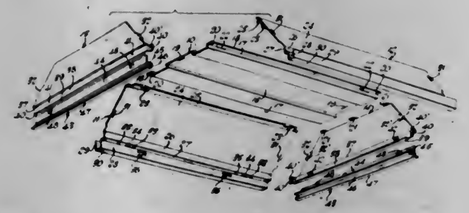
1. The combination with at least two lighting fixtures positioned in end-to-end relationship with each fixture having a top and side portions, said side portions having opposing inwardly extending channels substantially parallel to and adjoining said top portion, a plate within and bridging adjoining fixtures, said plate being positioned against the underside of said top portions and retained in said position by said inwardly extending channels, an elongated clamping member having U-shaped side jaws gripping the top edges of said fixtures and engaging said channels and means on said clamping member to force said jaws into clamping engagement with said fixtures and said plate to secure said fixtures in end-to-end engagement.

3,019,333
LIGHTING FIXTURE TROFFER AND LATCH THEREFOR

Julio A. Pascucci, Meriden, Conn., assignor to The Miller Company, Meriden, Conn., a corporation of Connecticut

Filed Feb. 13, 1958, Ser. No. 714,979
4 Claims. (Cl. 240—51.11)

1. A lighting fixture troffer comprising a relatively flat top section of rectangular configuration having two sets of parallel edges, a pair of end sections, means detachably securing one edge of each of said end sections to one edge of one of said sets of edges of said top section and depending therefrom, a rectangular ceiling opening having inwardly extending flange-like members on at least two opposing edges, a pair of side sections each detachably and hingeably connected to one edge of the other set of parallel edges, said side sections being movable inwardly one toward the other and between the end sec-



tions, said side sections upon insertion of the fixture in said ceiling opening being moved to outward positions with the lower edges of said side sections engaging said flange-like members, means for securing said side sections in said outward positions to said end sections to form a rigid structure and elongated members including means securing them to said end sections with the lower edge of each of said members lying substantially in a plane defined by the lower edges of said side sections when in said outward position to completely close said opening.

3,019,334
CELLULAR LIGHT CONTROL PANEL

Willis L. Lipscomb, 520 Spreckels Bldg., San Diego, Calif.

Filed Dec. 26, 1956, Ser. No. 630,622
5 Claims. (Cl. 240—78)

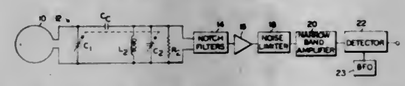


1. In a cellular panel for lighting control, translucent cell walls defining the cells extending entirely through the panel and opening at both faces of the panel, said cell walls being substantially uniform in thickness throughout the major portions thereof and having plate-like flanges extending inwardly of the cells and extending throughout substantially the entire inner peripheries of the corresponding cells and shading the portions of said cell walls adjacent one face of the panel, said flanges being brightness control means to reduce the brightness at one face of the panel when a light source is positioned adjacent the opposite face of the panel and said flanges being of a dimension, measured in the plane of said one face, greatly in excess of any variation in wall thickness required merely for draft in molding.

3,019,335
LARGE BANDWIDTH LOW NOISE ANTENNA CIRCUIT

Martin B. Brilliant, Boston, Mass., assignor to National Company, Inc., Malden, Mass., a corporation of Massachusetts

Filed Sept. 14, 1959, Ser. No. 839,856
18 Claims. (Cl. 250—20)

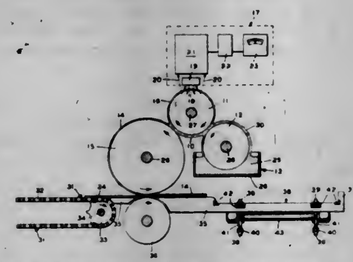


1. An improved low frequency communications receiver, said receiver comprising an antenna, a broad band amplifier having a pair of input terminals, a filter connected between said antenna and said amplifier, said filter comprising a tuned circuit including said antenna, said tuned circuit resonating at a frequency below 400 kilocycles, said filter having impedance transformation characteristics similar to those of a quarter wave length line, a loading resistor connected across the input terminals of said amplifier, the resistance of said resistor being substantially greater than the reflected resistance of said antenna at said input terminals of said amplifier, and an impulse-type noise limiter connected to the output of said amplifier.

3,019,336
METHOD OF AND APPARATUS FOR MEASURING COATING AMOUNTS

Don H. Johns, Fox River Grove, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed June 25, 1956, Ser. No. 593,754
10 Claims. (Cl. 250—43.5)

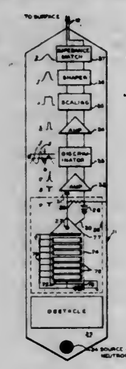


4. An apparatus for measuring the amount of coating being applied to a moving flat surface comprising, coating means for applying a wet coating to said surface, at least a portion of said coating means being substantially cylindrical and having on the surface thereof a thin film of said wet coating, the atoms essentially composing said cylindrical portion having an atomic number substantially different from the atoms essentially composing said wet film, means for moving said flat surface and coating means relative to each other, radiation means adjacent said thin wet film on said cylindrical portion and remote from said flat surface for directing a stream of beta-rays against and through said thin wet film, said thin wet film presenting essentially a finite thickness to the transmission and reflection of a portion of said beta rays and said cylindrical element presenting an infinite thickness to transmission of said beta rays, detector means for detecting a quantity of beta-rays back-scattered from said cylindrical portion and said thin wet film thereon, said quantity being proportional to the amount of coating being applied to said flat surface, and visual inspection means coupled with said detector means for visually indicating said quantity.

3,019,337
WELL LOGGING BY SELECTIVE DETECTION OF NEUTRONS BY RESONANT CAPTURE

Robert E. Fearon and Jean M. Thayer, Tulsa, Okla., assignors to Well Surveys, Inc., a corporation of Delaware

Original application July 30, 1949, Ser. No. 107,806, now Patent No. 2,712,081, dated June 28, 1955. Divided and this application Apr. 19, 1954, Ser. No. 423,972
5 Claims. (Cl. 250—83.1)

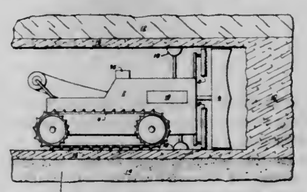


1. Apparatus for analyzing the energy spectrum of a flux of fast neutrons which comprises a confined ionizable gas containing a substantial amount of a first element the nuclei of which react with fast neutrons to produce nuclei of a second element and other heavy charged particles with all of the energy of each incident neutron and the net energy of the reaction going to the resultant charged particles, means for separately collecting the electronic portion of the charge released upon each reaction between a fast neutron and a nucleus of said first element, means for producing an electrical pulse systemically related to the electrons collected upon each reaction, and means for selecting those of said pulses having particular sizes as an indication of incident neutrons having related energies.

3,019,338
THICKNESS DETECTOR FOR COAL MINING MACHINE

Ralph Monaghan, Billy F. Wilson, and Guenther Knapp, Tulsa, Okla., assignors to Well Surveys, Incorporated, a corporation of Delaware

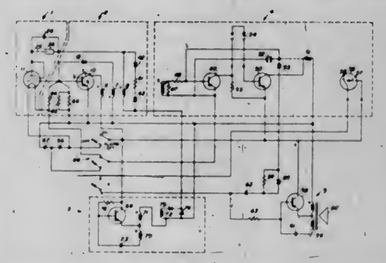
Filed Aug. 28, 1957, Ser. No. 680,871
8 Claims. (Cl. 250—83.3)



6. Apparatus for measuring the thickness of a layer of solid material over which a vehicle is propelled, said layer covering and being supported by a base material, said apparatus comprising a housing, a gamma ray source mounted in said housing, a gamma ray detector also mounted in said housing and spaced a predetermined distance from said source, shielding material located in said housing between said source and said detector, means mounting said housing on said vehicle in such manner that

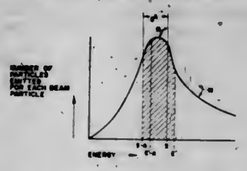
said housing is urged against said layer when said vehicle is propelled thereover, and means responsive to the output of said detector for indicating the thickness of said layer as said vehicle is propelled thereover.

3,019,339
RADIAC ALARM DOSIMETER
Edward J. Wesley, San Mateo, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 12, 1958, Ser. No. 780,173
6 Claims. (Cl. 250—83.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



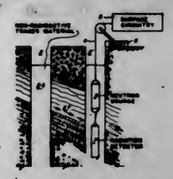
1. A recycling dosimeter circuit having the combination of means for generating a response to radiation in accordance with the strength of a radiation field, means for receiving said generated response comprising a blocking oscillator having a transistor as an active element, and a plurality of transformer coupled feedback circuits interposed between said means for generating a response to radiation and said means for receiving said generated response whereby a uniform pulse of large amplitude is generated by the means for receiving the generated response.

3,019,340
METHOD OF STABILIZING THE OUTPUT OF A NUCLEAR EMISSION SOURCE
Arthur H. Youmans and Thomas P. Hubbard, Jr., Tulsa, Okla., assignors to Well Surveys, Incorporated, a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,132
7 Claims. (Cl. 250—84.5)



1. The method of stabilizing the output of a device for producing nuclear emission by means of ion bombardment of a target, said method comprising the steps of producing an ion beam of predetermined composition, forming a target of material which will produce nuclear emission upon bombardment of said target with ions of said beam by a reaction having a resonance peak, establishing the target thickness and ion beam accelerating voltage such that, due to the resonance peak of said reaction, upon moderate variation in accelerating voltage the change in nuclear emission occasioned by the change thus effected in the energy of ions entering said target is substantially equal and opposite to the change in nuclear emission occasioned by the change thus effected in the energy of ions leaving said target.

3,019,341
TRACER LOGGING BY NEUTRON ACTIVATION
Ralph Monaghan, Tulsa, Okla., assignor to Well Surveys, Incorporated, a corporation of Delaware
Filed Nov. 4, 1957, Ser. No. 694,429
10 Claims. (Cl. 250—106)

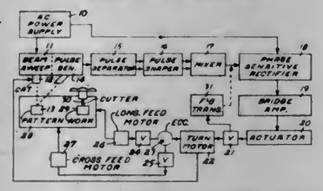


1. The method of ascertaining the character of subsurface strata penetrated by a well bore which includes introducing into the well fluid in said well bore a normally non-radioactive tracer material which becomes radioactivated when exposed to neutrons, radioactivating said tracer material within said well bore fluid by irradiating said well bore fluid with neutrons, a determined time interval after irradiation detecting the presence of said radioactivated material by its radioactivity, and transmitting the signal produced by said detection to the surface.

3,019,342
MOISTURE DETECTION
Jesse M. Brooke, Sweeny, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed June 20, 1958, Ser. No. 743,507
3 Claims. (Cl. 250—106)

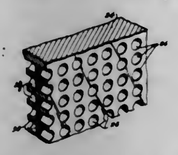
1. A method of detecting and measuring a small quantity of moisture in a hydrocarbonaceous fluid which comprises passing said hydrocarbonaceous fluid into a fixed fluidized bed of finely subdivided calcium carbide containing a radioactive carbon atom and detecting and measuring the radioactivity of gas thus produced.

3,019,343
UNIVERSAL LINE TRACER
Robert L. Henry, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 13, 1959, Ser. No. 799,207
6 Claims. (Cl. 250—202)



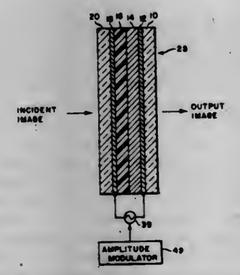
1. In a line tracing machine adapted to scan a line on a pattern with a moving light beam and produce an electrical signal of the same character each time the beam crosses the pattern line irrespective of whether the line be a light line drawn on a dark background or a dark line drawn on a light background, the combination of means for causing a light beam to be oscillated back and forth across the line on the pattern, a photomultiplier tube arranged to receive light reflected from said pattern by said light beam and to produce an electrical pulse each time the beam crosses the line, means to produce a high-frequency carrier, means for modulating the high-frequency carrier with the pulses produced in the photomultiplier tube, means to separately demodulate each half of the carrier, and means to limit each of the demodulated voltages to produce a signal pulse which is of the same character regardless of whether a light line or a dark line is being traced.

3,019,344
OPTICAL DEVICE AND SYSTEM
Jay J. Seidman, Los Angeles, and James R. Cornell, Alondra, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed July 23, 1958, Ser. No. 750,413
10 Claims. (Cl. 250—208)



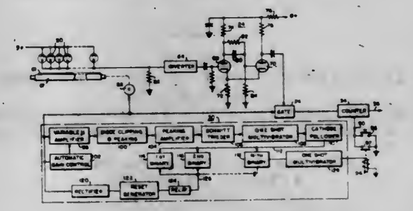
9. Means useful in the study of optical and luminescence-excitation characteristics of luminophors and especially of those luminophors susceptible to degradation in vacuo or in adverse gaseous environment, said means comprising: a rigid plate-like member having two opposite faces and a plurality of internal walls forming open passages through the member from face to face thereof; a plurality of optical units each disposed within a respective one of said passages and each of said units comprising a mass of luminophor material and gas-tight sealing means sealing the mass of luminophor material in the respective passage and sealing the respective passage against flow of gas therethrough, whereby said plate-like member may form a wall of an evacuable envelope for excitation of the said luminophor material by radiation transiting in vacuo.

3,019,345
RADIATION AMPLIFIER
Thomas R. Nisbet, Palo Alto, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Dec. 3, 1959, Ser. No. 857,022
4 Claims. (Cl. 250—213)



1. A radiation amplifier cell comprising a lamina of electroluminescent material, a lamina of photoconductive material, a first glass lamination having transparent electrodes formed on opposite sides thereof interposed between and in contact with one side of each of the laminae of electroluminescent and photoconductive material, a second glass lamination having a transparent electrode formed on one side thereof and located so that the transparent electrode is adjacent and in contact with the side of said photoconductive lamina opposite from said first glass member, a third glass lamination having a transparent electrode formed on one side thereof and located so that the transparent electrode is adjacent and in contact with the side of said electroluminescent lamina opposite from said first glass member, means connecting together the transparent electrodes of said first glass lamination, an energizing voltage source connected between the transparent electrodes of said second and third glass laminations, said electroluminescent and photoconductive laminae and the optical coupling therebetween as a result of light passing through said first glass lamination and its transparent electrodes being constructed and arranged in conjunction with the voltage output of said source so that bistable operation is obtained for incident radiation on said photoconductive lamina above a predetermined minimum level, and modulating means modulating the output voltage of said source so that for a first predetermined time the voltage of said source has a magnitude which causes the electroluminescent lamina to build up towards its saturation brightness level for incident radiation on said photoconductive element above said predetermined minimum level, and for a second predetermined time has a magnitude which causes the electroluminescent lamina to become substantially dark, said first predetermined time being chosen substantially equal to the time taken for said electroluminescent lamina to build up to its saturation brightness level when said photoconductive element is illuminated by said predetermined minimum level of incident radiation, and said second predetermined time being chosen substantially equal to the non-regenerative decay time of the electroluminescent and photoconductive circuit.

3,019,346
ELECTRONIC SURFACE INSPECTION SYSTEM
John F. Laycak, Duquesne, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 28, 1960, Ser. No. 17,813
13 Claims. (Cl. 250—219)

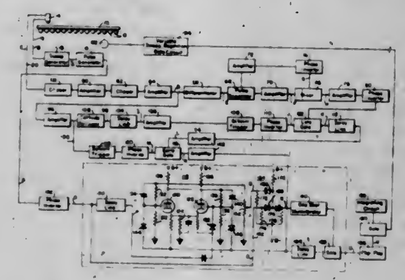


1. In an inspection system for detecting areas on the surface of moving material having a different optical appearance than the remainder of the material, the combination of apparatus including a stationary photoelectric cell disposed adjacent the moving material for producing an electric signal in which a pulse is produced whenever an area of different optical appearance on the material passes by said photoelectric cell, the width of said pulse being proportional to the length of said area along the path of travel of the material, means for producing an alternating current signal, means for gating said alternating current signal with the pulses produced by said apparatus, and means for counting the oscillations in the alternating current signal passing through said gating means.

3,019,347
ELECTRONIC SURFACE INSPECTION SYSTEM
John F. Laycak, Duquesne, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 23, 1959, Ser. No. 854,852
10 Claims. (Cl. 250—223)

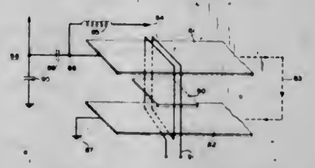
1. In a system adapted to produce an odd or even number of voltage spikes during successive equal time

intervals, apparatus for eliminating the groups having an odd number of spikes therein comprising, in combination, means for producing a first train of voltage pulses in which a pulse is produced during each of said equal time intervals with the leading edge of the pulse coinciding with the beginning of the time interval, means for delaying said first train of pulses by a predetermined amount, a device for producing pulses between successive pairs of the spikes in each of said groups and between the last odd-numbered spike in said odd-numbered groups and the



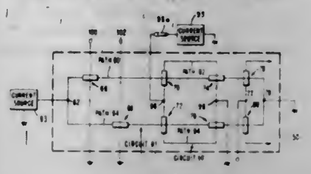
leading edge of the following pulse in said delayed first train of pulses, means for comparing the undelayed first train of pulses with the pulses produced by said device to thereby produce a second train of pulses in which a pulse occurs upon coincidence of a pulse in said first train with a pulse produced by said device, circuit means for increasing the length of the pulses in said second train, means for delaying said voltage spikes by an amount substantially equal to that of said equal time intervals, and apparatus for gating the delayed voltage spikes with said pulses of increased length.

3,019,348
TRANSVERSE MAGNETIC AMPLIFIER CORE CONSTRUCTION
Daniel M. Lipkin, Philadelphia, Pa., assignor to Remington Rand Inc., Philadelphia, Pa., a corporation of Delaware
Filed Mar. 17, 1955, Ser. No. 494,904
4 Claims. (Cl. 307—88)



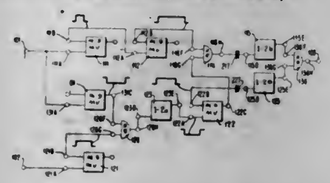
1. In a transverse ferro-magnetic amplifier core structure, the combination of a thin wafer of ferro-magnetic material, a metallic sheet on each side of said wafer, said sheets being connected at one end, a winding around said sheets with said wafer therebetween, terminals for said winding, one end of said sheets having an electrical circuit connected thereto comprising a radio frequency choke coil having a direct current bias source connected thereto, a blocking condenser and radio frequency current source, said circuit being connected to the other end of said connected sheets, the resultant magnetic field produced by the simultaneous action of said D.C. bias and radio frequency current with the current in said winding being such as to operate said core in the region of vanishing rotational hysteresis loss.

3,019,349
SUPERCONDUCTOR CIRCUITS
Jere L. Sanborn, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 30, 1960, Ser. No. 18,643
19 Claims. (Cl. 307—88.5)



12. A superconductor device comprising; first and second superconductive circuits; input means for selectively introducing resistance into each of said superconductive circuits to cause said circuits to selectively assume first and second different stable states; means coupled to said first and second circuits for supplying current thereto; and means coupling said first and second circuits for introducing resistance in each circuit in accordance with the current in the other circuit to cause said circuits to change from one of said stable states to the other of said stable states only when the input means introduces resistance into both of said first and second circuits.

3,019,350
PULSE SEPARATING COUNTER INPUT DEVICE
Albert Gauthey, Paris, France, assignor to IBM France Company, Paris, France, a corporation of France
Filed Oct. 21, 1957, Ser. No. 691,485
Claims priority, application France Nov. 13, 1956
11 Claims. (Cl. 307—88.5)

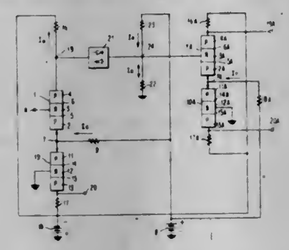


1. A counter input device comprising a first input terminal, a second input terminal, an output terminal, a first switch normally closed, a pulse delay and pulse lengthening device connected between said first input terminal and said first switch, a second switch normally closed, a pulse lengthening device connected between said second input terminal and said second switch, means effective to open said second switch for a predetermined time in response to a pulse at said first input terminal, means effective to open said first switch in response to a pulse from said second switch and for the duration of said signal therefrom, means effective to provide a signal at the output terminal for each pulse from said first switch, and means effective to provide a signal at the output terminal for each pulse from said second switch.

3,019,351
VOLTAGE LEVEL TRANSLATING CIRCUIT USING CONSTANT VOLTAGE PORTION OF DEVICE CHARACTERISTIC
James H. Pomerene, Poughkeepsie, and Edwin J. Slobodzinski, Hopewell Junction, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 20, 1957, Ser. No. 704,040
1 Claim. (Cl. 307—88.5)

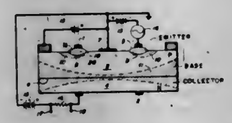
A voltage level translating device adapted to compensate for the voltage level difference between the output

of a first switching circuit and the voltage level input requirement of a second switching circuit comprising an input biasing network including two impedance elements having a point intermediate the impedance elements connected to the input of said second switching circuit for establishing on and off conditions for said second switching circuit, a load resistor in the output of said first switching circuit, an asymmetrically conductive element, having a substantially constant voltage region in its voltage-current characteristic, connected between the load



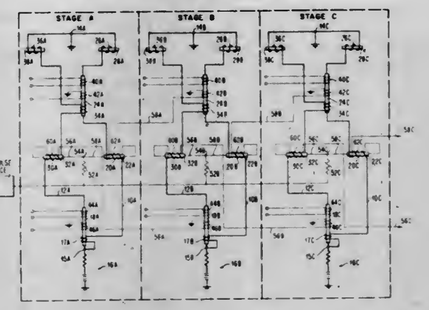
resistor of said first switching circuit and the point intermediate said impedance elements, means for operating said asymmetrically conductive element at different current values in the constant voltage region of its voltage-current characteristic responsive to the voltage level conditions at the output of said first switching circuit, means for varying the current direction through one of said impedance elements responsive to the variation of current through said asymmetrically conductive element including means for providing bi-polar voltage levels at the point intermediate said impedance elements.

3,019,352
TETRODE TRANSISTOR CIRCUIT
George Wertwijn, Park Ridge, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Dec. 16, 1958, Ser. No. 780,732
6 Claims. (Cl. 307—88.5)



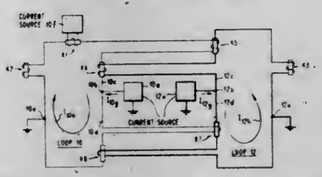
1. A transistor device comprising: a semi-conductor body having a first conductivity zone of one type and having a pair of conductivity zones of a second type defining with said first zone base-emitter and base-collector junctions; a pair of base electrodes one of which is positioned approximately at the geometrical center of one face of said first zone and the other having portions spaced equidistantly from said one electrode on the same face of said one zone; one of said pair of conductivity zones being positioned on said one face of said one zone intermediate said base electrodes and the other of said pair being coextensive and contiguous with the opposite face of said one conductivity zone; means, including emitter and collector electrodes connected to said pair of conductivity zones respectively, for establishing a forward bias for said base-emitter junction and a reverse bias for said base-collector junction; and a further bias means connected to said base electrodes for effectively restricting the forward bias of said base-emitter junction to a portion of said junction disposed toward one of said base electrodes.

3,019,353
SUPERCONDUCTOR INFORMATION TRANSFER CIRCUIT
James B. Mackay, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,310
10 Claims. (Cl. 307—88.5)



9. In an information transfer circuit; a plurality of storage devices each capable of assuming first and second stable information representing states; a plurality of superconductor coupling circuits each maintained at a superconductive temperature and each coupling a corresponding preceding one of said storage devices to a corresponding succeeding one of said storage devices; and a shift pulse source for simultaneously applying a shift pulse to each of said coupling circuits each of said coupling circuits including first and second paths; each of said coupling circuits being responsive to the corresponding preceding storage device at the time a shift pulse is initially applied to direct the shift pulse into one or the other of said paths to set the corresponding succeeding storage device in accordance with the state of the corresponding preceding device at the time the shift pulse is initially applied; each said shift pulse when once directed into one or the other of said paths being effective to render said coupling circuit non responsive to any change of state thereafter effective in the preceding storage device before the shift pulse is terminated.

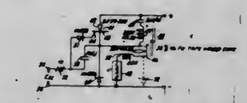
3,019,354
SUPERCONDUCTOR PERSISTENT CURRENT CIRCUIT
John L. Anderson, Poughkeepsie, and Francis R. Hand, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 29, 1959, Ser. No. 816,972
10 Claims. (Cl. 307—88.5)



5. In a superconductor circuit; a plurality of superconductor loops for storing persistent currents; said superconductor loops being directly coupled one to the other to form a ring circuit; each said loop having connected therein a superconductor gate conductor controlled by a control conductor connected in a preceding loop in said ring and a control conductor arranged to control a gate conductor connected in the preceding loop

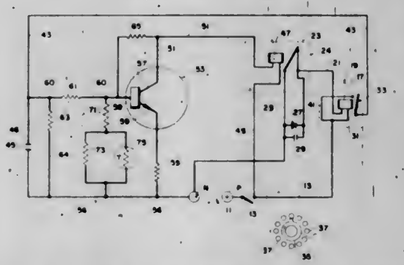
in said ring; whereby when a signal is applied to any particular one of said loops at a time when a persistent current is stored in the preceding loop, the persistent current in the preceding loop is quenched and a persistent current is established in the particular loop.

3,019,355
MAGNETIC SILICON CONTROLLED RECTIFIER POWER AMPLIFIER
Raymond Evan Morgan, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 12, 1959, Ser. No. 833,292
19 Claims. (Cl. 307—88.5)



17. A control amplifier including in combination a silicon controlled rectifier having an anode, a cathode and gating electrode, an inductive load circuit operatively coupled in the anode-cathode circuit of said silicon controlled rectifier, a saturable core transformer having its primary winding operatively coupled in the anode-cathode circuit of said silicon controlled rectifier, the secondary winding of said saturable core transformer being also coupled in the anode-cathode circuit of said silicon controlled rectifier, a charging capacitor connected in series circuit relationship with the secondary winding of said saturable reactor transformer, means for applying a gating control signal to the control electrode of said silicon controlled rectifier, and a booster rectifier connected across said inductive load circuit.

3,019,356
ELECTRONIC TIMER
Florian E. Tepolt, Utica, and Donald B. Heaslip, Sauquoit, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 13, 1959, Ser. No. 799,232
5 Claims. (Cl. 307—132)



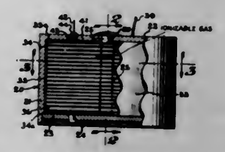
2. An electrical cycling timer comprised of transistor having a base, a collector and an emitter, a source of direct current having first and second terminals, a first circuit including a relay coil connecting said first terminal to said collector, a second circuit including a normally-open interrupter switch and limiting resistor connecting said first terminal to said base, a stepper switch having an actuator coil, a third circuit including said actuator coil and a normally-closed relay switch connecting said first terminal to said second terminal, said relay coil being arranged to open said relay switch when said relay coil is energized, said actuator coil when energized being arranged to close said interrupter switch, said emitter being connected to said second terminal, a fourth circuit including a capacitor and a timing resistor in parallel connecting said second circuit between said interrupter switch and said limiting resistor to said second terminal, a temperature compensating circuit connected between said transistor base and said second terminal to said source, said circuits being arranged so that, when said interrupter switch is closed, said capacitor is charged, said transistor is made conductive, and said relay switch is opened by energizing said relay coil and further so that said transistor remains conductive due to said capacitor and said timing resistor and said relay coil remains energized for a predetermined time after said interrupter switch is opened.

3,019,357
TRUNK TO BRANCH TREE LIGHTS
Dominic A. Zaffina, 415 Orchard Lake Ave., Pontiac, Mich.
Filed Mar. 27, 1959, Ser. No. 802,465
6 Claims. (Cl. 307—157)



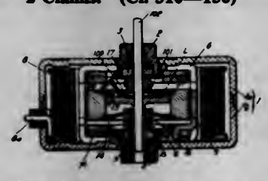
1. A Christmas tree light assembly comprising a trunk line composed of a plurality of sections, plug and socket electrical fixtures connecting confronting ends of said sections, each socket having plug inlets at one end into which one of the section plugs are adapted to fit and additional plug inlets, branch lines separably connected with said trunk line, each branch line having a plug at one end separably disposed in one of said additional plug inlets, said trunk line section sockets each having spaced apertures, and a bendable strip extending through said apertures and adapted to girdle a part of the tree trunk to hold the socket fastened to the tree trunk.

3,019,358
RADIOACTIVE BATTERY WITH CHEMICALLY DISSIMILAR ELECTRODES
Philip E. Ohmart, Cincinnati, Ohio, assignor to The Ohmart Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed May 9, 1952, Ser. No. 286,929
3 Claims. (Cl. 310—3)



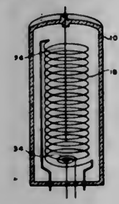
1. A radiant energy electric generator comprising an outer casing and an inner casing, said inner casing being adapted to contain a radioactive substance and being constructed of a material pervious to the radiations from said substance, a quantity of radioactive material disposed within said inner casing, a plurality of spaced composite electrode members disposed within said outer casing, a quantity of ionizable fluid in contact with said composite electrode members, each of said composite electrode members comprising a thin disc constructed of an electrode material and coated on one side with a second electrode material chemically dissimilar from the first electrode material, said discs being disposed within said outer casing in a parallel spaced relationship so that each of the coated surfaces is disposed in the same relative position, whereby the opposed surfaces of adjacent electrode members are chemically dissimilar, one of said plurality of composite electrode members being connected to said casing, a second of said composite electrode members disposed relative to the first so that the remaining electrode members are disposed intermediate the two being connected to a lead insulated from said outer casing, insulating material interposed between said composite electrode members, said insulating material extending over only a portion of said discs, each of said remaining electrode members also being insulated from said outer casing.

3,019,359
SMALL SELF-STARTING SYNCHRONOUS MOTORS HAVING A HIGH POWER-TO-WEIGHT RATIO
Roger Charles Leon Crommen, Valence (Drome), France, assignor to Compagnie Crouzet, Valence (Drome), France, a company of France
Filed Apr. 13, 1959, Ser. No. 806,094
Claims priority, application France Apr. 18, 1958
2 Claims. (Cl. 310—156)



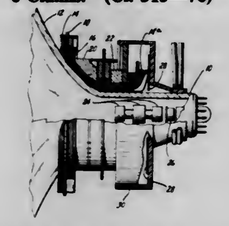
1. In a self-starting synchronous motor comprising: a stator including polar elements spaced apart circumferentially; an excitation coil surrounding said polar elements; and a rotor rotating in said stator, said rotor comprising a shaft, an annular permanent magnet having a substantially rectangular cross-sectional shape and comprising on each of its two lateral faces three planes inclined relative to a radial plane, a rigid cup fixed on said shaft the periphery of said cup being in point contact with each of the three inclined planes located on the same side of the magnet, and an elastic washer fixed on said shaft and having its periphery bearing elastically against each of the three inclined planes located on the side of the magnet opposite that on which said cup is located.

3,019,360
IONIZATION VACUUM GAUGE
George W. Hees, Williston Park, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,685
2 Claims. (Cl. 313—7)



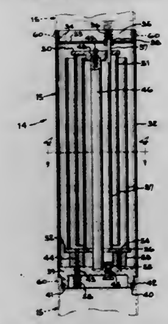
1. An ionization vacuum gauge comprising, in combination, an envelope of material impervious to air, an acceleration electrode in said envelope comprising a conductor wound in helical form and defining an elongated substantially cylindrical volume, an ion collector comprising a thin conductive wire positioned substantially along the longitudinal axis of said cylindrical volume, and a thermionic cathode of flat spiral shape positioned at one end of said cylindrical volume and normal to the longitudinal axis of said volume.

3,019,361
LAMINATED MAGNETIC SHIELDING MEANS FOR TELEVISION TUBES AND THE LIKE
Thomas V. Di Paolo, Riverside, N.J., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 15, 1957, Ser. No. 696,840
6 Claims. (Cl. 313—76)



1. In combination with a cathode ray tube system having magnetic deflection means for creating a relatively high frequency magnetic deflection field in a first plane and a relatively low frequency magnetic field in a second plane, a laminated shielding member comprising a highly electrically conductive, approximately flat, sheet-like member apertured to receive the neck of said cathode ray tube and disposed in adjacency with said deflection means, and a high permeability, approximately flat, sheet-like member secured to said highly electrically conductive sheet-like member on the side remote from said deflection means, said high permeability member being apertured to receive the neck of said cathode ray tube and being further formed with a gap extending transverse to said low frequency field and intersecting said aperture, said gap and said aperture dividing said high permeability member into two magnetically separate portions.

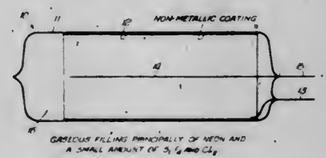
3,019,362
RADIANT ENERGY ELECTRIC GENERATOR FOR DENSITY RESPONSIVE APPARATUS
Philip E. Ohmart, Cincinnati, Ohio, assignor to The Ohmart Corporation, Cincinnati, Ohio, a corporation of Ohio
Original application Oct. 13, 1953, Ser. No. 385,753, now Patent No. 2,737,592, dated Mar. 6, 1956. Divided and this application Feb. 9, 1956, Ser. No. 564,412
13 Claims. (Cl. 313—93)



4. A strip cell for use in density responsive apparatus, said strip cell comprising a plurality of component radiant

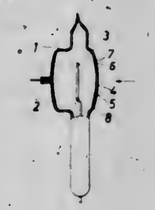
energy electric generators arranged in end to end relationship, each of said radiant energy electric generators comprising a housing, a first electrode in electrical connection with said housing, a second electrode electrochemically dissimilar from the first said electrode, and an ionizable gas in contact with each of said electrodes, said second electrode being electrically disposed at each end of said housing and insulated therefrom, said terminal connectors being in electrical connection with said terminal connector of a juxtaposed generator, and means associated with each end of said housing for securing said housing to the housing of the adjacent radiant energy electric generators.

3,019,363
RADIATION COUNTING MEANS
Friedrich Wilhelm Wiechering, Chicago, Ill., assignor to Radiation Counter Laboratories, Inc., Skokie, Ill., a corporation of Illinois
Filed Oct. 23, 1959, Ser. No. 848,374
3 Claims. (Cl. 313—93)



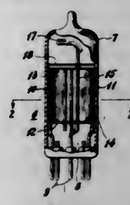
1. A Geiger-Müller counter comprising, in combination, an envelope, a pair of electrodes therein, and a gaseous filling in said envelope consisting essentially on the basis of relative percentages by pressure of neon containing about 0.034% chlorine and about 0.816% silicon tetrafluoride.

3,019,364
PHOTOELECTRIC DEVICE FOR ULTRA-VIOLET RADIATION
Alfred Krohs and Fritz Schlohlein, Jena, Germany, assignors to VEB Carl Zeiss Jena, Jena, Germany
Filed Nov. 27, 1956, Ser. No. 624,705
Claims priority, application Germany Dec. 22, 1955
1 Claim. (Cl. 313—102)



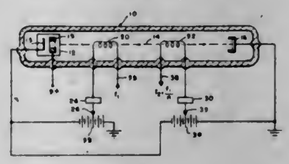
A photoelectric device comprising at least a photoemissive layer sensitive to the ultra-violet range of radiation in an envelope consisting of a glass bulb with a quartz window, said photo-emissive layer lying in the path of said radiation entering through said window in said photoelectric device, said window being sealed to said bulb by means of a graded seal composed of several intermediate glass rings of appropriate heat coefficients disposed around the outer edges of said quartz window and so sealed to said edges, to each other and to the wall of said bulb that said quartz window, said intermediate glass rings and the wall of said bulb which is to be sealed with the window lie in one common plane.

3,019,365
GAS DISCHARGE DEVICE
Garry G. Collins, Jr., Long Branch, and Keith W. Olson, Neptune, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,285
5 Claims. (Cl. 313—213)



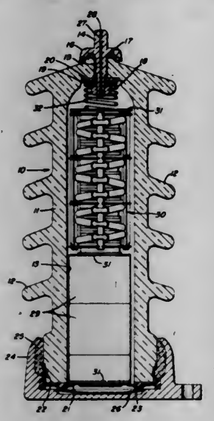
1. A cold cathode gas discharge device comprising an envelope, a cylindrical cathode having an oxide coating on the inside thereof, an anode having four sections spaced equidistant from said cathode to form a concentrated field between said anode and said cathode, and an inert gas filling said envelope, said devices having a stable breakdown over a wide temperature range.

3,019,366
MICROWAVE FREQUENCY DIVIDER
Donald A. Dunn, Menlo Park, Calif., assignor to the United States of America as represented by the Secretary of the Army
Filed July 29, 1958, Ser. No. 751,814
5 Claims. (Cl. 315—3.6)



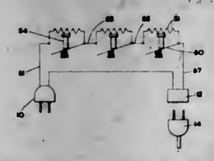
1. A microwave frequency divider circuit comprising a travelling wave tube having an electron gun at one end thereof for directing an electron beam along a path and a collector anode at the other end thereof for intercepting said beam, means including a first discrete slow-wave circuit element in coupling relationship to said beam and having a signal input means at the end thereof nearer said collector anode and an energy absorber at the other end thereof, whereby when a signal of prescribed frequency and power is applied to said input means said beam is saturated and interacts with said signal in the backward-wave mode to modulate said beam at said frequency, a second discrete slow-wave circuit element intermediate said first slow-wave circuit element and said collector anode and in coupling relationship to said beam, said second slow-wave circuit element having a signal output means at the end thereof nearer said gun and an energy absorber at the other end thereof, the beam current in coupling relation to said second slow-wave circuit being below start-oscillation current, and means for voltage tuning the modulated beam interacting with said second slow-wave circuit element to produce a signal on said second slow-wave circuit element which is a submultiple of said prescribed input frequency, said submultiple frequency having a value such that it is equal to the beat frequency between said submultiple frequency and said prescribed frequency on said beam, said submultiple signal being derived from said signal output means.

3,019,367
LIGHTNING ARRESTER AND GAP UNIT THEREFOR
John W. Kalb, Wadsworth, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Filed Jan. 4, 1957, Ser. No. 632,551
34 Claims. (Cl. 315—36)



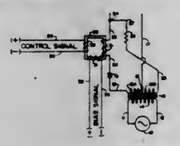
1. A spark gap for lightning arresters and the like comprising a plurality of axially juxtaposed plates, each comprising a member of insulating material with first and second metallic electrodes on opposite sides thereof, metallic means extending through the member for securing the electrodes to the plate member and for electrically connecting the electrodes, each of the said first and second electrodes having an arcing end thereof cooperating with an arcing end of the second or first electrode, respectively, of a next adjacent plate to form an arc gap therewith and the adjacent faces of the electrodes diverging oppositely with respect to a diametric axis transversely across the member, the arc gaps formed by the electrodes of the several plates constituting a succession of gaps outwardly from and about the longitudinal axis of the plates, each of the plate members being formed on each side thereof to constitute one surface of an arc recess about the arcing ends of the electrodes and of an arc extinguishing chamber between the diverging portions of the electrodes, and ridge and recess means on each side of the members for interengagement with the member of adjacent plates for holding the plates each with respect to the adjacent plate.

3,019,368
VOLTAGE REGULATOR
William Lionel Osborne, Thornbury, Ontario, Canada
Filed Mar. 29, 1956, Ser. No. 574,912
1 Claim. (Cl. 315—96)



A voltage regulator incorporating: two or more electronic tubes of the type having at the bottom thereof a central, downwardly extending plug surrounded by a set of downwardly extending prongs, two of which act as the filament terminals for the electronic tube; a base supporting thereabove a socket corresponding to each of said electronic tubes having conducting tubes for the reception of prongs therein, means for connecting the conducting tubes of each socket corresponding to the filament terminal prongs in series with the corresponding conducting tubes of each other socket and with an electrical line; and a connector normally biased into contact with each pair of said corresponding conducting tubes to electrically short them, actuable by said plug to break the shorting connection.

3,019,369
POLARITY SWITCHING CIRCUIT
Steve A. Zarieng, Akron, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 31, 1959, Ser. No. 803,189
20 Claims. (Cl. 315—205)

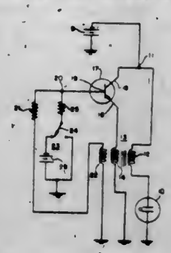


7. A polarity switching circuit comprising; a source of alternating current with a center tap thereon, a first and second unidirectional conducting device, a first winding connected to one side of the source, a second winding connected to the other side of the source, a first and second reactor having said first and second windings wound thereon respectively, a first impedance device connected to said other side of the source, a second impedance device connected to said one side of the source; the first unidirectional conducting device connected in series with said one side of the source and the first winding to permit current flow only in the direction of the first winding; the second unidirectional conducting device connected in series with said other side of the source and the second winding to permit current flow only in the direction of the second winding; the first winding and first impedance device connected to a first point; the second winding and second impedance device connected to a second point; means for maintaining both reactors unsaturated whereby the polarity at both the first and second points is negative, and the current flowing through said first and second windings causes their associated reactors to become saturated in alternate half cycles whereby the point associated with the saturated reactor is switched from the negative polarity to a positive polarity.

3,019,370
TRANSISTOR CONTROLLED GASEOUS INDICATOR
William Joseph Basharrah, Detroit, Mich., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 9, 1960, Ser. No. 13,886
3 Claims. (Cl. 315—206)

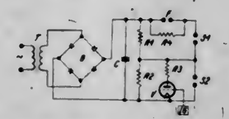
1. A circuit for controlling the operation of a gaseous glow lamp comprising a glow lamp, a supply source whose potential is not as great as the firing potential of said lamp in a series circuit including a transformer load winding coupled to a transformer core, a generating circuit for providing an alternating current potential across said load winding superimposed on said potential of said supply source to enable a repetitive firing and extinguishing operation of said lamp, said generating circuit including a gated blocking oscillator circuit having a transistor with a base electrode, an emitter electrode and a collector

electrode, a primary winding coupled to said core and in the collector-emitter circuit of said transistor, a positive feedback winding coupled to said core and connected to said base electrode, bias means for maintaining said



transistor in an off condition, and a gate circuit providing one of two selected levels of potential for overcoming said bias means to gate on said blocking oscillator in response to one of said potential levels.

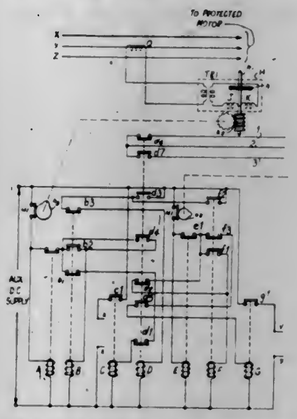
3,019,371
SPECTROSCOPIC LIGHT SOURCE
Arpad Bardocz, 4 Orlay-utca, Budapest XI, Hungary
Filed June 16, 1958, Ser. No. 742,361
12 Claims. (Cl. 315—232)



1. A spectroscopic light source comprising, in combination, a source of A.C. potential; a device having an input connected to said source and producing, at its output, relatively sharp voltage pulses of short duration in comparison with the duration of a half cycle of said source; full-wave rectifying means connected to the output of said device; an energy storage means in a charging circuit connected to the output of said rectifying means, said rectifying means charging said storage means to peak voltage during each pulse and interrupting the charging current at the end of each pulse while maintaining the storage means charged to peak voltage; an analytical spark gap in series in a power circuit connected across said storage means; and circuit means operatively associated with said power circuit and operable, in synchronized relation with said pulse production, to trigger said power circuit to discharge said storage means across said analytical spark gap just as the voltage of each pulse decays to substantially zero; each charge-discharge cycle of said storage means being effected during a period not exceeding the duration of a half cycle of said source; each of said charging and power circuits being inactive when the other is active.

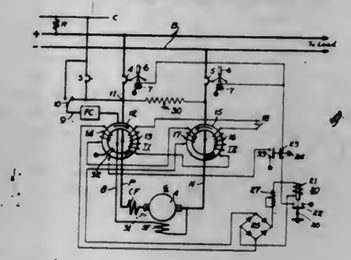
3,019,372
OVERHEAT ELECTRICAL PROTECTION DEVICE
Frederick Melville Pearce, Hale, and James Wilson Hodgkiss, Sale, England, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a British company
Filed Jan. 9, 1956, Ser. No. 558,156
Claims priority, application Great Britain Jan. 12, 1955
6 Claims. (Cl. 317—13)

1. An overheat electrical protection device including a first induction meter type measuring unit fitted with contacts which are operable by a rotatable disc for producing impulses at a rate proportional to the input energy lost as heat from a piece of electrical equipment, a second induction meter type measuring unit, fitted with contacts which are operable by a rotatable disc for producing impulses at a rate proportional to that part of the heat produced in the equipment which is dissipated by cooling and



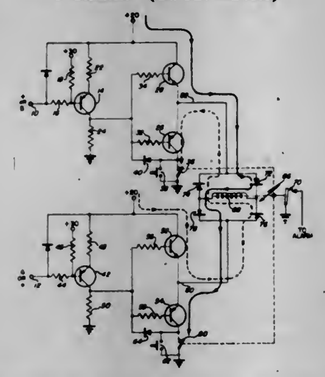
an electromagnetic switch operable in accordance with the difference between the repetition rates of the pulses from the first and second measuring units to disconnect the equipment from its load or supply when this difference reaches a predetermined value.

3,019,373
DIFFERENTIAL DIRECT CURRENT RESPONSIVE CONTROL SYSTEM
Max J. Kramer, Parma, Ohio, assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 2, 1959, Ser. No. 784,779
1 Claim. (Cl. 317—13)



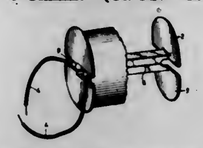
In combination, a D.C. generator adapted to be driven by a gas engine and having positive and negative output conductors connected through individual circuit breakers to a power distribution bus and a shunt field circuit including a field adjusting rheostat connected at its negative end to the negative generator terminal and at its positive end to the circuit breaker end of said positive output conductor, the positive breaker being open and the negative breaker closed to set up said generator for starting as a motor, switch means in shunt relation to said positive breaker and operable to connect said positive end of said field circuit and said positive conductor respectively to the positive side of said bus through current limiting resistance for generator start as a motor after which said switch means is opened and said positive breaker closed for connecting said generator directly across said bus, and fault protection means for said generator comprising two closed toroid cores of rectangular-hysteresis-loop magnetic material, each encircling one of said output conductors intermediate said generator and said circuit breakers and being magnetically saturated by the D.C. excitation provided by the current flow in the conductor it encircles, said field circuit having its positive current lead extending back through the positive conductor core to render the D.C. excitation on this core equal to that on the negative conductor core, a primary winding and an output winding of a lesser number of turns distributively wound on each core, an alternating current source to which said primary windings are connected in series and in such polarity relation with respect to each other that both cores are driven out of saturation during the same half of the A.C. cycle responsively to which alternating voltages are induced in said output windings, said output windings being connected in series opposition and having equal voltages induced therein which cancel and provide zero voltage thereacross for balanced D.C. excitation of said cores, said cores being responsive to unbalanced D.C. excitation to produce a net output voltage across said output windings, a control relay having a winding connected in circuit with said output windings through a full wave bridge rectifier, and trip means for each of said circuit breakers and controlled by said relay for tripping both circuit breakers responsively to said net output voltage reaching a predetermined magnitude.

3,019,374
ELECTRICAL APPARATUS
Frederick F. Ladd, Jr., Amesbury, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 764,055
5 Claims. (Cl. 317—148.5)



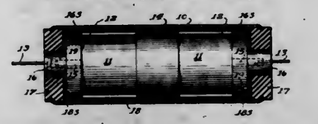
1. An electrical circuit comprising a first pair of transistors of opposite conductivity types, each of said transistors having base, emitter, and collector electrodes, means connecting the emitter-collector circuits of said first pair of transistors in a series circuit to a power supply means, a second pair of transistors of opposite conductivity types, each of said transistors having base, emitter, and collector electrodes, means connecting the emitter-collector circuits of said second pair of transistors in a series circuit to said power supply means, a signal source means connected to the base electrodes of the transistors of said first and second pair of transistors, a relay having a control winding connected between the connecting junctions of said first and second pair of transistors, and diode means connected to said relay winding to limit the current flow through said winding to a single direction which is independent of the direction of the current flow originating from said first and second pair of transistors.

3,019,375
HEAT-RESISTANT COIL FORMER, ESPECIALLY FOR ELECTRICAL RELAYS
Hans Geyer and Josef Fischer, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany
Filed Apr. 7, 1958, Ser. No. 726,958
Claims priority, application Germany Apr. 12, 1957
6 Claims. (Cl. 317—158)



1. An assembly for electrical devices of the class of relays and the like, comprising a heat-resistant spool carrying a coil winding, said spool comprising two half-shells, each half-shells made integrally of one ipece of sheet metal less than 1 millimeter thick and forming a central cross-sectionally troughlike elongated portion having a flange portion radially outwardly extending therefrom at each end thereof for a distance which is a multiple of the corresponding radial dimension of said central portion, each half-shell at least in part coated with a heat-resistant electrically insulating film, said half-shells being positioned with said elongated portions in opposed relation and corresponding flanges extending in opposite directions whereby the inner edges of one half-shell face corresponding inner edges of the other half-shell, said coil winding disposed on the central portions of said half-shells between the flanges formed by the flange portions at the opposite ends thereof and constituting the sole means for holding said half-shells in assembled position.

3,019,376
HIGH-TEMPERATURE MINIATURE CONDENSER CONSTRUCTION
Jerome J. Kurland, Chicago, and Joseph J. Kurland, Glencoe, Ill., assignors to Illinois Condenser Company, a corporation of Illinois
Filed Mar. 27, 1959, Ser. No. 802,477
5 Claims. (Cl. 317—242)

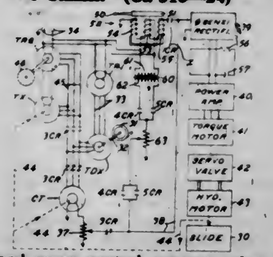


1. In a hermetically sealed high-temperature capacitor construction, a capacitor pack having an external connection terminal projecting from one end thereof, an encapsulation of air and moisture-resistant insulating mold material surrounding and completely encasing an intermediate portion of each terminal to form a solid bead that completely seals said portion, said bead being larger at its inner end than at its outer end such that said inner end presents an endwise outwardly facing abutment surface, a hollow frame open at one end and housing the pack and bead in endwise alignment, said frame having annular wall structure at said one end overlying the said abutment surface on the inner end of the bead to react therewith in limiting endwise separation of the bead and pack, a resilient sleeve of rubber-like material in snug, telescoping relation over the outer end of the bead to abut against said annular wall structure, and a tubular external casing in telescoping relation over the frame and bead, said casing having wall structure at the bead end thereof projecting into the sleeve and compressing the sleeve into sealing engagement with the bead and with said annular wall structure.

3,019,377
HAND SERVO CONTROL SYSTEM

John M. Morgan, Jr., Montgomery, and Hubert K. Brown and Joseph A. Rave, Jr., Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 16, 1958, Ser. No. 728,819
6 Claims. (Cl. 318—24)



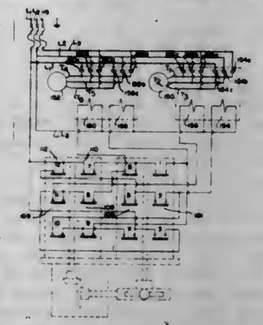
1. In a hand servo control apparatus for a machine tool having a slide and means for driving the slide in either direction including a servomotor and a servo amplifier for operating the servomotor in accordance with the phase and amplitude of an actuating signal, the invention comprising a synchro differential transmitter, a handwheel for operating the synchro differential transmitter, a normally quiescent dummy synchro receiver having its stator windings connected to the stator windings of said synchro differential transmitter, an A.C. source for energizing the rotor windings of said dummy synchro, a control transformer having its stator windings connected to the rotor windings of said synchro differential transmitter and its rotor windings connected to the input of said servo amplifier to provide an actuating signal for said servo amplifier, means for driving said control transformer in synchronism with said slide to provide mechanical feedback to said control transformer, an independent source of actuating signal for said servo amplifier, means for disconnecting said control transformer from said servo amplifier and connecting said independent source to said servo amplifier so as to drive said slide in accordance with the signal from the said independent source, and means for driving said dummy synchro in synchronism with said slide when said control transformer is disconnected, thereby to maintain said synchro differential transmitter in synchronism with said control transformer during movement of said slide under control of the signal from said independent source so as to prevent jump of the slide when said control transformer is again connected to said servo amplifier.

3,019,378
MANUAL MOTOR CONTROL DEVICE

James D. Brown and Lester Hanson, Salt Lake City, Utah, assignors to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware

Filed Nov. 12, 1957, Ser. No. 695,956
5 Claims. (Cl. 318—65)

1. Electric control means for a vehicle having left and right traction means, an electric motor connected to each traction means and having forward and reverse contactors, means connecting said motors to a source of electric power, said means including; a first set of normally disengaged switches, said first set of switches comprising three switch elements, a second set of normally disengaged switches, said second set of switches comprising three switch elements, first actuator means for selectively engaging and disengaging said first and second set of switches, a third and fourth set of normally engaged switches, said third and fourth set of switches each comprising two switch elements, a fifth and sixth set of normally disengaged set of switches, said fifth and sixth set of switches each comprising one switch element, second actuator means for selectively engaging and disengaging the third, fourth, fifth and sixth set of switches, conductor means interconnecting at least one normally engaged set and at least one normally disengaged set of

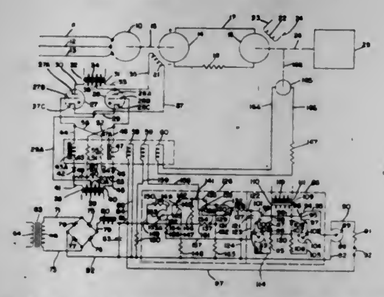


switches to the forward and reverse contactors of each of said motors, and a single manually actuated control arm interconnected with said first and second actuator means.

3,019,379
ACCELERATING AND DECELERATING CONTROL SYSTEM

Steve A. Zarleng, Akron, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio

Filed July 11, 1960, Ser. No. 41,828
17 Claims. (Cl. 318—158)



1. In an electrical system for controlling the acceleration of a motor comprising a power converter for controlling said motor; control circuit means for controlling said converter; a timing circuit connected to said control circuit means through an amplifier; a reference voltage indicative of the desired motor speed, said timing circuit comprising a condenser to be charged by a current from the reference voltage of a value determined by a transistor and upon application of said reference voltage, the condenser takes on a charge and increasingly energizes said control circuit means through the amplifier whereby the motor accelerates until said condenser is charged to a potential equal to the reference voltage.

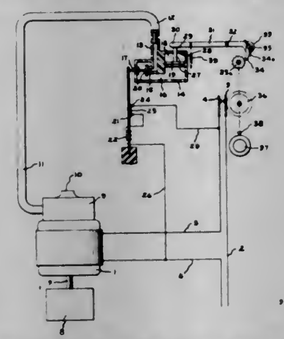
3,019,380
ELECTRO-PNEUMATIC SEQUENCE CONTROL SYSTEM

Philip H. Houser, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Aug. 25, 1960, Ser. No. 51,840
3 Claims. (Cl. 318—486)

2. A step-by-step sequence control mechanism for an electric motor comprising: an energizing circuit for said

motor; switch means controlling said energizing circuit; cam means controlling said switch means; a ratchet secured in driving relation to said cam means; a pawl engageable with said ratchet; a movable member secured to said pawl, said pawl engaging and advancing said ratchet when said member is moved from a first position to a second position; means biasing said member to one of said positions; and means for alternately moving said member to the other of said positions and allowing said biasing means to return said member to said one position comprising an air compressor secured to said motor to be operated thereby, a cylinder, a conduit connecting said

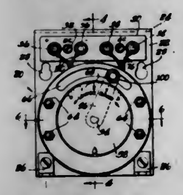


compressor and said cylinder, air vent positioned to prevent pressure buildup in said cylinder when said vent is open, means alternately opening and closing said vent, a piston in said cylinder, and means secured to said piston engaging said member, said piston moving from a first position to a second position in response to a buildup of pressure in said cylinder, said piston in its said second position causing said member to move to its said other position, said biasing means moving said member back to its said one position and said member moving said piston back to its said first position when said vent is opened.

3,019,381
RECTIFIER

Carl G. Howard, 261 Lakeside Place, Highland Park, Ill.

Filed May 4, 1955, Ser. No. 506,004
4 Claims. (Cl. 321—21)

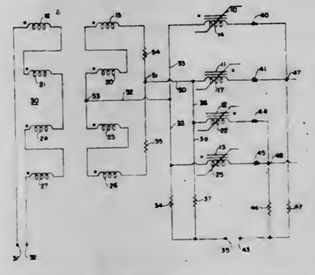


1. A transformer-rectifier unit comprising an elongated cylindrical housing having a sidewall and front and back end walls, a substantially cylindrical stator core coaxially mounted in said housing relatively adjacent the front end wall and snugly fitting within the sidewall, a substantially cylindrical rotor core, means including a shaft mounting said rotor core within said stator core for rotation relative thereto, means on said front end wall interconnected with said shaft for rotating said rotor core relative to said stator core and providing at said front end wall a visual indication of the relative positions of said cores, a primary coil mounted on one of said cores, a secondary coil mounted on the other of said cores and in inductive relation to the primary coil, said coils being rotatable relative to one another and each being symmetrically disposed about said shaft, relative rotation of said cores and said coils being effective to vary the voltage induced in said secondary winding, input connections to said primary winding for energizing said primary winding with alternating current, output connections from said secondary winding, metallic rectifier means mounted in said housing between the back end wall and the cores, means connecting said secondary output connections to said metallic rectifier means, and direct current output connections from said rectifier means.

3,019,382
CONTROL APPARATUS

Donald J. Rotier, Crystal, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 18, 1958, Ser. No. 781,345
5 Claims. (Cl. 323—89)

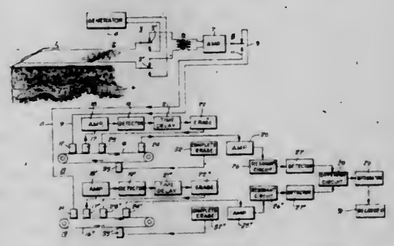


5. In a magnetic amplifier having means allowing a first set of power windings to conduct only during a first and subsequent like half-cycles of supply power and allowing a second set of power windings to conduct only during a second and subsequent like half-cycles of supply power, the improvement comprising: first and second bias impedances connected in series circuit with said first and second sets of power windings respectively; bias winding means; and means connecting said bias winding means across said bias impedances so that the current flowing through said bias impedances develops a constant polarity energization for said bias winding means.

3,019,383
GROUND LIQUID PROSPECTING METHOD AND APPARATUS

Russell Harrison Varian, Cupertino, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California

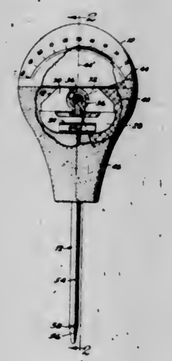
Filed Feb. 2, 1956, Ser. No. 563,116
13 Claims. (Cl. 324—.5)



1. Apparatus for use in detecting an underground liquid having nuclei possessing the properties of magnetic mo-

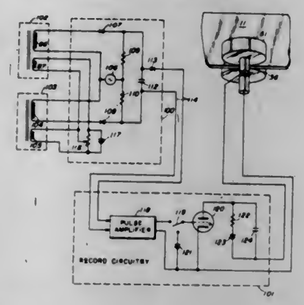
ment and gyroscopic moment which comprises means for first applying an alternating magnetic field at the Larmor frequency of the nuclei in the earth's magnetic field to the earth at the earth's upper surface and at an angle to the earth's magnetic field to thereby reorient a preponderance of the nuclei in the liquid which may be under the upper surface from alignment with the earth's magnetic field and for then removing the applied alternating magnetic field to thereby permit the nuclei to precess freely at their Larmor frequency in the earth's magnetic field, said first means applying said alternating magnetic field to the earth in a rapid succession of pulses, said magnetic field produced by the precessing nuclei being detected in a rapid succession of pulses between said applied magnetic field pulses, means at the upper surface for detecting the magnetic field produced by the precessing nuclei, the characteristics of said detected signal serving to indicate the existence of the underground liquid, and integrator means coupled to said detecting means for integrating the detected nuclear resonance signals over a long period of time.

3,019,384
MOISTURE INDICATING DEVICE
Harry A. Wayne, 4120 W. Greenwood, Skokie, Ill.
Filed Oct. 20, 1958, Ser. No. 768,111
9 Claims. (Cl. 324—29)



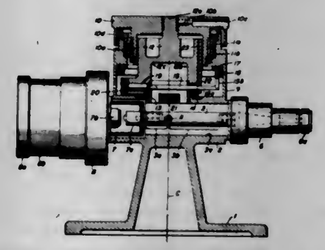
1. A moisture measuring and indicating device comprising a hollow housing shaped to receive manually applied pressure to enable said device to be inserted into moisture containing material, an electric motor positioned within said housing, said motor including a rotatable armature having a pair of terminals connected thereto, an indicating flag secured to said armature for rotation therewith, an elongated probe extending from said housing in alignment with the longitudinal central axis of said housing, said probe comprising an elongated metallic body portion forming a first electrode, a metallic end portion forming a second electrode, an insulating means positioned between said first and second electrodes at their junction, said first and second electrodes comprising almost all of the exposed surface area of said probe and said insulating means having an exposed surface area very much smaller than the exposed surface area of the first and second electrodes, said first and second electrodes being formed of dissimilar metals to provide a galvanic couple, conductor means connecting said first electrode to one of the armature terminals and conductor means connecting said second electrode to the other armature terminal whereby the generation of electric current by galvanic action in response to the presence of moisture at the junction of said electrode causes the armature to rotate said flag to an indicating position, the relatively large surface areas of said electrodes providing sufficient galvanic action current to eliminate the need for any separate power source for said armature.

3,019,385
MAGNETIC MARKING SYSTEM
David C. Kalbfell, 941 Rosecrans St., San Diego, Calif.
Filed June 2, 1958, Ser. No. 739,110
9 Claims. (Cl. 324—34)



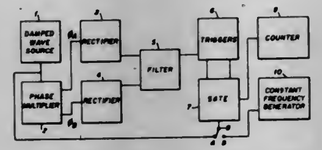
6. Apparatus for magnetically marking predetermined lengths along a moving sheet of magnetizable material, said apparatus comprising: recording means responsive to an applied electrical signal for producing a generally circularly shaped closed magnetic pattern on said moving sheet of magnetizable material; reading means positioned at substantially said predetermined distance from said recording means and responsive to a passing circularly shaped magnetization pattern on said moving sheet of magnetizable material for producing an electrical signal; and means for applying the electrical signals produced by said reading means to said recording means whereby said sheet of magnetizable material is magnetically marked at said predetermined lengths.

3,019,386
T-JUNCTION STANDING WAVE INDICATOR
Samuel Hopfer, Brooklyn, N.Y., assignor to Polytechnic Research & Development Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed Feb. 9, 1955, Ser. No. 487,152
8 Claims. (Cl. 324—58)



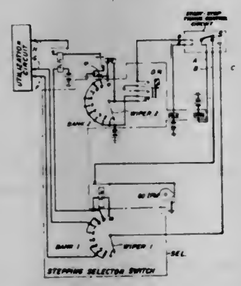
1. A standing wave indicator comprising a T-junction having three coaxial arms, a circular side-arm arranged normal to the plane of the T-junction and having one end thereof coupled to the field produced by all three arms of said junction, the center conductor of the two aligned arms of said junction being of the same diameter on opposite sides of the junction, and the center conductor of the stem arm of said T-junction being formed of a size substantially less than the center conductor of the two aligned arms of said junction to equalize the coupling between said side-arm and the three arms of said junction.

3,019,387
METHOD AND APPARATUS FOR DAMPED WAVE ANALYSIS
Robert G. Rowe, 8237 Witkop Ave., Niagara Falls, N.Y.
Filed Jan. 11, 1960, Ser. No. 1,734
4 Claims. (Cl. 324—68)



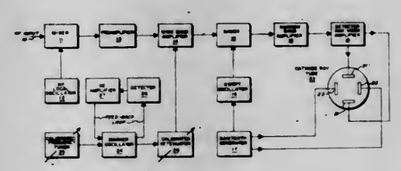
1. An apparatus for evaluating the damping factor of an electric oscillating damped wave comprising, in combination, a source of said damped waves, phase multiplication means connected to said source of damped waves and arranged to produce a number of phase-displaced damped waves, rectifier means connected to said phase multiplication means and arranged to produce pulsating D.C. voltage from each phase-displaced damped wave, filter means connected to said rectifier means to combine and smooth said pulsating D.C. voltage and measuring means connected to said filter means and arranged to indicate the time required for said D.C. voltage to change from a first to a second predetermined level.

3,019,388
SIGNAL TIMING CIRCUIT
Holger H. Thorbrogger, Chicago, Ill., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed Apr. 20, 1959, Ser. No. 807,661
20 Claims. (Cl. 324—68)



1. A circuit for determining the time duration of a signal condition comprising a pulse generator for generating a series of pulses, a plural stage counting circuit having a start condition and operative under control of pulses from said pulse generator upon the occurrence of a signal condition to advance from said start condition into and through a first stage and successive intermediate stages toward a last stage as long as said signal condition persists, means for rendering said counting circuit inoperative to stop the advance in any stage upon the cessation of a signal condition, first circuit means for causing said counting circuit to assume said start condition subsequent to the cessation of a signal condition, each of said stages except said last stage representing a discrete time duration in advance of said counting circuit, second circuit means associated with said last stage and operative under the control of the advance of said counting circuit into said last stage for measuring a prescribed time duration subsequent to the advance into said last stage, third circuit means controlled by the advance of said counting circuit into any stage except said last stage for indicating the time duration represented by said stage, and fourth circuit means associated with said third circuit means and controlled by said second circuit means for indicating said prescribed measured duration subsequent to the advance into said last stage.

3,019,389
SPECTRUM ANALYZER WITH RELATIVE AMPLITUDE MARKER
Alan Ross, Bayside, and Joseph S. Eisenmeyer and Isadore Rakofsky, Brooklyn, N.Y., assignors to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York
Filed Dec. 1, 1959, Ser. No. 856,410
5 Claims. (Cl. 324—77)

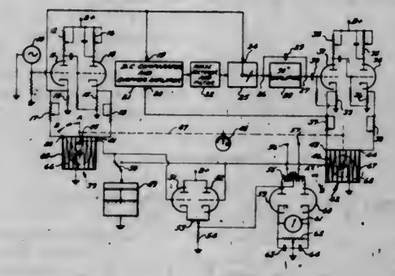


1. In a radio frequency spectrum analyzer for analyzing a radio frequency signal, said spectrum analyzer having a frequency selective circuit responsive to a relatively small range of frequencies, which relatively small range of frequencies is swept in time over a larger range of frequencies, and a display for indicating the amplitude of component portions of signals supplied to said analyzer in relation to the frequencies of said portions, a relative amplitude-measuring marker circuit comprising a signal generator with substantially stable amplitude output, means for controlling the frequency of said generator, means for controlling the amplitude of the output of said generator, means for supplying the output of said generator to said analyzer to cause an indication to appear on said display correlated to the frequency and amplitude of said generator in like fashion to the correlation of indications of frequency and amplitude of the radio frequency signal being analyzed, said amplitude control means having a control element, the variation of which bears a logarithmic relation to the amplitude of the output of said generator, and an amplitude control means indicator calibrated to read relative amplitudes and selectively connectable to indicate variations in said control element or, alternatively, adjustable to be independently controllable; whereby said control element may be varied to cause said indication produced on said display to correspond in amplitude to a particular portion of the radio frequency signal displayed, said amplitude control means indicator may be independently adjusted to a zero point and said control element may thereafter be varied, with corresponding change of indication of said control means indicator, to produce an indication on said display corresponding in amplitude to a second portion of the radio frequency signal displayed, and said control means indicator will then indicate directly the relative amplitude of said second portion of said signal with respect to the first portion.

3,019,390
PHASE MEASURING SYSTEM

Raymond A. MacMillan, Greenwood, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed May 5, 1959, Ser. No. 811,236
4 Claims. (Cl. 324—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



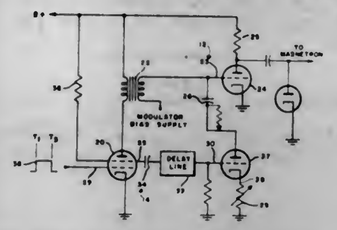
1. In a phase measuring system, a source of A.C. sinusoidal voltage with a wide frequency range having a 0° phase, means to convert said source voltage into a first pair of A.C. sinusoidal voltages of equal amplitudes, one voltage of said first pair having a precise 0° phase and the other a precise 180° phase, said first pair of A.C. voltages having superimposed thereupon a first pair of D.C. voltages of equal amplitudes, means to convert said voltage of 0° phase of said first pair of A.C. voltages into an A.C. sinusoidal voltage of precisely equal amplitude and having a precise 90° phase shift, means to automatically and continuously maintain precisely said amplitude and said phase shift of said 90° phase shifted voltage over said wide frequency range, means to convert said A.C. sinusoidal voltage having a 90° phase shift into a second pair of A.C. sinusoidal voltages of equal amplitude, one voltage of said second A.C. pair having a precise 90° phase and the other a precise 270° phase, said second pair of A.C. voltages having superimposed thereupon a second pair of D.C. voltages of equal amplitudes, a sine potentiometer having said first pairs of voltages applied thereto by way of a first pair of variable resistance means, said sine potentiometer including a first rotating brush, a cosine potentiometer having said second pairs of voltages applied thereto by way of a second pair of variable resistance means, said cosine potentiometer including a second rotating brush, a common drive shaft to rotate said first and second brushes in unison, said drive shaft having affixed thereto a calibrated dial, a D.C. potentiometer arranged to selectively measure the output D.C. voltage from said first brush or said second brush, means to vectorially sum the A.C. sinusoidal voltages from said first brush and said second brush to obtain a resulting voltage, and means to compare the phase of said resulting voltage to an A.C. voltage of unknown phase.

3,019,391
PULSE SHAPING CIRCUIT

Floyd V. Lewis, Santa Clara, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Feb. 26, 1959, Ser. No. 795,828
3 Claims. (Cl. 328—34)

1. A pulse shaping circuit comprising a driver tube having control and screen grids and a plate circuit, means to apply to said driver control grid a signal input in the form of a pulse having a steep leading edge, a modulator tube having a control grid and a plate circuit, transformer means for coupling the plate circuit of the driver tube to the control grid of the modulator tube, a load tube having a plate-cathode circuit connected in parallel with the grid of said modulator tube and having a control grid, and means including a delay line con-

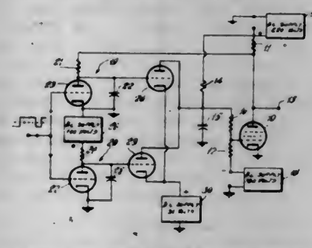


necting said driver screen grid to said load tube control grid.

3,019,392
STORAGE TIMER GATING DEVICE

William J. Heacock, Jr., Levittown, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 30, 1959, Ser. No. 843,605
6 Claims. (Cl. 328—119)



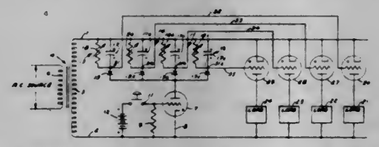
3. A storage timer gating device comprising a terminal for connection to a source of relatively high voltage, another terminal for connection to a circuit to be gated, a conductor connecting said terminals and having therein an impedance, means coupled to said conductor and operable to either block current flow or to establish a predetermined level of current flow through said conductor between said terminals, a pair of pulse circuits connected in parallel between a source of reference pulse inputs and said voltage controlling means, one of said parallel circuits being responsive to a selected repetition pattern of pulses from said pulse input source and operable on said means to cause the latter to establish, in said conductor a predetermined stable change in current, the other of said parallel circuits being responsive to a selected variation in said pulse pattern from said pulse source and also operable on said means to cancel said predetermined stable change in current.

3,019,393
SEQUENTIAL LOAD SWITCHING UTILIZING DISCHARGE TIMING MEANS

Stuart C. Rockafellow, Plymouth, Mich., assignor to Robotron Corporation, Detroit, Mich., a corporation of Michigan

Filed Sept. 2, 1958, Ser. No. 758,297
5 Claims. (Cl. 328—130)

1. In a circuit for independently affecting the conductivity of a plurality of load-actuating electric valves, each said valve including a potential responsive control means, the combination comprising: a plurality of time-constant circuits, each circuit including a chargeable element and a discharging device; an electric valve having an anode, a cathode and a control electrode; circuitry connecting one end of each of the time-constant circuits to a source of alternating potential; a plurality of one-way conductive means, there being one of each of said one-way conductive means connected in series with each time-constant circuit and circuitry connecting the other end of each of said time-constant circuits, respectively, through one of said one-way conductive means to the anode of said electric valve, said one-way conductive means each being sensed to permit the conduction of potential from one side of said source through its associated chargeable element to said electric valve; means connecting the cathode of said electric valve to the other

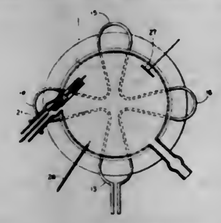


side of said source; means controlling the conductivity of said valve; a plurality of load-actuating electric valves, each of said last-named valves having a potential-responsive control means and a source of potential connected to each of said last-named valves so that same actuate a load when they are conductive; separate circuits connecting a point located between each of said one-way conductive means and the negative side of the chargeable element associated therewith to said control means for one of said load-actuating electric valves so that said load-actuating electric valves may be rendered conductive in sequence.

3,019,394
CHARGED PARTICLE ACCELERATOR

Willard H. Bennett, 174 Chesapeake St. SW., Washington, D.C.

Original application Nov. 21, 1955, Ser. No. 548,283, now Patent No. 2,942,106, dated June 21, 1960. Divided and this application Apr. 27, 1960, Ser. No. 25,176
7 Claims. (Cl. 328—235)
(Granted under Title 35, U.S. Code (1952), sec. 266)



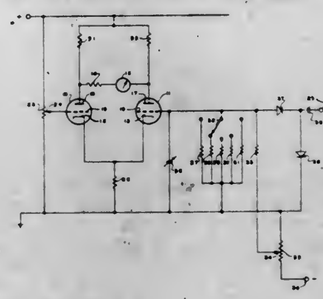
1. An accelerator for charged particles comprising an evacuated chamber means, means for producing a magnetic field in which the magnetic lines of force are symmetric with the axis of said chamber means, oppositely disposed propeller-shaped loops of wire on each side of said chamber means, and a frequency modulated radio-frequency current connected to said loops of wire for producing a sinusoidal magnetic field coaxially superimposed on said steady magnetic field.

3,019,395
ELECTRICAL DEVICE FOR COMPENSATING BIAS SHIFT OF ELECTRON TUBES

Daniel P. Hearn, Tulsa, Okla., assignor to Well Surveys Incorporated, a corporation of Delaware

Filed Apr. 24, 1957, Ser. No. 654,944
1 Claim. (Cl. 328—258)

A counting rate meter comprising at least one grid controlled electron tube, said tube having an anode, a cathode and at least one control grid, biasing means connected between said cathode and said grid, at least two resistors, a capacitor connected in parallel with said grid and connected selectively to at least one of said resistors, input means to receive pulses to be counted and deliver

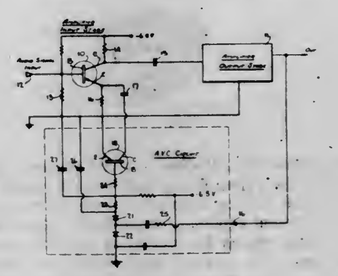


them to said capacitor, and a direct current source connected to said selected resistor in such a manner as to reduce substantially to zero the current through said selected resistor, independent of the selection, when no pulses are received by said input means.

3,019,396
AUTOMATIC VOLUME CONTROL TRANSISTOR CIRCUIT ARRANGEMENT

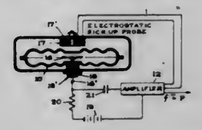
Wolfgang F. Heine, Huntington Station, and Kalju Meri, Elmhurst, N.Y., assignors to Mohawk Business Machines Corporation, Brooklyn, N.Y., a corporation of Maryland

Filed Oct. 9, 1959, Ser. No. 845,407
7 Claims. (Cl. 330—28)



1. An automatic volume control system for a transistor amplifier provided with an amplifying transistor and a circuit therefor, input means to apply an input signal to said transistor circuit, output means to derive an amplified signal from said transistor circuit and a resistor-capacitor parallel bias network interposed in said circuit, said system comprising a control transistor having base, emitter and collector electrodes, said control transistor being effectively connected in series with said capacitor across said resistor, said collector electrode of said control transistor being connected solely to one end of said capacitor, rectifier and filter means coupled to said output means to derive a direct control voltage therefrom proportional to the volume level of the amplified signal and means to apply said control voltage to said control transistor to vary the impedance thereof accordingly and thereby to control the amplification factor of said amplifying transistor.

3,019,397
PRESSURE RESPONSIVE DEVICE COMBINED WITH POSITIVE FEEDBACK OSCILLATOR CIRCUIT
James R. Cosby, Towson, Md., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 3, 1958, Ser. No. 758,840
5 Claims. (Cl. 331—65)



5. In a pressure transducer, a diaphragm of magnetic metallic material having a non-linear deflection versus pressure characteristic producing a variable spring rate throughout a given range of deflection and a given frequency of oscillation for each different increment of pressure to which it may be subjected, means for converting mechanical oscillations of said diaphragm into an electrical output having a frequency proportional to said oscillations comprising electromagnetic means located adjacent one side of said diaphragm which, when energized, acts on the diaphragm to sustain mechanical vibrations, a transducer having an electrical output responsive to movement of said diaphragm, and an electric circuit including an amplifier having its input connected to said transducer and a feedback connection from the output of said amplifier to said electromagnetic means.

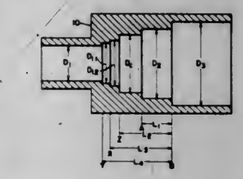
3,019,398
ELECTRICAL DELAY LINE
Carl E. Wellman, Jr., Auburn, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1958, Ser. No. 782,577
3 Claims. (Cl. 333—31)



1. In a delay line including a rod of magnetic material disposed within a close fitting rigid tube of magnetic material, a signal winding disposed between the tube and the rod and a ground conductor capacitively coupled to the signal winding, means for increasing the inductance, capacitance and time delay of said delay line, said means comprising a filling between the rod and tube consisting of a lubricant mixed with particles of magnetic material, said filling further permitting ease of assembly of said rod within said tube.

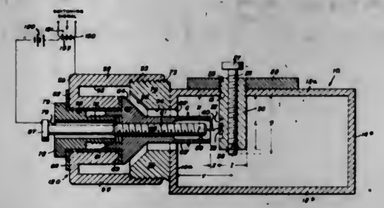
3,019,399
CIRCULAR WAVEGUIDE DIAMETER TRANSFORMER
Daniel A. Lasciani, West Medford, and Arthur A. Blaisdell, Natick, Mass., assignors to Microwave Associates, Inc., Burlington, Mass., a corporation of Massachusetts
Filed Mar. 6, 1959, Ser. No. 797,667
11 Claims. (Cl. 333—34)

1. Diameter transformer for circular waveguide intended for propagation of electromagnetic wave energy in a prescribed first mode having circular symmetry to one or more larger diameters capable of propagating energy in a second mode which is the next higher order of said first mode, comprising a circular waveguide the diameter of which, in a given axial direction, progressively increases stepwise at each of a plurality of axially-spaced transverse planes, each section of said waveguide between adjacent pairs of said planes being of substantially constant diameter, the diametral changes each being dimensioned to generate a prescribed amount of said second mode energy from the first mode energy at the operating frequency propagating through it, the magnitude of each diametral change being restricted so that substantially no energy in



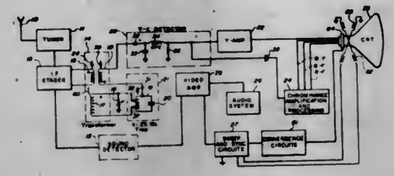
a mode higher than said second mode is generated from said first mode energy, the planes defining said diametral changes being spaced apart relative to said second mode energy at the operating frequency so that said amounts of second mode energy generated by the diametral change at each of said planes due to incidence thereat of first mode energy propagating through said waveguide in a given direction substantially cancel each other.

3,019,400
REVERSED SEMICONDUCTOR MICROWAVE SWITCH
Robert V. Garver, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 27, 1959, Ser. No. 789,465
2 Claims. (Cl. 333—73)
(Granted under Title 35, U.S. Code (1952), sec. 266)



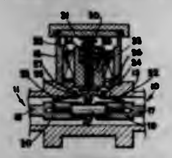
1. A normally "on" microwave semiconductor switch which draws power only when turned "off" said switch comprising in combination: a section of rectangular waveguide adapted to be excited in the TE_{10} mode, a first post inserted into said waveguide perpendicularly through one of its long sides, a second post inserted into said waveguide perpendicularly through one of its short sides at the same cross section as said first post, said posts thereby being mutually perpendicular, means electrically insulating said posts from one another, said posts having portions which almost touch, a semiconductor diode interposed between said portions, means applying a bias voltage between said posts to cut off said diode, and means for applying a voltage between said posts to cause said diode to act as substantially a short circuit, said posts being so constructed and arranged that when said diode is cut off microwave energy propagates through said waveguide substantially normally, and when said diode is substantially shortcircuited said posts become resonant in said waveguide at said cross section for a predetermined microwave frequency, thereby reflecting substantially all of the resonant frequency energy incident thereon.

3,019,401
COLOR TELEVISION
Charles H. Hever, Glencoe, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed June 15, 1960, Ser. No. 36,428
5 Claims. (Cl. 333—77)



1. An intermediate frequency coupling network for a color television receiver for translating an intermediate frequency signal including video components and a sound signal component and for attenuating the sound frequency component, said network comprising: a transformer having a primary winding, a secondary winding inductively coupled to said primary winding, and a tertiary winding tightly inductively coupled to one of the aforementioned windings; a resonant circuit including an inductor separate from said windings and tuned approximately to the frequency of said sound component, at least a portion of which resonant circuit is coupled in parallel across said tertiary winding and one end of which is coupled to one end of said secondary winding; means for impressing said intermediate frequency signal across said primary winding; and an output circuit including said secondary winding and at least a portion of said resonant circuit coupled in series opposition for developing voltages of opposing phase and substantially equal magnitude at a frequency corresponding to said sound frequency component.

3,019,402
STEP ATTENUATOR
Donald H. Lanctot, Malibu, Calif., assignor to Don-Lan Electronics, Inc., a corporation of California
Filed Feb. 1, 1960, Ser. No. 5,776
4 Claims. (Cl. 333—81)



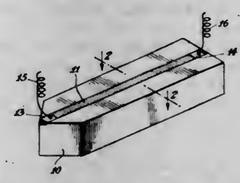
1. A step attenuator for insertion into a co-axial line carrying electro-magnetic energy, comprising: a body having input and output co-axial connectors in opposite sides, the inner conductors of said connectors terminating in first and second opposed axially spaced ends; first and second flexible reeds secured to said ends respectively with free end portions extending towards each other, said reeds being biased laterally to a first position; first and second resistance elements respectively connected between said free end portions of said reeds and the outer conductors of said connectors when said reeds are in said first position; a third resistance element electrically connected between said inner conductors when said reeds are in said first position; and actuating means extending laterally into said body adjacent to said free end portions and adapted upon actuation to move said reeds to a second position in which they are axially aligned, said actuating means electrically connecting said free end portions of said reeds and disconnecting them from said first and second resistance elements when in said second position.

3,019,403
LOW TORQUE POSITION SENSOR
Lawrence J. Kamm, San Diego, Calif., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 18, 1958, Ser. No. 774,741
7 Claims. (Cl. 336—30)



3. A position sensing device including in combination a first member formed of magnetic material, said first member having a plurality of poles spaced by a certain distance, a primary winding carried by said first member and adapted to be energized to produce a magnetic field, a second member formed of nonmagnetic material, a plurality of secondary winding coils, means mounting said secondary winding coils on said second member with said secondary winding coils spaced by a distance which is substantially equal to an integral multiple of said certain distance and means mounting said first and second members for relative movement with said second member in said magnetic field to cause the magnitude of the voltage induced in said secondary winding coils to be a measure of the amount of displacement of the secondary member from a null position and to cause the phase of the voltage induced in said secondary windings to indicate the direction of displacement of the second member from the null position.

3,019,404
THERMISTORS AND METHODS OF MAKING SAME
Frederick H. Fastenau, Huntington Station, and Seymour C. Spielberger, Roslyn Heights, N.Y., assignors to Bulova Research and Development Laboratories, Inc., Woodside, N.Y., a corporation of New York
Filed Dec. 22, 1955, Ser. No. 554,678
4 Claims. (Cl. 338—28)

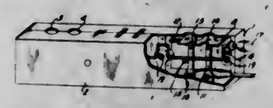


1. A thermistor structure comprising a ceramic backing constituted by a densely compacted aluminum oxide block, and a flake of thermally sensitive resistance material intimately bonded to the surface of said backing by sintering, said bond between said backing being free of an intermediate adhesive.

3,019,405
MULTIPLE ELECTRIC SECURITY JACK
Simon Barisin, 2671 Tucuman St., Olivos, Buenos Aires, Argentina
Filed July 9, 1959, Ser. No. 825,937
3 Claims. (Cl. 339—36)

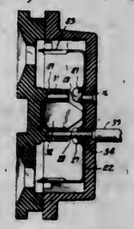
1. A safety electrical outlet comprising, in combination, an elongated housing formed in a wall thereof with

a plurality of pairs of apertures respectively adapted for receiving the prongs of electrical plugs; a plate for each pair of apertures slidably arranged in said housing adjacent said wall and movable between an open position permitting insertion of the prongs of an electrical plug through the respective pair of apertures and a closed position preventing insertion of such prongs through said pair of apertures; spring means operatively connected to each of said plates and tending to move the same to said closed position thereof; manually operable means con-



nected to each plate and extending to the exterior of the housing for moving said plate against the pressure of said spring means from said closed to said open position so that prongs of a plug may be inserted through the respective pair of apertures; and a single locking means cooperating with all of said plates for locking the plates which are moved to the open position in said open position while locking at the same time the plates which are left in the closed position in said closed position.

3,019,406
WIRING DEVICE WITH WIRE GRIPPING ELECTRICAL CONNECTOR
Saul I. Slater, Glen Cove, N.Y., assignor to Slater Electric Inc., Glen Cove, N.Y., a corporation of New York
Filed Nov. 14, 1957, Ser. No. 696,395
2 Claims. (Cl. 339—95)



1. An electrical receptacle comprising a hollow body of insulating material forming a housing with at least a side wall portion, an end wall portion and a rear wall portion, said rear wall having a hole for the insertion of a conductor wire, at least one U-shaped wire gripping contact member of resilient conductive sheet material, a channel in said housing for retaining said contact member in place with the base of the U adjacent the rear of said housing, means formed integrally with the respective legs of said U-shaped contact member for establishing electrical contact between each leg and a prong of a respective electrical plug inserted in said receptacle, a first cut in the base of said contact member located across the forward projection of said hole and extending from one edge transversely across a part of the base of said contact member and a second cut in the base of said contact member joining the end of said first cut and extending longitudinally of the base of said contact member substantially perpendicular to the said first cut to provide leaf means, the portions of said contact member adjacent said first cut and on either side thereof being bent forward at an angle of less than 90° to facilitate ingress of a conductor wire, the said second cut extending a substantial length on one side of the first cut to cause the bent forward portion on this side of the first cut to be more resilient than the bent forward portion on the opposite side, said housing further having an aperture for the insertion of a releasing tool located adjacent said leaf means on the said one side of said first cut, whereby a conductor wire inserted in said hole will force apart the edges of the contact strip at said first cut and be gripped thereby but may readily be removed by inserting a tool in said aperture to bend forward the more resilient of the edges at said first cut and release said wire.

3,019,407
SERIES LAMP SOCKET
Abraham Donsky, Anson Road, Norwalk, Conn.
Filed Aug. 22, 1960, Ser. No. 51,068
7 Claims. (Cl. 339—155)



1. A lamp comprising, in combination, first and second light bulbs, each having first and second electric contacts, means mounting said bulbs with said first contacts in engagement with each other, third and fourth contacts supported by said mounting means, each of said third and fourth contacts engaging one of said second contacts, a pair of electrical terminals supported by said mounting means, said terminals being adapted for insertion in a standard electrical outlet, and means connecting said terminals to said third and fourth contacts, whereby said bulbs are connected in series between said terminals.

3,019,408
ELECTRIC TERMINAL BLOCK ASSEMBLY OF THE STUD TYPE
George Ustin, Verona, N.J., assignor to Buchanan Electrical Products Corporation, Hillside, N.J., a corporation of New Jersey
Filed Apr. 22, 1958, Ser. No. 730,118
10 Claims. (Cl. 339—198)



10. A terminal block section of insulating material including first and second ends, said first end having a surface facing away from said second end, a floor intersecting said surface, a pair of grooves in said floor perpendicular to and in open communication with said surface, the bottoms of said grooves being closer to each other than the tops, a first recess in said floor between said grooves and having confronting sides in open communication with said surface, and a second recess in open communication with the ends of said grooves remote from said surface and spaced toward said second end from said surface and facing away from said second end.

3,019,409
GROUNDING CLIP
Bruno A. Sarafinas, Saugus, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,483
2 Claims. (Cl. 339—219)

1. A grounding fastener clip device having a base portion, attaching prongs extending from said base portion

for engagement with a support to hold the clip device to the support, a clamping arm connected at one end to said base portion and free at the other end and in superposed spaced relation to said base portion for clamping a wire between it and said base portion, said clamping arm having an aperture therethrough in alignment with said at-



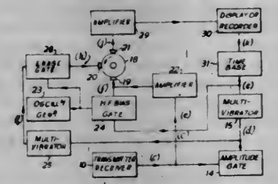
taching prongs whereby a fastening stud may have a portion thereof passed through said aperture and engaged with said attaching prongs to lock the clip device to a support and wire engaging means provided by the clip device whereby a wire may be engaged between the base portion and the clamping arm in either one of two directions angled relative to each other.

3,019,410
WIRE-TO-WIRE CONNECTION
Maurus C. Logan, Elizabeth, and David J. Crimmins, Nutley, N.J., assignors to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Oct. 12, 1959, Ser. No. 845,712
2 Claims. (Cl. 339—253)



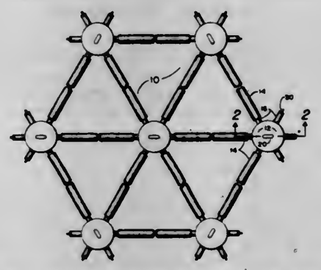
1. A wire-to-wire connection for the terminal ends of a pair of multi-strand electric cables, comprising means maintaining the strands of one cable bowed in a direction transverse to the longitudinal axis of said cable, latching means on said cable end exteriorly thereof, latching means on an end of the second cable exteriorly thereof, means on said end of the second cable maintaining the wire strands thereof in position to provide a recess in the direction of the longitudinal axis thereof proportioned to frictionally receive the bowed strands of the first mentioned cable when positioned thereagainst, said latching means on one of said cable ends being formed in inwardly spaced relation to said end thereof and said complementary latching means on the other cable end being formed to extend beyond said end thereof, the parts being so proportioned that said latching means will be aligned for interengagement to latch the cable ends together when the bowed strands of said first mentioned cable are inserted into said recess at said end of the other cable.

3,019,411
ECHO DETECTION WITH DELAYED READ OUT
Roy William George Haslett, Peter Roy Hopkin, and Norman Henry Benning, all of Barkingside, England, assignors to Kelvin & Hughes Limited, Glasgow, Scotland, a British company
Filed Jan. 21, 1958, Ser. No. 710,291
Claims priority, application Great Britain Jan. 24, 1957
7 Claims. (Cl. 340—1)



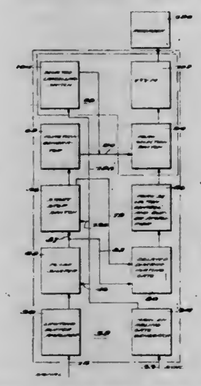
1. Echo ranging apparatus comprising receiver means for receiving echo signals, signal display means, a delay device comprising recording, reproducing and erase heads coupled between said receiver means and said display means, said device comprising a recording medium mounted for movement relative to and co-operating with said recording, reproducing and erase heads, and actuating means rendering said erase head operative prior to actuation of said recording head.

3,019,412
FLOATING SUPPORT FOR SEISMIC TRANSDUCERS
John M. Crawford, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,932
4 Claims. (Cl. 340—7)



1. A device for supporting a plurality of detectors in an aqueous solution comprising a plurality of hub members, a plurality of inflatable interconnecting tubular members, means for attaching said inflatable tubular members to the periphery of said hub members thereby supporting said hub members in a predetermined fixed space relationship, a float means, means for yieldably attaching said float to said hub members, and means for attaching said detectors to said hub members.

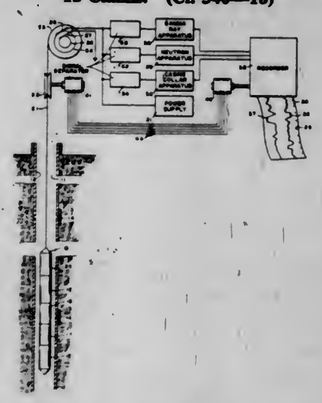
3,019,413
DISCRIMINATING INTERVAL TIME COMPUTER FOR ACOUSTIC WELL LOGGING SYSTEMS
Adrian Paul Brokaw, Tulsa, Okla., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,586
15 Claims. (Cl. 340—15)



1. A computer in an acoustic well logging system for discriminating between valid signal information repre-
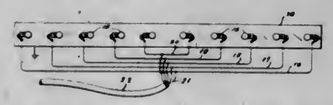
sented as time intervals between a pair of accepted pulses and invalid signal information represented as time intervals between a pair of rejected pulses, comprising means to accept a pair of pulses as valid signal pulses when the pulses occur within a predetermined time range following a synchronizing pulse, means generating a function pulse in response to said pair of pulses, means for storing the valid signal information in response to the function pulse, and utilization means for measuring the stored valid signal information.

3,019,414
METHOD OF AND APPARATUS FOR PRODUCING AND TRANSMITTING BOREHOLE SIGNALS
Glen Peterson, Tulsa, Okla., assignor to Well Surveys, Incorporated, Tulsa, Okla., a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,954
12 Claims. (Cl. 340—18)



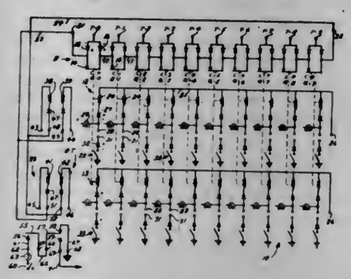
3. In a well logging system in which D.C. power is supplied from a surface power supply to a subsurface instrument over at least one conductor of an instrument supporting cable over which an intelligence signal is transmitted in the opposite direction at a frequency and magnitude comparable to variations of the voltage supplied by said power supply to said conductor, improved means at the surface for separating said intelligence signal from the power supply variations, said means comprising an isolating impedance connected between said power supply and said conductor, a voltage divider connected across said power supply selected to derive a compensating signal equal to the voltage between ground and said conductor at the surface developed by said power supply, and means indicating the difference between said compensating signal and the combined voltage on said conductor.

3,019,415
AUTOMOBILE TRAFFIC SIGNAL
William W. Marion, Sr., 2372 Collett Drive, St. Louis, Mo.
Continuation of application Ser. No. 749,914, July 21, 1958. This application Feb. 24, 1959, Ser. No. 795,283
5 Claims. (Cl. 340—82)



5. An automotive traffic signal, comprising, an extended sign having a series of lighting units each having terminals and arranged therealong in pairs with the units of each pair located on opposite ends of said sign, a source of electric current one of whose terminals is connected to one of the terminals of each unit, a plurality of secondary contacts each of which is connected by parallel leads to the other terminal of a pair of said units on opposite ends of said sign, said secondary contacts being arranged adjacently in a series corresponding to and connected to the second terminal of pairs of said units on opposite ends of said sign, a circuit-closing switch having a contact connected to the second terminals of said source and movable to successively engage said first contacts to successively connect to the second terminal of said source the second terminals of pairs of units on opposite ends of said sign, said circuit-closing contact being extended to successively bridge said second contacts as it moves therealong to maintain the connections of said source of pairs of units on opposite ends of said sign, said switch operating to rapidly produce continuous pairs of flashes by pairs of said units in opposite directions along said sign, a fluid pressure operated actuator connected to move said circuit-closing switch, and means for throttling the application of the fluid pressure to said actuator.

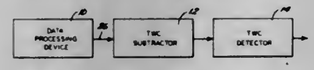
3,019,416
RELAY DEVICE FOR INDICATING IF INPUT DIGIT LIES WITHIN A PREDETERMINED RANGE
Joseph Gill, Pittsburgh, and Frederick W. Sippach, Crafton, Pa., assignors to Hagan Chemicals & Controls, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 23, 1959, Ser. No. 841,885
10 Claims. (Cl. 340—149)



1. A digital comparator comprising a plurality of relays, each having a pair of normally closed contacts and an associated coil controlling said contacts, means connecting said contacts in series, two control relays, one control relay comprising an alarm relay having a fixed contact and a contact arm normally spaced therefrom and a coil, and the other control relay comprising a transfer relay having a fixed contact and a contact arm normally engaging said fixed contact and a coil, an indicator connected to one of the contacts of said alarm relay, the other contact being connected to one of the contacts of said transfer relay, means to connect a source of potential across the indicator and the other contact of said transfer relay, means connecting the ends of said series connected contacts to one end of the coils of each of said control relays respectively, means to apply a source of potential between each of the contacts of any one of said plurality of relays and one of the ends of the coils of each of said control relays respectively, whereby two paths for current flow will be provided, one from each of the contacts to which a source of potential is applied to an associated control relay coil, and means to energize the coil of one of said plurality of relays to open the contacts thereof

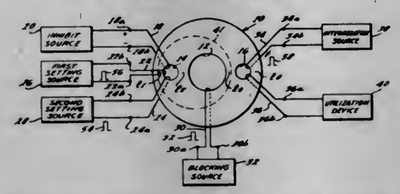
to break the circuit of one of said paths of current to the associated control relay coil only when the energized relay of said plurality is other than the relay to the contacts of which a source of potential has been applied.

3,019,417
DATA PROCESSING APPARATUS
Aaron P. Dornbusch, Waban, and John E. Mekota, Jr., Belmont, Mass., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 27, 1959, Ser. No. 802,461
6 Claims. (Cl. 340—172.5)



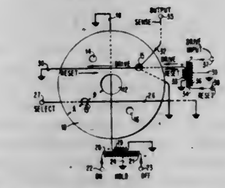
1. An electrical control circuit for monitoring a data processing function comprising a source of machine words formed of sequentially arranged multi-bit digit groups, said machine words including a multi-bit digit group weight count reduced modulo 3 or a multiple thereof, and being adapted to be read out of said source in either a forward or reverse direction, a subtraction circuit for effecting repetitive subtraction of said multi-bit digit groups wherein each multi-bit digit groups successively applied to said subtraction circuit is subtracted from the subtraction circuit output representing the difference digit resulting from the previous subtractions of the digit groups in said machine word, the number of said repetitive subtractions being determined by the number of multi-bit digit groups in the machine word, a logical detector circuit connected to the output of said subtraction circuit and arranged to detect the presence of any one of a plurality of predetermined digit words received from said subtraction circuit, and error indicating means connected to the output of said logical detector circuit adapted to be energized to indicate an error whenever the subtraction circuit output does not match one of said predetermined digit words.

3,019,418
MAGNETIC MEMORY SYSTEMS USING TRANSFLUXORS
Jan A. Rajchman, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 2, 1957, Ser. No. 650,154
15 Claims. (Cl. 340—174)



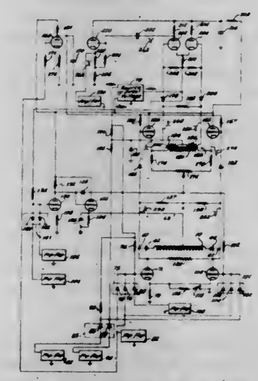
1. A memory system comprising a core of substantially rectangular hysteresis loop material having three apertures, the aperture walls defining four legs of which a pair are setting legs and the other pair are output legs, means for biasing one of said setting legs to saturation in an initial direction of magnetization, a first flux path including said one setting leg and an output leg, means for applying a momentary magnetizing force along said first flux path in a direction to produce a flux reversal therein from said initial direction to the other direction of magnetization, and another flux path including both said setting legs, said bias means producing a flux reversal in said other path each time a flux reversal is produced in said first path.

3,019,419
ELECTRICAL SWITCHING AND CONTROL APPARATUS
Munro K. Haynes and Louis A. Russell, Poughkeepsie, and Herbert K. Wild, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 18, 1957, Ser. No. 703,583
8 Claims. (Cl. 340—174)



1. A magnetic flux path comprising material capable of assuming either of two remanent states, said material having a central aperture and a plurality of secondary apertures, a plurality of first input windings respectively positioned through the different secondary apertures throughout said material for establishing a first remanent state thereat, a plurality of second input windings each positioned through one of said secondary apertures for establishing a second remanent state thereat, a plurality of output windings each positioned through one of said secondary aperatures for manifesting a change in the remanent state thereof, first selection means including a first selection winding positioned through the central aperture of said path for establishing a uniform remanent state therein thereby inhibiting the effectiveness of all said input windings, second selection means including a second selection winding positioned through one of the secondary apertures of said path, said core responsive only to the conjoint energization of both said first and second selection winding for altering the uniform remanent state of said path to thereby enable all said input windings.

3,019,420
MATRIX MEMORY
William H. Reinholtz, La Crescenta, Calif., assignor to General Precision, Inc., a corporation of Delaware
Filed Oct. 8, 1956, Ser. No. 614,554
4 Claims. (Cl. 340—174.1)



1. In combination for use with a storage medium for storing a plurality of bits of information, a plurality of transducers adapted to be disposed in coupled relationship with the storage medium for recording bits of in-

formation on the storage medium in response to applied input signals and for reading bits of information recorded on the storage medium, each of said transducers including a winding having a pair of terminals and an intermediate tap and producing a pair of oppositely poled signals at respective ones of the terminals constituting said pair in response to the reading thereby of the bits of information on the storage medium; first circuit means for connecting said transducers into a matrix composed of a plurality of different rows and columns of said transducers; first logic circuitry coupled to respective ones of the intermediate taps on the transducer windings for selectively conditioning different ones of the rows of said transducers for recording and reading operations; second logic circuitry coupled to respective ones of the pairs of terminals of the transducer windings for selectively conditioning different ones of the columns of transducers for recording and reading operations; input circuit means coupled to said first circuit means for introducing to the matrix of said transducers input signals corresponding to information to be recorded in the storage medium, such information being recorded at any particular time by the one of said plurality of transducers common to the one of said rows conditioned by said first logic circuitry and to the one of said columns conditioned by said second logic circuitry at that time; a plurality of push-pull circuits respectively coupled to the pairs of terminals of the transducer windings in respective ones of said columns for passing the corresponding pairs of oppositely-poled signals produced thereby, each of said push-pull circuits including a pair of discharge devices, each of said discharge devices including a cathode, a control grid and an anode; control means coupled to said input circuit means and to said push-pull circuits for alternately conditioning the matrix to a recording mode and to a reading mode, said control means being coupled to the control grids of said discharge devices to control the bias potential applied thereto, and said control means serving to activate said input circuit means and to deactivate said push-pull circuits for the recording mode and serving to activate said push-pull circuits and deactivate said input circuit means for the reading mode; a differential amplifier for amplifying the oppositely-poled signals passed by said push-pull circuits and for producing output signals in response thereto; a corresponding plurality of coupling networks coupling said push-pull circuits to said differential amplifier, each of said coupling networks including a transformer having a primary winding coupled to the cathodes of said pair of discharge devices in the corresponding push-pull circuit and a secondary winding coupled to said differential amplifier; means coupled to said differential amplifier for utilizing the output signals produced thereby; and further circuitry coupled to said second logic circuitry and to said coupling networks for causing the coupling networks associated with the different columns of transducers to be selectively conditioned to permit the signals passed at any particular time by the particular push-pull circuit coupled to the transducer common to the row selected by said first logic circuitry and to the column selected by said second logic circuitry at that particular time to be introduced to the differential amplifier, said further circuitry being coupled to an intermediate tap on the secondary winding of said transformer in each of said coupling networks.

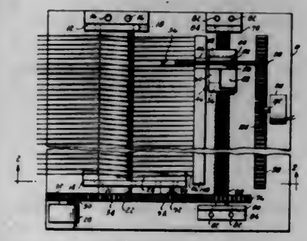
3,019,421

HELICAL MAGNETIC STORAGE ASSEMBLY

William H. Saylor, Altadena, Calif., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Feb. 7, 1958, Ser. No. 713,907
4 Claims. (Cl. 340—174.1)

3. A helical magnetic storage assembly including in combination a support, means providing a continuous spiral surface formed of magnetizable material on which a magnetic track may be recorded, said surface being generated by rotating a line forming an angle with an axis about said axis while advancing said line along said axis whereby said spiral surface has a given pitch, means mounting said surface on said support for rotation about



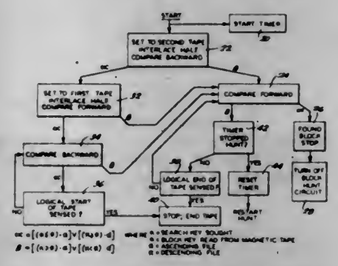
the axis of the spiral surface, a sensing head, means mounting said head on said support to register with said track, means for driving said surface-providing means, means for moving said head along a path parallel to the axis of said spiral surface as said surface rotates and means for positioning said sensing head radially along said spiral surface.

3,019,422

DATA PROCESSING APPARATUS

Joseph J. Eachus, Cambridge, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Feb. 2, 1959, Ser. No. 790,653
4 Claims. (Cl. 340—174.1)



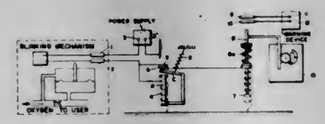
1. Data storage apparatus comprising an elongated record tape adapted to be reversibly driven, said record tape being divided into two logical halves each of which comprises a plurality of data blocks alternately interlaced with the blocks of the other half, said data blocks being recorded in a logically ascending or descending manner on said tape such that the data on one logical half of said tape may be read by movement of the tape in one direction and the data on the other logical half of said tape may be read by movement of the tape in the other direction, electromagnetic transducing means associated with said record tape for transferring data therefrom to suitable utilization means, and control means operable to selectively drive said tape backward and forward relative to said electromagnetic transducing means to make successive comparisons between the data blocks on said tape and an item of control information until the desired data block is found as indicated by coincidence between said data block and said control information, the particular logical half of said record tape read, the direction of movement of said record tape and the extent of movement of said record tape in each direction being determined automatically as a result of each one of said successive comparisons.

3,019,423

OXYGEN BREATHING SYSTEMS

Denys Thomas Glover and David Charles Lambert Lovell, Yeovil, England, assignors to Normalair Limited, Yeovil, England

Filed Nov. 26, 1956, Ser. No. 624,304
Claims priority, application Great Britain Nov. 28, 1955
3 Claims. (Cl. 340—279)



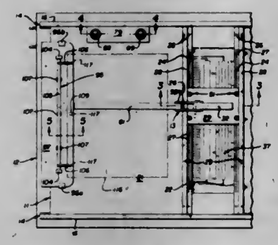
3. An alarm device for breathing apparatus including a source of electric power, comprising a circuit including a normally open switch, solenoid means to produce an electromagnetic impulse when said switch is closed, means operated by each inhaled breath of a user to close said switch, a warning device, a mechanism for operation of said warning device normally biasing said warning device into warning position, means operated by said solenoid means to withdraw said mechanism for operating of said warning device from warning position, and time delay means operating for a time slightly in excess of the normal time of successive inhaled breaths to delay said mechanism from moving said warning device again into warning position unless said switch should fail to open or close within the time of said delay.

3,019,424

SHIFTABLE TABLE ASSEMBLY WITH MOVABLE CONTACT ARM ASSEMBLY

Robert Goldwater, Oakland, and Frank B. Calhoun, Fremont, Calif., assignors to Safeway Stores, Incorporated, Oakland, Calif., a corporation of Maryland

Filed Jan. 9, 1959, Ser. No. 785,929
9 Claims. (Cl. 340—282)



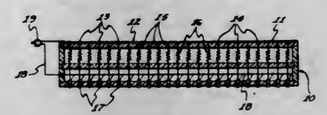
4. In a shiftable table assembly with a movable contact arm for use on a store ordering apparatus of the type having a framework and with which order guide pages are utilized, guide means adapted to be mounted on the framework, a table member slidably mounted in said guide means for movement between first and second positions, means mounted on said table member for retaining order guide pages on said table member, contact carrying means slidably mounted on said table member for movement with respect thereto, and indicating means actuated by movement of the table member to indicate whether the table member is in the first or second position.

3,019,425

ELECTRIC WRITING BOARD

Adolph Romero, 2322 E. Indian School Road, Phoenix, Ariz.

Filed Apr. 1, 1960, Ser. No. 19,379
1 Claim. (Cl. 340—334)



An electric writing board comprising in combination:

(*a*) a board of insulative material,

(*b*) an electroconductive coating on one face of said board having perforations formed in said coating,

(*c*) electrodes fixed in said board having ends centrally positioned in said perforations and spaced from the edges of said perforations and terminating in a plane lying substantially in the plane of the exposed face of said coating,

(*d*) a series of light bulbs carried on said writing board, one for each of said perforations and electrodes, each bulb having one terminal directly connected to one of said electrodes and its other terminal directly connected to a common conductor,

(*e*) and means for directly connecting one lead of a power supply to said electroconductive coating and another lead of said power supply directly to said common conductor,

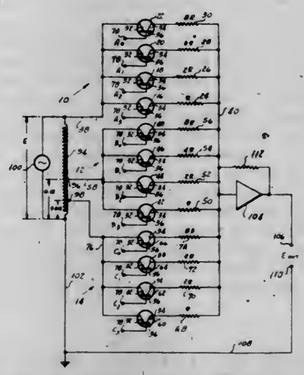
(*f*) said coating and the ends of said electrodes being so arranged in a common plane that writing on said board with a pencil having an electroconductive writing lead forms electroconductive conductive traces on said exposed face of said coating and across said perforations and the ends of said electrodes to thereby energize said bulbs in an array positionally corresponding to the material scribed in electroconductive tracings on said board.

3,019,426

DIGITAL-TO-ANALOGUE CONVERTER

Jack Gilbert, White Plains, N.Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 699,597
7 Claims. (Cl. 340—347)



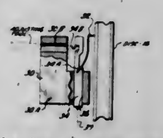
3. A digital-to-analogue converter for producing a voltage having a magnitude proportional to a binary coded number represented by binary bit groups corresponding to the respective digits of said number including in combination a plurality of groups of parallel-connected circuits, each of said circuits including a respective normally nonconducting element and an impedance

connected in series, said groups corresponding in significance respectively to the digits of said number, the impedances of each particular circuit group having values inversely proportional to the respective significances of the bits of the bit group corresponding to the digit to which the particular circuit group corresponds, means for simultaneously applying respective electrical signals having values proportional to the significances of the respective number digits to said circuit groups and means for applying the bits of said groups of bits to the elements of said groups of circuits with the bits of a group of a given significance being applied to the elements of the group of circuits to which the signal proportional to said given significance is applied to render conducting those elements which correspond to impedances whose parallel-connected value is inversely proportional to the value of a digit of said number.

3,019,427
SHAFT POSITION ENCODER

Carl P. Spaulding, San Marino, and William S. Duncan, Altadena, Calif., assignors to Datex Corporation, Monrovia, Calif., a corporation of California

Filed Dec. 1, 1958, Ser. No. 777,404
7 Claims. (Cl. 340—347)



4. In an encoder having an apertured case, a shaft rotatably mounted in said case, a disc having a plurality of radially spaced tracks having digitally coded conducting and non-conductive segments, a non-rotatable conductive member having a sensing contact extending therefrom for slidably engaging said segments of a track and an adjusting notch on the opposite side thereof from said sensing contact, an insulative supporting member having a plurality of spaced apart sockets defined to slidably receive one of said conductive members and spaced apart a distance corresponding to the radial spacing of said tracks, one of said conductive members being tightly positioned in each of said plurality of sockets, and means for mounting said supporting member on said case to place the sliding sensing contacts into engagement with the corresponding tracks of said disc and relative to the aperture of said case to allow access to the notches of said conductive members externally of said case, said supporting member is further defined to be coextensive with the conductive members positioned thereon and is provided with a longitudinal groove spaced on said supporting member opposite to the notches of said conductive member to receive a tool extending through the aperture of said case and positioned therein to engage the notch of one of said conductive members whereby the supporting member provides a fulcrum for the tool to allow movement of said conductive members for tangentially adjusting the sensing contact of the conductive member with the corresponding track of said disc.

3,019,428
MOUNTING AND LATCHING MEANS FOR ANNUNCIATOR LAMP HOUSING PANELS

William C. Arrasmith, Beverly Hills, Calif., assignor to Radar Relay, Inc., Santa Monica, Calif., a corporation of California

Filed May 17, 1960, Ser. No. 29,644
9 Claims. (Cl. 340—381)

1. An assembly for use in an electrical system including: a capsule-like housing for supporting electrical circuitry and components having a plurality of walls including an end wall with a first aperture formed therein, a support and guide member positioned in said housing in spaced relationship with said end wall thereof and having a second aperture in axial alignment with said first aperture, a movable member, an elongated plug member having a shoulder portion formed therein and mounted on the movable member and projecting from the movable member into said first and second apertures to

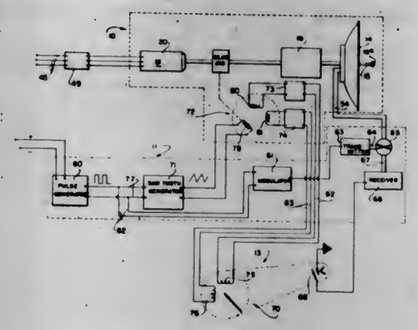


be slidable therein and supported at spaced points by said front wall and by said support and guide member, a resilient jack mounted in said housing in alignment with the first and second apertures to engage the shoulder portion of said plug member and thereby hold the movable member on the housing, and means mounted on said plug member for releasing the shoulder portion thereof from said resilient jack when the movable member is moved in the direction of said end wall of the housing.

3,019,429
SEARCH RADAR SYSTEMS

Nelson C. Harnois, La Canada, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Mar. 3, 1954, Ser. No. 413,768
8 Claims. (Cl. 343—11)

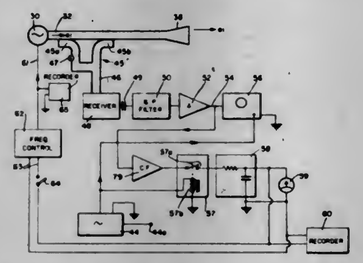


1. A search and tracking radar system for use on a vehicle comprising antenna means, means selectively rotating the antenna means in either direction about an axis extending fore and aft of the vehicle at a known rate, means for nodding the antenna means about an axis transverse the axis of rotation of the same and automatically changing the amplitude of the nodding in response to changing the direction of rotation of said antenna means, a radio frequency transmitter, a receiver, a wave guide system connected between the antenna means and the transmitter and receiver, a pulse generator producing repetitive timed voltage pulses, circuit means feeding said pulses to the transmitter so that the latter feeds pulsed radio frequency energy to the antenna means for release therefrom into space, a cathode ray tube having a grid electrically connected with the receiver to receive target echo voltages therefrom and having deflection coils, a saw-tooth pulse generator receiving pulses from the first named generator and converting them to voltage pulses of saw-tooth form, a resolver including a rotor driven in synchronism with the rotation of the antenna means and receiving said saw-tooth voltages, and two stator windings generating the sine and cosine functions of the saw-tooth pulses, and electrical connections between said stator windings and the deflection coils of said tube whereby the sine and cosine saw-tooth voltages are impressed on the deflection coils causing echo signals to be displayed on the tube in given time and position relation with respect to the position of the antenna.

3,019,430
DISTANCE-MEASURING APPARATUS AND METHOD

Norman E. Pedersen and Robert Fleischer, Troy, N.Y., assignors, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York

Filed June 4, 1957, Ser. No. 663,502
24 Claims. (Cl. 343—12)



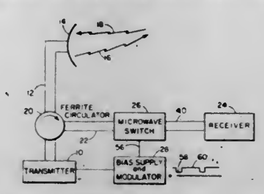
1. In combination, the steps of transmitting an unmodulated wave from a first station to a reflector at a reflecting station, sensing at said first station the wave reflected from said reflector, periodically varying the reflecting properties of said reflector at a repetition rate low compared to the frequency of said transmitted wave, to vary thereby the amplitude of said reflected wave, mixing said varying reflected wave with a larger quantity of the unmodulated transmitted wave at said first station to obtain a composite wave, and selectively detecting said composite wave to derive a quantity determined by said periodic variations in the reflecting properties of said reflector and by the phase relationship at said first station between said transmitted and reflected waves, said phase relationship being dependent upon the distance between said first station and said reflecting station, said derived quantity being substantially independent of the effects of wave reflections from objects other than said reflector.

3,019,431
PULSE RADAR SYSTEM WITH MICROWAVE SWITCH

Martin L. De Poy II, Westboro, Bruno A. Pattan, Roslindale, and Robert F. Lacy, Stoneham, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed Oct. 6, 1958, Ser. No. 765,599
2 Claims. (Cl. 343—17.1)

1. A radar system comprising, in combination, an antenna, a transmitter coupled to said antenna for generating a train of regularly spaced output pulses, a receiver, and means including a switch coupling said receiver to said antenna for transmitting to said receiver echo signals received by said antenna and rejecting leakage power signals from said transmitter between which said echo signals may occur, which leakage signals are of appreciably higher power level than said echo signals, said switch comprising a hybrid junction having first and second terminals coupled to said antenna and to said receiver, respectively, and third and fourth terminals, first and second equal length wave guide sections having a common narrow wall respectively connected to said third and fourth terminals, said wave guide sections being shorted at their remote ends, and first and second semiconductor crystal diodes having matched non-linear impedance characteristics and capable of absorbing microwave energy incident

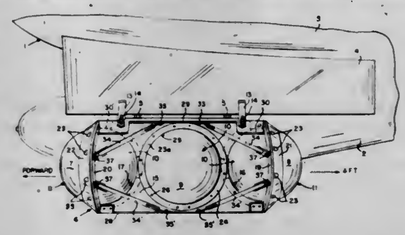


thereon in the range of power levels of said leakage power signals without damage positioned in said first and second wave guides, respectively, said diodes being further characterized in that the impedances thereof at energy levels of said echo signals are mismatched with the impedance of their respective wave guide sections to cause reflection of said echo signals incident thereon and coupling thereof to said receiver, and further, that the impedances thereof at energy levels of said leakage signals are matched to the impedance of their respective wave guide section to cause absorption of said leakage power signals.

3,019,432
AIRCRAFT WITH SUPPORT FOR A PLURALITY OF LUNEBERG REFLECTIVE LENSES

Sidney F. Johnston, Jr., Knoxville, Tenn., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Mar. 23, 1960, Ser. No. 17,233
7 Claims. (Cl. 343—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. In combination, a vehicle, a plurality of substantially spherical Luneberg radar reflector lens means carried by said vehicle comprising, a first pair of said lenses facing forwardly, a second pair of said lenses facing rearwardly, and a third pair of said lenses facing outwardly in opposite directions normal to the facing directions of said first and second pairs of said lenses.

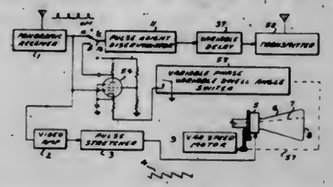
3,019,433
RADAR COUNTERMEASURE

Stanley B. White, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Filed Mar. 27, 1959, Ser. No. 802,576
5 Claims. (Cl. 343—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)

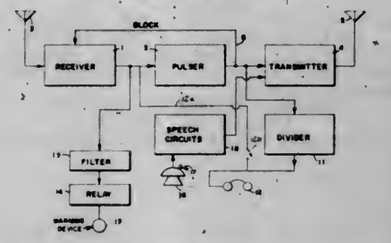
1. An airborne radio beacon for producing false targets on the plan position indicator of a ground search radar

having a rotating directional antenna the field pattern of which has a main lobe and a plurality of minor lobes of less intensity than the main lobe, comprising: a receiver of sufficient sensitivity to produce a video pulse output in response to pulses of high frequency energy radiated by the minor lobes of said antenna; a video pulse height discriminator for passing only those video pulses lying



between predetermined lower and upper magnitude limits; means for applying said video pulses to said pulse height discriminator; variable delay means; a transmitter for radiating pulses of energy to said ground radar antenna; means for applying the video pulses passed by said pulse height discriminator to said delay means; and means for applying the delayed output pulses of said delay means as triggering pulses to said transmitter.

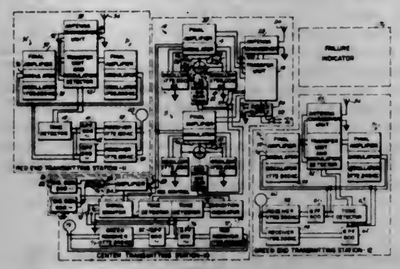
3,019,434
AIRCRAFT COLLISION WARNING SYSTEM
Robert H. Bushnell, Moorestown, N.J., and Vincent J. Chimera, Akron, Ohio, assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Oct. 14, 1957, Ser. No. 689,832
10 Claims. (Cl. 343—101)



9. Apparatus for warning against aircraft collision and including a transponder in each aircraft tuned to the same wave length and having a relatively short range, each transponder having free running but triggerable means for generating a short pulse at a relatively low pulse repetition frequency, a transmitter fired by each pulse to produce a corresponding radio frequency pulse, an antenna for propagating the radio frequency pulse, a receiver tuned to the frequency of the transmitter and adapted to trigger the transmitter to generate a pulse upon the reception of a pulse, and means indicating a sharp increase in the pulse repetition frequency of the pulse generating means.

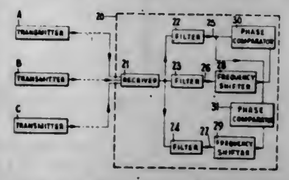
3,019,435
RADIO LOCATION SYSTEM
Robert C. Wilson and Robert J. Puchaty, Tulsa, Okla., assignors to Seismograph Service Corporation, Tulsa, Okla., a corporation of Delaware
Filed Dec. 10, 1956, Ser. No. 627,398
15 Claims. (Cl. 343—105)

2. In a transmitting system of the hyperbolic type, a plurality of spaced apart transmitting units for radiating signals of different frequency, means for manually turning on one of said units to radiate a signal, means responsive solely to the signal radiated from said one unit for turning on a second unit in the system, and means jointly responsive to the signal radiated from said one



unit and to the signal radiated from said second unit for initiating operation of a third unit in the system, thereby to place said first, second and third units in operation.

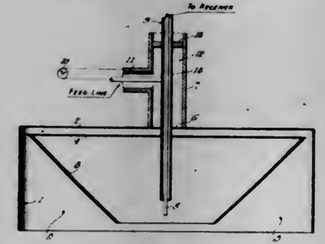
3,019,436
RADIO NAVIGATION SYSTEMS
Luis Charles Stenning, Beaconsfield, England, assignor to The General Electric Company Limited, London, England
Filed Mar. 26, 1959, Ser. No. 802,147
Claims priority, application Great Britain Mar. 31, 1958
15 Claims. (Cl. 343—105)



5. A hyperbolic navigation system including first, second and third geographically spaced transmitters arranged, in operation, to transmit first, second and third signals respectively having first, second and third frequencies respectively, these frequencies being different from one another, and apparatus which is arranged, in operation, to co-operate with the said transmitters, the said apparatus comprising: radio receiving means to receive the said three signals and to supply three corresponding signals which are hereinafter referred to as the first, second and third input signals respectively and which may have the same frequencies as the received signals; filter means to separate the first, second and third input signals into different channels; a first device for producing from the first input signal a first rotary field, first pick-up means coupled with the first rotary field, means for producing relative rotation between the first pick-up means and the first device, means for automatically controlling the relative rotation between the first pick-up means and the first device such that the frequency of the output signal derived from the first pick-up means is equal to the frequency of said third input signal, and first phase comparing means for determining the phase relationship between the output signal derived from the first pick-up means and the third input signal; a second device for producing from the second input signal a second rotary field, second pick-up means coupled with the second rotary field, means for producing relative rotation between the second pick-up means and the second device, means for automatically controlling the relative rotation between the second pick-up means and the second device such that the frequency of the output signal derived from the second pick-up means is equal to the frequency

of the third input signal, and second phase comparing means for determining the phase relationship between the output signal derived from the second pick-up means and the third input signal; the said first and second phase comparing means providing an indication of the geographical location of the said apparatus.

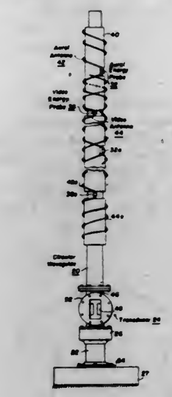
3,019,437
MICRO-WAVE ANTENNA
George B. Hoadley, Raleigh, N.C., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 13, 1955, Ser. No. 481,724
11 Claims. (Cl. 343—725)



10. An antenna comprising in combination, a pair of members defining surfaces of revolution concentrically disposed with their axes of revolution aligned on a common axis and defining a continuous space therebetween, the outermost one of said pair of surfaces being cylindrical and of constant dimension in a direction normal to the axis of revolution and having a closure in a plane normal to the axis of revolution, the closed end of said outermost surface constituting the input end thereof, the innermost one of said pair of surfaces being a truncated cone and having a closure in face relation with the closure on the outermost surface, the innermost surface tapering inwardly toward an open end thereof remote from the closed end of said outermost surface, the continuous space between said innermost and said outermost surfaces increasing in volume from the closed end of said innermost surface toward the open end thereof, conducting means attached to the closure of said outermost surface for connecting a source of electromagnetic energy to the continuous space between said innermost and outermost surfaces, electromagnetic energy receiving means coupled to the space within said innermost surface and means for preventing interference between electromagnetic energy radiated from said continuous space between said innermost and said outermost surfaces and electromagnetic energy received by said innermost surface.

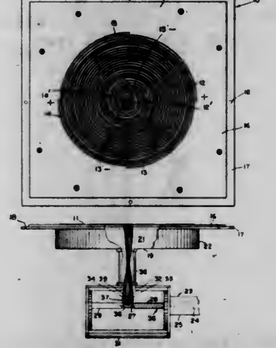
3,019,438
ANTENNA STRUCTURE
Paul M. Pan, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 18, 1957, Ser. No. 646,837
30 Claims. (Cl. 343—843)

1. An antenna system comprising conductive means, a first radiative conductor disposed with respect to said conductive means, a second radiative conductor disposed with respect to said conductive means and having substantially the same axis as the axis of said first radiative conductor and overlapping said first radiative conductor, first feeding means coupled to said first radiative conductor and adapted to feed a first signal between said first radiative conductor and said conductive means, and second feeding means coupled to said second radiative con-



ductor and adapted to feed a second signal between said second radiative conductor and said conductive means.

3,019,439
ELLIPTICALLY POLARIZED SPIRAL ANTENNA
Herbert J. Reis, Middle River, and Francis M. Kudo, Kenwood, Md., assignors to Martin-Marietta Corporation, a corporation of Maryland
Filed Sept. 19, 1957, Ser. No. 684,876
19 Claims. (Cl. 343—853)



2. A flush mounted elliptically polarized omniazimuthal antenna having a face and an underside, a plurality of at least four conducting elements electrically isolated from each other and interwound in a common direction across said face so that introduction of electromagnetic energy to said antenna will produce apparent current vectors at quadratic points around the mean circumferential region of said elements, the apparent current vector at any one quadratic point being circumferentially opposed to the apparent current vector of the adjacent quadratic points, balanced coupling means mounted on said underside, with the radially inner ends of said radiating elements connected to said coupling means, whereby a balanced and symmetrical wave pattern may be transmitted.

DESIGNS

JANUARY 30, 1962

192,135
KNITTED SHIRT
Frank Tiso, Bethlehem, Pa., assignor to Paul Meislin, Nathan Meislin, Ira Meislin, Adele Meislin, and Harry Gotthelf, all of Allentown, Pa., copartners trading as Fountain Hill Mills, Bethlehem, Pa.
Filed Dec. 12, 1960, Ser. No. 63,195
Term of patent 3½ years
(Cl. D3—4)



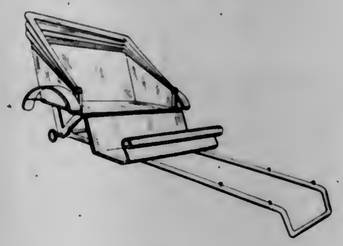
192,136
KNITTED SHIRT
Frank Tiso, Bethlehem, Pa., assignor to Paul Meislin, Nathan Meislin, Ira Meislin, Adele Meislin, and Harry Gotthelf, all of Allentown, Pa., copartners trading as Fountain Hill Mills, Bethlehem, Pa.
Filed Dec. 12, 1960, Ser. No. 63,196
Term of patent 3½ years
(Cl. D3—4)



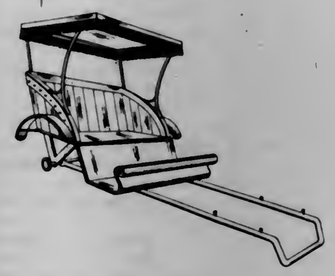
192,137
SWEATER OR SIMILAR ARTICLE
Robert Nast, 1900 Ave. W., Brooklyn, N.Y.
Filed July 13, 1961, Ser. No. 65,902
Term of patent 3½ years
(Cl. D3—4)



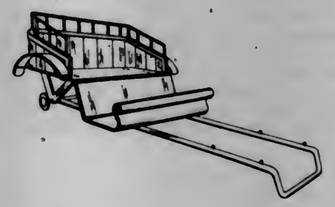
192,138
FRAME FOR A CHILD'S CART
Willie E. Huskey, R.D. 2, Box 309, Kent, Ohio
Original application Oct. 23, 1958, Ser. No. D. 53,106. Divided and this application Oct. 13, 1960, Ser. No. 62,479
Term of patent 3½ years
(Cl. D14—3)



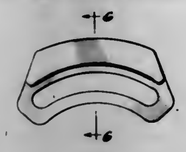
192,139
FRAME FOR A CHILD'S CART
Willie E. Huskey, R.D. 2, Box 309, Kent, Ohio
Original application Oct. 23, 1958, Ser. No. D. 53,105. Divided and this application Oct. 13, 1960, Ser. No. 62,484
Term of patent 3½ years
(Cl. D14—3)



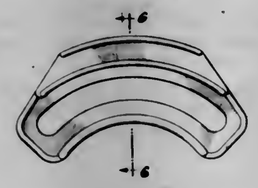
192,140
FRAME FOR A CHILD'S CART
Willie E. Huskey, R.D. 2, Box 309, Kent, Ohio
Original application Oct. 23, 1958, Ser. No. D. 53,107. Divided and this application Oct. 13, 1960, Ser. No. 62,485
Term of patent 3½ years
(Cl. D14—3)



192,141
WHEEL STABILIZER WEIGHT
Leland S. Hamer, 4170 Lakewood Drive, Lakewood, Calif.
Filed June 14, 1960, Ser. No. 60,959
Term of patent 14 years
(Cl. D14—30)



192,142
WHEEL BALANCE WEIGHT
Leland S. Hamer, 4170 Lakewood Drive, Lakewood, Calif.
Filed May 2, 1961, Ser. No. 65,003
Term of patent 14 years
(Cl. D14—30)



192,143
CHAIR BASE OR SIMILAR ARTICLE
Pehr J. Anderson, St. Charles, Ill., assignor to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
Filed July 5, 1960, Ser. No. 61,239
Term of patent 14 years
(Cl. D15—1)



192,144
STUFFED ANIMAL OR THE LIKE
Hazel Frances Rebold, 1118 De Vere Drive, Silver Spring, Md.
Filed Aug. 22, 1960, Ser. No. 61,839
Term of patent 3½ years
(Cl. D34—2)



192,145
STUFFED ANIMAL OR THE LIKE
Hazel Frances Rebold, 1118 De Vere Drive, Silver Spring, Md.
Filed Oct. 27, 1960, Ser. No. 62,646
Term of patent 3½ years
(Cl. D34—2)



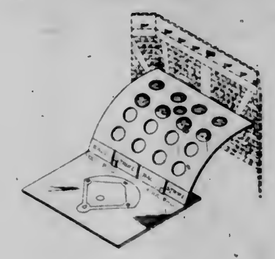
192,146
STUFFED ANIMAL OR THE LIKE
Hazel Frances Rebold, 1118 De Vere Drive, Silver Spring, Md.
Filed Oct. 27, 1960, Ser. No. 62,647
Term of patent 3½ years
(Cl. D34—2)



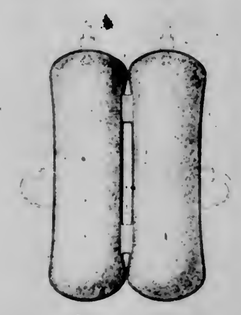
192,147
GAME BOARD
Reuben B. Klamer, Pacific Palisades, and Bill Markham, Buena Park, Calif., assignors to Link Research Corporation
Filed July 26, 1960, Ser. No. 61,516
Term of patent 3½ years
(Cl. D34—5)



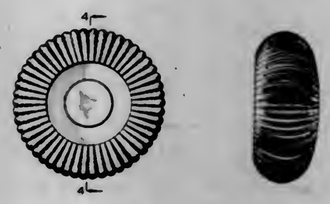
192,148
TIDDLYWINKS-TYPE GAME BOARD
David A. Brodie, % Anamatics Labs., Inc., 2 Morningside Drive, Lansdale, Pa.
Filed Jan. 23, 1961, Ser. No. 63,664
Term of patent 3½ years
(Cl. D34—5)



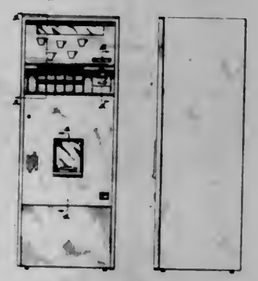
192,149
WATER TOY
Jerome A. Bergamini, 10813 Kenneth Ave., Oak Lawn, Ill.
Filed Jan. 4, 1960, Ser. No. 58,891
Term of patent 3½ years
(Cl. D34—15)



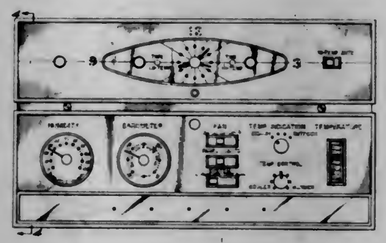
192,150
FLEXIBLE DOOR KNOB COVER
Charles J. Amdur and Edward J. Weinstein, Coral Gables, Fla., assignors to Decor Knok Cover Company, Coral Gables, Fla., a corporation of Florida
Filed May 18, 1960, Ser. No. 60,709
Term of patent 14 years
(Cl. D50—3)



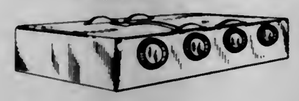
192,151
BEVERAGE VENDING MACHINE
Jose A. Conde, Independence, Mo., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Filed July 17, 1961, Ser. No. 65,932
Term of patent 14 years
(Cl. D52—3)



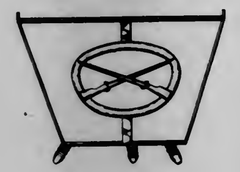
192,152
WEATHER INSTRUMENT
Moto Shimano, Los Angeles, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California
Filed June 22, 1961, Ser. No. 65,689
Term of patent 14 years
(Cl. D52—7)



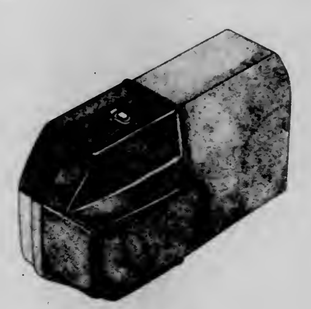
192,153
CORNEAL LENS COMPUTER
Alvin Eugene Reynolds, Tulsa, Okla., assignor to Plastic Contact Lens Company, a corporation of Illinois
Filed July 3, 1961, Ser. No. 65,793
Term of patent 3½ years
(Cl. D57—1)



192,154
HOLDER FOR ICE BUCKET OR SIMILAR ARTICLE
Lad H. Kimbrough, Jr., Richmond, Va., assignor to Ideal Fishing Float Company, Inc., Richmond, Va., a corporation of Virginia
Filed Apr. 12, 1961, Ser. No. 64,753
Term of patent 3½ years
(Cl. D58—26)



192,155
CAMERA CARRYING CASE
Vincent F. Lang, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 8, 1961, Ser. No. 65,068
Term of patent 7 years
(Cl. D87—5)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Edwards, Landon B., Jr. Storage rack. Re. 25,117, 1–30–62, Cl. 211—134.

Graves, Edward B., to Picker X-Ray Corp., Waite Mfg. Div., Inc. X-ray apparatus. Re. 25,118, 1–30–62, Cl. 250—93.

Picker X-Ray Corp., Waite Mfg. Div., Inc.: *See*—
Graves, Edward B. Re. 25,118.

Rawding, Burton R., to Raytheon Co. Supports for vibratory devices. Re. 25,119, 1–30–62, Cl. 310—26.

Raytheon Co.: *See*—
Rawding, Burton R. Re. 25,119.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Chrysanthemum plant. 2,125, 1–30–62, Cl. 47—60.

Boerner, Eugene S., to Jackson & Perkins Co. Chrysanthemum plant. 2,126, 1–30–62, Cl. 47—60.

Boerner, Eugene S., to Jackson & Perkins Co. Chrysanthemum plant. 2,127, 1–30–62, Cl. 47—60.

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 2,128, 1–30–62, Cl. 47—60.

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 2,129, 1–30–62, Cl. 47—61.

Brown, Robert L., to Stark Bro's Nurseries & Orchards Co. Peach tree. 2,124, 1–30–62, Cl. 47—62.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 2,125.
Boerner, Eugene S. 2,126.
Boerner, Eugene S. 2,127.
Boerner, Eugene S. 2,128.
Boerner, Eugene S. 2,129.

Stark Bro's Nurseries & Orchards Co.: *See*—
Brown, Robert L. 2,124.

LIST OF DESIGN PATENTEES

All-Steel Equipment Inc.: *See*—
Anderson, Pehr J. 192,143.

Amdur, Charles J., and E. J. Weinstein, to Decor Knok Cover Co. Flexible door knob cover. 192,150, 1–30–62, Cl. D50—3.

Anderson, Pehr J., to All-Steel Equipment Inc. Chair base or similar article. 192,143, 1–30–62, Cl. D15—1.

Bergamini, Jerome A. Water toy. 192,149, 1–30–62, Cl. D34—15.

Brodie, David A. Tiddlywinks-type game board. 192,148, 1–30–62, Cl. D34—5.

Conde, Jose A., to The Vendo Co. Beverage vending machine. 192,151, 1–30–62, Cl. D52—3.

Decor Knok Cover Co.: *See*—
Amdur, Charles J., and Weinstein. 192,150.

Eastman Kodak Co.: *See*—
Lang, Vincent F. 192,155.

Fountain Hill Mills: *See*—
Tiso, Frank. 192,135.
Tiso, Frank. 192,136.

General Controls Co.: *See*—
Shimano, Moto. 192,152.

Gotthelf, Harry: *See*—
Tiso, Frank. 192,135.
Tiso, Frank. 192,136.

Hamer, Leland S. Wheel stabilizer weight. 192,141, 1–30–62, Cl. D14—30.

Hamer, Leland S. Wheel balance weight. 192,142, 1–30–62, Cl. D14—30.

Huskey, Willie E. Frame for a child's cart. 192,138, 1–30–62, Cl. D14—3.

Huskey, Willie E. Frame for a child's cart. 192,139, 1–30–62, Cl. D14—3.

Huskey, Willie E. Frame for a child's cart. 192,140, 1–30–62, Cl. D14—3.

Ideal Fishing Float Co., Inc.: *See*—
Kimbrough, Lud H., Jr. 192,154.

Kimbrough, Lud H., Jr., to Ideal Fishing Float Co., Inc. Holder for ice bucker or similar article. 192,154, 1–30–62, Cl. D58—26.

Klamer, Reuben B., and B. Markham, to Link Research Corp. Game board. 192,147, 1–30–62, Cl. D34—5.

Lang, Vincent F., to Eastman Kodak Co. Camera carrying case. 192,155, 1–30–62, Cl. D87—5.

Link Research Corp.: *See*—
Klamer, Reuben B., and Markham. 192,147.

Markham, Bill: *See*—
Klamer, Reuben B., and Markham. 192,147.

Meislin, Adele: *See*—
Tiso, Frank. 192,135.
Tiso, Frank. 192,136.

Meislin, Ira: *See*—
Tiso, Frank. 192,135.
Tiso, Frank. 192,136.

Meislin, Nathan: *See*—
Tiso, Frank. 192,135.
Tiso, Frank. 192,136.

Meislin, Paul: *See*—
Tiso, Frank. 192,135.
Tiso, Frank. 192,136.

Nast, Robert. Sweater or similar article. 192,137, 1–30–62, Cl. D3—4.

Plastic Contact Lens Co.: *See*—
Reynolds, Alvin E. 192,153.

Rebold, Hazel F. Stuffed animal or the like. 192,144, 1–30–62, Cl. D34—2.

Rebold, Hazel F. Stuffed animal or the like. 192,145, 1–30–62, Cl. D34—2.

Rebold, Hazel F. Stuffed animal or the like. 192,146, 1–30–62, Cl. D34—2.

Reynolds, Alvin E., to Plastic Contact Lens Co. Corneal lens computer. 192,153, 1–30–62, Cl. D57—1.

Shimano, Moto, to General Controls Co. Weather instrument. 192,152, 1–30–62, Cl. D52—7.

Tiso, Frank, to P., N., I. and A. Meislin, and H. Gotthelf, Co-partners, trading as Fountain Hill Mills. Knitted shirt. 192,135, 1–30–62, Cl. D3—4.

Tiso, Frank, to P., N., I. and A. Meislin, and H. Gotthelf, Co-partners, trading as Fountain Hill Mills. Knitted shirt. 192,136, 1–30–62, Cl. D3—4.

Vendo Co., The: *See*—
Conde, Jose A. 192,151.

Weinstein, Edward J.: *See*—
Amdur, Charles J., and Weinstein. 192,150.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF JANUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Franck, Glenn H. 3,018,567.

AMP Inc.: *See*—
Cobaugh, Robert F., and Wahl. 3,018,816.
Crowley, Daniel J., Folkenroth, and Packard. 3,018,679.

A.V.R., Achat, Ventes, Representations, Societe Anonyme: *See*—
Somville, Charles A. 3,018,861.

Aagaard, Fridtjof, to American Cyanamid Co. Fluid throttling valve. 3,018,793, 1–30–62, Cl. 137—595.

Aalund, Thomas K., and H. Sullivan, to The Siegler Corp. Intelligence storing device for recording equipment. 3,019,301, 1–30–62, Cl. 179—100.2.

Abbey Etna Machine Co.: *See*—
Hankin, Ralph L. 3,018,678.

Abrell, Cornelius W. Motor driven fixture scaffold. 3,018,842, 1–30–62, Cl. 182—129.

Ackell, Joseph J., H. L. Paulding, and R. T. Yu, to Dow Jones & Co., Inc. Punched tape editing means. 3,018,946, 1–30–62, Cl. 234—25.

Acme Steel Co.: *See*—
Dvorak, William W., and Gibson. 3,018,596.

Actiengesellschaft Joh. Jacob Rieter & Cie: *See*—
Rutz, Hans, and Huber. 3,018,603.

Adams Corp., Korn Kurls Division: *See*—
McCleary, Eugene J., Jr., and Heigl. 3,018,715.

Adams, Dolor N., to Harris-Intertype Corp. Treatment of diazo-sensitized lithographic plates. 3,019,105, 1–30–62, Cl. 96—33.

Adams, Douglas P. Nomographic instruments. 3,018,552. 1–30–62, Cl. 33—1.

Adams Rite Mfg. Co.: *See*—
Woodworth, John A., Reeve, and Noah. 3,019,043.

Adams, Robert W., and A. R. Ellsworth. Clamp for matrices for molding phonograph records. 3,018,513, 1–30–62, Cl. 18—5.3.

Adams, Ronald A. C., to Algraphy Ltd. Processing of presensitised lithographic printing plates. 3,019,106, 1–30–62, Cl. 96—48.

Adams, William J., Jr., and D. B. Furlong, to FMC Corp. Pipe coupling. 3,018,785, 1–30–62, Cl. 137—107.

Adamson, Jack F. Fence wire retaining insulating device. 3,019,288, 1–30–62, Cl. 174—158.

Addressograph-Multigraph Corp.: *See*—
Brownsey, Horace P. 3,019,017.
Maul, John A., Brugge, and Anderson. 3,018,725.

Wike, Albert F., and Beaver. 3,018,723.

Admiral Corp.: *See*—
Squire, Herbert D. 3,018,685.

Aeroquip Corp.: *See*—
Cline, William M., and Clemons. 3,019,038.

Aerotec Industries, Inc.: *See*—
Spielman, James F. 3,019,050.

Ågren, Per T.: *See*—
Andersson, Anders R., and Ågren. 3,019,286.

Ahrens, Hermann H. F., to Daimler-Benz Aktiengesellschaft Storage area within motor transports. 3,019,047, 1–30–62, Cl. 296—28.

Air Exchangers Ltd.: *See*—
Donnison, James O. 3,018,773.

Air Placement Equipment Co.: *See*—
Pro, George M. 3,019,058.

Air Reduction Co., Inc.: *See*—
Dietrick, Harold A. 3,018,777.
Engel, Ralph D. 3,019,327.

Aircraft Armaments, Inc.: *See*—
Long, Omer M. 3,019,062.

Aircraft Corp.: *See*—
Mendelson, Myron J. 3,018,955.

Ajinomoto Co., Inc.: *See*—
Sakurai, Setsuji, Komachiya, and Ito. 3,019,232.

Aktiebolaget Flygts Pumpar: *See*—
Engiesson, Sixten. 3,018,925.

Albert, Harry F., to The Firestone Tire & Rubber Co. Use of phenylene di-tertiary amines in rubber. 3,019,211, 1–30–62, Cl. 260—45.9.

Albers-Schoenberg, Ernst, to Stantite Research Corp. Mixed ferrites by a coprecipitation process. 3,019,189, 1–30–62, Cl. 252—62.5.

Alders, Arthur F.: *See*—
Tyler, Tracy B., and Alders. 3,018,779.

Alexander, Frederick D.: *See*—
Bridges, Raymond H., and Alexander. 3,018,563.

Alexander, Guy B., and W. H. Pasfield, to E. I. du Pont de Nemours and Co. Process for producing sintered metals with dispersed oxides. 3,019,103, 1–30–62, Cl. 75—206.

Alger, Jerry T., to Configured Tube Products Co. Flame shapers. 3,018,823, 1–30–62, Cl. 158—113.

Algraphy Ltd.: *See*—
Adams, Ronald A. C. 3,019,106.

Allegheny Ludlum Steel Corp.: *See*—
Renshaw, William G., Bongartz, and Belgay. 3,019,090.

Allis-Chalmers Mfg. Co.: *See*—
Ambroz, Charles F. 3,018,545.
Goodwin, Edwin C., Jr. 3,019,309.
Kush, Theodore G. 3,018,849.

Allmanna Svenska Elektriska Aktiebolaget: *See*—
Andersson, Anders R., and Ågren. 3,019,286.

Altmann, Werner E., to Daimler-Benz Aktiengesellschaft. Differential gear. 3,018,672, 1–30–62, Cl. 74—650.

Aluminum Co. of America: *See*—
Kramer, Max J. 3,019,373.
Trautman, Leonard H. 3,018,885.
Nelson, David G. 3,018,593.

Ambelang, Joseph C., to The Firestone Tire & Rubber Co. N-benzyl-N'-phenyl-p-phenylenediamine and its manufacture. 3,019,262, 1–30–62, Cl. 260—570.9.

Ambroz, Charles F., to Allis-Chalmers Mfg. Co. Device for aligning operating linkage of hydraulic turbine wicket gate. 3,018,545, 1–30–62, Cl. 29—256.

American Air Filter Co., Inc.: *See*—
Gonzalez, Don J. 3,018,844.
Czerwonka, Lawrence J., and Rivers. 3,018,846.
Czerwonka, Lawrence J., and Logsdon. 3,019,127.
Lathrop, Harold F. 3,018,642.

American Can Co.: *See*—
Johns, Don H. 3,019,336.
Matejek, John M. 3,018,886.

American Cyanamid Co.: *See*—
Aagaard, Fridtjof. 3,018,793.
Arishima, Masao, and Sekizawa. 3,019,173.
Cantrall, Edward W., and Bernstein. 3,019,219.
Goodman, Joseph J., and Matrishin. 3,019,172.
Joyce, Asa W. 3,019,217.
Klothen, Irving. 3,019,109.
Lundberg, Lennart A., and Wilson. 3,019,156.
McCormick, Jerry R. D., and Jensen. 3,019,260.
Miller, Bernard. 3,019,159.
Newman, Richard L. 3,019,121.
Reynolds, Walter F., Jr., and Woodberry. 3,019,157.
Schoen, Geza E., Jr., and Leavitt. 3,019,221.
Sheers, Edward H. 3,019,223.

American Machine & Foundry Co.: *See*—
Eissmann, Oswald E. 3,018,781.

American Machine & Foundry Co., Inc.: *See*—
Bourne, Roland B., and Tyskewicz. 3,018,840.

American-Marietta Co.: *See*—
Haigh, Henry W., and Morgan. 3,019,146.

American Metal Climax, Inc.: *See*—
Saarivirta, Matti J. 3,019,102.

American Paper Products Co., The: *See*—
Sanford, Charles A. 3,019,012.

American Seal-Kap Corp. of Delaware: *See*—
Spaeth, Irvin J. 3,018,855.

American Telephone and Telegraph Co.: *See*—
Thorbrogger, Holger H. 3,019,388.

American Window Glass Co.: *See*—
Insolio, Thomas A., Magrini, Carini, and Clements 3,018,587.

Amstein, Edmund H., to The British Aluminum Co. Ltd. Production of refractory carbides, borides and the like. 3,019,084, 1–30–62, Cl. 23—204.

Anchor Hocking Glass Corp.: *See*—
Fouse, Frederick Z. 3,018,889.
Grumbles, Samuel C., Risch, and Gillen. 3,018,911.

Andersen, Donald L., and J. B. Thielen, to General Mills, Inc. Process for inhibiting corrosion. 3,019,196, 1–30–62, Cl. 252—392.

Anderson, Arthur G.: *See*—
Walker, Robert M., Anderson, and Rosenheim. 3,018,958.

Anderson, Chester A., ⅓ each to M. O. Edman, A. Erickson, and J. C. Lepler. Ventilator for building eaves. 3,018,713, 1–30–62, Cl. 98—37.

Anderson Co., The: *See*—
Diebold, Alfred J. 3,019,070.

Anderson, David D.: *See*—
Maul, John A., Brugge, and Anderson. 3,018,725.

Anderson, Edward P., to Engelhard Industries, Inc. Cathodic protection anode assembly. 3,019,177, 1–30–62, Cl. 204—196.

Anderson, Fred N., to Cherry Electrical Products Corp. Thermal snap-action switch. 3,019,319, 1–30–62, Cl. 200—122.

Anderson, James, to Vertimax Ltd. Hydraulic feed system of metals and other cutting machines. 3,018,629, 1–30–62, Cl. 60—97.

Anderson, James A., and S. S. Bushnell, Jr., to Breneman-Hartshorn, Inc. Window shade fastening means. 3,018,824, 1–30–62, Cl. 160—394.

Anderson, James B., to H. J. Heinz Co. Apparatus for separating fruit pulp from skins. 3,018,177, 1–30–62, Cl. 100—97.

Anderson, John L., and F. R. Hand, to International Business Machines Corp. Superconductor persistent current circuit. 3,019,354, 1–30–62, Cl. 307—88.5.

Anderson, John W. Windshield wiper blade. 3,018,500, 1–30–62, Cl. 15—250.42.

Anderson, Martin T. Fishing lure. 3,018,582, 1–30–62, Cl. 43—35.

Andersson, Anders R., and P. T. Ågren, to Allmanna Svenska Elektriska Aktiebolaget. Insulated electrical conductors and process for producing same. 3,019,286, 1–30–62, Cl. 174—121.

Anocut Engineering Co.: *See*—
Williams, Lynn A. 3,019,178.

Anslow, James R., to Jefferson Chemical Co., Inc. Salt of piperazine. 3,019,225, 1–30–62, Cl. 260—268.

Antonoff, Walter, to Universal Controls, Inc. Means for breaking a jam of coins in motor-driven, fare-collecting apparatus. 3,018,868, 1–30–62, Cl. 194—9.

Apex Smelting Co.: *See*—
Colwell, Donald L. 3,019,101.

Arishima, Masao, and Y. Sekizawa, to American Cyanamid Co. Method for preparing tetracycline. 3,019,173, 1–30–62, Cl. 195—80.

Armstrong Cork Co.: *See*—
Parker, John A. 3,019,212.

Arneson, Edwin L., to Federal Paper Board Co., Inc. Carton. 3,018,942, 1–30–62, Cl. 229—51.

Arnett, Samuel E., and H. E. Starr, to The Bendix Corp. Control apparatus for internal combustion engine. 3,018,621, 1–30–62, Cl. 60—39.28.

Arnold, Nicholas H., and A. L. Thompson, to Pentron Electronics Corp. Machine construction. 3,019,011, 1–30–62, Cl. 269—226.

Arnould, Marcel M., to Metal Frame Aquarium Co. Multipurpose fish aquarium cover. 3,018,758, 1–30–62, Cl. 119—5.

Aro Equipment Corp., The: *See*—
Hitt, Otis D., Knapp, Johnson, and Rosenblum. 3,018,673.
Keckler, John W. 3,018,635.

Arrasmith, William C., to Radar Relay, Inc. Mounting and latching means for annunciator lamp housing panels. 3,019,428, 1–30–62, Cl. 340—381.

Arsenault, Jean J. Line puller. 3,018,531, 1–30–62, Cl. 24—134.

Arvin Industries, Inc.: *See*—
Sohn, John P. 3,019,324.

Ashcroft, Charles D. Ball-point pen with tandem cartridges. 3,018,761, 1–30–62, Cl. 120—42.1.

Atlas Chemical Industries, Inc.: *See*—
Wolf, Alfred A. 3,019,315.

Attermeyer, Lawrence A., to The Cincinnati Milling Machine Co. Keyway cutting machine. 3,018,696, 1–30–62, Cl. 90—16.

Auffenorde, James E., and H. P. Penone, to Pittsburgh Plate Glass Co. Treating glass sheets. 3,019,136, 1–30–62, Cl. 117—211.

Augusta-Zunder Feuerzeugfabrik Mayer & Co.: See—
Todtenhöfer, Horst. 3,018,648.

Austin, Harry W., to Mine Safety Appliances Co. Adjustable helmet shell suspension. 3,018,483, 1–30–62, Cl. 2—3.

Automatic Canteen Co. of America: *See*—
Weber, Carl. 3,018,920.

Automatic Electric Laboratories, Inc.: *See*—
Esperseth, Maurice H., and Ostline. 3,019,294.
Ostline, John E., Coleman, and Taugner. 3,019,295.
Smith, Lester L. 3,019,299.

Babcock, John C.: *See*—
Pederson, Raymond L., and Babcock. 3,019,237.

Babcock, John C., and W. J. Wechter, to The Upjohn Co. 11α-allylated 11β-hydroxy-5β-pregnane-3,20-dione bisoximes and process. 3,019,244, 1–30–62, Cl. 260—397.5.

Babcock & Wilcox Co., The: *See*—
Markell, Walter G. 3,018,547.

Bachle, Carl F., to Continental Aviation and Engineering Corp. Internal combustion turbine engine. 3,018,625, 1–30–62, Cl. 60—39.65.

Badische, Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Hamprecht, Guenther, Bellmuth, and Lorenz. 3,018,930.
Kroeper, Hugo, Weitz, and Platz. 3,019,215.
Steinhofer, Adolf, Bartholome, Frey, and Nonnemacher. 3,019,272.
Wygasch, Ewald, and Luehdemann. 3,019,082.

Bagnasco, Dante V. Safety pin. 3,018,533, 1–30–62, Cl. 24—161.

Bailey, George B., to John B. Pierce Foundation. Heat exchange for structure with trough means. 3,018,639, 1–30–62, Cl. 62—285.

Baird, William G., and W. Hrach, to H-B Mfg. Co. Striping device. 3,018,505, 1–30–62, Cl. 15—503.

Baker Castor Oil Co., The: *See*—
Garal, Frank. 3,019,161.

Baker, Roy E., Jr. Bowling pinsetter curtain bracket. 3,019,021, 1–30–62, Cl. 273—53.

Bamber, Cletus F., to City Tank Corp. Automatic valve. 3,018,630, 1–30–62, C. 60—97.

Barassi, Carlo, to Pirelli S.p.A. Pneumatic tire with separate tread rings. 3,018,810, 1–30–62, Cl. 152—176.

Barbulesco, Daniel J., F. H. McCormick, and K. E. Spires, Jr., to General Motors Corp. Automatic washer having control means regulating the speed and torque of the drive motor. 3,018,649, 1–30–62, Cl. 68—12.

Bardocz, Arpad. Spectroscopic light source. 3,019,371, 1–30–62, Cl. 315—232.

Barenyi, Béla, to Daimler-Benz Aktiengesellschaft. Top for passenger motor vehicles. 3,019,049, 1–30–62, Cl. 296—137.

Barisin, Simon. Multiple electric security jack. 3,019,405, 1–30–62, Cl. 339—36.

Barker, Joseph W., to Sperry Rand Corp. Typing block-out mechanism for writing machines. 3,018,871, 1–30–62, Cl. 197—180.

Barmer Maschinenfabrik Aktiengesellschaft: *See*—
Lenk, Wilhelm. 3,018,604.

Barnes, James F., to Foil Process Corp. Carton. 3,018,939, 1–30–62, Cl. 229—44.

Barre, Wade E., and J. B. Clarkson, to Sylvania Electric Products Inc. Transparency previewer. 3,018,575, 1–30–62, Cl. 40—63.

Barth, Victor C., and T. W. Timmis, to said V. C. Barth. Journal lubricating pad and process of making same. 3,019,069, 1–30–62, Cl. 308—243.

Bartholome, Ernst: *See*—
Steinhofer, Adolf, Bartholome, Frey, and Nonnemacher. 3,019,272.

Bartholomew, George A., to United States Steel Corp. Method and apparatus for coating metal strip and wire. 3,019,126, 1–30–62, Cl. 117—17.

Barton, Bernard C.: *See*—
Haxo, Henry E., Barton, and Schaffner. 3,018,812.

Basharrah, William J., to Burroughs Corp. Transistor controlled gaseous indicator. 3,019,370, 1–30–62, Cl. 315—206.

Bauder, Ulrich, to Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft. Machine for forming lined containers. 3,018,702, 1–30–62, Cl. 93—44.1.

Bauer, Benjamin B., and H. Sherman, to Minnesota Mining & Mfg. Co. Tape recording-playback head. 3,019,303, 1–30–62, Cl. 179—100.2.

Bauer, Jordan V., and L. H. Elizer, to The Hubinger Co. Adhesive compositions. 3,019,120, 1–30–62, Cl. 106—213.

Bausch & Lomb Inc.: *See*—
Hayes, John D. 3,018,688.
Saxe, Douglas M. 3,018,689.

Beaver, Arnold R.: *See*—
Wike, Albert F., and Beaver. 3,018,723.

Beck, Edward G., to The Stolle Corp. Chambered sheet metal laminates and method of making. 3,018,593, 1–30–62, Cl. 29—157.3.

Belgay, Jack M.: *See*—
Renshaw, William G., Bongartz, and Belgay. 3,019,090.

Belk, Wilber C., and S. H. Ellison, Jr., to FMC Corp. Container filling apparatus. 3,018,592, 1–30–62, Cl. 53—61.

Belk, Wilber C., to FMC Corp. Method of sectionizing grapefruit. 3,018,808, 1–30–62, Cl. 146—236.

Bell Telephone Laboratories, Inc.: *See*—
Schelleng, John C. 3,019,296.
Schwenzfeger, Edward E. 3,019,293.

Bellmuth, Heinrich: *See*—
Hamprecht, Guenther, Bellmuth, and Lorenz. 3,018,930.

Beloit Iron Works: *See*—
Han, Shu T., and Brezinski. 3,018,825.
Hornbostel, Floyd. 3,019,130.

Beltone Hearing Aid Co.: *See*—
McCarrell, Stuart G. 3,019,305.
Weiss, Erwin. 3,019,304.
Weiss, Erwin M. 3,019,306.
Weiss, Erwin M. 3,019,307.

Bemis Bro. Bag Co.: *See*—
Keating, Alexander F. 3,018,943.
Kindseth, Harold V. 3,018,512.

Bendix Corp., The: *See*—
Arnett, Samuel E., and Starr. 3,018,621.
Collins, Garry G., Jr., and Olson. 3,019,365.
Cosby, James R. 3,019,397.
Goerke, James R. 3,018,763.
Humble, John A. 3,018,664.

Bendix Corp., The: *See*—
Leinkram, Charles Z. 3,019,142.
Stanton, George E. 3,018,852.
Tepolt, Florinn E., and Heaslip. 3,019,356.
Tognola, Tullio. 3,018,732.
Werts, Wayne F. 3,018,622.

Bennett, Willard H. Charged particle accelerator. 3,019,394. 1–30–62, Cl. 328—235.

Bennett, William N. Dashboard shift for motorboats. 3,018,669, 1–30–62, Cl. 74—473.

Benning, Norman H.: *See*—
Haslett, Roy W. G., Hopkin, and Benning. 3,019,411.

Bentley Engineering Co. Ltd., The: *See*—
Wainwright, Carlyle H. 3,018,646.

Bergstrom, Frank S., to Drill Development Co. Punch plate screens. 3,018,891, 1–30–62, Cl. 209—397.

Bernard, Lucien A., ½ to J. E. Briche. Flexible non-pneumatic tire. 3,018,809, 1–30–62, Cl. 152—41.

Bernklau, Kurt: *See*—
Maier, Walter, and Bernklau. 3,018,609.

Bernstein, Jack, and W. A. Lott, to Olin Mathieson Chemical Corp. Piperazine salt of phytic acid. 3,019,226, 1–30–62, Cl. 260—268.

Bernstein, Seymour: *See*—
Cantrall, Edward W., and Bernstein. 3,019,219.

Bernz, Otto, Co., Inc.: *See*—
Webster, Milo E. 3,018,914.

Berquist, Bruce S. Varying speed ratio gearing. 3,018,668, 1–30–62, Cl. 74—393.

Bertin, Daniel: *See*—
Nomine, Gerard, and Bertin. 3,019,252.

Best, Chris E.: *See*—
Reid, Robert J., and Best. 3,019,208.

Beyarly, Henry W., to Chemetron Corp. Heat treatment of homogenized materials. 3,019,110, 1–30–62, Cl. 99—122.

Bianca, Edoardo G. Vehicle parking system. 3,018,903. 1–30–62, Cl. 214—16.1.

Bieber, Samuel: *See*—
Hitchings, George H., and Bieber. 3,019,164.

Bilek, Andrew G. Rotatable rocket launcher. 3,018,692. 1–30–62, Cl. 89—1.7.

Birfield Engineering Ltd.: *See*—
Callaghan, Albert E. 3,019,151.

Biritz, Laszlo F., to F. D. Kolben. Timer device and method for determination. 3,018,611, 1–30–62, Cl. 58—1.
Birmann, Rudolph. Explosion gas turbines. 3,018,623, 1–30–62, Cl. 60—39.36.
Blackburn, Luther A. Deep well pump jack counterbalance control means. 3,018,865, 1–30–62, Cl. 192—116.5.
Blackwell, Jennings P.: *See*—
Doss, Richard C., and Blackwell. 3,019,081.
Blaisdell, Arthur A.: *See*—
Lanciani, Daniel A., and Blaisdell. 3,019,399.
Blazey, Lawrence E., to Terra Industries, Inc. Charcoal burner means for cooking grills. 3,018,772, 1–30–62, Cl. 126—25.
Bliese, Dolores B. Combined shoe and purse. 3,018,570, 1–30–62, Cl. 36—1.
Bloch, Alfred, and R. A. Messing, to Ethicon, Inc. Activated enzyme compositions. 3,019,171, 1–30–62, Cl. 195—68.
Blout, Elkan R., M. Green, H. G. Rogers, M. S. Simon, and R. B. Woodward, to Polaroid Corp. Novel photographic products, processes and compositions. 3,019,107, 1–30–62, Cl. 96—66.
Blue, Robert D., N. P. Sweeny, and M. P. Neipert, to The Dow Chemical Co. Depolarized primary cell. 3,019,279, 1–30–62, Cl. 136—103.
Boehm, Eric G.: *See*—
Mutolo, Peter J., and Boehm. 3,018,677.
Böhme Fettchemie G.m.b.H.: *See*—
Heyden, Rudi, and Plapper. 3,019,133.
Boller, Carl, W. Gündel, and A. Kirstahler, to Deutsche Hydrierwerke G.m.b.H. Process for improving the surface properties of powders. 3,019,123, 1–30–62, Cl. 106—308.
Bongartz, Roy C.: *See*—
Renshaw, William G., Bongartz, and Belgay. 3,019,090.
Bonikowski, Zbigniew: *See*—
Graneau, Peter, and Bonikowski. 3,018,978.
Bonsall, Frank, and B. S. Massey, to Bristol Siddeley Engines Ltd. Flame tubes for use in combustion systems of gas turbine engines. 3,018,624, 1–30–62, Cl. 60—39.37.
Borden Co., The: *See*—
Metcalf, Emerson D. 3,018,755.
Bork, Frank. Flue arrangement. 3,019,000, 1–30–62, Cl. 257—164.
Bosch, Robert, G.m.b.H.: *See*—
Köhler, Heinrich. 3,018,674.
Bose, Norman J., and N. R. Kroninger, to General Precision, Inc. X-Y plotter. 3,019,072, 1–30–62, Cl. 346—29.
Boswau, Hans P., to Leich Electric Co. Party line identification apparatus. 3,019,297, 1–30–62, Cl. 179—17.
Boudreaux, Joseph R., and F. S. McDonald, to The Dow Chemical Co. Fuel compositions. 3,019,094, 1–30–62, Cl. 44—56.
Bourne, Roland B., and J. P. Tyskewicz, to American Machine & Foundry Co., Inc. Acoustic duct and panel construction therefor. 3,018,840, 1–30–62, Cl. 181—33.
Bowers, Albert, and H. J. Ringold, to Syntex S.A. 6a-cyano progesterone and derivatives thereof. 3,019,240, 1–30–62, Cl. 260—397.3.
Bowers Machine Co. Ltd.: *See*—
Nichols, Peter F. 3,018,720.
Bowlus, Omer E., to Chrysler Corp. Leveling valve. 3,018,798, 1–30–62, Cl. 137—627.5.
Braconier, Frederic F. A., and J. J. L. E. Riga, to Societe Belge de l'Azote et des Produits Chimiques du Marly. Process and apparatus for treatment of hydrocarbons. 3,019,271, 1–30–62, Cl. 260—679.
Bradley, Donald G., to Imperial Chemical Industries Ltd. Winding apparatus. 3,018,973, 1–30–62, Cl. 242—18.
Braid, Milton: *See*—
Hauptschein, Murray, Braid, and Lawlor. 3,019,258.
Brancato, Leo J., to Heil-Coil Corp. Wire coil thread connection in soft materials. 3,018,684, 1–30–62, Cl. 85—1.
Brashear, Turner G., Jr., and F. Leader, to L & B Welding Equipment, Inc. Link track refacing apparatus. 3,019,328, 1–30–62, Cl. 219—125.
Brasington, Richard C.: *See*—
Lynch, John E., Brennan, and Brasington. 3,018,698.
Braski, Raymond J., and W. W. Krause, to Webcor, Inc. Thermostat. 3,019,320, 1–30–62, Cl. 200—136.5.
Breitmayer, Carl A. Apparatus for latching and opening container covers. 3,018,917, 1–30–62, Cl. 220—36.
Breneman-Hartshorn, Inc.: *See*—
Anderson, James A., and Bushnell. 3,018,824.
Brennan, James E.: *See*—
Lynch, John E., Brennan, and Brasington. 3,018,698.
Brenner, Abner, and J. M. Sherfey, to United States of America, Army. Process for electrowinning titanium from lower valent titanium alkali chlorides. 3,019,174, 1–30–62, Cl. 204—64.
Brewer, Clifford E. Chimney cowls and ventilating devices. 3,018,714, 1–30–62, Cl. 98—66.
Brey, Wilhelm, to The Firestone Tire & Rubber Co. Preparation of coated fabric material. 3,019,016, 1–30–62, Cl. 270—93.
Brezinski, Jerome P.: *See*—
Han, Shu T., and Brezinski. 3,018,825.
Briche, Jules E.: *See*—
Bernard, Lucien A. 3,018,809.
Bridges, Raymond H., and F. D. Alexander; said Bridges assor. to Southwestern Illinois Coal Corp. Coal dewatering apparatus. 3,018,563, 1–30–62, Cl. 34—95.
Brien, Andre. Watch dial illuminating device. 3,018,614, 1–30–62, Cl. 58—50.
Brilliant, Herbert. Swab. 3,018,778, 1–30–62, Cl. 128—269.
Brilliant, Martin B., to National Co., Inc. Large bandwidth low noise antenna circuit. 3,019,335, 1–30–62, Cl. 250—20.
Bristol Siddeley Engines Ltd.: *See*—
Bonsall, Frank, and Massey. 3,018,624.
Brite, Alan D. Cleaning composition and method. 3,019,194, 1–30–62, Cl. 252—142.
British Aluminum Co. Ltd., The: *See*—
Amstein, Edmund H. 3,019,084.
British Insulated Callender's Cables Ltd.: *See*—
Graneau, Peter, and Bonikowski. 3,018,978.
Hinds, Ronald. 3,018,802.
Brocard, Joseph J. M. R.: *See*—
Denis, Louis, Wolff, and Brocard. 3,018,748.
Brokaw, Adrian P., to Dresser Industries, Inc. Discriminating interval time computer for acoustic well logging systems. 3,019,413, 1–30–62, Cl. 340—15.
Brooke, Jesse M., to Phillips Petroleum Co. Moisture detection. 3,019,342, 1–30–62, Cl. 250—106.
Brooks, John W., to Remington Arms Co., Inc. Safety shield for explosively driven tools. 3,018,481, 1–30–62, Cl. 1—44.5.
Brown, Hubert K.: *See*—
Morgan, John M., Jr., Brown, and Rave. 3,019,377.
Brown, Hugh M., to Clemson Agricultural College of South Carolina. Yarn testing device. 3,018,659, 1–30–62, Cl. 73—95.5.
Brown, James D., and L. Hanson, to The Elmco Corp. Manual motor control device. 3,019,378, 1–30–62, Cl. 318—65.
Brown, Judson G. Filter frame and filter press. 3,018,894, 1–30–62, Cl. 210—231.
Brown, Judson G. Filtering processes and apparatus for use in connection therewith. 3,019,184, 1–30–62, Cl. 210—82.
Browning Industries, Inc.: *See*—
Browning, Val A. 3,018,694.
Browning, Val A., to Browning Industries, Inc. Recoil absorbing mechanism for firearms. 3,018,694, 1–30–62, Cl. 89—159.
Brownsey, Horace P., to Addressograph-Multigraph Corp. Feeding mechanisms. 3,019,017, 1–30–62, Cl. 271—44.
Bruber, Norman T., to The Firestone Tire & Rubber Co. Tire and method of making same. 3,019,149, 1–30–62, Cl. 156—87.
Brucker, James R., to Delavan Mfg. Co. Dual orifice valve. 3,018,792, 1–30–62, Cl. 137—469.
Brugge, Walter J.: *See*—
Maul, John A., Brugge, and Anderson. 3,018,725.
Brugmann, John B., to San Gabriel Ready Mixed. Stabilized concrete mix and method of use thereof. 3,018,880, 1–30–62, Cl. 206—47.
Brunner, Matthew J., P. Finkelstein, and H. E. Hibnick, to The Gillette Co. Cinchophen-hydrocortisone topical compositions. 3,019,162, 1–30–62, Cl. 167—58.
Bryan, George W.: *See*—
Minton, Warren B., Bryan, and Van Gorden. 3,018,615.
Buc, Saul R., and D. I. Randall, to General Aniline & Film Corp. Nitrobenzylsulfonylethanol compounds. 3,019,266, 1–30–62, Cl. 260—607.
Buc, Saul R., and D. I. Randall, to General Aniline & Film Corp. Nitrobenzylthioethanol compounds. 3,019,268, 1–30–62, Cl. 260—609.
Buchanan Electrical Products Corp.: *See*—
Usab, George. 3,019,408.
Buckley, Robert, and B. Zaremsky, to Ferro Corp. Stabilized asbestos filled polyvinyl chloride resins. 3,019,205, 1–30–62, Cl. 260—23.
Buffoli, Mario. Device for the realization of cams, especially for controlling automatic tools and the like. 3,018,699, 1–30–62, Cl. 90—20.
Bukspan, Joseph, to Hygrade Rainwear Mfg. Corp. Shell coats. 3,018,486, 1–30–62, Cl. 2—87.
Bulova Research and Development Laboratories, Inc.: *See*—
Fastenau, Frederick H., and Spielberger. 3,019,404.
Bunnell, Wendell L., to Columbia Iron Mining Co. Gate for diverting materials. 3,018,874, 1–30–62, Cl. 198—69.
Burndy Corp.: *See*—
Matthysse, Irving F. 3,019,284.
Burns, Harold: *See*—
Chappell, Edgar R. R., and Burns. 3,018,963.
Burroughs Corp.: *See*—
Basharrah, William J. 3,019,370.
Harduk, John, and Lessig. 3,019,316.
Heddendorf, George B., and Speh. 3,018,887.
Monticello, William A., and Yesowich. 3,018,721.
Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Hitchings, George H., and Bieber. 3,019,164.
Hitchings, George H., Elion, and Mackay. 3,019,224.
Murfitt, Harry C. 3,019,255.
Burt, Robert V., to The Proctor & Gamble Co. Container sorting apparatus. 3,018,873, 1–30–62, Cl. 198—38.
Bury, Harry, R. Claydon, and R. Smith, to The General Electric Co. Ltd. Thermoelectric cooling devices. 3,018,631, 1–30–62, Cl. 62—3.
Bushnell, Robert H., and V. J. Chimera, to Goodyear Aircraft Corp. Aircraft collision warning system. 3,019,434, 1–30–62, Cl. 343—101.
Bushnell, Sterling S., Jr.: *See*—
Anderson, James A., and Bushnell. 3,018,824.
Buxman, Richard L. Ventilated roofs for boats. 3,018,784, 1–30–62, Cl. 135—6.
Byk-Gulden Lomberg Chemische Fabrik G.m.b.H.: *See*—
Zellner, Hugo. 3,019,166.
Caldwell, Joseph M. Universally flexible conduit joint. 3,019,037, 1–30–62, Cl. 285—226.
Calhoun, Frank B.: *See*—
Goldwater, Robert, and Calhoun. 3,019,424.
California Research Corp.: *See*—
Furby, Neal W., and Newnan. 3,019,191.
Callaghan, Albert E., to Birfield Engineering Ltd. Machines for forming pads or padding from textile or other fibres. 3,019,151, 1–30–62, Cl. 156—375.
Callery Chemical Co.: *See*—
Grantham, Raymond J. 3,019,114.
Cameron-Johnson, Alan, to Dowty Rotol Ltd. Fluid operated mechanism for steerable aircraft wheels. 3,018,986, 1–30–62, Cl. 244—50.

Campbell, Clement: *See*—
Gordon, Saul, and Campbell. 3,018,654.
Canonica, Luigi, to Istituto Biochimico Italiano. Method of preparing 3-alkoxy-4- hydroxybenzoic acids and dialkylamides thereof. 3,019,257, 1–30–62, Cl. 260—520.
Cantrall, Edward W., and S. Bernstein, to American Cyanamid Co. 16,17-disubstituted progesterones. 3,019,219, 1–30–62, Cl. 260—239.55.
Carey, Robert J., and A. T. Walter, to Union Carbide Corp. Crystalline isotactic Polystyrene fibers. 3,019,077, 1–30–62, Cl. 18—54.
Carini, Reno: *See*—
Insolio, Thomas A., Magrini, Carini, and Clements. 3,018,587.
Carlisle Chemical Works, Inc.: *See*—
Mack, Gerry P., and Parker. 3,019,247.
Carlyle, Walter L. Ski rack. 3,018,897, 1–30–62, Cl. 211—60.
Carpenter, Joel C., to Oglebay Norton Co. Integrated bottom ring and attaching clip unit. 3,018,527, 1–30–62, Cl. 22—147.
Carpigiani, Poerio. Continuous ice cream freezer and dispenser. 3,018,641, 1–30–62, Cl. 62—342.
Carroll, Charles, to Duff-Norton Co. Monorail trolley. 3,018,739, 1–30–62, Cl. 105—154.
Carter's Ink Co., The: *See*—
Clancy, John J., Rafferty, and Wells. 3,019,201.
Castel, Jacques H., to PGAC Development Co. Perforating guns. 3,018,730, 1–30–62, Cl. 102—20.
Cataphote Corp.: *See*—
Searight, Charles E. 3,018,704.
Cel Elevator Co., Inc.: *See*—
De Negri, Ferdinando P. 3,018,565.
Central Soya Co., Inc.: *See*—
Kruse, Norman F., and Witte. 3,018,564.
Cerullo, Louis C. Guide for printing. 3,018,729, 1–30–62, Cl. 101—415.
Cerwin, Frank J., and J. A. Scott, to United States Steel Corp. Peeling apparatus and method. 3,018,700, 1–30–62, Cl. 90—24.
Challange-Cook Bros., Inc.: *See*—
Prichard, Evan S. 3,019,002.
Chance, A. B., Co.: *See*—
Newcomb, Cyrus B., Jr., and Renas. 3,019,287.
Chanmugam, Jayarajan, to Shell Oil Co. Regeneration of a nitrogen base containing ion exchanger. 3,019,182, 1–30–62, Cl. 208—254.
Chanmugam, Jayarajan, to Shell Oil Co. Regeneration of a nitrogen base containing ion exchanger. 3,019,199, 1–30–62, Cl. 260—2.2.
Chappell, Edgar R. R., and H. Burns. Temperature compensating integrating circuits for counting electrical pulses. 3,018,963, 1–30–62, Cl. 235—183.
Chauvin, John, small percentages to various assignees. Traction mechanism. 3,018,837, 1–30–62, Cl. 180—7.
Chavannes, Marc A., to Sealed Air Corp. Methods for making embossing rollers. 3,018,540, 1–30–62, Cl. 29—148.4.
Chemetron Corp.: *See*—
Bevarly, Henry W. 3,019,110.
Cheney, Ralph G. Atomizer. 3,018,971, 1–30–62, Cl. 239—338.
Cherry Electrical Products Corp.: *See*—
Anderson, Fred N. 3,019,319.
Chestek, James H., to General Electric Co. Vapor combustion system. 3,018,626, 1–30–62, Cl. 60—39.71.
Chicopee Mfg. Corp.: *See*—
Harmon, Carlyle. 3,018,521.
Chimera, Vincent J.: *See*—
Bushnell, Robert H., and Chimera. 3,019,434.
Chinn, Leland J., to G. D. Searle & Co. 5-hydroxy-2-oxyphenylcyclopentanealkanois and intermediates. 3,019,233, 1–30–62, Cl. 260—343.3.
Chopa, Jerome H.: *See*—
Wittenberg, Edward H., and Chopa. 3,018,970.
Christoff, Chris A., to Clary Corp. Motion conversion mechanism. 3,018,665, 1–30–62, Cl. 74—99.
Chrysler Corp.: *See*—
Bowlus, Omer E. 3,018,798.
Sailler, John W. 3,018,767.
Spieta, Frederick C. 3,018,667.
Sturtevant, Mark J. 3,019,048.
Chuffart, Robert C., to Imperial Chemical Industries Ltd. Method and apparatus for obtaining powders of uniform size. 3,018,890, 1–30–62, Cl. 209—158.
Chumley, Kleber D. Stopper attachment for a vacuum bottle. 3,018,912, 1–30–62, Cl. 215—100.
Cincinnati Milling Machine Co., The: *See*—
Attermeyer, Lawrence A. 3,018,696.
Decker, Jacob. 3,019,066.
Decker, Jacob, and Steinhard. 3,018,590.
Henry, Robert L. 3,019,343.
Lynch, John E., Brennan, and Brasington. 3,018,698.
Morgan, John M., Jr., Brown, and Rave. 3,019,377.
Schroeder, Walter, and Dall. 3,018,697.
City Tank Corp.: *See*—
Bamber, Cletus F. 3,018,630.
Clancy, John J., J. W. Rafferty, and R. C. Wells, to The Carter's Ink Co. Methods of making porous applicator structures. 3,019,201, 1–30–62, Cl. 260—2.5.
Clark Controller Co., The: *See*—
Gauvreau, Alphonse P. 3,019,317.
Hoge, Robert H. 3,018,794.
Zarleng, Steve A. 3,019,369.
Zarleng, Steve A. 3,019,379.
Clark Equipment Co.: *See*—
McAdams, Paul F. 3,018,573.
Clarke, Chapman & Co. Ltd.: *See*—
Hutchinson, Myles. 3,018,999.
Clarke, Daniel J., and E. A. Stalker, to The Stalker Corp. Method of making hollow blades. 3,018,542, 1–30–62, Cl. 29—156.8.
Clark, J. R. Co., The: *See*—
Munson, Donald J., and Nubson. 3,018,574.
Clarkson, Jack B.: *See*—
Barre, Wade E., and Clarkson. 3,018,575.
Clary Corp.: *See*—
Christoff, Chris A. 3,018,665.
Clavell, Thomas W., to Fairchild Stratos Corp. Means for mounting a body on a rotating shaft. 3,019,039, 1–30–62, Cl. 287—53.
Clay, Arthur T., to Hetherington & Berner Inc. Dredge pump. 3,018,736, 1–30–62, Cl. 103—103.
Claydon, Roy: *See*—
Bury, Harry, Claydon, and Smith. 3,018,631.
Cleaver-Brooks Co.: *See*—
Grobecker, Hugo H. 3,018,819.
Clements, Zayman C.: *See*—
Insolio, Thomas A., Magrini, Carini, and Clements. 3,018,587.
Clemons, William G.: *See*—
Cline, William M., and Clemons. 3,019,038.
Clemson Agricultural College of South Carolina: *See*—
Brown, Hugh M. 3,018,659.
Clickner, Earle D., to Shakespeare Co. Level wind fishing reel. 3,018,979, 1–30–62, Cl. 242—84.21.
Cline, William M., and W. G. Clemons, to Aeroquip Corp. Fitting. 3,019,038, 1–30–62, Cl. 285—243.
Clinefelter, James W. Plastic extruding machine. 3,018,516, 1–30–62, Cl. 18—14.
Clinefelter, James W. Perforated unit for plastic extruding machines. 3,018,807, 1–30–62, Cl. 146—174.
Clough, Harry, to Imperial Chemical Industries Ltd. Stabilisation of phenols. 3,019,269, 1–30–62, Cl. 260—620.
Clouse, Frank S. Fuel heating device. 3,019,325, 1–30–62, Cl. 219—38.
Clyde Paper Co. Ltd.: *See*—
Sneddon, Thomas. 3,018,515.
Coats & Clark Inc.: *See*—
Morin, Louis H., and Gries. 3,018,519.
Cobaugh, Robert F., and F. W. Wahl, to AMP Inc. Dies for crimping tool. 3,018,816, 1–30–62, Cl. 153—1.
Cognlat, Marcel, to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieres Electriques d'Ugine. Apparatus and method for analysis of fluids. 3,018,655, 1–30–62, Cl. 73—27.
Cohn, David. Bowling game. 3,019,020, 1–30–62, Cl. 273—44.
Coleman, Ivan V.: *See*—
Ostline, John E., Coleman, and Taugner. 3,019,295.
Collett, Charles H. Protector for well pipe. 3,019,063, 1–30–62, Cl. 308—4.
Collie, Robert M., and H. B. Jackson. Mechanical trash rake. 3,018,893, 1–30–62, Cl. 210—159.
Collins, Garry G., Jr., and K. W. Olson, to The Bendix Corp. Gas discharge device. 3,019,365, 1–30–62, Cl. 313—213.
Columbia Iron Mining Co.: *See*—
Bunnell, Wendell L. 3,018,874.
Columbian Carbon Co.: *See*—
Gholson, Roy L. 3,019,093.
Colwell, Donald L., to Apex Smelting Co. Aluminum base alloy for die castings. 3,019,101, 1–30–62, Cl. 75—141.
Compagnie Crouzet: *See*—
Crommen, Roger C. L. 3,019,359.
Conrad, Wendell R.: *See*—
Reid, Robert J., and Conrad. 3,019,209.
Conch International Methane Ltd.: *See*—
Henry, James J. 3,018,916.
Configured Tube Products Co.: *See*—
Alger, Jerry T. 3,018,823.
Conrad, Franklin: *See*—
Haefner, Albert J., and Conrad. 3,019,175.
Continental Aviation and Engineering Corp.: *See*—
Bachle, Carl F. 3,018,625.
Continental Oil Co.: *See*—
Crawford, John M. 3,019,412.
Cook, Ernest E., and H. J. Sadler. Pump structure. 3,018,737, 1–30–62, Cl. 103—173.
Cook, Evin L., to Socony Mobil Oil Co., Inc. Fluid-actuated percussion drill. 3,018,834, 1–30–62, Cl. 175—92.
Coon Development Co.: *See*—
Coon, Gertrude V. and H. A. 3,018,801.
Coon, Gertrude V. and H. A., to Coon Development Co. Loom for circular weaving. 3,018,801, 1–30–62, Cl. 139—29.
Coon, Howard A.: *See*—
Coon, Gertrude V. and H. A. 3,018,801.
Cornell, James R.: *See*—
Seidman, Jay J., and Cornell. 3,019,344.
Cosby, James R., to The Bendix Corp. Pressure responsive device combined with positive feedback oscillator circuit. 3,019,397, 1–30–62, Cl. 331—65.
Costelloe, Robert D.: *See*—
Wilton, Herbert C., and Costelloe. 3,018,908.
Couturier, Robert A.: *See*—
Diamond, Lew H., and Couturier. 3,018,851.
Coyle, William J., to United-Carr Fastener Corp. Wire shock mount. 3,019,008, 1–30–62, Cl. 267—1.
Cozart, Robert T. Vending machine. 3,018,869, 1–30–62, Cl. 194—10.
Crane, Grant, to The Firestone Tire & Rubber Co. Method of producing stabilized oil extended butadiene-styrene rubbery copolymer. 3,019,207, 1–30–62, Cl. 260—33.6.
Crane, William B., Jr., ½ to The Nevins Co. Combination three-dimensional article and display package therefor, and method of packaging said article. 3,018,879, 1–30–62, Cl. 206—45.31.

Craven, William J., S. J. Metro, and A. H. Matuszak, to Esso Research and Engineering Co. Lubricating oil compositions containing esters of polycarboxylic aromatic acids. 3,019,188, 1–30–62, Cl. 252—57.

Crawford, John M., to Continental Oil Co. Floating support for seismic transducers. 3,019,412, 1–30–62, Cl. 340—7.

Crimmins, David J.: *See*—
Logan, Maurus C., and Crimmins. 3,019,410.

Crommen, Roger C. L., to Compagnie Crouzet. Small self-starting synchronous motors having a high power-to-weight ratio. 3,019,359, 1–30–62, Cl. 310—156.

Crowley, Daniel J., E. E. Folkenroth, and D. R. Packard, to AMP Inc. Apparatus for severing electrical leads from a continuous wire source. 3,018,679, 1–30–62, Cl. 83—154.

Curtis, Harold F. Portable and adjustable charcoal grill. 3,018,771, 1–30–62, Cl. 126—25.

Czerwonka, Lawrence J., and R. D. Rivers, to American Air Filter Co., Inc. Electrostatic precipitators. 3,018,846, 1–30–62, Cl. 183—7.

Czerwonka, Lawrence J., and R. F. Logsdon, to American Air Filter Co., Inc. Filtering medium and method of making the same. 3,019,127, 1–30–62, Cl. 117—33.

Da Costa, Harry, to Motorola, Inc. Leveling apparatus. 3,019,010, 1–30–62, Cl. 269—191.

Dagens Nyheters Aktiebolag: *See*—
Skallquist, Karl S. A. 3,018,977.

Daimler-Benz Aktiengesellschaft: *See*—
Ahrens, Hermann H. F. 3,019,047.
Altmann, Werner E. 3,018,672.
Barenyi, Béla. 3,019,049.
Muller, Alfred H. 3,018,990.

Dall, Albert H.: *See*—
Schroeder, Walter, and Dall. 3,018,697.

Daniels, Howard L., to Telex, Inc. Electrical switch. 3,019,323, 1–30–62, Cl. 200—155.

Darling, L. A., Co.: *See*—
Huet, Edward C. 3,018,900.

Datex Corp.: *See*—
Spaulding, Carl P., and Duncan. 3,019,427.

Daverman, Edward H.: *See*—
Rookus, James E. 3,018,933.

Davidson, Ivor M., to Power Jets (Research and Development) Ltd. Jet aircraft with jet deflector. 3,018,983, 1–30–62, Cl. 244—15.

Davidson, John W.: *See*—
Rust, John L. 3,018,984.

Davis, Benjamin L., and W. C. Myberg, to United States of America, Navy. Tape capacitor. 3,019,150, 1–30–62, Cl. 156—184.

Davis, Charles H.: *See*—
Devon, Harry J., and Davis. 3,018,728.

Davis, Pearl C., to Westinghouse Electric Corp. Refrigeration apparatus. 3,019,071, 1–30–62, Cl. 312—308.

Davis, Raymond C.: *See*—
Waag, Harry O., and Davis. 3,018,636.

Davis, Robert F., ½ to E. M. Ogelvie. Garment trimmer. 3,018,932, 1–30–62, Cl. 223—1.1.

Day, Charles F. Barrel rubbish disposal unit. 3,018,945, 1–30–62, Cl. 232—44.

Dayton Tire & Rubber Co., The: *See*—
Monteith, Victor St. C., and Wyman. 3,018,511.

Dearborn Chemical Co.: *See*—
Denman, Wayne L., and Kerst. 3,019,195.
Wallen, Alphonse R. 3,019,118.

De Beurs, Johannes. Anti-pitch stabilizers for ships. 3,018,749, 1–30–62, Cl. 114—126.

Decker, Jacob, to The Cincinnati Milling Machine Co. Machine tool spindle construction. 3,019,066, 1–30–62, Cl. 308—187.1.

Decker, Jacob, and B. H. Steinhard, to The Cincinnati Milling Machine Co. Grinding machine feed mechanism. 3,018,590, 1–30–62, Cl. 51—165.

De Coriolis, Ernest G., incompetent (by P. de Coriolis, guardian), and C. C. Sykes, to Midland-Ross Corp. Metal article treating apparatus. 3,019,007, 1–30–62, Cl. 266—4.

De Coriolis, Pierre: *See*—
De Coriolis, Ernest G., and Sykes. 3,019,007.

Deere & Co.: *See*—
Johnson, Ellsworth T. 3,018,598.
Oehler, William P., and Hensen. 3,019,032.

Deisenroth, Robert J. Glass run for windows. 3,018,525. 1–30–62, Cl. 20—52.

De Lano, Merritt V., Jr., and W. E. Plaster, to Phillips Petroleum Co. Defluorination of HF alkylate. 3,019,273, 1–30–62, Cl. 260—683.42.

Delavan Mfg. Co.: *See*—
Brucker, James R. 3,018,792.

Deline, Edwin F. Carton. 3,018,940, 1–30–62, Cl. 229—45.

De Luis, Thomas, to H. K. Porter Co., Inc. Electrical cable with protecting layer of polyethylene terephthalate. 3,019,285, 1–30–62, Cl. 174—120.

Demarest, Le Roy E.: *See*—
Lapeyre, Fernand S. and J. M., and Demarest. 3,018,510.

De Negri, Ferdinando P., to Cel Elevator Co., Inc. Radar sweep simulator. 3,018,565, 1–30–62, Cl. 35—10.4.

Denis, Louis, P. B. Wolff, and J. J. M. R. Brocard, to Societe d'Etudes pour le Stockage et le Transport sous-marins des Fluides (S.O.M.A.F.). Device for the transport of freight, and in particular liquid or powdered loads of commercial value, in water and especially in sea water. 3,018,748, 1–30–62, Cl. 114—74.

Denman, Wayne L., and H. Kerst, to Dearborn Chemical Co. Method and composition for treating cooling water. 3,019,195, 1–30–62, Cl. 252—389.

Dentists' Supply Co. of New York, The: *See*—
Fritz, Carroll S. 3,018,884.

Deponai, Joseph G. Anti-skid assembly. 3,018,811, 1–30–62, Cl. 152—233.

De Foy, Martin L., II, B. A. Pattan, and R. F. Lucy, to Sylvania Electric Products Inc. Pulse radar system with microwave switch. 3,019,431, 1–30–62, Cl. 343—17.1.

Dershowitz, Samuel, to Polaroid Corp. Photographic process, products and compositions. 3,019,108, 1–30–62, Cl. 96—66.

Dessauer, Rolf, to E. I. du Pont de Nemours and Co. Process of coloring anodized aluminum. 3,019,143, 1–30–62, Cl. 148—6.1.

Deutsch, Fritz A., to Monroe Calculating Machine Co. Resetting mechanism. 3,018,953, 1–30–62, Cl. 235—144.

Deutsche Erdol-Aktiengesellschaft: *See*—
Schmid, Christoph W. 3,018,660.

Deutsche Hydrierwerke G.m.b.H.: *See*—
Boiler, Carl, Gündel, and Kirstahler. 3,019,123.

Devon, Harry J., and C. H. Davis, to Jas. H. Matthews & Co. Type holder strip and type holding accessory therefor. 3,018,728, 1–30–62, Cl. 101—381.

Dewese, Henry. Method of making a storage tank construction. 3,018,546, 1–30–62, Cl. 29—431.

Diamond Alkali Co.: *See*—
Siezak, Frank B., and Rosen. 3,019,160.
Rosen, Irving, and Siezak. 3,019,075.

Diamond, Lew H., and R. A. Couturier, to Otis Elevator Co. Control mechanism for doors. 3,018,851, 1–30–62, Cl. 187—48.

Didde, Carl W., and D. A. Glaser. Paper gathering and treating apparatus. 3,019,013, 1–30–62, Cl. 270—58.

Dieboid, Albert A., to Meridan Corp. Piano case. 3,018,681, 1–30–62, Cl. 84—177.

Diebold, Alfred J., to The Anderson Co. Motion-transmitting device. 3,019,070, 1–30–62, Cl. 312—223.

Diesterweg, Roland E. Lawn edger. 3,018,602, 1–30–62, Cl. 56—295.

Dietrich, Harold A., to Air Reduction Co., Inc. Anesthetic vaporizer and administering apparatus. 3,018,777, 1–30–62, Cl. 128—188.

Dietz, Alfred and G. Wire ropes. 3,018,607, 1–30–62, Cl. 57—148.

Dietz, Gerhard: *See*—
Dietz, Alfred and G. 3,018,607.

Dietz, Gerhard. Stranded metal ropes. 3,018,606, 1–30–62, Cl. 57—148.

Dijkstra, Lieuwe J.: *See*—
McReynolds, Andrew W., and Dijkstra. 3,019,176.

Di Paolo, Thomas V., to Philco Corp. Laminated magnetic shielding means for television tubes and the like. 3,019,361, 1–30–62, Cl. 313—76.

Dirks, Gerhard. Electronic adder-subtractor apparatus employing a magnetic drum. 3,018,960, 1–30–62, Cl. 235—176.

Doggett, Roger H., L. R. B. Hervey, and C. E. Lanyon, to John A. Manning Paper Co., Inc. Mucilage producing material. 3,019,138, 1–30–62, Cl. 127—29.

Doherty, Thomas H., to Mishawaka Rubber Co., Inc. High-traction footwear tread. 3,018,571, 1–30–62, Cl. 36—39.

Don-Lan Electronics, Inc.: *See*—
Lanctot, Donald H. 3,019,322.
Lanctot, Donald H. 3,019,402.

Donnison, James O., to Air Exchangers Ltd. Furnace and heat exchanger for heating gases. 3,018,773, 1–30–62, Cl. 126—110.

Donohue, William J. Methods and apparatus for continuous interaction of solids and fluids. 3,019,079, 1–30–62, Cl. 23—1.

Donsky, Abraham. Series lamp socket. 3,019,407, 1–30–62, Cl. 339—155.

Dornbusch, Aaron P., and J. E. Mekota, Jr., to Minneapolis-Honeywell Regulator Co. Data processing apparatus. 3,019,417, 1–30–62, Cl. 340—172.5.

Dorsey, William R., and R. E. Kalbaugh, to Vacu-Dry Co. Art of dehydrating apples. 3,018,559, 1–30–62, Cl. 34—28.

Doss, Richard C., and W. B. Reynolds, to Phillips Petroleum Co. Monopropellants containing quaternary ammonium compounds. 3,018,619, 1–30–62, Cl. 60—35.4.

Doss, Richard C., and J. P. Blackwell, to Phillips Petroleum Co. Stabilized nitric acid. 3,019,081, 1–30–62, Cl. 23—157.

Double A Products Co.: *See*—
Loup, Ronald L. 3,018,796.

Doucette, Lionel J., to General Electric Co. Ceramic body and method of making the same. 3,019,116, 1–30–62, Cl. 106—46.

Dow Chemical Co., The: *See*—
Blue, Robert D., Sweeny, and Neipert. 3,019,279.
Boudreaux, Joseph R., and McDonald. 3,019,094.
Dunbar, Joseph E. 3,019,259.

Dow Chemical Co., The: *See*—
Hemwall, John B. 3,019,098.
Lefevre, Lloyd E. 3,018,550.
McMurtrie, Robert. 3,019,059.
Whitby, Lawrence. 3,019,145.

Dow Jones & Co., Inc.: *See*—
Ackell, Joseph J., Pauiding, and Yu. 3,018,946.

Dowty Rotol Ltd.: *See*—
Cameron-Johnson, Alan. 3,018,986.

Dresser Industries, Inc.: *See*—
Brokaw, Adrian P. 3,019,413.
Isaacson, Walter P. 3,018,839.

Drill Development Co.: *See*—
Bergstrom, Frank S. 3,018,891.

Dubonnet, André, to Societe Anonyme pour l'Exploitation de Brevets d'Apparells Electroniques Codelec. Lockable push-button arrangement. 3,018,652, 1–30–62, Cl. 70—218.

Duff-Norton Co.: *See*—
Carroll, Charles. 3,018,739.

Dumesnil, Maurice E., to E. I. du Pont de Nemours and Co. Thermistor composition. 3,019,198, 1–30–62, Cl. 252—521.

Dumpis, Janis: *See*—
Schenblein, William A., Jr., and Dumpis. 3,019,041.

Dunbar, Joseph E., to The Dow Chemical Co. 1,4-dihydro-1,4-methanonaphthalene-5,8-diamine. 3,019,259, 1–30–62, Cl. 260—556.

Duncan, William S.: *See*—
Spaulding, Carl P., and Duncan. 3,019,427.

Dunlop, George E., to United States Steel Corp. Furnace lining temperature-thickness measuring apparatus. 3,018,663, 1–30–62, Cl. 73—341.

Dunn, Donald A., to United States of America, Army. Microwave frequency divider. 3,019,366, 1–30–62, Cl. 315—3.6.

Dunn, Jesse T., to Union Carbide Corp. Process for producing acrylic acid esters. 3,019,256, 1–30–62, Cl. 260—486.

Du Pont de Nemours, E. I., and Co.: *See*—
Alexander, Guy B., and Pasfield. 3,019,103.
Dessauer, Rolf. 3,019,143.
Dumesnil, Maurice E. 3,019,198.
Halliwell, Ronald H. 3,018,633.
Hoffman, Henry A., Jr., and Sherbeck. 3,019,119.
Moody, Frank B. 3,019,213.
Muetterties, Earl L. 3,019,086.
Pascal, Ivan. 3,019,261.

Dura Corp.: *See*—
Ross, William A. 3,018,848.

Durand, Arthur H.: *See*—
Tolass, William M., and Durand. 3,018,938.

Dvorak, William W., and J. L. Gibson, to Acme Steel Co. Pipe bundling machine. 3,018,596, 1–30–62, Cl. 53—198.

Eachus, Joseph J., to Minneapolis-Honeywell Regulator Co. Error checking device employing tristable elements. 3,018,954, 1–30–62, Cl. 235—153.

Eachus, Joseph J., to Minneapolis-Honeywell Regulator Co. Data processing apparatus. 3,019,422, 1–30–62, Cl. 340—174.1.

Ebert & Co. Inc.: *See*—
Ebert, Henry. 3,018,616.

Ebert, Henry, to Ebert & Co. Inc. Expansible linkage with removable links and means to prevent inadvertent separation of the latter. 3,018,616, 1–30–62, Cl. 59—79.

Echikson, Elchanan, to Red Devil Tools. Tool having a hand grip construction. 3,018,497, 1–30–62, Cl. 15—143.

Ecke, George G., and A. J. Kolka, to Ethyl Corp. Jet fuel compositions. 3,019,097, 1–30–62, Cl. 44—78.

Eckman, Richard E.: *See*—
Elliott, Charles H., and Eckman. 3,018,866.

Edelmann Gesellschaft m.b.H.: *See*—
Hoppe, Alfred, Langner, Westerhoff, Wolke, and Hauenstein. 3,019,179.

Edgcomb, Robert A.: *See*—
Kaye, Harold J. 3,018,994.

Edgewood Laboratories, Inc.: *See*—
Mansor, Leo. 3,019,165.

Edman, Marvin O.: *See*—
Anderson, Chester A. 3,018,713.

Edwards, John: *See*—
Ringold, Howard J., Mancera, Rosenkranz, and Edwards. 3,019,230.

Eggenberger, John S., J. C. Lloyd, and R. S. Smith, to International Business Machines Corp. Thin magnetic film. 3,019,125, 1–30–62, Cl. 117—8.

Eggers, Gerhard: *See*—
Ernst, Günther, and Eggers. 3,018,988.

Eggman, Max E., to The Magnavox Co. Delay firing mechanism. 3,018,734, 1–30–62, Cl. 102—75.

Ehmke, Murray H. Golf club head. 3,019,022, 1–30–62, Cl. 273—163.

Eichorst, Herman H. Outdoor washstand. 3,018,490, 1–30–62, Cl. 4—170.

Ellerman, George E., Pittsburgh Plate Glass Co. Glass fiber surface treatment. 3,019,122, 1–30–62, Cl. 106—287.

Elmco Corp., The: *See*—
Brown, James D., and Hanson. 3,019,378.

Eisenmeyer, Joseph S.: *See*—
Ross, Alan, Eisenmeyer, and Rakofsky. 3,019,389.

Elsmann, Oswald E., to American Machine & Foundry Co. Method and apparatus for cigarette rod forming. 3,018,781, 1–30–62, Cl. 131—64.

Eltel, Jay M. Cable stringing apparatus and method. 3,018,998, 1–30–62, Cl. 254—134.3.

Elco-Alcoa Containers, Inc.: *See*—
Phillips, Harry, Maciejowski, Shafer, Tucker, and Fuller. 3,018,594.

Electric & Musical Industries Ltd.: *See*—
Perkins, Denis G. 3,019,290

Electronic Aids, Inc.: *See*—
Tischler, Morris. 3,018,568.

Elfes, Lee E., to Massey-Ferguson Inc. Friction clutch mechanism. 3,018,863, 1–30–62, Cl. 192—48.

Elfes, Lee E., to Massey-Ferguson Inc. Dual clutch. 3,018,864, 1–30–62, Cl. 192—113.

Elion, Gertrude B.: *See*—
Hitchings, George H., Elion, and Mackay. 3,019,224.

Elizer, Lee H.: *See*—
Bauer, Jordan V., and Elizer. 3,019,120.

Ellenberger, Jakob, to Ellenberger & Poensgen G.m.b.H. Electric motor starting switch. 3,019,314, 1–30–62, Cl. 200—88.

Ellenberger & Poensgen G.m.b.H.: *See*—
Ellenberger, Jakob. 3,019,314.

Elliott, Charles H., and R. E. Eckman, to Reed Roller Bit Co. Mechanism to control the torque delivered by impact wrenches. 3,018,866, 1–30–62, Cl. 192—150.

Ellison, Samuel H., Jr.: *See*—
Belk, Wilber C., and Ellison. 3,018,592.

Ellithorpe, Gilbert S., to Littelfuse, Inc. Electric switch. 3,019,308, 1–30–62, Cl. 200—11.

Ellsworth, Allan R.: *See*—
Adams, Robert W., and Ellsworth. 3,018,513.

Embree, Thaylus: *See*—
Thomas, Thomas G., Taylor, and Embree. 3,018,853.

Engel, Ralph D., to Air Reduction Co., Inc. Fusion cladding. 3,019,327, 1–30–62, Cl. 219—76.

Engelhard Industries, Inc.: *See*—
Anderson, Edward P. 3,019,177.

Englesson, Sixten, ½ to Aktiebolaget Flygts Pumpar. Dispensing pump and coupling. 3,018,925, 1–30–62, Cl. 222—180.

Ercoli, Alberto. Process for the preparation of enolethers of Δ⁴-3-ketosteroids. 3,019,241, 1–30–62, Cl. 260—397.4.

Erickson, August: *See*—
Anderson, Chester A. 3,018,713.

Erner, William E., to Houdry Process Corp. Alkyl acridines. 3,019,227, 1–30–62, Cl. 260—279.

Ernst, Günther, and G. Eggers, to Societe Nationale d-Etude et de Moteurs d'Aviation. Electro-hydraulic jack device for controlling the stability of aircraft. 3,018,988, 1–30–62, Cl. 244—77.

Ernst, Hellmut, to Maschinenfabrik Augsburg-Nurnberg A.G. Floating crane. 3,018,901, 1–30–62, Cl. 212—3.

Eschinasi, Emile H.: *See*—
Eschinazi, Habib E. 3,019,263.
Eschinazi, Habib E. 3,019,264.
Eschinazi, Habib E. 3,019,265.

Eschinazi, Habib E., now by judicial change of name E. H. Eschinasi, to The Givaudan Corp. Process for preparing 1-acetyl-2,2,3-trimethylcyclobutane. 3,019,263, 1–30–62, Cl. 260—586.

Eschinazi, Habib E., now by judicial change of name E. H. Eschinasi, to The Givaudan Corp. 2-(2,2,3-trimethylcyclobutyl)-hepta-2,4-dien-6-one. 3,019,264, 1–30–62, Cl. 260—586.

Eschinazi, Habib E., now by judicial change of name E. H. Eschinasi, to The Givaudan Corp. Process for preparing irones. 3,019,265, 1–30–62, Cl. 260—587.

Esperseth, Maurice H., and J. E. Ostline, to Automatic Electric Laboratories, Inc. Paystation customer dialling in a toll ticketing telephone system. 3,019,294, 1–30–62, Cl. 179—6.3.

Esso Research and Engineering Co.: *See*—
Craven, William J., Metro, and Matuszak. 3,019,188.
Gunderloy, Frank C., Jr. 3,019,249.
Panzer, Jerome, and Westlund. 3,019,187.
Robson, Harry E. 3,019,100.

Etablissements Neyrpic: *See*—
Gros, Charles. 3,018,997.

Ethicon, Inc.: *See*—
Bloch, Alfred, and Messing. 3,019,171.

Ethier, Joseph A. Valve for effecting automatic double inking of the printing plate in a vertical press. 3,018,726, 1–30–62, Cl. 101—280.

Ethyl Corp.: *See*—
Ecke, George G., and Kolka. 3,019,097.
Haefner, Albert J., and Conrad. 3,019,175.
Hornbaker, Edwin D. 3,019,270.

Evers, Dundred D., to Philco Corp. Cryogenic refrigerating means. 3,018,643, 1–30–62, Cl. 62—467.

FMC Corp.: *See*—
Adams, William J., Jr., and Furlong. 3,018,785.
Belk, Wilber C. 3,018,808.
Belk, Wilber C., and Ellison. 3,018,592.
Puccinelli, Sylvio. 3,018,805.
Thompson, Howard H. 3,018,768.

F.T. Products Ltd.: *See*—
Fernberg, Eric B. 3,019,040.

Fairchild Stratos Corp.: *See*—
Clavell, Thomas W. 3,019,039.

Faragó, Gyula: *See*—
Heller, László, and Faragó. 3,018,640.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Heinz, Anton R., and Graulich. 3,019,192.
Kayser, Heinrich, Lorenz, and Schrader. 3,019,250.
Maier, Walter, and Bernklau. 3,018,609.

Farley, Barbara L. Ornamental apparatus for soilless hydroponic cultivation. 3,018,586, 1–30–62, Cl. 47—1.2.

Farnsworth-Johnson Corp.: *See*—
Johnson, Otis L. 3,018,860.

Fastenau, Frederick H., and S. C. Spielberger, to Bulova Research and Development Laboratories, Inc. Thermistors and methods of making same. 3,019,404, 1–30–62, Cl. 338—28.

Faust, John P., to Olin Mathieson Chemical Corp. Process for preparing diborane. 3,019,083, 1–30–62, Cl. 23—204.

Fearon, Robert E., and J. M. Thayer, to Well Surveys, Inc. Well logging by selective detection of neutrons by resonant capture. 3,019,337, 1–30–62, Cl. 250—83.1.

Federal Paper Board Co., Inc.: *See*—
Arneson, Edwin L. 3,018,942.

Fehlmann, Hans B. Elevating plant. 3,018,850, 1–30–62, Cl. 187—17.

Feinstein, Jack, to United States of America, Navy. Phonograph test method. 3,019,024, 1–30–62, Cl. 274—46.

Fekete, Frank, to Union Carbide Corp. Process for making phosphorus-containing organosilicon compounds. 3,019,248, 1–30–62, Cl. 260—448.8.

Ferdinand Lentjes Kesselschmiede u. Maschinenbau: *See*—
Prang, Peter, and Textor. 3,019,005.

Ferguson, Joe S., to Union Carbide Corp. Spiral roll of perforated thermoplastic multiple tubing and method and apparatus for producing same. 3,018,882, 1–30–62, Cl. 206—56.

Fernberg, Eric B., to F.T. Products Ltd. Fastener. 3,019,040, 1–30–62, Cl. 287—53.

Ferro Corp.: *See*—
Buckley, Robert, and Zaremsky. 3,019,205.

Fibreboard Paper Products Corp.: *See*—
Wagaman, Merle L. 3,018,941.

Filak, Carl M.: *See*—
Murphy, Alfred M., Filak, and Wagner. 3,019,144.

Filstrup, Edward C., Jr., to Olin Mathieson Chemical Corp. Shear member for gas operated blasting cartridge. 3,018,731, 1–30–62, Cl. 102—25.

Finkelstein, Paul: *See*—
Brunner, Matthew J., Finkelstein, and Hibnick. 3,019,162.

Finlayson, Thomas R., to Gleason Reel Corp. Shelter frame. 3,018,858, 1–30–62, Cl. 189—2.

Finneran, George D.: *See*—
McBride, Richard F. 3,019,034.

Firestone Tire & Rubber Co., The: *See*—
Albert, Harry E. 3,019,211.

Firestone Tire & Rubber Co., The: *See*—
Ambelang, Joseph C. 3,019,262.
Brey, Wilhelm. 3,019,016.
Bruber, Norman T. 3,019,149.
Crane, Grant. 3,019,207.
Hausch, Walter R. 3,019,148.
Jefferys, Alexander G. 3,018,518.
Koch, Robert C., and Whipple. 3,018,813.
Noall, John, and Putt. 3,019,153.
Noall, Michael W., Jr. 3,018,822.
Reid, Robert J., and Best. 3,019,208.
Reid, Robert J., and Conard. 3,019,209.
Sherrill, Price E., and Moss. 3,018,605.
Stevens, Horace D. 3,018,820.
Willis, James M. 3,018,821.

Firma Fr. Hesser Maschinenfabrik-Aktiengesellschaft: *See*—
Bauder, Ulrich. 3,018,702.

Firma Metabowerk Closs, Rauch & Schnizler K.G.: *See*—
Wrobbel, Werner. 3,018,591.

Fischer, Harry C., to Thermo-Craft Corp. Thermoelectric generator and method of making same. 3,019,278, 1–30–62, Cl. 136—4.

Fischer, Josef: *See*—
Geyer, Hans, and Fischer. 3,019,375.

Fleischer, Robert: *See*—
Pedersen, Norman E., and Fleischer. 3,019,430.

Fletcher, H. E., Co.: *See*—
Vasselin, John F. 3,019,004.

Foil Process Corp.: *See*—
Barnes, James F. 3,018,939.

Folkenroth, Earl E.: *See*—
Crowley, Daniel J., Folkenroth, and Packard. 3,018,679.

Fonken, Gunther S., to The Upjohn Co. 11β-hydroxy-5β-pregnane-3,20-dione bisoximes and the 11a-lower-alkyl derivatives thereof. 3,019,243, 1–30–62, Cl. 260—397.5.

Forte, Francis C. Hand wrestling apparatus. 3,019,019, 1–30–62, Cl. 272—81.

Foss, Frederic A., to International Business Machines Corp. Navigation computer. 3,018,964, 1–30–62, Cl. 235—186.

Foster, Leslie W.: *See*—
Snyder, Merton F., and Foster. 3,018,754.

Fouilland, Claude, and J. Montagnon, to Procedes Industriels et Charbons Actifs (P.I.C.A.). Means and arrangements for distributing sterilized water and the like liquids of a well defined grade. 3,019,185, 1–30–62, Cl. 210—205.

Fouse, Frederick Z., to Anchor Hocking Glass Corp. Gauging machine. 3,018,889, 1–30–62, Cl. 209—88.

Frampton, John A. Box construction for pop-out surprise toys. 3,018,937, 1–30–62, Cl. 229—37.

Francis, Joseph E., to Holley Carburetor Co. Four-barrel governor carburetor. 3,018,766, 1–30–62, Cl. 123—119.

Francis, William C., to Spencer Chemical Co. Process for amination of alpha-halo-epsilon-caprolactams. 3,019,218, 1–30–62, Cl. 260—239.3.

Franck, Glenn H., to ACF Industries, Inc. Radio static generator. 3,018,567, 1–30–62, Cl. 35—12.

Franklin, Godfrey. Boat trailer. 3,018,906, 1–30–62, Cl. 214—505.

Franklin, Truman L., and J. R. Williams, to United States of America, Air Force. Mechanical integrator. 3,018,553, 1–30–62, Cl. 33—1.

Frazelle, Jay B., ½ each to J. G. Molek and R. F. Long. Portable bracket pole. 3,018,898, 1–30–62, Cl. 211—86.

French, R. T., Co., The: *See*—
Westgate, Oscar L. 3,018,931.

Frey, Otto: *See*—
Steinhofer, Adolf, Bartholome, Frey, and Nonnemacher. 3,019,272.

Fried, Benjamin. Yarn storage and feeding system for circular knitting machines. 3,018,645, 1–30–62, Cl. 66—125.

Fritz, Carroll S., to The Dentists' Supply Co. of New York. Artificial tooth holder. 3,018,884, 1–30–62, Cl. 206—83.

Fujihara, Yoshiki to Servicised Products Corp. Joint sealing device. 3,018,703, 1–30–62, Cl. 94—18.

Fuller Co.: *See*—
Kramlich, Richard G. 3,019,057.

Fuller, George A., Jr.: *See*—
Phillips, Harry, Maciejowski, Shafer, Tucker, and Fuller. 3,018,504.

Furby, Neal W., and C. D. Newnan, Jr., to California Research Corp. Stabilized hydraulic fluid composition. 3,019,191, 1–30–62, Cl. 252—78.

Furlong, Donn B.: *See*—
Adams, William J., Jr., and Furlong. 3,018,785.

Fürst Stefan: *See*—
Reiners, Walter, and Fürst. 3,018,888.

Gabler, Rudolf, to Inventa A.G. für Forschung und Patentverwestung. Process for increasing the frictional resistance between threads, yarns and the like of synthetic linear polyamides and product made thereby. 3,019,132, 1–30–62, Cl. 117—138.8.

Gall, Theodore L. Trailer structure. 3,018,907, 1–30–62, Cl. 214—506.

Gallery Chemical Co.: *See*—
Gavlin, Gilbert, Klein, and Maguire. 3,019,251.

Garai, Frank, to The Baker Castor Oil Co. Method of treating mycotic infections. 3,019,161, 1–30–62, Cl. 167—58

Gardner Machine Co.: *See*—
Price, Ralph E. 3,018,589.

Garlock Inc.: *See*—
Schwing, Roger. 3,019,026.

Garrett Corp., The: *See*—
Heyniger, William L. 3,018,807.
Klines, Robert. 3,018,790.

Garver, Robert V., to United States of America, Army. Reversed semiconductor microwave switch. 3,019,400, 1–30–62, Cl. 333—73.

Gates Cyclo International, Inc.: *See*—
Helbig, Jim D. 3,018,759.

Gates, Harris G., to Gates & Sons, Inc. Combined tie lock and reinforcing timber clamp. 3,018,538, 1–30–62, Cl. 25—131.

Gates & Sons, Inc.: *See*—
Gates, Harris G. 3,018,538.

Gauthey, Albert, to IBM France Co. Pulse separating counter input device. 3,019,350, 1–30–62, Cl. 307—88.5.

Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Karl F. 3,018,708.
Rentschler, Waldemar T. 3,018,706.

Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Waldemar T. 3,018,710.

Gauvreau, Alphonse P., to The Clark Controller Co. Time delay relay. 3,019,317, 1–30–62, Cl. 200—108.

Gavlin, Gilbert, M. J. Klein, and R. G. Maguire, to Gallery Chemical Co. Production and use of sodium dimethoxyboryl. 3,019,251, 1–30–62, Cl. 260—462.

Gebruder Weiger: *See*—
Wensel, Alfred. 3,018,718.

Gee, Eric, H. Gudgeon, and K. Stephenson, to Imperial Chemical Industries Ltd. Preparation of cellular polyester organic polyisocyanate reaction product using amide catalyst. 3,019,200, 1–30–62, Cl. 260—2.5.

Geist, Harold E. Illuminated table. 3,019,331, 1–30–62, Cl. 240—2.

General Aniline & Film Corp.: *See*—
Buc, Saul R., and Randall. 3,019,266.
Buc, Saul R., and Randall. 3,019,268.
Takats, Zoltan, and Jacobson. 3,018,709.

General Corrugated Machinery Co.: *See*—
Keely, Clifford D. 3,018,701.

General Dynamics Corp.: *See*—
McReynolds, Andrew W., and Dijkstra. 3,019,176.

General Electric Co.: *See*—
Chestek, James H. 3,018,626.
Doucette, Lionel J. 3,019,116.
Houser, Philip H. 3,019,380.
Keeling, Kermit B., Sr. 3,018,508.
Morey, Everett D. 3,018,560.
Morgan, Raymond E. 3,019,355.
Pan, Paul M. 3,019,438.
Sherman, George R. 3,018,509.
Stanger, Walter E. 3,019,036.
Wellman, Carl E., Jr. 3,019,398.
Zelina, William B. 3,018,966.

General Electric Co. Ltd., The: *See*—
Bury, Harry, Claydon, and Smith. 3,018,631.
Stenning, Luis C. 3,019,436.

General Mills, Inc.: *See*—
Andersen, Donald L., and Thielen. 3,019,196.
Moen, Rolf. 3,018,662.

General Motors Corp.: *See*—
Barbulesco, Daniel J., McCormick, and Spires. 3,018,649.
Mann, Leonard J., and O'Connell. 3,018,637.
Schmidt, Lyle L. V. 3,018,650.
Thomas, Thomas G., Taylor, and Embree. 3,018,853.
Waag, Harry O., and Davis. 3,018,636.
Whistler, Charles C., Jr. 3,018,544.

General Precision, Inc.: *See*—
Bose, Norman J., and Kroninger. 3,019,072.
Reinholts, William H. 3,019,420.

Gentry, Leonard E. Dual purpose shower head assembly. 3,018,909, 1–30–62, Cl. 239—312.

George, Howard A. Means for producing special cams. 3,018,695, 1–30–62, Cl. 90—15.

Georgian, Vlasios, J. F. Kerwin, and M. E. Wolff, to Smith Kline & French Laboratories. 12β,13β-methano-18-norsteroids. 3,019,235, 1–30–62, Cl. 260—397.3.

Georgian, Vlasios, and J. F. Kerwin, to Smith Kline & French Laboratories. 20-amino-12,18-cyclopregnane derivatives. 3,019,236, 1–30–62, Cl. 260—397.3.

Gerlich, Stephen. Muffler. 3,018,841, 1–30–62, Cl. 181—56.

Gewiss, Lucien V. Fluid propelling and filtering apparatus. 3,018,896, 1–30–62, Cl. 210—403.

Geyer, Hans, and J. Fischer, to Siemens & Halske Aktiengesellschaft, Berlin & Munich. Heat-resistant coil former, especially for electrical relays. 3,019,375, 1–30–62, Cl. 317—158.

Gholson, Roy L., to Columbian Carbon Co. Carbon black beading process. 3,019,093, 1–30–62, Cl. 23—314.

Gibson, James L.: *See*—
Dvorak, William W., and Gibson. 3,018,596.

Gies, Paul E., and R. D. Rumsey, to Houdaille Industries, Inc. Flutter damper. 3,018,854, 1–30–62, Cl. 188—93.

Gilbert, Henry M., Jr. Wheel chock holder. 3,018,996, 1–30–62, Cl. 248—310.

Gilbert, Jack, to United Aircraft Corp. Digital-to-analogue converter. 3,019,426, 1–30–62, Cl. 340—347.

Gilchrist, Reginald S.: *See*—
Mattingly, Denis A. E., and Gilchrist. 3,018,974.

Gill, Joseph, and F. W. Sippach, to Hagan Chemicals & Controls, Inc. Relay device for indicating if input digit lies within a predetermined range. 3,019,416, 1–30–62, Cl. 340—149.

Gillen, William H.: *See*—
Grumbles, Samuel C., Risch, and Gillen. 3,018,911.

Gilles, Richard C., to The Polymer Corp. Polyamide oxidation inhibiting processes and resulting products. 3,019,210, 1–30–62, Cl. 260—45.7.

Gillette Co., The: *See*—
Brunner, Matthew J., Finkelstein, and Hibnick. 3,019,162.

Gilmore, Forrest E., to Phillips Petroleum Co. Method and apparatus for vaporizing liquefied gases and obtaining power. 3,018,634, 1–30–62, Cl. 62—52.

Gilstrap, Aretta E. Seed dispenser. 3,018,926, 1–30–62, Cl. 222—193.

Girden, Barney B. Device for catching fish and other submarine life. 3,018,579, 1–30–62, Cl. 43—4.

Gist, Fred M. Well bore scratcher. 3,018,831, 1–30–62, Cl. 166—173.

Givaudan Corp., The: *See*—
Eschinazi, Habib E. 3,019,263.
Eschinazi, Habib E. 3,019,264.
Eschinazi, Habib E. 3,019,265.

Glaser, Donald A.: *See*—
Didde, Carl W., and Glaser. 3,019,013.

Gleason Reel Corp.: *See*—
Finlayson, Thomas R. 3,018,858.

Glezen, Lewis E., to Nestaway Inc. Spring wire fastening device. 3,018,993, 1–30–62, Cl. 248—220.5.

Glitsch, Fritz W., & Sons Inc.: *See*—
Glitsch, Hans C. 3,019,003.

Glitsch, Hans C., to Fritz W. Glitsch & Sons Inc. Closures for fluid contact apparatus. 3,019,003, 1–30–62, Cl. 261—114.

Glover, Denys T., and D. C. L. Lovell, to Normalair Ltd. Oxygen breathing systems. 3,019,423, 1–30–62, Cl. 340—279.

Goerke, James R., to The Bendix Corp. Servo control apparatus. 3,018,763, 1–30–62, Cl. 121—41.

Goertz, Raymond C., and J. F. Lindberg, to United States of America, Atomic Energy Commission. Vehicle for slave robot. 3,018,980, 1–30–62, Cl. 242—86.5.

Goldwater, Robert, and F. B. Calhoun, to Safeway Stores, Inc. Shiftable table assembly with movable contact arm assembly. 3,019,424, 1–30–62, Cl. 340—282.

Gomella, Cyril, to Societe d'Etudes pour le Traitement et l'Utilisation des Eaux-S.E.T.U.D.E. Method of softening water by ion exchange. 3,019,183, 1–30–62, Cl. 210—30.

Gomersall, John R.: *See*—
Ogle, James A., Jr., and Gomersall. 3,018,671.

Gonzalez, Don J., to American Air Filter Co., Inc. Electrostatic precipitator. 3,018,844, 1–30–62, Cl. 183—7.

Good, Carl D., to Olin Mathieson Chemical Corp. Method for the production of diborane. 3,019,085, 1–30–62, Cl. 23—204.

Good, Fred C., to Fred C. Good & Sons, Inc. Windlass. 3,018,934, 1–30–62, Cl. 226—171.

Good, Fred C., & Sons, Inc.: *See*—
Good, Fred C. 3,018,934.

Goodman, Joseph J., and M. Matrishin, to American Cyanamid Co. Production of 7-chloro-6-demethyltetracycline. 3,019,172, 1–30–62, Cl. 195—80.

Goodrich, B. F., Co., The: *See*—
Hasselquist, Victor H. 3,019,018.

Goodwin, Edwin C., Jr., to Allis-Chalmers Mfg. Co. Integrated racking and contact controlling mechanism for circuit breakers. 3,019,309, 1–30–62, Cl. 200—50.

Goodyear Aircraft Corp.: *See*—
Bushnell, Robert H., and Chimera. 3,019,434.

Gordon, Carroll G. Electro-hydraulic servo valves. 3,018,795, 1–30–62, Cl. 137—623.

Gordon, Emanuel: *See*—
Lapat, Philip E., Gordon, and Holden. 3,019,139.

Gordon, Saul, and C. Campbell, to United States of America, Army. Automatic electronic buret. 3,018,654, 1–30–62, Cl. 73—23.

Gormel, Clarence J. Carrying case for portable dictating machines. 3,019,300, 1–30–62, Cl. 179—100.1.

Gossett, James D. Stabilizing bracket for outboard motors. 3,018,989, 1–30–62, Cl. 248—4.

Graneau, Peter, and Z. Bonikowski, to British Insulated Callender's Cables Ltd. Electrical analogue computing apparatus. 3,018,978, 1–30–62, Cl. 242—75.51.

Granier, Hector J., to Geo. J. Meyer Mfg. Co. Filler valves for pulp drinks or the like. 3,018,804, 1–30–62, Cl. 141—286.

Grantham, Raymond J., to Callery Chemical Co. Gas evolving protective coating. 3,019,114, 1–30–62, Cl. 106—13.

Graulich, Wilhelm: *See*—
Heinz, Anton R., and Graulich. 3,019,192.

Green, Milton: *See*—
Blout, Elkan R., Green, Rogers, Simon, and Woodward. 3,019,107.

Green, Milton, and H. P. Husek, to Polaroid Corp. O-acyl derivatives of amino-araikylene-substituted hydroquinones and catechols. 3,019,254, 1–30–62, Cl. 260—479.

Greenberger, George M. Tightener for conveyer belts. 3,018,875, 1–30–62, Cl. 198—208.

Greenblatt, Sidney R., and R. A. Guthman, Jr., to Montag, Inc. Loose-leaf binder. 3,018,780, 1–30–62, Cl. 129—23.

Greenlee Bros. & Co.: *See*—
Swanson, Edwin C. 3,018,818.

Greenman, Edwin G.: *See*—
Hechtman, John F., and Greenman. 3,019,134.

Grenchus, Edward J.: *See*—
Saltz, Fred, and Grenchus. 3,018,722.

Gries, Otto: *See*—
Morin, Louis H., and Gries. 3,018,519.

Griffin, Carl T. and R. A. Apparatus for separating grain from weeds (weed deflector). 3,018,601, 1–30–62, Cl. 56—119.

Griffin, Ross A.: *See*—
Griffin, Carl T. and R. A. 3,018,601.

Griffin, Theodore R., to United-Carr Fastener Corp. Closure member. 3,018,535, 1–30–62, Cl. 24—213.

Griffith Laboratories, Inc., The: *See*—
Schnell, Carl. 3,019,067.

Grobecker, Hugo H., to Cleaver-Brooks Co. Tube beading apparatus. 3,018,819, 1–30–62, Cl. 153—81.

Groo, Arthur L., to Welmaid Products Inc. Clothes drying rack. 3,018,899, 1–30–62, Cl. 211—123.

Gros, Charles, to Etablissements Neyrpic. Turbine unit for turbodrills and turbocorers. 3,018,997, 1–30–62, Cl. 253—3.

Gruber, Helmut, and H. Scheidig, to W. C. Heraeus, G.m.b.H. Water-cooled crucible for vacuum arc furnaces. 3,019,274, 1–30–62, Cl. 13—31.

Gruber, Warren M., to Tinius Olsen Testing Machine Co. Apparatus for controlling rate of change of condition. 3,018,658, 1–30–62, Cl. 73—90.

Grumbles, Samuel C., W. E. Risch, and W. H. Gillen, to Anchor Hocking Glass Corp. Closure cap and method of making same. 3,018,911, 1–30–62, Cl. 215—40.

Gudgeon, Herbert: *See*—
Gee, Eric, Gudgeon, and tSephenson. 3,019,200.

Guida, Frank C. Electrode for inert gas shielded electric welding and cutting. 3,019,330, 1–30–62, Cl. 219—145.

Guido, George A. Life saving apparatus for boats. 3,018,494, 1–30–62, Cl. 9—14.

Gulas, John, Sr. Door holder. 3,019,044, 1–30–62, Cl. 292—275.

Gulf Research & Development Co.: *See*—
Henderson, James H., and Wyllie. 3,018,827.

Gündel, Wolfgang: *See*—
Boller, Carl, Gündel, and Kirstahler. 3,019,123.

Gunderloy, Frank C., Jr., to Esso Research and Engineering Co. Synthesis of partial esters of phosphorus acids and salts thereof. 3,019,249, 1–30–62, Cl. 260—461.

Guthman, Richard A., Jr.: *See*—
Greenblatt, Sidney R., and Guthman. 3,018,780.

Gwynn, Marion H. Hydrofining and catalyst regeneration process. 3,019,181, 1–30–62, Cl. 208—217.

H-B Mfg. Co.: *See*—
Baird, William G., and Hrach. 3,018,505.

HRB-Singer, Inc.: *See*—
Krueger, Donald. 3,018,566.

Haas, Howard C., and N. W. Schuler, to Polaroid Corp. Plastic coating processes. 3,019,131, 1–30–62, Cl. 117—119.6.

Hacklander, Hans, to The Singer Mfg. Co. Ruffling mechanisms for sewing machines. 3,018,744, 1–30–62, Cl. 112—132.

Haefner, Albert J., and F. Conrad, to Ethyl Corp. Manufacture of 1,1,1-trichloroethane. 3,019,175, 1–30–62, Cl. 204—163.

Hagan Chemicals & Controls, Inc.: *See*—
Gill Joseph, and Sippach. 3,019,416.

Haigh, Henry W., and W. M. Morgan, to American-Marietta Co. Production of bonded cellulose units. 3,019,146, 1–30–62, Cl. 154—45.9.

Haler, David, to West Pharmaceutical Co. Ltd. Therapeutic substances and compositions. 3,019,222, 1–30–62, Cl. 260—242.

Haley, James C., to United States of America, Air Force. Dynamic analyzer for advanced reconnaissance systems. 3,018,653, 1–30–62, Cl. 73—1.

Hall, Donald A. Velocity measuring device. 3,019,073, 1–30–62, Cl. 346—38.

Halliwell, Ronald H., to E. I. du Pont de Nemours and Co. Method for charging fluorocarbon gases. 3,018,633, 1–30–62, Cl. 62—48.

Hammond, Joseph W., to Seismograph Service Corp. Method of seismic prospecting. 3,018,838, 1–30–62, Cl. 181—.5.

Hamprecht, Guenther, H. Bellmuth, and F. Lorenz, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Delivery apparatus for lumpy goods. 3,018,930, 1–30–62, Cl. 222—410.

Han, Shu T., and J. P. Brezinski, to Beloit Iron Works. Drainage control mechanism. 3,018,825, 1–30–62, Cl. 162—319.

Hand, Francis R.: *See*—
Anderson John L., and Hand. 3,019,354.

Hankin, Ralph L., to Abbey Etna Machine Co. Mechanism for end cropping and test sampling welded seam tubing. 3,018,678, 1–30–62, Cl. 82—101.

Haniet, Jacques M. N., to Societe d'Electonique et d'Autonmatisme. Method of manufacturing electrical resistances and articles resulting therefrom. 3,019,137, 1–30–62, Cl. 117—212.

Hannan, Patrick J., and J. M. Leonard. Device for detecting small changes in level. 3,018,558, 1–30–62, Cl. 33—209.

Hansen Harold V.: *See*—
Oehler, William P., and Hansen. 3,019,032.

Hanson, Lester: *See*—
Brown, James D., and Hanson. 3,019,378.

Hanssens, Gustave J. J., to Plastidry Societe Anonyme. Hose pipes. 3,018,800, 1–30–62, Cl. 138—125.

Harduk, John, and R. Lessig, to Burroughs Corp. Intermittent motion apparatus. 3,019,316, 1–30–62, Cl. 200—105.

Harlow, Kenneth B. Combustion systems for internal combustion engines. 3,019,276, 1–30–62, Cl. 123—148.

Harmon, Carlyle, to Chicopee Mfg. Corp. Apparatus for making strands, yarns, and the like. 3,018,521, 1–30–62, Cl. 19—150.

Harnist, Lucien. Hemorrhoidal composition. 3,019,163. 1–30–62, Cl. 167—63.

Harnois, Nelson C., to Lockheed Aircraft Corp. Search radar systems. 3,019,429. 1–30–62. Cl. 343—11.

Harris-Intertype Corp.: *See*—
Adams, Dolor N. 3,019,105.

Harris, Sidney E., and W. G. Rausch, to Hoffmann-La Roche Inc. Package filling apparatus. 3,018,595. 1–30–62, Cl. 53—78.

Harris, Wayne W., to International Business Machines Corp. Multi-channel tape detector. 3,018,951. 1–30–62. Cl. 235—61.11.

Harruff, Ray W., and W. S. Touchman, to A. Kimball Co. Portable record sensing apparatus. 3,018,947. 1–30–62, Cl. 234—30.

Hart, William D., to The Regina Corp. Combined suction operated floor washer and wax applier. 3,018,504. 1–30–62, Cl. 15—320.

Hartwell, Ralf L., to Technical Wire Products, Inc. Electrical shielding and sealing gasket. 3,019,281. 1–30–62. Cl. 174—35.

Hartzell, Carol: *See*—
Volkmann, Willy B., and Hartzell. 3,018,799.

Hartzell, Earl F.: *See*—
Volkmann, Willy B., and Hartzell. 3,018,799.

Haslett, Roy W. G., P. R. Hopkin, and N. H. Benning, to Kelvin & Hughes Ltd. Echo detection with delayed read out. 3,019,411. 1–30–62, Cl. 340—1.

Hasselman, Herbert P., to Sylvania Electric Products Inc. Double loose turn picker. 3,018,803. 1–30–62, Cl. 140—71.5.

Hasselquist, Victor H., to The B. F. Goodrich Co. Transfer mechanism for bias cut fabric pieces. 3,019,018. 1–30–62, Cl. 271—74.

Hauenstein, Gunther: *See*—
Hoppe, Alfred, Langner, Westerhoff, Wolke, and Hauenstein. 3,019,179.

Hauptschein, Murray, to Pennsalt Chemicals Corp. Acetyl-4-trifluoromethylsalicyclic acid. 3,019,253. 1–30–62, Cl. 260—479.

Hauptschein, Murray, M. Braid, and F. E. Lawlor, to Pennsalt Chemicals Corp. Organic fluorine compounds. 3,019,258. 1–30–62, Cl. 260—543.

Hausch, Walter R., to The Firestone Tire & Rubber Co. Laminated article and method of making same. 3,019,148. 1–30–62, Cl. 154—48.

Havens, Byron L., to International Business Machines Corp. Electronic multiplier-divider. 3,018,957. 1–30–62, Cl. 235—159.

Hazo, Henry E., B. C. Barton, and I. J. Schaffner, to United States Rubber Co. Adhering vinylpyridine-butadiene rubbers to other rubbers. 3,018,812. 1–30–62, Cl. 152—330.

Haydock, Raymond, to R. Haydock, trustee. Caster insert socket. 3,018,506. 1–30–62, Cl. 16—20.

Haydock, Raymond, trustee: *See*—
Haydock, Raymond. 3,018,506.

Hayes, John D., to Bausch & Lomb Inc. Projection optical system. 3,018,688, 1–30–62, Cl. 88—57.

Haynes, Munro K., L. A. Russell, and H. K. Wild, to International Business Machines Corp. Electrical switching and control apparatus. 3,019,419. 1–30–62, Cl. 340—174.

Heacock, William J., Jr., to United States of America, Navy. Storage timer gating device. 3,019,392, 1–30–62, Cl. 328—119.

Hearn, Daniel P., to Well Surveys Inc. Electrical device for compensating bias shift of electron tubes. 3,019,395, 1–30–62, Cl. 328—258.

Heaslip, Donald B.: *See*—
Tepolt, Florian E., and Heaslip. 3,019,356.

Hechtman, John F., and E. G. Greenman, to Kimberly-Clark Corp. Cellulosic product. 3,019,134. 1–30–62, Cl. 117—155.

Heddendorf, George B., and H. A. Speh, to Burroughs Corp. Card file marking device. 3,018,887, 1–30–62, Cl. 209—73.

Hedstrom, Carl W., to Hedstrom Union Co. Convertible baby vehicles. 3,019,028. 1–30–62, Cl. 280—36.

Hedstrom Union Co.: *See*—
Hedstrom, Carl W. 3,019,028.

Hees, George W., to Sylvania Electric Products Inc. Ionization vacuum gauge. 3,019,360. 1–30–62, Cl. 313—7.

Hegeman, Andrew R., and C. H. Ringe, to R. Hoe & Co., Inc. Inking mechanism for printing machines. 3,018,727. 1–30–62, Cl. 101—366.

Heine, Wolfgang F., and K. Meri, to Mohawk Business Machines Corp. Automatic volume control transistor circuit arrangement. 3,019,396, 1–30–62, Cl. 330—28.

Heigl, Cyrus H.: *See*—
McCleary, Eugene J., Jr., and Heigl. 3,018,715.

Heinz, Anton R., and W. Graulich, to Farbenfabriken Bayer Aktiengesellschaft. Copolymers of 2-chlorobutadi-1,3-ene and γ-chloracrylonitrile. 3,019,192. 1–30–62, Cl. 260—85.5.

Heinz, H. J., Co.: *See*—
Anderson, James B. 3,018,717.

Helbig, Jim D., to Gates Cyclo International, Inc. Poultry housing. 3,018,759, 1–30–62, Cl. 119—21.

Heil-Coil Corp.: *See*—
Brancato, Leo J. 3,018,684.

Heller, László, and G. Faragó, to Licencia Találmanyokat Ertekesitoe Vallalat. Apparatus for utilizing the heat which is obtained with the production of cold in refrigerating plants. 3,018,640, 1–30–62, Cl. 62—335.

Helly-Hansen, Leiv. Apparatus for the production of flexible tubes or hoses having helically extending reinforcing element. 3,019,154, 1–30–62, Cl. 156—429.

Hemwall, John B., to The Dow Chemical Co. Method of enhancing plant growth employing aurintricarboxylic acid and salts thereof. 3,019,098. 1–30–62, Cl. 71—1.

Henderson, James H., and M. R. J. Wyllie, to Gulf Research & Development Co. Single well vertical drive in-situ combustion process. 3,018,827. 1–30–62, Cl. 166—39.

Henry, James J., to Conch International Methane Ltd. Tank construction. 3,018,916, 1–30–62, Cl. 220—15.

Henry, Robert L., to The Cincinnati Milling Machine Co. Universal line tracer. 3,019,343, 1–30–62, Cl. 250—202.

Heraeus, W. C., G.m.b.H.: *See*—
Gruber, Helmut, and Scheidig. 3,019,274.
Lorenz, Albert. 3,019,275.

Hermanson, Edward H. Article dispensing device. 3,018,921, 1–30–62, Cl. 221—281.

Herrmann, Ned C.: *See*—
Moffitt, Thomas L., and Herrmann. 3,019,311.

Hershberger, Roman E. Car top sleeper. 3,018,782, 1–30–62, Cl. 135—1.

Hervey, Laurence R. B.: *See*—
Doggett, Roger H. Hervey, and Lanyon. 3,019,138.

Hetherington & Berner Inc.: *See*—
Clay, Arthur T. 3,018,736.

Heuer, Charles H., to Zenith Radio Corp., Color television. 3,019,401, 1–30–61, Cl. 333—77.

Heyden, Rudi, and J. Plapper, to Böhme Fettchemie G.m.b.H. Process for waterproofing leather. 3,019,133, 1–30–62, Cl. 117—142.

Heyniger, William L., to The Garrett Corp. Inflatable escape chute. 3,018,867, 1–30–62, Cl. 193—25.

Hibnick, Herbert E.: *See*—
Brunner, Matthew J., Finkelstein, and Hibnick. 3,019,162.

High Standard Mfg. Corp., The: *See*—
La Violette, Paul A., Jr. 3,018,577.

Hiliya, Kenji, and K. Okawa, to Nikon Spindle Seizo Kabuskiki Kaisha. Frame cleaning device utilizing exhaust air from a suction cleaner in spinning and like operations. 3,018,503, 1–30–62, Cl. 15—312.

Hill, Arthur D. Mercury switch control for electrically governed rudder. 3,018,750, 1–30–62, Cl. 114—144.

Hill, Edward T. Pistol to be worn on the wrist. 3,018,578, 1–30–62, Cl. 42—13.

Hill, Robert O.: *See*—
Potter, Marvin M., and Hill. 3,019,015.

Hinderling, Rudolf, A. H. Lutz, and O. Schnider, to Hoffmann-La Roche Inc. Method for the preparation of 2,4-dioxotetrahydropyridines. 3,019,230. 1–30–62, Cl. 260—297.

Hinds, Ronald, to British Insulated Callender's Cables Ltd. Manufacture of transposed multiple strip conductor. 3,018,802, 1–30–62, Cl. 140—71.

Hitchings, George H., and S. Bieber, to Burroughs Wellcome & Co. (U.S.A.) Inc. Urethan and 6 azauracil in cancer therapy. 3,019,164, 1–30–62, Cl. 167—65.

Hitchings, George H., G. B. Elion, and L. E. Mackay, to Burroughs Wellcome & Co. (U.S.A.) Inc. 6-thiocyanopurines and method of their preparation. 3,019,224, 1–30–62, Cl. 260—252.

Hitt, Otis D., E. F. Knapp, L. L. Johnson, and R. A. Rosenblum, to The Aro Equipment Corp. Transmission. 3,018,673, 1–30–62, Cl. 74—785.

Hoadley, George B., to United States of America, Army. Micro-wave antenna. 3,019,437, 1–30–62, Cl. 343—725.

Hockery, John C.: *See*—
Rogers, Ezra S., and Scott. 3,018,548.

Hodgkiss, James W.: *See*—
Pearce, Frederick M., and Hodgkiss. 3,019,372.

Hoe, R., & Co., Inc.: *See*—
Hegeman, Andrew R., and Ringe. 3,018,727.

Hoff, Jean C., to Jenoff Inc. Level indicator for grain bins and the like. 3,019,310, 1–30–62, Cl. 200—61.21.

Hoffman, Harold J., to Shar Dispersion Equipment Co., Inc. Rotational speed control for a driven shaft. 3,018,666, 1–30–62, Cl. 74—217.

Hoffman, Henry A., Jr. and L. A. Sherbeck, to E. I. du Pont de Nemours and Co. Cellulose acetate spinning solutions. 3,019,119, 1–30–62, Cl. 106—169.

Hoffmann-La Roche Inc.: *See*—
Harris, Sidney E., and Rausch. 3,018,595.
Hinderling, Rudolf, Lutz, and Schnider. 3,019,230.
Parsons, Anthony M. 3,019,229.

Hoge, Robert H., to The Clark Controller Co. Valves and safety controls therefor. 3,018,794, 1–30–62, Cl. 137—620.

Hohl, John, to Owens-Illinois Glass Co. Container closing apparatus. 3,018,597, 1–30–62, Cl. 53—314.

Holden, Robert B.: *See*—
Lapat, Philip E., Gordon, and Holden. 3,019,139.

Holley Carburetor Co.: *See*—
Francis, Joseph E. 3,018,766.

Holzinger, Rudolph J., to Socony Mobil Oil Co., Inc. Fire-resistant hydraulic fluids. 3,019,190, 1–30–62, Cl. 252—75.

Hopfer, Samuel, to Polytechnic Research & Development Co., Inc. T-junction standing wave indicator. 3,019,386, 1–30–62, Cl. 324—58.

Hopkin, Peter R.: *See*—
Haslett, Roy W., Hopkin, and Benning. 3,019,411.

Hoppe, Alfred, H. Langner, H. Westerhoff, H. Wolke, and G. Hauenstein, to Edeleanu Gesellschaft m.b.H. Process of separating wax from wax and oil-containing materials. 3,019,179, 1–30–62, Cl. 208—33.

Hornbaker, Edwin D., to Ethyl Corp. Stabilization of vinyl chloride. 3,019,270, 1–30–62, Cl. 260—652.5.

Hornbostel, Lloyd, to Beloit Iron Works. Fluid cushioned coating method and apparatus. 3,019,130, 1–30–62, Cl. 117—111.

Horton, Robert A., to Precision Metalsmiths, Inc. Method of form removal from precision casting shells. 3,018,528, 1–30–62, Cl. 22—195.

Hosbein, Hugh W., to Symington-Wayne Corp. Loading dock. 3,018,495, 1–30–62, Cl. 14—71.

Hosbein, Hugh W., to Symington-Wayne Corp. Mobile ramp. 3,018,496, 1–30–62, Cl. 14—71.

Hosier, William A., and T. A. Puorro, to Research Corp. Computing apparatus. 3,018,956, 1–30–62, Cl. 235—157.

Houdaille Industries, Inc.: *See*—
Glea, Paul E., and Rumsey. 3,018,854.
Mutolo, Peter J., and Boehm. 3,018,677.

Houdry Process Corp.: *See*—
Erner, William E. 3,019,227.

Houghton, William D., to Radio Corp. of America. Tape recording system. 3,019,291, 1–30–62, Cl. 178—6.6.

Houser, Philip H., to General Electric Co. Electro-pneumatic sequence control system. 3,019,380, 1–30–62, Cl. 318—486.

Howard, Carl G. Rectifier. 3,019,381, 1–30–62, Cl. 321—21.

Hrach, William: *See*—
Baird, William G., and Hrach. 3,018,505.

Hubbard, Thomas P., Jr.: *See*—
Youmans, Arthur H., and Hubbard. 3,019,340.

Huber, Rudolf: *See*—
Rutz, Hans, and Huber. 3,018,603.

Hubinger Co., The: *See*—
Bauer, Jordan V., and Elizer. 3,019,120.

Hudson, H. D., Mfg. Co.: *See*—
Pinke, August H., and Oys. 3,018,927.

Huelster, Otto J., to Scovill Mfg. Co. Lock slider for zipper fastener. 3,018,534, 1–30–62, Cl. 24—205.14.

Huet, Andre. Marine boiler exhibiting small variations of level. 3,018,764, 1–30–62, Cl. 122—34.

Huet, Edward C., to L. A. Darling Co. Adjustable shelf support. 3,018,900, 1–30–62, Cl. 211—148.

Hufford Corp., The: *See*—
Wheeler, Walter G., and Wendell. 3,018,817.

Humble, John A., to The Bendix Corp. Accelerometers. 3,018,664, 1–30–62, Cl. 73—503.

Hunt, Frederick C., and E. P. Klein, to Ling-Temco Electronics, Inc. Armature assembly and method of making the same. 3,018,541, 1–30–62, Cl. 29—155.56.

Huot, Henry E., to Huot Mfg. Co. Drill holding case. 3,018,876, 1–30–62, Cl. 206—17.

Huot Mfg. Co.: *See*—
Huot, Henry E. 3,018,876.

Husek, Helen P.: *See*—
Green, Milton, and Husek. 3,019,254.

Husted, Norris C. Mid-span service take off. 3,019,282, 1–30–62, Cl. 174—43.

Hutchinson, Myles, ½ to Clarke, Chapman & Co. Ltd. Hauling and lifting apparatus. 3,018,999, 1–30–62, Cl. 254—184.

Hydril Co.: *See*—
Knox, Granville S. 3,018,791.

Hydrocarbon Research, Inc.: *See*—
Keith, Percival C. 3,018,632.

Hygrade Rainwear Mfg. Corp.: *See*—
Bukspan, Joseph. 3,018,486.

IBM France Co.: *See*—
Gauthey, Albert. 3,019,350.

Illinois Condenser Co.: *See*—
Kurland, Jerome J. and Joseph J. 3,019,376.

Illinois Railway Equipment Co.: *See*—
Sweger, Theodore J. 3,019,064.

Imhoff, Albert W., to Schantz Organ Co. Tremolo for organ. 3,018,682, 1–30–62, Cl. 84—348.

Immel, Ralph C. Mud flaps. 3,019,631, 1–30–62, Cl. 280—154.5.

Imparato, Jack G. Rod adjustment clamps. 3,018,537, 1–30–62, Cl. 24—263.

Imperial Chemical Industries Ltd.: *See*—
Bradley, Donald G. 3,018,973.
Chuffart, Robert C. 3,018,890.
Clough, Harry. 3,019,269.
Gee, Eric, Gudgeon, and Stephenson. 3,019,200.
Kilby, William, and Wilte. 3,019,140.
Pajaczkowski, Andrzej. 3,019,214.
Vincent, George C. 3,019,080.

Industrial Refrigeration Co., Inc.: *See*—
Wells, Earl P. 3,018,561.

Innerfield, Irving. Method of administering streptokinase systematically. 3,019,167, 1–30–62, Cl. 167—73.

Insolio, Thomas A., P. J. Magrini, Sr., R. Carini, and Z. C. Clements, to American Window Glass Co. Glass cutter trolley unit. 3,018,587, 1–30–62, Cl. 49—48.

International Business Machines Corp.: *See*—
Anderson, John L., and Hand. 3,019,354.
Eggenberger, John S., Lloyd, and Smith. 3,019,125.
Foss, Frederic A. 3,018,964.
Harris, Wayne W. 3,018,951.
Havens, Byron L. 3,018,957.
Haynes, Munro K., Russell, and Wild. 3,019,419.
Mackay, James B. 3,019,353.
Pomerene, James H., and Slobodzinski. 3,019,351.
Saltz, Fred, and Grenchus. 3,018,722.
Sanborn, Jere L. 3,019,349.
Thomas, Walker H. 3,018,959.
Walker, Robert M., Anderson, and Rosenheim. 3,018,958.
Ward, Robert L. 3,018,961.

International Milling Co.: *See*—
Verschoyl, L. R. 3,018,950.

Inventa A.G. fur Forschung und Patentverwertung: *See*—
Gabler, Rudolf. 3,019,152.

Isaacson, Walter P., to Dresser Industries, Inc. Acoustic wave well logging system. 3,018,839, 1–30–62, Cl. 181—.5.

Istituto Biochimico Italiano: *See*—
Canonica, Luigi. 3,019,257.

Ito, Tamio: *See*—
Sakural, Setsuji, Komachiya, and Ito. 3,019,232.

Jaccard, René-Philippe, to S. J. Kaufman. Time-meter. 3,018,613, 1–30–62. Cl. 58—22.9.

Jackson, Herbert B.: *See*—
Collie, Robert M., and Jackson. 3,018,893.

Jacob, Theodore A., and N. R. Trenner, to Merck & Co., Inc. Purification of silane. 3,019,087, 1–30–62, Cl. 23—204.

Jacobson, Carl H.: *See*—
Takats, Zoltan, and Jacobson. 3,018,709.

Jaggi, Emanuel. Door handle assembly. 3,019,045, 1–30–62, Cl. 292—353.

Jefferson Chemical Co., Inc.: *See*—
Anslow, James R. 3,019,225.
Peppel, William J., and Watkins. 3,019,231.

Jefferys, Alexander G., to The Firestone Tire & Rubber Co. Apparatus for expanding one end of a cylindrical air spring into flared form. 3,018,518, 1–30–62, Cl. 18—19.

Jeffrey Mfg. Co., The: *See*—
Steinmetz, Walter C. 3,018,972.

Jenoff Inc.: *See*—
Hoff, Jean C. 3,019,310.

Jensen, Elmer R.: *See*—
McCormick, Jerry R. D., and Jensen. 3,019,260.

John, Frank T., to United States of America, Air Force. Self-illuminated aerial camera. 3,019,292, 1–30–62, Cl. 178—6.7.

Johns, Don H., to American Can Co. Method of and apparatus for measuring coating amounts. 3,019,336, 1–30–62. Cl. 250—43.5.

Johns-Manville Fiber Glass Inc.: *See*—
Labino, Dominick. 3,019,117.

Johnson, Ellsworth T., to Deere & Co. Mower attachment. 3,018,598, 1–30–62, Cl. 56—25.

Johnson, Francis M., to United States of America, Air Force. Multipurpose safety for igniter circuits. 3,018,733, 1–30–62, Cl. 102—70.2.

Johnson, Leonard L.: *See*—
Hitt, Otis D., Knapp, Johnson, and Rosenblum. 3,018,673.

Johnson, Otis L., to Farnsworth-Johnson Corp. Structural element for buildings. 3,018,860, 1–30–62, Cl. 189—34.

Johnson, Ralph E., to The Singer Mfg. Co. Attachment guiding device for sewing machines. 3,018,743, 1–30–62, Cl. 112—102.

Johnston, Sidney F., Jr., to United States of America, Air Force. Aircraft with support for a plurality of Luneberg reflective lenses. 3,019,432, 1–30–62, Cl. 343—18.

Jones, Hal J., and J. A. Morrison, Jr., to Texas Instruments Inc. Apparatus for determining the correlation coefficients of data. 3,018,962, 1–30–62, Cl. 235—181.

Jones & Laughlin Steel Corp.: *See*—
Laycak, John F. 3,019,346.
Laycak, John F. 3,019,347.
McCreanor, Richard A., and Uphoff. 3,018,656.

Jones, Walter L., to United-Carr Fastener Corp. Apparatus for applying snap fastener elements to supporting materials. 3,019,152, 1–30–62, Cl. 156—380.

Joyce, Asa W., to American Cyanamid Co. Azopyrazolone dye for polyester fibers. 3,019,217, 1–30–62, Cl. 260—163.

Julian Laboratories, Inc., The: *See*—
Julian, Percy L. 3,019,220.

Julian, Percy L., to The Julian Laboratories, Inc. Isolation of sapogenins. 3,019,220, 1–30–62, Cl. 260—239.55.

Kalb, John W., to The Ohio Brass Co. Lightning arrester and gap unit therefor. 3,019,367, 1–30–62, Cl. 315—36.

Kalbaugh, Robert E.: *See*—
Dorsey, William R., and Kalbaugh. 3,018,559.

Kalbfell, David C. Magnetic marking system. 3,019,385, 1–30–62, Cl. 324—34.

Kamm, Lawrence J., to United Aircraft Corp. Low torque position sensor. 3,019,403, 1–30–62, Cl. 336—30.

Kaplan, Leonard L.: *See*—
Klunipp, Theodore G., Wolff, and Kaplan. 3,019,169.

Kary, Samuel E. Apparatus for assembling wire gratings. 3,019,326, 1–30–62, Cl. 219—56.

Kaufman, Herman S., and F. W. West, to Minnesota Mining and Mfg. Co. Surface coloration of perfluorohalooleﬁn polymers and colorant composition therefor. 3,019,115. 1–30–62, Cl. 106—32.

Kaufman, Samuel J.: *See*—
Jaccard, René-Philippe. 3,018,613.

Kaye, Harold J., to R. A. Edgcomb. Adusting dial indicator mounting. 3,018,994, 1–30–62. Cl. 248—278.

Kayser, Heinrich, W. Lorenz, and G. Schrader, to Farbenfabriken Bayer Aktiengesellschaft. Thiophosphoric acid esters and a process for their production. 3,019,250. 1–30–62, Cl. 260—461.

Keating, Alexander F., to Bemis Bro. Bag Co. Bag. 3,018,943, 1–30–62, Cl. 229—62.5.

Keckler, John W., to The Aro Equipment Corp. Combination valve for oxygen converters. 3,018,635, 1–30–62, Cl. 62—55.

Keeling, Kermit B., Sr., to General Electric Co. Dual axis oven door structure. 3,018,508, 1–30–62, Cl. 16—147.

Keely, Clifford D., to General Corrugated Machinery Co. Method of sealing sandwich type carton ends. 3,018,701, 1–30–62, Cl. 93—36.

Kellman, James J., to L. J. R. Corp. Segmental disk wheel. 3,019,056, 1–30–62, Cl. 301—63.

Keith, Percival C., to Hydrocarbon Research, Inc. Cyclic process for transporting methane. 3,018,632, 1–30–62, Cl. 62—9.

Kelgard, Erik, to Nordberg Mfg. Co. Temperature responsive apparatus for controlling turbocharged engines. 3,018,617, 1–30–62, Cl. 60—13.

Kelvin & Hughes Ltd.: *See*—
Haslett, Roy W. G., Hopkin, and Benning. 3,019,411.

Kerst, Herman: *See*—
Denman, Wayne L., and Kerst. 3,019,195.

Kerwin, James F.: *See*—
Georgian, Vlasios, and Kerwin. 3,019,236.
Georgian, Vlasios, Kerwin, and Wolff. 3,019,235.

Kevane, Clement J.: *See*—
Taylor, William E., and Kevane. 3,018,539.

Khalil, Muhammad. Method and means for the installation of rail track. 3,018,967, 1–30–62, Cl. 238—349.

Kilby, William, and W. A. S. Wilte, to Imperial Chemical Industries Ltd. Desizing process. 3,019,140, 1–30–62, Cl. 134—30.

Kilham, Charles O., to United Shoe Machinery Corp. Fluid applying machines. 3,018,756, 1–30–62, Cl. 118—226.

Kimball, A., Co.: *See*—
Harruff, Ray W., and Touchman. 3,018,947.

Kimberly-Clark Corp.: *See*—
Hechtman, John F., and Greenman. 3,019,134.
Loppnow, Frank B. 3,018,757.

Kimes, Robert, to The Garrett Corp. Respiration apparatus. 3,018,790, 1–30–62, Cl. 137—454.6.

Kindseth, Harold V., to Bemis Bro. Bag. Co. Sealing apparatus. 3,018,512, 1–30–62, Cl. 18—4.

Kirk, Chester H., Jr. Air relief device. 3,018,787, 1–30–62, Cl. 137—202.

Kirstahler, Alfred: *See*—
Boller, Carl, Gündel, and Kirstahler. 3,019,123.

Klages, Christian L., and J. O. Sullivan, to Wesson Corp. Boring bar. 3,018,675, 1–30–62, Cl. 77—58.

Kleekamm, Fritz, and E. Siggel, to Vereinigte Glanzstoff-Fabriken A.G. Process for the production of low-shrinkage polyethylene terephthalate threads. 3,018,608, 1–30–62, Cl. 57—157.

Klein, Edward P.: *See*—
Hunt, Frederick C., and Klein. 3,018,541.

Klein, Karl, and F. Pongracz; said Klein assor. to said Pongracz. Feed collet for single and multi-spindle automatic machine tools, turret lathes, precision lathes and the like machine tools. 3,019,027, 1–30–62, Cl. 279—30.

Klein, Morton J.: *See*—
Gavlin, Gilbert, Klein, and Maguire. 3,019,251.

Kleinekathofer, Felix. Method of manufacturing filamentary structures. 3,018,610, 1–30–62, Cl. 57—157.

Klinger Mfg. Co, Ltd., The: *See*—
Mattingly, Denis A. E. and Gilchrist. 3,018,974.

Klompas, Nicholas, to Orenda Engines Ltd. Mounting mechanism for labyrinth seal disc. 3,019,035, 1–30–62, Cl. 285—18.

Klopfen, Irving, to American Cyanamid Co. Stabilization of antibiotics in feeds and feed supplements. 3,019,109, 1–30–62, Cl. 99—2.

Klumpp, Theodore G., J. E. Wolff, and L. L. Kaplan, to Sterling Drug Inc. Salicylate dry shell coating of dry 4-aminoquinoline core, and dry-compressing tablet-making process. 3,019,169, 1–30–62, Cl. 167—82.

Knapp, Elwood F.: *See*—
Hiitt, Otis D., Knapp, Johnson, and Rosenblum. 3,018,673.

Knapp, Guenther: *See*—
Monaghan, Ralph, Wilson, and Knapp. 3,019,338.

Knox, Granville S., to Hydril Co. Valve control apparatus. 3 018,791, 1–30–62, Cl. 137—458.

Koch, Robert C., and R. P. Whipple, to The Firestone Tire & Rubber Co. Diaphragm for tubeless tires. 3,018,813, 1–30–62, Cl. 152—341.

Koehn, Wilbur R. Finger cots. 3,018,484, 1–30–62, Cl. 2—21.

Köhler, Heinrich, to Robert Bosch G.m.b.H. Portable drill. 3,018,674, 1–30–62 Cl. 77—32.3.

Kolben, Felix D.: *See*—
Hiritz, Laszlo F. 3,018,611.

Kolka, Alfred J.: *See*—
Ecke, George G., and Kolka. 3,019,097.

Komachiya, Yoshioki: *See*—
Sakurai, Setsuji, Komachiya, and Ito. 3,019 232.

Korach, Malcolm, and W. H. Rideout, to Pittsburgh Plate Glass Co. Method of recovering butadiene monoxide. 3,019,234, 1–30–62, Cl. 260—348.

Korb, Karl W., to Permanent Mold Die Co., Inc. Double piston arrangement. 3,018,562, 1–30–62, Cl. 121—38.

Kosik, Samuel J., Jr.: *See*—
Robb, Frank R., and Kosik. 3,018,815.

Kramer, Max J., to Aluminum Co. of America. Differential direct current responsive control system. 3,019,373, 1–30–62, Cl. 317—13.

Kramlich, Richard G., to Fuller Co. Conveying apparatus. 3,019,057, 1–30–62, Cl. 302—52.

Krause, Walter W.: *See*—
Braski, Raymond J., and Krause. 3,019,320.

Kraust, Rudolf, and W. Strobelt, to Siemens & Halske Aktiengesellschaft Berlin and Munich. Telephone connector switch of the relay type. 3,019,298, 1–30–62, Cl. 179—18.

Kroeper, Hugo, H. Weitz, and R. Platz, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of telomers from ethylenically unsaturated compounds. 3,019,215, 1–30–62, Cl. 260—94.9.

Krohs, Alfred, and F. Schloblein, to VEB Carl Zeiss. Photoelectric device for ultra-violet radiation. 3,019,364, 1–30–62, Cl. 313—102.

Kroninger, Nolan R.: *See*—
Rose, Norman J., and Kroninger. 3,019,072.

Krueger, Donald, to HRB-Singer, Inc. Modulator device. 3,018,566, 1–30–62, Cl. 35—10.4.

Kruse, Norman F., and N. H. Witte, to Central Soya Co., Inc. Apparatus for treating flowable materials. 3,018,564, 1–30–62, Cl. 34—173.

Kucera, Clement M.: *See*—
Peter, Robert G., and Kucera. 3,018,836.

Kucera, Clement M., to Reed Roller Bit Co. Drill bit for producing an irregular indentation pattern on the bottom of a well bore. 3,018,835, 1–30–62, Cl. 175—378.

Kudo, Francis M.: *See*—
Reis, Herbert J., and Kudo. 3,019,439.

Kuellmar, Adolph G.: *See*—
Loomis, Russell M., Kuellmar, and Lundvall. 3,018,741.

Kulicke, Frederick W., Jr., to Kulicke & Soffa Mfg. Co. Continuous fine wire feeding device. 3,018,975, 1–30–62, Cl. 242—54.

Kulicke & Soffa Mfg. Co.: *See*—
Kulicke, Frederick W., Jr. 3,018,975.

Kurland, Jerome J. and J. J., to Illinois Condenser Co. High-temperature miniature condenser construction. 3,019,376, 1–30–62, Cl. 317—242.

Kurland, Joseph J.: *See*—
Kurland, Jerome J. and J. J. 3,019,376.

Kurz, Karl E., to Sawyer's Inc. Tachistoscope. 3,018,686, 1–30–62, Cl. 88—27.

Kush, Theodore G., to Allis-Chalmers Mfg. Co. Antispread device for industrial truck masts. 3,018,849, 1–30–62, Cl. 187—9.

L & B Welding Equipment, Inc.: *See*—
Brashear, Turner G., Jr., and Leader. 3,019,328.

L.J.R. Corp.: *See*—
Keilman, James J. 3,019,056.

Labino, Dominick, to Johns-Manville Fiber Glass Inc. Refractory blocks. 3,019,117, 1–30–62, Cl. 106—66.

Ladd, Frederick F., Jr., to Minneapolis-Honeywell Regulator Co. Electrical apparatus. 3,019,374, 1–30–62, Cl. 317—148.5.

Lambert, Frank A. Baby exercising device. 3,019,053, 1–30–62, Cl. 297—275.

Lambert, Harry L., and P. F. Page, to Royal McBee Corp. Proportional spacing mechanism. 3,018,870, 1–30–62, Cl. 197—84.

Lanciani, Daniel A., and A. A. Blaisdell, to Microwave Associates, Inc. Circular waveguide diameter transformer. 3,019,399, 1–30–62, Cl. 333—34.

Lanctot, Donald H., to Don-Lan Electronics, Inc. Double throw co-axial switch. 3,019,322, 1–30–62, Cl. 200—153.

Lanctot, Donald H., to Don-Lan Electronics, Inc. Step attenuator. 3,019,402, 1–30–62, Cl. 333—81.

Langner, Hans: *See*—
Hoppe, Alfred, Langner, Westerhoff, Wolke, and Hauenstein. 3,019,179.

Lanyon, Charles E.: *See*—
Doggett, Roger H., Hervey, and Lanyon. 3,019,138.

Lapat, Philip E., E. Gordon, and R. B. Holden, to United Nuclear Corp. Chemical process and product formed. 3,019,139, 1–30–62, Cl. 134—28.

Lapeyre, Fernand S. and J. M., and L. E. Demarest, to The Peelers Co. Shrimp peeling machine. 3,018,510, 1–30–62, Cl. 17—2.

Lapeyre, James M.: *See*—
Lapeyre, Fernand S. and J. M., and Demarest. 3,018,510.

La Pore, Gary E.: *See*—
Reed, James C. 3,018,924.

Larson, Carl V., to Sunset Equipment Co. Bulk milk tank. 3,018,915, 1–30–62, Cl. 220—15.

Laster, Harold W. Vehicle with elevator roof section. 3,019,046, 1–30–62, Cl. 296—10.

Lathrop, Harold F., to American Air Filter Co., Inc. Air conditioner. 3,018,842, 1–30–62, Cl. 62—427.

Launer, Sol J. Panel retractor. 3,018,507, 1–30–62, Cl. 16—78.

La Violette, Paul A., Jr., to The High Standard Mfg. Corp. Tubular magazine firearm with loading port in side of magazine. 3,018,577, 1–30–62, Cl. 42—6.

Lawlor, Francis E.: *See*—
Hauptschein, Murray, Braid, and Lawlor. 3,019,258.

Laycak, John F., to Jones & Laughlin Steel Corp. Electronic surface inspection system. 3,019,346, 1–30–62, Cl. 250—219.

Laycak, John F., to Jones & Laughlin Steel Corp. Electronic surface inspection system. 3,019,347, 1–30–62, Cl. 250—223.

Leader, Forest: *See*—
Brashear, Turner G., Jr., and Leader. 3,019,328.

Leavitt, Julian J.: *See*—
Schoen, Geza E., Jr., and Leavitt. 3,019,221.

Leeser, H. Edgar. Time recording device and card therefor. 3,019,074, 1–30–62, Cl. 346—85.

Lefevre, Lloyd E., to The Dow Chemical Co. Fabric cutting tool. 3,018,550, 1–30–62, Cl. 30—140.

Leich Electric Co.: *See*—
Boswau, Hans P. 3,019,297.

Leinkram, Charles Z., to The Bendix Corp. Semiconductor device. 3,019,142, 1–30–62, Cl. 148—1.5.

Lenk, Wilhelm, to Barmer Maschinenfabrik Aktiengesellschaft. Device for drawing off equal thread lengths from two feed spools. 3,018,604, 1–30–62, Cl. 57—58.52.

Leonard, John M.: *See*—
Hannan, Patrick J., and Leonard. 3,018,558.

Lepier, John C.: *See*—
Anderson, Chester A. 3,018,713.

Les Laboratoires Francais de Chimiotherapie: *See*—
Nomine, Gerard, and Bertin. 3,019,252.

Lessig, Roland: *See*—
Harduk, John, and Lessig. 3,019,316.

Leupold, Henry G., to United Electric Controls Co. Snap action electrical switch. 3,019,312, 1–30–62, Cl. 200—67.

Levey, Gustave S., to The Spee-Flo Mfg. Corp. Closed system recirculating assembly. 3,018,968, 1–30–62, Cl. 239—124.

Levin, Nathan, to Textile Machine Works. Knit suture for patterned fabric. 3,018,647, 1–30–62, Cl. 66—179.

Levy, Alex A. Plasterer's tool. 3,018,499, 1–30–62, Cl. 15—235.4.

Lewis, Floyd V., to Sylvania Electric Products Inc. Pulse shaping circuit. 3,019,391, 1–30–62, Cl. 328—34.

Licencia Talalmanyokat Ertekesitoe Vallalet: *See*—
Heller, Laszlo, and Farago. 3,018,640.

Light Metals Research Laboratory, Inc.: *See*—
Pagonis, George A. 3,018,789.

Lillienberg, August W., to Lindberg Engineering Co. Multiple zone heating furnace. 3,019,006, 1–30–62, Cl. 263—42.

Lindberg Engineering Co.: *See*—
Lillienberg, August W. 3,019,006.

Lindberg, John F.: *See*—
Goertz, Raymond C., and Lindberg. 3,018,980.

Lindsay, Maurice E., to Spindle Specialty Co. Shuttle-point cotton picking spindle. 3,018,600, 1–30–62, Cl. 56—50.

Ling-Temco Electronics, Inc.: *See*—
Hunt, Frederick C., and Klein. 3,018,541.

Lipkin, Daniel M., to Remington Rand Inc. Transverse magnetic amplifier core construction. 3,019,348, 1–30–62, Cl. 307—88.

Lipp, Albert: *See*—
Lore, Frank. 3,018,992.

Lipscomb, Willis L. Cellular light control panel. 3,019,334, 1–30–62, Cl. 240—78.

Littelfuse, Inc.: *See*—
Ellithorpe, Gilbert S. 3,019,308.

Litteral, Silas, and F. E. Step, to Storage Products Corp. Structural element. 3,018,862, 1–30–62, Cl. 189—37.

Little, Thomas. Printed circuit board. 3,019,283, 1–30–62, Cl. 174—68.5.

Lloyd, John C.: *See*—
Eggenberger, John S., Lloyd, and Smith. 3,019,125.

Lockheed Aircraft Corp.: *See*—
Harnois, Nelson C. 3,019,429.
Nisbet, Thomas R. 3,019,345.

Logan, Maurus C., and D. J. Crimmins, to The Thomas & Betts Co. Wire-to-wire connection. 3,019,410, 1–30–62, Cl. 339—253.

Logsdon, Robert F.: *See*—
Czerwonka, Lawrence J., and Logsdon. 3,019,127.

Lohn, Edwin E. Shift mechanism. 3,018,670, 1–30–62, Cl. 74—477.

Long, Carl O., ½ to R. A. Walsh. Wheel truing device. 3,018,588, 1–30–62, Cl. 51—104.

Long, Omer M., to Aircraft Armaments, Inc. Tractor track. 3,019,062, 1–30–62, Cl. 305—37.

Long, Ralph F.: *See*—
Frazelle, Jay B. 3,018,898.

Loomis, Russell M., A. G. Kuellmar, and J. S. Lundvall, to Union Asbestos & Rubber Co. Lading separating means. 3,018,741, 1–30–62, Cl. 105—376.

Loppnow, Frank B., to Kimberly-Clark Corp. Papermaking machine. 3,018,757, 1–30–62, Cl. 118—262.

Lore, Frank, ½ to A. Lipp. Quick level tripod table control system. 3,018,992, 1–30–62, Cl. 248—180.

Lorenz, Albert, to W. C. Heraeus G.m.b H. Apparatus for heating molten metals in a vacuum chamber. 3,019,275, 1–30–62, Cl. 13—31.

Lorenz, Friedrich: *See*—
Hamprecht, Guenther, Bellmuth, and Lorenz. 3,018,930.

Lorenz, Walter: *See*—
Kayser, Heinrich Lorenz, and Schrader. 3,019,250.

Losslus, Allan R. Dust pan and combination thereof with a broom. 3,018,502, 1–30–62, Cl. 15—257.2.

Lott, William A.: *See*—
Bernstein, Jack, and Lott. 3,019,226.

Loup, Ronald L., to Double A Products Co. Valve port arrangement. 3,018,796, 1–30–62, Cl. 137—625.12.

Louthan, Rector P.: *See*—
Mahan, John E., and Louthan. 3,019,267.

Lovell, David C. L.: *See*—
Glover, Denys T., and Lovell. 3,019,423.

Lovik, Melvin A.: *See*—
Reed, James C. 3,018,924.

Lucy, Robert F.: *See*—
De Poy, Martin L., II, Pattan, and Lucy. 3,019,431.

Ludwig, Herbert. Apparatus for forming foamed plastic soles with closed pores and for connecting same to articles of footwear. 3,018,517, 1–30–62, Cl. 18—17.

Luehdemann, Rolf: *See*—
Wygasch, Ewald, and Luehdemann. 3,019,082.

Luketa, Frank J. Chafing gear for trawl nets. 3,018,580, 1–30–62, Cl. 43—9.

Luketa, Frank J. Trawl lines. 3,018,581, 1–30–62, Cl. 43—9.

Lund, Jack H. Coaster. 3,018,913, 1–30–62, Cl. 215—100.5.

Lundberg, Lennart A., and L. H. Wilson, to American Cyanamid Co. Wet strength paper containing polyamide. 3,019,156, 1–30–62, Cl. 162—168.

Lundvall, John S.: *See*—
Loomis, Russell M., Kuellmar, and Lundvall. 3,018,741.

Lutz, August H.: *See*—
Hinderling, Rudolf, Lutz, and Schnider. 3,019,230.

Lynch, John E., J. E. Brennan, and R. C. Brasington, to The Cincinnati Milling Machine Co. Machine tool auxiliary spindle drive. 3,018,698, 1–30–62, Cl. 90—16.

Lyon, George A., to Lyon Inc. Brake drum cooling device. 3,018,856, 1–30–62, Cl. 188—264.

Lyon, George A., to Lyon Inc. Wheel cover. 3,019,055, 1–30–62, Cl. 301—37.

Lyon Inc.: *See*—
Lyon, George A. 3,018,856.
Lyon, George A. 3,019,055.

Maass, Herbert W. Pitless well adaptors. 3,018,829, 1–30–62, Cl. 166—88.

Machlis, Jerome, to Motec Industries, Inc. Color bar/dot generator. 3,019,289, 1–30–62, Cl. 178—5.4.

Machover, Carl: *See*—
Saslovsky, Sidney, Machover, and Siff. 3,018,965.

Maciejowski, John J.: *See*—
Phillips, Harry, Maciejowski, Shafer, Tucker, and Fuller. 3,018,594.

Mack, Gerry P., and E. Parker, to Carlisle Chemical Works, Inc. New organotin derivatives. 3,019,247, 1–30–62, Cl. 260—429.7.

Mackay, James B., to International Business Machines Corp. Superconductor information transfer circuit. 3,019,353, 1–30–62, Cl. 307—88.5.

MacKay, Lottie E.: *See*—
Hitchings, George H., Elion and MacKay. 3,019,224.

MacLean-Fogg Lock Nut Co.: *See*—
Oakley, Gilbert F. 3,018,740.
Oakley, Gilbert F. 3,018,995.

MacMillan, Raymond A., to United States of America, Air Force. Phase measuring system. 3,019,390, 1–30–62, Cl. 324—83.

Maddock, Ralph B., to Pako Corp. Film strand rollers for film processing machine. 3,018,935, 1–30–62, Cl. 226—190.

Magnavox Co., The: *See*—
Eggman, Max E. 3,018,734.

Magrauth, Andrew G. Mirror for chest, door, wall, or similar use. 3,018,690, 1–30–62, Cl. 88—97.

Magrini, Peter J., Sr.: *See*—
Insollo, Tuomas A., Magrini, Carini, and Clements. 3,018,587.

Maguire, Richard G.: *See*—
Gavlin, Gilbert, Klein and Maguire. 3,019,251.

Mahan, John E., and R. P. Louthan, to Phillips Petroleum Co. Thiols of bicyclo[2.2.1]hepta-2,5-diene and method of preparation. 3,019,267, 1–30–62, Cl. 260—609.

Maier, Walter, and K. Bernklau, to Farbenfabriken Bayer Aktiengesellschaft. Process for the hot stretching of yarns of synthetic materials. 3,018,609, 1–30–62, Cl. 57—157.

Mallory, Clarence C. Governor operated braking system. 3,019,060, 1–30–62, Cl. 303—21.

Malunowe, Edward W., and A. B. Sweet. Reversible carrier for laundry mangle machines. 3,018,904, 1–30–62, Cl. 214—151.

Mancera, Octavio: *See*—
Ringold, Howard J., Mancera, Rosenkranz, and Edwards. 3,019,239.

Mann, Leonard J., and J. J. O'Connell, to General Motors Corp. Refrigerator with defrost means. 3,018,637, 1–30–62, Cl. 62—155.

Manning, John A., Paper Co., Inc.: *See*—
Doggett, Roger H., Hervey, and Lanyon. 3,019,138.

Manning, Maxwell & Moore, Inc.: *See*—
Minty, John E. 3,018,902.

Mansfield Industries, Inc.: *See*—
Nemeth, Otto R. 3,018,876.

Mansor, Leo, to Edgewood Laboratories, Inc. Sunburn preventive and burn remedy. 3,019,165, 1–30–62, Cl. 167—65.

Marchetti, Carlo, to Societe Industrielle de Mecanique et Carrosserie Automobile-Simca. Mechanical vibration damping system. 3,019,030, 1–30–62, Cl. 280—124.

Marion, William W., Sr. Automobile traffic signal. 3,019,415, 1–30–62, Cl. 340—82.

Marskell, Walter G., to The Babcock & Wilcox Co. Method of making a pressure-tight mechanical joint for operation at elevated temperatures. 3,018,547, 1–30–62, Cl. 29—507.

Martin-Marrietta Corp.: *See*—
Multhopp, Huns. 3,018,982.
Multhopp, Hans. 3,018,987.
Perricci, Thomas G. 3,018,627.
Reis, Herbert J., and Kudo. 3,019,439.
Voigt, Woldemar. 3,018,985.

Maschinenfabrik Augsburg-Nurnberg A.G.: *See*—
Ernst, Heilmut. 3,018,901.

Massey, Bernard S.: *See*—
Bonsall, Frank, and Massey. 3,018,624.

Massey-Ferguson Inc.: *See*—
Elfes, Lee E. 3 018,863.
Elfes, Lee E. 3,018,864.

Matejek, John M., to American Can Co. Testing mechanism. 3 018,886, 1–30–62, Cl. 209—72.

Matrishin, Mary: *See*—
Goodman, Joseph J., and Matrishin. 3,019,172.

Matthews, Jas. H., & Co.: *See*—
Devon, Harry J., and Davis. 3,018,728.

Matthysse, Irving F., to Burndy Corp. Gripping cup to retain a conductor in a connector. 3,019,284, 1–30–62, Cl. 174—84.

Mattingly, Denis A. E., and R. S. Gilchrist, to The Klinger Mfg. Co. Ltd. Multiple bobbin winding apparatus for yarn and the like. 3,018,974, 1–30–62, Cl. 242—35.5.

Matuszak, Alfred H.: *See*—
Craven, William J., Metro, and Matuszak. 3,019,188.

Maul, John A., W. J. Brugge, and D. D. Anderson, to Addressograph-Multigraph Corp. Printing machines. 3,018,725, 1–30–62, Cl. 101—269.

McAdams, Paul F., to Clark Equipment Co. Tilting bulldozer blade. 3,018,573, 1–30–62, Cl. 37—144.

McBride, Marion E.: *See*—
McBride, Richard F. 3,019,034.

McBride, Richard F., 90% to M. E. McBride and 10% to G. D. Finneran. Simplified accounting system. 3,019,034, 1–30–62, Cl. 283—66.

McCarrell, Stuart G., to Beltone Hearing Aid Co. Transducer mounting means. 3,019,305, 1–30–62, Cl. 179—146.

McCleary, Eugene J., Jr., and C. H. Heigl, to Adams Corp., Korn Kurls Division. Food machinery. 3,018,715, 1–30–62, Cl. 99—238.

McConville, Thomas W.: *See*—
Saitta, Vincent F., and McConville. 3,018,776.

McCormick, Francis H.: *See*—
Barbulesco, Daniel J., McCormick, and Spires. 3,018,649.

McCormick, Jerry R. D., and E. R. Jensen, to American Cyanamid Co. Process for the catalytic reduction of 6-hydroxy hydronaphthacenes. 3,019,260, 1–30–62, Cl. 260—559.

McCorquodale Colour Display Ltd.: *See*—
Nash, James G. 3,018,724.

McCreanor, Richard A., and R. L. Uphoff, to Jones & Laughlin Steel Corp. Method for identifying defects in welded tubing. 3,018 656, 1–30–62, Cl. 73—37.

McCulloch Corp., Marine Products Division: *See*—
Snyder, Merton F., and Foster. 3,018,754.

McDonald, Fred S.: *See*—
Boudreaux, Joseph R., and McDonald. 3,019,094.
McGary, Charles W., Jr.: *See*—
Patrick, Charles T., Jr., and McGary. 3,019,203.
Tinsley, Samuel W., Starcher, McGary, and Patrick. 3,019,202.
McGraw-Edison Co.: *See*—
Ogle, James A., Jr., and Gomersall. 3,018,671.
Schindler, Carl. 3,018,735.
McMurtrie, Robert, to The Dow Chemical Co. Process for conveying carbonaceous solids through conduits. 3,019,059, 1–30–61, Cl. 302—66.
McReynolds, Andrew W., and L. J. Dijkstra, to General Dynamics Corp. Fuel element. 3,019,176, 1–30–62, Cl. 204—193.2.
Mekota, John E., Jr.: *See*—
Dornbusch, Aaron P., and Mekota. 3,019,417.
Mendelson, Myron J., to Aircraft Corp. Apparatus for performing arithmetic operations. 3,018,955, 1–30–62, Cl. 235—155.
Mercier, Robert M. Means ensuring contact between gasiform fluids and liquids. 3,018,843, 1–30–62, Cl. 183—2.5.
Merck & Co., Inc.: *See*—
Jacob, Theodore A. and Trenner. 3,019,087.
Novello, Frederick C. 3,019,245.
Meredith, Frederick W., and A. M. A. Majendie. Aircraft instruments. 3,018,661, 1–30–62, Cl. 73—178.
Meri, Kalju: *See*—
Heine, Wolfgang F., and Meri. 3,019,396.
Westerfeld, Ralph, and Meri. 3,019,302.
Meridan Corp.: *See*—
Diebold, Albert A. 3,018,681.
Merkin, Eugene, to United States of America, Navy. Jetstream spoiler. 3,018,691, 1–30–62, Cl. 89—1.5.
Merrow Machine Co., The: *See*—
Washburn, John M. 3,018,745.
Meshberg, Philip. Metering valve. 3,018,928, 1–30–62, Cl. 222—335.
Messing, Ralph A.: *See*—
Bloch, Alfred, and Messing. 3,019,171.
Metal Frame Aquarium Co.: *See*—
Arnould, Marcel M. 3,018,758.
Metalwash Machinery Co.: *See*—
Stanly, Henry J. 3,018,847.
Metcalf, Emerson D., to The Borden Co. Method and apparatus for making hose. 3,018,755, 1–30–62, Cl. 118—125.
Metro, Stephen J.: *See*—
Craven, William J., Metro, and Matuszak. 3,019,188.
Metropolitan-Vickers Electrical Co. Ltd.: *See*—
Pearce, Frederick M., and Hodgkiss. 3,019,372.
Meyer, Geo. J., Mfg. Co.: *See*—
Granier, Hector J. 3,018,804.
Meyer, Robert E., to United Aircraft Corp. Thrust reverser tailoring tabs. 3,018,620, 1–30–62, Cl. 60—35.54.
Michle, Amanda A.: *See*—
Michle, John S. 3,018,923.
Michle, John S., deceased; A. A. Michle, executrix, assor. to herself. Flow metering device. 3,018,923, 1–30–62, Cl. 222—41.
Microwave Associates, Inc.: *See*—
Lanciani, Daniel A., and Blaisdell. 3,019,399.
Midland-Ross Corp.: *See*—
De Coriolis, Ernest G., and Sykes. 3,019,007.
Miksis, Edward J. Folding roll. 3,019,014, 1–30–62, Cl. 270—61.
Milbourne, Charles G., to United Engineers & Constructors Inc. Process for fluid catalytic reforming of hydrocarbons to gas. 3,019,096, 1–30–62, Cl. 48—213.
Miller, Bernard, to American Cyanamid Co. Novel phosphorodithionates and methods for preparing the same. 3,019,159, 1–30–62, Cl. 167—22.
Miller Co., The: *See*—
Pascucci, Julio A. 3,019,333.
Schiffer, Henry C. 3,019,332.
Millington, Alfred F.: *See*—
Welch, Lewis W., and Millington. 3,018,711.
Milton Roy Co.: *See*—
Schneider, George W., Jr. 3,019,091.
Mine Safety Appliances Co.: *See*—
Austin, Harry W. 3,018,483.
Minneapolis-Honeywell Regulator Co.: *See*—
Dornbusch, Aaron P., and Mekota. 3,019,417.
Eachus, Joseph J. 3,018,954.
Eachus, Joseph J. 3,019,422.
Ladd, Frederick F., Jr. 3,019,374.
Myck, Edward A., Jr. 3,019,001.
Rotter, Donald J. 3,019,382.
Wacker, Robert J 3,018,712.
Minneapolis Moline Co.: *See*—
Morrell, John P. 3,018,909.
Minnesota Mining & Mfg. Co.: *See*—
Bauer, Benjamin B., and Sherman. 3,019,303.
Kaufman, Herman S., and West. 3,019,115.
Robb, Lester E. 3,019,206.
Wall, Thomas H 3,018,881.
Minton, Warren B., G. W. Bryan, and H. J. Van Gorden, to Time Stop, Inc. Automatic-cancelling or re-setting parking meter unit. 3,018,615, 1–30–62, Cl. 58—142.
Minton, Warren B. Magnetic proximity switches. 3,019,321, 1–30–62, Cl. 200—152.
Minty, John E., to Manning, Maxwell & Moore, Inc. Hydraulic crane. 3,018,902, 1–30–62, Cl. 212—20.
Mipro Metal Products Co.: *See*—
Watson, Frank P. 3,018,719.
Mishawaka Rubber Co., Inc.: *See*—
Doherty, Thomas H. 3,018,571.
Mobilcolor, Inc.: *See*—
Way, Frederick L. 3,018,683.
Moen, Rolf, to General Mills, Inc. Apparatus for measuring flow rate. 3,018,662, 1–30–62, Cl. 73—218.
Moffitt, Thomas L., and N. C. Herrmann, to Northeast Capital Corp. Push button switch unit for turn signal indicators. 3,019,311, 1–30–62, Cl. 200—61.27.
Mohawk Business Machines Corp.: *See*—
Heine, Wolfgang F., and Meri. 3,019,396.
Westerfeld, Ralph, and Meri. 3,019,302.
Molek, John G.: *See*—
Frazelle, Jay B. 3,018,898.
Monaghan, Ralph, B. F. Wilson, and G. Knapp, to Well Surveys, Inc. Thickness detector for coal mining machine. 3,019,338, 1–30–62, Cl. 250—83.3.
Monaghan, Ralph, to Well Surveys, Inc. Tracer logging by neutron activation. 3,019,341, 1–30–62, Cl. 250—106.
Monroe Calculating Machine Co.: *See*—
Deutsch, Fritz A. 3,018,953.
Sparks, Thomas. 3,018,949.
Montag, Inc.: *See*—
Greenblatt, Sidney R., and Guthman. 3,018,780.
Montagnon, Jean: *See*—
Fouilland, Claude, and Montagnon. 3,019,185.
Monteith, Victor St. C., and C. G. Wyman, to The Dayton Tire & Rubber Co. Tire apparatus. 3,018,511, 1–30–62, Cl. 18—2.
Monticello, William A., and T. N. Yesowich, to Burroughs Corp. Recording apparatus. 3,018,721, 1–30–62, Cl. 101—93.
Moody, Frank B., to E. I. du Pont de Nemours and Co. Polymerization of 2,5-dimethyl-2,4-hexadiene. 3,019,213, 1–30–62, Cl. 260—94.2.
Moog Industries, Inc.: *See*—
Scheuhlein, William A., Jr., and Dumpis. 3,019,041.
Moore, Norman. Apparatus for cutting bagels or the like. 3,018,806, 1–30–62, Cl. 146—150.
Morelle, Jules L. E., to Optique et Precision de Levallois. Setting devices for photographic apparatus. 3,018,705, 1–30–62, Cl. 95—10.
Morey, Everett D., to General Electric Co. Clothes drying machine. 3,018,560, 1–30–62, Cl. 34—45.
Morgan Crucible Co. Ltd., The: *See*—
White, Albert E. S. 3,019,068.
Morgan, John M., Jr., H. K. Brown, and J. A. Rave, Jr., to The Cincinnati Milling Machine Co. Hand servo control system. 3,019,377, 1–30–62, Cl. 318—24.
Morgan, Phillip R.: *See*—
Williams, Russell F., and Morgan. 3,018,618.
Morgan, Raymond E., to General Electric Co. Magnetic silicon controlled rectifier power amplifier. 3,019,355, 1–30–62, Cl. 307—88.5.
Morgan, Wallace M.: *See*—
Haigh, Henry W., and Morgan. 3,019,146.
Morin, Louis H., and O. Gries; said Gries assor. to Coats & Clark Inc. Apparatus for molding plastic insert in threaded sock nut blanks. 3,018,519, 1–30–62, Cl. 18—36.
Muro, Antonio. Support arrangement for mounting the mechanism located under the base of sewing machines. 3,018,747, 1–30–62, Cl. 112—258.
Morrell, John P., to Minneapolis Moline Co. Lift trucks and attachments therefor. 3,018,909, 1–30–62, Cl. 214—654.
Morrison, David, Jr. Lock. 3,018,651, 1–30–62, Cl. 70—146.
Morrison, John A., Jr.: *See*—
Jones, Hal J., and Morrison. 3,018,962.
Moss, Clyde E.: *See*—
Sherrill, Price E., and Moss. 3,018,605.
Motée Industries, Inc.: *See*—
Machlis, Jerome. 3,019,289.
White, Warren W. 3,018,952.
Motorola, Inc.: *See*—
Da Costa, Harry. 3,019,010.
Taylor, William E., and Kevane. 3,018,539.
Muetterties, Earl L., to E. I. du Pont de Nemours and Co. Preparation of diborane. 3,019,086, 1–30–62, Cl. 23—204.
Müller, Alfred H., to Daimler-Benz Aktiengesellschaft. Elastic engine suspension especially for motor vehicles. 3,018,900, 1–30–62, Cl. 248—9.
Multhopp, Hans, to Martin-Marrietta Corp. Ducted fan aircraft incorporating a blown flap arrangement. 3,018,982, 1–30–62, Cl. 244—15.
Multhopp, Hans, to Martin-Marrietta Corp. Blown tail arrangement for low speed controllability of an aircraft. 3,018,987, 1–30–62, Cl. 244—75.
Munson, Donald J., and E. L. Nubson, to The J. R. Clark Co. Ironing table foot construction. 3,018,574, 1–30–62, Cl. 38—121.
Murfitt, Harry C., to Burroughs Wellcome & Co. (U.S.A.) Inc. Ethyl bis-(2-chloropropyl)carbamate. 3,019,255, 1–30–62, Cl. 260—482.
Murphy, Alfred M., C. M. Filak, and N. A. Wagner, to Reynolds Metals Co. Extrusion heat treating system. 3,019,144, 1–30–62, Cl. 148—12.7.
Mutolo, Peter J., and E. G. Boehm, to Houdaille Industries, Inc. Cartridge-type spring-bias means for a predetermined torque release wrench. 3,018,677, 1–30–62, Cl. 81—52.4.
Myck, Edward A., Jr., to Minneapolis-Honeywell Regulator Co. Temperature control apparatus. 3,019,001, 1–30–62, Cl. 237—290.
Nakata, Sigemi. Depth micrometer. 3,018,557, 1–30–62, Cl. 33—170.
Nalle, George S., Jr. Plastic netting extrusion apparatus with oscillating contacting die elements and products of such apparatus. 3,019,147, 1–30–62, Cl. 154—46.
Nash, James G., to McCorquodale Colour Display Ltd. Apparatus for the deposition of viscous liquid materials. 3,018,724, 1–30–62, Cl. 101—171.
National Cash Register Co., The: *See*—
Seidman, Jay J., and Cornell. 3,019,344.
National Co., Inc.: *See*—
Brilliant, Martin B. 3,019,335.
National Research Corp.: *See*—
Walsh, Arthur G. 3,019,129.

Naud, Ernest O. Skyline carriage locking means and release therefor. 3,018,738, 1–30–62, Cl. 105—151.
Neeley, Howard B. Grease container. 3,019,065, 1–30–62, Cl. 308—187.
Neild, Alton B., Jr. Seal for engine cylinder liner. 3,018,763, 1–30–62, Cl. 123—41.83.
Neipert, Marshall P.: *See*—
Blue, Robert D., Sweeny, and Neipert. 3,019,279.
Nelson, David G., to Aluminum Co. of America. Release and transfer device. 3,018,593, 1–30–62, Cl. 53—67.
Nemeth, Otto R., to Mansfield Industries, Inc. Motion picture projector film feeding and rewind apparatus. 3,018,976, 1–30–62, Cl. 242—55.12.
Nestaway Inc.: *See*—
Giesen, Lewis E. 3,018,993.
Nevins Co., The: *See*—
Crane, William B., Jr. 3,018,879.
Newcomb, Cyrus B., Jr., and L. J. Renas, to A. B. Chance Co. Bushing cover. 3,019,287, 1–30–62, Cl. 174—138.
Newman, Ralph M., Jr. Web forming method and apparatus. 3,019,158, 1–30–62, Cl. 162—212.
Newman, Richard L., to American Cyanamid Co. Colored iron-stained coal and a method of coloring. 3,019,121, 1–30–62, Cl. 106—286.
Newnan, Charles D., Jr.: *See*—
Furby, Neal W., and Newnan. 3,019,191.
Nichols, Peter F., to Bowers Machine Co. Ltd. Device for stamping code numbers. 3,018,720, 1–30–62, Cl. 101—41.
Nikon Spindle Seizo Kabushiki Kaisha: *See*—
Hijiya, Kenji, and Okawa. 3,018,503.
Nisbet, Thomas R., to Lockheed Aircraft Corp. Radiation amplifier. 3,019,345, 1–30–62, Cl. 250—213.
Noah, George I.: *See*—
Woodworth, John A., Reeve, and Noah. 3,019,043.
Noall, John, and R. R. Putt, to The Firestone Tire & Rubber Co. Apparatus for building tires. 3,019,153, 1–30–62, Cl. 156—406.
Noall, Michael W., Jr., to The Firestone Tire & Rubber Co. Tire siping machine. 3,018,822, 1–30–62, Cl. 157—13.
Nomine, Gerard, and D. Bertin, to Les Laboratoires Francais de Chimiotherapie. Process for the preparation of novel derivatives of cyclopentanonaphthalene and products obtained thereby. 3,019,252, 1–30–62, Cl. 260—476.
Nonnemacher, Helmut: *See*—
Stelnhofer, Adolf, Bartholome, Frey, and Nonnemacher. 3,019,272.
Nordberg Mfg. Co.: *See*—
Kelgard, Erik. 3,018,617.
Normalair Ltd.: *See*—
Glover, Denys T., and Lovell. 3,019,423.
Northeast Capital Corp.: *See*—
Moffitt, Thomas L., and Herrmann. 3,019,311.
Novello, Frederick C., to Merck & Co., Inc. Halo-disulfamylanilines. 3,019,245, 1–30–62, Cl. 260—397.7.
Novi Equipment Co.: *See*—
Welch, Lewis W., and Millington. 3,018,711.
Novotney, Frank A. Toy. 3,018,583, 1–30–62, Cl. 46—11.
Nubson, Edward L.: *See*—
Munson, Donald J., and Nubson. 3,018,574.
Nugent, Walter S. Sitting furniture. 3,019,051, 1–30–62, Cl. 297—218.
Nyberg, Wilbur C.: *See*—
Davis, Benjamin L., and Nyberg. 3,019,150.
Oakley, Gilbert F., to MacLean-Fogg Lock Nut Co. Combined lading strap anchor and floor rack holder. 3,018,740, 1–30–62, Cl. 105—369.
Oakley, Gilbert F., to MacLean-Fogg Lock Nut Co. Combined lading strap anchor and floor rack holder. 3,018,995, 1–30–62, Cl. 248—294.
O'Brien, Rory M., to Watton Engineering Co. Ltd. Measuring and gauging devices. 3 018,556, 1–30–62, Cl. 33—147.
Obst, Charles J., to J. J. Vastano. Aerosol valve. 3,018,929, 1–30–62, Cl. 222—394.
O'Connell, John J.: *See*—
Mann, Leonard J., and O'Connell. 3,018,637.
O'Connell, Richard A.: *See*—
Pardo, Clay E., Jr., and O'Connell. 3,019,076.
Oehler, William P., and H. V. Hansen, to Deere & Co. Connection facilitating draft connection. 3,019,032, 1–30–62, Cl. 280—478.
Ogelvie, Evelyn M.: *See*—
Davis, Robert F. 3,018,932.
Ogle, James A., Jr., and J. R. Gomersall, to McGraw-Edison Co. Control knob construction. 3,018,671, 1–30–62, Cl. 74—504.
Oglebay Norton Co.: *See*—
Carpenter, Joel C. 3,018,527.
O'Hara, James B., to Olin Mathieson Chemical Corp. Production of boron trichloride. 3,019,089, 1–30–62, Cl. 23—205.
Ohio Brass Co., The: *See*—
Kalb, John W. 3 019,367.
Ohmart Corp., The: *See*—
Ohmart, Philip E. 3,019,358.
Ohmart, Philip E. 3,019,362.
Ohmart, Philip E., to The Ohmart Corp. Radioactive battery with chemically dissimilar electrodes. 3,019,358, 1–30–62, Cl. 210—3.
Ohmart, Philip E., to The Ohmart Corp. Radiant energy electric generator for density responsive apparatus. 3 019,362, 1–30–62, Cl. 313—93.
Olshel, John R., to Trico Products Corp. Windshield wiper. 3,018,501, 1–30–62, Cl. 15—250.42.
Okawa, Kazuyoshi: *See*—
Hijiya, Kenji, and Okawa. 3,018,503.
Olin Mathieson Chemical Corp.: *See*—
Bernstein, Jack, and Lott. 3,019,226.
Faust, John P. 3,019,083.
Filstrup, Edward C., Jr. 3,018,731.
Good, Carl D. 3,019,085.
O'Hara, James B. 3,019,089.
Olsen, Tinius, Testing Machine Co.: *See*—
Gruber, Warren M. 3,018,658.
Olson, Keith W.: *See*—
Collins, Garry G., Jr., and Olson. 3,019,365.
Optique et Precision de Levallois: *See*—
Morelle, Jules L. E. 3,018,705.
O'Reilly, Edward J., to The C. E. Ward Co. Method of making mortar board cap. 3,018,487, 1–30–62, Cl. 2—192.
Orenda Engines Ltd.: *See*—
Klompas, Nicholas. 3,019 035.
Orr, Ernest G., to Philco Corp. Clothes drying apparatus with moisture condensing means. 3,018,562, 1–30–62, Cl. 34—75.
Orr, Leighton E., to Pittsburgh Plate Glass Co. Method of producing coated glass articles. 3,019,135, 1–30–62, Cl. 117—211.
Osborne, William L. Voltage regulator. 3,019,368, 1–30–62, Cl. 315—96.
Oster, Gerald, to Polaroid Corp. Photographic products, processes, and compositions. 3,019,104, 1–30–62, Cl. 96—29.
Ostline, John E.: *See*—
Esperseth, Maurice H., and Ostline. 3,019,294.
Ostline, John E., I. V. Coleman, and J. W. Taugner, to Automatic Electric Laboratories, Inc. Automatic toll ticketing telephone system. 3,019,295, 1–30–62, Cl. 179—7.1.
Cl. 179—7.1.
Otis Elevator Co.: *See*—
Diamond, Lew H., and Couturier. 3,018,851.
Owens-Corning Fiberglas Corp.: *See*—
Roberson, Cletis L. 3,019,078.
Shyter, Games. 3,018,991.
Owens-Illinois Glass Co.: *See*—
Hohl, John. 3 018,597.
Oys, John E.: *See*—
Pinke, August H., and Oys. 3,018,927.
PGAC Development Co.: *See*—
Castel, Jacques H. 3,018,730.
Packard, Damon R.: *See*—
Crowley, Daniel J., Folkenroth, and Packard. 3,018,679.
Page, Paul F.: *See*—
Lambert, Harry L., and Page. 3,018,870.
Pagonis, George A., to Light Metals Research Laboratory, Inc. Valve. 3,018,789, 1–30–62, Cl. 137—341.
Palaczkowski, Andrzej, to Imperial Chemical Industries Ltd. Ethylene polymerisation. 3,019,214, 1–30–62, Cl. 260—94.9.
Pako Corp.: *See*—
Maddock, Ralph B. 3,018,935.
Palmer, Maxwell R.: *See*—
Wilson, Porter C., and Palmer. 3,018,775.
Pan, Paul M., to General Electric Co. Antenna structure. 3,019,438, 1–30–62, Cl. 343—843.
Panzer, Jerome, and R. A. Westlund, Jr., to Esso Research and Engineering Co. Lubricating compositions. 3,019,187. 1–30–62, Cl. 252—33.3.
Pardo, Clay E., Jr., and R. A. O'Connell, to United States of America, Agriculture. Treatment of textiles with polyepoxides and polyamides. 3,019,076, 1–30–62, Cl. 8—128.
Parham, Roy P. Portable hunting blind. 3,018,857, 1–30–62, Cl. 189—2.
Parke, Davis & Co.: *See*—
Taylor, Alton R. 3,019,168.
Parker, Emery: *See*—
Mack, Gerry P., and Parker. 3,019,247.
Parker, John A., to Armstrong Cork Co. Diisocyanate-modified acid-treated polyethers. 3,019,212, 1–30–62, Cl. 260—75.
Parks, Asbury S. Valves. 3,018,797, 1–30–62, Cl. 137—627.5.
Parsonenult, Frank L. Baseball pitching and fielding practice device. 3,018,769, 1–30–62, Cl. 124—11.
Parsons, Anthony M., to Hoffmann-La Roche Inc. Basic-5-[1'-methyl-piperidyl-(4')]-pentyl-(2) esters, salts thereof, and preparation. 3,019,229, 1–30–62, Cl. 260—294.3.
Pascal, Ivan, to E. I. du Pont de Nemours and Co. N-fluorinated alkyl-amides of alkanoic acids and process of preparation. 3,019,261, 1–30–62, Cl. 260—561.
Pascucci, Julio A., to The Miller Co. Lighting fixture troffer and latch therefor. 3,019,333, 1–30–62, Cl. 240—51.11.
Pasfield, William H.: *See*—
Alexander, Guy B., and Pasfield. 3,019,103.
Pass, Carl. Deep well fryer. 3,018,716, 1–30–62, Cl. 99—331.
Passariello, Angelo G. Pinch-spin tops. 3,018,584, 1–30–62, Cl. 46—72.
Patrick, Charles T., Jr.: *See*—
Tinsley, Samuel W., Starcher, McGary, and Patrick. 3,019 202.
Patrick, Charles T., Jr., and C. W. McGary, Jr., to Union Carbide Corp. Diepoxy sulfone compositions. 3,019,203, 1–30–62, Cl. 260—18.
Pattan, Bruno A.: *See*—
De Poy, Martin L., H. Pattan, and Lucy. 3,019,431.
Patten, Harry B., to United Shoe Machinery Corp. Fuse-setting mechanism. 3,018,693. 1–30–62, Cl. 89—6.
Paul, Les. Electrical musical instrument. 3,018,680, 1–30–62, Cl. 84—1.16.
Paulding, Herbert L.: *See*—
Ackell, Joseph J., Paulding, and Yu. 3,018,946.

Pearce, Frederick M., and J. W. Hodgkiss, to Metropolitan-Vickers Electrical Co Ltd. Overheat electrical protection device. 3,019,372, 1–30–62, Cl. 317—13.

Pedersen, Norman E., and R. Fleischer, to Research Corp. Distance-measuring apparatus and method. 3,019,430, 1–30–62, Cl. 343—12.

Pederson, Raymond L., and J. C. Babcock, to The Upjohn Co. Alkylation of 4-position of a Δ⁴-11-oxygenated pregnene. 3,019,237, 1–30–62, Cl. 260—397.3.

Peelers Co., The: *See*—
Lapeyre, Fernand S., J. M., and Demarest. 3,018,510.

Pelt, James D. Can carrier and single can holder. 3,018,919, 1–30–62, Cl. 220—113.

Pender, Lloyd G., Sr., to United-Carr Fastener Corp. Fastening installation. 3,018,530, 1–30–62, Cl. 24—73.

Pennsalt Chemicals Corp.: *See*—
Hauptschein, Murray. 3,019,253.
Hauptschein, Murray, Braid, and Lawlor. 3,019,258.

Penone, Hugh P.: *See*—
Auffenorde, James E., and Penone. 3,019,136.

Pentron Electronics Corp.: *See*—
Arnold, Nicholas H., and Thompson. 3,019,011.

Peppel, William J., and J. D. Watkins, to Jefferson Chemical Co., Inc. Method of transvinylating. 3,019,231, 1–30–62, Cl. 260—307.

Perkins, Denis Gordon, to Electric & Musical Industries Ltd. Correcting for transmission variations in television. 3,019,290, 1–30–62, Cl. 178—5.4.

Perlis, David B. Fluid branch switching system. 3,018,788, 1–30–62, Cl. 137—331.

Permanent Mold Die Co., Inc.: *See*—
Korb, Karl W. 3,018,762.

Perricci, Thomas G., to Martin-Marietta Corp. Rechargeable accumulator. 3,018,627, 1–30–62, Cl. 60—51.

Perrochat, Jean, to A. Raymond. Molding fastener. 3,018,529, 1–30–62, Cl. 24—73.

Pertrix-Union G.m.b.H.: *See*—
Priebe, Bodo. 3,019,141.

Peter, Robert G., and C. M. Kucera, to Reed Roller Bit Co. Rock bit guide. 3,018,836, 1–30–62, Cl. 175—408.

Peterson, Glen, to Well Surveys, Inc. Method of and apparatus for producing and transmitting borehole signals. 3,019,414, 1–30–62, Cl. 340—18.

Peterson Oven Co., The: *See*—
Wittenberger, Wallace W. 3,018,872.

Petitto, John J., Sr. Electrically operated time instructing device. 3,018,569, 1–30–62, Cl. 35—39.

Phelps Dodge Copper Products Corp.: *See*—
Wohlforth, Ralph L. 3,018,883.

Philco Corp.: *See*—
Di Paolo, Thomas V. 3,019,361.
Evers, Dundred D. 3,018,643.
Orr, Ernest G. 3,018,562.

Phillips, Harry, J. J. Maciejowski, W. A. Shafer, Jr., R. D. Tucker, and G. A. Fuller, Jr., to Ekco-Alcoa Containers, Inc. Container filling and sealing machines. 3,018,594, 1–30–62, Cl. 53—72.

Phillips Petroleum Co.: *See*—
Brooke, Jesse M. 3,019,342.
De Lano, Merritt V., Jr., and Plaster. 3,019,273.
Doss, Richard C., and Blackwell. 3,019,081.
Doss, Richard C., and Reynolds. 3,018,619.
Gilmore, Forrest E. 3,018,634.
Mahan, John E., and Louthan. 3,019,267.
Prentiss, Spencer S. 3,018,828.

Pierce, John B., Foundation: *See*—
Bailey, George B. 3,018,639.

Pinke, August H., and J. E. Oys, to H. D. Hudson Mfg. Co. Spraying apparatus. 3,018,027, 1–30–62, Cl. 222—333.

Pirelli S.p.A.: *See*—
Barassi, Carlo. 3,018,810.

Pittsburgh Plate Glass Co.: *See*—
Auffenorde, James E., and Penone. 3,019,136.
Ellerman, George E. 3,019,122.
Kornach, Malcolm, and Rideout. 3,019,234.
Orr, Leighton E. 3,019,135.

Plapper, Jürgen: *See*—
Heyden, Rudi, and Plapper. 3,019,133.

Plaster, William E.: *See*—
De Lano, Merritt V., Jr., and Plaster. 3,019,273.

Plastidry Societe Anonyme: *See*—
Hanssens, Gustave J. J. 3,018,800.

Platz, Rolf: *See*—
Kroeper, Hugo, Weitz, and Platz. 3,019,215.

Polakowski, Natalis H. Apparatus for rolling strip metal. 3,018,676, 1–30–62, Cl. 80—32.

Polarad Electronics Corp.: *See*—
Ross, Alan, Eisenmeyer, and Rakofsky. 3,019,389.

Polaroid Corp.: *See*—
Blout, Elkan R., Green, Rogers, Simon, and Woodward. 3,019,107.

Polaroid Corp.: *See*—
Derschowitz, Samuel. 3,019,108.
Green, Milton, and Husek. 3,019,254.
Haas, Howard C., and Schuler. 3,019,131.
Oster, Gerald. 3,019,104.
Rogers, Howard G. 3,019,124.
Whittier, Sidney B. 3,018,707.

Polymer Corp., The: *See*—
Gilles, Richard C. 3,019,210.

Polytechnic Research & Development Co., Inc.: *See*—
Hopfer, Samuel. 3,019,386.

Pomerene, James H., and E. J. Slobodzinski, to International Business Machines Corp. Voltage level translating circuit using constant voltage portion of device characteristic. 3,019,351, 1–30–62, Cl. 307—88.5.

Pomper, Victor, to Societe Industrielle Generale de Mecanique Appliquee S.I.G.M.A. Remote control installations for the valves of marine tankers. 3,018,628, 1–30–62, Cl. 60—51.

Pongracz, Friedrich: *See*—
Klein, Karl, and Pongracz. 3,019,027.

Porter, H. K., Co., Inc.: *See*—
De Lutis, Thomas. 3,019,285.

Posavic, Michael J. Pocket ash tray and cigarette package case. 3,018,877, 1–30–62, Cl. 206—38.

Potter, Marvin M., and R. O. Hill. Paper folding machine with tying means. 3,019,015, 1–30–62, Cl. 270—84.

Power Jets (Research and Development) Ltd.: *See*—
Davidson, Ivor M. 3,018,983.

Powers, Milton A. Filters. 3,018,845, 1–30–62, Cl. 183—7.

Powers, Milton A. Fluid filtering mediums and method of making the same. 3,019,186, 1–30–62, Cl. 210—506.

Prang, Peter, and H. D. Textor, to Ferdinand Lentjes Kesselschmiede u. Maschinenbau. Gas producer. 3,019,095, 1–30–62, Cl. 48—63.

Precision Metalsmiths, Inc.: *See*—
Horton, Robert A. 3,018,528.

Prentiss, Spencer S., to Phillips Petroleum Co. Prevention of water and gas coning. 3,018,828, 1–30–62, Cl. 166—53.

Preston, Jerome A., to The Ranson & Randolph Co. Hardenable polysiloxane compositions and curing catalysts therefor. 3,019,204, 1–30–62, Cl. 260—18.

Prewitt Aircraft Co.: *See*—
Prewitt, Richard H. 3,018,832.

Prewitt, Richard H., to Prewitt Aircraft Co. Aircraft structure. 3,018,832, 1–30–62, Cl. 170—159.

Price, Ralph E., to Gardner Machine Co. Vertical spindle disc grinder. 3,018,589, 1–30–62, Cl. 51—115.

Price, Roland C. Water ski tow rope. 3,018,753, 1–30–62, Cl. 115—6.1.

Prichard, Evan S., to Challange-Cook Bros., Inc. Transit concrete mixers. 3,019,002, 1–30–62, Cl. 259—169.

Priebe, Bodo, to Pertrix-Union G.m.b.H. Galvanic dry cell and electrolyte therefor. 3 019,141, 1–30–62, Cl. 136—155.

Pro, George M., to Air Placement Equipment Co. Air control structure for aggregate handling machines. 3,019,058, 1–30–62, Cl. 302—53.

Proceder Industriels et Charbons Actifs (P.I.C.A.): *See*—
Foulliand, Claude, and Montagnon. 3,019,185.

Procter & Gamble Co., The: *See*—
Burt, Robert V. 3,018,873.

Puccinelli, Sylvio, to FMC Corp. Pit gripping device. 3,018 805, 1–30–62, Cl. 146—28.

Puchaty, Robert J.: *See*—
Wilson, Robert C., and Puchaty. 3,019,435.

Puorro, Thomas A.: *See*—
Hosier, William A., and Puorro. 3,018,956.

Putt, Roy R.: *See*—
Noall, John, and Putt. 3,019,153.

Radar Relay, Inc.: *See*—
Arrasmith, William C. 3,019,428.

Radiation Counter Laboratories, Inc.: *See*—
Wiechering, Friedrich W. 3,019,363.

Radio Corp. of America: *See*—
Houghton, William D. 3,019,291.
Rajchman, Jan A. 3,019,418.
Rosi, Fred D., and Weisberg. 3,019,092.

Rafferty, John W.: *See*—
Clancy, John J., Rafferty, and Wells. 3,019,201.

Rajchman, Jan A., to Radio Corp. of America. Magnetic memory systems using transfluxors. 3,019,418, 1–30–62, Cl. 340—174.

Rakosky, Isadore: *See*—
Ross, Alan, Eisenmeyer, and Rakofsky. 3,019,389.

Rambo, Chester G. Edger and lawn trimmer. 3,018,599, 1–30–62, Cl. 56—26.

Randall, David I.: *See*—
Huc, Saul R., and Randall. 3,019,266.
Huc, Saul R., and Randall. 3,019,268.

Ranson & Randolph Co., The: *See*—
Preston, Jerome A. 3,019,204.

Rausch, William G.: *See*—
Harris, Sidney E., and Rausch. 3,018,595.

Rave, Joseph A. Jr.: *See*—
Morgan, John M., Jr., Brown, and Rave. 3,019,377.

Raymond, A.: *See*—
Perrochat, Jean. 3,018,529.

Read, Robert L. Water circulating system for cleaning swimming pools. 3,018,491, 1–30–62, Cl. 4—172.

Red Devil Tools: *See*—
Echikson, Elchanan. 3,018,497.

Reed, James C., ¼ to W. C. Tennesen, ¼ to M. A. Lovik, and ¼ to G. E. La Pore. Particulate material dispenser means. 3,018,924, 1–30–62, Cl. 222—48.

Reed Roller Bit Co.: *See*—
Elliott, Charles H., and Eckman. 3,018,866.
Kucera, Clement M. 3,018 835.
Peter, Robert G., and Kucera. 3,018,836.

Reeve, Richard J.: *See*—
Woodworth, John A., Reeve, and Noah. 3,019,043.

Regina Corp., The: *See*—
Hart, William D. 3,018,504.

Reid, Robert J., and C. E. Best, to The Firestone Tire & Rubber Co. Method of making graft copolymers of vinyl chloride and polyacrylate. 3,419,208, 1–30–62, Cl. 260—45.5.

Reid, Robert J., and W. R. Conard, to The Firestone Tire & Rubber Co. Blend of vinyl chloride polymer and butadiene-vinylidene chloride copolymer. 3,019,209, 1–30–62, Cl. 260—45.5.

Reidelbach, John A., Jr., to Timber Engineering Co. Metal bridging for joists. 3,018,522, 1–30–62, Cl. 20—9.

Reifurth, Hans. Hydraulic shock absorber. 3,019,009, 1–30–62, Cl. 267—64.

Reiners, Walter, and S. Fürst, said Fürst assor to said Reiners. Method and apparatus for automatically sorting and collecting yarn colis for winding or weaving operations. 3,018,888, 1–30–62, Cl. 209—74.

Reinholtz, William H., to General Precision, Inc. Matrix memory. 3,019,420, 1–30–62, Cl. 340—174.1.

Reis, Herbert J., and F. M. Kudo, to Martin-Marietta Corp. Elliptically polarized spiral antenna. 3,019,439, 1–30–62, Cl. 343—853.

Remington Arms Co., Inc.: *See*—
Brooks, John W. 3,018,481.

Remington Rand Inc.: *See*—
Lipkin, Daniel M. 3,019,348.

Ren Plastics, Inc.: *See*—
Renaud, Harold E. 3,018,520.

Renas, Lawrence J.: *See*—
Newcomb, Cyrus B., Jr., and Renas. 3,019,287.

Renaud, Harold E., to Ren Plastics, Inc. Method of molding by spraying molten metal and heat-reactive bonding agent. 3,018,520, 1–30–62, Cl. 18—48.

Renshaw, William G., R. C. Bongartz, and J. M. Belgay, to Allegheny Ludlum Steel Corp. Corrosion test. 3,019,090, 1–30–62, Cl. 23—230.

Rentschler, Karl F., to Alfred Gauthier G.m.b.H. Photographic shutter. 3,018,708, 1–30–62, Cl. 95—18.

Rentschler, Waldemar T., to Alfred Gauthier G.m.b.H. Photographic camera with automatic exposure regulator. 3,018,706, 1–30–62, Cl. 95—10.

Rentschler, Waldemar T., to Alfred Gauthier G.m.b.H. Photographic camera. 3,018,710, 1–30–62, Cl. 95—64.

Research Corp.: *See*—
Hosier, William A., and Puorro. 3,018,956.
Pedersen, Norman E., and Fleischer. 3,019,430.

Reynolds Metals Co.: *See*—
Murphy, Alfred M., Flink, and Wagner. 3,019,144.

Reynolds, Walter F., Jr., and N. T. Woodberry, to American Cyanamid Co. Web-forming fibrous suspensions of improved freeness. 3,019,157, 1–30–62, Cl. 162—168.

Reynolds, William B.: *See*—
Doss, Richard C., and Reynolds. 3,018,619.

Rideout, Walter H.: *See*—
Korach, Malcolm, and Rideout. 3,019,234.

Riebel, Fred, & Co.: *See*—
Riebel, Fred J. 3,018,526.

Riebel, Fred J., to Fred Riebel & Co. Leg support and corner bracket. 3,018,526, 1–30–62, Cl. 20—92.

Riechers, William H. Locking safety device for firearms. 3,018,576, 1–30–62, Cl. 42—1.

Riga, Jean J. L. E.: *See*—
Braconier, Frederic F. A., and Riga. 3,019,271.

Rinaldi, Nicholas, to Scovill Mfg. Co. Pass case binders. 3,018,532, 1–30–62, Cl. 24—153.

Ringe, Carl H.: *See*—
Hegeman, Andrew R., and Ringe. 3,018,727.

Ringold, Howard J.: *See*—
Bowers, Albert, and Ringold. 3,019,240.

Ringold, Howard J., O. Mancera, G. Rosenkranz, and J. Edwards, to Syntex S.A. 6a-bromo pregnane compounds. 3,019,239, 1–30–62, Cl. 260—397.3.

Risch, William E.: *See*—
Grumbles, Samuel C., Risch, and Gillen. 3,018,911.

Rivers, Richard D.: *See*—
Czerwonka, Lawrence J., and Rivers. 3,018,846.

Robb, Frank B., and S. J. Kosik, Jr. Valve stem retainer. 3,018,815, 1–30–62, Cl. 152—427.

Robb, Lester E., to Minnesota Mining and Mfg. Co. Polyblends of a thermoplastic tetrafluoroethylene polymer latex and an elastomeric fluorocarbon polymer latex and article coated therewith. 3,019,206, 1–30–62, Cl. 260—29.6.

Roberson, Cletis L., to Owens-Corning Fiberglas Corp. Method of forming fibers. 3,019,078, 1–30–62, Cl. 18—54.

Roberson, Peggie R. H. Foot measuring device. 3,018,554, 1–30–62, Cl. 33—3.

Robotron Corp.: *See*—
Rockafellow, Stuart C. 3,019,393.

Robson, Harry E., to Esso Research and Engineering Co. Integrated process of ore reduction and gas generation. 3,019,100, 1–30–62, Cl. 75—26.

Rockafellow, Stuart C., to Robotron Corp. Sequential load switching, utilizing discharge timing means. 3,019,393, 1–30–62, Cl. 328—130.

Rodgers, Edward A. Hosiery supporter. 3,018,536, 1–30–62, Cl. 24—243.

Rodriguez, Manuel G. Egg carton with reinforcing and advertising means. 3,018,936, 1–30–62, Cl. 229—1.5.

Rogers, Ezra S., and R. J. Scott, to J. C. Hockery. Wall-type power-operated can opener. 3,018,548, 1–30–62, Cl. 30—4.

Rogers, Howard G.: *See*—
Blout, Elkan R., Green, Rogers, Simon, and Woodward. 3,019,107.

Rogers, Howard G., to Polaroid Corp. Multicolor photosensitive film and process of making the same. 3,019,124, 1–30–62, Cl. 117—8.

Romero, Adolph. Electric writing board. 3,019,425, 1–30–62, Cl. 340—334.

Rooker, William A. Fruit sauce process. 3,019,112, 1–30–62, Cl. 99—154.

Rooker, William A. Fruit sauces. 3,019,113, 1–30–62, Cl. 99—186.

Rookus, James E. 5% to E. H. Daverman. Film projector. 3,018,933, 1–30–62, Cl. 226—76.

Rorig, Kurt J., to G. D. Searle & Co. 4-diphenyl(methyl/hydroxymethyl) -aminoperidines and process. 3,019,228, 1–30–62, Cl. 260—293.

Rosen, Irving: *See*—
Slezak, Frank B., and Rosen. 3,019,160.

Rosen, Irving, and F. B. Slezak, to Diamond Alkali Co. Methods of bleaching with haloglycoluril compositions. 3,019,075, 1–30–62, Cl. 8—108.

Rosen, Norman. Protective bumper device. 3,018,492, 1–30–62, Cl. 5—93.

Rosenblum, Robert A.: *See*—
Hitt, Otis D., Knapp, Johnson, and Rosenblum. 3,018,673.

Rosenheim, Donald E.: *See*—
Walker, Robert M., Anderson, and Rosenheim. 3,018,958.

Rosenkranz, George: *See*—
Ringold, Howard J., Mancera, Rosenkranz, and Edwards. 3,019,239.

Rosenkranz, George, to Syntex, S.A. 17α-methyl-9α-fluoro-Δ⁵-androstene-17β-ol-3-one derivatives. 3,019,246, 1–30–62, Cl. 260—397.45.

Rosi, Fred D., and L. R. Weisberg, to Radio Corp. of America. Method for purifying materials. 3,019,092, 1–30–62, Cl. 23—294.

Ross, Alan, J. S. Eisenmeyer, and I. Rakofsky, to Polarad Electronics Corp. Spectrum analyzer with relative amplitude marker. 3,019,389, 1–30–62, Cl. 324—77.

Ross, William A., to Dura Corp. Adapter adjusting means for vehicle lifts. 3,018,848, 1–30–62, Cl. 187—8.75.

Rotler, Donald J., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,019,382, 1–30–62, Cl. 323—89.

Rottig, Walter: *See*—
Vleistich, Wolf, Rottig, and Spengler. 3,019,088.

Rowe, Robert G. Method and apparatus for damped wave analysis. 3,019,387, 1–30–62, Cl. 324—68.

Royal McBee Corp.: *See*—
Lambert, Harry L., and Page. 3,018,870.

Rubens, Gerald E. Adjustable mounting apparatus. 3,018,774, 1–30–62, Cl. 126—202.

Rudy, Thomas P., to Shell Oil Co. Thermal insulated combustion chambers. 3,019,277, 1–30–62, Cl. 123—191.

Ruhrchemie Aktiengesellschaft: *See*—
Vleistich, Wolf, Rottig, and Spengler. 3,019,088.

Rumsey, Rollin D.: *See*—
Gies, Paul E., and Rumsey. 3,018,854.

Russell, Louis A.: *See*—
Haynes, Munro K., Russell, and Wild. 3,019,419.

Rust, John L., ½ to J. W. Davidson. Device for producing relative motion. 3,018,984, 1–30–62, Cl. 244—17.19.

Rutz, Hans, and R. Huber, to Actiengesellschaft Joh. Jacob Rieter & Cie. Air suction system for removing threads, fly and dust from spinning machines. 3,018,603, 1–30–62, Cl. 57—56.

Saarivirta, Matti J., to American Metal Climax, Inc. Copper-zirconium-hafnium alloys. 3,019,102, 1–30–62, Cl. 75—153.

Sadel, Leo. Eyeglass retaining assembly. 3,018,687, 1–30–62, Cl. 88—52.

Sadler, Harry J.: *See*—
Cook, Ernest E., and Sadler. 3,018,737.

Safeway Stores, Inc.: *See*—
Goldwater, Robert, and Calhoun. 3,019,424.

Salada-Shirriff-Horsey Ltd.: *See*—
Spross, Spencer A. 3,019,111.

Safiarski, Edward F. Combined lavatory accessory and soap dispenser. 3,018,489, 1–30–62, Cl. 4—166.

Sailler, John W., to Chrysler Corp. Engine intake manifold. 3,018,767, 1–30–62, Cl. 123—122.

Saint-Paul, Jean L. R., to Societe Anonyme dite: Pneumatiques et Caoutchouc Manufacture Kleber-Colombes. Tire manufacture. 3,018 814, 1–30–62, Cl. 152—361.

Salitta, Vincent F., and T. W. McConville. Toxic chemicals mask. 3,018,776, 1–30–62, Cl. 128—141.

Sakurai, Setsuji, Y. Konnachiya, and T. Ito, to Ajinomoto Co., Inc. Process for producing synthetic tryptophane. 3,019,232 1–30–62, Cl. 260—319.

Salgado, Tomas N. Apparatus for the continuous spinning and treatment of synthetic filaments. 3,018,514, 1–30–62, Cl. 18—8.

Saltz, Fred, and E. J. Grenchus, to International Business Machines Corp. Wire printer. 3,018,722, 1–30–62, Cl. 101—93.

Sammietro, Achille C. Automobile wheel suspension systems. 3 019,029 1–30–62, Cl. 280—124.

San Gabriel Ready Mixed: *See*—
Bruggmann, John B. 3,018,880.

Sanborn, Jere L., to International Business Machines Corp. Superconductor circuits. 3,019,349, 1–30–62, Cl. 307—88.5.

Sandiford, Burton B., to Union Oil Co. of California. Method for increasing the permeability of subterranean formations. 3,018,826, 1–30–62, Cl. 166—9.

Sanford, Charles A., to The American Paper Products Co. Collator. 3,019,012, 1–30–62, Cl. 270—58

Sarafinas, Bruno A., to United-Carr Fastener Corp. Grounding clip. 3 019,409, 1–30–62, Cl. 339—219.

Saslovsky, Sidney, C. Machover, and E. J. Siff, to United Aircraft Corp. Movable magnetic core force vector summing device. 3,018,965, 1–30–62, Cl 235—189.

Saunders, Charles A. Sling bow. 3,018,770, 1–30–62, Cl. 124—20.

Saunders, Charles E. Catalyst for the decomposition of hydrogen peroxide and method of preparing said catalyst. 3,019,197, 1–30–62, Cl. 252—477.

Sawyer's Inc.: *See*—
Kurz, Karl F. 3,018,686.

Saxe, Douglas M., to Bausch & Lomb Inc. Optical system for electro-optical switching apparatus. 3,018,689, 1–30–62, Cl. 88—57.

Saylor, William H., to United Aircraft Corp. Helical magnetic storage assembly. 3,019,421, 1–30–62, Cl. 340—174.1.

Schaffner, Irwin J.: *See*—
Haxo, Henry E., Barton, and Schaffner. 3,018,812.

Schantz Organ Co.: *See*—
Imhoff, Albert W. 3,018,682.

Scheidig, Helmut: *See*—
Gruber, Helmut, and Scheidig. 3,019,274.

Schelleng, John C., to Bell Telephone Laboratories, Inc. Phase stabilization of circuits which employ a heterodyne method. 3,019,296, 1–30–62, Cl. 179—15.5.

Scheublein, William A., Jr., and J. Dumpis, to Moog Industries, Inc. Adjustable ball joint assembly. 3,019,041, 1–30–62, Cl. 287—87.

Schiffer, Henry C., to The Miller Co. Lighting fixture and connector therefor. 3,019,332, 1–30–62, Cl. 240—9.

Schindler, Carl, to McGraw-Edison Co. Electromagnetic vibratory pump. 3,018,735, 1–30–62, Cl. 103—53.

Schlegel, Werner. Window. 3,018,524, 1–30–62, Cl. 20—40.

Schlohlein, Fritz: *See*—
Krohs, Alfred, and Schlohlein. 3 019,364.

Schmerling, Louis, to Universal Oil Products Co. Polymerization of olefins into polymers of high melting point. 3,019,216, 1–30–62, Cl. 260—94.9.

Schmid, Christoph W., to Deutsche Erdol-Aktiengesellschaft. Method of and apparatus for flooding sample cores taken from oil-bearing rock strata. 3,018,660, 1–30–62, Cl. 73—153.

Schmidt, Lyle L. V., to General Motors Corp. Washing machine with drain pump having means to reduce the power requirements of the pump when operating at high speed. 3,018,650, 1–30–62, Cl. 68—23.

Schmiedel, Ludwig, to Starcosa Machinen- und Apparatebau G.m.b.H. Device for floating up and washing out of ground products or materials. 3,018,895, 1–30–62, Cl. 210—374.

Schneider, Alexander W.: *See*—
Whiting, Edwin F., and Schneider. 3,019,238.

Schneider, George W., Jr., to Roy Milton Co. Pneumatic programming system for colorimetric analyzers. 3,019,091, 1–30–62, Cl. 23—253.

Schnell, Carl, ¼ to The Griffith Laboratories, Inc. Comminuting machine. 3,019,067, 1–30–62, Cl. 308—189.

Schnider, Otto: *See*—
Hinderling, Rudolf, Lutz, and Schnider. 3,019,230.

Schoen, Geza E., Jr., and J. J. Leavitt, to American Cyanamid Co. Styryl-bisbenzimidazole brighteners. 3,019,221, 1–30–62, Cl. 260—240.

Schomers, William H. Track mechanism for vehicles. 3,019,061, 1–30–62, Cl. 305—32.

Schrader, Gerhard: *See*—
Kayser, Heinrich, Lorenz, and Schrader. 3,019,250.

Schreiner, Max, Jr., and P. W. Snyder, Jr., to Socony Mobil Oil Co., Inc. Conversion of high boiling hydrocarbons. 3,019,180, 1–30–62, Cl. 208—51.

Schroeder, Walter, and A. H. Dall, to The Cincinnati Milling Machine Co. Counterbalance control device. 3,018,697, 1–30–62, Cl. 90—16.

Schuler, Norman W.: *See*—
Haas, Howard C., and Schuler. 3,019,131.

Schüler, Werner. Convertible garment of pile material. 3,018,485, 1–30–62, Cl. 2—70.

Schurich, Herbert. Flat hand knitting machine with a detachable auxiliary needle bed. 3,018,644, 1–30–62, Cl. 66—64.

Schwenzfeger, Edward E., to Bell Telephone Laboratories, Inc. Selection circuit. 3,019,293, 1–30–62, Cl. 178—26.

Schwing, Roger, to Garlock Inc. Cooled sealing assembly. 3 019,026, 1–30–62, Cl. 277—16.

Scott, James A.: *See*—
Cerwin, Frank J., and Scott. 3,018,700.

Scott, Robert J.: *See*—
Rogers, Ezra S., and Scott. 3,018,548.

Scovill Mfg. Co.: *See*—
Huelster, Otto J. 3,018,534.
Rinaldi, Nicholas. 3,018,532.

Seagram, Joseph E., & Sons, Inc: *See*—
Unger, Earl D. 3,018,910.

Sealed Air Corp.: *See*—
Chavannes, Marc A. 3,018,540.

Searight, Charles E., to Cataphote Corp. Stripe applicator for pavements. 3,018,704, 1–30–62, Cl. 94—44.

Searle, G. D., & Co.: *See*—
Chinn, Leland J. 3,019,233.
Rorig, Kurt J. 3,019,228.

Seidman, Jay J., and J. R. Cornell, to The National Cash Register Co. Optical device and system. 3,019,344, 1–30–62, Cl. 250—208.

Seismograph Service Corp.: *See*—
Hammond, Joseph W. 3,018,838.
Wilson, Robert C., and Puchaty. 3,019,435.

Sekizawa, Yasuharu: *See*—
Arishima, Masao, and Sekizawa. 3,019,173.

Semoes, John J. Cultivator. 3,018,833, 1–30–62, Cl. 172—159.

Serviced Products Corp.: *See*—
Fujihara, Yoshiki. 3,018,703.

Servo Corp. of America: *See*—
Willey, Frank G., and Westover. 3,018,555.

Shafer, Wayne A., Jr.: *See*—
Phillips, Harry, Maciejowski, Shafer, Tucker, and Fuller. 3,018,594.

Shakespeare Co.: *See*—
Clickner, Earle D. 3,018,979.

Shar Dispersion Equipment Co., Inc.: *See*—
Hoffman, Harold J. 3,018,666.

Sheers, Edward H., to American Cyanamid Co. Deodorization of cyanuric chloride. 3,019,223, 1–30–62, Cl. 260—248.

Shell Oil Co.: *See*—
Channugam, Jayarajan. 3,019,182.
Channugam, Jayarajan. 3,019,199.
Rudy, Thomas P. 3,019,277.

Sherbeck, Leander A.: *See*—
Hoffman, Henry A., Jr., and Sherbeck. 3,019,119.

Sherfey, Joseph M.: *See*—
Brenner, Abner, and Sherfey. 3,019,174.

Sherman, George R., to General Electric Co. Dual axis oven door structure. 3,018,509, 1–30–62, Cl. 16—147.

Sherman, Harvey: *See*—
Bauer, Benjamin B., and Sherman. 3,019,303.

Sherrill, Price E., and C. E. Moss, to The Firestone Tire & Rubber Co. Textile lubricating apparatus. 3,018,605, 1–30–62, Cl. 57—120.

Siegler Corp., The: *See*—
Aalund, Thomas K., and Sullivan. 3,019,301.

Siemens & Halske Aktiengesellschaft, Berlin & Munich: *See*—
Geyer, Hans, and Fischer. 3,019,375.
Kraust, Rudolf, and Strobelt. 3,019,298.

Sierhuis, Paul J. C. Alarm repeating mechanism for an alarm clock. 3,018,612, 1–30–62, Cl. 58—21.12.

Siff, Elliott J.: *See*—
Saslovsky, Sidney, Machover and Siff. 3,018,965.

Siggel, Erhard: *See*—
Kleekamm, Fritz, and Siggel. 3,018,608.

Signal Mfg. Co.: *See*—
Smith, Aaron H. 3,019,042.

Signal-Stat Corp.: *See*—
Welsh, James W. 3,019,318.

Simon, Myron S.: *See*—
Blout, Elkan R., Green, Rogers, Simon, and Woodward. 3,019,107.

Singer Mfg. Co., The: *See*—
Hacklander, Hans. 3,018,744.
Johnson, Ralph E. 3,018,743.

Sippach, Frederick W.: *See*—
Gill, Joseph, and Sippach. 3,019,416.

Skallquist, Karl S. A., to Dagens Nyheters Aktiebolag. Driving mandrel for rolls of paper in printing and similar machines. 3,018,977, 1–30–62, Cl. 242—72.

Slater Electric Inc.: *See*—
Slater, Saul I. 3,019,406.

Slater, Saul I., to Slater Electric Inc. Wiring device with wire gripping electrical connector. 3,019,406, 1–30–62, Cl. 339—95.

Slayter, Games, to Owens-Corning Fiberglas Corp. Damping pad. 3,018,991, 1–30–62, Cl. 248—22.

Slezak, Frank B.: *See*—
Rosen, Irving, and Slezak. 3,019,075.

Slezak, Frank B., and I. Rosen, to Diamond Alkali Co. Haloglycoluril bactericidal compositions for disinfecting and bleaching. 3,019,160, 1–30–62, Cl. 167—33.

Slobodzinski, Edwin J.: *See*—
Pomerene, James H., and Slobodzinski. 3,019,351.

Smiley, William D., to Union Carbide Corp. Coated carbonaceous articles. 3,019,128, 1–30–62, Cl. 117—71.

Smith, Aaron H., to Signal Mfg. Co. Coupling element. 3,019,042, 1–30–62, Cl. 287—108.

Smith Kline & French Laboratories: *See*—
Georgian, Vlasios, and Kerwin. 3,019,236.
Georgian, Vlasios, Kerwin, and Wolff. 3,019,235.

Smith, Lester L., to Automatic Electric Laboratories, Inc. Switching selector repeater. 3,019,299, 1–30–62, Cl. 179—18.

Smith, Reggie: *See*—
Bury, Harry, Claydon, and Smith. 3,018,631.

Smith, Robert S.: *See*—
Eggenberger, John S., Lloyd, and Smith. 3,019,123.

Snead, June L. Diaper cleansing water closet. 3,018,488, 1–30–62, Cl. 4—1.

Sneddon, Thomas, to Clyde Paper Co. Ltd. Manufacture of plastic sheets. 3,018,515, 1–30–62, Cl. 18—12.

Snyder, Francis H., to Francis H. Snyder and Associates, Inc. Decorative laminates. 3,019,155, 1–30–62, Cl. 162—149.

Snyder, Francis H., and Associates, Inc.: *See*—
Snyder, Francis H. 3,019,155.

Snyder, Merton P., and L. W. Foster, to McCulloch Corp., Marine Products Division. Outboard motor. 3,018,754, 1–30–62, Cl. 115—18.

Snyder, Paul W., Jr.: *See*—
Schreiner, Max, Jr., and Snyder. 3,019,180.

Societe Anonyme dite: Pneumatiques et Caoutchouc Manufacture Kleber-Colombes: *See*—
Saint-Paul, Jean L. R. 3,018,814.

Societe Anonyme pour l'Exploitation de Brevets d'Appareils Electroniques Codelec: *See*—
Dubonnet, André. 3,018,652.

Societe Belge de l'Azote et des Produits Chimiques du Marly: *See*—
Braconier, Frederic F. A., and Riga. 3,019,271.

Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieres Electriques d'Ugine: *See*—

Societe d'Electronique et d'Autonmatisme: *See*—
Haniet, Jacques M. N. 3,019,137.
Cogniat, Marcel. 3,018,655.

Societe d'Etudes pour le Stockage et le Transport sous-marins des Fluides (S.O.M.A.F.): *See*—
Denis, Louis, Wolff, and Brocard. 3,018,748.

Societe d'Etudes pour le Traitement et l'Utilisation des Eaux-S.E.T.U.D.E.: *See*—
Gomella, Cyril. 3,019,183.

Societe Industrielle de Mecanique et Carrosserie Automobile-Simca: *See*—
Marchetti, Carlo. 3,019,030.

Societe Industrielle Generale de Mecanique Appliquee S.I.G.M.A.: *See*—
Pomper, Victor. 3,018,628.

Societe Nationale d'Etude et de Moteurs d'Aviation: *See*—
Ernst, Günther, and Eggers. 3,018,988.

Socony Mobil Oil Co., Inc.: *See*—
Cook, Evin L. 3,018,834.
Holzinger, Rudolph J. 3,019,190.
Schreiner, Max, Jr., and Snyder. 3,019,180.

Sohn, John P., to Arvin Industries, Inc. Electric heater. 3,019,324, 1–30–62, Cl. 219—34.

Somvillé, Charles A., to A.V.R., Achat, Ventes, Representations, Societe Anonyme. Device for assembling and/or fixing elements of metal frames. 3,018,861, 1–30–62, Cl. 189—36.

Sorrell, Ray T., to United States of America, Navy. Projectile anchors and anchoring emplacing devices. 3,018,152, 1–30–62, Cl. 114—206.

Southwestern Illinois Coal Corp.: *See*—
Bridges, Raymond H., and Alexander. 3,018,563.

Spaeth, Irvin J., to American Seal-Kap Corp. of Delaware. Railway brake beam support chair structure. 3,018,855, 1–30–62, Cl. 188—210.

Sparks, Thomas, to Monroe Calculating Machine Co. Register selection control devices. 3,018,949, 1–30–62, Cl. 235—60.

Spaulding, Carl P., and W. S. Duncan, to Datex Corp. Shaft position encoder. 3,019,427, 1–30–62, Cl. 340—347.

Spee-Flo Mfg. Corp., The: *See*—
Levey, Gustave S. 3,018,968.

Speh, Herman A.: *See*—
Heddendorf, George B., and Speh. 3,018,887.

Spencer Chemical Co.: *See*—
Francis, William C. 3,019,218.

Spengler, Herbert: *See*—
Vielstich, Wolf, Rottig, and Spengler. 3,019,088.

Sperry Rand Corp.: *See*—
Barker, Joseph W. 3,018,871.

Spielberger, Seymour C.: *See*—
Fastenau, Frederick H., and Spielberger. 3,019,404.

Spielman, James F., to Aerotec Industries, Inc. Aircraft seats and aircraft seating. 3,019,050, 1–30–62, Cl. 297—217.

Spielman, Warren L. Can opener. 3,018,549, 1–30–62, Cl. 30—4.

Spietz, Frederick C., to Chrysler Corp. Belt tightener. 3,018,667, 1–30–62, Cl. 74—242.9.

Spindle Specialty Co.: *See*—
Lindsay, Maurice E. 3,018,600.

Spires, Krell E., Jr.: *See*—
Barbulesco, Daniel J., McCormick, and Spires. 3,018,649.

Spray, Claude L. Process of treating the raw juice of agave plant leaves. 3,019,193, 1–30–62, Cl. 252—87.

Springer, Albert L. Mechanical liner hanger. 3,018,830, 1–30–62, Cl. 166—124.

Sprous, Spencer A., to Salada-Shirriff-Horsey Ltd. Marmalade base and process for its preparation. 3,019,111, 1–30–62, Cl. 99—129.

Spurlock, A. D. Electrical boat bail device. 3,018,751, 1–30–62, Cl. 114—197.

Squire, Herbert D., to Admiral Corp. Sheet metal nut having depressed oval opening providing thread means. 3,018,085, 1–30–62, Cl. 85—36.

Stahly, John M. Side delivery dump cart. 3,019,054, 1–30–62, Cl. 298—18.

Stalker Corp., The: *See*—
Clarke, Daniel J., and Stalker. 3,018,542.

Stalker, Edward A.: *See*—
Clarke, Daniel J., and Stalker. 3,018,542.

Stanger, Walter E., to General Electric Co. Retractable flange coupling unit. 3,019,036, 1–30–62, Cl. 285—18.

Stanly, Henry J., to Metalwash Machinery Co. Spraying booth. 3,018,847, 1–30–62, Cl. 183—22.

Stanton, George E., to The Bendix Corp. Combination retracting mechanism and wear indicator. 3,018,852, 1–30–62, Cl. 188—72.

Stangel, Victor. Remotely powered propulsion and control mechanism for model aircraft. 3,018,585, 1–30–62, Cl. 46—77.

Stapling Machines Co.: *See*—
Voorhees, Thomas L. 3,018,482.

Starcher, Paul S.: *See*—
Tinsley, Samuel W., Starcher, McGary, and Patrick. 3,019,202.

Starcosa Machinen- und Apparatebau G.m.b.H.: *See*—
Schmiedel, Ludwig. 3,018,895.

Starr, Harry E.: *See*—
Arnett, Samuel E., and Starr. 3,018,621.

Steatite Research Corp.: *See*—
Albers-Schoenberg, Ernst. 3,019,189.

Steinhard, Bertram H.: *See*—
Decker, Jacob, and Steinhard. 3,018,590.

Steinhofer, Adolf, E. Barthoiome, O. Frey, and H. Nonnemacher, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Process of thermally cracking a petroleum oil. 3,019,272, 1–30–62, Cl. 260—683.

Steinmetz, Walter C., to The Jeffrey Mfg. Co. Materials reducing apparatus. 3,018,972, 1–30–62, Cl. 241—41.

Stenning, Luis C., to The General Electric Co. Ltd. Radio navigation systems. 3,019,436, 1–30–62, Cl. 343—105.

Step, Francis E.: *See*—
Litteral, Silas, and Step. 3,018,862.

Stephenson, Kenneth: *See*—
Gee, Eric, Gudgeon, and Stephenson. 3,019,200.

Sterling Drug Inc.: *See*—
Klumpp, Theodore G., Wolff, and Kaplan. 3,019,169.

Stevens, Horace D., to The Firestone Tire & Rubber Co. Fabric edge turning device. 3,018,820, 1–30–62, Cl. 156—405.

Stites, Loren H. Switch. 3,019,313, 1–30–62, Cl. 200—87.

Stolle Corp., The: *See*—
Beck, Edward G. 3,018,543.

Storage Products Corp.: *See*—
Litteral, Silas, and Step. 3,018,862.

Stratton, James L. Safety brake valve. 3,018,786, 1–30–62, Cl. 137—118.

Strobelt, Walter: *See*—
Kraust, Rudolf, and Strobelt. 3,019,298.

Struben, Francis L., ½ to J. C. Struben. Interlocking extrusions. 3,018,859, 1–30–62, Cl. 189—34.

Struben, Jean C.: *See*—
Struben, Francis L. 3,018,859.

Sturtevant, Mark J., to Chrysler Corp. Window assembly construction. 3,019,048, 1–30–62, Cl. 296—44.

Sullivan, Herbert: *See*—
Aalund, Thomas K., and Sullivan. 3,019,301.

Sullivan, Jack O.: *See*—
Klages, Christian L., and Sullivan. 3,018,675.

Sumitomo Electric Industries, Ltd.: *See*—
Takada, Mitsuru. 3,019,280.

Sunset Equipment Co.: *See*—
Larson, Carl V. 3,018,915.

Swanson, Edwin C., to Greenlee Bros. & Co. Pipe bender. 3,018,818, 1–30–62, Cl. 153—48.

Sweeny, Norman P.: *See*—
Blue, Robert D., Sweeny, and Neipert. 3,019,279.

Sweet, Adwin B.: *See*—
Malunowe, Edward W., and Sweet. 3,018,904.

Sweger, Theodore J., to Illinois Railway Equipment Co. Journal box construction for railway cars. 3,019,064, 1–30–62, Cl. 308—238.

Sykes, Clarke C.: *See*—
De Coriolis, Ernest G., Pierre, and Sykes. 3,019,007.

Sylvania Electric Products Inc.: *See*—
Barre, Wade E., and Clarkson. 3,018,575.
De Poy, Martin L., II, Pattan, and Lucy. 3,019,431.
Hasselman, Herbert P. 3,018,803.
Hees, George W. 3,019,360.
Lewis, Floyd V. 3,019,391.

Symington-Wayne Corp.: *See*—
Hosbein, Hugh W. 3,018,495.
Hosbein, Hugh W. 3,018,496.

Syntex, S.A.: *See*—
Bowers, Albert, and Ringold. 3,019,240.
Ringold, Howard J., Mancera, Rosenkranz, and Edwards. 3,019,239.
Rosenkranz, George. 3,019,246.

Takada, Mitsuru, to Sumitomo Electric Industries, Ltd. Pressure type oil feeding tank for oil filled cables and oil filled electrical machines and appliances. 3,019,280, 1–30–62, C. 174—12.

Takats, Zoltan, and C. H. Jacobson, to General Aniline & Film Corp. Camera film feeding, cutting and storing apparatus. 3,018,709, 1–30–62, Cl. 95—31.

Tapper, Samuel. Containers with slide covers. 3,018,918, 1–30–62, Cl. 220—41.

Tate, Herbert L. Dust bathing apparatus. 3,018,760, 1–30–62, Cl. 119—159.

Taugner, Jack W.: *See*—
Ostline, John E., Coleman, and Taugner. 3,019,295.

Taylor, Alton R., to Parke, Davis & Co. Heat and ultraviolet light attenuation of polio virus. 3,019,168, 1–30–62, Cl. 167—78.

Taylor, Walter E.: *See*—
Thomas, Thomas G., Taylor, and Embree. 3,018,853.

Taylor, William E., and C. J. Kevane, to Motorola, Inc. Diffused base transistor and method of making same. 3,018,539, 1–30–62, Cl. 29—25.3.

Technical Wire Products, Inc.: *See*—
Hartwell, Ralf L. 3,019,281.

Telex, Inc.: *See*—
Daniels, Howard L. 3,019,323.

Tennessen, William C.: *See*—
Reed, James C. 3,018,924.

Tennessee Valley Authority: *See*—
Walters, Henry K., Jr. 3,019,099.

Tepolt, Florian E., and D. B. Heaslip, to The Bendix Corp. Electronic timer. 3,019,356, 1–30–62, Cl. 307—132.

Terra Industries, Inc.: *See*—
Blazey, Lawrence E. 3,018,772.

Texas Instruments Inc.: *See*—
Jones, Hal J., and Morrison. 3,018,962.

Textile Machine Works: *See*—
Levin, Nathan. 3,018,647.

Textor, Hans D.: *See*—
Prang, Peter, and Textor. 3,019,095.

Thayer, Jean M.: *See*—
Fearon, Robert E., and Thayer. 3,019,337

Thermo-Craft Corp.: *See*—
Fischer, Harry C. 3,019,278.

Thielen, Jean B.: *See*—
Andersen, Donald L., and Thielen. 3,019,196.

Thomas & Betts Co., The: *See*—
Logan, Maurus C., and Crimmins. 3,019,410.

Thomas, Thomas G., W. E. Taylor, and T. Embree, to General Motors Corp. Fluid cooled vehicle drum brake. 3,018,853, 1–30–62, Cl. 188—78.

Thomas, Walker H., to International Business Machines Corp. Computing device. 3,018,959, 1–30–62, Cl. 235—167.

Thompson, Alfred L.: *See*—
Arnold, Nicholas H., and Thompson. 3,019,011.

Thompson, Howard H., to FMC Corp. Engine starting apparatus. 3,018,768, 1–30–62, Cl. 123—185.

Thorbrogger, Holger H., to American Telephone and Telegraph Co. Signal timing circuit. 3,019,388, 1–30–62, Cl. 324—68.

Timber Engineering Co.: *See*—
Reidelbach, John A., Jr. 3,018,522.

Time Stop, Inc.: *See*—
Minton, Warren B., Bryan, and Van Gorden. 3,018,615.

Timmis, Thomas W.: *See*—
Barth, Victor C., and Timmis. 3,019,069.

Tinsley, Samuel W., P. S. Starcher, C. W. McGary, Jr., and C. T. Patrick, Jr., to Union Carbide Corp. Diepoxy sulfone compositions. 3,019,202, 1–30–62, Cl. 260—18.

Thornton-Trump, Walter E. Mobile power-operated bin handling and transporting vehicle. 3,018,905, 1–30–62, Cl. 214—390.

Tischler, Morris, to Electronic Aids, Inc. Electronic plastic block arrangement. 3,018,568, 1–30–62, Cl. 35—19.

Todtenhöfer, Horst, to Augusta-Zunder Feuerzeugfabrik Mayer & Co. Gas lighter. 3,018,648, 1–30–62, Cl. 67—7.1.

Tognola, Tullio, to The Bendix Corp. Ignition means for ammunition primer or the like. 3,018,732, 1–30–62, Cl. 102—70.2.

Tolaas, William M., and A. H. Durand, to Waldorf Paper Products Co. Product encircling band. 3,018,938, 1–30–62, Cl. 229—40.

Touchman, William S.: *See*—
Harruff, Ray W., and Touchman. 3,018,947.

Trautman, Leonard H., to Aluminum Co. of America. Extrusion and stretch-straightening apparatus and method. 3,018,885, 1–30–62, Cl. 207—1.

Trenner, Nelson R.: *See*—
Jacob, Theodore A., and Trenner. 3,019,087.

Trico Products Corp.: *See*—
Oishei, John R. 3,018,501.

Tucker, Robert D.: *See*—
Phillips, Harry, Maciejowski, Shafer, Tucker, and Fuller. 3,018,594.

Tyler, Tracy B., and A. F. Alders. Body cavity evacuating apparatus. 3,018,779, 1–30–62, Cl. 128—278.

Tyskewicz, John P.: *See*—
Bourne, Roland B., and Tyskewicz. 3,018,840.

Tyson, Raymond K.: *See*—
Tyson, Raymond K. 3,018,783.

Tyson, Raymond K., to R. K. Tyson. Collapsible shelter device. 3,018,783, 1–30–62, Cl. 135—5.

Unger, Earl D., to Joseph E. Seagram & Sons, Inc. Nonrefillable pouring device for bottles. 3,018,910, 1–30–62, Cl. 215—22.

Union Asbestos & Rubber Co.: *See*—
Loomis, Russell M., Kuellmar, and Lundvall. 3,018,741.

Union Carbide Corp.: *See*—
Carey, Robert J., and Walter. 3,019,077.
Dunn, Jesse T. 3,019,256.
Fekete, Frank. 3,019,248.
Ferguson, Joe S. 3,018,882.
Patrick, Charles T., Jr., and McGary. 3,019,203.
Smiley, William D. 3,019,128.
Tinsley, Samuel W., Starcher, McGary, and Patrick. 3,019,202.

Union Oil Co. of California: *See*—
Sandiford, Burton B. 3,018,826.

United Aircraft Corp.: *See*—
Gilbert, Jack. 3,019,426.
Kamm, Lawrence J. 3,019,403.
Meyer, Robert E. 3,018,620.
Saslowsky, Sidney, Machover, and Siff. 3,018,965.
Saylor, William H. 3,019,421.

United-Carr Fastener Corp.: *See*—
Coyle, William J. 3,019,008.
Griffin, Theodore R. 3,018,535.
Jones, Walter I. 3,019,152.
Pender, Lloyd G., Sr. 3,018,530.
Sarafinas, Bruno A. 3,019,409.

United Electric Controls Co.: *See*—
Leupold, Henry G. 3,019,312.

United Engineers & Constructors Inc. *See*—
Milbourne, Charles G. 3,019,096.

United Nuclear Corp.: *See*—
Lapat, Philip E., Gordon, and Holden. 3,019,139.

United Shoe Machinery Corp.: *See*—
Kilham, Charles O. 3,018,756.
Patten, Harry B. 3,018,693.

United States of America
Agriculture: *See*—
Pardo, Clay E., Jr., and O'Connell. 3,019,076.
Weaver, Elmer A. 3,019,170.
Air Force: *See*—
Franklin, Truman L., and Williams. 3,018,553.
Haley, James C. 3,018,653.
John, Frank T. 3,019 292.
Johnson, Francis M. 3,018,733.
Johnston, Sidney F., Jr. 3,019,432.
MacMillan, Raymond A. 3,019,390.
White, Stanley B. 3,019,433.
Army: *See*—
Brenner, Abner, and Sherfey. 3,019,174.
Dunn, Donald A. 3,019,366.
Garver, Robert V. 3,019,400.
Gordon, Saul, and Campbell. 3,018,654.
Hoadley, George B. 3,019,437.
Atomic Energy Commision: *See*—
Goertz, Raymond C., and Lindberg. 3,018,980.
Navy: *See*—
Davis, Benjamin L., and Nyberg. 3,019,150.
Feinstein, Jack. 3,019,024.
Hencock, William J., Jr. 3,019,392.
Merkin, Eugene. 3,018,691.
Sorrell, Ray T. 3,018,752.
Wesley, Edward J. 3,019,339.

United States Rubber Co.: *See*—
Haxo, Henry E., Barton, and Schaffner. 3,018,812.

United States Steel Corp.: *See*—
Bartholomew, George A. 3,019,126.
Cerwin, Frank J., and Scott. 3,018,700.
Dunlop, George E. 3,018,663.
Yevick, George. 3,018,657.

Universal Controls, Inc.: *See*—
Antonoff, Walter. 3,018,868.

Universal-Oil Products Co.: *See*—
Schmerling, Louis. 3,019,216.

Uphoff, Russel L.: *See*—
McCreanor, Richard A., and Uphoff. 3,018,656.

Upjohn Co., The: *See*—
Babcock, John C., and Wechter. 3,019,244.
Fonken, Gunther S. 3,019,243.
Pederson, Raymond L., and Babcock. 3,019,237.
Wechter, William J. 3,019,242.
Whiting, Edwin F., and Schneider. 3,019,238.

Utlin, George, to Buchanan Electrical Products Corp. Electric terminal block assembly of the stud type. 3,019,408, 1–30–62, Cl. 339—198.

VEB Carl Zeiss: *See*—
Krohs, Alfred, and Schlohlein. 3,019,364.

Vacu-Dry Co.: *See*—
Dorsey, William R., and Kalbaugh. 3,018,559.

Vandale Corp.: *See*—
Van Dusen, Frederick E. 3,019,005.

Van Dusen, Frederick E., to Vandale Corp. Conveying means. 3,019,005, 1–30–62, Cl. 262—19.

Van Gorden, Harry J.: *See*—
Minton, Warren B., Bryan, and Van Gorden. 3,018,615.

Varian Associates: *See*—
Varian, Russell H. 3,019,383.
Zaphiropoulos, Renn. 3,018,944.

Varian, Russell H., to Varian Associates. Ground liquid prospecting method and apparatus. 3,019,383, 1–30–62, Cl. 324—5.

Vasselin, John F., to H. E. Fletcher Co. Method and apparatus for flame cutting mineral bodies and other material. 3,019,004, 1–30–62, Cl. 262—3.

Vastano, Joseph J.: *See*—
Obst, Charles J. 3,018,929.

Vereinigte Glanzstoff-Fabriken A.G.: *See*—
Kleekamm, Fritz, and Siggel. 3,018,608.

Verschoyl, L. R., to International Milling Co. Programming calculator. 3,018,950, 1–30–62, Cl. 235—61.

Vertimax Ltd.: *See*—
Anderson, James. 3,018,629.

Vietetich, Wolf, W. Rottig, and H. Spengler, to Ruhrchemie Aktiengesellschaft. Process for producing heavy water. 3,019,088, 1–30–62, Cl. 23—204.

Vincent, George C., to Imperial Chemical Industries Ltd. Process for the production of alumina. 3,019,080, 1–30–62, Cl. 23—143.

Voight, Woldemar, to Martin-Marietta Corp. Swept wing with unswept spar. 3,018,985, 1–30–62, Cl. 244—46.

Volkmann, Willy B., and E. F. Hartzell, deceased (C. Hartzell, administratrix). Water surge arrester. 3,018,799, 1–30–62, Cl. 138—26.

Voorhees, Thomas L., to Stapling Machines Co. Control mechism for wirebound box-making machines. 3,018,482, 1–30–62, Cl. 1—147.

Wang, Harry O., and R. C. Davis, to General Motors Corp. Freezing device. 3,018,636, 1–30–62, Cl. 62—135.

Wacker, Robert J., to Minneapolis-Honeywell Regulator Co. Control system for a room closing air curtain. 3,018,712, 1–30–62, Cl. 98—36.

Wagaman, Merle L., to Fibreboard Paper Products Corp. Carton closure flap construction. 3,018,941, 1–30–62, Cl. 229—51.

Wagner, Nicholas A.: *See*—
Murphy, Alfred M., Filak, and Wagner. 3,019,144.

Wahl, Frederick W.: *See*—
Cobaugh, Robert F., and Wahl. 3,018,816.

Wainwright, Carlyle H., to The Beatley Engineering Co. Ltd. Feeding attachments for circular knitting machines. 3,018,646, 1–30–62, Cl. 66—140.

Waldorf Paper Products Co.: *See*—
Tolaas, William M., and Durand. 3,018,938.

Walker, Robert M., A. G. Anderson, and D. E. Rosenheim, to International Business Machines Corp. Very high frequency computing circuit. 3,018,958, 1–30–62, Cl. 235—164.

Wall, Thomas H., to Minnesota Mining and Mfg. Co. Adhesive bandage package unit. 3,018,881, 1–30–62, Cl. 206—56.

Wallen, Alphonse R., to Dearborn Chemical Co. Composition for anti-corrosion coating and method of preparing same. 3,019,118, 1–30–62, Cl. 106—123.

Walsh, Arthur G., to National Research Corp. Apparatus and process for coating. 3,019,129, 1–30–62, Cl. 117—101.

Walsh, Raymond A.: *See*—
Long, Carl O. 3,018,588.

Walter, Andrew T.: *See*—
Carey, Robert J., and Walter. 3,019,077.

Walters, Henry K., Jr., to Tennessee Valley Authority. Manufacture of fluid fertilizer from wet-process phosphoric acid. 3,019,099, 1–30–62, Cl. 71—34.

Ward, C. E., Co., The: *See*—
O'Reilly, Edward J. 3,018,487.

Ward, Paul S. Apparatus for proofing and baking bread. 3,018,742, 1–30–62, Cl. 107—55.

Ward, Robert L., to International Business Machines Corp. Arithmetic switching circuit. 3,018,061, 1–30–62, Cl. 235—176.

Washburn, John M., to The Merrow Machine Co. Sewing machine feed mechanism. 3,018,745, 1–30–62, Cl. 112—209.

Wasserman, Bernard H. Finger brush. 3,018,498, 1–30–62, Cl. 15—167.

Watkins, Joel D.: *See*—
Peppel, William J., and Watkins. 3,019,231.

Watkins, Richard E. Cigarette package. 3,018,878, 1–30–62, Cl. 206—41.2.

Watson, Frank P., to Mipro Metal Products Co. Receptacles with swinging door on the top. 3,018,719, 1–30–62, Cl. 100—265.

Watton Engineering Co. Ltd.: *See*—
O'Brien, Rory M. 3,018,556.

Way, Frederick L., to Mobilcolor, Inc. Audio signal-responsive device. 3,018,683, 1–30–62, Cl. 84—464.

Wayne, Harry A. Moisture indicating device. 3,019,384, 1–30–62, Cl. 324—29.

Weaver, Elmer A., to United States of America, Agriculture. Method of increasing microbial activities. 3,019,170, 1–30–62, Cl. 195—51.

Webcor, Inc.: *See*—
Braski, Raymond J., and Krause. 3,019,320.

Weber, Carl, to Automatic Canteen Co. of America. Storage and vending apparatus. 3,018,920, 1–30–62, Cl. 221—90.

Webster, Milo E., to Otto Bernz Co., Inc. Pressure container construction. 3,018,914, 1–30–62, Cl. 220—3.

Wechter, William J.: *See*—
Babcock, John C., and Wechter. 3,019,244.

Wechter, William J., to The Upjohn Co. 3,20-dioximes of 11-hydroxy-progesterones. 3,019,242, 1–30–62, Cl. 260—397.5.

Wegener, Edward F. and T. H.. Towing devices. 3,019,033, 1–30–62, Cl. 280—482.

Wegener, Thure H.: *See*—
Wegener, Edward F. and T. H. 3,019,033.

Weisberg, Leonard R.: *See*—
Rosi, Fred D., and Weisberg. 3,019,092.

Weiss, Erwin, to Beltone Hearing Aid Co. Electroacoustic transducers. 3,019,304, 1–30–62, Cl. 179—114.

Weiss, Erwin M., to Beltone Hearing Aid Co. Transducer suspension. 3,019,306, 1–30–62, Cl. 179—146.

Weiss, Erwin M., to Beltone Hearing Aid Co. Artificial mastoid. 3,019,307, 1–30–62, Cl. 179—175.1.

Weiss, Saul G. Articulator. 3,018,551, 1–30–62, Cl. 32—32.

Weitz, Hans-Martin: *See*—
Kroeper, Hugo, Weitz, and Platz. 3,019,215.

Welch, Lewis W., and A. F. Millington, to Novi Equipment Co. Duct structure. 3,018,711, 1–30–62, Cl. 98—2.

Well Surveys, Inc.: *See*—
Fearon, Robert E., and Thayer. 3,019,337.
Hearn, Daniel P. 3,019,395.
Monaghan, Ralph. 3,019,341.
Monaghan, Ralph, Wilson, and Knapp. 3,019,338.
Peterson, Glen. 3,019,414.
Youmans, Arthur H., and Hubbard. 3,019,340.

Weller, Royal. Guidance control for missile. 3,018,981, 1–30–62, Cl. 244—14.

Wellman, Carl E., Jr., to General Electric Co. Electrical delay line. 3,019,398, 1–30–62, Cl. 333—31.

Wells, Earl P., to Industrial Refrigeration Co., Inc. High vacuum system. 3,018,561, 1–30–62, Cl. 34—51.

Wells, Robert C.: *See*—
Clancy, John J., Rafferty, and Wells. 3,019,201.

Welmaid Products Inc.: *See*—
Groo, Arthur L. 3,018,899.

Welsh, James W., to Signal-Stat Corp. Pull ribbon for snap action vane switch. 3,019,318, 1–30–62, Cl. 200—122.

Weltronic Co.: *See*—
Zeller, Richard S. 3,019,329.

Wendell, Olaf B.: *See*—
Wheeler, Walter G., and Wendell. 3,018,817.

Wenzel, Alfred, to Gebruder Weiger. Baler and straw cutter for harvester thresher. 3,018,718, 1–30–62, Cl. 100—103.

Werts, Wayne E., to The Bendix Corp. Control apparatus. 3,018,622, 1–30–62, Cl. 60—39.28.

Wertwijn, George, to Zenith Radio Corp. Tetrode transistor circuit. 3,019,352, 1–30–62, Cl. 307—88.5.

Wesley, Edward J., to United States of America, Navy. Radiac alarm dosimeter. 3,019,339, 1–30–62, Cl. 250—83.6.

Wesson Corp.: *See*—
Klages, Christian L., and Sullivan. 3,018,675.

West, Fred W.: *See*—
Kaufman, Herman S., and West. 3,019,115.

West Pharmaceutical Co. Ltd.: *See*—
Haler, David. 3,019,222.

Westerfeld, Ralph, and K. Meri, to Mohawk Business Machines Corp. Magnetic recording techniques. 3,019,302, 1–30–62, Cl. 179—100.2.

Westerhoff, Heinrich: *See*—
Hoppe, Alfred, Langner, Westerhoff, Wolke, and Hauenstein. 3,019,179.

Westgate, Oscar L., to The R. T. French Co. Closure for condiment containers and the like. 3,018,931, 1–30–62, Cl. 222—480.

Westinghouse Electric Corp.: *See*—
Davis, Pearl C. 3,019,071.

Westling, Kenneth R. Putting practice device. 3,019,023, 1–30–62, Cl. 273—177.

Westlund, Roy A., Jr.: *See*—
Panzer, Jerome, and Westlund. 3,019,187.

Westover, Thomas A.: *See*—
Willey, Frank G., and Westover. 3,018,555.

Wheeler, Walter G., and O. B. Wendell, to The Hufford Corp. Stretch leveling apparatus and method. 3,018,817, 1–30–62, Cl. 153—35.

Whipple, Robert P.: *See*—
Koch, Robert C., and Whipple. 3,018,813.

Whistler, Charles C., Jr., to General Motors Corp. Refrigerating apparatus. 3,018,544, 1–30–62, Cl. 29—157.3.

Whitby, Lawrence, to The Dow Chemical Co. High energy hydrocarbon fuel containing magnesium alloys. 3,019,145, 1–30–62, Cl. 149—87.

White, Albert E. S., to The Morgan Crucible Co. Ltd. Bearings. 3,019,068, 1–30–62, Cl. 308—237.

White, Richard N. Ore concentrating device. 3,018,892, 1–30–62, Cl. 209—441.

White, Stanley B., to United States of America, Air Force. Radar countermeasure. 3,019,433, 1–30–62, Cl. 343—18.

White, Warren W., to Motec Industries, Inc. Digital indicator and decimal point indicating means. 3,018,952, 1–30–62, Cl. 235—117.

Whiting, Edwin F., and A. W. Schneider, to The Upjohn Co. Process for oxidation of 11-hydroxysteroids to 11-ketosteroids. 3,019,238, 1–30–62, Cl. 260—397.3.

Whittier, Sidney B., to Polaroid Corp. Photographic lighting apparatus. 3,018,707, 1–30–62, Cl. 95—11.5.

Wiechering, Friedrich W., to Radiation Counter Laboratories, Inc. Radiation counting means. 3,019,363, 1–30–62, Cl. 313—93.

Wilte, Wilfred A. S.: *See*—
Kilby, William, and Wilte. 3,019,140.

Wike, Albert F., and A. R. Beaver, to Addressograph-Multigraph Corp. Printing machines. 3,018,723, 1–30–62, Cl. 101—134.5.

Wild, Herbert K.: *See*—
Haynes, Munro K., Russell, and Wild. 3,019,419.

Willey, Frank G., and T. A. Westover, to Servo Corp. of America. Aircraft velocity-altitude ratio meter. 3,018,555, 1–30–62, Cl. 33—46.5.

Williams, Jean R.: *See*—
Franklin, Truman L., and Williams. 3,018,553.

Williams, Lynn A., to Anocut Engineering Co. Electrode for electrolytic shaping. 3,019,178, 1–30–62, Cl. 204—284.

Williams, Russell F., and P. R. Morgan. Starting and stopping mechanism for internal-combustion engines. 3,018,618, 1–30–62, Cl. 60—16.

Williamson, John. Liquid dispensing system. 3,018,922, 1–30–62, Cl. 222—25.

Willis, James M., to The Firestone Tire & Rubber Co. Chafer for tire bead area protection. 3,018,821, 1–30–62, Cl. 156—135.

Wilson, Billy F.: *See*—
Monaghan, Ralph, Wilson, and Knapp. 3,019,338.

Wilson, Charles S. Sliding panel and assembly mount. 3,018,523, 1–30–62, Cl. 20—19.

Wilson, Lucius H.: *See*—
Lundberg, Lennart A., and Wilson. 3,019,156.

Wilson, Porter C. and M. R. Palmer. Resuscitator apparatus. 3,018,775, 1–30–62, Cl. 128—29.

Wilson, Robert C., and R. J. Puchaty, to Seismograph Service Corp. Radio location system. 3,019,435, 1–30–62, Cl. 343—105.

Wilton, Barbara J.: *See*—
Wilton, Herbert C., and Costelloe. 3,018,908.

Wilton, Herbert C., and R. D. Costelloe; said Costelloe assor. of 76% to said H. C. Wilton and 24% to B. J. Wilton. Conveyor for dispensing contents of dump trucks. 3,018,908, 1–30–62, Cl. 214—508.

Winberg, Ragnar W. Combined presser foot and feeder. 3,018,746, 1–30–62, Cl. 112—211.

Winkler, Eric H. Portable refrigeration apparatus. 3,018,638, 1–30–62, Cl. 62—237.

Wittbrodt, Gertrude. Baby bed play pen. 3,018,493, 1–30–62, Cl. 5—99.

Witte, Norman H.: *See*—
Kruse, Norman F., and Witte. 3,018,564.

Wittenberg, Edward H., and J. H. Chopa. Fluid-operated liquid sprayers. 3,018,970, 1–30–62, Cl. 239—323.

Wittenberger, Wallace W., to The Peterson Oven Co. Tray for baking oven. 3,018,872, 1–30–62, Cl. 198—24.

Wohlforth, Ralph L., to Phelps Dodge Copper Products Corp. Packaging of coiled tubes. 3,018,883, 1–30–62, Cl. 206—59.

Wolf, Alfred A., to Atlas Chemical Industries, Inc. Quick trip switch. 3,019,315, 1–30–62, Cl. 200—97.

Wolff, J. Edward: *See*—
Klumpp, Theodore G., Wolff, and Kaplan. 3,019,169.

Wolff, Manfred E.: *See*—
Georgian, Vlasios, Kerwin, and Wolff. 3,019,235.

Wolff, Pierre B.: *See*—
Denis, Louis, Wolff, and Brocard. 3,018,748.

Wolke, Herbert: *See*—
Hoppe, Alfred, Langner, Westerhoff, Wolke, and Hauenstein. 3,019,179.

Woodberry, Norman T.: *See*—
Reynolds, Walter F., Jr., and Woodberry. 3,019,157.

Woodward, Robert B.: *See*—
Blout, Elkan R., Green, Rogert, Simon, and Woodward. 3,019,107.

Woodworth, John A., R. J. Reeve, and G. I. Noah, to Adams Rite Mfg. Co. Sliding door lock. 3,019,043, 1–30–62, Cl. 292—113.

Wrobbel, Werner, to Firma Metabowerk Closa, Rauch & Schnizler K.G. Device for the working in stages of the surfaces of workpieces on a grinding or polishing train. 3,018,591, 1–30–62, Cl. 51—217.

Wygasch, Ewald, and R. Luehdemann, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of concentrated alkali solutions. 3,019,082, 1–30–62, Cl. 23—184.

Wyllie, Malcolm R. J.: *See*—
Henderson, James H., and Wyllie. 3,018,827.

Wyman, Charles G.: *See*—
Monteith, Victor S. C., and Wyman. 3,018,511.

Yamura, Teiji. Apparatus for producing punched tape for teleprinter for transmission of characters of Chinese alphabet. 3,018,948, 1–30–62, Cl. 234—123.

Yesowich, Thomas N.: *See*—
Monticello, William A., and Yesowich. 3,018,721.

Yevick, George, to United States Steel Corp. Device for testing circumferential welds in pipe lines. 3,018,657, 1–30–62, Cl. 73—46.

Youmans, Arthur H., and T. P. Hubbard, Jr., to Well Surveys, Inc. Method of stabilizing the output of a nuclear emission source. 3,019,340, 1–30–62, Cl. 250—84.5.

Young, Gerald V., to H. V. Young Oil Co. Apparatus for spreading granular material using hydraulic power. 3,019,025, 1–30–62, Cl. 275—8.

Young, H. V., Oil Co.: *See*—
Young, Gerald V. 3,019,025.

Yu, Richard T.: *See*—
Ackell, Joseph J., Paulding, and Yu. 3,018,946.

Zaffina, Dominic A. Trunk to branch tree lights. 3,019,357, 1–30–62, Cl. 307—157.

Zaphiropoulos, Renn, to Varian Associates. Electrical vacuum pump apparatus. 3,018,944, 1–30–62, Cl. 230—69.

Zaremsky, Baruch: *See*—
Buckley, Robert, and Zaremsky. 3,019,205.
Zarleng, Steve A., to The Clark Controller Co. Polarity switching circuit. 3,019,369, 1–30–62, Cl. 315—205.
Zarleng, Steve A., to The Clark Controller Co. Accelerating and decelerating control system. 3,019,379, 1–30–62, Cl. 318—158.
Zawadzki, Antoni. Automatic rocker and glider. 3,019,052, 1–30–62, Cl. 297—260.
Zelina, William B., to General Electric Co. Electric function network. 3,018,966, 1–30–62, Cl. 235—195.
Zeller, Richard S., to Weltronic Co. Welding apparatus. 3,019,329, 1–30–62, Cl. 219—131.
Zellner, Hugo, to Byk-Gulden Lomberg Chemische Fabrik G.m.b.H. Antiphlogistic and choleretic compositions and process of therapeutically using same. 3,019,166, 1–30–62, Cl. 167—65.
Zenith Radio Corp.: *See*—
Heuer, Charles H. 3,019,401.
Wertwijn, George. 3,019,352.
Zimmerman, Wade N., Jr. Ditching machine. 3,018,572, 1–30–62, Cl. 37—90.

CLASSIFICATION OF PATENTS

ISSUED JANUARY 30, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 44.5: 3,018,481
147: 3,018,482
2— 3: 3,018,483
21: 3,018,484
70: 3,018,485
87: 3,018,486
192: 3,018,487
4— 1: 3,018,488
166: 3,018,489
170: 3,018,490
172: 3,018,491
5— 93: 3,018,492
99: 3,018,493
8— 108: 3,019,075
128: 3,019,076
9— 14: 3,018,494
13— 31: 3,019,274
3,019,275
14— 71: 3,018,495
3,018,496
15— 143: 3,018,497
167: 3,018,498
235.4: 3,018,499
250.42: 3,018,500
3,018,501
257.2: 3,018,502
312: 3,018,503
320: 3,018,504
503: 3,018,505
16— 20: 3,018,506
78: 3,018,507
147: 3,018,508
3,018,509
17— 2: 3,018,510
18— 2: 3,018,511
4: 3,018,512
5.3: 3,018,513
8: 3,018,514
12: 3,018,515
14: 3,018,516
17: 3,018,517
19: 3,018,518
36: 3,018,519
48: 3,018,520
54: 3,019,077
3,019,078
19— 150: 3,018,521
20— 9: 3,018,522
19: 3,018,523
40: 3,018,524
52: 3,018,525
92: 3,018,526
22— 147: 3,018,527
195: 3,018,528
23— 1: 3,019,079
143: 3,019,080
157: 3,019,081
184: 3,019,082
204: 3,019,083
3,019,084
3,019,085
3,019,086
3,019,087
3,019,088
205: 3,019,089
230: 3,019,090
253: 3,019,091
294: 3,019,092
314: 3,019,093
24— 73: 3,018,529
3,018,530
134: 3,018,531
153: 3,018,532
161: 3,018,533
205.14: 3,018,534
213: 3,018,535
243: 3,018,536
263: 3,018,537
25— 131: 3,018,538
29— 25.3: 3,018,539
148.4: 3,018,540
155.56: 3,018,541
156.8: 3,018,542
157.3: 3,018,543
3,018,544
256: 3,018,545
431: 3,018,546
507: 3,018,547
30— 4: 3,018,548
3,018,549
140: 3,018,550
32— 32: 3,018,551
33— 1: 3,018,552
3,018,553
3: 3,018,554
46.5: 3,018,555
147: 3,018,556
33— 170: 3,018,557
209: 3,018,558
34— 28: 3,018,559
45: 3,018,560
51: 3,018,561
75: 3,018,562
95: 2,018,563
173: 3,018,564
35— 10.4: 3,018,565
3,018,566
12: 3,018,567
19: 3,018,568
39: 3,018,569
36— 1: 3,018,570
59: 3,018,571
37— 90: 3,018,572
144: 3,018,573
38— 121: 3,018,574
40— 63: 3,018,575
42— 1: 3,018,576
6: 3,018,577
13: 3,018,578
43— 4: 3,018,579
9: 3,018,580
3,018,581
35: 3,018,582
44— 56: 3,019,094
78: 3,019,097
46— 11: 3,018,583
72: 3,018,584
77: 3,018,585
47— 1.2: 3,018,586
60: P.P.2,125
P.P.2,126
P.P.2,127
61: P.P.2,128
P.P.2,129
62: P.P.2,124
48— 63: 3,019,095
213: 3,019,096
49— 48: 3,018,587
51— 104: 3,018,588
115: 3,018,589
165: 3,018,590
217: 3,018,591
53— 61: 3,018,592
67: 3,018,593
72: 3,018,594
78: 3,018,595
198: 3,018,596
314: 3,018,597
56— 25: 3,018,598
26: 3,018,599
50: 3,018,600
119: 3,018,601
295: 3,018,602
57— 56: 3,018,603
58.52: 3,018,604
120: 3,018,605
148: 3,018,606
3,018,607
157: 3,018,608
3,018,609
3,018,610
58— 1: 3,018,611
21.12: 3,018,612
22.9: 3,018,613
50: 3,018,614
142: 3,018,615
59— 79: 3,018,616
60— 13: 3,018,617
16: 3,018,618
35.4: 3,018,619
35.54: 3,018,620
39.28: 3,018,621
3,018,622
39.36: 3,018,623
39.37: 3,018,624
39.65: 3,018,625
39.71: 3,018,626
51: 3,018,627
3,018,628
97: 3,018,629
3,018,630
62— 3: 3,018,631
9: 3,018,632
48: 3,018,633
52: 3,018,634
55: 3,018,635
135: 3,018,636
155: 3,018,637
237: 3,018,638
285: 3,018,639
335: 3,018,640
342: 3,018,641
427: 3,018,642
467: 3,018,643
66— 64: 3,018,644
125: 3,018,645
140: 3,018,646
179: 3,018,647
67— 7.1: 3,018,648
68— 12: 3,018,649
23: 3,018,650
70— 146: 3,018,651
218: 3,018,652
71— 1: 3,019,098
34: 3,019,099
73— 1: 3,018,653
23: 3,018,654
27: 3,018,655
37: 3,018,656
46: 3,018,657
90: 3,018,658
95.5: 3,018,659
153: 3,018,660
178: 3,018,661
218: 3,018,662
341: 3,018,663
503: 3,018,664
74— 99: 3,018,665
217: 3,018,666
242.9: 3,018,667
393: 3,018,668
473: 3,018,669
477: 3,018,670
504: 3,018,671
650: 3,018,672
785: 3,018,673
75— 26: 3,019,100
141: 3,019,101
153: 3,019,102
206: 3,019,103
77— 32.3: 3,018,674
58: 3,018,675
80— 32: 3,018,676
81— 52.4: 3,018,677
82— 101: 3,018,678
83— 154: 3,018,679
84— 1.16: 3,018,680
177: 3,018,681
348: 3,018,682
464: 3,018,683
85— 1: 3,018,684
36: 3,018,685
88— 27: 3,018,686
52: 3,018,687
57: 3,018,688
3,018,689
97: 3,018,690
89— 1.5: 3,018,691
1.7: 3,018,692
6: 3,018,693
159: 3,918,694
90— 15: 3,018,695
16: 3,018,696
3,018,697
3,018,698
20: 3,018,699
24: 3,018,700
93— 36: 3,018,701
44.1: 3,018,702
94— 18: 3,018,703
44: 3,018,704
95— 10: 3,018,705
3,018,706
11.5: 3,018,707
18: 3,018,708
31: 3,018,709
64: 3,018,710
96— 29: 3,019,104
33: 3,019,105
48: 3,019,106
66: 3,019,107
3,019,108
98— 2: 3,018,711
36: 3,018,712
37: 3,018,713
66: 3,018,714
99— 2: 3,019,109
122: 3,019,110
129: 3,019,111
154: 3,019,112
186: 3,019,113
238: 3,018,715
331: 3,018,716
100— 97: 3,018,717
103: 3,018,718
265: 3,018,719
101— 41: 3,018,720
93: 3,018,721
3,018,722
134.5: 3,018,723
101— 171: 3,018,724
269: 3,018,725
280: 3,018,726
366: 3,018,727
381: 3,018,728
415: 3,018,729
102— 20: 3,018,730
25: 3,018,731
70.2: 3,018,732
3,018,733
75: 3,018,734
103— 53: 3,018,735
103: 3,018,736
173: 3,018,737
105— 151: 3,018,738
154: 3,018,739
369: 3,018,740
376: 3,018,741
106— 13: 3,019,114
32: 3,019,115
46: 3,019,116
66: 3,019,117
123: 3,019,118
169: 3,019,119
213: 3,019,120
286: 3,019,121
287: 3,019,122
308: 3,019,123
107— 55: 3,018,742
112— 102: 3,018,743
132: 3,018,744
209: 3,018,745
211: 3,018,746
258: 3,018,747
114— 74: 3,018,748
126: 3,018,749
144: 3,018,750
197: 3,018,751
206: 3,018,752
115— 6.1: 3,018,753
18: 3,018,754
117— 8: 3,019,124
3,019,125
17: 3,019,126
33: 3,019,127
71: 3,019,128
101: 3,019,129
111: 3,019,130
119.6: 3,019,131
138.8: 3,019,132
142: 3,019,133
155: 3,019,134
211: 3,019,135
3,019,136
212: 3,019,137
118— 125: 3,018,755
226: 3,018,756
262: 3,018,757
119— 5: 3,018,758
21: 3,018,759
159: 3,018,760
120— 42.1: 3,018,761
121— 38: 3,018,762
41: 3,018,763
122— 34: 3,018,764
123—41.83: 3,018,765
119: 3,018,766
122: 3,018,767
148: 3,019,276
185: 3,018,768
191: 3,019,277
124— 11: 3,018,769
20: 3,018,770
126— 25: 3,018,771
3,018,772
110: 3,018,773
202: 3,018,774
127— 29: 3,019,138
128— 29: 3,018,775
141: 3,018,776
188: 3,018,777
269: 3,018,778
278: 3,018,779
129— 23: 3,018,780
131— 64: 3,018,781
134— 28: 3,019,139
30: 3,019,140
135— 1: 3,018,782
5: 3,018,783
6: 3,018,784
136— 4: 3,019,278
103: 3,019,279
155: 3,019,141
137— 107: 3,018,785
118: 3,018,786
202: 3,018,787
331: 3,018,788
137— 341: 3,018,789
454.6: 3,018,790
458: 3,018,791
469: 3,018,792
595: 3,018,793
620: 3,018,794
623: 3,018,795
625.12: 3,018,796
627.5: 3,018,797
3,018,798
138— 26: 3,018,799
125: 3,018,800
139— 29: 3,018,801
140— 71: 3,018,802
71.5: 3,018,803
141— 286: 3,018,804
146— 28: 3,018,805
150: 3,018,806
174: 3,018,807
236: 3,018,808
148— 1.5: 3,019,142
6.1: 3,019,143
12.7: 3,019,144
149— 87: 3,019,145
152— 41: 3,018,809
176: 3,018,810
233: 3,018,811
330: 3,018,812
341: 3,018,813
361: 3,018,814
427: 3,018,815
153— 1: 3,018,816
35: 3,018,817
48: 3,018,818
81: 3,018,819
154— 45.9: 3,019,146
46: 3,019,147
48: 3,019,148
156— 87: 3,019,149
135: 3,018,821
184: 3,019,150
162— 149: 3,019,155
168: 3,019,156
3,019,157
212: 3,019,158
319: 3,018,825
166— 9: 3,018,826
39: 3,018,827
53: 3,018,828
88: 3,018,829
124: 3,018,830
173: 3,018,831
167— 22: 3,019,159
33: 3,019,160
58: 3,019,161
3,019,162
63: 3,019,163
65: 3,019,164
3,019,165
3,019,166
73: 3,019,167
78: 3,019,168
82: 3,019,169
170— 159: 3,018,832
172— 159: 3,018,833
174— 12: 3,019,280
35: 3,019,281
43: 3,019,282
68.5: 3,019,283
84: 3,019,284
120: 3,019,285
121: 3,019,286
138: 3,019,287
158: 3,019,288
175— 92: 3,018,834
378: 3,018,835
408: 3,018,836
178— 5.4: 3,019,289
3,019,290
6.6: 3,019,291
6.7: 3,019,292
26: 3,019,293
179— 6.3: 3,019,294
7.1: 3,019,295
15.5: 3,019,296
17: 3,019,297
18: 3,019,298
3,019,299
100.1: 3,019,300
179—100.2: 3,019,301
3,019,302
3,019,303
114: 3,019,304
146: 3,019,305
3,019,306
175.1: 3,019,307
180— 7: 3,018,837
181— .5: 3,018,838
3,018,839
33: 3,018,840
56: 3,018,841
182— 129: 3,018,842
183— 2.5: 3,018,843
7: 3,018,844
3,018,845
3,018,846
22: 3,018,847
187— 8.75: 3,018,848
9: 3,018,849
17: 3,018,850
48: 3,018,851
188— 72: 3,018,852
78: 3,018,853
93: 3,018,854
210: 3,018,855
264: 3,018,856
189— 2: 3,018,857
3,018,858
34: 3,018,859
3,018,860
36: 3,018,861
37: 3,018,862
192— 48: 3,018,863
113: 3,018,864
116.5: 3,018,865
150: 3,018,866
193— 25: 3,018,867
194— 9: 3,018,868
10: 3,018,869
195— 51: 3,019,170
68: 3,019,171
80: 3,019,172
3,019,173
197— 84: 3,018,870
180: 3,018,871
198— 24: 3,018,872
38: 3,018,873
69: 3,018,874
208: 3,018,875
200— 11: 3,019,308
50: 3,019,309
61.21: 3,019,310
61.27: 3,019,311
67: 3,019,312
87: 3,019,313
88: 3,019,314
97: 3,019,315
105: 3,019,316
108: 3,019,317
122: 3,019,318
3,019,319
136.5: 3,019,320
152: 3,019,321
153: 3,019,322
155: 3,019,323
204— 64: 3,019,174
163: 3,019,175
193.2: 3,019,176
196: 3,019,177
284: 3,019,178
206— 17: 3,018,876
38: 3,018,877
41.2: 3,018,878
45.31: 3,018,879
47: 3,018,880
56: 3,018,881
3,018,882
59: 3,018,883
83: 3,018,884
207— 1: 3,018,885
208— 33: 3,019,179
51: 3,019,180
217: 3,019,181
254: 3,019,182
209— 72: 3,018,886
73: 3,108,887
74: 3,018,888
88: 3,018,889
158: 3,018,890
397: 3,018,891
441: 3,018,892
210— 30: 3,019,183
82: 3,019,184
159: 3,018,893
205: 3,019,185
231: 3,018,894

210— 374: 3,018,895
403: 3,018,896
506: 3,019,186
211— 60: 3,018,897
86: 3,018,898
123: 3,018,899
134: Re.25,117
148: 3,018,900
212— 3: 3,018,901
20: 3,018,902
214— 16.1: 3,018,903
151: 3,018,904
390: 3,018,905
505: 3,018,906
506: 3,018,907
508: 3,018,908
654: 3,018,909
215— 22: 3,018,910
40: 3,018,911
100: 3,018,912
100.5: 3,018,913
219— 34: 3,019,324
38: 3,019,325
56: 3,019,326
76: 3,019,327
125: 3,019,328
131: 3,019,329
145: 3,019,330
220— 3: 3,018,914
15: 3,018,915
3,018,916
36: 3,018,917
41: 3,018,918
113: 3,018,919
221— 90: 3,018,920
281: 3,018,921
222— 25: 3,018,922
41: 3,018,923
48: 3,018,924
180: 3,018,925
193: 3,018,926
333: 3,018,927
335: 3,018,928
394: 3,018,929
410: 3,018,930
480: 3,018,931
223— 1.1: 3,018,932
226— 76: 3,018,933
171: 3,018,934
190: 3,018,935
229— 1.5: 3,018,936
37: 3,018,937
40: 3,018,938
44: 3,018,939
45: 3,018,940
51: 3,018,941
3,018,942
62.5: 3,018,943
230— 69: 3,018,944
232— 44: 3,018,945
234— 25: 3,018,946
30: 3,018,947
123: 3,018,948
235— 60: 3,018,949
61: 3,018,950
235—61.11: 3,018,951
117: 3,018,952
144: 3,018,953
153: 3,018,954
155: 3,018,955
157: 3,018,956
159: 3,018,957
164: 3,018,958
167: 3,018,959
176: 3,018,960
3,018,961
181: 3,018,962
183: 3,018,963
186: 3,018,964
189: 3,018,965
195: 3,018,966
238— 349: 3,018,967
239— 124: 3,018,968
312: 3,018,969
323: 3,018,970
338: 3,018,971
240— 2: 3,019,331
9: 3,019,332
51.11: 3,019,333
78: 3,019,334
241— 41: 3,018,972
242— 18: 3,018,973
35.5: 3,018,974
54: 3,018,975
55.12: 3,018,976
72: 3,018,977
75.51: 3,018,978
84.21: 3,018,979
86.5: 3,018,980
244— 14: 3,018,981
15: 3,018,982
3,018,983
17.19: 3,018,984
46: 3,018,985
50: 3,018,986
75: 3,018,987
77: 3,018,988
248— 4: 3,018,989
9: 3,018,990
22: 3,018,991
180: 3,018,992
220.5: 3,018,993
278: 3,018,994
294: 3,018,995
316: 3,018,996
250— 20: 3,019,335
43.5: 3,019,336
83.1: 3,019,337
83.3: 3,019,338
83.6: 3,019,339
84.5: 3,019,340
93: Re.25,118
106: 3,019,341
3,019,342
202: 3,019,343
208: 3,019,344
213: 3,019,345
219: 3,019,346
223: 3,019,347
252— 33.3: 3,019,187
252— 57: 3,019,188
62.5: 3,019,189
75: 3,019,190
78: 3,019,191
87: 3,019,193
142: 3,019,194
389: 3,019,195
392: 3,019,196
477: 3,019,197
521: 3,019,198
253— 3: 3,018,997
254—134.3: 3,018,998
184: 3,018,999
257— 164: 3,019,000
290: 3,019,001
259— 169: 3,019,002
260— 2.2: 3,019,199
2.5: 3,019,200
3,019,201
18: 3,019,202
3,019,203
3,019,204
23: 3,019,205
29.6: 3,019,206
33.6: 3,019,207
45.5: 3,019,208
3,019,209
45.7: 3,019,210
45.9: 3,019,211
75: 3,019,212
85.5: 3,019,192
94.2: 3,019,213
94.9: 3,019,214
3,019,215
3,019,216
163: 3,019,217
239.3: 3,019,218
239.55: 3,019,219
3,019,220
240: 3,019,221
242: 3,019,222
248: 3,019,223
252: 3,019,224
268: 3,019,225
3,019,226
279: 3,019,227
293: 3,019,228
294.3: 3,019,229
297: 3,019,230
307: 3,019,231
319: 3,019,232
343.3: 3,019,233
348: 3,019,234
397.3: 3,019,235
3,019,236
3,019,237
3,019,238
3,019,239
3,019,240
397.4: 3,019,241
397.45: 3,019,246
397.5: 3,019,242
3,019,243
3,019,244
397.7: 3,019,245
260—429.7: 3,019,247
448.8: 3,019,248
461: 3,019,249
3,019,250
462: 3,019,251
476: 3,019,252
479: 3,019,253
3,019,254
482: 3,019,255
486: 3,019,256
520: 3,019,257
543: 3,019,258
556: 3,019,259
559: 3,019,260
561: 3,019,261
570.9: 3,019,262
586: 3,019,263
3,019,264
587: 3,019,265
607: 3,019,266
609: 3,019,267
3,019,268
620: 3,019,269
652.5: 3,019,270
679: 3,019,271
683: 3,019,272
683.42: 3,019,273
261— 114: 3,019,003
262— 3: 3,019,004
19: 3,019,005
263— 42: 3,019,006
266— 4: 3,019,007
267— 1: 3,019,008
64: 3,019,009
269— 191: 3,019,010
226: 3,019,011
270— 58: 3,019,012
3,019,013
61: 3,019,014
84: 3,019,015
93: 3,019,016
271— 44: 3,019,017
74: 3,019,018
272— 81: 3,019,019
273— 44: 3,019,020
53: 3,019,021
163: 3,019,022
177: 3,019,023
274— 46: 3,019,024
275— 8: 3,019,025
277— 16: 3,019,026
279— 30: 3,019,027
280— 36: 3,019,028
124: 3,019,029
3,019,030
154.5: 3,019,031
478: 3,019,032
482: 3,019,033
283— 66: 3,019,034
285— 18: 3,019,035
3,019,036
226: 3,019,037
243: 3,019,038
287— 53: 3,019,039
287— 53: 3,019,040
87: 3,019,041
108: 3,019,042
292— 113: 3,019,013
275: 3,019,044
353: 3,019,045
296— 10: 3,019,046
28: 3,019,047
44: 3,019,048
137: 3,019,049
297— 217: 3,019,050
218: 3,019,051
260: 3,019,052
275: 3,019,053
298— 18: 3,019,054
301— 37: 3,019,055
63: 3,019,056
302— 52: 3,019,057
53: 3,019,058
66: 3,019,059
303— 21: 3,019,060
305— 32: 3,019,061
37: 3,019,062
307— 88: 3,019,348
88.5: 3,019,349
3,019,350
3,019,351
3,019,352
3,019,353
3,019,354
3,019,355
132: 3,019,356
157: 3,019,357
308— 4: 3,019,063
38: 3,019,064
187: 3,019,065
187.1: 3,019,066
189: 3,019,067
237: 3,019,068
243: 3,019,069
310— 3: 3,019,358
26: Re.25,119
156: 3,019,359
312— 223: 3,019,070
308: 3,019,071
313— 7: 3,019,360
76: 3,019,361
93: 3,019,362
3,019,363
102: 3,019,364
213: 3,019,365
315— 3.6: 3,019,366
36: 3,019,367
96: 3,019,368
205: 3,019,369
206: 3,019,370
232: 3,019,371
317— 13: 3,019,372
3,019,373
148.5: 3,019,374
158: 3,019,375
242: 3,019,376
318— 24: 3,019,377
65: 3,019,378
318— 158: 3,019,379
486: 3,019,380
321— 21: 3,019,381
323— 89: 3,019,382
324— .5: 3,019,383
29: 3,019,384
34: 3,019,385
58: 3,019,386
68: 3,019,387
3,019,388
77: 3,019,389
83: 3,019,390
328— 34: 3,019,391
119: 3,019,392
130: 3,019,393
235: 3,019,394
258: 3,019,395
330— 28: 3,019,396
331— 65: 3,019,397
333— 31: 3,019,398
34: 3,019,399
73: 3,019,400
77: 3,019,401
81: 3,019,402
336— 30: 3,019,403
338— 28: 3,019,404
339— 36: 3,019,405
95: 3,019,406
155: 3,019,407
198: 3,019,408
219: 3,019,409
253: 3,019,410
340— 1: 3,019,411
7: 3,019,412
15: 3,019,413
18: 3,019,414
82: 3,019,415
149: 3,019,416
172.5: 3,019,417
174: 3,019,418
3,019,419
174.1: 3,019,420
3,019,421
3,019,422
279: 3,019,423
282: 3,019,424
334: 3,019,425
347: 3,019,426
3,019,427
381: 3,019,428
343— 11: 3,019,429
12: 3,019,430
17.1: 3,019,431
18: 3,019,432
3,019,433
101: 3,019,434
105: 3,019,435
3,019,436
725: 3,019,437
843: 3,019,438
853: 3,019,439
346— 29: 3,019,072
38: 3,019,073
85: 3,019,074

CLASSIFICATION OF DESIGNS

D3— 4: 192,135
192,136
192,137
D14— 3: 192,138
D14— 3: 192,139
192,140
30: 192,141
192,142
D15— 1: 192,143
D34— 2: 192,144
192,145
192,146
D34— 5: 192,147
192,148
15: 192,149
D50— 3: 192,150
D52— 3: 192,151
7: 192,152
D57— 1: 192,153
D58— 26: 192,154
D87— 5: 192,155

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

January 30, 1962 Volume 774 Number 5

TRADEMARKS

NOTICES

Public Law 87-354
[87th Congress, S. 1186]
October 4, 1961

AN ACT

75 Stat. 775.

To facilitate the protection of consumers of articles of merchandise composed in whole or in part of gold or silver from fraudulent misrepresentation concerning the quality thereof, and for other purposes.

Gold or silver articles. Misrepresentation of quality.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) section 4 of the Act entitled "An Act forbidding the importation, exportation, or carriage in interstate commerce of falsely stamped articles of merchandise made of gold or silver or their alloys, and for other purposes", approved June 13, 1906 (34 Stat. 260; 15 U.S.C. 294 et seq.), is amended by—

(1) inserting therein, immediately after the section number "SEC. 4.", the subsection designation "(a)"; and

(2) adding at the end thereof the following new subsection:

"(b) Whenever any person, firm, corporation, or association, being a manufacturer or dealer subject to the first section of this Act—

"(1) applies or causes to be applied to any article of merchandise intended for sale or customarily sold as a complete product to consumers in any State, by stamping, branding, engraving, or otherwise, any quality mark or stamp indicating or purporting to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal; or

"(2) imports into any State any such article of merchandise bearing any such

CONDITION OF TRADEMARK APPLICATIONS AS OF NOVEMBER 30, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,100
Date of oldest new application	April 10, 1961
Date of oldest amended application	May 1, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	4-10-61	5-1-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	5-17-61	6-1-61
Renewals (All Classes)	11-7-61	11-20-61
Sec. 12 (c) Publications (All Classes)	11-6-61	11-24-61

Applications filed during the month of November 1961—2,018

Registrations Issued 283—No. 726,844 to No. 727,126
Renewals Issued 61

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

quality mark or stamp which indicates or purports to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal,

such person, firm, corporation, or association, before depositing any such article manufactured or imported after six months after the effective date of this Act in the United States mails, or causing such article to be so deposited, for transmission thereby, or delivering such article or causing such article to be delivered to any common carrier for transportation from one State to any other State, or transporting such article or causing such article to be transported from one State to any other State, shall—

"(A) apply or cause to be applied to that article a trademark of such person, firm, corporation, or association duly registered or applied for within thirty days after an article bearing the trademark is placed in commerce or imported under the laws of the United States or the name of such person, firm, corporation, or association; and Identifying trademark.

"(B) if such article of merchandise is composed of two or more parts which are complete in themselves but which are not identical in quality, and any one of such parts bears such a quality mark or stamp, apply or cause to be applied to each other part of that article of merchandise a quality mark or stamp of like pattern and size disclosing the quality of that other part.

Each identifying trademark or name applied to any article of merchandise in compliance with clause (A) of this section shall be applied to that article by the same means as that used in applying the quality mark or stamp appearing thereon, in type or lettering at least as large as that used in such quality mark or stamp, and in a position as close as possible to that quality mark or stamp. For the purposes of this subsection, the term 'State' includes the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the District of Columbia." "State."

75 Stat. 776.

SEC. 2. The amendments made by this Act shall take effect on the first day of the third month beginning after the date of enactment of this Act. Effective date.

Approved October 4, 1961.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 109,135. Fritz Müller "Coroplast" K.G., Wuppertal-Nachstebreck, Germany. Filed Nov. 14, 1960.

COROFLEX

Owner of German Reg. No. 717,993, dated Sept. 25, 1958.

For Synthetic Plastic Tapes and Bands for General Use in the Industrial Arts as Wrappings for Anti-Corrosion, Surface Protection and Thermal Insulation Purposes.

SN 111,810. Monsanto Chemical Company, St. Louis, Mo. Filed Jan. 13, 1961.

VOCON

For Synthetic Resins for General Use in the Industrial Arts.

First use Dec. 15, 1960.

SN 117,413. Teneria Moderna Franco-Espanola, Sociedad Anonima, Barcelona, Spain. Filed Apr. 7, 1961.

MOLLETAS

"Molleta" is the Spanish word for "bread."

For Tanned Skins and Fur Pelts.

First use Nov. 14, 1950; in commerce Nov. 14, 1950.

SN 119,076. Tube-Kote, Inc., Houston, Tex. Filed May 1, 1961.

TUBE-KOTE

Owner of Reg. No. 558,108.

For Plastic Materials Sold in Cans and Similar Containers, Including Polyurethane, Epoxy and Phenolic Resin Compounds.

First use May 26, 1960.

SN 119,245. Summit Hall Turf Farm, Inc., Gaithersburg, Md. Filed May 3, 1961.



The representation of a plug of turf is disclaimed apart from the mark as shown. Owner of Reg. No. 648,414.

For Packaged Plugs of Turf.

First use Apr. 3, 1956.

Class 2—Receptacles

SN 109,667. Cellulose Products Corporation, Milltown, N.J. Filed Dec. 6, 1960.

Wrap
·a·
Nap

For Bags for Discarding of Sanitary Products.

First use Aug. 24, 1960.

SN 110,106. Shriro Trading Corporation, New York, N.Y. Filed Dec. 12, 1960.



The word "Brand" is disclaimed apart from the mark as shown.

For Wooden Serving Accessories—Namely, Salad Bowls, Nut Dishes, Mixing Bowls, Trays, Serving Spoons, and Serving Forks.

First use in April 1959.

SN 114,470. Foster Grant Co., Inc., Leominster, Mass. Filed Feb. 27, 1961.

Du-o-Cup

For Containers—Namely, Plastic Drinking Cups.

First use on or about Feb. 1, 1961.

SN 121,352. Bopp-Decker Plastics, Inc., Birmingham, Mich. Filed June 5, 1961.

VACRON

For Vacuum Ware—Namely, Bottles, Mugs, Cups and Bowls.
First use Apr. 3, 1961.

SN 124,278. Novo Industrial Corporation, New York, N.Y. Filed July 19, 1961.

NOVO

Owner of Reg. Nos. 671,189, 709,016, and others.
For Beverage Cases and Cartons.
First use Jan. 30, 1961.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 110,994. Gutman-Lann Glove Company, Inc., New York, N.Y. Filed Dec. 29, 1960.

FINALE

For Handbags.
First use Nov. 12, 1959.

SN 111,803. Kadin Bros. Inc., New York, N.Y. Filed Jan. 13, 1961.

Pillow Soft

For Ladies' Handbags.
First use on or about Oct. 11, 1960.
Subj. to Intf. with Reg. No. 722,457.

Class 4—Abrasives and Polishing Materials

SN 105,304. Pres-On Abrasives, Inc., Addison, Ill. Filed Sept. 27, 1960.

PRES-ON

For Coated Abrasive Sheets.
First use in or about the month of August 1951.

SN 122,759. The Butcher Polish Company, Malden, Mass. Filed June 26, 1961.

COMMERCE BRAND

The word "Brand" is disclaimed apart from the mark as shown.
For Self-Polishing Wax and Paste Wax.
First use during January 1940.

SN 122,760. The Butcher Polish Company, Malden, Mass. Filed June 26, 1961.

GREEN STRIPE

For Self-Polishing Wax.
First use during January 1945.

SN 122,761. The Butcher Polish Company, Malden, Mass. Filed June 26, 1961.

WHITE STRIPE

For Self-Polishing Wax.
First use Feb. 14, 1961.

SN 123,080. Colgate-Palmolive Company, New York, N.Y. Filed June 29, 1961.

GUSTO

For Scouring Pads.
First use Apr. 26, 1961.

SN 124,035. The Butcher Polish Company, Malden, Mass. Filed July 17, 1961.

For Self-Polishing Wax.
First use June 15, 1960.

SN 124,250. American Potash & Chemical Corporation, Los Angeles, Calif. Filed July 19, 1961.

TRONA

Owner of Reg. Nos. 306,280, 651,632, and others.
For Glass and Metal Polishing Materials.
First use July 9, 1959, on glass polishing materials.

Class 6—Chemicals and Chemical Compositions

SN 117,898. Monsanto Chemical Company, St. Louis, Mo. Filed Apr. 14, 1961.

SANTOSCREEN

Owner of Reg. Nos. 508,623, 536,015, and 675,813.
For Compounds for Use as Ultraviolet Stabilizers for Further Use in the Industrial Arts.
First use Mar. 21, 1961.

Class 7—Cordage

SN 88,157. Industrial Products Company, Philadelphia, Pa. Filed Dec. 29, 1959.

POLY-LINE

Owner of Reg. No. 628,087.
For Plastic Safety Rope.
First use Sept. 29, 1959.

SN 117,237. United States Steel Corporation, Pittsburgh, Pa. Filed Apr. 5, 1961.

PETROFIBER

For Wire Rope Cores.
First use July 27, 1960.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 122,080. The House of Beauregard, Inc., Nashville, Tenn. Filed June 15, 1961.

BEAU-LITE

For Cigarette Lighters.
First use Oct. 7, 1960.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 109,010. "Star" Bonifacio Echeverria, S.A., Eibar, Guipuzcoa, Spain. Filed Nov. 23, 1960.

STARLET

Owner of Spanish Reg. No. 318,914, dated July 9, 1957; and U.S. Reg. No. 683,862.
For Firearms—Namely, Rifles, Hunting Guns, Revolvers, Pistols, and Anti-Aircraft Guns.
First use 1956; in commerce Apr. 1, 1957.

SN 116,243. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Mar. 22, 1961.

SUPER-G

For Dynamite.
First use on or about Sept. 1, 1948.

SN 121,373. Federal Cartridge Corporation, Minneapolis, Minn. Filed June 5, 1961.

FEDERAL

For Shot Shells, Metallic Cartridges, Air Rifle Shot, Hand Traps, Ammunition Components, Such as Primers, Card Wads, Cushion Wads, and Empty Primed Shells.
First use on or about Sept. 1, 1918.

Class 10—Fertilizers

SN 112,878. Booher Lumber Co., Inc., Nedrow, N.Y. Filed Feb. 1, 1961.

TIMBERTURF

For Garden Mulch and Soil Conditioner Made From the Shredded Bark of Hard and Soft Wood Trees.
First use Mar. 29, 1960.

SN 119,553. Pacific Gamble Robinson Co., Seattle, Wash. Filed May 8, 1961.

Garden Boy

For Fertilizers.
First use Feb. 7, 1961.

SN 119,631. Michiana Chemical Company, Niles, Mich. Filed May 9, 1961.

Spartan

For Plant Food.
First use March 1959.

SN 120,830. Solar Nitrogen Chemicals, Inc., Lima, Ohio. Filed May 25, 1961.

The shading in the drawing does not represent any color.
For Fertilizer Ammoniating Solution.
First use Apr. 8, 1961.

SN 120,899. Plantabbs Corporation, Baltimore, Md. Filed May 26, 1961.

F-48

For Plant Food.
First use Feb. 27, 1961.

Class 12—Construction Materials

SN 103,095. Cariboo-P.G.E. Lumber Manufacturers' Association (Canadian association—new association), Vancouver, British Columbia, Canada, assignee of Cariboo-P.G.E. Lumber Manufacturers' Association (Canadian association), Vancouver, British Columbia, Canada. Filed Aug. 22, 1960. COLLECTIVE MARK.

CPGE

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 22, 1960; Reg. No. 119,749, dated Oct. 7, 1960.
For Lumber.
First use Feb. 1, 1960; in commerce Feb. 20, 1960.

SN 104,782. The United Steel Companies Limited, Broomhill, Sheffield, England. Filed Sept. 19, 1960.

FORTIWELD

Owner of British Reg. Nos. 738,396/79678 and 739,615/79698, dated Jan. 19, 1955 and Feb. 11, 1955, respectively; and U.S. Reg. No. 630,283.
For Structural Iron and Steel.

SN 108,782. Hoffman Industries, Inc., Batavia, Ill. Filed Nov. 21, 1960.

HOF-KOR

For Prefabricated Rigid Partition Walls for Buildings.
First use July 1960.

SN 109,651. Washington Timber Products Inc., Everett, Wash. Filed Dec. 5, 1960.

WIDE FACE

For Lumber Products—Namely, Floor and Roof Decking Lumber.
First use Oct. 10, 1960.

SN 112,043. Houdaille Industries, Inc., Buffalo, N.Y. Filed Jan. 18, 1961.

WELD-KOTE

For Bituminous Concrete Road Surfacing Material.
First use Sept. 5, 1960.

SN 112,173. Taylor Lumber Company, Inc., Galesburg, Mich. Filed Jan. 19, 1961.

TAYLORED

For Pre-Fabricated Buildings and Parts Thereof.
First use Mar. 1, 1960.

SN 119,071. Terrapin Limited, London, England. Filed May 1, 1961.

TERRAPIN

Owner of British Reg. No. 677,265, dated Feb. 22, 1949.
For Portable Buildings.

SN 119,617. Findlay Refractories Company, Washington, Pa. Filed May 9, 1961.

PYROSIL

For Raw or Partly Prepared Materials Including Fused Silica and Clay Bonded Refractory Material Containing Fused Silica.
First use Mar. 15, 1961.

SN 122,216. Plastifiber & Chemical, Inc., Crystal Lake, Ill. Filed June 16, 1961.

TWI-LITE

For Hollow Reinforced Plastic Panels for General Construction.
First use Nov. 1, 1960.

SN 122,265. Caradco Incorporated, Dubuque, Iowa. Filed June 19, 1961.

CARADCO

For Structural Building Components—Namely, Doors, Windows, Window and Door Frames, Window Storm Panels, and Storage, Wardrobe, Vanity and Kitchen Cabinets and Accessories Therefor.
First use Mar. 23, 1961.

SN 122,431. Dierks Forests, Inc., Kansas City, Mo. Filed June 20, 1961.

UNIFIBER

For Insulating Sheathing, Shingle Backer, and Roof Insulation.
First use Mar. 3, 1961.

SN 123,119. Shelvey C. McPhail, Oklahoma City, Okla. Filed June 29, 1961.

BLUE RIBBON

For Aluminum Doors and Windows.
First use Jan. 1, 1958.

SN 123,127. Northeastern Commercial Co., Inc., Stoughton, Mass. Filed June 29, 1961.

Bathline of America

For Shower and Bathtub Enclosures, Shower Doors, Patio Doors, and Storm Doors.
First use June 1, 1959.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 89,033. William G. Thorn, d.b.a. W. G. Thorn & Co., San Francisco, Calif. Filed Jan. 14, 1960.

TWIST-TITE

For Wire Products—Namely, Bag Ties and Bale Ties.
First use on or about July 28, 1959.

SN 89,306. Sterling Bolt Company, Chicago, Ill. Filed Jan. 19, 1960.

EVERYTHING FOR FASTENING

Owner of Reg. No. 601,146.
For Bolts, Nuts, Screws, Rivets, and Metallic Washers.
First use September 1936.

SN 94,347. Radiator Specialty Company, Charlotte, N.C. Filed Apr. 4, 1960.

VISIBLE FAUCET REPAIR SYSTEM

Without relinquishing any common law rights, no claim is made to the words "Faucet Repair" apart from the mark in its entirety.
For Kits of Faucet Parts.
First use Sept. 10, 1958.

SN 104,781. The United Steel Companies Limited, Broomhill, Sheffield, England. Filed Sept. 19, 1960.

FORTIWELD

Owner of British Reg. Nos. 738,396/7967S and 739,615/7969S, dated Jan. 19, 1955 and Feb. 11, 1955, respectively.
For Metallic Pipes and Tubes, Nails, Screws, Nuts, Bolts, Pipe-Flanges and Pipe-Joints.

SN 106,945. Stanley Spring Mfg. Co., Chicago, Ill. Filed Oct. 21, 1960.



For Wire and Steel Coil Springs and Leaf Springs.
First use Jan. 15, 1954.

SN 110,541. Heilig Brothers Company, Inc., York, Pa. Filed Dec. 20, 1960.

ACRYLUME

For Screen Cloth, Screening, Window and Door Screens, and the Like, Made of Aluminum and Coated With an Acrylic Base Protective Compound.
First use Aug. 18, 1960.

SN 110,687. Knickerbocker Rubber Company, Chicago, Ill. Filed Dec. 22, 1960.

JET STREAM

For Shampoo and Bath Sprays.
First use Nov. 22, 1960.

SN 110,709. Sharon Steel Corporation, Sharon, Pa. Filed Dec. 22, 1960.

SHARONSTEEL

Owner of Reg. No. 354,873.
For Tensional and Heavy Duty Steel Strapping and Seals for Strip Metal Strapping.
First use Jan. 1, 1948.

SN 110,900. Teleflex Incorporated, North Wales, Pa. Filed Dec. 27, 1960.

FLEXATROL

For Guide Conduit for Accommodating Elongated Elements Inserted Therethrough.
First use Sept. 22, 1960.

SN 117,329. Aerosol Techniques, Inc., Bridgeport, Conn. Filed Apr. 7, 1961.

SWIVEL-MIST

For Aerosol Spray Dispensing Head.
First use Mar. 15, 1961.

SN 117,474. Fleming & Sons, Inc., Dallas, Tex. Filed Apr. 10, 1961.

MATCH-TAKS

Owner of Reg. No. 395,202.
For Tacks.
First use Feb. 18, 1941.

SN 118,894. Meinecke & Co., Inc., New York, N.Y. Filed Apr. 28, 1961.

"PERMA-WEAR"

For Stainless Steel Pots for Containing and Dispensing Tea or Coffee.
First use in June 1957.

SN 118,916. Signode Steel Strapping Company, Chicago, Ill. Filed Apr. 28, 1961.

MAGNUS

For Package, Bundle, and Load Binding Strapping.
First use in November 1947.

SN 118,951. Camloc Fastener Corporation, Paramus, N.J. Filed May 1, 1961.

FASTEN/ATION

For Latches and Fasteners.
First use Jan. 30, 1961.

SN 118,979. Elgan Co., Inc., Rochester, N.Y. Filed May 1, 1961.

ELGAN

Owner of Reg. Nos. 546,216 and 550,785.
For Repair Links for Tire Chains.
First use Nov. 3, 1960.

SN 119,319. Sterling Metalware Company, Philadelphia, Pa. Filed May 4, 1961.

STER-FORM

For Metal Sinks.
First use Mar. 31, 1961.

SN 119,329. United Shoe Machinery Corporation, Boston, Mass. Filed May 4, 1961.

SE

For Eyelets.
First use on or about Mar. 22, 1961.

SN 119,377. The Hollaender Manufacturing Co., Cincinnati, Ohio. Filed May 5, 1961.

NU-RAIL

For Fittings Used To Join Pipe Sections in the Construction of Fences, Railings, Frames, Partitions and the Like.
First use June 10, 1948.

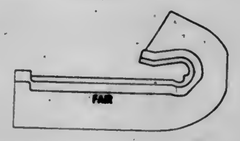
SN 119,378. The Hollaender Manufacturing Co., Cincinnati, Ohio. Filed May 5, 1961.

SPEED-RAIL

For Fittings Used To Join Pipe Sections in the Construction of Fences, Railings, Frames, Partitions and the Like.
First use Mar. 4, 1955.

Class 14—Metals and Metal Castings and Forgings

SN 92,180. Poor & Company, Chicago, Ill. Filed Mar. 4, 1960.



The representation of the rail anchor is hereby disclaimed apart from the mark as shown. Owner of Reg. Nos. 514,396 and 514,397.
For Rail Anchors for Preventing the Creeping of Rails.
First use Jan. 22, 1953.

SN 102,192. Calumet & Hecla, Inc., Calumet, Mich. Filed Aug. 8, 1960.

LIDEOX

For Billets of Metal Alloy.
First use July 8, 1960.

SN 107,818. Bergische Stahl-Industrie, Remscheid, Germany. Filed Nov. 4, 1960.

PYRODUR

Owner of German Reg. No. 424,423, dated Oct. 13, 1930.
For Raw and Partly Worked Base Metals.

SN 110,630. Sharon Steel Corporation, Sharon, Pa. Filed Dec. 21, 1960.

SHARONSTEEL

Owner of Reg. No. 354,873.
For Open Hearth and Electric Furnace, Forging and Re-rolling Quality Steel and Stainless Steel Ingots, Blooms, Slabs and Billets; Hot Rolled Steel Plates, Pickled and Oiled Steel Plates, Painted and Lithographed Steel Strip; and Electro-galvanized Strip Steel.
First use Jan. 1, 1938, on ingots, blooms, slabs and billets.

SN 118,371. Precision Metalsmiths, Inc., Cleveland, Ohio. Filed Apr. 21, 1961.

PMI

For Investment Castings Made to the Order and Specification of the Customer.
First use Feb. 15, 1949.

Class 15—Oils and Greases

SN 99,171. Red-E-Blend Fuel Company, West Sacramento, Calif. Filed June 16, 1960.

RED E BLEND

For Motor Fuel for Two Cycle Internal Combustion Engines.
First use Jan. 7, 1960.

SN 101,365. Ajem Laboratories, Inc., Livonia, Mich. Filed July 7, 1960.

JEM KOOL

For Coolant for Metal Grinding and Cutting.
First use Oct. 15, 1957.

SN 112,408. Schuco Industries, Inc., New York, N.Y. Filed Jan. 24, 1961.

INSTRU-CARE

For Concentrated Oil-Less Lubricants in Liquid Form.
First use July 7, 1958.

SN 115,809. Ideal Industries, Inc., Wilmington, Del. Filed Mar. 16, 1961.

WIRE LUBE

Owner of Reg. No. 602,536.
For Lubricants Used in Pulling Wires Through Conduits.
First use Apr. 1, 1953.

SN 120,926. VIP Laboratories, Inc., Tulsa, Okla. Filed May 26, 1961.

VIP

For Cleansing and Preserving Additive for Greases, Oils and Hydrocarbon Fuels.
First use January 1950.

Class 16—Protective and Decorative Coatings

SN 108,038. Farac Oil and Chemical Company, Chicago, Ill. Filed Nov. 8, 1960.

FLEXAQUA

For Oil-in-Water Emulsion Paint Vehicle.
First use Nov. 3, 1960.

Class 17—Tobacco Products

SN 109,954. Cia. Cigarrera "La Moderna" S.A., Monterrey, Nuevo Leon, Mexico. Filed Dec. 9, 1960.

DEL PRADO

Owner of Mexican Reg. No. 62,334, dated July 6, 1949.
For Tobacco Products—Namely, Cigars and Cigarettes.

Class 18—Medicines and Pharmaceutical Preparations

SN 99,451. Pharmacia Laboratories, Inc., New York, N.Y. Filed June 21, 1960.

MACRO-DEX

For Special Macromolecular Fraction of Dextran Particularly Useful as a Blood Plasma Expander.
First use June 16, 1960.

SN 110,547. Les Laboratoires Dausse, Societe Anonyme, Paris, France. Filed Dec. 20, 1960.

SOLURUTINE

Owner of French Reg. No. 392,718, dated Mar. 17, 1949 (Seine); Natl. Inst. No. 447,228.
For Pharmaceutical Preparation for Treatment of Diseases Associated With the Circulatory System.

SN 112,253. Gilroy/Mays Company, Inc., South Bend, Ind. Filed Jan. 23, 1961.

ALO-EASE

For Laxative Preparation.
First use July 1960.

SN 112,480. Nicholas International Limited, Toronto, Ontario, Canada. Filed Jan. 25, 1961.

MYLOMIDE

Priority claimed under Sec. 44(d) on Canadian application filed Nov. 8, 1960; Reg. No. 124,156, dated Oct. 27, 1961.
For Hypnotics and Sedatives.

SN 119,436. Tanabe Seiyaku Co., Ltd., Higashi-ku, Osaka, Japan. Filed May 5, 1961.

METHOFADIN

メトファジン

The Japanese characters shown in the drawing are a phonetic equivalent of the term "Methofadin." Owner of Japanese Reg. No. 560,963.
For Antibacterial Sulfa Agent.

Class 19—Vehicles

SN 83,653. Simca, Paris, France. Filed Oct. 20, 1959.

MONTLHERY

Owner of French Reg. No. 474,915, dated Oct. 3, 1958 (Seine); Natl. Inst. No. 113,875.
For Automobiles.

SN 107,290. Robert E. Soderholm, d.b.a. Soderholm Manufacturing Co., Worthington, Minn. Filed Oct. 27, 1960.

SAFARI TOP TRUNK

No claim is made to the words "Top Trunk" apart from the mark.
For Vehicle Top Carrier for Luggage and Other Objects.
First use July 5, 1960.

SN 111,432. Rheinstahl Hanomag Aktiengesellschaft, Hannover, Germany. Filed Jan. 6, 1961.

Owner of German Reg. No. 737,586, dated Apr. 14, 1960.
For Automotive Vehicles—Namely, Vehicles for Moving of Persons, Automotive Trucks, Automotive Delivery Vehicles, Motor Buses, Chain-Driven Vehicles, Hauling Vehicles, Truck Trailers; and Parts Thereof.

SN 116,223. Forger & Lamb, Liverpool, N.Y. Filed Apr. 14, 1961.

Glasshawk

For Boats.
First use Jan. 30, 1961.

SN 120,033. Talman Corporation, West Warwick, R.I. Filed May 15, 1961.

SAILSTAR

For Sailboats.
First use July 12, 1960.

SN 123,061. American Truck Body Company, Martinsville, Va. Filed June 29, 1961.

PACTAINER

For Special Bodied Automotive Trucks and Railway Cars.
First use Apr. 26, 1960.

SN 123,633. Leif A. Eriksen, d.b.a. Tag Along Manufacturing Co., Littleton, Colo. Filed July 10, 1961.

TAG ALONG

For Infants' Supporting Chair and Stroller.
First use before June 1960.

SN 124,164. Blue Bird Body Company, Fort Valley, Ga. Filed July 18, 1961.

For School Busses.
First use 1955.

SN 124,165. Blue Bird Body Company, Fort Valley, Ga. Filed July 18, 1961.

BLUE BIRD

For Transit Vehicles and Parts Thereof.
First use July 1935.

SN 128,907. Jack C. McKee, d.b.a. Drifter Manufacturing Company, Gallatin, Tenn. Filed Sept. 29, 1961.

DRIFT-R-CRUZ

For Boats.
First use at least as early as Feb. 1, 1961.

Class 20 — Linoleum and Oiled Cloth

SN 122,415. Arkwright Merchandising Corporation, New York, N.Y. Filed June 20, 1961.

Charm House

For Linoleum, Oil Cloth, Vinyl Tile, Plastic Coverings for Furniture, Seats, Stands, Tables and Plastic Seat Covers, Rugs and Mats, Oil Cloth Table Cloths and Table Covers, Oil Cloth Shelving.
First use Mar. 27, 1951.

Class 21 — Electrical Apparatus, Machines, and Supplies

SN 82,692. Murata Manufacturing Company Limited, Higashiyama-ku, Kyoto, Japan. Filed Oct. 5, 1959.

MIFT

Priority claimed under Sec. 44(d) on Japanese application filed Apr. 11, 1959; Reg. No. 574,168, dated June 10, 1961.
For Parts for Electric Communication Apparatus—Namely, Electronic Wave Filters.

SN 82,693. Murata Manufacturing Company Limited, Higashiyama-ku, Kyoto, Japan. Filed Oct. 5, 1959.

PIELEFORK

Priority claimed under Sec. 44(d) on Japanese application filed Apr. 11, 1959; Reg. No. 569,896, dated Apr. 1, 1961.
For Piezoelectric Tuning Fork in Electric Communication Apparatus.

SN 106,793. Clover Lamp Co., Inc., Philadelphia, Pa. Filed Oct. 20, 1960.

FORECASTER ORIGINALS

For Electrical Table Lamps.
First use July 23, 1960.

SN 108,053. Le Porte-Echappement Universel S.A., d.b.a. The Universal Escapement Ltd., La Chaux-de-Fonds, Switzerland. Filed Nov. 8, 1960.

ESCAP

Owner of Swiss Reg. No. 176,345, dated June 26, 1959.
For Motors, in Particular Battery Operated Miniature Direct Current Motors.

SN 108,305. Fisher Radio Corporation, Long Island City, N.Y. Filed Nov. 14, 1960.

DYNAMIC SPACEXPANDER

For Electronic Unit for Adding Reverberations to a Sound Reproducing System.
First use June 30, 1960.

SN 110,912. Jervis B. Webb Company, Detroit, Mich. Filed Dec. 27, 1960.

TOWMATIC

Owner of Reg. Nos. 568,293 and 571,119.
For Electronic Dispatching Control Systems for Tow Conveyors.
First use Feb. 25, 1957.

SN 111,102. The I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed Dec. 30, 1960.

K - DON

For Electrical Switching Devices—Namely, Circuit Breakers.
First use February 1960.

SN 112,388. Lindberg Engineering Company, Chicago, Ill. Filed Jan. 24, 1961.

PYROPLAT

For Electric Hot Plates for Use in Laboratories.
First use Nov. 4, 1960.

SN 112,979. Permavolt Transformers, Inc., Grand Haven, Mich. Filed Feb. 2, 1961.

PERMAVOLT

For Transformers and Power Supplies.
First use June 28, 1960.

SN 113,776. Svenska Relafabriken A.B.N. Aktiebolag, Tyreso, Sweden. Filed Feb. 15, 1961.

WEGEPHONE

Priority claimed under Sec. 44(d) on Swedish application filed Aug. 17, 1960; Reg. No. 90,592, dated Oct. 21, 1960.
For Loudspeakers, Telecommunicating Apparatuses, Such as Telephone Apparatuses, Telephone Switching Equipment and Parts Thereof, Apparatuses for Generation, Accumulation and Transforming of Electric Energy, Electric Wires, Television and Radio Apparatus and Parts Thereof, Instruments for Electro-Acoustical Measurement.

SN 116,450. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed Mar. 24, 1961.

HYNETIC

For Hydraulic Magnetic Circuit Breakers.
First use on or about Aug. 14, 1959.

SN 118,810. Precision Transformer Corp., Elk Grove Village, Ill. Filed Apr. 27, 1961.

PTC

For Electrical Transformers.
First use Feb. 25, 1953.

SN 119,053. The Sampson Company, Chicago, Ill. Filed May 1, 1961.

PERMA TEST

For Electronic Tubes, Diodes, Transistors, Resistors, Capacitors, Transformers, Rectifiers, Relays, Batteries and Soldering Irons.
First use Apr. 19, 1961.

SN 119,161. Sunbeam Corporation, Chicago, Ill. Filed May 2, 1961.

S

Owner of Reg. No. 543,696.
For Electric Pressing Irons; Electric Floor Cleaning, Polishing and Conditioning Machines and Rug Scrubbing Machines; Electric Cooking Appliances; Electric Can Openers; and Electric Food and Beverage Mixers.
First use on or about June 17, 1959, on electric pressing irons.

SN 119,208. JFD Electronics Corporation, Brooklyn, N.Y. Filed May 3, 1961.

TRANSIS-TENNA

For Television Antennas.
First use Apr. 14, 1961.

SN 122,497. AMP Incorporated, Harrisburg, Pa. Filed June 21, 1961.

COAXICON

For Electrical Connectors.
First use in April 1959.

SN 122,546. A. E. Moore Company, Inc., Waupaca, Wis. Filed June 21, 1961.

PETRO-MATIC

For Electric Door Operators.
First use May 24, 1961.

SN 122,571. Sonotec, Incorporated, Santa Ana, Calif. Filed Mar. 23, 1961.

L

For Amplifiers, Power Supplies, Equalizers, Attenuators, Panels, Chassis, Complete Studio Consoles, Public Address Systems and the Like, and on Components Thereof.
First use July 30, 1960.

SN 122,863. United Co-Operatives, Inc., Alliance, Ohio. Filed June 26, 1961.

UNICO

For Spark Plugs.
First use at least as early as Apr. 13, 1959; at least as early as July 1, 1940, in a different display.

SN 122,997. Control Dynamics Corporation, North Hollywood, Calif. Filed June 28, 1961.

DOUBLE-MITE

For Electrical Relays.
First use Feb. 20, 1961.

SN 123,411. Communications Control Corporation, Van Nuys, Calif. Filed July 5, 1961.

CANDU

For Electrical Apparatus for Receiving Analogue Signals, Converting Them to Digital Signals, and Recording the Digital Signals.
First use July 15, 1960.

Class 22 — Games, Toys, and Sporting Goods

SN 88,338. Shoppers World Co., Cicero, Ill. Filed Dec. 31, 1959.

SHOPPER'S WORLD

For General Line of Inexpensive Play and Educational Toys; Dolls; and Apparatus Sold as Units for Playing Board, Card and Similar Type Games.
First use May 1957.

SN 108,272. Columbia Plastics Corp., Culver City, Calif. Filed Nov. 14, 1960.

COPCO

For Toy Plastic Boats.
First use Sept. 5, 1960.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 73,475. Dempster Brothers, Inc., Knoxville, Tenn. Filed May 12, 1959.

DUMPMASTER

Owner of Reg. Nos. 353,486, 668,949 and others.
For Lifting Mechanism for Truck for Dumping Detachable Containers.
First use Apr. 19, 1957.

SN 77,874. Vapor Blast Mfg. Co., Milwaukee, Wis. Filed July 16, 1959.

VAPOR V-B BLAST

For Sand Blasting Machines and Parts Thereof.
First use June 1, 1937.

SN 83,156. The Zeller Corporation, Defiance, Ohio. Filed Oct. 12, 1959.

ZELLER

Owner of Reg. No. 579,989.
For Running Gear for Crawler Tractors.
First use July 31, 1959.

SN 101,106. Kiekhaefer Corporation, Cedarburg, Wis. Filed July 19, 1960.

FLEETMASTER

For Marine Propulsion Lower Units and Parts Thereof.
First use Jan. 13, 1960.

SN 101,107. Kiekhaefer Corporation, Cedarburg, Wis. Filed July 19, 1960.

SPORTMASTER

For Marine Propulsion Lower Units and Parts Thereof.
First use Jan. 13, 1960.

SN 105,267. Concrete Pipe Machinery Company, Sioux City, Iowa. Filed Sept. 27, 1960.

MC CRACKEN

For Concrete Pipe Machines and Parts Thereof.
First use Jan. 1, 1936.

SN 105,429. Flexweight, Inc., Wichita, Kans. Filed Sept. 29, 1960.

FLEXWEIGHT

For Oilfield Drilling Equipment—Namely, Drill Pipe Sections.
First use Jan. 16, 1959.

SN 109,628. Dwight E. Reynolds, El Monte, Calif. Filed Dec. 5, 1960.

Roto-Drive

For Auger and Connections Therefor for Installing Small Pipe, Rigid Tubing and the Like Under Drives, Walks, Etc.
First use Oct. 20, 1960.

SN 110,262. Double A Products Company, Manchester, Mich. Filed Dec. 15, 1960.

GEROTOR

Owner of Reg. Nos. 410,181, 435,452, and others.
For Fluid Pumps.
First use June 13, 1927.

SN 110,707. Sharon Steel Corporation, Sharon, Pa. Filed Dec. 22, 1960.

SHARONSTEEL

Owner of Reg. No. 354,873.
For Strip Metal Strapping Tools—Namely, Stretchers, Sealers, Winders, Coil Holders and Cutters, and Shears.
First use Jan. 1, 1948.

SN 110,987. Detroit Stamping Company, Detroit, Mich. Filed Dec. 29, 1960.

HAN-D-VISE

For Toggle Actuated Clamps.
First use Nov. 15, 1960.

SN 111,570. Wilson Jones Company, Chicago, Ill. Filed Jan. 9, 1961.

JET 170

Owner of Reg. No. 560,425.
For Stapling Machines.
First use Sept. 20, 1960.

SN 112,181. Marvin J. Goldblatt, d.b.a. Veterans Auto Parts, Rochester, N.Y. Filed Jan. 19, 1961.

Veterans AUTO PARTS

Applicant hereby disclaims the terms "Auto Parts" and "Guaranteed" apart from the mark as shown.
For Automobile Motors and Driving Parts.
First use Dec. 1, 1959.

SN 114,485. Illinois Tool Works, Inc., Chicago, Ill., by merger from Illinois Tool Works, Chicago, Ill. Filed Feb. 27, 1961.

ILLINIZED

Owner of Reg. Nos. 118,664 and 356,041.
For Cutting Tools in Connection With Machine Tools, Tool Bits in Connection With Machine Tools, Milling Cutters, Planer Tools, Drawing and Extruding Dies, and Friction Resisting Parts of Machinery Such as Bearing Surfaces in General.
First use Jan. 29, 1961.

SN 114,505. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Feb. 27, 1961.

SCOTCHKOTE

Owner of Reg. Nos. 583,386, 706,885, and others.
For Electrically Powered Industrial Machine for Spray Application of a Protective Resin in Powdered Form To Provide a Coating on a Surface.
First use Jan. 6, 1961.

SN 115,085. The Spee-Flo Manufacturing Corporation, Houston, Tex. Filed Mar. 7, 1961.

H-GUN

For High Pressure Airless Paint Spray Guns.
First use on or about Dec. 1, 1960.

SN 115,293. Automotive Warehouse Distributor, Inc., Denver, Colo. Filed Mar. 10, 1961.

REMEX

For Automotive Clutches, Engine Starter Gears, Engine Starter Drive, Transmissions, Differentials, and Carburetors.
First use Jan. 20, 1961.

SN 115,572. Associated American Winding Machinery, Inc., New York, N.Y. Filed Mar. 14, 1961.

AMACOIL

The words "Winding Round the World" are disclaimed apart from the mark as shown.
For Winding Machinery and Parts Therefor.
First use Jan. 12, 1961.

SN 118,897. Muller Machinery Company, Inc., Metuchen, N.J. Filed Apr. 28, 1961.

MULLER MOR-FLO R

Owner of Reg. No. 564,254.
For Concrete and Mortar Plastering Machines.
First use Apr. 19, 1961, on plastering machines.

SN 118,936. The American Agricultural Chemical Company, New York, N.Y. Filed May 1, 1961.

AGRICO

Owner of Reg. Nos. 166,054 and 264,116.
For Spreaders.
First use Mar. 10, 1961.

SN 119,111. Curlator Corporation, East Rochester, N.Y. Filed May 2, 1961.

RANDO-CLEANER

Owner of Reg. Nos. 558,770, 707,480, and others.
For Machines for Use in the Textile Industry in Cleaning and Opening Cotton, Linters, Wool, and Other Materials.
First use Apr. 12, 1961.

SN 119,171. Avery Adhesive Products, Inc., San Marino, Calif. Filed May 3, 1961.

APPLICON

For Machines and Devices for Dispensing or Other Near-End-Use Processing of Pressure-Sensitive Labels and Webs.
First use Apr. 13, 1961.

SN 119,196. Warren Doble, North Hollywood, Calif. Filed May 3, 1961.

DIVOT DOCTOR

For Golf Green Repair Tool.
First use Apr. 5, 1961.

SN 119,204. Indel Supply, Inc., Dallas, Tex. Filed May 3, 1961.

Octo-Plug

For Bridges for Shot Holes.
First use on or about Dec. 28, 1959.

SN 119,328. United Shoe Machinery Corporation, Boston, Mass. Filed May 4, 1961.

TYMASTER

Owner of Reg. No. 703,104.
For Twine Bundling Machines—Namely, Machines for Tying Into Bundles, Materials Such as Newspapers, Magazines, Multi-Wall Paper Bags, Shipping Containers, and the Like.
First use in or about December 1956.

SN 119,405. Moto-Mower, Inc., Oak Park, Mich. Filed May 5, 1961.

TERRA

For Power Handles Comprising a Power Unit and Handle as an Assembly for Attachment to Various Tools Including Lawn Mowers, Tillers, Cultivators, Edgers, Vacuum Cleaners, Plows, Sickle Bars, and Tractors.
First use February 1961.

SN 119,455. Moto-Mower, Inc., Oak Park, Mich. Filed May 5, 1961.

MOTO-MOWER

Owner of Reg. Nos. 515,280 and 708,069.
For Small Tractors and Lawn Mowers of the Riding Type.
First use March 1959.

SN 120,469. Advance Chemical Company, San Francisco, Calif. Filed May 22, 1961.

SPRAY DYNE

Applicant disclaims the word "Spray" apart from the mark as shown.
For Atomizer for Application of Liquid Cleaner to Toilet Bowls.
First use on or about Mar. 28, 1961.

SN 122,004. Charles Levin & Co., Lincolnwood, Ill. Filed June 14, 1961.

Taper Magic

For Electric Hair Clippers.
First use Jan. 24, 1961.

SN 122,070. Dynamic Models, Inc., Van Nuys, Calif. Filed June 15, 1961.

AUTOMIX

For Carburetors.
First use Apr. 27, 1961.

SN 122,732. Super Mold Corporation of California, Lodi, Calif. Filed June 23, 1961.

LODRIX

For Tire Mold Loaders.
First use May 19, 1961.

SN 122,832. Parco Products Company, Pennsburg, Pa. Filed June 26, 1961.

PINOKIO

For Sprayers for Insecticides, Fungicides, Weed Killers and the Like.
First use Mar. 17, 1961.

SN 123,033. Renner Manufacturing Company, Milwaukee, Wis. Filed June 28, 1961.

COMPORTER

For Marine Mobile Boat Hoists and Parts Therefor.
First use Apr. 7, 1961.

SN 123,112. Manchester Machine & Tool Company, Akron, Ohio. Filed June 29, 1961.

MANCHESTER

For Cutoff Tools, Fly Cutters and Replacement Inserts for Said Cutoff Tools and Fly Cutting Tools, and Squaring Fixtures.
First use May 1, 1954.

Class 24 — Laundry Appliances and Machines

SN 108,923. Tornado-France, Paris, France. Filed Nov. 22, 1960.



Owner of French Reg. No. 413,358, dated July 6, 1951 (Paris); Natl. Inst. No. 496,972.
For Washing Machines and Clothes Driers.

SN 119,273. Detrex Chemical Industries, Inc., Detroit, Mich. Filed May 4, 1961.

Betty Brite

The name "Betty Brite" is not identified with a particular living individual.
For Dry Cleaning Machines.
First use Jan. 6, 1961.

SN 122,024. Pyrofax Gas Corporation, New York, N.Y. Filed June 14, 1961.

PYROFAX

For Gas-Operated Clothes Dryers.
First use on or about Jan. 5, 1959.

SN 122,137. Surety Company, Philadelphia, Pa. Filed June 15, 1961.

merit-made

For Ironing Board Covers.
First use on or about Mar. 14, 1960.

Class 26 — Measuring and Scientific Appliances

SN 82,805. United Geophysical Corporation, Pasadena, Calif. Filed Oct. 6, 1959.

STRATA PRINTER

For Apparatus for Recording Seismic Waves Received at a Plurality of Points in the Earth as Variable Density Records, and Parts Thereof, and Machines and Parts Thereof for Printing Those Records in Side-by-Side Relationship as a Profile Simulating Subterranean Strata and Unconformities.
First use Sept. 1, 1956.

SN 95,958. Western Geophysical Company of America, Los Angeles, Calif. Filed Apr. 27, 1960.

Western STRATIGRAM

For Seismograph Records and Record Sections.
First use Jan. 4, 1960.

SN 102,033. Macbeth Corporation, Newburgh, N.Y. Filed Aug. 4, 1960.

VUE-O-CRITIC

For Electric Color Control Equipment.
First use in or about June 1952.

SN 109,043. Daystrom, Incorporated, Murray Hill, N.J. Filed Nov. 25, 1960.

TRANSCAL

For Heat Resistant Transparent Plastic Windows for Use on Electrical Measuring, Indicating, Recording, and Controlling Instruments and Devices.
First use Aug. 2, 1960.

SN 109,353. Rheem Manufacturing Company, Richmond, Calif. Filed Nov. 30, 1960.

DIDAK

For Teaching Machine.
First use June 1, 1960.

SN 110,665. Compagnie d'Applications Mecaniques a l'Electronique, au Cinema et a l'Atomistique (C.A.M.E.C.A.), Paris, France. Filed Dec. 22, 1960.

SHOW-BOX

Priority claimed under Sec. 44(d) on French Reg. No. 488,972, dated June 23, 1960 (Seine); Natl. Inst. No. 146,662.
For Sound Motion Picture Projection Apparatus With Loud Speaker, Screen and Film Magazine, Completely Automatic, Including Selector, Loader, Starter, Stopper, Unloader and Rewinder, Controlled by Insertion of a Coin.

SN 111,104. Indiana General Corporation, Valparaiso, Ind. Filed Dec. 30, 1960.



For Magnetic Memory Cores, Memory Planes, Memory Stacks; Magnetic Fines Separators; Vibro-Magnetic Analyzers; Electronic Metal Detectors.
First use Sept. 7, 1960.

SN 115,446. De Jur-Amsco Corporation, Long Island City, N.Y. Filed Mar. 13, 1961.

DYNA-ZOOM

For Motion Picture Cameras and Photographic and Projection Lenses.
First use Feb. 2, 1961.

SN 115,497. Kysor Heater Company, Cadillac, Mich. Filed Mar. 13, 1961.

SHUTTERSTAT

For Temperature Control Apparatus for Internal Combustion Engines and the Like.
First use on or about June 7, 1937.

SN 115,593. Electro-Optical Systems, Inc., Pasadena, Calif. Filed Mar. 14, 1961.

MSI

For Semiconductor Strain Gauges.
First use Dec. 12, 1960.

SN 116,344. Robertson Photo-Mechanix, Inc., Chicago, Ill. Filed Mar. 23, 1961.

ROBERTSON

Owner of Reg. No. 610,654.
For Cameras; Screen Selectors; Screen and Photographic Mask Elimination Cases; Film Cabinets; Film Holders; Plate-Holders; Masking Bars; Diaphragm Control Devices; Shutter Controls; Lenses; Screens; Hand Magnifiers; Photographic Lighting Equipment—Namely, Lamps and Reflectors; Printing Frames; Extension and Copyboard Focusing Scales; and Specialized Photographic and Dark Room Equipment—Namely, Etching Machines, Plate Whirlers, and Tables for Retouching, Etching, Make-Up and Stripping, and Inking-Up Lithographic Plates; Electrostatic Photographic Equipment—Namely, Electrostatic Cameras for Use With Reflected Copy, Transparency Copy and Microfilm Copy; Equipment for Affixing Image to Plate; Lithographic Masters.
First use in or about 1917.

SN 119,227. National Lead Company, New York, N.Y. Filed May 3, 1961.



For Lead Material for Shielding Against Radiation.
First use Mar. 6, 1961.

SN 121,020. The National Eye Research Foundation, Chicago, Ill. Filed May 29, 1961.

PERISCREENER

For Charts and Apparatus Utilized in Measuring or Ascertaining the Extent of a Visual or Temporal Field.
First use Jan. 17, 1961.

SN 121,306. Ohaus Scale Corporation, Union, N.J. Filed June 2, 1961.

505

For Scales.
First use May 5, 1961.

SN 122,138. Transcopy, Incorporated, Newton, N.J. Filed June 15, 1961.

TRANSAMATIC I

For Photocopying Machines.
First use Dec. 21, 1960.

SN 122,579. Well Pump Company, Chicago, Ill. Filed June 21, 1961.

Vis-a-trol

For Liquid Level Controller for Controlling Level of Fluid in Sump Basins, Septic Tanks, Sewer Disposal, Drain Sumps and the Like.
First use Jan. 3, 1961.

SN 122,643. Radiation Technology, Inc., Atlanta, Ga. Filed June 22, 1961.

SCRAM

For Personal Radiation Monitors.
First use on or about June 9, 1961.

SN 123,647. I.R. Systems, Inc., West Springfield, Mass. Filed July 10, 1961.

IR

For Machines for Retrieving Information by Way of Cards.
First use June 1, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 123,129. Oriental Marine Products Limited, Victoria, Hong Kong. Filed June 29, 1961.

ROYAL HONG KONG

For Cultured Pearls.
First use March 1961; in commerce March 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 119,609. E. W. Bruno Co., Inc., New York, N.Y. Filed May 9, 1961.

Three Crowns

For Brushes and Brush and Comb Sets.
First use Apr. 6, 1961.

SN 122,174. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 16, 1961.

LONGFELLA'

For Cellulose Sponges.
First use Jan. 30, 1961.

Class 30 — Crockery, Earthenware, and Porcelain

SN 121,455. L. W. Wirth, Inc., New York, N.Y. Filed June 5, 1961.

WALDORF

For Chinaware—Namely, Tableware.
First use May 11, 1961.

Class 31 — Filters and Refrigerators

SN 44,793. Hein, Lehmann & Co. A.G., Dusseldorf, Germany. Filed Jan. 21, 1958.

CONIDURE

For Spring Steel Wire Sieves, Sieve Grates, Fine and Wide Slit Sieves, Fine Hole Perforates, Sheets, Fine Hole Punch Sheets.
First use June 16, 1951; in commerce February 1954.

SN 94,148. William E. Cunningham, d.b.a. Cunningham Manufacturing Co., San Carlos, Calif. Filed Apr. 1, 1960.

GENIE JET

For Silt Filtering Bags Used in Connection With Swimming Pool Cleaning Equipment.
First use December 1959.

SN 109,101. Remington Corp., Auburn, N.Y. Filed Nov. 25, 1960.

TROPICOOL

For Self-Contained Air Conditioning Units, Each Comprising a Refrigeration Unit Enclosed Within a Cabinet and an Air Circulating Fan.
First use 1948.

SN 114,535. Louis Radoi, Miami, Fla. Filed Feb. 27, 1961.

FRIGIBAR

For Refrigerated Service Bars.
First use Apr. 15, 1959.

SN 120,273. Zero Manufacturing Company, Inc., Washington, Mo. Filed May 17, 1961.

COMPACT

For Small Bulk Refrigerator Milk Tanks.
First use Nov. 1, 1960.

SN 120,389. Continental Filtration Inc., Taylor, Mich. Filed May 19, 1961.

DIALCLEAN

For Swimming Pool Filter.
First use Oct. 22, 1960.

SN 120,477. Arrowhead and Puritas Waters, Inc., Los Angeles, Calif. Filed May 22, 1961.



The drawing is lined for red, blue, gold, and silver. The term "Electric Cooler" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 98,033 and 658,652.
For Electric Coolers for Drinking Water.
First use July 17, 1959.

Class 32 — Furniture and Upholstery

SN 110,112. Thomas Industries Inc., Louisville, Ky. Filed Dec. 12, 1960.

MOE

Owner of Reg. Nos. 517,557, 579,407, and others.
For Bathroom Cabinets.
First use June 21, 1956.

SN 114,191. Delta Precision Products, Inc., Addison, Ill. Filed Feb. 23, 1961.

DELWOOD

For Furniture Legs, Table Dividers, and Moulded Drawers.
First use August 1959.

SN 114,578. E. Gomme Limited, High Wycombe, England. Filed Feb. 27, 1961.

G-PLAN

Owner of British Reg. No. 777,846, dated May 20, 1958.
For Furniture—Namely, Dining Room Chairs and Stools, Coffee Tables, Chairs and Sofas, Beds and Headboards, Bedside Tables and Cupboards, Dressing Tables and Dressing Chests, Mirrors, Liquor Cabinets, Corner Tables, Plant Troughs, Wardrobes, Chests, Sideboards, Dining Room Tables, Bookcases and Secretaries.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 105,831. Queen Mantel and Tile Co., Inc., Atlanta, Ga. Filed Oct. 5, 1960.

STAR

For Gas Operated Hearth Fire Starters.
First use Mar. 19, 1960.

SN 106,149. A. O. Smith Corporation, Milwaukee, Wis. Filed Oct. 10, 1960.

CER-TEMP

For Hot Water Heaters and Water Heating Apparatus.
First use Apr. 6, 1960.

SN 106,956. Todd Shipyards Corporation, New York, N.Y. Filed Oct. 21, 1960.

DUAL-PAC

For Fuel Burners Including Oil Burners, Gas Burners and Parts Thereof and Accessories Therefor Including Air Registers and Forced Draft Fans and Packages Containing Burners and Accessories Therefor.
First use November 1959.

SN 106,958. Todd Shipyards Corporation, New York, N.Y. Filed Oct. 21, 1960.

SAV-PAC

For Fuel Burners Including Oil Burners, Gas Burners and Parts Thereof and Accessories Therefor Including Air Registers and Forced Draft Fans and Packages Containing Burners and Accessories Therefor.
First use June 1958.

SN 111,086. Everhot All-Copper, Inc., Boston, Mass. Filed Dec. 30, 1960.

COPPER-RAMA

For Water Heaters.
First use Oct. 25, 1960.

SN 111,087. Everhot All-Copper, Inc., Boston, Mass. Filed Dec. 30, 1960.

COPPERAMA

For Water Heaters.
First use Oct. 25, 1960.

SN 114,312. Buensod-Stacey Corporation, New York, N.Y. Filed Feb. 24, 1961.

VOLUMTROL

For Regulators Controlling the Flow of Air in Air-Conditioning Systems.
First use Oct. 12, 1960.

SN 115,239. Lehigh, Inc., Easton, Pa. Filed Mar. 9, 1961.

AIR ISOLATOR

For Refrigerated Air Curtains Used as Doorways.
First use Apr. 20, 1960.

SN 115,727. The Rails Company, Maplewood, N.J. Filed Mar. 15, 1961.

RAILSEAL

For Railroad Track Switch Heaters.
First use Feb. 17, 1961.

SN 115,996. Brookside Corporation, McCordsville, Ind. Filed Mar. 20, 1961.



The lining on the mark is a part thereof and does not represent color.
For Fans, Fan Blades and Blowers.
First use Feb. 24, 1961.

SN 116,783. An-Cor Industrial Plastics, Inc., Buffalo, N.Y. Filed Mar. 30, 1961.

AN-COR

For Fiber Reinforced Plastic Ducts, Stacks, Hoods, and Fans.
First use about Nov. 1, 1960.

SN 116,804. Little Devil Pre-Heater Corporation, New York, N.Y. Filed Mar. 30, 1961.

"LITTLE DEVIL"

For Pre-Heating Air Devices.
First use Nov. 1, 1960.

SN 117,657. Steel City Furnace Corporation, Springdale, Pa. Filed Apr. 11, 1961.

JETTRONAIRE

For Residential Forced Air Furnaces.
First use on or about May 28, 1958.

SN 118,954. Carrier Corporation, Syracuse, N.Y. Filed May 1, 1961.

astroglas

For Water Heaters.
First use Aug. 12, 1960.

SN 119,070. Temco, Inc., Nashville, Tenn. Filed May 1, 1961.

AL-KOVE

For Gas Heaters.
First use Nov. 17, 1960.

SN 120,364. American Metal Products Co., Inc., Los Angeles, Calif. Filed May 19, 1961.

AMERI-FLOW

For Registers, Grilles and Diffusers.
First use May 8, 1961.

SN 120,925. Van Wert Stoker Manufacturing Co., Inc., Peckville, Pa. Filed May 26, 1961.

Therm-A-Pak

For Oil Fired Heating Units.
First use May 1, 1961.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 123,583. Victor Manufacturing & Gasket Company, Chicago, Ill. Filed July 7, 1961.

MUL-TI-COR

For Gasketing Material and Gaskets Made Therefrom.
First use June 20, 1961.

SN 124,076. The Firestone Tire & Rubber Company, Akron, Ohio. Filed July 17, 1961.

DARLINGTON

For Resilient Vehicle Tires.
First use Apr. 14, 1961.

Class 37 — Paper and Stationery

SN 104,530. Interchemical Corporation, New York, N.Y. Filed Sept. 15, 1960.

ic

For Heat Sensitive Copy Paper Used on Thermocopying Machines.
First use Nov. 18, 1959.

SN 114,189. Curtis 1000, Incorporated, West Hartford, Conn. Filed Feb. 23, 1961.

FOLD-A-CARDS

For Mailing Envelopes of Paper Having a Card Attached Thereto Adapted Particularly for Remailing.
First use Feb. 7, 1961.

SN 125,440. United States Envelope Company, Springfield, Mass. Filed Aug. 4, 1961.

PENSTAR

For Filler Paper, in Tablet Form and in Wrapped or Banded Packages.
First use on or about June 30, 1936.

SN 125,441. United States Envelope Company, Springfield, Mass. Filed Aug. 4, 1961.

Linweave **SPECTRA**

Owner of Reg. No. 154,170.
For Writing Papers and Envelopes, and for Text and Cover Papers.
First use on or about May 27, 1961.

SN 125,443. United States Envelope Company, Springfield, Mass. Filed Aug. 4, 1961.

RITEFORM

For Typing Paper, in Tablet Form and in Wrapped or Banded Packages, Students' and Stenographers' Notebooks, Memo Pads, Packaged Index Cards, and Tablets of Air Mail Paper.
First use on or about July 2, 1935.

Class 38 — Prints and Publications

SN 114,771. Inland Waterway Guide, Inc., Fort Lauderdale, Fla. Filed Mar. 2, 1961.

INLAND
WATERWAY GUIDE

For Magazine.
First use in the year 1948.

SN 119,696. Scholastic Magazines, Inc., New York, N.Y., assignee of Le Roy Hayman, d.b.a. Leaf Publishing Company, Evanston, Ill. Filed May 10, 1961.

BACKGROUND

For News Magazine.
First use Aug. 29, 1960.

Class 39 — Clothing

SN 92,127. Storktowne Products, Inc., Chicago, Ill. Filed Mar. 3, 1960.

Weather Tamer

For Snowsuits, Car Coats and Jackets.
First use Jan. 25, 1960.

SN 94,889. Glen Raven Knitting Mills, Inc., Glen Raven, N.C. Filed Apr. 12, 1960.

ARIEL

For Ladies' Nylon Hosiery.
First use Nov. 15, 1959.

SN 105,600. Cliff Arquette, Gettysburg, Pa. Filed Oct. 3, 1960.



The portrait shown is that of applicant in stage costume.
For Clothing—Namely, Hats and Shirts.
First use on or about Mar. 1, 1959.

SN 106,083. The Formfit Company, Chicago, Ill. Filed Oct. 10, 1960.

OLYMPIA

For Brassieres and Girdles.
First use on or about Sept. 27, 1960.

SN 108,968. Endicott Johnson Corporation, Endicott, N.Y. Filed Nov. 23, 1960.

WINDSOR WALKER

For Men's and Boys' Shoes.
First use July 1, 1948.

SN 109,538. M. Wilkinson & Company Limited, Bradford, England. Filed Dec. 2, 1960.

Reversit

Owner of British Reg. No. B704,598, dated Feb. 4, 1952.
For Shirts and Collars.

SN 110,569. Washington Manufacturing Company, Inc., d.b.a. Washington Mfg. Company, Old Kentucky Mfg. Company, Gold Star Company, Lori-Lynn Company and The Brodnax Company, Nashville, Tenn. Filed Dec. 20, 1960.

BRODNAX

For Men's and Boys' Sportswear—Namely, Sport Shirts, Knit Shirts, Sweaters, Pants, Including Walking Shorts, Deck Pants, and Casual Pants.
First use Nov. 25, 1960.

SN 111,194. Knit Products Corporation, Belmont, N.C. Filed Jan. 3, 1961.

TWICE THE WEAR IN EVERY PAIR

For Hosiery for Ladies and Misses.
First use Dec. 6, 1957.

SN 111,743. Kathy Cabot, Inc., Boston, Mass. Filed Jan. 12, 1961.

KATHY CABOT

The name "Kathy Cabot" is fictitious.
For Children's and Teenagers' Wearing Apparel—Namely, Skirts, Blouses, Jackets, Jumpers, Slacks, and Bermuda Shorts.
First use Oct. 1, 1960.

SN 112,812. The Winsted Hosiery Company, Winsted, Conn. Filed Jan. 30, 1961.

WINSTED

For Hosiery for Men, Women, and Children; and Wearing Apparel—Namely, Shirts, Sweaters, and Underwear for Men, Women, and Children.
First use Aug. 10, 1960.

SN 112,995. Peerless Mills Corporation, New York, N.Y. Filed Jan. 31, 1961.

MERICK

For Men's Shirts, Sport Shirts and Pajamas.
First use at least as early as 1920.

SN 113,706. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Feb. 15, 1961.

FARAH 65S

Owner of Reg. Nos. 558,581, 558,776, and 627,029.
For Boys' Slacks, Men's Slacks, and Men's Walking Shorts.
First use Feb. 2, 1961.

SN 113,834. Joseph Kanner Hat Co., Inc., South Norwalk, Conn. Filed Feb. 16, 1961.

SABLE FINISH

For Men's Hats.
First use Jan. 6, 1961.

SN 113,840. La Lanne Incorporated, Hollywood, Calif. Filed Feb. 16, 1961.

JACK LA LANNE

The mark consists of the name of applicant's president, whose consent is of record.
For Women's Exercising Wearing Apparel—Namely, Gym Suits.
First use Sept. 12, 1960.

SN 113,855. A. E. Nettleton Company, Syracuse, N.Y. Filed Feb. 16, 1961.

TREAD RIGHT SHANK

Applicant disclaims any right to the word "Shank" apart from the mark as shown.
For Men's Shoes.
First use Jan. 26, 1959.

SN 113,860. Ratner Manufacturing Company, San Diego, Calif. Filed Feb. 16, 1961.

EVERCREASE

For Men's Slacks and Suits.
First use Sept. 1, 1960.

SN 113,939. The Moyer Manufacturing Company, Youngstown, Ohio. Filed Feb. 17, 1961.

pro-mate

The cross hatching on the drawing is merely used to reproduce that shown on the specimens and is not intended for the purpose of shading or indicating color. Owner of Reg. No. 696,127.
For Men's Slacks and Walk Shorts.
First use Feb. 9, 1960.

SN 114,148. Stratford Neckwear Co., Inc., New York, N.Y. Filed Feb. 21, 1961.

Stephano Di Savoia

The name "Stephano Di Savoia" is fictitious, and is not intended to refer to any living individual.
For Men's Neckties.
First use Jan. 25, 1961.

SN 114,167. Atlas Shirt Company, Inc., New York, N.Y. Filed Feb. 23, 1961.

HIDE-A-WAY TAB

No claim is made to the word "Tab" apart from the mark shown.
For Shirt Collars.
First use Feb. 10, 1961.

SN 114,276. Thornton Knitting Co. Inc., Denton, N.C. Filed Feb. 23, 1961.

Dura-Tread

For Boys' Hosiery.
First use Apr. 21, 1957.

SN 114,431. Champ Hats, Inc., Philadelphia, Pa. Filed Feb. 27, 1961.

M.F./E.E.S.

For Men's Hats.
First use Jan. 24, 1961.

SN 114,588. Associated Dry Goods Corporation, New York, N.Y. Filed Feb. 28, 1961.

True Merit

Owner of Reg. No. 30,179.
For Men's and Boys' Clothing—Namely, Slacks, Pajamas, Knit Shirts, Undershirts, and Briefs.
First use Sept. 10, 1960, on undershirts and briefs.

SN 114,776. Kops Bros., Inc., New York, N.Y. Filed Mar. 2, 1961.

BLISS

For Foundation Garments.
First use fall of 1936.

SN 115,304. Joseph F. Corcoran Shoe Co. Inc., Stoughton, Mass. Filed Mar. 10, 1961.

CORCORAN TWO 'N ONE

For Men's Shoes.
First use Jan. 23, 1961.

SN 115,776. Burlington Industries, Inc., New York, N.Y. Filed Mar. 16, 1961.

E & W

Owner of Reg. Nos. 76,228, 709,670, and others.
For Underwear, and Outerwear for Men, Women, and Children—Namely, Jackets, Pants, and Slacks, Shirts, Robes, Sweaters, Aprons, Pajamas, Jeans, Overalls, and Dungarees; Swim Trunks and Suits, Briefs, Undershorts, Union Suits, Undervests, Underpants, Gloves, Socks, Hosiery, and Diapers.
First use June 1, 1906.

SN 115,801. Genesco Inc., Nashville, Tenn. Filed Mar. 16, 1961.

PUNCHINELLO

For Boots, Shoes, and Slippers of Leather, Rubber, Fabric, or a Combination of Those Materials, for Men, Women, and Children.
First use Dec. 18, 1959.

SN 116,690. Barney Licardo, d.b.a. Licardo Gloves, Gloversville, N.Y. Filed Mar. 17, 1961.

GRIPMASTER

For Sporting Gloves.
First use on or about Nov. 1, 1959.

SN 117,207. Modern Import Co., St. Louis, Mo. Filed Apr. 5, 1961.

LEATHER-LUX

For Men's Shoes.
First use Feb. 2, 1961.

SN 118,441. Jane Hart, d.b.a. Perry Distributing Company, Detroit, Mich. Filed Apr. 24, 1961.

BEAUTEX

For Rubber Gloves.
First use Apr. 4, 1961.

SN 118,599. Piedmont Shirt Company, Greenville, S.C. Filed Apr. 25, 1961.

GRO-NEK

For Men's and Boys' Shirts and Collars.
First use Mar. 29, 1961.

SN 122,879. International Latex Corporation, Dover, Del. Filed July 6, 1961.

WONDERLASTIC

For Elastic Fabric Made Up Into Foundation Garments.
First use June 26, 1961.

SN 123,718. Feder Industries, Inc., New York, N.Y. Filed Jan. 19, 1961.

TRICOSA

Owner of Reg. No. 554,625.
For Knitted Outer Wear—Namely, Blouses, Skirts, Jackets, Coats, Dresses, Suits, Scarves, Stoles and Sweaters.
First use Dec. 4, 1949.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 102,284. Wellington Sears Company, New York, N.Y. Filed Aug. 8, 1960.

MASTERBLEND

For Piece Goods of All Cotton or a Blend of Cotton and Synthetics.
First use June 24, 1960.

SN 114,709. Jerome Levine, Skokie, Ill. Filed Mar. 1, 1961.

CARPETLAND, U.S.A.

Applicant disclaims the letters "U.S.A." apart from the mark as shown.
For Textile Rugs and Textile Carpets.
First use Feb. 7, 1961.

SN 119,184. Chicopee Manufacturing Corporation, New Brunswick, N.J. Filed May 3, 1961.

COOL-PUFF

For Seat Cover Fabrics.
First use Jan. 24, 1961.

SN 121,137. J. P. Stevens & Co., Inc., New York, N.Y. Filed May 31, 1961.

SURABELLA

For Textile Fabrics of Synthetic Fibers To Be Used in Making Dresses, Blouses and Lingerie.
First use Mar. 3, 1961.

SN 121,283. Fulton Industries, Inc., Atlanta, Ga. Filed June 2, 1961.

Fulton Duralap

Owner of Reg. No. 712,197.
For Knitted or Woven Paper Yarn Fabric.
First use May 9, 1961.

SN 123,821. S. S. Kresge Company, Detroit, Mich. Filed July 12, 1961.

BRIGHT STAR

For Diapers, Crib Sheets, and Crib Receiving Blankets.
First use Mar. 1, 1961.

SN 123,877. Dan River Mills, Incorporated, Danville, Va. Filed July 13, 1961.

CLOCKER

For Textile Fabrics in the Piece of Cotton, Synthetic Fibers or Mixtures Thereof.
First use June 29, 1961.

SN 123,923. Rhoads & Company, Philadelphia, Pa. Filed July 13, 1961.

Uni-Pad

For Pads, for Use Above the Mattresses in Beds or Bassinets, Variously Known as Bed Pads, Mattress Pads, Protective Pads, Underpads, Mattress Protectors and Bassinet Pads.
First use Oct. 11, 1949.

SN 124,104. M. Lowenstein & Sons, Inc., New York, N.Y. Filed July 17, 1961.

NAPPY-TIME

For Bed Sheets, Made of Cotton and/or Synthetic Fibres.
First use June 1, 1961.

SN 124,143. Textron Inc., Providence, R.I. Filed July 17, 1961.

RAMSDALE

For Wool, Cotton, Fur and Synthetic Piece Goods and Combinations Thereof.
First use June 27, 1961.

SN 124,236. J. P. Stevens & Co., Inc., New York, N.Y. Filed July 18, 1961.

Greer Naturals

For Piece Goods of a Combination of Wool and Synthetic Fibers.
First use Apr. 13, 1961.

SN 124,633. Dan River Mills, Incorporated, Danville, Va. Filed July 25, 1961.

DANFAIR

Owner of Reg. No. 676,401.
For Textile Fabrics in the Piece of Cotton, Synthetic Fibers or Mixtures Thereof.
First use July 7, 1961.

SN 124,706. Bell Industries, Inc., New York, N.Y. Filed July 26, 1961.

PARK LANE

For Blankets.
First use June 21, 1961.

Class 43 — Thread and Yarn

SN 116,260. Reynolds Yarns Inc., New York, N.Y. Filed Mar. 22, 1961.

LA MADELAINE

For Woolen Hand Knitting Yarns.
First use Apr. 9, 1959.

Class 44 — Dental, Medical, and Surgical Appliances

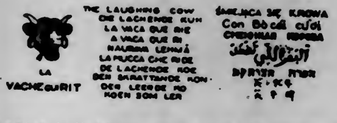
SN 91,438. Margaret A. Pratt, d.b.a. Minneapolis Instrument Company, Minneapolis, Minn. Filed Feb. 23, 1960.

FARR'S

Owner of Reg. No. 376,256.
For Automatic Spring Surgical Retractors.
First use Jan. 1, 1920.

Class 46 — Foods and Ingredients of Foods

SN 66,714. Fromageries Bel—La Vache Qui Rit, Paris, France. Filed Jan. 29, 1959.



The drawing is lined for red. All of the foreign wording appearing with the mark means "the laughing cow." Owner of French Reg. No. 421,922, dated Aug. 12, 1952 (Seine); Natl. Inst. No. 518,597, and U.S. Reg. No. 616,294.
For Butter, Cheese, and Edible Animal and Vegetable Fats and Oils.

SN 76,509. Pete's Frozen Foods, Inc., Rockford, Ill. Filed June 25, 1959.



No claim of exclusive right is made to the words "Pizza Pie" as the name of the goods identified herein.
For Frozen Pizza Pie.
First use Apr. 2, 1959.

SN 90,688. Litvak Meat Company, d.b.a. Litvak Packing Co., Denver, Colo. Filed Feb. 10, 1960.

LITVAK'S



The drawing is lined for red and blue. Applicant disclaims use of the word "Brand" in connection with its mark.
For Fresh and Frozen Meats.
First use Jan. 2, 1960.

SN 94,079. Milk Foods, Inc., U.S.A., Modesto, Calif. Filed Mar. 31, 1960.

MF

Owner of Reg. No. 696,519.
For Instant Meatless Food Dips.
First use Dec. 19, 1958.

SN 97,335. F. G. Sharp & Co., Trout Hall, Jamaica, British West Indies. Filed May 17, 1960.

"UGLI"

Owner of U.S. Reg. No. 644,528.
For Fresh Citrus Fruits.
First use Jan. 10, 1939; in commerce Feb. 26, 1955.

SN 98,405. Tosi Trading Company, Boston, Mass. Filed June 3, 1960.

GONDOLA

For Canned Tomato Products—Namely, Canned Tomatoes, Canned Tomato Paste, Canned Tomato Puree, and Canned Pizza Sauce.
First use January 1945.

SN 98,827. William S. White, d.b.a. Chef Bill, Hickman Mills, Mo. Filed June 10, 1960.



The drawing is lined for yellow.
For Salad Dressings—8 Oz. Bottles—3 Kinds: 1000 Island, Blue Cheese, and Russian.
First use Feb. 1, 1960.

SN 99,121. The Borden Company, New York, N.Y. Filed June 16, 1960.

HOME TREAT

Owner of Reg. No. 265,673.
For Ice Cream-Like Product Made From Vegetable Oil (Mellorine).
First use July 1958.

SN 99,133. First Spice Mixing Co., Inc., Long Island City, N.Y. Filed June 16, 1960.

BACTOCIDE

For Preparation Consisting of Food Substances and an Antibacterial and Antimycotic for Incorporation in Meat Products To Inhibit Bacterial and/or Mold Growth.
First use Apr. 12, 1960.

SN 103,099. Central Soya Company, Inc., Fort Wayne, Ind. Filed Aug. 22, 1960.



For Livestock and Poultry Feed, Dog Food, Soy Flour, Soy Protein for Use as an Ingredient of Foods, Soybean Oil for Use in Foods and Lecithin for Use in Foods.
First use Aug. 8, 1960.

SN 103,892. Armour and Company (Delaware corporation), assignee of Armour and Company (Illinois corporation), d.b.a. Armour Creameries, Chicago, Ill. Filed Sept. 6, 1960.



For the purpose of registration, no claim is made to the exclusive right to use an illustration of fresh eggs as a representation of the goods identified herein, but the applicant waives none of its common law rights therein.
For Fresh Eggs.
First use July 6, 1960.

SN 104,829. Wesley L. Hicks, d.b.a. W. L. Hicks, Buffalo, N.Y. Filed Sept. 20, 1960.

Uncle-Pic

For Barbecue Sauce.
First use on or about Sept. 9, 1960.

SN 105,485. Armour and Company (Delaware corporation), Chicago, Ill., assignee of Armour and Company (Illinois corporation), Chicago, Ill. Filed Sept. 30, 1960.

COUNTRY SUPPER

For Canned Prepared Meat Dishes.
First use Aug. 19, 1960.

SN 106,507. Thomas L. Lalley, d.b.a. Lalley Associates, West Redding, Conn. Filed Oct. 17, 1960.

FIREHOUSE

The lines in the drawing are a feature of the mark and do not represent any color.
For Tomato Juice Cocktail.
First use May 26, 1960.

SN 106,715. Hereford Heaven Brands, Inc., d.b.a. White Face Brands, Oklahoma City, Okla. Filed Oct. 19, 1960.

WHITE FACE BRANDS'

The word "Brands'" is disclaimed apart from the mark as shown.
For Fresh and Frozen Packaged Meats.
First use in 1954.

SN 107,348. Kelly Vegetable Farms Co., Inc., Oxnard, Calif. Filed Oct. 28, 1960.

SHANNON

For Fresh Vegetables.
First use June 13, 1960.

SN 107,370. Parker Potato Packing Corp., Parker, Idaho. Filed Oct. 28, 1960.

Magic Idaho

No claim is made to the word "Idaho" apart from the mark as shown.
For Canned Potatoes.
First use Oct. 7, 1960.

SN 109,004. R.G.B. Laboratories, Inc., Kansas City, Mo. Filed Nov. 23, 1960.

CATER-BLEND

For Cream Substitute Containing Essentially Hydrogenated Vegetable Oils, Dextrose, Vegetable Protein, Stabilizer, Salt, Artificial Coloring and Flavor, but Containing No Milk or Milk Products.
First use Aug. 15, 1960.

SN 109,081. Libner Grain Company, Incorporated, Norwalk, Conn. Filed Nov. 25, 1960.



For Bird Seed.
First use Sept. 1, 1960.

SN 110,006. Urick & Hollis, Los Angeles, Calif. Filed Dec. 9, 1960.

Mr. Coachella

For Fresh Grapes.
First use May 28, 1957.

SN 110,155. The Institute of Nutrition of Central America & Panama, d.b.a. INCAP, Managua, Nicaragua. Filed Dec. 13, 1960.

INCAPARINA

Owner of Nicaragua Reg. No. 10,263, dated Feb. 18, 1960.
For Dietary Supplement Consisting of a Corn, Cottonseed, Green Leaved Vegetables and Yeast Mixture, for Combating Protein Deficiency in Humans.

SN 111,058. John L. Ashman, d.b.a. Fred L. Ashman, Benton Harbor, Mich. Filed Dec. 30, 1960.



For Fresh Fruit.
First use Sept. 1, 1959.

SN 111,816. Sessions Company, Inc., d.b.a. Pal Foods, Enterprise, Ala. Filed Jan. 13, 1961.



For Peanut Butter.
First use April 1959.

SN 112,119. The Chocolate House, Inc., Milwaukee, Wis. Filed Jan. 19, 1961.

CHOCOLATE HOUSE

Owner of Reg. No. 669,040.
For Candies.
First use February 1947.

SN 112,120. The Chocolate House, Inc., Milwaukee, Wis. Filed Jan. 19, 1961.



Owner of Reg. No. 669,040.
For Candies.
First use Nov. 1, 1960.

SN 113,263. California Date Growers Association, Indio, Calif. Filed Feb. 8, 1961.



The name "Betty Baker" does not represent a particular living individual.
For Packaged Dates.
First use Nov. 18, 1960.

SN 113,290. The Nestlé Company, Inc., White Plains, N.Y. Filed Feb. 8, 1961.

NESTLÉ's
DOUBLE N

Owner of Reg. Nos. 310,735, 707,263, and others.
For Chocolate Flavored Syrup for Making a Food Beverage.
First use Dec. 27, 1960.

SN 113,537. Leaf Brands, Inc., Chicago, Ill. Filed Feb. 13, 1961.

IRISH COFFEE

Applicant waives exclusive right to the word "Coffee" apart from the mark as shown.
For Candy.
First use Jan. 18, 1961.

SN 113,971. Yeast Products Inc., Paterson, N.J. Filed Feb. 17, 1961.

ARDAMINE

For Yeast Product Sold Only to Food Manufacturers—Namely, Yeast Autolysate in Paste and Powder Form Used as a Flavor and Protein Additive for Dehydrated Soups and Other Processed Foods and as a Base for Bouillon and Beef Extracts.
First use in July 1956.

SN 114,530. Pride O' Texas Citrus Association, Inc., Mission, Tex. Filed Feb. 27, 1961.

HI-SWEET

Owner of Reg. No. 533,515.
For Fresh Citrus Fruits.
First use Nov. 12, 1948.

SN 118,100. Purity Stores, Inc., Burlingame, Calif. Filed Apr. 18, 1961.

MISSION FARM

For Canned Fruits and Vegetables and Canned Fruit and Vegetable Juices.
First use Mar. 27, 1961.

SN 119,127. High Rock Company, d.b.a. High Rock Ginger Ale Company and as Coffee-Ette Food Supply Company, Baltimore, Md. Filed May 2, 1961.



For Instant Coffee.
First use Sept. 15, 1960.

SN 119,360. Continental Seafood Corporation, Chicago, Ill. Filed May 5, 1961.

BLUE PEARL

For Seafood—Namely, Fresh and Frozen Scallops.
First use on or about Apr. 24, 1961.

Class 49—Distilled Alcoholic Liquors

SN 94,514. J. & J. Pallas, S.A., Nerac, France. Filed Apr. 6, 1960.

PALLAS

Priority claimed under Sec. 44(d) on French Reg. No. 219, dated Oct. 27, 1959 (Nerac); Natl. Inst. No. 135,092. The drawing is lined for gold.
For Brandy, Gin, Vodka and Liqueurs.

Class 50—Merchandise Not Otherwise Classified

SN 98,920. National Potteries Corporation, Bedford, Ohio. Filed June 13, 1960.

PERMAFLOWER

For Artificial Flowers and Arrangements of Artificial Flowers.
First use May 18, 1960.

SN 99,361. Plaque Craft, Incorporated, Baltimore, Md. Filed June 20, 1960.

Scroll Art

For Kits Containing Materials and Instructions for Making Wall Plaques.
First use Apr. 14, 1960.

SN 103,536. CFC Corporation, North Hollywood, Calif. Filed Aug. 29, 1960.



For Outlet Box Covers That Protect Outlet Boxes During Plastering Operations.
First use July 29, 1960.

SN 105,700. Wood Conversion Company, St. Paul, Minn. Filed Oct. 3, 1960.

KANGAROLL-PAK

For Closed Pulpboard Shipping Container Housing One or More Rolls of Non-Woven Fabrics in the Form of Loosely Matted Adhesively-Bound Vegetable Fiber in Sheet Form, the Container and Contents Constructed for Opening and Use as a Dispenser of the Contained Goods.
First use Aug. 26, 1960.

Class 52 — Detergents and Soaps

SN 117,663. Volz Sales & Manufacturing Company, Inc., Memphis, Tenn. Filed Apr. 11, 1961.

PINE-CLEAN

For Cleaner, Disinfectant, and Deodorant.
First use Mar. 20, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 29,382. Pick Hotels Corporation, Chicago, Ill. Filed May 3, 1957.



Owner of Reg. Nos. 535,464 and 535,465.
For Restaurant Services.
First use Mar. 1, 1954.

SN 63,537. Mobile Dairy Bars, Inc., Washington Court House, Ohio. Filed Dec. 2, 1958.



The drawing is lined for the colors blue and orange but no claim for color is made.
For Mobile Soda Fountain Services.
First use June 16, 1958.

Class 101 — Advertising and Business

SN 79,239. Leonard Hicks, Jr., Chicago, Ill. Filed Aug. 10, 1959.

LEONARD HICKS, JR.

For Hotel Representation Consisting of Arrangements for Conventions, Sales Meetings, Individual Hotel Reservations, and Advertising and Sales Promotion for Hotels in Various Cities.
First use Dec. 1, 1945.

Class 102 — Insurance and Financial

SN 96,225. Insurance Company of North America, Philadelphia, Pa., assignee of Indemnity Insurance Company of North America, Philadelphia, Pa. Filed May 2, 1960.

INA
Champion

Owner of Reg. Nos. 713,296 and 713,297.
For Underwriting of Automobile Insurance.
First use May 1959.

SN 96,226. Insurance Company of North America, Philadelphia, Pa., assignee of Indemnity Insurance Company of North America, Philadelphia, Pa. Filed May 2, 1960.

INA CHAMPION

Owner of Reg. Nos. 713,296 and 713,297.
For Underwriting of Automobile Insurance.
First use May 1959.

SN 117,501. Insurance Company of North America, Philadelphia, Pa. Filed Apr. 10, 1961.

BIG TOP

For Underwriting of Blanket Catastrophe Liability Insurance.
First use May 1957.

Class 105 — Transportation and Storage

SN 82,236. Johnson Motor Lines, Inc., Charlotte, N.C. Filed Sept. 28, 1959.



For Transportation of Goods by Motor Vehicle.
First use June 1954.

CERTIFICATION MARKS

Class B — Services

SN 110,745. Diaper Service Industry Association, Philadelphia, Pa. Filed Dec. 23, 1960.

dsia

The mark certifies that the service was performed by a member of applicant and meets standards established by applicant as to use of equipment, washing procedures, bacteria testing, and delivery schedules.
For Diaper Rental Service.
First use June 9, 1960.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

726,844. PIONEER. Pioneer Hi-Bred Corn Company. SN 98,523. Pub. 11–14–61. Filed 6–6–60.

726,845. TURFIBER. International Paper Company. SN 100,518. Pub. 11–14–61. Filed 7–8–60.

726,846. ALLACO. Alexander & Langenhagen, d.b.a. Allaco Products. SN 102,816. Pub. 11–14–61. Filed 8–17–60.

726,847. PARIS SPECTACULAR. Strawberry King, Inc. SN 116,357. Pub. 11–14–61. Filed 3–23–61.

726,848. HUDSON VALLEY. Kentucky Valley Farms. SN 117,787. Pub. 11–14–61. Filed 4–13–61.

726,849. MONKEY. Tak Muto. SN 117,982. Pub. 11–14–61. Filed 4–17–61.

726,850. GANTREZ. General Aniline & Film Corporation. SN 119,960. Pub. 11–14–61. Filed 5–15–61.

726,851. CHROMAGLOW. U.S. Plastic and Chemical Corporation, by merger from U.S. Plastic Products Corporation. SN 120,039. Pub. 11–14–61. Filed 5–15–61.

726,852. GAME TIME. L. Teweles Seed Co. SN 120,149. Pub. 11–14–61. Filed 5–16–61.

726,853. LEISURE. L. Teweles Seed Co. SN 120,150. Pub. 11–14–61. Filed 5–16–61.

726,854. BLUE DISCOVERY. L. Teweles Seed Co. SN 120,151. Pub. 11–14–61. Filed 5–16–61.

726,855. TRAFFIC. L. Teweles Seed Co. SN 120,152. Pub. 11–14–61. Filed 5–16–61.

Class 2—Receptacles

726,856. GOLD PFEIL AND DESIGN. Gold-Pfeil Ludwig Krumm Aktiengesellschaft. SN 75,725. Pub. 11–14–61. Filed 6–15–59.

726,857. GOLDEN ARROW AND DESIGN. Gold-Pfeil Ludwig Krumm Aktiengesellschaft. SN 76,777. Pub. 11–14–61. Filed 6–15–59.

726,858. PROTECT-O. Reliance Products Sales Corp. SN 106,346. Pub. 4–18–61. Filed 10–13–60.

726,859. BROWNY. Standard Scientific Supply Corp. SN 110,588. Pub. 11–14–61. Filed 12–19–60.

726,860. DYNAFILM. National Distillers and Chemical Corporation. SN 116,552. Pub. 11–14–61. Filed 3–27–61.

726,861. CAMPING GAZ INTERNATIONAL AND DESIGN. A.D.G. Societe d'Application des Gaz, Produits Routiers et Materiaux. SN 120,452. Pub. 11–14–61. Filed 5–19–61.

726,862. BAND-LOC. Marinette and Menominee Box Company. SN 121,299. Pub. 11–14–61. Filed 6–2–61.

Class 4—Abrasives and Polishing Materials

726,863. BON AMI. The Bon Ami Company. SN 117,448. Pub. 11–14–61. Filed 4–10–61.

726,864. KUP-KUT. Pacific Grinding Wheel Company, Inc. SN 119,232. Pub. 11–14–61. Filed 5–3–61.

Class 6—Chemicals and Chemical Compositions

726,865. SUPERGUM. Jacques Wolf & Co. SN 80,470. Pub. 11–14–61. Filed 8–28–59.

726,866. RAPIDAZOL. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. SN 81,393. Pub. 11–14–61. Filed 9–15–59.

726,867. THOROCHEM AND DESIGN. K.P.B., Inc. SN 85,136. Pub. 11–14–61. Filed 11–12–59.

726,868. SKIDOO. American-Marietta Company. SN 104,502. Pub. 11–14–61. Filed 9–15–60.

726,869. DIAMOND CRYSTAL. Diamond Crystal Salt Company. SN 106,479. Pub. 11–14–61. Filed 10–17–60.

726,870. PLANT SHIELD. Gar-Prod, Inc. SN 108,432. Pub. 11–14–61. Filed 11–14–60.

726,871. ACTELLIC. Plant Protection Limited. SN 110,086. Pub. 11–14–61. Filed 12–12–60.

726,872. BANTEX. Monsanto Chemical Company. SN 118,800. Pub. 11–7–61. Filed 4–27–61.

Class 8—Smokers' Articles, Not Including Tobacco Products

726,873. VARAFLAME. Ronson Corporation. SN 102,139. Pub. 11–7–61. Filed 8–5–60.

726,874. ROGERS. Rogers, Inc. SN 110,471. Pub. 11–14–61. Filed 12–19–60.

Class 9—Explosives, Firearms, Equipments, and Projectiles

726,875. ASSOCIATED AFS AND DESIGN. Associated Food Stores Inc. SN 83,444. Pub. 11–14–61. Filed 10–19–59.

Class 10—Fertilizers

726,876. ORGANAGRO. The Erda Corporation. SN 102,552. Pub. 11–14–61. Filed 8–12–60.

726,877. MAGIC LIFE AND DESIGN. The Newcomer Corporation. SN 118,092. Pub. 11–14–61. Filed 4–18–61.

Class 12—Construction Materials

726,878. TRU-BLOC FOUNDATION ETC. AND DESIGN. Tru-Bloc ° Chem - Stress Decorative - Structural - Concrete Products Research and Development Laboratory (joint venture). SN 101,710. Pub. 11–14–61. Filed 7–29–60.

726,879. TRU-BLOC FOUNDATION ETC. AND DESIGN. Tru-Bloc ° Chem - Stress Decorative - Structural - Concrete Products Research and Development Laboratory (joint venture). SN 101,711. Pub. 11–14–61. Filed 7–29–60.

726,880. PAGHOLZ. PAG Presswerk A.G. SN 121,307. Pub. 11–14–61. Filed 6–2–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

726,881. SEEP-PRUF. Crest Manufacturing Company, Inc. SN 97,825. Pub. 11–14–61. Filed 5–25–60.

726,882. BRAZE-SEAL. Imperial-Eastman Corporation, by merger and change of name from The Imperial Brass Manufacturing Company. SN 100,779. Pub. 11–14–61. Filed 7–13–60.

726,883. THERMO-FORGED. The Holo-Krome Screw Corporation. SN 101,325. Pub. 11–14–61. Filed 7–22–60.

726,884. VOGUE AND DESIGN. Federal Enameling & Stamping Company. SN 103,400. Pub. 11–14–61. Filed 8–25–60.

726,885. MICRACORE. Elkay Manufacturing Company. SN 104,245. Pub. 11–14–61. Filed 9–12–60.

726,886. SANO-METER. Antone Delano Pannutti. SN 104,879. Pub. 11–14–61. Filed 9–21–60.

726,887. LL AND DESIGN WITHIN A CIRCLE. Long-Lok Corporation. SN 114,778. Pub. 11–14–61. Filed 3–2–61.

726,888. REPUBLIC X-TRU-COAT. Republic Steel Corporation. SN 116,075. Pub. 11–14–61. Filed 3–20–61.

726,889. TECO H-CLIP. Timber Engineering Company. SN 116,360. Pub. 11–14–61. Filed 3–23–61.

726,890. LOAD-LOK. Parker-Hannifin Corporation. SN 116,657. Pub. 11–14–61. Filed 3–28–61.

726,891. NUPS. Philadelphia Steel and Wire Corporation. SN 116,748. Pub. 11–14–61. Filed 3–29–61.

726,892. RUBBERMAID AND DESIGN. Rubbermaid Incorporated. SN 118,003. Pub. 11–14–61. Filed 4–17–61.

Class 14—Metals and Metal Castings and Forgings

726,893. STERLITE. Sterling Factories. SN 113,311. Pub. 11–14–61. Filed 2–8–61.

Class 18—Medicines and Pharmaceutical Preparations

726,894. IMPRO. Collins Products, Inc. SN 92,086. Pub. 11–14–61. Filed 3–3–60.

726,895. MARTEX. Nopco Chemical Company. SN 110,459. Pub. 11–14–61. Filed 12–19–60.

726,896. DERMABASE. The Borden Company. SN 111,318. Pub. 11–14–61. Filed 1–5–61.

726,897. CONSUMER STANDARD. Consumer Standard, Inc. SN 115,786. Pub. 11–14–61. Filed 3–16–61.

726,898. VF ETC. AND DESIGN. Harry Wagonfeld, d.b.a. Vitamin Fair Co. SN 116,275. Pub. 11–14–61. Filed 3–22–61.

726,899. H-3. Raphael P. Platoff, d.b.a. H3 Products Company. SN 116,566. Pub. 11–14–61. Filed 3–27–61.

726,900. SUNKIST. Sunkist Growers, Inc. SN 117,314. Pub. 11–14–61. Filed 4–6–61.

726,901. ULOSPANS. Riker Laboratories, Inc. SN 120,340. Pub. 11–14–61. Filed 5–18–61.

726,902. CALINATE. Provident Pharmaceuticals, Inc. SN 121,594. Pub. 11–14–61. Filed 6–7–61.

726,903. S.E.Z. American Cyanamid Company. SN 121,621. Pub. 11–14–61. Filed 6–8–61.

726,904. NUTRA-WEET. Barth Levitt Products. SN 121,743. Pub. 11–14–61. Filed 6–9–61.

726,905. LACTA-DOME. Dome Chemicals, Inc. SN 121,810. Pub. 11–14–61. Filed 6–12–61.

726,906. AMBITROPE. Merck & Co., Inc. SN 121,842. Pub. 11–14–61. Filed 6–12–61.

726,907. GASTROMYCIN. Provident Pharmaceuticals, Inc. SN 121,860. Pub. 11–14–61. Filed 6–12–61.

726,908. SPALIX. Provident Pharmaceuticals, Inc. SN 121,938. Pub. 11–14–61. Filed 6–13–61.

726,909. FUMATRIN-FORTE. Provident Pharmaceuticals, Inc. SN 121,939. Pub. 11–14–61. Filed 6–13–61.

726,910. EUCADRYL. Crookes-Barnes Laboratories, Inc. SN 121,980. Pub. 11–14–61. Filed 6–14–61.

726,911. NEO-LIDA-MANTLE. Dome Chemicals, Inc. SN 122,290. Pub. 11–14–61. Filed 6–19–61.

Class 19—Vehicles

726,912. WINSTON. Spaugh Manufacturing Incorporated. SN 96,047. Pub. 11–14–61. Filed 4–28–60.

726,913. PROTECT-A-BABE. S. R. Oresman & Company. SN 115,717. Pub. 11–14–61. Filed 3–15–61.

726,914. GOLFSTREAMER. G.E.D. Corporation. SN 117,185. Pub. 11–14–61. Filed 4–5–61.

726,915. OCEAN AIRE. Sutone Corporation. SN 117,231. Pub. 11–14–61. Filed 4–5–61.

726,916. CLEAR-FLEX. The Anderson Company. SN 119,831. Pub. 11–14–61. Filed 5–12–61.

726,917. ICYCLE. Fox Go-Boy Carts, Inc. SN 119,956. Pub. 11–14–61. Filed 5–15–61.

Class 21—Electrical Apparatus, Machines, and Supplies

726,918. MAGNE-HEAD. General Instrument Corporation, by consolidation from General Transistor Corp. SN 95,996. Pub. 11–14–61. Filed 4–28–60.

726,919. GEC AND DESIGN. General Electrodynamics Corporation. SN 105,880. Pub. 11–14–61. Filed 10–6–60.

726,920. TRANSCRAFT AND DESIGN. Transpace, Inc. SN 106,545. Pub. 11–14–61. Filed 10–17–60.

726,921. PB AND DESIGN. American Machine & Foundry Company. SN 107,723. Pub. 11–14–61. Filed 11–3–60.

726,922. SEA SLAVE. Sturrup, Incorporated. SN 114,727. Pub. 11–14–61. Filed 3–1–61.

726,923. HEATMASTER. Sears, Roebuck and Co. SN 116,262. Pub. 11–14–61. Filed 3–22–61.

726,924. THERMOTIZED. Sears, Roebuck and Co. SN 116,264. Pub. 11–14–61. Filed 3–22–61.

726,925. SUN GUN. Sylvania Electric Products, Inc. SN 116,269. Pub. 11–14–61. Filed 3–22–61.

726,926. VIGILANTE. Wagner Electric Corporation. SN 116,274. Pub. 11–14–61. Filed 3–22–61.

726,927. 707. Landers, Frary & Clark. SN 116,319. Pub. 11–14–61. Filed 3–23–61.

Class 22—Games, Toys, and Sporting Goods

726,928. SKEE-REEL. B & E Mfg., Co. SN 89,122. Pub. 11–14–61. Filed 1–18–60.

726,929. TOWER OF BABBLE. E. Christman Dawn, d.b.a. The Game Company. SN 90,495. Pub. 11–14–61. Filed 2–8–60.

726,930. TURTLE. W. H. Schaper Manufacturing Co., Inc. SN 91,850. Pub. 11–14–61. Filed 2–29–60.

726,931. GETTYSBURG. The Avalon Hill Company. SN 99,192. Pub. 11–14–61. Filed 6–17–60.

726,932. SUPERIOR AND DESIGN. T. Cohn, Inc. SN 101,749. Pub. 11–14–61. Filed 8–1–60.

726,933. HUDSON BAY. Herter's Inc. SN 103,566. Pub. 11–14–61. Filed 8–29–60.

726,934. PLAYBOY. Union Steel Chest Corporation. SN 106,011. Pub. 5–2–61. Filed 10–7–60.

726,935. KEN. Mattel, Inc. SN 106,617. Pub. 11–14–61. Filed 10–17–60.

726,936. BLACK JACK AND DESIGN. Fernand Marchessault. SN 112,743. Pub. 11–14–61. Filed 1–30–61.

726,937. RAGGY MUFFIN. W. Goebel Porzellanfabrik. SN 114,214. Pub. 11–14–61. Filed 2–23–61.

726,938. DAYTONA INTERNATIONAL SPEEDWAY. Marken Educational Games, Inc. SN 115,069. Pub. 11–14–61. Filed 3–7–61.

726,939. WEED WING. John A. O'Neil, d.b.a. Johnny O'Neil Bait Company. SN 116,149. Pub. 11–14–61. Filed 3–21–61.

726,940. NEVADA. The United States Playing Card Company. SN 117,662. Pub. 11–14–61. Filed 4–11–61.

726,941. THE BAT. Julius S. Black, d.b.a. Demon Lure Co. SN 117,682. Pub. 11–14–61. Filed 4–12–61.

726,942. MAGIC TOUCH. Edward L. Cohen, d.b.a. Edwards Home Products. SN 117,770. Pub. 11–14–61. Filed 4–13–61.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

726,943. CAPRI. Trans-World Industries, Inc. SN 88,342. Pub. 11–14–61. Filed 12–31–59.

726,944. MERCEDES. Mercedes Buromaschinen-Werke Aktiengesellschaft. SN 96,807. Pub. 11–14–61. Filed 5–11–60.

726,945. HANDY-DONUT. Belshaw Brothers, Incorporated. SN 100,005. Pub. 11–14–61. Filed 6–30–60.

726,946. DEPTH-AU-TROL. The Bullard Company. SN 104,892. Pub. 11–14–61. Filed 9–21–60.

726,947. BROTHER. Nihon Mishin Seizo Kabushiki Kaisha. SN 110,946. Pub. 11–14–61. Filed 12–28–60.

726,948. NUMERIDRILL. Giddings & Lewis Machine Tool Company. SN 116,120. Pub. 11–14–61. Filed 3–21–61.

726,949. SELEC-TOW-LINE. Mechanical Handling Systems Inc. SN 116,545. Pub. 11–14–61. Filed 3–27–61.

726,950. ENGIS. Engis Equipment Company. SN 116,630. Pub. 11–14–61. Filed 3–28–61.

726,951. OPIO. Harford Pumps Limited. SN 116,640. Pub. 11–14–61. Filed 3–28–61.

726,952. HUCK AND DESIGN. William F. Huck, d.b.a. Huck Company. SN 116,643. Pub. 11–14–61. Filed 3–28–61.

726,953. MEYER HANDYMAN AND DESIGN. Wm. W. Meyer and Sons, Inc. SN 116,742. Pub. 11–14–61. Filed 3–29–61.

726,954. ROTO-BROOM. Frink Sno-Plows, Inc. SN 117,773. Pub. 11–14–61. Filed 4–13–61.

726,955. SERV-O-LINK. George S. Bohannon, d.b.a. Bohannon Industries. SN 118,855. Pub. 11–14–61. Filed 4–28–61.

726,956. YPSILON. Heinrich Wüster, Jr. SN 119,093. Pub. 11–14–61. Filed 5–1–61.

726,957. POLY-AIR. Eugene M. Noel, d.b.a. The E. M. Noel Company. SN 119,229. Pub. 11–14–61. Filed 5–3–61.

726,958. ALINABAL. Miniature Precision Bearings, Inc., d.b.a. Split Ballbearing. SN 119,400. Pub. 11–14–61. Filed 5–5–61.

Class 24 — Laundry Appliances and Machines

726,959. MOISTURE MINDER. Whirlpool Corporation. SN 94,376. Pub. 11–14–61. Filed 4–4–60.

726,960. MIRACLE TOUCH. Whirlpool Corporation. SN 108,424. Pub. 11–14–61. Filed 11–14–60.

726,961. MASTER TOUCH. Whirlpool Corporation. SN 108,425. Pub. 11–14–61. Filed 11–14–60.

726,962. TOUCH COMMAND. General Electric Company. SN 112,250. Pub. 11–14–61. Filed 1–23–61.

Class 26 — Measuring and Scientific Appliances

726,963. ROCKET. Deutsche Elektronik G.m.b.H. SN 65,760. Pub. 11–14–61. Filed 1–13–59.

726,964. TAMCO. Time Automated Mfg. Inc. SN 75,591. Pub. 11–14–61. Filed 6–11–59.

726,965. ABACUS. Abacus, Incorporated. SN 82,180. Pub. 11–14–61. Filed 9–28–59.

726,966. SCHACHT AND DESIGN. Albert Schacht, G.m.b.H. SN 87,914. Pub. 11–14–61. Filed 12–23–59.

726,967. DISTRIB-U-SCOPE. Snap-On Tools Corporation. SN 90,583. Pub. 11–14–61. Filed 2–8–60.

726,968. ERINGUARD. Dublin Industries, Inc. SN 93,507. Pub. 11–14–61. Filed 3–23–60.

726,969. METRO FARER. Universal Controls, Inc. SN 95,950. Pub. 11–14–61. Filed 4–27–60.

726,970. QUICK-CHECK. The McNeil Machine & Engineering Company. SN 96,604. Pub. 11–14–61. Filed 5–6–60.

726,971. MERCEDES. Mercedes Buromaschinen-Werke Aktiengesellschaft. SN 96,868. Pub. 11–14–61. Filed 5–11–60.

726,972. KINEMOMETER. Medelec Lab. SN 97,080. Pub. 11–14–61. Filed 5–13–60.

726,973. NUMERATOR 88 AND DESIGN. Cromwell Business Machines. SN 97,459. Pub. 11–14–61. Filed 5–19–60.

726,974. MEASUREMASTER. The Measuregraph Company. SN 102,035. Pub. 11–14–61. Filed 8–4–60.

726,975. MAGNA CHROME. Suprefot Film Products Co. Inc. SN 104,773. Pub. 11–14–61. Filed 9–19–60.

726,976. AUTORADIOGRAPHIC. General Aniline & Film Corporation. SN 105,434. Pub. 11–14–61. Filed 9–29–60.

726,977. SILVER BEAUTY. Triple-A Specialty Company. SN 106,159. Pub. 11–14–61. Filed 10–10–60.

726,978. CA AND DESIGN. Coin Acceptors, Inc. SN 106,795. Pub. 11–14–61. Filed 10–20–60.

726,979. AUTOMOTION. Metro-Goldwyn-Mayer British Studios Limited. SN 106,824. Pub. 11–14–61. Filed 10–20–60.

726,980. ACCU-DROP. Accu-Tech Corp. SN 106,874. Pub. 11–14–61. Filed 10–21–60.

726,981. FLO-LEVEL. Flo-Tronics, Inc. SN 106,896. Pub. 11–14–61. Filed 10–21–60.

726,982. RATOGRAPHIC. Fischer & Porter Company. SN 107,663. Pub. 11–14–61. Filed 11–2–60.

726,983. MAGNARATOR. Fischer & Porter Company. SN 107,666. Pub. 11–14–61. Filed 11–2–60.

726,984. EDO. Edo Corporation. SN 108,035. Pub. 11–14–61. Filed 11–8–60.

726,985. GAMMA SENTRY. Curtiss-Wright Corporation. SN 108,466. Pub. 11–14–61. Filed 11–15–60.

726,986. FAIRFIELD. Mansfield Industries, Inc. SN 109,715. Pub. 11–14–61. Filed 12–6–60.

726,987. DETECTO GAS. Detectogas Instruments, Inc. SN 110,261. Pub. 11–14–61. Filed 12–15–60.

726,988. LEICINA. E. Leitz, Inc. SN 111,806. Pub. 11–14–61. Filed 1–13–61.

726,989. REFLECTAL. Jerry Johnson, d.b.a. Photo Electronic Research. SN 113,228. Pub. 11–14–61. Filed 2–7–61.

726,990. MICROFLASH. Edgerton, Germeshausen & Grier, Inc. SN 114,106. Pub. 11–14–61. Filed 2–21–61.

726,991. HY-FI. Wilkens Instrument & Research, Inc. SN 115,649. Pub. 11–14–61. Filed 3–14–61.

726,992. LAB CHIEF. Everett Stanley Harrison. SN 116,725. Pub. 11–14–61. Filed 3–29–61.

726,993. DESIGN OF TWO CIRCLES. D. P. Bushnell & Company, Inc. SN 117,687. Pub. 11–14–61. Filed 4–12–61.

726,994. PUPPY. Foster Grant Co., Inc. SN 117,700. Pub. 11–14–61. Filed 4–12–61.

726,995. ACCROPET MANOSTAT AND DESIGN. Manostat Corporation, Inc. SN 117,794. Pub. 11–14–61. Filed 4–13–61.

726,996. PRIMAX-I-METER. HD Electric Company. SN 117,861. Pub. 11–14–61. Filed 4–14–61.

726,997. TEST-M-LITE. HD Electric Company. SN 117,862. Pub. 11–14–61. Filed 4–14–61.

726,998. POWERITE. American Optical Company. SN 117,939. Pub. 11–14–61. Filed 4–17–61.

726,999. PICTURE TIME. Traid Corporation. SN 118,015. Pub. 11–14–61. Filed 4–17–61.

727,000. RAYOSCAN. Leeds and Northrup Company. SN 118,157. Pub. 11–14–61. Filed 4–19–61.

727,001. VACULATOR. Consolidated Vacuum Corporation. SN 118,336. Pub. 11–14–61. Filed 4–21–61.

727,002. SOLU METER. Industrial Instruments, Inc. SN 118,446. Pub. 11–14–61. Filed 4–24–61.

727,003. HYDEL. American Brake Shoe Company. SN 118,756. Pub. 11–14–61. Filed 4–27–61.

727,004. MATCHED WINDOW. The Harshaw Chemical Company. SN 118,782. Pub. 11–14–61. Filed 4–27–61.

727,005. MAGNAVIEW. Welsh Manufacturing Company. SN 118,836. Pub. 11–14–61. Filed 4–27–61.

727,006. BIO-TRONICS. Roger C. Minnick, d.b.a. R. C. Minnick & Associates. SN 119,401. Pub. 11–14–61. Filed 5–5–61.

727,007. POWR-KRAFT. Montgomery Ward & Co., Incorporated. SN 119,447. Pub. 11–14–61. Filed 5–5–61.

727,008. KARBANK. Malcolm B. Boyce. SN 119,745. Pub. 11–14–61. Filed 5–11–61.

727,009. PANEL-PACK. Kondo Products, Inc. SN 121,007. Pub. 11–14–61. Filed 5–29–61.

727,010. SURFACOUNT. Republic Steel Corporation. SN 121,027. Pub. 11–14–61. Filed 5–29–61.

Class 28 — Jewelry and Precious-Metal Ware

727,011. RING-DANT. Palais Jewelers, Inc. SN 120,559. Pub. 11–14–61. Filed 5–22–61.

Class 29 — Brooms, Brushes, and Dusters

727,012. REPRESENTATION OF FOUR LIGHTNING ARROWS. Tornado-France. SN 108,924. Pub. 11–14–61. Filed 11–22–60.

727,013. SWIVEL-EASE. Auto Craft Products, Inc. SN 110,393. Pub. 11–14–61. Filed 12–19–60.

Class 32 — Furniture and Upholstery

727,014. CRIST-POR-TRA AND DESIGN. C. Wesley Crist. SN 112,601. Pub. 11–14–61. Filed 1–27–61.

727,015. MOBILMAID. Mills Hospital Supply Co. SN 113,431. Pub. 11–14–61. Filed 2–10–61.

727,016. STYLE-IN-STEEL. Novo Industrial Corporation. SN 118,475. Pub. 11–14–61. Filed 4–24–61.

727,017. ROCK-IN-EEZ. Superior Parlor Frame Company. SN 119,068. Pub. 11–14–61. Filed 5–1–61.

727,018. LOBBYIST. Design and Production, Inc. SN 119,362. Pub. 11–14–61. Filed 5–5–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

727,019. SERPENTIX. Friedrich Stubbe, d.b.a. Albert Stubbe. SN 119,808. Pub. 11–14–61. Filed 5–11–61.

727,020. LOCKHEED. Wagner Electric Corporation. SN 119,904. Pub. 11–14–61. Filed 5–12–61.

Class 36 — Musical Instruments and Supplies

727,021. THEATER HOMES. Associated TV Radio Company. SN 108,252. Pub. 11–14–61. Filed 11–14–60.

727,022. LUCERNE. Transistor Sound Laboratory Inc. SN 115,741. Pub. 11–14–61. Filed 3–15–61.

Class 37 — Paper and Stationery

727,023. MEAD CHESTNUT BOARD AND DESIGN. The Mead Corporation. SN 76,412. Pub. 11–14–61. Filed 6–24–59.

727,024. STAFF MIMEO AND DESIGN. Heller & Usdan Inc. SN 95,281. Pub. 11–14–61. Filed 4–18–60.

727,025. TIPPA. Adlerwerke vorm. Heinrich Kleyer A.G. SN 98,044. Pub. 11–14–61. Filed 4–29–60.

727,026. NORCROSS. Norcross, Inc. SN 102,579. Pub. 11–14–61. Filed 8–12–60.

727,027. CRYSTAL WAXING. The Crystal Tissue Company. SN 107,557. Pub. 11–14–61. Filed 11–1–60.

727,028. KEMEX. Kemex Meat Brands, Inc. SN 113,836. Pub. 11–14–61. Filed 2–16–61.

727,029. NASSAU. Tension Envelope Corporation. SN 117,232. Pub. 11–14–61. Filed 4–5–61.

727,030. FORM-TAB. The Multistamp Company. SN 119,304. Pub. 11–14–61. Filed 5–4–61.

727,031. CWC. Carbon Web Corp. SN 120,381. Pub. 11–14–61. Filed 5–19–61.

727,032. ASTRONAUT. Brown Company. SN 120,958. Pub. 11–14–61. Filed 5–29–61.

727,033. CLEAR SPRING. West Virginia Pulp and Paper Company. SN 121,452. Pub. 11–14–61. Filed 6–5–61.

727,034. MYSTER-REE. Fisher Pen Company. SN 121,482. Pub. 11–14–61. Filed 6–6–61.

727,035. SOFTGLOW. West Virginia Pulp and Paper Company. SN 121,521. Pub. 11–14–61. Filed 6–6–61.

727,036. FLAVORFOIL. RAP Industries, Inc., by change of name from The Rap-In-Wax Company. SN 121,597. Pub. 11–14–61. Filed 6–7–61.

727,037. NU-KLEON. Burroughs Corporation. SN 121,629. Pub. 11–14–61. Filed 6–8–61.

Class 38 — Prints and Publications

727,038. JOURNEY TO THE STARS. James P. Grazioso. SN 90,249. Pub. 11–14–61. Filed 2–3–60.

727,039. THE DAZEY PLAN. Dazey Enterprises, Inc. SN 105,423. Pub. 11–14–61. Filed 9–29–60.

727,040. MAGNE-COUPON. The Cuneo Press, Inc. SN 115,442. Pub. 11–14–61. Filed 3–13–61.

727,041. SAFE TRANSIT NEWS. National Safe Transit Committee, Inc. SN 116,248. Pub. 11–14–61. Filed 3–22–61.

727,042. ASK THE TEACHER. The McNaught Syndicate, Inc. SN 118,798. Pub. 11–14–61. Filed 4–27–61.

727,043. TWO'N THREE TIME. The Sunday School House. SN 118,822. Pub. 11–14–61. Filed 4–27–61.

727,044. BREAKTHROUGH. United Carbon Products Co. SN 118,833. Pub. 11–14–61. Filed 4–27–61.

727,045. HEXCEL NEWS. Hexcel Products Inc. SN 119,868. Pub. 11–14–61. Filed 5–12–61.

Class 39 — Clothing

727,046. GRIDIRON. Carmi-Ainsbrooke Corporation (New York corporation), assignee of Carmi-Ainsbrooke Corporation (Illinois corporation). SN 70,040. Pub. 11–14–61. Filed 3–23–59.

727,047. REPRESENTATION OF A DOG. Wolverine Shoe and Tanning Corporation. SN 93,573. Pub. 11–14–61. Filed 3–23–60.

727,048. MONA LISA. Lowenthal-Berg, Ltd. SN 95,838. Pub. 11–14–61. Filed 4–26–60.

727,049. AIRFILM AND DESIGN. Airfilm Corporation. SN 96,061. Pub. 11–14–61. Filed 4–7–60.

727,050. SWIM-CHIC. Israel Purchasing Service, Inc. SN 106,203. Pub. 11–14–61. Filed 10–11–60.

727,051. SWIM-CHIC BY GOTTEX. Israel Purchasing Service, Inc. SN 106,204. Pub. 11-14-61. Filed 10-11-60.

727,052. SILVORAMA. Siari Originals, Inc. SN 116,434. Pub. 11-14-61. Filed 3-24-61.

727,053. LUCKY STRIKE. Beckwith-Arden Inc. SN 119,666. Pub. 11-14-61. Filed 5-10-61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

727,054. GLO-FLEX. Globe Rubber Products Corp. SN 112,143. Pub. 11-14-61. Filed 1-19-61.

727,055. COVENT GARDEN CLASSICS. Fieldcrest Mills, Inc. SN 112,894. Pub. 11-14-61. Filed 2-1-61.

727,056. PRYSTENE. The Bradford Dyers' Association Limited. SN 113,079. Pub. 11-14-61. Filed 2-6-61.

727,057. KRISPELLE. I. A. Wyner & Co., Inc. SN 116,179. Pub. 11-14-61. Filed 3-21-61.

727,058. KRISPETTE. I. A. Wyner & Co., Inc. SN 116,180. Pub. 11-14-61. Filed 3-21-61.

727,059. LEXON. The Kendall Company. SN 116,406. Pub. 11-14-61. Filed 3-24-61.

727,060. REEVES-AIR. Reeves Brothers, Inc. SN 116,668. Pub. 11-14-61. Filed 3-28-61.

727,061. COLORTRONICS. United Merchants and Manufacturers, Inc. SN 119,725. Pub. 11-14-61. Filed 5-10-61.

727,062. NYLRIDGE. Sears, Roebuck and Co. SN 120,246. Pub. 11-14-61. Filed 5-17-61.

727,063. VINTAGE. Sears, Roebuck and Co. SN 120,247. Pub. 11-14-61. Filed 5-17-61.

727,064. PORT ROYAL. Sears, Roebuck and Co. SN 120,252. Pub. 11-14-61. Filed 5-17-61.

727,065. TUF-N-TIDY. Cone Mills Inc. SN 120,864. Pub. 11-14-61. Filed 5-26-61.

Class 43 — Thread and Yarn

727,066. DORLAINE. Emile Bernat & Sons Company. SN 115,422. Pub. 11-14-61. Filed 3-13-61.

727,067. PURRFUR. Deering Milliken, Inc. SN 116,486. Pub. 11-14-61. Filed 3-27-61.

Class 44 — Dental, Medical, and Surgical Appliances

727,068. ESKASIZER. Eska Company, Inc. SN 65,417. Pub. 5-19-59. Filed 1-7-59.

727,069. ALLOTRODES. Alloyd Engineering Laboratory, Inc. SN 106,027. Pub. 11-14-61. Filed 10-10-60.

727,070. FEMS-CHIC. Kimberly-Clark Corporation. SN 119,978. Pub. 11-14-61. Filed 5-15-61.

Class 46 — Foods and Ingredients of Foods

727,071. MORRELL PRIDE IOWA FARM BRAND. John Morrell & Co. SN 77,461. Pub. 11-14-61. Filed 7-10-59.

727,072. VESTA. Vesta, Inc., by change of name from Vesta Foods Inc. SN 92,337. Pub. 11-14-61. Filed 3-7-60.

727,073. SEBASCO ESTATES. Sebasco Estates Foods, Incorporated. SN 93,557. Pub. 11-14-61. Filed 3-23-60.

727,074. VIATOL. Shell Oil Company, d.b.a. Shell Chemical Company. SN 93,720. Pub. 11-14-61. Filed 3-25-60.

727,075. MARK VIII. Wm. Wrigley Jr. Company Limited. SN 94,714. Pub. 11-14-61. Filed 4-8-60.

727,076. CHICKEN SARA LEE. Kitchens of Sara Lee, Inc. SN 97,559. Pub. 11-14-61. Filed 5-20-60.

727,077. GREAT BEAR AND DESIGN. Great Bear Spring Company, d.b.a. Great Bear Instant Beverage Service. SN 98,279. Pub. 11-14-61. Filed 6-2-60.

727,078. "A SWALLOW WILL TELL YOU" AND DESIGN. Brownell & Field Co. SN 99,486. Pub. 11-14-61. Filed 6-22-60.

727,079. DR. PENLAND'S. Langendorf United Bakeries, Inc. SN 100,265. Pub. 11-14-61. Filed 7-5-60.

727,080. TRICOLOR. C. J. Van Houten & Zoon, N.V. SN 106,362. Pub. 11-14-61. Filed 10-13-60.

727,081. FIDDLE FADDLE. The Wander Company, d.b.a. Poppycock Candies. SN 107,089. Pub. 11-14-61. Filed 10-24-60.

727,082. TROTTER AND DESIGN. C. J. Mattingly Packing Company, Inc. SN 118,463. Pub. 11-14-61. Filed 4-24-61.

727,083. SANACREAM. Sanna Dairies, Inc. SN 118,725. Pub. 11-14-61. Filed 4-26-61.

727,084. "HOSPITALITY." Trenton Milling Company. SN 118,830. Pub. 11-14-61. Filed 4-27-61.

727,085. BACHMAN AND DESIGN. Bachman Bakeries Corporation. SN 118,941. Pub. 11-14-61. Filed 5-1-61.

727,086. ZIPPER AND DESIGN. Cook Produce, Inc. SN 119,108. Pub. 11-14-61. Filed 5-2-61.

727,087. AMAFERM. Bio-Zyme, Incorporated. SN 119,175. Pub. 11-14-61. Filed 5-3-61.

727,088. BAZOOKA. Topps Chewing Gum, Incorporated. SN 121,239. Pub. 11-14-61. Filed 6-1-61.

727,089. TOP-CAT. Kellogg Company. SN 121,394. Pub. 11-14-61. Filed 6-5-61.

727,090. CUE Q. Anderson, Clayton & Co. SN 121,787. Pub. 11-14-61. Filed 6-12-61.

727,091. IRELAND'S. G. D. Ireland, d.b.a. Ireland's Chili Company. SN 123,205. Pub. 11-28-61. Filed 6-30-61.

Class 49 — Distilled Alcoholic Liquors

727,092. HOKUS POKUS. Si Sherman, d.b.a. Hokus-Pokus Wholesale Liquor Company. SN 115,006. Pub. 11-14-61. Filed 3-6-61.

Class 50 — Merchandise Not Otherwise Classified

727,093. CA. Creative Arts, Inc. SN 119,852. Pub. 11-14-61. Filed 5-12-61.

727,094. DRICLAD AND DESIGN. E.P.S. (Research & Development) Limited. SN 121,554. Pub. 11-14-61. Filed 6-7-61.

Class 51 — Cosmetics and Toilet Preparations

727,095. SPARKLING GOLD AND DESIGN. Daggett & Ramsdell, Inc. SN 95,486. Pub. 11-14-61. Filed 4-21-60.

727,096. WONDER RINSE. Helene Curtis Industries, Inc. SN 96,681. Pub. 11-14-61. Filed 5-9-60.

727,097. ELISABETH UNGAR. Elisabeth Ungar-Skin Care, Inc. SN 101,444. Pub. 11-14-61. Filed 7-25-60.

727,098. JEAN NATE FRICTION POUR LE BAIN. Jean Nate, Inc. SN 112,558. Pub. 11-14-61. Filed 1-26-61.

Class 52 — Detergents and Soaps

727,099. SPARKLING GOLD AND DESIGN. Daggett & Ramsdell, Inc. SN 96,166. Pub. 11-14-61. Filed 4-21-60.

727,100. CERTI-FOAM. Joseph D. Conway, d.b.a. The Certified Chemical and Equipment Co. SN 104,810. Pub. 11-14-61. Filed 9-20-60.

727,101. CERTI-LAVE. Joseph D. Conway, d.b.a. The Certified Chemical and Equipment Co. SN 104,811. Pub. 11-14-61. Filed 9-20-60.

727,102. RUG-IT "L." Joseph D. Conway, d.b.a. The Certified Chemical and Equipment Co. SN 104,812. Pub. 11-14-61. Filed 9-20-60.

727,103. GRAY-GONE. Midwest Chemical Manufacturing Co., Inc., d.b.a. Midwest Chemical Company. SN 107,032. Pub. 11-14-61. Filed 10-24-60.

727,104. MID-DRY. Midland Laboratories. SN 110,869. Pub. 11-14-61. Filed 12-27-60.

727,105. SHAMROCK. James V. Freeman, Incorporated. SN 110,990. Pub. 11-14-61. Filed 12-29-60.

727,106. MALIBU AMBER. Conrad Gaiser, d.b.a. Malibu Products Company. SN 112,709. Pub. 11-14-61. Filed 1-30-61.

727,107. GENIE SUDS. Colgate-Palmolive Company. SN 113,327. Pub. 11-14-61. Filed 2-9-61.

727,108. GO-JO. Gojer, Inc. SN 115,050. Pub. 11-14-61. Filed 3-7-61.

727,109. COMZYME. The Rooto Corporation. SN 117,136. Pub. 11-14-61. Filed 4-4-61.

727,110. HETRAPHENE. Columbia Wax Company. SN 119,938. Pub. 11-14-61. Filed 5-15-61.

Service Marks

Class 100 — Miscellaneous

727,111. JIFFY. The Jiffy Co., Inc. SN 113,419. Pub. 11-14-61. Filed 2-10-61.

Class 102 — Insurance and Financial

727,112. CEFCO. Commercial Equipment Finance Corp. SN 111,863. Pub. 11-14-61. Filed 1-16-61.

727,113. FEDERATED INSURANCE ETC. AND DESIGN. Federated Mutual Implement and Hardware Insurance Company. SN 114,108. Pub. 11-14-61. Filed 2-21-61.

727,114. STAND GUARD. Standard Accident Insurance Company. SN 120,143. Pub. 11-14-61. Filed 5-16-61.

Class 105 — Transportation and Storage

727,115. THE KEY LINE DARLING FREIGHT INC. AND DESIGN. Darling Freight, Inc. SN 112,445. Pub. 11-14-61. Filed 1-25-61.

Class 107 — Education and Entertainment

727,116. "LIVE WIRE." Independence Broadcasting Company. SN 116,130. Pub. 11-14-61. Filed 3-21-61.

Collective Membership Mark

Class 200

727,117. ARMADA AND DESIGN. American Record Manufacturers and Distributors Association. SN 108,441. Pub. 11-14-61. Filed 11-15-60.

Certification Marks

Class A — Goods

727,118. ELECTRI-LIVING. Street & Smith Publications, Inc. SN 53,301. Pub. 3-15-60. Filed 6-10-58.

727,119. THE LAWN INSTITUTE SEAL OF APPROVAL AND DESIGN. Better Lawn and Turf Institute, Inc. SN 118,550. Pub. 11-14-61. Filed 4-25-61.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 12 — Construction Materials

727,120. The Bostwick Steel Lath Company, Niles, Ohio. SN 109,235. Filed P.R. 11-29-60; Am. S.R. 10-11-61.

NAIL-IT

For Steel Studding for Buildings and Parts Thereof. First use May 9, 1939.

Class 21 — Electrical Apparatus, Machines, and Supplies

727,121. Teleprompter Corporation, New York, N.Y. SN 81,602. Filed P.R. 9-17-59; Am. S.R. 10-16-61.

GROUP W COMMUNICATIONS

For Electrically-Operated Apparatus for the Cuing of Speakers and Actors by Means of Scripts Advanced in Conformity With the Action and/or Dialogue or Monologue To Be Presented and Electrical Driving, Switching and Speed Control Equipment Therefor, Electrical Circuit Control Apparatus, Relay Control Panels, and Lighting Control Apparatus. First use in April 1958.

Class 38 — Prints and Publications

727,122. A. E. Walsh & Partners Ltd., London, England. SN 87,751. Filed P.R. 12-21-59; Am. S.R. 11-15-61.

EUROMARKET SURVEYS

For Series of Printed Publications—Namely, Studies Relating to Business and Economic Matters, Issued From Time To Time. First use Feb. 5, 1958; in commerce June 10, 1958.

Class 46 — Foods and Ingredients of Foods

727,123. Fritzsche Brothers, Inc., New York, N.Y. SN 78,197. Filed P.R. 7-22-59; Am. S.R. 8-14-61.

OIL LEMOJUCE

For Imitation Lemon Juice Oil for Use as a Food Flavoring. First use June 9, 1959.

727,124. Fritzsche Brothers, Inc., New York, N.Y. SN 78,198. Filed P.R. 7-22-59; Am. S.R. 8-14-61.

OIL ORANJUCE

For Imitation Orange Juice Oil for Use as a Food Flavoring. First use June 19, 1959.

Class 51 — Cosmetics and Toilet Preparations

Service Mark

727,125. Shulton, Inc., Clifton, N.J. SN 114,358. Filed 2-24-61.



The mark comprises the contour or conformation of a white pottery glass bottle in which the goods are sold.

For After Shave Talcum.

First use about April 1938.

Class 107 — Education and Entertainment

727,126. Teleprompter Corporation, New York, N.Y. SN 81,601. Filed P.R. 9-17-59; Am. S.R. 10-19-61.

GROUP COMMUNICATIONS

For Staging Services and Closed Circuit Television Services.

First use Aug. 12, 1957.

TRADEMARK REGISTRATIONS RENEWED

146,799. GILCO AND DESIGN. Cl. 29. 9-20-21.
148,902. ADOR'ME. Cl. 51. 11-29-21.
149,248. FRACTOL. Cl. 15. 12-6-21.
150,122. WYROL. Cl. 51. 12-27-21.
150,368. TOMBOY TAYLOR. Cl. 38. 1-3-22.
150,369. THE TERRIBLE-TEMPERED MR. BANG. Cl. 38. 1-3-22.
150,370. AUNT EPPIE HOGG. Cl. 38. 1-3-22.
150,371. THE POWERFUL KATRINKA. Cl. 38. 1-3-22.
150,821. THE TOONERVILLE TROLLEY. Cl. 38. 1-10-22.
151,267. UNION. Cl. 2. 1-24-22.
151,441. "BY" ETC. AND DESIGN. Cl. 21. 2-7-22.
151,448. BOYER ETC. AND DESIGN. Cl. 23. 2-7-22.
151,486. ERIO. Cl. 6. 2-7-22.
151,754. FCH AND DESIGN. Cl. 46. 2-14-22.
152,825. DUTCH TWINS AND DESIGN. Cl. 46. 3-7-22.
153,053. LUBALOY. Cl. 9. 3-7-22.
153,665. CHAMPION. Cl. 23. 3-28-22.
154,033. YAGER'S LINIMENT ETC. AND DESIGN. Cl. 18. 4-4-22.
155,040. FLEXINDEX. Cl. 37. 5-16-22.
155,052. CLOVER LEAF. Cl. 7. 5-16-22.
155,130. WORTHINGTON AND SCARAB DESIGN. Cl. 23. 5-16-22.
155,200. ATLANTIC. Cl. 23. 5-23-22.
389,766. MULTIMATIC. Cl. 27. 8-19-41.
389,868. LA ROSA AND DESIGN. Cl. 46. 8-26-41.
390,087. HOMO AND DESIGN. Cl. 18. 9-9-41.
390,799. ARTFIBER. Cl. 33. 10-7-41.
391,090. PINOLA. Cl. 46. 10-21-41.
391,250. BUY-GUIDE. Cl. 42. 10-28-41.
391,255. GLOLON. Cl. 42. 10-28-41.
391,911. DANAZOLA BRAND AND DESIGN. Cl. 46. 12-2-41.
391,937. GINGHAM. Cl. 51. 12-2-41.
391,984. WHIRLAWAY AND DESIGN. Cl. 42. 12-2-41.
392,128. DUTCH BOY DESIGN. Cl. 14. 12-9-41.
392,535. CALORIA. Cl. 15. 12-30-41.
392,536. ADORABLE. Cl. 42. 12-30-41.
392,556. RANTEX. Cl. 44. 12-30-41.
392,812. ORALINE. Cl. 44. 1-13-42.
393,164. PLASTICRUDE. Cl. 15. 1-27-42.
393,223. CLOZ-IT. Cl. 13. 1-27-42.
393,360. SANI FLUFF. Cl. 1. 2-10-42.
393,389. FAMOUS FARMPHOS. Cl. 10. 2-10-42.
393,525. CHALLENGER. Cl. 19. 2-17-42.
393,528. BOARDEX. Cl. 37. 2-17-42.
394,075. RYTEX CHATTER-BOX. Cl. 37. 3-17-42.
394,305. RYTEX CARD-O-GRAMS. Cl. 37. 3-31-42.
394,315. ARROW. Cl. 1. 3-31-42.
394,316. BOB WHITE. Cl. 1. 3-31-42.
394,318. CHINOOK. Cl. 1. 3-31-42.
394,319. COLONIAL MAID. Cl. 1. 3-31-42.
394,320. DIAMOND. Cl. 1. 3-31-42.
394,321. FERN. Cl. 1. 3-31-42.
394,325. TOPAZ. Cl. 1. 3-31-42.
394,451. SALUTE. Cl. 39. 4-7-42.
394,467. BUFFALO BILLY'S AND DESIGN. Cl. 39. 4-7-42.
394,561. REPEAT-O-PAK. Cl. 11. 4-14-42.
394,988. ROUND UP AND DESIGN. Cl. 46. 5-5-42.
395,070. AIRDRAULIC. Cl. 23. 5-12-42.
395,257. REDBOW. Cl. 46. 5-19-42.
395,296. KING'S PARK. Cl. 46. 5-19-42.
395,304. EXCELSIOR. Cl. 6. 5-19-42.
395,421. FIELDCREST. Cl. 42. 5-26-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

106,328. BEAR. Cl. 9. 10-19-15.
610,276. KOBAR. Cl. 18. 8-9-55.

The following registrations issued Dec. 13, 1955

617,324. GULF GLEAM AND DESIGN. Cl. 4.
617,325. GEMINI AND DESIGN. Cl. 4.
617,330. THERMOTUNG. Cl. 6.
617,331. C.K.C. Cl. 6.
617,334. STADLER'S XXX-TRIPLE-X SOIL-BIL-DER AND DESIGN. Cl. 10.
617,345. TRANSLUX. Cl. 12.
617,350. EGSCO. Cl. 12.
617,351. KOLORDRIFT. Cl. 12.
617,358. SNUGGY. Cl. 13.
617,359. McKINNEY HOME & HOBBY HARDWARE AND DESIGN. Cl. 13.
617,381. "WHITEY" WHITE OWL. Cl. 17.
617,397. COBRA. Cls. 19 and 23.
617,398. EXECUTIVE. Cl. 19.
617,399. ROYALTONE. Cl. 20.
617,401. LIFE-FACE. Cl. 20.

617,402. LIFE-TAC. Cl. 20.
617,403. "THERMFLEX." Cl. 21.
617,405. RAM. Cl. 21.
617,416. WEDGE-GRIP. Cl. 23.
617,419. MMM. Cl. 23.
617,420. FARMGARD. Cl. 23.
617,421. MODULE ERECTOR. Cl. 23.
617,427. DYNA-FLUX. Cl. 26.
617,428. TORKAGE AND DESIGN. Cl. 26.
617,431. DECA-SWEEP. Cl. 26.
617,435. POWERHOUSE. Cl. 26.
617,438. OXYATOR. Cl. 26.
617,439. SHRAGIE. Cl. 27.
617,441. NAVETTE. Cl. 27.
617,442. ROUSSEAU AND DESIGN. Cl. 28.
617,443. JEWEL LOCK. Cl. 28.
617,444. EVER-GLOW. Cl. 28.
617,446. ESSENCE OF SPRING AND DESIGN. Cl. 28.
617,447. NAVETTE. Cl. 28.
617,451. BAMAG AND DESIGN. Cl. 31.
617,455. ALBION. Cl. 31.
617,457. COLONY ARTS GROUP. Cl. 32.
617,460. PHENIX AIRFLOAT. Cl. 32.
617,462. FLYTE FORM AND DESIGN (REPRESENTATION OF AN AIRPLANE). Cl. 32.
617,465. REJUVENATOR. Cl. 32.
617,467. CHARCOAL KING. Cl. 34.
617,471. UNI-SHIM. Cl. 35.
617,472. P AND DESIGN. Cl. 35.
617,474. FREEFLOW. Cl. 35.
617,476. ROMAR. Cl. 36.
617,481. ADGIF. Cl. 37.
617,486. BAYOU KRAFT. Cl. 37.
617,492. COLOR-BAX. Cl. 38.
617,495. EXPORT TRADE AND SHIPPER. Cl. 38.
617,496. "YARD BIRD." Cl. 38.
617,500. TOMORROW'S TOOLS—TODAY! Cl. 38.
617,503. RUTH'S ORIGINAL OF TEXAS AND DESIGN. Cl. 39.
617,507. NUHIDE AND DESIGN. Cl. 39.
617,510. HI-CHAIR-SAFE. Cl. 39.
617,512. LE HAVRE AND DESIGN. Cl. 39.
617,516. JEANSTERS. Cl. 39.
617,519. GLIDE RITE. Cl. 39.
617,521. LOCKED-IN SOCK AND DESIGN (REPRESENTATION OF A PADLOCK). Cl. 39.
617,526. DO-CEE-DO. Cl. 39.
617,530. LA SCALA. Cl. 39.
617,532. REPRESENTATION OF BABY AND DESIGN. Cl. 39.
617,534. PATTY WARD. Cl. 39.
617,535. DOUBLE DOE. Cl. 39.
617,538. SILVA-DUV. Cl. 42.
617,540. SKIP CORD. Cl. 42.
617,541. PACIDRIL. Cl. 42.
617,542. CLOUD-PUFF AND DESIGN (REPRESENTATION OF A CLOUD). Cl. 42.
617,548. CALORA. Cl. 42.
617,549. CALMONT. Cl. 42.
617,553. "COR-VOX." Cl. 44.
617,557. SONARTHERM. Cl. 44.
617,558. SCHOONER. Cl. 45.
617,569. INTERPACK. Cl. 46.
617,573. REPRESENTATION OF GROTESQUE FIGURE UPSIDE DOWN. Cl. 46.
617,575. LIQUA-SWEET. Cl. 46.
617,586. S.C. ABEL PEREIRA DA FONSECA AND DESIGN. Cl. 49.
617,588. DEERFIELD ETC. AND DESIGN. Cl. 49.
617,591. COPPERITE. Cl. 50.
617,592. RLR ETC. AND DESIGN. Cl. 50.
617,594. ZEROGARD. Cl. 50.
617,595. ELASTOMERIC PRINTING PLATES AND DESIGN. Cl. 50.
617,597. DELTONE. Cl. 51.
617,606. OLE DE JEAN PATOU. Cl. 51.
617,608. SHOT-TREAT. Cl. 52.
617,615. GIRL AND WREATH DESIGN. Cl. 52.
617,618. LUMMUS HEAT EXCHANGER DIVISION AND DESIGN. Cl. 100.
617,633. GRAVER AND DESIGN. Cl. 106.
617,634. TIARCORIZE. Cl. 106.
617,635. HARDALUME. Cl. 106.
617,636. RIZZODIZE. Cl. 106.
617,637. SURE WEAR K. Cl. 106.
617,638. HERTAINE. Cl. 106.
617,639. BEAUTY-PLUS. Cl. A.
617,641. MY PLAY PONY. Cl. 22.
617,643. PRINT-N-ETCH. Cl. 23.
617,645. KUDA-SINKA BRAND AND DESIGN. Cl. 46.
617,646. SLICEPAR. Cl. 46.
617,647. TABLE RITE. Cl. 46.

Section 18

232,752. SUNBEAM. Cl. 28. 9-13-27.
430,502. PLASTIC KLEEN AND DESIGN. Cl. 4. 6-10-47.
545,406. BUG BAN. Cl. 6. 7-17-51.

INDEX OF REGISTRANTS

JANUARY 30, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A.D.G. Societe d'Application des Gaz Produits Routiers et Materiaux, Paris, France. 726,861, pub. 11–14–61. Cl. 2.
Abacus, Inc., Los Angeles, Calif. 726,965, pub. 11–14–61. Cl. 26.
Acacia Lumber Co.: *See*—
Le Vay, Alex P.
Accu-Tech Corp., New York, N.Y. 726,980, pub. 11–14–61. Cl. 26.
Adlerwerke vorm. Heinrich Kleyer A.G., Frankfurt am Main, Germany. 727,025, pub. 11–14–61. Cl. 37.
Airfilm Corp., Grosse Pointe, Mich. 727,049, pub. 11–14–61. Cl. 39.
Alexander & Langenhagen, d.b.a. Allaco Products, Cambridge, Mass. 726,846, pub. 11–14–61. Cl. 1.
Allaco Products: *See*—
Alexander & Langenhagen.
Alloyd Engineering Laboratory, Inc., Verona, Wis. 727,069, pub. 11–14–61. Cl. 44.
American Brake Shoe Co., New York, N.Y. 727,003, pub. 11–14–61. Cl. 26.
American Cyanamid Co., New York, N.Y. 726,903, pub. 11–14–61. Cl. 18.
American Machine & Foundry Co., New York, N.Y. 726,921, pub. 11–14–61. Cl. 21.
American-Marietta Co., Chicago, Ill. 726,868, pub. 11–14–61. Cl. 6.
American Optical Co., Southbridge, Mass. 726,998, pub. 11–14–61. Cl. 26.
American Polyglas Corp., Carlstadt, N.J. 617,345, canc. Cl. 12.
American Record Manufacturers and Distributors Association, Chicago, Ill. 727,117, pub. 11–14–61. Cl. 200.
Anderson, Clayton & Co., Dallas, Tex. 727,090, pub. 11–14–61. Cl. 46.
Anderson Co., The, Gary, Ind. 726,916, pub. 11–14–61. Cl. 19.
Armstrong Cork Co., Lancaster, Pa. 617,399, canc. Cl. 20.
Artfiber Corp.: *See*—
Light Conditioning Co. of America, Inc.
Ashwell, Thomas, & Co., Inc., New York, N.Y. 617,495, canc. Cl. 38.
Associated Food Stores Inc., Jamaica, N.Y. 726,875, pub. 11–14–61. Cl. 9.
Associated TV Radio Co., Cleveland, Ohio. 727,021, pub. 11–14–61. Cl. 36.
Atlantic Stamping Co., Rochester, N.Y. 155,200, ren. 1–30–62. Cl. 23.
Avalon Hill Co., The, Baltimore, Md. 726,931, pub. 11–14–61. Cl. 22.
Auto Craft Products, Inc., Kansas City, Mo. 727,013, pub. 11–14–61. Cl. 29.
B & B Mfg. Co., Hopkins, Minn. 726,928, pub. 11–14–61. Cl. 22.
Bachman Bakeries Corp., Reading, Pa. 727,085, pub. 11–14–61. Cl. 46.
Bamag-Meguin Aktiengesellschaft, now by change of name Pintsch Bamag Aktiengesellschaft, Berlin, Germany. 617,451, canc. Cl. 31.
Bambi Footwear Inc., Brooklyn, N.Y. 617,521, canc. Cl. 39.
Beckerman, M., & Sons, Inc., New York, N.Y. 617,519, canc. Cl. 39.
Beckwith-Arden Inc., Watertown, Mass. 727,053, pub. 11–14–61. Cl. 39.
Belshaw Brothers, Inc., Seattle, Wash. 726,945, pub. 11–14–61. Cl. 23.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 727,066, pub. 11–14–61. Cl. 43.
Better Lawn and Turf Institute, Inc., Kansas City, Mo. 727,119, pub. 11–14–61. Cl. A.
Bianchini, Ferier, Inc., New York, N.Y. 392,536, ren. 1–30–62. Cl. 42.
Bio-Zyme, Inc., Sheldon, Iowa. 727,087, pub. 11–14–61. Cl. 46.
Bishop Publishing Co., Chicago, Ill. 617,492, canc. Cl. 38.
Bissell Carpet Sweeper Co., to Bissell Inc., Grand Rapids, Mich. 153,665, ren. 1–30–62. Cl. 23.
Bissell Inc.: *See*—
Bissell Carpet Sweeper Co.
Black, Julius S., d.b.a. Demon Lure Co., San Antonio, Tex. 726,941, pub. 11–14–61. Cl. 22.
Bohannon, George S., d.b.a. Bohannon Industries, Colorado Springs, Colo. 726,955, pub. 11–14–61. Cl. 23.
Bohannon Industries: *See*—
Bohannon, George S.
Bon Ami Co., The, New York, N.Y. 726,863, pub. 11–14–61. Cl. 4.
Borden Co., The, New York, N.Y. 726,896, pub. 11–14–61. Cl. 18.
Bostwick Steel Lath Co., The, Niles, Ohio. 727,120. Cl. 12.
Boyce, Malcolm B., Beverly Hills, Calif. 727,008, pub. 11–14–61. Cl. 26.
Bradford Dyers' Association Ltd., The, Bradford, England. 727,056, pub. 11–14–61. Cl. 42.
British Filters Ltd., Maidenhead, England. 617,455, canc. Cl. 31.
Brown Co., Boston, Mass. 727,032, pub. 11–14–61. Cl. 37.
Brown Paper Industries, Inc., West Monroe, La. 617,486, canc. Cl. 37.
Brownell & Field Co., Providence, R.I. 727,078, pub. 11–14–61. Cl. 46.
Bullard Co., The, Bridgeport, Conn. 726,946, pub. 11–14–61. Cl. 23.
Burroughs Corp., Detroit, Mich. 727,037, pub. 11–14–61. Cl. 37.
Bushnell, D. P., & Co., Inc., Pasadena, Calif. 726,993, pub. 11–14–61. Cl. 26.
Byington Electric Co.: *See*—
Byington, Robert J.
Byington, Robert J., d.b.a. Byington Electric Co., San Francisco, Calif. 151,441, ren. 1–30–62. Cl. 21.
Cadie Chemical Products, Inc., New York, N.Y. 617,325, canc. Cl. 4.
Callaway Mills Co., Lagrange, Ga. 617,548–49, canc. Cl. 42.
Carbon Web Corp., Cincinnati, Ohio. 727,031, pub. 11–14–61. Cl. 37.
Carmi-Ainsbrooke Corp., from Carmi-Ainsbrooke Corp., New York, N.Y. 727,046, pub. 11–14–61. Cl. 39.
Caton, Thomas R., d.b.a. Reproduction Research Laboratories, Lynbrook, N.Y. 617,591–2, canc. Cl. 50.
Central Chemical Corp.: *See*—
Central Chemical Corp. of Maryland.
Central Chemical Corp. of Maryland, to Central Chemical Corp., Hagerstown, Md. 393,389, ren. 1–30–62. Cl. 10.
Certified Chemical and Equipment Co., The: *See*—
Conway, Joseph D.
Chesapeake Shoe Mfg. Co., The, Baltimore, Md. 394,467, ren. 1–30–62. Cl. 39.
Chicago Pneumatic Tool Co., New York, N.Y. 151,448, ren. 1–30–62. Cl. 23.
Childhood Interests, Inc., Roselle Park, N.J. 617,641, canc. Cl. 22.
Clement, J. W., Co., Buffalo, N.Y. 617,595, canc. Cl. 50.
Cohen, Edward L., d.b.a. Edwards Home Products, Merchantville, N.J. 726,942, pub. 11–14–61. Cl. 22.
Cohn & Rosenberger, Inc., New York, N.Y. 232,752, canc. Cl. 28.
Cohn, T., Inc., Brooklyn, N.Y. 726,932, pub. 11–14–61. Cl. 22.
Coin Acceptors, Inc., St. Louis, Mo. 726,978, pub. 11–14–61. Cl. 26.
Colgate-Palmolive Co., New York, N.Y. 727,107, pub. 11–14–61. Cl. 52.
Collins Products, Inc., Waukon, Iowa. 726,894, pub. 11–14–61. Cl. 18.
Columbia Wax Co., Glendale, Calif. 727,110, pub. 11–14–61. Cl. 52.
Columbian Carbon Co., New York, N.Y. 395,304, ren. 1–30–62. Cl. 6.
Commercial Equipment Finance Corp., Milwaukee, Wis. 727,112, pub. 11–14–61. Cl. 102.
Cone Mills Inc., New York, N.Y. 727,065, pub. 11–14–61. Cl. 42.
Consolidated Research Co., Cincinnati, Ohio. 430,502, canc. Cl. 4.
Consolidated Vacuum Corp., Rochester, N.Y. 727,001, pub. 11–14–61. Cl. 26.
Consumer Standard, Inc., Crystal Lake, Ill. 726,897, pub. 11–14–61. Cl. 18.
Conway, Joseph D., d.b.a. The Certified Chemical and Equipment Co., Cleveland, Ohio. 727,100–2, pub. 11–14–61. Cl. 52.
Cook Produce, Inc., Glendale, Ariz. 727,086, pub. 11–14–61. Cl. 46.
Cowden Mfg. Co., Kansas City, Mo., to Erwin Mills, Inc., Durham, N.C. 394,451, ren. 1–30–62. Cl. 39.
Crane Packing Co., Chicago, Ill. 617,474, canc. Cl. 35.
Crawford, Keen & Cia. Sociedad de Responsabilidad Limitada, Buenos Aires, Argentina. 617,331, canc. Cl. 6.
Creative Arts, Inc., Miami, Fla. 727,093, pub. 11–14–61. Cl. 50.
Crest Mfg. Co., Inc., Long Island City, N.Y. 726,881, pub. 11–14–61. Cl. 13.
Crist, C. Wesley, Portland, Oreg. 727,014, pub. 11–14–61. Cl. 32.
Cromwell Business Machines, North Hollywood, Calif. 726,973, pub. 11–14–61. Cl. 26.
Crookes-Barnes Laboratories, Inc., Wayne, N.J. 726,910, pub. 11–14–61. Cl. 18.
Crystal Tissue Co., The, Middletown, Ohio. 727,027, pub. 11–14–61. Cl. 37.
Cuneo Press, Inc., The, Chicago, Ill. 727,040, pub. 11–14–61. Cl. 38.
Curtis, Helene, Industries, Inc., Chicago, Ill. 727,096, pub. 11–14–61. Cl. 51.
Curtiss-Wright Corp., Princeton, N.J. 726,985, pub. 11–14–61. Cl. 26.
Daggett & Ramsdell, Inc., New York, N.Y. 727,095, pub. 11–14–61. Cl. 51.
Daggett & Ramsdell, Inc., New York, N.Y. 727,099, pub. 11–14–61. Cl. 52.
Darling Freight, Inc., Grand Rapids, Mich. 727,115, pub. 11–14–61. Cl. 105.
Dawn, E. Christman, d.b.a. The Game Co., New York, N.Y. 726,929, pub. 11–14–61. Cl. 22.

Dazey Enterprises, Inc., St. Louis, Mo. 727,039, pub. 11–14–61. Cl. 38.
Decade Instrument Co., Caldwell, N.J. 617,431, canc. Cl. 26.
Deering Milliken, Inc., New York, N.Y. 727,067, pub. 11–14–61. Cl. 43.
Demon Lure Co.: *See*—
Black, Julius S.
Design and Production, Inc., Alexandria, Va. 727,018, pub. 11–14–61. Cl. 32.
Detectogas Instruments, Inc., Houston, Tex. 726,987, pub. 11–14–61. Cl. 26.
Deutsche Elektronik G.m.b.H., Berlin-Wilmersdorf, Germany. 726,963, pub. 11–14–61. Cl. 26.
Diamond Crystal Salt Co., St. Clair, Mich. 726,869, pub. 11–14–61. Cl. 6.
Dietzgen, Eugene, Co., Chicago, Ill. 393,528, ren. 1–30–62. Cl. 37.
Dodge, Ruez M., d.b.a. The Ruez Co., Charleston, W. Va. 617,358, canc. Cl. 13.
Dome Chemicals, Inc., New York, N.Y. 726,905, pub. 11–14–61. Cl. 18.
Dome Chemicals, Inc., New York, N.Y. 726,911, pub. 11–14–61. Cl. 18.
Don Juan Corp. of California, Los Angeles, Calif. 617,530, canc. Cl. 39.
Douglas Furniture Corp., Chicago, Ill. 617,462, canc. Cl. 32.
Dover Corp.: *See*—
Rotary Lift Co.
Dublin Industries, Inc., Hayward, Calif. 726,968, pub. 11–14–61. Cl. 26.
E.P.S. (Research & Development) Ltd., Sittingbourne, Kent, England. 727,094, pub. 11–14–61. Cl. 50.
Edgerton, Germeshausen & Grier, Inc., Boston, Mass. 726,990, pub. 11–14–61. Cl. 26.
Edo Corp., Long Island City, N.Y. 726,984, pub. 11–14–61. Cl. 26.
Edwards Home Products: *See*—
Cohen, Edward L.
Elkay Mfg. Co., Chicago, Ill. 726,885, pub. 11–14–61. Cl. 13.
Empire Machinery Co., Odessa, Tex. 617,428, canc. Cl. 26.
Engis Equipment Co., Chicago, Ill. 726,950, pub. 11–14–61. Cl. 23.
Erda Corp., The, Pine Plains, N.Y. 726,876, pub. 11–14–61. Cl. 10.
Eska Co., Inc., Dubuque, Iowa. 727,068, pub. 5–19–59. Cl. 44.
Fabrex Corp.: *See*—
National Fabrics Corp.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. 726,866, pub. 11–14–61. Cl. 6.
Farmers' Commission House, Inc., New York, N.Y., to Long Island Packers, Inc., Eastport, Long Island, N.Y. 151,754, canc. Cl. 46.
Farmgard Products Co., Minneapolis, Minn. 617,420, canc. Cl. 23.
Farmgard Products Co., Minneapolis, Minn. 617,594, canc. Cl. 50.
Fear, Fred, & Co., Brooklyn, N.Y. 617,558, canc. Cl. 45.
Feature Ring Co., Inc., New York, N.Y. 617,443–44, canc. Cl. 28.
Federal Enameling & Stamping Co., Pittsburgh, Pa. 726,884, pub. 11–14–61. Cl. 13.
Federated Mutual Implement and Hardware Insurance Co., Owatonna, Minn. 727,113, pub. 11–14–61. Cl. 102.
Fieldcrest Mills, Inc.: *See*—
Marshall Field & Co.
Fieldcrest Mills, Inc., Spray, N.C. 727,055, pub. 11–14–61. Cl. 42.
Fischer & Porter Co., Warminster, Pa. 726,982–3, pub. 11–14–61. Cl. 26.
Fisher Pen Co., Forest Park, Ill. 727,034, pub. 11–14–61. Cl. 37.
Flintkote Co., The, New York, N.Y. 617,351, canc. Cl. 12.
Flo-Tronics, Inc., Minneapolis, Minn. 726,981, pub. 11–14–61. Cl. 26.
Fontaine Converting Works, Inc., Martinsville, Va. 617,638, canc. Cl. 106.
Foster & Davies, Inc., Cleveland, Ohio. 617,639, canc. Cl. A.
Fox, Fontaine, Greenwich, Conn. 150,368–71, ren. 1–30–62. Cl. 38.
Fox, Fontaine, Greenwich, Conn. 150,821, ren. 1–30–62. Cl. 38.
Fox Go-Boy Carts, Inc., Janeaville, Wis. 726,917, pub. 11–14–61. Cl. 19.
Freeman, James V., Inc., Jacksonville, Fla. 727,105, pub. 11–14–61. Cl. 52.
Frink Sno-Plows, Inc., Clayton, N.Y. 726,954, pub. 11–14–61. Cl. 23.
Fritzsche Brothers, Inc., New York, N.Y. 727,123–4. Cl. 46.
G.E.D. Corp., Berkeley, Mich. 726,914, pub. 11–14–61. Cl. 19.
Gaiser, Conrad, d.b.a. Malibu Products Co., La Mirada, Calif. 727,106, pub. 11–14–61. Cl. 52.
Game Co., The: *See*—
Dawn, E. Christman.
Gar-Prod, Inc., Lindenhurst, N.Y. 726,870, pub. 11–14–61. Cl. 6.
Geigy Chemical Corp.: *See*—
Geigy Co., Inc.
Geigy Co., Inc., New York, N.Y., to Geigy Chemical Corp., Yonkers, N.Y. 151,486, ren. 1–30–62. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 726,850, pub. 11–14–61. Cl. 1.
General Aniline & Film Corp., New York, N.Y. 726,976, pub. 11–14–61. Cl. 26.
General Cigar Co., Inc., New York, N.Y. 617,381, canc. Cl. 17.
General Electric Co., Schenectady, N.Y. 726,962, pub. 11–14–61. Cl. 24.
General Electrodynamics Corp., Garland, Tex. 726,919, pub. 11–14–61. Cl. 21.
General Instrument Corp., Newark, N.J. by consolidation from General Transistor Corp., Jamaica, N.Y. 726,918, pub. 11–14–61. Cl. 21.
General Transistor Corp.: *See*—
General Instrument Corp.
Giddings & Lewis Machine Tool Co., Fond Du Lac, Wis. 726,948, pub. 11–14–61. Cl. 23.
Gilbert Bros. & Co. Inc., to The Yager Drug Co., Baltimore, Md. 154,033, ren. 1–30–62. Cl. 18.
Gilbert, E. T. Mfg. Co., Inc.: *See*—
Lee, William R.
Globe Rubber Products Corp., Philadelphia, Pa. 727,054, pub. 11–14–61. Cl. 42.
Gloria Gloves, Inc., New York, N.Y. 617,535, canc. Cl. 39.
Goebel, W., Porzellanfabrik, Oeslau, near Coburg, Bavaria, Germany. 726,937, pub. 11–14–61. Cl. 22.
Gojer, Inc., Akron, Ohio. 727,108, pub. 11–14–61. Cl. 52.
Gold-Pfeil Ludwig Krumm Aktiengesellschaft, Offenbach am Main, Kaiserstreet, Germany. 726,856–7, pub. 11–14–61. Cl. 2.
Goodrich, B. F., Co., The, Akron, Ohio. 393,525, ren. 1–30–62. Cl. 19.
Graham Co. Inc., The, New York, N.Y. 395,257, ren. 1–30–62. Cl. 46.
Granat Bros., San Francisco, Calif. 617,441, canc. Cl. 27.
Granat Bros., San Francisco, Calif. 617,447, canc. Cl. 28.
Grant, Foster, Co., Inc., Leominster, Mass. 726,994, pub. 11–14–61. Cl. 26.
Graver Tank & Mfg. Co., Inc., East Chicago, Ind. 617,633, canc. Cl. 106.
Grazioso, James P., West New York, N.J. 727,038, pub. 11–14–61. Cl. 38.
Great Bear Instant Beverage Service: *See*—
Great Bear Spring Co.
Great Bear Spring Co., d.b.a. Great Bear Instant Beverage Service, New York, N.Y. 727,077, pub. 11–14–61. Cl. 46.
Greif Bros. Cooperage Corp., The, Delaware, Ohio. 393,223, ren. 1–30–62. Cl. 13.
Gross Galesburg Co., Galesburg, Ill. 617,526, canc. Cl. 39.
Gulf Oil Corp., Pittsburgh, Pa. 617,324, canc. Cl. 4.
HD Electric Co., Deerfield, Ill. 726,906–7, pub. 11–14–61. Cl. 26.
H3 Products Co.: *See*—
Platoff, Raphael P.
Hansen, Rasmus, A/S: *See*—
Hansen, Rasmus.
Hansen, Rasmus, to Rasmus Hansen A/S, Copenhagen, Denmark. 391,911, ren. 1–30–62. Cl. 46.
Harford Pumps Ltd., London, England. 726,951, pub. 11–14–61. Cl. 23.
Harrison, Everett S., Fort Lauderdale, Fla. 726,992, pub. 11–14–61. Cl. 26.
Harshaw Chemical Co., The, Cleveland, Ohio. 727,004, pub. 11–14–61. Cl. 26.
Havre de Grace Hosiery Mills, Inc., The, Havre de Grace, Md. 617,512, canc. Cl. 39.
Heller & Usdan Inc., New York, N.Y. 727,024, pub. 11–14–61. Cl. 37.
Hercules Powder Co., Wilmington, Del. 106,328, canc. Cl. 9.
Herter's Inc., Waseca, Minn. 726,933, pub. 11–14–61. Cl. 22.
Hexel Products Inc., Berkeley, Calif. 727,045, pub. 11–14–61. Cl. 38.
Hokus-Pokus Wholesale Liquor Co.: *See*—
Sherman, Si.
Holland American Wafer Co., Grand Rapids, Mich. 152,825, ren. 1–30–62. Cl. 46.
Holland-Rantos Co., Inc., New York, N.Y. 392,556, ren. 1–30–62. Cl. 44.
Holo-Krome Screw Corp., The, Elmwood, Conn. 726,883, pub. 11–14–61. Cl. 13.
Homo Distributing Co., Inc., Buffalo, N.Y. 390,087, ren. 1–30–62. Cl. 18.
House of Huston, Inc., Coral Gables, Fla. 545,406, canc. Cl. 6.
House of Rousseau, Ltd., New York, N.Y. 617,442, canc. Cl. 28.
Huck, William F., d.b.a. Huck Co., New York, N.Y. 726,952, pub. 11–14–61. Cl. 23.
Hueston, C. L., Co.: *See*—
Hueston, Carmen L.
Hueston, Carmen L., d.b.a. C. L. Hueston Co., Detroit, Mich 617,330, canc. Cl. 6.
Humble Oil & Refining Co.: *See*—
Standard Oil Co.
Standard Oil Co. of New Jersey.
Imperial Brass Mfg. Co., The: *See*—
Imperial-Eastman Corp.
Imperial-Eastman Corp., by merger and change of name from The Imperial Brass Mfg. Co., Chicago, Ill. 726,882, pub. 11–14–61. Cl. 13.
Independence Broadcasting Co., Philadelphia, Pa. 727,116, pub. 11–14–61. Cl. 107.
Independent Grocers' Alliance Distributing Co., Chicago, Ill. 617,647, canc. Cl. 46.
Industrial Instruments, Inc., Cedar Grove, N.J. 727,002, pub. 11–14–61. Cl. 26.
International Packers Ltd., Chicago, Ill. 617,569, canc. Cl. 46.
International Paper Co., New York, N.Y. 726,845, pub. 11–14–61. Cl. 1.
Interstate Bakeries Corp., Kansas City, Mo. 617,573, canc. Cl. 46.
Invicta-Seeland, Inc., New York, N.Y., to Mido-G. Schaeren & Co., S.A., Bienne, Switzerland. 389,766, ren. 1–30–62. Cl. 27.
Ireland, G. D., d.b.a. Ireland's Chili Co., Wichita Falls, Tex. 727,091, pub. 11–28–61. Cl. 46.
Irresistible, Inc., Jersey City, N.J., to The Nestle Le Mur Co., New York, N.Y. 391,937, ren. 1–30–62. Cl. 51.

Israel Purchasing Service, Inc., New York, N.Y. 727,050–1, pub. 11–14–61. Cl. 39.
Ivanhoe Mutual Orange Association, Ivanhoe, Calif. 395,296, ren. 1–30–62. Cl. 46.
Jay Mfg. Co., Inc., Roxbury, Mass. 617,516, canc. Cl. 39.
Jiffy Co., Inc., The, Knoxville, Tenn. 727,111, pub. 11–14–61. Cl. 100.
Johnson, Jerry, d.b.a. Photo Electronic Research, New York, N.Y. 726,980, pub. 11–14–61. Cl. 26.
Johnston Pharmaceutical Distributors, Inc., Los Angeles, Calif. 610,276, canc. Cl. 18.
K.P.B., Inc., New York, N.Y. 726,867, pub. 11–14–61. Cl. 6.
Karcher, Margaret B., Playa Del Rey, Calif. 617,510, canc. Cl. 39.
Kaynar Co., The, Los Angeles, Calif. 617,597, canc. Cl. 51.
Kellogg Co., Battle Creek, Mich. 727,089, pub. 11–14–61. Cl. 46.
Kemex Meat Brands, Inc., Washington, D.C. 727,028, pub. 11–14–61. Cl. 37.
Kendall Co., The, Walpole, Mass. 727,059, pub. 11–14–61. Cl. 42.
Kendall Co., The, Walpole, Mass. 617,532, canc. Cl. 39.
Kentucky Valley Farms, Jersey City, N.J. 726,848, pub. 11–14–61. Cl. 1.
Kimberly-Clark Corp., Neenah, Wis. 727,070, pub. 11–14–61. Cl. 44.
Kitchens of Sara Lee, Inc., Chicago, Ill. 727,076, pub. 11–14–61. Cl. 46.
Kondo Products, Inc., Woodside, N.Y. 727,009, pub. 11–14–61. Cl. 26.
Landers, Frary & Clark, New Britain, Conn. 726,927, pub. 11–14–61. Cl. 21.
Lane-Wells Co., Los Angeles, Calif. 617,500, canc. Cl. 38.
Langendorf United Bakeries, Inc., San Francisco, Calif. 727,079, pub. 11–14–61. Cl. 46.
La Rosa, V., & Sons, Inc., Brooklyn, N.Y. 389,868, ren. 1–30–62. Cl. 46.
Lear, Inc., Grand Rapids, Mich. 617,427, canc. Cl. 26.
Ledoux & Co., Teaneck, N.J. 617,438, canc. Cl. 26.
Lee, William R., to E. T. Gilbert Mfg. Co., Inc., Rochester, N.Y. 146,799, ren. 1–30–62. Cl. 29.
Leeds and Northup Co., Philadelphia, Pa. 727,000, pub. 11–14–61. Cl. 26.
Lehn & Fink Products Corp., Bloomfield, N.J. 617,615, canc. Cl. 52.
Leitz, E., Inc., New York, N.Y. 726,988, pub. 11–14–61. Cl. 26.
Le Vay, Alex P., d.b.a. Acacia Lumber Co., Dayton, Ohio. 617,421, canc. Cl. 23.
Levitt, Barth, Products, Valley Stream, N.Y. 726,904, pub. 11–14–61. Cl. 18.
Light Conditioning Co. of America, Inc., New York, N.Y., to Artfiber Corp., Madison, N.J. 390,799, ren. 1–30–62. Cl. 33.
Lockport Cotton Batting Co., to Lockport Mills, Inc., Lockport, N.Y. 394,315–16, ren. 1–30–62. Cl. 1.
Lockport Cotton Batting Co., to Lockport Mills, Inc., Lockport, N.Y. 394,318–21, ren. 1–30–62. Cl. 1.
Lockport Cotton Batting Co., to Lockport Mills, Inc., Lockport, N.Y. 394,325, ren. 1–30–62. Cl. 1.
Lockport Cotton Batting Co., to Lockport Mills, Inc., Lockport, N.Y. 393,360, ren. 1–30–62. Cl. 1.
Lockport Mills, Inc.: *See*—
Lockport Cotton Batting Co.
Long Island Packers, Inc.: *See*—
Farmers' Commission House, Inc.
Long-Lok Corp., Los Angeles, Calif. 726,887, pub. 11–14–61. Cl. 13.
Lowenthal-Berg, Ltd., New York, N.Y. 727,048, pub. 11–14–61. Cl. 39.
Lummus Co., The, New York, N.Y. 617,618, canc. Cl. 100.
M & M Mfg. Co., Providence, R.I. 617,446, canc. Cl. 28.
Malibu Products Co.: *See*—
Gaiser, Conrad.
Manostat Corp., Inc., New York, N.Y. 726,995, pub. 11–14–61. Cl. 26.
Mansfield Industries, Inc., Chicago, Ill. 726,986, pub. 11–14–61. Cl. 26.
Marchessault, Fernand, Montreal, Quebec, Canada. 726,936, pub. 11–14–61. Cl. 22
Marinette and Menominee Box Co., Marinette, Wis. 726,862, pub. 11–14–61. Cl. 2.
Marken Educational Games, Inc., Daytona Beach, Fla. 726,938, pub. 11–14–61. Cl. 22.
Marshall Field & Co., Chicago, Ill., to Fieldcrest Mills, Inc., Spray, N.C. 395,421, ren. 1–30–62. Cl. 42.
Mathieson Chemical Corp., now by merger and change of name Olin Mathieson Chemical Corp., New York, N.Y. 617,575, canc. Cl. 46.
Mattel, Inc., Hawthorne, Calif. 726,935, pub. 11–14–61. Cl. 22.
Mattingly, C. J., Packing Co., Inc., Glendale, Ariz. 727,082, pub. 11–14–61. Cl. 46.
McKinney Mfg. Co., Pittsburgh, Pa. 617,359, canc. Cl. 13.
McNaught Syndicate, Inc., The, New York, N.Y. 727,042, pub. 11–14–61. Cl. 38.
McNeil Machine & Engineering Co., The, Akron, Ohio. 726,970, pub. 11–14–61. Cl. 26.
Mead Corp., The, Dayton, Ohio. 727,023, pub. 11–14–61. Cl. 37.
Measuregraph Co., The, St. Louis, Mo. 726,974, pub. 11–14–61. Cl. 26.
Mechanical Handling Systems Inc., Detroit, Mich. 726,949, pub. 11–14–61. Cl. 23
Medelec Lab., San Antonio, Tex. 726,972, pub. 11–14–61. Cl. 26.
Melba Mfg. Co., Chicago, Ill., to Nestle Lemur Co., The, New York, N.Y. 148,902, ren. 1–30–62. Cl. 51.
Mercedes Buromaschinen-Werke Aktiengesellschaft, Frankfurt am Main, Germany. 726,944, pub. 11–14–61. Cl. 23.
Mercedes Buromaschinen-Werke Aktiengesellschaft, Frankfurt am Main, Germany. 726,971, pub. 11–14–61. Cl. 26.
Merck & Co., Inc., Rahway, N.J. 726,906, pub. 11–14–61. Cl. 18.
Metro-Goldwyn-Mayer British Studios Ltd., Hertfordshire, England. 726,979, pub. 11–14–61. Cl. 26.
Meyer, Wm. W., and Sons, Inc., Skokie, Ill. 726,953, pub. 11–14–61. Cl. 23.
Midland Laboratories, Dubuque, Iowa. 727,104, pub. 11–14–61. Cl. 52.
Mido-G. Schaeren & Co., S.A.: *See*—
Invicta-Seeland, Inc.
Midwest Chemical Co.: *See*—
Midwest Chemical Mfg. Co., Inc.
Midwest Chemical Mfg. Co., Inc., d.b.a. Midwest Chemical Co., Detroit, Mich. 727,103, pub. 11–14–61. Cl. 52.
Mills, Erwin, Inc.: *See*—
Cowden Mfg. Co.
Mills Hospital Supply Co., Chicago, Ill., 727,015, pub. 11–14–61. Cl. 32.
Miniature Precision Bearings, Inc., d.b.a. Split Ballbearing, Keene, N.H. 726,958, pub. 11–14–61. Cl. 23.
Minnick, R. C., & Associates: *See*—
Minnick, Roger C.
Minnick, Roger C., d.b.a. R. C. Minnick & Associates, Springfield, Ohio. 727,006, pub. 11–14–61. Cl. 26.
Monsanto Chemical Co., St. Louis, Mo. 726,872, pub. 11–7–61. Cl. 6.
Montgomery Ward & Co., Inc., Chicago, Ill. 727,007, pub. 11–14–61. Cl. 26.
Morrell, John, & Co., Ottumwa, Iowa. 727,071, pub. 11–14–61. Cl. 46.
Motch & Merryweather Machinery Co., The, Cleveland, Ohio. 617,419, canc. Cl. 23.
Multistamp Co., The, Norfolk, Va. 727,030, pub. 11–14–61. Cl. 37.
Mushlin, Samuel, Quincy, Mass. 617,557, canc. Cl. 44.
Myers-Spalti Mfg. Co., Houston, Tex. 617,457, canc. Cl. 32.
Nate, Jean, Inc., New York, N.Y. 727,098, pub. 11–14–61. Cl. 51.
National Distillers and Chemical Corp., New York, N.Y. 726,860, pub. 11–14–61. Cl. 2.
National Fabrics Corp., to Fabrex Corp., New York, N.Y. 391,984, ren. 1–30–62. Cl. 42.
National Lead Co., New York, N.Y. 392,128, ren. 1–30–62. Cl. 14.
National Safe Transit Committee, Inc., Washington, D.C. 727,041, pub. 11–14–61. Cl. 38.
National Wax Co., Skokie, Ill. 393,164, ren. 1–30–62. Cl. 15.
Nestle Le Mur Co., The: *See*—
Irresistible, Inc.
Nestle Lemur Co., The: *See*—
Melba Mfg. Co.
New England Overall Co., Inc., Boston, Mass. 617,507, canc. Cl. 39.
Newcomer Corp., The, Columbia, Mo. 726,877, pub. 11–14–61. Cl. 10.
Nihon Misbin Seizo Kabushiki Kaisha, Misuho-ku, Nagoya, Japan. 726,947, pub. 11–14–61. Cl. 23.
Noel, E. M., Co., The: *See*—
Noel, Eugene M.
Noel, Eugene M., d.b.a. The E. M. Noel Co., Cambridge, Mass. 726,957, pub. 11–14–61. Cl. 23.
Nopco Chemical Co., Newark, N.J. 726,895, pub. 11–14–61. Cl. 18.
Norcross, Inc., New York, N.Y. 727,026, pub. 11–14–61. Cl. 37.
Novo Industrial Corp., New York, N.Y. 727,016, pub. 11–14–61. Cl. 32.
Olin Mathieson Chemical Corp.: *See*—
Mathieson Chemical Corp.
Western Cartridge Co.
O'Neil, John A., d.b.a. Johnny O'Neil Bait Co., Akron, Ohio. 726,939, pub. 11–14–61. Cl. 22.
O'Neil, Johnny, Bait Co.: *See*—
O'Neil, John A.
Oresman, S. R., & Co., West Warwick, R.I. 726,913, pub. 11–14–61. Cl. 19.
Oxford Filing Supply Co., Brooklyn, to Oxford Filing Supply Co., Inc., Garden City, N.Y. 155,040, ren. 1–30–62. Cl. 37.
Oxford Filing Supply Co., Inc.: *See*—
Oxford Filing Supply Co.
Pacific Grinding Wheel Co., Inc., Everett, Wash. 726,864, pub. 11–14–61. Cl. 4.
Pacific Mills, New York, N.Y. 617,541, canc. Cl. 42.
Pag Presswerk A.G., Essen, Germany. 726,880, pub. 11–14–61. Cl. 12.
Palais Jewelers, Inc., New York, N.Y. 727,011, pub. 11–14–61. Cl. 26.
Pangburn Co., Inc., Fort Worth, Tex. 394,988, ren. 1–30–62. Cl. 46.
Pannutti, Antone D., San Jose, Calif. 726,886, pub. 11–14–61. Cl. 13.
Pantasote Co., The, Passaic, N.J. 617,041–2, canc. Cl. 20.
Parker-Hannifin Corp., Cleveland, Ohio. 726,890, pub. 11–14–61. Cl. 13.
Paschall, William M., Philadelphia, Pa. 617,645, canc. Cl. 46.
Patou, Jean, Inc., New York, N.Y. 617,606, canc. Cl. 51.
Pepperell Mfg. Co., Boston, Mass. 391,250, ren. 1–30–62. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 391,255, ren. 1–30–62. Cl. 42.
Phenix, L. C., Co., Inc., Los Angeles, Calif. 617,460, canc. Cl. 32.
Philadelphia Steel and Wire Corp., Philadelphia, Pa. 726,891, pub 11–14–61. Cl. 13.
Phoenix Mfg. Co., Joliet, Ill. 617,472, canc. Cl. 35.
Photo Electronic Research: *See*—
Johnson, Jerry.

Pintsch Bamag Aktiengesellschaft: *See*—
Bamag-Meguin Aktiengesellschaft.
Pioneer Hi-Bred Corn Co., Des Moines, Iowa. 726,844, pub. 11–14–61. Cl. 1.
Plant Protection Ltd., Yalding, Kent, England. 726,871, pub. 11–14–61. Cl. 6.
Platoff, Raphael P., d.b.a. H3 Products Co., Studio City, Calif. 726,899, pub. 11–14–61. Cl. 18.
Poppycock Candies: *See*—
Wander Co., The.
Portland Cordage Co., The, Portland, Oreg., to Tubbs Cordage Co., San Francisco, Calif. 155,052, ren. 1–30–62. Cl. 7.
Provident Pharmaceuticals, Inc., Chattanooga, Tenn. 726,902, pub. 11–14–61. Cl. 18.
Provident Pharmaceuticals, Inc., Chattanooga, Tenn. 726,907–9, pub. 11–14–61. Cl. 18.
Radio Ceramics Corp., Angola, Ind. 617,403, canc. Cl. 21.
Railroad Friction Products Corp., Wilmerding, Pa. 617,397, canc. Cl. 23.
Ram Electronics, Inc., Irvington-on-Hudson, N.Y. 617,405, canc. Cl. 21.
Rap-In-Wax Co., The: *See*—
Rap Industries, Inc.
Rap Industries, Inc., from The Rap-In-Wax Co., Minneapolis, Minn. 727,036, pub. 11–14–61. Cl. 37.
Redmond, B., & Son, Inc., New York, N.Y. 617,646, canc. Cl. 46.
Reeves Brothers, Inc., New York, N.Y. 727,060, pub. 11–14–61. Cl. 42.
Reliance Products Sales Corp., Woonsocket, R.I. 726,858, pub. 4–18–61. Cl. 2.
Reproduction Research Laboratories: *See*—
Caton, Thomas R.
Republic Steel Corp., Cleveland, Ohio. 726,888, pub. 11–14–61. Cl. 13.
Republic Steel Corp., Cleveland, Ohio. 727,010, pub. 11–14–61. Cl. 26.
Riker Laboratories, Inc., Northridge, Calif. 726,901, pub. 11–14–61. Cl. 18.
Ritex Watch Co.: *See*—
Shragie, Harry.
Roanoke Mills Co., Roanoke Rapids, N.C. 617,540, canc. Cl. 42.
Rogers, Inc., New York, N.Y. 726,874, pub. 11–14–61. Cl. 8.
Romar Recording Studios, Glendale, N.Y. 617,476, canc. Cl. 36.
Ronson Corp., Woodbridge, N.J. 726,873, pub. 11–7–61. Cl. 8.
Rooto Corp., The, Detroit, Mich. 727,109, pub. 11–14–61. Cl. 52.
Rotary Lift Co., to Dover Corp., Memphis, Tenn. 395,070, ren. 1–30–62. Cl. 23.
Rubbermaid Inc., Wooster, Ohio. 726,892, pub. 11–14–61. Cl. 13.
Ruez Co., The: *See*—
Dodge, Ruez M.
Ruth's Original of Texas: *See*—
Ruth's Original of Texas, Inc.
Ruth's Original of Texas, Inc., from Ruth's Original of Texas, Fort Worth, Tex. 617,503, canc. Cl. 39.
Rytex Co., The, Indianapolis, Ind. 394,075, ren. 1–30–62. Cl. 37.
Rytex Co., The, Indianapolis, Ind. 394,305, ren. 1–30–62. Cl. 37.
Sanna Dairies, Inc., Madison, Wis. 727,083, pub. 11–14–61. Cl. 46.
Schacht, Albert, G.m.b.H., Ulm (Danube), Germany. 726,966, pub. 11–14–61. Cl. 26.
Schaper, W. H., Mfg. Co., Inc., Minneapolis, Minn. 726,930, pub. 11–14–61. Cl. 22
Scott, O. M., & Sons Co., Marysville, Ohio. 617,496, canc. Cl. 38.
Scripto, Inc., Atlanta, Ga. 617,481, canc. Cl. 37.
Sears, Roebuck and Co., Chicago, Ill. 726,923–4, pub. 11–14–61. Cl. 21.
Sears, Roebuck and Co., Chicago, Ill. 727,062–4, pub. 11–14–61. Cl. 42.
Sebasco Estates Foods, Inc., Sebasco Estates, Maine. 727,073, pub. 11–14–61. Cl. 46.
Shell Chemical Co.: *See*—
Shell Oil Co.
Shell Oil Co., d.b.a. Shell Chemical Co., New York, N.Y. 727,074, pub. 11–14–61. Cl. 46.
Sherman, Si, d.b.a. Hokus-Pokus Wholesale Liquor Co., Alexandria, La. 727,092, pub. 11–14–61. Cl. 49.
Shragie, Harry, d.b.a. Ritex Watch Co., New York, N.Y. 617,439, canc. Cl. 27.
Shulton, Inc., Clifton, N.J. 727,125. Cl. 51.
Siari Originals, Inc., New York, N.Y. 727,052, pub. 11–14–61. Cl. 39.
Sleep Promotion Laboratory, Inc., New York, N.Y. 617,465, canc. Cl. 32.
Smith, Elwin G., & Co., Pittsburgh, Pa. 617,350, canc. Cl. 12.
Snap-On Tools Corp., Kenosha, Wis. 617,416, canc. Cl. 23.
Snap-On Tools Corp., Kenosha, Wis. 726,967, pub. 11–14–61. Cl. 26.
Soc. Com. Abel Pereira Da Fonseca (S.A.R.L.), Lisbon, Portugal. 617,586, canc. Cl. 49.
Spaugh Mfg. Inc., Elkhart, Ind. 726,912, pub. 11–14–61. Cl. 19.
Split Ballbearing: *See*—
Miniature Precision Bearings, Inc.
Stadler Fertilizer Co., The, Cleveland, Ohio. 617,334, canc. Cl. 10.
Standard Accident Insurance Co., Detroit, Mich. 727,114, pub. 11–14–61. Cl. 102.
Standard Distillers Products, Inc., Baltimore, Md. 617,588, canc. Cl. 49.
Standard Manifold Co., Chicago, Ill. 394,561, ren. 1–30–62. Cl. 11.
Standard Oil Co., Bayonne, N.J., to Humble Oil & Refining Co., Houston, Tex. 150,122, ren. 1–30–62. Cl. 51.
Standard Oil Co., Bayonne, N.J. and New York, N.Y., to Humble Oil & Refining Co., Houston, Tex. 149,248, ren. 1–30–62. Cl. 15.
Standard Oil Co., The, Cleveland, Ohio. 617,608, canc. Cl. 52.
Standard Oil Co. of New Jersey, Wilmington, Del., to Humble Oil & Refining Co., Houston, Tex. 392,535, ren. 1–30–62. Cl. 15.
Standard Scientific Supply Corp., New York, N.Y. 726,859, pub. 11–14–61. Cl. 2.
Stanhill Fashions Inc., New York, N.Y. 617,538, canc. Cl. 42.
Staple Coat Co., Inc., New York, N.Y. 617,542, canc. Cl. 42.
Sterling Factories, Erie, Pa. 726,893, pub. 11–14–61. Cl. 14.
Strawberry King, Inc., New Hyde Park, N.Y. 726,847, pub. 11–14–61. Cl. 1.
Street & Smith Publications, Inc., New York, N.Y. 727,118, pub. 3–15–60. Cl. A.
Stubbe, Albert: *See*—
Stubbe, Friedrich.
Stubbe, Friedrich, d.b.a. Albert Stubbe, Vlotho (Weser), Germany. 727,019, pub. 11–14–61. Cl. 35.
Studebaker-Packard Corp., Detroit, Mich. 617,398, canc. Cl. 19.
Sturrup, Inc., Middletown, Conn. 726,922, pub. 11–14–61. Cl. 21.
Sunday School House, The, Glendale, Calif. 727,043, pub. 11–14–61. Cl. 38.
Sunkist Growers, Inc., Los Angeles, Calif. 726,900, pub. 11–14–61. Cl. 18.
Superior Parlor Frame Co., Sheboygan, Wis. 727,017, pub. 11–14–61. Cl. 32.
Suprefot Film Products Co. Inc., New York, N.Y. 726,975, pub. 11–14–61. Cl. 26.
Sutone Corp., Los Angeles, Calif. 726,915, pub. 11–14–61. Cl. 19.
Sylvania Electric Products, Inc., New York, N.Y. 726,925, pub. 11–14–61. Cl. 21.
Tak Muto, Encinitas, Calif. 726,849, pub. 11–14–61. Cl. 1.
Teleprompter Corp., New York, N.Y. 727,121. Cl. 21.
Teleprompter Corp., New York, N.Y. 727,126. Cl. 107.
Tension Envelope Corp., New York, N.Y. 727,029, pub. 11–14–61. Cl. 37.
Teweles, L., Seed Co., Milwaukee, Wis. 726,852–5, pub. 11–14–61. Cl. 1.
Thoresen Direct Sales: *See*—
Thoresen, Marie.
Thoresen, Marie, d.b.a. Thoresen Direct Sales, New York, N.Y. 617,435, canc. Cl. 26.
Tiarco Corp., Newark, N.J. 617,634–37, canc. Cl. 106.
Timber Engineering Co., Washington, D.C. 726,889, pub. 11–14–61. Cl. 13.
Time Automated Mfg. Inc., Rahway, N.J. 726,964, pub. 11–14–61. Cl. 26.
Topps Chewing Gum, Inc., Brooklyn, N.Y. 727,088, pub. 11–14–61. Cl. 46.
Tornado-France, Paris, France. 727,012, pub. 11–14–61. Cl. 29.
Traid Corp., Encino, Calif. 726,999, pub. 11–14–61. Cl. 26.
Transistor Sound Laboratory Inc., Corona, N.Y. 727,022, pub. 11–14–61. Cl. 36.
Transpace, Inc., San Fernando, Calif. 726,920, pub. 11–14–61. Cl. 21.
Trans-World Industries, Inc., Long Island City, N.Y. 726,943, pub. 11–14–61. Cl. 23.
Trenton Milling Co., Trenton, Ill. 727,084, pub. 11–14–61. Cl. 46.
Triple-A Specialty Co., Chicago, Ill. 726,977, pub. 11–14–61. Cl. 26.
Tru-Bloc Chem-Stress Decorative-Structural-Concrete Products Research and Development Laboratory, San Diego, Calif. 726,878–9, pub. 11–14–61. Cl. 12.
Tubbs Cordage Co.: *See*—
Portland Cordage Co., The.
Uddo & Taormina Corp.: *See*—
Uddo Taormina Corp.
Uddo Taormina Corp., Brooklyn and New York, N.Y., to Uddo & Taormina Corp., Brooklyn, N.Y. 391,090, ren. 1–30–62. Cl. 46.
Ulasich, Frank M., Faribault, Minn. 617,643, canc. Cl. 23.
Ungar, Elisabeth, Skin Care, Inc., New York, N.Y. 727,097, pub. 11–14–61. Cl. 51.
Union Steel Chest Corp.: *See*—
Union Tool Chest Co.
Union Steel Chest Corp., Le Roy, N.Y. 726,934, pub. 5–2–61. Cl. 22.
Union Tool Chest Co., Rochester, to Union Steel Chest Corp., Le Roy, N.Y. 151,267, ren. 1–30–62. Cl. 2.
Uni-Shim Co., The, Atlanta, Ga. 617,471, canc. Cl. 35.
United Carbon Products Co., Bay City, Mich. 727,044, pub. 11–14–61. Cl. 38.
United Merchants and Manufacturers, Inc., New York, N.Y. 727,061, pub. 11–14–61. Cl. 42.
U.S. Plastic and Chemical Corp., by merger from U.S. Plastic Products Corp., Metuchen, N.J. 726,851, pub. 11–14–61. Cl. 1.
U.S. Plastic Products Corp.: *See*—
U.S. Plastic and Chemical Corp.
United States Playing Card Co., The, Cincinnati, Ohio. 726,940, pub. 11–14–61. Cl. 22.
Universal Controls, Inc., New York, N.Y. 726,969, pub. 11–14–61. Cl. 26.
Van Houten, C. J., & Zoon, N.V., Weesp, Netherlands. 727,080, pub. 11–14–61. Cl. 46.
Vesta Foods Inc.: *See*—
Vesta, Inc.
Vesta, Inc., from Vesta Foods Inc., New York, N.Y. 727,072, pub. 11–14–61. Cl. 46.
Vitamin Fair Co.: *See*—
Wagonfeld, Harry.

Wagner Electric Corp., St. Louis, Mo. 726,926, pub. 11–14–61. Cl. 21.
Wagner Electric Corp., St. Louis, Mo. 727,020, pub. 11–14–61. Cl. 35.
Wagonfeld, Harry, d.b.a. Vitamin Fair Co., New York, N.Y. 726,898, pub. 11–14–61. Cl. 18.
Walker Machine & Foundry Corp., Roanoke, Va. 617,467, canc. Cl. 34.
Walsh, A. E., & Partners Ltd., London, England. 727,122. Cl. 38.
Wander Co., The, d.b.a. Poppycock Candies, Chicago, Ill. 727,081, pub. 11–14–61. Cl. 46.
Ward Stilson Co., The, Anderson, Ind. 617,534, canc. Cl. 39.
Webster, Stanley, Laboratories, Inc., Elmhurst, Ill. 617,553, canc. Cl. 44.
Welsh Mfg. Co., Providence, R.I. 727,005, pub. 11–14–61. Cl. 26.
West Virginia Pulp and Paper Co., New York, N.Y. 727,033, pub. 11–14–61. Cl. 37.
West Virginia Pulp and Paper Co., New York, N.Y. 727,035, pub. 11–14–61. Cl. 37.
Western Cartridge Co., East Alton and Springfield, Ill., to Olin Mathieson Chemical Corp., East Alton, Ill. 153,053, ren. 1–30–62. Cl. 9.
Whirlpool Corp., Benton Harbor, Mich. 726,959–61, pub. 11–14–61. Cl. 24.
White, S. S., Dental Mfg. Co., The, Philadelphia, Pa. 392,812, ren. 1–30–62. Cl. 44.
Wilkens Instrument & Research, Inc., Walnut Creek, Calif. 726,991, pub. 11–14–61. Cl. 26.
Wolf, Jacques, & Co., Newark, N.J. 726,865, pub. 11–14–61. Cl. 6.
Wolverine Shoe and Tanning Corp., Rockford, Mich. 727,047, pub. 11–14–61. Cl. 39.
Worthington Corp.: *See*—
Worthington Pump and Machinery Corp.
Worthington Pump and Machinery Corp., New York, N.Y., to Worthington Corp., Harrison, N.J. 155,130, ren. 1–30–62. Cl. 23.
Wrigley, Wm., Jr., Co., Ltd., Toronto, Ontario, Canada. 727,075, pub. 11–14–61. Cl. 46.
Wuster, Heinrich, Jr., Imst, Tirol, Austria. 726,956, pub. 11–14–61. Cl. 23.
Wyner, I. A., & Co., Inc., New York, N.Y. 727,057–8, pub. 11–14–61. Cl. 42.
Yager Drug Co., The: *See*—
Gilbert Bros. & Co. Inc.

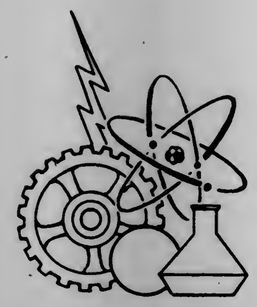
U.S. GOVERNMENT PRINTING OFFICE: 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

February 6, 1962 • Volume 775 • Number 1



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of February 6, 1962	1
New Applications Received	1
Notices	
Board of Appeals Decisions Rendered in the Month of December 1961	1
Microfilm List of Organic Phosphorus Compounds	1
Adjudicated Patents	1
Disclaimers	1
Change	1
Patents Available for Licensing or Sale	2
Condition of Patent Applications	3
Decisions in Patent and Trademark Cases	
In re Marion L. Smitley	5
Patent Suits	10
Reissue Patents Granted	11
Patents Granted	
General and Mechanical	12
Chemical	206
Electrical	247
Design Patents Granted	309
Index of Patentees	i
Classification of Patents	xxvii

Trademarks

Issue of February 6, 1962	TM 1
Applications Filed	TM 1
Condition of Trademark Applications	TM 1
Notices	
Public Law 87-354	TM 1
Trademark Suits	TM 2
Marks	
Marks Published for Opposition (375)	TM 4
Registrations Issued	
Principal Register	TM 34
Registrations Renewed	TM 39
Registrations Canceled	TM 39
Registrations—New Certificates	TM 40
Registrations Published Under Sec. 12(c) (31)	TM 41
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

February 6, 1962 Volume 775 Number 1

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of December 1961

Examiner affirmed	286
Examiner affirmed in part	34
Examiner reversed	72
Total	392

Microfilm Lists of Organic Phosphorus Compounds

The Patent Office offers the following subject matter on 16 mm. microfilm:

OPCP 1. The specification and claims of U.S. Patents classified in Class 260, subclass 461, Organic Phosphorus Compounds which have been coded for mechanized searching by the CAMP system. This search system is described in Patent Office Research and Development Report No. 18, Mechanized Searching of Phosphorus Compounds, which may be purchased from the U.S. Department of Commerce, Washington 25, D.C., for 25 cents. Consists of two reels.

OPCP 2. A list of the compounds named in each patent in Class 260, subclass 461 arranged alphabetically under the patent number in which they appear. Consists of two reels.

OPCP 3. An inverted file of the named compounds in the patents in Class 260, subclass 461, listing the names of the compounds and thereunder the patent number of each patent containing the compound. Consists of two reels.

The complete set of six reels is priced at $60.00 and may be obtained under order addressed to the Commissioner of Patents, Washington 25, D.C. Each set of two reels may be ordered separately at $20.00 a set.

C. A. KALK,
Director of Administration.

Adjudicated Patents

(D.C. Mich.) Holstensson and Arvidius Patent No. 2,291,158 (274—10), for talking machine for playing a plurality of records in succession. Claim 1 *Held* valid and infringed. *Holstensson* v. *V-M Corp.*, 198 F. Supp. 779; 131 USPQ 137.

(D.C.N.J.) Breil Patent No. 2,483,579 (29—229), for means for handling retaining rings. *Held* invalid. *Waldes Kohinoor Inc.* v. *Industrial Retaining Ring Co.*, 198 F. Supp. 755; 131 USPQ 218.

(D.C.N.J.) Heimann Patent No. 2,487,802 (85—8.8), for retaining ring assemblies. *Held* invalid. *Id.*

(D.C.N.J.) Heimann Patent No. 2,487,803 (85—8.8), for spring retaining rings. *Held* invalid. *Id.*

(D.C.N.J.) Feitl Patent No. 2,491,306 (85—8.8), for retaining rings. *Held* invalid. *Id.*

(D.C. Oreg.) Pierce Patent No. 2,927,820 (200—14), for street sweeper brush winding machine. *Held* invalid. *Pierce* v. *Ben-Ko-Matic, Inc., et al.*, 198 F. Supp. 772; 131 USPQ 114.

(D.C. Tex.) Parker and Brazzil Reissue Patent No. 24,441 (153—2), for apparatus for preforming multiple metal working operations on pipes. Claims 1-9 *Held* valid and infringed. *Parker* v. *Brown and Root*, 198 F. Supp. 795; 131 USPQ 116.

Disclaimers

2,811,653.—*Arnold R. Moore*, Princeton, N.J. SEMICONDUCTOR DEVICES. Patent dated Oct. 29, 1957. Disclaimer filed Dec. 22, 1961, by the assignee, *Radio Corporation of America*.

Hereby enters this disclaimer to claims 1, 2, 4, and 5 of said patent.

2,817,613.—*Charles W. Mueller*, Princeton, N.J. SEMICONDUCTOR DEVICES WITH ALLOYED CONDUCTIVITY-TYPE DETERMINING SUBSTANCE. Patent dated Dec. 24, 1957. Disclaimer filed Dec. 22, 1961, by the assignee, *Radio Corporation of America*.

Hereby enters this disclaimer to claims 1, 2, and 3 of said patent.

Change

In the OFFICIAL GAZETTE, issue of Jan. 23, 1962, vol. 774, p. 890, first column, strike out the following:

3,018,189

WITHDRAWN

and insert instead the following:

3,018,189

METHOD OF CONDITIONING POLYETHYLENE SURFACES FOR THE ADHESION OF MATERIALS COATED THEREON AND RESULTING PRODUCT

George W. Traver, Chicago, Ill., assignor to Traver Investments, Inc., a corporation of Illinois

Filed Mar. 27, 1953, Ser. No. 345,015

15 Claims. (Cl. 117—47)



2. The method of treating a polyethylene body to render a surface thereof adherent to coating material, which consists in subjecting said surface to the action of an electrostatic discharge in a force field of alternating character to render said treated surface receptive and strongly adherent to subsequently applied coating material.

New Applications Received During December 1961

Patents	7,187
Designs	373
Plant Patents	8
Reissues	19
Total	7,587

Issue

Patents	1,111	No. 3,019,440 to No. 3,020,550, incl.
Designs	48	No. 192,156 to No. 192,203, incl.
Reissues	1	No. 25,120
Total	1,160	

Patents Available for Licensing or Sale

2,991,007. Polar Coordinate Aiming Device. Contraves A.G., Zurich 52, Switzerland. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,012,812. Exhaust Device for Vehicles. Daniel N. Miller, Jr., 3144 Hamilton Way, Casper, Wyo.

3,015,024. Illuminated Flower Pot Holder. William Charchan and Samuel Charchan, co-inventors, 2037 N. Grove St., Route #2, Standish, Mich.

General Electric Company is prepared to grant non-exclusive licenses under the following 17 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,992,271. Catalytic Oxidation of Aralkyl Compounds.

3,001,922. Polymers.

Applications for license under the following 15 patents may be addressed to: Patent Counsel, Major Appliance Div. General Electric Company, Appliance Park, Louisville 1, Ky.

2,854,141. Filtering System for Dishwashers or the Like.

2,895,307. Refrigerating System Including a Hot Gas Defrosting Circuit.

2,907,181. Hot Gas Defrosting Refrigerating System.

2,907,184. Refrigerating System Including Hot Gas Defrosting Circuit.

3,005,227. Hinge Structure.

3,005,322. Automatic Ice Maker.

3,006,155. Heat Pump Including Charge Modifying Means.

3,006,156. Refrigeration Apparatus.

3,006,158. Refrigerator Cabinet Construction.

3,006,613. Self-Contained Air Conditioning Apparatus Adapted for Heating, Cooling and Dehumidification.

3,009,329. Automatic Ice Maker Control Means.

3,009,330. Automatic Ice Maker Control Means.

3,009,332. Variable Output Air Conditioning Unit and Control Arrangement Therefor.

3,012,417. Automatic Ice Maker Water Supply Means.

3,012,837. Pedal Operated Door Opener.

CONDITION OF PATENT APPLICATIONS AS OF DECEMBER 31, 1961

Total number of pending applications (excluding Designs)	195, 563
Total number of pending Design applications	5. 704
Total number of applications awaiting action (excluding Designs)	96, 342
Total number of Design applications awaiting action	1, 854
Date of oldest new application	Sept. 23, 1960
Date of oldest amended application	Sept. 12, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) OORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	4-28-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-29-61	5-18-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	1-23-61	1-5-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-16-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-20-61	2-13-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	5-16-61	5-1-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-17-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	2-6-61	1-30-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-5-61	12-14-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-27-60	1-9-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-23-60	11-4-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-30-60	1-4-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	11-21-60	11-23-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-3-61	4-28-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	2-10-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-17-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-27-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-31-61	6-5-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	4-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	2-1-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-3-61	2-1-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	1-6-61	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	5-9-61	4-26-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	12-1-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	2-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-8-61	3-30-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	1-9-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-30-60	1-16-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	12-16-60	12-16-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-23-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	1-6-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	12-12-60	12-8-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-23-60	9-12-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-10-61	5-8-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-2-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	4-3-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-1-60	11-4-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-27-61	1-16-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-24-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	12-1-60	12-1-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-22-61	5-29-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-16-61	4-7-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray; Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-20-60	11-1-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-19-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	1-9-61	1-6-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	11-9-60	12-9-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-4-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	12-23-60	12-2-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-13-61	4-27-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus	1-30-61	1-6-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-27-60	12-14-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	1-9-61
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	11-3-60	11-4-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-5-60	10-3-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-28-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	1-24-61	1-23-61
81. (III) MONCURE, J. A., Industrial Arts	8-30-61	8-23-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-24-61	9-1-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	12-14-60	12-19-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	7-20-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	2-8-61	2-1-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-13-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during February 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1960.*

Patents.....Numbers 2,368,613 to 2,370,612 inclusive
Plant Patents.....Numbers 649 to 651 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE MARION L. SMITLEY

No. 6720. Decided December 18, 1961

[—CCPA—;—F.2d—; 132 USPQ 3]

1. PATENTABILITY—REFERENCE—OPERATIVENESS.

"While much speculative argument has been made, by both the Patent Office and appellant, concerning the operativeness of the particular Reynoldson device relied on * * *, the operativeness or inoperativeness of this device is not really material to the issue, considering the limited manner in which the Board relied on this reference. It stated: '* * * it appears to us that there is a clear teaching in the Reynoldson patent of the *desirability* of separately operative controls.'"

2. SAME—SAME—ANALOGOUS ART.

In connection with appellant's application on a vacuum-actuated governor, for a vehicle driven by an internal combustion engine, to restrict the amount of fuel-air mixture supplied to the engine when approaching or reaching either excessive engine speed or excessive vehicle speed, or both, and the citation therein of a Holley, Jr., patent disclosing the use of two series-connected valves connecting a manifold vacuum source with a vacuum motor which provides power assisted automobile steering, *Held* that "As to appellant's contention that Holley, Jr., is from a non-analogous art, we agree with the Board's view that this is not the case."; that "* * * the Holley, Jr., device relates, as does appellant's, to the control of vacuum-operated servomotors applied to motor vehicles"; that "As some indication, though not conclusive by any means, that, as a practical matter, the art is not too remote, is the fact * * * that the Holley, Jr., patent is assigned to the assignee of appellant's application, Holley Carburetor Company"; and that "* * * appellant's invention and that of Holley, Jr., are really in the same art of vacuum-actuated motor vehicle accessory mechanisms."

3. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE THE COURT—CLAIM NOT CONSIDERED BELOW.

Where appellant's "Request for Interference," containing an amendment to his application adding a claim 13 allegedly copied (with omissions) from a patent of another, was refused consideration by the Board of Appeals, but was thereafter considered by the Primary Examiner, whose action was: "(*a*) the claim is deemed unpatentable over the references relied on in rejecting the other claims which were made the subject of the appeal" and "(*b*) entry of the amendment and the request for interference are both denied"; and where appellant asked the court "to consider claim 13 and to indicate that this claim is allowable along with the claims regularly on appeal," *Held* that "We cannot do this"; that "The claim is not in the application on appeal, its entry having been refused"; and that "The claim has not been considered by the Patent Office and therefore we cannot review it on appeal."

4. APPEAL TO THE BOARD OF APPEALS—MATTER BEFORE BOARD—REFUSAL TO CONSIDER PAPER FILED BEYOND TIME ALLOWED BY RULE 197(b).

Where after the 30 days allowed by Rule 197(b) to ask for reconsideration of the decision of the Board of Appeals, appellant filed a "Supplement to Request for Reconsideration," *Held* that "As to the Board's refusal to consider a paper filed beyond the time allowed by the rules, that is within its discretion, if not its right, and no abuse of discretion has been shown."

5. PATENTABILITY—PARTICULAR SUBJECT MATTER—"GOVERNOR."

The decision of the Board of Appeals refusing certain claims in an application entitled "Governor" as unpatentable over the prior art is affirmed.

APPEAL from the Patent Office. Serial No. 618,757.

AFFIRMED.

Donald P. Bush, George A. Degnan (*Whittemore, Hulbert & Belknap*, of counsel) for appellant.

Clarence W. Moore (*George C. Roeming*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH and MARTIN, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the Examiner's rejection of claims 1, 3, 6, 8 and 12 in application Ser. No. 618,757, filed October 29, 1956, for "Governor."

Appellant also appeals from the Board's refusal to consider claim 13, proposed by appellant April 29, 1960, in a "Request for Interference" with Wetterhahn Patent 2,921,641, issued January 19, 1960, which was after the hearing before the Board and before its decision. No claim has been allowed.

The Smitley invention is a vacuum-actuated, "combined engine and road speed governor" for a vehicle driven by an internal combustion engine to which fuel is supplied through a carburetor. The purpose of the governor is to restrict the amount of fuel-air mixture supplied to the engine when approaching or reaching either excessive engine speed or excessive vehicle speed, or both. Appellant's invention embodies a carburetor of conventional construction comprising an upper air intake portion having a venturi and a lower body portion containing a throttle valve. The operator of the vehicle may regulate the quantity of fuel-air mixture supplied to the engine by controlling the position of the throttle valve through an accelerator pedal in the usual way. Such control of the throttle valve may be overriden, however, by appellant's automatic governor apparatus, which we will now briefly describe.

A vacuum-actuated governor diaphragm assembly, or "vacuum motor," is attached to the carburetor body portion and operatively connected to the throttle valve so that movement of the governor diaphragm under vacuum will close the throttle against the action of a spring which tends to open it. The vacuum side of the diaphragm chamber communicates through conduits with the venturi section, with the manifold below the throttle valve, and also with a controlled source of air under atmospheric pressure. As long as these passages are connected to atmosphere no vacuum can be produced to operate the governor. Such connection is through an air bleed conduit in which two speed-responsive, centrifugally-actuated, valves are placed *in series*. One valve is rotated in accordance with engine speed and the other in accordance with vehicle speed. When *either* speed exceeds a predetermined value, it shuts off the supply of bleed air, the vacuum produced in the carburetor venturi or intake manifold, or both, acts on the governor diaphragm, moving it to close the throttle and slow down the engine.

It will be understood, as is well known, that an internal combustion engine when running produces a partial vacuum in the carburetor venturi section and also in the intake manifold and this is the source of vacuum utilized to operate the governor. Appellant places the inlet end of his bleed air conduit in the top of the carburetor where it will receive clean air through the carburetor air filter. His bleed air control valves are of known construction.

Claims 1 and 6 are illustrative and read:

1. A constant speed governor for a vehicle driven by an internal combustion engine having a valve for controlling the flow of fuel to said engine, comprising a vacuum motor connected to said valve, air bleed means for rendering said vacuum motor inoperative, and a pair of adjustable centrifugal valve means connected in series and adapted for rotation in accordance with engine and vehicle road speed to variably restrict said air bleed and to actuate said vacuum motor and close said fuel control valve, said series connection resulting in governing action normally responsive to one or the other of said speeds and not to both of said speeds.

6. The combination of a motor vehicle carburetor having an air intake passage with a venturi restriction and a throttle valve below said venturi, resilient means for normally holding said throttle valve open, a vacuum motor connected to said throttle valve in a manner to adapt said motor when actuated to oppose said resilient means and to close said throttle valve, first conduits connecting said vacuum motor with said venturi and said intake passage below said throttle valve, a second conduit between said first conduits and said intake passage above said venturi, said second conduit being adapted to bleed air to said vacuum motor, and a pair of centrifugal valves connected in series in said second conduit, one of said valves being connected for rotation in accordance with engine speed and the other of said valves being connected for rotation in accordance with vehicle road speed, said valves being adapted to restrict the bleed of air to said vacuum motor when governed engine or vehicle road speed is approached and to prevent the bleed of air when either of said governed speeds is reached, the restriction of said bleed air causing said vacuum motor to progressively close said throttle valve.

The references relied on are:

Sticelber, 1,843,960, February 9, 1932.
Olson, 2,367,606, January 16, 1945.
Parker, 2,657,918, November 3, 1953.
Reynoldson, 2,708,979, May 24, 1955.
Holley, Jr., 2,748,881, June 5, 1956.

Reynoldson shows speed control apparatus including elements similar in actuation and operation to corresponding elements of applicant's, the main distinction being that the Reynoldson speed responsive valves are arranged in parallel rather than in series.

The Reynoldson specification states:

It is another object of the invention to provide in an automatic speed control system for a self-propelled vehicle having an internal combustion engine, independent controls for automatically limiting the *speed of the engine* and the *speed of the vehicle* to prevent overspeeding of either the engine or the vehicle. [Emphasis ours.]

* * * * * * *

* * * With this [parallel valve] arrangement the auxiliary valve 100 will automatically take over control of the fuel input of the engine 105 upon closing of the bleeder ports in *either* of the controllers 106 and 110, the former being responsive to the speed of the vehicle and the latter being responsive to the speed of the engine, the auxiliary valve being so constructed that the diaphragm 31 is fully responsive to closure of *either* of the bleeder ports. [Emphasis ours.]

We shall discuss this reference further in connection with appellant's contention that the disclosed apparatus will not function as above stated.

Holley, Jr., discloses the use of two series-connected valves, one responsive to road speed and the other to engine speed, connecting a manifold vacuum source with a vacuum motor which provides power assisted automobile steering. The Holley, Jr., power assist device may be inactivated by actuation of either of the two series-connected valves.

Parker discloses an engine speed regulator system wherein the amount of fuel supplied to the engine is controlled by the back-and-

forth movement of a spring-biased power servo consisting of a piston slidable in a cylinder. Fluid under pressure supplied to the servo cylinder by a hydraulic pump tends to raise the servo piston against the action of the servo spring and increase the flow of fuel to the engine. Located in the fluid line between the servo and the pump are *two speed-responsive devices* which act *in series* to supply fluid to the motor, i.e., fluid will be allowed to flow to the power servo only when neither of the speed-responsive devices is actuated.

Olson discloses a vacuum-actuated governor of the same general type as appellant's. The Olson vacuum motor is connected to a throttle valve and to a combination of venturi and manifold vacuum sources in a manner very similar to appellant's. Olson, however, discloses only a single speed-responsive valve in the bleed line which connects his vacuum motor with atmospheric air, which valve apparently responds to engine speed. It is the same kind of centrifugally actuated valve used by appellant.

Sticelber was not applied by the Examiner in his final rejection but was of record and noted by the Board as teaching—

> * * * the idea of controlling the throttle valve of the driving engine of a vehicle separately by two governors, one responsive to engine speed and the other responsive to vehicle speed, to prevent overspeeding.

The Sticelber governors are electrical switching means arranged in parallel so that actuation of either will close an electrical circuit to energize a solenoid-controlled throttle. When energized, the solenoid cuts off the fuel to the engine.

The Board, summarizing the Examiner's rejection, stated:

> All of the claims stand rejected as unpatentable over Olson, Parker, Reynoldson and Holley, Jr., which have been applied in various ways * * *. While we find no reversible error in the rejection of the claims, we shall confine our remarks to the Olson, Reynoldson and Holley, Jr., patents which we regard as the best references, the Parker patent being considered cumulative in character.

Appellant objected to the Examiner's rejection because, inter alia, the device disclosed by Reynoldson was alleged to be inoperative, and because the Holley, Jr., patent, for power steering apparatus, was alleged to be from a non-analogous art.

[1] While much speculative argument has been made, by both the Patent Office and appellant, concerning the operativeness of the particular Reynoldson device relied on (disclosed in FIG. 6, possibly modified by the inclusion of the pressure equalizer of FIG. 7), the operativeness or inoperativeness of this device is not really material to the issue, considering the limited manner in which the Board relied on this reference. It stated:

> * * * it appears to us that there is a clear teaching in the Reynoldson patent of the *desirability* of separately operative controls. [Emphasis ours.]

Regardless of operativeness, the truth of the above statement is beyond dispute. Reynoldson clearly discloses a two-valve bleed line governor system wherein actuation of either governor air bleed valve is *intended* to effect control of fuel flow to an engine, in accordance with either engine or vehicle speed. The Reynoldson valves are arranged in *parallel*. Parker and Holley, Jr., however, clearly disclose the use of *series*-valve governor systems designed to effect independent control over a governed engine or vacuum motor by *either* of the valves in the system. These references further disclose making series-valve governors responsive to the same two speeds to which Reynoldson's governors are intended to respond. If, for any reason, including inoperativeness, the particular Reynoldson governor valve system were found to be undesirable, it must be presumed that one skilled in the art would look to the prior art, at least in the vacuum motor automotive accessory field as exemplified by Holley, Jr., for another two-valve system which might effect the same desired control. In view of this art, we agree with the Patent Office decision that the claimed invention is obvious. We see nothing patentably significant in the positioning of such governor valves in an atmospheric air bleed line, rather than in a vacuum line as in Holley, Jr. Both Reynoldson and Olson so position speed-responsive governor valves.

In claim 6, particular positions for the "first conduits" and "second conduit" are required. Olson discloses substantially this same conduit system which one skilled in the art could, in an obvious way, incorporate into a series-valve governor system if he so desired. In fact, it appears to us that appellant's governor is substantially Olson's with one additional centrifugal valve, like Olson's, responsive to vehicle speed, inserted in the air bleed line.

Claim 12 further requires: (1) centrifugal valves which are "spring loaded to remain open," shown by Olson to be old, and (2) a source of clean air for which Holley, Jr., expressly provided. Such specific elements in particular governor systems would be obvious, if not conventional, in view of the state of this art as disclosed by the references.

[2] As to appellant's contention that Holley, Jr., is from a non-analogous art, we agree with the Board's view that this is not the case. As the Board pointed out, the Holley, Jr., device relates, as does appellant's, to the control of vacuum-operated servomotors applied to motor vehicles. Holley, Jr., moreover, is controlling his vacuum motor by his series valves in accordance with the road speed and engine speed of the vehicle. As some indication, though not conclusive by any means, that, as a practical matter, the art is not too remote, is the fact pointed out by the Board that the Holley, Jr., patent is assigned to the assignee of appellant's application, Holley Carburetor Company. We feel that appellant's invention and that of Holley, Jr., are really in the same art of vacuum-actuated motor vehicle accessory mechanisms. *In re Kylstra*, 24 CCPA 938, 87 F.2d 487, 32 USPQ 382.

For all of the foregoing reasons we find no error in the rejection of claims 1, 3, 6, 8 and 12.

Proposed Claim 13 and Related Reasons of Appeal

After the 30 days allowed by Rule 197(b) to ask for reconsideration of the Board's decision, appellant filed a "Supplement to Request for Reconsideration" accompanied by a "Request for Interference" containing an amendment adding claim 13 allegedly copied (with omissions) from Wetterhahn Patent No. 2,921,641.

The Board refused to consider either of these papers, the supplementary request because filed too late and the request for interference because it, as the Board said, "is not properly before us." The Board also said, "[it] will be considered by the Primary Examiner in due course," as it was on June 13, 1960, just before appeal was taken to this court on June 20.

The Primary Examiner's action on claim 13 was:

(*a*) the claim is deemed unpatentable over the references relied on in rejecting the other claims which were made the subject of the appeal;

(*b*) entry of the amendment and the request for interference are both denied.

By reasons of appeal appellant alleges error by the Board in—

(*a*) failing to act on the supplementary request,

(*b*) failing to act on the request for interference, and

(*c*) failing to pass on the patentability of claim 13.

Appellant asks us "to consider claim 13 and to indicate that this claim is allowable along with the claims regularly on appeal." We cannot do this. The claim is not in the application on appeal, its entry having been refused. [3] The claim has not been considered by the Patent Office and therefore we cannot review it on appeal. 35 U.S.C. 141. *In re Korum et al.*, 33 CCPA 923, 154 F.2d 185, 69 USPQ 144; *In re Wiedman*, 44 CCPA 901, 243 F.2d 798, 113 USPQ 492.

[4] As to the Board's refusal to consider a paper filed beyond the time allowed by the rules, that is within its discretion, if not its right, and no abuse of discretion has been shown. *In re Sweet*, 30 CCPA 1124, 1127, 136 F.2d 722, 58 USPQ 327. In that case the Board was held not to have abused its discretion in refusing to permit entry of a new claim.

[5] The decision of the Board of Appeals is affirmed.

AFFIRMED.

SMITH, *J.*, did not sit or participate in decision.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,289,606, J. H. Victor, Oil seal with laminated retaining shell, **filed** Nov. 29, 1961, Ct. Cls., Doc. 453/61, *A. Black Carr v. The United States.*

2,344,151, M. Kasser, Method and apparatus for treating perishable articles; **2,684,907**, R. L. Brunsing, Method of shipping lettuce and of preparing for shipment, **filed** Nov. 29, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/345, *Western Vegetable Industries, Inc. v. J. J. Cronetti.*

2,439,201, R. A. Clark, Jr., Remote radio receiver tuning indicating apparatus; **2,833,859**, H. A. Rahmel et al., System for determining listening habits of wave signal receiver users, **filed** Apr. 7, 1959, D.C., S.D.N.Y., Doc. 145/22, *A. C. Nielson Company v. American Research Bureau, Inc.* Stipulation vacating consent decree of Nov. 15, 1961, withdrawing show cause order. Consent decree holding patent valid Nov. 16, 1961.

2,460,593, A. E. Nelson, Support; **2,462,416**, same, Can opener; **2,469,981**, same, Pivotal bracket; **2,471,342**, same, Bracket; **2,542,606**, same; **2,558,058**, same; **2,637,897**, same, Can opener; **2,648,127**, same, Magnetic lid holder, **filed** July 8, 1959, D.C., E.D. Mo. (St. Louis), Doc. 10/392(1), *Helen Smith Nelson, Executrix of Arthur E. Nelson, Deceased v. Swing-A-Way Mfg. Co. et al.* Consent judgment; complaint dismissed with prejudice Nov. 15, 1961.

2,462,416. (See 2,460,593.)

2,469,981. (See 2,460,593.)

2,471,342. (See 2,460,593.)

2,520,890, D. E. Priest, Saw frames, **filed** Dec. 30, 1957, D.C. Conn. (New Haven), Doc. 7053, *Parker Manufacturing Company v. Forsberg Manufacturing Company.* Consent judgment; patent held valid and infringed; defendant enjoined (notice Nov. 28, 1961).

2,542,606. (See 2,460,593.)

2,558,058. (See 2,460,593.)

2,565,794, Rickes and Wood, Vitamin B–12; **2,763,362**, same, Vitamin B–12, Active composition and process of preparing same, **filed** Nov. 30, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1519–61–WM, *Merck & Company, Inc. v. Duradean Company, Inc. et al.* **Same, filed** Dec. 1, 1961, same, Doc. 1527–61–HW, *Merck & Co., Inc. v. Signet Laboratories, etc.* **Same, filed** Dec. 1, 1961, D.C., S.D.N.Y., Doc. 61/4251, *Merck & Co., Inc. v. AFRO American Trading Corporation et al.*

2,637,897. (See 2,460,593.)

2,648,127. (See 2,460,593.)

2,684,907. (See 2,344,151.)

2,686,127, R. H. McDowell, Manufacture of alginic materials, **filed** Nov. 16, 1961, D.C. Oreg. (Portland), Doc. 61/493, *Billie Joe Thompson v. Baden R. Rupert et al.*

2,763,362. (See 2,563,794.)

2,733,531, M. J. Puretic, Net handling apparatus, **filed** Nov. 28, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 2644–SD–C, *Mario J. Puretic et al. v. Whaley Engineering Company, Inc.*

2,750,314, C. W. Bemmels, Adhesive tapes, **filed** May 18, 1959, D.C., E.D. Mich. (Detroit), Doc. 19/079, *Johnson & Johnson v. Shuford Mills, Inc. et al.* Consent judgment Nov. 28, 1961.

2,765,202, V. L. Barr, Cage type roller bearings and method of assembling rollers therein; **2,884,288**, K. L. Herrmann et al., Needle roller bearings, **filed** Nov. 22, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/552, *Roller Bearing Company of America v. Bearings, Inc.*

2,765,373, A. L. Smith, Hearing aid, construction and support therefor; **3,000,462**, A. L. Smith, Air-conduction hearing aid clamps, **filed** Dec. 12, 1961, D.C., N.D. Okla. (Tulsa), Doc. 5309, *Alonzo L. Smith v. Myron O. Weil et al.*

2,776,484, L. E. Stewart, Concrete form construction; **2,825,956**, J. C. Shoemaker, Concrete-form locking means, **filed** June 3, 1958, D.C., W.D. Wis. (Madison), Doc. 3074, *Simplex Forms System, Inc. et al. v. C. James Elifritz et al.* Consent judgment; defendants enjoined Oct. 6, 1961.

2,797,461, B. B. Osher, Clip device; **2,828,790**, same, Wing assembly for wallets, pass cases and the like; **2,926,714**, same, Wing assembly for billfolds, wallets, pass cases and the like, **filed** Nov. 15, 1961, D.C., S.D.N.Y., Doc. 61/4072, *American Kleer-Vu Plastics, Inc. v. Aristocrat Leather Products, Inc. et al.*

2,825,436, L. A. Amtsberg, Impact clutch; **2,881,884**, same, **filed** Nov. 29, 1961, D.C., S.D. Tex. (Houston), Doc. 13/992, *Chicago Pneumatic Tool Company v. Reed Roller Bit Company.*

2,825,956. (See 2,776,464.)

2,828,790. (See 2,797,461.)

2,833,859. (See 2,439,201.)

2,840,318, C. Schnell, Comminuting machines having perforated plate and rotary cutter; **2,906,316**, same, Comminuting machine; **2,934,120**, same; **2,934,121**, same; **Re. 24,683**, same, Method of comminuting meat; **Re. 24,764**, same, Comminuting machine, **filed** Nov. 21, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c1979, *Carl Schnell et al. v. The Allbright-Nell Company et al.*

2,846,745, W. M. Lathrop, Buckle; **2,876,516**, L. F. Cummings, same, **filed** Nov. 29, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1513/61–K, *Products Research Co. v. The Troy Co.*

2,847,135, V. A. Galloway, Vehicle loader, **filed** May 22, 1961, D.C., W.D. Ky. (Louisville), Doc. 4146, *Victor A. Galloway et al. v. Tri-City Scrap Baling Co., Inc.* Patent held valid and infringed; complaint and counterclaim dismissed; defendant restrained Nov. 22, 1961.

2,854,426, P. J. Dasher, Process of milling synthetic rubber latex coagulum containing water, **filed** Apr. 17, 1961, D.C., W.D. Texas (Pecos), Doc. 3357, *The Patent and Licensing Corporation et al. v. General Tire & Rubber Co.* Order of dismissal without prejudice Nov. 30, 1961.

2,876,441, J. H. Boyles, Method and means for feeding thread in tufting machines; **2,966,866**, J. L. Card, Method of and apparatus for making patterned tufted pile fabric, **filed** Nov. 28, 1961, D.C. Del. (Wilmington), Doc. 2398, *Callaway Mills Company v. Singer-Cobble, Inc.* **Same, filed** Nov. 29, 1961, same, Doc. 2399, *James Lees and Sons Company v. Singer-Cobble, Inc.*

2,876,516. (See 2,846,745.)

2,881,884. (See 2,825,436.)

2,884,288. (See 2,765,202.)

2,905,945, L. Winter, Collar construction for shirts, **filed** Nov. 30, 1961, D.C., S.D.N.Y., Doc. 61/4226, *Snap-tab Corporation v. Wilk Shirt Corporation.*

2,906,316. (See 2,840,318.)

2,926,714. (See 2,797,461.)

2,934,120. (See 2,840,318.)

2,934,121. (See 2,840,318.)

2,937,265, B. Blitzer, Cellular lighting element and means for supporting the same; **Reg. No. 670,247** (INFINILITE), Integrated Ceilings, Inc., Louvered ceiling elements and light screens, **filed** July 7, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39/263, *Integrated Ceilings & Grillworks, Inc. v. United Lighting and Ceiling Company.* Consent judgment; injunction granted Nov. 22, 1961.

2,966,866. (See 2,876,441.)

2,970,783, D. A. Cheyette, Composite wearing parts for crushers and the like, **filed** Nov. 29, 1961, D.C., E.D. Wis. (Milwaukee), Doc. 61–C–309, *Norberg Manufacturing Company v. Barber-Green Company.*

3,000,462. (See 2,765,373.)

Re. 24,139 (of 2,691,391), Jamison and Yates, Non-corrugating fabric, **filed** Dec. 3, 1956, D.C., W.D.S.C. (Greenville), Doc. 2059, *Chicopee Manufacturing Corporation v. Riegel Textile Corporation.* Order granting plaintiff's motion for nonsuit, with prejudice (notice Dec. 5, 1961).

Re. 24,683. (See 2,840,318.)

Re. 24,764. (See 2,840,318.)

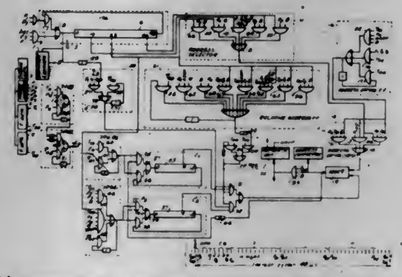
REISSUES

FEBRUARY 6, 1962

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,120
TALLY INSTRUCTION APPARATUS FOR AUTOMATIC DIGITAL COMPUTERS
Thomas G. Holmes, Melbourne, Fla., assignor to Soroban Engineering, Inc., Melbourne, Fla., a corporation of Florida
Original No. 2,874,901, dated Feb. 24, 1959, Ser. No. 474,044, Dec. 8, 1954. Application for reissue Jan. 17, 1961, Ser. No. 83,863
9 Claims. (Cl. 235—157)
(Granted under Title 35, U.S. Code (1952), sec. 266)

9. In an automatic digital computer employing instructions providing at least three addresses to the control component of the computer which takes instructions from the computer memory, analyzes these instructions and issues appropriate commands causing the computer to execute the instruction and a base counter to which said addresses may be relative: apparatus for executing a tally instruction, said apparatus comprising means for adding the numerical value of one of said addresses to the contents of said base counter, means for comparing the resulting sum with the numerical value of a second of said addresses, means associated with said comparing means and said base counter and operative when said sum is less than the numerical value of said second address to increase the count in the base counter by the numerical value of said one address and to seek the next instruction at the place indicated by said third address, and means associated with



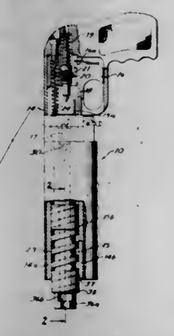
said comparing means and operative when said sum is equal to or greater than the numerical value of said second address to refer the computer to an instruction other than the instruction at the place indicated by said third address.

PATENTS

GRANTED FEBRUARY 6, 1962

GENERAL AND MECHANICAL

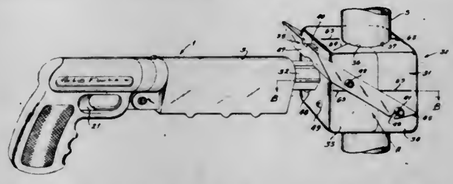
3,019,440
FASTENER ARRESTING DEVICE FOR A POWER ACTUATED TOOL
Rowland J. Kopf, Rocky River, and Roger Marsh, Hudson, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Jan. 12, 1955, Ser. No. 481,388
10 Claims. (Cl. 1—44.5)



1. In combination, a power actuated tool and a driveable unit adapted to be driven thereby, said tool including a member providing a passageway so that said power can drive a driveable unit through said passageway toward the discharge end thereof, said driveable unit including a captive head having an abutment means thereon, said head adapted to carry along said passageway a forwardly projecting piercing portion of a fastener for penetrating a workpiece when driven by said tool, an abutment means operatively connected to said member for operatively engaging said first mentioned abutment means to stop the travel of said unit along said passageway with the piercing portion adapted to travel a predetermined distance beyond the discharge end for workpiece penetration, said second mentioned abutment means including a crossbar extending transversely through apertures in said member and said head with at least one of said apertures being a slot elongated in the length direction of the passageway to form a lost motion connection between said captive head and said member, and a helical compression spring telescoped over said member and operatively engaging said crossbar and an integral outwardly extending flange on said member for absorbing the energy of the driveable unit during stopping of said head by movement of said crossbar relative to said member.

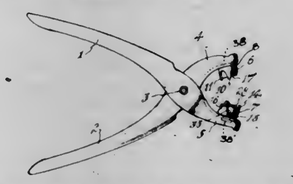
3,019,441
BRACKET ATTACHING FIXTURE FOR FASTENER DRIVING TOOL
Elmer F. Pfaff, Mantua Township, Ohio, assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Jan. 4, 1956, Ser. No. 557,321
9 Claims. (Cl. 1—44.5)

1. In an explosive powered tool having a barrel for driving a fastener element into a structural member, a fixture comprising a box having cut-out portions in opposite walls to receive said structural member, said box being divided into hinged sections, one section pivoting on the other, each box section including a portion of each of said cut-out portions, an arm fixed to said one section for engagement with said member to close said sections about said member by interfering with said member unless the



sections are so closed, a second arm pivoted to the other of said box sections, said arm having means to interlock with said one box section, and cam means on said arm to properly position said arm for interlocking with said one box section as said box sections are closed against each other.

3,019,442
SNAP FASTENER APPLICATOR TOOLS
Walter J. Hoeckele, Watchung, N.J., assignor to Tapex Corporation, Newark, N.J., a corporation of New Jersey
Filed Sept. 25, 1959, Ser. No. 842,391
5 Claims. (Cl. 1—317)



1. In an applicator for a snap fastener attachable to sheet material and consisting of a lipped stud part, a lipped socket part and a pronged backing attachable to either part by penetration of the prongs through the sheet material and then sliding of the prongs in anchoring relation under the lip, said applicator comprising a pliers-type body with jaws on each of which is mounted an oppositely-disposed fastening tool, the improvement comprising a first tool comprising a first base having a flat top surface, a set of flexible fingers projecting from and along the side of said base and extending above its top surface and having slightly inwardly-curved ends designed to grip a pronged backing at its edge and to release same upon a forward tug thereon, and a second tool comprising a second base having a centrally-indented top surface and of surface shape complementary to that of the stud or socket, a set of flexible fingers projecting from and along the sides of said latter base and extending above its top surface and having slightly inwardly-curved ends designed to grip a stud or a socket at its edge and to release same upon a forward tug thereon, both sets of said fingers being designed in a manner so that when the loaded jaws are closed, the prongs of the backing will penetrate

the sheet material and then slide in anchored relation under the lip and, as the jaws are opened, both sets of fingers will release their grip on the edge of its respective part or backing.

3,019,443
PERSPIRATION SHIELD
Marie Lewis Rose, 5 Tudor City Place, Apt. B-8, New York, N.Y.
Filed May 20, 1959, Ser. No. 814,648
1 Claim. (Cl. 2—55)



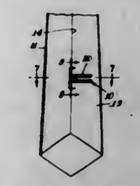
A self-adhering underarm perspiration shield, substantially as described herein, comprising in combination: a sheet of thin, elastic, flexible, transparent and moisture-proof plastic material formed in a generally oval configuration and which may be folded upon a transverse fold-line between two approximately similar portions; an adhesive material coated upon the entire surface of one side of said plastic-film material; a flesh-tinted, emollient and perfumed powder-like substance providing ingredients for the absorption, neutralization and reduction of perspiration; said powder-like substance being arranged in spaced areas upon the outer surface of said adhesive material and held thereto by means of the inherent adhesive properties of said adhesive material to provide the entire outer surface of said one side of said plastic material with said spaced areas of powder-like substance and adjacent areas of free adhesive; whereby said perspiration shield is adapted to be placed upon the underarm portion of the body of a wearer and held to the body of the wearer by means of said free adhesive areas.

3,019,444
SHOWER CAP
Shirley Pollack, 17114 Fairfield, and Devora Finsilver, 20435 Picadilly, both of Detroit, Mich.
Filed Feb. 12, 1960, Ser. No. 8,410
2 Claims. (Cl. 2—68)



1. A shower cap formed of a waterproof material adapted to conform to a generally spherical shape, having means for retaining its free edge in pressured contact with the head of the wearer and having a plurality of elongated, non-resilient, rigid, hand-deformable stiffening members attached to the surface of the material so as to extend in a general direction from the central portion of the cap toward the edge thereof, whereby said stiffening members may be deformed so as to vary the free shape assumed by the cap to conform to the hairdo of the wearer, said cap having a larger volume than the head and hairdo it is adapted to embrace so as to enable it to fit the head without crushing the hairdo of the wearer.

3,019,445
FASTENING DEVICE AND MANNER OF ATTACHING THE SAME
Julius A. Hirsch and Lillian Small, Chicago, Ill., assignors to Cutter Cravat, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 13, 1957, Ser. No. 677,981
8 Claims. (Cl. 2—145)



7. In combination, a fabric necktie having a rear portion and a front portion, a necktie clip comprising a wire formed into a clip portion, a pair of substantially parallel wire legs extending outwardly therefrom, and a pointed prong at the outer end of each leg, said pointed prongs having portions extending substantially laterally from the ends of the legs in opposite directions substantially in the plane of the legs and pointed portions extending inwardly from said laterally extending portions substantially parallel to said legs, said pointed prongs piercing and extending through the fabric in the rear side of the front portion of the necktie for attaching the necktie clip solely thereby to the rear side of the front portion of the necktie, and said clip portion being adapted to receive the rear portion of the necktie.

3,019,446
UNDERGARMENT
John H. Wyss, Herman L. Fredericksen, and William A. Testard, Kenosha, Wis., assignors to Cooper's Incorporated, Kenosha, Wis., a corporation of Wisconsin
Filed Apr. 22, 1959, Ser. No. 808,091
1 Claim. (Cl. 2—224)



A nether garment comprising a front body section adapted to extend from below the hips to cover the lower part of the abdomen, a rear body section adapted to extend from below the waist, a crotch section connecting said front and rear body sections, an elastic band secured to the upper ends of said front and rear body sections and adapted to surround the body of the wearer below the waist and a pair of leg bands secured along first, second and third portions thereof to the marginal portions of said front, rear and crotch sections, respectively, to form a pair of leg openings, said first portion of each leg band being attached at its upper end to said elastic band at a point adjacent the midpoint of the side and arranged and constructed so that said first portion is adapted to assume a position in which a part thereof lies along the juncture between the groin and the thigh and the remainder thereof extends sufficiently rearwardly therefrom so that stretching of said leg band resists inward displacement of said part, said second portion of each leg band being attached at its upper end to said elastic band at a point forward of the midpoint

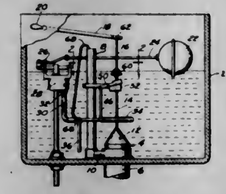
of the side and arranged and constructed so that said second portion is adapted to assume a position in which a part thereof lies along the juncture between the respective thigh and buttock, and the remainder extends sufficiently forwardly therefrom so that stretching of said leg band will resist upward displacement of said last named part.

3,019,447
APPARATUS FOR DOUCHING THE ANUS
Konstantin A. Sluz, Canberra, Australia
(% F. Kovaleff, 242 8th Ave., San Francisco, Calif.)
Filed Dec. 10, 1958, Ser. No. 779,380
1 Claim. (Cl. 4—7)



A douching device comprising a pipe-like nozzle sealed at one end, and having a series of small holes through the wall of the nozzle for a limited portion of the circumference thereof and adjacent the sealed end, two spacing feeler guides attached to the nozzle at opposite sides thereof at the sealed end, and diverging therefrom on the same side as the holes, with the holes therebetween, to space the nozzle from the user's body and to permit the passage of a liquid as a spray, and a connecting means on the opposite open end of the nozzle for the supply of the liquid thereto.

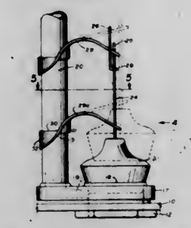
3,019,448
FLUSH CONTROL DEVICE FOR TOILET FLUSH TANK
George Ulicni, Gary, Ind.
(6817 Harrison St., Crown Point, Ind.)
Filed Jan. 11, 1961, Ser. No. 82,011
7 Claims. (Cl. 4—41)



1. In a flush tank of the class wherein liquid is discharged therefrom through a discharge valve when the closure of said valve is lifted from its seat by a manually movable linkage and wherein liquid is supplied to said flush tank through an inlet valve, the combination therewith; of a tubular conduit comprising an inlet portion connected to said inlet valve, a curved portion concentrically positioned over said closure, said curved portion having orifices directed to discharge liquid against said closure, an outlet portion for discharging liquid into said tank, and stopper means movable into said outlet portion to stop said liquid from discharging through said outlet portion; and means actuated by said manually movable linkage for releasably holding said stopper means away from said outlet portion.

3,019,449
FLUSH VALVE GUIDE
Orvan J. Bennett, Rte. 2, Fort Lupton, Colo.
Filed Mar. 19, 1959, Ser. No. 800,425
6 Claims. (Cl. 4—57)

1. In combination with a water closet tank having a discharge pipe from its bottom with the upper rim of the pipe forming an annular seat within and adjacent to the floor of the tank, a floatable seating body adapted to rest upon the seat to close the tank and to be lifted to a floating position to open and drain the tank, a rigid stem upstanding from the body and means for pulling the stem upwardly to move the body from the closed position to the floating open position thereabove, a pair of outstanding flexible arms mounted within the tank for flexure in an upward direction, one above the other, with the extended end of each arm being connected to the stem and with the arms being substantially in spaced parallelism and being thereby adapted to flex vertically, substantially in unison to hold the stem in a vertical position as the body moves from a closed position to an open position and returns to the closed position upon the seat.



3,019,450
RETRACTABLE SWIMMING POOL COVER
Edward S. Karasiewicz, Park Ridge, Ill., assignor to American Typesetting Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 29, 1958, Ser. No. 763,971
9 Claims. (Cl. 4—172)

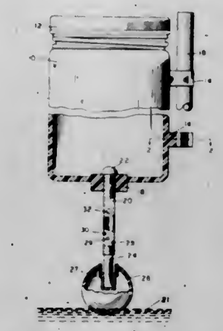


1. A retractable cover for a swimming pool comprising a guide channel extending along each side of the pool, a flexible screen adapted to extend horizontally over the water in the pool and having spaced transverse supports movably received in and supported by the guide channels, a rotatable roll and rotatable cable drum means located at one end of the pool, means connecting one end of the screen to the roll, cable means connecting the other end of the screen to the cable drum means, a reversibly rotatable drive shaft, means including a one-way driving connection between the shaft and the roll for rotating the roll in the winding direction when the shaft is rotated in one direction to wind the screen on the roll and retract the screen from over the water in the pool, and means including a one-way driving connection between the shaft and the cable drum means for rotating the cable drum means in the winding direction when the shaft is rotated in the opposite direction to wind the cable means on the cable drum means and advance the screen over the water in the pool.

3,019,451
DISPENSER FOR DISINFECTANT AND THE LIKE
William D. Wooldridge, 1539 N. Cheyenne, Tulsa, Okla., assignor of fifty percent to James R. Head, Tulsa, Okla.
Filed Nov. 2, 1960, Ser. No. 66,852
2 Claims. (Cl. 4—228)

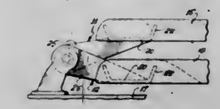
1. A device of the class described; a fluid container secured to a vertical overflow pipe within a flush tank, said

container having a removable closure at the top end, and a valve seat at the lower end, a valve stem slideably mounted in said valve seat, said stem including an outer sleeve terminating its upper end with a cap inside said



container, longitudinal perforations in said sleeve, a lower solid stem attached to a float outside said container, and adjustable within said sleeve with respect to said perforations to control the amount of said fluid in said sleeve.

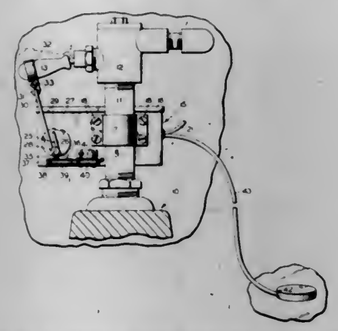
3,019,452
HINGE FOR MOLDED ARTICLES
Wesley I. Williams, P.O. Box 44, Midway City, Calif.
Filed Nov. 3, 1958, Ser. No. 771,265
5 Claims. (Cl. 4—236)



1. A toilet seat assembly, comprising: a molded toilet seat member having a bottom portion; a molded toilet seat cover member having a bottom portion; a hinge structure for hinging together said two members to swing from a side-by-side position to a position substantially perpendicular to each other comprising two hinge members each including an elongated substantially flat base element having opposed side edges and opposed ends with a hinge ear at each end bent normal to the plane of the base element, the spacing between the hinge ears of one member being less than the spacing between the hinge ears of the other member so that the members can be postiioned one inside the other; and anchor elements formed integral with each base element and extending outwardly therefrom, the anchor elements of one hinge member being molded into the bottom portion of one of said molded members and the anchor elements of the other hinge member being molded into the bottom portion of the other molded member.

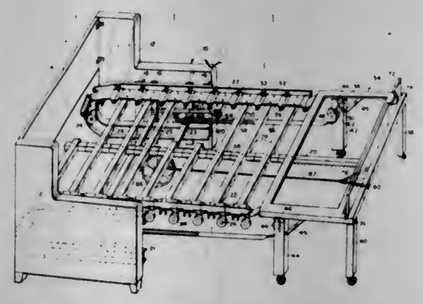
3,019,453
POWER LAVATORY FLUSHING APPARATUS
Floyd H. Radcliffe, 136 McMillan Drive, Longview, Wash.
Filed Jan. 6, 1960, Ser. No. 721
1 Claim. (Cl. 4—249)

The combination with a lavatory flush valve having a hand actuable flush handle pivotally mounted for swinging movement of said handle about a horizontal axis, of a receptacle mounted adjacent said lavatory, an electric motor in said receptacle, a gear train in said receptacle driven by said motor, a shaft extending out of said receptacle driven by said gear train, a cam disc driven by said shaft, an offset pin on said disc, a rod connecting said pin with said flush handle, an electric switch adjacent said disc, said disc having a cut-away portion on its periphery, a projection on said switch adjacent the periphery of said disc which when seating in said cut-away portion permits



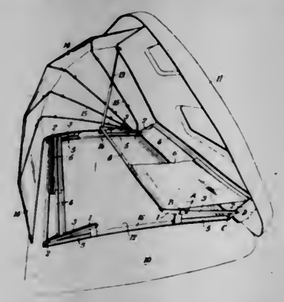
said switch to move to open position, engagement of the periphery of said disc with said projection closing said switch to establish a circuit to said motor, and a second remotely positioned foot operated switch connected to said motor and parallel with said first mentioned switch for initial energization thereof to move said disc to close said first mentioned switch.

3,019,454
EXTENSIBLE AND COLLAPSIBLE BED RETRACTABLE WITHIN A SOFA OR CHAIR, OTTOMAN-BED, CHEST OF DRAWERS
Pasquale Fred Luca, 95 New York Ave., West Hempstead, N.Y.
Filed Nov. 12, 1958, Ser. No. 773,390
2 Claims. (Cl. 5—17)



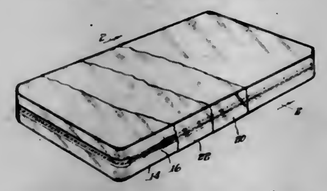
1. An extensible and retractable bed in combination with a sofa frame comprising a pair of U-shaped Channel members mounted upon the inner walls of the side pieces of the sofa frame, the bight portion of the U-shaped channel members being positioned inwardly of the rear wall of the sofa frame, and presenting respective vertically spaced forwardly extended trackways of a length terminating inwardly of the side frames of said sofa frame and being secured thereto; a mattress supporting frame consisting of a plurality of transverse channel shaped bars, each of said bars having a rack section secured to the under side thereof and of a length to extend from opposite sides thereof, the ends of adjacent rack sections being in close spaced relation, a transverse link member fixed to respective ends of said channel shaped bars, each link member having knuckles interengageable with knuckles of the next adjacent link member, a pintle for interlocking said knuckles, each pintle having a roller adapted to traverse said U-shaped channel members and gear means operatively connected to said rack sections for advancing and retracting said mattress supporting frame.

3,019,455
FOLDING BEDS
Cecil Henry Walter Carte, Folkestone, England, assignor to Martin Walter Limited, Folkestone, England
Filed Feb. 29, 1960, Ser. No. 11,812
Claims priority, application Great Britain Mar. 3, 1959
6 Claims. (Cl. 5—214)



1. A folding bed comprising a supporting base, a pair of parallel rigid side members exending lengthwise of the bed, a strip of flexible material connected to said side members and extending between them to form the supporting surface of the bed, and linkages at the ends of the bed which connect the side members and the base and permit said side members to be separated and folded together, each of said linkages comprising end links pivoted to one of the side members and to the base and a centre link connecting said end links, and a pivot connecting the centre link to one of the end links being movable over dead centre in relation to a pivot connecting asid end link to the base as the side members are separated to retain said side members in spaced relation.

3,019,456
MATTRESS
Ewald A. Kamp, Chicago, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,686
4 Claims. (Cl. 5—355)



1. An exteriorly seamless mattress comprising a resilient inner core, a cushioning layer covering said core, an envelope enclosing the cushioning layer and core and serving to protect the cushioning layer against subsequently applied coating, fastener means associated with said envelope to secure the same in its enclosing position, a strip adhered to said envelope on opposite sides of the fastener means and overlying the fastener means, and a substantially continuous elastomeric coating covering the envelope and strip and rendering the mattress exteriorly seamless.

3,019,457
INFLATABLE RUBBER DINGHIES
Peter Albert Lowery, Purley, England, assignor to Chemring Limited, Surrey, England, a British company
Filed Jan. 23, 1959, Ser. No. 788,655
4 Claims. (Cl. 9—11)



1. An inflatable boat in the form of a dinghy comprising buoyancy tubes and a canopy characterised in this that a corner reflector is mounted on the top of the canopy the said reflector comprising radar responsive material arranged in the manner of a corner reflector and suitably connected to inflatable tubes forming arches over the top of the canopy so that when the dinghy is inflated the tubes forming part of the corner reflector are also inflated and the reflector is thereby erected without the aid of spars or other rigid parts.

3,019,458
SPOON-SHAPED SWIM-FIN
Ettore de Barbieri and Fernando Gatti, both of 7/1 Via Solimano, Santa Margherita Ligure, Italy
Filed Sept. 29, 1958, Ser. No. 763,922
Claims priority, application Italy Dec. 3, 1957
5 Claims. (Cl. 9—309)



1. A fin for a swimmer, comprising a foot portion having a substantially flat base section, an integral upwardly extending heel section and an integral upwardly extending toe section, an elongated, integrally formed flexible fin blade extending from the base of said foot portion at the toe section end thereof in alignment with the longitudinal axis of the foot portion but at a downward angle with respect to the plane of said base, said blade being longitudinally and transversely cambered, the curvature of the blade facing downwardly in reference to the heel and toe sections, and lateral stiffening ribs on the top and the bottom side of the blade extending substantially parallel to the longitudinal edges of the blade, said ribs being faired into the foot portion at the middle thereof.

3,019,459
INFLATABLE SAFETY SHIRT
James H. Ripley, 80 Cresta Vista Drive, San Francisco, Calif.
Filed May 1, 1958, Ser. No. 732,214
1 Claim. (Cl. 9—342)

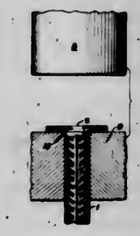
An inflatable safety shirt comprising: two layers of porous shirt cloth forming an upper portion of the shirt above but adjacent to the waist line and secured together to define the walls of an inflatable compartment extending fully across said shirt from adjacent to said waistline to the shoulders of the shirt, a tube opening at one end thereof into said compartment at a point spaced a substantial distance below the upper portion of said compartment and carried by said shirt and extending a sufficient distance upwardly from said point for reaching the

mouth of the wearer when such shirt is worn by the latter for inflating said compartment by breath from the mouth of the wearer, at least one horizontally extending opening free from a valve or any obstruction to the free flow of water therethrough formed in one of the walls of said



compartment adjacent to the lower end of the latter and spaced below said point through which water entering said compartment by seepage thereof through the walls of said compartment is adapted to be expelled upon inflating said compartment at said point.

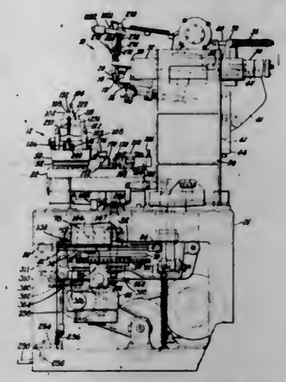
3,019,460
METHOD OF MAKING ROUNDED HEAD NAIL
John C. Corckran, 5300 Purlington Way, Baltimore, Md.
Filed Oct. 22, 1956, Ser. No. 617,553
3 Claims. (Cl. 10—54)



1. The process of forming a substantially round head on a generally square shank of a wire fastener having substantially flat sides joined by substantially smooth receding corners comprising: rupturing each shank side with indentations angular to the longitudinal axis terminating short of the corners, holding the shank in a generally square vise with the head forming end projecting from the vise, striking the projecting end axially with a substantially smooth-faced header for upsetting the end to flow the metal freely outwardly, the ruptured indentations permitting the metal to flow more readily at such ruptured flat portions than at the corner portions and thereby producing a substantially round head.

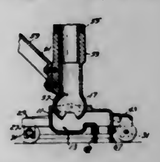
3,019,461
SOLE ROUNDING MACHINES
Paul W. Seaßeben, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed May 12, 1960, Ser. No. 28,800
14 Claims. (Cl. 12—17.2)

1. In a shoe machine, an operating head, a jack for a last, said jack being mounted for rotation and oscillation to present a shoe on the last to said head, adjustable driving means for rotating said jack and simultaneously oscillating it with a variable amplitude, said jack comprising means for centering the shoe thereon with the mid point of the last bottom at the axis of rotation of said jack, and means controlled by said centering means



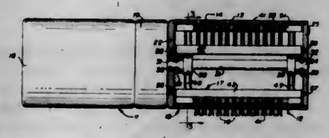
for setting said driving means in accordance with the size of the last.

3,019,462
VACUUM CLEANER
Floyd M. Nash and Joseph Jacuzzi, Kensington, Calif., assignors to Jacuzzi Bros., Incorporated, Richmond, Calif., a corporation
Filed Jan. 26, 1960, Ser. No. 4,793
4 Claims. (Cl. 15—1.7)



1. A vacuum cleaner comprising a substantially arcuate inverted trough-shaped housing including front and rear substantially arcuate walls, surface engaging means at each end of said arcuate housing in proximity to said rear arcuate wall, and surface engaging means intermediate said end surface engaging means and in proximity to said front arcuate wall to provide a three point surface contact defining a triangular area, all of said surface engaging means being adapted to support said housing and maintain the lower edges of said walls thereon in substantially predetermined spaced relation to an underlying surface, a hose connection to said housing at a point within said triangular area, a flexible blade depending from each to said substantially arcuate walls to at least the plane of the defined three point surface contact.

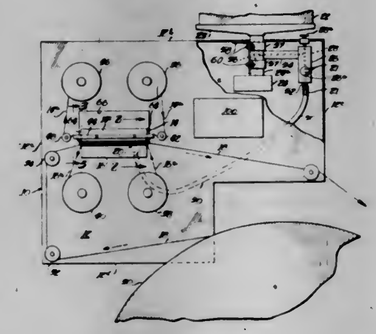
3,019,463
POWER HAIR BRUSH
Samuel L. Mitchell, 621 5th St., Vallejo, Calif.
Filed Sept. 2, 1959, Ser. No. 837,740
7 Claims. (Cl. 15—23)



1. A power hair brush comprising a rotatable perforated hood, a brush head disposed within said hood and

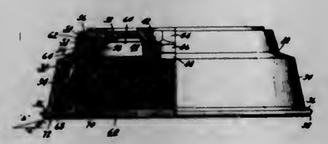
mounted for simultaneous concentric rotation therewith, said brush head having a body with projecting bristles translatable with respect thereto in and out of the hood perforations, power means coupled to said head and hood for effecting said simultaneous concentric rotation, and cam actuated means coupled to said head for translating the bristles relative to the body in and out of said perforations during said rotation.

3,019,464
AUTOMATIC FILM CLEANER
Robert Grunwald, Northbrook, Richard R. Wallace, Wilmette, and Howard Bowen, Evanston, Ill., assignors to The Harwald Company, Inc., Evanston, Ill., a corporation of Illinois
Filed Aug. 18, 1958, Ser. No. 755,693
7 Claims. (Cl. 15—100)



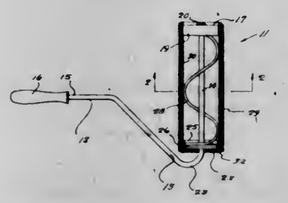
7. An apparatus for controlling the flow of liquid to a film cleaning machine, said machine having liquid absorbent pads on which the film is wiped, said apparatus including an electrically conductive cleaning liquid; supply means to supply said liquid to said pads; and control means associated with said pads to measure the electrical resistance of a given thickness of said pads, said control means being connected to said supply means to increase the liquid flow to said pads when the electrical resistance is greater than a predetermined amount indicative of dry pads and to decrease the liquid flow to said pads when the electrical resistance is less than a given value indicative of excessively wet pads.

3,019,465
RUG SCRUBBING TOOL ATTACHMENT PARTICULARLY FOR FLOOR POLISHERS
Frank K. Bayless, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
Filed May 28, 1959, Ser. No. 816,452
6 Claims. (Cl. 15—180)



1. A rug scrubbing tool comprising: a rigid inverted cup-shaped brush back having a generally disk-like mounting portion and a skirt which depends therefrom and defines a downwardly facing opening; a plurality of brush bristles rigidly secured in and within said brush back and disposed in a generally circular path; said bristles being disposed to extend toward the downwardly facing opening, and said mounting portion having means for connection to the driving shaft of a motor powered machine, said bristles being of such length that the lower ends thereof are positioned above the lower edge of said skirt when the skirt rests on a rug and the tool is rotated by said shaft on an axis perpendicular to said mounting portion.

3,019,466
PAINT ROLLER HAVING A DETACHABLE FRAME
Edward J. Denholtz, Hillside, N.J., assignor to Durex, Inc., Hillside, N.J., a corporation of New Jersey
Filed Feb. 19, 1960, Ser. No. 9,735
1 Claim. (Cl. 15—230)

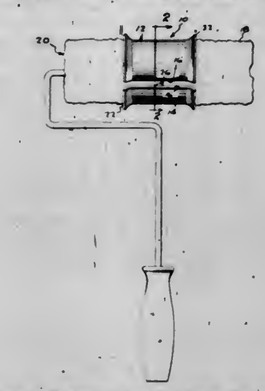


A paint roller comprising a handle rod formed with a straight shaft portion having a free end, a first circular cap member, means rotatably securing said cap member on the end of said straight shaft portion and preventing the cap member from moving axially on said straight shaft portion, a second circular cap member freely and rotatably mounted on said straight shaft portion at a location spaced from the first cap member and being free to move axially on the shaft portion, said cap members facing each other and being inwardly concave in opposing relation, a coiled spring having respective end turns which are relatively closely wound and a longitudinally extended yieldable intermediate portion whose turns are relatively widely spaced, said end turns being tightly secured in and held respectively in said cap members with said intermediate portion surrounding said straight shaft portion between said cap members, and a removable rigid cylindrical roler member slidably engaged over said cap members and surrounding the helical intermediate portion of the spring, the turns of said yieldable intermediate portion being substantially larger in normal diameter than said cap members and being substantially larger in normal diameter than the inside diameter of said roller member, whereby to exert a yieldable expansive frictional gripping force on the intermediate portion of the inside surface of and to support said roller member, the spring being substantially free to expand longitudinally when the roller member is engaged on said intermediate portion of the spring, due to the freedom of movement of the second cap member on the shaft portion, whereby to facilitate the mounting and removal of the roller member.

3,019,467
PAINT ROLLER CLEANER
Patrick L. Garrett, 463 W. Hollywood, Detroit, Mich.
Filed Dec. 11, 1959, Ser. No. 858,891
4 Claims. (Cl. 15—236)

1. A paint roller cleaner consisting of an elongated cylindrical resilient longitudinally split compressible sleeve, said sleeve having free longitudinal edges which are spaced from each other, said sleeve having normally an internal diameter not substantially less than the outside diameter of a paint roller to be cleaned and adapted to be circum-

posed on and moved lengthwise of the roller for cleaning the same, said sleeve being adapted to be manually



compressed to a diameter smaller than the outside diameter of a roller on which the sleeve is circumposed.

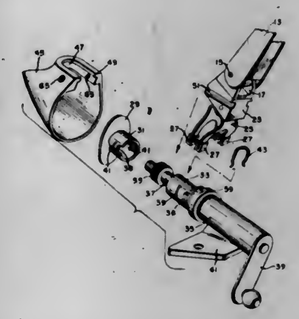
3,019,468
WIPER BLADE PARKING DEVICE
Arthur R. Hatch, Plymouth, Mich., assignor to American Motors Corporation, Kenosha, Wis., a corporation of Maryland
Filed Sept. 19, 1960, Ser. No. 56,882
4 Claims. (Cl. 15—250.19)



1. In combination with a vehicle having a header structure with a channel area for receiving the marginal edge of a window pane, apparatus for contacting the pane for cleaning same and for parking out of contact with the pane when inoperative, said apparatus comprising a longitudinal molding strip extending along the header adjacent the marginal edge of the pane, said strip being curved in cross section; an actuating arm mounted on the header structure for swinging movement relative thereto; a wiper blade assembly carried on the arm and including a resilient wiper blade for contacting the window pane and a backing member spaced from the window pane and carrying the wiper blade; means for elevating the wiper blade out of contact with the pane and for assisting in effecting movement of the wiper blade to a position overlying the molding strip during swinging movement of the arm to parking position, said means including, a clip secured to the backing member and spaced from the window pane, said clip being of a width several times less than the length of the wiper blade and several times less than the length of the backing member and said clip having a ramp portion for engaging the molding strip to initiate elevating the wiper blade out of contact with the pane during swinging movement of the arm to parking position.

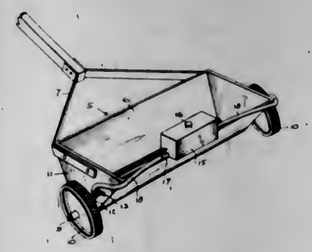
3,019,469
WINDSHIELD CLEANER
Robert M. Fox, Detroit, Mich., and Bert E. Ray, Houston, Tex., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,490
2 Claims. (Cl. 15—250.21)

1. A windshield wiper for curved windshields including a reversible drive shaft, a wiper arm having a section anchored to said shaft and an elongated wiper carrying section, a pivotal connection having an axis extending generally longitudinally of said wiper carrying section for pivotally connecting said wiper carrying section to said anchored section, a fixed cylindrical type cam with an axially contoured operating surface and having its axis substantially coincident with the axis of said drive shaft,



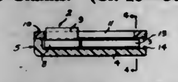
a cam follower fixed to said wiper carrying section and having point contact means defining a plane with the axis of the drive shaft and being in engagement with the axially contoured operating surface of said cam for turning said wiper carrying section relative to the anchored section as the drive shaft operates without axial movement thereof, said anchoring section extending about and forming a housing covering said cam.

3,019,470
COMBINATION FERTILIZER SPREADER AND LAWN MARKER
Nicholas Romeo, 6950 NW. 19th Court, West Hollywood, Fla.
Filed Apr. 21, 1959, Ser. No. 807,844
3 Claims. (Cl. 15—503)



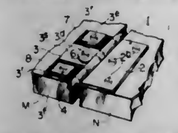
1. A lawn marker in combination with a lawn fertilizer spreader of the type that has an open bin defined by angled side walls and vertical flat end walls, the bin having a pair of supporting ground wheels, a tank supported upon a forward upper marginal edge of the bin for the reception of a colored fluid, discharge nozzles fixed upon the flat end portions of the bin and with the nozzles having their discharge ends in overlying relation to treads of the wheels, fluid conducting conduits leading from the tank and that are connected to the nozzles whereby to conduct the colored fluid from the tank to be deposited upon the treads of the wheels for rolling application upon the lawn to indicate the line of traverse of the spreader.

3,019,471
ZIPPER LUBRICATOR
Charles M. Bowersox, 75 Cline St., Dayton, Ohio
Filed Jan. 14, 1959, Ser. No. 786,782
5 Claims. (Cl. 15—560)



5. A device for lubricating slide fasteners or the like including a pair of plate-like housing sections having adjacent surfaces in closely spaced generally parallel relation and a wall section forming a generally peripheral connection therebetween and defining a pocket therewith, said wall section being interrupted and having its extremities defining an opening to said pocket, the pocket having a contour to house a relatively flat wafer of lubricant, relatively free means in said pocket to project the wafer therefrom, the extremities of said wall section having relatively convergent inner surfaces, said plate-like housing sections having portions projected beyond the extremities of said wall section including slide coupling means integral therewith adapted to engage over a slide fastener or the like and contain it to the projected portion of the wafer as it is moved thereby.

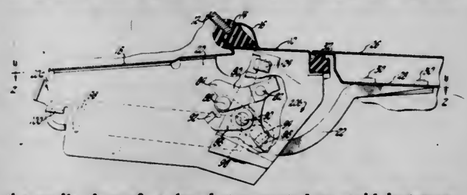
3,019,472
ADJUSTABLE HINGES
Robert E. Wasmuth, 520 Flaxmill Road, Huntington, Ind.
Filed Mar. 28, 1958, Ser. No. 724,753
6 Claims. (Cl. 16—129)



1. In a hinge having leaves pivotally joined together along an axis of rotation, said leaves having holes through which headed securing means are passed for affixing the leaves to supporting members, improvements in the mounting of the hinge permitting adjustment of the hinge position with respect to a supporting member in at least two different mutually crossing directions, comprising on at least one leaf separate retaining and locking areas, each area surrounding at least one hole and the diameters of the holes through said areas being large in comparison with the diameters of the associated securing means, the surfaces of the leaf facing away from the supporting member being respectively of smooth character and of roughened character in the retaining and in the locking areas; separate washers respectively overlying a portion of each area, a securing means passing through each washer and being a snug fit therein and the surface of each washer which contacts an area being of the same character as the associated area, said roughened locking surfaces being provided with at least two series of parallel grooves, the respective series being disposed in mutually intersecting directions to leave pyramid-like roughening elements which lock with similar elements on the associated washers.

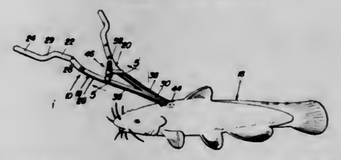
3,019,473
LID HINGE AND COUNTERBALANCE
John P. Bogater, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application June 19, 1956, Ser. No. 592,459, now Patent No. 2,922,184, dated Jan. 26, 1960. Divided and this application May 25, 1959, Ser. No. 815,595
1 Claim. (Cl. 16—190)

A hinge and counterbalance for body and lid members, comprising in combination, a hinge strap connected to the lid member; a hinge box mounted on the body member; means pivotally connecting said hinge strap to the hinge box between opposite walls thereof to permit swinging said lid between open and closed positions; a toggle linkage including first and second links and pivot means connecting the links; means pivotally connecting said first link to said hinge strap between said opposite walls at a point between the connection of the hinge strap to the lid member and the means pivotally connecting said strap to the hinge box; means pivotally connecting said second link to said hinge box between



the walls thereof; a bracket mounted on said last-mentioned pivotal connecting means outside a wall of said hinge box in fixed angular relationship to said second link for swinging movement thereof; a spring; and means connecting said spring to said bracket at a location such that the force of the spring is effective on the link at a point spaced from the pivotal connections of the link to form a lever, the construction and arrangement being such that the spring is loaded when the lid is closed and the moment arm of this lever increases as the lid is opened.

3,019,474
FISH SKINNING SAW
John A. Hughes, Box 147, Davis, Okla.
Filed Nov. 25, 1959, Ser. No. 855,337
1 Claim. (Cl. 17—7)

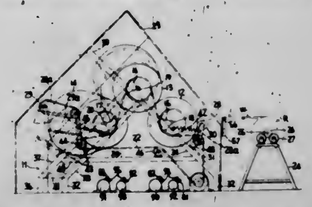


A fish skinning saw comprising a pair of similar elongated members, means pivotally interconnecting the elongated members intermediate the ends thereof consisting of an inwardly extending lug on each of said members, one of said lugs having a U-shaped extension on the inner end thereof receiving the other lug therebetween, a pivot pin extending through the lugs for pivotally interconnecting the lugs, and spring means mounted on the pin and engaging the lugs in such a manner for urging the blades towards each other, a handle formed on one end of each of the elongated members, and a blade formed on the other end of each of the elongated members, each of said blades being substantially straight and rectangular in cross section and tapering gradually toward the end remote from said handle and having saw teeth on the outer edge thereof, said saw teeth edges being tapered for sawing and severing the skin of a fish and separating the skin from the flesh of a fish.

3,019,475
STRETCHING APPARATUS
William G. Smith, Sarver, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Filed Mar. 8, 1960, Ser. No. 13,526
18 Claims. (Cl. 18—1)

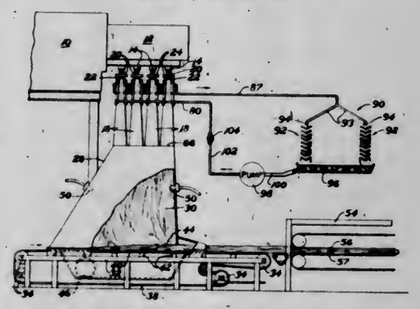
1. An apparatus for continuously stretching a sheeting of a plastic material in web form having straight edges to

produce a web having curved edges, which comprises a supporting structure, a cylindrical roll mounted on said supporting structure for rotation about its cylindrical axis, first and second conical rolls mounted on said supporting structure for rotation about their conical axes, with the smaller end of said first conical roll adjacent to the smaller end of said second conical roll, with the smaller end of said first conical roll adjacent to said cylindrical roll and with the larger end of said first conical roll spaced substantially farther away from said cylindrical roll, means to rotate said cylindrical roll and said first and second conical rolls, means to provide tension to the web



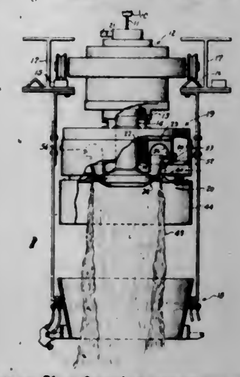
when moving in a path of travel partially around said cylindrical roll and said first and second conical rolls, said cylindrical roll and said first and second conical rolls being positioned with respect to one another and with respect to said tensioning means to provide contact of the moving web with a major portion of the revolution of the surfaces of said three rolls during travel of the web in contact with said cylindrical roll, said first conical roll and said second conical roll in that order, means to heat the web during contact of the web with said cylindrical roll and with said first conical roll and means to cool the web during contact of the web with said second conical roll.

3,019,476
COOLING METHOD AND APPARATUS
Alvis M. Rawlinson, Santa Clara, and Gilard M. Falling, San Jose, Calif., assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Oct. 20, 1954, Ser. No. 463,504
6 Claims. (Cl. 18—2.5)



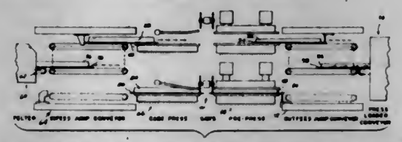
1. Apparatus of the character disclosed, in combination, a spout into which streams of molten mineral material are delivered, means for projecting gaseous blasts into the spout for attenuating the material of the streams into fibers, receptacles formed adjacent oppositely disposed walls of the spout adapted to receive a heat absorbing liquid, a wall of each spout forming one wall of a receptacle, said receptacles being vented to the atmosphere, a heat transfer means for cooling the liquid, a plurality of liquid conveying tubes arranged for recirculating liquid through the receptacles and the heat transfer means, and pumping means for moving the liquid.

3,019,477
HIGH OUTPUT RADIANT HEATER FOR A GLASS FIBER FORMING APPARATUS
Dale Kleist, St. Louisville, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 773,988
7 Claims. (Cl. 18—2.5)



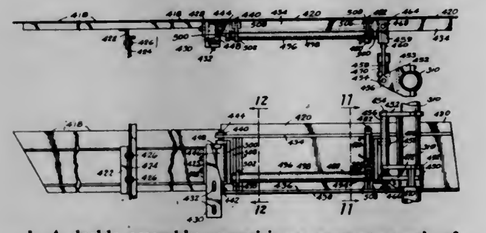
1. In a rotary fiber forming apparatus which comprises a generally cylindrical centrifuge having a plurality of vertically spaced, circumferential rows of stream forming orifices in its periphery the combination with said centrifuge of a high output, heater comprising an annular refractory element extending circumferentially around said centrifuge at a level above the uppermost one of said rows of stream forming orifices of the centrifuge, said refractory element having a generally arcuate cross section with its concave surface directed toward and at least partially exposed in line of sight to the peripheral area of the centrifuge, a combustible gas supply manifold and means for feeding said gases for combustion along the concave surface of said refractory element.

3,019,478
MAT EDGE PRESS APPARATUS
Harold E. Erickson, Auburn, and Norman E. Nelson, Charles V. Nelson, and Dale L. Schubert, Tacoma, Wash.; said Erickson assignor to said Schubert and said Norman E. Nelson and said Charles V. Nelson assignors, by mesne assignments, to Industrial Development Co., Tacoma, Wash., a corporation of Washington
Original application Mar. 21, 1957, Ser. No. 647,589. Divided and this application Sept. 2, 1958, Ser. No. 758,353
6 Claims. (Cl. 18—4)



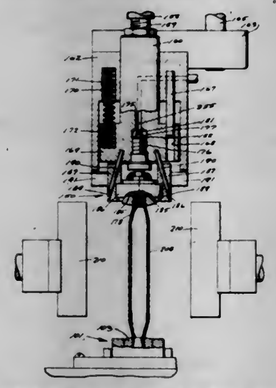
1. Apparatus for selectively compacting a leading end portion only of a compactable mat, said apparatus comprising: a frame, a bed plate on the frame, a press platen having a leading section arranged to lie substantially parallel to the bed plate when in pressing position and a trailing section which slopes away from the bed plate in the trailing direction thereof, conveying means proportioned and arranged to move the mat to a position at which a leading end portion only of the mat is located within the operating range of the platen, drive means connected to the platen for alternately advancing and retracting it with respect to the mat, thereby compacting said leading end portion to a predetermined thickness with a trailing portion of the mat immediately behind the leading portion being compacted to the lesser degree determined by the slope of the trailing section of the platen, and second conveying means arranged to move the entire mat forwardly across the bed plate beyond the operating range of the platen.

3,019,479
PRESS DECKLE ASSEMBLY
Harold E. Erickson, Auburn, and Norman E. Nelson, Charles V. Nelson, and Dale L. Schubert, Tacoma, Wash.; said Erickson assignor to said Schubert and said Norman E. Nelson and said Charles V. Nelson assignors, by mesne assignments, to Industrial Development Co., Tacoma, Wash., a corporation of Washington
Original application Mar. 21, 1957, Ser. No. 647,589, now Patent No. 2,989,774, dated June 27, 1961. Divided and this application Sept. 2, 1958, Ser. No. 758,354
3 Claims. (Cl. 18—4)



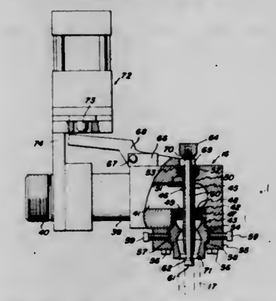
1. A deckle assembly comprising a support, a pair of spaced, vertical parallel plates, vertically arranged hinge means on the plates for pivotally mounting one end of the plates, mounting means slidably engaging the hinge means and secured to the support for mounting the plates for movement in a vertical plane, drive means interconnecting the mounting means and the plates for reciprocating the latter in a vertical plane, and drive means interconnecting the support and the plates for reciprocating the latter angularly in a horizontal plane about the hinge means.

3,019,480
METHOD OF AND APPARATUS FOR MAKING PLASTIC ARTICLES
Leonard D. Soubier, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 17, 1959, Ser. No. 799,909
5 Claims. (Cl. 18—5)



5. An apparatus for making a blank from which a blown plastic article is to be made including means defining an extrusion orifice, an injection mold movable linearly from a first position overlying said orifice to a second position spaced from said orifice, means for filling said mold with plastic material at its first position, and means for extruding a tubular extension integral with the material filling said mold during movement, the improvement of actuating means for moving said mold from its first position to its second position, a plurality of successively operable means for regulating the speed of movement of said actuating means, and means responsive to linear displacement of said mold for operating said successively operable means to vary the speed of movement of said mold.

3,019,481
VARIABLE ORIFICE EXTRUSION DIE
Kaiji Negoro, West Hartford, Conn., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed July 16, 1959, Ser. No. 827,470
6 Claims. (Cl. 18—5)



2. In a machine for forming tubing wherein the machine is of the type including an extruder; a variable orifice extrusion die, said extrusion die comprising a die shell and a die core, said die core having a terminal portion which is cylindrical in outline and a cylindrical adjacent portion of a reduced diameter, said die core being outwardly flared intermediate said terminal portion and said adjacent portion whereby tubing being extruded will flow over said terminal portion and have a constant internal diameter, said die shell having a minimum cross-sectional forming area selectively receiving said terminal portion and said adjacent portion of said die core to produce tubing of varying wall thickness, means mounting said die core for freedom of movement axially in the direction of flow of extruded material, said die core being urged out of said die shell solely by the flow of extruded material over said die core, means restricting movement of said die core out of said die shell to a position where said adjacent portion is aligned with said forming area and said terminal portion projects beyond said die core, and die core positioning means connected to said die core for retracting said die core to a position where said terminal portion is aligned with said forming area to reduce the wall thickness of the tubing.

3,019,482
APPARATUS FOR PRESSING DISC-SHAPED PHONOGRAPH RECORDS
Jan Christoffel van Houten, Baarn, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 1, 1958, Ser. No. 725,703
Claims priority, application Netherlands Apr. 3, 1957
2 Claims. (Cl. 18—5.3)

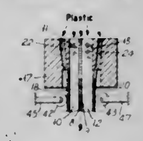
1. In an apparatus for pressing disc-shaped phonograph records, a pressing mould, a pin having one end

secured to a central portion of the mould and provided at an intermediate point with a centering collar, a thin matrix on the surface of the mould and provided with a central aperture, said collar fitting into said aperture and having a thickness approximately the same as the



thickness of the matrix, a metal covering disc having a thickness less than about 0.1 mm. on the upper surface of said collar and extending over the adjacent portion of the matrix, and an adhesive layer securing said disc to said pin.

3,019,483
METHOD AND APPARATUS FOR PRODUCING EXTRUDED STRUCTURAL BOARD
Ralph D. Schultheiss, Springdale, Conn., assignor to Union Carbide Corporation, a corporation of New York
Filed May 4, 1959, Ser. No. 810,793
8 Claims. (Cl. 18—12)



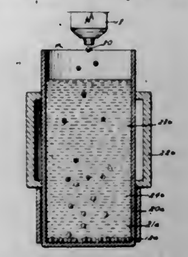
1. A method for producing a ribbed structural board comprising extruding a multiplicity of substantially parallel rib-forming streams of plastic material; reciprocating said rib-forming streams in a direction transverse to the direction of extrusion so as to alternately contact and separate the edges of adjacent rib-forming streams; extruding simultaneously with said rib-forming streams thin membrane-forming streams of plastic material adjacent to the outer edges of said rib-forming streams, and contacting said membrane-forming stream with the outer edges of said rib-forming streams.

3,019,484
APPARATUS FOR APPLYING A COATING ON WELDING ELECTRODE MATERIAL
Harald Strohmeier, Kapfenberg, Styria, Austria, assignor to Gebr. Bohler & Co. Aktiengesellschaft, Vienna, Austria
Filed June 16, 1959, Ser. No. 820,733
Claims priority, application Germany June 19, 1958
1 Claim. (Cl. 18—12)



Apparatus for applying a coating on welding electrode material, which comprises an extruder for extruding a coating composition as a coating on a core, a feed screw unit operable to feed said coating composition to said extruder and to work said coating composition to raise its temperature by friction sufficiently to enable it to be extruded by said extruder at a temperature of 40–100° C., and inlet means for introducing said composition to said feed screw unit, said feed screw unit being constructed to have said inlet means detachably connected to any of several points of the length of said feed screw unit.

3,019,485
METHOD OF PRODUCING METAL SPHERES
Lawrence H. Diamond, Oceanside, N.Y., assignor to Accurate Specialties, Inc., Woodside, N.Y., a corporation of New York
Filed Jan. 11, 1960, Ser. No. 1,581
3 Claims. (Cl. 18—48)



1. The method of forming shot using metals having a relatively high melting point comprising the steps of: (1) providing a shot tower and a molten medium having a specific density slightly less than that of said metal, and a melting point above that of said metal; (2) heating said medium to the molten state; (3) passing solid pellets of metal into said medium of a size sufficiently small to permit melting and forming of spherical droplets due to surface tension of the molten metal; (4) allowing said droplets to rest upon the bottom of said medium after formation; (5) cooling said medium to a solid at a temperature below the melting point of said metal; (6) and dissolving said medium in a second medium in which said metal is insoluble to obtain said spheres.

3,019,486
METHOD OF MAKING PLASTIC HINGE
Donald L. Stinson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 20, 1957, Ser. No. 704,037
3 Claims. (Cl. 18—48)



1. A method of forming a flexible joint in a semi-rigid, solid plastic material which comprises as the sole formative step a repeated flexing of the material along a line forming the axis of desired flexibility so that there is formed along said line a reoriented necked-down portion.

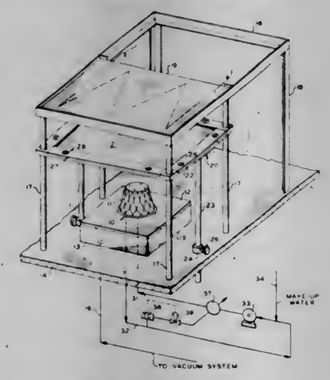
3,019,487
METHOD FOR ROLLING METAL POWDER
Gerhard Naeser, Duisburg-Huckingen, Germany, assignor to Mannesmann Aktiengesellschaft, Dusseldorf, Germany, a corporation of Germany
Filed July 15, 1958, Ser. No. 748,627
1 Claim. (Cl. 18—55)



The method of making compacted strips of metal from metal powder which comprises compressing the metal powder between cylindrical compression surfaces having rounded peripheries to form a compact metal strip having lateral edges while tightly applying opposing thrusts to the lateral edges of the metal powder and compacted

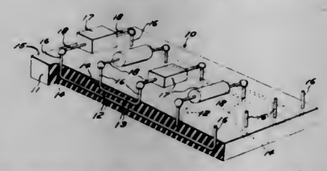
strip throughout the compression operation and withdrawing the end thrusts from each lateral edge of the compacted strip in opposite directions on a plane perpendicular to the direction of the end thrust after the metal powder has been compacted into a strip.

3,019,488
METHOD FOR VACUUM MOLDING POLYMER SHEETS
Robert Doyle, William L. Holt, and Wayne E. Cooper, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed June 16, 1958, Ser. No. 742,331
5 Claims. (Cl. 18—56)



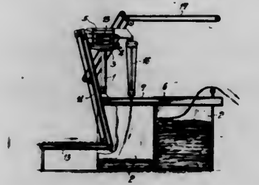
1. In a process in which a sheet of a polymer having a density of at least 0.90 at 25° C. and a crystallinity of at least 80 percent at 25° C. is formed into a molded article by heating the sheet and thereafter pulling the sheet around a mold by evacuating air from between the mold and sheet, the improvement which comprises controlling the temperature of said mold so that its surface temperature is in the range of about 150 to about 230° F. when said sheet initially contacts said mold surface.

3,019,489
METHOD OF MAKING WIRED ELECTRICAL MOUNTING BOARDS
Martin S. Burg, Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 9, 1956, Ser. No. 603,009
2 Claims. (Cl. 18—59)



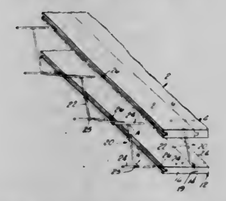
2. The method of making encased electrical circuit panels which comprises, forming U-shaped conductors having parallel legs disposed transversely of the intermediate portions of said conductors and with the legs of some conductors of different length relative to the legs of other conductors, successively placing the conductors into an open mold cavity and selectively placing the legs of the conductors into recesses in the bottom of the mold cavity to mask portions of the legs and to support the conductors with the intermediate portions of selected conductors in predetermined spaced and overlying relation to other conductors, and pouring plastic dielectric molding material into the open mold cavity to form a block of dielectric material around the unmasked portions of the conductors.

3,019,490
APPARATUS FOR PROCESSING TEXTILE FIBERS
Erwin Schütz, Kaiserslautern, Germany, assignor to Kammgarnspinnerei Kaiserslautern, Kaiserslautern, Germany
Filed Jan. 22, 1959, Ser. No. 788,382
Claims priority, application Germany Jan. 25, 1958
2 Claims. (Cl. 19—160)



1. In an apparatus for conveying textile fibers in form of a strand from one processing machine to another processing machine: two substantially parallel rows of containers for temporarily receiving and storing sections of said fiber strand, said rows being arranged one behind the other, a depositing mechanism for depositing fiber strand sections in said containers, said depositing mechanism including a frame structure extending in a direction transverse to said rows and over said rows and also including a carriage supported by said frame structure and movable in the longitudinal direction of said rows, said depositing mechanism also including a single pendulum feeder only supported by said carriage and tiltable back and forth for feeding said strand sections in folds into one of said rows of containers, first conveying means for conveying said fiber strand from said one processing machine to said depositing mechanism for depositing fiber strand sections successively first in one row of containers and after filling the same in the other row of containers, and second conveying means for conveying fiber strand sections from the respectively filled row of containers to the other processing machine.

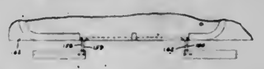
3,019,491
COMPOSITE TRUSS DECK
Arthur L. Troutner, Skyline Drive, Boise, Idaho
Filed Feb. 10, 1958, Ser. No. 714,284
6 Claims. (Cl. 20—1)



1. A composite truss deck structure, comprising a pair of spaced chord members each comprising at least one pair of co-planar wooden boards having contiguous longitudinal edges and having transverse bores in the material thereof extending inwardly therein from the contiguous edges thereof, the bores of one board being aligned with the bores of the other board of the pair, metal shear pins having opposite end portions respectively disposed in the aligned bores and forming metallic connections between the pairs of boards, said pins having

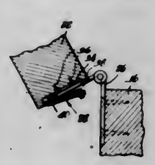
intermediate portions disposed between the contiguous edges of the boards, metal webbing of zigzag configuration connecting the chord members, said webbing defining a series of reverse angles with the apexes of the angles respectively disposed between the contiguous edges of the pairs of boards, and means connecting the webbing at the apexes of the angles thereof to said shear pins, the contiguous edge of at least one board in each pair having indentation means adjacent the outer ends of the bores for accommodating said webbing in the regions of the angle apexes.

3,019,492
DOOR MOUNTING
Alfred F. Schlmek, 601 N. Spring Ave., La Grange Park, Ill.
Filed Sept. 28, 1959, Ser. No. 842,781
15 Claims. (Cl. 20—16)



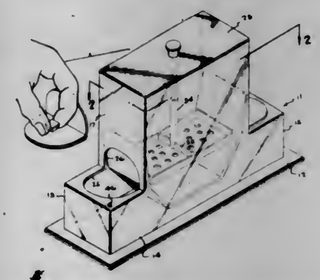
1. A mounting for a door or the like comprising a first track adapted to be secured across a door frame or the like, a second track adapted to be secured across a door or the like in register with the first track, a first arm pivotally and fixedly secured in one end of the first track and pivotally and slidably secured in the second track and a second arm pivotally and fixedly secured to the end of said second track further from said one end of said first track and slidably secured in said first track, said arms being spaced from one another in freely movable adjustable relationship to afford relative axial movement of said tracks.

3,019,493
WEATHERSEAL FOR DOORS
Victor L. Walenga, 14900 Vine Ave., Harvey, Ill.
Filed Feb. 23, 1960, Ser. No. 10,505
7 Claims. (Cl. 20—67)



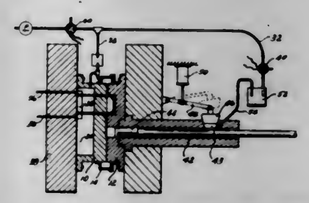
1. A weather sealing structure for doors and the like comprising hinge means including first leaf means mountable on a narrow peripheral edge of a door supported within a door frame and the like and second leaf means pivotally connected to and overlying said first leaf means and said narrow peripheral edge with the pivotal axis of the connection between said leaf means being disposed for extending longitudinally of said edge of the door for entry into a space between confronting portions of said edge and the door frame when the door is closed, elongated means mounted on said second leaf means for extending longitudinally of said edge of the door and for entry into said space when the door is closed, said elongated means including a relatively rigid member, a first resilient sealing element along a first margin thereof disposed adjacent an outer margin of said second leaf means for sealingly engaging the door frame and the like when the door is closed, and a second resilient sealing element disposed along a second margin of said relatively rigid member adjacent the pivotal connection between said first and second leaf means for sealingly engaging said edge of the door.

3,019,494
STERILIZER FOR BARBERS' IMPLEMENTS
Harry T. Hogle, 327 Kinapai St., Honolulu, Hawaii, and Teodolfo U. Tabios, % Biltmore Barber Shop, 2424 Kalakaua Ave., Honolulu, Hawaii
Filed June 26, 1959, Ser. No. 823,111
1 Claim. (Cl. 21—87)



A sterilizer for barbers' implements comprising a horizontally elongated main container of non-circular horizontal cross section and of substantial height open at its top end and having upstanding walls, said container being adapted to receive sterilizing liquid, an elongated top cover having a peripheral recess adapted to receive the top rim of said main container, an apertured elongated horizontal tray slidably and non-rotatably fitting in said main container, said tray being formed with apertures to supportingly receive portions of barbers' implements, a depending threaded stud member rigidly secured to the intermediate portion of said top cover, and an upstanding internally threaded sleeve member rigidly secured to the intermediate portion of said tray and threadedly receiving said stud member, whereby the tray may be at times elevated by lifting the top cover, whereby said top cover may be at times rotated to a transverse position with respect to said tray to provide access to said tray, and whereby the tray may be vertically adjusted by rotating said top cover.

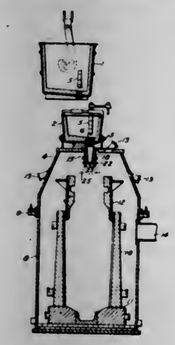
3,019,495
DIE CASTING
Robert C. Cornell, Jackson, Mich., assignor to Litemetal Dicast, Inc., Jackson, Mich., a corporation of Michigan
Filed May 28, 1958, Ser. No. 738,456
12 Claims. (Cl. 22—68)



1. A method of pressure diecasting of molten metal in a cold chamber type of machine in which the molten metal is first delivered to the cold chamber through an opening in the cold chamber and then mechanically transferred therefrom to the die under pressure comprising the step, following the delivery of molten metal into the cold chamber, of evacuation of the cold chamber in a direction counter to the direction of mechanical transfer of the molten metal into the die and through the opening through which the molten metal is delivered into the cold chamber.

10. A machine for the pressure die casting of molten metal of the cold chamber type in which molten metal is first delivered to said cold chamber and then mechanically transferred to the die under pressure comprising a die, a cold chamber, means movable in said chamber to transfer molten metal from said chamber to said die, an opening defined in said chamber for the delivery of molten metal to said chamber means defining a passage communicating with said opening, means for closing said opening to the ambient atmosphere, and means for evacuating said chamber and said passage between said chamber and opening closing means.

3,019,496
VACUUM CASTING APPARATUS
Henry C. Bigge, Bethlehem, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Oct. 27, 1958, Ser. No. 769,624
11 Claims. (Cl. 22—73)

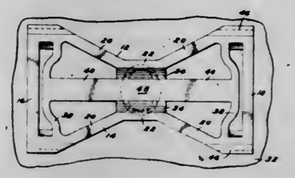


1. Apparatus for guiding molten metal into a vacuum chamber, said apparatus comprising a refractory funnel set into a metal retaining cylinder, said retaining cylinder being fastened to the top of said vacuum chamber and extending down into said vacuum chamber, a retaining ring attached to said retaining cylinder and supporting said refractory funnel, and a plurality of depending metallic members fastened to said retaining ring, whereby to retain a cone of solidified metal formed during pouring of said molten metal into said vacuum chamber.

3,019,497
MAKING FINE GRAINED CASTINGS
Robert A. Horton, Dover, N.J., Richard L. Ashbrook, La Porte, Ind., and Roy C. Feagin, Mountain Lakes, N.J., assignors, by mesne assignments, to Howe Sound Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 21, 1958, Ser. No. 775,345
9 Claims. (Cl. 22—196)

1. The method of making a fine grained casting which comprises applying a nucleation catalyst to the surface of a pattern, forming a mold about the pattern to which such catalyst has been applied, removing the pattern from the mold while leaving at least a portion of the nucleation catalyst to define at least in part the surface of the mold, said portion of the nucleation catalyst being securely bonded to the mold, introducing a melt into said mold to form a casting therein without incorporating any substantial amount of catalyst from the mold into the casting, whereby the casting consists essentially of the original melt material, and removing the casting from the mold without there being any essential transfer of catalyst material from the mold wall into the casting.

3,019,498
DEFORMABLE PLASTIC FASTENER
Robert L. Brown, Ferndale, Mich. (Robin Products Co., 27027 Groesbeck Highway, Warren, Mich.)
Filed Dec. 3, 1959, Ser. No. 857,072
14 Claims. (Cl. 24—73)



1. A fastener comprising a base member having means forming an apertured expandable lug depending from the lower face thereof, said lug being adapted to extend through an opening in a panel on which the base member is seated and expanded to lock the fastener to the panel, said lug being located intermediate the opposite ends of said base, said base having adjacent each of said opposite ends a transversely extending, readily laterally deformable rib, an expanding plug located above and in axial alignment with the expandable lug, and a pair of struts each connected at one end to one of said ribs and at the other end to said plug, said struts being relatively rigid in axial direction and inclining upwardly and inwardly from the plane of said base to said plug whereby the length of said struts measured from said rib to the axial center of the plug is greater than the distance between each rib and the axial center of said apertured plug, said struts being bendable at their connection with said plug and ribs.

3,019,499
FASTENER
Roy E. Peckham, Detroit, Mich., assignor to Robert L. Brown, Ferndale, Mich.
Continuation of application Ser. No. 526,934, Aug. 8, 1955. This application Dec. 3, 1959, Ser. No. 857,222
3 Claims. (Cl. 24—73)



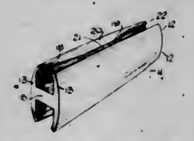
1. A sheet metal fastener comprising a body portion formed of a malleable and readily permanently distortable metal, said body portion having a pair of opposed tabs struck in their entirety from separate areas spaced inwardly from and circumscribed by a continuous peripheral edge portion of the body portion, said tabs each comprising a first leg portion struck upwardly from the body portion and connected therewith along a bend line and a second leg portion underlying the first leg portion and connected therewith by a return bend, the second leg portion of each tab extending below the level of the body portion and being bent along corresponding lines below the level of the body portion outwardly away from one another and being spaced apart a distance less than the spacing between said return bends, said tabs being wider adjacent said bend lines than at said free ends and the side edges thereof tapering inwardly toward each other from the bend lines to said return bends, said bend lines being spaced apart in generally parallel relation and the metal therebetween lying generally at, as distinguished from below, the level of the body portion, said body portion having rib means thereon extending along and adjacent opposite sides of the openings formed by said struck out tabs and said metal extending between said bend lines to impart substantial rigidity to said body

portion at the area thereof adjacent said tabs and the metal between said bend lines whereby the fastener may be positioned against an apertured panel with the free ends of the tabs extending through an aperture in the panel and the first leg portions may be gripped between the jaws of a squeezing tool and squeezed together to bend the tabs about said bend lines to thereby spread the free ends of the tabs apart and upwardly into tight engagement with the edges of the aperture.

3,019,500
KEEPS FOR KNITTING NEEDLES OR OTHER ROD-LIKE ARTICLES

Bernard George Duffin, Headless Cross, Redditch, and Norman Thomas Sanders, Mappleborough Green, Studley, England, assignors to Needle Industries Limited, Warwick, England, a British company

Filed Nov. 24, 1958, Ser. No. 775,845
Claims priority, application Great Britain Dec. 3, 1957
2 Claims. (Cl. 24—81)

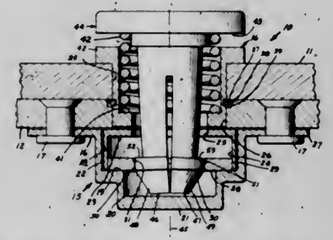


1. A keep for a set of rod-like articles comprising a body formed of an elastically deformable plastic material and including a plurality of channel forming portions of substantially greater length than depth each having opposed side walls and a mouth, a core portion common to each of said channel forming portions and integrally connected with said side walls thereof to form a bottom wall to each channel, and each pair of opposed side walls incorporating at the mouth of the channel defined thereby respective integral ribs of generally triangular shape in cross-section in a plane perpendicular to the length of the channel the bases of said ribs being integrally united with the remaining portions of their respectively associated side walls, said ribs having inner and outer side faces which mutually convergent and divergent in a direction from the central region of the channel to the ends of the channel, the inner and outer side faces of each said rib meeting at a ridge which is situated in the channel and is convexly bowed lengthwise of the channel, the ridges of each pair of associated ribs having their minimum separation in the central region of the length of the channel.

3,019,501
FASTENER

Edmund J. Kraus and Robert A. Kraus, Gardena, Calif., assignors to Kirk-Wing Company, Vega Baja, Puerto Rico, a corporation of Puerto Rico

Filed Aug. 13, 1959, Ser. No. 833,598
2 Claims. (Cl. 24—213)

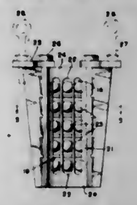


1. A fastener for joining two objects together comprising: a retainer adapted to enter into and engage the walls of aligned holes through said objects, and including an interior opening, an interior shoulder, an exterior flange, and an exterior snap-ring groove, and a snap-ring in said groove, whereby said retainer is attachable to a first of said objects by engagement between the exterior flange and the snap-ring; a plunger having a central axis, and passing through said retainer, said plunger including a stem with an enlarged head at one end thereof, the other end of said plunger being split to form a plurality of spring-like prongs which are bent outwardly from the said axis, the end of each of said prongs having a tapered section, a substantially cylindrical section adjacent to said tapered section, and a catch shoulder on the other side of the cylindrical section from the tapered section; bias spring means disposed between the interior shoulder of the retainer and the enlarged head of the plunger, biasing the head of the plunger away from the retainer; a receptacle attached to the second of said objects, said receptacle having an inner wall; an insert within said receptacle and having an outer wall of lesser respective lateral dimensions than said inner wall so as to be laterally shiftable therein, at least one of said dimensions being greater than a corresponding dimension of the hole in the adjacent object, so that the insert is prevented from passing into said hole; a first shoulder on said insert extending inwardly from said outer wall and having an aperture therein; a substantially cylindrical inner wall inside said insert extending away from the first shoulder; a second shoulder on said receptacle adjacent to said cylindrical inner wall; and an unyielding annular release member having an opening therethrough, said release member being disposed inside said insert and reciprocable between the said first and second shoulders, whereby, with the receptacle in the holes in the objects in substantial alignment with the receptacle, the plunger may be pressed past the first shoulder so that the catch shoulders hook over the said first shoulder, and whereby another push on the pushbutton forces the prongs into the release member, where they are engaged and compressed, and the bias spring then backs off the plunger so that it carries the release member until it strikes the first shoulder, thereby releasing the prongs from engagement therewith, the prongs thereby passing through the first shoulder to detach the plunger from the receptacle, the insert being laterally shiftable to compensate for misalignments between the receptacle and retainer.

3,019,502
LOCKING DEVICE FOR OIL WELL DRILL RODS OR PIPES

John M. Walker, Jr., P.O. Box 147, Houma, La., assignor of one-fourth to Henry J. Frost, Thibodaux, one-fourth to Jack L. Murphy, Houma, and one-fourth to Edmond L. Deramee, Jr., Thibodaux, La.

Filed July 23, 1958, Ser. No. 750,518
6 Claims. (Cl. 24—263)



1. A locking device for holding pipes or rods in wells including a housing anchored on a support at the locus of the well opening, and a cage mounted in the housing in concentric relation to the pipe or rod to be supported, the cage comprising inner and outer shells, the inner shell being provided with elongated openings, there being annular recesses formed in the outer shell, the wall of each of which is canted, and sets of ball bearings mounted at intervals in the annular recesses, the bearings being of uniform size and protruding through the elongated openings of the inner shell for surface contact with the well pipe or rod, each bearing of each set being bodily movable inwardly along the canted wall of each annular recess to exert a locking force on the pipe or rod passed through the cage.

3,019,503
WATCH BRACELET

Oscar F. Placco, Paul E. Stone, and Frank P. Keyes, Albuquerque, N. Mex., assignors to Bell Trading Post, Ltd., a limited partnership of New Mexico

Filed July 11, 1958, Ser. No. 747,886
2 Claims. (Cl. 24—265)

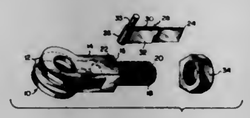


1. For use in mounting and securely retaining a wrist watch atop a flat median portion of a split-type wrist embracing band, a pair of adapters designed and adapted to be affixed to the exterior surface of the band at the respective ends of the flat median portion, each adapter embodying a one-piece clip embodying a clip proper horseshoe-shaped in plan, and a companion covering and concealing shield, said clip embodying coplanar arms having free ends connectible with sockets and extensions provided at a cooperating end of a wrist watch, like ends of said shield and clip being integrally connected together by a bendable joint, said joint permitting the shield to be moved to an out-of-the-way position to connect the clip with the watch extension, then bent back to a position in which the clip is virtually covered and concealed by the shield.

3,019,504
TAPE AND TERMINAL FITTING ASSEMBLY

Ernest M. Castagliuolo, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Apr. 29, 1959, Ser. No. 809,769
2 Claims. (Cl. 24—265)

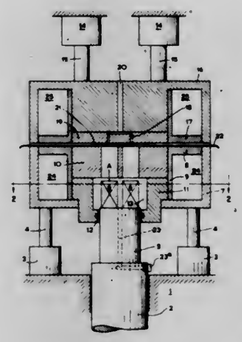


2. A tape and terminal assembly comprising, an elongated fitting having a connecting portion at one end for connecting the assembly to associated apparatus, a threaded shank of substantially uniform diameter at the opposite end, a neck portion at its medial region having a transverse aperture therethrough, and a shoulder at the inner end of said threaded shank and normal thereto, said shank having a transverse axial slot extending from the end thereof into said aperture and forming the shank into flexible gripping portions, said aperture being of larger dimension than the width of said slot, a tape having an end portion in said slot and an enlarged end eye portion in said aperture, and a locknut threaded on said shank and surrounding said end portion to retain it in said slot, and wherein tightening of said locknut against said shoulder is accompanied by a reaction force to cause said gripping portions to flex into gripping engagement with said end portion of said tape.

3,019,505
PRESS PROVIDED WITH AT LEAST ONE DIE FOR MOULDING PRODUCTS FROM CERAMIC MATERIAL

Hendrik Jan van den Berge, Nico Bliek, Johannes Jochem Willem Geleijnse, and Adrianus Theodorus van der Maat, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Dec. 18, 1958, Ser. No. 781,298
Claims priority, application Netherlands Jan. 3, 1958
8 Claims. (Cl. 25—45)



1. A press for moulding ceramic products in a mould open on both ends comprising a plunger reciprocating through one end of said mould, a closing member adjacent to the other end of said mould, said closing member being provided with apertures forming a complete passage through said closing member, a filter interposed between said closing member and said mould a space in said press communicating with said mold, duct means in said plunger extending longitudinally thereof and opening into said space, through which ceramic material is fed as a liquid suspension to completely fill said space and said mold, means to move said mold to reduce the volume of said space and thereby concentrate the suspension in said mold prior to the molding operation proper, said apertures being the means for discharging the liquid during said mold movement and the moulding operation proper, said mould during the moulding operation being closed at one end by said plunger and at the other end by said filter.

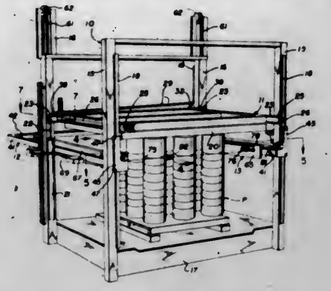
3,019,506
CUTTING APPARATUS

Frank S. Pearne, Los Angeles, Calif., assignor to Pearne and Lacy Machine Company, Inc., Los Angeles, Calif., a corporation of California

Filed Mar. 9, 1960, Ser. No. 13,854
7 Claims. (Cl. 25—108)

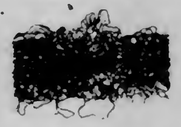
4. Apparatus for cutting elongated objects into sections comprising a frame, said frame including spaced, upright posts secured to a base; a clamping board guided on said posts for reciprocation toward and away from said base; reversible fluid actuators fixed to said posts and connected to said clamping board; an elevator, said elevator including spaced side bars extending between said posts, said side bars being reciprocally guided by said posts for movement between said frame base and said clamping board; first reversible motor drive means drivingly connected between said posts and said elevator; a wire carriage mounted on said elevator for reciprocation transverse to its path of movement, said carriage including side plates adjacent to and parallel with said

side bars of said elevator, and a cutting wire extending between said side plates; and second reversible motor



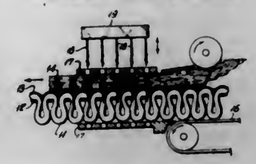
drive means drivingly connected between said elevator and carriage.

3,019,507
METHOD OF MAKING BULKY CONTINUOUS FILAMENT YARNS OF ISOTACTIC POLYOLEFINS
Domenico Maragliano and Francesco Denti, Milan, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy
Filed Apr. 9, 1958, Ser. No. 727,398
Claims priority, application Italy Apr. 11, 1957
7 Claims. (Cl. 28—72)



1. The process comprising the steps of forming a yarn of smooth, continuous melt-extruded filaments of a fiber-forming polymeric higher alpha-olefin consisting prevailingly of isotactic, crystallizable macromolecules, heating the yarn at a temperature between 20° C. and 80° C. while stretching it at the maximum safe rate for the given temperature between 20° C. and 80° C. by feeding it through a stretching zone at the rate of 30 to 150 meters/minute and stretching it with a stretch ratio between 1:2.5 and 1:5.5 to introduce into the individual filaments of the yarn internal strains which are irregularly distributed along the lengths of the individual filaments, abruptly introducing the yarn of stretched, irregularly strained filaments into a medium in which it is heated rapidly, without the application of tension thereto, to a temperature between 50° C. and the melting point of the polymeric alpha-olefin and selected in dependence on the stretching temperature to release the strains introduced into the filaments by the stretching, the release of the irregularly-distributed internal strains resulting in the formation of crimps in the individual filaments which crimps are irregularly distributed along the length of the filaments with their loops disposed in different planes, and the crimps in the different filaments serving to separate the individual filaments of the yarn from each other and provide air spaces between the crimps which contribute to the bulkiness, lightness and insulating capacity of the yarn, the bulky yarn being further characterized in that the orientation of the crystallites of the polymeric alpha-olefin resulting from stretching of the smooth continuous filaments is substantially retained in the crimped filaments, and the yarn consisting of the crimped filaments has substantially the same tensile strength as the stretched and oriented yarn prior to the relaxation of the strains and crimping.

3,019,508
CUSHIONED CARPETING AND METHOD OF MAKING THE SAME
Henry A. Reinhardt, Bryn Mawr, Pa., and David B. Parlin, Thompsonville, Conn., assignors to Bigelow-Sanford, Inc., a corporation of Delaware
Filed Oct. 17, 1958, Ser. No. 767,949
9 Claims. (Cl. 28—72.2)



9. In a cushioned carpet of the type having pile elements carried by a backing formed from woven strands, said pile elements extending from one face of the backing and a cushioning pad of fibrous material extending over and being removably attached to the other face of the backing, the improvement which comprises fibers from the pad extending through the backing and terminating adjacent the base of the pile elements carried thereon, said pile elements passing through openings in the backing without severing the strands thereof and being removable from said openings upon separation of the pad from the backing.

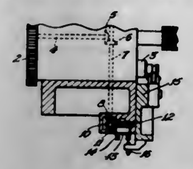
3,019,509
CRIMPED REGENERATED CELLULOSE FIBERS
Norman Louis Cox and William Dickson Nicoll, Wilmington, Del., assignors, by mesne assignments, to Beaunit Mills, Incorporated, a corporation of New York
Original application May 21, 1954, Ser. No. 431,576, now Patent No. 2,852,333, dated Sept. 16, 1958. Divided and this application Feb. 25, 1958, Ser. No. 717,319
10 Claims. (Cl. 28—82)



1. A regenerated cellulose filament having a smooth surface and a substantially non-crenulated cross-section, and a curly crimp which, after mechanical removal, is substantially restored by wetting the tension-free filament with an aqueous liquid, said filament having a thick skin of substantially uniform thickness comprising at least 50% of the filament cross-section by radial measurement, a core, and a diffuse boundary between said skin and said core.

3,019,510
MULTIPLE-SPINDLE AUTOMATIC LATHES
Charles Albert Bischoff, Paris, France, assignor to Societe des Etablissements Malicet & Blin, Aubervilliers, France
Filed May 24, 1960, Ser. No. 31,449
Claims priority, application France July 21, 1959
3 Claims. (Cl. 29—65)

1. In a multiple-spindle automatic lathe having a frame, a revolving head rotatably mounted in said frame and wherein are rotatably mounted, about axes parallel to the axis of rotation of said revolving head and spaced on a circle, a plurality of workpiece-carrying spindles, a plurality of tool-carriers in equal number to said spindles and mounted on said frame for transverse movement in a direction at right angles with the axis of said revolving head, the latter being adapted to be rotated stepwise so that each spindle in turn comes successively in working relationship with each tool-carrier, in combination, a rotating member, for each tool carrier, carrying circumferentially spaced, axially adjustable stops, and mounted for rotation about an axis parallel to the direction of movement of the tool-carrier, the number of said stops being equal to the number of spindles on the revolving head, means for rotating said stop-carrying member stepwise



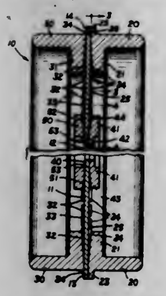
and synchronously with the revolving head so as to bring each stop in turn in axial alignment with a single cooperating adjustable stop mounted on the corresponding tool-carrier, said stop-carrying member bearing transversely on the machine frame in the direction of the feed motion of the tool-carrier.

3,019,511
CROWNED ROLL
Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Feb. 15, 1961, Ser. No. 89,528
9 Claims. (Cl. 29—130)



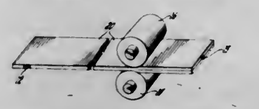
1. A roll whose axis is subject to deflection in response to a load applied to the roll, said roll comprising an outer shell formed of a material having a relatively low coefficient of thermal expansion, an inner shell rigid with the outer shell and formed of a material having a relatively higher coefficient of thermal expansion, and means for heating the inner shell, the ratio of cross-sectional area of the inner shell to the outer shell being greater at the center of the roll than at the ends thereof, whereby heating of said inner shell effects maintenance of a greater outer peripheral dimension for the outer shell at the center than at the ends thereof.

3,019,512
JOINT CONSTRUCTION
Edward A. Stalker, 409 1st St., Bay City, Mich.
Filed Sept. 3, 1957, Ser. No. 681,844
9 Claims. (Cl. 29—156.8)



1. In the process of uniting adjoining surfaces of separate components to join the components into an integral structure the steps comprising, forming an annular capillary space of tapering thickness in the longitudinal direction and of substantially uniform thickness in the peripheral direction transverse of the direction of tapering thickness to provide said space with greater capillarity in the transverse direction than in the longitudinal direction, and introducing bonding material adapted to be rendered fluid by heat into said space at the end of least thickness to cause distribution of said bonding material throughout the entire peripheral extent of said space before the material flows into said space in the longitudinal direction.

3,019,513
METHOD OF MANUFACTURE
James R. Hornaday, Jr., Royal Oak, Charles W. Vigor, East Detroit, Clarence J. Tobin, Detroit, and James C. Holzwarth, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 22, 1958, Ser. No. 737,000
7 Claims. (Cl. 29—157.3)

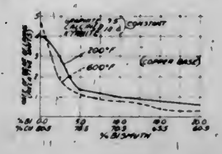


7. In a process for manufacturing a stainless steel article having integral passages therein, said stainless steel having a nominal composition of about 16% to 18% chromium, about 10% to 14% nickel, about 2% to 3% molybdenum, about .1% maximum carbon, about 2% maximum manganese, about 1% maximum silicon and the balance substantially iron, the steps comprising providing at least two said stainless steel plates, cleaning the plate surfaces, applying a stop-weld material over portions which are not to be bonded of one of said plates, superimposing the other plate over the first-mentioned plate whereby the stop-weld material is sandwiched between said plates, bright annealing the assembled plates in a dry purified hydrogen atmosphere at a temperature ranging from about 1800° F. to 2100° F. for a period of time sufficient to thoroughly soften the sheets and remove the oxides thereon, cold rolling the sheets to at least a 50% reduction in cross section, subjecting the assembly to a second bright annealing operation in a dry purified hydrogen atmosphere within a temperature range of 1800° F. to 2100° F. for a time sufficient to stress relieve the structure and promote diffusion bonding between the plates, then subjecting the assembly to a second cold rolling operation involving at least a 30% reduction in cross section based on a thickness of the assembly resulting from the first cold rolling operation, then again annealing the structure in a dry purified hydrogen atmosphere within a temperature range of 1800° F. to 2100° F. for a time sufficient to stress relieve the structure and promote diffusion bonding and homogeneity of the structure throughout the portions of the cross section of the assembly which are bonded, and then subjecting the portions of the structure which are not to be bonded to hydraulic pressure, whereby these portions are expanded to form passages.

3,019,514
FRICTION LINING FOR BRAKES, CLUTCHES AND THE LIKE
Roy E. Bickelhaupt, Urbana, Ill., and James F. Masterson, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 862,950
19 Claims. (Cl. 29—182.5)

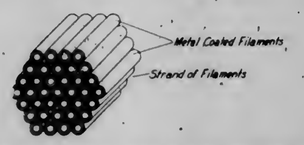
1. A sintered friction composition for brakes, clutches and the like consisting essentially of: between about 40%

and about 85% of metallic matrix selected from the group consisting of iron, copper, antimony, nickel, zinc, and tin; from about 4% to about 10% of finely divided graphite dispersed throughout said matrix and characterized by intimate association therewith; between about 5% and about 10% of lead, between about 3% and about



20% of bismuth to promote the wear life of said article; and, between about 4% and about 40% of a ceramic friction producing material, said composition being characterized by the formation of a wear resistant glaze when rubbed with another surface in the presence of iron at elevated temperatures.

3,019,515
METAL COATED GLASS FIBERS
Harry B. Whitehurst and William H. Otto, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Original application Nov. 10, 1953, Ser. No. 391,184, now Patent No. 2,848,390, dated Aug. 19, 1958. Divided and this application Nov. 21, 1957, Ser. No. 697,895
5 Claims. (Cl. 29—195)

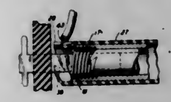


1. Glass fibers coated with a high melting point metal comprising fibers having an inner coating of a metal which has a melting point of from about 100° F. to about 1500° F. selected from the group consisting of tin, bismuth, cadmium, lead, zinc, indium, antimony, magnesium, aluminum and alloys of these, and an outer electrodeposited metallic coating having a melting point greater than that of the inner coating metal, the outer coating being one selected from the group consisting of stainless steel, copper, iron, brass, chromium, silver, cadmium, indium and nickel.

3,019,516
METHOD OF FORMING A PROTECTIVE COATING ON MOLYBDENUM
James C. Holzwarth, Birmingham, James R. Hornaday, Jr., Royal Oak, and Charles W. Vigor, East Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed May 13, 1959, Ser. No. 813,034
12 Claims. (Cl. 29—198)

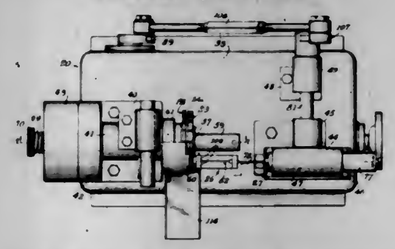
7. A process for forming a ductile, high temperature oxidation-resistant coating on a molybdenum base metal article which comprises cleaning surfaces of a molybdenum base metal article, electroplating a relatively soft, crack-free layer of chromium on said article to a depth of about 0.5 mil to 4 mils, flame spraying a porous overlay of a metal powder on said chromium plate in an amount equal to approximately 0.1 to 0.15 gram per square centimeter, said powdered metal comprising about 15% to 50% chromium and the balance substantially all nickel, sintering said overlay in a substantially dry hydrogen atmosphere at a temperature of about 1700° F. to 3000° F., flame spraying a powdered alloy comprising approximately 10% to 20% chromium, 0.5% to 6% boron and the balance principally nickel on said overlay in an amount equal to about 0.1 to 0.15 gram per square centimeter, and thereafter heating said article in said atmosphere at a temperature of approximately 1800° F. to 2250° F. to melt the nickel-chromium-boron alloy and cause it to penetrate into the pores of said overlay, and continuing to heat said article to reduce local boron concentration gradients in the resultant coating by solid state diffusion.

3,019,517
WIRE UNWRAPPING TOOL
Albert J. Lovecky, Flushing, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 17, 1958, Ser. No. 715,736
7 Claims. (Cl. 29—203)



1. A tool for unwrapping a wrapped wire connection from a terminal comprising an unwrapping and ejecting shaft having at one end means for engaging a wrapped wire connection and a passageway for receiving a terminal, a sleeve enclosing said shaft, means coupling said shaft to said sleeve to limit axial movement of the shaft with respect to the sleeve, a handle enclosing the other end of said shaft and secured to the sleeve, a plunger that slides within said handle being attached to the other end of said shaft, and biasing means secured to said sleeve and acting against the plunger to withdraw the one end of the shaft within the sleeve.

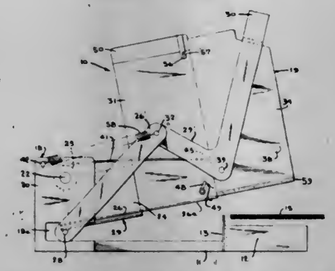
3,019,518
BLIND PULL RIVET ASSEMBLY MACHINE
Raymond O. Wilson, San Marino, Calif., assignor to Olympic Screw & Rivet Corporation, Downey, Calif., a corporation of California
Filed June 1, 1959, Ser. No. 817,163
11 Claims. (Cl. 29—211)



1. In a machine for assembling pins into sleeves having heads at one end, an intermittently moving index disc having a plurality of uniformly spaced seats in the periphery thereof, a back-up disc fixedly connected to the index disc and having its peripheral portion spaced from the index disc and from the seat therein, a chute to gravitationally feed sleeves in a direction toward the edge of said disc, one at a time, with the heads on the sleeves freely entering and being disposed in the space between the discs, said space being greater than the thickness of the sleeve heads and the sleeves, thereby, being movable endwise in their seats until said heads encounter the back-up disc, a pin-feeding chute, means to displace pins from the end of the latter chute and introduce them into said sleeves from the ends thereof that are opposite to the sleeve heads, said pins and sleeves engaging to slide the sleeve to bring

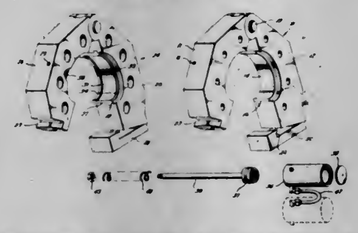
the heads thereof against the back-up plate during such introduction of pins into the sleeves, and means to operate the pin-displacing means when the index disc is at rest.

3,019,519
CLIP DESIGN MECHANISM
Frederick L. Guarino, 260 Arlington St., Mineola, N.Y.; Henry Gervais, 85 Searington Road, Manhasset, N.Y.; and Daniel Vlahov, 256 Arlington St., Mineola, N.Y.
Filed Jan. 22, 1959, Ser. No. 788,346
2 Claims. (Cl. 29—212)



1. A device for attaching a clip to a pile of papers, comprising a base member having a raised, recessed forward platform, said platform having opposed tracks for holding and guiding said clip, a depressible upper member pivoted to the base member, spring tensioned means interconnecting the base and the upper member for normally keeping the forward end of the upper member normally raised from the base member, track guide means on said upper member, thrusting means movable along said track guide means, means for guiding a clip forwardly toward the platform, linkage means in connection with said thrusting means for actuating the same upon depression of the upper member, a housing in said upper member for accommodating a pile of wire clips therein, and means athwart the track guide means for depressing a portion of the clip as the same is being thrust to clip a pile of papers on said platform.

3,019,520
PIPE CRIMPING APPARATUS
Kenneth C. Woolley, Houston, Tex., assignor to Tex-Tube, Inc., Houston, Tex., a corporation of Texas
Filed Jan. 23, 1961, Ser. No. 84,273
7 Claims. (Cl. 29—234)



1. Apparatus for crimping together sections of belled end pipe comprising, fixed annular split die means having an inner diameter substantially equal to the outer diameter of the pipe to be crimped and having an endwise facing annular shoulder for engaging the root of the bell of a pipe to be crimped, means for pivotally securing the split sections of the fixed die means together, latch means for releasably securing the free ends of the fixed die means together when placed about a pipe to be crimped, movable annular split die means having an internal cylindrical section of a diameter between the outer diameter of a pipe to be crimped and the outer diameter of the bell end of said pipe, said movable die means having an outwardly curved throat radius section commencing at one end of the cylindrical section and extending outwardly to a diameter greater than the outer diameter of the bell end of the pipe to be crimped, means for pivotally securing the split section of the movable die means together, latch means for releasably securing the free ends of the movable die means together when placed about the pipe to be crimped, and means for moving said movable die means toward said fixed die means.

3,019,521
CYLINDER HEAD ALIGNING MEANS
James T. Clark, Fort Morgan, Colo., assignor to Clark-Feather Manufacturing Co., Fort Morgan, Colo., a corporation of Colorado
Filed July 2, 1959, Ser. No. 824,541
1 Claim. (Cl. 29—283)

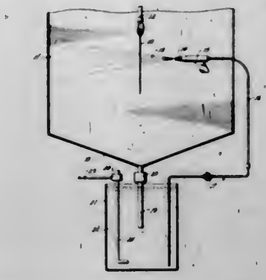


Means for aligning and holding cylinder heads and cylinder head gaskets in place on a cylinder block having threaded cap screw sockets comprising: a removable cylindrical plug having a smooth outer surface, the lower portion of said plug having a diameter to fit closely within one of said threaded screw sockets and the upper portion of said plug having a larger diameter substantially equal to the root diameter of the threads in said socket so that it cannot enter therein; a cylindrical cavity formed in said upper portion opening to the top thereof; an inwardly extending hooked flange surrounding the opening of said cavity for receiving a withdrawing tool for lifting said plug from said threaded cap screw sockets after the cylinder head and gaskets have been placed on said cylinder block.

3,019,522
REFORMATION OF METALLIC SURFACES
John M. Bluth, 901 E. Walnut St., Burbank, Calif., and Jacob L. Sellers, 1108 Lemp Ave., North Hollywood, Calif.
Filed June 23, 1958, Ser. No. 743,661
17 Claims. (Cl. 29—552)

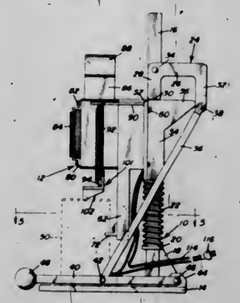
1. The method of reforming a metallic work piece surface containing contiguous microscopic irregularities, the metal being of the class consisting of steel, aluminum, titanium, manganese, carbide cermets, brass and alloys of iron, nickel, chromium, beryllium and magnesium, that includes blasting said surface with a dispersion in a carrier liquid of solid particles which are substantially free from angular abrasive surface shapes and consist essentially of substantially spherical glass beads in the size

range of about 0.003 to 0.032 inch, said carrier liquid being composed of water and an essentially non-foaming organic water soluble bead dispersing agent, and



thereby displacing the metal to give rounded contour to relatively sharp irregularities and resultant increased regularity to said surface while maintaining substantially constant the tolerances of the work piece.

3,019,523
SOLENOID OPERATED CAN OPENER
Hilton H. Eady, Rte. 1, Franklin, Ga., assignor of fifty percent to James N. Register, Warner Robins, Ga.
Filed May 3, 1960, Ser. No. 26,614
4 Claims. (Cl. 30—4)



1. A can opener comprising a base, an upstanding standard rigid with said base, a can opener head slidably mounted on said standard for varying the vertical position thereof, said head including a solenoid having a vertically movable core, can opening means mounted on the lower end of the core for opening the top of a can when the core is forced downwardly when the solenoid is energized, and switch means mounted on the base, said switch means being disposed in an electrical circuit for the solenoid and normally being open for retaining the solenoid in deenergized condition, said switch means including an operating member disposed for engagement by the can when placed on the base thus closing the circuit and energizing the solenoid for automatically opening the can, said plunger in the switch being spring biased to an open position when the can is moved away from the switch thus deenergizing the solenoid, said solenoid including spring means interconnecting the core and the body thereof for retracting the core when the solenoid is deenergized, manually operated lever means connected between said head and said base for manually operating said head vertically and selectively manually locking it in one of a plurality of vertically spaced positions.

3,019,524
CAN OPENER
Richard H. Taves, 10611 W. Nevada Ave., Melrose Park, Ill.
Filed Oct. 6, 1960, Ser. No. 61,018
2 Claims. (Cl. 30—6.1)

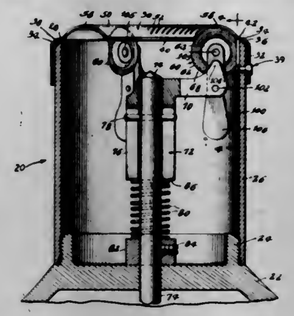


1. A piercing tool for forming dispensing and air vent openings in a can top having a double seam about the top periphery thereof, comprising: a body formed from a single sheet of metal material and including a flat body portion serving as a handle, a hook portion at one end of the body portion lying in an upwardly inclined angle relative to the body portion, said hook portion having near its terminus a hook member of a fixed radius with an outer lateral edge struck therefrom and extending radially downwardly and inwardly towards the intermediate portion adjacent thereto, said hook member adapted to anchor beneath the double seam of a can top to be punctured, said flat body portion adapted to extend over the can top and having a relatively small triangular shaped vent piercing member struck therefrom at the juncture thereof with the inner end of said hook portion, said vent piercing member extending downwardly at an obtuse angle relative to said handle portion and normal relative to said hook portion, said vent piercing member adapted to pierce the top and prevent lateral movement of the tool and accidental removal of the said hook member from the can top seam, the opposite end of said handle portion having a relatively large discharge piercing member with a pointed free end integrally secured thereto and extending downwardly from the same side of said body portion as said hook member, said discharge piercing member being so located on the body portion so as to penetrate the can top near the periphery thereof and is so shaped that it bears against and rolls the metal away from the periphery of the can top and towards the center of the can forming a venturi between it and the vertical wall of the can adjacent the discharge opening, whereby liquid may be poured from the can without interference by the indented metal material, the lateral edge of said hook member, the apex of said vent piercing member, and the pointed end of said discharge member terminating in a common plane parallel to and below the plane of the hook portion and below the plane of the handle portion and inclined downwardly relative to the plane of said handle portion effecting piercing of the can top with relatively little strain on the handle portion during its use by the operator.

3,019,525
SHEAR PLATE AND CUTTER ASSEMBLY FOR ROTARY TYPE DRY SHAVER
John Bruecker, 1100 N. Verdugo Road, Glendale, Calif.
Filed June 29, 1960, Ser. No. 39,591
5 Claims. (Cl. 30—43)

1. In a shearing head for dry shavers of the rotary type, in combination, a generally circular shear plate provided with a lateral concavo-convex torus, said torus being formed with a first row of elongated spaced slots having parallel shearing edges and disposed on one side of the torus crest, and a second row of similar slots on the other side of the torus crest, the longitudinal axes of the slots of each row being parallel, the slots of the two rows being arranged in radially aligned pairs with the longitudinal axes of the slots of each pair extending at an obtuse angle

to each other, a cutter movably mounted for circumferential sweeping movement around the inside concave face of said torus and having an arcuate cutting edge shaped



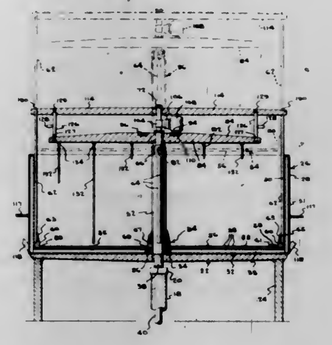
conformably to the cross sectional curvature of said concave face, and means for effecting revolution of said cutter about the longitudinal axis of the torus.

3,019,526
MEMBERS HAVING A METAL PART SECURED TO A WOODEN PART
Harry Beckham Randolph, 16 Pall Mall, London, England
Filed Jan. 20, 1960, Ser. No. 3,521
4 Claims. (Cl. 30—341)



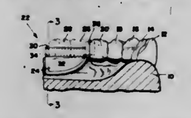
1. Garden shears comprising a pair of pivoted blade and wooden handle members, a tang integral with each said blade, said tang being of rectangular cross-section and tapering along its length, each handle member having an annular slot extending therealong from one end thereof, said slot being spaced from the periphery of the handle to define externally thereof an annular wooden sheath and internally thereof a wooden core, said core having a hole therein of elongate rectangular cross-section and dimensioned to receive said tang in a tight fit, said hole extending along the length of said rectangular cross-section into close proximity with said slot, said hole extending longitudinally of the handle beyond said slot, a ferrule comprising a cylindrical portion and a base portion integral and laterally coextensive therewith, said cylindrical portion fitting tightly within said slot and embracing said core, the base portion abutting the end of the handle and having a parallel sided slot extending fully across said base portion, said tang fitting tightly within said hole, and shoulders formed on opposite sides of said tang abutting against the end surface of the handle and the cylindrical portion of said ferrule.

3,019,527
CHEESE MANUFACTURING MACHINE
James McReavy, Mancelona, Mich.
Filed Apr. 8, 1958, Ser. No. 727,076
24 Claims. (Cl. 31—48)



1. Apparatus for manufacturing cheese comprising a vat; a perforated false bottom mounted therein for up-and-down movement; means mounted in the vat connected with and adapted for raising and lowering said false bottom; a rotary support mounted on the vat; means carried by the first named means having a driving connection with the support for rotating said support; and agitator means carried by said support and extending into the vat.

3,019,528
STRESS BREAKER FOR ARTIFICIAL DENTURES
Anthony J. De Pietro, Springfield, Pa. (1524 S. Broad St., Philadelphia, Pa.)
Filed Dec. 1, 1959, Ser. No. 856,426
3 Claims. (Cl. 32—5)

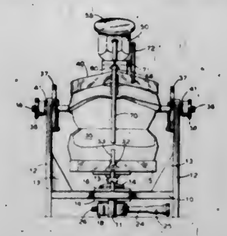


1. In an artificial denture, the combination comprising a saddle, false teeth carried by said saddle, a tubular member between said teeth and saddle and embedded in said teeth, a shank projected into said tubular member and adapted for being detachably anchored by one end to a permanent tooth, and a substantially thick layer of rubber-like material internally lining said tubular member and thereby providing a resilient cushion between said tubular member and shank, said shank being permanently embedded in said rubber-like material.

3,019,529
DENTAL ARTICULATOR
George Hinze, Valley Road, Locust Valley, N.Y.
Filed May 11, 1959, Ser. No. 812,380
2 Claims. (Cl. 32—32)

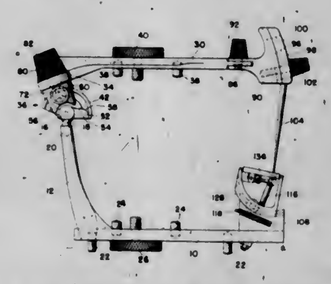
1. In a dental articulator, a base; a lower model supporting platform mounted on said base; support means extending upwardly from said base; an upper model supporting platform; articulated universal joint means mounting said upper platform on said support means for longitudinal, lateral and tilting adjustment relative to said

lower platform; an arm secured to and extending forwardly from said upper platform; and an incisal guidance



pin having a universal mounting in the free end of said last named arm and longitudinally adjustable in its mounting, the lower end of said pin engaging said base.

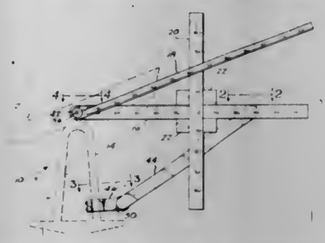
3,019,530
DENTAL ARTICULATOR
Anthony J. De Pietro, 1524 S. Broad St., Springfield, Pa.
Filed Dec. 1, 1959, Ser. No. 856,425
9 Claims. (Cl. 32—32)



1. In a dental articulator, a lower bow member, an upper bow member, and means mounting said members in mutually overlying relation including a pair of laterally spaced hinge-type joints at the rear of said articulator, each of said hinge joints including a part in the form of a spherical element mounted in fixed relation to said lower bow member, and a part in the form of a disc-like element mounted in adjustable fixed relation to said upper bow member and disposed in upright position, a marginal area of said disc-like element being recessed to provide a downwardly facing undersurface simulating the condyle path in the natural skull and bearing upon the top of the underlying spherical element, and to provide an abutment for engaging the side of said spherical element facing the other one of said spherical elements.

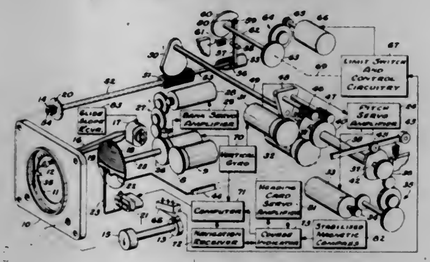
3,019,531
SCALE REDUCING DEVICE FOR SIGHTING INSTRUMENTS
Loren N. Adkins, P.O. Box 1054, Juneau, Alaska
Filed Nov. 7, 1958, Ser. No. 772,530
3 Claims. (Cl. 33—67)

1. A scale device adapted to be mounted on a stadia sighting instrument assembly having an upright frame member, a leveling plate, a scope, and a scope mounting shaft rotatably mounting the scope on the frame member, comprising a first scale member, means adapted to secure the first scale member to the scope shaft in parallel relation with the scope and rotatable therewith, a stationary second scale member, means adapted to mount one end of the second scale member on the scope shaft, angular brace means, means connecting one end of the brace means to the outer end of the second scale member, clamp means on the other end of the brace means adapted to be secured to the upright instrument frame member at a selected height location for positioning the second scale member in a stationary position parallel to the leveling plate, and a third scale member the third scale member



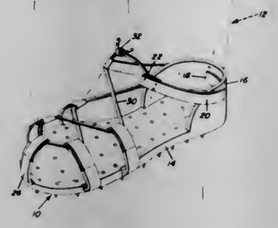
being normal to the second scale member slidably mounted on the second scale member and intersecting the first scale member, the scale members cooperating to indicate readings and forming together a triangular configuration similar to a triangle defined by the line of sight of the scope and the horizontal and vertical projections of that line.

3,019,532
AIRCRAFT APPROACH HORIZON INSTRUMENT
Lester W. Haerther and Hans I. Walker, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 31, 1957, Ser. No. 662,800
4 Claims. (Cl. 33—204)



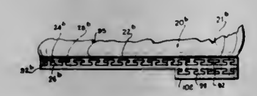
1. In an aircraft instrument of the type including a pitch angular motion repeater servo positioned in accordance with a vertical reference associated motion transmitter, which motion repeater positions an indicator indicative of pitch attitude, and including a pitch trim control to modify said pitch indication by a pitch trim parameter means for mechanically inserting said pitch trim parameter without affecting said servo positioned motion repeater comprising a mechanical differential having an output shaft and first and second input shafts, said first input shaft being connected to and positioned in accordance with said pitch motion repeater, first mechanical means operable by said pitch trim control to supply an input to said second differential input shaft proportional to said pitch trim parameter, said differential output shaft being operably connected to said pitch indicator, switching means having a plurality of selectable positions, second mechanical means responsive to a first position of said switching means to engage and move said first mechanical means to a predetermined position, said second mechanical means being responsive to a second position of said switching means to disengage from said first mechanical means.

3,019,533
CREEPER
Sherman S. Smith, 127 NW. D St., Grants Pass, Oreg.
Filed Mar. 9, 1960, Ser. No. 13,929
2 Claims. (Cl. 36—7.6)



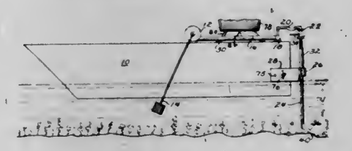
1. A creeper comprising a sole of flexible material generally in the shape of the sole of an article of footwear, an upstanding heel socket at one end of said sole for engagement with the heel portion of an article of footwear, a plurality of pointed caulks mounted on said sole and distributed throughout the area thereof, said caulks projecting from the bottom surface of said sole and including headed ends recessed into the upper surface thereby providing a smooth upper surface for engagement with the sole of an article of footwear, the portion of said sole remote from the heel socket having a pair of transverse passageways, a flexible strap received in each passageway, an elongated strap connected to said heel socket and having forwardly extending end portions, a toe strap connected to the toe end portion of said sole, each of said straps having a loop on the free end thereof, each of said end portions of said elongated strap having a loop on the free end thereof, and a flexible line extending through the loops and securing the sole to an article of footwear.

3,019,534
INTERCHANGEABLE SHOE SOLES AND HEELS
Robert T. Kaufman, 2035 Creston Ave., and Benjamin Arlitz, 170 Vermilyea Ave., both of Bronx, N.Y.
Filed Apr. 16, 1959, Ser. No. 806,805
1 Claim. (Cl. 36—15)



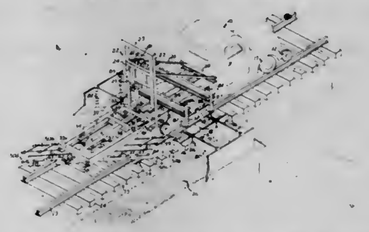
A shoe construction, comprising an upper, a mid-sole secured to said upper, said mid-sole having a solid bottom with a plurality of alternate inverted T-shaped ribs and T-shaped grooves, said ribs and grooves being uniformly spaced from heel end to toe end of the mid-sole and extending across the mid-sole, an outer sole removably attached to said mid-sole, said outer sole having a solid body with a tread side and an attaching side, said attaching side having a plurality of alternate T-shaped ribs and inverted T-shaped grooves, uniformly spaced from heel end to toe end of the outer sole, and extending across the outer sole, the ribs and grooves of the outer sole mating with and engaging with the groves and ribs respectively of the mid-sole whereby the outer sole is attached to and removed from said mide-sole by snapping the outer sole onto and out of the mid-sole, said outer sole having the heel end portion of the tread side thereof formed with a plurality of alternate inverted T-shaped ribs and T-shaped grooves extending across the heel end portion for its entire area, removably engaging a separate heel, said heel having a solid body with an attaching side formed with equally spaced alternate T-shaped ribs and inverted T-shaped grooves extending across the heel for its entire area and interlocked with the grooves and ribs respectively of the heel end portion.

3,019,535
APPARATUS FOR REMOVING MATTER FROM THE BOTTOM OF WATERWAYS
David R. Talbott, 224 W. Wood Road, and William M. Darden, 8 Thompson St., both of Annapolis, Md.
Filed July 25, 1960, Ser. No. 45,021
13 Claims. (Cl. 37—78)



1. In combination, a shallow draft barge, a plurality of substantially vertical, laterally spaced pipes extending downwardly from one end of said barge, a downwardly and outwardly sloping jet part including a jet exit connected to the lower end of each of said pipes, and a unitary U-shaped slot through the lower side of said jet part and extending upwardly through the lower part of said pipe, said slot lying in a plane normal to a vertical plane through the axis of said jet part.

3,019,536
RAILWAY BALLAST EQUIPMENT
John Knox Kershaw, Montgomery, Ala., assignor to Kershaw Manufacturing Company, Inc., Montgomery, Ala., a corporation of Alabama
Filed July 19, 1957, Ser. No. 672,985
6 Claims. (Cl. 37—104)



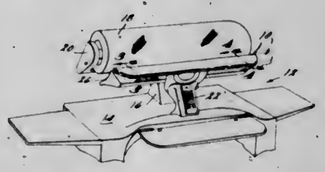
1. Railway ballast equipment including a supporting structure, right and left hand pairs of pivotally interrelated ballast manipulating blades on said supporting structure, means for disposing all of said blades perpendicularly of a roadbed, hydraulic power means for equally and oppositely shifting each pair to dispose all of said blades in parallel common vertical planes and for shifting one pair of blades angularly with respect to the other pair of blades to dispose said pairs of blades in vertical intersecting planes, pivotally united pairs of laterally extending ballast manipulating wings on said supporting structure, a pivotally united interconnecting member between said wings of each pair to maintain parallelogrammatic relation of said wings, and means for disposing said pairs of wings in common transverse parallel planes extending across said roadbed and in parallel planes individually vertically angularly related with respect to each other, extending forwardly and rearwardly of the common plane which said wings may assume, said common plane being perpendicularly transverse of a roadbed.

3,019,537
KEEPER FOR AN EXCAVATOR TOOTH
Ferrald Daniel Stephenson, Lakewood, Calif., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Jan. 6, 1959, Ser. No. 785,174
3 Claims. (Cl. 37—142)



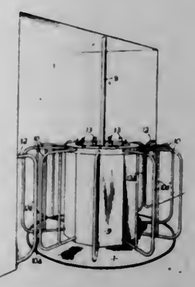
1. In an excavator tooth having a tooth base member and a replaceable tip member assembled thereon, and wherein said members are provided with aligned openings to afford a passageway through the assembled members, a keeper removably reposed in said passageway to hold the parts in assembled relation, said keeper having an elongated body essentially wedge shaped with end portions at one side thereof bearing against surfaces defining the openings in said tip, said keeper having a recess formed inward at the other side of the body opposite the side having the end portions aforesaid, a solid block of resilient material seated in said recess and projecting in the direction of said other side of the keeper body, a helical spring embedded in said block of resilient material so that the resilient material penetrates all interstices of the spring to firmly lock the spring to the resilient block with at most a thin film of resilient material covering the convolute portions of the spring that are outermost of the recess in said body, said coil spring having its axis extending transverse to the longitudinal axis of said keeper body, and the convolutes of said spring projecting beyond the plane of said other side of the keeper body bearing against a seating surface within said tooth base.

3,019,538
ADJUSTABLE FEEDBOARD CONSTRUCTION FOR IRONERS
Loren E. Schrader, Mount Clemens, Mich., assignor to Ironrite, Inc., Mount Clemens, Mich., a corporation of Michigan
Filed Jan. 20, 1958, Ser. No. 709,923
5 Claims. (Cl. 38—64)



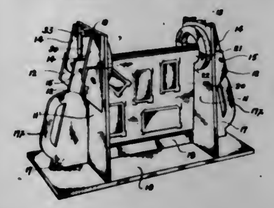
1. In an ironer having a stationary curved shoe and a roll movable into engagement with the shoe, a feedboard having a continuous upper surface of a length corresponding substantially to the length of said shoe arranged adjacent the shoe for supporting articles to be ironed during feeding of the articles to the ironer between the shoe and the roll, longitudinally slidable hinge means supporting the feedboard on the shoe along the edge adjacent to the roll for movement to a first position in which the ends of said feedboard are adjacent the ends of the shoe and second and third positions in which the feedboard is shifted in opposite directions longitudinally thereof so as to enable handling and manipulation of articles at one end of the shoe, while enabling the feedboard to function as an article support for the remainder of said roll.

3,019,539
TURNSTILES
Henry James Dolman, Staple Hill, Bristol, England, assignor to Brecknell, Dolman & Rogers Limited, Bristol, England, a British company
Filed Aug. 5, 1960, Ser. No. 47,672
Claims priority, application Great Britain Aug. 12, 1959
4 Claims. (Cl. 39—3)



1. A turnstile installation comprising a barrier structure including a pair of side wings defining an opening; a combined turnstile-turntable structure comprising a vertical shaft bisecting said opening, a turntable substantially at ground level rotatable about said shaft, a turnstile consisting of equi-distantly spaced radially extending arms moving with said turntable and defining a plurality of compartments of which the turntable constitutes the floors thereof; power means including an electric motor for imparting rotation to said turnstile-turntable; a plurality of coin receiving units carried by said turnstile and accessible to passengers in said turnstil compartments, one unit for each compartment, each said unit having a movable coin detent for temporarily supporting an inserted coin; coin-operated switch means carried by said casing; electrically actuated mechanical stop means for arresting turnstile-turntable rotation; cyclically operating control means moving synchronously with said turnstile-turntable to operate said mechanical stop means unless periodically influenced by said coin-operated switch means, and a common detent operating device for moving said coin detents of said coin receiving units to dislodge for collection said supported coins as said turnstile-turntable rotates.

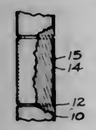
3,019,540
CARD DISPLAY RACK
John Chudek, Jr., 1256 State St., Bellingham, Wash.
Filed July 5, 1960, Ser. No. 40,907
4 Claims. (Cl. 40—102)



1. A display rack of the character described comprising a frame structure including a base plate with two laterally spaced, vertical end frames fixed rigidly thereon and held in fixed spacing thereby, paired annular hangers fixed to the inside faces of said end frames in horizontal axial alignment, and a plurality of display panels disposed between said laterally spaced end frames in face to face relationship; each panel having a supporting ear

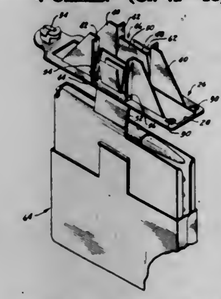
at each of its opposite ends and adjacent its top edge projecting into the corresponding annular hanger for swinging suspension of the panel; said panels being adapted to be individually swung from one side of the pack, over the same and to the opposite side thereof; said laterally spaced end frames being of equal height and each comprises an upper end portion that is hinged to the lower portion for outward swinging and wherein said annular panel hangers are diametrically horizontally divided for separation of the parts thereof; the lower portions of the annular hangers being fixed to the lower portions of said end frames and the upper portions of said annular hangers being fixed to the hinged upper end portions of said end frames to swing outwardly therewith to open the annular hangers for reception or removal of the suspending ears of said panels from the seats provided by the lower halves of the hangers.

3,019,541
CALENDAR FOR WRITING INSTRUMENTS
Arnold Kese, 2915 N. 30th Ave., Tacoma, Wash.
Filed Jan. 19, 1959, Ser. No. 787,603
7 Claims. (Cl. 40—335)



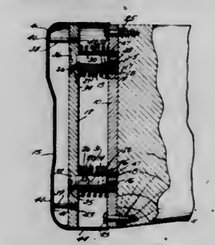
1. A writing instrument comprising a body member, a circumferential guideway in the body member, a sleeve member rotatably mounted in the guideway, a circumferential band on one of the members inscribed with month designations, a circumferential shaded band on the other member registering with the first mentioned circumferential band and having a window portion in which one month designation at a time may be inspected, a circumferential band on one of the members inscribed with numerals comprising two complete sets of the days of a month, a circumferential shaded band on the other of the members registering with the band with the days of the month and having a window of a selected width in which a single one only of the two sets of days of the month may be inspected, the latter windowed band having a first shaded area defining said window therein and having a second shaded area disposed in the window and defining with the first shaded area a second window in which a last day of selected months may be inspected.

3,019,542
CARTRIDGE MAGAZINE CONVERSION
Atlee G. Manthos, Arlington Heights, Ill. (Box 2401, Spokane International Airport, Spokane, Wash.)
Filed June 13, 1958, Ser. No. 741,818
4 Claims. (Cl. 42—18)



1. In a firearm, a barrel, a breech housing therefor having a cartridge chamber, a removable floor plate for said breech housing having a bottom opening for the admission of cartridges to the chamber, a magazine adapted to be inserted from the bottom and through the floor plate opening to fit and be releasably held in the floor plate opening for supplying cartridges to the chamber, an upper section of said magazine being positioned above the floor plate and a lower section positioned below the floor plate, said floor plate having upstanding longitudinal guide members on both sides of said opening and parallel to the barrel for guiding the magazine above said plate, and means for releasably attaching the magazine to the breech housing, said means including at least one pivotally mounted element having a latching portion positioned above said floor plate and a guiding portion positioned below said floor plate.

3,019,543
RECOIL ABSORBER FOR A FIREARM
Alfred Ducharme, Bald Hill Trailer Camp, West Warwick, R.I.
Filed July 1, 1959, Ser. No. 824,235
2 Claims. (Cl. 42—74)



1. In a recoil absorber for a firearm, the combination which comprises a mounting plate, means for attaching the mounting plate to the end of a stock of a firearm, bushings threaded in said mounting plate, studs threaded in said bushings and positioned normal to the mounting plate, a traveling plate slidably mounted on said studs, sleeves slidably mounted on the studs, movable with and in unison with the travelling plate and positioned between the mounting and traveling plates, said bushings having counter bores therein and said sleeves having a reduced portion thereon that are receivable in the bores in said bushings, springs extended around the sleeves and bushings and positioned between the plates, coacting shoulders on said bushings and said sleeves for limiting the inward travel of said traveling plate, enlarged heads on said studs for limiting the outward movement of said travelling plate, a cover positioned over said plates and springs, and mounted to slide over the adjacent portion of the stock of a firearm upon which the absorber is mounted, and means for securing the cover to the traveling plate.

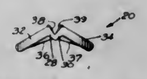
3,019,544
FISHING LURES
John Hummel, 1000 Riverside Drive, Ottawa, Ontario, Canada
Filed July 3, 1959, Ser. No. 824,889
1 Claim. (Cl. 43—42.41)



A fishing lure comprising a spoon, a hook having a shank, and spring means interconnecting said shank and spoon and normally urging same apart, said spoon having guard means adapted to receive the point of said hook

and shield same from entanglement with weeds, said spring means being adapted normally to restrain said hook point against movement out of said guard means, said spring means being a leaf spring to one end of which said hook shank is rigidly secured, and locking means being provided for releasably locking said leaf spring at its other end to said spoon, said leaf spring having a waist portion and said locking means comprising a bracket secured to the spoon and having a recess adapted to accommodate said waist portion and restrain the leaf spring against longitudinal movement in one direction, said bracket being slotted to accommodate said other end of said leaf spring and to present an abutment adapted to engage the extremity of said leaf spring and restrain the leaf spring against longitudinal movement in the other direction, the resiliency of said leaf spring normally holding it in locked engagement with said bracket.

3,019,545
SINKER
Marion R. Long, 220 N. 21st St., New Castle, Ind.
Filed July 11, 1960, Ser. No. 41,926
4 Claims. (Cl. 43—44.89)



1. A sinker adapted securely to grip a fishing line and to cause the fishing line to assume a predetermined position in the water, comprising a first gripping portion and a second gripping portion disposed in facing relationship and normally spaced apart in a first position thereof to receive an associated fishing line therebetween, a bendable connection joining said gripping portions along one edge thereof, a first wing on the opposite edge of said first gripping portion and disposed substantially perpendicular thereto and projecting outwardly therefrom in a direction away from said second gripping portion, and a second wing on the opposite edge of said second gripping portion and disposed substantially perpendicular thereto and projecting outwardly therefrom in a direction away from said first gripping portion, said wings having a size substantially greater than said gripping portions so as readily to be grasped by the fingers of a user to facilitate movement of said gripping portions to a second position gripping an associated fishing line therebetween, the cross sectional area of said bendable connection being less than the cross sectional area of said gripping portions and said wings to insure preferential bending in said bendable connection in moving said gripping portions between the first and second positions thereof, whereby said sinker can be applied to an associated fishing line by the user placing the associated fishing line between said gripping portions in said first position thereof and the user thereafter grasping said wings with the fingers and deforming said bendable connection without the use of any tool to move said gripping portions to the second position thereof wherein said gripping portions securely grip the associated fishing line and said sinker can be removed from the associated fishing line by the user grasping said wings with the fingers and deforming said bendable connection without the use of any tool to move said gripping portion into said first position thereof to release the associated fishing line.

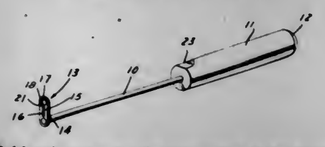
3,019,546
LINE ATTACHING DEVICE
Christie L. Hansen, P.O. Box 12, Port Sulphur, La.
Filed Mar. 18, 1958, Ser. No. 722,272
19 Claims. (Cl. 43—44.91)

1. A device to be removably secured to a line comprising a pair of separable sections having facing inner walls, the first of said inner walls having a channel therein for receiving a line parallel to said channel, said channel including a resilient insert, said insert having an upstanding transverse wall near each end of said channel, each upstanding wall having a slit therein for receiving said line, said slit being narrower than said channel, means on the second of said inner walls, said



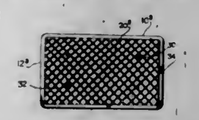
means being received within said channel and cooperating with said channel for frictionally engaging said line therebetween to prevent relative movement between said line and said device, and means to separably secure the sections in face to face relation to each other, said sections being separable from each other by relative movement transverse to the planes of said inner walls.

3,019,547
FISHHOOK EXTRACTOR
Gordon P. Felts, 122 Caravan Sahara Park, Palm Springs, Calif., assignor of one-third to Arthur W. Jarrett, Palm Springs, Calif., and one-third to Robert W. Seeger, Arcadia, Calif.
Filed July 18, 1960, Ser. No. 43,411
5 Claims. (Cl. 43—53.5)



1. A fishhook extractor for removing a fishhook having an eye, comprising: an elongate shank member; a handle at one end of said shank; and hook engaging means at the other end of said shank including a member extending at substantially right angles to the shank axis, said member having a generally key-shaped opening therein comprised of an elongate slot portion positioned adjacent the shank, and an enlarged head portion positioned in spaced relation to the shank, the slot portion being of a width less than the diameter of the fishhook eye, and a communicating passage with said opening, whereby a fishing line may be laterally passed from the exterior of said member into said opening.

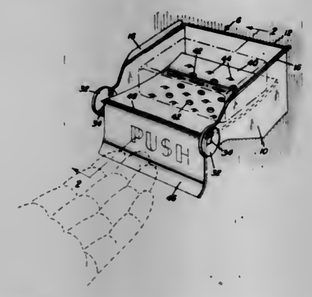
3,019,548
SOAP GRIP HOLDERS
Ira Nadler, 575 West End Ave., New York, N.Y.
Filed Apr. 10, 1959, Ser. No. 805,457
1 Claim. (Cl. 45—28)



A soap grip comprising a rigid plastic dish-like shell body, rectangular in plan, with spaced groups of projecting teeth spaced along the peripheral edge of the body, and at least four spaced barbs projecting from the inner surface of the dished body, a pair of spaced pointed lugs serving as legs projecting from the outer surface of the

body adjacent one end thereof, and another pair of spaced pointed lugs serving as legs projecting from the outer surface of the body adjacent the other end thereof, said latter legs being longer than the first-named legs whereby the body is adapted to be supported in tilted condition, the peripheral edge of the body having a notch communicating with the interior of the body at the center of the end of the body mounting the shorter legs wherethrough excess liquid off of the supported cake of soap is adapted to drain.

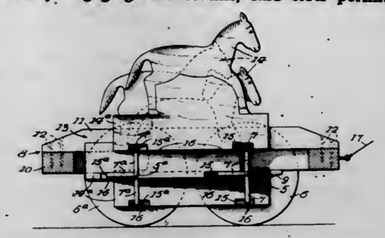
3,019,549
SOAP TIP-OUT TRAY
Walter E. Evans, R.R. 2, North Manchester, Ind.
Filed Nov. 18, 1959, Ser. No. 853,879
3 Claims. (Cl. 45—28)



1. A mechanical ejecting and serving-type holder for a cake of soap comprising a tray embodying a U-shaped member having vertical opposed side walls and a connecting wall therebetween, the outer ends of the side walls being narrowed in width and terminating in supporting and hinging heads, and a bottom between the aforementioned walls cooperating therewith and defining a receptacle portion, a generally L-shaped member providing a holder and tip-out for a cake of soap and having a normal horizontal plate portion located for use in the receptacle portion, and a depending flange constituting a manually actuatable trip, said member being provided with a rocker shaft the ends of which are fashioned into journals, said journals being removably mounted for operation in bearings provided therefor in the aforementioned heads, said flange portion being engageable beneath said inclined bottom portion to be suddenly stopped thereby for ejecting the soap from the member by the force of inertia, said heads being of circular concavo-convex form with the convex sides facing each other and with the central portions thereof provided with dimples, said dimples defining the aforementioned bearings.

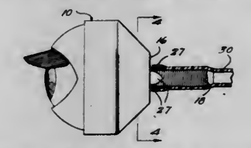
3,019,550
RACING HORSE TOY
Otto W. Berberich, Rte. 1, Sandy Lane, Richmond, Va.
Filed Aug. 12, 1959, Ser. No. 833,317
3 Claims. (Cl. 46—107)

1. A toy comprising a frame, a front rotatable axle, a rear rotatable axle, both of said axles having cranks spaced apart longitudinally thereof, wheels supporting said axles and operative to drive the same, each of said cranks on said rear axle being in alignment longitudinally of the frame with a corresponding crank on the said front axle to form a plurality of aligned pairs of cranks, each of said pairs of cranks having an animal simulation pivotally connected thereto, said animal simulation being rigid and bridging said pair of cranks, whereby when said axles are rotated, said simulations will represent animals racing, each of said pivotal connections comprising a longitudinal slot loosely engaging said cranks, said slots permitting



movement of said simulations by momentum beyond the throw of said cranks.

3,019,551
FLEXIBLE EYE DUCT FOR TEARING EYES
Harry Brudney, New York, N.Y., assignor to Dollac Corporation, Brooklyn, N.Y.
Filed Jan. 6, 1959, Ser. No. 785,269
4 Claims. (Cl. 46—135)



1. In a tearing eye for a doll head, a rear casing, a port through said casing, a flexible nipple fixedly secured at one end thereof to said casing and leading to said port, said nipple being comprised of a helical closed coil spring and adapted at its other end to receive a flexible tube attached thereto.

3,019,552
FLEXIBLE FIGURE TOY
Friedrich Schleich, Schwabisch Gmund, Wurttemberg, Germany
Filed Sept. 12, 1958, Ser. No. 760,766
Claims priority, application Germany Dec. 5, 1956
12 Claims. (Cl. 46—156)

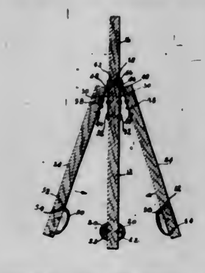


1. A flexible figure toy, comprising a skeleton-like flexible inner wire-structure serving as flexible support for the body, head and limbs of the figure toy, and a single one-piece continuous covering structure completely covering and enclosing said wire structure and having wide portions and hose-like inner supporting cores integral with said wide portions and surrounding the wire structure, said inner cores constituting bottoms of notch-like transverse groves separating said wide portions from each other.

3,019,553
WOODEN MUSICAL TOY
Carlos Gomez, 914 Jefferson Ave., and Juan R. Victor, 916 Jefferson Ave., both of Brooklyn, N.Y.
Filed Oct. 23, 1959, Ser. No. 848,246
2 Claims. (Cl. 46—191)

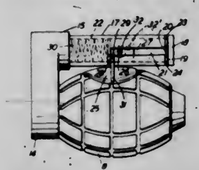
1. A sounding device comprising a flat wooden body of substantially rectangular shape, a handle forming an

extension of one end thereof, wooden clappers hingedly connected at one end to the body, on both sides thereof at opposed points intermediate the ends of said body and spaced from the handle, hammers immovably mounted on the free ends of the clappers, a metal semicircular member fixed on each side of the body at its other end, in the path of movement of the hammers on the clappers, said members constituted by metal dish-shaped buttons, the hinge connections between the body and clappers each comprising a hinge plate on the body spaced from said handle, knuckles at ends of the plate, another hinge plate on the adjacent clapper with knuckles at the



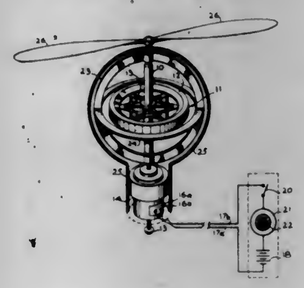
top thereof in line with the first-named knuckles, a hinge pin extending through the openings in the aligned knuckles, resilient means for urging the hammer carrying ends of the clappers toward the body including a transverse opening in the body at its juncture with its handle, an integral lug on each hinge plate of the clappers extending upwardly and overlapping and disposed closely adjacent the adjacent end of the opening, and a coiled spring in the opening, the ends of the spring impinging against the lugs whereby the lugs are urged outwardly away from the body and the hammer carrying the ends of the clappers are urged inwardly toward the body.

3,019,554
TOY HAND GRENADE
Rocco M. Rago, Rockford, Ill., assignor to Andrew F. Wintercorn, Rockford, Ill.
Filed Sept. 18, 1958, Ser. No. 761,869
14 Claims. (Cl. 46—200)



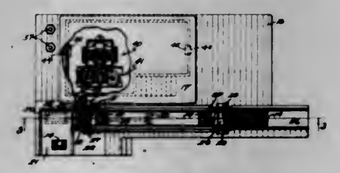
1. In a load and fire mechanism, the combination of a normally fully expanded bulb of compressible resilient material having a restricted air vent, a plunger reciprocable in a cylinder adjacent said bulb, spring means normally urging said plunger in a firing direction and adapted to be loaded when the plunger is moved in the opposite direction, said cylinder having a bayonet slot provided in the wall thereof, one portion of which extends lengthwise relative to said cylinder and another portion of which at one end of the first portion extends transversely relative to said cylinder, and an arm rigid with said plunger and extending laterally therefrom through said slot and adapted to be operated manually to move the plunger in the cylinder to one end of the slot to load the spring means and then lock the plunger in cocked position by lateral movement of said arm in the transversely extending end portion of the slot, the arm in this lateral movement compressing the bulb for timed return movement of the arm by means of said bulb out of the transversely extending end portion of the slot to the firing position.

3,019,555
TOY DEVICE
Charles Poticha, 1214 W. 139th St., Hawthorne, Calif.
Filed June 15, 1959, Ser. No. 820,211
12 Claims. (Cl. 46—243)



1. A toy capable of motion either along the ground or through the air, said toy comprising: a gyroscopic device including a rotatable shaft, a wheel mounted on the shaft and rotatable therewith in a plane perpendicular to said shaft, and first and second rings, said first ring being rotatably mounted on said shaft in a plane perpendicular to the plane of said wheel and in frictional contact with said shaft, said second ring being rigidly coupled to said first ring and concentric with said wheel; a ball-shaped member rigidly mounted on one end of said shaft; a propeller for lifting said gyroscopic device into the air rigidly mounted on the other end of said shaft; an electric motor coupled to said shaft between said gyroscopic device and said ball-shaped member for rotating said shaft; a battery; and a potentiometer connected in series between said battery and said motor for varying the speed of said motor.

3,019,556
CONVEYOR APPARATUS FOR TRANSFERRING TOY LOAD ARTICLES
Marshall H. Frisbie, Branford, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland
Filed Nov. 3, 1959, Ser. No. 850,629
12 Claims. (Cl. 46—243)

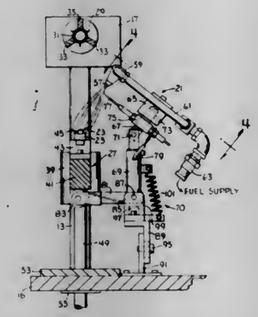


1. An animated toy for automatically transferring ferrous toy load articles successively from a source of supply to a load depository in oriented relation to the latter, comprising in combination with the source of load articles, an endless belt having a load article conveying surface and supported for advancing travel away from said source to a point of belt travel reversal, a chute extending downward from said point of belt travel reversal in laterally branching relation to the line of travel of said belt and located to receive load articles discharged from said belt one by one at said point of reversal, means to generate a magnetic field at said chute beyond the point of belt travel reversal in the direction of travel of said article conveying belt, said magnetic field being operative to orient and detain each of said ferrous load articles after discharge thereof one by one from said belt and before the discharged article coasts down said chute, and a disabling device operatively related to said magnetic field in a manner to reduce the attraction thereof for said work article to an extent to release said oriented work article for coasting down said chute.

3,019,557
PROCESS AND PREPARATIONS FOR CONDITIONING SOIL
Aharon Katchalsky, Tel Aviv, and Ignacy Bursztyn, Moshe Rim, and David Vofsi, Rehovoth, Israel, assignors to The Weizmann Institute of Science, Rehovoth, Israel
No Drawing. Filed May 22, 1959, Ser. No. 814,969
9 Claims. (Cl. 47—58)

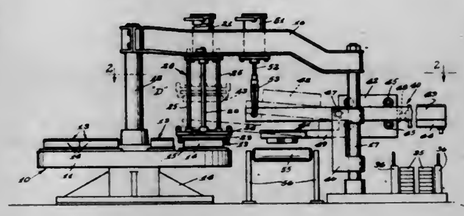
1. The method for conditioning moisture-deficient soils which comprises treating the soil with an aqueous nitrogenous hardening binder, thereby producing in situ, discrete agglutinated lumps of soil.

3,019,558
BEADING MACHINE
Bernard G. Broadbent, Seneca Falls, and Frederick A. Hemphill, Waterloo, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed May 15, 1957, Ser. No. 659,260
5 Claims. (Cl. 49—1)



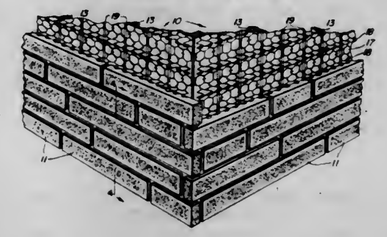
1. An apparatus for mounting a heat plasticizable material configuration upon a structure formed to receive the configuration, said apparatus comprising a fixed support, a movable support member, a bed on said support member, said bed being adapted to support a configuration, a jig mounted on said fixed support for positioning the structure to which the configuration is to be applied; actuating means connected to said movable support member for moving the said support member and bed from an initial position to a position where the configuration engages the structure; heat generating means in the initial position of the bed having its heat generating means directed onto said configurations on the bed and tracking means pivotally mounted on the part carried by said support, said tracking means having two portions, one portion supporting the heat generating means and the other portion maintained in engagement with the movable support member to continue the application of heat to said configuration during movement thereof toward the structure.

3,019,559
TAKE-OUT APPARATUS FOR GLASSWARE
William A. Stutske and Frederick H. Wood, Jr., Toledo, Ohio, assignors to Kimble Glass Company, a corporation of Ohio
Filed May 5, 1958, Ser. No. 732,949
10 Claims. (Cl. 49—14)



1. In a take-out device having ware grasping jaws movable with respect to each other and conjunctively between loading and unloading positions of said device, combined apparatus comprising a mounting ring having at least one stationary depending traverse bar attached thereto, at least one pair of grasping jaws, a fluid-operated motor slidably supported on said traverse bar having movable cylinder and piston elements each adapted to independent movement with respect to said ring member and traverse bar, a pair of grasping jaw supports movable toward and away from each other having one grasping jaw individual to each, one jaw support attached to the piston element and the other jaw support attached to the cylinder element of said motor, the said grasping jaws being disposed in confronting aligned relation adapted to both individual and simultaneous movement.

3,019,560
HANGER PANEL FOR VENEER MASONRY BLOCKS
Roy C. Hansen, 220 Vidas Ave., Salt Lake City, Utah, assignor of one-third to Robert B. Cole, Salt Lake City, Utah, and one-third to Carol A. Dalton, Bountiful, Utah
Filed Dec. 31, 1958, Ser. No. 784,336
2 Claims. (Cl. 50—342)



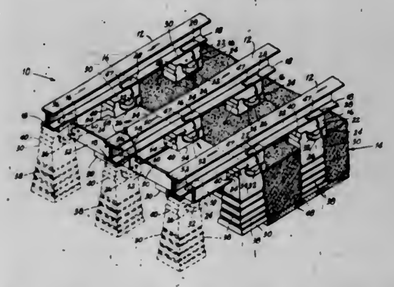
1. A hanger panel for veneer blocks, comprising a backing panel adapted to cover a portion of a wall expanse and to be secured to the wall framing; an expanse of wire mesh substantially coextensive with said backing panel and secured to a face thereof, said wire mesh being formed with alternate channels and ridges extending in parallel rows across the exposed face thereof, the said ridges having sides adjacent their tips, respectively, which are approximately normal to the said face of the backing panel and mutually similar shoulders extending outwardly at and along their bases, respectively, and spaced from said backing panel, so as to permit insertion of blocks directly into the channels from the open tops thereof; and blocks resting on the mutually opposite and confronting shoulders of mutually adjacent channel-defining

ridges, respectively, the spacing between the sides of the mutually adjacent ridges being slightly less than the width of said blocks to insure resilient gripping of such blocks in spaced relationship with the backing panel when seated in wall-facing positions on the ridge shoulders, said ridges and shoulders thereof affording passage for mortar in the pointing up of the resulting block courses.

3,019,561
FLEXIBLE ANCHOR ARRANGEMENT FOR CASTABLE OR PLASTIC REFRACTORY AND METHOD FOR EMPLOYING THE SAME

Herman W. Weber, Rock Hill, Mo., assignor to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania

Filed Mar. 10, 1958, Ser. No. 720,340
2 Claims. (Cl. 50—368)



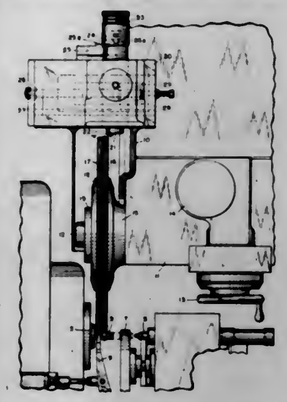
1. In a refractory wall, a monolithic refractory panel having a plurality of preformed refractory tiles embedded therein and extending beyond one major surface thereof, the extended portions of the tiles each provided with oppositely extending bosses, an individual metal hanger movably engaging each of said tiles, each hanger including a pair of parallel hook-shaped spaced apart elements in supporting engagement with said bosses, said parallel hook-shaped elements being spaced apart a distance greater than the width of the supported tile thereby accommodating lateral movement of the tile, the oppositely extending bosses on the tiles being formed with convex surfaces inclined upwardly and outwardly of the tile body, said boss surfaces being in engagement with the spaced apart hanger elements in substantially a ball and socket type of arrangement, and a plurality of parallel flanged structural members each in supporting engagement with a plurality of said hangers.

3,019,562
GRINDING MACHINE WITH DUAL PURPOSE GRINDING WHEELS

Ralph E. Price, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa., a corporation of Pennsylvania

Filed Dec. 3, 1959, Ser. No. 857,113
7 Claims. (Cl. 51—3)

1. In a grinding machine, a rotary work support, a grinding wheel base, a grinding wheel slide thereon, a grinding wheel shaft rotatably mounted on the wheel slide, means for rotating said shaft, a grinding wheel mounted on the shaft, a second grinding wheel mounted on the shaft adjacent said first wheel, means for moving said wheel slide transversely toward and from the work support with said first grinding wheel in position to engage a workpiece, means for stopping the movement of said wheel slide toward said workpiece, means actuated by said stopping means for moving said wheel slide longitudinally of said work support to subject said workpiece to the operation of said second grinding wheel, a time delay circuit operable at the end of said longitudinal movement to provide a sparkout interval and thereafter

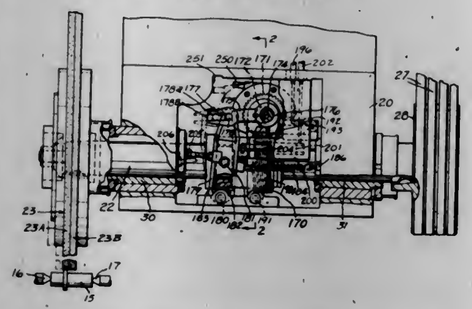


to move said grinding wheel slide away from said work support.

3,019,563
GRINDING MACHINE

Dana W. Martin, Northboro, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Apr. 9, 1959, Ser. No. 805,337
14 Claims. (Cl. 51—50)



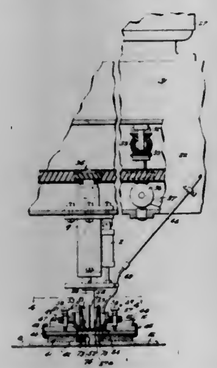
1. A grinding machine having a grinding wheel rotatable about a given axis and movable transversely of its axis of rotation, said grinding wheel including a first portion for rough grinding and a second portion for finish grinding disposed in axial juxtaposition, a rotatable work support, means to feed said grinding wheel transversely of a workpiece to rough grind a cylindrical surface on a workpiece with the first portion of said grinding wheel, means operable at a predetermined point in the grinding operation to displace the grinding wheel axially for traversing the grinding wheel across the cylindrical face of a workpiece to finish grind the workpiece with the second portion of the grinding wheel, and means for reciprocating said grinding wheel axially during the entire grinding operation.

3,019,564
POLISHING SURFACES

Edward F. Haracz, 161 Pershing Road, Clifton, N.J.

Filed Apr. 29, 1959, Ser. No. 809,703
3 Claims. (Cl. 51—56)

2. A polishing head for a polishing machine of the type which includes a drive shaft for rotating the head, said head comprising a first annular plate having plane surfaces, a second annular-like plate having plane surfaces and a central bowl-like curvilinear vertical opening, said second plate being superimposed over said first plate, releasable clamping means securing the first and second plates together, a foundation member having an upwardly tapering centrally disposed surface, a downwardly tapering bushing member fixedly disposed between said drive shaft and said foundation member at its said inner surface whereby rotative force is applied by said shaft to said foundation member, means for articulating said founda-

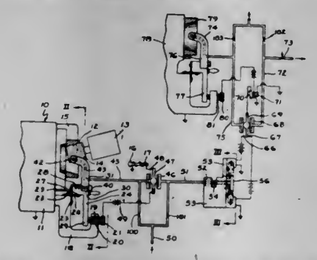


tion member and said second plate, said articulating means comprising a downwardly extending curvilinear surface on said foundation member cooperating with said central curvilinear vertical opening in said second plate, and means for movably securing said second plate and said foundation plate, said movable securing means comprising headed bolts passing between openings in said foundation plate and fixedly secured to said second plate, and spring means between said bolt heads and said foundation plate whereby the latter is held yieldably secured to said second plate.

3,019,565
GRINDING MACHINE

Robert G. Hatstat, George H. Lockwood, and William D. Schmidt, Worcester, Mass., assignors to The Heald Machine Company, Worcester, Mass., a corporation of Delaware

Continuation of application Ser. No. 531,659, Aug. 31, 1955. This application Sept. 4, 1959, Ser. No. 838,358
22 Claims. (Cl. 51—165)

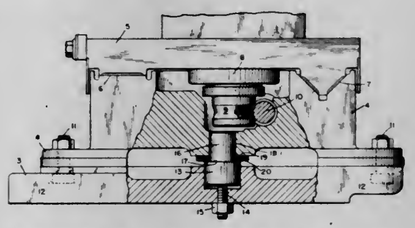


1. A grinding machine comprising a work support, a tool support, an abrading tool on the said tool support, means for applying said tool to a workpiece in said work support for a grinding operation, work-gauge means operative to measure the size of the workpiece by direct continuous measurement of the workpiece by the work-gauge means during the grinding operation, after-gauge means operative to measure the size of the workpiece subsequent to the grinding operation, and means responsive to said after-gauge means to adjust the work-gauge means to compensate for errors in the sizes of successive workpieces as determined by the after-gauge means.

3,019,566
SWIVEL WHEELBASE FOR UNIVERSAL GRINDING MACHINES

Ralph E. Price, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa., a corporation of Pennsylvania

Filed Jan. 8, 1960, Ser. No. 1,207
6 Claims. (Cl. 51—166)

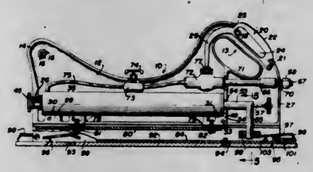


1. A mounting for a grinding machine element comprising a fixed bed, a grinding wheel slide and a wheelbase reciprocally carried by the wheel slide, a pivot mounted on the bed, said pivot having a shoulder and a reduced upper part, a bore in the wheel slide for slidably and rotatably fitting the upper part of the pivot, and resilient means directly supporting the wheel slide on the shoulder of the pivot.

3,019,567
PNEUMATIC SANDER

George J. de Faller, Ornan V. Tatum, and Nickolas R. Livingston, all of 4929 Red Oak Lane, Fort Worth, Tex.

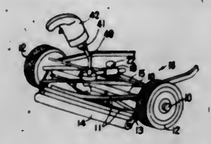
Filed Sept. 1, 1960, Ser. No. 53,496
6 Claims. (Cl. 51—170)



1. In a pneumatically powered reciprocating tool, a cylinder including forward and rear ends thereof, an inlet port in a forward wall of said cylinder, means communicating said inlet port with a source of pressured air, valve means interposed in said means communicating said inlet port with said source of pressured air, a piston in said cylinder, a hollow piston rod attached to said piston within said cylinder and extending through said rear end thereof, a helical spring positioned about said piston rod within said cylinder between said piston and said rear end of said cylinder, a valve port including a valve seat in the forward end of said cylinder, a valve adapted to be received in sealing contact with said valve seat in said cylinder, a valve rod attached to said valve and extending through said piston and through said piston rod and projecting rearwardly of said cylinder and said piston rod, a collar secured to said valve rod within said piston rod, a helical valve lifting spring positioned about said valve rod within said piston rod between said piston and said collar, a helical valve seating spring positioned

about said valve rod within said piston rod between said collar and the rearward end of said piston rod, and means connecting a reciprocating member to said piston rod.

3,019,568
LAWN MOWER GRINDER AND SHARPENER
Myrl M. Sauers and Clinton B. McElheny, both of 1680 Tartar Lane, Compton, Calif.
Filed May 19, 1960, Ser. No. 30,179
2 Claims. (Cl. 51—173)



1. A portable grinding tool for grinding lawn mower reel blades, comprising, a guide secured to extend transversely beneath one end of a sleeve, said sleeve being adapted to slidably receive a post, clamping means for securing the post with respect to the sleeve, said post flattened at one end and having a hole formed in the flattened end to receive a bushing adjustably secured thereto by a locking nut, a rotating shaft having a thrust bearing flange formed thereon and received through the bushing, a cupped abrasive wheel secured to one end of the shaft and a power source removably attached to the other end of the shaft, a wheel guard around the wheel, a blade guide disposed in a depression formed centrally in the cupped abrasive wheel, said blade guide supported by a bracket to the flattened end of the post and having spaced projecting lugs adapted to slidably engage along opposite sides of a mower reel blade, said cupped abrasive wheel adapted to selectively engage with the blade at spaced locations disposed in line with each other and extending across the full diameter of the grinding wheel.

3,019,569
TOILET FLUSH TANK VALVE SANDER
Thomas Matayka, 6351 N. Merrimac Ave., Chicago, Ill.
Filed Oct. 31, 1960, Ser. No. 66,318
15 Claims. (Cl. 51—187)



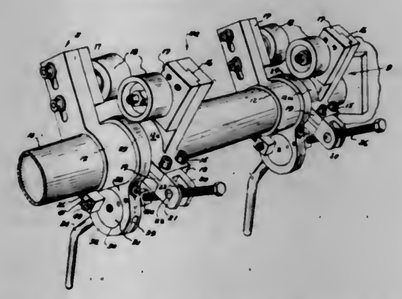
1. A flush tank valve seat sander, comprising a substantially frusto-conical body member having means for attachment to an actuating shaft, and having its upper end of greater diameter than the valve seat of a flush tank, said body having an annular shoulder adjacent said larger end and a frusto-conical portion of smaller diameter at its larger end at said annular shoulder, forming an angular recess adjacent said annular shoulder, and an arcuate strip of flexible sanding material having its trailing end extending backwardly in a rotative direction from an attaching portion at its leading end, said arcuate strip conforming and covering the two said frusto-conical portions of said body and having the trailing end of said arcuate strip loose to be drawn into engagement with said frusto-conical portions of said body upon rotation of the body in a flush tank valve seat.

3,019,570
COATED ABRASIVE BACK-UP PAD
Dirck J. Oltoa, Loudonville, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts
Filed May 2, 1960, Ser. No. 25,949
1 Claim. (Cl. 51—195)



A non-circular back-up pad for coated abrasive discs of similar configuration to the pad comprising a flexible, relatively planar member; means on said member to secure the same to the shaft of a rotary tool; and means to positively locate and hold the abrasive disc on said member in direct alignment with said member, said last-mentioned means comprising at least one relatively flexible projection extending outwardly from the surface of said member.

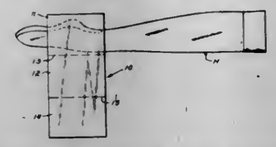
3,019,571
WORK SUPPORTING BRACKETS FOR CENTERLESS GRINDERS
George R. Whittenberg, 8301 Lynch Road, Detroit 34, Mich.
Filed Oct. 15, 1959, Ser. No. 846,613
6 Claims. (Cl. 51—236)



1. As a part of a fixture adapted to support a work piece for a centerless gringer, in combination a cylindrical beam disposed horizontally, a plurality of brackets mounted thereon, the brackets being alined but spaced from each other, each bracket including two short sleeves mounted co-axially upon said beam in a spaced relation to each other, an arm extending from each sleeve upwardly at an angle to a vertical line passing through the axis of said beam, each sleeve having radial tongue means extending therefrom approximately at right angle to the arm on said sleeve, a stationary member secured to the beam intermediate said sleeves, the member including a body portion below said beam, a member supported by said body portion, said member being adapted to be rotated about a horizontal axis vertically alined with the axis of the beam, a link connecting the tongue means of one sleeve with said rotary member at a point spaced from the axis of its rotation, a second link connecting the tongue means of the other sleeve with said disk at a point diametrically opposed to the first named point, and a handle connected to the rotary member to

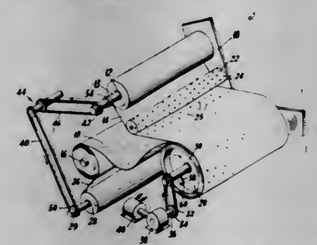
impart thereto a limited rotary movement to cause both sleeves to be swivelled about the beam to adjust the angle between said arms.

3,019,572
HOSIERY PACKAGE
John C. Berry and William J. Berry, both of Box 946, Durham, N.C.
Filed June 6, 1958, Ser. No. 740,306
22 Claims. (Cl. 53—21)



1. The method of forming a hosiery package comprising placing a single hose in a flat, laid out state, placing panel means over the foot, ankle, and heel portion of the hose, reversely folding the leg portion of the hose over the panel means, placing another panel means over the folded portion of the hose, placing at least a second hose between the panel means, and placing the panel means and hosiery in transparent wrapper means.

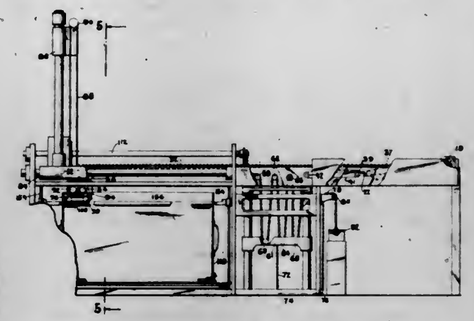
3,019,573
INSULATION WRAPPING MACHINE
Charles R. Navikas, Speedway, Ind., assignor to Union Carbide Corporation, a corporation of New York
Filed Apr. 13, 1959, Ser. No. 805,793
14 Claims. (Cl. 53—27)



1. In a wrapping machine for rolling a composite metal foil-fibrous sheeting layer type insulation about a container, a machine frame for rotatably supporting said container, a foil roll and a fibrous sheeting roll rotatably mounted in said frame, rotating means for controllably rotating said container, drive means for rotating said fibrous sheeting roll at a speed correlated to said container speed to feed fibrous sheeting thereto with slack, and means for rotating said foil roll to roll foil around said container under an adjustably uniform tension.

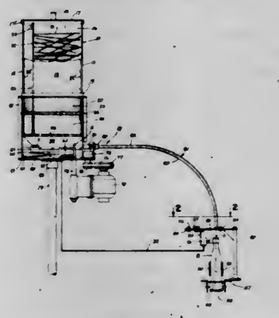
3,019,574
AUTOMATIC CIGARETTE CATCHER
James V. Johnson, Jr., Ocee K. Groppe, Kermit Hibbitts, and Malcolm E. Phillips, Jr., Raleigh, N.C., assignors to American Machine & Foundry Company, a corporation of New Jersey
Continuation of application Ser. No. 743,298, June 20, 1958. This application Apr. 9, 1959, Ser. No. 805,343
28 Claims. (Cl. 53—35)

1. An apparatus for automatically collecting rod shaped articles from a source and delivering them into a tray, said apparatus comprising a conveyor driven in timed relationship with the arrival of articles from the source, said conveyor being provided with projections and undulations on one surface to form pockets into which one or more of the articles are delivered from the source, the conveyor having a horizontal run and a vertical run, an endless belt having a run parallel to the vertical run of the pocketed conveyor and spaced therefrom a distance sufficient to retain the rod shaped articles in the



pockets of the conveyor during the vertical run, means for driving the belt and conveyor simultaneously, means for introducing the vertical runs of conveyor and belt into a receiving tray, and means for causing said vertical runs to traverse said tray horizontally to deposit said rod shaped articles within said tray whilst the conveyor and belt are driven.

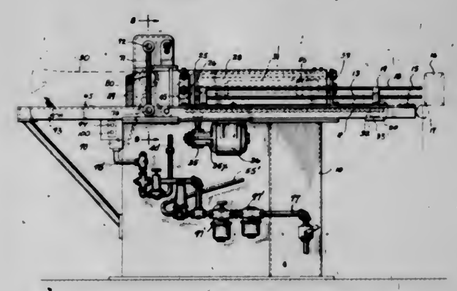
3,019,575
APPARATUS FOR INSERTING STRAWS OR THE LIKE
Walter G. Charley and Walter A. Charley, La Crescent, Minn.
Filed Feb. 13, 1959, Ser. No. 793,091
9 Claims. (Cl. 53—59)



8. In combination, a hopper, a pair of doors each having an upper outwardly rolled edge positioned around a pivot rod and pivoting thereon, said pivot rods being secured to said hopper at opposite ends thereof, a lower edge of said doors being outwardly turned to provide flanges and said flanges having rolled edges each provided with a rod having ends extending therefrom, corresponding ends of said rods being secured together by a link, said rod ends penetrating arcuate slots on the walls of said hopper, motor means connected to one of said rods for pivoting said doors, each of said doors being provided with spaced baffles, at least one of the baffles on one of the doors being positioned intermediate the baffles on the other of the doors so as to provide a serpentine passageway therebetween for straws, a reservoir comprising a pair of spaced plates hav-

ing outwardly turned flanges, said spaced plates extending the length of the hopper at their upper edges and having one end inwardly spaced from the hopper at their lower edges and having an offset portion to permit translation of a pusher bar, a base plate therebelow upon which straws are adapted to rest in vertical stack, a pusher bar positioned to move from first to the second position along said base plate to engage the end of a straw positioned thereon and move it lengthwise thereof, bias means for returning said pusher bar to first position, solenoid means for acuating said pusher bar, a switch adjustably positioned along the line of travel of the bottle in which a straw is to be inserted for actuating said solenoid means, a pair of gripper rollers having a smooth surface, said rollers rotating oppositely and to engage the end of a straw and to transfer it to a guide means, arcuately extending guide means having an end positioned to receive said straw and a second end positioned over said bottle for guiding said straw from said gripper means to said bottle.

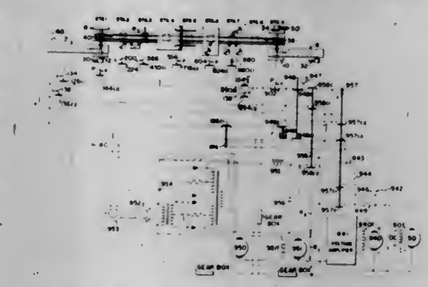
3,019,576
BALER
Leslie J. Sisley, 415 Denny Way, Seattle, Wash.
Filed July 28, 1959, Ser. No. 830,087
2 Claims. (Cl. 53—61)



1. In a package bagging machine a tubular nozzle about which the open end of a bag may be applied for filling with packages advanced through the nozzle, and a releasable clamp associated with the nozzle for securing the bag thereon for filling; said clamp comprising paired, parallel rods mounted for endwise movement above and below the nozzle, a vertical clamp bar joining said rods across one side of the nozzle, another clamp bar extended between the rods and slidable thereon at the other side of the nozzle, and a bar joining the ends of said rods at that side of the nozzle, and an expandable and contractable power means mounted between and connected to the two last mentioned bars to actuate the clamp for holding or releasing the bag.

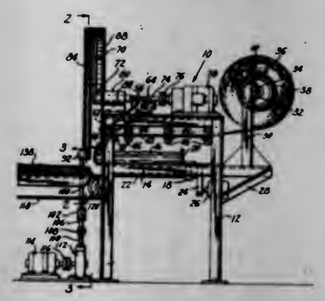
3,019,577
PACKAGING LINE
Frank Slamar, Monroeville, and Alfred Teplitz, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 9, 1958, Ser. No. 760,005
10 Claims. (Cl. 53—74)

1. Apparatus for packaging a bundle of tin plate including a platform on which the tin plate is mounted comprising a packaging conveyor having a plurality of stations therealong, means for delivering a bundle to the first station, means for removing a bundle from the last station, a wrapping station for wrapping waterproof paper around the bundle, a packaging station for wrapping a container around the waterproof paper on the bundle, said packaging station including a bundle hoist for lifting the bundle upwardly from said packaging conveyor, a platen above said hoist, means for feeding to a position above said hoist a container having a central section, a side flap on each side of said central section, a side tab on each end of said side flaps and an end flap at each end of said central section, means carried by said platen to fold said side flaps and side tabs against said package and means for folding said end flaps against



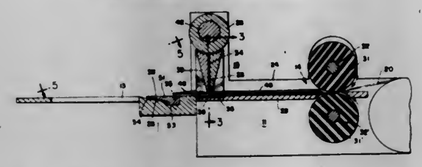
said bundle, a horizontal strapping station for applying strapping around said container on said bundle, a vertical strapping station for applying strapping around said container on said bundle, means for moving said packaging conveyor when the operations on the bundle at each of said stations have been completed, and means for preventing operation of the apparatus at the various stations until the packaging conveyor is stopped.

3,019,578
INTERLEAVING APPARATUS FOR PACKAGING BACON SLICES
Israel B. Cohen, P.O. Box 1493, Knoxville, Tenn.
Filed Sept. 30, 1960, Ser. No. 59,583
9 Claims. (Cl. 53—123)



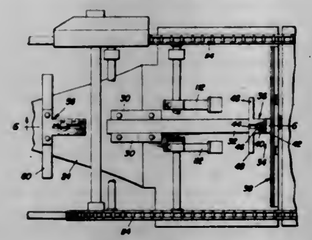
1. A device for packaging sliced bacon comprising a supporting framework, a platform on said framework, a slicing station at one end of said platform, a housing enclosing said slicing station, means for supporting a roll of wax paper on said platform, guide means for guiding a strip of wax paper from said roll to said slicing station, means for moving a slab of bacon on said platform toward said slicing station, a pair of coaxially mounted and synchronously rotatable blades within said housing at said slicing station, one of said blades constituting a slicing blade and the other constituting a deflector blade, said slicing blade being arranged to simultaneously slice said bacon and said strip of paper, an opening in a portion of said deflector blade, a nozzle adjacent said housing end, an air pressure supply means operatively connected to said nozzle, said nozzle being positioned to direct air pressure through said opening in the deflector blade against the cut-off portions of said strip for the purpose of blowing said paper portions against corresponding slices of bacon.

3,019,579
FILM-CUTTING AND CARD HOLDER INSERTING MACHINE
John A. Heckman, Skokie, Ill.
(3017 E. Copper St., Tucson, Ariz.)
Filed Nov. 7, 1960, Ser. No. 67,616
10 Claims. (Cl. 53—123)



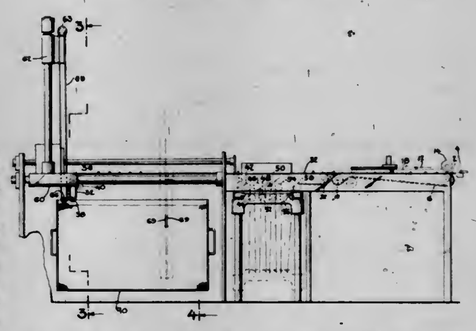
1. A film-strip cutting and card-holder inserting machine for use in the seriatim cutting of sections from a film strip and inserting the sections into card-holders each having thin layers of transparent material superimposed on opposite faces of the card-holder over a rectangular opening therein, the perimeters of the transparent layers, except along one end perimeter of one layer, being adhered to the card-holder to form a pocket within the plane of the card-holder open inwardly adjacent one end of the card-holder, the machine comprising, a film-strip-reel spindle located at one end of the base, a card-holder tray located at the opposite end of the base, a film-strip advancing-means located on the base inwardly adjacent the spindle, a film-strip cutting-means located on the base inwardly adjacent the tray, and means on the tray inwardly adjacent the cutting means for the insertion of the one end of the card-holder to so flex the card-holder outwardly of the pocket as to insure an opening to the pocket for the edge of the film-strip as advanced by the film-strip advancing means when the card-holder rearwardly of its insertion into the flexing means is pressed against the tray.

3,019,580
WIDE BACK TENSION PLATE FOR BREAD WRAPPING MACHINE
Benjamin R. Asbury, High Point, N.C.
(896 Broughton NE., Orangeburg, S.C.)
Filed Mar. 4, 1959, Ser. No. 797,100
5 Claims. (Cl. 53—230)



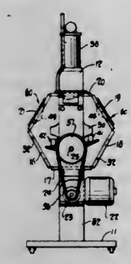
1. In a bread wrapping machine, a back tension plate unit and a pusher arm arrangement, said back tension plate unit including a slide bar, a generally continuous back tension plate and a mounting bracket securing said back tension plate to said slide bar, and said pusher arm being timed to engage said mounting bracket to move said back tension plate forwardly with said pusher arm clearing said back tension plate, and a stop member engaged by said slide bar to positively limit rearward movement of said back tension plate unit, said stop member including a support and a stop element adjustably carried by said support, whereby various sizes of loaves may be wrapped.

3,019,581
AUTOMATIC CATCHER
Malcolm E. Phillips, Jr., Raleigh, N.C., and Harvie P. Curlee, Jr., Valdosta, Ga., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed June 20, 1958, Ser. No. 743,298
17 Claims. (Cl. 53—236)



1. An apparatus for automatically collecting rod-shaped articles from a source and delivering them into a tray, said apparatus comprising a first belt having a horizontal conveyor run and a vertical delivery run, a second belt having a run parallel to the vertical run of the first belt and spaced therefrom a distance sufficient to firmly hold the rod-shaped articles between said vertical runs, means for driving said belts simultaneously, means for the introduction of vertical runs of said belts and the rod-shaped articles held therebetween into a receiving tray, and means for causing said vertical runs to traverse said tray horizontally to deposit said rod-shaped articles within said tray while said belts are driven.

3,019,582
LAMINATED BLISTER PACKAGE SEALING MACHINE
Philip Freeman, 1391 E. 33rd St., Cleveland, Ohio
Filed Apr. 13, 1960, Ser. No. 21,947
2 Claims. (Cl. 53—371)



1. A laminated blister package sealing machine, comprising in combination, a frame member, a vertically reciprocating platen actuated by a pneumatic cylinder including electrically operated valve means and associated circuits, a horizontally extending hexagonal drum journaled on the frame immediately below the platen, each of the plane faces of the drum having a cavity therein

bounded by a flat surface, adapted to support a laminated blister card thereon with the blister in dependent position within the cavity, a motor mounted on the frame, a six point Geneva wheel mounted on the drum axle and connected to the motor through a driver having a cam roller intermittently engageable therewith, to index successive faces of the drum into parallel alignment with the platen, and first and second electric switches forming a part of the pneumatic valve circuits and mounted in the path of the rotating cam roller, the first switch being triggered by the cam roller immediately prior to its engagement with the Geneva wheel slots to energize the pneumatic cylinder and raise the platen clear of the drum, the second switch being triggered by the cam roller immediately after its disengagement from the Geneva wheel to energize the pneumatic cylinder and lower the platen into compressed engagement with the aligned drum surface.

3,019,583
HEAT-SEALING MACHINE FOR BAGS, PROVIDED WITH BAG LOCATING MEANS
John D. Sylvester, Garden City, N.Y., and John D. Keenan, Jr., Caldwell, N.J., assignors to Amsco Packaging Machinery, Inc., Long Island City, N.Y., a corporation of New York
Filed Mar. 4, 1959, Ser. No. 797,202
2 Claims. (Cl. 53—373)



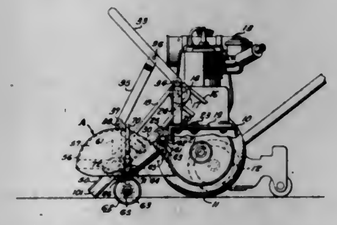
1. In a machine for heat-sealing the mouth of a bag composed of limp non-form-sustaining material and containing merchandise, said mouth lying along one edge of the bag and said bag having a rear edge opposite to the mouth edge: a heat-applying element adapted to seal the bag mouth along a line closely adjacent to the enclosed merchandise, a moving conveyor arranged to convey a bag along the direction of said seal line toward and past said heat-applying element, a first guide rail alongside one transverse edge of the conveyor and arranged above and parallel to the direction of travel of said conveyor, said guide rail being positioned to be encountered by the mouthward edge of the merchandise-filled region of an approaching bag and serving to shift the bag on the conveyor in a crosswise direction to a predetermined position relative to said heat-applying element, a second guide rail alongside the opposite transverse edge of the conveyor in a region farther from said element, said second guide rail being arranged above said conveyor and so located that the minimum crosswise distance between said rails is less than any bag dimension lying crosswise of the conveyor, whereby a bag whose rear edge contacts said second rail will, regardless of the crosswise merchandise dimension, have the mouthward edge of its merchandise-filled region positioned to encounter said first guide rails, and means between said first guide rail and said heat-applying element for laying the walls of the bag mouth into smoothly extending relation for engagement by said element.

3,019,584
ARTICLE WRAPPING STRUCTURE
Bengt A. Arvidson, Chicago, Ill., assignor to Miller Wrapping & Sealing Machine Co., a corporation of Illinois
Filed Apr. 30, 1957, Ser. No. 656,044
4 Claims. (Cl. 53—390)

1. A wrapping structure for facilitating the initial manual wrap of an article with a sheet of wrapping material comprising, a tray adapted to hold a stack of sheets of wrapping material, a table having a top on which said tray may be positioned, an article stop on the table against which an article to be wrapped by a sheet of wrapping material may be positioned, and elongated interfitting groove and tongue formed one on the tray underside and the other in the table top with the tongue having a length sufficient for slidably guiding and confining the tray for movements toward and away from said stop without twisting in a predetermined orientation relative to said article stop so that placing an article on the top sheet of wrapping material in the tray and in position against the article stop will locate the article and sheet relative to each other.

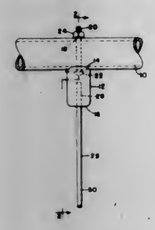


3,019,585
LAWN EDGING ATTACHMENT
Howell H. Wellborn, 3911 Highgrove Drive, Dallas, Tex.
Filed Apr. 7, 1958, Ser. No. 726,993
1 Claim. (Cl. 56—25.4)



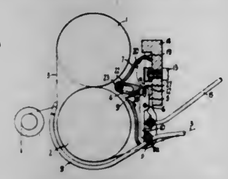
An attachment adapted to be connected to a power lawn mower comprising an elongated flat base having slots formed therein being adapted to receive fasteners to connect said base to said mower and having a hanger depending from one end thereof, an upstanding arm attached to said base, a yoke bar having lugs on its ends connected to said hanger, a cylindrical shaft housing extending transversely and forwardly of said yoke bar being pivotally connected thereto, a lever having one end pivotally connected to said upstanding arm and having an intermediate portion operatively associated with said cylindrical shaft housing for imparting swinging movement to said cylindrical shaft housing, an axial shaft rotatably supported by said cylindrical shaft housing having an inner end projecting beyond said cylindrical shaft housing and an outer end projecting beyond said cylindrical shaft housing, a pulley connected to said inner end adapted to be connected to a motor pulley on said mower, a radial cutter connected to said outer end, an inverted U-shaped bracket connected to said cylindrical shaft housing straddling said cutter, said U-shaped bracket having socket members on the terminal ends thereof, a guide having a hub portion and a disk portion rotatably supported on a hanger, said hanger adapted to fit within said socket members to position said hub portion and said disk portion rearward of said cutter.

3,019,586
RAKE TOOTH MEANS
Blaine W. Gustafson, Ottumwa, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,712
17 Claims. (Cl. 56—400)



1. Rake tooth means adapted for mounting on a rake bar of cylindrical section having an aperture diametrically therethrough, comprising: a mounting block of elastomer material having opposite ends and disposed radially as respects the bar with one of its ends engaging the bar in register with the aperture and of concave shape so as to receive the bar and hold the block against twisting about its own axis relative to the bar; a bolt having a portion embedded in the block and a portion projecting from said one end and through said aperture; nut means on the projecting portion of the bolt at the diametrically opposite side of the bar for securing the block to the bar; and a rake tooth separate from the bolt and having a portion embedded in the block and a portion projecting from the other end of said block.

3,019,587
AUTOMATIC KNOCK-OFF DEVICE FOR TEXTILE SPINNING MACHINES
Raphael Weiss, Kempten, Allgau, Germany, assignor to Allgauer Maschinenbau G.m.b.H., Kempten, Allgau, Germany, a German company
Filed Apr. 6, 1960, Ser. No. 20,294
Claims priority, application Germany Apr. 8, 1959
12 Claims. (Cl. 57—84)



1. An automatic knock-off device for textile spinning machines in sensing the breakage or running out of a thread used therein, comprising in combination:

a frame structure;

a press roller and a driven roller, the driven roller mounted rotatably with respect to said frame structure and the press roller mounted for both rotational movement and radial movement with respect to said frame structure;

a prop lever and a trigger lever pivoted to each other to form a knuckle joint, said trigger lever being also pivoted to said frame structure and said prop lever being guidingly related to said frame structure for substantially longitudinal movement toward and away from said press roller upon pivotal movement of said trigger lever about its point of pivotal support;

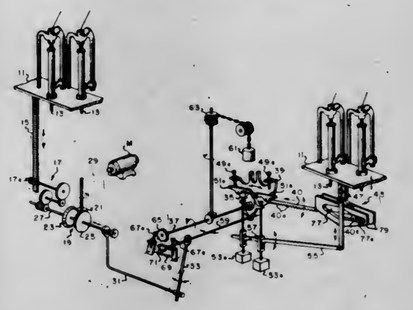
resilient means constantly urging said knuckle joint in a direction to move said prop lever toward said press roller and a trigger which in a first position prevents such movement and in a second position permits such movement;

means supported by said thread for holding said trigger in said first position;

means constantly urging said trigger into said second position;

whereby upon breakage of said thread, said trigger will immediately assume said second position and thereby permit said resilient means to act through said knuckle joint and move said prop lever against said press roller.

3,019,588
BUILDER MOTION
Grady H. Sanders, Spartanburg, S.C., and Early D. Jones, deceased, late of Spartanburg, S.C., by Sadie C. Jones, administratrix, Spartanburg, S.C., assignors to Deering Milliken Research Corporation, Spartanburg, S.C., a corporation of Delaware
Filed Apr. 29, 1960, Ser. No. 25,792
9 Claims. (Cl. 57—99)

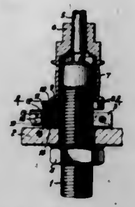


2. In a roving frame having a rotatable flyer and a bobbin carriage and an English type builder motion with an angularly movable traverse-reversing and traverse-length-controlling poker bar, a poker bar cam vertically movable as a function of the relative traversing position of said flyers and bobbins, and being arranged in angular driving relation to said poker bar, and means for shortening the effective length of said poker bar from its pivot to the point of engagement with said cam, the improvement comprising an improved poker bar cam having a cam slot with upper and lower oppositely facing cam surfaces spaced apart varying distances along the linear extent of said slot for imparting angular movement to said poker bar.

3,019,589
BRAKE FOR SPINNING AND TWISTING SPINDLES
Johann Jacob Keyser, Grabenallee 16, Aarau, Switzerland
Filed July 21, 1961, Ser. No. 125,811
Claims priority, application Germany July 30, 1960
5 Claims. (Cl. 57—88)

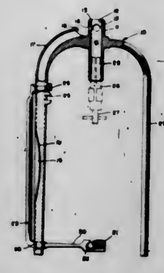
1. In combination with a textile machine spindle having an annular rotatable portion with an inner braking surface and an outer braking surface, an inner braking member arranged within said annular portion for selective engagement with said inner braking surface, an outer braking member arranged substantially radially opposite to said inner braking member adjacent to and on the outside of said annular portion for selective braking engagement with said outer braking surface, and control lever

means having said inner and outer braking members linked thereto and being operable to simultaneously bring



said inner and outer braking members into braking engagement with said inner and outer braking surface respectively.

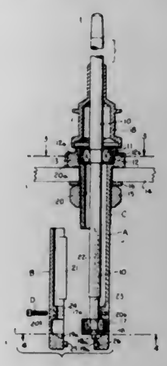
3,019,590
FLYERS FOR TEXTILE MACHINES
Arthur A. Brame, Greensboro, N.C., assignor to Brame Textile Machine Company, Greensboro, N.C., a corporation of North Carolina
Filed Oct. 24, 1958, Ser. No. 769,340
5 Claims. (Cl. 57—115)



1. A flyer for textile spinning machines having a balancing leg, a hollow leg and an entrance socket having a rove opening therethrough, said flyer having a matte-finished chrome surface on external and internal portions of the balancing and hollow legs and the entrance socket to reduce fiber-to-metal friction and fiber choking.

3,019,591
TEXTILE SPINDLE
Fernando Azcargorta Cortabarria, Vergara, Guipuzcoa, Spain, assignor to Construcciones Mecanicas Textiles, S.A., Vergara, Guipuzcoa, Spain
Filed Sept. 7, 1961, Ser. No. 136,622
2 Claims. (Cl. 57—135)

1. In a textile spindle having an elongated base, with an axial tubular bore therein, fixed upon the spindle rail so that the rail is confined between an upper flange carried adjacent the top of the base and a nut carried upon the upper portion of the base below the flange on a threaded mounting, and having a spindle blade carrying a first anti-friction bearing mounted upon an upper cushioning element within an annular seat adjacent the top of said tubular bore and a second anti-friction bearing mounted upon a lower cushioning element adjacent the bottom of said bore within an annular seat, the improvement including, a longitudinal lid mounted entirely below said threaded mounting for the bolt separating substantially the entire portion of the base below the threaded mounting into longitudinal halves but leaving the upper portion of the base mounted upon the rail, and means fastening and unfastening the lid with respect to the base, whereby the lower bearing and its cushioning element may be inspected and repaired upon removal of the lid, and whereby the spindle



blade and bearings may be removed from the base with the base positioned upon the rail.

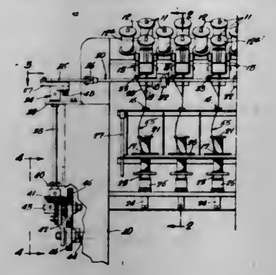
3,019,592
SUPPORTED METALLIC YARN
Arthur S. Gould, Old Greenwich, Conn., and Philip Nathanson, Brooklyn, N.Y., assignors to The Dobeckmun Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 24, 1956, Ser. No. 618,051
2 Claims. (Cl. 57—144)



1. A yarn comprising a continuous-filament base thread and at least one continuous-filament supported thread twisted around said base thread in supported relation therewith, said continuous-filament base thread comprising a first metal film interposed between long narrow strips of transparent film material, said continuous-filament supported thread comprising a second metal film interposed between other long narrow strips of transparent film material and a color deposit overlying at least one of said first and second films along the length thereof.

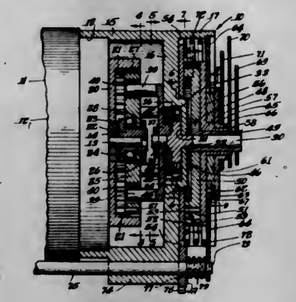
3,019,593
METHOD FOR PRODUCING VARIABLE TWIST YARN
Ralph T. Reid, Lexington, Va., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Nov. 6, 1959, Ser. No. 851,356
2 Claims. (Cl. 57—156)

1. The method of twisting a splash-type, uniform denier yarn which comprises plying at least one singles yarn under constant and uniform twist with another singles yarn under conditions of variable twist to provide a relatively masked area in one length of the uni-



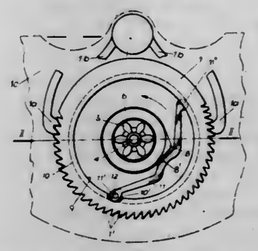
form denier plied yarn and an unmasked area in another area of the uniform denier plied yarn.

3,019,594
ELECTRIC CLOCK
Edward V. Sundt, 118 Sterling Lane, Wilmette, Ill.
Filed Feb. 9, 1959, Ser. No. 791,902
10 Claims. (Cl. 58—26)



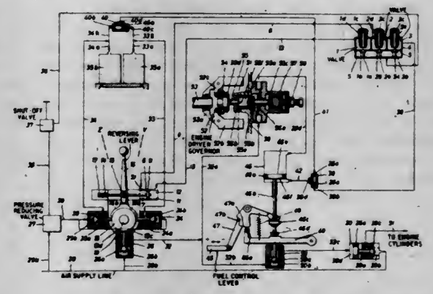
1. In an electric clock, a synchronous electric motor including a frame, a motor shaft directly driven by the motor at a synchronous speed, and a bearing for the shaft carried by the frame, a first differential gear reducer having close tolerances and including an internal toothed annulus rigidly secured to the motor shaft bearing concentrically with the motor shaft, an eccentric secured to the motor shaft, an external toothed rotor meshing with the internal toothed annulus, and a ball bearing rotatably mounting the rotor on the eccentric for oscillating the rotor with respect to the annulus and for rotating the rotor at a reduced speed in accordance with the relative numbers of teeth on the annulus and rotor, a second differential gear reducer having wide tolerances and including a housing rigidly secured to the frame, a shaft rotatably carried by the housing in alignment with the motor shaft, an internal toothed annulus formed in the housing concentrically with the shaft rotatably carried thereby, an eccentric rotatably mounted on said shaft, an external toothed rotor meshing with the internal toothed annulus and rotatably mounted on the eccentric for oscillation with respect to the annulus and for rotation at a reduced speed in accordance with the relative numbers of teeth on the annulus and rotor, and a coupling between the rotor and the shaft for rotating the latter at said reduced speed, a loose coupling connected between the rotor of the first differential gear reducer and the eccentric of the second differential gear reducer for rotating the latter from the former, and time indicating means driven by the external toothed rotor of the second differential gear reducer.

3,019,595
INERTIA WOUND WATCH WITH OVERWIND PREVENTER
Kurt Mürrle, Osterfeldstrasse 35, Pforzheim, Germany
Filed Aug. 6, 1958, Ser. No. 753,515
Claims priority, application Germany Aug. 20, 1957
2 Claims. (Cl. 58—82)



1. In a self-winding watch of the type having a mainspring, a shaft for winding said mainspring, a ratchet wheel rotatably mounted on said shaft, a flyweight mounted for oscillatory movement, and a pair of pawls connected to and actuated by said flyweight to rotate said ratchet wheel in only one direction, an overwind preventor interposed between said ratchet wheel and said shaft and comprising a rod-shaped spring connected to said ratchet wheel, and a cam projecting from said shaft and having a relatively acute vertex, said rod-shaped spring being arranged substantially in the direction of a secant of said ratchet wheel and having in its middle part a curvature the vertex of which is directed toward the axis of said shaft, said rod-shaped spring being of a shape to engage with and take along said cam to rotate said shaft and wind said mainspring when said ratchet wheel is being turned and of strength to yield to the resistance of said cam when said mainspring has been sufficiently wound while said ratchet wheel is being turned, and said vertex of said cam and said vertex of said rod-shaped spring being so shaped that when said rod-shaped spring is turned by said ratchet wheel about the axis of said shaft, said rod-shaped spring overruns said cam when the mainspring is sufficiently wound.

3,019,596
STARTING AND REVERSING SYSTEM FOR DIESEL ENGINES
Friedrich Henninger, Mannheim-Wallstadt, Germany, assignor to Motoren-Werke Mannheim A.G., vorm. Benz Abt. Stat Motorenbau, Mannheim, Germany, a German company
Filed Apr. 5, 1960, Ser. No. 20,059
Claims priority, application Germany Apr. 16, 1959
8 Claims. (Cl. 60—16)



1. A control installation for selectively reversing the direction of operation of an internal combustion engine

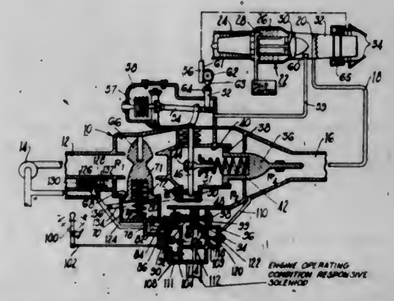
and for starting said engine, comprising in combination a displaceable camshaft of said engine, power operator means coupled to said camshaft for displacing said camshaft by first and second displacements according to the desired direction of said engine, first valve means for activating said power operator means to effect said first displacement of said camshaft to determine a first direction of operation of said engine, second valve means for activating said power operator means to effect said second displacement of said camshaft to determine a second and opposite direction of operation of said engine, third valve means for initiating starting of said engine, said third valve means being actuatable following operation of one of said first and second valve means and upon completion of displacement of the camshaft effected by such valve means, speed sensitive governor means preventing above a definite speed range of said engine said third valve means from becoming effective, said governor means allowing said third valve means to become effective within said speed range, locking means controlling starting of said engine, said locking means being in an engine starting position upon and during effective actuation of said third valve means, said locking means being released upon ineffectiveness of said third valve means.

3,019,597

JET ENGINE FUEL CONTROL RESPONSIVE TO INFERENTIALLY MEASURED COMBUSTION GAS TEMPERATURE

Richard C. German, Samuel E. Arnett, and Elmer G. Roberts, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed June 20, 1957, Ser. No. 666,877
4 Claims. (Cl. 60—35.6)



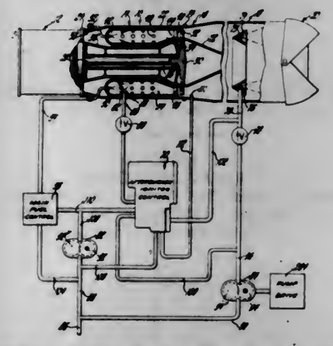
1. In a fuel feeding system for a combustion engine having an exhaust area varying mechanism, a fuel manifold upstream of said mechanism, a conduit for supplying fuel to said manifold, a metering valve in said conduit for controlling the effective flow area thereof, a regulating valve in series flow with said metering valve for controlling the pressure drop thereacross, means in said conduit for pressurizing the fuel therein: a manually operated control member, control means operatively connected to said regulating valve and said manually operated control member for controlling the position of said regulating valve as a function of the position of said control member, means including a temperature responsive member and a member responsive to an engine operating condition which varies with engine power output operatively connected to said control means for modifying the position of said regulating valve as a function of the temperature of the fuel flowing through said conduit and as a function of said engine operating condition, and means for controlling the position of said metering valve including a linkage system incorporating a cam member movable in response to changes in position of said area varying mechanism, follower means operatively connected to the surface of said cam member and said metering valve, and means responsive to a fluid pressure in said engine upstream of said manifold for varying the action of said follower means in accordance with changes in said fluid pressure.

3,019,598

AFTERBURNER FUEL IGNITER

Morris G. Hocutt, San Diego, Calif., and Carl T. McLuen, Racine, Wis., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 23, 1958, Ser. No. 750,348
10 Claims. (Cl. 60—35.6)



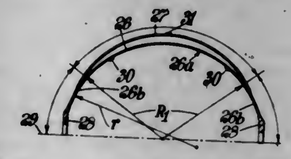
2. A multi-shot fuel injection system for a turbomachine having a main fuel combustion chamber and an afterburner chamber therein, main and afterburner sources of fuel under pressure, first conduit means connecting the fuel from said afterburner source to said afterburner chamber, second conduit means connecting the fuel from said main source to said main combustion chamber in a plurality of paths, and fuel flow control means in one of said paths, said control means including a fuel pump having a fuel inlet connected to said main source and an outlet connected to said combustion chamber, movable fuel flow blocking means normally blocking said inlet, other conduit means connecting the fuel from said afterburner source to said blocking means to act thereon, said blocking means being movable in response to the pressure of afterburner fuel thereon to unblock said inlet providing substantially continuous injection of said fuel by said pump into said combustion chamber, and means movable into said outlet to block said outlet and terminate said injection upon the pumping of a predetermined quantity of fuel.

3,019,599

AIRCRAFT REACTION-PROPULSION UNITS OR INSTALLATIONS

Rowan Herbert Colley, Sunny Hill, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain

Filed Jan. 11, 1960, Ser. No. 1,672
Claims priority, application Great Britain Jan. 15, 1959
4 Claims. (Cl. 60—35.54)



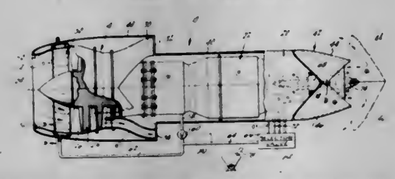
1. In jet propulsion means comprising a jet pipe, a propulsion nozzle at the outlet of the jet pipe, a lateral reverse thrust outlet from the jet pipe upstream of the propulsion nozzle and means receiving gas passing through the reverse thrust outlet and imparting a forward component of velocity to said gas thereby to produce a reverse thrust; at least one valve member curved transversely about the jet pipe axis and mounted within the jet pipe to swing about an axis at right angles to the jet pipe axis between a first position in which the valve member closes the reverse thrust outlet and permits gas to flow to said propulsion nozzle, and a second position in which the reverse thrust outlet is uncovered and gas flow to the propulsion nozzle is blocked, said valve member having end portions by which it is supported, said end portions tapering in axial dimension (a) towards its pivotal axis, and said end portions having a principal radius of curvature (r) which increases from the central portion towards the pivotal axis such that the product $a.r.$ is substantially constant peripherally along said end portions.

3,019,600

TURBO-FAN ENGINE THRUST REVERSER

Charles A. Peek, Jr., South Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Aug. 3, 1959, Ser. No. 831,378
1 Claim. (Cl. 60—35.54)



A turbo-fan jet engine having an axis and an air inlet section open to ram air at its forward end and containing an engine driven fan designed to promote axial flow and inhibit radial flow and both a turbo-jet engine with an outlet and an engine encompassing short bypass section with an outlet, both said turbo-jet engine and bypass section communicating with and receiving fan discharge air from said inlet for eventual discharge to atmosphere through said outlets to generate forward thrust, a thrust reverser comprising pivotal flap means in said inlet forward of said fan to thereby block flow through the bypass section, and clam-shell means pivotally attached to said engine outlet to reverse the flow being discharged to atmosphere therethrough from the engine, and means to simultaneously actuate said flap means and said clam-shell means between a retracted position wherein they present no resistance to flow and an operable position wherein flow through said bypass section is blocked and the effective fan inlet area is reduced and flow discharged from said engine outlet is reversed, said clam-shell means so shaped and positioned with respect to said engine outlet that when said clam-shell means is in its operable position, the effective outlet area of said turbo-jet engine is reduced so that the output of said engine is reduced an amount substantially equal to the reduction in power absorbed by said fan section when said pivotal flap means blocks flow through said bypass section.

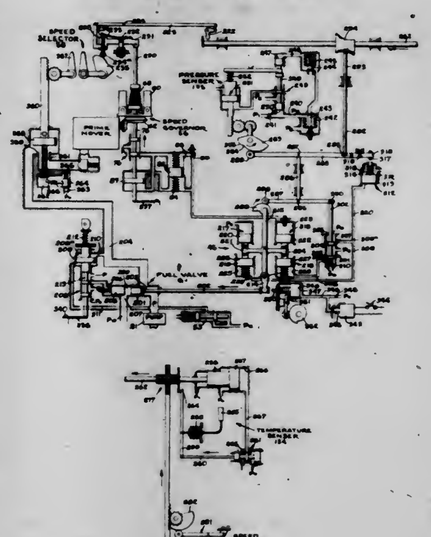
3,019,601

PEN-SHAPED NOZZLE WITH THRUST DEFLECTOR

William H. Sens, Elmwood, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Oct. 5, 1959, Ser. No. 844,328
9 Claims. (Cl. 60—35.55)

1. A pen-shaped exhaust nozzle having a casing with an outer and inner surface, said outer surface being substantially straight on the top thereof and extending for the full exhaust nozzle length and terminating in a point, and further having a smoothly curved surface on the bottom thereof converging gradually toward said straight portion and terminating at its rearward end substantially short thereof and still further having connecting portions smoothly joining said straight and smoothly curved surfaces so that said casing outer surface is pen-shaped, said casing having an inner surface defining an exhaust gas passage communicating with atmosphere and shaped to define a passage of substantially circular cross section at its forward end, and also having a tipped nozzle throat extending from said rearward end of said curved outer surface toward said straight outer surface in a direction to define an acute angle therewith from the point end thereof, and still further having an expansion surface rearward of said throat and converging toward said straight outer surface and terminating at said point, and means to change the position of said casing adjacent said point to deflect exhaust gases passing through the exhaust nozzle downwardly.



3,019,602

SPEED REGULATOR FOR PRIME MOVERS

Harland C. Plummer, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois

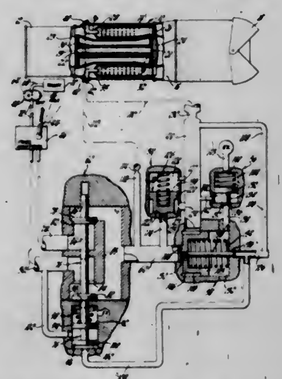
Filed May 6, 1957, Ser. No. 657,291
21 Claims. (Cl. 60—39.29)

14. In a fuel regulating system, the combination of, a fuel valve, a speed governor having a servo coupled to

said valve for normally closing and opening the valve as the speed sensed by the governor rises above and falls below the governor speed setting respectively, devices for sensing changes in conditions of speed and air temperature and pressure, a system normally adjusted by each of said devices and computing maximum and minimum limits of a permissible range of fuel flow for each prevailing set of conditions, mechanism controlled by said system for disabling said governor when said maximum limit is exceeded during periods of acceleration, and means also controlled by said system and rendered operative automatically during a period of deceleration and when the flow through said fuel valve has decreased substantially to said minimum limit to withdraw said speed and temperature sensing devices from the control of said system and leave the latter within the sole control of said pressure sensing device.

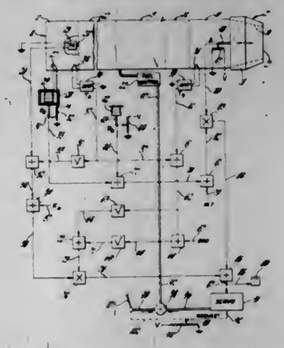
16. For regulating the flow of fuel to a prime mover, the combination of, a fuel valve, a speed governor adapted to be driven by a prime mover and having a servo for closing and opening said valve as the detected speed increases and decreases relative to the governor speed setting respectively, a system responsive to speed, temperature and pressure conditions which affect the operation of a prime mover and operable to compute maximum and minimum limits of a permissible range of fuel change for each combination of such conditions, means controlled by said system for limiting the operation of said servo in accordance with the prevailing values of such limits, and means operable automatically when the fuel flow reaches said minimum limit during a deceleration period to withdraw said system from the control of said temperature and speed conditions and render the same responsive to air pressure changes alone.

3,019,603
FUEL DISTRIBUTING SYSTEM
Arthur Kreutzer, Brooklyn, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,379
11 Claims. (Cl. 60—39.28)



1. A fuel distributing system for a gas turbine engine having a fuel nozzle, a plurality of fuel manifolds connected to said fuel nozzle, a source of fuel under pressure, a plurality of conduit means connecting said source and said manifolds, said conduit means including means connecting said source and one of said manifolds at all times, and means in the remaining of said conduit means controlling the distribution of fuel to the remaining of said manifolds, said latter means including a plurality of fluid pressure operated movable devices, a first of said devices operable in response to a predetermined pressure of the fuel in said one manifold to communicate a limited flow of fuel to a second of said manifolds, a second of said devices operable in response to a predetermined pressure of fuel in said second manifold thereagainst to permit movement of a third of said devices by fuel thereagainst at the pressure of the fuel in said one manifold, movement of said third device providing free communication of the fuel moving said third device from said source to said second manifold through said conduit means.

3,019,604
TURBOJET THRUST COMPUTER
William M. Hall, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 19, 1959, Ser. No. 787,517
5 Claims. (Cl. 60—39.28)



3. A thrust computer for a turbojet engine comprising, in combination, means responsive to rotational speed N of the engine, means responsive to total pressure P_2 in the engine inlet, means responsive to total temperature T_2 in the engine inlet, means responsive to total temperature T_5 in the turbine outlet, means responsive to ambient atmospheric pressure P_A, means responsive to engine jet nozzle area A, and computing means actuated by the said responsive means providing an output of corrected thrust according to the formula

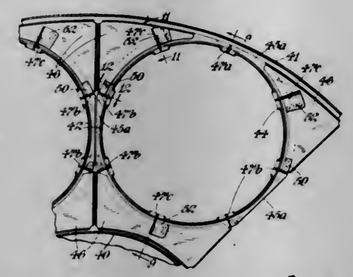
$$\frac{F}{\delta_2}=\left[k_3\frac{N}{\sqrt{\theta_2}}-k_4\right]\left[k_1\sqrt{\frac{T_5}{\theta_2}}-800-k_2\sqrt{\frac{T_2}{\theta_2}}\right]+A\left[14.7-\frac{P_A}{\delta_2}\right]$$

where k_1, k_2, k_3, and k_4 are constants representing engine characteristics.

3,019,605
COMBUSTION APPARATUS OF GAS TURBINE ENGINES WITH MEANS CONTROLLING AIR FLOW CONDITIONS IN THE COMBUSTION APPARATUS
Frederick Reginald Murray, Newstead Abbey, Linby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Nov. 18, 1957, Ser. No. 697,068
Claims priority, application Great Britain Nov. 21, 1956
15 Claims. (Cl. 60—39.65)

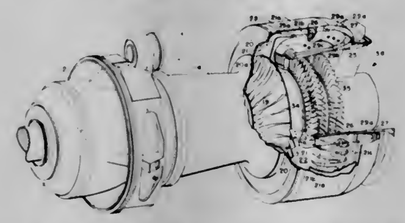
1. Combustion equipment of a gas-turbine engine comprising air casing structure and a flame tube defining a combustion space accommodated within the air casing structure, the flame tube having an air inlet at one end and an outlet at its opposite end, and said flame tube having a wall spaced away from the air casing structure to form an air space extending around the flame tube from

adjacent the air inlet to adjacent said outlet, there being circumferentially-spaced apertures in the flame tube wall adjacent said outlet establishing unobstructed communication between the air space and the combustion space for permitting a substantial flow of air from said air space into said combustion space, said apertures beginning and ending adjacent said outlet, and further comprising flow-



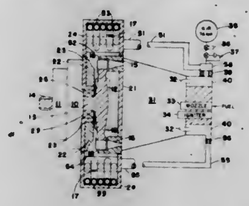
dividing walls disposed within the air space at said apertures, each flow-dividing wall extending radially across the air space from adjacent the flame tube wall to adjacent the air casing and extending axially of the flame tube across a corresponding one of the apertures to divide the air flowing from the air space towards the aperture, said flow-dividing walls being imperforate throughout their entire radial dimensions.

3,019,606
COMBUSTION SECTION FOR A GAS TURBINE ENGINE
Anselm Franz, Stratford, Conn., assignor to Avco Corporation, Stratford, Conn., a corporation of Delaware
Filed Sept. 4, 1959, Ser. No. 838,346
3 Claims. (Cl. 60—39.65)



1. In a gas turbine engine, a combustion section having a primary combustion zone and a dilution region, a compressor, a diffuser section for said compressor, an annular air chamber receiving air from said diffuser and surrounding said combustion section, a wall between said air chamber and said dilution region, a series of curved deflector vanes positioned and circumferentially spaced in said air chamber adjacent said wall to form channels in said air chamber for effecting a turn and changing direction of the flow of air from a partially circumferential direction to an axial direction and resulting in increasing gradients of energy in the air flow from a lower energy region on the inside of the turn in each of said channels to a higher energy region on the outside of said turn, and a series of air scoops in said wall each with an inlet in said chamber and an outlet in said dilution region, one of said scoops being positioned in each of said channels with said inlet bridging a portion of each channel in the region of lower energy air thereby to divert a portion of the air through said scoops from each channel into said dilution region and leaving a passage adjacent each of said scoops for continuing the axial flow of higher energy air in said air chamber.

3,019,607
EXHAUST SHROUD COOLING
Dennen J. Bunger, Whitesboro, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 24, 1957, Ser. No. 661,383
2 Claims. (Cl. 60—39.66)

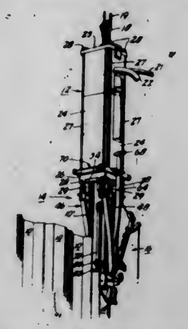


1. A compact combustion starter for aircraft turbine engines comprised of a ring of nozzles; a combustion chamber connected to said nozzles; a turbine arranged to be driven at its periphery by gases from said nozzles; drive means including reduction gearing for engaging an aircraft engine; a short shaft connecting said reduction gearing and said turbine; said shaft being rotatably mounted in a mounting which is positioned between said gearing and said turbine; heat barrier means extending radially outwardly from said mounting between the downstream side of the turbine and a transverse support wall for said reduction gearing; said transverse support wall extending outwardly slightly beyond the periphery of said turbine; an exhaust shroud extending from the outer part of said transverse support wall to a transverse combustion chamber wall; said exhaust shroud having only one exhaust port and a pocket at each side of said exhaust port; said heat barrier means, said exhaust shroud, and said combustion wall being arranged so that gases from said turbine are deflected radially outwardly and so that an annular-like exhaust chamber is formed, whereby exhaust gases are directed radially-outwardly away from the support wall and turbine mounting; cooling-shielding means in said exhaust chamber comprised of a layer of abutting tubes extending circumferentially along and resting on the inner surface of said exhaust shroud from one side to the other side of said exhaust port; said tubes having inlet ends and outlet ends adjacent said single exhaust port; two longitudinally-extending inlet and outlet manifolds each having two rows of offset openings positioned in said pockets in said shroud adjacent said one exhaust port; the inlet and outlet ends of said tubes being respectively received in the two rows of said off-set openings of each of said inlet and outlet manifolds.

3,019,608
APPARATUS FOR BALANCING AND HOLDING PILE-DRIVING HAMMERS ON SHEET PILING
Theodore Marmion, 113 Moonachie Ave., Moonachie, N.J.
Filed Dec. 13, 1957, Ser. No. 702,695
13 Claims. (Cl. 61—63)

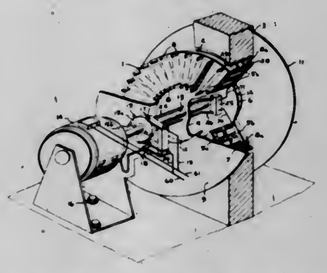
1. Apparatus for conveniently driving sheet piling of the type having an arch shape as seen in end view thereby forming a vertically extending offset portion when the sheet piling is standing on end, said apparatus comprising a pile driving hammer, self-balancing and clamping mechanism secured to the hammer for holding the hammer on top of the sheet pile being driven including a pair of opposed legs depending from the hammer and providing first and second closely spaced opposed guide

surfaces extending down along opposite faces of the sheet pile and maintaining the axis of the hammer aligned with respect to these guiding surfaces so as to prevent backward or forward tipping motion of the hammer with respect to the axis of the sheet pile, a guide member providing a third guide surface extending down along a substantial length of the offset portion of the sheet



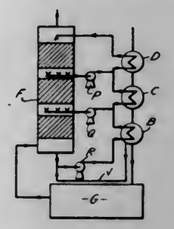
pile so as to prevent lateral motion of the hammer with respect to the axis of the pile, a clamping device included in said mechanism for applying clamping force on the faces of the piling between said first and second guide surfaces, thereby to lock the hammer onto the pile while driving the pile downwardly, and releasing means for removing said clamping force and withdrawing said hammer after the pile has been driven.

3,019,609
THERMOELECTRIC AIR CONDITIONING ARRANGEMENT
Joseph A. Pietsch, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 21, 1960, Ser. No. 77,319
4 Claims. (Cl. 62—3)



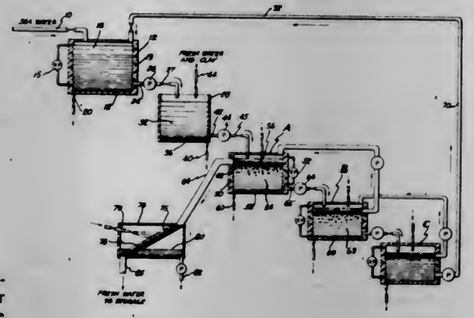
1. A thermoelectric heating and cooling device utilizing the Peltier effect comprising a thermopile, means for rotatably mounting said thermopile within an aperture in a partition, means for energizing said thermopile with a source of direct current electrical power including a commutator rotatably mounted with said thermopile, and stationary conductor brushes associated with the commutator bars for conducting an alternating current from an A.C. power source to said commutator, and means including a synchronous motor adapted for connection to said A.C. power source for rotating said thermopile within said aperture of said partition at a rotational speed in synchronization with the frequency of said A.C. power source so that the alternating current conducted by said brushes to said commutator is converted to pulsating direct current by said commutator.

3,019,610
GAS HUMIDIFICATION AND DE-HUMIDIFICATION PROCESSES
Henry Reginald Clive Pratt, Abingdon, England, assignor to The United Kingdom Atomic Energy Authority, The Patents Branch, London, England
Filed Nov. 6, 1957, Ser. No. 694,821
Claims priority, application Great Britain Nov. 9, 1956
8 Claims. (Cl. 62—11)



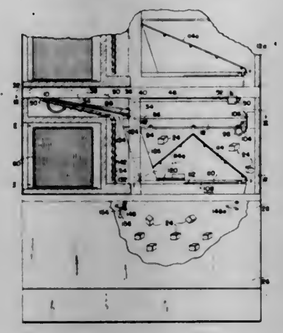
1. In a process in which a gas is subjected to the terminal steps of humidification with a liquid in at least two successive humidifying stages and dehumidification by condensing said liquid therefrom in an equal number of successive dehumidifying stages, and an intermediate step of chemical treatment of the gas, the further step of passing liquid from the first of said humidifying stages into indirect heat exchange relationship with gas passing through the last of said dehumidifying stages and respectively liquid from each succeeding humidifying stage into indirect heat exchange relationship with gas passing through each preceding dehumidifying stage.

3,019,611
RECOVERY OF FRESH WATER FROM SEA WATER
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio
Filed Oct. 18, 1960, Ser. No. 68,322
8 Claims. (Cl. 62—58)



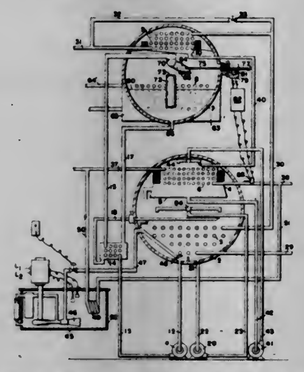
1. A method of treating saline waters to recover relatively fresh water which comprises subjecting the saline water to a combination of a precipitation treatment and a refrigeration treatment, said precipitation treatment comprising the introduction of siliceous material containing hydrated aluminum silicate to said saline water and separating the precipitate therefrom, said refrigeration treatment comprising refrigerating the resultant precipitate-free saline water to cause water to freeze out as ice crystals, separating said ice crystals from the mother saline water and melting the ice crystals to recover fresh water.

3,019,612
ICE CUBE MAKING MACHINE
Wilbert J. Jaeger, Orange, Calif., assignor to Carbonic Dispenser, Inc., of California, Norwalk, Calif., a corporation of California
Filed Dec. 9, 1957, Ser. No. 701,587
19 Claims. (Cl. 62—66)



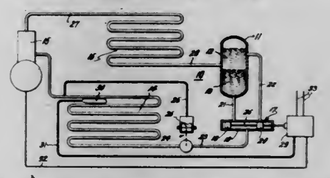
3. An ice maker for making slabs to be cubed comprising vertically and laterally spaced apart freezing plate and cube cutter units, operating means to intermittently heat said plate for a period and thaw the bond of adherence enabling the slab to separate from the plate, second operating means effective to supply energy to said cutter during portions of said cycles but in each of which for another portion it is rendered relatively ineffective from being so energized, and control means sensitive to separation of the weight of the ice slab from the plate for causing operation of said second operating means.

3,019,613
ABSORPTION REFRIGERATION SYSTEMS AND METHOD OF OPERATING THE SAME
Louis H. Leonard, Jr., Dewitt, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Jan. 13, 1960, Ser. No. 2,208
24 Claims. (Cl. 62—103)



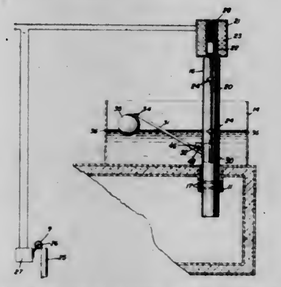
23. In the method of operation of an absorption refrigeration system including a generator containing a tube bundle compartment and an outlet compartment, solution discharge means in the tube bundle compartment for discharging weak solution in heat exchange relation with heating medium in the tube bundle and second means in the generator adjacent the discharge means extending into the outlet compartment, the steps which consist in discharging solution in the generator at full load in heat exchange relation with heating medium in the tube bundle, and, at partial load, varying the relationship between the discharge means and said second means to forward at least some solution to the outlet compartment without passage in heat exchange relation with the heating medium.

3,019,614
DUAL TEMPERATURE REFRIGERATION
Albert E. Schubert, Pittsfield, Mass., and Carlyle S. Herrick, Alplaus, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 4, 1958, Ser. No. 758,949
3 Claims. (Cl. 62—114)



3. In a variable capacitor refrigeration system wherein the capacity is varied by regulating the proportions of a mixture of a plurality of refrigerants which are caused to be circulated through the system, a method of operating such a system comprising utilizing at least a pair of refrigerants which are substantially completely insoluble in the liquid phase at a predetermined temperature in the condenser and in a storage part of said system, said refrigerants capable of forming two separate phases due to insolubility characteristics under the operable conditions of the system, said two refrigerants having different vapor pressures so that different temperatures are obtained when the liquid phase evaporates at the same pressure with each of said refrigerants operating as a refrigerant medium, circulating a mixture of said refrigerants through the said system the proportion of which is dependent upon system refrigerant load, condensing said refrigerants at a temperature where the said refrigerants are insoluble with respect to each other, utilizing insolubility characteristics of said refrigerants during condensation thereof from the vapor stage for separation, and storing the refrigerants in a receiver.

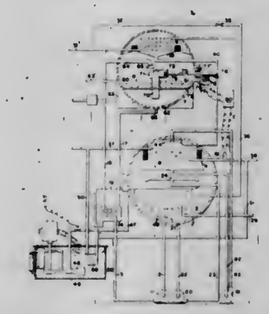
3,019,615
ICE CREAM MIX CONTROL
Frank T. Moser, Easton, Pa., assignor, by mesne assignments, to Mister Softee, Inc., Runnemede, N.J., a corporation of Pennsylvania
Filed Mar. 7, 1960, Ser. No. 13,186
9 Claims. (Cl. 62—132)



1. In a combination a freezer, a mix reservoir, means for conveying mix from the reservoir to the freezer and

having a port therein, means controlled by discharge of frozen confection from the freezer for opening and closing said port and further means for changing the effective area of the port in accordance with changes in depth of the mix in the mix reservoir.

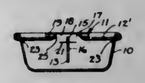
3,019,616
ABSORPTION REFRIGERATION SYSTEMS AND METHOD OF OPERATING THE SAME
James A. Papapanu, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Jan. 13, 1960, Ser. No. 2,209
4 Claims. (Cl. 62—141)



1. In combination with an absorption refrigeration system including a generator having a weir member therein separating the generator in a first compartment and a second compartment, a tube bundle placed in the first compartment, and an outlet for strong solution placed in the second compartment, means for discharging weak solution in the generator in heat exchange relation with heating medium passing through the tube bundle therein, said discharge means including a pipe member having an open end extending within the generator, and a control arrangement for varying the quantity of weak solution discharged in the generator in heat exchange relation with the heating medium, said arrangement including a first tube member extending from the second compartment through the first compartment adjacent the discharge means adapted to receive solution from the discharge means, a second tube member extending from a portion of the first compartment adjacent the second compartment to a point adjacent the discharge means adapted to receive solution from the discharge means, a box-like member adapted to be placed below the open end of the pipe member and connected to the first and second tube members, said box-like member being separated into two sections each of which is connected to one of the tube members, and means for varying the relationship between said discharge means and said tube members to select the places of discharge of said solution in the generator thereby varying the quantity of solution discharged in the generator in heat exchange relation with heating medium therein.

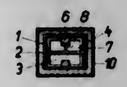
3,019,617
SPLASH AND SPILL GUARD FOR REFRIGERATOR ICE CUBE TRAYS
Sylvester A. Malthaner, 4221 Pinecrest Road, Rockford, Ill., and Robert L. Jacklin, Box 83D, R.R. 2, Wheaton, Ill.
Filed Mar. 26, 1958, Ser. No. 724,089
9 Claims. (Cl. 62—361)

1. In a freezing device comprising a container having a removable metallic grid defining ice pockets therein adapted to be filled with water to a certain level, a cover of flexible resilient non-metallic material connected inwardly from its outer edges to the grid and fitting loosely at its outer edges and independently of its connections with the grid only on the inside of said container below the top thereof and having a central filler opening communicating



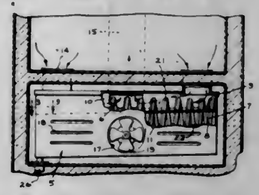
with the inner portion of the pockets, said cover providing a water seal by its engagement around the outer periphery thereof with the side walls of the container whereby water is retained within said container by surface tension against spilling from between the cover and container wall in the event of tilting of the container.

3,019,618
APPARATUS FOR THE PREVENTION OF FORMATION OF SUGAR CRUSTS ON CONTINUOUS TROUGH CONVEYORS
Fritz Meyer, Uzwil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland, a Swiss firm
Filed June 10, 1958, Ser. No. 741,023
Claims priority, application Germany June 12, 1957
9 Claims. (Cl. 62—380)



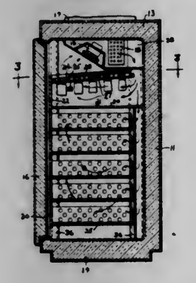
1. A conveyor for conveying a continuous stream of raw sugar at elevated temperature, said continuous stream having humid air entrained therein, said conveyor including a housing having top, bottom and side walls, conveying means comprising U-shaped conveyor bars that fit within a rectangular trough formed by said walls, said conveying means moving said stream of raw sugar at elevated temperature therethrough and cooling means for cooling at least one of said walls to a temperature lower than said elevated temperature to condense thereon moisture from said humid air, said moisture forming on said cooled wall within said housing to form a liquid layer thereon whereby said liquid layer prevents the formation of sugar crusts on said wall as said sugar is conveyed therethrough.

3,019,619
EVAPORATOR STRUCTURE FOR HOUSEHOLD REFRIGERATORS
Donald E. Hilliker, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 19, 1960, Ser. No. 76,620
7 Claims. (Cl. 62—417)



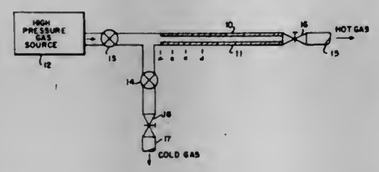
1. A household refrigerator including a freezer compartment for the storage of frozen foods and a fresh food compartment for the storage of foodstuffs at above-freezing temperatures, an evaporator for refrigerating both of said compartments, a housing enclosing said evaporator, said evaporator comprising a refrigerant conduit formed to include a plurality of passes series connected by end loops, a partition positioned in a plane intersecting said passes between the ends thereof dividing said housing and said evaporator into a freezer section and a fresh food section and separate means for circulating air from said fresh food compartment over said fresh food evaporator section and air from said freezer compartment over said fresh food section.

3,019,620
REFRIGERATING APPARATUS
Anthony R. Costantini, Philadelphia, and Anthony Di Angelus, Havertown, Pa., assignors to Victory Metal Manufacturing Company, doing business as Victory Metal Manufacturing Corporation, Plymouth Meeting, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1960, Ser. No. 69,110
13 Claims. (Cl. 62—418)



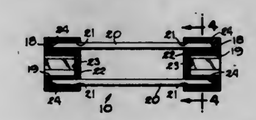
1. Refrigerating apparatus including a quick-freeze compartment and a forced air cooling system for cooling and circulating air through the quick-freeze compartment, said quick-freeze compartment comprising a generally imperforate walled enclosure having an inlet and an outlet through which inlet and outlet respectively cold air from the cooling system enters and is withdrawn after passing through the compartment, supporting means within the enclosure from which the articles to be frozen may be suspended at different elevations, said supporting means being so disposed in the enclosure relative to the inlet and outlet that some of the incoming cold air passes through the entire article suspension region before being withdrawn through the outlet while the remainder of the incoming cold air divides into plural flow paths, each of which flow paths passes through only a portion of the entire article suspension region before being withdrawn through the outlet.

3,019,621
HIGH TEMPERATURE COMPRESSION HEATER
Maurice O. Lawson, 111 E. Schantz Ave., Dayton, Ohio
Filed Oct. 3, 1960, Ser. No. 60,233
8 Claims. (Cl. 62—467)
(Granted under Title 35, U.S. Code (1952), sec. 266)



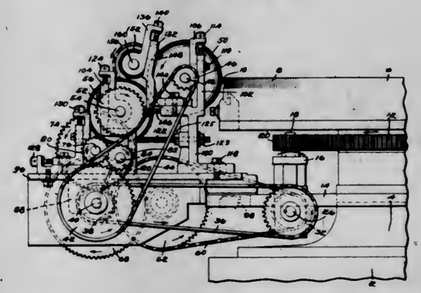
1. A device for producing high temperature gas comprising: a tubular chamber, a layer of insulation on the inner wall of said chamber, a high pressure gas source, means for cyclically admitting gas from said high pressure source to said chamber, a second means for allowing gas to leave said chamber under expansion, said second means being operated out of phase with respect to said first means, a first outlet means for discharging hot gas from said chamber, and a second outlet, adjacent said second means, for discharging cold gas from said chamber.

3,019,622
FLEXIBLE COUPLING
Rex M. A. Fermier, Chicago, Ill., assignor to Lovejoy Flexible Coupling Co., Chicago, Ill., a corporation of Illinois
Filed Feb. 3, 1961, Ser. No. 86,921
2 Claims. (Cl. 64—15)



1. A coupling for connecting the flat-sided axially separated ends of two alined shafts, said coupling comprising a head having a flat-sided shaft hole in one face and a plurality of angularly spaced pin holes in the opposite face, said shaft hole being adapted to telescope with one of the shafts, a similar head telescoping with the other shaft and having pin holes alined with said pin holes in said first head, a plurality of pins extending between said heads with the opposite ends of each pin projecting into said alined holes to transmit torque between the heads, a stop formed in each of said shaft holes, said stops abutting against the ends of the shafts and limiting the sliding of said heads apart along the shafts, and stops formed in said pin holes and abutting against the ends of said pins to limit sliding of the heads toward each other.

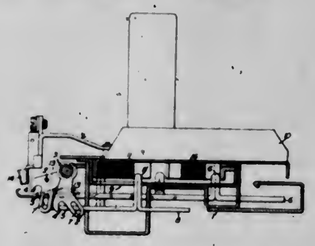
3,019,623
PILE FABRIC KNITTING MACHINES
Irving C. Howes, North Andover, Mass., assignor to Davis & Furber Machine Company, North Andover, Mass., a corporation of Massachusetts
Filed Apr. 10, 1959, Ser. No. 805,399
3 Claims. (Cl. 66—9)



1. Means for feeding fibers to a circular knitting machine which includes a base and a needle cylinder carrying a plurality of hooked needles, said means comprising a carding head frame and carding elements mounted thereon, said frame comprising a pair of spaced vertical plates having extended horizontal upper surfaces to which bearings may be attached, said plates fastened to the base of the knitting machine, pairs of

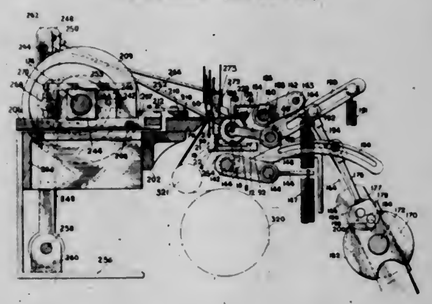
spaced bearings mounted on the upper surfaces of said spaced plates, said bearings being adjustable vertically and lengthwise of said plates, said pairs of bearings supporting a pair of feed rolls, a lickerin and a doffer, a horizontal drive shaft at right angles to said plates mounted on bearings fixed to said machine under the needle cylinder, gearing driven by said machine for rotating said shaft, and means mounted on the said plates and driven by said shaft for causing appropriate rotation of said feed rolls, lickerin and doffer.

3,019,624
MOVING NEEDLE TYPE HAND OPERATED KNITTING MACHINE
Sanji Hori, 3–4 Nakasako-cho, Tokushima, Japan
Filed May 28, 1958, Ser. No. 738,465
Claims priority, application Japan Nov. 11, 1957
8 Claims. (Cl. 66—60)



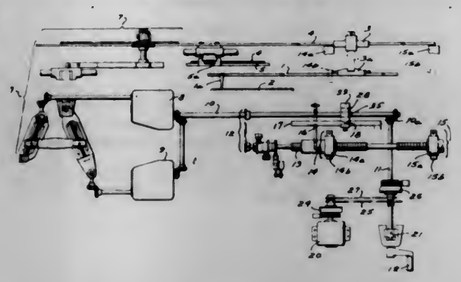
1. A hand knitting machine comprising a frame, a bar mounted on the front of said frame, a plurality of sinkers pivotally mounted on said bar for movement forwardly and rearwardly of said frame, each sinker having a neb and a controller thereon, a plurality of knitting needles slidably mounted on said frame, and a needle actuator movably mounted on said frame for moving said needles and said sinkers in sequence.

3,019,625
PATTERN MECHANISM FOR PILE FABRICS
John L. Hubbard, Cornwall on the Hudson, N.Y., assignor to The Firth Carpet Company, New York, N.Y., a corporation of New York
Filed Oct. 6, 1958, Ser. No. 765,503
6 Claims. (Cl. 66—84)



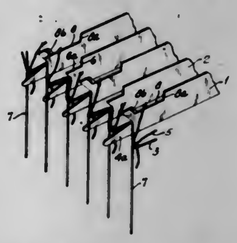
1. In a knitting machine, a pile forming mechanism for making relief type designs, said mechanism comprising a hook bar, a plurality of hooks mounted on said hook bar, an actuating lever connected to each hook, a pattern drum rotatably positioned adjacent the actuating levers, and pattern means on said drum engaging specific actuating levers to vary the movement of the hooks connected thereto.

3,019,626
STRAIGHT BAR KNITTING MACHINES
Raymond Blood, Shepshed, England, assignor to William Cotton Limited
Filed July 15, 1959, Ser. No. 827,208
Claims priority, application Great Britain July 18, 1958
10 Claims. (Cl. 66—89)



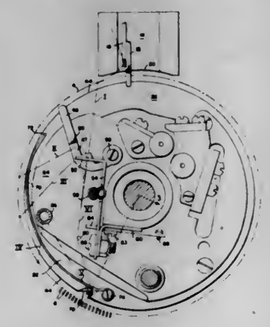
1. A straight bar knitting machine in which at least one mechanism is required to be progressively adjusted in fashioning operations of the machine and is required to be re-set, having in combination, adjustment means connected to said mechanism for adjusting it, an adjustment operating shaft connected to said adjustment means for operating the latter, drive transmitting means connected to said adjustment operating shaft for transmitting drive thereto, a power drive connected to the drive transmitting means and operable for imparting drive thereto, clutch means connected in said drive transmitting means for control of the drive, and switch means associated with the clutch means and operable to effect such control of the clutch means that re-setting of said mechanism in desired direction can be effected through said adjustment operating shaft from said power drive.

3,019,627
METHOD AND MACHINE FOR KNITTING PILE FABRICS
Hugo Lindner and Hellmuth Lindner, Auerbach, Erzgebirge, Germany, assignors to VEB Vereinigte Strumpfwerke Eeda, Auerbach, Erzgebirge, Germany
Filed Oct. 30, 1958, Ser. No. 770,792
Claims priority, application Germany Feb. 21, 1958
10 Claims. (Cl. 66—91)



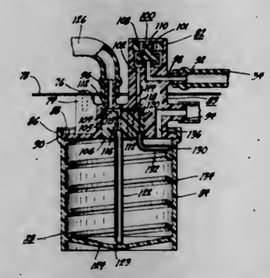
7. A method of manufacturing a plush material upon a flat knitting machine having sinkers wherein the foundation thread is successively formed into loops and the plush forming thread is laid upon the upper side of the sinkers comprising, loosely supporting the plush forming material parallel to the foundation thread upon the sinkers, maintaining a plurality of vertically reciprocable loop-forming needles having shafts between the sinkers, moving the plush forming material by means of some of the sinkers against the shafts of the needles and drawing portions of the thread downwardly against the restraining force of the sinkers by descent of the needles into the knocking-off position to break the pile-forming threads against the sinker edges.

3,019,628
CLAMPING AND CUTTING MEANS FOR CIRCULAR KNITTING MACHINE
Frank R. Page, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed Sept. 19, 1958, Ser. No. 762,000
8 Claims. (Cl. 66—145)



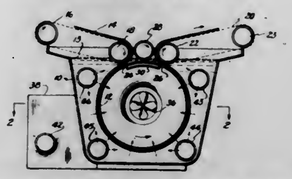
1. A knitting machine comprising a needle cylinder, needles carried thereby, means for feeding yarn to the needles, a dial, transfer elements carried by said dial, said dial having projecting fins for guiding said transfer elements for radial movements thereof, and means providing a cutting edge cooperating with said fins to shear yarn ends closely adjacent to the needles.

3,019,629
DISPENSING DEVICE
Marvin O. Ross, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,851
11 Claims. (Cl. 68—17)



4. A solid washing agent dispenser comprising, means forming a fluid flow channel having an inlet end and an outlet end, means in said channel between said ends for restricting said fluid flow to create a suction adjacent said restricting means, a container, a suction tube connecting said container and said channel adjacent said restricting means, means in said channel for bypassing a portion of said fluid to said container, means in said container associated with said bypass means for directing said fluid portion into said container for dissolving said solid washing agent and for cleaning said receptacle.

3,019,630
WASHING OR DYEING MACHINE
Johann Fleissner and Gerold Fleissner, Egelsbach, Germany, assignors to Fleissner & Sohn Maschinenfabrik, Egelsbach, near Frankfurt am Main, Germany
Filed Oct. 16, 1959, Ser. No. 853,434
Claims priority, application Germany Aug. 31, 1955
2 Claims. (Cl. 68—158)

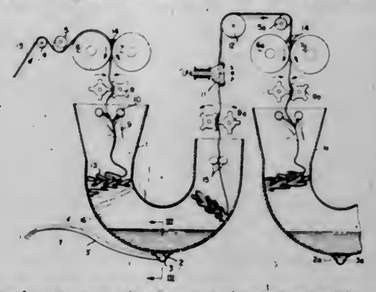


1. In a fibrous material washing machine having a liquid container, a perforated washing drum rotatably mounted on its horizontal axis within said container and adapted to be substantially submerged below the washing liquid surface level to be maintained in said container, first conveyor means for feeding unwoven fibrous material to an ingress point to be borne on the revolving surface of said drum for movement beneath said drum, said ingress point lying just below the surface to be maintained for the level of the washing liquid, second conveyor means for removing said material from said drum at an egress point on the revolving surface of said drum, said egress point lying just below the surface to be maintained for the level of the washing liquid, said second conveyor means being positioned opposite to the said first conveyor means across the top of said drum, pump means for withdrawing washing liquid from the interior of said drum to form a differential pressure between the exterior and interior of said drum for drawing said liquid from said container through said material borne on the submerged portions of said drum into said drum and thereby firmly holding said borne material on the said drum as the said drum rotates through the major portion of a single revolution to move said material from said first to said second conveyor means, and liquid supplying tube means having a perforated outlet within said container and joined to said pump means for recirculating the said withdrawn liquid substantially uniformly against the submerged surface portions of said washing drum, the improvement comprising a liquid and air excluding cover positioned within said drum on a circumferential surface adjacent to the uppermost portion of said drum, the ends of said cover lying beneath the level to be maintained for said liquid substantially submerging said drum while simultaneously being positioned respectively adjacent the said points of ingress and egress of said fibrous material on said drum whereby a substantially increased suction effect is achieved by the action of said pump which said effect is continuously maintained during the contact of said fibrous material on said drum by increased differential pressure over the fibrous material covered surface of said drum.

3,019,631
WASHING MACHINE FOR WASHING GOODS IN FULL WIDTH
Adolf Freyberg, St. Tonis, near Krefeld, Germany, assignor to Joh. Kleinewefers Sohne, Krefeld, Germany
Filed Oct. 29, 1959, Ser. No. 849,557
Claims priority, application Germany Nov. 6, 1958
5 Claims. (Cl. 68—178)

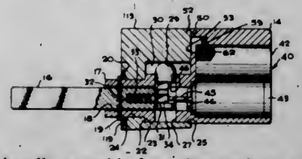
2. A washing machine for washing webs and similar textile goods in full width, which includes: at least one J-box adapted to receive washing liquid and having an entrance opening and an exit opening, means respectively arranged at said extrance opening and said exit opening for respectively feeding the goods to be washed into and withdrawing the washed goods from said J-box,

and laying means arranged near said entrance opening for folding the goods fed into said J-box in a plurality of folds across the cross section of said J-box, said laying means including oscillatable tubular members connectable



to a fresh water supply source and provided with openings for supplying water therethrough into said J-box, said laying means also including folding arms connected to said tubular members for oscillation therewith.

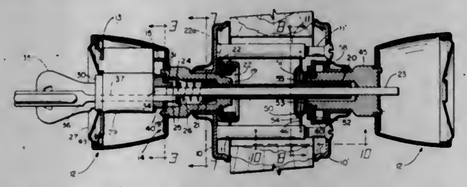
3,019,632
HANDLE ASSEMBLY WITH REMOVABLE KEY-OPERATED MECHANISM
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif.
Filed Aug. 29, 1960, Ser. No. 52,674
4 Claims. (Cl. 70—224)



1. In a handle assembly for a door lock, an escutcheon adapted to be attached to a door, said escutcheon having a handle-facing area thereon, a handle rotatably mounted on the escutcheon having a portion including an escutcheon-facing area on said handle, means forming an access hole in said portion of the escutcheon-facing area, said access hole being covered by said handle-facing area of the escutcheon when the handle is in locked position, said access hole having a position exposed relative to said handle-facing area of the escutcheon when the handle is rotated away from locked position, blocking means for holding said handle in non-rotatable relationship with said escutcheon, means forming a chamber in the handle, a key-operated mechanism in said chamber operatively associated with said blocking means, a detent in said mechanism and having a portion extending therefrom, detent engaging means within said access hole, said detent having an engagement with said detent engaging means to retain said key-operated mechanism in the handle, said key-operated mechanism being adapted to be released therefrom by instrumentation extended through the access hole into engagement with the detent to enable removal of said mechanism.

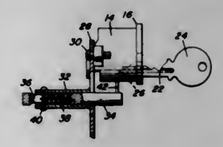
3,019,633
KNOB HAVING A REMOVABLE CYLINDER LOCK ASSEMBLY
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif., and George B. Solovieff, South Gate, Calif.; said Solovieff assignor to said Russell
Filed Aug. 3, 1959, Ser. No. 831,087
4 Claims. (Cl. 70—224)

2. A key operated mechanism comprising a housing, a wall at the inside end of the housing having a non-circular hole therethrough, said housing having an opening at the outside end, a cylinder barrel having an endwise removable and non-rotatable mounting in the housing, a key operated cylinder plug rotatably mounted in said barrel having an inner portion extending into said hole and having an initial position removable from said hole, means on said inner portion receptive of the edges of said hole whereby when said inner portion is rotated away from said initial position said inner portion is engaged by said edges and non-removably secured thereby, a shaft having a non-circular cross-sectional shape, an aperture in said inner portion receptive of said shaft, said aperture having a shape complemental



to the cross-sectional shape of the shaft to prevent relative rotation between the plug and the shaft, said shaft having a slidable position in the aperture, and spring means acting between said shaft and said housing normally urging said shaft into the aperture, means limiting rotation of said shaft and said inner portion of the plug to positions other than said initial position, means forming a passage through said plug providing access to said shaft, the shaft being subject to inward endwise movement by an instrument extended through said passage whereby to enable disengagement of said shaft from said inner portion and rotation of said inner portion to said initial position for removal of said cylinder barrel from the housing.

3,019,634
KEY EJECTING MEANS
Alfred C. Roberson, 1111 11th St. NW., Canton, Ohio
Filed May 22, 1959, Ser. No. 815,103
5 Claims. (Cl. 70—388)



3. In a lock mechanism having a rotatable barrel receiving a key, a spring biased pin extending radially into the barrel for engagement with the key and for ejection of the key when the key is in inoperative position within the barrel, means supporting said pin for movement in an arcuate swinging pattern for movement laterally away from the key and barrel when the key is rotated to operative position, said pin being spring biased about its axis of arcuate movement toward the barrel for movement into the barrel for engaging and ejecting the key when the key is moved to inoperative position.

3,019,635
KEY CLOSURE
Dorothy H. Kling, Dayton, Ohio
Filed Oct. 10, 1957, Ser. No. 689,287
1 Claim. (Cl. 70—456)

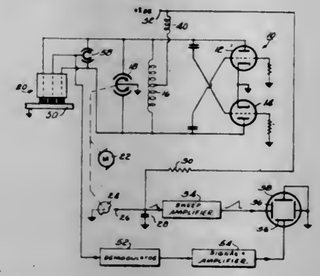
A key retaining device comprising a shallow elongated housing having an open end and a pair of spaced opposed

walls provided with inner surfaces facing each other, a pair of spaced brackets securing said inner surface of one of said walls, and a substantially U-shaped spring disposed longitudinally of and substantially coextensively with said



walls and having inturned ends respectively slidably mounted in said brackets whereby a key inserted through said open end between said spring and said other wall is maintained flat against said inner surface of said other wall by said spring.

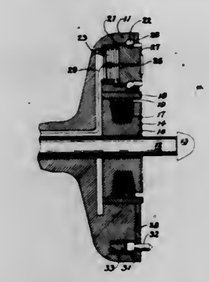
3,019,636
ULTRASONIC INSPECTION AND MEASURING MEANS
Elliott A. Henry, Newtown, Conn., assignor to Sperry Products, Inc., a corporation of New York
Filed Oct. 30, 1958, Ser. No. 770,779
4 Claims. (Cl. 73—67.7)



1. Apparatus for ultrasonic inspection of a workpiece, including a transducer having a single receiving element and a pair of spaced transmitting elements disposed symmetrically with respect to said receiving element, said elements being disposed in proximity to one another and having one surface thereof defining a common plane, each of said elements being constructed of a piezo-electric material, a wave signal generator having a balanced output circuit including a pair of complementary sections, each coupled to one of said transmitting elements, and means for deriving from said receiving element a potential indicative of the amplitude of acoustic waves produced in the workpiece.

3,019,637
ULTRASONIC TESTING ARRANGEMENT
Edward G. Cook, Morrisville, and Julius F. Tibolla, Yardley, Pa., and Constantine Foundos, Pennington, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Mar. 24, 1959, Ser. No. 801,652
4 Claims. (Cl. 73—67.7)

1. In a portable probe arrangement for use in nondestructively testing a preselected portion of an object, in combination, support means having a plurality of holes therein; a plurality of electro-mechanical transducers each positioned at least partially within one of said holes respectively in said support means, said transducers all being of like polarity and being so closely spaced that the ultrasonic beams produced upon actuation of said transducers overlap at least partially thereby effectively producing a single beam of relatively large cross-section within the preselected portion of the object being tested; springs urging each of said transducers outwardly from said holes in said support means; ball bearing means positioned between said support means and each of said electro-mechanical transducers to allow each transducer linear and limited universal motion with respect to said support means; and magnetic means for urging said sup-



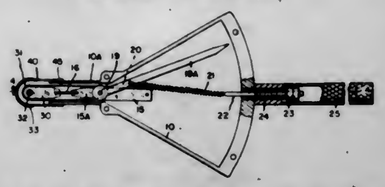
port means into effective contact with the object under test whenever desired whereby each of said transducers is moved inwardly of said holes in said support means against the action of said springs so that each of said transducers is in effective contact with the object under test under a substantially equal and reproducible pressure.

3,019,638
MOISTURE INDICATING DEVICE
William F. Klein, 1201 W. Main St., Troy, Ohio
Filed Nov. 2, 1959, Ser. No. 850,181
5 Claims. (Cl. 73—73)



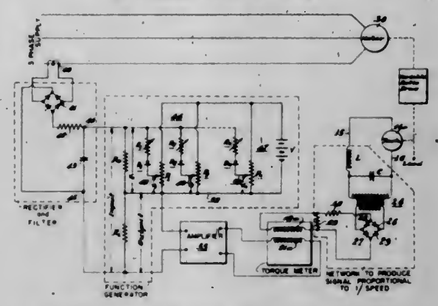
1. In a moisture indicating device, a body terminating at one end in a wick adapted to be inserted in a moisture containing medium, an elongated strip of moisture absorptive material within said body and in communication with said wick, said indicating strip being of chosen color and formed from a material, such as blotting paper, which when saturated with moisture turns a darker shade of its chosen color, a masking member overlying said indicating strip, said masking member having a plurality of spaced apart openings therein extending lengthwise of said indicating strip so as to expose successive areas of said indicating strip to view, said masking member being of the same color and shade as said indicating strip when dry, whereby where said indicating strip is saturated with moisture the areas thereof visible through the openings in said masking member will contrast with the surrounding areas of said masking member, said indicating strip being of generally triangular configuration and decreasing in width from one end to the other so as to dry in a uniform manner.

3,019,639
SURFACE INDICATORS
Charles F. Staples, 1315 S. Woodward Ave., Birmingham, Mich.
Filed July 7, 1958, Ser. No. 746,889
8 Claims. (Cl. 73—105)



1. A device for detecting and indicating the extent of surface imperfections, comprising a sector shaped frame having an extension at the apex thereof, a sub frame fixed within said frame and having a portion lying within said extension, a shaft rotatably mounted in said sub frame with its axis normal to the plane of the frame, said shaft having fixed thereto an indicator hand, a leaf spring fixed at one end to said sub frame and having fixed to its other end a member carrying a rotatable shaft, surface contacting wheels fixed to said last mentioned shaft and means for transmitting rotative movement of said wheels to the shaft carrying the indicator hand.

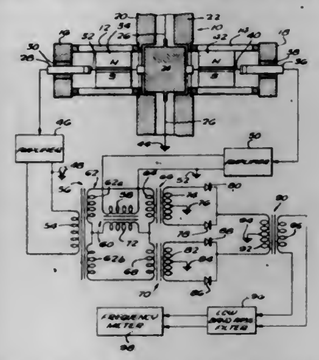
3,019,640
METHOD OF AND MEANS FOR MEASURING TORQUE OF AN ELECTRIC MOTOR DRIVE
Richard H. Engelmann, Cincinnati, Ohio, assignor to Jack N. Binns, Cincinnati, Ohio
Filed Oct. 27, 1959, Ser. No. 849,044
18 Claims. (Cl. 73—136)



1. A method of measuring the torque developed by an electric D.C. motor while driving a load, which method consists in developing a torque meter current that is linearly proportional to the motor armature current, developing a second torque meter current that is directly proportional to source voltage and inversely proportional to the r.p.m. of the motor shaft and developing the product of said torque meter currents, said product being proportional to the torque developed by the motor.

3,019,641
FORCE MEASURING SYSTEM
Haskell Shapiro, Glendale, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 9, 1959, Ser. No. 805,253
11 Claims. (Cl. 73—141)

1. In a force measuring system, the combination of a force responsive element, a pair of substantially identically prestressed vibratory strings having connection with said element such that movement of said element in response to variation in force thereon causes opposite variations in the stress of said strings, means for vibrating said strings at frequencies corresponding to the respective tensions thereof and for providing sinusoidally varying potentials the frequencies of which correspond to the respective frequencies of vibration; means for determining the difference in the frequencies of said potentials comprising, means responsive respectively to the frequency of vibration of said pair of strings affording the sum and the difference of said potentials, means responsive to said sum and difference affording means for squaring each of said potential sum and potential difference, means responsive to said squaring means for providing an output which is the difference between said squared potential sum and said squared potential difference, and filter means responsive to said output providing means for isolating the difference of the frequencies of said potentials from the remainder of said output.



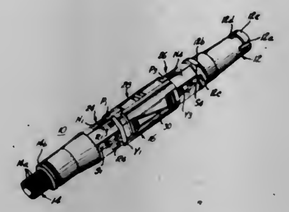
3,019,642
TIRE CHECKING APPARATUS
John P. Gallagher, % 620 Palairet St., Philadelphia, Pa.
Filed Aug. 8, 1958, Ser. No. 753,909
6 Claims. (Cl. 73—146)



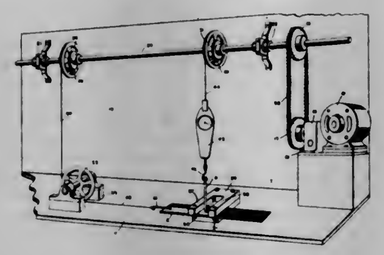
1. Apparatus for the determination of the relative loads sustained by a plurality of tires mounted on a single wheel of a motor vehicle, for the purpose of evaluating wear conditions of such tires, comprising means providing a plurality of platforms defining a portion of a roadway and located closely side by side to sustain individually the tires carried by a single wheel of such vehicle, means individually associated with each of said platforms to provide an output signal as a measure of the load on its associated platform, and load indicating means responsive to said signals.

3,019,643
STRAIN GAUGE BALANCES
Truman M. Curry, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 789,059
11 Claims. (Cl. 73—147)

1. A strain gauge balance for aerodynamic model testing comprising an elongated cantilever having a base, an opposite, model-supporting tip, and an instrument portion, said instrument portion comprising longitudinally spaced elongated beam sections of substantially uniform, at least approximately elliptical cross section, with the maximum thickness of the beam sections being in the pitching plane of the model and the minimum thickness of the beam sections being in the yawing plane thereof, and an intermediately situated axial force-measuring section interconnecting the beam sections, sets of electrical strain gauges operatively mounted on selected opposing longitudinally extending faces of said beam sections, and electric circuit means interconnecting said strain gauges in combinations which measure moment components and lateral forces acting on the model, said approximately elliptical form of the beam sections preventing the maximum stresses due to side force and yawing moment from combining directly with the maximum stresses due to normal force and pitching moment.

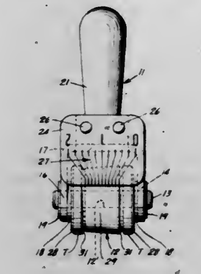


3,019,644
ADHESION TESTING MACHINE
Alfonso R. Mancini, Penfield, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 10, 1958, Ser. No. 720,155
5 Claims. (Cl. 73—150)



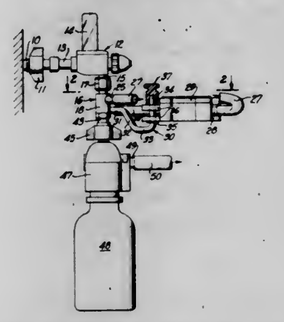
1. A machine for testing the bond strength between two layers of a laminated material at least one of which is a flexible material, a first means coupled to said flexible material to move said flexible material in a first given direction from a given fixed point, a second means coupled to the other layer to move said other layer in a second given direction from said given fixed point, said first given direction being perpendicular to said second given direction at said given fixed point, a third means coupled to said first and second means for moving both said first and second means at a given uniform rate of speed in said first and second given directions respectively, whereby said laminated material is stripped at said given fixed point uniformly, and said first means includes measuring means for gauging said bond strength, said measuring means being responsive to a tensile force between said first means and said flexible material.

3,019,645
INK GAUGES
Francis K. Lake, Euclid, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,659
3 Claims. (Cl. 73—150)



1. A gauge for measuring the thickness of liquid film on a liquid bearing member and comprising; a body in the general shape of a roller engageable in rolling relation with the liquid bearing member, said body including end disks of substantially the same diameter for engaging the periphery of a member bearing a fluid film to be measured, a central portion of conical shape supported between said end disks and adapted to be partially coated along the longitudinal axis thereof by a fluid film to be measured, and said body being formed with annular grooves spacing the periphery of the conical central portion from the periphery of the end disks; means including a handle mounting said body for rotation therein; and an indicator including a graduated scale mounted on said means in alignment with the axis of said body central portion for indicating the thickness of the film being measured as related to the axial extent to which the conical portion is wetted by a liquid film.

3,019,646
OXYGEN METER FITTING
Austin F. Gavin, P.O. Box 1810, Santa Ana, Calif.
Filed Oct. 10, 1960, Ser. No. 61,708
5 Claims. (Cl. 73—201)



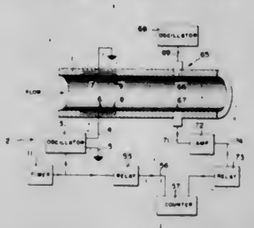
1. An oxygen volume meter fitting for use in an oxygen supply system having a source of oxygen supply connected to a rate of flow meter carried by a flow meter fitting, a volume meter and a humidifier, said volume meter fitting comprising a body portion, an integral inlet member disposed above said body portion, a nut rotatably mounted on said inlet member, said nut having internal screw threading for connection to said flow meter fitting, a right angular oxygen inlet passageway extending vertically

downwardly from the top of said inlet member into said body portion and then horizontally within the upper part of said body portion, a horizontally directed hollow inlet connector formed integrally with and projecting horizontally from said body portion, said inlet passageway extending through said inlet connector, a flexible inlet tube connected at one end to said inlet connector, the other end of said inlet tube adapted to be connected to the input of said volume meter, said fitting having an outlet connector disposed beneath said inlet connector, said outlet connector being formed integrally with and projecting horizontally from said body portion at substantially a right angle with respect to said inlet connector, a flexible outlet tube connected at one end to said outlet connector, the other end thereof adapted to be connected to the output of said volume meter, a right angular oxygen outlet passageway extending horizontally through said outlet connector and into the lower part of said body portion and then vertically downwardly within said body portion to the lower end thereof, an outlet member formed integrally with said body portion and disposed at the bottom thereof, said outlet passageway having an open lower end at the bottom of said outlet member, said outlet member having external screw threading extending thereabout for connection to said humidifier, a meter support comprising an elongated rod fixedly connected at one end to the side of said body portion adjacent to and substantially between said inlet and outlet connectors, said meter support having a first horizontal portion extending substantially horizontally from said body portion, an angular portion extending angularly downwardly from the outer end of said first horizontal portion, a second horizontal portion extending horizontally from said angular portion and an elongated straight vertical portion extending upwardly from said second horizontal portion, a washer-like ring fixedly secured to said meter support adjacent the lower end of said vertical portion, said vertical portion and ring being adapted to support and hold said meter adjacent to said fitting so that oxygen flows from said rate of flow meter fitting into said inlet passageway, then through said volume meter and through said outlet passageway to said humidifier to protect said volume meter from damage by moisture added to the oxygen by said humidifier.

3,019,647
ELECTRICAL FLUID-FLOW MEASURING APPARATUS

Richard B. Beard and Kenneth C. Hudson, Philadelphia, Pa., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Aug. 30, 1957, Ser. No. 681,384
3 Claims. (Cl. 73—204)

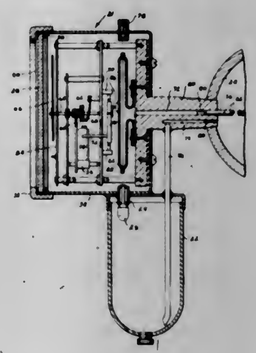


1. Apparatus for measuring fluid flow comprising a conduit for said fluid, high frequency dielectric heating means associated with said conduit for rapidly heating small volumes of said flowing fluid, an ultrasonic wave transmitting device positioned along said conduit a predetermined distance down-stream from said heating means for transmitting ultrasonic signals into said flowing fluid, ultrasonic wave receiving means positioned along said conduit diametrically opposite said transmitting device to receive said ultrasonic signals from said transmitting device, said fluid constituting an acoustic coupling medium between said transmitting device and said receiving means, the coupling characteristic of said medium being altered by said heating thereof, means responsive to the change in the characteristic of coupling between said transmitting device and said receiving device to produce a control signal, and means responsive to the energization of said heating means to initiate a count and to said control signal to terminate said count for timing the passage of said heated volume of fluid between said heating means and said ultrasonic devices for indicating the rate of flow of said fluid.

3,019,648
DIFFERENTIAL PRESSURE GAUGE

Robert W. Ruppert, 242 Globe Ave., Union, N.J.

Filed Oct. 29, 1958, Ser. No. 770,398
6 Claims. (Cl. 73—212)

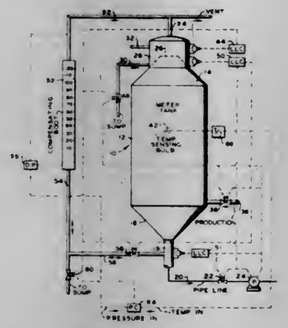


1. An indicator for operation by the difference between the pressures at two different locations in a conduit through which a fluid is flowing, said indicator including a probe extending into the flow stream in the conduit and having an opening facing the oncoming fluid flow for obtaining a combined dynamic and static pressure head within the probe, a first passage communicating with the conduit at another location and opening into the conduit in a direction free of components facing the oncoming fluid for measuring a lower pressure of the fluid, an aneroid pressure gauge including a diaphragm chamber having a diaphragm forming one wall thereof, and a second chamber on the outside of the diaphragm and containing mechanism that is operated by movement of the diaphragm, a second passage through which the opening in the probe communicates with the pressure gauge, one of the passages leading to the diaphragm chamber and the other to the second chamber, both of said chambers being sealed so as to acquire pressures equal to the pressures in said passages, and an indicator movable by said mechanism along a scale, and in which the indicator has a stem which extends into the conduit and both passages extend through the stem, one of which passages communicates with the interior of the probe, the other of which leads into a channel in the end face of the stem, and there is a cover on the end face of the stem over the channel and making the channel a continuation of one passage through the stem, the continuation extending in the direction of the fluid flow in the conduit and the fluid in the passage from said channel being thereby subjected to aspirator suction by the fluid in the conduit.

3,019,649
METERING SYSTEM FOR LIQUIDS

Louis E. Kuntz and Marvin A. Remke, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 16, 1957, Ser. No. 678,609
10 Claims. (Cl. 73—223)



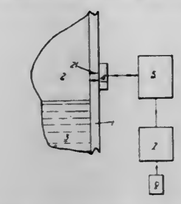
1. A metering system for accurately metering at varied liquid temperatures a fixed volume of liquid when corrected to a standard temperature, comprising a metering tank having a fixed full level, a valved inlet line, and a valved outlet line from the bottom section of said tank; an upright elongated vessel of small horizontal cross sectional area relative to said tank connected therewith so as to fill therefrom and drain thereinto, the volume of liquid in said tank filled to said fixed full level when added to the volume of liquid in said vessel filled to an intermediate level in accordance with the temperature of said liquid constituting said fixed volume at said standard temperature; a separate draindown line from the lower section of said vessel having a valve therein adapted to drain liquid from said vessel without affecting the liquid full level in said tank; and means for controlling the level of liquid in said vessel during draindown so as to provide the compensating volume of liquid in said vessel to give said fixed volume including temperature means for sensing the temperature of liquid in said tank, a pressure controller sensitive to said temperature sensing means operatively connected with the valve in said drain-down line so as to drain liquid from said vessel to a selected differential pressure in response to the sensed temperature, and a differential pressure sensing means sensitive to differential pressure between two selected levels in said vessel operatively connected with said pressure controller.

3,019,650
APPARATUS FOR DETECTING THE PRESENCE OR ABSENCE AT A LOCATION OF A BODY OF LIQUID

Bernard A. Worswick, Croydon, England, assignor to Bailey Meters & Controls Limited, Croydon, England, a British company

Filed Apr. 1, 1958, Ser. No. 725,742
Claims priority, application Great Britain Apr. 1, 1957
24 Claims. (Cl. 73—290)

1. Apparatus for detecting the presence or absence of a body of liquid at a location between upper and lower limits of level and for indicating the level of the body of liquid within said limits, comprising a solid body comprising a conductor of ultrasonic energy formed with a face adapted to extend between said upper and said lower limit of level to define the said location and to enter into liquid contacting relationship with the body of liquid when present at the said location, signal transmitter means mounted on the body and including a transducer adapted to be energised by means including an electric oscillator to propagate ultrasonic energy into the body towards said surface between said limits of level, signal receiving means adapted to be influenced by ultrasonic energy reflected back from said surface through said solid body to said signal receiving means and adapted to assume a condition of magnitude proportional to the intensity of said ultrasonic energy influencing the signal receiving means, and meter means adapted to effect a signal in dependence on the magnitude of the condition of the signal receiving means.



3,019,651
LIQUID QUANTITY MEASURING APPARATUS

Harry M. Hermanson, Golden Valley, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Nov. 30, 1956, Ser. No. 625,382
9 Claims. (Cl. 73—304)



9. A tank unit for use in a container of fluid and with a capacitive type fluid level system comprising in combination: a measuring capacitor having an output terminal and having an input terminal to be connected to a first source of voltage; a compensating capacitor having an output terminal and having an input terminal to be connected to a second source of voltage; conductor means connecting the output terminals of said measuring and compensating capacitors; and phase shifting means connected between the input terminals of said measuring and compensating capacitors within the container.

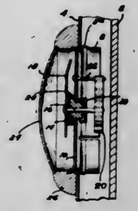
3,019,652
DEVELOPMENT TIME METER

Emil S. Wieszeck, P.O. Box 389, Salem, N.H.

Filed Jan. 2, 1958, Ser. No. 706,862
3 Claims. (Cl. 73—363.7)

1. In an installation in which the temperature of a medium on one side of a barrier is to be indicated to an observer on the other side thereof, said barrier having an aperture therethrough, an indicator device comprising temperature sensing means on said one side of said barrier and in registry with said aperture, means including a dial plate substantially closing said aperture, said dial

plate having a dial scale thereon on the side opposite said temperature sensing means and being made of heat insulating material, a spindle connected to and movable by said temperature sensing means, said spindle extending



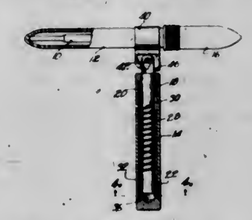
through said aperture closing means and being made of heat insulating material, and a pointer on said spindle on the side of said dial plate opposite said temperature sensing means.

3,019,653
THERMAL ACTUATOR
Frank Swales, Granada Hills, Robert J. Kurvers, North Hollywood, and Harry S. Green, Sepulveda, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 9, 1960, Ser. No. 27,972
3 Claims. (Cl. 73—368.3)



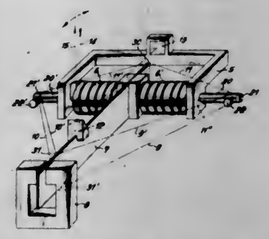
1. A thermal actuator comprising an outer cylinder and an inner cylinder spaced from said outer cylinder and defining an annular space closed at one end, an annular piston on side of which closes off a portion of said annular space, a thermally expansible fluid responsive to variations in the ambient temperature in the vicinity of the outer cylinder filling said space, a piston within and slidably engaging said inner cylinder, a low viscosity fluid cooperating with the other side of said annular piston and filling the remainder of said annular space and a portion of said inner cylinder, said second mentioned piston terminating said portion of the inner cylinder, an actuating rod attached to said inner cylinder piston and a return spring urging said piston and rod against said low viscosity fluid.

3,019,654
THERMOMETER SPINNER
William R. Spaulding, 6027 W. 76th Terrace, Prairie Village, Kans.
Filed July 13, 1959, Ser. No. 826,824
1 Claim. (Cl. 73—373)



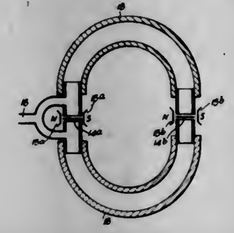
A spinner device for shaking down a medical thermometer by centrifugal force comprising a tubular case for a thermometer to be spun, the case having a detachable closure; an elongated, tubular support having opposed open ends; a first sleeve carried by said support at one end thereof, said first sleeve having a first section closing said one end externally of the latter and a second section integral with said first section and telescoped within said support, said second section having an opening therein proximal to the junction thereof with said first section and being provided with cylindrical inner and outer surfaces, the outer surface having a flat portion extending from the innermost end of said second section to said opening; a second sleeve having a central opening therethrough and carried by the support at the opposite end thereof, said second sleeve having a pair of integral segments, one of said segments being telescoped within said support and the other of said segments being disposed externally of said support; means releasably securing said sleeves to said support; an elongated shaft within said support, one end of said shaft being in engagement with the inner surface of said second section, the opposite end of said shaft passing through the opening in said second sleeve and extending outwardly from the latter; hinge means swingably attaching the case to the shaft on the opposite end of the latter and intermediate the ends of the case, the shaft normally extending laterally from the case, said case being swingable relative to said shaft to a position substantially parallel with the latter; and an elongated coil spring surrounding said shaft within said support, one end of said spring being secured to said shaft proximal to the opposite end thereof in spaced relation to said second sleeve, the opposite end of said spring extending between said support and said flat portion and inserted within said opening to thereby secure said shaft to said support.

3,019,655
DEVICE FOR MEASURING GRAVITY ON MOVING PLATFORMS
Anton Graf, Lochham, near Munich, Germany, assignor to Askania-Werke A.G., Berlin-Friedenau, Germany, a corporation of Germany
Filed May 6, 1957, Ser. No. 657,151
4 Claims. (Cl. 73—382)



1. A gravimeter comprising in combination a support yoke defining an approximately horizontal axis, subject to displacements of such axis in any of the three dimensions of space when the support yoke is installed on a moving platform such as a ship, an airplane or the like; torsion spring means having one end secured to said support yoke in said axis; a gravimeter mass secured to the other end of said torsion spring means for torsional movement in a plane normal to said axis; a plurality of restraining members, extending from points of said mass lying in said plane, remotely from said axis, to points of said support yoke on opposite sides of and remote from said plane so as to restrain the mass from movements relative to said support yoke other than said torsional movement; and means for strongly damping said torsional movement.

3,019,656
PRESSURE GAUGES
William Millar, Abingdon, England, assignor to The United Kingdom Atomic Energy Authority Patents Branch, London, England
Filed Apr. 22, 1957, Ser. No. 654,285
Claims priority, application Great Britain Apr. 20, 1956
8 Claims. (Cl. 73—398)



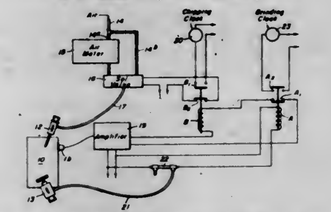
1. A pressure gauge comprising an electromagnetic acoustic transmitter and an electromagnetic acoustic receiver, said transmitter and receiver each including a thin electrically conducting diaphragm adapted to be energised in the presence of a magnetic field by an electric current flowing in the diaphragm, two tubes connected between said transmitter and receiver with their axes normal to the said diaphragms adapted when gas-filled to form equal-length acoustic transmission lines between each side of the transmitter diaphragm and a corresponding side of the receiver diaphragm, means for admitting into said tubes a gas whose pressure is to be measured, means for energising the transmitter diaphragm whereby an acoustic signal is injected into said transmission lines and means for measuring the voltage induced in the receiver diaphragm by said signal, whereby the pressure may be measured by measuring the attenuation of the acoustic signal in the transmission lines.

3,019,657
PRESSURE GAUGES
Albert Mazelka, Chicago, Ill., assignor to Milton Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 15, 1957, Ser. No. 634,287
1 Claim. (Cl. 73—419)



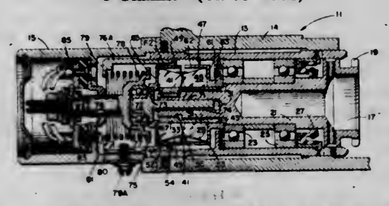
An improvement in an air pressure gauge for obtaining a low pressure reading in which the gauge includes a movable piston carried by a gauge bar and a tube within which said piston operates, a coupling connecting the tube to an air chuck, the improvement comprising a member having a cylindrical body open at both ends and having an outside diameter slightly less than the inside diameter of the tube, said member adapted to be inserted in one end of said tube between said piston and said coupling so as to provide said tube at one end with an enlarged volume chamber, and means provided by one end of said member for fixedly positioning said member within one end of said tube and between said piston and said coupling, said means comprising a lateral flange provided on one end of said member adapted to engage one end of said tube which is adapted to be disposed within said coupling.

3,019,658
WORKING-TIME RECORDER
William E. Ehrhart, Titusville, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 30, 1960, Ser. No. 18,681
8 Claims. (Cl. 73—432)



1. The combination, with a pneumatically operated tool which induces vibrations in a workpiece when it performs an operation thereon, of a recorder comprising an air meter for measuring the volume of air consumed by said tool, a bypass for delivering air to said tool around said meter, a solenoid-operated valve connected to said bypass and said meter and having a first position in which it directs air through said bypass to the exclusion of said meter and a second position in which it directs air through said meter to the exclusion of said bypass, means for producing a signal in response to vibrations in the workpiece, and means operatively connecting said signal producing means and the solenoid of said valve, whereby the valve assumes its first position in the absence of vibrations in the workpiece, and its second position when operation of said tool induces vibrations in the workpiece.

3,019,659
CENTRIFUGAL GOVERNOR HAVING AXIALLY-ALIGNED WEIGHTS
Henry Troeger, Cooperstown, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Aug. 31, 1959, Ser. No. 836,972
5 Claims. (Cl. 73—551)



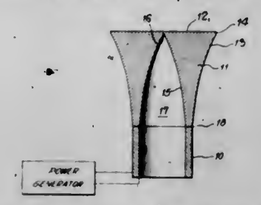
1. A centrifugal governor comprised of a driven shaft having gear for connection to device to be controlled at a predetermined speed, an annular ring having a plurality of equi-spaced radial slots mounted on said shaft for rotation therewith, a pair of identical centrifugal plate-like weights axially aligned and slidably received in each of said slots, each of said weights having a rolling cam surface and a pivot corner, each pair of said

weights being arranged so that said cam surfaces are in contact and one of said weights projects axially from one end of said ring, said contacting cam surfaces being free of interlocking structure, retaining means carried by said shaft and arranged so that said weights can pivot outwardly to a limited extent, said retaining means including axially-movable actuating structure contacting the axially-projecting weights, spring means connected to said actuating structure arranged to exert an axial force so that said cam surfaces are in contact, said weights being constructed so that at a predetermined speed said weights pivot outwardly by means of said cam surfaces and pivot corners to cause said actuating structure to be moved axially against the force of said spring means, said weights and said retaining means being constructed so that below said predetermined speed said weights are pivoted inwardly and said actuating structure is moved axially toward said weights under the urging of said spring means.

3,019,660
ULTRASONIC TRANSDUCER

Walter Welkowitz, Metuchen, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey

Filed Apr. 26, 1956, Ser. No. 580,881
6 Claims. (Cl. 74—1)



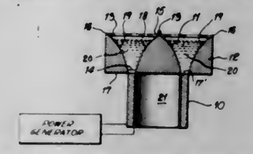
1. An ultrasonic transducer comprising a hollow, cylindrical, polarized electrostrictive, electromechanically sensitive body; a radiator; and power generating means; said radiator being affixed to one end of said electromechanicallly sensitive body by means of a high strength, thermo-setting adhesive of low compliance, said radiator having a face opposite said electromechanically sensitive body greater in area than that of the portion of said radiator affixed to said electromechanically sensitive body so that the outer surface of said radiator tapers outwardly from said electromechanically sensitive body toward the face of said radiator, said outer surface being a surface of revolution which terminates a small distance from said face, where said surface of revolution becomes a cylinder, said radiator having an inner surface of revolution smaller in area than said outer surface, said inner surface being generated by a curve which is the mirror of the curve generating said outer surface, said inner surface terminating in a point which is substantially in the same plane with the points at which said outer surface becomes a cylinder, said radiator having approximately the same acoustic resistance as said electromechanically sensitive body, said electromechanically sensitive body being vibrated in length mode by said power generating means.

3,019,661
ULTRASONIC TRANSDUCER AND IMPEDANCE MATCHING DEVICE THEREFOR

Walter Welkowitz, Metuchen, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey

Filed Apr. 26, 1956, Ser. No. 580,882
5 Claims. (Cl. 74—1)

1. An ultrasonic transducer comprising a hollow cylindrical, polarized electrostrictive, electromechanically sensitive body, a matching section at one end of said electromechanically sensitive body and attached thereto by a high strength, thermo-setting adhesive of low compliance; power generating means; said matching section comprising an inner solid section, an outer solid section in spaced relationship with said inner solid section and means for maintaining said spaced relationship between said inner solid section and said outer solid section; the periphery of one end of said inner solid section being in contact with the edge of the inner surface of said electromechanically sensitive body, the surface of said inner solid

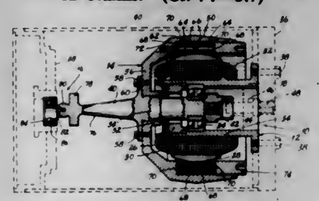


section being a surface of revolution terminating in a point opposite said end in contact with said electromechanically sensitive body, the inner surface of said outer solid section being a surface of revolution greater in area than and mirroring the surface of said inner solid section, the outer surface of said outer solid section being a cylindrical surface, the periphery of one end of said inner surface of said outer solid section being in contact with the edge of the outer surface of said electromechanically sensitive body; said electromechanically sensitive body being vibrated parallel to its axis by said power generating means.

3,019,662
GYROSCOPIC CONTROL MECHANISM

Edwin H. Gahn, Normandy, Mo., assignor, by mesne assignments, to Systron-Donner Corporation, Concord, Calif., a corporation of California

Filed Apr. 14, 1955, Ser. No. 501,240
12 Claims. (Cl. 74—5.7)



1. A gyroscope control mechanism comprising, in combination, electromagnetic prime mover means including a first stator assembly and movable rotor assembly, and a self-aligning ball bearing assembly having a central pivot point in fixed relation to said stator assembly, said rotor assembly being rotatably retained and supported by said bearing assembly for universal pivotal movement about said central pivot point, the stator assembly including a stack of laminations in encircling relation to the ball bearing assembly, and electrical conducting means associated therewith for establishing a magnetic field, the rotor assembly including squirrel cage inducting means in encircling relation to the stator laminations.

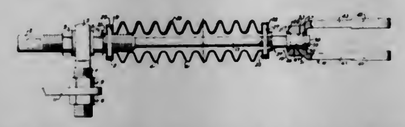
3,019,663
PROTECTOR FOR RELATIVELY MOVABLE PARTS

Theodore R. Breunich, Stamford, Conn., assignor to Controlex Corporation of America, White Plains, N.Y., a corporation of New York

Filed Nov. 20, 1958, Ser. No. 775,287
2 Claims. (Cl. 74—18.2)

1. In a mechanical control device of the push-pull type comprising a tubular sheath member having a threaded

end and a control rod member slidably received in the threaded end of said sheath member and being provided with a threaded end beyond said sheath member, said sheath member being supported at its threaded end against endwise movement thereof and said rod member being connected at its threaded end to an operating means for slidably moving the same within said sheath member, the combination with said members of a protective sleeve extending about said members from the threaded end of said sheath member to said threaded end of said rod member and having a body portion of corrugated form to provide for extension and contraction of said sleeve lengthwise of said rod member upon slidable movement of the latter within said sheath member, said sleeve having a passageway therethrough substantially greater in transverse dimension than the diameter of said rod and being made of an elastic material of such flexibility that the sleeve per se is not structurally strong enough against collapsing of the corrugated body portion thereof, said sleeve at each end of said body portion thereof being provided with a hollow disc-shaped member defining an annular recess generally coaxial with the longitudinal axis of said rod member; each of said disc-shaped members including an outer circular axial wall of substantial width and having an outside diameter approximating the outside diameter of the body portion of said sleeve, an inside annularly-shaped radial wall of substantial width ex-



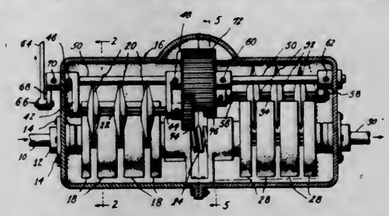
tending inwardly from said outer axial wall at substantially right angles to the length of said sleeve and connected at its inner circumference to one end of the body portion of said sleeve, and an outer radial wall spaced parallelly from said inside radial wall and having an annular configuration comparable to the latter, the central openings in said inner and outer radial walls having diameters approximating the diameter of said passageway, a pair of rigid discs respectively threadedly engaging and carried by the threaded ends of said sheath and rod members and each of said discs having a periphery extending about said longitudinal axis of a diameter substantially greater than the transverse dimensions of its associated carrying member and of inwardly folded portions of said corrugated sleeve and approximating the outside diameter of said sleeve, said discs respectively being disposed in said disc-shaped sleeve members to support the body portion of said sleeve at each end so as to render said body portion resistant to collapse along said longitudinal axis and to rigidify said inner walls of said sleeve members so that the latter form rigid shoulders between which the corrugations of said body portion are extended and contracted, the flexible material of said sleeve being of sufficient elasticity to enable said disc-shaped members thereof to be stretched to receive said discs and to enable the walls of said members to elastically engage the exterior surfaces of said discs so as to be supported thereby.

3,019,664
FRICTION GEAR TYPE VARIABLE SPEED TRANSMISSION

William E. Burns, Denville, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed May 12, 1960, Ser. No. 28,620
9 Claims. (Cl. 74—199)

1. A variable speed transmission comprising an input and an output shaft; a first friction gear mounted on the input shaft for rotation thereby; a second friction gear engageable and rotatable by the said first friction gear; a third friction gear; means operatively connecting the second and third friction gears for rotating the third friction gear upon rotation of the second friction gear; a fourth friction gear engageable and rotatable by the third friction gear, said fouth friction gear being mounted on the output shaft to impart rotation thereto; mecha-

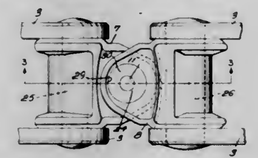


nism for simultaneously moving one gear of one of the two pairs of engaging gears and another gear of the other pair of engaging gears in different directions relative to the input shaft to thereby simultaneously change the radii of engagement in the two pairs of engaging gears in an opposite sense.

3,019,665
UNIVERSAL PIVOTED LINK CHAIN

Lester G. Rollins, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 19, 1957, Ser. No. 703,873
5 Claims. (Cl. 74—246)



1. In a universal pivoted link chain, a series of link elements pivotally connected by transverse pivot pins arranged with their axes lying at the pitch line of the chain, and other link elements spaced at intervals along the length of the chain intermediate said first mentioned link elements, said last mentioned link elements having pivot pins arranged perpendicularly to lines parallel with said transverse pivot pins, said perpendicularly arranged pivot pins spaced with their axes at right angle to the line parallel with the transverse pivot pin axes with the inner sides of said last mentioned link elements closer to the pitch line of the chain than are the outer surfaces of said last mentioned link elements thereby to provide for substantial clearance spaces at the inner sides of said last mentioned link elements.

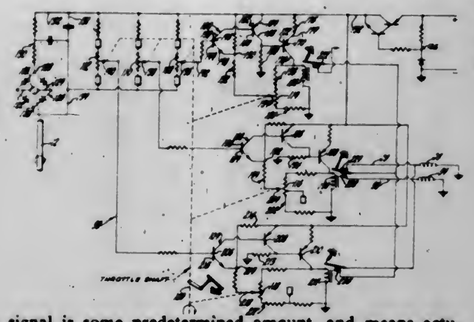
3,019,666
TRANSMISSION SHIFT PATTERN GENERATOR

John B. Brennan, Flint, and John B. Force, Bancroft, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Jan. 26, 1959, Ser. No. 788,912
10 Claims. (Cl. 74—472)

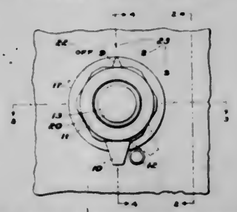
1. In a vehicle having a throttle controlled engine and a transmission for coupling said engine to a load, a control system comprising electrical generating means for producing a voltage indicative of vehicle speed, at least one voltage dividing means disposed across said generating means, said dividing means being mechanically actuated by said throttle for providing a voltage signal that is a function of vehicle speed and throttle setting, gear ratio changing means for varying the over-all gear ratio through said transmission, switch means connected

with said voltage dividing means and said gear ratio means so as to be responsive to said signal for actuating said gear ratio changing means whenever said voltage



signal is some predetermined amount, and means actuated by movement of said throttle to vary said predetermined amount as a function of said movement.

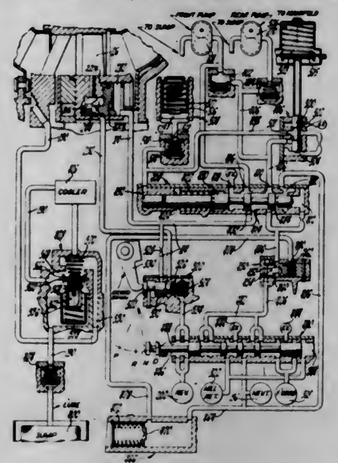
3,019,667
KNOB
Michael S. Bann, Orange County, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed June 16, 1959, Ser. No. 820,827
7 Claims. (Cl. 74—528)



1. A control knob for an instrument panel comprising a rotatable driven shaft extending through said panel, a knob member formed with a central opening to receive said driven shaft, a torque transmitting member interconnecting said driven shaft and knob members so as to allow limited axial movement of said knob relative to said driven shaft, and a positive unidirectional locking mechanism, said mechanism including a lug member extending from said knob and a pin projecting from said panel, at least one of said lug or pin members having a cammed surface which cooperates with the surface of the other member to cause the knob to move axially and pass easily over the pin when the knob is rotated from the off to an energized position.

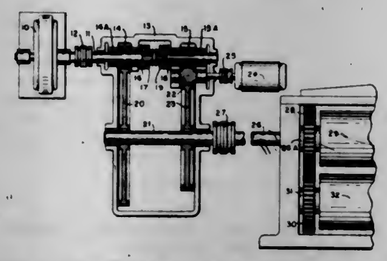
3,019,668
TRANSMISSION
Frank J. Winchell, Franklin Village, and Oliver K. Kelley, Bloomfield Hills, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 25, 1956, Ser. No. 600,022
7 Claims. (Cl. 74—645)

1. A power transmission comprising in combination, a device which transmits torque hydrodynamically from an impeller to a turbine, which turbine transmits torque to an output shaft selectively in a plurality of torque transmitting relationships, adjusting means including adjustable hydrodynamic blades which varies the torque transmitted from the impeller to the turbine, means urging the adjusting means toward a first position providing one range of varying torque ratios between the impeller and turbine, means including a first fluid pressure chamber for overcoming the urging means and holding the adjusting means in a second position providing a different range of varying torque ratios between the impeller and turbine, a source of fluid under pressure, means for selectively establishing the various torque transmitting re-



lationships between the turbine means and output shaft including a second fluid pressure chamber for establishing one of its relationships, means for supplying fluid under pressure to said second chamber to establish said one of said relationships, means for interrupting the supply and venting said second chamber to prevent the establishment of said one relationship, and means for selectively connecting the first chamber to the source or to the second chamber.

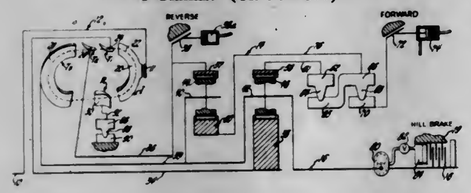
3,019,669
REVERSING DRIVE AND CONTROL
Giuseppe Cozzo, Yonkers, and Roy D. Palmer, New York, N.Y., assignors to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1958, Ser. No. 717,213
12 Claims. (Cl. 74—661)



1. In a rolling mill having a stand of reversible rolls, the combination including a drive for rotating said rolls at a predetermined speed, said drive comprising a main motor; means for maintaining said motor energized and rotating in one direction throughout an entire rolling cycle including forward and reverse working passes; means for connecting said motor to, and disconnecting it from,

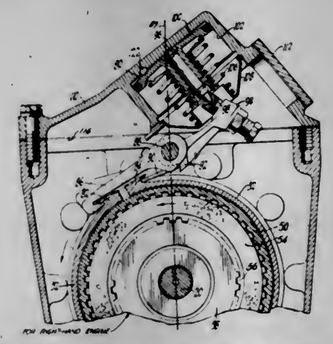
said rolls at the beginning and end of each working pass, respectively; means independent of said main motor for stopping and reversing the direction of rotation of said rolls at the end of each working pass while they are idle, and accelerating said idle rolls until said predetermined speed is substantially reached; and means for causing said main motor to supply power to said rolls during each forward and reverse working pass.

3,019,670
TRANSMISSION
Oliver K. Kelley, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 17, 1956, Ser. No. 598,370
8 Claims. (Cl. 74—677)



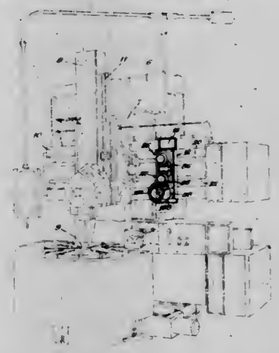
1. A transmission comprising in combination, a pair of torque-establishing devices adapted to establish a driving connection between an input member and an output member when both devices are engaged and to break the driving connection when either device is disengaged, yielding means urging both devices to engage, means for selectively permitting and preventing engagement of one device, and means for assisting the engagement of the other device whenever said one device is permitted to engage.

3,019,671
TRANSMISSION
Harold H. Albinson, Detroit, and Joseph F. Voss, Plymouth, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application May 31, 1955, Ser. No. 512,222. Divided and this application June 12, 1958, Ser. No. 741,591
7 Claims. (Cl. 74—758)



1. A power transmission comprising in combination, a casing containing a power input shaft, a power output shaft, drive gearing adapted to connect the shafts, a brake drum fixed to an element of the gearing and concentric with the shafts, a brake band for holding the drum against rotation to establish a driving connection through the gearing, the brake band having anchor and apply ends, a brake shaft the axis of which is disposed in a plane of symmetry of the gearing, an anchor pivoted on the shaft and having a free end projecting on one side of said plane of symmetry and supporting the anchor end of the brake, and a brake apply mechanism supporting the apply end of the brake and including a brake arm pivoted on the brake shaft and extending on the other side of said plane of symmetry, the brake band, anchor and apply mechanism being reversible as a unit with respect to the plane of symmetry to provide a self-energizing brake for either hand of rotation of the brake drum; means for operating the brake arm disposed asymmetrically with respect to said plane of symmetry; a support for the operating means formed on the casing and symmetrical with respect to the plane of symmetry; and means for securing the operating means to the support in either of two positions each of which is asymmetrical with respect to said plane, the operating means when in either position being placed to operate the brake apply means in one of its two positions.

3,019,672
MACHINE TOOL ADJUSTING MEANS
Walter T. Hake, Cincinnati, Ohio, assignor, by mesne assignments, to Elmes and King Manufacturing Company, Cincinnati, Ohio, a copartnership
Filed Nov. 18, 1955, Ser. No. 547,813
7 Claims. (Cl. 77—4)

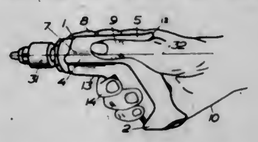


2. In a manual tool positioning device for a vertical boring mill having a rotatable work table, a horizontal rail, a head movable horizontally across the rail, a ram movable vertically in the head, a feed rod operatively associated with said ram to move the ram vertically a distance proportional to the amount of rotation of the rod, and a feed screw operable to move the head a distance proportional to the amount of rotation of the screw; means operatively connected to said rod to indicate the amount of movement thereof, other means operatively connected to said screw to indicate the amount of movement thereof, and manually rotatable power means operatively connected to respective means for actuation thereof, said power means having a common axis of rotation, said axis being unassociated with the axes of rotation of said respective means.

3,019,673
PORTABLE POWER TOOLS
Fritiof Stig Sjöstrand, Stockholm, Carl Otto Lennart Ottosson, Ektorp, and Stig Rune Zernell, Johanneshov, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Feb. 17, 1959, Ser. No. 793,786
8 Claims. (Cl. 77—7)

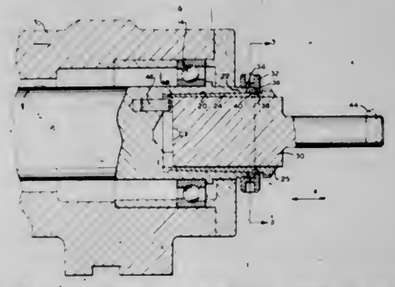
1. A portable power tool of the gun type having a barrel portion accommodating a motor and an implement-

carrying chuck and a handle portion extending downwardly and rearwardly from said barrel portion at an obtuse angle, a projecting wing at each side of said barrel portion extending longitudinally of said barrel portion to form a rest or support for the thumb and forefinger of the hand of the operator grasping the tool and means for separating said thumb and forefinger from



the other fingers of such hand grasping the rear end of the barrel portion and the handle portion of the tool, said barrel portion forming a ridge separating said thumb and forefinger, a noise dampening means in said barrel portion, and exhaust passages in said projecting wings leading from said dampening means to the atmosphere and opening at the forward ends of said wings.

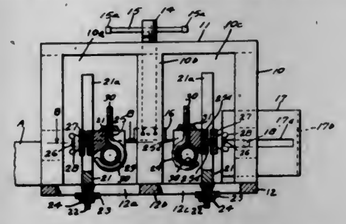
3,019,674
BORING BAR CONSTRUCTION
Eric J. Hirvonen, Worcester, Mass., assignor to Leland-Gifford Company, Worcester, Mass., a corporation of Massachusetts
Filed Sept. 18, 1959, Ser. No. 841,435
3 Claims. (Cl. 77—58)



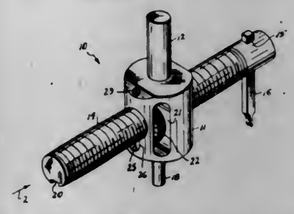
1. A boring bar construction comprising a head, a cylindrical spindle therein, means to drive the spindle, a bore in the spindle at an end thereof, said bore being concentric with the spindle, a tapered sleeve in the bore for the removable reception of a boring tool, said sleeve being eccentric at its outer surface and cylindrical at the inner surface thereof, means connecting the spindle and boring tool to drive the latter by the former, means to tighten and loosen the sleeve by proper axial motion thereof to clamp or release the tool therein, the sleeve being rotatively adjustable to adjust the tool radially and the tool being selectively removable when the sleeve is loose, said sleeve tightening and loosening means including a substantially annular rotatable member engaging the sleeve and effective to cause the sleeve to be moved axially to be tightened evenly and circumferentially thereof in the bore, said annular member being located adjacent the tool.

3,019,675
DOWEL HOLE DRILLING JIG
James L. Cleveland, 351 Clyde Ave., Calumet City, Ill.
Filed June 28, 1960, Ser. No. 39,330
5 Claims. (Cl. 77—62)

1. A drilling jig including a plate having parallel upper and lower flanges on one side and a lower flange on the other side, a power screw mounted in a hole in the upper flange for engaging a piece of lumber to be drilled against the first lower flange, a slide member mounted for movement along said second lower flange, a block mounted for movement along said slide member, and a drilling guide carried by said block.

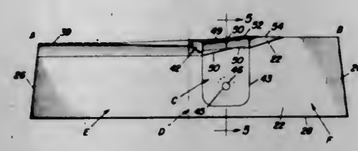


3,019,676
FLY CUTTER WITH MICROMETRICAL ADJUSTMENT
Andrew A. Bogdan, 3103½ Dubois Ave., Baltimore, Md.
Filed Nov. 4, 1959, Ser. No. 850,916
3 Claims. (Cl. 77—77)



1. In a micrometer fly cutter, the combination of a substantially cylindrical body, a mounting shank provided axially at one end of said body, said body being formed with a tranesverse bore and with an open-sided recess communicating with said bore, said recess having a pair of spaced walls transverse to said bore, a screw-threaded shaft slidable but non-rotatable in said bore, a cutting tool carried by one end portion of said shaft in spaced parallel relation to the axis of said body and shank, a micrometer adjusting nut disposed in said recess in abutment with said walls thereof and operatively engaging said shaft whereby to vary the distance of said tool from the axis of the body and shank, portions of said nut projecting into the open sides of said recess, and a set screw provided in said body and engaging said nut to lock the same against rotation.

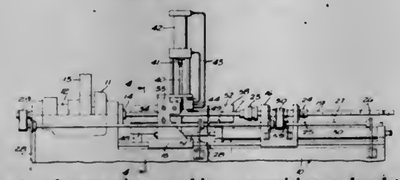
3,019,677
ROLLING DIES FOR THREADING, POINTING AND FINISHING SCREWS
Italo J. Cermatori, 68 Park Ave., Hoboken, N.J.
Filed May 27, 1959, Ser. No. 816,115
4 Claims. (Cl. 80—9)



1. A thread rolling and pointing die adapted to gently press, point and thread the shank of a screw blank in one operation comprising a block having a grooved main working surface, said grooves defining intervening ribs

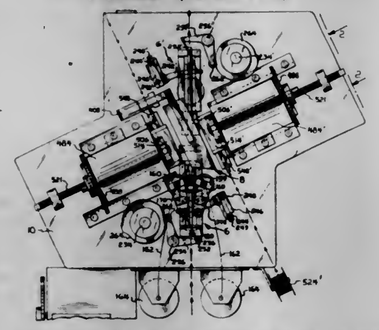
and said ribs and grooves extending lengthwise from one transverse end to the other transverse end and progressively increasing in depth and cross-section from the screw blank intake end to the screw blank finishing end, the crests of said ribs providing swaging ridges, the grooves and ribs being uniformly spaced from each other and one of said ribs having a ridge extending beyond said main working surface enabling it to cut off and finish off the terminal of the convolution formed on a screw blank, surrounding the pinnacle of the point formed thereon so that the pinnacle or any portion of the point adjacent the same will be finished and undamaged and so that the point is free of burrs and is less likely broken during final threading step.

3,019,678
TUBE TAPERING MACHINE
Cecil K. Le Fiell, 3359 Packers Ave., Los Angeles, Calif.
Filed July 21, 1958, Ser. No. 749,678
2 Claims. (Cl. 80—14)



1. A tube tapering machine comprising a headstock and a tailstock both of which have rotary chucks therein in which the ends of a tube may be chucked, means for rotating the chucks, a die carrier between the chucks having opposed rotary adjustable dies mounted thereon rotatable about axes transverse to the axis of rotation of the tube and presenting opposed tapered peripheral grooves which slidingly engage the tube with concave lines of contact in all positions of adjustment of the dies, means for moving the die carrier axially of the tube as it rotates, a template, means engageable with the template for rotating the dies about their respective axis oppositely but in unison as the die carrier moves between the chucks, a second template, means for moving one of the chucks relatively to the other axially of the tube, and means engageable with the second template for regulating the movement of the axially movable chuck.

3,019,679
LEAD MAKING MACHINE
Glendon H. Schwalm and Robert Ullman, Harrisburg, Pa., assignors to AMP Incorporated, Harrisburg, Pa.
Filed July 15, 1958, Ser. No. 748,722
3 Claims. (Cl. 81—9.51)



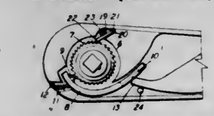
1. A wire stripping device comprising, a pair of normally aligned wire carriers, wire severing and insulation cutting means disposed between said carriers, each of said carriers having a slide member mounted thereon, said slide members being normally biased towards said severing and cutting means and each being movable away from said severing and cutting means, freely rotatable wire feed wheel means mounted on one of said slide members, continuously rotatable drive wheel means mounted on said one slide member and normally in driving engagement with said feed wheel means, camming means for disengaging said drive wheel means from said feed wheel means during movement of said one slide member away from said cutting and severing means, and clamping means on each of said slide members for clamping fed wire at the conclusion of feeding thereof.

3,019,680
JAW OPERATING STRUCTURE FOR PIPE WRENCH
Henry J. Daugherty, 11401 Roth Drive, and Robert E. Maxwell, 745 Wainwright, both of Houston, Tex.
Filed Apr. 27, 1959, Ser. No. 809,168
13 Claims. (Cl. 81—53)



1. A tube rotating apparatus comprising a ring having means thereon for rotating the same, a plurality of shoes having surfaces for engagement with a pipe, lever means connecting said shoes to said ring, said lever means including a plurality of pivoted means, a locking block interconnected with said ring and relatively rotatable therewith having means thereon for engagement with one of said shoes when the locking block is rotated.

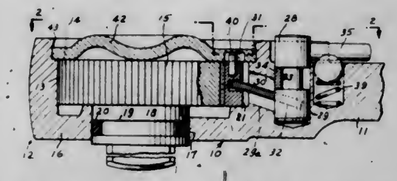
3,019,681
REVERSIBLE RATCHET WRENCH
Everett D. Grissom, Selma, Ala.
(Air Force Base, San Francisco, Calif.)
Filed Nov. 20, 1959, Ser. No. 854,436
1 Claim. (Cl. 81—61)



A reversible ratchet wrench comprising, a main case, said case having space for holding operating parts and also forming part as handle means, a cover, said cover being of a size and shape to fit upon and partly close the case, bolts holding the case and cover together, a short shaft having each end formed square and having its middle portion round, the round portion having teeth formed integral around the center thereof, a round hole in the case and a same size round hole in the cover, these two holes being in register with each other and having the round end portions of the shaft fitting revolvably in these holes; an elongated open space in one side of the case, a handle, said handle having an outer end portion with its other end flat and blunt pointed, a stud bolt mounted in the case and cover, the middle part of the stud bolt forming a shaft, the flat part of the handle having a hole therethrough and being mounted pivotally on the stud bolt shaft portion; a curved part, said curved part having

one end as an integral tooth of a size to fit the teeth on the said round part, the other end of the curved part having a slot formed therein, a small spring, this spring being positioned to hold the toothed end of the curved part adjacent the teeth in the round part; a pawl, this pawl being positioned between the case side and the round part with teeth, another small spring, this other spring being positioned between the pawl and case side and being adapted to act as a stop for the teeth in the round part; the round end of the handle being inserted in the slot in the curved part; a comparatively large spring, one end of this spring being attached in the edge of the flat part of the handle with its other end attached in the side of the case and being set to pull the handle toward the side of the case; a flat plate portion, this portion being mounted upon the outer end portion of the handle.

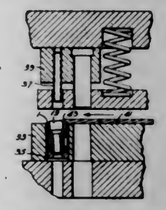
3,019,682
REVERSIBLE RATCHET TYPE WRENCH
Terence G. Hare, 17638 Grand River, Detroit, Mich.
Filed Apr. 8, 1960, Ser. No. 20,924
8 Claims. (Cl. 81—63.2)



1. In a wrench comprising a body having a head and a handle, a rotatable member journalled for rotation in said head, said rotatable member having ratchet teeth around the periphery thereof, said body having a cavity therein opening to the periphery of said rotatable member, said cavity having opposite side wall portions diverging in the direction of the periphery of said rotatable member, a pawl within said cavity having along one edge ratchet teeth engageable with the ratchet teeth on the rotatable member and having a pair of side walls diverging in a direction toward said edge, said pawl being shiftable in said cavity circumferentially of said rotatable member in opposite directions as limited by interengagement of said side walls of the pawl and said side wall portions of the cavity and being shiftable in said cavity in a direction radially of said rotatable member, and means biasing said pawl so that it tends to move in a direction toward said rotatable member, the improvement including means interengaging between said pawl and said body during the shifting movement of said pawl circumferentially to reverse the operation of said wrench, said means being operable during said shifting to move said pawl radially outwardly away from said rotatable member, thereby insuring the disengagement of the teeth on said pawl from the teeth on said rotatable member.

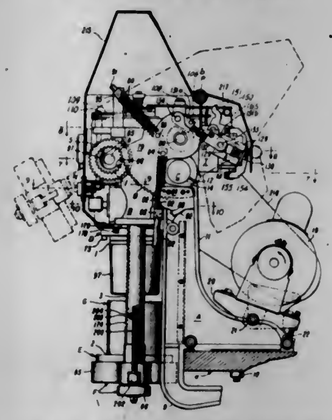
3,019,683
RESILIENT PUNCHING DIE ACCESSORY TO GUIDE, STOP OR EJECT MATERIAL
Donald D. Welbaum and Robert M. Birkenbeul, Fort Wayne, Ind., assignors to Birkwel Research and Design Inc., Fort Wayne, Ind., a corporation of Indiana
Filed July 28, 1958, Ser. No. 751,556
8 Claims. (Cl. 83—129)

1. A punching die accessory comprising a cylindrical body defining a substantially central, cylindrical, coaxial chamber, a first coaxial bore of less diameter than said chamber, intersecting one end thereof, a second coaxial bore of less diameter than said first bore, intersecting the other end of said chamber, a tubular member of resilient, yieldable material mounted in said chamber and filling at least both end portions of said chamber, said member defining a coaxial, through hole of less diameter than said second bore, a core element comprising a cylindrical shank disposed in and filling said hole, a fulcrum means circumferentially disposed on and about said sank at one end thereof, coaxial therewith, said fulcrum means abutting one end of said member and slidably fitting said second bore, a cylindrical head on the other end of said



shank, coaxial therewith, abutting the other end of said member and having a diameter greater than that of said shank but less than that of said first bore, said head being disposed within said first bore and extending a short distance beyond the end of said body, said element being tiltable, about said fulcrum means, from its normal coaxial position relative to said body, against the action of said resilient member, by a radially applied force, said head and said body constituting stop means for limiting the tilting of said element.

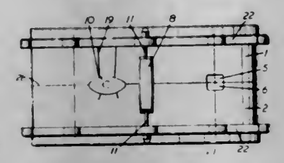
3,019,684
FLAT EDGE TRIMMER WITH AN INTERNAL SHEARING PUNCH AND AUTOMATIC OPERATING MEANS THEREFOR
Henry Reid, 24 Birchwood Ave., West Orange, N.J.
Filed Sept. 8, 1958, Ser. No. 759,653
14 Claims. (Cl. 83—190)



1. In a machine for operating upon a workpiece comprising a frame, a punch mounted on the lower end of said frame, a die, said die and punch having coacting portions to receive between them and operate upon said workpiece, driving means including a motor for actuating said punch to cause coaction of said punch and die upon said workpiece, a combined die support and work clamp beneath said punch, mounting means on said frame providing for movement of said die support and work clamp toward and away from said punch so as to move and to release a workpiece and said die into and from work-operating relation to said punch, respectively, mechanism

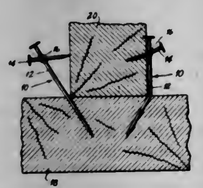
to move said die support and work clamp into and out of work-operating position, said mounting means and said mechanism including rack bars carrying said die support and work clamp longitudinally vertically slidably mounted in said frame, means for sliding said rack bars including a gear journaled on the frame meshing with each rack, a pinion drivingly connected to said gears, a gear segment pivotally mounted on a horizontal axis on the frame and meshing with said pinion for rotating said gears to move said die support and work clamp into work-operating position, the combination with said mechanism and mounting means of control means drivingly connectable to said driving means and including a control shaft rotatable in timed relation to said driving means to cause application and release of power from said motor to and from said mechanism, respectively, a driving connection between said control shaft and said gear segment to swing the gear segment about its pivotal mounting on the frame, and locking means for positively holding said die support and work clamp in work-operating position.

3,019,685
MUSICAL DRUMS
Lewis Davis, 114–116 Charing Cross Road, London, England
Filed Mar. 6, 1959, Ser. No. 797,769
7 Claims. (Cl. 84—411)



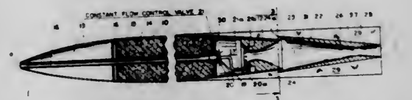
1. A drum comprising two cylindrical shell portions composed of synthetic plastic material and abutting one another in axial alignment on a circumferential plane, means on one portion cooperating with means on the other portion to define a plurality of apertures, lugs for receiving tightening screws, shanks on said lugs each extending through one of said apertures, means on said shanks cooperating with means on said lugs to prevent axial displacement of said shanks in said apertures and to ensure precise axial alignment of said portions, a circumferentially arranged rim surrounding the free end of each portion and carrying a drum head, and tightening screws extending through said rims and cooperating with screw threads in said lugs for urging said rims towards one another to lock said portions and said lugs in their operative positions and to tension said drum heads.

3,019,686
DOUBLE NAIL UNIT
William L. Behrle, Rte. 1, Fenton, Mo.
Filed May 5, 1958, Ser. No. 732,864
1 Claim. (Cl. 85—10)



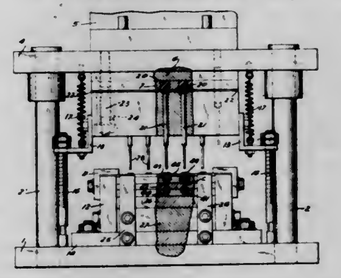
A double nail unit comprising a primary nail and a secondary nail, each nail having an elongated body with a head at one end normal to the body and a point at the other end, the primary nail having an enlarged portion through its body at a point spaced from the head of the primary nail, an opening through the enlargement large enough to receive the body of the secondary nail, the body of the secondary nail being received within the opening of the enlargement, the body of the secondary nail being rigidly connected to the body of the primary nail, the bodies of the primary and secondary nails being disposed at an acute angle to one another with the acute angle being defined by the portions of the bodies of the nails which extend from the point of their connection toward their respective heads, the head of each nail being disposed normal to its body so that each nail may be driven by a driving tool, the head of each nail being spaced from its point of connection to the other nail by a distance sufficient to enable the engagement by each head of a withdrawing tool, the heads being spaced far enough from one another to provide freedom from interference by either head with the engagement with either head by the withdrawing tool, the connection between the nails being sufficiently strong to remain intact against the force of the withdrawing tool against the head of the secondary nail.

3,019,687
METHOD OF FORMING A SOLID PROPELLANT
Calvin A. Gongwer, Glendora, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Sept. 11, 1952, Ser. No. 309,039
5 Claims. (Cl. 86—1)



1. A method of forming a solid integral propellant charge which comprises intimately mixing powdered aluminum with finely-divided potassium perchlorate, placing said mixture within a metal container, subjecting said mixture and container to pressure between 30,000 and 100,000 p.s.i., thereby intimately bonding said aluminum and potassium perchlorate together to form a solid mass and simultaneously bonding said solid mass to said metal container.

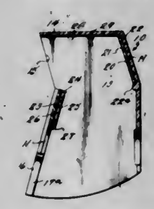
3,019,688
DEVICE FOR DETECTING LOW OR MISSING CHARGES IN THE ASSEMBLY OF AMMUNITION COMPONENTS
Robert J. Hunt, Raytown, Mo., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed Mar. 25, 1958, Ser. No. 723,803
3 Claims. (Cl. 86—23)



1. A press mechanism for simultaneously compressing a charge of material in each of a group of small

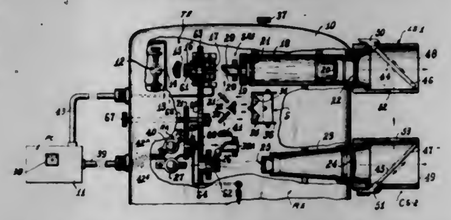
containers comprising in combination, a fixed member, a movable assembly, said movable assembly comprising a block slidably supporting a plurality of pressure-applying elements for engaging a charge of material in said containers, a plate associated with said block containing a plurality of resilient cushion elements aligned with the ends of said pressure applying elements, a back up plate associated with said cushion element containing plate, a support means mounted on said fixed member to support a plurality of said containers between said fixed member and said movable assembly in alignment with said pressure applying elements, means for applying force to move said assembly, backup plate, cushion element-containing plate, block and pressure applying elements toward and away from said fixed member and containers supported thereon, and pressure sensitive means positioned and acting between said pressure-applying elements and said aligned cushion elements to detect and record the position of containers having low or missing charges of material therein during the material compressing operation.

3,019,689
OPTICAL VIEWING DEVICE
Gerhardt A. Paulsrud, 408 Kings Highway, Sioux City, Iowa
Filed Jan. 18, 1961, Ser. No. 83,404
1 Claim. (Cl. 88—1)



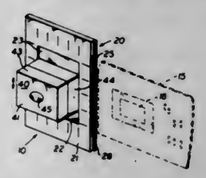
An instrument for use in horizontal viewing while in a reclining position comprising a lightweight plastc materal casing, said casing including a rear wall portion having ntegrally formed side walls perpendicular thereto, an integral top wall, a portion of said rear wall adjacent the top wall being angularly disposed with respect thereo, a first integral flange on said rear wall adjacent said angularly disposed portion and extending between said side walls, second and third spaced integral flanges on the angularly disposed portion of said rear wall extending between said first integral flange and said top wall, a first generally rectangular mirror secured to said angularly disposed rear wall portion in the area defined by said first, second, and third integral flanges and said top wall, the lower end of said rear wall having an arcuate cut away flanged lower portion adapted to seat on the forehead of the user, the free front edges of said side walls each having first inclined portions and second oppositely inclined portions, integral flanges on said side walls, perpendicular thereto and adjacent said first inclined portions, an inclined front wall secured between said first inclined portions of said side walls and in engagement with the integral flanges thereon, the lower end of said front wall having an arcuate cut away flanged portion adapted to seat on the nose and cheeks of the user, the upper end of said front wall, the second inclined portions of said side walls, and an edge of said top wall defining an opening in alignment with said first rectangular mirror, said front wall further including a first integral flange adjacent the upper end thereof, a second integral flange on said front wall in spaced parallel relation to said first, a pair of integral flanges extending between said first and second integral flanges and with the same defining a generally rectangular area, a second rectangular mirror secured to said front wall in the generally rectangular area whereby light entering the opening in alignment with said first mirror is reflected to said second mirror and to the eyes of the user.

3,019,690
INSTRUMENT FOR MEASURING DISTANCES AND THE LIKE
Klaus Hildebrand, Berlin-Neukoelln, and Hugo Pocher, Berlin-Friedenau, Germany, assignors to Continental Elektroindustrie A.G., Askania-Werke, Berlin-Mariendorf, Germany, a corporation of Germany
Filed May 14, 1959, Ser. No. 813,224
Claims priority, application Germany Mar. 10, 1956
3 Claims. (Cl. 88—1)



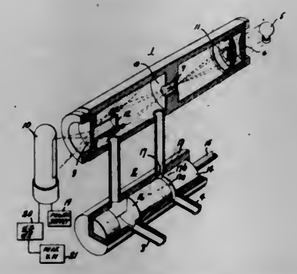
3. An optical device for measurement of the transmission time of light over a path under measurement comprising a modulated light source, means for directing light from the source over the path under measurement, means for directing light from the source over a second path including an optical phase-shifter, means for receiving light over both paths and comparing their phase, and selectively operable calibration means including a third light path of fixed length short-circuiting the path under measurement, the common portions of the light path under measurement and the short-circuited path being of fixed length.

3,019,691
OPTICAL VIEWER PARTICULARLY FOR MICROFILM AND TRANSPARENCIES
Harvey B. Schneider, 162—40 9th Ave., Beechhurst, N.Y.
Filed Nov. 12, 1959, Ser. No. 852,523
8 Claims. (Cl. 88—1)



1. An optical viewer for microfilm comprising, in combination, a film holder including a pair of sheets of substantially opaque material arranged in superposition and secured together along a pair of opposite edges to define a film receiving slot between such opposite edges, said sheets having aligned window openings therein alignable with the film; a sheet of translucent light diffusing material covering the window opening in one of said opaque sheets; and a lens housing mounted on the other of said opaque sheets, and formed from a pre-cut blank of relatively flexible and substantially opaque material folded about fold lines to form a normally collapsed but readily erectable enclosure including a front wall having an aperture with a relatively high powered lens mounted therein, two pairs of opposed side walls foldable about medial fold lines, and a rear wall having a window opening aligned with the window opening in said other opaque sheet; said rear wall including flaps projecting from a pair of opposite side walls and engageable with said other opaque sheet for mounting of said lens housing on said film holder; said lens housing being normally collapsed with said front wall substantially flush with the outer surface of said other opaque sheet; said lens housing being erectable to form a substantially light proof tube through which a microfilm mounted in said slot may be viewed by holding the viewer so that light will enter through said sheet of light diffusing material, with the lens spaced from the microfilm to magnify selected areas of the latter; the lateral spacing of the opposite edges of the film receiving slot being substantially in excess of the corresponding lateral dimension of the window opening in the rear wall of said lens housing to provide for scanning of selected areas of the film by relative lateral movement of the film and said lens housing.

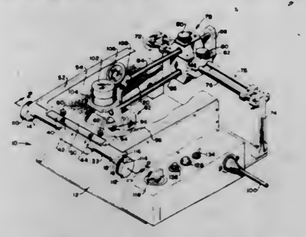
3,019,692
CONDENSATION NUCLEI OPTICAL MEASURING APPARATUS
George F. Skala, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 30, 1957, Ser. No. 681,414
5 Claims. (Cl. 88—14)



1. In a condensation nuclei measuring device the combination comprising means defining an expansion chamber traversed by a beam of radiant energy and adapted to receive nuclei bearing gaseous samples periodically, radiation sensitive means positioned to intercept radiation modified by nuclei induced droplet clouds and produce an electrical output which is proportional to the number of nuclei, said electrical output having a magnitude which is a nonlinear function of the nuclei concentrations, and means to convert said output into one which is a linear function of the nuclei concentration.

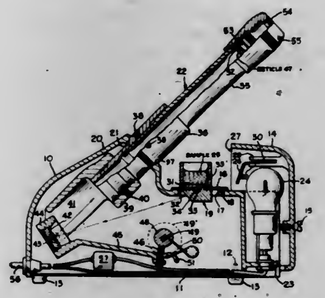
3,019,693
METHOD OF DETERMINING AZIMUTHAL DISTRIBUTION OF A SYSTEM OF LINEAL ELEMENTS
Homer W. Patnode, Hampton Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 22, 1958, Ser. No. 782,052
5 Claims. (Cl. 88—14)

3. In a method for summarizing the azimuthal distribution of a system of lineal elements on a surface, wherein said system is represented identically on two image sheets; the steps comprising superimposing the sheets in identical azimuthal orientation with the sheets being displaced from a position of registry by an amount approximately the average width of the lineal elements, maintaining the sheets so superimposed and the amount of the displacement constant and varying the direction of the displacement, and photometrically measuring the transmission of light through a selected substantially identical portion of



the superimposed sheets at a plurality of different relative positions of the sheets so superimposed.

3,019,694
REFRACTOMETER
Robert J. Meltzer, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed July 3, 1959, Ser. No. 824,829
7 Claims. (Cl. 88—14)

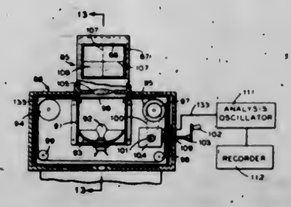


1. A refractometer comprising a housing, a refracting prism rigidly mounted in said housing and adapted for receiving thereon samples of materials to be examined, a light source for directing light rays at grazing incidence to a sample of material disposed on said prism, a concave reflecting surface having a spherical zone for bringing rays of light emerging from the sample to a focus to produce an image at an image plane, an ocular lens system having a calibrated reticle scale disposed in said image plane and a magnifying lens in optical alignment therewith, adjusting means for movably mounting said concave reflecting surface for positioning said image relative to said reticle scale, said calibrated reticle scale and said adjusting means together being effective to compensate for temperature conditions whereby a direct reading of refractive index with reference to a known sample is indicated.

3,019,695
ANALYSIS AND REPRODUCTION OF IMAGE MOVEMENT
Newhall Douglas, 517 Sherwood Road, Hohokus, N.J.
Original application July 3, 1957, Ser. No. 669,885, now Patent No. 2,968,211, dated Jan. 17, 1961. Divided and this application Jan. 20, 1960, Ser. No. 3,537
5 Claims. (Cl. 88—16)

1. Recording apparatus for ascertaining the movement followed by a motion picture camera during the taking of a film, comprising, a casing, an eyepiece for following on a projection screen the image movements of a naturally stationary object photographed on film in said moving camera, said eyepiece being mounted on the casing, a translucent movable member disposed for move-

ment within said casing, an index mark on said member, said translucent member being disposed with respect to the eyepiece so that said index mark is visible through the eyepiece, manual means for moving said translucent member so that said index mark traverses the field of



said eyepiece in step with the image of said naturally stationary object, an electric wave source, means coupled to said manual means for modulating said source in accordance with movement of said index mark to comprise signals, and means for recording said signals.

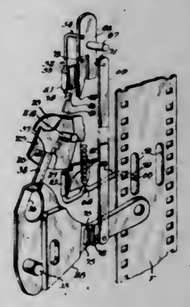
3,019,696
SPACE-TIME REPRODUCTION OF SPATIALLY RECORDED IMAGES
Newhall Douglas, 517 Sherwood Road, Hohokus, N.J.
Filed Oct. 15, 1956, Ser. No. 616,017
9 Claims. (Cl. 88—16)



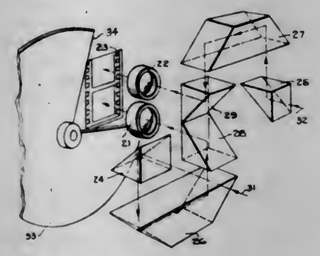
1. In a scenic projection system for projecting a background scene, a projector adapted to project a transparency formed from exposed film; a supporting surface upon which said projector is freely movable at random as to direction and rate of movement to shift the location of the projected image on a screen; and transparency shifting means operable, only in response to movement of said projector in respect to its supporting surface, to shift the transparency in the projector at a rate corresponding to the rate of movement of said projector and in a direction such that the background scene changes to correspond with the relative position of the projector.

3,019,697
FILM STOPPING MECHANISM FOR CAMERAS
Eric S. Lindau, 676 Western Ave., Lake Forest, Ill.
Filed Oct. 1, 1958, Ser. No. 764,635
7 Claims. (Cl. 88—16)

1. In an automatic film stopping mechanism for movie cameras including a film gate adapted to receive a film strip, a film advancing mechanism operatively associated with said film gate, a shutter mechanism operatively connected to and movable in syncronism with the film advancing means, and a movable manually actuated control member operatively connected to the advancing and shutter mechanisms for controlling the operation thereof with said control member having a film advancing position and a film stopping position, the combination of a film engaging member constructed for movement in the direction of advancing movement of a film strip positioned in said film gate and having a portion adapted to enter an opening in such a film strip and operatively engage the latter for movement therewith, resilient means operatively associated with said film engagement member opposing movement of the latter with such a film strip, a movable member operatively associated with said shutter and film advancing mechanisms and operative in one position to stop the operation of such mechanisms, means operatively connecting said last-mentioned member and said film engaging member whereby movement of the latter with the film is transmitted to said movable member to move the same to a mechanism stopping position and means operatively connecting said movable member and said manually actuated control member whereby movement of the latter from a film advancing position to a film stopping position is operable to move said movable member from a mechanism stopping position to a released position.

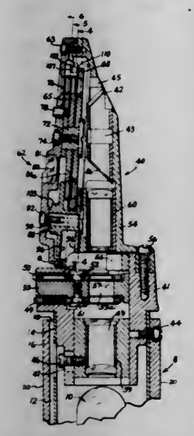


3,019,698
PHOTOGRAPHIC METHODS AND APPARATUS FOR USE IN CAMERAS AND PROJECTORS
Stewart L. Sheldon, P.O. Box 197, Trotwood, Ohio
Filed Apr. 20, 1953, Ser. No. 349,640
6 Claims. (Cl. 88—16.6)



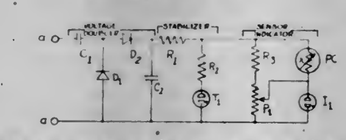
1. A photographic method enabling three dimensional projection including the steps of transmitting a pair of spaced images in separate adjacent parallel paths, deflecting said images oppositely, further deflecting said images oppositely, further deflecting said images substantially ninety degrees in substantially parallel paths, then deflecting said images to points aligned substantially at right angles to the common plane of said spaced images, transmitting said images from said points through relatively aligned lenses and deflecting said images to merge in successive timed spaced relation on a screen to simulate three dimensional projection thereby.

3,019,699
INSTRUMENT FOR EXAMINATION OF THE EYE
George F. Schenk, Williamsville, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Apr. 25, 1960, Ser. No. 24,613
5 Claims. (Cl. 88—20)



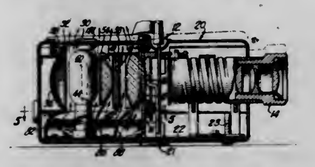
1. In a device for eye examination having a housing with a transverse viewing aperture, a lamp in said housing, an optical system for directing a beam of light along a light channel in said housing and light directing means immediately adjacent said viewing aperture for directing said beam of light into an eye under examination, the combination of a pair of coaxial lens dials carrying each a graded series of lenses, one series being of relatively weak dioptric power and the other series being of relatively strong dioptric power, means for rotatably supporting said coaxial dials side by side in said housing with said weak dial more remote from the examiner's eye than said strong dial, and means having a Geneva pick-up connecting said dials for rotating said dials and thereby selecting the combination of strong and weak lenses positioned in said viewing aperture characterized by a rotatable impeller having two radial flanges overlapping and receiving between them peripheral portions of said pair of dials, said Geneva pick-up connection driving said impeller from said weak dial, and pin gearing connecting said impeller in driving relation with said strong dial.

3,019,700
RADIANT ENERGY METER
Robert Colman, 2 Howard St., New York, N.Y.
Filed Mar. 14, 1958, Ser. No. 721,386
6 Claims. (Cl. 88—23)



2. Radiant energy sensing means comprising a supply of electrical energy, a voltage doubler energized by said supply and including a pair of semi-conducting devices and a pair of capacitors, voltage stabilizing means comprising the series combination of a first resistor, a second resistor and a gas discharge tube, said series circuit being connected to the output terminals of said voltage doubler, voltage adjustment means comprising a series circuit connection of a resistor and a potentiometer, said series circuit being connected across the combination of said second resistor and said gas discharge tube, a photoconductive cell connected between the arm of said potentiometer and one terminal of said series connection of resistor and potentiometer, gas discharge indicating means connected to the arm of said potentiometer and the other terminal of said series connection of resistor and potentiometer, component support means, said support means serving to enclose and support the aforesaid components, control means operably connected to said potentiometer, control position indicating means mounted on said component support means and an aperture in said component support means, said aperture providing radiant energy access to said photoconductive cell.

3,019,701
SLIDE PROJECTOR
Hubert U. Brueckner, Lombard, Edward E. Fluskey, Oak Park, and Wolodymyr Werbyckyj, River Grove, Ill., assignors to Revere Camera Company, a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,479
2 Claims. (Cl. 88—24)



1. A portable slide projector including a housing enclosed the entire mechanism, said housing consisting of a box-like cover portion seated on a base, the inner surface of said base comprising a floor within said housing; a lens and lamp compartment within said housing, bounded by a rear vertical wall and two vertical sidewalls, each of said sidewalls extending vertically from an upper extremity closely adjacent to the said cover to a lower extremity spaced an appreciable distance from the floor of said housing; a projection lamp adjacent said rear vertical wall and seated in a lamp socket resting directly on said floor; a lens system supported within said compartment, between said sidewalls and forwardly of said projection lamp; and an improved cooling system for said projector, comprising: an open grill located in the portion of the cover of said housing overlying the said compartment and defining an air outlet; another open grill located in one sidewall of said cover portion and defining an air inlet; a fan mounted within the housing between said air inlet and the nearer of the sidewalls of said lens and lamp compartment; means directing and confining the flow of air drawn into said housing by said fan comprising a curved shield mounted to extend closely adjacent to the circular path traversed by the tips of said fan blades in their uppermost travel having a first edge facing said air inlet and a second edge abutting the nearer sidewall of said lens and lamp compartment; a curved baffle extending from the floor of said housing from below the central region of the lamp and lens compartment upwardly to the lower extremity of that sidewall of said compartment which is further from said fan, whereby air impelled by the blades of said fan is caused to enter the lens compartment below the plane of the lower edge of the nearer sidewall of said compartment and to proceed upwardly between said sidewalls and past the surfaces of the lamp and lens members in said compartment and thence directly outwardly of said housing via said open grill defining the air outlet in the cover of said housing; and a plurality of relatively narrow curved deflectors extending generally in alignment with the axis of rotation of

said fan and extending from said curved baffle to the plane of said nearer sidewall, the purpose of said deflectors being to assist in directing the air upwardly past the contents of said compartment, in proportion to the cooling requirements of the lamp and lenses contained in said compartment.

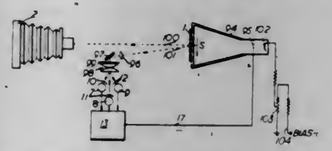
3,019,702
APPARATUS FOR FLASHING IN CORNERS AND MARGINS OF PHOTOGRAPHS DURING PROJECTION PRINTING THEREOF
Ray V. Winn, Jr., 4831 E. 17th St., Kansas City, Mo.
Filed Jan. 22, 1957, Ser. No. 635,375
2 Claims. (Cl. 88—24)



1. The combination with an operable projection printer of an apparatus for flashing photographic paper simultaneously with the printing operation, said apparatus including a hollow housing of dimensions adapting the same to be conveniently held in one hand, said housing having a side wall provided with an opening through one face thereof and of smaller dimensions than said face; a light source within the housing and aligned with said opening to permit rays of light to be directed through said opening and onto the paper during said printing thereof and upon actuation of said light source; an opaque, flat dodging panel of greater dimensions than said opening; bracket means on said housing movably carrying said panel in outwardly spaced relationship from said opening in substantially perpendicular relationship to said rays of light and thereby interposed directly between the light source and the paper for defining a boundary of the field of radiation of the source to control exposure of the paper to the rays; and a plate member movably mounted on the housing and provided with a plurality of apertures having differing areas and of less area than said opening, said plate member being interposable over the opening with any one of the apertures aligned with said opening, the boundary of the field of radiation of the source through the opening being selectively restricted upon interposition of the plate member over the opening whereby the amount of exposure of the paper to the rays may be variably controlled.

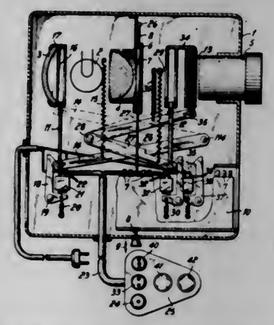
3,019,703
PHOTOGRAPHIC COLOUR REPRODUCTION APPARATUS
Arthur R. Kilminster, Birmingham, England, assignor to Hunter-Penrose Limited, London, England, a British company
Filed Sept. 18, 1958, Ser. No. 761,879
Claims priority, application Great Britain Sept. 24, 1957
21 Claims. (Cl. 88—24).

1. Photographic colour reproduction apparatus, comprising scanning means arranged to produce a spot of substantially white light and including means to cause said spot to scan a raster on a coloured original, a first, a second and a third photoelectric device each arranged to be responsive to a primary colour component of light transmitted from the original as a result of the scanning thereof, an analysing cathode ray tube having deflector means connected to the photoelectric devices and responsive to electrical signals originating as outputs from the photoelectric devices to determine a sequence of positions of a spot of light on the face of said tube according to the colours of areas of the original scanned in sequence, a fourth photoelectric device arranged to receive light from said spot of light and operable in response to said light to produce a colour signal, a selecting screen interposed between the analysing cathode ray tube and



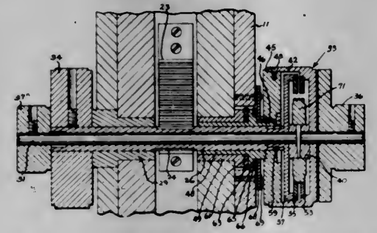
the fourth photoelectric device and having a predetermined optical density for each area thereof to select colours for correction by varying the intensity of the light received by the fourth photoelectric device according to the position of the spot of light on the face of the analysing tube, correction means connected to the fourth photoelectric device and operable to convert the colour signal into a colour and tone corrected modulating signal, and electrically actuated modulating means connected to the correction means and operable by said modulating signal to control the amount of light transmissible to a photographic plate.

3,019,704
LIGHT OUTPUT MODIFYING ARRANGEMENT FOR SLIDE PROJECTORS
Erich Zillmer, Braunschweig, Germany, assignor to Voigtlander, A.G., Braunschweig, Germany, a corporation of Germany
Filed Oct. 24, 1960, Ser. No. 64,328
Claims priority, application Germany Oct. 28, 1959
11 Claims. (Cl. 88—26)



1. A slide projector comprising, in combination, casing; a light source, a concave mirror arranged behind said light source, and a light projecting objective mounted in said casing, in alignment with the projector light axis, and arranged for said mirror to direct light rays through said objective; plural light modifying elements each mounted in said casing for movement between an operative position, in which it is disposed in the path of light rays along the projector axis, and an inoperative position, in which it is disposed out of the path of light rays along the projector axis; and plural operating means, each associated with a respective one of said elements, for effecting movement of its associated element to its operative position independently of any other of said elements; whereby all of said elements may be maintained in said inoperative position or a selected number of said elements may be selectively moved to the operative position, at will and in accordance with the desired character and degree of light modification.

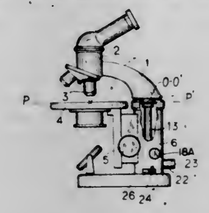
3,019,705
COARSE AND FINE ADJUSTMENT MECHANISM FOR MICROSCOPES
Leonard A. Wilkinson, Snyder, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Dec. 13, 1957, Ser. No. 702,606
3 Claims. (Cl. 88—39)



1. In a microscope having raising and lowering mechanism, driving means therefor comprising a tubular coarse adjustment shaft operatively connected to said mechanism to drive the same, said shaft extending through the microscope and projecting on both sides thereof, a coarse adjustment knob on each projecting portion of said tubular shaft for rotation of said shaft by either hand selectively of the operator, a fine adjustment shaft extending through said tubular shaft and projecting at both ends thereof, planetary gearing connecting said fine adjustment shaft in driving relation to said tubular shaft including two adjacent coaxial internal gears, one in fixed relation to said tubular shaft and the other in fixed relation to a brake member, said microscope having a reaction portion cooperating with said brake member, an eccentric on and rotating with said fine adjustment shaft, and an orbitally movable gear member surrounding said fine adjustment shaft and rotatably mounted on said eccentric, said gear member meshing with both said coaxial internal gears so as to effect a differential drive of said tubular shaft relative to said braked internal gear, and a fine adjustment knob on each projecting portion of said fine adjustment shaft, each fine adjustment knob being positioned on the outer side of its respective coarse adjustment knob.

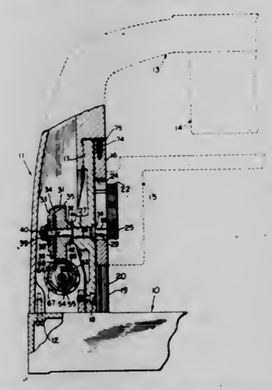
3,019,706
FINE ADJUSTMENT MECHANISM FOR MICROSCOPES
Tadashi Ueno, Setagaya-ku, Tokyo, Japan, assignor to Nippon Kogaku K.K., Tokyo, Japan, a corporation of Japan
Filed Feb. 25, 1958, Ser. No. 717,523
7 Claims. (Cl. 88—39)

1. A fine adjustment mechanism for focusing the objective of microscopes, comprising an angle arm of which the free end supports at least one objective, a hollow vertical pillar, an annular plate of spring metal attached to the upper end of the pillar, a bridge of spring plate metal extending across the annular plate and having its ends integral with diametrically opposite peripheral regions of the annular plate, means affixing the central portion of the adjacent end of the angle arm to a central portion of the bridge so that a free intermediate region of the bridge extends from each side of the bridge central portion to the adjacent end of the bridge integral with the annular plate and the adjacent end of the angle arm is spaced from the top of the pillar to permit tilting of the angle arm about the bridge as an axis, the axis of the bridge being perpendicular to the direction in which the free end of the angle arm extends from the pillar, an elongated rod rigid with the central portion of the bridge and the adjacent end of the angle arm and



normally extending vertically within the pillar and of a diameter less than the parallel interior dimension of the pillar, a rotatable shaft externally threaded in the cylindrical portion thereof supported in the pillar wall and extending across the hollow interior of the pillar to the side of the rod opposite to that in which the free end of the angle arm extends from the pillar, and a conical cam integrally mounted on the rotatable shaft and coaxial therewith engaging the rod with its conical cam surface.

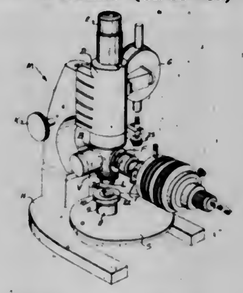
3,019,707
FINE ADJUSTMENT MECHANISM FOR MICROSCOPES
Harold W. Straat, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed May 13, 1959, Ser. No. 812,839
1 Claim. (Cl. 88—39)



In a microscope comprising a supporting frame carrying optically aligned lens and stage members and having at least one of said members movable relative to the other, a slide reciprocably mounted on said frame and having said one of said members directly secured thereto, a rack carried by said slide, a shaft rotatably mounted with respect to said frame, a pinion mounted on said shaft and disposed in mesh with said rack for drivingly interconnecting said rack and said shaft; a driving pinion having helical teeth and rotatably mounted on said shaft, a friction clutch comprising a spring biased disc mounted on and driven by said shaft and engaging an adjacent face of said driving pinion for drivingly interconnecting said driving pinion and shaft, a helical worm gear in mesh

with said driving pinion teeth, said worm gear being slidably mounted on a hollow shaft carried by said frame, said hollow shaft including means defining an axially extending slot, a screw shaft concentrically mounted within said hollow shaft, a follower nut threadedly disposed on said screw shaft and projecting through said hollow shaft slot and interconnected with said worm gear such that the latter is free to slide axially along said hollow shaft with said nut but is held against rotation relative to said hollow shaft by the nut, coarse adjustment knob means directly connected with said hollow shaft for directly driving said worm gear and thereby effecting coarse adjustment of said reciprocable slide, and fine adjustment knob means carried by said screw shaft for causing said nut to move axially and carry with it the worm gear for thereby effecting fine adjustment of said reciprocable slide, and friction means operably disposed between said frame and said coarse adjusting knob means for preventing rotational movement of said hollow shaft during movement of said fine adjustment knob means, said friction clutch permitting movement of the coarse and fine adjusting means without damage thereto or to said slide even though the latter has moved to a limit of its movement.

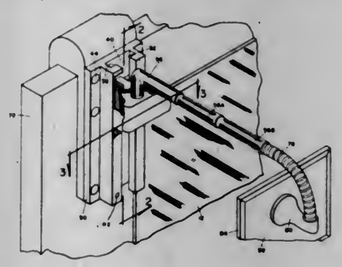
3,019,708
MICROSCOPE STAGES
Hobert W. French, Jr., Colden, Howard A. Maier, Williamsville, and Jack L. Brookhart, Tonawanda, N.Y., assignors to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 17, 1959, Ser. No. 820,905
5 Claims. (Cl. 88—39)



1. In a microscope, in combination, a housing carrying an optical system including an objective and an eyepiece, means including a target and a vertical illuminator for projecting an image of said target along the axis of said optical system, a stage, focusing means for adjusting the separation of said housing and stage to focus the microscope for viewing an object on said stage, a gage for indicating changes in the separation of said stage and objective, and a mount for supporting a contact lens, said stage having a spherical socket for receiving a mating surface on said mount, the radius of curvature of said socket being so related to the position of an average lens carried by the mount that the center of curvature of said socket substantially coincides with the center of curvature of said lens to afford universal adjustment of the contact lens without altering the normal relation of its surface to the optical axis of the microscope.

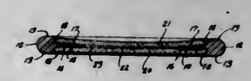
3,019,709
ADJUSTABLE MIRROR BRACKET
Ramona J. Teason, 2801 N. Sheridan Road, Chicago, Ill.
Filed June 24, 1958, Ser. No. 744,244
4 Claims. (Cl. 88—84)

1. An adjustable bracket for positioning a mirror in spaced relationship to a second mirror comprising the combination of a base plate having a T slot therein; means for fixedly mounting the base plate to a vertical surface, the second mirror being mounted to the vertical surface; a boss having sides, a rear, and an upper surface having grooves on both of the sides thereof adapted to slide within the T slot, the boss having a tapered surface on the rear side thereof; a wedge shaped spring loaded check adapted to engage the tapered rear side of the boss and bind the boss against free movement within the T slot; an aperture in the upper surface of the boss; an arm comprised of a plurality of telescoping hollow sections



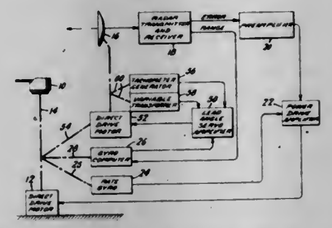
and having a right angle bend a spaced distance from a first end thereof, said first end of the arm adapted to fit within the aperture; a universal connector on the second end of the arm; and a mirror mounted to the connector; whereby, the mirror may be positioned with respect to the second mirror with vertical adjustments of the boss in the T slot, adjusted horizontally by rotation of the first end of the arm in the aperture positioned with respect to distance from the second mirror by extension and contraction of the telescoping arm and positioned to any angle of reflection by adjustment of the universal connector.

3,019,710
HAND MIRROR
John W. Bean, Bloomfield, Conn. (% The Fuller Brush Co., 3580 Main St., Hartford, Conn.)
Filed June 19, 1959, Ser. No. 821,439
3 Claims. (Cl. 88—89)



1. A double mirror comprising a rigid unitary frame including a peripheral rim having opposite outer faces and surrounding a central area and also including a thin web means integral with said rim and located between the planes of the opposite faces thereof which web means extends into said central area and defines two opposite recesses within said peripheral rim and also defines a central opening, two oppositely facing reflecting glasses located respectively within said recesses with their outer faces oppositely disposed and with their back faces in engagement with said web means which glasses have such size and shape that their peripheries are at least approximately in engagement with the interior edges of said rim and which glasses have their said outer faces entirely exposed, and a layer of adhesive joining the back faces of said two reflecting glasses through said central opening which adhesive serves entirely independently of the rim to retain said glasses in engagement with said web means.

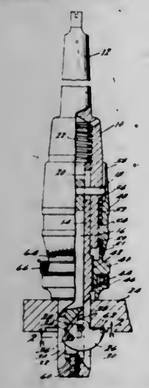
3,019,711
CONTROL SYSTEMS FOR POSITIONING OBJECTS HAVING HIGH INERTIA
Francis M. Bailey, Scotia, N.Y., and Eugene B. Canfield, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Dec. 26, 1956, Ser. No. 630,700
13 Claims. (Cl. 89—41)



1. In a control system for positioning an inertia load in accordance with a supplied control signal, an inertia load, means for providing a control signal, prime mover means including a movable output member attached to said inertia load by a continuous solid substantially rigid element whereby gears are eliminated and flexure is minimized to directly drive said load simultaneously through the same angular displacement as said output member, power drive means responsive to said control signal to energize said prime mover in accordance therewith, response means coupled to said prime mover output member and said load for movement therewith and responsive to such movement to modify said control signal in a manner to obtain correspondence of load position with the control signal as initially supplied.

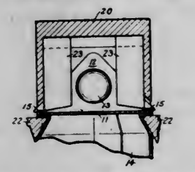
7. For directly driving an inertia load in a closed loop servo system, a slow speed electric motor including a field structure and an armature rotatable therein with said armature having a D^2L-to-horsepower ratio not less than about 2,000 inches cubed per motor horsepower where D is the armature outside diameter and L its stack length.

3,019,712
CUTTING TOOL
George H. Winberry, Jr., Detroit, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich., a corporation of Michigan
Filed Jan. 31, 1958, Ser. No. 712,461
8 Claims. (Cl. 90—11)



1. In a cutting tool for machining the lower face of a workpiece having a bore therein, a sleeve extending from said cutting tool, the lower portion thereof adapted to be disposed within said bore, said lower portion having aligned slots formed in the wall thereof which define a plane passing through the central opening of said sleeve substantially parallel to the axis thereof, a cutting blade pivotally mounted within said portion of the sleeve by a pin passing through the cutting blade and the sleeve in alignment with said slots substantially perpendicular to the axis of the sleeve, an elongated camming member slidably disposed within said sleeve and having a first cut away portion in the lower end thereof disposed in a plane substantially parallel and adjacent to the plane in which the cutting blade pivots, and a second cut away portion in the lower end thereof disposed in a plane substantially perpendicular to the plane in which the cutter blade pivots to permit said lower end of the camming member to extend beyond and move axially relative to said pin, said first portion and said cutter blade being drivingly connected by a pin and slot connection, an adjustable stop pin in the lower end of said sleeve axially aligned with said lower end of the camming member to limit the downward movement of said camming member, whereby the pivotal movement of said cutting blade is limited, and means for axially advancing said camming member relative to said sleeve to positively pivot the cutting blade from a position entirely within the sleeve into a cutting engagement with a point on the lower face of the workpiece spaced from said bore, said pin and slot connection being located such that said means axially advances said pin and slot connection between positions above and below the pin pivotally connecting the cutting blade to the sleeve.

3,019,713
STRIKING PUNCH
Howard M. Hill, Hamilton, Va.
Filed Oct. 7, 1959, Ser. No. 845,003
1 Claim. (Cl. 93—36.5)

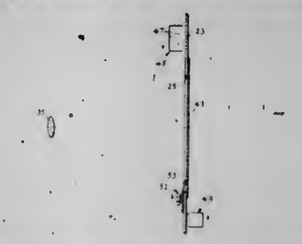


A punch, adapted to strike and form a container end seam flange, comprising four vertical walls connected at their upper end and open at their lower end said walls abutting at four corners and forming a rectangle, two narrow slots situated at the junction of said vertical walls at two opposite corners of said rectangle and extending upwardly from the lower edge of said abutting walls providing clearance for an upright member of a container structure said upright member extending through said container end seam flange and means within said four vertical punch walls confining and guiding said upright member of a container structure against motion from an upright position while the striking face of said punch approaches and strikes said container end seam flange.

3,019,714
CHARGING AND DEVELOPING APPARATUS FOR ELECTROSTATIC PRINTING
Sidney Teiser and Walter R. Sassaman, Rochester, N.Y., assignors, by mesne assignments, to Magnefax Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1958, Ser. No. 724,946
21 Claims. (Cl. 95—1.7)

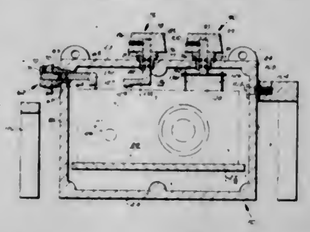
20. A charging and developing apparatus for use in electrostatic printing comprising a light tight chamber containing means for holding a sheet treated with photocon-

ductive material at a substantially vertical focal plane support position, said means holding the sheet in fixed position in said chamber with the photoconductive material at an exposure position therein, a high voltage rail extending substantially vertically near said focal plane support position, charging means including substantially vertical track means substantially parallel to said focal plane support position and a U-shaped housing movable vertically along said track means and having a plurality of grid wires mounted within said housing and a resilient contact member electrically connected to said grid wires and bearing against said rail to make sliding contact with said rail during vertical movements of said housing along said track means, means including said rail and said resilient contact member for impressing a high potential electrical charge on said grid wires during vertical movements of



said housing along said track means, said housing having a rest position near the top of a sheet held in said focal plane support position, means for exposing said charged sheet and forming a latent image on the charged side thereof, magnet means for forming a brush of magnetic powder containing developing material, means mounting said magnet means for movement substantially parallel to said sheet from a lower rest position upwardly across said sheet and downwardly back to its said rest position, and operating means for first moving said housing from its rest position downwardly across said sheet and then upwardly again to its rest position, to impress an electrostatic charge on said sheet, and then, after a pause for exposure of the charged sheet to a light pattern occasioned by operation of said exposing means, moving said magnet means from its rest position upwardly across said sheet and then downwardly again to its rest position.

3,019,715
UNDERWATER CASING, INCLUDING CAMERA CONTROL MEANS
Ernest A. Arnold, 91 Lee St., and Albert W. Pipes, 361 Vine St., both of Pawtucket, R.I.
Filed June 30, 1959, Ser. No. 824,002
1 Claim. (Cl. 95—11)

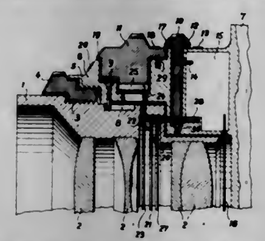


An underwater camera casing including camera control means comprising a five sided casing having a bottom wall, top wall, left side wall, right side wall and a front wall forming an open rear wall chamber, said front wall having an opening consisting of a ring frame provided with a step and a flange, a photographing window formed in said opening comprising a gasket engaging said flange and said step, a window of transparent material engaging said gasket and said step, a second gasket engaging said step and said window and a ring plate engaging said second gasket, screw means to secure said ring plate to said ring frame to form a fluid tight seal around said window, a rear wall provided with a platform, a rear wall gasket located between said rear wall and the top, bottom, right side and left side walls, screw means to secure said rear wall to said top, bottom, right side and left side wall whereby said rear wall forms a fluid tight chamber in cooperation with said five sided casing and fluid tight window, said platform projecting into said chamber, a left side handle, a handle gasket, screw means securing said left side handle and gasket to said left side wall in fluid tight relationship, a right side handle, a second handle gasket, screw means securing said right side handle and gasket to said right side wall in fluid tight relationship, a plurality of camera control means comprising a spring loaded camera shutter setting lever, consisting of a pipe plug fixed in said front wall in fluid tight relationship by means of pipe threads, a shaft provided with a circular recess, an O ring located in said last mentioned circular recess, said shaft and O ring rotatively mounted in said pipe plug, a lever fixed to one end of said shaft on the outside of said front wall, the other end of said shaft projecting into said chamber and adapted to engage the cocking lever of a camera, and a coil spring fixed on one end to said shaft and on the other end to the front wall to yieldingly hold said shaft in pre-selected position, a shutter release lever consisting of a pipe plug fixed in said left side wall in fluid tight relationship by means of pipe threads, a second shaft provided with a circular recess, an O ring located in said circular recess, said second shaft and O ring rotatively mounted in said pipe plug, a lever fixed to one end of said shaft on the outside of said left side wall, the other end of said second shaft projecting into said chamber and adapted to engage the shutter release button of a camera, a safety lock release, consisting of a pipe plug fixed in the top wall in fluid tight relationship by means of pipe threads, a third shaft provided with a circular recess, an O ring located in said last mentioned circular recess, said third shaft and O ring rotatively mounted in said last mentioned pipe plug, a knob fixed to one end of said third shaft on the outside of said top wall, the other end of said shaft projecting into said chamber and adapted to engage the film transport lock of a camera, and a film advance knob, consisting of a pipe plug fixed in said top wall in fluid tight relationship by means of pipe threads, a fourth shaft provided with a circular recess, an O ring located in said last mentioned circular recess, said fourth shaft and O ring rotatively mounted in said last mentioned pipe plug, a knob fixed to one end of said fourth shaft on the outside of said top wall, the other end of said shaft projecting into said chamber, an adapter consisting of a circular collar provided with a plurality of slots, means on said fourth shaft to engage said plurality of slots to rotate said adapter, means to secure said adapter to the film transport wheel of a camera located in said chamber and fixed to said platform whereby said platform orients said camera with the photographing window and the plurality of camera control means.

3,019,716
PHOTOGRAPHIC CAMERA PROVIDED WITH SHUTTER AND DIAPHRAGM
Richard Sommer, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed May 21, 1958, Ser. No. 736,838
3 Claims. (Cl. 95—64)

1. In a camera objective assembly including an objective mount, a shutter; an adjustable iris diaphragm in-

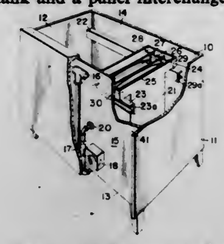
cluding a pair of coaxial adjusting rings rotatable independently of each other, each of the diaphragm lamellae being pivotally connected to both rings for adjustment by rotation of either ring relative to the other ring; a manually rotatable exposure time setting ring operatively associated with said shutter and coupled to one of said adjusting rings to rotate the latter during setting of exposure time, said exposure time setting ring having a pair of oppositely facing frusto-conical side surfaces coaxial therewith; a manually rotatable diaphragm setting ring coupled to the other adjusting ring to rotate the latter during setting of the diaphragm by said diaphragm setting ring, said diaphragm setting ring having, at one side facing said exposure time setting ring, a cylindrical surface; a fixed portion of said assembly, coaxial with the objective axis, supporting a stationary scale of exposure time values immediately adjacent one frusto-conical side surface of said exposure time setting ring and extending in the direction of movement of the latter; a diaphragm scale extending along said cylindrical surface of said diaphragm setting ring, and immediately adjacent and extending along the other side of said exposure time setting ring; a first indicator fixed on said one frusto-conical side surface of said exposure time setting ring and



cooperable with said stationary scale; and a second indicator fixed on the other frusto-conical side surface of said exposure time setting ring and cooperable with said diaphragm scale; whereby upon movement of said diaphragm setting ring, the diaphragm aperture is adjusted in accordance with movement of said diaphragm scale relative to said second indicator and, upon movement of said exposure time setting ring, the diaphragm is adjusted in accordance with movement of said first indicator relative to said stationary scale and said second indicator relative to said diaphragm scale so that exposure time is set simultaneously with adjustment of the diaphragm aperture in accordance with the exposure time adjustment and with reading of the diaphragm adjustment by reference to said second indicator cooperable with said diaphragm scale; said diaphragm setting ring having, at the opposite side, a frusto-conical outer surface geometrically coextensive with a frusto-conical outer surface of the objective mount; one of said frusto-conical outer surfaces carrying a filter factor scale and the other frusto-conical outer surface carrying a mark cooperable with said filter factor scale; said other frusto-conical side surface of said exposure time setting ring partially overlapping the adjacent cylindrical surface of said diaphragm setting ring.

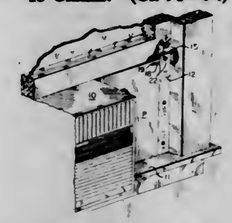
3,019,717
FILM PROCESSING AND DEVELOPING APPARATUS
Leonard W. Gacki, Jamaica, N.Y., assignor to Medical Metals Inc., a corporation of New York
Filed May 14, 1959, Ser. No. 813,273
3 Claims. (Cl. 95—96)

1. In a film processing and developing tank having interchangeable auxiliary tanks suspendable within temperature controlled fluid of a main tank processing compartment, the improvement comprising parallel trains of independently rotatable members extending the full width of said compartment, said members being separately adjustable by rotation to provide supports at different elevations with respect to the fluid in said compartment and with different lateral spacing for the suspension of said auxiliary tanks; a recess formed by extensions of the side walls of said tank and a panel interchangeably adaptable



to cover said recess; controls supported within said recess for regulating flow of temperature controlled fluid in said processing compartment circulated longitudinally of said auxiliary processing tanks and through fluid conductors extending adjacent and parallel to said supporting members.

3,019,718
SEALING MEANS FOR WINDOW MOUNTED AIR CONDITIONING UNITS
David Earle MacLeod and Carl George Alt, Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 764,114
13 Claims. (Cl. 98—94)

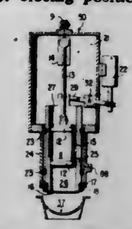


1. Sealing means for closing off the space between the side of an air conditioning unit and a side track of a window within which the air conditioning unit is mounted, said sealing means comprising panel means extending between said side of said air conditioning unit and said side track of the window; securing means for securing one end of the panel means to the side of said air conditioning unit; and engaging means on the other end of the panel means gripping said side track of the window, said engaging means comprising a channel means, a flange on one edge of said channel means, means forming a threaded aperture in said flange, means defining an aperture in said panel means, fastening means extending through said aperture in said panel means into said threaded aperture to secure said channel means to said panel means, means defining a tapped aperture in said channel means, and a screw member extending through said tapped aperture in said channel means into engagement with the side track, said screw member cooperating with said channel means to wedge the channel means in the side track.

3,019,719
INFUSER OF BEVERAGE MAKING MACHINE
Alfredo J. Parraga, Havana, Cuba
(6387 SW. Coral Way, Miami, Fla.)
Filed Jan. 12, 1960, Ser. No. 1,893
9 Claims. (Cl. 99—287)

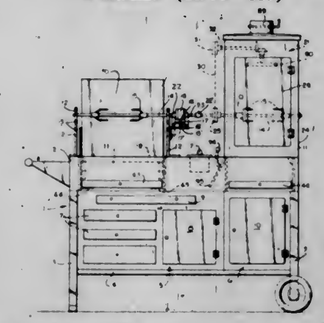
1. In an automatic beverage making machine having a strainer receptacle carried by an endless support, means

for intermittently moving said support to advance said strainer receptacle between loading, infusing and discharging stations, and an infuser at said infusing station and comprising a support member having a hot water inlet, a tubular water receiving skirt mounted for intermittent reciprocating movement in said support between an initial inlet closing position and a liquid re-



ceiving and feeding position wherein said strainer receptacle when in said infusing station is adapted to receive liquid from the skirt, a port in the wall of said skirt, adapted to align with said hot water inlet in the liquid receiving and feeding position of the skirt, and a piston mounted in said skirt intermittently reciprocally movable to close said port and expel liquid from the skirt into said strainer receptacle when said skirt is in liquid feeding position.

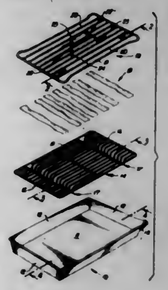
3,019,720
OUTDOOR COOKING UNIT
Robert C. Topper, 537 Brookhurst Drive, Dallas, Tex.
Filed June 22, 1959, Ser. No. 821,759
2 Claims. (Cl. 99—339)



1. A portable cooking unit comprising, in combination, a housing having top, side and end walls, first and second openings in said top, communicating with one another through the interior of said housing, a firebox removably mounted in said first opening, a smoke chamber mounted above said second opening, a rotisserie shaft and drive means, means for interchangeably supporting said rotisserie shaft in position above said first opening or within said chamber over said second opening, means for coupling said shaft to said drive means in either of said positions, means for directing smoke from said firebox to said second opening and through said chamber, and a damper between said openings for regulating the passage of said smoke to said chamber.

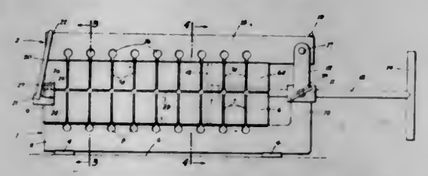
3,019,721
DEVICE FOR FACILITATING THE COOKING OF BACON
Arthur B. Haapala, Long Beach, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed May 14, 1959, Ser. No. 813,222
1 Claim. (Cl. 99—400)

A device for facilitating the cooking of bacon in a non-curling manner, comprising: a drip pan having a substantially flat rectangular bottom wall, four connected upstanding edge walls connected to said bottom wall and defining four corner portions, one of which is provided with a grease-egress spout; a substantially rectangular perforate bacon support rack having a substantially flat rectangular bacon-engageable top portion within the drip pan comprising a plurality of transversely spaced longitudinal parallel wire members effectively connected at opposite ends thereof in a direction transverse to the longitudinal direction of the parallel wire members and having two longitudinally spaced parallel transversely directed downwardly extending substantially V-shaped portions formed out of the plurality of transversely spaced longitudinal wires and defining downwardly directed rests



removably resting upon the top surface of the bottom wall of the drip pan; and a substantially rectangular perforate bacon cover member provided with upwardly projecting handle means and having a substantially flat rectangular bacon-engageable bottom portion substantially co-extensive in area with the underlying bacon-engageable top portion of the bacon support rack removably positioned within the drip pan supported by said underlying bacon-engageable top portion of the bacon support rack, said bacon cover member comprising a plurality of longitudinal parallel wire members transversely spaced differently from the transverse spacing of the longitudinal wire members of the bacon support rack's top portion and provided with an encircling member extending completely therearound and interconnecting adjacent ends of said spaced parallel wire members.

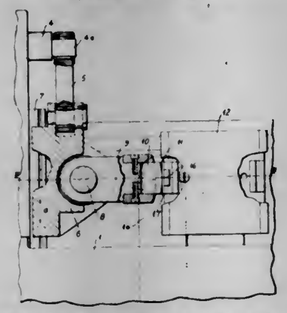
3,019,722
PRESS FOR FORMING TIED MEAT ROLLS
Rowland H. Gum, Modesto, Calif., assignor to San Joaquin Valley Turkey Growers' Association, Modesto, Calif., a non-profit cooperative association
Filed Nov. 18, 1960, Ser. No. 70,315
7 Claims. (Cl. 100—1)



1. A meat roll press comprising lower and upper units, the lower unit comprising a rigid longitudinal bar arranged to be mounted in a fixed position and a lower meat-receiving mold half mounted on the upper edge of and upstanding from the bar and closed at its forward end; the upper unit comprising a longitudinal rigid bar

and an upper mold half mounted on and depending from the lower edge of the last named bar and closed at its forward end, means pivoting the bars together at their rear ends and beyond the mold halves for opening and closing movement of said halves, said upper mold half cooperating with the lower mold half when the mold is closed; means to releasably secure the mold halves in closed position, and a plunger arranged to enter the rear end of the mold and compress the meat therein when said mold is closed.

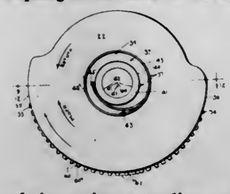
3,019,723
METHOD OF PRESSING BY ROLLING BY MEANS OF AN EMBOSSED WHEEL AND PRESSING MACHINE FOR CARRYING OUT THE SAID METHOD
Alfred Baner, 18a Rue des Jeannerets, Le Locle, Switzerland
Filed June 3, 1960, Ser. No. 33,816
5 Claims. (Cl. 101—5)



2. Apparatus for die shaping a workpiece at a work station and within a working zone of the workpiece, said apparatus comprising a work shaping die member having a work shaping end to contact the workpiece and pivot means spaced from said work shaping end, said pivot means supporting said work shaping end for rolling die shaping movement along said workpiece and with respect to a die shaping location within said working zone, means to move said pivot means alternately to opposite parallel axial positions of the pivot means for said work shaping end of said work shaping die member to undergo rolling movement alternately in opposite directions with respect to the die shaping location within said working zone, and means engaged with said work shaping die member and active to impose force through a point on said die member spaced from said pivot means and said work shaping end for the work shaping end of the member to squeeze material of the workpiece within the working zone toward the die shaping location in the zone while the workpiece is being subjected to the rolling die shaping movement of said die member.

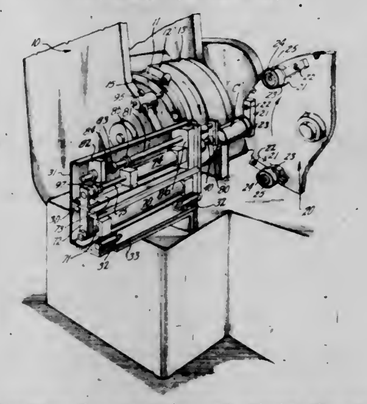
3,019,724
MARKING DIES AND THE LIKE
Erich O. Hoffmann, Chicago, Ill., assignor to Quality Die Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 27, 1959, Ser. No. 809,249
4 Claims. (Cl. 101—7)

1. A marking die including in combination a die wheel carrier including a journal stud, a disk shaped rotary die wheel journalled on said stud, the carrier and the die wheel having proximate opposing companion planar die wheel and carrier surfaces normal to an axis of rotation of the die wheel on the stud, means to retain the die wheel and the carrier together in substantially facial contact, a series of die characters extending outwardly from the periphery of the die wheel around an arc of said wheel, there being an annular spring receiving recess extending into the body of said die wheel from the die wheel planar surface aforesaid, said recess being substantially co-axial with the axis of die wheel rotation and having an outer substantially circular cylindrical spring expansion limiting wall extending axially of the die wheel from the die wheel planar surface, a helical spring seated within said annular recess, means to secreu one end of said spring to the floor of the annular recess,



the other end of the spring extending outwardly from the annular recess in axial direction through the planar surfaces, and means to anchor said outwardly extending portion to the carrier, the spring being biased and preloaded when its convolutions are in expanded unwound pre-loaded location and in engagement with the expansion limiting wall with the die wheel in a zero starting position with respect to the carrier.

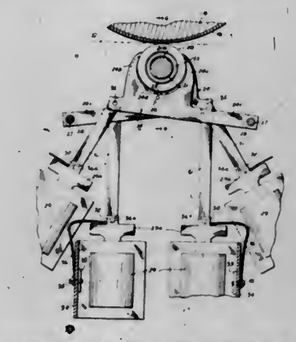
3,019,725
SUPPORTING CONTAINERS FOR PRINTING THEREON
Lawrence W. Freeman, West Hartford, Conn., assignor to Plax Corporation, Bloomfield, Conn., a corporation of Delaware
Filed Mar. 14, 1960, Ser. No. 14,901
15 Claims. (Cl. 101—38)



1. Apparatus for supporting and printing the exterior of a container comprising an expandable mandrel mechanism having an elongated housing insertable through the mouth of the container, an elongated support element movable outwardly of said housing to supportingly engage the interior of the container wall to be printed, first and second links pivotally connected adjacent opposite ends of said element respectively, said first link being pivotally connected to said housing adjacent the outer end thereof, an actuating rod reciprocably cooperable with said housing, said second link being pivotally connected to said rod, means connected to said housing and said rod to insert said housing into the container to be printed and operate said rod to expand and collapse said mandrel mechanism in conjunction with a printing operation, and printing means adjacent said mandrel mechanism for printing the exterior of the container supported by the expanded mandrel mechanism.

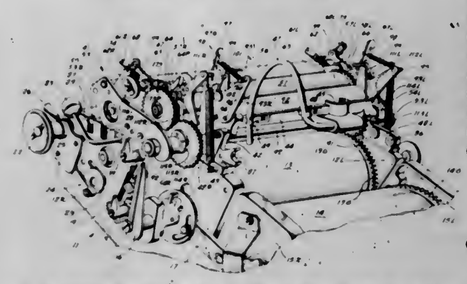
3,019,726
DUPLICATING MACHINES
Jesse L. Rogers, 2014 Connecticut Ave., Washington, D.C.
Filed Mar. 24, 1959, Ser. No. 801,552
10 Claims. (Cl. 101—132)

1. In a duplicating machine, the combination of a cylinder, an impression roller provided adjacent said cylinder for cooperation therewith and comprising a plurality of individual sections disposed in substantial axial alignment longitudinally of the cylinder, a rigid supporting shaft for said roller sections, said roller sections being formed with circular openings at the center thereof to receive said shaft, said shaft having a semi-cylindrical bottom portion conforming in radius to said openings and a relieved upper portion whereby the vertical sectional dimension of the shaft is less than the diameter of said openings and whereby the roller sections may be individually and independently moved upwardly and downwardly on said shaft, and means for moving said roller sections.

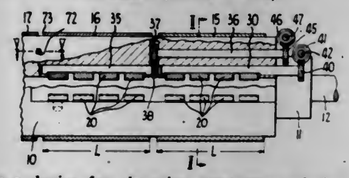


3,019,727
PRINTING MACHINES
Francis K. Lake, Euclid, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Sept. 14, 1959, Ser. No. 839,762
16 Claims. (Cl. 101—148)

1. A repellent system for applying ink repellent to the form roller of a lithographic printing machine which includes a master cylinder and comprising, a fountain for holding a supply of repellent, a fountain roller rotatable in the fountain, a distributor roller engageable with the form roller, a cam rotatable with the master cylinder, a ductor roller shiftable between the fountain and distributor rollers and engageable therewith, and operating means for so shifting the ductor roller including a first member pivotal about the axis of the fountain roller and mounting the ductor roller thereon to continuously engage the fountain roller, means normally urging said first member to engage the ductor roller with the distributor roller, a second member having a direct connection to the first member and having a portion coaxial with the axis of the fountain roller and being adjustably positionable with respect to the first member, said second member being adjustably positionable as aforesaid by way of an eccentric means rotatable about the axis of the fountain roller and effective on a slide mounted within a slot formed in said second member, said second member having a cam follower mounted thereon to be intermittently engaged by said cam for instituting swinging movement of the ductor roller away from contact with the distributor roller, whereby adjustment of the position of the second member through rotation of said cam means varies the portion of the rotational cycle of the cam that is effective to interrupt the transfer of repellent from the ductor roller to the distributor roller.

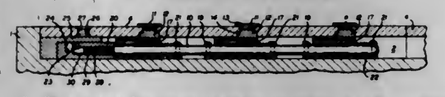


3,019,728
PRINTING PRESS MACHINERY
Ludwig Wenczler, Augsburg, Germany, assignor to Maschinenfabrik Augsburg-Nurnberg, A.G., Augsburg, Germany, a corporation of Germany
Filed Mar. 25, 1960, Ser. No. 17,563
Claims priority, application Germany Apr. 17, 1959
9 Claims. (Cl. 101—378)



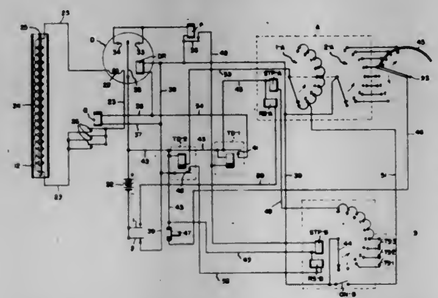
2. In a device for clamping stereotype printing plates and the like onto the plate cylinder of a rotary printing press where at least some of said stereotype plates are spaced axially of said cylinder from either end thereof, the combination which comprises a separate set of clamping hooks for clamping engagement with opposite axial edges of each of said plates, means for pivotally mounting said clamping hooks in said plate cylinder for arcuate swinging movement of said hooks selectively into and out of clamping engagement with said plates, rotatable cam means for swinging independently separate said sets of hooks for clamping one edge of said individual printing plates, and individual operating means accessible at one end of said plate cylinder for separately and individually operating said cam means for each of said sets of clamping hooks, some of said cam means for clamping said edges of plates spaced axially from said end of said cylinder being co-axially aligned with those of said cam means for clamping said edges of plates nearer said end of said cylinder.

3,019,729
UNDERSIDE LOCK UP DEVICE FOR PRINTING PLATES
Carl H. Ringe, Hartsdale, N.Y., and Charles A. Harless, Riverside, Conn., assignors to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed Sept. 26, 1958, Ser. No. 763,607
12 Claims. (Cl. 101—378)



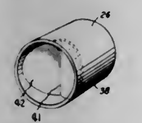
1. In a magazine press printing cylinder, a plate clamping mechanism comprising a hook for engaging a recess in the plate, supporting and guiding means mounting the hook for arcuate movement concentrically about the cylinder axis, and operating mechanism for moving the said hook between plate clamping and plate releasing positions comprising an axially movable operating member with cooperating meshing gear tooth segments formed on the hook and operating member respectively and being helical tooth segments having a pitch cylinder also substantially concentric with the cylinder axis.

3,019,730
INDUCTION MINE FIRING AND TIMING SYSTEM
Wilson R. Maltby, Arlington, Va. (9319 Cedar Lane, Bethesda, Md.), and Robert H. Park, Bernardsville, N.J. (Corporation Road, Dennis, Mass.)
Filed Jan. 17, 1947, Ser. No. 722,608
18 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



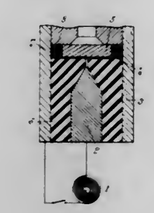
4. In an induction controlled firing mechanism for a mine, an induction coil, a relay operatively connected to the coil, electromechanical timing and switching means for mechanically rendering the relay nonresponsive to signals generated in said coil during a series of predetermined intervals while leaving the relay responsive during intervening intervals, a switch mechanism controlled by the timing and switching means and electrically connected to interrupt the circuit from the induction coil to the relay during substantially said predetermined intervals, and means for firing a detonator when a signal has been generated in the induction coil during each of said intervening intervals.

3,019,731
JET PERFORATOR FOR WELL CASINGS
Edwin David Edwards, Wichita Falls, and Ralph J. Hach, Plano, Tex., assignors to Advanced Oil Tools, Inc., Wichita Falls, Tex., a corporation of Delaware
Continuation of application Ser. No. 629,836, Dec. 21, 1956. This application Feb. 19, 1960, Ser. No. 9,652
8 Claims. (Cl. 102—20)



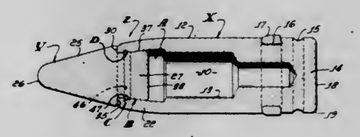
1. A jet perforating charge for well pipe comprising a cylindrical body of an explosive having a recess defined by two plane faces at one end thereof with the recess faces forming a dihedral angle, with the apex line of the dihedral angle substantially intersecting the central axis of said body at right angles thereto, a detonator at the end of said body opposite said recess and aligned with the body central axis, and a housing containing the body of explosive.

3,019,732
ELECTRICAL PRIMERS
Alfred Kaspaul, Stamford, Conn., assignor to Brevets Aero-Mecaniques S.A., Geneva, Switzerland, a society of Switzerland
Filed Oct. 21, 1958, Ser. No. 768,634
Claims priority, application Luxembourg Oct. 29, 1957
4 Claims. (Cl. 102—28)



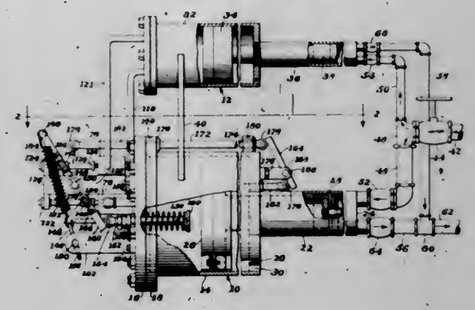
1. An electric primer adapted to be fired by a flow of electrical current from a source of electrical voltage which comprises in combination, a sensitive primary charge adapted to be exploded by an electrical discharge of predetermined high potential, two electrodes disposed adjacent to said sensitive charge, both electrodes adapted to be connected with a source of electrical energy, a semiconductive material, said material being selected from the group consisting of Se, Ge, V_2O_5, SiO, Si, SiO_2, $SiO\text{-}SiO_2$, $CaO\text{-}SiO_2$, CeO_2, CdS, CdSe, Sb_2S_3, Al-Sb, Ga-Sb, UO_2, CdS-CdO, CdSe-CdO, said semi-conductive material abutting said sensitive charge and electrically coupled with said electrodes to complete a circuit between the two electrodes to allow an electric charge of said predetermined potential to penetrate therethrough and ignite said sensitive primary charge and to dissipate an electric charge of less than said predetermined potential.

3,019,733
PROJECTILE CONSTRUCTION
Ralph A. Braid, Long Beach, Calif., assignor to Harvey Machine Co., Inc., Torrance, Calif., a corporation of California
Filed May 21, 1957, Ser. No. 660,630
7 Claims. (Cl. 102—91)



1. A projectile of the character described including, an elongate body having a flat front face, said body being formed with a straight cylindrical portion and an inwardly tapering portion terminating at said face, and with a bore entering therein from said flat front face and having corresponding straight and tapered portions, an annular recess in the tapered portion of said bore adjacent its open end, a solid nose of softer material than said body and having an extension entering the tapered portion of said bore and engaged therewith throughout its length, said nose extension terminating short of the end of said bore remote from said face, and an annular radial projection on said extension filling said recess in said bore.

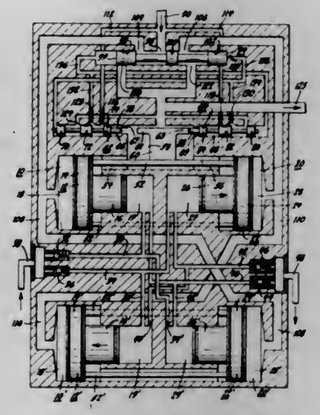
3,019,734
APPARATUS FOR PRESSURE TESTING HOLLOW BODIES FOR LEAKAGE
Landrum S. Bourquin, Savannah, Ga., assignor to Savannah Machine & Foundry Company, Savannah, Ga., a corporation of Georgia
Filed Oct. 28, 1958, Ser. No. 770,028
4 Claims. (Cl. 103—49)



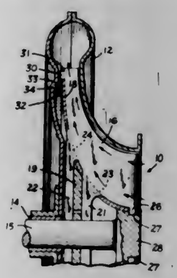
1. Apparatus for increasing the pressure of water initially under relatively low pressure, for supplying water at the increased pressure to a hollow body for testing the latter for leakage, and for maintaining the increased pressure of the water in the body even though leakage occurs, comprising: a main differential piston and cylinder assembly; a smaller auxiliary differential piston and cylinder assembly having the same differential ratio as said main assembly, the larger cylinder and piston portions of each of said assemblies defining a single acting fluid motor and the smaller cylinder and piston portion of each of said assemblies defining a single acting liquid pump, the pistons of said assemblies being free of mechanical interconnection; suction conduit means connected to each of said pumps for conducting thereto water under pressure from a common source to effect suction strokes of said pumps; discharge conduit means connected to each of said pumps for conducting therefrom water under an increased pressure to a body to be tested; check valves in each of said conduit means for preventing back flow of water therethrough; conduit means connected to each of said motors for conducting thereto air under a controlled pressure in order to effect a power stroke thereof to increase the pressure of the water supplied to said pumps and discharge the water at such increased pressure; a pair of control valves connected into said last-mentioned conduit means for alternatively supplying or exhausting air to or from each of said motors; and mechanical mechanism connected to said control valves and having lost-motion mechanical engagement with the piston of said main assembly for operating said control valves reversely to supply air to one of said motors and exhaust air from the other.

3,019,735
GAS DRIVEN HYDRAULIC PUMP
John D. Moeller, Dayton, and Ted R. Scarff, Troy, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application May 9, 1958, Ser. No. 734,185, now Patent No. 2,942,553, dated June 28, 1960. Divided and this application Oct. 5, 1959, Ser. No. 847,859
4 Claims. (Cl. 103—49)

1. A gas driven hydraulic pump including, a first pair of opposed cylinders, a first pair of pistons disposed within said first pair of cylinders and interconnected for simultaneous movement in the same direction, a second pair of opposed cylinders, a second pair of pistons disposed within said second pair of cylinders and interconnected for simultaneous movement in the same direction, each piston dividing its respective cylinder into a motor chamber and a pumping chamber, passage means interconnecting opposed motor chambers of said pairs of cylinders whereby the first and second pair of pistons will move simultaneously in opposite directions, and piston actuated reversing valve means operatively connected to said passage means for controlling the alternate admission and exhaust of gas under pressure to the opposed motor chambers of said pairs of cylinders.

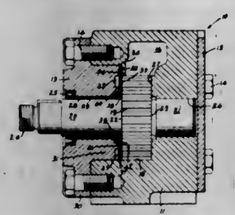


3,019,736
CENTRIFUGAL PUMPING MEANS
Edward A. Stalker, Bay City, Mich. (% The Stalker Corp., 903 Woodside Drive, Essexville, Mich.)
Filed Mar. 5, 1959, Ser. No. 797,536
7 Claims. (Cl. 103—103)



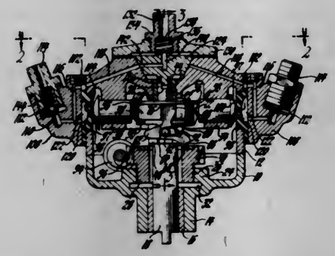
1. A composite rotor for a centrifugal pump adapted for operation in a case comprising a rotatable shaft, a radially extending disk mounted on said shaft, a unitary shroud having a plurality of openings therein, a plurality of blades mounted against said shroud and bonded thereto by fused metal, said blades and said shroud terminating at substantially the same radial distance from the axis of rotation, each said blade having an integral tongue extending radially inward through a said opening in said shroud into contact with the side surface of said disk, and fused metal means bonding said tongues to said disk forming joints subject to stress in shear.

3,019,737
LEAF SPRING SEAL FOR PUMPS
Herbert F. Prasse, Gates Mills, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 12, 1960, Ser. No. 8,440
12 Claims. (Cl. 103—126)



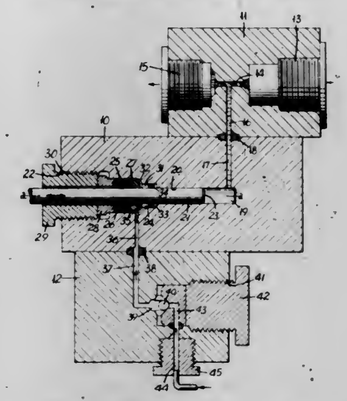
1. In a pump, a housing having a pumping chamber formed with an inlet and an outlet, rotary fluid displacement means in said chamber for moving fluid from the inlet to the outlet, a flexible plate form member clamped in said housing only at the inlet side of said rotary fluid displacement means, said plate form member having flexible sealing portions providing a front sealing face and extending across and against an adjoining side face of the rotary fluid displacement means, said plate form member being free to flex on the outlet side of the pump, and a rear motive surface spaced from said sealing face, and means including an adjoining housing wall forming with said plate form member a pressure control recess behind said sealing portions receiving fluid at pump-generated pressure to pressure-load said sealing surface against said side face.

3,019,738
FLUID PUMP
Joseph Zubaty, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 6, 1957, Ser. No. 657,449
2 Claims. (Cl. 103—150)



1. In a fluid pump having a housing and drive shaft, means for varying the volume of fluid pumped comprising a reciprocable plunger having a curved head at one end, a diaphragm of substantially rectangular cross section mounted in said housing and including a section having a continuously concave surface defining one wall of a pumping chamber and a flat surface engaging said plunger curved head, said plunger curved head having substantially the same projected area as said diaphragm concave surface, and stroke varying means drivably engageable with said plunger and driven by said drive shaft for reciprocating said plunger whereby said plunger is caused to flex said diaphragm, the stroke varying means thereby cooperating with said diaphragm and said plunger head during the pump operation to provide a non-linear stroke-volume ratio.

3,019,739
HIGH PRESSURE PUMPING APPARATUS
Rae A. Prosser, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Mar. 23, 1959, Ser. No. 801,318
11 Claims. (Cl. 103—204)

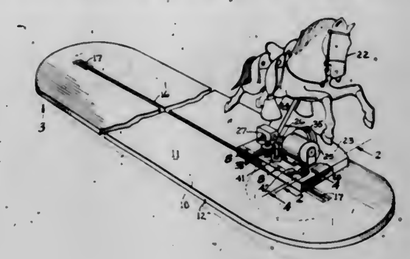


1. A lubricated reciprocating plunger assembly for producing high pressures on fluids which comprises a housing containing an axial bore having an opening at one end; a reciprocating plunger extending through the axial bore opening and having an inner pumping end; an annular cavity between at least one portion of said reciprocating plunger and the walls of said axial bore; a floating seal in said annular cavity dividing said cavity into a first section longitudinally located between the axial bore opening and said seal and a second section longitudinally located between said seal and the inner pumping end of said reciprocating plunger; an annular packing section between said reciprocating plunger and the walls of said axial bore, shaped and arranged to facilitate lubrication and longitudinally located between said annular cavity and the axial bore opening, said annular packing section being contiguous to said annular cavity and serving to seal fluid pressures developed in such cavity; means for introducing a fluid lubricant into said first section of said annular cavity contiguously associated with said annular packing section, such fluid serving to lubricate the packing section; means for maintaining said fluid lubricant at a pressure above the suction pressure so as to allow lubricant flow into said first section during the suction stroke; said second section in said annular cavity containing compressed fluid during at least the compression stroke of said reciprocating plunger; said floating seal being transversely arranged and constructed in said annular cavity to separate the first lubricant-containing section from the second compressed fluid-containing section, said floating seal being adapted to move in a direction parallel to the axis of reciprocation of said plunger and thereby adjust the relative volumes of said first and second sections as required by the compressibility of said fluid lubricant.

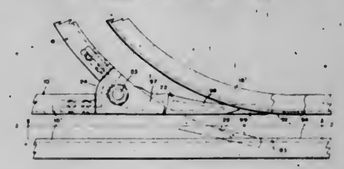
3,019,740
AMUSEMENT RIDES
Duane W. Price, 2601 Midvale, West Los Angeles, Calif.
Filed Dec. 1, 1960, Ser. No. 73,035
9 Claims. (Cl. 104—61)

1. An amusement ride comprising a relatively flat platform having an elongated slot formed therein in a longitudinal direction with respect to the long axis of said platform, a pedestal including a base and a rider support mov-

able in opposite longitudinal directions with respect to said platform and rotatable about a vertical axis at the ends of its longitudinal movement with respect to the platform, guide means having rollers engaging in said slot and a shaft extending upwardly through said slot and said base and providing a pivot about which said pedestal is adapted to rotate, means for moving said pedestal in said opposite longitudinal directions and cooperating with said shaft for rotating said pedestal about said shaft, means carried by said base and engaging said slot for limiting the degree of rotation of said pedestal about said shaft, and means at opposite ends of said slot for camming said limiting means from engagement with said slot at the start of and during the period of rotation of said pedestal about said shaft.

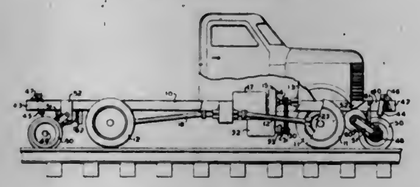


3,019,741
SWITCH STRUCTURE FOR CONVEYOR SYSTEM
Leonard J. Bishop, Birmingham, and Joel H. Barlow, Detroit, Mich., assignors to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Original application Oct. 30, 1956, Ser. No. 619,249, now Patent No. 2,875,703, dated Mar. 3, 1959. Divided and this application Jan. 12, 1959, Ser. No. 786,133
3 Claims. (Cl. 104—104)



1. Load bearing track switch structure, comprising fixed track means including a pair of first load bearing tracks in angular, generally meeting relation to one another at a switch zone to support load units traveling at one side of said zone, said tracks comprising converging pairs of track members each having a portion providing a horizontal load supporting surface, a given track member of each pair having a further portion extending downwardly of said surface, a further load bearing track on the other side of said switch zone having portions providing horizontal load supporting surfaces substantially coplanar with those of said first track, and a switch movable in said switch zone to and from positions to connect the load supporting surfaces of the given track members of one or the other of said first tracks with said surfaces of said further track, said switch having a load supporting surface generally coplanar with said load supporting surfaces of said track members and said further track, on which switch surface said load units travel in traversing said switch zone, said switch being adapted for side abutting engagement with the respective downwardly extending portions of said given track members in said respective connecting positions of the switch, the switch being provided with a supporting member spaced beneath and laterally exposed horizontally below said load supporting surface of the switch, said given track members of said first tracks each having an opening in said depending further portion thereof beneath the respective horizontal load supporting surfaces thereof, said last named surfaces extending over said respective openings, said supporting member of the switch being horizontally receivable in the respective openings with the switch laterally abutting one or the other of said first given load bearing track members and with the load supporting surface of the switch providing a flush continuation of a load supporting surface of the abutted track, said depending portions of said given track members sustaining said supporting member from beneath in either of said positions of the switch.

3,019,742
ROAD AND RAIL VEHICLE
John Knox Kershaw, Montgomery, Ala., assignor to Kershaw Manufacturing Company, Inc., Montgomery, Ala., a corporation of Alabama
Filed July 19, 1957, Ser. No. 673,047
3 Claims. (Cl. 105—215)



2. A construction and maintenance unit for railways including a chassis, a power plant mounted on said chassis, forward and rearward roadway wheels on said chassis, forward and rearward railway wheels on said chassis aligned with and outwardly of said roadway wheels, said railway wheels and said roadway wheels being simultaneously engageable with the rails of said railway, first hydraulic means driven from said prime mover for incrementally selectively adjusting the relative heights of each of said railway wheels to selectively support said chassis from said roadway wheels and said railway wheels, second hydraulic means for rotating said railway wheels for propelling said chassis along said rails when said railway wheels engage said rails, a clutch connected to said prime mover, said clutch being connected to said roadway wheels, said prime mover being also connected to the aforesaid hydraulic means for supplying power thereto to individually rotate said railway wheels and individually raise and lower the same with respect to said chassis, and control means for controlling said means for adjusting said wheels, said control means being centrally of said chassis and actuatable by the operator of said unit.

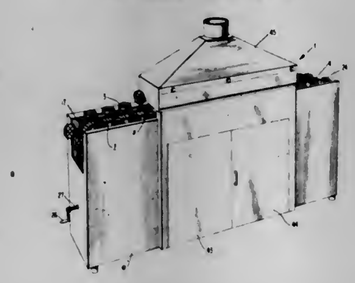
3,019,743
LID FOR VEHICLES, ESPECIALLY FREIGHT CARS AND TRUCKS
Christian J. Stiefel, Aachen, and Helmut F. König, Minden, Westphalia, Germany, assignors to Waggonfabrik Talbot, Aachen, Germany
Filed Oct. 24, 1958, Ser. No. 769,425
Claims priority, application Germany Nov. 22, 1957
1 Claim. (Cl. 105—377)

In a closure system for vehicles, especially railway freight cars and trucks: a vehicle body having an end wall at each end thereof and being provided with a roof portion having a substantially centrally located longitudinal opening extending in the longitudinal direction of said vehicle substantially from one of said end walls to the other end wall; a single lid member movable selectively from an opening position in which said opening in said roof portion is uncovered into a closing position in which said opening is closed by said lid member; said lid member, when in said closing position, extending over the entire length and width of said opening so as to close the same; tilting arms respectively attached to said lid member at each end portion thereof and extending downwardly along and pivotally connected to said end walls for tilting said lid member to one side of said opening; a shaft extending longitudinally along said body and journaled thereon; a lever on each end of said shaft; link means



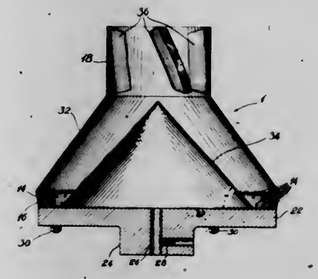
operatively interconnecting said levers with the adjacent ones of said arms for uniform movement of said arms with each other; power storage means connected to said arms and arranged at one of said end walls only and responsive to the opening of said lid member for storing power produced by the opening of said lid member; said power storage means being adapted in response to the closing movement of said lid member to release the stored power for aiding the closing movement of said lid member; and strut means extending transverse to said opening intermediate to said walls, said lid member being provided with roller means for engagement with said strut means during the initial opening phase only and during the last closing phase only of said lid member.

3,019,744
ASSEMBLY AND STACKING APPARATUS
Thomas Carvel, Winding Farm Road, Chauncey, N.Y.
Filed Feb. 20, 1961, Ser. No. 90,415
15 Claims. (Cl. 107—1)



1. In an assembly apparatus, in combination, driven conveyor means for receiving individual articles of manufacture and in operation transporting them in respective spaced positions along a given path of travel, a first group of pivotally mounted carriers operable individually to a first position for receiving and holding individual, respective articles of manufacture and pivotally operable individually to a second position for disposing the second mentioned articles individually overlying respective ones of the first-mentioned articles, a second group of pivotally mounted carriers individually operable to a first position for receiving and holding respective individual articles of manufacture and pivotally operable to a second position for disposing the respective articles of manufacture thereon overlying respective ones of said second-mentioned articles to form a sandwich combination, means cooperative with said conveyor means to move the first and second group of carriers along separate paths substantially parallel to the path of travel of said conveyor means and in synchronism therewith, and means spaced from a zone in which said carriers and conveyor means receive said articles of manufacture and spaced therefrom in the direction of travel of said conveyor means operable automatically cyclically in timed relationship with the speed of said conveyor means to automatically angularly rotate and pivotally operate the carriers of said first group successively to said second position and including means to pivotally operate the carriers of said second group successively to said second position and alternately with the individual carriers of said first group in timed sequence to dispose the second-mentioned articles on respective ones of the first-mentioned articles on said conveyor means and respective ones of the third-mentioned articles carried on said second group of carriers in position overlying respective ones of the second-mentioned articles to form said sandwich combination, and means operable automatically to restore each of the carriers automatically to said first positions subsequent to their operation to their second positions thereby to position them in readiness for receiving said respective articles.

3,019,745
SUGAR SPINNING MACHINE
Albert Du Bois, 6105 de Vimy, and Armand Du Bois, 8431 Clark St., both of Montreal, Quebec, Canada
Filed Oct. 3, 1960, Ser. No. 60,020
3 Claims. (Cl. 107—8)

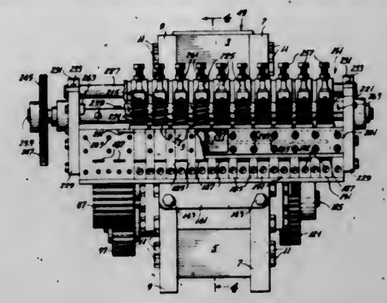


1. A sugar-spinning machine component comprising: a vertical hollow rotatable frusto-conical body terminated at the smaller diameter and upper end thereof with a cylindrical inlet opening or sugar syrup; a series of inwardly directed upright baffle plates disposed around the inner periphery of said cylindrical inlet; an upright lower portion closed at one end and connected at the other end to the larger diameter end of said frusto-conical body; said lower portion being provided with a plurality of syrup outlet apertures along the periphery thereof; said closed end having a conical deflector extending inwardly therefrom and being spaced from said frusto-conical body.

3,019,746
EXTRUDING APPARATUS
Fred A. Cunningham, John O. Klatt, Reams F. Brown, and Woodrow W. Slovacek, all of San Antonio, Tex., assignors to The Facs Manufacturing Company, Inc., San Antonio, Tex., a corporation of Texas
Filed Sept. 10, 1957, Ser. No. 683,045
8 Claims. (Cl. 107—14)

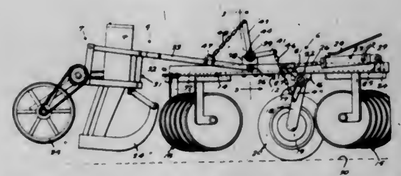
1. Extruding apparatus, comprising: means defining a shallow passageway; an element moveably mounted above

said passageway at the downstream end thereof, said element having a bevelled undersurface constituting a tapering upper wall of said passageway at said downstream end; means for forcing material into said passageway under



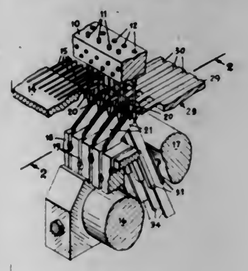
pressure; and means for intermittently depressing said element to cut off the material which has passed thereunder and to simultaneously mash any material thereunder with said undersurface.

3,019,747
DISK AND PLANTER COMBINATION
Donald E. Strahan, Wesubleau, Mo.
Filed Mar. 14, 1960, Ser. No. 14,953
2 Claims. (Cl. 111—63)



1. In combination with a disk harrow including a frame, sets of disks connected to and disposed beneath the frame, an axle journaled in the frame, cranks projecting laterally from the ends of the axle and having free ends provided with aligned stub axles, ground wheels journaled on the stub axles, and torque imparting means connected to said axle for turning the axle in one direction to lower the wheels and elevate the frame and disks and in the opposite direction to lower the frame and disks and elevate the wheels; a planter disposed behind the harrow frame including a frame having laterally spaced forwardly extending rigid arms disposed over a rear part of the harrow frame; a coupling unit comprising means detachably and pivotally connecting forward free ends of said arms to the harrow frame, said coupling unit being disposed above the level of, behind and parallel to said axle, a rock shaft, means journaling the rock shaft on the harrow frame above, behind, substantially parallel and adjacent to said axle, link and lever means connecting the axle and rock shaft for turning the rock shaft in the opposite direction to the axle when the axle is turned by said torque imparting means in said first mentioned direction for elevating the harrow frame and disks, and a second link and lever means connecting said rock shaft to the planter frame arms behind and spaced from said coupling unit for swinging the arms upwardly about the pivot means of the coupling unit and relative to the harrow frame for elevating the planter relative to the disk harrow as the disk harrow frame is elevated, the weight of said planter acting, through said second link and lever means, for turning the rock shaft in the opposite direction for lowering the planter relative to the harrow frame as the axle is turned in the other direction for lowering the harrow frame and disks and for elevating the ground wheels, said first mentioned link and lever means consisting of levers fixed to and extending from the axle and rock shaft and angularly disposed relative to one another and a non-elastic flexible element connecting the distal ends of said levers and extending between the axle and rock shaft.

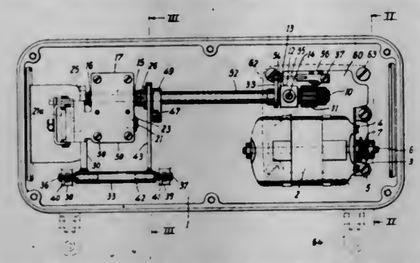
3,019,748
APPARATUS FOR SIMULTANEOUSLY FORMING ROWS OF CUT PILE STITCHING AND ROWS OF LOOP PILE STITCHING
Joseph Lewis Card, Chattanooga, Tenn., assignor to Singer-Cobble, Inc., Chattanooga, Tenn., a corporation of Delaware
Filed Sept. 19, 1957, Ser. No. 684,886
5 Claims. (Cl. 112—79)



1. In a tufting machine, a pair of spaced needles for inserting pile yarns into a base fabric, means for reciprocating said needles, means for supporting said base fabric beneath said needles, a hook bar mounted for reciprocation beneath said needles, a single slot in said hook bar beneath said needles, a cut pile hook adapted to cooperate with one of said needles and a loop pile hook adapted to cooperate with the other of said needles, each hook having a shank and a bill, the shanks of both hooks being received in said single slot with said bills pointing in the same direction, knife means cooperating with one side of said cut pile hook for cutting loops formed thereon, the bill of said loop pile hook being laterally spaced from the other side of said cut pile hook the same distance as said needles, means for reciprocating said hook bar to alternately move said bills across their respective needles, in the needles' lowermost position, to form loops in said pile yarns and to move said bills away from their corresponding needles, and loop stripping means cooperating with said loop pile hook for engaging a loop formed thereon and removing said loop from the free end of said hook bill as said bill reciprocates away from its corresponding needle.

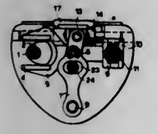
3,019,749
ADJUSTABLE MATERIAL-FEEDER DRIVE FOR SEWING MACHINES
Friedrich Knobloch, Bielefeld, Germany, assignor to Anker-Phoenix Nahmaschinen A.G., Bielefeld, Germany, a corporation of Germany
Filed Apr. 6, 1960, Ser. No. 20,437
Claims priority, application Germany May 27, 1959
8 Claims. (Cl. 112—210)

1. In a sewing machine having a base with a top for supporting the material to be sewed and provided with an opening in said top; a material feeder mechanism mounted in said base beneath said top and comprising a material-engaging gripper member movable in said opening, said feeder mechanism having a drive shaft, a control cam fixedly mounted on said shaft, a follower engaging said cam for transmitting during revolution of said cam constant periodic deflections, said follower being linked to said gripper member for imparting reciprocating feeding motion thereto, a slider connected with said follower, a normally stationary guide member having a



guide-way in which said slider is displaceable, said guide member being rotatably mounted on said drive shaft, and adjusting means connected with said guide member for varying the setting of said guide member about the axis of said drive shaft to thereby modify the material-feeding motion of said gripper member.

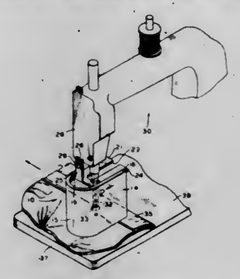
3,019,750
FEED DEVICE FOR A SEWING-MACHINE
Luigi Bono, Pavia, Italy, assignor to Necchi S.p.A., Pavia, Italy, a firm
Filed Mar. 18, 1958, Ser. No. 722,168
Claims priority, application Italy Apr. 12, 1957
12 Claims. (Cl. 112—215)



1. Feeding mechanism for a sewing machine, comprising, in combination, supporting means; a feed member; means for mounting said feed member on said supporting means for angular rocking movement about a first axis and for reciprocating feeding movement in direction of said first axis; means operatively connected to said feed member for reciprocating the same in direction of said first axis; a driven cam means rotatable in one direction; lever means extending parallel to said first axis and being mounted on said supporting means for angular movement about a second axis, said lever means being operatively connected to said rotary cam means to be rocked about said second axis, said lever means supporting said feed member for movement therealong in said direction of said first axis so that said feeding member is rocked by said lever means when the same is rocked by said cam means, while being supported by said lever means during movement in said direction of said first axis.

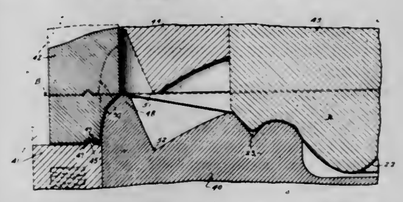
3,019,751
FINGER SHIELD AND EYE GUARD FOR SEWING MACHINES
Salvatore Fichera, 807 Carpenter St., Philadelphia, Pa.
Filed Oct. 14, 1959, Ser. No. 846,351
3 Claims. (Cl. 112—261)

1. A finger shield and eye guard for sewing machines comprising, in combination, an arcuate main body member having a light transmitting portion and a substantially rigid portion defining a pocket at least partially enveloping the needle parts of a sewing machine therewithin, said main body being of U-shaped cross section having a pair of spaced apart sides and a central bight portion, said bight portion being transparent and defining said light transmitting portion, said sides being rigid and defining said rigid portion of said main body member, mounting means comprising a substantially rigid plate for detachably securing said main body member adjacent to said needle parts of the sewing machine with the light transmitting parts in the line of sight between the needle



parts and the machine operator and with said rigid portion in the path of movement of the fingers of the machine operator and the workpiece toward the needle parts, said mounting means including a bracket for releasable connection to the sewing machine, and track assembly means slidably connecting said main body member to said bracket comprising a longitudinal channel defined by said sides of said main body member extending normal to said bight portion slidably receiving said rigid plate therewithin.

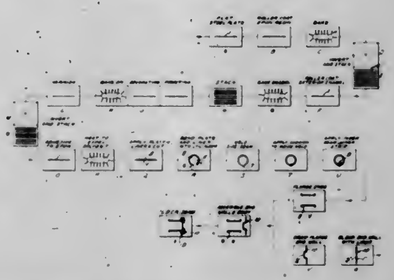
3,019,752
APPARATUS FOR MAKING WHEEL COVERS
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Original application Nov. 5, 1956, Ser. No. 620,289. Divided and this application Sept. 2, 1958, Ser. No. 758,244
2 Claims. (Cl. 113—49)



1. In drawing die apparatus for shaping flat thin sheet metal blanks of minimal size into smooth wrinkle-free circular wheel cover form, a lower circular die assembly having an outer marginal draw rib projecting upwardly to a substantial height and of convexly curved radial cross-sectional contour on its radially outer side and crest, said lower die assembly having radially inwardly from said draw rib a circular forming portion defining with the radially inner side of said draw rib an annular generally V-shaped groove of substantial depth opening upwardly, a clamping die ring member encircling said draw rib and having yieldable means supporting the die ring member normally at an elevation at least as high as the crest of said draw rib so as to receive freely upon the upper surface of the die ring member the margins of a sheet metal blank to be formed; an upper die assembly having a hold-down ring axially aligned with said clamping die ring member and engageable therewith to grip the margin of

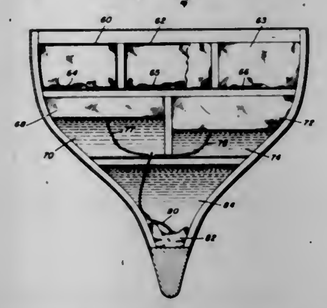
the blank, said hold-down ring having a concave forming surface complementary to the convexly curved radially outer side of said draw rib and being of an inside diameter above said concave forming surface about the same as the diameter of the draw rib crest, the upper die assembly having a central forming portion axially aligned with the circular forming portion of the lower die assembly and of an outside diameter about equal to the inside diameter of said groove, said upper die assembly including a dishing rib punch die ring having a circular nose generally complementary to said groove and being mounted in relative reciprocal relation between and to both of said central forming portion and said hold-down ring of the upper die assembly; and means for actuating said die assemblies for relative sheet metal blank drawing and separating strokes and in a sequence wherein the circular and central portions of the die assemblies are driven into drawing relation to the central portion of the blank and said clamping ring member and said hold-down ring are driven together in blank margin-gripping relation and axially downwardly relative to said draw rib until said concave forming surface presses the outer marginal portion of the blank onto said radially outer curved forming surface of the draw rib, said actuating means being operative after the central portions and said ring members of the die assemblies have completed their drawing strokes to drive said dishing die ring into said groove to thereby draw the portion of the blank overlying the groove into said groove and work the marginal portion of the blank between said radially outer draw rib surface and said complementary concave forming surface inwardly toward and over the crest of the draw ring.

3,019,753
METHOD OF FORMING INTERIOR-LINED SHEET METAL CONTAINERS
Martin A. Orlins, Millbrae, Calif., assignor to Rheem Manufacturing Company, Richmond, Calif., a corporation of California
Filed Apr. 24, 1953, Ser. No. 351,019
10 Claims. (Cl. 113—120)



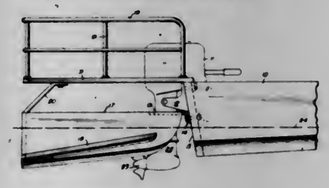
1. The method of forming a container shell with an expansible metal sheet and a separate liner of elastic plastic-sheeting exposed to the inside of the container after the formation thereof with opposed surfaces of said sheet and sheeting in confronting adjacent relation, which comprises providing said metal sheet in a relatively flat form and of a size to be rolled into cylindrical form to provide said shell, applying an adhesive to one of said surfaces, covering said surface of said sheet with said sheeting, deforming said sheet into cylindrical form with the sheeting on the inside thereof, and stretching the sheet together with the lining generally parallel to the axis of said shell to permanently deform the sheet and place the sheeting in a state of tension whereby wrinkles formed in the sheeting during the deformation of the sheet into cylindrical form will be removed.

3,019,754
SHIP SALVAGE SYSTEM
William Welshausen, 316 Cedar Ave., Allenhurst, N.J.
Filed Apr. 4, 1957, Ser. No. 650,627
1 Claim. (Cl. 114—54)



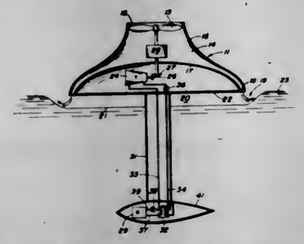
In combination with a sunken ship having a plurality of flooded compartments of various sizes and shapes, a plurality of flexible inflatable containers, a single container disposed in at least some of said compartments, the container in each of said some of said compartments being of a size and shape complementary to the corresponding compartment and capable of substantially filling the latter when fully inflated and being freely movable therein when in the uninflated or partially inflated state, an air inlet line connected to each container by which the container may be inflated for substantially filling the corresponding compartment unless the container is prevented from inflating fully by water trapped in the compartment whereby each one of any partially filled containers may be capable of seeking new positions within the corresponding compartment as the ship shifts its position whereby in the event a partially filled container prevented from being inflated fully by water entrapped in a compartment may, upon shifting of the container to a new position in the compartment become fully inflated if movement of the container in the compartment uncovers a means for venting the compartment such as a doorway or port hole, rigid tanks containing water, means securing said tanks to said ship in addition to said flexible containers, means including fluid outlet and inlet means for expelling water from said tanks and for introducing air under pressure into the tanks after they are attached to the ship, said tanks being secured to the exterior of the ship, and additional rigid tanks secured in the interior of the ship.

3,019,755
HYDROFOIL DECK EXTENSION
Jack Diamond, 5135 Wissioming Road, Washington, D.C.
Filed July 27, 1960, Ser. No. 45,613
5 Claims. (Cl. 114—66.5)



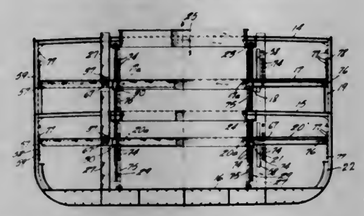
1. A small water craft, including an outboard motor driven boat, a rearwardly extending platform secured to said boat, and hydroplane floats secured in supporting relation to said platform.

3,019,756
NUCLEAR POWERED GROUND-EFFECT MACHINE FOR OPERATION OVER WATER EMPLOYING WATER SHIELDING
Albert T. Murri, 7206 Lehigh Lane, Springfield, Va.
Filed Feb. 17, 1960, Ser. No. 9,399
6 Claims. (Cl. 114—67)
(Granted under Title 35, U.S. Code (1952), sec. 266)



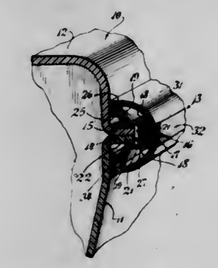
3. A ground-effect machine for operation over water comprising in combination an exterior housing, an interior housing arranged within said exterior housing and spaced therefrom to define a vertical well, said well communicating with the atmosphere above said machine through an air intake and with the region below said machine through an annular nozzle, said nozzle being defined by the peripheral space formed by the interior and exterior housings, a fan mounted in said well, a turbine mounted below said fan in driving arrangement therewith, a nuclear reactor depending from said interior housing by means of a hollow strut and disposed below and in vertical spaced relationship to said interior and exterior housings, said nuclear reactor being maintained in a submerged condition whereby said interior and exterior housings are water-shielded from radiation originating in said nuclear reactor and heat exchange means interconnected between said nuclear reactor and said turbine whereby heat energy is transferred from said nuclear reactor to said turbine by means in said strut.

3,019,757
VERTICALLY ADJUSTABLE SHIP DECKS
Frazer A. Bailey, San Francisco, Calif.; Wells Fargo Bank American Trust Company and Herman Phleger, executors of said Frazer A. Bailey, deceased
Filed May 7, 1959, Ser. No. 811,614
3 Claims. (Cl. 114—72)



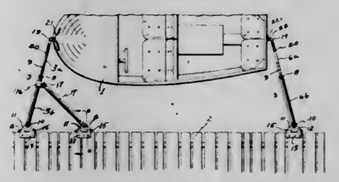
1. In a cargo ship having at least two fixed decks, a vertically movable deck intermediate the two fixed decks, ship structural members depending from the ship and adjacent to the movable deck, a plurality of fixed rollers extending in one longitudinal direction and in one transverse direction from the vertically movable deck into engagement with vertical tracks supported by the ship structural members, resiliently biased rollers extending in the other longitudinal direction and in the other transverse direction from the vertically movable deck into engagement with vertical tracks supported by the ship structural members to urge the fixed rollers against their tracks and inhibit longitudinal and transverse movements of the movable deck, a plurality of latches extending from the deck, a like plurality of groups of latch sockets, ship members depending from the ship and adjacent to the deck, said ship members supporting at vertically spaced positions the sockets of each group for engagement selectively by corresponding latches, a plurality of synchronized drive units to raise and lower the vertically movable deck to selected vertical locations, and means to operate the latches when juxtaposed with their corresponding sockets at the selected vertical locations to secure and support the movable deck in position for cargo stowage.

3,019,758
SELF-LOCKING GUNNEL BUMPERS
James S. Erkert, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Oct. 26, 1959, Ser. No. 848,733
8 Claims. (Cl. 114—219)



1. A two-part bumper assembly for the gunnel of a boat having a hull and a deck and outwardly extending adjoining flanges on the exterior of the hull and deck having mating openings, comprising an inner bumper member of relatively rigid material and having openings complementary to the openings in said flanges, connecting means adapted to pass through said complementary openings to secure the inner bumper member to said flanges, an outer bumper member of relatively soft and flexible material and encompassing the inner bumper member and said flanges, and interlocking means integral with the inner and outer bumper members for attaching the members together.

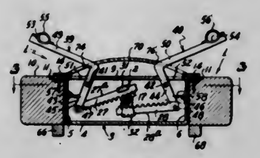
3,019,759
BOAT MOORING DEVICE
Ernest L. Woods, Daytona Beach, Fla.
(700 Middle Drive, Woodruff Place, Indianapolis, Ind.)
Filed Oct. 22, 1958, Ser. No. 768,867
4 Claims. (Cl. 114—230)



1. A boat mooring device for securing a boat to a stationary structure, comprising first mooring means including a forward mooring arm pivotally attached to said stationary structure and a rigid bracing arm pivotally attached to said forward mooring arm at a point intermediate its ends and extending to the stationary structure at an angle with said forward mooring arm to be removably connected with the stationary structure, second

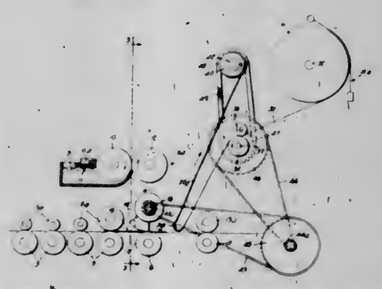
mooring means comprising an after mooring arm pivotally attached to the stationary structure, said forward and after mooring arms being pivotable in both vertical and horizontal planes and having first and second socket means respectively at their outermost ends, a first spherical stud member, a second spherical stud member, said first and second stud members being attached to the forward and after ends of the boat respectively extending horizontally substantially on the fore-and-aft axis of the boat, and first and second coupling means on the first and second socket means respectively to cause the socket means to clasp the stud members, whereby the stud members can rotate freely in the sockets allowing the boat to roll and pitch without substantial strain on the mooring means.

3,019,760
PROPELLED SURFBOARD
Henry A. Berliner, 2841 Tilden St. NW., Washington D.C.
Filed Mar. 9, 1960, Ser. No. 13,918
9 Claims. (Cl. 115—70)



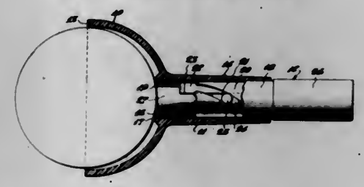
1. A propelling device adapted to be attached to one end of a surfboard, comprising: a housing; a propeller shaft rotatably mounted in said housing; gear means rotatably mounted on said shaft; one-way clutch means between said shaft and said gear means to operably connect said shaft to said gear means for rotation in one direction with respect thereto rack means extending inwardly from opposite sides of said shaft and engaging said gear means; and an actuating member connected to said rack means and movable from outside of said housing to effect reciprocation of said rack means and rotation of said propeller shaft.

3,019,761
PROTECTOR ASSOCIATED WITH THE GUMMING MECHANISM OF PAPER CONVERTING MACHINES OR THE LIKE
Abraham Novick, Flushing, N.Y., assignor to F. L. Smithe Machine Co., Inc., New York, N.Y., a corporation of New York
Filed Nov. 9, 1956, Ser. No. 621,415
13 Claims. (Cl. 118—70)



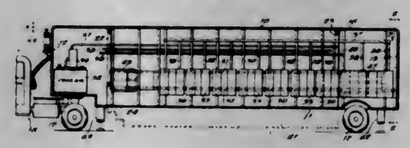
3. In combination, a rotary adhesive applicator, means for conveying articles past said applicator for an adhesive application, and shielding means comprising a web and means for advancing said web into the vicinity of the discharge of said adhesive applicator to present a changing surface for receiving and carrying off adhesive splattered by said applicator.

3,019,762
GOLF BALL MARKING DEVICE
Harry W. Hautz, 6110 Gladys Ave., Cincinnati, Ohio
Filed Oct. 1, 1958, Ser. No. 764,687
4 Claims. (Cl. 118—76)



1. A device to place a spot of marking substance upon a golf ball comprising a cup dimensioned to removably receive a golf ball, a hollow tube formed as an integral part of said cup and extending from the bottom thereof, means defining a circular opening in the bottom of said cup which opens into said tube, a circular boss in the bottom of said cup surrounding said opening, a stick of marking substance, a carrier for said stick which is configurated to fit snugly in said tube, and said carrier including means responsive to rotational movement of said carrier to advance and withdraw said stick through said opening and into contact with a golf ball disposed in said cup to deposit a spot of marking substance thereon.

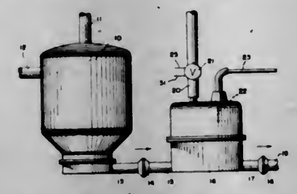
3,019,763
MOBILE MILKING HOUSE AND MILK ROOM
Robert G. Ferris, Harvard, Ill., assignor to Starline, Inc., a corporation of Illinois
Filed Jan. 14, 1960, Ser. No. 2,479
14 Claims. (Cl. 119—14.03)



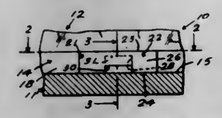
1. A milking device comprising: an elongated mobile support in the form of an enclosure having adit and exit openings in opposite end portions thereof; a plurality of animal positioning and feeding means along one side thereof; animal milking means associated with said animal positioning means for milking animals in said enclosure; an operator's platform along the opposite side thereof; and vertical adjusting means operatively connected to said platform whereby when the device is in an operative position said platform may be lowered and when in a transporting position may be elevated.

3,019,764
MILK RELEASER WITH TIMER CONTROL
Lorell John Schilling, Galesville, Wis., assignor to Schilling Electric Company
Filed Mar. 6, 1958, Ser. No. 719,663
6 Claims. (Cl. 119—14.05)

5. In a liquid handling system including means for collecting liquid and means operable for transferring said liquid from said collecting means; a control system comprising: a timer; means responsive to the quantity of liquid in said collecting means for initiating operation of said transferring means, and connected with said timer for initiating operation thereof; a connection between said timer and said liquid transferring means for terminating the action of the transferring means a predetermined period of time after initiation of operation thereof; and means for rendering said liquid responsive means inoperative during the operation of said liquid transferring means and until substantially all of said liquid has been transferred from said collecting means.



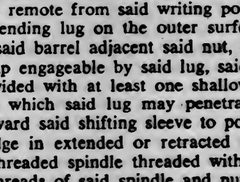
3,019,765
FEED CONTROL FOR A BIRD FEEDER
William M. Malloy, Sr., Stony Point, N.Y.
Filed Aug. 5, 1960, Ser. No. 47,663
6 Claims. (Cl. 119—52)



1. In combination with a feeder for wild birds including a hopper having a bottom, a platform disposed beneath and secured to an underside of said hopper bottom and having a part extending outwardly from an edge of said bottom, said hopper bottom being of substantial thickness whereby an upper surface thereof is disposed substantially above the level of an upper surface of the platform, said hopper bottom being recessed to provide an automatic feed dispensing chute having an upper end opening into the hopper and a lower discharge end opening outwardly of said edge of the hopper bottom onto a portion of the top surface of the platform; a feed control comprising a body member having a bottom surface resting on a part of the top surface of said platform located outwardly with respect to said edge of the hopper bottom and having an inner edge abutting said edge of the hopper bottom, means securing said body member on the platform, said body member having a recess opening outwardly of a portion of said bottom surface and through a portion of said inner edge, a part of said recess communicating with the discharge end of the chute and through which the chute discharges into the feed control and onto the top surface of said platform, and said body member having a top portion provided with an access opening smaller than the recess and communicating with a part thereof only, and another part of said top portion being disposed between said access opening and the discharge end of the chute to provide a guard or shield between the access opening and chute and located over the first mentioned part of said recess.

3,019,766
LIVESTOCK FEEDER
Richard H. Pannier, McLean, Ill.
Filed July 30, 1958, Ser. No. 751,996
4 Claims. (Cl. 119—53.5)

1. In a hog feeder having a bin with a feeding section beneath said bin together with means supporting said bin above said section, a floor, a part of said floor constituting the bottom of said feeding section, said feeding section including a pair of inwardly and downwardly inclined panels, lower inwardly and downwardly inclined panels beneath said first mentioned panels and having discharge slots at the lower portions thereof through which feed is adapted to pass, said slots opening through the lower panels, feeding troughs adjacent to said slots and in registry therewith so that feed passing through said slots enters said feeding troughs, vertical partitions disposed



in the troughs, agitators in said slots for the feed in the throat of said feeding section, said agitators each including a flat panel with portions generally aligned with the inside surface of one of said lower panels, an agitating rod constituting a part of said agitator and protruding into the throat of said feeding section, and means floatingly and vertically adjustably mounting said agitator panel in one of said slots, said agitator panel including means guidingly engaging said partitions.

3,019,767
WRITING INSTRUMENT, MORE PARTICULARLY A BALL-POINT PEN
Hans Ambros, Hannover, Germany, assignor to Gunther Wagner, Hannover, Germany
Filed Jan. 4, 1960, Ser. No. 103
Claims priority, application Germany Jan. 12, 1959
5 Claims. (Cl. 120—42.03)



1. In a mechanical writing device or the like of the type having a hollow barrel, a writing cartridge having a writing point positioned axially of said cartridge and axially movable therein to be positioned with its writing point in an extended operative position or in a retracted inoperative position, the improvement comprising a nut axially and rotatably mounted in the end of said barrel remote from said writing point, at least one axially extending lug on the outer surface of said nut, a cap on said barrel adjacent said nut, a shifting sleeve on said cap engageable by said lug, said shifting sleeve being provided with at least one shallow and one deep notch into which said lug may penetrate when moved axially toward said shifting sleeve to position said writing cartridge in extended or retracted position, respectively, a threaded spindle threaded within said nut, the pitch of threads of said spindle and nut being so great as to normally rotate said nut upon axial movement of said spindle, said shallow and said deep notches normally

holding said nut against rotation, whereby upon axial movement of said threaded spindle said nut will be moved axially to a position clear of said notches whereupon said nut will be rotated, means on said spindle engaging said cartridge whereby the axial position of said cartridge is determined by the axial position of said spindle, means extending through said cap for digital manipulation whereby said spindle may be urged toward said writing point, and a spring biasing said nut toward said cap to rotate said nut from one said notch to the other when clear of said notches.

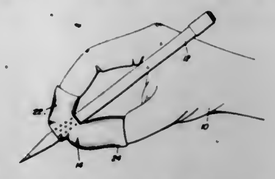
3,019,768
CONNECTOR MEANS FOR A TANDEM WRITING UNIT
Frank H. Seyer, West Los Angeles, and James L. Marcotte, Lawndale, Calif., assignors to Paper Mate Manufacturing Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 18, 1957, Ser. No. 635,030
5 Claims. (Cl. 120—42.1)



4. In combination with a writing unit comprising at least two tubular ink cartridges, each including a cartridge body having a writing tip at one end and having an opposite open end, the provision of: an elongated connector body member having laterally extending means presenting a surface having engagement with at least one cartridge body at its open end to longitudinally position said one cartridge body, said connector member having longitudinal surfaces In holding frictional engagement with said one cartridge body, said connector member including spaced gripping portions extending longitudinally in a direction opposite to said longitudinal surfaces and from the opposite side of said laterally extending means, said gripping portions having circumaxially spaced friction faces to grasp and hold the writing tip end of the other cartridge body.

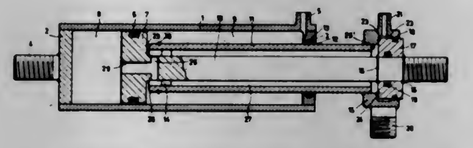
3,019,769
WRITING AID
Elmer L. Ballard, 2304 Poinsettia Drive, San Diego 6, Calif.
Filed July 22, 1959, Ser. No. 828,738
2 Claims. (Cl. 120—103)

1. A writing aid comprising a cylindrical plastic sleeve for slidably receiving a writing instrument, rearwardly divergent thumb and index finger stalls integral with diametrically opposite side portions of said sleeve, a cylindrical metallic liner mounted in the sleeve, said liner having perforations therein and comprising forwardly and inwardly inclined, integral anchoring teeth on its inner surface aligned with the perforations and adapted to bite



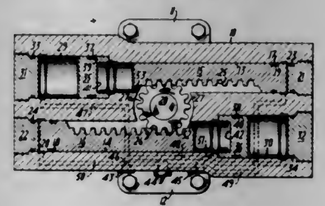
into the instrument, and means for securing the liner in the sleeve.

3,019,770
HYDRAULIC DEVICE
Valentin Balass, Seestrasse 355, Zurich, Switzerland
Filed Oct. 1, 1959, Ser. No. 843,792
6 Claims. (Cl. 121—38)



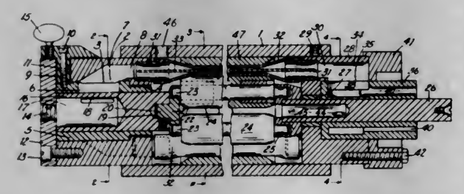
1. A pressure fluid operated actuator device comprising a pressure cylinder, a double acting actuator piston in said cylinder having a circular working face on one side and an annular working face surrounding the piston rod on the other side, means for feeding pressure fluid to the side of the piston provided with said annular working face, pressure fluid flow control means connected for movement with said piston, said control means including two valves and a control member axially reciprocable with respect to said piston for simultaneous operation of said valves in opposite sense, each valve having a pair of sealing members, one sealing member being connected to the piston and the other sealing member being connected to the control member, the sealing members of each pair having cooperating sealing surfaces pressed tightly one upon the other when the valve is closed and forming a passage between them when the valve is opened, whereby the fluid pressure propelling the piston is directly proportional to the closing force of the valves acting on the control member.

3,019,771
HYDRAULIC ROTARY ACTUATOR
William E. Heese, Old Saybrook, and Robert F. White, Stonington, Conn., assignors to General Dynamics Corporation, New York, N.Y., a corporation of Delaware
Filed June 9, 1960, Ser. No. 35,077
2 Claims. (Cl. 121—38)



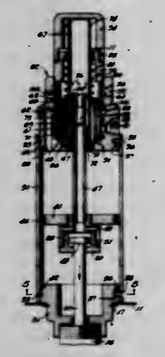
1. A three position rotary hydraulic actuator comprising a housing, an output shaft journaled in the housing, a pinion in the housing on the shaft, first, second and third fluid ports in the housing adapted to be subjected to fluid pressure to control the angular position of the shaft, two first parallel cylinders formed in the housing, two parallel piston-like racks engaging opposite sides of the pinion and respectively slidably mounted in the first cylinders, first fluid passage means providing fluid communication between the first port and one end of each of the first cylinders, two second cylinders formed in the housing and extending from the other ends of the first cylinders along their axes, the diameter of the second cylinders being greater than that of the first cylinders, two pistons respectively slidably mounted in the second cylinders, second fluid passage means providing fluid communication between the second port and the end of each of the second cylinders remote from the first cylinder, and third fluid passage means providing fluid communication between the third port and the junctions of the first and second cylinders.

3,019,772
FLUID MOTOR WITH FLEXIBLE TUBULAR CYLINDERS SYMMETRICALLY SPACED ABOUT THE POWER SHAFT
Robert P. Humphrey, Kalamazoo, Mich., assignor to General Gas Light Company, Kalamazoo, Mich.
Continuation of application Ser. No. 809,117, Apr. 27, 1959. This application Feb. 8, 1960, Ser. No. 7,485
20 Claims. (Cl. 121—48)



1. A fluid pressure driven motor comprising a tubular body, an inlet block mounted in one end of said body and defining a central inlet valve chamber opening axially through the body with a series of angularly spaced inlet ports opening radially to the valve chamber and axially to the inner end of the inlet block, an outlet block mounted in the other end of said tubular body and defining a central exhaust valve chamber with a series of angularly spaced outlet ports opening radially thereto and axially to the inner end of said outlet block, a speed adjusting valve of cylindrical shape mounted within said inlet chamber and having radially opening ports selectively movable into registry with said inlet ports in said inlet block, an adjusting member connected to said adjusting valve and projecting exteriorly of said inlet block, a cylindrical inlet valve rotatably mounted within said adjusting valve and having diametrically opposed ports rotatable across the inner ends of the slots in said adjusting valve, an end plate secured to said inlet block over the outer ends of said adjusting valve and said inlet valve and having a connection for a fluid pressure delivery conduit opening to the interior of said inlet valve, an opening in said outlet block extending between the bottom of said exhaust valve chamber and the inner face of said outlet block, an outlet valve having a cylindrical contour positioned in said outlet valve chamber and having an axial central shaft passage aligned with said opening in said outlet block, outlet passages formed as diametrically opposed recesses in the surface of said outlet valve and extending angularly thereabout to simultaneously register with a plurality of outlet ports in said outlet block with outlet port closing area on the surface of the outlet valve member between said outlet passages, exhaust passages extending axially through said outlet valve from said outlet passages to the outer end of the outlet valve, a driven passage extending axially through said outlet valve and the opening in said outlet block and rotatably supported by a bearing in said opening in said outlet block, means non-rotatably connecting said outlet valve to said shaft, a first roll carrier non-rotatably and drivingly connected to said shaft at the inner end of said outlet block, a second roll carrier non-rotatably and drivingly connected to said inlet valve at the inner end of said inlet valve, roll shafts extending axially through said tubular body and connected at their ends to said roll carriers eccentrically with respect to said shaft and said body, roll members rotatably mounted on said roll shafts with their peripheries in inwardly spaced relation from the inside of the said tubular body, a series of flexible and expansible walled tubes disposed in angularly spaced relation around the interior of said tubular body with their opposite ends connected to said inlet and outlet ports by means of nipples fitted axially in the ports and ends of the tubes, flat tube supporting plates extending through said tubes and disposed in chordal relation around the interior of said tubular body, an annular tube backing member positioned around the interior of said tubular body and supporting the outer sides of said tubes in spaced relation to the cylinder generated by rotation of said rolls rotating with said carriers whereby each roll substantially collapses each tube in passing thereover, said inlet ports in said inlet valve and said outlet passages in said outlet valve being relatively angularly disposed with respect to said body to successively admit fluid pressure to said inlet ports and said tubes and to close off the outlet ends of the tubes when pressure is applied thereto, said inlet ports in said inlet valve having angular overlapping relation with the passages in said adjusting valve to simultaneously admit fluid pressure to two tubes on opposite sides of said tubular body, said outlet valve and driven shaft having registering pasages formed therein opening through said first carrier to the interior of said tubular body and said tubular body having an outlet formed therethrough whereby part of the exhausted fluid from said tubes is circulated through said body to cool said tubes and rolls.

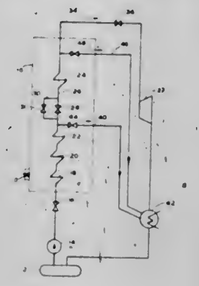
3,019,773
FLUID MOTOR
William M. Meeker, Pasadena, Calif., assignor to Grover Smith Manufacturing Corporation, San Gabriel, Calif., a corporation of California
Filed Oct. 8, 1959, Ser. No. 845,217
16 Claims. (Cl. 121—157)



1. A fluid motor comprising a cylindrical housing reciprocably mounting a piston therewithin, automatic valve mechanism secured to one end of said housing having a pressurized fluid inlet and an exhaust fluid outlet, said piston supporting a tube opening at one end into the far end of said valve mechanism and at its

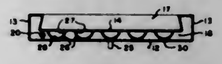
other end to a chamber in said housing remote from said valve mechanism, said valve mechanism including a pair of concentric tubular sleeve valves movable independently of said piston and having open unrestricted opposite ends and slidably supported axially of said piston tube, said valve mechanism including a plurality of passages interposed between said fluid inlet and outlet and the adjacent end of said cylindrical housing and controlled by the axial movement of said piston and of said sleeve valves to direct said pressurized fluid to first one side and then to the other of said piston and for alternately exhausting fluid from the opposite ends of said cylindrical housing.

3,019,774
ONCE-THROUGH VAPOR GENERATOR
Herbert Beyerlein, Hamburg, Othmarschen Westend, Germany, assignor to Dunwerke Aktiengesellschaft, Ratingen, Germany, a corporation of Germany
Filed Sept. 16, 1959, Ser. No. 840,446
3 Claims. (Cl. 122—406)



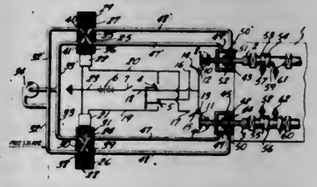
1. A method of starting up a forced flow once-through vapor generator having first heating surfaces including a primary superheater and second heating surfaces including a secondary superheater serially connected therein, a point of use connected to said second heating surfaces, a vaporizable fluid flowing through said first and second heating surfaces wherein it is vaporized and superheated by the passage of heating gases thereover so that only vapor flows through said second heating surfaces, the invention comprising starting up with the flow of said vaporizable fluid through only said first heating surfaces and then condensing and recirculating it while commencing the passage of heating gases over said first and second heating surfaces, heating said vaporizable fluid as it flows through said first heating surfaces to a selected temperature and pressure, gradually increasing the flow of heating gases over said first and second heating surfaces, by-passing a portion of said vaporizable fluid from said first heating surfaces to said second heating surfaces, throttling said portion of said vaporizable fluid entering said second heating surfaces so that it flashes into a vapor, condensing and recirculating the vapor flowing through said second heating surfaces progressively increasing the flow of vaporizable fluid from said first heating surfaces to said second heating surfaces in direct relationship to said increase in heating gas flow to maintain only vapor flowing through said second heating surfaces until the desired conditions of temperature and pressure for starting the unit are attained, admitting the flow of vaporizable fluid directly from said first heating surfaces to said second heating surfaces and discontinuing by-passing said vaporizable fluid from said first heating surfaces to said second heating surfaces, passing the vapor from said second heating surfaces to said point of use, and at the same time discontinuing the flow from said first and second heating surfaces to be condensed and recirculated.

3,019,775
CLOSURE MEMBER OR THE LIKE
George L. Robinson, Pittsburgh, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,492
4 Claims. (Cl. 122—498)



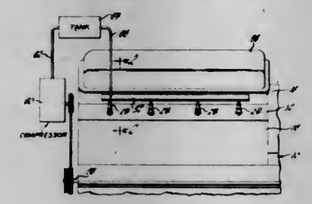
1. In a water-cooled furnace door or the like for metallurgical furnaces or the like, apparatus comprising, in combination, a substantially flat front plate having a rearwardly extending peripheral flange, a substantially flat imperforate back plate having a rearwardly and transversely outwardly extending peripheral flange, said plates being behind one another in parallel spaced relation, means for joining the edges of said respective flanges to enclose the space within said plates, the rear face of said back plate with the rearwardly extending portion of its flange forming a refractory lining recess, a plurality of generally vertical lengths of arched stays having laterally spaced toe edges and a bend in front of said toe edges in generally triangularly spaced relation thereto endwise, said respective toe edges being each welded to the front face of the back plate over a major portion of the height thereof, a plurality of generally vertical slots extending through said front plate in registry with the bend of each of said stays respectively, said bends being welded through said slots to said front plate from the outside thereof, said last-named welds sealing said slots to seal the space between said plates, said stays terminating short of said peripheral flanges and having at least the end and intermediate portions of each stay weld affixed to said plates respectively, and means communicating with said space for the circulation of water therethrough.

3,019,776
POWER PLANT
Thomas W. Clavell, Hempstead, N.Y., assignor to Fairchild Stratos Corporation, a corporation of Maryland
Filed Sept. 12, 1952, Ser. No. 309,240
15 Claims. (Cl. 123—21)



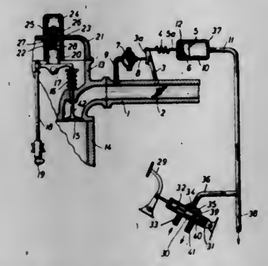
1. In an internal combustion engine having a pair of valves and corresponding actuating mechanism therefor including relatively shiftable plural cams and cam follower means, the combination of a pair of motive means for relatively shifting said plural cams and followers of corresponding valves to alternatively place one of said plural cams for each valve into operation, means for activating one of said motive means, and means responsive to the resulting relative shifting of the corresponding plural cams and follower means for activating said other motive means, whereby said one and said other motive means act in sequence to successively shift the plural cam and cam follower means of the corresponding valves.

3,019,777
AIR INJECTION SYSTEM FOR AN INTERNAL COMBUSTION ENGINE
Alfred Candelise, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 4, 1960, Ser. No. 12,855
4 Claims. (Cl. 123—26)



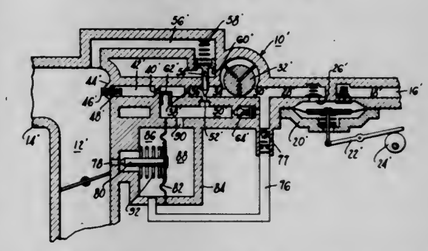
1. In combination with an internal combustion engine having an engine block and a cylinder head and cylinders formed in said block and pistons reciprocably received within said cylinders and cooperating with said block and said head to define combustion chambers, an air injection system comprising a source of compressed air driven by said engine, means for introducing air from said source into said combustion chambers in timed relation with the stroke-cycle of said engine, a compressed air manifold mounted on said engine and extending to points adjacent said engine cylinders and said introducing means, conduit means connecting said compressor with said manifold and said manifold with each of said compressed air introducing means, means for timing the introduction of compressed air from said manifold into said combustion chambers during a portion of the expansion stroke of said engine, said means for timing the introduction of compressed air from said manifold into said combustion chambers comprising, a rotary timing and distribution valve receiving compressed air from said source and having compressed air delivery conduit means connecting with said air introducing means, said air introducing means having valve means therein for controlling the admission of compressed air from said manifold to said combustion chambers and valve actuating means actuated by compressed air from said distribution and timing valve for actuating said valve means in timed relation to said engine.

3,019,778
FOUR-CYCLE INTERNAL COMBUSTION ENGINE WITH EXHAUST BRAKE
Richard Kloss, Koln-Buchforst, Germany, assignor to Klöckner-Humboldt-Deutz Aktiengesellschaft, Koln, Germany
Filed Dec. 3, 1959, Ser. No. 856,986
Claims priority, application Germany Dec. 13, 1958
3 Claims. (Cl. 123—97)



1. An exhaust brake system for a four-stroke cycle internal combustion engine having an exhaust conduit: brake valve means mounted in said exhaust conduit and movable in a closing direction and in an opening direction, first spring means operatively connected to said brake valve means for actuating the same, fluid operable cylinder piston means arranged for connection with a source of fluid pressure, said cylinder piston means being movable selectively from a first position to a second position and vice versa, second spring means associated with said cylinder piston means and continuously urging said cylinder piston means to and normally holding the same in said first position, said cylinder piston means being operatively connected to said first spring means and being operable in response to a desired minimum braking fluid pressure acting upon said cylinder piston means to move to said second position to thereby pre-load said first spring means against the thrust of said second spring means for closing said brake valve means, abutment means connected to a part of said cylinder piston means for determining said second position, and fluid pressure responsive means communicating with said exhaust conduit and operatively connected to said brake valve means and adapted to move the same in opening direction in response to a certain pressure head built up in said conduit, the adjusting forces exerted upon said valve means on one hand by said first spring means in said preloaded condition and on the other hand by said fluid pressure responsive means balancing each other just below said certain pressure head.

3,019,779
FUEL SUPPLY SYSTEM
Frederik Barfod, Detroit, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 10, 1960, Ser. No. 7,874
4 Claims. (Cl. 123—119)

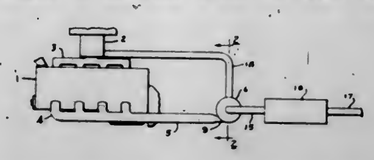


1. In a fuel supply system for an internal combustion engine having an induction passage and a source of fuel, a nozzle in said induction passage, a valve in said nozzle, spring means urging said valve toward closed position, conduit means connecting said nozzle with said source of fuel, a supply pump in said conduit means, a second pump in said conduit means downstream of said supply pump for placing fuel under a pressure which varies as a function of engine speed, passage means connecting said induction passage to said conduit means between said nozzle and said second pump, and valve means responsive to the pressure differential across said second pump for controlling the flow through said passage means.

3,019,780
GAS PURIFYING ARRANGEMENT
James M. Nuding, 20415 Baltar St., Canoga Park, Calif.
Filed Dec. 12, 1957, Ser. No. 702,322
13 Claims. (Cl. 123—119)

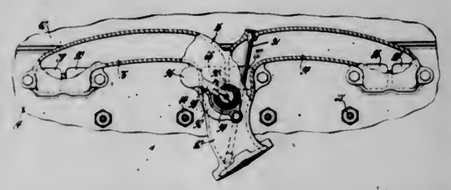
1. A gas purifying arrangement comprising a source of incompletely oxidized gases, an open substantially cylindrical chamber, means for introducing said gases into said chamber in a rotational flow pattern, outlet means for said chamber defining an exit aperture in said open chamber adjacent said means for introducing said gases

at the axis of rotation of said gases for removing lighter components of said gases, a restricted outlet for said



chamber for removing heavier components of said gases, and means connected to said restricted outlet for oxidizing said heavier components of said gases.

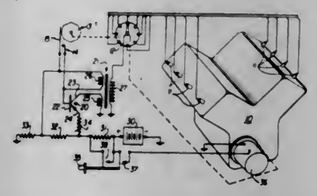
3,019,781
ENGINE MANIFOLDING
Adelbert E. Kolbe, Berkley, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,508
2 Claims. (Cl. 123—122)



2. An exhaust system for an internal combustion engine comprising, a cylinder head having individual cylinder exhaust passages and an intake manifold heating exhaust passage having the two ends thereof connecting with two of said individual cylinder exhaust passages, an exhaust manifold for receiving exhaust gases from said individual cylinder exhaust passages and having a plurality of branches and a central outlet connected therewith and each of said branches receiving exhaust gases from a plurality of said individual cylinder exhaust passages, a heat sensitive control valve mounted in said exhaust manifold adjacent one of said two individual cylinder exhaust passages and positionable in the closed position to direct the flow of exhaust gases in one of said branches through said intake manifold heating exhaust passage to the other of said two individual cylinder exhaust passages in one direction only and out through at least a portion of another of said branches and into said central outlet and in the open position to permit flow of exhaust gases directly through said exhaust manifold from the one of said two individual cylinder exhaust passages and to permit induced flow of exhaust gases from said branches directly into said central outlet without passing through said intake manifold heating passage.

3,019,782
IGNITION SYSTEM
Oleh M. Kuritza, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed July 1, 1958, Ser. No. 745,965
12 Claims. (Cl. 123—179)

5. An ignition system for an internal combustion engine which has a plurality of cylinders with ignition means, a timer with contacts intermittently opened to control the firing of the cylinders, a distributor to apply firing signals in turn to the ignition means, an electrical starter for the engine, a low voltage direct current electrical system, and a switch for connecting the starter to the electrical system; said system including in combination, an oscillator having a transistor and a transformer, said transformer having a saturable core with first, second, and third inductively coupled windings thereon, means connecting said transistor to the electrical system for providing operating voltages to said transistor therefrom, said last named means including means connected to the starter switch for reducing the voltage applied from the electrical system after the engine is started, feedback circuit means coupling said transistor to said first and second windings to provide feedback through said windings to produce oscillations in said transistor, said feedback circuit means having



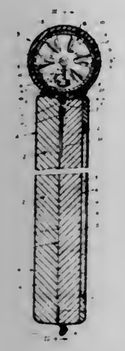
a portion connected to the timer contacts to intermittently short a portion of said feedback circuit means and thereby render said oscillator inoperative, said feedback circuit causing operation of said oscillator in response to opening of the timer contacts, said transformer and said feedback circuit means being constructed so that the frequency of said oscillator is substantially greater than the frequency of operation of the timer whereby a plurality of oscillations is produced each time the timer renders the feedback circuit operative, and means connecting said third winding to the distributor to apply the oscillations thereto.

3,019,783
COVERED DISH AND TRAY COMBINATION
Houghton W. Clarke, Evanston, Ill., assignor of ninety-nine percent to Mealpack Corporation, Evanston, Ill., a corporation of Illinois
Filed Oct. 14, 1957, Ser. No. 690,113
7 Claims. (Cl. 126—381)



1. In a structure of the character described, a base having a raised shoulder defining a central cavity and being provided with a peripheral channel extending about said cavity, said channel being substantially shallower than the height of said shoulder, a solid heat-chargeable element removably disposed within said cavity and having its outer periphery disposed adjacent the inner surface of said shoulder, said element providing a top surface for the support of hot prepared meals within said cavity, and a removable cover having its lower edge portion seated within said peripheral channel, said shoulder being provided with at least one passage extending downwardly and inwardly from said channel and having its lower end terminating adjacent the outer periphery of said heat-chargeable element, whereby, vapors condensing upon the inner surface of said cover flow into said channel to provide a liquid seal between said cover and base and form a partial vacuum within said cavity, said passage carrying excess condensate from said channel into direct contact with the outer periphery of said element for revaporization thereby.

3,019,784
THERAPEUTIC MASSAGE CUSHIONS
Murlyn J. Elden, Silver Creek, N.Y., assignor to Niagara Therapy Manufacturing Corporation, Adamsville, Pa., a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,781
9 Claims. (Cl. 128—33)



1. A therapeutic massage unit including in combination, a motor assembly designed to be detachably connected to one end of a cushion assembly; said cushion assembly including a vibration transmitting member compactly sandwiched between a pair of resilient cushioning slabs which are enclosed within an envelope covering, said vibration transmitting member terminating adjacent one end of said resilient cushioning slabs with the adjacent end of said envelope covering presenting a pair of spaced bead formations; said motor assembly including a gyratory motor, a housing shell formed from flexible sheet material presenting a flexible tubular body section terminating in laterally extending flange portions, the tubular body section of said shell being designed to enclose and support the gyratory motor therein when said flange portions are drawn into substantially abutting relationship, means for drawing said flange portions substantially into abutment and securing said flange portions to the adjacent end of the vibration transmitting member of said cushion assembly, a pair of channel shaped locking members secured to the motor containing shell and each designed to receive the bead formation extending along the adjacent edge of said envelope covering, and a removable wedging spline inserted into each of said channel shaped members to thereby detachably secure said bead formation thereto.

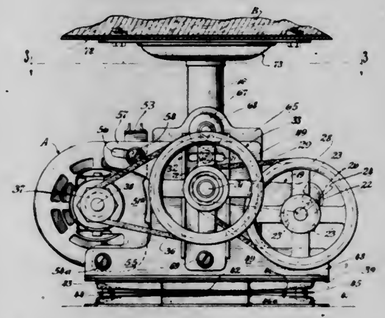
3,019,785
VIBRATORY MASSAGE CUSHION
Murlyn J. Elden, Silver Creek, N.Y., assignor to Niagara Therapy Manufacturing Corporation, Adamsville, Pa., a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,864
9 Claims. (Cl. 128—33)

1. A therapeutic massage unit presenting a relatively flat cushion section and a roll section at one end of said cushion section; said cushion section containing a vibration transmitting grid sandwiched between a pair of resilient cushioning slabs, said vibration transmission grid including a plurality of spaced longitudinally extending flexible metal bands joined at the ends thereof by transversely extending flexible metal bands and a series of spaced intermediate flexible metal bands inclined at an angle with respect to said end bands; said roll section containing a housing shell presenting a flexible tubular body portion, a gyratory motor removably contained in the tubular body portion of said housing shell, means for securing the tubular body portion of said shell to one end of said vibration transmitting grid and for drawing the tubular body portion thereof around said gyratory motor to provide a support therefor, a resilient cushion-



ing slab in surrounding relation to said tubular body portion; and a covering envelope snugly enclosing said cushion section and said roll section.

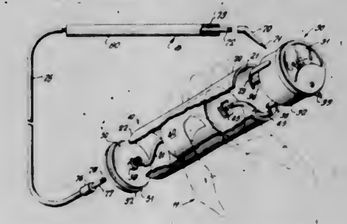
3,019,786
MASSAGE APPARATUS AND COUCH ASSEMBLY
Carl Krauss, % Lakewood Engineering & Mfg. Co., 212 N. Carpenter St., Chicago, Ill.
Filed July 20, 1959, Ser. No. 828,215
5 Claims. (Cl. 128—33)



1. An oscillating massage unit for a massage couch, comprising a housing having legs for supporting the massage unit upon the floor, an oscillating standard having a massage pad at its upper end, operating mechanism for oscillating said standard within said housing including a mounting frame, a motor at one end of said frame having a horizontal drive shaft, a pulley mounted on an end of the drive shaft, a horizontally arranged crankshaft journalled in the other end of said frame having a pulley on one end and an eccentric on the other, a substantially horizontally extending connecting rod connected at one end to said eccentric and at its other end to the lower end of said standard for reciprocating the latter, a double groove pulley intermediate the pulley on the motor drive shaft and the pulley on the crankshaft, a drive belt connecting the pulley on the motor drive shaft with one groove of said double groove pulley and a second drive belt connecting the other groove of said double groove pulley to the pulley on the crankshaft, a bracket mounted on and intermediate the ends of the mounting frame, means for pivotally mounting said bracket adjacent its lower end upon said mounting frame, said bracket having an arcuate

slot adjacent its upper end and a stub shaft intermediate its ends and upon which the double groove pulley is rotatably mounted, an adjusting screw extending through said arcuate slot and mounted in said mounting frame for locking said bracket in an adjusted position, a motor bracket plate at each end of and carrying the motor with each bracket plate being pivotally mounted adjacent its lower end on the mounting frame, said mounting frame having an arcuate slot adjacent the upper end of each bracket plate, and an adjusting screw extending through each arcuate slot and mounted in a threaded opening in its bracket plate for locking its bracket plate in an adjusted position.

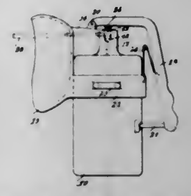
3,019,787
APPARATUS FOR ELECTROLYTIC DENTAL DESENSITIZATION
Joe J. Simmons, 6440 Patrick Drive, Dallas, Tex.
Filed Oct. 5, 1960, Ser. No. 60,668
2 Claims. (Cl. 128—172.1)



1. Apparatus for electrolytic desensitization and inhibition of decay comprising a hollow body means defining an electrode formed of an electrically conductive material and being of such dimension as to be readily and comfortably grasped within a patent's hand, a source of electrical energy supported within said hollow body means, indicating means supported at one end portion of said body means for readily visibly indicating the amount of current flow passing through the electrode such that a dentist can constantly monitor the amount of current flowing, an applicator means formed of electrically conductive material and including an elongated relatively narrow solution retaining operating end portion defining a second electrode for applying a solution to a specific area of the patient's tooth and being adapted to be manually manipulated, said applicator means including insulating means for insulating the applicator means from a dentist's hand, and means electrically connecting said hollow body means, said source of electrical energy and said applicator means including an elongated insulated flexible electrical lead connected between said hollow body means and said applicator means for permitting ready manipulation of said second electrode.

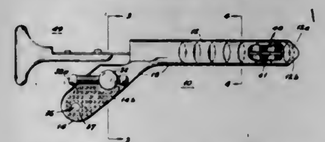
3,019,788
OXYGEN DISPENSER
William Hughes, Stafford Springs, Conn.
(R.F.D. 1, West Stafford, Conn.)
Filed Feb. 10, 1959, Ser. No. 792,417
4 Claims. (Cl. 128—203)

4. In a gas dispenser, a container provided with an upstanding neck, a valve arranged in said neck, an end piece of yieldable material positioned on the upper end of said neck for controlling actuation of said valve, and said end piece having its lower surface engaging the upper end of said valve, a support member positioned adjacent to said neck, a mask formed integral with and projecting from said support member, a handle having an end thereof pivotally connected to said support member, a shoulder on said handle engaging said yieldable end piece, a releasable stop member interposed between a portion of said handle and said container, a clamping ring affixed to said mask and surrounding said container, a finger engaging bracket on said ring, said container holding a quantity of gaseous oxygen under pressure,



said gas dispenser adapted to be used when needed by motorists, a spring member having one end connected to said ring and having a portion engaging said handle, there being registering outlet openings in said support member and neck.

3,019,789
ANASTOMOSIS CLAMP
Jules L. Whitehill, 209 S. Tucson Blvd., Tucson, Ariz., and Charles E. Gagnier, P.O. Box 11312, Tucson, Ariz.
Filed June 30, 1958, Ser. No. 745,636
3 Claims. (Cl. 128—305)



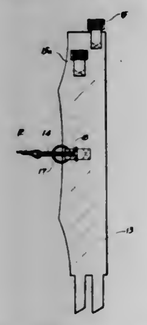
1. A surgical instrument for anastomosing hollow viscera in side-to-side relation comprising first and second blades, each of said blades having horizontally extending teeth forming undulations along its longitudinal axis, grooves in said teeth, each of said blades being adapted to be inserted through a wall of one branch of said viscera, vertically extending slots in said teeth so adapted and arranged that when said blades are clamped together a single horizontal slot will extend along the longitudinal axis of said blades, and means for clamping said blades together in such a manner that the teeth on one blade are interposed intermediate the teeth on the other blade, whereby adjacent walls of said branches of said viscera are held in said undulations in a serpentine shape.

3,019,790
COMBINATION HEMOSTAT AND INTRAVENOUS NEEDLE
Robert J. Militana, 87 NE. 88th St., Miami, Fla.
Filed July 15, 1960, Ser. No. 43,184
4 Claims. (Cl. 128—322)



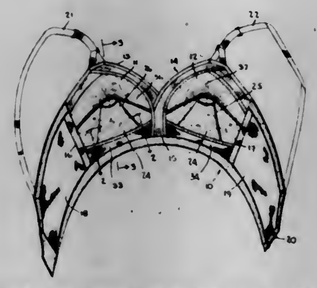
1. A surgical instrument comprising a pair of handle members with jaw members formed integrally with said handle members, pivot means pivotally mounting said handle means and said jaw members, needle guide means mounted in proximity of said pivot means, toggle means pivotally secured to said handle members, needle support means mounted on said toggle means and a hypodermic needle slidably mounted on said needle guide means and extending between said handle members and supported on said needle support means whereby upon the swinging of said jaw members and said handle members to a closed position said toggle means will cause said needle to slide in said needle guide in the direction toward the free ends of said jaw members.

3,019,791
TRACTION STRAP FOR PROSTATIC SURGERY
Lawrence R. Limbeck, 401 C St., Lincoln, Nebr.
Filed Feb. 10, 1960, Ser. No. 7,949
2 Claims. (Cl. 128—349)



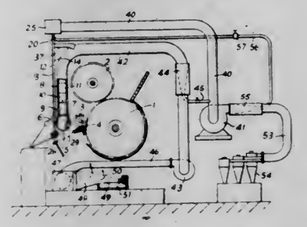
1. In a medical traction device in combination with a catheter and bag attached to one end of said catheter, a thong of substantial length, a strap adapted to be fastened around the patient's leg, said strap having a hook thereon and a ring on said strap adjacent said hook, an elastic member attached to said hook and threaded upwardly through said ring, said thong attached to said elastic member and extending upwardly therefrom, said thong being tied to the aforesaid catheter and the assembly thus described being adapted to maintain constant tension upon said catheter and bag.

3,019,792
BRASSIERE
Mack Kahn, 417 5th Ave., New York 16, N.Y.
Filed Mar. 8, 1960, Ser. No. 13,474
2 Claims. (Cl. 128—480)



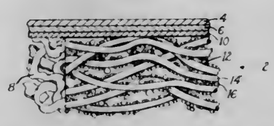
1. A brassiere comprising a bust pocket; and a columnar support for the breast, disposed in and secured to said bust pocket, said support comprising a folded piece of material having a flattened tubular center portion of substantially truncated triangular configuration as viewed in elevation, said center portion having an open top adapted to engage and support a frontal protruding part of the breast, and further having a bottom base which is larger than the top base and which is secured to the bust pocket to hold the columnar support in place therein.

3,019,793
CIGARETTE-MAKING MACHINES OF THE CONTINUOUS ROD TYPE
Francis Auguste Maurice Labbé, Orleans, France, assignor to Molins Machine Company Limited, London, England, a British company
Filed Mar. 16, 1959, Ser. No. 801,683
Claims priority, application Great Britain Mar. 21, 1958
16 Claims. (Cl. 131—84)



1. In a tobacco-manipulating machine such as a continuous rod cigarette-making machine, apparatus for forming a tobacco filler, comprising a conveyor on which the filler is formed, a pair of opposed walls defining an enclosed passage and extending to said conveyor at opposite sides thereof, tobacco-feeding means to feed tobacco into the said passage, and air-impelling means to cause a stream of air to flow through the passage at high velocity towards the conveyor in a direction such as to cause the air to convey the said tobacco through the passage and impel it on to the conveyor or on to tobacco already on the conveyor, the said passage having a side opening through which air can escape from the passage so as to be separated from the tobacco while the latter continues to move towards the conveyor, the said air-impelling means being arranged to impart to the air a velocity through the passage such that tobacco is impelled by the air past the said side opening to reach the conveyor.

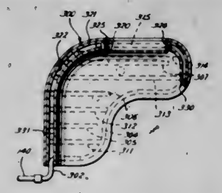
3,019,794
SUPPORTED PROTEIN CIGARETTE FILTERS
Robert A. Whitmore, Beverly, and Shu-Tung Tu, Ipswich, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Nov. 25, 1959, Ser. No. 855,399
2 Claims. (Cl. 131—208)



1. A tobacco smoke filtering system for removing undesired components from tobacco smoke, said filtering system comprising a passageway for said smoke, a mass of supporting fibers disposed substantially to fill a cross-section of said passageway and arranged to define paths for said tobacco smoke through said mass, and a coating on said fibers comprising a mixture of gelatine at a pH between 2.5 and 8.0 and between 10% and 50%

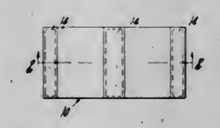
by weight of a water soluble salt based on the weight of said gelatine, said salt being in the form of crystals formed in situ in said gelatine on the surfaces of fibers of said mass, said salt crystals interrupting the continuous surface of said gelatine, to provide a high ratio of surface area to mass of said gelatine and salt mixture.

3,019,795
METHOD AND APPARATUS FOR TREATING HAIR
Dallas D. Weatherholt, Lamona Faye Cherry, and James H. Fulford, Houston, Tex. (all % 124 Pamellia Drive, Bellaire, Tex.)
Filed Jan. 3, 1958, Ser. No. 706,915
14 Claims. (Cl. 132—7)



1. Apparatus for treating hair on the head, including drying, dying, bleaching, permanent waving and creme or oil treating, and the like, comprising means for generating an alternating electromagnetic field of a frequency in the radio frequency range, a head piece fittable to closely cover the hair on the head including means for concentrating said field in a surface encompassing the hair on the head but not including the skull, said concentrating means being operatively connected to said generating means whereby said field emanates at said concentrating means, means for insulating electric currents of said generating means from said head piece, timing means for controlling the length of the period that said field is generated at said head piece by said generating means, whereby said field acts for a predetermined length of time on the hair on the head encompassed by said head piece to treat the hair, the time required for the treatment requiring from about ⅙ to ⅓ the time normally required for the treatment.

3,019,796
HAIR WAVING DEVICE
Raymond E. Reed, Barrington, Ill., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Aug. 19, 1957, Ser. No. 678,878
8 Claims. (Cl. 132—9)

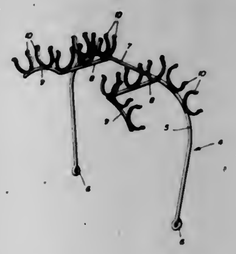


1. A device for use in the permanent waving of hair comprising a water-pervious web carrying a water-soluble alkaline material together with a water-soluble reducing agent selected from the class consisting of magnesium thioglycolate having the composition

$$(HS—CH_2—COO)_2Mg$$

and hydrates thereof, said alkaline material and agent being present in dry solid form and being distributed substantially uniformly throughout a major portion of said web, said web carrying in addition a supply of water-soluble neutralizer in solid form, said supply of neutralizer being confined to a localized zone of said web, whereby contact of said web with an aqueous medium when wrapped with a hair tress results in leaching of said water-soluble solid components from said web and successive exposure of the hair tress to the resultant aqueous solutions of alkaline material and reducing agent and of neutralizer.

3,019,797
HAIR CURLING DEVICE
William J. Strys, 70–72 N. 7th St., and Leslie F. Bolcato, 65 Mill St., both of Paterson, N.J.
Filed Aug. 25, 1958, Ser. No. 756,908
2 Claims. (Cl. 132—33)



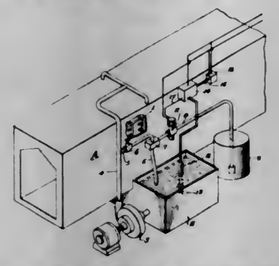
1. A hair curling device comprising: a frame including a substantially inverted U-shaped, resilient head clamp engageable under tension over the top, rear portion of the head, a pair of spaced, parallel arms on the bight portion of said head clamp extending forwardly therefrom at right angles thereto over the top portion of the head, pairs of transversely aligned, resilient generally U-shaped clips mounted on the arms, said arms including outwardly right angularly bent, arcuate free end portions substantally paralleling the clamp, longitudinally aligned pairs of generally U-shaped, resilient clips on said free end portions of said arms and on said head clamp, and a plurality of transverse and longitudinal tubular rollers for winding the hair removably mounted in the pairs of aligned clips for retention thereby on the frame.

3,019,798
HAIR CURLERS
Augusta Gaget, 20 Rue d'Echallon, Oyonnax, France
Filed Dec. 23, 1958, Ser. No. 782,523
Claims priority, application France Jan. 8, 1958
2 Claims. (Cl. 132—42)



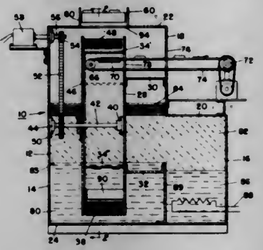
1. A hair curler comprising an elongated substantially cylindrical mandrel formed on its periphery with a plurality of substantially longitudinal rows of transverse ribs, said ribs being substantially parallel to each other in each of said rows and being arcuate on the periphery of said mandrel, the inner curvature of the ribs of the successive rows facing around said mandrel alternately towards one and the other end thereof to produce thereon a substantially sinusoidal transverse pattern; and means to retain a tress of hair on said mandrel to compel said tress to assume a substantially sinusoidal shape, between the successive ribs of the successive rows.

3,019,799
APPARATUS FOR SPRAYING ARTICLES AND FOR CONTROL OF ELECTROLYTE CONCENTRATIONS
Alfred Douty, Wyncote, Pa., assignor to Amchem Products, Inc., Ambler, Pa., a corporation of Delaware
Filed July 7, 1959, Ser. No. 825,437
4 Claims. (Cl. 134—57)



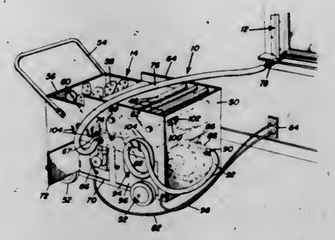
1. In a system for spraying a succession of metal articles with an electrolytic solution, a spraying station, a spray at said spraying station, a reservoir for the solution, a system for circulating the solution from the reservoir to the spray and returning it to the reservoir, means for controlling the concentration of chemicals in the solution comprising a sensing device immersed in the solution, a solution return pipe connected into said circulating system between the reservoir and the spray, an aspirator in said return pipe, a concentrate reservoir, a pipe connecting said concentrate reservoir to the aspirator, a valve in said concentrate pipe and means responsive to impulses from said sensing device to control the operation of said valve.

3,019,800
CLEANING APPARATUS
Burton Rand, Bala Cynwyd, Pa., assignor to Autosonics, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 28, 1960, Ser. No. 59,066
10 Claims. (Cl. 134—79)



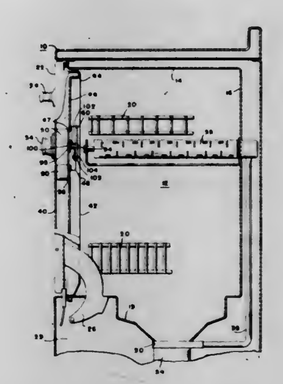
1. In a cleaning apparatus for degreasing machined parts comprising a housing, a pair of spaced arcuate inner walls fixedly mounted within said housing, an outer arcuate wall fixedly mounted around said inner walls, a rotary member having pusher vanes which are disposed between the inner and outer walls, means in said housing operatively connected to said member for rotating said member, the lower portion of said inner and outer walls being adapted to be disposed in a degreasing solvent, and at least one ultrasonic transducer adapted to be disposed within the degreasing solvent, said transducer being disposed between spaced ends of said inner walls and radiating downwardly toward the inner surface of said outer wall, whereby said machined parts may be moved between the inner and outer walls through said solvent and be subjected to cavitation generated by said transducer.

3,019,801
WINDOW WASHING SYSTEM
Marian Ruth Peterson, 1145 E. 5th St., Reno, Nev.
Filed Sept. 4, 1959, Ser. No. 838,132
5 Claims. (Cl. 134—94)



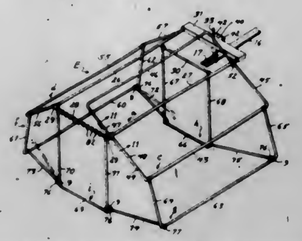
1. A window washing system comprising a generally U-shaped spray frame, means connected to said spray frame for mounting said spray frame on a window in an inverted position, said spray frame having a plurality of nozzles for directing fluids from said spray frame onto a window, means connected to said spray frame for supplying cleaning fluid thereto, and means at the base of said spray frame for collecting spray fluid applied to a window, said spray fluid collecting means including a generally channel-shaped holder and a sponge insert, said holder being hingedly mounted for swinging to an inoperative position for replacement of the sponge insert.

3,019,802
DISHWASHER HAVING A DISPENSER
Robert L. Mercer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,986
7 Claims. (Cl. 134—95)



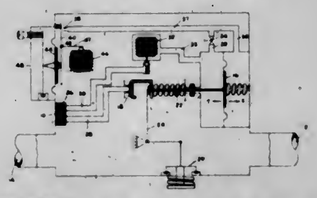
3. In combination with a cleaning apparatus having at least one operation, a timer for said apparatus, said timer having a shaft for controlling said operation, a dispenser having at least one container, a shutter plate for covering said container, a protuberance on said plate, a cam on said shaft having at least one position, means for biasing said protuberance against said cam, and means for moving said shaft to actuate said operation and said shutter plate whereby at least one of said containers is uncovered during said operation.

3,019,803
AUTO CAMPER
Thomas L. Moody, 348 Warren Road, Hatboro, Pa.
Filed Jan. 28, 1960, Ser. No. 5,231
8 Claims. (Cl. 135—4)



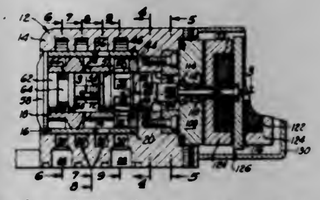
4. In an automobile camping kit, a supporting framework adapted to extend longitudinally of an automobile, means for securing said framework to the top of an automobile extending longitudinally thereof, a vertical pivot pin upstanding from the rear end of said supporting framework, an enclosure frame pivotally mounted at the rear end of said supporting framework on said vertical pivot pin for vertical movement along said pin and for swinging movement about the axis of said pin to a position rearward of the automobile at a selected height within the limits of said pin, a plurality of frame elements included in said enclosure frame, said frame elements being pivotally connected for erection on the ground behind the automobile, and fabric covering said frame elements.

3,019,804
FLUID FLOW AND PRESSURE CONTROL SYSTEMS
Henry A. Miller, Jr., Scotch Plains, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 5, 1959, Ser. No. 784,987
19 Claims. (Cl. 137—64)



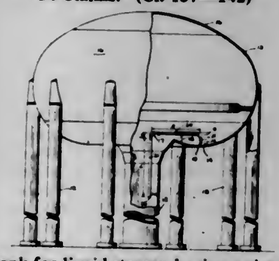
1. A fluid flow and pressure control device comprising a body having an inlet, an outlet, a supply valve in communication with the inlet for discharging fluid, when open, to the outlet, pressure responsive valve actuating means, having a side thereof in communication with the inlet, connected to the supply valve, the opening and closing of the valve depending upon the position of the valve actuating means, and a control circuit for maintaining a desired pressure with respect to the varying pressure of the ambient atmosphere, and alternately and automatically, for maintaining the desired pressure independently of varying ambient pressure, said control circuit comprising a nozzle in communication with opposite sides of said valve actuating means, said nozzle discharging fluid to said outlet, means mounted for cooperation with said nozzle to control the amount of discharge from the nozzle and thereby the position of said valve actuating means, a differential pressure sensing element exposed to and responsive to the pressure of the ambient atmosphere for actuating the nozzle control means, said pressure sensing element being rendered inoperable when the desired minimum pressure exceeds the pressure of the ambient atmosphere, and an absolute pressure sensing element responsive to pressure variations within the device for actuating said nozzle control means, said absolute pressure sensing element being operable independently of the pressure of the ambient atmosphere and when the desired minimum pressure within the device exceeds the pressure of the ambient atmosphere.

3,019,805
ELECTRO-HYDRAULIC SERVO VALVE
Carroll G. Gordon, San Mateo, Calif. (3 William Court, Menlo Park, Calif.), assignor of one-half to William F. Stoesser, Mountain View, Calif.
Filed Sept. 6, 1960, Ser. No. 54,180
7 Claims. (Cl. 137—83)



1. An electro-hydraulic servo valve which includes: valve means including housing having pressure and other passages formed therein and, said valve means also including other passages formed therein and, said valve means also including valve rotor means rotatably mounted in said housing, said rotor means being capable of being rotated so as to place said pressure passage in communication with at least one of said other passages; hydraulic control means located upon said housing, said hydraulic control means including a flexible tube having a free end and a secured end, said free end of said tube being open, said hydraulic control means also include passage means connecting the interior of said secured end of said tube to said pressure passage, said hydraulic control means further including means for rotating said rotor means in response to a pressure differential and means for receiving hydraulic pressure from said free end of said tube and for creating a pressure differential, said means for receiving being operatively connected to said means for rotating said rotor means; and means for flexing said tube engaging said tube intermediate the ends thereof so as to cause said free end of said tube to move with respect to said means for receiving hydraulic pressure.

3,019,806
SELF-PRIMING SIPHON DRAIN
John N. Pirok, Evergreen Park, and Joel H. Trammell, Chicago, Ill., assignors to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 17, 1960, Ser. No. 9,235
14 Claims. (Cl. 137—142)

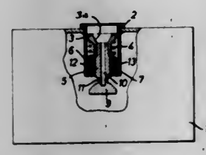


1. In a tank for liquid storage having a riser pipe penetrating the bottom of said tank, said riser pipe including means for introducing and removing water from said tank, said bottom having an obstruction preventing a portion of the bottom from being drained, a siphon for draining that bottom portion of the tank, said siphon comprising an inlet leg extending into said bottom portion, a connecting leg in communication with said inlet leg, and a priming leg in communication with said connecting leg freely depending into said riser pipe, said siphon being of such dimensions that the length of said priming leg is not less than:

$$\frac{P_1(S+2M+1)-Q(M+J)(M+1)}{P_1-Q(M+J)}$$

where the length of said priming leg is measured in feet from its bottom opening to the level of the riser opening, Q is the pressure in pounds per square inch of a one foot high column of stored liquid, S is the length (K) in feet of said connecting leg plus the height (J) in feet of said connecting leg at the end adjacent said priming leg above the level of the riser opening plus the height (N) in feet at the other end of said leg adjacent the inlet leg above the level of the riser opening, P_1 is the usual atmospheric pressure at the level of said tank in pounds per square inch, and M is the distance in feet measured from the bottom opening of the inlet leg to the riser opening.

3,019,807
FILLING VALVE FOR LIGHTER TANKS
Emil Projahn, Nurnberg, Germany, assignor to Gebruder Kollisch, Nurnberg, Germany
Filed Apr. 18, 1960, Ser. No. 22,922
Claims priority, application Germany Nov. 13, 1959
7 Claims. (Cl. 137—199)



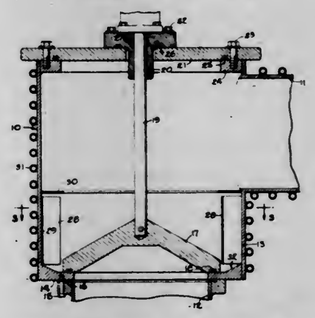
1. A filling valve for a tank for liquefied gas comprising: tubular holder means insertable in the upper part of the tank, a valve seat on the inner end of said holder means, a semi-permeable unilaterally osmotically acting means in the holder means between the valve seat and the atmosphere, a valve member extending reciprocably through said holder means having a valve head engageable with the tank side of said seat, a spring urging the valve member in a direction to cause the head to engage the seat and yieldable to permit movement of the valve member to separate the head from the seat, said valve member having means sealingly engaging the atmosphere side of said semi-permeable uni-laterally osmotically acting means adjacent the valve member when the valve head is moved off said seat, a filling bore extending into the valve member from the end opposite the valve head and opening laterally from the valve member adjacent the seat so as to communicate with the tank side of the seat only when the valve head is moved off said seat, and a passage leading through said valve seat and along the outside of the valve member to the tank side of said semi-permeable unilaterally osmotically acting means for the passage of gas from the tank side of the seat while preventing passage of liquid therefrom.

3,019,808
STOPCOCK
Eugene L. Bennet, St. Joseph, Mich., assignor to Laboratory Equipment Corporation, St. Joseph, Mich., a corporation of Michigan
Filed Mar. 17, 1960, Ser. No. 15,768
6 Claims. (Cl. 137—246)



1. In a stopcock, a body member providing a tapered socket, a rotatable plug having a tapered surface fitted to said socket, said plug having a transverse passage, said body member having means providing inlet and outlet passages adapted to be connected by said plug passage when said plug is rotated to one position and to be disconnected when said plug is rotated to another position, said plug being formed to provide an annular groove around each of the ends of said plug passage, the portions of said plug at the ends of said plug passage inside said annular grooves being recessed slightly with respect to the tapered surface of said plug, said socket being formed to provide annular spaces around the contiguous ends of said inlet and outlet passages, and the means providing the contiguous ends of said inlet and outlet passages inside said annular spaces being recessed slightly with respect to the surface of said socket.

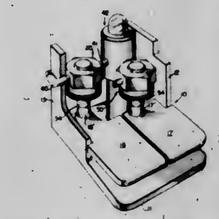
3,019,809
COMBINED VACUUM VALVE AND COLD TRAP
Harold N. Ipsen and Karl H. Seelandt, Rockford, Ill., assignors to Ipsen Industries, Inc., Rockford, Ill., a corporation of Illinois
Filed Sept. 13, 1960, Ser. No. 55,458
7 Claims. (Cl. 137—340)



1. A combined cold trap and vacuum valve comprising a hollow body having a tubular inlet portion, a tubular outlet portion and a tubular intermediate portion disposed between said inlet and outlet portions, said intermediate portion being coaxial with said outlet portion and being larger in diameter than the outlet portion to provide an annular shoulder extending around

the end of the outlet portion, a valve disk disposed within said intermediate portion to seat against said shoulder and having a diameter larger than the diameter of said outlet portion and smaller than the diameter of said intermediate portion, an annulus axially spaced from said shoulder and extending around said intermediate portion to overhang the periphery of said disk, means supporting said disk for movement toward and away from said shoulder, an annular baffle disposed between said shoulder and said annulus and disposed in the space surrounding said disk, and means for cooling said baffle, said shoulder and said annulus.

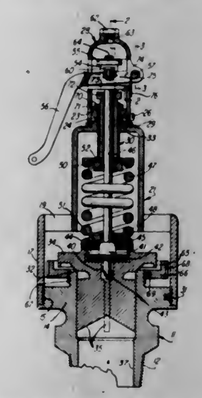
3,019,810
FOOT CONTROL VALVE DEVICE
Robert H. Aymar, Prince Georges County, and Earl R. Weiner, Baltimore, Md., assignors to We-Mar, Inc., Baltimore, Md., a corporation of Maryland
Filed Aug. 21, 1959, Ser. No. 835,292
6 Claims. (Cl. 137—495)



1. A foot controlled valve device comprising a generally rectangular planar base of relatively high specific gravity, a pair of spaced similar ears integral with said base and extending upwardly from opposite sides thereof adjacent the rear thereof, pedal means overlying the front part of said base and extending between said ears, means pivotally mounting said pedal means between said ears intermediate the ends thereof for rocking motion, a valve body including a valve element and an upwardly movable valve operator extending therebeneath, supporting conduit means extending through said ears and connected with said valve body, said supporting conduit means mounting said valve body between said ears with the valve body being entirely within an envelope defined by said ears and the valve operator operatively overlying the part of said pedal that extends between said ears, said valve body including opposed chambers between which said valve element is disposed, said conduit means including portions respectively communicating with one of said chambers for directing fluid pressure therebetween, and fluid pressure responsive means connected to said valve element and subject to pressures controlled thereby for providing a reactive force on said pedal means through said valve operator.

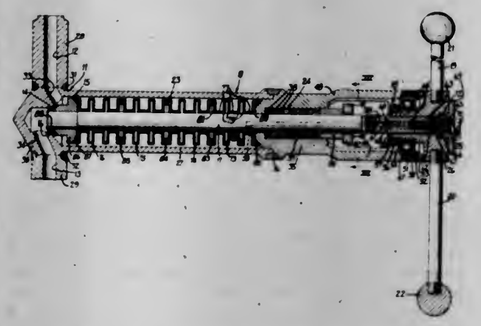
3,019,811
RELIEF VALVE EMBODYING ANTI-VIBRATION STRUCTURE
Maurice W. Young, Fort Wayne, Ind., and Albert C. Schrimshaw, Haviland, Ohio, assignors to Kunkle Valve Company, Fort Wayne, Ind., a partnership
Filed Mar. 10, 1958, Ser. No. 720,271
3 Claims. (Cl. 137—543.13)

1. A relief valve comprising a body member providing a valve seat, a valve disc slidably fitted in the body member and having a portion adapted to engage the valve seat, a pressure pin fitted into the upper face of the valve disc, a first member of synthetic resin material interposed between the pressure pin and the valve disc for isolating and shielding the parts from each other, a bottom spring thrust collar having a tiltable thrust engagement with the pressure pin, and said pressure pin having a portion loosely fitting under a portion of the valve disc, a pressure spring having its lower end engaging the thrust collar, a top thrust collar in contact with the top end of the spring, a spindle secured to the pressure pin and extending up through the spring and thrust collars, said spindle having a connected relation with the bottom thrust collar whereby upward movement of the spindle moves the bottom thrust collar upwardly and



also moves the valve disc upwardly through the loosely fitting portions, means for lifting the spindle, a pressure adjusting screw member supported above the body member and engaging the upper face of the top thrust collar, a second member also of synthetic resin material and which is carried by the bottom thrust collar for contact with the pressure pin, and a third member of synthetic resin material supported by the top thrust collar and through which the spindle extends for isolating and shielding the top thrust collar with respect to the spindle and with respect to the pressure adjusting screw member.

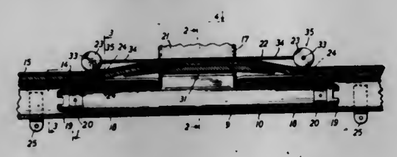
3,019,812
HIGH TEMPERATURE VALVE
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of New York
Filed Oct. 27, 1958, Ser. No. 769,854
6 Claims. (Cl. 137—557)



1. In a valve including a casing having inlet and outlet passages, a valve seat between said passages and a wall portion having an opening therethrough, a valve part having a surface portion engageable with said seat

and a rod portion projecting outwardly through said opening, a metallic bellows around said rod portion integrally connected at one end to said valve part and integrally connected at the other end to said wall portion to prevent flow of fluid through said opening, said casing and said bellows forming a heat flow passage with the outer surface of said bellows continuously exposed thereto, a packing between said rod portion and said wall portion for preventing flow of fluid through said opening in the event of rupture of said bellows, and indicating means responsive to fluid pressure in the region between said bellows and said packing in substantially freely movable relationship to said rod portion to indicate rupture of said bellows.

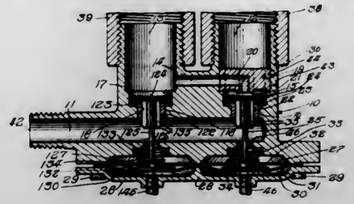
3,019,813
CONDUIT PROVIDED WITH MOVABLE FITTING
Günther Dommann, Wethmar, near Lunen, Westphalia, Germany, assignor to Gewerkschaft Eisenhutte Westfalia, Wethmar, near Lunen, Westphalia, Germany, a corporation of Germany
Filed Sept. 18, 1958, Ser. No. 761,791
Claims priority, application Germany Sept. 26, 1957
5 Claims. (Cl. 137—580)



1. In combination a conduit and a fitting for making a fluid connection to the conduit, said conduit comprising a flexible material including means defining a longitudinally extending slit through the wall thereof, said fitting being essentially a T fitting having the T head formed as an open ended conduit and the T stem formed as an open ended conduit communicating with the T head, the fitting being positioned with the T head disposed lengthwise in the conduit, and the T stem extending through the slit in the conduit wall, slit sealing means sealing the slit in the conduit on each side of the T stem up to a position on each side of the T stem adjacent the T stem, and hermetic sealing means hermetically sealing conduit pressure from the slit between the referred to positions, said T fitting, slit sealing means and hermetic sealing means being slidable axially of the conduit, whereby pressure tight fluid connection can be made at different points along a length of the conduit.

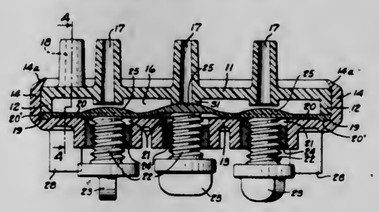
3,019,814
HOME APPLIANCE
Clifton A. Cobb, Carrol A. Orr, and William F. Robandt, Jr., all of St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 850,396
3 Claims. (Cl. 137—607)

1. A mixing valve structure comprising: means forming a mixing chamber having an outlet therefrom; means forming a first inlet passage for delivering a first fluid into said chamber; means forming a second inlet passage for delivering a second fluid into said chamber, including a portion for receiving the second fluid prior to the delivery thereof to said mixing chamber; means forming a relatively restricted flow by-pass passage from said first inlet passage into said portion of the second inlet passage for delivery of first fluid to said portion; means forming a first valve seat in said first inlet passage; means forming a second valve seat in said by-pass passage; valve means in said first inlet passage movable between said valve seats, said valve means closing said first inlet passage into said mixing chamber and opening said by-pass passage when in engagement with said first valve seat and opening said first inlet passage and



closing said by-pass passage when in engagement with said second valve seat; and means for moving said valve means into selective engagement with said valve seats.

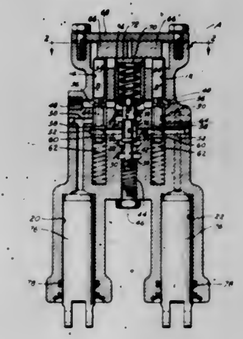
3,019,815
VALVE
Nelson Lenardon, New York, and Harold Romanoff, Scarsdale, N.Y., assignors to Saxon Plastics Corp., New York, N.Y., a corporation of New York
Filed July 15, 1959, Ser. No. 827,394
3 Claims. (Cl. 137—612.1)



1. In a home aquarium tank air valve for selectively and independently controlling the passage of air from a single source through a plurality of outlets into the tank, the air valve having a valve body, the valve body comprising a first valve body part having a plane surface with depending side walls and having a plurality of orifices extending through the plane surface parallel to the side walls, a second valve body part having a plane surface and extending side walls to telescopically receive the first valve body part when the first valve body part is inserted within the second valve body part to form an internal air chamber communicating with said orifices, a flat deformable diaphragm interposed between and sealingly engaged with the depending side walls of the first valve body part and the plane surface of the second valve body part to seal said chamber from the plane surface of the second valve body part, said diaphragm being secured at its periphery to at least one of the valve body parts to lie closely adjacent the plane surface of the second valve body part to resist movement of the diaphragm as an entirety, a plurality of openings in the plane surface of the second valve body part communicating the plane surface and the adjacent side of the diaphragm with the outside of the valve body, said number of openings being equal to the number of said orifices and being alined therewith, a stem threadingly engaged with the plane surface of the second valve body part in each opening and with an operating handle on the outside of the valve body and extending through the opening to terminate in an inner end, the threaded mounting permitting adjustment of each stem for movement of the inner end to and from engagement

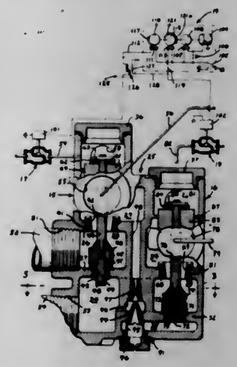
with an adjacent local portion of the diaphragm to deform said local portion of the diaphragm into sealing engagement with its alined orifice, an additional orifice in the plane surface of the first valve body part communicating from the chamber to the outside of the valve body to pass air from the outside of the valve body to the chamber.

3,019,816
CONTROL VALVE FOR DUAL INDEPENDENTLY OPERABLE BRAKING SYSTEMS
Lester J. Larsen and Richard L. Lewis, St. Joseph, Mich., assignors to The Bendix Corporation, a corporation of Delaware
Continuation of abandoned application Ser. No. 705,921, Dec. 30, 1957. This application Mar. 23, 1960, Ser. No. 18,221
3 Claims. (Cl. 137—621)



1. In a control wave for controlling pressure in two separate systems: a valve body member having two motor ports whose pressure supply is to be modulated, first and second individual flow directing valve chambers each of which chambers has an exhaust port, a control port communicating with one of said motor ports, and a pressure port; first and second control members for respective ones of said first and second valves each of which when moved in one direction closes off its exhaust port from its control port and thereafter opens communication between its control port and its pressure port; a modulating valve comprising a longitudinally extending bore in said body member having an exhaust port, a control port communicating with said pressure ports, and a pressure supply port arranged in that order in the sidewalls of said bore; a third control member in said bore having a pair of lands one of which in the normal position of the third control member provides a maximum sidewall overlap between its supply and control ports while the other is open with respect to its exhaust port, and which when actuated provides increasing sidewall overlap between its control and exhaust ports while decreasing sidewall overlap between its control and supply ports; a first actuating means which simultaneously moves said first and third control members in their actuating directions; and a second actuating means which simultaneously moves said second and third control members in their actuating directions; said first and second directing valves and said modulating valve being so constructed and arranged with respect to each other to ensure upon each operation of each of said actuating means that the pressure ports of said directing valves are normally closed and are opened at a time when a pressure, relatively low to the maximum pressure to be supplied to said pressure supply port, is supplied said pressure ports by said modulating valve.

3,019,817
CONTROL SYSTEM FOR WATER TREATMENT APPARATUS
Robert A. Whitlock, Rockford, Ill., assignor to Aqua-Matic Inc., Rockford, Ill., a corporation of Illinois
Filed Sept. 17, 1959, Ser. No. 840,577
10 Claims. (Cl. 137—624.18)

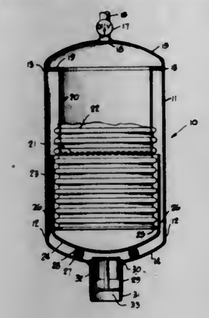


1. A control system for a water treatment apparatus comprising, first and second valve means each including a valve chamber and upper and lower outlet chambers, said valve means each having top and bottom ports respectively communicating each valve chamber with the upper and lower outlet chambers of that valve, a valve member in each valve chamber yieldably urged to a lower position blocking flow through the bottom ports, inlet passage means communicating with the valve chamber of said first valve means between the top and bottom ports thereof for supplying fluid under pressure to the first valve means, first and second flow passages respectively communicating with the upper outlet chambers of said first and second valve means, first and second drain passages respectively communicating with the upper outlet chambers of said first and second valve means, first and second drain valves in said first and second drain passages respectively, means responsive to opening of said first and second drain valves for respectively moving the valve members in the first and second valve means to a raised position blocking flow through the respective top ports, a service outlet, passage means communicating the valve chamber of said second valve means with the lower outlet chamber of said first valve means and with said service outlet, an ejector having a raw water inlet connected to the lower outlet chamber of said second valve means and an outlet communicating with the upper flow chamber of said first valve means, and means for opening said first drain valve and for thereafter opening said second drain valve and for closing said first drain valve to sequentially raise said first and second valve members.

3,019,818
SURGE DISSIPATING APPARATUS
Wilhelm S. Everett, P.O. Box 169, Santa Paula, Calif.
Filed Nov. 3, 1958, Ser. No. 771,278
6 Claims. (Cl. 138—30)

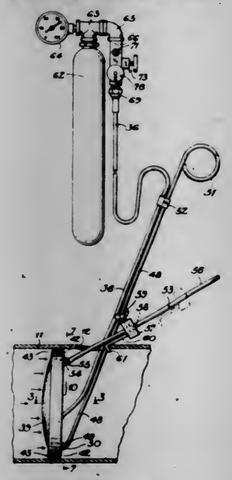
1. An apparatus for attenuating sudden pressure surges in a fluid line, said apparatus comprising: a closed casing; a fluid line; a branch fluid passage communicating between the interior of said casing and said fluid line; throttle valve means interposed in said fluid passage to frictionally absorb a part of the kinetic energy of said pressure surges, said throttle valve means being movable to a first position solely in response to said pressure surges and to a second position solely in response to a falling

off of said surges, and said throttle valve means further embodying a restricted opening in said second position whereby resurges are prevented to said line; compressible



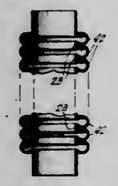
means coupled to and disposed within said casing, said compressible means being adapted to absorb another part of the kinetic energy characterizing said pressure surges.

3,019,819
FLOW STOPPING APPARATUS FOR GAS MAINS
Victor E. Ankarlo, 422 E. 1st St., Duluth, Minn.
Filed Apr. 6, 1959, Ser. No. 804,320
5 Claims. (Cl. 138—93)



4. In a flow stopping apparatus for a gas main, an expansible frame structure comprising oppositely disposed upper and lower shackle members, telescopic strut means connecting said shackle members, a pair of resilient link bars disposed at opposite sides of said strut means and pivotally connected at opposite ends to said shackle members, said link bars being longitudinally channeled at their outer sides and being bowable outwardly by inward pressure on said shackle members, an inflation tube looped around said frame structure and extending in said longitudinally channeled link bars, said tube having a closed end secured to said lower shackle member and an inlet end extending upwardly from said lower shackle member, an elastic diaphragm carried by said frame structure and having a peripheral portion expansible by said inflation tube upon inflation of said tube, a first manipulating rod pivotally secured to the lower portion of said frame structure and swingable inwardly towards said frame structure to lie approximately parallel to said strut means, a second rod pivotally secured to the upper portion of said frame structure, the pivotal axes of said rods being substantially parallel, said second rod having a hook portion adapted to engage an edge of a lateral insertion opening formed in a gas main, and an air supply hose connected to the inlet of said inflation tube and extending along said first rod.

3,019,820
CORRUGATED TUBING
Joseph W. Yowell, Hillspoint Road, Westport, Conn., and Donald B. Miner, Orange Center Road, Orange, Conn.
Filed Feb. 28, 1957, Ser. No. 643,055
2 Claims. (Cl. 138—121)



1. An internal-pressure corrugated tubing formed of only a single piece of thin-walled, seamless tubing comprising a resilient, tubular body having at least one annular corrugation, said corrugation having an outwardly disposed portion whose axial cross-section is substantially the arc of a circle extending materially greater than 180 degrees and an annular inwardly disposed portion whose axial cross-section is straight and constitutes a cylindrical section, the intersection of the first-named portion and the inwardly disposed portion having relatively no curvature thereby forming a sharp intersection.

3,019,821
LOW FRICTION FABRIC MATERIAL
Charles S. White, 30007 Lahser Road, Birmingham, Mich.
Original application Nov. 4, 1955, Ser. No. 544,945, now Patent No. 2,804,886, dated Sept. 3, 1957. Divided and this application July 31, 1957, Ser. No. 677,175
3 Claims. (Cl. 139—420)

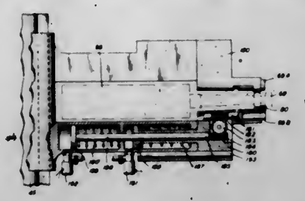


1. A woven fabric having spaced plies forming opposite faces thereof, one of said plies having threads of tetrafluoroethylene material therein to provide a low friction surface on the outer face thereof, the other of said plies having threads of bondable material therein to provide a bondable surface on the outer face thereof, a plurality of stuffer cords in the space between said plies, and means for connecting said plies and retaining said stuffer cords in position.

3,019,822
AUTOMATIC WIRING APPARATUS
Oscar D. Jacobson, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 3, 1956, Ser. No. 601,996
1 Claim. (Cl. 140—71)

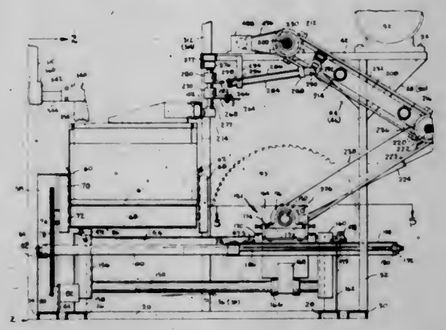
In automatic wiring apparatus for applying and securing wire to modularly spaced terminals on a planar panel,

including a first and second wiring device, wire dressing means associated with each said device comprising a pair of modularly spaced tubular members one above and one below each said device, means for moving each said pair of tubular members in a plane parallel to the plane of said



panel in the Y direction, means for moving each said wiring device in the X direction and in only one sense away from the position between said associated pair of tubular members, each said tubular member comprising an inner and an outer cylinder, said inner cylinder being arranged for longitudinal motion relative to said outer cylinder.

3,019,823
AUTOMATIC WOOD FEEDING AND CUTTING SAW APPARATUS
Cyrus J. Cornell, Laceyville, Pa.
Filed June 18, 1959, Ser. No. 821,186
1 Claim. (Cl. 143—47)



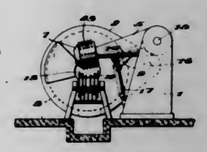
A wood saw comprising a frame an alternately moving and stopped wood supporting feed conveyor for feeding wood toward said frame, a wood stop positioned in the path of movement of said wood, a continuously rotating wood saw mounted for cutting and return movements in said frame, an auxiliary support arm mounted intermediate the path of movement of said saw and said stop for supporting the forward end of said wood, control means operable upon engagement of said wood with said stop to halt the movement of said feed conveyor and initiate forward movement of said saw, said forward movement serving to cut the wood positioned in the path of movement of said saw, said control means including means operable in response to a decrease in the speed of rotation of said saw to reverse the feed of said saw and to reestablish the cutting feed when said saw regains its normal rotative speed and further means for reversing the forward movement of said saw upon completion of the cut of the wood, and reverse movement of said saw serving to move said support arm out of supporting position and start movement of said feed conveyor upon completion of said reverse movement, and means operable upon completion of said reverse movement to return said support arm to its supporting position.

3,019,824
KNOT REMOVING MACHINE
Brownie S. Bakke, Arcata, Calif.
(120–A E. 4th St., Cloverdale, Calif.)
Filed Jan. 21, 1960, Ser. No. 3,762
5 Claims. (Cl. 144—2)



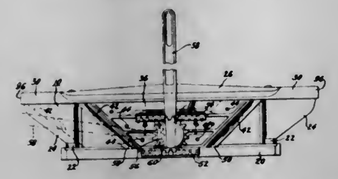
1. A knot removing machine comprising a frame, a conveyor adapted to receive veneer panels and carried by said frame, said conveyor having a lower flight with spaces therebetween through which loose knots are adapted to fall, and means including a roll having a plurality of fingers located above said lower flight for pushing loose knots from the veneer panels as they are propelled by the lower flight of said conveyor, said means further including a brush extending transversely across the lower flight of the conveyor, said lower flight of the conveyor having at least two groups of belts arranged in tandem with the belts of one group transversely staggered with reference to the belt of the other group thereby leaving staggered spaces in the lower flight through which the knots may be ejected.

3,019,825
BARKING MACHINES
Kjell Olof Gunnar Herolf, Sundsbruk, near Sundsvall, Sweden, assignor to Sunds Verkstader Aktiebolag, Sundsbruk, Sweden
Filed Dec. 21, 1959, Ser. No. 861,051
Claims priority, application Sweden Dec. 22, 1958
3 Claims. (Cl. 144—208)



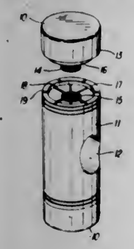
1. A barking machine comprising a frame, a substantially horizontally disposed holder swingably mounted adjacent one end thereof about a pivot axis on said frame, the remainder of said holder being adapted to move substantially vertically, a rotary drum journaled in said holder and movable therewith, at least one barking member mounted in said drum and adapted to engage a log which is passed axially through said drum, means for guiding a log longitudinally through said drum, said log-guiding means comprising a lower stationary conveyor, at least one arm swingably mounted adjacent one end thereof about a pivot axis to said frame, the other end of said arm being adapted to move substantially vertically above said stationary conveyor and a roll mounted adjacent said other end of said arm and movable therewith, said roll being adapted to engage a log on said stationary conveyor, and means including a link connecting said arm to said holder to cause vertical movement of said roll, effected by engagement thereof with the upper surface of a log, to automatically move said holder to center said drums with respect to a log as it is passed therethrough.

3,019,826
WOOD TRIMMING MACHINE HAVING IMPROVED CUTTER PROTECTIVE MEANS
William L. Grathwol, deceased, late of Stratford, Conn., by Margaret D. Grathwol, executrix, 1422 Broadbridge Ave., Stratford, Conn.
Filed June 2, 1959, Ser. No. 817,618
10 Claims. (Cl. 144—216)



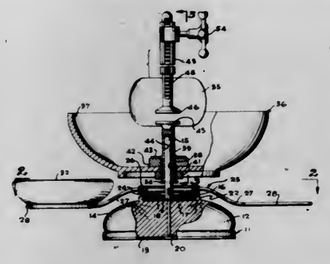
1. A wood trimming machine comprising: a generally horizontally extending cutter frame; a carriage supported by said frame for horizontal to-and-fro movement relative thereto; a cutter blade secured to one end of said carriage and facing toward one end of said frame; means for positioning wood pieces on said frame in position to be cut by said cutter blade; means for moving said carriage to cut such a positioned piece of wood; and horizontally extending means supported by said frame and disposed so as to cover the top of said cutter blade regardless of its horizontal position, said horizontally extending means including a depending skirt which substantially surrounds the upper edge of said cutter blade when said cutter blade is disposed in the vicinity of the end toward which it faces, whereby the user of said wood cutter is protected from unintentional contact with said cutter blade from the top thereof during operation of said wood cutter.

3,019,827
HAMMERS WITH REPLACEABLE STRIKING FACE
Winstone Eric Payton Jeffery, Hall Green, Birmingham, and Walter Runciman Stephens, Stratford-on-Avon, England, assignors to Birmingham Belting Company Limited, Birmingham, England, a company of Great Britain
Filed Dec. 28, 1959, Ser. No. 862,243
Claims priority, application Great Britain Jan. 3, 1959
2 Claims. (Cl. 145—36)



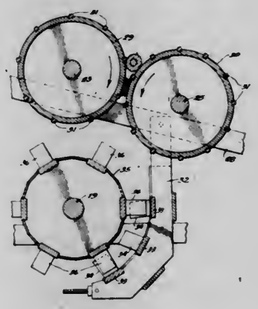
1. A hammer comprising a head portion of hard metal and a renewable face portion of a relatively soft synthetic resinous material having a screw threaded stem for engagement with an internally threaded hole provided in the head portion, the face portion having a plain surface surrounding said stem and the end of the head around said internally threaded hole being provided with a locking surface which is engaged by said plain surface on the face portion, said locking surface having a series of angularly spaced indentations around said internally threaded opening, wherein the head portion has a series of angularly spaced radially extending grooves provided on a flat surface which is on the end face of the head portion in a plane at right angles to the axis of the said internally threaded hole.

3,019,828
NUTCRACKER
Jack R. Pava, Santa Barbara, Calif.
Filed Sept. 26, 1960, Ser. No. 58,496
2 Claims. (Cl. 146—14)



1. In a nutcracker device, a base, a spindle projecting upwardly from the base, a bowl-supporting frame mounted for rotation on said spindle and providing a plurality of circular bowl-supporting portions arranged in circumferentially spaced relation, antifriction bearing means between said base and said frame, a support on said spindle above said frame, a main bowl resting on said support, and nut-cracking means carried by said bowl, said main bowl and said nut-cracking means being removable as a unit from said spindle.

3,019,829
APPARATUS FOR SEGMENTING CORNCOBS
Roger R. Yoerger, Champaign, Ill., assignor to Iowa State College Research Foundation, Ames, Iowa, a corporation of Iowa
Filed Sept. 3, 1959, Ser. No. 838,374
4 Claims. (Cl. 146—117)



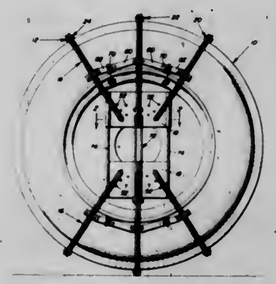
1. In apparatus for segmenting corncobs, a frame, a pair of rollers rigidly, rotatably supported on said frame with the axes thereof disposed in parallel, side-by-side relation, means on said frame supporting the axis of one roller higher than the axis of the other roller, means on said frame for rotating said rollers toward each other at the tops thereof, said rotating means including means for rotating the lower of said rollers faster than the upper of said rollers, each of said rollers being equipped with a plurality of axially extending bars spaced about

the periphery thereof, said rollers being sized to grip a cob on nearly opposite sides of the center line and spaced apart about one-half inch, and a rotatable knife mounted on said frame below said rollers for cutting action transverse to the axes of said rollers whereby said knife is adapted to sever the elongated cob strips provided by the action of said rollers transversely thereof into segments of relatively uniform size.

3,019,830
ADJUSTABLE SNOW AND MUD LUG FOR VEHICLE TIRES

Albert J. Shelby, 3023 Sheridan Road, Lennon, Mich.

Filed Apr. 29, 1960, Ser. No. 25,647
8 Claims. (Cl. 152—225)



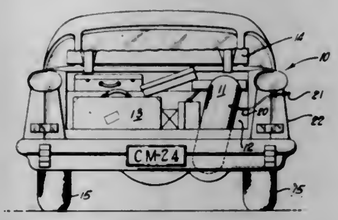
1. An adjustable traction device for vehicle tires comprising a pair of generally J-shaped opposed traction members adapted to embrace diametrically opposite portions of a vehicle tire with the free ends of the longer leg portions thereof disposed on one side of a tire and projecting toward each other, adjustable and coacting securing means on said longer leg portions interconnecting the latter for moving the free end portions of said J-shaped members toward each other to frictionally embrace diametrically opposite portions of a tire, each of said J-shaped members including at least three generally U-shaped members, a mounting plate, means fixedly securing one free end portion of the center U-shaped member to said plate, and means pivotally securing the corresponding end portion of each of the other U-shaped members to said plate for movement about an axis extending between the free end portions of its legs, and interconnecting means secured between the legs of the center U-shaped member and the corresponding legs of the other U-shaped member, adjacent the bight portions thereof, of each of said J-shaped members for limiting movement of the bight portions of said U-shaped members away from each other.

3,019,831
PNEUMATIC TIRE-FILLING DEVICE

Charles J. Morrello, 2 Tudor City Place, New York, N.Y.

Filed Nov. 16, 1959, Ser. No. 853,083
2 Claims. (Cl. 152—415)

1. In a pneumatic tire filling device of the character described for mounting through the side of an automobile for communication between the outside of said automobile and a spare tire located within said automobile, said spare tire having a conventional threaded filling valve stem including an air valve therein openable upon depressing, the combination which comprises a flexible air conduit for leading from a filling point outside said automobile to said spare tire valve stem, a threaded coupling at the end of said conduit adjacent said spare tire and adapted for connection to said valve stem for flow communication between said conduit and said spare tire, said coupling including means for depressing and opening said air valve in said spare tire valve stem, a nipple adjacent the opposite end of said conduit for flow communication between said conduit and the outside of said automobile, means for permanently mounting said nipple penetrating through the side of said automobile, each of the opposite ends of said nipple being threaded for receiving threaded couplings thereon, a threaded coupling at said opposite end of said conduit adapted for connection to one end of said threaded nipple inside said automobile, a threaded cap adapted for connection to the opposite end of said threaded nipple outside said automobile, a one-way air valve in said nipple for retaining pneumatic pressure with-

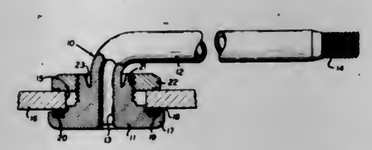


in said spare tire notwithstanding said opening of said valve in said spare tire valve stem by said coupling and for admitting passage of air pressure through said nipple from the end thereof outside said automobile, said outside end of said nipple being adapted to receive in flow communication air pressure from a conventional filling air hose, and the size and threading of said nipple and the outside diameter thereof all being selected to accommodate and interfit with conventionally standard threaded air hose couplings as used in the automotive industry and said threaded couplings on opposite ends of said conduit being conventionally standard couplings as used in the automotive industry whereby said combination comprises conventionally standard interfitting parts.

3,019,832
LOW BEND, TUBELESS TIRE VALVE STEM

Selden T. Williams, Bellerose, N.Y., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Nov. 30, 1956, Ser. No. 625,261
5 Claims. (Cl. 152—427)

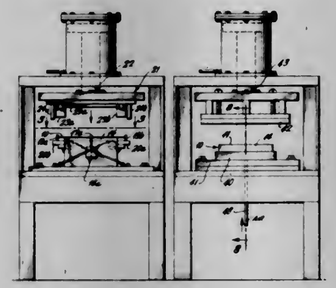


1. A valve stem for attachment to a tubeless tire rim, said valve stem comprising a tubular shank portion and an enlarged base portion integral with the shank portion and of an axial length to have a part thereof inserted into and extend through a valve stem hole in a tire rim, said base portion being formed with an axially extending annular groove at the juncture of the base portion with the inner end of the shank portion, said groove being of a depth to enable the shank portion to be bent at a minimum radius to the base portion, and said base portion being formed at one end with an annular flange adapted to seat against a face of a tire rim and at the other end is externally screw threaded and adapted to accommodate a clamping nut for engaging the other face of the rim.

3,019,833
ROLLED EDGE METAL CONTAINERS, METHOD AND APPARATUS FOR MAKING SAME

Patrick H. Reardon, Hagerstown, Md., assignor to The Mitchel-Tyler Company, Hagerstown, Md., a corporation of Maryland

Filed Sept. 29, 1959, Ser. No. 843,220
5 Claims. (Cl. 153—2)

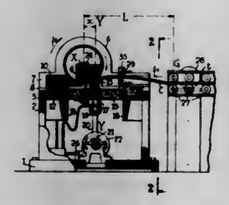


1. The method of making an open metal container having rolled edges and interlocked sides which comprises bending a tab at each corner of a rectangular flat metal blank into a plane normal to the plane of the blank, bending two first sides of said blank having one of said tabs at each end of each said first sides along a line normal to the bends of said tabs and into a plane normal to the plane of said tabs, bending the remaining two sides of said blank each along a line joining the points of intersection of the bend lines of said tabs and said two first sides of said blank so that the plane of said two remaining sides after they are bent is parallel to the planes of said tabs, and rolling the edges of said two remaining sides together with the edges of said tabs into a circular configuration to lock said first and remaining sides in positive engagement with each other.

3,019,834
SHEET-BENDING METHOD AND MACHINE FOR THE PRODUCTION OF TUBULAR ELEMENTS

Francois H. Montignot, Pont-a-Mousson, France, assignor to Compagnie de Pont-a-Mousson, Nancy (Meurthe-et-Moselle), France, a French body corporate

Filed Jan. 28, 1959, Ser. No. 789,534
Claims priority, application France Jan. 31, 1958
6 Claims. (Cl. 153—65)

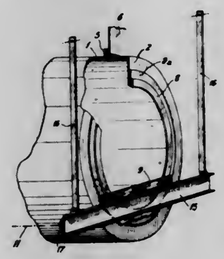


1. A method of bending a sheet about a cylindrical portion of a fixed form, comprising: continuously positively feeding the sheet in the direction toward said form, maintaining the sheet free of restriction over a determinable length prior to its reaching said cylindrical portion of the form, applying to the free length of the sheet a discontinuous force substantially perpendicular to said sheet for permanently bending a portion of said sheet by applying the latter against the cylindrical portion of the form, said portion facing the direction from which the sheet is fed, and creating simultaneously in said free length of sheet, upstream of the sheet portion which is being permanently bent and which is temporarily stopped due to its being applied against the form, due to the continuous positive feed of the sheet toward said form, an elastic bend whose convexity is directed oppositely to that of said sheet portion, then terminating the bending force so that the potential energy stored in said elastic bend automatically and simultaneously causes the expansion of said elastic bend and an advance with respect to said form of the permanently bent sheet portion, and guiding said bent sheet portion during its advance about the fixed form on the downstream side thereof opposite the direction of feed of the sheet with respect to the form.

3,019,835
ROTARY KILNS AND DRYERS OR OTHER LIKE APPARATUS

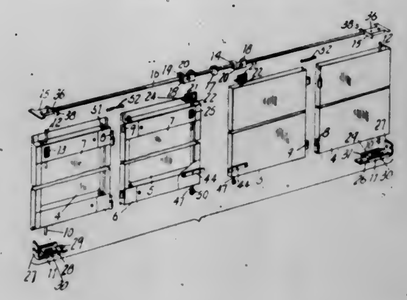
René L. F. Maurand, La Couronne, France, assignor to Ciments Lafarge, Paris, France, a corporation of France

Filed July 8, 1957, Ser. No. 670,472
Claims priority, application France July 15, 1956
11 Claims. (Cl. 159—9)



11. In a rotary kiln or dryer of the upwardly inclined type, through which passes a rising flow of gas for drying a fluid pulp or slurry fed at the upper end of said kiln, said kiln being provided with an outer cylindrical shell having at least at its upper extremity a radial inner flange, the provision of means for maintaining in the higher end of said kiln a pool of fluid slurry having at its upper extremity a depth higher than the radial dimension of said flange, said means comprising a wearing annulus coaxial and secured to the outer face of said flange; a dam-plate located near the outer face of said wearing annulus, said plate having dimensions and being placed in suitable relationship for overlapping the lower segment defined by the outer periphery of said wearing annulus and having a horizontal edge located at a level at least as high as the level of the pool of slurry to be maintained in the kiln; a wearing sliding member secured to said plate on the side thereof facing said wearing annulus; a bar horizontally disposed opposite said segment and secured to said plate on the other side thereof; a pair of sliding shoes secured to both ends of said horizontal bar; slide tracks mounted parallel to the axis of said kiln for guiding said sliding shoes; and a pair of cables connected respectively to both ends of said bar and carrying weights at their free ends, said cables passing round a pair of pulleys located so as to maintain the strands of the cables secured to said bar in a direction giving rise on both ends of said bar to components of forces substantially parallel to the axis of said kiln and directed towards said wearing annulus to press the wearing sliding member thereagainst.

3,019,836
FOLDING DOORS AND MOUNTING FIXTURES THEREFOR
Robert L. Leigh, Grand Rapids, Mich., assignor to Air Control Products, Inc., Coopersville, Mich.
Filed Feb. 20, 1959, Ser. No. 794,573
8 Claims. (Cl. 160—199)



1. A folding door assembly in a doorway having a lintel, side and floor comprising a side panel positioned adjacent said side and an outer panel hingedly supported from the outer edge of said side panel, a top bracket of downwardly opening channel section secured to said lintel adjacent said side of said doorway and having a downturned transverse wall at its outer end, a guide rail secured to said transverse wall and extending outwardly from said side and across said doorway above said panels, an upwardly opening channel shaped spring retainer secured within said bracket inwardly of said transverse wall and defining a first slot disposed perpendicular to said side of said doorway, a spring retained above said retainer, a top abutment slidable in said retainer and urged outwardly from the side of said doorway by said spring, a top pintle slidably mounted at the upper inside corner of said side panel and spring urged through said first slot at the outer side of said abutment, a bottom bracket of upwardly opening channel section secured to said floor below said top bracket and extending outwardly from the side of said doorway, a second spring retainer of downwardly opening channel section longitudinally adjustably secured in said bottom bracket and defining an upwardly opening slot, a second spring positioned between said bottom bracket and said second retainer, a bottom abutment slidable in said second retainer at the outer end of said second spring, a bottom pintle fixedly projecting from the lower inside corner of said side panel and projecting through the upwardly opening slot in said second retainer outwardly of said second abutment, a top guide rod slidably mounted in the upper outer corner of said outer panel and spring biased upwardly therefrom, said top guide rod having an angled bracket on its upper end, a U-shaped guide bracket slidably mounted on said guide rail and having a laterally projecting head pin on its side, said bracket on said top guide rod defining a laterally opening slot receiving the end of said headed pin, a spring plate on said angled bracket overlying the slot therein and defining a hole retaining said headed pin in said bracket, a bottom guide rod slidably mounted in the lower outside corner of said outer panel and yieldably projected therebelow, and a retaining bracket secured to said floor below the closed position of the outer edge of said outer panel and defining an upwardly opening inwardly diverging V-shaped notch adapted to receive said bottom guide rod, the top edges of said panels having projections thereon spaced from the adjacent side edges of the panels and a tension spring connected between said projections.

3,019,837
IN SITU COMBUSTION PROCESS
John W. Marx, Richard H. Langenheim, Henry O. Dixon, and Joseph C. Trantham, all of Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Oct. 28, 1957, Ser. No. 692,592
8 Claims. (Cl. 166—11)

8. A proces for initiating in situ combustion in a permeable stratum containing combustible carbonaceous material which comprises passing air thru a section of said stratum between a first well and second well therein so as to effect absorption of O_2 by said stratum; continuing the passing of air thru said stratum for at least 10 hours and until the O_2 concentration in the effluent gas is substantially that of the injected air; thereafter igniting said stratum around one of said wells to establish a combustion zone in the adjacent stratum; and moving said combustion zone thru said stratum between the wells by feeding air thereto.

3,019,838
WELL BORE COMPLETION METHOD
Don L. Harlan and Joel A. Battle, Jr., Houston, and Joseph C. Allen, Bellaire, Tex., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 863,045
8 Claims. (Cl. 166—39)



1. In the recovery of hydrocarbons contained in an underground formation traversed by at least one well bore and where a combustion-supporting gas is injected into the formation through a tubing string positioned in said well bore, said tubing string having a packer affixed at a point along its length, the method of preparing said well bore containing a column of liquid hydrocarbons for the recovery operation which comprises introducing a non-combustible, heavier-than-oil liquid into said well bore while maintaining the packer affixed to the tubing string in a retracted position in an amount sufficient to raise the oil-non-combustible liquid interface to a level just above that at which the packer is to be set for said recovery operation, raising the tubing string and packer affixed thereto and, setting said packer below the level of said liquid interface to form a fluid-tight seal between the tubing string and the wall of the well bore at the desired level for the recovery operation, introducing a non-combustible fluid into the well bore above the set packer whereby substantial pressure is exerted downward against the packer, providing a combustion-supporting gas to said well bore below the set packer to drive the relatively small amount of non-combustible, heavier-than-oil liquid remaining in this part of the well bore into the formation

and to establish permeability to adjacent well bores traversing the formation, and initiating said recovery operation in the formation adjacent the lower portion of the well bore.

3,019,839
METHOD FOR RELIEVING HYDROSTATIC PRESSURE IN OIL RECOVERY FROM WELLS
Dolores Floyd Bloom, Bakersfield, Calif., assignor to Aircushion Patents Corporation, Bakersfield, Calif., a corporation of California
No Drawing. Filed Aug. 25, 1960, Ser. No. 51,797
2 Claims. (Cl. 166—43)

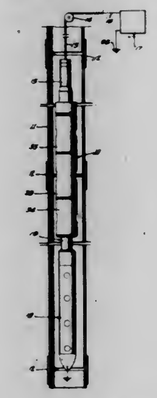
1. A method of recovering fluids from an earthbore penetrating a fluid bearing formation and containing substantially coaxially disposed tubing and a casing between which a hydrostatic head bears upon the formation, including the step of inducing a pendulum-like action of the body of liquid extending into the casing and the tubing by repeatedly alternating the steps of introducing gas at the surface of the ground between the casing and tubing under pressure sufficient to discharge a portion only of the liquid of said hydrostatic head from the opened upper end of said tubing and then introducing gas into the tubing at the surface of the ground under pressure sufficient to discharge a portion only of the liquid of said hydrostatic head from the opened upper end of said casing; the alternation between said steps being effected in timed relation with the minimalization of the liquid flow from the opened upper ends of said tubing and said casing, respectively.

3,019,840
RETRIEVING TOOL
Thomas A. Kennard, Box 723, Jennings, La.
Filed June 25, 1958, Ser. No. 744,376
10 Claims. (Cl. 166—55)



1. Apparatus for retrieving a fish secured within a well above the bottom thereof, said fish having a tubular body and permanently set locking means on said body positively gripping the wall of said well to prevent axial movement of said body, said apparatus comprising a tubular housing adapted to be moved axially within said well, an annular cutting member on the lower end of said housing adapted to mill away said locking means upon rotation thereagainst, said housing being adapted to receive said tubular body as said cutting member penetrates axially through said locking means, gripping means within said housing to receive and support said body, an anchor spear adapted to extend through said tubular body while said cutting member engages said body, said anchor spear being slidably and rotatably carried in said housing, radially extendable members on the lower end of said anchor spear for gripping the inner wall of said well, and fish gripping means on said anchor spear adapted to engage said body and prevent rotation thereof.

3,019,841
CASING COLLAR LOCATOR
Helmut G. Ternow, Sierra Vista, Ariz., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Aug. 15, 1957, Ser. No. 678,380
8 Claims. (Cl. 166—55.1)

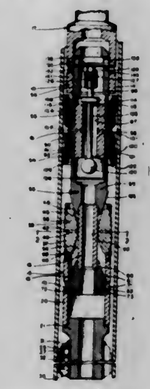


1. Combination well logging and perforating apparatus for use in a cased borehole comprising: a housing; elongated magnet means in the said housing, said magnet means having a substantially constant magnetomotive force and polarity and being adapted to be lowered therewith into a borehole on a supporting cable and for emitting and receiving magnetic flux at longitudinally spaced-apart locations in the borehole; a relatively high resistance inductor coil positioned in inductive relation to said magnet means for producing voltages normally below a predetermined value responsive to changes in said magnetic flux; an electrically operated perforator connected to said housing, said perforator having electrical actuating means connected in series with said coil; a direct current source adapted for positioning at the top of the borehole and for connection in series with said coil and said perforator actuating means; and a shunt circuit connected across said coil, said circuit including diode means in series therein having a threshold conductivity potential above the aforesaid predetermined voltage and a relatively low resistance at voltages thereacross above said predetermined voltage.

3,019,842
WELL PACKER
Benjamin P. Nutter, Houston, Tex., assignor to Johnston Testers, Inc., Houston, Tex., a corporation of Texas
Filed Nov. 19, 1958, Ser. No. 775,056
15 Claims. (Cl. 166—126)

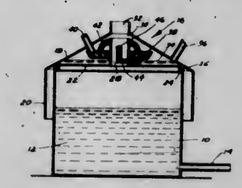
1. In a bridge plug positionable within a casing: a tubular housing, friction means carried by said housing for engaging the casing, slip means pivotally and slidably carried by said housing for pivoting and radial movement outwardly into gripping engagement with said casing, a tubular mandrel having a lower end slidably received within said housing for limited longitudinal movement relative thereto, longitudinally spaced expander means carried by said mandrel for independently wedging alternate opposite ends of said slip means into gripping engagement with the casing, elastomer packing means car-

ried by said mandrel above said expander means for packing off against pressure differentials acting upwardly and downwardly thereon, valve means received in said mandrel operative by flow of fluid through said tubular mandrel and housing for blocking the flow of fluid there-



through in either longitudinal direction, and a retrieving head adapted to be operatively connected to a tubing string releasably connected to said mandrel and to portions of said valve means and urging said valve means to open positions permitting flow of fluid through said mandrel and housing in either direction.

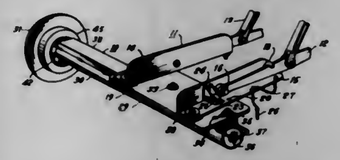
3,019,843
FIRE INHIBITOR AND EXTINGUISHER
Dawson Powell, 1102 Buttonwood Ave., Warwick, R.I.
Filed July 27, 1956, Ser. No. 600,542
6 Claims. (Cl. 169—2)



1. Apparatus for preventing and extinguishing combustion in open-top storage tanks for flammable liquids, said apparatus comprising a floatable compartment of slightly less peripheral dimension than the tank interior, said compartment being substantially enclosed with the exception of a plurality of outlet openings located adjacent the upper portion thereof, said compartment being adapted to receive therein a supply of vaporizing non-flammable liquid whereupon application of radiant heat to said tank will simultaneously cause vaporization of the flammable liquid therein and the non-flammable liquid in said compartment, said vapors mixing to produce a non-flammable mixture before contacting the surrounding air.

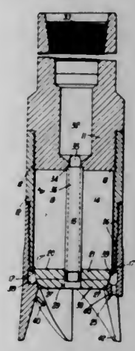
3,019,844
VEHICLE MOUNTED EDGERS
Milford M. Key, P.O. Box 161, Cleburne, Tex.
Filed Nov. 24, 1958, Ser. No. 776,132
2 Claims. (Cl. 172—15)

1. Means for mounting an edger on a vehicle including a pair of substantially horizontal frame members extending longitudinally of the vehicle and mounted thereon for limited lateral movement relative to each other, a plate extending transversely between the frame members, a pair of upright fasteners pivotally connecting the plate to said frame members for limited relative movement about upright axes, an arm extending transversely between said frame members in superimposed relation to said plate and having an outer end portion projecting



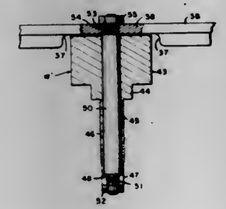
laterally of said members for supporting the edger, an upright fastener pivotally connecting the inner end portion of the arm to said plate for movement about an upright axis to vary the angular relationship of said arm to said plate, the limited movement of said frame members and plate permitting limited longitudinal movement of said arm laterally of the vehicle, and means attaching said arm to said plate in adjusted angular positions.

3,019,845
MAGNETIC RETRIEVING TOOL
William Mayall, Chessington, England, assignor to Kingston Instrument Company Limited, Chessington, England, a British company
Filed June 15, 1959, Ser. No. 820,256
Claims priority, application Great Britain June 25, 1958
9 Claims. (Cl. 175—328)



1. A magnetic retrieving tool for removing magnetizable material from oil wells and similar bore holes comprising a hollow body, at least one permanent magnet disposed within said body, a main cap member of magnetic material and a cutter having a plurality of teeth located at one end of said body, said cutter being provided with outlet ports for directing liquid onto each of said teeth during operation of the tool, means establishing a passageway for liquid through said body from one end thereof to the other, said passageway being in communication with said outlet ports in said cutter, means detachably securing said main cap member and cutter to said body end and with the outer face of said main cap member exposed to the exterior of said body for attracting magnetizable material, and an auxiliary cap member secured to said body and disposed intermediate said main cap member and permanent magnet for retaining said permanent magnet within said body, said auxiliary cap member having one face thereof in mangetic contact with at least one pole piece of said permanent magnet and the opposite face thereof in magnetic contact with the inner face of said main cap member, and said main cap member and cutter being detachable from said body without separating said auxiliary cap member from its magnetic contact witth said pole piece of said permanent magnet.

3,019,846
SENSITIVITY COMPENSATED BALANCE
Fritz Baur, Denver, Colo., assignor to Wm. Ainsworth & Sons, Inc., Denver, Colo., a coropration of Colorado
Filed Apr. 7, 1960, Ser. No. 20,762
10 Claims. (Cl. 177—246)



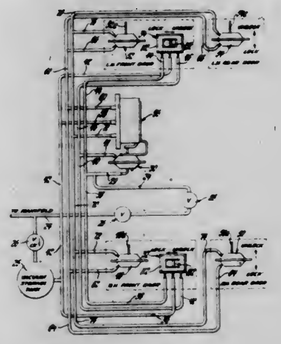
10. In a balance including a beam, the improvement comprising a stud extending downwardly from said beam and formed of material having a coefficient of thermal expansion materially less than the coefficient of thermal expansion of said beam; and a counterweight attached to the lower end of said stud and extending upwardly along said stud.

3,019,847
EXHAUST SYSTEM FOR VEHICLE INTERNAL COMBUSTION ENGINE
Franz W. Abramson, Glendale, Calif., and Joseph H. Gilson, Warren, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,515
5 Claims. (Cl. 180—64)



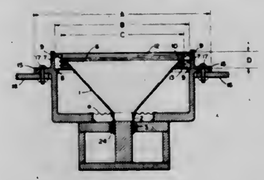
1. In an engine exhaust system for a vehicle having an internal combustion engine and a vehicle frame and a vehicle body defining wheel wells and spaced vehicle wheels mounted for rotation in said wheel wells, an engine exhaust manifold connected with said engine to receive exhaust gases therefrom and having a discharge passage, an exhaust muffler connected with said discharge passage and mounted in generally parallel relation to and nested against said engine and having a discharge pipe section extending therefrom, a second pipe section joined to said discharge pipe section and extending forwardly through a portion of said vehicle frame, a lateral pipe section joined to said second pipe section and extending upwardly and outwardly laterally beyond said frame and discharging the exhaust gases from said engine through said vehicle body adjacent a vehicle wheel well.

3,019,848
VACUUM-OPERATED COINCIDENTAL DOOR LOCK CONTROL SYSTEM
Louis P. Garvey and James D. Leslie, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,662
4 Claims. (Cl. 180—82)



1. In a fluid-operated door locking system for automatically and manually operating a door latch comprising, a fluid source, a reservoir for said fluid, fluid controlled operating means connected with said door latch, a fluid supply circuit for connecting said reservoir to said operating means, said fluid supply circuit including a remote control means for directing fluid from said reservoir to said operating means for locking and unlocking said latch, said remote control means including delay means for maintaining fluid communication betweeen said reservoir and said operating means for a predetermined time interval, a valve in said fluid circuit interposed between said fluid source and said remote control means, said valve associated with a transmission selector and adapted upon movement of the latter into a drive position to direct fluid from said source to said remote control means to energize said delay means for locking said latch, and a manually operable valve located in said circuit between said reservoir and said remote control means and adapted upon momentary actuation to energize said delay means whereby sufficient fluid is admitted from said reservoir to said latch operating means to lock or unlock said door latch.

3,019,849
LOUDSPEAKER DIAPHRAGM SUSPENSION
John A. King, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed July 16, 1959, Ser. No. 827,607
13 Claims. (Cl. 181—31)



1. In a sound-reproducing device, an acoustic diaphragm, a housing having first and second supporting flanges lying in spaced parallel planes, a generally cylindrical corrugated compliant element, means for rigidly attaching the opposed ends of said compliant element to

said first and second supporting flanges and means for attaching said diaphragm to the interior surface of said cylindrical element intermediate said ends.

3,019,850
PREFABRICATED INSULATED DUCT AND SOUND TRAP
John J. March, 54—18 43rd St., Maspeth, N.Y.
Filed Apr. 8, 1958, Ser. No. 727,219
2 Claims. (Cl. 181—42)



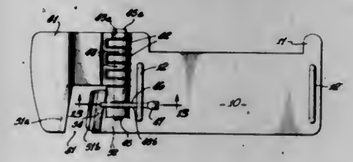
1. A prefabricated duct section having substantially rectangular shape comprising a plurality of equally dimensioned glass fiber sections having an outer coating of aluminum foil affixed thereto and an inner coating of perforated metal affixed thereto, plural angularly formed hinged portions provided in the perforated metal and the glass fiber mat, adhesive means disposed on said hinged portions to effectively seal said hinged portions as a unitary joint upon the angular assembly of the duct into substantially rectangular shape, sound attenuation means disposed between opposite side walls of the assembled duct, means extending beyond the upper and lower edges of the sound attenuation means adapted to be disposed within predetermined apertures in the opposite sidewalls to secure said sound attenuation means in predetermined relation in the assembled duct, and said sound attenuation means comprising glass fiber members discriminately shaped with hollow resonance chambers therein.

3,019,851
EXTENSION LADDER
Roger C. Doss, 2313 Ogden, Omaha, Nebr.
Filed Aug. 1, 1960, Ser. No. 46,837
3 Claims. (Cl. 182—111)



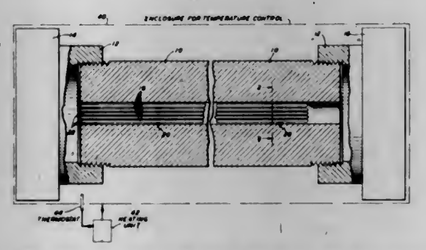
1. In a sectional ladder, the combination which comprises a center beam including a plurality of sections channel-shaped in cross section and positioned back to back, each having continuous longitudinally disposed openings in the sides, sockets spaced inwardly from one of the ends thereof, and splice bars with spring latches therein extended from ends opposite to the ends in which the sockets are positioned, the spring latches of one section being positioned to snap into the sockets of an adjoining section in assembling the beam, rungs having hubs with lugs extended from lower surfaces and having projections on outer ends pivotally mounted in the sections and positioned to, selectively, fold into the sections or extend outwardly from the sections, said lugs being below the pivotal mountings of the rungs and positioned to support the rungs in horizontal positions, and adjustable supporting means on the lower end of the beam.

3,019,852
CLIMBER
Emil O. Soderberg, 1809½ Echo Park Ave., Los Angeles 26, Calif.
Filed Jan. 2, 1958, Ser. No. 706,633
5 Claims. (Cl. 182—134)



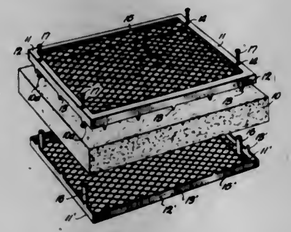
2. A climber device for use with foot gear for climbing a flanged structural member, comprising an elongated foot plate adapted to be secured to a shoe and to extend transversely with respect to the shoe, the foot plate having thereon a forwardly open recess adjacent one end thereof and defined by longitudinally spaced sides, a disc secured pivotally to the foot plate for rotation on an axis substantially normal to the plane of the foot plate, the disc having a gripping edge projecting beyond one of said spaced sides of the recess toward the other of said spaced sides and terminating a predetermined distance from the latter, the other of said sides having thereon a gripping edge facing the gripping edge of the disc, said gripping edges being arranged substantially normal to the longitudinal axis of the foot plate with the inner gripping edge disposed a spaced distance below the outer gripping edge, whereby the gripping edges function to receive a flange of a structural member therebetween and to grip the opposite sides of the latter at vertically spaced points.

3,019,853
SEPARATION OF GASES BY DIFFUSION
Girard T. Kohman and Kenneth B. McAfee, Jr., Summit, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 30, 1958, Ser. No. 745,374
11 Claims. (Cl. 183—2)



1. The method of extracting helium from a mixture with other gases comprising impressing the mixture under a pressure of several thousand pounds per square inch upon the outer surfaces of a plurality of capillary tubes formed of a glass including at least one of the glass-forming substances selected from the group consisting of SiO_2, B_2O_3, Al_2O_3 and P_2O_5 to an aggregate percentage of at least 75 percent and recovering the helium which passes from the mixture into the tubes.

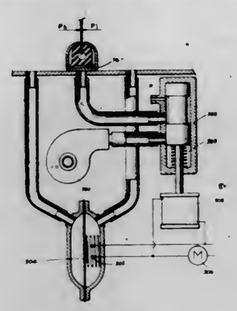
3,019,854
FILTER FOR HEATING AND AIR CONDITIONING DUCTS
Waltus A. O'Bryant, 8745 Mission Road, Kansas City 15, Kans.
Filed Oct. 12, 1959, Ser. No. 845,994
1 Claim. (Cl. 183—49)



A filter assembly comprising, in combination, a three dimensional body of resilient, deformable filter media of greater length than thickness having two substantially flat faces, a support structure adapted to removably engage the said body between two half portions thereof, one of said half portions abutting against each said flat face, each said support structure half portion comprising a continuous outline frame substantially congruent in form to that of the face of said mat it abuts against, yet so diminished in area dimensions as to be engageable with said face circumferentially substantially interior of the peripheral edge thereof, whereby to leave and provide a circumferential band of filter media surrounding each said half portion, each said outline frame of sufficient strength as to be self and mat supporting when in place on the latter, each said frame including a perforated screen received centrally thereof, each said frame having an inwardly extending circumferential flange thereon engaging said body, spaced teeth on the flange of each said frame adapted to penetrate and grip said filter media but not entirely penetrate therethrough, and means for releasably connecting each said outline frame with the other within the circumference of each said frame, said connecting means penetrating said body and rigidly spacing one frame from the other against compressive force.

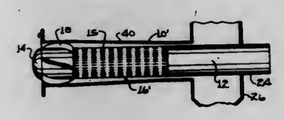
3,019,855
FILTERS
Paul M. Engle, Syracuse, N.Y., assignor to Cambridge Filter Manufacturing Corporation, a corporation of New York
Filed Apr. 9, 1958, Ser. No. 727,411
2 Claims. (Cl. 183—62)

1. An air filter, comprising means defining a path for the flow of air, a supply of filter media in roll form, having an intermediate portion thereof traversing said path, spaced endless belt means of U section adapted over a portion of their length to embrace and engage the respective marginal side edge surfaces of the traversing portion of said filter media, guide channels having inturned flanges disposed along the engaging portion of said belts, continuous running sealing means carried by said belts and extending to the adjacent side flanges of their respective channels, and means for pressurizing said channels behind said running sealing means, means for intermittently driving said belts to advance said filter media across said path and means responsive to an increase in differential pressure across said media, to simultaneously



depressurize said channels during advancing of said filter media.

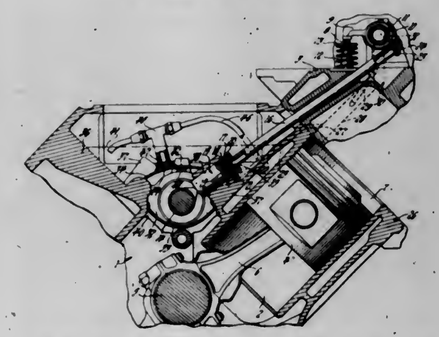
3,019,856
DUST COLLECTOR
George C. Patterson, Dearborn, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1958, Ser. No. 781,636
2 Claims. (Cl. 183—80)



1. In a centrifugal separator for removing particulate materials from gaseous fluid media, the combination of a first elongated cylindrical tube of substantially constant diameter along its length and open interiorly to the free flow of gas therein, said first tube being closed at its entrance end and open at its exit end, a second elongated cylindrical tube surrounding said first tube in coaxial relation thereto, said first and second tubes defining an annular dusty gas duct therebetween, means in said annular dusty gas duct for imparting a swirling motion to gas passed therethrough, said first tube having a plurality of axially spaced sets of circumferentially aligned, elongated openings therein forming an elongated gas outlet zone, said sets being axially spaced from each other by tube sections of uninterrupted contour, each of said elongated openings being axially oriented in its major dimension on the periphery of said first tube, each of said elongated openings having a radially outwardly extending baffle formed along common sides thereof, said swirling motion imparting means being adapted to direct the gas flowing through said annular gas passage in a swirling motion to flow first over said baffles and thence across said openings, and said second elongated tube gradually tapering from a first larger diameter at the front end of said gas outlet zone to a smaller diameter at the rear end of said gas outlet zone of said first tube to form a gas outlet zone between said first and second tubes of gradually decreasing cross section, and a dust collection chamber connected to the exit end of said second tube and the first tube extending through said dust collection chamber and sealed therefrom, whereby particulate materials suspended in a gas stream passing through said annular dusty gas duct are centrifugally thrown outwardly against said second tube and further by contacting said baffles, and a proportionate part of the gas is diverted in its direction of flow around said baffles and into said elongated open-

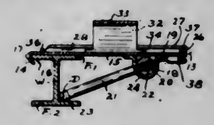
ings adjacent the front end of said gas outlet zone and the remaining gas is retained at its original centrifugal velocity by passing into a decreasing volumetric zone of said gas outlet zone, passing out through said remaining elongated openings.

3,019,857
VALVE OPERATING LINKAGE LUBRICATION AND HYDRAULIC VALVE LIFTER FEED SYSTEM FOR ENGINES
Dan B. Kuiper, Grand Rapids, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 22, 1959, Ser. No. 822,143
5 Claims. (Cl. 184—6)



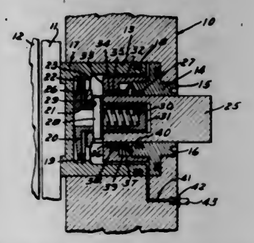
1. In an internal combustion engine or the like having a valve, a valve rocker, a rocker operating hydraulic valve lifter and lifter operating cam means, said lifter including an outer plunger-like body engaging said cam means, a lubricating and fluid feed system for said rocker and lifter including wall members defining a fluid pumping chamber enclosing the cam means, one of said wall members having an opening therein slidably embracing said lifter body, said plunger-like body being movable inwardly of said chamber from said opening to displace fluid from said chamber during the return stroke of said cam means, and one-way fluid passage means connecting said chamber with said rocker exteriorly of said lifter for conducting said displaced fluid to said rocker.

3,019,858
VEHICLE LIFT ATTACHMENT
Harold E. Olson, 135 N. 3rd Ave., Oakdale, Calif.
Filed Aug. 7, 1959, Ser. No. 832,367
5 Claims. (Cl. 187—8.75)



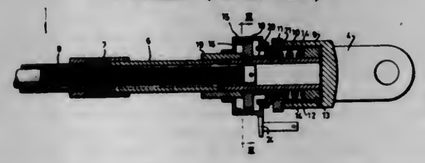
1. In combination with a vehicle lift comprising a head providing a support rail of uniform cross-section having a horizontally disposed flat flange spanning an upright dependent web integral therewith, an elongated one-piece base element mounted directly upon and across said rail flange, means on the base element engaging the rail for a sliding guided adjustment of the element solely longitudinally along the rail flange, said means comprising terminal hook means at one end of the element receiving and slidably engaging one side edge portion of said rail flange while the other end of the element extends laterally beyond the other side edge of the flange and strut member depending from the extending portion of the base member and engaging said rail web for securing the base member against its tilting about the second flange edge, and a pillow-block member directly and adjustably carried on said base element in non-tilting relation thereto for its disposal and direct frame-supporting engagement laterally of the rail and beneath an overlying point of the vehicle chassis by and upon a lifting of the head beneath the vehicle.

3,019,859
VEHICLE BRAKING MECHANISM WITH CLEARANCE ADJUSTING MEANS
Eugene W. Marsh, Van Nuys, Calif., assignor to Airheart Products Inc., Van Nuys, Calif., a corporation of California
Filed May 26, 1959, Ser. No. 815,926
5 Claims. (Cl. 188—72)



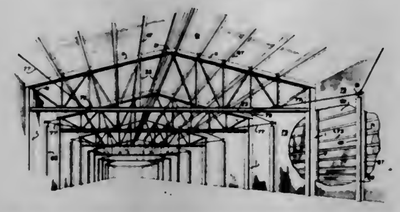
1. Braking mechanism, comprising: cooperable braking elements mounted for relative movements into and out of engagement; a cylinder; a main piston for actuating one of said braking elements; a hollow axially extending stud member carried by said main piston; a tubular auxiliary piston of less active area than the main piston surrounding and in telescoped relation to said stud member; a diametrical transverse pin carried by said auxiliary piston extending through diametrically aligned openings in said stud, said openings having diameters larger than the pin diameter; a compression spring in said stud having one end bearing against said pin and its other end against an outer end portion of said stud; means for applying a fluid pressure to said pistons to relatively move the pistons to the extent of the limited movement of the pin in said openings; and a holding device for releasing said auxiliary piston for movement in one direction when a predetermined holding force is exceeded, and for movement in an opposite direction when a different holding force is exceeded.

3,019,860
AUTOMATIC, SINGLE-ACTING BRAKE SLACK ADJUSTERS
Erik Mauritz Jeppsson, Malmo, Sweden, assignor to Svenska Aktiebolaget Bromsregulator, Malmo, Sweden, a corporation of Sweden
Filed July 6, 1960, Ser. No. 41,176
Claims priority, application France July 9, 1959
3 Claims. (Cl. 188—196)



1. An automatic, single-acting brake slack adjuster comprising a brake rod to be connected in a vehicle brake rigging so as to form part thereof and transmit brake power on braking, which brake rod comprises two non-rotatable rod parts connected by a rotatable rod part which has a small axial clearance relative to the first of said non-rotatable rod parts, coacting selflocking threads on said rotatable rod part and the second of said non-rotatable rod parts, and means for rotating said rotatable rod part in the direction for taking up brake slack automatically in response to the movement of the brake, comprising a one-way driving device with a driven member rotatably mounted on said rotatable rod part, and means forming a clutch between said driven member and said rotatable rod part and comprising coacting clutch surfaces associated with said driven member and said rotatable rod part, axially spaced shoulders on said first non-rotatable rod part and said rotatable rod part, a compressed spring disposed between said shoulders, an axially displaceable sleeve that is disposed between said first non-rotatable rod part and said rotatable rod part and is axially displaceable in relation thereto and has a shoulder disposed between said shoulder on said first non-rotatable rod part and said compressed spring and normally transmits the pressure of said compressed spring to said coacting cluch surfaces for holding them in engagement with one another, said shoulder on said sleeve and said shoulder on said first non-rotatable rod part normally having between them an axial clearance that is smaller than said first-named axial clearance, whereby said sleeve will relieve said coacting clutch surfaces of the pressure of said spring to bring about disengagement of said clutch on yielding of said spring to stress arising in said brake rod when transmitting brake power.

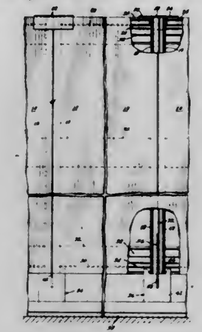
3,019,861
METALLIC BUILDING STRUCTURE
Herman R. Rasch, Lincoln Park, and Robert J. Cummins, Detroit, Mich., assignors to National Steel Corporation, a corporation of Delaware
Filed Mar. 9, 1959, Ser. No. 798,094
19 Claims. (Cl. 189—1)



1. Metallic building structure comprising two pairs of opposed main columns, a main column of each pair being disposed at each side of the building structure, a pair of roof trusses one extending between and supported by each pair of main columns, a stub column between the main columns at each side of the building structure, a plurality of vertically spaced girts secured to each stub column, vertical side wall sheeting disposed on the inner sides of the girts, and tension members secured to and extending between each stub column and each truss of the pair of roof trusses, the tension members being secured to the stub columns at locations above the bottoms of the stub columns.

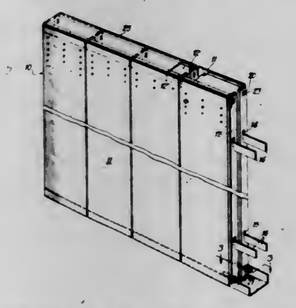
3,019,862
PARTITION CONSTRUCTION
John A. Bohnsack, Pottsville, Pa., assignor to Aetna Steel Products Corporation, New York, N.Y., a corporation of New York
Filed July 5, 1957, Ser. No. 669,981
8 Claims. (Cl. 189—34)

8. In a partition wall, a series of panels disposed in end-to-end relation in said wall, said panels comprising spaced confronting side panel members disposed at the opposite sides, respectively, of the wall, said panel members of each panel having interconnected transverse parts adjacent each end thereof and marginal edge portions extending beyond said transverse parts and defining a vertical recess, and a base having individual panel supports disposed in spaced relation longitudinally of the wall under the adjacent ends of adjacent panels, respectively, each panel support having a bottom and upper edges above said bottom on which the transverse parts at the adjacent ends of adjacent panels are supported at the



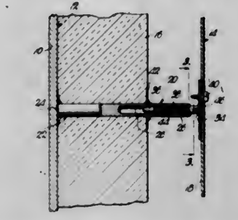
joint therebetween above said bottom, there being a panel support at both ends of each panel, and means engaging the adjacent ends of adjacent panels in said recesses and having a part in overlapping engagement with portions of said supports below said upper edges thereof for providing a reinforcing overlap-connection between the wall panels and said base, said last mentioned means comprising a vertical stud disposed between said panel ends and having lateral flanges in engagement with said marginal edge portions of said panels for laterally aligning the adjacent panels with each other.

3,019,863
WALL STRUCTURE
Thomas F. Kearns, Jr., New York, N.Y., assignor to General Steel Products Corp., Flushing, N.Y., a corporation of New York
Filed May 21, 1959, Ser. No. 814,871
9 Claims. (Cl. 189—34)



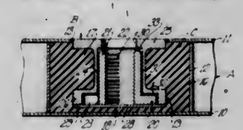
1. An assembly of the class described comprising a panel provided with a flange member, an elongate member, said members having corresponding elements thereon adapted for interlocking engagement, and clip means adapted to be mounted on supporting structure and to urge said corresponding elements into interlocking engagement while itself engaging said members to retain the same in assembled position relatively to the supporting structure.

3,019,864
LAGGING MOUNT
Harry R. Lester, Kansas City, Mo., assignor, by mesne assignments, to Tempmaster Corporation, Kansas City, Mo., a corporation of Missouri
Filed Oct. 12, 1959, Ser. No. 845,974
5 Claims. (Cl. 189—34)



1. A laminated structure including a wall having an outermost face; lagging spaced from said face and provided with an opposed innermost face; a plurality of pins between the wall and the lagging; means rigidly connecting the extremity of each of the pins proximal to said wall, to the outermost face of the same with the pins extending outwardly therefrom, each of said pins being provided with an elongated, relatively smooth surfaced bore therein extending longitudinally of a respective pin from the extremity thereof proximal to said lagging; an elongated fastener removably telescoped into said bore of each of the pins, extending outwardly therefrom and having means on the outer face thereof normally frictionally engaging the surface of corresponding bores in the pins to prevent ready removal of the fasteners from said bores; a plate rigidly secured to the outer end of each of the fasteners and in engagement with that portion of the innermost face of the lagging in direct opposition to a respective plate; and means releasably connecting each of the plates to said lagging.

3,019,865
FLOATING MOLDED INSERT
Frederick W. Rohe, 879 S. East St., Anaheim, Calif.
Filed Nov. 16, 1959, Ser. No. 853,138
5 Claims. (Cl. 189—34)



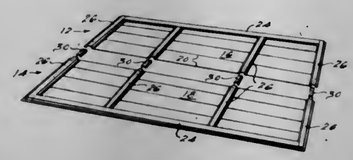
1. In combination with a lightweight panel including a honeycomb core and skin sheets secured to the edges thereof, said panel having therein a hole beginning with a circular opening in one of said skin sheets and continuing through said core approximately to the opposite skin sheet; an insert including a shell having an outer head in the form of a flat circular radial flange disposed in the opening in said one skin sheet and closing the outer end of said hole, having an inner head of radial flange form, spaced axially from said outer head and disposed adjacent the bottom of said hole, said inner head being radially elongated and having, in its end face, key recesses in diametrically opposite end portions thereof, and a tubular barrel integrally joining said heads, said outer head having a central opening for receiving a fastener bolt, said barrel having a cylindrical counterbore communicating with said opening at one end and with said key recesses at its other end; a nut including an integrally threaded sleeve portion received in said counterbore and a pair of diametrically opposite integral keys projecting radially from one end of said sleeve portion and received in said key recesses; a thin disc secured to the end face of said inner head closing the inner end of said shell, and projecting over said key recesses to define a pair of pockets in which said keys are retained loosely, said sleeve having radial clearance in said counterbore so as to have a floating, self aligning action in receiving the end of a bolt extended through said outer head opening; and a body of solidified plastic material molded around said shell and within said hole, said molded body having keyed rotation-resisting engagement with said honeycomb core and engaging said elongated inner head to resist rotation of said shell in said panel, said shell in turn securing said nut against rotation through the keyed engagement of said nut keys in said key recesses, said body of material including a thin pad interposed between said disc and said opposite skin sheet adhering to both.

3,019,866
MEMBERS FOR USE IN THE CONSTRUCTION OF STRUCTURAL FRAMEWORK
Edward Witold Grabowski, Harrow-on-the-Hill, England, assignor to Metriframe Structures Limited, London, England, a British company
Filed Sept. 3, 1957, Ser. No. 681,621
Claims priority, application Great Britain Sept. 3, 1956
5 Claims. (Cl. 189—36)



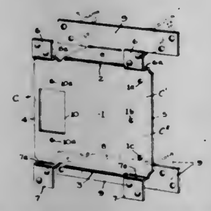
2. A member for use in the construction of structural frameworks and having at least two flanges with a common edge wherein one flange is formed with a first row of substantially circular apertures the centres of adjacent apertures of which are spaced a predetermined equal distance from each other and lie substantially on a line parallel to said common edge and spaced therefrom and from the opposed parallel edge of said one flange by a distance substantially equal to said predetermined distance, and the other flange is provided with second and third rows of substantially circular apertures the centres of adjacent apertures of the second row of which are spaced by said predetermined distance from each other and lie on a line parallel to said common edge and spaced therefrom by said predetermined distance, and the centres of adjacent apertures of the third row thereof are spaced from each other by a distance substantially equal to twice the distance between the centres of adjacent apertures in said second row and lie on a line parallel to said common edge and spaced therefrom by a distance substantially equal to twice said predetermined distance, the centre of each aperture in the third row being arranged to lie on a line normal to said common edge and intersecting the centre of an aperture in said second row, and every other aperture in said first row is of one size and the remaining apertures in said first row are of a larger size, all the apertures in said second row are of said one size and all the apertures in said third row are of said larger size, and all the apertures of said one size have a diameter substantially equal to one-half said predetermined distance and all the apertures of said larger size have a diameter greater than one-half said predetermined distance but not greater than two-thirds of said predetermined distance.

3,019,867
KNOCKDOWN DOOR
John S. Colombini, Walled Lake, Mich.
Original application May 28, 1956, Ser. No. 587,804, now Patent No. 2,948,956, dated Aug. 16, 1960. Divided and this application Feb. 1, 1960, Ser. No. 5,770
1 Claim. (Cl. 189—46)



A sheet metal door of the knockdown type comprising two similarly formed door halves secured together, each door half comprising a sheet metal panel having a generally planar surface and a series of parallel substantially V-shaped grooves forming ribs projecting from one side thereof, a frame member extending parallel to said ribs along one edge of each panel, each panel having spaced and parallel channel-shaped frame elements secured thereon and disposed perpendicular to said frame members, each panel having a marginal groove formed along its opposite edge, said frame elements on each panel extending across said grooves and projecting beyond the planar surface of the panel and partially across the marginal groove at said opposite edge but terminating inwardly from the marginal edge thereof, said panels being arranged with their said marginal grooves in nested relation and with their frame elements in aligned and abutting relation, and a connecting element telescopically received within the channels of each aligned pair of frame elements and secured thereto thereby securing said panels together said connecting elements constituting the sole means for securing the two door halves together to complete the door.

3,019,868
DOOR FRAME ANCHOR
Theodore J. Truman, Columbiana, and William F. Harder, Hubbard, Ohio, assignors to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed June 30, 1960, Ser. No. 40,070
1 Claim. (Cl. 189—46)



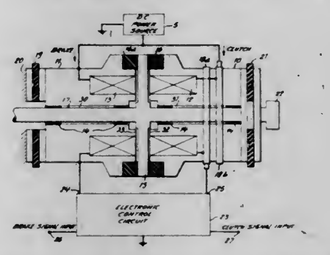
As an article of manufacture, an anchor for metallic door frames of substantially channel form and having hinge depressions, said anchor including a body plate of coplanar form between top, bottom, and opposite side edges and presenting a front face and a rear face and reversible edge for edge, said body plate having a latch plate opening at one side of a center line intersecting said top and bottom edges, upper and lower pairs of door frame welding tabs projecting from said front face of the plate and adapted to extend into the channel of the door frame for attachment to a portion of the channel, said tab offset from said front face at substantially right angles to their junction with the plate to provide clearance for hinge depressions in the door frame, and stud attaching flanges projecting from the rear face of the plate, said flanges including a portion between said tabs disposed at right angles to the body of the plate and an angularly disposed terminal portion parallel to and offset from the rear face of the plate.

3,019,869
SUIT AND SHIRT BAGS
Daniel A. Engelhardt, Hales Corners, Wis.
(410 E. Wright Blvd., Universal City, Tex.)
Filed Sept. 14, 1959, Ser. No. 839,853
2 Claims. (Cl. 190—43)



1. A suit and shirt bag comprising an elongated body portion, longitudinally disposed interlocking fastening devices centrally disposed on one face theretof, a pair of spaced, aligned, transversely opposed pockets within the bag, said pockets each having an open side opening towards the opposed pocket and adapted to receive and retain between them the end portions of a plurality of folded shirts, said bag having a relatively small transverse apparel receiving compartment at one end thereof, and interlocking fastening devices on said bag for closing said end compartment.

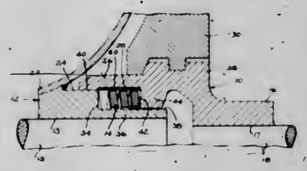
3,019,870
BRAKE AND CLUTCH DRIVING AND HOLDING CIRCUIT
Ori Even-Tov, Johnsville, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 8, 1960, Ser. No. 1,284
20 Claims. (Cl. 192—18)



10. In apparatus of the class described, a driving member, a driven member, electromagnetic clutch means interposed between said driving member and said driven member, electromagnetic brake means associated with said driven member, a control circuit coupled to said clutch means and provided with a clutch signal input terminal, said control circuit including means responsive to a signal

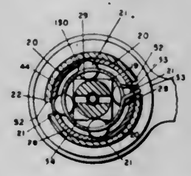
at said clutch signal input terminal for supplying current of a first magnitude for a predetermined period of time and thereafter supplying current of a second magnitude for an indeterminate period of time, a control circuit coupled to said brake means and provided with a brake signal input terminal, said last-named control circuit including means responsive to a signal at said brake signal input terminal for supplying current of a first magnitude for a predetermined period of time and thereafter supplying current of a second magnitude for an indeterminate period of time, and means intercoupling said control circuits so that the operation of one such circuit excludes the operation of the other and the initiation of operation of one such circuit terminates the operation of the other.

3,019,871
ONE WAY CLUTCHES
Rene E. Sauzedde, Terryville, Conn., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1958, Ser. No. 753,782
3 Claims. (Cl. 192—41)



1. A one-way clutch comprising a rotatable driving member, a rotatable driven member, said members being arranged to be selectively rotated in opposite directions, one of said members being rotatably journalled on said other member, a coiled torsion driving spring located radially between said members and having ends resiliently and respectively engaging said members, a uni-directional driving connection between one of the members and the spring, a shouldered portion on the other member detachably engageable with an end of the spring for a unidirectional driving relation, means adjacent the shouldered portion for disengaging the driving relation when the relative rotation between the driving and driven members is reversed, and an annular rubber-like resilient sleeve surrounding the spring and mounted on one of said members for yieldably cushioning the radial spring expansion during a driving relation between said members.

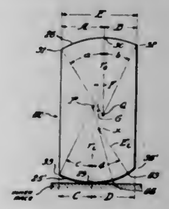
3,019,872
FRICTION CLUTCH
Harry C. Morris, 1023 W. 8th St., Erie, Pa., and Robert F. Meier, Erie, Pa.; said Meier assignor to said Morris
Filed May 2, 1955, Ser. No. 505,126
5 Claims. (Cl. 192—44)



1. A friction clutch comprising an inner member, an outer member having a cylindrical surface surrounding said inner member and spaced therefrom, at least four shoe members arranged at circumferential intervals in the space between said inner and outer members, an arcuate outer face on each said shoe member and adapted to frictionally engage said cylindrical surface, the radius of curvature of said arcuate outer face being slightly greater than the radius of curvature of said cylindrical surface, the opposing end faces of adjacent shoe members being convergently inclined toward each other in a radial outward direction at an angle with the periphery of the shoe member, a curved cam face having a center of curvature on said inner members for each pair of said convergently inclined end faces of said shoe members, and a wedge member engaging each said opposing end faces of said adjacent shoe member, said end face being disposed at an angle to a line perpendicular to a radial line through the center of curvature of said curved cam face at an angle d and said end faces being disposed at an angle B to said radial line a portion of the surfaces of said shoes engaging a portion of said inner cylindrical surface and having a resistance to slipping thereon when a force is applied thereto the ratio of said applied force and said resistance to slipping being designated by u, said angles having the relation

$$\left(\frac{1-\tan d}{1+\tan d}\right)\tan d \tan B \leqq u$$

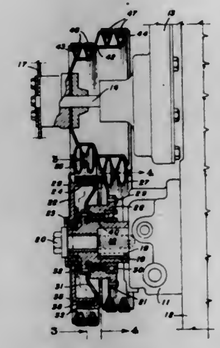
3,019,873
SPRAG
Ernest A. Ferris, Downers Grove, and Robert J. Curran, Chicago, Ill., assignors to Borg-Warner Corporation, a corporation of Illinois
Filed Apr. 8, 1957, Ser. No. 651,493
12 Claims. (Cl. 192—45.1)



1. A gripper for a one-way engaging device comprising a first surface adapted to engage a race, a second surface spaced from said first surface adapted to engage another race, one of said surfaces being defined by a first radius and a second radius shorter than said first radius, the portion of said one surface defined by said first radius being longer than the portion thereof defined by said second radius.

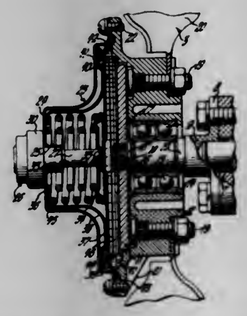
3,019,874
AUTOMATIC TWO-SPEED DRIVES FOR AUTOMOBILE ACCESSORIES
John E. Heckethorn, Dyersburg, Tenn., assignor to Heckethorn Manufacturing & Supply Co., Dyersburg, Tenn., a corporation of Colorado
Filed Sept. 15, 1958, Ser. No. 761,258
2 Claims. (Cl. 192—48)

1. A multiple clutch construction for a two speed accessory drive comprising: a drive spindle; a relatively large drive pulley rotatably mounted on said spindle adjacent the forward extremity thereof; a relatively small drive pulley rotatably mounted adjacent the rear extremity of said spindle; an annular clutch flange mounted on and extending rearwardly from said large drive pulley; a clutch drum fixedly mounted on said spindle and surrounding said flange in concentric, spaced relation; an annular, resiliently-expansible unitary clutch band completely surrounding said flange; hooked extremities formed on said clutch band, one extremity being hooked through an opening in said clutch drum; a relatively flat zig-zag compression spring mounted in said clutch drum, one extremity of said clutch band being hooked over said spring so that the inherent expansion of the latter will tension said clutch band to cause the latter to frictionally



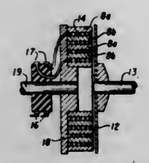
engage the circumference of said clutch flange until a predetermined speed is reached; and a directional clutch arranged to transmit torque from said spindle to said small drive pulley until the speed of the latter exceeds the speed of the former.

3,019,875
VARIABLE SPEED DRIVE MECHANISM
F. Robert J. Fowler, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 16, 1959, Ser. No. 820,683
12 Claims. (Cl. 192—58)



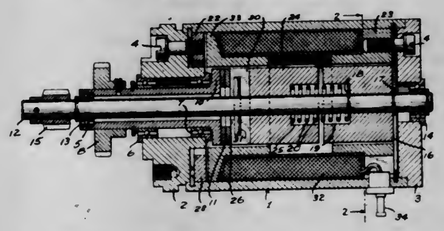
2. A variable speed drive mechanism including a drive shaft, an impeller driven by said drive shaft, a driven member rotatably supported upon said drive shaft, means carried by said driven member and forming therewith a chamber enclosing said impeller, said means comprising an annular flexible diaphragm having one rim thereof secured to said driven member and another rim thereof secured to a diaphragm actuator, working fluid in said chamber, said diaphragm being movable with respect to said impeller to vary the quantity of working fluid in contact with said impeller, and automatically operable means for varying the position of said diaphragm actuator including a temperature responsive power element effective to move said diaphragm actuator toward said impeller upon a rise in temperature.

3,019,876
FAST RESPONSE MAGNETIC FRICTION CLUTCH
Jacob Rabinow, Takoma Park, Md., assignor, by direct and mesne assignments, to Rabinow Engineering Co., Inc., Rockville, Md., a corporation of Maryland
Filed Jan. 6, 1960, Ser. No. 877
7 Claims. (Cl. 192—84)



1. A magnetic coupling comprising a magnet member and an armature member attracted into frictional engagement with said magnet member when the coupling is energized, said magnet member comprising a set of closely spaced thin strips of magnetic material constituting alternate pole members, each of said strips having one edge aligned with the corresponding edges of adjacent strips to constitute a multiple pole face, means for spacing adjacent strips of the set by a distance of the same order of magnitude as the thickness of the strips, the unattracted armature being spaced from said pole face by a distance of the same order of magnitude as the thickness of the strips and exciting means for energizing alternate strips of the set with magnetic flux of alternate polarity to attract said armature member so that the face thereof is drawn into frictional engagement with said strip edges.

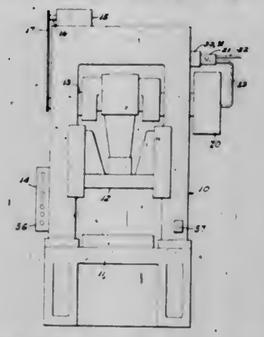
3,019,877
REVERSE ACTING MAGNETIC CLUTCH
Alexander Onyskin, 56 Anoatok Drive, Huntington, N.Y.
Filed July 28, 1959, Ser. No. 830,148
1 Claim. (Cl. 192—90)



A miniature magnetic clutch comprising a tubular case having a front bearing cap secured at the front end of said case and a rear bearing cap secured at the rear end of said case, a hollow shaft rotatably secured within said front bearing cap and having an annular flange at the rear end thereof and being secured against axial movement with respect to said tubular case, a second shaft rotatably supported within said hollow shaft and secured to said rear bearing cap and secured against axial movement with respect to said tubular case, a first coupling of magnetic material secured to said second shaft and being concentric therewith, a second coupling of magnetic material mounted on said shaft and being concentric therewith and axially movable with respect thereto, said second coupling having a slot in one face thereof, a pin extending from said second shaft, said pin being received in said slot whereby said second coupling rotates with said second shaft, said slotted face of said second coupling being adjacent to said annular flange and being movable into engagement therewith, a spring biasing means interposed between said first and second coupling toward engagement with said annular flange and away

from said first coupling, the interfaces between said first and second couplings defining an air gap, and an energizing winding secured to said casing and concentric with said first and second couplings, energization of said energizing winding generating a magnetic flux through said first coupling, said air gap and said second coupling to cause said second coupling to move toward said first coupling against the force of said biasing spring whereby said second coupling disengages said annular flange.

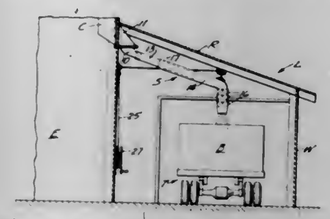
3,019,878
POWER PRESS CONTROL MEANS
Edwin A. Munschauer, Jr., Snyder, N.Y., assignor to Niagara Machine & Tool Works, Buffalo, N.Y.
Filed Apr. 14, 1959, Ser. No. 806,319
9 Claims. (Cl. 192—144)



1. In a control system for machines, electromagnetic means for starting and stopping the same, an operating circuit for the electromagnetic means, a first circuit means for energizing said operating circuit and a second circuit means for maintaining such energization after a predetermined initial period, a normally open switch in said first circuit means and manual push button means for closing the same to initiate a machine cycle, a plurality of parallel switches in said second circuit means and a selector switch for including one or another of said plurality of switches in said second circuit means, a plurality of synchronously rotating cams driven from said machine, each of said cams being adapted to close one of said plurality of switches at a predetermined point in the machine cycle and open the same before the end of a cycle of machine operation, the switch opening points of said cams being variously spaced from the end of a machine cycle to compensate for varying degrees of drift of the machine at various operating speeds, and anti-repeat means comprising a cam rotatable with the aforesaid cams and a switch opened and closed thereby during each machine cycle to open said first circuit means and prevent reclosure thereof until the push button means is released and reclosed at the end of a cycle of operation.

3,019,879
GRAIN LOADING DEVICE
Marvin R. Wenschlag, Pierpont, S. Dak.
Filed June 15, 1959, Ser. No. 820,288
2 Claims. (Cl. 193—16)

1. In combination, a fluent material storage structure having a discharge opening in the side wall thereof, an elongate inclined material conveyor comprising a plurality of sections telescopically interconnected for relative extensible and retractable movement therebetween, means interconnecting the upper receiving end of said conveyor with said discharge opening for swinging movement of said conveyor in an inclined plane about a vertical axis, straight track means disposed above the leading section of said conveyor and laterally of said axis, conveyor supporting means movable on said track, and means pivotally suspending said conveyor from said supporting means for straight line movement of the delivery end of said conveyor perpendicular in space to said axis



and for swinging movement about a vertical axis, the trailing section of said conveyor swinging about said axis in response to the linear movement of the delivery end.

3,019,880
UNDERLINING DEVICE FOR TYPEWRITER MACHINES
José María Manescau Baccarelli, Presidente Luis Saenz Peña 259, Buenos Aires, Argentina
Filed Oct. 13, 1959, Ser. No. 846,133
1 Claim. (Cl. 197—113)

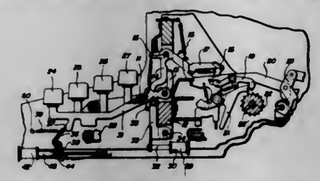


In combination, a typwriter frame, a typewriter carriage, a typewriter platen rotatable in the typewriter carriage and extending transversely thereof, a forked type-guiding member on the typewriter frame in front of the platen, horizontally-extending bearing means on the top of the typewriter frame and at the elevation of the forked member, a shaft extending horizontally across the top of the frame and journalled in the horizontal bearing means, said shaft having a bent arm portion carrying an underlining type and a terminal handle on one end of the shaft for rotating the shaft, said underlining type arm portion being adjustable between an operative position overlying the forked member and an inoperative position underlying the forked member, and a standard type bar having type thereon pivoted on the typewriter frame and engageable with the underlining type arm portion when in its operative position to cause the underlining type to be struck simultaneously with the type on the standard type bar.

3,019,881
AUTOMATIC LINE FEEDING AND TABULATING APPARATUS FOR TYPEWRITERS OR LIKE MACHINES
Louis Cetran, Newington, and Ronald H. Arthur and John H. Holland, West Hartford, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Mar. 18, 1960, Ser. No. 15,968
14 Claims. (Cl. 197—114)

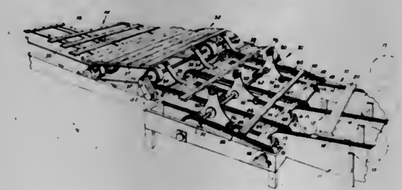
1. In a typewriter having a movable carriage for supporting a worksheet and a platen rotatably mounted on said carriage for advancing said worksheet in vertical direction, line feed mechanism for indexing said platen, means for operating said line feed mechanism, a device

having a continuous conductive track, program means for rendering said track effective at predetermined positions in accordance with a desired vertical format, means coupling said line feed mechanism with said device whereby the latter partakes of an indexing movement each line feed operation, controlled means for actuating and for



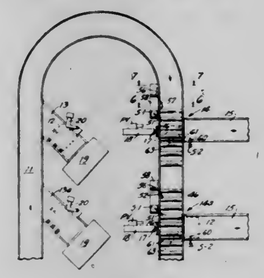
maintaining actuated said line feed mechanism operating means, and means responsive to each line feed indexing operation for sensing said track on said device, said controlled means being operative in response to the sensing of positions on said track rendered effective to discontinue operation of said line feed mechanism operating means.

3,019,882
LUMBER FEEDER
Harry C. Pearson, Portland, Oreg., assignor to Portland Iron Works, Portland, Oreg., a corporation of Oregon
Filed Mar. 26, 1959, Ser. No. 802,127
3 Claims. (Cl. 198—34)



2. In lumber handling apparatus, a plurality of laterally spaced off-bearing chains having laterally aligned sets of lugs thereon for engaging and advancing boards positioned on said chains between said lugs, means for driving said chains at a predetermined speed, and feeding mechanism for feeding board singly between said sets of lugs, said feeding mechanism comprising a plurality of laterally spaced, flexible conveyor elements positioned forwardly of said off-bearing chains for carrying boards toward and discharging such boards onto said off-bearing chains, means for driving said conveyor elements at said predetermined speed, means for feeding boards upon said conveyor elements with said boards extending laterally thereof, a plurality of star wheels having radially extending arms and rollers rotatably mounted on the ends of arms, said star wheels being mounted between said conveyor elements to rotate with rollers moving bodily in an arc extending partially above said conveyor elements, means driving said star wheels to rotate the same with said rollers moving bodily in the direction of movement of said conveyor elements when the rollers swing above said conveyor elements, said rollers upon engaging a board in the upward swing of the rollers being adapted to advance or delay the board relative to the initial position of the board upon said conveyor element so that each board passing said star wheel will be within a predetermined position on said conveyor elements, and means associated with said conveyor elements for adjusting the location of a said board so that it is within the trailing part of a said predetermined position comprising a plurality of shoes slanting upwardly between said conveyor elements so as to cause a board traveling on said elements to ride up on said shoe means and thereby have its motion arrested, said shoe means being located within the periphery of the arc of said rollers but on the side of said star wheels toward said off-bearing chains whereby as said rollers swing downwardly they will engage a board resting upon said shoe means to push the same onto said conveyor elements, the rotation of said star wheel being correlated with the movement of said off-bearing chains so that a board lying within a said predetermined position will be fed from said conveyor elements onto said off-bearing chains between the sets of lugs on said chains.

3,019,883
CODING MECHANISM FOR CONVEYOR SYSTEMS
Thomas P. Jones, St. Paul, Minn., assignor to Standard Conveyor Company, North St. Paul, Minn., a corporation of Minnesota
Filed May 6, 1959, Ser. No. 811,461
7 Claims. (Cl. 198—38)

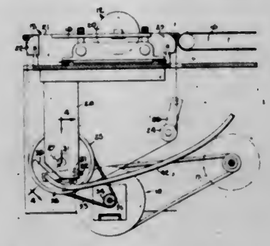


6. In a conveyor system having a main conveyor adapted to convey load units along a determined path from a plurality of loading station platforms to a plurality of transfer stations, each of said units having an outer wall member of electro-non-conducting material and each of said platforms including a feed conveyor for said main conveyor, a stapling gun associated with each of said platforms to affix coding staples to such walls of the load units on the associated platform, each of said stapling guns being mounted adjacent to the path of movement of load units on the associated feed conveyor and in various code positions each associated with one of said transfer stations, power means for actuating said guns at the several loading stations to affix staples to load units thereon, each of said staples having an elongated exposed conductor portion adapted to be contacted simultaneously by sensing fingers associated with one of said transfer stations, and means projecting in the path of movement of the load units on each feed conveyor for activating the stapling gun associated with such feed conveyor to affix staples to the load units when they arrive at predetermined positions on the several feed conveyors.

3,019,884
BELT DRIVE FOR CHECK WEIGHER
Harold L. Bartelt, Rockford, Ill., assignor to Bartelt Engineering Company, Inc., Rockford, Ill., a corporation of Delaware
Filed Mar. 30, 1959, Ser. No. 802,712
2 Claims. (Cl. 198—39)

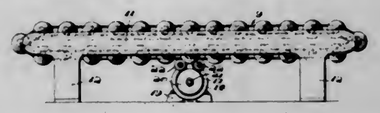
2. In a check weigher, the combination of, a weighing device having a platform adapted to deflect vertically in response to the weight of an article on the platform, an endless belt having a run extending across said platform, guide rolls supporting said belt, a drum mounted to turn about a horizontal axis with the belt extending around and in contact with the outer surface of an arc of the drum, said drum having a plurality of openings formed therein

and connecting the outer surface with the interior of the drum, a bar pivotally mounted to turn about a horizontal axis and projecting into said drum, a member disposed within said drum in running contact with the inner surface thereof and overlying at least a portion of said open-



ings in the arc of the drum contacting the belt, said member being pivotally mounted on said bar to turn about a second horizontal axis parallel to the first axis whereby the member may turn about the second axis to closely engage the interior of said drum and said bar may turn about said first axis to move said member in contact with the drum, said member having a passage communicating with the openings in said arc, a source of vacuum connected to said passage thereby to communicate with the openings and hold said belt against said drum, and means turning said drum thereby to advance said belt.

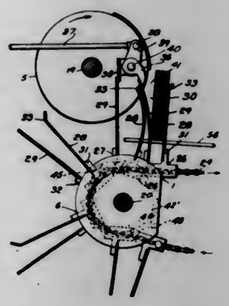
3,019,885
MOTIVE POWERED OR GRAVITY BEARINGLESS CONVEYOR
Walton W. Cushman, Webb City, Mo. (6428 Lumar Drive SE., Washington, D.C.)
Filed July 22, 1960, Ser. No. 44,825
11 Claims. (Cl. 198—127)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a convertible motive-powered or gravity bearingless roller conveyor structure, the combination of a substantially horizontal longitudinally extending roller-supporting bed, means depending from said bed for supporting it, a plurality of bed-contacting roller units each including a pair of coaxially aligned intercommunicating inflatable rollers, the rollers of each pair having therebetween a hollow hub-like pulley common to both rollers, each pair of rollers and their common hub-like pulley providing a complete roller unit of the conveyor structure, said pulley being receptive of means for rotating the unit, and valve means carried by the unit for inflating both rollers of said unit.

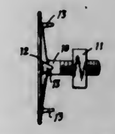
3,019,886
APPARATUS FOR COUNTING AND BANDING ENVELOPES AND THE LIKE
Richard Winkler, Rengsdorf, near Neuwied, and Kurt Dünnebier, Wollendorf, near Neuwied, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Original application Aug. 20, 1956, Ser. No. 604,878, now Patent No. 2,917,884, dated Dec. 22, 1959. Divided and this application Oct. 28, 1959, Ser. No. 849,290
14 Claims. (Cl. 198—134)

1. In a machine of the character described, means for forming envelopes into packs of a given size, including a conveyer means having a series of pockets provided with front and rear resilient walls arranged transversely with respect to the direction of movement of the conveyer and having outer portions providing entrances therebetween for the envelopes, means for discharging envelopes in successive order into one of the pockets while the conveyer is in motion, detent means for engaging and holding back



the outer portion of the resilient rear wall of said pocket to widen the entrance to the pocket while receiving a given quantity of envelopes from said discharging means and to impart tension therein incidental to bending of said resilient wall responsive to movement of the conveyor, and means for releasing the detent means for return of the resilient rear wall to normal position under snap action to hold the envelopes in a pack.

3,019,887
SECURING BOLT
George Lowden, 45 Danbury Drive, San Francisco, Calif.
Filed Nov. 6, 1959, Ser. No. 851,443
3 Claims. (Cl. 198—151)

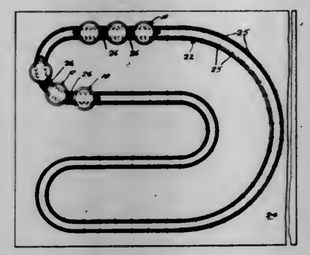


1. A bolt for mounting metallic articles upon a nonmetallic supporting member having a threaded shank for a securing nut, characterized by the fact that the head of said bolt is feathered to its outer edge with a substantially flat outer surface and triangular portions struck inwardly from the outer edge thereof forming barbs on the underside of said head with the apex of the triangular portions at periphery of said head, whereby a substantially continuous contact will be established about the feathered edge of the bolt head for retaining said bolt against turning when a securing nut is tightened upon said threaded shank.

3,019,888
CONTAINER CONVEYOR
James B. Johnston, 320 37th St., Sacramento, Calif.
Filed Dec. 9, 1959, Ser. No. 858,517
2 Claims. (Cl. 198—181)

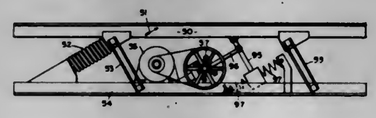
1. A container conveyor comprising an endless track secured to a base for placement on a shalf, a plurality of flat top container cars operating on said track, each car embodying a pair of trucks rotatably secured to the under side of said cars, each of said trucks embodying a pair of inner and outer inverted U-shaped members fitted one within the other, said inverted U-shaped members having downwardly extended legs, the legs of said U-

shaped outer member being spaced from the legs of the inner U-shaped member, providing wheel spaces therebetween, wheels operating within said wheel spaces, said



wheels having axles secured to said downwardly extended legs, said wheels supporting said cars on said track, and mechanical mechanism connecting adjacent cars together.

3,019,889
ENERGY TRANSMITTING MEANS FOR CONVEYORS AND THE LIKE
Robert M. Carrier, Jr., Louisville, Ky., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 30, 1952, Ser. No. 328,766
6 Claims. (Cl. 198—220)



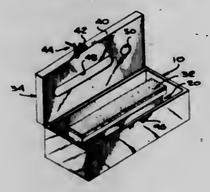
1. In combination, a base, a member moveable with respect to said base, a support structure for said member, a resilient element cooperating with said member and said support structure to establish an equilibrium position for said member, said member, structure and element having a resonant frequency of vibration with respect to said base, a drive having a fixed amplitude of motion, a variable frequency of motion in starting and stopping and an operating frequency of motion essentially corresponding to said resonant frequency, a lever coupling said drive and said member, a first pivotal connection between said drive and said lever, a second pivotal connection between said lever and said member, a point on said lever spaced from said pivots, and inertia means connected to said point on said lever and having sufficient mass to inhibit motion of said lever at said point to an amplitude generally equal to the motion of said member attached to said lever at said second pivotal connection.

3,019,890
PORTABLE CONVEYOR UNIT
Raymond R. Knill, Asa Lloyd McLaughlin, Frederick J. Priesnitz, Lory Stevens Conder, and Russell G. Haworth, Carlsbad, N. Mex., assignors to Potash Company of America, Carlsbad, N. Mex., a corporation of Colorado
Filed Apr. 9, 1958, Ser. No. 727,466
20 Claims. (Cl. 198—233)



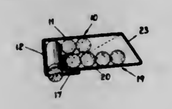
1. In a belt conveyor, the combination of a belt-supporting assembly, including elongated members constructed for skidding movement and arranged in coacting pairs in laterally spaced substantially parallel relation to said belt, a bridging member pivotally interconnected to each of at least one pair of skiddable members, upper and lower belt-supporting idlers disposed on said assembly, flexible means extending along a side of and detachably interconnecting the respective belt support assemblies arranged in series, each of said flexible means being interconnected with at least two spaced points on each skiddable member, one substantially forwardly and one substantially rearwardly of the center of said skiddable member so as to provide longitudinal stability when pull is exerted on said flexible means.

3,019,891
AMALGAM WELL
James L. Irby, 1010 Noble St., Fairbanks, Alaska; Gladys E. Irby, administratrix of the estate of James L. Irby, deceased
Filed Apr. 5, 1960, Ser. No. 20,170
6 Claims. (Cl. 206—1)



5. An amalgam well comprising a container having a bottom wall and an upstanding sidewall having an upper edge, a pedestal upstanding on said bottom wall and spaced from said sidewall to define a scrap amalgam receiving chamber within the container, said pedestal having a top surface spaced below the upper edge of the sidewall, a resilient and compressible pad secured upon said top surface, said pad being thicker than the distance between said top surface and the upper edge of the sidewall, a cover engageable with the upper edge of the sidewall and closing the top of the container in closed position, said cover in closed position compressing said pad, means for holding the cover down in closed position against the tension of said pad, and opening means in the cover over said pad for exposing amalgam mix resting upon the pad and compressed by the cover around the opening means, said container being elongated rectangular in form, and said pedestal being longitudinally elongated and positioned endwise and centrally within the container, said pedestal comprising an upstanding relatively narrow web, and a wider head fixed on the upper edge of the web, said head having a flat upper surface with which the pad is coextensive and to which the pad is secured.

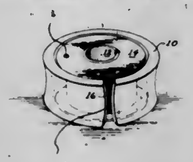
3,019,892
CIGARETTE DISPENSING PACKAGE
Jobst Gellert, 227 Viewmont Ave., Toronto, Ontario, Canada
Filed Feb. 19, 1960, Ser. No. 9,897
8 Claims. (Cl. 206—41.2)



1. A cigarette package comprising a base section having a bottom, a front wall and side walls joined together

in a substantially firm structure; a movable top section having a top, a rear wall hingedly connected to the top section and base section permitting sliding movement of the top section relative to the base section, said rear wall forming the rear wall of the package; a divider fastened to the front edge of the top and projecting towards the bottom, said divider being positioned to normally lie against the inside of the front wall and being of a depth having its lower edge terminate above the bottom a distance slightly greater than the thickness of a cigarette, and panels projecting down from the ends of the top and positioned to lie inside the side walls whereby on sliding said top section laterally a slot is formed between the front and the divider through which one cigarette will be dispensed by tilting the package from a substantially horizontal plane through an angle slightly greater than 90°; and means slidably retaining said section in its package forming condition.

3,019,893
BOBBIN HOBBLE
William H. Jacobs and Dorothy J. Timpone, St. Louis, Mo., assignors of one-third to Wendell Coffee, Lubbock, Tex.
Filed June 8, 1960, Ser. No. 34,671
2 Claims. (Cl. 206—53)

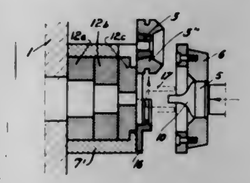


2. A protector for thread on a bobbin, the bobbin having a cylindrical center element adapted to the winding of the thread thereon, and two equal sized end discs coaxial with the cylinder, one at each end of the cylinder; comprising:

(*a*) an annular band co-axial with the bobbin surrounding same,
(*b*) the width of the band about equal to the distance between discs,
(*c*) the band at the edges being slightly larger in diameter than the discs,
(*d*) the band being arcuately concave in axial section so that it extends into the volume between the discs,
(*e*) the band being constructed of transparent springy material, and
(*f*) the band having a slot extending the full width of the band so that the band is a split ring, and
(*g*) the slot forming an aperture for thread to extend from the bobbin.

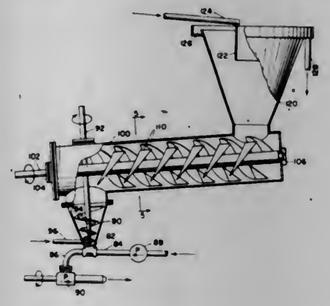
3,019,894
EXTRUSION OF METALS
Jean Delcroix, Montbard, René Hubert, Boulogne-sur-Seine, and René Heintz, Berlaimont, France, assignors to Compagnie du Filage des Metaux et des Joints Curty, a corporation of France
Filed Nov. 12, 1958, Ser. No. 773,496
Claims priority, application France Dec. 3, 1957
4 Claims. (Cl. 207—2)

1. An extrusion press for the extrusion of metals, said press comprising a container, a transverse sliding carrier, a die mounted on said sliding carrier, an extrusion ram, a dummy block interposed between said ram and the billet to be extruded, and a false container interposed between said container and said die, said false container constituting an auxiliary and separable portion of said container with a false container passage adapted to line up with and form a continuation of the container passage, said die seating at the end of said false container passage with the die orifice opening thereinto, said false container being located in a housing with a conical supporting surface provided in the container, this housing



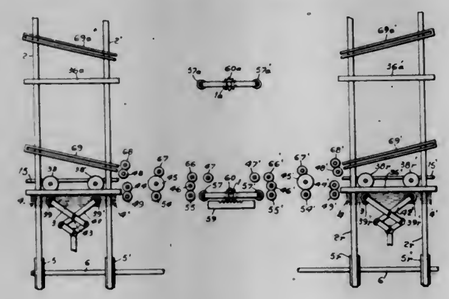
being formed in such manner that when said false container is in position it is supported by the main container so as to be able to withstand the pressures arising during the extrusion operation and in order that said false container may be readily withdrawn after each operation.

3,019,895
APPARATUS FOR SEPARATING, WASHING AND CLASSIFYING SOLIDS
Hirsch Loevenstein, Los Angeles, Calif., and Carl W. Carlson, Salem, and Leland B. Gunderson, Hood River, Oreg., assignors to Harvey Aluminum (Incorporated), a corporation of California
Original application Sept. 11, 1956, Ser. No. 609,254, now Patent No. 2,964,179, dated Dec. 13, 1960. Divided and this application May 6, 1960, Ser. No. 27,303
3 Claims. (Cl. 209—12)



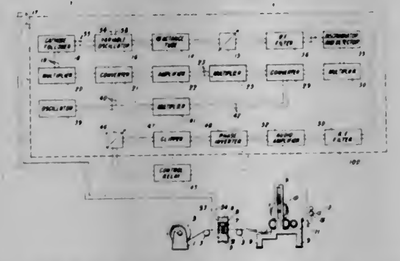
1. Apparatus for washing solids which comprises a downwardly inclined cylinder, means for introducing a slurry into the top portion of the cylinder, washing liquid inlet means for introducing washing liquid into the bottom portion of the cylinder for passage toward the top end of the cylinder, means for withdrawing the washing liquid from the top end of the cylinder, a motor driven shaft rotatably mounted lengthwise of the cylinder, and a plurality of shovel-shaped blades arranged on the shaft for engaging settled slurry solids, the blades being disposed obliquely with respect to the axis of the shaft with the trailing end of the blades extending toward the top end of the cylinder to lift the settled slurry solids upwardly and toward the top end of the cylinder and then releasing them as the shaft rotates, thereby permitting the washing liquid to wash the solid material, and control means in the washing liquid inlet means for regulating the upward flow of said liquid such as to wash the solids content of the slurry as the solids progress downwardly toward said inlet means.

3,019,896
SORTING MACHINE
Joseph Young, Antwerp, Belgium, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 25, 1957, Ser. No. 636,309
Claims priority, application Belgium Jan. 31, 1956
17 Claims. (Cl. 209—74)



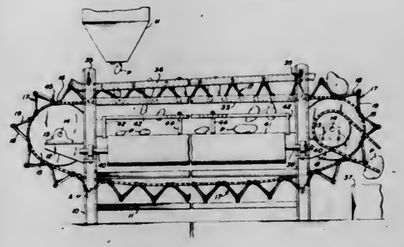
4. In a document sorting machine or the like, the combination with means for advancing records along dual courses, of means for feeding one document at a time out of an exit position of one said course to a station offset from both courses, mechanism operable either to return the document at said station to its previous course at an input position spaced along this course from said exit position, or to direct the document from said station into an input position in the other course, and selection means for selectively rendering one or the other of these operations effective.

3,019,897
FLAW-DETECTING APPARATUS AND METHOD
Earle W. Barber and Earle W. Barber, Jr., Westerly, R.I., assignors, by mesne assignments, of one-half to Julian W. Maxson, one-fourth to Louis L. Matthews, and one-fourth to Joseph A. Clancy
Filed Dec. 31, 1957, Ser. No. 706,520
23 Claims. (Cl. 209—81)



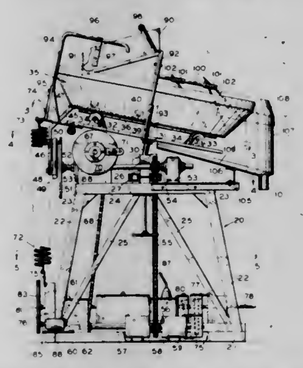
1. Apparatus for detecting imperfections in a traveling paper web and the like having, in combination, capacitive means, means for causing the web to travel past the capacitive means, an oscillator of predetermined frequency to which the capacitive means is coupled and having an output circuit, means for multiplying the frequency of the output circuit to multiply, also, any deviation in frequency from the predetermined oscillator frequency produced by imperfections in the paper, a frequency discriminator for separating out the multiplied frequency deviation, means for producing a control signal from the separated deviation, and means for adjusting the last-named means to compensate for any deviation produced by the interference of the paper grain.

3,019,898
SIZING APPARATUS
Francis Bertinot, 508 S. Main St., Church Point, La.
Filed Oct. 27, 1958, Ser. No. 769,749
10 Claims. (Cl. 209—102)



1. A sizing machine comprising a frame defining a horizontal supporting structure, a carrier movable on said supporting structure, said carrier comprising a plurality of sizing members cooperating to form a conveyor for the articles being sized, each of said members comprising two slats pivoted along their upper edges thereby forming a downwardly opening trough-like member, an endless chain for advancing each of said members, an angular member connected with a slat of each member cooperating with said chain to hold the member in upright position with respect to said chain, means urging the lower edges of said slats together whereby to separate the slats of adjacent members, and means mounted on the frame above the supporting structure for varying the distance between adjacent members.

3,019,899
APPARATUS FOR THE RECOVERY OF PRECIOUS METALS
Robert Ward Radcliffe, 356 Union St. NE., Salem, Oreg.
Filed Dec. 17, 1959, Ser. No. 860,145
1 Claim. (Cl. 209—435)



An apparatus for separating precious metals from sand, gravel or the like comprising a supporting frame having a centrally positioned socket, a plate, a base frame, rollers carried on the upperside of said plate, a centrally positioned rod depending from said plate terminating in a ball seating in said socket for limited universal movement of said plate, said socket rigidly mounted to a supporting frame, a separating pan mounted for oscillatory movement on said rollers, means carried by said supporting frame for imparting oscillatory movement to said pan, means carried by said frame for imparting intermittent pivoted movement about a hori-

zontal axis to said plate and hence said pan, said means for imparting oscillatory movement to said pan comprising lever means depending from said pan, a disc rotatably mounted on said frame, a crank pin on said disc, a connection between said crank pin and said lever arms, said means for imparting intermittent pivotal movement to said plate comprising a rotatable shaft on said frame, cam discs carried by said shaft engaging the underside of said plate, a coil spring extending from the underside of said plate to said base frame biasing said plate against said cam discs, a supply chute carried by said plate for movement therewith, said plate normally being positioned on an incline, a housing surrounding the lower tilted side of said pan, said housing being provided with an outlet, means for supplying water to said chute and said pan, a common motor means for driving said rotatably mounted disc and said shaft, and means for controlling the speed of said rotatably mounted disc and said shaft.

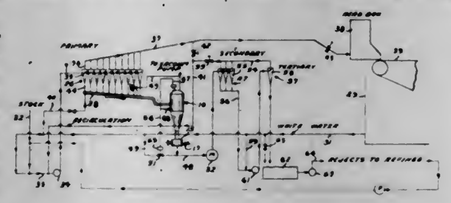
3,019,900
DENSE LIQUID MEDIA TYPE SEPARATOR
Lucien Lagrost, Fontainebleau, France, assignor to Preparation Industrielle des Combustibles, Fontainebleau, France, a French concern
Filed Nov. 27, 1959, Ser. No. 855,720
Claims priority, application France Dec. 2, 1958
13 Claims. (Cl. 209—172)



1. Apparatus for separating solid materials of different specific gravities by means of a suspension comprising an elongated sedimentation vat for holding a body of dense liquid, said vat having an overflow sill along one end over which the light fraction is discharged with overflow dense liquid; a lifting wheel rotatable about a horizontal axis extending normal to the longitudinal axis of said vat for lifting and discharging the "sink" products therefrom, said wheel including an annular peripheric wall having inwardly projecting flanges on its side edges forming side boards, and a plurality of circumferentially spaced buckets with each bucket including, in addition to the pheripheric wall and side boards, a generally radially extending perforated plate and a member whose general plane converges with the wheel axle, said perforated plate being connected at its outer end to the peripheral wall and side boards of the wheel and at its inner end to said member whose general plane converges with the wheel axle, the construction and arrangement being such that the perforated plates of the buckets insures drainage and the member whose general plane converges with the wheel axle insures the lateral discharge outside the wheel of the lifted and drained sink products as the wheel is rotated.

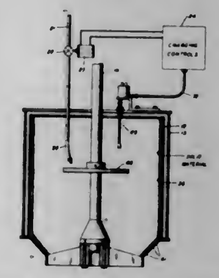
3,019,901
VACUUM RECEIVER AND SEPARATOR
Maurice D. Woodruff, Springfield, Ohio, assignor to The Bauer Bros. Co., Springfield, Ohio, a corporation of Ohio
Filed July 1, 1959, Ser. No. 824,277
18 Claims. (Cl. 209—211)

4. Apparatus for cleaning a liquid stock containing acceptable and rejectable solids in suspension, including primary and secondary hydro-cyclonic cleaners, means for flowing the liquid stock of said primary cleaner and flowing the rejects from said primary cleaner toward said secondary cleaner, another hydro-cyclonic cleaner intermediate said primary and secondary cleaners and in the path of flow to said secondary cleaner, said other hydro-cyclonic cleaner receiving the rejects from said primary cleaner and delivering an accepted fraction thereof to said secondary cleaner, said other hydro-cyclonic cleaner having a large



flow capacity under conditions of low pressure drop relative to said primary and secondary cleaners whereby to provide conditions favorable to a removal of heavy and abrasive particles, and means for applying a vacuum in said hydro-cyclonic cleaner.

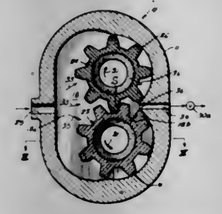
3,019,902
PROBE FOR CENTRIFUGAL
Alexander H. McPhee, Manhasset, and Thomas H. Reid, Brooklyn, N.Y., assignors to Hepworth Machine Company, Inc., Long Island City, N.Y., a corporation of New York
Filed June 23, 1958, Ser. No. 743,526
4 Claims. (Cl. 210—97)



1. In combination, a centrifugal basket, means for rotating said basket, charging means for applying solid-containing material to be centrifuged to said basket as it is being rotated, a valve for controlling said material applying means, and valve control means, including probe means positioned within the basket so as to be immovable at all times the basket is being rotated during the charging operation and electric circuit means outside the basket connected to said probe means, for controlling the operation of said valve in a direction to cut off the application of said material when the solids therein build up a wall of predetermined thickness on the inside of the basket, said probe means comprising a single insulated metallic member placed generally parallel to the axis of said basket and out of contact at all times with said wall.

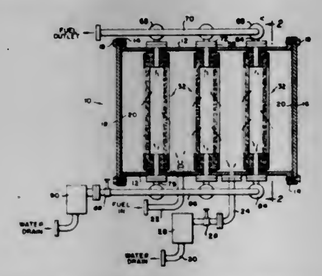
3,019,903
FLUID FILTER MECHANISM
Robert A. Daane, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Apr. 13, 1959, Ser. No. 806,009
7 Claims. (Cl. 210—108)

1. A filter assembly for cleansing pressurized liquids continuously delivered thereto, comprising a housing defining a filter chamber interiorly thereof and provided with a contaminated fluid inlet and outlets for the passage of filtrate and contaminants, and a plurality of toothed meshing passaged porous filtering elements and means within the housing mounting said elements for counter-rotation and sealing the inlet from the filtrate outlet, the elements during said counter-rotation being in sealing meshing engagement to divide the filter chamber into a contaminated fluid compartment and a contaminant compartment and being in close relation with the surfaces of the latter compartment to prevent sub-



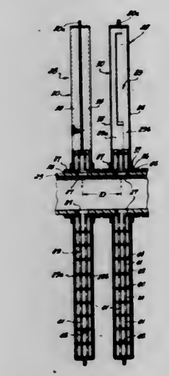
stantial fluid flow from said compartment to the contaminated fluid compartment, the contaminated fluid under pressure contacting the counter-rotating elements and filtrate removed therefrom passing through the passages in said elements to the filtrate outlet, the inlet and outlets being so sized that a pressure drop occurs from the filtrate outlet to the contaminant outlet to cause reverse fluid flow from the interior of the elements to said centaminate outlet to continuously backwash contaminant thereto.

3,019,904
AVIATION FUEL FILTER
Edward B. Stecher, 705 S. Wayne St., Arlington, Va.
Filed Aug. 14, 1959, Ser. No. 833,890
1 Claim. (Cl. 210—312)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A water-fuel separator comprising a horizontal tank having a fuel inlet in the lower portion thereof, and a plurality of fuel outlet tubes located in the upper portion of the tank, each of said fuel outlet tubes being removably connected to the tank so as to be rendered removable from the interior thereof, a plurality of substantially vertical filter cartridges equal in number to the outlet tubes in the tank, each of said filter cartridges comprising a pair of spaced, fixedly mounted porous leaves arranged in parallel relation to one another, an annular member interposed between said leaves and to which the peripheral portion of each of said pair of leaves is fixedly connected in peripheral moisture proof relation therewith, each of said annular members having an opening formed therein and extending radially thereof adjacent the upper portion thereof, said fuel outlet tubes being mounted within said openings, whereby fuel must pass through said filter leaves before passing out of the water-fuel separator, each of said annular members having a second opening formed therein adjacent the lower portion thereof, a water drain tube removably mounted in the opening in the lower portion of each of said annular members and extending outwardly of the tank whereby water accumulating between the filter leaves in any one cartridge is adapted to be drained from the tank; and a water outlet within the lower portion of said tank located exteriorly of said filter cartridges whereby water accumulating on the exterior of said cartridges is adapted to be drained from the bottom of the tank; each of said porous filter leaves comprising a pair of porous members having interposed therebetween a quantity of porous, felt-like filter material, said porous members each haivng a neoprene ring embedded in the peripheral portion thereof and said neoprene treated peripheral portion of each of the filter leaves being clamped to a side surface of each of said annular members in moisture-tight relation therewith.

3,019,905
FILTER ELEMENT AND ASSEMBLY
William O. Baker, West Covina, and Paul D. Prizler, Temple City, Calif., assignors to Swimquip, Inc., El Monte, Calif., a corporation of California
Filed Dec. 15, 1959, Ser. No. 859,638
11 Claims. (Cl. 210—486)

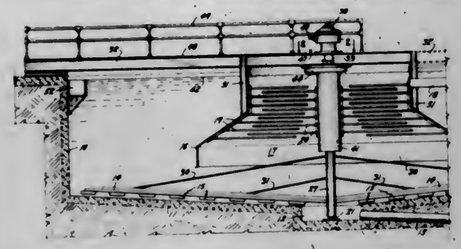


1. A filter core comprising: a pair of juxtaposed core members, of unitary molded plastic material, each member having a series of arms spaced from each other, and webs extending between the arms and defining apertures therebetween for entrance of water between the core members, spacer means on alternate webs for interposing between corresponding spacer means of the other member, the length of each spacer means along the web being less than the corresponding center to center distance of the arms whereby channels are formed between the cores at the arms.

3,019,906
SUPPORTING STRUCTURES FOR SEWAGE CLARIFICATION UNITS
Clifton H. Allen, Denver, Colo., assignor to Western Filter Company, Denver, Colo., a corporation of Colorado
Filed Aug. 3, 1959, Ser. No. 831,168
2 Claims. (Cl. 210—524)

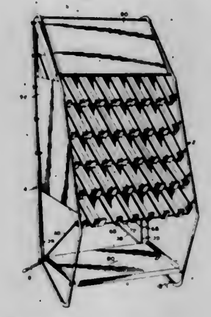
1. In a clarification tank, an axially-positioned fixed vertical supporting column; a concentrically positioned thrust bearing mounted on the top of said column; a drive shaft rotatably mounted in and in vertical axial alignment with said bearing; a collar element fixed to said drive shaft and supported by said thrust bearing; rake

arms extending from said collar element; a second thrust bearing surrounding said drive shaft and bearing on said collar element; shaft driving means co-axial with said column and supported by said second thrust bearing and connected with said drive shaft to drive the latter and thereby cause said rake arms to revolve about said column; and rotation preventing means acting to prevent



rotation of said shaft driving means, said rotation preventing means comprising a beam structure of less length than the diameter of said tank extending from and being stationarily mounted on one side of said tank, the axial portion of said structure being mounted on and supported by said second thrust bearing, said shaft driving means being mounted on said beam structure.

3,019,907
MERCHANDISE DISPLAY RACK
Stephen Belejack, 716 Columbus Ave., Boston, Mass.
Filed Nov. 3, 1960, Ser. No. 67,084
7 Claims. (Cl. 211—49)



1. In a display stand;

a pair of side frames each having a rear upright and a front upright inclined downwardly and forwardly from the rear upright;

a plurality of vertically spaced transverse shelf holders connecting the rear uprights above the center thereof;

a plurality of transverse U-shaped shelf holders equal in number to the rear holders pivotally mounted in said front upright centrally thereof;

shelf members supported on said shelf holders;

and hanging means depending from each end of the shelf members and engaging the shelf holding means.

3,019,908
AUTOMOBILE VISOR SUPPORTABLE RACK
Harold Theurer, 834 S. Phillips Ave., Sioux Falls, S. Dak.
Filed May 27, 1959, Ser. No. 816,278
4 Claims. (Cl. 211—50)

1. An automobile sun visor engageable rack, comprising a pair of opposite end members each of which comprises a pair of outer and inner generally U-shaped members having arcuate bight portions of different radii and the one of less radius being disposed within the one of greater radius and being rigidly secured thereto, the legs of the U-shaped members being of different lengths and diverging from said arcuate bight portions, the legs of the outer U-shaped members being the longer and the shorter ones, the said longer legs each being provided with a hook engageable with a sun visor, the shorter legs being unitary with a member disposed at right angles to said end mem-



bers and at a position intermediate said arcuate bight portions and said hooks, a rod disposed in parallel relation to said member and having its opposite ends secured to the outer U-shaped members adjacent the arcuate bight portions thereof, and a second rod disposed between said member and said first rod in parallel relation thereto and having its opposite ends secured to the outer U-shaped members, the spaces between said legs defining pockets for maps or the like.

3,019,909
HANGER DEVICE
Charles Harvey Churchill, P.O. Box 83, Cortland, N.Y.
Filed Jan. 7, 1959, Ser. No. 785,376
2 Claims. (Cl. 211—86)



1. A garment hanger device for use over a bathtub and adapted to be supported between a wall and a shower curtain rod opposed thereto, comprising a bar bent adjacent one end thereof to form a straight portion extending at an angle to the main portion of the bar, the free end of the angled portions of the bar adapted to engage the wall at a point above the curtain rod and a stop means adjustably mounted adjacent the free end of the main portion of the bar for engaging the curtain rod thereby wedging the bar between the wall and the rod with the main portion of the bar horizontally disposed for supporting suspended articles.

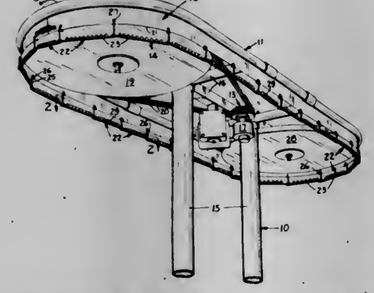
3,019,910
BOW TIE HOLDER
Harold L. Greene, 1329 NW. 2nd Ave., Fort Lauderdale, Fla.
Filed Mar. 4, 1959, Ser. No. 797,290
10 Claims. (Cl. 211—87)

1. A holder for magnetic objects comprising a substantially rectangular elongated non-magnetic body having a flat surface extending substantially the entire length thereof, a pair of spaced magnetic rods embedded in said body and projecting from said surface outwardly from said body, said rods extending in parallel relation along the length of said surface, a plurality of permanent magnets enclosed in said body and spaced along the length thereof



with the ends of said magnets in contact with said rods, and a plurality of ledges extending outwardly from said flat surface at spaced points along said body for supporting and positioning a plurality of bow ties.

3,019,911
SUSPENSION DEVICE FOR TRAVELING BELT CONVEYOR
Floyd E. Collette, 713 4th St., Farmington, Minn.
Filed Apr. 7, 1958, Ser. No. 726,839
5 Claims. (Cl. 211—122)

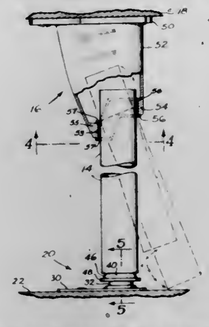


1. In an endless belt conveyor of the type adapted to travel edgewise in a horizontal plane, a suspension device therefor comprising, a flexible traveling belt having a free lower edge, an elongated horizontal rod having an eye formed at one end thereof and an upturned portion terminating in a fastener at the other end, said fastener being freely suspended from the lower edge of the belt and the eye portion being adapted to pivotally surround the upturned portion of another elongated horizontal rod also freely suspended from the lower edge of said belt at a position in spaced horizontal relation therefrom.

3,019,912
REVOLVING SHELF MOUNTING ASSEMBLY
Alfred Raymond Hoffman, Gig Harbor, Wash., assignor, by mesne assignments, to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Dec. 30, 1959, Ser. No. 862,820
6 Claims. (Cl. 211—144)

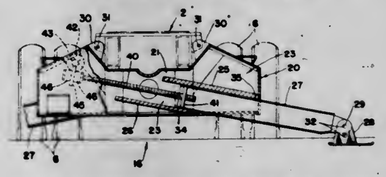
4. A revolving shelf mounting assembly comprising in combination a post adapted to support a shelf, a vertically

arranged lower bearing assembly for detachably and rotatably mounting the lower end of the post, and a vertically arranged upper bearing assembly comprising a housing having a vertically stepped opening in its lower end, a vertically stepped bushing seated in the opening and



dimensioned to mount rotatably the upper end of the post, the housing being recessed both vertically and laterally to permit lifting the post in an axial direction as well as moving it angularly in the direction permitted by the stepped configuration of the opening.

3,019,913
OUTRIGGERS FOR POWER SHOVELS, CRANES OR THE LIKE
Spencer Bowman, Lakewood, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Filed Aug. 15, 1960, Ser. No. 49,624
20 Claims. (Cl. 212—145)

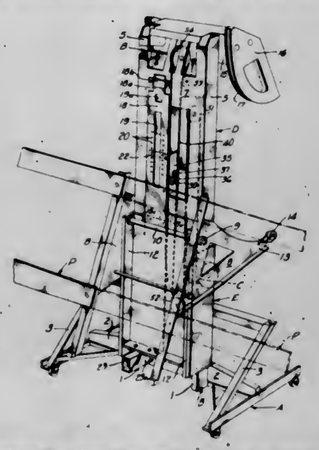


1. In an outrigger of the type which is characterized by the provision of a beam and actuating means therefor which are adapted to be mounted on a carrier for longitudinal movement of said beam by said actuating means simultaneously outwardly and downwardly from a retracted position clearing the ground to an extended position whereat an end thereof is engaged with the ground; the combination therewith of support means on said carrier engaging the top and bottom sides of said beam at points that are located to resist upward swinging of said beam by upward reaction of the ground against such one end and to provide frictional locking of said beam in extended position without aid of said actuating means; said actuating means comprising a reversible motor and self-locking power transmission means operatively connected between said motor and said beam as a further safety feature against inadvertent collapse of said beam from extended position.

3,019,914
APPARATUS FOR INSTALLING WALLBOARD ON CEILINGS
Burrett W. Taylor, 201 Ventura St., Santa Paula, Calif.
Filed Sept. 23, 1959, Ser. No. 841,851
9 Claims. (Cl. 214—1)

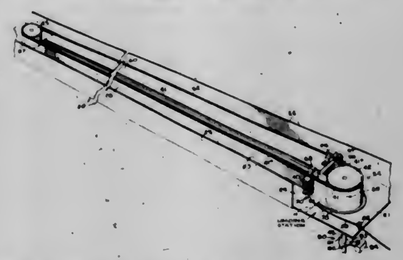
1. An apparatus for lifting wallboard to installing position, comprising, a mobile support, a frame fixed to said

support and having a shoulder, a movable extension section slidably mounted on said frame, cam segments fixed to the upper end of said movable section, an elongated plate also carried by said movable section shiftable relative thereto, a carriage slidably mounted on said movable section, a wallboard platform mounted on said carriage, means on the bottom of the carriage for engaging said movable section, means on the plate of the movable sec-



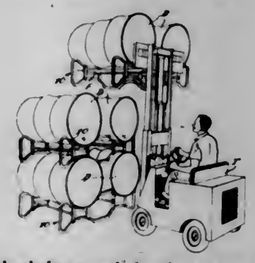
tion engaging the shoulder on the frame to prevent upward travel of said movable section, said means being released on the shifting movement of said plate to permit upward travel of said movable section, pulleys on the fixed frame and other pulleys on the movable section, a winding drum, and a cable having one end connected to the drum and the other end connected to the carriage while the intermediate reaches of said cable are sheaved over said pulleys.

3,019,915
APPARATUS FOR MAKING A WIRING HARNESS
Louis E. Long, Rockford, Ill., assignor to Greenlee Bros. & Co., Rockford, Ill., a corporation of Illinois
Filed Aug. 27, 1959, Ser. No. 836,445
12 Claims. (Cl. 214—1.1)



1. A machine for forming a wire harness which comprises an endless flexible drawing member, means for supporting said flexible drawing member for movement about an endless path, controllable means for driving said drawing member intermittently along said path in steps of selectively variable length, a loading station adjacent said endless path, a wire receptacle extending along said endless path, a source of wire at said loading station, means coupled to said drawing means for gripping the leading end of a wire fed from said source, means for measuring the amount of wire payed out from said source, presettable means coupled to said driving means for automatically stopping said leading end at a predetermined point in its path of movement so that it may be cut at said loading station to form a first piece of wire having a predetermined length, and means for causing the leading end of the first piece of wire to be drawn additionally along said path of movement and deposited at said loading station so that when successive pieces have been cut off they lie side by side in said receptacle for binding together into a harness.

3,019,916
PORTABLE DRUM RACK
Frank F. Malcher, Cleveland, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed May 9, 1958, Ser. No. 734,315
1 Claim. (Cl. 214—10.5)

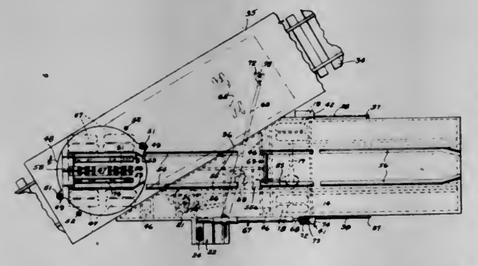


A portable skeleton rack for the storage and transporting of drums in pairs adapted to permit the removal of one or both drums at the top of the stack by the tynes of a lift fork from a direction transverse to the axis of the drums without disturbing the rack or other drums, said rack comprising, in combination, a pair of drums supporting end frames each including upper and lower rails having substantially horizontal portions provided with spaced arcuate drum seats extending inwardly of the frame toward each other, and having their crown portions spaced apart; laterally spaced vertical struts lying substantially in the plane of the end frames and connecting the upper and lower frame rails at either side of said crown portions, said struts and crown portions defining openings for receiving the tynes of a lift fork when the truck carrying the tynes moves parallel to the longitudinal axis of the drums to lift the frames and drums; two sets of cross members having opposite end portions detachably secured to said vertically disposed struts, said cross members located in a common horizontal plane medially between the crown portions of said upper and lower rails and at right angles to the planes of said end frames, whereby, when the tynes of the lift fork move in a direction parallel to the axis of the drums they will enter the space between the struts and said crown portions, and when the tynes of the lift fork move transversely to the axis of the drum and engage beneath both sets of cross members, the rack with both drums mounted thereon may be handled for stacking, and when the tynes of the lift fork pass above one or both sets of said cross members and tangentially engage one or both drums, the latter may be removed from the rack without disturbing the companion drum or the rack at the top of the stack.

3,019,917
MOBILE LOADING RAMPS
Fortunato S. Ajero, 547 McDonald Ave., Galion, Ohio, assignor to Albert I. Kegan, as trustee, Evanston, Ill.
Filed June 26, 1957, Ser. No. 668,234
2 Claims. (Cl. 214—38)

1. Apparatus for transferring a highway trailer between a fully loaded position on a railway flatcar located on a section of railway track and a fully unloaded position

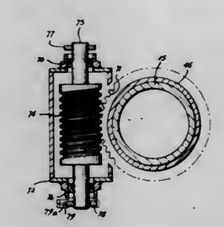
on a section of roadway paralleling the section of railway track, said apparatus consisting of a load-unload vehicle having a surmounting platform which has a front side disposed at an acute angle to the longitudinal axis of the load-unload vehicle and has a rear side disposed at right angles to the said axis, self-powered means for moving the load-unload vehicle along the section of railway track, between it and the roadway section, to bring said angular front side against the flatcar into abutting side-by-side relation with the side of the flatcar, power jack means for raising and lowering the platform to conform to the level of the flatcar it abuts and for maintaining it level therewith, a ramp and means hingedly connecting it to the platform about an axis which extends across the said rear side of the platform at an acute angle to said abutting sides of the platform and flatcar, power means for moving said ramp between an elevated position thereof and a depressed position thereof wherein it contacts the said roadway and wherein said abutting platform then provides a diagonal roadway continuation over the depressed ramp, over the platform and onto the flatcar, said roadway continuation permitting a said trailer to be moved by a highway tractor between said fully un-



loaded position of the trailer and a partly loaded position thereof in which the trailer is diagonally related to the flatcar with the rear portion of the trailer resting on the flatcar and the front portion of the trailer extending diagonally forward to overhang the platform, power means carried on the platform for moving the trailer front portion generally sideways of the flatcar between its said partly loaded position and said fully loaded position thereof wherein the trailer is fully loaded on the flatcar in general alignment therewith, said platform and the flatcar it abuts cooperating to provide a continuous support pathway along which the trailer front portion travels while being moved by said power means between the last said trailer positions, said power means comprising means for detachably engaging the front portion of a trailer when the latter is in either its partly loaded or its fully loaded position, an arm connected to said engaging means, and hydraulically powered means for moving said arm between extended and retracted positions thereof, said engaged trailer front portion being brought into the said partly loaded position responsive to the arm being moved into its said retracted position and being brought into its fully loaded position responsive to the arm being moved into its said extended position.

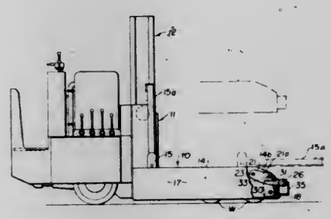
3,019,918
HOIST
Howard Nichols Keener, 6220 Forest Hill Drive, Fort Worth, Tex.
Filed Mar. 18, 1959, Ser. No. 800,197
7 Claims. (Cl. 214—75)

1. A hoist comprising a base member, a vertical member rotatably mounted on said base member, a chain storage chamber within said vertical member, a longitudinally extensible boom member pivotally mounted atop said vertical member for rotation about a horizontal axis, said boom member having an inboard and an outboard end and a sprocket chamber within said inboard end, boom locking means on said boom to maintain said boom member in the desired predetermined position of extension, a longitudinally extensible brace member interconnecting said vertical member and said boom member at points intermediate their ends, brace locking means on said brace member to maintain said brace member at various predetermined lengths to position said boom member at various desired angles relative to said vertical member, a first sprocket rotatably mounted at the outboard end of said



boom member, a second sprocket rotatably mounted within said sprocket chamber at said inboard end of said boom member, a worm and worm gear mounted on said boom and connected to said second sprocket to produce rotation thereof, a roller chain extending from said first sprocket along said boom member around said second sprocket and downward into said chain storage chamber within said vertical member, and chain guide means mounted within said sprocket chamber of said boom member adjacent said second sprocket and projecting into said chain storage chamber to hold said chain against said second sprocket over a substantial portion of the circumference thereof and guide said chain into said storage chamber.

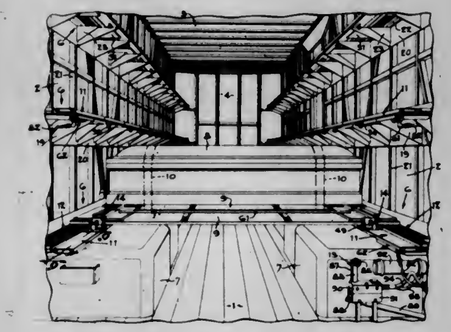
3,019,919
INDUSTRIAL TRUCK WITH AUXILIARY LIFT
John A. Draxler, Berea, Ohio, assignor to The Elwell-Parker Electric Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 31, 1958, Ser. No. 725,091
2 Claims. (Cl. 214—82)



1. An industrial truck adapted for shifting massive loads between a generally horizontal load supporting surface of the truck and an external location at a level below that of said surface, comprising: a vehicle including at one end a vertically shiftable front end loading platform, said platform having a generally horizontal load supporting top surface and a front skirt at the outer end of the platform spaced below said surface, said platform also including an inclined formation sloping from said surface toward said skirt; power-moved stanchion means movable lengthwise of the platform for providing

a load shifting force directed lengthwise of the platform; a vertically swingable arm assembly projecting forwardly over the central region of said skirt through an opening in said platform, said assembly having an inner end mounted beneath the platform surface by transverse pivot means and carrying on its outer end transversely disposed horizontal roller means; a hydraulic cylinder unit with a fixed element mounted on said platform beneath said surface and a movable element pivotally connected to said arm assembly for swinging said assembly from a lowermost position with said roller means below said inclined formation to a position at least as high as said surface; and a source of hydraulic fluid pressure and control means therefor directing fluid to and from said unit for swinging said arm assembly, and maintaining the roller means at a selected position.

3,019,920
LOAD SUPPORTING AND HANDLING MECHANISM FOR VEHICLES
Daniel A. Hillenbrand, Batesville, and Wilbur W. F. Dieckmann, Napoleon, Ind., assignors to Batesville Casket Company, Inc., Batesville, Ind., a corporation of Indiana
Filed Nov. 30, 1959, Ser. No. 856,062
12 Claims. (Cl. 214—84)



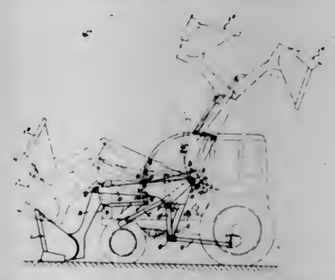
1. In a vehicle body having side walls and a rearward opening, a support structure adapted to support loaded pallets in horizontal rows one above the other, said support structure comprising, respective pairs of horizontal rail assemblies mounted one above the other relative to the side walls of the vehicle, each of said rail assemblies comprising a fixed rail, a conveyor extending parallel with the fixed rail, a series of skid sections mounted above the fixed rail in end-to-end relationship, and actuating means engageable with the rearmost skid section of said end to end series and adapted to thrust said series of skid sections collectively in a forward direction relative to the fixed rail, lift means interposed between the fixed rail and skid sections and adapted to elevate the skid sections collectively in response to the forward motion thereof, said skid sections, in a lowered position, residing below the plane of said conveyors and residing above said plane when shifted to the elevated position, said conveyors adapted to engage the opposite ends of the loaded pallets and support the same for advancement of the pallets relative to the vehicle with the skid sections in said lowered position, said skid sections adapted to engage and lift the opposite ends of the pallets from the conveyors and to support the same during road transport of the vehicle, said actuating means adapting the skid sections to be shifted individually from the elevated position to the lowered position, thereby to transfer the loaded pallets individually to the conveyor for unloading the same.

3,019,921
DRAG BUCKET ELEVATING AND UNLOADING MECHANISM
Charles J. Prange, Lima, Ohio
Filed Apr. 12, 1960, Ser. No. 36,102
3 Claims. (Cl. 214—103)



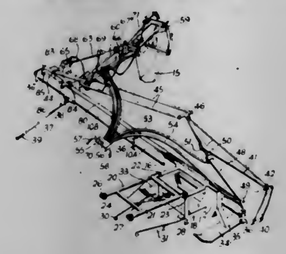
1. In an apparatus utilizing a drag bucket for cleaning drainage conduits such as sewers and culverts: a support adapted to be positioned adjacent a mouth of said conduit; a bucket guide roller of bucket-straddling proportions comprising a main body section having an axial length approximately equal to the diameter of the bucket and a pair of axially thin, disc-like end flange members disposed closely adjacent the ends of said main body section; and a shaft mounted in said support upon which said main body section and end flange members are mounted for free rotation independently of one another on a common rotational axis, with the end flange members located closely adjacent the respective ends of main body section; said main body section having a central part providing a generally cylindrical central bearing surface of minimum radius for supporting contact with a central area of said bucket and having axially opposed flange parts integrally joined to respective axial extremities of said central part and providing frusto-conical lateral bearing surfaces diverging outwardly from and of greater radius than said central surface, and said end flange members having peripheral bearing surfaces of a radius approximately the same as the maximum radius of said lateral bearing surfaces, for supporting engagement with lateral parts of said bucket while rotating at a circumferential rate of rotation substantially matched to that of said minimum radius central bearing surface to minimize slippage between the respective bearing surfaces and said central and lateral parts of the bucket.

3,019,922
LOADING DEVICES FOR MOUNTING ON VEHICLES
Frederick Webster, Meltham, Huddersfield, England, assignor, by mesne assignments, to David Brown Tractors Limited, Meltham, Huddersfield, England, a company of Great Britain
Filed Sept. 10, 1957, Ser. No. 683,159
Claims priority, application Great Britain Sept. 15, 1956
6 Claims. (Cl. 214—140)



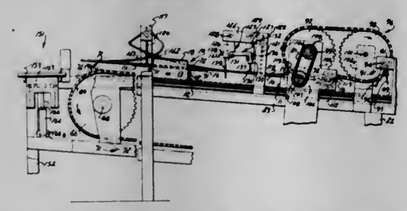
1. A loading device for mounting on vehicles comprising a support; at least one lifting arm pivotally connected to said support; a bucket pivotally connected directly to the free end of and depending from said lifting arm; power operated means for pivotally raising said lifting arm relative to said support; and linkage pivotally connected to said support, to said lifting arm and to said bucket below the pivot connection of the bucket to the lifting arm and actuated by said raising movement of said lifting arm for automatically swinging said bucket forwardly relative to said lifting arm during the initial raising of said lifting arm.

3,019,923
APPARATUS FOR SUPPORTING LAND WORKING OR OTHER TOOLS ON A TRACTOR
Percival H. Morrison, Twyford, and Percival J. Packman, Ruscombe, near Twyford, England, assignors to Leeford (London) Limited, London, England, a British company
Filed Aug. 27, 1959, Ser. No. 836,453
Claims priority, application Great Britain Aug. 29, 1958
4 Claims. (Cl. 214—140)



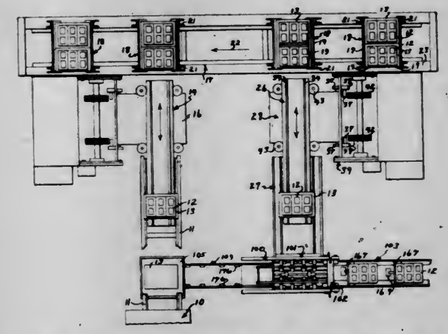
1. Apparatus to be used on a tractor for supporting an agricultural tool comprising a beam, means carried by the beam for attaching the same to and for support by the tractor transversely across the tractor, whereby said beam can extend to a position at one side of the tractor, a carriage mounted on and for relative movement along the beam, means on said carriage for the detachable attachment and support of the tool, and means for moving the carriage longitudinally along the beam; an upper rail and a lower rail carried by said beam each said rail providing a forward bearing face and a rearward bearing face; an upper bearing face on the upper rail; and a lower bearing face on the lower rail; wheels carried by said carriage engaging said upper bearing face, rear face of the upper rail and front face of the lower rail; and means carried by said carriage engageable with the front face of the upper rail, rear face of the lower rail, and lower face of the lower rail, and means for moving the carriage slidably along said beam.

3,019,924
CONTAINER CASE FEEDING AND OPENING MEANS
Robert F. Krupp and Jan K. Wagner, Oakland, Calif., assignors to Gerber Products Company, Fremont, Mich., a corporation of Michigan
Filed July 18, 1957, Ser. No. 672,618
12 Claims. (Cl. 214—304)



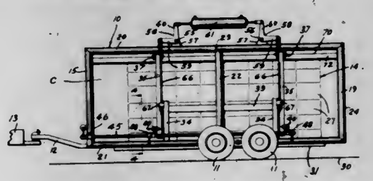
1. In combination, means for advancing a case having exposed side flaps, a feeler rod, a pair of spears on opposite sides of the path of travel of said case, means mounting said rod and spears cooperatively for pivotal movement together in a path parallel to the direction of movement of said case, said rod depending in the path of movement of said case and positioned to be pivotally moved by said case as said case is advanced, said spears being positioned each to impale one side flap and to lift said flaps as said case moves past said spears.

3,019,925
BLOCK HANDLING APPARATUS
Robert M. Gray, Rte. 1, Sheffield, Ala.
Filed Apr. 24, 1958, Ser. No. 730,611
14 Claims. (Cl. 214—310)



14. In apparatus for moving and unloading pallets loaded with material and stacked in superposed relation, a shuttle conveyor adapted selectively to move under and lift the pallets one level at a time and subsequently to withdraw them from the stack, a transfer conveyor disposed adjacent the discharge end of the shuttle conveyor, means to move the shuttle conveyor over the transfer conveyor and thence below the level thereof thereby to deposit the pallets onto the transfer conveyor, means to drive the transfer conveyor, pallet unloading means located adjacent an end of the transfer conveyor on which the loaded pallets are delivered, means for removing the material from the pallets, means for removing the empty pallets from the unloading means, and control means to energize the drive means for the transfer conveyor upon removal of an empty pallet at the unloading means whereby a loaded pallet is moved onto the unloading means.

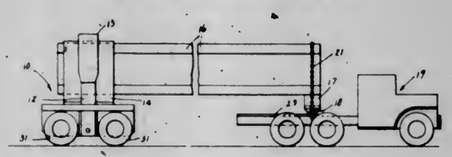
3,019,926
STRADDLE TRAILER
James Julius Christenson, Cowiche, Wash., assignor to Towmotor Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 24, 1957, Ser. No. 692,114
1 Claim. (Cl. 214—392)



In a straddle carrier: a wheeled structure defining a chamber which is open along the bottom and at one end, said structure comprising a front upright rectangular frame and a rear frame comprising a transverse top beam

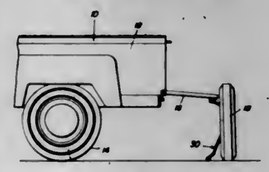
and legs extending downwardly from the ends thereof, horizontal upper side beam members connecting said front and rear frames, and intermediate members connecting intermediate portions of said horizontal beam members; vertical guides spaced along the opposite sides of said chamber having fixed pivots at their upper ends on the adjacent of said horizontal beam members for swinging movement of their lower ends transversely of the chamber; load engagers on opposite sides of said chamber, the engager being telescopically supported in the lower ends of the guide on that side for swinging movement therewith as a unit inwardly from retracted positions to engage the load; power means operative to move said load engagers laterally into engagement with the load, said power means comprising longitudinal shafts extending along the sides of said structure, means operative to simultaneously oscillate said shafts, and toggles connecting said shafts and the lower ends of said guides for moving said guides and associated engagers back and forth in response to oscillation of said shafts; means for lifting said load engagers so as to raise the load within said chamber, said lifting means comprising a pair of transverse shaft members supported across the upper portion of said structure, vertical levers fixed on said transverse members, horizontally directed levers connected to said shaft members, linkage means connecting said shaft members so that they will oscillate in unison, link members connecting said horizontally directed levers to said load engagers so that said load engagers will be raised and lowered by telescopic movement with respect to the guide supports as said shaft members are oscillated, and fluid motor means connected to said vertical levers for reciprocating the same and thereby imparting oscillation to said shaft members; and ceiling means in the upper portion of said chamber for engagement by said load when it is lifted, said last named means having inclined load guiding flange members along the longitudinal edges thereof for deflecting an engaged load in a direction towards the central axis of the chamber.

3,019,927
METHOD AND APPARATUS FOR TRANSPORTING BEAMS
Daniel J. Sheehan, Jr., P.O. Box 430, and Fred J. Stephan, 1318 N. Logan Ave., both of Danville, Ill.
Filed Dec. 5, 1958, Ser. No. 778,345
4 Claims. (Cl. 214—396)



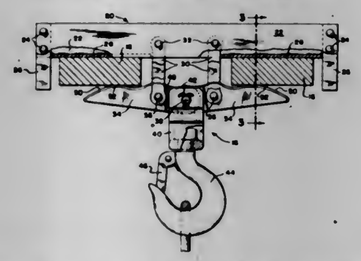
1. In a mobile apparatus adapted to support one end of an elongated heavy load member such as a concrete beam or the like: dual wheeled trucks adapted to be disposed on opposite sides of said load member, each of said trucks including side members and wheels mounted in spaced relation on said side members, tubular arch columns pivotally supported on said side members midway between said wheels and extending above said load member, a cross member rigidly joining the upper ends of said columns, an idler sheave supported for vertical movement within each of said columns, chains anchored at one end to said columns and extending over said sheaves to support a load receiving arm between said columns, power means including hydraulic cylinders mounted within said columns and adapted to position said sheaves and consequently said load arm, and centering springs carried by said trucks and acting on said columns to bias said columns upright with relation to said trucks, whereby said trucks may articulate with relation to said columns and against the force exerted by said centering springs when traversing rutted surfaces.

3,019,928
SPARE TIRE CARRIER FOR PICKUP TRUCKS
Marvelle W. Mullins, 1000 W. Main St., Henderson, Tex.
Filed Aug. 12, 1958, Ser. No. 754,545
2 Claims. (Cl. 214—451)



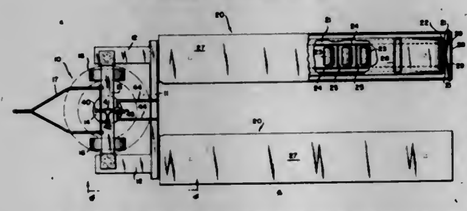
1. In combination, a motor vehicle body including a vertically swingable tailgate having its lower end hingedly secured to the rear end portion of said body, and a spare wheel and tire carrier including an angulated, generally vertical bar comprising an intermediate portion and divergent end portions, means for removably securing a spare wheel on said intermediate portion, and means selectively hingedly and detachably securing the ends of said bar to the free end portion of the outside of the closed tailgate and to the body at a point below said tailgate, said bar being vertically engageable with the ground for supporting the tail gate in a generally horizontal open position and to facilitate the mounting thereon or removal therefrom of the spare wheel.

3,019,929
AUTOMATICALLY LOCKING LIFT FORK ATTACHMENT
Edward Merrill Gardner, Flushing, and Valentine T. Kopp, Lynbrook, N.Y., assignors to Merrill Brothers, Maspeth, N.Y., a corporation of New York
Filed Apr. 30, 1959, Ser. No. 810,094
12 Claims. (Cl. 214—620)



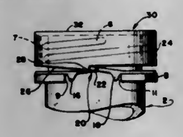
1. The combination of an industrial fork-lift truck with a load-lifting attachment mounted on the tines of the fork and cooperatively connected thereto to pick up and transport loads, said attachment comprising a beam extending transversely on the upper portion of the tines of the fork, a load-engaging means beneath the beam for engaging and supporting a load to be lifted and transported, pairs of spaced supporting links pivoted to the beam and extending downwardly between the tines of the fork, a lever pivoted intermediate its ends between each pair of supporting links below the position of the tines, the inner ends of the levers overlapping between the pairs of links, pivot means extending through said overlapping ends of said levers and supporting the loading-engaging means, said levers each including an arm extending laterally from its pair of supporting links, said arms extending respectively under and in contact with the adjacent tines of the fork and pressed into looking engagement therewith by the weight of the load-engaging means and of the load carried by the load-engaging means, whereby said attachment is automatically actuated to lock itself to the tines of the fork.

3,019,930
FORK LIFT UNIT
John W. Allen, Hinsdale, Ill., assignor to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed June 23, 1960, Ser. No. 38,293
9 Claims. (Cl. 214—731)



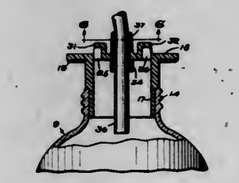
1. A fork lift unit for lifting and moving heavy objects, comprising a truck portion having at least a pair of forwardly projecting lifting forks attached thereto, each of said forks including a base channel member, an elongated expandable container supported on said channel member, and a cover plate overlying said container for movement relative to said base plate means upon expansion of said container, and adjustable means attaching said lifting forks to said truck portion whereby the spacing between said lifting forks may be varied, said truck portion carrying container expansion means in communication with the container of each lifting fork for operation thereof.

3,019,931
RECEPTACLES WITH POSITIVE LOCKING CLOSURES
Elbert H. E. Thornton, 5000 N. Dotsy Ave., Odessa, Tex.
Filed Dec. 3, 1959, Ser. No. 857,017
16 Claims. (Cl. 215—9)



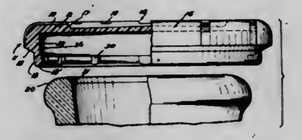
8. A safety receptacle comprising in combination a containing means having an open end, said containing means being provided with an external circumferential bead spaced from said open end and having an interruption therein, and retaining means disposed between said open end and said bead; a ring disposed on said bead, said ring carrying wedge means normally projecting above the surface of said ring and means for depressing said wedge means; said ring carrying an abutment cooperating with said interruption for preventing turning movement of said ring relative to said containing means; and a closure for said containing means having a crown portion and a skirt portion having a terminal edge, said skirt portion having retaining means adapted to cooperate with the retaining means on said containing means whereby said closure can be tightened and retained on said containing means, said skirt having a notch in said terminal edge thereof, said notch cooperating with said wedge means to prevent removal of said closure unless said means for depressing said wedge is operated.

3,019,932
UNIVERSAL CAP
Frank K. Singiser, 159 Christopher St., New York, N.Y.
Filed Dec. 12, 1958, Ser. No. 780,124
1 Claim. (Cl. 215—37)



In a drainage system, means for universally fitting a drainage tube to different size bottles comprising a rigid light weight unitary molded plastic body having a disc-like top wall, said top wall formed with an opening arranged and proportioned to receive and grip and seal around the drainage tube with its end held against both inadvertent withdrawal from and excessive depression into the bottles, the top wall formed also with one or more other openings constructed and arranged to vent the bottles while preventing contamination of their content, and an annular sleeve-like side wall integrally dependent from said top wall, said side wall formed with different size annular parts proportioned to telescope with the mating annular necks of different size open-mouth fluid receptacles, the side wall having also a straight, smooth cylindrical inner face for engaging over necks of smaller size, and the side wall further having a stepped outer face for lower and upper engagement there with necks respectively of intermediate and larger size.

3,019,933
SNAP-ON CAPS AND PACKAGES INCORPORATING THE SAME
Jack U. Gould, Brooklyn, and Leonard M. Gutmann, Babylon, N.Y., assignors to Ferdinand Gutmann & Co., Brooklyn, N.Y., a corporation of New York
Filed Aug. 6, 1958, Ser. No. 753,550
4 Claims. (Cl. 215—41)



1. A package including a relatively rigid container comprising a neck having a rim, of which the area close to and peripherally of the neck bore is higher than any other portion of the rim, and a peripheral outer bead continuous with said rim, the lowermost portion of said bead having a slope extending downwardly and inwardly at least far enough to be engaged by a snap-on cap for said package; in combination with a snap-on cap, including a top disk, and a skirt unitary therewith and depending therefrom, of resilient plastic, the junction between top disk and skirt of said cap comprising a thick relatively rigid portion extending peripherally along the top disk and a thick relatively rigid portion integral therewith, extending peripherally of the upper part of the skirt, the skirt having an inwardly extending lower rim portion thickened circumferentially, embracing and tangential to the downwardly and inwardly sloping lower portion of the bead, the skirt portion above the inwardly extending thickened lower rim being of substantially uniform inner diameter greater than that of the container neck embraced

thereby, for clearance with respect thereto and to provide a space and having a portion reduced in thickness relative to that of the junction to afford the flexibility to permit the thickened lower rim of the skirt to be snapped in place under the bead under cap-applying pressure; the top disk of the snap-on cap having the central portion thereof corresponding substantially to the bore of the container, of thickness materially less than that of the rim portion of the top disk that is adjacent the junction thereof with the skirt, whereby the vertical component of pressure exerted tangentially of the lower portion of the bead against the inwardly extending rim portion of the skirt will exert maximum leverage transmitted through the relatively stiff junction of the cap for effective seating of the cap against the most elevated area of the container rim close to the bore of the neck, said snap-on cap having means unitary therewith to facilitate its removal from the container.

3,019,934
LIFT GATE SUPPORT FOR STATION WAGON

John P. Bogater, Detroit, and Samuel F. Loria and Nelson E. Putnam, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Sept. 23, 1954, Ser. No. 457,872, now Patent No. 2,908,415, dated Oct. 13, 1959. Divided and this application Feb. 2, 1959, Ser. No. 790,752
3 Claims. (Cl. 217—60)



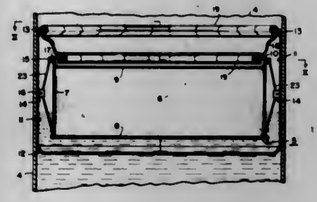
3. A support of the character described for a hinged closure, including: an outer channel; an inner channel slidably mounted in said outer channel in telescopic relation therewith; a first latch and keeper on said channels for supporting the closure in fully open position, said first latch being mounted on said inner channel; a second latch and keeper on said channels for supporting the closure in an intermediate position, said second latch being pivotally mounted on said outer channel for manual movement between operative and inoperative positions; and means comprising friction detents for presetting said second latch in operative position in which it is adapted readily to be moved into engagement with the keeper at said intermediate position, or in inoperative position in which it passes by the keeper at said intermediate position.

3,019,935
FLOATING SEAL FOR TANKS

Lloyd E. Anderson, Sr., Pittsburgh, Pa., assignor to Pittsburgh-Des Moines Steel Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Sept. 1, 1959, Ser. No. 837,407
6 Claims. (Cl. 220—26)

1. In combination with a storage tank having an upright cylindrical wall surrounding the storage space of said tank, a seal for said storage space including a roof surrounded by and spaced from said cylindrical wall and including a buoyancy chamber; a cylindrical wall surrounding said buoyancy chamber and terminating at its upper end in an inturned annular flange; a plurality of elongated arc-shaped shoes located side by side and each in contact with the upright wall of said tank; a separate rod-shaped spring located between each such shoe and said buoyancy chamber with an intermediate portion of each such spring pivotally secured to a separate one of

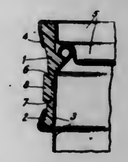


said shoes at a point intermediate the edges thereof and with one end of such spring pivotally secured to said cylindrical wall of said buoyancy chamber adjacent said inturned flange and with the other end of such spring located in sliding engagement with said cylindrical wall of said buoyancy chamber and a flexible impervious annular band secured to the upper end of each of said shoes and to the free edge of said inturned flange on the cylindrical enclosing wall of said buoyancy chamber.

3,019,936
UNBREAKABLE AND IMPERVIOUS RING OF MOULDED SYNTHETIC MATERIAL FOR PACKAGE TINS

Georges Maulaz, Fribourg, Switzerland, assignor to Satrametal S.A., Fribourg, Switzerland, a Swiss corporation

Filed Nov. 28, 1960, Ser. No. 72,233
Claims priority, application Switzerland Dec. 2, 1959
4 Claims. (Cl. 220—53)

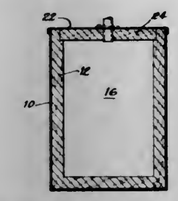


3. In an unbreakable and impervious ring of moulded synthetic material fixed at one edge on the body of a package tin and at the other edge on a lid closing said tin and said lid and ensuring an airtight closure therebetween, a strip, two peripheral and parallel tearing grooves defining the width of said strip, a tongue integral with said strip and serving to tear said strip along said grooves, said strip having a thickness diminishing progressively up to the base of said tongue to facilitate the initial stage of tearing, the outer surface of said strip in the portion of diminishing thickness being tangential to a cylinder coaxial to said ring, and a junction line between the base of the tongue and the portion of the strip having a thickness diminishing progressively up to the base of said tongue, said junction line having the shape of a chevron, the center point of said chevron being in the middle of said strip at the end of the portion of diminishing thickness of said strip.

3,019,937
INSULATED TANK FOR STORAGE AND TRANSPORTATION OF LOW BOILING LIQUEFIED GAS

Willard L. Morrison, Lake Forest, Ill., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas

Filed Oct. 25, 1957, Ser. No. 692,388
2 Claims. (Cl. 220—65)



1. A container for the storage and transportation of a low boiling liquefied gas in large volume at about atmospheric pressure comprising an outer fluid and substantially vapor impervious wall of a structurally strong material, a relatively thick layer of a porous insulating material formed of a highly porous wood of low density lining the inner face of the container wall and having its inner surfaces in direct contact with the liquid content material, the pores of the insulating lining having permeability controlled to prevent the escape of vapors at a rate greater than the introduction of vapors therein from the liquid and from adjacent pores whereby a back pressure is built up within the pores to block deep penetration of the liquid into the porous insulation lining thereby to maintain a spaced relationship between the liquid and the outer wall of the container to define a vapor filled insulation space therebetween which is free of liquid.

3,019,938
COATED CAN END AND COATING METHOD

Teddy Miller, John H. Anderson, and David J. Rosbe, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Sept. 9, 1957, Ser. No. 682,755
9 Claims. (Cl. 220—81)



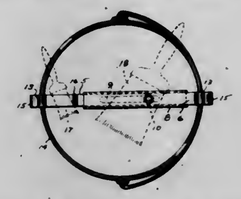
6. In a can end of the type having a seaming panel, a curl integral with the outer edge of said seaming panel, a chuck wall at the inner edge of said seaming panel, and a seaming panel radius integrally joining said chuck wall to said seaming panel; one layer of sealing compound on at least part of said curl and part of the width of said seaming panel, and a second layer of sealing material on said chuck wall and a contiguous portion of said seaming panel radius, said second layer of sealing material being spaced from said one layer.

3,019,939
BRUSH SUPPORTING ATTACHMENT FOR PAINT PAILS

Wilburt J. Brown, 890 Highland Ave., Medford, Mass.

Filed May 16, 1958, Ser. No. 735,824
1 Claim. (Cl. 220—90)

A brush supporting and wiping attachment for paint pails, said attachment comprising first and second members of flat elongated strips of sheet material, said first member having a portion thereof in face to face overlapping relation with a portion of said second member and with the longitudinal axes of said members in parallel relationship, said overlapping portions of said members having downturned flanges on their side edges whereby said portions are of U-shaped cross-section throughout their lengths, one of said overlapping portions being slidable within the other, the lower of said portions having a longitudinal slot, and a locking screw extending upwardly through said slot and into the upper

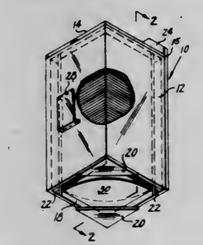


of said portions thereby to enable the length of said attachment to be adjusted, the end of each member remote from the overlapping portion of said member being provided with a U-shaped bend disposed with its closed end extending upwardly to receive the rim of the pail within it, and one of said members including a transverse, upwardly disposed bend between its rim-receiving bend and the proximate ends of its downturned margins and spaced from said rim-receiving bend to establish therewith a retaining seat for brushes which are too short to be supported by the central zone of said attachment, and the rim of the paint pail.

3,019,940
FILTER DEVICE AND DISPENSING UNIT THEREFOR

Arthur J. Sutton, 3536 N. Grant, Indianapolis, Ind.

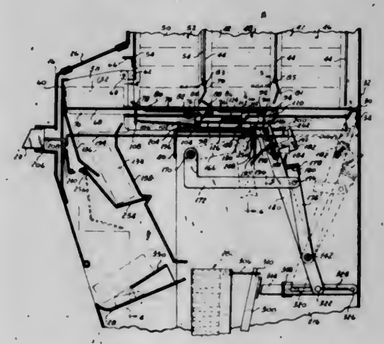
Filed Apr. 8, 1958, Ser. No. 727,075
3 Claims. (Cl. 221—48)



1. A filter element dispensing assembly comprising a generally rectangular vertical container having an open top closeable by a removable closure member and a dispensing aperture at its lower end, retaining elements extending across opposed corners of the rectangular opening defined by the lower margin of said container, said retaining elements providing parallel, opposed edge surfaces facing the longitudinal axis of said container, said dispensing aperture being thus defined as a parallel hexagon having a right angle at each end of its longest diagonal, a generally rectangular stack of filter elements disposed vertically within said container, said stack being supported on said retaining elements and each filter element having a free margin extending generally across one diagonal of the stack, said filter element stack being disposed in said container so that the said diagonal free margin of each of said filter elements is generally co-

extensive with said longest diagonal of said dispensing aperture whereby said filter elements may be grasped at their free margin and removed one-by-one through said dispensing aperture.

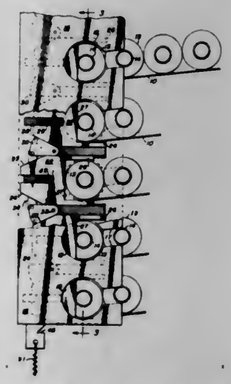
3,019,941
ELECTRIC CONSOLE CIGARETTE MERCHANDISING MACHINE
Christian Gabrielsen, Mountain Lakes, Hrand Vorperian, Far Hills, and Andrew W. Sukovich, Linden, N.J., assignors to Rowe Manufacturing Co., Inc., Whippany, N.J., a corporation of New York
Filed Jan. 28, 1954, Ser. No. 406,622
4 Claims. (Cl. 221—109)



1. A merchandising machine for dispensing packages of merchandise including in combination a cabinet having a window, a plurality of tiers of columnar containers each containing a supply of packages of merchandise to be dispensed, means mounting said tiers of containers within said cabinet with the containers of each tier disposed one behind the other, a plurality of dispensing slides associated with the respective tiers of containers, respective extensions on said slides, guide means mounting said slides for reciprocating movement below said tiers, means normally positioning said slides with said extensions below said window, a delivery chute, means mounting said chute in said cabinet below said slide extensions in their normal positions, each of said slides being arranged to support a package of merchandise from its associated tier of containers over said chute in a position to be viewed through said window, a plurality of pushers carried by each of said slides, each of said pushers being associated with a respective container, respective actuating means for said slides, means for driving said actuating means to reciprocate said slides first with a dispensing stroke and then with a return stroke on each operation of the machine and means for selectively coupling one of said actuating means with said driving means to cause the slide extension corresponding to the one actuating means to move out from under the package supported thereby on the dispensing stroke and to cause the pushers associated with the one actuating means to engage and carry forward packages of cigarettes from their corresponding containers to cause the slide to move a fresh package to a position to be viewed through said window.

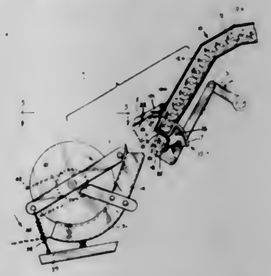
3,019,942
BOTTLED DRINK MACHINE
Carlton L. Barnhart, 2928 W. Lancaster, Fort Worth, Tex.
Filed Feb. 18, 1960, Ser. No. 9,510
4 Claims. (Cl. 221—125)

1. In a vending machine, a bottle locking mechanism comprising: a vertical cover plate having a plurality of withdrawal ports, a plurality of adjacent locking plates slidably mounted on said cover plate and normally partially obstructing said withdrawal ports, tapered edges positioned exteriorly of said ports on said locking plates, a plurality of wedge shaped tumblers respectively pivotally mounted on said cover plate between said tapered edges of next adjacecnt locking plates, telescoping links respectively extending between and pivotally connected to said



next adjacent tumblers, bosses respectively affixed to corresponding side surfaces of said tumblers, a locking bar slidably supported within said vending machine, said locking bar having a plurality of slots positioned to respectively receive said bosses, means holding said locking bar in a position where said slots confine said bosses, and coin operated means releasing said locking bar from said means holding the same.

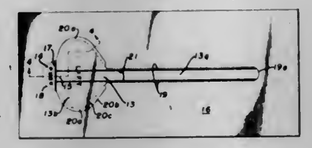
3,019,943
SPOOL TREATING APPARATUS
Malcolm Curry, Flanders, N.J., assignor to The American Thread Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 8, 1959, Ser. No. 785,651
5 Claims. (Cl. 221—263)



3. Apparatus for treating spools to eliminate hangnails on end flanges thereof comprising a rolling compression mechanism to apply rolling pressure to said end flanges and feeding means for delivering hangnail bearing spools to said rolling compression mechanism in orderly succession, said feeding means comprising a tubular inclined runway having an entrance at its uppermost end and an exit at its lowermost end, a shaft, a generally segmental body including a hub mounted on said shaft for oscillatory movement thereon, means for effecting such oscillatory movement, said body having an arcuate wall portion alignable in one oscillatory position of said body

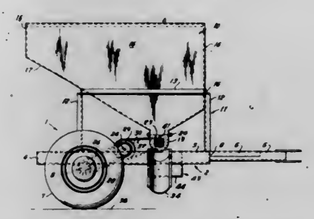
with said exit to close it off, said body also having a recess with an open top adjoining said arcuate wall portion and an open leading side, said recess being movable in another oscillatory position of said body to underlie said exit and receive a single spool therefrom, a trap door member carried by said body and movable into closing and open positions relative to said open leading side, spring means for maintaining said trap door member in closing position relative to said open leading side when said recess underlies said exit, and trip means for moving said trap door member to an open position relative to said leading side for permitting discharge of the spool within the recess when said recess is moved away from below said exit and arrives at a delivery position remote from said exit during the oscillatory motion of said body, said rolling compression mechanism comprising a second tubular inclined runway, having an entrance in proximity to said exit of said feeding means to receive spools therefrom, a driven roller whose periphery enters a portion of said second runway, said periphery engageable with said end flanges of said spools to exert rolling pressure thereon for at least one full revolution of each spool, external supporting means, and a roller support on which said roller is mounted, said roller support being hingedly connected at one end thereof to external supporting means, and having a spring at the other end thereof connecting said roller support with external supporting means.

3,019,944
DISPENSING CARTON FOR FLEXIBLE SHEETS
Howard Neil Nelson, Neenah, and Cephas Bryan Sitterson, Jr., Appleton, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Dec. 30, 1957, Ser. No. 706,139
2 Claims. (Cl. 221—302)



1. In a dispensing carton of fibrous material, a manually removable elongate generally key-shaped panel disposed in a co-planar portion thereof marginally defined by a perimeter of weakness, said panel comprising a strip-like portion leading into a major lift portion of greater transverse width than the strip portion, and a connected push-in tab portion of lesser transverse width than said major lift portion disposed at one end and aligned with said strip-like portion, said tab portion being marginally defined by perforations and hingedly connected to said lift portion by a line of weakness, said major lift portion being marginally defined by a cut score line extending from the exterior surface partially through the fibrous material of said carton, and a line of perforation spaced inwardly of said cut score line and extending substantially coextensive therewith but terminating short of said tab hinge line, said strip-like portion being marginally defined by lines of perforation extending continuously from the marginal perforations of said lift portion and terminating in a cut score line at the free end of said strip portion, whereby said panel is severable from said carton by manual depression and hinging of said push-in tab to the bottom surface of said lift portion followed by upward lifting of the latter portion, and resultant severance of the fibrous carton material within the area bounded by the said cut score lines and inwardly spaced perforations, with further lifting thereof resulting in complete severance of the remaining strip-like portion of said panel.

3,019,945
STOCK FEED PELLET SPREADER
Sidney M. Pattillo, Rosebud, Tex. (Rte. 3, Box 194J, Lubbock, Tex.)
Filed Apr. 4, 1960, Ser. No. 19,877
1 Claim. (Cl. 222—177)

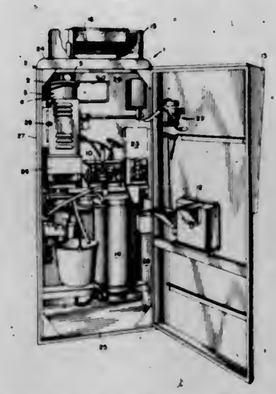


A stock feed pellet spreader comprising a wheeled vehicle, adapted to be towed, including a frame, an axle extending outwardly beyond opposite sides of the frame, and a pair of wheels mounted on opposite ends of the axle and rotatable therewith, a hopper supported on the frame, between the wheels, having an elongated bottom opening coextensive with its width arranged parallel to the axle, an elongated trough positioned below the hopper, in alignment with the elongated opening thereof and communicating therewith, the trough extending substantially beyond one side of the hopper and terminating at a point opposite the adjacent wheel, the trough being closed at its ends and having a bottom opening in its extended end portion, a conveyor screw operatively positioned within the trough and having its shaft journaled in the ends thereof, drive means including clutch and transmission means operatively connecting the conveyor shaft to the axle whereby the conveyor shaft is adapted to be rotated at selected speeds relative to the speed of rotation of the axle, and an articulated chute conforming to the bottom of the trough having a first section pivotally connected at one end to the bottom of the trough, inwardly of the opening therein, and movable pivotally from a first position, in which it forms a closure for said opening, to a second position in which it is inclined downwardly and outwardly below it, the chute having a second section pivotally connected at one end to the outer end of the first section and movable pivotally from a first position, corresponding to the first position of the first section, in which the second section is folded upwardly over the adjacent end of the trough, to a second position, corresponding to the second position of the first section, in which the second section is inclined downwardly and outwardly from the first section, in longitudinal alignment therewith, the length of the respective sections being such that in their last mentioned positions the chute extends downwardly and outwardly substantially beyond the adjacent wheel.

3,019,946
VENDING MACHINES
Richard J. Mueller, Franklin Park, Ill., assignor to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,355
9 Claims. (Cl. 222—180)

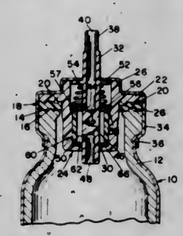
1. In a beverage vending machine, a cabinet, beverage discharging means disposed in said cabinet, and beverage vending apparatus normally disposed in said machine in operative position wherein said apparatus is operatively coupled to said discharging means for feeding a beverage thereinto, a shelf for supporting said apparatus, said shelf including sidewall members normally disposed in position to retainingly surround said apparatus when the latter is supported by said shelf, certain of said sidewall members being hingedly mounted relative to the other of said side-

wall members for swinging movement into and out of said last mentioned normal position, and means hingedly



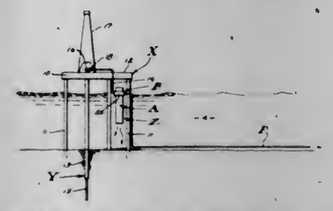
connecting said shelf to said cabinet for swinging movement between said operative position and a position outside of said cabinet.

3,019,947
METERED VALVE CONSTRUCTION
William G. Gorman, Albany, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 5, 1959, Ser. No. 851,167
8 Claims. (Cl. 222—394)



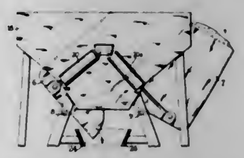
1. A metering valve construction for controlling the discharge of fluid material under pressure from a container, said valve construction comprising a one-piece molded plastic tank of generally tubular shape, an exterior annular flange thereon integral therewith, said flange having a periphery substantially co-extensive with the mouth of the container, means securing the flange of the mouth of the container with a portion of the tank depending at least in part into the container, a body gasket interposed between the mouth of the container and the flange, said means including a ferrule which secures the tank to the container at the mouth thereof by being crimped to the flange, said ferrule having a generally central aperture therein, the bottom member of the tank having an aperture therein, said apertures being aligned and axially spaced, a valve stem in the tank extending therefrom at both ends thereof through said apertures, a stop on the valve stem limiting the outward extent thereof, a spring engaged with said stop and normally urging said valve stem outwardly, a washer surrounding said valve stem, said spring being engaged with said washer, means forming a metering chamber in said tank surrounding said valve stem at least in part, said chamber forming means comprising a sparate plug in the tank, said plug surrounding the valve stem and having at least a central portion thereof radially spaced from the valve stem and forming said metering chamber of predetermined capacity, said valve stem finding bearing engagement with the ferrule at the central aperture thereof, washer, and the tank bottom member, said valve stem being provided with an inlet port to form communication between the interior of the container and the metering chamber when the valve stem is in its outwardmost position as occasioned by the spring, and an outlet port in communication with the atmosphere and normally sealed off from the metering chamber except when said valve is moved against the action of the spring to provide for communication between the metering chamber and the discharge port, the filling port then being sealed off from the metering chamber.

3,019,948
FLUID RESERVOIR
Paul Huska, 739 Monroe Ave., Los Angeles, Calif.
Filed July 7, 1958, Ser. No. 747,056
8 Claims. (Cl. 222—395)



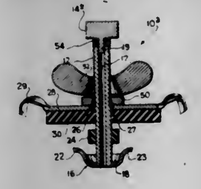
1. An offshore reservoir adapted to contain a fluid of low gravity separate from a sea of surrounding high gravity fluid, and including, a vertically disposed wall encompassing the low gravity fluid and open at its lower end to be in communication with the high gravity fluid, said wall comprising a body secured to a fixedly positioned supporting structure projecting upward from the bottom of the sea to have predetermined portions thereof projecting above and below the level of the surrounding high gravity fluid.

3,019,949
HOPPER CAPABLE OF BEING EMPTIED IN A REGULATABLE MANNER
Pierre Jean-Marie Theodore Allard, 8 Rue de Soisy, Eaubonne, France
Filed Feb. 12, 1959, Ser. No. 792,803
Claims priority, application France Feb. 15, 1958
4 Claims. (Cl. 222—502)



1. A hopper of the class described, comprising: a pair of confronting bucket members having normally substantially horizontal and coplanar flat bottom portions, each of said bucket members being open at the side which faces the other and each communicating with the other through said open side, means supporting said bucket members for individual pivotal movement about horizontally spaced parallel axes in either direction away from their respective normal positions, lateral portions of said bucket members being cut away to permit individual pivotal movement of either bucket member in either direction independently of the other, said bottom portions having rectilinear edges which are normally effectively in contact with each other and equidistant from said axes, a pair of spaced parallel side plate members extending perpendicularly to said axes and laterally enclosing said cut away portions, and separate displacement means connected to each bucket member for effecting said individual pivotal movement thereof.

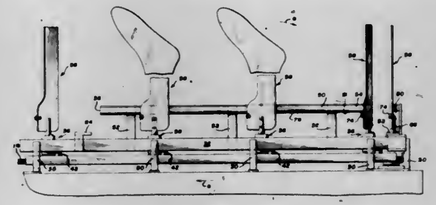
3,019,950
PUNCTURED CAN SEAL AND SPOUT
Louis G. Callegari, 34—06 45th St., Long Island City, N.Y.
Filed Mar. 31, 1959, Ser. No. 803,150
2 Claims. (Cl. 222—542)



1. A sealing device for a cylindrical can having a circular top with a triangular opening near the periphery thereof, comprising a generally triangular plate larger in size than said opening, a resilient triangular gasket juxtaposed to said plate, said plate and gasket having registering slots, a threaded shank passing through the registering slots in said plate and gasket, a nut threaded on said shank at one end thereof beyond said plate, a clamping member, said member having a body secured to the other end of the shank, said member having a plurality of radially extending curved fingers adapted to engage at the underside of the top of the can, said one end of the shank being formed with a knob handle, a resilient washer disposed on said shank between said gasket and said member, a metal washer disposed on said shank between said nut and said plate, said other end of the shank being formed with a portion of reduced width, said slots in the plate and gasket plate being rectangular and slidably receiving said portion of the shank of reduced width to prevent turning thereof, said plate having two outwardly extending curved fingers thereon adapted to engage on the outside of the can, said member having a shell-like body adapted to receive said resilient washer therein with one side of the resilient washer held in abutment with said gasket through said opening in the top of the can, said gasket having a curved wide edge extending beyond said plate for abutting an annular rim at the top of the can, said shank having an axial bore extending therethrough, said bore having a threaded end, said knob handle having a stud removably threaded in said end of the bore, whereby the interior of the can and the exterior thereof communicate through said bore when the knob handle is removed, and a resilient sealing ring disposed on the stud between the knob handle and shank.

3,019,951
STOCKING HANDLING APPARATUS
John W. Glaze, Jr., and James C. Wilson, Charlotte, N.C., assignors to Autoboard Corporation, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Apr. 28, 1960, Ser. No. 25,420
7 Claims. (Cl. 223—76)

1. A stocking receiving form assembly for a stocking handling machine, said assembly comprising a stocking receiving form having a vertically extend ng shank portion at its lower end and an upwardly and forwardly pointing stocking foot receiving portion at its upper end, a vertical support rod fixedly secured to and projecting downwardly from the lower end of said shank portion for free vertical sliding movement into and out of a vertical rod receiving bore in a carrier movable along a path in the stocking handling machine, and means projecting laterally from one side of said shank portion at



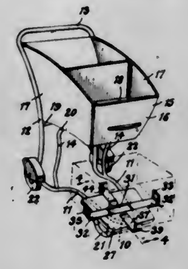
a location horizontally offset from said rod for engaging a guide rail extending along one portion of the path of movement of the carrier when said form is supported on said carrier to restrict rearward tilting movement of the upper end of said form as a stocking is drawn onto said form while said form is carried by said carrier along said first portion of said path.

3,019,952
BACK PACK CONVERTIBLE TO HAND-BAG
Forrest Oliver Brewster, Banff, Alberta, Canada
Filed May 18, 1959, Ser. No. 813,847
5 Claims. (Cl. 224—9)



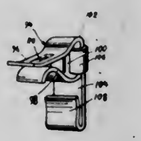
1. A dual-purpose container having a planar bottom wall of rectangular outline formed with longitudinal side margins and transverse end margins, a pair of end wall sections and a pair of rectangular side wall sections connected together and with said bottom wall, said side wall sections having closing means along their upper longitudinal marginal edges, and a harness for supporting the container alternatively as a back pack or as a handbag, comprising a pair of straps each having one end rotatably connected with said bottom wall intermediate the longitudinal side margins thereof and having the other end detachably and adjustably connected with said container adjacent the longitudinal side margins of said bottom wall, said strap one ends being spaced from an end wall and adjacently disposed and said other ends being spaced from each other and from the other end wall whereby to form a back pack for suspension by a pair of strap loops from the shoulders of a wearer, and pairs of retaining loop means spaced apart and secured adjacent the upper longitudinal marginal edges of said side walls intermediate the ends of said container for guidedly receiving strap portions to provide loop handles extending above said closing means when said container is used as a handbag.

3,019,953
REMOVABLE UNDER-CARRIAGE SHELF FOR SHOPPING CARTS
Martin Umanoff, Huntington, N.Y., assignor, by mesne assignments, to R. A. MacPlum Industries, Inc., a corporation of New Jersey
Filed May 26, 1960, Ser. No. 31,973
4 Claims. (Cl. 224—42.43)



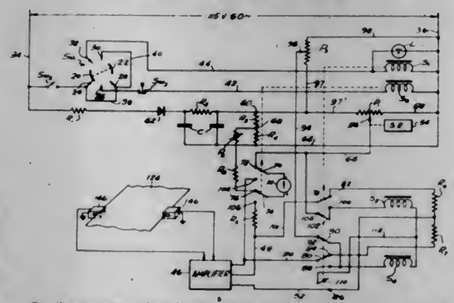
4. A platform for removable use on a shopping cart having a frame including a forward end and rearwardly diverging side members, and a cross member secured to said side members near said forward end, said cross member and forward end forming an opening between them, said platform comprising a plate seated on top of said frame at said forward end, a block of relatively resilient material projecting downwardly from said plate, said block having an external contour identical to but slightly larger than said opening, whereby said block may be forced into said opening and held snugly therein, and spring urged clamps slidably mounted on said plate for engaging and holding a package on the upper face of said plate.

3,019,954
CLIP FOR VEHICLE DASHBOARD
William G. Faltin, Box 1362, York, Pa.
Filed Dec. 19, 1957, Ser. No. 703,884
2 Claims. (Cl. 224—42.46)



1. A clip unit connectable to the substantially horizontal inner end of a dash panel of a vehicle for supporting an article in depending relationship from said dash panel and comprising in combination, a resilient unitary U-shaped clip formed from strip-like spring material continuously integral from end to end and affording a pair of opposing gripping jaws connected by a bight portion and said jaws being arranged to receive therebetween and respectively engage the opposite surfaces of said inner end of a dash panel for quick engagement and disengagement therewith, said jaws initially sloping toward each other at the outer ends and being substantially in engagement with each other when not in use, a supporting member formed from strip material of substantially the width of the strip-like spring material of the U-shaped clip, and ears formed upon opposite sides of one end of said supporting members and being folded tightly around the opposite side edges of said bight portion of said U-shaped clip to secure said one end of said supporting member to said clip, said supporting member depending from and being substantially parallel to the bight portion of said U-shaped clip, whereby said jaws extend substantially transversely from said supporting member, the lower portion of said depending supporting member having means for connecting the same to an article to be supported by said clip and supporting member relative to the dash panel of a vehicle.

3,019,955
STEERING ROLL INDICATING AND ADJUSTING APPARATUS
Willard M. Walthall, Danville, Ill., assignor to Hurletron Incorporated, Danville, Ill., a corporation of Delaware
Filed Dec. 10, 1959, Ser. No. 858,771
23 Claims. (Cl. 226—21)



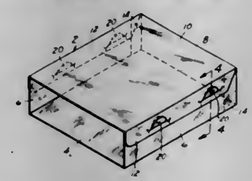
2. Apparatus for indicating the angular position of a steering roll of a printing press, said roll being pivotal relative to the press and having a driving element connected between said press and said roll to swing the roll comprising, an electrical impedance element having a variable part coupled with said driving element, an electrical circuit including a source of potential and an indicator responsive to the difference in potential between parts of said circuit including said electrical impedance element.

3,019,956
CONTAINERS AND CLOSURE OR LIKE PARTS THEREOF
Friedrich Mühlhoff, Koln-Bickendorf, Germany, assignor to Mauser Kommandit-Gesellschaft, Koln-Ehrenfeld, Germany
Filed Nov. 22, 1957, Ser. No. 698,307
Claims priority, application Germany Dec. 14, 1956
2 Claims. (Cl. 229—5.7)



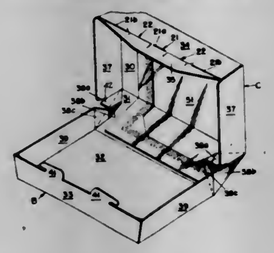
1. An end closure for a container including a body member formed of fibrous sheet material, a bottom rim provided at the lower end of said body member, a reinforcing ring encompassing said rim, said end closure comprising a bottom closure member mounted by said body member at the lower end thereof, said bottom closure member being formed of chemically inert corrosion resistant material and being provided with a continuous peripheral flange mounted by said rim, said bottom closure member having a continuous projection depending therefrom and terminating inwardly of said reinforcing ring for engagement with a complementary upward projection on the cover member of an underlying container, and a reinforcing bead defined in said bottom closure member inwardly of said projection thereof, said reinforcing bead being thicker than the remainder of said bottom closure member.

3,019,957
INTERLOCKING ENGAGEMENT FOR A PLASTIC BLANK
Charles E. Palmer, Turnpike Road, Somers, Conn.
Filed Apr. 7, 1959, Ser. No. 804,686
3 Claims. (Cl. 229—16)



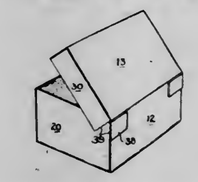
3. A blank of plastic material having contiguous panel portions for folding into a transparent container when erected, at least one of said panel portions being adapted to extend in one direction along the outer surface of a second panel, said one panel having a curvilinear incision therein spaced inwardly from the free end thereof, said curvilinear incision having a substantially arcuate center portion and a pair of reverse curves smoothly blending into said center portion, said arcuate center portion defining a substantially arcuate tab having its free end pointing away from the free end of said one panel, said second panel having a substantially U-shaped incision therein with a base portion and legs extending away from the free end thereof, said incisions being dimensioned and located on said panels for passage of said arcuate tab through the base portion of said U-shaped incision upon erection of the container with the reverse curve portions bottoming against the base portion of the U-shaped incision with the legs intersecting the centers of said reverse curves, said arcuate tab being adapted to extend along the inner surface of said second panel and resiliently bear thereon, and said container having means thereon to limit movement of said one panel in said one direction.

3,019,958
HINGE COVER CARTON
Norman J. Asman and William S. Huss, Appleton, Wis., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 28, 1961, Ser. No. 98,977
5 Claims. (Cl. 229—31)



1. A tamperproof folding carton formed of a single blank to provide a receptacle portion and a cover portion; said receptacle portion comprising a bottom panel, lower end panels, a lower front panel and a rear panel hingedly connected; said cover portion comprising a top panel hingedly connected to the upper edge of said rear panel, upper end panels and an upper front panel hingedly connected; webs hingedly connected to the rear edges of said upper and lower end panels and to the end edge of said rear panel, said webs being foldable along diagonal lines of weakness extending from the rear corners of said carton, said webs when folded lying in superposed relationship against said rear panel, the upper end panels and the webs extending therefrom being cut away adjacent their free edges to form slots extending along the score lines joining same; and the upper free edges of said lower end panels adjacent said rear panel being inserted in said slots.

3,019,959
CARTON
George V. Skowronski, Neenah, Wis., assignor to American Can Company, Jersey City, N.J., a corporation of New Jersey
Filed July 17, 1959, Ser. No. 827,863
1 Claim. (Cl. 229—45)

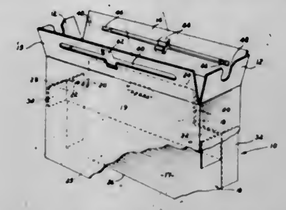


A tamperproof and reclosable package made from an integral paperboard blank comprising a receptacle portion containing contents and a cover portion hingedly connected thereto; the receptacle portion including hingedly connected front, rear, bottom and a pair of opposed side walls, means connecting the side walls to the front and rear walls along their adjacent edges, the cover portion including a cover main wall hinged to the upper edge of said rear wall and adapted to close the open top of the receptacle portion, cover front and side walls hingedly connected to said cover main wall and adapted to overlie the adjacent exterior portions of the receptacle front and side walls respectively, and means connecting the cover side walls to the cover front wall along their adjacent edges, and a connecting flap connected to each cover side wall at its end adjacent the rear wall along a line of tearing weakness by which it may be severed from the cover side wall, said connecting flaps overlying and permanently adhered to adjacent exterior surfaces of the said receptacle rear wall, whereby said cover portion is retained in closed position and is adapted to be opened only by hinging said cover portion open on said main cover wall hinge connection and severing said connecting flaps along said lines of tearing weakness, thereby providing visual indication of tampering.

3,019,960
HANDLE CARTON
Norman C. Vaughan-Parks, 1500 Lakeshore Road, Toronto, Ontario, Canada
Filed Sept. 3, 1959, Ser. No. 837,812
1 Claim. (Cl. 229—52)

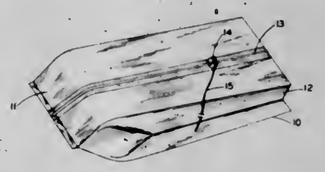
A carton having bottom and side walls, a top wall formed of overlapping upper and lower top flaps each hinged to a side wall and an outwardly movable handle in said carton, comprising elongated registering slots in both said top flaps terminating short of the edge-boundaries of each of said flaps, said slots being at least as long and as wide as said handle to permit passage of said handle outwardly therethrough, tabs hinged to said upper top flap along hinge lines bordering said slot, said tabs extending into said slot and being separated from each

other in said slot by a predetermined minimum distance less than the length of said handle thereby to be engaged and swung outwardly when said handle is moved outwardly through said slot, and a pair of weakened lines in said upper top flap extending from said slot at the ends



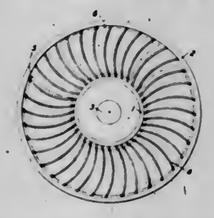
of the hinge line of each of said tabs to a free edge of said upper top flap to define a severable strip, the area of said upper top flap bounded only by said slot, said weakened lines and at least one free edge of said upper top flap defining the only securing area for sealing said upper top flap to said carton.

3,019,961
CONTAINER
Floyd R. Pulliam, 2023 W. Arbor Ave., Littleton, Colo.
Filed May 5, 1961, Ser. No. 107,960
12 Claims. (Cl. 229—63)



1. A container comprising an envelope having a closed bottom and open top, a keyway mounted along one wall of the envelope, extending substantially from the closed bottom to the open top, a rider assembly mounted for movement on the keyway, a cinch assembly arranged to be looped about the closed end of said bag and attached to said rider whereby the open top of the envelope is closed.

3,019,962
PRESSURE EXCHANGERS
Dudley Brian Spalding, 2 Vineyard Hill Road, Wimbledon, London, England
Filed Jan. 26, 1959, Ser. No. 789,043
Claims priority, application Great Britain Jan. 31, 1958
1 Claim. (Cl. 230—69)



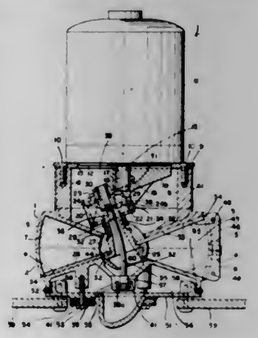
A pressure exchanger rotor incorporating an inner cylinder, an outer cylinder spaced apart from and concentric with the inner cylinder, and a multiplicity of walls extending between and secured to the inner and outer cylinders to form a series of cells, each wall having a bowed cross-section in any plane perpendicular to the rotor axis and subtending, in any plane normal to the rotor axis, a chord which passes through the rotor axis.

3,019,963
RADIAL BLOWER FOR GASES WITH HIGH DUST CONTENT
Bruno Christian Eck, Geisbergstrasse 24, Koln-Klettenberg, Germany
Filed July 8, 1955, Ser. No. 520,878
9 Claims. (Cl. 230—127)



1. In a radial blower having a spiral casing with axial intake means and with tangential outlet means: an impeller rotatably journalled in said casing and provided with rearwardly curved blades, the blade angles of said impeller blades being within the range of from 38° to 58°, measured between the blade and a line extending at right angles to a radius passing through the point being measured, the blade angle measured at any point on any of the blades falling within a range of plus or minus 5° from a predetermined median value of blade angle, said blade angle being greater than the angle of friction of dust material in the air passing through the blower.

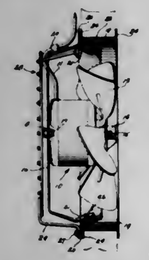
3,019,964
VACUUM PUMP
Owen H. Griswold, Westwood, N.J.
Filed Mar. 10, 1960, Ser. No. 14,092
4 Claims. (Cl. 230—148)



1. In a pump of the character described, a housing having end walls of conical shape and having a common conical axis, and a side wall of spherical shape interconnecting the peripheral edges of said end walls, a separator plate extending transversely between said end walls at one side of said common conical axis, a disc disposed between said conical walls and adapted to nutate therebetween, said disc having a recess therein through which said separator plate extends, means for nutating said disc, said means comprising a drive shaft coaxial with said common axis, and crank means driven by said drive shaft, said crank means being weighted at one side of said common axis to statically counterbalance the weight of said crank means at the other side of said common axis, said weight

being axially displaced relatively to said crank means an amount to deliberately produce a dynamic unbalance or force couple equal in magnitude but opposite in direction to the force couple produced by the forces of acceleration of the nutating disc, and means associated with said disc for balancing the unbalanced inertia forces in said disc due to the recess therein through which said separator plate extends.

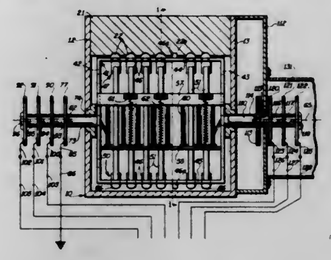
3,019,965
CHASSIS VENTILATING FANS FOR ELECTRONIC EQUIPMENT
Roger T. Lyman, Princeton, N.J., assignor to Kooltronic Fan Company, Princeton, N.J., a corporation of New Jersey
Filed Mar. 31, 1958, Ser. No. 725,039
4 Claims. (Cl. 230—259)



1. A shallow depth fan comprising the combination of an electric motor having a housing with a rotary shaft extending from said housing and a fan blade having a central hub having a plurality of fan wings extending therefrom; said rotary shaft of said electric motor extending from a surface of said electric motor housing; said central hub of said fan blade being secured to said rotary shaft; each of said plurality of fan wings extending generally radially of said hub and bending rearwardly toward said electric motor housing; said plurality of fan wings having air moving surfaces bent at an angle to the plane defined by the rotation of said fan wings; said air moving surfaces at least partially within an area concentric with said electric motor housing; the entire portion of said fan blade falling within a volume bounded by the end of said hub away from said surface of said motor housing surface; said rearward bend of said plurality of fan wings causing a radial component of air motion of air moved by said fan wings; an orifice ring having a conical shape; said orifice ring being coaxially mounted with respect to said electric motor housing; the smallest diameter of said conically shaped orifice ring lying in a plane substantially centrally located along the axis of the circular area swept by the ends of said fan wings; the largest diameter of said orifice ring having a mounting flange extending therefrom for mounting said fan from a mounting surface in a half-in, half-out position.

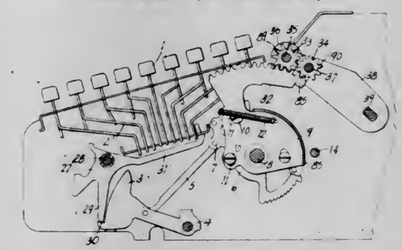
3,019,966
RECORD PERFORATING DEVICE
Albert W. Scribner, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed May 2, 1960, Ser. No. 25,973
13 Claims. (Cl. 234—50)

1. Record perforating apparatus; comprising a frame, a shear block assembly secured to said frame and formed along an apex edge with a plurality of spaced open side notches, said notches each having a shear cutting edge, means for feeding a record along a bent path around the said notched edge of said shear block assembly, a plurality of shear blades, the outer ends of said blades having contoured shear cutting edges, means on said frame for supporting said blades for swinging movement so that said contoured blade cutting edges swing into, through and out of the respectively associated notches during the unidirectional swinging movement of said blades, the shear cutting edges of said notches lying on the surfaces



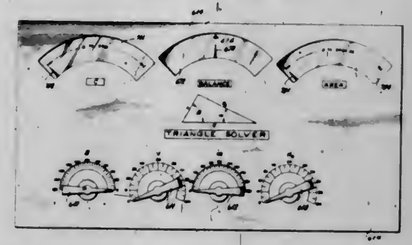
of revolution generated by the said contoured shearing edges of the respectively associated blades when the latter are swung past said shear block assembly, said outer ends of said blades thus being adapted to respectively cooperate with the edges of said notches so as to laterally shear away a bent portion of the record, and means for driving said blade supporting means.

3,019,967
ADDING AND SUBTRACTING MACHINE WITH CREDIT BALANCE PRINTING AND SELF ZEROING DIALS
John W. Mathews, Holland, Mich., assignor to R. C. Allen Business Machines, Inc., Grand Rapids, Mich.
Filed Dec. 22, 1954, Ser. No. 476,884
18 Claims. (Cl. 235—60.17)



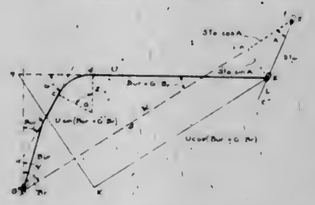
2. In an adding and subtracting machine having a transversely and vertically shiftable accumulator with dials and carry pawls for the dials thereof, a plate pivoted on the side of said machine and having a laterally turned flange with an angled cam slot therein, a pin on said accumulator engaged in said slot to move said accumulator laterally between add and subtract positions upon movement of said plate, a rock shaft extending transversely of said machine and connected to trip the carry pawl of the right dial of the machine upon rearward and also upon forward rocking of the shaft, means for raising and lowering said accumulator at the end of a total taking operation, an arm on the end of said shaft, a link depending from the end of said arm, a lever on said machine actuated upon total taking operations of said machine, a bar positioned in the path of said lever and tiltably supported by said link to advance said link under a vertically movable portion of said accumulator when said one link is raised and said accumulator is raised whereby descending motion of the accumulator moves said shaft to trip the carry pawl of the right dial.

3,019,968
MECHANICAL FIRE CONTROL COMPUTER, SOLVING TRIGONOMETRIC EQUATIONS
Lewis W. Imm, Los Angeles, Calif., assignor to General Precision Inc., a corporation of Delaware
Filed Nov. 4, 1949, Ser. No. 125,629
9 Claims. (Cl. 235—61)



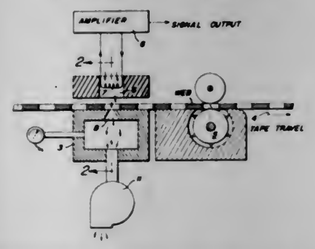
1. In a computer, a first element adjustable to register a value equal to the value of a side of a right triangle, a second element adjustable to register a value equal to the value of the hypotenuse of said triangle, a third element adjustable to register a value equal to the value of the angle opposite the aforementioned side of said triangle, an equation balance registering device movable in opposite directions from a balance registering position, means operated by said first element for displacing said device in one direction an amount proportional to the value registered by said element, and means jointly controlled by said second and third elements for multiplying the value registered by said second element by the sine of the angle registered by said third element and displacing said device in the opposite direction an amount proportional to the product of said multiplication; said device being disposed in balance registering position wherever the product of said multiplication is equal to the value registered by said first element.

3,019,969
TORPEDO INTERCEPT CALCULATING APPARATUS
Clifford F. Abt, Long Island City, and Richard Y. Miner, Port Washington, N.Y., assignors to American Bosch Arma Corporation
Filed May 25, 1953, Ser. No. 357,262
9 Claims. (Cl. 235—61.5)



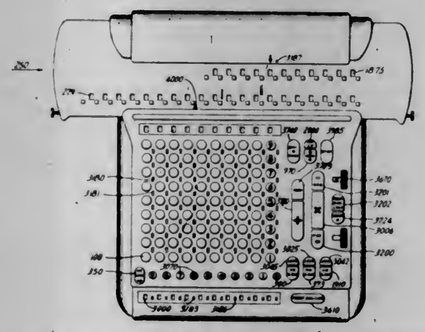
1. In a device of the character described for regulating the path of a torpedo, a resolver having one winding energized by a voltage proportional to the turning radius of a torpedo and a second winding energized by the sum of the reach of the torpedo and the travel of the torpedo in air, a second resolver energized by the outputs of said first resolver and one of the inputs of said first resolver, a third resolver energized according to distance travelled by own ship and adjusted according to relative bearing, said third resolver having its outputs connected to the outputs of said second resolver, a fourth resolver energized by the combined outputs of said second and third resolvers, motive means controlled by one output of said fourth resolver and adapted to control said second and fourth resolvers, a fifth resolver, the other output of said fourther resolver being connected to energize said fifth resolver, the outputs of said fifth resolver being connected to modify the inputs of said fourth resolver and means adapted to control said first resolver according to the difference between the adjustment of said second and third resolvers.

3,019,970
HOT WIRE READER
John H. MacNeill, Melbourne, Fla., assignor to Soroban, Inc., Melbourne, Fla., a corporation of Florida
Filed Dec. 16, 1958, Ser. No. 780,697
20 Claims. (Cl. 235—61.11)



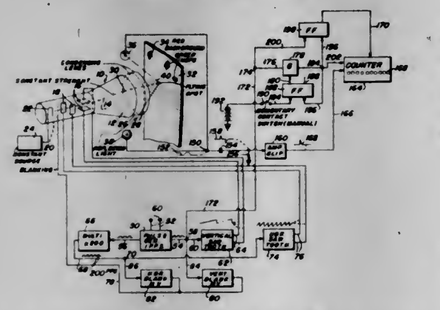
1. A mechanism for sensing perforations in perforated members comprising at least one heated element having a variable electrical resistance versus temperature characteristic, means for producing a flow of air over said heated element, feed means for moving a perforated member between said element and said means along a path such that perforations in the member become disposed between said element and said means for producing, and measuring means for determining an impedance characteristic of said element.

3,019,971
CALCULATING MACHINES
Eugene E. Reynolds, Richmond, Charles A. Lindberg, Lafayette, Harold T. Avery, Oakland, George E. Munzing, Pleasant Hill, and William E. Thomas, San Francisco, Calif., assignors to Smith-Corona Marchant Inc., a corporation of New York
Filed Oct. 22, 1956, Ser. No. 617,454
31 Claims. (Cl. 235—63)



1. A calculating machine having a register comprising a plurality of ordinally arranged numeral wheels; a plural order keyboard; actuators for the numeral wheels controlled by the keyboard; means for shifting the register relative to the actuators; respective decimal indicators for each order of the keyboard and a plurality of decimal indicators for the register, said decimal indicators each being mounted for movement from a normally hidden position to a position of display; a plurality of ordinally arranged control keys; means responsive to depression of a control key to move a respective keyboard decimal indicator and a respective register decimal indicator to positions of display; and mechanism responsive to depression of said key to shift the register to a position determined by the order of the depressed control key.

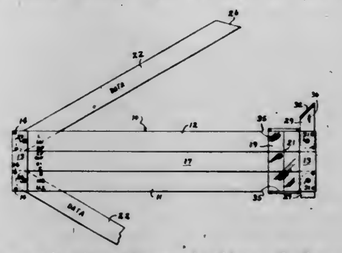
3,019,972
APPARATUS FOR COUNTING NEPS
Fred P. Strother, Shawmut, Ala., assignor, by mesne assignments, to West Point Manufacturing Company, West Point, Ga., a corporation of Georgia
Filed Nov. 30, 1954, Ser. No. 471,973
2 Claims. (Cl. 235—92)



1. In apparatus for determining the effective number of neps or the like in a predetermined field of cloth having a background contrasting with said neps in light adsorption characteristics, means including a pulse source for producing an effective light scansion in traces to cover said predetermined field, means responsive to illumination from said predetermined field of cloth for producing a pulse for each nep in each of said scansion traces, counting means responsive to the said nep produced pulses for counting same when the counting means is otherwise enabled, and gating means coupled between the counting means and said pulse source and responsive to pulses derived from the latter for otherwise enabling the counting means in synchronization with said scansion continuously during only and all of a predetermined number of scansion traces required to cover said predetermined field to cause the counting means to count all the said nep produced pulses resulting during said predetermined number of scansion traces only said gating means including a gate and a flip-flop, the output of the gate being coupled to the flip-flop at one input the corresponding output of which is coupled to an enabling input of the counting means, the other input of said flip-flop and the input to said gate being coupled in common to said pulse source for receiving pulses derived therefrom, the arrangement being such that changes in illumination caused by the contrast of said neps with background during the scansion of said predetermined field of cloth is indicated by said counting means.

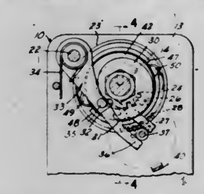
3,019,973
SLIDE RULE
Comer H. Blackerby, 1101 Government St., Apt. 1A, Mobile, Ala.
Filed Jan. 21, 1960, Ser. No. 3,875
2 Claims. (Cl. 235—70)

1. In a slide rule, a pair of spaced body portions secured to each other and forming a guideway therebetween, a slide in the guideway between the body portions and adapted to slide relatively to said body portions, at least one of said body portions being U-shaped as viewed in cross section with the open sides thereof facing outwardly of the slide rule, a plurality of indicia bearing leaves pivotally mounted at one end to said one U-shaped body portion and having free inner ends



adapted to swing in and out of said one body portion, the free ends of said leaves being slanted, and retaining means pivotally mounted adjacent the free ends of the leaves and having slanted surfaces thereon which complement the slanted free ends of said leaves to engage and retain, selectively, said free ends within said one U-shaped body portion.

3,019,974
AUTOMATIC NUMERAL WHEEL ALIGNING MECHANISM
Harvey N. Bliss, Windsor, and Harold B. Vroom, Simsbury, Conn., assignors to Veeder-Root Incorporated, Hartford, Conn., a corporation of Connecticut
Filed Sept. 11, 1958, Ser. No. 760,364
7 Claims. (Cl. 235—136)

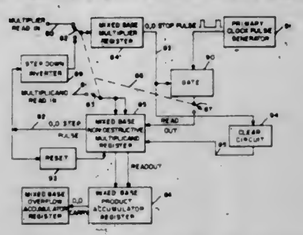


1. In a counter having first and second counter wheels mounted on a common axis for relative rotation and a continuous transfer mechanism interconnecting said counter wheels, said transfer mechanism being supported for planetary movement about the common axis, the counter wheel aligning mechanism comprising a cam mounted for rotation with said first counter wheel about the common axis, said cam having a configuration corresponding to the various portions of said first counter wheel, a cam follower engaging said cam and operable between said cam and said transfer mechanism to control the planetary position of said transfer mechanism in accordance with the configuration of said cam, and means carried by said first counter wheel and operable upon occurrence of a given speed of rotation of said first counter wheel to displace said cam follower from said cam.

3,019,975
MIXED-BASE NOTATION FOR COMPUTING MACHINES
Richard E. Williams, Fairfax, Va., assignor, by mesne assignments, to Melpar, Inc., Falls Church, Va., a corporation of Delaware
Filed July 12, 1957, Ser. No. 671,662
31 Claims. (Cl. 235—155)

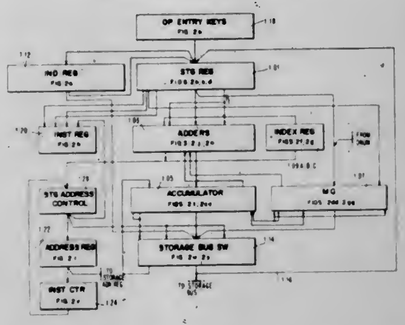
2. A system of multiplication in mixed-base notation, comprising a first mixed-base register, a second mixed-

base register, means for inserting a multiplier mixed-base number in said first mixed-base register, means for inserting a multiplicand mixed-base number in said second mixed-base register, a product mixed-base register, and



means for non-destructively reading out the contents of said multiplicand mixed-base register into said product mixed-base register a number of times equal to the contents of said multiplier mixed-base register.

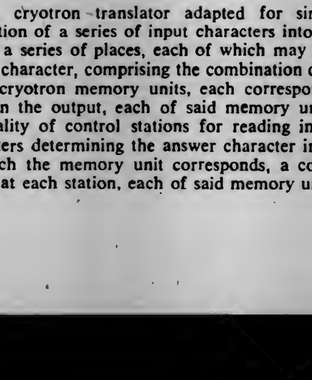
3,019,976
DATA PROCESSING SYSTEM INCLUDING AN INDICATING REGISTER
Jordan M. Taylor, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,444
1 Claim. (Cl. 235—157)



In a data processing system operable to act upon data manifestations in response to a program of instruction manifestations, the manifestations representative of each instruction including an operations part and address part; apparatus for performing a logical comparison, test and branch in response to manifestations representative of a Test Indicators instruction, including: storage means having addressable locations for storing as states manifestations representative of instructions and data; addressing means for obtaining access to specified locations in said storage; sequential program means for indicating as states the address of a Test Indicators instruction; means for transferring manifestations representative of said Test Indicators instruction states from said program means to said addressing means, for causing said storage means to emit signals representative of said Test Indicators instruction; decoding means for receiving said emitted signals representative of said operations part of said Test Indicators instruction and emitting output signals in accordance with said operations part; routing means for generating routing signals in accordance with said decoding means output signals; first means controlled by said routing signals for transferring said emitted signals representative of said address part of said Test Indicators instruction to said addressing means, for causing said storage means to emit signals representative of masking data; a storage register having a plurality of orders; an accumulator register having a plurality of orders; an adder having a plurality of orders; second means controlled by said routing signals interconnecting said storage register, accumulator register and adder in a manner to permit orders of data manifestations stored as states in said storage register to be summed in said adder with corresponding orders of data manifestations stored as states in said accumulator, the sum being stored as states in said accumulator register; third means controlled by said routing signals for complementing the data manifestations stored as states in said accumulator before said summation commences; an indicator register having a plurality of orders, each order comprising a bistable device having a true output for indicating the state stored therein, a complement output for indicating the complement of the state stored therein; a set input for causing said bistable device to assume a one state, a reset input for causing said bistable device to assume a zero state and a binary input for causing said device to assume an opposite state; fourth means controlled by said routing signals for selectively transferring signals representative of said indicator register true and complement states from selected ones of said bistable devices true and complement outputs to said storage register; fifth means controlled by said routing signals for entering signals representative of data to be tested into said indicator register; sixth means controlled by said routing signals for storing as states in said storage register said emitted signals representative of said masking data; seventh means controlled by asid routing signals for entering signals representative of said storage register masking data representative states into said adder for transfer to said accumulator register as states; eighth means controlled by said routing signals for entering signals representative of said accumulator masking data representative states into said adder for the transfer of the complement back to said accumulator as states; ninth means controlled by said routing signals for entering as states into said storage register; signals representative of said indicator register test data representative states and signals representative of said accumulator register complemented masking data, said storage register combined states assuming a one condition for each order corresponding to a one signal from the corresponding order of either the indicator register or the accumulator register; tenth means controlled by said routing signals for making said seventh means operative to enter said storage register combined states into said adder and operative to cause a one to be simultaneously summed in said adder; eleventh means controlled by said routing signals and associated with said adder for generating an end carry signal if the combined states of the storage register entered into the adder are all ones; twelfth means controlled by said routing signals operative by said end carry signal for causing said program means to indicate states representative of a non-sequential instruction address.

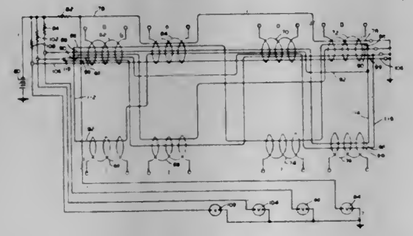
3,019,977
PARALLEL-OPERATING SYNCHRONOUS DIGITAL COMPUTER CAPABLE OF PERFORMING THE CALCULATION x+Y.Z AUTOMATICALLY
Simon Duinker and Herman Jacob Heijn, Eindhoven, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 17, 1958, Ser. No. 722,039
Claims priority, application Netherlands Mar. 16, 1957
6 Claims. (Cl. 235—157)

1. A parallel-operating synchronous digital computer capable of performing the calculation $x+y.z$ automatically, comprising a calculating unit including a first register for registering the number x, a second register for registering the number y and a third register for registering the number z, an arithmetic element for producing the sum or difference of the numbers registered in the first and second registers, said calculating unit transferring the result of said sum or difference to the first register and a part of the third register, said calculating unit also effecting shifts in the first and third registers, said transfer and shifts being controlled in response to signals derived from a micro-control circuit which comprises means for sensing information about



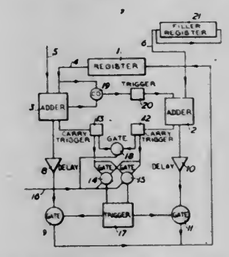
the least significant digit of the number z and a predetermined number of succeeding digits $(n-1)$ of the number z, where $n \geq 2$, said micro-control circuit comprising a logical circuit having inputs to which are applied signals representative of said digits and having outputs connected to said calculating unit, said outputs producing control signals in response to the applied signals which control the transfer and shift operations of the calculating unit in accordance with the applied signals.

3,019,978
CRYOTRON TRANSLATORS
Albert Ernest Slade, Cochituate, and Dudley Allen Buck, North Wilmington, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass.
Filed Mar. 7, 1957, Ser. No. 644,581
11 Claims. (Cl. 235—164)



5. A cryotron translator adapted for simultaneous translation of a series of input characters into an output having a series of places, each of which may contain an output character, comprising the combination of a plurality of cryotron memory units, each corresponding to a place in the output, each of said memory units having a plurality of control stations for reading in the input characters determining the answer character in the place to which the memory unit corresponds, a control conductor at each station, each of said memory units having at least one gate conductor, all of said gate conductors being superconductive at the temperature of operation of said translator in the absence of an applied magnetic field and adapted to become resistive at such temperature upon the application of a magnetic field thereto, each gate conductor of a memory unit being magnetically coupled to each one of a combination of control conductors therein in such manner as to transfer between the superconductive and resistive states under the influence of a change in the magnetic field applied to it by the passage of a current through any of said control conductors in the combination coupled thereto, each of said gate conductors in each memory unit being coupled to a different combination of control conductors from every other gate conductor therein, whereby upon the passage of a current through all but one of the control conductors in each station the resistive state of no more than one gate conductor may remain unchanged, superconductive means connecting one end of each of said gate conductors in each memory to one end of every other gate conductor therein, and superconductive means connecting the other end of each of said gate conductors to the other end of every other gate conductor therein; and means for determining whether the conductive path comprising the parallel-connected gate conductors in each memory unit is superconductive, the gate conductors in each memory unit being coupled to the control conductors therein in such combinations that when a series of input characters is read into said translator in the form of currents through logical combinations of control conductors in each memory unit, the conductive state of said conductive path in each memory indicates the storage or nonstorage therein of said series of input characters and thereby also indicates the presence or absence of a character in the output place to which the memory corresponds.

3,019,979
ELECTRONIC ADDING CIRCUITS
Ralph Townsend, Darien, Conn., assignor to International Computers and Tabulators Limited
Filed Mar. 3, 1959, Ser. No. 796,918
9 Claims. (Cl. 235—170)



6. Electronic apparatus for adding together two value representing serial trains of binary pulse groups applied thereto, each group representing a digit in a single denomination of a notation having a radix greater than two, groups representing digits of like denominational significance being applied concurrently, said apparatus comprising a first binary adder for producing from said applied trains a first sum pulse train of binary pulse groups, each group representing a sum digit of corresponding denominational significance to the applied digits; a filler generator for generating a single train of binary pulse groups representing filler digits concurrently with the application of the applied digit representing groups, a filler digit having a value equal to the difference between the denominational radix of the applied digits and one more than the highest value which may be represented by a single group of binary pulses; a sec-

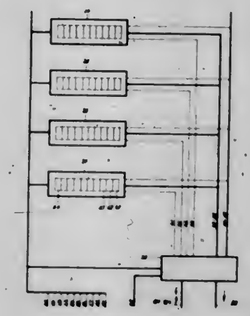
ond binary adder operated concurrently with said first adder for producing a second sum pulse train of binary pulse groups each representing the sum of a digit represented by a group of said first sum pulse train and the filler digit of like denominational significance; a first carry store for said first adder; a second carry store for said second adder; first delay means connected to the sum output of said first adder; a first gate connected to said first delay means; second delay means connected to the sum output of said second adder; a second gate connected to said second delay means; a control trigger switchable between first and second states and operatively connected to said first and second gates for opening said first gate and said second gate when said trigger is in the first and second state respectively; control means for switching said trigger between the first and second state operatively connected to said carry stores and effective when said second carry store is storing a carry at the end of a group to switch said trigger to said second state and effective when said carry store is not storing a carry at the end of a group to switch said trigger to said first state and means responsive to the storage of a carry by said second carry store to condition said first carry store to store a carry.

3,019,980

APPARATUS FOR THE RECEPTION, STORAGE, AND RE-EMISSION OF POSITIVE AND NEGATIVE NUMERICAL VALUES, ESPECIALLY FOR USE WITH STANDARD OFFICE MACHINES

Erwin Spingies, Hamburg-Farmsen, and Herbert Rose, Wohltorf, Lauenburg, Germany, assignors to Brunsviga Maschinenwerke Aktiengesellschaft, Braunschweig, Germany, a firm

Filed Dec. 9, 1957, Ser. No. 701,551
Claims priority, application Germany Dec. 13, 1956
3 Claims. (Cl. 235—172)



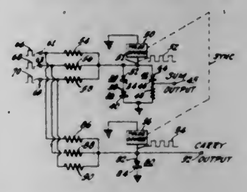
1. In an information processing system in which information is supplied to and removed from the system by standard office accounting type machines and which comprises electrical interconnection apparatus for transmitting information among said machines including at least one electro-mechanical accumulator, a control unit, means in said control unit for receiving information from said input and output machines in the form of potentials unique to each kind of information to be transmitted, first means in said control unit for generating electrical pulses to select which of said accumulators is to store each item of incoming information, second means in said control unit responsive to said unique potentials for generating electrical impulses representative of each item of information to be stored and for applying said impulses to said accumulators, and means in said control unit for reading information stored in each of said accumulators directly as potentials unique to each kind of information stored for direct transmission to said input and output machines, the accumulator, for each decimal order, comprising one storage drum actuated by electromagnetic impulse-controlled stepping means, and further including a transmission line capable of being switched over associated with the storage drum and its electromagnetic stepping means, said transmission line being selectively connectable for entering and withdrawing values.

3,019,981

BINARY ADDER EMPLOYING NEGATIVE RESISTANCE ELEMENTS

Morton H. Lewin, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,479
13 Claims. (Cl. 235—176)



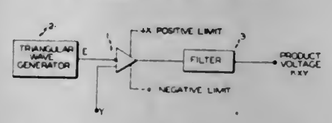
7. A circuit comprising, in combination, a first series circuit including a first and a second voltage controlled negative resistance semiconductor device connected in series, a second series circuit including a third voltage controlled negative resistance semi-conductor device and an impedance element connected in series, and a pair of terminals between which said first and second series circuits are connected in parallel, all of said devices being poled in the same sense from one of said terminals to the other.

3,019,982

ELECTRONIC MULTIPLIER

James W. Follin, Jr., Silver Spring, Md., assignor to Research Corporation, New York, N.Y., a corporation of New York

Filed Nov. 30, 1954, Ser. No. 471,972
5 Claims. (Cl. 235—194)



1. An electronic system for multiplying two variables, consisting of means for generating a voltage having a periodic triangular wave form, means for adding a bias voltage to said periodic voltage thereby providing a biased periodic triangular wave, the magnitude of said bias voltage being determined by the first of said variables and for limiting the amplitude of said biased wave according to the second of said variables, and means for filtering said biased, limited wave to provide the average value thereof.

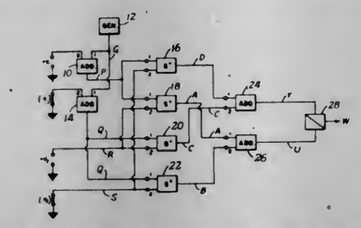
3,019,983

MULTIPLIER

George A. Philbrick, Springdale Ave., Dover, Mass.

Filed Feb. 4, 1955, Ser. No. 486,050
30 Claims. (Cl. 235—194)

1. The method of multiplying a first quantity by a second quantity including the steps of: forming an area proportional to the product of said first and second quantities by providing a segment of a first triangular or saw tooth like wave, providing a segment of a second triangular or saw tooth like wave substantially the same as the segment of said first wave but shifted relative thereto by an amount proportional to said first quantity to be



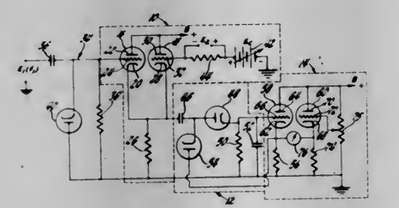
multiplied, providing a segment of a third wave displaced from a reference axis by an amount proportional to said second quantity to be multiplied, and measuring an area bounded by said three segments and said reference axis to determine the product of said first and second quantities.

3,019,984

ELECTRONIC MULTIPLYING CIRCUIT

Robert R. Bockemuehl, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 700,256
7 Claims. (Cl. 235—194)



1. A multiplying circuit for obtaining a voltage proportional to the product of two data quantities, said circuit comprising a signal voltage source developing a voltage of constant amplitude and of variable frequency corresponding to the value of one data quantity, a signal voltage source developing a direct current voltage having a variable amplitude corresponding to the value of another data quantity, means interconnecting said sources and developing a variable signal voltage having said variable amplitude and said variable frequency, and integrating means connected with the last mentioned means and responsive to said variable signal voltage for developing an output voltage corresponding in amplitude to the product of said variable amplitude and said variable frequency.

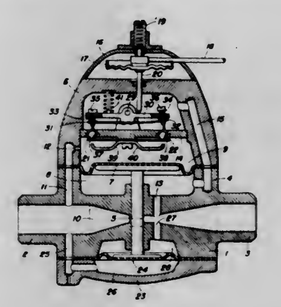
3,019,985

HEAT EXCHANGER VALVE

Kurt Grosjean, Zug, Switzerland, assignor to Landis & Gyr, A.G., Zug, Switzerland, a corporation of Switzerland

Filed Dec. 29, 1959, Ser. No. 862,581
Claims priority, application Switzerland Jan. 14, 1959
3 Claims. (Cl. 236—1)

1. In a thermostatic, heat exchanger regulator valve for controlling the flow of a liquid medium during heating and cooling functions comprising a diaphragm pressure member and hydraulic servo means including a control valve for controlling the flow of said liquid medium, said control valve being controlled according to the pressure exerted by said diaphragm pressure member, means for improving said control valve comprising a two-armed rocker, said rocker being urged in one direction by said diaphragm pressure member and in the opposite direction by a compression spring, two bimetal strips carried by said rocker, said strips having free ends lying respectively under said arms of said rocker and being adapted to bend in opposite directions relative to their respective arms in response to a particular temperature condition of said liquid medium, a pair of throttle members each comprising a ball valve, said throttle members being disposed respectively below said arms of said rocker and said free ends of said strips,



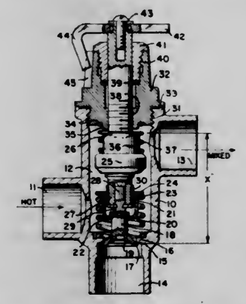
leaf spring means adjacent said ball valves for urging said valves into the closed position, each of said throttle members being located to control the actuation of said control valve and each being controlled according to the position of the associated strip whereby a change in temperature during heating functions causes one of said strips to actuate the associated throttle member to thereby actuate said control valve while the other said strip moves away from its associated throttle member, whereas a change in temperature durihg cooling functions causes said other strip to actuate its associated throttle member to thereby actuate said control valve, while the first one of said strips moves away from its associated throttle member.

3,019,986

FLUID MIXING VALVE

Rudolph T. Schoerner, Cranston, R.I., assignor to Taco Heaters, Incorporated, Cranston, R.I., a corporation of New York

Filed June 21, 1957, Ser. No. 667,198
2 Claims. (Cl. 236—12)



1. In a fluid mixing or tempering valve, a body having a chamber therein; an inlet to said chamber; an outlet from said chamber; another inlet to said chamber; a re-

movable plug forming one wall of said chamber; a valve seat forming part of said other inlet; a valve for said other inlet; resilient means adapted to urge said valve into cooperation with said valve seat including a cup-shaped guiding element; a temperature responsive element, a spring encircling a portion of said element and said plug wherein the spring element engages the element and plug for holding the same in assembled relation, said element being in said chamber and in abutting relation with said plug; means between said valve and said element telescopically cooperating with said cup-shaped guiding element for causing said temperature responsive element to open and close said valve in response to temperature variations applied to said element in said chamber; and means associated with said plug to vary the distance between said valve seat and the end of said element away from said seat.

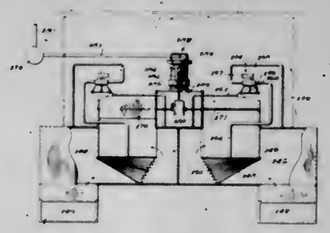
3,019,987

AIR DISTRIBUTING APPARATUS AND METHOD

Richard P. Goemann, Port Washington, and Robert O. Norton, Huntington Station, N.Y., assignors to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania

Original application Sept. 6, 1955, Ser. No. 532,436. Divided and this application Sept. 19, 1960, Ser. No. 60,766

6 Claims. (Cl. 236—13)



1. In a dual air distributing system for a building, a first conduit supplying relatively cold air and a second conduit which in a first instance is supplying relatively hot air and in a second instance is supplying relatively cold air, said conduits communicating with an outlet located in association with a room of said building, valve means in each of said conduits, said valve means operating in said first instance (i.e., when said second conduit supplies relatively hot air) reciprocally whereby movement of one of said valve means in an opening direction is accompanied by movement of the other of said valve means in a closing direction resulting in a relatively constant flow of air through said outlet, said valve means further operating in said second instance (i.e., when the said second conduit supplies relatively cold air) nonreciprocally whereby movement of one said valve means in an opening direction results in a relatively increased flow of air through said outlet, a single drive means associated with said valve means and changeover means associated with the said drive means for changing the relative operation of the said valve means according to the condition of air in the said second conduit.

3,019,988

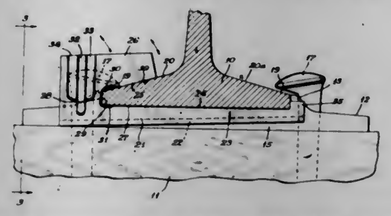
TIE PLATE BEARING ANCHOR

John H. Liebenthal, Homewood, Ill., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware

Filed Aug. 15, 1960, Ser. No. 49,557

6 Claims. (Cl. 238—327)

1. A rail anchor comprising a steel plate provided with a vertically rigid body portion for extending across beneath the base portion of a railway rail and arranged for edgewise engagement with the bottom surface thereof, an upwardly projecting portion at one end of said body arranged for edgewise engagement with the rail and recessed to provide upper and lower jaws adapted to be driven transversely of the rail into gripping engagement with the top and bottom surfaces of the rail base at one side of the rail, and means comprising a series of corrugations formed in said upwardly projecting portion of the anchor at a location intermediate said recess and the



adjacent outer end of the anchor body and extending parallel to said outer end of said body with their lower ends terminating short of the lower edge of said upwardly projecting portion and with their upper ends opening through the upper edge of said upwardly projecting portion so as to facilitate greater arcuate yielding of the upper jaw relative to the lower jaw in the region of the upper ends of said corrugations than at the lower ends of said corrugations.

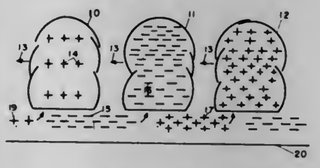
3,019,989

ATMOSPHERIC SPACE CHARGE MODIFICATION

Bernard Vonnegut, North Scituate, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Apr. 5, 1954, Ser. No. 421,154

10 Claims. (Cl. 239—2)



4. The process of augmenting the space charge in a selected volume of the atmosphere and thereby increasing the degree of electrical disturbance therein, which comprises introducing into the atmosphere adjacent the ground, from a plurality of stations distributed over an area of at least one thousand square miles, into a moving stream of the atmosphere up-wind from the location of said selected volume of the atmosphere, a mass of positively-charged particles at a rate of between about two and about twenty-microamperes per square mile of said area.

3,019,990

ATOMIZING OIL BURNER NOZZLE

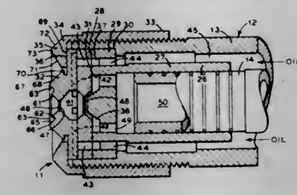
Iain B. Campbell, London, England, assignor to Babcock & Wilcox, Limited, London, England, a company of Great Britain

Filed Apr. 8, 1959, Ser. No. 804,912

3 Claims. (Cl. 239—125)

2. A sprayer plate for use in a liquid fluid atomizer comprising a body having a frusto-conical inlet converging inwardly toward the interior of said plate defining therein a whirl chamber, and a frusto-conical outlet diverging outwardly toward the face of said plate, said frusto-conical inlet and outlet being connected at their

medium to define a discharge orifice thereat, a groove formed in the face of said plate terminating in a sharp edge circumscribing said outlet, and the outer face of the sprayer plate extends outwardly of the annular groove therein and concentric with the axis of the discharged orifice, said face including disposed about said groove an



annular surface sloping rearwardly in a radially outward direction, a ridge formed between the radially outer surface of the groove and the annular surface of said face, and a second ridge formed between said outlet and said radially inner surface of said groove, said first mentioned ridge projecting axially beyond the second mentioned ridge.

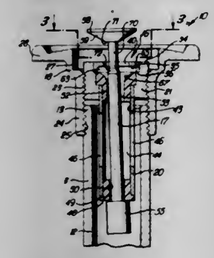
3,019,991

GYRATORY STEM SPRINKLERS WITH UPPER CHAMBER

John O. Hruby, Jr., Burbank, Calif., assignor, by mesne assignments, to Rain Jet Corporation, Burbank, Calif., a corporation

Filed June 20, 1960, Ser. No. 37,496

4 Claims. (Cl. 239—206)



1. A sprinkler comprising a vertically extending water supply pipe, a body mounted in the upper end of said pipe and having an upper end and lower end and an inside surface defining a flow passage for water in the body, the body having an inlet opening formed therein for admitting water from the pipe to said passage, the body having a discharge opening formed in the upper end of the body for discharging water from said passage, an elongate stem having an upper end, the stem being disposed in the body passage with the upper end of the stem extending upwardly beyond said discharge opening, the stem being of a diameter which is substantially smaller than that of said discharge opening, stop means on the stem engageable with the body for maintaining the stem against being removed upwardly through said discharge opening, a head fixed on the upper end of the stem and having an undersurface encircling the stem, said undersurface being inclined upwardly for deflecting water from said discharge opening radially outward around the stem, the walls which define said inlet opening being inclined with respect to radii of the body for imparting rotary motion to water in said passage thereby to gyrate the stem around in the body with the axis of the stem being inclined with respect to the axis of said passage, the body having an annular and radially inward extending wall spaced between said discharge and inlet openings and forming a restriction in said passage, said discharge opening being smaller in circumference than that portion of said passage next adjacent the discharge opening.

3,019,992

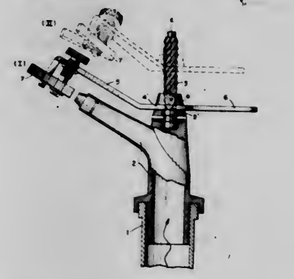
DEVICE FOR ACTUATING A ROTARY SPRINKLER NOZZLE

Giuseppe Zecchinato, Via Mazzini 6, Verona, Italy

Filed Jan. 26, 1960, Ser. No. 4,651

Claims priority, application Italy Jan. 26, 1959

4 Claims. (Cl. 239—230)



1. In combination with a rotary sprinkler nozzle member and means supporting said member for rotation about a vertical axis and providing a jet of sprinkling liquid thereto; means connected with said member and having a helical path formed therein and extending in the direction of said axis, an actuating member having a central portion engaging the last-mentioned means for reciprocal movement of said actuating member upon said helical path, said actuating member further having two arms firmly connected with said central portion and located on opposite sides thereof, said actuating member being movable by gravity to a lowermost position, and an impact plate carried by one of said arms and adapted to be located in the path of said jet for moving said actuating member upwardly from said lowermost position, the other arm being weight-balanced relatively to said one arm and said impact plate.

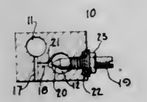
3,019,993

NOZZLE

Clinton E. Hoover, East Moline, Ill., assignor to American Machine and Metals, Inc., New York, N.Y., a corporation of Delaware

Filed Oct. 1, 1959, Ser. No. 843,812

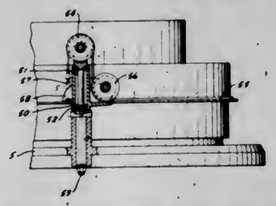
2 Claims. (Cl. 239—407)



1. In an atomizing device, an elongated piece of bar stock; longitudinal main passages extending completely through said bar stock, the longitudinal axes of which are parallel to, spaced from each other and located within a plane extending longitudinally through said bar stock and diagonally disposed relatively to the longitudinal centerline of said bar stock; a plurality of substantially equally spaced small diameter passages extending from one of said main passages and lying within a single plane passing through the longitudinal axis of said main passage; another small diameter passage intersecting each of

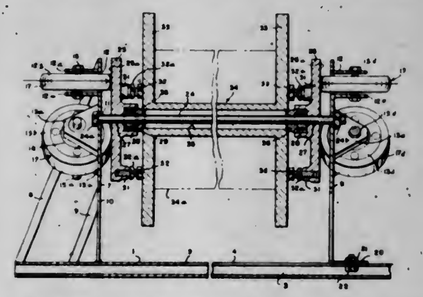
said first mentioned small diameter passages wholly within the cross sectional confines of said piece of bar stock, extending from the other of said main passages and lying within a plane passing through the longitudinal axis of said other main passage and at right angles to the plane including said first mentioned small diameter passages; a separate adjustable needle valve extending into said other main passage for each of said other small diameter passages and in alignment therewith; means for locking said needle valve in adjusted position; and sealing means cooperable with said locking means for preventing leakage around said needle valve.

3,019,994
HYDRAULIC BOWL RELEASE FOR CONE CRUSHERS
Loren G. Symons, North Hollywood, Calif., assignor to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 16, 1957, Ser. No. 690,458
3 Claims. (Cl. 241—290)



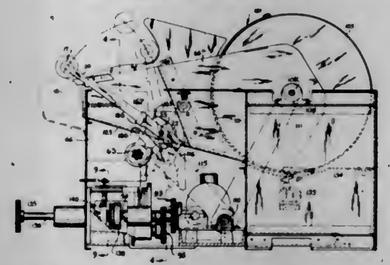
1. For use with a crusher having a gyrated head, a frame, and a bowl structure rotatably adjustable in relation to said frame, hydraulic means for rotatably adjusting said bowl structure in relation to the frame, said hydraulic means including a flexible tension member, means for securing spaced parts of the flexible tension member to the bowl structure and the frame, a contact element about which said flexible tension member passes, and hydraulic means for moving said contact element from a predetermined initial position and for thereby exerting tension on the tension member effective to move the spaced parts of the tension member closer together and thereby to rotate the bowl in relation to the frame.

3,019,995
CABLE APPLICATOR AND REWIND UNIT
Raymond H. Eckert, 1350 Washington St., Fairfield, Calif., and Robert P. Baldwin, 2317 N. Richmond St., Arlington, Va.
Filed Apr. 24, 1961, Ser. No. 105,237
8 Claims. (Cl. 242—54)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a cable reel, a flat rectangular base plate having a fixed end plate carried thereon adjacent one end thereof, in perpendicular relation thereto, an adjustable end plate carried by the opposite end of said base plate perpendicular thereto and parallel to said fixed end plate, means for adjusting said adjustable end plate toward and away from said fixed end plate, including a tie-rod shaft extending through said end plates parallel to said base plate and perpendicular to said end plates for drawing said end plates toward each other, a friction disk journalled on said tie-rod in spaced adjacent parallel relation to each of said end plates having a flat friction surface facing the end plate parallel thereto, a plurality of friction rolls journalled on each of said end plates for rotation in planes around the axis of said tie-rod which are angularly disposed to said end plates and spaced radially from the tie-rod, said rolls having resilient rubber-like treads disposed in compressive contact with the friction surfaces of said disks, said friction disks having a plurality of adjustable studs threaded therein perpendicular to the friction surface and disposed in circularly spaced relation to each other around said tie-rod and adjustable for impinging engagement thereof on the side flanges of a wire cable spool when the spool is disposed on said tie-rod between said disks, and means at the centers of said disks facing toward each other for entering the opposite ends of the bore of a wire spool when disposed between said disks for centering the spool on said tie-rod and between the disks during rotation thereof.

3,019,996
BALLING APPARATUS FOR SLIVERS
George S. Van Deusen, Lyndhurst, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 28, 1960, Ser. No. 25,399
29 Claims. (Cl. 242—54.4)



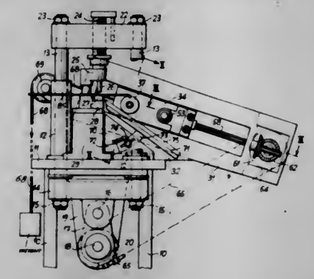
1. In a balling apparatus for forming a strand or sliver of material into a ball, an arbor upon which the strand is wound to form a ball, a driving drum cooperating with said arbor to rotate the latter and engageable with the periphery of said arbor or the ball thereon to effect a rotation of the arbor, support means for said arbor comprising a support arm rotatably supporting said arbor, a member supporting said support arm for movement in a direction away from said driving drum and about a first axis offset from the axes of said driving drum and arbor to accommodate the build-up of a ball on said arbor, and means supporting said member for oscillation about a second axis offset from said first axis and the axes of said drum and arbor to move said arbor between a doffing position and a balling position.

3,019,997
PAPER ROLL DISPENSER
Philip A. Wooster, 102 I St., San Rafael, Calif.
Filed May 29, 1958, Ser. No. 738,897
2 Claims. (Cl. 242—55.42)

1. In a paper roll dispenser, a base support, a stud having one end of the same rigidly fixed to the support, a rigid tube loosely fitted over the stud and having a length greater than the length of one roll, that end of the tube corresponding to the free end of the stud being provided with a flange for engaging one end of an adjacent roll whereby the rolls are retained upon the stud, said stud being hollow, and releasable locking means carried within said stud in that portion of the same normally embraced by said tube for releasably retaining the rigid tube on the stud, said locking means having a moveable portion accessible through the flanged end of said tube for releasing said locking means, the combined length of the stud and tube in the retained position of the same being such as to extend through a plurality of aligned paper rolls disposed end to end upon the same.

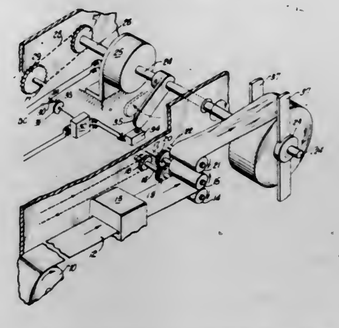


3,019,998
STRIP PUNCHING AND WINDING MACHINE
Hermann Jaun, Regensdorf, Switzerland, assignor to Elektro-Motoren A.G., Zug, Switzerland
Filed Dec. 1, 1959, Ser. No. 856,602
Claims priority, application Austria Dec. 15, 1958
4 Claims. (Cl. 242—56.8)



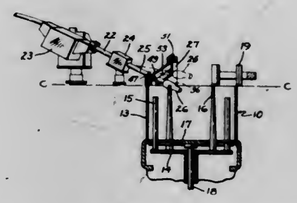
1. A machine for producing strip coils with grooves formed by recesses punched into the strip being wound, comprising a stationary punching device, operating means for said punching device, a slide, a rectilinear track for guiding the slide, a coil winding device having a winding mandrel rotatably supported on the slide so that on moving the slide along the track the rotary axis of said mandrel moves in a plane which substantially intersects the punching place of said punching device, a mechanism actuated by said operating means for rotating said mandrel through a predetermined constant angle each time between two consecutive punching actuations of said punching device, a rectilinear stationary guide rail having a guide surface extending in a second plane substantially intersecting the punching place at an acute angle with respect to the first-mentioned plane, and means for urging said slide along said track toward the punching place maintaining thereby the strip coil under formation on said winding mandrel in tangential contact with said guide surface of the guide rail.

3,019,999
WINDING DEVICE
Norman Schiff, Franklin Park, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed Sept. 21, 1960, Ser. No. 57,451
6 Claims. (Cl. 242—75.51)



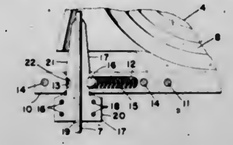
1. A windup device for a traveling web of sheet material which comprises: a source from which the traveling web of sheet material is delivered at a controlled speed, means including a windup shaft on which the traveling web of sheet material is wound, devices for applying torque to the windup shaft tending to rotate the shaft in one direction to wind up the material at a speed greater than the controlled speed, and means including devices for periodically interrupting the application of said torque and for applying said torque again after a controlled period of interruption, said last mentioned means including also instrumentalities for reversing the rotation of said shaft during said period of interruption.

3,020,000
REELING APPARATUS
Myles Morgan, Worcester, Mass., assignor to Morgan Construction Company, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 27, 1957, Ser. No. 699,314
4 Claims. (Cl. 242—81)
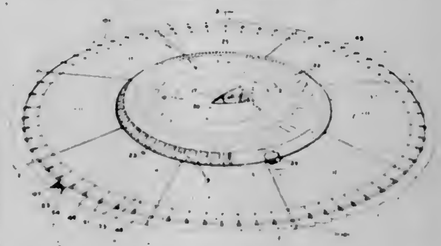


4. Reeling apparatus comprising a fixed housing, two concentric circular rows of pins mounted within the housing for rotation about their common axis, a guide pipe extending into the housing and having one end which resides in a first position between an inner and outer row of pins substantially below the upper ends of the inner row, the other end of the pipe being connected for angular movement of the pipe relative to the said housing, and an actuator capable of moving the guide pipe in a plane lying at an angle to the said axis from the said first position to a second position wherein the said one end is entirely removed from between the rows of pins and substantially raised above their upper ends and lies outside an imaginary cylinder defined by an extension of the outer row of pins and means restricting the movement of the pipe to the said plane.

3,020,001
LOCK ATTACHMENT FOR A SPRING TYPE COUNTERBALANCER
Dave Fischbein, 2720 30th Ave. S., Minneapolis, Minn.
Filed Feb. 5, 1958, Ser. No. 713,462
1 Claim. (Cl. 242—107.2)



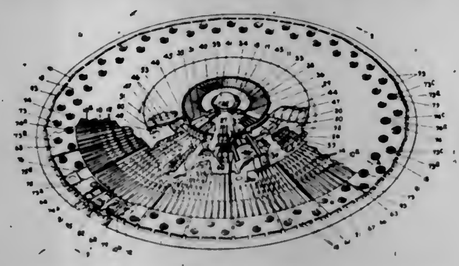
A guide and locking mechanism for spring type counterbalancing units comprising in combination a housing, a spool mounted in said housing for rotation about a horizontal axis and a leash wound on said spool for extensible or retractable movements relative to the housing, a horizontally disposed stationary member rigidly secured adjacent the underside of the housing and a vertically disposed leash passageway formed in the outer end portion thereof affording a guide for said leash, a horizontally disposed bore in said stationary member affording a housing for a coiled spring and a ball outwardly of said spring and projected thereby, said vertically disposed passageway formed in the outer end portion of said stationary member affording a seat, a movable member adjustably secured to the leash at the outer end portion thereof, said movable member having a base and an upstanding post section, said post section at its lower end portion being dimensioned to engage the vertical bore in the stationary member with a close working fit, a longitudinal bore extending through the base section and the post section of the movable member to afford a leash passageway and means for clamping the movable member on the leash at a predetermined position adjacent the free outer end portion thereof, an annular groove formed in the lower end portion of the post section of the movable member affording a race for the spring projected ball whereby when said leash is in its retracted position the engagement of the ball with the race will lock the leash in its predetermined position.

3,020,002
VERTICAL TAKE-OFF AIRCRAFT CONTROL
John Carver Meadows Frost, Georgetown, Ontario, Canada, assignor, by mesne assignments, to Avro Aircraft Limited, Malton, Ontario, Canada, a corporation of Canada
Filed May 9, 1955, Ser. No. 507,099
Claims priority, application Great Britain May 11, 1954
14 Claims. (Cl. 244—15)



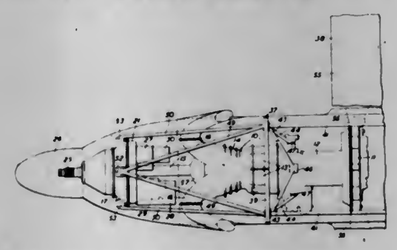
1. An aircraft comprising a generally lentiform structure sheathed by opposed aerofoil surfaces which provide lift developing surfaces, engine means within the structure and embodying an air displacement passage having an intake and having an annularly arranged outlet adjacent the perimeter of the structure, the outlet including an upper nozzle and a lower nozzle through which the air from the engine means may be ejected in two streams having opposite components of thrust, individual shutters for the nozzles and separately movable to vary the nozzle openings, and shutter control means operable to move the shutters selectively and thus control the relative magnitudes of the streams from the nozzles.

3,020,003
DISC AIRCRAFT WITH GAS TURBINE AND RAM JET ENGINES
John Carver Meadows Frost, Georgetown, Ontario, and Claude John Williams, Toronto, Ontario, Canada, assignors to Avro Aircraft Limited, Malton, Ontario, Canada, a corporation of Canada
Filed July 2, 1956, Ser. No. 595,547
Claims priority, application Great Britain July 5, 1955
14 Claims. (Cl. 244—15)



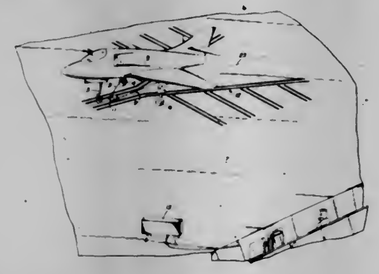
1. An aircraft comprising a generally lentiform structure sheathed by opposed aerofoil surfaces which provide lift developing surfaces, an air displacement passage within the structure and having an intake and having an annularly arranged outlet adjacent the perimeter of the structure, the air displacement passage including a plurality of generally radially disposed ducts, flame tubes positioned in the ducts adjacent the outlet to eject their products of combustion therethrough, the ducts and the flamé tubes together providing ram jet engines, means in the passage to supply air under compression to the ram jet engines, and means at the outlet to control selectively the flow of the efflux from the outlet to provide a controlled propulsive thrust.

3,020,004
TURBINE-PROPELLER POWER UNITS FOR AIRCRAFT
Jack Vallis Blyth, Ewell, and George Frank Upton, Boreham Wood, England, assignors to D. Napier & Son Limited, London, England, a company of Great Britain
Filed Dec. 9, 1958, Ser. No. 779,160
Claims priority, application Great Britain Dec. 12, 1957
2 Claims. (Cl. 244—54)



2. An aircraft comprising a wing having a leading edge, an air intake in said leading edge, a turbine-propeller power unit comprising a first structural unit consisting of an engine comprising at least one turbine, at least one combustion chamber, at least one air compressor, an air intake assembly for said air compressor disposed in substantial vertical alignment with said air intake in said leading edge of said wing, a driving connection between said turbine and said air compressor, an output member, and a driving connection between said turbine and said output member, and a second structural unit consisting of a reduction gearing assembly, an input member, an output shaft, auxiliary equipment requiring to be driven, and driving connections between said input member and said auxiliary equipment, shafting connecting said output member of said first structural unit to said input member of said second structural unit, a ring frame supporting said power unit, rigid mounting means connecting said first structural unit to said ring frame, separate rigid mounting means connecting said second structural unit to said ring frame, and ducting connecting said air intake in said leading edge of said wing to said air intake assembly of said engine.

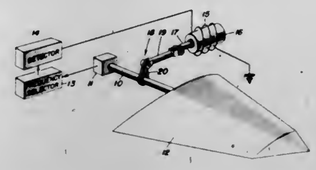
3,020,005
CATAPULT LAUNCHING DIRECTION AND POSITION INDICATOR
Ephriam J. Stockwell, McKays Beach, Leonardtown, Md.
Filed Aug. 30, 1960, Ser. No. 53,016
10 Claims. (Cl. 244—63)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. In launching apparatus for launching aircraft, a catapult shuttle located in a deck, longitudinal pressure hoses mounted on said deck aft of said shuttle for locating the transverse location of an aircraft with respect to the centerline of said shuttle, transverse pressure hoses mounted aft on said deck perpendicular to the center line of said shuttle for locating the longitudinal location of an aircraft with respect to said shuttle, pressure actuated switches connected to each of said hoses, electrical circuit means operatively associated with said pressure actuated switches, and an indicator light console operatively associated with said circuit means whereby an aircraft approaching said shuttle is directed to a position over said catapult.

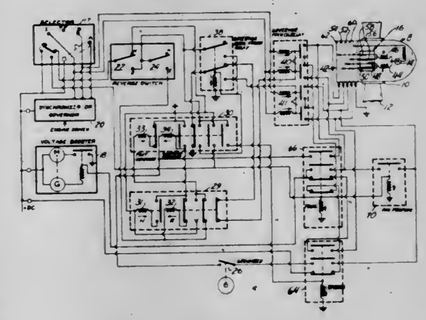
3,020,006
VIBRATION DAMPING MECHANISM
James R. Warren, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Original application Dec. 6, 1954, Ser. No. 473,490, now Patent No. 2,996,627, dated Aug. 15, 1961. Divided and this application Mar. 21, 1957, Ser. No. 651,567
3 Claims. (Cl. 244—75)

1. In a vibration damping mechanism for use in damping wing oscillations of airborne missiles, the combination of, a container, a mixture of viscous substance and a magnetizable substance substantially filling said container throughout, a piston slidably mounted within said container and connected to the missile wing through a mechanical linkage so that wing vibrations are controlled by the movements of said piston, a magnetizing coil surrounding said container and energized by an electrical circuit including a vibration sensing instrument measuring



wing vibrations and producing electrical signals representative of the wing vibrations, an amplifier amplifying said electrical signals, and a detector rectifying said electrical signals, whereby said rectified electrical signals energize said coil to produce a varying magnetic field within said container.

3,020,007
REVERSING AIRCRAFT PROPELLER
Edward K. Hine, North Caldwell, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Dec. 10, 1956, Ser. No. 627,313
8 Claims. (Cl. 244—81)

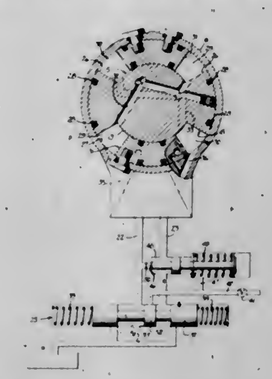


1. In an aircraft propeller, a reversible electric motor connected to the blades of the propeller and energizable to increase and decrease blade pitch between a maximum reverse angle and a feather angle, governor means connectable to said motor to energize same to hold constant propeller speed by blade pitch adjustment, switch means to invert the effect of the governor on the motor, and a sequencing relay system connected to said motor operable to select normal pitch governing, reverse pitch governing through said switch means, and reverse pitch free of control by said governor.

3,020,008
CONTROL SURFACE ACTUATOR DAMPER HINGE
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Oct. 1, 1957, Ser. No. 687,510
2 Claims. (Cl. 244—85)
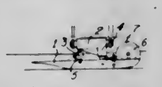
1. In a damping and actuating device particularly adapted for the stationary and movable parts of aircraft and the like, a housing adapted to be secured to one part of the aircraft and having a cylindrical chamber

therein, an oscillatory piston within said chamber and having a shaft extending therefrom adapted to have connection with another part of the aircraft, fluid pressure passageways communicating with opposite sides of said piston, valve means operable to admit fluid under pressure to either of said passageways to effect relative movement of said housing and piston with respect to each



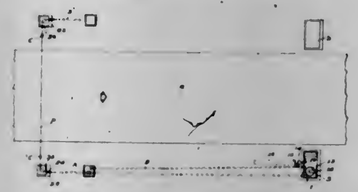
other, and a damping orifice connected between said passageways between said valve means and said piston and normally closed by fluid pressure, upon the supply of fluid under pressure to either of said passageways and opening upon the failure of fluid pressure flowing to said passageways to accommodate the by-pass of fluid under pressure through either side of said piston.

3,020,009
LANDING SKID EQUIPPED WITH AUXILIARY WHEEL
Francois Victor Guilbert, La Garenne-Colombes, France, assignor to Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, Seine, France
Filed Feb. 2, 1959, Ser. No. 790,410
Claims priority, application France Feb. 6, 1958
7 Claims. (Cl. 244—102)



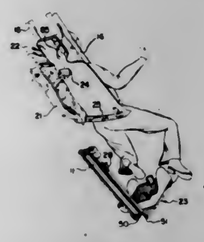
1. Landing skid assembly for aircraft having two landing skids carried by the aircraft, comprising, in combination, auxiliary retractable wheels respectively mounted at the rear ends of the skids, high-pressure tires fitting said wheels, means interconnecting the skids, and the wheels and controlled by the pilot for controlling the retraction of said wheels with respect to the skid profiles, for landing and taking-off on a soft ground on which the skids slide, and the protrusion of said wheels with respect to said skid profiles, for landing and taking-off on a hard ground of the cement and concrete type and on a grassy soil on which the wheels run, and means connected to said control means and sensitive to the load applied on the protruding wheels in landing and taking-off conditions for controlling said control means in order to retract said wheels automatically and definitively with respect to the skid profiles as soon as said load becomes greater by about 30% than the normal load of said wheels, the skids sliding then on the ground until the landing or taking-off is ended as long as the pilot does not control a new projection of the wheels.

3,020,010
ARRESTING GEAR RETRIEVE SYSTEM
Robert J. Haber, Graylyn Crest, New Castle, Del., assignor to All American Engineering Company, Wilmington, Del., a corporation of Delaware
Filed July 10, 1958, Ser. No. 747,629
4 Claims. (Cl. 244—110)



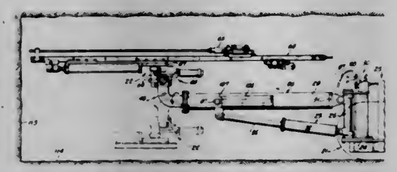
1. An arrest engine piston retriever system, comprising an elongated fluid sealed retrieve tube, a piston in the retrieve tube, a retrieve line coupled at one end to said piston and at the opposite end to the trailing end of an arrest engine piston having an arrest cable attached to its opposite end, an end seal mounted in an end of the retrieve tube, said seal permitting the passage therethrough of said retrieve line, a source of fluid pressure supply adjacent the tube and connected thereto, manually operated valve means interconnected between said pressure supply and said tube adapted to release pressure into the retrieve tube to move said retrieve piston in the tube, and manual control means for said retrieve system adapted to selectively grip said arrest cable to slow down or stop the retrieve operation at any desired stage thereof said manual control means acting during the retrieve operation to selectively apply a partial or full braking force, respectively, to said system.

3,020,011
EJECTION SEAT
Donald W. Beem, Gahanna, and Frank H. Wallace, Columbus, Ohio, assignors to North American Aviation, Inc.
Filed July 21, 1960, Ser. No. 44,433
8 Claims. (Cl. 244—141)



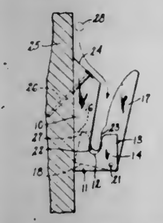
1. An aircraft ejection seat having, in combination: a seat bottom portion provided with an occupant support and with an attached rocket propulsion unit having a longitudinal axis, a separate seat back portion oriented generally parallel to said rocket propulsion unit longitudinal axis, let-down parachute means secured to said seat back portion, retention strap means attached to said seat back portion for restraining the seat occupant, engaged separable connector means connecting said seat back portion to said seat bottom portion, and release means restricting movement of said seat back portion relative to said seat bottom portion, said release means being operably connected to said let-down parachute means and freeing said seat bottom portion from restraint relative to said seat back portion when a drag force is applied to said release means by said let-down parachute means.

3,020,012
LOW OVERHEAD JUMBO DRILL SUPPORTING BRACKET
Joseph J. Moracco, Utica, and Chandler L. Bush, Briarcliff Manor, N.Y., assignors to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Filed Feb. 27, 1959, Ser. No. 796,071
11 Claims. (Cl. 248—16)



9. In rock drill apparatus, a support, an elongated cylinder, an elongated boom sleeving over the cylinder, means confining the cylinder within the boom against endwise movement relative to the latter, means mounting a rear end of the boom to the support and preventing rotation of the boom about its longitudinal axis, a drill mount disposed externally of the forward end of the boom, means rigidly connecting the drill mount with a forward end of the cylinder, the cylinder and drill mount being rotatable as a unit about the longitudinal axis of the boom, slot means in the cylinder and boom, pin means having longitudinal movement in the slot means relative to the boom and cylinder and cooperable with the slot means to translate such pin movement into rotary movement of the cylinder about the longitudinal axis of the boom, and hydraulic piston means for giving said longitudinal movement to the pin means.

3,020,013
PICTURE HANGER
Zell Ochin, 98 Beacon St., Hamden, Conn., and Lawrence P. Griser, R.F.D. 1, Sandy Hook, Conn.
Filed Mar. 27, 1959, Ser. No. 802,415
3 Claims. (Cl. 248—28)



2. A picture hanger comprising a body member having a planar rear surface for securement against a wall, said body member having at its lower end a forwardly projecting foot and a socket adjacent the inner end of the foot to receive a cord, the lower portion of said body member being bifurcated to provide spaced walls and having a shoulder at the upper end of said bifurcated portion, a guide finger between said walls and pivoted to said foot adjacent the outer end of the latter, said guide finger also having an inwardly projecting foot portion provided with a cord-receiving socket, adapted to register, in part, with said first socket in an outward position of the guide finger, and a portion at the inner side of said socket adapted to engage said shoulder on the body member to limit outward pivotal movement of the guide finger away from the body member, said guide finger being adapted to stand in an outward position with respect to the body member to provide an upwardly opening passage therebetween leading into said registering sockets, the upper surface of said body member being inclined downwardly from the plane of its rear surface toward said guide finger and the latter extending upwardly beyond the lower edge of said surface to guide a cord into said passage, and the bottom of the socket on the guide finger being above the bottom of the socket on the body member to be engaged by the cord when lodged in said socket to move said guide finger about its pivot in a direction toward the body member.

3,020,014
FISHING ROD HOLDER
Wilmont W. Emery, 4221 56th St., Sacramento 24, Calif.
Filed Apr. 9, 1959, Ser. No. 805,193
1 Claim. (Cl. 248—48)

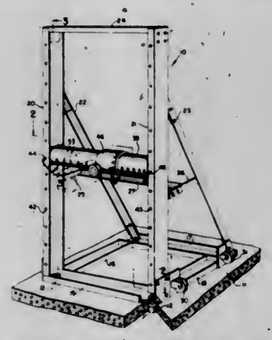


A fishing rod support comprising a main support including spaced leg members, a supporting member in the form of an open loop connecting the upper ends of said leg members, extending laterally and downwardly therefrom, a second supporting member comprising a length of heavy wire material formed into a substantially U-shaped support having downwardly extended ends, the open side of said second supporting member being disposed downwardly, sleeves oval in cross section, slidably mounted on said leg members of said main support, the downwardly extended ends of said second supporting member being disposed within said sleeves wedged against said leg members of said main support, adjustably securing said second supporting member to said main support, said supporting members adapted to receive the handle end of a fishing rod supporting the fishing rod for fishing, and rubber tubular friction members fitting over said open loop and second supporting member for frictional contact with the handle of a fishing rod held in said supporting member, preventing accidental sliding movement of said fishing rod on said support.

3,020,015
JACKSTAND
Louis R. Seplavy, 471 S. Broadway, Hicksville, N.Y.
Filed Nov. 24, 1959, Ser. No. 855,086
8 Claims. (Cl. 248—123)

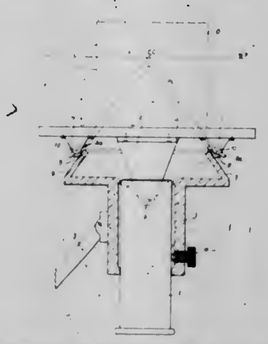
1. Apparatus for use in straightening the frame and body of an automobile comprising a frame having a pair of spaced horizontal members and a pair of spaced vertical facing channels attached thereto, a hollow cylindrical support beam extending between said channels; said support beam having outwardly extending tapered rollers at the ends thereof in each of said channels, cables

connected to each end of said support beam and extending upwardly, weight balancing means in the upper ends of said channels having said cables attached thereto, spaced holes in said channels, stop pins engageable in said holes to thereby establish the height of said support beam, a sleeve rotatably positioned on said support beam, said sleeve having a plurality of apertures therein circumferentially thereof, said support beam having a



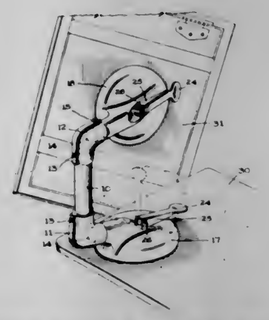
plurality of apertures extending longitudinally thereof, a stop pin for establishing the position of said sleeve, coupling means pivotally carried by said sleeve, said horizontal members having holes therein, a washer over each said hole of larger diameter than said hole, each washer having an elongated opening therein, and a bolt extending through the opening in said washer and the hole in said horizontal members.

3,020,016
ARRANGEMENTS FOR MOUNTING OBJECTS
John Kingsbury, Cambridge, England, assignor to Pye Limited, Cambridge, England, a British company
Filed May 29, 1959, Ser. No. 816,866
Claims priority, application Great Britain June 6, 1958
12 Claims. (Cl. 248—183)



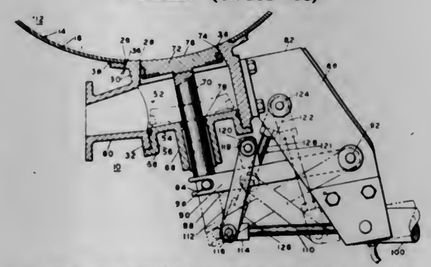
1. An arrangement for mounting an object to tilt, comprising an object support, a bearing member, a guide member carried by said bearing member for reciprocating movement therein, a pivot pivoting said object support to said guide member for tilting movement with respect thereto, the path of movement of said pivot with said guide member being defined by a line normal to a desired plane in which a reference point on said object is to be maintained, and cam and curved cam follower means on said object support and said bearing member for mutual cooperation, said cam and cam follower means being located such that a line from the centre of said pivot to said reference point constitutes the hypotenuse of a right-angled triangle whose other sides are formed by lines joining the centre of curvature of the cam follower to the pivot and the centre of curvature of said cam follower to said reference point.

3,020,017
PLACEMENT DEVICES FOR USE IN MEDICAL, SURGICAL, ORTHOPEDIC, AND LIKE WORK
William S. Watson, % The Pelvic Anchor Corp., P.O. Box 44, Brighton Station, Rochester, N.Y.
Filed Dec. 30, 1958, Ser. No. 783,827
9 Claims. (Cl. 248—206)



1. A placement device of the character described comprising an elongated frame carrying at one end a suction cup facing away from and approximately in a direction parallel to the length of said frame and adapted for attachment to a supporting surface, said frame having an arm extending laterally therefrom adjacent its other end and said end carrying a suction cup facing approximately in a direction at right angle to said first direction and adapted for attachment to a supporting surface substantially perpendicular to said first named supporting surface, the position of said second named suction cup being such that the plane of said second named supporting surface extends past said first named suction cup in spaced relation on one side thereof.

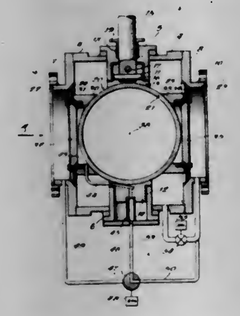
3,020,018
DISCHARGE VALVE
George Stram, Hellam, Pa., assignor to Capitol Products Corporation, Mechanicsburg, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1959, Ser. No. 801,271
4 Claims. (Cl. 251—58)



1. In a mixer having a receptacle provided with a semi-cylindrical bottom wall, a discharge opening in said semi-cylindrical bottom wall offset with respect to the longitudinal vertical medial plane of said receptacle, a valve

for controlling discharge of material through said opening having a cylindrical body having its axis disposed perpendicular with respect to the plane of said discharge opening, said valve body having at its upper end an inlet passage communicating with said discharge opening and formed to provide a valve seat, said valve body being open at its lower end and having a removable end closure therefor, a discharge passage in the side of said cylindrical valve body adjacent the longitudinal vertical medial plane of said receptacle, a bracket secured to said cylindrical valve body at the side opposite said discharge passage and extending outwardly and downwardly therefrom, a valve stem in axial coincidence with the axis of said cylindrical valve body extending through said end closure, a valve disc carried by the upper end of said valve stem, and operating means carried by said bracket connected with the lower end of said valve stem for moving said valve disc into and out of engagement with said valve seat for closing and opening said inlet passage.

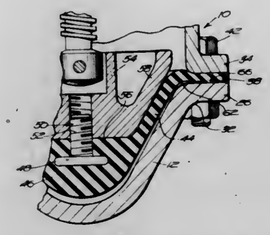
3,020,019
ROTARY VALVE
Donald G. Fawkes, Chicago, Ill., assignor to Henry Pratt Company, a corporation of Illinois
Filed Oct. 5, 1959, Ser. No. 844,291
11 Claims. (Cl. 251—175)



1. A rotary valve, comprising: a housing having spaced openings forming an inlet and an outlet; means forming a valve seat about said inlet; a rotor rotatably mounted in said housing and having a pipe-like member for alignment with said inlet and outlet to provide unobstructed fluid flow through the valve; a closure mounted on said rotor for extending across said inlet to close the valve, said closure including an annular ring plate annularly pivotally supported on said rotor, the ring plate outer periphery being shaped to sealingly engage said valve seat; and means responsive to fluid under pressure acting on said closure to pivot said ring plate on its support to bring said outer periphery into said sealing contact with the valve seat.

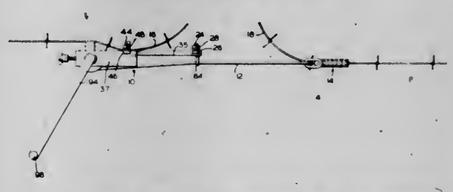
3,020,020
DIAPHRAGM VALVE
Henry W. Boteler, East Greenwich, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 764,082
12 Claims. (Cl. 251—331)

11. For a diaphragm valve of the type having a body with a substantially straight flow passageway therethrough, a diaphragm comprising a marginal portion in a plane, a thick relatively inflexible central portion on one side of said plane, an intermediate flexible rolling sleeve portion which joins said marginal and central portions, said intermediate portion having a part which is adjacent the central portion in the form of a tapered sleeve the sides of which are at a substantial angle to said plane, said intermediate portion having its remaining part which is adjacent the marginal portion extending around a rounded corner from the tapered sides into



and outward along said plane and a pair of opposed raised ribs on the surface of said sleeve portion which forms the exterior of said sleeve, each of said ribs originating substantially at the beginning of said corner and extending therearound and along said marginal portion.

3,020,021
PULLING DEVICE
Malcolm C. Story, 521 S. Willson, Bozeman, Mont.
Filed Nov. 9, 1959, Ser. No. 851,639
7 Claims. (Cl. 254—161)

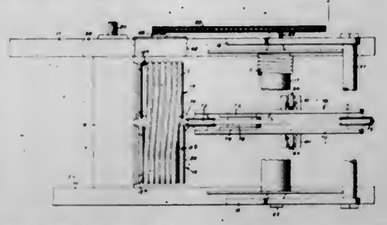


1. In a pulling apparatus comprising a body member, means for attaching one portion of material to said body member, grip means connected to said body member for gripping another portion of material separated from said first portion of material, means for drawing said grip member toward said body member, and, means for securing said other portion of material to said body member after said other portion of material has been drawn to said body member; the improvement wherein said body member includes a table, said attaching means includes a first clamping plate positioned adjacent said table and, means for moving said first clamping plate toward said table to clamp said one portion of material to said table, and, said securing means includes a second clamping plate positioned adjacent said table and means for moving said second clamping plate toward said table to clamp said other portion of material to said table.

3,020,022
CABLE WINCH
Edwin W. Turnquist, Tulsa, Okla., assignor to Braden Winch Company, Broken Arrow, Okla.
Filed Aug. 27, 1958, Ser. No. 757,546
8 Claims. (Cl. 254—175.7)

1. A cable winch comprising two driven drums, multiple peripheral grooves in the driven drums contoured to closely match the diameter of a cable spanning said driven drums in frictional contact, the initial groove of each of said driven drums being larger in tread diameter than the second groove and the second groove being larger in trend diameter than the remaining grooves, a separate cable storage drum arranged to receive said cable as it

is fed from the terminal groove of one of said driven drums, and means for exerting a constant load on said

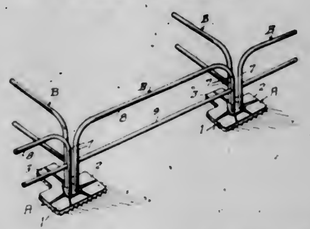


cable as it is pulled from said last-named driven drum, whereby said grooved diameter variations compensate for the stretching of said cable under extreme load conditions.

3,020,023
TRAFFIC CONTROL BARRIER

David R. MacIntyre, 7 Forest Drive, and Frederick Kenneth Schultze, 180 Crescent Drive, both of Florham Park, N.J.

Filed July 6, 1959, Ser. No. 825,325
5 Claims. (Cl. 256—24)



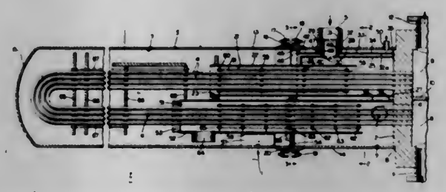
2. A portable knock-down barrier comprising a plurality of base pieces to set on a support surface, and a plurality of rail sections, each base piece having a plurality of elements and each rail section having a plurality of parts each telescopically coactive with one of said elements of any one of said base pieces to separably connect said rail sections to said base pieces, each base piece comprising a T-shaped plate with two arms in substantial alignment with each other, said elements on the base piece comprising elongated studs rigidly secured to and projecting upwardly from the base, at least two of which are disposed in a common vertical plane parallel with said two arms that are in alignment with each other and at least one other element being disposed in a vertical plane parallel with the other arm of the base piece, said parts of each rail section including vertical stiles having openings in their lower ends each for telescopically slidable association with any of said studs.

3,020,024
HEAT EXCHANGER CONSTRUCTION

Harold R. Lawrance, Massillon, Ohio, assignor to The Griscom-Russell Company, Massillon, Ohio, a corporation of Delaware

Filed Jan. 7, 1959, Ser. No. 785,346
5 Claims. (Cl. 257—32)

1. A heat exchanger having a shell forming a steam condensing compartment, a feed-water inlet, a feed-water outlet, a bundle of heat exchange tubes in the shell connected to the inlet and outlet and forming a path of flow for feed water from the inlet to the outlet, the shell being horizontally disposed and having upper and lower shell portions, means including partitions and plates within the shell forming a boxlike desuperheat chamber separate from said condensing compartment, the desuperheat chamber enclosing portions of the tubes, steam inlet means in the upper portion of the shell adjacent the desuperheat chamber, walls forming a passageway separate from said condensing compartment and connecting the steam inlet means with the desuperheat chamber, walls forming a cooling jacket adjacent to the steam inlet means and within the upper portion of the shell, the cooling jacket being separate from the condensing compartment and having a fluid outlet, the cooling jacket and desuper-

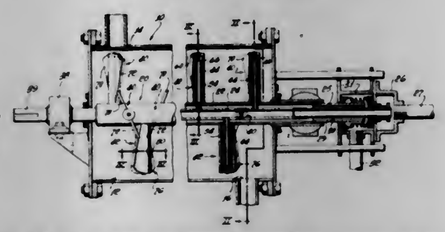


heat chamber having a space therebetween, which space communicates with the condensing compartment and which space is coextensive with the spaced walls and plates forming the jacket and chamber, and passage means communicating between the cooling jacket in the upper portion and condensate contained in the lower portion of the shell, whereby condensate may be passed into the cooling jacket to cool the steam inlet means and adjacent shell walls.

3,020,025
ROTARY HEAT EXCHANGER

Richard F. O'Mara, 839 S. Lorraine Blvd., Los Angeles, Calif.

Filed Aug. 29, 1957, Ser. No. 680,942
4 Claims. (Cl. 257—79)

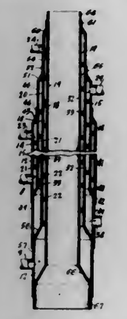


1. A rotary heat exchanger comprising: means forming an enclosed elongated trough having a lower generally cylindrical inner surface; a double hollow shaft assembly including an inner hollow shaft within and concentric with an outer hollow shaft; means rotatably supporting said shaft assembly within said trough; a plurality of heat transfer assemblies extending radially from said shaft assembly and carried thereby and spaced therealong including a conduit for leading fluid from the interior of one of said shafts radially outwardly, means for conveying said fluid from the outer end of the conduit into the interior of the other said shaft, impeller fin means in heat transfer relation with the conveyed fluid and with flowable material in the trough and having an arcuate outer edge adapted to sweep adjacent said cylindrical surface during rotation of the shaft assembly in the trough and means for securing the fin means with its effective plane at a selected angle relative to a plane perpendicular to the axis of said shaft assembly; means for supplying flowable material to one end of said trough and removing the same from the other end; means for supplying heat transfer fluid to the interior of one of said shafts and removing the same from the interior of the other shaft; and means for rotating the shaft assembly.

3,020,026
HEAT EXCHANGER

Donald J. Peeps, Rossford, and Frank W. Hoffman, Toledo, Ohio, assignors to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio

Filed May 7, 1958, Ser. No. 733,582
3 Claims. (257—246)

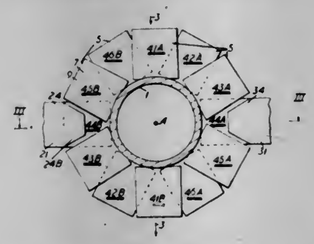


1. A heat exchanger having telescoped, concentric tubes, spaced from each other to define elongated passages of annular cross section for heat exchange fluids, inwardly tapered portions of the tubes closing all of said passages at one end thereof outwardly flaring portions of the tubes closing all of said passages at the other end thereof, main cylindrical bodies of the tubes disposed between the tapered and flaring portions thereof, the tubes having cylindrical terminating sections beyond the tapered and flaring portions, each of said terminating sections closely engaging an adjacent tube, the tubes constituting the outer walls of said passages being outwardly and progressively of shorter length and so arranged that each end of each of the said tubes is externally exposed, and inlet and outlet connections for said passages communicating therewith through said exteriorly exposed ends of the tubes.

3,020,027
HEAT EXCHANGER TUBES WITH RADIALLY EXTENDING FINS TRANSVERSELY CONNECTED THERETO AND METHOD OF FORMING THE SAME

Owen W. Dumpleton, London, England, assignor to Babcock & Wilcox Limited, London, England, a company of Great Britain

Filed Nov. 12, 1958, Ser. No. 773,289
11 Claims. (Cl. 257—262.16)

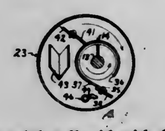


1. A tube construction comprising a metallic tube, suitable for use in a tubulous convection heat exchanger and a plurality of metallic fins connected to the outer surface of said tube to provide for extended heat transfer surfaces, said fins each comprising at least two substantially parallel, spaced plates arranged to extend outwardly and transversely of the tube axis and a rectilinear web portion which extends along at least part of the radially inner edge of each plate to join said plates, said web being disposed tangent to said tube in a plane extending transversely of said tube, and said fins being secured to the tube at the point of contact with said web by a weld.

3,020,028
APPARATUS FOR MIXING A LIQUID WITH FINE PARTICLES

Ellis W. Bullock, % The Fly Ash Arrestor Corp., P.O. Box 1883, Birmingham, Ala.

Filed Jan. 4, 1960, Ser. No. 306
3 Claims. (Cl. 259—3)

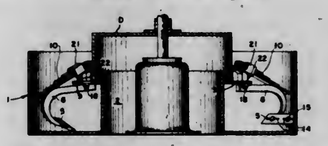


1. Apparatus for mixing liquid with fine solid particles comprising a drum mounted for rotation generally on a horizontal axis and having one open end, means to rotate said drum, a screw conveyor extending through said open end to deliver particles within the drum, a housing extending about said conveyor and having an outlet on the lower side thereof within said drum, a discharge plate connected to the housing and positioned under said outlet to receive said particles, said plate having its outer edge substantially parallel to and uniformly spaced from the inner surface of the drum to form a uniform layer of particles on the drum, means to dispense liquid on the layer of particles while on the drum, a scraper disposed adjacent the inner circumference of the drum to scrape the mixture of liquid and particles from the inner circumference of the drum, and a chute disposed under said scraper and extending through the open end of the drum to receive said mixture after being removed by the scraper and to convey the mixture outwardly of the rotating drum.

3,020,029
CEMENT MIXING MACHINE

Erik Valdemar Fejmert, O Storgatun 25, Nykoping, Sweden

Filed Dec. 30, 1957, Ser. No. 705,913
Claims priority, application Sweden May 21, 1957
4 Claims. (Cl. 259—178)



1. A machine for mixing materials (e.g., concrete) comprising

(*a*) a standing cylindrical receptacle which has its axis vertical,

(*b*) a cylindrical wall of relatively large diameter coaxially within said receptacle and defining with it an annular mixing space,

(*c*) rotatable part means,

(*d*) a plurality of arms,

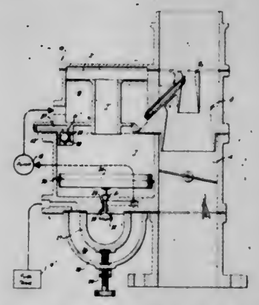
(*e*) pivotal supports for said arms carried by said rotatable part means for vertical swinging movement of said arms,

(*f*) said arms extending downwardly into the annular mixing space,

(*g*) paddles respectively supported from the lower ends of said arms, each paddle extending only part way across said annular mixing space,

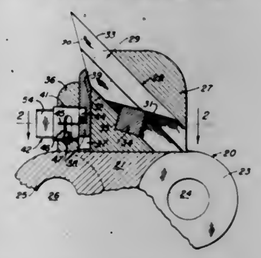
(*h*) respective blade spring devices carried by said rotatable part means and bearing against said arms,
(*i*) said blade spring devices biasing said arms and paddles downwardly about the pivotal supports of said arms from said rotatable part means,
(*j*) whereby said spring devices exert a sliding pressure on said arms when said paddles are urged upwardly by the material in said receptacle during mixing, and said paddles are radially arranged in said annular mixing space such that each paddle describes a path at one side of the path described by the paddle in front and is arranged at such an angle to the direction of rotation around said annular mixing space and relative to the axis of the drive that some of them throw the material backwards and inwards, and
(*k*) some backwards and outwards and
(*l*) so that each throws the material into the furrow formed by the paddle ahead of it.

3,020,030
CARBURETOR DEVICE
Lonnie Robert Capehart, Ukiah, Calif., assignor to Capehart-Zbitnoff Corp., Ukiah, Calif., a corporation of California
Filed Dec. 9, 1959, Ser. No. 858,525
2 Claims. (Cl. 261—36)



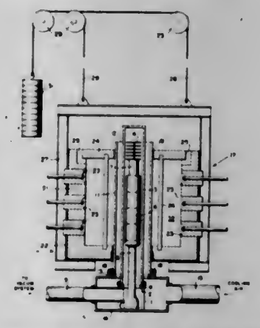
1. A fuel level control apparatus for a carburetor having a bowl supplied with liquid fuel from a fuel storage tank by means of a fuel pump, said apparatus comprising a vertical overflow tube open at both ends extending upwardly within and substantially coaxial to the centerline of said bowl, the top of said tube being at the normal fuel level of said bowl and said tube piercing the bottom of said bowl with the other end terminating in the top of an overflow chamber located vertically beneath said bowl, the bottom of said bowl forming the top of said overflow chamber, means providing a vent from the upper portion of said overflow chamber to the atmosphere, a check valve associated with said vent to prevent fuel flowing out of said vent, a two-way valve connecting the fuel pump to the fuel storage tank and a lower portion of said overflow chamber selectively, said two-way valve being formed integrally within the lower portion of the overflow chamber and having an upwardly facing inlet opening into said overflow chamber and a downwardly facing inlet opening out of said overflow chamber, a float unit within said overflow chamber, and means operatively connecting said float to said two-way valve for causing the pump to draw fuel from said storage tank through a filter means when the level of fuel in the overflow chamber is low and from the overflow chamber when the level of fuel therein is high, said filtering means comprising a cup-shaped porous ceramic filter attached to the bottom of said overflow chamber to enclose the downwardly facing inlet of said two-way valve, a bowl-shaped enclosure attached to the bottom of said overflow chamber and surrounding said cup-shaped filter to enclose a space around the outside of said filter, and means connecting said space to the storage tank.

3,020,031
MINING CUTTER
Luther N. Franklin, S. Madison Ave., Madisonville, Ky.
Filed Nov. 18, 1960, Ser. No. 70,167
3 Claims. (Cl. 262—33)



2. A mining cutter comprising a support member provided with a slanting recess, a cutter bit having a shank seated in said recess, there being a slot in said support member, a keeper slidably mounted in said slot, said keeper having a transverse groove therein, there being a circular opening in an end of said support member, a locking member including a cylindrical section rotatably arranged in said opening, a cylindrical off-set projection on one end of the locking member engaging the groove in said keeper, a square-shaped tool engaging portion on the opposite end of the locking member from said projection, there being a transverse slit in said cylindrical section, the outer periphery of the cylindrical section being cut away to define a recessed portion, and a pin mounted in the lower end portion of said support member for engaging the recessed portion of said cylindrical section.

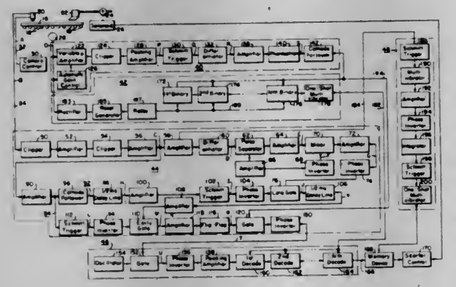
3,020,032
VACUUM FURNACE
Robert J. Casey, Philadelphia, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Apr. 6, 1959, Ser. No. 804,461
4 Claims. (Cl. 263—42)



3. Heating apparatus including in combination an annular muffle, structure forming a furnace chamber around said muffle including burners to heat said muffle to incandescence, a heating chamber made of material transparent to radiant heat concentric with and surrounded by said muffle, means to support said chamber in a fixed

position including means forming a passage and means forming a pressure tight connection between the interior of said chamber and said passage, means to apply a vacuum to said means to support, and through said passage and said connection, to said chamber, an annular shield made of material transparent to radiant heat between said muffle and chamber and spaced from the latter, supporting means for said shield to hold said shield in a fixed position surrounding said chamber, means to supply cooling air to flow through the space between said chamber and shield, means to hold work to be heated in said chamber in a location between the ends of said muffle, and a radiation shield in said chamber between an end of said chamber and the location between the ends of the furnace in which work is adapted to be held to be heated.

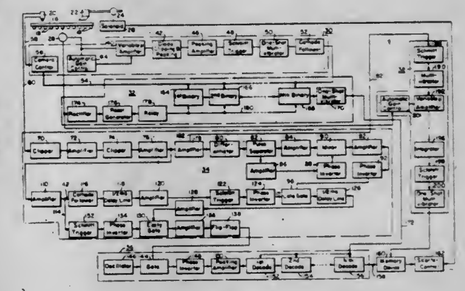
3,020,033
INSPECTION AND CONTROL SYSTEM
Richard A. McCreanor, Pittsburgh, Russel L. Uphoff, Murrysville, John F. Laycak, Duquesne, and Rudolph S. Libenschek, Pittsburgh, Pa., assignors to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 15, 1959, Ser. No. 827,315
23 Claims. (Cl. 266—23)



6. In an automatic hot scarfing machine for burning defects from the surface of heated steel slabs, the combination of conveyor means for moving the heated slab along a substantially straight line path, an electron-optics device mounted above said path for scanning an image of the surface of a heated slab passing therebeneath along a line extending substantially perpendicular to the direction of movement of the slab to thereby produce a pulsed signal in which each pulse has a width proportional to the width of a flaw image along said scanning line, means responsive to the speed of said slab for gating said pulsed signal to eliminate a portion of the pulses therein and produce a resultant pulsed signal, the portion of the pulses eliminated being a function of the speed of said slab, means for integrating the widths of the pulses in said resultant signal to produce a control voltage when the sum of the widths in said resultant signal reaches a predetermined amount, and means operable in response to said control voltage for rendering said scarfing machine operative.

3,020,034
INSPECTION AND CONTROL SYSTEM
John F. Laycak, Duquesne, and Russel L. Uphoff, Murrysville, Pa., assignors to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 23, 1959, Ser. No. 854,908
14 Claims. (Cl. 266—23)

1. In apparatus for detecting flaws on the surface of moving material in which the flaws have a different optical appearance than the remainder of the material, the combination of means including an electron-optics device for scanning an image of the surface of said moving material at a sweep repetition frequency which varies as a function of the speed of said moving body, means responsive to the output of said electron-optics device for producing a pulsed signal in which each pulse has a width proportional to the width of a flaw image scanned by said electron beam, and apparatus coupled to said latter-mentioned means for integrating the pulses in said pulsed signal to produce an indicating voltage when the sum of the widths of the pulses in said signal reaches a predetermined amount.

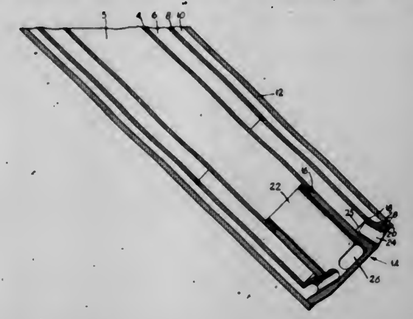


6. In an automatic hot scarfing machine for burning flaws from the surface of heated steel slabs, the combination of conveyor means for moving a heated slab along a substantially straight line path, an electron-optics device mounted above said path for scanning an image of the surface of a heated slab with an electron beam along a line extending substantially perpendicular to the direction of movement of the slab, means responsive to the speed of said slab for controlling the electron-optics device whereby the sweep repetition rate of its electron beam is proportional to the speed of the slab, means coupled to the output of said electron-optics device for producing a pulsed signal in which each pulse has a width proportional to the width of a flaw scanned by said electron beam, means for integrating the widths of the pulses in said signal to produce a control voltage when the sum of the widths of the pulses in said signal reaches a predetermined amount, and means operable in response to said control voltage for rendering said scarfing machine operative.

3,020,035
OXYGEN ROOF JET DEVICE
Gene Wesley Hinds, Westfield, N.J., George M. Skinner, Indianapolis, Ind., and Paul Lewis Smith, New York, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed July 18, 1960, Ser. No. 45,518
2 Claims. (Cl. 266—34)

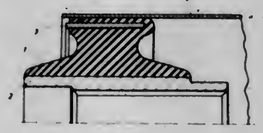
1. In a jet device for directing a fluid flow toward a molten bath comprising, an inner tube defining a central coolant conduit, a second tube outwardly spaced therefrom to define an annular fluid passage therebetween, a third tube outwardly spaced from the second tube to define a second outer annular coolant passage, means secured to the upper ends of said tubes for supplying said passages with flows of said fluid and a coolant, a nozzle associated with the forward end of said tubes for directing flows of fluid toward the bath and having passages for circulating said coolant, the improvement therewith which comprises the combination of a highly conductive nozzle having a forward face exposed to the bath, said nozzle sealably engaging the forward end of each of said tubes for receiving oxygen therefrom, and for circulating said coolant

fluid, downwardly directed oxygen orifices communicating the first of said annular passages with said forward face, said orifices adjacently disposed to provide lateral spacing therebetween, a central chamber in said nozzle, the forward wall of said chamber constituting the rear surface of the nozzle face, said chamber having an inlet engaging the inner tube to receive a flow of coolant therefrom, uniformly cross-sectional bores outwardly radiating from said chamber each of said bores having an outlet port opening into said second annular coolant passage thereby permitting coolant from said chamber to be outwardly directed into said coolant passages in smooth, high-velocity streams and to enter the lower end of said passage, said radial



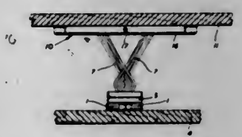
bores being positioned substantially parallel to the nozzle face and disposed such that at least one of said bores lies intermediate each adjacent pair of downwardly extending orifices, said second annular passage terminating at an annular wall forwardly adjacent said outlet ports, said wall being provided with rearwardly extending integral projections positioned such that at least one of said projections completely occupies the peripheral interval separating each adjacent pair of outlet ports thereby defining a plurality of rearwardly extending channels, the lower end of said channel adapted to receive coolant streams from said outlet ports, and the channel upper end being outwardly divergent to combine the respective coolant streams into an annular flow.

3,020,036
RUBBER SPRING
Hans-Joachim Kleinschmidt, Essen, Germany, assignor to Gelenkwellenbau G.m.b.H., Essen, Germany
Filed July 2, 1959, Ser. No. 824,648
11 Claims. (Cl. 267—1)



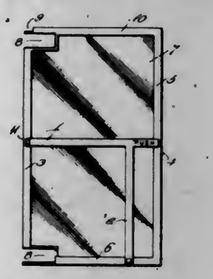
5. As an article of manufacture: an outer substantially tubular member, an inner member also substantially tubular, a tubular rubber spring body having an annular insert vulcanized thereto and interposed in compressed condition between said members and vulcanized to at least the inner member, said annular insert being considerably closer to the said outer member than to the said inner member, there being an uninterrupted mass of rubber inside said insert of greater radial extent than the rubber on the outside of said insert, the rubber of the spring body between the insert and the said outer member being in a state of high compression.

3,020,037
SPRING CUSHIONING DEVICES
John Kenneth Bache, 144 High St., West Bromwich, England, and George German, 11 Clerkenwell Crescent, Malvern, England
Filed Oct. 12, 1959, Ser. No. 845,983
Claims priority, application Great Britain Oct. 15, 1958
6 Claims. (Cl. 267—1)



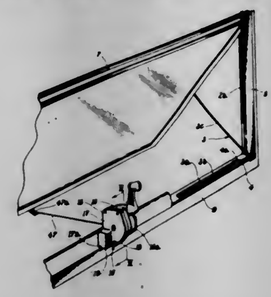
1. A spring cushioning device comprising a plurality of parallel torsion bars, means for resisting twisting of one end of each torsion bar, a plurality of lever arms joined to respective torsion bars and extending laterally with respect to the longitudinal torsional axes of the torsion bars, pressure surfaces associated with the respective ends of said lever arms, the respective lever arms of pairs of said torsion bars being inclined in opposite directions with respect to the pressure surfaces whereby movement under load towards one another of said pressure surfaces angularly deflects said lever arms and applies a twisting couple to the torsion bars, the effective lengths of the lever arms increasing progressively with the extent of deflection and the oppositely-inclined lever arms deflecting in opposite angular directions, and pre-stressing means comprising a common stop member co-operable with said oppositely-inclined lever arms to limit the minimum deflection of the latter and produce a predetermined minimum torsional stress.

3,020,038
REVOLVING DOOR PUSHBAR CIRCUIT CONTROLLER
Arthur M. Simpson, Evansville, Ind., assignor to International Steel Company, Evansville, Ind., a corporation of Indiana
Filed Aug. 30, 1957, Ser. No. 681,288
11 Claims. (Cl. 268—73)



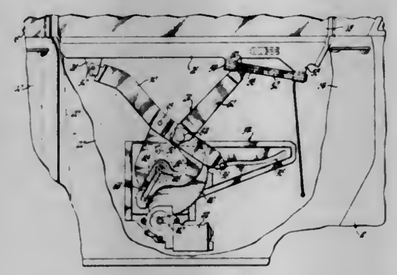
1. A revolving door pushbar circuit controller for the wing of a revolving door assembly, comprising a displaceable pushbar extending laterally of a revolving door wing and hinged on a vertical pivot adjacent one edge of said wing and terminating in a push-in circuit controller adjacent the other edge of said door wing, a vertically disposed displaceable pushbar hinged on a horizontal pivot adjacent the lower edge of said door wing and connected with the aforesaid pushbar and extending vertically upwardly longitudinally of said door wing intermediate the vertical pivot of said laterally extending pushbar and said push-in circuit controller and displaceable with said laterally extending pushbar whereby inward pressure applied at any position along said vertically disposed pushbar or along said laterally extending pushbar operates said push-in circuit controller.

3,020,039
OPERATING DEVICES FOR CASEMENT WINDOWS AND THE LIKE
James Patrick Hynes, East Brighton, Victoria, and Gerald Francis Dunphy, Chadstone, Victoria, Australia, assignors to Ogden Industries Pty. Limited, Huntingdale, Victoria, Australia, a company of Victoria
Filed Sept. 25, 1959, Ser. No. 842,253
9 Claims. (Cl. 268—109)



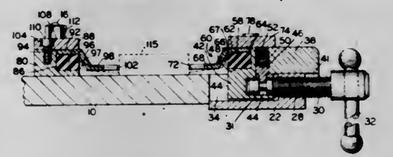
1. An operating device for windows and the like comprising a winch mechanism for controlling opening movements of a window and for returning said window to a closed position within a window frame, said winch mechanism comprising a rotatable drum mounted in a casing, a flexible line having one end connected to said window and the other end connected to said rotatable drum, means arranged in said rotatable drum for automatically preventing rotation of said rotatable drum in a window opening direction when the window reaches the fully opened position, driving means for rotating the rotatable drum in winding and unwinding directions, and means connected to said window and window frame for torsionally biasing said window to an open position.

3,020,040
REAR DOOR WINDOW REGULATOR
Edward J. King and Louis Romanzi, Jr., Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,489
6 Claims. (Cl. 268—124)



1. A door window regulator of the type adapted to move a window between raised and lowered positions along a curvilinear path relative to a well formed within the door, a window regulator mechanism disposed within said well and comprising a back plate fixed to said door, a sector gear, a shaft for rotatably mounting the gear on the back plate, means for rotating said sector gear, a cam slot formed in said back plate, a lift arm articulated at one end to the window proximate the latter's forward edge, a follower member formed on the other end of the lift arm and disposed within the back plate cam slot, said lift arm being articulated intermediate its ends to the sector gear, a slotted channel member mounted on said window proximate the rear edge thereof, a balance arm articulated at one end to the lift arm, the other end of the balance arm being slidably disposed within the channel member, and an intermediate lever having one end commonly articulated with said balance arm to the lift arm, the other end of said intermediate lever being connected through a lost motion connection to the sector shaft, the intermediate lever being adapted to urge the lift arm follower along the back plate cam slot during the initial lowering movement of the window whereby said window is translated rearwardly relative to said door prior to being lowered with the well.

3,020,041
VISE
Victor H. Peterson, Watertown, and Victor H. Peterson Jr., Belmont, Mass. (both of 183 High St., Boston 10, Mass.)
Filed Nov. 27, 1959, Ser. No. 855,621
5 Claims. (Cl. 269—135)

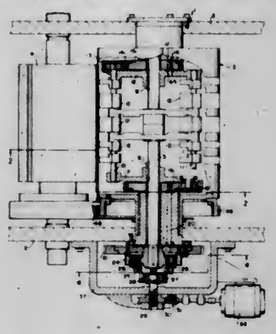


1. A vise comprising a base, two jaws, means supported by said base to move one said jaw towards and away from the other said jaw embodying a jaw support, another jaw support supported by said base, each said jaw support having a cut-out therein, a resilient member in each said cut-out and normally positioned therein, each said jaw embodying an upper portion positioned upon said resilient member, an intermediate portion extending diagonally downward and inward and normally spaced laterally from a said resilient member, and a gripper portion extending laterally inward from said intermediate portion and normally spaced above said base, retainers directly above said jaws, and means holding said retainers and jaw supports together.

3,020,042
RUNNING FOLD ADJUSTMENT
Emory W. Worthington, Ridgewood, and Albert Vogel, Westfield, N.J., assignors to Wood Newspaper Machinery Corporation, Plainfield, N.J., a corporation of Virginia
Filed Nov. 13, 1959, Ser. No. 852,842
4 Claims. (Cl. 270—77)

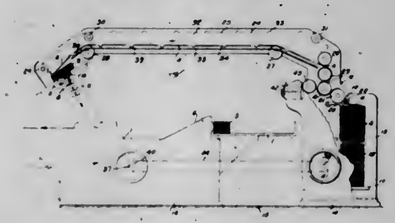
1. In a folder mechanism having a frame, a folder cylinder rotatable in said frame, folder drive means for rotating said cylinder, a folder blade drive shaft rotatably mounted within said cylinder and extending parallel to the longitudinal axis of said cylinder, brackets mounted on said folder blade drive shaft, at least one folder blade shaft rotatably mounted in said brackets having folder blades thereon, a first gear fixedly mounted with respect to said frame, a first gear train drivingly connecting said first gear with said folder blade shaft, a second gear mounted on said folder blade shaft, a

second gear train connecting said folder blade shaft with said folder drive means, a helical connecting gear movable along its longitudinal axis and meshing both with an exterior helical cut gear mounted on said folder blade



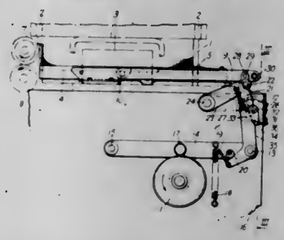
drive shaft and an interior helical cut ring gear in driving engagement with said folder drive shaft, whereby said folder blade shaft may be rotated with respect to said folder drive means while said folder drive cylinder is rotating.

3,020,043
APPARATUS FOR SUPPLYING BLANKS TO ROTARY ENVELOPE MAKING MACHINES
Richard Winkler, Rengsdorf, near Neuwied, and Kurt Dunnebier, Wollendorf, near Neuwied, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 18, 1958, Ser. No. 774,677
Claims priority, application Germany Nov. 29, 1957
6 Claims. (Cl. 271—5)



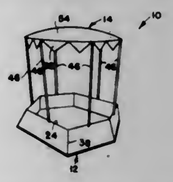
1. In combination with an envelope making machine having a discharge table for receiving finished envelopes thereon for removal by an attendant of the machine and said envelope making machine having means remote from said discharge table for feeding blanks into the machine from the bottom of a substantially shallow working stack, a blank supply mechanism adjacent said discharge table and remote from the working stack including means for supporting a supply stack of blanks adapted to be filled by the operator in quantity capable of maintaining the machine in operation over a substantial period of time, means for removing the blanks individually from the top of said supply stack one at a time and in spaced relation, a conveyor connected with said removing means for carrying the blanks separately in spaced relation from the removing means and having a discharge end extending over the working stack for depositing the blanks individually onto the working stack, and a driving mechanism between the envelope making machine and the envelope blank supply mechanism for operating the blank supply mechanism in accordance with the rate of movement of the blanks from the bottom of the working stack into the envelope making machine.

3,020,044
CARD FEEDING APPARATUS
Hubert John Hillen, Croydon, and Douglas John Stuart, Wallington, England, assignors, by mesne assignments, to International Computers and Tabulators Limited, London, England, a British company
Filed June 20, 1958, Ser. No. 743,240
Claims priority, application Great Britain Aug. 7, 1957
6 Claims. (Cl. 271—44)



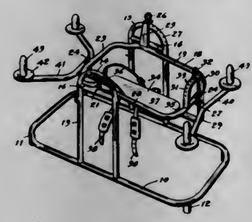
1. Card feeding apparatus comprising a magazine, a picker device reciprocable cyclically relative to the bottom of the magazine to engage an edge of the bottom card of a pile contained in the magazine and to effect feeding of the card from the magazine, a card elevator and a cyclically operable cam co-operating therewith to effect movement thereof from a position below the magazine to a position at which the bottom card is elevated by the card elevator out of the path of the picker device, a trip device operable to connect the card elevator with the cam and to effect disconnection therebetween, and an automatically operable actuator co-operable with the trip device to control said connection and disconnection between the card elevator and cam thereby to prevent or permit feeding of the bottom card by the picker device without interruption of the operation of the picker device.

3,020,045
SAND BOX AND SHELTER STRUCTURE
Charles William Moss, 1415 Beechwood Drive, Ann Arbor, Mich.
Filed July 6, 1959, Ser. No. 824,996
9 Claims. (Cl. 272—1)



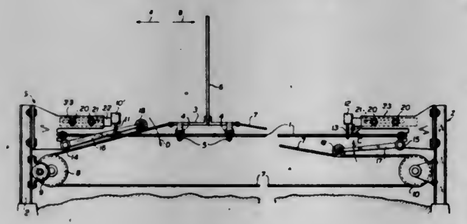
4. A play structure for children comprising a base member formed by folding a blank constituting a sandwich of board-like rigidity and having a layer of foamed plastic material which is compressible without rupture and on the inner and outer surfaces of which are secured respectively sheets of paperboard, the blank having a flat central portion defining an equilateral polygon and a rim portion connected thereto, said rim portion being an outward extension of the sides of said central portion and being folded to form in radial cross section a triangular structure with one side of the triangular structure forming an inner side wall of the base member and another side of the triangular structure being generally in the plane of said central portion, said rim portion having a plurality of spaced holes along its upper edge, and a plurality of poles standing vertically upright through said holes and supporting on their upper ends a cover assembly, said cover assembly including a plurality of flexible ribs bowed upwardly with their ends connected respectively to diametrically opposite poles and exerting radially outward thrust thereagainst, and a fabric cover overlying said flexible ribs and operably connected to the upper ends of said poles.

3,020,046
FOOT EXERCISING MACHINE
Leon G. Hotas, 43 Rowand St., St. James, Manitoba, Canada
Filed May 18, 1959, Ser. No. 813,898
3 Claims. (Cl. 272—57)



1. A foot exercising machine, comprising: a pair of spaced standards; a pair of aligned bearings, each carried by one of said standards; a frame positioned between said standards, and pivotally side carried by said bearings; a further pair of aligned bearings, same being carried by said frame, one at each end thereof; a U-shaped cradle suspended below and at a downwardly sloping angle to said frame, with the ends thereof pivotally carried by said second mentioned bearings; a shoe mounted on said cradle; means on said shoe for receiving and retaining a human foot thereto, with the ankle joint thereof aligned with said first mentioned bearings, and the foot joint thereof aligned with said second mentioned bearings, for correct shoe-guided swinging movement of said foot on said joints, when operated; arms supported by said frame and extending from the corners thereof; and means on said arm ends for selectively applying weight to each.

3,020,047
TARGET CONVEYING DEVICE
Ernst Karl Spieth, Schanbacherstr. 29, Esslingen-Hegensberg, Germany
Filed Aug. 17, 1959, Ser. No. 834,281
2 Claims. (Cl. 273—105.6)



1. In a target conveying device including a target stand and a shooting stand disposed oppositely each other, a carriage having wheels and guide rollers below and opposite said wheels, a target carried by said carriage, two carrying cords supporting said carriage by means of said wheels of the latter during its movement on said cords, said two carrying cords being disposed between said target stand and said shooting stand, a pulling cable secured to both ends of said carriage and forming an upper run and a lower run, a roller mounted at said target stand and at said shooting stand, respectively, said rollers being disposed at a level below that of said carrying cords, said pulling cable running over said rollers and forms inclined portions from said rollers towards said carriage, caused by the difference of the height levels of said carrying cords and of said rollers, an electric motor driving one of said rollers, abutment switches disposed in the electric circuit of said electric motor, two swinging levers disposed in front of said target stand and of said shooting stand, respectively, one end of one of said swinging levers being pivotally secured to said target stand and one end of the other of said swinging levers being pivotally secured to said shooting stand, the other end of said swinging levers resting on the top run of said pulling cable, the end of said swinging levers resting on the upper run of said pulling cable being lifted toward engagement with said abutment switch during movement of said carriage toward said respective stands, in order to open said abutment switch and to stop the movement of said carriage, as said other end of said swinging levers is raised during increase of inclination of said inclined portions of said pulling cable.

3,020,048
GOLF IRON
Robert L. Carroll, 408 McIver St., Greenville, S.C.
Filed May 20, 1960, Ser. No. 30,631
1 Claim. (Cl. 273—167)

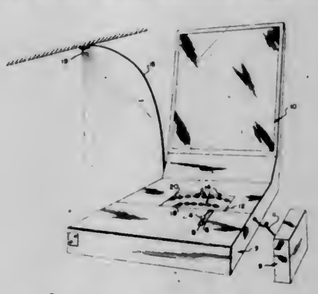


A golf iron including a blade having a striking surface, a neck and a bridge portion integrally connecting said blade and said neck, said bridge portion having a thickness approximately that of said neck and presenting a concave surface contiguous to the striking surface of said blade and said neck and having a curvature corresponding to that which would be defined by the movement of an arcuate portion of a golf ball surface between the bottom and the top of said blade while being maintained contiguous to both the striking surface of said blade and said neck.

3,020,049
GOLF PRACTICE APPARATUS
Alvin L. McNeill, Moorestown, N.J., assignor to Victor Development Company, Merchantville, N.J., a corporation of New Jersey
Filed Oct. 31, 1957, Ser. No. 693,670
4 Claims. (Cl. 273—186)

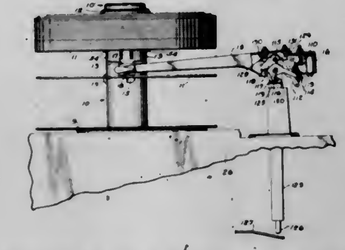
1. Golf practice apparatus comprising a captive ball, displaceable means to support said ball in a rest position, means to generate a signal representative of the time of passage of said ball between said rest position and a displaced position on being struck with a golf club swung thereat, two linear arrays of photo-electric sensing elements extending transversely of the path of the projection of the head of said club onto a plane, said elements being arranged for the generation of a signal at one element in each of said arrays by the shadow of said swung club head, a plurality of groups of electrically energizable indicating means, the indicating means of each of said groups being associated with a range of values for said first named signal and each indicating

means within each of said groups being associated with signals generated at a combination of said sensing elements, separate movable power distributing means for each of said groups, means responsive to said first-named



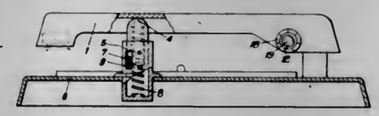
signal to energize one of said distributing means, and means responsive to signals from said one elements to set said one distributing means to a position effecting energization of the indicating means associated with said one elements.

3,020,050
SPINDLE FOR AUTOMATIC DROP-TYPE PHONOGRAPHS
Victor Jorner, Chicago, Ill., assignor to The Seeburg Corporation, Chicago, Ill., a corporation of Pennsylvania
Filed July 6, 1959, Ser. No. 825,291
3 Claims. (Cl. 274—10)



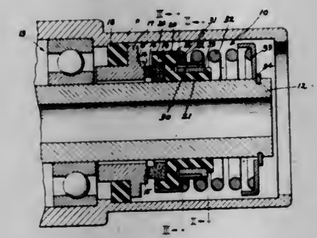
1. Apparatus for use in automatic phonographs of the type adapted to play both sides of a plurality of records, comprising: a vertical rotatable member having a diameter slightly less than that of the central apertures in the records to be played so as to permit sliding of said records thereon, said rotatable member having an upper section and a lower section which are mounted independently for rotation in opposite directions; driving means for rotating said upper section in one direction and said lower section in the opposite direction; upper record supporting means mounted in said upper section for supporting a stack of records in such a manner that the bottom side of the lowermost record in said stack can be reproduced by said phonograph, said upper record supporting means being actuable so as to release the lowermost record in said stack while supporting the remainder thereof; lower record supporting means mounted in the lower section of said rotatable member for receiving a record which has been released by said upper record supporting means and for supporting such a record in downwardly spaced relation to said upper record supporting means in such a manner that the top side of such a record can be reproduced by said phonograph, said lower record supporting means being actuable so as to release a record supported thereby; a tone arm having an upper and a lower stylus on one free end and having its other end mounted at a fixed height approximately equidistant vertically between said upper and said lower record supporting means; means for raising the free end of said tone arm into a first operative playing position so as to reproduce the bottom side of the lowermost record in said stack; means for actuating said upper record supporting means so as to release the lowermost record from said stack after reproduction of the bottom side thereof; means for lowering the free end of said tone arm into a second operative playing position so as to reproduce the top side of a record supported on said lower record supporting means; means for actuating said lower record supporting means so as to release the record supported thereby after reproduction of the top side thereof and prior to the receipt of the next record thereon; and retaining means positioned beneath said lower record supporting means for receiving all records which have been released by said lower record supporting means.

3,020,051
INDICATING DEVICE FOR THE CONTACT WEIGHT OF PHONOGRAPH PICK-UPS
Heinrich Zimmermann and Hans Hermann, St. Georgen, Black Forest, Germany, assignors to Gebr. Steidinger K.G., St. Georgen, Black Forest, Germany, a German company
Filed June 16, 1958, Ser. No. 742,419
Claims priority, application Germany June 21, 1957
3 Claims. (Cl. 274—23)



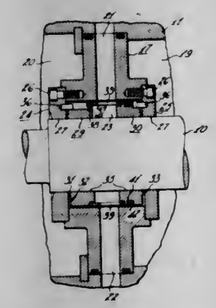
1. In a record player for inetrchangeable pick-ups requiring different pressures for proper reproduction of sound from records, a tone arm, a pick-up supported in one end of the tone arm, a base plate, a vertical rotatable shaft extending upwardly from the base plate, a yoke on the tone arm at the end region of the tone arm remote from the pick-up, an extension integral with the yoke adjacent to and below the tone arm and projecting in the direction toward the pick-up, means interconnecting the yoke extension and the tone arm, a bracket at the upper end of the vertical rotatable shaft, a horizontal shaft rotatably supported in the bracket and supporting the yoke, a first spring attached at one end to the bracket and clamped at its other end to maintain the horizontal shaft in the yoke with a predetermined friction against rotation of the horizontal shaft, a second spring coiled about the horizontal shaft, a pin extending radially from the horizontal shaft, one end of the second spring being braced against the yoke surface toward the pick-up end of the tone arm and the other end of the second spring being braced against the radial pin, the tension of the first spring exceeding that of the second spring and being oppositely directed, means on the horizontal shaft externally to the tone arm for adjusting the tension of the second spring, a spring biased tone arm vertical support spaced from the vertical shaft and integral with the base plate engaging an intermediate region of the tone arm, equally spaced graduations on the tone arm support, an indicator on the tone arm support co-operating with the graduations to indicate the magnitude of the pressure exerted by the needle of the pick-up in the tone arm, and a second series of equally spaced graduations on the horizontal shaft for identifying the required magnitude and direction of rotation of the horizontal shaft in accordance with the difference between the actual reading of the indicater on the tone arm support and the desired reading thereof that the tension of the second spring is adjusted to produce the desired reading.

3,020,052
SHAFT SEAL
Remi J. Gits, Hinsdale, Ill., assignor to Gits Bros. Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Nov. 1, 1955, Ser. No. 544,159
2 Claims. (Cl. 277—89)



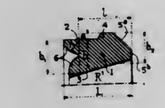
2. A device for forming a seal with a stationary surface that is disposed radially of a shaft, comprising: a sealing ring having a polished end surface for engaging the stationary surface, a cylindrical outer surface and a radially disposed rear surface; an elastomer diaphragm engaging the outer cylindrical and the radial rear surfaces of the sealing ring and forming a seal therewith; a projection around the outer edge of said diaphragm extending rearwardly from the radial portion thereof; a cylindrical extension of said diaphragm extending rearwardly from the inner edge of the diaphragm and sealing ring, and containing a central opening through which a shaft may be extended; a metal band of cylindrical configuration surrounding said extension of said diaphragm; and a metal shell surrounding said diaphragm and metal band and having a radial portion spaced from the radial portion of the diaphragm by said projection, said shell having a driving connection with the metal band.

3,020,053
FLOATING BUSHING SEAL
Donald O. Millar and Kenneth E. Kraemer, Milwaukee, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 11, 1956, Ser. No. 627,679
3 Claims. (Cl. 277—137)



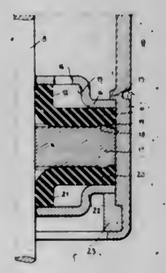
1. A pressure seal comprising a seal housing having an aperture enclosed by inwardly extending members, each of said members having an opening, a shaft extending through said openings with a first predetermined clearance, a bushing within said seal housing aperture and having an inner bore through which said shaft extends with a second predetermined clearance less than said first predetermined clearance, said second predetermined clearance between said bushing and said shaft providing a primary seal, said bushing having an outside diameter less than the diameter of said housing aperture, said bushing having an axially extending projection spaced radially outward from said bushing bore on the side of said bushing facing pressure to be sealed, said bushing being axially spaced from said inwardly extending members except for said projection which engages one of said inwardly extending members to permit said bushing to pivot relative to said inwardly extending member in response to deflections of said shaft, means nonrotatably fastening said bushing to one of said inwardly extending members and permitting relative radial and axial movement between the bushing and seal housing, said bushing having a circumferential groove in its outer surface, a resilient sealing ring having a static inner diameter less than the diameter of said groove and being stretched and partially disposed within said groove and having an outer static diameter greater than the diameter of said housing aperture and compressed and confined within said housing aperture, said resilient sealing ring providing an adjustable positive secondary seal between said seal housing and said bushing in response to relative pivotal movements of said bushing about said projection contact point and said shaft restricting the flow of pressurized fluid through said primary seal.

3,020,054
SEALING RING FOR A PIPE JOINT AND THE JOINT INCORPORATING THIS RING
Jean Eugène Driancourt, Pont-a-Mousson, France, assignor to Compagnie de Pont-a-Mousson, Nancy, France, a French body corporate
Filed Feb. 19, 1958, Ser. No. 716,231
Claims priority, application France Feb. 21, 1957
1 Claim. (Cl. 277—170)



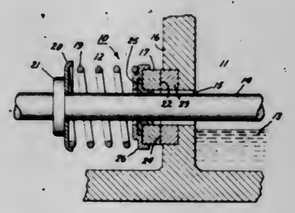
A sealing ring of elastic material adapted to provide a seal between two pipe line elements, one having a male end and the other a corresponding socket, said ring comprising a massive annular body with solid radial sections adapted to be compressed radially between said two pipe line elements and to resist radial displacements of one of said elements with respect to the other, said body having inner and outer faces and having a radial thickness of about one-third to one-half of its axial width, said body including, on the one hand, at one of its ends two short flange-shaped massive lips which extend from the body and have a substantially quarter-circle-shaped radial section to avoid their bending back towards the other end, said lips having a radial thickness between about one-third and one-half the radial thickness of said body, said body including, on the other hand, at about the middle of its length on one of its faces an axial anchoring rib for engaging the adjacent surface of the corresponding pipe line element, said rib being of substantial axial extent, but of relatively slight radial projection with respect to the associated face of said body and thereby being robust and rigid, and said body including at said other end in relaxed state, a flat transverse shoulder perpendicular to the axis of the ring and having an outer frusto-conical centering end surface which converges in the direction of said other end and which extends from said rib to said transverse shoulder.

3,020,055
FLUID-TIGHT JOINT PROTECTED AGAINST DUST FOR TELESCOPIC SHOCK-ABSORBERS OF AUTOMOBILE VEHICLES
Fernand Stanislas Allinquant, 6–10 Rue Olier, Paris, France
Filed July 11, 1958, Ser. No. 747,943
Claims priority, application France July 30, 1957
1 Claim. (Cl. 277—187)



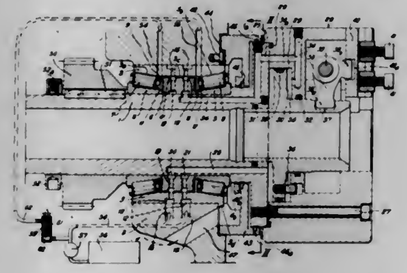
A sealing device at the exit of a piston rod from a fluid pressure cylinder, namely for a telescopic shock-absorber, comprising in combination with said cylinder and rod, a middle disc-washer, slidably mounted in one open bore end of said cylinder around said rod, a pair of elastic washers, each having at rest an outer diameter greater than the diameter of said cylinder bore and an inner diameter less than the diameter of said rod, symmetrically backed against the opposite faces of said middle disc-washer within said bore around said rod, and formed with oppositely directed lips pressing said rod, a pair of rigid washers of shallow U-section, each formed with a bored bottom around said rod and with a peripheral flange of a diameter less than that of said cylinder bore, symmetrically disposed for each enclosing one of said elastic washers in close contact of its bottom with the lip of the enclosed elastic washer and of its flange with the peripheral surface thereof, the innermost of said rigid washers having a perforated bottom, abutting means in the cylinder bore for said inner rigid washer, and means in said bore for clamping the peripheral flange of the outer rigid washer and thus holding the formed assembly against said abutting means.

3,020,056
SEAL MATERIAL
Maynard C. Agens, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 30, 1959, Ser. No. 830,484
5 Claims. (Cl. 277—237)



1. A seal body adapted to engage a surface element with rubbing contact therebetween to provide a fluid seal, said body comprising a mixture of Ag and SnS_2.

3,020,057
ROTARY FLUID SUPPLY SYSTEM
Louis J.-M. Gamet, Bougival, France, assignor to La Precision Industrielle, Seine-et-Oise, France, a company of France
Filed Feb. 1, 1960, Ser. No. 5,735
Claims priority, application France Feb. 12, 1959
11 Claims. (Cl. 279—4)

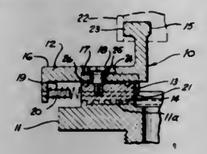


1. In a machine-tool including a stationary frame, a rotatable spindle having a cylindrical portion and at least one axially directed bore, and a fluid motor bodily rotatable with said spindle and operatively connected with the opening of said bore, the combination of a pair of axially spaced roller cages, each including a set of regularly distributed taper rollers, said cages having their smaller diameter ends facing one another; a stationary outer-ring fitted in said frame, secured against rotation therein and surrounding said cages and rollers, and having spaced outer-race ways for said sets of rollers and a cylindrical inner surface therebetween; a set of three coaxially juxtaposed annular members having cylindrical inner faces fitted about said cylindrical portion of said spindle, both outer members being each provided with an inner-race way respectively for said sets of rollers and the middle member having a cylindrical outer surface defining with said cylindrical inner surface an annular gap of narrow radial width; axial tightening means carried by said spindle for securing said set of members to said spindle for rotation therewith; an external pressure fluid system; orifice means in said outer ring connectable with said fluid system; first annular groove means defined between said cylindrical inner and outer surfaces and registering with said orifice means; second annular groove means coplanar with the former between said cylindrical inner face of said middle annular member and the outer surface of said cylindrical portion; radial duct means connecting respectively first and second annular groove means and said second groove means with said axially directed bore, whereby when under pressure fluid of said system feeds said fluid motor and a minor portion of said fluid passing through said annular gap cools and lubricates said roller bearings; and means supplied by said fluid system for further cooling and lubricating said roller bearings.

3,020,058
AUTOMATICALLY ADJUSTING HOLDING DEVICE
Milton Feldman, 34 Harvard Road, Linden, N.J.
Filed Jan. 4, 1960, Ser. No. 431
1 Claim. (Cl. 279—123)
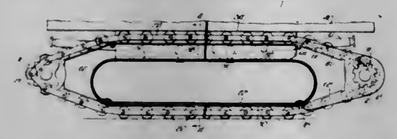
A holding device comprising in combination with a support having a centrally located spiral groove thread, a plurality of holding portions, each of said holding portions comprising a base portion having a plurality of grooves in one face, said base portion being independently mounted on said support and movable thereon in a direction passing substantially through the center of said support, said

grooves in said base portion engaging said spiral groove thread, a holding element, a spring under compression connecting said holding element to said base portion, said spring tending to slidably move said holding element on said base portion in a direction parallel to said base portion and decrease the compression in said spring, and a



shoulder bolt, said holding element having an opening elongated in a direction parallel to the movement of said spring for admitting said shoulder bolt, said shoulder bolt disposed in said elongated opening and connected to said base portion, whereby said holding element may move relative to said base portion in a direction parallel to the movement of said spring.

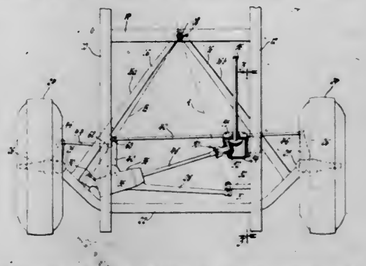
3,020,059
LIFT CONVEYOR
John W. Allen, La Grange, Ill., assignor to Stanray Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,149
6 Claims. (Cl. 280—43.23)



1. A lift conveyor for lifting and moving heavy objects, comprising an elognated bottom plate member, an elongated cover channel plate member with its open face upward, means uniting the ends of said members on a transverse axis for permitting vertical movement therebetween, endless roller link chains longitudinally surrounding said members and means, and an inflatable container carried between said members, whereby responsive to the inflation of the container expanding forces are exerted between said members for causing extending movement therebetween.

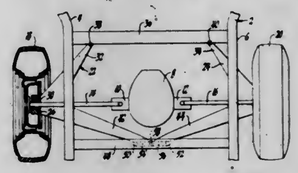
3,020,060
STEERING ARRANGEMENT FOR A SOLID FRONT AXLE SUSPENSION
Johannes Rosenkrands, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 13, 1960, Ser. No. 42,709
2 Claims. (Cl. 280—95)

1. In a suspension-steering system for a self-propelled vehicle, an axle under the frame of the vehicle having dirigible means pivotally connected thereto at either end thereof, steering linkage means operably connected to said dirigible means, a generally horizontally disposed V-frame member having its legs fixedly connected to said axle in inwardly spaced relation with respect to said dirigible means, said V-frame member being supported by the vehicle frame through a universal connection located at the vertex of the V substantially on the center line of the vehicle, a radius rod having pivotal connection with the frame of the vehicle at one side thereof and extending toward the other side of the vehicle where it has pivotal connection with said axle through a pin type joint, a gear box mounted on said radius rod inward of said pin joint, means actuated by the output of said gear box having connection with said linkage at a point such that when said dirigible means are in centered relation the connection is located on a line representing the axis of said pin joint



and intersecting the axis of said universal connection, and transverse shaft means inputing to said gear box comprising a universal joint located on a line intersecting the axis of the connection between said radius rod and the vehicle frame at the said one side of the vehicle and the axis of said universal connection.

3,020,061
SWING AXLE REAR SUSPENSION
Johannes W. Rosenkrands, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,590
8 Claims. (Cl. 280—104)

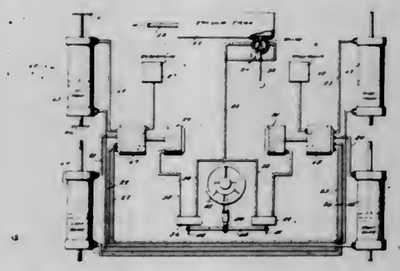


1. In combination with the sprung mass of a vehicle, a pair of laterally oppositely extending control arms each having longitudinally spaced inboard end portions, means pivotally connecting one inboard end of each arm on said sprung mass, the other inboard ends of said arms being pivotally connected together independent of said sprung mass, and means connecting said last mentioned end portions to said sprung mass, said last mentioned means comprising a pair of upwardly extending links pivoted at one end of each to a respective arm outboard of the pivotal connection between said arms, said links converging laterally so that the projected axes thereof intersect at a point vertically aligned with the pivotal connection between said arms, and means pivotally connecting said links at their other ends to said sprung mass.

3,020,062
MOTOR VEHICLE STABILIZING DEVICE
Luis Farrugia Reed, Miguel Cabrera 49, Mexico City, Mexico
Filed July 2, 1958, Ser. No. 746,187
3 Claims. (Cl. 280—112)

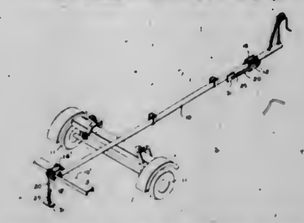
1. A vehicle stabilizing system comprising a double acting hydraulic ram vertically disposed at each corner area of a motor vehicle, said rams each comprised of a cylinder element and a piston element, one element being connected to the vehicle running gear and the other element to the vehicle frame, a pump having connections to each of said rams, said connections to the pair of rams

on one side of the vehicle being to the lower portion thereof to raise said side of the vehicle, while the connections to the pair of rams on the opposite side of the vehicle is to the upper portion thereof, for simultaneously and positively raising the one side and depressing the other side of the vehicle frame, a second pump having a connection to each of the rams, said connections of said second pump to the pair of rams on the opposite side of the vehicle being to the lower portion thereof to raise the latter side of the vehicle, while the connections to the



pair of rams on said one side of the vehicle is to the upper portion thereof for simultaneously and positively raising said opposite side and depressing said one side of the vehicle frame, power means for operating said pumps selectively, means actuated by and upon turning of the vehicle steering wheel beyond a set point in either direction for controlling power to one or the other of said last-named means, and inertia means responsive to predetermined minimum centrifugal force of the vehicle in making a turn for rendering effective said means actuated upon turning of said steering wheel.

3,020,063
SAFETY TRAILER SUPPORT
Jesse F. Warren, Jr., 1000 Hays St., Tallahassee, Fla.
Filed Sept. 30, 1959, Ser. No. 843,389
4 Claims. (Cl. 280—150.5)



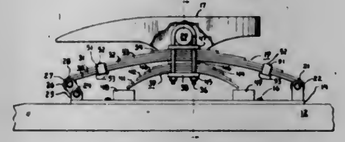
1. In combination with a load bearing vehicle supported intermediate its ends and including generally horizontal frame structure, that improvement which comprises supporting means for said ends, said supporting means including an attaching plate adapted to be located in a substantially vertical plane, an opposed clamping yoke between which and said plate a portion of said frame is received, bolts connecting said plate and said yoke in fixed relation to said frame, an externally threaded stud attached to and extending outwardly from said plate and forming a pivot, a hollow supporting leg on said pivot, a radially serrated hub fixed to said plates and located concentrically about the base of said stud, said leg having an opening about which there is fixed a radially serrated hub for cooperation with the first mentioned hub whereby said leg may be adjusted relative to said vehicle, a wing nut for engagement with the threads of said stud for binding said serrated hubs in fixed relation and said leg relative to said frame, a leg extension longitudinally telescoped within said leg, transverse openings through said leg and extension with a series of such openings in one whereby said extension may be relatively adjusted to vary the length, a transverse pin for securing said leg and extension in adjusted position one relative to the other, and a pivoted foot on the outer end of said extension and movable from a transverse position to a position substantially parallel to said leg.

3,020,064
SADDLE MOUNT
Howard A. Hinton, 103 Peterson Court, Longview, Tex.
Filed July 13, 1959, Ser. No. 826,510
3 Claims. (Cl. 280—402)



1. A saddle mount for supporting in elevated position over one vehicle an end of another vehicle to be towed or the like, said saddle mount comprising a base having a horizontal surface and adapted to be attached to the towing vehicle, a sleeve fixed to said base with its axis substantially perpendicular to the said horizontal surface of the base, a support member journaled in said sleeve for rotation about the sleeve axis and a portion of said support member protruding from said sleeve and forming a cradle to seat the axle of the vehicle to be towed, a plurality of reinforcing plates rigidly fastened to the sleeve and the base, said sleeve being elevated above said base and said support element being provided with a circular flange which rotates in the space between the base and the elevated sleeve.

3,020,065
SPRING MOUNTED FIFTH WHEEL
George Sandefur, Rural Rte. 1, Plainfield, Ind.
Filed May 11, 1960, Ser. No. 28,266
3 Claims. (Cl. 280—439)

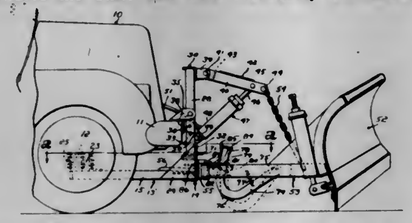


1. In combination with a tractor having a member adapted to carrying a fifth wheel; a first pair of semi-elliptic spring units shackled to said member, said spring units having their elliptical planes substantially parallel to the direction of length of the tractor; a shaft attached to each of said spring units by means of U-bolts; a fifth wheel journaled to said shafts; and a second pair of semi-elliptic spring units fastened to said first pair by said U-bolts in normally non-supporting disposition below said first pair and adapted to become supporting during predetermined load conditions between a semi-trailer and said tractor.

3,020,066
BLADE FRAME AND VEHICLE COUPLER
Anthony J. Torrey, 874 Edgell Road, Framingham, Mass.
Filed Jan. 15, 1959, Ser. No. 787,080
2 Claims. (Cl. 280—510)

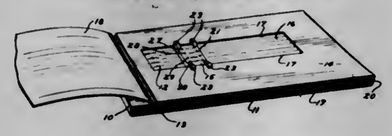
1. In a coupler for attaching the frame of a blade to a motor vehicle, a vehicle attachment including a transverse thrust member, a pair of rearwardly disposed lock-

ing jaws, vertical pivots, one for each jaw and located rearwardly of said member, each jaw being fast on one end of its pivot, said spring means urging the rear ends of said jaws toward each other, said frame including a member engageable with said transverse member and an element extending rearwardly thereof and including a head provided with forwardly and inwardly tapering side faces engageable with said jaws and operable to spread them apart on relative movement of said members one towards the other and with rearwardly and inwardly



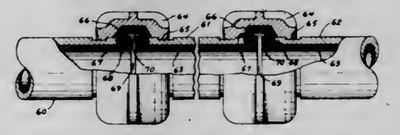
tapering shoulders engageable by the rear ends of said jaws when moved inwardly by said spring means, said jaws being materially thicker than said head and there being clearances between said jaws and said head when said members are engaged thereby to enable said frame to swing upwardly and downwardly and from side-to-side relative to said attachment and said attachment also including operator actuated means to rotate both of said pivots against the action of said spring means to spread said jaws into positions disengaged from said shoulders.

3,020,067
MARKING DEVICE
Oscar H. Molomot, Minneapolis, Minn., assignor to Truckers Specialty Printing Co., Inc., Minneapolis, Minn., a corporation of Minnesota
Filed July 24, 1958, Ser. No. 750,668
1 Claim. (Cl. 281—29)



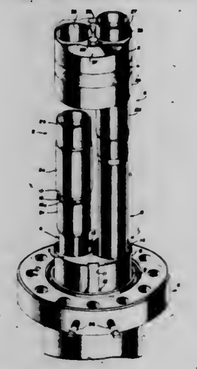
A truckers' log book consisting of a plurality of identically sized chart sheets each having an identical longitudinally extending rectangular chart displayed thereon, a cover having a flexible upper flap and a flexible lower flap each of substantially the same dimensions as that of said chart sheets, means binding said upper and lower flaps and said sheets together along a first transverse edge of said log book, said sheets being provided with perforations to facilitate removal parallel to and adjacent said first edge, a flexible index flap integral with said lower flap at a second transverse edge thereof, parallel to and spaced from said first edge, said index flap being of substantially the same dimension as said upper and lower flap and said chart sheets and being foldable to lie in superimposed relation to an upper surface of an uppermost one of said sheets and to lie in spaced relation to said uppermost sheets, said index flap being provided with an elongated, rectangular, longitudinally extending opening positioned to aline with said chart on said uppermost chart sheet when said index flap is positioned in superimposed relation thereto, said opening being partially bounded by parallel, facing longitudinal edge portions of said index flap, and a marking guide constituted as a body extending transversely of said index flap and outwardly extending flanges on opposite ends, respectively, of said body providing outwardly opening guideways substantially in the plane of the body and slidably receiving said longitudinal edge portions of said index flap, said marking guide being provided with a plurality of pencil receiving holes therethrough and with at least one straight edge portion extending perpendicularly to said longitudinal index flap edge portions.

3,020,068
COUPLING OF LINED PIPE AND METHODS
Frank X. Costanzo, Cranford, N.J., assignor to Victaulic Company of America, Union, N.J., a corporation of New Jersey
Filed Feb. 18, 1959, Ser. No. 794,058
15 Claims. (Cl. 285—55)



1. In lined pipe formed for mechanical coupling by employing coupling grooves formed therein, a section of pipe, a lining applied within said pipe and extending throughout the length thereof, an annular coupling groove formed in the exterior of said pipe adjacent an end thereof, the said lining having a cylindrical portion extending out beyond said end of said pipe and an annular collar of protective material overlying and in seating engagement with said extending portion of said lining and butted against said pipe end, said collar having the same external diameter as the external diameter of said pipe and terminating substantially flush with the end of the lining whereby the exterior surface portion of said pipe between said groove and said collar, and the exterior surface of said collar, form one continuous gasket engaging surface.

3,020,069
MULTIPLE STRING TUBING HANGER CONSTRUCTIONS
William W. Word, Jr., Houston, Tex., assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Mar. 26, 1959, Ser. No. 802,159
6 Claims. (Cl. 285—137)



1. In a well head apparatus for multiple completion wells, the combination of

a head member adapted for mounting at the top of a well and provided with an upright passage therethrough of circular cross section, said passage being provided with a transverse upwardly facing shoulder;

a hanger member of generally cylindrical form, said hanger member being dimensioned to be lowered into said passage and having a diameter sufficiently large to substantially fill said passage, said hanger member having a downwardly facing transverse shoulder disposed to come into seating engagement with said shoulder in said passage as said hanger member is lowered into said passage,

said hanger member being provided with a plurality of vertical openings therethrough, at least one of said openings being of circular transverse cross section;

a first tubing string supporting element of cylindrical form and of such diameter as to substantially fill the cross-sectional area of said one vertical opening, said first tubing string supporting element being threaded at its lower end for attachment to a tubing string to be suspended therefrom,

said hanger member and said first tubing string supporting element being provided with cooperating shoulder means extending transversely of said first tubing string supporting element whereby said first tubing string supporting element, when received in said one vertical opening, can be supported directly on said hanger member;

releasable attaching means comprising

a detent carried by said hanger member,

said first tubing string supporting element being provided with a transverse, annular, outwardly opening groove spaced above the lower end of said element by a distance such as to be located within said one opening when said element is received therein and supported on said hanger member,

and resilient means engaging said detent to bias the same into said one vertical opening to engage between the side walls of said groove when said first tubing string supporting element is received in said one vertical opening,

engagement of said detent in said groove serving to releasably attach said hanger member to said first tubing string supporting element, whereby said hanger member can be lowered into said passage and seated therein by means of a handling joint attached to said first tubing string supporting element and can be withdrawn upwardly from the passage by the handling joint when not held against upward movement,

said releasable attaching means allowing rotating of said first tubing string supporting element, and the tubing string suspended therefrom, about the vertical axis of said first tubing string supporting element relative to said hanger member when said element is supported on said hanger member, with said detent constantly engaging said first tubing string supporting element during such rotation,

at least one other tubing string supporting element threaded at its lower end for attachment to a tubing string to be suspended therefrom, said other tubing string supporting element being of such transverse dimension and shape that it can be lowered beside said first tubing string supporting element into another of said vertical openings when said first tubing string supporting element is received in said one opening and supported on said hanger member,

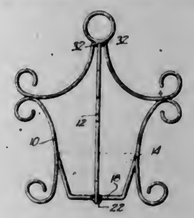
said hanger member and said other tubing string supporting element being provided with cooperating shoulder means extending transversely of said other tubing string supporting element whereby said other tubing string supporting element, when received in said other vertical opening, can be supported directly on said hanger member, the transverse dimension and shape of said other tubing string supporting element allowing independent upward withdrawal of said first tubing string supporting element when both of said elements are supported on said hanger member;

said resilient means of said releasable attaching means being effective to allow said attaching means to release under upward strain when said hanger member is seated in said passage and held against upward movement, whereby said first tubing string supporting element can be detached from said hanger member and raised, independently of said other tubing string supporting element,

said vertical openings in said hanger member being of such size as to freely pass the tubing strings to be suspended from said tubing string supporting elements; and

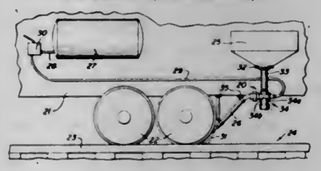
seal means for effecting a fluid-tight seal between said tubing string supporting elements and the wall of said passage, said seal means including packing portions surrounding said tubing string supporting elements and through which said first tubing string supporting element can be withdrawn upwardly without removal of said seal means or said other tubing string supporting element.

3,020,070
LOCKING STRUCTURE
Gary L. Kitterman, 1601 Washington Blvd., Kansas City, Kans.
Filed Mar. 14, 1960, Ser. No. 14,961
6 Claims. (Cl. 287—54)



1. Locking structure for maintaining a pair of members in relative fixed positions comprising a first member including a first stretch having a U-shaped notch formed therein and a second stretch spaced from said first stretch and having a U-shaped loop formed therein, the transverse cross section of each stretch being substantially uniform throughout the length thereof; and a second continuous member having a portion thereof seated within said notch and a section received by said loop, there being a pair of wings integral with said second member on each side of the portion thereof which is seated within said notch.

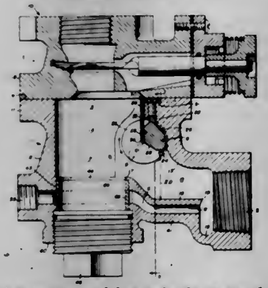
3,020,071
SAND TRAP FOR VEHICLES
Thomas Makinson, 326 N. Buchanan, Pocatello, Idaho
Filed Jan. 27, 1960, Ser. No. 5,058
4 Claims. (Cl. 291—11)



1. A sand trap for controlled feeding of sand under a drive wheel of a vehicle equipped with a sand bin, a compressed air system, and a sand delivery pipe, comprising a body having a substantially rectilinear sand supply passage extending therethrough from top to bottom thereof with means at its upper end for connection

with the sand bin so that sand will flow thereinto by gravity, an air jet passage offset laterally from the longitudinal axis of said sand supply passage and extending transversely thereof from side to side of said body with one end adapted for connection with an air supply line of said air system and with the opposite end adapted for connection with said sand delivery pipe, and a sand induction passage leading to said air jet passage from said sand supply passage at a location above the lower end of the latter, leaving trap space in said lower end for the accumulation of foreign matter carried by the sand; a closure element normally secured to said body at the lower end of the sand supply passage as a removable bottom for said trap space affording direct clean-out access throughout the length of the sand supply passage; a jet nozzle in the air jet passage; and a foreign matter rejecting grill guarding entrance to the induction passage at the opening thereof into the sand supply passage, the inflow side of said grill being above and in direct communication with said trap space so that foreign matter caught by the grill will gravitate into the trap space.

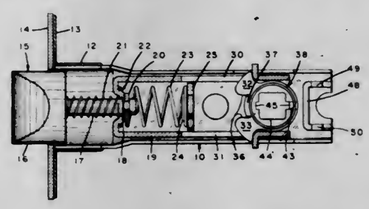
3,020,072
SAND TRAP
Virgil L. Frantz, Salem, Va., assignor to Graham-White Sales Corporation, Salem, Va., a corporation of Virginia
Filed Nov. 17, 1958, Ser. No. 774,235
14 Claims. (Cl. 291—11)



12. A sand trap comprising a body, a sand chamber in said body and having angularly related inlet and outlet legs opening respectively onto spaced inlet and outlet ports, a sandflow regulating unit insertable from a side into said body through a transverse bore therein, said unit including a pair of axially spaced journals rotatably seated in apertures in said body at opposite ends of said bore, and a blade between said journals and disposed in said sand chamber above an opening between said legs, said blade being substantially coextensive in width with said opening and swingable on said journals in a limited arc relative to said opening for varying the upper extremity thereof, an angle plate secured to said body above said blade and having a depending tongue projecting between said journals and of substantially the width of said blade for centering said blade axially relative to said chamber, means acting between said body and unit for holding said blade in a given position within said arc, and nozzle means in said body and opening into said outlet leg for directing air against sand therein.

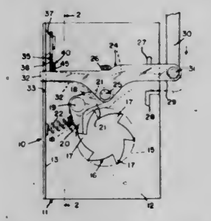
3,020,073
SIMPLIFIED LATCH ASSEMBLY
Murray E. Williams, Grand Rapids, Mich., assignor to Dexter Industries, Inc., Grand Rapids, Mich.
Filed Mar. 6, 1958, Ser. No. 719,596
3 Claims. (Cl. 292—169)

1. A latch mechanism, comprising: a case; a retractor slideably mounted in said case, and having spaced opposite arms; a bolt slideably mounted with respect to said case and operably connected to said retractor; a retractor spring biasing said retractor outwardly with respect to said case; rollback means rotatably received in said case and engaging said retractor arms, said rollback means including coaxial cylindrical journal sections spaced from each other along the axis thereof and including a connecting member joining said journal sections, said rollback means also including a plurality of cam members having a central driving aperture and received between said journal



sections, and also having a cut-out receiving said connecting member, said cam members also having spaced projections on opposite sides of said cut-out for engaging the arms of said retractor, respectively, said retractor spring tending to urge said retractor outwardly and thereby urge said cam members against said connecting member, and said rollback means also including interengaging means on said journal sections and cam members on the opposite side thereof from said connecting portion for preventing relative angular displacement of said cam means with respect to said journal sections.

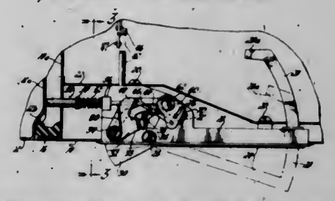
3,020,074
DOOR LOCK
Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 21, 1959, Ser. No. 860,791
6 Claims. (Cl. 292—280)



4. A door lock comprising a support having a detent mounted thereon for movement to and from position in which it holds a latching member of the lock against movement to release a door, means urging said detent toward said holding position, an operating arm having a pivotal connection intermediate the length thereof to said detent which enables the arm to either swing idly about said pivotal connection as a fulcrum point, and thereby fail to move said detent from said holding position, or to move with said detent in said movement of the latter, said operating arm being adapted to swing about a further fulcrum point on one side of said pivotal connection to move said detent, through the agency of the connection, out of said holding position of the detent, means optionally engaged by said operating arm to provide said further fulcrum point, means to selectively move said last named means into and out of position for said optional engagement by said operating arm, and an op-
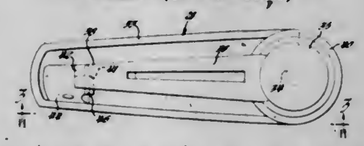
erating device engageable with said operating arm on the opposite side of said pivotal connection to move the arm about said further fulcrum point.

3,020,075
FLUSH TYPE DOOR HANDLE
Theodore H. Johnstone, Lincoln Park, and Robert C. Liem, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 8, 1960, Ser. No. 34,781
8 Claims. (Cl. 292—336.3)



1. A flush type handle of the character described for a door movably mounted on a body, comprising: an elongated gripping member pivotally mounted on the door for pivotal movement between an inoperative position wherein said member lies substantially flush with the surface of the door and an operative position wherein one end of said member is spaced from the surface of the door so that the member can be gripped by the hand of an operator; a push button movably mounted on said door for swinging said gripping member from inoperative position to operative position; a movably mounted detent adapted to couple said push button to said gripping member; and means responsive to the position of the door for moving the detent into and out of coupling relation with said gripping member.

3,020,076
COMBINED DOOR HANDLE AND PULL-TO FOR VEHICLE DOOR
Frank P. Biondo, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 15, 1960, Ser. No. 36,406
3 Claims. (Cl. 292—336.3)



1. In combination in a vehicle body having a door and a latch for holding the door closed, a handle pivotally mounted on the door; means connecting said handle to the latch whereby the latch is operated upon turning the handle, said handle having an undercut notch spaced from its pivotal mounting; and a member projecting from the door having an interlocking hook which is complementary to said notch and is adapted to interlock with said notch to prevent the handle from being pulled away from the door.

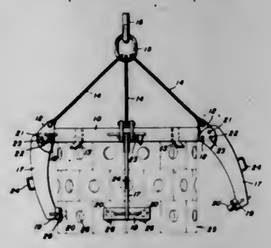
3,020,077
ROUND-MOUTHED SHOVEL
Leo J. Rokos, Philadelphia, Pa., assignor to Anna Kathryn Rokos Long, Philadelphia, Pa.
Filed June 25, 1959, Ser. No. 822,916
3 Claims. (Cl. 294—49)

1. In an earth-working tool, a dished plate having one side concave and the other side convex, said plate being provided along one margin with a plurality of laterally spaced cutouts each extending inward from the plate edge of said one plate margin between entirely straight side-edge faces parallel to each other and to the remaining cutout side edge faces and terminating at an inner edge



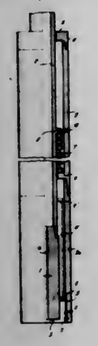
face extending laterally between the side edge faces of the respective cutout, said inner edge faces and the plate edge faces between said cutouts all being disposed in substantially parallel planes and each intersecting at an acute angle with the convex side of said plate.

3,020,078
GRAPPLE FOR LIFTING CYLINDRICAL ARTICLES
William H. Ray, Vandergrift, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 24, 1958, Ser. No. 763,021
1 Claim. (Cl. 294—63)



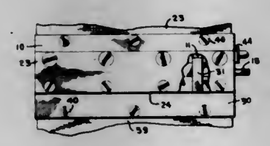
A grapple for lifting sectional ceramic columns having apertures in their side walls comprising a continuous rigid ring which has an open central portion and is located to encircle closely the upper portion of a column and steady the column around its full circumference and thereby prevent individual sections of the column from coming loose, means attached to said ring for suspending it from above, a plurality of uniformly spaced pairs of brackets fixed to the outside of said ring, arms pivoted to the respective pairs of brackets and extending downwardly therefrom, a plurality of guide plates fixed to said ring intermediate said pairs of brackets and projecting downwardly and outwardly for guiding the ring into position around a column as the ring is lowered, arcuate grip plates fixed to the lower ends of the respective arms and being located to engage the lower portion of the column, knobs projecting inwardly from said grip plates and being located to fit within apertures in the lower portion of the column, said brackets and arms having openings which mate when the arms are in a raised position and openings which mate when the arms are in a lower position, and pins inserted in said openings for holding said arms in a raised position in which the grapple can be placed on or removed from the column or in a lowered position in which the grapple can transport the column.

3,020,079
MAGNETIC GRAPPLING MECHANISM FOR LOST WELL DRILLING APPARATUS
Herbert Samol, Hemmingstedt, near Heide, Holstein, Dea-Siedlung, Germany, assignor to Deutsche Erdol-Aktiengesellschaft, Mittelweg, Germany, a corporation of Germany
Filed Sept. 29, 1959, Ser. No. 843,183
7 Claims. (Cl. 294—65.5)



1. In a grappling mechanism for recovering loose metal objects from the bottom of a well, a rod-supported member having a magnet on its lower end, a tubular shield having at least a part surrounding said magnet in spaced relation thereto, a shear element normally holding said magnet and shield in predetermined relative axial position wherein the magnet is disposed near the lower end of the shield in object retrieving position, said element being broken to permit relative axial displacement of the shield and magnet when the shield encounters the bottom of the well, resilient means biasing said shield axially relative to said magnet, and means actuated after predetermined lifting of the magnet relative to the shield for automatically effectively blocking the lower end of the shield so that retrieved objects will not be lost even when separated from said magnet.

3,020,080
QUICK DETACHABLE DEVICE FOR A SLING
Everette A. Pierson, R.R. 2, Box 13, Lynn, Ind.
Filed Aug. 5, 1960, Ser. No. 47,787
3 Claims. (Cl. 294—76)



1. A device retaining a connection between two sling ends under load thereon and automatically releasing upon that load removal, said device comprising a body having a slot thereacross; a transverse slot from one side of the body intersecting and crossing the first slot; a slide slidably retained in said first slot; a spring normally urging said slide to one end of its slot; an abutment carried by the body at said slot end in the path of the slide; said slide having a transverse notch thereacross aligned with said body transverse slot with said slide in said end position; a second body having a finger extending therefrom to a free end, of a size slidably entering said first body transverse slot; said finger having a transverse notch thereacross adjacent said free end; a member for shifting said slide in opposition to said spring, moving the slide transverse slot to one side of the finger notch and moving a length of the slide through the notch retaining said finger against withdrawal from the first body; means selectively retaining said shifting member in the slide shifted position; and means interconnecting said sling ends, one to each of said bodies; said slide being held in its shifted position by pressure of said finger on said slide even though said retaining means be actuated to a non-retaining condition; said spring moving said slide to a finger-release position upon removal of the load on said sling ends.

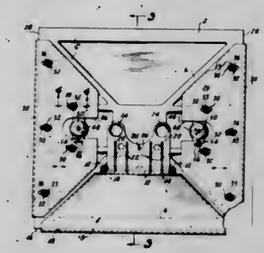
3,020,081
HYDRAULIC KICK BUMPER SUB
Lester C. Patterson, 201 A St., Taft, Calif.
Filed Apr. 28, 1958, Ser. No. 731,466
13 Claims. (Cl. 294—86)



1. A hydraulic kick bumper sub, comprising: a mandrel assembly including a tubular mandrel having a bore therethrough and having a body from one end of which there extends an axially arranged externally threaded, tapered pin having an internally threaded counterbore with a shoulder at the inner end thereof; a shatterable plate in said counterbore and in abutment with said shoulder; an externally threaded nut threaded into said counterbore and securing said plate against said shoulder; a shank of reduced diameter extending axially from the opposite end of said body, said shank having a first enlarged diameter part adjacent said body and of smaller diameter than said body, said part having a plurality of annularly spaced slots extending from the free end of said part toward said body, the slots being of greater annular width at the top than at the bottom with a shoulder at the inner end of each of said wider portions, there being a longitudinally extending finger between each of the larger portions of said slots, said fingers terminating at the outer end of said first part; a second enlarged diameter part on said shank of substantially the same diameter as the first enlarged diameter part and spaced longitudinally outwardly of the first part, said second part having a plurality of annularly spaced slots which are of greater annular width at the end of said second part facing the first part, the fingers of one part being aligned with the narrower portions of the slot of the other part, said mandrel having a shank end extending outwardly beyond the second part; a lock ring secured on said end part, said ring having lugs receivable in the adjacent end portions of the slots of the second part of the mandrel; an annular sealing element on said end part of the shank; means securing said sealing element secured on said end part of the shank; a barrel assembly including a tubular barrel in which the shank portion of the mandrel is telescopically receivable with the sealing element in slidable sealing engagement with the interior of said barrel,

said barrel having an internally threaded socket at its outer end for attachment to an adjacent part of a drill string; a drive sleeve threadably secured to the inner end of said barrel, said drive sleeve including an annular striking inner end part and a plurality of annularly arranged internal splines of a width to be received in the narrower portions of the slots of the first and second part of the mandrel shank; telescoping and extension of the mandrel and barrel assemblies being effected by relative longitudinal and rotational movements thereof, said bumper sub being effective for downward blows when the assemblies are in telescoped position and upward blows when in the extended positions, there being a discharge jet opening in the wall of the barrel so positioned that when the assemblies are in the extended position, said jet opening is positioned outwardly of the sealing element in the barrel and when the assemblies are in the telescoped position, said jet opening is positioned inwardly of said sealing element; and means operable on said plate for breaking same.

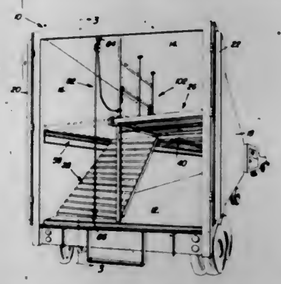
3,020,082
TILE SETTING APPARATUS
Erwin A. Engelke, 1510 Sabine St., Austin, Tex.
Filed Dec. 30, 1957, Ser. No. 705,992
8 Claims. (Cl. 294—87)



1. A tile setting device comprising; a base plate having an uninterrupted front face adapted to support a plurality of tiles thereon, tile holding means mounted on the rear face of said base plate, said tile holding means comprising a plurality of movable structures respectively mounted near edges of said base plate which are adjacent each other each having a thin rigid flange extending outwardly of its adjacent edge of said base plate and then forwardly past said front face to engage the edges of adjacent tiles on said front face, and manually operable means on said rear face for selectively moving said structures to withdraw said flange means from holding engagement with said tiles.

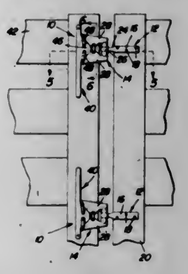
3,020,083
DOUBLE DECK TRAILER LOADING STRUCTURE
Harold R. Doan, 2103 Cleveland, and James A. Scovel, 220 S. 20th Ave., both of Caldwell, Idaho
Filed Jan. 11, 1961, Ser. No. 82,008
9 Claims. (Cl. 296—24)

1. A double deck livestock loading structure for trailer trucks and the like comprising, upper platform means supported in spaced relation above a trailer floor, center support means mounted substantially along a longitudinal center line of said floor to support a rear portion of the platform means, ramp forming means hingedly connected to said platform means and forming a section of said rear portion of the platform means on one side of the support means when in elevated position and a ramp when in lowered position with a rear edge of the section resting on the floor, collapsible bracket means mounted on side walls of the trailer and operatively extended to support said ramp section when in elevated position and protectively collapsed when the section is in lowered position, gate means mounted on a roof of the trailer to form a protective rail for the rear portion of the platform means when the ramp section is in lowered position, and rear support means removably mounted on the center support means and the collapsible bracket means for supporting said rear



edge of the ramp section in elevated position, said center support means comprising a rear supporting post mounted in the trailer floor and a longitudinal support member mounted at a rear end by the post in spaced relation above the floor to support the platform means thereon, and anchor means mounted on the support member for holding the gate means in operative position.

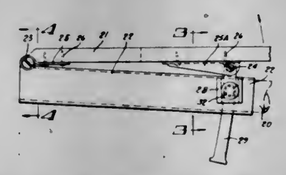
3,020,084
PARTING SWIVEL JOINT
Paul W. Sylvester, Hotchkiss, Colo.
Filed July 30, 1959, Ser. No. 830,591
10 Claims. (Cl. 296—51)



7. In combination with a truck having an open ended body, a generally rectangular tailgate for closing the open end of said body, said tailgate being secured to said body at each corner of said tailgate by a parting swivel joint, each parting swivel joint comprising a latch, said latch having a body portion and a neck portion having a reduced diameter, said neck portion terminating in a spherical latch member, said body being secured to said tailgate with said neck and latch member extending beyond the adjacent side edge of the tailgate, an articulated keeper mechanism, said keeper mechanism including a pair of keeper jaws having opposing head portions, means pivotally securing said jaws together for movement of said head portions toward and away from each other toward and away from a closed position, said head portions having opposing semi-spherical recesses formed therein complementary to opposite sides of said latch member, means securing said articulated keeper mechanism to a side of said truck body adjacent said latch with said head portions extending beyond the rear edge of the

body sides, and means for positively moving said keeper jaws toward and away from each other with said recesses receiving and embracing opposite sides of said latch member.

3,020,085
ADJUSTABLE TRAY FOR WHEELCHAIR
William H. Russell, 737 Farmdale Ave., Ferndale, Mich.
Filed June 10, 1960, Ser. No. 35,354
1 Claim. (Cl. 297—153)



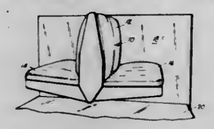
A tray for a wheelchair having side arms, comprising a panel received on said side arms, said panel having a pair of channel members pivotally secured at one end to its underside, and arranged for lateral adjustment, so that the said arms are received in said channels to prevent the vertical displacement of said channel members, the said channel members being provided with vertical tunnel members, there being curved arms pivoted to said panel and slidable in said tunnel members, said tunnel members having threaded apertures in the sides thereof for receiving set screws arranged to impinge on said arms to hold them in adjusted position, the pivot means for said curved arms being threaded rods which extend through apertured brackets secured to said panel and threaded openings in said arms.

3,020,086
DESK-CHAIR COMBINATION UNIT
Howard B. Barber, Leesburg, Ind., assignor to Peabody Seating Company, Inc., North Manchester, Ind., a corporation of Indiana
Filed Feb. 15, 1960, Ser. No. 8,608
8 Claims. (Cl. 297—170)



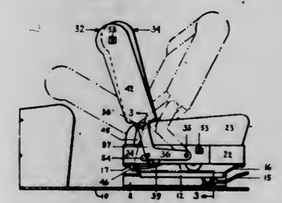
1. In a desk-chair combination unit of the four-leg type in which the desk is supported on two front legs and the chair on two rear legs, and in which one side of the unit is open for access and the other side is closed, means for rigidly connecting and supporting said desk and chair, said means including a first substantially continuous tubular structure having a generally vertical section which constitutes a supporting leg for the front corner of the desk at the open side of the unit, a horizontal section which extends rearwardly beneath the desk from the upper end of said vertical section, a second horizontal section which extends laterally beneath the desk to the far side of the latter from the rear end of said first horizontal section, a connecting section which extends downwardly from the far end of said second horizontal section, and a third horizontal section which extends laterally beneath the seat of the chair from the lower end of said connecting section, means for attaching said first horizontal section of said tubular structure to the underside of the desk, means for attaching the third horizontal section to the underside of the seat of the chair, a second continuous tubular structure providing supporting leg means for both the front corner of the desk and the rear corner of the chair at the closed side of the unit, and a third tubular structure providing supporting leg means for the rear corner of the chair at the open side of the unit.

3,020,087
CANTILEVER BOOTH SEATS
Charles R. Macklin, Tulsa, Okla., assignor to Goodner Van Engineering Company, Tulsa, Okla., a corporation of Delaware
Filed May 8, 1959, Ser. No. 811,943
4 Claims. (Cl. 297—244)



1. A booth structure comprising a vertical support member, a horizontally disposed plate member rigidly secured to the support member and extending outwardly therefrom in one direction, an upwardly extending back support rigidly secured between the plate and the support members, a pair of oppositely disposed seat portions horizontally carried by the plate member, said back and seat portions supported in a cantilever action from the vertical support member by the plate member.

3,020,088
AUTOMOBILE FRONT SEAT BACKREST ADJUSTMENT
Jules Haltenberger, P.O. Box 131, Rancho Santa Fe, Calif.
Filed Mar. 4, 1957, Ser. No. 643,672
1 Claim. (Cl. 297—357)



In a two-door automobile having a front seat and a rear seat, the front seat having a base and a backrest mounted on the base; the improvement comprising means mounting the backrest on the base for rearward tilting movement from a normal upright position to any of a plurality of rearwardly tilted positions, means connected to the backrest to hold the same in any of said plurality of rearwardly tilted positions against free forward tilting movement, and means mounting the backrest on the base for free forward tilting movement of the backrest from said normal upright position to provide easier access to the rear seat.

3,020,089
RETRACTABLE BELT
Benjamin F. Monroe, 1734 Benedict Canyon Drive, Beverly Hills, Calif.
Filed Feb. 23, 1960, Ser. No. 10,464
17 Claims. (Cl. 297—388)

12. In a restraint device, the combination comprising: at least one strap having a running bight; a buckle end

for said strap through which said bight runs over a rotatable member drivably engaged by said bight; and a latch means for receiving said buckle end to releasably



lock said member against rotating in one direction to hold said straps against movement in a corresponding direction.

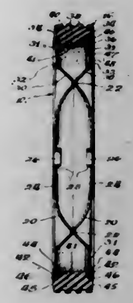
3,020,090
WHEEL COVER
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,859.
11 Claims. (Cl. 301—37)



1. In a wheel structure including a wheel having rim and body parts having radially facing rigid bumps, a cover for overlying disposition upon the wheel including axially adjacent oppositely extending in a generally radial direction annular rib portions with one of said rib portions being engageable behind said rigid bumps, and circumferehtially spaced sets of edges defining slots extending through both of said rib portions to augment the resilient deflectability of same for detachable engagement behind the bumps, and with at least some of said edges bearing against and cooperating with the bumps to resist circumferential movement and slippage of the cover relative to the bumps.

3,020,091
WHEEL WITH WHITE SIDE WALL
Milton Solomon, Chicago, Ill., assignor to International Wheel Corporation, a corporation of Illinois
Filed July 19, 1960, Ser. No. 43,867
4 Claims. (Cl. 301—63)

1. A wheel structure of the character described comprising a pair of circular discs fastened face to face and having their circumferential edges spaced apart and providing a peripheral recess, a tire member seated in said recess and having a relatively narrow, circumferential body portion protruding beyond the marginal rim of the wheel body, at least one disc having a central annular area and a planar annular area adjacent the circumferential edge thereof, an outwardly protruding annular bead defining the radially inward edge of the planar area, and a third annular area connecting the central annular area and the planar area, said planar area having a coating of white coloring applied thereto to give the illusion that same forms a radial continuation of the tire, said bead being connected between said planar area and third annular area along a sharply curved line of juncture, said



planar area extending inwardly from the side wall of the tire at a relatively small angle relative to said side wall.

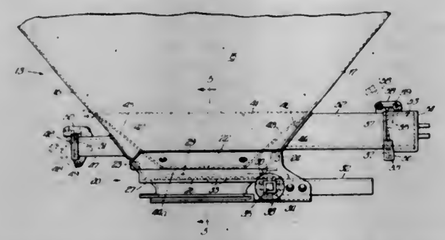
3,020,092
PNEUMATIC DISCHARGE HOPPER CAR
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 18, 1959, Ser. No. 853,904
1 Claim. (Cl. 302—52)

In combination, a multi-sided load containing hopper having a discharge opening and a sliding gate for controlling discharge of lading by gravity from the opening and additional means for withdrawal of lading pneumatically including air inlet and air and lading exit conduits connecting with one side of the hopper, a secondary floor spaced from the hopper side having the exit conduit to form in combination with said hopper wall and with the floor of the sliding gate a vacuum chamber, said secondary floor being spaced from the floor of the gate to provide an entrance opening for the lading, and a deflector extending downwardly from the mouth of the exit conduit towards the entrance opening to direct the flow of lading into the exit conduit.

3,020,093
HOPPER OUTLET CONSTRUCTION
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 28, 1959, Ser. No. 862,406
4 Claims. (Cl. 302—52)

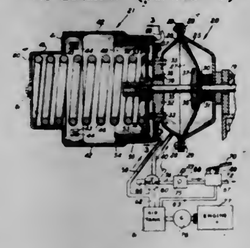
1. In combination, a load containing hopper for the downward flow of lading having a central gravity discharge area and a movable flat floor closing the discharge area, a vacuum chamber extending around the discharge area, passageways around the vacuum chamber spaced from the movable floor whereby lading can flow from said discharge area and into the vacuum chamber,

and means providing an opening in the vacuum chamber for the intake of air to said chamber and another opening



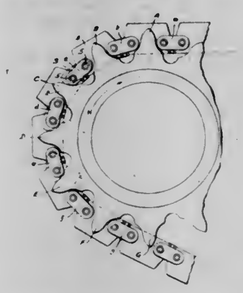
from said chamber for the evacuation of air and lading from said chamber.

3,020,094
SAFETY BRAKE MECHANISM FOR VEHICLE
Anthony F. Murty and Benedict P. Murty, Portland, Oreg., assignors to Bendix-Westinghouse Automotive Air Brake Company, a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,464
20 Claims. (Cl. 303—9)



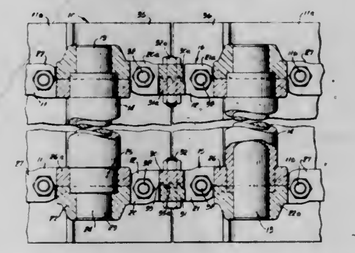
1. A safety device effective in the event of fluid pressure failure for mechanically setting a brake which is normally set by a fluid pressure brake actuator comprising means forming a pair of chambers, one of which constitutes a cylinder, said means including a plate separating said chambers, a piston in said cylinder chamber movable toward and away from said plate, a safety spring urging said piston toward said plate, a valve stem fixed to said piston and extending through said plate into the other of said chambers, said plate having a bleed orifice therethrough, a valve head on said valve stem, said valve head closing said bleed orifice upon movement of said piston away from said plate to compress said safety spring, a source of pressure fluid, means connecting said cylinder chamber with said pressure fluid source to admit pressure fluid to said cylinder chamber in order to move said piston away from said plate and compress said safety spring, a vent valve normally venting said other chamber whereby pressure fluid admitted to said one chamber when said bleed orifice is open may escape through said vent valve, closing of said vent valve resulting in the building up of pressure in said cylinder chamber with resulting movement of said piston away from said plate to compress said safety spring, the movement of the piston resulting in corresponding movement of said valve head to close said bleed orifice, the closing of said bleed orifice permitting said vent valve thereafter to be opened without resulting in return of said piston as long as sufficient fluid pressure is maintained in said cylinder chamber to overcome said safety spring, and mechanical brake setting means movable by said piston to brake setting position upon loss of fluid pressure in said cylinder chamber to an extent such that said safety spring returns said piston toward said plate.

3,020,095
TRACK CHAIN FOR VEHICLES
Karl Erwin Backhaus, Remscheid, Germany, assignor to Diehl KG, Remscheid, Germany, a corporation of Germany
Filed Dec. 15, 1958, Ser. No. 780,283
Claims priority, application Germany Dec. 16, 1957
6 Claims. (Cl. 305—57)



1. A track chain for vehicles comprising a plurality of interconnected chain link means and longitudinally extending chain link connector means in alternately repeated order along the track path, the linear dimensions of at least one of said means being slightly less than the corresponding distance between the respective teeth means of a driving wheel means over which said track chain is conducted and the linear distance between one point on one said means in repeated order and the corresponding point on that next adjacent thereto is slightly less than the linear distance between one point on one said teeth means and the corresponding point on that next adjacent thereto.

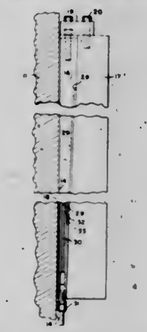
3,020,096
MASTER COUPLING LINK
James J. Strnad, Bedford, Ohio, assignor to Lempco Products, Inc., Bedford, Ohio, a corporation of Ohio
Filed Dec. 28, 1959, Ser. No. 862,144
1 Claim. (Cl. 305—58)



In a crawler vehicle track; a master coupling link assembly for detachably connecting the ends of such track, comprising a pair of transversely spaced apart link members each composed of two longitudinally extending, relatively separable sections, each section of each link member having an outer end portion defining an eye hingedly connected with an end of said track and an inner end portion including a series of vertically arranged serrations adapted to laterally overlap and interlock with a series of serrations formed on the inner end portion of the other section of said link member, the relatively overlapping inner end portions of the sections of both of said link members being arranged to permit relative separation of the serrations of said sections upon relative lateral dis-

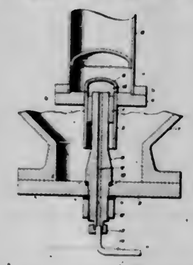
placement of the ends of said track; and fastening means for detachably connecting the relatively separable sections of each of said link members and for holding the serrations of said sections in interlocking engagement.

3,020,097
BEARING GIB
Edward P. Bullard III and Edward P. Bullard IV, Fairfield, Conn., assignors to The Bullard Company, a corporation of Connecticut
Filed Apr. 26, 1960, Ser. No. 24,794
4 Claims. (Cl. 308—3)



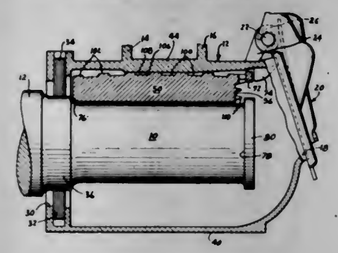
1. A combined bearing gib and clamping device for a machine tool comprising a tapered gib located between a stationary member and a movable member adapted to be moved along said stationary member; means for adjusting said tapered gib to compensate for wear between said stationary and movable members; a shallow recess of substantial area within one face of said gib; a thin flexible sheet of metal completely filling said recess; an hermetical seal about the peripheries of said recess and said flexible sheet; a passage within said gib; means for establishing communication between said passage and the inner surface of said flexible sheet of metal; and means for supplying pressure fluid to said passage.

3,020,098
BEARING FOR ROTATABLE SHAFT
Henri Mercier, Gardanne, and Gaston Brun, Aix-en-Provence, France, assignors to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation of France
Filed Apr. 3, 1959, Ser. No. 804,021
Claims priority, application France Apr. 9, 1958
1 Claim. (Cl. 308—36.3)



An assembly comprising a rotatable vertical shaft mounted in a tank adapted to contain process fluid which is deleterious to bearing surfaces, comprising a stub axle vertically mounted in the tank, a bushing surrounding the axle and defining therewith opposed plain bearing surfaces, said shaft being connected to said bushing by a vertically elongated sleeve surrounding said bushing and having an opened lower end located a substantial distance below the bushing, said shaft being concentric with the bushing and axle, a cap overlying the axle and bushing and defining therewith a chamber, and a passage extending axially through the axle from the exterior of the tank into the chamber for conveying thereto a lubricating fluid, and a means for supplying to the passage a highly viscous lubricating fluid under pressure, which fluid has a substantially different specific gravity from the process fluid, and which is non-miscible therewith, whereby a separation plane between the lubricating fluid and the process fluid may be located between the bearing surfaces and the lower end of the sleeve.

3,020,099
RAILWAY CAR JOURNAL BEARING
Raymond K. Smith, Joliet, Ill., assignor to Klasing Hand Brake Co., Joliet, Ill., a corporation of Illinois
Filed Dec. 7, 1959, Ser. No. 857,801
2 Claims. (Cl. 308—56)

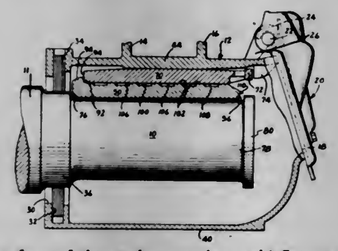


1. A railway car axle mounting comprising a journal box having a top wall defining a substantially flat downwardly facing bearing seat, and a pair of side walls depending from said top wall, an axle extending between said side walls at a location below the top wall and presenting a journal within the box, and a bearing interposed between said journal and top wall, said bearing comprising a bearing block formed of an aluminum alloy which is light in weight and possesses high heat-dissipating characteristics, said bearing block presenting a semi-cylindrical imperforate bearing surface, and a thin liner of flexible plastic material interposed between said bearing block and journal, said bearing block having a substantially flat upper surface in intimate direct contact with said flat bearing seat, said flat upper surface being interrupted at spaced regions by a series of transversely extending grooves which extend completely across said flat upper surface and which, in combination with said flat downwardly facing seat, define a number of air passages for establishing communication between the opposite side regions of the journal box.

3,020,100
RAILWAY CAR JOURNAL BEARING
Raymond K. Smith, Joliet, Ill., assignor to Klasing Hand Brake Co., Joliet, Ill., a corporation of Illinois
Filed Dec. 7, 1959, Ser. No. 857,802
3 Claims. (Cl. 308—56)

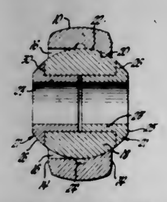
1. A railway car axle mounting comprising a journal box having a top wall defining a downwardly facing bearing seat, and a pair of side walls depending from said top wall, an axle extending between said side walls below the top wall and presenting a journal within the box, and a bearing assembly interposed between said journal and top wall, said bearing assembly comprising a bearing block formed of an aluminum alloy which is light in weight and possesses high heat-dissipating properties,

said bearing block presenting a semi-cylindrical imperforate bearing surface, a thin liner of flexible plastic material interposed between said bearing block and journal, and a wedge member disposed above said bearing block in contact with said downwardly facing bearing seat and presenting a flat continuous uninterrupted downwardly facing surface, said bearing block having a flat upper surface in intimate contact with said flat downwardly



facing surface of the wedge member, said flat upper surface being interrupted at spaced regions by a series of transversely extending grooves which extend completely and transversely across said flat upper surface and, in combination with said flat downwardly facing surface of the wedge member, define a number of air passages which establish communication between the opposite side regions of the journal box.

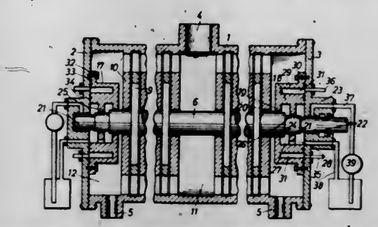
3,020,101
BALL AND SOCKET CONNECTION
Donald A. McCaslin, Cupertino, Calif., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 7, 1959, Ser. No. 811,717
2 Claims. (Cl. 308—72)



1. A rod end connection comprising a substantially flat-sided cage member having a slot in one side wall and an annular concave internal bearing surface, a substantially flat-sided centrally apertured bearing element within said cage having an annular convex bearing surface complementary to said first bearing surface, said annular convex bearing surface extending substantially beyond the sides of said cage member and a pair of bushing members each having a shank portion accommodated in the aperture of said bearing element and flanges abutting the opposed sides of such element, the outer peripheral surfaces of said flanges being rounded and feathered to increase the effective area of said convex bearing surface, said bushings in operation preventing dislodgment of said element through said slot.

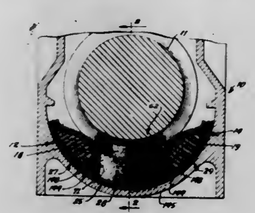
3,020,102
MOLECULAR PUMPS
Willi Becker, Ehringshausen, Kreis Wetzlar, Germany, assignor to Arthur Pfeiffer G.m.b.H., Wetzlar, Germany
Filed Mar. 9, 1960, Ser. No. 13,895
4 Claims. (Cl. 308—77)

1. In a bearing arrangement for molecular pumps, pressure chambers in a pump which are subjected to a preliminary vacuum, a pump shaft for the pump, bearing plates bounding the said pressure chambers and each plate having an opening therein, a casing secured to the inner side of each bearing plate, each casing enclosing



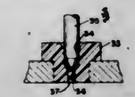
the opening in the respective bearing plate and surrounding the pump shaft with slight clearance, cooling chambers in association with said casing, and a return pipe for oil passing out of the bearing plates.

3,020,103
JOURNAL BOX LUBRICATOR
Robert J. Harkenrider, Winona, Minn., assignor to Miller Lubricator Company, Winona, Minn., a corporation of Minnesota
Filed Nov. 16, 1959, Ser. No. 853,218
18 Claims. (Cl. 308—88)



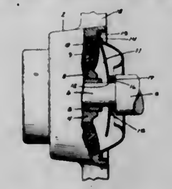
1. In a lubricator for a railroad car journal box of the type in which the floor of the box serves as an oil reservoir and oil is lifted by the lubricator to the undersurface of a car axle journal that extends into the box, said lubricator comprising spaced parallel resilient lobes secured together and proportioned to extend longitudinally of the box when inserted therein between the undersurface of the journal and the box floor, said lobes including a central lobe and spaced side lobes on either side of said central lobe, said central lobe being proportioned to contact the journal when the lubricator is applied between the journal and the box floor and having an upper soft journal contacting portion including an applicator surface defined by capillary means for lifting oil from the oil reservoir when the lubricator is in operative position in the box, said applicator surface defining side edges along either side of said central lobe and extending generally parallel to said central lobe, said side lobes being proportioned to be spaced from the journal when the lubricator is applied between the journal and the box floor, said side lobes being relatively stiff as compared to said central lobe journal contacting portion, said side lobes being respectively hinged to said central lobe below said central lobe side edges, respectively, for swinging movement about axes that extend longitudinally of said central lobe, said side lobes being formed to abut against the sides of said central lobe when the lubricator is applied between the journal and the box floor, whereby said side lobes serve to support said central lobe against the drag applied thereto by the rotating action of the journal during operation thereof when the lubricator is in operative position in the box.

3,020,104
BEARINGS
Edgar B. Nichols, 325 W. Main St., Moorestown, N.J.
Filed Nov. 26, 1956, Ser. No. 624,383
1 Claim. (Cl. 308—159)



A bearing assembly comprising a shaft having a tapered end, a support, a piece of nylon carried thereby, said piece having a bore in which said shaft is rotatively mounted and held against radial movement and a metal ball in said bore with a diameter in axial alignment with the axis of said shaft, said bore extending beyond said ball and having a circumferential groove in which said ball is retained.

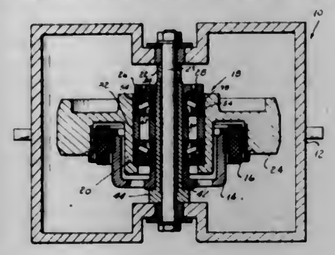
3,020,105
THRUST BEARING ARRANGEMENT FOR ROTATABLE MACHINES
Paige W. Thompson, Morrison, Ill., and Myron D. Tupper, Fort Wayne, Ind., assignors to General Electric Company, a corporation of New York
Original application Apr. 30, 1957, Ser. No. 656,133, now Patent No. 2,958,908, dated Nov. 8, 1960. Divided and this application Dec. 28, 1959, Ser. No. 862,250
2 Claims. (Cl. 308—163)



1. In a bearing assembly, a rotatable shaft, a raised surface provided on said shaft, a part mounted about said shaft and having a thrust bearing surface formed in a substantially radial plane, a stationary thrust bearing member in thrust receiving engagement with said second mentioned surface, said first and second mentioned surfaces being axially spaced a predetermined axial distance, and a mass of cured resin material disposed in the axial space between said surfaces, said resin material securing said part and shaft together in a predetermined permanently fixed relation.

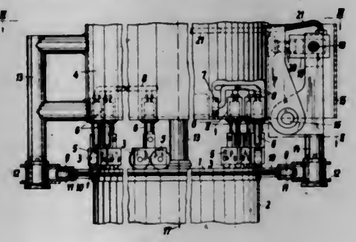
3,020,106
BEARINGS HAVING BALLS WITH RESTRAINED SPIN AXES
Bruce L. Mims, Danbury, Conn., assignor to The Barden Corporation, Danbury, Conn., a corporation of Connecticut
Filed July 16, 1959, Ser. No. 827,575
3 Claims. (Cl. 308—174)

1. A preloaded bearing assembly including in combination a support, a stator carried by said support, a rotor having an axis of rotation, means including respective first and second bearings for rotatably mounting said rotor on said support, each of said bearings having respective races of arcuate cross-section and having rolling elements disposed between said races, said rolling elements having spin axes, means for urging corresponding first races of said bearings to move toward each other and relative to the second races of said bearings in the direction of said axis to load said bearings to cant the spin axes of the rolling elements of one of the bearings to an acute angle in one direction with respect to the rotor axis and to cant the spin axes of the rolling elements of the other bearing to an acute angle in the opposite direction with respect to said rotor axis and



means for constraining each of the rolling elements to rotate about the spin axis to which it is canted under the action of said loading means.

3,020,107
ROTATABLE ARRANGEMENT, ESPECIALLY FOR DREDGES
Otto Heinrich Habermaas, Rheinhausen, and Otto Hoppmann, Mulheim-Heissen, Germany, assignors to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany
Filed Jan. 28, 1960, Ser. No. 5,274
Claims priority, application Germany Feb. 4, 1959
5 Claims. (Cl. 308—203)

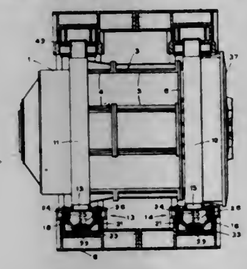


1. A rotary arrangement, especially for rotatable dredges, which comprises: a lower structure, an upper structure, trackless supporting rollers interposed between said lower structure and said upper structure and supporting said upper structure for rotation about a vertical axis, centering rollers mounted on one of said structures and rotatable about vertical axes, circular guiding means mounted on the other one of said structures and engaged by said centering rollers, at least one of said centering rollers being movable radially with regard to the vertical axis about which said upper structure is rotatable, and means continuously yieldably urging said one centering roller against and holding the same in engagement with said circular guiding means, at least another one of said centering rollers being non-yieldably mounted.

3,020,108
ANTI-FRICTION BEARINGS
Patrick Alwyne Clark, Norton, Sheffield, Dennis Stubbs, Sheffield, and Dennis George Bloomfield, Rotherham, England, assignors to Davy and United Engineering Company Limited
Filed Aug. 15, 1958, Ser. No. 755,285
Claims priority, application Great Britain Aug. 16, 1957
2 Claims. (Cl. 308—203)

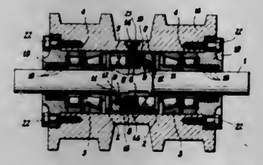
1. A rotary furnace assembly including, in combination, a frame mounted to tilt about a substantially horizontal axis, a refractory furnace vessel, bearing means in said frame for supporting said vessel so as to rotate about a central axis through said vessel at right angles

to said first-mentioned axis, said vessel being formed coaxially with two peripheral cylindrical tracks and with one circular end track, and said bearing means including four cages mounted for universal movement respectively about four separate centers fixed with respect to said frame, two cages beneath each cylindrical track when said vessel is lying horizontally, and two cages on each side of the vertical plane containing the vessel axis, four pairs of parallel rollers allocated respectively to said cages to



rotate about axes fixed therein while running on said cylindrical tracks, two diametrically opposed rockers, mounted to rock about axes substantially at right angles to the axis of rotation of said vessel, two end thrust rollers mounted to roll on said end track and mounted respectively in said rockers to rotate therein about axes respectively perpendicular to the rocker axes, and supporting mechanism for said rockers, said supporting mechanism being mounted on said frame and adapted to permit one of said rockers to move in a direction slightly away from said first-mentioned axis, about which said frame tilts, while the other rocker moves an equal distance towards said first-mentioned axis.

3,020,109
TRACK ROLLER BEARINGS AND THE LIKE
William Hay Sloane, 12 Glenbrook Ave., East Malvern, Victoria, Australia, and George Johann Felix Leitl, 11 Alfred St., Kew, Victoria, Australia
Filed Sept. 22, 1959, Ser. No. 841,562
24 Claims. (Cl. 308—207)



1. A bearing assembly for supporting and locating a shell concentrically about a shaft extending therethrough comprising a pair of longitudinally spaced bearings adapted to resist substantially radial loads only, a pair of antifriction thrust bearings located between the said radial load resisting bearings and adapted to resist axial loads, and a fluid damped shock absorbing device provided between said shaft and said shell, said thrust bearings being tapered roller bearings arranged to have the axes of their rollers convergent outwardly of the bearing, and said fluid damped shock absorbing device including a housing fast with the said shaft and positioned between the said tapered roller bearings, a series of circumferentially spaced cylinders extending longitudinally and oppositely directed from each end of said housing toward the said tapered roller bearings, each of said cylinders containing a spring urging the rollers of said tapered bearings into engagement with their respective cups.

3,020,110
PIVOT BEARING FOR UNIVERSAL JOINTS ESPECIALLY FOR USE IN CONNECTION WITH UNIVERSAL JOINT SHAFTS
Hans-Joachim Kleinschmidt, Essen, Germany, assignor to Gelenkwellenbau G.m.b.H., Essen, Germany
Filed Aug. 27, 1959, Ser. No. 836,510
Claims priority, application Germany Sept. 11, 1958
3 Claims. (Cl. 308—212)



1. A pivot bearing, especially for universal joint shafts, in which the individual pivots are journalled in bearing bushings by means of needles and in which between the pivot end and the bottom of said bushing there is provided a flat bearing disc, characterized in that the pivot end is provided with a flat recess for receiving and centering said disc which comprises a synthetic material of polyamide.

3,020,111
CONVERTIBLE COFFEE-DINING TABLE
Henry A. Berliner, 2841 Tilden St. NW., Washington, D.C.
Filed Aug. 23, 1960, Ser. No. 51,397
6 Claims. (Cl. 311—3)

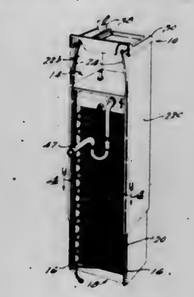


1. A convertible table, comprising: a table top; leaf means projecting horizontally beyond at least one edge of said table top to provide an extension of the upper surface of said table top at generally the same level therewith; generally upright leg means rigidly connected at their upper ends to said leaf means; and means pivotally connecting said leaf means to said table top for downwardly swinging movement into a generally vertical table-supporting position, said rigidly connected legs being swung upwardly and inwardly thereby to an inactive position underlying said table.

3,020,112
CABINET ASSEMBLY FOR WATER COOLERS
Charles N. Snapp, Jr., Birmingham, Mich., assignor to Temprite Products Corporation, Birmingham, Mich., a corporation of Michigan
Filed June 22, 1959, Ser. No. 821,887
2 Claims. (Cl. 312—280)

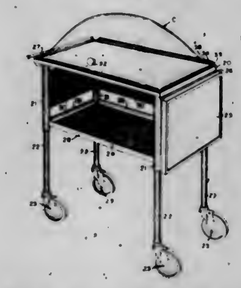
1. A self-contained cabinet water dispenser, comprising: an upright rigid frame; an outer resiliently bendable wrap-around wall element covering at least three sides of said frame and slidably supported thereon for up and down movement only thereon, said wall element being substantially the same height as said frame when fully assembled therewith; a rigid top member adapted to be assembled upon the upper end of said frame and having a depending skirt adapted to overlie a portion of at least two of said three sides of said wall element; and means for removably securing said top member to said frame including first inwardly directed fixed pin means on the portion of said skirt overlying one of said sides, second similar inwardly directed fixed pin means on the portion of said skirt overlying another of said sides, and means

in said wall element defining openings in the upper end thereof adapted to receive said pin means to lock said top member on said frame, whereby assembly may be effected by positioning said wall element in sliding engagement with said frame so that the top thereof is higher than the top of said frame, bending inwardly the upper portion of at least one of the sides of said wall element



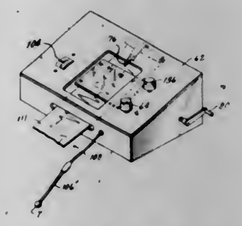
having said openings therein, placing said top member on the top of said wall element and then allowing the deflected side to return to its normal position with said pin means positioned in said opening, and sliding said wall element with said top member locked thereto down said frame into a fully assembled position therewith wherein said top member is positioned at the top of said frame.

3,020,113
FOOD DISPLAY DEVICE
Victor D. Molitor, Englewood, Colo.
(1318 10th St., Denver, Colo.)
Filed Mar. 17, 1958, Ser. No. 721,780
4 Claims. (Cl. 312—284)



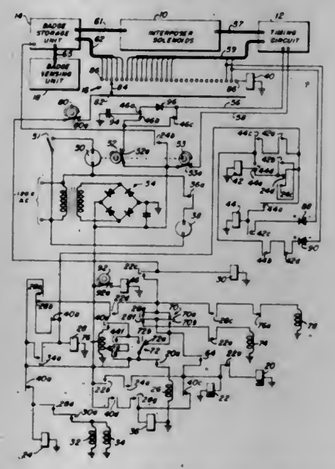
1. A food display device comprising, in combination, a generally horizontal support for food; a concave, transparent plastic cover for said support and having a peripheral surface adapted to engage said support in closed position, said cover including a rearwardly extending integral plastic flange; hinge means directly pivotally connecting said flange to one edge of said support, so that said cover may be raised and lowered about said hinge means, between a down position forming an enclosure for food articles on said support and a raised position providing access to said articles, but forming an upright transparent wall above said hinge means; and stop means associated with said hinge means and arranged to arrest movement of said cover at an upright position of said cover in which the center of gravity of said cover is slightly rearwardly past dead center relative to said hinge means and said peripheral surface is disposed at an acute angle to said support, so that the bending moment about said flange is negligible.

3,020,114
DEVICE FOR RECORDING BALANCE POINT OF ELECTRICAL BRIDGE CIRCUITS
Eustace Edgar Suckling, 21 Bellair Drive, Dobbs Ferry, N.Y.
Filed Nov. 9, 1960, Ser. No. 68,255
10 Claims. (Cl. 346—17)



1. Means for recording the balance point of an electrical bridge circuit comprising, a normally balanced electrical bridge circuit having therein an element adapted to unbalance said circuit, a meter connected to said circuit for indicating the balanced condition thereof, manual means for electrically rebalancing said circuit when unbalanced by said element, a cam device having a center point, said cam device being connected to said manual circuit rebalancing means for corresponding movement therewith, a slidably mounted indicating stylus having an operating element extending into the orbit of said cam device, and means for operating said cam device into engagement with said operating element whereby said cam device displaces said operating element into coincidence with said center point of said cam.

3,020,115
WORKMAN'S TIME RECORDER
John T. Parsons, Traverse City, and Floyd E. Harwood, Ypsilanti, Mich., assignors to Parsons Corporation, Traverse City, Mich., a corporation of Michigan
Filed Jan. 6, 1958, Ser. No. 707,254
10 Claims. (Cl. 346—54)



6. A recording unit adapted for use with keys bearing indicia representing data to be recorded, comprising a recorder adapted to receive a record medium, sensing means operatively connected to said recorder and adapted to removably receive one of said keys for sensing the indicia thereon, means controlled by said sensing means for operating said recorder to record the data represented by the sensed indicia, control means operatively connected to said sensing means and actuated by the insertion of a key into said sensing unit for operating said sensing unit to sense the inserted key, and means operatively connected to said control means and controlled by the presence or absence of a record medium in said recorder for conditioning said control means for operation only when a record medium has been inserted into said recorder.

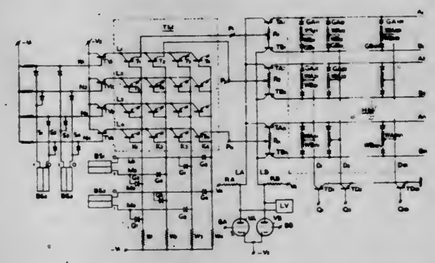
3,020,116
RECORDING ELECTRICITY METERS
Richard Pudelko, Zug, Switzerland, assignor to Landis & Gyr A.G., Zug, Switzerland, a body corporate of Switzerland
Filed Feb. 5, 1957, Ser. No. 638,341
Claims priority, application Switzerland Feb. 11, 1956
3 Claims. (Cl. 346—66)



1. Means for converting electrical measuring meters having conventional Arabic numerical displays for indicating the quantity measured to electrical meters having encoded displays of said indicated quantity for facilitating machine processing of said quantity comprising a code representing counter mechanism adapted to replace the conventional counter mechanism of said meter, said code representing mechanism having a plurality of interconnected cylindrical elements corresponding respectively with successive powers of 10 in a multi-place decimal notation arrangement, each of said cylindrical elements comprising 10 fields on the periphery thereof, each field corresponding with one of the numerals 0 to 9, said fields having projections thereon disposed in the corners of a rectangular area in each of said fields leaving a central space in each said rectangular area which is unoccupied by said projections, the number of said projections and the particular corners from which they project being variable according to the numeral 0 to 9 which is represented by the respective field.

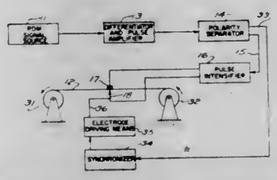
3,020,117
SYSTEM FOR CONTROLLING A PLURALITY OF WRITING HEADS
Herman Jacob Heijn, Jacob Fredrik Klinkhamer, Johannes Arnoldus Samwel, and Heine Andries Rodrigues de Miranda, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,874
Claims priority, application Netherlands June 5, 1956
1 Claim. (Cl. 346—74)

A circuit arrangement for controlling a plurality of writing members of a magnetic memory comprising a plurality of writing heads, each writing head having associated therewith at least two windings for registering magnetic markings in opposite directions on said magnetic memory, a first winding of each writing head being connected in series with a rectifier between one conductor of a first group of control conductors and one conductor of a second group of control conductors, a second winding of each writing head being connected in series with a rectifier between said one conductor of the first group of control conductors and one conductor of a third group of control conductors, a first transistor group, the main current path of each transistor of said first transistor group being connected between a conductor of the first group of conductors and a point of constant potential, a second transistor group, the main current path of each transistor of said second transistor group being connected between a conductor of said second group of conductors and a first writing conductor, a third transistor group, the main current path of each transistor of said third transistor group being connected between a conductor of said third group of conductors and a second writing conductor, the control electrodes of transistors connected to corresponding conductors of said second and third conductor groups being connected together in pairs through



a tapped resistor, means for connecting the writing conductors to a writing current source, and selecting means for applying a control voltage to a tap point of one of said tapped resistors and to a control electrode of one transistor of said first transistor group, thereby rendering the selected transistors conductive and thus selecting an associated writing member, a first writing amplifier having a main current path connected in series with said first writing conductor, a second writing amplifier having a main current path connected in series with said second writing conductor, a read-out amplifier connected across said first and second writing conductors, and means for applying writing signals to said writing amplifiers thereby activating a selected writing member.

3,020,118
PULSE MODULATION RECORDING FOR TELEMETERING
Paul E. Smith, Jr., Littleton, Mass., assignor to Conval Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed May 14, 1959, Ser. No. 813,110
2 Claims. (Cl. 346—74)



1. Apparatus for permanently recording upon a recording medium the magnitude of a quantity transmitted by pulse duration modulation comprising, a source of duration modulated rectangular pulses, means for differentiating each of said duration modulated pulses to obtain one train of pulses of one polarity coincident with the leading edge of each of said duration modulated pulses and another train of pulses of opposite polarity each coinciding with a duration modulated pulse trailing edge, marking means, means for imparting relative movement between

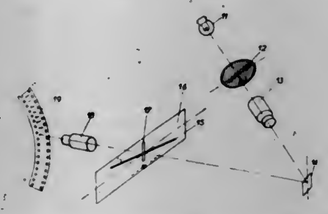
said marking means and said recording medium in first and second different directions, means responsive to said one train of pulses for synchronizing the relative movement in said first direction with the occurrence of said leading edge pulses, and means responsive to each of said trailing edge pulses for impressing a mark upon said medium at points related to the magnitude of said quantity as a function of a variable related to the relative movement in said second direction.

3,020,119
APPARATUS FOR RECORDING LIGHT SPOT TRACES ON FILM

Maurice Marchal and Marie-Therese Marchal, both of 12 Rue Jacques Bingen, Paris, France

Filed Apr. 16, 1959, Ser. No. 806,883
Claims priority, application France Apr. 17, 1958
2 Claims. (Cl. 346—109)

1. Apparatus for optically recording light traces upon a film, comprising a rectilinear source of light, a member having a narrow slit, a first objective for focussing an image of said light source on to said slit with the linear direction of said image inclined at an angle of less than 45° with the perpendicular to the longitudinal direction of said slit, means for deflecting said image in the direction of said perpendicular, a measuring device connected to actuate said deflecting means, a light-sensitive film mounted behind said slit, with the length of the film extending in the direction of the slit, a second objective for focussing a reduced image of the light spot formed by the



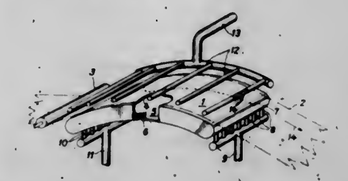
intersection of said linear image with said slit upon the film, means for moving said film transversely in the direction of said perpendicular to the longitudinal direction of said slit and at a substantially constant speed, and means for advancing said film in the longitudinal direction of said slit.

CHEMICAL

3,020,120
METHOD AND MEANS FOR STERILIZING STRIPLIKE MATERIAL

Willi Löliger, Grunegg, Konolfingen, Switzerland, assignor to Alpura Aktiengesellschaft, Bern, Switzerland, a corporation of Switzerland

Filed Feb. 17, 1958, Ser. No. 715,657
Claims priority, application Switzerland Feb. 20, 1957
4 Claims. (Cl. 21—2)



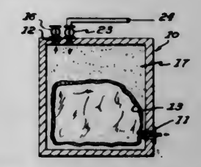
4. The improvement in the art of producing sterile containers from continuous striplike material, which comprises continuously moving the material towards container forming means, sterilizing by heating to at least 200° C. the surface on the side of the material, which forms the inside of the subsequently formed container, while the material moves towards the container forming means, and simultaneously cooling the opposite surface of the material which surface is at the outside of the subsequently formed containers.

3,020,121
METHODS AND APPARATUS FOR CONDITIONING HOLLOW ARTICLES AGAINST CORROSION

Glen C. Bull, 2800 Quebec St. NW., Washington, D.C.

Filed Nov. 19, 1959, Ser. No. 854,179
5 Claims. (Cl. 21—2.5)

1. A method of conditioning hollow and partially hollow articles against corrosion including inflating a flexible container within the hollow of the article to substantially fill the hollow and expel the free atmosphere therefrom, sealing all the exterior openings in the article communicating with the hollow therein, surrounding the article with a second flexible container, applying a corrosion inhibiting agent on the exterior of the innermost container, and supplying a continuous circulation of an inert medium



through the outer container in contact with the exterior surface of the hollow article.

3,020,122
INHIBITING RUSTING OF AEROSOL TYPE CONTAINERS

Francis Anthony Dominik, Sayreville, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 28, 1959, Ser. No. 816,385
4 Claims. (Cl. 21—2.7)

3. A process for the prevention of rusting of carbon steel aerosol type containers which comprises contacting said containers for a period of at least about 5 seconds with an essentially aqueous solution containing from about 0.1% to 0.4% diammonium phosphate at a pH of from about 7 to 8.2.

3,020,123
PREPARATION OF METAL THIOCYANATES AND WERNER COMPLEXES THEREOF

William D. Schaeffer, Pomona, and Homer E. Rea, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed June 16, 1959, Ser. No. 820,605
12 Claims. (Cl. 23—75)

1. A method for preparing a thiocyanate of a divalent metal selected from the group consisting of iron, manganese, cobalt and nickel, which comprises reacting a reagent salt of said divalent metal with a monovalent cation thiocyanate salt, at a molar ratio of the former to the latter of essentially 1:2, in an alcoholic solvent medium, said reagent salt being selected from the class consisting of sulfates and chlorides, said monovalent cation being selected from the class consisting of alkali metal and ammonium, and said solvent being a saturated aliphatic alcohol containing 1 to 4 carbon atoms, thereby forming a solution of divalent metal thiocyanate and precipitating an insoluble salt of said monovalent cation from the class consisting of sulfates and chlorides, and separating said last-named salt from the solution.

3,020,124
MANUFACTURE OF PERCHLORATES

Justo B. Bravo, Malvern, and Philip H. Delano, West Chester, Pa., assignors to Foote Mineral Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Jan. 23, 1959, Ser. No. 788,495
5 Claims. (Cl. 23—85)

4. A continuous process for the manufacture of ammonium perchlorate which comprises continuously introducing an aqueous solution of lithium chloride into an electrolytic cell between an anode and a cathode, passing an electric current through the solution from the anode to the cathode at an effective cell voltage in excess of the theoretical decomposition voltage required to form a perchlorate from a chloride, thereby electrolytically oxidizing the chloride in the solution to perchlorate, continuously withdrawing perchlorate-containing electrolyte from the cell, reacting the withdrawn electrolyte with ammonium carbonate, thereby precipitating lithium carbonate and forming a solution containing ammonium perchlorate, recovering the ammonium perchlorate from the solution, chlorinating the lithium carbonate to form lithium chloride, and returning the lithium chloride so formed to the electrolytic cell.

3,020,125
PROCESS OF MAKING SODIUM METASILICATE

David J. Eisenberg, Oak Park, and Thomas Mauthner, Detroit, Mich., assignors to Nelson Chemicals Co., Detroit, Mich.

No Drawing. Filed Nov. 10, 1958, Ser. No, 772,715
10 Claims. (Cl. 23—110)

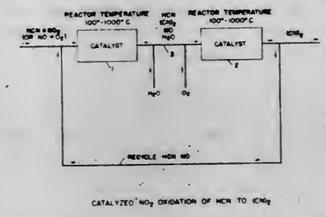
1. A process for producing a porous, low bulk density sodium metasilicate, comprising: admixing in a reaction zone at a temperature below about 60° C. in substantially stoichiometric proportion a sodium subsilicate containing a ratio of Na_2O to SiO_2 greater than 1, and an aqueous liquid solution of water glass in which the molecular ratio of Na_2O to SiO_2 is less than 1, said water glass solution containing sufficient water to be liquid at temperatures below about 100° C.; agitating and heating said mixture to a temperature sufficient to cause a bubbling reaction to ensue, while allowing the escape of steam from said reaction zone; continuing the heating until a thick plastic mass forms, while allowing the escape of steam from said reaction zone, the maximum temperature being at all times below the fusion point of the reaction mixture; and then discharging the resulting sodium metasilicate from said reaction zone.

3,020,126
PREPARATION OF CYANOGEN

William L. Fierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Filed Nov. 12, 1959, Ser. No. 852,444
11 Claims. (Cl. 23—151)

1. A process for the preparation of cyanogen which comprises contacting a mixture of hydrogen cyanide, oxygen, and an oxide of nitrogen selected from the group consisting of nitric oxide and nitrogen dioxide, in a plurality of separate reaction zones, with a plurality of portions of a catalyst capable of accelerating the oxidation of hydrogen cyanide by the nitrogen oxide, at a temperature of about 100°–1000° C., sufficient to effect reaction between the nitrogen oxide and hydrogen cyanide, cooling



said mixture in catalyst-free zones between said reaction zones to a temperature at which by-product water is condensed and removed from said mixture, and recovering cyanogen from the reaction effluent from the last of the reaction zones.

3,020,127
PREPARATION OF DIBORANE

Robert D. Schultz, East Whittier, and Carl L. Randolph, Jr., Whittier, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

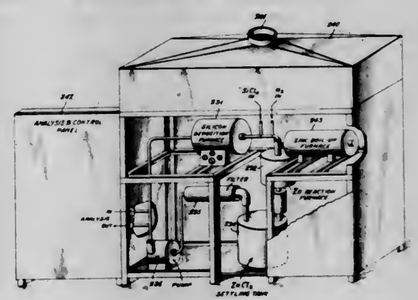
No Drawing. Filed May 16, 1955, Ser. No. 508,810
16 Claims. (Cl. 23—204)

1. A method of preparing diborane which comprises reacting a metal borohydride selected from the group consisting of the alkali and alkaline earth metal borohydrides with a protolyzing acid selected from the group consisting of halogenated phosphoric acid and halogenated acetic acid.

3,020,128
METHOD OF PREPARING MATERIALS OF HIGH PURITY

Willis A. Adcock and Raymond C. Sangster, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

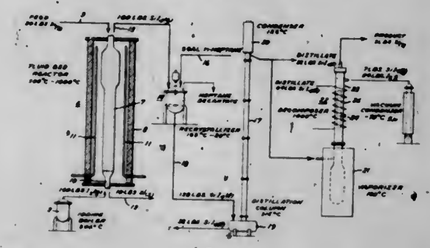
Filed Dec. 31, 1957, Ser. No. 706,494
10 Claims. (Cl. 23—223.5)



1. A method of converting a volatilizable halide containing at least one element selected of the group consisting of metals and metalloids in combination with a halogen into a highly purified elemental state of said at least one element which comprises passing a gaseous mixture of said halide and hydrogen into a first reaction zone maintained at a temperature sufficient to cause substantial reaction to take place, with the consequent deposition of said at least one element in the first reaction zone and formation of hydrogen halide, removing from the first reaction zone a mixture of the unreacted halide, hydrogen and the hydrogen halide, mixing zinc vapor

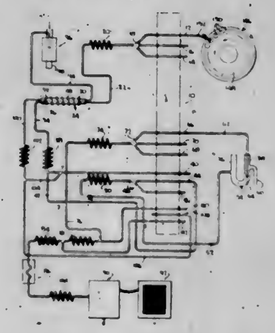
with said mixture in a second reaction zone to reduce preferentially the hydrogen halide formed by the reaction in the first reaction zone, removing the zinc compound formed in the second reaction zone, replacing the hydrogen utilized in the first reaction zone, and recirculating the resultant mixture of hydrogen and unreacted volatilizable halide through said first reaction zone.

3,020,129
PRODUCTION OF SILICON OF IMPROVED PURITY
Carlyle S. Herrick, Alplaus, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 25, 1958, Ser. No. 751,088
3 Claims. (Cl. 23—223.5)



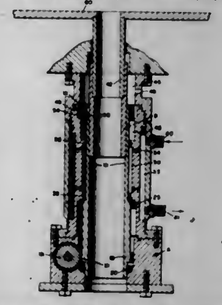
1. In a process of converting low grade silicon into silicon of improved purity, the improvement of providing high purity silicon which comprises, fluidizing silicon in particle form with iodine vapor to form silicon tetraiodide, said fluidizing including feeding silicon powder into a furnace, introducing iodine vapor into said furnace, removing excess heat of reaction from the fluidized particles, recrystallizing the silicon tetraiodide, distilling the silicon tetraiodide, and thereafter converting the silicon tetraiodide to elemental silicon by thermal decomposition thereof on a heated silicon surface.

3,020,130
DIGESTION APPARATUS AND METHOD
Andres Ferrari, Scarsdale, N.Y., assignor to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed Aug. 6, 1959, Ser. No. 832,002
19 Claims. (Cl. 23—230)



17. A continuous method of digestion and analysis of a substance for nitrogen determination, according to which there is employed a horizontal rotary member provided with a liquid passage extending helically around the axis of rotation of said member, said method comprising rotating said member about said axis and heating said member while it rotates, introducing into said liquid passage a stream of liquid containing the substance to be digested and an acid for digesting said substance, regulating the quantity of said liquids which flow into and out of said cylinder so that the liquid flows in said helical passage only during the rotation of said rotary member so that mixing of successive portions of the liquid stream during the flow through said passage is prevented, withdrawing from said rotary member during the rotation thereof and at a point downstream in relation to said first mentioned point a stream of the liquid containing the digested substance, and subjecting the withdrawn stream of liquid during the flow thereof to treatment for quantitative analysis in respect to the nitrogen content thereof, said further treatment comprising the addition of water as a diluent liquid and an alkali to neutralize the acid in said withdrawn stream of liquid and to release ammonia therefrom with concomitant formation of ammonium hydroxide, in said last mentioned stream, as a result of the solution of the released ammonia in the liquid diluent, and the addition of a color reagent to the stream containing the ammonium hydroxide for colorimetric analysis of said last mentioned stream in respect to ammonia as a measure of the nitrogen content of said digested substance.

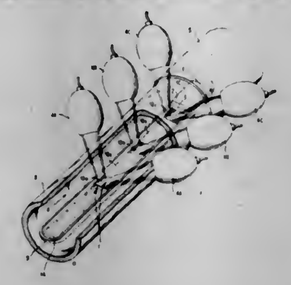
3,020,131
ROTATING PEDESTAL
Dean D. Knapic, Los Altos, Calif., assignor to Knapic Electro-Physics, Inc., Palo Alto, Calif., a corporation of California
Filed Oct. 22, 1959, Ser. No. 848,130
5 Claims. (Cl. 23—273)



1. A pedestal for rotating a hot crucible comprising a hollow vertical column, a housing encasing said vertical column, bearing means on the lower portion of said housing in spaced relation supporting said column for vertical rotation, drive means mounted between said bearing means to rotatably drive said column, a water jacket within said housing mounted above said bearing means, water seal means forming the upper and lower limits of said water jacket against said column, said sealing means located in spaced relation above said bearing means, a gas chamber mounted above said water chamber within said housing, said gas chamber having an upper and lower chamber area, venting means venting said upper chamber means to atmosphere, and gas trap means mounted between said upper and lower chamber areas.

3,020,132
SINGLE CRYSTAL REFINING
Gerard R. Gunther-Mohr, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 30, 1959, Ser. No. 809,957
9 Claims. (Cl. 23—301)

8. A method of single crystal refining comprising the steps of providing a seed crystal in contact with a quantity of longitudinally disposed material, providing a plurality of sources of heat each capable of rendering a discrete portion of said material in a molten condition, providing



relative motion between said sources of heat and said material in a direction away from said seed crystal and providing shielding means controlling the application of heat from said source to said seed crystal.

3,020,133
HYDROCARBON GEL
George B. Feild, New Castle, and William H. Markwood, Jr., Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 15, 1953, Ser. No. 386,398
10 Claims. (Cl. 44—7)

1. A composition of matter consisting essentially of a combustible liquid hydrocarbon and a hydrolyzed reaction product represented by the formula

$$Al(OOCR)_nOH_{(3-n)}$$

where R is a member of the class consisting of straight and branch chain hydrocarbon radicals containing from 6 to 17 carbon atoms and n is from 1.75 to 2.50 mole equivalents per mole of aluminum.

3,020,134
AUTOMOTIVE FUEL
James L. Keller, Brea, Francis S. Liggett, Long Beach, and Chester E. Wilson, Anaheim, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Mar. 7, 1955, Ser. No. 492,784
9 Claims. (Cl. 44—58)

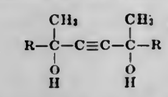
1. An internal combustion engine fuel consisting essentially of hydrocarbons boiling in the gasoline boiling range containing between about 0.0013% and about 0.065% by weight of lecithin and between about 0.01% and about 1.5% by weight of a paraffinic hydrocarbon oil of medium lubricating oil grade having a viscosity at 210° F. of between about 42 and about 78 S.S.U., a flash point between 410° F. and 500° F., and a viscosity index greater than 60, the amount of mineral lubricating oil being between 3.25 and 9.75 times the amount of lecithin present.

3,020,135
LIQUID HYDROCARBON FUEL COMPOSITIONS
Elizabeth L. Fareri and John P. Pellegrini, Jr., Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 28, 1959, Ser. No. 862,039
11 Claims. (Cl. 44—62)

1. A fuel composition comprising a major amount of a liquid hydrocarbon fuel distillate and a small amount, sufficient to reduce deposit formation, of an oil-soluble copolymer of (*a*) a monomeric alkyl ester of an acid selected from the group consisting of acrylic and methacrylic acids, and whose alkyl ester substitutent contains 8 to 18 carbon atoms, and (*b*) a monomeric quaternary ammonium salt of an acid selected from the aforesaid group, one of whose covalent N-bonds is attached to a monovalent aliphatic hydrocarbon radical containing 8 to 18 carbon atoms, two other of whose covalent N-bonds are attached to members selected from the group consisting of monovalent aliphatic hydrocarbon radicals containing 1 to 18 carbon atoms, and aralkyl radicals containing 7 to 23 carbon atoms, and whose remaining covalent N-bond is attached to an alkyl radical containing 1 to 4 carbon atoms, said monomeric quaternary ammonium salt and said monomeric alkyl ester being copolymerized in a weight ratio in the range of about 0.03:1 to 1:1.

3,020,136
ACETYLENIC GLYCOL DEICER
Myron Becker, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Jan. 22, 1959, Ser. No. 788,274
5 Claims. (Cl. 44—77)

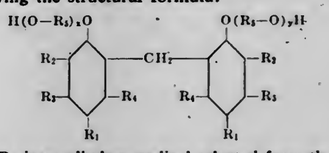
1. A motor gasoline containing a small amount, sufficient to inhibit stalling, of acetylenic glycols having the formula



wherein R is an alkyl group containing between 2 and 4 carbon atoms.

3,020,137
MOTOR FUEL COMPOSITIONS
Albert C. Condo, Jr., Newtown Square, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Mar. 13, 1959, Ser. No. 799,086
7 Claims. (Cl. 44—78)

1. A motor fuel composition consisting essentially of a major amount of hydrocarbon base materials boiling in the gasoline boiling range and an amount ranging between about 0.001 volume percent and about 1.0 volume percent based on the total volume of the fuel of a polyether having the structural formula:

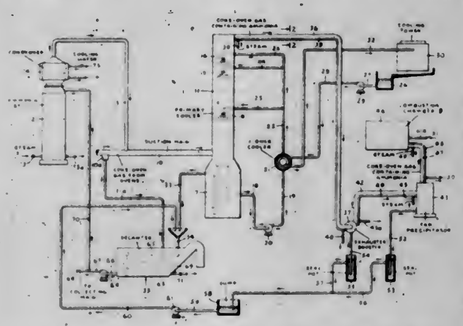


wherein R_5 is an alkylene radical selected from the group consisting of ethylene and propylene radicals, and wherein R_1 and R_2 are alkyl radicals containing from 1 to 18 carbon atoms and R_3 and R_4 are selected from the group consisting of hydrogen atoms and alkyl radicals containing from 1 to 18 carbon atoms and the sum of the carbon atoms in the radicals represented by R_1, R_2, R_3, and R_4 is from 2 to 72, and wherein x and y are integers whose sum ranges between 2 to 24.

3,020,138
METHOD FOR PROCESSING, DISTRIBUTION AND COMBUSTION OF COKE-OVEN GAS CONTAINING AMMONIA
Frans Wethly, Manhasset, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed May 6, 1959, Ser. No. 811,357
5 Claims. (Cl. 48—190)

1. A method for processing, distribution and combustion of coke-oven gas containing ammonia, cyanide and sulfur compounds and light oil compounds, which com-

prises cooling coke-oven gas containing ammonia, cyanide and sulfur compounds, tar, naphthalene and light oil compounds to a temperature below 95° F. by direct heat exchange by intimately contacting the gas with aqueous liquor devoid of a chemical which reacts with the ammonia in the gas to effect liquefaction and separation of a predominant portion of the tar and naphthalene from the gas, transmitting the thus treated coke-oven gas containing ammonia, cyanide and sulfur compounds and light oil compounds through a corrodible pipe line,

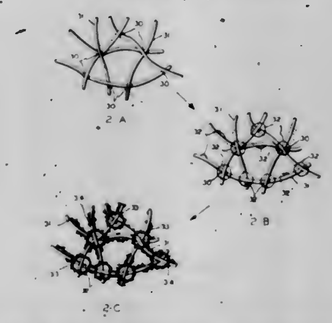


heating the cooled coke-oven gas to a temperature above 100° F. and maintaining it at a temperature above 100° F. during its transmission through said pipe line thereby avoiding both corroding the pipe line and forming deposits therein, and burning at least a portion of the ammonia- and light oil compound-containing gas at the end of the transmission, hydrogen liberated by thermal decomposition of the ammonia during the burning together with the hydrocarbons retained in the the gas resulting in increased heating value from the gas.

3,020,139
ABRASIVE PRODUCT

John E. Camp, Latham, Josef C. Mueller, Jr., Cohoes, Frederick G. Sandholdt, North Troy, and George L. Haywood, Latham, N.Y., assignors to Norton Company, Troy, N.Y., a corporation of Massachusetts

Filed Apr. 18, 1960, Ser. No. 22,947
19 Claims. (Cl. 51—295)



1. An article of manufacture comprising: a three-dimensional open non-woven web having substantial loft and a high proportion of internal voids formed by laying down in superposed random fashion a plurality of relatively short flexible tough synthetic organic fibers; an elastomeric bonding adhesive adhering to said fibers substantially at the points of intersection of said fibers with one another, said adhesive bonding said fibers one to the other so as to form a resilient web; and overlying said elastomeric bonding adhesive and extending further than said bonding adhesive along the length of said fibers, a harder, more rigid adhesive applied by roll coating without substantial softening of said elastomeric adhesive.

3,020,140
COMPOSITIONS FOR METAL SURFACE REFORMATION

John M. Bluth, 901 E. Walnut St., Burbank, Calif., and Jacob L. Sellers, 1106 Lemp Ave., North Hollywood, Calif.

No Drawing. Filed Jan. 19, 1959, Ser. No. 787,394
14 Claims. (Cl. 51—306)

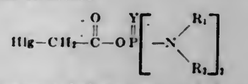
1. A composition for use in blast peening of microscopically irregular surfaces, consisting essentially of solid substantially spherical glass beads in the size range of about 0.003 to 0.032 inch, admixed with a carrier liquid comprising an aqueous solution of an organic essentially non-foaming dispersing agent for promoting suspension of the beads, said composition being substantially free from solid non-spherical abrasive particles.

3,020,141
MIXED ANHYDRIDES OF PHOSPHORODIAMIDIC ACID IN METHOD OF WEED CONTROL

Philip C. Hamm, Webster Groves, Mo., and George A. Saul, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,493
12 Claims. (Cl. 71—2.3)

3. The method of destroying vegetation which comprises applying thereto a toxic concentration of mixed anhydride of the structure



where Hlg represents halogen selected from the group consisting of chlorine, bromine and iodine, Y represents a member of the group consisting of oxygen and sulfur, R_1 and R_2 are selected from the group consisting of lower alkyl, lower alkenyl, lower alkoxy substituted lower alkyl, vinyloxy substituted lower alkyl and phenyl radicals with the proviso that not more than one is phenyl and R_1 and R_2 together with the nitrogen represent a radical selected from the group consisting of pyrrolidinyl, piperidinyl and morpholinyl.

3,020,142
HERBICIDAL METHOD EMPLOYING N-(3-CHLORO-4-METHYLPHENYL) - 2 - METHYL - PENTANAMIDE

Joe R. Willard and Kenneth P. Dorschner, Middleport, N.Y., assignors to FMC Corporation, a corporation of Delaware

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,058
1 Claim. (Cl. 71—2.3)

The method of destroying and inhibiting undesirable vegetation which comprises treating the undesirable vegetation with a phytotoxic amount and concentration of N-(3-chloro-4-methylphenyl)-2-methylpentanamide.

3,020,143
METHOD OF REGULATING PLANT GROWTH

Henry Bluestone, University Heights, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Original application Jan. 23, 1957, Ser. No. 635,582, now Patent No. 2,953,573, dated Sept. 20, 1960. Divided and this application Sept. 28, 1959, Ser. No. 842,577
3 Claims. (Cl. 71—2.5)

1. The method of regulating plant growth which comprises employing as a plant growth regulant, in an amount sufficient to effect the desired regulation, a 2-thiazolidinethione alkhalide, the alkyl substituent of which is a lower alkyl.

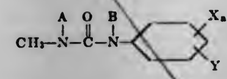
3,020,144
HERBICIDAL COMPOSITION AND METHOD EMPLOYING N-CYANO AND N-CYANOALKYL SUBSTITUTED UREAS

Richard J. Gobeil and Raymond W. Luckenbaugh, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 22, 1955, Ser. No. 554,617
7 Claims. (Cl. 71—2.6)

2. A herbicidal composition comprising a material selected from the group consisting of anionic, cationic and non-ionic surface-active agents and, in amount sufficient to exert herbicidal action, a compound represented by the formula

(1)



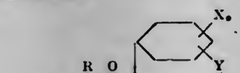
where one of the two substituents A and B is selected from the group consisting of cyano and cyano alkyl containing less than 6 carbon atoms and the other of said substituents is selected from the group consisting of hydrogen, alkyl containing less than 6 carbon atoms and alkenyl containing less than 6 carbon atoms; X and Y are selected from the group consisting of hydrogen, halogen, and alkyl of less than 5 carbon atoms, and *n* is a positive integer less than 3; the aromatic substituent having hydrogen on at least one of the nuclear carbons ortho to the nuclear carbon to which the ureido nitrogen atom is linked.

3,020,145
HERBICIDAL COMPOSITION AND METHOD EMPLOYING SUBSTITUTED UREAS

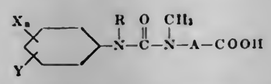
Richard J. Gobeil, Rayner S. Johnson, and Raymond W. Luckenbaugh, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 22, 1955, Ser. No. 554,618
7 Claims. (Cl. 71—2.6)

2. A herbicidal composition comprising a material selected from the group consisting of anionic, cationic and nonionic surface active agents and, in amount sufficient to exert herbicidal action, a compound selected from the group consisting of the carbamido alkanoic acids represented by the formulas



and



where A is a bivalent saturated aliphatic hydrocarbon radical containing less than 5 carbon atoms, R is selected from the group consisting of hydrogen, alkyl containing less than 6 carbon atoms and alkenyl containing less than 6 carbon atoms, X and Y are selected from the group consisting of hydrogen, halogen, and alkyl containing less than 5 carbon atoms, and *n* is a positive integer less than 3, the aromatic substituent having hydrogen on at least one of the nuclear carbons ortho to the nuclear carbon to which the urea nitrogen atom is linked, and the salts, esters, and amides of said carbamido alkanoic acids.

3,020,146
METHOD OF DESTROYING UNDESIRABLE PLANTS

Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 22, 1958, Ser. No. 762,237
10 Claims. (Cl. 71—2.6)

1. A method of destroying undesirable plants which comprises contacting said plants with a herbicidal composition comprising an inert carrier and as the essential active ingredient, in a quantity which is injurious to said plants, a compound selected from the group consisting of alpha-chlorophenylacetic acid, its esters in which the esterifying group is an unsubstituted alkyl group containing from one to ten carbon atoms, its alkali metal salts, its anhydride, its amine salts in which the amine component contains up to ten carbon atoms, and its amides in which the amine component contains up to ten carbon atoms.

3,020,147
PROCESS FOR THE HEAT HARDENING OF PELLETS COMPOSED OF ORES ON SINTERING GRATES

Karl-Heinz Boss, Bad Homburg vor der Hohe, Hans Rausch, Oberursel (Taunus), and Kurt Meyer, Frankfurt am Main, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany

No Drawing. Filed Feb. 15, 1960, Ser. No. 8,483
Claims priority, application Germany Mar. 25, 1959
1 Claim. (Cl. 75—5)

A process for hard-burning raw green pellets not greater than about 20 mm. in diameter and having a moisture content of about 9% H_2O and composed of fine-grained iron ore comprising forming a bed of pellets at rest upon a horizontally moving sinter grate, drawing hot gas at a temperature of from about 1000 to 1400° C. through said bed with a low velocity corresponding to a vacuum of from about 20–60 mm. water column to dry and preheat the pellets in the top of said bed to about the temperature of said hot gases without bursting the pellets and then increasing the vacuum to about 70–200 mm. water column to increase the hot gas velocity to continue the heating of the pellets throughout the entire bed and thus burn and heat harden the unbroken pellets at a temperature of from about 1000 to 1400° C.

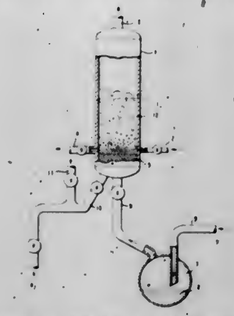
3,020,148
PRODUCTION OF REFRACTORY METALS

Wilmer A. Jenkins II and Howard W. Jacobson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Apr. 5, 1960, Ser. No. 20,218
8 Claims. (Cl. 75—26)

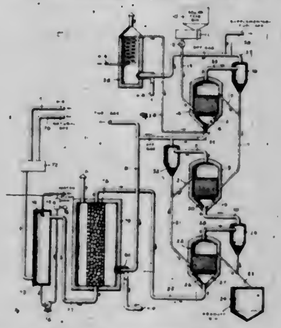
1. A method for producing in elemental state a metal selected from the group consisting of niobium, tantalum and tungsten comprising reacting a chloride of said metal with hydrogen in a closed reaction chamber and at temperatures ranging from 700–950° C., during the reaction maintaining in said chamber a fluidized suspension of finely divided solid particles of the metal under production upon the surfaces of which the metal being formed in the reaction will deposit, employing in said reaction a mole ratio of hydrogen to metal chloride of between

50/1 and 225/1 when niobium is being produced, of between 100/1 and 225/1 when tantalum is being produced,



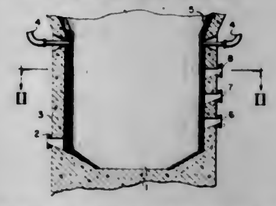
and of between 3/1 and 50/1 when tungsten is being produced, and recovering the resulting metal product.

3,020,149
BENEFICIATION OF ORES
Bruce Scott Old, Concord, Richard Warren Hyde, Lexington, Herman P. Meissner, Winchester, Stanley V. Margolin, Newton, and Frank C. Schora, Jr., Bedford, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 8, 1959, Ser. No. 805,070
5 Claims. (Cl. 75—26)



1. A process for reducing metallic oxides comprising passing finely-divided particles of a metallic oxide through a preheating and prereducing zone, a first reaction zone and a second reaction zone, flowing hot raw reducing gas heated to a temperature of between about 750° C. and 1200° C. into said second reaction zone from below to fluidize the particles therein, reduce them and entrain the smaller particles, discharging the partially spent and partially cooled reducing gas from said second reaction zone, separating from said gas said smaller particles entrained therein, introducing said gas into said first reaction zone from below to fluidize the particles therein, reduce them at a temperature below that at which sticking occurs and entrain the smaller particles, discharging the more completely spent gas from said first reaction zone, separating said smaller particles from said gas, introducing the separated smaller particles into the fluidized particles in said second reaction zone, burning a part of the gas discharged from the first reaction zone to heat the gas and introducing it from below into the particles in said preheating and prereducing zone to fluidize the particles therein and partially reduce them, discharging the gas from the preheating and prereducing zone, separating any finely-divided particles entrained therein and introducing the separated particles into said first reaction zone.

3,020,150
METHOD OF SMELTING TITANIFEROUS IRON ORE
Thomas F. Reed, Mount Lebanon Township, Allegheny County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 26, 1959, Ser. No. 815,959
4 Claims. (Cl. 75—41)



1. The method of smelting titaniferous iron ore which comprises charging a blast furnace having a slag notch, operating the blast furnace to form molten pig iron having a low titanium content and slag having a large silicon content as compared to the titanium content, permitting the molten pig iron and slag to accumulate in the furnace until the molten pig iron reaches the level of the slag notch, flushing the furnace to remove all the molten slag, then casting the molten pig iron from the furnace within 45 minutes after the finish of the flush, continuing operation of the furnace to produce more molten pig iron, and repeating the flushing and casting operations in the manner set forth above.

3,020,151
BENEFICIATION AND RECOVERY OF METALS
John S. Nachtman, 2801 Quebec St. NW., Washington, D.C., and Henry Gordon Poole, 1000 16th St., Golden, Colo.
No Drawing. Filed Feb. 26, 1957, Ser. No. 642,377
13 Claims. (Cl. 75—82)

1. In the method of producing a metal selected from the group consisting of cobalt, nickel, molybdenum and tungsten by reaction from the corresponding metal sulfides the step of reacting the metal sulfide with tin as a reducing agent in a hydrogen atmosphere which is reducing as to tin sulfide as well as the metal sulfide so as to regenerate the tin upon heating the materials to an elevated temperature while the tin is in a fluid state to produce the corresponding metal in a relatively purified state.

3,020,152
EXHAUST VALVE STEEL
Charles W. Vigor, East Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 2, 1960, Ser. No. 26,293
7 Claims. (Cl. 75—126)



7. A solution-treated and aged austenitic stainless steel having a Rockwell "C" hardness at room temperature of at least 38 and consisting essentially of about 0.63% to 0.68% carbon, 0% to 5% silicon, 8.75% to 10.25% manganese, 20.5% to 22.5% chromium, 2.2% to 2.8% molybdenum, 0.34% to 0.38% nitrogen, 0.02% to 0.03% boron and the balance substantially all iron, said steel having a stress-rupture life of at least 100 hours under a stress of 26,000 p.s.i. at a temperature of 1400° F.

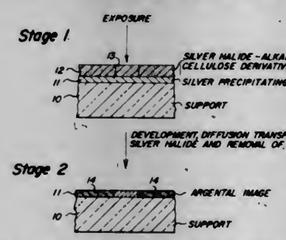
3,020,153
IRON AND STEEL PRODUCTION
Arthur Linz, 35 E. 35th St., New York, N.Y., and Norman F. Tisdale, 1408 Navahoe Drive, Pittsburgh, Pa.
No Drawing. Filed Nov. 6, 1958, Ser. No. 772,179
8 Claims. (Cl. 75—129)

1. A method for the production of rimming steels which comprises preparing an iron containing melt, adding a metallic containing material during furnacing, incorporating from 0.5 to 5.0 pounds per ton of iron of a complex rare earth metal salt therewith said salt having the general formula MRX_4 in which M represents a member of the group consisting of sodium and potassium, R represents a rare earth metal having an atomic number ranging from 57–71, and X is fluorine.

3,020,154
ALUMINUM ALLOY
Noble N. Ida, Towson, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
No Drawing. Filed Apr. 24, 1958, Ser. No. 730,535
3 Claims. (Cl. 75—138)

1. An aluminum alloy consisting by weight of about 0.5% to 2.0% nickel, 1.0% to 3.5% titanium and the balance being essentially aluminum.

3,020,155
PHOTOGRAPHIC DIFFUSION TRANSFER PROCESS
Edward C. Yackel, Henry C. Yutzy, Donald P. Foster, and Arthur A. Rasch, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 23, 1956, Ser. No. 586,705
11 Claims. (Cl. 96—29)



4. A method of forming a photographic image which comprises exposing to a subject an element comprising (1) a support, (2) a silver precipitating stratum on the support containing silver precipitating nuclei, and (3) adhered to said stratum a light-sensitive emulsion layer containing silver halide uniformly dispersed in a member of the class consisting of an alkali-soluble acid-insoluble dibasic acid ester of a cellulose ethyl ether and an alkali-soluble acid-insoluble dibasic acid ester of a cellulose acetate, developing a latent image in the emulsion layer with an alkaline silver halide developing solution containing a silver halide developing agent and a silver halide solvent for a time sufficient to form a silver image and an image-wise distribution of a soluble silver complex in the emulsion layer, allowing a portion of said silver complex to diffuse imagewise to said silver precipitating stratum and the silver of said portion of silver complex to be precipitated in said stratum by means of said nuclei, and removing the emulsion layer from said stratum, the diffusion of the silver complex being carried out in the presence of a member of the class consisting of a mercapto-1,3,4-oxadiazole, a mercapto-1,3,4-thiadiazole, a benzothiazoline-2-thione and 1,3-dimethylbenzene-4-sulfonic acid.

3,020,156
METHOD OF COATING METAL ON DIELECTRIC MATERIAL
William E. Rowe, Newburyport, Mass., assignor to Mycalex Corporation of America, Clifton, N.J., a corporation of New York
Continuation of application Ser. No. 658,390, May 10, 1957. This application Apr. 4, 1960, Ser. No. 19,595
4 Claims. (Cl. 96—35)



1. The method of coating a metal on a predetermined portion of the surface of a dielectric material, comprising the steps of coating said surface with a liquid silver suspension, baking said suspension at about 400° F. for about thirty minutes to drive off the liquid from said suspension and to cause said silver to bond to said surface, coating said silver with a light sensitive heat shrinkable solution consisting essentially of 16 ounces of commercial fish glue, 3 ounces of a 20% solution of ammonium dichromate, 10 drops of concentrated ammonia and 1 gallon of water, baking said solution at about 100° F. until it dries, disposing a negative over said dried solution, illuminating said negative to expose a portion of said light sensitive material, developing said light sensitive material in water to wash away the exposed portion thereof, and baking the remaining portion of said light sensitive material at about 400° F. for about thirty minutes to cause said material to shrink and pull the underlying silver off said surface of said dielectric material.

3,020,157
PROCESS OF AMMONIATING SYRUP
Walter R. Fetzer, Clinton, Iowa, assignor to Standard Brands Incorporated, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 26, 1956, Ser. No. 600,173
10 Claims. (Cl. 99—2)

1. A method of treating a sugar-containing aqueous syrup, comprising gradually adding to and dispersing ammonia vapor in a body of the syrup having a temperature in the range of ambient temperatures to 220° F., adding an acidic material to the mixture in such proportion as to maintain the mixture during the reaction period within a pH range of 4.0 to 7.5, and terminating the treatment when the nitrogen content of the mixture resulting from chemical reaction has substantially increased, the weight of ammonia employed (calculated as anhydrous NH_3) being between 2% and 5.5% of the dry substance weight of the sugars initially present.

3,020,158
PROCESS OF AMMONIATING FEED
Walter R. Fetzer, Clinton, Iowa, assignor to Standard Brands Incorporated, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 25, 1957, Ser. No. 698,382
8 Claims. (Cl. 99—2)

1. A two step method of making a nitrogen-enriched sweetened feed for ruminants comprising first reacting ammonia with a sugar-containing sirup at a temperature between 140° and 220° F. utilizing ammonia in amount between 2 and 5.5% of the dry substance weight of the sirup and maintaining the pH of the sirup during the first step between 4.0 and 7.5 pH by the addition of acidic material during the first step thereby increasing the protein equivalent of the sirup between 5 and 30%, secondly,

mixing the treated sirup with pulverulent feed solids, drying the mixture thereof while subject to heat at a temperature below 220° F. until the moisture content is reduced to between 1 and 5%, and then terminating the ammoniation reaction by cooling the mixture to a temperature substantially below 140° F.

3,020,159
METHOD OF ENHANCING THE XANTHOPHYLL CONTENT OF POULTRY FEEDS

Norman F. Kruse, Decatur, Ind., assignor to Central Soya Company, Inc., Decatur, Ind., a corporation of Indiana

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,153
4 Claims. (Cl. 99—4)

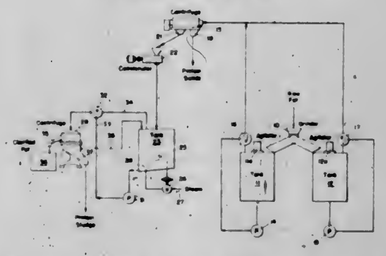
1. The method of enhancing the xanthophyll content of poultry feeds, comprising preparing a xanthophyll concentrate from orange oil by distilling the xanthophyll-containing orange oil under reduced pressure to obtain a distillation residue containing the xanthophyll in concentrated form, said residue concentrate containing at least 500 units of xanthophyll per gram, and thereafter mixing said orange oil xanthophyll concentrate with a poultry feed material containing less than 8,000 xanthophyll units per pound of feed material, said xanthophyll concentrate and said feed material being mixed in such proportions that the mixture contains in excess of 10,000 units of xanthophyll per pound.

4. The method of enhancing the xanthophyll content of poultry feeds, comprising preparing a xanthophyll concentrate from orange oil by extracting the xanthophyll-containing orange oil with anhydrous methanol and recovering a concentrated xanthophyll product from the methanol, said concentrate containing at least 500 units of xanthophyll per gram, and thereafter mixing said orange oil xanthophyll content with the poultry feed material containing less than 8,000 xanthophyll units per pound of feed material, said xanthophyll concentrate and said feed material being mixed in such proportions that the mixture contains in excess of 10,000 units of xanthophyll per pound.

3,020,160
MECHANICAL DEFATTING OF FATTY TISSUE DERIVED FROM ANIMALS

Francis P. Downing and Thomas W. Alberts, Philadelphia, Pa., assignors to The Sharples Corporation, a corporation of Delaware

Filed Aug. 27, 1958, Ser. No. 757,598
3 Claims. (Cl. 99—14)



1. A process for the separation of protein solids in uncoagulated condition from animal fat which comprises reducing said fat to particle sizes not exceeding ¾", thereafter bringing the mass under temperature conditions sufficiently high to melt the fat but not in excess of 120° F. while establishing substantially complete thermal equilibrium throughout said mass, and thereafter and while under the conditions of said thermal equilibrium subjecting said mass to centrifuging to remove protein solids therefrom.

3,020,161
PROCESS FOR REMOVAL OF RADIONUCLIDES FROM MILK

Gopala K. Murthy and Jeptha E. Campbell, Jr., Cincinnati, Ohio, Edmund B. Masurovsky, College Park, Md., and Locke F. Edmondson, Arlington, Va.; said Edmondson assignor to the United States of America as represented by the Secretary of Agriculture; said Murthy, Campbell, and Masurovsky assignors to the United States of America as represented by the United States Atomic Energy Commission

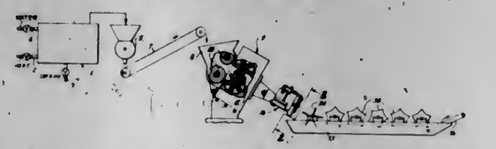
No Drawing. Filed Jan. 19, 1961, Ser. No. 83,850
4 Claims. (Cl. 99—54)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for the removal of cationic radionuclides from a milk comprising determining the pH and the cationic composition of a milk, adjusting the milk to a pH in the range of about from 5 to 6 with an edible organic acid, contacting a cation-exchange resin with an aqueous salt solution of non-radioactive cations in proportions substantially the same as determined from the milk to be processed and at a pH substantially that of the acidified milk until the resin is charged, washing excess salts from the charged resin, contacting the milk with the charged resin to remove radioactive cations from the milk while non-radioactive cations remain in equilibrium between the milk and the charged resin, and restoring the milk to its original pH to give an acceptably flavored milk product essentially free of radionuclides.

3,020,162
METHOD OF MAKING CORN CHIPS

Fred A. Cunningham, John O. Klatt, Reams F. Brown, and Woodrow W. Slovacek, all of San Antonio, Tex., assignors to The Facs Manufacturing Company, Inc., San Antonio, Tex., a corporation of Texas

Filed Sept. 10, 1957, Ser. No. 683,046
3 Claims. (Cl. 99—80)



1. A process for forming food products, comprising the steps of: pre-cooking whole kernels of corn in water for a period of time on the order of one-half hour; cooling said whole pre-cooked kernels; grinding said whole pre-cooked kernels to provide corn masa containing the ground undecomposed fibrous hulls; extruding said masa under pressure into a thin body for frying; and subjecting said masa to a continual mechanical mashing action immediately prior to extrusion by compressing said masa between opposed mashing surfaces to eliminate lumps and unground kernels which are too large to be extruded into said thin body.

3,020,163
MANUFACTURE OF CHEESE

James Bryan Stine, Lincolnwood, Ill., assignor to National Dairy Products Corporation, Chicago, Ill., a corporation of Delaware

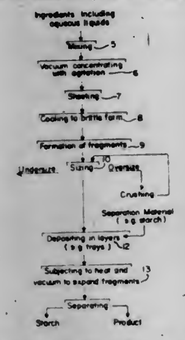
No Drawing. Filed Dec. 15, 1958, Ser. No. 780,235
6 Claims. (Cl. 99—116)

1. The improvement in the process of making Swiss cheese which comprises rapidly cooling the curd after it has been cooked to the proper degree, from about the cooking temperature to a temperature of between about 110° F. and 90° F., that is, materially lower than the cooking temperature but above the temperature at which the curd absorbs enough water to interfere with the curing of the cheese, said cooling being effected in a period of less than about 15 minutes.

3,020,164
FOOD PRODUCT AND METHOD OF MANUFACTURE

John H. Forkner, Fresno, Calif., assignor to The Pillsbury Company, Minneapolis, Minn., a corporation of Delaware

Filed Apr. 7, 1960, Ser. No. 20,729
31 Claims. (Cl. 99—134)



1. As a new article of manufacture, small dry masses each having an outer surface tending to retard penetration of moisture and an inner porous sponge-like interior, the masses containing reducing sugar and a gel-forming agent.

3,020,165
LOW VISCOSITY GLASS COMPOSITIONS

Earl K. Davis, Ogden, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York

No Drawing. Filed July 5, 1960, Ser. No. 40,508
3 Claims. (Cl. 106—54)

1. A glass composition consisting essentially of the following ingredients, percent by weight, batch basis:

SiO_2	35–45
Al_2O_3	0–5
Total $Al_2O_3+SiO_2$	40–50
Na_2O	5–9
Li_2O	2–5
KHF_2	5–9

At least one material selected from the group consisting of:

CaO, ZnO, MgO, BaO	1–2
B_2O_3	30–40
Sb_2O_3	0–1

3,020,166
PROCESS FOR THE MANUFACTURE OF DYED STRUCTURES FROM REGENERATED CUPRAMMONIUM CELLULOSE

Jacques Wegmann and Carl Becker, Basel, Switzerland, assignors to Ciba Company, Inc., Fair Lawn, N.J.

No Drawing. Filed Aug. 22, 1958, Ser. No. 756,513
Claims priority, application Switzerland Aug. 28, 1957
7 Claims. (Cl. 106—167)

1. A process for the manufacture of fibers and foils from regenerated cellulose, consisting in adding to an ammoniacal copper oxide spinning solution a water-soluble organic dyestuff selected from the group consisting of phthalocyanine, azo, anthraquinone and oxazine dyestuffs containing at least one reactive substituent capable of forming a chemical bond with the hydroxyl groups of the cellulose molecule due to the presence of a member selected from the group consisting of a sulfonyl-oxy group and a chlorine atom, and spinning the so-treated spinning solution into filaments and foils.

3,020,167
COMPOSITION OF MATTER AND METHOD OF TREATING FIBROUS CELLULOSIC MATERIALS THEREWITH

Manuel Gonzales-Pelaez, Lope de Rueda 27, Madrid, Spain, assignor of thirty-five percent to Charles F. Pfeifer, New Canaan, and forty percent to Vincent C. Arguimbau, Darien, Conn.

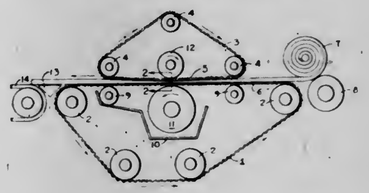
No Drawing. Filed Sept. 10, 1958, Ser. No. 760,081
11 Claims. (Cl. 106—229)

8. A composition consisting essentially of about 40 to 94 parts by weight of a low molecular weight chlorinated hydrocarbon, about 6 to 50 parts by weight benzene, an amount up to about 22 parts by weight of a wax of the group consisting of vegetable and mineral waxes, and a minor amount up to about 2 parts by weight of a vegetable resin as hardener.

3,020,168
NONWOVEN FABRICS WITH A FABRIC-LIKE APPEARANCE

A Peter Gouveia, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Filed May 9, 1958, Ser. No. 734,312
2 Claims. (Cl. 117—11)



1. A method for treating a nonwoven fabric to impart a fabric-like appearance thereto which comprises positioning the nonwoven fabric between the upper reach of one endless screen and the lower reach of another endless screen, moving the adjacent reaches of said endless screens and said nonwoven fabric in the same predetermined direction, applying a fluid film forming substance to impregnate said nonwoven fabric while between said screens, passing said screens and said impregnated nonwoven fabric between adjacent and opposed pressure rolls, applying varying amounts of pressure to said nonwoven fabric by applying a predetermined pressure to said rolls so that when transmitted through said screens said impregnated nonwoven fabric is subjected to varying amounts of pressure and so that said fluid film forming substance is distributed in varying concentrations throughout said nonwoven fabric.

3,020,169
SHOE LINING AND STIFFENING MATERIALS

Ferdinand N. Phillips, Jr., Brookline, and Thomas C. Morris, Lexington, Mass., and Adolph M. Chaplick, Hudson, N.H.; said Morris and Chaplick assignors to B. B. Chemical Co., Boston, Mass., a corporation of Massachusetts

Filed Dec. 6, 1956, Ser. No. 626,624
6 Claims. (Cl. 117—33)



5. A normally flexible, lastable shoe liner comprising a relatively open non-woven, two dimensionally stretchable, fibrous sheet base from 0.02 to 0.01 inch in thick-

ness, a coating of flocking cement on one face of said base, flock fibers held in upstanding relation to said sheet by said coating of cement, and a substantially solid continuous layer of heat softenable, stiff, resilient, thermoplastic adhesive localized substantially at the surface on the other face of said base, said fibrous sheet base including a binder holding the fibers in relatively open, loosely matted relationship substantially only at their points of contact, projecting ends of fibers of said fibrous sheet being embedded in and held against displacement by said layer of adhesive and portions of the fibers in the interior of said fibrous sheet being capable of limited movement relative to each other, said layer of adhesive having a thickness relative to the thickness of said base of the order of 0.01:0.027 whereby said adhesive will penetrate said base and surround substantial portions of the fibers of said base when said adhesive is softened by heat and an assembled shoe and liner are stretched against a form in the shaping of a shoe.

3,020,170
TRANSFER SHEET AND COMPOSITION THEREFOR

Norman Macaulay, Tonawanda, N.Y., assignor to Moore Business Forms, Inc., Niagara Falls, N.Y., a corporation of Delaware

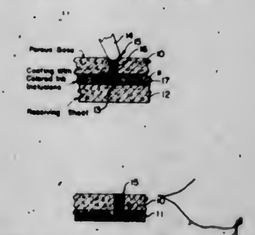
No Drawing. Filed Oct. 12, 1960, Ser. No. 62,106
22 Claims. (Cl. 117—36.1)

10. A transfer sheet comprising a base sheet coated on at least one face thereof with a pressure-rupturable continuous film of a film-former consisting essentially by weight of a cyclized rubber resin, said film having homogeneously dispersed therethrough globules of a marking fluid having an average diameter of less than about 20 microns, the total weight of said fluid having a ratio to the weight of said film-former within the range of about 1:3 to about 3:1, said marking fluid being comprised essentially of about 10–30% by weight of a colorant and the remainder a liquid carrier for said colorant, said carrier being an essentially non-volatile liquid in which said resin is substantially non-soluble.

3,020,171
PRESSURE-SENSITIVE RECORD AND TRANSFER SHEET MATERIAL

Joseph A. Bakan, David J. Striley, and Theodore Malerson, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Aug. 26, 1960, Ser. No. 52,195
14 Claims. (Cl. 117—36.2)

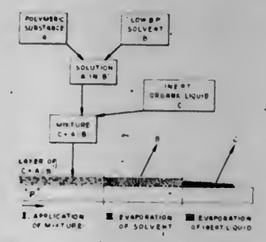


1. A combined record and transfer material consisting of a porous base member and a rupturable coating on one side of the member, said coating containing a profusion of entrapped liquid droplets of ink, which ink is made up of coloring material in a vehicle capable of readily penetrating the pores of the base member, the droplets being of such a size and present in such profusion as to supply sufficient ink upon rupture of the coating according to a desired configuration to enable a portion of said ink to penetrate through the porous base member to produce a mark of the same configuration on the side of the base member opposite the coated side, and to enable a further portion of the released ink to be deposited in the same configuration to produce another mark on another surface in contact with the coated surface of the member.

3,020,172
PROCESS OF MANUFACTURE OF TEMPERATURE-SENSITIVE RECORDING PAPER

Dietrich Fritz Arthur Mohnhaupt, Vesenaz, Switzerland, assignor to Permaco S.A., Vesenaz, Switzerland, a corporation of Switzerland

Filed Sept. 8, 1959, Ser. No. 838,401
Claims priority, application Switzerland Sept. 16, 1958
26 Claims. (Cl. 117—36.7)

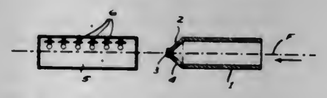


1. A process for manufacturing temperature-sensitive recording paper having a light-colored coating layer on a dark carrier paper base, comprising admixing with the solution of a polymerized organic substance having a sintering point of from about 80° to 220° C. in an organic solvent therefor having a boiling point lower than the sintering point of said polymerized material, an organic liquid free from hydroxyl groups which has a boiling point above the boiling point of said organic solvent and below the sintering point of said polymeric material, which is inert toward said paper base, and in which said polymerized material is insoluble, said liquid being added in such amounts to said solution that said polymerized material is not precipitated therefrom, and that the solids content of the resulting mixture is from about 6 to 20% by weight; applying said resulting mixture on said paper base; heating the resulting layer of said mixture on said paper base to evaporate substantially exclusively said solvent therefrom, thereby forming a finely divided gray to white precipitate of said polymerized substance in said inert liquid on said paper base; and then heating further to such temperature as to evaporate said inert liquid therefrom and forming a gray to white coating of said polymerized substance on said paper base.

3,020,173
PROCESS FOR THE PRODUCTION OF KNOP YARNS AND APPARATUS THEREFOR

Louis Stieffenhofer, Chavanoz, France, assignor to Moulinage et Retorderie de Chavanoz, Chavanoz, Isere, France, a corporation of France

Filed May 13, 1958, Ser. No. 734,988
Claims priority, application France May 14, 1957
3 Claims. (Cl. 117—45)



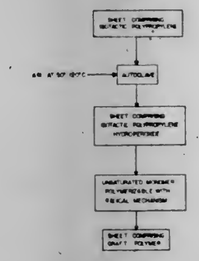
1. A process for the manufacture of knop yarns which comprises applying to a yarn having a first coating layer

of a plastisol thereon, an additional coating layer consisting of a second plastisol of low viscosity capable of adhering to said first coating layer and of shrinking when dried, passing said coated yarn through a nozzle having a restricted opening adapted to remove the excess of said low viscosity plastisol, and passing said yarn through a drying zone to dry said low viscosity plastisol and to cause the latter to shrink and form spaced beads on said yarn.

3,020,174
METHOD OF GRAFT POLYMERIZING MONOMERS ONTO A SHAPED ARTICLE OF PEROXIDIZED POLYMERS OF PROPYLENE AND COPOLYMERS OF PROPYLENE AND ETHYLENE

Giulio Natta, Enrico Beati, and Febo Severini, Milan, Italy, assignors to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy

Filed Mar. 5, 1957, Ser. No. 643,915
Claims priority, application Italy Mar. 14, 1956
29 Claims. (Cl. 117—47)



1. A process for the production of shaped articles comprising linear high molecular weight polymers selected from the group consisting of isotactic polymers of propylene, non-isotactic polymers of propylene and non-isotactic copolymers of propylene and ethylene, and having grafted thereon polymeric chains formed by the polymerization of a monomer which is polymerizable by a radical mechanism, said process comprising first contacting the shaped articles with a gas containing molecular oxygen at a temperature of 50 to 120° C. until a predetermined amount of oxygen is bound to the polymer chains in the form of hydroperoxide groups, and thereafter immersing the article, under polymerizing conditions, in a monomer capable of being polymerized with a radical mechanism, whereby said monomer is polymerizer, with the aid of the hydroperoxide groups bound to the polymer comprising the shaped article, to polymeric chains which are chemically grafted onto the polymeric linear chains of said article.

3,020,175
CHEMICAL CLEANING OF PRINTED CIRCUITS

Edward S. Penczek, Rochester, and Rollin W. Furguson, Webster, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed June 12, 1958, Ser. No. 741,648
10 Claims. (Cl. 117—49)

1. A chemical cleaning process for preparing for dip soldering the surfaces of copper conductors that are disposed on the surface of an insulating base of a printed wiring board, comprising subjecting said board to the action of an acidic oxidizing bath for a sufficient period of time to remove tarnish and surface films from the copper conductors, then spray rinsing said board with a clean aqueous rinse, then subjecting said board to an aqueous mineral acid bath to remove any salt formed on said conductor surfaces in said acidic oxidizing bath,

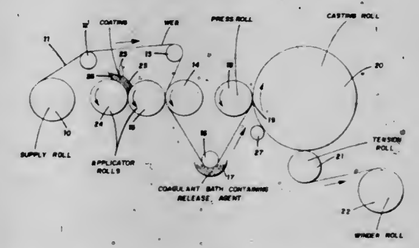


then rinsing said surface free of residual acid with an aqueous spray rinse.

3,020,176
CAST COATED PAPER AND METHOD OF MAKING THE SAME

James V. Robinson and Earl B. Brookbank, Jr., Chillicothe, Ohio, assignors to The Mead Corporation, Dayton, Ohio, a corporation of Ohio

Filed Mar. 13, 1958, Ser. No. 721,106
18 Claims. (Cl. 117—64)



1. In the manufacture of cast-surfaced mineral coated paper, the steps comprising coagulating the coating while still mobile and fluent and deformable on the paper by direct contact with a coagulating electrolyte to form said coating into a tough deformable gel, concomitantly incorporating a water-soluble non-ionic surfactant with said coagulating electrolyte which imparts substantially complete separation of said coating from a casting surface, and thereafter bringing said coating into contact with a casting surface, said surfactant being liquid on said casting surface and imparting substantially complete separation of said coating from said casting surface.

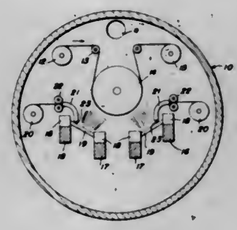
3,020,177
ART OF VAPORIZING MATERIALS

Paul Alexander, Princeton, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed May 13, 1959, Ser. No. 812,897
12 Claims. (Cl. 117—107)

1. The method of producing vapors for vacuum deposition of a meltable and vaporizable material, which comprises providing a heater body having a greater effective cross-section at one end than at the other end and an upper surface for supporting the molten metal, mounting the body in a vacuum chamber with said upper surface of the body inclined downwardly from the said one end thereof at an angle of 2 to 45 degrees, applying an elec-

trical potential difference from one end of the body to the other whereby the body is resistively heated with a first region at said one end of said surface above the melting point of the vaporizable material and below the temperature of significant evaporation thereof and other and lower parts of said surface at temperatures above that for



the evaporation of the material, and supplying the vaporizable material to said surface near the upper end thereof whereby the melted material will flow downward on said surface from said first region onto said other parts of said surface and therewith attain higher temperatures and be vaporized at said other parts.

3,020,178

PAPER IMPREGNATING COMPOSITIONS, IMPREGNATED PAPERS AND THE PROCESS OF IMPREGNATING PAPER

Edward J. Sweeney and Walter W. Toy, Philadelphia, Pa., and Paul J. McLaughlin, Moorestown, N.J., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Sept. 6, 1957, Ser. No. 682,318
13 Claims. (Cl. 117—155)

1. A method which comprises impregnating throughout its mass a porous fibrous saturating paper sheet of 5 to 250 mils thickness formed of cellulosic fibers having a Canadian freeness value of at least 450 with an aqueous dispersion containing 5 to 60% by weight of a water-insoluble polymer of an acrylic acid ester selected from the group consisting of polymers of methyl acrylate and ethyl acrylate, copolymers of acrylic acid esters of alcohols having 1 to 4 carbon atoms with each other and copolymers of an acrylic acid ester of an alcohol having from 1 to 4 carbon atoms with a compound selected from the group consisting of methyl, ethyl, propyl, and butyl methacrylates, styrene, acrylonitrile, methacrylonitrile, vinyl acetate, vinyl chloride, and vinylidine chloride, said polymer having a T_1 between $-17°$ C. and $+17°$ C. and a molecular weight between about 20,000 and 950,000, and subsequently drying the impregnated sheet.

3,020,179

TOBACCO TREATMENT AND PRODUCT THEREFROM

Earl H. Hess, Lancaster, Pa., assignor to General Cigar Co., Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 29, 1959, Ser. No. 862,451
24 Claims. (Cl. 131—17)

1. The improved process for manufacturing a coherent tobacco smoking product from comminuted tobacco, which comprises mixing not more than 75% by weight of said tobacco with water to form a slurry, heating said slurry in a sealed zone to develop a steam pressure of at least 90 p.s.i.a., maintaining said slurry at said steam pressure for at least 5 minutes, blending the thus treated slurry with the remainder of said tobacco to yield a soft paste that may be spread evenly, and forming and drying said paste into said coherent tobacco smoking product.

3,020,180

STABILIZED AMMONIUM NITRATE PROPELLANT

Edwin F. Morello, Joliet, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Dec. 17, 1957, Ser. No. 703,461
5 Claims. (Cl. 149—18)

1. An ammonium nitrate gas-generator composition consisting essentially of (*a*) ammonium nitrate as the major component, (*b*) a binder consisting essentially of (i) a cellulose ester of an alkanoic acid having from 2 to 4 carbon atoms and (ii) an oxygenated hydrocarbon plasticizer for said ester, (*c*) a catalyst adapted for promoting the burning of said ammonium nitrate and (*d*) N-phenylmorpholine in an amount at least sufficient to improve the stability of said composition with respect to gas evolution.

3,020,181

GUN PROPELLANT

Wayne A. Proell, Chicago, Ill., and Norman J. Bowman, Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 10, 1957, Ser. No. 651,818
1 Claim. (Cl. 149—19)

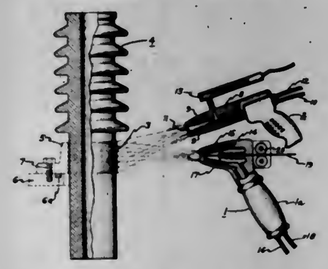
A gun propellant consisting of (1) about 20 weight percent of a binder consisting of (A) about 25 weight percent of cellulose acetate analyzing between about 55 and 57 weight percent of acetic acid, (B) about 37 weight percent of the polyester condensation product of ethylene glycol and diglycollic acid, the mole ratio of glycol to acid being about 1.2 and (C) about 37 weight percent of dinitrodiphenyl oxide, (2) about 2 weight percent of phenothiazine, (3) about 2 weight percent of carbon black and about 76 weight percent of ammonium nitrate.

3,020,182

CERAMIC-TO-METAL SEAL AND METHOD OF MAKING THE SAME

Franklin W. Daniels, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

Filed Sept. 26, 1958, Ser. No. 763,573
7 Claims. (Cl. 154—43)



7. A ceramic-to-metal seal structure comprising a ceramic body and a metal part having seal surfaces joined together by a composite ceramic metal material therebetween composed of a mixture of ceramic and metallic particles, wherein the proportion of ceramic particles to metallic particles decreases in a direction away from said ceramic body to provide a metal layer of substantial thickness, said metal part being hermetically joined to the surface of said metal layer.

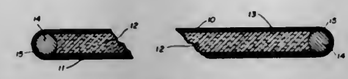
3,020,183

PROTECTIVE INSULATING MAT

Archie Calvaresi, 3075 W. 61st Ave., Denver, Colo.

Filed May 13, 1959, Ser. No. 812,879
1 Claim. (Cl. 154—44)

A protective insulating mat comprising a flat, rectangular, marginally-sealed envelope of tough wear- and water-resistant, flexible, air and water impermeable material, a flat, flexible, fibrous filler unit of high heat-insulating capacity coextensively within said envelope, means flexibly inhibiting lacerating contact of adjacent envelope and



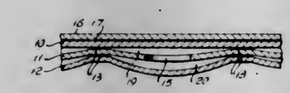
filler unit surfaces, and operatively-rigid rods secured in spaced parallelism interiorly along opposite outer edges of said envelope, wherein said rods are smoothly cylindrical in adhesively-bonded coaction with envelope edge zones thereby extended.

3,020,184

SOUND DAMPENING COMPOSITION

Richard H. Cubberley, Morristown, and Vincent C. Harold, Jr., Lodi, N.J., and Harold J. Zinaman, Brooklyn, N.Y., assignors to The Patent and Licensing Corporation, New York, N.Y., a corporation of Massachusetts

Filed Sept. 30, 1955, Ser. No. 537,702
2 Claims. (Cl. 154—44)



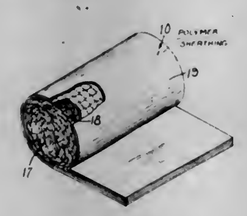
1. A sound dampening member adapted to be adhered to the surface of a vibratory metal object for dampening the vibrations thereof comprising a sandwich of two layers of flexible felt with a third continuous layer therebetween, said third layer containing rows of holes therein and adhered to the other two layers by narrow parallel strips of adhesive located between the rows of holes and on both sides of said third layer, the adhesive strips on one side of said third layer being substantially in the same area as said adhesive strip on the other side of said third layer, all of said layers being in contact at the strips of adhesive but each layer being separated from each other in the area between the strips of adhesive.

3,020,185

WIRE REINFORCED POLYTETRAFLUOROETHYLENE SEAL

John A. Moffitt, Jr., North Haven, and Alfred S. Kidwell, Milford, Conn., assignors to The Connecticut Hard Rubber Company, New Haven, Conn., a corporation of Connecticut

Filed July 28, 1958, Ser. No. 751,248
5 Claims. (Cl. 154—53)



1. A fire-impervious seal comprising an inner compressible metal-wire core, an enclosing wire-mesh fabric sheath, and an outer sheath of primed adhesive receptive polytetrafluoroethylene film, the wire-mesh fabric sheath being adhesively attached to the primed surface of the polytetrafluoroethylene.

3,020,186

LAMINATING METHOD AND MEANS FOR MANUFACTURING SYNTHETIC RESINOUS FOAM PADS

Leonard Lawrence, 118 84th Ave., Kew Gardens, N.Y.

Filed May 21, 1959, Ser. No. 814,780
2 Claims. (Cl. 156—248)



1. The method of forming a resilient pad from heat sealable materials comprising the steps of: providing a first lamina of material having a calendered surface; providing a second lamina of flexible heat sealable synthetic resinous material; laminating said first and second laminae using a pressure sensitive adhesive; providing a third lamina of synthetic resinous foam material which is heat sealable with respect to said second lamina; placing said third lamina in superimposed position upon the exposed surface of said second lamina; cutting pads from said third lamina and simultaneously heat sealing the peripheral edges thereof to the adjacent surface of said second lamina; removing the unsealed portions of said third lamina from contact with said second lamina, and; stripping the remaining portions of said second lamina from contact with said first lamina.

3,020,187

METHOD OF MAKING PICKER STICKS FOR USE IN SHUTTLE LOOMS

Juan Vila Ferran, 82 Amilcar St., Barcelona, Spain

Filed May 13, 1957, Ser. No. 658,606
Claims priority, application Spain Oct. 10, 1952
2 Claims. (Cl. 156—250)



1. The method of forming picker sticks for looms, comprising treating a plurality of thin slabs of green wood lumber with powdered urea, drying the slabs to approximately 10% moisture content, assembling the slabs into a wedge shaped stair step pile, laminating said slabs with urea-formaldehyde resin adhesive, placing filler pieces of less thickness in the steps, positioning a confining slab of wood lumber to cover the steps and the filler pieces, thereafter subjecting the assemblage to heat and compression to both mold the pile and compress the adhesive, then treating the compressed pile with a concentrated solution of formaldehyde, then cutting the pile transversely to produce a plurality of wedge shaped stick units.

3,020,188

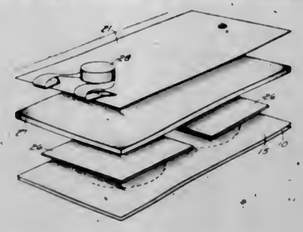
METHOD OF MAKING A FOLDABLE TRAVEL MIRROR CONSTRUCTION

Thomas A. Zompa, East Providence, R.I., assignor to Trina, Inc., Providence, R.I., a corporation of Rhode Island

Filed Oct. 27, 1958, Ser. No. 769,900
3 Claims. (Cl. 156—221)

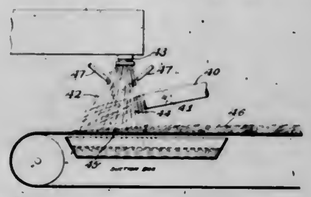
1. The method of making a travel mirror comprising the steps of scoring spaced openings in a rectangular sheet of plastic material, gluing spaced mirrors to a second sheet of plastic material, said mirrors being of larger diameter than said openings, placing said first sheet of plastic material over said second sheet of plastic mate-

rial with said openings concentric with said mirrors, applying heat and pressure to join said sheets around the periphery of each mirror, placing an outside sheet of



plastic material in back of said sheets, and joining all the sheets adjacent the edges by heat and pressure and simultaneously flattening a transverse line across said sheets to provide a foldable portion.

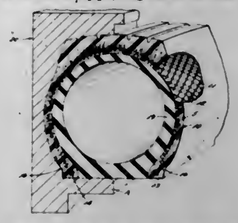
3,020,189
FIBROUS STRUCTURES AND METHODS FOR MANUFACTURING SAME
Jack H. Waggoner, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Continuation of application Ser. No. 184,355, Sept. 12, 1950, now Patent No. 2,772,603, dated Dec. 4, 1956. This application Oct. 19, 1956, Ser. No. 617,091
4 Claims. (Cl. 156—34)



1. The method of manufacturing a fibrous structure, comprising the steps of raining glass fibers down from above onto a collecting wall, spraying dry pulp binder fibers into the path of the glass fibers in advance of their deposition upon the collecting wall whereby the fibers become uniformly mixed and interfelted to form a fibrous structure in which the pulp fibers comprise a bonding agent, and wetting the fibers with water in liquid form to enhance ionic attraction between the pulp fibers and the glass fiber surfaces.

3,020,190
METHOD OF MAKING A VEHICULAR TIRE
Fred B. Pfeiffer, 270 Ferndale Ave., Akron 4, Ohio, assignor of one-half to Jesse R. Crossan
Filed Feb. 14, 1958, Ser. No. 715,232
2 Claims. (Cl. 156—125)

1. In making a pneumatic tire a method which comprises the steps of attaching elongated inextensible load-bearing members to spaced tire bead grommets to form a cage of the general shape of an openbeaded tire; associating numerous fibers of substantial length with thermosetting material, applying said material with the fibers associated therewith over the inside surface of the crown portion of said cage; laying the cage, material and fiber assembled as described, in a tire mold preparatory to molding said tire, and then causing numerous said fibers to catch upon and fold about said load-bearing members by forcing said material with the fibers associated therewith against and beyond the load-bearing members a distance sufficient to entirely embed said members in the material and to mold the latter against the inner surface of the mold, and then applying heat to the thermosetting



material and thereby causing said material to set while under said pressure.

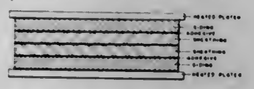
ERRATA

For Class 156—221 see:
Patent No. 3,020,188

For Class 156—248 see:
Patent No. 3,020,186

For Class 156—250 see:
Patent No. 3,020,187

3,020,191
PROCESS OF SIMULTANEOUSLY PRODUCING TWO SIDING-SHEATHING UNITS
Wayne L. Meek and Matti J. Hyvarinen, International Falls, Minn., assignors to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Filed Dec. 1, 1959, Ser. No. 856,466
4 Claims. (Cl. 156—288)

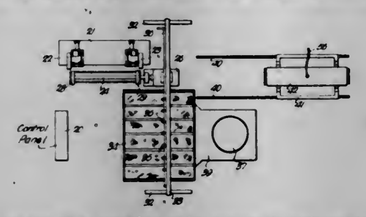


1. A process of simultaneously producing two siding-sheathing units by pressing four mats of lignocellulose material between a single pair of platens, which consists in the arrangement of said mats between platens in sandwich formation with respect to facing mats and structural insulation mats, the arrangement being such that one surface of each facing mat is contacted by a hot pressing surface, adhesive spread between the facing mat and the adjacent structural insulating mat, the structural insulating mats in sandwich formation being back to back and applying heat in excess of 400° F. to about 470° F. with a continuous application of pressure in excess of about 100 pounds per square inch until the temperature of the adhesive reaches about 230° F. to about 250° F. and the density of the facing mats has materially increased.

3,020,192
METHOD AND APPARATUS FOR APPLYING RESILIENT SLEEVES
Joseph F. Stephens and James R. Higgins, Jackson County, Mo., and Homer A. Haynes, Wyandotte County, Kans., assignors to Gustin-Bacon Manufacturing Company, a corporation of Missouri
Filed Oct. 8, 1958, Ser. No. 766,071
7 Claims. (Cl. 156—423)

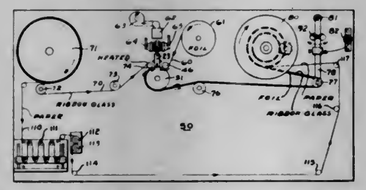
1. Apparatus for applying resilient sleeves to work pieces comprising a mandrel adapted to receive a hollow work piece thereon, means mounting said mandrel for pivotal motion in a horizontal plane, vacuum means for receiving a sleeve of resilient material therein and expanding it to such internal size as to permit the work piece to fit therein, said means comprising an elongate outer shell forming a hollow outer tube, a perforate secondary shell positioned within and spaced inwardly from said

outer tube and forming an inner hollow tube, the inner hollow tube sealingly connected circumferentially to the outer hollow tube at at least one position therealong whereby to form a continuous annular volume therebetween bounded at all points by the inner and outer hollow tubes, and a vacuum connection to said annular vol-



ume, means for rotating said mandrel with said work piece thereon, means for translating the vacuum means from a position free of the mandrel to a position surrounding same at one of the pivotal positions of said mandrel, and means for spraying adhesive on said work piece while it is being rotated on said mandrel at a second pivotal position of said mandrel.

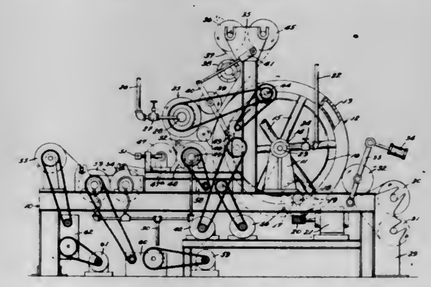
3,020,193
CAPACITOR MANUFACTURE
Charles F. Seck, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Nov. 1, 1956, Ser. No. 619,893
3 Claims. (Cl. 156—517)



1. In a machine suitable for cutting sheets of metal foil from a ribbon thereof and for attaching such sheets in predetermined spaced relation to a ribbon of dielectric material, a rotatable drum, means for feeding metal foil in ribbon form onto the cylindrical surface of said drum, means for supplying negative pressure through such surface of the drum to hold the foil in engagement therewith, means for separating the so-held foil into sheets during its passage over the surface of said drum, means for training a dielectric ribbon over the surface of such drum occupied by a foil sheet, means for applying heat to the dielectric ribbon to activate an adhesive applied to the under surface thereof to effect adherence of an engaged sheet thereto, and means for progressively winding the ribbon into a coil following its departure from said drum.

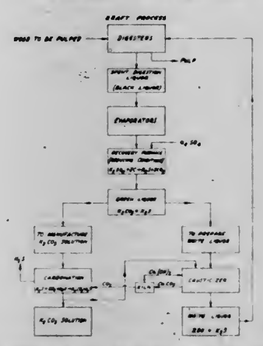
3,020,194
TWO-SIDED LAMINATOR
Rudolph A. Jerothe, Wayne, N.J., assignor to Toscony Fabrics Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 22, 1958, Ser. No. 710,524
3 Claims. (Cl. 156—583)

2. Apparatus for forming a two-sided laminate of fabric and plastic material, said apparatus comprising a rotatable heating drum having a circumferentially extensive heating face for simultaneously supporting and heating a substantial arcuate reach of plastic material, means for heating and rotating the drum, means for progressively laying a plurality of films of plastic material on the face of said drum, means spaced about the drum from said film laying means for progressively laying a fabric backing on the films supported by said drum, a second rotatable heating drum having a circumferentially extensive heating face for simultaneously supporting and heating a substantial arcuate reach of plastic material, means for progressively laying a second film of plastic material on said second drum, a stripper roll for stripping the plastic material and fabric from the first heated drum, said stripper roll being arcuately spaced from the point of



contact of said fabric backing with said plastic material to permit heating of said fabric backing to substantially the temperature of said first drum, means for delivering the second film of plastic material from the second heated drum and superimposing it on the bare face of the heated fabric to form a laminated material, and means for pressing and cooling the laminated material progressively, said means for pressing and cooling including an embossing roll, a cooperating backing roll, and means for pressing one toward the other.

3,020,195
PRODUCTION OF POTASSIUM COMPOUNDS
Ferri Casciani, York, and Harry D. Banman, Glen Rock, Pa., assignors to P. H. Glatfelter Company, Spring Grove, Pa., a corporation of Pennsylvania
Filed Feb. 29, 1960, Ser. No. 11,637
16 Claims. (Cl. 162—32)



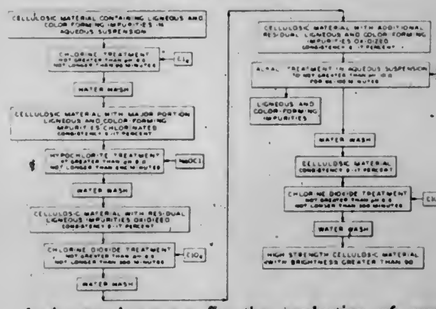
1. In the pulping of ligneous cellulosic materials with potassium base cooking liquors, the process of preparing solutions of potassium salts of carbonic acid comprising the steps of, adding potassium sulfate to spent potassium base cooking liquor in an amount substantially in excess of that required to replenish losses resulting from the pulping and recovery operation, burning said spent liquor to produce a smelt comprising potassium carbonate and potassium sulfide, dissolving said smelt to product a smelt solution comprising potassium carbonate and potassium sulfide, and carbonating at least a portion of said smelt

solution with a gas containing carbon dioxide to generate hydrogen sulfide gas and thereby produce a solution of potassium salts of carbonic acid.

3,020,196
PRODUCTION OF HIGH BRIGHTNESS HIGH STRENGTH WOOD PULPS

John Schuber, Syracuse, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Aug. 5, 1960, Ser. No. 47,611
6 Claims. (Cl. 162—78)



1. A staged process for the production of superbleached cellulosic material having a brightness in excess of 90 and of high strength characteristics which comprises, in the sequence specified, (A) treating an aqueous suspension of unbleached cellulosic material containing a substantial amount of ligneous and noncellulosic color-forming impurities in a first stage with elemental chlorine at not greater than pH 6 for not in excess of 90 minutes to chlorinate a major portion of said impurities, water washing the cellulosic material, (B) treating the cellulosic material at a consistency of about 9–17% with an alkaline hypochlorite in a second stage at greater than pH 8 for not in excess of 240 minutes to oxidize a portion of the residual ligneous and color-forming impurities to brighten the pulp without material degradation of the cellulose, water washing the cellulosic material, (C) treating the cellulosic material at a consistency of about 9%–17% in a third stage with chlorine dioxide at not greater than pH 6.5 for not in excess of 300 minutes to oxidize an additional portion of said residual impurities without material degradation of the cellulose, water washing the cellulosic material, (D) then adding alkali to an aqueous suspension of the cellulosic material at a consistency of about 9%–17% in a fourth stage to an alkaline pH above about pH 10 to effect dissolution of said oxidized impurities, water washing the cellulosic material, (E) treating the cellulosic material at a consistency of about 9%–17% in a fifth stage with chlorine dioxide at not greater than pH 5.5 for not in excess of 300 minutes to oxidize remaining ligneous and color-forming impurities without material degradation of the cellulose, water washing the cellulosic material, and recovering superbleached pulp having a G.E. brightness in excess of 90, improved color stability and high strength characteristics substantially unchanged from those of the unbleached cellulosic material.

3,020,197
METHOD FOR PRODUCTION OF HIGH BRIGHTNESS HIGH STRENGTH WOOD PULPS

John Schuber, Syracuse, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Aug. 5, 1960, Ser. No. 47,619
5 Claims. (Cl. 162—78)

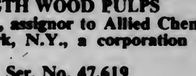
1. A staged process for the production of superbleached cellulosic material having a brightness in excess of 90 and of high strength characteristics which comprises, in the sequence specified, (A) treating an aqueous suspension of unbleached cellulosic material containing a substantial amount of ligneous and noncellulosic color-forming impurities in a first stage with elemental chlorine at not greater than pH 6 for not in excess of 90 minutes to chlorinate a major portion of said impurities, water washing the cellulosic material, (B) treating the cellulosic material at a consistency of about 9–17% with an alkaline hypochlorite in a second stage at greater than pH 8 for not in excess of 240 minutes to oxidize a portion of the residual ligneous and color-forming impurities to brighten the pulp without material degradation of the cellulose, water washing the cellulosic material, (C) treating the cellulosic material at a consistency of about 9%–17% with a third stage with chlorine dioxide at not greater than pH 6.5 for not in excess of 300 minutes to oxidize a portion of the residual ligneous and color-forming impurities to brighten the pulp without material degradation of the cellulose, water washing the cellulosic material, (D) then treating the cellulosic material at a consistency of about 9–17% in a fourth stage with an alkaline peroxide at greater than pH 8 for not in excess of 300 minutes to oxidize an additional portion of the residual impurities without material degradation of the cellulosic material to brighten the cellulosic material to a greater extent than in said third stage and impart color stability to the cellulosic material, water washing the cellulosic material, (E) treating the cellulosic material at a consistency of about 9%–17% in a fifth stage with chlorine dioxide at not greater than pH 5.5 for not in excess of 300 minutes to oxidize remaining ligneous and color-forming impurities without material degradation of the cellulose, water washing the cellulosic material, and recovering superbleached pulp having a G.E. brightness in excess of 90, improved color stability and high strength characteristics substantially unchanged from those of the unbleached cellulosic material.

3,020,198
CHLOROMETHYL THIONOPYROPHOSPHATE ESTERS AND THEIR USE AS PESTICIDES

Ralph B. Fearing, Hammond, Ind., Edward N. Walsh, Chicago Heights, Ill., and John G. Brady, Campbell, Calif., assignors to Stauffer Chemical Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 3, 1960, Ser. No. 59,815
15 Claims. (Cl. 167—22)

1. A compound represented by the general formula:



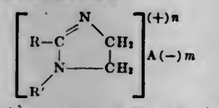
wherein R and R′ are lower alkyl radicals having from one to six carbon atoms and wherein one of the substituents represented by X and Y is sulfur and the other is oxygen.

3,020,199
IMIDAZOLINE STABILIZERS

Jack A. Williams, Tulsa, Okla., and Arthur G. Hirsch, Dyer, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,221
12 Claims. (Cl. 167—33)

1. A composition comprising a halogenated organic compound selected from the group consisting of 1,1,1-trichloro-2,2-bis(p-chlorophenyl) ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl) ethane, 1,1-dichloro-2,2-bis(p-chlorophenyl) ethane, 1,1,1-trichloro - 2,2 - bis(p-fluorophenyl) ethane, gamma hexachlorocyclohexane, 1,2,4,5,6,7,8,8-octachloro - 4,7 - methano - 3a,4,7,7a - tetrahydroindan, 1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-dimethanonaphthalene, 1,2,3,4,10,10-hexachloro-6,7-epoxy - 1,4,4a,5,6,7,8,8a - octahydro - 1,4,5,8-dimethanonaphthalene, polychlorinated bicyclic terpenes and an ester of 2,4-dichlorophenoxyacetic acid selected from the group consisting of isopropyl esters, butyl esters and mixtures thereof; a hydrocarbon solvent; and from about 0.001% to about 1.0% of a substituted imidazoline salt having the structural formula



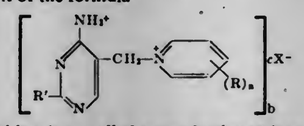
in which R is a hydrocarbon radical having from about 6 to about 24 carbon atoms selected from the group consisting of an alkyl radical, an alkenyl radical, an alkadienyl radical and mixtures thereof, R′ is selected from the group consisting of a hydrogen atom, a hydroxyethyl radical, and an aminoethyl radical, A is an anion of a polyunsaturated aliphatic carboxylic acid having from about 10 to about 60 carbon atoms, and *n* and *m* are integers from 1 to 3 inclusive.

3,020,200
1-(2 - ALKYL-4-AMINO-5-PYRIMIDINYLMETHYL)-ALKYL-PYRIDINIUM QUATERNARY SALTS FOR TREATING COCCIDIOSIS

Edward F. Rogers, Middletown, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application July 28, 1959, Ser. No. 829,979. Divided and this application June 24, 1960, Ser. No. 38,449
15 Claims. (Cl. 167—53.1)

2. A poultry feed supplement composition that comprises an edible inert carrier having dispersed therein from about 1% to about 40% by weight of a pyridinium quaternary salt of the formula



wherein R′ is a lower alkyl group having at least two carbon atoms, R is lower alkyl, X is an anion, *n* has a value of 1 to 3 inclusive, and *b* and *c* are positive numbers having values such that the positive charge of *b* moles of cation is neutralized by *c* moles of anion X.

3,020,201
l-ARGININE-l-GLUTAMATE INTRAVENOUS THERAPY OF HEPATIC COMA AMMONIA INTOXICATION

Arnold E. Osterberg, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,733
2 Claims. (Cl. 167—65)

1. A method of combating ammonia intoxication occuring during hepatic coma which comprises administering to a patient having elevated ammonia blood levels associated with hepatic coma a solution of l-arginine-l-glutamate by intravenous infusion.

3,020,202
2-ACETAMIDO-4-PHENYL THIAZOLE PROCESS OF INHIBITING GASTRIC SECRETION IN HUMAN BEINGS

Patrick H. Seay, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed July 21, 1959, Ser. No. 828,452
1 Claim. (Cl. 167—65)

The method of inhibiting gastric secretion in human beings which comprises the oral administration to said humans of an oral pharmaceutical preparation comprising in dosage unit form from about 5 to about 200 milligrams of 2-acetamido-4-phenylthiazole and an oral pharmaceutical carrier.

3,020,203
AGENT FOR THE TREATMENT OF TEMPORARY HOARSENESS

Lucien Harnist, Rua Aperana 117, Rio de Janeiro-Leblon, Brazil

No Drawing. Filed Jan. 11, 1960, Ser. No. 1,409
3 Claims. (Cl. 167—68)

1. A composition for the relief of temporary hoarseness comprising a pharmaceutical carrier and aluminum mandelate selected from the group consisting of

$Al_2O_3.6C_6H_5CH(OH)COOH$,
$Al_2O_3.3C_6H_5CH(OH)COOH$, and
$Al_2O_3.2C_6H_5CH(OH)COOH$.

3,020,204
PROCESS FOR PREPARING AUGMENTATIVE INTRINSIC FACTOR CONCENTRATE

Leon Ellenbogen, New City, and Samuel R. Hawkins, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 11, 1960, Ser. No. 28,237
4 Claims. (Cl. 195—2)

1. The process for the preparation of augmentative intrinsic factor concentrate having high potency which comprises digesting animal tissue containing intrinsic factor activity in an aqueous medium containing a proteolytic enzyme elaborated by a fungus selected from the group consisting of the species *Entomophthora apiculata, Entomophthora coronata, Basidiobolus ranarum, Conidiobolus brefeldianus* and *Conidiobolus villosus;* separating out the insoluble solid material from the aqueous digested mixture to provide an aqueous solution containing intrinsic factor; and drying said aqueous solution to provide a high potency augmentative intrinsic factor concentrate.

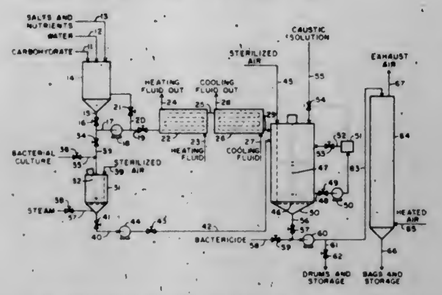
3,020,205
RECOVERY OF SULFUR FROM SULFATES

Mead Le Roy Jensen, Cheshire, Conn., assignor to Callahan Mining Corp., New York, N.Y.

No Drawing. Filed Oct. 9, 1958, Ser. No. 766,208
7 Claims. (Cl. 195—2)

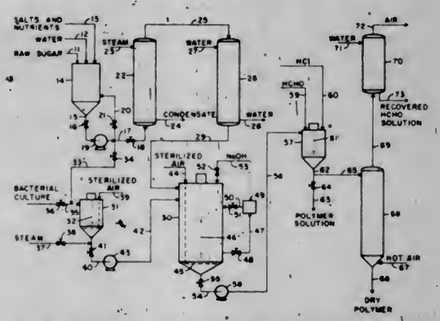
1. A process of recovering sulfur from sulfate ore chosen from the group of soluble and slightly soluble inorganic sulfates comprising the steps of, dissolving the sulfates in a water solution, subjecting the dissolved sulfate to fermentation by anaerobic bacteria of the genus Desulfovibrio thereby causing the liberation of hydrogen sulfide gas and then oxidizing said hydrogen sulfide gas to produce sulfur.

3,020,206
PROCESS FOR SYNTHESIZING POLYSACCHARIDES
John T. Patton and Gordon P. Lindblom, Tulsa, Okla., assignors to Jersey Production Research Company, a corporation of Delaware
Filed May 23, 1960, Ser. No. 31,187
13 Claims. (Cl. 195—31)



1. An improved process for producing a water-soluble heteropolysaccharide which comprises inoculating an aqueous carbohydrate solution with bacteria of the genus Xanthomonas, fermenting said solution, adding a base to said solution during the fermentation to maintain the pH between about 6 and about 7.5, and recovering a viscous solution containing heteropolysaccharide.

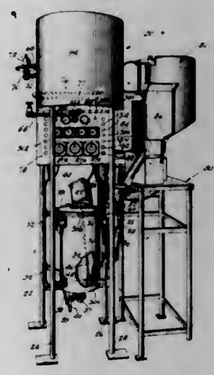
3,020,207
THICKENING AGENT AND PROCESS FOR PRODUCING SAME
John T. Patton, Tulsa, Okla., assignor to Jersey Production Research Company, a corporation of Delaware
Filed May 27, 1960, Ser. No. 32,241
16 Claims. (Cl. 195—31)



1. A process for preparing an improved thickening agent which comprises fermenting an aqueous carbohydrate solution with bacteria of the genus Xanthomonas to produce a heteropolysaccharide and thereafter reacting said heteropolysaccharide with a saturated, unsubstituted aldehyde containing from one to about four carbon atoms per molecule.

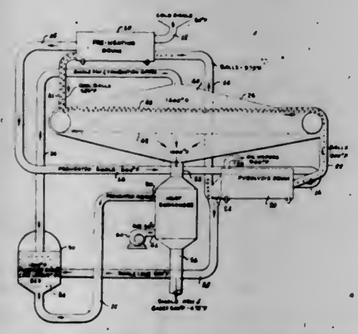
3,020,208
ACTIVE DRY YEAST REHYDRATOR
Robert F. Dale, Elm Grove, Alfred J. Backus, West Bend, and Edgar J. Kezeli, Grafton, Wis., assignors to Red Star Yeast and Products Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 10, 1960, Ser. No. 48,591
20 Claims. (Cl. 195—127)

1. An apparatus for effecting the rehydration of active dry yeast which comprises, a pressurizable mixing chamber, a hopper, a first valve associated with said hopper and in communication with said chamber adjacent the top thereof, said first valve being adapted to open to permit the transmission of materials therethrough from said hopper into said chamber and when closed being effective to sealingly close said chamber, whereby a pressure may be developed therein, means for delivering a predetermined quantity of water into said chamber at a predetermined temperature, a plurality of mechanisms for dispensing predetermined quantities of materials including



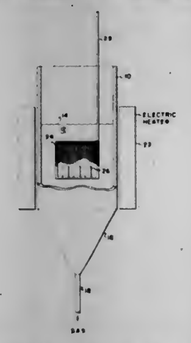
active dry yeast and substances promotive of the rehydration and growth of the yeast into said hopper, control means for said first valve to effect opening thereof as said materials are being dispensed by said mechanisms into said hopper, mixing means for effecting mixing within said chamber as said materials are being transmitted thereto through said first valve, a second valve adjacent the bottom of said chamber, and means for pressurizing said chamber after the mixing has been completed whereby the rehydrated yeast product may be discharged from said chamber through said second valve.

3,020,209
PLANT AND PROCESS FOR THE PRODUCTION OF OIL
William J. Culbertson, Jr., and Thomas D. Nevens, Denver, Colo., assignors, by mesne assignments, to The Oil Shale Corporation, Beverly Hills, Calif., a corporation of Nevada
Filed Oct. 20, 1958, Ser. No. 768,229
25 Claims. (Cl. 202—14)



1. A process for producing oil and gas from solid material leaving, upon pyrolysis, a solid carbonaceous residue, which comprises the steps of: pyrolyzing said solid material to produce oil vapors and gases, and a solid carbonaceous residue, heat for said pyrolysis step being provided by admixture of said solid material with solid heat-carrying bodies; combusting said solid carbonaceous residue, produced upon pyrolysis of said solid material, by means of a free oxygen-containing gas to thereby produce heat in the form of hot gaseous products, and solid products entrained therein; continuously passing solid bodies, in the form of a bed of shallow thickness, through at least a portion of said products of combustion whereby to re-heat said solid bodies; and repeating said pyrolyzing step by admixture of additional solid material with said reheated solid heat-carrying bodies.

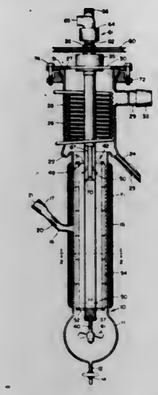
3,020,210
HEAT HARDENING FLUID COKE COMPACTIONS
Frank M. Stephens, Jr., and Howard C. Renken, Columbus, Ohio, assignors, by mesne assignments, to Esso Research and Engineering Company, Linden, N.J., a corporation of Delaware
Filed Feb. 24, 1955, Ser. No. 490,424
11 Claims. (Cl. 202—26)



1. In the thermal heat hardening of compactions of fluid coke particles made by a fluidized coking process with an agglutinating hydrocarbon binder substance at heat hardening temperatures at which temperatures the compactions normally tend to deform and oxidize, the improvement which comprises immersing the fluid coke compaction in a dense, turbulent, fluidized bed of coke particles maintained at heat hardening temperature to decompose said binder to a carbonaceous residue to produce adequate strength whereby deformation and excessive oxidation of said compaction are prevented, and withdrawing the thus heat hardened compaction from said fluidized bed.

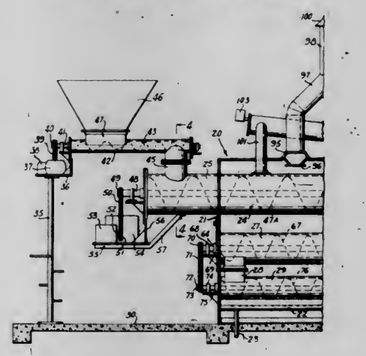
3,020,211
FILM-FORMING AND WIPING DISTILLATION PROCESS AND APPARATUS FOR CARRYING OUT THE SAME
Arthur F. Smith, 1516 Lake Road, Webster, N.Y.
Filed Nov. 28, 1958, Ser. No. 776,789
14 Claims. (Cl. 202—64)

12. A method for the fractional distillation of liquid comprising applying said liquid to at least a part of an internal surface of revolution having an upright axis to flow downwardly thereover in a film under the influence of gravity, heating the liquid in said film to vaporize at least a part thereof, partially condensing the vapor, returning the condensate to said surface for reheating thereof, continuously positively mechanically engaging on said surface of revolution axially-spaced bearing areas that have substantial axial extent and that have an angular extent that is substantial but that represents but a fraction of the angular extent of said surface of revolution, with the slotted faces of a column of independently radially-movable wiping blades, rotating said column relative to said surface to remove the film from said surface at the leading edges of said blades, continuously collecting the



removed material in the slots in said blade faces, continuously reapplying the removed material from said slots onto said surface of revolution, again to flow downwardly over said surface in film form, condensing the evolved vapor in an upper zone, and recovering as a product fraction the vapor that is condensed in said upper zone.

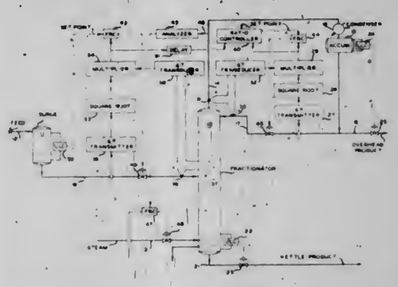
3,020,212
REFUSE CONVERTER
Dae C. Lantz, Burbank, Calif., assignor to Pan American Resources, Inc., Burbank, Calif.
Filed Nov. 4, 1959, Ser. No. 850,840
1 Claim. (Cl. 202—118)



In a continuously operating refuse converter, the combination of a housing comprising a combustion chamber, a burner in the bottom of said combustion chamber, a first pipe extending horizontally of said housing and having an end extending out of said housing, a refuse receiving hopper communicating with said extending end, a helical conveyor rotatable in and filling said first pipe, a second pipe of smaller diameter than said first pipe in said housing beneath and parallel to said first pipe, a second helical conveyor rotatable in and filling said second pipe, a first outlet passage between said first and second pipes at the end thereof opposite said hopper, said second helical conveyor operating in the direction

opposite to that of said first helical conveyor, a third pipe of smaller diameter than said second pipe below and parallel to said second pipe, a second outlet passage between said second pipe and said third pipe at the end thereof opposite said first outlet passage and smaller than said first outlet passage, a third helical conveyor rotatable in and filling said third pipe and operating in a direction opposite to that of said second helical conveyor, said third pipe having an end extending out of said housing at the end thereof opposite said refuse receiving hopper, cooling means surrounding the extending end of said third pipe, power means for driving all of said helical conveyors, an outlet at the end of said third pipe for discharging carbonaceous residue, said outlet comprising a rotary feeder including a housing, a rotatable shaft therein, and radial blades extending from said shaft, means comprising a chain and sprocket connection with said third helical conveyor for rotating said shaft, and outlet means communicating with said first pipe and extending out of the top of said housing adapted for the discharge of combustible gas into a storage unit.

3,020,213
FRACTIONATION CONTROL SYSTEM
Dale E. Lupfer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 16, 1959, Ser. No. 853,340
9 Claims. (Cl. 202—160)



1. In a fractionation system wherein a feed mixture of two or more components is directed to a fractionation column, a temperature differential is maintained between the bottom and top of said column, a vapor stream is removed from the top of said column, said vapor stream is cooled to condense at least a part of same, a part of the resulting condensate is returned to said column as external reflux, and a liquid stream is removed from the bottom of said column; a control system comprising first means to establish a signal R_e representative of the flow of said external reflux, second means to establish a signal ΔT representative of the difference between the temperature of vapor removed from said column and the temperature of said external reflux, third means responsive to said first and second means to establish a signal R_1 which is equal to

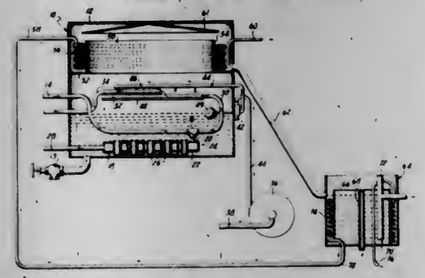
$$R_e\left(1+\frac{C_p}{\lambda}\Delta T\right)$$

where C_p is the specific heat of said external reflux and λ is the heat of vaporization of liquid in the top of said column, fourth means to establish a signal F representative of the flow of said feed mixture, fifth means to establish a signal $\Delta T'$ representative of the difference between the temperature of vapor in said column at the region said feed mixture enters said column and the temperature of said feed mixture, sixth means responsive to said fourth and fifth means to establish a signal F_1 which is equal to

$$F\left(1+\frac{C_p'}{\lambda'}\Delta T'\right)$$

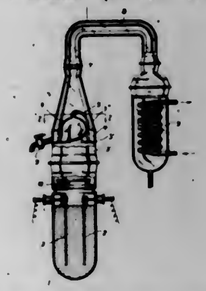
where C_p' is the specific heat of said feed mixture and λ' is the heat of vaporization of liquid in said column at said region where said feed mixture enters, seventh means responsive to said third and sixth means to establish a signal representative of the ratio of R_1 to F_1, and eighth means responsive to said seventh means to regulate the relative flows of said external reflux and said feed mixture.

3,020,214
DISTILLATION APPARATUS AND A METHOD OF OPERATING SAME
Daniel E. Beduhn and Richard E. Wernecke, Manitowoc, Wis.
Filed Nov. 9, 1956, Ser. No. 621,298
3 Claims. (Cl. 202—181)



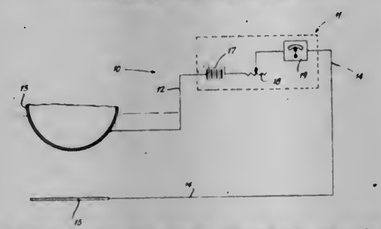
1. Apparatus for the suppression of foam in the distillation of multi-component liquids comprising a tank, a first heating surface disposed in said tank, said first heating surface including a generally horizontal substantially flat plate immediately underlying a heating coil, structure for discharging a liquid onto said first heating surface, a second heating surface disposed below said first heating surface, said structure being operable by a control which is responsive to a liquid level sensing device located between said heating surfaces, and a condensing surface in communication with the upper portion of said tank.

3,020,215
DISTILLING APPARATUS
Hans Weber, Mainz-Gonsenheim, Germany, assignor to Jenaer Glaswerk Schott & Gen., Mainz, Germany, a corporation of Germany
Filed May 22, 1958, Ser. No. 737,055
Claims priority, application Germany May 22, 1957
5 Claims. (Cl. 202—197)



1. A distilling apparatus comprising a still and a cyclone separator mounted above said still and connected thereto, said cyclone separator having an upwardly arched partition therein separating said still from said cyclone separator and forming an annular vortex chamber at the outside thereof with said cyclone separator, said partition serving as an inlet for distillate from said still and a jet tube connected to the uppermost point of said partition and communicating therewith extending within said separator and downwardly into said vortex chamber in a direction substantialy tangential to said partition.

3,020,216
PROCESS FOR PROTECTION AGAINST ELECTROLYTIC CORROSION OF VESSEL HULLS AND THE LIKE IN FRESH WATER
Richard D. Bradley, 824 Brookside, Glendale 22, Mo.
Filed Jan. 15, 1959, Ser. No. 787,043
6 Claims. (Cl. 204—23)



1. A process for preventing electrolytic corrosion of submerged metallic structures in marine fresh waters which comprises connecting through insulated electrical conduits the metallic structure as a cathode in an external circuit with a metallic zinc material as an anode, positioning said anode in the water underneath the cathode and controlling the current through said circuit and the water as an electrolyte at a current of about 0.05 to 0.3 milliampere current density per square foot of cathode surface to form a coating on the cathode while substantially eliminating the formation of any calcareous deposits.

3,020,217
MIRROR BRIGHT GOLD ALLOY ELECTROPLATING
Edwin Cornell Rinker, Morristown, N.J., assignor to Sel-Rex Precious Metals, Inc., Belleville, N.J., a corporation of New Jersey
No Drawing. Filed Oct. 19, 1956, Ser. No. 616,948
3 Claims. (Cl. 204—43)

1. A process for the electrodeposition of gold which comprises electrolyzing a gold cyanide bath containing, per gallon, the following ingredients within the range of proportions specified:

Potassium cyanide	oz.	4 to 16
Potassium gold cyanide	oz.	[1] 0.5 to 4
Potassium hydroxide	oz.	2 to 6
Antimony compound (calculated as antimony)	oz.	0.02 to 0.5
Polyhydric alcohol	cc.	30 to 120
Sulfonated vegetable oil	cc.	10 to 90

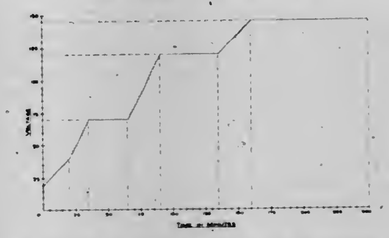
[1] Troy.

to form a bright yellow gold deposit.

3,020,218
ZINC ELECTROPLATING SOLUTION AND METHODS
Aloysius G. Cafferty, Venice, Calif., assignor to Western Electric Company, Incorporated, a corporation of New York
No Drawing. Filed July 28, 1960, Ser. No. 45,797
4 Claims. (Cl. 204—55)

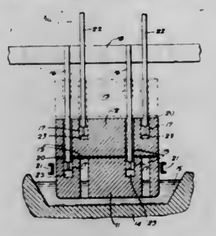
1. A zinc electroplating solution consisting essentially of an aqueous solution of zinc acetate, between approximately 30 and 90 grams per liter; citric acid, between approximately 1.5 and 3 times the grams-per-liter concentration of the zinc acetate; and a sufficient quantity of an alkaline pH-modifying substance to adjust the pH to a value within the range of about 4 to 5.5.

3,020,219
PROCESS FOR PRODUCING OXIDE COATINGS ON HIGH SILICON ALUMINUM ALLOY
John B. Franklin, Norwalk, and Norton W. Vallance, Jr., Downey, Calif., assignors, by mesne assignments, to Electralab Printed Electronics Corporation, Needham Heights, Mass, a corporation of Massachusetts
Filed Jan. 12, 1959, Ser. No. 786,005
10 Claims. (Cl. 204—58)



1. A process for coating high silicon aluminum alloy articles having at least 7% silicon with a hard and dense coating of oxide of aluminum which comprises passing an electric current at increasing constant voltage increments through an electrolytic cell containing an electrolyte with said article forming the anode, said electrolyte maintained between about 20° and 50° F. and comprising a water solution of between about 19% and 25% by volume of 66 Baumé sulfuric acid and an aqueous peat extract as additive, interrupting the voltage rise at between about 65 and 90 volts when an oxide coating of between about .001" and .0015" thick is formed, and maintaining the voltage substantially constant for a period of about 15 to 45 minutes at said interrupted voltage value to increase the oxide coating thickness during said period.

3,020,220
CONTINUOUS CARBON ELECTRODE
Werner Helling, Grevenbroich, Lower Rhine, Germany (Auerfelderstrasse 2, Munich 9, Germany) and Robert Lange, v. d. Portsendstrasse 9, Grevenbroich, Lower Rhine, Germany
Filed Nov. 29, 1957, Ser. No. 699,820
Claims priority, application Germany Sept. 9, 1952
15 Claims. (Cl. 204—67)



14. A method of forming a continuous carbon electrode in an operating electrolytic furnace for the production of aluminum from molten alumina-containing electrolyte, said furnace having a capacity of at least 50,000 amperes, comprising the steps of holding in an electrolytic furnace a lower preburnt carbon electrode block in a posi-

tion in which its lower portion reaches into the hot molten electrolyte in said furnace and its upper face extends horizontally and is spaced from the molten electrolyte above the same; placing on said horizontally extending upper face of said lower preburnt carbon electrode block while the same is held in said position in said furnace an upper preburnt carbon electrode block with a layer of unburnt carbonaceous binder material in plastic condition having a thickness of at least 5 mm. and consisting essentially of an intimate mixture of a carbonizable binder composition and of carbon particles having a maximum size of about 3 mm. interposed between said upper and lower preburnt carbon electrode blocks; engaging said lower preburnt carbon electrode block by first supporting and lowering means; discontinuing holding of said lower preburnt carbon electrode block in said position thereof; lowering said lower preburnt carbon electrode block by said first supporting and lowering means with said upper preburnt carbon electrode block placed thereon, whereby said layer of carbonaceous binder material reaches within said furnace a zone sufficiently hot to carbonize and harden said binder material and to thereby firmly connect said electrode blocks to each other; supporting said upper preburnt carbon electrode block at least after said lowering of said lower preburnt carbon electrode block by second supporting and lowering means; discontinuing engagement of said lower preburnt carbon electrode block by said first supporting and lowering means; and further lowering said electrode blocks firmly connected to each other by said second supporting and lowering means engaging only said upper preburnt carbon electrode block.

3,020,221
PROCESS FOR PRODUCING SODIUM

William H. Loftus, Lewiston, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

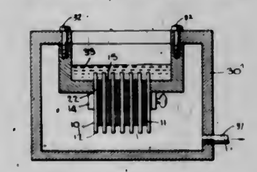
No Drawing. Filed June 20, 1960, Ser. No. 37,021
14 Claims. (Cl. 204—68)

1. The method of producing sodium at high current efficiency which comprises electrolyzing with direct current a fused salt mixture of sodium chloride, calcium chloride and a balance consisting essentially of barium chloride, said mixture having a percent by weight composition comprising a calcium chloride content in the range 15 to 30% and a sodium chloride content having a lower limit of 20%, an upper limit of 30% when the calcium chloride is less than 24% and an upper limit of 35% when the calcium chloride is 24 to 30%.

3,020,222
METHOD FOR CASTING SIDE SUPPORTING PLATES ONTO THE EDGES OF SPACED NUCLEAR FUEL PLATES

John L. Zambrow, Westbury, and Seymour I. Megeff, Flushing, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., a corporation of Delaware

Filed Sept. 28, 1959, Ser. No. 842,639
19 Claims. (Cl. 204—154.2)



1. A method of fabricating a side supporting member along corresponding edge portions of a plurality of spaced nuclear fuel plates comprising the steps of forming a porous molding cavity wherein said edge portions project into said cavity through one surface thereof to a preselected degree, introducing molten material into said cavity to cover said edges, and applying a differential pressure across said surface while said molten material hardens to insure intimate contact of said material with said edge portions along their lengths, said differential pressure including a vacuum applied beneath said porous molding cavity.

12. A method of assembling a plurality of fuel plates in a nuclear reactor fuel assembly comprising the steps of arranging said plates in a desired spaced orientation and temporarily interconnecting said plates as a group with edges of respective selected edges aligned relative to one another, molding a side supporting member in situ along each group of aligned side edges and thereafter removing the temporary interconnection between said plates.

3,020,223
MANUFACTURE OF HYDRAZINE

Jean P. Manion, Milwaukee, Wis., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

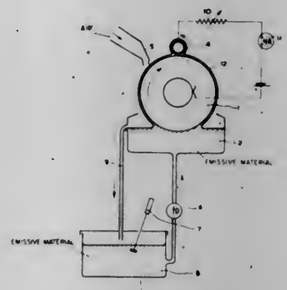
No Drawing. Filed Aug. 25, 1958, Ser. No. 757,142
2 Claims. (Cl. 204—177)

1. The process of preparing hydrazine which comprises subjecting an ammoniacal gas to an electrical glow discharge, said gas containing 0.05 to 5% by volume of an acyclic allyl compound chosen from the group consisting of allyl amine, allyl alcohol, and allyl chloride.

3,020,224
METHOD AND DEVICE FOR APPLYING ELECTRON-EMISSIVE COATINGS TO COATING-SUPPORTS OF INDIRECTLY HEATED THERMIONIC CATHODES OF ELECTRIC DISCHARGE TUBES

Hans Hinrich Blank, Hamburg-Wellingsbuttel, Germany, and Pieter Geert van Zanten, Adrianus Kulper, and Friedrich Hermann Raymund Almer, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 24, 1958, Ser. No. 730,633
10 Claims. (Cl. 204—181)



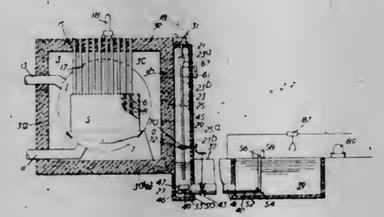
5. A method of applying a coating of emissive material onto a support for making a cathode, comprising the steps of rotating a coating roller in one direction in contact with a supply of paste-like emissive material thereby forming a film of said material on the coating roller, rotating the cathode support in the opposite direction in contact with the emissive material film to transfer emissive material onto the support, maintaining a potential difference between the cathode support and coating roller, with the roller positive, whereby cataphoretic deposition occurs, air-stripping the emissive material film from the coating roller to terminate the material-transferring process while the roller and support continue to rotate, and drying the coating on the support while it rotates.

8. Apparatus for coating a support with emissive material to form a cathode, comprising a vessel for holding a supply of paste-like emissive material, a coating roller whose surface contacts the supply of emissive material and means for rotating the coating roller in one direction whereby a film of emissive material is established on the roller, means for supporting and rotating the cathode support in the opposite direction in contact with the film of emissive material on the support thereby to transfer material onto the support, means for maintaining the coating roller at a positive potential relative to the support so that cataphoretic deposition occurs, and means located between the vessel and the support on the side of the roller travelling toward the support for air stripping the film of emissive material from the coating roller thereby to terminate the material-transferring operation.

3,020,225
MATERIAL HANDLING PLANT

William R. Wootton, London, England, assignor to Babcock & Wilcox Limited, London, England, a British company

Filed Feb. 27, 1957, Ser. No. 642,696
Claims priority, application Great Britain Mar. 1, 1956
4 Claims. (Cl. 204—193.2)

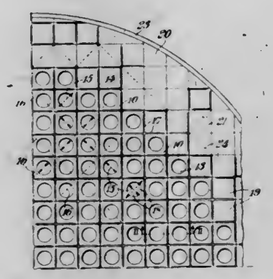


1. Plant for conveying from an upper level used fuel elements withdrawn from a nuclear reactor and released at said upper level to a movable fuel-element receiver at a lower level and adapted for the reception of a plurality of fuel elements at respective locations therein, comprising a fluid-tight chamber adapted to receive in its lower portion the movable fuel-element receiver, a generally vertically-extending disposal tube positioned in said chamber and having an opening at its upper portion to receive a used fuel element withdrawn from the nuclear reactor and released at said upper level and which is adapted to guide the descent of the used fuel element under gravity and to discharge said used fuel element from its lower end at said lower level to the fuel-element receiver, means for maintaining a body of liquid in the lower portion of said chamber with the upper surface thereof above the level of the bottom of the disposal tube, a blower having its discharge outlet communicating with the chamber to discharge air into the chamber at superatmospheric pressure to pressurize the chamber to force liquid from said body upwardly in the disposal tube to a level higher than the normal level of the body of liquid when the chamber is at atmospheric pressure to brake the descent of a used fuel element passing downwardly through said disposal tube, and means to shift the discharge end of the disposal tube to different positions, whereby the lower end of the disposal tube may be positioned to discharge used fuel elements passing therethrough into different locations in the fuel-element receiver.

3,020,226
NUCLEAR REACTOR MODERATOR STRUCTURES

Stanley Hackney, Fearnhead, Warrington, England, assignor to United Kingdom Atomic Energy Authority, London, England

Filed July 1, 1958, Ser. No. 745,885
Claims priority, application Great Britain July 1, 1957
1 Claim. (Cl. 204—193.2)

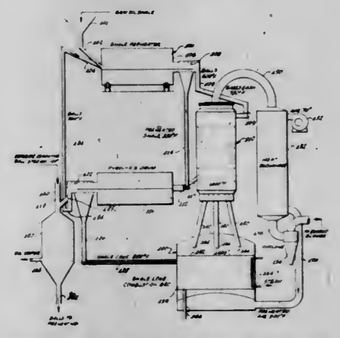


A graphite moderator structure comprising right prismatic blocks of basic rectangular section and stacked on a rectangular lattice in columns, each block engaging at its side faces with adjacent blocks and defining a fuel element channel passing through the block in the direction of the axes of the columns, the direction of minimum Wigner growth in all blocks being perpendicular to the axes of the fuel element channels but changing between blocks so as to be in the direction of one diagonal plane in any one block and in the direction of the other diagonal plane in any of the blocks adjacent to the side faces thereof, the side faces being recessed to accommodate Wigner growth perpendicular to said diagonal planes.

3,020,227
PROCESS AND APPARATUS FOR HEATING SOLID INERT HEAT-CARRYING BODIES

Thomas D. Nevens and William J. Culbertson, Jr., Denver, Colo., assignors, by mesne assignments, to The Oil Shale Corporation, Beverly Hills, Calif., a corporation of Nevada

Filed Dec. 21, 1959, Ser. No. 861,086
13 Claims. (Cl. 208—11)



1. A process for the production of oil from carbonaceous material, which comprises: heating and simultaneously grinding said carbonaceous material by solid-to-solid milling contact with hotter solid heat-carrying bodies in a heating and grinding zone, to produce oil vapors and gases and a fluidizable combustible residue of smaller average size than said solid heat-carrying bodies; trans-

ferring said fluidizable combustible residue to a combustion zone; fluidizing and combusting said combustible residue in said combustion zone by means of a fluidizing combustion-supporting gas; transferring said heat-carrying bodies to a reheating zone to form therein a plurality of vertically spaced shallow beds of heat-carrying bodies; blowing the combustion gas resulting from combustion of said combustible residue through said beds of heat-carrying bodies to fluidize them and reheat them; moving said heat-carrying bodies successively downwardly from bed to bed in said reheating zone; withdrawing said heat-carrying bodies from a lower bed of said reheating zone and transferring them back to said heating and grinding zone to heat and grind additional carbonaceous material.

3,020,228

UPGRADING LUBRICATING OILS BY HYDROGENATION WITH A THREE COMPONENT CATALYST

Jacques Demeester, Paris, France, assignor to The British Petroleum Company Limited, London, England, a joint-stock corporation of Great Britain

No Drawing. Filed Apr. 27, 1959, Ser. No. 808,862
Claims priority, application France May 2, 1958
22 Claims. (Cl. 208—264)

1. A process for refining a lubricating oil to produce an oil of improved stability, which comprises contacting the oil in the presence of hydrogen and at a temperature of between about 150° and 340° C. with a catalyst consisting of alumina and the oxides of molybdenum, iron, and cobalt; the oxides being supported on the alumina, and the ratio, by weight, of molybdenum oxide to cobalt oxide being at least equal to 1.5:1, the content of molybdenum oxide being between about 3 and 20% by weight of the total catalyst weight, and the minimum content of iron oxide being 10% of the total catalyst weight when said ratio is equal to 1.5:1, progressively less than 10% of the total catalyst weight as said ratio increases from 1.5:1 to 3:1, 4% of the total catalyst weight when said ratio is in the region of 3:1, and progressively more than 4% of the total catalyst weight as said ratio increases above 3:1.

3,020,229

COAGULATION OF DISPERSED CARBONACEOUS MATERIAL

Bruce R. Thompson, Charleston, Fred N. Hill, South Charleston, and Keith L. Smith, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 28, 1957, Ser. No. 692,519
11 Claims. (Cl. 210—54)

1. A method of coagulating an aqueous suspension containing substances composed predominantly of elemental carbon which comprises adding to said aqueous suspension a coagulating amount of poly(ethylene oxide) which has a reduced viscosity value of at least 1.0 as determined at a concentration of 0.2 gram of said poly(ethylene oxide) per 100 milliliters of acetonitrile at 30° C.

3,020,230

COAGULATION OF DISPERSED SOLIDS

Keith L. Smith, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 28, 1957, Ser. No. 692,523
6 Claims. (Cl. 210—54)

1. A method of coagulating a liquid suspension comprising silica which comprises adding to said liquid suspension a coagulating amount of poly(ethylene oxide) which has a reduced viscosity of at least 1.0 as determined at a concentration of 0.2 gram of said poly(ethylene oxide) per 100 milliliters of acetonitrile at 30° C.

3,020,231

COAGULATION

Charles E. Colwell and Robert C. Miller, Pittsburgh, Pa., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 18, 1957, Ser. No. 696,928
36 Claims. (Cl. 210—54)

1. A method for coagulating solids comprising clay mineral suspended in an aqueous medium which comprises adding to said aqueous medium a coagulating amount of poly(ethylene oxide) which has a reduced viscosity value of a least 1.0 as measured at a concentration of 0.2 gram of said poly(ethylene oxide) in 100 milliliters of acetonitrile at 30° C.

3,020,232

DRILLING MUD CONDITIONER

Joseph Bayne Doughty, Charleston, S.C., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 21, 1958, Ser. No. 729,537
4 Claims. (Cl. 252—8.5)

1. The process of preparing a drilling mud additive including sulfonated lignin, which process comprises preparing a mixture of an isolated lignin with ground bark, chosen from the group consisting of pine and gum, in which the bark constitutes 5 to 75% of the mixture, cooking the mixture at a temperature of 135° to 270° C. in an aqueous solution of a lignin sulfonating chemical chosen from the group consisting of an alkali metal sulfite, an alkali metal bisulfite, and a mixture of alkali metal bisulfite with sulfurous acid, and containing from ½ to 8 mols of the chemical to each 840 grams of lignin-bark mixture, until substantially all of the soluble materials are dissolved, and reserving as drilling mud additive the cooked mixture, including at least the soluble and insoluble solids of the cook.

3,020,233

GREASE COMPOSITION

Dennis F. Hallowell, Jr., Fullerton, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed Apr. 29, 1959, Ser. No. 809,600
4 Claims. (Cl. 252—40.7)

1. A grease composition consisting essentially of a lubricating oil thickened to a grease consistency with a soap selected from the group consisting of alkali metal and alkaline earth metal fatty acid soaps and from about 0.25 to 20% of monostearoyl tetraethylene pentamine silicate.

3,020,234

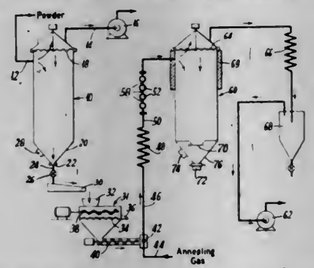
METHOD AND APPARATUS FOR PRODUCING A HOMOGENEOUS THERMAL INSULATION MIXTURE

Wilfried Haumann, Indianapolis, Ind., assignor to Union Carbide Corporation, a corporation of New York

Continuation of application Ser. No. 580,899, Apr. 26, 1956. This application Oct. 6, 1959, Ser. No. 845,302
6 Claims. (Cl. 252—62)

2. In the production of a dry thermal insulation mixture of finely divided low heat conductive powder and finely divided oxidizable radiant heat barrier material, a high-speed method of reducing the occurrence of segregation of said low heat conductive powder and radiant heat barrier material and improving the homogeneity thereof while preventing surface oxidation of said barrier material, said method comprising preliminarily mixing said low conductive powder and radiant heat barrier material in the desired proportions, gas blowing the preliminary mix in a gas stream of nitrogen and hydrogen, finally mixing the gas-blown preliminary mix by passage thereof through alternately divergent and convergent reentrant paths, whereby said preliminary mix is subjected to an intense circulatory acceleration and turbulent action, and mechanically separating and removing the resulting mixture from said gas, thereby effecting an intimately commingled insulation mixture.

5. Apparatus for the production of a homogeneous mixture of finely divided low heat conductive powder and radiant heat barrier material comprising a preliminary insulation mix supply container, a vibratory feeder for



receiving insulation mix from said container and delivering said mix to a fluidization chamber, sifter apparatus between said vibratory feeder and said fluidization chamber to remove oversize particles, means for fluidizing said mix in a reducing carrier gas, a series of toroidally shaped mixing chambers for turbulently moving said fluidized mix, and means for separating said carrier gas from the resulting mixture whereby an intimately commingled insulation mixture is effected.

3,020,235

FERROMAGNETIC MATERIAL

Gerard Heinrich Jonker and Poul Bernard Braun, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 14, 1957, Ser. No. 689,740
Claims priority, application Netherlands Oct. 19, 1956
5 Claims. (Cl. 252—62.5)

1. A ferromagnetic material consisting essentially of crystals having the composition:

$$Ba_{(1-a-b-e)}Sr_aPb_bCa_eMe^{II}_{(3-d-e-f)}Co^{II}_dCu^{II}_eMn^{II}_fFe^{III}_{(28-g)}Co^{III}_gO_{46}$$

in which Me^{II} is at least one bivalent metal selected from the group consisting of Fe^{II}, Ni, Zn and Mg and in which a is at most 1, b is at most 0.7, c is at most 0.6, d is at most 2, e is at most 0.6, f is at most 0.6, g is at most 0.5, said crystals having a rhombohedral structure, the elementary cell of which can be described in the hexagonal crystal system by a c-axis of about 113.1 A., and an a-axis of about 5.9 A.

3,020,236

MANGANESE-ZINC FERRITE AND METHOD OF MAKING

Alfred Sommers, Bergenfield, N.J., assignor to General Precision, Inc., a corporation of Delaware

No Drawing. Filed June 10, 1959, Ser. No. 819,226
2 Claims. (Cl. 252—62.5)

1. A method of preparing a manganese-zinc ferrite with high magnetic permeability, small loss factor and a Curie point of about 180° C., comprising the steps of

milling a calcined mixture of a particle size of no greater than 1 micron consisting essentially in mol percentage of about 52% Fe_2O_3, between about 15% to about 25% MnO_2, between about 5% to about 15% Mn_3O_4, and about 18% ZnO, for a time period of between 24 to 48 hours utilizing only distilled water during the milling operation to keep the alkali impurity content as low as possible;

drying the mixture;

molding the mixture with a binder into desired shapes;

sintering the mixture for between about 2 to about 4 hours at a temperature of between about 1300° C. to about 1350° C. in an atmosphere of about 24% oxygen and the balance substantially nitrogen;

slowly reducing said oxygen content so that at the end the oxygen content is about ½ of 1%; and,

slowly cooling said sintered product in a nitrogen atmosphere.

3,020,237

CLEANSING COMPOSITION IN DRY GRANULAR FORM

Lyman D. Dunn, 603 Addison St., Chicago, Ill.

No Drawing. Filed Oct. 25, 1957, Ser. No. 692,261
8 Claims. (Cl. 252—109)

1. A dry, pulverulent cleansing composition capable of sudsing, which composition has been produced by mixing together until dry approximately 71 to 87 parts by dry weight of borax and approximately 1 to 6 parts by dry weight of a potassium soft soap containing by weight of said soap up to about 40% water, said soft soap being a potassium soap of a short chain fatty acid comprising a mixture containing at least about 70% of fatty acid having from 8 to 14 carbon atoms of which at least about 60% has from 12 to 14 carbon atoms, thereafter adding approximately 12 to 25 parts by dry weight of a sodium soap of a long chain fatty acid comprising a mixture containing at least about 90% of fatty acid having from 16 to 18 carbon atoms, and mixing said borax-potassium soap mixture and said sodium soap together to produce a product in a dry granular form.

3,020,238

PROCESS OF MANUFACTURING A SPECIAL GLASS APPLICABLE FOR MAKING A RADIO-PHOTOLUMINESCENCE DOSIMETER

Motosuke Munakata, Setagaya-ku, Tokyo-to, and Junpei Asahara, Shinjuku, Tokyo-to, Japan, assignors to Agency of Industrial Science and Technology, Ministry of International Trade and Industry, Tokyo-to, Japan

No Drawing. Filed Dec. 10, 1958, Ser. No. 779,274
Claims priority, application Japan Dec. 27, 1957
9 Claims. (Cl. 252—301.6)

4. An opaque solid body comprising glassy base material and fine crystalline particles contained therein, the amount of said particles being at least 15% by weight of the material, said particles being uniformly dispersed in the glassy base material and having a maximum diameter of about 50μ, said body being produced by mixing together P_2O_5, Al_2O_3, a metal compound selected from the group consisting of BaO, MgO, CaO, SrO and ZnO, an alkali metal compound selected from the group consisting of K_2O and Na_2O, and Ag_2O, said Ag_2O being present in the amount of 4 to 6 percent of the total weight of the mixture, and said P_2O_5 and said Al_2O_3 being present in the proportions to provide in said glass 64 to 75.3 weight percent of P_2O_5 and 7.9 to 13.5 weight percent of Al_2O_3, heating said mixture at a temperature from 1100° C. to 1350° C. to melt said mixture and to form microcrystals uniformly dispersed in the melted mass, each of said particles having a maximum diameter of 50μ and the quantity of said particles being at least about 15 weight percent of the product, and cooling and solidifying said melted mass, whereby to form an opaque body.

3,020,239

REMOVAL OF VANADIUM FROM A SUPPORTED MOLYBDENUM-CONTAINING CATALYST

Richard A. Flinn and Meredith M. Stewart, Penn Hills, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 4, 1958, Ser. No. 778,084
5 Claims. (Cl. 252—413)

1. A process for the removal of vanadium from a catalyst composition which contains molybdenum supported

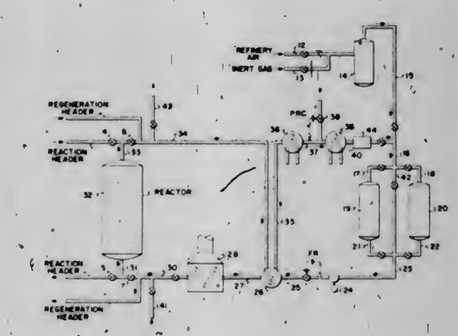
on a carrier, said removal being accomplished without substantial concomitant removal of molybdenum from said catalyst composition, which process comprises washing said catalyst composition for a period of at least about one-half hour with an aqueous solution of between about 0.1 and 50 weight percent glycolic acid at a temperature between about 30° and 150° F.

3,020,240

CATALYST REACTIVATION PROCESS

William Lockett, Jr., Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 3, 1956, Ser. No. 625,669
7 Claims. (Cl. 252—419)



1. An improved process for the reactivation of platinum-on-alumina hydroforming catalysts which have become deactivated by the accumulation of carbonaceous deposits thereon during the hydroforming process as well as by the agglomeration of the platinum into large crystallities of low activity, which comprises stripping the spent catalyst of hydrogen and hydrocarbon materials, regenerating the stripped catalyst by circulating flue gas containing a small amount of oxygen through the catalyst at a pressure of over about 100 p.s.i.g. thereby burning carbonaceous deposits off the catalyst at temperatures below 1050° F., withdrawing flue gases from the catalyst undergoing regeneration, passing the withdrawn flue gases through a drier to remove water formed during regeneration, recycling the dried flue gas containing a small amount of oxygen to the catalyst to complete the regeneration thereof, partially rejuvenating the regenerated catalyst by increasing the oxygen content of the dry recycle flue gas stream to over 5 mol percent, continuing the circulation of this gas stream at a temperature of at least 900° F. and at a pressure above about 100 p.s.i.g. over the catalyst and through the driers for a period of time sufficient to dry out the system and partially rejuvenate the catalyst, chlorine treating the partially rejuvenated catalyst by adding chlorine to the said recirculating rejuvenating gas stream while maintaining the pressure above about 100 p.s.i.g., bypassing such a recirculating gas stream around the driers during the chlorine addition step, discontinuing the addition of chlorine when the total amount of chlorine charged is about 0.5 to 2.0 wt. percent based on the catalyst and completing the rejuvenation of the catalyst by continuing to recirculate the oxygen-containing stream at a temperature of at least 910° F. and at a pressure above about 100 p.s.i.g., the total catalyst reactivation time being at most about 10 hours.

3,020,241

METHOD FOR PREPARING VAPOR-PHASE ISOMERIZATION CATALYST

John A. Ridgway, Jr., and Buell O'Connor, Texas City, Tex., assignors, by mesne assignments, to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Nov. 17, 1958, Ser. No. 774,085
8 Claims. (Cl. 252—439)

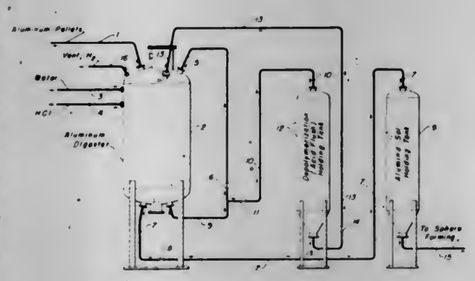
1. A method for preparing a superior catalyst for isomerization of light hydrocarbons which comprises impregnating solid hydrous alumina containing between about 1 to 30 percent by weight of combined water in the presence of between about 0.001 to 0.02 mole of aluminum chloride per mole of dry Al_2O_3 with a solution of a platinum compound whereby platinum is added thereto in a proportion between about 0.01 and 2.0 percent by weight, based on dry Al_2O_3, drying and calcining, impregnating the resulting composite with hydrogen fluoride to a fluoride level in the range of about 0.5 to 5 percent by weight, based on dry Al_2O_3, exposing the composite to a substance selected from the group consisting of sulfur, sulfur-containing compounds, and mixtures thereof in sufficient quantity so that the catalyst is contacted with at least about 0.1 percent by weight of sulfur, based on dry Al_2O_3, and calcining.

3,020,242

ALUMINA SOL MANUFACTURE

Daniel E. McCartney, Mount Prospect, and James Hoekstra, Evergreen Park, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Dec. 20, 1957, Ser. No. 704,102
13 Claims. (Cl. 252—442)



1. In the process for the manufacture of an alumina sol containing combined chloride wherein aluminum is contacted with concentrated hydrochloric acid in an aluminum digestion zone, forming thereby alumina sol and high molecular weight sol polymers, the improvement which comprises separating alumina sol from undissolved aluminum particles and high molecular weight sol polymers within said digestion zone and removing the same from said zone, commingling with said undissolved aluminum particles and polymers hydrochloric acid at a rate in excess of that required to maintain the aluminum/chloride weight ratio of the resulting alumina sol below a level of about 0.3 for a period of from about 1 to about 6 hours, and circulating the resulting solution through said digestion zone.

3,020,243

PREPARATION OF GEL EXTRUDATES

Ronald E. Reitmeier, Middletown, Ky., assignor to Catalysts and Chemicals Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Filed May 22, 1958, Ser. No. 736,989
2 Claims. (Cl. 252—465)

1. A method of preparing an extruded molybdenum oxide-cobalt oxide catalyst supported on a carrier of a mixture of alumina and kaolin, said catalyst having the cobalt oxide uniformly dispersed in the carrier, being resistant to shattering and being dimensionally stable in use at elevated temperature for desulfurization and hydrocarbon conversion, comprising mixing 1) molybdenum oxide in dry form in an amount of from about 3% to about 20% of the total weight of the mixture (2) about 25–35% by weight of dry activated alumina, (3) dry kaolin in an amount of about ½ of said activated alumina, and (4) the remainder consisting of hydrated alumina, said hydrated alumina containing about 28% by weight of combined water and being in the dry state, there being present a greater amount of said hydrated alumina than said activated alumina, thereafter adding a sufficient amount of water containing a cobalt salt dissolved therein capable of being converted to cobalt oxide promoter on calcining said catalyst, the amount of said cobalt oxide varying from between about 2 to about 3.5% while continuing said mixing, adding aqueous nitric acid to form a plastic doughy mass, extruding said mass, drying said extrudate at a temperature of from 300–500° F. and calcining at a temperature of about 700–1200° F. to effect uniform shrinkage of the extruded catalyst.

3,020,244

PREPARATION OF HOMOGENEOUS CATALYSTS CONTAINING COBALT OXIDE AND ALUMINUM OXIDE

Edward K. Dienes, Louisville, Ky., assignor to Catalysts and Chemicals, Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 736,988, May 22, 1958. This application May 27, 1959, Ser. No. 816,079
5 Claims. (Cl. 252—465)

1. A method of preparing porous, hard cobalt oxide-molybdenum trioxide catalyst extrudate containing a major proportion of aluminum oxide as the carrier and having high mechanical strength consisting essentially of the steps of uniformly mixing in the dry state, from about 5–50% by weight of total catalyst of molybdenum oxide, hydrated alumina containing from 15 to 35% by weight of combined water of hydration, and a high surface area crystalline non-peptizable material selected from the group consisting of calcined alumina, calcined zirconia and calcined titania, said crystalline material having a surface area of from 100 to 350 square meters per gram and constituting from about 10% up to about 50% by weight of the finished catalyst, adding to said mixture a water solution of a divalent cobalt salt which is capable of decomposing to cobaltous oxide on heating the catalyst mixture after the extruding step, the amount of cobalt added providing from about 1% to about 5% of cobalt oxide in the finished catalyst, said water solution of said cobalt salt containing at least 3% of free nitric acid and up to about 20% of nitric acid, adding a solid combustible organic reducing agent in an amount of at least one mole of reducing agent per mole of cobalt, expressed as metal, in the finished catalyst, which upon calcining for decomposition of said cobalt salt imparts porosity to the finished catalyst extrudate, mixing the aforesaid ingredients whereby said nitric acid peptizes said hydrated alumina to form a stiff paste, extruding said paste, drying and calcining the extrudate at a temperature up to about 950° F. to decompose said cobalt salt to cobaltous oxide.

3,020,245

PREPARATION OF CATALYSTS CONTAINING COBALT AND MOLYBDENUM OXIDES

Ronald E. Reitmeier, Middletown, Ky., assignor to Catalysts and Chemicals Inc., Louisville, Ky., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 736,987, May 22, 1958. This application May 27, 1959, Ser. No. 816,080
2 Claims. (Cl. 252—465)

1. A method of preparing a hard, porous desulfurization catalyst containing as the active ingredients about 3.5% cobalt oxide and about 10%–15% of molybdenum oxide on inert support consisting of alumina consisting essentially of the steps of mixing in the dry state (1) finely divided molybdenum oxide in the entire amount required in the finished catalyst, (2) porous calcined alumina having a surface area of about 30 to 350 square meters per gram and an average pore diameter in the range of 20 to 100 Angstrom units in an amount of from 10 to 50% of the total carrier in the finished catalyst, (3) hydrated alumina containing 15–35% by weight of combined water of hydration to provide substantially the entire remainder of said carrier, adding to said dry mixture a water solution of cobalt nitrate in an amount to provide the entire cobalt oxide content of the finished catalyst and milling the mixture to form a plastic doughy mass, there being present about 3% to about 20% of strong mineral acid present during this mixing operation, said mineral acid being selected from the group consisting of hydrochloric acid, nitric acid and sulfuric acid, extruding the mass to form a shaped plastic catalyst body, drying said shaped catalyst, calcining at elevated temperatures first at about 500° F. and then at 950° F. for a period of time to decompose the cobalt nitrate.

3,020,246

CARBON-NITROGEN POLYMERS AND METHOD OF PREPARING SAME

William L. Fierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed May 28, 1959, Ser. No. 816,391
3 Claims. (Cl. 260—2)

1. A method of preparing carbon-nitrogen polymers which comprises heating an anhydrous mixture of ammonia and cyanogen, at an ammonia/cyanogen mol ratio in excess of 1, at a pressure greater than about 30 p.s.i.g., to a temperature in the range from about 100°–400° F.

3,020,247

DYEING OF EXPANDABLE POLYSTYRENE

Joseph Bianco, Lock Haven, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed June 6, 1960, Ser. No. 33,928
9 Claims. (Cl. 260—2.5)

1. A method of dyeing expandable polystyrene particles which are capable of further expansion comprising immersing said particles for at least 1.5 minutes in an aqueous dye solution comprising from 0.1–7.5% by weight of water of a water insoluble, organic solvent soluble dye, and from 0.1–0.5 mole per liter of water of a solvent selected from the group consisting of dimethyl formamide, dimethyl acetonate, dimethyl sulfoxide and N-methylpyrrolidone, said dyeing solution being heated and maintained at a temperature of less than 90° C.

3,020,248

METHOD OF MAKING EXPANDABLE PLASTIC AND PREPARATION OF CELLULAR PLASTIC THEREFROM

George E. Henning, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 29, 1955, Ser. No. 556,331
4 Claims. (Cl. 260—2.5)

1. A method of making expandable plastic materials, which comprises introducing granules of an extrudable solid organic thermoplastic compound selected from the groups consisting of polyethylene, polyvinyl chloride and copolymers of vinyl chloride and vinyl acetate into a treating zone, introducing into the treating zone a liquefied, normally gaseous expanding medium to be absorbed into the granules of the thermoplastic compound, said treating zone being sealed to the atmosphere, said liquefied expanding medium being selected from the group consisting of dichlorodifluoromethane, chlorodifluoromethane, dichlorofluoromethane, dichlorotetrafluoroethane, difluorochloroethane, 1,1-difluoroethane, and trichlorofluoromethane and having a specific gravity greater than the specific gravity of the granules of the thermoplastic compound, the level of the liquefied expanding medium introduced into the treating zone being sufficiently less than the level of the granules of the thermoplastic compound so that the granules of the thermoplastic compound will rest at the bottom of the treating zone rather than floating in the liquefied expanding medium, heating the treating zone containing the granules of the thermoplastic compound and the liquefied expanding medium to a temperature below the critical temperature of the liquefied expanding medium to increase the rate of absorption of the liquefied expanding medium by the granules of the thermoplastic compound, allowing the granules of the thermoplastic compound to soak in the expanding medium until the desired amount of liquefied expanding medium has been absorbed by the granules of thermoplastic compound, withdrawing the granules of the thermoplastic compound soaked with the desired amount of the liquefied expanding medium from the bottom of the zone while preventing exposure of the soaked granules of the thermoplastic compound to the atmosphere, and withdrawing a sufficient amount of the liquefied expanding medium from the zone while removing the soaked granules of the thermoplastic compound therefrom so that the difference in the level of the granules of the thermoplastic compound and the level of the liquefied expanding medium remaining in the zone is sufficient to maintain the granules of the thermoplastic compound at rest at the bottom of the treating zone rather than floating in the liquefied expanding medium.

3,020,249

PREPARATION OF POLYURETHANE FOAM FROM ALKYD POLYESTER RESIN AND A TOLUENE DIISOCYANATE AND 1,2,6-HEXANETRIOL ADDUCT

Omer E. Curtis, Jr., Toledo, Ohio, assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Filed July 22, 1957, Ser. No. 673,142
4 Claims. (Cl. 260—2.5)

1. A process for the production of polyurethane foam which comprises reacting the adduct of 1,2,6-hexanetriol and toluene diisocyanate in excess toluene diisocyanate prepared by heating toluene diisocyanate to a temperature within the range of 75–125° C., admixing 1,2,6-hexanetriol in the proportion of 4–20 parts by weight of 1,2,6-hexanetriol per 100 parts by weight of toluene diisocyanate, maintaining the temperature of the mixture consisting essentially of 1,2,6-hexanetriol and toluene diisocyanate within the range of 100–125° C. for a sufficient length of time to produce an adduct of 1,2,6-hexanetriol and toluene diisocyanate in excess toluene diisocyanate; with an alkyd polyester resin produced by reaction of a dicarboxylic acid selected from the group consisting of phthalic, isophthalic, terephthalic, succinic, adipic, maleic, fumaric, malic, camphoric, diphenic acids and anhydrides thereof, with a polyhydroxy compound selected from the group consisting of ethylene glycol, diethylene glycol, hexamethylene glycol, pinacol, glycerol, trimethylolpropane, trimethylolethane, hexanetriol, erythritol, pentaerythritol, and mannitol in the proportion of 1.00 mol dibasic acid, less than 0.85 mol diol polyhydroxy compound and 2.00–0.35 mol triol polyhydroxy compound together with water to produce a foam and in the presence of a tertiary amine resinification catalyst and an organic dispersing agent.

3,020,250

AQUEOUS EPOXY RESIN EMULSIONS AND COATINGS THEREFROM

Stanley Norwalk, Springfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Aug. 4, 1959, Ser. No. 831,498
25 Claims. (Cl. 260—7)

10. A curable aqueous epoxy resin emulsion consisting essentially of an oil phase comprising a polyglycidyl ether of a polyhydric phenol, a water phase, a water-dispersible protein colloidally dispersed in the water phase as a protective colloid and an amount of urea sufficient to cure said polyglycidyl ether of a polyhydric phenol.

3,020,251

RESINOUS COMPOSITIONS DERIVED FROM POLYAMIDES AND ALKYLBENZENE DIISOCYANATES

Donald H. Russell, Pennsauken, N.J., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 15, 1959, Ser. No. 846,558
1 Claim. (Cl. 260—18)

A composition of matter comprising an alkylbenzene diisocyanate wherein the alkyl radical is selected from the group consisting of branched and normal chains and contains from about 9 to about 18 carbon atoms and a polymeric polyamide in a ratio of from about 1:1 to about 1:3, respectively, based on weight percent, said polyamide being the reaction product of polymeric fatty acids containing at least two carboxyl radicals and an aliphatic polyamine containing reactive radicals selected from the group consisting of amine radicals and carboxyl radicals.

3,020,252

ROAD MARKER MATERIALS AND METHODS OF MAKING SAME

Charles K. Hancock, College Station, Tex., assignor to Signal Oil and Gas Company, a corporation of Delaware

No Drawing. Filed Dec. 1, 1954, Ser. No. 472,529
2 Claims. (Cl. 260—24)

1. A new composition of matter adapted to be used as a road marker material comprising sulphur, polyethylene tetrasulphide and wood rosin as component materials, between 60% and 98% by weight of said component materials of said sulphur and between 1% and 25% by weight of said component materials of said polyethylene tetrasulphide mixed while maintaining the mixture at a temperature below 160° C. which will maintain the mixture in the molten state to plasticize the sulphur, said mixture of sulphur and polyethylene tetrasulphide being thereafter admixed with between 1% and 15% by weight of said component materials of said wood rosin while maintaining the mixture in the molten state at a temperature below 160° C. for a sufficient time to distribute the wood rosin with the rest of the components of the material but less than the period of time which will cause substantial discoloration of the material from prolonged heating.

3,020,253

PROCESS OF PLASTICIZING A VINYL CHLORIDE RESIN WITH DITETRAHYDROFURFURYL TEREPHTHALATE AND PRODUCT OBTAINED THEREBY

Robert M. Lukes, Lawrence Park, Pa., assignor to General Electric Company, a corporation of New York

No Drawing. Filed June 26, 1958, Ser. No. 744,649
6 Claims. (Cl. 260—30.4)

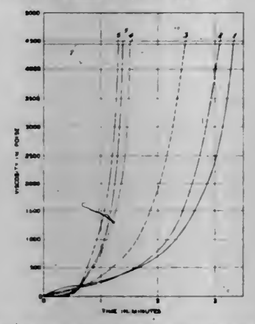
1. A composition of matter composed of a vinyl chloride resin and a plasticizer therefor comprising ditetrahydrofurfuryl terephthalate.

3,020,254

PHENOLIC RESIN AND MOLDING COMPOSITION

Frank W. Less, Kenmore, Jay C. Searer, Snyder, and Eugene C. Roeck, Williamsville, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

Filed Aug. 9, 1955, Ser. No. 527,314
13 Claims. (Cl. 260—38)



1. A moldable composition comprising as a major component solid discrete inert filler particles, and as a minor component, a thermosetting phenolic resin composition in an amount from about one percent to about thirty-five percent by weight of the total composition which comprises (A) the solid comminuted reaction product of formaldehyde with phenol in the ratio of between about 0.5 and about 0.85 mol formaldehyde per mol of phenol, (B) hexamethylenetetramine in an amount between about four percent and about twenty percent by weight of said solid reaction product (A), and (C) an aromatic monocarboxylic acid which imparts a high degree of fluidity to the resin in its fused state in an amount ranging between about 0.5 and about twenty percent by weight of said solid reaction product (A), wherein said aromatic monocarboxylic acid is selected from the group consisting of ethyl benzoic acid, propyl benzoic acid, dialkyl benzoic acids, dihydroxy benzoic acids, and an aromatic monocarboxylic acid which has the formula: R—Ar—COOH wherein R is a substitutent selected from the group consisting of H, CH_3, and OH groups, and wherein Ar is a radical selected from the group consisting of phenyl, phenyl-alkyl, phenyl-alkenyl containing less than six carbon atoms in the alkenyl group, and naphthyl.

3,020,255

UNSATURATED ETHER OF METHYLOL MELAMINE, AND POLYMERS AND COPOLYMERS THEREOF

John K. Magrane and Ralph E. Layman, Jr., Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,563
20 Claims. (Cl. 260—45.3)

1. A polymerizable composition of matter comprising the transetherification reaction product of a lower alkoxy-methylamino 1,3,5-triazine and a monohydroxy compound represented by the formula:

$$CH_2=C(R_1)-COOR_2$$

where R_1 is a member selected from the class consisting of H, halogen and alkyl groups contaiinng not in excess of 4 carbon atoms and R_2 is a monohydroxy substituted alkyl group containing not in excess of 4 carbon atoms.

3,020,256

UNSATURATED POLYESTER COMPOSITION CONTAINING PHENYL CHLOROPHOSPHONATES TO REDUCE COLOR

Jean Louis Philippe Imer, Chauny, France, assignor to Compagnie de Saint-Gobain, Paris, France

No Drawing. Filed Jan. 3, 1957, Ser. No. 632,262
Claims priority, application France Jan. 16, 1956
8 Claims. (Cl. 260—45.4)

1. Copolymers comprising polyesters resulting from the reaction of a glycol with a dicarboxylic acid containing an ethylenic unsaturated bond, said polyesters being copolymerized with at least one monomer containing at least one ethylenic double-bond, said copolymerized polyesters containing from 0.001 to 0.1% by weight of the copolymer of a compound having the formula

$$O=P(OC_6H_5)(Cl)-X$$

in which X is one of the group consisting of Cl and OC_6H_5.

3,020,257

METHOD FOR MANUFACTURE OF POLYISOBUTYLENE-VINYL ACETATE GRAFT COPOLYMER

Mitsuo Iwakiri and Tsunetoshi Hino, Osaka, Japan, assignors to Haris Co., Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed Feb. 12, 1958, Ser. No. 714,679
2 Claims. (Cl. 260—45.5)

1. The steps in the process for the production of a substitute for chicle in chewing gum, which consist in (1) concurrently commencing the reaction of a mixture of 50 parts of polyisobutylene and 250 parts of vinyl acetate in the presence of 250 parts of a lower ketone of the group consisting of acetone, methyl ethyl ketone, methyl propyl ketone, methyl isopropyl ketone and methyl butyl ketone, and 1.25 parts of a catalyst of the group consisting of benzoyl peroxide, acetyl peroxide and lauroyl peroxide, in a reaction zone at a temperature between 75° C. and 80.5° C., and continuously circulating the mixture from said reaction zone through a cooling zone and returning the mixture to said reaction zone; (2) completing graft co-polymerization, after polymerization commences in said reaction zone, by discontinuing circulation through said cooling zone and maintaining said mixture in said reaction zone for two hours; and (3) blowing vapour into the product of step (2) until unreacted monomer and lower ketone are driven therefrom and a white, tasteless and odorless plastic substitute for chicle results.

3,020,258

ODOR INHIBITORS FOR OLEFIN POLYMERS

Archie L. Robbins, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 31, 1959, Ser. No. 836,859
12 Claims. (Cl. 260—45.9)

1. A polymer composition comprising a blend of (1) a polymer of an olefin having a maximum of 8 carbon atoms per molecule and no branching nearer the double bond than the 4-position, said polymer having been prepared in the presence of a chromium oxide-containing

catalyst and containing an odor-producing antioxidant compound containing in its structure a phenyl radical in which at least one of its valences is satisfied with a member selected from the group consisting of amino and hydroxy groups, said compound having a molecular weight of at least 110, and (2) in the range of 0.01 to 2.0 weight percent of an aminophenol selected from the group consisting of ortho-, meta-, and para-aminophenol.

3,020,259

POLYOLEFINS STABILIZED WITH REACTION PRODUCTS OF NONYLPHENOL AND CARBONYL COMPOUNDS

Felix Schülde, Bad Soden (Taunus), and Otto Mauz, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Sept. 3, 1958, Ser. No. 758,690
Claims priority, application Germany Sept. 7, 1957
6 Claims. (Cl. 260—45.95)

1. As a new composition of matter, a solid polymer produced from an olefin selected from the group consisting of propene and butene-1, said polymer containing tertiary carbon atoms and being prepared by the polymerization of the olefin in the presence of a catalytic amount of a catalyst prepared from a mixture of an organoaluminum compound and a salt of a heavy metal of subgroups IV*b*–VI*b* of the periodic table, and 0.05–5% by weight of the product formed by the reaction of nonyl phenol, in the presence of a mineral acid dehydrating agent, with a member selected from the group consisting of formaldehyde, acetaldehyde, acetone, methylethyl ketone, cyclohexanone and benzaldehyde.

3,020,260

ORGANOSILOXANE POTTING COMPOUND

Melvin E. Nelson, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Aug. 18, 1960, Ser. No. 50,333
13 Claims. (Cl. 260—46.5)

1. A soft, non-friable gel which is the reaction product of an intimate mixture consisting essentially of

(1) an organosiloxane having a viscosity of from 100 to 10,000 cs. at 25° C. and being a copolymer consisting essentially of units of the formula $RViSiO$, R_2SiO, and $CH_3R_2SiO_{.5}$ where each R individually is selected from the group consisting of methyl and phenyl radicals and Vi represents a vinyl radical, at least 0.174 molar percent of the units in said copolymer being the said $RViSiO$ units,

(2) a liquid hydrogenosiloxane of the average general formula $HRCH_3SiO(R_2SiO)_nSiCH_3RH$ where each R is as above defined and *n* has an average value such that the viscosity of the hydrogenosiloxane is no more than 10,000 cs. at 25° C., no more than 25 molar percent of the total R radicals present in (1) and (2) being phenyl, and

(3) a platinum catalyst in an amount sufficient to furnish at least 0.1 part per million of Pt based on the combined weight of (1) and (2);

the proportions of (1) and (2) being such that prior to reaction there is an average of from 1.4 to 1.8 gram atoms of the silicon-bonded H atoms in (2) per gram molecular weight of (1) and there being at least one $RViSiO$ unit in (1) for every silicon-bonded H atom in (2), the molecular weight of (1) being calculated by the equation: log visc.$=1.00+0.0123\ M^{.8}$, where M is the molecular weight and "visc." is the viscosity of (1) in cs. at 25° C.

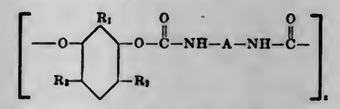
3,020,261

POLYNITRO URETHANES

Lloyd H. Brown, Glendora, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Aug. 9, 1954, Ser. No. 448,737
6 Claims. (Cl. 260—47)

1. As new compositions of matter, the polynitro urethanes having the general formula:



wherein R_1, R_2, and R_3 are radicals selected from the group consisting of hydrogen and nitro radicals, at least one R being nitro, A is a lower alkylene radical, and *x* is a whole number greater than one.

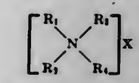
3,020,262

METHOD FOR PRODUCING 2-OXAZOLIDONES FROM EPOXIDES AND ISOCYANATES

George P. Speranza, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Dec. 19, 1957, Ser. No. 703,767
14 Claims. (Cl. 260—47)

1. A method for converting a C_2 to C_{12} aliphatic hydrocarbon monoepoxide to a corresponding 3-substituted-2-oxazolidone product which comprises reacting each mol of epoxide group to be converted with an equivalent amount of hydrocarbon monoisocyanate at a temperature within the range of about 100° to about 250° C. in the presence of a catalytically effective amount of an addition catalyst selected from the group consisting of trialkylamines, alkali metal halides and ammonium compounds represented by the formula:



in which X is an atom consisting of fluoride, chloride, bromide and iodide and R_1, R_2, R_3 and R_4 each represent a member selected from the group consisting of hydrogen and alkyl, cycloalkyl, aryl, alkaryl and aralkyl hydrocarbon radicals having 2 to 20 carbon atoms, the carbon atoms of said epoxide group being in vicinal relationship to each other.

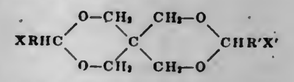
3,020,263

POLYESTER RESINS

Talmage D. Foster, Jr., Tornado, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 31, 1958, Ser. No. 770,928
10 Claims. (Cl. 260—67)

1. A process for the production of resinous polyesters which comprises (1) forming an intermediate polyester condensate by heating and condensing at a temperature within the range between about 125° C. and 225° C. a mixture comprising (*a*) a spirobi(meta-dioxane) compound having the structure



wherein R and R′ designate members of the class consisting of the divalent aliphatic radicals of the formula C_nH_{2n} wherein *n* is an integer from 2 to 18, and divalent cyclohexane group; and X and X′ are —$COOR^2$ radicals wherein R^2 designates a member of the class consisting of hydrogen and the alkyl radicals having one to fourteen carbon atoms; and (*b*) a member of the class consisting of the alkanediols of the structure

$$C_mH_{2m}(OH)_2$$

where *m* is an integer from 2 to 10 and the polyoxyalkylene diols of the structure

$$HOCH_2CHR^3(OCH_2CHR^3)_pOH$$

where R^3 is of the class consisting of hydrogen and the methyl radical, and *p* is an integer from 1 to 3, the said diol and spirobi-(meta-dioxane) compound being reacted in the range of molar ratios of from 1:1 to 5:1, said diol having a boiling point higher than that of by-product R^2OH, removing the by-product R^2OH as it is formed, and continuing the heating until substantially all formation and evolution of the R^2OH has ceased; and (2) treating said intermediate polymer condensate at a temperature within the range between about 60° C. and 100° C. with between about 5 percent and 100 percent by weight of water and with between about 0.8 percent and 27 percent by weight of formaldehyde, based on the weight of intermediate polymer condensate, in the presence of a catalytic quantity of acid for a period of time between about one and six hours.

3,020,264

PROCESS FOR THE PRODUCTION OF EUPOLYOXYMETHYLENES WITH SULFUR CATALYST

Jürgen Behrends, Hanau (Main), Otto Schweitzer, Konigstein (Taunus), and Werner Kern, Mainz, Germany, and Heinrich Hopff, Zurich, Switzerland, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed Jan. 6, 1960, Ser. No. 690
Claims priority, application Germany Jan. 7, 1959
15 Claims. (Cl. 260—67)

1. A process for the production of eupolyoxymethylenes comprising polymerizing monomeric formaldehyde in contact with elemental sulfur in a liquid medium selected from the group consisting of benzine and decalin under essentially water-free conditions.

3,020,265

ACRYLONITRILE POLYMERIZATION PROCESS

Raymond F. Tietz, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 4, 1957, Ser. No. 694,109
10 Claims. (Cl. 260—79.3)

1. In a process for preparing a polymer of acrylonitrile which comprises polymerizing a monomer mixture containing at least 85% by weight acrylonitrile based on the weight of total monomers and up to about 14% by weight of an ethylenically unsaturated monomer copolymerizable with acrylonitrile based on the weight of total monomers, and between about 0.1% and about 3.0% of a monoethylenically unsaturated sulfonic acid based on the weight of the total polymerization reaction mixture in a liquid medium, the improvement which comprises carrying out said process in the presence of a liquid medium selected from the group consisting of a mixture of an organic solvent for said polymer selected from the group consisting of dimethylformamide, dimethylacetamide, dimethylsulfoxide, tetramethylene sulfone, butyrolactone, and ethylene carbonate and a diluent which is a nonsolvent for said polymer selected from the group consisting of water, benzene and methyl ethyl ketone, said mixture being so selected that the polymerization system has a dielectric constant of less than about 60 when measured at a temperature of 29° C.

3,020,266

ACCELERATING RUBBER WITH 5-CARBALKOXY-4-ALKYL-2-THIAZOLESULFENAMIDES

John J. D'Amico, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Dec. 31, 1956, Ser. No. 631,441, now Patent No. 2,914,535, dated Nov. 24, 1959. Divided and this application Feb. 2, 1959, Ser. No. 795,885
2 Claims. (Cl. 260—79.5)

1. The process of vulcanizing rubber selected from the group consisting of natural rubber and butadiene-styrene copolymer rubber which comprises heating the rubber, sulfur and small amount sufficient to accelerate vulcanization of 5-carboloweralkoxy-4-loweralkyl-2-thiazolesulfenamide.

3,020,267

FLUORINATED ORGANIC COMPOUNDS AND POLYMERS THEREOF

John T. Barr, Needham, Mass., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Filed Nov. 17, 1955, Ser. No. 547,538
13 Claims. (Cl. 260—92.1)

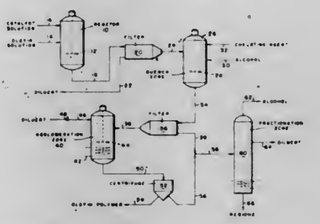
1. A polymer selected from the group consisting of polymeric $CF_2{=}CF{-}CCl{=}CH_2$, $CF_2{=}CF{-}CH{=}CHCl$ and $CF_2{=}CF{-}CCl{=}CHCl$.

3,020,268

SLURRY RESOLUTION

Henry G. Schutze, Irving Leibson, and Delos E. Bown, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 21, 1957, Ser. No. 691,513
7 Claims. (Cl. 260—93.7)



1. In a method wherein a C_2 to C_6 alpha olefin is polymerized in the presence of a non-olefinic, non-polar organic diluent containing a catalytic amount of a reduced compound of a metal of the group consisting of groups IV–B, V–B, VI–B, and VIII of the periodic system of elements under conditions to form a polymer of said olefin melting above about 100° C. whereby there is formed a first slurry of polymer particles in said diluent, said particles having surface areas in excess of about 10 $m.^2/g.$, particle diameters of less than about 1,000 A. and a particle specific gravity about the same as the specific gravity of said diluent, the improvement which comprises quenching said first slurry with a C_1–C_4 alcohol to deactivate said catalyst, thereafter, prior to exposure of said particles to a polar atmosphere, separating said particles from said first slurry, slurrying said separated particles in a liquid medium comprising at least one C_1 to C_4 alcohol and a non-polar, non-olefinic organic diluent to provide a second slurry, heating said second slurry to a temperature of about 20 to about 50° C. below the melting point of said polymer at a pressure within the range of about 0 to 100 p.s.i.g., sufficient to render said polymer sparingly soluble in said diluent, said second slurry being maintained under said temperature and pressure conditions for a period of time sufficient to selectively soften

the surface of said particles and to agglomerate said particles to an extent sufficient to increase the specific gravity of said particles by about 120 to 200 percent whereby agglomerated particles are provided having surface areas of less than about 1 m.²/g. and particle diameters of not less than 1 micron, cooling said second slurry of agglomerated particles and then separating said thus agglomerated particles from said liquid medium.

3,020,269
BUTADIENE POLYMERIZATION

Edward C. Leonard, Jr., Bloomfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 10, 1957, Ser. No. 633,396
5 Claims. (Cl. 260—94.3)

1. A process for the polymerization of butadiene to form polybutadiene having a trans-1,4 content of at least 90 percent which comprises contacting butadiene with a catalytic amount of a polymerization catalyst sufficient to polymerize said butadiene consisting of a mixture of vanadium tetrachloride and triisobutylaluminum in such proportions that the Al:V molar ratio is within the range of about 1:1 to about 16:1, in the presence of an inert hydrocarbon diluent and at a temperature above about 20° C.

3,020,270
CATALYSIS OF PHOSPHOSULFURIZATION REACTIONS

John A. Brown, Metuchen, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 13, 1958, Ser. No. 734,820
8 Claims. (Cl. 260—139)

1. In a process wherein phosphorus pentasulfide is reacted with a hydrocarbon material selected from the group consisting of C_2–C_{10} monoolefin polymers having a molecular weight in the range of 500–100,000 and petroleum bright stocks having viscosities above 100 SUS at 210° F., viscosity indices above 80 and initial boiling points above 700° F. abs., at a temperature in the range of 350° to 600° F., to obtain a product useful as a lubricant additive containing above 2 weight percent of combined phosphorus and above 4 weight percent of combined sulfur; an improved method of increasing the reaction rate and of enhancing the obtainance of a clear product free of sediment which comprises catalyzing the reaction between said phosphorus pentasulfide and hydrocarbon material by the addition to the reaction mixture of in the range of 0.01 to 0.1 weight percent of a catalyst selected from the group consisting of water, inorganic oxides of phosphorus and inorganic oxygen acids of phosphorus consisting of phosphorus, oxygen and hydrogen.

3,020,271
PROCESS FOR MODIFICATION OF OLEFIN POLYMERS

Clark O. Miller, Willoughby, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Filed May 27, 1959, Ser. No. 816,078
10 Claims. (Cl. 260—139)

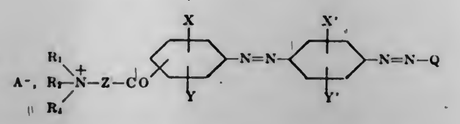
1. The process of preparing phosphorus-, sulfur-, and halogen-containing compositions which comprises preparing a mixture of phosphorus trihalide, sulfur and an aliphatic polymer, and heating said mixture at a temperature above 140° C. but below the decomposition point of the components of the reaction mixture, the mole ratio of the total amount of sulfur used to the total amount of phosphorus trihalide used being at least 1:1 and the mole ratio of the total amount of phosphorus trihalide used to the total amount of aliphatic polymer used being at least 1:1.

3,020,272
DISAZO DYES FOR ACRYLIC AND POLYESTER FIBERS

Mario Francesco Sartori, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 25, 1959, Ser. No. 815,297
9 Claims. (Cl. 260—186)

1. A compound of the formula



wherein Q is the coupling radical of a mononuclear phenol which is free of substituents other than chlorine, bromine, lower alkyl and additional hydroxy groups and which is attached to its N=N group in a position para to an OH group, X and Y are members of the group consisting of hydrogen, lower alkyl, chlorine and bromine, X′ and Y′ are members of the group consisting of hydrogen, lower alkyl, lower alkoxy, chlorine and bromine, Z is an alkylene radical having from 1 to 3 C-atoms, R_1 is a lower alkyl radical, R_2 is a radical of the group consisting of lower alkyl and lower hydroxyalkyl, R_3 is a radical of the group consisting of lower alkyl, lower hydroxyalkyl and benzyl, and A^- is a water-solubilizing anion.

3,020,273
PROCESS FOR THE PREPARATION OF DIGLYCOSYLUREAS AT REDUCED PRESSURE

Thomas R. Steadman, Kensington, and Paul R. Steyermark, Takoma Park, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Mar. 29, 1960, Ser. No. 18,269
6 Claims. (Cl. 260—211.5)

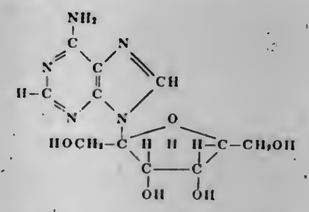
1. A process for the preparation of diglycosylureas which comprises heating at least two moles of an aldose with one mole of urea at a pressure below about 650 mm. of mercury in the presence of a quantity of lower aliphatic acid having 2 to 4 carbon atoms equal to about 0.1 to ten times the weight of aldose present and recovering the product diglycosylurea.

3,020,274
6-AMINO-9-D-PSICOFURANOSYLPURINE

Thomas E. Eble and Charles Lewis, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Mar. 10, 1958, Ser. No. 720,066
3 Claims. (Cl. 260—211.5)

1. 6-amino-9-D-psicofuranosylpurine having the structural formula:



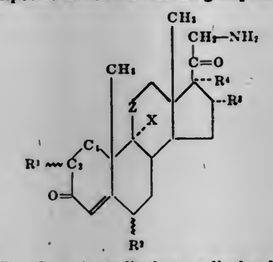
and an optical rotation in dimethylformamide of minus 68 degrees.

3,020,275
21-NITROGEN SUBSTITUTED STEROIDS OF THE PREGNANE SERIES AND METHODS OF PREPARING THE SAME

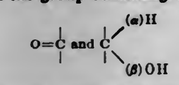
Michael Marx, Leonia, N.J., and Leland L. Smith, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 7, 1960, Ser. No. 35,388
13 Claims. (Cl. 260—239.55)

11. A compound selected from the group consisting of:



wherein —C_2—C_1— is a divalent radical selected from the group consisting of CH_2—CH_2— and —CH=CH— radicals, X is selected from the group consisting of hydrogen, chlorine and fluorine atoms, Z is a divalent radical selected from the group consisting of



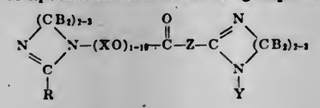
radicals, R^1 is selected from the group consisting of hydrogen and lower alkyl radicals, R^2 is selected from the group consisting of hydrogen, halogen and lower alkyl radicals, R^3 is selected from the group consisting of hydrogen, hydroxyl, fluorine, lower alkyl and lower alkanoyloxy radicals, at least one of the radicals R^2 and R^3 being other than hydrogen and lower alkyl, R^4 is selected from the group consisting of hydrogen, hydroxyl and lower alkanoyloxy radicals and R^3 and R^4 when taken together form a member selected from the group consisting of lower alkylidenedioxy and (1-alkoxy)-lower alkylidenedioxy radicals and pharmaceutically acceptable acid addition salts.

3,020,276
CYCLIC AMIDINES

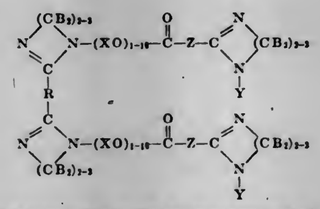
William B. Hughes, Webster Groves, and Verner L. Stromberg, Shrewsbury, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,391
7 Claims. (Cl. 260—256.4)

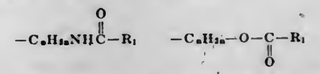
1. A compound selected from the group consisting of



and



where B is selected from the group consisting of hydrogen and a lower alkyl group, X is a lower alkylene group having at least two carbon atoms, R and Z are hydrocarbon-containing moieties of a carboxylic acid, each having 1–36 carbon atoms, and Y is selected from the group consisting of hydrogen, a hydrocarbon group having 1–36 carbon atoms, and a member selected from the group consisting of —C_nH_{2n}—NR_1—R_1,



—C_nH_{2n}—OR_1, —(C_nH_{2n}—NR_1)$_x$$R_1$, and another cyclic amidine group wherein R_1 is selected from the group consisting of hydrogen and a hydrocarbon having 1–36 carbons, *n* is 1–6, and *x* is 1–10.

3,020,277
1-(2-n-PROPYL-4-AMINO-5-PYRIMIDYL-METHYL)-2(OR 4)-METHYL PYRIDINIUM SALTS

Edward F. Rogers, Middletown, and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 28, 1959, Ser. No. 829,979
4 Claims. (Cl. 260—256.4)

1. A member of the group consisting of 1-(2-n-propyl-4-amino-5-pyrimidylmethyl)-2-methyl pyridinium quaternary salt, wherein the anion of the quaternary salt is a non-toxic anion; and non-toxic acid addition salts thereof.

3,020,278
VITAMIN-OROTIC ACID COMPOSITIONS

Edgar A. Ferguson, Jr., 150 Woodruff Ave., Brooklyn, N.Y.

No Drawing. Filed Sept. 16, 1959, Ser. No. 840,259
4 Claims. (Cl. 260—256.6)

1. A compound selected from the group consisting of thiamine orotate, thiamine orotate orotic acid, and thiamine mononitrate orotic acid.

3,020,279
PREPARATION OF QUINACRIDONE PIGMENTS

Paul B. Woodlock, Midland Park, John F. Santimauro, Wyckoff, and Vincent C. Vesce, Saddle River, N.J., assignors, by mesne assignments, to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 18, 1959, Ser. No. 800,092
4 Claims. (Cl. 260—279)

1. The improvement in the process of preparing a quinacridone by ring-closure of a 2,5-diarylamino terephthalic acid which forms a quinacridone upon ring-closure with elimination of water which comprises heating to a temperature above 100° C. and up to reflux temperature, a mixture comprising essentially the 2,5-diarylamino terephthalic acid, anhydrous aluminum chloride and a halogenated aromatic hydrocarbon diluent inert to aluminum chloride and haying a boiling point in the range 120 to 225° C. for a time sufficient to effect ring closure of the 2,5-diarylamino terephthalic acid and produce a quinacridone.

3,020,280
QUINOLINE SYNTHESIS

Francis E. Cislak and William R. Wheeler, Indianapolis, Ind., assignors to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed July 22, 1957, Ser. No. 673,121
3 Claims. (Cl. 260—283)

1. The process of preparing quinoline which comprises mixing the vapors of acetaldehyde, methanol, and aniline, passing the resultant mixture through a reactor containing a silica-alumina catalyst maintained at a temperature between about 450° C. to about 500° C. and recovering quinoline from the reaction product.

3,020,281
METHOD OF PREPARING QUINOLINE
Francis E. Cislak and William R. Wheeler, Indianapolis, Ind., assignors to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana
No Drawing. Filed July 22, 1957, Ser. No. 673,122
3 Claims. (Cl. 260—283)

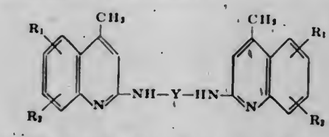
1. The process of preparing quinoline which comprises mixing the vapors of acetaldehyde, formaldehyde, methanol, and aniline, passing the resultant mixture through a reactor containing a silica-alumina catalyst maintained at a temperature between about 450° C. to about 500° C. and recovering quinoline from the reaction product.

3,020,282
PROCESS OF PREPARING QUINOLINE
Francis E. Cislak and William R. Wheeler, Indianapolis, Ind., assignors to Reilly Tar & Chemical Corporation, Indianapolis, Ind., a corporation of Indiana
No Drawing. Filed July 22, 1957, Ser. No. 673,150
3 Claims. (Cl. 260—283)

1. The process of preparing quinoline which comprises mixing the vapors of acetaldehyde, formaldehyde, and aniline, passing the resultant mixture through a reactor containing a silica-alumina catalyst maintained at a temperature between about 450° C. to about 500° C. and recovering quinoline from the reaction product.

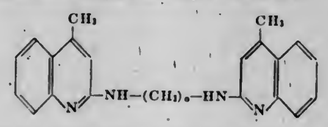
3,020,283
BIS-LEPIDINES
Richard U. Schock, Jr., and Richard B. Hasbrouck, Lake Forest, Ill., and Donald E. Dickson, Kenosha, Wis., assignors to Abbott Laboratories, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Oct. 20, 1958, Ser. No. 768,064
12 Claims. (Cl. 260—288)

1. A compound selected from the group consisting of bases represented by the formula:



and non-toxic acid-addition and lower alkyl quaternary ammonium salts thereof wherein Y represents a member of the group consisting of alkylene groups having from 2 to 12 carbon atoms inclusive, phenylene, cyclohexyl, 1,4-xylyl and 1,4-phenylenebisethylene and each R_1 and R_2 represents a member of the group consisting of hydrogen, loweralkyl, loweralkoxy, hydroxy, chloro and bromo.

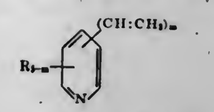
2. A compound represented by the formula:

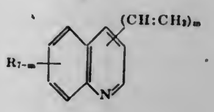


wherein *n* is an integer from 2 to 12, inclusive.

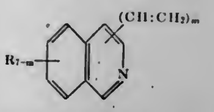
3,020,284
PROCESS FOR INHIBITING THE POLYMERIZATION OF NITROGENATED HETEROCYCLIC VINYL COMPOUNDS
Giovanni B. Gechele, Adriano Nenz, and Giuseppe Barberis, all of Milan Italy, assignors to Sicedison A.p.A., Milan, Italy
No Drawing. Filed Dec. 30, 1959, Ser. No. 862,804
Claims priority, application Italy Jan. 9, 1959
7 Claims. (Cl. 260—290)

1. A process for inhibiting the polymerization of polymerizable basic nitrogenous heterocyclic vinyl compounds selected from the group consisting of those of the formulae:





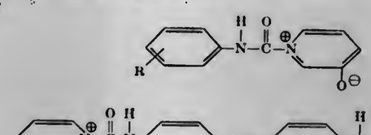
and

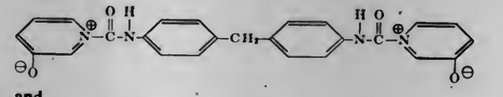


where *m* is a numeral ranging from 1 to 2, and where R is a member selected from the group consisting of H and alkyl, consisting in addition to said heterocyclic vinyl compounds, of a stabilizing amount of dipicrylamine.

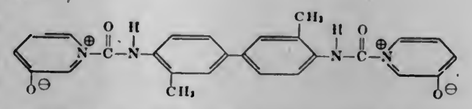
3,020,285
N-(CARBANILIDO)-3-OXYPYRIDYL BETAINES
Seymour L. Shapiro, Hastings on Hudson, and Louis Freedman, Bronxville, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware
No Drawing. Filed Apr. 13, 1960, Ser. No. 21,894
6 Claims. (Cl. 260—295)

1. A member of the group consisting of compounds of the following formulae





and



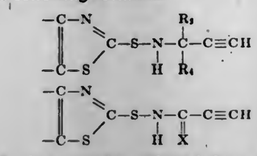
wherein R is selected from the group consisting of hydrogen, lower alkyl, halogen, and lower alkoxy.

3,020,286
CALCIUM NICOTINATE IODIDE
Edgar A. Ferguson, Jr., 150 Woodruff Ave., Brooklyn, N.Y.
No Drawing. Filed Aug. 24, 1960, Ser. No. 51,504
3 Claims. (Cl. 260—295.5)

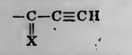
1. Calcium nicotinate iodide.

3,020,287
N-(PROPYNYL)-2-(THIAZOLE) SULFENAMIDES
George E. P. Smith, Jr., Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed June 5, 1958, Ser. No. 739,989
9 Claims. (Cl. 260—306.6)

6. An N-(propynyl)-2-(thiazole) sulfenamide selected from the class consisting of those sulfenamides having one of the following formulas:



wherein R_3 is a member selected from the group consisting of hydrogen and lower alkyl; R_4 is a member selected from the group consisting of alkyl of no more than 20 carbon atoms, alkenyl of no more than 18 carbon atoms, cycloalkyl of no more than 7 carbon atoms and hydrocarbon aryl of no more than 14 carbon atoms;



is a member of the group consisting of ethynylcycloalkyl and ethynylcycloalkenyl containing no more than 12 carbon atoms, ethynylcycloalkadienyl and ethynylcycloalkatrienyl containing no more than 10 carbon atoms; and the valences of the carbon atoms in the 4- and 5-positions of the thiazole ring are satisfied by a member selected from the group consisting of hydrogen, methyl, ethyl and residues of carbocyclics, said carbocyclics containing no more than 13 carbon atoms and being a member selected from the group consisting of unsubstituted naphtho, unsubstituted benzo, 5,6,7,8-tetrahydrobenzo, nitrobenzo, alkylbenzo, methylbenzo, dimethylbenzo, phenylbenzo, tolylbenzo and chlorobenzo.

3,020,288
HYPOTENSIVE COMPOUNDS
William Robert Wragg, Woodford Green, and Leslie Bretherick, Upminster, England, assignors to May & Baker Limited, Essex, England, a British company
No Drawing. Filed Mar. 19, 1959, Ser. No. 800,397
Claims priority, application Great Britain Mar. 24, 1958
1 Claim. (Cl. 260—313)

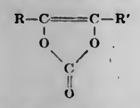
A member of the class consisting of 1-ethyl-2,2,5,5-tetramethylpyrrolidine and its acid pharmaceutically acceptable addition salts.

3,020,289
POLYMERIZATION OF 2-p-DIOXANONE WITH SULFURIC ACID
Eugene A. Weipert, Detroit, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan
No Drawing. Filed Mar. 4, 1960, Ser. No. 12,660
4 Claims. (Cl. 260—340.2)

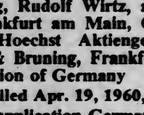
1. A process for the polymerization of 2-p-dioxanone which comprises heating 2-p-dioxanone at a temperature in the range of from about 85° C. to about 110° C. for a period of from about 5 to 30 minutes in the presence of from about 0.05 to about 1.0 weight percent of concentrated sulfuric acid.

3,020,290
PREPARATION OF UNSATURATED COMPOUNDS
Philip H. Moss, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware
No Drawing. Filed Oct. 14, 1959, Ser. No. 846,249
4 Claims. (Cl. 260—340.2)

1. A process for the preparation of the compound of the formula



where R is a radical selected from the group consisting of methyl and ethyl and R′ is a radical selected from the group consisting of hydrogen and methyl which comprises passing chlorine gas into an alkylene carbonate of the formula



in a mol quantity ratio of said gas to said carbonate of between 1:4 and 2:1, said alkylene carbonate being illuminated with actinic light of a wave length of 2000–4000 angstroms and maintained at a temperature between 20 and 90° C., then subsequently heating the resultant chlorinated reaction mixture to a temperature between 100 and 300° C. until hydrogen chloride substantially ceases to evolve.

3,020,291
PROCESS FOR PREPARING 2-METHYLFURAN
Andrew P. Dunlop, Riverside, and Donald G. Manly, Barrington, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey
No Drawing. Filed Dec. 13, 1957, Ser. No. 702,515
3 Claims. (Cl. 260—346.1)

1. In a process for producing 2-methylfuran in which furfuryl alcohol in the vapor phase is contacted with hydrogen at a temperature between about 100° C. and about 300° C. in the presence of a catalyst, the improvement wherein said catalyst consists essentially of copper chromite catalyst which has been pre-reduced by contact with hydrogen gas at a temperature below about 250° C. prior to initial contact with the furfuryl alcohol vapors.

3,020,292
VINYL 9,10-EPOXYSTEARATE
Daniel Swern, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed July 13, 1954, Ser. No. 443,182
1 Claim. (Cl. 260—348)
(Granted under Title 35, U.S. Code (1952), sec. 266)

Vinyl 9,10-epoxystearate.

3,020,293
PROCESS FOR THE MANUFACTURE OF OLEFIN OXIDATION PRODUCTS FROM OLEFIN-MERCURY COMPLEXES
Manfred Schönberg, Rudolf Wirtz, and Therese Quadflieg, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Apr. 19, 1960, Ser. No. 23,156
Claims priority, application Germany Apr. 24, 1959
14 Claims. (Cl. 260—348.5)

1. A process for the manufacture of an olefin oxide having a carbon chain length of 2 to 12 carbon atoms which comprises reacting, with water at a pH value between 7 and 14 and at a temperature in the range from 70 to 300° C. in a liquid aqueous phase, a complex compound of (1) an olefinic hydrocarbon of corresponding carbon chain length which is unsaturated by at most two olefinic groups and (2) a compound selected from the group consisting of a mercuric salt, mercuric oxide and mercuric hydroxide.

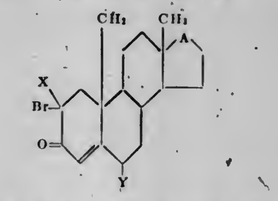
3,020,294
PRODUCTION OF RING A AROMATIC STEROIDS

Carl Djerassi, George Rosenkranz, Stephen Kaufmann, John Pataki, and Jesus Romo, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Original application Mar. 28, 1950, Ser. No. 152,498, now Patent No. 2,705,237, dated Mar. 29, 1955. Divided and this application Feb. 28, 1955, Ser. No. 496,906

1 Claim. (Cl. 260—397.3)

A new product comprising a dibromo-Δ^4-3-ketosteroid of the androstane series capable of dehydrobromination to form a $\Delta^{1,4,6}$-3-ketosteroid and having the following formula:



wherein A is selected from the group consisting of C=O and C—OR and R is selected from the group consisting of hydrogen, a lower alkyl group, the benzyl group, the residue of a lower fatty acid and a benzoic acid, and X is bromine when Y is hydrogen and Y is bromine when X is hydrogen.

3,020,295
THERAPEUTIC 4-HYDROXY-19-NORTESTOSTERONE-17-CYCLOPENTYL-PROPIONATE AND ITS PROCESS OF PREPARATION AND ITS APPLICATION

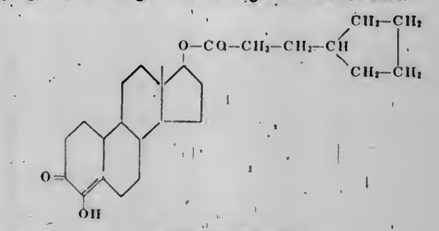
Bruno Camerino, Milan, and Bianca Patelli, Stradella, Italy, assignors to Società Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed July 12, 1960, Ser. No. 42,235

Claims priority, application Great Britain July 13, 1959

1 Claim. (Cl. 260—397.4)

4-hydroxy-19-nortestosterone-17-cyclopentylpropionate having the following structural formula



3,020,296
PREPARATION OF ESTRADIOL AND INTERMEDIATES THEREOF

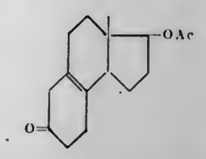
Garard Nomine, Noisy-le-Sec, Daniel Bertin, Montrouge, and Jean Tessier, Paris, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed Oct. 25, 1960, Ser. No. 64,733

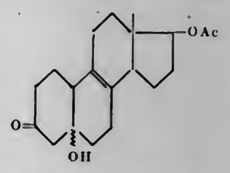
Claims priority, application France Nov. 6, 1959

5 Claims. (Cl. 260—397.45)

1. A process for the preparation of estradiol which comprises condensing $\Delta^{9(10)}$-3-methyl-7-oxo-3,4[3'-acyloxy-cyclopentano (2',1')] octahydronapthalenes of the formula



wherein Ac is the acyl radical of an organic carboxylic acid having 1 to 18 carbon atoms with methylvinyl ketone to form 17β-acyloxy-19-nor-$\Delta^{9(9)}$-androstene-5-ol-3-ones of the formula



wherein Ac has the above definition, dehydrating the latter in the presence of an alkaline alcoholate to form 19-nor-$\Delta^{4,9(10)}$-androstadiene-17β-ol-3-one and isomerizing said dehydrated compound in the presence of palladized carbon black to estradiol.

3,020,297
2α,6α-DIMETHYLHYDROCORTISONE AND THE 21-ACYLATES THEREOF

Frank H. Lincoln, Jr., George B. Spero, and John L. Thompson, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Nov. 12, 1959, Ser. No. 852,204

3 Claims. (Cl. 260—397.45)

1. 2α,6α-dimethylhydrocortisone.

3,020,298
ALUMINUM ACETYLENIC COMPOUNDS

Eugene C. Ashby, Walter E. Foster, Jesse R. Mangham, and Tillmon H. Pearson, all of Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 10, 1957, Ser. No. 651,796

8 Claims. (Cl. 260—448)

1. As a new composition of matter an aluminum compound having at least one acetylenic radical bonded to the metal wherein the triple bond is in the alpha position from the aluminum and the remaining valences of the aluminum are satisfied by a group selected from the group consisting of hydrogen, hydrocarbon radicals having up to and including about 20 carbon atoms, and a halogen.

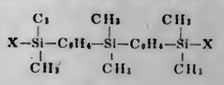
3,020,299
ORGANOSILICON COMPOSITIONS

James Marsden, Scheuectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 15, 1958, Ser. No. 755,138

4 Claims. (Cl. 260—448.2)

1. A composition of matter having the formula



where X is selected from the class consisting of bromine, chlorine, and the hydroxyl group.

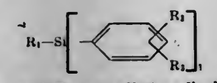
3,020,300
ALKYL-TRIS-DIALKYL PHENYLSILANES

Wilhelm J. Schnabel, Columbus, Ohio, assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed June 5, 1959, Ser. No. 818,272

2 Claims. (Cl. 260—448.2)

1. Liquid monoalkyl-tris-alkylphenylsilanes of the general formula:



wherein R_1, R_2, and R_3 are alkyl radicals containing 2 to 5 carbon atoms.

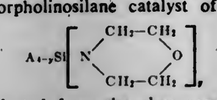
3,020,301
PROCESS OF MAKING CYANOALKYLSILANES

Roscoe A. Pike, Grand Island, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1959, Ser. No. 862,749

6 Claims. (Cl. 260—448.2)

1. A process for preparing a cyanoalkylsilane wherein the cyano group is interconnected to silicon through at least two carbon atoms, which comprises reacting an alkene nitrile with a silane having one silicon-bonded hydrogen and three silicon-bonded hydrolyzable groups selected from the class consisting of alkoxy groups, aryloxy groups, acetoxy groups and halogen in the presence of a morpholinosilane catalyst of the formula:



where A is selected from the class consisting of alkyl groups, phenyl groups, a halogen atom and an alkoxy group and y is an integer from 1 to 4.

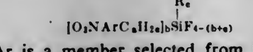
3,020,302
NITROARYLFLUOROSILANES AND PROCESS FOR THEIR PRODUCTION

Donald L. Bailey, Snyder, N.Y., and Ronald M. Pike, Chelmsford, Mass., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 30, 1959, Ser. No. 849,759

12 Claims. (Cl. 260—448.2)

1. Nitroarylfluorosilanes represented by the formula:



wherein Ar is a member selected from the group consisting of the phenylene group, the alkyl-substituted phenylene groups and the alkoxy-substituted phenylene groups, R is a monovalent hydrocarbon group free of aliphatic unsaturation; a has a value from 0 to 8, b has a value from 1 to 3, c has a value from 0 to 2 and $(b+c)$ has a value from 1 to 3.

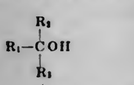
3,020,303
PRODUCTION OF ALIPHATIC PHOSPHATE ESTERS

John A. Pianfetti, Charleston, and Paul L. Janey, Nitro, W. Va., assignors to FMC Corporation, a corporation of Delaware

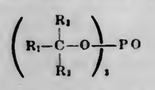
No Drawing. Filed Mar. 25, 1960, Ser. No. 17,508

12 Claims. (Cl. 260—461)

3. The process of preparing a phosphate ester comprising the steps of (a) reacting a mixture containing an alkali metal hydroxide with an aliphatic alcohol having the formula



R_1, R_2 and R_3 being selected from the group consisting of hydrogen and alkyl, alkenyl and alkoxyalkyl radicals having from 1 to 17 carbon atoms, from 3 to 4 mols of said hydroxide and at least about 6 mols of said alcohol being used per mol of phosphorus oxychloride employed in step (b), while concurrently removing substantially all of the water formed in said reaction to produce a substantially anhydrous reaction mixture containing an alkali metal alcoholate, (b) reacting said mixture with phosphorus oxychloride at a temperature within the range of 0° to about 100° C. to produce a product mixture containing a phosphate ester having the formula



where R_1, R_2 and R_3 are as defined above, and (c) separating said ester from said product mixture, while (d) simultaneously with steps (a) and (b) maintaining a non-oxidizing atmosphere.

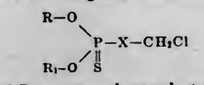
3,020,304
CHLOROMETHYLATED O,O-DIALKYL-THIOPHOSPHORIC ACID ESTERS

Otto Scherer, Helmut Hahn, and Gerhard Stähler, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Sept. 17, 1957, Ser. No. 684,403

4 Claims. (Cl. 260—461)

1. Compounds of the general formula



in which R and R_1 are members selected from the group consisting of CH_3 and C_2H_5, and X is a member selected from the group consisting of oxygen and sulfur.

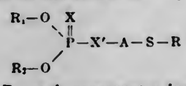
3,020,305
HALOGEN SUBSTITUTED ALKENYLTHIOALKYL ESTERS OF PHOSPHORUS ACIDS

John P. Chupp, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Aug. 25, 1958, Ser. No. 757,124

11 Claims. (Cl. 260—461)

1. A compound of the structure



wherein R_1 and R_2 each represent a lower alkyl radical, X and X' represent a chalkogen having atomic weight less than 40, A represents a lower alkylene radical and R represents a halogen substituted lower 2-alkenyl radical.

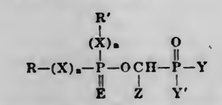
3,020,306
PHOSPHORUS COMPOUNDS

Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 22, 1959, Ser. No. 841,450

12 Claims. (Cl. 260—461)

1. Compounds of the formula

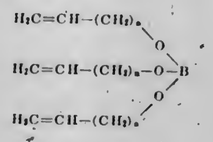


wherein R and R' are selected from the group consisting

of aromatic hydrocarbon radicals which are free from aliphatic unsaturation and have from 6 to 12 carbon atoms, and said aromatic hydrocarbon radicals carrying halogen as substituents; X is selected from the group consisting of —O— and —S—; *n* is an integer of from 0 to 1; E is selected from the group consisting of oxygen and sulfur; Z is selected from the group consisting of hydrogen, aromatic hydrocarbon radicals of from 6 to 12 carbon atoms, said aromatic hydrocarbon radicals having lower alkoxy groups as substituents, and alkyl radicals having from 1 to 11 carbon atoms; Y and Y' are selected from the group consisting of alkoxy and haloalkoxy radicals having from 1 to 12 carbon atoms, and aromatic hydrocarbon and aromatic hydrocarbonoxy radicals which have from 6 to 12 carbon atoms.

3,020,307
CYCLOALKENYL BORATES AND PREPARATION THEREOF
John P. Luvisi, Park Ridge, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Dec. 23, 1959, Ser. No. 861,462
17 Claims. (Cl. 260—462)

1. A process for the preparation of a cycloalkenyl borate which comprises condensing a hydrocarbon selected from the group consisting of alkadienes and cycloalkadienes with an alkenyl borate at condensation conditions to form the desired cycloalkenyl borate, said alkenyl borate being of the formula:



in which *n* is an integer of from 0 to 10.

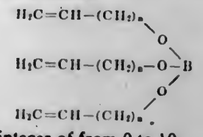
17. A compound selected from the group consisting of tris-(5-norbornen-2-yl) borate, tris-[(5-norbornen-2-yl)methyl] borate, and [(5-norbornen-2-yl)methyl] diallyl borate.

3,020,308
PREPARATION OF TRIALKYL BORATES FROM SODIUM PENTABORATE OR BORAX
Hugo Stange, Niagara Falls, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Aug. 2, 1954, Ser. No. 447,380
7 Claims. (Cl. 260—462)

7. A method of preparing a trialkyl borate which comprises heating a mixture of a compound selected from the group consisting of borax and sodium pentaborate with a lower alkanol to a temperature at which a trialkyl borate is formed and distilling the trialkyl borate formed from the reaction mixture.

3,020,309
HALOCYCLOALKENYL BORATES AND PREPARATION THEREOF
John P. Luvisl, Park Ridge, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Dec. 23, 1959, Ser. No. 861,463
18 Claims. (Cl. 260—462)

1. A process for the preparation of halocycloalkenyl borate which comprises condensing a halo-substituted compound selected from the group consisting of halo-substituted alkadienes and halo-substituted cycloalkadienes with an alkenyl borate at condensation conditions to form the desired halocycloalkenyl borate, said alkenyl borate being of the formula:



in which *n* is an integer of from 0 to 10.

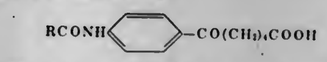
13. A compound selected from the group consisting of tris-(1,4,5,6,7,7-hexachloro-5-norbornen-2-yl) borate, tris - [(1,4,5,6,7,7 - hexachloro-5-norbornen-2-yl)methyl] borate, tris - [(3,5 - dichloro - 3 - cyclohexen-1-yl)methyl] borate, (1,4,5,6,7,7-hexachloro-5-norbornen-2-yl) divinyl borate and bis-[(3,5-dichloro-3-cyclohexen-1-yl)methyl] allyl borate.

3,020,310
PROCESS FOR THE PRODUCTION OF TERTIARY CYANOETHYLATED AMINES
George W. Fowler, South Charleston, and John W. Lynn, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Aug. 12, 1960, Ser. No. 49,143
10 Claims. (Cl. 260—465.5)

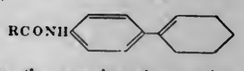
1. A process for the cyanoethylation of weakly basic aliphatic amines which comprises reacting a weakly basic aliphatic amine selected from the group consisting of 3,3'-iminodipropionitrile and N,N'-bis(2-cyanoethyl)ethylenediamine with acrylonitrile in the presence of from about 5 to about 100 percent, based on the total amount of acrylonitrile and amine, of an organic acid catalyst selected from the group consisting of lower alkanoic acids, benzoic acid, and paratoluene-sulfonic acid at a temperature of from about 50° C. to about 150° C.

3,020,311
PROCESS FOR PREPARATION OF POLYAMIDE INTERMEDIATES
Samuel C. Temin, Cleveland, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 9, 1958, Ser. No. 727,279
2 Claims. (Cl. 260—518)

1. A process for preparing 5-(p-acylaminobenzoyl) valeric acids of the formula



wherein R is a lower alkyl radical, which comprises reacting at between about 25° C. and 90° C. a 1-(p-acylaminophenyl) cyclohexene of the formula



wherein R has the meaning above, with ozone in the presence of an aqueous solvent containing no more than about 50% by weight of water; and subjecting the resulting ozonization reaction product to hydrolysis by heating to between about 50° C. and 100° C. in the presence of oxygen thereby forming said 5-(p-acylaminobenzoyl) valeric acid.

3,020,312
PURIFYING PHTHALIC ACIDS
Arthur D. Moscrip, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Jan. 13, 1958, Ser. No. 708,657
8 Claims. (Cl. 260—524)

1. In a process for producing isophthalic acid wherein m-xylene is partially oxidized in liquid phase to obtain a reaction product comprising solid isophthalic acid, unoxidized liquid m-xylene and contaminating color bodies, and wherein a solid material comprising solid isophthalic acid, occluded liquid m-xylene and contaminating color bodies is separated from the free liquid in said reaction product and subsequently contacted with an aqueous lower alkanol thereby to produce a solution of the isophthalic acid in said aqueous alkanol, said solution also containing the occluded unoxidized xylene and contaminating color bodies, the improvement of: (1) separately contacting said solution, at a temperature in the approximate range of from about 50 to about 300° F., with an added agent selected from the group consisting of water, and both water and xylene, in amount sufficient to produce a two-phase liquid system; and (2) separating from the resulting two-phase liquid system a xylene-rich layer containing color bodies, whereby an aqueous-alkanol-rich solution of isophthalic acid containing reduced concentrations of xylene and color bodies is obtained.

3,020,313
PROCESS FOR PREPARING PHENYL CARBAMYL CHLORIDES
Johnnie M. Aulbaugh, Baytown, Charles J. Kramis, Houston, and Howard T. Siefen, Pasadena, Tex., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 13, 1958, Ser. No. 754,732
4 Claims. (Cl. 260—544)

1. In the process of reacting approximately equimolar amounts of phenyl isocyanate and chlorine, at a temperature within the range from —15° to 90° C., in a solvent selected from the group consisting of acetylene tetrachloride, chloroform, carbon tetrachloride, hexachloroethane, monochlorobenzene, ortho-dichlorobenzene, trichlorobenzene, monochlorotoluenes and nitrobenzene, to produce para-chlorophenyl carbamyl chloride, the improvement of carrying out said process in the presence of less than 250 parts per million by weight of water.

3,020,314
PROCESS FOR THE PREPARATION OF ALCOHOLS, ALDEHYDES AND KETONES
Thomas Alderson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 22, 1959, Ser. No. 847,889
10 Claims. (Cl. 260—597)

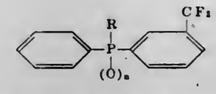
1. The process for preparing oxygenated organic compounds of the class consisting of alcohols and aldehydes of 5–7 carbon atoms and ketones of 9–13 carbon atoms from acyclic olefins of 4–6 carbon atoms respectively, which comprises reacting one of said olefins with carbon monoxide and water at a temperature of 100–350° C. and a pressure of 100–3000 atmospheres in the presence of a catalyst consisting essentially of a group VIII noble metal halide, wherein the halide is selected from the class consisting of chloride, bromide and iodide, and up to 10 moles per mole of noble metal halide of a group V compound selected from the group consisting of pyridine, quinoline and compounds represented by the formula,



wherein M is a member of the group consisting of nitrogen, phosphorus, arsenic, antimony and bismuth, and R, R' and R" are members of the group consisting of hydrogen, and alkyl and monocyclic aryl hydrocarbon radicals of up to 18 carbon atoms, said halide being present in an amount ranging from 0.00001 to 0.1 mole per mole of olefin initially added for the reaction, and the initial molar ratio of olefin:carbon monoxide:water being within the range of 1:0.1:0.1 to 1:5:15.

3,020,315
ARYL PHENYL α,α,α-TRIFLUORO-m-TOLYL PHOSPHINES AND OXIDES THEREOF
John Robert Campbell, St. Louis, and Roger E. Hatton, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 26, 1960, Ser. No. 52,012
5 Claims. (Cl. 260—606.5)

1. Phosphines and phosphine oxides represented by the structure,



where R is selected from the group consisting of m-tolyl and α,α,α-trifluoro-m-tolyl radicals and *n* is an integer from 0 to 1.

3,020,316
BIS(2-METHOXYETHYL) ETHER PRODUCTION
Robert M. Thomas, Tonawanda, and Guenter K. Weisse, Niagara Falls, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Feb. 28, 1957, Ser. No. 642,933
3 Claims. (Cl. 260—615)

1. A process for the production of bis(2-methoxyethyl) ether which comprises as a first step reacting methanol, sodium hydroxide and bis(2-chloroethyl) ether at from 20° C. to 80° C. until substantially all of the bis(2-chloroethyl) ether has been converted to the intermediate 2-chloroethyl-2-methoxyethyl ether as measured by the production of from 45 to 80 percent by weight of the theoretical amount of sodium chloride and as a second step raising the reaction mixture to a temperature of from 45° C. to 150° C. and continuing the reaction to substantial completion, with the proviso that the temperature in the second step is at least 25° C. higher than the temperature in the first step.

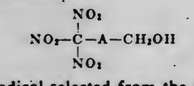
3,020,317
POLYNITRO ALCOHOLS AND SALTS THEREOF
Karl Klager, Monrovia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed May 29, 1957, Ser. No. 662,549
20 Claims. (Cl. 260—632)

1. A composition of matter selected from the group consisting of 2,2,4,4-tetranitrobutanol and the alkali metal, alkaline earth metal, and ammonium salts thereof.

7. The method for preparing the compound selected from the group consisting of 2,2,4,4-tetranitrobutanol, the alkali metal, alkaline earth metal, and the ammonium salts thereof, which comprises reacting a salt selected from the group consisting of the alkali metal, alkaline earth metal, and ammonium salts of dinitro ethanol with acid at a pH of from about 2.0 to 6.0 and subsequently adjusting the pH to obtain the desired product.

3,020,318
POLYNITRO ALCOHOLS AND THEIR METHOD OF PREPARATION
Marvin H. Gold and Gustave B. Linden, Pasadena, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
No Drawing. Filed July 25, 1957, Ser. No. 675,799
14 Claims. (Cl. 260—632)

1. As compositions of matter the polynitro alcohols having the general formula:



wherein A is a radical selected from the group consisting of lower alkylene and lower nitroalkylene radicals.

3,020,319

PREPARING 2,2-DINITRO-1,3-PROPANEDIOL

Karl Klager, Monrovia, and Gustave B. Linden, Los Angeles, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Nov. 16, 1953, Ser. No. 392,477

3 Claims. (Cl. 260—635)

1. The method of preparing 2,2-dinitro-1,3-propanediol which comprises reacting 2,2-dimethyl-5-hydroxymethyl-5-nitro-1,3-dioxane with a base selected from the group consisting of alkali metal and alkaline earth metal hydroxides to yield a salt; subsequently reacting said salt with a nitrite salt selected from the group consisting of alkali metal and alkaline earth metal nitrite salts in the presence of silver nitrate to yield a dinitro dioxane; and subsequently acid hydrolyzing said dinitro dioxane to the desired 2,2-dinitro-1,3-propanediol.

3,020,320

PREPARATION OF LONG-CHAIN PRIMARY ALIPHATIC ALCOHOLS

Charles Paquot, Daniel Lefort, and Janine Sorba, all of Paris, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a corporation of France

No Drawing. Filed Dec. 18, 1958, Ser. No. 781,213

Claims priority, application France Dec. 24, 1957

7 Claims. (Cl. 260—638)

1. A method of preparation of primary alcohols having $n-1$ atoms of carbon, starting from the corresponding saturated straight chain aliphatic peracid having n atoms of carbon, the peracid having the formula $R—CH_2—CO_3H$ where R represents a saturated hydrocarbon chain containing from 8 to 18 atoms of carbon, comprising the steps of mixing said peracid with a solvent chosen from the group consisting of petroleum ether, dioxane, cyclohexane and mixtures thereof, and heating said peracid and solvent mixture to boiling temperature with continuous agitation for a period of time comprised between 5 and 180 minutes.

3,020,321

PREPARATION OF FLUOROOLEFINS

Hugh Harper Gibbs, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 4, 1958, Ser. No. 778,080

12 Claims. (Cl. 260—653.3)

1. Process for the preparation of fluoroolefins which comprises contacting a vaporized fluorocarbon acid halide having general formulas of the class consisting of $XC_nF_{2n}COY$ and $C_{n+2}F_{2(n+2)}(COY)_2$, wherein X is of the class consisting of hydrogen and fluorine, Y is a halogen, and n an integer of greater than 1, with a catalyst of the class consisting of stable metal oxides, wherein the metal is selected from the class consisting of metals in group II-A of the periodic table and silicon, and stable oxygen-containing metal salts, wherein the metal is selected from the group consisting of metals in groups I-A II-A of the periodic table, at a temperature of 200° to 500° C., and recovering a fluoroolefin having the general formulas XC_nF_{2n-1} and $C_{n+2}F_{2(n+2)-2}$, where X and n are as stated above.

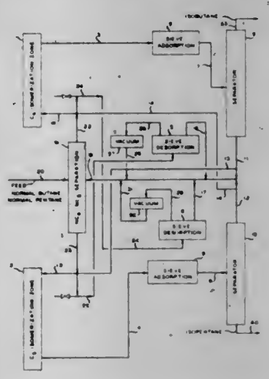
3,020,322

ISOMERIZATION OF HYDROCARBONS

John G. Allen, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Oct. 19, 1959, Ser. No. 847,401

2 Claims. (Cl. 260—683.65)



1. A method for the separate isomerization of hydrocarbons of different molecular weight which comprises in a first isomerization zone isomerizing a normal paraffin-hydrocarbon of a given molecular weight, in a second isomerization zone isomerizing a normal paraffin-hydrocarbon of a molecular weight different from that of said given molecular weight, from each of said isomerization zones passing effluents, respectively, to molecular sieve material containing zones thereby causing adsorption in each of said molecular sieve zones, respectively, of insufficiently isomerized hydrocarbon while yielding from each of said molecular sieve zones a stream containing isomerized hydrocarbon product, removing from each of said molecular sieve zones unisomerized hydrocarbons adsorbed therein by elution of the unisomerized hydrocarbon of said given molecular weight on the sieve material in the zone in which it has been adsorbed, using as eluent, unisomerized hydrocarbon of molecular weight different from that of said hydrocarbon of said given molecular weight and by elution of unisomerized hydrocarbon of said molecular weight different from that of said hydrocarbon of said given molecular weight, using, as eluent, hydrocarbons of said given molecular weight, and passing said unisomerized hydrocarbons, including those used as eluents, to a hydrocarbon separation zone wherein the hydrocarbons are separated according to molecular weight, obtaining hydrocarbons separated according to molecular weight, returning from said separation zone to the said first isomerization zone hydrocarbon of said given molecular weight being isomerized therein and returning from said separation zone to said second isomerization zone hydrocarbon of said different molecular weight being isomerized therein.

ELECTRICAL

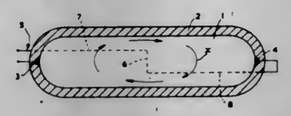
3,020,323

METHOD FOR STIRRING ELECTRIC-CURRENT-CONDUCTING MELTS IN FURNACES, MIXERS AND HOLDERS

William D. Redfern, Monta Vido Mount Road, Llanfairfechan, Caernarvonshire, Wales

Filed Nov. 18, 1958, Ser. No. 774,625

6 Claims. (Cl. 13—5)



1. Apparatus for stirring an electric-current-conducting melt comprising a container for the melt, first and second electrodes carried by said container in spaced relation to each other and located in a vertical plane dividing the melt into substantially equal portions, a pair of conductors connected to said electrodes for establishing an electric current circuit between said electrodes, one of said conductors extending from the electrode to which it is connected back toward the other electrode and being carried by said container so as to be isolated from the melt held thereby, said one conductor having a first straight leg portion lying on one side of said plane and a second straight leg portion lying on the other side of said plane with there being a linear portion connecting such legs which passes through said plane.

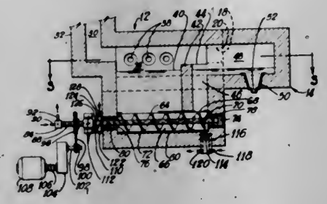
3,020,324

APPARATUS FOR MELTING HEAT SOFTENABLE MINERAL MATERIAL

Charles C. Curtis, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed Dec. 30, 1958, Ser. No. 783,784

12 Claims. (Cl. 13—6)



1. Apparatus of the character disclosed, in combination, a receptacle constructed to contain heat-softenable mineral material, means for heating the material in the receptacle to reduce the material to flowable condition, said receptacle having walls of refractory, a metal walled chamber disposed within the receptacle, said metal walled chamber having a passage to receive heat-softenable material from the receptacle, a relatively movable material agitating means formed of metal disposed within the chamber, means for moving said agitating means to advance the material through said chamber, means engageable with said agitating means and the metal wall of the chamber and connected with a current supply for flowing an electric current through the material in the chamber for heating the material therein at a higher temperature than that of the material in the receptacle, an outlet means for said chamber for discharge of the material therefrom.

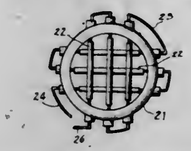
3,020,325

THERMOELECTRIC DEVICE

Gunnar A. F. Winckler, Milford, Conn., assignor to United Nuclear Corporation, New Haven, Conn., a corporation of Delaware

Filed Nov. 3, 1958, Ser. No. 771,438

1 Claim. (Cl. 136—4)



A thermoelectric generator comprising a non-conducting heat resistant collar, a plurality of thermoelectric devices positioned within said collar, electrical means to connect said devices in series, each said device including a pair of dissimilar thermoelectric elements spaced apart and mounted in the collar, an intermediate heat conducting element having protuberances at each end and adapted to make slight areal contact at each end of the conducting element with a dissimilar thermoelectric element to form a hot junction, and to create a high temperature gradient in the region of said junction, said heat conducting elements forming a grid within the collar whereby a source of heat within the collar is operative to activate all said devices simultaneously.

3,020,326

THERMOELECTRIC ALLOYS AND ELEMENTS

Russell E. Fredrick, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed Aug. 21, 1958, Ser. No. 756,462

10 Claims. (Cl. 136—5)

1. A thermoelectric alloy consisting essentially of 60.01 to 61.16 atomic percent tellurium, substantially all of the balance being an antimony-bismuth constituent containing 65 to 90 atomic percent antimony.

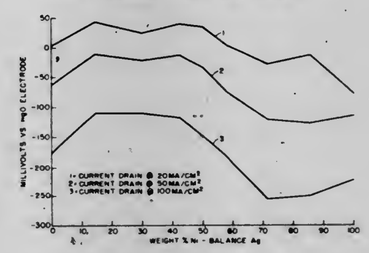
3,020,327

FUEL CELLS AND THEIR ELECTRODES

Paul Ruetschi, Glenside, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey

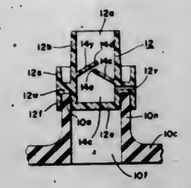
Filed Aug. 11, 1959, Ser. No. 832,978

4 Claims. (Cl. 136—120)



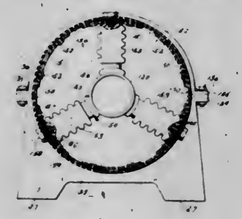
1. A fuel cell electrode comprising a porous matrix, at least the pore surfaces of said matrix consisting of a nickel-silver alloy in which nickel is present in an amount by weight of the alloy of from 10% to 50% and silver is present in an amount by weight of the alloy of from 90% to 50%.

3,020,328
BATTERY CAP
Richard A. Jones, Muncie, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 845,837
2 Claims. (Cl. 136—177)



1. On a dry-charge storage battery having a case including a neck around an electrolyte and fluid filler opening, the combination therewith of a one-piece battery cap means including a unitary body of insulating material, sealing means integral with said body and having a laterally outwardly extending annular web portion as well as first and second annular sealing lip portions axially extending in opposite directions and each substantially concentric and coaxial relative to said body, said web portion specifically having therein a vent opening formed as part of passage means and extending radially outwardly through said body, baffle means including a pair of transverse partition members integral inside said body and extending in angular positions toward though spaced from each other so as to complete another part of passage means from said vent opening to an open end of said body, and a covered end integral with said body in a location opposite to that of said open end and to one side of said vent opening for protecting and shielding said baffle means and vent opening as the passage means against contamination of the filler opening both when the filler opening is shut off completely and when this filler opening is vented between said transverse partition members and vent opening to permit "breathing" and escape of electrolytic gases subsequent to filling and wet use with electrolyte and fluid in the battery case, one of said sealing lip portions together with said web portion serving to limit telescopic fit of said body about the neck of the battery case both during storage and shipment of the battery case in dry condition as well as during wet use thereof.

3,020,329
HOUSING FOR BUS RUN
William Deans, Ridgewood, N.J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 22, 1957, Ser. No. 698,094
2 Claims. (Cl. 174—16)



1. An elongated housing for enclosing an elongated electrical conductor; said housing being constructed of a plurality of longitudinal metallic members extending substantially parallel to said electrical conductor; each of said metallic members having protrusions along the longitudinal edges thereof; a plurality of insulating strips interposed between adjacent metallic members adjacent to said protrusions; and means comprising insulated bolted connections securing adjacent metallic members to one another so as to form a rigid housing structure which presents a high impedance to induced currents; insulating stand-off means mounted between said enclosure and said conductor for supporting said conductor in spaced relationship from said enclosure, fluid insulating means occupying the region between said enclosure and said conductor.

3,020,330
TRANSPOSED ELECTRICAL BUS DUCTS
Paul Huska, 739 Moreno Ave., Los Angeles, Calif.
Filed Apr. 27, 1959, Ser. No. 809,041
8 Claims. (Cl. 174—34)



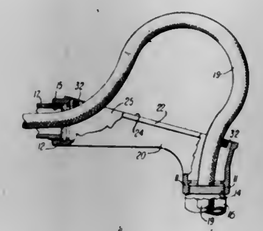
1. An electrical bus duct of the character described for the transposition of conductors and including, an elongate multi-tubular unit having at least three adjacently straight and parallel elongate ducts, and one pair only of said adjacent ducts being crossed so as to transpose the conductors carried therein as they extend between the opposite ends of the unit.

3,020,331
STRAIN RELIEF WASHER
Nathan R. Schwartz, Yonkers, N.Y., assignor, by mesne assignments, to Swivelier Company, Inc., Nanuet, N.Y., a corporation of New York
Filed June 22, 1959, Ser. No. 821,861
5 Claims. (Cl. 174—62)



1. In combination a mounting means adapted to be removably connected to a support having electrical power means associated therewith, an electrical device secured to said mounting means, said electrical device including a first and a second electrical conductor insulated from one another and both extending through an opening in said mounting means, a first means including a washer section having an opening aligned with said mounting means opening and having both of said conductors extending therethrough, said first means also including a strain relief section formed integrally with said washer section, both of said conductors extending through hole means in said strain relief section, said strain relief section being inclined with respect to said washer means; said first means further including a section of reduced area defining a boundary between said strain relief section and said washer section along which the angular disposition between said strain relief section and said washer section may be adjusted; said washer section opening being defined by a formation which cooperates with a formation of said electrical device to prevent said first means from rotating relative to said electrical device.

3,020,332
PULLING ELBOW
Arthur I. Appleton, 1713 Wellington Ave., Northbrook, Ill.
Filed July 21, 1959, Ser. No. 828,498
5 Claims. (Cl. 174—72)



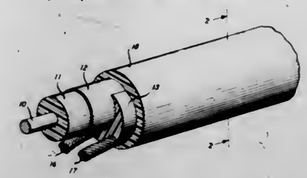
1. A pulling elbow for providing a substantially right angle bend in large diameter heavy wall rigid conduit containing heavy insulated cable comprising a generally L-shaped separable housing having a conduit receiving end opening in each leg with the axis of each leg and its opening intersecting at about a right angle within the housing, means for separating said housing along a plane defining an elongated access opening axially exposing said leg openings, a pair of smooth surfaced rollers, and means journaling a roller of said pair at each end of the elongated access opening so that said rollers extend transversely to the leg axes and at least partially over said access opening for guidably engaging a cable being pulled through the pulling elbow.

3,020,333
MEANS FOR STRENGTHENING AN INTEGRALLY FORMED JOINT
Robert J. Bangert and Thomas L. Staley, Fort Wayne, Ind., assignors to General Electric Company, a corporation of New York
Filed Sept. 29, 1953, Ser. No. 383,086
1 Claim. (Cl. 174—94)



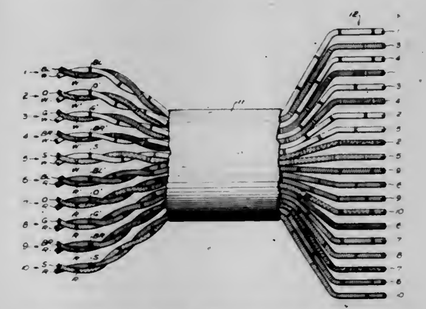
A pair of wires adapted to be integrally joined, one of said wires being composed of aluminum, the other of said wires being disposed of copper, said wires being composed in side-by-side closely spaced apart parallel relationship, and a ferrule member formed of aluminum sheet material and adapted to clamp said wires together, a portion of said ferrule positioned around said wires and having its ends extending inwardly between said wires thereby maintaining said wires out of contact with each other and preventing an electrolytic process therebetween, and an integral alloy joint formed solely of the ends of said wires and a portion of said ferrule electrically uniting said wires, said joint being strengthened both by the addition of aluminum in said joint from said ferrule and by the clamping portion of the ferrule which absorbs stresses in said wires before such stresses can be transmitted to said joint.

3,020,334
ELECTRICAL CABLE
Robert M. Riley, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 1, 1959, Ser. No. 843,820
2 Claims. (Cl. 174—107)



1. An armorless ocean telephone cable comprising an inner electrical conductor, a layer of insulation surrounding said conductor, an outer conductor over said insulation, an elongated spacer member having a substantially crescent-shaped cross section extending longitudinally with respect to said cable and positioned over a major portion of said outer conductor, a plurality of spaced apart strength members comprising parallel metal strands each having an opposite lay, positioned on said spacer member, at a point of its greatest thickness, and an outer layer of insulating material surrounding the whole and embracing said strength members, said outer layer of insulating material having its greatest thickness where it embraces the metal strands.

3,020,335
COLOR CODED CABLE
Randall Gillis, Eggertsville, N.Y., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 16, 1960, Ser. No. 15,351
3 Claims. (Cl. 174—112)

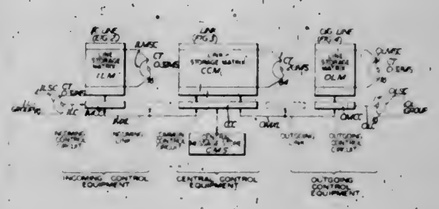


2. A cable comprising a plurality of twisted pairs of distinctive color coded conductors, a different base color on each conductor of each pair, and each of the conductors of each twisted pair having a reference color thereon corresponding to the base color of the other conductor of the twisted pair.

3,020,336
DATA-PROCESSING SYSTEMS
Esmond Philip Goodwin Wright, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Jan. 30, 1959, Ser. No. 790,124
Claims priority, application Great Britain Feb. 6, 1958
11 Claims. (Cl. 178—2)

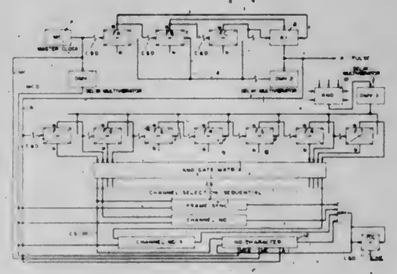
1. A data processing system comprising incoming and outgoing lines, incoming and outgoing line circuits com-

mon to a number of said lines, each including line stores individual to the lines for storing items of intelligence, there being a single store for each line, central apparatus common to the lines and including a plurality of central stores, an incoming connecting circuit between the incoming line circuit and the central stores, an outgoing connecting circuit between the outgoing line circuit and the



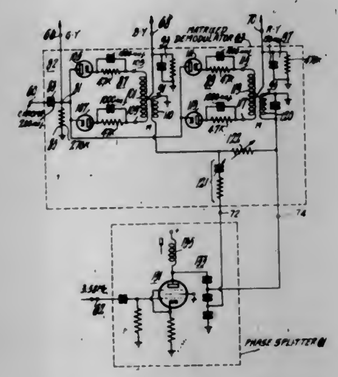
central stores, and control equipment in the central apparatus responsive to a signal on a line for scanning the incoming lines and operating said incoming and outgoing circuits for causing the sequential transfer of items of intelligence from the incoming lines to the outgoing lines through the incoming and outgoing line stores and the central stores.

3,020,337
SYNCHRONIZING CHARACTER GENERATORS
Carl J. Zarcone, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,377
8 Claims. (Cl. 178—2)



1. In a multiplex binary code transmission system, wherein a code is characterized as a legitimate code only if the first bit thereof has a given binary value, a transmission line, a plurality of code registers, a counter for counting and producing an enablement signal for enabling each said register in seriatim, means responsive to the said enablement of a register for shifting the bits of a code registered therein out of said register and into said transmission line, a stand-by circuit having an input connected to said transmission line and an output connected for transmission into said transmission line, said stand-by circuit having means responsive to a first code bit of a legitimate code being shifted out of a said register and into said transmission line for disabling itself to offer no interference with the transmission of said legitimate code into said line, said stand-by circuit having means for otherwise synthesizing bits for the remaining number of code bits in a said code and for transmitting said synthesized bits into said transmission line.

3,020,338
COLOR TELEVISION DEMODULATION SYSTEM
Roland N. Rhodes, Levittown, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Continuation of application Ser. No. 442,326, July 9, 1954. This application Aug. 2, 1957, Ser. No. 677,177
5 Claims. (Cl. 178—5.4)

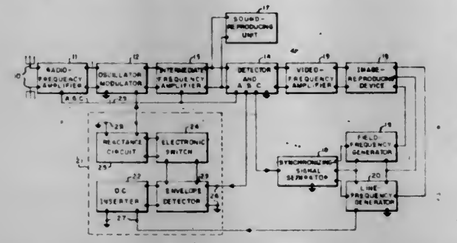


1. In a color television system, means to demodulate a chrominance signal consisting of a color modulated carrier wave to provide demodulated signals corresponding to three desired predetermined phases of the chrominance signal, comprising, two synchronous demodulators, each of said demodulators having a separate individual output circuit means for providing a detected signal of given polarity, the detected signals from the two output circuit means corresponding with two of said three predetermined phases of the chrominance signal, said demodulators also having an output circuit means common to both demodulators for providing a combined detected signal of opposite polarity corresponding with the third of said predetermined phases of the chrominance signal, means to couple said chrominance signal to both of said demodulators, a source of demodulating oscillations having the same frequency as said carrier wave, and means to couple two selected phases of said oscillations to respective ones of said demodulators, each of said two selected phases being different from each of said three predetermined phases of the chrominance signal, the phases being selected so that the interaction between said demodulators due to said common output circuit means causes the demodulated signals in the three output circuit means to correspond with the three predetermined desired phases of the chrominance signal.

3,020,339
AUTOMATIC TUNING APPARATUS FOR A COLOR TELEVISION RECEIVER
Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 18, 1958, Ser. No. 774,767
4 Claims. (Cl. 178—5.4)

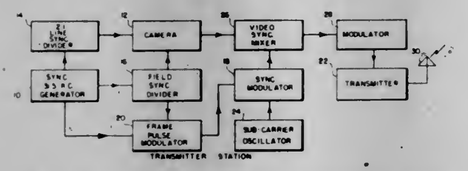
1. Automatic tuning apparatus for a television receiver of the type having, with respect to received modulated carrier waves, a normal tuning relationship and another tuning relationship preferred by most users of such receivers but which receiver, when tuned to the latter relationship, exhibits an undesirable beat-note pattern caused by the proximity of sound and color subcarriers when a compatibile color-television signal is received, the apparatus comprising: means for manually tuning such a receiver to the received carrier waves, said waves having

modulation components which may include the color subcarrier; means for detecting the presence or absence of said color subcarrier; and means responsive to the latter means and coupled to the tuning means for automatically shifting the tuning of the receiver from said preferred



relationship to said normal relationship when a received signal changes from a monochrome signal to a color-television signal and from said normal to said preferred relationship when a received signal changes from a color-television signal to a monochrome signal.

3,020,340
TELEVISION SYNCHRONIZING SYSTEM
Samuel A. Schwartz, Los Altos, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed June 3, 1958, Ser. No. 739,495
7 Claims. (Cl. 178—6)



1. In a television system including transmitter and receiver stations, an oscillator in the transmitter station having a fixed frequency sine wave primary signal output which is an even multiple of the picture line frequency of the system, frequency divider means responsive to said sine wave primary signal output and providing line and field synchronization signals for the transmitter station, means generating a sub-carrier signal, modulator means responsive to said frequency divider means and said oscillator and modulating said sub-carrier signal to provide a composite synchronization signal including both primary and framing signals for said receiver station, synchronization separator circuit means in the receiver station detecting the composite synchronization signal, receiver station frequency dividers for dividing the primary signal to produce horizontal and vertical synchronization pulses for the receiver station horizontal and vertical deflection circuits, gating circuit means coupling the synchronization separator to the frequency dividers, and feedback circuit means coupling the vertical pulse output of the deflection circuits in the receiver station to the gating circuit wherein coincidence of the framing signal in the composite synchronization signal and the vertical pulse passes the composite synchronization signals to the dividers.

3,020,341
STEREOSCOPIC TELEVISION
Freeman H. Owens, 600 W. 116th St., New York, N.Y.
Filed Dec. 21, 1951, Ser. No. 262,818
2 Claims. (Cl. 178—6.5)

1. The method of effecting stereoscopic television comprising alternately creating overlapping, laterally displaced, non-polarized images of stereo pairs of a subject at the rate of a pair to a television scanning frame, alternately electrically transmitting and translating each pair of the same into alternate, interlaced odd and even

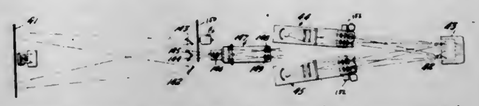
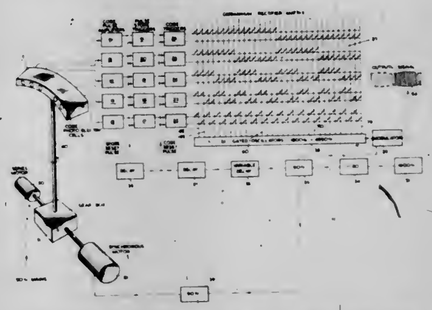


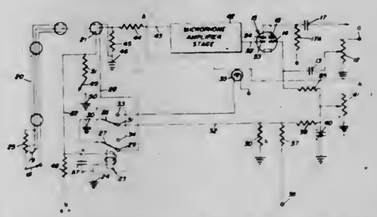
image forming lines of a television frame, oppositely polarizing the images produced by the odd and even scanning lines and alternately viewing the reproduced polarized images in correspondingly polarized relation.

3,020,342
READER SYSTEMS
Harold Kilner Robin, Tunbridge Wells, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed May 29, 1958, Ser. No. 738,724
Claims priority, application Great Britain May 30, 1957
12 Claims. (Cl. 178—52)



1. A reader system for reading a multi-unit code in time-division multiplex including a rotatable reading head, a plurality of lenses in the reading head, a plurality of photo-responsive cells situated one behind each lens in the reading head, means for rotating the reading head, a plurality of projection systems disposed round and spaced from the reading head and in each projection system means for projecting light simultaneously from each of a plurality of discrete areas in the projection system representing different units of the code through a separate one of the said lenses on to its associated photo-responsive means, as the reading head is rotated.

3,020,343
AUDIO SELECTIVE FADING SYSTEM
William D. Aldridge, Jr., 402 Delaine, Corpus Christi, Tex.
Filed Mar. 29, 1960, Ser. No. 18,433
4 Claims. (Cl. 179—1)



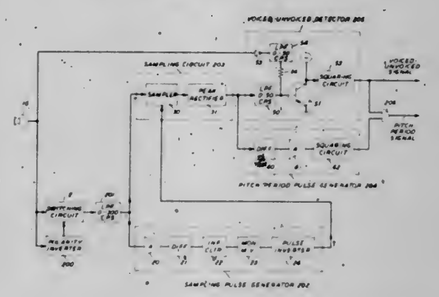
1. An audio selective fading system comprising a first audio signal source, a second audio signal source,

said second audio signal source being a microphone, means for feeding said first signal source to a first grid of a mixer thermionic tube the plate voltage thereof supplying energy to a driver, an amplifier connecting said second audio signal source and a second grid of said mixer thermionic tube, a source of negative biasing voltage connected to said first grid to bias said first grid to an off position, a relay operated switch when closed capable of grounding said negative biasing voltage, a relay operated switch connected to the output of the microphone when closed capable of grounding said microphone.

3,020,344
APPARATUS FOR DERIVING PITCH INFORMATION FROM A SPEECH WAVE

Anthony J. Prestigiacomo, North Plainfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 27, 1960, Ser. No. 78,363
5 Claims. (Cl. 179—1)

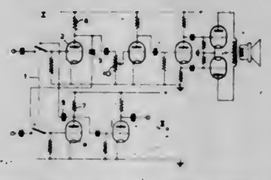


1. In a vocoder communication system, means for obtaining information-bearing signals that specify the pitch characteristic of a speech wave which comprises a source of a speech wave, means for deriving from selected components of said speech wave an asymmetrical wave, means for sampling selected peaks of said asymmetrical wave, means for developing a unidirectional wave from the largest of said sampled peaks, means for comparing the average value of said unidirectional wave with the average absolute value of said speech wave to produce a first signal indicative of the voiced-unvoiced nature of said speech wave, and means for generating from said unidirectional wave a second signal indicative of the fundamental period of said speech wave.

3,020,345
AMPLIFYING ARRANGEMENT FOR STEREOPHONIC REPRODUCTION

Cornelis Vonk, The Hague, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Nov. 16, 1959, Ser. No. 853,303
Claims priority, application Germany Nov. 24, 1958
2 Claims. (Cl. 179—1)

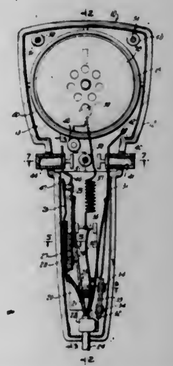


1. An amplifying system for stereophonic reproduction comprising first and second amplifier channels, said first channel having an electroacoustic converter connected to the output thereof, said second channel having an output circuit, means for connecting said output circuit to a reproducing apparatus, each of said channels having an amplifying device, switch means connected to said channels for selectively interconnecting the output of each amplifier device to the input of the other amplifier device and to remove signal inputs to said first and second channels, whereby electrical oscillations are simultaneously applied to both of said channels, and means for adjusting the amplification factor of at least one of said channels.

3,020,346
MICROPHONE FOR SOUND DISPATCHING STATION

Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York

Filed Dec. 9, 1957, Ser. No. 701,466
4 Claims. (Cl. 179—2)



1. In a combination microphone and toy railway control unit for model railway trains including, a control circuit for operating trains on a power track and a microphone control circuit for connecting said microphone to an electrical current supply, the improvement comprising a housing having a hollow hand grip portion and an enlarged hollow microphone receiving portion, said control circuit including a fixed contact member and a resilient contact member normally in engagement therewith for closing said control circuit, said microphone control circuit including a microphone conductive rim contact portion and a resilient contact member in normally open relation with said rim contact portion, control circuit reciprocable button means biased in an outward direction by said control circuit resilient contact member, microphone control circuit reciprocable button means biased in an outward direction by said microphone control circuit resilient contact member, said first mentioned button means being manually actuable in an inward direction to open said train operating control circuit and said second mentioned button means being manually actuable in an inward direction to close said microphone operating control circuit.

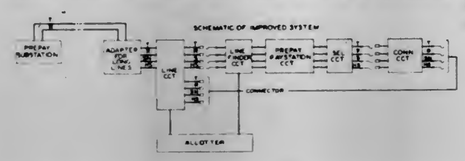
3,020,347
PREPAY PAYSTATION TELEPHONE SYSTEM

Ernest H. Gatzert, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Oct. 16, 1958, Ser. No. 767,529
7 Claims. (Cl. 179—6.3)

1. In a dial telephone system, stations including regular stations and paystations each terminating in a line

circuit, linefinder selector combinations for extending connections from said line circuits, other selective switches including connectors for further extending connections to other stations, a prepay paystation adapter circuit in each said linefinder selector combination in circuit between a linefinder and its associated selector, said adapter circuit including a pad circuit, said pad circuit including a paystation relay for differentiating between a line serving a regular subscriber station and a line serving a paystation

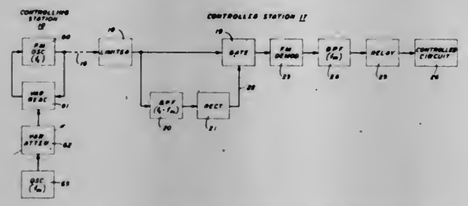


and another relay for thereafter differentiating between lines serving one or another kind of paystation, said paystation relays controlling said prepay paystation adapter circuit, first to freely extend a connection from said linefinder to said selector, second to block the operation of said selector until a coin has been deposited at a said paystation, and third to disable said blocking means and to provide means for repeating dial pulses into said selector.

3,020,348
SIGNALING CIRCUITS

Pieter G. Cath, Ann Arbor, Mich., assignor to Bell Telephone Laboratories Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 31, 1958, Ser. No. 770,996
14 Claims. (Cl. 179—6.3)



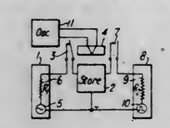
1. In a selective signaling system, a transmisison line, a source of signaling current for producing on said line a frequency modulated signaling wave having a preselected modulation index, and a signal receiving circuit connected to said line for responding only to said signaling wave, said receiving circuit comprising normally disabled demodulating means, means for detecting at least one sideband of said signaling wave, first threshold responsive means for enabling said demodulating means only when the output of said detecting means exceeds a first threshold, filter means connected to said demodulating means, and second threshold responsive means for responding only when the output of said filter means exceeds a second threshold.

3,020,349
ELECTRIC PULSE MODULATING AND DEMODULATING CIRCUITS

Kenneth William Cattermole, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 30, 1955, Ser. No. 550,163
Claims priority, application Great Britain Dec. 3, 1954
8 Claims. (Cl. 179—15)

1. An electric pulse translating system including a source of amplitude modulated signal waves, a pulse circuit for producing amplitude modulated pulse trains possessing substantially the same information as that contained in the signal waves, the pulses of said train being short with respect to the spacing therebetween, said spacing being substantially fixed and related to the frequency of the signal wave comprising a storage device connected to said signal wave source, having a storage capacity sufficient to store substantially all the energy of said wave applied to it during the interval intermediate successive pulses of said train, high impedance means for applying said energy from said source to said

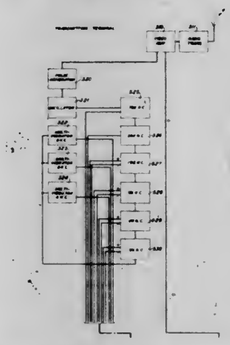


storage means, a low impedance output circuit, switching means intermediate said storage means and said output circuit and means to periodically operate said switching means to produce alternately an open circuit condition between said storage circuit and said output circuit for a period substantially equal to the spacing between said pulses for storing said energy from said signal means and a closed circuit condition between said storage device and said output circuit for a period equal to the duration of said pulses, the periodicity of said operating means being substantially greater than that of the highest frequency of said signal waves.

3,020,350
PULSE CODE MODULATION COMMUNICATION SYSTEM

Harold S. Black, Elmhurst, and James Oliver Edson, Great Kills, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

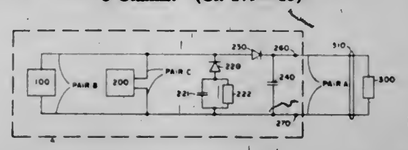
Filed May 10, 1945, Ser. No. 592,967
31 Claims. (Cl. 179—15)



8. In a communication system, a source of signals of complex wave form, an apparatus for repeatedly generating a single pulse having a time relationship relative to a reference time representative of the amplitude of said complex wave at different predetermined instants of time, apparatus responsive to each of said single pulses for generating a group of permutation code pulses each pulse of which has one of a plurality of different characteristics and each group of which represents said amplitudes comprising a plurality of sources of electrical waves in which a source of waves of different frequency is provided for each of the pulses of the permutation code groups of pulses, apparatus for generating each of the pulses of said

permutation code groups of pulses, means for determining the characteristic of each of said pulses controlled by the condition of the respective electrical waves at the time of occurrence of said single pulse, apparatus for transmitting said permutation code groups of pulses over a transmission medium, receiving apparatus responsive to each of said pulses of each of said permutation code groups of pulses, a plurality of sources of electrical waves having a different fundamental frequency for each of the pulses of said permutation code groups of pulses and having a different phase for each of the possible characteristics of each of the pulses of the permutation code group, apparatus responsive to each of the received pulses for selecting an electrical wave of a predetermined phase dependent upon the characteristic of said pulse, apparatus for combining all of said selected waves and repeatedly generating a single pulse having a time relationship relative to a reference time controlled by each of said groups of permutation codes representative of the amplitudes of said complex wave at said predetermined intervals of time, and apparatus for reconstructing said complex wave from said last-mentioned pulses.

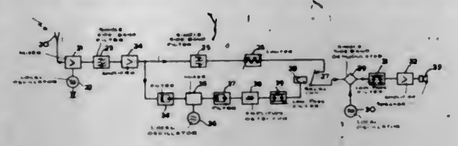
3,020,351
DIRECTIONAL COUPLING NETWORK
William M. Woodhull, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 20, 1957, Ser. No. 647,418
5 Claims. (Cl. 179—15)



1. In a telephone set circuit, means for receiving alternating current signals, a source of modulated alternating current signals coupled in parallel with said means for receiving alternating current signals, a first half wave demodulating means, means for applying said modulated alternating current signals as an input to said first demodulating means, a line connecting said telephone set to a central office, means for applying the output of said first demodulating means to said line, whereby said line forms part of the load impedance of said first demodulating means, a second half wave demodulating means oppositely poled with respect to said first demodulating means, means for applying said modulated alternating signals as an input to said second demodulating means, said second demodulating means including a load impedance substantially equal to the load impedance of said first demodulating means.

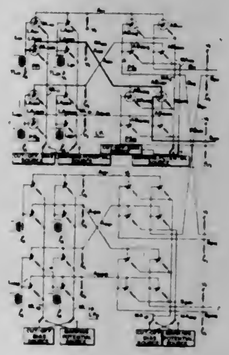
3,020,352
SINGLE SIDEBAND EQUIPMENT FOR SPEECH TRANSMISSION
Frank de Jager and Johannes Anton Greefkes, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., Irvington on Hudson, N.Y.
Filed Mar. 15, 1957, Ser. No. 646,237
Claims priority, application Netherlands Apr. 26, 1956
11 Claims. (Cl. 179—15.55)

1. A single-sideband system comprising a transmitter having means for producing a single-sideband signal controlled by speech signals, a limiter connected to limit the amplitude of said single-sideband signal, means for producing a pilot signal switching voltage which varies discontinuously between fixed values in accordance with the instantaneous presence and absence of said speech signals, and means for transmitting said limited single-sideband signal and said pilot signal switching voltage, and a receiver having means to receive said transmitted signals, a single-sideband demodulator, a limiter, means connected to apply the received single-sideband signal to said demodulator through the last-named limiter, an



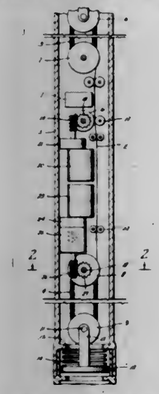
output means connected to said demodulator, and a switching means controlled by the received switching voltage and connected to permit the received signal to reach said output means only during the presence of said speech signals.

3,020,353
ARRANGEMENT FOR AUTOMATIC TELEPHONE SYSTEMS
Alphonsus Heetman, Hilversum, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed July 23, 1957, Ser. No. 673,642
Claims priority, application Netherlands Aug. 16, 1956
3 Claims. (Cl. 179—18)



1. An automatic telephone system comprising a first group of conductors, a second group of conductors, a plurality of intermediate groups of conductors, a first plurality of transistors each having collector, base and emitter electrodes, groups of said emitter electrodes being respectively connected to conductors of said first group and groups of said collector electrodes being respectively connected to conductors of a first one of said intermediate groups, a second plurality of transistors each having collector, base and emitter electrodes, groups of said last-named emitter electrodes being respectively connected to conductors of a last one of said intermediate groups and groups of said last-named collector electrodes being respectively connected to conductors of said second group, further pluralities of transistors each having emitter electrodes connected in groups to respective conductors of a preceding one of said intermediate groups of conductors and collector electrodes connected in groups to respective conductors of a succeeding one of said intermediate groups of conductors, whereby a conductor of said first group can be connected to a conductor of said second group via a choice of conductors of said intermediate groups by rendering selected transistors conductive, means for biasing all of said emitter electrodes with respect to all of said base electrodes so as to render all of said transistors normally non-conductive, and marking means connected to apply a marking voltage to the base electrode of at least one transistor in each of said plurality of transistors so as to render selected transistors consecutively conductive for establishing a connection between a selected conductor of said first group and a selected conductor of said second group, the conductors of said second group having a D.-C. return resistance which is lower in value than the D.-C. return resistances of the conductors of said intermediate and first groups of conductors thereby to insure that no other transistors which are connected to the conductors forming said connection will become conductive upon subsequent applications of marking voltage.

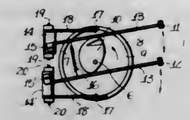
3,020,354
STORING TAPE IN A TUBULAR TAPE RECORDER
Harold E. McGowen, Jr., Houston, Tex., assignor to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed May 16, 1960, Ser. No. 29,451
3 Claims. (Cl. 179—100.2)



1. In a magnetic tape recorder, a relatively narrow and longitudinally elongated hollow housing, two endless belts each in the form of a longitudinally elongated loop positioned within the housing in longitudinal tandem succession to one another with the major loop axis at the longitudinal center line of the housing and each belt of a width to occupy the major portion of the interior width of the hollow housing, said looped belts being adapted to receive and store in superposed layers a magnetic tape which reaches from one belt to the other and is wound up on one as it is fed from the other, a magnetic recording head mounted in the housing to operate on the tape reach portion between the belts, power driven tape engageable feed means operating at a constant rate to feed tape to the recording head and drive transmitting means having a slip clutch connection with the wind-up belt and driving the same at a rate to maintain tension on the tape beyond said feed means.

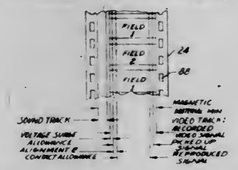
3,020,355
MAGNETIC RECORDING AND REPRODUCING SYSTEM
Ikuro Moriya, Kanagawa-ku, Yokohama, Japan, assignor to Victor Company of Japan, Limited, Yokohama, Japan, a corporation of Japan
Filed Sept. 20, 1960, Ser. No. 57,167
Claims priority, application Japan Oct. 2, 1959
3 Claims. (Cl. 179—100.2)

1. A magnetic sound recording and reproducing system comprising a magnetic sheet coated with a magnetic material on one surface, means for moving the sheet in one direction, at least two parallel supporting rods each having a magnetic head fitted at one end and, at the other end, a pivoting part movable to right and left with respect to said sheet, at least two arms related with said rods each arm having a vertically movable roller at one end, a rotary disk provided with a centrally disposed cam member substantially one-half of the periphery of which



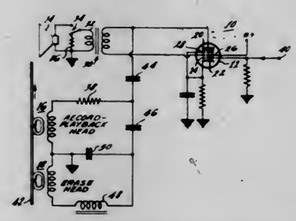
is parabolic and the other half is substantially arcuate, said disk also being provided with a high edge part on substantially one-half of the peripheral surface and with a low edge part on the other substantially half part of said peripheral surface for moving said arms alternately up and down into and out of contact with said magnetic material-coated surface, and means related with said cam member for reciprocating said supporting rods and hence said magnetic heads.

3,020,356
TRANSVERSELY RECORDED TAPE
Leonard Dodge Barry, Detroit, Mich., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Original application May 27, 1952, Ser. No. 292,013. Divided and this application Dec. 27, 1960, Ser. No. 78,453
3 Claims. (Cl. 179—100.2)



2. A recording film, a signal recorded on said film in lines running transversely of said film, said signal being continued in lines longitudinally displaced from each other along the film, the signal recorded being overlapped at the ends and beginnings of the lines at the same recording strength as that in the central portion of the recorded lines.

3,020,357
RESONANT CIRCUITRY FOR A TRANSDUCER HEAD
Michael J. Nowlan, Audubon, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 3, 1956, Ser. No. 625,963
7 Claims. (Cl. 179—100.2)



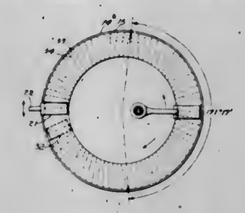
1. A circuit for a magnetic head comprising means for applying a signal to said head for energizing said head

at a predetermined frequency, and means providing for maximum alternating current flow through said head at said predetermined frequency, said means including a capacitor and an inductor presenting negligible electrical losses at said predetermined frequency connected in a closed loop circuit with said head.

3,020,358
MAGNETIC RECORDING AND REPRODUCING APPARATUS

Avery G. Richardson, Boonton, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Filed Feb. 6, 1957, Ser. No. 638,891
9 Claims. (Cl. 179—100.2)

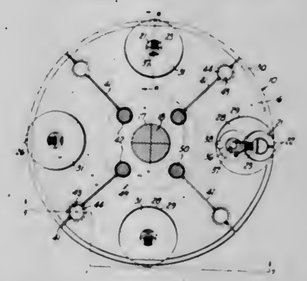


1. An apparatus for magnetically recording and reproducing signals comprising a drive shaft, a reproducing head, means coupling said reproducing head to said shaft for rotation about said shaft, rotatable means carrying a layer of magnetizable material, the thickness thereof being small compared to its width, means coupling said shaft to said rotatable means for rotation of said layer of magnetizable material about said shaft, a recording head disposed for recording signals on said layer, said recording head being adapted to magnetize said layer along a circular track, the center of rotation of said reproducing head being offset with respect to the center of rotation of said magnetizable layer so that an arcuate portion of the path of said reproducing head coincides with an arcuate portion of said track.

3,020,359
TAPE TRANSDUCING APPARATUS

Robert Fred Pfost, Mountain View, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California

Filed Oct. 11, 1957, Ser. No. 689,594
3 Claims. (Cl. 179—100.2)

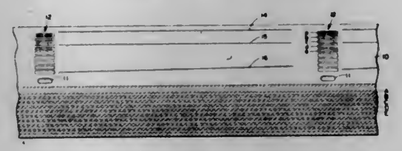


3. In tape transducer apparatus, a drum-like head member formed of rigid material, said member being rotatable about a central axis and including a plurality of circumferentially spaced portions, said portions being mounted for circumferential movement relative to each other, a plurality of transducer units carried by said member, each unit being mounted upon a corresponding portion, and means connected to adjacent portions for adjusting the relative circumferential position of said portions, thereby affording adjustment of the angular position of each transducer unit relative to the adjacent transducer units.

3,020,360
PRONUNCIARY

Joseph W. Gratian and Richard J. O'Brien, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed Jan. 29, 1959, Ser. No. 789,918
2 Claims. (Cl. 179—100.2)

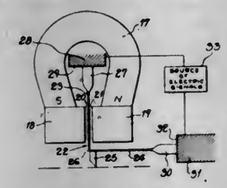


1. In combination, an elongate tape of a transparent synthetic plastic material having along one transverse portion thereof a longitudinally extending magnetically retentive coating that provides a plurality of longitudinally extending channels for the reception of phonetically reproducible magnetic impressions, and having a plurality of channels of printed matter disposed on the uncoated portion of said tape, said printed matter comprising a plurality of separate bits of information, there being a magnetic impression on said tape associated with and corresponding to each said bit, the magnetic impressions being arranged in substantially uniform transverse and lengthwise relation to their corresponding bits, and apparatus for simultaneously permitting visual reproduction of a particular bit and phonetic reproduction of the corresponding magnetic impression comprising motive means for moving the tape through a lengthwise path, a light source disposed on one side of said path for projecting light through the uncoated portion of said tape to provide an image of the printed matter thereon, a table mounted for movement transversely of said tape, said table being formed with a window and being mounted for movement on one side of said tape to permit projection from said tape of the image of only the portion of one channel of the printed matter containing said particular bit, and a transducer head secured to said table in fixed relation to said window to sense, in the one channel of said coating corresponding to the channel of said particular bit of printed matter, the magnetic impression that corresponds to said particular bit, in which said printed matter is disposed in transversely extending columns that are uniformly spaced along the length of said tape, and index means disposed on the uncoated portion of said tape between said columns, said index means comprising first linear indicia that extends generally lengthwise of said tape and is sloped transversely of said tape, and second linear indicia comprising a plurality of shorter, parallel uniformly spaced and generally lengthwise-extending straight lines that are sloped transversely of said tape, at a different slope than said first linear indicia, said second indicia lines being associated respectively with groups of sequential columns of printed matter on said tape, whereby the relative transverse position of said first indicia at a given point along the length of said tape can serve to identify a particular group of sequential columns, and the relative transverse position of the associated line of said second indicia can serve to identify a particular column within said group.

3,020,361
ELECTROMAGNETIC ENGRAVING APPARATUS

Jerry B. Minter 2nd, Normandy Heights Road, Morristown, N.J.

Filed Jan. 23, 1956, Ser. No. 560,727
20 Claims. (Cl. 179—100.41)

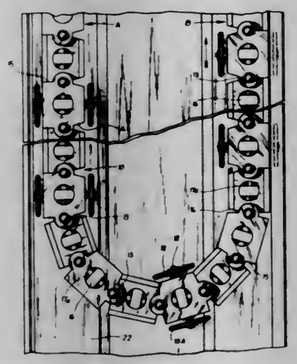


1. An electromechanical transducing device of the kind having a stylus in transducing engagement with a moving surface, comprising means defining a magnetic gap, an armature of non-magnetic material located in said gap and arranged to be excited by electric currents to cause vibration of said armature, a stylus connected to said armature, means supporting said armature to constrain it to execute vibrations in one plane substantially perpendicular to the magnetic lines of force across said gap while constraining said stylus against torsional vibration with respect to said surface and against vibration in a plane perpendicular to the first mentioned plane, the last mentioned means comprising a first longitudinally rigid arm attached to said armature and having flexibility in only one plane normal to said moving surface, and another longitudinally rigid flexible arm also attached to said armature and having flexibility in another plane only and normal to said first plane.

3,020,362
MEANS FOR DELIVERING POWER SUPPLY TO TRAVELLING MACHINE ELEMENTS

Gilbert Waninger, Ettlingen, Baden, Germany, assignor to Kabelschlepp G.m.b.H., Siegen, Westphalia, Germany

Filed Sept. 6, 1957, Ser. No. 682,446
Claims priority, application Germany Sept. 6, 1956
1 Claim. (Cl. 191—12)

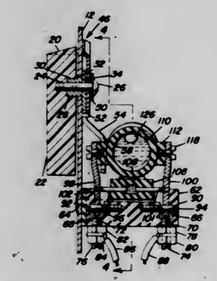


An installation for delivering services such as electric power, compressed air, et cetera through a flexible conduit to a unit for movement along a track, comprising a plurality of links, each link being provided with a passage for receiving the conduit with such passages lying on one and the same axis, means directly pivotally connecting adjacent links to each other for relative movement about parallel axes that are at least perpendicular to the passages to form a flexible chain, two spaced apart tracks lying laterally opposed to each other, the distance between the tracks corresponding to the minimum curvature diameter of the chain, opposed spaced anti-friction means on at least some of the links of the chain movable on the tracks, the width of each track corresponding to the distance between the anti-friction means of the chain, the links including means whereby only a limited angularity in the plane of movement of the chain is possible so that a minimum radius of the chain and therefore of the conduit is not exceeded, said limiting means comprising bevel edges on one side of each link to one side of the pivotally connecting means determining the minimum radius and edges on each link on the other side of the pivotally connecting means extending perpendicularly to the passage, a base plate, and raised portions on said base plate defining said tracks with the tracks extending in the direction of the movement of the chain.

3,020,363
TIME DELAY SWITCH

Joseph T. Gurney, Sr., R.D. 1, Rte. 12, Box 219B, Chenango Forks, N.Y.

Filed Apr. 8, 1959, Ser. No. 805,085
15 Claims. (Cl. 200—33)

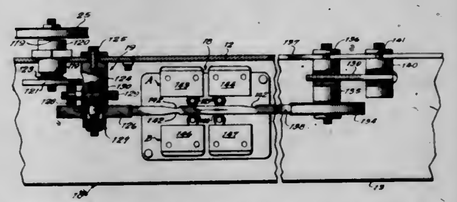


1. A variable mechanical time delay switch comprising a liquid switch pivotally mounted about a pivot axis for pivotal movement between an open and closed position, time delay means rigidly fixed to said liquid switch for pivoting said switch about said axis to an open or closed position after a preselected interval subsequent to the selective pivotal positioning of said time delay means wherein the extent of said interval depends upon said pivotal positioning.

3,020,364
TIMED ELECTRICAL CONTROL APPARATUS

Floyd G. Eubanks, 2665 Las Lunas St., Pasadena, Calif., assignor of ten percent to Robert M. McManigol, South Pasadena, Calif.

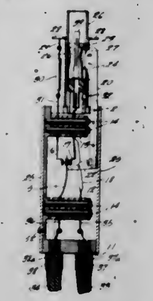
Original application Sept. 8, 1953, Ser. No. 378,732, now Patent No. 2,811,063, dated Oct. 29, 1957. Divided and this application Aug. 26, 1957, Ser. No. 680,096
2 Claims. (Cl. 200—46)



1. Timed sequence switch control apparatus, comprising: a rotatable driving member; a rotatable driven mem-

ber, said members having spaced parallel axes of rotation and spaced confronting overlapping radial surfaces; a rotatably mounted element positioned between said axes of rotation and having diametrically opposite sides respectively in engagement with said surfaces; a plurality of switch contacts; means moved by said driven member having parts for cyclically actuating said contacts in timed relation to the speed of said driving member; and rotary linear motion transmitting means for adjustably varying the position of said element between said shafts to vary the speed ratio between said members and the consequent time interval of the actuation of said contacts.

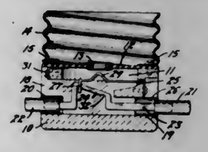
3,020,365
SELF-NORMALLING VIDEO JACK
Charles J. Neenan, Westport, Conn., assignor to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York
Filed Apr. 23, 1959, Ser. No. 808,526
3 Claims. (Cl. 200—51.09)



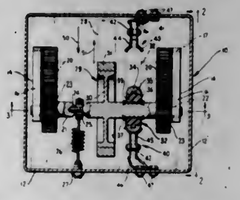
1. A jack comprising a frame having spaced apart front and rear ends joined by a side member, a plug receptacle secured to said front end and having a center conducting pin, a pair of parallel spaced apart contact arms extending rearwardly from said front end and terminating in spaced apart contacts, means mounting said contact arms in insulated spaced apart relation to said frame side member and to each other, means connecting one of said contact arms to said center pin, a third contact arm mounted in insulated spaced apart relation to said frame side member and remotely with respect to said first and second contact arms, said third contact arm having a contact normally engaging the contact on one of said first and second contact arms, a conductor mounted in parallel spaced apart relation to said third contact arm and electrically connected to said one of said first and second contact arms, means on said frame rear end providing access for electrical connection to said third contact arm and to said conductor, and a lever arm pivotally mounted on said frame front end having actuator means at one end for altering the engagement status of said contacts and cam means at its other end positioned to be actuated by a jack plug upon insertion into said receptacle.

3,020,366
SAFETY LAMP SOCKET
John Donald Dolph, 9251 Ellen Court, Denver, Colo.
Filed Feb. 15, 1960, Ser. No. 8,680
1 Claim. (Cl. 200—51.16)

An electric lamp socket comprising: a vertical cylindrical base block of electrical insulating material; a circular concentric cavity in the top of said block; a horizontal diametrically extending switch chamber formed in said block below and opening to said cavity; a reciprocal switch bar mounted in said chamber; buttons on the extremities of said switch bar for shifting the latter diametrically; an inclined offset cam portion on the top of said switch bar; a flexible metallic switch blade fixedly mounted in said block at one side of said cavity and extending over said switch bar into engagement with the offset cam portion of the latter, so that when said switch bar is moved in one direction it will flex said switch blade downwardly a predetermined distance and when moved in the other direction, it will flex said switch bar upwardly a predetermined distance; a flexible diaphragm positioned over said switch blade and covering said cavity; an electrical contact carried by and extending through said diaphragm over said switch blade, said contact being positioned above and in spaced relation to the uppermost position of said switch blade; a lamp-receiving shell concentrically mounted on said block over said diaphragm and adapted to receive the base of a conventional electric lamp which when threaded into said shell will act to flex said diaphragm downwardly to a position to be contacted by said switch blade when the latter is in its uppermost position; and means for placing said shell and said switch blade in an electric circuit.



3,020,367
INERTIAL TIME DELAY SWITCH
Herbert F. Bariffi, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 770,228
7 Claims. (Cl. 200—61.53)

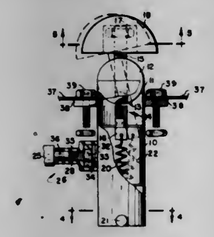


1. In an inertially operated time delay switch mechanism: a base structure; a rotatable element having an axis and mounted on said base structure for both rotation about said axis and for movement in a direction normal to said axis of said rotation; means carried by said base structure and cooperable with said rotatable element for preventing yawing of said element upon said movement; means disposed between said rotatable element and said base structure for biasing said element against said movement; a contact member carried by said rotatable element; and contact means disposed at least at one end of travel of said element.

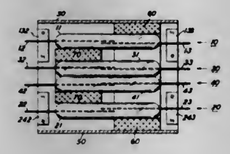
3,020,368
FOOT-OPERATED SWITCH CLOSABLE BY TRANSVERSE PIVOTAL MOVEMENT IN ANY DIRECTION
Ralph P. Nielsen, Boulder, Colo., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed June 16, 1960, Ser. No. 36,556
2 Claims. (Cl. 200—86.5)

1. A foot-operated switch closable by transverse pivotal movement, comprising: mounting sleeve means of

electrically conductive material provided with a partially spherical electrically conductive seat means at the top thereof; an at least partially spherical swivel ball element of electrically conductive material rotatively carried in said seat means for universal relative rotation with respect thereto; a longitudinal lever member vertically adjustably carried by said swivel ball element centrally downwardly therethrough with an upper portion extending thereabove and being provided with a foot pedal and with a lower electrical contact portion extending therebelow into a central position within said mounting sleeve means; biasing tension spring means connected at one end to the lower end of said lever member and provided at the other end with mounting pin means connected to a lower portion of said mounting sleeve means for biasing said lever member into central aligned relationship with respect to said seat means and said mounting sleeve means; and electrically conductive encompassing contact means comprising inner cylindrical sleeve means spacedly mounted within said outer mounting sleeve means around the electrical contact portion of said lever member and electrically insulated from said outer mounting sleeve means.

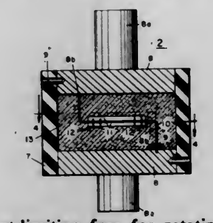


3,020,369
CIRCUIT CONTROLLER
Oscar D. Jacobson, Bronx, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 27, 1959, Ser. No. 809,058
10 Claims. (Cl. 200—104)



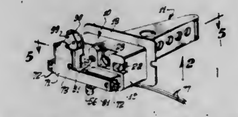
1. A circuit controller comprising a first pair of spaced-apart magnetizable contacts, a second pair of spaced-apart magnetizable contacts, a permanent source of magnetic energy for maintaining unlike magnetic poles between the contacts of the first pair of contacts in order to hold these contacts together, and an additional source of magnetic energy operable for superposing like magnetic poles between the contacts of the first pair of contacts in order to nullify the holding effect of the permanent magnetic source thereon and for creating unlike magnetic poles between the contacts of the second pair of contacts in order to move these contacts into mutual engagement, and a magnetizable member interposed between the additional source and the permanent source for preventing the additional source's energy from critically altering the magnetization of the permanent source.

3,020,370
PROTECTION OF SEMICONDUCTOR DIODES
Kenneth W. Swain, Hampton Falls, N.H., assignor to The Chase-Shawmut Company, Newburyport, Mass.
Filed Mar. 21, 1960, Ser. No. 16,340
15 Claims. (Cl. 200—120)



1. A current-limiting fuse for rotating rectifiers comprising a tubular casing of insulating material; a pair of terminal elements closing the ends of said casing; a ribbon-type fuse link conductively interconnecting said pair of terminal elements, said link including an axially inner zone of reduced cross-sectional area and axially outer zones enclosing angles of about 90 degrees with said axially inner zone; and plate means of insulating material substantially coextensive with said axially inner zone fastened to said link and bridging said axially inner zone to relieve said axially inner zone from centrifugal forces incident to rotation of said fuse.

3,020,371
FURNACE FAN CONTROL
Albert E. Baak, 640 Ocampo Drive, Pacific Palisades, Calif.
Filed Sept. 3, 1957, Ser. No. 681,782
1 Claim. (Cl. 200—122)



In an air circulation control mechanism for a furnace of the like, the combination of: a thermally responsive element adapted to be mounted within a duct and having a fixed portion and a free portion, the position of said free portion being a function of the temperature of said element; a snap action switch including a first member movable between off and on positions; means for coupling said free portion to said first member in driving relationship, said member being moved to said on position when the temperature of said element is raised to a first value and being moved to said off position when the temperature of said element is lowered to a second value of less magnitude than said first value; a second member movably mounted on said switch for engaging said first member when in said off position; a time delay unit adapted to be mounted outside of the duct for engaging said second member to move said first member from said off position to another off position nearer said on position at a period of time after said time delay unit is energized thereby lowering the magnitude of said first value of temperature; and means for energizing said time delay unit.

3,020,372
FUSE STRUCTURES
Frederick J. Kozacka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newbury, Mass.
Filed Nov. 24, 1958, Ser. No. 775,881
10 Claims. (Cl. 200—131)

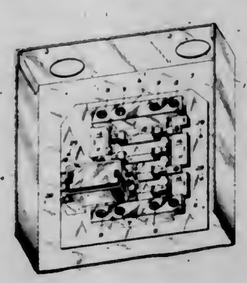
1. A fusible protective device comprising an insulating casing, a pulverulent arc-quenching fulgurite-forming fill-

er inside said casing, a fusible element in ribbon-form submersed in said filler, said element having a first zone of reduced cross-sectional area situated between the ends thereof, low fusing point metal overlay means on said element adjacent, said first zone of reduced cross-sectional area, said element having additional zones of reduced



cross-sectional area situated between said first zone and said ends of said element forming arc gaps upon fusion thereof, and said additional zones of reduced cross-sectional area being provided with insulating means adapted to preclude upon formation of said arc gaps formation of arc-gap-shunting fulgurites by said filler.

3,020,373
LOAD DISTRIBUTING ARRANGEMENT FOR PULL-OUT TYPE SWITCHES
Herman H. Kobryner, Forest Hills, and Charles F. Brauneck, Glen Cove, N.Y., assignors to Murray Manufacturing Corporation, Brooklyn, N.Y.
Filed June 10, 1959, Ser. No. 819,254
8 Claims. (Cl. 200—133)



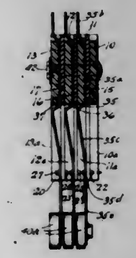
1. A load distributing arrangement comprising an enclosure, a pair of bus bars spaced a predetermined distance apart, means securing said bus bars in insulating relation to the base of said enclosure, a plurality of conductive fittings extending alternately from opposite of said bus bars, each of said fittings including a pair of spaced contact clips, the clips on the plurality of fittings being aligned in the direction of the bus bars; a plurality of pull-out type switches, each comprising an insulated base portion in the shape of an open rectangular box having a raised bottom, means securing said base portion to said enclosure so that the raised bottom thereof extends over a bus bar, the box being of sufficient width to overlap adjacent of said fittings and including openings at one end of the bottom thereof for exposing said adjacent fittings to the inside of said box, a second pair of contact clips mounted at the opposite end of the bottom of said box, said switch further comprising a puller portion in the shape of a cover for said box, two pairs of contact blades attached to said cover and positioned to enter said fitting clips through the openings in said box and said contact clips respectively, and fuses electrically connecting the blades at one end of said box to the blades at the opposite end of the box.

3,020,374
CIRCUIT BREAKER ARCING CONTACT CONSTRUCTION
George D. Tootelian, Broomall, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 2, 1959, Ser. No. 824,583
8 Claims. (Cl. 200—146)



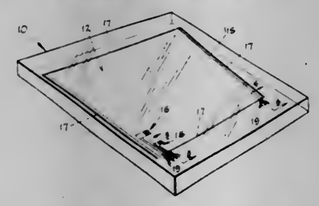
1. A movable contact arm for a circuit breaker; said movable contact arm being movable between an engaged and disengaged position with respect to a cooperating contact; said movable contact arm carrying a main contact and an arcing contact; said arcing contact being pivotally connected to said contact arm; abutting means mounted to said movable arm for limiting the motion of said arcing contact with respect to said contact arm; said arcing contact being electrically insulated from said contact arm at the pivot point; a biasing means for normally biasing said arcing contact towards an engaged position with respect to said cooperating contact; an auxiliary means for imparting additional force to said arcing contact in the direction of the force imparted by said biasing means; said auxiliary means electrically connecting said arcing contact to said contact arm for generating a magnetic field; said auxiliary means including a magnetic means movable against and imparting a force to said arcing contact responsive to said magnetic field.

3,020,375
ELECTRIC SWITCH
John H. Williams, Barrington, Ill., assignor to Oak Manufacturing Co., a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 809,121
2 Claims. (Cl. 200—166)



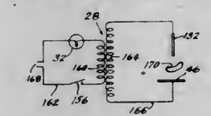
1. An electric switch construction adapted to provide a large number of separate switches in an aligned arrangement as for piano key arrangement, said construction comprising a stack having top and front faces extending along the stack length, said stack having its depth extending from the front face toward the rear face and the height of the stack extending from the top face to the bottom face thereof, said stack having a length great in comparison to depth or height, said stack consisting of clamped flat strips of insulation extending lengthwise and parallel to the top and bottom stack faces, said strips being disposed to form a laminated stack construction, said stack as a whole having slots extending from the front face rearwardly for part of the depth of the stack, said slots being disposed in spaced parallel relation along the stack length, alternate strips having grooves in the surface thereof, each groove extending along the full length of a strip parallel to but offset from the strip edge which forms part of the front face of the stack, all the grooves being in vertical alinement as viewed from the end of the stack, said grooves being interrupted at spaced intervals along the stack length where they intersect said slots, a contact wire for each said alternate strips, each contact wire extending lengthwise of the stack and being substantially accommodated by the grooving to be tightly clamped between adjacent strips when said strips are tightly bound to form a compact stack, each of said alternate grooved strips having its own wire attached thereto adjacent one wire end with the other wire end being straight and stopping short of the strip end, the one end of said wire having a terminal portion extending beyond the strip end, said stack having such wire equipped strips so arranged that at each end of the stack, terminal portions alternate with blind dead wire ends, said wires being accessible at said slots, at least one flat movable spring metal contact strip for each slot, each contact strip extending transversely of the stack along a line extending from the back to the front faces of the stack, each contact strip having a flat thin portion tightly gripped between strip faces at the rear parts of the stack, the contact strip extending forwardly along a slot toward and beyond the front face of the stack to provide a free portion of the contact strip for movement in a direction generally parallel to the stack height, each contact strip being movable in the stack slot toward or away from a contact wire, each contact strip having a terminal portion extending beyond the rear face of the stack so that separate contact strips can be in separate circuits with a contact wire providing a common circuit connection and means for maintaining said strips tightly to provide a unitary stack.

3,020,376
LAMINATED PLASTIC ARTICLES AND METHOD OF MAKING THE SAME
John J. Hofmann and Eugene D. Esling, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Dec. 31, 1956, Ser. No. 631,584
9 Claims. (Cl. 219—19)



5. A transparent electrically conducting unit, comprising a first transparent synthetic resinous plastic sheet having a thermally evaporated electrically conducting film of metal on a surface thereof, a pair of spaced bus bars in electrical contact with said film, a second transparent synthetic resinous plastic sheet overlying said electrically conductive film and a third sheet of synthetic resinous plastic material over said second sheet, all of said plastic sheets being laminated together to form a composite unit, and a pair of lead wires embedded in the second transparent plastic sheet and held in electrical contact with said bus bars.

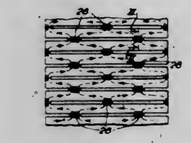
3,020,377
ARTICLE PERFORATION AND FOOD PRESERVATION
Robert W. Shawfrank, Chicago, Ill., assignor to Hussman Engineering Corp., a corporation of Illinois
Filed Apr. 21, 1958, Ser. No. 729,975
13 Claims. (Cl. 219—19)



2. Apparatus of the character disclosed comprising a frame, a trough mounted on the frame, the floor of said trough constituting an electrical electrode, a second electrode mounted in the trough above and in spaced relation to the first mentioned electrode, said trough being adapted for the passage of articles to be perforated therethrough and between the electrodes, electrical arcing and control means comprising a transformer having a primary winding and a secondary winding, a secondary circuit including said secondary winding and electrodes in serial relation, a primary circuit including said primary winding, and a resistor in said primary winding having a positive temperature resistance coefficient.

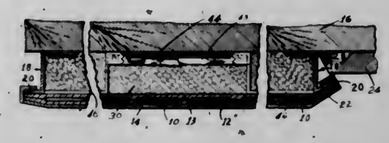
11. A method of perforating articles by means of a transformer having a high voltage secondary winding, and a primary winding of substantially lesser voltage, and spaced electrodes in series with the secondary winding, comprising repeatedly passing the articles between the electrodes and thereby reducing the effective distance therebetween for forming an arc, and interrupting the arc by establishing a resistance in the primary winding and breaking the circuit therethrough.

3,020,378
ELECTRICAL HEATING AND CONDUCTING DEVICES
Paul Eisler, 57 Exeter Road, London NW. 2, England
Filed Nov. 10, 1958, Ser. No. 783,633
Claims priority, application Great Britain Nov. 18, 1957
20 Claims. (Cl. 219—19)



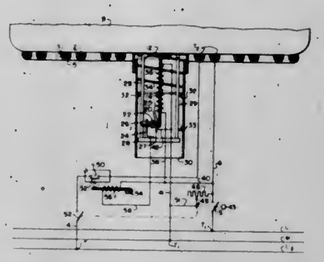
19. A structure incorporating a crimped metal foil presenting an electrically conducting pattern having a plurality of substantially parallel arms with spaces between them and areas interconnecting the arms, at least two terminal areas forming part of said pattern and adapted for connection into an electrical circuit, and a flexible insulating support for said pattern, the foil having crimps substantially over its whole area and the crimps consisting of small undulations perpendicular to the mean surface of the pattern and the crimps in the arms being at an angle to those in the areas interconnecting the arms and affording the pattern pre-determined elasticity and deformability in its said mean surface.

3,020,379
ELECTRIC HEATING PANEL
Edmund Ludlow, Benjamin H. Irwin, and John C. Brighton, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Sept. 21, 1959, Ser. No. 841,226
7 Claims. (Cl. 219—19)



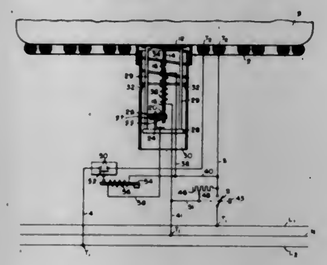
1. An electric heating panel, comprising an electrically conductive foil grid laminated between a pair of flexible insulating sheets, the margins of said sheets extending outwardly beyond the periphery of said grid and being bonded together, a rigid heat-conductive metal sheet bonded to one of said pair of insulating sheets and having its marginal edges bent over the margins of the pair of insulating sheets, and means interposed between the bent over margins of the metal sheet and the pair of insulating sheets for bracing said panel and connecting it to a wall surface in position to dispose said foil sheet in spaced relation thereto between said wall surface and said metal sheet, said means being disposed in spaced relation to said insulating sheets within the extent of said grid.

3,020,380
CONTROL DEVICE
Vincent L. Carissimi, Fairfield, Conn., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 14, 1956, Ser. No. 628,383
22 Claims. (Cl. 219—20)



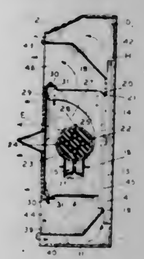
1. A control device for controlling the temperature of a cooking vessel and its contents by controlling an electrical heating unit comprising, a high thermal conductivity portion for sensing the temperature of a vessel being heated by said heating unit and having a control portion which is movable with relation to said thermal portion in response to temperature changes in said thermal portion, means electrically connected to said control portion for controlling the energization of the heating unit in response to movement of said control portion, an auxiliary electrical heater supported in heat transmitting relation with respect to said control portion to also cause movement thereof, and a variable electrical resistance connected with said electrical heater to vary the magnitude of current through said heater whereby the movement of said control portion may be controlled, said control portion being movable, upon increase in temperature, in the direction of terminating energization of the heating unit.

3,020,381
CONTROL DEVICE
Vincent L. Carissimi, Fairfield, Conn., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 14, 1956, Ser. No. 628,422
16 Claims. (Cl. 219—20)



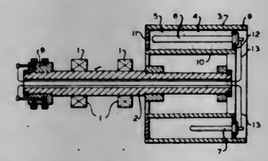
1. A control device for controlling the temperature of a cooking vessel and its contents by means of controlling an electrical resistance heating unit therefor comprising, a high thermal conductivity portion for engagement with a cooling vessel and having a first control portion which is movable with relation to said thermal portion in response to temperature changes in said thermal portion, a second control portion, supporting means supporting said second control portion from said first control portion so as to be electrically and thermally insulated therefrom, means connected to said second control portion for controlling the energization of a resistance unit in response to movement of said first and second control portions, and an auxiliary electrical heater supported with respect to said second control portion to cause movement thereof.

3,020,382
BASEBOARD ELECTRIC HEATER
Harry E. Harrell, Jr., 4028 NE. Prescott, Portland, Oreg.
Filed June 5, 1959, Ser. No. 818,338
3 Claims. (Cl. 219—34)



1. A baseboard electric heater comprising a generally rectangular housing having an upright rear wall, a bottom wall integrally formed thereon and extending forwardly thereof and a top wall integrally formed thereon and extending forwardly thereof, said housing having a pair of compartments formed at opposite ends thereof, a pair of spaced apart parallel saddle members secured to said rear wall and extending forwardly therefrom, an elongated electric resistance heater extending longitudinally of said housing, anti-friction means on said saddles supporting said heater for longitudinal expansion movement, a reflector supported on said saddle members within said housing in spaced relation to said housing to provide an air passage between said housing and said reflector, and a grill supported on said saddle members forwardly of said electric resistance heater.

3,020,383
HEATED ROLL
Tsuneo Onishi and Akio Kobayashi, Okayama City, Japan, assignors of three-fourths to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan, and one-fourth to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 3, 1959, Ser. No. 856,983
Claims priority, application Japan Dec. 5, 1958
2 Claims. (Cl. 219—37)



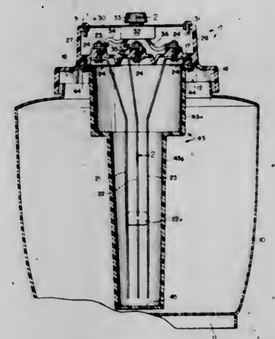
1. A roll adapted to be heated for the drying and heat treatment of fibers which comprises, in combination, a rotatably-supported hollow shaft, cylindrical roller means secured to said hollow shaft for simultaneous rotation therewith, said roll means including an inner cylindrical wall spaced radially from said shaft and a concentric outer cylindrical wall spaced radially from said inner wall to define an annular outer chamber therebetween concentric with but radially spaced from said shaft and separated therefrom by said inner wall and an inner annular chamber defined between said inner wall and said shaft, said outer chamber being closed and fluid-tight and containing a heat-transfer fluid, electric heating means disposed exteriorly of said shaft but in heat conduction relationship with said heat-transfer fluid, and conductors for supplying energizing current to said electric heating means, said conductors extending interiorly of said hollow shaft.

3,020,384
DUAL RADIANT HEATER
Maxwell K. Murphy, 535 W. Goldengate, Detroit, Mich.
Filed Apr. 20, 1959, Ser. No. 807,355
7 Claims. (Cl. 219—39)



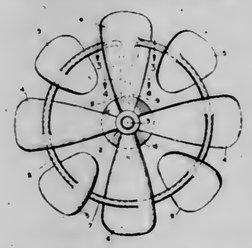
1. In a combination radiant and convection heater adapted for installation in a common wall between adjacent rooms, a pair of sheet type electric radiant heating elements having resistor grids adhered to their respective inner surfaces mounted back-to-back in spaced relation for emitting heat rays from their respective outer surfaces directly into said rooms, a pair of oppositely disposed air inlets mounted above said heating elements, a pair of oppositely disposed air outlets mounted below said heating elements, and a blower mounted in the heater operable to provide forced air circulation through said heater from said inlets and out through said outlets thereby to provide convection currents of heated air from the rear surfaces of said elements in both rooms.

3,020,385
VAPORIZER
Peter Conlin and William L. Schulz, Reedsburg, Wis., assignors to Hankscraft Company, Reedsburg, Wis., a corporation of Wisconsin
Filed Dec. 9, 1959, Ser. No. 858,510
2 Claims. (Cl. 219—40)



1. In a vaporizer, first, second and third substantially identical electrodes suspended in fixed, spaced apart relationship for immersion in a liquid to be vaporized, said second electrode being arranged between said first and third electrodes the area for liquid immersion of said second electrode being substantially identical to that of said first and of said third electrodes, and means including a selector switch for applying electric voltage to selected ones of said electrodes for effecting vaporization of said liquid at selected rates, said means being arranged to apply voltage only to said first and third electrodes, said second electrodes serving as a barrier to ion flow whereby vaporization is at a minimum rate, said means being arranged alternately to apply voltage only to said first and second electrodes to effect a greater vaporization rate, and said means being further arranged alternately to apply voltage between said second electrode and said first and third electrodes to effect a still greater vaporization rate.

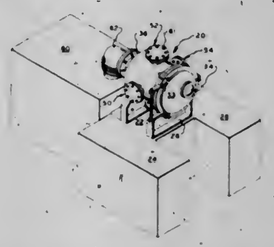
3,020,386
ELECTRIC HEATERS
Irving Naxon, 3600 Touhy Ave., Chicago, Ill.
Filed June 10, 1959, Ser. No. 819,450
1 Claim. (Cl. 219—42)



A heater comprising a bladed electric fan, a tubular circular frame formed with sections interconnecting the

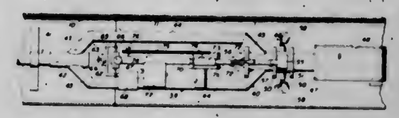
outer portions of the blades, and a heating conduit in the frame and formed with end portions directed inwardly through one of the blades to emerge from one side thereof for connection to a current supply source.

3,020,387
ELECTRON BEAM HEATING DEVICES
Malcolm Basche, Newtonville, Matthias F. Comerford, Watertown, Nicholas E. Doyle, Jr., Brookline, and James S. Hetherington, Boston, Mass., assignors, by mesne assignments, to Alloyd Electronics Corporation, Cambridge, Mass., a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,812
9 Claims. (Cl. 219—50)



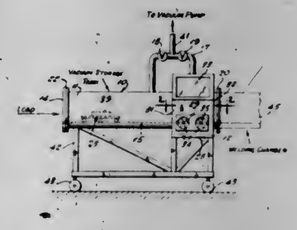
1. An electron beam heating device comprising a hermetic enclosure having a plurality of ports at different positions therethrough and a plurality of mounts at different positions therein, means for continuously evacuating said enclosure, each of said ports having a first connecting means, each of said mounts having a second connecting means, and a plurality of modules, at least first of said modules having a third connecting means, at least a second of said modules having a fourth connecting means, any one of said third connecting means and any one of said first connecting means being adapted for mating, any one of said fourth connecting means and any one of said second connecting means being adapted for mating, one of said modules providing an electron beam source, one of said modules providing a holder for positioning work in association with said electron beam source, whereby said electron beam source and said holder may be located at selected ones of said different positions.

3,020,388
AUTOMATIC WELDING MACHINE
Bernard V. Elliott, P.O. Box 1111, Bartlesville, Okla.
Filed Dec. 7, 1956, Ser. No. 626,970
10 Claims. (Cl. 219—60)



1. An internal pipe welding apparatus for joining two pipe sections comprising a carriage, a boom carried by said carriage, means on said boom for gripping the internal surface of one of the pipe sections, remotely controlled means for operating said gripping means for locking the said gripping means to the pipe section, said gripping means being rotatable with respect to said boom, a welding head supported by said boom, means for feeding welding wire to said welding head, and means for longitudinally adjusting said welding head with respect to the gripping means.

3,020,389
PORTABLE AIR LOCK FOR WELDING CHAMBERS
Eugene F. Gorman, Rutherford, N.J., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 10, 1958, Ser. No. 772,736
4 Claims. (Cl. 219—72)



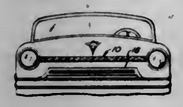
1. In combination with an evacuable welding chamber having an access port including a removable gas tight closure co-operating therewith, an apparatus for outgassing metal parts in a controlled atmosphere and for maintaining said parts in said controlled atmosphere prior to introduction thereof to said welding chamber which is also maintained under a similar controlled atmosphere, said apparatus comprising: a first and second chamber, said first chamber including an outlet port having a removable sealing closure therefor, means for controlling the atmosphere in said first chamber, said outlet port communicating with said second chamber and being sealably separable therefrom by said removable closure, said second chamber having an access port adaptable to sealably engage the access port in said welding chamber.

3,020,390
LIGHT PROJECTOR
Carroll B. Lusk, Richmond, Va.
(101 Forrest Way, Camillus, N.Y.)
Filed June 17, 1958, Ser. No. 742,536
3 Claims. (Cl. 240—3)



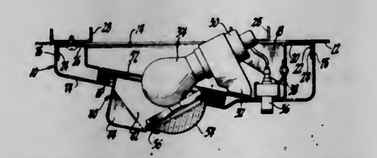
3. In a light projector, the combination of an elongated housing having a rear end and an open front end and provided in its front end portion with a longitudinally extending slot, a forwardly oriented lamp provided in the rear end portion of said housing, and a lens unit provided in the front end portion of the housing, said lens unit including a supporting plate removably mounted in the front end portion of the housing and provided with a slot in register with the slot in said front end portion, a fixed lens provided on said supporting plate, a movable lens frame positioned on the supporting plate for movement toward and away from the fixed lens, a lens in said movable frame, and fastening means provided on the movable frame and extending through the slot in said supporting plate for locking the movable frame in an adjusted position, said fastening means being accessible through the slot in the front end portion of the housing.

3,020,391
VEHICLE ILLUMINATION
Vincent Stiglia, 532 51st St., West New York, N.J.
Original application Oct. 7, 1954, Ser. No. 460,967, now Patent No. 2,921,180, dated Jan. 12, 1960. Divided and this application Oct. 29, 1959, Ser. No. 850,750
1 Claim. (Cl. 240—7.1)



In combination with a vehicle body having an end portion, two conventional lights and light-filled casings enclosing said lights and located in substantially the same plane at the lateral extremities of said end portion, said end portion having a recess conforming to the contour of said end portion and extending between said lights, said casings having opposed side openings; and a single elongated continuous tubular transparent plastic member having a rear portion located in said recess and a dome-shaped front portion protruding outwardly beyond said recess, said member having ends extending through the side openings of said casings, the front portion of said tubular member being light diffusing and being optically connected with said two lights to provide illumination constituting an uninterrupted continuation of said two lights and a reflecting coating upon the rear portion of said tubular member.

3,020,392
READING LAMP ASSEMBLY
James D. Leslie, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1958, Ser. No. 753,688
9 Claims. (Cl. 240—7.35)



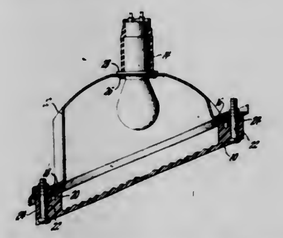
1. A reading lamp assembly comprising a lamp body having an opening therein, a light source fixedly secured to and positioned within said body, a lens support rotatably adjustably mounted on said lamp body for movement about a fixed axis and in every position thereof forming a closure for said body opening, means acting between said lamp body and lens support to releasably retain the latter in any selected adjusted position, and a light-concentrating lens mounted on said support with its optical axis at a fixed angle to the axis of rotation of said support.

3,020,393
BASE AND SOCKET FOR FLUORESCENT LAMPS
Fritz Kalberlah, Bad Homburg vor der Hohe, Germany, assignor, by mesne assignments, to Allgemeine Elektricitats-Gesellschaft, Berlin-Grunewald, Germany
Filed Aug. 5, 1954, Ser. No. 448,020
Claims priority, application Germany Dec. 31, 1953
4 Claims. (Cl. 240—11.4)

1. A base and socket structure for a fluorescent lamp having an elongated tubular glass bulb, comprising a base secured to each end of the bulb, two sockets positioned near said bulb to enable to suspend said bulb therebetween, the base and socket at each end of the bulb being removably interconnected, all portions of said bases and sockets that are non-current carrying being composed of transparent material including transparent cement securing each base to said bulb for the axial discharge of light from the tube interior substantially free from obstruction.

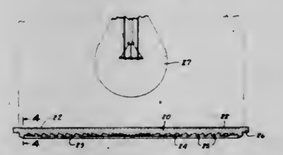


3,020,394
LAMP ASSEMBLY
Harold K. Barnhizer, Lapel, and Lyle N. Williams, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,947
5 Claims. (Cl. 240—41)



1. A lamp assembly comprising in combination, an acrylic resin lens element, a lamp housing adapted to support said lens element and a vinyl foam gasket clamped between said housing and said lens element, said vinyl foam gasket being formed from a vinyl plastisol comprising about 100 parts by weight of a finely divided vinyl resin dispersed in about 70 to 110 parts by weight of a plasticizer consisting of a polymeric epoxidized vegetable oil having an oxirane oxygen content of about 5% to 7% and a degree of unsaturation represented by an iodine number of about 0.5 to 1.5.

3,020,395
LIGHTING DEVICE
Gordon M. Peltz, Montclair, N.J., assignor to The Phoenix Glass Co., Monaca, Pa., a corporation of West Virginia
Filed May 27, 1957, Ser. No. 661,638
3 Claims. (Cl. 240—106)



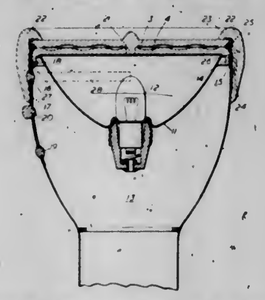
1. A lighting device comprising a flat plate having Fresnel prisms on the light exit side and having diffusing sections covering the light incident side, a concentrated light source positioned on said light incident side within the periphery of the plate and at the focal point of the plate, means for holding said light source in such position, the diffusing sections being disposed to cross the prisms at right angles, and said diffusing sections having a non-

planar surface with a maximum angle of departure with respect to the theoretical surface of the light incident side of said flat plate in the range of 5° to 12°.

3,020,396
FLASHLIGHT OPTICAL SYSTEM

Arthur Frederick Worboys, London, England, assignor to The Ever Ready Company (Great Britain) Limited, London, England, a British company

Filed Mar. 24, 1958, Ser. No. 723,159
Claims priority, application Great Britain Mar. 29, 1957
2 Claims. (Cl. 240—106)

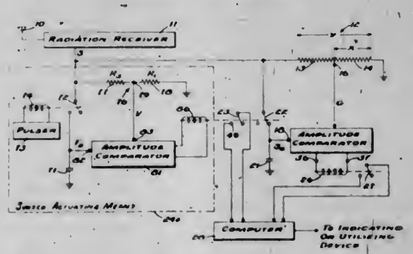


1. An optical system for use in a battery-operated flash light, comprising in combination two circular lenses each having a plane face and an undulatory face formed as two volutes which have the same pitch and which leave the centre of the face in directions spaced 180° apart and extend spirally to the lens periphery, and supporting means for supporting the lenses coaxially relative one to the other for relative angular movement so that the relative position of the lenses is continuously variable from a position in which the crests on one undulatory face register with the troughs on the other undulatory face to permit a substantially parallel beam of light to pass through the lenses without substantial change, to a position in which the crests on the undulatory faces are in registration and the beam of light has a maximum divergence, said continuous variation in the relative positions of the lenses giving a continuously spreading beam the intensity of which is always substantially uniform across its width.

3,020,397
INTENSITY COMPARING SYSTEM FOR DETERMINING FRACTION OF TRAVEL TIME TO A RADIATING SOURCE

Roger J. Pierce and Hardin T. Abrams, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Oct. 11, 1956, Ser. No. 615,734
11 Claims. (Cl. 250—2)

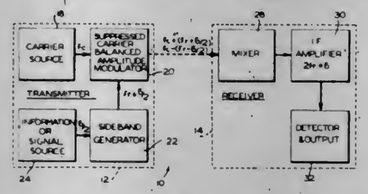


1. Means for indicating a predetermined travel time for a substantially constant average-energy vehicle moving toward a radiation source at a constant velocity, including means for receiving and detecting the amplitude of the radiation from said source, memory means for remembering a given voltage level, switching means connected between said memory means and the output of said receiving means, with said switching means being normally closed, voltage dividing means connected with the output of said receiving means, amplitude-comparator means having a pair of inputs, with one input connected to said memory means, and with its other input connected to a tap point on said voltage divider, computing means for providing an output indication at a time related to a pair of time-spaced switched inputs, means for providing the first switched input to said computing means simultaneously with the opening of said switching means, and means for providing an output indication of said comparator means to said computing means, with said comparator means providing as its output the second switched input to said computing means at substantially the instant that the inputs to said comparator means have a predetermined amplitude relationship.

3,020,398
SIDEBAND INTERMEDIATE FREQUENCY COMMUNICATIONS SYSTEM

Clyde M. Hyde, Lincoln, Nebr., assignor to Research Corporation, New York, N.Y., a corporation of New York

Filed Apr. 15, 1960, Ser. No. 22,532
5 Claims. (Cl. 250—6)

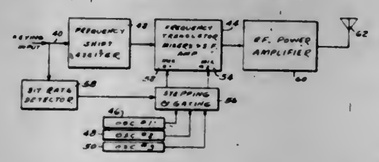


1. A radio communications system comprising a radio transmitter including a carrier frequency source, a signal source, a sideband generator connected to the output of the signal source, a balanced amplitude modulator connected to the outputs of the carrier frequency source and the sideband generator to produce a carrier suppressed transmission, and a radio receiver for receiving the sideband transmission, said radio receiver including a mixer for combining the two sidebands to produce an intermediate frequency which is an algebraic sum of the two sideband frequencies.

3,020,399
REDUCTION OF MULTIPATH EFFECTS BY FREQUENCY SHIFT

James L. Hollis, Silver Spring, Md., assignor to Rixon Electronics, Inc., a corporation of Maryland

Filed Jan. 9, 1959, Ser. No. 785,947
2 Claims. (Cl. 250—8)

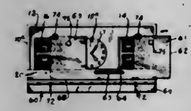


1. Apparatus for sequentially converting the carrier frequencies of individual signal pulses by amounts progressively differing, from pulse to pulse, by a constant frequency differential, comprising a mixer, a plurality of fixed-frequency oscillators of different frequencies related by said differential, and a pulse-rate detector; means for supplying pulses of carrier energy in sequence to one input of said mixer, means for connecting said pulse-rate detector to the output of said mixer, and a stepping circuit controlled by said pulse rate detector for selectively connecting said oscillators, in an ordered sequence, to the other input of said mixer.

3,020,400
RADIO CABINET HAVING A HINGED AND SLIDABLE SHUTTER FOR CONTROLLING THE VOLUME

Angel Rosario, 1699 Washington Ave., Bronx, N.Y.

Filed Oct. 29, 1959, Ser. No. 849,524
1 Claim. (Cl. 250—16)

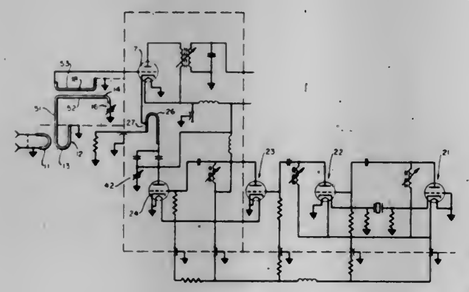


In a cabinet having a hollow body with top, bottom, front, rear and end walls, the front wall having louvers, a radio including a loud-speaker inside the body, and a shutter assembly for controlling the passage of sound through the louvers hingedly and slidably mounted on the front wall of the cabinet, said assembly including a hinge member and a plate slidably mounted in the hinge member, fingers on the front wall adapted to yieldingly hold the plate in closed position and handles on the plate for manipulating the same.

3,020,401
HIGH FREQUENCY RECEIVER WITH RESONANT CAVITY

John G. Isabeau, Mountain View, Calif., assignor to RS Electronics Corporation, Palo Alto, Calif., a corporation of California

Filed Jan. 11, 1960, Ser. No. 1,536
9 Claims. (Cl. 250—20)

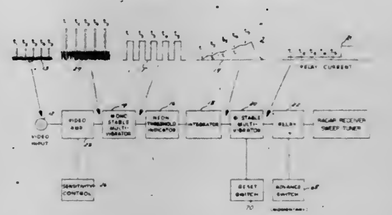


1. A receiver comprising a chassis for mounting the component parts, a cover cooperating with said chassis and forming a cavity, a cavity loop disposed within said cavity and having an external portion, means for indirectly coupling an antenna to the external portion of said cavity loop, a mixer, and means for coupling the cavity signals to the mixer.

3,020,402
AUTOMATIC SIGNAL FINDER

Elihu Brodsky, Brooklyn, and Harold A. Levine, West Hempstead, N.Y., assignors to Loral Electronics Corporation, New York, N.Y., a corporation of New York

Filed Aug. 19, 1955, Ser. No. 529,472
3 Claims. (Cl. 250—20)

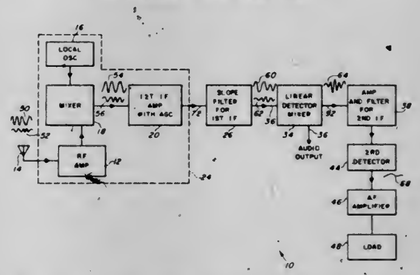


1. In a radar receiver including a motor-driven sweep tuner, the improvement comprising means for interrupting the flow of current to the motor of said sweep tuner comprising: means for receiving the video output of said receiver, amplifying means for increasing the strength of said video output, monostable multivibrator means connected to said amplifying means and responsive to a pulsed signal from said radar receiver to provide a corresponding pulse of constant amplitude and width, integrating means including a capacitor receiving the incremental output of said monostable multivibrator, triggering means including a bistable multivibrator operated by the reaching of said capacitor of a predetermined degree of charge, relay means controlled by operation of said bistable multivibrator for interrupting said flow of current, and means for resetting said bistable multivibrator after discharge of said condenser.

3,020,403
ANTI-CAPTURE SIGNAL RECEIVING APPARATUS

Kenneth C. Perkins, Lynnfield Centre, Mass., assignor to General Electronic Laboratories, Inc., Cambridge, Mass., a corporation of Massachusetts

Filed Oct. 29, 1957, Ser. No. 694,694
11 Claims. (Cl. 250—20)



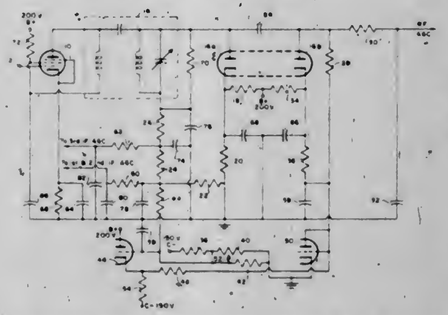
1. In an apparatus for extracting frequency modulation information from the weaker of two frequency modulation carrier signals having overlapping bandwidths, the combination of means for amplitude modulating each of said carrier signals in accordance with the frequency modulation intelligence in the corresponding frequency modulation signal, a linear detector mixer, means for applying said overlapping bandwidth amplitude modulated carrier signals to the linear detector mixer to produce an amplitude modulated frequency modulation carrier signal component having a frequency equal to the difference of the frequencies of said two signals, means coupled to said linear detector mixer for selectively amplifying

signals from said linear detector mixer in a range of difference frequencies of said two carriers, and detector means coupled to said selective amplifying means for obtaining the amplitude modulation information from said selectively amplified signals.

3,020,404
MANUAL R.F. GAIN CONTROL

Dominic M. Kaltenbacher, Towson, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed July 21, 1959, Ser. No. 828,672
1 Claim. (Cl. 250—20)



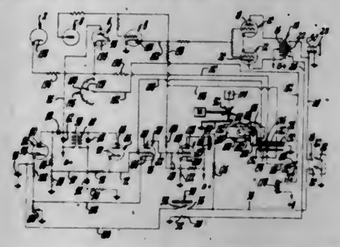
A manual radio frequency gain control for a direction finding radio receiver having radio and intermediate frequency amplifiers comprising a first automatic gain control circuit having an input adapted to be connected to the output of said intermediate frequency amplifiers for varying the gain of said intermediate frequency amplifiers, said first circuit including a rectifier biased at a first level to provide a controlling voltage for said intermediate frequency amplifiers, a second automatic gain control circuit having an input adapted to be connected to the output of said intermediate frequency amplifiers and having an output for varying the gain of said radio frequency amplifiers, said second circuit having a rectifier biased at a second level to provide a controlling voltage for said radio frequency amplifiers, said second circuit output including a diode clamp to prevent the output from going positive, a manual gain control comprising a variable voltage source connected to said first circuit for manually varying the gain of said intermediate frequency amplifiers, and a cathode follower means connected between said variable voltage source and second circuit output for raising the level of said variable source above the level applied to said intermediate frequency amplifiers and applying said variable voltage to said second circuit for clamping by said diode clamp whereby manual gain control may be applied first to said intermediate frequency amplifiers and then to said radio frequency amplifiers to maintain the optimum signal to noise ratio throughout said receiver.

3,020,405
RADIO SENSITIVITY CONTROL

Bertram A. Schwarz, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Dec. 8, 1954, Ser. No. 473,853. Divided and this application Oct. 23, 1959, Ser. No. 853,436
3 Claims. (Cl. 250—20)

2. In radio apparatus, means for tuning the apparatus over a predetermined band of frequencies, power storage means connected to said tuning means to drive the same, a gear train load connected to the tuning means and driven by the same to govern the movement of the tuning means, said gear train including a rotatable shaft and parts having limited orbital motion about an axis parallel to said shaft between driving and indexed conditions, amplifying means in said apparatus, a plurality of circuits



containing resistance connected to said amplifying means to provide different sensitivities therefor, and switching means connected to the circuits and actuated by relative orbital movement of parts of the gear train to vary the sensitivity of the amplifying means.

3,020,406
ENERGY DETECTION APPARATUS

Theodore R. Whitney, Los Angeles, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio

Filed Sept. 19, 1958, Ser. No. 762,090
16 Claims. (Cl. 250—83.3)



1. Energy detection apparatus, comprising in combination: means for collecting energy emanating from within a given angular field of view and imaging said energy upon a focal plane to form an image of said field of view, said image having an energy intensity-versus displacement distribution characteristic substantially corresponding to the radiant energy intensity versus displacement distribution characterizing said angular field of view; energy transducing means responsive to the energy collected by said collecting means; a body of energy responsive material whose transmissivity to energy to which said energy transducing means is responsive is a function of the intensity of energy incident upon said body; and means positioning said body in energy controlling relation between said collecting means and said transducing means at substantially said focal plane so that an energy intensity distribution corresponding to that produced at said focal plane is produced within the material comprising said body to permit intensity selective attenuation upon energy emanating from different points within said given angular field of view prior to its sensing by said transducing means.

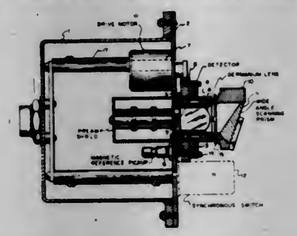
3,020,407
HORIZON SENSOR

Monty M. Merlen, Stamford, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware

Filed Nov. 12, 1959, Ser. No. 852,548
20 Claims. (Cl. 250—83.3)

8. A horizon sensor comprising in combination an infrared detector, scanning means imaging an infrared beam from a scanning cone of predetermined angle on said detector, driving means for said scanning means,

means driven by said driving means synchronized with said scanning means for generating a reference signal at two points 180° apart in terms of the scanning cone whereby pulses are generated by the reference generator at two points in each revolution and by the detector at each horizon crossing and continuous signal output is pro-

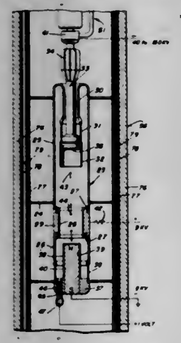


duced by the detector between pulses, electronic means associated with reference generator and detector for measuring rotational intervals between each horizon crossing and succeeding reference pulse and between said pulse and the next horizon crossing and electronic means for comparing the measurements and for producing a differential output proportional thereto.

3,020,408
NUCLEAR ANALYTICAL APPARATUS

Philip W. Martin, 1345 West Road, Whittier, Calif., and Stanley G. Stroud, Redondo Beach, Calif. (2109 Summerland Ave., San Pedro, Calif.)

Filed Nov. 14, 1955, Ser. No. 546,563
5 Claims. (Cl. 250—84.5)



1. A source of neutrons comprising: a tube structure containing a gaseous mixture of deuterium and tritium; a spaced pair of electrodes supported in said envelope, one of said electrodes forming a target; a sleeve electrode positioned between said electrodes with the axis thereof extending in a path between said electrodes; a ring magnet positioned between said electrodes in coaxial relationship with said sleeve electrode; said ring magnet producing an axially extending magnetic field within said sleeve electrode; a first voltage source connected between said pair of electrodes; a second voltage source connected between said sleeve electrode and the other one of said pair of electrodes whereby both an electrical field and a magnetic field are produced within said sleeve electrode; said magnetic field and electric field coacting to produce ionization of said gaseous mixture and to accelerate resulting ions towards said target, said resulting ions impinging on said target to deplete the gaseous mixture; and electrically controlled deuterium and tritium storage means in said tube operable to replenish the gaseous mixture in said envelope as it is depleted in said target, the ions impinging on said target being retained by the target for reaction with subsequent accelerated ions to produce high energy neutrons.

3,020,409
METHOD OF SORTING-OUT PARTS OF INSULATING MATERIAL

Wolfgang Clement, Stuttgart-Zuffenhausen, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

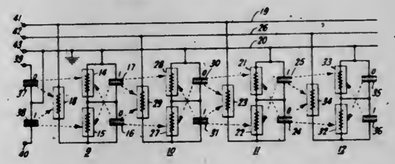
No Drawing. Filed July 7, 1959, Ser. No. 825,400
Claims priority, application Germany July 16, 1958
5 Claims. (Cl. 250—106)

1. A method of detecting plastic components having etched conductive elements thereon which contain remnants of the etching agent, which will ultimately reduce the insulating property of the plastic, in which the etching agent is a compound comprising introducing into the etching agent portions of substantially the same compound in which one of the elements of the compound is radioactive, etching the components in said agent, cleaning said etching components, and thereafter testing said cleaned components for radioactivity, to detect components having a residual remnant of said etching agent.

3,020,410
SHIFT REGISTER

Edwin R. Bowerman, Jr., Whitestone, N.Y., assignor to General Telephone and Electronics Laboratories, Inc., a corporation of Delaware

Filed Oct. 28, 1960, Ser. No. 65,825
14 Claims. (Cl. 250—208)



1. A shift register comprising an array of storage units optically coupled in series, each of said storage units including first and second series-connected photoconductive elements; first and second series-connected electroluminescent cells, said first photoconductive element being optically coupled to said first electroluminescent cell and said second photoconductive element being optically coupled to said second electroluminescent cell; means electrically coupling said first photoconductive element in paralllel with said second electroluminescent cell; means electrically coupling said second photoconductive element in parallel with said first electroluminescent cell; and a third photoconductive element connected in series with said first and second photoconductive elements, the first and second electroluminescent cells in each of said storage units being optically coupled to the first and second photoconductive elements respectively in the succeeding storage unit in said series, said first and second electroluminescent cells being further optically coupled to the third photoconductive element in said succeeding storage unit.

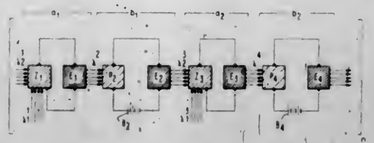
3,020,411
PHOTOVOLTAIC DEVICES

George Cheroff, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 7, 1958, Ser. No. 746,682
13 Claims. (Cl. 250—208)

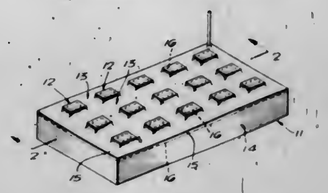
1. Apparatus for performing logic comprising, in combination, a plurality of logical stages connected in se-

quence, each of said stages including a photovoltaic element having a first and a second light input means associated therewith, said element being capable of producing photovoltage upon irradiation by only one of either



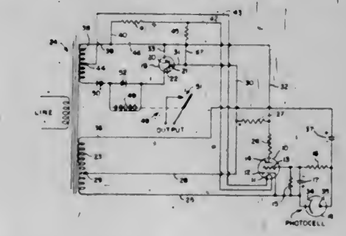
of said light inputs, and an electrosensitive element connected with said photovoltaic element and operatively responsive thereto to produce a light output, said light output becoming said first light input to the following photovoltaic element.

3,020,412
SEMICONDUCTOR PHOTOCELLS
Mieczyslaw Byczkowski, Chicago, Ill., assignor to Hoffman Electronics Corporation, a corporation of California
Filed Feb. 20, 1959, Ser. No. 794,736
5 Claims. (Cl. 250—211)



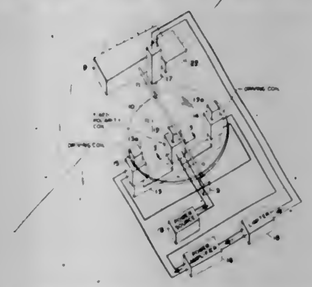
1. A photocell comprising a body of semiconductor material predominantly of one conductivity type having a major surface thereof formed with protuberances extending above the basal plane of said major surface to define spaced-apart islands whose distal surfaces are thus composed of material of said one conductivity type; and a layer of semiconductor material of an opposite conductivity type formed upon the said basal plane of said major surface so as to cover said plane and the peripheral surfaces only of said islands, to define an exposed linear P-N junction adjacent and within the perimeter of the exposed distal surface of each of said islands.

3,020,413
CONDITION RESPONSIVE MEANS
William B. Hamelink, Richfield, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 6, 1960, Ser. No. 54,198
7 Claims. (Cl. 250—214)



1. Condition detecting means comprising; condition sensing means adapted to be subjected to a condition to be detected, a hot cathode electron discharge device having an electrically energizable cathode heater, a pair of main current conducting electrodes, and a control electrodes, means connecting said condition sensing means in controlling relation to the control electrode of said discharge device, a transistor having a pair of output electrodes and an input electrode, means connecting the output electrodes of said discharge device in controlling relation to the input electrode of said transistor, control means connected in circuit with the output electrodes of said transistor to thereby control said control means in accordance with the condition to which said sensing means is subjected, and biasing circuit means connected to the input electrode of said transistor, said biasing circuit means including said cathode heater whereby a malfunction of said discharge device due to an open circuited cathode heater also renders said transistor inoperative to control said control means.

3,020,414
SCANNING MIRROR ASSEMBLY
William B. McKnight, Summerville, Lonnie N. McClusky, Toney, and Gene H. Widenhofer, Huntsville, Ala., assignors to the United States of America as represented by the Secretary of the Army
Filed July 5, 1960, Ser. No. 40,978
6 Claims. (Cl. 250—235)
(Granted under Title 35, U.S. Code (1952), sec. 266)

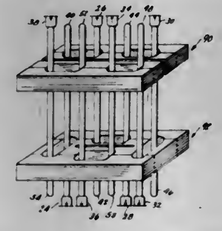


2. A scanning mirror assembly comprising: a paramagnetic plate having a mirrored surface; means attached to said plate for providing an axis of vibration; electromagnetic means magnetically coupled to said plate for positioning said plate about said axis; driving means electrically coupled to said electromagnetic means for causing said electromagnetic means to recurrently vary said position of said plate; a mechanical-electrical transducer mechanically responsive to movement of said plate for producing an electrical output corresponding to movement of said plate; said driving means comprising an electrical amplifier and regenerative means comprising means for regeneratively coupling said electrical output to the input of said amplifier and the output of said amplifier to an input of said electromagnetic means to cause self controlled oscillatory plate movement.

3,020,415
CURRENT BALANCING REACTORS
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 23, 1959, Ser. No. 808,501
12 Claims. (Cl. 307—58)

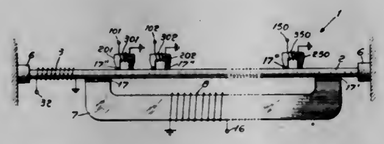
6. A current balancing reactor means for a plurality of parallel connected diodes; said current balancing reactor means comprising a stack of magnetic laminations; each of said diodes having diode conductors extending therefrom; each of said diode conductors being positioned

adjacent a first and second diode conductor of said diode conductors; each of said diode conductor and its said first adjacent conductor extending through a respective aperture in a first portion of said stack of magnetic laminations; each of said diode conductors and its said second adjacent diode conductor extending through a respective aperture in a second portion of said stack of magnetic laminations; each of said adjacent diode conductors carrying current in an opposite direction; each of said diode conductors terminating on a common bus conductor means; said bus conductor means being comprised of a first and second portion positioned adjacent a first and second face of said stack of magnetic laminations; alter-



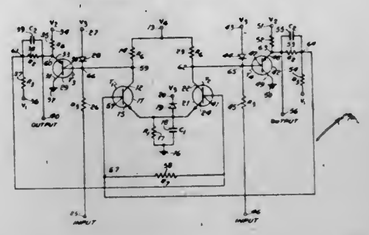
nately positioned diode conductors passing current through said stack in a first direction terminating at said first bus portion; the other of said diode conductors passing current through said stack in a direction opposite said first direction terminating at said second bus portion; the magnetic circuit for each of said diode conductors extending through a common aperture including a relatively small air gap; said relatively small air gap being formed by air gaps in a percentage of the laminations forming said first and second portion of said stack of magnetic laminations; said air gaps including a slot connecting the said apertures in said percentage of laminations.

3,020,416
SIGNAL TRANSLATING DEVICE
Richard K. Van Vechten, Clifton, and Robert T. Adams, Short Hills, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 21, 1960, Ser. No. 3,922
18 Claims. (Cl. 307—88)



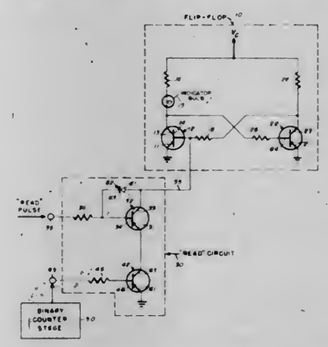
7. A signal translating device comprising a constrictive signal propagating member, a first magnetic circuit including a flux conductive member and a portion of said constrictive signal propagating member, a first inductive element inductively coupled to said flux conductive member, a plurality of second inductive elements inductively coupled to said signal propagating member through a corresponding plurality of second magnetic circuits and means for propagating a constrictive disturbance along said signal propagating member, to vary the reluctance of said member in regions common to both said first magnetic circuit and each said second magnetic circuit in a predetermined sequence whereby the inductive coupling between said first inductive element and each of said second inductive elements may be sequentially varied.

3,020,417
TRANSISTOR MULTIVIBRATOR
Philip Cheilik, Bronx, N.Y., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Mar. 11, 1957, Ser. No. 645,358
7 Claims. (Cl. 307—88.5)



1. A self-biasing multivibrator circuit comprising first and second principal transistors, one of said principal transistors conducting while simultaneously the other principal transistor is not conducting to provide multivibrator action, each of said transistors having an input electrode, an output electrode and an emitter electrode, first and second voltage divider circuits each coupled to a source of potential, circuitry means respectively coupling each of said output electrodes to an associated one of said voltage divider circuits, first circuitry means coupling the input electrode of said first transistor to said second voltage divider circuit, second circuitry means coupling the input electrode of said second transistor to said first voltage divider circuit and a feedback circuit for maintaining the potential at the input electrode of the conducting transistor at a value closely approximating the cut-off potential of said conducting transistor and below saturation, including a resistor coupled directly between said first and second input electrodes.

3,020,418
TRANSISTORIZED STORAGE REGISTER-INDICATOR CIRCUIT
Philip Emile, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed May 23, 1958, Ser. No. 737,462
4 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A storage register indicator circuit comprising a flip-flop circuit having first and second amplifying elements, said first amplifying element having a first electrode, said first electrode rendering said first amplifying element conductive upon the application of a pulse there-

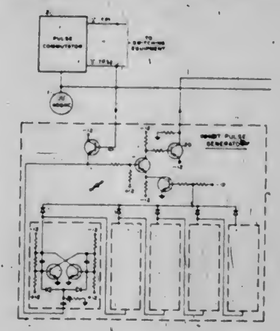
to and rendering said first amplifying element non-conductive upon being connected to a predetermined potential through a low impedance connection, third and fourth amplifying elements connected in series between said first electrode and said predetermined potential, means for rendering said fourth amplifying element highly conductive when said storage register is in one state and for rendering said fourth amplifying elements non-conductive when said storage register is in another state, means for applying a read" pulse to said third amplifying element, said third amplifying element being rendered conductive by said "read" pulse so that when said fourth amplifying element is conductive said first electrode is effectively connected to said predetermined potential and when said fourth amplifying element is non-conductive a pulse is applied to said first electrode.

3,020,419

PULSE FREQUENCY DIVIDING SYSTEM USING RING COUNTER AND MEANS TO CANCEL SOME INPUT PULSES

Barrie Brightman, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed July 28, 1958, Ser. No. 751,430
4 Claims. (Cl. 307—88.5)



1. In combination, means for generating N time position defining pulses which recur in repetitive time position frames, a recycling pulse operated counting chain having N settings, a gate circuit for normally coupling said time position defining pulses to said counting chain to advance the setting of said counting chain, means for periodically inhibiting said gate circuit during the occurrence of a particular one of said time position defining pulses to thereby prevent said counting chain from counting that pulse, and means for producing an output pulse each time that said counting chain is in a particular one of its N settings.

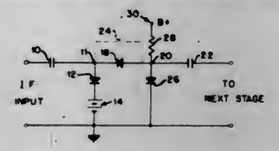
3,020,420

LIMITER CIRCUIT EMPLOYING SHUNT DIODE MEANS TO SWEEP OUT DISTRIBUTED CAPACITANCE IN THE NON-CONDUCTING STATE

Peter G. Smee, Lynchburg, Va., assignor to General Electric Company, a corporation of New York

Filed June 24, 1959, Ser. No. 822,502
9 Claims. (Cl. 307—88.5)

1. A clipping circuit including series connected unidirectional conducting means, input terminal means for said clipping circuit having input signals impressed thereon for driving said undirectional means into conduction upon excursions of said signal in one direction from a reference voltage and to drive it into a nonconductive state upon excursions in the opposite direction, output terminal means for said clipping circuit adapted to have a load connected thereto, and means to prevent said input signals from being transmitted through the distributed capacitance of said unidirectional means while in its nonconducting state, said last named means including a path connected in shunt with said output terminals which presents a relatively high impedance to current flow at all times said unidirectional means is in its conductive state and a relatively low impedance to current flow at all times that said unidirectional means is in a nonconducting state.

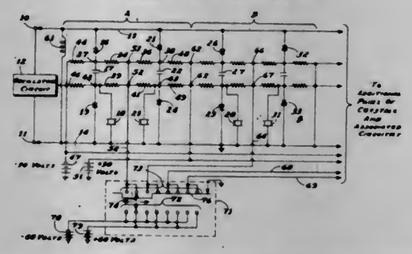


3,020,421

CRYSTAL SWITCHING SYSTEM

Robert L. Craiglow, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Sept. 8, 1959, Ser. No. 838,481
6 Claims. (Cl. 307—88.5)



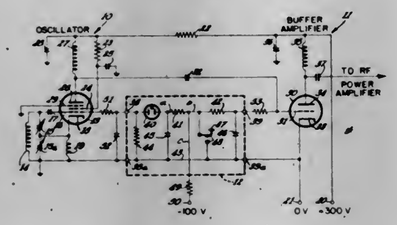
1. A selecting circuit comprising a pair of terminals having a given D.-C. potential, and at least one pair of switching circuits connected in parallel with each other across said pair of terminals, each of said switching circuits comprising a first diode having an anode and a cathode and crystal means connected in series arrangement with respect to said pair of terminals, and a second diode connected across said crystal means, the anode of the first diodes of one of said switching circuits being connected to said crystal means connected in series therewith, the cathode of the first diode of the other of said switching circuits being connected to the said crystal means connected in series therewith, the first and second diode of any given switching circuit being oppositely poled with respect to said given D.-C. potential, biasing means for biasing said first diodes into a nonconductive state and said second diodes into a conductive state, said biasing means comprising first voltage source means negative with respect to the D.-C. potential of said pair of terminals, second voltage source means positive with respect to the D.-C. potential of said pair of terminals, and a resistive network connected between said first and second voltage source means and having points thereon connected to the point between said first diode and said second diode of each of said two switching circuit of a given pair of said switching circuits, and control conductor means connected to said resistive network between the points at which the resistive network is connected to said two switching circuits, and means for selectively supplying to said control conductor means either a positive voltage of sufficient magnitude to cause one of said first diodes to become conductive and one of said second diodes to become nonconductive, a negative voltage of sufficient magnitude to cause the other of said first diodes to become conductive and the other of said second diodes to become nonconductive, or the D.-C. potential of said pair of terminals.

3,020,422

TIME SEQUENCE CONTROL CIRCUIT

Ellis R. Mace, Council Bluffs, Iowa, assignor to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Filed July 24, 1959, Ser. No. 829,447
3 Claims. (Cl. 307—109)



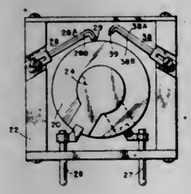
1. A control circuit for producing control potentials between a pair of first and second terminals and a pair of third and fourth terminals comprising, a gas discharge device, a first resistance and a second resistance connected in series between said first and third terminals, said first resistance being connected between said discharge device and said second resistance, a common conductor connected between said second and fourth terminals, a potential developing resistance connected between said first and second terminals, a first capacitor connected to the connection between said discharge device and said first resistance and to said common conductor, a second capacitor connected between said third and fourth terminals, switching means connected between said common conductor and the connection between said first and second resistances, and an impedance and a potential source connected in series across said switching means.

3,020,423

CRYSTAL FREQUENCY STABILIZATION

Eduard A. Gerber, Monmouth County, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed July 8, 1959, Ser. No. 825,854
3 Claims. (Cl. 310—8.9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A temperature compensating device for a crystal that decreases in frequency as pressure is applied along a first axis across opposing nodal points in a first direction and increases in frequency as pressure is applied along a second axis across opposing nodal points in a second direction comprising a rigid frame for supporting said crystal, a first temperature sensitive device attached to said rigid frame for applying pressure across said opposing nodal points in said first direction as the temperature increases above a first given temperature and a second temperature sensitive device attached to said rigid frame for applying pressure across said opposing nodal points in said second direction as the temperature decreases below a second given temperature.

3,020,424

PIEZOELECTRIC CRYSTAL

Rudolf Bechmann, Oceanport, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed May 8, 1958, Ser. No. 734,062
1 Claim. (Cl. 310—9.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



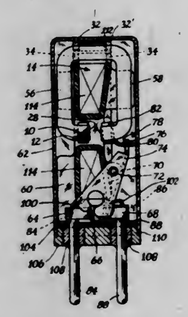
A thickness shear piezoelectric crystal element comprising a quartz plate having a peripheral contour in the shape of an equilateral triangle, said contour being derived from and having its apices extending substantially to the periphery of a disc shaped quartz crystal having a diameter to thickness ratio of about 60, said thickness and said equilateral triangle shape of said crystal being such as to restrict the crystal to oscillation in thickness shear mode at not less than 10 megacycles, and said oscillation occurring with a sharp peak response at its fundamental frequency and nearly complete rejection of spurious harmonics occurring close to the fundamental frequency.

3,020,425

ELECTROMAGNETIC MOTOR

Rudolf Steiner, 17215 Valerio St., Van Nuys, Calif., assignor of one-half to Eugene D. Kilmer, Los Angeles, Calif.

Filed Oct. 20, 1958, Ser. No. 768,130
18 Claims. (Cl. 310—20)



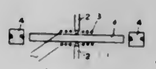
1. An electromagnetically actuated device comprising a magnetic core formed of a plurality of generally C-shaped strips of flexible magnetizable material nested one inside the other with the strips joined to one another at their ends to form opposing faces of an air gap, the strips being loose one from another in a zone intermediate their ends for independent flexure when the core is flexed to change the size of said air gap, and a coil interlinked with said core to magnetize the core and move said ends relatively

toward one another by magnetic attraction against the resistance to bending of the loose portions of said strips in said zone.

3,020,426
FERROMAGNETIC MATERIAL

Cornelis Martinus van der Burgt, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Feb. 12, 1957, Ser. No. 639,724
Claims priority, application Netherlands Feb. 14, 1956
4 Claims. (Cl. 310—26)



1. A ferromagnetic material particularly adapted for a magnetostrictive vibrator consisting essentially of a material corresponding to the formula:

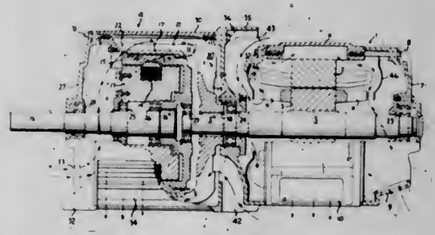
$$Co_x\{Ni_yZn_{(1-y)}\}_{(1-x)}Fe_2O_4$$

wherein y has a value between 1 and about 0.3 and the value of the product xy is between about 0.006 and 0.024, said material being formed by mixing cobalt, nickel, zinc and ferric oxides in proportions corresponding to said formula, and sintering said mixture at a temperature of about 1000° C. to 1400° C., said material having a loss factor (tan δ) less than about 1.62 percent and a temperature factor of initial permeability (T_c/μ_o) of less than about 25×10^{-6}.

3,020,427
VENTILATION OF DYNAMOELECTRIC MACHINE DRIVE UNITS

Charles M. Wheeler and Philip M. Folger, Erie, Pa., assignors to General Electric Company, a corporation of New York

Filed Mar. 14, 1960, Ser. No. 14,817
7 Claims. (Cl. 310—59)

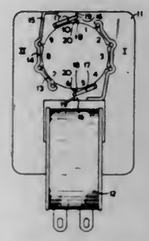


1. An electric power unit comprising two dynamoelectric machines, each machine having a generally annular housing member and an end housing member at opposite ends of said drive unit, a housing adapter member positioned intermediate and interconnecting said annular housing members, said machines having aligned rotatable shafts, said adapter member having a hub portion providing bearing support means for supporting and aligning said shafts, and baffling means extending outwardly from said hub portion to a peripheral portion, said peripheral portion and said baffling means defining independent and mutually isolated air intake and directing paths into each machine, each machine having means arranged to draw air therein through its associated air intake and directing means whereby air flow into each machine through said adapter is independent of air flow through said adapter into the other machine.

3,020,428
STATOR FOR SINGLE-PHASE INDUCTION MOTORS

Barend Martinus Meijer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 31, 1958, Ser. No. 725,211
Claims priority, application Netherlands Apr. 5, 1957
2 Claims. (Cl. 310—172)

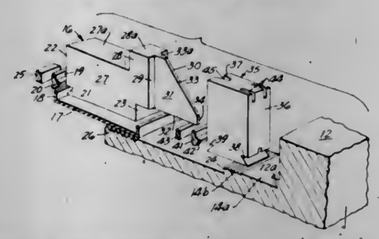


1. A stator for a single phase induction motor comprising two pole halves, each having at least five pole portions of substantially equal circumferential length and substantially equally spaced from one another, the first pole portion of each pole half being unshaded and diametrically opposed to the first pole portion of the other pole half, the last pole portion of each pole half being provided with a separate short-circuited shading coil, a magnetic shunt being provided in each pole half between the first unshaded pole and the adjacent pole of the other pole half and between the first pole and the penultimate pole of the other pole half, the latter shunt being effected through a side of the separate short circuited shading coil, which side is remote from the rotor of said induction motor, all the remaining pole portions of each pole half being provided with interconnected short circuited shading coils, and a narrow air gap on opposite sides of each separate short circuited shading coil.

3,020,429
D.C. MOTOR COMMUTATOR CONSTRUCTION

Calice G. Courneya, 421 6th St. SE., Minneapolis, Minn., assignor of fifty percent to B. J. Reger, Fargo, N.Dak.

Filed Nov. 9, 1959, Ser. No. 851,679
8 Claims. (Cl. 310—234)

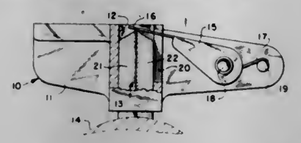


1. Commutator construction for use with D.C. machines comprising a plurality of commutator segments arranged in circumferentially adjacent ring shape, means for retaining said segments in a ring upon a rotor of a D.C. machine, each of said segments having a blade extending axially therefrom and disposed generally in a radial plane, each plate having opposed sides converging radially outwardly and axially away from its respective segment, a plurality of riser segments arranged in circumferentially adjacent ring shape, means for retaining said riser segments in a ring upon a rotor of a D.C. machine, and each of said riser segments having a surface therein corresponding to the shape of said blades for receiving a blade in wedged relation therein.

3,020,430
SPLIT BRUSHES AND SUPPORT THEREFOR

Melvin H. Neuhardt, Baltimore, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland

Filed June 16, 1960, Ser. No. 36,567
1 Claim. (Cl. 310—246)

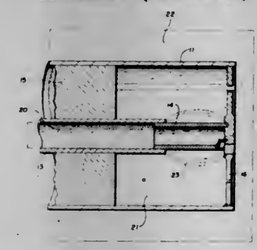


A split brush and support therefor comprising a supporting bracket having a brush guideway, said guideway having a longitudinal slot formed therein, a split brush confined within said guideway, said split brush comprising a pair of adjacent individual brushes having respective ends beveled oppositely to each other, whereby an apex is formed for said split brush, a pivoted brush tensioning arm carried by said supporting bracket, said arm extending through said slot in said guideway to rest upon the apex of said split brush, and spring means urging said arm upon said split brush, whereby said arm rests upon the apex of said brush at all times during the normal wearing cycle of said split brush, and whereby said pair of adjacent brushes wear evenly and carry an equal amount of the electrical load.

3,020,431
ION SOURCE AND PLASMA GENERATOR

Eugene F. Martina, Palo Alto, Calif., assignor to American Radiator & Standard Sanitary Corporation, a corporation of Delaware

Filed Nov. 20, 1957, Ser. No. 697,679
13 Claims. (Cl. 313—63)



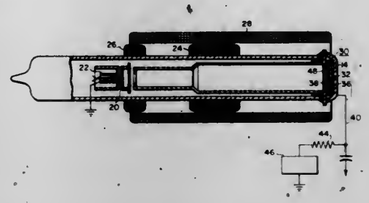
1. An ion source comprising a chamber at least one wall of which is composed of a metal permeable to a gas sought to be ionized, means of directing said gas to one surface of said wall, means of maintaining a high vacuum at a second surface of said wall, means of applying a high difference of potential between two points on said second surface, said points being so spaced as to cause rapid diffusion of said gas through said wall and create a sudden increase in pressure at said second surface, thereby causing an electric arc discharge of short duration between the two said points on said second surface.

3,020,432
PHOTOCONDUCTIVE DEVICE

James F. Nicholson, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 24, 1959, Ser. No. 855,108
5 Claims. (Cl. 313—65)

5. An apparatus for converting a radiation image into an electrical signal, the magnitude of which decreases with increasing radiation intensity, which comprises; an evacuated envelope, a target electrode of material positioned at one end of said envelope which exhibits a decrease in conductivity with an increase of radiation

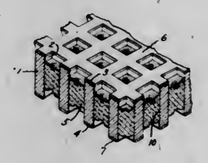


adapted to receive said radiation image, an electrically conductive layer positioned on one side of said target material and an electron gun within said envelope for directing a stream of electrons onto said target material.

3,020,433
STORAGE ELECTRODE STRUCTURE

Harold R. Day, Jr., Ballston Lake, N.Y., assignor to General Electric Company, a corporation of New York

Filed May 18, 1956, Ser. No. 585,786
9 Claims. (Cl. 313—68)

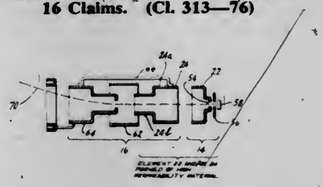


1. A storage electrode for storage tubes comprising an integral, self-supporting, rigid glass structure in the form of a mesh defining a plurality of regularly arranged, rectilinear apertures extending therethrough, a conducting coating on a surface of said mesh, and plugs of conducting material within said apertures, each of said plugs being spaced from said coating.

3,020,434
SELF SHIELDING ELECTRON GUN AND CATHODE RAY TUBE SYSTEM INCLUDING SAME

Ralph A. Bloomsburgh, Lafayette Hill, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

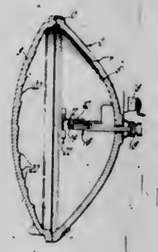
Filed Dec. 8, 1958, Ser. No. 778,651
16 Claims. (Cl. 313—76)



1. An electron gun structure for a cathode ray tube comprising a cathode and first and second grids, said second grid having a generally cup-shaped form with a central opening in the closed end thereof for the passage of an electron beam, the open end of said second grid being directed away from said cathode, and an electrostatic lens structure comprising a plurality

of axially aligned, generally tubular elements, said second grid being formed of a material having a high permeability and low residual magnetism.

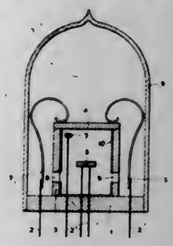
3,020,435
FILAMENT SHIELD
Howard C. Mead, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,643
2 Claims. (Cl. 313—117)



1. A vehicle headlamp comprising a substantially paraboloidal reflector, a first coiled filament disposed in a substantially horizontal plane and approximately at the focus of said reflector, a second coiled filament disposed generally parallel to and spaced a slight distance below and to one side of said first filament, a lens covering said reflector and provided with vertically up-bending and down-bending prisms for distributing light rays reflected by said reflector upon selective energization of said filaments to provide a lower beam from said first filament and an upper beam from said second filament, a filament shield comprising an upper shield section having the shape of a truncated 160° sector of a circle and being disposed substantially entirely above said horizontal plane to intercept glare-producing light rays from said first filament in the solid angle subtended by 160° of the upper half of said lens, a lower shield section having the shape of a truncated 100° sector of said circle and being disposed substantially entirely below said horizontal plane to intercept direct glare-producing light rays from said first filament in the solid angle subtended by 100° of the lower half of said lens, and a relatively narrow centrally located bridge integral with and joining said shield sections to define openings in said shield between said shield sections on each side of said bridge to permit passage therethrough of selected direct light rays from said first filament toward the unshielded portions of said lens, a substantial portion of said second filament being located opposite one of said openings in said shield whereby a substantial portion of the light rays therefrom in excess of said selected light rays from said first filament is permitted to pass through said opening toward an unshielded portion of said lens.

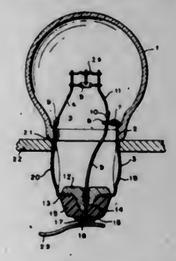
3,020,436
GLOW DISCHARGE TUBES
Gerardus Josephus Marie Ahsmann, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 11, 1960, Ser. No. 28,316
Claims priority, application Netherlands Aug. 14, 1959
12 Claims. (Cl. 313—213)

1. A gaseous glow discharge tube comprising an envelope, a gaseous medium within said envelope, anode and cathode electrodes within said envelope and defining a discharge path therebetween, said cathode being plate-shaped and consisting of a monocrystal of an element selected from the group consisting of germanium and silicon, and a coating of the same material as the cathode of visible



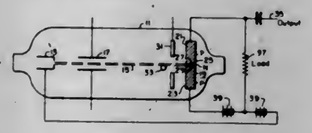
thickness on the portion of the inner wall of the envelope exposed to the discharge.

3,020,437
ELASTIC LAMPS, PRINCIPLES, CONSTRUCTIONS, MOUNTINGS AND METHODS
John J. Horan, 420 Quigley Ave., Willow Grove, Pa.
Filed Feb. 9, 1959, Ser. No. 791,907
18 Claims. (Cl. 313—318)



1. An electric lamp comprising: a radiant energy producing device; a hermetically sealed enclosure containing said device; a radiant energy transmitting component constituting at least a part of said enclosure; and metallic wall means constituting a part of said enclosure, said wall means including at least one resilient metallic portion jutting therefrom, the resiliency thereof lying in said metallic wall means, said wall means thus being adapted to yield elastically when said means is inserted into an opening in a relatively non-compliant receptacle.

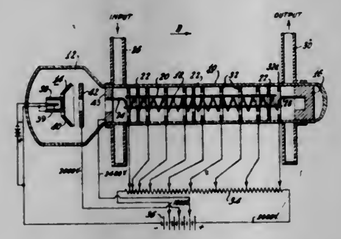
3,020,438
ELECTRON BEAM DEVICE
George C. Sziklai, Princeton, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 29, 1958, Ser. No. 751,659
5 Claims. (Cl. 315—1)



1. An electron beam device including an envelope, a generating means for generating an electron beam, a target member, deflecting means for deflecting said electron beam over said transistor target member so that the current from said transistor target member is continuously variable in response to signals applied to said deflecting

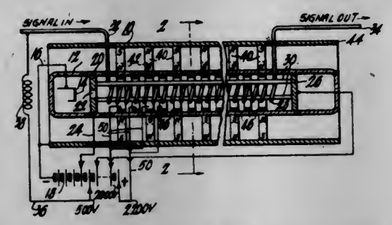
means, said transistor target member including a first zone of semiconductor material, a second zone of semiconductor material, and a third zone of semiconductor material positioned between said first zone and second zone, a semiconductor transition region between said first zone and said third zone and a semiconductor transition region between said second zone and said third zone, said third zone being of a different conductivity type from said first zone and from said second zone a fixed electrical contact on said first zone, a fixed electrical contact on said second zone, and said electron beam operable to provide the sole electrical contact to said third zone.

3,020,439
HIGH EFFICIENCY TRAVELING WAVE TUBES
Arie L. Elchenbaum, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 30, 1958, Ser. No. 752,120
14 Claims. (Cl. 315—3.5)



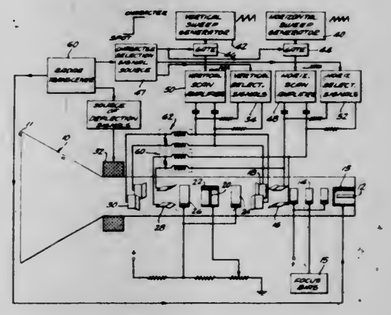
1. A traveling wave tube comprising an electron gun and an electron collector defining an electron beam path therebetween, a slow wave propagating structure disposed along and continuously coupled to said path, said structure comprising means for propagating waves therealong at a constant phase velocity, and means comprising at least one electrode disposed in spaced relation to and along at least the final portion of said structure for establishing an accelerating electrostatic field in the direction of electron travel.

3,020,440
ELECTRON BEAM DEVICE
Kern K. N. Chang, Mercer County, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Continuation of application Ser. No. 469,423, Nov. 17, 1954. This application June 25, 1959, Ser. No. 822,967
18 Claims. (Cl. 315—3.5)



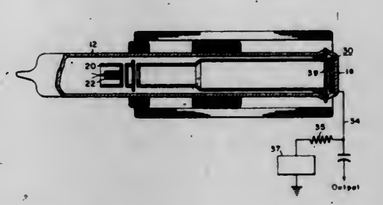
6. A traveling wave tube adapted to be excited by a signal wave and comprising an evacuated envelope containing a delay line adapted to propagate said signal wave within said tube along an axis therein with a phase velocity substantially less than the speed of light, means for producing a relatively dense beam of electrons with a path of travel along said axis, and means for confining said beam to a substantially constant diameter flow along said path; said confining means including magnetic focusing means for producing magnetic fields having at least three regions of relatively high flux density alternating with regions of substantially zero flux density along said path, and electrostatic means for producing an electrostatic focusing field at each of said regions of substantially zero flux density.

3,020,441
CHARACTER BEAM-SHAPED TUBE
Omer F. Hamann, San Diego, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Oct. 9, 1957, Ser. No. 689,121
7 Claims. (Cl. 315—8.5)



1. In a cathode-ray tube display system for displaying characters on the screen of a cathode-ray tube of the type having an aperture plate with character-shaped apertures for intercepting and shaping the electron beam cross section, the improvement comprising means for focusing said electron beam cross section to have a smaller cross-sectional area than a character-shaped aperture, means for generating vertical- and horizontal-sweep potentials for scanning a character-shaped aperture, means for generating aperture selection voltages, and means to apply both said vertical- and horizontal-sweep potentials and said aperture deflection potentials to said electron beam to select and raster scan a desired one of said character-shaped apertures and means for causing the electrons that traverse said character-shaped aperture to impinge on a viewing screen.

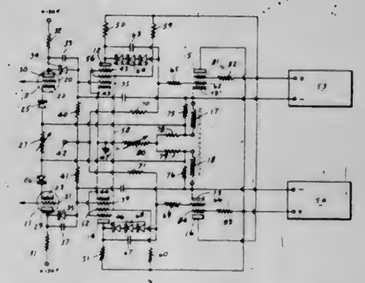
3,020,442
PHOTOCONDUCTIVE TARGET
James F. Nicholson and Kenneth R. Simpson, Elmira, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 11, 1959, Ser. No. 812,226
5 Claims. (Cl. 315—10)



1. A photoconductive target electrode for a pick-up tube, said target electrode comprising a transparent con-

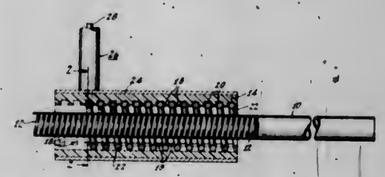
ductive film, a thin film of amorphous selenium on one surface of said conductive film, and an antimony trisulfide coating on said film of amorphous selenium.

3,020,443
DEFLECTION CIRCUIT FOR CATHODE RAY TUBE
Thomas S. Teetor, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation
Filed Nov. 27, 1959, Ser. No. 855,765
5 Claims. (Cl. 315—26)



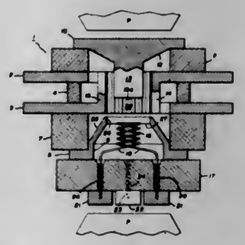
1. A deflection circuit for cathode ray tubes comprising a deflection coil, means for energizing said coil comprising a push-pull amplifier having a first amplifier tube and first independent anode voltage supply connected in series across said coil, the cathode of said tube being connected to one end of said coil and a second amplifier tube and second independent anode voltage supply connected in series across said coil in bucking relation to said first anode voltage supply, the cathode of said second tube being connected to the other end of said coil, and an input circuit coupled to the control electrodes of said tubes whereby signal voltages in said input circuit cause current flow in said coil in proportion to said signal voltages.

3,020,444
TRAVELLING WAVE TUBE COUPLER
Herbert J. Wolkstein, Newark, and Ralph E. Bridge, South Bound Brook, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 5, 1959, Ser. No. 811,180
5 Claims. (Cl. 315—39.3)



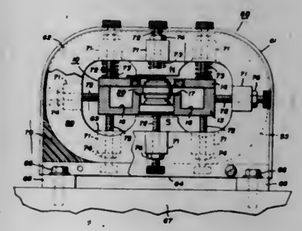
1. Traveling wave tube apparatus comprising a traveling wave tube of the kind having a wave propagating helix inside the envelope, and a helical coupler coil external to the envelope and adapted to provide for the coupling of radio frequency energy to said helix, a support for said helical coupler coil comprising a hollow tube of insulation having on the interior surface thereof a plurality of spaced rows of ridges of insulation material, adjacent ridges in each row being spaced apart by an open valley, said rows being parallel to the longitudinal axis of said insulation tube, said helical coupler coil being held in place by the sides of the ridges in the different rows, the diameter of the wire of said helical coupler coil being greater than the height of said ridges and exposed to the envelope of the traveling wave tube which it surrounds.

3,020,445
CROSS-FIELD ELECTRIC DISCHARGE DEVICES
Myron Weinstein, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 24, 1958, Ser. No. 775,898
17 Claims. (Cl. 315—39.63)



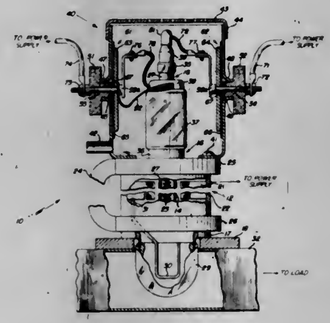
3. A magnetron comprising an anode circuit including a plurality of segments supported in mutually spaced relation and defining a cylindrical opening, an electron emissive electrode disposed axially outwardly of one end of said opening, a non-emissive electrode extending only partially in said opening from the other end thereof, whereby said non-emissive electrode and said segments define an annular interaction region therebetween and the partial extension of said non-emissive electrode in said opening affords a hollow space in said opening axially interposed between said interaction region and said emissive electrode, and means for directing electrons from said emissive electrode axially into said one end of said opening in said anode circuit toward said interaction region and inwardly toward the center of said hollow space, thereby to adapt said electrons for rotating in said hollow space at a smaller radius relative to the radius of said interaction region and before entering said interaction region.

3,020,446
MAGNETRON CIRCUIT APPARATUS
Michael Bessarab, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 21, 1958, Ser. No. 736,867
16 Claims. (Cl. 315—39.71)



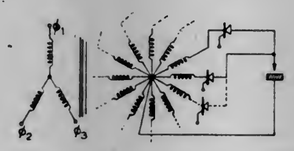
1. A unitary magnetron circuit apparatus comprising a magnet including a pair of opposed closely spaced pole pieces, a cavity circuit positioned between said pole pieces, means for mounting a magnetron in said circuit with the longitudinal axis of said magnetron substantially coextensive with the magnetic field between said pole pieces, and means carried by said magnet supporting said circuit on said magnet and adjustable for predeterminedly positioning said circuit relative to said pole pieces, thereby to adjust said magnetic field position relative to the longitudinal axis of a magnetron mounted in said circuit.

3,020,447
MAGNETRON SYSTEMS
Louis H. Schall, Dedham, and Donald L. Winsor, Waltham, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,745
14 Claims. (Cl. 315—85)



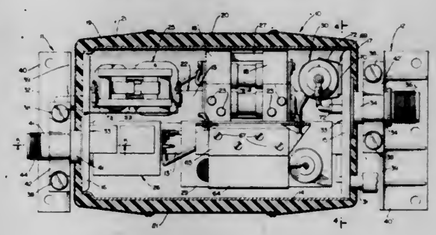
1. In combination, a magnetron-type electron discharge device having an anode, a cathode electrically insulated from said anode and a cathode support assembly, an electrically conductive shield surrounding said support assembly and electrically and mechanically connected to said anode, capacitive means formed by a portion of said shield and a conductive surface disposed parallel thereto, an electrically conductive supply lead passing through said shield and insulated therefrom in the region of said capactive means, a cathode lead disposed within said shield and connected between said supply lead and said cathode, and means for electrically shunting said cathode lead, said shunting means having a low inductance as compared with that of said cathode lead.

3,020,448
ELECTRIC DISINTEGRATION OF CONDUCTIVE MATERIALS
Gregory Fefer, Newnham-on-Severn, Gloucester, England, assignor to Sparcatron Limited, Stafford, England, a company of Great Britain
Filed Dec. 7, 1959, Ser. No. 857,920
2 Claims. (Cl. 315—138)



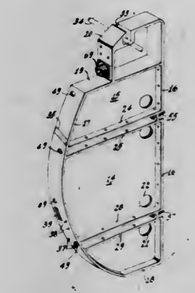
1. Apparatus for working electrically conductive materials by repeated time-spaced electric discharges across a gap between a workpiece and an electrode, including a gate-controlled rectifying semi-conductor element supplied with alternating current, wherein the gate electrode is fed with pulses arranged to be in synchronism with the alternating voltage so that the controlled rectifier will commence conduction at a point during the excursion of the supply voltage.

3,020,449
ELECTRICAL APPARATUS
Russell W. Twaddell and Stephen E. Gregoire, Sidney, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Jan. 6, 1958, Ser. No. 707,388
6 Claims. (Cl. 317—79)



1. An electrically operated igniter adapted to operate at elevated temperatures, comprising an elongated rigid casing, closure members secured to the ends of the casing, spaced wide parallel longitudinally extending frame members extending chordally of the casing and attached to the end closure members and spaced from the sidewall of the casing, rigid housings of units which contain at least some of the elements of the igniter circuit located between and suspended from the frame members, oppositely, generally axially outward propjecting trunnion-like supporting members for the casing attached to the respective end closure members, and igniter unit supporting brackets adapted to be clampingly secured to the supporting members.

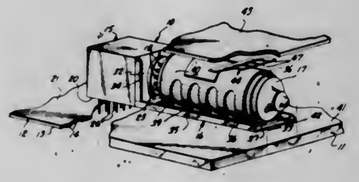
3,020,450
MOUNTING FOR ELECTRICAL ELEMENTS
Richard E. Shafer, Pasadena, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,352
14 Claims. (Cl. 317—99)



1. A frame for electrically insulating a plurality of electrical units from shock, permitting the cooling thereof and for positioning the maximum number of said units in a circular walled space with maximum accessibility comprising a D-shaped frame having a centrally disposed web between a straight base portion thereof and a curved portion thereof, a plurality of ribs between the straight portion of said frame and the curved portion thereof, certain of said ribs being on one side of said web and others of said ribs being on the other side of said web, said ribs being arranged in staggered relation on the two sides of said web, one edge of said ribs on one side of said web lying

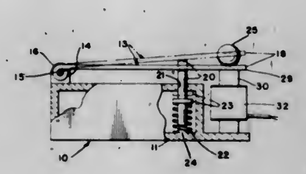
in the plane of the side of said frame, said web having openings therein adjacent said ribs, and means providing a compartment attached to one end of said frame of the same width as the width of said frame, a wall of said compartment having a notch therein to accommodate a rod to permit the pivoting of said frame thereon.

3,020,451
RIGHT ANGLE HEAT DISSIPATING TUBE SHIELD
John C. McAdam, Burbank, Calif., assignor to International Electronic Research Corporation, Burbank, Calif., a corporation of California
Filed Nov. 25, 1957, Ser. No. 698,565
11 Claims. (Cl. 317—101)



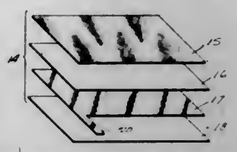
1. A right angle shield mount for electronic tubes comprising a block of dielectric material having a flat base, a side face at right angles to the flat base having a plurality of contact pin receptacles therein, a plurality of pins in said block extending outwardly of the flat base and a wire lead connecting each of the pins to one of said receptacles, a resilient cover for each of said leads throughout the portion thereof within the block whereby to resiliently mount the receptacles and the wires connected thereto in the block, a base plate of heat conducting material having a flat portion secured to the block at said side face and having another portion extending outwardly therefrom in the same plane as said flat base, said base plate being in electrically insulated relationship with said pins, a tube contacting envelope of dead metal attached to said other portion in heat conducting relationship and a spring clip overlying sides of said envelope whereby to hold the envelope in heat conducting relationship to the electronic tube.

3,020,452
VIBRATION PROTECTIVE DEVICE
Chester A. Tudbury, White Plains, N.Y., assignor to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 11, 1958, Ser. No. 760,427
5 Claims. (Cl. 317—165)



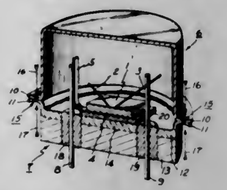
1. A vibration responsive device comprising in combination a vertically movable arm having at least a portion thereof comprised of a pair of slightly spaced legs, a depression in the upper surface of said legs, a magnetically permeable member separate from said arm and resting in said depression, and electrically energized magnet means for magnetizing said legs to hold said magnetically permeable member thereon by magnetic attraction.

3,020,453
UNITIZED ELECTRICAL CAPACITOR
Frank J. Hogue, 129 N. 15th St., Malvern, Ohio
Filed May 22, 1959, Ser. No. 815,145
4 Claims. (Cl. 317—230)



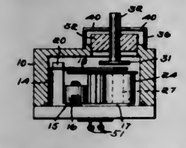
1. A multiple section condenser comprising a plurality of condenser sections, each section comprising a tubular metallic case, an insulating core member disposed in said case, a pair of insulated sheet-like foil elements spirally wound on said core member, a tab element formed integrally on the edge of one of said foil elements, and means electrically connecting said tab element to the case, means securing the sections in end-to-end axially aligned relation with their cases in conductive contact with each other, and respective elongated conductive terminal strips conductively engaged with the other foil elements of the sections and extending through the sections parallel to the common axis of the sections, said terminal strips projecting from the final section, the core members of the sections including axially extending tubular insulating sleeves spaced to receive said elongated terminal strips and insulating disc members connecting the ends of the sleeves.

3,020,454
SEALING OF ELECTRICAL SEMICONDUCTOR DEVICES
Lloyd H. Dixon, Jr., Billerica, Mass., assignor to Solid State Products, Inc., Salem, Mass., a corporation of Massachusetts
Filed Nov. 9, 1959, Ser. No. 851,751
8 Claims. (Cl. 317—234)



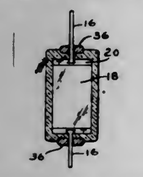
4. Sealed electrical semiconductor apparatus comprising a semiconductor wafer having electrical contacts connected therewith, a first cup-shaped enclosure structure of pressure-weldable metal having high thermal conductivity and including an integral annular flange about the open end thereof, a second cup-shaped enclosure structure including a disk of metal containing iron and an integral layer of pressure-weldable metal on said disk extending upwardly about the periphery thereof to an integral annular flange, said disk and layer having an opening therethrough, a ceramic electrical insulation member having one of the oxides of aluminum and beryllium therein which increases thermal conductivity thereof, said ceramic member mounting said wafer on said layer of pressure-weldable metal, said structures being fixed together in enclosing relationship to said wafer, contacts, and ceramic member with said flanges confronting one another and with the pressure-weldable metal of said flanges united integrally by a narrow annular pressure-welded junction, at least one electrical lead extending through said opening in said disk and layer, and vitreous electrical insulation material bondable with said metal containing iron, said vitreous material being disposed in said opening in sealed relationship with said lead and disk and insulating said lead from said enclosure structures.

3,020,455
VIBRATORY CAPACITORS
Harry Reifel, Waltham, Mass., assignor to Stevens-Arnold Inc., a corporation of Massachusetts
Filed May 4, 1959, Ser. No. 810,775
6 Claims. (Cl. 317—250)



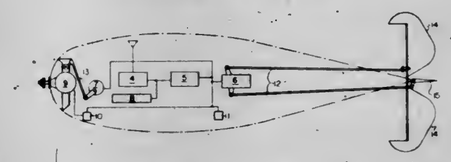
1. A vibratory capacitor comprising a base; a reed cantilever supported at one end to said base and forming a vibratory plate of said capacitor, said reed comprising two longitudinally extending strips of magnetic spring metal extending in a common plane and separated at the longitudinal axis of the reed by and joined together by a longitudinally extending strip of non-magnetic material extending in said plane; a motor electromagnet for driving said one strip and said reed at a predetermined frequency supported by said base with its polepiece facing and spaced from one side of the free end of one of said strips of magnetic metal; a generator electromagnet having a coil in which current is induced by movement of said reed and said one strip at said frequency, supported by said base with its polepiece facing and spaced from the free end of the corresponding side of the other of said strips of magnetic metal; a first magnetic circuit including said one strip and said pole piece of said motor electromagnet; a second magnetic circuit including said other strip and said polepiece of said generator electromagnet; a plate having a conductive surface facing and spaced from the side of said reed opposite the side facing said eletcromagnets and forming the fixed plate of said capacitor; a metal enclosure for said reed, said electromagnets and said plate having a conductive surface, secured to said base, and means insulatedly supporting said plate having a conductive surface from said enclosure.

3,020,456
ELECTRICAL CAPACITORS AND METHOD OF PRODUCTION
Margaret M. Layton, Corning, Robert B. Randels, Painted Post, and George F. Stockdale, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed May 5, 1959, Ser. No. 811,135
7 Claims. (Cl. 317—258)



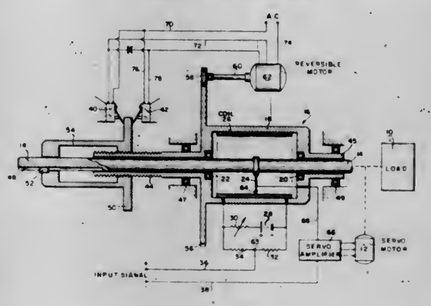
1. In an encapsulated capacitor assembly comprising a capacitor element composed of electrodes separated by dielectric material and electrical leads attached to the electrodes and extending through a glass casing that encapsulates the element, a fusion seal between each lead and the glass casing, and an annular ceramic disc surrounding each such lead and integrally united with the surface of the glass casing, the seal between the lead and the casing being strengthened against fracture without appreciably altering the electrical characteristics of the capacitor assembly.

3,020,457
REMOTE CONTROL SERVOSYSTEM
Robert C. Kelley, Hollywood, Calif.
Filed Oct. 11, 1951, Ser. No. 250,923
14 Claims. (Cl. 318—16)



11. In a remote control system having a plurality of controls at a control station and a plurality of corresponding remote controls at a remote station, means responsive to the operation of any one of said control station controls for transmitting a code comprising a predetermined number of successive circuit interruptions and circuit closures corresponding in number to the number of said controls in said control station, each of said circuit interruptions and each of said circuit closures corresponding to a different one of said control station controls and to corresponding different ones of said remote station controls, means dependent upon the particular one of said control station controls which is operated for prolonging the corresponding circuit interruption or circuit closure in said transmitted code, means in said remote station operated in response to said transmitted code for operating only the remote station control corresponding to the said prolonged circuit interruption or circuit closure of said transmitted code, control devices in said control station operated in response to and in accordance with the operation of said control station controls, and remote devices in said remote station corresponding to said control station devices operated to correspondence with said operated control station devices in response to the operation of said remote station controls.

3,020,458
SERVOSYSTEM ELECTRO-MECHANICAL RESET MECHANISM
Walter A. Morgan, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Nov. 16, 1960, Ser. No. 69,608
2 Claims. (Cl. 318—28)



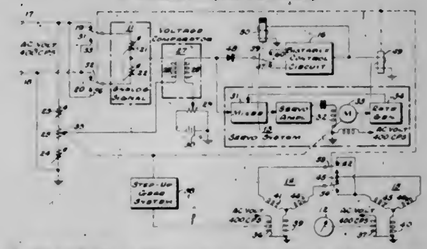
1. A reset system for use with a servo-mechanism including a servo amplifier and servo motor for controlling

the position of a load comprising: a potentiometer having a movable shaft extending into the housing thereof; a wiper contact on said movable shaft; a pair of spaced-apart normally open switches; at least one cam located between said normally open switches when the wiper contact is at the midscale point of the potentiometer and movable in response to a predetermined amount of movement of the movable shaft to actuate a predetermined one of said switches; a reversible motor actuated by the closing of the switch; and means interconnecting the motor and the housing of the potentiometer for moving the housing in the appropriate direction to reset the system.

3,020,459
ANALOG-VOLTAGE SHAFT POSITIONING SYSTEM

Charles O. Feigleson, Cedar Rapids, Iowa., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Feb. 3, 1958, Ser. No. 713,063
3 Claims. (Cl. 318—28)



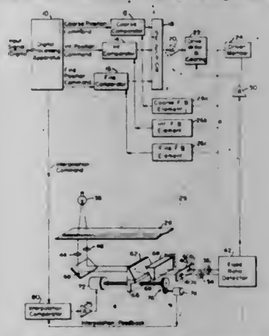
1. In a shaft positioning system having a servo-control circuit including an input circuit and a potentiometer, means for developing a difference voltage between a signal applied to said input circuit and a voltage having an amplitude controlled by the operation of said potentiometer, an output shaft, and a servo system operating in response to the difference voltage developed by said means for positioning said potentiometer and for controlling the position of said output shaft, the direction of operation of said servo system being reversed in response to an inversion of phase of said difference voltage; reversing means operating in response to said difference voltage exceeding a predetermined value for inverting the phase between said voltages derived from said input signal and from said potentiometer, operation of said reversing means reversing the direction of operation of said servo system and said potentiometer, and means responsive to the operation of said reversing means for reversing the direction of operation of said output shaft relative to the direction of operation of said servo system and said potentiometer so that the direction of operation of said output shaft is determined by the phase of said input signal regardless of the operation of said reversing means.

3,020,460
POSITION CONTROL SERVOSYSTEM

John O. Morin, Bedford, James O. McDonough, Concord, and Herbert P. Grossimon, Arlington, Mass., assignors to The Hartford Special Machinery Co., Hartford, Conn., a corporation of Connecticut

Filed July 21, 1958, Ser. No. 749,788
20 Claims. (Cl. 318—28)

1. Apparatus for automatically and accurately positioning a driven member comprising, in combination a first automatic control system positioning said driven member to the approximate desired position, and a second positioning system adapted to accurately position said driven member at the desired location, said second system being operative after said first system has approximately positioned said driven member, said second system including a grating secured to said driven member for movement therewith, said grating having a plurality of radiation modifying areas, a source of radiant energy to which a portion of said grating is exposed, means responsive to a portion of the radiant energy from said source modified by said grating, said energy responsive means being fixed with respect to said driven member, said radiation responsive means being adapted to generate

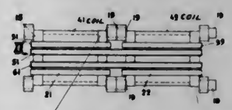


continuously variable signal which is uniquely related to the distance and direction of at least one of the radiation modifying areas of said grating from a predetermined location determined by the position of said radiation responsive means, and means continuously responsive to said signal to drive said driven member until said radiation modifying area is at said predetermined location with respect to said radiation responsive means to thereby accurately position said grating and the driven member associated therewith.

3,020,461
TORSIONAL MAGNETOSTRICTION FEELER APPARATUS EMPLOYING FEEDBACK

Bořivoj Dubský, Oldřich Straka, and Blahoslav Trefil, Prague, Czechoslovakia, assignors to Vyzkumný a zkusebni letecky ustav, Letnany, near Prague, Czechoslovakia

Filed Mar. 4, 1959, Ser. No. 797,242
Claims priority, application Czechoslovakia Mar. 7, 1958
4 Claims. (Cl. 318—28)



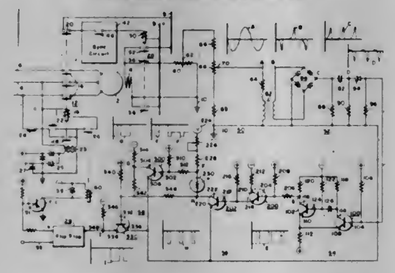
1. In combination in a torsional magnetostriction feeler, an assembly including at least one pair of rigidly interconnected torsional bodies, each of said bodies having wound thereon exciting, polarization and pick-up windings, each pair of said bodies having wound thereon feedback windings, a first bridge circuit comprising branch paths in which said pick-up and polarization windings are connected and displaceable diagonal path means in which said feedback windings are connected, motor means including a motor winding, said motor means being adapted to displace said diagonal path means, a second bridge circuit comprising branch paths in which said exciting windings are connected and a diagonal path in which said motor winding is connected, whereby the application of a torsional force to said feeler causes a voltage to be induced in said pick-up windings, thereby causing a current flow through said feedback windings, thereby causing an unbalance of said second bridge circuit and a resultant current flow through said motor winding, thereby causing

displacement of said first circuit diagonal path means to a point where the current flow through said feedback windings is reduced to zero.

3,020,462
SYNCHRONOUS MOTOR CONTROL

Dean J. MacGregor, Amherst, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 19, 1959, Ser. No. 821,601
4 Claims. (Cl. 318—170)



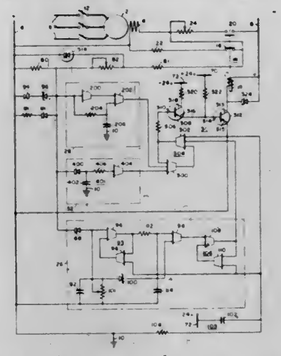
1. In a damper winding protection circuit for a synchronous alternating current motor having a field winding, saturating core means responsive to the induced alternating current in the field winding for providing a pulse signal for each half cycle of the induced alternating current, rectifier means connected to receive said output pulses as an input and inverting the negative pulses so that a positive pulse is obtained for each half cycle of the induced alternating current in the field winding, differentiating circuit means for sharpening the output pulses and means for blocking the positive portion of said output pulses so that a narrow sharp pulse is obtained for each half cycle of the induced alternating current voltage in the field winding, square pulse generating means receiving said sharp pulses and generating a square pulse of constant width for each sharp pulse, a positive temperature coefficient thermistor receiving said square pulses having an energy input for each said square pulse proportional to the magnitude and the time length of each said pulse, said positive temperature coefficient resistance having a marked change in resistance upon occurrence of a predetermined series of said square pulses, said positive temperature coefficient thermistor capable of storing the input energy thereby causing a rise in the temperature of said thermistor and a rapid increase in thermistor resistance upon attainment of a predetermined temperature rise, and means for detecting said increased resistance for altering the connections to said motor upon occurrence of said increased resistance.

3,020,463
SYNCHRONOUS MOTOR CONTROL

Dean J. MacGregor, Amherst, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 7, 1959, Ser. No. 811,615
17 Claims. (Cl. 318—175)

1. In a control system for a synchronous alternating current motor having a field winding adapted to be connected to an excitation source comprising, in combination, a resistance element, means arranged to short-circuit the field winding through said resistance element when the motor is starting, a speed sensing device operably connected to said field winding and providing a signal in accordance with the frequency of the induced current in the field winding, a polarity sensing device operably connected to said field winding and providing a second signal during a brief interval of the midpoint region of the first half of the opposite polarity half cycle of said induced current compared to the polarity of said excitation source, a pull-in sensing device operably connected to said field winding and providing a third signal in the absence of said second signal from said polarity sensing device after a

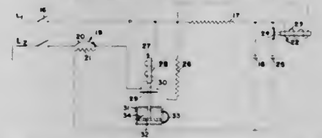


predetermined time period, and means responsive to the simultaneous occurrence of either the first and second signal or the first and third signal for opening the short circuit through said resistance element of the field winding and thereafter connecting said field winding to the excitation source.

3,020,464
REFRIGERATION SYSTEMS

Karl M. Gerteis, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed Mar. 21, 1960, Ser. No. 16,243
9 Claims. (Cl. 318—221)

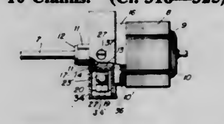


1. In a single-phase induction motor circuit adapted to be supplied with current, said circuit including a stator and a rotor cooperating therewith and inductively related thereto, the combination of a main winding, a start winding, and means for delaying energization of the main winding for an interval of time after energization of the start winding to provide application of starting current increments to the motor, said latter means including a relay having a contact in series with said main winding, a relay winding connected in parallel with said main winding and means for delaying the closing of said contact.

3,020,465
DYNAMOELECTRIC MACHINE AND GOVERNOR

Robert L. Rowe, Sag Harbor, N.Y.

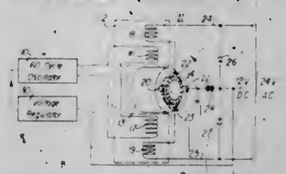
Filed Mar. 15, 1960, Ser. No. 15,223
10 Claims. (Cl. 318—325)



1. A dynamoelectric machine comprising a stationary member and a rotatable member having a shaft, said rotatable member having a winding and a current collector connected thereto, means responsive to the speed of

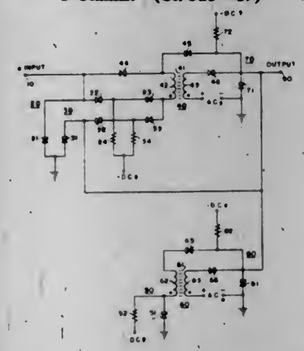
said rotatable member for opening and closing the circuit of said rotatable member winding, said speed responsive means comprising an insulating mounting member supported on said rotatable member and arranged around end turns of said rotatable member winding adjacent to said current collector, a fixed electrical contact connected in said rotatable member winding circuit and fixedly mounted on said mounting member, a centrifugally speed responsive movable electrical contact connected in said rotatable member winding circuit and adapted to contact said fixed contact for closing the rotatable member winding circuit therethrough, a reed mounting member for supporting said movable electrical contact, a lug with two angularly extending sides formed on said insulating mounting member, means securing said reed mounting member to said insulating mounting member lug and arranged to support said movable eelctrical contact adjacent to said fixed contact, and means comprising an adjusting screw threadedly engaging said insulating mounting member lug and arranged for adjustment therein relative to said reed mounting member for engagement therewith for biasing said movable contact toward said fixed contact to vary the contact pressure therebetween whereby said movable contact will break contact with said fixed contact under the action of centrifugal force thereon according to the adjusted position of said biasing screw for regulating the speed of said rotatable member by open circuiting the winding thereof above a predetermined speed dependent on the position of said biasing screw.

3,020,466
ELECTRIC GENERATOR
Richard T. Race, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 30, 1959, Ser. No. 862,831
5 Claims. (Cl. 322—28)



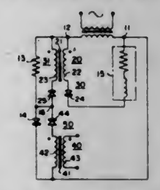
5. An electric current generating system for an automobile having a battery and a variable speed engine, which system includes in combination, a low power fixed frequency alternating current source, a magnetic amplifier having a fixed stator and a rotor adapted to be rotated with respect to said stator means connecting said rotor to the automobile engine for driving said rotor at speeds which vary through a substantial range, said rotor having windings thereon and a commutator connected to the windings, a first pair of brushes engaging said commutator at substantially opposite positions, said brushes being interconnected with each other and connected to a reference potential point, a second pair of brushes engaging said commutator at substantially opposite positions intermediate the positions of said brushes of said first pair, a pair of control windings on said stator, means for applying current from said alternating current source to said control windings, a pair of compensating windings on said stator, an output circuit including first and second portions each connected to one brush of said second pair and each including one of said compensating windings, said output circuit providing alternating current which is balanced with respect to the reference potential point, rectifier circuit means connected between said output circuit and the reference point providing a direct current output, means coupling said rectifier circuit means to the battery for charging the same, and voltage regulator means coupled to said alternating current source to said rectifier circuit means and responsive to the direct current voltage thereof, said control circuit means controlling the voltage applied by said alternating current source to said control windings so that the voltage and frequency of said alternating current in said output circuit remains substantially constant with variations in the speed of rotation of said rotor.

3,020,467
BINARY ALTERNATOR
Walter F. Guenther, Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1957, Ser. No. 696,437
8 Claims. (Cl. 323—89)



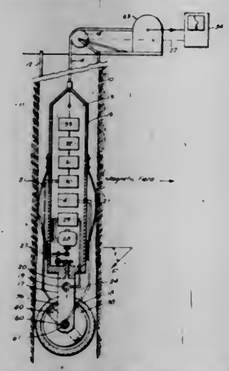
1. In a binary alternator, in combination, first and second complementary magnetic amplifiers, means for applying an input signal to reset said first magnetic amplifier, means for connecting the output signal of said first magnetic amplifier to said second magnetic amplifier to effect a reset of said second magnetic amplifier, means for connecting the output signal of said second magnetic amplifier to said first magnetic amplifier to effect a reset of said first magnetic amplifier, and circuit means connected to said reset means of said first magnetic amplifier for affording two current paths for resetting of said first magnetic amplifier, said circuit means being operative to prevent reset of said first magnetic amplifier when both said input signal and said output signal of said second magnetic amplifier are simultaneously present, said circuit means being operative to allow reset of said first magnetic amplifier when only one of said input and said second magnetic amplifier output signals is present.

3,020,468
MAGNETIC AMPLIFIER
John Rosa, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 2, 1959, Ser. No. 796,572
4 Claims. (Cl. 323—89)



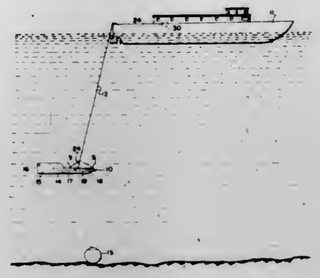
1. In a system of control for supplying load current to a highly inductive load from the output of magnetic amplifier means, in combination, a pair of terminals energized with alternating current, a first stage magnetic amplifier, a second stage magnetic amplifier having a gating circuit, a saturable core, and a reset circuit, said gating circuit including a gating winding, a gating rectifier, and an inductive load connected to said terminals, said first stage magnetic amplifier having a gating circuit, a saturable core, and a reset circuit, said gating circuit of the first stage magnetic amplifier including a gating winding and a gating rectifier and the reset circuit of the second stage magnetic amplifier including a resetting rectifier and a resetting winding, said gating circuit of the first stage magnetic amplifier and reset circuit of the second stage magnetic amplifier being connected in series across said terminals, and two coupling impedances connected in series and respectively connected in parallel with the gating circuit of the first stage magnetic amplifier and the reset circuit of the second stage magnetic amplifier.

3,020,469
BOREHOLE LOGGING METHOD AND APPARATUS
Donald E. O'Reilly, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 17, 1958, Ser. No. 781,161
4 Claims. (Cl. 324—.5)



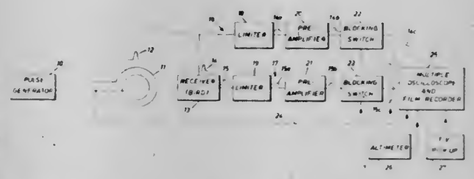
1. Apparatus for logging a bore hole in the earth which comprises a sonde insertable in the borehole, a first coil of insulated wire insertable in the borehole mounted on said sonde, automatic means in said sonde maintaining the winding axis of said first coil in an orientation substantially perpendicular to the earth's magnetic field vector at the borehole, a second coil of insulated wire insertable in the borehole mounted on said sonde, support means associated with said first coil supporting said second coil in an orientation so that the winding axis of said second coil is substantially parallel to the earth's magnetic field vector at the borehole when said first coil is oriented by said automatic orienting means, said first and second coils being disposed to produce overlapping magnetic fields over a substantial region when said coils are energized, a source of radio-frequency current electrically connected to and energizing said first coil at a frequency substantially equal to that given by the relation $f=2799F$ where f is the frequency in kilocycles per second and F is the strength of the earth's magnetic field in gauss at the borehole, a source of square-wave unidirectional current pulses electrically connected to and energizing said second coil, the magnitude of said current pulses in said second coil producing a field of strength not exceeding six gauss at the region of overlapping fields, and means connected to said first coil measuring and indicating changes in the electrical energy losses thereof.

3,020,470
SUBMERGED BODY DETECTION SYSTEM
Elbert N. Shawhan, Minneapolis, Minn., Arnold C. McLean, Tawas City, Mich., Harry Palevsky, Chicago, Ill., and Robert L. Mather, Clarksville, Iowa
Filed June 4, 1943, Ser. No. 489,726
23 Claims. (Cl. 324—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



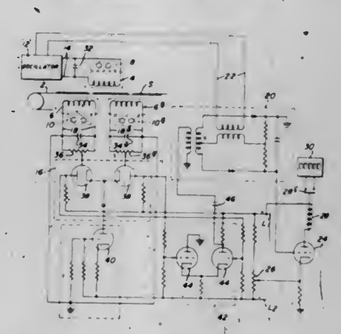
1. In a device for detecting a transient magnetic flux, a source of pulsating magnetic flux, a pair of interconnected pick-up coils arranged so that one coil is more closely coupled to the source of pulsating flux than is the other and said coils have opposing and substantially equal voltages induced therein by said pulsating flux and adding voltages induced therein by said transient flux, and electroresponsive means connected to said coils.

3,020,471
METHOD AND APPARATUS FOR THE DETECTION OF ORE BODIES
Anthony René Barringer, Agincourt, Ontario, Canada, assignor to Barringer Research Limited
Filed June 16, 1958, Ser. No. 742,285
10 Claims. (Cl. 324—6)



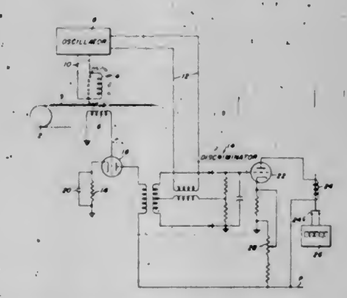
6. Survey apparatus for detecting the presence of a conductor from a point remote therefrom comprising in combination: pulse generating means operable intermittently at a frequency below radio frequency to establish a primary electro-magnetic field of sufficient magnitude at least to encompass at least a portion of said conductor and establish a secondary electro-magnetic field thereabout; means operable to abruptly terminate said pulse and procure a rapid collapse of said primary field, said collapse of said primary field in turn inducing a resultant transient collapse of said secondary field around said conductor delayed a short time after said collapse of said primary field; detector and receiver apparatus responsive whilst exhibiting at least a minor degree of motion to said collapse of said primary and secondary electro-magnetic fields to provide respective primary and secondary signals; blocking means operable intermittently to block said primary signal and to pass said secondary signal; and measuring apparatus associated with said receiver and responsive to said secondary signal to provide information concerning said conductor.

3,020,472
APPARATUS FOR DETECTING DISCONTINUITY IN AN ELECTRICAL CONDUCTING OBJECT
Thomas K. Cauley, West Mifflin, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 26, 1956, Ser. No. 630,570
4 Claims. (Cl. 324—34)



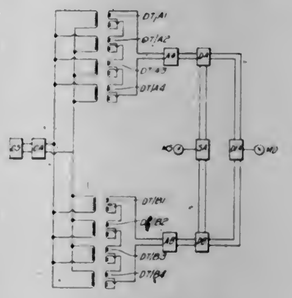
1. Apparatus for counting moving objects made of electrical conducting material which comprises a transmitter circuit, a receiver circuit adjacent said transmitter circuit, a first coil in one of said circuits, second and third coils in the other of said circuits, the second and third coils being so arranged that each of said objects will influence the magnetic coupling between the first and second coils and the magnetic coupling between the first and third coils in sequence, means for moving said objects past the second and third coils in sequence, means for obtaining a signal from said receiver circuit when the leading edge of each object passes adjacent thereto, means for obtaining a signal from said receiver circuit when the trailing edge of each object passes adjacent thereto, a counter, and means for impressing the signals from only one of said edges on said counter.

3,020,473
COUNTING APPARATUS
Thomas K. Cauley, West Mifflin, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Aug. 6, 1959, Ser. No. 831,961
3 Claims. (Cl. 324—34)



1. Apparatus for counting moving electrical conductive objects comprising means for moving said objects along a path of travel, a transmitter coil located on one side of said path of travel with its axis arranged at an angle to said path of travel, a receiver coil located on the side of said path of travel opposite said transmitter coil with its axis extending in the general direction of object travel and with the number of turns of wire on the entry side of the axis of the transmitter coil times the average magnitude of the flux linking these turns being substantially equal to the number of turns of wire on the exit side thereof times the average magnitude of the flux linking these turns, a counter, means for obtaining a signal from said receiver coil when the leading edge of each object passes adjacent thereto, means for obtaining a signal from said receiver coil when the trailing edge of each object passes adjacent thereto, and means for impressing the signal from only one of said edges on said counter.

3,020,474
TESTING COMPACTED BODIES OF MIXED MATERIAL
William Thompson, Lea, Preston, and Harry Nowell, Marton, Blackpool, England, assignors to United Kingdom Atomic Energy Authority, London, England
Filed Jan. 14, 1959, Ser. No. 786,745
Claims priority, application Great Britain Jan. 15, 1958
2 Claims. (Cl. 324—40)

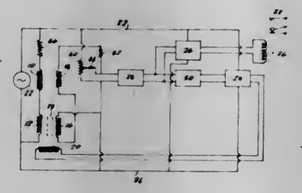


1. Apparatus for testing the manufacture of a compacted body of mixed material having two constituents, one constituent having a superior electrical conducting property to that of the other, comprising means for supporting a differential transformer at each end of the compacted body, means for feeding alternating current to the primary windings of said differential transformers, means for detecting the output of the secondary windings of said transformers, means for summing the output of the secondary windings of said transformers whereby the proportion of each constituent present is determined, and means for indicating the difference between the outputs from the secondary windings of said transformers whereby the homogeneity of mixing of the two constituents is determined.

3,020,475
ELECTRICAL NULL TRANSMISSION NETWORKS
John Hugh Davey Walton, Folkestone, England, assignor to Mec-Test Limited, London, England, a company of Great Britain and Northern Ireland
Filed July 7, 1959, Ser. No. 825,597
5 Claims. (Cl. 324—41)

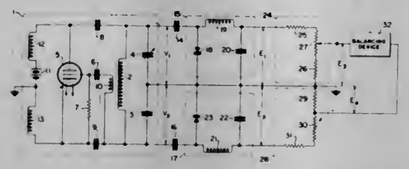
1. Apparatus for detecting the presence of metallic objects in a region of space, comprising an electrical null transmission network having two sets of coupled coils, each set having primary and secondary windings, the second set of said coils being provided with a ferromagnetic core, A.-C. generator means for driving current through said primary coils, circuit means interconnecting said coils operative to define an output whereat the induced voltages in said secondary coils add to a vector sum of zero when said network is balanced, first and second phase sensitive detecting means connected to said output, and

an additional winding on said core capable of producing varying degrees of saturation therein in response to flow of direct current in said additional winding, said first phase sensitive detecting means being responsive to the component of voltage at said output which is in phase with the current in said primary coils, said second phase sensitive detecting means being responsive to the component of voltage at said output which is in quadrature



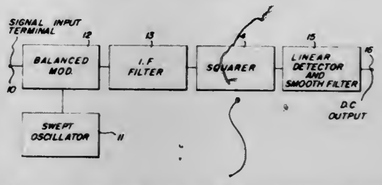
phase relation with the current in said primary coils, said second detecting means being operatively connected to said additional winding for driving direct current therethrough in magnitude proportional to the magnitude of said quadrature voltage component, said direct current in said additional winding being polarized in the direction tending to reduce the magnitude of said quadrature voltage component.

3,020,476
MEASURING APPARATUS
George V. Jacoby, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,761
5 Claims. (Cl. 324—61)



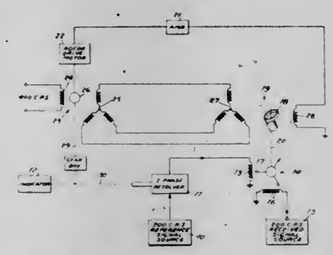
1. A measuring device comprising an alternating signal voltage generator having a pair of output terminals, a pair of capacitive impedance elements serially connected between said output terminals, the capacitive impedance of one of said impedance elements being variable in accordance with the condition of a variable to be measured, said serially connected impedance elements constituting a signal voltage divider for signals developed at said output terminals, a first rectifier circuit for converting alternating signals developed across one of said impedance elements into corresponding unidirectional signals, said first rectifier circuit including a first rectifier having a first and a second terminal, a second rectifier circuit for converting alternating signals developed across the other one of said impedance elements into corresponding unidirectional signals, said second rectifier circuit including a second rectifier having a first and a second terminal, means connecting said second terminal of said first rectifier to said second terminal of said second rectifier to arrange said first rectifier and said second rectifier in an opposing relationship, and utilization means connected between the first output signal terminal of said first rectifier circuit and of said second rectifier circuit, said utilization means being jointly responsive to said unidirectional signals.

3,020,477
POWER SPECTRUM ANALYZER
Marcus Lewinstein, Jamaica, N.Y., assignor, by mesne assignments, to Electro-Mechanical Research, Inc., Sarasota, Fla., a corporation of Connecticut
Filed Oct. 6, 1958, Ser. No. 765,400
5 Claims. (Cl. 324—77)



1. A spectrum analyzer of the frequency scanning superheterodyne type for analyzing a band of frequencies, comprising a modulator having a signal input circuit for said band of frequencies and an output circuit, a source of frequency scanning local oscillation signal coupled to said modulator, an intermediate frequency filter coupled to said modulator output circuit, said intermediate frequency filter being tuned to the difference frequency between the scanning local oscillator frequency and the frequencies of the band of frequency, a frequency doubler coupled in cascade with said intermediate frequency filter, and a linear detector coupled in cascade with said frequency doubler, said frequency doubler including a bandpass tuned circuit tuned to twice the center frequency of said intermediate frequency filter and having a Q sufficiently high to reject frequencies passed by said intermediate frequency filter.

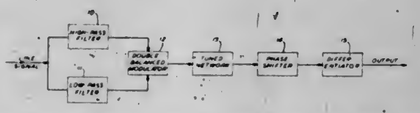
3,020,478
PHASE MEASURING DEVICE
Mortimer Rogoff, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 12, 1957, Ser. No. 671,434
6 Claims. (Cl. 324—83)



1. A phase sensitive device for determining the phase angle of a signal comprising a two-phase drag cup motor having a rotor and quadrature windings, an alternating current servo loop having a flux path and including a phase shifting comparison means, a source of alternating current reference input signals coupled to said phase shifting comparison means to pass reference alternating current signals thereto, said servo loop having its output coupled to one of said quadrature windings, a source of unknown signals whose phase is to be determined coupled to the other quadrature winding, said two-phase motor rotor moving in accordance with the phase angle relationship between the signals appearing on said quadrature windings, a coupling means intersecting the flux path of the servo loop and coupling said servo loop to said two-phase motor rotor to affect a phase angle comparison between the signals on said two quadrature wind-

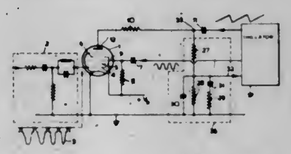
ings to alter the phase angle of the servo loop output in accordance therewith, and indicating means coupled to said phase shifting comparison means to indicate the amount of phase angle shift necessary to have said servo loop experience a null for said phase angle comparison which will determine the phase angle of said unknown signal, said coupling comprising a coaxial ring positioned at an oblique angle to said rotor.

3,020,479
ELECTRIC WAVE SYNCHRONIZATION
Mason A. Logan, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 15, 1960, Ser. No. 49,545
6 Claims. (Cl. 328—13)



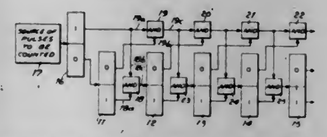
1. In a data transmission system in which digital information is transmitted as predetermined phase shifts of a carrier frequency for each successive data element, an arrangement for recovering from the received signal a synchronization wave comprising a high-pass filter having its low frequency cut off just above said carrier frequency, a low-pass filter having its high frequency cut off just below the carrier frequency, means for applying the received wave to the inputs of both of said filters, modulating means connected to the outputs of said filters whereby said two outputs are intermodulated to produce sum and difference frequencies thereof, and a bandpass filter connected to the output of said modulating means for selecting said difference frequency, said difference frequency constituting said synchronization wave.

3,020,480
CIRCUIT ARRANGEMENT FOR PRODUCING A CONTROL VOLTAGE
Peter Johannes Hubertus Janssen and Wouter Smeulers, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 25, 1958, Ser. No. 730,947
Claims priority, application Netherlands May 2, 1957
6 Claims. (Cl. 328—26)



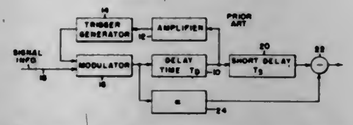
1. A circuit arrangement for the production of a control voltage for synchronizing an oscillator with a synchronizing signal comprising an electron discharge device having in the order named a cathode, a first control electrode, a second control electrode, and a third electrode, means applying said synchronizing signal to said first control electrode, a resistance capacitance network, means applying a first alternating voltage derived from said oscillator to said third electrode, means applying a second alternating voltage derived from said oscillator to said second control electrode by way of said network, said network having a short time constant with respect to the period of said second alternating voltage, and output circuit means connected to said third electrode.

3,020,481
REFLECTED BINARY CODE COUNTER
George D. Hulst, Verona, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 15, 1957, Ser. No. 696,793
5 Claims. (Cl. 328—42)



1. An electrical pulse counter having a plurality of stages comprising a plurality of bistable electron conducting devices, each of said stages including one of said bistable devices, each bistable device having an input means and providing first and second states of conduction alternately responsive to pulses received at said input means, a source of pulses to be counted, one of said bistable devices coupled to said source of pulses to serve as a control stage, the bistable device representing the first stage of said counter having its input means coupled to said control stage, and a plurality of coincident circuits each having first and second input means and one output means coupled between the counter stages, said counter stages being alike and said control stage having in its output circuit "And" gates connected in series, each successive stage of the counter being coupled to one series "And" gate respectively of the control circuit.

3,020,482
SYNCHRONIZATION NETWORK
Leon M. Barton, Syracuse, and Eugene C. Nordell, North Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed July 13, 1959, Ser. No. 826,547
7 Claims. (Cl. 328—55)

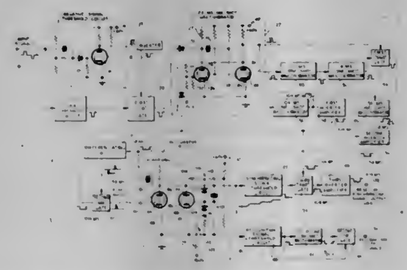


1. A first signal path and a second signal path having unequal transmission time delays, means for applying first frequency signals to the input of said first signal path, a source of second frequency signals connected to the input of said second signal path, a common delay line having a delay time which varies with frequency, means for connecting the outputs of said first and second signal paths to the input of said common delay line, said source having an output frequency so related to the frequency of said first signals so that there is an identical delay time between the input of said first signal path and the output of said delay line at the frequency of said first signals and the input of said second signal path and the output of said delay line at the frequency of said second signals.

3,020,483
SIGNAL RECOGNITION CIRCUIT USING PULSE POSITION MODULATION AND PULSE WIDTH DISCRIMINATION
Ferril A. Losee, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,913
13 Claims. (Cl. 328—110)

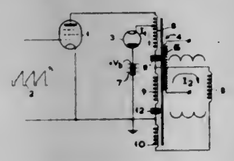
1. A recognition system for providing a control signal useful for exercising a control function and indicating

conditions of reliable reception in a communication system, said recognition system comprising: means responsive to a message containing regularly spaced synchronizing signals for signalling the occurrence of synchronizing signals; means responsive to said means for signalling for indicating the proper time interval of the next succeeding synchronizing signal; means coupled to said means for signalling and said means for indicating for providing successively higher outputs, up to a given maximum, as long as an uninterrupted sequence of properly time related synchronizing signals is provided, said means



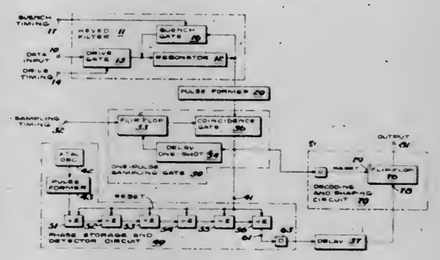
being reset to a starting condition on the absence of a properly timed synchronizing signal; means responsive to said means for signalling and said means for providing successively higher outputs for providing timing signals following a selected sequence of properly time related signals; and means responsive to said means for providing successively higher outputs for providing a control signal following detection of a given minimum number of properly time related synchronizing signals and for a selected period of time following reset of said means to a starting condition.

3,020,484
CIRCUIT ARRANGEMENT FOR PRODUCING A CURRENT HAVING A NON-LINEAR SAWTOOTH WAVEFORM THROUGH A COIL
Peter Johannes Hubertus Janssen and Anthonie Jannis Moggre, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,350
Claims priority, application Netherlands Sept. 30, 1958
6 Claims. (Cl. 328—142)



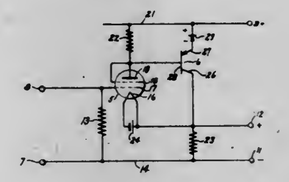
1. A circuit for producing a current having a non-linear sawtooth waveform in a coil comprising an amplifier, and an output circuit connected to said amplifier, said output circuit comprising first and second capacitors alternately serially connected with first and second transformer winding sections, booster diode circuit means comprising a series connected rectifier device and source of voltage connected in parallel with at least a portion of said connected circuit including said first and second capacitors, said coil being connected in parallel with a portion of said serially connected circuit including only one of the said capacitors.

3,020,485
DIGITAL PHASE-PULSE DEMODULATOR
Frank Secretan, Los Angeles, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Oct. 24, 1958, Ser. No. 769,452
18 Claims. (Cl. 329—104)



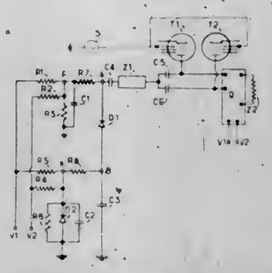
1. A demodulator for a phase-pulsed signal comprising, means for generating pulses having a fixed phase-relationship with said signal, means for sampling one of said pulses per phase-pulse of said signal, phase-storage means connected to said sampling means, said phase-storage means providing an output frequency equal to a frequency of said signal, the phase of said phase-storage means being reset in response to the output of said sampling means, said storage means including at least N number of binary frequency dividers, N numbers of differentiating circuits connected to outputs of said dividers to detect the signal, and decoding and shaping means being connected to the output of said phase-storage means.

3,020,486
CATHODE FOLLOWER CIRCUIT HAVING TRANSISTOR FEEDBACK STABILIZATION
Richard E. Milford, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 30, 1958, Ser. No. 712,251
2 Claims. (Cl. 330—3)



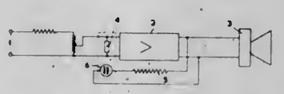
1. In combination, an electrometer tube having at least an anode, a cathode and a control electrode, a transistor having an emitter, a collector and a base electrode, a source of operating potential, a first resistance connected between a point on said source and both said cathode and said collector, an anode resistance connected between said anode and a point on said source positive with respect to said first point, means including a high value input impedance connected between said control electrode and said first point for supplying a signal voltage thereto whereby said discharge device operates as a cathode follower to reproduce said signal voltage on said first resistance, and means to impress signal voltage variations appearing on said anode between said emitter and base electrode of said transistor thereby to produce signal variations in current in said collector to augment the signal reproduced on said first resistance, said first resistance having a comparatively small value with respect to said input impedance.

3,020,487
GAIN STABILIZED AMPLIFIER SYSTEM
Jean Andre Gilbert Paquet, Paris, France, assignor to Lignes Telegraphiques & Telephoniques, Paris, France
Filed Nov. 19, 1958, Ser. No. 775,067
Claims priority, application France Jan. 3, 1958
2 Claims. (Cl. 330—51)



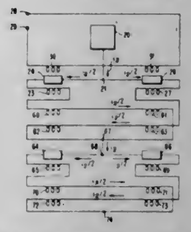
1. A gain stabilized amplifier system comprising parallel amplifiers including common input and output circuits, said output circuits having a determinable reference point, separate D.C. voltage sources coupled to and simultaneously supplying power to said individual amplifiers, voltage differential circuit means coupled to and responsive to the difference in voltage of said sources, an impedance, and connection means coupled to said output circuits and coupling said impedance to said reference point, in response to a first condition of said voltage difference, said connection means also being adapted for selectively and effectively isolating said output circuits and said impedance in response to a second condition of said voltage difference, said connection means being coupled to and controlled by said voltage differential circuit means and responsive to said two conditions of said difference in voltage.

3,020,488
CONTROL ARRANGEMENT AND CIRCUIT ELEMENT FOR ELECTRICAL AMPLIFIERS
Jacobus Rodrigues de Miranda, Cornelis Maria Boon, and Jan Hubert Maria Delsege, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 25, 1958, Ser. No. 776,348
Claims priority, application Germany Nov. 26, 1957
1 Claim. (Cl. 330—59)



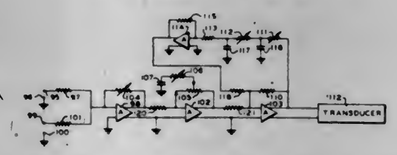
An automatic gain control arrangement for an amplifier for changing the gain of the amplifier relatively rapidly in one direction when the amplitude of the amplified signal exceeds a predetermined value and changing the gain relatively slowly in the opposite direction when said amplified signal amplitude is below said predetermined value, comprising a source of input signals to be amplified, a photosensitive semi-conductive resistor capable of storing free charge carriers and connected to said source, an amplifier having its input terminals connected to said resistor, a light-emitting gas discharge tube connected across the output terminals of said amplifier, said tube instantaneously igniting and illuminating said resistor and setting up free charge carriers therein when the voltage at said output terminals exceeds said predetermined value, whereby said resistor instantaneously exhibits an increased conductivity when the tube is ignited and slowly recovers its initial low conductivity after the tube is extinguished, the slow recovery being due to the recombination period of the free charge carriers, said resistor and said gas discharge tube being arranged in a common envelope, the resistor and the tube being separated by an electrically conductive screen, thereby preventing transfer of voltage pulses to the resistor on the sudden ignition or extinguishment of the tube.

3,020,489
CRYOGENIC DEVICE
Robert M. Walker, Closter, N.J., and Eugene S. Schlig, New York, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1958, Ser. No. 782,706
9 Claims. (Cl. 330—62)



1. A multi-stage cryogenic amplifier comprising a plurality of amplifier stages, means maintaining each of said stages at a superconductive temperature; each of said stages including first and second current paths, a terminal, and means connecting said first and second paths in parallel circuit relationship with said terminal; a current source; means connecting said source in series with said plurality of stages; all of said paths including means responsive to current flow therethrough tending to maintain the resistance of each of said first and second paths equal one to another; and circuit means coupling each succeeding stage to each preceding stage including first magnetic means electrically connected in series with said first path of said preceding stage and said terminal of said succeeding stage for magnetically modifying the resistance of said first and second paths of said succeeding stage, second magnetic means electrically connected in series with said second path of said preceding stage and said terminal of said succeeding stage for magnetically modifying the resistance of said first and second paths of said succeeding stage, said first and second magnetic means magnetically coupled and orientated in fixed relationship whereby the magnetic field generated by said first magnetic means is opposed to the magnetic field generated by said second magnetic means.

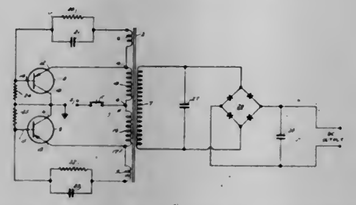
3,020,490
PROCESS CONTROLLER
Louis D. Kleiss, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 21, 1957, Ser. No. 697,881
13 Claims. (Cl. 330—85)



1. Control apparatus comprising process controller means to establish an output signal representative of an

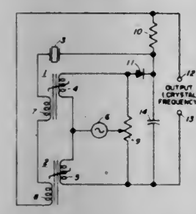
input signal applied thereto, means responsive to said output signal to apply a negative feedback signal to said means to establish, and means responsive to said output signal to apply a positive feedback signal to said means to establish, said means to apply a positive feedback signal having a plurality of series connected delay means incorporated therein, each of said delay means comprising means to restrict passage of said positive feedback signal followed by a signal storage means for said positive feedback signal.

3,020,491
STARTING CIRCUIT FOR TRANSISTOR POWER SUPPLY
Donald P. Kurtz, Rockaway, N.J., assignor to Aircraft Radio Corporation, Boonton, N.J., a corporation of New Jersey
Filed Mar. 4, 1959, Ser. No. 797,272
6 Claims. (Cl. 331—113)



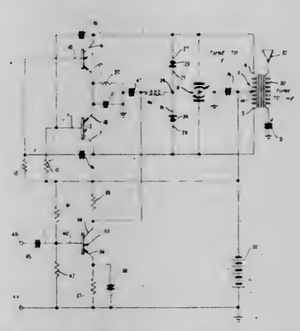
1. An alternating current generator comprising a pair of transistors connected in a push-pull oscillator circuit with a saturable core reactor, a source of D.C. potential connected through said saturable core reactor to two electrodes of each of said transistors, feedback circuits including said saturable core reactor for applying switching voltages to a third electrode of each of said transistors to cause said transistors to conduct alternately including a pair of voltage dividers respectively connected in series with said reactor and said source of D.C. potential with intermediate points of said voltage dividers respectively connected to said third electrode of said transistors for supplying a starting current to said transistors.

3,020,492
FREQUENCY-CONTROLLED MAGNETIC OSCILLATOR
William L. Shockley, Richardson, Tex., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Sept. 12, 1960, Ser. No. 55,232
3 Claims. (Cl. 331—158)



1. A magnetic oscillator in combination with a high-Q resonant frequency-determining device for developing signal at the frequency of said device comprising, saturable inductor means having primary and secondary circuits, a source connected to said primary circuit to apply alternating current which has a frequency substantially higher than the resonant frequency of said frequency-determining device, said primary circuit of said saturable inductor means being connected in a balanced arrangement for substantially cancelling in the secondary circuit the induced voltage at said higher frequency, means for coupling said frequency-determining device between said primary and secondary circuits in a regenerative sense to sustain oscillation in said inductor means at the frequency of said frequency-determining device, said sustained oscillations modulating that current applied to said primary circuit from said source, and demodulating means coupled to said primary circuit in a balanced arrangement with respect to said source for demodulating said modulated current to provide signal at the frequency of said frequency-determining device.

3,020,493
FREQUENCY MODULATION CIRCUIT
George R. Carroll, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 27, 1959, Ser. No. 796,037
4 Claims. (Cl. 332—16)

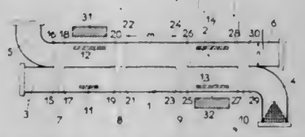


1. In combination: first and second transistors, each having an input terminal, an output terminal and a reference terminal; an inductor having one end coupled to the output terminal of said first transistor and having its other end coupled to the output terminal of said second transistor, the input terminals of said first and second transistors being coupled to a center-tap on said inductor, the input terminal of said first transistor being coupled to the output terminal of said second transistor, the input terminal of said second transistor being coupled to the output terminal of said first transistor, the reference terminals of said first and second transistor being connected to a point of fixed potential; a tuning capacitor coupled to said inductor for defining a circuit tuned to a predetermined frequency; a pair of unilaterally conductive semiconductor devices connected in series opposition across said inductor; a source of varying direct current signal coupled to the connection between said devices and having a polarity such as to cause the devices to be nonconductive; a resonant circuit coupled to said inductor; and a utilization circuit coupled to said resonant circuit.

3,020,494
CIRCULATOR
Bernard Pierre Chiron, Paris, France, assignor to Lignes Telegraphiques & Telephoniques, Paris, France
Filed Sept. 24, 1959, Ser. No. 842,133
Claims priority, application France Jan. 19, 1959
4 Claims. (Cl. 333—9)

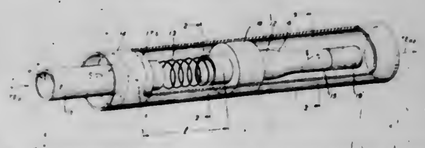
1. A four-port circulator for the transmission of an ultra-high frequency wave having a given frequency and propagation mode, comprising first and second rectangular cross-section waveguide lengths having substantially

identical cross-sections and parallel longitudinal axes, first, second, third and fourth coupling means successively distributed along both said guide lengths and constituting four 8.34 decibels directional couplers, each one of which is spaced from the next one by at least one-half of the phase wavelength in said guides for said mode and frequency, a first slab of low loss ferromagnetic material endowed with gyromagnetic effect when polarized by a steady magnetic field and set up in said first guide length between said first and second coupling means, a second slab of low loss ferromagnetic material endowed with gyromagnetic effect when polarized by a steady magnetic field and set up in said second guide length between said third and fourth coupling means, magnetic polarization means for impressing upon each one of said slabs a steady magnetic field substantially perpendicular to said guide axes, and first and second pieces of dielectric material set up in said first and second guide lengths respectively between said third and fourth coupling means and between said first an second coupling means; said four ports respectively consisting of each one of four openings respectively constituted by one and the other of the ends



of said first and second guide lengths; wherein said ferromagnetic slabs are so dimensioned that the differences between the phase shifts they introduce in the transmitted waves for one and the other of the two possible propagation directions in said guides are respectively equal to plus 180 degrees for one of said guides and to minus 180 degrees for the other guide, said propagation directions being referred to a common direction parallel to the axes of both guides; wherein said dielectric material pieces are so dimensioned that they respectively introduce in the waves transmitted in the guides in which they are inserted a phase shift substantially equal for one of said guides to the larger of the phase shifts introduced by the ferromagnetic element set up in the other guide for either propagation direction in the latter, and for this latter guide a phase shift substantially equal to the smaller of the phase shifts introduced for either propagation direction in said one of said guides; wherein one of said four ports is closed on a reflectionless termination impedance; and wherein each one of said ferromagnetic material slabs is located in one of said guides in a position closer to one of the narrower side walls of said one of said guides than to the other of said narrower side walls.

3,020,495
WAVE MODE CONVERTER
Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,541
6 Claims. (Cl. 333—10)



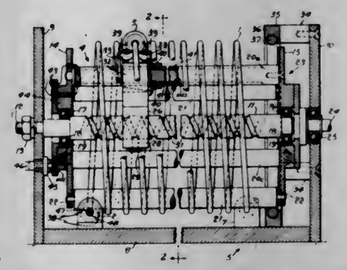
6. In combination, two hollow conductive wave guides of circular cross section coaxially disposed and individually adapted to support a TE_{on} mode, a multiplicity of interruptions in the conductive boundary of the internal one of said guides to provide energy coupling between said two guides, the radii of the two guides and the length of the coupling region being proportioned to impart an equal power division with a 180 degree phase difference between said guides, said internal guide being gradually reduced in radius beyond the coupling region to coincide with a null of a TE_{on} mode higher than TE_{01}.

3,020,496
SOLID DELAY LINES
Erwin Feuerstein, Needham, and Robert L. Sternberg, Marblehead, Mass., assignors to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed May 7, 1958, Ser. No. 733,650
14 Claims. (Cl. 333—30)



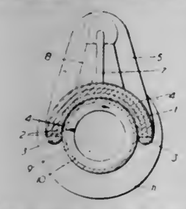
1. A solid delay line comprising a medium for propagating ultrasonic energy, an input transducer for converting an electrical signal into transversely polarized elastic waves propagated into said medium along a path defined by a plurality of planar, internal reflecting areas, each of said reflecting areas being positioned at an angle to said path, the magnitude of said angle lying within a predetermined critical range such that a portion of said transversely polarized waves incident on the respective reflecting areas are split therefrom into longitudinal waves reflected at different angles from said transversely polarized waves, and a plurality of tap transducers each receiving and converting a respective one of said longitudinal waves into an electrical signal.

3,020,497
ADJUSTABLE DELAY LINE
Michael A. Argentieri, Lyndhurst, and Francis E. Lind, Totowa Borough, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Aug. 6, 1958, Ser. No. 753,493
3 Claims. (Cl. 333—30)



1. An adjustable delay line comprising a housing member having two end portions, a helical magnetostrictive delay line fixedly mounted between said end portions coaxially of a given axis for transmitting a signal therealong, said helical delay line having a low-friction material overlying the turns of said helical delay line to mechanically isolate said delay line thereby preventing mechanical damping of said signal, a first transducer coupled about a portion of said helical delay line and disposed a given distance from said given axis, a second transducer coupled about another portion of said helical delay line, a threaded shaft fixed to one of said end portions disposed coaxially of said given axis, ball bearing members having inner and outer races disposed adjacent the ends of said shaft, said inner races being carried about said shaft, rotatable end-frame members carried by said outer races, a plurality of support rods disposed parallel to said given axis and rotatably connected at their ends to said end-frame members in engaging relation with the turns of said helical delay line, a plurality of spacer rods disposed parallel to said given axis fixedly attached to said end-frame members, a member threadably receivable on said threaded shaft and connected to said first transducer, said member having an aperture such that one of said spacer rods passing through said aperture maintains said member in a fixed radial position, a plurality of guide trolleys mounted on said member such that the turns of said helical delay line are guided through said first transducer, an O ring supported by said housing end portions coaxially of said given axis to frictionally bear against a portion of said support rods to rotate said support rods about their axes upon rotation of said end-frame members, and means for adjusting the rotary position of said end-frame members thereby determining the amount of delay applied to said signal.

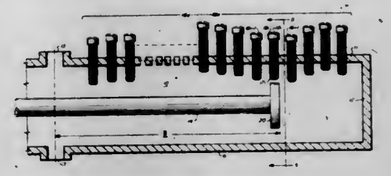
3,020,498
COUPLED WAVEGUIDES
Eric Albert Ash and John David Pattenden, Aldwych, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Dec. 8, 1958, Ser. No. 778,828
Claims priority, application Great Britain Dec. 30, 1957
9 Claims. (Cl. 333—33)



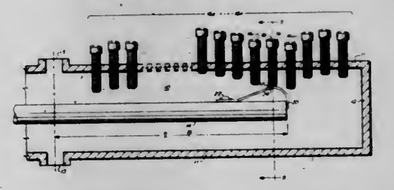
1. A pair of physically spaced waveguides of different form each constructed to provide substantially the same mean value of propagation constant for waves of the same frequency over a given length, said waveguides being positioned in coupling relation to one another to provide substantially irreversible power interchange at successive intervals over said given length, one of said waveguides surrounding a semi-circular surface of the other waveguide at its extremities and insulated therefrom, said waveguides providing a relative phase velocity for waves of said frequency varying in like manner in each said successive length.

3,020,499
COAXIAL CAVITY TRACKING MEANS
Leo Beiser, Flushing Manor, and Seymour Schneider, Bayside, N.Y., assignors to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York
Filed May 20, 1960, Ser. No. 30,490
7 Claims. (Cl. 333—82)

1. A tracking compensator for the incremental adjustment of the resonant frequency of a tunable coaxial cavity comprising, a coaxial cavity having an outer conductor and a center conductor relatively moveable thereto along their common longitudinal axis, a metallic disc-shaped member affixed near the end point of said center conductor within said cavity, a plurality of individually adjustable metallic members spaced in substantially axial progression along said outer conductor and projecting therethrough to a controllable depth of penetration into said cavity, such that at least one of said individually adjustable members in the vicinity of the endpoint of said center conductor electrically interacts, substantially independently of the remainder of said individually-adjustable metallic members, with said disc-shaped member at a plurality of operating positions to vary the end loaded capacity of said center conductor to said outer conductor wall to provide thereby a relatively fine adjustment in the frequency tuning of said cavity at said plurality of operating positions.



3,020,500
COAXIAL CAVITY TRACKING MEANS AND METHOD
Leo Beiser, Flushing Manor, N.Y., assignor to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York
Filed May 20, 1960, Ser. No. 30,527
3 Claims. (Cl. 333—82)

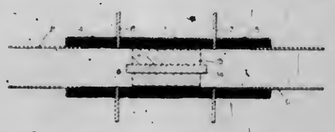


1. A tracking compensator for incremental adjustment of the resonant frequency of a tunable coaxial cavity comprising, a coaxial cavity having an outer conductor and a center conductor relatively moveable thereto along their common longitudinal axis, a metallic mass affixed near the end point of said center conductor, and a plurality of individually adjustable members spaced in substantially axial progression along said outer conductor and projecting therethrough such that at a plurality of operating positions of said center conductor with respect to said outer conductor at least one of said individually adjustable members in the vicinity of the end point of said center conductor cooperates in non-shorting fashion with said metallic mass, substantially independently of the remainder of said individually-adjustable members, to vary the effective electrical field configuration in said vicinity to provide thereby a relatively fine adjustment in the frequency tuning of said cavity at said plurality of operating positions.

3,020,501
WAVEGUIDES
Roy Stanley Cole, London, and William Nell Honeyman, Hanworth, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Filed May 10, 1957, Ser. No. 658,389
Claims priority, application Great Britain May 12, 1956
8 Claims. (Cl. 333—98)

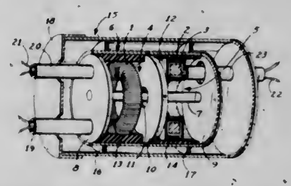
1. A waveguide, microwave ferromagnetic material arranged in said waveguide, said waveguide having a

wall portion which is a coil having a plurality of turns insulated from one another and wound sufficiently closely so that the capacity between adjacent turns is such as to conduct electromagnetic energy propagated through



said waveguide, and means for applying an alternating current to said coil to set up an alternating magnetic field in said waveguide, to control the permeability of said material.

3,020,502
MULTICORE TRANSFORMER
John F. Graham, Raytown, Mo., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed July 1, 1959, Ser. No. 824,260
8 Claims. (Cl. 336—73)



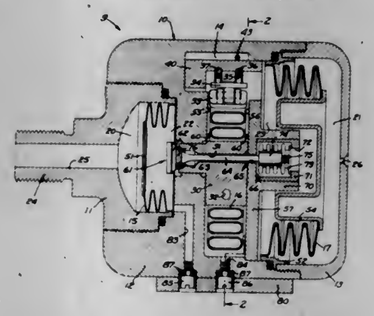
1. A multicore transformer having a combination electrostatic shield and a magnetic coupling member, first and second inductors, each of said inductors having a closed magnetic core with a central opening therethrough, said shield and coupling member comprising an enclosure having conductive walls, a shielding partition of conductive material disposed across said enclosure to divide said enclosure into first and second substantially enclosed compartments, said first and second inductors being mounted in said first and second compartments respectively, a central conductive member connected between opposite points on the inside wall of said container and passing through the openings of said first and second inductors and passing through but insulated from the central portion of said partition, whereby said central conductive member and the walls of said enclosure function as a single-turn link coupling between said inductors.

3,020,503
INDUCTANCE COIL COMPRISING AN ANNULAR PREMAGNETISABLE CORE
Maximilien Felix Reijnst, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., Irvington on Hudson, N.Y.
Filed Apr. 12, 1957, Ser. No. 652,453
Claims priority, application Germany May 11, 1956
3 Claims. (Cl. 336—110)



1. A variable inductor comprising an annular ferromagnetic core, a toroidal winding disposed on said core, a pair of similar magnets magnetized transversely to the axis of the core and both mounted wholly inside of the annular core so as to lie substantially in the same plane as the annular core and facing one another across a small gap and serving to premagnetize the core by an amount dependent on the interrelationship of their poles, said magnets being relatively rotatable about the core axis so as to vary the said interrelationship and thereby change the degree of premagnetization of the core.

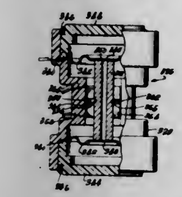
3,020,504
PRESSURE TRANSDUCER
Eugene A. Marks, Arlington, Calif., assignor to Bourns, Inc., a corporation of California
Filed Dec. 24, 1958, Ser. No. 782,959
17 Claims. (Cl. 338—40)



1. A pressure responsive instrument comprising a case having an enclosed cavity provided therein, first and second flexible partition means dividing said cavity into first and second outer chambers separated by an intermediate chamber, said first flexible partition means between said intermediate chamber and said first outer chamber being considerably stiffer than said second flexible partition means, said first outer chamber being pressurized to a higher pressure than said second outer chamber, said intermediate chamber being filled with fluid and its pressure being a function of the pressure in said second outer chamber and the resistance of said second flexible partition means to deflection caused by thermal expansion of said fluid, means within said intermediate chamber cooperating with said fluid to restrain said first flexible partition means against movement relative to said case responsive to vibration, a resistance element mounted on said case within said intermediate chamber, a movable contact connected to said first flexible partition means and wiping on said element to produce an electrical signal that is a function of the difference between the pressures in said first and second outer chambers, and terminal means connected to said resistance element and to said movable contact.

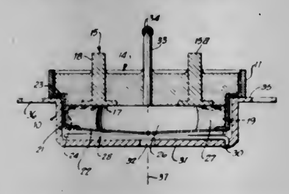
3,020,505
ADJUSTABLE ELECTRICAL INSTRUMENTS
Marlan E. Bourns and Carl N. Boode, Riverside, and Edward D. O'Brian, Anaheim, Calif.; said Boode and O'Brian assignors to Bourns, Inc., a corporation of California
Original application May 20, 1957, Ser. No. 660,247, now Patent No. 2,932,808, dated Apr. 12, 1960. Divided and this application Apr. 8, 1960, Ser. No. 23,123
9 Claims. (Cl. 338—43)

1. An accelerometer which includes: a housing; means movable in response to acceleration mounted within said housing; a wound resistance element having a uniform cross-sectional configuration along its length mounted within said housing; and contact means mounted on said means movable in response to acceleration, said contact means engaging substantially all points of said resistance element in a plane perpendicular to the axis of said resistance element and being movable along the length of said



resistance element as said means movable in response to acceleration are moved within said housing.

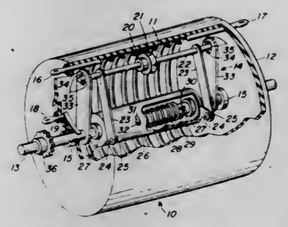
3,020,506
BUBBLE TYPE ELECTROLYTIC REVERSIBLE SWITCH
Richard C. Remington, Pompton Plains, and David J. Schauffler, Orange, N.J., assignors to General Precision, Inc., a corporation of Delaware
Filed Dec. 9, 1959, Ser. No. 858,471
8 Claims. (Cl. 338—86)



1. An electrolytic sensing element comprising a cup shaped case, a seal cap of an electrically insulating material fixedly attached to the open end of the case to seal the case, a cup shaped metallic insert fitted to the interior of the case to form an electrolyte compartment therein, the height of said electrolyte compartment between the inner face of the seal cap and the inner surface of the metallic insert being relatively small, a plurality of pairs of diametrically aligned contacts supported by the seal cap, each of said contacts having an exposed surface thereof directed toward the electrolyte compartment, a predetermined quantity of electrolytic fluid inserted into said electrolyte compartment, the electrolytic fluid quantity being limited relative to the volume of the electrolyte compartment to form a bubble through the electrolytic fluid, said bubble normally extending through the entire height of the electrolyte compartment, the case being made of relatively thin metal, the seal cap being a transparent plate sealed into the open end of the case, a coiled spring inserted into the case, between the inner surface of the case and the bottom of the metallic insert, said coiled spring having a lip integral therewith and projecting therefrom, the wall of the case, adjacent the spring, having an opening therethrough, the lip of the spring extending through the opening through the wall of the case to provide a ground connection to the metallic insert.

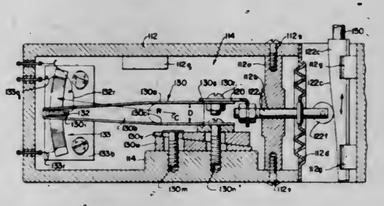
3,020,507
UNIFORM TROLLEY LOADING IN A COIL
Frederick W. Johnson, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Oct. 21, 1960, Ser. No. 64,056
5 Claims. (Cl. 338—143)

1. Apparatus for maintaining substantially uniform trolley pressure on a helical trackway throughout the range of trolley travel along the trackway, comprising a main shaft substantially coaxial with the center axis of said helical trackway, a cooperative support between said main shaft and said trackway, said support being provided with bearing means for relative rotational movement between said main shaft and said trackway, structural means mounted for relative rotative movement about said main shaft, a trolley shaft, a trolley element adapted for following movement along said trackway and adapted for sliding movement along said trolley shaft, linkage means pivotally connected to said structural means and rigidly connected to said trolley shaft, torsion means interconnect-



ing said main shaft and said structural means, said torsion means being adapted for applying substantially constant rate torque to said structural means, said trackway comprising the helix coil electrical element of a variable impedance coil, said cooperative support comprising a housing of insulating material enclosing said variable impedance coil, and arms rigidly mounted on said main shaft for maintaining a fixed rotational relation between said trolley shaft and said main shaft, and said arms being provided with means for guiding radial movement of said trolley shaft relative to said main shaft.

3,020,508
DISPLACEMENT TRANSDUCER
Arthur A. Zuehlke, Riverside, and James A. E. Hyams, Arlington, Calif., assignors to Bourns, Inc., a corporation
Filed Aug. 23, 1961, Ser. No. 133,517
16 Claims. (Cl. 338—162)

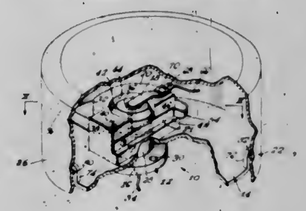


1. Displacement-indicating means comprising:
a movable member whose displacements are to be indicated, and means for constraining the member to movements in a prescribed path;
motion-multiplying means comprising first and second elongate spring members rigidly interconnected adjacent one end only of each thereof, the non-connected free end portions of the spring members being at least slightly divergent in a direction away from their interconnected ends;
anchorage means relative to which said movable member is movable, and means firmly securing a free end portion of the first of said spring members to said anchorage means;
means firmly securing a free end portion of the second of said spring members to said movable member for generally longitudinal movement in the direction of movement of the movable member;

and motion-indicating means comprising a movable element secured to said motion-multiplying means adjacent the interconnected ends of said spring members,

whereby movements of small magnitude of said movable member are translated by bowing flexure of said spring members into respectively concurrent motions of large magnitude of said movable element.

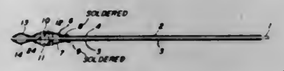
3,020,509
QUICK DISCONNECT ROTATABLE MOUNTING FOR BEACON LIGHT
George Washington Whelen III, Deep River, Conn., assignor to Whelen Engineering Company, Inc., Deep River, Conn., a corporation of Connecticut
Filed Sept. 8, 1959, Ser. No. 838,716
2 Claims. (Cl. 339—5)



1. A quick disconnect mounting for a beacon light or the like comprising a bearing stud having an upstanding cylindrical stud portion and a bottom base flange extending radially from said stud portion, a base for mounting a beacon light or the like comprising a bottom plate having a journal opening receiving said cylindrical stud portion and rotatably mounted in bearing relation on said base flange, said base having a beacon base portion overlying said base plate for supporting the beacon light or the like, an upstanding boss on said base plate having a bore continuous with said opening and receiving said stud portion therein, an annular recess formed in said stud portion, said stud portion defining locking shoulder means within said recess, a resilient arm mounted on said boss and extending in perpendicular relation to the axis of said stud portion and biased into said recess in said stud portion in releasably locking relationship with the shoulder means therein, a rod reciprocably extending through said boss and fixedly secured to a free end of said resilient arm, said rod extending outwardly of said beacon base portion to afford manual reciprocation thereof for selectively moving said arm outwardly of said recess to disconnect said base from said stud, contact means at the upper end of said cylindrical portion and insulated therefrom, electrical lead means extending into said stud and connected to said contact means, contact means on said boss releasably engaging said contact means on said stud portion, and lead means connected to said contact means on said boss for energizing a beacon light or the like on said base.

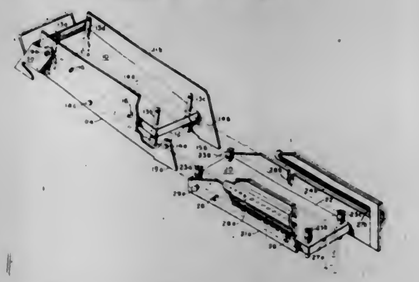
3,020,510
ELECTRICAL CONNECTOR FOR PREFORMED PANEL CIRCUIT ARRANGEMENTS
Frederick C. Kuch, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 26, 1957, Ser. No. 705,456
3 Claims. (Cl. 339—17)

1. A printed circuit board connector comprising a trough-like receptacle member including means defining therein a long narrow opening having a top and at least two side walls, a plurality of inflexible contact members fixedly located on said side walls and having terminations a substantial distance below the top of said opening, a printed circuit board having a plurality of terminal leads printed thereon, a plurality of undulant resilient metallic members each associated with and contacting a respectively different one of said terminal leads and having a protuberance forming a loop portion adjacent the lower edge of said board, and means for securing said resilient metallic members in position on said board, said means com-



prising an insulating member fastened to said board transversely across each of said metallic members, said insulating member being adapted to engage at least one of said side walls along that portion of its area extending from the top of said opening to said terminations of said inflexible contact members, whereby said loop portions of said metallic members engage said inflexible contact members when the lower edge of the circuit board is inserted in the receptacle.

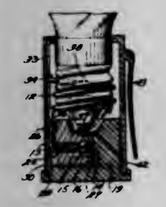
3,020,511
ELECTRICAL CONNECTOR
Jack Raver, New York, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 25, 1958, Ser. No. 744,383
5 Claims. (Cl. 339—65)



1. A separable electrical connector comprising a first longitudinal insulating block having a predetermined longitudinal pattern of terminal elements disposed on a face thereof, said first block having a proximal end and a distal end, a first pair of parallel opposed side plates mounted on opposite sides of said first block and extending beyond said distal end thereof, each of said first pair of side plates including a channel therein oriented parallel to the length of said first block a given first distance above the face thereof, each channel extending from a first point in the vicinity of the proximal end of said first block to a second point, which second point of both channels is located the same given longitudinal distance beyond the distal end of said first block, each channel being open ended at said first point thereof and closed ended at said second point thereof, a second longitudinal insulating block having a complementary longitudinal pattern of terminal elements disposed on a face thereof which are engageable with said terminals of said first block, said second block having a leading end and a trailing end, a second pair of parallel opposed side plates mounted on opposite sides of said second block, each of said second pair of side plates including a short straight edge foot portion located below the leading end thereof and disposed at an acute angle with respect to the length of said second block, said acute angle facing the trailing edge of said second block, said foot portion

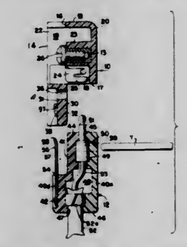
being brought into engagement with the face of said first block at the proximal end thereof when assembly of said connecter is initiated and then riding on the face of said first block towards said distal end thereof as assembly of said connector proceeds, whereby during assembly of said connector said second block is maintained in spaced relationship with respect to said first block at said acute angle to thereby maintain said terminal elements in disengagement, each of said second pair of side plates including a respective pivot pin lug projecting therefrom and oriented directly above said foot portion in a position to be received by said respective channels at said first point thereof when assembly of said connector is initiated, whereby said pivot pin lugs move in said channels towards said second point thereof as assembly of said connector proceeds, the length of each short straight edge foot portion being no greater than said given longitudinal distance, whereby when said pivot pin lugs reach said second point each of said foot portions has moved beyond the distal end of said first block, thereby permitting said second block to be rotated about said pivot pin lugs through said acute angle towards said first block, said complementary longitudinal pattern of terminal elements achieving cooperative relationship with said predetermined longitudinal pattern of terminal elements when said pivot pin lugs reach said second point of said channels, whereby said complementary longitudinal pattern of terminal elements are sequentially engaged to said predetermined pattern of terminal elements in response to rotation of said second block about said pivot pin lugs through said acute angle towards said first block when said pivot pin lugs have reached said second point of said channel.

3,020,512
TAKE-APART SOCKET FOR ELECTRIC LAMPS
John Wiley Anderson, Newtown, Conn. (% The Plastic Molding Corporation, Sandy Hook, Conn.)
Filed May 27, 1958, Ser. No. 738,225
9 Claims. (Cl. 339—67)



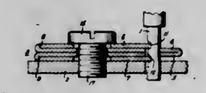
3. A receptacle for electric lamps having a conductive screw base and center terminal comprising, a tubular casing shell open at both ends having diametrically opposite notches in the tubular wall thereof at one end of the shell including an enlargement of each of said notches separated from said end of the shell by a relatively constricted width of the notch, parallel spans of current supplying conductors sufficiently thicker individually than said constricted width of each notch to require forceful insertion of at least one of said conductors past said constricted width of the notches and into said notch enlargements, a mounting body of insulative material separably engaged with and closing one open end portion of said casing shell and housing at least two parallel passageways occupied respectively by said conductors and extending through said body in crosswise relation to the tubular axis of said shell, at least one of said passageways having its opposite ends in register with said notch enlargements whereby to enable said body to encompass and be supported by said conductors with the latter protruding from both sides of said shell, said body further having an opening extending from said one of said passageways through its surface facing the interior of said shell for admitting the central terminal of the lamp base into conductive contact with the conductor in said passageway, and a helical coil of resilient conductive wire having convolutions of size and pitch approximately to fit and receive the screw base of the lamp, one end portion of the wire of said coil extending slidably through the insulative material of said body into the other of said passageways whereby to contact with the other of said conductors therein.

3,020,513
TAMPER PROOF ELECTRICAL CONNECTOR
Edward Clarke Quackenbush, Hamden, Conn., assignor to The Whitney Blake Company, New Haven, Conn., a corporation of Connecticut
Filed Feb. 3, 1958, Ser. No. 712,846
4 Claims. (Cl. 339—91)



1. A tamper-proof electrical connector adapted to be rigidly mounted upon a support surface comprising, in combination, a contact receptacle and a mating contact plug with at least one coacting set of electrical contact members respectively affixed to said receptacle and said plug and disposed for mating engagement, said contact receptacle having a shelf projection intermediate its top and bottom portion with transverse bores therein through which retaining means may be inserted for rigidly mounting said contact receptacle to said support surface, said contact plug having a stepped configuration mating to said shelf whereby said bores are covered when said plug is in mating engagement with said receptacle, a spring arm affixed to said plug, a projection on the undersurface of said shelf for locking engagement with said spring arm, and matching transverse openings in said receptacle and plug in substantial axial alignment when said receptacle and plug are in mating engagement whereby upon insertion of a tool in said aligned openings said spring arm is released from said projection.

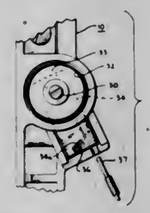
3,020,514
WIRE CONNECTOR CLAMP
William Lawrence Butler, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Filed Dec. 16, 1960, Ser. No. 76,210
8 Claims. (Cl. 339—95)



8. A wire connector clamp comprising a central leg, a pair of curved outer legs joined to one edge of said central leg with their concave faces toward said central leg and forming acute angles therewith, said central leg having a wire receiving aperture at a point displaced from said edge a distance such that said curved legs will partially overlie said wire receiving aperture when said

curved legs are brought into face to face contact with said central leg and means for bringing said central and outer legs into face to face contact with each other with a wire in said wire receiving aperture to effect clamping of said wire to said clamp.

3,020,515
ELECTRIC TERMINAL CONSTRUCTION
Herman J. Hammerly, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Original application Oct. 14, 1955, Ser. No. 540,558, now Patent No. 2,899,521, dated Aug. 11, 1959. Divided and this application Mar. 24, 1959, Ser. No. 801,467
3 Claims. (Cl. 339—95)



1. An electrical device comprising a base of insulating material having a generally planar supporting portion, a generally L-shaped spring strip on said supporting portion in edgewise relation to the plane thereof, said base having a plurality of integral abutment portions disposed adjacent said spring strip and retaining at least a portion of said spring strip in a predetermined position on said supporting portion, said abutments permitting removal of said spring strip in a direction perpendicular to the plane of said supporting portion, a conductive terminal strap on said insulating base and including a first portion overlying said spring strip and retaining said strip on said supporting portion and a second portion forming a wire contacting portion, said spring strip including a wire-gripping end portion extending adjacent said contacting portion of said terminal strap at an acute angle thereto.

3,020,516
ELECTRICAL CONNECTOR BODY AND CAP CONSTRUCTION WITH IMPROVED CONDUCTOR SECURING MEANS
Victor R. Despard, Syracuse, N.Y., assignor to Pass & Seymour, Inc., Syracuse, N.Y., a corporation of New York
Filed Apr. 25, 1958, Ser. No. 730,839
11 Claims. (Cl. 339—101)



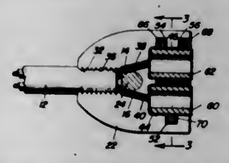
1. In an electric connector device for use with various sized cables, each having a plurality of individually insulated stranded conductors in combination, a rigid cylindrical base of insulation material having contacts carried thereby, one for each conductor and extending from one end thereof, a recess opening through the opposite end of the base and partially through the side wall thereof for each contact, each recess having side walls converging to a fillet adjacent the axial center of said base, a rigid terminal plate electrically connected to each contact and having its ends inserted axially into channels in the walls of the corresponding recess so as to partially close the side wall opening thereof, means mounted by said plate to electrically connect one of said stranded conductors to said plate and mechanically hold it tightly into the recess fillet and axially of the base, and a flexible resilient cover for said base including a tubular sleeve closely engaging the side wall of said base, covering said terminal plates and recess openings in the cylindrical wall, having an integral annulus partially covering the recess openings in the said end wall and an integral axial sleeve adapted to engage the cable and hold it in substantial alignment with the conductors in the fillets.

3,020,517
CONTACT AND TERMINAL MEMBER FOR WIRING DEVICES
Robert H. Murphy, West Hartford, Conn., assignor to The Wiremold Company, West Hartford, Conn., a corporation of Connecticut
Filed Sept. 5, 1957, Ser. No. 682,229
4 Claims. (Cl. 339—164)



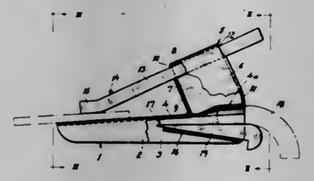
1. In an electric wiring device comprising an insulating body having cooperating front and back parts, means to hold said parts together when assembled, the front part having recessed portions in its rear face for reception of conductor wires and for combined contact-and-terminal members, a combined contact-and-terminal member having a contact portion and a terminal portion spaced from one another along a conductor wire, an extension on said terminal portion reversely bendable to embrace the conductor wire, said terminal extension when inserted in one recessed portion of said insulating body and when bent into embracement with the conductor engaging a side wall of that recessed portion while the body of the terminal portion engages the opposite wall of that recessed portion, said side walls converging to increase the embracing engagement of said extension and said connecting portion with the conductor wire as said combined contact-and-terminal member is inserted into said front part.

3,020,518
SOLDERLESS ELECTRICAL CONNECTORS
Ralph Camping and Gertrude W. Camping, both of 2015 N. 38th Way, Phoenix, Ariz.
Filed Mar. 5, 1959, Ser. No. 797,506
3 Claims. (Cl. 339—191)



1. A solderless connector comprising a pair of casing sections, each section having a bore portion within which to embrace an electrical cable having a pair of stranded conductors, a pair of semi-cylindrical pockets which form cylindrical pockets when said sections are assembled, one of said cylindrical pockets having a cylindrical groove, the other of said cylindrical pockets having a pair of cylindrical grooves, a conductive sleeve in each cylindrical pocket, elastic rings adapted to be rolled onto the sleeves with the strands of said stranded conductors respectively on said sleeves and held fastened in place by said rings, there being a single ring on one sleeve and located in the pocket having one groove, there being a pair of spaced rings on the other sleeve and located in the pocket that has spaced cylindrical grooves therein.

3,020,519
ELECTRIC CONNECTING CLAMPS
Conrad Coleman, 17 Storgatan, Uddevalla, Sweden
Filed Apr. 11, 1958, Ser. No. 727,929
Claims priority, application Sweden Apr. 13, 1957
2 Claims. (Cl. 339—273)



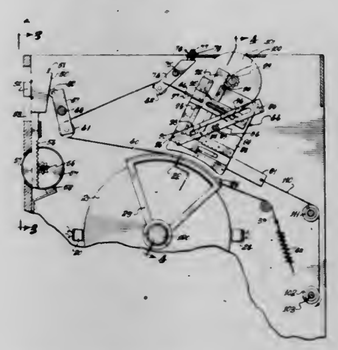
1. A contact clamp comprising a jaw having a flat top portion, a support mounted on said jaw flat top portion and having a guide opening therethrough directed longitudinally of and on an acute angle toward said jaw flat top portion and a second jaw consisting of an elongated rod slidably mounted through said support opening for longitudinal movement to and from said jaw flat top portion and having a bent end portion capable of cooperating with said jaw flat top portion for clamping an object therebetween upon the other end of said second jaw being struck moving said second jaw towards said first-mentioned jaw.

3,020,520
TERMINAL FOR MAKING ELECTRICAL CONNECTIONS
Quentin Berg, % Berg Manufacturing Corporation, 142 Reno St., New Cumberland, Pa.
Filed July 30, 1959, Ser. No. 830,549
4 Claims. (Cl. 339—273)



3. A crimped terminal connection comprising a generally U-shaped member formed from an integral piece of thin sheet metal and having ears upstanding from the sides thereof defining a longitudinal channel, a bared wire projecting into said channel through one end thereof, said ears being crimped on the wire throughout the length of the wire within said channel with parts of said ears folded over the wire and formed so as to leave a part of the wire throughout its length in the crimped terminal exposed along one side thereof, said connection being characterized in that the terminal and the end of the wire are crimped together under metal-deforming pressure so as to cold flow the terminal and the end of the wire and integrate the same into a unitary mass, the outer periphery of the crimped portion of said terminal being formed to provide an electric current conducting contact surface, said terminal tapering throughout its length from a greater to a lesser cross section from said one end toward the front thereof.

3,020,521
VARIABLE DELAY LINE
Henry Salvatori and Carl H. Savit, Los Angeles, Calif., assignors to Western Geophysical Company of America, Los Angeles, Calif., a corporation of Delaware
Filed May 15, 1957, Ser. No. 659,435
2 Claims. (Cl. 340—15)



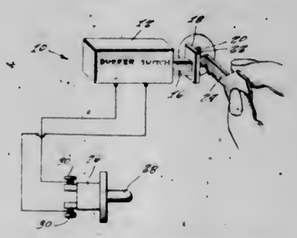
1. A variable magnetic delay line for transmitting a time scale representation of an input signal wherein a time scale transformation of the form of $T=t+A+BF(t)$, where T is the transformed time scale, t is the input time scale, A is a predetermined additive constant, B is a predetermined constant of proportionality, and $F(t)$ is a predetermined function of the said t, is applied to the time scale at the signal output, said delay line comprising: a rotating disc, a circumferential magnetic recording surface on said disc, said disc being affixed to a rotating shaft; a stationary magnetic recording head positioned proximate a first circumferential position on said surface for recording said input signal at a first time scale position; a magnetic reading head positioned proximate said surface along the direction of rotation of said disc from said recording head at a second time scale position on said surface, means for mounting said reading head for circumferential movement with respect to said disc, said reading head being affixed to said mounting means; means urging said mounting means in a first circumferential direction; a flexible line affixed at the first end thereof to said mounting means extending tangentially therefrom in a second circumferential direction opposed to said first direction, said line extending in a plane substantially perpendicular to the axis of rotation of said shaft; a static delay means for displacing said mounting means through a fixed predetermined distance to introduce a fixed static time delay equal to A, said static delay means including a pulley, said pulley being positioned substantially in the plane of said cable, said pulley being mounted upon a lever arm, said lever arm being pivotally mounted for arcuate movement in said plane, said cable being extended over said pulley and maintained in tension thereby, and means for varying the arcuate position of said pulley in said plane; a dynamic correction means for circumferentially moving said mounting means to continuously vary said second time scale position at a predetermined rate during rotation of said disc to introduce a dynamic correction equal to $BF(t)$ in said delay line, said line being affixed at the second end thereof to said dynamic correction means; and a stationary erase head positioned proximate said surface at a circumferential distance along the direction of rotation from said reading head.

3,020,522
REMOTE CONTROL SYSTEM
John C. Lesher, Erie, Pa., assignor to Rad-O-Lite, Inc., Erie, Pa., a corporation of Pennsylvania
Filed May 22, 1959, Ser. No. 815,158
7 Claims. (Cl. 340—33)



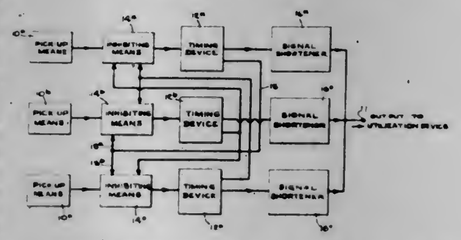
1. A remote control system for traffic lights comprising a portable transmitter for alternatively generating first and second modulated carrier waves of different carrier frequencies, a receiver for said first modulated carrier waves, means for establishing a predetermined pattern of illuminated traffic lights, a relay means for disconnecting, when actuated, traffic lights to be controlled from a conventional traffic light control apparatus and connecting said lights to said means for establishing, means for actuating said relay means in response to receipt of said first modulated carrier signal by said receiver, said circuit means including means for maintaining said relay means actuated for a predetermined time after termination of transmission of said first modulated carrier wave said means for establishing including a plurality of further control circuits, each of said further control circuits establishing when energized a different pattern of illumination of the traffic lights to be controlled, means for pulsing said first modulated carrier waves, and a fast acting stepping relay means responsive to pulses of said first modulated carrier wave for sequentially and successively energizing said further control circuits.

3,020,523
AUTO KEY REMINDER
William R. McKeon, 135-37 94th St., Ozone Park, N.Y.
Filed June 13, 1960, Ser. No. 35,785
3 Claims. (Cl. 340—52)



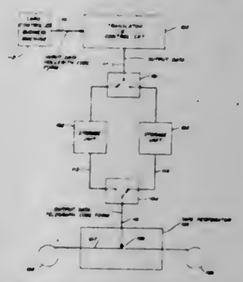
1. An automotive vehicle ignition accessory comprising, in combination, a main housing, an electrically responsive signal device, said device being mounted within said main housing, a first normally open switch mounted within said main housing, said first normally open switch being connected in series with said signal device, a second normally closed switch connected in series with said first switch and said signal device being mounted within a door frame of the vehicle, a source of electrical energy connected in circuit relationship with said first and second switches of said signal device, a key sensing device carried by said housing adjacent to the ignition lock for closing said first switch in response to the insertion of an ignition key to the ignition lock, said second switch closing an electrical circuit through said signal device in response to the opening of said door with said ignition key in said locked position, said electrically responsive signal device comprising an audible signal buzzer, said second normally closed switch comprising a push button having a plunger normally biased outwardly toward an extended position, and said push button being disposed in the path of movement of the vehicle door for movement inwardly to open said second switch in response to the closing of the vehicle door.

3,020,524
MULTIPLE INPUT SENSING APPARATUS
James L. Quinn, Chicago, Ill., assignor to Cummins-Chicago Corp., Chicago, Ill., a corporation of Illinois
Filed Dec. 16, 1957, Ser. No. 702,924
7 Claims. (Cl. 340—147)



1. Multiple input sensing apparatus for producing one output signal discretely spaced in time relative to all other output signals in response to each of plural, randomly occurring, and even coincident events at a plurality of locations, said apparatus comprising, in combination, a plurality of pick-up devices and means for actuating each device in response to successive events occurring at one of said locations, a corresponding plurality of time measuring devices and means for actuating each one through one timing cycle whenever the corresponding one of said pick-up devices is actuated, means for preventing actuation of each of said time measuring devices so long as any other of such measuring devices is actuated, and plural means each responsive to actuation of one of said time measuring devices for producing an output signal of shorter duration than the timing cycle of said time measuring devices.

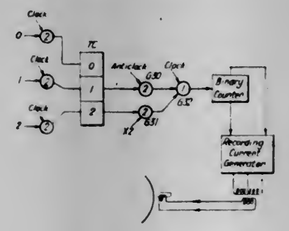
3,020,525
RECORD CONTROLLED TRANSLATOR
Richard J. Garrison, Dumont, N.J., and Eugene W. Henches, New York, and George Spiro, Seaford, N.Y., assignors to American Telephone and Telegraph Company, a corporation of New York
Filed Apr. 4, 1958, Ser. No. 726,545
15 Claims. (Cl. 340—172.5)



9. In a data storage and translation system, a plurality of input circuits for receiving within a predetermined time

duration a set of data signals representing different characters with the identity of each character being determined by the particular time within said duration that the signal representing each character is received, means for translating said received data into a different code form, a recorder, and means operable only after an entire set of data has been received for sequentially applying said translated data character by character to said recorder for recording on an output medium.

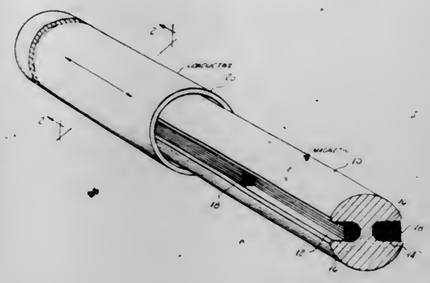
3,020,526
INTELLIGENCE STORAGE EQUIPMENT
Desmond Sydney Ridler and Alexander Douglas Odell, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Dec. 19, 1955, Ser. No. 554,037
Claims priority, application Great Britain Dec. 31, 1954
4 Claims. (Cl. 340—174.1)



1. A magnetic storage system, for intelligence of which each element may have either of two different values, in which each element of said intelligence is recorded as a pattern of magnetization within a discrete length of an endless magnetic track on the periphery of a rotatable drum, and in which the pattern of magnetization representing the first of said values consists of a single reversal of the orientation of said magnetization and the pattern of magnetization representing the second of said values consists of two reversals of the orientation of said magnetization, and which system comprises means under control of the intelligence to be recorded and of a source of pulses each of which occurs at the mid-point of an intelligence element to generate a first pulse train consisting of a pulse at the mid-point of each element having said second value, means for mixing said first pulse train and a train of pulses each of which occurs at the beginning of an element to produce a second pulse train, a binary pair so controlled by said second pulse train as to change its condition once in response to a received element of said first value and twice in response to a received element of said second value, and means under control of the outputs from said binary pair to generate current for causing said recording on the track on said drum.

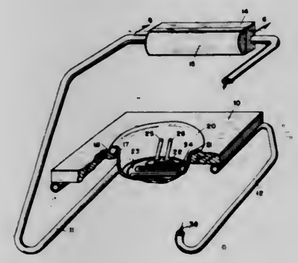
3,020,527
POSITION INDICATING SYSTEM
Frederick B. MacLaren, New York, N.Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed May 13, 1957, Ser. No. 658,802
7 Claims. (Cl. 340—196)

1. A electrical position transducer including in combination a longitudinally extending paramagnetic core formed with a pair of longitudinally extending winding-receiving slots, a primary winding disposed in said slots, a secondary winding disposed in said slots, a longitudinally extending sheath formed of conductive material surrounding the paramagnetic core, means for impressing an electrical input signal upon the primary winding, means for longitudinally varying the relative position of the paramagnetic core and conductive sheath, and means for
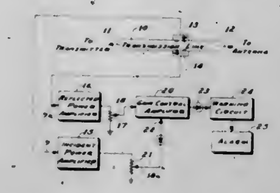


obtaining from the secondary winding an electrical output signal indicative of relative position of the core and the sheath.

3,020,528
TOILET TRAINING APPARATUS
Caleb V. Swanson, Jr., Redondo Beach, and Reinhold W. Feidt, Santa Monica, Calif.
Filed Apr. 20, 1959, Ser. No. 807,398
4 Claims. (Cl. 340—235)



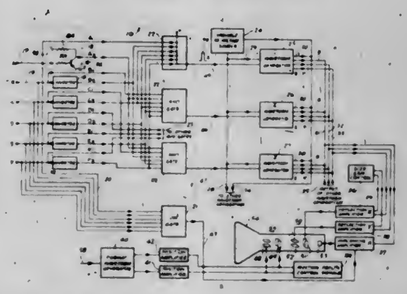
4. A child training apparatus comprising: a frame including first and second spaced metal contact members mounted to a seat member having an aperture formed therein; an open top container mounted in said aperture, the bottom of said container being non-conducting; conducting means on the bottom of the container, said conducting means including a first and a second conductor which are insulated from each other, the upper surface of each conductor being substantially flush with the upper surface of the container bottom; means electrically connecting said first and second conductors to said first and second metal contact members respectively; a sound making device connected to said seat member having inductance means for actuating it; power means for passing current through the inductance means; and transistor means for controlling the current flow through the inductance means, said transistor means being connected in series with said inductance means and power means, said transistor means having a terminal, the potential of which controls the current flow through the inductance means, said transistor terminal being connected to said first metal contact member; said power means having two terminals, one of which is connected to said second metal contact member.

3,020,529
REFLECTED POWER ALARM FOR A VARIABLE POWER OUTPUT ANTENNA SYSTEM
Daniel L. Turner, Belmont, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Dec. 21, 1959, Ser. No. 860,944
3 Claims. (Cl. 340—253)



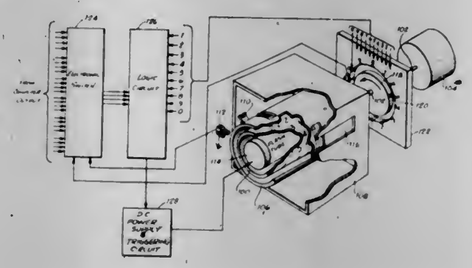
1. A monitoring circuit for detecting and indicating in a load terminated transmission means the presence of a standing voltage wave ratio greater than a predetermined value, said monitoring circuit comprising first extracting means for extracting a portion of the reflected energy reflected back from said load, second extracting means for extracting a portion of the incident energy transmitted along the transmission means toward said load, first means including a first amplifier means constructed to amplify said extracted portion of said reflected energy, second means for supplying to said amplifier means a signal derived from and proportional to said incident energy, said amplifier means constructed and arranged to respond to said derived signal to have its amplification factor varied inversely with the magnitude of said derived signal to maintain the magnitude of the amplified portion of the reflected energy substantially constant for a given ratio of the magnitude of the extracted reflected signal to the magnitude of the extracted incident signal, and means responsive to the magnitude of the output signal of said amplifier means to indicate when the amplified portion of the reflected energy means exceeds a predetermined level.

3,020,530
SYSTEM FOR DISPLAYING CODED INFORMATION ON CATHODE RAY TUBES
Herman W. Volberg, San Diego, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 753,032
12 Claims. (Cl. 340—324)



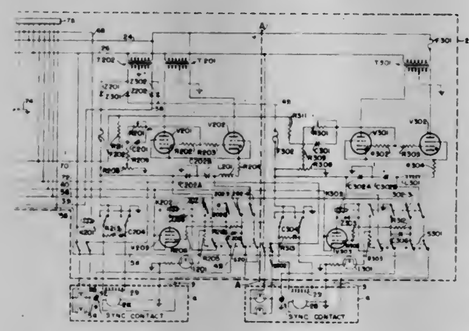
2. In a display system wherein coded information having particular character designations are capable of being received and decoded by decoding means providing individual output pulses corresponding to individual character designations, and cathode ray means having beam generating means and deflection means and final position deflection means for receiving waveforms corresponding to said character designations causing character images of said character designations to be displayed, the combination with said decoding means and said cathode ray means including a plurality of semi-conductor waveform generating units, each of said units in response to one of said individual output pulses being capable of providing output waveforms to said deflection means having predetermined configurations corresponding to said individual character designation and being capable of providing an unblanking waveform to said beam generating means, said output waveforms and said unblanking waveforms being synchronized in time causing said beam generating means to be selectively energized only when said output waveforms are received by said deflection means, field means impressed across said waveform generating units for selectively varying the time length of said waveforms, amplifier means between said units and said deflection means for varying the magnitude of said output waveforms and said unblanking waveforms, variable control means for providing selective positive control of said amplifier in varying said magnitude of said output waveforms and said unblanking waveforms by said amplifier means, other blanking control means for momentarily blanking said beam generating means when said decoding means receives said coded information, and other semiconductor waveform generating means providing output waveforms to said position deflection means in coordination with said incoming code for causing said position deflection means to position a plurality of said character displays in a predetermined manner on said cathode ray means.

3,020,531
ALPHA-NUMERICAL DISPLAY MEANS
Norman J. Appleton, Plainview, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,872
3 Claims. (Cl. 340—324)



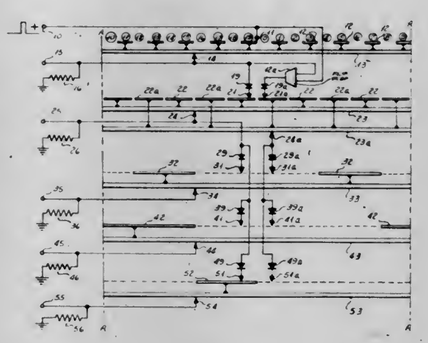
1. An alpha-numeric display device for displaying characters in accordance with discrete character-manifesting signals applied thereto, said device comprising:
a first drum having *n* axially displaced columns of characters circumferentially disposed thereon, where *n* is an integer greater than one;
cyclically operated scanning means in cooperative relationship with said first drum for sequentially scanning said characters a character at a time; a second drum, coaxial with and surrounding said first drum having *n* similar circumferentially staggered, equiangularly center-displaced non-overlapping slots therein, each of said slots being in cooperative relationship with a separate one of said columns of said characters; first rotating means for rotating said first drum; second rotating means for rotating said second drum at an angular velocity equal to $1/mn$ of said first drum, where *m* is any positive integer, said second drum being moved through the angular displacement between said slot centers in response to said first drum making an integral number of revolutions; a window oriented in cooperative relationship with said drums, said window having one dimension parallel to the axis of said drums at least equal to the axial extent of said *n* columns and a second dimension perpendicular to said one dimension having an extent which permits only a single character to be observed; normally unoperated illuminating display means for illuminating and displaying the character which is then within both one of said slots and said window in response to the operation thereof;
logic means associated with said scanning means and having a character manifesting signal applied thereto for effecting the operating of said display means in response to the discrete character manifested by said signal being scanned; and,
switching means controlled by said scanning means for sequentially applying for an interval, each one, of a given number, of separate character-manifesting signals to said logic means.

3,020,532
CUING APPARATUS
Hubert J. Schlafly, Jr., Hollis, N.Y., assignor to Teleprompter Corporation, New York, N.Y., a corporation of New York
Filed Nov. 4, 1957, Ser. No. 694,276
18 Claims. (Cl. 340—334)



1. Cuing apparatus comprising a plurality of script display means and a control means, each of said display means including a motor, a script sheet having a plurality of discontinuities disposed lengthwise thereof, means coupling said script sheet to said motor, a conductor, and a switch operable upon passage of each of said discontinuities past a location fixed with reference to said coupling means, said control means including for each of said display means an electron discharge tube controlling, according to its state of conduction, the application of power to the motor in the associated one of said display means, and means responsive to operation of the associated one of said switches to change the state of conduction in the associated one of said tubes, said control means further including for said display means collectively an electron discharge device controlling, according to its state of conduction, the state of conduction in said tubes, and means to change the state of conduction in said device responsive to change in the state of conduction in all of said tubes by operation of their respective switches.

3,020,533
CYCLIC ANALOGUE TO DIGITAL CONVERTER
Carl F. Schaefer, Pleasantville, and Jack B. Speller, Chappaqua, N.Y., assignors, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Jan. 31, 1956, Ser. No. 562,438
13 Claims. (Cl. 340—347)

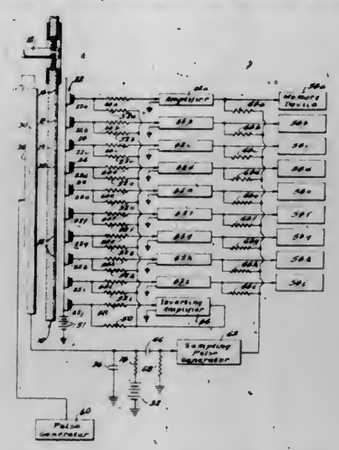


1. A cyclic analogue to digital converter for producing a binary digital representation of the relative rotation between two members including in combination a first member, a second member, means mounting the first and second members for relative rotation, a plurality of consecutive circles of conductive segments mounted on the first member, a source of input excitation voltage, means for obtaining two outputs complementary to one another from each but the last circle of said plurality of consecutive circles, means for obtaining an output from the last circle, means including means mounted on the second member for coupling to each but the first circle of said plurality of consecutive circles two inputs complementary to one another derived directly from the two complementary outputs of the immediately preceding circle, means including means mounted on the second member for coupling the input excitation to the first circle, a subsequent circle of conductive segments mounted on the first member, means for obtaining an output from the subsequent circle, and means including means mounted on the second member for coupling to the subsequent circle two complementary inputs derived directly from the two complementary outputs of the penultimate of said plurality of consecutive circles.

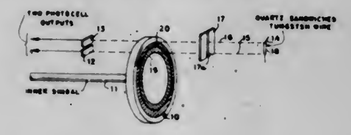
3,020,534
OPTICAL ENCODER
Edward M. Jones, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 10, 1958, Ser. No. 727,649
16 Claims. (Cl. 340—347)

5. An electrical circuit comprising, in combination, a plurality of light responsive cells having a pair of confronting electrodes and a mass of semiconductor material disposed therebetween, a flash lamp confronting the cells, an inversion amplifier electrically connected between the first of the cells and each of the other cells, a shift register electrically coupled to each of the other cells responding to pulses having amplitudes greater than a threshold value, a trigger pulse generator electrically connected to the flash lamp, and a sampling pulse generator coupled to the trigger pulse generator and electrically

connected to the input of each shift register having an amplitude essentially equal to the threshold value, whereby actuation of each shift register is controlled by the response of the other cell coupled thereto.
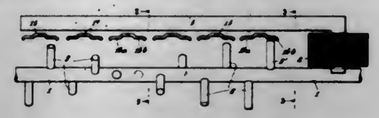


3,020,535
ANALOG TO DIGITAL CONVERSION SYSTEM
James C. Gevas, Newark, N.J., assignor to General Precision, Inc., a corporation of Delaware
Filed July 10, 1959, Ser. No. 826,284
12 Claims. (Cl. 340—347)



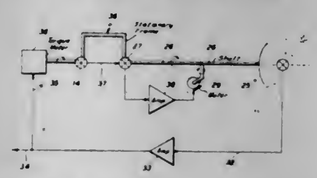
1. In a digital device for determining the position of a member, a first sensor and circuit means for producing time displaced impulses over a first and second line for each incremental displacement of the member, a second sensor and circuit means for selectively enabling the transmission of pulses over said first and second lines depending upon the direction of rotation of said member, and memory hold means for delaying the transmission of said impulses over said first and second lines for a time delay less than the time of each incremental movement of said member, said memory hold means comprising switch means associated with said first sensor and energized by a hold signal for delaying the transmission of said time displaced impulses over said first and second lines.

3,020,536
ARRANGEMENT FOR SETTING MAGNETIC CIRCUITS
Josef Dirr, Fohrenweg 10, Solothurn, Switzerland
Filed June 12, 1958, Ser. No. 741,669
5 Claims. (Cl. 340—364)

1. An arrangement for setting magnetic circuits comprising a cam shaft having a plurality of cam pins thereon, a rail having a plurality of bent levers pivotally mounted with respect thereto, magnetic means on said rail for generating a magnetic field so that upon movement of said cam shaft said bent levers will successively be actuated with successive movement of said cam pins adjacent said bent levers to complete a magnetic flux path from said cam shaft through said cam pins through said bent levers and into said rail.



3,020,537
AUTOMATIC TRACKING SYSTEM
Robert G. Schriefer, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Filed May 1, 1953, Ser. No. 352,508
5 Claims. (Cl. 343—7.4)



1. A system of the character described comprising radar sensing apparatus which includes a directional movable antenna and which produces an error signal corresponding to the deviation between said antenna and a target being tracked, a gyroscopic instrument comprised of a pair of orthogonally related single-degree-of-freedom gyros mounted on a single gimbal platform with the spin axes of said gyros perpendicular to the plane of said platform, a rigid frame, both said antenna and said instrument being carried in physically spaced relation by said rigid frame, torque means mounted on said platform and operatively coupled to one of said gyros for causing precessional movement of said platform upon actuation of said torque means, circuit means interconnecting said apparatus with said torque means for applying said error signal to the latter, said platform being movable to a position dependent upon the character of said error signal, a signal-generating device operatively connected to said instrument and generating a signal corresponding to the degree of movement of said platform, and position-comparing means operatively intercoupled between said antenna and said signal-generating device and responsive to the signal generated by the latter for causing said antenna to move in unison with said platform, said platform being moved in response to said error signal in a direction to reduce the deviation between said antenna and said target and to thereby produce a corresponding reduction in said error signal.

3,020,538
MEANS FOR TRACKING MOVABLE TARGETS
Torben Teiling, Lidingo, and Bengt Evald Torsten Bengtsson, Vallingby, Sweden, assignors to Aresco Aktiebolag, Stockholm, Sweden, a Swedish joint-stock company
Filed Aug. 8, 1957, Ser. No. 677,020
Claims priority, application Sweden Aug. 30, 1956
7 Claims. (Cl. 343—7.4)

1. In an automatic target tracking apparatus for following a moving target the combination of an azimuth sighting means, an azimuth shaft operatively connected with said azimuth sighting means for registering the present azimuth angle θ indicated by said azimuth sighting means, an azimuth servo motor operatively connected

with said azimuth shaft, a first signal generating means controlled by said azimuth shaft so as to generate a first measured control signal $\dot{\theta}$ which is the first time derivative of said azimuth angle θ, a range finding means, a second signal generating means operatively connected with said range finding means to generate a calculated signal

$$\frac{\dot{R}}{R}$$

wherein R is the present range to the target and $\dot{R}$ the first time derivative thereof, a multiplying network, means for feeding said first measured control signal $\dot{\theta}$ and said calculated signal

$$\frac{\dot{R}}{R}$$

into said multiplying network to obtain a product signal

$$-2\frac{\dot{R}}{R}\dot{\theta}$$

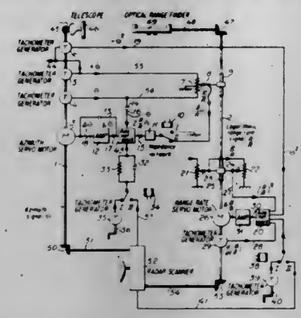
a third signal generating means controlled by said azimuth shaft so as to generate a second measured control signal $-\dot{\theta}$ which is the second time derivative of said azimuth angle θ, means for adding said product signal

$$-2\frac{\dot{R}}{R}\dot{\theta}$$

and said second measured control signal $-\dot{\theta}$ to obtain a difference signal $\Delta\dot{\theta}$ which is equal to the sum

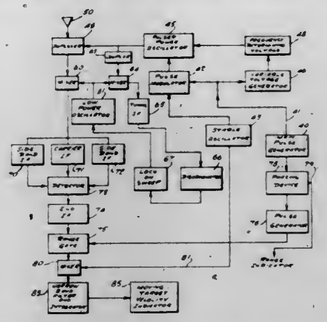
$$-2\frac{\dot{R}}{R}\dot{\theta}-\ddot{\theta}$$

an integrating network, means for feeding said difference signal $\Delta\dot{\theta}$ into said integrating network, the output of said integrating network being connected to the input of said servo motor to provide a second difference signal $\Delta\dot{\theta}$ corresponding to the required increase or decrease of the velocity of said azimuth shaft to have the target followed by the azimuth sighting means.



3,020,539
MODULATED CARRIER WAVE MOVING TARGET DETECTION RADAR SYSTEM
Elliot L. Gruenberg, Brooklyn, N.Y., assignor to Maxson Electronics Corporation, a corporation of New York
Filed Mar. 24, 1958, Ser. No. 723,239
23 Claims. (Cl. 343—7.7)

1. A moving target detecting radar system comprising constant frequency oscillation producing means, a transmitter means connected thereto for producing pulses of microwave carrier oscillations modulated by a subcarrier consisting of said constant frequency oscillations, means for receiving echoes of said microwave oscillations, means for demodulating the received oscillations and deriving therefrom said subcarrier, which may have Doppler effect frequency variations due to reflection from moving targets, mixer means connected to the output of the demodulator means and the constant frequency oscillation producing means for producing echo pulses, and means connected to said mixer means for indicating pulses due to a moving target.



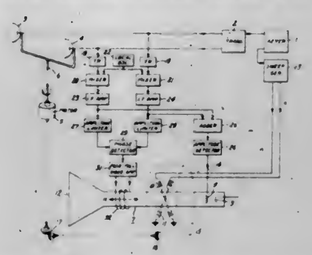
3,020,540
METHOD AND DEVICE FOR MEASURING THE SPEED OF AN AIRCRAFT OR THE LIKE
Pierre Gaudillere, 9 Rue Edouard Nortier, Neuilly-sur-Seine, France
Filed Oct. 7, 1958, Ser. No. 765,762
Claims priority, application France Oct. 11, 1957
11 Claims. (Cl. 343—8)

1. Device for measuring the speed of an aircraft or the like comprising the following means disposed on the aircraft: means for transmitting two wave beams one of which is directed forwardly and the other rearwardly of the aircraft, the axes of said beams being downwardly inclined at the same angle from the horizontal, said waves comprising signals whose respective frequencies, that is, the frequency p for the forward beam, and q for the rear beam, differ from one another by an amount $f=p-q$ which is small relative to p and q, means for receiving on the aircraft the echoes of frequency p' and q' of the waves reflected by the ground, and means for measuring the frequency $f'=p'-q'$.

3,020,541
ELECTRICAL SIGNAL INDICATOR
Frank R. Dickey, Jr., Alexandria, Va., assignor to General Electric Company, a corporation of New York
Filed Oct. 27, 1953, Ser. No. 388,528
13 Claims. (Cl. 343—11)

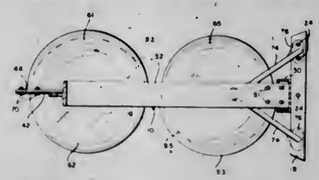
1. A radar object location system comprising means for transmitting pulses of radio frequency waves toward objects in space, antenna means comprising a plurality of directive reception patterns for separately receiving echoes returned from objects irradiated by said transmitted pulses, a cathode ray tube indicator, means for producing a polar sweep on the screen of said cathode ray tube indicator timed with said pulse transmissions, means responsive to said received echoes for intensifying said sweep, means for deriving a signal from said separately

received echoes having an amplitude indicative of the angular position of the located object relative to the directivity of said antenna reception patterns, and means



independent of said sweep producing means for directing said polar sweep to an angle different from its radial direction in accordance with said derived signal.

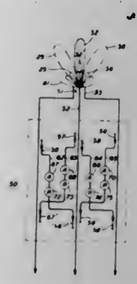
3,020,542
MOUNTING AIRCRAFT WITH PLURAL SPHERICAL LUNEBERG RADAR REFLECTIVE LENSES AND MOUNTING MEANS
Sidney F. Johnston, Jr., Knoxville, Tenn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 29, 1960, Ser. No. 18,456
4 Claims. (Cl. 343—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with an aircraft, a radar reflective return means consisting of a plurality of Luneberg radar reflective lenses each having an attached hemispherical radar reflector, mounting means attaching said Luneberg radar reflective lenses to the aircraft, said mounting means comprising a planular member having a plurality of lens receiving openings therein, a plurality of annular retaining means for securing said lenses in said lens receiving openings with the hemispherical reflectors thereof facing in opposite directions, a pair of parallel bracing members mounted on said planular member, a channel member securely attached to said planular member and said bracing members for supporting said planular member and said bracing members therefrom, and an annular member adapted for attachment to said aircraft and to said channeled member for providing a cantilever support for said Luneberg lenses from said aircraft.

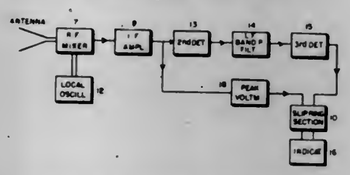
3,020,543
CROSS-TALK CANCELLATION APPARATUS FOR BROADBAND MICROWAVE RADIO LINKS
Tingye Li, Red Bank, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 24, 1960, Ser. No. 31,353
6 Claims. (Cl. 343—100)

1. A microwave transmission system comprising means for generating a plurality of major lobes from a plurality of feeds associated respectively therewith from at least one antenna location, said lobes being displaced by acute angles from each other and each being representative of distinct narrow band channels of signal information, each of said major lobes giving rise to at least one minor side lobe which substantially coincides with an adjacent major lobe, and means for cancelling the interference arising from the presence of the coincident minor lobes, said



means comprising means for feeding back signal energy of the proper magnitude and phase from each feed respectively associated with each intended major lobe to every other feed respectively associated with every other major lobe normally having a minor lobe coincident with said intended major lobe.

3,020,544
PASSIVE RADIO FREQUENCY DETECTION APPARATUS AND METHOD
Hanns H. Wolff, Matawan, N.J., assignor to Maxson Electronics Corporation, a corporation of New York
Filed Jan. 23, 1959, Ser. No. 788,643
10 Claims. (Cl. 343—100)

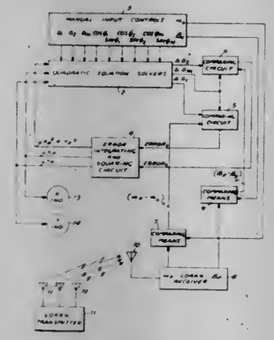


1. The method of surveying the surface of the earth, comprising the steps of receiving at a position above the earth its reflections of extraterrestrial radio frequency radiation, sensing the angular direction of polarization of the received reflected radiation, producing an electrical output corresponding in amplitude to the variations in polarization, and producing an indication of the electrical output as a representation of a characteristic of the earth's surface.

3,020,545
RADIO NAVIGATION SYSTEM
Morton Losher, Bergenfield, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Feb. 12, 1958, Ser. No. 714,751
6 Claims. (Cl. 343—103)

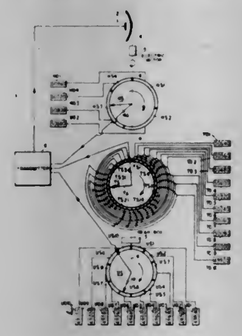
1. A radio navigation receiver adapted to be carried on a craft and cooperating with a plurality of Loran beacons for indicating in Cartesian coordinates the displacement of said craft with respect to a known point which may be selected to be one of said plurality of Loran beacons comprising means for receiving signals from said beacons, means for deriving from the received signals measured distance difference signals indicative of the craft's position relative said known point, means for generating hyperbolic coordinate signals indicative of the

position of said known point, means to generate assumed signals indicative of the Cartesian coordinates of said craft's displacement relative to said known point, means for computing from said assumed signals, other signals indicative of the differences between the craft's distance to each said beacon and the distance from said known point to each said beacon, means to compare these computed difference distance signals with the measured dis-



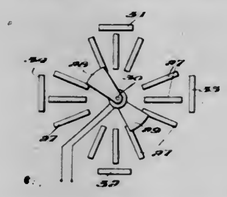
tance difference signals indicative of the craft's position relative said known point and the position of said known point to yield error signals, and means for applying the error signals to said assumed signals' generating means to correct said assumed signals so as to drive said generating means to values more precisely indicative of the Cartesian coordinates representing the displacement of the craft's position from the known point.

3,020,546
RADIO BEACONS
Sidney Arthur Walter Jolliffe, Maldon, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Filed Dec. 23, 1958, Ser. No. 782,445
Claims priority, application Great Britain Oct. 6, 1958
6 Claims. (Cl. 343—106)



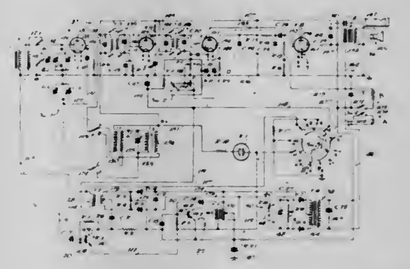
1. A radio beacon system comprising means for radiating a sharply directional radio beam, means for varying the azimuthal direction of said beam in pre-determined manner and means for simultaneously modulating the transmitted beam with at least two azimuth indicating frequencies one of which is selected from a predetermined number of different predetermined frequencies each of which is appropriate to a different sector of a plurality of sectors of azimuth into which the whole range of azimuth variation of the beam is divided, and another of which is selected from a predetermined number of different predetermined frequencies each of which is appropriate to a different sub-sector of a plurality of sub-sectors into which each of the said sectors is divided, whereby each sub-sector is characterised by the transmission of a different combination of two modulation frequencies.

3,020,547
ARRANGEMENT FOR RADIO DIRECTION FINDING
Carl-Erik Granqvist, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden
Filed June 24, 1957, Ser. No. 667,317
Claims priority, application Sweden Aug. 2, 1956
12 Claims. (Cl. 343—114)



1. An arrangement for radio direction finding comprising a magnetic antenna having a magnetic core in the form of a Z-armature, said antenna being rotatable about the axis of the stem of said armature, a coil around said core, and a plurality of elongated magnetic conductors radially disposed about said armature in an arrangement providing a sinusoidal field distribution; whereby when said antenna is rotated the field intensity through said core will vary substantially sinusoidally with the angle of rotation.

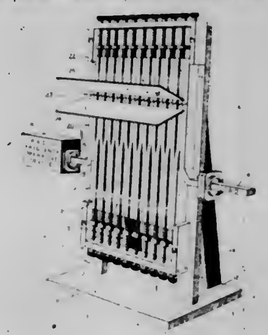
3,020,548
PORTABLE RADIO DIRECTION FINDER
Edward Jacobson and Abraham Siegelman, Morton Grove, Ill., assignors to Allen-Bradford, Inc., Chicago, Ill.
Filed May 19, 1958, Ser. No. 736,113
23 Claims. (Cl. 343—121)



1. A portable radio direction finder which comprises, a housing having an omni-directional antenna mounted thereon, said antenna being non-resonant at one group of frequencies, a directionally responsive antenna rotatively mounted thereon for receiving said one group of frequencies and having a generally figure 8 response characteristic, a low frequency electronic switching oscillator in said housing, a tunable radio frequency receiver adapted to provide an audio frequency output, means in said housing combining the signal outputs of said antennas at any frequency in said one group of

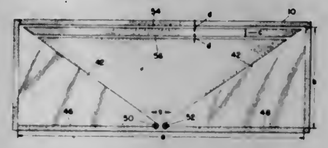
frequencies and applying the same to said receiver, said oscillator being connected to modulate said signal combining means to change the phase relationship between the signal outputs of said antennas at the frequency of said oscillator, a phase detector and a right-left indicator in said housing driven by said phase detector, the receiver output being connected to said phase detector, and a connection between said low frequency oscillator and said phase detector whereby the signal output of said receiver is connected to said phase detector in synchronism with the change of phase relationship between said signal outputs of said antennas.

3,020,549
MATCHED ANTENNA ARRAY
Morris L. Kales, 6408 Marjory Lane, Bethesda, Md., and Herman N. Chait, 15028 Dickens St., Sherman Oaks, Calif.
Filed Aug. 20, 1959, Ser. No. 835,155
12 Claims. (Cl. 343—771)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. An antenna system for a radio frequency energy operative device comprising; a plurality of antenna elements; a plurality of duplex couplers having four ports interconnected such that when the third port is terminated in a matched impedance energy applied to the fourth port is delivered to the first and second ports in equal amplitude and 90-degree phase relationship; means for short circuit terminating first and second ones of said ports of each duplex coupler; means individually connecting an antenna element between each of said first and second ports and the terminations thereof; means connecting said couplers in series wherein the third port of a preceding coupler of the series is connected to the fourth port of the succedent coupler of the series; means providing a matched impedance termination connected to the third port of the last coupler of the series; and means connecting the fourth port of the first coupler of the series to the radio frequency operative device.

3,020,550
BROADBAND SHEET ANTENNA
Jack Beever, Philadelphia, Pa., assignor to Jerrold Electronics Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,832
4 Claims. (Cl. 343—795)



3. A broadband antenna covering 54 to 108 mc. and 174 to 216 mc. frequencies comprising a sheet of insulating material, a pair of metal foil right triangles affixed thereto with their bases in horizontal alignment and the apexes at the acute base angles adjacent each other, the latter constituting connecting points for electrical connection to wires leading to the antenna posts of a receiver, a first band of metal foil parallel to said bases connecting the apexes opposite said bases, and a second band of metal foil parallel to said first band and terminally connected to the hypotenuses of said triangles, the overall length of said bases being 0.4λ, the length of the altitudes of said triangles being $0.16\lambda \pm 10\%$ and the space between said first and second bands being $0.014\lambda \pm 10\%$, where λ=wavelength in air at mean frequency, first harmonic.

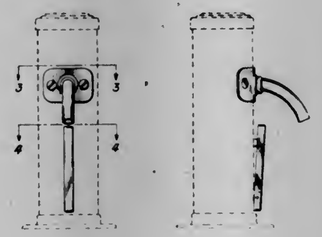
DESIGNS

FEBRUARY 6, 1962

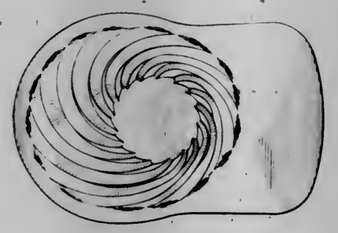
192,156
SIGN FOR A TELEPHONE BOOTH OR THE LIKE
William S. Barron, Decatur, Ga., assignor to Gladwin Plastics, Inc., Atlanta, Ga., a corporation of Georgia
Filed July 11, 1961, Ser. No. 65,877
Term of patent 14 years
(Cl. D1—12)



192,157
DISPENSING HEAD FOR BEER AND THE LIKE
Bryn H. Nissen, 5875 Walsh, St. Louis, Mo.
Filed Oct. 14, 1960, Ser. No. 62,493
Term of patent 14 years
(Cl. D2—3)



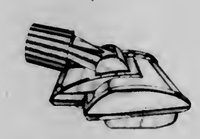
192,158
COLLAPSIBLE CAP OR THE LIKE
Robert Dorfman, 165 E. 35th St., New York, N.Y.
Filed June 20, 1961, Ser. No. 65,653
Term of patent 7 years
(Cl. D3—13)



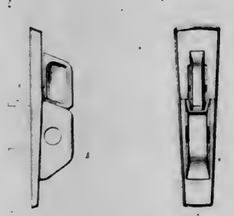
192,159
UNITARY SOLE AND HEEL FOR FOOTWEAR
Ettore Iorio, 1570 74th St., Brooklyn, N.Y.
Filed Apr. 14, 1961, Ser. No. 64,735
Term of patent 14 years
(Cl. D7—5)



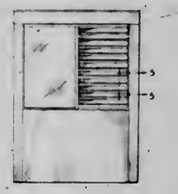
192,160
VACUUM CLEANER NOZZLE OR THE LIKE
Ralph A. W. Johanson, White Plains, N.Y., assignor to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed Sept. 8, 1961, Ser. No. 66,659
Term of patent 14 years
(Cl. D9—2)



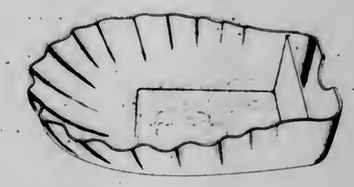
192,161
COMBINED LIFT HANDLE AND LATCH FOR LOCKER DOORS
Dagfinn O. Amdal, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Feb. 14, 1961, Ser. No. 63,940
Term of patent 14 years
(Cl. D10—8)



192,162
SERVICE OFFICE BUILDING FOR FILLING STATION ISLANDS
Charles E. Knox, Jr., 1007 Slocum St., Dallas, Tex.
Filed Mar. 2, 1959, Ser. No. 54,787
Term of patent 14 years
(Cl. D13—1)



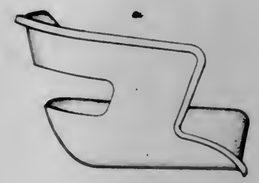
192,163
TELEPHONE ENCLOSURE
Henry G. Turner, Atlanta, Ga., assignor to American Telephone and Telegraph Company, New York, N.Y., a corporation of New York
Filed Sept. 26, 1960, Ser. No. 62,259
Term of patent 14 years
(Cl. D13—1)



192,164
TRAY SLIDE
Philip Golden, Teaneck, N.J., assignor to S. Blickman, Inc., Weehawken, N.J., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 63,060
Term of patent 7 years
(Cl. D14—3)



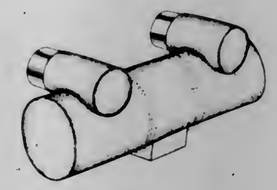
192,165
VEHICLE SEAT
Joseph J. Brandon, Highland Park, Ill., assignor to Coach & Car Equipment Corporation, Chicago, Ill., a corporation of Illinois
Filed Apr. 3, 1961, Ser. No. 64,574
Term of patent 3½ years
(Cl. D15—8)



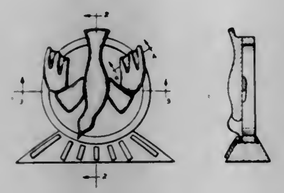
192,166
CEILING TILE
Sharon de Leon, Chicago, Ill., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 28, 1961, Ser. No. 66,899
Term of patent 14 years
(Cl. D18—2)



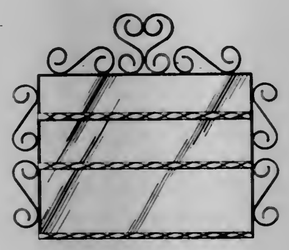
192,167
HOUSING FOR AN X-RAY TUBE
Elliot F. Noyes, New Canaan, and Ernest M. Bevilacqua, Springdale, Conn., assignors to The Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Filed Apr. 4, 1960, Ser. No. 60,014
Term of patent 14 years
(Cl. D26—8)



192,168
RELIGIOUS PLAQUE OR SIMILAR ARTICLE
William J. O'Shea, 16 Centennial Drive, Syracuse, N.Y.
Filed July 24, 1961, Ser. No. 66,021
Term of patent 14 years
(Cl. D29—23)



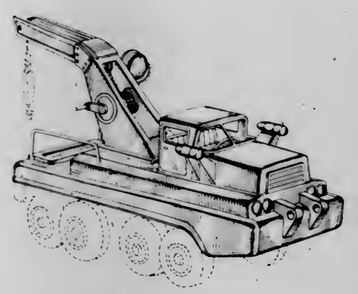
192,169
WALL SHELF
Jozsef Molnar, 158 Maple Ave., Holmes, Pa.
Filed Feb. 4, 1960, Ser. No. 59,264
Term of patent 3½ years
(Cl. D33—18)



192,170
TOY SEA HORSE
Esther R. Kovac, 3510 Ocean View Blvd., Glendale, Calif.
Filed Sept. 5, 1961, Ser. No. 66,613
Term of patent 14 years
(Cl. D34—2)



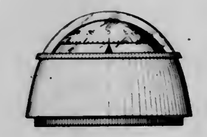
192,171
TOY CAR WRECKER
Allan J. Alvaney, Arlington Heights, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed Dec. 1, 1960, Ser. No. 63,050
Term of patent 3½ years
(Cl. D34—15)



192,172
GRASS TRIMMER
Jack J. Zimmerman, Riverside, Ill., assignor to Phonex Instrument Company, Inc., Chicago, Ill., a corporation
Filed Feb. 21, 1961, Ser. No. 64,014
Term of patent 14 years
(Cl. D40—1)



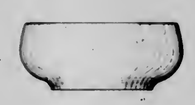
192,173
KITCHEN TIMER
August Wilhelm Höwe, 93 Am Fort Gonsenheim, Mainz (Rhine), Germany
Filed Feb. 14, 1961, Ser. No. 63,935
Term of patent 14 years
(Cl. D42—7)



192,174
CUP
Bertrand N. Trombley, Birmingham, Mich., assignor to Bopp-Decker Plastics, Inc., Birmingham, Mich., a corporation of Michigan
Filed Mar. 23, 1961, Ser. No. 64,456
Term of patent 14 years
(Cl. D44—9)



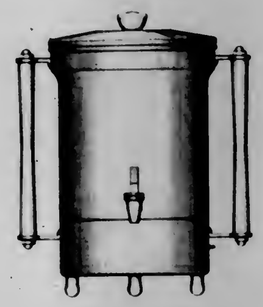
192,175
BOWL
Bertrand N. Trombley, Birmingham, Mich., assignor to Bopp-Decker Plastics, Inc., Birmingham, Mich., a corporation of Michigan
Filed Mar. 23, 1961, Ser. No. 64,457
Term of patent 14 years
(Cl. D44—15)



192,176
PLATE OR SIMILAR ARTICLE
Bjørn Wiinblad, Selb, Bavaria, Germany, assignor to Rosenthal-Porzellan Aktiengesellschaft, Bavaria, Germany, a corporation of Germany
Filed May 2, 1961, Ser. No. 65,008
Term of patent 14 years
(Cl. D44—15)



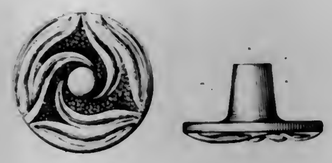
192,177
COFFEE URN
Richard F. Krause, Massillon, Ohio, assignor to The Enterprise Aluminum Company, Massillon, Ohio, a corporation of Ohio
Filed Aug. 14, 1961, Ser. No. 66,319
Term of patent 7 years
(Cl. D44—26)



192,178
DISHWASHER
Harrison K. Linger, Wheaton, Ill., assignor to General Electric Company, a corporation of New York
Filed Sept. 25, 1961, Ser. No. 66,845
Term of patent 14 years
(Cl. D49—1)



192,179
FURNITURE KNOB OR SIMILAR ARTICLE
Vytant P. Aleks, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Sept. 23, 1960, Ser. No. 62,252
Term of patent 14 years
(Cl. D50—3)



192,180
BEVERAGE VENDING MACHINE
Clare E. Hodgman, Mamaroneck, N.Y., assignor to The Coca-Cola Company, Atlanta, Ga., a corporation of Delaware
Filed Nov. 20, 1959, Ser. No. 58,413
Term of patent 14 years
(Cl. D52—3)



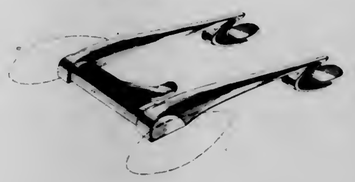
192,181
SURFACE FINISH GAUGE
Cyrus B. Kurtz, 3372 Mayfield Road, Cleveland, Ohio
Filed June 15, 1959, Ser. No. 56,337
Term of patent 7 years
(Cl. D52—6)



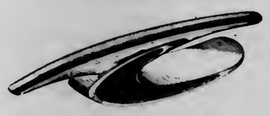
192,182
COMBINED BOAT LIGHT AND ROPE CLEAT
Alexis de Sakhnoffsky, Grand Rapids, Mich., assignor to Attwood Corporation, a corporation of Michigan
Filed Apr. 13, 1960, Ser. No. 60,170
Term of patent 3½ years
(Cl. D54—11)



192,183
BOW HANDLE
Alexis de Sakhnoffsky, Grand Rapids, Mich., assignor to Attwood Corporation, a corporation of Michigan
Filed Apr. 13, 1960, Ser. No. 60,172
Term of patent 3½ years
(Cl. D54—11)



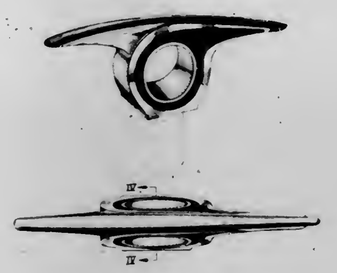
192,184
CLEAT
Alexis de Sakhnoffsky, Grand Rapids, Mich., assignor to Attwood Corporation, a corporation of Michigan
Filed Apr. 13, 1960, Ser. No. 60,174
Term of patent 3½ years
(Cl. D54—11)



192,185
BOAT HOOK FOR SKI TOW ROPE
Alexis de Sakhnoffsky, Grand Rapids, Mich., assignor to Attwood Corporation, a corporation of Michigan
Filed Apr. 13, 1960, Ser. No. 60,177
Term of patent 3½ years
(Cl. D54—11)



192,186
EYE CLEAT
Alexis de Sakhnoffsky, Grand Rapids, Mich., assignor to Attwood Corporation, a corporation of Michigan
Filed Apr. 13, 1960, Ser. No. 60,178
Term of patent 3½ years
(Cl. D54—11)



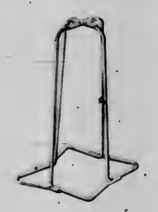
192,187
INFANT'S FEEDING SPOON OR SIMILAR ARTICLE
Estelle Kalter, New York, N.Y.
(300 Lenox Road, Brooklyn, N.Y.)
Filed Jan. 5, 1961, Ser. No. 63,454
Term of patent 14 years
(Cl. D54—12)



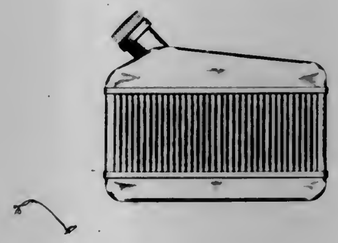
192,188
BRACKET FOR CONVERTING A PORTABLE POWER DRIVE INTO A PIPE MACHINE
James Lake, Jr., Brooklyn, N.Y., assignor to New York Plumbers' Specialties Co., Inc., Bronx, N.Y., a corporation of New York
Filed Apr. 3, 1961, Ser. No. 64,580
Term of patent 14 years
(Cl. D54—13)



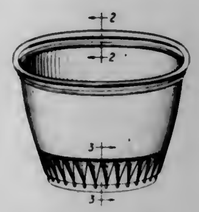
192,189
WIRE COIL CARRIER
Robert A. McMasters, Birmingham, Ala., assignor to Southeastern Metals Company
Filed June 9, 1960, Ser. No. 60,907
Term of patent 14 years
(Cl. D58—5)



192,190
BOTTLE
Clifford R. Wheeler, Agawam, Mass., assignor to Custom Plastics Corporation, Chicopee, Mass., a corporation
Filed May 18, 1961, Ser. No. 65,220
Term of patent 14 years
(Cl. D58—6)



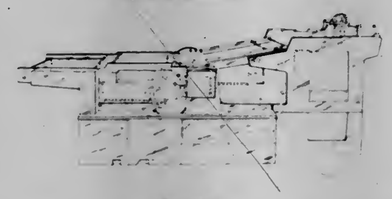
192,191
CUP
Samuel Do Chung Han, Leonia, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed May 13, 1960, Ser. No. 60,570
Term of patent 14 years
(Cl. D58—11)



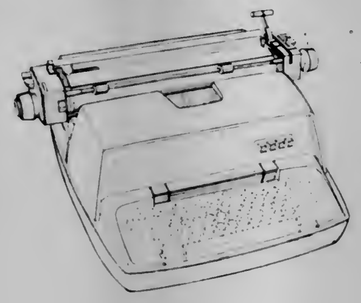
192,192
COMBINED PITCHER AND DISPENSING CLOSURE
Earl S. Tupper, Smithfield, R.I., assignor to Rexall Drug and Chemical Company, Los Angeles, Calif., a corporation of Delaware
Filed Jan. 4, 1960, Ser. No. 58,917
Term of patent 14 years
(Cl. D58—26)



192,193
PRINTING PRESS OR SIMILAR ARTICLE
Donald John Behnk, Allison Park, Pa., assignor to Miller Printing Machinery Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 14, 1959, Ser. No. 57,524
Term of patent 14 years
(Cl. D64—11)



192,194
TYPEWRITER
David O. Chase, Camillus, and Philip H. Stevens, Syracuse, N.Y., assignors to Smith-Corona Marchant Inc., Syracuse, N.Y., a corporation of New York
Filed Jan. 31, 1961, Ser. No. 63,777
Term of patent 14 years
(Cl. D64—11)



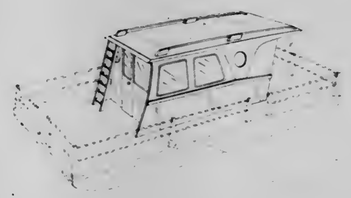
192,195
AIRCRAFT
Wieslaw Zenon Stepniewski, Springfield, Pa., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Oct. 18, 1960, Ser. No. 62,636
Term of patent 14 years
(Cl. D71—1)



192,196
BOAT HULL
Donald M. Smith, 9001 Imperial Ave., Garden Grove, Calif.
Filed Apr. 20, 1959, Ser. No. 55,582
Term of patent 14 years
(Cl. D71—1)



192,197
HOUSEBOAT
Ormond L. Luger, 9612 Oakland Ave., and Rennold J. Luger, 4505 Belvidere Lane, both of Minneapolis, Minn.
Filed Dec. 22, 1960, Ser. No. 63,298
Term of patent 14 years
(Cl. D71—1)



192,198
REFRIGERATED FOOD MERCHANDISING CABINET
Robert B. Norris, Minneapolis, Minn., assignor to Schaefer, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 8, 1960, Ser. No. 62,779
Term of patent 14 years
(Cl. D80—11)

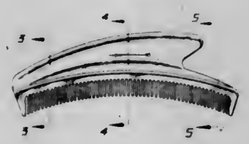
192,199
OUTDOOR GRILL
Lester E. Watson, P.O. Box 3307, Station A, Tyler, Tex., and Jasper L. Corley, 216 N. 54th St., Birmingham, Ala.
Filed July 7, 1959, Ser. No. 56,686
Term of patent 14 years
(Cl. D81—10)



192,200
HEATER
Murray Wilhoite, Nashville, Tenn., assignor to Temco, Inc., Nashville, Tenn., a corporation of Tennessee
Filed Dec. 9, 1960, Ser. No. 63,168
Term of patent 14 years
(Cl. D81—10)



192,201
COMB
Elmer Cave Rolls, 5576 Alberta St., Vancouver, British Columbia, Canada
Filed Aug. 14, 1961, Ser. No. 66,320
Term of patent 7 years
(Cl. D86—8)



192,202
AQUARIUM COVER
Allan H. Willinger, 56 Gail Drive, New Rochelle, N.Y.
Filed Sept. 6, 1961, Ser. No. 66,622
Term of patent 14 years
(Cl. D91—2)



192,203
NARROW WOVEN FABRIC OR SIMILAR ARTICLE
Inge Petsche, Old Greenwich, Conn., assignor to The Barmen Lace Corporation, Stamford, Conn., a corporation of New York
Filed Sept. 19, 1961, Ser. No. 66,754
Term of patent 7 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 6TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Holmes, Thomas G., to Soroban Engineering, Inc. Tally instruction apparatus for automatic digital computers. Re. 25,120, 2–6–62, Cl. 235—157.

Soroban Engineering, Inc.: *See*—
Holmes, Thomas G. Re. 25,120.

LIST OF DESIGN PATENTEES

Aleks, Vytant P., to National Lock Co. Furniture knob or similar article. 192,179, 2–6–62, Cl. D50—3.
Alvaney, Allan J., to Sears, Roebuck and Co. Toy car wrecker. 192,171, 2–6–62, Cl. D34—15.
Amdal, Dagfinn O., to National Lock Co. Combined lift handle and latch for locker doors. 192,161, 2–6–62, Cl. D10—8.
American Can Co.: *See*—
Han, Samuel D. 192,191.
American Telephone and Telegraph Co.: *See*—
Turner, Henry G. 192,163.
Attwood Corp.: *See*—
De Sakhnoffsky, Alexis. 192,182–6.
Barmen Lace Corp., The: *See*—
Petsche, Inge. 192,203.
Barron, William S., to Gladwin Plastics, Inc. Sign for a telephone booth or the like. 192,156, 2–6–62, Cl. D1—12.
Behnk, Donald J., to Miller Printing Machinery Co. Printing press or similar article. 192,193, 2–6–62, Cl. D64—11.
Bevilacqua, Ernest M.: *See*—
Noyes, Eliot F., and Bevilacqua. 192,167.
Blickman, S., Inc.: *See*—
Golden, Philip. 192,164.
Boeing Airplane Co.: *See*—
Stepniewski, Wieslaw Z. 192,195.
Bopp-Decker Plastics, Inc.: *See*—
Trombley, Bertrand N. 192,174.
Trombley, Bertrand N. 192,175.
Brandon, Joseph J., to Coach & Car Equipment Corp. Vehicle seat. 192,165, 2–6–62, Cl. D15—8.
Celotex Corp., The: *See*—
De Leon, Sharon. 192,166.
Chase, David O., and P. H. Stevens, to Smith-Corona Marchant Inc. Typewriter. 192,194, 2–6–62, Cl. D64—11.
Coach & Car Equipment Corp.: *See*—
Brandon, Joseph J. 192,165.
Coca-Cola Co., The: *See*—
Hodgman, Clare E. 192,180.
Corley, Jasper L.: *See*—
Watson, Lester E., and Corley. 192,199.
Custom Plastics Corp.: *See*—
Wheeler, Clifford R. 192,190.
De Leon, Sharon, to The Celotex Corp. Ceiling tile. 192,166, 2–6–62, Cl. D18—2.
De Sakhnoffsky, Alexis, to Attwood Corp. Combined boat light and rope cleat. 192,182, 2–6–62, Cl. D54—11.
De Sakhnoffsky, Alexis, to Attwood Corp. Bow handle. 192,183, 2–6–62, Cl. D54—11.
De Sakhnoffsky, Alexis, to Attwood Corp. Cleat. 192,184, 2–6–62, Cl. D54—11.
De Sakhnoffsky, Alexis, to Attwood Corp. Boat hook for ski tow rope. 192,185, 2–6–62, Cl. D54—11.
De Sakhnoffsky, Alexis, to Attwood Corp. Eye cleat. 192,186, 2–6–62, Cl. D54—11.
Dorfman, Robert. Collapsible cap or the like. 192,158, 2–6–62, Cl. D3—13.
Electrolux Corp.: *See*—
Johanson, Ralph A. W. 192,160.
Enterprise Aluminum Co., The: *See*—
Krause, Richard F. 192,177.
General Electric Co.: *See*—
Linger, Harrison K. 192,178.
Gladwin Plastics, Inc.: *See*—
Barron, William S. 192,156.
Golden, Philip, to S. Blickman, Inc. Tray slide. 192,164, 2–6–62, Cl. D14—3.
Han, Samuel D., to American Can Co. Cup. 192,191, 2–6–62, Cl. D58—11.
Hodgman, Clare E., to The Coca-Cola Co. Beverage vending machine. 192,180, 2–6–62, Cl. D52—3.
Höwe, August W. Kitchen timer. 192,173, 2–6–62, Cl. D42—7.
Iorio, Ettore. Unitary sole and heel for footwear. 192,159, 2–6–62, Cl. D7—5.
Johanson, Ralph A. W., to Electrolux Corp. Vacuum cleaner nozzle or the like. 192,160, 2–6–62, Cl. D9—2.
Kalter, Estelle. Infant's feeding spoon or similar article. 192,187, 2–6–62, Cl. D54—12.
Knox, Charles E., Jr. Service office building for filling station islands. 192,162, 2–6–62, Cl. D13—1.
Kovac, Esther R. Toy sea horse. 192,170, 2–6–62, Cl. D34—2.
Krause, Richard F., to The Enterprise Aluminum Co. Coffee urn. 192,177, 2–6–62, Cl. D44—26.
Kurtz, Cyrus B. Surface finish gauge. 192,181, 2–6–62, Cl. D52—6.
Lake, James, Jr., to New York Plumbers' Specialties Co., Inc. Bracket for converting a portable power drive into a pipe machine. 192,188, 2–6–62, Cl. D54—13.
Linger, Harrison K., to General Electric Co. Dishwasher. 192,178, 2–6–62, Cl. D49—1.
Luger, Ormond L. and R. J. Houseboat. 192,197, 2–6–62, Cl. D71—1.
Luger, Rennoid J.: *See*—
Luger, Ormond L. and R. J. 192,197.
Machlett Laboratories, Inc., The: *See*—
Noyes, Eliot F., and Bevilacqua. 192,167.
McMasters, Robert A., to Southeastern Metals Co. Wire coil carrier. 192,189, 2–6–62, Cl. D58—5.
Miller Printing Machinery Co.: *See*—
Behnk, Donald J. 192,193.
Molnar, Jozsef. Wall shelf. 192,169, 2–6–62, Cl. D33—18.
National Lock Co.: *See*—
Aleks, Vytant P. 192,179.
Amdal, Dagfinn O. 192,161.
New York Plumbers' Specialties Co., Inc.: *See*—
Lake, James, Jr. 192,188.
Nissen, Bryn H. Dispensing head for beer and the like. 192,157, 2–6–62, Cl. D2—3.
Norris, Robert B., to Schaefer, Inc. Refrigerated food merchandising cabinet. 192,198, 2–6–62, Cl. D80—11.
Noyes, Eliot F., and E. M. Bevilacqua, to The Machlett Laboratories, Inc. Housing for an X-ray tube. 192,167, 2–6–62, Cl. D26—8.
O'Shea, William J. Religious plaque or similar article. 192,168, 2–6–62, Cl. D29—23.
Petsche, Inge, to The Barmen Lace Corp. Narrow woven fabric or similar article. 192,203, 2–6–62, Cl. D92—1.
Phonex Instrument Co., Inc.: *See*—
Zimmerman, Jack J. 192,172.
Rexall Drug and Chemical Co.: *See*—
Tupper, Earl S. 192,192.
Rolls, Elmer C. Comb. 192,201, 2–6–62, Cl. D86—8.
Rosenthal-Porzellan Aktiengesellschaft: *See*—
Wilnblad, Bjørn. 192,176.
Schaefer, Inc.: *See*—
Norris, Robert B. 192,198.
Sears, Roebuck and Co.: *See*—
Alvaney, Allan J. 192,171.
Smith-Corona Marchant Inc.: *See*—
Chase, David O., and Stevens. 192,194.
Smith, Donald M. Boat hull. 192,196, 2–6–62, Cl. D71—1.
Southeastern Metals Co.: *See*—
McMasters, Robert A. 192,189.
Stepniewski, Wieslaw Z., to Boeing Airplane Co. Aircraft. 192,195, 2–6–62, Cl. D71—1.
Stevens, Philip H.: *See*—
Chase, David O., and Stevens. 192,194.
Temco, Inc.: *See*—
Wilhoite, Murray. 192,200.
Trombley, Bertrand N., to Bopp-Decker Plastics, Inc. Cup. 192,174, 2–6–62, Cl. D44—9.
Trombley, Bertrand N., to Bopp-Decker Plastics, Inc. Bowl. 192,175, 2–6–62, Cl. D44—15.
Tupper, Earl S., to Rexall Drug and Chemical Co. Combined pitcher and dispensing closure. 192,192, 2–6–62, Cl. D58—26.
Turner, Henry G., to American Telephone and Telegraph Co. Telephone enclosure. 192,163, 2–6–62, Cl. D13—1.
Watson, Lester E., and J. L. Corley. Outdoor grill. 192,199, 2–6–62, Cl. D81—10.
Wheeler, Clifford R., to Custom Plastics Corp. Bottle. 192,190, 2–6–62, Cl. D58—6.
Wilnblad, Bjørn, to Rosenthal-Porzellan Aktiengesellschaft. Plate or similar article. 192,176, 2–6–62, Cl. D44—15.
Wilhoite, Murray, to Temco, Inc. Heater. 192,200, 2–6–62, Cl. D81—10.
Willinger, Allan H. Aquarium cover. 192,202, 2–6–62, Cl. D91—2.
Zimmerman, Jack J., to Phonex Instrument Co., Inc. Grass trimmer. 192,172, 2–6–62, Cl. D40—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 6TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See*—
Schwalm, Glendon H., and Ullman. 3,019,679.

Abbott Laboratories: *See*—
Osterberg, Arnold E. 3,020,201.
Schock, Richard U., Jr., Hasbrouck, and Dickson. 3,020,283.

Abrams, Hardin T.: *See*—
Pierce, Roger J., and Abrams. 3,020,397.

Abramson, Franz W., and J. H. Gilson, to General Motors Corp. Exhaust system for vehicle internal combustion engine. 3,019,847, 2-6-62, Cl. 180—64.

Abt, Clifford F., and R. Y. Miner, to American Bosch Arma Corp. Torpedo intercept calculating apparatus. 3,019,969, 2-6-62, Cl. 235—61.5.

Accurate Specialties, Inc.: *See*—
Diamond, Lawrence H. 3,019,485.

Adams, Robert T.: *See*—
Van Vechten, Richard K., and Adams. 3,020,416.

Adcock, Willis A., and R. C. Sangster, to Texas Instruments Inc. Method of preparing materials of high purity. 3,020,128, 2-6-62, Cl. 23—223.5.

Addressograph-Multigraph Corp.: *See*—
Lake, Francis K. 3,019,645.
Lake, Francis K. 3,019,727.

Adkins, Loren N. Scale reducing device for sighting instruments. 3,019,531, 2-6-62, Cl. 33—67.

Advanced Oil Tools, Inc.: *See*—
Edwards, Edwin D., and Hach. 3,019,731.

Aerojet-General Corp.: *See*—
Brown, Lloyd H. 3,020,261.
Gold, Marvin H., and Linden. 3,020,318.
Gongwer, Calvin A. 3,019,687.
Klager, Karl. 3,020,317.
Klager, Karl, and Linden. 3,020,319.
Schultz, Robert D., and Randolph. 3,020,127.

Aetna Steel Products Corp.: *See*—
Bohnsack, John A. 3,019,862.

Agency of Industrial Science and Technology, Ministry of International Trade and Industry: *See*—
Munakata Motosuke, and Asahara. 3,020,238.

Agens, Maynard C., to General Electric Co. Seal material. 3,020,056, 2-6-62, Cl. 277—237.

Ahsmann, Gerardus J. M., to North American Philips Co., Inc. Glow discharge tubes. 3,020,436, 2-6-62, Cl. 313-4-213.

Ainsworth, Wm., & Sons, Inc.: *See*
Baur, Fritz. 3,019,846.

Air Control Products, Inc.: *See*—
Leigh, Robert L. 3,019,836.

Aircraft Radio Corp.: *See*—
Kurtz, Donald P. 3,020,491.

Aircushion Patents Corp.: *See*—
Bloom, Dolores F. 3,019,839.

Airheart Products Inc: *See*—
Marsh, Eugene W. 3,019,859.

Air Reduction Co., Inc.: *See*—
Miller, Henry A., Jr. 3,019,804.
Onishi, Tsuneo, and Kobayashi. 3,020,383.

Ajero, Fortunato S., to A. I. Kegan, as trustee. Mobile loading ramps. 3,019,917, 2-6-62, Cl. 214—38.

Alberts, Thomas W.: *See*—
Downing, Francis P., and Alberts. 3,020,160.

Albinson, Harold H., and J. F. Voss, to General Motors Corp. Transmission. 3,019,671, 2-6-62, Cl. 74—758.

Alderson, Thomas, to E. I. du Pont de Nemours and Co. Process for the preparation of alcohols, aldehydes and ketones. 3,020,314, 2-6-62, Cl. 260—597.

Aldridge, William D., Jr. Audio selective fading system. 3,020,343, 2-6-62, Cl. 179—1.

Alexander, Paul, to Continental Can Co., Inc. Art of vaporizing materials. 3,020,177, 2-6-62, Cl. 117—107.

All American Engineering Co.: *See*—
Haber, Robert J. 3,020,010.

Allard, Pierre J.-M. T. Hopper capable of being emptied in a regulatable manner. 3,019,949, 2-6-62, Cl. 222—502.

Allen, Clifton H., to Western Filter Co. Supporting structures for sewage clarification units. 3,019,906, 2-6-62, Cl. 210—524.

Allen, John G., to Phillips Petroleum Co. Isomerization of hydrocarbons. 3,020,322, 2-6-62, Cl. 260—683.65.

Allen, John W., to Stanray Corp. Fork lift unit. 3,019,930, 2-6-62, Cl. 214—731.

Allen, John W., to Stanray Corp. Lift conveyor. 3,020,059, 2-6-62, Cl. 280—43.23.

Allen, Joseph C.: *See*—
Harlan, Don L., Battle, and Allen. 3,019,838.

Allen-Bradford, Inc.: *See*—
Jacobson, Edward, and Siegelman. 3,020,548.

Allen, R. C., Business Machines, Inc.: *See*
Mathews, John W. 3,019,967.

Allgauer Maschinenbau G.m.b.H.: *See*—
Weiss, Raphael. 3,019,587.

Allgemeine Elektricitats-Gesellschaft: *See*—
Kalberlah, Fritz. 3,020,393.

Allied Chemical Corp.: *See*—
Curtis, Omer E., Jr. 3,020,249.
Schuber, John. 3,020,196.
Schuber, John. 3,020,197.
Wethly, Frans. 3,020,138.
Woodlock, Paul B., Santimauro, and Vesce. 3,020,279.

Allinquant, Fernand S. Fluid-tight joint protected against dust for telescopic shock-absorbers of automobile vehicles. 3,020,055, 2-6-62, Cl. 277—187.

Allis-Chalmers Mfg. Co.: *See*—
Millar, Donald O., and Kraemer. 3,020,053.

Alloyd Electronics Corp.: *See*—
Basche, Malcolm, Comerford, Doyle, and Hetherington. 3,020,387.

Almer, Friedrich H. R.: *See*—
Blank, Hans Hinrich, van Zanten, Kuiper and Almer. 3,020,224.

Alpura Aktiengesellschaft: *See*—
Loliger, Willi. 3,020,120.

Alt, Carl G.: *See*—
MacLeod, David E., and Alt. 3,019,718.

Ambros, Hans, to Gunther Wagner. Writing instrument, more particularly a ball-point pen. 3,019,767, 2-6-62, Cl. 120—42.03.

Amchem Products, Inc.: *See*—
Douty, Alfred. 3,019,799.

American Bosch Arma Corp.: *See*—
Abt, Clifford F., and Miner. 3,019,969.

American Brake Shoe Co.: *See*—
Stephenson, Ferrald D. 3,019,537.

American Can Co.: *See*—
Asman, Norman J., and Huss. 3,019,958.
Skowronski, George V. 3,019,959.

American Cyanamid Co.: *See*—
Ellenbogen, Leon, and Hawkins. 3,020,204.
Magrane, John K., and Layman. 3,020,255.
Marx, Michael, and Smith. 3,020,275.

American Machine & Foundry Co.: *See*—
Johnson, James V., Jr., Groppe, Hibbits, and Phillips. 3,019,574.
Phillips, Malcolm E., Jr., and Curlee. 3,019,581.

American Machine and Metals, Inc.: *See*—
Hoover, Clinton E. 3,019,903.

American Motors Corp.: *See*—
Hatch, Arthur R. 3,019,468.

American Optical Co.: *See*—
French, Robert W., Jr., Maier, and Brookhart. 3,019,708.
Schenk, George F. 3,019,699.
Wilkinson, Leonard A. 3,019,705.

American Radiator & Standard Sanitary Corp.: *See*—
Martina, Eugene F. 3,020,431.
Patterson, George C. 3,019,856.

American Telephone and Telegraph Co.: *See*—
Garrison, Richard J., Henches, and Spiro. 3,020,525.

American Thread Co., The: *See*—
Curry, Malcolm. 3,019,943.

American Typesetting Corp.: *See*—
Karasiewicz, Edward S. 3,019,450.

Ampex Corp.: *See*—
Barry, Leonard D. 3,020,356.
Pfost, Robert F. 3,020,359.

Amsco Packaging Machinery, Inc.: *See*—
Sylvester, John D., and Keenan. 3,019,583.

Anderson, John H.: *See*—
Miller, Teddy, Anderson, and Rosbe. 3,019,938.

Anderson, John W. Take-apart socket for electric lamps. 3,020,512, 2-6-62, Cl. 339—67.

Anderson, Lloyd E., Sr., to Pittsburgh-Des Moines Steel Co. Floating seal for tanks. 3,019,935, 2-6-62, Cl. 220—26.

Ankario, Victor E. Flow stopping apparatus for gas mains. 3,019,819, 2-6-62, Cl. 138—93.

Anker-Phoenix Nahmaschinen A.G.: *See*—
Knobloch, Friedrich. 3,019,749.

Appleton, Arthur I. Pulling elbow. 3,020,332, 2-6-62, Cl. 174—72.

Appleton, Norman J., to General Precision, Inc. Alpha-numerical display means. 3,020,531, 2-6-62, Cl. 340—324.

AquaMatic Inc.: *See*—
Whitlock, Robert A. 3,019,817.

Arenco Aktiebolag: *See*—
Telling, Torbern, and Bengtsson. 3,020,538.

Argentieri, Michael A., and F. E. Lind, to International Telephone and Telegraph Corp. Adjustable delay line. 3,020,497, 2-6-62, Cl. 333—30.

Arguimbau, Vincent C.: *See*—
Gonzales-Pelaez, Manuel. 3,020,167.

Arlitz, Benjamin: *See*—
Kauffman, Robert T., and Arlitz. 3,019,534.

Armco Steel Corp.: *See*—
Word, William W., Jr. 3,020,069.

Arnett, Samuel E.: *See*—
German, Richard C., Arnett, and Roberts. 3,019,597.

Arnold, Ernest A., and A. W. Pipes. Underwater casing, including camera control means. 3,019,715, 2-6-62, Cl. 95—11.

Arthur, Ronald H.: *See*—
Cetran, Louis, Arthur, and Holland. 3,019,881.

Arvidson, Bengt A., to Miller Wrapping & Sealing Machine Co. Article wrapping structure. 3,019,584, 2-6-62, Cl. 53—390.

Arvin Industries, Inc.: *See*—
Ludlow, Edmund, Irwin, and Brighton. 3,020,379.

Asahara, Junpei: *See*—
Munakata, Motosuke, and Asahora. 3,020,238.

Asbury, Benjamin R. Wide back tension plate for bread wrapping machine. 3,019,580, 2-6-62, Cl. 53—230.

Ash, Eric A., and J. D. Pattenden, to International Standard Electric Corp. Coupled waveguides. 3,020,498, 2-6-62, Cl. 333—33.

Ashbrook, Richard L.: *See*—
Horton, Robert A., Ashbrook, and Feagin. 3,019,497.

Ashby, Eugene C., W. E. Foster, J. R. Mangham, and T. H. Pearson, to Ethyl Corp. Aluminum acetylenic compounds. 3,020,298, 2-6-62, Cl. 260—448.

Askania-Werke A.G.: *See*—
Graf, Anton. 3,019,655.

Asman, Norman J., and W. S. Huss, to American Can Co. Hinge cover carton. 3,019,958, 2-6-62, Cl. 229—31.

Atlantic Refining Co., The: *See*—
Condo, Albert C., Jr. 3,020,137.
Russell, Donald H. 3,020,251.

Atlas Copco Aktiebolag: *See*—
Sjöstrand, Fritlof S., Ottosson, and Zernell. 3,019,673.

Aulbaugh, Johnnie M., C. J. Kramis, and H. T. Siefen, to E. I. du Pont de Nemours and Co. Process for preparing phenyl carbamyl chlorides. 3,020,313, 2-6-62, Cl. 260—544.

Autoboard Corp., Inc.: *See*—
Glaze, John W., Jr., and Wilson. 3,019,951.

Automatic Canteen Co. of America: *See*—
Mueller, Richard J. 3,019,946.

Autosonics, Inc.: *See*—
Rand, Burton. 3,019,800.

Avco Corp.: *See*—
Franz, Anselm. 3,019,606.

Avro Aircraft Ltd.: *See*—
Frost, John C. M. 3,020,002.
Frost, John C. M., and Williams. 3,020,003.

Aymar, Robert H., and E. R. Weiner, to We-Mar, Inc. Foot control valve device. 3,019,810, 2-6-62, Cl. 37—495.

B.B. Chemical Co.: *See*—
Phillips, Ferdinand N., Jr., Morris, and Chaplick. 3,020,169.

Baak, Albert E. Furnace fan control. 3,020,371, 2-6-62, Cl. 200—122.

Babcock & Wilcox, Ltd.: *See*—
Campbell, Iain B. 3,019,990.
Dumpleton, Owen W. 3,020,027.
Wootton, William R. 3,020,225.

Baccarelli, José M. Underlining device for typewriter machines. 3,019,880, 2-6-62, Cl. 197—113.

Bache, John K., and G. German. Spring cushioning devices. 3,020,037, 2-6-62, Cl. 267—1.

Backhaus, Karl E., to Diehl KG. Track chain for vehicles. 3,020,093, 2-6-62, Cl. 305—57.

Backus, Alfred J.: *See*—
Dale, Robert F., Backus, and Kezell. 3,020,208.

Bailey, Donald L., and R. M. Pike, to Union Carbide Corp. Nitroaryifluorosilanes and process for their production. 3,020,302, 2-6-62, Cl. 260—448.2.

Bailey, Francis M., and E. B. Canfield, to General Electric Co. Control systems for positioning objects having high inertia. 3,019,711, 2-6-62, Cl. 89—41.

Bailey, Frazer A., deceased, Wells Fargo Bank American Trust Co. and H. Phleger, executors. Vertically adjustable ship decks. 3,019,757, 2-6-62, Cl. 114—72.

Bailey Meters & Controls Ltd.: *See*—
Wornwick, Bernard A. 3,019,650.

Bakan, Joseph A., D. J. Striley, and T. Malerson, to The National Cash Register Co. Pressure-sensitive record and transfer sheet material. 3,020,171, 2-6-62, Cl. 117—36.2.

Baker, William O., and P. D. Prizler, to Swimquip, Inc. Filter element and assembly. 3,019,905, 2-6-62, Cl. 210—486.

Bakke, Brownie S. Knot removing machine. 3,019,824, 2-6-62, Cl. 144—2.

Balass, Valentin. Hydraulic device. 3,019,770, 2-6-62, Cl. 121—38.

Baldwin-Lima-Hamilton Corp.: *See*—
Cozzo, Giuseppe, and Palmer. 3,019,669.

Baldwin Piano Co., The: *See*—
Jones, Edward M. 3,020,534.

Baldwin, Robert P.: *See*—
Eckert, Raymond H., and Baldwin. 3,019,995.

Ballard, Elmer L. Writing aid. 3,019,769, 2-6-62, Cl. 120—103.

Bangert, Robert J., and T. L. Staley, to General Electric Co. Means for strengthening an integrally formed joint. 3,020,333, 2-6-62, Cl. 174—94.

Bann, Michael S., to Collins Radio Co. Knob. 3,019,667, 2-6-62, Cl. 74—528.

Barber, Earle W. and E. W. Barber, Jr., ½ to J. W. Maxson, ¼ to L. L. Matthews, and ¼ to J. A. Clancy. Flaw-detecting apparatus and method. 3,019,897, 2-6-62, Cl. 209—81.

Barber, Earle W., Jr.: *See*—
Barber, Earle W. and E. W. Barber, Jr. 3,019,897.

Barber, Howard B., to Peabody Seating Co., Inc. Desk-chair combination unit. 3,020,086, 2-6-62, Cl. 297—170.

Barberis, Giuseppe: *See*—
Gechele, Giovanni B., Nenx, and Barberis. 3,020,284.

Barden Corp., The: *See*—
Mims, Bruce L. 3,020,106.

Barfod, Frederik, to The Bendix Corp. Fuel supply system. 3,019,779, 2-6-62, Cl. 123—119.

Bariffi, Herbert F., to Hughes Aircraft Co. Inertial time delay switch. 3,020,367, 2-6-62, Cl. 200—61.53.

Barlow, Joel H.: *See*—
Bishop, Leonard J., and Barlow. 3,019,741.

Barnes Engineering Co.: *See*—
Merlen, Monty M. 3,020,407.

Barnhart, Carlton L. Bottled drink machine. 3,019,942, 2-6-62, Cl. 221—125.

Barnhizer, Harold K., and L. N. Williams, to General Motors Corp. Lamp assembly. 3,020,394, 2-6-62, Cl. 240—41.

Barr, John T., to Pennsalt Chemicals Corp. Fluorinated organic compounds and polymers thereof. 3,020,267, 2-6-62, Cl. 260—92.1.

Barringer, Anthony R., to Barringer Research Ltd. Method and apparatus for the detection of ore bodies. 3,020,471, 2-6-62, Cl. 324—6.

Barringer Research Ltd.: *See*—
Barringer, Anthony R. 3,020,471.

Barry, Leonard D., to Ampex Corp. Transversely recorded tape. 3,020,356, 2-6-62, Cl. 179—100.2.

Bartelt Engineering Co., Inc.: *See*—
Bartelt, Harold L. 3,019,884.

Bartelt, Harold L., to Bartelt Engineering Co., Inc. Belt drive for check weigher. 3,019,884, 2-6-62, Cl. 198—39.

Barton, Leon M., and E. C. Nordell, to General Electric Co. Synchronization network. 3,020,482, 2-6-62, Cl. 328—55.

Basche, Malcolm, M. F. Comerford, N. E. Doyle, Jr., and J. S. Hetherington, to Alloyd Electronics Corp. Electron beam heating devices. 3,020,387, 2-6-62, Cl. 219—50.

Batesville Casket Co., Inc.: *See*—
Hillenbrand, Daniel A., and Dieckmann. 3,019,920.

Battle, Joel A., Jr.: *See*—
Harlan, Don L., Battle, and Allen. 3,019,838.

Bauer, Alfred. Method of pressing by rolling by means of an embossed wheel and pressing machine for carrying out the said method. 3,019,723, 2-6-62, Cl. 101—5.

Bauer Bros. Co., The: *See*—
Woodruff, Maurice D. 3,019,901.

Bauman, Harry D.: *See*—
Casciani, Ferri, and Bauman. 3,020,195.

Baur, Fritz, to Wm. Ainsworth & Sons, Inc. Sensitivity compensated balance. 3,019,846, 2-6-62, Cl. 177—246.

Bausch & Lomb Inc.: *See*—
Davis, Earl K. 3,020,165.
Meltzer, Robert J. 3,019,694.
Straat, Harold W. 3,019,707.

Beati, Enrico: *See*—
Natta, Giulio, Beati, and Severini. 3,020,174.

Bayless, Frank K., to General Electric Co. Rug scrubbing tool attachment particularly for floor polishers. 3,019,465, 2-6-62, Cl. 15—180.

Bean, John W., to The Fuller Brush Co. Hand mirror. 3,019,710, 2-6-62, Cl. 88—89.

Beard, Richard B., and K. C. Hudson, to Minneapolis-Honeywell Regulator Co. Electrical fluid-flow measuring apparatus. 3,019,647, 2-6-62, Cl. 73—204.

Beaunit Mills, Inc.: *See*—
Cox, Norman L., and Nicoll. 3,019,509.

Bechmann, Rudolf, to United States of America, Army. Piezoelectric crystal. 3,020,424, 2-6-62, Cl. 310—9.5.

Becker, Carl: *See*—
Wegmann, Jacques, and Becker. 3,020,166.

Becker, Myron, to Socony Mobil Oil Co., Inc. Acetylenic glycol deicer. 3,020,136, 2-6-62, Cl. 44—77.

Becker, Willi, to Arthur Pfeiffer G.m.b.H. Molecular pumps. 3,020,102, 2-6-62, Cl. 308—77.

Beduhn, Daniel E., and R. E. Wernecke, to Manitowoc Engineering Corp. Distillation apparatus and a method of operating same. 3,020,214, 2-6-62, Cl. 202—181.

Beem, Donald W., and F. H. Wallace, to North American Aviation, Inc. Ejection seat. 3,020,011, 2-6-62, Cl. 244—141.

Beever, Jack, to Jerrold Electronics Corp. Broadband sheet antenna. 3,020,550, 2-6-62, Cl. 343—795.

Behrends, Jurgen, O. Schweitzer, W. Kern, and H. Hopff, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Process for the production of eupolyoxymethylenes with sulfur catalyst. 3,020,264, 2-6-62, Cl. 260—67.

Behrle, William L. Double nail unit. 3,019,686, 2-6-62, Cl. 85—10.

Beiser, Leo, to Polarad Electronics Corp. Coaxial cavity tracking means and method. 3,020,500, 2-6-62, Cl. 333—82.

Beiser, Leo, and S. Schneider, to Polarad Electronics Corp. Coaxial cavity tracking means. 3,020,499, 2-6-62, Cl. 333—82.

Belejack, Stephen. Merchandise display rack. 3,019,907, 2-6-62, Cl. 211—49.

Bell Telephone Laboratories, Inc.: *See*—
Black, Harold S., and Edson. 3,020,350.
Cath, Pieter G. 3,020,348.
Jacobson, Oscar D. 3,019,822.
Jacobson, Oscar D. 3,020,369.
Kohman, Girard T., and McAfee. 3,019,853.
Kuch, Frederick C. 3,020,510.
Li, Tingye. 3,020,543.
Logan, Mason A. 3,020,479.
Lovecky, Albert J. 3,019,517.
Miller, Stewart E. 3,020,495.
Prestigiacomo, Anthony J. 3,020,344.
Riley, Robert M. 3,020,334.

Bell Trading Post, Ltd.: *See*—
Placco, Oscar F., Stone, and Keyes. 3,019,503.

Beloit Iron Works: *See*—
Deane, Robert A. 3,019,903.
Hornbostel, Lloyd. 3,019,511.

Bendix Corp., The: *See*—
Barfod, Frederik. 3,019,779.
Bickelhaupt, Roy E., and Masterson. 3,019,514.
Bunger, Dennen J. 3,019,607.
German, Richard C., Arnett, and Roberts. 3,019,597.
Larsen, Lester J., and Lewis. 3,019,816.
Troeger, Henry. 3,019,659.
Twaddell, Russell W., and Gregoire. 3,020,449.

Bendix-Westinghouse Automotive Air Brake Co.: *See*—
Murty, Anthony F., and Benedict P. 3,020,094.

Bengtsson, Bengt E. T.: *See*—
Teiling, Torbern, and Bengtsson. 3,020,538.

Bennet, Eugene L., to Laboratory Equipment Corp. Stopcock. 3,019,808, 2–6–62, Cl. 137—246.

Bennett, Orvan J. Flush valve guide. 3,019,449, 2–6–62, Cl. 4—57.

Berberich, Otto W. Racing-horse toy. 3,019,550, 2–6–62, Cl. 46—107.

Berg, Quentin. Terminal for making electrical connections. 3,020,520, 2–6–62, Cl. 339—273.

Berkley Machine Co.: *See*—
Winkler, Richard, and Dünnebier. 3,019,886.
Winkler, Richard and Dünnebier. 3,020,043.

Berliner, Henry A. Propelled surfboard. 3,019,760, 2–6–62, Cl. 115—70.

Berliner, Henry A. Convertible coffee-dining table. 3,020,111, 2–6–62, Cl. 311—3.

Berry, John C. and W. J. Hosiery package. 3,019,572, 2–6–62, Cl. 53—21.

Berry, William J.: *See*—
Berry, John C. and W. J. 3,019,572.

Bertin, Daniel: *See*—
Nomine, Gerard, Bertin, and Tessier. 3,020,296.

Bertinot, Francis. Sizing apparatus. 3,019,898, 2–6–62, Cl. 209—102.

Bessarab, Michael, to General Electric Co. Magnetron circuit apparatus. 3,020,446, 2–6–62, Cl. 315—39.71.

Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung: *See*—
Habermaas, Otto H., and Hoppmann. 3,020,107.

Bethlehem Steel Co.: *See*—
Bigge, Henry C. 3,019,496.

Beyerlein, Herbert, to Durrwerke Aktiengesellschaft. Once-through vapor generator. 3,019,774, 2–6–62, Cl. 122—406.

Bianco, Joseph, to Koppers Co., Inc. Dyeing of expandable polystyrene. 3,020,247, 2–6–62, Cl. 260—2.5.

Bickelhaupt, Roy E., and J. F. Masterson, to The Bendix Corp. Friction lining for brakes, clutches and the like. 3,019,514, 2–6–62, Cl. 29—182.5.

Bigelow-Sanford, Inc.: *See*—
Reinhardt, Henry A., and Parlin. 3,019,508.

Bigge, Henry C., to Bethlehem Steel Co. Vacuum casting apparatus. 3,019,496, 2–6–62, Cl. 22—73.

Binns, Jack N.: *See*—
Engelmann, Richard H. 3,019,640.

Biondo, Frank P., to General Motors Corp. Combined door handle and pull-to for vehicle door. 3,020,076, 2–6–62, Cl. 292—336.3.

Birkenbeul, Robert M.: *See*—
Welbaum, Donald D., and Birkenbeul. 3,019,683.

Birkwel Research and Design Inc.: *See*—
Welbaum, Donald D., and Birkenbeul. 3,019,683.

Birmingham Belting Co., Ltd.: *See*—
Jeffery, Winstone E. P., and Stephens. 3,019,827.

Birum, Gail H., to Monsanto Chemical Co. Phosphorus compounds. 3,020,306, 2–6–62, Cl. 260—461.

Bischoff, Charles A., to Societe des Etablissements Maillet & Bilin. Multiple-spindle automatic lathes. 3,019,510, 2–6–62, Cl. 29—65.

Bishop, Leonard J., and J. H. Barlow, to Mechanical Handling Systems, Inc. Switch structure for conveyor system. 3,019,741, 2–6–62, Cl. 104—104.

Black and Decker Mfg. Co., The: *See*—
Neuhardt, Melvin H. 3,020,430.

Black, Harold S., and J. O. Edson, to Bell Telephone Laboratories, Inc. Pulse code modulation communication system. 3,020,350, 2–6–62, Cl. 179—15.

Blackerby, Comer H. Slide rule. 3,019,973, 2–6–62, Cl. 235—70.

Blank, Hans H., P. G. van Zanten, A. Kuiper, and F. H. R. Almer, to North American Philips Co., Inc. Method and device for applying electron-emissive coatings to coating-supports of indirectly heated thermionic cathodes of electric discharge tubes. 3,020,224, 2–6–62, Cl. 204—181.

Blaw-Knox Co.: *See*—
Robinson, George L. 3,019,775.

Blick, Nico: *See*—
Van den Berge, Hendrik J., Blick, Geleijnse, and van der Maat. 3,019,505.

Bliss, Harvey N., and H. B. Vroom, to Veeder-Root Inc. Automatic numeral wheel aligning mechanism. 3,019,974, 2–6–62, Cl. 235—136.

Blood, Raymond, to William Cotton Ltd. Straight bar knitting machines. 3,019,626, 2–6–62, Cl. 66—89.

Bloom, Dolores F., to Aircushion Patents Corp. Method for relieving hydrostatic pressure in oil recovery from wells. 3,019,839, 2–6–62, Cl. 166—43.

Bloomfield, Dennis G.: *See*—
Clark, Patrick A., Stubbs, and Bloomfield. 3,020,108.

Bloomshurgh, Ralph A., to Philco Corp. Self shielding electron gun and cathode ray tube system including same. 3,020,434, 2–6–62, Cl. 313—76.

Blumstone, Henry, to Diamond Alkali Co. Method of regulating plant growth. 3,020,143, 2–6–62, Cl. 71—2.5.

Bluth, John M., and J. L. Sellers. Reformation of metallic surfaces. 3,019,522, 2–6–62, Cl. 29—552.

Bluth, John M., and J. L. Sellers. Compositions for metal surface reformation. 3,020,140, 2–6–62, Cl. 51—306.

Blyth, Jack V., and G. F. Upton, to D. Napier & Son Ltd. Turbine-propeller power units for aircraft. 3,020,004, 2–6–62, Cl. 244—54.

Bockemuehl, Robert R., to General Motors Corp. Electronic multiplying circuit. 3,019,984, 2–6–62, Cl. 235—194.

Boeing Airplane Co.: *See*—
Curry, Truman M. 3,019,643.

Bogater, John P., to General Motors Corp. Lid hinge and counterbalance. 3,019,473, 2–6–62, Cl. 16—190.

Bogater, John P., S. F. Loria, and N. E. Putnam. Lift gate support for station wagon. 3,019,934, 2–6–62, Cl. 217—60.

Bogdan, Andrew A. Fly cutter with micrometrical adjustment. 3,019,676, 2–6–62, Cl. 77—77.

Bohnsack, John A., to Aetna Steel Products Corp. Partition construction. 3,019,862, 2–6–62, Cl. 189—34.

Bolcato, Leslie F.: *See*—
Strys, William J., and Bolcato. 3,019,797.

Bonanno, Joseph L., to The Lionel Corp. Microphone for sound dispatching station. 3,020,346, 2–6–62, Cl. 179—2.

Bono, Luigi, to Necchi S.p.A. Feed device for a sewing-machine. 3,019,750, 2–6–62, Cl. 112—215.

Boode, Carl N.: *See*—
Bourns, Marian E., Boode, and O'Brian. 3,020,505.

Boon, Cornelis M.: *See*—
De Miranda, Jacobus R., Boon, and Dellege. 3,020,488.

Borg-Warner Corp.: *See*—
Ferris, Ernest A., and Curran. 3,019,873.
Shapiro, Haskell. 3,019,641.

Bosa, Karl-Heinz, H. Rausch, and K. Meyer, to Metallgesellschaft Aktiengesellschaft. Process for the heat hardening of pellets composed of ores on sintering grates. 3,020,147, 2–6–62, Cl. 75—5.

Boteler, Henry W., to Grinnell Corp. Diaphragm valve. 3,020,020, 2–6–62, Cl. 251—331.

Bourns, Inc.: *See*—
Bourns, Marian E., Boode, and O'Brian. 3,020,505.
Marks, Eugene A. 3,020,504.
Zuehlke, Arthur A., and Hyams. 3,020,508.

Bourns, Marian E., C. N. Boode, and T. D. O'Brian; said Boode and O'Brian assors. to Bourns, Inc. Adjustable electrical instruments. 3,020,505, 2–6–62, Cl. 338—43.

Bourquin, Landrum S., to Savannah Machine & Foundry Co. Apparatus for pressure testing hollow bodies for leakage. 3,019,734, 2–6–62, Cl. 103—49.

Bowen, Howard: *See*—
Grunwald, Robert, Wallace, and Bowen. 3,019,404.

Bowerman, Edwin R., Jr., to General Telephone and Electronics Laboratories, Inc. Shift register. 3,020,410, 2–6–62, Cl. 250—208.

Bowersox, Charles M. Zipper lubricator. 3,019,471, 2–6–62, Cl. 15—560.

Bowman, Norman J.: *See*—
Proell, Wayne A., and Bowman. 3,020,181.

Bowman, Spencer, to The Thew Shovel Co. Outriggers for power shovels, cranes or the like. 3,019,913, 2–6–62, Cl. 212—145.

Bown, Delos F.: *See*—
Schutze, Henry G., Leibson, and Bown. 3,020,268.

Braden Winch Co.: *See*—
Turnquist, Edwin W. 3,020,022.

Bradley, Richard D. Process for protection against electrolytic corrosion of vessel hulls and the like in fresh water. 3,020,216, 2–6–62, Cl. 204—23.

Brady, John G.: *See*—
Fearing, Ralph B., Walsh, and Brady. 3,020,198.

Braid, Ralph A., to Harvey Machine Co., Inc. Projectile construction. 3,019,733, 2–6–62, Cl. 102—91.

Brame, Arthur A., to Brame Textile Machine Co. Flyers for textile machines. 3,019,590, 2–6–62, Cl. 57—115.

Brame Textile Machine Co.: *See*—
Brame, Arthur A. 3,019,590.

Braun, Poul B.: *See*—
Jonker, Gerard H., and Braun. 3,020,235.

Brauneck, Charles F.: *See*—
Kobryner, Herman H., and Brauneck. 3,020,373.

Bravo, Justo B., and P. H. Delano, to Foote Mineral Co. Manufacture of perchlorates. 3,020,124, 2–6–62, Cl. 23—85.

Brecknell, Dolman & Rogers Ltd.: *See*—
Dolman, Henry J. 3,019,539.

Brennan, John B., and J. B. Force, to General Motors Corp. Transmission shift pattern generator. 3,019,666, 2–6–62, Cl. 74—472.

Bretherick, Leslie: *See*—
Wragg, William R., and Bretherick. 3,020,288.

Breunich, Theodore R., to Controlex Corp. of America. Protector for relatively movable parts. 3,019,663, 2–6–62, Cl. 74—18.2.

Brevets Aero-Mecaniques S.A.: *See*—
Kaspaul, Alfred. 3,019,732.

Brewster, Forrest O. Back pack convertible to hand-bag. 3,019,952, 2–6–62, Cl. 224—9.

Bridge, Ralph E.: *See*—
Wolkstein, Herbert J., and Bridge. 3,020,444.

Brightman, Barrie, to General Dynamics Corp. Pulse frequency dividing system using ring counter and means to cancel some input pulses. 3,020,419, 2–6–62, Cl. 307—88.5.

Brighton, John C.: *See*—
Ludlow, Edmund, Irwin, and Brighton. 3,020,379.

British Petroleum Co. Ltd., The: *See*—
Demeester, Jaques. 3,020,228.

Broadbent, Bernard G., and F. A. Hemphill, to Sylvania Electric Products Inc. Beading machine. 3,019,558, 2–6–62, Cl. 49—1.

Brodsky, Elihu, and H. A. Levine, to Loral Electronics Corp. Automatic signal finder. 3,020,402, 2–6–62, Cl. 250—20.

Brookbank, Earl B., Jr.: *See*—
Robinson, James V., and Brookbank. 3,020,176.

Brookhart, Jack L.: *See*—
French, Hobert W., Jr., Maier, and Brookhart. 3,019,708.

Brown, David, Tractors, Ltd.: *See*—
Webster, Frederick. 3,019,922.

Brown, John A., to Esso Research and Engineering Co. Catalysis of phosphosulfurization reactions. 3,020,270, 2–6–62, Cl. 260—139.

Brown, Lloyd H., to Aerojet-General Corp. Polynitro urethanes. 3,020,261, 2–6–62, Cl. 260—47.

Brown, Reams F.: *See*—
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,019,746.
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,020,162.

Brown, Robert L.: *See*—
Peckham, Roy E. 3,019,499.

Brown, Robert L. Deformable plastic fastener. 3,019,498, 2–6–62, Cl. 24—73.

Brown, Wilburt J. Brush supporting attachment for paint pails. 3,019,939, 2–6–62, Cl. 220—90.

Brudney, Harry, to Dollac Corp. Flexible eye duct for tearing eyes. 3,019,551, 2–6–62, Cl. 46—135.

Bruecker, John. Shear plate and cutter assembly for rotary type dry shaver. 3,019,525, 2–6–62, Cl. 30—43.

Brueckner, Hubert U., E. E. Fluskey, and W. Werbyckyj, to Revere Camera Co. Slide projector. 3,019,701, 2–6–62, Cl. 88—24.

Brun, Gaston: *See*—
Mercier, Henri, and Brun. 3,020,098.

Brunsviga Maschinenwerke Aktiengesellschaft: *See*—
Spingles, Erwin, and Rose. 3,019,980.

Buck, Dudley A.: *See*—
Slade, Albert E., and Buck. 3,019,978.

Bull, Glen C. Methods and apparatus for conditioning hollow articles against corrosion. 3,020,121, 2–6–62, Cl. 21—2.5.

Bullard Co., The: *See*—
Bullard, Edward P., III and E. P. Bullard, IV. 3,020,097.

Bullard, Edward P., III and E. P. Bullard, IV, to The Bullard Co. Bearing gib. 3,020,097, 2–6–62, Cl. 308—3.

Bullard, Edward P., IV: *See*—
Bullard, Edward P., III and E. P. Bullard, IV. 3,020,097.

Bullock, Ellis W. Apparatus for mixing a liquid with fine particles. 3,020,028, 2–6–62, Cl. 259—3.

Bunger, Dennen J., to The Bendix Corp. Exhaust shroud cooling. 3,019,607, 2–6–62, Cl. 60—39.66.

Burg, Martin S., to Western Electric Co., Inc. Wired electrical mounting boards. 3,019,489, 2–6–62, Cl. 18—59.

Burns, William E., to Curtiss-Wright Corp. Friction gear type variable speed transmission. 3,019,664, 2–6–62, Cl. 74—199.

Burroughs Corp.: *See*—
Castagliuolo, Ernest M. 3,019,504.

Bursztyn, Ignacy: *See*—
Katchalsky, Aharon, Bursztyn, Rim, and Vofsi. 3,019,557.

Bush, Chandler L.: *See*—
Morocco, Joseph J., and Bush. 3,020,012.

Butler, William L., to General Electric Co. Wire connector clamp. 3,020,514, 2–6–62, Cl. 339—95.

Byczkowski, Mieczyslaw, to Hoffman Electronics Corp. Semiconductor photocells. 3,020,412, 2–6–62, Cl. 250—211.

Cafferty, Aloysius G., to Western Electric Co., Inc. Zinc electroplating solution and methods. 3,020,218, 2–6–62, Cl. 204—55.

Callahan Mining Corp.: *See*—
Jensen, Mead L. 3,020,205.

Callegari, Louis G. Punctured can seal and spout. 3,019,950, 2–6–62, Cl. 222—542.

Calvaresi, Archie. Protective insulating mat. 3,020,183, 2–6–62, Cl. 154—44.

Cambridge Filter Mfg. Corp.: *See*—
Engle, Paul M. 3,019,855.

Camco, Inc.: *See*—
McGowen, Harold E., Jr. 3,020,354.

Camerino, Bruno, and B. Patelli, to Societa Farmaceutici Italia. Therapeutic 4-hydroxy-19-nortestosterone-17-cyclopentyl-propionate, and its process of preparation and its application. 3,020,295, 2–6–62, Cl. 260—397.4.

Camp, John E., J. C. Mueller, Jr., F. G. Sandholdt, and G. L. Haywood, to Norton Co. Abrasive product. 3,020,139, 2–6–62, Cl. 51—295.

Campbell, Iain B., to Babcock & Wilcox, Ltd. Atomizing oil burner nozzle. 3,019,990, 2–6–62, Cl. 239—125.

Campbell, Jeptha E., Jr.: *See*—
Murthy, Gopala K., Campbell, Masurovsky, and Edmondson. 3,020,161.

Campbell, John R., and R. E. Hatton, to Monstanto Chemical Co. Aryl phenyl a,a,a-trifluoro-m-tolyl phosphines and oxides thereof. 3,020,315, 2–6–62, Cl. 260—606.5.

Camping, Gertrude W.: *See*—
Camping, Ralph and G. W. 3,020,518.

Camping, Ralph and G. W. Solderless electrical connectors. 3,020,518, 2–6–62, Cl. 339—191.

Candelise, Alfred, to General Motors Corp. Air injection system for an internal combustion engine. 3,019,777, 2–6–62, Cl. 123—26.

Canfield, Eugene B.: *See*—
Bailey, Francis M., and Canfield. 3,019,711.

Capehart, Lonnie R., to Capehart-Zbitnoff Corp. Carburetor device. 3,020,030, 2–6–62, Cl. 261—30.

Capehart-Zbitnoff Corp.: *See*—
Capehart, Lonnie R. 3,020,030.

Capitol Products Corp.: *See*—
Stram, George. 3,020,018.

Carbonic Dispenser, Inc., of California: *See*—
Jaeger, Wilbert J. 3,019,612.

Card, Joseph L., to Singer-Cobble, Inc. Apparatus for simultaneously forming rows of cut pile stitching and rows of loop pile stitching. 3,019,079, 2–6–62, Cl. 112—79.

Carissimi, Vincent L., to Westinghouse Electric Corp. Control device. 3,020,380, 2–6–62, Cl. 219—20.

Carissimi, Vincent L., to Westinghouse Electric Corp. Control device. 3,020,381, 2–6–62, Cl. 219—20.

Carlson, Carl W.: *See*—
Loevenstein, Hirsch, Carlson, and Gunderson. 3,019,895.

Carrier Corp.: *See*—
Gertels, Karl M. 3,020,464.
Leonard, Louis H., Jr. 3,019,613.
MacLeod, David E., and Alt. 3,019,718.
Papapanu, James A. 3,019,616.

Carrier, Robert M., Jr., to Chain Belt Co. Energy transmitting means for conveyors and the like. 3,019,889, 2–6–62, Cl. 198—220.

Carroll, George R., to Hughes Aircraft Co. Frequency modulation circuit. 3,020,493, 2–6–62, Cl. 332—16.

Carroll, Robert L. Golf iron. 3,020,048, 2–6–62, Cl. 273—167.

Carte, Cecil H. W., to Martin Walter Ltd. Folding beds. 3,019,455, 2–6–62, Cl. 5—214.

Carvel, Thomas. Assembly and stacking apparatus. 3,019,744, 2–6–62, Cl. 107—1.

Casciani, Ferri, and H. D. Bauman, to P. H. Glatfelter Co. Production of potassium compounds. 3,020,195, 2–6–62, Cl. 162—32.

Casey, Robert J., to Selas Corp. of America. Vacuum furnace. 3,020,032, 2–6–62, Cl. 263—42.

Castagliuolo, Ernest M., to Burroughs Corp. Tape and terminal fitting assembly. 3,019,504, 2–6–62, Cl. 24—265.

Catalysts and Chemicals, Inc.: *See*—
Dienes, Edward K. 3,020,244.
Reitmeier, Ronald E. 3,020,243.
Reitmeier, Ronald E. 3,020,245.

Cath, Pieter G., to Bell Telephone Laboratories, Inc. Signaling circuits. 3,020,348, 2–6–62, Cl. 179—6.3.

Cattermole, Kenneth W., to International Standard Electric Corp. Electric pulse modulating and demodulating circuits. 3,020,349, 2–6–62, Cl. 179—15.

Cauley, Thomas K., to United States Steel Corp. Apparatus for detecting discontinuity in an electrical conducting object. 3,020,472, 2–6–62, Cl. 324—34.

Cauley, Thomas K., to United States Steel Corp. Counting apparatus. 3,020,473, 2–6–62, Cl. 324—34.

Central Soya Co., Inc.: *See*—
Krause, Norman F. 3,020,159.

Centre National de la Recherche Scientifique: *See*—
Paquot, Charles, Lefort, and Sorba. 3,020,320.

Cermatori, Italo J. Rolling dies for threading, pointing and finishing screws. 3,019,677, 2–6–62, Cl. 80—9.

Cetran, Louis, R. H. Arthur, and J. H. Holland, to Royal McBee Corp. Automatic line feeding and tabulating apparatus for typewriters or like machines. 3,019,881, 2–6–62, Cl. 197—114.

Chain Belt Co.: *See*—
Carrier, Robert M., Jr. 3,019,889.

Chait, Herman N.: *See*—
Kales, Morris L., and Chait. 3,020,549.

Chang, Kern K. N., to Radio Corp. of America. Electron beam device. 3,020,440, 2–6–62, Cl. 315—3.5.

Chaplick, Adolph M.: *See*—
Phillips, Ferdinand N., Jr., Morris, and Chaplick. 3,020,169.

Charley, Walter A.: *See*—
Charley, Walter G. and W. A. 3,019,575.

Charley, Walter G. and W. A. Apparatus for inserting straws or the like. 3,019,575, 2–6–62, Cl. 53—59.

Chase-Shawmut Co., The: *See*—
Kozacka, Frederick J. 3,020,372.
Swain, Kenneth W. 3,020,370.

Cheilik, Philip, to International Telephone and Telegraph Corp. Transistor multivibrator. 3,020,417, 2–6–62, Cl. 307—88.5.

Chemring Ltd.: *See*—
Lowery, Peter A. 3,019,457.

Cheroff, George, to International Business Machines Corp. Photovoltaic devices. 3,020,411, 2–6–62, Cl. 250—208.

Cherry, Lamona F.: *See*—
Weatherholt, Dallas D., Cherry, and Fulford. 3,019,795.

Chicago Bridge & Iron Co.: *See*—
Pirok, John N., and Trammell. 3,019,806.

Chicago Pneumatic Tool Co.: *See*—
Morocco, Joseph J., and Bush. 3,020,012.

Chiron, Bernard P., to Lignes Telegraphiques & Telephoniques. Circulator. 3,020,494, 2–6–62, Cl. 333—9.

Christenson, James J., to Townmotor Corp. Straddle trailer. 3,019,926, 2–6–62, Cl. 214—392.

Chudek, John, Jr. Card display rack. 3,019,540, 2–6–62, Cl. 40—102.

Chupp, John P., to Monsanto Chemical Co. Halogen substituted alkenylthioalkyl esters of phosphorus acids. 3,020,305, 2–6–62, Cl. 260—461.

Churchill, Charles H. Hanger device. 3,019,909, 2–6–62, Cl. 211—86.

Ciba Co., Inc.: *See*—
Wegmann, Jacques, and Becker. 3,020,166.

Ciments Lafarge: *See*—
Maurand, Rene L. F. 3,019,835.

Cislak, Francis E., and W. R. Wheeler, to Reilly Tar & Chemical Corp. Quinoline synthesis. 3,020,280, 2–6–62, Cl. 260—283.

Cislak, Francis E., and W. R. Wheeler, to Reilly Tar & Chemical Corp. Method of preparing quinoline. 3,020,281, 2–6–62, Cl. 260—283.

Cislak, Francis E., and W. R. Wheeler, to Reilly Tar & Chemical Corp. Process of preparing quinoline. 3,020,282, 2–6–62, Cl. 260—283.

Clancy, Joseph A.: *See*—
Barber, Earle W., and E. W. Barber, Jr. 3,019,897.

Clark, James T., to Clark-Feather Mfg. Co. Cylinder head aligning means. 3,019,521, 2–6–62, Cl. 29—283.

Clark, Patrick A., D. Stubbs, and D. G. Bloomfield, to Davy and United Engineering Co. Ltd. Anti-friction bearings. 3,020,108, 2–6–62, Cl. 308—203.

Clarke, Houghton W., 99% to Mealpach Corp. Covered dish and tray combination. 3,019,783, 2–6–62, Cl. 126—381.

Clark Feather Mfg. Co.: *See*—
Clark, James T. 3,019,521.

Clavell, Thomas W., to Fairchild Stratos Corp. Power plant. 3,019,776, 2–6–62, Cl. 123—21.

Clement, Wolfgang, to International Standard Electric Corp. Method of sorting out parts of insulating material. 3,020,409, 2–6–62, Cl. 250—106.

Cleveland, James L. Dowel hole drilling jig. 3,019,675, 2–6–62, Cl. 77—62.

Cobb, Clifton A., C. A. Orr, and W. F. Robandt, Jr., to Whirlpool Corp. Home appliance. 3,019,814, 2–6–62, Cl. 137—607.

Coffee, Wendell: *See*—
Jacobs, William H., and Timpone. 3,019,893.

Cogsdill Tool Products, Inc.: *See*—
Winberry, George H., Jr. 3,019,712.

Cohen, Israel R. Interleaving apparatus for packaging bacon slices. 3,019,578, 2–6–62, Cl. 53—123.

Cole, Robert B.: *See*—
Hansen, Roy C. 3,019,560.

Cole, Roy S., and W. N. Honeyman, to Electric & Musical Industries Ltd. Waveguides. 3,020,501, 2–6–62, Cl. 333—98.

Coleman, Conrad. Electric connecting clamps. 3,020,519, 2–6–62, Cl. 339—273.

Colgate-Palmolive Co.: *See*—
Dominik, Francis A. 3,020,122.

Collette, Floyd E. Suspension device for traveling belt conveyor. 3,019,911, 2–6–62, Cl. 211—122.

Colley, Rowan H., to Rolls-Royce Ltd. Aircraft reaction-propulsion units or installations. 3,019,599, 2–6–62, Cl. 60—35.54.

Collins Radio Co.: *See*—
Bahn, Michael S. 3,019,667.
Feigleson, Charles O. 3,020,459.
Graham, John F. 3,020,502.
Craigtow, Robert L. 3,020,421.
Haerther, Lester W., and Walker. 3,019,532.
Johnson, Frederick W. 3,020,507.
Pierce, Roger J., and Abrams. 3,020,397.
Secretan, Frank. 3,020,485.
Shockley, William L. 3,020,492.
Turner, Daniel L. 3,020,529.

Colman, Robert. Radiant energy meter. 3,019,700, 2–6–62, Cl. 88—23.

Colombini, John S. Knockdown door. 3,019,867, 2–6–62, Cl. 189—46.

Columbia Broadcasting System, Inc.: *See*—
Neenan, Charles J. 3,020,365.

Colwell, Charles E., and R. C. Miller, to Union Carbide Corp. Coagulation. 3,020,231, 2–6–62, Cl. 210—54.

Comerford, Matthias F.: *See*—
Basche, Malcolm, Comerford, Doyle, and Hetherington. 3,020,387.

Commonwealth Engineering Co. of Ohio, The: *See*—
Toulmin, Harry A., Jr. 3,019,611.

Compagnie de Pont-A-Mousson: *See*—
Drlancourt, Jean E. 3,020,054.
Montignot, Francois H. 3,019,834.

Compagnie de Saint-Gobain: *See*—
Imer, Jean L. P. 3,020,256.

Compagnie du Filage des Metaux et des Joints Curty: *See*—
Delcroix, Jean, Hubert, and Heintz. 3,019,894.

Conch International Methane Ltd.: *See*—
Morrison, Willard L. 3,019,937.

Conder, Lory S.: *See*—
Knill, Raymond R., McLaughlin, Priesnitz, Conder, and Haworth. 3,019,890.

Condo, Albert C., Jr., to The Atlantic Refining Co. Motor fuel compositions. 3,020,137, 2–6–62, Cl. 44—78.

Conlin, Peter, and W. L. Schulz, to Hankscraft Co. Vaporizer. 3,020,385, 2–6–62, Cl. 219—40.

Connecticut Hard Rubber Co., The: *See*—
Moffitt, John A., Jr., and Kidwell. 3,020,185.

Construcciones Mecanicas Textile, S.A.: *See*—
Cortabarria, Fernando A. 3,019,591.

Continental Can Co., Inc.: *See*—
Alexander, Paul. 3,020,177.
Miller, Teddy, Anderson, and Rosbe. 3,019,938.
Negoro, Kaiji. 3,019,481.

Continental Elektroindustrie A.G., Askania-Werke: *See*—
Hildebrand, Klaus, and Pocher. 3,019,690.

Controlex Corp. of America: *See*—
Brenndeh, Theodore R. 3,019,663.

Conval Corp.: *See*—
Smith, Paul E., Jr. 3,020,118.

Cook, Edward G., J. F. Tibolla, and C. Foundos, to Curtiss-Wright Corp. Ultrasonic testing arrangement. 3,019,637, 2–6–62, Cl. 73—67.7.

Cooper, Wayne E.: *See*—
Doyle, Robert, Holt, and Cooper. 3,019,488.

Cooper's Inc.: *See*—
Wyss, John H., Freiericksen, and Testard. 3,019,446.

Corckan, John C. Method of making rounded head nail. 3,019,460, 2–6–62, Cl. 10—54.

Cornell, Cyrus J. Automatic wood feeding and cutting saw apparatus. 3,019,823, 2–6–62, Cl. 143—47.

Cornell, Robert C., to Litemetal Diesst, Inc. Die casting. 3,019,495, 2–6–62, Cl. 22—68.

Corning Glass Works: *See*—
Layton, Margaret M., Randels, and Stockdale. 3,020,456.
Seck, Charles F. 3,020,193.

Cortabarria, Fernando A., to Contrucciones Mecanicas Textiles, S.A. Textile spindle. 3,019,591, 2–6–62, Cl. 57—135.

Costantini, Anthony R., and A. Di Angelus, to Victory Metal Mfg. Co., d.b.a. Victory Metal Mfg. Corp. Refrigerating apparatus. 3,019,620, 2–6–62, Cl. 62—418.

Costanzo, Frank X., to Victaulic Co. of America. Coupling of lined pipe and methods. 3,020,068, 2–6–62, Cl. 285—55.

Cotton, William, Ltd.: *See*—
Blood, Raymond. 3,019,626.

Courneya, Calice G., 50% to B. J. Reger. D. C. motor commutator construction. 3,020,429, 2–6–62, Cl. 310—234.

Cox, Norman L., and W. D. Nicoll, to Beaunit Mills, Inc. Crimped regenerated cellulose fibers. 3,019,509, 2–6–62, Cl. 28—82.

Cozzo, Giuseppe, and R. D. Palmer, to Baldwin-Lima-Hamilton Corp. Reversing drive and control. 3,019,069, 2–6–62, Cl. 74—661.

Craiglow, Robert L., to Collins Radio Co. Crystal switching system. 3,020,421, 2–6–62, Cl. 307—88.5.

Crossan, Jesse R.: *See*—
Pfeiffer, Fred B. 3,020,190.

Cubberley, Richard H., V. C. Harold, Jr., and H. J. Zinaman, to The Patent and Licensings Corp. Sound dampening composition. 3,020,184, 2–6–62, Cl. 154—44.

Culbertson, William J., Jr.: *See*—
Nevans, Thomas D., and Culbertson. 3,020,227.

Culbertson, William J., Jr., and T. D. Nevens, to The Oil Shale Corp. Plant and process for the production of oil. 3,020,209, 2–6–62, Cl. 202—14.

Cummins-Chicago Corp.: *See*—
Quinn, James L. 3,020,524.

Cummins, Robert J.: *See*—
Rasch, Herman R., and Cummins. 3,019,861.

Cunningham, Fred A., J. O. Klatt, R. F. Brown, and W. W. Slovacek, to The Faes Mfg. Co., Inc. Extruding apparatus. 3,019,746, 2–6–62, Cl. 107—14.

Cunningham, Fred A., J. O. Klatt, R. F. Brown, and W. W. Slovacek, to The Faes Mfg. Co., Inc. Method of making corn chips. 3,020,162, 2–6–62, Cl. 99—80.

Curlee, Harvie P., Jr.: *See*
Phillips, Malcolm E., Jr., and Curlee. 3,019,581.

Curran, Robert J.: *See*—
Ferris, Ernest A., and Curran. 3,019,873.

Curry, Malcolm, to The American Thread Co. Spool treating apparatus. 3,019,943, 2–6–62, Cl. 221—263.

Curry, Truman M., to Boeing Airplane Co. Strain gauge balances. 3,019,643, 2–6–62, Cl. 73—147.

Curtis, Charles C., to Owens-Corning Fiberglas Corp. Apparatus for melting heat softenable mineral material. 3,020,324, 2–6–62, Cl. 13—6.

Curtis, Omer E., Jr., to Allied Chemical Corp. Preparation of polyurethane foam from alkyl polyester resin and a toluene diisocyanate and 1,2,6-hexanetriol adduct. 3,020,249, 2–6–62, Cl. 260—2.5.

Curtiss-Wright Corp.: *See*—
Burns, William E. 3,019,664.
Cook, Edward G., Tibolla, and Foundos. 3,019,637.
Hine, Edward K. 3,020,007.

Cushman, Walton W. Motive powered or gravity bearingless conveyor. 3,019,885, 2–6–62, Cl. 198—127.

Cutter Cravat, Inc.: *See*—
Hirsch, Julius A., and Small. 3,019,445.

Daane, Robert A., to Beloit Iron Works. Fluid filter mechanism. 3,019,903, 2–6–62, Cl. 210—108.

Dale, Robert F., A. J. Backus, and E. J. Kezell, to Red Star Yeast and Products Co. Active dry yeast rehydrator. 3,020,208, 2–6–62, Cl. 195—127.

Dalton, Carol A.: *See*—
Hansen, Roy C. 3,019,560.

D'Amico, John J. Accelerating rubber with 5-carbalkoxy-4-alkyl-2-thiazolesulfenamides. 3,020,266, 2–6–62, Cl. 260—79.5.

Daniels, Franklin W., to General Electric Co. Ceramic-to-metal seal and method of making the same. 3,020,182, 2–6–62, Cl. 154—43.

Darden, William M.: *See*—
Talbott, David R., and Darden. 3,019,535.

Daugherty, Henry J., and R. E. Maxwell. Jaw operating structure for pipe wrench. 3,019,680, 2–6–62, Cl. 81—53.

Davis, Earl K., to Bauch & Lomb Inc. Low viscosity glass compositions. 3,020,165, 2–6–62, Cl. 106—54.

Davis & Furber Machine Co.: *See*—
Howes, Irving C. 3,019,623.

Davis, Lewis. Musical drums. 3,019,685, 2–6–62, Cl. 84—411.

Davy and United Engineering Co. Ltd.: *See*—
Clark, Patrick A., Stubbs, and Bloomfield. 3,020,108.

Day, Harold R., Jr., to General Electric Co. Storage electrode structure and method of making. 3,020,433, 2–6–62, Cl. 313—68.

Daystrom, Inc.: *See*—
Mace, Ellis R. 3,020,422.

Deans, William, to I-T-E Circuit Breaker Co. Housing for bus run. 3,020,329, 2–6–62, Cl. 174—16.

De Barbieri, Ettore, and F. Gattl. Spoon-shaped swim-fin. 3,019,458, 2–6–62, Cl. 9—309.

Deere & Co.: *See*—
Gustafson, Blaine W. 3,019,586.

Deering Milliken Research Corp.: *See*—
Sanders, Grady H., and Jones. 3,019,588.

De Faller, George J., O. V. Tatum, and N. R. Livingston. Pneumatic sander. 3,019,567, 2–6–62, Cl. 51—170.

De Jager, Frank, and J. A. Greefkes, to North American Philips Co., Inc. Single sideband equipment for speech transmission. 3,020,352, 2–6–62, Cl. 179—15.55.

Delano, Philip H.: *See*—
Bravo, Justo B., and Delano. 3,020,124.

Delcroix, Jean, R. Hubert, and R. Heintz, to Compagnie du Filage des Metaux et des Joints Curty. Extrusion of metals. 3,019,894, 2–6–62, Cl. 207—2.

Dellege, Jan H. M.: *See*—
De Miranda, Jacobus R., Boon, and Dellege. 3,020,488.

Demeester, Jaques, to The British Petroleum Co. Ltd. Upgrading lubricating oils by hydrogenation with a three component catalyst. 3,020,228, 2–6–62, Cl. 208—264.

De Miranda, Helne A. R.: *See*—
Heijn, Herman J., Klinkhamer, Samwel, and De Miranda. 3,020,117.

De Miranda, Jacobus R., C. M. Boon, and J. H. M. Dellege, to North American Philips Co., Inc. Control arrangement and circuit element for electrical amplifiers. 3,020,488, 2–6–62, Cl. 330—59.

Denholtz, Edward J., to Durex, Inc. Paint roller having a detachable frame. 3,019,466, 2–6–62, Cl. 15—230.

Dentl, Francesco: *See*—
Marngliano, Domenico, and Dentl. 3,019,507.

De Pietro, Anthony J. Stress breaker for artificial dentures. 3,019,528, 2–6–62, Cl. 32—5.

De Pietro, Anthony J. Dental articular. 3,019,530, 2–6–62, Cl. 32—32.

Deramee, Edmond L., Jr.: *See*—
Walker, John M., Jr. 3,019,502.

Despard, Victor R., to Pass & Seymour, Inc. Electrical connector body and cap construction with improved conductor securing means. 3,020,516, 2–6–62, Cl. 339—101.

Deutsche Erdol-Aktiengesellschaft: *See*—
Samol, Herbert. 3,020,079.

Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Behrends, Jurgen, Schweitzer, Kern, and Hopff. 3,020,264.

De Vilbiss Co., The: *See*—
Peeps, Donald J., and Hoffman. 3,020,026.

Dexter Industries, Inc.: *See*—
Williams, Murray E. 3,020,073.

Diamond Alkali Co.: *See*—
Bluestone, Henry. 3,020,143.

Diamond, Jack. Hydrofoil deck extension. 3,019,755, 2–6–62, Cl. 114—66.5.

Diamond, Lawrence H., to Accurate Specialties, Inc. Method of producing metal spheres. 3,019,485, 2–6–62, Cl. 18—48.

Di Angelus, Anthony: *See*—
Costantini, Anthony R., and Di Angelus. 3,019,620.

Dickey, Frank R., Jr., to General Electric Co. Electrical signal indicator. 3,020,541, 2–6–62, Cl. 343—11.

Dickson, Donald E.: *See*—
Schock, Richard U., Jr., Hasbrouck, and Dickson. 3,020,283.

Dieckmann, Wilbur W. F.: *See*
Hillenbrand, Daniel A., and Dieckmann. 3,019,920.

Diehl KG: *See*—
Backhaus, Karl E. 3,020,095.

Dienes, Edward K., to Catalysts and Chemicals, Inc. Preparation of homogeneous catalysts containing cobalt oxide and aluminum oxide. 3,020,244, 2–6–62, Cl. 252—465.

Dirr, Josef. Arrangement for setting magnetic circuits. 3,020,536, 2–6–62, Cl. 340—364.

Dixon, Henry O.: *See*—
Marx, John W., Langenheim, Dixon, and Trantham. 3,019,837.

Dixon, Lloyd H., Jr., to Solid State Products, Inc. Sealing of electrical semiconductor devices. 3,020,454, 2–6–62, Cl. 317—234.

Djerassi, Carl, G. Rosenkranz, S. Kaufmann, J. Pataki, and J. Romo, to Syntex S.A. Production of ring A aromatics steroids. 3,020,294, 2–6–62, Cl. 260—397.3.

Doan, Harold R., and J. A. Scovel. Double deck trailer loading structure. 3,020,083, 2–6–62, Cl. 296—24.

Dobeckmun Co., The: *See*—
Gould, Arthur S., and Nathanson. 3,019,592.

Dolline Corp.: *See*—
Brudney, Harry. 3,019,551.

Dolman, Henry J., to Brecknell, Dolman & Rogers Ltd. Turnstiles. 3,019,539, 2–6–62, Cl. 39—3.

Dolph, John D. Safety lamp socket. 3,020,366, 2–6–62, Cl. 200—51.16.

Dominik, Francis A., to Colgate-Palmolive Co. Inhibiting rusting of aerosol type containers. 3,020,122, 2–6–62, Cl. 21—2.7.

Dommann, Gunther, to Gewerkschaft Eisenhutte Westfalia. Conduit provided with movable fitting. 3,019,813, 2–6–62, Cl. 37—580.

Dorey, George B., to Enterprise Railway Equipment Co. Pneumatic discharge hopper car. 3,020,092, 2–6–62, Cl. 302—52.

Dorey, George B., to Enterprise Railway Equipment Co. Hopper outlet construction. 3,020,093, 2–6–62, Cl. 302—52.

Dorschner, Kenneth P.: *See*—
Willard, Joe R., and Dorschner. 3,020,142.

Dortort, Isadore K., to I-T-E Circuit Breaker Co. Current balancing reactors. 3,020,415, 2–6–62, Cl. 307—58.

Doss, Roger C. Extension ladder. 3,019,851, 2–6–62, Cl. 182—111.

Doughty, Joseph B., to West Virginia Pulp and Paper Co. Drilling mud conditioner. 3,020,232, 2–6–62, Cl. 252—8.5.

Douglas, Newhall. Analysis and reproduction of image movement. 3,019,695, 2–6–62, Cl. 88—16.

Douglas, Newhall. Space-time reproduction of spatially recorded images. 3,019,696, 2–6–62, Cl. 88—16.

Douty, Alfred, to Amchem Products, Inc. Apparatus for spraying articles and for control of electrolyte concentrations. 3,019,799, 2–6–62, Cl. 134—57.

Dow Corning Corp.: *See*—
Nelson, Melvin E. 3,020,260.

Downing, Francis P., and T. W. Alberts, to The Sharples Corp. Mechanical defatting of fatty tissue derived from animals. 3,020,160, 2–6–62, Cl. 99—14.

Doyle, Nicholas E., Jr.: *See*—
Basche, Malcolm C., Doyle, and Hetherington. 3,020,387.

Doyle, Robert, W. L. Holt, and W. E. Cooper, to Phillips Petroleum Co. Method for vacuum molding polymer sheets. 3,019,488, 2–6–62, Cl. 18—56.

Draxler, John A., to The Elwell-Parker Electric Co. Industrial truck with auxiliary lift. 3,019,919, 2–6–62, Cl. 214—82.

Dresser Industries, Inc.: *See*—
Ternow, Helmut G. 3,019,841.

Drlancourt, Jean E., to Compagnie de Pont-A-Mousson. Sealing ring for a pipe joint and the joint incorporating this ring. 3,020,054, 2–6–62, Cl. 277—170.

Du Bois, Albert and Armand. Sugar spinning machine. 3,019,745, 2–6–62, Cl. 107—8.

Du Bois, Armand: *See*—
Du Bois, Albert and Armand. 3,019,745.

Dubsky, Borivoj, O. Straka, and B. Trefil, to Vyzkumny a zkusebni letecky ustav. Torsional magnetostriction feeler apparatus employing feedback. 3,020,461, 2–6–62, Cl. 318—28.

Ducharme, Alfred. Recoil absorber for a firearm. 3,019,543, 2–6–62, Cl. 42—74.

Duflin, Bernard G., and N. T. Sanders, to Needle Industries Ltd. Keeps for knitting needles or other rod-like articles. 3,019,500, 2–6–62, Cl. 24—81.

Duinker, Simon, and H. J. Heijn, to North American Philips Co., Inc. Parallel-operating synchronous digital computer capable of performing the calculation $x+y.z$ automatically. 3,019,977, 2–6–62, Cl. 235—157.

Dumpleton, Owen W., to Babcock & Wilcox Ltd. Heat exchanger tubes with radially extending fins transversely connected thereto and method of forming the same. 3,020,027, 2–6–62, Cl. 257—262.16.

Dunlop, Andrew P., and D. G. Manly, to The Quaker Oats Co. Process for preparing 2-methylfuran. 3,020,291, 2–6–62, Cl. 260—346.1.

Dunn, Lyman D. Cleansing composition in dry granular form. 3,020,237, 2–6–62, Cl. 252—109.

Dünnebier, Kurt: *See*—
Winkler, Richard, and Dünnebier. 3,019,886.
Winkler, Richard, and Dünnebier. 3,020,043.

Dunphy, Gerald F.: *See*—
Hynes, James P., and Dunphy. 3,020,039.

Du Pont de Nemours, E. I., and Co.: *See*—
Alderson, Thomas. 3,020,314.
Anlbaugh, Johnnie M., Kramis, and Sieren. 3,020,313.
Gibbs, Hugh H. 3,020,321.
Gobell, Richard J., and Luckenbaugh. 3,020,144.
Gobell, Richard J., Johnson, and Luckenbaugh. 3,020,145.
Jenkins, Wilmer A., II, and Jacobson. 3,020,148.
Loftus, William H. 3,020,221.
Sartori, Mario F. 3,020,272.
Tletz, Raymond F. 3,020,265.

Durex, Inc.: *See*—
Denholtz, Edward J. 3,019,466.

Durrwerke Aktiengesellschaft: *See*—
Beverlein, Herbert. 3,019,774.

Eady, Hilton H., 50% to J. N. Register. Solenoid operated can opener. 3,019,523, 2–6–62, Cl. 30—4.

Eastman Kodak Co.: *See*—
Yackel, Edward C., Yutzy, Foster, and Rasch. 3,020,155.

Eble, Thomas E., and C. Lewis, to The Upjohn Co. 6-amino-9-D-psicofuranosylpurine. 3,020,274, 2–6–62, Cl. 260—211.5.

Eck, Bruno C. Radial blower for gases with high dust content. 3,019,963, 2–6–62, Cl. 230—127.

Eckert, Raymond H., and R. P. Baldwin. Cable applicator and rewind unit. 3,019,995, 2–6–62, Cl. 242—54.

Edmondson, Locke F.: *See*—
Murthy, Gopala K., Campbell, Masurovsky, and Edmondson. 3,020,161.

Edson, James O.: *See*—
Black, Harold S., and Edson. 3,020,350.

Edwards, Edwin D., and R. J. Hach, to Advanced Oil Tools, Inc. Jet perforator for well casings. 3,019,731, 2–6–62, Cl. 102—20.

Ehrhart, William E., to United States Steel Corp. Working-time recorder. 3,019,658, 2–6–62, Cl. 73—432.

Elchenbaum, Arle L., to Radio Corp. of America. High efficiency traveling wave tubes. 3,020,439, 2–6–62, Cl. 315—3.5.

Elden, Murlyn J., to Niagara Therapy Mfg. Corp. Therapeutic massage cushions. 3,019,784, 2–6–62, Cl. 128—33.

Elden, Murlyn J., to Niagara Therapy Mfg. Corp. Vibratory massage cushion. 3,019,785, 2–6–62, Cl. 128—33.

Eisenberg, David J., and T. Mauthner, to Nelson Chemicals Co. Process of making sodium metasilicate. 3,020,125, 2–6–62, Cl. 23—110.

Eisler, Paul. Electrical heating and conducting devices. 3,020,378, 2–6–62, Cl. 219—19.

Ekco Products Co.: *See*—
Hoffman, Alfred R. 3,019,912.

Electrolab Printed Electronics Corp.: *See*—
Franklin, John B., and Vallance. 3,020,219.

Electric & Musical Industries Ltd.: *See*—
Cole, Roy S., and Honeyman. 3,020,501.

Electric Storage Battery Co., The: *See*—
Ruetschi, Paul. 3,020 327.

Electro-Mechanical Research, Inc.: *See*—
Lewinstein, Narcus. 3,020,477.

Elektro-Mortoren A.G.: *See*—
Jaun Hermann. 3,019,998.

Ellenbogen Leon, and S. R. Hawkins, to American Cyanamid Co. Process for preparing augmentative intrinsic factor concentrate. 3,020,204, 2–6–62, Cl. 195—2.

Elliott, Bernard V. Automatic welding machine. 3,020,388, 2–6–62, Cl. 219—60.

Elmer and King Mfg. Co.: *See*—
Hake, Walter T. 3,019,672.

Elwell-Parker Electric Co., The: *See*—
Drexler, John A. 3,019,919.
Emery, Wilmont W. Fishing rod holder. 3,020,014, 2–6–62. Cl. 248—48.
Emile, Philip, Jr., to United States of America, Army. Transistorized storage register-indicator circuit. 3,020,418, 2–6–62. Cl. 307—88.5.
Engelhardt, Daniel A. Suit and shirt bags. 3,019,869. 2–6–62. Cl. 190—43.
Engelke, Erwin A. Tile setting apparatus. 3,020,082. 2–6–62. Cl. 294—87.
Engelmann, Richard H., to Jack N. Bluns. Method of and means for measuring torque of an electric motor drive. 3,019,640. 2–6–62. Cl. 73—136.
Englander Co., Inc., The: *See*—
Kamp, Ewald A. 3,019,456.
Engle, Paul M., to Cambridge Filter Mfg. Corp. Filters. 3,019,855. 2–6–62. Cl. 183—62.
Enterprise Railway Equipment Co.: *See*
Dorey, George B. 3,020,092.
Dorey, George B. 3,020,093.
Erickson, Harold E., N. E. and C. V. Nelson, and D. L. Schubert: said Erickson assor. to said Schubert and said N.E. and C. V. Nelson assors to Industrial Development Co. Mat edge press apparatus. 3,019,478. 2–6–62. Cl. 18—4.
Erickson, Harold E., N. E. and C. V. Nelson, and D. L. Schubert: said Erickson assor. to said Schubert and said N.E. and C. V. Nelson assors. to Industrial Development Co. Press deckle assembly. 3,019,479. 2–6–62. Cl. 18—4.
Erkert, James S., to National Lock Co. Self-locking gunnel bumpers. 3,019,758. 2–6–62. Cl. 114—219.
Esling, Eugene D.: *See*—
Hofmann, John J., and Esling. 3,020,376.
Esso Research and Engineering Co.: *See*
Brown, John A. 3,020,270.
Lockett, William, Jr. 3,020,240.
Morgan, Walter A. 3,020,458.
Schutze, Henry G., Leibson, and Bown. 3,020,268.
Stephens, Frank M., Jr., and Renken. 3,020,210.
Ethyl Corp.: *See*
Ashby, Eugene C., Foster, Maugham, and Pearson. 3,020,298.
Eubanks, Floyd G., 10% to Robert M. McManigal. Timed electrical control apparatus. 3,020,364. 2–6–62. Cl. 200—46.
Evans, Walter E. Soap tip-out tray. 3,019,549. 2–6–62. Cl. 45—28.
Even-Tov, Ori, to Sperry Rand Corp. Brake and clutch driving and holding circuit. 3,019,870. 2–6–62. Cl. 192—18.
Ever Ready Co. (Great Britain) Ltd., The: *See*
Worboys, Arthur F. 3,020,396.
Everett, Wilhelm S. Surge dissipating apparatus. 3,019,818. 2–6–62. Cl. 138—30.
FMC Corp.: *See*
Pfanfertl, John A., and Janey. 3,020,303.
Willard, Joe R., and Dorschner. 3,020,142.
Face Mfg. Co., Inc., The: *See*—
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,019,746.
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,020,162.
Fairchild Stratos Corp.: *See*—
Clavell, Thomas W. 3,019,776.
Falling, Gilard M.: *See*—
Rawlinson, Alvis M., and Falling. 3,019,476.
Faltin, William G. Clip for vehicle dashboard. 3,019,954. 2–6–62. Cl. 224—42.46.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Scherer, Otto, Hahn, and Stähler. 3,020,304.
Schonberg, Manfred, Wirtz, and Quadflieg. 3,020,293.
Schilde, Felix, and Mauz. 3,020,259.
Farer, Elizabeth L., and J. P. Pellegrini, Jr., to Gulf Research & Development Co. Liquid hydrocarbon fuel compositions. 3,020,135. 2–6–62. Cl. 44—62.
Fawkes, Donald G., to Henry Pratt Co. Rotary valve. 3,020,019. 2–6–62. Cl. 251—175.
Feagin, Roy C.: *See*—
Horton, Robert A., Ashbrook, and Feagin. 3,019,497.
Fearing, Ralph B., E. N. Walsh, and J. G. Brady, to Stauffer Chemical Co. Chloromethyl thionopyrophosphate esters and their use as pesticides. 3,020,198. 2–6–62. Cl. 167—22.
Fefer, Gregory, to Sparcatron Ltd. Electric disintegration of conductive materials. 3,020,448. 2–6–62. Cl. 315—138.
Feigleson, Charles O., to Collins Radio Co. Analog-voltage shaft positioning system. 3,020,459. 2–6–62. Cl. 318—28.
Feild, George B., and W. H. Markwood, Jr., to Hercules Powder Co. Hydrocarbon gel. 3,020,133. 2–6–62. Cl. 44—7.
Fejnert, Erik V. Cement mixing machine. 3,020,029. 2–6–62. Cl. 259—178.
Feldman, Milton. Automatically adjusting holding device. 3,020,058. 2–6–62. Cl. 279—123.
Feldt, Reinhold W.: *See*—
Swanson, Caleb V., Jr., and Feldt. 3,020,528.
Felts, Gordon P., ½ to Arthur W. Jarrett, and ½ to Robert W. Seeger. Fishhook extractor. 3,019,547. 2–6–62. Cl. 43—53.5.
Ferguson, Edgar A., Jr. Vitamin-orotic acid compositions. 3,020,278. 2–6–62. Cl. 260—256.6.
Ferguson, Edgar A., Jr. Calcium nicotinate iodide. 3,020,286. 2–6–62. Cl. 260—295.5.
Fermier, Rex M. A., to Lovejoy Flexible Coupling Co. Flexible coupling. 3,019,622. 2–6–62. Cl. 64—15.
Ferran, Juan V. Method of making picker sticks for use in shuttle looms. 3,020,187. 2–6–62. Cl. 156—250.
Ferrari, Andres, to Technicon Instruments Corp. Digestion apparatus and method. 3,020,130. 2–6–62. Cl. 23—230.
Ferris, Ernest A., and R. J. Curran, to Borg-Warner Corp. Sprag. 3,019,873. 2–6–62. Cl. 192—45.1.
Ferris, Robert G., to Starline, Inc. Mobile milking house and milk room. 3,019,763. 2–6–62. Cl. 119—14.03.
Ferro Stamping Co.: *See*—
Pickles, Joseph. 3,020,074.
Fetzer, Walter R., to Standard Brands Inc. Process of ammoniating syrup. 3,020,157. 2–6–62. Cl. 99—2.
Fetzer, Walter R., to Standard Brands Inc. Process of ammoniating feed. 3,020,158. 2–6–62. Cl. 99—2.
Feuerstein, Erwin, and R. L. Sternberg, to Laboratory For Electronics, Inc. Solid delay lines. 3,020,496. 2–6–62. Cl. 333—30.
Fichera, Salvatore. Finger shield and eye guard for sewing machines. 3,019,751. 2–6–62. Cl. 112—261.
Fierce, William L., and W. J. Sandner, to The Pure Oil Co. Preparation of cyanogen. 3,020,126. 2–6–62. Cl. 23—151.
Fierce, William L., and W. J. Sandner, to The Pure Oil Co. Carbon-nitrogen polymers and method of preparing same. 3,020,246. 2–6–62. Cl. 260—2.
Finsilver, Devora: *See*—
Pollack, Shirley, and Finsilver. 3,019,144.
Firestone Tire & Rubber Co., The: *See*—
Smith, George E. P., Jr. 3,020,287.
Firth Carpet Co., The: *See*—
Hubbard, John L. 3,019,625.
Fischbein, Dave. Lock attachment for a spring type counterbalancer. 3,020,001. 2–6–62. Cl. 242—107.2.
Fleissner, Gerold: *See*—
Fleissner, Johann and G. 3,019,630.
Fleissner, Johann and G., to Fleissner & Sohn Maschinenfabrik. Washing or dyeing machine. 3,019,630. 2–6–62. Cl. 68—138.
Fleissner & Sohn Maschinenfabrik: *See*—
Fleissner, Johann and G. 3,019,630.
Flinn, Richard A., and M. M. Stewart, to Gulf Research & Development Co. Removal of vanadium from a supported molybdenum-containing catalyst. 3,020,239. 2–6–62. Cl. 252—413.
Fluskey, Edward E.: *See*—
Brueckner, Hubert C., Fluskey, and Werbyckyj. 3,019,701.
Folger, Philip M.: *See*—
Wheeler, Charles M., and Folger. 3,020,427.
Follin, James W., Jr., to Research Corp. Electronic multiplier. 3,019,982. 2–6–62. Cl. 235—194.
Foote Mineral Co.: *See*—
Bravo, Justo B., and Delano. 3,020,124.
Force, John B.: *See*—
Brennan, John B., and Force. 3,019,666.
Forkner, John H., to The Pillsbury Co. Food product and method of manufacture. 3,020,164. 2–6–62. Cl. 99—134.
Foster, Donald P.: *See*—
Yackel, Edward C., Yutzy, Foster, and Rasch. 3,020,155.
Foster, Talmage D., Jr., to Union Carbide Corp. Polyester resins. 3,020,263. 2–6–62. Cl. 260—67.
Foster, Walter E.: *See*—
Ashby, Eugene C., Foster, Maugham, and Pearson. 3,020,298.
Foundos, Constantine: *See*—
Cook, Edward G., Tibolla, and Foundos. 3,019,637.
Fowler, F. Robert J., to General Motors Corp. Variable speed drive mechanism. 3,019,875. 2–6–62. Cl. 192—58.
Fowler, George W., and J. W. Lynn, to Union Carbide Corp. Process for the production of tertiary cyanoethylated amines. 3,020,310. 2–6–62. Cl. 260—465.5.
Fox, Robert M., and B. E. Ray, to General Motors Corp. Windshield cleaner. 3,019,469. 2–6–62. Cl. 15—250.21.
Franklin, John B., and N. W. Vallance, Jr., to Electralab Printed Electronics Corp. Process for producing oxide coatings on high silicon aluminum alloy. 3,020,219. 2–6–62. Cl. 204—58.
Franklin, Luther. Mining cutter. 3,020,031. 2–6–62. Cl. 262—33.
Frantz, Virgil L., to Graham-White Sales Corp. Sand trap. 3,020,072. 2–6–62. Cl. 291—11.
Franz, Anselm, to Avco Corp. Combustion section for a gas turbine engine. 3,019,606. 2–6–62. Cl. 60—39.65.
Fredericksen, Herman L.: *See*—
Wyss, John H., Fredericksen, and Testard. 3,019,446.
Fredrick, Russell E., to Minnesota Mining and Mfg. Co. Thermoelectric alloys and elements. 3,020,326. 2–6–62. Cl. 136—5.
Freedman, Louis: *See*—
Shapiro, Seymour L., and Freedman. 3,020,285.
Freeman, Lawrence W., to Plax Corp. Supporting containers for printing thereon. 3,019,725. 2–6–62. Cl. 101—38.
Freeman, Philip. Laminated blister package sealing machine. 3,019,582. 2–6–62. Cl. 53—371.
French, Hobert W., Jr., H. A. Maier, and J. L. Brookhart, to American Optical Co. Microscope stages. 3,019,708. 2–6–62. Cl. 88—39.
Freyberg, Adolf, to Joh. Kleinewefers Sohne. Washing machine for washing goods in full width. 3,019,631. 2–6–62. Cl. 68—178.
Frisbie, Marshall H., to The A. C. Gilbert Co. Conveyor apparatus for transferring toy load articles. 3,019,556. 2–6–62. Cl. 46—243.
Frost, Henry J.: *See*—
Walker, John M., Jr. 3,019,502.
Frost, John C. M., to Avro Aircraft Ltd. Vertical take-off aircraft control. 3,020,002. 2–6–62. Cl. 244—15.
Frost, John C. M., and C. J. Williams, to Avro Aircraft Ltd. Disc aircraft with gas turbine and ram jet engines. 3,020,003. 2–6–62. Cl. 244—15.
Fulford, James H.: *See*—
Weatherholt, Dallas D., Cherry, and Fulford. 3,019,795.
Fuller Brush Co., The: *See*—
Bean, John W. 3,019,710.
Furguson, Rollin W.: *See*—
Penczek, Edward S., and Furguson. 3,020,175.

Gabrielsen, Christian, H. Vorperian, and A. W. Sukovich, to Rowe Mfg. Co., Inc. Electric console cigarette merchandising machine. 3,019,941. 2–6–62. Cl. 221—109.
Gacki, Leonard W., to Medical Metals Inc. Film processing and developing apparatus. 3,019,717. 2–6–62. Cl. 95—96.
Gadget-of-the-Month Club, Inc.: *See*—
Haapala, Arthur B. 3,019,721.
Nielsen, Ralph P. 3,020,368.
Gaget, Augusta. Hair curlers. 3,019,798. 2–6–62. Cl. 132—42.
Gagnier, Charles E.: *See*—
Whitehill, Jules L., and Gagnier. 3,019,789.
Gahn, Edwin H., to Systron-Donner Corp. Gyroscopic control mechanism. 3,019,662. 2–6–62. Cl. 74—5.7.
Gallagher, John P. Tire checking apparatus. 3,019,642. 2–6–62. Cl. 73—146.
Gamet, Louis J.-M., to La Precision Industrielle. Rotary fluid supply system. 3,020,057. 2–6–62. Cl. 279—4.
Gardner, Edward M., and V. T. Kopp, to Merrill Bros. Automatically locking lift fork attachment. 3,019,929. 6–2–62. Cl. 214—620.
Garrett, Patrick L. Paint roller cleaner. 3,019,467. 2–6–62. Cl. 15—236.
Garrison, Richard J., E. W. Henches, and G. S. Spiro, to American Telephone and Telegraph Co. Record controlled translator. 3,020,525. 2–6–62. Cl. 340—172.5.
Garvey, Louis P., and J. D. Leslie, to General Motors Corp. Vacuum-operated coincidental door lock control system. 3,019,848. 2–6–62. Cl. 180—82.
Gatti, Fernando: *See*—
De Barbieri, Ettore, and Gatti. 3,019,458.
Gatzert, Ernest H., to General Dynamics Corp. Prepay pay-station telephone system. 3,020,347. 2–6–62. Cl. 179—6.3.
Gaudilliere, Pierre. Method and device for measuring the speed of an aircraft or the like. 3,020,540. 2–6–62. Cl. 343—8.
Gavin, Austin F. Oxygen meter fitting. 3,019,646. 2–6–62. Cl. 73—201.
Gebr. Bohler & Co. Aktiengesellschaft: *See*—
Strohmeier, Harald. 3,019,484.
Gebr. Steidinger K.G.: *See*—
Zimmermann, Heinrich, and Hermann. 3,020,051.
Gebruder Kollisch: *See*—
Projahn, Emil. 3,019,807.
Gebrueder Buehler: *See*—
Meyer, Fritz. 3,019,618.
Gechele, Giovanni B., A. Nenz, and G. Barberis, to Sicedison A.p.A. Process for inhibiting the polymerization of nitrogenated heterocyclic vinyl compounds. 3,020,284. 2–6–62. Cl. 260—290.
Geleijnse, Johannes J. W.: *See*—
Van den Berge, Hendrik J., Bliek, Geleijnse, and Van der Maat. 3,019,505.
Gelenkwellenbau G.m.b.H.: *See*—
Kleinschmidt, Hans-Joachim. 3,020,036.
Kleinschmidt, Hans-Joachim. 3,020,110.
Gellert, Jobst. Cigarette dispensing package. 3,019,892. 2–6–62. Cl. 206—41.2.
General Cigar Co., Inc.: *See*—
Hess, Earl H. 3,020,179.
General Dynamics Corp.: *See*—
Brightman, Barrie. 3,020,419.
Gatzert, Ernest H. 3,020,347.
Gratian, Joseph W., and O'Brien. 3,020,360.
Hamann, Omer F. 3,020,441.
Heese, William E., and White. 3,019,771.
King, John A. 3,019,849.
Mancini, Alfonso R. 3,019,644.
Penczek, Edward S., and Furguson. 3,020,175.
Raver, Jack. 3,020,511.
Volberg, Herman W. 3,020,530.
Woodhull, William M. 3,020,351.
Zarcone, Carl J. 3,020,337.
General Electric Co.: *See*—
Agens, Maynard C. 3,020,056.
Bailey, Francis M., and Canfield. 3,019,711.
Bangert, Robert J., and Staley. 3,020,333.
Barton, Leon M., and Nordell. 3,020,482.
Bayless, Frank K. 3,019,465.
Bessarab, Michael. 3,020,446.
Butler, William L. 3,020,514.
Daniels, Franklin W. 3,020,182.
Day, Harold R., Jr. 3,020,433.
Dickey, Frank R., Jr. 3,020,541.
Hammerly, Herman J. 3,020,515.
Herrick, Carlyle S. 3,020,129.
Hilliker, Donald E. 3,019,619.
Lukes, Robert M. 3,020,253.
Marsden, James. 3,020,299.
Milford, Richard E. 3,020,486.
Pletsch, Joseph A. 3,019,609.
Schubert, Albert E., and Herrick. 3,019,614.
Skala, George F. 3,019,692.
Smee, Peter G. 3,020,420.
Thompson, Paige W., and Tupper. 3,020,105.
Weinstein, Myron. 3,020,445.
Wheeler, Charles M., and Folger. 3,020,427.
General Electronic Laboratories, Inc.: *See*—
Perkins, Kenneth C. 3,020,403.
General Gas Light Co.: *See*—
Humphrey, Robert P. 3,019,772.
General Motors Corp.: *See*—
Abramson, Franz W., and Gilson. 3,019,847.
Albinson, Harold H., and Voss. 3,019,671.
Barnhizer, Harold K., and Williams. 3,020,394.
Biondo, Frank P. 3,020,076.
Bockemuehl, Robert R. 3,019,984.
Bogater, John P. 3,019,473.
Brennan, John B., and Force. 3,019,666.
Candelise, Alfred. 3,019,777.
General Motors Corp.: *See*—Continued
Fowler, F. Robert J. 3,019,875.
Fox, Robert M., and Ray. 3,019,469.
Garvey, Louis P., and Leslie. 3,019,848.
Hall, William M. 3,019,604.
Hocutt, Morris G., and McLuen. 3,019,598.
Holzwarth, James C., Hornaday, and Vigor. 3,019,516.
Hornaday, James R., Jr., Vigor, Tobin, and Holzwarth. 3,019,513.
Johnstone, Theodore H., and Liem. 3,020,075.
Jones, Richard A. 3,020,328.
Kelley, Oliver K. 3,019,670.
King, Edward J., and Romanzi. 3,020,040.
Kolbe, Adelbert E. 3,019,781.
Kreutzer, Arthur. 3,019,603.
Kuiper, Dan B. 3,019,857.
Leslie, James D. 3,020,392.
McCaslin, Donald A. 3,020,101.
Mead, Howard C. 3,020,435.
Mercer, Robert L. 3,019,802.
Moeller, John D., and Scarff. 3,019,735.
Rosenkrands, Johannes. 3,020,060.
Rosenkrands, Johannes W. 3,020,061.
Ross, Marvin O. 3,019,629.
Sauzedde, Rene E. 3,019,871.
Schwarz, Bertram A. 3,020,405.
Vigor, Charles W. 3,020,152.
Winchell, Frank J., and Kelley. 3,019,668.
Zubaty, Joseph. 3,019,738.
General Precision, Inc.: *See*—
Appleton, Norman J. 3,020,531.
Gevas, James C. 3,020,535.
Imm, Lewis W. 3,019,968.
Remington, Richard C., and Schauffler. 3,020,506.
Sommers, Alfred. 3,020,236.
General Steel Products Corp.: *See*—
Kearns, Thomas F., Jr. 3,019,863.
General Telephone and Electronics Laboratories, Inc.: *See*—
Bowerman, Edwin R., Jr. 3,020,410.
Gerber, Eduard A., to United States of America, Army. Crystal frequency stabilization. 3,020,423. 2–6–62. Cl. 310—8.9.
Gerber Products Co.: *See*—
Krupp, Robert F., and Wagner. 3,019,924.
German, George: *See*—
Bache, John K., and German. 3,020,037.
German, Richard C., S. E. Arnett, and E. G. Roberts, to The Bendix Corp. Jet engine fuel control responsive to inferentially measured combustion gas temperature. 3,019,597. 2–6–62. Cl. 60—35.6.
Gerteis, Karl M., to Carrier Corp. Refrigeration systems. 3,020,464. 2–6–62. Cl. 318—221.
Gervais, Henry: *See*—
Guarino, Frederick L., Gervais, and Vlahov. 3,019,519.
Gevas, James C., to General Precision, Inc. Analog to digital conversion system. 3,020,535. 2–6–62. Cl. 340—347.
Gewerkschaft Elsenhutte Westfalia: *See*—
Dommann, Gunther. 3,019,813.
Gibbs, Hugh H., to E. I. du Pont de Nemours and Co. Preparation of fluoroolefins. 3,020,321. 2–6–62. Cl. 260—653.3.
Gilbert, A. C., Co., The: *See*—
Frisbie, Marshall H. 3,019,556.
Gillette Co., The: *See*—
Reed, Raymond E. 3,019,796.
Gillis, Randall, to Western Electric Co., Inc. Color coded cable. 3,020,335. 2–6–62. Cl. 174—112.
Gilson, Joseph H.: *See*—
Abramson, Franz W., and Gilson. 3,019,847.
Gits Bros. Mfg. Co.: *See*—
Gits, Remi J. 3,020,052.
Gits, Remi J., to Gits Bros. Mfg. Co. Shaft seal. 3,020,052. 2–6–62. Cl. 277—89.
Glatfelter, P. H., Co.: *See*—
Casciani, Ferri, and Bauman. 3,020,195.
Glaze, John W., Jr., and J. C. Wilson, to Autoboard Corp., Inc. Stocking handling apparatus. 3,019,951. 2–6–62. Cl. 223—76.
Gobell, Richard J., and R. W. Luckenbaugh, to E. I. du Pont de Nemours and Co. Herbicidal composition and method employing N-cyano and N-cyanoalkyl substituted ureas. 3,020,144. 2–6–62. Cl. 71—2.6.
Gobell, Richard J., R. S. Johnson, and R. W. Luckenbaugh, to E. I. du Pont de Nemours and Co. Herbicidal composition and method employing substituted ureas. 3,020,145. 2–6–62. Cl. 71—2.6.
Goemann, Richard P., and R. O. Norton, to H. H. Robertson Co. Air distributing apparatus and method. 3,019,987. 2–6–62. Cl. 236—13.
Gold, Marvin H., and G. B. Linden, to Aerojet-General Corp. Polynitro alcohols and their method of preparation. 3,020,318. 2–6–62. Cl. 260—632.
Gomez, Carlos, and J. R. Victor. Wooden musical toy. 3,019,353. 2–6–62. Cl. 46—191.
Gongwer, Calvin A., to Aerojet-General Corp. Method of forming a solid propellant. 3,019,687. 2–6–62. Cl. 86—1.
Gonzales-Pelaez, Manuel, 35% to C. F. Pfeifer and 40% to V. C. Arguimbau. Composition of matter and method of treating fibrous cellulosic materials therewith. 3,020,167. 2–6–62. Cl. 106—229.
Goodner Van Engineering Co.: *See*—
Macklin, Charles R. 3,020,087.
Gordon, Carroll G., ½ to W. F. Stoesser. Electro-hydraulic servo valve. 3,019,805. 2–6–62. Cl. 137—83.
Gorman, Eugene F., to Union Carbide Corp. Portable air lock for welding chambers. 3,020,389. 2–6–62. Cl. 219—72.
Gorman, William G., to Sterling Drug Inc. Metered valve construction. 3,019,947. 2–6–62. Cl. 222—394.

Gould, Arthur S., and P. Nathanson, to The Dobeckman Co. Supported metallic yarn. 3,019,592, 2-6-62, Cl. 57—144.

Gould, Jack L., and L. M. Gutmann, to Ferdinand Gutmann & Co. Snap-on caps and packages incorporating the same. 3,019,933, 2-6-62, Cl. 215—41.

Gouveia, A. Peter, to Johns-Manville Corp. Nonwoven fabrics with a fabric-like appearance. 3,020,168, 2-6-62, Cl. 117—11.

Grabowski, Edward W., to Metriframe Structures Ltd. Members for use in the construction of structural framework. 3,019,866, 2-6-62, Cl. 189—36.

Grace, W. R. & Co.: *See* Steadman, Thomas R., and Steyermark. 3,020,273.

Graf, Anton, to Askania-Werke A.G. Device for measuring gravity on moving platforms. 3,019,655, 2-6-62, Cl. 73—382.

Graham, John F., to Collins Radio Co. Multicore transformer. 3,020,502, 2-6-62, Cl. 336—73.

Graham White Sales Corp.: *See* Frantz, Virgil L. 3,020,072.

Granqvist, Carl Erik, to Svenska Aktiebolaget Gasaccumula for Arrangement for radio direction finding. 3,020,547, 2-6-62, Cl. 343—114.

Grathwol, Margaret D.: *See* Grathwol William L. 3,019,826.

Grathwol, William L., deceased, by M. D. Grathwol, executrix. Wood trimming machine having improved cutter protective means. 3,019,826, 2-6-62, Cl. 144—216.

Gratian, Joseph W., and R. J. O'Brien, to General Dynamics Corp.: Pronunciary. 3,020,360, 2-6-62, Cl. 179—100.2.

Gray, Robert M. Block handling apparatus. 3,019,925, 2-6-62, Cl. 214—310.

Greefkes, Johannes A.: *See* De Jager, Frank, and Greefkes. 3,020,352.

Green, Harry S.: *See* Swales, Frank, Kurvers, and Green. 3,019,653.

Greene, Harold L. Bow tie holder. 3,019,910, 2-6-62, Cl. 211—87.

Greenlee Bros. & Co.: *See* Long, Louis E. 3,019,915.

Gregoire, Stephen E.: *See* Twaddell, Russell W., and Gregoire. 3,020,449.

Grinnell Corp.: *See* Boteler, Henry W. 3,020,020.

Griscom Russell Co., The: *See* Lawrance, Harold R. 3,020,024.

Griser, Lawrence P.: *See* Dehlu, Zell, and Griser. 3,020,013.

Grissom, Everett D. Reversible ratchet wrench. 3,019,681, 2-6-62 Cl. 81—61.

Griswold, Owen H. Vacuum pump. 3,019,964, 2-6-62, Cl. 230—148.

Groppe, Otto K.: *See* Johnson, James V., Jr., Groppe, Hibbitts, and Phillips. 3,019,574.

Grosjean, Kurt, to Landis & Gyr, A.G. Heat exchanger valve. 3,019,985, 2-6-62, Cl. 236—1.

Grossimon, Herbert P.: *See* Morin, John O., McDonough, and Grossimon. 3,020,460.

Grover Smith Mfg. Corp.: *See* Meeker, William M. 3,019,773.

Gruenberg, Elliot L., to Maxson Electronics Corp. Modulated carrier wave moving target detection radar system. 3,020,539, 2-6-62, Cl. 343—7.7.

Grunwald, Robert R. R. Wallace, and H. Bowen, to The Harwald Co., Inc. Automatic film cleaner. 3,019,464, 2-6-62, Cl. 15—100.

Guarino, Frederick L., H. Gervais, and D. Vlahov. Clip design mechanism. 3,019,519, 2-6-62, Cl. 29—212.

Gueuther, Walter F., to Westinghouse Electric Corp. Binary alternator. 3,020,467, 2-6-62, Cl. 323—89.

Guilbert, Francois V., to Sud-Aviation Societe Nationale de Constructions Aeronautiques. Landing skid equipped with auxiliary wheel. 3,020,009, 2-6-62, Cl. 244—102.

Gulf Research & Development Co.: *See* Fareri, Elizabeth L., and Pellegrini. 3,020,135.
Flinn, Richard A., and Stewart. 3,020,239.
O'Reilly, Donald E. 3,020,469.
Patnode, Homer W. 3,019,693.

Gulton Industries, Inc.: *See* Welkowitz, Walter. 3,019,660.

Gulton Industries, Inc.: *See* Welkowitz, Walter. 3,019,661.

Gum, Rowland H., to San Joaquin Valley Turkey Grower's Assn. Press for forming tied meat rolls. 3,019,722, 2-6-62, Cl. 100—1.

Gunderson, Leland B.: *See* Loevenstein, Hirsch, Carlson, and Gunderson. 3,019,895.

Gunther-Mohr, Gerard R., to International Business Machines Corp. Single crystal refining. 3,020,132, 2-6-62, Cl. 23—301.

Gurney, Joseph T., Sr. Time delay switch. 3,020,363, 2-6-62, Cl. 200—33.

Gustafson, Blaine W., to Deere & Co. Rake tooth means. 3,019,586, 2-6-62, Cl. 56—400.

Gustin Bacon Mfg. Co.: *See* Stephens, Joseph F., Higgins, and Haynes. 3,020,192.

Gutmann, Ferdinand, & Co.: *See* Gould, Jack L., and Gutmann. 3,019,933.

Gutmann, Leonard M.: *See* Gould, Jack L., and Gutmann. 3,019,933.

Haapala, Arthur B., to to Gadget-of-the-Month Club, Inc. Device for facilitating the cooking of bacon. 3,019,721, 2-6-62, Cl. 99—400.

Haber, Robert J., to All American Engineering Co. Arresting gear retrieve system. 3,020,010, 2-6-62, Cl. 244—110.

Habermaas, Otto H., and O. Hoppmann, to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung. Rotatable arrangement; especially for dredges. 3,020,107, 2-6-62, Cl. 308—203.

Hach, Ralph J.: *See* Edwards, Edwin D., and Hach. 3,019,731.

Hackney, Stanley, to United Kingdom Atomic Energy Authority. Nuclear reactor moderator structures. 3,020,226, 2-6-62, Cl. 204—193.2.

Haerther, Lester W., and H. I. Walker, to Collins Radio Co. Aircraft approach horizon instrument. 3,019,532, 2-6-62, Cl. 33—204.

Hahn, Helmut: *See* Scheyer, Otto, Hahn, and Stahler. 3,020,304.

Hake, Walter T., to Elmer and King Mfg. Co. Machine tool adjusting means. 3,019,672, 2-6-62, Cl. 77—4.

Hall, William M., to General Motors Corp. Turbojet thrust computer. 3,019,604, 2-6-62, Cl. 60—39.28.

Hallowell, Dennis F., Jr., to Richfield Oil Corp. Grease composition. 3,020,233, 2-6-62, Cl. 252—40.7.

Haltenberger, Jules. Automobile front seat backrest adjustment. 3,020,088, 2-6-62, Cl. 297—357.

Hamann, Omer F., to General Dynamics Corp. Character beam-shaped tube. 3,020,441, 2-6-62, Cl. 315—8.5.

Hanedink, William R., to Minneapolis-Honeywell Regulator Co. Condition responsive means. 3,020,413, 2-6-62, Cl. 250—214.

Hamm, Philip C., and G. A. Saul, to Monsanto Chemical Co. Mixed anhydrides of phosphorodiamidic acid in method of weed control. 3,020,141, 2-6-62, Cl. 71—2.3.

Hammerly, Herman J., to General Electric Co. Electric terminal construction. 3,020,515, 2-6-62, Cl. 339—95.

Hancock, Charles K., to Signal Oil and Gas Co. Road marker materials and methods of making same. 3,020,252, 2-6-62, Cl. 260—24.

Hankscraft Co.: *See* Conlin, Peter, and Schulz. 3,020,385.

Hansen, Christie L. Line attaching device. 3,019,546, 2-6-62, Cl. 43—44.91.

Hansen, Roy C. ⅓ to R. B. Cole, and ⅓ to C. A. Dalton. Hanger panel for veneer masonry blocks. 3,019,560, 2-6-62, Cl. 50—342.

Haracz, Edward F. Polishing surfaces. 3,019,564, 2-6-62, Cl. 51—56.

Harder, William F.: *See* Truman, Theodore J., and Harder. 3,019,868.

Hare, Terence G. Reversible ratchet type wrench. 3,019,682, 2-6-62, Cl. 81—63.2.

Haris Co., Ltd.: *See* Iwakiri, Mitsuo, and Hino. 3,020,257.

Harkenrider, Robert J., to Miller Lubricator Co. Journal box lubricator. 3,020,103, 2-6-62, Cl. 308—88.

Harlan, Don L., J. A. Battle, Jr., and J. C. Allen, to Texaco Inc. Well bore completion method. 3,019,838, 2-6-62, Cl. 166—39.

Harless, Charles A.: *See* Ringe, Carl H., and Harless. 3,019,729.

Harnist, Lucien. Agent for the treatment of temporary hoarseness. 3,020,203, 2-6-62, Cl. 167—68.

Harold, Vincent C., Jr.: *See* Cubberley, Richard H., Harold, and Zinaman. 3,020,184.

Harrell, Harry E., Jr. Baseboard electric heater. 3,020,382, 2-6-62, Cl. 219—34.

Hartford Special Machinery Co., The: *See* Morin, John O., McDonough, and Grossimon. 3,020,460.

Harvey Aluminum (Inc.): *See* Loevenstein, Hirsch, Carlson, and Gunderson. 3,019,895.

Harvey Machine Co., Inc.: *See* Braid, Ralph A. 3,019,733.

Harwald Co., Inc., The: *See* Grunwald, Robert, Wallace, and Bowen. 3,019,464.

Harwood, Floyd E.: *See* Parsons, John T., and Harwood. 3,020,115.

Hasbrouck, Richard B.: *See* Schock, Richard U., Jr., Hasbrouck, and Dickson. 3,020,283.

Hatch, Arthur R., to American Motors Corp. Wiper blade parking device. 3,019,468, 2-6-62, Cl. 15—250.19.

Hatstat, Robert G., G. H. Lockwood, and W. D. Schmidt, to The Heald Machine Co. Grinding machine. 3,019,565, 2-6-62, Cl. 51—165.

Hatton, Roger E.: *See* Campbell, John R., and Hatton. 3,020,315.

Haumann, Wilfried, to Union Carbide Corp. Method and apparatus for producing a homogeneous thermal insulation mixture. 3,020,234, 2-6-62, Cl. 252—62.

Hautz, Harry W. Golf ball marking device. 3,019,762, 2-6-62, Cl. 118—76.

Hawkins, Samuel R.: *See* Ellenbogen, Leon, and Hawkins. 3,020,204.

Haworth, Russell G.: *See* Kulli, Raymond R., McLaughlin, Priesnitz, Conder, and Haworth. 3,019,890.

Haynes, Homer A.: *See* Stephens, Joseph F., Higgins, and Haynes. 3,020,192.

Haywood, George L.: *See* Camp, John E., Mueller, Sandholdt, and Haywood. 3,020,139.

Hazeltine Research, Inc.: *See* Richman, Donald. 3,020,339.

Head, James R.: *See* Wooldridge, William D. 3,019,451.

Heald Machine Co., The: *See* Hatstat, Robert G., Lockwood, and Schmidt. 3,019,565.

Heckethorn, John E., to Heckethorn Mfg. & Supply Co. Automatic two-speed drives for automobile accessories. 3,019,874, 2-6-62, Cl. 192—48.

Heckethorn Mfg. & Supply Co.: *See* Heckethorn, John E. 3,019,874.

Heckman, John A. Film-cutting and card holder inserting machine. 3,019,579, 2-6-62, Cl. 53—123.

Heese, William E., and R. F. White, to General Dynamics Corp. Hydraulic rotary actuator. 3,019,771, 2-6-62, Cl. 121—38.

Heetman, Alphonsus, to North American Philips Co., Inc. Arrangement for automatic telephone systems. 3,020,353, 2-6-62, Cl. 179—18.

Heijn, Herman J.: *See* Duinker, Simon, and Heijn. 3,019,977.

Heijn, Herman J., J. F. Klinkhamer, J. A. Samwel, and H. A. R. De Miranda, to North American Philips Co., Inc. System for controlling a plurality of writing head. 3,020,117, 2-6-62, Cl. 346—74.

Heintz, Rene: *See* Delcroix, Jean, Hubert, and Heintz. 3,019,894.

Heiling, Werner, and R. Lange. Continuous carbon electrode. 3,020,220, 2-6-62, Cl. 204—67.

Hemphill, Frederick A.: *See* Broadbent, Bernard G., and Hemphill. 3,019,558.

Henches, Eugene W.: *See* Garrison, Richard J., Henches, and Spiro. 3,020,525.

Henning, George E., to Western Electric Co., Inc. Method of making expandable plastic and preparation of cellular plastic therefrom. 3,020,248, 2-6-62, Cl. 260—2.5.

Henninger, Friedrich, to Motoren-Werke Mannheim A.G. Vorm. Benz Abt. Stat Motorenbau. Starting and reversing system for Diesel engines. 3,019,596, 2-6-62, Cl. 60—16.

Henry, Elliott A., to Sperry Products, Inc. Ultrasonic inspection and measuring means. 3,019,636, 2-6-62, Cl. 73—67.7.

Hepworth Machine Co., Inc.: *See* McPhee, Alexander H., and Reid. 3,019,902.

Hercules Powder Co.: *See* Feild, George B., and Markwood. 3,020,133.

Hermann, Hans: *See* Zimmermann, Heinrich, and Hermann. 3,020,051.

Hermanson, Harry M., to Minneapolis-Honeywell Regulator Co. Liquid quantity measuring apparatus. 3,019,651, 2-6-62, Cl. 73—304.

Herolf, Kjell O. G., to Sunds Verkstader Aktiebolag. Barking machines. 3,019,825, 2-6-62, Cl. 144—208.

Herrick, Carlyle S.: *See* Schubert, Albert E., and Herrick. 3,019,614.

Herrick, Carlyle S., to General Electric Co. Production of silicon of improved purity. 3,020,129, 2-6-62, Cl. 23—223.5.

Hess, Earl H., to General Cigar Co., Inc. Tobacco treatment and product therefrom. 3,020,179, 2-6-62, Cl. 131—17.

Hetherington, James S.: *See* Basche, Malcolm, Comerford, Doyle, and Hetherington. 3,020,387.

Hibbitts, Kermit: *See* Johnson, James V., Jr., Groppe, Hibbitts, and Phillips. 3,019,574.

Higgins, James R.: *See* Stephens, Joseph F., Higgins, and Haynes. 3,020,192.

Hildebrand, Klaus, and H. Pocher, to Continental Elektroindustrie A.G., Askania-Werke. Instrument for measuring distances and the like. 3,019,690, 2-6-62, Cl. 88—1.

Hill, Fred N.: *See* Thompson, Bruce R., Hill, and Smith. 3,020,229.

Hill, Howard M. Striking punch. 3,019,713, 2-6-62, Cl. 93—36.5.

Hillen, Hubert J., and D. J. Stuart, to International Computers and Tabulators Ltd. Card feeding apparatus. 3,020,044, 2-6-62, Cl. 271—44.

Hillenbrand, Daniel A., and W. W. F. Dieckmann, to Batesville Casket Co., Inc. Load supporting and handling mechanism for vehicles. 3,019,920, 2-6-62, Cl. 214—84.

Hilliker, Donald E., to General Electric Co. Evaporator structure for household refrigerators. 3,019,619, 2-6-62, Cl. 62—417.

Hinds, Gene W., G. M. Skinner, and P. L. Smith, to Union Carbide Corp. Oxygen roof jet device. 3,020,035, 2-6-62, Cl. 266—34.

Hine, Edward K., to Curtiss-Wright Corp. Reversing aircraft propeller. 3,020,007, 2-6-62, Cl. 244—81.

Hino, Tsunetoshi: *See* Iwakiri, Mitsuo, and Hino. 3,020,257.

Hinton, Howard A. Saddle mount. 3,020,064, 2-6-62, Cl. 280—402.

Hinze, George. Dental articulator. 3,019,529, 2-6-62, Cl. 32—32.

Hirvonen, Eric J., to Leland-Gifford Co. Boring bar construction. 3,019,674, 2-6-62, Cl. 77—58.

Hirsch, Arthur G.: *See* Williams, Jack A., and Hirsch. 3,020,199.

Hirsch, Julius A., and L. Small, to Cutter Cravat, Inc. Fastening device and manner of attaching the same. 3,019,445, 2-6-62, Cl. 2—145.

Hocutt, Morris G., and C. T. McLuen, to General Motors Corp. Afterburner fuel igniter. 3,019,598, 2-6-62, Cl. 60—35.6.

Hoe, R., & C., Inc.: *See* Ringe, Carl H., and Harless. 3,019,729.

Hoeckele, Walter J., to Tapex Corp. Snap fastener applicator tools. 3,019,442, 2-6-62, Cl. 1—317.

Hoekstra, James: *See* McCartney, Daniel E., and Hoekstra. 3,020,242.

Hoffman, Alfred R. to Ekco Products Co. Revolving shelf mounting assembly. 3,019,912, 2-6-62, Cl. 211—144.

Hofmann, John J., and E. D. Esling, to Libbey-Owens-Ford Glass Co. Laminated plastic articles and method of making the same. 3,020,376, 2-6-62, Cl. 219—19.

Hoffman Electronics Corp.: *See* Byczkowski, Mieczyslaw. 3,020,412.

Hoffman, Frank W.: *See* Peeps, Donald J., and Hoffman. 3,020,026.

Hoffmann, Erich O., to Quality Die Co. Marking dies, and the like. 3,019,724, 2-6-62, Cl. 101—7.

Hogue, Frank J. Unitized electrical capacitor. 3,020,453, 2-6-62, Cl. 317—230.

Holland, John H.: *See* Cetran, Louis, Arthur, and Holland. 3,019,881.

Hollis, James L., to Rixon Electronics, Inc. Reduction of multipath effects by frequency shift. 3,020,399, 2-6-62, Cl. 250—8.

Holt, William L.: *See* Doyle, Robert, Holt, and Cooper. 3,019,488.

Holzwarth, James C.: *See* Hornaday, James R., Jr., Vigor, Tobin, and Holswarth. 3,019,513.

Holzwarth, James C., J. R. Hornaday, Jr., and C. W. Vigor, to General Motors Corp. Method of forming a protective coating on molybdenum. 3,019,516, 2-6-62, Cl. 29—198.

Honeyman, William N.: *See* Cole, Roy S., and Honeyman. 3,020,501.

Hooker Chemical Corp.: *See* Less, Frank W., Searer, and Roeck. 3,020,254.

Hoover, Clinton E., to American Machine and Metals, Inc. Nozzle. 3,019,993, 2-6-62, Cl. 239—407.

Hopff, Heinrich: *See* Behrends, Jurgen, Schweitzer, Kerner, and Hopff. 3,020,264.

Hoppmann, Otto: *See* Habermaas, Otto H., and Hoppmann. 3,020,107.

Horan, John J. Elastic lamps, principles, constructions, mountings and methods. 3,020,437, 2-6-62, Cl. 313—318.

Hori, Sanji. Moving needle type hand operated knitting machine. 3,019,624, 2-6-62, Cl. 66—60.

Horie, Harry T., and T. U. Tablos. Sterilizer for barbers' implements. 3,019,494, 2-6-62, Cl. 21—87.

Hornaday, James R., Jr.: *See* Holzwarth, James C., Hornaday, and Vigor. 3,019,516.

Hornaday, James R., Jr., C. W. Vigor, C. J. Tobin, and J. C. Holzwarth, to General Motors Corp. Method of manufacture. 3,019,513, 2-6-62, Cl. 29—157.3.

Hornbostel, Lloyd, to Beloit Iron Works. Crowned roll. 3,019,511, 2-6-62, Cl. 29—130.

Horton, Robert A., R. L. Ashbrook, and R. C. Feagin, to Howe Sound Co. Making fine grained castings. 3,019,497, 2-6-62, Cl. 22—196.

Hotas, Leon G. Foot exercising machine. 3,020,046, 2-6-62, Cl. 272—57.

Houdaille Industries, Inc.: *See* Ramsey, Rollin D. 3,019,812.
Ramsey, Rollin D. 3,020,008.

Howe Sound Co.: *See* Horton, Robert A., Ashbrook, and Feagin. 3,019,497.

Howes, Irving C., to Davis & Furber Machine Co. Pile fabric knitting machines. 3,019,623, 2-6-62, Cl. 66—9.

Hruby, John O., Jr., to Rain Jet Corp. Gyratory stem sprinklers with upper chamber. 3,019,991, 2-6-62, Cl. 239—206.

Hubbard, John L., to The Firth Carpet Co. Pattern mechanism for pile fabrics. 3,019,625, 2-6-62, Cl. 66—84.

Hubert, René: *See* Delcroix, Jean, Hubert, and Heintz. 3,019,894.

Hudson, Kenneth C.: *See* Beard, Richard B., and Hudson. 3,019,647.

Hughes Aircraft Co.: *See* Bariffi, Herbert F. 3,020,367.
Carroll, George R. 3,020,493.
Losee, Perril A. 3,020,483.

Hughes, John A. Fish skinning saw. 3,019,474, 2-6-62, Cl. 17—7.

Hughes, William. Oxygen dispenser. 3,019,788, 2-6-62, Cl. 128—203.

Hughes, William B., and V. L. Stromberg, to Petrolite Corp. Cyclic amidines. 3,020,276, 2-6-62, Cl. 260—256.4.

Hulst, George D., to International Telephone and Telegraph Corp. Reflected binary code counter. 3,020,481, 2-6-62, Cl. 328—42.

Hummel, John. Fishing lures. 3,019,544, 2-6-62, Cl. 43—42.41.

Humphrey, Robert P., to General Gas Light Co. Fluid motor with flexible tubular cylinders symmetrically spaced about the power shaft. 3,019,772, 2-6-62, Cl. 121—48.

Hunt, Robert J., to Remington Arms Co., Inc. Device for detecting low or missing charges in the assembly of ammunition components. 3,019,688, 2-6-62, Cl. 86—23.

Hunter-Penrose Ltd.: *See* Kilminster, Arthur R. 3,019,703.

Hurletron Inc.: *See* Walthall, Willard M. 3,019,955.

Huska, Paul. Fluid reservoir. 3,019,948, 2-6-62, Cl. 222—395.

Huska, Paul. Transposed electrical bus ducts. 3,020,330, 2-6-62, Cl. 174—34.

Huss, William S.: *See* Asman, Norman J., and Huss. 3,019,958.

Hussman Engineering Corp.: *See* Shawfrank, Robert W. 3,020,377.

Hyams, James A. E.: *See* Zuehlke, Arthur A., and Hyams. 3,020,508.

Hyde, Clyde M., to Research Corp. Sideband intermediate frequency communications system. 3,020,398, 2-6-62, Cl. 250—6.

Hyde, Richard W.: *See* Old, Bruce S., Hyde, Meissner, Margolin, Newton, and Schora. 3,020,149.

Hynes, James P., and G. F. Dunphy, to Ogden Industries Pty. Ltd. Operating devices for casement windows and the like. 3,020,039, 2-6-62, Cl. 268—109.

Hyvarinen, Matti J.: *See* Meek, Wayne L., and Hyvarinen. 3,020,191.

I-T-E Circuit Breaker Co.: *See* Deans, William. 3,020,329.
Dortort, Isadore K. 3,020,415.
Tootelian, George D. 3,020,374.

Ibry, Gladys E.: *See* Irby, James L. 3,019,891.

Ida, Noble N., to Martin-Marietta Corp. Aluminum alloy. 3,020,154, 2-6-62, Cl. 75—138.

Imer, Jean L. P., to Compagnie de Saint-Gobain. Unsaturated polyester composition containing phenyl chlorophosphonates to reduce color. 3,020,256, 2–6–62, Cl. 260—45.4.

Imm, Lewis W., to General Precision Inc. Mechanical fire control computer solving trigonometric equations. 3,019,968, 2–6–62, Cl. 235—61.

Industrial Development Co.: *See*—
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,478.
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,479.

International Business Machines Corp.: *See*—
Cheroff, George. 3,020,411.
Gunther-Mohr, Gerard R. 3,020,132.
Taylor, Jordan M. 3,019,976.
Walker, Robert M., and Schlig. 3,020,489.

International Computers and Tabulators Ltd.: *See*—
Hillen, Hubert J., and Stuart. 3,020,044.
Townsend, Ralph. 3,019,979.

International Electronic Research Corp.: *See*—
McAdam, John C. 3,020,451.

International Standard Electric Corp.: *See*—
Ash, Eric A., and Pattenden. 3,020,498.
Cattermole, Kenneth W. 3,020,349.
Clement, Wolfgang. 3,020,409.
Ridler, Desmond S., and Odell. 3,020,526.
Wright, Esmond P. G. 3,020,336.
Young, Joseph. 3,019,896.

International Steel Co.: *See*—
Simpson, Arthur M. 3,020,038.

International Telephone and Telegraph Corp.: *See*—
Argentieri, Michael A., and Lind. 3,020,497.
Cheilik, Philip. 3,020,417.
Hulst, George D. 3,020,481.
Losher, Morton. 3,020,545.
Richardson, Avery G. 3,020,358.
Rogoff, Mortimer. 3,020,478.
Schriefer, Robert G. 3,020,537.
Van Vechten, Richard K., and Adams. 3,020,416.

International Wheel Corp.: *See*—
Solomon, Milton. 3,020,091.

Iowa State College Research Foundation: *See*—
Yoerger, Roger R. 3,019,829.

Ipsen, Harold N., and K. H. Seelandt, to Ipsen Industries, Inc. Combined vacuum valve and cold trap. 3,019,809, 2–6–62, Cl. 137—340.

Ipsen Industries, Inc.: *See*—
Ipsen, Harold N., and Seelandt. 3,019,809.

Irby, James L., deceased; G. E. Irby, administratrix. Amalgam well. 3,019,891, 2–6–62, Cl. 206—1.

Ironrite, Inc.: *See*—
Schrader, Loren E. 3,019,538.

Irwin, Benjamin H.: *See*—
Ludlow, Edmund, Irwin, and Brighton. 3,020,379.

Isabeau, John G., to RS Electronics Corp. High frequency receiver with resonant cavity. 3,020,401, 2–6–62, Cl. 250—20.

Iwakiri, Mitsuo, and T. Hino, to Haris Co., Ltd. Method for manufacture of polyisobutylene-vinyl acetate graft copolymer. 3,020,257, 2–6–62, Cl. 260—45.5.

Jacklin, Robert L.: *See*—
Malthaner, Sylvester A., and Jacklin. 3,019,617.

Jacobson, Howard W.: *See*—
Jenkins, Wilmer A., II, and Jacobson. 3,020,148.

Jacobs, William H., and D. J. Timpone, ¼ to W. Coffee. Bobbin hobble. 3,019,893, 2–6–62, Cl. 206—53.

Jacobson, Edward, and A. Siegelman, to Allen-Bradford, Inc. Portable radio direction finder. 3,020,548, 2–6–62, Cl. 343—121.

Jacobson, Oscar D., to Bell Telephone Laboratories, Inc. Automatic wiring apparatus. 3,019,822, 2–6–62, Cl. 140—71.

Jacobson, Oscar D., to Bell Telephone Laboratories, Inc. Circuit controller. 3,020,369, 2–6–62, Cl. 200—104.

Jacoby, George V., to Minneapolis Honeywell Regulator Co. Measuring apparatus. 3,020,476, 2–6–62, Cl. 324—61.

Jacuzzi Bros., Inc.: *See*—
Nash, Floyd M., and Jacuzzi. 3,019,462.

Jacuzzi, Joseph: *See*—
Nash, Floyd M., and Jacuzzi. 3,019,462.

Jaeger, Wilbert J., to Carbonic Dispenser, Inc., of California. Ice cube making machine. 3,019,612, 2–6–62, Cl. 62—66.

Janey, Paul L.: *See*—
Pianfetti, John A., and Janey. 3,020,303.

Janssen, Peter J. H., and W. Smeulers, to North American Philips Co., Inc. Circuit arrangement for producing a control voltage. 3,020,480, 2–6–62, Cl. 328—26.

Janssen, Peter J. H., and A. J. Moggre, to North American Philips Co., Inc. Circuit arrangement for producing a current having a non-linear sawtooth waveform through a coil. 3,020,484, 2–6–62, Cl. 328—142.

Jarrett, Arthur W.: *See*—
Felts, Gordon P. 3,019,547.

Jaun, Hermann, to Elektro-Motoren A.G. Strip punching and winding machine. 3,019,998, 2–6–62, Cl. 242—56.8.

Jefferson Chemical Co., Inc.: *See*—
Moss, Philip H. 3,020,260.
Speranza, George P. 3,020,262.

Jeffery, Winstone E. P., and W. R. Stephens, to Birmingham Belting Co. Ltd. Hammers with replaceable striking face. 3,019,827, 2–6–62, Cl. 145—36.

Jenaer Glaswerk Schott & Gen.: *See*—
Weber, Hans. 3,020,215.

Jenkins, Wilmer A., II, and H. W. Jacobson, to E. I. du Pont de Nemours and Co. Production of refractory metals. 3,020,148, 2–6–62, Cl. 75—26.

Jensen, Mead L., to Callahan Mining Corp. Recovery of sulfur from sulfates. 3,020,203, 2–6–62, Cl. 195—2.

Jeppsson, Erik M., to Svenska Aktiebolaget Bromsregulator. Automatic, single-acting brake slack adjusters. 3,019,860, 2–6–62, Cl. 188—196.

Jerothe, Rudolph A., to Toscony Fabrics Inc. Two-sided laminator. 3,020,194, 2–6–62, Cl. 156—583.

Jerrold Electronics Corp.: *See*—
Beever, Jack. 3,020,550.

Jersey Production Research Co.: *See*—
Patton, John T. 3,020,207.
Patton, John T., and Lindblom. 3,020,206.

Johns-Manville Corp.: *See*—
Gouveia, A Peter. 3,020,168.

Johnson, Frederick W., to Collins Radio Co. Uniform trolley loading in a coil. 3,020,507, 2–6–62, Cl. 338—143.

Johnson, James V., Jr., O. K. Groppe, K. Hibbitts, and M. E. Phillips, Jr., to American Machine & Foundry Co. Automatic cigarette catcher. 3,019,574, 2–6–62, Cl. 53—35.

Johnson & Johnson: *See*—
Schiff, Norman. 3,019,999.

Johnson, Rayner S.: *See*—
Cobell, Richard J., Johnson, and Luckenbaugh. 3,020,145.

Johnston, James B. Container conveyor. 3,019,888, 2–6–62, Cl. 198—181.

Johnston, Sidney F., Jr., to United States of America, Air Force. Mounting aircraft with plural spherical Luneberg radar reflective lenses and mounting means. 3,020,542, 2–6–62, Cl. 343—18.

Johnston Testers, Inc.: *See*—
Nutter, Benjamin P. 3,019,842.

Johnstone, Theodore H., and R. C. Liem, to General Motors Corp. Flush type door handle. 3,020,075, 2–6–62, Cl. 292—336.3.

Jolliffe, Sidney A. W. to Marconi's Wireless Telegraph Co. Ltd. Radio beacons. 3,020,546, 2–6–62, Cl. 343—106.

Jones, Early D.: *See*—
Sanders, Grady H., and Jones. 3,019,588.

Jones, Edward M., to The Baldwin Piano Co. Optical encoder. 3,020,534, 2–6–62, Cl. 340—347.

Jones & Laughlin Steel Corp.: *See*—
Laycak, John F., and Uphoff. 3,020,034.
McCreanor, Richard A., Uphoff, Laycak, and Libenschek. 3,020,033.

Jones, Richard A., to General Motors Corp. Battery cap. 3,020,328, 2–6–62, Cl. 136—177.

Jones, Sadie C.: *See*—
Sanders, Grady H., and Jones. 3,019,588.

Jones, Thomas P., to Standard Conveyor Co. Coding mechanism for conveyor systems. 3,019,883, 2–6–62, Cl. 198—38.

Jonker, Gerard H. and P. B. Braun, to North American Philips Co., Inc. Ferromagnetic material. 3,020,235, 2–6–62, Cl. 252—62.5.

Jorner, Victor, to The Seeburg Corp. Spindle for automatic drop-type phonographs. 3,020,050, 2–6–62, Cl. 274—10.

Joy Mfg. Co.: *See*—
Rollins, Lester G. 3,019,665.

Kabelschlepp G.m.b.H.: *See*—
Waninger, Gilbert. 3,020,362.

Kahn, Mack. Brassiere. 3,019,792, 2–6–62, Cl. 128—480.

Kalberlah, Fritz, to Allgemeine Elektricitats-Gesellschaft. Base and socket for fluorescent lamps. 3,020,393, 2–6–62, Cl. 240—11.4.

Kales, Morris L., and H. N. Chait. Matched antenna array. 3,020,549, 2–6–62, Cl. 343—771.

Kaltenbacher, Dominic M., to United States of America, Navy. Manual R. F. gain control. 3,020,404, 2–6–62, Cl. 250—20.

Kammgarnspinnerei Kaiseslautern: *See*—
Schutz, Erwin. 3,019,490.

Kamp, Ewald A., to The Englander Co., Inc. Mattress. 3,019,456, 2–6–62, Cl. 5—355.

Karaslewicz, Edward S., to American Typesetting Corp. Retractable swimming pool cover. 3,019,450, 2–6–62, Cl. 4—172.

Kaspaul, Alfred, to Brevets Aero-Mecaniques S.A. Electrical primers. 3,019,732, 2–6–62, Cl. 102—28.

Katchalsky, Aharon, I. Bursztyn, M. Rim, and D. Vofsi, to The Wizmann Institute of Science. Process and preparations for conditioning soil. 3,019,557, 2–6–62, Cl. 47—58.

Kauffman, Robert T., and B. Arlitz. Interchangeable shoe soles and heels. 3,019,534, 2–6–62, Cl. 36—15.

Kaufmann, Stephen: *See*—
Djerassi, Carl, Rosenkranz, Kaufmann, Pataki, and Romo. 3,020,294.

Kearns, Thomas F., Jr. to General Steel Products Corp. Wall structure. 3,019,863, 2–6–62, Cl. 189—34.

Keenan, John D., Jr.: *See*—
Sylvester, John D., and Keenan. 3,019,583.

Keener, Howard N. Hoist. 3,019,918, 2–6–62, Cl. 214—75.

Kegan, Albert I.: *See*—
Ajero, Fortunato S. 3,019,917.

Keller, James L., F. S. Liggett, and C. E. Wilson, to Union Oil Co. of California. Automative fuel. 3,020,134, 2–6–62, Cl. 44—58.

Kelley, Oliver K.: *See*—
Winchell, Frank J., and Kelley. 3,019,668.

Kelley, Oliver K., to General Motors Corp. Transmission. 3,019,670, 2–6–62, Cl. 74—677.

Kelley, Robert C. Remote control servosystem. 3,020,457, 2–6–62, Cl. 318—16.

Kennard, Thomas A. Retrieving tool. 3,019,840, 2–6–62, Cl. 166—55.

Kern, Werner: *See*—
Behrends, Jurgen, Schweitzer, Kerner and Hopff. 3,020,264.

Kershaw, John K., to Kershaw Mfg. Co., Inc. Railway ballast equipment. 3,019,536, 2–6–62, Cl. 37—104.

Kershaw Mfg. Co., Inc.: *See*—
Kershaw, John K. 3,019,536.
Kershaw, John K. 3,019,742.

Kershaw, John K., to Kershaw Mfg. Co., Inc. Road and rail vehicle. 3,019,742, 2–6–62, Cl. 105—215.

Kese, Arnold. Calendar for writing instruments. 3,019,541, 2–6–62, Cl. 40—335.

Key, Milford M. Vehicle mounted edgers. 3,019,844, 2–6–62, Cl. 172—15.

Keyes, Frank P.: *See*—
Placco, Oscar F., Stone, and Keyes. 3,019,503.

Keyser, Johann J. Brake for spinning and twisting spindles. 3,019,589, 2–6–62, Cl. 57—88.

Kezell, Edgar J.: *See*—
Dale, Robert F., Backus and Kezell. 3,020,208.

Kidwell, Alfred S.: *See*—
Moffitt, John A., Jr., and Kidwell. 3,020,185.

Kilmer, Eugene D.: *See*—
Steiner, Rudolf. 3,020,425.

Kilminster, Arthur R., to Hunter-Penrose Ltd. Photographic colour reproduction apparatus. 3,019,703, 2–6–62, Cl. 88—24.

Kimberly-Clark Corp.: *See*—
Nelson, Howard N., and Sitterson. 3,019,944.

Kimble Glass Co.: *See*—
Stutzke, William A., and Wood. 3,019,559.

King, Edward J., and L. Romanzi, Jr., to General Motors Corp. Rear door window regulator. 3,020,040, 2–6–62, Cl. 268—124.

King, John A., to General Dynamics Corp. Loudspeaker diaphragm suspension. 3,019,849, 2–6–62, Cl. 181—31.

Kingsbury, John, to Pye Ltd. Arrangements for mounting objects. 3,020,016, 2–6–62, Cl. 248—183.

Kingston Instrument Co. Ltd.: *See*—
Mayall, William. 3,019,845.

Kirk-Wing Co.: *See*—
Kraus, Edmund J. and R. A. 3,019,501.

Kitterman, Gary L. Locking structure. 3,020,070, 2–6–62, Cl. 287—54.

Klager, Karl, to Aerojet-General Corp. Polynitro alcohols and salts thereof. 3,020,317, 2–6–62, Cl. 260—632.

Klager, Karl, and G. B. Linden, to Aerojet-General Corp. Preparing 2,2-dinitro-1,3-propanediol. 3,020,319, 2–6–62, Cl. 260—635.

Klasing Hand Brake Co.: *See*—
Smith, Raymond K. 3,020,099.
Smith, Raymond K. 3,020,100.

Klatt, John O.: *See*—
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,019,746.
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,020,162.

Klein, William F. Moisture indicating device. 3,019,638, 2–6–62, Cl. 73—73.

Kleinewefers, Joh., Sohne: *See*—
Freyberg, Adolf. 3,019,631.

Kleinschmidt, Hans-Joachim, to Gelenkwellenbau G.m.b.H. Rubber spring. 3,020,036, 2–6–62, Cl. 267—1.

Kleinschimtd, Hans-Joachim, to Gelenkwellenbau G.m.b.H. Pivot bearing for universal joints especially for use in connection with universal joint shafts. 3,020,110, 2–6–62, Cl. 308—212.

Kleiss, Louis D., to Phillips Petroleum Co. Process controller. 3,020,490, 2–6–62, Cl. 330—85.

Kleist, Dale, to Owens-Corning Fiberglas Corp. High output radiant heater for a glass fiber forming apparatus. 3,019,477, 2–6–62, Cl. 18—2.5.

Kling, Dorothy H. Key closure. 3,019,635, 2–6–62, Cl. 70—456.

Klinkhamer, Jacob F.: *See*—
Heijn, Herman J., Klinkhamer, Samwel, and De Miranda. 3,020,117.

Klockner-Humboldt-Deutz Aktiengesellschaft: *See*—
Kloss, Richard. 3,019,778.

Kloss, Richard, to Klockner-Humboldt-Deutz Aktiengesellschaft. Four-cycle internal combustion engine with exhaust brake. 3,019,778, 2–6–62, Cl. 123—97.

Knapic, Dean D., to Knapic Electro Physics, Inc. Rotating pedestal. 3,020,131, 2–6–62, Cl. 23—273.

Knapic Electro-Physics, Inc.: *See*—
Knapic, Dean D. 3,020,131.

Knill, Raymond R., A. L. McLaughlin, F. J. Priesnitz, L. S. Conder, and R. G. Haworth, to Potash Co. of America. Portable conveyor unit. 3,019,890, 2–6–62, Cl. 198—233.

Knobloch, Friedrich, to Anker-Phoenix Nahmaschinen A.G. Adjustable material-feeder drive for sewing machines. 3,019,749, 2–6–62, Cl. 112—210.

Kobayashi, Akio: *See*—
Onishi, Tsuneo, and Kobayashi. 3,020,383.

Kobryner, Herman H., and C. F. Brauneck, to Murray Mfg. Corp. Load distributing arrangement for pull-out type switches. 3,020,373, 2–6–62, Cl. 200—133.

Kohman, Girard, T., and K. B. McAfee, Jr., to Bell Telephone Laboratories, Inc. Separation of gases by diffusion. 3,019,853, 2–6–62, Cl. 183—2.

Kolbe, Adelbert E., to General Motors Corp. Engine manifolding. 3,019,781, 2–6–62, Cl. 123—122.

König, Helmut F.: *See*—
Stiefel, Christian J., and König. 3,019,743.

Kooltronic Fan Co.: *See*—
Lyman, Roger T. 3,019,965.

Kope, Rowland J., and R. Marsh, to Olin Mathieson Chemical Corp. Fastener arresting device for a power actuated tool. 3,019,440, 2–6–62, Cl. 1—44.5.

Kopp, Valentine T.: *See*—
Gardner, Edward M., and Kopp. 3,019,929.

Koppers Co., Inc.: *See*—
Blanco, Joseph. 3,020,247.

Kozacka, Frederick J., to The Chase-Shawmut Co. Fuse structures. 3,020,372, 2–6–62, Cl. 200—131.

Kraemer, Kenneth E.: *See*—
Millar, Donald O., and Kraemer. 3,020,053.

Kramis, Charles J.: *See*—
Aulbaugh, Johnnie M., Kramis, and Siefen. 3,020,313.

Kraus, Edmund J., and R. A., to Kirk-Wing Co. Fastener. 3,019,501, 2–6–62, Cl. 24—213.

Kraus, Robert A.: *See*—
Kraus, Edmund J. and R. A. 3,019,501.

Krauss, Carl. Massage apparatus and couch assembly. 3,019,786, 2–6–62, Cl. 128—33.

Kreutzer, Arthur, to General Motors Corp. Fuel distributing system. 3,019,603, 2–6–62, Cl. 60—39.28.

Krupp, Robert F., and J. K. Wagner, to Gerber Products Co. Container case feeding and opening means. 3,019,924, 2–6–62, Cl. 214—304.

Kruse, Norman F., to Central Soya Co., Inc. Method of enhancing the xanthophyll content of poultry feeds. 3,020,159, 2–6–62, Cl. 99—4.

Kuch, Frederick C., to Bell Telephone Laboratories, Inc. Electrical connector for preformed panel circuit arrangements. 3,020,510, 2–6–62, Cl. 339—17.

Kulper, Adrianus: *See*—
Blank, Hans H., van Zanten, Kulper, and Almber. 3,020,224.

Kulper, Dan B., to General Motors Corp. Valve operating linkage lubrication and hydraulic valve lifter feed system for engines. 3,019,857, 2–6–62, Cl. 184—6.

Kunkle Valve Co.: *See*—
Young, Maurice W., and Schromshaw. 3,019,811.

Kuntz, Louis E., and M. A. Remke, to Phillips Petroleum Co. Metering system for liquids. 3,019,649, 2–6–62, Cl. 73—223.

Kurashiki Rayon Co., Ltd.: *See*—
Onishi, Tsuneo, and Kobayashi. 3,020,383.

Kuritza, Oleh M., to Motorola, Inc. Ignition system. 3,019,782, 2–6–62, Cl. 123—179.

Kurtz, Donald P., to Aircraft Radio Corp. Starting circuit for transistor power supply. 3,020,491, 2–6–62, Cl. 331—113.

Kurvers, Robert J.: *See*—
Swales, Frank, Kurvers, and Green. 3,019,653.

Labbe, Francis A. M., to Molins Machine Co. Ltd. Cigarette-making machines of the continuous rod type. 3,019,793, 2–6–62, Cl. 131—84.

Laboratory Equipment Corp.: *See*—
Bennet, Eugene L. 3,019,808.

Laboratory For Electronics, Inc.: *See*—
Feuerstein, Erwin, and Sternberg. 3,020,496.

Lagrost, Lucien, to Preparation Industrielle des Combustibles. Dense liquid media type separator. 3,019,900, 2–6–62, Cl. 209—172.

Lake, Francis K., to Addressograph-Multigraph Corp. Ink gauges. 3,019,645, 2–6–62, Cl. 73—150.

Lake, Francis K., to Addressograph-Multigraph Corp. Printing machines. 3,019,727, 2–6–62, Cl. 101—148.

Landis & Gyr, A.G.: *See*—
Grosjean, Kurt. 3,019,985.
Pudelko, Richard. 3,020,116.

Landis Tool Co.: *See*—
Price, Ralph E. 3,019,562.
Price, Ralph E. 3,019,566.

Lange, Robert: *See*—
Helling, Werner, and Lange. 3,020,220.

Langenheim, Richard H.: *See*—
Marx, John W., Langenheim, Dixon, and Trantham. 3,019,837.

Lantz, Dae C., to Pan American Resources, Inc. Refuse converter. 3,020,212, 2–6–62, Cl. 202—118.

La Precision Industrielle: *See*—
Gamet, Louis J.-M. 3,020,057.

Larsen, Lester J., and R. L. Lewis, to The Bendix Corp. Control valve for dual independently operable braking systems. 3,019,810, 2–6–62, Cl. 137—621.

Lawrance, Harold R., to The Griscom-Russell Co. Heat exchanger construction. 3,020,024, 2–6–62, Cl. 257—32.

Lawrence, Leonard. Laminating method and means for manufacturing synthetic resinous foam pads. 3,020,186, 2–6–62, Cl. 156—238.

Lawson, Maurice O. High temperature compression heater. 3,019,621, 2–6–62, Cl. 62—467.

Laycak, John F.: *See*—
McCreanor, Richard A., Uphoff, Laycak, and Libenschek. 3,020,033.

Laycak, John F., and R. L. Uphoff, to Jones & Laughlin Steel Corp. Inspection and control system. 3,020,034, 2–6–62, Cl. 266—23.

Layman, Ralph E., Jr.: *See*—
Magrane, John K., and Layman. 3,020,255.

Layton, Margaret M., R. B. Randels, and G. F. Stockdale, to Corning Glass Works. Electrical capacitors and method of production. 3,020,456, 2–6–62, Cl. 317—258.

Lee, James and Sons Co: *See*—
Reid Ralph T. 3,019,593.

Leeford (London) Ltd.: *See*—
Morrison, Percival H., and Packman. 3,019,923.

Le Fiell, Cecil K. Tube tapering machine. 3,019,678, 2–6–62, Cl. 80—14.

Lefort, Daniel: *See*—
Paquot, Charles, Lefort, and Sorba. 3,020,320.

Leibson, Irving: *See*—
Schutze, Henry G., Leibson, and Bown. 3,020,268.

Leigh, Robert L., to Air Control Products, Inc. Folding doors and mounting fixtures therefor. 3,019,836, 2–6–62, Cl. 160—199.

Leitl, George J. F.: *See*—
Sloane, William H., and Leitl. 3,020,109.

Leland-Gifford Co.: *See*—
Hirvonen, Eric J. 3,019,674.

Lempco Products, Inc.: *See*—
Strnad, James J. 3,020,096.

Lenardon, Nelson, and H. Romanoff, to Saxon Plastics Corp. Valve. 3,019,815, 2-6-62, Cl. 137—612.1.

Leonard, Edward C., Jr., to Union Carbide Corp. Butadiene polymerization. 3,020,269, 2-6-62, Cl. 260—94.3.

Leonard, Louis H., Jr., to Carrier Corp. Absorption refrigeration systems and method of operating the same. 3,019,-613, 2-6-62, Cl. 62—103.

Les Laboratoires Francais de Chimiotherapie: *See*—
Nonfine, Gerard, Bertin, and Tessler. 3,020,296.

Lesher, John C., to Rad-O-Lite, Inc. Remote control system. 3,020,522, 2-6-62, Cl. 340—33.

Leslie, James D.: *See*—
Garvey, Louis P., and Leslie. 3,019,848.

Leslie, James D., to General Motors Corp. Reading lamp assembly. 3,020,392, 2-6-62, Cl. 240—7.35.

Less, Frank W., J. C. Searer, and E. C. Roeck, to Hooker Chemical Corp. Phenolic resin and molding composition. 3,020,254, 2-6-62, Cl. 260—38.

Lester, Harry R., to Tenupmaster Corp. Lagging mount. 3,019,864, 2-6-62, Cl. 189—34.

Levine, Harold A.: *See*
Brodsky, Ellihu, and Levine. 3,020,402.

Lewin, Morton H., to Radio Corp. of America. Binary adder employing negative resistance elements. 3,019,981, 2-6-62, Cl. 235—176.

Lewinstein, Narcus, to Electro-Mechanical Research, Inc. Power spectrum analyzer. 3,020,477, 2-6-62, Cl. 324—77.

Lewis, Charles: *See*—
Eble, Thomas E., and Lewis. 3,020,274.

Lewis, Richard L.: *See*—
Larsen, Lester J., and Lewis. 3,019,816.

Li, Tingye, to Bell Telephone Laboratories, Inc. Cross-talk cancellation apparatus for broadband microwave radio links. 3,020,543, 2-6-62, Cl. 343—100.

Libbey-Owens-Ford Glass Co.: *See*—
Hofmann, John J., and Esling. 3,020,376.

Libenschek, Rudolph S.: *See*—
McCreanor, Richard A., Uphoff, Laycak, and Libenschek. 3,020,033.

Liebentual, John H., to Poor & Co. Tie plate bearing anchor. 3,019,988, 2-6-62, Cl. 238—327.

Liem, Robert C.: *See*—
Johnstone, Theodore H., and Liem. 3,020,075.

Liggett, Francis S.: *See*—
Keller, James L., Liggett, and Wilson. 3,020,134.

Lignes Telegraphiques & Telephoniques: *See*
Chiron, Bernard P. 3,020,494.
Paquet, Jean A. G. 3,020,487.

Limbeck, Lawrence R. Traction strap for prostatic surgery. 3,019,791, 2-6-62, Cl. 128—349.

Lincoln, Frank H., Jr., G. B. Spero, and J. L. Thompson, to The Upjohn Co. 2a,6a-dimethylhydrocortisone and the 21-acylates thereof. 3,020,297, 2-6-62, Cl. 260—397.45.

Lind, Francis E.: *See*
Argentieri, Michael A., and Lind. 3,020,497.

Lindau, Eric S. Film stopping mechanism for cameras. 3,019,697, 2-6-62, Cl. 88—16.

Lindberg, Charles A.: *See*
Reynolds, Eugene E., Lindberg, Avery, Munzing, and Thomas. 3,019,971.

Lindblom, Gordon P.: *See*—
Patton, John T., and Lindblom. 3,020,206.

Linden, Gustave B.: *See*
Gold, Marvin H., and Linden. 3,020,318.
Klager, Karl, and Linden. 3,020,319.

Lindner, Hellmuth: *See*—
Lindner, Hugo and H. 3,019,627.

Lindner, Hugo and H., to VEB Vereinigte Strumpfwerke Esda. Method and machine for knitting pile fabrics. 3,019,627, 2-6-62, Cl. 66—91.

Linz, Arthur, and N. F. Tisdale, to Molybdenum Corp. of America. Iron and steel production. 3,020,153, 2-6-62, Cl. 75—129.

Lionel Corp., The: *See*
Bonanno, Joseph L. 3,020,346.

Litemetal-Dicast, Inc.: *See*—
Cornell, Robert C. 3,019,495.

Little, Arthur D., Inc.: *See*
Old, Bruce S., Hyde, Meissner, Margolin, and Schora. 3,020,149.
Slade, Albert E., and Buck. 3,019,978.
Vonnegut, Bernard. 3,019,989.

Livingston, Nickolas R.: *See*
De Falber, George J., Tatum, and Livingston. 3,019,567.

Lockett, William, Jr., to Esso Research and Engineering Co. Catalyst reactivation process. 3,020,240, 2-6-62, Cl. 252—419.

Lockheed Aircraft Corp.: *See*
Schwartz, Samuel A. 3,020,340.
Swales, Frank Kurvers, and Green. 3,019,653.

Lockwood, George H.: *See*
Hatstat, Robert G., Lockwood, and Schmidt. 3,019,565.

Loevenstein, Hirsch, C. W. Carlson, and L. B. Gunderson, to Harvey Aluminum (Inc.). Apparatus for separating, washing and classifying solids. 3,019,895, 2-6-62, Cl. 209—12.

Loftus, William H., to E. I. du Pont de Nemours and Co. Process for producing sodium. 3,020,221, 2-6-62, Cl. 204—68.

Logan, Mason A., to Bell Telephone Laboratories, Inc. Electric wave synchronization. 3,020,479, 2-6-62, Cl. 328—13.

Lolliger, Willi, to Alpura Aktiengesellschaft. Method and means for sterilizing striplike material. 3,020,120, 2-6-62, Cl. 21—2.

Long, Anna K. R.: *See*—
Rokos, Leo J. 3,020,077.

Long, Louis E., to Greenlee Bros. & Co. Apparatus for making a wiring harness. 3,019,915, 2-6-62, Cl. 214—1.1.

Long, Marion R. Sinker. 3,019,545, 2-6-62, Cl. 43—44.89.

Loral Electronics Corp.: *See*—
Brodsky, Ellhu, and Levine. 3,020,402.

Loria, Samuel F.: *See*—
Bogater, John P., Loria, and Putnam. 3,019,934.

Losee, Ferril A., to Hughes Aircraft Co. Signal recognition circuit using pulse position modulation and pulse width discrimination. 3,020,483, 2-6-62, Cl. 328—110.

Losher, Morton, to International Telephone and Telegraph Corp. Radio navigation system. 3,020,545, 2-6-62, Cl. 343—105.

Lovecky, Albert J., to Bell Telephone Laboratories, Inc. Wire unwrapping tool. 3,019,517, 2-6-62, Cl. 29—203.

Lovejoy Flexible Coupling Co.: *See*—
Fermier, Rex M. A. 3,019,622.

Lowden, George. Securing bolt. 3,019,887, 2-6-62, Cl. 198—151.

Lowery, Peter A., to Chemring Ltd. Inflatable rubber dinghies. 3,019,457, 2-6-62, Cl. 9—11.

Lubrizol Corp., The: *See*—
Miller, Clark O. 3,020,271.

Luca, Pasquale F. Extensible and collapsible bed retractable within a sofa or chair, ottoman-bed, chest of drawers. 3,019,454, 2-6-62, Cl. 5—17.

Luckenbaugh, Raymond W.: *See*—
Gobeil, Richard J., and Luckenbaugh. 3,020,144.
Gobeil, Richard J., Johnson, and Luckenbaugh. 3,020,145.

Ludlow, Edmund, B. H. Irwin, and J. C. Brighton, to Arvin Industries, Inc. Electric heating panel. 3,020,379, 2-6-62, Cl. 219—19.

Lukes, Robert M., to General Electric Co. Process of plasticizing a vinyl chloride resin with ditetrahydrofurfuryl terephthalate and product obtained thereby. 3,020,253, 2-6-62, Cl. 260—30.4.

Lupfer, Dale E., to Phillips Petroleum Co. Fractionation control system. 3,020,213, 2-6-62, Cl. 202—160.

Lusk, Carroll B. Light projector. 3,020,390, 2-6-62, Cl. 240—3.

Luvisi, John P., to Universal Oil Products Co. Cycloalkenyl borates and preparation thereof. 3,020,307, 2-6-62, Cl. 260—462.

Luvisi, John P., to Universal Oil Products Co. Halocycloalkenyl borates and preparation thereof. 3,020,309, 2-6-62, Cl. 260—462.

Lyman, Roger T., to Kooltronic Fan Co. Chassis ventilating fans for electronic equipment. 3,019,965, 2-6-62, Cl. 230—259.

Lynn, John W.: *See*—
Fowler, George W., and Lynn. 3,020,310.

Lyon, George A. Apparatus for making wheel covers. 3,019,752, 2-6-62, Cl. 113—49.

Lyon, George A., to Lyon Inc. Wheel cover. 3,020,090, 2-6-62, Cl. 301—37.

Lyon Inc.: *See*—
Lyon, George A. 3,020,090.

Macaulay, Norman, to Moore Business Forms, Inc. Transfer sheet and composition therefor. 3,020,170, 2-6-62, Cl. 117—36.1.

Mace, Ellis R., to Daystrom, Inc. Time sequence control circuit. 3,020,422, 2-6-62, Cl. 307—109.

MacGregor, Dean J., to Westinghouse Electric Corp. Synchronous motor control. 3,020,462, 2-6-62, Cl. 318—170.

MacGregor, Dean J., to Westinghouse Electric Corp. Synchronous motor control. 3,020,463, 2-6-62, Cl. 318—175.

MacIntyre, David R., and F. K. Schulize. Traffic control barrier. 3,020,023, 2-6-62, Cl. 256—24.

Macklin, Charles R., to Goodner Van Engineering Co. Cantilever booth seats. 3,020,087, 2-6-62, Cl. 297—244.

MacLaren, Frederick R., to United Aircraft Corp. Position indicating system. 3,020,527, 2-6-62, Cl. 340—196.

MacLeod, David E., and C. G. Alt, to Carrier Corp. Sealing means for window mounted air conditioning units. 3,019,718, 2-6-62, Cl. 98—94.

MacNeill, John H., to Soroban, Inc. Hot-wire reader. 3,019,970, 2-6-62, Cl. 235—61.11.

MacPlum, R. A., Industries, Inc.: *See*
Umanoff, Martin. 3,019,953.

Magnavox Co., The: *See*—
Teetor, Thomas S. 3,020,443.

Magnefax Corp.: *See*—
Teiser, Sidney, and Sassaman. 3,019,714.

Magrane, John K., and R. E. Layman, Jr., to American Cyanamid Co. Unsaturated ether of methylol melamine, and polymers and copolymers thereof. 3,020,255, 2-6-62, Cl. 260—45.3.

Maier, Howard A.: *See*—
French, Robert W., Jr., Maier, and Brookhart. 3,019,708.

Malerson, Theodore: *See*—
Bakan, Joseph A., Striley, and Malerson. 3,020,171.

Makinson, Thomas. Sand trap for vehicles. 3,020,071, 2-6-62, Cl. 291—11.

Malcher, Frank F., to Republic Steel Corp. Portable drum rack. 3,019,916, 2-6-62, Cl. 214—10.5.

Malloy, William M., Sr. Feed control for a bird feeder. 3,019,765, 2-6-62, Cl. 119—52.

Malthy, Wilson R., and R. H. Park. Induction mine firing and timing system. 3,019,730, 2-6-62, Cl. 102—18.

Malthaner, Sylvester A., and R. L. Jacklin. Splash and spill guard for refrigerator ice cube trays. 3,019,617, 2-6-62, Cl. 62—361.

Mancini, Alfonso R., to General Dynamics Corp. Adhesion testing machine. 3,019,644, 2-6-62, Cl. 73—150.

Mangham, Jesse R.: *See*—
Ashby, Eugene C., Foster, Mangham, and Pearson. 3,020,298.

Manlon, Jean P., to Olin Mathieson Chemical Corp. Manufacture of hydrazine. 3,020,223, 2-6-62, Cl. 204—177.

Manitowoc Engineering Corp.: *See*—
Bednhn, Daniel E., and Wernecke. 3,020,214.

Manly, Donald G.: *See*—
Donlop, Andrew P., and Manly. 3,020,291.

Mannesmann Aktiengesellschaft: *See*—
Naeser, Gerhard. 3,019,487.

Manthos, Athe G. Cartridge magazine conversion. 3,019,542, 2-6-62, Cl. 42—18.

Maragliano, Domenico, and F. Dentl, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Method of making bulky continuous filament yarns of isotactic polyolefins. 3,019,507, 2-6-62, Cl. 28—72.

March, John J. Prefabricated insulated duct and sound trap. 3,019,850, 2-6-62, Cl. 181—42.

Marchal, Marie-Therese: *See*—
Marchal, Maurice and M.-T. 3,020,119.

Marchal, Maurice and M.-T. Apparatus for recording light spot traces on film. 3,020,119, 2-6-62, Cl. 346—109.

Marconi's Wireless Telegraph Co. Ltd.: *See*—
Jolliffe, Sidney A. W. 3,020,546.

Marcotte, James L.: *See*—
Seyer, Frank H., and Marcotte. 3,019,768.

Margolin, Stanley V.: *See*—
Old, Bruce S., Hyde, Meissner, Margolin, and Schora. 3,020,149.

Marks, Eugene A., to Bourns, Inc. Pressure transducer. 3,020,504, 2-6-62, Cl. 338—40.

Markwood, William H., Jr.: *See*—
Feild, George B., and Markwood. 3,020,133.

Marmion, Theodore. Apparatus for balancing and holding pile-driving hammers on sheet piling. 3,019,608, 2-6-62, Cl. 61—63.

Marsden, James, to General Electric Co. Organosilicon compositions. 3,020,299, 2-6-62, Cl. 260—448.2.

Marsh, Eugene W., to Airheart Products Inc. Vehicle braking mechanism with clearance adjusting means. 3,019,859, 2-6-62, Cl. 188—72.

Marsh, Roger: *See*—
Kope, Rowland J., and Marsh. 3,019,440.

Martin, Dana W., to Norton Co. Grinding machine. 3,019,-563, 2-6-62, Cl. 51—50.

Martin-Marietta Corp.: *See*
Ida, Noble N. 3,020,154

Martin, Philip W., and S. G. Stroud. Nuclear analytical apparatus. 3,020,408, 2-6-62, Cl. 250—84.5.

Martina, Eugene F., to American Radiator & Standard Sanitary Corp. Ion source and plasma generator. 3,020,431, 2-6-62, Cl. 313—63.

Marx, John W., R. H. Langenheim, H. O. Dixon, and J. C. Trantham, to Phillips Petroleum Co. In situ combustion process. 3,019,837, 2-6-62, Cl. 166—11.

Marx, Michael, and L. L. Smith, to American Cyanamid Co. 21 nitrogen substituted steroids of the pregnane series and methods of preparing the same. 3,020,275, 2-6-62, Cl. 260—239.55.

Maschinenfabrik Augsburg-Nurnberg, A.C.: *See*
Wenczler, Ludwig. 3,019,728.

Masterson, James F.: *See*—
Rickelhaupt, Roy E., and Masterson. 3,019,514.

Masurovsky, Edmund B.: *See*
Murthy, Gopala K., Campbell, Masurovsky, and Edmondson. 3,020,161.

Matayka, Thomas. Toilet flush tank valve sander. 3,019,-569, 2-6-62, Cl. 51—187.

Mather, Robert L.: *See*—
Shawhan, Elbert N., McLean, Palevsky, and Mather. 3,020,470.

Mathews, John W., to R. C. Allen Business Machines, Inc. Adding and subtracting machine with credit balance printing and self zeroing dials. 3,019,967, 2-6-62, Cl. 235—60.17.

Matthews, Louis L.: *See*—
Barber, Earle W. and E. W. Barber, Jr. 3,019,897.

Maulaz, Georges, to Satrametal S.A. Unbreakable and impervious ring, of moulded synthetic material, for package tins. 3,019,936, 2-6-62, Cl. 220—53.

Maurand, Rene L. F., to Ciments Lafarge. Rotary kilns and dryers or other like apparatus. 3,019,835, 2-6-62, Cl. 159—9.

Mauser Kommandit Gesellschaft: *See*—
Mühlhoff, Friedrich. 3,019,956.

Mauthner, Thomas: *See*—
Eisenberg, David J., and Mauthner. 3,020,125.

Mauz, Otto: *See*—
Schilde, Felix, and Mauz. 3,020,259.

Maxson Electronics Corp.: *See*—
Gruenberg, Elliot L. 3,020,539.
Wolff, Hanns H. 3,020,544.

Maxson, Julian W.: *See*
Barber, Earle W. and E. W. Barber, Jr. 3,019,897.

Maxwell, Robert E. *See*—
Daugherty, Henry J., and Maxwell. 3,019,680.

May & Baker Ltd.: *See*
Wragg, William R., and Bretherick. 3,020,288.

Mayall, William, to Kingston Instrument Co. Ltd. Magnetic retrieving tool. 3,019,845, 2-6-62, Cl. 175—328.

Mazelka, Albert, to Milton Mfg. Co., Inc. Pressure gauges. 3,019,657, 2-6-62, Cl. 73—419.

McAdam, John C., to International Electronic Research Corp. Right angle heat dissipating tube shield. 3,020,451, 2-6-61, Cl. 317—101.

McAfee, Kenneth B., Jr.: *See*—
Kohman, Girard T., and McAfee. 3,019,853.

McCartney, Daniel E., and J. Hoekstra, to Universal Oil Products Co. Alumina sol manufacture. 3,020,242, 2-6-62, Cl. 252—442.

McCaslin, Donald A., to General Motors Corp. Ball and socket connection. 3,020,101, 2-6-62, Cl. 308—72.

McClusky, Lonnie S.: *See*—
McKnight, William B., McClusky, and Widenhofer. 3,020,414.

McCreanor, Richard A., R. L. Uphoff, J. F. Laycak, and R. S. Libenschek, to Jones & Laughlin Steel Corp. Inspection and control system. 3,020,033, 2-6-62, Cl. 266—23.

McDonough, James O.: *See*—
Morin, John O., McDonough, and Grossimon. 3,020,460.

McElheny, Clinton B.: *See*—
Sauers, Myrl M., and McElheny. 3,019,568.

McGowen, Harold E., Jr., to Camco, Inc. Storing tape in a tubular tape recorder. 3,020,354, 2-6-62, Cl. 179—100.2.

McKeon, William R. Auto key reminder. 3,020,523, 2-6-62, Cl. 340—52.

McKnight, William B., L. N. McClusky, and G. H. Widenhofer, to United States of America, Army. Scanning mirror assembly. 3,020,414, 2-6-62, Cl. 250—235.

McLaughlin, Asa L.: *See*—
Kidd, Raymond R., McLaughlin, Priesnitz, Conder, and Haworth. 3,019,890.

McLaughlin, Paul J.: *See*—
Sweeney, Edward J., Tou, and McLaughlin. 3,020,178.

McLean, Arnold C.: *See*—
Shawhan, Elbert N., McLean, Palevsky, and Mather. 3,020,470.

McLuen, Carl T.: *See*—
Hocutt, Morris G., and McLuen. 3,019,598.

McManigal, Robert M.: *See*—
Eubanks, Floyd G. 3,020,364.

McNeill, Alvin L., to Victor Development Co. Golf practice apparatus. 3,020,049, 2-6-62, Cl. 273—186.

McPhee, Alexander H., and T. H. Reid, to Hepworth Machine Co., Inc. Probe for centrifugal. 3,019,902, 2-6-62, Cl. 210—97.

McReavy, James. Cheese manufacturing machine. 3,019,527, 2-6-62, Cl. 31—48.

Mead Corp., The: *See*—
Robinson, James V., and Brookbank. 3,020,176.

Mead, Howard C., to General Motors Corp. Filament shield. 3,020,435, 2-6-62, Cl. 313—117.

Mealpach Corp.: *See*—
Clarke, Houghton W. 3,019,783.

Mechanical Handling Systems, Inc.: *See*—
Bishop, Leonard J., and Barlow. 3,019,741.

Mec-Test Ltd.: *See*—
Walton, John H. D. 3,020,475.

Medical Metals Inc.: *See*—
Gackl, Leonard W. 3,019,717.

Meek, Wayne L., and M. J. Hyvarinen, to Minnesota and Ontario Paper Co. Process of simultaneously producing two sidesiding-shearding units. 3,020,191, 2-6-62, Cl. 156—288.

Meeker, William M., to Grover Smith Mfg. Corp. Fluid motor. 3,019,773, 2-6-62, Cl. 121—57.

Megeff, Seymour I.: *See*—
Zambrow, John L., and Megeff. 3,020,222.

Meier, Robert F.: *See*—
Morris, Harry C., and Meier. 3,019,872.

Meijer, Barend M., to North American Philips Co., Inc. Stator for single-phase induction motors. 3,020,428, 2-6-62, Cl. 310—172.

Meissner, Herman P.: *See*—
Old, Bruce S., Hyde, Meissner, Margolin, and Schora. 3,020,149.

Melpar, Inc.: *See*—
Williams, Richard E. 3,019,975

Meltzer, Robert J., to Bausch & Lomb Inc. Refractometer. 3,019,694, 2-6-62, Cl. 88—14.

Mercer, Robert L., to General Motors Corp. Dishwasher having a dispenser. 3,019,802, 2-6-62, Cl. 134—95.

Mercier, Henri, and G. Brun, to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques. Bearing for rotatable shaft. 3,020,098, 2-6-62, Cl. 308—36.3.

Merck & Co., Inc.: *See*—
Rogers, Edward F., and Sarett. 3,020,200.
Rogers, Edward F., and Sarett. 3,020,277.

Merlen, Monty M., to Barnes Engineering Co. Horizon sensor. 3,020,407, 2-6-62, Cl. 250—83.3.

Merrill Bros.: *See*—
Gardner, Edward M., and Kopp. 3,019,929.

Metallgesellschaft Aktiengesellschaft: *See*—
Boss, Karl Heinz, Rausch, and Meyer. 3,020,147.

Metriframe Structures Ltd.: *See*—
Grabowski, Edward W. 3,019,866.

Meyer, Fritz, to Gebrueder Buehler. Apparatus for the prevention of formation of sugar crusts on continuous trough conveyors. 3,019,618, 2-6-62, Cl. 62—380.

Meyer, Kurt: *See*—
Boss, Karl Heinz, and Meyer. 3,020,147.

Midland-Ross Corp.: *See*—
Temin, Samuel C. 3,020,311.

Milford, Richard E., to General Electric Co. Cathode follower circuit having transistor feedback stabilization. 3,020,486, 2-6-62, Cl. 330—3.

Militana, Robert J. Combination hemostat and intravenous needle. 3,019,790, 2-6-62, Cl. 128—322.

Millar, Donald O., and K. E. Kraemer, to Allis-Chalmers Mfg. Co. Floating bushing seal. 3,020,053, 2-6-62, Cl. 277—137.

Millar, William, to The United Kingdom Atomic Energy Authority, Patents Branch. Pressure gauges. 3,019,656, 2-6-62, Cl. 73—398.

Miller, Clark O., to The Lubrizol Corp. Process for modification of olefin polymers. 3,020,271, 2-6-62, Cl. 260—139.

Miller, Henry A., Jr., to Air Reduction Co., Inc. Fluid flow and pressure control systems. 3,019,804, 2-6-62, Cl. 137—64.

Miller Lubricator Co.: *See*—
Harkenrider, Robert J. 3,020,103.

Miller, Robert C.: *See*—
Colwell, Charles E., and Miller. 3,020,231.

Miller, Stewart E., to Bell Telephone Laboratories, Inc. Wave mode converter. 3,020,495, 2-6-62, Cl. 333—10.

Miller, Teddy, J. H. Anderson, and D. J. Rosbe, to Continental Can Co., Inc. Coated can end and coating method. 3,019,938, 2–6–62, Cl. 220—81.

Miller Wrapping & Sealing Machine Co.: *See*—
Arvidson, Bengt A. 3,019,584.

Milton Mfg. Co., Inc.: *See*—
Mazeika, Albert. 3,019,657.

Mims, Bruce L., to The Barden Corp. Bearings having balls with restrained spin axes. 3,020,106, 2–6–62, Cl. 308—174.

Miner, Donald B.: *See*—
Yowell, Joseph W., and Miner. 3,019,820.

Miner, Richard Y.: *See*—
Abt, Clifford F., and Miner. 3,019,969.

Minneapolis-Honeywell Regulator Co.: *See*—
Beard, Richard B., and Hudson. 3,019,647.
Hamelink, William B. 3,020,413.
Hermanson, Harry M. 3,019,651.
Jacoby, George V. 3,020,476.

Minnesota Mining and Mfg. Co.: *See*—
Fredrick, Russell E. 3,020,326.

Minnesota and Ontario Paper Co.: *See*—
Meek, Wayne L., and Hyvarinen. 3,020,191.

Minter, Jerry B., 2nd. Electromagnetic engraving apparatus. 3,020,361, 2–6–62, Cl. 179—100.41.

Mister Softee, Inc.: *See*—
Moser, Frank T. 3,019,615.

Mitchel-Tyler Co., The: *See*—
Reardon, Patrick H. 3,019,833.

Mitchell, Samuel L. Power hair brush. 3,019,463, 2–6–62, Cl. 15—23.

Moeller, John D., and T. R. Scarff, to General Motors Corp. Gas driven hydraulic pump. 3,019,735, 2–6–62, Cl. 103—49.

Moffitt, John A., Jr., and A. S. Kidwell, to The Connecticut Hard Rubber Co. Wire reinforced polytetrafluoroethylene seal. 3,020,185, 2–6–62, Cl. 154—53.

Moggre, Anthonie J.: *See*—
Janssen, Peter J. H., and Moggre. 3,020,484.

Mohnhaupt, Dietrich F. A., to Permaco S.A. Process of manufacture of temperature-sensitive recording paper. 3,020,172, 2–6–62, Cl. 117—36.7.

Molins Machine Co. Ltd.: *See*—
Labbe, Francis A. M. 3,019,793.

Molitor, Victor D. Food display device. 3,020,113, 2–6–62, Cl. 312—284.

Molomot, Oscar H., to Truckers Specialty Printing Co., Inc. Marking device. 3,020,067, 2–6–62, Cl. 281—29.

Molybdenum Corp. of America: *See*—
Linz, Arthur, and Tisdale. 3,020,153.

Monroe, Benjamin F. Retractable belt. 3,020,089, 2–6–62, Cl. 297—388.

Monsanto Chemical Co.: *See*—
Blum, Gail H. 3,020,306.
Campbell, John R., and Hatton. 3,020,315.
Clupp, John P. 3,020,305.
Hamm, Phillip C., and Saul. 3,020,141.

Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Maragliano, Domenico, and Denti. 3,019,507.
Natta, Giulio, Beati, and Severini. 3,020,174.

Montignot, Francois H., to Compagnie de Pont-A-Mousson. Sheet-bending method and machine for the production of tubular elements. 3,019,834, 2–6–62, Cl. 153—65.

Mosely, Thomas L. Auto camper. 3,019,803, 2–6–62, Cl. 135—4.

Moore Business Forms, Inc.: *See*—
Macaulay, Norman. 3,020,170.

Moracco, Joseph J., and C. L. Bush, to Chicago Pneumatic Tool Co. Low overhead jumbo drill supporting bracket. 3,020,012, 2–6–62, Cl. 248—16.

Morello, Edwin F., to Standard Oil Co. Stabilized ammonium nitrate propellant. 3,020,180, 2–6–62, Cl. 149—18.

Morgan Construction Co.: *See*—
Morgan, Myles. 3,020,000.

Morgan, Myles, to Morgan Construction Co. Reeling apparatus. 3,020,000, 2–6–62, Cl. 242—81.

Morgan, Walter A., to Esso Research and Engineering Co. Servosystem electro-mechanical reset mechanism. 3,020,458, 2–6–62, Cl. 318—28.

Morin, John O., J. O. McDonough, and H. P. Grossimon, to The Hartford Special Machinery Co. Position control servosystem. 3,020,460, 2–6–62, Cl. 318—28.

Moriya, Ikuro, to Victor Co. of Japan, Ltd. Magnetic recording and reproducing system. 3,020,355, 2–6–62, Cl. 179—100.2.

Morrello, Charles J. Pneumatic tire-filling device. 3,019,831, 2–6–62, Cl. 152—415.

Morris, Harry C., and R. F. Meier; said Meier assor. to said Morris. Friction clutch. 3,019,872, 2–6–62, Cl. 192—44.

Morris, Thomas C.: *See*—
Phillips, Ferdinand N., Jr., Morris, and Chaplick. 3,020,169.

Morrison, Percival H., and P. J. Packman, to Leeford (London) Ltd. Apparatus for supporting land working or other tools on a tractor. 3,019,923, 2–6–62, Cl. 214—140.

Morrison, Willard L., to Conch International Methane Ltd. Insulated tank for storage and transportation of low boiling liquefied gas. 3,019,937, 2–6–62, Cl. 220—65.

Moscrip, Arthur D., to Sun Oil Co. Purifying phthalic acids. 3,020,312, 2–6–62, Cl. 260—524.

Moser, Frank T., to Mister Softee, Inc. Ice cream mix control. 3,019,615, 2–6–62, Cl. 62—132.

Moss, Charles W. Sand box and shelter structure. 3,020,045, 2–6–62, Cl. 272—1.

Moss, Philip H., to Jefferson Chemical Co., Inc. Preparation of unsaturated compounds. 3,020,290, 2–6–62, Cl. 260—340.2.

Motoren-Werke Mannheim A.G. Vorm. Benz Abt. Stat Motorenbau: *See*—
Henninger, Friedrich. 3,019,596.

Motorola, Inc.: *See*—
Kuritza, Oleh M. 3,019,782.
Race, Richard T. 3,020,466.

Moulinage et Retorderie de Chavanoz: *See*—
Stiefenhofer, Louis. 3,020,173.

Mueller, Josef C., Jr.: *See*—
Camp, John E., Mueller, Sandholdt, and Haywood. 3,020,139.

Mueller, Richard J., to Automatic Canteen Co. of America. Vending machines. 3,019,946, 2–6–62, Cl. 222—180.

Mühlhoff, Friedrich, to Mauser Kommandit-Gesellschaft. Containers and closure or like parts thereof. 3,019,956, 2–6–62, Cl. 229—5.7.

Mullins, Marvelle W. Spare tire carrier for pickup trucks. 3,019,928, 2–6–62, Cl. 214—451.

Munakata, Motosuke, and J. Asahara, to Agency of Industrial Science and Technology, Ministry of International Trade and Industry. Process of manufacturing a special glass applicable for making a radiophotoluminescence dosimeter. 3,020,238, 2–6–62, Cl. 252—301.6.

Munschauer, Edwin A., Jr., to Niagara Machine & Tool Works. Power press control means. 3,019,878, 2–6–62, Cl. 192—144.

Munzing, George E.: *See*—
Reynolds, Eugene E., Lindberg, Avery, Munzing, and Thomas. 3,019,971.

Murphy, Jack L.: *See*—
Walker, John M., Jr. 3,019,502.

Murphy, Maxwell K. Dual radiant heater. 3,020,384, 2–6–62, Cl. 219—39.

Murphy, Robert H., to The Wiremold Co. Contact and terminal member for wiring devices. 3,020,517, 2–6–62, Cl. 339—164.

Murray, Frederick R., to Rolls-Royce Ltd. Combustion apparatus of gas turbine engines with means controlling air flow conditions in the combustion apparatus. 3,019,605, 2–6–62, Cl. 60—39.65.

Murray Mfg. Corp.: *See*—
Kobryner, Herman H., and Brauneck. 3,020,373.

Murri, Albert T. Nuclear powered ground-effect machine for operation over water employing water shielding. 3,019,756, 2–6–62, Cl. 114—67.

Murrle, Kurt. Inertia wound watch with overwind preventer. 3,019,595, 2–6–62, Cl. 58—82.

Murthy, Gopala K., J. E. Campbell, Jr., E. B. Masurovsky, and L. F. Edmondson; said Edmondson assor. to United States of America, Agriculture; said Murthy, Campbell, and Masurovsky assors. to United States of America, Atomic Energy Commission. Process for removal of radionuclides from milk. 3,020,161, 2–6–62, Cl. 99—54.

Murty, Anthony F. and B. P., to Bendix-Westinghouse Automotive Air Brake Co. Safety brake mechanism for vehicle. 3,020,094, 2–6–62, Cl. 303—9.

Murty, Benedict P.: *See*—
Murty, Anthony F. and B. P. 3,020,094.

Mycalex Corp. of America: *See*—
Rowe, William E. 3,020,156.

Nachtman, John S., and H. G. Poole. Beneficiation and recovery of metals. 3,020,151, 2–6–62, Cl. 75—82.

Nadler, Ira. Soap grip holders. 3,019,548, 2–6–62, Cl. 45—28.

Naeser, Gerhard, to Mannesmann Aktiengesellschaft. Method for rolling metal powder. 3,019,487, 2–6–62, Cl. 18—55.

Napier, D., & Son Ltd.: *See*—
Blyth, Jack V., and Upton. 3,020,004.

Nash, Floyd M., and J. Jacuzzi, to Jacuzzi Bros., Inc. Vacuum cleaner. 3,019,462, 2–6–62, Cl. 15—1.7.

Nathanson, Philip: *See*—
Gould, Arthur S., and Nathanson. 3,019,592.

National Cash Register Co., The: *See*—
Bakan, Joseph A., Striley, and Maierson. 3,020,171.

National Dairy Products Corp.: *See*—
Stine, James B. 3,020,163.

National Lock Co.: *See*—
Erkert, James S. 3,019,758.

National Research Development Corp.: *See*
Robin, Harold K. 3,020,342.

National Steel Corp.: *See*—
Rasch, Herman R., and Cummins. 3,019,861.

Natta, Giullo, E. Beati, and F. Severini, to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Method of graft polymerizing monomers onto a shaped article of peroxidized polymers of propylene and copolymers of propylene and ethylene. 3,020,174, 2–6–62, Cl. 117—47.

Navikas, Charles R., to Union Carbide Corp. Insulation wrapping machine. 3,019,573, 2–6–62, Cl. 53—27.

Naxon, Irving. Electric heaters. 3,020,386, 2–6–62, Cl. 219—42.

Necchi S.p.A.: *See*—
Bono, Luigi. 3,019,750.

Needle Industries Ltd.: *See*—
Duffin, Bernard G., and Sanders. 3,019,500.

Neenan, Charles J., to Columbia Broadcasting System, Inc. Self-normalling video jack. 3,020,365, 2–6–62, Cl. 200—51.09.

Negoro, Kaiji, to Continental Can Co., Inc. Variable orifice extrusion die. 3,019,481, 2–6–62, Cl. 18—5.

Nelson, Charles V.: *See*—
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,478.
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,479.

Nelson Chemicals Co.: *See*—
Eisenberg, David J., and Mauthner. 3,020,125.

Nelson, Howard N., and C. B. Sitterson, Jr., to Kimberly-Clark Corp. Dispensing carton for flexible sheets. 3,019,944, 2–6–62, Cl. 221—302.

Nelson, Melvin E., to Dow Corning Corp. Organosiloxane potting compounds. 3,020,260, 2–6–62, Cl. 260—46.5.

Nelson, Norman E.: *See*—
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,478.
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,479.

Nenz, Adriano: *See*—
Gechele, Giovanni B., Nenz, and Barberis. 3,020,284.

Neuhardt, Melvin H., to The Black and Decker Mfg. Co. Split brushes and support therefor. 3,020,430, 2–6–62, Cl. 310—246.

Nevans, Thomas D., and W. J. Culbertson, Jr., to The Oil Shale Corp. Process and apparatus for heating solid inert heat-carrying bodies. 3,020,227, 2–6–62, Cl. 208—11.

Nevens, Thomas D.: *See*—
Culbertson, William J., Jr., and Nevens. 3,020,209.

Niagara Machine & Tool Works: *See*—
Munschauer, Edwin A., Jr. 3,019,878.

Niagara Therapy Mfg. Corp.: *See*—
Elden, Muriyn J. 3,019,784.
Elden, Muriyn J. 3,019,785.

Nichols, Edgar B. Bearings. 3,020,104, 2–6–62, Cl. 308—159.

Nicholson, James F., to Westinghouse Electric Corp. Photoconductive device. 3,020,432, 2–6–62, Cl. 313—65.

Nicholson, James F., and K. R. Simpson, to Westinghouse Electric Corp. Photoconductive target. 3,020,442, 2–6–62, Cl. 315—10.

Nicoll, William D.: *See*—
Cox, Norman L., and Nicoll. 3,019,509.

Nielsen, Ralph P., $^1/_{10}$ to Gadget-of-the-Month Club, Inc. Foot operated switch closable by transverse pivotal movement in any direction. 3,020,368, 2–6–62, Cl. 200—86.5.

Nippon Kogaku K.K.: *See*—
Ueno, Tadashi. 3,019,706.

Nomine, Gerard, D. Bertin, and J. Tessier, to Les Laboratoires Francais de Chimiotherapie. Preparation of estradiol and intermediates thereof. 3,020,296, 2–6–62, Cl. 260—397.45.

Nordberg Mfg. Co.: *See*—
Symons, Loren G. 3,019,994.

Nordell, Eugene C.: *See*—
Barton, Leon M., and Nordell. 3,020,482.

North American Aviation, Inc.: *See*—
Beam, Donald W., and Wallace. 3,020,011.

North American Philips Co., Inc.: *See*—
Ahsmann, Gerardus J. M. 3,020,436.
Blank, Hans H., van Zanten, Kuiper, and Almer. 3,020,224.
De Jager, Frank, and Greefkes. 3,020,352.
De Miranda, Jacobus R., Boon, and Dellege. 3,020,488.

North American Philips Co., Inc.: *See*—
Duinker, Simon, and Heijn. 3,019,977.
Heetman, Alphonsus. 3,020,353.
Heijn, Herman J., Klinkhamer, Samwel, and De Miranda. 3,020,117.
Janssen, Peter J. H., and Moggre. 3,020,484.
Janssen, Peter J. H., and Smeulers. 3,020,480.
Jonker, Gerard H., and Braun. 3,020,235.
Meijer, Barend M. 3,020,428.
Reijnst, Maximilien F. 3,020,503.
Van den Berge, Hendrik J., Blick, Geleijnse, and van der Maat. 3,019,505.
Vander Burgt, Cornelis M. 3,020,426.
Van Houten, Jan C. 3,019,482.
Vonk, Cornelis. 3,020,345.

Norton Co.: *See*—
Camp, John E., Mueller, Sandholdt, and Haywood. 3,020,139.
Martin, Dana W. 3,019,563.
Olton, Dirck J. 3,019,570.

Norton, Robert O.: *See*—
Goemann, Richard P., and Norton. 3,019,987.

Norwalk, Stanley, to Union Carbide Corp. Aqueous epoxy resin emulsions and coatings therefrom. 3,020,250, 2–6–62, Cl. 260—7.

Novick, Abraham, to F. L. Smithe Machine Co., Inc. Protector associated with the gumming mechanism of paper converting machines or the like. 3,019,761, 2–6–62, Cl. 118—70.

Nowell, Harry: *See*—
Thompson, William, and Nowell. 3,020,474.

Nowlan, Michael J., to Radio Corp. of America. Resonant circuitry for a transducer head. 3,020,357, 2–6–62, Cl. 179—100.2.

Nuding, James M. Gas purifying arrangement. 3,019,780, 2–6–62, Cl. 123—119.

Nutter, Benjamin P., to Johnston Testers, Inc. Well packer. 3,019,842, 2–6–62, Cl. 166—126.

Oak Mfg. Co.: *See*—
Williams, John H. 3,020,375.

O'Brian, Edward D.: *See*—
Bourns, Marlan E., Boode, and O'Brian. 3,020,505.

O'Brien, Richard J.: *See*—
Gratian, Joseph W., and O'Brien. 3,020 360.

O'Bryant, Waitus A. Filter for heating and air conditioning ducts. 3,019,854, 2–6–62, Cl. 183—49.

Ochin, Zell, and L. P. Griser. Picture hanger. 3,020,013, 2–6–62, Cl. 248—28.

O'Connor, Buell: *See*—
Ridgway, John A., Jr., and O'Connor. 3,020,241.

Odell, Alexander D.: *See*—
Ridler, Desmond S., and Odell. 3,020,526.

Ogden Industries Pty. Ltd.: *See*—
Hynes, James P., and Dunphy. 3,020,039.

Ohio Crankshaft Co., The: *See*—
Tudbury, Chester A. 3,020,452.

Oil Shale Corp., The: *See*—
Culbertson, William J., Jr., and Nevens. 3,020,209.
Nevans, Thomas D., and Culbertson. 3,020,227.

Old, Bruce S., R. W. Hyde, H. P. Meissner, S. V. Marrello, and F. C. Schora, Jr., to Arthur D. Little, Inc. Beneficiation of ores. 3,020,149, 2–6–62, Cl. 75—26.

Olin Mathieson Chemical Corp.: *See*—
Kope, Rowland J., and Marsh. 3,019,440.
Manion, Jean P. 3,020,223.
Pfaff, Elmer F. 3,019,441.
Schnabel, Wilhelm J. 3,020,300.
Stange, Hugo. 3,020,308.
Thomas, Robert M., and Weisse. 3,020,316.

Olson, Harold E. Vehicle lift attachment. 3,019,858, 2–6–62, Cl. 187—8.75.

Olton, Dirck J., to Norton Co. Coated abrasive back-up pad. 3,019,570, 2–6–62, Cl. 51—195.

Olympic Screw & Rivet Corp.: *See*—
Wilson, Raymond O. 3,019,518.

O'Mara, Richard F. Rotary heat exchanger. 3,020,025, 2–6–62, Cl. 257—79.

Onishi, Tsuneo, and A. Kobayashi, $^3/_4$ to Kurashiki Rayon Co., Ltd., and $^1/_4$ to Air Reduction Co., Inc. Heated roll. 3,020,383, 2–6–62, Cl. 219—37.

Onyskin, Alexander. Reverse acting magnetic clutch. 3,019,877, 2–6–62, Cl. 192—90.

O'Reilly, Donald E., to Gulf Research & Development Co. Borehole logging method and apparatus. 3,020,469, 2–6–62, Cl. 324—5.

Orlins, Martin A., to Rheem Mfg. Co. Method of forming interior-lined sheet metal containers. 3,019,753, 2–6–62, Cl. 113—120.

Orr, Carrol A.: *See*
Cobb, Clifton A., Orr, and Robandt. 3,019,814.

Osterberg, Arnold E., to Abbott Laboratories. l-arginine-l-glutamate intravenous therapy of hepatic coma ammonia intoxication. 3,020,201, 2–6–62, Cl. 167—65.

Otto, William H.: *See*—
Whitehurst, Harry B., and Otto. 3,019,515.

Ottosson, Carl O. L.: *See*—
Sjöstrand, Fritiof S., Ottosson, and Zernell. 3,019,673.

Owens, Freeman H. Stereoscopic television. 3,020,341, 2–6–62, Cl. 178—6.5.

Owens-Corning Fiberglas Corp.: *See*
Curtis, Charles C. 3,020,324.
Kleist, Dale. 3,019,477.
Rawlinson, Alvis M., and Failing. 3,019,476.
Waggoner, Jack H. 3,020,189.
Whitehurst, Harry B., and Otto. 3,019,515.

Owens-Illinois Glass Co.: *See*—
Soubier, Leonard D. 3,019,480.

Packman, Percival J.: *See*—
Morrison, Percival H., and Packman. 3,019,923.

Page, Frank R., to Scott & Williams, Inc. Clamping and cutting means for circular knitting machine. 3,019,628, 2–6–62, Cl. 66—145.

Palevsky, Harry N.: *See*—
Shawhan, Elbert N., McLean, Palevsky, and Mather. 3,020,470.

Palmer, Charles E. Interlocking engagement for a plastic blank. 3,019,957, 2–6–62, Cl. 229—16.

Palmer, Roy D.: *See*—
Cozzo, Giuseppe, and Palmer. 3,019,669.

Pan American Resources, Inc.: *See*—
Lantz, Dae C. 3,020,212.

Pannier, Richard H. Livestock feeder. 3,019,766, 2–6–62, Cl. 119—53.5.

Paper Mate Mfg. Co.: *See*—
Seyer, Frank H., and Marcotte. 3,019,768.

Papapanu, James A., to Carrier Corp. Absorption refrigeration systems and method of operating the same. 3,019,616, 2–6–62, Cl. 62—141.

Paquet, Jean A. G., to Lignes Telegraphiques & Telephoniques. Gain stabilized amplifier system. 3,020,487, 2–6–62, Cl. 330—51.

Paquot, Charles, D. Lefort, and J. Sorba, to Centre National de la Recherche Scientifique. Preparation of long-chain primary aliphatic nicohols. 3,020,320, 2–6–62, Cl. 260—638.

Park, Robert H.: *See*—
Maltby, Wilson R., and Park. 3,019,730.

Parlin, David B.: *See*—
Reinhardt, Henry A., and Parlin. 3,019 508.

Parraga, Alfredo J. Infuser of beverage making machine. 3,019,719, 2–6–62, Cl. 99—287.

Parsons Corp.: *See*—
Parsons, John T., and Harwood. 3,020,115.

Parsons, John T., and F. E. Harwood, to Parsons Corp. Workman's time recorder. 3,020,115, 2–6–62, Cl. 346—54.

Pass & Seymour, Inc.: *See*—
Despard, Victor R. 3,020,516.

Pataki, John: *See*—
Djerassi, Carl, Rosenkranz, Kaufmann, Pataki, and Romo. 3,020,294.

Patelli, Bianca: *See*—
Camerino, Bruno, and Patelli. 3,020,295.

Patent and Licensings Corp. The: *See*—
Cubberley, Richard H., Harold, and Zinaman. 3,020,184.

Patnode, Homer W., to Gulf Research & Development Co. Method of determining azimuthal distribution of a system of lineal elements. 3,019,693, 2–6–62, Cl. 88—14.

Pattenden, John D.: *See*
Ash, Eric A., and Pattenden. 3 020,498.

Patterson, George C., to American Radiator & Standard Sanitary Corp. Dust collector. 3,019,856, 2–6–62, Cl. 183—80.

Patterson, Lester C. Hydraulic kick bumper sub. 3,020,081, 2–6–62, Cl. 294—86.

Pattillo, Sidney M. Stock feed pellet spreader. 3,019,945, 2–6–62, Cl. 222—177.

Patton, John T., to Jersey Production Research Co. Thickening agent and process for producing same. 3,020,207, 2-6-62, Cl. 195—31.

Patton, John T., and G. P. Lindblom, to Jersey Production Research Co. Process for synthesizing polysaccharides. 3,020,206, 2-6-62, Cl. 195—31.

Paulsrud, Gerhardt A. Optical viewing device. 3,019,689, 2-6-62, Cl. 88—1.

Pava, Jack R. Nutcracker. 3,019,828, 2-6-62, Cl. 146—14.

Peabody Seating Co., Inc.: *See*—
Barber, Howard B. 3,020,086.

Pearne, Frank S., to Pearne and Lacy Machine Co., Inc. Cutting apparatus. 3,019,506, 2-6-62, Cl. 25—108.

Pearne and Lacy Machine Co., Inc.: *See*—
Pearne, Frank S. 3,019,506.

Pearson, Harry C., to Portland Iron Works. Lumber feeder. 3,019,882, 2-6-62, Cl. 198—34.

Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
Mercier, Henri, and Brun. 3,020,098.

Peckham, Roy E., to R. L. Brown. Fastener. 3,019,199, 2-6-62, Cl. 24—73.

Peck, Charles A., Jr., to United Aircraft Corp. Turbo-fan engine thrust reverser. 3,019,600, 2-6-62, Cl. 60—35.54.

Peeps, Donald J., and F. W. Hoffman, to The De Vilbiss Co. Heat exchanger. 3,020,026, 2-6-62, Cl. 257—240.

Pellegrini, John P., Jr.: *See*—
Farcri, Elizabeth L., and Pellegrini. 3,020,135.

Peltz, Gordon M., to The Phoenix Glass Co. Lighting device. 3,020,395, 2-6-62, Cl. 240—106.

Penczek, Edward S., and R. W. Furguson, to General Dynamics Corp. Chemical cleaning of printed circuits. 3,020,175, 2-6-62, Cl. 117—49.

Pennsalt Chemicals Corp.: *See*—
Barr, John T. 3,020,267.

Perkins, Kenneth C., to General Electronic Laboratories, Inc. Anti-capture signal receiving apparatus. 3,020,403, 2-6-62, Cl. 250—20.

Permaco S.A.: *See*—
Mohnhaupt, Dietrich F. A. 3,020,172.

Peterson, Marian R. Window washing system. 3,019,801, 2-6-62, Cl. 134—94.

Peterson, Victor H. and V. H., Jr. Vise. 3,020,041, 2-6-62, Cl. 269—135.

Peterson, Victor H., Jr.: *See*—
Peterson, Victor H. and V. H., Jr. 3,020,041.

Petrolite Corp.: *See*—
Hughes, William B., and Stromberg. 3,020,276.

Pfaff, Elmer F., to Olin Mathieson Chemical Corp. Bracket attaching fixture for fastener driving tool. 3,019,441, 2-6-62, Cl. 1—44.5.

Pfeifer, Charles F.: *See*—
Gonzales Pelaez, Manuel. 3,020,167.

Pfeiffer, Arthur, G.m.b.H.: *See*—
Becker, Willi. 3,020,102.

Pfeiffer, Fred H., Jr., to J. R. Crossan. Method of making a vehicular tire. 3,020,190, 2-6-62, Cl. 156—125.

Pfost, Robert F., to Ampex Corp. Tape transducing apparatus. 3,020,359, 2-6-62, Cl. 179—100.2.

Philbrick, George A. Multiplier. 3,019,983, 2-6-62, Cl. 235—194.

Philco Corp.: *See*
Bloomsburgh, Ralph A. 3,020,434.

Phillips, Ferdinand N., Jr., T. C. Morris, and A. M. Chaplick; said Morris and Chaplick, assors. to B. B. Chemical Co. Shoe lining and stiffening materials. 3,020,169, 2-6-62, Cl. 117—33.

Phillips, Malcolm E., Jr.: *See*—
Johnson, James V., Jr., Groppe, Hibbitts, and Phillips. 3,019,574.

Phillips, Malcolm E., Jr., and H. P. Curlee, Jr., to American Machine & Foundry Co. Automatic catcher. 3,019,581, 2-6-62, Cl. 53—236.

Phillips Petroleum Co.: *See*—
Allen, John G. 3,020,322.
Doyle, Robert, Holt, and Cooper. 3,019,488.
Kleiss, Louis D. 3,020,490.
Kuntz, Louis E., and Remke. 3,019,649.
Lupfer, Dale E. 3,020,213.
Marx, John W., Langenheim, Dixon, and Trantham. 3,019,837.
Robbins, Archie L. 3,020,258.
Strassen, Donald L. 3,019,486.

Pfleger, Herman, executor: *See*—
Bailey, Frazer A. 3,019,757.

Phoenix Glass Co., The: *See*—
Peltz, Gordon M. 3,020,395.

Pianfetti, John A., and P. L. Janey, to FMC Corp. Production of aliphatic phosphate esters. 3,020,303, 2-6-62, Cl. 260—461.

Pickles, Joseph, to Ferro Stamping Co. Door lock. 3,020,074, 2-6-62, Cl. 292—280.

Pierce, Roger J., and H. T. Abrams, to Collins Radio Co. Intensity comparing system for determining fraction of travel time to a radiating source. 3,020,397, 2-6-62, Cl. 250—2.

Pierson, Everette A. Quick detachable device for a sling. 3,020,080, 2-6-62, Cl. 294—76.

Pietsch, Joseph A., to General Electric Co. Thermoelectric air conditioning arrangement. 3,019,609, 2-6-62, Cl. 62—3.

Pike, Ronald M.: *See*—
Bailey, Donald L., and Pike. 3,020,302.

Pike, Roscoe A., to Union Carbide Corp. Process of making cyanoalkylsilanes. 3,020,301, 2-6-62, Cl. 260—448.2.

Pillsbury Co., The: *See*—
Forkner, John H. 3,020,161.

Pipes, Albert W.: *See*—
Arnold, Ernest A., and Pipes. 3,019,715.

Pirok, John N., and J. H. Trammell, to Chicago Bridge & Iron Co. Self-priming siphon drain. 3,019,800, 2-6-62, Cl. 137—142.

Pittsburgh-Des Moines Steel Co.: *See*—
Anderson, Lloyd E., Sr. 3,019,935.

Pittsburgh Plate Glass Co.: *See*—
Smith, William G. 3,019,475.

Placco, Oscar F., P. E. Stone, and F. P. Keyes, to Bell Trading Post, Ltd. Watch bracelet. 3,019,503, 2-6-62, Cl. 24—265.

Plax Corp.: *See*—
Freeman, Lawrence W. 3,019,725.

Plummer, Harland C., to Woodward Governor Co. Speed regulator for prime movers. 3,019,602, 2-6-62, Cl. 60—39.28.

Pocher, Hugo: *See*—
Hildebrand, Klaus, and Pocher. 3,019,690.

Polarad Electronics Corp.: *See*—
Beiser, Leo. 3,020,500.
Beiser, Leo, and Schneider. 3,020,499.

Pollack, Shirley, and D. Finsliver. Shower cap. 3,019,444, 2-6-62, Cl. 2—68.

Poole, Henry G.: *See*—
Nachtman, John S., and Poole. 3,020,151.

Poor & Co.: *See*—
Liebenthal, John H. 3,019,988.

Porter, H. K., Co., Inc.: *See*—
Weber, Herman W. 3,019,561.

Portland Iron Works: *See*—
Pearson, Harry C. 3,019,882.

Potash Co. of America: *See*—
Knill, Raymond R., McLaughlin, Priesnitz, Conder, and Haworth. 3,019,890.

Poticha, Charles. Toy device. 3,019,555, 2-6-62, Cl. 46—243.

Powell, Dawson. Fire inhibitor and extinguisher. 3,019,843, 2-6-62, Cl. 169—2.

Prange, Charles J. Drag bucket elevating and unloading mechanism. 3,019,921, 2-6-62, Cl. 214—103.

Prasse, Herbert F., to Thompson Ramo Wooldridge Inc. Leaf spring seal for pumps. 3,019,737, 2-6-62, Cl. 103—126.

Pratt, Henry, Co.: *See*—
Fawkes, Donald G. 3,020,019.

Pratt, Henry R. C., to The United Kingdom Atomic Energy Authority, Patents Branch. Gas humidification and dehumidification processes. 3,019,610, 2-6-62, Cl. 62—11.

Preparation Industrielle des Combustibles: *See*—
Lagrost, Lucien. 3,019,900.

Prestigiacomo, Anthony J., to Bell Telephone Laboratories, Inc. Apparatus for deriving pitch information from a speech wave. 3,020,344, 2-6-62, Cl. 179—1.

Price, Duane W. Amusement rides. 3,019,740, 2-6-62, Cl. 104—61.

Price, Ralph E., to Landis Tool Co. Grinding machine with dual purpose grinding wheels. 3,019,562, 2-6-62, Cl. 51—3.

Price, Ralph E., to Landis Tool Co. Swivel wheelbase for universal grinding machines. 3,019,566, 2-6-62, Cl. 51—166.

Priesnitz, Frederick J.: *See*—
Knill, Raymond R., McLaughlin, Priesnitz, Conder, and Haworth. 3,019,890.

Prizler, Paul D.: *See*—
Baker, William O., and Prizler. 3,019,905.

Procell, Wayne A., and N. J. Bowman, to Standard Oil Co. Gun propellant. 3,020,181, 2-6-62, Cl. 149—19.

Projahn, Emil, to Gebruder-Kollisch. Filling valve for lighter tanks. 3,019,807, 2-6-62, Cl. 137—199.

Prosser, Rae A., to Union Carbide Corp. High pressure pumping apparatus. 3,019,739, 2-6-62, Cl. 103—204.

Pudelko, Richard, to Landis & Gyr A.G. Recording electricity meters. 3,020,116, 2-6-62, Cl. 346—66.

Pulliam, Floyd R. Container. 3,019,961, 2-6-62, Cl. 229—63.

Pure Oil Co., The: *See*—
Fierce, William L., and Sandner. 3,020,126.
Fierce, William L., and Sandner. 3,020,246.

Putnam, Nelson E.: *See*—
Bogater, John P., Loria, and Putnam. 3,019,934.

Pye Ltd.: *See*—
Kingsbury, John. 3,020,016.

Quackenbush, Edward C., to The Whitney Blake Co. Tamper proof electrical connector. 3,020,513, 2-6-62, Cl. 339—91.

Quadflieg, Therese: *See*—
Schönberg, Manfred, Wirtz, and Quadflieg. 3,020,293.

Quaker Oats Co., The: *See*—
Dunlop, Andrew P., and Manly. 3,020,291.

Quality Die Co.: *See*—
Hoffmann, Erich O. 3,019,724.

Quinn, James L., to Cummins-Chicago Corp. Multiple input sensing apparatus. 3,020,524, 2-6-62, Cl. 340—147.

RS Electronics Corp.: *See*—
Isabean, John G. 3,020,401.

Rabinow, Jacob, to Rabinow Engineering Co., Inc. Fast response magnetic friction clutch. 3,019,876, 2-6-62, Cl. 192—84.

Race, Richard T., to Motorola, Inc. Electric generator. 3,020,466, 2-6-62, Cl. 322—28.

Radcliffe, Floyd H. Power lavatory flushing apparatus. 3,019,453, 2-6-62, Cl. 4—249.

Radcliffe, Robert W. Apparatus for the recovery of precious metals. 3,019,899, 2-6-62, Cl. 209—435.

Radio Corp. of America: *See*—
Chang, Kern K. N. 3,020,440.
Eichenbaum, Arie L. 3,020,439.
Lewin, Morton H. 3,019,981.
Nowlan, Michael J. 3,020,357.
Rhodes, Roland N. 3,020,338.
Shafer, Richard E. 3,020,450.
Wolkstein, Herbert J., and Bridge. 3,020,444.

Rad-O-Lite, Inc.: *See*—
Lesher, John C. 3,020,522.

Rago, Rocco M., to A. F. Wintercorn. Toy hand grenade. 3,019,554, 2-6-62, Cl. 46—200.

Rain Jet Corp.: *See*—
Hruby, John O., Jr. 3,019,991.

Rand, Burton, to Autosonics, Inc. Cleaning apparatus. 3,019,800, 2-6-62, Cl. 134—79.

Randels, Robert B.: *See*—
Layton, Margaret M., Randels, and Stockdale. 3,020,456.

Randolph, Carl L., Jr.: *See*—
Schultz, Robert D., and Randolph. 3,020,127.

Randolph, Harry B. Members having a metal part secured to a wooden part. 3,019,526, 2-6-62, Cl. 30—341.

Rasch, Arthur A.: *See*—
Yackel, Edward C., Yutzy, Foster, and Rasch. 3,020,155.

Rasch, Herman R., and R. J. Cummins, to National Steel Corp. Metallic building structure. 3,019,861, 2-6-62, Cl. 189—1.

Rausch, Hans: *See*—
Boss, Karl-Heinz, Rausch, and Meyer. 3,020,147.

Raver, Jack, to General Dynamics Corp. Electrical connector. 3,020,511, 2-6-62, Cl. 339—65.

Rawlinson, Alvis M., and G. M. Falling, to Owens-Corning Fiberglas Corp. Cooling method and apparatus. 3,019,476, 2-6-62, Cl. 18—2.5.

Ray, Bert E.: *See*—
Fox, Robert M., and Ray. 3,019,469.

Ray, William H., to United States Steel Corp. Grapple for lifting cylindrical articles. 3,020,078, 2-6-62, Cl. 294—63.

Raytheon Co.: *See*—
Schall, Louis H., and Winsor. 3,020,447.

Rea, Homer E.: *See*—
Schaeffer, William D., and Rea. 3,020,123.

Reardon, Patrick H., to The Mitchel-Tyler Co. Rolled edge metal containers, method and apparatus for making same. 3,019,833, 2-6-62, Cl. 153—2.

Red Star Yeast and Products Co.: *See*—
Dale, Robert F., Backus, and Kezell. 3,020,208.

Redfern, William D. Method for stirring electric-current-conducting melts in furnaces, mixers and holders. 3,020,323, 2-6-62, Cl. 13—5.

Reed, Luis F. Motor vehicle stabilizing device. 3,020,062, 2-6-62, Cl. 280—112.

Reed, Raymond E., to The Gillette Co. Hair waving device. 3,019,796, 2-6-62, Cl. 132—9.

Reed, Thomas F., to United States Steel Corp. Method of smelting titaniferous iron ore. 3,020,150, 2-6-62, Cl. 75—41.

Reger, B. J.: *See*—
Courneya, Callee G. 3,020,429.

Register, James N.: *See*—
Eady, Hilton H. 3,019,523.

Reid, Henry. Flat edge trimmer with an internal shearing punch and automatic operating means therefor. 3,019,684, 2-6-62, Cl. 83—190.

Reid, Ralph T., to James Lee and Sons Co. Method for producing variable twist yarn. 3,019,593, 2-6-62, Cl. 57—156.

Reid, Thomas H.: *See*—
McPhee, Alexander H., and Reid. 3,019,902.

Reifel, Harry, to Stevens-Arnold Inc. Vibratory capacitors. 3,020,455, 2-6-62, Cl. 317—250.

Reijnst, Maximilien E., to North American Philips Co., Inc. Inductance coil comprising an annular premagnetisable core. 3,020,503, 2-6-62, Cl. 336—110.

Reilly Tar & Chemical Corp.: *See*—
Cislak, Francis E. and Wheeler. 3,020,280.
Cislak, Francis E., and Wheeler. 3,020,281.
Cislak, Francis E., and Wheeler. 3,020,282.

Reinhardt, Henry A., and D. B. Parlin, to Bigelow-Sanford, Inc. Cushioned carpeting and method of making the same. 3,019,508, 2-6-62, Cl. 28—72.2.

Reitmeier, Ronald E., to Catalysts and Chemicals Inc. Preparation of gel extrudates. 3,020,243, 2-6-62, Cl. 252—465.

Reitmeier, Ronald E., to Catalysts and Chemicals Inc. Preparation of catalysts containing cobalt and molybdenum oxides. 3,020,245, 2-6-62, Cl. 252—465.

Remington Arms Co., Inc.: *See*—
Hunt, Robert J. 3,019,688.

Remington, Richard C., and D. J. Schauffler, to General Precision, Inc. Bubble type electrolytic reversible switch. 3,020,506, 2-6-62, Cl. 338—86.

Remke, Marvin A.: *See*—
Kuntz, Louis E., and Remke. 3,019,649.

Renken, Howard C.: *See*—
Stephens, Frank M., Jr., and Renken. 3,020,210.

Republic Steel Corp.: *See*—
Malcher, Frank F. 3,019,916.
Truman, Theodore J., and Harder. 3,019,868.

Research Corp.: *See*—
Follin, James W., Jr. 3,019,982.
Hyde, Clyde M. 3,020,398.

Revere Camera Co.: *See*—
Brueckner, Hubert U., Fluskey, and Werbyckyj. 3,019,701.

Reynolds, Eugene E., C. A. Lindberg, H. T. Avery, G. E. Munzing, and W. E. Thomas, to Smith-Corona Marchant Inc. Calculating machines. 3,019,971, 2-6-62, Cl. 235—63.

Rheem Mfg. Co.: *See*—
Orlins, Martin A. 3,019,753.

Rhodes, Roland N., to Radio Corp. of America. Color television demodulation system. 3,020,338, 2-6-62, Cl. 178—5.4.

Richardson, Avery G., to International Telephone and Telegraph Corp. Magnetic recording and reproducing apparatus. 3,020,358, 2-6-62, Cl. 179—100.2.

Richfield Oil Corp.: *See*—
Hallowell, Dennis F., Jr. 3,020,233.

Richman, Donald, to Hazeltine Research, Inc. Automatic tuning apparatus for a color television receiver. 3,020,339, 2-6-62, Cl. 178—5.4.

Richter, Sidney B., to Velsicol Chemical Corp. Method of destroying undesirable plants. 3,020,146, 2-6-62, Cl. 71—2.6.

Ridgway, John A. Jr., and B. O'Connor, to Standard Oil Co. Method for preparing vapor-phase isomerization catalyst. 3,020,241, 2-6-62, Cl. 252—439.

Ridler, Desmond S., and A. D. Odell, to International Standard Electric Corp. Intelligence storage equipment. 3,020,526, 2-6-62, Cl. 340—174.1.

Riley, Robert M., to Bell Telephone Laboratories, Inc. Electrical cable. 3,020,334, 2-6-62, Cl. 174—107.

Rim, Moshe: *See*—
Katchalsky, Aharon, Bursztyn, Rim, and Vofsi. 3,019,557.

Ringe, Carl H., and C. A. Harless, to R. Hoe & Co., Inc. Underside lock up device for printing plates. 3,019,729, 2-6-62, Cl. 101—378.

Rinker, Edwin C., to Sel-Rex Precious Metals, Inc. Mirror bright gold alloy electroplating. 3,020,217, 2-6-62, Cl. 204—43.

Ripley, James H. Inflatable safety shirt. 3,019,459, 2-6-62, Cl. 9—342.

Rixon Electronics, Inc.: *See*—
Hollis, James L. 3,020,399.

Robandt, William F., Jr.: *See*—
Cobb, Clifton A., Orr, and Robandt. 3,019,814.

Robbins, Archie L., to Phillips Petroleum Co. Odor inhibitors for olefin polymers. 3,020,258, 2-6-62, Cl. 260—45.9.

Roberson, Alfred C. Key ejecting means. 3,019,634, 2-6-62, Cl. 70—388.

Roberts, Elmer G.: *See*—
German, Richard C., Arnett, and Roberts. 3,019,597.

Robertson, H. H., Co.: *See*—
Goemann, Richard P., and Norton. 3,019,987.

Robin, Harold K., to National Research Development Corp. Reader systems. 3,020,342, 2-6-62, Cl. 178—52.

Robinson, George L., to Blaw-Knox Co. Closure member or the like. 3,019,775, 2-6-62, Cl. 122—498.

Robinson, James V., and E. B. Brookbank, Jr., to The Mead Corp. Cast coated paper and method of making the same. 3,020,176, 2-6-62, Cl. 117—64.

Roeck, Eugene C.: *See*—
Less, Frank W., Searer, and Roeck. 3,020,254.

Rogers, Edward F., and L. H. Sarett, to Merck & Co., Inc. 1-(2-alkyl-4-amino-5-pyrimidinylmethyl)-alkyl-pyridinium quaternary salts for treating coccidiosis. 3,020,200, 2-6-62, Cl. 167—53.1.

Rogers, Edward F., and L. H. Sarett, to Merck & Co., Inc. 1-(2-n-propyl-4-amino-5-pyrimidyl-methyl)-2(or 4)-methyl pyridinium salts. 3,020,277, 2-6-62, Cl. 260—256.4.

Rogers, Jesse L. Duplicating machines. 3,019,726, 2-6-62, Cl. 101—132.

Rogoff, Mortimer, to International Telephone and Telegraph Corp. Phase measuring device. 3,020,478, 2-6-62, Cl. 324—83.

Rohe, Frederick W. Floating molded insert. 3,019,865, 2-6-62, Cl. 189—34.

Rohm & Haas Co.: *See*—
Sweeney, Edward J., Toy, and McLaughlin. 3,020,178.

Rokos, Leo J., to A. K. R. Long. Round mouthed shovel. 3,020,077, 2-6-62, Cl. 294—49.

Rollins, Lester G., to Joy Mfg. Co. Universal pivoted link chain. 3,019,665, 2-6-62, Cl. 74—246.

Rolls-Royce Ltd.: *See*—
Colley, Rowan H. 3,019,599.

Rolls-Royce Ltd.: *See*—
Murray, Frederick R. 3,019,605.

Romanoff, Harold: *See*—
Leuridon, Nelson, and Romanoff. 3,019,815.

Romanzi, Louis, Jr.: *See*—
King, Edward J., and Romanzi. 3,020,040.

Romeo, Nicholas. Combination fertilizer spreader and lawn marker. 3,019,470, 2-6-62, Cl. 15—503.

Romo, Jesus: *See*—
Djerassi, Carl, Rosenkranz, Kaufmann, Pataki, and Romo. 3,020,294.

Rosa, John, to Westinghouse Electric Corp. Magnetic amplifier. 3,020,468, 2-6-62, Cl. 323—89.

Rosario, Angel. Radio cabinet having a hinged and slidable shutter for controlling the volume. 3,020,400, 2-6-62, Cl. 250—16.

Rosbe, David J.: *See*—
Miller, Teddy, Anderson, and Rosbe. 3,019,938.

Rose, Herbert: *See*—
Spingies, Erwin, and Rose. 3,019,980.

Rose, Marie L. Perspiration shield. 3,019,443, 2-6-62, Cl. 2—55.

Rosenkrands, Johannes, to General Motors Corp. Steering arrangement for a solid front axle suspension. 3,020,060, 2-6-62, Cl. 280—95.

Rosenkrands, Johannes W., to General Motors Corp. Swing axle rear suspension. 3,020,061, 2-6-62, Cl. 280—104.

Rosenkranz, George: *See*—
Djerassi, Carl, Rosenkranz, Kaufmann, Pataki, and Romo. 3,020,294.

Ross, Marvin O., to General Motors Corp. Dispensing device. 3,019,629, 2-6-62, Cl. 68—17.

Rowe Mfg. Co., Inc.: *See*—
Gabrielsen, Christian, Vorperian, and Sukovich. 3,019,941.

Rowe, Robert L. Dynamoelectric machine and governor. 3,020,465, 2-6-62, Cl. 318—325.

Rowe, William E., to Mycalex Corp. of America. Method of coating metal on dielectric material. 3,020,156, 2-6-62, Cl. 96—35.

Royal McBee Corp.: *See*—
Cetran, Louis, Arthur, and Holland. 3,019,881.
Scribner, Albert W. 3,019,966.

Ruetschi, Paul, to The Electric Storage Battery Co. Fuel cells and their electrodes. 3,020,327, 2-6-62, Cl. 136—120.

Rumsey, Rollin D., to Houdaille Industries, Inc. High temperature valve. 3,019,812, 2-6-62, Cl. 137—557.

Rumsey, Rollin D., to Houdaille Industries, Inc. Control surface actuator damper hinge. 3,020,008, 2-6-62, Cl. 244—85.

Ruppert, Robert W. Differential pressure gauge. 3,019,648, 2-6-62, Cl. 73—212.

Russell, Donald H., to The Atlantic Refining Co. Resinous compositions derived from polyamides and alkylbenzene diisocyanates. 3,020,251, 2-6-62, Cl. 260—18.

Russell, Fred J. Handle assembly with removable key-operated mechanism. 3,019,632, 2-6-62, Cl. 70—224.

Russell, Fred J., and G. B. Solovieff: said Solovieff assor. to said Russell. Knob having a removable cylinder lock assembly. 3,019,633, 2-6-62, Cl. 70—224.

Russell, William H. Adjustable tray for wheelchair. 3,020,085, 2-6-62, Cl. 297—153.

Salvatori, Henry, and C. H. Savit, to Western Geophysical Co. of America. Variable delay line. 3,020,521, 2-6-62, Cl. 340—15.

Samol, Herbert, to Deutsche Erdol-Aktiengesellschaft. Magnetic grappling mechanism for lost well drilling apparatus. 3,020,079, 2-6-62, Cl. 294—65.5.

Samwel, Johannes A.: *See*—
Heijn, Herman J., Klinkhamer, Samwel, and De Miranda. 3,020,117.

San Joaquin Valley Turkey Grower's Association: *See*—
Gum, Rowland H. 3,019,722.

Sandefur, George. Spring mounted fifth wheel. 3,020,065, 2-6-62, Cl. 280—439.

Sanders, Norman T.: *See*—
Duffin, Bernard G., and Sanders. 3,019,500.

Sanders, Grady H., and E. D. Jones, deceased (S. C. Jones, administratrix), to Deering Milliken Research Corp. Builder motion. 3,019,588, 2-6-62, Cl. 57—99.

Sandholdt, Frederick G.: *See*—
Camp, John E., Mueller, Sandholdt, and Haywood. 3,020,139.

Sandnery Walter J.: *See*—
Fierce, William L., and Sandner. 3,020,126.
Fierce, William L., and Sandner. 3,020,246.

Sangster, Raymond C.: *See*—
Adcock, Willis A., and Sangster. 3,020,128.

Santimauro, John F.: *See*—
Woodlock, Paul B., Santimauro, and Vesce. 3,020,279.

Sarett, Lewis H.: *See*—
Rogers, Edward F., and Sarett. 3,020,200.
Rogers, Edward F., and Sarett. 3,020,277.

Sartori, Mario F., to E. I. du Pont de Nemours and Co. Disazo dyes for acrylic and polyester fibers. 3,020,272, 2-6-62, Cl. 260—186.

Sassaman, Walter R.: *See*—
Telser, Sidney, and Sassaman. 3,019,714.

Satrametal S.A.: *See*—
Maulaz, Georges. 3,019,936.

Sayers, Myrl M., and C. B. McElheny. Lawn mower grinder and sharpener. 3,019,568, 2-6-62, Cl. 51—173.

Saul, George A.: *See*—
Hamm, Philip C., and Saul. 3,020,141.

Sauzedde, Rene E., to General Motors Corp. One way clutches. 3,019,871, 2-6-62, Cl. 192—41.

Savannah Machine & Foundry Co.: *See*—
Bourquin, Landrum S. 3,019,734.

Savit, Carl H.: *See*—
Salvatori, Henry, and Savit. 3,020,521.

Saxon Plastics Corp.: *See*—
Lenardon, Nelson, and Romanoff. 3,019,815.

Scarff, Ted R.: *See*—
Moeller, John D., and Scarff. 3,019,735.

Schaefer, Carl F., and J. B. Speller, to United Aircraft Corp. Cyclic analogue to digital converter. 3,020,533, 2-6-62, Cl. 340—347.

Schaeffer, William D., and H. E. Rea, to Union Oil Co. of California. Preparation of metal thiocyanates and Werner complexes thereof. 3,020,123, 2-6-62, Cl. 23—75.

Schall, Louis H., and D. L. Winsor, to Raytheon Co. Magnetron systems. 3,020,447, 2-6-62, Cl. 315—85.

Schauffler, David J.: *See*—
Remington, Richard C., and Schauffler. 3,020,506.

Schenk, George F., to American Optical Co. Instrument for examination of the eye. 3,019,699, 2-6-62, Cl. 88—20.

Scherer, Otto, H. Hahn, and G. Stähler, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Chloromethylated O,O-dialkyl-thiophosphoric acid esters. 3,020,304, 2-6-62, Cl. 260—461.

Schiff, Norman, to Johnson & Johnson. Winding device. 3,019,999, 2-6-62, Cl. 242—75.51.

Schilling Electric Co.: *See*—
Schilling, Lorell J. 3,019,764.

Schilling, Lorell J., to Schilling Electric Co. Milk releaser with timer control. 3,019,764, 2-6-62, Cl. 119—14.05.

Schimek, Alfred F. Door mounting. 3,019,492, 2-6-62, Cl. 20—16.

Schlafly, Hubert J., Jr., to Teleprompter Corp. Cuing apparatus. 3,020,532, 2-6-62, Cl. 340—334.

Schleich, Friedrich. Flexible figure toy. 3,019,552, 2-6-62, Cl. 46—156.

Schlig, Eugene S.: *See*—
Walker, Robert M., and Schlig. 3,020,489.

Schmidt, William B.: *See*—
Haystat, Robert G., Lockwood, and Schmidt. 3,019,565.

Schnabel, Wilhelm J., to Olin Mathieson Chemical Corp. Alkyl-tris-dialkylphenylsilanes. 3,020,300, 2-6-62, Cl. 260—448.2.

Schneider, Harry B. Optical viewer particularly for microfilm and transparencies. 3,019,691, 2-6-62, Cl. 88—1.

Schneider, Seymour: *See*—
Belser, Leo, and Schneider. 3,020,499.

Schoch, Richard U., Jr., R. B. Hasbrouck, and D. E. Dickson, to Abbott Laboratories. Bis-lepidines. 3,020,283, 2-6-62, Cl. 260—288.

Schoerner, Rudolph T., to Taco Heaters, Inc. Fluid mixing valve. 3,019,986, 2-6-62, Cl. 236—12.

Schönberg, Manfred, R. Wirtz, and T. Quadflieg, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the manufacture of olefin oxidation products from olefin-mercury complexes. 3,020,293, 2-6-62, Cl. 260—348.5.

Schrader, Loren E., to Ironrite, Inc. Adjustable feedboard construction for ironers. 3,019,538, 2-6-62, Cl. 38—64.

Schriefer, Robert G., to International Telephone and Telegraph Corp. Automatic tracking system. 3,020,537, 2-6-62, Cl. 343—7.4.

Schromshaw, Albert C.: *See*—
Young, Maurice W., and Schromshaw. 3,019,811.

Schuber, John, to Allied Chemical Corp. Production of high brightness high strength wood pulps. 3,020,196, 2-6-62, Cl. 162—78.

Schuber, John, to Allied Chemical Corp. Method for production of high brightness high strength wood pulps. 3,020,197, 2-6-62, Cl. 162—78.

Schubert, Albert E., and C. S. Herrick, to General Electric Co. Dual temperature refrigeration. 3,019,614, 2-6-62, Cl. 62—114.

Schubert, Dale L.: *See*—
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,478.
Erickson, Harold E., N. E. and C. V. Nelson, and Schubert. 3,019,479.

Schülde, Felix, and O. Mauz, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Polyolefins stabilized with reaction products of nonylphenol and carbonyl compounds. 3,020,259, 2-6-62, Cl. 260—45.95.

Schultheiss, Ralph D., to Union Carbide Corp. Method and apparatus for producing extruded structural board. 3,019,483, 2-6-62, Cl. 18—12.

Schultz, Robert D., and C. L. Randolph, Jr., to Aerojet-General Corp. Preparation of diborane. 3,020,127, 2-6-62, Cl. 23—204.

Schultze, Frederick K.: *See*—
MacIntyre, David R., and Schultze. 3,020,023.

Schulz, William L.: *See*—
Conlin, Peter, and Schulz. 3,020,385.

Schutz, Erwin, to Kammgarnspinnerei Kaiserslautern. Apparatus for processing textile fibers. 3,019,490, 2-6-62, Cl. 19—160.

Schutze, Henry G., I. Leibson, and D. E. Bown, to Esso Research and Engineering Co. Slurry resolution. 3,020,268, 2-6-62, Cl. 260—93.7.

Schwalm, Glendon H., and R. Ullman, to AMP Inc. Lead making machine. 3,019,679, 2-6-62, Cl. 81—951.

Schwartz, Nathan R., to Swiveller Co., Inc. Strain relief washer. 3,020,331, 2-6-62, Cl. 174—62.

Schwartz, Samuel A., to Lockheed Aircraft Corp. Television synchronizing system. 3,020,340, 2-6-62, Cl. 178—6.

Schwarz, Bertram A., to General Motors Corp. Radio sensitivity control. 3,020,405, 2-6-62, Cl. 250—20.

Schweitzer, Otto: *See*—
Behrends, Jurgen, Schweitzer, Kern, and Hopff. 3,020,264.

Scott & Williams, Inc.: *See*—
Page, Frank R. 3,019,628.

Scovel, James A.: *See*—
Doan, Harold R., and Scovel. 3,020,083.

Scovill Mfg. Co.: *See*—
Williams, Selden T. 3,019,832.

Scribner, Albert W., to Royal McBee Corp. Record perforating device. 3,019,966, 2-6-62, Cl. 234—50.

Searer, Jay C.: *See*—
Less, Frank W., Searer, and Roeck. 3,020,254.

Seay, Patrick H., to The Upjohn Co. 2-acetamido-4-phenyl thiazole process of inhibiting gastric secretion in human beings. 3,020,202, 2-6-62, Cl. 167—65.

Seck, Charles F., to Corning Glass Works. Capacitor manufacture. 3,020,193, 2-6-62, Cl. 156—517.

Secretan, Frank, to Collins Radio Co. Digital phase-pulse demodulator. 3,020,485, 2-6-62, Cl. 329—104.

Seeburg Corp., The: *See*—
Jorner, Victor. 3,020,050.

Seeger, Robert W.: *See*—
Felts, Gordon P. 3,019,547.

Seelandt, Karl H.: *See*—
Ipsen, Harold N., and Seelandt. 3,019,809.

Selas Corp. of America: *See*—
Casey, Robert J. 3,020,032.

Sellers, Jacob L.: *See*—
Bluth, John M., and Sellers. 3,019,522.
Bluth, John M., and Sellers. 3,020,140.

Sel-Rex Precious Metals, Inc.: *See*—
Rinker, Edwin C. 3,020,217.

Senfleben, Paul W., to United Shoe Machinery Corp. Sole rounding machines. 3,019,461, 2-6-62, Cl. 12—17.2.

Sens, William H., to United Aircraft Corp. Pen-shaped nozzle with thrust deflector. 3,019,601, 2-6-62, Cl. 60—35.55.

Seplavy, Louis R. Jackstand. 3,020,015, 2-6-62, Cl. 248—123.

Severini, Febo: *See*—
Natta, Giulio, Beati, and Severini. 3,020,174.

Seyer, Frank H., and J. L. Marcotte, to Paper Mate Mfg. Co. Connector means for a tandem writing unit. 3,019,768, 2-6-62, Cl. 120—42.1.

Shafer, Richard E., to Radio Corp. of America. Mounting for electrical elements. 3,020,450, 2-6-62, Cl. 317—99.

Shapiro, Haskell, to Borg-Warner Corp. Force measuring system. 3,019,641, 2-6-62, Cl. 73—141.

Shapiro, Seymour L., and L. Freedman, to U.S. Vitamin & Pharmaceutical Corp. N-(carbamilido)-3-oxypyridyl betaines. 3,020,285, 2-6-62, Cl. 260—295.

Sharples Corp., The: *See*—
Downing, Francis P., and Alberts. 3,020,160.

Shawfrank, Robert W., to Hussman Engineering Corp. Article perforation and food preservation. 3,020,377, 2-6-62, Cl. 219—19.

Shawhan, Elbert N., A. C. McLean, H. Palevsky, and R. L. Mather. Submerged body detection system. 3,020,470, 2-6-62, Cl. 324—3.

Sheehan, Daniel J., Jr., and F. J. Stephan. Method and apparatus for transporting beams. 3,019,927, 2-6-62, Cl. 214—396.

Shelby, Albert J. Adjustable snow and mud lug for vehicle tires. 3,019,830, 2-6-62, Cl. 152—225.

Sheldon, Stewart L. Photographic methods and apparatus for use in cameras and projectors. 3,019,698, 2-6-62, Cl. 88—16.6.

Shockley, William L., to Collins Radio Co. Frequency-controlled magnetic oscillator. 3,020,492, 2-6-62, Cl. 331—158.

Sicedison A.p.A.: *See*—
Gechele, Giovanni B., Nenz, and Barberis. 3,020,284.

Siefen, Howard T.: *See*—
Aulbaugh, Johnnie M., Kramis, and Siefen. 3,020,313.

Siegelman, Abraham: *See*—
Jacobson, Edward, and Siegelman. 3,020,548.

Signal Oil and Gas Co.: *See*—
Hancock, Charles K. 3,020,252.

Simmons, Joe J. Apparatus for electrolytic dental desensitization. 3,019,787, 2-6-62, Cl. 128—172.1.

Simpson, Arthur M., to International Steel Co. Revolving door pushbar circuit controller. 3,020,038, 2-6-62, Cl. 268—73.

Simpson, Kenneth R.: *See*—
Nicholson, James F., and Simpson. 3,020,442.

Singer-Cobble, Inc.: *See*—
Card, Joseph L. 3,019,748.

Singiser, Frank K. Universal cap. 3,019,932, 2-6-62, Cl. 215—37.

Sisley, Leslie J. Baler. 3,019,576, 2-6-62, Cl. 53—61.

Sitterson, Cephas B., Jr.: *See*—
Nelson, Howard N., and Sitterson. 3,019,944.

Sjöstrand, Fritiof S., C. O. L. Ottosson, and S. R. Zernell, to Atlas Copco Aktiebolag. Portable power tools. 3,019,673, 2-6-62, Cl. 77—7.

Skala, George F., to General Electric Co. Condensation nuclei optical measuring apparatus. 3,019,692, 2-6-62, Cl. 88—14.

Skinner, George M.: *See*—
Hinds, Gene W., Skinner, and Smith. 3,020,035.

Skowronski, George V., to American Can Co. Carton. 3,019,959, 2-6-62, Cl. 229—45.

Slade, Albert E., and D. A. Buck, to Arthur D. Little, Inc. Cryotron translators. 3,019,978, 2-6-62, Cl. 235—164.

Slamar, Frank, and A. Teplitz, to United States Steel Corp. Packaging line. 3,019,577, 2-6-62, Cl. 53—74.

Sloane, William H., and G. J. F. Leitl. Track roller bearings and the like. 3,020,109, 2-6-62, Cl. 308—207.

Slovacek, Woodrow W.: *See*—
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,019,746.
Cunningham, Fred A., Klatt, Brown, and Slovacek. 3,020,162.

Sluz, Konstantin A. Apparatus for douching the anus. 3,019,447, 2-6-62, Cl. 4—7.

Small: Lillian: *See*—
Hirsch, Julius A., and Small. 3,019,445.

Smee, Peter G., to General Electric Co. Limiter circuit employing shunt diode means to sweep out distributed capacitance in the non-conducting state. 3,020,420, 2-6-62, Cl. 307—88.5.

Smeulers, Wouter: *See*—
Janssen, Peter J. H., and Smeulers. 3,020,480.

Smith, Arthur F. Film-forming and wiping distillation process and apparatus for carrying out the same. 3,020,211, 2-6-62, Cl. 202—64.

Smith, George F. P., Jr., to The Firestone Tire & Rubber Co. N-(propynyl)-2-(thiazole) sulfenamides. 3,020,287, 2-6-62, Cl. 260—306.6.

Smith, Keith L.: *See*—
Thompson, Bruce R., Hill, and Smith. 3,020,229.

Smith, Keith L., to Union Carbide Corp. Coagulation of dispersed solids. 3,020,230, 2-6-62, Cl. 210—54.

Smith, Leland L.: *See*—
Marx, Michael, and Smith. 3,020,275.

Smith, Paul E., Jr., to Conval Corp. Pulse modulation recording for telemetering. 3,020,118, 2-6-62 Cl. 346—74.

Smith, Paul L.: *See*—
Hinds, Gene W., Skinner, and Smith. 3,020 035.

Smith, Raymond K., to Klasing Hand Brake Co. Railway car journal bearing. 3,020,099, 2-6-62, Cl. 308—56.

Smith, Raymond K., to Klasing Hand Brake Co. Railway car journal bearing. 3,020,100, 2-6-62, Cl. 308—56.

Smith, Sherman S. Creeper. 3,019,533, 2-6-62, Cl. 36—7.6.

Smith, William G., to Pittsburgh Plate Glass Co. Stretching apparatus. 3,019,475, 2-6-62, Cl. 18—1.

Smith-Corona Marchant Inc.: *See*—
Reynolds, Eugene E., Lindberg, Avery, Munzing, and Thomas. 3,019,971.

Smithe, F. L., Machine Co., Inc.: *See*—
Novick, Abraham. 3,019,761.

Snapp, Charles N., Jr., to Temprite Products Corp. Cabinet assembly for water coolers. 3,020,112, 2-6-62, Cl. 312—280.

Società Farmaceutici Italia: *See*—
Camerino, Bruno, and Patelli. 3,020,295.

Societe des Etablissements Malicet & Blin: *See*—
Bischoff, Charles A. 3,019,510.

Socony Mobil Oil Co., Inc.: *See*—
Becker, Myron. 3,020,136.

Soderberg, Emil O. Climber. 3,019,852, 2-6-62, Cl. 182—134.

Solid State Products, Inc.: *See*—
Dixon, Lloyd H., Jr. 3,020,454.

Solomon, Milton, to International Wheel Corp. Wheel with white side wall. 3,020,091, 2-6-62, Cl. 301—63.

Solovieff, George B.: *See*—
Russell, Fred J., and Solovieff. 3,019,633.

Sommer, Richard, to Voigtlander A.G. Photographic camera provided with shutter and diaphragm. 3,019,716, 2-6-62, Cl. 95—64.

Sommers, Alfred, to General Precision, Inc. Manganese-zinc ferrite and method of making. 3,020,236, 2-6-62, Cl. 252—62.5.

Sorba, Janine: *See*—
Paquot, Charles, Lefort, and Sorba. 3,020,320.

Soroban, Inc.: *See*—
MacNeill, John H. 3,019,970.

Soubier, Leonard D., to Owens-Illinois Glass Co. Method of and apparatus for making plastic articles. 3,019,480, 2-6-62, Cl. 18—5.

Spalding, Dudley B. Pressure exchangers. 3,019,962, 2-6-62, Cl. 230—69.

Sparcatron Ltd.: *See*—
Fefer, Gregory. 3,020,448.

Spaulding, William R. Thermometer spinner. 3,019,654, 2-6-62, Cl. 73—373.

Speller, Jack B.: *See*—
Schaefer, Carl F., and Speller. 3,020,533.

Speranza, George P., to Jefferson Chemical Co., Inc. Method for producing 2-oxazolidones from epoxides and isocyanates. 3,020,262, 2-6-62, Cl. 260—47.

Spero, George B.: *See*—
Lincoln, Frank H., Jr., Spero, and Thompson. 3,020,297.

Sperry Products, Inc.: *See*—
Henry, Elliott A. 3,019,636.

Sperry Rand Corp.: *See*—
Even-Tov, Ori. 3,019,870.

Spieth, Ernst K. Target conveying device. 3,020,047, 2-6-62, Cl. 273—105.6.

Spingies, Erwin, and H. Rose, to Brunsviga Maschinenwerke Aktiengesellschaft. Apparatus for the reception, storage, and re-emission of positive and negative numerical values, especially for use with standard office machines. 3,019,980, 2-6-62, Cl. 235—172.

Spiro, George: *See*—
Garrison, Richard J., Henches, and Spiro. 3,030,525.

Stahler, Gerhard: *See*—
Scherer, Otto, Hahn, and Stahler. 3,020,304.

Staley, Thomas L.: *See*—
Bangert, Robert J., and Staley. 3,020,333.

Stalker, Edward A. Joint construction. 3,019,512, 2-6-62, Cl. 29—156.8.

Stalker, Edward A. Centrifugal pumping means. 3,019,736, 2-6-62, Cl. 103—103.

Standard Brands Inc.: *See*—
Fetzer, Walter R. 3,020,157.
Fetzer, Walter R. 3,020,158.

Standard Conveyor Co.: *See*—
Jones, Thomas P. 3,019,883.

Standard Oil Co. (Indiana): *See*—
Morello, Edwin F. 3,020,180.
Frosell, Wayne A., and Bowman. 3,020,181.
Ridgway, John A., Jr., and O'Connor. 3,020,241.
Williams, Jack A., and Hirsch. 3,020,199.

Stange, Hugo, to Olin Mathieson Chemical Corp. Preparation of trialkyl borates from sodium pentaborate or borax. 3,020,308, 2-6-62, Cl. 260—462.

Stanray Corp.: *See*—
Allen, John W. 3,019,930.
Allen, John W. 3,020,059.

Staples, Charles F. Surface indicators. 3,019,639, 2-6-62, Cl. 73—105.

Starline, Inc.: *See*—
Ferris, Robert G. 3,019,763.

Stauffer Chemical Co.: *See*—
Fearing, Ralph B., Walsh, and Brady. 3,020,198.

Steadman, Thomas R., and P. R. Steyermark, to W. R. Grace & Co. Process for the preparation of diglycosylureas at reduced pressure. 3,020,273, 2-6-62, Cl. 260—211.5.

Stecher, Edward B. Aviation fuel filter. 3,019,904, 2-6-62, Cl. 210—312.

Stieffenhofer, Louis, to Moulinage et Retorderie de Chavanos. Process for the production of knop yarns and apparatus therefor. 3,020,173, 2-6-62, Cl. 117—45.

Steiner, Rudolf, ½ to E. D. Kilmer. Electromagnetic motor. 3,020,425, 2-6-62, Cl. 310—20.

Stephan, Fred J.: *See*—
Sheehan, Daniel J., Jr., and Stephan. 3,019,927.

Stephens, Frank M., Jr., and H. C. Renken, to Esso Research and Engineering Co. Heat hardening fluid coke compactions. 3,020,210, 2-6-62, Cl. 202—26.

Stephens, Joseph F., J. R. Higgins, and H. A. Haynes, to Gustin-Bacon Mfg. Co. Method and apparatus for applying resilient sleeves. 3,020,192, 2-6-62, Cl. 156—423.

Stephens, Walter R.: *See*—
Jeffrey, Winstone E. P., and Stephens. 3,019,827.

Stephenson, Ferrald D., to American Brake Shoe Co. Keeper for an excavator tooth. 3,019,537, 2-6-62, Cl. 37—142.

Sterling Drug Inc.: *See*—
Gorman, William G. 3,019,947.

Sternberg, Robert L.: *See*—
Feuerstein, Erwin, and Sternberg. 3,020,486.

Stevens-Arnold Inc.: *See*—
Reifel, Harry. 3,020,455.

Stewart, Meredith M.: *See*—
Flinn, Richard A., and Stewart 3,020,239.

Steyermark, Paul R.: *See*—
Steadman, Thomas R., and Steyermark. 3,020,273.

Stiefel, Christian J., and H. F. Konig, to Waggonfabrik Talbot. Lad for vehicles, especially freight cars and trucks. 3,019,743, 2–6–62, Cl. 105—377.

Stiglin, Vincent. Vehicle illumination. 3,020,391, 2–6–62, Cl. 240—7.1.

Stinson, Donald L., to Phillips Petroleum Co. Method of making plastic hinge. 3,019,486, 2–6–62, Cl. 18—48.

Stockdale, George F.: *See*—
Layton, Margaret M., Randels and Stockdale. 3,020,456.

Stockwell, Ephriam J. Catapult launching direction and position indicator. 3,020,005, 2–6–62, Cl. 244—63.

Stoesser, William F.: *See*—
Gordon, Carroll G. 3,019,805.

Stone, Paul E.: *See*—
Place, Oscar F., Stone, and Keyes. 3,019,503.

Story, Malcolm C. Pulling device. 3,020,021, 2–6–62, Cl. 254—161.

Straat, Harold W., to Bausch & Lomb Inc. Fine adjustment mechanism for microscopes. 3,019,707, 2–6–62, Cl. 88—39.

Strahan, Donald E. Disk and planter combination. 3,019,747, 2–6–62, Cl. 111—63.

Straka, Oldrich: *See*—
Dubsky, Borivoj, Straka, and Trefil. 3,020,461.

Stram, George, to Capitol Products Corp. Discharge valve. 3,020,018, 2–6–62, Cl. 251—58.

Striley, David J.: *See*—
Bakan, Joseph A., Striley, and Malerson. 3,020,171.

Strnad, James J., to Lempco Products, Inc. Master coupling link. 3,020,086, 2–6–62, Cl. 305—58.

Strohmeier, Harald, to Gebr. Böhler & Co. Aktiengesellschaft. Apparatus for applying a coating on welding electrode material. 3,019,484, 2–6–62, Cl. 18—12.

Stromberg, Verner L.: *See*—
Hughes, William B., and Stromberg. 3,020,276.

Strother, Fred P., to West Point Mfg. Co. Apparatus for counting neps. 3,019,972, 2–6–62, Cl. 235—92.

Stroud, Stanley G.: *See*—
Martin, Philip W., and Stroud. 3,020,408.

Stryg, William J., and L. F. Boleato. Hair curling device. 3,019,797, 2–6–62, Cl. 132—33.

Stuart, Douglas J.: *See*—
Hillen, Hubert J., and Stuart. 3,020,044.

Stubbs, Dennis: *See*—
Clark, Patrick A., Stubbs, and Bloomfield. 3,020,108

Stutzke, William A., and F. H. Wood, Jr., to Kimble Glass Co. Take-out apparatus for glassware. 3,019,559, 2–6–62, Cl. 49—14.

Suckling, Eustace E. Device for recording balance point of electrical bridge circuits. 3,020,114, 2–6–62, Cl. 346—17.

Sud-Aviation Societe Nationale de Constructions Aeronautiques: *See*—
Guilbert, Francois V. 3,020,009.

Sukovich, Andrew W.: *See*—
Gabrielsen, Christian, Vorperian, and Sukovich. 3,019,941

Sun Oil Co.: *See*—
Moscrip, Arthur D. 3,020,312.

Sunds Verkstader Aktiebolag: *See*—
Herolf, Kjell O. G. 3,019,825.

Sundt, Edward V. Electric clock. 3,019,594, 2–6–62, Cl. 58—26.

Sutton, Arthur J. Filter device and dispensing unit therefor. 3,019,940, 2–6–62, Cl. 221—48.

Svenska Aktiebolaget Bromsregulator: *See*—
Jeppsson, Erik M. 3,019,860.

Svenska Aktiebolaget Gasaccumulator: *See*—
Grangvist, Carl Erik. 3,020,547.

Swain, Kenneth W., to The Chase-Shawmut Co. Protection of semiconductor diodes. 3,020,370, 2–6–62, Cl. 200—420.

Swales, Frank, R. J. Kurvers, and H. S. Green, to Lockheed Aircraft Corp. Thermal actuator. 3,019,653, 2–6–62, Cl. 73—368.3.

Swanson, Caleb V., Jr., and R. W. Feldt. Toilet training apparatus. 3,020,528, 2–6–62, Cl. 310—235.

Sweeney, Edward J., W. W. Toy, and P. J. McLaughlin, to Rohm & Haas Co. Paper impregnating compositions, impregnated papers and the process of impregnating paper. 3,020,178, 2–6–62, Cl. 117—155.

Swern, Daniel, to United States of America, Agriculture Vinyl 9,10-epoxystearate. 3,020,292, 2–6–62, Cl. 260—348.

Swimquip, Inc.: *See*—
Baker, William O., and Prizler. 3,019,905

Swiveller Co., Inc.: *See*—
Schwartz, Nathan R. 3,020,331.

Sylvania Electric Products Inc.: *See*—
Broadbent, Bernard O., and Hemphill. 3,019,558.
Zambrow, John L., and Megeff. 3,020,222.

Sylvester, John D., and J. D. Keenan, Jr., to Amsco Packaging Machinery, Inc. Heat-sealing machine for bags, provided with bag locating means. 3,019,583, 2–6–62, Cl. 53—373.

Sylvester, Paul W. Parting swivel joint. 3,020,084, 2–6–62, Cl. 296—51.

Symons, Loren G., to Nordberg Mfg. Co. Hydraulic bowl release for cone crushers. 3,019,990, 2–6–62, Cl. 241—290.

Syntex S.A.: *See*—
Djerassi, Carl, Rosenkranz, Kaufmann, Pataki, and Romo. 3,020,294.

Systron-Donner Corp.: *See*—
Gahn, Edwin H. 3,019,662.

Sziklai, George C., to Westinghouse Electric Corp. Electron beam device. 3,020,438, 2–6–62, Cl. 315—1.

Tablos, Teodolfo C.: *See*—
Horie, Harry T., and Tablos. 3,019,494.

Taco Heaters, Inc.: *See*—
Schoerner, Rudolph T. 3,019,986.

Talbott, David R., and W. M. Darden. Apparatus for removing matter from the bottom of waterways. 3,019,535, 2–6–62, Cl. 37—78.

Tapex Corp.: *See*—
Hoeckele, Walter J. 3,019,442.

Tatum, Orman V.: *See*—
De Faller, George J., Tatum, and Livingston. 3,019,567

Taves, Richard H. Can opener. 3,019,524, 2–6–62, Cl. 30—6.4.

Taylor, Burrett W. Apparatus for installing wallboard on ceilings. 3,019,914, 2–6–62, Cl. 211—1.

Taylor, Jordan M., to International Business Machines Corp. Data processing system including an indicating register. 3,019,976, 2–6–62, Cl. 235—157.

Teason, Ramona J. Adjustable mirror bracket. 3,019,709, 2–6–62, Cl. 88—84.

Technicon Instruments Corp.: *See*—
Ferrari, Andres. 3,020,130.

Tector, Thomas S., to The Magnavox Co. Deflection circuit for cathode ray tube. 3,020,443, 2–6–62, Cl. 315—26.

Telling, Torbern, and R. E. T. Bengtsson, to Arenco Aktiebolag. Means for tracking movable targets. 3,020,538, 2–6–62, Cl. 343—7.4.

Teiser, Sidney, and W. R. Sassaman, to Magnefax Corp. Charging and developing apparatus for electrostatic printing. 3,019,711, 2–6–62, Cl. 95—1.7.

Telegrompter Corp.: *See*—
Schlafly, Hubert J., Jr. 3,020,532.

Temin, Samuel C., to Midland-Ross Corp. Process for preparation of polyamide intermediates. 3,020,311, 2–6–62, Cl. 260—518.

Tempmaster Corp.: *See*—
Lester, Harry R. 3,019,864.

Temprite Products Corp.: *See*—
Snapp, Charles N., Jr. 3,020,112.

Teplitz, Alfred: *See*—
Shamar, Frank, and Teplitz. 3,019,577.

Ternnow, Helmut G., to Dresser Industries, Inc. Casing collar locator. 3,019,841, 2–6–62, Cl. 166—55.1.

Tessier, Jean: *See*—
Nomine, Gerard, Bertin, and Tessier. 3,020,296.

Testard, William A.: *See*—
Wyss, John H., Fredericksen, and Testard. 3,019,446.

Texaco Inc.: *See*—
Harlan, Don L., Battle, and Allen. 3,019,838.

Texas Instruments Inc.: *See*—
Adcock, Willis A., and Sangster. 3,020,128.

Tex Tube, Inc.: *See*—
Woodley, Kenneth C. 3,019,520.

Theurer, Harold. Automobile visor supportable rack. 3,019,908, 2–6–62, Cl. 211—50.

Thew Shovel Co., The: *See*—
Bowman, Spencer. 3,019,913.

Thomas, Robert M., and G. K. Welsse, to Olin Mathieson Chemical Corp. Bis(2-methoxyethyl)ether production. 3,020,316, 2–6–62, Cl. 260—615.

Thomas, William E.: *See*—
Reynolds, Eugene E., Lindberg, Avery, Munzing, and Thomas. 3,019,971.

Thompson, Bruce R., F. N. Hill, and K. L. Smith, to Union Carbide Corp. Coagulation of dispersed carbonaceous material. 3,020,229, 2–6–62, Cl. 210—54.

Thompson, John L.: *See*—
Lincoln, Frank H., Jr., Spero, and Thompson. 3,020,297.

Thompson, Paige W., and M. D. Topper, to General Electric Co. Thrust bearing arrangement for rotatable machines. 3,020,105, 2–6–62, Cl. 308—163.

Thompson Ramo Wooldridge Inc.: *See*—
Prasse, Herbert F. 3,019,737.
Whitney, Theodore R. 3,020,406.

Thompson, William, and H. Nowell, to United Kingdom Atomic Energy Authority. Testing compacted bodies of mixed material. 3,020,474, 2–6–62, Cl. 324—40.

Thornton, Elbert H. E. Receptacles with positive locking closures. 3,019,931, 2–6–62, Cl. 215—9.

Tiboldi, Julius F.: *See*—
Cook, Edward G., Tiboldi, and Foundos. 3,019,637.

Tietz, Raymond F., to E. I. du Pont de Nemours and Co. Acrylonitrile polymerization process. 3,020,265, 2–6–62, Cl. 260—79.3.

Timpone, Dorothy J.: *See*—
Jacobs, William H., and Timpone. 3,019,893.

Tisdale, Norman F.: *See*—
Linz, Arthur, and Tisdale. 3,020,153.

Tobin, Clarence J.: *See*—
Hornaday, James R., Jr., Vigor, Tobin, and Holzwarth. 3,019,513.

Tootelian, George D., to I-T-E Circuit Breaker Co. Circuit breaker arcing contact construction. 3,020,374, 2–6–62, Cl. 200—146.

Toper, Robert C. Outdoor cooking unit. 3,019,720, 2–6–62, Cl. 99—339.

Torrey, Anthony J. Blade frame and vehicle coupler. 3,020,066, 2–6–62, Cl. 280—510.

Toscony Fabrics Inc.: *See*—
Jerothe, Rudolph A. 3,020,194.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Recovery of fresh water from sea water. 3,019,611, 2–6–62, Cl. 62—58.

Towmotor Corp.: *See*—
Christenson, James J. 3,019,926.

Townsend, Ralph, to International Computers and Tabulators Ltd. Electronic adding circuits. 3,019,979, 2–6–62, Cl. 235—170.

Toy, Walter W.: *See*—
Sweeney, Edward J., Toy, and McLaughlin. 3,020,178.

Trammell, Joel H.: *See*—
Pirok, John N., and Trammell. 3,019,806.

Trantham, Joseph C.: *See*—
Marx, John W., Langenheim, Dixon, and Trantham. 3,019,837.

Trefil, Blahoslav: *See*—
Dubsky, Borivoj, Straka, and Trefil. 3,020,461.

Trina, Inc.: *See*—
Zompa, Thomas A. 3,020,188.

Troeger, Henry, to The Bendix Corp. Centrifugal governor having axially-aligned weights. 3,019,659, 2–6–62, Cl. 73—551.

Troutner, Arthur L. Composite truss deck. 3,019,491, 2–6–62, Cl. 20—1.

Trückers Specialty Printing Co., Inc.: *See*—
Molomet, Oscar H. 3,020,067.

Truman, Theodore J., and W. F. Harder, to Republic Steel Corp. Door frame anchor. 3,019,868, 2–6–62, Cl. 189—46.

Tu, Shu-Tung: *See*—
Whitmore, Robert A., and Tu. 3,019,794.

Tudbury, Chester A., to The Ohio Crankshaft Co. Vibration protective device. 3,020,452, 2–6–62, Cl. 317—165.

Tupper, Myron D.: *See*—
Thompson, Paige W., and Tupper. 3,020,105.

Turner, Daniel L., to Collins Radio Co. Reflected power alarm for a variable power output antenna system. 3,020,529, 2–6–62, Cl. 340—253.

Turnquist, Edwin W., to Braden Winch Co. Cable winch. 3,020,022, 2–6–62, Cl. 254—175.7.

Twaddell, Russell W., and S. E. Gregoire, to The Bendix Corp. Electrical apparatus. 3,020,449, 2–6–62, Cl. 317—79.

Ueno, Tadashi, to Nippon Kogaku K.K. Fine adjustment mechanism for microscopes. 3,019,706, 2–6–62, Cl. 88—39.

Uheni, George. Flush control device for toilet flush tank 3,019,448, 2–6–62, Cl. 4—41.

Ullman, Robert: *See*—
Schwalm, Glendon H., and Ullman. 3,019,679.

Umanoff, Martin, to R. A. MacPlan Industries, Inc. Removable under-carriage shelf for shopping carts. 3,019,953, 2–6–62, Cl. 224—42.43.

Union Carbide Corp.: *See*—
Bailey, Donald L., and Pike. 3,020,302.
Colwell, Charles E., and Miller. 3,020,231.
Foster, Talmage D., Jr. 3,020,263.
Fowler, George W., and Lynn 3,020,310.
Gorman, Eugene F. 3,020,389.
Haumann, Wilfried. 3,020,234.
Hinds, Gene W., Skinner, and Smith. 3,020,035.
Leonard, Edward C., Jr. 3,020,269.
Navikas, Charles R. 3,019,573.
Norwalk, Stanley J. 3,020,250.
Pike, Roscoe A. 3,020,301.
Prosser, Rae A. 3,019,739.
Schultheiss, Ralph D. 3,019,483.
Smith, Keith L. 3,020,230.
Thompson, Bruce R., Hill, and Smith. 3,020,229.

Union Oil Co. of California: *See*—
Keller, James L., Liggett, and Wilson. 3,020,134.
Schaeffer, William D., and Rea. 3,020,123.

United Aircraft Corp.: *See*—
Maclaren, Frederick B. 3,020,527.
Peck, Charles A., Jr. 3,019,600.
Schaefer, Carl F., and Speller. 3,020,533.
Sens, William H. 3,019,601.

United Nuclear Corp.: *See*—
Winckler, Gunnar A. F. 3,020,325.

United Shoe Machinery Corp.: *See*—
Senftleben, Paul W. 3,019,461.
Whitmore, Robert A., and Tu. 3,019,794.

United Kingdom Atomic Energy Authority: *See*—
Hackney, Stanley. 3,020,226.
Thompson, William, and Nowell. 3,020,474.

United Kingdom Atomic Energy Authority, Patents Branch, The: *See*—
Millar, William. 3,019,656.
Pratt, Henry R. C. 3,019,610.

United States of America
Agriculture: *See*—
Murthy, Gopala K., Campbell, Masurovsky, and Edmondson 3,020,161.
Swern, Daniel. 3,020,292.
Air Force: *See*—
Johnston, Sidney F., Jr. 3,020,542.
Army: *See*—
Bechmann, Rudolf. 3,020,424.
Emile, Philip, Jr. 3,020,418.
Gerber, Edward A. 3,020,423.
McKnight, William B., McClusky, and Widenhofer. 3,020,414.
Atomic Energy Commission: *See*—
Murthy, Gopala K., Campbell, Masurovsky, and Edmondson. 3,020,161.
Navy: *See*—
Kaltenbacher, Dominic M. 3,020,401.
Warren, James R. 3,020,006.

United States Steel Corp.: *See*—
Cauley, Thomas K. 3,020,472.
Cauley, Thomas K. 3,020,473.
Ehrhart, William E. 3,019,658.
Ray, William H. 3,020,078.
Ressl, Thomas F. 3,020,150.
Slamar, Frank, and Teplitz. 3,019,577.

U.S. Vitamin & Pharmaceutical Corp.: *See*—
Shapiro, Seymour L., and Freedman. 3,020,285.

Universal Oil Products Co.: *See*—
Luvisi, John P. 3,020,307.
Luvisi, John P. 3,020,309.
McCartney, Daniel E., and Hoekstra. 3,020,242.

Uphoff, Russel H.: *See*—
McCreanor, Richard A., Uphoff, Laycak, and Libenschek. 3,020,033.
Laycak, John F., and Uphoff. 3,020,034.

Upjohn Co., The: *See*—
Eble, Thomas E., and Lewis. 3,020,274.
Lincoln, Frank H., Jr., Spero, and Thompson. 3,020,297.
Seay, Patrick H. 3,020,202.

Upton, George F.: *See*—
Blyth, Jack V., and Upton. 3,020,004.

VEB Vereinigte Strumpfwerke Esda: *See*—
Lindner, Hugo and H. 3,019,627.

Vallance, Norton W., Jr.: *See*—
Franklin, John B., and Vallance. 3,020,219.

Van den Berge, Hendrik J., N. Blick, J. J. W. Geleijnse, and A. T. van der Maat, to North American Philips Co., Inc. Press provided with at least one die for moulding products from ceramic material. 3,019,505, 2–6–62, Cl. 25—45.

Van der Burgt, Cornelis M., to North American Philips Co., Inc. Ferromagnetic material. 3,020,426, 2–6–62, Cl. 310—26.

Van der Maat, Adrianus T.: *See*—
Van den Berge, Hendrik J., Blick, Geleijnse, and van der Maat. 3,019,505.

Van Deusen, George S., to The Warner & Swasey Co. Balling apparatus for slivers. 3,019,996, 2–6–62, Cl. 242—54.4.

Van Houten, Jan C., to North American Philips Co., Inc. Apparatus for pressing disc shaped phonograph records. 3,019,482, 2–6–62, Cl. 18—5.3.

Van Vechten, Richard K., and R. T. Adams, to International Telephone and Telegraph Corp. Signal translating device. 3,020,416, 2–6–62, Cl. 307—88.

Van Zanten, Pieter G.: *See*—
Blauk, Hans H., van Zanten, Kuiper, and Almer 3,020,224.

Vaughan Parks, Norman C. Handle carton. 3,019,960, 2–6–62, Cl. 229—52.

Vecdor-Root Inc.: *See*—
Bliss, Harvey N., and Vroom. 3,019,974.

Veiskol Chemical Corp.: *See*—
Richter, Sidney B. 3,020,146.

Vesce, Vincent C.: *See*—
Woodlock, Paul B., Santimauro, and Vesce. 3,020,279.

Victaulic Co. of America: *See*—
Costanzo, Frank X. 3,020,068.

Victor Co. of Japan, Ltd.: *See*—
Moriya, Ikuro. 3,020,355.

Victor Development Co.: *See*—
McNeill, Alvin L. 3,020,049.

Victor, Juan R.: *See*—
Gomez, Carlos, and Victor. 3,019,553.

Victory Metal Mfg. Co., d.b.a. Victory Metal Mfg. Corp.: *See*—
Costantini, Anthony R., and Di Angelus. 3,019,620.

Vigor, Charles W.: *See*—
Holzwarth, James C., Hornaday, and Vigor. 3,019,516.

Vigor Charles W.: *See*—
Hornaday, James R., Vigor, Tobin, and Holzwarth. 3,019,513.

Vigor, Charles W., to General Motors Corp. Exhaust valve steel. 3,020,152, 2–6–62, Cl. 75—126.

Vlahov, Daniel: *See*—
Guarino, Frederick L., Gervais, and Vlahov. 3,019,519.

Vofsi, David: *See*—
Katchalsky, Aharon, Bursztyn, Rim, and Vofsi. 3,019,557.

Vogel, Albert: *See*—
Worthington, Emory W., and Vogel. 3,020,042.

Voigtlander A.G.: *See*—
Sommer, Richard. 3,019,716.
Zillmer, Erich. 3,019,704.

Volberg, Herman W., to General Dynamics Corp. System for displaying coded information on cathode ray tubes. 3,020,530, 2–6–62, Cl. 340—324.

Vonk, Cornelis, to North American Philips Co., Inc. Amplifying arrangement for stereophonic reproduction. 3,020,345, 2–6–62, Cl. 179—1.

Vonnegut, Bernard, to Arthur D. Little, Inc. Atmospheric space charge modification. 3,019,989, 2–6–62, Cl. 239—2.

Vorperian, Hrand: *See*—
Gabrielsen, Christian, Vorperian, and Sukovich. 3,019,941.

Voss, Joseph F.: *See*—
Allbinson, Harold H., and Voss. 3,019,671.

Vroom, Harold R.: *See*—
Bliss, Harvey N., and Vroom. 3,019,974.

Vyzkummy a zkusebni letecky ustav: *See*
Dubsky, Borivoj, Straka, and Trefil. 3,020,461.

Waggoner, Jack H., to Owens-Corning Fiberglas Corp. Fibrous structures and methods for manufacturing same. 3,020,189, 2–6–62, Cl. 156—34.

Waggonfabrik Talbot: *See*—
Stiefel, Christian J., and Konig. 3,019,743.

Wagner, Gunther: *See*—
Ambros, Hans. 3,019,767.

Wagner, Jan K.: *See*—
Krupp Robert F., and Wagner. 3,019,924.

Walenga, Victor L. Weatherseal for doors. 3,019,493, 2–6–62, Cl. 20—67.

Walker, Hans I.: *See*—
Haerther, Lester W., and Walker. 3,019,532.

Walker, John M., Jr., ¼ to H. J. Frost, ¼ to J. L. Murphy, and ½ to E. L. Deramee, Jr. Locking device for oil well drill rods or pipes. 3,019,502, 2–6–62, Cl. 24—263.

Walker, Robert M., and E. S. Schlig, to International Business Machines Corp. Cryogenic device. 3,020,489, 2–6–62, Cl. 330—62.

Wallace, Richard R.: *See*—
Grunwald, Robert, Wallace, and Bowen. 3,019,464.
Wallace, Frank H.: *See*—
Beem, Donald W., and Wallace. 3,020,011.
Walsh, Edward N.: *See*—
Fearing, Ralph B., Walsh, and Brady. 3,020,198.
Walter, Martin, Ltd.: *See*—
Carte, Cecil H. W. 3,019,455.
Walthall, Willard M., to Hurletron Inc. Steering roll indicating and adjusting apparatus. 3,019,955, 2-6-62, Cl. 226—21.
Walton, John H. D., to Mec-Test Ltd. Electrical null transmission networks. 3,020,475, 2-6-62, Cl. 324—41.
Waninger, Gilbert, to Kabelschlepp G.m.b.H. Means for delivering power supply to travelling machine elements. 3,020,362, 2-6-62, Cl. 191—12.
Warner & Swasey Co., The: *See*—
Van Deusen, George S. 3,019,996.
Warren, James R., to United States of America, Navy. Vibration damping mechanism. 3,020,006, 2-6-62, Cl. 244—75.
Warren, Jesse F., Jr. Safety trailer support. 3,020,063, 2-6-62, Cl. 280—150.5.
Wasmuth, Robert E. Adjustable hinges. 3,019,472, 2-6-62, Cl. 16—129.
Watson, William S. Placement devices for use in medical, surgical, orthopedic, and like work. 3,020,017, 2-6-62, Cl. 248—206.
Weatherholt, Dallas D., L. F. Cherry, and J. H. Fulford. Method and apparatus for treating hair. 3,019,795, 2-6-62, Cl. 132—7.
Weber, Hans, to Jenaer Glaswerk Schott & Gen. Distilling apparatus. 3,020,215, 2-6-62, Cl. 202—197.
Weber, Herman W., to H. K. Porter Co., Inc. Flexible anchor arrangement for castable or plastic refractory and method for employing the same. 3,019,561, 2-6-62, Cl. 50—308.
Webster, Frederick, to David Brown Tractors, Ltd. Loading devices for mounting on vehicles. 3,019,922, 2-6-62, Cl. 214—140.
Wegmann, Jacques, and C. Becker, to Ciba Co., Inc. Process for the manufacture of dyed structures from regenerated cuprammonium cellulose. 3,020,166, 2-6-62, Cl. 106—167.
Weiner, Earl R.: *See*—
Aymar, Robert H., and Weiner. 3,019,810.
Weinstein, Myron, to General Electric Co. Cross-field electric discharge devices. 3,020,445, 2-6-62, Cl. 315—39.63.
Weipert, Eugene A., to Wyandotte Chemicals Corp. Polymerization of 2-p-dioxanone with sulfuric acid. 3,020,289, 2-6-62, Cl. 260—340.2.
Weiss, Raphael, to Allgauer Maschinenbau G.m.b.H. Automatic knock-off device for textile spinning machines. 3,019,587, 2-6-62, Cl. 57—84.
Weisse, Guenter K.: *See*—
Thomas, Robert M., and Weisse. 3,020,316.
Welbaum, Donald D., and R. M. Birkenbeul, to Birkwel Research and Design Inc. Resilient punching die accessory to guide, stop or eject material. 3,019,683, 2-6-62, Cl. 83—129.
Welkowitz, Walter, to Gulton Industries, Inc. Ultrasonic transducer. 3,019,660, 2-6-62, Cl. 74—1.
Welkowitz, Walter, to Gulton Industries, Inc. Ultrasonic transducer and impedance matching device therefor. 3,019,661, 2-6-62, Cl. 74—1.
Wellhorn, Howell H. Lawn edging attachment. 3,019,585, 2-6-62, Cl. 56—25.4.
Wells Fargo Bank American Trust Co.: *See*—
Bailey, Frazer A. 3,019,757.
Welshausen, William. Ship salvage system. 3,019,754, 2-6-62, Cl. 114—54.
We-Mar, Inc.: *See*—
Aymar, Robert H., and Weiner. 3,019,810.
Wenczler, Ludwig, to Maschinenfabrik Augsburg-Nurnberg, A.G. Printing press machinery. 3,019,728, 2-6-62, Cl. 101—378.
Wenschlag, Marvin R. Grain loading device. 3,019,879, 2-6-62, Cl. 193—16.
Werbyckyj, Wolodymyr: *See*—
Brueckner, Fluskey, and Werbyckyj. 3,019,701.
Wernecke, Richard E.: *See*—
Beduhn, Daniel E., and Wernecke. 3,020,214.
West Point Mfg. Co.: *See*—
Strother, Fred P. 3,019,972.
West Virginia Pulp and Paper Co.: *See*—
Doughty, Joseph B. 3,020,232.
Western Electric Co., Inc.: *See*—
Burg, Martin S. 3,019,489.
Cafferty, Aloysius G. 3,020,218.
Gillis, Randall. 3,020,335.
Henning, George E. 3,020,248.
Western Filter Co.: *See*—
Allen, Clifton H. 3,019,906.
Western Geophysical Co. of America: *See*—
Salvatori, Henry, and Savit. 3,020,521.
Westinghouse Electric Corp.: *See*—
Carlssimi, Vincent L. 3,020,380.
Carlssimi, Vincent L. 3,020,381.
Guenther, Walter F. 3,020,467.
MacGregor, Dean J. 3,020,462.
MacGregor, Dean J. 3,020,463.
Nicholson, James F. 3,020,432.
Nicholson, James F., and Simpsnn. 3,020,442.
Rosa, John. 3,020,468.
Sziklai, George C. 3,020,438.
Wethly, Frans, to Allied Chemical Corp. Method for processing, distribution and combustion of coke-oven gas containing ammonia. 3,020,138, 2-6-62, Cl. 48—190.
Wheeler, Charles M., and P. M. Folger, to General Electric Co. Ventilation of dynamoelectric machine drive units. 3,020,427, 2-6-62, Cl. 310—59.
Wheeler, William R.: *See*—
Cislak, Francis E., and Wheeler. 3,020,280.
Cislak, Francis E., and Wheeler. 3,020,281.
Cislak, Francis E., and Wheeler. 3,020,282.
Whelen Engineering Co., Inc.: *See*—
Whelen, George W., III. 3,020,509.
Whelen, George W., III, to Whelen Engineering Co., Inc. Quick disconnect rotatable mounting for beacon light. 3,020,509, 2-6-62, Cl. 339—5.
Whirlpool Corp.: *See*—
Cobb, Clifton A., Orr, and Robandt. 3,019,814.
White, Charles S. Low friction fabric material. 3,019,821, 2-6-62, Cl. 139—420.
White, Robert F.: *See*—
Heese, William E., and White. 3,019,771.
Whitehill, Jules L., and C. E. Gagnier. Anastomosis clamp. 3,019,789, 2-6-62, Cl. 128—305.
Whitehurst, Harry B., and W. H. Otto, to Owens-Corning Fiberglas Corp. Metal coated glass fibers. 3,019,515, 2-6-62, Cl. 29—195.
Whitlock, Robert A., to AquaMatic Inc. Control system for water treatment apparatus. 3,019,817, 2-6-62, Cl. 137—624.18.
Whitmore, Robert A., and S.-T. Tu, to United Shoe Machinery Corp. Supported protein cigarette filters. 3,019,794, 2-6-62, Cl. 131—208.
Whitney Blake Co., The: *See*—
Quackenbush, Edward C. 3,020,513.
Whitney, Theodore R., to Thompson Ramo Wooldridge Inc. Energy detection apparatus. 3,020,406, 2-6-62, Cl. 250—83.3.
Whittenberg, George R. Work supporting brackets for centerless grinders. 3,019,571, 2-6-62, Cl. 51—236.
Widenhofer, Gene H.: *See*—
McKnight, William B., McClusky, and Widenhofer. 3,020,414.
Wieszeck, Emil S. Development time meter. 3,019,652, 2-6-62, Cl. 73—363.7.
Wilkinson, Leonard A., to American Optical Co. Coarse and fine adjustment mechanism for microscopes. 3,019,705, 2-6-62, Cl. 88—39.
Willard, Joe R., and K. P. Dorschner, to FMC Corp. Herbicidal method employing N-(3-chloro-4-methylphenyl)-2-methyl-pentanamide. 3,020,142, 2-6-62, Cl. 71—2.3.
Williams, Claude J.: *See*—
Frost, John C. M., and Williams. 3,020,003.
Williams, Jack A., and A. G. Hirsch, to Standard Oil Co. Imidazoline stabilizers. 3,020,199, 2-6-62, Cl. 167—33.
Williams, John H., to Oak Mfg. Co. Electric switch. 3,020,375, 2-6-62, Cl. 200—166.
Williams, Lyle N.: *See*—
Barnhizer, Harold K., and Williams. 3,020,394.
Williams, Murray E., to Dexter Industries, Inc. Simplified latch assembly. 3,020,073, 2-6-62, Cl. 292—169.
Williams, Richard E., to Melpar, Inc. Mixed-base notation for computing machines. 3,019,975, 2-6-62, Cl. 235—155.
Williams, Selden T., to Scovill Mfg. Co. Low bend, tubeless tire valve stem. 3,019,832, 2-6-62, Cl. 152—427.
Williams, Wesley I. Hinge for molded articles. 3,019,452, 2-6-62, Cl. 4—236.
Wilson, Chester E.: *See*—
Keller, James L., Liggett, and Wilson. 3,020,134.
Wilson, Raymond O., to Olympic Screw & Rivet Corp. Blind pull rivet assembly machine. 3,019,518, 2-6-62, Cl. 29—211.
Winberry, George H., Jr., to Cogsdill Tool Products, Inc. Cutting tool. 3,019,712, 2-6-62, Cl. 90—11.
Winchell, Frank J., and O. K. Kelley, to General Motors Corp. Transmission. 3,019,668, 2-6-62, Cl. 74—645.
Winckler, Gunnar A. F., to United Nuclear Corp. Thermoelectric device. 3,020,325, 2-6-62, Cl. 136—4.
Winkler, Richard, and K. Dünnebier, to Berkley Machine Co. Apparatus for counting and banding envelopes and the like. 3,019,886, 2-6-62, Cl. 198—134.
Winkler, Richard, and K. Dunnebier, to Berkley Machine Co. Apparatus for supplying blanks to rotary envelope making machines. 3,020,043, 2-6-62, Cl. 271—5.
Winn, Ray V., Jr. Apparatus for flashing in corners and margins of photographs during projection printing thereof. 3,019,702, 2-6-62, Cl. 88—24.
Winsor, Donald L.: *See*—
Schall, Louis H., and Winsor. 3,020,447.
Wintercorn, Andrew F.: *See*—
Raso, Rocco M. 3,019,554.
Wiremold Co., The: *See*—
Murphy, Robert H. 3,020,517.
Wirtz, Rudolf: *See*—
Schönberg, Manfred, Wirtz, and Quadflieg. 3,020,293.
Wizmann Institute of Science, The: *See*—
Katchalsky, Aharon, Bursztyn, Rim, and Vofsi. 3,019,557.
Wolff, Hanns H., to Maxson Electronics Corp. Passive radio frequency detection apparatus and method. 3,020,544, 2-6-62, Cl. 343—100.
Wolkstein, Herbert J., and R. E. Bridge, to Radio Corp. of America. Travelling wave tube coupler. 3,020,444, 2-6-62, Cl. 315—39.3.
Wood, Frederick H., Jr.: *See*—
Stutzke, William A., and Wood. 3,019,559.
Wood Newspaper Machinery Corp.: *See*—
Worthington, Emory W., and Vogel. 3,020,042.
Woodhull, William M., to General Dynamics Corp. Directional coupling network. 3,020,351, 2-6-62, Cl. 179—15.
Woodlock, Paul B., J. F. Santimauro, and V. C. Vesce, to Allied Chemical Corp. Preparation of quinacridone pigments. 3,020,279, 2-6-62, Cl. 260—279.
Woodruff, Maurice D., to The Bauer Bros. Co. Vacuum receiver and separator. 3,019,901, 2-6-62, Cl. 209—211.
Woods, Ernest L. Boat mooring device. 3,019,759, 2-6-62, Cl. 114—230.

Woodward Governor Co.: *See*—
Plummer, Harland C. 3,019,602.
Wooldridge, William D., 50% to J. R. Head. Dispenser for disinfectant and the like. 3,019,451, 2-6-62, Cl. 4—228.
Woolley, Kenneth C., to Tex-Tube, Inc. Pipe crimping apparatus. 3,019,520, 2-6-62, Cl. 29—234.
Wooster, Philip A. Paper roll dispenser. 3,019,997, 2-6-62, Cl. 242—55.42.
Wootton, William R., to Babcock & Wilcox Ltd. Material handling plant. 3,020,225, 2-6-62, Cl. 204—193.2.
Worboys, Arthur F., to The Ever Ready Co. (Great Britain) Ltd. Flashlight optical system. 3,020,396, 2-6-62, Cl. 240—106.
Word, William W., Jr., to Armco Steel Corp. Multiple string tubing hanger constructions. 3,020,069, 2-6-62, Cl. 285—137.
Worswick, Bernard A., to Bailey Meters & Controls Ltd. Apparatus for detecting the presence or absence at a location of a body of liquid. 3,019,650, 2-6-62, Cl. 73—290.
Worthington, Emory W., and A. Vogel, to Wood Newspaper Machinery Corp. Running fold adjustment. 3,020,042, 2-6-62, Cl. 270—77.
Wragg, William R., and L. Brethenick, to May & Baker Ltd. Hypotensive compounds. 3,020,288, 2-6-62, Cl. 260—313.
Wright, Esmond P. G., to International Standard Electric Corp. Data-processing systems. 3,020,336, 2-6-62, Cl. 178—2.
Wyandotte Chemicals Corp.: *See*—
Welpert, Eugene A. 3,020,289.
Wyss, John H., H. L. Fredericksen, and W. A. Testard, to Cooper's Inc. Undergarment. 3,019,446, 2-6-62, Cl. 2—224.
Yackel, Edward C., H. C. Yutzy, D. P. Foster, and A. A. Rasch, to Eastman Kodak Co. Photographic diffusion transfer process. 3,020,155, 2-6-62, Cl. 96—29.
Yoerger, Roger R., to Iowa State College Research Foundation. Apparatus for segmenting corncobs. 3,019,829, 2-6-62, Cl. 146—117.
Young, Joseph, to International Standard Electric Corp. Sorting machine. 3,019,896, 2-6-62, Cl. 209—74.
Young, Maurice W., and A. C. Schromshaw, to Kunkle Valve Co. Relief valve embodying anti-vibration structure. 3,019,811, 2-6-62, Cl. 137—543.13.
Yowell, Joseph W., and D. B. Miner. Corrugated tubing. 3,019,820, 2-6-62, Cl. 138—121.
Yutzy, Henry C.: *See*—
Yackel, Edward C., Yutzy, Foster, and Rasch. 3,020,155.
Zambrow, John L., and S. I. Megeff, to Sylvania Electric Products Inc. Method for casting side supporting plates onto the edges of spaced nuclear fuel plates. 3,020,222, 2-6-62, Cl. 204—154.2.
Zarcone, Cari J., to General Dynamics Corp. Synchronizing character generators. 3,020,337, 2-6-62, Cl. 178—2.
Zecchinato, Giuseppe. Device for actuating a rotary sprinkler nozzle. 3,019,992, 2-6-62, Cl. 239—230.
Zernell, Stig R.: *See*—
Sjöstrand, Fritiof S., Ottosson, and Zernell. 3,019,673.
Zillmer, Erich, to Voigtlander, A.G. Light output modifying arrangement for slide projectors. 3,019,704, 2-6-62, Cl. 88—26.
Zimmermann, Heinrich, and H. Hermann, to Gebr. Steidinger K.G. Indicating device for the contact weight of phonograph pick-ups. 3,020,051, 2-6-62, Cl. 274—23.
Zinaman, Harold J.: *See*—
Cubberley, Richard H., Harold, and Zinaman. 3,020,184.
Zompa, Thomas A., to Trina, Inc. Method of making a foldable travel mirror construction. 3,020,188, 2-6-62, Cl. 156—221.
Zubaty, Joseph, to General Motors Corp. Fluid pump. 3,019,738, 2-6-62, Cl. 103—150.
Zuehlke, Arthur A., and J. A. E. Hyams, to Bourns, Inc. Displacement transducer. 3,020,508, 2-6-62, Cl. 338—162.

CLASSIFICATION OF PATENTS

ISSUED FEBRUARY 6, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 44.5: 3,019,440
3,019,441.
317: 3,019,442
2— 55: 3,019,443
68: 3,019,444
145: 3,019,445
224: 3,019,446
4— 7: 3,019,447
41: 3,019,448
57: 3,019,449
172: 3,019,450
228: 3,019,451
236: 3,019,452
249: 3,019,453
5— 17: 3,019,454
214: 3,019,455
355: 3,019,456
9— 11: 3,019,457
309: 3,019,458
342: 3,019,459
10— 54: 3,019,460
12— 17.2: 3,019,461
13— 5: 3,020,323
6: 3,020,324
15— 1.7: 3,019,462
23: 3,019,463
100: 3,019,464
180: 3,019,465
230: 3,019,466
236: 3,019,467
250.19: 3,019,468
250.21: 3,019,469
503: 3,019,470
560: 3,019,471
16— 129: 3,019,472
190: 3,019,473
17— 7: 3,019,474
18— 1: 3,019,475
2.5: 3,019,476
3,019,477
4: 3,019,478
3,019,479
5: 3,019,480
3,019,481
5.3: 3,019,482
12: 3,019,483
3,019,484
48: 3,019,485
3,019,486
55: 3,019,487
56: 3,019,488
59: 3,019,489
19— 160: 3,019,490
20— 1: 3,019,491
16: 3,019,492
67: 3,019,493
2: 3,020,120
21— 2.5: 3,020,121
2.7: 3,020,122
87: 3,019,494
22— 68: 3,019,495
73: 3,019,496
196: 3,019,497
23— 75: 3,020,123
85: 3,020,124
110: 3,020,125
151: 3,020,126
204: 3,020,127
223.5: 3,020,128
3,020,129
230: 3,020,130
273: 3,020,131
301: 3,020,132
24— 73: 3,019,498
3,019,499
81: 3,019,500
213: 3,019,501
263: 3,019,502
265: 3,019,503
3,019,504
25— 45: 3,019,505
108: 3,019,506
28— 72: 3,019,507
72.2: 3,019,508
82: 3,019,509
29— 65: 3,019,510
130: 3,019,511
156.8: 3,019,512
157.3: 3,019,513
182.5: 3,019,514
195: 3,019,515
198: 3,019,516
203: 3,019,517
211: 3,019,518
212: 3,019,519
234: 3,019,520
283: 3,019,521
29— 552: 3,019,522
30— 4: 3,019,523
6.1: 3,019,524
43: 3,019,525
341: 3,019,526
31— 48: 3,019,527
32— 5: 3,019,528
32: 3,019,529
3,019,530
33— 67: 3,019,531
204: 3,019,532
36— 7.6: 3,019,533
15: 3,019,534
37— 78: 3,019,535
104: 3,019,536
142: 3,019,537
38— 64: 3,019,538
39— 3: 3,019,539
40— 102: 3,019,540
335: 3,019,541
42— 18: 3,019,542
74: 3,019,543
43— 42.41: 3,019,544
44.89: 3,019,545
44.91: 3,019,546
53.5: 3,019,547
44— 7: 3,020,133
58: 3,020,134
62: 3,020,135
77: 3,020,136
78: 3,020,137
45— 28: 3,019,548
3,019,549
46— 107: 3,019,550
135: 3,019,551
156: 3,019,552
191: 3,019,553
200: 3,019,554
243: 3,019,555
3,019,556
47— 58: 3,019,557
48— 190: 3,020,138
49— 1: 3,019,558
14: 3,019,559
50— 342: 3,019,560
368: 3,019,561
51— 3: 3,019,562
50: 3,019,563
56: 3,019,564
165: 3,019,565
166: 3,019,566
170: 3,019,567
173: 3,019,568
187: 3,019,569
195: 3,019,570
236: 3,019,571
295: 3,020,139
306: 3,020,140
53— 21: 3,019,572
27: 3,019,573
35: 3,019,574
59: 3,019,575
61: 3,019,576
74: 3,019,577
123: 3,019,578
6,019,579
230: 3,019,580
236: 3,019,581
371: 3,019,582
373: 3,019,583
390: 3,019,584
56— 25.4: 3,019,585
400: 3,019,586
57— 84: 3,019,587
88: 3,019,589
99: 3,019,588
115: 3,019,590
135: 3,019,591
144: 3,019,592
156: 3,019,593
58— 26: 3,019,594
82: 3,019,595
60— 16: 3,019,596
35.54: 3,019,599
3,019,600
35.55: 3,019,601
35.6: 3,019,597
3,019,598
39.28: 3,019,602
3,019,603
3,019,604
39.65: 3,019,605
3,019,606
39.66: 3,019,607
61— 63: 3,019,608
62— 3: 3,019,609
11: 3,019,610
62— 58: 3,019,611
66: 3,019,612
103: 3,019,613
114: 3,019,614
132: 3,019,615
141: 3,019,616
361: 3,019,617
380: 3,019,618
417: 3,019,619
418: 3,019,620
467: 3,019,621
64— 15: 3,019,622
66— 9: 3,019,623
60: 3,019,624
84: 3,019,625
89: 3,019,626
91: 3,019,627
145: 3,019,628
68— 17: 3,019,629
158: 3,019,630
178: 3,019,631
70— 224: 3,019,632
3,019,633
388: 3,019,634
456: 3,019,635
71— 2.3: 3,020,141
3,020,142
2.5: 3,020,143
2.6: 3,020,144
3,020,145
3,020,146
73— 67.7: 3,019,636
3,019,637
73: 3,019,638
105: 3,019,639
136: 3,019,640
141: 3,019,641
146: 3,019,642
147: 3,019,643
150: 3,019,644
3,019,645
201: 3,019,646
204: 3,019,647
212: 3,019,648
223: 3,019,649
290: 3,019,650
304: 3,019,651
363.7: 3,019,652
368.3: 3,019,653
373: 3,019,654
382: 3,019,655
398: 3,019,656
419: 3,019,657
432: 3,019,658
551: 3,019,659
74— 1: 3,019,660
3,019,661
5.7: 3,019,662
18.2: 3,019,663
199: 3,019,664
246: 3,019,665
472: 3,019,666
528: 3,019,667
645: 3,019,668
661: 3,019,669
677: 3,019,670
758: 3,019,671
75— 5: 3,020,147
26: 3,020,148
3,020,149
41: 3,020,150
82: 3,020,151
126: 3,020,152
129: 3,020,153
138: 3,020,154
77— 4: 3,019,672
7: 3,019,673
58: 3,019,674
62: 3,019,675
77: 3,019,676
80— 9: 3,019,677
14: 3,019,678
81— 9.51: 3,019,679
53: 3,019,680
61: 3,019,681
63.2: 3,019,682
83— 129: 3,019,683
190: 3,019,684
84— 411: 3,019,685
85— 10: 3,019,686
86— 1: 3,019,687
23: 3,019,688
88— 1: 3,019,689
3,019,690
3,019,691
14: 3,019,692
3,019,693
88— 14: 3,019,694
16: 3,019,695
3,019,696
3,019,697
16.6: 3,019,698
20: 3,019,699
23: 3,019,700
24: 3,019,701
3,019,702
3,019,703
26: 3,019,704
39: 3,019,705
3,019,706
3,019,707
3,019,708
84: 3,019,709
89: 3,019,710
89— 41: 3,019,711
90— 11: 3,019,712
93— 36.5: 3,019,713
95— 1.7: 3,019,714
11: 3,019,715
64: 3,019,716
96: 3,019,717
29: 3,020,155
37: 3,020,156
98— 94: 3,019,718
99— 2: 3,020,157
3,020,158
4: 3,020,159
14: 3,020,160
54: 3,020,161
80: 3,020,162
116: 3,020,163
134: 3,020,164
287: 3,019,719
339: 3,019,720
400: 3,019,721
100— 1: 3,019,722
101— 5: 3,019,723
7: 3,019,724
38: 3,019,725
132: 3,019,726
148: 3,019,727
378: 3,019,728
3,019,729
102— 18: 3,019,730
20: 3,019,731
28: 3,019,732
91: 3,019,733
103— 49: 3,019,734
3,019,735
103: 3,019,736
126: 3,019,737
150: 3,019,738
204: 3,019,739
104— 61: 3,019,740
104: 3,019,741
105— 215: 3,019,742
377: 3,019,743
106— 54: 3,020,165
167: 3,020,166
220: 3,020,167
107— 1: 3,019,744
8: 3,019,745
14: 3,019,746
111— 63: 3,019,747
112— 79: 3,019,748
210: 3,019,749
215: 3,019,750
261: 3,019,751
113— 49: 3,019,752
120: 3,019,753
114— 54: 3,019,754
66.5: 3,019,755
67: 3,019,756
72: 3,019,757
219: 3,019,758
230: 3,019,759
115— 70: 3,019,760
117— 11: 3,020,168
33: 3,020,169
36.1: 3,020,170
36.2: 3,020,171
36.7: 3,020,172
45: 3,020,173
47: 3,020,174
49: 3,020,175
64: 3,020,176
107: 3,020,177
155: 3,020,178
118— 70: 3,019,761
76: 3,019,762
119—14.03: 3,019,763
14.05: 3,019,764
52: 3,019,765
53.5: 3,019,766
129—42.03: 3,019,767
42.1: 3,019,768
103: 3,019,769
121— 38: 3,019,770
3,019,771
48: 3,019,772
157: 3,019,773
122— 406: 3,019,774
498: 3,019,775
123— 21: 3,019,776
26: 3,019,777
97: 3,019,778
119: 3,019,779
3,019,780
122: 3,019,781
179: 3,019,782
126— 381: 3,919,783
128— 33: 3,019,784
3,019,785
3,019,786
172.1: 3,019,787
203: 3,019,788
305: 3,019,789
322: 3,019,790
349: 3,019,791
480: 3,019,792
131— 17: 3,020,179
84: 3,019,793
208: 3,019,794
132— 7: 3,019,795
9: 3,019,796
33: 3,019,797
42: 3,019,798
134— 57: 3,019,799
79: 3,019,800
94: 3,019,801
95: 3,019,802
135— 4: 3,019,803
136— 4: 3,020,325
5: 3,020,326
120: 3,020,327
177: 3,020,328
137— 64: 3,019,804
83: 3,019,805
142: 3,019,806
199: 3,019,807
246: 3,019,808
340: 3,019,809
495: 3,019,810
543.13: 3,019,811
557: 3,019,812
580: 3,019,813
607: 3,019,814
612.1: 3,019,815
621: 3,019,816
624.18: 3,019,817
138— 30: 3,019,818
93: 3,019,819
121: 3,019,820
139— 429: 3,019,821
140— 71: 3,019,822
143— 47: 3,019,823
144— 2: 3,019,824
208: 3,019,825
216: 3,019,826
145— 36: 3,019,827
146— 14: 3,019,828
117: 3,019,829
149— 18: 3,020,180
19: 3,020,181
152— 225: 3,019,830
415: 3,019,831
427: 3,019,832
153— 2: 3,019,833
65: 3,019,834
154— 43: 3,020,182
44: 3,020,183
3,020,184
53: 3,020,185
156— 34: 3,020,189
125: 3,020,190
221: 3,020,188
248: 3,020,186
250: 3,020,187
288: 3,020,191
423: 3,020,192
517: 3,020,193
583: 3,020,194
159— 9: 3,019,835
160— 199: 3,019,836
162— 32: 3,020,195
78: 3,020,196
3,020,197
166— 11: 3,019,837
30: 3,019,838
43: 3,019,839
55: 3,019,840
166— 55.1: 3,019,841
126: 3,019,842
167— 22: 3,020,198
33: 3,020,199
53.1: 3,020,200
65: 3,020,201
3,020,202
68: 3,020,203
169— 2: 3,019,843
172— 15: 3,019,844
174— 16: 3,020,329
34: 3,020,330
62: 3,020,331
72: 3,020,332
94: 3,020,333
107: 3,020,334
112: 3,020,335
175— 328: 3,019,845
177— 240: 3,019,846
178— 2: 3,020,336
3,020,337
5.4: 3,020,338
3,020,339
6: 3,020,340
6.5: 3,020,341
52: 3,020,342
179— 1: 3,020,343
3,020,344
3,020,345
2: 3,020,346
6.3: 3,020,347
3,020,348
15: 3,020,349
3,020,350
3,020,351
15.55: 3,020,352
18: 3,020,353
100.2: 3,020,354
3,020,355
3,020,356
3,020,357
3,020,358
3,020,359
3,020,360
100.41: 3,020,361
180— 64: 3,019,847
82: 3,019,848
181— 31: 3,019,849
42: 3,019,850
182— 111: 3,019,851
134: 3,019,852
183— 2: 3,019,853
49: 3,019,854
62: 3,019,855
80: 3,019,856
184— 6: 3,019,857
187— 8.75: 3,019,858
188— 72: 3,019,859
196: 3,019,860
189— 1: 3,019,861
34: 3,019,862
3,019,863
3,019,864
3,019,865
36: 3,019,866
46: 3,019,867
3,019,868
190— 43: 3,019,869
191— 12: 3,020,362
192— 18: 3,019,870
41: 3,019,871
44: 3,019,872
45.1: 3,019,873
48: 3,019,874
58: 3,019,875
84: 3,019,876
90: 3,019,877
144: 3,019,878
193— 16: 3,019,879
195— 2: 3,020,204
3,020,205
31: 3,020,206
3,020,207
127: 3,020,208
197— 113: 3,019,880
114: 3,019,881
198— 34: 3,019,882
38: 3,019,883
39: 3,019,884
127: 3,019,885
134: 3,019,886
151: 3,019,887
181: 3,019,888
220: 3,019,889
233: 3,019,890
200— 33: 3,020,363

200— 46: 3,020,364
51.09: 3,020,365
51.16: 3,020,366
61.53: 3,020,367
86.5: 3,020,368
104: 3,020,369
120: 3,020,370
122: 3,020,371
131: 3,020,372
133: 3,020,373
146: 3,020,374
166: 3,020,375
202— 14: 3,020,209
26: 3,020,210
64: 3,020,211
118: 3,020,212
160: 3,020,213
181: 3,020,214
197: 3,020,215
204— 23: 3,020,216
43: 3,020,217
55: 3,020,218
58: 3,020,219
67: 3,020,220
68: 3,020,221
154.2: 3,020,222
177: 3,020,223
181: 3,020,224
193.2: 3,020,225
3,020,226
206— 1: 3,019,891
41.2: 3,019,892
53: 3,019,893
207— 2: 3,019,894
208— 11: 3,020,227
264: 3,020,228
209— 12: 3,019,895
74: 3,019,896
81: 3,019,897
102: 3,019,898
172: 3,019,900
211: 3,019,901
435: 3,019,899
210— 54: 3,020,229
3,020,230
3,020,231
97: 3,019,902
108: 3,019,903
312: 3,019,904
486: 3,019,905
524: 3,019,906
211— 49: 3,019,907
50: 3,019,908
86: 3,019,909
87: 3,019,910
122: 3,019,911
144: 3,019,912
212— 145: 3,019,913
214— 1: 3,019,914
1.1: 3,019,915
10.5: 3,019,916
38: 3,019,917
75: 3,019,918
82: 3,019,919
84: 3,019,920
103: 3,019,921
140: 3,119,922
3,019,923
304: 3,019,924
310: 3,019,925
392: 3,019,926
396: 3,019,927
451: 3,019,928
620: 3,019,929
731: 3,019,930
215— 9: 3,019,931
37: 3,019,932
41: 3,019,933
217— 60: 3,019,934
219— 12: 3,020,376
3,020,377
3,020,378
3,020,379
20: 3,020,380
3,020,381
34: 3,020,382
37: 3,020,383
39: 3,020,384
40: 3,020,385

219— 42: 3,020,386
50: 3,020,387
60: 3,020,388
72: 3,020,389
220— 26: 3,019,935
53: 3,019,936
65: 3,019,937
81: 3,019,938
90: 3,019,939
221— 48: 3,019,940
109: 3,019,941
125: 3,019,942
263: 3,019,943
302: 3,019,944
222— 177: 3,019,945
180: 3,019,946
394: 3,019,947
395: 3,019,948
502: 3,019,949
542: 3,019,950
223— 76: 3,019,951
224— 9: 3,019,952
42.43: 3,019,953
42.46: 3,019,954
226— 21: 3,019,955
229— 5.7: 3,019,956
16: 3,019,957
31: 3,019,958
45: 3,019,959
52: 3,019,960
63: 3,019,961
230— 69: 3,019,962
127: 3,019,963
148: 3,019,964
259: 3,019,965
234— 50: 3,019,966
235—60.17: 3,019,967
61: 3,019,968
61.11: 3,019,970
61.5: 3,019,969
63: 3,019,971
70: 3,019,973
92: 3,019,972
136: 3,019,974
155: 3,019,975
157: Re.25,120
3,019,976
3,019,977
164: 3,019,978
170: 3,019,979
172: 3,019,980
176: 3,019,981
194: 3,019,982
3,019,983
3,019,984
7: 3,020,250
236— 1: 3,019,985
12: 3,019,986
13: 3,019,987
238— 327: 3,019,988
239— 2: 3,019,989
125: 3,019,990
206: 3,019,991
230: 3,019,992
407: 3,019,993
240— 3: 3,020,390
7.1: 3,020,391
7.35: 3,020,392
11.4: 3,020,393
41: 3,020,394
106: 3,020,395
3,020,396
241— 290: 3,019,994
242— 54: 3,019,995
54.4: 3,019,996
55.42: 3,019,997
56.8: 3,019,998
75.51: 3,019,999
81: 3,020,000
107.2: 3,020,001
244— 15: 3,020,002
3,020,003
54: 3,020,004
63: 3,020,005
75: 3,020,006
81: 3,020,007
85: 3,020,008
102: 3,020,009
110: 3,020,010
141: 3,020,011

248— 16: 3,020,012
28: 3,020,013
48: 3,020,014
123: 3,020,015
183: 3,020,016
206: 3,020,017
250— 2: 3,020,397
6: 3,020,398
8: 3,020,399
16: 3,020,400
20: 3,020,401
3,020,402
3,020,403
3,020,404
3,020,405
83.3: 3,020,406
3,020,407
84.5: 3,020,408
106: 3,020,409
208: 3,020,410
3,020,411
211: 3,020,412
214: 3,020,413
235: 3,020,414
251— 58: 3,020,018
175: 3,020,019
331: 3,020,020
252— 8.5: 3,020,232
40.7: 3,020,233
62: 3,020,234
62.5: 3,020,235
3,020,236
109: 3,020,237
301.6: 3,020,238
413: 3,020,239
419: 3,020,240
439: 3,020,241
442: 3,020,242
465: 3,020,243
3,020,244
3,020,245
254— 161: 3,020,021
175.7: 3,020,022
256— 24: 3,020,023
257— 32: 3,020,024
79: 3,020,025
246: 3,020,026
262.16: 3,020,027
259— 3: 3,020,028
178: 3,020,029
260— 2: 3,020,246
2.5: 3,020,247
3,020,248
3,020,249
7: 3,020,250
18: 3,020,251
24: 3,020,252
30.4: 3,020,253
38: 3,020,254
45.3: 3,020,255
45.4: 3,020,256
45.5: 3,020,257
45.9: 3,020,258
45.95: 3,020,259
46.5: 3,020,260
47: 3,020,261
3,020,262
67: 3,020,263
3,020,264
79.3: 3,020,265
79.5: 3,020,266
92.1: 3,020,267
93.7: 3,020,268
94.3: 3,020,269
139: 3,020,270
3,020,271
186: 3,020,272
211.5: 3,020,273
3,020,274
239.55: 3,020,275
256.4: 3,020,276
3,020,277
256.6: 3,020,278
279: 3,020,279
283: 3,020,280
3,020,281
3,020,282
288: 3,020,283
290: 3,020,284

260— 295: 3,020,285
295.5: 3,020,286
306.6: 3,020,287
313: 3,020,288
340.2: 3,020,289
3,020,290
346.1: 3,020,291
348: 3,020,292
348.5: 3,020,293
397.3: 3,020,294
397.4: 3,020,295
397.45: 3,020,296
3,020,297
448: 3,020,298
448.2: 3,020,299
3,020,300
3,020,301
3,020,302
461: 3,020,303
3,020,304
3,020,305
3,020,306
462: 3,020,307
3,020,308
3,020,309
465.5: 3,020,310
518: 3,020,311
524: 3,020,312
544: 3,020,313
597: 3,020,314
606.5: 3,020,315
615: 3,020,316
632: 3,020,317
3,020,318
635: 3,020,319
638: 3,020,320
653.3: 3,020,321
683.65: 3,020,322
261— 36: 3,020,030
262— 33: 3,020,031
263— 42: 3,020,032
266— 23: 3,020,033
3,020,034
34: 3,020,035
267— 1: 3,020,036
3,020,037
268— 73: 3,020,038
109: 3,020,039
124: 3,020,040
269— 135: 3,020,041
270— 77: 3,020,042
271— 5: 3,020,043
44: 3,020,044
272— 1: 3,020,045
57: 3,020,046
273—105.6: 3,020,047
167: 3,020,048
186: 3,020,049
274— 10: 3,020,050
23: 3,020,051
277— 89: 3,020,052
137: 3,020,053
170: 3,020,054
187: 3,020,055
237: 3,020,056
279— 4: 3,020,057
123: 3,020,058
280—43.23: 3,020,059
95: 3,020,060
104: 3,020,061
112: 3,020,062
150.5: 3,020,063
402: 3,020,064
439: 3,020,065
510: 3,020,066
281— 29: 3,020,067
285— 55: 3,020,068
137: 3,020,069
287— 54: 3,020,070
291— 11: 3,020,071
3,020,072
292— 169: 3,020,073
280: 3,020,074
336.3: 3,020,075
3,020,076
294— 49: 3,020,077
63: 3,020,078
65.5: 3,020,079

294— 76: 3,020,080
86: 3,020,081
87: 3,020,082
296— 24: 3,020,083
51: 3,020,084
297— 153: 3,020,085
170: 3,020,086
244: 3,020,087
357: 3,020,088
388: 3,020,089
301— 37: 3,020,090
63: 3,020,091
302— 52: 3,020,092
3,020,093
303— 9: 3,020,094
305— 57: 3,020,095
58: 3,020,096
307— 58: 3,020,415
88: 3,020,416
88.5: 3,020,417
3,020,418
3,020,419
3,020,420
3,020,421
109: 3,020,422
308— 3: 3,020,097
36.3: 3,020,098
56: 3,020,099
3,020,100
72: 3,020,101
77: 3,020,102
88: 3,020,103
159: 3,020,104
163: 3,020,105
174: 3,020,106
203: 3,020,107
3,020,108
207: 3,020,109
212: 3,020,110
310— 8.9: 3,020,423
9.5: 3,020,424
20: 3,020,425
26: 3,020,426
59: 3,020,427
172: 3,020,428
234: 3,020,429
246: 3,020,430
311— 3: 3,020,111
312— 280: 3,020,112
284: 3,020,113
313— 63: 3,020,431
65: 3,020,432
68: 3,020,433
76: 3,020,434
117: 3,020,435
213: 3,020,436
318: 3,020,437
315— 1: 3,020,438
3.5: 3,020,439
3,020,440
8.5: 3,020,441
10: 3,020,442
26: 3,020,443
39.3: 3,020,444
39.63: 3,020,445
39.71: 3,020,446
85: 3,020,447
138: 3,020,448
317— 79: 3,020,449
99: 3,020,450
101: 3,020,451
165: 3,020,452
230: 3,020,453
234: 3,020,454
250: 3,020,455
258: 3,020,456
318— 16: 3,020,457
28: 3,020,458
3,020,459
3,020,460
3,020,461
170: 3,020,462
175: 3,020,463
221: 3,020,464
325: 3,020,465
322— 28: 3,020,466
323— 89: 3,020,467
3,020,468

324— .5: 3,020,469
3: 3,020,470
6: 3,020,471
34: 3,020,472
3,020,473
40: 3,020,474
41: 3,020,475
61: 3,020,476
77: 3,020,477
83: 3,020,478
328— 13: 3,020,479
26: 3,020,480
42: 3,020,481
55: 3,020,482
110: 3,020,483
142: 3,020,484
329— 104: 3,020,485
330— 3: 3,020,486
51: 3,020,487
59: 3,020,488
62: 3,020,489
85: 3,020,490
331— 113: 3,020,491
158: 3,020,492
332— 16: 3,020,493
333— 9: 3,020,494
10: 3,020,495
30: 3,020,496
3,020,497
33: 3,020,498
82: 3,020,499
3,020,500
98: 3,020,501
336— 73: 3,020,502
110: 3,020,503
338— 40: 3,020,504
43: 3,020,505
86: 3,020,506
143: 3,020,507
162: 3,020,508
339— 5: 3,020,509
17: 3,020,510
65: 3,020,511
67: 3,020,512
91: 3,020,513
95: 3,020,514
3,020,515
101: 3,020,516
164: 3,020,517
191: 3,020,518
273: 3,020,519
3,020,520
340— 15: 3,020,521
33: 3,020,522
52: 3,020,523
147: 3,020,524
172.5: 3,020,525
174.1: 3,020,526
196: 3,020,527
235: 3,020,528
253: 3,020,529
324: 3,020,530
3,020,531
334: 3,020,532
347: 3,020,533
3,020,534
3,020,535
364: 3,020,536
343— 7.4: 3,020,537
3,020,538
7.7: 3,020,539
8: 3,020,540
11: 3,020,541
18: 3,020,542
100: 3,020,543
3,020,544
103: 3,020,545
106: 3,020,546
114: 3,020,547
121: 3,020,548
771: 3,020,549
795: 3,020,550
346— 17: 3,020,114
54: 3,020,115
66: 3,020,116
74: 3,020,117
3,020,118
109: 3,020,119

CLASSIFICATION OF DESIGNS

D 1— 12: 192,156
D 2— 3: 192,157
D 3— 13: 192,158
D 7— 5: 192,159
D 9— 2: 192,160
D10— 8: 192,161
D13— 1: 192,162
192,163

D14— 3: 192,164
D15— 8: 192,165
D18— 2: 192,166
D26— 8: 192,167
D29— 23: 192,168
D33— 18: 192,169
D34— 2: 192,170
15: 192,171

D40— 1: 192,172
D42— 7: 192,173
D44— 9: 192,174
15: 192,175
192,176
26: 192,177
D49— 1: 192,178
D50— 3: 192,179

D52— 3: 192,180
6: 192,181
D54— 11: 192,182
192,183
192,184
192,185
192,186
12: 192,187

D54— 13: 192,188
D58— 5: 192,189
6: 192,190
11: 192,191
26: 192,192
192,194
D64— 11: 192,193
192,194
D71— 1: 192,195

D71— 1: 192,196
192,197
D80— 11: 192,198
D81— 10: 192,199
192,200
D86— 8: 192,201
D91— 2: 192,202
D92— 1: 192,203

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

February 6, 1962 Volume 775 Number 1

TRADEMARKS

NOTICES

Public Law 87-354
[87th Congress, S. 1186]
October 4, 1961

AN ACT

75 Stat. 775.

To facilitate the protection of consumers of articles of merchandise composed in whole or in part of gold or silver from fraudulent misrepresentation concerning the quality thereof, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) section 4 of the Act entitled "An Act forbidding the importation, exportation, or carriage in interstate commerce of falsely stamped articles of merchandise made of gold or silver or their alloys, and for other purposes", approved June 13, 1906 (34 Stat. 260; 15 U.S.C. 294 et seq.), is amended by—

Gold or silver articles. Misrepresentation of quality.

(1) inserting therein, immediately after the section number "SEC. 4.", the subsection designation "(a)"; and

(2) adding at the end thereof the following new subsection:

"(b) Whenever any person, firm, corporation, or association, being a manufacturer or dealer subject to the first section of this Act—

CONDITION OF TRADEMARK APPLICATIONS AS OF DECEMBER 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,518
Date of oldest new application	June 1, 1961
Date of oldest amended application	May 8, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	6-1-61	5-8-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-3-61	7-3-61
Renewals (All Classes)	11-16-61	12-26-61
Sec. 12 (c) Publications (All Classes)	12-13-61	

Applications filed during the month of December 1961—1802

Registrations Issued	222—No. 727,127 to No. 727,348
Renewals Issued	55

For the quarter—October 1, 1961 through December 31, 1961

Applications filed	5981
Registrations issued	3667
Renewals issued	720
Cancellations under Section 8	1723

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

"(1) applies or causes to be applied to any article of merchandise intended for sale or customarily sold as a complete product to consumers in any State, by stamping, branding, engraving, or otherwise, any quality mark or stamp indicating or purporting to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal; or

"(2) imports into any State any such article of merchandise bearing any such quality mark or stamp which indicates or purports to indicate that such article is made in whole or in part of gold or silver or of an alloy of either such metal,

such person, firm, corporation, or association, before depositing any such article manufactured or imported after six months after the effective date of this Act in the United States mails, or causing such article to be so deposited, for transmission thereby, or delivering such article or causing such article to be delivered to any common carrier for transportation from one State to any other State, or transporting such article or causing such article to be transported from one State to any other State, shall—

Identifying trademark.

"(A) apply or cause to be applied to that article a trademark of such person, firm, corporation, or association duly registered or applied for within thirty days after an article bearing the trademark is placed in commerce or imported under the laws of the United States or the name of such person, firm, corporation, or association; and

"(B) if such article of merchandise is composed of two or more parts which are complete in themselves but which are not identical in quality, and any one of such parts bears such a quality mark or stamp, apply or cause to be applied to each other part of that article of merchandise a quality mark or stamp of like pattern and size disclosing the quality of that other part.

Each identifying trademark or name applied to any article of merchandise in compliance with clause (A) of this section shall be applied to that article by the same means as that used in applying the quality mark or stamp appearing thereon, in type or lettering at least as large as that used in such quality mark or stamp, and in a position as close as possible to that quality mark or stamp. For the purposes of this subsection, the term "State." "State" includes the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the District of Columbia."

75 Stat. 776.

Effective date.

SEC. 2. The amendments made by this Act shall take effect on the first day of the third month beginning after the date of enactment of this Act.

Approved October 4, 1961.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 273,655 (ADMIRAL), Columbia Radio Corporation, Radio receiving sets, vacuum or electron tubes and radio speakers; **Reg. No. 405,192**, same, Continental Radio and Television Corporation, Refrigerators; **Reg. No. 407,816**, same, Admiral Corporation, Radio receiving cabinets, combination radio and phonograph cabinets, record player cabinets, etc.; **Reg. No. 549,908**, same, Radio receiving sets and parts thereof, vacuum or electron tubes, radio loud speakers, etc.; **Reg. No. 589,773**, same, Dehumidifiers, humidifiers and room air conditioners, **filed** Dec. 28, 1961, D.C., S.D.N.Y., Doc. 61/4604, *Admiral Corporation* v. *Soflcam International Co. et al.*

Reg. No. 402,388 (A AND DESIGN), Aeroquip Corporation, Hose fittings and pipe couplings for fluids; **Reg. No. 549,556** (AEROQUIP), same, Group (a) hose fittings and pipe fittings for fluid, hose, pipe and conduit fluid couplings, etc.; **Reg. No. 549,559** (AEROQUIP AND DESIGN), same; **Reg. No. 698,833** (A AND DESIGN), same, Fittings, couplings and accessories for fluid conduits, **filed** Dec. 11, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1567/61–HW, *Aeroquip Corporation* v. *Western Coupling Corporation et al.*

Reg. No. 405,192. (See Reg. No. 273,655.)

Reg. No. 407,816. (See Reg. No. 273,655.)

Reg. No. 411,294 (SEVENTEEN), Triangle Publications, Inc., Monthly magazine devoted to the interests of girls, **filed** Dec. 15, 1961, D.C., S.D.N.Y., Doc. 61/4465, *Triangle Publications, Inc.* v. *Louis Marx & Co., Inc.* Consent judgment; defendant enjoined Dec. 18, 1961.

Reg. No. 549,556. (See Reg. No. 402,388.)

Reg. No. 549,559. (See Reg. No. 402,388.)

Reg. No. 549,908. (See Reg. No. 273,655.)

Reg. No. 551,084 (TEMPLE), Temple Lumber Company, Toilet seats; **Reg. No. 601,035**, same, Southern Pine Lumber Company, Partially fabricated furniture stock, namely, drawer fronts, case tops, table legs, and book case tops; **Reg. No. 601,474**, same, Wooden shipping, storage and beverage boxes; **Reg. No. 603,470**, same, Green, air dried, kiln dried finished and rough pine and hardwood lumber and timbers, etc., **filed** Nov. 2, 1961, D.C., E.D. Tex. (Beaumont), Doc. 4523, *Temple Lumber Company* v. *Vernon S. Temple, Sr., doing business as Temple Lumber Company.* Decree enjoining defendant Dec. 22, 1961.

Reg. No. 566,098 (THERMO-FAX), Minnesota Mining & Manufacturing Company, Sensitized sheet material for making duplicate copies of typed or printed matter; **Reg. No. 577,845**, same, Machine for making duplicate copies of pictorial matter; **Reg. No. 601,804**, same, Sheet to be adhered to back side of sheet of printed or pictorial matter to reinforce same; **Reg. No. 685,362**, same, Liquid chemical composition useful in connection with coated sheet material which has been adapted to produce copies of information contained on microfilm; **Reg. No. 686,868**, same, Electrically operated machine for reading microfilm and producing copies of the information contained on microfilm, **filed** Dec. 30, 1960, D.C., S.D.N.Y., Doc. 60/5111, *Minnesota Mining & Manufacturing Company* v. *Paul B. Williams, Inc. et al.* Consent judgment; defendants enjoined Dec. 27, 1961.

Reg. No. 577,845. (See Reg. No. 560,098.)

Reg. No. 589,773. (See Reg. No. 273,655.)

Reg. No. 601,035. (See Reg. No. 551,084.)

Reg. No. 601,474. (See Reg. No. 551,084.)

Reg. No. 601,804. (See Reg. No. 560,098.)

Reg. No. 603,470. (See Reg. No. 551,084.)

Reg. No. 670,247 (INFINILITE), Integrated Ceilings, Inc., Louvered ceiling elements and light screens; **2,937,265**, B. Blitzer, Cellular lighting element and means for supporting the same, **filed** July 7, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39/263, *Integrated Ceilings & Grillworks, Inc.* v. *United Lighting and Ceiling Company.* Consent judgment; injunction granted Nov. 22, 1961.

Reg. No. 685,362. (See Reg. No. 560,098.)

Reg. No. 686,868. (See Reg. No. 560,098.)

Reg. No. 698,833. (See Reg. No. 402,388.)

Reg. No. 713,657 (NOUVELLE VIE), Jon Pierre Cosmetics, Inc., Skin conditioning cream, **filed** Dec. 8, 1961, D.C., E.D. Pa. (Philadelphia), Doc. 30/613, *Jon Pierre Cosmetics, Inc.* v. *Frances Denney, Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 106,101. Island Creek Coal Company, Huntington, W. Va. Filed Oct. 10, 1960.

ISLAND CREEK
Precisioncored

Owner of Reg. No. 191,978.
For Coal.
First use May 31, 1960.

SN 117,024. The Kendall Company, Walpole, Mass. Filed Apr. 3, 1961.

KENDALL

Owner of Reg. Nos. 508,593, 618,215, and others.
For Absorbent Web of Rayon or Other Fibrous Material for Industrial Use.
First use Oct. 26, 1954.

SN 119,075. Tube-Kote, Inc., Houston, Tex. Filed May 1, 1961.



The drawing is lined for gray but no claim is made to color. Owner of Reg. No. 558,108.
For Plastic Materials Sold in Cans and Similar Containers, Including Polyurethane, Epoxy and Phenolic Resin Compounds.
First use May 26, 1960.

SN 120,637. The O. Hommel Company, Carnegie, Pa. Filed May 23, 1961.

CER-OPAKE

For Opacifiers for Glazes, Porcelain Enamels and Glass Colors.
First use Oct. 21, 1960.

SN 122,244. Allied Chemical Corporation, New York, N.Y. Filed June 19, 1961.

CAPRAN

Owner of Reg. Nos. 623,610 and 629,770.
For Plastic Sheets and Films of Nylon.
First use May 10, 1961.

SN 122,707. Liang Seng & Co., Ltd., Bangkok, Thailand. Filed June 23, 1961.

For Tapioca Flour for Further Manufacture and General Use in the Industrial Arts.
First use Nov. 5, 1949; in commerce Nov. 5, 1949.

SN 124,294. Quickee Products, Inc., Yonkers, N.Y. Filed July 19, 1961.

GROUND GRIP-R

For Sand Product To Supply Traction on Ice and Snow.
First use July 12, 1961.

Class 2—Receptacles

SN 111,218. Reynolds Aluminum Supply Company, Atlanta, Ga. Filed Jan. 3, 1961.

SIRCO

Owner of Reg. No. 651,368.
For Metal Drums.
First use on or before Mar. 31, 1948.

SN 111,219. Reynolds Aluminum Supply Company, Atlanta, Ga. Filed Jan. 3, 1961.

SSIRCO

Owner of Reg. No. 651,368.
For Metal Drums.
First use on or before Mar. 31, 1948.

SN 112,830. Container Ring Co., Inc., Bound Brook, N.J. Filed Jan. 31, 1961.

WEDGE-LOX

For Ringtype Closure for Fastening Barrel Heads to Barrels.
First use May 25, 1957.

SN 113,256. American Can Company, New York, N.Y. Filed Feb. 8, 1961.

CANCO

Owner of Reg. Nos. 92,935, 703,267, and others.
For Metal Containers, Fibre Containers, and Composite Containers Consisting of Fibre Bodies and Metal Ends.
First use on or about July 1, 1912.

SN 114,603. Crown Zellerbach Corporation, San Francisco, Calif. Filed Feb. 28, 1961.

RAINY DAY SHOPPER

For Polyethylene Coated Paper Bags.
First use Nov. 9, 1960.

SN 120,186. Container Corporation of America, Chicago, Ill. Filed May 17, 1961.

DOUBLE "A"

For Folding Cartons, Boxes, and Shipping Containers Formed Entirely of Paperboard.
First use Sept. 1, 1957.

SN 123,034. Reppel & Vollmann, Kierspe, Westphalia, Germany. Filed June 28, 1961.

valon

Owner of German Reg. No. 734,237, dated Feb. 26, 1960.
For Household Crockery Made of Plastic—Namely, Dishes, Saucers, Plates, Cups; Cruets, and Containers for Liquid and Granular Goods.

SN 123,542. Haveg Industries, Inc., Wilmington, Del. Filed July 7, 1961.

HAV-A-TRAY

For Plastic Food Dishes and Holders.
First use Oct. 28, 1960.

SN 123,875. Crown Zellerbach Corporation, San Francisco, Calif. Filed July 13, 1961.

Freshgard

For Paper Produce Bags.
First use Nov. 5, 1960.

SN 124,234. Standard Paper Box Corp., Los Angeles, Calif. Filed July 18, 1961.

STAN-O-Matic

For Folding Paper Cartons Manufactured by Applicant.
First use May 16, 1955.

SN 124,676. Albert E. Reed & Company Limited, London, England. Filed July 25, 1961.

KOMMANDOSAC

Owner of British Reg. No. 797,298, dated Nov. 2, 1959.
For Sacks and Bags, and Containers in the Nature of Sacks or Bags, All Made Principally of Paper or of Cardboard.

SN 124,932. National Dairy Products Corporation, New York, N.Y. Filed July 28, 1961.

GUARDWALL

For Cartons and Containers for Ice Cream and Other Frozen Products and the Blanks Therefor.
First use on or about Feb. 2, 1959.

SN 125,004. Central Soya Company, Inc., Fort Wayne, Ind. Filed July 31, 1961.

WONDERLAND

For Egg Cartons.
First use May 13, 1960.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 107,540. American Guard-It Manufacturing Company, Chicago, Ill. Filed Nov. 1, 1960.

ACCESSO-PAK

For Soft-Sided, Frameless, Foldable Garment and Accessory Traveling Bags Adapted To Be Suspended From a Hanging Bracket in an Open Position.
First use on or about May 6, 1960.

SN 123,731. Contessa Handbags, Inc., New Bedford, Mass. Filed July 11, 1961.

Contessa

For Ladies' Handbags.
First use June 2, 1961.

SN 124,728. Ever-Lite Company, New York, N.Y. Filed July 26, 1961.

jasimco

For Portfolios, Billfolds, Wallets, Coin Purses, Attaché Cases, Card Cases, Key Cases, Pocket Secretaries, and Pocket Recorders.
First use May 18, 1961.

Class 4—Abrasives and Polishing Materials

SN 120,356. United Sanitary Chemicals Company, Incorporated, Baltimore, Md. Filed May 18, 1961.

LONGLO

Owner of Reg. No. 405,435.
For Floor Wax.
First use June 1940.

Class 5—Adhesives

SN 115,739. Technical Tape Corp., New Rochelle, N.Y. Filed Mar. 15, 1961.

TUCK TRIO

For Pressure Sensitive Adhesive Tape.
First use February 1960.

Class 6—Chemicals and Chemical Compositions

SN 81,356. James Varley & Sons, Incorporated, St. Louis, Mo. Filed Sept. 14, 1959.

MICRO-KIL

For Disinfectant—Germicide—Deodorant—Cleaner.
First use May 8, 1959.

SN 96,131. N.V. Maatschappij voor Wasverwerking, Amersfoort, Netherlands. Filed Mar. 20, 1961.

VLIDO

Owner of Dutch Reg. No. 137,660, dated June 15, 1960.
For Insecticide and Air Purifier.

SN 104,066. Calsicat Company, Grove City, Pa. Filed Sept. 8, 1960.

CALSICAT

For Catalyst Compositions—Namely, Solid-Type Catalysts for Liquid and Vapor Phase Chemical Reactions.
First use on or about Aug. 15, 1960.

SN 105,651. Metal & Thermit Corporation, Woodbridge Township, Middlesex County, N.J. Filed Oct. 3, 1960.

C-Sn

For Tin Chemical.
First use on or about Sept. 24, 1959.

SN 108,062. Merck & Co., Inc., Rahway, N.J. Filed Nov. 8, 1960.

M-ZYME

For Animal Hide Processing Enzyme.
First use Oct. 21, 1960.

SN 109,656. Arthur J. Williams, d.b.a. Vapor Products Company, Orlando, Fla. Filed Dec. 5, 1960.

MILDEWDISK

Owner of Reg. No. 601,187.
For Mildew-Proofing Compound for Use in Closets.
First use June 21, 1955.

SN 113,301. Pictograph Limited, New Barnet; England. Filed Feb. 8, 1961.

PICTOGRAPH Chemicals

The words "Brand" and "Chemicals" are disclaimed apart from the mark as shown. Owner of British Reg. No. 749,120, dated Dec. 16, 1955.
For Chemical Preparations Used in Industry, Science and Photography.

SN 116,369. Aluminum Company of Canada, Limited, Montreal, Quebec, Canada. Filed Mar. 24, 1961.

ALCAN

Owner of Canadian Reg. No. 106, folio N.S. 27,361, dated Apr. 3, 1948; and U.S. Reg. No. 707,988.
For Chemicals for General Industrial Use—Namely, Alumina Hydrate, Aluminum Chloride, Aluminum Fluoride, Aluminum Sulfate, Cryolite, Chlorine, Lime, Magnesia, Magnesium Chloride, Mixtures of Magnesia and Lime.
First use September 1945; in commerce in or about December 1945 on aluminum sulfate.

SN 117,011. J. M. Huber Corporation, Borger, Tex. Filed Apr. 3, 1961.

AROFLO

Owner of Reg. No. 504,158.
For Carbon Black.
First use Oct. 5, 1954.

SN 117,015. J. M. Huber Corporation, Borger, Tex. Filed Apr. 3, 1961.

AROGEN

Owner of Reg. No. 504,158.
For Carbon Black.
First use May 27, 1955.

SN 117,017. J. M. Huber Corporation, Borger, Tex. Filed Apr. 3, 1961.

AROTONE

Owner of Reg. Nos. 504,158 and 547,223.
For Carbon Black.
First use Nov. 19, 1952.

SN 118,970. W. J. Deevy & Sons, New York, N.Y. Filed May 1, 1961.

D.V.O.

For Concentrated Deodorant for Industrial and Commercial Use.
First use Mar. 15, 1960.

SN 119,231. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed May 3, 1961.

SELECTOGEN

For Diagnostic Reagents for Laboratory Use.
First use Mar. 9, 1961.

SN 122,498. Active Process Supply Co., New York, N.Y. Filed June 21, 1961.

WITTEX

For Photographic Silk Screen Emulsion.
First use Jan. 2, 1949.

SN 122,584. Fisher Scientific Company, Pittsburgh, Pa. Filed June 21, 1961.

GRAM-PAC

For Reagent Chemicals for Laboratory and Test Use.
First use Mar. 8, 1943.

SN 122,615. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed June 22, 1961.

Redax

For Chemical Compound Employed as a Scorch Retarder in the Manufacture of Vulcanized Rubber Articles.
First use Mar. 1, 1961.

SN 122,929. Gulf Oil Corporation, Pittsburgh, Pa. Filed June 27, 1961.

SANI-SOIL-SET

For Dust Laying Composition Which Is Applied to Earth To Coat and Permeate the Surface Soil.
First use Jan. 24, 1936.

SN 125,430. South Penn Oil Company, Oil City, Pa. Filed Aug. 4, 1961.

PENNZOIL

For Lighter Fluid.
First use July 27, 1961.

SN 125,949. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Aug. 14, 1961.

STA-LOK

For Industrial Starches.
First use July 11, 1961.

SN 126,549. Westville Chemical Corporation, Monroe, Conn. Filed Aug. 23, 1961.

WESTMER

For Catalysts.
First use July 17, 1961.

SN 129,814. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Oct. 12, 1961.

NEPOL

For Amylose.
First use Oct. 4, 1961.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 123,585. Alan I. Yackira, New York, N.Y. Filed July 7, 1961.

MATCHIC

For Combination Cigarette Package Container and Match Booklet Support.
First use June 16, 1961.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 122,533. Interelectronics Corporation, New York, N.Y. Filed June 21, 1961.

INTREX

For Detonating Fuzes.
First use on or about Nov. 15, 1949.

SN 122,536. Interelectronics Corporation, New York, N.Y. Filed June 21, 1961.

INTRON

For Detonating Fuzes.
First use on or about Nov. 15, 1949.

Class 10—Fertilizers

SN 106,099. Hollandish-Deutsche Santaflor Comp. Heinz Petersen K.G., Hamburg, Germany. Filed Oct. 10, 1960.

santaflor

Owner of German Reg. No. 721,234, dated Jan. 17, 1959.
For Fertilizers.

SN 120,230. Rohm & Haas Company, Philadelphia, Pa. Filed May 17, 1961.

MENDOK

For Synthetic Organic Chemicals in Solid Form and/or Solutions and/or Suspensions for Use in Controlling the Growth and/or Eradication of Plants.
First use on or about Aug. 17, 1959.

SN 120,512. Ever-Mulch Company, Louisville, Ky. Filed May 22, 1961.

EVER-MULCH

For Mulches.
First use Mar. 16, 1961.

Class 11—Inks and Inking Materials

SN 117,656. Stark Company, Philadelphia, Pa. Filed Apr. 11, 1961.

STA-MARKER

For Fast Drying Opaque Ink.
First use on or about Mar. 9, 1961.

Class 12—Construction Materials

SN 113,866. Società Applicazioni Gomma Antivibranti "Saga" S.p.A., Milan, Italy. Filed Feb. 16, 1961.

AFOTERM

Owner of Italian Reg. No. 150,685, dated Aug. 24, 1960.
For Building Panels Having Sound Absorbing and Thermic Properties.

SN 118,989. A. P. Green Fire Brick Company, Mexico, Mo. Filed May 1, 1961.

GREEN

Owner of Reg. Nos. 600,884, 628,914, and others.
For Chemically Bonded or Burned Basic Refractory Brick, Plastic Refractories, Refractory Ramming Mixes, Refractory Castables, Refractory Mortar, and Refractory Gunning Mixes.
First use Jan. 20, 1960.

SN 123,144. The Tremco Manufacturing Company, Cleveland, Ohio. Filed June 29, 1961.

TREMPATCH

For Patching Material for Floors and the Like.
First use Aug. 14, 1953.

SN 123,153. York Stone & Supply Company, York, Pa. Filed June 29, 1961.

STONEFACE

For Concrete Masonry Units Having at Least One Textured Face.
First use Apr. 14, 1961.

SN 123,168. Bestwall Gypsum Company, Ardmore, Pa. Filed June 30, 1961.

SPACIAL SILENCE

For Acoustical Tile.
First use during the month of January 1961.

SN 123,175. Castle Lumber Corporation, Heightstown, N.J. Filed June 30, 1961.



For Construction Materials—Namely, Asphalt Roofing Material, Asbestos Side Wall and Roofing Material, Metal Roofing, Aluminum Siding and Accessories Therefor, Millwork, Mouldings, Window Units, Doors, Ornamental Iron Railings and Posts, Guttering, Eaves Troughs and Downspouts.
First use Apr. 27, 1961, on all goods except window units.

SN 123,244. Stover Plywood Corporation, New York, N.Y. Filed June 30, 1961.



For Prefinished Plywood Panels and Plywood Door Skins.
First use May 17, 1961, on prefinished plywood panels.

SN 123,274. The Philip Carey Manufacturing Company, Cincinnati, Ohio. Filed July 3, 1961.

STYLETEX

For Shingles.
First use Apr. 30, 1959.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 95,706. Pyronetics, Inc., Santa Fe Springs, Calif., assignee of Hans F. Eckardt and John L. Marsh (joint ownership), Santa Fe Springs, Calif. Filed Apr. 25, 1960.



For Valves, and Particularly Explosive-Actuated Valves and Relief Valves.
First use on or about Sept. 28, 1959.

SN 107,819. Bergische Stahl-Industrie, Remscheid, Germany. Filed Nov. 4, 1960.

BSIG

Owner of German Reg. No 375,249, dated Oct. 12, 1927.
For Fittings—Namely, Pipe Connectors, Return Bends, Terminal Fittings, Headers for Use in the Construction and Operation of Oil Refineries, Chemical Works and Like Plants.

SN 110,830. Electro-Way Corporation, Los Angeles, Calif. Filed Dec. 27, 1960.

ELECTRO-MATIC SINK

For Combined Swing Faucet and Dishwashing Fixture.
First use Dec. 5, 1960.

SN 117,602. Belknap Hardware and Manufacturing Company, Louisville, Ky. Filed Apr. 11, 1961.

BELKNAP

Owner of Reg. Nos. 530,343, 551,992, and others.
For Mortise Door, Door Pulls, Push Plates, Letter Box Plates, Door Bolts, Pull Plates, Sash Locks, Flush Sash Lifts, Screen Door Sets, Casement Adjusters, Bar Sash Lifts, Barrel Bolts, Handrail Brackets, Door Knockers, Hook Sash Lifts, Door Bumpers and Door Stops.
First use in 1940.

SN 119,672. California Industrial Products, Inc., South Gate, Calif. Filed May 10, 1961.

CIP

For Automotive and Industrial Fasteners.
First use May 6, 1958.

SN 123,176. Castle Lumber Corporation, Heightstown, N.J. Filed June 30, 1961.



For Hardware—Namely, Collars, Escutcheons, Lock Sets, Closet Rods, Closet Brackets, Adapter Plates, Back Bolts, Thresholds, Sliding Door Tracks, Jack Posts, Drawer Slides, Foundation Vents, Louvers, Bifold Tracks, Door Stops, Hinges, Knobs, Door Pulls, Sash Lifts, Magnetic Bar Catches, Hat and Coat Hooks, Door Closers, Latches, Butt Hinges, Handrail Brackets and Friction Catches.
First use Apr. 27, 1961.

SN 123,865. Borg-Warner Corporation, Chicago, Ill. Filed July 13, 1961.



BORG-WARNER

Owner of Reg. Nos. 673,740, 681,668, and others.
For Lavatories, Sinks, Washtubs, Bathtubs, Washing Machine Tubs and Related Fixtures.
First use on or prior to Feb. 9, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 119,530. The Lincoln Electric Company, Cleveland, Ohio. Filed May 8, 1961.

TOOLWELD

Owner of Reg. No. 362,515.
For Metallic Welding Electrodes.
First use Jan. 26, 1935.

SN 120,691. Blackstone Corporation, Jamestown, N.Y. Filed May 24, 1961.



For Iron Castings Including Gray Iron Castings, Ductile Iron Castings and Malleable Iron Castings.
First use in 1922.

SN 122,162. The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada. Filed June 16, 1961.

COMINCO

Owner of U.S. Reg. Nos. 646,129, 706,165, and others.
For Metal Anodes.
First use in commerce Mar. 30, 1961.

SN 122,445. Levolor Lorentzen, Inc., Hoboken, N.J. Filed June 20, 1961.

LEVOLOR

Owner of Reg. Nos. 388,750 and 619,321.
For Woven Aluminum, Usable for Folding and Sliding Doors, Room Dividers and Partitions, Roll-Up Shades, Spring-Roller Shades, Roman Shades, Cafe Curtains, Draperies, Valances, Decorative Wall Panels Similar to Tapestries, and Protective Screens and Covers.
First use on or about Aug. 17, 1959.

Class 15—Oils and Greases

SN 92,361. Eugene N. Bilenker, Elizabeth, N.J. Filed Mar. 8, 1960.

HUMSOC

For Gasoline, Motor Oil, and Fuel Oil.
First use Feb. 23, 1960.

Class 16—Protective and Decorative Coatings

SN 123,177. Castle Lumber Corporation, Heightstown, N.J. Filed June 30, 1961.



For Protective Coatings—Namely, Ready-Mixed Oil Paints, Latex Base Paints, Creosote Base Paints and Stains.
First use May 29, 1961.

Class 17—Tobacco Products

SN 123,299. General Cigar Co., Inc., New York, N.Y. Filed July 3, 1961.

TIPARILLO

For Cigars Provided With Tipped Ends.
First use June 20, 1961.

Class 18—Medicines and Pharmaceutical Preparations

SN 111,066. Carter Products, Inc., d.b.a. Wallace Laboratories, New York, N.Y. Filed Dec. 30, 1960.

WALLACE

For Pharmaceutical Preparations and Ingredients of Pharmaceutical Preparations Including Analgesics, Tranquilizers, Muscle Relaxants, Sleep Inducers, Preparations To Control Appetite and Preparations for Treating Conditions of the Menopause, Gastro-Intestinal Canal and Skeletal Disorders.
First use at least as early as June 1957, on meprobamate used as ingredient in pharmaceutical preparations.

SN 115,371. Norgine Laboratories, Inc., New York, N.Y. Filed Mar. 10, 1961.

DECORPA

For Medicinal Preparation in the Nature of Vegetable Mucins Used as a Bulking Agent for Appetite Control and as a Bulk Complement to Liquid-Formula Diets.
First use Feb. 27, 1961.

SN 118,013. M-A Pharmaceutical Corporation, Mount Vernon, N.Y., assignee of Charles A. Sussilin, Mount Vernon, N.Y. Filed Apr. 17, 1961.

M-A

For Medicinal Preparations in Tablet Form for Relief of Distress or Discomfort Associated With Over Indulgence in Food and/or Drink.
First use Apr. 2, 1960.

SN 120,775. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

ZE-ZYMES

For Antacid.
First use Mar. 21, 1961.

SN 120,776. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

ALLEAVE

For Antacid.
First use Mar. 21, 1961.

SN 120,777. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

ZYMATE

For Antacid.
First use Mar. 21, 1961.

SN 120,778. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

KENZOSE

For Antacid.
First use Apr. 11, 1961.

SN 120,780. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

A TO Z

For Antacid.
First use Mar. 21, 1961.

SN 120,781. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

ENZOSE

For Antacid.
First use Mar. 21, 1961.

SN 120,782. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

HASTEEZE

For Antacid.
First use Mar. 21, 1961.

SN 120,783. Chesebrough-Pond's Inc., New York, N.Y. Filed May 25, 1961.

SPECIF-AIDE

For Antacid.
First use Mar. 21, 1961.

SN 125,525. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Aug. 7, 1961.

ORAGRAFIN

For Cholangiographic Medium.
First use June 22, 1961.

SN 125,535. Richardson-Merrell Inc., Cincinnati, Ohio. Filed Aug. 7, 1961.

ENCOATS

Owner of Reg. No. 393,109.
For Enteric Coated Tablets for Medicinal and Pharmaceutical Preparations for Internal Use.
First use May 1942.

SN 125,924. Burt Krone Company, Springfield, Mo. Filed Aug. 14, 1961.

PONKINSEEDS

For Laxative Preparation.
First use July 2, 1946.

SN 126,269. Sterling Drug Inc., New York, N.Y. Filed Aug. 18, 1961.

SUCRIDA

For Antidiabetic Preparation.
First use July 20, 1961.

SN 126,283. Vitaminerals, Inc., Glendale, Calif. Filed Aug. 18, 1961.

REGENAZYME

For Vitamin B12, Iron Multi-Vitamin Preparation.
First use Aug. 7, 1961.

SN 126,380. Organon Inc., West Orange, N.J. Filed Aug. 21, 1961.

REFLORA

For Medicinal Preparation Recommended for Use in the Treatment of Vaginitis.
First use Feb. 16, 1961.

SN 126,469. Palos Verdes Bird Farm, Inc., d.b.a. Pet Tone Products, Walteria, Calif. Filed Aug. 22, 1961.

COLOR-UP

For Carotene-in-Oil Vitamin Supplement for Birds.
First use June 23, 1961.

Class 19—Vehides

SN 120,358. Vought Industries, Inc., Dallas, Tex. Filed May 18, 1961.

KOZY

Owner of Reg. No. 602,849.
For Mobile Homes.
First use on or about Dec. 31, 1931.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 68,308. Northern Steel Products, Inc., Seattle, Wash. Filed Feb. 24, 1959.

NORTHERN

The drawing is lined for red and blue.
For Electric Water Heaters.
First use July 15, 1956.

SN 85,258. The Thermal Syndicate Limited, Wallsend-on-Tyne, England. Filed Nov. 13, 1959.

SPECTROSIL

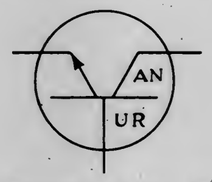
Owner of British Reg. No. 771,136, dated Nov. 13, 1957; and U.S. Reg. No. 680,441.
For Fused Silica or Glass Products for Electrical Purposes—Namely, Power Line Insulators, Insulators for Electrostatic Mist and Dust Precipitators, Rings for Mercury Rectifiers and Mercury Rectifiers With Tubes; Ignition Basins, Ignition Crucibles, Crucible Electric Furnaces, Radiant Electric Heaters, Mercury Vapor and Other Gas Discharge Lamps, Vacuum Tight Seals for Electrical Conductors, Ignition Spoons, X-Ray Analysis Specimen Tubes, Insulators for Radio and Other High Frequency Tubes, Electric Immersion Heaters, Electric Lamp Globes, Chimneys and Reflectors, Tubing for Electric Fuses, Electric Condenser Insulation, Heating Elements, Conduit Material, Vacuum Tubes, Transistors, Television Insulators, and Parts of the Foregoing.

SN 110,791. Shaw Instrument Corporation, Latrobe, Pa. Filed Dec. 23, 1960.

CERMAC

For Ceramic Seals, i.e., a Metal Conductor Passing Through and Sealed in a Ceramic Insulator, Which in Turn Is Usually Sealed to a Metallic Vessel.
First use on or about July 1, 1959.

SN 112,005. Vantur Electronics, Inc., Decatur, Ga. Filed Jan. 17, 1961.



For Electronic Equipment and Power Supplies—Namely, Frequency and Modulation Monitors for Television Stations and Video Power Supplies.
First use on or about Mar. 15, 1959.

SN 112,834. Eaton Manufacturing Company, Cleveland, Ohio. Filed Jan. 31, 1961.

AJUSTO-GEAR

Owner of Reg. Nos. 503,874 and 607,143.
For Electromagnetically Operated Drive Transmitting Mechanism and Controls Therefor.
First use Jan. 16, 1961.

SN 117,019. Industrial Heat Systems, Glendale, Calif. Filed Apr. 3, 1961.

ihs

For Electrical Heaters, Heater Panels, and Ovens.
First use July 20, 1957.

SN 117,470. The Electric Storage Battery Company, Philadelphia, Pa. Filed Apr. 10, 1961.

ESB

Owner of Reg. No. 708,276.
For Electric Batteries and Parts Thereof.
First use Mar. 9, 1961.

SN 117,541. Sel-Set Machinery Corporation, Salem, Oreg. Filed Apr. 10, 1961.

UNI-PAK

For Electrical Remote Control Sawmill Setworks and Components Thereof.
First use Feb. 15, 1961.

SN 117,542. Sel-Set Machinery Corporation, Salem, Oreg. Filed Apr. 10, 1961.

THRIFT-O-MATIC

For Electrical Remote Control Sawmill Setworks and Components Thereof.
First use Feb. 15, 1961.

SN 117,979. Edward Martony, d.b.a. The Marvlizer Company, Escondido, Calif. Filed Apr. 17, 1961.

MARVLIZER

For Domestic Food Mixers.
First use Jan. 5, 1952.

SN 119,353. Compagnie Francaise Thomson-Houston, Paris, France. Filed May 5, 1961.

STEMMATRON

Priority claimed under Sec. 44(d) on French Reg. No. 492,382, dated Dec. 8, 1960 (Paris); Natl. Inst. No. 154,957.
For Electronic Tubes.

SN 119,536. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed May 8, 1961.

PURPLE PEEPER

For Flame Sensing Device Utilizing Ultraviolet Rays.
First use July 5, 1960.

SN 119,616. Federal Pacific Electric Company, Newark, N.J. Filed May 9, 1961.

ECONOLIM

Owner of Reg. Nos. 101,568, 583,418, and others.
For Electrical Fuses.
First use Jan. 17, 1961.

SN 119,678. Circle F Mfg. Co., Trenton, N.J. Filed May 10, 1961.

NO-KLIK JUNIOR

Owner of Reg. No. 649,247.
For Manually Operated, General Purpose A.C. Snap Switches.
First use May 4, 1961.

SN 119,788. Northern Electric Company, Chicago, Ill. Filed May 11, 1961.

COMET

For Electric Bed Coverings.
First use Mar. 29, 1961.

SN 119,815. Towson Laboratories, Inc., Towson, Md. Filed May 11, 1961.

CAPCODER

For Electronic Converters.
First use Apr. 5, 1961.

SN 119,884. Mueller Electric Company, Cleveland, Ohio. Filed May 12, 1961.

MICRO-GATOR

Owner of Reg. No. 618,964.
For Electrical Connecting Clips.
First use Apr. 24, 1961.

SN 120,224. Radex Corporation, Chicago, Ill. Filed May 17, 1961.

HAPPY IONS

For Negative Ionizer.
First use May 10, 1961.

SN 120,716. General Electric Company, Pittsfield, Mass. Filed May 24, 1961.

VOLT-PAC

For Variable Transformers.
First use on or about Apr. 18, 1961.

SN 122,534. Interelectronics Corporation, New York, N.Y. Filed June 21, 1961.

INTREX

For Power Supplies, Generators, Inverters, Amplifiers, Battery Chargers, and Batteries.
First use on or about Nov. 15, 1949.

SN 122,537. Interelectronics Corporation, New York, N.Y. Filed June 21, 1961.

INTRON

For Power Supplies, Generators, Inverters, Amplifiers, Battery Chargers, and Batteries.
First use on or about Nov. 15, 1949.

SN 122,570. Sonotec, Incorporated, Santa Ana, Calif. Filed Mar. 23, 1961.

Langevin

Owner of Reg. No. 662,508.
For Amplifiers, Power Supplies, Equalizers, Attenuators, Knobs, Dials, Panels, Chassis, Racks, Filters, Complete Studio Consoles, Public Address Systems, and Related Audio Equipment and Components Thereof.
First use June 1948.

SN 123,592. American General Supply Corp., New York, N.Y. Filed July 10, 1961.

A.G.S.

For Two-Way Citizen's Band Radio.
First use Mar. 1, 1961.

SN 123,615. Communications Control Corporation, Van Nuys, Calif. Filed July 10, 1961.



For Electronic Circuits.
First use Sept. 26, 1960.

SN 126,064. Metro-Goldwyn-Mayer British Studios Limited, Boreham Wood, England. Filed July 24, 1961.

AUTOMOTION

Owner of British Reg. No. 799,124, dated Dec. 11, 1959.
For Sound Recording and Reproducing Apparatus and Instruments.

Class 22—Games, Toys, and Sporting Goods

SN 97,516. Plastilite Corporation, Omaha, Nebr. Filed May 19, 1960.

MINNO THERM

For Minnow Bucket.
First use Dec. 30, 1958.

SN 116,091. Toymaker Incorporated, Chicago, Ill. Filed Mar. 20, 1961.

SCREWBALLS

For Toys in the Form of Hollow Balls With Permanent Magnets Therein.
First use Oct. 28, 1959.

SN 116,182. Alexander Doll Company Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Mar. 22, 1961.

CHATTERBOX

For Dolls.
First use Mar. 16, 1961.

SN 116,315. Kiddie Brush & Toy Co., Inc., Janesville, Mich. Filed Mar. 23, 1961.

PERKY PINTO

The term "Pinto" is disclaimed apart from the mark.
For Toy Horses.
First use in the year 1958.

SN 116,616. Acme Tackle Company, Providence, R.I. Filed Mar. 28, 1961.

K. O. WOBBLER

No claim of exclusive right is made to "Wobbler" as used on fish lures.
For Fish Lures.
First use Dec. 1, 1954.

SN 116,794. Bankers Utilities Company, South San Francisco, Calif. Filed Mar. 30, 1961.

ADD O BANK

No claim of exclusive right is made to "Bank" as used on savings banks.
For Portable Savings Banks.
First use in 1938.

SN 117,072. Wham-O Manufacturing Company, San Gabriel, Calif. Filed Apr. 3, 1961.

WHAM-O

For Toys, Equipment for Playing Games, and Sporting Goods—Namely, Slingshots, Flying Saucers, Golf Practice Balls, Plastic Boats, Bows, Paddle Game Equipment, Boomerangs, and Hoops.
First use at least as early as 1948 on slingshots.

SN 118,521. Waltz Manufacturing Corporation, Dayton, Ohio. Filed Apr. 24, 1961.

GINGERBREAD HOUSE

No claim of exclusive right is made to "House" as used on a child's playhouse, apart from the mark as shown.
For Child's Playhouse.
First use Nov. 2, 1960.

SN 119,283. The Hubley Manufacturing Company, Lancaster, Pa. Filed May 4, 1961.

THE RED FOX MISSILE

No claim of exclusive right is made to "Missile" when applied to projectile firing toy guns.
For Projectile Firing Toy Guns.
First use Mar. 20, 1961.

SN 121,180. The Enterprise Manufacturing Company, Akron, Ohio. Filed June 1, 1961.

GALAXIE

For Fishing Reels.
First use Aug. 22, 1960.

SN 121,181. The Enterprise Manufacturing Company, Akron, Ohio. Filed June 1, 1961.

JUPITER

For Fishing Reels.
First use Aug. 22, 1960.

SN 121,325. Seneca Tackle Co., Inc., New York, N.Y. Filed June 2, 1961.

LITTLE CLEO

For Fish Lures.
First use Feb. 1, 1953.

SN 121,833. John E. Lewis, Phoenix, Ariz. Filed June 12, 1961.

RIB-BONA-POI

For Toy, Comprising a Pair of Swingable Cords Having Ribboned Weights on One End and Tassel Handles on the Other End.
First use Mar. 21, 1961.

SN 122,104. Norstan Research & Development Company, Minneapolis, Minn. Filed June 15, 1961.

NORSTAN

For Coin Operated Amusement Device Which When in Operation Simulates a Helicopter in Flight.
First use Aug. 1, 1960.

SN 123,951. Stephen J. Vranes, Salt Lake City, Utah. Filed June 12, 1961.

HOPPY TAW

Applicant disclaims the use of the word "Taw" apart from the mark as used.
For Rubber Disk Used in Children's Games and in Playing Hopscotch and Other Similar Games.
First use Sept. 1, 1953.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 73,420. Nyloncraft, Inc., Mishawaka, Ind. Filed May 11, 1959.

NYLONCRAFT

For Nylon Gears, Bearings, Pulleys, Sheaves, Bushings, and Shaft Coupling Parts.
First use Oct. 15, 1956.

SN 108,144. Chas. H. Stehling Company, Milwaukee, Wis. Filed Nov. 9, 1960.

TURBINE

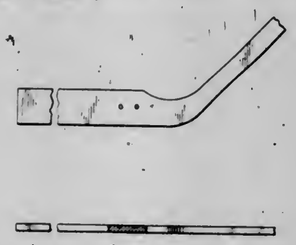
For Sewer Cleaning Equipment Including Stoppage Drags, Sewer Brushes, Derrick Booms, Portable Power Drives, Windlasses, Sewer Braces, Cable Guides, Guide Jacks, Cleaning Cables, Root and Sand Buckets, Flushing Units, Harpoons, Rods and Rod Pushers, Sewer Hogs, Self-Propelling Nozzles, Ferrets, and Related Accessories and Controls.
First use June 18, 1953.

SN 108,858. AEI-Birlec Limited, London, England. Filed Nov. 22, 1960.

AUTOSORBER

Priority claimed under Sec. 44(d) on British Reg. No. B810,653, dated Sept. 13, 1960.
For Apparatus for Treating Vapours or Gases or Mixtures Thereof.

SN 110,802. The Torrington Company, Torrington, Conn. Filed Dec. 23, 1960.



No claim is made to the portion of the goods shown in the drawing except as illustrating the general location of the mark and its configuration. Specifically the mark consists of two small depressions impressed longitudinally in spaced arrangement along one side of the shank of the needle. Owner of Reg. No. 231,838.
For Latch Knitting Needles, Spring Beard Needles and Thread Guides.
First use on or about Jan. 1, 1960.

SN 111,368. Van Norman Industries, Inc., Springfield, Mass. Filed Jan. 5, 1961.

LECTRO-CAM

For Grinding Machines.
First use on or about Dec. 2, 1960.

SN 111,507. Kulicke and Soffa Manufacturing Company, Philadelphia, Pa. Filed Jan. 9, 1961.



The drawing is lined for the color red.
For Automatic and Semi-Automatic Manipulating, Positioning, Measuring, Dispensing and Bonding Instruments and Machines for Rapid Assembly of Semi-Conductor Components, Transistors and Micro-Modules; Automatic and Semi-Automatic Paper and Cardboard Dispensing, Folding, Cutting and Gluing Apparatus; Precision Metal Working and Forming Machines; and Materials Handling Equipment—Namely, Automatic Carton and Shipping Case Opening, Loading and Unloading Machines, Conveyors, Inverters, Cleaners, Sanitizers and Renovators.
First use on or about Mar. 15, 1957.

SN 111,773. Walbro Corporation, Cass City, Mich. Filed Jan. 12, 1961.

PULSYCLE

For Fuel Pumps.
First use Feb. 19, 1960.

SN 112,084. Superior Electric Products Corp., Cape Girardeau, Mo. Filed Jan. 18, 1961.

SUPERLECTRIC

For Can Openers.
First use Sept. 30, 1960.

SN 112,563. Pennsalt Chemicals Corporation, Philadelphia, Pa. Filed Jan. 26, 1961.

AGI-KLEAN

For Metal Preparation Equipment.
First use May 11, 1959.

SN 112,749. Mohawk Tools, Inc., Montpelier, Ohio. Filed Jan. 30, 1961.

SIZE-OPTIONAL

Owner of Reg. No. 418,012.
For Rotary Cutting Tools.
First use Aug. 1, 1954.

SN 113,580. Denton W. Underhill, d.b.a. Underhill Mfg. Co., Glendale, Calif. Filed Feb. 13, 1961.

LITTLE JOE

For Sleeving Cutters for Cutting Predetermined Lengths of Insulative Sleeving, Circuit Board Holders for Holding Electrical or Electronic Circuit Boards During Assembly of Components Thereupon, and Connector Holders for Holding Cylindrical and Similar Electrical Connections During Wiring Thereof.
First use Nov. 12, 1956.

SN 114,596. Borg-Warner Corporation, Chicago, Ill. Filed Feb. 28, 1961.

BRAKE-MATE

For Hydraulic Retarders for Controlling the Speed of Vehicles and Parts Thereof for Replacement and Repair.
First use on or prior to Dec. 5, 1960.

SN 114,639. The Planet Products Corporation, Chicago, Ill. Filed Feb. 28, 1961.



Applicant disclaims the word "Pumps," "Universal" and "Use" apart from the mark as shown.
For Gear Pumps, Centrifugal Pumps and Impeller Pumps.
First use Dec. 7, 1960.

SN 114,661. Wheel Trueing Tool Company, Detroit, Mich. Filed Feb. 28, 1961.

TRU-VAC

For Vacuum Operated Holding Pads for Anchoring Portable Drilling Machines.
First use September 1960.

SN 116,722. Calmer P. Hanson, d.b.a. Go-Byk Industries, Rothsay, Minn. Filed Mar. 29, 1961.

GO-BYK

For Bicycle Motor Kit.
First use July 18, 1960.

SN 116,782. American Fastener Corporation, Manasquan, N.J. Filed Mar. 30, 1961.

AMFAST

For Machines for Affixing Fasteners to Bags and Casing Closures.
First use Feb. 1, 1961.

SN 117,153. The Van Dorn Iron Works Company, Cleveland, Ohio. Filed Apr. 3, 1961.

VAN DORN

For Plastic Injection Molding Machines and Presses and Parts, Accessories, and Controls Therefor.
First use at least 1946.

SN 117,782. Imperial International Corp., New York, N.Y. Filed Apr. 13, 1961.

STARELLE

For Stainless Steel Flatware.
First use Jan. 3, 1961.

SN 117,954. Chotěborské Kovodelné Závody, Národní Podnik, Chotěbor, Czechoslovakia. Filed Apr. 17, 1961.



Owner of Czechoslovakian Reg. No. 153,846, dated May 30, 1959.
For Machines and Apparatus for the Bottling Industry Including Machines and Apparatus for Washing, Filling, Sealing and Branding of Bottles for Beer, Milk, Wine, Mineral Water, Soda Water and Fruit Juices; Machines and Apparatus for the Manufacture of Soda Water; Machines, Apparatus and Utensils for the Dairy and Food Industry Including Vessels, Tanks, Pasteurizing Apparatus, Coolers, Churns, Pumps, Cleaning Installations, Working Tables, Cheesetanks, Paraffin Coating Machines, Cocoa Mixing Machines, Homogenizing Apparatus, Centrifuges, Filter Presses; Welding, Cutting and Soldering Apparatus; Stop Valves; Reduction Valves; Oxygen Cutting Machines; Mandrels.

SN 118,339. Joseph Dixon Crucible Company, Jersey City, N.J. Filed Apr. 21, 1961.

LOCK MATE

For Sprayers for Powdered Graphite.
First use Mar. 28, 1961.

SN 119,571. Joseph A. Stachon, d.b.a. Vaclipper Co., Napa, Calif. Filed May 8, 1961.

VACLIPPER

For Vacuum Operated Hair Clipping Apparatus.
First use Apr. 1, 1961.

SN 119,870. Howard Rotavator Company, Inc. of Illinois, Harvard, Ill. Filed May 12, 1961.

UNIMIX

For Rotary Soil Working Machine.
First use Apr. 28, 1961.

SN 120,047. Wayne Manufacturing Company, Pomona, Calif. Filed May 15, 1961.

WAYNE

For Powered Vehicles Comprising Indoor and Outdoor Improved Area Sweeping Machines and Cleaning Machines.
First use Apr. 17, 1947.

SN 120,713. The Firestone Tire & Rubber Company, Akron, Ohio. Filed May 24, 1961.

FairLawn

Applicant disclaims the word "Lawn" apart from the complete mark shown. Owner of Reg. No. 381,100.
For Power Lawn Mowers.
First use May 4, 1961.

SN 120,722. Hughes Tool Company, Houston, Tex. Filed May 24, 1961.

HUGHESARC

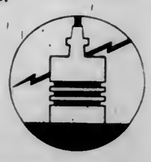
Owner of Reg. Nos. 599,602 and 698,951.
For Hardfacing on Tool Joints.
First use May 12, 1961.

SN 121,249. Admos, Inc., Warren, Mich. Filed June 2, 1961.

ADMOS

For Automatic Warehouse Equipment—Namely, Loaders; Article Release Mechanisms; Conveyors, Including Skate Wheel, Roller, Live Roller, Belt, Chute, and Extension Types; and Parts and Components of the Foregoing.
First use May 12, 1960.

SN 122,353. Outboard Marine Corporation, Waukegan, Ill. Filed June 19, 1961.



For Internal Combustion Engines.
First use Apr. 28, 1961.

SN 123,181. Chalmers F. Cover, d.b.a. Cover Lumber & Supply Company, Cortland, Ohio. Filed June 30, 1961.

POROUSFILL

For Machine for Installing Underground Drainage Channels.
First use May 23, 1961.

SN 123,193. Gorham Corporation, Providence, R.I. Filed June 30, 1961.

SEA STAR

For Stainless Steel Table Flatware and Table Cutlery.
First use May 26, 1961.

SN 123,422. Hahn, Inc., Evansville, Ind. Filed July 5, 1961.

SABRE

For Power Operated Garden Tillers.
First use on or about Sept. 1, 1959.

SN 123,559. Oneida Ltd., Oneida, N.Y. Filed July 7, 1961.

ALAMEDA

For Stainless Steel Flat Tableware.
First use Apr. 28, 1961.

SN 123,621. Diamond Saw Works, Inc., Chaffee, N.Y. Filed July 10, 1961.

MEDIA

For Saw Blades.
First use Aug. 1, 1960.

SN 123,658. Lehigh, Inc., Easton, Pa. Filed July 10, 1961.

Le-Hy

CHECKTROL

For Air Cylinder and Valve Combinations.
First use June 2, 1961.

SN 123,662. Lehigh, Inc., Easton, Pa. Filed July 10, 1961.

The JOCKEY

For Air Cylinder and Valve Combinations.
First use Feb. 2, 1961.

SN 124,177. Dover Corporation, Washington, D.C. Filed July 18, 1961.

DOVER

Owner of Reg. No. 694,905.
For Passenger and Freight Elevators and Lifts for Residence, Commercial and Industrial Use, and Parts and Components Thereof.
First use July 1, 1960.

Class 24 — Laundry Appliances and Machines

SN 116,629. Elfstrom Corporation, Los Angeles, Calif. Filed Mar. 28, 1961.

E

For Washing Machine Replacement Parts Such as Pumps, Gaskets, Hoses, Molded Parts, and Diaphragms.
First use Dec. 18, 1960.

Class 26 — Measuring and Scientific Appliances

SN 78,086. General Time Corporation, New York, N.Y., assignee of Stromberg Time Corporation, New York, N.Y. Filed July 20, 1959.

TRANSACTER

For Data Communication Systems, Apparatus for Data Collection, Data Transmitters, Data Recorders, and Punched Cards for Same.
First use Dec. 3, 1954.

SN 93,717. Earl F. Seymour, d.b.a. Seymour's, New York, N.Y. Filed Mar. 25, 1960.

DORYT

For Optical Lenses.
First use Dec. 9, 1954.

SN 118,426. Forté-Fairbairn Inc., Needham Heights, Mass. Filed Apr. 24, 1961.

Forté

For Electronic Moisture Content Analyzer.
First use in July 1958.

SN 118,648. Charles Bruning Company, Inc., Mount Prospect, Ill. Filed Apr. 26, 1961.

REVOLUTE STARLET

Owner of Reg. Nos. 505,207, 638,759, and others.
For Diazo Machines for Exposing and Developing White Prints, Brown-Line Prints, and Other Reproductions.
First use December 1960.

SN 121,610. Textron Inc., Rochester, N.Y. Filed June 7, 1961.

PEDIOPTIC

For Spectacle Frames.
First use Apr. 12, 1961.

SN 121,616. Will Corporation, Rochester, N.Y. Filed June 7, 1961.

BIOSONIK

For Apparatus for Laboratory Use for Ultrasonic Disruption of Biologic Cells.
First use May 1, 1961.

SN 122,536. Interelectronics Corporation, New York, N.Y. Filed June 21, 1961.

INTREX

For Electronic Measuring Apparatus—Namely, Frequency, Voltage and Current Meters, Electrical Thermometers, Audiometric Apparatus, Terrestrial Sensing Apparatus, Gas-Concentration Determining and Analyzing Apparatus.
First use on or about Nov. 15, 1949.

SN 122,538. Interelectronics Corporation, New York, N.Y. Filed June 21, 1961.

INTRON

For Electronic Measuring Apparatus—Namely, Frequency, Voltage and Current Meters, Electrical Thermometers, Audiometric Apparatus, Terrestrial Sensing Apparatus, Gas-Concentration Determining and Analyzing Apparatus.
First use on or about Nov. 15, 1949.

SN 122,675. Allen Electric and Equipment Company, Kalamazoo, Mich. Filed June 23, 1961.

ALLEN-TRONIC

Owner of Reg. Nos. 530,894, 548,924, and 558,995.
For Apparatus for Testing, Analyzing and Synchronizing Internal Combustion Engines, Ignition Systems, Motors, Batteries, Distributors, Voltage Regulators, Alternators, and Generators.
First use Jan. 13, 1961.

Class 27 — Horological Instruments

SN 87,186. Bulova Watch Company, Inc., Flushing, N.Y. Filed Dec. 14, 1959.



For Watches.
First use Sept. 24, 1959.

SN 110,993. Girard Perregaux & Cie, S.A., La Chaux-de-Fonds, Switzerland. Filed Dec. 29, 1960.

GIRARD PERREGAUX

Owner of U.S. Reg. Nos. 522,620, 592,182, and 644,713.
For Battery Operated Electric Watches.
First use Oct. 1, 1960; in commerce Oct. 1, 1960.

SN 119,898. Société des Anciens Etablissements Duverdrey & Bloquel, St. Nicolas-d'Aliermont, Seine Maritime, France. Filed May 12, 1961.



Priority claimed under Sec. 44(d) on French Reg. No. 395, dated Nov. 29, 1960 (Eu and Treport); Natl. Inst. No. 156,015.
For Clocks, Watches and Parts Thereof.

SN 122,220. Edward J. Schermett, Syracuse, N.Y. Filed June 16, 1961.



For Stop Watches.
First use June 9, 1961.

Class 28 — Jewelry and Precious-Metal Ware

SN 90,167. David Karp Company, Inc., d.b.a. Hand Kraft, New York, N.Y. Filed Feb. 2, 1960.

UNITED STATES 50

For Finger Rings.
First use Jan. 20, 1960.

SN 117,994. M. Edward Pope, d.b.a. Eddie Pope & Co., Altadena, Calif. Filed Apr. 17, 1961.

BARJON

For Jewelry—Namely, Necklaces, Earrings, Tie Pins, Cuff Links, Pendants, Bracelets, Pins and Finger Rings.
First use Feb. 6, 1961.

SN 121,132. Harold J. Searer, d.b.a. Akron Linen Products Company, Akron, Ohio. Filed May 31, 1961.

SINGAPORE

Owner of Reg. No. 389,960.
For Wrist Watch Straps Made of Leather, Linen, or Molded Plastic.
First use in or about October 1932.

Class 29 — Brooms, Brushes, and Dusters

SN 122,327. Lactona Incorporated, St. Paul, Minn. Filed June 19, 1961.

RAWHIDE

For Hair Brushes.
First use Apr. 24, 1961.

Class 31 — Filters and Refrigerators

SN 114,319. Jesse W. Eakins Company, Detroit, Mich. Filed Feb. 24, 1961.

FILTREAT

For Mechanical and Chemical Filters for Fluids.
First use Dec. 15, 1960.

SN 117,298. The Perm-A-Soft Co., Minneapolis, Minn. Filed Apr. 6, 1961.

PERM-A-SOFT

For Water Conditioner.
First use July 18, 1960.

SN 118,816. The C. Schmidt Company, Cincinnati, Ohio. Filed Apr. 27, 1961.

THESCO Schmidt

Owner of Reg. No. 153,850.
For Refrigerators, Refrigerated Display Cases, Refrigerated Cabinets, Refrigerated Lockers Which Hold Perishables at Thermostatically Controlled Temperatures and Humidities Which Are Used in the Display, Transportation, and Storage of Food and Non-Food Products Such as Bakery Goods, Ice Cream Products, Freezer and Refrigerator Products, Blood Banks and Warming Ovens.
First use on or about Apr. 20, 1960.

Class 32 — Furniture and Upholstery

SN 114,008. King Fisher Mattress Co., Portland, Oreg. Filed Feb. 20, 1961.

BED O' FOAM

For Mattresses and Bed Springs.
First use Jan. 30, 1961.

SN 117,311. The Stanley Works, New Britain, Conn. Filed Apr. 6, 1961.

STANLEY

For Furniture Legs, Shelving and Furniture Parts.
First use in or about 1954.

SN 118,278. The P & P Chair Company, Asheboro, N.C. Filed Apr. 20, 1961.

CAROLINA Rocker

No claim is made to the word "Rocker" as the name of the goods.
For Rocking Chairs.
First use Apr. 3, 1961.

SN 119,698. W. W. Holes Manufacturing Co., d.b.a. W. W. Holes Mfg. Co., St. Cloud, Minn. Filed May 10, 1961.

MAGIC-CIRCLE

For Turn-Table Merchandise Display Devices.
First use Jan. 11, 1961.

SN 120,001. Pen Dee, Incorporated, Portsmouth, Va. Filed May 15, 1961.

PEN DEE

For Crib Mattresses and Baby Pads.
First use Feb. 7, 1960.

SN 120,428. Herman Miller, Inc., Zeeland, Mich. Filed May 19, 1961.

CSS

Owner of Reg. No. 721,604.
For Tables, Racks, Cabinets and Other Office and Home Furniture Mounted on Supporting Poles.
First use July 13, 1959.

SN 121,355. Arthur F. Bregila, New York, N.Y. Filed June 5, 1961.

INTERPOLE

For Specially Mounted and Supported Articles of Furniture—Namely, Cabinets With or Without Shelves, Chests of Drawers, Bars, Desks, Stereo or Hi-Fi Sets, and Book Shelves.
First use during April 1960.

SN 123,502. Simmons Company, New York, N.Y. Filed July 6, 1961.

ALBUM

For Upholstered Furniture.
First use May 18, 1961.

SN 123,864. Borg-Warner Corporation, Chicago, Ill. Filed July 13, 1961.

INGERSOLL B-W PRODUCTS

BORG-WARNER

Owner of Reg. Nos. 513,546, 681,668, and others.
For Cabinets and Parts Thereof—Namely, Cabinet Frames, Panels, Drawers, Doors, and Case and Cradle Slides.
First use on or prior to Feb. 28, 1961.

SN 124,401. Allen Industries, Inc., Detroit, Mich. Filed July 21, 1961.

ALLENAIRE

For Mattress Pads and Resinated Cotton Products for Use in Padding, Cushioning, Insulating or the Like.
First use June 15, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 118,406. Brown Fintube Company, Elyria, Ohio. Filed Apr. 24, 1961.

BROWN FINTUBE

The word "Fintube" and the representation of the goods are disclaimed apart from the mark as shown.
For Heat Exchangers.
First use Mar. 25, 1961.

SN 124,176. Dover Corporation, Washington, D.C. Filed July 18, 1961.

DOVER

For Gas-Fired Wall Furnaces, Unit Heaters, Warm Air Furnaces, Room Heaters, and Fireplace Fixtures.
First use Sept. 19, 1960, on fireplace fixtures.

SN 124,488. April Showers Company, Inc., Washington, D.C. Filed July 3, 1961.

APRIL SHOWERS

Owner of Reg. No. 371,681.
For Evaporative Type Air Conditioning Roof Coolers.
First use June 1934.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 119,441. Tyler Manufacturing Co., Inc., Inglewood, Calif. Filed May 5, 1961.

PLUG-O-MATIC

For Tubeless Tire Repair Kit; Tire Repair Gun; Tire Repair Plugs and Tips; Tire Repair Probe; and Tire Repair Cement.
First use Dec. 1, 1960.

SN 124,175. Dover Corporation, Washington, D.C. Filed July 18, 1961.

DOVER

Owner of Reg. No. 694,905.
For Pressure Sealing Devices, Such as Rod Packing Rings, Sealing Rings, and Piston Rings.
First use Dec. 12, 1960.

Class 36 — Musical Instruments and Supplies

SN 122,350. Sonotec, Incorporated, Santa Ana, Calif. Filed June 8, 1961.

Langevin

Owner of Reg. No. 662,508.
For Music Amplifiers, Power Supplies, Equalizers, Attenuators, Knobs, Dials, Panels, Chassis, Racks, Filters, and Related Musical Equipment and Components Thereof, and in Musical Instruments Such as Electronic Organs and Wired Music Systems.
First use June 1948.

Class 37 — Paper and Stationery

SN 83,487. Dixie Wax Paper Company, Dallas, Tex. Filed Oct. 19, 1959.

Auto-Pac DIXIE

For Continuous Webs of Printed Waxed Paper for Use by Consumers in Forming Bags for Packaging Foods.
First use Dec. 1, 1958.

SN 100,666. National Research Corporation, Cambridge, Mass., assignee of Vaculite Corporation, Hamilton, Ohio. Filed July 11, 1960.

ALULENE

For Metallized Glassine Papers Sold in Bulk Quantities to Converters for Further Processing To Form Various Packaging Containers.
First use July 8, 1960.

SN 115,748. Wilson Jones Company, Chicago, Ill. Filed Mar. 15, 1961.

CHAMPION

For Catalog Binders.
First use 1929.

SN 115,749. Wilson Jones Company, Chicago, Ill. Filed Mar. 15, 1961.

BLACKHAWK

For Post Binders.
First use 1936.

SN 121,413. Natone Company, Los Angeles, Calif. Filed June 5, 1961.

Martha Lorraine Face Savers

Consent of Martha Lorraine Stolaroff is of record. Owner of Reg. No. 612,518.
For Facial Tissues.
First use Apr. 14, 1961.

SN 122,747. Ardlee Service, Inc., New York, N.Y. Filed June 26, 1961.

MEMOLOG

For Memorandum Pads.
First use Jan. 24, 1961.

SN 124,105. Ludlow Corporation, Needham Heights, Mass. Filed July 17, 1961.

SPARKLEKOTE

Owner of Reg. No. 389,946.
For Label Papers.
First use prior to July 17, 1940.

SN 124,264. Eagle Pencil Company, Danbury, Conn. Filed July 19, 1961.

SCHOLAR

Owner of Reg. No. 48,097.
For Ball Point Pens.
First use Mar. 6, 1961.

SN 124,342. Crown Zellerbach Corporation, San Francisco, Calif. Filed July 20, 1961.

THE EMBLEM OF FINEST QUALITY

Applicant disclaims "The Emblem of Finest Quality" apart from the mark as shown. Owner of Reg. Nos. 433,968 and 593,901.
For Paper in Jumbo Rolls.
First use Feb. 23, 1954.

SN 127,079. Binney & Smith Inc., New York, N.Y. Filed Sept. 1, 1961.

E-Z-SYTE

For Chalk.
First use July 18, 1961.

SN 127,254. Paper Mate Manufacturing Company, Santa Monica, Calif. Filed Sept. 5, 1961.

PIGGY-BACK

Owner of Reg. No. 644,751.
For Ball-Point Pens.
First use July 11, 1961.

SN 127,407. Jacksonville Paper Company, d.b.a. Jacksonville Paper Co., Jacksonville, Fla. Filed Sept. 7, 1961.

WUNDA WEAVE

For Bathroom Tissue.
First use 1948.

SN 127,650. Revolving Charge Associates, Palos Verdes Estates, Calif. Filed Sept. 11, 1961.

CREDAMATIC

For Printed Business Forms for Use in Credit Transactions.
First use Aug. 10, 1961.

Class 38 — Prints and Publications

SN 83,155. Alfred J. Zaebringer, d.b.a. American Rocket Company, Wyandotte, Mich. Filed Oct. 12, 1959.

ROCKET ABSTRACTS

Owner of Reg. No. 705,254.
For Publications Listing and Describing Literature Relating to Rockets.
First use Apr. 22, 1959.

SN 108,152. Artistic Card Publishing Corp., Elmira, N.Y. Filed Nov. 10, 1960.

NAPOLEON PRINTS

The word "Prints" is disclaimed apart from the mark as shown.
For Greeting Cards.
First use Sept. 1, 1956.

SN 111,344. James T. Moore, d.b.a. Scriptorium, Bethlehem, Conn. Filed Jan. 5, 1961.

SCRIPTORIUM

For Music Study Books.
First use Sept. 15, 1949.

SN 114,789. Julius Pollak & Sons, Inc., Long Island City, N.Y. Filed Mar. 2, 1961.

PEG PACK

For Packaged Christmas Cards.
First use Aug. 1, 1960.

SN 117,125. Nicholas International Limited, Toronto, Ontario, Canada. Filed Apr. 4, 1961.

Nicholas **Bullet**

For Product News Bulletin.
First use Mar. 1, 1960.

SN 117,827. Worley Publishing Co., Inc., New York, N.Y. Filed Apr. 13, 1961.

Atlas
THE MAGAZINE OF THE WORLD PRESS

Applicant disclaims the words "Magazine of the World Press" apart from the mark shown.
For Monthly Magazine.
First use Mar. 6, 1961.

SN 121,024. Northern Pacific Railway Company, St. Paul, Minn. Filed May 29, 1961.

The
NORTHWEST

The drawing is lined for red.
For Company Magazine Concerned With Natural Resources and Their Development.
First use Aug. 1, 1927.

SN 122,135. Southern Publishing Company, College Park, Ga. Filed June 15, 1961.

Southern BUILDER

Owner of Reg. No. 672,647.
For Trade Magazine.
First use Sept. 10, 1958.

SN 123,827. New York Herald Tribune Inc., New York, N.Y. Filed July 12, 1961.

Let's Talk Business

For Syndicated Column Feature.
First use May 15, 1961.

SN 123,853. Admiral Transit, Inc., St. Paul, Minn. Filed July 13, 1961.

DIAL-A-ROUTE

For Chart Listing of Motor Freight Terminals.
First use May 15, 1961.

SN 123,933. Sun Chemical Corporation, New York, N.Y. Filed July 13, 1961.

COLOR-MISER

For Charts for Assisting the Calculation of the Amount of Newspaper Printing Ink To Be Employed in Printing.
First use July 3, 1961.

SN 123,944. Where What When, Inc., Detroit, Mich. Filed July 13, 1961.

where

For Weekly Magazines Distributed in Leading Hotels and Motels Primarily Directed to Traveler Guests.
First use Jan. 1, 1936.

SN 124,324. B & B Business Service, Roosevelt, N.Y. Filed July 20, 1961.



For Cards for Soliciting Donations to Charity.
First use July 10, 1961.

SN 124,346. Dreyfus & Co., New York, N.Y. Filed July 20, 1961.



Without waiver of common law rights, applicant disclaims the words "With the Charts" apart from the mark as shown.
For Weekly Printed Report of Financial Chart Opinion.
First use Oct. 24, 1960.

SN 124,398. The Washington Post Company, Washington, D.C. Filed July 20, 1961.

Potomac

For Sunday Magazine Supplement to a Newspaper.
First use Feb. 5, 1961.

SN 124,441. Holiday Inns of America, Inc., Memphis, Tenn. Filed July 21, 1961.



Owner of Reg. Nos. 592,539 and 708,521.
For Road Atlas and Travel Guide.
First use June 28, 1961.

SN 124,504. Biddle Trade Publishing Co., d.b.a. Biddle Trade Publishing Company, Los Angeles, Calif. Filed July 24, 1961.

TRU-AC

For Periodically Issued Lists of Current Selling Prices of Goods That Are Sold by Suppliers of Building Materials.
First use Oct. 27, 1960.

SN 124,545. Harvey Features Syndicate, New York, N.Y. Filed July 24, 1961.

Richie Rich
THE POOR LITTLE RICH BOY

Owner of Reg. No. 720,703.
For Comic Periodical.
First use June 15, 1960.

SN 124,669. Newspaper Enterprise Association, Inc., Cleveland, Ohio. Filed July 25, 1961.

TIME OF YOUR LIFE

For Newspaper Column.
First use Apr. 28, 1961.

SN 126,065. Metro-Goldwyn-Mayer British Studios Limited, Boreham Wood, England. Filed July 24, 1961.

AUTOMOTION

Owner of British Reg. No. 799,124, dated Dec. 11, 1959.
For Cinematographic Films Prepared for Exhibition.

SN 129,791. Polaroid Corporation, Cambridge, Mass. Filed Oct. 12, 1961.

POLACOLOR

For Photographic Prints.
First use during the fall of 1947.

Class 39—Clothing

SN 89,314. Helene Kravadze Williams, Washington, D.C. Filed Jan. 19, 1960.

POSTURE + PLUS

For Shoulder Strap Attachments for Brassieres and Foundation Undergarments Sold Either Separately or as Part of a Finished Brassiere or Undergarment.
First use Jan. 4, 1960.

SN 89,813. Sondra Manufacturing Co. Inc., New York, N.Y. Filed Jan. 27, 1960.

Kotton-aire by Dreamies

Owner of Reg. Nos. 396,280 and 651,778.
For Nightgowns, Pajamas, Slips, Shorties, Panties Useful as Nightwear and Underwear.
First use October 1955; 1938 as to "Dreamies."

SN 91,410. The May Department Stores Company, St. Louis, Mo. Filed Feb. 23, 1960.

Prima Donna

For Women's Shoes.
First use Aug. 2, 1957.

SN 92,084. Clark Knitting Mills, Inc., Union City, N.J. Filed Mar. 3, 1960.

JODY LYNN

Owner of Reg. No. 660,375.
For Sweaters.
First use Oct. 25, 1955.

SN 92,812. Sears, Roebuck and Co., Chicago, Ill. Filed Mar. 14, 1960.

HOALOHA

For Men's, Women's and Children's Outer Wearing Apparel—Namely, Sportshirts and Muumuus.
First use on or about Mar. 10, 1950.

SN 95,210. Levi Strauss & Company, San Francisco, Calif. Filed Apr. 15, 1960.

ESTER-X

For Finish for Fabric Made Up Into Apparel—Namely, Men's, Children's, and Ladies' Jeans and Jackets.
First use Apr. 29, 1959.

SN 95,404. Wolverine Shoe and Tanning Corporation, Rockford, Mich. Filed Apr. 19, 1960.

WOLVERINE

For Goods Consisting Chiefly of Leather—Namely, Shoes, Gloves, Hats and Caps for Men, Women, and Children.
First use Nov. 1, 1913.

SN 105,726. Deering Milliken, Inc., New York, N.Y. Filed Oct. 4, 1960.

BOWLONS

For Bowling Costumes Consisting of Sport Shirts and Blouses and Matching Slacks, Skirts and Shorts.
First use June 27, 1960.

SN 108,012. Apex Dress Co., Inc., New York, N.Y. Filed Nov. 8, 1960.

an Apex Fashion

No exclusive claim is made to the word "Fashion" apart from the mark as shown. Owner of Reg. Nos. 380,819 and 415,974.
For Ladies', Misses' and Juniors' Dresses and Suits.
First use Mar. 7, 1950.

SN 109,418. Jordan Manufacturing Corp., New York, N.Y. Filed Dec. 1, 1960.

NATURALLY YOURS BY SEA NYMPH

Owner of Reg. No. 435,285.
For Women's Bathing Suits and Swim Suits Having Built-In Brassieres.
First use Sept. 27, 1960.

SN 109,434. Ria Geopardi, Inc., New York, N.Y. Filed Dec. 1, 1960.

RIA GEOPARDI

Gertrude Beglinger, president of the applicant corporation, is now known as "Ria Geopardi."
For Women's and Men's Shoes, Hosiery, Lingerie, Dresses, Gloves, Scarves, Belts and Other Items of Apparel.
First use on or about Feb. 4, 1958.

SN 109,984. M'Lady Sportswear, Inc., Reading, Pa. Filed Dec. 9, 1960.

TEE N' TIDE

The word "Tee" is hereby disclaimed apart from the mark as shown.
For Women's Wear—Namely, Sweaters, Pants, Skirts, Shorts, Shirts, Dresses, Suits and Coats, and Men's Shirts.
First use Oct. 11, 1960.

SN 113,645. Judy Kent, Inc., New York, N.Y. Filed Feb. 14, 1961.

MELLOWOOL

For Yarns and Fabrics Made of Blended Wool, Acrylic and Nylon Fibers, and Sold in Wearing Apparel of All Kinds.
First use Jan. 23, 1961.

SN 114,318. Dixon-Bartlett Company, Baltimore, Md. Filed Feb. 24, 1961.

MAGIC THROAT

No claim is made to the word "Throat" apart from the mark as shown.
For Ladies' Shoes.
First use Jan. 24, 1961.

SN 116,329. Melville Shoe Corporation, New York, N.Y. Filed Mar. 23, 1961.

SNASUALS

For Men's, Women's, Boys' and Girls' Shoes, Hosiery and Casual Footwear.
First use Mar. 1, 1961.

SN 116,646. The Joseph & Feiss Company, Cleveland, Ohio. Filed Mar. 28, 1961.

DOUBLE TOPPER

Owner of Reg. No. 391,325.
For Men's and Boys' Overcoats and Topcoats.
First use on or about Aug. 27, 1940.

SN 118,700. Maidenform, Inc., New York, N.Y. Filed Apr. 26, 1961.

AMARYLLIS

For Foundation Garments, Particularly Brassieres.
First use Apr. 13, 1961.

SN 118,853. Artnell Company, Chicago, Ill. Filed Apr. 28, 1961.

SKI-MATES

For Ladies' and Children's Nightwear—Namely, Pajamas.
First use on or about Apr. 3, 1961.

SN 119,168. American Biltrite Rubber Co., Inc., Chelsea, Mass. Filed May 3, 1961.

DURATHANE

For Rubber Top Lifts and Heels.
First use Jan. 26, 1961.

SN 119,185. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed May 3, 1961.

CANTROL

For Men's and Boys' Outer Garments—Namely, Suits, Slacks and Trousers.
First use Apr. 27, 1961.

SN 119,217. McCrory Corporation, New York, N.Y. Filed May 3, 1961.

NATIONAL CLUB

For Men's Dress and Negligee Shirts, Knitted and Basque Shirts, Hats and Sports Apparel—Namely, Shirts, Polo Shirts, Bush Coats, Sweaters and Jerseys, Slacks and Jackets.
First use Jan. 20, 1938.

SN 124,852. John B. Stetson Company, Philadelphia, Pa. Filed July 27, 1961.

SIRTEX

For Bibs, Bib Covers, and Aprons.
First use June 8, 1961.

Class 40—Fancy Goods, Furnishings, and Notions

SN 94,811. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed Apr. 11, 1960.

FLORENCE

Owner of Reg. No. 158,437.
For Hair Brush and Comb Sets.
First use Mar. 9, 1960.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 94,048. Chatham Manufacturing Company, Elkin, N.C. Filed Mar. 31, 1960.

KENT

For Blankets.
First use Mar. 25, 1960.

SN 124,235. J. P. Stevens & Co., Inc., New York, N.Y. Filed July 18, 1961.

CREPIMA

For Cotton Goods in the Piece.
First use May 15, 1961.

SN 124,853. John B. Stetson Company, Philadelphia, Pa. Filed July 27, 1961.

SIRTEX

For Towels, Pillow Covers, Sheets, and Table Covers.
First use June 8, 1961.

SN 124,948. Shirley Fabrics Corporation, New York, N.Y. Filed July 28, 1961.

LIGHTNING

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres and Mixtures Thereof.
First use Aug. 1, 1960.

SN 125,103. Shirley Fabrics Corporation, New York, N.Y. Filed July 31, 1961.

ELEGY

For Textile Fabrics in the Piece of Cotton, Rayon, Wool, Synthetic Fibres, and Mixtures Thereof.
First use July 11, 1960.

Class 43 — Thread and Yarn

SN 116,785. Arkwright, Incorporated, New York, N.Y. Filed Mar. 30, 1961.

FIRST LADY

Owner of Reg. Nos. 301,346, 689,143, and 403,146.
For Thread and Yarns, Including Wool, Cotton, and Synthetic Fibers for Crocheting, Sewing, and Knitting.
First use Jan. 1, 1930.

SN 122,212. National Plastic Products Company, Inc., Odenton, Md., by assignment and change of name from The National Plastic Products Company, Odenton, Md. Filed June 16, 1961.

Copéy

For Polyester Filaments and Yarns.
First use May 16, 1961.

Class 44 — Dental, Medical, and Surgical Appliances

SN 110,654. B-D Laboratories, Inc., Rutherford, N.J. Filed Dec. 22, 1960.

SWUBE

Owner of Reg. No. 704,349.
For Disposable Culture Applicator and Container Therefor.
First use on or about January 1958.

SN 111,419. Medco Products Company, Inc., Tulsa, Okla. Filed Jan. 6, 1961.

Kol-therm

For Radiation Appliance Mechanism for Electrical Medical Therapy Apparatus of the Floor Stand Type for Professional Use.
First use April 1960.

SN 112,352. Atlantic Surgical Company, Inc., Rosedale, N.Y. Filed Jan. 24, 1961.

O'DOR-LESS

No claim is made to the representation of the goods, apart from the mark shown.
For Surgical Drainage Tubes and Like Post Operation Appliances.
First use Nov. 30, 1960.

SN 113,933. Lohmann Kommanditgesellschaft, Fahr, Rhineland, Germany. Filed Feb. 17, 1961.

VISCOTEX

Owner of German Reg. No. 698,291, dated Dec. 14, 1956.
For Fabric-Like Fibre Structures as Component of Bandages and Wound Dressings.

SN 120,347. The Seamless Rubber Company, New Haven, Conn. Filed May 18, 1961.

MADERITE

Owner of Reg. Nos. 116,687, 322,113, and others.
For Surgeons' Gloves Made of Rubber.
First use Mar. 24, 1961.

SN 123,892. The Holter Research Foundation, Helena, Mont. Filed July 13, 1961.

ARRHYTHMIAGRAPH

For Electrocardiograph Apparatus—Namely, for Presenting a Quantitative Record of Heart Beats Produced by an Electrocardiograph and Used in Conjunction Therewith.
First use Sept. 9, 1960.

SN 123,893. The Holter Research Foundation, Helena, Mont. Filed July 13, 1961.

AVSEP

For Electrocardiograph Apparatus—Namely, for Presenting a Quantitative Record of Heart Beats Produced by an Electrocardiograph and Used in Conjunction Therewith.
First use Sept. 9, 1960.

SN 124,287. Pasçal Company, Inc., Seattle, Wash. Filed July 19, 1961.

RAFORMER

For Gingival Contour Former and Cavity Filling Former.
First use on or about Apr. 18, 1960.

SN 124,455. Orthopedic Frame Company, Kalamazoo, Mich. Filed July 21, 1961.

STRYKER

Owner of Reg. No. 620,010.
For Overbed Frames, Stretchers, Traction Frames, Universal Hospital Beds, Turning Frames, Portable Cabinets for Storing Equipment Used in Applying or Removing Casts, Cast and Padding Cutters, Bone and Autopsy Saws and Accessories Including Vacuum Devices for Collecting Plaster and Bone Dust, Heels for Casts, Cast Spreaders, Electrically Operated Surgical Tools and Appliances, Tape for Skin Grafting Purposes, Grafting Skin Cutters, Skin Abraders, Devices for Assisting Patients in Walking, Splints, Patient-Supporting Boards and Pads for Use on Operating Tables and the Like.
First use at least as early as 1942 on turning frames and heels for casts.

SN 124,606. John Vigg, Seattle, Wash. Filed July 24, 1961.

RAY-O-DONT

For Dental Model or Anatomical Model of the Jaw.
First use June 1, 1961.

SN 124,651. Johnson & Johnson, New Brunswick, N.J. Filed July 25, 1961.

SIGNALOC

For Adhesive Tapes.
First use Apr. 17, 1961.

Class 46 — Foods and Ingredients of Foods

SN 93,546. Red Star Yeast and Products Company, Milwaukee, Wis. Filed Mar. 23, 1960.

SMAK

For Acid Hydrolyzed Torula Yeast Designed To Be Used as a Flavorant in Any Processed Food in Which a Meat-Like Flavor Is Desirable.
First use Feb. 11, 1960.

SN 95,602. Robert A. Johnston Company, Milwaukee, Wis. Filed Apr. 22, 1960.

WINDSOR SUGAR THINS

Owner of Reg. No. 574,231.
For Cookies.
First use Apr. 12, 1960.

SN 104,438. Dofo, Danske Ostemejeriers Faellessalg og Osteeksport, Hadersiev, Denmark. Filed Sept. 14, 1960.



The lining in the drawing does not represent color and is merely employed as a shading effect. Owner of Danish Reg. No. 1354/60, dated June 11, 1960.
For Dairy Products—Namely, Cheese, Processed Cheese, Cheese Spread, Casein (Raw and Otherwise) Used for Food Purposes, Canned Milk Products, Fluid Milk and Fluid Cream.

SN 104,915. Faibish Corporation, New York, N.Y. Filed Sept. 21, 1960.

GARUDA

The mark means "Legendary Bird" in the Indonesian language.
For Hard Wheat Flour.
First use January 1959.

SN 105,410. Blue Goose Growers, Inc., Fullerton, Calif., by change of name from American National Growers Corporation, Fullerton, Calif. Filed Sept. 29, 1960.

NAPONEE

For Fresh Citrus Fruits.
First use October 1959.

SN 105,411. Blue Goose Growers, Inc., Fullerton, Calif., by change of name from American National Growers Corporation, Fullerton, Calif. Filed Sept. 29, 1960.

MONACHE

For Fresh Citrus Fruits.
First use at least as early as 1940.

SN 110,217. Morinaga Confectionery Co., Ltd., Minato-ku, Tokyo, Japan. Filed Dec. 14, 1960.

Pacific Favourite Crackers

No claim is made to the exclusive use of the term "Crackers."
For Crackers.
First use May 1960; in commerce on or about June 25, 1960.

SN 110,540. Gramling Canning Company, Inc., Gramling, S.C. Filed Dec. 20, 1960.

Gramling

For Canned Peaches, Peach Pickle, Peach Marmalade, and Peach Preserves.
First use June 21, 1960.

SN 112,354. Berks-Lehigh Cooperative Fruit Growers, Inc., Fleetwood, Pa. Filed Jan. 24, 1961.



Applicant makes no exclusive claim to the representation of the glass with the liquid pouring into it apart from the mark as shown. Owner of Reg. Nos. 386,595 and 553,848.
For Applesauce, Apple Syrup, and Apple Juice and Apple Cider as Food Drinks.
First use Nov. 4, 1940, on apple juice.

SN 113,412. General Foods Corporation, White Plains, N.Y. Filed Feb. 10, 1961.

DREAM WHIP

Owner of Reg. Nos. 386,395, 659,903, and others.
For Dessert Topping Mix.
First use on or about Sept. 24, 1956.

SN 113,646. King Kullen Grocery Co., Inc., Jamaica, N.Y. Filed Feb. 14, 1961.

LADY NANCY

For Bakery Products—Namely, Cake, Cinnamon Buns, Bread, Ginger Snaps, English Muffins, Danish Almond Ring, Danish Bow Ties, Danish Coffee Ring, Danish Tea Rings, French Crumb Cake, Fruit and Nut Ring, Holland Raisin Loaf, Louisiana Orange Ring, Marble Ring, Orange Fluff Ring, Streusel Coffee Ring, Blueberry Muffins, Bran Muffins, Corn Muffins, Crumb Buns, Apple Crumb Cake, Apple Crumb Pie, Apple Pie, Applesauce Loaf, Blueberry Pie, Cherry Pie, Cocoanut Custard Pie, Lemon Meringue Pie, Mince Pie, Peach Pie, Pineapple Cheese Pie, Pumpkin Pie, Turnovers, Angel Food, Golden Layer Cake, Golden Pound Cake, Iced Angel Food, Iced Cup Cakes, Iced Loaf, Jelly Roll, Lemon Roll, Macaroon Cup Cakes, Marble Pound Cake, Party Cup Cake, Raisin Pound Cake, Sponge Layer Cake, Doughnuts, Glazed Donuts, Jelly Donuts, Dessert Shells, Devils Food Cups, Golden Corn Patties, Lady Fingers, Jelly Whirl, Melt-away Whirl, Raisin Bread, Whole Wheat Bread, White Bread, Sandwich Loaf White Bread, and Pullman Loaf White Bread.
First use Nov. 8, 1960.

SN 114,663. Wm. Wrigley Jr. Company, Chicago, Ill. Filed Feb. 28, 1961.

PLENTPAK

Applicant disclaims any rights to the exclusive use of the word "Pak" apart from the mark as shown. Owner of Reg. Nos. 64,816, 192,523, 588,210, and others.
For Chewing Gum.
First use Feb. 15, 1961.

SN 115,010. Stock Yards Packing Co., Inc., Chicago, Ill. Filed Mar. 6, 1961.

PLEASURE CHEST OF CHEESE

Applicant disclaims the word "Cheese." Owner of Reg. No. 556,686.
For Cheese.
First use Dec. 14, 1960.

SN 115,090. Suffolk Farms Packing Co., Inc., d.b.a. Suffolk Farms Packing Co., Chelsea, Mass. Filed Mar. 7, 1961.

SPIN

For Spice Seasonings for Foods.
First use Feb. 9, 1961.

SN 115,094. Union Handels-Gesellschaft A.G. (Union Société Commerciale S.A.; Union Trading Company Ltd.), Basel, Switzerland. Filed Mar. 7, 1961.

PRIMAVERA

Priority claimed under Sec. 44(d) on Swiss Reg. No. 183,565, dated Oct. 20, 1960. "Primavera" when translated into English means "spring."
For Cocoa, Cocoa-Butter for Food Purposes, Crushed and Boiled Cocoa Beans for Food Purposes.

SN 115,165. Ranchburger Co., Fairbury, Nebr. Filed Mar. 8, 1961.



For Frozen Beef Patties.
First use July 20, 1960.

SN 116,398. Food Brokers, Inc., of California, d.b.a. Par-Pak Foods Company, San Francisco, Calif. Filed Mar. 24, 1961.

MERIT-PAK

For Canned Fruits.
First use Feb. 6, 1961.

SN 116,399. Food Brokers, Inc., of California, d.b.a. Par-Pak Foods Company, San Francisco, Calif. Filed Mar. 24, 1961.

PAR-PAK

For Canned Fruits.
First use Feb. 6, 1961.

SN 116,425. The Procter & Gamble Company, Cincinnati, Ohio. Filed Mar. 24, 1961.

POP 'N SNAC

For Edible Vegetable Oil.
First use Feb. 20, 1961.

SN 117,259. Frederick Joseph Carten, Westmount, Quebec, Canada. Filed Apr. 6, 1961.

SEADYNE

Owner of Canadian Reg. No. N.S. 46/12,277, dated Oct. 10, 1939.
For Food Product in the Nature of a Dietary Supplement Containing Minerals.

SN 117,337. H. C. Brill Company, Inc., Newark, N.J. Filed Apr. 7, 1961.

BRILL'S STAIZ

For Stabilizer for Meringues for Pastry, and Fillings, Containing, Dextrose, Tapioca, Corn and Maize Starches, Refined Hydro-Colloids and Agar Agar.
First use Sept. 13, 1948.

SN 118,301. William C. Terry, d.b.a. Poppin Products, St. Petersburg, Fla. Filed Apr. 20, 1961.



For Candy.
First use Feb. 8, 1961.

SN 118,961. Enoch S. Christoffersen, d.b.a. Christoffersen Poultry, Egg & Feed Market, Turlock, Calif. Filed May 1, 1961.

VALCHRIS

Owner of Reg. Nos. 520,781, 611,863, and 678,181.
For Fresh and Frozen Boneless Turkeys (Half and Whole), and Fresh and Frozen Cooked Turkey Rolls.
First use Jan. 18, 1956, on boneless turkeys.

SN 119,029. Melrose Seed Co., Buffalo, N.Y. Filed May 1, 1961.



No claim of exclusive right is made to the words "Wild Bird Food," said words being the name of the goods.
For Bird Food.
First use Oct. 14, 1960.

SN 119,162. Sam Ward, Co., Los Angeles, Calif. Filed May 2, 1961.

ISLAND BEAUTY

For Canned Pineapple.
First use Oct. 24, 1960.

SN 119,393. The Little Dutch Candy Mill Corporation, d.b.a. Dutch Mill Candies, Chicago, Ill. Filed May 5, 1961.

POP-O-NUTS

For Candy.
First use Apr. 1, 1961.

SN 119,415. James W. Paisley, d.b.a. Paisley Farm, Mentor, Ohio. Filed May 5, 1961.

PAISLEY FARM

For Pickles.
First use June 30, 1951.

SN 120,630. J. H. Filbert, Inc., Baltimore, Md. Filed May 23, 1961.

GOLDEN BELLE

For Margarine.
First use Sept. 1, 1927.

SN 120,821. National Packing Corporation, Boston, Mass. Filed May 25, 1961.

TREAT TRAY

For Dog and Cat Food.
First use May 11, 1961.

SN 120,883. Hesmer Foods, Inc., Evansville, Ind. Filed May 26, 1961.

BARBARONI

For Can Prepared Sea Shell Macaroni With Hickory Smoked Pit Cooked Pork in Barbecue Sauce.
First use May 18, 1949.

SN 121,935. Pan Pacific Fisheries, Inc., Terminal Island, Calif. Filed June 13, 1961.



For Canned Tuna Fish.
First use Aug. 28, 1960.

SN 122,027. Salada-Shirriff-Horsey Ltd., Don Mills, Ontario, Canada. Filed June 14, 1961.

MARMA-JEL

Owner of Canadian Reg. No. 120,935, dated Jan. 20, 1961.
For Fruit Breakfast Spreads.

SN 122,128. Sol Cafe Mfg. Corp., Jamaica, N.Y. Filed June 15, 1961.

COFFEE-CAL

For Coffee.
First use Apr. 12, 1961.

SN 122,129. Sol Cafe Mfg. Corp., Jamaica, N.Y. Filed June 15, 1961.

CAFE-CAL

For Coffee.
First use Apr. 12, 1961.

SN 122,205. Mavar Shrimp & Oyster Company, Ltd., Biloxi, Miss. Filed June 16, 1961.

KOZY KITTEN

For Cat Food.
First use June 1, 1961.

SN 122,225. Sol Cafe Mfg. Corp., Jamaica, N.Y. Filed June 16, 1961.

KOFFEE-KAL

For Coffee.
First use Apr. 12, 1961.

SN 122,603. Deep Run Packing Company, Inc., Dublin, Pa. Filed June 22, 1961.

BIG BET

For Dog Food and Cat Food.
First use Jan. 27, 1950.

SN 122,608. Farmers Produce Co. of Willmar, Willmar, Minn. Filed June 22, 1961.

NORTHERN GROWN

For Dressed Fresh and Frozen Poultry.
First use Apr. 15, 1961.

SN 122,609. Farmers Produce Co. of Willmar, Willmar, Minn. Filed June 22, 1961.



For Dressed Fresh and Frozen Poultry.
First use Apr. 15, 1961.

SN 122,623. King Kullen Grocery Co., Inc., Jamaica, N.Y. Filed June 22, 1961.



Owner of Reg. No. 679,707.
For Evaporated Milk.
First use June 9, 1960.

SN 122,740. N. V. Maatschappij Antradex, d.b.a. Antradex Company Ltd., Willemstad, Curacao, Netherlands Antilles. Filed May 9, 1961.

ANTRADEX

Priority claimed under Sec. 44(d) on Dutch Reg. No. 4,237, dated Jan. 12, 1961.
For Coffee and Coffee Products; and Products With Milk Base—Namely, Infant Foods, Dietetic Preparations and Beverages.

SN 122,806. Kelly Vegetable Farms Co., Inc., Oxnard, Calif. Filed June 26, 1961.



For Fresh Vegetables.
First use Mar. 28, 1961.

SN 123,085. De-Raef Corporation, Kansas City, Mo. Filed June 29, 1961.

SAY-LAC

Owner of Reg. No. 403,497.
For Mixture Comprising Spray Dried Milk Solids, Soy Flour, Dextrose, Wheat Starch, Calcium Carbonate, Salt, Calcium Peroxide, and Potassium Bromate Trace Used To Increase the Mineral Content in the Processing of Bakery Products, Particularly Bread and Bread Products.
First use in July 1953.

SN 123,678. F. H. Peavey & Company, Minneapolis, Minn. Filed July 10, 1961.

AURA

For Pastry and Pie Dough Flour.
First use June 17, 1961.

SN 123,680. Phoenix Candy Co., Inc., Brooklyn, N.Y. Filed July 10, 1961.

STRICTLY FUN

For Candy.
First use June 1, 1961.

SN 123,833. Oulevay S.A., Morges, Vaud, Switzerland. Filed July 12, 1961.

PAMELA

Owner of Swiss Reg. No. 160,821, dated May 5, 1956.
For Biscuits and Confectionery.

SN 124,286. Ore-Ida Foods, Inc., d.b.a. Oregon Frozen Foods Co., Ontario, Oreg. Filed July 19, 1961.



For Frozen Vegetables.
First use on or about Jan. 4, 1952.

SN 126,716. Allstate Produce, Inc., Oxnard, Calif. Filed Aug. 28, 1961.



For Fresh Vegetables.
First use July 28, 1961.

Class 47 — Wines

SN 122,807. Honeywood, Inc., Salem, Oreg. Filed June 26, 1961.

FRUIT CELLAR

For Wine.
First use Apr. 20, 1961.

Class 49 — Distilled Alcoholic Liquors

SN 118,206. Asche-Bandor Corporation, New York, N.Y. Filed Apr. 20, 1961.

AKIVA

Owner of Reg. No. 517,622.
For Brandy and Cordials.
First use Mar. 2, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 121,887. Henry Wolke, Woodbury, Conn. Filed June 12, 1961.



For Gavel Blocks.
First use June 9, 1961.

Class 51 — Cosmetics and Toilet Preparations

SN 87,078. Siroil Laboratories, Inc., Santa Monica, Calif. Filed Dec. 10, 1959.

SIR-O-LENE

Owner of Reg. No. 632,564.
For Remedial Skin Softener for Use in Treating Psoriasis and Also for Chapped, Chafed, Flaky and Dry Skin and Minor Sunburn and Windburn.
First use Nov. 18, 1959.

SN 92,163. Parfums Givenchy, Courbevoie, Seine, France. Filed Mar. 4, 1960.



The lining which appears on the drawing is a part of the mark and is not symbolic of color. Applicant disclaims the words "Paris" and "France" apart from the mark as used.
Owner of French Reg. No. 480,092, dated Apr. 30, 1959 (Seine); Natl. Inst. No. 125,302.
For Perfumes, Preparations for the Hair, Dentifrices, Toilet Lotions, Toilet Waters, Perfumed Skin Lotions, Cologne Water, Face Lotions, Cosmetic Skin Creams, Face Powder, Cosmetic Bath Salts and Bath Oils, Bath Talcum Powder.

SN 96,865. Eleanor Mast, d.b.a. Imperial Toiletries Company, New York, N.Y. Filed May 11, 1960.



For Mascara, Eye Shadow, Rouge, Lipstick, Blemish Cover Stick, Sun Tan Oil, Anti-Perspirant Deodorant, Liquid Make-Up, Make-Up Foundation, Skin Cream, Face Powder, Toilet Water, Body Sachet, Perfume, Perfume Concentrate and Bath Essence.
First use June 18, 1934.

SN 98,747. Martha Sparks, Denver, Colo. Filed June 9, 1960.

FOREST SET

Owner of Reg. Nos. 646,612, 647,982, and others.
For Hair Dressing and Conditioner.
First use on or about Nov. 15, 1956.

SN 102,412. Parfums Weil Paris, Inc., d.b.a. Parfums Weil Paris, New York, N.Y. Filed Aug. 10, 1960.

SECRET OF VENUS

For Perfumes, Bath Oils, Bath Powders, Bath Salts, and Bath Soaps.
First use 1942.

SN 111,478. Clairol Incorporated, New York, N.Y. Filed Jan. 9, 1961.

QUICK STICK

Applicant disclaims "Stick" apart from the mark as shown.
For Preparation for Removing Stains From the Skin.
First use Oct. 27, 1960.

SN 111,479. Clairol Incorporated, New York, N.Y. Filed Jan. 9, 1961.

MAGIC STICK

Applicant disclaims "Stick" apart from the mark as shown.
For Preparation for Removing Stains From the Skin.
First use Oct. 27, 1960.

SN 112,945. Wm. Camlynn Cosmetics, Inc., Palatine, Ill. Filed Feb. 2, 1961.

BABY FACE

For Facial Wash for Dry Skin.
First use Nov. 15, 1960.

SN 120,371. Beauty Coin Products, Inc., New York, N.Y. Filed May 19, 1961.

BEAUTY COIN

For Skin Creams.
First use May 11, 1961.

SN 120,373. Beauty Coin Products, Inc., New York, N.Y. Filed May 19, 1961.

BIO-RICH

For Skin Creams.
First use May 11, 1961.

SN 120,752. Sally Nan Incorporated, Syosset, N.Y. Filed May 24, 1961.

HIDDEN TOUCH

For Cosmetic Make-Up Cream.
First use Apr. 1, 1960.

Class 52 — Detergents and Soaps

SN 82,254. Madison Chemical Corporation, d.b.a. The Madison Supply and Equipment Co., Maywood, Ill. Filed Sept. 28, 1959.

DRI-CLEAN

For Floor, Furniture and Woodwork Dust Absorbent Material.
First use in November 1951.

SN 94,005. Kilburn Chemical Company, Lakewood, Ohio. Filed Mar. 30, 1960.

WIND-O-SHINE

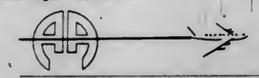
For Liquid Glass Cleanser.
First use in 1938.

SN 103,174. Lever Brothers, Port Sunlight, Limited, Port Sunlight, England. Filed Aug. 22, 1960.

CARNAVAL

Owner of British Reg. No. 254,969, dated May 30, 1903.
For Soaps.

SN 118,634. Aircraft & Airport Services, Inc., Metropolitan, Mich. Filed Apr. 26, 1961.



The lining on the drawing is a feature of the mark, and does not represent color.
For Aluminum Cleaning Preparation.
First use Feb. 24, 1961.

SN 120,130. Sears, Roebuck and Co., Chicago, Ill. Filed May 16, 1961.

HOMART

Owner of Reg. Nos. 509,746 and 517,810.
For Pipe Solvent (Caustic Compound), Soot Remover (Chemical), Boiler Cleaning Compound.
First use on or about Jan. 15, 1946.

SN 120,308. General Products, d.b.a. Terry Allen, Chicago, Ill. Filed May 18, 1961.

TERRY ALLEN

The name "Terry Allen" is fictitious and not of any living individual.
For Flowing Cream Shampoo and Castile Shampoo.
First use Feb. 23, 1960.

SN 121,003. Lever Brothers Company, New York, N.Y. Filed May 29, 1961.

TWINK

Owner of Reg. No. 128,429.
For Hair Shampoo.
First use May 16, 1961.

SN 122,782. Dishmaster Corporation, Bloomfield Hills, Mich. Filed June 26, 1961.

DISHMASTER

Owner of Reg. Nos. 406,702 and 551,034.
For Liquid Detergent.
First use Apr. 4, 1960.

SN 122,816. Martin Laboratories, Inc., Owensboro, Ky. Filed June 26, 1961.



For Waterless Hand Cleaner.
First use Nov. 6, 1960.

SN 123,055. Yardley & Company Limited, Stratford, London, England. Filed June 28, 1961.

FOAMINE

Owner of British Reg. No. 244,597, dated Mar. 1, 1902.
For Toilet Soaps.

SERVICE MARKS

Class 100 — Miscellaneous

SN 95,063. Ebner Associates, New York, N.Y. Filed Apr. 14, 1960.



For Consultation in Connection With Inspection of Materials.
First use June 18, 1959.

SN 96,460. American Association of Doctor's Nurses, Washington, D.C. Filed May 5, 1960.



Applicant disclaims exclusive use of the caduceus apart from the mark as shown.
For Association Services—Namely, Promotion of the Welfare of Doctors' Nurses.
First use Mar. 15, 1959.

SN 113,402. Cleveland Piping & Supply Co., Cleveland, Ohio. Filed Feb. 10, 1961.



For Engineering Design and Engineering and Consulting Services Relating to Piping for Various Industrial and Commercial Uses.
First use Jan. 16, 1961.

SN 114,858. Johnson & Prince Inc., Philadelphia, Pa. Filed Mar. 3, 1961.

LITHO-STAT

For Preparation of Offset Lithographic Plates.
First use Aug. 27, 1960.

SN 120,889. International Air Service Company, Ltd., Burlingame, Calif. Filed May 26, 1961.

IASCO

For Furnishing of Flight Crews to Operators of Aircraft.
First use about Apr. 1, 1961.

Class 101 — Advertising and Business

SN 103,110. Donovan Coffee Company, d.b.a. Double Dividend Premium Store, Birmingham, Ala. Filed Aug. 22, 1960.



For Sales Promotion of the Goods and Services of Others Through the Medium of Trading Stamps Which Are Redeemable in Premium Merchandise,
First use on or about May 15, 1959.

SN 103,111. Donovan Coffee Company, d.b.a. Double Dividend Premium Store, Birmingham, Ala. Filed Aug. 22, 1960.

DOUBLE DIVIDEND

For Sales Promotion of the Goods and Services of Others Through the Medium of Trading Stamps Which Are Redeemable in Premium Merchandise.
First use on or about May 15, 1959.

SN 110,429. Charles D. Glenn, d.b.a. Charles Morgan, San Francisco, Calif. Filed Dec. 19, 1960.

MAN THE GALLEY

For Radio Programs Relating to the Field of Cookery.
First use May 16, 1960.

Class 102 — Insurance and Financial

SN 117,382. Maccabees Mutual Life Insurance Company, Detroit, Mich. Filed Apr. 7, 1961.



For Underwriting of Life Insurance.
First use Mar. 29, 1961.

Class 103 — Construction and Repair

SN 113,602. Mable S. Alexander, d.b.a. All-State Termite and Pest Control Company, Memphis, Tenn. Filed Feb. 14, 1961.



For Termite and Pest Control.
First use July 14, 1949.

Class 105 — Transportation and Storage

SN 126,232. Illinois-California Express, Inc., Denver, Colo. Filed Aug. 18, 1961.



Owner of Reg. No. 664,855.
For Transportation of Cargo and Freight by Motor Vehicle.
First use during the month of February 1959.

Class 107 — Education and Entertainment

SN 114,849. Famous Artists Schools, Inc., Westport, Conn. Filed Mar. 3, 1961.



For Correspondence Courses in Various Art Media.
First use August 1953.

SN 121,659. Muzak Corporation, New York, N.Y. Filed June 8, 1961.

music by Muzak

Owner of Reg. Nos. 323,327, 615,498, and others.
For Planned Music Service for Transmitting Specially Programmed Background Music to Stores, Restaurants, Homes, Hotels, Banks, Railroads, Airlines, Boats, Transportation Terminals, Factories and Other Industrial and Commercial Establishments Throughout the United States.
First use May 22, 1961.

SN 122,940. Massey-Ferguson, Inc., Detroit, Mich. Filed June 27, 1961.

FIVE STAR JUBILEE

For Title of a Television Program—Namely, a Musical and Variety Program.
First use Mar. 17, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 73,204. Delta Gamma Fraternity, Columbus, Ohio. Filed May 8, 1959.

TAU DELTA ETA

The lining shown on the drawing is not intended to indicate color. The Greek letters shown on the shield are "Delta Gamma."
For Indicating Membership in a Fraternal Organization.
First use Jan. 1, 1911.

SN 106,684. American Cemetery Association, Columbus, Ohio. Filed Oct. 19, 1960.

AMERICAN CEMETERY ASSOCIATION FOUNDED 1887

For Indicating Membership in the Association.
First use Nov. 1, 1957.

SN 116,593. Structural Clay Products Research Foundation, Geneva, Ill. Filed Mar. 27, 1961.

MEMBER OF NEW FRONTIERS WITH SCR STRUCTURAL CERAMICS STRUCTURAL CLAY PRODUCTS RESEARCH FOUNDATION

For Indicating Membership in Applicant.
First use Jan. 2, 1961.

SN 120,861. Chicago Truck Drivers, Chauffeurs and Helpers Union of Chicago and Vicinity (Independent), d.b.a. Chicago Teamsters, Chauffeurs, and Helpers of Chicago and Vicinity, Chicago, Ill. Filed May 26, 1961.

CTCU INDEPENDENT SINCE 1908

Owner of Reg. Nos. 663,267, 664,859, and 684,222.
For Indicating Membership in Applicant.
First use February 1908.

CERTIFICATION MARKS

Class A—Goods

SN 111,714. Michigan Milk Producers Association, Traverse City, Mich. Filed Dec. 28, 1960.

NORTHERN MICHIGAN MILK "NUB OF HEALTH"

The mark certifies regional origin of the goods from Northern Michigan.
For Milk.
First use Sept. 1, 1960.

SN 117,320. Washington State Apple Advertising Commission, Wenatchee, Wash. Filed Apr. 6, 1961.

The mark certifies regional origin.
For Apples.
First use Jan. 30, 1961.

SN 117,571. Washington State Apple Advertising Commission, Wenatchee, Wash. Filed Apr. 10, 1961.

Washington

The mark certifies regional origin.
For Apples.
First use Jan. 30, 1961.

Class B—Services

SN 101,949. The International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, Washington, D.C. Filed Aug. 3, 1960.

TEAMSTERS I.B. OF T.C.W. & H. OF AMERICA UNION SERVICE

The mark certifies that the labor in connection with the services has been performed by members of applicant.
For Handling, Maintenance, Transportation, Delivery, Selling, and Other Associated Services.
First use October 1957.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

727,127. HI-JELL. Benton Clay Co. SN 110,023. Pub. 11–21–61. Filed 12–12–60.

Class 2—Receptades

727,128. POLY GLO. Container Corporation of America. SN 120,181. Pub. 11–21–61. Filed 5–17–61.

727,129. STRENGTH-END. Bemis Bro. Bag Company. SN 120,479. Pub. 11–21–61. Filed 5–22–61.

727,130. LADY SUSAN. J J Newberry Co. SN 120,895. Pub. 11–21–61. Filed 5–26–61.

727,131. WESTVACO. West Virginia Pulp and Paper Company. SN 121,155. Pub. 11–21–61. Filed 5–31–61.

Class 4—Abrasives and Polishing Materials

727,132. P.P.Z. Les Specialites P.P.Z., Etablissements Pierre P. Zecchini. SN 114,494. Pub. 11–21–61. Filed 2–27–61.

727,133. LA FRANCE. Maurice H. Simson, d.b.a. Alpha Chemical Co. SN 116,674. Pub. 11–21–61. Filed 3–28–61.

727,134. GOLD BRICK. L. L. Antle & Co., Inc. SN 119,832. Pub. 11–21–61. Filed 5–12–61.

Class 6—Chemicals and Chemical Compositions

727,135. HERBERTS. Dr. Kurt Herberts, d.b.a. Dr. Kurt Herberts & Co. SN 75,482. Pub. 11–21–61. Filed 6–10–59.

727,136. WARCOSET. Sun Chemical Corporation. SN 80,380. Pub. 11–21–61. Filed 8–27–59.

727,137. HARCURE. Wallace & Tiernan Incorporated. SN 83,582. Pub. 11–21–61. Filed 10–19–59.

727,138. ALWAX. American Cyanamid Company. SN 95,035. Pub. 11–21–61. Filed 4–14–60.

727,139. PENT-OXONE. Shell Oil Company. SN 101,044. Pub. 9–19–61. Filed 7–18–60.

727,140. CONCHEMCO. Consolidated Coatings & Chemicals, Inc., d.b.a. Seidlitz Paint & Varnish Co. SN 102,829. Pub. 1–31–61. Filed 8–17–60.

727,141. DE-GREEN. Stauffer Chemical Company. SN 102,951. Pub. 11–21–61. Filed 8–18–60.

727,142. CALSICAT. Calsicat Company. SN 104,063. Pub. 11–21–61. Filed 9–8–60.

727,143. TAMCO. Tamms Industries Co. SN 104,336. Pub. 11–21–61. Filed 9–12–60.

727,144. KOLPHOS. Kolker Chemical Corporation. SN 105,008. Pub. 11–21–61. Filed 9–22–60.

727,145. AEROZINE 50. Aerojet-General Corporation. SN 105,407. Pub. 11–21–61. Filed 9–21–60.

727,146. STAPH-GO. Continental Laboratories, Inc. SN 107,182. Pub. 11–21–61. Filed 10–26–60.

727,147. RITACHOL. R.I.T.A. Chemical Corporation. SN 110,095. Pub. 11–21–61. Filed 12–12–60.

727,148. ZURD. Philip Kremer, d.b.a. Murd Company. SN 113,535. Pub. 11–21–61. Filed 2–13–61.

727,149. AEROFUME. American Potash & Chemical Corporation. SN 114,078. Pub. 11–21–61. Filed 2–21–61.

727,150. POWERIZER. General Water Conditioning Co., d.b.a. Water Specialties Co. SN 114,207. Pub. 11–21–61. Filed 2–23–61.

727,151. OMBROPHOB. Sandoz, Inc. SN 114,882. Pub. 11–21–61. Filed 3–3–61.

727,152. MYKON. Sun Chemical Corporation. SN 116,270. Pub. 11–21–61. Filed 3–22–61.

Class 7—Cordage

727,153. POLY-D. Wall Rope Works, Inc. SN 117,822. Pub. 11–21–61. Filed 4–13–61.

Class 10—Fertilizers

727,154. WARCOFORM. Sun Chemical Corporation. SN 80,370. Pub. 11–21–61. Filed 8–27–59.

Class 11—Inks and Inking Materials

727,155. OPTI-SCAN. Port Huron Sulphite & Paper Company. SN 117,131. Pub. 11–21–61. Filed 4–4–61.

727,156. TWINTAB. Royal McBee Corporation. SN 117,395. Pub. 11–21–61. Filed 4–7–61.

Class 12—Construction Materials

727,157. ARMCO AND DESIGN. Armco Steel Corporation. SN 117,160. Pub. 11–21–61. Filed 4–5–61.

727,158. SARANG. Elliott Bay Mill Company. SN 118,568. Pub. 11–21–61. Filed 4–25–61.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

727,159. WEATHER GARD AND DESIGN. Construction Fasteners, Inc. SN 104,378. Pub. 11–21–61. Filed 9–13–60.

727,160. CHEMEX. United States Rubber Company. SN 105,113. Pub. 4–4–61. Filed 9–23–60.

727,161. BLUE BANTAM. Henry Valve Company. SN 105,895. Pub. 11–21–61. Filed 10–6–60.

727,162. POP STIX. Popstix Corporation, assignee of Joseph Telasco. SN 110,245. Pub. 11–21–61. Filed 12–14–60.

727,163. TUFLINE. Continental Manufacturing Company. SN 117,458. Pub. 11–21–61. Filed 4–10–61.

Class 14—Metals and Metal Castings and Forgings

727,164. HI-ALLOY AND DESIGN. Hi-Alloy Weld Specialties, Inc. SN 104,264. Pub. 11–21–61. Filed 9–12–60.

727,165. HI-ALLOY. Hi-Alloy Weld Specialties, Inc. SN 104,265. Pub. 11–21–61. Filed 9–12–60.

Class 15—Oils and Greases

727,166. FANCIFUL FIGURE OF A MAN. Martin Oil Service, Inc. SN 120,547. Pub. 11–21–61. Filed 5–22–61.

727,167. GALA. Ross Products, Inc. SN 120,573. Pub. 11–21–61. Filed 5–22–61.

Class 16—Protective and Decorative Coatings

727,168. CONCHEMCO. Consolidated Coatings & Chemicals, Inc., d.b.a. Seidlitz Paint & Varnish Co. SN 102,828. Pub. 1–31–61. Filed 8–17–60.

727,169. TARGET. William Zinsser & Co., Inc. SN 110,390. Pub. 11–21–61. Filed 12–16–60.

727,170. TROPEX. International Paint Company, Inc. SN 125,383. Pub. 11–21–61. Filed 8–4–61.

727,171. ANTICON. Denton Edwards Co., Ltd. SN 125,478. Pub. 11–21–61. Filed 8–7–61.

Class 17—Tobacco Products

727,172. CHIEFTAIN. The American Tobacco Company. SN 119,915. Pub. 11–21–61. Filed 5–15–61.

Class 18—Medicines and Pharmaceutical Preparations

727,173. MARVOSAN. Day-Baldwin, Inc. SN 94,436. Pub. 11–21–61. Filed 4–5–60.

727,174. STANDARD PLUS. General Nutrients Corporation. SN 106,899. Pub. 11–21–61. Filed 10–21–60.

727,175. 4X4 WITHIN A CIRCLE. Walnut Grove Products Company, Inc. CONSOLIDATED CERTIFICATE. SN 107,535, pub. 11–14–61, filed 10–31–60, Cl. 18; SN 107,534, pub. 10–31–61, filed 10–31–60, Cl. 46; SN 107,527, pub. 11–14–61, filed 10–31–60, Cl. 50.

727,176. BILLARD PROTEIN AC AND DESIGN. Billard Corporation, assignee of Billard Barbell Company, Inc. SN 108,261. Pub. 11–21–61. Filed 11–14–60.

727,177. ELEPARON. Luitpold-Werk Chemisch-Pharmazeutische Fabrik. SN 110,693. Pub. 11–21–61. Filed 12–22–60.

727,178. FORMULA-S. Warner-Lambert Pharmaceutical Company. SN 110,718. Pub. 11–21–61. Filed 12–22–60.

727,179. FESTAVITAL. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. SN 110,989. Pub. 11–21–61. Filed 12–29–60.

727,180. CS. Consumer Standard, Inc. SN 115,787. Pub. 11–21–61. Filed 3–16–61.

727,181. NEMISIS. Beautlich, Inc. SN 120,481. Pub. 11–21–61. Filed 5–22–61.

727,182. DL CERTIGARD DIAMOND STANDARD AND DESIGN. Diamond Laboratories. SN 121,365. Pub. 11–21–61. Filed 6–5–61.

727,183. K-SYRUP. Walker Laboratories, Inc. SN 123,512. Pub. 11–21–61. Filed 7–6–61.

727,184. OPTIMIL. Carter Products, Inc. SN 123,609. Pub. 10–10–61. Filed 7–10–61.

Class 21—Electrical Apparatus, Machines, and Supplies

727,185. SEAL-TITE. Harvey Hubbell, Incorporated. SN 64,074. Pub. 3–28–61. Filed 12–11–58.

727,186. SELECTRONIC. The Mosler Safe Company. SN 100,801. Pub. 4–25–61. Filed 7–13–60.

727,187. TRU-WOOD. Elliott Bay Lumber Co. SN 101,483. Pub. 11–21–61. Filed 7–26–60.

727,188. SELECT-A-STEAM. Landers, Frary & Clark. SN 105,903. Pub. 11–21–61. Filed 10–6–60.

727,189. PRO-TEXTORS. Leo E. Doran, Sr., d.b.a. Doran Laboratories Company. SN 106,189. Pub. 11–21–61. Filed 10–11–60.

727,190. UNISWITCH. Amplex Corporation. SN 107,725. Pub. 11–21–61. Filed 11–3–60.

727,191. DIRK. H. K. Porter Company, Inc. SN 108,817. Pub. 11–21–61. Filed 11–21–60.

727,192. STA-TITE. The Sta-Tite Manufacturing Company. SN 110,105. Pub. 11–21–61. Filed 12–12–60.

727,193. SOUND-OFF AND DESIGN. Charles Raney, Jr. SN 110,171. Pub. 11–21–61. Filed 12–13–60.

727,194. RES-Q-MATIC. Aquatronic Industries, Inc. SN 110,812. Pub. 11–21–61. Filed 12–27–60.

727,195. FIESTA. Moffats Limited. SN 114,506. Pub. 11–21–61. Filed 2–27–61.

727,196. LINCOLN. Allied Radio Corporation. SN 115,287. Pub. 11–21–61. Filed 3–10–61.

727,197. ECONO-GRID. Erie Resistor Corporation. SN 115,676. Pub. 11–21–61. Filed 3–15–61.

727,198. MARDIX AND DESIGN. Mardix, assignee of Richard C. Hix. SN 117,008. Pub. 11–21–61. Filed 4–3–61.

Class 22—Games, Toys, and Sporting Goods

727,199. CLARO TRU-GRIP. Claro Laboratories. SN 102,199. Pub. 11–21–61. Filed 8–8–60.

727,200. SCALEXTRIC. Minimodels Limited. SN 104,631. Pub. 10–10–61. Filed 9–16–60.

727,201. ANSWERS ON THE RED. Rev. Maurice R. Warren, d.b.a. Fun-Way Games. SN 112,806. Pub. 11–21–61. Filed 1–30–61.

727,202. BR:Y:TE AND STAR DESIGN WITHIN A CIRCLE. L G Williams, d.b.a. Star-Br:Y:Te. SN 114,068. Pub. 11–21–61. Filed 2–20–61.

727,203. SNAPPY. Fairway Specialties Co. SN 117,962. Pub. 11–21–61. Filed 4–17–61.

727,204. HONEY LOU. J. Swedlin, Inc., d.b.a. Gund Mfg. Co. SN 118,621. Pub. 11–21–61. Filed 4–25–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

727,205. COMBIND. American Photocopy Equipment Company. SN 96,462. Pub. 11–21–61. Filed 5–5–60.

727,206. LIXIE. Lixie Inc. SN 102,326. Pub. 11–21–61. Filed 8–9–60.

727,207. ARMOR SHIELDED ARVIN ETC. AND DESIGN. Arvin Industries, Inc. SN 107,402. Pub. 11–21–61. Filed 10–31–60.

727,208. SPRAYFOIL. Sprayfoil Corporation. SN 108,516. Pub. 11–21–61. Filed 11–15–60.

727,209. PLASTI-VEND'R. H. W. Bleiman Company. SN 109,028. Pub. 11–21–61. Filed 11–25–60.

727,210. LATHAN AND DESIGN. Lathan Manufacturing Co. SN 109,079. Pub. 11–21–61. Filed 11–25–60.

727,211. NSU WANKEL AND DESIGN. NSU Motorenwerke Aktiengesellschaft. SN 109,338. Pub. 8–22–61. Filed 11–30–60.

727,212. STRIPWRIGHT. Kelsey-Hayes Company. SN 111,339. Pub. 11–21–61. Filed 1–5–61.

727,213. TORQ-RING AND DESIGN. Koelling Universal Joints, Inc. SN 111,412. Pub. 11–21–61. Filed 1–6–61.

727,214. ITCO. Itco Corporation. SN 113,532. Pub. 11-21-61. Filed 2-13-61.

727,215. B-W MECHANICS UNIVERSAL JOINT, BORG-WARNER AND DESIGN. Borg-Warner Corporation. SN 114,676. Pub. 11-21-61. Filed 3-1-61.

727,216. SAFETY SHEAR. Bro-Dart Industries. SN 115,995. Pub. 11-21-61. Filed 3-20-61.

727,217. TEENY. W. R. Sweeney Mfr., Inc. SN 116,762. Pub. 11-21-61. Filed 3-29-61.

727,218. TRIG-A-MATIC. Trig-A-Tape Corp. SN 116,765. Pub. 11-21-61. Filed 3-29-61.

727,219. SCH P AND DESIGN. Blech- & Metallwarenfabrik Schütz & Patry. SN 117,086. Pub. 11-21-61. Filed 4-4-61.

727,220. LUK AND DESIGN. Lamellen und Kupplungsbau August Haussermann. SN 117,113. Pub. 11-21-61. Filed 4-4-61.

727,221. IMPERIAL CROWN. Imperial Knife Associated Companies, Inc. SN 117,192. Pub. 11-21-61. Filed 4-5-61.

727,222. SPIN-AWAY AND DESIGN. Simon-Carter Company. SN 119,431. Pub. 11-21-61. Filed 5-5-61.

Class 24 — Laundry Appliances and Machines

727,223. WHIRLPOOL. Whirlpool Corporation. SN 110,719. Pub. 11-21-61. Filed 12-22-60.

727,224. DYNAIRE. Suburban Appliance Co. SN 118,821. Pub. 11-21-61. Filed 4-27-61.

Class 25 — Locks and Safes

727,225. FALCON. Falcon Lock Co. SN 110,265. Pub. 11-21-61. Filed 12-15-60.

Class 26 — Measuring and Scientific Appliances

727,226. MORTON. Harry E. Morton. SN 71,965. Pub. 11-21-61. Filed 4-21-59.

727,227. MANSFIELD. Mansfield Industries, Inc. SN 108,059. Pub. 11-21-61. Filed 11-8-60.

727,228. PIEZOR AND DESIGN. Electro Optical Systems, Inc. SN 110,750. Pub. 11-21-61. Filed 12-23-60.

727,229. COLORVISION. Colorvision Plastics, Inc. CONSOLIDATED CERTIFICATE. SN 115,584, pub. 9-26-61, filed 3-14-61, Cl. 26; SN 96,200, pub. 11-14-61, filed 5-2-60, Cl. 50.

727,230. VOLEMETRON. Atomium Corporation. SN 115,655. Pub. 11-21-61. Filed 3-15-61.

727,231. COINETTE. Cook Machinery Co., Inc. SN 116,478. Pub. 11-21-61. Filed 3-27-61.

Class 27 — Horological Instruments

727,232. ELGIN SPORTSMAN. Elgin National Watch Company. SN 118,981. Pub. 11-21-61. Filed 5-1-61.

727,233. EMATIS. E. Mathey-Tissot & Co. S.A. SN 119,216. Pub. 11-21-61. Filed 5-3-61.

727,234. BERYL-X. Elgin National Watch Company. SN 119,365. Pub. 11-21-61. Filed 5-5-61.

727,235. RAINIER. Simon Golub & Sons Inc. SN 119,964. Pub. 11-21-61. Filed 5-15-61.

727,236. COSMONAUT. Movado Watch Agency, Inc. SN 121,019. Pub. 11-21-61. Filed 5-29-61.

Class 30 — Crockery, Earthenware, and Porcelain

727,237. PORTRAIT. Cliff Arquette. SN 105,604. Pub. 11-21-61. Filed 10-3-60.

727,238. "THESE ARE MY PEOPLE" AND PORTRAIT. Cliff Arquette. SN 105,606. Pub. 11-21-61. Filed 10-3-60.

727,239. FLARE-WARE AND DESIGN. The Hall China Company. SN 117,702. Pub. 11-21-61. Filed 4-12-61.

727,240. SUPER-CERAM AND DESIGN. The Hall China Company. SN 117,703. Pub. 11-21-61. Filed 4-12-61.

Class 32 — Furniture and Upholstery

727,241. GRACEFOLD. McNeff Industries, Inc. SN 119,027. Pub. 11-21-61. Filed 5-1-61.

Class 33 — Glassware

727,242. PORTRAIT OF A MAN. Cliff Arquette. SN 105,602. Pub. 11-21-61. Filed 10-3-60.

Class 34 — Heating, Lighting, and Ventilating Apparatus

727,243. JONNY VENT AND DESIGN. The Feeny Manufacturing Company. SN 115,461. Pub. 10-24-61. Filed 3-13-61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

727,244. STAT-TITE. Standard-Thomson Corporation. SN 120,349. Pub. 11-21-61. Filed 5-18-61.

Class 37 — Paper and Stationery

727,245. REPRESENTATION OF A PAINT BRUSH. Fabrique Suisse de Crayons Caran d'Ache S.A. SN 76,476. Pub. 11-21-61. Filed 6-25-59.

727,246. POGO. Frank T. Johmann. SN 88,611. Pub. 11-21-61. Filed 1-7-60.

727,247. ECON-O-SET. Harvey Pendell Meyers, d.b.a. The Meyers Company. SN 95,510. Pub. 11-21-61. Filed 4-21-60.

727,248. CHINOGRAPH. Talens & Son, Inc. SN 105,706. Pub. 11-21-61. Filed 9-22-60.

727,249. TAPE-STIK. Kleen-Stik Products, Inc. SN 106,107. Pub. 11-21-61. Filed 10-10-60.

727,250. BOND-AIDE. Peck Industries Inc. SN 123,493. Pub. 11-21-61. Filed 7-6-61.

Class 38 — Prints and Publications

727,251. CONSERVATIVE BAPTIST FOREIGN MISSION SOCIETY AND DESIGN. Conservative Baptist Foreign Mission Society. SN 115,895. Pub. 11-21-61. Filed 3-17-61.

727,252. SPE JOURNAL. Society of Plastics Engineers, Inc. SN 116,678. Pub. 11-21-61. Filed 3-28-61.

727,253. VARI-GRAPHIC. Dan W. Cash Printing Company. SN 116,702. Pub. 11-21-61. Filed 3-29-61.

727,254. C.P.I. NEWS. Putman Publishing Company. SN 116,915. Pub. 11-21-61. Filed 3-31-61.

727,255. BACKSTAIRS AT THE WHITE HOUSE. United Press International, Inc. SN 120,770. Pub. 11-21-61. Filed 5-24-61.

727,256. KANSAS FARMER. Harman-Slocum Publishing Company, Inc. SN 120,989. Pub. 11-21-61. Filed 5-29-61.

Class 39 — Clothing

727,257. SAILFAST BY SEVEN SEAS. The Moyer Manufacturing Company, d.b.a. Seven Seas. SN 83,237. Pub. 11-21-61. Filed 10-14-59.

727,258. BABY DUDS OF OKLAHOMA BY D.K. Baby Duds. SN 92,208. Pub. 11-21-61. Filed 3-7-60.

727,259. SPADS. Douglas Fraser & Sons Limited. SN 94,570. Pub. 11-21-61. Filed 4-7-60.

727,260. GREAT EXPECTATIONS. Norman Zuckerkandel, d.b.a. Great Expectations. SN 101,837. Pub. 11-21-61. Filed 8-1-60.

727,261. GESCHU AND DESIGN. Gebr. Schulten. SN 103,689. Pub. 11-21-61. Filed 8-30-60.

727,262. TREVI. The Williams Manufacturing Company. SN 106,867. Pub. 11-21-61. Filed 10-20-60.

727,263. COWEN'S. International Shoe Company, d.b.a. The Florsheim Shoe Company. SN 107,765. Pub. 11-21-61. Filed 11-3-60.

727,264. ROSE-O-NET. Martin H. Rose. SN 110,173. Pub. 11-21-61. Filed 12-13-60.

727,265. TRA-VEL-COTE AND DESIGN. Morris Metzger and Sons, Inc. SN 112,292. Pub. 11-21-61. Filed 1-23-61.

727,266. VITA-LUX. John B. Stetson Company. SN 113,955. Pub. 11-21-61. Filed 2-17-61.

727,267. FEATHERLIFT. Sears, Roebuck and Co. SN 116,263. Pub. 11-21-61. Filed 3-22-61.

727,268. MARCROWN. Martin's. SN 116,739. Pub. 11-21-61. Filed 3-29-61.

Class 41 — Canes, Parasols, and Umbrellas

727,269. PERMA-CASE. Schertz Umbrellas, Inc. SN 120,755. Pub. 11-21-61. Filed 5-24-61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

727,270. SARABAN. Deering Milliken, Inc., by merger and change of name from Deering, Milliken & Co. Inc. SN 94,266. Pub. 11-21-61. Filed 4-4-60.

727,271. BARCLAY. Chatham Manufacturing Company. SN 96,092. Pub. 11-21-61. Filed 4-29-60.

727,272. WEVENIT. Edouard Dubied & Cie., Société Anonyme. SN 96,107. Pub. 9-20-60. Filed 4-29-60.

727,273. SATINIA. Everfast Fabrics, Inc. SN 121,182. Pub. 11-21-61. Filed 6-1-61.

727,274. ACCLAIM. Bates Manufacturing Company. SN 121,347. Pub. 11-21-61. Filed 6-5-61.

727,275. JETSAIL. J. P. Stevens & Co., Inc. SN 121,512. Pub. 11-21-61. Filed 6-6-61.

727,276. DANSTORM. Dan River Mills, Incorporated. SN 121,545. Pub. 11-21-61. Filed 6-7-61.

727,277. MILACRIL. Deering Milliken, Inc. SN 121,546. Pub. 11-21-61. Filed 6-7-61.

Class 43 — Thread and Yarn

727,278. COLORBRED. Indian Head Mills, Inc. SN 120,723. Pub. 11-21-61. Filed 5-24-61.

727,279. L AND SPOOL DESIGN. Lohrke Textiles, Inc. SN 121,297. Pub. 11-21-61. Filed 6-2-61.

Class 44 — Dental, Medical, and Surgical Appliances

727,280. EXER-MATIC. Exer-Matic, Inc. SN 106,487. Pub. 11-21-61. Filed 10-17-60.

727,281. BONAPED AND DESIGN. The Bon-A-Ped Corporation. SN 109,469. Pub. 11-21-61. Filed 12-2-60.

727,282. JUSTI. H. D. Justi & Son, Inc. SN 112,462. Pub. 11-21-61. Filed 1-25-61.

727,283. ARP AND DESIGN. Avionics Research Products Corporation. SN 119,345. Pub. 11-21-61. Filed 5-5-61.

727,284. METREFLO. Avionics Research Products Corporation. SN 119,346. Pub. 11-21-61. Filed 5-5-61.

Class 46 — Foods and Ingredients of Foods

727,175. CONSOLIDATED CERTIFICATE. See Class 18.

727,285. MARIO'S. Beatrice Foods Co., assignee of Mario's Food Products Company. SN 79,501. Pub. 11-21-61. Filed 8-13-59.

727,286. MOUNT ROSE. Montrose Macaroni Mfg. Co. SN 96,345. Pub. 11-21-61. Filed 5-3-60.

727,287. VANEX. Productos Caseros, S.A. SN 96,550. Pub. 11-21-61. Filed 4-21-60.

727,288. HOLLAND HOUSE. W. Sheinker & Son, Inc. SN 102,588. Pub. 11-21-61. Filed 8-12-60.

727,289. RICE A-BONGO. American Beauty Macaroni Co., d.b.a. The American Beauty Macaroni Co. SN 103,247. Pub. 11-21-61. Filed 8-23-60.

727,290. VESTA. Vesta, Inc., d.b.a. Vesta. SN 103,424. Pub. 11-21-61. Filed 8-25-60.

727,291. SUNNYLAND BULGHUR CO. AND DESIGN. Sunnyland Bulghur Co. SN 103,690. Pub. 11-21-61. Filed 8-30-60.

727,292. GIRL AND BASKET DESIGN. Spice Islands Company. SN 105,572. Pub. 11-21-61. Filed 9-30-60.

727,293. THREESOME. B. M. Reeves Company, Inc. SN 107,586. Pub. 11-21-61. Filed 11-1-60.

727,294. LITE. Anderson, Clayton & Co. SN 107,899. Pub. 11-21-61. Filed 11-7-60.

727,295. KINGS CANYON. P & P Farms. SN 109,199. Pub. 11-21-61. Filed 11-28-60.

727,296. FANT'S FAIRY. Fant Milling Company, d.b.a. Gladiola Biscuit Company. SN 109,401. Pub. 11-21-61. Filed 12-1-60.

727,297. MAGIC. Fant Milling Company, d.b.a. Gladiola Biscuit Company. SN 109,404. Pub. 11-21-61. Filed 12-1-60.

727,298. ROYAL RIVIERA PEARS ETC. Harry and David. SN 110,436. Pub. 11-21-61. Filed 12-19-60.

727,299. BOBBY SHAFTOE'S. Sea-Chefs, Inc. SN 110,475. Pub. 11-21-61. Filed 12-19-60.

727,300. VAN HOUTEN VH AND DESIGN. C. J. Van Houten & Zoon N.V. SN 111,448. Pub. 11-21-61. Filed 1-6-61.

727,301. THE PEANUT BUTTER CHURN. Food Corporation of America, d.b.a. Food Corp. of America. SN 113,633. Pub. 11-21-61. Filed 2-14-61.

727,302. SILVER DOLLAR. Clarence W. Hammond, d.b.a. Hammond Shrimp Co. SN 114,477. Pub. 11-21-61. Filed 2-27-61.

727,303. FASHION FARE. General Mills, Inc. SN 115,230. Pub. 11-21-61. Filed 3-9-61.

727,304. KENILWORTH. Red & White Corporation. SN 118,102. Pub. 11-21-61. Filed 4-18-61.

727,305. SHELL OUTS. Steele Canning Company. SN 118,505. Pub. 11-21-61. Filed 4-24-61.

727,306. YOGI. Arnaud Coffee Corporation. SN 118,759. Pub. 11-21-61. Filed 4-27-61.

Class 48 — Malt Beverages and Liquors

727,307. MOLSON'S CANADIAN AND DESIGN. Molson's Brewery, Limited. SN 87,894. Pub. 11-21-61. Filed 12-23-59.

727,308. THE BEST BREWS IN THE WORLD COME FROM CARLING. Carling Brewing Company Incorporated. SN 98,773. Pub. 11-21-61. Filed 6-10-60.

727,309. PIGGY PAK. G. Heileman Brewing Co. SN 103,020. Pub. 11-21-61. Filed 8-19-60.

727,310. RIVIERA. Atlantic Brewing Company. SN 116,788. Pub. 11-21-61. Filed 3-30-61.

Class 49 — Distilled Alcoholic Liquors

727,311. DRURY LANE. Katz Drug Company. SN 119,772. Pub. 11-21-61. Filed 5-11-61.

Class 50 — Merchandise Not Otherwise Classified

727,175. CONSOLIDATED CERTIFICATE. See Class 18.

727,229. CONSOLIDATED CERTIFICATE. See Class 26.

727,312. TECH-TARP. Technical Rubber, Inc. SN 104,124. Pub. 11-21-61. Filed 9-8-60.

727,313. PORTRAIT OF A MAN. Cliff Arquette. SN 105,601. Pub. 11-21-61. Filed 10-3-60.

727,314. PORTRAIT OF A MAN. Cliff Arquette. SN 105,605. Pub. 11-21-61. Filed 10-3-60.

Class 51 — Cosmetics and Toilet Preparations

727,315. REPRESENTATION OF A HEART. Helena Rubinstein, Inc. SN 85,401. Pub. 11-21-61. Filed 11-16-59.

727,316. ORAL MASTER. James J. Gilbool. SN 96,797. Pub. 11-21-61. Filed 5-10-60.

727,317. SWEET BONNE. George H. Weyer, Inc., d.b.a. Affiliated Laboratories. SN 102,972. Pub. 11-21-61. Filed 8-18-60.

727,318. MORA. S.I.P.A.P.—S.p.A., Societa Italiana Prodotti Apparecchi Parrucchieri. SN 103,212. Pub. 11-21-61. Filed 8-22-60.

727,319. OLALIN. C. H. Boehringer Sohn. SN 104,887. Pub. 11-21-61. Filed 9-21-60.

727,320. SWIMMING POOL WAVE. Charles E. Fleming, Jr., d.b.a. Anita's Beauty Shoppe and as Anita's. SN 106,195. Pub. 11-21-61. Filed 10-11-60.

727,321. PEARL-EYES. John Robert Powers Products Co., Inc. SN 107,148. Pub. 8-29-61. Filed 10-25-60.

727,322. BREATH OF ROSES. 42 Products Ltd., Inc., d.b.a. Floral Flavors of California. SN 109,484. Pub. 11-21-61. Filed 12-2-60.

727,323. WALDORF. General Products. SN 111,493. Pub. 11-21-61. Filed 1-9-61.

Class 52 — Detergents and Soaps

727,324. CARICATURE OF MAN WITH TOP HAT. Kutol Products Co. Inc. SN 80,889. Pub. 11-21-61. Filed 9-4-59.

727,325. DISC. Aspen Corporation. SN 110,971. Pub. 11-21-61. Filed 12-29-60.

727,326. TAB-JETS. Detabgent Corporation. SN 110,985. Pub. 11-21-61. Filed 12-29-60.

727,327. DETABGENT. Detabgent Corporation. SN 110,986. Pub. 11-21-61. Filed 12-29-60.

727,328. AEROWASH. Wyandotte Chemicals Corporation. SN 111,711. Pub. 11-21-61. Filed 1-11-61.

727,329. WALDORF. General Products. SN 114,206. Pub. 11-21-61. Filed 2-23-61.

727,330. SCAMPER. Safeway Stores, Incorporated. SN 117,301. Pub. 9-5-61. Filed 4-6-61.

Service Marks

Class 100 — Miscellaneous

727,331. UNITED CHURCH PRESS. The Board of Christian Education and Publication, Evangelical and Reformed Church, d.b.a. The Christian Education Press, and The Board of Home Missions, Congregational Christian Churches, d.b.a. Pilgrim Press (joint owners). SN 66,770. Pub. 11-21-61. Filed 1-30-59.

727,332. REPRESENTATION OF A HUMAN FEMALE. Sandy's Franchise, Inc. SN 108,395. Pub. 11-21-61. Filed 11-14-60.

727,333. JULES HAIRSTYLIST. Jules E. Bernfeld, d.b.a. Jules Hairstylist. SN 111,314. Pub. 11-21-61. Filed 1-5-61.

Class 101 — Advertising and Business

727,334. CIRCLES AND MAP DESIGN WITH WORDING. Credit Bureau Audit Systems, Inc. SN 66,703. Pub. 11-21-61. Filed 1-29-59.

727,335. RED & WHITE. Bushey & Wright, Inc. SN 104,510. Pub. 11-21-61. Filed 9-15-60.

727,336. THE INTERNATIONAL BEAUTY CONGRESS. International Beauty Congress, Inc. SN 107,457. Pub. 11-21-61. Filed 10-31-60.

727,337. ART POINT STUDIOS AND DESIGN. The Art Point Studios. SN 114,742. Pub. 11-21-61. Filed 3-2-61.

Class 102 — Insurance and Financial

727,338. SDC. System Development Corporation. SN 63,611. Pub. 6-28-60. Filed 12-3-58.

727,339. BURKE AND COMPTON REALTY, INC. AND DESIGN. Burke and Compton Realty, Inc. SN 109,472. Pub. 11-21-61. Filed 12-2-60.

Class 105 — Transportation and Storage

727,340. LOFTLEIDIR AND DESIGN. Loftleidir h.f. SN 109,979. Pub. 11-21-61. Filed 12-9-60.

727,341. MR. TRAVEL AND DESIGN. Mr. Travel Inc. SN 114,555. Pub. 11-21-61. Filed 2-27-61.

Class 106 — Material Treatment

727,342. HI-T-LUBE. General Magnaplate Corp. SN 90,421. Pub. 11-21-61. Filed 2-5-60.

727,343. SOVEL-SET. Sovelco Mills, Inc. SN 104,327. Pub. 11-21-61. Filed 9-12-60.

727,344. SOVEL-FAST. Sovelco Mills, Inc. SN 104,328. Pub. 11-21-61. Filed 9-12-60.

727,345. SOVEL-PERM. Sovelco Mills, Inc. SN 104,329. Pub. 11-21-61. Filed 9-12-60.

Class 107 — Education and Entertainment

727,346. SDC. System Development Corporation. SN 63,610. Pub. 6-28-60. Filed 12-3-58.

727,347. SDC. System Development Corporation, assignee of Systems Development Corporation. SN 79,532. Pub. 6-28-60. Filed 8-13-59.

727,348. CHEVRON. Standard Oil Company of California. SN 97,422. Pub. 11-21-61. Filed 5-18-60.

TRADEMARK REGISTRATIONS RENEWED

146,289. SATIN-SONATA. Cl. 42. 9-6-21.
148,719. BROMO SODA. Cl. 18. 11-22-21.
149,368. DIXIE. Cl. 43. 12-13-21.
150,361. FLOOD'S OINTMENT. Cl. 18. 1-3-22.
150,411. HOOPERWOOD. Cl. 42. 1-3-22.
150,462. MIAMI. Cl. 42. 1-3-22.
151,647. WORCESTER. Cl. 46. 2-7-22.
151,760. FLEISCHMANN'S. Cl. 46. 2-14-22.
151,809. HOOPERWOOD. Cl. 35. 2-14-22.
151,920. OLD HICKORY. Cl. 11. 2-14-22.
152,031. PUREZA. Cl. 46. 2-14-22.
152,523. HUM-MER. Cl. 23. 2-28-22.
152,860. JOHN RUSKIN. Cl. 17. 3-7-22.
153,825. "NEW EASY." Cl. 23. 3-28-22.
154,170. LINWEAVE. Cl. 37. 4-4-22.
154,893. DEL MONTE. Cl. 45. 5-16-22.
154,998. PIEDMONT. Cl. 17. 5-16-22.
155,543. DEAD SHOT AND DESIGN. Cl. 6. 5-30-22.
391,407. SERENACEL. Cl. 42. 11-4-41.
392,073. PHONACALL. Cl. 21. 12-9-41.
392,138. SPEEDWAY. Cl. 23. 12-9-41.
392,208. POLYTHERM. Cl. 16. 12-16-41.
392,234. COLPROVIA. Cl. 16. 12-16-41.
392,398. ARROW DESIGN. Cl. 19. 12-23-41.
392,399. DIAMOND ARROW. Cl. 19. 12-23-41.
392,418. JAYGOL. Cl. 6. 12-23-41.
392,543. SHANLANESE. Cl. 42. 12-30-41.
392,641. BLANCETTE. Cl. 42. 1-6-42.
393,183. CORO CRAFT. Cl. 28. 1-27-42.
393,220. GUARDS. Cl. 39. 1-27-42.
393,295. KAYSER AND DESIGN. Cl. 39. 2-3-42.
393,356. UKELANO. Cl. 36. 2-10-42.
393,464. KRONISOL. Cl. 6. 2-17-42.
393,465. METHOX. Cl. 6. 2-17-42.
393,643. KAYSER. Cl. 39. 2-24-42.
393,753. BOLCA. Cl. 26. 3-3-42.
394,297. ABLOY AND REPRESENTATION OF KEY. Cl. 25. 3-31-42.
394,329. MOVIELAND GIRL. Cl. 39. 3-31-42.
394,432. KAYRESS. Cl. 39. 4-7-42.
394,448. MOGUL-METALLIZER. Cl. 23. 4-7-42.
394,480. DARYL. Cl. 39. 4-7-42.
394,667. BLACK THORN. Cl. 49. 4-21-42.
394,668. CABIN BROOK. Cl. 49. 4-2-42.
394,743. AKROMAX. Cl. 26. 4-28-42.
394,819. PHILCO. Cl. 25. 4-28-42.
394,824. GARDEN CLUB. Cl. 35. 4-28-42.
395,217. COUNTRY GENTLEMAN. Cl. 49. 5-19-42.
395,221. ADAMS-ADAMS AND DESIGN. Cl. 44. 5-19-42.
395,272. CHARM. Cl. 38. 5-19-42.
395,436. PHILCO. Cl. 29. 5-26-42.
395,439. SUNTILE. Cl. 12. 5-26-42.
395,474. REGENT ROYAL. Cl. 39. 5-26-42.
395,493. YOUR DAY BEGINS THE NIGHT BEFORE. Cl. 32. 5-26-42.
395,578. HYDRO-TREATOR. Cl. 23. 6-2-42.
395,735. NO-FOG. Cl. 52. 6-9-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

398,742. THE "ALL IN ONE" VITAMIN CAPSULE. Cl. 6. 11-17-42.
642,448. DE GREASE IT. Cl. 52. 8-7-56.

Section 8

418,346. BLENSOL. Cl. 51. 12-18-45.
437,346. CREAM. Cl. 42. 3-16-48.
444,208. TIGER AND DESIGN. Cl. 15. 9-12-50.
597,495. HILL'S. Cl. 46. 10-26-54.

The following registrations issued Dec. 20, 1955

617,653. SEWSOFT AND DESIGN. Cl. 1.
617,660. DOLIER. Cl. 2.
617,661. TOWNE & COUNTRY. Cl. 2.
617,662. CHUCK WAGON. Cl. 2.
617,665. SIL. Cl. 4.
617,681. PAHCOL. Cl. 6.
617,695. K-FLO. Cl. 10.
617,696. PHOS-FLO. Cl. 10.
617,701. VETROTEX. Cl. 12.
617,703. UB AND DESIGN. Cl. 12.
617,705. WOVEN DESIGN SELVAGE OF WIRE CLOTH. Cl. 13.
617,706. CCS CONTINENTAL. Cl. 13.
617,707. CARPENTER AND DESIGN. Cl. 13.
617,709. EZ SEAT LIFTER AND DESIGN. Cl. 13.
617,718. "LISCO." Cl. 15.
617,720. POWER-FREEING AND DESIGN. Cl. 15.
617,722. DESIGN OF 2 FLAGS. Cl. 15.
617,736. FLAVORITE. Cl. 18.
617,737. ARTHRIN. Cl. 18.
617,738. HYDRODENT. Cl. 18.
617,741. LOBEX. Cl. 18.
617,743. EUPHASED-5. Cl. 18.
617,751. FEXEROL. Cl. 18.
617,754. VISORACK. Cl. 19.
617,756. DYNAMAX. Cl. 19.
617,758. WHIRL-A-WAY AND DESIGN. Cl. 19.
617,760. TORSION-LEVER. Cl. 19.
617,761. GUARDIAN-ANGEL. Cl. 19.
617,762. COBRA. Cl. 19.
617,763. FEDRALENE. Cl. 21.
617,764. TRANSITRON. Cl. 21.
617,766. FRANKORAMA. Cl. 21.
617,767. VOCAMATIC. Cl. 21.
617,768. MONO-UNIT. Cl. 21.
617,769. VITA-MISER. Cl. 21.
617,770. NIGHTINGALE ALTA FIDELIDAD AND DESIGN. Cl. 21.
617,772. TRITACTOE. Cl. 22.
617,773. TRI TAC TOE AND DESIGN. Cl. 22.
617,779. BROTHER CASEY. Cl. 22.
617,782. "CRUX." Cl. 22.
617,783. FISH CHARM AND DESIGN. Cl. 22.
617,787. HOBIE AND DESIGN. Cl. 22.
617,788. WINGE-E AND ARROW DESIGN. Cl. 22.
617,789. GINASTA AND DESIGN. Cl. 22.
617,790. PLUMBOB. Cl. 22.
617,791. CRYPT-O. Cl. 22.
617,792. WHITE MAGIC. Cl. 22.
617,793. MAMBO. Cl. 22.
617,797. GUARDSMAN. Cl. 22.
617,799. EQUIPMENT DESIGNED FOR SERVICE, ETC. AND DESIGN. Cl. 23.
617,800. POWER-AIRE. Cl. 23.
617,802. SPRITE. Cl. 23.
617,803. GYRON. Cl. 23.
617,804. GHOST. Cl. 23.
617,806. LIGHTNING. Cl. 23.
617,810. MITRTRU. Cl. 23.
617,812. HOLDA-FOLD. Cl. 23.
617,813. CARDOX AUGER MINER. Cl. 23.
617,815. SCADLE. Cl. 26.

617,816. GARTER POINTER. Cl. 26.
617,818. RULERITER. Cl. 26.
617,819. TUK-AWAY. Cl. 26.
617,823. LITHOTEST. Cl. 26.
617,825. GUARDIAN ANGEL PROTECTS ETC. AND DESIGN. Cl. 28.
617,839. RECOOLER CTI AND DESIGN. Cl. 31.
617,841. PERMA-FREEZ. Cl. 31.
617,844. WATER SPRITE. Cl. 31.
617,848. HAMPSHIRE CRAFT. Cl. 32.
617,849. GEOMETRICAL DESIGN. Cl. 32.
617,851. AUTO-SLIDE. Cl. 32.
617,852. THUNDERBIRD. Cl. 32.
617,853. TUBEMATIC. Cl. 32.
617,855. ORAN DUAL-AIR. Cl. 34.
617,857. DESIGN WITHIN TRIANGLE. Cl. 34.
617,866. TODAY'S AND DESIGN. Cl. 36.
617,876. QUIK-DEX AND DESIGN. Cl. 38.
617,877. MOO-O-OS AND MUSINGS. Cl. 38.
617,884. DOGIE. Cl. 39.
617,897. FITTENS. Cl. 39.
617,900. SUGAR STICK. Cl. 39.
617,901. KITTEN MERE. Cl. 39.
617,904. BECKERAMA. Cl. 39.
617,906. TAPESTRAMA BY ADVANCE AND LETTER A. Cl. 42.
617,909. RIBONITRIMS AND DESIGN. Cl. 42.
617,910. RIBONIT AND DESIGN. Cl. 42.
617,915. TEA HOUSE. Cl. 42.
617,916. SANDMAN. Cl. 42.
617,922. PHELUN. Cl. 43.
617,926. MI-AME. Cl. 45.
617,939. KARMALETTES. Cl. 46.
617,941. MEL-O-CREME. Cl. 46.
617,943. HOT TAMALE PETE AND DESIGN. Cl. 46.
617,955. SCREAM PUFF. Cl. 46.
617,960. LIGHT CRUST. Cl. 46.
617,962. GOLDEN FLUFF BASE. Cl. 46.
617,965. WASHCO. Cl. 46.
617,966. SODERHOLM SWEDISH RYE. Cl. 46.
617,972. CROFT BANQUET. Cl. 48.
617,974. FLAVORLOCK. Cl. 49.
617,975. "MAGIC-FLOW." Cl. 50.
617,978. RAMESES. Cl. 50.
617,979. ACME COLOR. Cl. 50.
617,980. ALL STARS AND DESIGN. Cl. 50.
617,981. SPRA-LOK. Cl. 50.
617,982. "I BELIEVE." Cl. 50.
617,985. BOURGES (STANDARDIZED) COLOTONE. Cl. 50.
617,986. CALICRAFT WOOD PRODUCTS AND DESIGN. Cl. 50.
617,988. GATOR GRIP. Cl. 50.
617,991. "DOC" HARRY'S K-9 AND DESIGN. Cl. 52.
617,997. WASHINGTON GAS LIGHT CO. AND DESIGN. Cl. 100.
617,998. PRINTCOPY. Cl. 101.
617,999. MASSEY'S PICTURAMA OF HOME BUYS AND DESIGN. Cl. 102.
618,000. SALES ROBOT. Cl. 102.
618,002. ANCHOR THE ROOF TO THE EARTH. Cl. 103.
618,005. SYSTEM TANK LINES, INC. AND DESIGN. Cl. 105.
618,009. ANDERSON'S SR AND SHIELD DESIGN. Cl. 18.
618,012. SIEGLER OUTHEATS 'EM ALL ETC. AND DESIGN. Cl. 34.
618,013. "HEAT 'EM AND EAT 'EM." Cl. 46.
618,015. KAREN'S AND DESIGN. Cl. 46.
618,018. DRAIN-FRE. Cl. 52.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

410,354. VERSENE. Cl. 52. The Martin-Dennis Company. 11–21–44. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

518,778. IKE AND MIKE AND DESIGN. Cl. 46. Malbis Bakery Company. 12–13–49. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

529,901. AMOFLEX. Cl. 6. Pan American Refining Corporation. 8–29–50. New Cert. Sec. 7(c) to The American Oil Company, Chicago, Ill.

531,949. EL SOL AND DESIGN. Cl. 46. Vories Baking Company. 10–17–50. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

532,100. AMOREZ. Cl. 6. Pan American Refining Corporation. 10–17–50. New Cert. Sec. 7(c) to The American Oil Company, Chicago, Ill.

535,646. AMOIL. Cl. 6. Pan American Refining Corporation. 1–2–51. New Cert. Sec. 7(c) to The American Oil Company, Chicago, Ill.

544,594. VERSENATE. Cl. 6. Berswerth Chemical Company. 7–3–51. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

572,018. VERSEN-OL. Cl. 6. Berswerth Chemical Company. 3–17–53. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

573,443. VERSENE-DIOL. Cl. 6. Berswerth Chemical Company. 4–21–53. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

575,968. VERSENE FE–3 SPECIFIC. Cl. 6. Berswerth Chemical Company. 6–16–53. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

575,969. VERSENE T. Cl. 6. Berswerth Chemical Company. 6–16–53. New Cert. Sec. 7(c) to The Dow Chemical Company, Midland, Mich.

576,960. BELLE MEADE. Cl. 46. United Biscuit Company of America. 7–7–53. New Cert. Sec. 7(c) to D. G. Goodman & Son, Nashville, Tenn.

628,562. SKINLIFE. Cl. 18. Skinlife, Incorporated. 6–12–56. New Cert. Sec. 7(c) to Helena Rubinstein, Inc., New York, N.Y.

643,033. REX. Cl. 46. Jack's Cookie Co., Inc. 3–19–57. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

644,136. BUMPIT. Cl. 22. C. & M. Industries. 4–16–57. New Cert. Sec. 7(c) to Norman Joe Nichols, doing business as Nichols Industries, Algonac, Mich.

649,819. "FAMOUS FIFTY" 50. Cl. 46. Jack's Cookie Company. 8–6–57. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

649,827. POOR BOY. Cl. 46. Jack's Cookie Co., Inc. 8–6–57. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

661,117. VORIES. Cl. 46. Vories Baking Company. 4–29–58. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

670,136. PASITABS. Cl. 18. Tafon Distributors, Inc. 11–25–58. New Cert. Sec. 7(c) to Caltex Distributors, Inc., Los Angeles, Calif.

677,428. SMILIN' FRESH! Cl. 46. Jack's Cookie Co., Inc. 4–21–59. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

678,550. ROCK 'N ROLL. Cl. 46. Jack's Cookie Company. 5–12–59. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

682,631. MALBO AND DESIGN. Cl. 46. Jack's Cookie Co., Inc., assignee of Malbis Bakery Corporation. 7–28–59. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

684,235. DEVIL DAINTY. Cl. 46. Jack's Cookie Co., Inc. 8–25–59. New Cert. Sec. 7(c) to Jack's Cookie Corporation, Cleveland, Ohio.

709,486. BANFF SPRINGS AND DESIGN. Cl. 49. Carrington and Company, Ltd. 1–3–61. New Cert. Sec. 7(c) to Weinkle's Liquor Stores, Inc., Miami, Fla.

711,221. BACK SUPPORTER. Cl. 32. Back Supporters, Inc. 2–14–61. New Cert. Sec. 7(c) to The Spring-Air Company, Chicago, Ill.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 1—Raw or Partly Prepared Materials

153,155. Mar. 14, 1922. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

DU PONT

For Pyroxylin and Nitrocellulose.

389,976. Sept. 2, 1941. Barium and Chemicals, Inc., Willoughby, Ohio. Pub. by registrant.

USITE

For Mixture of Argillaceous and Carbonaceous Materials for Blanketing and Insulating Purposes in the Sink Heads of Ingot Molds.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

394,235. Mar. 24, 1942. Philco Corporation, Philadelphia, Pa. Pub. by registrant.

PHILCO

For Canvas Carrying Cases and Leather Carrying Cases.

Class 6—Chemicals and Chemical Compositions

152,156. Feb. 21, 1922. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

DU PONT

For Dyestuff Intermediates.

153,705. Mar. 28, 1922. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

LITHOSOL

For Dyestuff Intermediates.

390,077. Sept. 9, 1941. Barium and Chemicals, Inc., Willoughby, Ohio. Pub. by registrant.

BARIUM X A

For Composition Employed in the Conditioning of Steel and Comprising a Reducing Agent and a Compound of One or More Members of the Group Including the Alkali and Alkaline Earth and Magnesium for the Purpose of Removing Gaseous and Normally Solid Inclusions From Steel by Addition to the Latter While It Is in a Molten Condition.

Class 14—Metals and Metal Castings and Forgings

148,353. Nov. 15, 1921. Beckett, Laycock & Watkinson Limited, London, England. Pub. by registrant.

BECLAWAT

For Channel Shaped Metal Rods Made in Lengths and Adapted To Be Cut To Size.

332,193. Feb. 4, 1936. Pacific Alloy Co., Seattle, Wash. Pub. by Gould-National Batteries, Inc., St. Paul, Minn.

VANASIL

For Metal Alloy in Ingot Form.

Class 16—Protective and Decorative Coatings

158,608. Sept. 12, 1922. The R. A. Becker Varnish Company, Cincinnati, Ohio. Pub. by registrant.

Rēnamel

For Stain Varnish, Varnishes, Mixed Paints, and Paint Enamels.

Class 17—Tobacco Products

164,907. Feb. 27, 1923. Mazer Cigar Manufacturing Company, Detroit, Mich. Pub. by J. C. Winter & Co., Inc., Red Lion, Pa.



For Cigars.

191,148. Nov. 4, 1924. The Mazer-Cressman Cigar Co., Philadelphia, Pa. Pub. by J. C. Winter & Co., Inc., Red Lion, Pa.



For Cigars.

344,785. Apr. 6, 1937. Mazer-Cressman Cigar Co., Detroit, Mich. Pub. by J. C. Winter & Co., Inc., Red Lion, Pa.

COUNSELLOR

For Cigars.

Class 18—Medicines and Pharmaceutical Preparations

76,722. Feb. 8, 1910. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

PITUITRIN

For Cardio-Vascular Stimulants and Diuretics.

382,092. Oct. 15, 1940. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

TAKA-DIASTASE

For Digestant Preparation.

385,974. Mar. 25, 1941. S. B. Penick & Company, d.b.a. Lloyd Brothers, Pharmacists, Inc., New York, N.Y. and Cincinnati, Ohio. Pub. by Lloyd Brothers, Inc., Cincinnati, Ohio.

HYPER-VISCRA

For Fluid Extract of Viscum Album and Crataegus for Use in Treatment of Hypertension.

Class 21—Electrical Apparatus, Machines, and Supplies

391,258. Oct. 28, 1941. Oak Mfg. Co., Chicago, Ill. Pub. by Oak Manufacturing Co., Crystal Lake, Ill.

Oak

For Electric Switches, Vibrators, and Electric Condensers.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

378,758. June 18, 1940. Korb-Pettit Wire Fabrics & Iron Works, Inc., Philadelphia, Pa. Pub. by Hewitt-Robins, Incorporated, King of Prussia, Pa.

FLEXTROUGH

For Wire Conveyor Belts for Industrial Purposes.

Class 27—Horological Instruments

110,868. June 13, 1916. Sears, Roebuck and Co., Chicago, Ill. Pub. by registrant.

The National Call

For Alarm Clocks.

Class 38—Prints and Publications

54,856. July 31, 1906. The Railway Equipment and Publication Company, New York, N.Y. Pub. by registrant.

THE POCKET LIST
or
RAILROAD OFFICIALS.

For Serial Publications Relating to the Business of Railroads and Containing Information With Respect Thereto.

225,187. Mar. 15, 1927. The Railway Equipment and Publication Company, New York, N.Y. Pub. by registrant.

THE OFFICIAL RAILWAY EQUIPMENT REGISTER

For Periodical Relating to the Business of Railroads and Containing Information With Respect Thereto.

233,997. Oct. 18, 1927. The Railway Equipment and Publication Company, New York, N.Y. Pub. by registrant.

RAILWAY LINE CLEARANCES
AND CAR DIMENSIONS

For Periodical.

376,634. Apr. 2, 1940. NEA Service, Inc., Cleveland, Ohio. Pub. by Newspaper Enterprise Association, Inc., Cleveland, Ohio.

Brenda Breeze

For Comic Drawings, Published in a Series in Daily and Sunday Newspapers.

376,649. Apr. 2, 1940. NEA Service, Inc., Cleveland, Ohio. Pub. by Newspaper Enterprise Association, Inc., Cleveland, Ohio.



For Comic Drawings, Published in a Series in Daily and Sunday Newspapers.

Class 39—Clothing

93,819. Oct. 21, 1913. Burberrys, London, England. Pub. by Burberrys Limited, London, England.



For Suits, Overcoats, Shirts, and Gaiters for General Sporting and Military Wear for Men, Women, and Children.

388,926. July 15, 1941. Raleigh Haberdasher, Inc., Washington, D.C. Pub. by registrant.

Lake-Loom

For Men's Summer Suits.

392,257. Dec. 16, 1941. The H. A. Seinsheimer Company, Cincinnati, Ohio. Pub. by registrant.

COOLERS

For Men's Clothing—Namely, Suits, Overcoats, Topcoats and Trousers.

Class 40—Fancy Goods, Furnishings, and Notions

98,787. Aug. 4, 1914. I. B. Kleinert Rubber Company, New York, N.Y. Pub. by registrant.

Justrite

For Dress-Shields.

Class 43—Thread and Yarn

20,625. Jan. 19, 1892. J. & P. Coats, Limited, Paisley, Scotland. Pub. by Coats & Clark Inc., New York, N.Y.



For White and Colored Cotton Thread, Reeled on Spools.

Class 46—Foods and Ingredients of Foods

357,702. June 14, 1938. Chr. Hansen's Laboratory, Inc., West Allis, Wis. Pub. by registrant.

HANSEN'S

For Dairy Preparations—Namely, Cheese Color, Butter Color, Ice Cream Color, Lactic Ferment Culture, Bulgarian Milk Culture, Neutraliser (Standard Alkali Solution) and Indicator (Phenolphthalein).

393,434. Feb. 17, 1942. The E. Kahn's Sons Company, Cincinnati, Ohio. Pub. by registrant.

KASOCO

For Meat and Meat Products—Namely, Bacon.

416,513. Sept. 18, 1945. Fishery Products, Inc., Boston, Mass., and Cleveland, Ohio. Pub. by Blue Water Seafoods, Inc., Cleveland, Ohio.

BLUE BANK

For Sea Foods—Namely, Frozen Fish.

INDEX OF REGISTRANTS

FEBRUARY 6, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Aberle, Inc., Philadelphia, Pa. 617,897, canc. Cl. 39.
Ace Cabinet Corp., New Bedford, Mass. 617,841, canc. Cl. 31.
Acme Photo Engraving Co., San Francisco, Calif. 617,979, canc. Cl. 50.
Advance Fabrics Co., New York, N.Y. 617,906, canc. Cl. 42.
Aerojet-General Corp., Azusa, Calif. 727,145, pub. 11–21–61. Cl. 6.
Affiliated Laboratories: *See*—
Weyer, George H., Inc.
Allied Radio Corp., Chicago, Ill. 727,196, pub. 11–21–61. Cl. 21.
Alpha Chemical Co.: *See*—
Simson, Maurice H.
Alter, Hobart T., d.b.a. Hobie Surfboard Shop, Dana Point, Calif. 617,787, canc. Cl. 22.
American Beauty Macaroni Co., The: *See*—
American Beauty Macaroni Co.
American Beauty Macaroni Co., d.b.a. The American Beauty Macaroni Co., Kansas City, Kans. 727,289, pub. 11–21–61. Cl. 46.
American Cyanamid Co., New York, N.Y. 727,138, pub. 11–21–61. Cl. 6.
American-Marietta Co., d.b.a. United Brick & Tile Co., Chicago, Ill. 617,703, canc. Cl. 12.
American Oil Co., The: *See*—
Pan American Refining Corp.
American Optical Co., Southbridge, Mass. 617,819, canc. Cl. 26.
American Photocopy Equipment Co., Evanston, Ill. 727,205, pub. 11–21–61. Cl. 23.
American Potash & Chemical Corp., Los Angeles, Calif. 727,149, pub. 11–21–61. Cl. 6.
American Tobacco Co., The, New York, N.Y. 727,172, pub. 11–21–61. Cl. 17.
Amplex Corp., Long Island, N.Y. 727,190, pub. 11–21–61. Cl. 21.
Anderson, Clayton, & Co., Dallas, Tex. 727,294, pub. 11–21–61. Cl. 46.
Anderson Co., The, Gary, Ind. 617,762, canc. Cl. 19.
Anderson Remedies, Portland, Oreg. 618,009, canc. Cl. 18.
Anita's: *See*—
Fleming, Charles E., Jr.
Anita's Beauty Shoppe: *See*—
Fleming, Charles E., Jr.
Antle, L. L., & Co., Inc., Atlanta, Ga. 727,134, pub. 11–21–61. Cl. 4.
Aquatronic Industries, Inc., Culver City, Calif. 727,194, pub. 11–21–61. Cl. 21.
Armco Steel Corp., Middletown, Ohio. 727,157, pub. 11–21–61. Cl. 12.
Arnaud Coffee Corp., New Orleans, La. 727,306, pub. 11–21–61. Cl. 46.
Arquette, Cliff, Gettysburg, Pa. 727,237–8, pub. 11–21–61. Cl. 30.
Arquette, Cliff, Gettysburg, Pa. 727,242, pub. 11–21–61. Cl. 33.
Arquette, Cliff, Gettysburg, Pa. 727,313–14, pub. 11–21–61. Cl. 50.
Art Point Studios, The, Sebastopol, Calif. 727,337, pub. 11–21–61. Cl. 101.
Art Steel Sales Corp., New York, N.Y. 617,876, canc. Cl. 38.
Arvin Industries, Inc., Columbus, Ind. 727,207, pub. 11–21–61. Cl. 23.
Aspen Corp., Tully, N.Y. 727,325, pub. 11–21–61. Cl. 52.
Associated Enterprises, Venice, Calif. 617,709, canc. Cl. 13.
Athletic Products Co., Inc., South Bend, Ind. 617,797, canc. Cl. 22.
Atlantic Brewing Co., Chicago, Ill. 727,310, pub. 11–21–61. Cl. 48.
Atomium Corp., Waltham, Mass. 727,230, pub. 11–21–61. Cl. 26.
Ault & Wiborg Corp., to Interchemical Corp., New York, N.Y. 392,208, ren. 2–6–62. Cl. 16.
Avionics Research Products Corp., Venice, Calif. 727,283–4, pub. 11–21–61. Cl. 44.
Axel Bros., Inc., Long Island City, N.Y. 617,825, canc. Cl. 28.
Baby Duds, Enid, Okla. 727,258, pub. 11–21–61. Cl. 39.
Back Supporters, Inc., to The Spring-Air Co., Chicago, Ill. 711,221, new cert. Cl. 32.
Bailey, George S., Hat Co., Los Angeles, Calif. 617,884, canc. Cl. 39.
Barium and Chemicals, Inc., Willoughby, Ohio. 389,976, 12(c) pub. 2–6–62. Cl. 1.
Barium and Chemicals, Inc., Willoughby, Ohio. 390,077, 12(c) pub. 2–6–62. Cl. 6.
Barrell, William L., Co., Boston, Mass. 617,978, canc. Cl. 50.
Bassick Co., The, Bridgeport, Conn. 392,398–9, ren. 2–6–62. Cl. 19.
Bates Mfg. Co., Lewiston, Maine. 727,274, pub. 11–21–61. Cl. 42.
Bay, Elliott, Lumber Co., Seattle, Wash. 727,187, pub. 11–21–61. Cl. 21.
Bay, Elliott, Mill Co., Seattle, Wash. 727,158, pub. 11–21–61. Cl. 12.
Beatrice Foods Co., Chicago, Ill., from Mario's Food Products Co., Detroit, Mich 727,285, pub. 11–21–61. Cl. 46.
Beautlich, Inc., Chicago, Ill. 727,181, pub. 11–21–61. Cl. 18.
Becker Cloak Corp., New York, N.Y. 617,904, canc. Cl. 39.
Becker, R. A., Varnish Co., The, Cincinnati, Ohio. 158,608, 12(c) pub. 2–6–62. Cl. 16.
Beckett, Laycock & Watkinson Ltd., London, England. 148,353, 12(c) pub. 2–6–62. Cl. 14.
Belford, Hugh W.: *See*—
Flood, Daniel A.
Belford, Robbie F.: *See*—
Flood, Daniel A.
Belford, William A.: *See*—
Flood, Daniel A.
Bemis Bro. Bag Co., St. Louis, Mo. 727,129, pub. 11–12–61. Cl. 2.
Bernfeld, Jules E., d.b.a. Jules Hairstylist, Washington, D.C. 727,333, pub. 11–21–61. Cl. 100.
Bersworth Chemical Co., to The Dow Chemical Co., Midland, Mich. 544,594, new cert. Cl. 6.
Bersworth Chemical Co., to The Dow Chemical Co., Midland, Mich. 572,018, new cert. Cl. 6.
Bersworth Chemical Co., to The Dow Chemical Co., Midland, Mich. 573,443, new cert. Cl. 6.
Bersworth Chemical Co., to The Dow Chemical Co., Midland, Mich. 575,968–9, new cert. Cl. 6.
Billard Barbell Co., Inc.: *See*—
Billard Corp.
Billard Corp., from Billard Barbell Co., Inc., New York, N.Y. 727,176, pub. 11–21–61. Cl. 18.
Blech- & Metallwarenfabrik Schutz & Patry, Vienna, Austria. 727,219, pub. 11–21–61. Cl. 23.
Bleiman, H. W., Co., Philadelphia, Pa. 727,269, pub. 11–21–61. Cl. 23.
Board of Christian Education and Publication, The, Evangelical and Reformed Church, d.b.a. The Christian Education Press, and The Board of Home Missions, Congregational Christian Churches, d.b.a. Pilgrim Press, Philadelphia, Pa. 727,331, pub. 11–21–61. Cl. 100.
Board of Home Missions, The: *See*—
Board of Christian Education and Publication, The.
Boehringer, C. H., Sohn, Ingelheim (Rhine), Germany. 727,319, pub. 11–21–61. Cl. 51.
Bol, Ltd., to Jacques Bolsey, New York, N.Y. 393,753, ren. 2–6–62. Cl. 26.
Bolsey, Jacques: *See*—
Bol, Ltd.
Bon-A-Ped Corp., The, Washington, D.C. 727,281, pub. 11–21–61. Cl. 44.
Borg-Warner Corp., Chicago, Ill. 727,215, pub. 11–21–61. Cl. 23.
Botimer, Lloyd, d.b.a. Botimer Special Tool Co., Vassar, Mich. 617,810, canc. Cl. 23.
Botimer Special Tool Co.: *See*—
Botimer, Lloyd.
Bourges Color Corp., New York, N.Y. 617,985, canc. Cl. 50.
Bowser, Inc.: *See*—
Bowser, S. F., & Co., Inc.
Bowser, S. F., & Co., Inc., to Bowser, Inc., Fort Wayne, Ind. 394,743, ren. 2–6–62. Cl. 26.
Broberg Game Co.: *See*—
Broberg, George H. A.
Broberg, George H. A., d.b.a. Broberg Game Co., Alhambra, Calif. 617,793, canc. Cl. 22.
Bro-Dart Industries, Newark, N.J. 727,216, pub. 11–21–61. Cl. 23.
Buffum, Francis H., Concord, N.H. 617,792, canc. Cl. 22.
Burberrys, by Burberrys Ltd., London, England. 93,819, 12(c) pub. 2–6–62. Cl. 39.
Burberrys Ltd.: *See*—
Burberrys.
Burke and Compton Realty, Inc., Washington, D.C. 727,339, pub. 11–21–61. Cl. 102.
Burrus Mills, Inc., d.b.a. Burrus Mill & Elevator Co., Fort Worth, Tex. 617,960, canc. Cl. 46.
Bushey & Wright, Inc., Chicago, Ill. 727,335, pub. 11–21–61. Cl. 101.
C. & M. Industries, to N. J. Nichols, d.b.a. Nichols Industries, Algonac, Mich. 644,136, new cert. Cl. 22.
California Foresteering, Placerville, Calif. 617,986, canc. Cl. 50.
California Packing Corp., San Francisco, Calif. 154,893, ren. 2–6–62. Cl. 45.
Calsicat Co., Grove City, Pa. 727,142, pub. 11–21–61. Cl. 6.
Caltex Distributors, Inc.: *See*—
Tafon Distributores, Inc.
Cambridge Tile Mfg. Co., The, Cincinnati, Ohio. 395,439, ren. 2–6–62. Cl. 12.
Capa Products Co., Maple Springs, N.Y. 617,761, canc. Cl. 19.
Cardox Corp., Chicago, Ill. 617,813, canc. Cl. 23.
Carhoff Co., Cleveland, Ohio. 395,735, ren. 2–6–62. Cl. 52.
Carling Brewing Co. Inc., Cleveland, Ohio. 727,308, pub. 11–21–61. Cl. 48.
Carlyle, Robert J., Brooklyn, N.Y. 617,982, canc. Cl. 50.
Carpenter Mfg. Corp., The, Cleveland, Ohio. 617,707, canc. Cl. 13.

Carrington and Co., Ltd., to Weinkle's Liquor Stores, Inc., Miami, Fla. 709,486, new cert. Cl. 49.
Carter Products, Inc., New York, N.Y. 727,184, pub. 10–10–61. Cl. 18.
Cash, Dan W., Printing Co., Waco, Tex. 727,253, pub. 11–21–61. Cl. 38.
Celanese Corp. of America, New York, N.Y. 391,407, ren. 2–6–62. Cl. 42.
Celanese Corp. of America, New York, N.Y. 392,543, ren. 2–6–62. Cl. 42.
Chatham Mfg. Co., Elkin, N.C. 727,271, pub. 11–21–61. Cl. 42.
Chipman Knitting Mills, Easton, Pa. 617,816, canc. Cl. 26.
Christian Education Press, The: *See*—
Board of Christian Education and Publication, The.
Claro Laboratories, South Bend, Ind. 727,199, pub. 11–21–61. Cl. 22.
Clay-Adams Co., Inc., to Clay-Adams, Inc., New York, N.Y. 395,221, ren. 2–6–62. Cl. 44.
Clay-Adams, Inc.: *See*—
Clay-Adams Co., Inc.
Clay, Benton, Co., Casper, Wyo. 727,127, pub. 11–21–61. Cl. 1.
Cluett, Peabody & Co., Inc., New York, N.Y. 393,220, ren. 2–6–62. Cl. 39.
Coats & Clark Inc.: *See*—
J. & P. Coats, Ltd.
Cohn & Rosenberger, Inc., to Coro, Inc., New York, N.Y. 393,183, ren. 2–6–62. Cl. 28.
Collier, R. T., Corp., Los Angeles, Calif. 617,844, canc. Cl. 31.
Colprovia Roads, Inc., Rochester, N.Y. 392,234, ren. 2–6–62. Cl. 16.
Colorvision Plastics, Inc., Boston, Mass. 727,229. Pub. 9–26–61, Cl. 26; pub. 11–14–61, Cl. 50. (Consolidated certificate, Classes 26 and 50.)
Congregational Christian Churches: *See*—
Board of Christian Education and Publication, The.
Conservative Baptist Foreign Mission Society, Wheaton, Ill. 727,251, pub. 11–21–61. Cl. 38.
Consolidated Coatings & Chemicals, Inc., d.b.a. Seldlitz Paint & Varnish Co., Kansas City, Mo. 727,140, pub. 1–31–61. Cl. 6.
Consolidated Coatings & Chemicals, Inc., d.b.a. Seldlitz Paint & Varnish Co., Kansas City, Mo. 727,168, pub. 1–31–61. Cl. 16.
Construction Fasteners, Inc., Reading, Pa. 727,159, pub. 11–21–61. Cl. 13.
Consumer Standard, Inc., Crystal Lake, Ill. 727,180, pub. 11–21–61. Cl. 18.
Container Corp. of America, Chicago, Ill. 727,128, pub. 11–21–61. Cl. 2.
Continental Copper & Steel Industries, Inc., New York, N.Y. 617,706, canc. Cl. 13.
Continental Laboratories, Inc., Palo Alto, Calif. 727,146, pub. 11–21–61. Cl. 6.
Continental Mfg. Co., Cincinnati, Ohio. 727,163, pub. 11–21–61. Cl. 13.
Cooling Tower Institute, Palo Alto, Calif. 617,829, canc. Cl. 31.
Cook Machinery Co., Inc., Dallas, Tex. 727,231, pub. 11–21–61. Cl. 26.
Coro, Inc.: *See*—
Cohn & Rosenberger, Inc.
Creative Closures, Denver, Colo. 617,981, canc. Cl. 50.
Credit Bureau Audit Systems, Inc., Grand Rapids, Mich. 727,334, pub. 11–21–61. Cl. 101.
Croft Brewing Co.: *See*—
Narragansett Brewing Co.
Currie, Margaret F., d.b.a. Sewing-Aids, Manhasset, N.Y. 617,812, canc. Cl. 23.
Custom Specialties Co., Pomona, Calif. 617,779, canc. Cl. 22.
Daroff, H., & Sons, Inc., to H. Daroff & Sons, Inc., Philadelphia, Pa. 395,474, ren. 2–6–62. Cl. 39.
Daryl Dress Co., to The RickMar Corp., St. Louis, Mo. 394,480, ren. 2–6–62. Cl. 39.
Davis Fishing Tackle Co.: *See*—
Davis, Lester M.
Davis, Lester M., d.b.a. Davis Fishing Tackle Co., Tacoma, Wash. 617,790, canc. Cl. 22.
Day-Baldwin, Inc., Irvington, N.J. 727,173, pub. 11–21–61. Cl. 18.
Deadwyler, T. J., d.b.a. The "Lisco" Co., Atlanta, Ga. 617,718, canc. Cl. 15.
Deering, Milliken & Co.: *See*—
Deering Milliken, Inc.
Deering Milliken, Inc., New York, N.Y. 727,277, pub. 11–21–61. Cl. 42.
Deering Milliken, Inc., Wilmington, Del., by merger and change of name from Deering, Milliken & Co. Inc., New York, N.Y. 727,270, pub. 11–21–61. Cl. 42.
De Havilland Engine Co. Ltd., The, Edgware, Middlesex, England. 617,802–4, canc. Cl. 23.
De Laval Separator Co., The, Poughkeepsie, N.Y. 392,138, ren. 2–6–62. Cl. 23.
Delman Co., The, Des Moines, Iowa. 617,758, canc. Cl. 19.
Detabgent Corp., Tully, N.Y. 727,326–7, pub. 11–21–61. Cl. 52.
Diamond Laboratories, Des Moines, Iowa. 727,182, pub. 11–21–61. Cl. 18.
Dixie Mercerizing Co., Chattanooga, Tenn. 149,368, ren. 2–6–62. Cl. 43.
Doane Agricultural Service, Inc., St. Louis, Mo. 618,002, canc. Cl. 103.
"Doc" Harry's Inc., Baltimore, Md. 617,991, canc. Cl. 52.
Dolber Corp., New York, N.Y. 617,660, canc. Cl. 2.
Doran Laboratories Co.: *See*—
Doran, Leo E., Sr.
Doran, Leo E., Sr., d.b.a. Doran Laboratories Co., St. Louis, Mo. 727,189, pub. 11–21–61. Cl. 21.
Dorr Co., Inc., The, New York, N.Y., to Dorr-Oliver Inc., Stamford, Conn. 395,578, ren. 2–6–62. Cl. 23.
Dorr-Oliver Inc.: *See*—
Dorr Co., Inc., The.
Dougherty's, J. A., Sons, Inc., Distillers, Philadelphia, Pa. 395,217, ren. 2–6–62. Cl. 49.
Dow Chemical Co.: *See*—
Bersworth Chemical Co.
Dow Chemical Co., The: *See*—
Martin-Dennis Co., The.
Drexel Furniture Co., Drexel, N.C. 617,852, canc. Cl. 32.
Du Pont de Nemours, E. I., & Co., Wilmington, Del. 152,156, 12(c) pub. 2–6–62. Cl. 6.
Du Pont de Nemours, E. I., & Co., Wilmington, Del. 153,155, 12(c) pub. 2–6–62. Cl. 1.
Du Pont de Nemours, E. I., & Co., Wilmington, Del. 153,705, 12(c) pub. 2–6–62. Cl. 6.
Dynamax Ltd., Ville St. Michel (near Montreal), Quebec, Canada. 617,756, canc. Cl. 19.
Edouard Dubied & Cie., Societe Anonyme, Couvet, Neuchatel, Switzerland. 727,272, pub. 9–20–60. Cl. 42.
Edwards, Denton, Co., Ltd., New York, N.Y. 727,171, pub. 11–21–61. Cl. 16.
Electro Optical Systems, Inc., Pasadena, Calif. 727,228, pub. 11–21–61. Cl. 26.
Elgin National Watch Co., Elgin, Ill. 727,232, pub. 11–21–61. Cl. 27.
Elgin National Watch Co., Elgin, Ill. 727,234, pub. 11–21–61. Cl. 27.
Englander Co., Inc., The: *See*—
Superior Felt & Bedding Co.
Erie Resistor Corp., Erie, Pa. 727,197, pub. 11–21–61. Cl. 21.
Evangelical and Reformed Church: *See*—
Board of Christian Education and Publication, The.
Everfast Fabrics, Inc., New York, N.Y. 727,273, pub. 11–21–61. Cl. 42.
Exer-Matic, Inc., Wichita, Kans. 727,280, pub. 11–21–61. Cl. 44.
FMC Corp.: *See*—
Ohio-Apex, Inc.
Fabrex Corp.: *See*—
Mallinson, H. R., & Co. Inc.
Fabrique Suisse de Crayons Caran d'Ache S.A., Geneva, Switzerland. 727,245, pub. 11–21–61. Cl. 37.
Fairway Specialties Co., Portland, Oreg. 727,203, pub. 11–21–61. Cl. 22.
Falcon Lock Co., South Gate, Calif. 727,225, pub. 11–21–61. Cl. 25.
Fant Milling Co., d.b.a. Gladiola Biscuit Co., Sherman, Tex. 727,296–7, pub. 11–21–61. Cl. 46.
Faraday, Inc.: *See*—
Holtzer-Cabot Electric Co., The.
Farbwerke Hoechst Aktiengeselschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany. 727,179, pub. 11–21–61. Cl. 18.
Federal Telecommunication Laboratories, a division of International Telephone and Telegraph Corp., Nutley, N.J. 617,763, canc. Cl. 21.
Feeny Mfg. Co., The, Muncie, Ind. 727,243, pub. 10–24–61. Cl. 34.
Felix Glatz Import Co., Inc., New York, N.Y. 617,815, canc. Cl. 26.
Fesler Co., Inc., The, Stamford, Conn. 617,751, canc. Cl. 18.
Firth Carpet Co., The, New York, N.Y. 617,916, canc. Cl. 42.
Fischer Bed Spring Co., Pittsburgh, Pa. 617,853, canc. Cl. 32.
Fishery Products, Inc., Boston, Mass., and Cleveland, Ohio, by Blue Water Seafoods, Inc., Cleveland, Ohio. 416,513, 12(c) pub. 2–6–62. Cl. 46.
Fleischmann Co., The, Cincinnati, Ohio, and New York, N.Y., to Standard Brands Inc., New York, N.Y. 151,760, ren. 2–6–62. Cl. 46.
Fleming, Charles E., Jr., d.b.a. Anita's Beauty Shoppe, and as Anita's, Rocky Mount, N.C. 727,320, pub. 11–21–61. Cl. 51.
Flo-Mix Fertilizers, Inc., Houma, La. 617,695–6, canc. Cl. 10.
Flood, Daniel A., to William A. Belford, Hugh W. Belford, and Robbie F. Belford, Okmulgee, Okla. 150,361, ren. 2–6–62. Cl. 18.
Floral Flavors of California: *See*—
42 Products Ltd., Inc.
Florsheim Shoe Co., The: *See*—
International Shoe Co.
Food Corp. of America, d.b.a. Food Corp. of America, Los Angeles, Calif. 727,301, pub. 11–21–61. Cl. 46.
42 Products Ltd., Inc., d.b.a. Floral Flavors of California, Santa Monica, Calif. 727,322, pub. 11–21–61. Cl. 51.
Fraser, Douglas, & Sons Ltd., Abroath, Angus, Scotland. 727,259, pub. 11–21–61. Cl. 39.
Freezit Corp. of America, The, Dallas, Tex. 617,783, canc. Cl. 22.
Fun-Way Games: *See*—
Warren, Maurice R., Rev.
Gain Corp., Chicago, Ill. 617,720, canc. Cl. 15.
Gain Corp., Chicago, Ill. 617,722, canc. Cl. 15.
Gebr. Schulten, Oeding, near Borken, Germany. 727,261, pub. 11–21–61. Cl. 39.
General Magnaplate Corp., Belleville, N.J. 727,342, pub. 11–21–61. Cl. 106.
General Mills, Inc., Minneapolis, Minn. 727,303, pub. 11–21–61. Cl. 46.
General Nutrients Corp., Northfield, Ill. 727,174, pub. 11–21–61. Cl. 18.
General Products, Chicago, Ill. 727,323, pub. 11–21–61. Cl. 51.

General Products, Chicago, Ill. 727,329, pub. 11–21–61. Cl. 52.
General Water Conditioning Co., d.b.a. Water Specialties Co., Chicago, Ill. 727,150, pub. 11–12–61. Cl. 6.
Gerber, Alber, d.b.a. Gerber & Armbruster, New York, N.Y. 617,998, canc. Cl. 101.
Gerber & Armbruster: *See*—
Gerber, Albert.
Gilhool, James J., Bala-Cynwyd, Pa. 727,316, pub. 11–21–61. Cl. 51.
Ginasta Corp. of America, New York, N.Y. 617,789, canc. Cl. 22.
Gladiola Biscuit Co.: *See*—
Fant Milling Co.
Glenmore Distilleries Co., Owensboro, to Glenmore Distilleries Co., Louisville, Ky. 394,667–8, ren. 2–6–62. Cl. 49.
Golub, Simon, & Sons Inc., Seattle, Wash. 727,235, pub. 11–21–61. Cl. 27.
Goodman, D. G., & Son: *See*—
United Biscuit Co. of America.
Goodrich, B. F., Co., The, Akron, Ohio. 394,824, ren. 2–6–62. Cl. 35.
Gould-National Batteries, Inc.: *See*—
Pacific Alloy Co.
Gould, Robert, Inc., New York, N.Y. 617,980, canc. Cl. 50.
Gruzinn, Frank, Maplewood, N.J. 617,791, canc. Cl. 22.
Great Expectations: *See*—
Zuckerkandel, Norman.
Gund Mfg. Co.: *See*—
Swedlin, J., Inc.
Guttman, Joseph, & Bros., New York, N.Y. 617,900, canc. Cl. 39.
Hall China Co., The, East Liverpool, Ohio. 727,239–40, pub. 11–21–61. Cl. 30.
Hammond, Clarence W., d.b.a. Hammond Shrimp Co., West Palm Beach, Fla. 727,302, pub. 11–21–61. Cl. 46.
Hammond Shrimp Co.: *See*—
Hammond, Clarence W.
Hansen's, Chr., Laboratory, Inc., West Allis, Wis. 357,702, 12(c) pub. 2–6–62. Cl. 46.
Harman-Slocum Publishing Co., Inc., Cleveland, Ohio. 727,256, pub. 11–21–61. Cl. 38.
Harry and David, Medford, Oreg. 727,298, pub. 11–21–61. Cl. 46.
Haze Krimmel Co.: *See*—
Krimmel, Hazelett C.
Helleman, G., Brewing Co., La Crosse, Wis. 727,309, pub. 11–21–61. Cl. 48.
Helburn, Willard, Inc., Peabody, Mass. 617,653, canc. Cl. 1.
Henry Valve Co., Melrose Park, Ill. 727,161, pub. 11–21–61. Cl. 13.
Herberts, Dr. Kurt, & Co.: *See*—
Herberts, Dr. Kurt.
Herberts, Dr. Kurt, d.b.a. Dr. Kurt Herberts & Co., Wuppertal-Barmen, Germany. 727,135, pub. 11–21–61. Cl. 6.
Herman, G. P., Pharmacal Co., Cleveland, Ohio. 617,736, canc. Cl. 18.
Hesslein & Co., Inc., New York, N.Y. 617,915, canc. Cl. 42.
Heublein, G. F., & Bro. Inc., now by change of name to Heublein, Inc., Hartford, Conn. 617,974, canc. Cl. 49.
Heublein, Inc.: *See*—
Heublein, G. F., & Bro. Inc.
Hewitt-Robins, Inc.: *See*—
Korb-Pettit Wire Fabrics & Iron Works, Inc.
Hi-Alloy Weld Specialties, Inc., Houston, Tex. 727,164–5, pub. 11–21–61. Cl. 14.
Hix, Richard C.: *See*—
Mardix.
Hobie-Surfboard Shop: *See*—
Alter, Hobart T.
Hodge, Farwell & Co., Elkhart, Ind. 617,988, canc. Cl. 50.
Holtzer-Cabot Electric Co., The, Boston, Mass., to Faraday, Inc., Adrian, Mich. 392,073, ren 2–6–62. Cl. 21.
Hooper, Wm. E., & Sons, Co., to Mount Vernon Mills, Inc., Baltimore, Md. 150,411, ren. 2–6–62. Cl. 42.
Hooper, Wm. E., & Sons, Co., to Mount Vernon Mills, Inc., Baltimore, Md. 151,809, ren. 2–6–62. Cl. 35.
Hubbell, Harvey, Inc., Bridgeport, Conn. 727,185, pub. 3–28–61. Cl. 21.
Hunt, Philip A., Co., Palisades Park, N.J. 617,681, canc. Cl. 6.
Imperial Knife Associated Companies, Inc., Providence, R.I. 727,221, pub. 11–21–61. Cl. 23.
Indian Head Mills, Inc., Philadelphia, Pa. 727,278, pub. 11–21–61. Cl. 43.
Interchemical Corp.: *See*—
Ault & Wiborg Corp.
International Beauty Congress, Inc., Long Beach, Calif. 727,336, pub. 11–21–61. Cl. 101.
International Paint Co., Inc., New York, N.Y. 727,170, pub. 11–21–61. Cl. 16.
International Shoe Co., d.b.a. The Florsheim Shoe Co., Chicago, Ill. 727,263, pub. 11–21–61. Cl. 39.
Itco Corp., Fresno, Calif. 727,214, pub. 11–21–61. Cl. 23.
J. & P. Coats, Ltd., Paisley, Scotland, by Coats & Clark Inc., New York, N.Y. 20,625, 12(c) pub. 2–6–62. Cl. 43.
Jack's Cookie Co., to Jack's Cookie Corp., Cleveland, Ohio. 649,819, new cert. Cl. 46.
Jack's Cookie Co., to Jack's Cookie Corp., Cleveland, Ohio. 678,550, new cert. Cl. 46.
Jack's Cookie Co., Inc., to Jack's Cookie Corp., Cleveland, Ohio. 643,033, new cert. Cl. 46.
Jack's Cookie Co., Inc., to Jack's Cookie Corp., Cleveland, Ohio. 649,827, new cert. Cl. 46.
Jack's Cookie Co., Inc., to Jack's Cookie Corp., Cleveland, Ohio. 677,428, new cert. Cl. 46.
Jack's Cookie Co., Inc., to Jack's Cookie Corp., Cleveland, Ohio. 684,275 new cert. Cl. 46.
Jack's Cookie Co., Inc., from Malbis Bakery Corp., to Jack's Cookie Corp., Cleveland, Ohio. 682,631, new cert. Cl. 46.
Jack's Cookie Corp.: *See*—
Jack's Cookie Co.
Jack's Cookie Co., Inc.
Malbis Bakery Co.
Vories Baking Co.
James Mfg. Co., Fort Atkinson, Wis. 617,975, canc. Cl. 50.
Jaygol Products Corp., New York, N.Y., to Meadows Chemicals, Inc., New Hyde Park, N.Y. 392,418, ren. 2–6–62. Cl. 6.
Johmann, Frank T., Berkeley Heights, N.J. 727,246, pub. 11–21–61. Cl. 37.
Juan & McCormack, New York, N.Y., to Universal Food Specialties, Inc., Dover, Del. 152,031, ren. 2–6–62. Cl. 46.
Jules Hairstylist: *See*—
Bernfeld, Jules E.
Justi, H. D., & Son, Inc., Philadelphia, Pa. 727,282, pub. 11–21–61. Cl. 44.
Kahn's, E., Sons Co., The, Cincinnati, Ohio. 393,434, 12(c) pub. 2–6–62. Cl. 46.
Kamkap Inc., New York, N.Y. 617,806, canc. Cl. 23.
Karen Frozen Food Corp., Brooklyn, N.Y. 618,015, canc. Cl. 46.
Katz Drug Co., Kansas City, Mo. 727,311, pub. 11–21–61. Cl. 49.
Kaye-Jacobel Associates, Yonkers, N.Y. 617,772–3, canc. Cl. 22.
Kayser, Julius, & Co., to Kayser-Roth Corp., New York, N.Y. 393,295, ren. 2–6–62. Cl. 39.
Kayser, Julius, & Co., to Kayser-Roth Corp., New York, N.Y. 393,643, ren. 2–6–62. Cl. 39.
Kayser, Julius, & Co., to Kayser-Roth Corp., New York, N.Y. 394,432, ren. 2–6–62. Cl. 39.
Kayser-Roth Corp.: *See*—
Kayser, Julius, & Co.
Kelsey-Hayes Co., Detroit, Mich. 727,212, pub. 11–21–61. Cl. 23.
Kern, George, Inc., New York, N.Y. 617,766, canc. Cl. 21.
Kleen-Stik Products, Inc., Chicago, Ill. 727,249, pub. 11–21–61. Cl. 37.
Kleinert, I. B., Rubber Co., New York, N.Y. 98,787, 12(c) pub. 2–6–62. Cl. 40.
Koelling Universal Joints, Inc., Dallas, Tex. 727,213, pub. 11–21–61. Cl. 23.
Kolker Chemical Corp., Newark, N.J. 727,144, pub. 11–21–61. Cl. 6.
Korb-Pettit Wire Fabrics & Iron Works, Inc., Philadelphia, Pa., by Hewitt-Robins Inc., King of Prussia, Pa. 378,758, 12(c) pub. 2–6–62. Cl. 23.
Kremer, Philip, d.b.a. Murd Co., Philadelphia, Pa. 727,148, pub. 11–21–61. Cl. 6.
Krimmel, Hazelett C., d.b.a. Haze Krimmel Co., Cuyahoga Falls, Ohio. 618,018, canc. Cl. 52.
Kutol Products Co. Inc., Cincinnati, Ohio. 727,324, pub. 11–21–61. Cl. 52.
Lamellen und Kupplungsbau August Haussermann, Esslingen am Neckar, Mettingen, Germany. 727,220, pub. 11–21–61. Cl. 23.
Landers, Frary & Clark, New Britain, Conn. 727,188, pub. 11–21–61. Cl. 21.
Lathan Mfg. Co., San Francisco, Calif. 727,210, pub. 11–21–61. Cl. 23.
Les Specialities P.P.Z. Etablissements Pierre P. Zecchini, Bagnolet, Seine, France. 727,132, pub. 11–21–61. Cl. 4.
Lewis, L., Cigar Mfg. Co., Newark, to I. Lewis Corp., East Orange, N.J. 152,860, ren. 2–6–62. Cl. 17.
Lewis, L., Corp.: *See*—
Lewis, L., Cigar Mfg. Co.
Liggett & Myers Tobacco Co., New York, N.Y. 154,998, ren. 2–6–62. Cl. 17.
"Lisco" Co., The: *See*—
Deadwyler, T. J.
Lixle Inc., Georgiaville, R.I. 727,206, pub. 11–21–61. Cl. 23.
Lloyd Brothers, Inc.: *See*—
Penick, S. B., Co.
Lloyd Brothers, Pharmacists, Inc.: *See*—
Penick, S. B., Co.
Lobex Products, Chicago, Ill. 617,741, canc. Cl. 18.
Loftleidir h.f., Reykjavik, Iceland. 727,340, pub. 11–21–61. Cl. 105.
Lohrke Textiles, Inc., Philadelphia, Pa. 727,279, pub. 11–21–61. Cl. 43.
Luitpold-Werk Chemisch-Pharmazeutische Fabrik, Munich, Germany. 727,177, pub. 11–21–61. Cl. 18.
Lustry, Narodni Podnik, Kamenicky Senov, Czechoslovakia. 617,857, canc. Cl. 34.
Maglia, Andrew R., d.b.a. Vetrotex, Detroit, Mich. 617,701, canc. Cl. 12.
Maize Industries, Chicago, Ill. 617,939, canc. Cl. 46.
Malbis Bakery Corp.: *See*—
Jack's Cookie Co., Inc.
Malbis Bakery Co., to Jack's Cookie Corp., Cleveland, Ohio 518,778, new cert. Cl. 46.
Mallinson, H. R., & Co., Inc., to Fabrex Corp., New York, N.Y. 146,289, ren. 2–6–62. Cl. 42.
Mallinson, H. R., & Co., Inc., to Fabrex Corp., New York, N.Y. 150,462, ren. 2–6–62. Cl. 42.
Mansfield Industries, Inc., Chicago, Ill. 727,227, pub. 11–21–61. Cl. 26.
Mardix, from R. C. Hix, Palo Alto, Calif. 727,198, pub 11–21–61. Cl. 21.
Mario's Food Products Co.: *See*—
Beatrice Foods Co.
Martin-Dennis Co., The, to The Dow Chemical Co., Midland, Mich. 410,354, new cert. Cl. 52.
Martin Oil Service, Inc., Blue Island, Ill. 727,166, pub. 11–21–61. Cl. 15.
Martin's, Brooklyn, N.Y. 727,268, pub. 11–21–61. Cl. 39.
Massey, Thomas J., & Co., Inc., Richmond, Va. 617,999, canc. Cl. 102.

Mathey-Tissot, E., & Co. S.A., Les Ponts-de-Martel, Switzerland. 727,233, pub. 11–21–61. Cl. 27.
Mazer Cigar Mfg. Co., Detroit, Mich., by J. C. Winter & Co., Inc., Red Lion, Pa. 164,907, 12(c) pub. 2–6–62. Cl. 17.
Mazer-Cressman Cigar Co., Detroit, Mich., by J. C. Winter & Co., Inc., Red Lion, Pa. 344,785, 12(c) pub. 2–6–62. Cl. 17.
Mazer-Cressman Cigar Co., The, Philadelphia, by J. C. Winter & Co., Inc., Red Lion, Pa. 191,148, 12(c) pub. 2–6–62. Cl. 17.
McKesson & Robbins, Inc., New York, N.Y. 398,742, canc. Cl. 6.
McNeff Industries, Inc., Dallas, Tex. 727,241, pub. 11–21–61. Cl. 32.
Meadows Chemicals, Inc.: *See*—
Jaygol Products Corp.
Meirett Inc., Danbury, Conn. 642,448, canc. Cl. 52.
Merck & Co., Inc., Rahway, N.J. 617,738, canc. Cl. 18.
Metallizing Co. of America, Inc., to Metallizing Co. of America, Inc., Chicago, Ill. 394,448, ren. 2–6–62. Cl. 23.
Metzger, Morris, and Sons, Inc., New York, N.Y. 727,265, pub. 11–21–61. Cl. 39.
Meyers Co., The: *See*—
Meyers, Harvey P.
Meyers, Harvey P., d.b.a. The Meyers Co., Chattanooga, Tenn. 727,247, pub. 11–21–61. Cl. 37.
Mi-Ame Canned Beverages Co., Hialeah, Fla. 617,926, canc. Cl. 45.
Milk Foods, Inc., U.S.A., Modesto, Calif. 617,955, canc. Cl. 46.
Minimodels Ltd., Havant, England. 727,200, pub. 10–10–61. Cl. 22.
Moffats Ltd., Weston, Ontario, Canada. 727,195, pub. 11–21–61. Cl. 21.
Molson's Brewery, Ltd., Montreal, Quebec, Canada. 727,307, pub. 11–21–61. Cl. 48.
Montrose Macaroni Mfg. Co., Brooklyn, N.Y. 727,286, pub. 11–21–61. Cl. 46.
Morris, Joseph L., Elmhurst, N.Y. 617,909–10, canc. Cl. 42.
Morse & Morse, Inc.: *See*—
Morse & Morse.
Morse & Morse, to Morse & Morse, Inc., Los Angeles, Calif. 394,329, ren. 2–6–62. Cl. 39.
Morton, Harry E., Drexel Hill, Pa. 727,226, pub. 11–21–61. Cl. 26.
Morton Salt Co.: *See*—
Worcester Salt Co.
Mosler Safe Co., The, New York, N.Y. 727,186, pub. 4–25–61. Cl. 21.
Mount Vernon Mills, Inc.: *See*—
Hooper, Wm. E., & Sons Co.
Movado Watch Agency, Inc., New York, N.Y. 727,236, pub. 11–21–61. Cl. 27.
Moyer Mfg. Co., The, d.b.a. Seven Seas, Youngstown, Ohio. 727,257, pub. 11–21–61. Cl. 39.
Murd Co.: *See*—
Kremer, Philip.
NSU Motorenwerke Aktiengesellschaft, Neckarsulm, Wurttemberg, Germany. 727,211, pub. 8–22–61. Cl. 23.
Narragansett Brewing Co., d.b.a. The Croft Brewing Co., Cranston, R.I. 617,972, canc. Cl. 48.
Nassau Fashions, Inc., Cleveland, Ohio. 617,901, canc. Cl. 39.
National Model Distributors, d.b.a. Tiger Products Co., Chicago, Ill. 444,208, canc. Cl. 15.
National Products of Arlington, Inc., d.b.a. National Products, Inc., Arlington, Mass. 617,962, canc. Cl. 46.
Nea Service, Inc., by Newspaper Enterprise Association, Inc., Cleveland, Ohio. 376,634, 12(c) pub. 2–6–62. Cl. 38.
Nea Service, Inc., by Newspaper Enterprise Association, Inc., Cleveland, Ohio. 376,649, 12(c) pub. 2–6–62. Cl. 38.
New York Wire Cloth Co., York, Pa. 617,705, canc. Cl. 13.
Newberry, J. J., Co., New York, N.Y. 727,130, pub. 11–21–61. Cl. 2.
Newspaper Enterprise Association, Inc.: *See*—
Nea Service, Inc.
Nichols Industries: *See*—
C & M. Industries.
Nichols, Norman J.: *See*—
C. & M. Industries.
Oak Mfg. Co., Chicago, Ill., by Oak Mfg. Co., Crystal Lake, Ill. 391,258, 12(c) pub. 2–6–62. Cl. 21.
Ohio-Apex, Inc., Nitro, W. Va., to FMC Corp., New York, N.Y. 393,464–5, ren. 2–6–62. Cl. 6.
Olsen, Paul, Los Angeles, Calif. 617,782, canc. Cl. 22.
Olson, Melford E., Minneapolis, Minn. 617,941, canc. Cl. 46.
Oran Co., Columbus, Ohio. 617,855, canc. Cl. 34.
Orthopter Co., Denver, Colo. 617,788, canc. Cl. 22.
Ortiz, Manuel, Jr., Sarasota, Fla. 617,770, canc. Cl. 21.
P & P Farms, Fresno, Calif. 727,295, pub. 11–21–61. Cl. 46.
Pacific Alloy Co., Seattle, Wash., by Gould-National Batteries, Inc., St. Paul, Minn. 332,193, 12(c) pub. 2–6–62. Cl. 14.
Pan American Refining Corp., to The American Oil Co., Chicago, Ill. 529,901, new cert. Cl. 6.
Pan American Refining Corp., to The American Oil Co., Chicago, Ill. 532,100, new cert. Cl. 6.
Pan American Refining Corp., to The American Oil Co., Chicago, Ill. 535,646, new cert. Cl. 6.
Parke, Davis & Co., Detroit, Mich. 76,722, 12(c) pub. 2–6–62. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 382,092, 12(c) pub. 2–6–62. Cl. 18.
Peck Industries Inc., Flushing, N.Y. 727,250, pub. 11–21–61. Cl. 37.
Penick, S. B., & Co., d.b.a. Lloyd Brothers, Pharmacists, Inc., New York, N.Y., and Cincinnati, Ohio, by Lloyd Brothers, Inc., Cincinnati, Ohio. 385,974, 12(c) pub. 2–6–62. Cl. 18.
Philco Corp., Philadelphia, Pa. 394,235, 12(c) pub. 2–6–62. Cl. 3.
Philco Corp., Philadelphia, Pa. 394,819, ren. 2–6–62. Cl. 25.
Philco Corp., Philadelphia, Pa. 395,436, ren. 2–6–62. Cl. 29.
Philco Corp., Philadelphia, Pa. 617,768–9, canc. Cl. 21.
Pilgrim Press: *See*—
Board of Christian Education and Publication, The.
Popstix Corp., from Joseph Telasco, Hicksville, N.Y. 727,162, pub. 11–21–61. Cl. 13.
Port Huron Sulphite & Paper Co., Port Huron, Mich. 727,155, pub. 11–21–61. Cl. 11.
Porter, H. K., Co., Inc., Pittsburgh, Pa. 727,191, pub. 11–21–61. Cl. 21.
Porter, H. K., Inc.: *See*—
Porter, Henry K.
Porter, Henry K., Everett, Mass., to H. K. Porter, Inc., Somerville, Mass. 153,825, ren. 2–6–62. Cl. 23.
Power Transmission Co., High Point, N.C. 617,800, canc. Cl. 23.
Powers, John Robert, Products Co., Inc., New York, N.Y. 727,321, pub. 8–29–61. Cl. 51.
Premier-Hall Mfg. Co., Inc., Chicago, Ill. 617,851, canc. Cl. 32.
Productos Caseros, S.A., Mexico City, Mex. 727,287, pub. 11–21–61. Cl. 46.
Putman Publishing Co., Chicago, Ill. 727,254, pub. 11–21–61. Cl. 38.
Quest Mfg. Co., Chicago, Ill. 151,920, ren. 2–6–62. Cl. 11.
R.I.T.A. Chemical Corp., Chicago, Ill. 727,147, pub. 11–21–61. Cl. 6.
Railway Equipment and Publication Co., The, New York, N.Y. 54,856, 12(c) pub. 2–6–62. Cl. 38.
Railway Equipment and Publication Co., The, New York, N.Y. 225,187, 12(c) pub. 2–6–62. Cl. 38.
Railway Equipment and Publication Co., The, New York, N.Y. 233,997, 12(c) pub. 2–6–62. Cl. 38.
Raleigh Haberdasher, Inc., Washington, D.C. 388,926, 12(c) pub. 2–6–62. Cl. 39.
Raney, Charles, Jr., Fort Lauderdale, Fla. 727,193, pub. 11–21–61. Cl. 21.
Rapidol Distributing Corp., New York, N.Y. 418,346, canc. Cl. 51.
Red & White Corp., Chicago, Ill. 727,304, pub. 11–21–61. Cl. 46.
Reeves, B. M., Co., Inc., Brooklyn, N.Y. 727,293, pub. 11–21–61. Cl. 46.
Richmond Cedar Works Mfg. Corp., Richmond, Va. 617,661–2, canc. Cl. 2.
Rifkin, William, & Sons, Philadelphia, Pa. 437,346, canc. Cl. 42.
River, Dan, Mills, Inc., Danville, Va. 727,276, pub. 11–21–61. Cl. 42.
Rose, Martin H., Detroit, Mich. 727,264, pub. 11–21–61. Cl. 39.
Ross Products, Inc., New York, N.Y. 727,167, pub. 11–21–61. Cl. 15.
Royal McBee Corp., Port Chester, N.Y. 727,156, pub. 11–21–61. Cl. 11.
Rubinstein, Helena, Inc.: *See*—
Skinlife, Inc.
Rubinstein, Helena, Inc., New York, N.Y. 727,315, pub. 11–21–61. Cl. 51.
S.I.P.A.P.-S.p.A. Societa Italiana Prodotti Apparecchi Parrucchieri, Genoa, Italy. 727,318, pub. 11–21–61. Cl. 51.
Safeway Stores, Inc., Oakland, Calif. 727,330, pub. 9–5–61. Cl. 52.
Sandoz, Inc., New York, N.Y. 727,151, pub. 11–21–61. Cl. 6.
Sandy's Franchise, Inc., Kewanee, Ill. 727,332, pub. 11–21–61. Cl. 100.
Schenley Laboratories, Inc., New York, N.Y. 617,743, canc. Cl. 18.
Schertz Umbrellas, Inc., New York, N.Y. 727,269, pub. 11–21–61. Cl. 41.
Sea-Chefs, Inc., Morehead City, N.C. 727,299, pub. 11–21–61. Cl. 46.
Sears, Roebuck and Co., Chicago, Ill. 110,868, 12(c) pub. 2–6–62. Cl. 27.
Sears, Roebuck and Co., Chicago, Ill. 727,267, pub. 11–21–61. Cl. 39.
Seidlitz Paint & Varnish Co.: *See*—
Consolidated Coatings & Chemicals, Inc.
Seinsheimer, H. A., Co., The, Cincinnati, Ohio. 392,257, 12(c) pub. 2–6–62. Cl. 39.
Seven Seas: *See*—
Moyer Mfg. Co., The.
Sewing-Aids: *See*—
Currie, Margaret F.
Shaco: *See*—
Sherman, Robert.
Sheffield Corp., The, Dayton, Ohio. 617,823, canc. Cl. 26.
Sheinker, W., & Son, Inc., Woodside, N.Y. 727,288, pub. 11–21–61. Cl. 46.
Shell Oil Co., New York, N.Y. 727,139, pub. 9–19–61. Cl. 6.
Sherman, Robert, d.b.a. Shaco, San Francisco, Calif. 617,737, canc. Cl. 18.
Siegler Corp., The: *See*—
Siegler Enamel Range Co.
Siegler Enamel Range Co., to The Siegler Corp., Centralia, Ill. 618,012, canc. Cl. 34.
Simon-Carter Co., Minneapolis, Minn. 727,222, pub. 11–21–61. Cl. 23.
Simson, Maurice H., d.b.a. Alpha Chemical Co., New York, N.Y. 727,133, pub. 11–21–61. Cl. 4.
Skinlife, Inc., to Helena Rubinstein, Inc., New York, N.Y. 628,562, new cert. Cl. 18.
Snider, John W., Medford, Oreg. 617,877, canc. Cl. 38.
Society of Plastics Engineers, Inc., Stamford, Conn. 727,252, pub. 11–21–61. Cl. 38.
Southern Knitwear Mills, Inc., Charlotte, N.C. 617,922, canc. Cl. 43.
Soveico Mills, Inc., Winston Salem, N.C. 727,343, pub. 11–21–61. Cl. 106.
Soveico Mills, Inc., Winston-Salem, N.C. 727,344–5, pub. 11–21–61. Cl. 106.

Spice Islands Co., South San Francisco, Calif. 727,292, pub. 11–21–61. Cl. 46.
Sprayfoil Corp., Minneapolis, Minn. 727,208, pub. 11–21–61. Cl. 23.
Spring-Air Co., The: *See*—
Back Supporters, Inc.
Standard Brands Inc.: *See*—
Fleischmann Co., The.
Standard Oil Co. of California, San Francisco, Calif. 727,348, pub. 11–21–61. Cl. 107.
Standard-Thomson Corp., Waltham, Mass. 727,244, pub. 11–21–61. Cl. 35.
Star-Br:Y:Te: *See*—
Williams, L G
Sta-Tite Mfg. Co., The, Kansas City, Mo. 727,192, pub. 11–21–61. Cl. 21.
Stauffer Chemical Co., New York, N.Y. 727,141, pub. 11–21–61. Cl. 6.
Steele Canning Co., Springdale, Ark. 727,305, pub. 11–21–61. Cl. 46.
Stetson, John B., Co., Philadelphia, Pa. 727,266, pub. 11–21–61. Cl. 39.
Stevens, J. P., & Co., Inc., New York, N.Y. 727,275, pub. 11–21–61. Cl. 42.
Street & Smith Publications, Inc., New York, N.Y. 395,272, ren. 2–6–62. Cl. 38.
Stuart Co.: *See*—
Thompkins, Stuart A.
Studebaker-Packard Corp., Detroit, Mich. 617,760, canc. Cl. 19.
Suburban Appliance Co., Dayton, Tenn. 727,224, pub. 11–21–61. Cl. 24.
Sun Chemical Corp., New York, N.Y. 727,136, pub. 11–21–61. Cl. 6.
Sun Chemical Corp., New York, N.Y. 727,152, pub. 11–21–61. Cl. 6.
Sun Chemical Corp., New York, N.Y. 727,154, pub. 11–21–61. Cl. 10.
Sunnyland Bulghur Co., Fresno, Calif. 727,291, pub. 11–21–61. Cl. 46.
Superior Felt & Bedding Co., to The Englander Co., Inc., Chicago, Ill. 395,493, ren. 2–6–62. Cl. 32.
Swedlin, J., Inc., d.b.a. Gund Mfg. Co., New York, N.Y. 727,204, pub. 11–21–61. Cl. 22.
Sweeney, W. R., Mfr., Inc., Salisbury, Mo. 727,217, pub. 11–21–61. Cl. 23.
System Development, Santa Monica, Calif., from Systems Development Corp., Dayton, Ohio. 727,347, pub. 6–28–60. Cl. 107.
System Development Corp., Santa Monica, Calif. 727,338, pub. 6–28–60. Cl. 102.
System Development Corp., Santa Monica, Calif. 727,346, pub. 6–28–60. Cl. 107.
Systems Development Corp.: *See*—
System Development.
System Tank Lines, Inc., Oakland, Calif. 618,005, canc. Cl. 105.
Tafon Distributores, Inc., to Caltex Distributors, Inc., Los Angeles, Calif. 670,136, new cert. Cl. 18.
Talens & Son, Inc., Union, N.J. 727,248, pub. 11–21–61. Cl. 37.
Tamms Industries Co., Chicago, Ill. 727,143, pub. 11–21–61. Cl. 6.
Technical Rubber, Inc., West Haven, Conn. 727,312, pub. 11–21–61. Cl. 50.
Telasco, Joseph: *See*—
Popstix Corp.
Thompkins, Stuart A., d.b.a. Stuart Co., San Francisco, Calif. 617,818, canc. Cl. 26.
Tiger Products Co.: *See*—
National Model Distributors.
Today's Items, Inc., New York, N.Y. 617,866, canc. Cl. 36.
Tomlinson, Kent, Co.: *See*—
Tomlinson, Kent.
Tomlinson, Kent, d.b.a. Kent Tomlinson Co., Chicago, Ill. 617,799, canc. Cl. 23.
Trager Mfg. Co., Inc., Scranton, Pa. 155,543, ren. 2–6–62. Cl. 6.
Transitron Inc., New York, N.Y. 617,764, canc. Cl. 21.
Transportation Venders, Inc., Newark, N.J. 597,495, canc. Cl. 46.
Travel Inc., Mr., Chicago, Ill. 727,341, pub. 11–21–61. Cl. 105.
Trig-A-Tape Corp., Berkeley, Calif. 727,218, pub. 11–21–61. Cl. 23.
Tyler, W. S., Co., The, Cleveland, Ohio. 152,523, ren. 2–6–62. Cl. 23.
United Biscuit Co. of America, to D. G. Goodman & Son, Nashville, Tenn. 576,960, new cert. Cl. 46.
United Brick & Tile Co.: *See*—
American-Marietta Co.
United Press International, Inc., New York, N.Y. 727,255, pub. 11–21–61. Cl. 38.
United States Envelope Co., Springfield, Mass. 154,170, ren. 2–6–62. Cl. 37.
United States Life Insurance Co. in the City of New York, The, New York, N.Y. 618,000, canc. Cl. 102.
United States Rubber Co., New York, N.Y. 727,160, pub. 4–4–61. Cl. 13.
Universal Food Specialties, Inc.: *See*—
Juan & McCormack.
Van Houten, C. J., & Zoon N.V., Weesp, Netherlands. 727,300, pub. 11–21–61. Cl. 46.
Velveray Corp., Passaic, N.J. 392,641, ren. 2–6–62. Cl. 42.
Vesta: *See*—
Vesta, Inc.
Vesta, Inc., d.b.a. Vesta, New York, N.Y. 727,290, pub. 11–21–61. Cl. 46.
Vetrotex: *See*—
Maglia, Andrew R.
Visor Specialties: *See*—
Visor Specialty Co
Visor Specialty Co., d.b.a. Visor Specialties, Hagerstown, Md. 617,754, canc. Cl. 19.
Vocamatic, Inc., Valley Stream, N.Y. 617,767, canc. Cl. 21.
Vorles Baking Co., to Jack's Cookie Corp., Cleveland, Ohio. 531,949, new cert. Cl. 46.
Vorles Baking Co., to Jack's Cookie Corp., Cleveland, Ohio. 661,117, new cert. Cl. 46.
Walker's Austex Chili Co., Austin, Tex. 617,943, canc. Cl. 46.
Walker Laboratories, Inc., Mount Vernon, N.Y. 727,183, pub. 11–21–61. Cl. 18.
Wall Rope Works, Inc., New York, N.Y. 727,153, pub. 11–21–61. Cl. 7.
Wallace & Tiernan Inc., Belleville, N.J. 727,137, pub. 11–21–61. Cl. 6.
Walnut Grove Products Co., Inc., Atlantic, Iowa. 727,175. Pub. 11–14–61, Cl. 18; pub. 10–31–61, Cl. 46. (Consolidated certificate, Classes 18 and 46.)
Warner-Lambert Pharmaceutical Co.: *See*—
Warner, William R., & Co., Inc.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 727,178, pub. 11–21–61. Cl. 18.
Warner, William R., & Co., Inc., Wilmington, Del., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 148,719, ren. 2–6–62. Cl. 18.
Warren, Maurice R., Rev., d.b.a. Fun-Way Games, Pellston, Mich. 727,201, pub. 11–21–61. Cl. 22.
Wartsila-Yhtyma O/Y-Wartsila-Koncernen A/B, Vartsial, Finland. 394,297, ren. 2–6–62. Cl. 25.
Washington Co-operative Farmers Association, Seattle, Wash. 617,965, canc. Cl. 46.
Washington Gas Light Co., Washington, D.C. 617,997, canc. Cl. 100.
Water Specialties Co.: *See*—
General Water Conditioning Co.
Weinkle's Liquor Stores, Inc.: *See*—
Carrington and Co., Ltd.
West Virginia Pulp and Paper Co., New York, N.Y. 727,131, pub. 11–21–61. Cl. 2.
Weyand & Hogman Fish Co., Wyandotte, Mich. 618,013, canc. Cl. 46.
Weyer, George H., Inc., d.b.a. Affiliated Laboratories, Kansas City, Mo. 727,317, pub. 11–21–61. Cl. 51.
Whirlpool Corp., St. Joseph, Mich. 727,223, pub. 11–21–61. Cl. 24.
Whiting, David, & Sons, Inc., Wilton, N.H. 617,848–9, canc. Cl. 32.
Wickes, W. Wirt, & Son, Inc., New York, N.Y. 617,966, canc. Cl. 46.
Williams, L G, d.b.a. Star-Br:Y:Te, Martinez, Calif. 727,202, pub. 11–21–61. Cl. 22.
Williams Mfg. Co., The, Portsmouth, Ohio. 727,262, pub. 11–21–61. Cl. 39.
Winter, J. C., & Co., Inc.: *See*—
Mazer Cigar Mfg. Co.
Winter & Co., Inc.: *See*—
Winter & Co.
Winter & Co., to Winter & Co., Inc., New York, N.Y. 393,356, ren. 2–6–62. Cl. 36.
Winter, J. C., & Co., Inc.: *See*—
Mazer-Cressman Cigar Co., The.
Worcester Salt Co., Silver Springs, and New York, N.Y., to Morton Salt Co., Chicago, Ill. 151,647, ren. 2–6–62. Cl. 46.
Wright, Donnell W., d.b.a. Donnell W. Wright, Mfg. Co., San Bernardino, Calif. 617,665, canc. Cl. 4.
Wright, Donnell W., Mfg. Co.: *See*—
Wright, Donnell W.
Wyandotte Chemicals Corp., Wyandotte, Mich. 727,328, pub. 11–21–61. Cl. 52.
Zinsser, William, & Co., Inc., New York, N.Y. 727,169, pub. 11–21–61. Cl. 16.
Zuckerkandel, Norman, d.b.a. Great Expectations, Philadelphia, Pa. 727,260, pub. 11–21–61. Cl. 39.

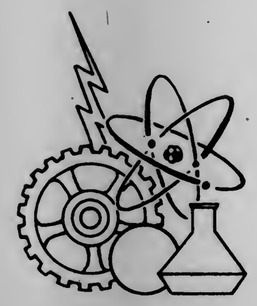
U.S. GOVERNMENT PRINTING OFFICE 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

February 13, 1962 • Volume 775 • Number 2



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of February 13, 1962	317
New Applications Received	317
Notices	
Board of Appeals Decisions Rendered in the Month of December 1961	317
Disclaimers	317
Adverse Decisions in Interferences	317
Patents Available for Licensing or Sale	317
Condition of Patent Applications	318
Proclamation of the Convention for the Protection of Industrial Property	321
Convention for the Protection of Industrial Property	322
Reissue Patents Granted	339
Plant Patents Granted	340
Patents Granted	
General and Mechanical	341
Chemical	527
Electrical	564
Design Patents Granted	608
Index of Patentees	i
Classification of Patents	xxiii

Trademarks

Issue of February 13, 1962	TM 45
Applications Filed	TM 45
Condition of Trademark Applications	TM 45
Notices	
Oppositions Under Section 13 of the Trademark Act of 1946	TM 45
Marks	
Marks Published for Opposition (353)	TM 46
Registrations Issued	
Principal Register	TM 73
Supplemental Register	TM 78
Registrations Renewed	TM 78
Registrations Canceled	TM 79
Registrations Amended, Disclaimed, Corrected, etc.	TM 80
Registrations—New Certificates	TM 80
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of December 1961

Examiner affirmed	286
Examiner affirmed in part	34
Examiner reversed	72
Total	392

Disclaimers

2,695,028.—*Murray Dulberg*, New York, N.Y. COSMETIC RECEPTACLE. Patent dated Nov. 23, 1954. Disclaimer filed Jan. 4, 1962, by the inventor.

Hereby enters this disclaimer to claims 1 through 11, 14 through 34, 37 through 45, and 49 through 52 of said patent.

2,943,143.—*Gerald B. Herzog* and *Leslie L. Burns, Jr.*, Princeton, N. J. COLOR IMAGE REPRODUCTION APPARATUS. Patent dated June 28, 1960. Disclaimer filed Jan. 2, 1962, by the assignee, *Radio Corporation of America*.

Hereby enters this disclaimer to claim 7 of said patent.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,825,885, V. T. Reynolds, Vibration record interpreter, decided Oct. 25, 1961, Interference No. 90,396, claim 19.

Pat. 2,867,435, H. S. Gleason, Recorder, decided Jan. 11, 1962, Interference No. 91,648, claim 4.

Pat. 2,879,570, P. D. Becker, Fastener, decided Oct. 18, 1961, Interference No. 90,666, claims 1, 2, and 3.

Pat. 2,909,651, W. L. Cook, Method and apparatus for hot riveting and similar metal forming operations, decided Jan. 10, 1962, Interference No. 91,555, claim 12.

Pat. 2,922,958, E. K. Dean, Transistor inverter with starter circuit, decided Dec. 21, 1961, Interference No. 91,255, claim 4.

Pat. 2,926,943, J. D. Leslie and R. G. Steffes, Closure latch, decided Dec. 20, 1961, Interference No. 91,570, claims 1 and 2.

Pat. 2,938,604, J. V. O'Grady and D. T. Moynihan, Elevator control system, decided Jan. 5, 1962, Interference No. 92,100, claims 5, 6, and 43.

Patents Available for Licensing or Sale

2,760,682. Grain and Commercial Fertiliser Distributer. Eugene E. Ingram, 126 N. 74th St., Birmingham 6, Ala.

2,998,868. Dumping Device. Contraves A.G., Zurich 52, Switzerland. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,010,421. Boat Propelling and Steering Means. Wallace Perkins, Box 824, Woodville, Tex.

General Electric Company is prepared to grant non-exclusive licenses under the following 12 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 12 patents may be addressed to: General Electric Company, Flight Propulsion Division, Cincinnati 15, Ohio, Attention: Patent Counsel.

2,551,276. Dual Vortex Liquid Spray Nozzle.

2,699,646. Gas Turbine Powerplant Having Variable Exhaust Area and Control System Therefor.

2,706,383. Control for Gas Turbine Powerplant.

2,713,767. Fuel and Variable Area Nozzle Regulating Apparatus for Thermal Powerplant.

2,739,441. Temperature Responsive Control System for Gas Turbine Powerplant Having Exhaust Reheating.

2,805,544. Control System for Variable Exhaust Area Reaction Powerplant.

2,874,536. Cooling Means for Tailpipe.

2,944,399. Afterburner Combustion Means.

2,969,641. Aerodynamic Nozzle.

2,975,589. Wide Modulation Range Reheat Fuel Systems.

2,978,870. Fuel Injector for a Combustion Chamber.

2,984,970. Thrust Augmenting System.

New Applications Received During December 1961

Patents	7,187
Designs	373
Plant Patents	8
Reissues	19
Total	7,587

Issue

Patents	974	No. 3,020,551 to No. 3,021,524, incl.
Designs	35	No. 192,204 to No. 192,238, incl.
Plant Patents	1	No. 2,130
Reissues	3	No. 25,121 to No. 25,123, incl.
Total	1,013	

CONDITION OF PATENT APPLICATIONS AS OF DECEMBER 31, 1961

Total number of pending applications (excluding Designs)	195,563
Total number of pending Design applications	5,704
Total number of applications awaiting action (excluding Designs)	96,342
Total number of Design applications awaiting action	1,854
Date of oldest new application	Sept. 23, 1960
Date of oldest amended application	Sept. 12, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	4-28-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-29-61	5-18-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	1-23-61	1-5-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-16-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-20-61	2-13-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	5-16-61	5-1-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-17-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	2-6-61	1-30-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-5-61	12-14-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-27-60	1-9-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-23-60	11-4-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-30-60	1-4-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	11-21-60	11-23-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-3-61	4-28-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	2-10-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-17-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-27-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-31-61	6-5-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	4-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	2-1-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-3-61	2-1-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	1-6-61	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	5-9-61	4-26-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	12-1-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	2-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-8-61	3-30-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	1-9-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-30-60	1-16-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	12-16-60	12-16-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-23-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	1-6-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	12-12-60	12-8-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-23-60	9-12-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-10-61	5-8-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-2-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	4-3-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-1-60	11-4-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-27-61	1-16-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-24-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	12-1-60	12-1-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-22-61	5-29-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-16-61	4-7-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-20-60	11-1-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-19-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	1-9-61	1-6-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	11-9-60	12-9-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-4-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	12-23-60	12-2-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-13-61	4-27-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus	1-30-61	1-6-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-27-60	12-14-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	1-9-61
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	11-3-60	11-4-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-5-60	10-3-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-28-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	1-24-61	1-23-61
81. (III) MONCURE, J. A., Industrial Arts	8-30-61	8-23-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-24-61	9-1-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	12-14-60	12-19-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	7-20-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	2-8-61	2-1-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-13-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during February 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents	Numbers 2,368,613 to 2,370,612 inclusive
Plant Patents	Numbers 649 to 651 inclusive

CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY

By the President of the United States of America

A Proclamation

WHEREAS a convention revising the convention of Paris for the protection of industrial property of March 20, 1883, as revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at The Hague on November 6, 1925, and at London on June 2, 1934, was signed by the respective plenipotentiaries of the United States of America and certain other countries at Lisbon on October 31, 1958;

WHEREAS the text of the said convention in the French language, as certified by the Federal Political Department of Switzerland, is word for word as follows:

[The French text is not reprinted here]

WHEREAS the Senate of the United States of America by their resolution of August 17, 1960, two-thirds of the Senators present concurring therein, did advise and consent to the ratification of the said convention;

WHEREAS the said convention was duly ratified by the President of the United States of America on August 29, 1960, in pursuance of the aforesaid advice and consent of the Senate;

WHEREAS it is provided in paragraph 1 of Article 18 of the said convention that, if the convention is ratified before May 1, 1963 in the name of at least six countries, it shall come into force between those countries one month after the deposit of the sixth ratification has been notified to them by the Government of the Swiss Confederation;

WHEREAS on December 4, 1961 the Federal Political Department of Switzerland gave notification as aforesaid that the governments of the following six countries had deposited instruments of ratification of the said convention on the dates indicated: France on March 24, 1961, the Federal Republic of Germany on July 28, 1961, Czechoslovakia on August 12, 1961, Monaco on September 2, 1961, the United Kingdom of Great Britain and Northern Ireland on September 6, 1961, and the United States of America on October 26, 1961;

WHEREAS, pursuant to the aforesaid provision of paragraph 1 of Article 18 of the said convention, the convention will come into force on January 4, 1962;

NOW, THEREFORE, be it known that I, John F. Kennedy, President of the United States of America, do hereby proclaim and make public the said convention to the end that the same and every article and clause thereof shall be observed and fulfilled with good faith, on and after January 4, 1962, by the United States of America and by the

citizens of the United States of America and all other persons subject to the jurisdiction thereof.

IN TESTIMONY WHEREOF, I have hereunto set my hand and caused the Seal of the United States of America to be affixed.

DONE at the City of Washington this second day of January in the year of our Lord one thousand nine hundred sixty-two and [SEAL] of the Independence of the United States of America the one hundred sixty-eighth.

JOHN F. KENNEDY

By the President:
DEAN RUSK,
Secretary of State.

CONVENTION OF PARIS
for the
Protection of Industrial Property
of 20th March, 1883
revised
at Brussels on 14th December, 1900, at Washington on 2nd June, 1911, at The Hague on 6th November, 1925, at London on 2nd June, 1934, and at Lisbon on 31st October, 1958

Article 1

(1) The countries to which the present convention applies constitute themselves into a Union for the protection of industrial property.

(2) The protection of industrial property is concerned with patents, utility models, industrial designs, trademarks, service marks, trade names, and indications of source or appellations of origin, and the repression of unfair competition.

(3) Industrial property shall be understood in the broadest sense and shall apply not only to industry and commerce proper, but likewise to agricultural and extractive industries and to all manufactured or natural products; for example, wines, grain, tobacco leaf, fruit, cattle, minerals, mineral waters, beer, flowers and flour.

(4) The term "patents" shall include the various kinds of industrial patents recognized by the laws of the countries of the Union, such as patents of importation, patents of improvement, patents and certificates of addition, etc.

Article 2

(1) Nationals of each of the countries of the Union shall, as regards the protection of industrial property, enjoy in all the other countries of the Union the advantages that their respective laws now grant, or may hereafter grant, to nationals, without prejudice to the rights specially provided by the present Convention. Consequently, they shall have the same protection as the latter, and the same legal remedy against any infringement of their rights, provided they observe the conditions and formalities imposed upon nationals.

(2) However, no condition as to the possession of a domicile or establishment in the country where protection is claimed may be required of persons entitled to the benefits of the Union for the enjoyment of any industrial property rights.

(3) The provisions of the laws of each of the countries of the Union relating to judicial and administrative procedure and to jurisdiction, and to the election of domicile or the designation of an agent, which may be required by the laws on industrial property, are expressly reserved.

Article 3

Nationals of countries not forming part of the Union, who are domiciled or who have real and effective industrial or commercial establishments in the territory of one of the countries of the Union, are treated in the same manner as nationals of the countries of the Union.

Article 4

A. — (1) A person who has duly filed an application for a patent, or for the registration of a utility model, or of an industrial design, or of a trademark, in one of the countries of the Union, or his successors in title, shall enjoy, for the purpose of filing in the other countries, a right of priority during the periods hereinafter stated.

(2) Every filing that is equivalent to a regular national filing under domestic law of any country of the Union or under bilateral or multilateral treaties concluded between countries of the Union shall be recognized as giving rise to a right of priority.

(3) By a regular national filing is meant any filing that is adequate to establish the date on which the application was filed in the country concerned, whatever may be the outcome of the application.

B. — Consequently, the subsequent filing in any of the other countries of the Union before the expiration of those periods shall not be invalidated through any acts accomplished in the interval, as, for instance, by another filing, by publication or exploitation of the invention, by the putting on sale of copies of the design or model, or by use of the mark, and these acts cannot give rise to any right of third parties, or of any personal possession. Rights acquired by third parties before the date of the first application which serves as the basis for the right of priority are reserved under the domestic legislation of each country of the Union.

C. — (1) The above-mentioned periods of priority shall be twelve months for patents and utility models, and six months for industrial designs and for trademarks.

(2) These periods shall start from the date of filing of the first application; the day of filing shall not be included in the period.

(3) If the last day of the period is an official holiday, or a day when the Office is not open for the filing of applications in the country where protection is claimed, the period shall be extended until the first following working day.

(4) A subsequent application for the same subject as a previous first application within the meaning of paragraph (2) above and filed in the same country of the Union, shall be considered as the first application, of which the filing date shall be the starting point of the period of priority, provided that, at the time of filing the subsequent application, the previous application has been withdrawn, abandoned or refused, without being open to public inspection and without leaving any rights outstanding, and has not served as a basis for claiming a right of priority. The previous application may not thereafter serve as a basis for claiming a right of priority.

D. — (1) Any person desiring to take advantage of the priority of a previous filing shall be required to make a declaration indicating the date of such filing and the country in which it was made. Each country will determine the latest permissible date for making such declaration.

(2) These particulars shall be mentioned in the publications issued by the competent authority, and in particular in the patents and the specifications relating thereto.

(3) The countries of the Union may require any person making a declaration of priority to produce a copy of the application (specification, drawings, etc.) previously filed. The copy, certified as correct by the authority which received the application, shall not require any authentication, and may in any case be filed, without fee, at any time within three months of the filing of the subsequent application. They may require it to be accompanied by a certificate from the same authority showing the date of filing, and by a translation.

(4) No other formalities may be required for the declaration of priority at the time of filing the application. Each of the countries of the Union shall decide what consequences shall follow the omission of the formalities prescribed by the present Article, but such consequences shall in no case go beyond the loss of the right of priority.

(5) Subsequently, further proof may be required.

A person who avails himself of the priority of a previously filed application shall be required to specify the number of that application, which shall be published under the conditions provided for by paragraph (2) above.

E. — (1) Where an industrial design is filed in a country by virtue of a right of priority based on the filing of a utility model, the period of priority shall be only that fixed for industrial designs.

(2) Furthermore, it is permissible to file a utility model in a country by virtue of a right of priority based on the filing of a patent application, and vice versa.

F. — No country of the Union may refuse a priority or a patent application on the ground that the applicant claims multiple priorities, even originating in different countries, or on the ground that an application claiming one or more priorities contains one or more elements that were not included in the original application or applications whose priority is claimed, provided that, in both cases, there is unity of invention within the meaning of the law of the country.

With respect to the elements not included in the original application or applications whose priority is claimed, the filing of the later application shall give rise to a right of priority under the usual conditons.

G. — (1) If examination reveals that an application for a patent contains more than one invention, the applicant may divide the application into a certain number of divisional applications and preserve as the date of each the date of the initial application and the benefit of the right of priority, if any.

(2) The applicant may also, on his own initiative, divide a patent application and preserve as the date of each divisional application the date of the initial application and the benefit of the right of priority, if any. Each country of the Union shall have the right to determine the conditions under which such division shall be authorized.

H. — Priority may not be refused on the ground that certain elements of the invention for which priority is claimed do not appear among the claims formulated in the application in the country of origin, provided that the application documents as a whole specifically disclose such elements.

Article 4bis

(1) Patents applied for in the various countries of the Union by persons entitled to the benefits of the Union shall be independent of patents obtained for the same invention in other countries, whether members of the Union or not.

(2) This provision is to be understood in an unrestricted sense, in particular, in the sense that patents applied for during the period of priority are independent, both as regards the grounds for invalidation and for forfeiture and as regards their normal duration.

(3) The provision shall apply to all patents existing at the time when it comes into effect.

(4) Similarly, it shall apply, in the case of the accession of new countries, to patents in existence on either side at the time of accession.

(5) Patents obtained with the benefit of priority shall have in the various countries of the Union a duration equal to that which they would have had if they had been applied for or granted without the benefit of priority.

Article 4ter

The inventor shall have the right to be mentioned as such in the patent.

Article 4quater

The grant of a patent shall not be refused and a patent shall not be invalidated on the ground that the sale of the patented product or of a product obtained by means of the patented process is subject to restrictions or limitations resulting from the domestic law.

Article 5

A. — (1) The importation by the patentee into the country where the patent has been granted of articles manufactured in any of the countries of the Union shall not entail forfeiture of the patent.

(2) Each country of the Union shall have the right to take legislative measures providing for the grant of compulsory licences to prevent the abuses which might result from the exclusive rights conferred by the patent, for example, failure to work.

(3) Forfeiture of the patent shall not be prescribed except in cases where the grant of compulsory licences would not have been sufficient to prevent such abuses. No proceeding for the forfeiture or revocation of a patent may be instituted before the expiration of two years from the grant of the first compulsory licence.

(4) An application for a compulsory licence may not be made on the ground of failure to work or insufficient working before the expiration of a period of four years from the date of filing of the patent application or three years from the date of the grant of the patent, whichever period last expires; it shall be refused if the patentee justifies his inaction by legitimate reasons. Such a compulsory licence shall be non-exclusive and shall not be transferable, even in the form of the grant of a sub-licence, except with that part of the enterprise or goodwill using such licence.

(5) The foregoing provisions shall be applicable, *mutatis mutandis*, to utility models.

B. — The protection of industrial designs shall not, under any circumstance, be liable to any forfeiture either by reason of failure to work or by reason of the importation of articles corresponding to those which are protected.

C. — (1) If, in any country, the use of a registered trademark is compulsory, the registration shall not be cancelled until after a reasonable period, and then only if the person concerned cannot justify his inaction.

(2) The use of a trademark by the proprietor in a form differing in elements which do not alter the distinctive character of the mark in the form in which it was registered in one of the countries of the Union, shall not entail invalidation of the registration and shall not diminish the protection granted to the mark.

(3) The concurrent use of the same mark on identical or similar goods by industrial or commercial establishments considered as co-proprietors of the mark according to the provisions of the national law of the country where protection is claimed, shall not prevent the registration or diminish in any way the protection granted to the mark in any country of the Union, provided the use does not result in misleading the public and is not contrary to the public interest.

D. — No indication or mention of the patent, of the utility model, of the registration of the trademark, or of the deposit of the industrial design shall be required upon the product as a condition of recognition of the right to protection.

Article 5bis

(1) A period of grace of not less than six months shall be allowed for the payment of the prescribed fees for the maintenance of industrial property rights, subject to the payment of a surcharge, if the domestic law so provides.

(2) The countries of the Union shall have the right to provide for the restoration of patents which have lapsed by reason of non-payment of fees.

Article 5ter

In each of the countries of the Union the following shall not be considered as infringements of the rights of a patentee:

1. the use on board vessels of other countries of the Union of devices forming the subject of his patent in the body of the vessel, in the machinery, tackle, gear and other accessories, when such vessels temporarily or accidentally enter the waters of a country, provided that such devices are used there exclusively for the needs of the vessel;
2. the use of devices forming the subject of the patent in the construction or operation of aircraft or land vehicles of other countries of the Union, or of accessories to such aircraft or land vehicles, when those aircraft or land vehicles temporarily or accidentally enter the country.

Article 5quater

When a product is imported into a country of the Union where there exists a patent protecting a process of manufacture of the said product,

the patentee shall have all the rights, with regard to the imported product, as are accorded to him by the domestic law of the country of importation, on the basis of the process patent, with respect to products manufactured in that country.

Article 5quinquies

Industrial designs shall be protected in all the countries of the Union.

Article 6

(1) The conditions for the filing and registration of trademarks shall be determined in each country of the Union by its domestic law.

(2) However, an application for the registration of a trademark filed by a national of a country of the Union in any country of the Union may not be refused nor may a registration be cancelled on the ground that filing, registration or renewal has not been effected in the country of origin.

(3) A mark duly registered in a country of the Union shall be regarded as independent of marks registered in the other countries of the Union, including the country of origin.

Article 6bis

(1) The countries of the Union undertake, either administratively if their legislation so permits, or at the request of an interested party, to refuse or to cancel the registration and to prohibit the use of a trademark which constitutes a reproduction, imitation or translation, liable to create confusion, of a mark considered by the competent authority of the country of registration or use to be well-known in that country as being already the mark of a person entitled to the benefits of the present Convention and used for identical or similar goods. These provisions shall also apply when the essential part of the mark constitutes a reproduction of any such well-known mark or an imitation liable to create confusion therewith.

(2) A period of at least five years from the date of registration shall be allowed for seeking the cancellation of such a mark. The countries of the Union may provide for a period within which the prohibition of use must be sought.

(3) No time limit shall be fixed for seeking the cancellation or the prohibition of the use of marks registered or used in bad faith.

Article 6ter

(1) (*a*) The countries of the Union agree to refuse or to invalidate the registration, and to prohibit by appropriate measures the use, without authorization by the competent authorities, either as trademarks or as elements of trademarks, of armorial bearings, flags and other State emblems of the countries of the Union, official signs and hall-marks indicating control and warranty adopted by them and all imitations thereof from a heraldic point of view.

(*b*) The provisions of sub-paragraph (*a*) above apply equally to armorial bearings, flags and other emblems, abbreviations or titles of international intergovernmental organizations of which one or more countries of the Union are members, with the exception of armorial bearings, flags and other emblems, abbreviations or titles that are

already the subject of existing international agreements intended to ensure their protection.

(*c*) No country of the Union shall be required to apply the provisions of sub-paragraph (*b*) above to the prejudice of the owners of rights acquired in good faith before the entry into force, in that country, of the present Convention. The countries of the Union shall not be required to apply the said provisions when the use or registration covered by sub-paragraph (*a*) above is not of such a nature as to suggest to the public that a connection exists between the organization concerned and the armorial bearings, flags, emblems, abbreviations or titles, or if such use or registration is clearly not of a nature to mislead the public as to the existence of a connection between the user and the organization.

(2) The prohibition of the use of official signs and hall-marks indicating control and warranty shall apply solely in cases where the marks which contain them are intended to be used on goods of the same or a similar kind.

(3) (*a*) For the application of these provisions the countries of the Union agree to communicate reciprocally, through the International Bureau, the list of State emblems and official signs and hall-marks indicating control and warranty which they desire, or may thereafter desire, to place wholly or within certain limits under the protection of the present Article and all subsequent modifications of this list. Each country of the Union shall in due course make available to the public the lists so communicated.

Nevertheless, this communication is not obligatory so far as the flags of States are concerned.

(*b*) The provisions of sub-paragraph (*b*) of paragraph (1) of this Article shall only apply to armorial bearings, flags and other emblems, abbreviations or titles of international intergovernmental organizations that the latter have communicated to the countries of the Union through the International Bureau.

(4) Any country of the Union may, within a period of twelve months from the receipt of the communication, transmit through the International Bureau its objections, if any, to the country or international intergovernmental organization concerned.

(5) In the case of State flags, the measures prescribed by paragraph (1) above shall apply solely to marks registered after 6th November, 1925.

(6) In the case of State emblems other than flags, and of official signs and hall-marks of the countries of the Union and in the case of armorial bearings, flags and other emblems, abbreviations or titles of international intergovernmental organizations, these provisions shall be applicable only to marks registered more than two months after the receipt of the communication provided for in paragraph (3) above.

(7) In cases of bad faith the countries shall have the right to cancel the registration of marks that contain State emblems, signs or hall-marks even though registered before 6th November, 1925.

(8) Nationals of each country who are authorized to make use of State emblems, signs or hall-marks of their country, may use them even though they are similar to those of another country.

(9) The countries of the Union undertake to prohibit the unauthorized use in trade of the State armorial bearings of the other countries of the Union, when the use is of such a nature as to be misleading as to the origin of the goods.

(10) The above provisions shall not prevent the countries from exercising the power given in paragraph (3) of Article 6quinquies B, to refuse or to cancel the registration of marks containing, without authorization, the armorial bearings, flags and other State emblems or official signs or hall-marks adopted by a country of the Union as well as the distinctive signs of international intergovernmental organizations mentioned in paragraph (1) of this Article.

Article 6quater

(1) When, in accordance with the law of a country of the Union, the assignment of a mark is valid only if it takes place at the same time as the transfer of the business or goodwill to which the mark belongs, it shall suffice for the recognition of this validity that the portion of the business or goodwill situated in that country be transferred to the assignee, together with the exclusive right to manufacture or sell there the goods bearing the mark assigned.

(2) This provision does not impose upon the countries of the Union any obligation to regard as valid the assignment of any mark the use of which by the assignee would, in fact, be of such a nature as to mislead the public, particularly as regards the origin, nature or material qualities of the goods to which the mark is applied.

Article 6quinquies

A. — (1) Every trademark duly registered in the country of origin shall be accepted for filing and protected in its original form in the other countries of the Union, subject to the reservations indicated in the present Article. These countries may, before proceeding to final registration, require the production of a certificate of registration in the country of origin, issued by the competent authority. No authentication shall be required for this certificate.

(2) The country of the Union where the applicant has a real and effective industrial or commercial establishment, or, if he has not such an establishment within the Union, the Union country where he has his domicile, or if he has no domicile in the Union, the country of his nationality if he is a national of a Union country, shall be considered his country of origin.

B. — Trademarks under the present Article may not be denied registration or invalidated except in the following cases:

1. when they are of such a nature as to infringe rights acquired by third parties in the country where protection is claimed;
2. when they are devoid of any distinctive character, or consist exclusively of signs or indications which may serve in trade to designate the kind, quality, quantity, intended purpose, value, place of origin of the goods or time of production, or have become customary in the current language or in the bona fide and established practices of the trade of the country where protection is claimed;
3. when they are contrary to morality or public order and, in particular, of such a nature as to deceive the public. It is understood that a mark may not be considered contrary to public order for the sole reason that it does not conform to a provision of the law relating to trademarks, except where such provision itself relates to public order.

The above is, however, subject to Article 10bis.

C. — (1) To determine whether a mark is eligible for protection, all the factual circumstances must be taken into consideration, particularly the length of time the mark has been in use.

(2) Trademarks shall not be refused in the other countries of the Union for the sole reason that they differ from the marks protected in the country of origin only by elements that do not alter the distinctive character and do not affect the identity of the marks in the form in which these have been registered in the said country of origin.

D. — No person may benefit from the provisions of the present Article if the mark for which he claims protection is not registered in the country of origin.

E. — However, in no case shall the renewal of the registration of a mark in the country of origin involve the obligation to renew the registration in the other Union countries where the mark has been registered.

F. — The benefit of priority shall be accorded to applications for the registration of marks filed within the period fixed by Article 4, even when registration in the country of origin does not occur until after the expiration of such period.

Article 6sexies

The countries of the Union undertake to protect service marks. They shall not be required to provide for the registration of such marks.

Article 6septies

(1) If the agent or representative of the person who is the proprietor of a mark in one of the countries of the Union applies, without such proprietor's authorization, for the registration of the mark in his own name in one or more Union countries, the proprietor shall be entitled to oppose the registration applied for or demand its cancellation or, if the law of the country so allows, the assignment in his favour of the said registration, unless such agent or representative justifies his action.

(2) The proprietor of the mark shall, subject to the reservations of paragraph (1) above, be entitled to oppose the use of his mark by his agent or representative if he has not authorized such use.

(3) Domestic laws may provide an equitable time limit within which the proprietor of a mark must assert the rights provided for in the present Article.

Article 7

The nature of the goods to which the trademark is to be applied shall in no case form an obstacle to the registration of the mark.

Article 7bis

(1) The countries of the Union undertake to accept for filing and to protect collective marks belonging to associations the existence of which is not contrary to the law of the country of origin, even if such associations do not possess an industrial or commercial establishment.

(2) Each country shall be the judge of the particular conditions under which a collective mark shall be protected and may refuse protection if the mark is contrary to the public interest.

(3) Nevertheless, the protection of these marks shall not be refused

to any association the existence of which is not contrary to the law of the country of origin, on the ground that such association is not established in the country where protection is sought or is not constituted according to the law of the latter country.

Article 8

A trade name shall be protected in all the countries of the Union without the obligation of filing or registration, whether or not it forms part of a trademark.

Article 9

(1) All goods unlawfully bearing a trademark or trade name shall be seized on importation into those countries of the Union where such mark or name has a right to legal protection.

(2) Seizure shall likewise be effected in the country where the unlawful application occurred or in the country into which the goods have been imported.

(3) Seizure shall take place at the request either of the public prosecutor or of any other competent authority or of any interested party, whether a natural or a juridical person, in conformity with the domestic law of each country.

(4) The authorities shall not be bound to effect seizure in transit.

(5) If the law of a country does not permit seizure on importation, such seizure shall be replaced by prohibition of importation or by seizure within such country.

(6) If the law of a country permits neither seizure on importation nor prohibition of importation nor seizure within the country, then, until such time as the law is modified accordingly, these measures shall be replaced by the actions and remedies available in such cases to nationals under the law of such country.

Article 10

(1) The provisions of the preceding Article shall apply in cases of direct or indirect use of a false indication of the source of the product or the identity of the producer, manufacturer or trader.

(2) Any producer, manufacturer or trader, whether a natural or juridical person, engaged in the production or manufacture of or trade in such goods and established either in the locality falsely indicated as the source or in the district where this locality is situated, or in the country falsely indicated, or in the country where the false indication of source is used, shall in any case be deemed an interested party.

Article 10bis

(1) The countries of the Union are bound to assure to persons entitled to the benefits of the Union effective protection against unfair competition.

(2) Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition.

(3) The following in particular shall be prohibited:

1. all acts of such a nature as to create confusion by any means whatever with the establishment, the goods, or the industrial or commercial activities of a competitor;

2. false allegations in the course of trade of such a nature as to discredit the establishment, the goods, or the industrial or commercial activities of a competitor;
3. indications or allegations the use of which in the course of trade is liable to mislead the public as to the nature, the manufacturing process, the characteristics, the suitability for their purpose or the quantity of the goods.

Article 10ter

(1) The countries of the Union undertake to assure to nationals of the other countries of the Union appropriate legal remedies to repress effectively all the acts referred to in Articles 9, 10 and 10bis.

(2) They undertake, further, to provide measures to permit syndicates and associations which represent the industrialists, producers or traders concerned and the existence of which is not contrary to the laws of their countries, to take action in the Courts or before the administrative authorities, with a view to the repression of the acts referred to in Articles 9, 10 and 10bis, in so far as the law of the country in which protection is claimed allows such action by the syndicates and associations of that country.

Article 11

(1) The countries of the Union shall in conformity with their domestic law, grant temporary protection to patentable inventions, utility models, industrial designs and trademarks, in respect of goods exhibited at official or officially recognized international exhibitions held in the territory of one of them.

(2) This temporary protection shall not extend the periods provided by Article 4. If later the right of priority is invoked, each country may provide that the period shall start from the date of introduction of the goods into the exhibition.

(3) Each country may require, as proof of the identity of the article exhibited and of the date of its introduction, such evidence as it considers necessary.

Article 12

(1) Each of the countries of the Union undertakes to establish a special industrial property service and a central office for the communication to the public of patents, utility models, industrial designs and trademarks.

(2) This service shall publish an official periodical journal. It shall publish regularly:

(a) the names of the proprietors of patents granted, with a brief description of the inventions patented;
(b) reproductions of trademarks registered.

Article 13

(1) The international office established under the name International Bureau for the Protection of Industrial Property is placed under the high authority of the Government of the Swiss Confederation, which regulates its organization and supervises its operation.

(2) (a) The French and English languages shall be used by the International Bureau in performing the tasks provided for in paragraphs (3) and (5) of this Article.

(b) The conferences and meetings referred to in Article 14 shall be held in the French, English and Spanish languages.

(3) The International Bureau centralizes information of every kind relating to the protection of industrial property and compiles and publishes it. It undertakes studies of general utility concerning the Union and edits, with the help of documents supplied to it by the various Administrations, a periodical journal dealing with questions relating to the objects of the Union.

(4) The issues of this journal, as well as all the documents published by the International Bureau, shall be distributed to the Administrations of the countries of the Union in proportion to the number of contributing units mentioned below. Additional copies as may be requested, either by the said Administrations or by companies or private persons, shall be paid for separately.

(5) The International Bureau shall at all times hold itself at the disposition of the countries of the Union, to supply them with any special information they may need on questions relating to the international industrial property service. The Director of the International Bureau shall make an annual report on his administration, which shall be communicated to all the countries of the Union.

(6) The ordinary expenditure of the International Bureau shall be borne by the countries of the Union in common. Until further authorization, it shall not exceed the sum of 120,000 Swiss francs per annum. This sum may be increased, when necessary, by a unanimous decision of one of the conferences provided for in Article 14.

(7) Ordinary expenditure does not include expenses relating to the work of conferences of plenipotentiaries or administrative conferences nor the expenses caused by special work or publications effected in conformity with the decisions of a conference. Such expenses, the annual total of which may not exceed 20,000 Swiss francs, shall be divided among the countries of the Union in proportion to their contributions towards the operation of the International Bureau in accordance with the provisions of paragraph (8) below.

(8) To determine the contribution of each country to this total expenditure, the countries of the Union and those which may afterwards join the Union are divided into six classes, each contributing in the proportion of a certain number of units, namely:

First class	25 units
Second class	20 units
Third class	15 units
Fourth class	10 units
Fifth class	5 units
Sixth class	3 units

These coefficients are multiplied by the number of countries in each class, and the sum of the products thus obtained gives the number of units by which the total expenditure is to be divided. The quotient gives the amount of the unit of expense.

(9) Each of the countries of the Union shall, at the time it becomes a member, designate the class in which it wishes to be placed. However, any country of the Union may declare later that it desires to be placed in another class.

(10) The Government of the Swiss Confederation will supervise the expenditure of the International Bureau and its accounts, and will make the necessary advances.

(11) The annual account rendered by the International Bureau shall be communicated to all the other Administrations.

Article 14

(1) The present Convention shall be submitted to periodical revision with a view to the introduction of amendments designed to improve the system of the Union.

(2) For this purpose conferences shall be held successively in one of the countries of the Union between the delegates of the said countries.

(3) The Administration of the country in which the conference is to be held shall make preparations for the work of the conference, with the assistance of the International Bureau.

(4) The Director of the International Bureau shall be present at the meetings of the conferences, and take part in the discussions, but without the right of voting.

(5) (*a*) During the interval between the Diplomatic Conferences of revision, Conferences of representatives of all the countries of the Union shall meet every three years in order to draw up a report on the foreseeable expenditure of the International Bureau for each three-year period to come and to consider questions relating to the protection and development of the Union.

(*b*) Furthermore, they may modify, by unanimous decision, the maximum annual amount of the expenditure of the International Bureau, provided they meet as Conferences of Plenipotentiaries of all the countries of the Union, convened by the Government of the Swiss Confederation.

(*c*) Moreover, the Conferences provided for in paragraph (*a*) above may be convened between their triennial meetings by either the Director of the International Bureau or the Government of the Swiss Confederation.

Article 15

It is understood that the countries of the Union reserve the right to make separately between themselves special arrangements for the protection of industrial property, in so far as these arrangements do not contravene the provisions of the present Convention.

Article 16

(1) Countries which are not parties to the present Convention shall be permitted to accede to it at their request.

(2) Any such accession shall be notified through diplomatic channels to the Government of the Swiss Confederation, and by it to all the other Governments.

(3) Accession shall automatically entail acceptance of all the clauses and admission to all the advantages of the present Convention and shall take effect one month after the dispatch of the notification by the Government of the Swiss Confederation to the other countries of the Union, unless a subsequent date is indicated in the request for accession.

Article 16bis

(1) Any country of the Union may at any time notify in writing

the Government of the Swiss Confederation that the present Convention is applicable to all or part of its colonies, protectorates, territories under mandate or any other territories subject to its authority, or any territories under its sovereignty, and the Convention shall apply to all the territories named in the notification one month after the dispatch of the communication by the Government of the Swiss Confederation to the other countries of the Union unless a subsequent date is indicated in the notification. Failing such a notification, the Convention shall not apply to such territories.

(2) Any country of the Union may at any time notify in writing the Government of the Swiss Confederation that the present Convention ceases to be applicable to all or part of the territories that were the subject of the notification under the preceding paragraph, and the Convention shall cease to apply in the territories named in the notification twelve months after the receipt of the notification addressed to the Government of the Swiss Confederation.

(3) All notifications sent to the Government of the Swiss Confederation in accordance with the provisions of paragraphs (1) and (2) of the present Article shall be communicated by that Government to all the countries of the Union.

Article 17

Every country party to this Convention undertakes to adopt, in accordance with its constitution, the measures necessary to ensure the application of this Convention.

It is understood that at the time an instrument of ratification or accession is deposited on behalf of a country, such country will be in a position under its domestic law to give effect to the provisions of this Convention.

Article 17bis

(1) The Convention shall remain in force for an indefinite time, until the expiration of one year from the date of its denunciation.

(2) Such denunciation shall be addressed to the Government of the Swiss Confederation. It shall affect only the country in whose name it is made, the Convention remaining in operation as regards the other countries of the Union.

Article 18

(1) The present Act shall be ratified and the instruments of ratification deposited in Bern not later than 1st May, 1963. It shall come into force, between the countries in whose names it has been ratified, one month after that date. However, if before that date it is ratified in the name of at least six countries, it shall come into force between those countries one month after the deposit of the sixth ratification has been notified to them by the Government of the Swiss Confederation, and for countries in whose names it is ratified at a later date, one month after the notification of each such ratification.

(2) Countries in whose names no instrument of ratification has been deposited within the period referred to in the preceding paragraph shall be permitted to accede under the terms of Article 16.

(3) The present Act shall, as regards the relations between the countries to which it applies, replace the Convention of Paris of 1883 and the subsequent acts of revision.

(4) As regards the countries to which the present Act does not apply, but to which the Convention of Paris revised at London in 1934 applies, the latter shall remain in force.

(5) Similarly, as regards countries to which neither the present Act nor the Convention of Paris revised at London apply, the Convention of Paris revised at The Hague in 1925 shall remain in force.

(6) Similarly, as regards countries to which neither the present Act nor the Convention of Paris revised at London, nor the Convention of Paris revised at The Hague apply, the Convention of Paris revised at Washington in 1911 shall remain in force.

Article 19

(1) The present Act shall be signed in a single copy in the French language, which shall be deposited in the archives of the Government of the Swiss Confederation. A certified copy shall be forwarded by the latter to each of the Governments of the countries of the Union.

(2) The present Act shall remain open for signature by the countries of the Union until 30th April, 1959.

(3) Official translations of the present Act shall be established in the English, German, Italian, Portuguese and Spanish languages.

In witness whereof the undersigned Plenipotentiaries, after presenting their full powers, have signed the present Act.

Done at Lisbon on 31st October, 1958.

[Preamble and signatures omitted.]

NOTE: The translation of the Convention printed here is the official English translation established by the International Bureau in accordance with Article 19(3). This translation hence may differ in language from the previous revision in those articles or parts of articles which were not changed. The prior versions of the Convention were published in the OFFICIAL GAZETTE as follows: Convention of Paris of 1883, 40 O.G. 446, July 26, 1887 (25 Stat. 1372; Treaty Series 379); revision of Brussels of 1900, 101 O.G. 1372, November 11, 1902 (32 Stat. 1936); revision of Washington of 1911, 204 O.G. 1011, July 21, 1914 (37 Stat. 1645; Treaty Series 579); revision of The Hague of 1925, 407 O.G. 298, June 9, 1931 (47 Stat. 1789; Treaty Series 834); revision of London of 1934, 613 O.G. 23, August 3, 1948 (53 Stat. 1748; Treaty Series 941). The present treaty will appear in Volume 13 of "United States Treaties and Other International Agreements" and will also appear as a separate numbered publication of the "Treaties and Other International Acts Series."

List of Countries

The following is a list of countries which have adhered to the Convention of Paris for the Protection of Industrial Property as revised at Lisbon in 1958, and to previous versions of the Convention, the revision of London of 1934, of The Hague of 1925, and the revision of Washington of 1911. The original date is given and also the date of the adherence to the different versions. In some instances a country becoming independent or acquiring a separate status has continued previous adherence under a new name or under the new status; in such cases the original dates are still used. The note from the Swiss Government referred to in the proclamation also stated that Iran and the Republic of Haiti acceded to Convention and that the Convention as revised at Lisbon enters into force with respect to these countries also.

Country	Original date	Washington 1911	The Hague 1925	London 1934	Lisbon 1958
Australia	Aug. 5, 1907	Oct. 10, 1925	Feb. 12, 1933	June 2, 1958	
Papua and New Guinea	Feb. 12, 1933		do		
Norfolk Is. and Nauru	July 29, 1936		July 29, 1936		
Austria	Jan. 1, 1909	May 1, 1913	June 1, 1928	July 19, 1947	
Belgium	July 7, 1884	Aug. 8, 1914	July 27, 1929	Nov. 24, 1939	
Brazil	do	Dec. 17, 1914	Oct. 26, 1929		
Bulgaria	June 13, 1921	June 13, 1921			
Canada	Sept. 1, 1923	Sept. 1, 1923	June 1, 1928	July 30, 1951	
Ceylon	June 10, 1905	June 20, 1913		Dec. 29, 1952	
Cuba	Nov. 17, 1904	Jan. 3, 1922			
Czechoslovakia	Oct. 5, 1919	Oct. 5, 1919	Mar. 3, 1933		Jan. 4, 1962
Denmark (including Faroe Islands)	Oct. 1, 1894	Aug. 30, 1914	Sept. 10, 1937	Aug. 1, 1938	
Dominican Republic	July 11, 1890	May 1, 1913			
Egypt	July 1, 1951			July 1, 1951	
Finland	Sept. 20, 1921	Sept. 20, 1921		May 30, 1953	
France (including Algeria and colonies)	July 7, 1884	May 1, 1913	Oct. 20, 1930	June 25, 1939	Do.
Germany	May 1, 1903	do	June 1, 1928	Aug. 1, 1938	Do.
Greece	Oct. 2, 1924	Oct. 2, 1924		Nov. 27, 1953	
Haiti	July 1, 1958			July 1, 1958	Do.
Hungary	Jan. 1, 1909	May 1, 1913	May 16, 1929		
Indonesia	Oct. 1, 1888		June 1, 1928	Aug. 8, 1948	
Iran	Dec. 16, 1959			Dec. 16, 1959	Do.
Ireland	Dec. 4, 1925	Dec. 4, 1925		May 14, 1958	
Israel	Sept. 12, 1933		Sept. 12, 1933	Mar. 24, 1950	
Italy	July 7, 1884	May 1, 1913	June 1, 1938	July 15, 1955	
Japan	July 15, 1899	do	Jan. 1, 1935	Aug. 1, 1938	
Lebanon	Sept. 1, 1924	Sept. 1, 1924	Nov. 17, 1930	Sept. 30, 1947	
Liechtenstein	July 14, 1933		July 14, 1933	Jan. 28, 1951	
Luxembourg	June 30, 1922	June 30, 1922		July 30, 1945	
Mexico	Sept. 7, 1903	May 1, 1913	Jan. 16, 1930	July 14, 1955	
Monaco	April 29, 1956			April 29, 1956	Do.
Morocco	July 30, 1917	July 30, 1917	Oct. 20, 1930	Jan. 21, 1941	
Netherlands	July 7, 1884	May 1, 1913	June 1, 1928	Aug. 8, 1948	
Netherlands Indies	Oct. 1, 1888		do	do	
Surinam and Curacao	July 1, 1890		do	do	
New Zealand	Sept. 7, 1891	June 20, 1913	July 29, 1931	July 14, 1946	
Western Samoa	July 29, 1931		do	do	
Norway	July 1, 1885	May 1, 1913		Aug. 1, 1938	
Poland	Nov. 10, 1919	Nov. 10, 1919	Nov. 22, 1931		
Portugal (including Azores and Madeira)	July 7, 1884	May 1, 1913	Nov. 17, 1928	Nov. 7, 1949	
Rhodesia and Nyasaland, Federation of	Apr. 1, 1958			Apr. 1, 1958	
Roumania	Oct. 6, 1920	Oct. 6, 1920			
San Marino	Mar. 4, 1960			Mar. 4, 1960	
Spain	July 7, 1884	May 1, 1913	June 1, 1928	Mar. 2, 1956	
Spanish colonies	Dec. 15, 1947		Dec. 15, 1947		
Sweden	July 1, 1885	Jan. 11, 1917	July 1, 1934	July 1, 1953	
Switzerland	July 7, 1884	May 1, 1913	June 15, 1929	Sept. 24, 1939	
Syria	Sept. 1, 1924	Sept. 1, 1924	Nov. 17, 1930	Sept. 30, 1947	
Tunis	July 7, 1884	May 1, 1913	Oct. 20, 1930	Oct. 4, 1942	
Turkey	Oct. 10, 1925	Oct. 10, 1925	Aug. 21, 1930	June 27, 1957	
Union of South Africa	Dec. 1, 1947			Dec. 1, 1947	
United Kingdom	July 7, 1884	May 1, 1913	June 1, 1928	Aug. 1, 1938	Do.
Tanganyika	Jan. 1, 1938		Jan. 1, 1938	Jan. 28, 1951	
Trinidad and Tobago	May 14, 1908	June 20, 1913	Oct. 21, 1929		
Singapore	Nov. 12, 1949			Nov. 12, 1949	
United States	May 30, 1887	May 1, 1913	Mar. 6, 1931	Aug. 1, 1938	Do.
Vatican City	Sept. 29, 1960			Sept. 29, 1960	
Viet-Nam	July 7, 1884	May 1, 1913	Oct. 20, 1930	June 25, 1939	
Yugoslavia	do	Feb. 26, 1921	Oct. 29, 1928		

REISSUES

FEBRUARY 13, 1962

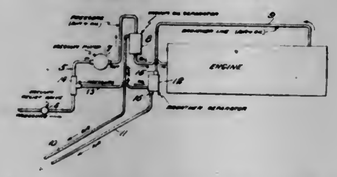
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,121
EXCESS BREATHER OIL RECOVERY SYSTEM

Ray C. Barker, Wichita, Kans.

Original No. 2,849,994, dated Sept. 2, 1958, Ser. No. 587,981, May 29, 1956. Application for reissue May 16, 1960, Ser. No. 30,053

9 Claims. (Cl. 123—41.86)



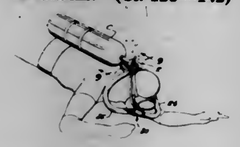
1. Excess breather oil recovery system for aircraft in which there is an engine having a breather extending from the engine lubricating system to atmosphere and a vacuum system having an air pump, said recovery system comprising the combination of engine breather line, an excess breather oil separator connected to said breather line and having separate air and oil discharge outlets, a drain connection extending from said oil discharge outlet to the suction side of said vacuum pump, and a vacuum oil separator connected with the discharge side of said vacuum pump and having an air discharge outlet and an oil discharge outlet, said oil discharge outlet being connected to return excess oil collected from the breather air back to the engine lubricating system.

25,122
SAFETY-FIRST UNDERWATER BREATHING APPARATUS

Rory Everett Page, Garden Grove, Calif., assignor, by mesne assignments, of one-half to Charles L. Hope and Boneva L. Hope, and one-half to Rory E. Page and Beverly Jo Page

Original No. 2,823,670, dated Feb. 18, 1958, Ser. No. 419,195, Mar. 29, 1954. Application for reissue Mar. 19, 1959, Ser. No. 800,609

18 Claims. (Cl. 128—142)



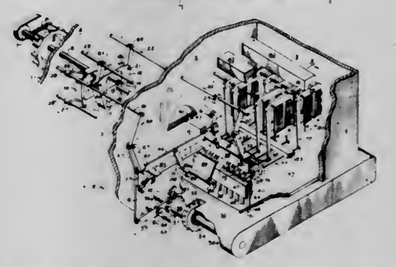
11. An underwater breathing system of the type in which breathable gas to be breathed by a diver is maintained under pressure and is supplied in accordance with the inhalation demands of the diver at a pressure level slightly above ambient pressure, and in which substantially all the gas exhaled upon each exhalation of the diver is immediately discharged into the surrounding water without any recirculation thereof within the system, said system comprising: a container for compressed gas; a pressure reducing and pressure regulating mechanism coupled to said container; a flexible air supply tube having one end thereof coupled to said pressure reducing and regulating mechanism, the operation of said pressure reducing and pressure regulating mechanism being such as to selectively supply gas from said container to said air supply tube at a pressure slightly above ambient pressure; a flexible air discharge tube having one end thereof coupled to said pressure reducing and regulating mechanism; a discharge valve on said one end of said air discharge tube; a hollow body having first, second and third openings therein, the other end of said air supply tube communicating with said first opening, the other end of said air discharge tube communicating with said second opening; a mouthpiece adapted to be removably held in the diver's mouth and communicating with said third opening; a first pressure-sensitive unidirectional valve supported from said hollow body in a position to selectively close said first opening, and operable both to permit unused gas to flow from said air supply tube into said hollow body, and to inhibit flow of either water or gas in the reverse direction; and a second pressure-sensitive unidirectional valve supported from said hollow body in a position to selectively close said second opening, and operable to permit either water or gas to flow from said hollow body into said air discharge tube while inhibiting their flow in the opposite direction; said first and second valves and said hollow body together defining a compartment whose volume is relatively small compared to the combined volume of said air supply and air discharge tubes.

25,123
HIGH SPEED PUNCH DEVICE

John H. MacNeill, Melbourne, Fla., assignor to Soroban Engineering, Inc., Melbourne, Fla., a corporation of Florida

Original No. 2,859,816, dated Nov. 11, 1958, Ser. No. 572,508, Mar. 19, 1956. Application for reissue Feb. 21, 1961, Ser. No. 90,899

38 Claims. (Cl. 234—115)



1. A device for marking a record member, comprising at least one marking member movable between a spacing position and a marking position, a bail, means for moving said bail between a retracted position and a marking member actuating position, at least one interposer, means for moving said interposer between a first position and a second position, said interposer arranged and adapted in said second position only for operatively coupling said at least one marking member and said bail for a marking operation, a record feed actuator, means for moving said feed actuator from one position to another position, means for maintaining said means for moving in isochronism, link means movable with and interconnecting said bail moving means and said feed actuator moving means and means connected with said link means for returning said interposer to its first position when said link means obtains a predetermined position.

PLANT PATENTS

GRANTED FEBRUARY 13, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,130
ROSE PLANT
Eugene S. Boerner, Newark, N.Y., assignor, by mesne assignments, to Home Nursery Products Corporation, Newark, N.Y., a corporation of New York
Filed Mar. 23, 1961, Ser. No. 97,981
1 Claim. (Cl. 47—61)

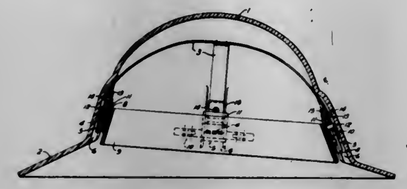
A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a vigorous, upright and bushy habit of plant growth, good hardiness, constant production of healthy leathery foliage, good flower size, very double flower petalage, a very strong and unusual geranium flower fragrance, a distinctive and attractive general color tonality of the flowers corresponding to Scarlet Red, lightly overcast with Scarlet, and long-lasting flower qualities.

PATENTS

GRANTED FEBRUARY 13, 1962

GENERAL AND MECHANICAL

3,020,551
HELMET SHELL SUSPENSION WITH ADJUSTABLE HEIGHT SWEAT BAND
Harry W. Austin, Monroeville, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 26, 1958, Ser. No. 776,615
3 Claims. (Cl. 2—3)



1. A helmet shell suspension comprising a head-receiving cradle having head-engaging straps, means fastened to the lower ends of the straps adapted to be attached to a helmet shell to support the shell, a headband disposed inside the lower part of the cradle formed from a flexible sweatband and encircled by a relatively stiff backing band, and a plurality of relatively stiff members disposed around the headband and detachably connected to said backing band, each of said members being provided with a pair of vertically spaced slots forming a loop between the slots, the lower part of a cradle strap extending through each loop to support said members, said straps and members tightly engaging each other in sliding relation, the cradle including stiffening means for the lower parts of said straps engaging said stiff members to increase frictional engagement between the straps and said members whereby considerable manual pressure is required to slide said members up and down the straps to any desired location to permit the headband to be adjusted vertically in the cradle.

3,020,552
SUNBATHING GLASSES
Audrey M. Coon, P.O. Box 6232, Centre Branch, Sacramento, Calif.
Filed Nov. 30, 1959, Ser. No. 856,239
2 Claims. (Cl. 2—15)



1. A one-piece eye shield constructed of semi-rigid material, comprising a nose grip embodying a curved bridge section and a pair of spaced rearwardly extended arms formed integral with and forming continuations of said bridge section, substantially oval eye shield members formed integral with said nose piece, merging with said arms at points adjacent to said bridge section at opposite sides of said nose grip, said arms constituting nose gripping portions adapted to spread apart for positioning over the nose of the user, by a forward bending movement of said shield members, and said arms adapted to return to their normal nose gripping positions upon releasing the shields.

3,020,553
SAWYER'S APRON
Gertrude L. Hyde, Rte. 2, St. Helen, Mich.
Filed Sept. 9, 1960, Ser. No. 54,883
3 Claims. (Cl. 2—52)



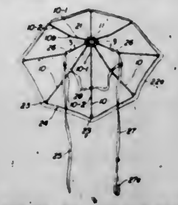
1. An apron comprising a waistband, an apron body, and means detachably connecting said apron body to the waistband, said means comprising snap fastener halves attached to the waistband and mating snap fastener halves attached to the apron body, each of said snap fastener halves being arranged in a row lengthwise of the apron and waistband with the snap fastener halves of each row spaced equal distances apart, and the row of snap fastener halves attached to said waistband being longer than the row of snap fastener halves attached to the apron body for mounting said apron body in longitudinally spaced adjusted positions on said waistband.

3,020,554
HOOK-ON NECK-TIE
Zdenek Wolanski, Sydney, New South Wales, Australia
Filed Sept. 8, 1958, Ser. No. 759,528
Claims priority, application Australia Sept. 19, 1957
2 Claims. (Cl. 2—153)



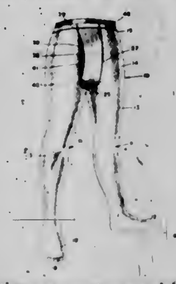
1. A hook-on neck-tie comprising; a former consisting of a center-block shaped to constitute a knot core and a pair of oppositely outwardly projecting horns respectively adapted to enter between a collar peak and its neck-band, said center block including a pair of holes extending through the body thereof, a drape looped about said former, and a support hook having one end in the form of a tongue for engagement between a neck-band and a wearer's neck, and its other end consisting of a pair of prongs inserted within and extending from said holes formed in said center block, said prongs penetrating parts of said drape looped about said former and securely holding said drape to said former, and said prongs having the terminal ends thereof emergent from said holes and turned sidewards.

3,020,555
UMBRELLA-STYLE HAT
Samuel S. Taylor, 233 S. Main St., Salt Lake City, Utah
Filed Apr. 18, 1958, Ser. No. 729,453
5 Claims. (Cl. 2—177)



1. An umbrella-style hat, comprising a hub disk; a circumferential series of ribs pivotally secured to said hub disk for extension radially thereof in the opening of the hat for wearing purposes, said ribs being pivoted to said hub disk adjacent to but short of corresponding ends thereof so as to leave relatively short end portions of said ribs projecting from one face of said hub disk, and said projecting end portions being canted toward the center of the hub disk to serve as lever arms; a stud secured to said hub disk centrally thereof and having an elongate shank which projects with but beyond said end portions of the ribs so as to have a free end above the latter; a ferrule slidably mounted on said shank above said end portions of the ribs; a fabric covering for said ribs interposed between said ferrule and said end portions of the ribs; and a spring exerting tension between said ferrule and said free end of the shank for normally exerting pressure against the lever arm end portions of the ribs to force said ribs and said fabric cover into radially extended position, wherein the hat is open for wearing.

3,020,556
COMBINATION GARMENT
Jacob D. Isley, Snow Camp, N.C., assignor to Liberty Hosiery Mills, Inc., Gibsonville, N.C., a corporation of North Carolina
Filed Apr. 20, 1959, Ser. No. 807,548
10 Claims. (Cl. 2—224)



1. A combination garment comprising a pair of knit units and an intermediate panel portion secured together to form tubular waist, hip, leg and foot portions, said garment being knit of stretchable yarn, said panel portion extending from the rear to the front of the garment between the units being of double ply fabric and having an overlapping openable front flap.

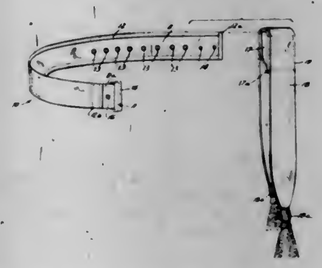
3,020,557
GARMENT BONE
Morton Sobel, Easton, Pa.
Filed May 2, 1960, Ser. No. 25,980
2 Claims. (Cl. 2—260)

1. A bone for use in an undergarment comprising an extended, relatively wide and flat flexible metal body, and an end member cast of a plastic material extending from said body and including a rear portion in which an end portion of said body is embedded, a tip portion adapted to be sewed through, and an intermediate portion between said rear and tip portions, said intermediate and tip portions extending beyond said end portion of the metal body, said end member having opposed side surfaces which are



substantially wider than the thickness of said end member measured between said side surfaces, said end member further having a hole substantially centered in said intermediate portion and extending through the latter perpendicular to said opposed side surfaces to relieve stresses in said plastic material at said side surfaces and thereby avoid tearing and fracturing of said end member upon flexing of the latter about a laterally extending axis.

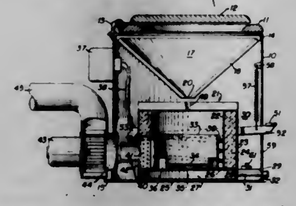
3,020,558
SASH CONSTRUCTION
Abner A. Raeburn, New York, N.Y., assignor to N. S. Meyer, Inc., New York, N.Y., a corporation of New York
Filed Apr. 16, 1958, Ser. No. 728,931
1 Claim. (Cl. 2—300)



A sash construction comprising in combination an elongated rectangular flexible member having a first end and a second end, an inside surface formed on said flexible member, an outside surface formed on said flexible member, a plurality of female fastener members formed on said inside surface, a plurality of male fastener members formed on said inside surface with the male members disposed adjacent the second end, a substantially rigid hollow rectangular frame member, said first end of said flexible member disposed within the hollow of said frame and encircling one side thereof and fastened to said outside surface, said second end of said flexible member disposed within the hollow of said frame and encircling the remaining side thereof and fastened to said inside surface,

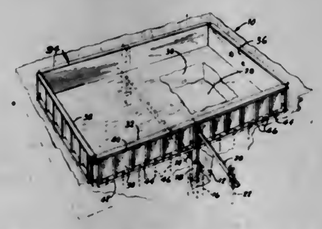
a second flexible member folded upon itself with its ends joined together, said second flexible member encircling said flexible member with portions of said second flexible member disposed adjacent said inside surface and said outside surface of said flexible member to provide two substantially parallel sides which are substantially parallel with the inside and outside surface of said first flexible member, said second flexible member being slidable upon said first flexible member so that it can be positioned to overlie said frame member and hide it from view, an elongated member permanently attached to said second flexible member to form a single member by stitching and said elongated member having tassels attached at each end.

3,020,559
INCINERATOR TOILET
Ernest Bayne Blankenship and Harry A. Bowers, Dallas, Tex., assignors to Research Products Manufacturing Company, Dallas, Tex., a corporation of Texas
Filed Jan. 5, 1959, Ser. No. 785,081
4 Claims. (Cl. 4—131)



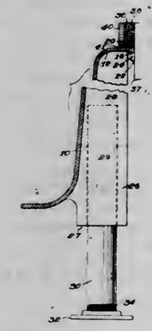
1. In a waterless toilet including an electrically actuated incinerator therein, a vertical hollow body, a vertically disposed incinerator unit, smaller in height and distance across than said body and positioned within said body at the base thereof and interiorly spaced from the walls of said body, a thermo switch within said incinerator unit near the base thereof, heating means at the walls of said incinerator unit, a suction fan positioned exteriorly of said body, means communicating the intake of said suction fan with the interior of said body, a vent tube opposite said intake of said fan communicating the interior of said incinerator unit with the interior of said body, and means electrically connecting said thermo switch with said heating means and said suction fan for de-energizing said heating means and said suction fan when said thermo switch is subjected to a temperature above a preset level.

3,020,560
SWIMMING POOL CONSTRUCTION AND RELATED METHOD
Robert Bedick, Merrick, N.Y., assignor to Merit Associates, Inc., Long Island City, N.Y.
Filed June 20, 1960, Ser. No. 37,291
2 Claims. (Cl. 4—172)



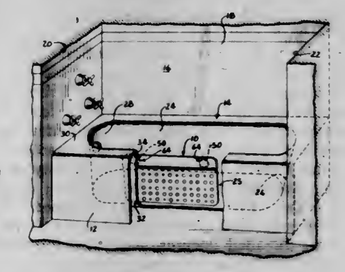
1. A swimming pool structure comprising a plurality of sides defining an enclosure and a flexible waterproof member engaging said sides and extending between the lower extremities thereof to constitute a water storage means, said sides each comprising a wood framework and cement asbestos panels covering the framework on the inside and constituting lateral supports for said flexible member, said structure further comprising gasket and interliner members between said flexible member and said cement asbestos panels, at least one of the sides being provided with a hole, a first circular fitting engaging in said hole against the corresponding panel of the said one side, a second circular fitting engaging in said hole and pressing against the vinyl adjacent the hole, and means to lock the fittings together.

3,020,561
BATHTUB CONSTRUCTION
Roger B. Cotting, Rte. 1, Box 41C, Sarasota, Fla.
Filed Sept. 2, 1958, Ser. No. 758,442
6 Claims. (Cl. 4—173)



1. A standard bathtub, adapted to be installed in any location in a room, comprising a tub body having a cavity and an outturned rim lying substantially in a horizontal plane, said rim enclosing the perimeter of the tub body, and an upturned tile setting flange extending upwardly from and completely about said rim and spaced outwardly from the cavity and inwardly from the outer edge of the rim thereby providing a substantially flat surface on either side of the flange.

3,020,562
TUB AND SHOWER MAT WITH MAGNETIC HOLDING MEANS
John A. Reynolds, 6108 N. Hermitage St., Chicago 26, Ill.
Filed Feb. 9, 1960, Ser. No. 7,689
3 Claims. (Cl. 4—185)



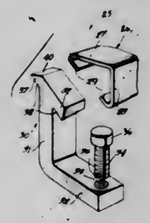
1. A substantially flat tub and shower mat of generally rectangular design and formed of elastomeric mate-

rial, said mat being formed with a longitudinally extending edge region embracing one adjacent pair of corner regions of the mat, each of said corner regions being formed with a shallow circular pocket therein with said pockets opening on one side of the mat, a thin flat circular disk-like permanent magnet of the barium ferrite type disposed within each pocket and having its inner face in coextensive face-to-face contact with the bottom of said pocket, the rim region of said pocket being formed with a shallow annular recess thereabout of a depth equal to the overall depth of the pocket less the axial thickness of the magnet and of an overall diameter greater than the diameter of the pocket, and a thin plano-concave and imperforate disk of elastomeric material seated within said shallow annular recess, overhanging the circular edge of the magnet, and having its rim sealed to the rim region of the recess coextensively therearound, said disk, in combination with the walls of said pocket, serving completely to enclose the magnet and maintain the same within the confines of the mat, the outer face of said disk being of concave configuration whereby the disk will function in the manner of a suction cup when said one side of the mat is applied to a planar surface with the adjacent magnet exerting forward pressure against the disk under the influence of magnetic attraction between the magnet and a magnetic object in the vicinity of said planar surface.

3,020,563
CLAMPING ARRANGEMENT FOR SINK STRUCTURE

Matyas J. Just, Chicago, Ill., assignor to Just Manufacturing Company, a corporation of Illinois

Filed Dec. 15, 1960, Ser. No. 75,997
4 Claims. (Cl. 4—187)

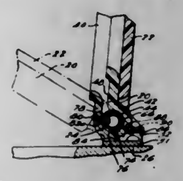


1. In a sink structure including a drainboard having an upper surface and having an opening, a sink positioned within said opening, said sink including a bowl and a horizontal rim extending around said bowl, said rim having an edge portion engaging the upper surface of said drainboard; a clamping structure for securing said sink to said drainboard comprising a plurality of elongated brackets connected to said rim and projecting downwardly within said opening, said brackets being substantially co-extensive with said rim, each bracket being of V-shape including a first flange extending horizontally with and being connected to said rim and a second flange projecting downwardly with respect to said rim, each of said flanges having lips projecting inwardly toward each other and diagonally with respect to said first and second flanges and being relatively laterally spaced to provide elongated slots in said channels, a plurality of securing clamps connected to said channels, each clamp including an L-shaped member having a horizontal leg and a vertical leg connected thereto, said horizontal leg having a vertical threaded opening, a vertical threaded fastener in each opening and adapted to engage the underneath side of said drainboard, an engaging head on each vertical leg, said head including opposed outwardly extending prongs insertable through said slots, said prongs having edges extending diagonally relative to said flanges and engaging said lips within said channels to be retained therein, said prongs including means engageable with said first flange during tightening of said fastener to retain L-shaped member in position whereupon tightening of said fastener said sink is secured to said drainboard.

3,020,564
TOILET VENTILATION SYSTEM

Joseph Chodacki, Wayne County, Mich. (12504 Charest St., Detroit 12, Mich.) and Roman Zdrojkowski, Wayne County, Mich. (3889 Sobieski, Detroit 12, Mich.)

Filed June 6, 1961, Ser. No. 115,223
5 Claims. (Cl. 4—213)



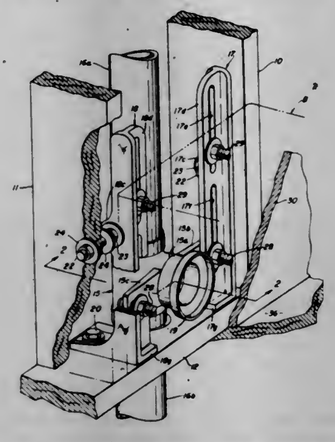
1. In a lavatory ventilation system for use on toilet bowls, the combination comprising a tubular hinge assembly detachably secured to the rear portion of a toilet bowl and including a rotatably fixed tubular outer sleeve having a venting aperture therethrough, an oval shaped toilet seat including a tubular mounting portion at the rear portion thereof disposed in overlying sliding relationship around said outer sleeve providing for pivoting movement of said seat to and from a lowered position and a raised position, said seat adapted to snugly overlie a portion of said bowl when in said lowered position, and having a recess in the underside thereof, said mounting portion having a throat therethrough disposed in communication with said recess and said venting aperture in said outer sleeve when said seat is in said lowered position and out of communication with said venting aperture when said seat is in said raised position, resilient means coacting with said tubular hinge assembly and said seat for resiliently biasing said seat in a rest position angularly spaced from said lowered position, a seat cover pivotally mounted on said outer sleeve, a tubular inner sleeve slidably disposed within said outer sleeve and having a venting port therethrough adapted to be disposed in communication with said venting aperture and said throat when said seat is in said lowered position, a remotely disposed exhaust fan, a remotely disposed switching means for energizing said exhaust fan, conduit means connecting one end of said inner sleeve to said exhaust fan, an actuating lever mounted on said one end of said inner sleeve and disposed in said conduit means, coacting means on said tubular mounting portion for rotating said inner sleeve and said lever thereon when said seat is moved from said rest position to said lowered position as when occupied, and means connecting said actuating lever to said switching means for energizing said fan when said seat is moved from said rest position to said lowered position.

3,020,565
CARRIER AND FITTING

Vincent T. Manas, Washington, D.C., and George J. Flegel, Michigan City, Ind., assignors to Josam Manufacturing Co., Michigan City, Ind., a corporation of Delaware

Filed Feb. 3, 1959, Ser. No. 790,909
6 Claims. (Cl. 4—252)

1. For support of a wall hung closet bowl fixture relative to spaced vertical frame and horizontal frame members in a wall enclosing a soil stack to which the bowl fixture is connected, said fixture having at the back thereof a mounting flange having on each side thereof a lateral pair of vertically spaced parallel mounting stud receiving apertures, said soil stack including a fitting with inlet branch means adapted to a compression sealed connection with a gasketed horn of the fixture, said fitting carrying thereon oppositely extending lateral arms apertured near the ends thereof, fixture supporting means transmitting the major part of the fixture weight to and supporting the fixture locally on a horizontal frame member, comprising: a carrier and foot unit entirely within the wall at either side of the fitting, each said unit having an apertured flat-bottomed foot portion adapted for support on and bolted securement to a horizontal frame member and having also an upright carrier portion of a cross section providing a web and a flange integral with the foot portion and merging into an end of the foot portion, the flange of the carrier portion having at a level above mid-height of the unit an aperture for bolting the same parallel to a vertical frame member, the web of the carrier portion having elongated aligned vertical slots therethrough and extending over the major length thereof, a pair of vertically spaced fixture mounting studs secured to each said unit in spatially and vertically adjustable positions for engaging a corresponding lateral pair of apertures of a fixture flange and whereby the apertured arms of said fitting may be secured to respective units by the lowermost studs, and bolt-like means through the flange aperture of each unit for securing the unit to a respective vertical frame member.



3,020,566
SELF-TUCKING FITTED SHEET

Hattie T. Anderson and Martin Anderson, both of 1-H Gardenway, Greenbelt, Md.

Filed Jan. 12, 1960, Ser. No. 2,797
4 Claims. (Cl. 5—334)

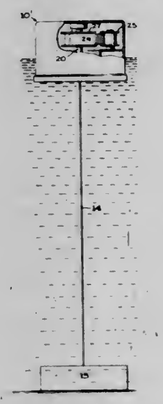


1. A self-tucking cover for a mattress, or the like, comprising: a top substantially conforming to the top of said mattress; a skirt substantially conforming to the periphery of said mattress and depending in depth below said mattress, said skirt having a free peripheral edge; differentially tensioned elastic means attached to said edge, said elastic means when fully extended in cooperation with said edge being of substantially equal peripheral length therewith; extensible corner elastic segments of said elastic means, and cooperating respectively therewith relatively inextensible corner segments of said edge, each of said corner edge segments being of substantially greater length than the corresponding corner elastic segments when said corner elastic segments are fully relaxed, said corner elastic segments when fully relaxed in cooperation with corresponding corner edge segments being of relatively greater extensibility than the remainder of said elastic means when said remainder is fully relaxed in cooperation with the remainder of said edge, whereby said elastic means may be differentially extended in cooperation with said edge.

3,020,567
BUOY AND LIKE FLOATING OBJECT INCORPORATING MEANS FOR RESILIENTLY CONNECTING SAME TO ITS ANCHOR

Rutger B. Colt, Baltimore, Md., assignor to The Bendix Corporation, a corporation of Delaware

Filed May 7, 1959, Ser. No. 811,721
2 Claims. (Cl. 9—8)



1. In combination, a buoyant device and an anchor therefor, an anchor cable for connecting said device to its anchor, a cable drum, means including a member which rotates in relation to the effective anchoring length of cable payed out or taken up when the cable is wound on or unwound from said drum, a spring take-up reel having a metallic pre-stressed constant-force ribbon spring wound thereon, and a spring output reel adapted to rotate with said member and to have said spring wound thereon and unwound therefrom in response to variations in flotation forces acting on the buoyant device when the anchor is in anchoring position.

3,020,568
WATER SKI WITH SPOUT

Louis R. Tierney, 88 Summer St., Everett, Mass.

Filed Nov. 6, 1959, Ser. No. 851,317
1 Claim. (Cl. 9—310)

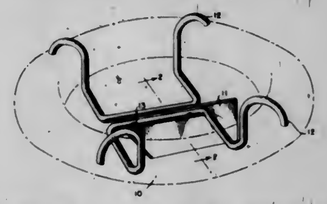
A water ski comprising a ski body having upper and lower surfaces and a rear end, and an L-shaped tubular "rooster tail" producing spout fixed on the ski body, said spout consisting of a horizontal arm located at the lower surface of the body and having a forwardly facing

water open inlet end and an upstanding arm at the rear end of the body having an upwardly facing discharge end, and an adapter jet nozzle engaged on the discharge end of the spout having a reduced jet opening, said nozzle



being an inverted cup-shape having a sidewall telescoped into the discharge end and an upper end wall in which the jet opening is formed, and bayonet slot and stud means securing the nozzle in place.

3,020,569
AMBULANT FLOATING SEAT
Robert Andrew Morris, San Diego, Calif. (% Dr. E. A. Morris, 741 N. Riverside Ave., Rialto, Calif.)
Filed Nov. 10, 1958, Ser. No. 773,073
1 Claim. (Cl. 9—347)



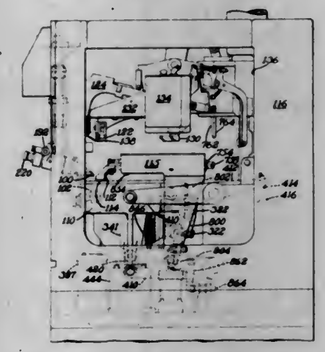
A floating inner tube seat of the character described comprising a pair of rod-like yoke members, each of said yoke members being substantially U-shaped and arranged so that the respective bight portions thereof are in confronting relation, a vertical plate-like scull extending between and joined near its upper edge to each of the bight portions, each of the legs of the yoke members having its free end shaped to form a hook element adapted to receive and be supported by a portion of an inner tube.

3,020,570
METHOD OF MAKING THREADED FASTENERS WITH LOCKING INSERT THEREIN
Richard B. Wallace, Birmingham, and Robert J. Ebbert, Rochester, Mich., assignors to The Oakland Corporation, Birmingham, Mich., a corporation of Michigan
Filed Mar. 17, 1958, Ser. No. 722,027
4 Claims. (Cl. 10—10)



1. The method of making a self-locking threaded element which comprises forming a radially inwardly extending slightly inwardly tapered recess in the side of a generally cylindrical body, thereafter rolling a thread on said body and simultaneously displacing radially outer portions of the side walls of said recess inwardly toward the center of said recess, and finally inserting a plug of plastic material having the property of some plastic flow into said recess under sufficient pressure to cause flow of the material to interlock it in the recess, the plug being of sufficient volume to extend outwardly beyond the open end of said recess.

3,020,571
LASTING MACHINES
Raymond M. Bowler, Salem, N.H., and Melvin Clamp, Andover, Mass., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed May 18, 1959, Ser. No. 814,060
16 Claims. (Cl. 12—8.8)



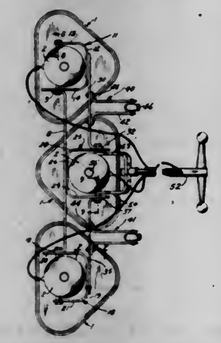
1. In a machine for lasting the toe end of a shoe, having a support for a shoe on its last, toe embracing wipers for wiping the upper materials of a shoe around the toe end of the last in response to relative heightwise movement between the wipers and the shoe, and for thereafter wiping the lasting margin of the upper materials inwardly over the toe end of the bottom of the shoe in response to advancing and closing movements of the wipers, means for effecting relative heightwise movement between the wipers and the shoe, mechanism for thereafter imparting advancing movements to the wipers, and mechanism for closing the wipers in response to this advancing movement including means for yieldingly holding said wipers in a variably predetermined closed position during relative heightwise movement between the wiper and the shoe support and for positively closing said wipers during their advancing movement.

3,020,572
LATERAL EXPANDABLE SHOE FORM
Aaron Harry Fishman, East Rockaway, N.Y., assignor to Admiral Plastics Corporation, Brooklyn, N.Y., a corporation of New York
Filed Jan. 31, 1961, Ser. No. 86,130
2 Claims. (Cl. 12—116.8)



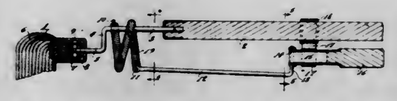
1. A one-piece molded shoe tree for expanding the toe and forward portions of a shoe, comprising a body of a compressible resilient plastic material including a front edge portion defined by a curved surface concentric about the longitudinal axis of said tree and extending the greater part of a circle, a rear edge portion defined by an elliptical surface disposed symmetrically about said axis and extending parallel to said front edge portion, and an intermediate surface integral with and extending between said front and rear edge portions of frustoconical shape tapering outward from said front edge portion to said rear edge portion, said intermediate surface terminating in a pair of base edges tapering outward from the terminal ends of said front edge portion to the terminal ends of said rear edge portion, said base edges being normally spaced from one another and being adapted to be moved toward one another to facilitate insertion of said tree into a shoe.

3,020,573
TOOL HARNESS
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed May 26, 1959, Ser. No. 815,995
1 Claim. (Cl. 15—49)



In surface treating apparatus of the class described including an odd number of units each having independent motor-driven rotatable means adapted to be positioned on and moved over a surface to be treated, means providing a housing for each unit, an elongated frame, means for mounting the housings of the units on the frame essentially in a single row lengthwise thereof with the rotatable means of adjacent units overlapping one another lengthwise of the frame, the frame normally being horizontal and movable back and forth over the surface in a direction perpendicular to its length when the rotatable means are positioned on the surface during such movement, the unit mounting means including structure for individually mounting the housing of each unit on the frame for pivotal movement about an axis perpendicular to the direction of the normal back and forth movement of the frame on the surface, an elongated rod having a bifurcated end including a pair of spaced arms, the structure for mounting the housing of the middle unit in said row for pivotal movement on the frame including provisions for mounting the ends of the arms on the housing of the middle unit for pivotal movement about an axis coinciding with the axis about which the housing of the middle unit is pivotally movable on the frame, the rod normally being inclined rearward of the frame and angularly movable on the axis about which the housing of the middle unit is pivotally movable on the frame when its outer free end is grasped by an operator for manipulating the frame and units mounted thereon on the surface, releasable means for holding the rod in a fixed upward extending position with respect to the frame, a pair of spaced members extending rearward from the frame and forming a unitary part thereof, the spaced members being disposed at opposite sides of the middle unit and removed from the ends of the frame by at least the end units in said row of units, the spaced members extending rearward of the housing of the middle unit and overhanging the rear of the last-mentioned housing, roller means rotatably mounted on the overhanging ends of the spaced members, the roller means being spaced from the surface when the rotatable means is positioned on the surface, and means comprising the frame and the rod in its fixed upward extending position for tilting the apparatus to move the rotatable means to a position at an acute angle to the surface and bring the roller means in contact with the surface to facilitate movement of the apparatus on the surface with the aid of the roller means.

3,020,574
MOPS HAVING EXTRACTING MECHANISM
Peter S. Vosbikian, Melrose, Pa., and Thomas S. Vosbikian, 1012 70th Ave., Philadelphia, Pa.
Filed June 16, 1960, Ser. No. 36,555
2 Claims. (Cl. 15—119)



1. A mop having an extracting mechanism, comprising a mop handle having a straight rear portion and having a front portion in the form of a rod fixed to the rear portion and extending longitudinally of it with a right angle bend intermediate its ends and then continuing as a straight front stretch offset from the rear portions of the handle of the rod and terminating in a free end, a mop head detachably connected with said free end, and an extractor in the form of a helix rotatable on the rear rod portion to align its opening with the mop head, and an extractor handle having a tubular member offset from it and rotatable and longitudinally slidable on the mop handle, said extractor handle having a rod connected with it and with the periphery of said helix.

3,020,575
WEATHERPROOF ROUTER TROWEL
Joseph B. Mullicane, 11715 Inglewood Ave., Hawthorne, Calif.
Filed May 25, 1959, Ser. No. 815,505
5 Claims. (Cl. 15—235.3)

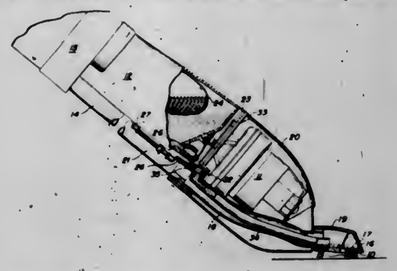


1. A weatherproof router trowel for troweling mortar between upper and lower courses of brick, comprising: a trowel blade; a guide strip, said blade and strip joined together along their lower margins to form a unitary member of V-shaped cross section having a mortar-collecting channel between said trowel blade and guide strip, said guide strip adapted when placed against an upper course of brick to occupy a vertical operating position in which said guide strip projects above said trowel blade, thereby to place said trowel blade in an angular position for angular insertion between said upper course and a lower course to trowel the mortar therebetween to produce a sloping face.

3,020,576
SUCTION WASHING APPLIANCE
Dale C. Gerber, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed July 11, 1960, Ser. No. 41,890
6 Claims. (Cl. 15—320)

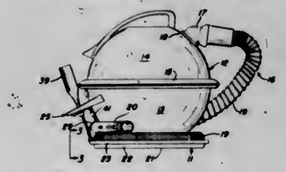
1. A floor washing appliance comprising, a suction nozzle, suction creating means, a fluid flow system con-

necting the suction side of said suction creating means to said nozzle, a liquid detergent dispensing tank carried by said appliance above said nozzle, a liquid flow line leading from said tank into a position to discharge liquid



detergent onto the floor and means in said liquid flow line for releasing an antifoamant into contact with the detergent as it is dispensed to prevent the formation of suds and foam and its entry into said fluid flow system.

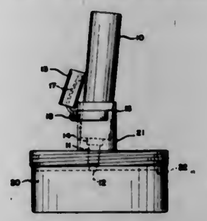
3,020,577
SUCTION CLEANERS
George F. Carabet, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed June 29, 1960, Ser. No. 39,575
2 Claims. (Cl. 15—323)



1. In a suction cleaner of the type having a flexible hose and adapted to use cleaning tools: a cleaner body having a side wall, means projecting from said side wall and cooperating therewith to define a recess having a vertically disposed open mouth through which the hose is removably coiled in said recess to store the hose, retaining means including frame means projecting upwardly from said projecting means into engagement with the hose, when stored, to maintain the latter in said coiled condition in said recess, tool storage means on the upper portion of said frame means and arranged above the coiled hose to removably support cleaning tools adjacent said body side wall, and means mounting said frame means on said projecting means for movement of said frame means and tool storage means outwardly of said body side wall to hose release position whereby the hose may be uncoiled from said recess.

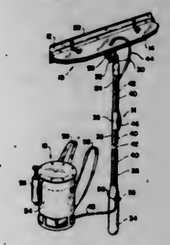
3,020,578
COMBINATION INK WELL AND FELT NIB PEN
Sidney N. Rosenthal, Belle Harbor, N.Y., assignor to Speedry Chemical Products, Inc., Richmond Hill, N.Y.
Filed Dec. 12, 1960, Ser. No. 75,372
2 Claims. (Cl. 15—517)

1. In combination, an ink container and a felt nib pen; said container including at the top a vertical tube or well opening into it and inking means at the bottom of the well; said pen having an elongated tubular body and also having a smaller tubular nib holder formed at one end in which is and through which extends a felt nib, and also having a cylindrical cap removably fitted over the nib holder for sealing off the nib when the pen is not in use; said well being of a slightly larger diameter than the pen body so that the pen may be inserted, nib end down, into the well with the cap removed to be supported by the well with its nib in wetting contact with the inking means at the bottom of the well; the combination including a spring clip comprising a split springy ring removably encircling the pen body, but being sufficiently springy so



that it may be enlarged and thus removably encircle the well; said clip having a flat strip of springy metal secured at one end to the ring and extending at right angles to it; said spring clip being interchangeably attachable to the pen body for clipping the pen to various objects, and to the well for entering into and thus supporting said pen cap to one side of the well and capable of simultaneously pressing the cap against the pen body and thus spring holding the pen body against the interior wall of the well and thus frictionally holding the pen in the well.

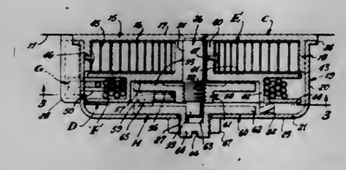
3,020,579
PAINT APPLYING APPARATUS
Donald J. O'Connor, East Hartford, Conn.
Filed Nov. 7, 1958, Ser. No. 772,566
6 Claims. (Cl. 15—553)



1. A paint applying apparatus comprising an applicator which includes an upper elongated close grained sponge-like member of low absorbency having a generally flat face and a lower elongated close grained sponge-like member of low absorbency disposed in spaced parallel relationship with said upper member and having a generally flat face extending approximately in a common plane with the face of said upper member, said lower member also having a groove running lengthwise in its upper surface which holds a supply of paint when the member is out of engagement with a work surface and which can be contracted to deliver said paint to a work surface when said member is in engagement with and is compressed by a work surface, a distributor connected with the applicator and provided with a paint inlet and a plurality of distributing passageways connected with said inlet to conduct paint therefrom to the space between said sponge-like members, said passageways being arranged to discharge paint substantially throughout the length of said space and the resistance to paint flow offered by said passageways being substantially equal so

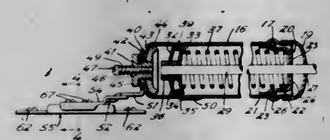
as to provide for substantially equal paint flow therethrough and a uniform distribution of paint along the length of said space and said groove, an elongated handle supporting the applicator and distributor in operative positions with the elongated sponge-like members of the applicator substantially normal to the handle centerline, and means for supplying paint under pressure to the distributor inlet including a manually operable flow control device.

3,020,580
DOOR CLOSER
Edward R. Glenn, Pasadena, Calif., assignor to John C. Acker and Agnes R. Acker, both of Los Angeles County, Calif.
Filed Oct. 21, 1959, Ser. No. 847,828
10 Claims. (Cl. 16—61)



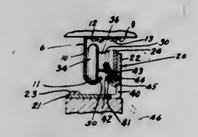
1. A door closer of the character referred to including, a body adapted to be mounted in fixed relationship to a door frame supporting a door, a spool rotatably carried by the body, a tow line wound about the spool and having an end portion extending from the spool and coupled with the door, spring means between the body and the spool to normally yieldingly rotate the spool in a direction to wind the line thereon and braking means between the body and the spool and operable to slow rotation of the spool in the direction where the line is being wound thereon and to allow for free rotation in the other direction, said braking means including a threaded shaft carried by the body, a braking disc threaded on said shaft and establishing frictional engagement with the spool and stop means limiting rotation of the disc in the direction to advance it towards the spool and spring means normally yieldingly urging the disc in the direction of rotation of the spool when the line is being wound thereon to advance the disc on the shaft and towards the spool.

3,020,581
DOOR CHECK
Harold W. Falk, Minneapolis, Minn., assignor to Wright Products, Inc., St. Paul Park, Minn., a corporation of Minnesota
Filed Feb. 2, 1956, Ser. No. 563,101
1 Claim. (Cl. 16—66)



A door check including a cylinder, a piston slidably supported within said cylinder, a piston rod connected to said piston and extending through one end of said cylinder, bracket means secured to said piston rod and adapted to be secured to a door frame, a member secured to the other end of said cylinder and fixed in relation thereto, a first bracket member pivotally secured to said first named member and extending longitudinally with respect to said cylinder, a second bracket member having a surface adapted to be secured to a door and extending parallel to said first bracket and overlapping the same, one of said bracket members having an aperture therethrough and the other of said bracket members having a longitudinal slot therein, and means extending through said aperture and slot for securing said two bracket members in adjusted overlapping relation, said first bracket member having and end lying on a plane parallel to said surface of said second bracket member, said end of said first bracket member having a transverse slot therethrough, and said first named member including a tongue having an offset end extending through said slot and providing the pivotal connection between said first named member and said first bracket member.

3,020,582
SLIDING DOOR HANGER
Arthur T. Cox, Pasadena, Calif., assignor to Arthur Cox and Sons, Inc., Pasadena, Calif., a corporation of California
Filed Mar. 8, 1960, Ser. No. 13,488
1 Claim. (Cl. 16—105)

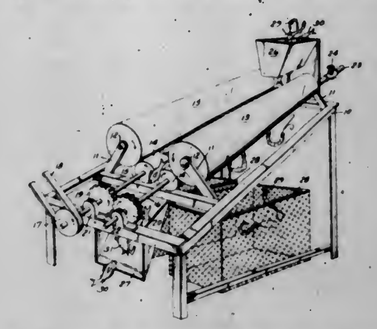


A sliding door hanger, including: a bracket having two legs in substantially right angular relationship to provide a horizontal leg and a vertical leg, the horizontal leg adapted to be secured to the top edge of the sliding door and to lie horizontally and transversely thereof, with the vertical leg extending above and adjacent one side of the door, said vertical leg formed with a slot extending from the horizontal leg upwardly, a lug carried by the vertical leg and extending downwardly within the vertical leg slot at an angle to the plane of the leg toward and terminating above the horizontal leg, an arm provided with a roller, pivoted to the vertical leg of the bracket and provided along one edge with a lug extending at an angle to the plane of the arm, the two lugs lying in overlapped juxtaposition and transversely of the top edge of the door, the lug of the arm formed with a screw threaded bore and the lug of the bracket provided with a slot and a screw passed through the slot of the bracket lug for engagement with the screw threads of the arm lug for adjusting separation between the lugs.

3,020,583
APPARATUS FOR SEPARATING SHRIMP FROM A MIXED CATCH AND/OR REMOVING THE SHRIMP HEADS
Fernand S. Lapeyre and James M. Lapeyre, New Orleans, La., assignors to The Peelers Company, Houma, La., a partnership
Filed Sept. 23, 1957, Ser. No. 685,597
10 Claims. (Cl. 17—2)

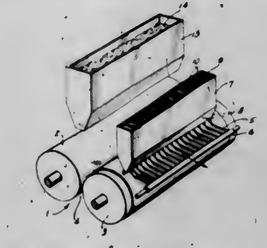
1. A device for separating heads-on shrimp having long whiskers from a mixed catch comprising a moving member having a wetted surface to which the catch is indiscriminately subjected and to which will selectively

adhere only the whiskers of the shrimp, and whisker grasping and pulling means so operatively associated



with the member as to receive the whiskers therefrom and remove the entrained shrimp from the catch.

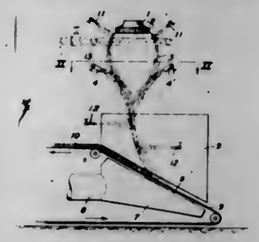
3,020,584
APPARATUS AND METHOD FOR FORMING FLOOR TILE
Paul W. Brakeley, Plainfield, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Dec. 6, 1957, Ser. No. 701,004
15 Claims. (Cl. 18—2)



12. In a device for the manufacture of thermoplastic surface covering materials, said device including mill rolls to mill the thermoplastic material into a blanket, a plurality of spaced cutting means movably mounted adjacent to one of the rolls of said mill and mounted relative thereto so as to cut a plurality of spaced grooves substantially through a blanket of material on the adjacent roll and means for discharging particles of splash adjacent the spaced cutting means, whereby the splash will be fed into the grooves cut into a blanket of material on the mill roll.

3,020,585
PROCESS AND APPARATUS FOR THE MANUFACTURE OF FIBER LININGS OR MATS
Lucien Berthon, Liancourt, Marcel Levecque, Saint-Gratien, and Paul Piot, Deuil, France, assignors to Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France, a corporation of France
Filed May 6, 1957, Ser. No. 657,229
Claims priority, application France May 15, 1956
15 Claims. (Cl. 18—2.5)

1. A process of producing continuous lengths of fiber linings or mats of glass and similar materials comprising centrifugally extruding fibers of molten material to form a curtain of fibers in the form of a continuous tube, guiding said tube downwardly in an annular curtain around a substantially vertical axis, with the aid of gas currents to accelerate its falling speed, deforming said annular curtain at at least one point in its periphery by an impinging jet of gas, spreading said annular curtain to a substantially flat curtain under the influence of said jet of gas



with substantially no movement of the aixs thereof transversely to the length of the mat, and depositing said flat curtain of fibers onto a moving conveyor belt in the form of a continuous mat of overlapping substantially parallel fibers.

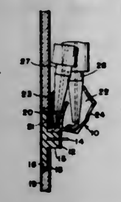
3,020,586
APPARATUS FOR PRODUCING FIBERS
Maurice Charpentier, Rantigny, and Lucien Berthon, Liancourt, France, assignors to Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France, a corporation of France
Filed June 11, 1958, Ser. No. 741,267
Claims priority, application France June 17, 1957
12 Claims. (Cl. 18—2.5)

1. An apparatus for manufacturing fibers of thermoplastic material comprising a hollow rotary centrifuge provided with an opening to receive the heated thermoplastic material in the interior thereof, said centrifuge having a peripheral wall provided with a plurality of superposed rows of orifices therein for projecting the fibers therethrough by centrifugal force, said peripheral wall having a varied angularity with the inclination thereof with respect to the vertical, increasing constantly from the top to the bottom thereof, means including an annularly-shaped slot for directing an annular hot gaseous blast against the peripheral wall of said centrifuge and onto the fibers issuing therefrom in a direction transverse to the planes of emission thereof, the upper part of said peripheral wall being disposed below said slot within the vertical projection thereof and within the path of said gaseous blast so that the portion of the blast striking said upper part of the wall is directed towards the main part of the blast with minimal deviation thereof towards the upper part of the centrifuge.

3,020,587
PROCESS AND APPARATUS FOR THE MANUFACTURE OF SEALING STRIPS OR GASKETS
Sterling W. Alderfer and Harry David Bodley, Akron, Ohio, assignors to Sterling Alderfer Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 3, 1958, Ser. No. 726,122
7 Claims. (Cl. 18—4)

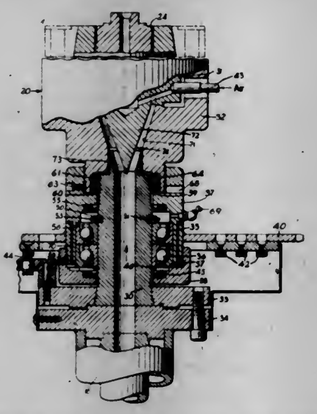
2. Apparatus for the manufacture of strips of flexible material, comprising, an elongated flexible mold having

exterior walls defining a mold cavity, said mold having means dividing said cavity into at least two separate chambers communicating at their upper portions, said mold having a longitudinal parting line above said divid-



ing means, at least two nozzles projecting into said cavity along said parting line, each said nozzle being adapted to deposit liquid molding material into one of said chambers, and means to support and propel the mold.

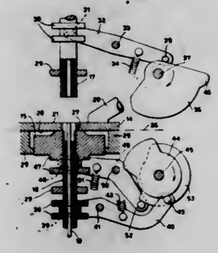
3,020,588
ROTARY PLASTIC EXTRUSION DIE
Joe S. Ferguson and Garland E. Raley, Terre Haute, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed Feb. 4, 1958, Ser. No. 713,183
10 Claims. (Cl. 18—14)



5. Apparatus for producing tubing from thermoplastic material comprising an extruder having a stationary nipple with a conical stationary inner surface, a die journaled on said nipple having a rotative cone spaced inside said stationary conical surface and a diverging rotative surface spaced from said cone and forming a projection of said stationary conical surface, and means for continuously rotating said die in the same direction on its journal on said stationary nipple, to cause rotation of said projection with respect to said stationary conical surface.

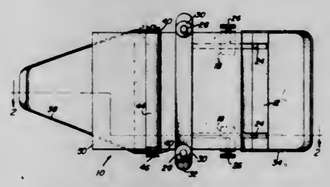
3,020,589
DEVICE FOR MOLDING ARTICLES BY COMPACTING POWDER MATERIAL
Oddino S. Maritano, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Via Jervis, Ivrea, Italy, a corporation of Italy
Filed July 28, 1960, Ser. No. 45,923
3 Claims. (Cl. 18—16.5)

1. In a device for molding an article by compacting powder material, said article being formed of two substantially cylindrical or prismatic parts having different cross-sections and adjoining each other on a horizontal plane perpendicular to the direction of their longitudinal axes, a pair of punch members arranged opposite said plane and each one having a contour corresponding to the shape of the cross-section of one of said parts, a die assembly formed of a pair of vertically superposed die portions contacting each other on said plane and each one associated with one of said punch members, means for feeding the powder material into said die assembly from the top die member thereof, means for vertically moving said punch members into the associated die portions for compacting therein the powder material so fed,



means for stationarily mounting one of said die portions, the other die portion being vertically shiftable from the stationary die portion through a stroke at least equal to the height of said article, and means for relatively moving each one of said punch members and the associated die portion to eject the corresponding part of said article therefrom, said last named means comprising means for shifting said shiftable die portion with respect to the associated punch member through a stroke equal to the height of the corresponding part of said article, and means for additionally moving the other punch member with respect to the associated stationary die portion through a stroke equal to the height of the other part of said article.

3,020,590
BENDING TOOL FOR PLASTIC TILE
Walter Siegert, Widewater, Alberta, Canada
Filed Feb. 9, 1959, Ser. No. 792,103
2 Claims. (Cl. 18—19)



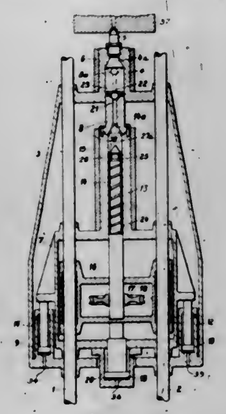
1. A tool for bending plastic tile comprising a base plate having parallel side walls, a rigid handle secured to the side walls and extending upwardly from one end of the base plate, said base plate having a tile forming surface extending along its bottom surface and upwardly in a curved convex arcuate manner over the opposite end of the base plate, a second handle pivotally supported intermediate its ends between the side walls of the base plate at said opposite end thereof and concentric with the curved convex arcuate shape part of the tile forming surface, said second handle extending upwardly from the base plate and having its lower ends depending below the tile forming surface, clamping means carried by the base plate and extending over the bottom thereof for releasably securing the plastic tile thereagainst and in association

with the tile forming surface, a roller carried between the depending lower ends of the pivotally supported handle for rolling movement along an arcuate path to bend the tile over the curved convex arcuate part of the tile forming surface, whereby the two handles may be used to suspend the base plate and the tile into a heated medium and worked to form the plastic tile.

3,020,591
INJECTION MOLDING MACHINE

Rudolf Breher and Friedrich Berndt Bielfeldt, Bad Oeynhausen, Germany, assignors to Friedrich Stubbe, Vlotho (Weser), Germany

Filed Jan. 19, 1960, Ser. No. 3,338
Claims priority, application Germany Jan. 26, 1959
7 Claims. (Cl. 18—30)

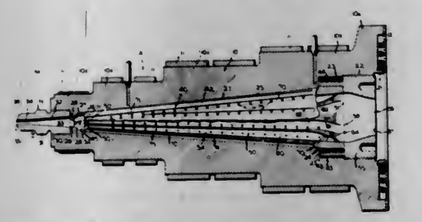


1. In an injection molding machine: a molding material receiving cylinder, an injection nozzle communicating with said material receiving cylinder for receiving molten molding material therefrom and injecting the same into a mold, an injection piston etxending into and movable relative to said material receiving cylinder in axial direction thereof, first actuating means for effecting movement of said injection piston and said material receiving cylinder relative to each other a heating cylinder arranged within and in substantially axial alignment with said injection piston for heating molding material, a rotatable feeder worm extending into and rotatable in said heating cylinder for conveying molding material into said heating cylinder, means for admitting molding material to said feeder worm passage means for effecting communication between said heating cylinder and said material receiving cylinder, said feeder worm and said heating cylinder comprising wall portions of a storage chamber variable in volume, said storage chamber comprising at least one wall portion movable relative to said heating cylinder in axial direction thereof for alternately increasing and decreasing the volume of said storage chamber to thereby respectively fill said storage chamber by means of said feeder worm with a certain charge of molding material and to discharge plasticized material from said storage chamber into said material receiving cylinder, second actuating means operable independently of said first actuating means for effecting movement of said last mentioned wall portion relative to said heating cylinder, and means arranged in said passage means and permitting the flow of molding material from said heating cylinder to said material receiving cylinder while preventing the flow of said last mentioned material in reverse direction.

3,020,592
PLASTICIZING CYLINDERS FOR INJECTION MOLDING AND THE LIKE MACHINES

Mario Maccaferri, 24 Redfield St., Rye, N.Y.

Filed Sept. 1, 1960, Ser. No. 57,860
11 Claims. (Cl. 18—30)

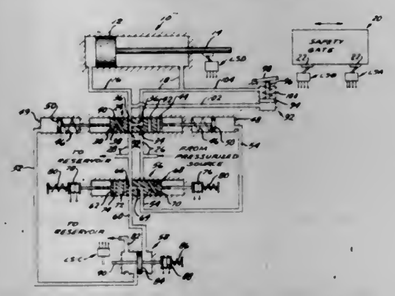


3. Plasticizing apparatus including, in combination, a plasticizing cylinder structure having a main passage extending therethrough with an intake opening coaxial therewith at one end and a discharge opening coaxial therewith through the opposite end of reduced diameter relative to the diameter of said intake opening; said main passage being tapered at a constant angle of taper from said intake opening to said discharge opening; said cylinder structure having a plurality of flow channels spaced radially outwardly from, spaced apart around and extending longitudinally along said main passage at constant angles of inclination radially inwardly from locations adjacent said intake opening to locations adjacent said discharge opening; said cylinder structure also having a multiplicity of radially disposed, small diameter openings closely spaced apart along each of said channels throughout the lengths of the latter in communication between said passage and said channels; said cylinder structure closing said channels at the ends thereof adjacent said intake opening; and said channels at the ends thereof adjacent said discharge opening having discharge openings therethrough.

3,020,593
ELECTRO-HYDRAULIC SAFETY MECHANISM

Bernie A. Olmsted, East Longmeadow, and Francisco R. Cinco, Springfield, Mass., assignors to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts

Filed Oct. 6, 1959, Ser. No. 844,714
10 Claims. (Cl. 18—30)

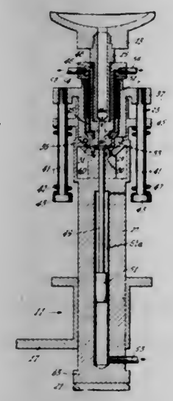


10. An electro-hydraulic safety mechanism for a machine having relatively movable dies or the like, an hydraulic actuator for opening and closing the dies, and a safety gate movable to a closed position to prevent operator access to the dies, the said mechanism including a pressure line which is connectible with a source of pressurized hydraulic fluid and also including two control valves comprising a master valve and an interlock valve which are operatively associated with the actuator, the master valve having die opening and die closing positions and being solenoid operated to assume its die closing position, and the master valve being arranged to provide connection between the pressure line and the actuator when in its die opening position to cause die opening operation, the interlock valve being solenoid operated to move to a die closing position wherein it effects a series connection with the master valve in die closing position between the pressure line and the actuator to cause die closing operation, electrical control means for said valves comprising a pair of power circuits respectively including the valve solenoids, a third circuit including a relay having normally open contacts in each of the pair of circuits, normally closed contacts in said third circuit adapted to be opened with the dies closed and thereafter re-closed, a pair of limit switches having normally open poles respectively located in said pair of circuits and having normally closed poles connected in series in said third circuit, the said pair of limit switches being arranged to be tripped by movement of the safety gate to its closed position, said relay having normally open contacts arranged to shunt said normally closed poles whereby to require said safety gate to be moved from closed position and then reclosed between cycles of die closing operation, and a third limit switch having a normally open pole in the circuit of the master valve solenoid and arranged to be tripped by movement of the interlock valve to its die closing position whereby to complete the circuit of the master valve solenoid.

3,020,594
INJECTION MOLDING

Alexander G. Makowski, Fayville, Mass., assignor, by mesne assignments, to American Can Company, New York, N. Y., a corporation of New Jersey

Filed July 11, 1958, Ser. No. 747,996
14 Claims. (Cl. 18—42)

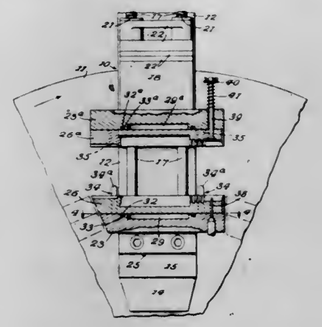


1. The method of making a molded thermoplastic article of the type having overhanging portions at one end thereof with an adjacent undercut configuration requiring forcible stripping of the finished article from a mold, which comprises providing a mold having a cavity of the shape required to produce the article including undercut-forming portions; introducing softened thermoplastic material under pressure into the mold by a nozzle which approaches the mold in such a way that the plastic material enters the mold cavity from a direction opposite to that in which the overhanging portion will project from the body of the finished article; rapidly cooling the portions of the mold cavity in the immediate vicinity of the overhang-forming portions to render them into a firm and resilient part of the finished article by bringing large quantities of cooling agent rapidly into heat conductive proximity with said mold cavity portions, and promptly stripping the overhanging portions of the set plastic article free of said undercut-forming portions of the mold.

3,020,595
HOLLOW PLASTIC ARTICLE MOLDING MACHINE

John L. Szajna, Norridge, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Aug. 29, 1958, Ser. No. 758,009
3 Claims. (Cl. 18—42)



1. In a molding machine, two mold half carrying blocks mounted for movement toward and away from each other, the opposed sides of said blocks each having a coolant receiving recess opening therethrough, each of said blocks also having an inlet and an outlet opening into its respective recess, a coolant supply line and a coolant return line connected to each block in communication with said coolant inlet and said coolant outlet, respectively, two cooperating mold halves, said mold halves having cooperating aligning pins and bushings for initially aligning said mold halves, said mold halves having remote sides conforming to and contacting said opposed sides of said blocks in sealed relation about said recesses, said mold halves spanning and coacting with said recesses to form two coolant receiving chambers whereby coolant circulated through said coolant chambers is in direct contact with said mold halves, and means laterally adjustably and detachably securing said mold halves to said blocks.

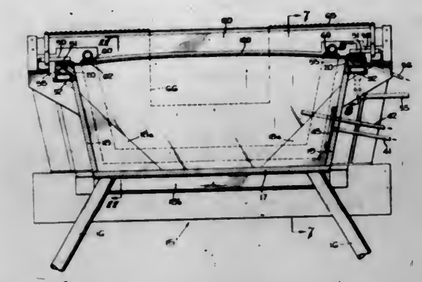
3,020,596
METHOD FOR FREE FORMING OF STRETCHED SHEET MATERIAL

Robert J. Clapp, Downey, and John E. Jameson, Buena Park, Calif., assignors to Swedlow Inc., Los Angeles, Calif., a corporation of California

Filed Sept. 19, 1960, Ser. No. 59,137
14 Claims. (Cl. 18—56)

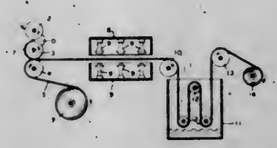
1. In a process for forming flat stretched thermoplastic sheet material of tough laminar structure into curved contours without substantial decrease in toughness of such material, the steps comprising: mechanically forming the sheet to a curved contour while imparting stresses therein, holding the sheet to said contour while heating the main body of the same to a temperature substantially below the thermoplastic temperature thereof and above the temperature at which appreciable shrinkage occurs while maintaining the entire peripheral edge portions of the sheet

cooled to a temperature below that at which shrinkage occurs, applying a differential fluid pressure to opposed faces of said heated sheet to further form the same to a



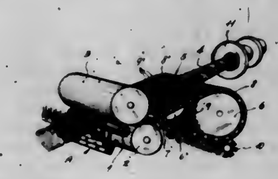
new contour while holding the cooled edge portions of the same against movement, and cooling said sheet while continuing to cool said edge portions, to apply said pressure and to hold the sheet to said new contour.

3,020,597
METHOD OF MAKING MICROPOROUS FILM
Robert Smith-Johannsen, Niskayuna, N.Y., assignor to S-J Chemical Company, Niskayuna, N.Y., a copartnership
Filed July 3, 1953, Ser. No. 367,217
11 Claims. (Cl. 18—57)



1. The method of making microporous films which comprises sufficiently heating finely divided thermoplastic particles to cause fusion thereof while the particles are thoroughly dispersed throughout a continuous inert medium having a viscosity from about 20,000 centipoises to about 2,000,000 centipoises at the temperature used to cause such fusion and then dissolving out the inert medium.

3,020,598
APPARATUS FOR CONVEYING ROVING IN A TEXTILE MACHINE
Enterio L. Dotti, San Martin 2328, Santa Fe, Argentina
Filed July 30, 1957, Ser. No. 675,182
2 Claims. (Cl. 19—65)



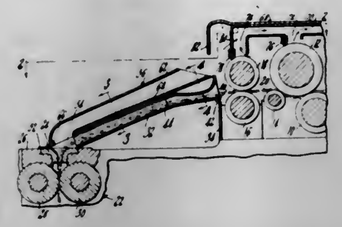
1. A conveying apparatus for roving in a yarn manufacturing machine including a funnel for receiving the roving, comprising in combination: cooperating drawing rollers driven at high speed to draw and project the roving at high speed in an electrically charged condition from the rollers, and means receiving and electrically discharging the roving while conveying the roving to the funnel; said means comprising axially parallel spaced smaller and larger sprockets, the smaller of said sprockets being disposed adjacent the drawing rollers and the larger of said sprockets being disposed adjacent to the funnel, two spaced endless chains parallel in vertical planes entrained on the sprockets and driven at a linear speed not less than the peripheral speed of the drawing rollers, each of said chains including a plurality of links with overlapped ends, and rods respectively connecting each of the overlapped ends of the links of one chain with opposed overlapped ends of the links on the other chain, said rods and links being electrically conductive for electrically discharging the roving while carrying the roving to said funnel, said rods moving away from the drawing rollers in a path inclined upwardly from the smaller to the larger sprockets to entrain roving fibres projected from the drawing rollers, said rods creating upward currents of air to entrain and separate the fibres and to permit the fibres to straighten while being projected upon the rapidly moving rods.

3,020,599
MANUFACTURE OF CELLULOSIC PRODUCT
Paul H. Pukis, Red Granite, and Harold V. Rutkus, Neenah, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,108
3 Claims. (Cl. 19—147)



1. Apparatus for the manufacture of sanitary napkins from a travelling web of porous wrapper material and a succession of absorbent napkin body portions successively fed onto said web in spaced relationship, the apparatus including a main frame, folding plows on said frame for folding of first one and then the other side marginal portion of said wrapper material to form a tube thereof with said body portions spacedly contained in said tube, opposed pleating means adapted to pleat the wrapper material between successive napkin body portions by infolding of the side edges of the tube of wrapper material, a mandrel mounted to lie within said tube of material and extending between the opposed pleating means, said mandrel being positioned to lie between said napkin body portions and the wrapper material immediately thereunder and between said pleating means, said mandrel being of a width substantially greater than the minimum spacing between said opposed pleating means, a second mandrel mounted on the main frame immediately ahead of said pleating means and extending between said folded marginal portions of the wrapper material to support the material during pleating, presser means immediately beyond said pleating means adapted to press the pleated tube intermediate said body portions, and means mounted on the main frame for conveyance of said tube and napkin body portions therein in timed relation to said pleating and pressing means.

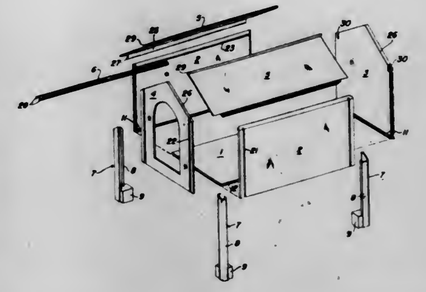
3,020,600
FLY REMOVING APPARATUS
Paul B. West, Clemson, S.C., assignor to Saco-Lowell Shops, Boston, Mass., a corporation of Maine
Filed Nov. 23, 1959, Ser. No. 854,823
3 Claims. (Cl. 19—157)



1. In combination with a drawing frame having a pair of drafting element output rolls followed by a pair of calender rolls having an input trumpet for feeding drafted sliver to a take-up package, a sliver controlling enclosure for the web of sliver extending from adjacent the nip of said output rolls to adjacent said trumpet, said enclosure being in the shape of a generally triangular flat bottomed horn with flaring sides and having a narrow generally rectangular mouth opening of greater width than height positioned closely adjacent the nip of said output rolls and a throat opening of generally circular configuration positioned closely adjacent and above said trumpet and in contact with the face of said trumpet, said enclosure having a generally flat bottom portion extending continuously from adjacent said output nip to said trumpet and having an interior surface of nonstatic electricity generating material, and an upper portion joined with said bottom portion to provide enclosed sides along the length of said enclosure with said upper portion being disposed in substantially parallel spaced relationship from said bottom portion along a substantial length thereof, an aperture in said upper portion disposed generally directly above said trumpet, and a conduit disposed outside of said enclosure and in communication with said aperture, said conduit being adapted to convey lint and fly ejected from said enclosure through said aperture under the influence of air flow created by the sliver condensing action of said enclosure and said trumpet without interfering with the smooth flow of sliver through said enclosure and said trumpet.

3,020,601
PREFABRICATED KNOCK-DOWN BUILDING STRUCTURE
Richard H. Stambaugh, 4403 Harrison Ave. NW., and John Douglas Fuller, 805 Sherlock Place NE., both of Canton, Ohio
Filed Dec. 16, 1958, Ser. No. 780,885
1 Claim. (Cl. 20—2)

A six sided structure including four sides, a bottom panel and a top closure comprising two vertically extending side panels and two vertically extending end panels, the vertical interior edges of each of said vertically extending panels being formed with a right angled tongue and groove joint constructed to prevent inward movement of said panels when assembled in rectangular form, a groove formed in the interior surface above the bottom edge of each of said vertically extending panels, said bottom panel having a tongue formed on each of its four edges which extends into said grooves to prevent downward movement of said bottom panel, a vertically extending slit formed in the outer surface of each of said vertically extending panels adjacent to each edge thereof, each slit being inclined toward the edge of the panels, four corner members of generally right angled formation formed with inwardly extending flanges slanted to slidably interfit with said vertically extending slits and lock said vertically extending panels in place, horizontally extending slits formed in the interior surface of said side panels below their top edges, the side edges of said top closure having downward extensions along the inner walls of said side panels, flanges extending outwardly from the downturned extensions and slidably engaging said horizontally extending slits, vertically extending slits formed



in the top edge of one of said end panels in line with said downward extensions so that said top closure may be slidably assembled with said downward extensions sliding through said vertically extending slits in the top edge of said one end panel and said outwardly extending flanges on said extensions being slidably received in said horizontally extending slits on the interior of said side panels, said corner members being slidable upwardly across said vertically extending slits in the top edge of said one end panel to prevent removal of said top closure and to thus lock the entire structure in assembled relationship.

3,020,602
WALLBOARD FASTENER
Robert L. Siering, Sea Cliff, N.Y., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Nov. 7, 1957, Ser. No. 695,060
10 Claims. (Cl. 20—4)

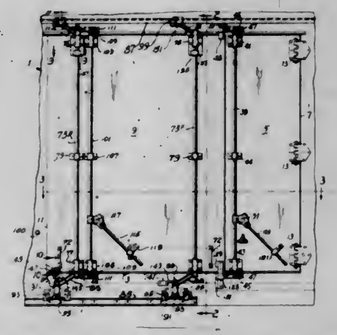


10. A fastener comprising a uniplanar base, a plurality of arms extending angularly from opposite ends of said base, a curved extension continuous with each arm curved back to the plane of said base and having as a center of curvature the approximate junction of the respective arm with the base.

3,020,603
HOUSE CAR SIDE DOOR STRUCTURE
Thomas C. Soddy, Downers Grove, Ill., assignor, by mesne assignments, to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,865
13 Claims. (Cl. 20—23)

1. Supporting and operating means for a railway car exterior sliding door of the type which closes into a door

opening in a side wall of the car and substantially flush with the side wall, comprising a track on the outside of the side wall below the door opening, horizontal crank arms spaced apart lengthwise of the door having freely journaled upright pivots on the lower portion of the door near the front and rear thereof, carriages riding on the track and having upright pivots journaled on the swinging ends of the crank arms, said crank arms being freely swingable about said carriages as the door moves into and out of closed position, said door when swung out of closed position being movable with said carriages along said

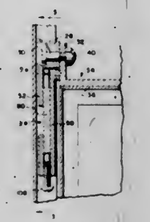


track longitudinally of the car in rearward direction to a retracted position clear of the opening and being movable in forward direction abreast of the opening, the lower crank arms having projections on their pivoted ends in opposite directions to their door supporting swinging ends, and stops fixed relative to the side wall and projecting therefrom and between the side wall and the track and engageable by said projections as the door moves abreast of the opening to automatically swing the crank arms at front and rear of the door about their pivots and move both the front and the rear of the door into the door opening.

3,020,604
FRICTION PIVOT BLOCK FOR PROJECTED TYPE WINDOWS AND THE LIKE

Ernest O. Bransford, Jr., Greensboro, N.C., assignor to Beaman Corporation, a corporation of North Carolina

Filed Oct. 25, 1960, Ser. No. 64,771
7 Claims. (Cl. 20—42)

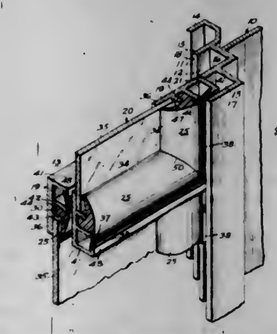


1. For use in releasably holding a window sash member in a track, a friction-retarded locating assembly including a body having a slot formed therein, a loop-shaped spring positioned in said slot and having a bight located at one end of said slot and two legs extending along the opposite sides of said slot, said spring legs having their ends opposite said bight bearing against said body at the other end of said slot, a pair of friction shoes positioned on opposite sides of said body, each said friction shoe having a portion within said slot and being located on the outward side of one of said spring legs, and an adjusting means engageable with the outer side of said bight of said spring and movable to expand said spring and press said friction shoes outwardly for changing the pressure of said shoes on the sides of a track.

3,020,605
COMBINED GLAZING AND WEATHER STRIPPING

Philip Di Lemme, Bronxville, N.Y. (% Pamco Awning Corp., Rte. 46, Pine Brook, N.J.)

Filed Jan. 21, 1960, Ser. No. 3,752
8 Claims. (Cl. 20—56)



8. In a window installation having a window frame and a pair of sashes slidably mounted in said frame, a rectangular sash frame having two horizontal and two vertical sash rails, the rails being similar to each other and each having two pockets, a window pane in the sash frame, and means for weather sealing both vertical and one horizontal rail of the sash frame to the window frame and for sealing the other horizontal rail to an adjacent horizontal rail of the other sash frame when the window is closed, said means having the additional function of maintaining the pane against the rails and being in the form of elongated flexible strips each having a projecting bulbous tongue locked in one of the pockets of the adjacent rail, an end part beyond the pockets shaped to engage and urge a marginal part of the pane inwardly toward the rail and an opposite end part having a portion thereof inserted into the second pocket and movable therein under the pressure of the window frame or the pressure of an adjacent sash, the opposite end part having another portion projecting from the pocket and urged outwardly, the outwardly urged end parts carried by the vertical rails engaging the window frame at all times, the outwardly urged end part carried by one horizontal rail engaging a horizontal rail of the adjacent sash when the window is closed.

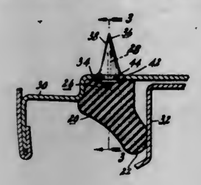
3,020,606
SEALING STRIP ASSEMBLY

Walter Ziffer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 16, 1959, Ser. No. 853,190
2 Claims. (Cl. 20—69)

2. In combination, an apertured metal panel, a sealing device for said panel passing through the aperture therein and sealing the aperture at opposite sides of the panel, said sealing device comprising; a generally conical unitary member made from yieldable material and having a blind bore extending inwardly from the base thereof, an outwardly and generally upwardly extending flange surrounding the upper end of the bore and having a diameter greater than the normal diameter of the base of the cone

and greater than the diameter of said aperture, said flange being formed from relatively thin stock and tapering outwardly so as to deflect and seal against one side of said panel, a second flange surrounding said cone and spaced from said first mentioned flange and extending downwardly toward the first mentioned flange and flaring outwardly in sealed relation to the opposite side of said

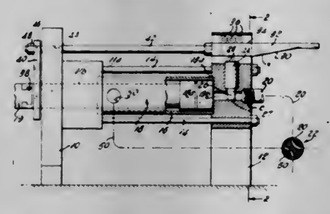


panel, said second flange being formed by an annular groove extending around said cone inwardly and upwardly from the base thereof, the outer edges of said flanges normally being spaced apart a distance less than the thickness of said panel for enhancing the sealing effect of the flanges against the panel for forming a fluid tight connection at opposite sides of the panel between the panel and the fastening device.

3,020,607
MEANS FOR CONTROLLING THE SPEED OF A CHARGING PLUNGER IN A DIE CASTING MACHINE

Gustav Nyselius, Newfield Ave., Stamford, Conn.

Filed June 25, 1959, Ser. No. 822,848
4 Claims. (Cl. 22—68)



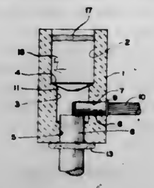
1. In apparatus of the kind described including a reciprocable plunger having a piston portion enclosed in a cylinder and means for introducing fluid under pressure alternately into opposite ends of said cylinder to reciprocate the plunger, a port through which said fluid is supplied to, and exhausted from, the rear end of said cylinder, a gate valve extending into said port reciprocable in a plane normal to the axis of said port, and cam means moveable in response to movement of the plunger and having a cam surface disposed to limit opening movement of said gate valve.

3,020,608
FRANGIBLE MOLD

Leonard Gelfand, South Euclid, Ohio, assignor to Erico Products, Inc., Cleveland, Ohio, a corporation of Ohio

Filed July 13, 1959, Ser. No. 826,710
4 Claims. (Cl. 22—116)

1. A small, portable, thin walled mold for cast welding connections with molten metal produced by an exothermic reaction comprising a unitary cylindrical refractory body having a large cylindrical bore opening to one end thereof, a small co-axial cylindrical bore opening to the other end thereof, an intermediate co-axial bore of intermediate diameter opening into such respective end bores and forming a mold cavity, and a small lateral passage through the wall of such mold cavity having a tubular sleeve inserted therein projecting into such mold cavity adapted for entrance of one of the members to be welded, said small bore being adapted for entrance of



the other member to be welded thereto when said mold is placed thereon, and said large bore being adapted to serve as a crucible for such metal-producing exothermic reaction.

3,020,609
PROCESS OF FORMING A SHELL MOLD FROM A WATER, FURFURYL ALCOHOL, SAND AND CATALYST COMPOSITION

Lloyd H. Brown, Oak Park, and Jimmy W. Hill, Barrington, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

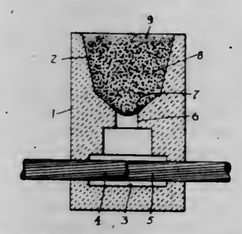
No Drawing. Filed Mar. 29, 1956, Ser. No. 574,610
2 Claims. (Cl. 22—193)

1. A process for forming a shell mold from a water, furfuryl alcohol, sand and acid-reacting catalyst composition, said process comprising the steps of mixing said water, sand and acid-reacting catalyst until a first substantially homogeneous mixture is formed, adding between about 2.5 and 10% of furfuryl alcohol based on the weight of said sand until a second substantially homogeneous mixture is formed having good green strength, and applying said second homogeneous mixture within approximately 16 hours after formation thereof to a pattern having a temperature of between about 400°–600° F., whereby said furfuryl alcohol is resinified in a single stage, said acid reacting catalyst being selected from the group consisting of ferric chloride, zinc chloride, ferrous chloride and oxalic acid and present in a sufficient quantity to neutralize the alkaline values of said sand and trigger polymerization of said furfuryl alcohol at said temperature of between about 400°–600° F., said water being present in a quantity sufficient to facilitate mixing and enable acid formation to take place.

3,020,610
METHOD OF WELDING ALUMINUM AND OTHER METALS

Melvin F. Rejdak, Cleveland, Ohio, assignor to Erico Products, Inc., Cleveland, Ohio, a corporation of Ohio

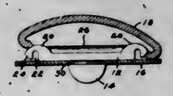
Original application Dec. 20, 1955, Ser. No. 554,234. Divided and this application Oct. 21, 1957, Ser. No. 691,505
13 Claims. (Cl. 22—203)



1. The method of welding an aluminum article to another metal article which comprises exothermically re-

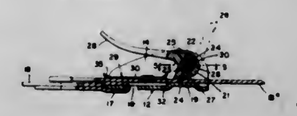
ducing tin oxide and cuprous oxide with metallic aluminum, controlling the violence of the reaction by inclusion of excess aluminum in the exothermic reaction mixture, such excess aluminum alloying with the molten tin and copper produced, such molten tin being much in excess of such molten copper, immediately delivering such resultant molten alloy of tin, copper, and aluminum at a temperature of at least 2,000° F. to a mold cavity defined in part by such articles to be welded, the heat content of such molten charge being sufficient partially to melt such aluminum article for interfusion therewith to form a strong malleable cast weld connection of good electrical conductivity.

3,020,611
FASTENING DEVICE FOR MOLDING
Jean Léon Perrochat, Basel, Switzerland, assignor to A. Raymond, Grenoble, France, a firm
Filed Nov. 14, 1958, Ser. No. 774,064
Claims priority, application Germany Nov. 14, 1957
1 Claim. (Cl. 24—73)



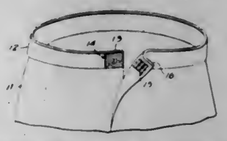
A fastener for a molding or the like installation formed from a single piece of molded plastic material adapted for axial insertion within an apertured support, said fastener having a head portion, resilient legs extending from said head portion for engaging a trim molding member, and a shank portion formed from the medial lateral surface of said head portion extending in a direction normal to said head portion and terminating in a support engaging portion, said resilient legs curved downwardly in substantially the same direction as said shank portion in spaced relation on opposite sides of said head portion and having free tapered terminal ends, said resilient legs being in spaced, substantially parallel relationship with the axis of said head portion.

3,020,612
SAFETY BELT BUCKLE AND INERTIA RESISTER
William H. Meeker, Rochester, N.Y., assignor to Hickok Manufacturing Co., Inc., Rochester, N.Y., a corporation of New York
Filed Jan. 16, 1956, Ser. No. 559,238
1 Claim. (Cl. 24—170)



A safety belt buckle comprising a body having a base and elongate spaced side flanges, means for attaching a belt to one end portion of the base, means rockably supported by and between the flanges adjacent to the other end of the body for gripping an end portion of a belt, an elongate lever tongue connected to said means for actuating the same to belt releasing position and extending toward said one end of the base when said means is in belt gripping position, a plate member disposed between said flanges between the lever tongue and the body base, and means supporting said plate in spaced relation to said body base comprising outwardly extending flat trunnion ears carried upon opposite sides of said plate adjacent to the end thereof nearest to said gripping means and slots in said flanges in which said trunnion ears are loosely mounted for limited turning movement, said loose mounting of the trunnion ears in the slots permitting limited swinging of the other end of the plate and preventing engagement of said plate with said lever tongue.

3,020,613
LADDER-LIKE BURR SEPARABLE FASTENER
Louis H. Morin, Bronx, N.Y.
(125 Beechwood Ave., New Rochelle, N.Y.)
Filed Feb. 20, 1959, Ser. No. 794,741
12 Claims. (Cl. 24—204)



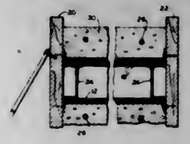
1. In separable fasteners of the character described, a burr fastener element comprising a plurality of coupled rung-like members, each including a sheet, and a multiplicity of burrs having offset ends disposed on one surface of the sheet, said burrs being disposed in circumferential rows spaced radially on the sheet, with the offset ends arranged in varied directions and angles on said surface of said sheet.

3,020,614
JEWELRY CATCH
Joseph De Curtis, 12 Bevely Ann Drive, North Providence, R.I., and Henry L. Ferragamo, 94 Roslyn Ave., Cranston, R.I.
Filed June 30, 1959, Ser. No. 823,896
3 Claims. (Cl. 24—232)



1. A jewelry catch comprising a blank having a base, a single elongated stem and a cross bar, said cross bar consisting of two similar geometrically opposite forms bent to produce a U-shaped back having two parallelly aligned arms positioned entirely at the end of said stem opposite the base, axially aligned bearings in said two parallelly aligned arms, said base being bent at an approximate right angle to said stem, said U-shaped back terminating the upper end of said stem, said two parallelly aligned arms overlying said base, said stem being ductile thereby to permit it to be twisted sidewise and forward and back to place said two parallelly aligned arms in selected position in relation to said base.

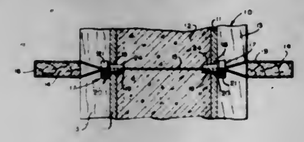
3,020,615
CONDUIT MOLDING FORM
Alfred H. Peters, Richmond, Calif.
(1315 Capuchino, Burlingame, Calif.)
Filed Nov. 26, 1958, Ser. No. 776,563
3 Claims. (Cl. 25—128)



1. As a new article of manufacture, a conduit molding form of substantial length and capable of being readily

cut to shorter lengths, said form comprising a hollow thin-walled easily cut tubular core, a continuous spiral winding of flexible easily cut material tightly engaged upon the surface of said core and extending along its entire length, said flexible material being substantially circular in cross section to facilitate its being pulled endwise from the surface of the core, and a water soluble adhesive material coating the exterior of said core and securing said winding to said core, said adhesive also securing adjacent convolutions of said windings to one another so as to facilitate cutting of said core and winding without unraveling of said winding, said core and winding being water permeable in wet molding operations to facilitate subsequent removal of first the winding and then the core.

3,020,616
STEEL BAND FORM TIE INSERT
Fredrick W. Marpe, 762 Griswold Road, Covina, Calif.
Filed Sept. 25, 1959, Ser. No. 842,446
1 Claim. (Cl. 25—131)



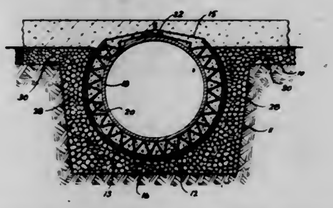
A device of the character described comprising a form embodying spaced apart sheeting adapted to have concrete therebetween, studs adjacent to the outer surface of said sheeting, a steel band projecting through the sheeting and said band having looped end portions, wales projecting through said looped end portions, there being opposed openings in said sheeting, opposed inserts extending through said openings and said inserts having said band extending therethrough, each of said inserts embodying a one piece construction and being shaped to include a tapered first portion having a frusto-conical shape, said tapered portion facilitating the removal of the inserts, a cylindrical section portion arranged contiguous to the large end of the first portion and defining a shoulder, the diameter of said shoulder being greater than the diameter of the opening in the sheeting so as to limit inward movement of the inserts through the opening, a third portion of rectangular formation adjacent the second portion, there being a longitudinally extending slot in the insert for the projection therethrough of said band, the outer end portion of the slot being of flaring formation.

3,020,617
SUPPORTS FOR CERAMIC WARE
Rudolph Dopera, 11032 Concert St., El Monte, Calif.
Filed Mar. 7, 1960, Ser. No. 13,297
2 Claims. (Cl. 25—153)



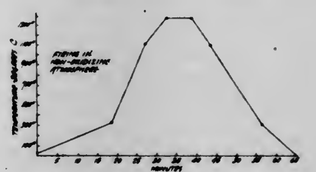
1. A ceramic support which includes: a single sheet of heat resistant metal formed so as to have a central portion and tabs extending from said central portion, each of said tabs having a terminal point located at the extremity thereof remote from said central portion, each of said tabs being bent with respect to said central portion so that said terminal points are spaced equidistant from one another and are directed away from said central portion whereby said terminal points may engage two different ceramic bodies spaced from one another without the remainder of said supporting devices engaging such bodies.

3,020,618
CONCRETE FORM
Lee E. Eward, 515 2nd Ave. W., Seattle, Wash.
Filed Jan. 20, 1958, Ser. No. 709,857
2 Claims. (Cl. 25—154)



2. The method of installing a duct of the character described comprising providing an earth trench of greater width than the duct and of a depth at least equal to the diameter of the duct, placing a water-pervious material bed in the bottom of the trench, effecting the disposition of an assembled duct and spaced wrapper about the duct within the trench upon the bed, including the steps of applying and securing spacers about the duct at spaced intervals therealong, applying a flexible form defining sheet wrapper about the spacers and duct in such a manner as to leave an opening only along the top of the duct into the space provided between the duct and wrapper, applying securing ties about the wrapper for retaining the wrapper against said spacers, filling the trench outside of said wrapper with a water-pervious material so as to leave access to said opening and laying a bed of water-pervious material on the earth along opposite sides of the trench, introducing concrete through said opening so as to fill the space between said duct and wrapper as established by said spacers with concrete, and forming a concrete slab over the duct and trench and in contact with the concrete that fills the space between said duct and wrapper.

3,020,619
FIRING PROCESS FOR FORSTERITE CERAMICS
William J. Koch, Livingston, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 7, 1959, Ser. No. 857,479
4 Claims. (Cl. 25—157)



1. In a method of making ceramic parts of approximately forsterite composition, having relatively high density and high modulus of rupture, the process comprising preparing a blended and dried mixture of talc ($3MgO \cdot 4SiO_2 \cdot 2H_2O$), fused MgO, potash feldspar, ball clay ($Al_2O_3 \cdot SiO_2 \cdot 2H_2O$) and precipitated $BaCO_3$, mixing the blended mixture with organic plasticizers, binders and lubricants to prepare a molding composition, molding parts of said composition, subjecting said molded parts to a first firing in air to burn off substantially all organic

matter and to drive off substantially all volatile matter, and then subjecting said parts to a second firing for a relatively brief period of time in a non-oxidizing atmosphere until said parts are completely vitrified, said second firing including maintaining said parts at a maximum temperature of about 1375° to 1390° C. for about 5 to 10 minutes.

3,020,620
BOW STRAIGHTENING DEVICE

Ian McLeod Hill, Lurgan, Donacloney, Northern Ireland, assignor of one-half to John Dalglish & Sons Limited, Thornliebank, Glasgow, Scotland, a British company

Filed Nov. 30, 1960, Ser. No. 72,742
4 Claims. (Cl. 26—51.3)



1. A device for removing backward bow in the weft threads of woven fabrics or in courses of knitted fabrics being progressed in a lengthwise direction, comprising a shaft disposed transversely to the line of progress of the fabric to effect a return bend in said line of progress, a pair of rollers mounted on said shaft and having an aggregate width exceeding that of the fabric, and means for effecting lateral adjustment of said rollers along said shaft each to and from a median position relative to the fabric width, whereby if there is a backward bow in the fabric the rollers can be adjusted transversely thereof each away from the median position to leave a gap therebetween whereby the center of the fabric travels through a shorter path than the remainder thereof in movement through said return bend thus to remove the bow.

3,020,621
DRAW ROLL

David Sacks, Seaford, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Dec. 3, 1959, Ser. No. 857,077
5 Claims. (Cl. 28—71.3)



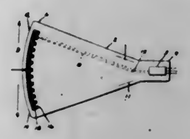
1. A draw roll assembly comprising a pair of cylindrical draw rolls having their axes spaced and skewed, one of said rolls having a rigid inelastic high friction surface on at least one section intermediate its ends and a rigid inelastic comparatively low friction surface on the end sections thereof, said sections having substantially equal diameters.

3,020,622
METHOD OF MAKING TARGET ELECTRODE FOR BARRIER STORAGE GRID TUBE

Cyril L. Day, Huntington, Ind., assignor to International Telephone and Telegraph Corporation

Filed June 28, 1957, Ser. No. 668,671
4 Claims. (Cl. 29—25.18)

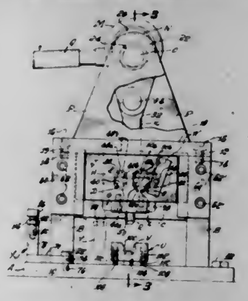
1. The method of making a target electrode for a barrier grid storage tube comprising the steps of: annealing a metal blank; drawing a bowl from said blank; annealing said bowl; repeating said drawing and annealing steps until said bowl does not change shape during annealing; placing a layer of dielectric material on the inner surface of said bowl; forming a metal screen into a bowl shape; and placing said screen within said metal bowl in contact with the outer surface of said dielectric material layer.



3,020,623
BATTERY CABLE MAKE-UP TOOL

Richard W. Beall, Jr., 834 20th St., Hermosa Beach, Calif., assignor of one-half to Linden H. Chandler, Lomita, Calif.

Filed July 2, 1956, Ser. No. 595,174
10 Claims. (Cl. 29—33.5)

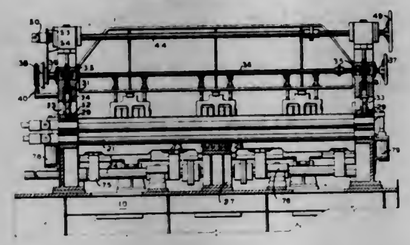


1. A device for use in cutting a length of cable covered with electrical insulating material from a coil thereof, removing said insulation from the end portions of said cable, and crimping terminal connectors having elongated tubular shanks to said exposed cable end portions, including: first cutting means; second cutting means so operatively associated with said first means that when said second means is moved a first distance relative to said first means said cable disposed between said first and second means is cut, which second means when moved a second distance relative to said first means severs said insulating cover on said cable, said first and second cutting means being first and second parallel bars, each of which have at least one semi-circular recess formed therein that is oppositely disposed and aligned with said recess formed in the other of said bars; first punch means that move concurrently with said second cutting means; second punch means that are stationary and in substantially the same vertical plane as said first punch means; a first stop operatively associated with said second cutting means to hold said cable in a position to permit cutting of a predetermined length of said insulating material from an end portion thereof; a second stop operatively associated with said second cutting means that limits the movement thereof to said second distance; and actuating means for concurrently moving said second cutting means and first punch means to sequentially cut said cable, sever said insulating material on the end portions thereof, and crimp said connectors to said end portions by pressure contact between said punch means; a base being provided that has two stanchions mounted thereon between which a crosspiece extends, said first cutting bar being rigidly affixed to said crosspiece, a guide plate being provided that is vertically movable relative to said stanchions by said actuating means, and on which guide plate said second cutting bar is rigidly mounted, said first punch being rigidly connected to and supported from said guide plate.

3,020,624
APPARATUS FOR CLEANING AND PROCESSING METAL STRIP

Gilbert F. Menster, Canfield, Ohio, assignor to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio

Filed Oct. 3, 1955, Ser. No. 538,084
4 Claims. (Cl. 29—81)



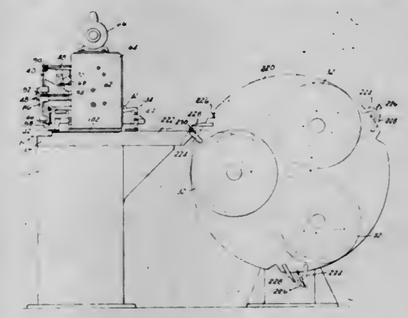
2. A strip processing machine of the type having a frame and an elongated thin diametered working roll, means to movably support said working roll with respect to said frame, said last mentioned means comprising an elongated shaft extending in generally parallel relation with and disposed to one side of said working roll, a plurality of eccentrics mounted at longitudinally spaced points along said elongated shaft, means to rotatably support said elongated shaft in rigid relation with respect to said frame, said last mentioned means comprising a plurality of bearing members mounted on said frame and engaging said elongated shaft at points closely adjacent said eccentrics, an elongated beam-like supporting member extending in generally parallel relation with and disposed to said one side of said working roll, said supporting member being positioned in spaced relation between said working roll and said elongated shaft, a plurality of longitudinally spaced follower roll assemblies mounted from said supporting member, each of said follower roll assemblies engaging one of said eccentrics, a plurality of longitudinally spaced back-up roll assemblies mounted from said supporting member, said back-up roll assemblies engaging said working roll at longitudinally spaced points, said bearing members, said eccentrics, said follower roll assemblies and said back-up roll assemblies being positioned substantially in alignment with respect to each other to define a plurality of longitudinally spaced normally extending beam-like supports for said working roll, and means to rotate said elongated shaft to variably position said working roll.

3,020,625
SOCKET FEEDING METHOD AND APPARATUS

Grant N. Willis, Bristol, Conn., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware

Filed July 5, 1955, Ser. No. 519,958
3 Claims. (Cl. 29—155.5)

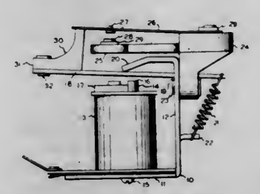
1. The method of orienting selectably positionable components on a supporting structure which comprises adhesively securing a plurality of the components on a continuous strip in predetermined uniformly spaced apart locations and in predetermined uniformly oriented disposition relative to one another locating a supporting structure having apertures of a configuration and size complemental to components to be assembled thereon in a predetermined position, moving the continuous strip along an established guide path to a predetermined location where one of said components is to be disassociated from said continuous strip at a location relative to one of the apertures of said supporting structure to facilitate assembly of said removed component on said supporting structure, disassociating said component from said continuous strip, angularly orienting said component relative to an aperture having its complemental configuration and size, and providing relative movement between said disassociated component and said supporting structure sufficient to assemble said component in its allocated aperture on said structure.



3,020,626
METHOD OF ASSEMBLING RELAYS

Walter F. Dowdle, Lincoln, Ill., assignor to Essex Wire Corporation, Fort Wayne, Ind.

Original application July 22, 1957, Ser. No. 673,246, now Patent No. 2,900,472, dated Aug. 18, 1959. Divided and this application Oct. 23, 1958, Ser. No. 772,647
2 Claims. (Cl. 29—155.5)



1. In the assembly of relays of the type which consist of a magnetic frame carrying a core, an electrically energizable winding carried on said core, an armature supported upon said frame and movable from an unattracted position to an attracted position adjacent said core upon energization of said winding, a relatively stationary contact member, a cantilever-supported contact spring extending over said armature and carrying an electric contact arranged for cooperative engagement with said contact member, said contact spring being pretensioned so that it is biased toward the contact member to normally urge said contact into engagement with said contact member, and a contact actuator having a base portion secured to a surface of said armature facing said free end of the contact spring and having an actuating face engageable with said free end of the contact spring for displacing said contact spring and said contact away from said contact member in said unattracted position of the armature; the steps comprising: (*a*) forming a plurality of subassemblies, each comprising said frame, winding, core, armature, contact member, contact spring and contact

wherein the spacings between the free ends of the contact springs and the oppositely facing surfaces of the armatures are subject to substantial variation; (*b*) forming several groups of actuators, each with a different predetermined dimension between the actuating faces and the armature-engaging surfaces of the actuators; (*c*) gauging the spacing between the free end of the contact spring and the oppositely facing surface of the armature of each of said subassemblies; (*d*) selecting an actuator for each gauged subassembly from the particular one of said groups which actuator, when secured to the armature of said gauged subassembly, gives the closest to a desired separation between the free end of the contact spring and the actuating face of the selected actuator in the attracted position of the armature; and (*e*) permanently securing each selected actuator to the armature of its corresponding subassembly.

3,020,627
COIL-FABRICATING METHOD

Edward L. Swainson, Newtonville, Mass., assignor, by mesne assignments, to Northrop Corporation, Beverly Hills, Calif., a corporation of California

Filed July 6, 1956, Ser. No. 596,336
3 Claims. (Cl. 29—155.57)

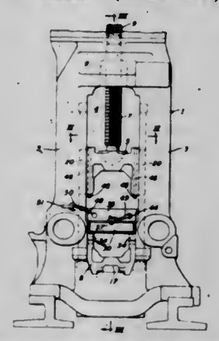


1. In a method of fabricating a multiple coil assembly for a precision electrical device, the steps of fastening a sleeve to a winding fixture substantially concentric with said sleeve, fastening a plurality of bobbins in spaced relationship about the outer surface of said sleeve, the winding axes of said bobbins being perpendicular to the axis of said sleeve, winding a coil about each of said bobbins from a continuous length of wire, said wire being covered with plastic bonding material, heating said sleeves, coils and bobbins to fuse said plastic bonding material on respective turns of wire in each coil to cause said turns to adhere to one another and to said surface of said sleeve, and separating said sleeve from said winding fixture and said bobbins.

3,020,628
APPARATUS FOR DISASSEMBLING TOP ROLL BEARING RIDERS

John G. Sage, East McKeesport, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Apr. 11, 1958, Ser. No. 727,954
3 Claims. (Cl. 29—200)

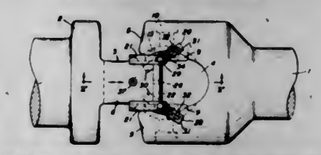


1. An apparatus for removing top roll bearing riders from bearing chock windows in a pair of laterally spaced rolling mill roll housings comprising, in combination, a roll changing slide carriage mounted for movement over a horizontal path extending through said windows and including a spaced pair of bearing carriers forming part of the bearing chocks for a bottom roll, a frame spanning the distance between said carriers and having supporting engagement thereon, a pair of turntables mounted for rotation on said frame about vertical axes spaced apart a distance corresponding to the spacing of said top roll bearing riders, and means comprising the mill screwdown jack-posts for lowering said riders onto said turntables for rotation thereby to positions in which they can be moved by said slides through said windows.

3,020,629
APPARATUS FOR CHANGING BEARING SLIPPERS IN ROLLING MILL UNIVERSAL DRIVE ASSEMBLIES

John G. Sage, East McKeesport, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Apr. 23, 1958, Ser. No. 730,482
8 Claims. (Cl. 29—200)

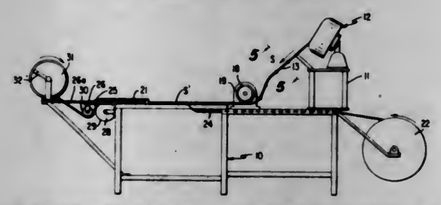


1. In an apparatus for removing and replacing a pair of bearing slippers in a rolling mill universal drive assembly that includes a bifurcated drive spindle and a roll-drive fishtail between the bifurcations of said spindle, and in which said slippers normally occupy positions respectively on opposite sides of said fishtail, the combination with said slippers and fishtail, of a supporting frame mounted on said fishtail, and means for suspending said slippers from said frame for movement toward each other to positions in which they can be moved to and from the space between said spindle bifurcations by axial movement of said fishtail relative to said spindle, said suspending means comprising a pair of brackets from which said slippers are respectively suspended, and a pair of pivots on said frame at points equally spaced relative to the axis of said fishtail mounting said brackets for movement about parallel axes.

3,020,630
MACHINE FOR MAKING A STAPLE FASTENING BELT

Donald A. Weinstein, Toledo, Ohio, assignor to Prestole Corporation, Toledo, Ohio, a corporation of Michigan

Filed June 24, 1959, Ser. No. 822,622
3 Claims. (Cl. 29—211)



1. In a machine for forming a staple element belt, each staple element being of general U-form with each leg outwardly angled to provide oppositely arranged notches, horizontal staple element guide means, power means for feeding staple elements to said guide means for providing and advancing a row of juxtaposed staple elements in such manner that the staple elements are in inverted U

position, a supply of flexible sheet material in elongate strip form, an inverted T-shaped track means disposed in a closed passageway adapted to confine the top and sides of each of said staple elements, a guideway of a width slightly greater than the distance between the notches of said staple elements disposed under said T-shaped track adapted to guide the strip of material to the staple element row in such manner that the strip is at approximately right angles to the legs of the U staple elements, a peripherally grooved roller arranged to engage the upper part of successive staple elements discharged from said guide means, a roller adjacent the end of said passageway of a width to extend between the legs of the U staple and arranged adjacent said grooved roller and beneath the strip material to press the sheet material strip into the staple element engaged by the grooved roller so that the edges of the strip are forced into the notches of such staple element, said last roller having a curved peripheral surface, and means to impart advancing movement to the strip.

3,020,631
METHOD OF MAKING HOSE CLAMPS

Edward R. Kennedy, Seven Hills, Ohio, assignor, by mesne assignments, to Republic Industrial Corporation, New York, N.Y., a corporation of Delaware

Filed Oct. 2, 1958, Ser. No. 764,973
3 Claims. (Cl. 29—417)



1. A method of forming a hose clamp from a continuous flat strip of strong resilient metal, comprising the steps of progressively feeding the strip to forming dies, notching both edges of the strip to shape the sides of a tapered tongue while leaving the narrower end of the tongue connected to the leading portion of the strip, punching an angular tongue-receiving opening in the strip, said opening having a transverse straight edge closely adjacent to the juncture with the tongue and of a width to permit the insertion of the tongue, severing the end of the tongue transversely from its joining strip portion, pressing the intermediate portion of the strip against a round mandrel having a protuberance thereon shaped to form an offset loop in the strip and having substantially straight separated sides, curving the end portions around the mandrel and into overlapping engagement with the tongue projecting through said opening, bending the tongue backwardly over the adjacent ends of the strip for permanent locking engagement, and then forming an offset of the strip at each side of the opening and inwardly for a distance equal to the thickness of the strip to bring the adjacent ends of the strip into a circular form of substantially complete circular contact with a hose to be clamped.

3,020,632
METHOD OF JOINING CARBIDES TO BASE METALS

Nerses H. Krikorian, John D. Farr, and Willard G. Whiteman, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

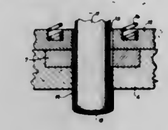
No Drawing. Filed Nov. 12, 1959, Ser. No. 852,585
4 Claims. (Cl. 29—420)

1. A method of joining a consolidated mass composed of at least one refractory metal carbide in powder form, selected from the class consisting of uranium carbide and zirconium carbide to a surface of a refractory metal base selected from the class consisting of tantalum and niobium comprising carburizing the surface of said metal base and sintering said mass and said base at a temperature in the range of 1700° C.–2200° C. in a non-oxidizing atmosphere while said base is held in contact with said carbide during the sintering step.

3,020,633
FABRICATION OF HOLLOW ARTICLES

Charles Archibald Heuer, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia

Filed Apr. 24, 1959, Ser. No. 808,723
6 Claims. (Cl. 29—421)

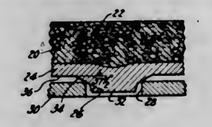


1. A method of forming hollow articles comprising providing a flat metal sheet partially laminated in a predetermined pattern, mechanically working said sheet into a cup-shaped member, and distending the laminations of said member with fluid pressure.

3,020,634
PROCESS FOR MOUNTING FRICTION SEGMENTS

Joseph R. Williamson and James G. Billmeyer, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware

Filed Mar. 31, 1958, Ser. No. 723,569
10 Claims. (Cl. 29—470)



1. A method for fastening a nonweldable sinterable powdered material to a weldable ferrous attachment surface of a metal support comprising the steps of: compacting a layer of said nonweldable sinterable powdered material against a layer of a resistance weldable essentially ferrous material in a manner providing an attachment surface of said weldable layer, one of said attachment surfaces being shaped as a receiving recess and the other of said attachment surfaces being a protruding surface shaped for insertion into said recess with the side portions of said surfaces adjacent to said ends forming an interference of from approximately 45 degrees to approximately 60 degrees, sintering said compacted layers to form a sinter bond therebetween, centering and abutting said ends of said surfaces into generally line contact with each other, passing electrical energy through said surfaces until said layer of sintered resistance weldable material reaches a plastic state and terminating the flow of electrical energy before any appreciable amount of said material reaches a molten state, and forcing said surfaces together under pressure while said sintered weldable material is in a plastic state.

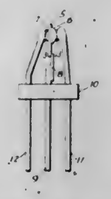
3,020,635
SOLDERING METHODS

Harry F. Redgrift, Norwood, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed May 31, 1956, Ser. No. 588,487
7 Claims. (Cl. 29—495)

1. The method of attaching a conducting lead to electrical conductivity-type determining impurity material on

a semiconductor chip, said method comprising attaching said impurity material to said chip, placing a conducting lead adjacent said impurity material to provide a unit assembly, said impurity material and said conducting lead having the property of being capable of being wet by lactic acid while said semiconductor chip is of a substance substantially incapable of being wet by lactic acid, applying a solution containing lactic acid to said assembly thereby applying lactic acid to said lead and said impurity material, and thereafter applying molten solder to said assembly whereby said solder becomes applied to said lead and said impurity material, but not to said chip.



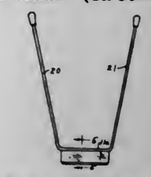
2. The method of attaching a conducting lead to electrical conductivity-type determining impurity material on a semiconductor chip, said method comprising attaching said impurity material to said chip, placing a conducting lead adjacent said impurity material to provide a unit assembly, said impurity material and said conducting lead having the property of being capable of being wet by aqueous orthophosphoric acid while said semiconductor chip is of a substance substantially incapable of being wet by aqueous orthophosphoric acid, applying a solution containing aqueous orthophosphoric acid to said assembly thereby applying said acid to said lead and said impurity material, and thereafter applying molten solder to said assembly whereby said solder becomes applied to said lead and said impurity material, but not to said chip.

3,020,636
METHOD AND APPARATUS FOR SLITTING TUBES
William Richard Ayton, London, William Henry Ginnings, Waltham Abbey, and Ronald Percy Hocking, London, England, assignors to Belling & Lee, Ltd., Enfield, Middlesex, England
Filed Oct. 3, 1957, Ser. No. 687,987
Claims priority, application Great Britain Oct. 5, 1956
11 Claims. (Cl. 29—533)



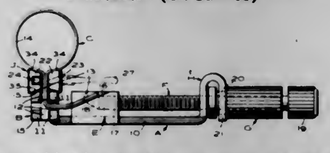
1. A method of producing a slit extending from one end of a tubular electrical socket element designed to accommodate a plug pin which method comprises the steps of applying a force to the tube wall at said end in a direction parallel to the longitudinal axis of the tube, the parts of the tube wall other than those parts directly acted upon by the force being contained against deformation by a restraining surface formed with a space so located therein as to accommodate the whole of a strip of material sheared and bent outwardly of the tube wall as a result of applying the force, separating the tube and restraining surface and severing the strip of material from the tube.

3,020,637
FLOWER BED AND SOD EDGER
Charles Truran, 15064 Cheyenne, Detroit, Mich.
Filed Sept. 3, 1959, Ser. No. 837,930
1 Claim. (Cl. 30—315)



An integral sod edger comprising a U-shaped member having a horizontal foot rest at the bight of the U, the arms of the U extending upwardly and outwardly at a slight divergent angle, an edging blade depending from the foot rest and handles on the upper ends of the arms.

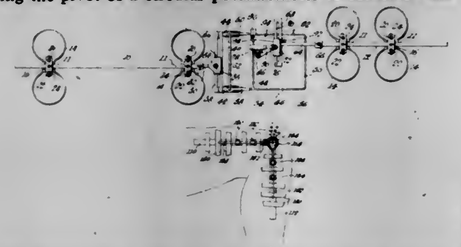
3,020,638
COMBINATION DENTAL INSTRUMENT DEFINING A MATRIX BAND RETAINER AND CLAMPING BLOCK FOR THE BAND
Benjamin F. Toffiemire, P.O. Box 677, Lafayette, Calif.
Filed Mar. 9, 1959, Ser. No. 798,003
3 Claims. (Cl. 32—63)



2. In a combination dental instrument defining a matrix band retainer and clamping block for the band: a matrix retainer having means adapted to be detachably anchored to overlapped end portions of a looped matrix band, and being operable for constricting the loop portion of the band around a patient's tooth; a slotted clamping block formed as an entirely separate part from the matrix retainer, and defining a pair of arms fixed relative to one another and being adapted to straddle and to engage overlapped portions of the band which are held by the retainer and disposed between the retainer and the looped portion of the band; the clamping block being adapted for removably engaging with the retainer; the retainer constituting a holder for both the clamping block and the looped band, when applying the latter around a tooth; and the block being provided with releasable clamping means operable for engaging with the overlapped portions of the band adjacent to the loop for holding the looped portion of the band around the tooth, when the retainer is detached from the band; the matrix retainer being adapted to be entirely removed from the patient's mouth, while the clamping block still remains in the patient's mouth to firmly hold the matrix band around the banded tooth; the clamping means including a self-locking toggle arrangement; the toggle arrangement including an operating lever which is disposed substantially parallel with the occlusal plane of the banded tooth, when the toggle arrangement is locked.

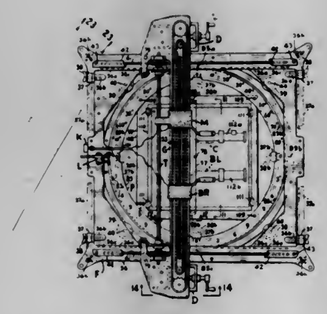
3,020,639
METHOD AND APPARATUS FOR MEASURING ANGLES OF BODY JOINTS
Peter V. Karpovich, Springfield, and George P. Karpovich, Longmeadow, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Oct. 14, 1960, Ser. No. 62,817
3 Claims. (Cl. 33—1)

1. A method for producing a visual record with respect to time of the motion of a joint of the body comprised of locating the approximate center of a projection of the pivotal axis of the joint on a record plane substantially parallel to the plane in which the body members of the joint move by striking at least two arcs on a record sheet held by mechanical means connected to one body member forming said joint with a scriber held by a mechanical extension attached to the other body member of said joint, geometrically erecting perpendicular bisectors to chords passed through said arcs, the intersections of said bisectors determining the location of the projection of the pivotal axis of said body joint, placing the pivot of a circular potentiometer to coincide with



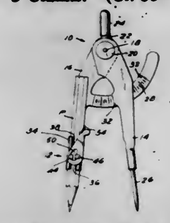
the approximate center of the projection of the pivotal axis of the body joint and attaching the sliding contact of the potentiometer to one body member forming the joint and the resistor of the potentiometer to the other body member forming the joint so that the position of the sliding contact on the resistance is a function of the angle formed by the body members of the joint, and continually producing a visual recording with respect to time of the electrical potential of a circuit including the potentiometer resistance and the sliding contact so that the magnitude of the potential indicates the angle formed at the joint at any point of time as the joint is flexed during normal exercise.

3,020,640
GRAPHIC MACHINE
Phillip Graham, 2825 Glenmore Ave., Pittsburgh 16, Pa.
Filed Oct. 14, 1958, Ser. No. 767,157
44 Claims. (Cl. 33—23)



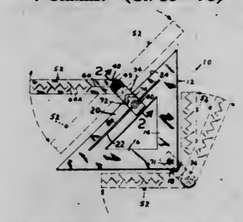
27. An automatic graphic machine comprising a frame, a beam mounted for translating movement across said frame, a carriage mounted on said beam for longitudinal reciprocable movement thereon, a marking element carried by said carriage, an arm pivoted on said carriage, and means responsive to the extent of pivoting movement of said arm for selectively locking the said carriage to the said beam and allowing free translation movement of said beam or allowing free reciprocable movement of said carriage on said beam and locking said beam to the said frame, so as to selectively draw lines along a straight path or another straight path at right angles thereto, depending upon the extent of pivoting of said arm.

3,020,641
COMPASS PENCIL CLAMP
Alex Augustin, Sparrowbush, N.Y.
Filed Feb. 17, 1960, Ser. No. 9,243
3 Claims. (Cl. 33—27)



1. A pencil holder for use with a pencil compass having two legs comprising a flexible cylindrical band integral with one of said legs of said compass, said cylindrical band having a longitudinal opening having parallel edges extending the length of said band, two ears protruding outwardly from said cylindrical band and extending from said edges at points on opposite sides of said longitudinal opening, and releasable clamping means comprising a rotatable clamping lever having camming walls defining a kidney-shaped opening therein through which said ears protrude, said ears being engaged by said camming walls, said opening having a positioning means to maintain said clamping lever in a clamping position, said clamping lever being effective to draw said ears and said edges of said longitudinal opening together or to allow them to spread apart upon a rotation of said clamping lever with respect to said ears.

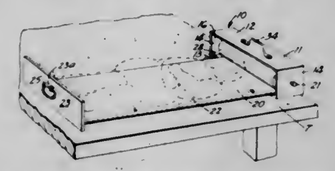
3,020,642
DRAFTING INSTRUMENT
Irvin J. Rickey, 1013 SW. 30th, Oklahoma City, Okla.
Filed Dec. 14, 1959, Ser. No. 859,205
4 Claims. (Cl. 33—93)



1. A drafting instrument, comprising: a draftsman's triangle having sides defining a right angle corner, said triangle having an aperture adjacent said right angular corner; a relatively short substantially rectangular bar flatly connected by one end portion to the upwardly disposed surface of said triangle through the aperture therein, the free end portion of said bar projecting beyond said right angular corner; an outstanding wall carried intermediate its ends by said bar forming a right angular corner in contiguous contact with the end portions of the sides of said triangle forming the right angular corner for preventing lateral movement of said bar relative to said triangle, the free end portion of said bar having a semi-circular edge and having a central aperture coaxial with the semi-circular edge, at least one surface of the semi-circular edge of said bar being scored to indicate radial measurements; an elongated blade pivotally connected at one end to the free end portion of said bar, said blade having parallel opposing side edges and having at least one surface of its pivotally connected end

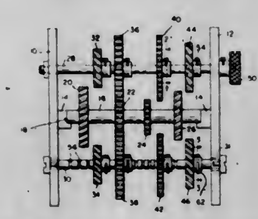
provided with at least one score for co-operative registration with the radial scores in said one surface of said bar for fixing said blade at predetermined angular positions relative to said triangle and said bar; and means for releasably securing said blade in such positions.

3,020,643
COLLAPSIBLE INFANT HEIGHT MEASURING DEVICE
Charlotte B. Moran, 1866 Meadowview Road, Minneapolis, Minn.
Filed July 6, 1959, Ser. No. 825,200
4 Claims. (Cl. 33—138)



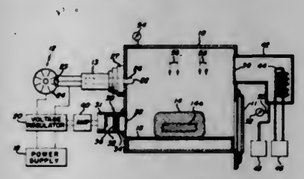
1. An infant measuring apparatus comprising an elongated housing having peripheral wall portions and having an elongated opening formed therein, said housing having securing means mounted thereon adapted to detachably engage the edge of a flat supporting surface, an elongated roller disposed within and rotatably mounted to opposite peripheral wall portions of said housing, an elongated flexible sheet having one end thereof secured to said roller and rolled thereon and having indicia on one surface thereof, a combination foot plate and closure secured to the other end of said sheet and adapted when said sheet is unrolled to be engaged by the feet of a child lying on the unrolled sheet whereby the height of the child may be measured, and said foot plate and closure being of a size and shape to close said housing opening when said sheet is rolled upon said roller.

3,020,644
GEAR GAUGING APPARATUS
Warren L. Jubelt, East Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 9, 1959, Ser. No. 798,075
3 Claims. (Cl. 33—179.5)



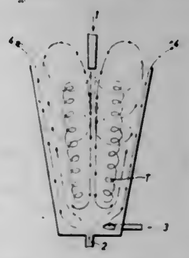
1. An in-gauge for cluster gear members having integral first and second gears on a single shaft, said gauge comprising laterally spaced supports, a pair of parallel shafts extending between said supports, first and second pairs of gauge gears, one gauge gear of each pair being adjustably carried by one of said parallel shafts, each pair of gauge gears when brought into lateral registration being dimensioned to fit in tight mesh with one of the gears of said cluster gear, means for locking said gauge gears in different positions of axial adjustment on said parallel shafts to locate either pair in position to gauge one of the gears of said cluster gear and the other pair in clearance with respect to said cluster gear, one of said parallel shafts being rotatable, manual means for rotating said one shaft, and means for fixing at least the gear positioned to gauge the gear of the cluster gear to said one parallel shaft for rotation therewith.

3,020,645
METHOD AND APPARATUS FOR CONTROL OF FREEZE DRYING
David A. Copson, Waltham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 788,844
11 Claims. (Cl. 34—5)



11. Apparatus for controlling the removal of a vaporizable component by sublimation from material including a solid and said vaporizable component in the solid state comprising container means for holding the material to be treated in an atmosphere at a pressure substantially lower than atmospheric pressure, a microwave electrical energy generator, a propagated electromagnetic wave guiding structure coupled to said generator and communicating with said container, means for applying propagated electromagnetic wave energy to said material to supply the heat of sublimation to sublimate a substantial portion of said component, photoelectric means for producing a control signal in response to the presence of glow discharge according to the molecular vapor concentration in said container means, a plurality of pump means communicating with said container means for drawing off said vaporizable component to maintain the pressure in said container substantially below atmospheric pressure, and control means fed by said control signal to replace one of said pump means by another of said pump means adapted to draw off said vaporized component at an increased rate, thereby to reduce the molecular vapor concentration in said container.

3,020,646
PROCESS FOR DRYING FILLERS OF SILICA OR SILICATE
Werner Joseph, Leverkusen, Gustav Kaule, Opladen, and Ernst Podschus, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Dec. 18, 1958, Ser. No. 781,253
Claims priority, application Germany Dec. 21, 1957
11 Claims. (Cl. 34—10)



1. A method of removing water from a siliceous material which comprises establishing a vortex of hot inert gas heated to drying temperature, said vortex having an entry end and an outlet end for said gas and a central area in which there is flow of gas toward the entry end surrounded by an external area in which there is circular flow of hot gas around the central area and toward the outlet end, introducing the siliceous material into contact with the hot gas by feeding it into the central area and thereby suspending the siliceous material in said gas, and removing the resulting suspension from said outlet end.

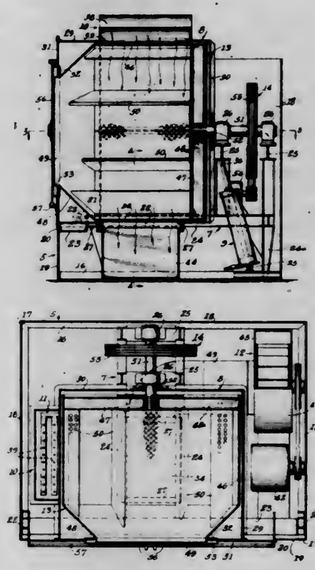
3,020,647
GLOVE BOX ATTACHMENT
Harvey L. Butts, Kennewick, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 31, 1960, Ser. No. 19,136
2 Claims. (Cl. 34—92)



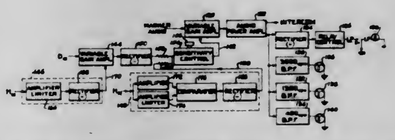
1. In a glove box assembly comprising a glove, and a box having an opening through which the glove may be inserted, the combination therewith of a housing comprising a first wall sealed to the box and having an opening therein coincident with the opening in the box, a second wall parallel to the first wall and having an opening aligned with the opening in the box, means for attaching the glove over the opening in the second wall, a valve plate positioned within the housing which is sufficiently long to permit pivotal retraction of said valve plate out of overlapping relationship with said opening, external means for pivoting the valve plate, an O-ring gasket positioned around the opening in the first wall to seal the valve plate to the first wall during evacuation of the box, a peripheral seal holding the first and second walls in a spaced-apart relationship to permit sliding movement of said valve plate, and means for evacuating said box and said housing with glove attached.

3,020,648
CLOTHES PRE-CONDITIONER AND DRYER
George N. Strike, 1844 Cyprus Ave., Los Angeles 65, Calif.
Filed Mar. 17, 1958, Ser. No. 721,941
2 Claims. (Cl. 34—133)

1. A clothes pre-conditioner and dryer comprising a drum having a perforated cylindrical wall and an open front, said drum being tiltably mounted, means supporting the drum for rotation, a set of hollow, perforated clothes-lifting vanes in the drum, a drum housing within which the drum is disposed and having an open front into the opening of which the open front of the drum extends, a closure for said open front of the housing and spaced from the open front of the drum, an air seal between the outer surface of the open end of the drum and the front of the housing, said closure being spaced from the open front of the drum, means to conduct heated air from beneath into the upper portion of the drum housing, the housing having an opening into which the duct discharges, and means to draw said air downwardly through the drum housing, the housing having a second opening from which the air therein discharges, the air stream thus created moving partly through the perforations in the vanes and downwardly through the perforated drum and permeating clothes being tumbled by the vanes in the drum during rotation of the latter and being sealed against lateral egress by said closure and air seal.



3,020,649
SIMULATED RADIO NAVIGATIONAL AIDS MARKER RECEIVER
Ralph L. Samson, Wyckoff, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 770,218
4 Claims. (Cl. 35—10.2)



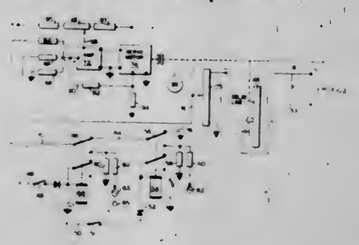
1. In a simulated radio navigational aids system having computing means producing a pair of electrical signals that are respectively variable in accordance with the supposed effective ground and elevational distances of a simulated craft with respect to a fictitious navigational aids signal radio transmitting station having a generally conical radiation pattern, and means providing audio frequency signals representing an audio signal transmitted by said station: an improved simulated radio receiving system comprising a first variable gain amplifier for amplifying said audio frequency signals, means providing

perceptible indication of said amplified audio frequency signals, a first electronic function generating means including a second variable gain amplifier, said function generating means receiving said ground distance signal as an input signal and delivering an output signal that generally increases in magnitude with increase in ground distance, means to apply said output signal as an electronic gain control signal to said first variable gain amplifier to decrease its gain with increasing ground distance, a second electronic function generating means receiving said elevational distance signal as input signal and delivering an output signal that generally increases in magnitude with increase in elevational distance up to a predetermined elevation, and thereafter remains substantially constant with further elevation increase, means to apply the latter output signal as an electronic gain control signal to said second variable gain amplifier to decrease its gain, and thereby increase the gain of said first variable gain amplifier with increasing elevational distance up to said predetermined elevation, and to render the gains of both variable gain amplifiers substantially constant with further elevational increase beyond said predetermined elevation, a third electronic function generating means also receiving as input signal said elevational distance signal and delivering an output signal that is substantially constant up to a second predetermined elevation substantially greater than the first predetermined elevation, and increases in magnitude with increasing elevation thereafter, and means to apply the last-mentioned output signal as an additional electronic gain control signal to said first variable gain amplifier to decrease its gain for elevations above said second predetermined elevation, whereby to simulate: a conical radiation pattern up to said first predetermined elevation, audio frequency output increasing with increasing elevation; thereabove, a cylindrical radiation pattern up to said second predetermined elevation, audio frequency output constant with increasing elevation; and thereabove, gradual fadeout with increasing elevation.

3,020,650
DYNAMIC SERVO DRIVEN MAGNETOSTRICTIVE DELAY LINE

Donald K. Hawkins, College Park, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed Nov. 20, 1959, Ser. No. 854,318
3 Claims. (Cl. 35—10.4)

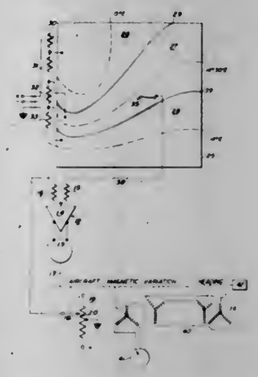


2. Training apparatus comprising a first pulse generating means for triggering a gate pulse, said means including a servo driven delay line and being responsive to an applied voltage for adjusting said delay line, whereby the gate pulse may automatically be varied in time, manually controllable means for applying voltages of different magnitudes to said last named means, a second pulse generating means for triggering a video pulse, said second means including a delay circuit which may be serially inserted or removed from the second means to thereby alter the time occurrence of a video pulse, and display means responsive to the output signals of the said first and second means whereby a varying display indicative of search tracking operations may be presented.

3,020,651
AUTOMATIC MAGNETIC DEVIATION EFFECTS IN FLIGHT SIMULATORS

Albert E. Schierhorst, Beltsville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Filed May 18, 1959, Ser. No. 813,867
5 Claims. (Cl. 35—12)



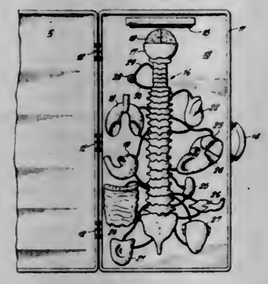
1. In a flight simulator of the type having a computer for providing data in the form of derived voltages representing the heading of an aircraft to turn a shaft to a position representing the heading and to drive a flight plotting board, the combination comprising a simulated magnetic compass, a synchro device to drive the compass from the shaft, means driven from the plotting board for deriving voltages representing the deviation between magnetic north and true north, and a servo system connected between the said last means and the synchro device to apply thereto a rotation representing the magnetic deviation, said means for deriving voltages representing the deviation between magnetic north and true north comprising a planar member having a plurality of conductive segments mutually insulated, means to apply to each respective segment a predetermined potential corresponding to a magnetic deviation and a wiper movable on said member and connected to the plotting board.

3,020,652
NEUROLOGICAL MANIKIN

Neal N. Ferrari, 29 MacLean Ave., Staten Island, N.Y., and Dominic N. Menichella, Staten Island, N.Y.; said Menichella assignor to said Ferrari

Filed Oct. 25, 1960, Ser. No. 64,910
4 Claims. (Cl. 35—17)

1. An improved anatomical model comprising in combination, a column of model vertebrae arranged to simulate the natural spinal column, a plurality of tubular members communicating between said column of model vertebrae and at least one model of a human organ, said tubular members being formed of a transparent, flexible plastic material and provided with a fluid visible through said tubular members, means for circulating said fluid between said column of model vertebrae and said model of a human organ, the said model vertebrae being movable to compress said tubular members in simulation of compression upon neutral members emerging from the natural spinal column, the circulation of said fluid between said column of model vertebrae and said model of a human organ being impeded upon said compression of the tubular members, said model of a human

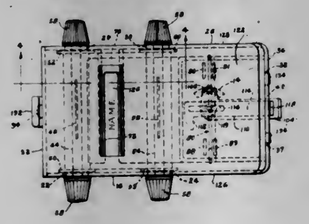


organ being hollow and formed of a plastic material, said fluid entering and leaving said model of a human organ by way of said tubular members.

3,020,653
MANUALLY OPERATED TACHISTOSCOPE

Karl P. Joslow, Newton, Mass., assignor to Samuel Joslow, Boston, Mass.

Filed Aug. 10, 1959, Ser. No. 832,791
9 Claims. (Cl. 35—35)



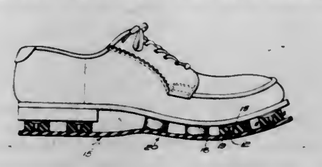
1. A tachistoscope comprising a casing having a window opening therethrough, means holding indicia within said casing in a position visible through said window opening, a shutter movably mounted in said casing having a window opening therethrough so positioned that it registers with said casing window opening when said shutter is moved to a predetermined position, and actuating mechanism operatively connected to and adapted to move said shutter and bring said two window openings in register during said movement, said mechanism embodying a finger trip actuating member, movably connected to and extending through, said casing, a wire connector movably mounted in said casing, a coil spring attached to said connector and to said actuating member, said connector being adapted to rotatably move when said spring is moved beyond a predetermined point by movement of said actuating member.

3,020,654
AUXILIARY SOLE FOR SPORT SHOES

Donald H. McCann, 42 Nicholson Place, Tiverton, R.I.

Filed May 19, 1960, Ser. No. 30,164
5 Claims. (Cl. 36—7.5)

1. An auxiliary sole for an article of footwear having a plurality of protruding metallic surface engaging members on the sole thereof, said auxiliary sole comprising a flexible sole piece having a plurality of disc members affixed thereto in face-to-face relation, said disc members composed of relatively hard material to resist compression, each of said disc members having a bore therein to receive and completely embrace the protruding part of the surface engaging member, the depth of said bore being sufficient to maintain the said protruding part out of contact with the said sole piece, said bore and the

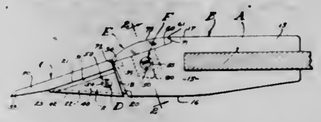


face surface therearound having a shape to accept therein the surface engaging members, means holding the auxiliary sole in position with the disc members receiving the surface engaging members.

3,020,655
WEAR PLATE MOUNTING FOR DIGGER TOOTH CONSTRUCTION

Richard L. Launder, Downey, Calif., assignor to H. & L. Tooth Company, Montebello, Calif., a corporation of California

Filed Dec. 8, 1958, Ser. No. 778,932
10 Claims. (Cl. 37—142)



1. A digger tooth including, a tooth body having a forwardly extending base and a tooth point projecting forward from the base, a flat wear plate with a bottom engaging the base and adjoining the tooth point and extending rearwardly therefrom, and means mounting the wear plate and including a stem depending from the bottom of the plate to enter into the base, and a resilient retainer pin engaged transversely through the base and stem and yieldingly and releasably drawing the bottom of the plate onto the base.

3,020,656
BUCKET WHEEL

Günter Linden, Brühl, Bezirk Köln, Germany, assignor, by mesne assignments, to Beteiligungs- und Patentverwaltungsgesellschaft mit beschrankter Haftung, Essen, Germany

Filed Sept. 28, 1959, Ser. No. 842,731
Claims priority, application Germany Oct. 4, 1958
3 Claims. (Cl. 37—190)



1. A bucket wheel having conveyor means arranged on one side thereof and adjacent thereto and comprising: a shaft, supporting means connected to said shaft for rotation and forming the rear side of said bucket wheel and being located remote from said conveyor means, first ring means connected to said supporting means, second ring means arranged in spaced relationship to

said first ring means and arranged on the front side of said bucket wheel adjacent to said conveyor means, connecting wall means connecting said first and second ring means to each other, a plurality of bucket means spaced from each other and connected to circumferential portions of said first and second ring means, a plurality of chamber means respectively associated and communicating with the interior of said bucket means, each of said chamber means being formed by a slideway extending from the rear side toward the front side of said bucket wheel and at an acute angle with regard to said shaft, the front end of said slideway forming a discharging edge located in the interior of said bucket wheel and in spaced relationship to said shaft, each of said chamber means furthermore being formed by two successive ones of said connecting wall means and arranged relative to each other so as to diverge relative to each other in the direction toward said conveyor means, and stationary discharging means extending from said conveyor means into said bucket wheel above said shaft and close to at least some of said discharging edges for receiving excavated material therefrom and passing the same on to said conveyor means.

3,020,657
BRACELET
James L. Clark, 301 N. Water St., Milwaukee, Wis.
Filed Sept. 18, 1958, Ser. No. 761,784
1 Claim. (Cl. 40—21)



An identification bracelet comprising terminal strap members formed from plastic sheet material, one of said strap members being widened to form an enlarged flat body portion, the inner end of the other strap member being widened to correspond to the width of the body portion and having a flap overlying the inner edge of the body portion and the outer face of the body portion, and a clear plastic sheet corresponding substantially to the size of the body portion placed over the outer face of said body portion and heat sealed around its entire marginal edge to the body portion and to the inner end of the second strap member, said body portion and clear plastic sheet constituting a pocket with the inner end of the body portion constituting an entrance slit to the pocket, the flap constituting a closure for said slit, and means securing the outer ends of the strap members together.

3,020,658
IDENTIFICATION BRACELET
James L. Clark, Milwaukee, Wis., assignor to Mark-Clark Products, Inc., Milwaukee, Wis., a corporation
Filed Dec. 4, 1959, Ser. No. 857,282
1 Claim. (Cl. 40—21)



An identification bracelet comprising a body portion widened at one end and a clear plastic window heat sealed to the body portion at its widened part at its longitudinal marginal edges and at its inner end leaving the opposite end of the window free from the strap to form an entrance mouth leading to a pocket defined by the window and a part of the body portion, an identification card adapted to be inserted in the pocket through said mouth, a sealing and guide flap for the pocket and card formed on the free end of the window for overlying the outer face of the body portion, the bracelet being adapted to be held in a wrist encircling position by a snap fastener including a stud anchored to the body portion directly below the flap, the flap having an opening for insertion over the stud, the snap fastener also including a socket portion carried by the opposite end of the body from the stud with the open portion of the socket facing outwardly from the body portion, the body portion also having a longiutdinal row of spaced openings, the body portion being adapted to encircle the wrist of a patient with the stud through a selected opening in the body portion, and said body portion being folded back upon itself to present the open portion of the socket to the stud so that the socket portion can be firmly pressed on the stud with the flap pressed against the material of the body portion, the folded back part of the body being severable to eliminate excess material leaving the socket only on the stud.

3,020,659
CANDY OR PILL DISPENSING CONTAINER
Harry H. J. Paulini, New York, N.Y., assignor, by direct and mesne assignments, to United Sweets of America, Inc.
Filed Apr. 25, 1957, Ser. No. 655,100
2 Claims. (Cl. 40—307)



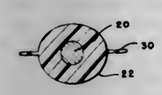
1. In a candy or pill dispensing container having a cylindrical open ended container body with an annular internal groove, and inner and outer closure disks fitted into said groove so that the inner disk is retained against rotation while the outer disk may be rotated relative thereto, the inner disk having an illustration thereon suitable for animation, and the outer disk being transparent and having an arcuate series of embossments, undulations or markings suitably spaced from one another and adapted when the outer disk is rotated to pass over the illustration so as to animate the same.

3,020,660
COLLAPSIBLE IMITATION TREE
John Scherotto, Union City, N.J.
(353 W. 57th St., Room 320, New York, N.Y.)
Filed Nov. 30, 1959, Ser. No. 856,090
4 Claims. (Cl. 41—15)



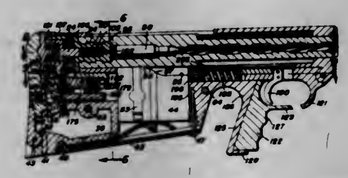
1. A unitary, collapsible, imitation tree comprising a plurality of rigid but flexible substantially cylindrical trunk sections alternately interconnected with a plurality of rigid but flexible tiered-branches sections, each of said tiered-branches sections having a plurality of spaced, elongated strips, permanently interconnected with each other and with adjacent cylindrical trunk sections, and depending first outwardly away from trunk sections adjacent thereabove and then inwardly toward trunk sections therebelow, meeting therewith at substantially right angles.

3,020,661
METHOD OF POLISHING AND DEFLASHING MOLDED PLASTIC ARTICLES
Andrew J. Miller and Urban P. Nellis, Dayton, and Richard C. Waymire, Brookville, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,637
4 Claims. (Cl. 41—41)



1. In a method for de-flashing and enhancing the surface appearance of cellulose acetate butyrate or cellulose acetate propionate plastic articles, the steps comprising; immersing articles having a relatively thick portion of the aforementioned plastic and a relatively thin section of unwanted flash in a vapor bath of an organic solvent taken from the class consisting of ketones, esters and trichloroethylene maintained at a temperature above the boiling point of the solvent and below 250° F. for a time sufficient to dissolve the flash from the article and simultaneously enhance the surface finish thereof, and then removing the articles from the solvent vapor bath and allowing them to cool whereby a high gloss surface finish is obtained free from flash.

3,020,662
REPEATING MAGAZINE RIFLE WITH ROTATABLE AND FORWARDLY MOVABLE BARREL
Adam Merkel, 16 Fraunauses Wiebelsbach, Kreis Dieburg (Odenwald), Hessen, Germany
Filed Jan. 9, 1959, Ser. No. 785,923
3 Claims. (Cl. 42—11)



1. A firearm comprising in combination a stock, a receiver fixed to the stock, a barrel longitudinally movable within the receiver into a rear firing and into a loading position in which the barrel has been moved forwardly, a breech bolt closing the barrel, means on said barrel and breech bolt for locking said barrel and said breech bolt in the rear firing position of the barrel, said means being operative after the barrel has been moved to the rear by rotational movement of the barrel, said breech bolt including a bracket member carrying a locking nut, a firing pin assembly longitudinally slidably mounted in the breech bolt and bracket member, said firing pin assembly including a tension spring and a nosepiece projecting downwardly, sear and trigger means mounted entirely within the stock, and a cocking member including a movable stop applied against the nosepiece of the firing pin assembly for first bringing the firing pin assembly into its position in which it is ready for firing whereby the firing pin assembly may then be released, said sear and trigger means comprising a trigger, a trigger arm connected therewith for movement longitudinally upon pulling of the trigger, a sear arm connected with the cocking member, movable relatively to and with the trigger arm, respectively, sear members pivotally connected with the trigger arm and the sear arm, respectively, one of said sear members carrying the stop applied against the nose piece of the firing pin assembly, the sear arm being operated by the operation of the cocking member before the pulling of the trigger, the operation of the cocking member moving the sear arm and the trigger arm rearwardly, with the stop on the sear member pushing back the nose piece of the firing pin assembly during such movement to bring it into firing position, the operation of the trigger and trigger arm producing a relative movement of the trigger arm relatively to the sear arm, tilting the pivotally connected sear members and withdrawing the stop from engagement with the nose piece of the firing pin assembly, thus firing the firearm.

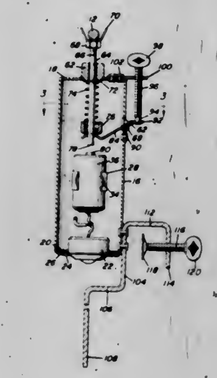
3,020,663
SAFETY TRIGGER LOCK FOR FIREARMS
Clarence W. Newson, 854 W. 3rd North St., Salt Lake City 16, Utah
Filed May 5, 1960, Ser. No. 27,044
2 Claims. (Cl. 42—70)



1. In combination with a firearm of the type having a trigger and a trigger guard therefor which is substantially U-shaped, a trigger lock comprising a relatively thick plate having a recess formed in one side face thereof of a size and shape conforming to the outline of said trigger guard and opening through one side edge portion of said plate, a boss formed on said plate and projecting outwardly away from the inner end of said recess having its free end flush with the plane containing said one side face of said plate and being of cross-sectional size and shape to be snugly received in and to substantially fill the space between said trigger and the forward end of said trigger guard, an abutment formed on said plate projecting outwardly and away from the inner end of said recess and having its free end flush with said plane and being of a cross-sectional size and shape to be received between said trigger and the rear end of said guard, said abutment including a portion confronting said portion of said plate defining said recess conforming to the inner surface of the corresponding portion of said trigger guard. said abutment and boss, together with the portions of said plate defining said recess, defining a groove in which

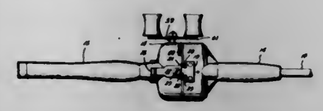
said guard is laterally receivable, said recess being of a depth to receive said trigger and guard, a pivoted stop secured in said recess and having a portion movable toward and away from said trigger between the latter and said abutment, said means disposed between said movable portion and said abutment normally yieldably urging said movable portion into engagement with the rear of said trigger and yieldably resisting rearward movement of the latter relative to said guard, a cover plate complementary in size and plan shape to said plate pivotally secured to said one side face of said plate and movable between a closed position substantially entirely enclosing said recess and registered with said plate and in open position with said cover plate swung completely out of registry with said recess about an axis extending transversely of said plate and said cover plate.

3,020,664
FISHING SIGNAL DEVICE
Edward D. Snyder and David R. Hamilton, both of Rte. 1, Ridgeley, W. Va.
Filed May 13, 1960, Ser. No. 29,039
6 Claims. (Cl. 43—17)



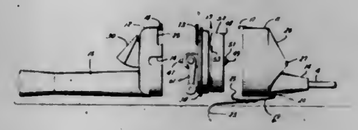
1. A fishing signal device comprising a casing, means on said casing for attachment to a supporting device, a signal device mounted on said casing, a battery within said casing and electrically connected to the signal device, said battery comprising a contact, a movable rod slidably mounted in the casing and terminating exteriorly thereof for movement in relation to the contact on the battery for grounding the battery upon inward movement of said rod thereby completing the circuit to the signal device, said rod including a saddle on the outer end thereof for engagement with a fishing device whereby pull on the fishing device such as would be exerted by a bite thereon will move the rod inwardly into contacting relation, spring means urging said rod outwardly away from the contact on the battery thereby preventing operation of the signal device until a force greater than the force of the spring means has been encountered by the fishing device, and a flange on the rod engageable with the casing for limiting the outward movement of said rod, said spring means including a coil spring encircling the rod and having one end thereof abutting against the flange on the rod, a collar slidable on the rod and abutting the other end of the coil spring, and an operating arm extending inwardly from the exterior of the casing and including a bifurcated inner end engaging the movable collar for moving the collar and compressing the spring for varying the force required to move the rod inwardly.

3,020,665
COMBINATION FISHING ROD, HANDLE AND REEL
R. Dell Hull, 1131 E. Easton St., Tulsa, Okla.
Filed June 10, 1960, Ser. No. 35,353
3 Claims. (Cl. 43—20)



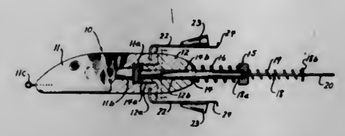
1. In a combination rod, reel and handle assembly including a unitary rod and front reel casing section and a unitary handle and back reel casing section, an improved assembly for securing said front and back casing sections comprising hook-like connector means for joining said casing sections at the top, said hook-like connector means providing for limited pivoting movement of said casing sections in an opening direction, a locking lug secured to the bottom portion of one of said casing sections, a locking jaw mounted on the bottom portion of the other of said casing sections and releaseably engagable with said lug to lock said casing sections in closed relation, a pivot screw engaging said jaw and said other casing section for securing said jaw to said other casing, said pivot screw being manipulatable to secure said jaw tightly in locked relation with said locking lug and to release said jaw for movement outward from said one casing section and said locking lug, said pivot screw providing for pivoting movement of said jaw out of alignment with said locking lug upon manipulation to release said jaw.

3,020,666
COMBINATION FISHING ROD, HANDLE AND REEL
R. Dell Hull, 1131 E. Easton St., Tulsa 1, Okla.
Filed Aug. 18, 1958, Ser. No. 755,540
17 Claims. (Cl. 43—20)



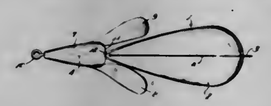
16. In a fishing reel combination, the improvement comprising a front casing member and a rear casing member together forming substantially the entire casing for the reel, mutually interengaging securing means at opposite sides of the casing for releasably securing the members thereof together, a reel assembly including a line spool, a line pick-up head and means for rotating the latter all mounted on a base plate, cooperating flange means on said base plate and on said front and rear casing members, said base plate and reel assembly being positioned between said casing members and being supported by said cooperating flange means upon assembly of said front and rear cover members, said reel assembly being substantially completely enclosed by said casing members, said securing means bridging said base plate and holding the casing members in predetermined relative positions in which the base plate is secured therebetween by clamping, said base plate being an integral element of the casing structure comprising, in series, said rear casing member, said base plate, and said front casing member.

3,020,667
FISHING LURE
Heber C. Lamar, P.O. Box 6411, Lawrence, Ind.
Filed Mar. 4, 1960, Ser. No. 12,744
11 Claims. (Cl. 43—35)



1. A fishing lure comprising a body formed by a front member, a rear member engaging said front member, said members being provided with longitudinal openings extending through said rear member and into said front member adapted to slidably receive a tubular member, a tubular member slidably received in said openings, said slidable tubular member having a bearing element disposed at one end thereof, a spring surrounding said slidable tubular member and extending between said bearing element thereon and a portion of said rear member, an intermediate member extending through said bearing element and disposed in said slidable tubular member and having a portion at one end thereof freely slidable within said slidable tubular member, a hooking element secured to the other end of said intermediate member, a bearing element disposed thereon, a spring surrounding said intermediate member and extending between said bearing element disposed on said intermediate member and said bearing element disposed on said slidable tubular member, and a hollow member supported on said body adapted to selectively receive and partially envelop said hooking element.

3,020,668
FISHING LURE
John A. O'Neil, 1805 Preston, Akron, Ohio
Filed Dec. 18, 1957, Ser. No. 703,568
3 Claims. (Cl. 43—42.16)



1. A fishing lure comprising, in combination, a tapered-end spoon, a hook mounted on said spoon, a shank rigidly mounted on and protruding from the tapered end of said spoon, and a frusto-conical hub having a rearwardly closed base journaled for rotation on said shank and against the said end of said spoon, and spinner blades on said hub extending axially a substantial distance beyond the said end of said spoon, whereby said end of said spoon and said base of said hub, and said axially extending spinner blades cooperate to provide weed-free operation.

3,020,669
INFLATABLE BUOYANT BODY HAVING CONICAL FASTENING MEMBER THEREON
Knut Beyer-Olsen and Otto Steffensen, both of Kirkegaten 10, Alesund, Norway
Filed Dec. 8, 1958, Ser. No. 778,980
Claims priority, application Norway Dec. 10, 1957
3 Claims. (Cl. 43—43.1)

2. An inflatable buoyant body of plastic, comprising a hollow conical fastening member having a wall which decreases in thickness from the apex portion towards the edge, said apex portion being solid and having a passage therethrough from one point on the outside surface thereof to another point on the outside surface thereof for the passage of a rope therethrough, a hollow inflatable plastic bladder integrally joined to the conical fastening member over the entire inside surface of said hollow fastening member, the wall overlapping a relatively large surface area of the plastic bladder and being smoothly joined to the bladder at the edge of the wall, said fastening member being of a plastic which has a high tensile strength relative to the plastic in said bladder, said bladder being of a plastic having greater pliability than the plastic of said fastening member, and a valve means extending from outside of said buoyant body at least through said bladder.



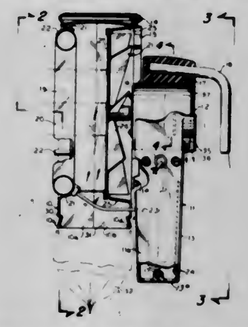
3,020,670
FISHING FLOAT
Hervey D. Lockhart, Ashville, N.Y.
Filed Dec. 3, 1959, Ser. No. 857,165
2 Claims. (Cl. 43—44.91)



1. In a fishing float, a bouyant body having a longitudinal slot therein from end to end and a filler in the slot, a tube lying in the slot having a relatively flat tang parallel to the tube embedded in the body and projecting radially outside the tube and oriented to prevent rotation of the tube relative to the body, said tube slidably receiving a fish line, a washer of elastomeric material surrounding the line at one end of the tube, said washer having an aperture slightly larger than a fish line, a compression fitting with an aperture of size larger than the line, said fitting comprising two screw threaded parts, one part being mounted on the tube and having an axially presented shoulder for one side of the washer, the other part having an axially presented shoulder for the other side of the washer, and said shoulders when tightened against opposite sides of the washer compressing the

washer uniformly about its center to squeeze it radially inward into gripping engagement with the line when said parts are screwed toward each other.

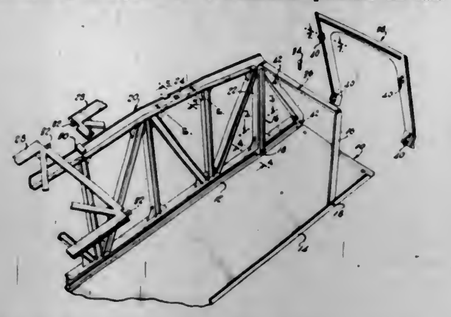
3,020,671
INSECT TRAP
Frederick T. Potter, Columbus, Ohio, assignor to Ampco Corporation, Columbus, Ohio a corporation of Ohio
Filed Apr. 6, 1960, Ser. No. 20,289
2 Claims. (Cl. 43—139)



1. An insect trap comprising a housing having an axially disposed annular inlet at the front side thereof and an outlet at the rear side thereof, an annular light tube disposed at said inlet coaxial therewith so as to attract insects to said inlet, a combination fan and screen unit mounted within the housing and spaced axially therewithin rearwardly from said inlet, said fan and screen unit comprising suction blades for drawing air and insects through the inlet and a face screen carried by the suction blades on the inlet side thereof with which the insects drawn through said inlet will contact before contacting said blades and will be thrown radially outwardly therefrom by centrifugal force, air duct means extending from said rear side of said housing to closely adjacent said face screen for substantially preventing recirculation of air within said housing, a discharge outlet portion leading radially from said housing at a location between said inlet and the face of the screen so that insects contacting said screen and thrown radially therefrom will pass through said discharge outlet portion, said discharge outlet portion having an outlet mouth, and a flexible bag having a mouth mounted on said outlet mouth, rotation of said screen overcoming the suction of the rotating fan to throw the insects contacting with the screen with considerable force outwardly into said bag and overcoming the suction of the fan to expand the bag to receive the insects, rotation of said screen also preventing return of insects back through said outlet mouth from the expanded bag.

3,020,672
COLLAPSIBLE TOY BRIDGE
Moses Zion, Brooklyn, N.Y., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed July 3, 1959, Ser. No. 824,849
6 Claims. (Cl. 46—17)

1. A toy bridge structure comprising a deck span member having an upstanding flange portion on each side thereof, a frame member extending longitudinally of said deck span member and having a recess defined thereon adjacent a bottom face, said recess being positioned over an associated deck span flange portion, said longitudinal frame member having a vertically elongated slot, and an arch member pivotally connected to said upstanding flange portion of said deck span member and being alternatively collapsible to a horizontal position on said



deck span and to an upright position with a portion confined in said slot.

3,020,673
EXPANDING TOY
Helen Cooke, 2244 N. Nottingham St., Arlington, Va.
Filed Feb. 10, 1956, Ser. No. 564,710
1 Claim. (Cl. 46—90)



In a toy, a body formed of a resilient expandible material, said body constituting an enclosure impervious to air, means for forcing air under pressure into said enclosure for expanding said body, said means consisting of a bellows unit having an upper plate and a lower plate arranged in substantially spaced parallel relation, an end plate secured to said upper and lower plates, a connecting plate secured to said end plate and extending across the front and along each side of the upper and lower plates, said connecting plate being of a folded accordion pleated portion to permit the flexing of the upper and lower plates towards one another, a sheet of rubbery material secured to the upper and lower plates adjacent the front portion thereof, said rubbery material being mounted in and forming a part of said body with said bellows unit being positioned within said enclosure, a tubular conduit having one end connected with said lower plate and the other end connected to said sheet of rubbery material adjacent said body to admit air into said bellows unit, valve means positioned in said tubular conduit, and a valve-controlled conduit positioned in said end plate to provide communication between said body and unit.

3,020,674
FLAG RAISING AND SALUTING TOY
David Sachs, 3933 Topanga Canyon Lane, Malibu, Calif.
Filed Feb. 3, 1961, Ser. No. 86,906
7 Claims. (Cl. 46—120)

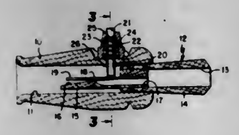
1. A flag saluting toy comprising: a base; a tubular flag pole mounted in the base and projecting upwardly therefrom, said flag pole having a longitudinal slot extending substantially the full height thereof; a flag having slide means at one end thereof, said slide means being slidably mounted within said flag pole and supporting the flag in a position projecting horizontally through said

slot; a soldier figure including a hollow body secured at its lower end to said base and projecting upwardly therefrom, a saluting arm, a shaft extending transversely through the shoulder portion of said body and having one end projecting therefrom and anchored in said saluting arm for pivotally mounting the same for vertically swinging movement between a lowered position and a raised saluting position, a crank arm attached to said shaft within said hollow body, and a push stem pivoted to said crank arm and projecting downwardly through said hollow body for vertical sliding movement therein; and actuator mechanism comprising a lever extending through an aperture in one side of the base and pivoted to the



base adjacent said aperture, and a push rod of spring wire pivoted to the inner end of said lever at one end and anchored at its other end to said slide means of the flag, said push rod being of flexible spring wire, projecting upwardly into said flag pole when said inner end of the lever is raised, and adapted to assume a bowed position upon downward swinging movement of said lever toward the side of the base, with its upper end substantially tangent to the axis of said flag pole and its lower end diverging away from said axis; said lever being arranged to engage the lower end of said push stem when approaching its upper limit of raising movement, thereby to elevate said saluting arm as the flag reaches its fully elevated position.

3,020,675
GOOSE CALLER
Nevelyn C. Boecker, Toledo, Ohio
(810 N. Cousino Road, Oregon, Ohio)
Filed Mar. 21, 1960, Ser. No. 16,245
1 Claim. (Cl. 46—180)

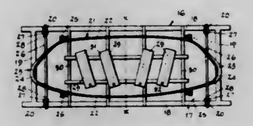


A goose caller comprising a tubular mouthpiece, a tubular sounding box telescoping into the forward end of said mouthpiece, a semi-cylindrical tongue disposed partly in said mouthpiece and partly in said sound box, the inner end of said tongue disposed within said sound box being longitudinally channeled at its inner end portion and tapered at its outer end portion which extends within said mouthpiece, a reed overlying the channeled portion of said tongue and said tapered portion, a wedge for retaining said tongue and said reed in said sound box, a pin slidingly disposed within said mouthpiece and having its inner end engageable with a free portion of said reed and having its outer end disposed outside of said mouthpiece, and spring means normally biasing said pin in a direction away from said reed, whereby rapid manipulation of said pin will change the tone emitted from the goose caller due to the vibratory action of said reed.

3,020,676
METHOD OF FERTILIZING AND CONTROLLING SOIL MOISTURE WITH PHOSPHATE SLIME
Harold J. McGillivray, 512 N. Delaware Ave., Tampa, Fla.
No Drawing. Filed Oct. 27, 1958, Ser. No. 769,535
1 Claim. (Cl. 47—58)

The method of simultaneously enhancing the fertility and moisture retaining qualities of an agricultural area which includes the step of depositing a subsurface layer of phosphate slime by the individual injection of adjacent deposits thereof to form contiguous horizontal subsurface areas of such slime.

3,020,677
APPARATUS FOR CONTROLLING THE HEATING OF THE GLASS SHEET DURING BENDING
Gerald White, Rossford, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Original application Feb. 29, 1956, Ser. No. 568,454. Divided and this application Aug. 12, 1960, Ser. No. 54,558
3 Claims. (Cl. 49—67)

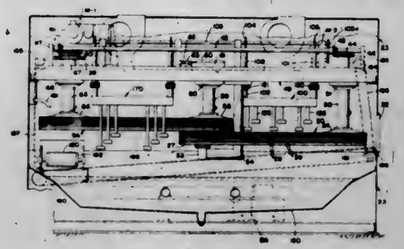


1. In apparatus for bending glass sheets, an outline type bending mold having a curved shaping surface for receiving the peripheral portions of a bent glass sheet in contact therewith, and a container carried by the mold beneath the shaping surface and within the projected periphery thereof for enclosing a gas-producing substance, said container including gas impervious side and bottom walls and having a top wall provided with a series of openings therein, said top wall being positioned relative to said mold so as to face said shaping surface whereby said openings provide means for directing gas from said container adjacent said shaping surface.

3,020,678
ABRADING MACHINE FOR SURFACE FINISHING WORK PIECES
James T. Lewis, Jr., Chagrin Falls, Charles A. Crabiel, Northfield, and Robert R. Cowden, Akron, Ohio, assignors to The Lewis Welding & Engineering Corp., Bedford, Ohio, a corporation of Ohio
Filed Dec. 23, 1958, Ser. No. 782,438
20 Claims. (Cl. 51—14)

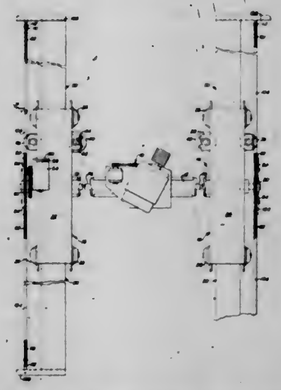
1. In an abrading machine, a pair of endless flexible compressible conveyor belts having contiguous portions for conveying work pieces in a substantially vertical position along a predetermined path of movement, means for resiliently biasing the contiguous portion of at least one of said belts toward the contiguous portion of the other, a reciprocable support mounted for vertical transverse movement with respect to said path of movement of the work pieces, a plurality of guns carried by said reciprocable support and positioned on opposite sides of said path of movement of the work pieces and at successive locations along said path of movement of the work pieces, and means for operating said guns to discharge abrasive

material onto the work pieces as the latter are moved by said conveyor means along said path of movement



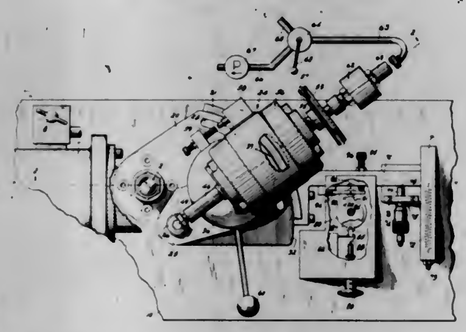
and the guns are reciprocated transverse to said path of movement of the work pieces.

3,020,679
MACHINE TOOLS
James L. Hensley, Clinton, Tenn., assignor to Ty-Sa-Man Machine Company, Knoxville, Tenn., a corporation of Tennessee
Filed Sept. 4, 1958, Ser. No. 759,076
8 Claims. (Cl. 51—34)



1. In apparatus of the type having frame means including a pair of spaced apart parallel rails and a structure extending across the space between said rails and being mounted on said rails for movement along said rails, the improvement which comprises a first drive assembly disposed adjacent to one of said rails, said drive assembly including a sprocket wheel mounted on said structure for rotation about an axis extending transversely of said rails, a chain disposed in the plane of said sprocket wheel and being looped about a portion of the periphery of said sprocket wheel, means fixing the end portions of said chain to said frame means at points located upon a line in said plane, a pair of guide wheels having smooth peripheries for contacting said chain as it passes from said line to the periphery of said sprocket wheel, and adjustable means mounting said guide wheels on said structure for free rotation in the plane of said sprocket wheel about axes which may be shifted relative to the axis of said sprocket wheel to adjust the position of said chain; a second drive assembly like said first drive assembly disposed adjacent to the other of said rails; and means for rotating the sprocket wheels of said assemblies simultaneously to move said sprocket wheels along said chains and thereby cause said structure to move along said rails.

3,020,680
CONTOUR GRINDER
George W. Soderman, Alpine, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 26, 1958, Ser. No. 744,701
1 Claim. (Cl. 51—73)

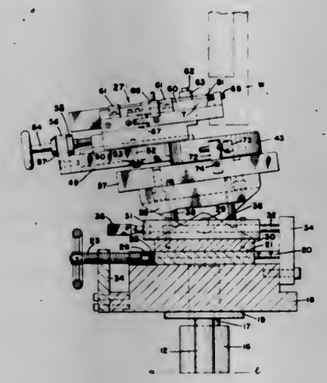


An apparatus for grinding sphero-flat crystals with faces of predetermined diameters comprising a continuously driven cup grinder having an inner grinding surface cross-sectionally curved about a given center, a carriage mounted for movement about an axis spaced from and disposed short of the grinding surface, a crystal driving unit, a hollow chuck supporting spindle driven thereby, a hollow chuck adapted to removably hold a crystal in position to be ground removably disposed in one end of the hollow spindle, a support for the crystal driving unit mounted on the carriage, a pivot for the crystal driving unit interposed between the crystal driving unit and the support to condition the crystal driving unit for movement to move its chuck between a loading position for the chuck away from the grinding surface and a grinding position for the chuck adjacent the grinding surface, an arm fixed to the carriage and projecting away from the carriage and the axis thereof, means to force the arm through a feeding motion to move the carriage a given distance about its axis to cause feeding of the crystal to the grinding surface of the grinder, a micrometer with an arm engageable end, means to mount the micrometer at a fixed position with its arm engageable end positioned to be engaged by the arm when the crystal is positioned to engage the grinding surface and the micrometer is set to locate the end at a zero position so that the micrometer, when adjusted to locate the end at a known position from the zero position, will terminate the grinding cycle a predetermined variable distance from the start of the grinding cycle, and a unit operatively connected to the arm and operable to control movement of the carriage to complete the grinding cycle for the crystal in a predetermined length of time.

3,020,681
TOOL FINISHING PROCESS AND APPARATUS
Bernard E. Hite, Norwalk, Ohio, assignor to Carbide Grinders, Inc., Norwalk, Ohio, a corporation of Ohio
Filed Mar. 14, 1957, Ser. No. 646,073
5 Claims. (Cl. 51—122)

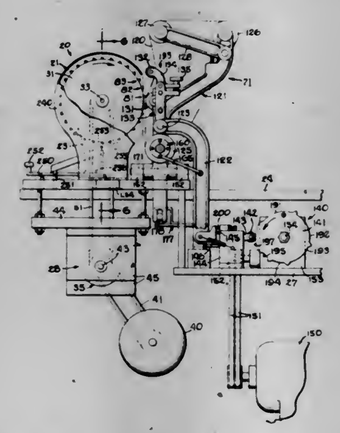
1. Apparatus for finishing single point cutting tools and the like comprising means having a moving abrasive surface, a tool mount adapted to mount a tool thereon with its cutting end disposed against such surface, and means supporting said mount in a position such that the abrasive surface moves in a direction generally parallel to the cutting edge of the tool, said tool mount comprising a base part and a tool holding part that are rotatably

connected by anti-friction means for rotation of the latter about an axis inclined and extending from a point disposed behind such abrasive surface at said base part to a point in front of such abrasive surface to form a



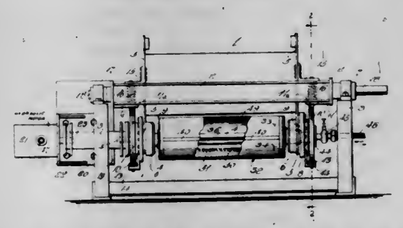
radius on such cutting edge that is tangent to the adjacent cutting edge portions, and means readily to position such axis toward and away from such abrasive surface to adjust the radius formed on such cutting tool.

3,020,682
POISING MACHINE FOR BALANCE WHEELS
August L. Spetzler, Peru, and John A. Richards, Oglesby, Ill., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 21, 1960, Ser. No. 64,117
18 Claims. (Cl. 51—145)



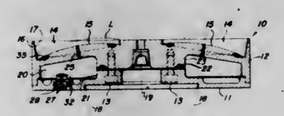
1. In a poising machine for balance wheels and the like the combination comprising a rotary carrier wheel having bearings about its periphery for mounting a plurality of balance wheels with the axis of each of them oriented in tangential position, means for rotating the carrier wheel at a high speed so that each balance wheel assumes a position of equilibrium with its heavy side out, and means at the periphery of the carrier wheel for engaging the balance wheels thereon in succession and for removing material from the presented heavy sides thereof until a condition of balance is achieved.

3,020,683
FLUID BALLAST CONTROL SYSTEM FOR MACHINE FOR PRECISION FINISHING OF PARTS BY CONTROLLED VIBRATION
William E. Brandt, Red Lion, Pa., assignor, by mesne assignments, to Bell Intercontinental Corporation, a corporation of Delaware
Filed Oct. 31, 1958, Ser. No. 771,095
7 Claims. (Cl. 51—163)



1. In a machine for the precision finishing of parts by controlled vibration, a frame structure, a cradle tiltably journalled in said frame structure, a vibratory bowl resiliently mounted in said cradle and having end portions depending through said cradle to a position beneath the bottom of said bowl, a rotatable cylinder extending longitudinally of said bowl and rotatably journalled between said end portions of said bowl beneath said bowl, said cylinder being divided into hollow compartments, means for admitting fluid into one of said compartments while maintaining a dead air space in another of said compartments and means for rotatably driving said cylinder whereby centrifugal forces developed by the displacement of the fluid in the said compartment of said cylinder produce pulses which are transferred to said bowl as vibratory forces.

3,020,684
LENS BLOCKING DEVICE
Andrew H. Oldfield, Waterloo, and Stanley F. Hostetler, Phelps, N.Y., assignors, by mesne assignments, to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed Dec. 26, 1957, Ser. No. 705,214
2 Claims. (Cl. 51—235)



1. A portable lens block having a plurality of seats each of which is adapted to receive a lens blank, an annular, resilient sealing member forming part of each seat and positioned to engage the juxtaposed surface of a lens blank adjacent the periphery of the blank when the blank is positioned on the seat, said block having an interior chamber therein, a duct connected at one end to each seat radially within the sealing member of that seat and connected at its opposite end to said chamber, a port for connecting said chamber to the exterior of said block at a point outside of all said seats, a valve having an operative portion for closing said port, a seat on the outside of said block for said valve, said seat surrounding said port, and a spring positioned to constantly urge said valve to closed position against the last-named seat, whereby application of suction to said valve externally of an external source of said valve sufficient to overcome the resistance of said spring will open said valve and evacuate said chamber and the spaces within the several sealing members and between the several lens blanks

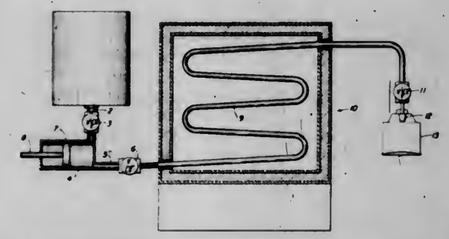
and their associated seats, thereby to secure the several lens blanks to the lens block by suction on the insides of the blanks and by atmospheric pressure against the outsides of the blanks, said spring being of sufficient strength to close said valve immediately upon disconnection of said source of suction from said block thereby to retain the lens blanks on their associated seats by suction, and means connected to said valve for manually opening said valve against the resistance of said spring to admit atmospheric pressure into said chamber and against the insides of the lens blanks thereby to release the suction to permit removal of the lens blanks from the block.

3,020,685

PROCESS AND APPARATUS FOR FILLING PRESSURE TIGHT CANS

Frank L. Kurek, 609 Charles Lane, Madison, Wis.

Filed Nov. 15, 1957, Ser. No. 696,687
7 Claims. (Cl. 53—7)



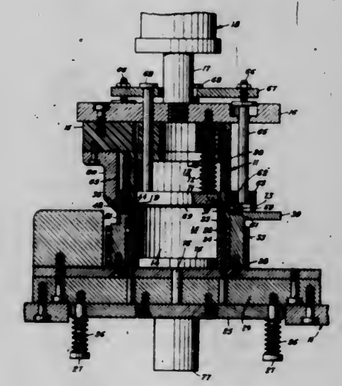
1. A self contained process for transferring a concentrate from a supply tank to a receiver comprising the steps of supplying a concentrate to a metering pump, metering said concentrate, cooling said concentrate, supporting the receiver in connection with the outlet, filling a receiver with concentrate and subsequently sealing the receiver closed.

3,020,686

PACKAGING IN PLASTIC FILM

Dean E. Rueckert, Mokena, and Carl J. Lind, Evanston, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

Filed Sept. 9, 1955, Ser. No. 533,490
11 Claims. (Cl. 53—22)



11. The method of forming packages of products from sheets of film, including placing a sheet of film across one side of said product, placing across the opposite side of said product a stiffener containing vent channels leading from its central portion to its outer edge, positioning a second sheet of film outside of said stiffener, applying a vacuum between said films along a line generally enclosing said stiffener while exposing the exterior of both said films to atmospheric pressure with said channels allowing evacuation of the area beneath the product, and sealing the two films to each other on the area between said line and the edge of said stiffener while maintaining said vacuum.

3,020,687

METHOD AND APPARATUS FOR FORMING INDIVIDUAL WRAPPED PADS FROM OTHERWISE CONTINUOUS BATT STRIPS

Curt G. Joa, Ocean Ridge, Fla., assignor to Falls Paper & Power Company, Chester, Pa., a corporation of Wisconsin

Filed Sept. 15, 1958, Ser. No. 760,963
65 Claims. (Cl. 53—23)



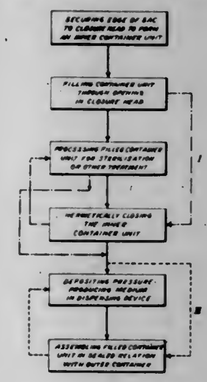
1. A method of severing a batt of non-self-sustaining loosely compacted fibers and comprising the steps of enclosing an area of desired batt severance and flowing a fluid stream in a confined channel against said batt in the enclosed area of desired batt severance to sever by convection the batt material in said area from batt material outside said area and to remove by convection batt material from the area thus enclosed.

3,020,688

METHOD FOR FILLING AND ASSEMBLING A COMPARTMENTED PRESSURIZED DISPENSING DEVICE

John Paul Modderno, Gambrills, Md., assignor to Modern-Lab., Incorporated, Baltimore, Md., a corporation of Maryland

Filed July 8, 1958, Ser. No. 747,293
10 Claims. (Cl. 53—36)



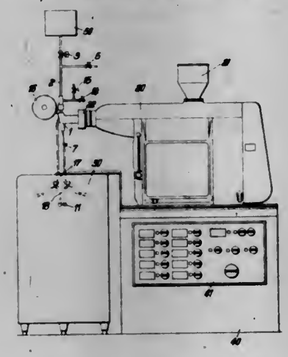
1. A method of forming a compartmented dispensing device for discharging a treated material under pressure which comprises securing a gasket to the edge of a closure having a dispensing opening therein, securing the edge of a sac to said gasket to form an inner container unit; filling said unit through said dispensing opening with product to be dispensed; processing said product to effect a treatment thereof while in said unit; depositing a pressure-producing medium in an outer container adapted to receive said unit; assembling said unit in said outer container; and hermetically sealing said unit to said outer container with said gasket and edge of sac forming a seal to prevent the pressure-producing medium from coming in contact with said product.

3,020,689

METHOD AND APPARATUS FOR THE CONTINUOUS FILLING OF PLASTIC TUBING WITH STERILE LIQUIDS

Justus Luther, Munich, Germany, assignor, by mesne assignments, to Allgäuer Alpenmilch A.G., Munich, Germany, a corporation of Germany

Filed Apr. 8, 1959, Ser. No. 805,030
7 Claims. (Cl. 53—140)



1. In a machine for the continuous manufacture of containers filled with a sterile liquid the combination comprising an extruder head for continuously forming tubing of flexible material, releasable pressure means located in spaced relationship from said extruder head along said tubing for sealing the newly formed tubing in a direction normal to its longitudinal axis at spaced locations therealong so as to obtain individual closed containers, releasable supporting means located between said releasable pressure means and the extruder head so as to support substantially the whole wall of the newly formed tubing along a predetermined portion of the path of said tubing immediately after said tubing leaves said extruder, said releasable supporting means constricting the cross section of the tubing at their point of engagement opposite from said extruder head so that the interior of the engaged tubing may be pressurized on engagement of the supporting means and is hereby supported against internal pressure, and means to inject steam under pressure into said extruder head and into said tubing while in operative engagement with said supporting means, and means to fill sterile liquid into said tubing after said supporting means have been released.

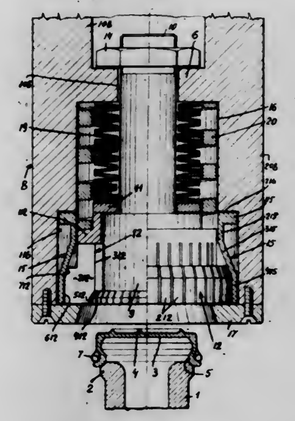
3,020,690

CAPPING DEVICES

Armando Podesta and Carlo Vignati, both of 52 Via Eustachi, Milan, Italy

Filed Aug. 11, 1960, Ser. No. 49,074
Claims priority, application Italy Aug. 18, 1959
5 Claims. (Cl. 53—353)

1. A capping head for tightly securing a closure cap to a container having a beaded neck, comprising a tubular shell provided with an abutment member in its bore, a cap presser having a head slidably mounted in one end of said bore, a first spring means urging said head away from said abutment member, an annular clamping jaw formed as a crown of independently yielding fingers encircling said cap presser, second spring means urging said annular clamping jaw away from said abutment member, a counter bore in said shell at the cap presser end of said bore providing at its inner end an annular shoulder, a sleeve-like constricting member elastically and radially deformable mounted with clearance coaxially in said



counter bore, the inner end of said constricting member abutting against said annular shoulder, and coacting inclined planes on said elastically deformable constricting member and said crown of fingers, whereby upon axially shifting said tubular shell in the direction of a container upon the neck of which a cap has been pressed by said cap presser and encircled by said crown of fingers, said constricting member will elastically constrict said independent fingers against the skirt of the cap but will yield in any radial direction, thus permitting said constricted fingers to follow irregularities of the container neck below its bead.

3,020,691

CARTON-CLOSING MACHINES

Bernard Hewlett Oxborrow, Swindon, England, assignor to The Metal Box Company Limited, London, England, a British company

Filed May 6, 1960, Ser. No. 27,436
Claims priority, application Great Britain Aug. 7, 1959
17 Claims. (Cl. 53—376)

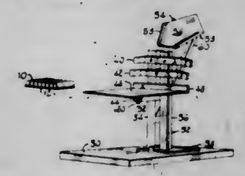
1. A machine for closing a carton having a lid hinged to the back of the carton body and side and front lid flaps to be engaged with the sides and front of the body and secured thereto by a thermoplastic adhesive, comprising first conveyor means to move the cartons in succession along a horizontal path, folder means operable to cause the lids of the cartons to overlie the bodies thereof while the cartons are moved by the first conveyor means, second conveyor means arranged to receive cartons from the first conveyor means to move them in succession in a vertical path to a discharge position, and sealing means disposed along said vertical path and operable to effect

engagement of the side and front lid flaps with the carton bodies, to apply heat to the lid flaps, and means to effect



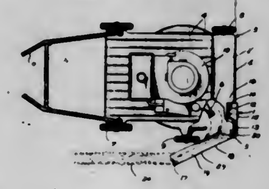
cooling of the cartons before they reach the discharge position.

3,020,692
PACKAGING
William E. Peglow, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 5, 1959, Ser. No. 844,551
8 Claims. (Cl. 53—392)



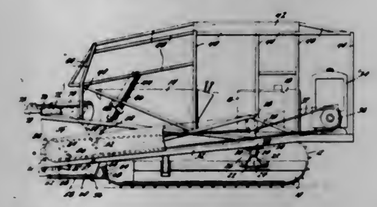
1. The method of enfolding product within a carton blank having a defined face, said method comprising: assembling a group of product in a position from which it may readily be inverted; placing said face of an unfolded carton blank in juxtaposition with the upper surface of said product; partially folding the carton blank downwardly about at least one side of said product; inverting said product and partially folded carton while preventing relative motion therebetween; and completing the folding of said carton completely about the product while in said inverted position.

3,020,693
WINDROWING ATTACHMENT FOR ROTARY LAWN MOWERS
Ralph C. Sears, Rte. 2, Box 93, Salina, Kans.
Filed Nov. 20, 1959, Ser. No. 854,435
2 Claims. (Cl. 56—25.4)



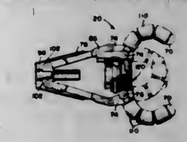
1. A windrowing attachment for a mobile mower for cutting grass or the like having a housing with a top and depending skirt forming sides and a forward end having a substantially straight portion and corners at said forward sides and having a horizontal rotary cutting blade under the housing, one of said sides having an opening therein near said forward end of the housing, said windrowing attachment comprising, an angle member having vertical and horizontal legs, means attaching said vertical leg to the substantially straight portion of said depending skirt at the forward end near one corner thereof, the horizontal leg having a portion extending over the top of a portion of the housing, said angle member including an elongated extension portion extending outwardly and rearwardly at an angle from said front side of the housing over said opening in the side of said housing for deflecting the grass as it is propelled through said opening by rotation of the blade, the lower edge of said vertical leg of said extension extending below said depending skirt and being curved to accommodate for unevenness in the ground and said horizontal leg of the angle member and extension being on substantially the same plane as said top of the housing.

3,020,694
TREE CLEARING ATTACHMENT FOR TRACTOR
Clarence B. Foshee, 509 E. Main St., Gurdon, Ark., and Joe A. McCauley, Okolona, Ark.
Filed Feb. 17, 1960, Ser. No. 9,215
16 Claims. (Cl. 56—26)



1. A device for clearing land of growth comprising a frame, means to tiltably mount the frame medially of its length, power means on one end of said frame, and cutter means on the other end of said frame, with a driving connection from said power means, said cutter means comprising a drum rotatably mounted on said frame, brackets arranged on the periphery of said drum, and rigid arms articulated in said brackets and having cutting teeth at their distal ends, said teeth comprising splitting teeth with sharp working edges in planes normal to the axis of said drum, and chipping teeth with sharp working edges parallel to the axis of said drum, said splitting teeth and chipping teeth being arranged in pairs peripherally of said drum so as to follow a common path.

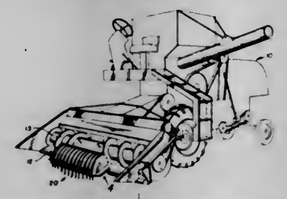
3,020,695
TREE SHAKING DEVICE
Russell D. Gould, 12570 N. Capitol Ave., San Jose 27, Calif., and John E. Richter, 502 Morse, San Jose, Calif.
Filed May 9, 1960, Ser. No. 27,949
10 Claims. (Cl. 56—328)



1. In a tree shaking mechanism of a type employing a boom mounting a pair of opposed hook members adapted to positively grasp and hold a tree member, deformable

cushion means positioned between said members, said cushion means comprising a back plate, a support spaced from the back plate, and annular means mounted for rotation on said support so as to be deformable in a direction generally toward said back plate.

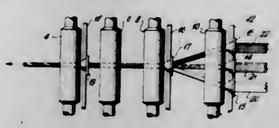
3,020,696
COMBINE ATTACHMENT FOR RETRIEVING DOWN EARS OF CORN
Harold H. Thurow, Ault, Colo. (Rte. 1, Eaton, Colo.) and Herbert J. Thurow, Eaton, Colo. (Rte. 2, Ault, Colo.)
Filed Sept. 11, 1959, Ser. No. 839,437
3 Claims. (Cl. 56—364)



1. In combination, in a down ear corn retriever unit attachment for combines having a cutter bar and a power take-off shaft and drive pulley wheel, a frame including arms adapted to be secured to the front of the combine ahead of the cutter bar and adapted for carrying the unit thereby, identical semi-circular aligned end housing members connected to and carried by said arms, means for connecting the end members to the arms, a rotatable shaft extending between said end members and rotatably carried thereby and having a driven pulley wheel secured rigidly thereon, identical journal means on each end member for so rotatably carrying said shaft thereby, said shaft being so carried by each end member at identical points thereon and which are eccentric to the diametrical center point of the semi-circular end members, means for securing the driven wheel to the shaft, a plurality of spaced apart identical retriever wheels each rigidly secured transversely of and to said shaft, identical hub means for securing each wheel to the shaft, each wheel having adjustably extending retriever finger rods secured to the peripheral edge thereof and with each finger extending from the peripheral edge in a plane at a right angle to a radius of the wheel to which secured, identical means on a wheel periphery for so adjustably securing each finger rod thereto, identical stripper finger flanges with one thereof secured to the frame between each pair of wheels and extending in the same semi-circular shape as and in the plane of the aligned end members and each thereof in close proximity to the sides of an adjacent pair of wheels and to permit each of said wheels to rotate freely without contact therewith, identical means for securing each stripper flange to the frame in such position, and a pulley belt means extending over and between the drive pulley wheel and the driven pulley wheel of the rotatable shaft.

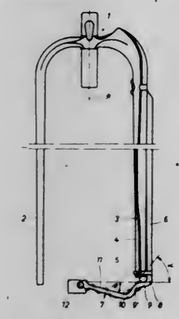
3,020,697
METHOD AND APPARATUS FOR PRODUCING MULTI-COLORED SINGLE YARN IN SIMULATION OF PLY YARN
James Sherman Henry, La Grange, Ga., assignor to Callaway Mills Company, La Grange, Ga., a corporation of Georgia
Filed Nov. 7, 1958, Ser. No. 772,454
4 Claims. (Cl. 57—36)

2. Apparatus for producing multi-colored single yarn in simulation of a ply yarn having ends of different colors, said apparatus comprising a roving frame having front, second, third and back rolls driven at such speeds as to effect drafting between said first and second rolls and between said third and back rolls, a plurality of laterally spaced, stationary trumpets behind said back rolls, each of said laterally spaced trumpets being arranged to condense and separately guide a drawing sliver of a different color to said back rolls, a single, stationary trumpet be-



tween said third and back rolls to condense all said colored slivers together behind said third rolls, a single, stationary trumpet between said front and second rolls to again condense all said colored slivers together behind said front rolls, and twisting means for imparting a twist in excess of roving twist to the fibers delivered from said front rolls.

3,020,698
FLYER WITH PRESSER
Adolf Schiltknecht, Winterthur, Switzerland, assignor to Joh. Jacob Rieter & Co. Ltd., Winterthur, Switzerland, a corporation of Switzerland
Filed Dec. 14, 1959, Ser. No. 859,363
4 Claims. (Cl. 57—117)

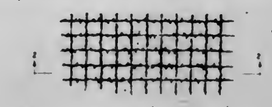


1. A flyer comprising a hollow arm, having an outlet for the sliver at the lower end, a presser arm member having a part swingably mounted on said hollow arm, said member having a portion located below said hollow arm and extending approximately at a right angle to the rotation axis of the flyer and traversing an imaginary vertical line extending downward from said outlet, said last mentioned portion of said member continuing into a downwardly curved portion and subsequently into a downwardly slanted portion, followed by a portion curved in a direction opposite to the direction of the slant of said slanted portion for guiding the sliver to freely leave said outlet in a substantially vertical direction.

3,020,699
MANUFACTURE OF CREPE YARNS AND FABRICS
Derk Jan Everhard Nijkamp, Velp, and Gerrit Jan van Lochem and Jan Gradus Vos, Arnhem, Netherlands, assignors, by mesne assignments, to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 30, 1957, Ser. No. 674,996
Claims priority, application Netherlands Aug. 2, 1956
9 Claims. (Cl. 57—157)

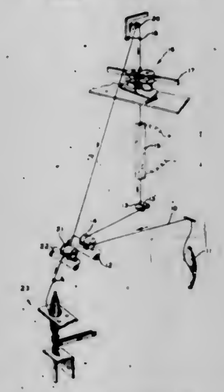
4. A method of producing yarn suitable for crepe fabric which comprises twisting together at least two con-

tinuous multifilament nylon threads having a twist of less than 150 turns per meter and different shrinkage properties into a composite yarn having a twist of from 300 to 1000 turns per meter, displacing the filaments of the com-



posite yarn by the action of a strong current of air as the result of which random filamentary loops project outwardly therefrom subjecting the composite yarn to a shrinkage-inducing temperature and collecting the yarn in an orderly manner.

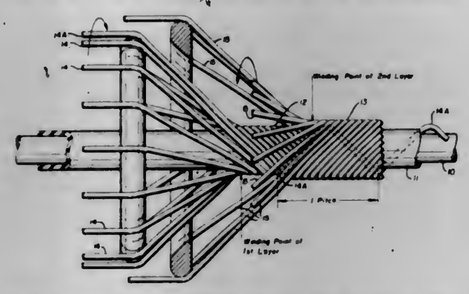
3,020,700
PRODUCTION OF CURLED YARN
Pieter van Dijk, Velp, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Mar. 4, 1959, Ser. No. 797,236
Claims priority, application Netherlands Mar. 22, 1958
1 Claim. (Cl. 57—157)



A method for producing permanently curled yarn from thermoplastic products comprising the steps of supplying thermoplastic yarn to and passing said yarn through a twisting zone, snubbing the yarn to enable substantial tension increase in said tension zone, twisting the yarn passing through said twisting zone while increasing the tension imparted to the yarn during twisting by between 200 and 400%, heat setting the yarn while in twisted condition sufficiently to produce yarn shrinkage of at least 7% during the heating operation, withdrawing said yarn from the twisting zone at a speed sufficient to provide stretch in order to reduce the aforesaid shrinkage to between 2 and 4% with respect to the starting yarn, and collecting said yarn in package form.

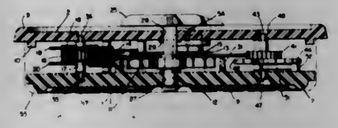
3,020,701
METHOD OF WINDING WIRE REINFORCING MEMBERS ON A RESILIENT TUBE
Clarence E. McCormick, Poland, Ohio, assignor to Lee Rubber & Tire Corporation, doing business as Republic Rubber Division, Youngstown, Ohio, a corporation of Ohio
Filed June 16, 1960, Ser. No. 36,523
7 Claims. (Cl. 57—160)

5. The method of forming a wire reinforced flexible hose which includes the successive steps of placing a rubber tube on a mandrel, moving said mandrel and tube longitudinally in axial relation to a first group of circumferentially spaced wires, wrapping each of said wires about said tube simultaneously to form a first even layer of wires in a helical pattern, moving said mandrel and tube in axial relation to a second group of circumferen-



tially spaced wires, wrapping each of said wires of said second group simultaneously about said first even layer of wires at a winding point thereon within one pitch of a wire of said first even layer from the winding point of said first group of wires.

3,020,702
TIMEPIECE MOVEMENT
Lawrence Feldman, Balderas 90, Mexico 1 DF, Mexico City, Mexico
Filed Sept. 2, 1958, Ser. No. 758,386
2 Claims. (Cl. 58—52)



1. In a timepiece having a cup-shaped case with a back wall portion and a cylindrical side wall portion having a front edge, two thin flat plates of molded plastic material having the characteristics of a low coefficient of friction, high abrasion resistance, elasticity, toughness, shock resistance and strength over a wide range of temperature, said plates being superposed in parallel spaced relation with inner surfaces facing one another and comprising a front plate and a back plate, one plate only having three integrally molded projecting posts extending axially from its inner face and asymmetrically arranged around the circumference of said one plate and the other plate having in its inner face matching recesses receiving and fitting the ends of said posts, securing means cooperating with said posts and the engaging portions of said other plate to secure said two plates together in assembled spaced relationship, said plates having aligned bearing holes extending through the plates, a timepiece movement comprising a plurality of parallel pivots assembled between the two plates, each said pivot having oppositely disposed ends journaled respectively in aligned holes of said plates and at least some of said pivots having shoulders engaging the inner surfaces of said plates to position said pivots axially, said back plate being of a size to fit in said case and having on its outer surface a peripheral rim and said front plate being larger and having a peripheral portion seating on the front edge of said side wall of the case and an annular flange on the inner surface of said front plate fitting into said case, said plates thereby providing a resilient shock-resisting mounting of said movement in said case.

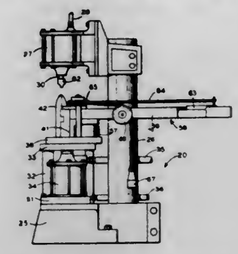
3,020,703
SEALED WATCH CASE
Arthur W. Wadsworth, Fort Thomas, Ky., assignor to Elgin National Watch Company, Elgin, Ill., a corporation of Illinois
Filed Nov. 9, 1953, Ser. No. 390,773
2 Claims. (Cl. 58—90)



1. In a sealed watch case construction, a body, a works-retaining ring in said body, at least one of said last named members having a groove formed therein with a portion against which an elastic band may be engaged in tensioned condition, a cover member having snap-on relationship with said body, said cover member having a back terminating in a peripheral portion the inner side of which consists of three contiguous angularly related surfaces, the outermost of said three surfaces being a stop surface and a second of said surfaces being a rim surface, said body having a first surface which is a stop surface mating with the stop surface of said cover and a second surface which is a trim surface mating with the rim surface of said cover member, said rim surfaces being undercut relative to their respective stop surfaces so as to urge said stop surfaces toward each other, and a continuous resilient elastic band located in said groove under tension and partially projecting therefrom, the third surface of said cover peripheral portion being juxtaposed to said band and positioned to distort and compress said band when said cover member is in position, whereby to effect a tight seal, said body having an abutment for restraining movement of said works-retaining ring in one direction, said works-retaining ring being resiliently restrained by said cover against movement in an opposite direction, said groove being formed in said works-retaining ring, said body having a peripheral flange projecting beyond the stop surface of said body, the inner surface of said flange projecting beyond the bottom of said groove and adjacent thereto so as to form a side for said groove, the said third surface of said cover member acting to compress and distort said resilient band both against said works-retaining ring and the inner surface of said flange.

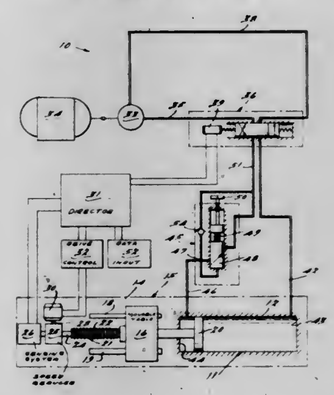
3,020,704
LINK CLOSING MACHINE HAVING MAGAZINE LOADING CLIP
Hermann Stegmaier, Flushing, N.Y., assignor to Benjamin Gartner, New York, N.Y.
Filed Dec. 11, 1959, Ser. No. 859,036
10 Claims. (Cl. 59—1)

1. A machine for closing open end links comprising a magazine having a channel, a clip rod containing a supply of loosely mounted links adapted to be received in said channel, means for feeding the links along said channel, gripping means connected adjacent one end of said channel for receiving and holding a link in position to be closed, means for successively stripping the links from said clip rod and feeding said links from said channel to said gripping means one after another, said clip rod being readily removable from said channel upon removal of the links therefrom, means for locking the last few links prior to the exhausting of the links from said rod within said channel to retain the loose links in proper position within said channel upon removal of said



rod and for facilitating the insertion of a new loaded clip in said channel.

3,020,705
POSITIONING SYSTEM INCLUDING A PRIME MOVER AND LOCKING MEANS THEREFOR
Walter P. Hill, Detroit, Mich., assignor to Walter P. Hill, Inc., Detroit, Mich., a corporation of Michigan
Filed Oct. 21, 1959, Ser. No. 847,807
14 Claims. (Cl. 60—6)

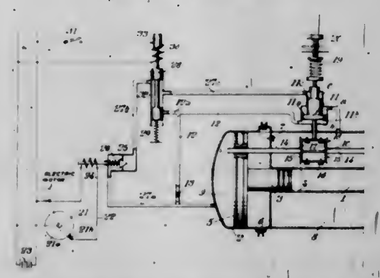


1. A numerical positioning control system comprising a fixed component, a movable component movable relative to said fixed component, means for biasing said movable component, means for holding said movable component against movement relative to said fixed component under the bias of said biasing means, means for releasing said holding means comprising a position intelligence unit having an output characteristic indicative of the position of said movable component with respect to said fixed component, a coordinate intelligence unit having an output characteristic indicative of a desired position for said movable component with respect to said fixed component, means for comparing the output characteristics of said position intelligence unit and said coordinate intelligence unit having an output characteristic, means responsive to said comparing means output characteristic for releasing said holding means to permit movement of said component under the bias of said biasing means when said movable component is in a position other than the position required by said coordinate intelligence characteristic, and second means responsive to said comparing means output characteristic for controlling said biasing means to effect movement of said movable component.

3,020,706
CONTROL MEANS FOR FREE-PISTON OR SEMI-FREE PISTON ENGINES

Helge Horgen, Lyon, France, assignor to Societe d'Etudes et de Participations Eau, Gaz, Electricite Energie S.A., Geneva, Switzerland, a society of Switzerland

Filed Nov. 28, 1958, Ser. No. 777,056
Claims priority, application France Dec. 3, 1957
9 Claims. (Cl. 60—13)

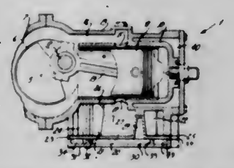


1. An installation comprising at least one free-piston or semi-free-piston engine, said engine including a combustion cylinder, a power piston operating in said combustion cylinder, an air compressor cylinder fixed with respect to said combustion cylinder, a compressor piston rigid with said power piston and operating in said compressor cylinder, a compressed air reservoir, means for passing compressed air from said compressor cylinder to said reservoir, means including a part fixed with respect to said compressor cylinder and a movable part operatively connected with said compressor piston and adapted to cooperate with said fixed part to form therewith a variable volume air cushion, where the pressure varies periodically in accordance with the reciprocating movement of said pistons, for storing energy from said power piston during the outward stroke thereof and returning the stored energy to said pistons during the inward stroke thereof, a stabilizer having a movable element arranged to regulate by its displacements the quantity of air in said cushion, means responsive to variations of at least one internal characteristic of said engine for controlling said movable element, means for further subjecting said movable element to pressure pulses collected from said cushion at periodically recurring times and means controlled independently of the movements of said pistons for varying the phase of said pressure pulse collection times with respect to the cycle of pressure variation in said cushion to vary the operation of said stabilizer movable element.

3,020,707
ENGINE EXHAUST MANIFOLD CONSTRUCTION

Lloyd P. Post, Fond du Lac, and Robert J. Shanahan, Oshkosh, Wis., assignors to Kiekhaefer Corporation, Cedarburg, Wis., a corporation of Wisconsin

Filed Dec. 7, 1960, Ser. No. 74,248
5 Claims. (Cl. 60—31)



1. In a two-cycle internal-combination engine having a cylinder block with a plurality of cylinders disposed in line and an exhaust cavity in the block to one side of the cylinders, said cylinders having a given firing order wherein the exhaust period of one cylinder overlaps the exhaust period of the next firing cylinder and each cylinder having at least one exhaust port opening into the exhaust cavity, a closure member disposed oppositely from the cylinder exhaust ports and overlying the exhaust cavity of the cylinder block to close the cavity, said member having a baffle formed integrally therewith and extending into the cavity and dividing the cavity into a pair of adjacent chambers each having the respective exhaust ports of a corresponding group of cylinders opening thereinto, said groups of cylinders having alternating exhaust periods with the baffle serving to prevent interference in the exhaust periods of consecutively firing cylinders, an outer member overlying the closure member and spaced therefrom intermediate the edges thereof to form a coolant passage therebetween opposite from the exhaust ports, coolant supply means for said passage, coolant discharge means for said passage, and exhaust conduit means connected to the block and adapted to receive the discharges of exhaust gases from the adjacent chambers of the exhaust cavity.

3,020,708
ROCKET PROPELLANTS AND THEIR UTILIZATION

John E. Mahan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Jan. 2, 1951, Ser. No. 204,075
18 Claims. (Cl. 60—35.4)

1. A method for imparting immediate thrust to a rocket comprising introducing separate streams of oxidizer fuel components of a bipropellant into the combustion chamber of the rocket motor in contact with each other therein in proportions to produce spontaneous ignition, said fuel component being at least one unsaturated organic amine selected from the group consisting of compounds having the following structural characteristics



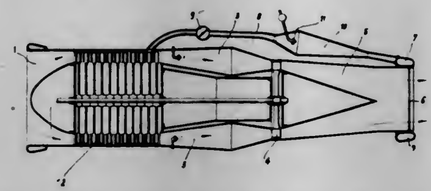
wherein R_1 is a radical selected from the group consisting of alkenyl, arylalkenyl, alkaryl-alkenyl, cycloalkyl-alkenyl, cycloalkenyl-alkenyl, hydrogen, aryl and alkaryl, R_2 is a radical selected from the group consisting of alkenyl, aryl-alkenyl, alkaryl-alkenyl, cycloalkyl-alkenyl, cycloalkenyl-alkenyl and hydrogen, and R_3 is a radical selected from the group consisting of alkenyl, aryl-alkenyl, alkaryl-alkenyl, cycloalkyl-alkenyl and cycloalkenyl-alkenyl, each said alkenyl radical containing at least 4 carbon atoms and wherein the total of carbon atoms does not exceed 25.

3,020,709
CONTROL MEANS OF THE FLOW OF A FLUID BY ANOTHER FLOW

Jean H. Bertin, Neuilly-sur-Seine, and Marcel Kadosch and François M. L. Maunoury, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed May 15, 1953, Ser. No. 355,354
Claims priority, application France May 21, 1952
5 Claims. (Cl. 60—35.6)

1. In a turbojet unit having, in series flow arrangement, an air compressor, a combustion chamber, a turbine and a propulsive nozzle designed for forming the thrust-producing jet of said unit, a jet control device comprising auxiliary nozzle means opening into the propulsive nozzle at the discharge and thereof and substantially inclined with respect to the axis of said propulsive nozzle, piping means for tapping pressure gas from a point of said unit upstream of said turbine and downstream of at least a part of said compressor and supplying said pressure gas to said auxiliary nozzle means to be expanded therethrough and form an auxiliary jet generally cross-

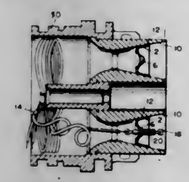


wise of the thrust-producing jet, valve means in said piping means, and means associated with said piping means for increasing the specific momentum of the flow of pressure gas therethrough.

3,020,710
SEALING MEANS FOR ROCKET NOZZLES

Stephen H. Herzog, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Mar. 29, 1956, Ser. No. 574,933
8 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



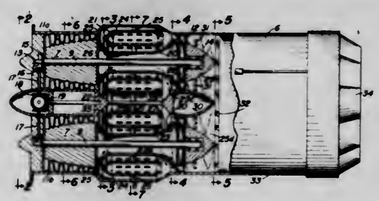
1. In a rocket motor of the type having an end member adapted to seal the after end of a rocket motor tube, said end member having a converging-diverging exhaust nozzle extending therethrough, said nozzle having an entrance portion of a shape formed by an inwardly convex curve of revolution, a throat portion rearwardly thereof, and a diverging fustro-conical portion rearwardly of the throat portion, the improvements in combination, comprising; means for sealing said nozzle against the atmosphere whereby the rocket motor may be stored for long periods without critical deterioration of its combustible contents, said last mentioned means comprising a closure member for said nozzle, said closure being of thermoplastic material and comprising a generally axial skirt of a size and shape to snugly fit a portion of the wall of the nozzle, said axial skirt terminating in a transverse frangible wall, said transverse wall comprising a thickened central button connected by a thinned outer portion to said axial skirt, said axial skirt being bonded and sealed to said nozzle wall by a suitable bonding and sealing material.

3,020,711
MULTIUNIT TURBOJET ENGINE

Robert W. Pinnes, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy

Filed Feb. 11, 1957, Ser. No. 639,579
6 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A multiunit turbojet engine comprising four rotatable parallel shafts, compressor units having rotor and stator blades, a compressor rotor drum carrying said rotor blades rotatably mounted on the upstream end of each of said shafts, a single stator blade supporting member in juxtaposition to said rotor drum carrying a portion of the stator blades for each of said rotor drums, a casing enclosing all four units, said stator blade supporting member being centrally mounted with said rotor drums equally spaced about the periphery thereof, the remaining stator blades being carried by the inner wall of said casing, a turbine rotatably mounted on the downstream end of each of said shafts, a common combustion chamber having a first and second outer wall, a first and second shroud forming said outer walls, a plurality of perforated shrouds forming the innermost walls of said common combustion

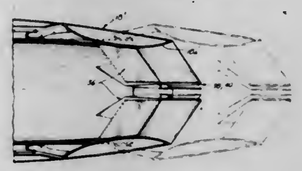


chamber and enclosing each of said shafts, a cooling shroud of lesser diameter than and concentric with each of said last mentioned shrouds, said common combustion chamber being operatively positioned between said compressors and said turbines, and fuel supply means supplying fuel to said common combustion chamber, whereby the outlet of each of said compressors discharges air under pressure into said common combustion chamber, the inlets of said turbines are supplied with hot gases from said common combustion chamber and all of said hot gases exhaust from said engine through a common exhaust nozzle imparting thrust to said engine.

3,020,712
REVERSIBLE-THRUST SOUND SUPPRESSION JET NOZZLES WITH MOVABLE EJECTOR RINGS

David M. Dolliver, Bellevue, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed June 22, 1959, Ser. No. 822,071
4 Claims. (Cl. 60—35.6)



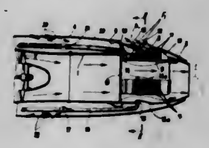
1. A jet engine noise suppression nozzle comprising a tubular nozzle duct having an exit end with a plurality of transversely disposed, peripherally separated stream dividers mounted in said duct, said stream dividers having bluff aft ends extending transversely to the direction of nozzle discharge and located substantially at said exit end, said stream dividers extending forwardly from said ends in said duct, a normally retracted ejector sleeve extending around said exit end and comprising a rearward extension from the exit end of said duct for confining the discharging gases issuing therefrom, means mounting said sleeve to permit rearward extension movement thereof from said duct to form a gap therebetween for admitting slipstream air into said sleeve, and a plurality of pairs of transversely disposed substantially parallel vortex generator plates mounted in said sleeve in substantially coplanar longitudinally extending alignment with the respective opposite edges of each of said bluff ends, the forward ends of said plates being located adjacent to said bluff ends

with the sleeve retracted, and the aft ends of said plates extending aft in the sleeve at least substantially to the aft end thereof.

3,020,713
THRUST SPOILING DEVICE FOR JET PROPULSION UNITS

Jean H. Bertin, Neuilly-sur-Seine, and Marcel Kadosch, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed Dec. 9, 1953, Ser. No. 397,228
Claims priority, application France Dec. 12, 1952
1 Claim. (Cl. 60—35.54)

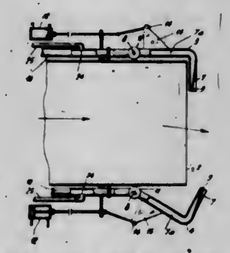


In a jet propulsion unit ending with a propulsive nozzle designed for expanding motive gas and having a pipe connecting said propulsive nozzle for conducting thereto a stream of motive gas, a thrust spoiling device comprising passage means at the periphery of said pipe upstream of said propulsive nozzle, said passage means extending laterally of the normal axial flow path of said stream and opening into the atmosphere at a substantial angle with the axis of said nozzle, to provide an auxiliary deflected exhaust path for said stream, blowing means extending at the periphery of said pipe and opening thereinto upstream of said passage means, said blowing means being designed for forming a screen-like fluid partition about the motive gas stream past the passage means, means for supplying pressure fluid to said blowing means, controllable means for cutting off the supply of pressure fluid, means for collecting ambient air and means for leading said ambient air to a point of the pipe located between the blowing means and the passage means, whereby the low-pressure wake zone which tends to arise at the side of the fluid partition opposite to the screen is filled with air.

3,020,714
DEVICE FOR CONTROLLING THE JET OF A REACTION PROPULSION MOTOR

Gerhard Eggers and Gunther Ernst, Dammarie les Lys, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France

Filed June 27, 1957, Ser. No. 668,423
Claims priority, application France July 3, 1956
9 Claims. (Cl. 60—35.54)

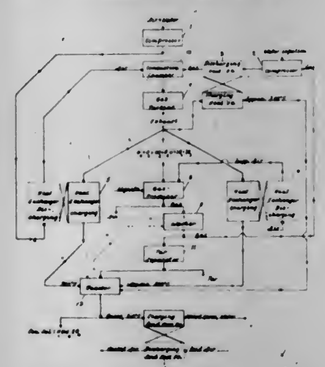


4. A device for controlling the gaseous stream issuing from the outlet of a jet propulsion unit, comprising the combination of a plurality of movable screen-like members distributed around said outlet, of separate operative means operating said members to a position wherein they project into said stream substantially perpendicular thereto to form a partial obstruction to the flow path thereof and to another position wherein they are retracted whereby the stream flows clear of said members, of nozzle means at the inward end of said members, said members being hollow and acting as blowing means, feeding said nozzle means with fluid under pressure for forming screen-like fluid jets extending the obstruction formed by said screen-like members, said nozzle means being directed towards the axis of the unit, whereby said screen-like fluid jets are in a substantially perpendicular direction relatively to the axis of the unit, when said members are in projected position of first flexible control means controlling said operative means to effect a rough control of the gaseous stream and of second flexible control means comprising auxiliary blowing means controlling said first mentioned blowing means to effect an accurate control of the gaseous stream.

3,020,715
METHOD OF IMPROVING THE THERMAL EFFICIENCY OF A GAS PRODUCER-GAS TURBINE ASSEMBLY

Alfred M. Thomsen, 265 Buckingham, Apt. 402, San Francisco, Calif.

Filed May 8, 1957, Ser. No. 657,871
2 Claims. (Cl. 60—39.12)

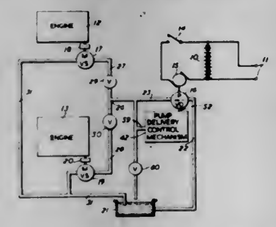


1. The method of improving the thermal efficiency of a gas producer-gas turbine assembly operating upon a fuel, selected from the group consisting of anthracite, bituminous coal, and lignite, containing both sulphur and nitrogen, which comprises; dividing the hot gas of the turbine exhaust, which consists of a mixture of nitrogen, oxygen, carbon dioxide, oxides of sulphur, and water vapor, into two portions; utilizing one portion as the air of combustion required by the gas producer thus converting the sensible heat contained therein into additional chemical energy as it passes through said fuel, and by its water content improving the conversion of the nitrogen of said fuel into ammonia; passing the second portion of the exhaust through heat accumulators, thus storing the sensible heat resident therein, and subsequently imparting said stored heat to traversing, relatively cool, gas and air, respectively, required in the operation of turbine and producer, by reversal of flow through said heat accumulators; injecting water into air and gas before said traverse through said heat accumulators thus enriching said gases in water vapor and improving the over-all efficiency of turbine and producer with increased yield of ammonia; washing the producer gas with water to remove, in part, said ammonia with attendant removal of tar and sulphur; separating the tar from the resulting ammoniated water and commingling said ammoniated water with the exhaust gas from the turbine after partial cooling of same by passage through the heat accumulators, thus converting said ammonia together with attendant sulphur into ammonium sulphate with simultaneous evaporation of water thus increasing the concentration of ammonium sulphate in said water; and further increasing said concentration by the re-use of said water solution of ammonium sulphate in the removal of ammonia and sulphur from producer gas.

3,020,716
STARTING SYSTEMS FOR GAS TURBINE ENGINES

Kenneth Howard Greenly, Luton, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain

Filed Oct. 7, 1959, Ser. No. 844,921
Claims priority, application Great Britain Aug. 8, 1957
2 Claims. (Cl. 60—39.14)



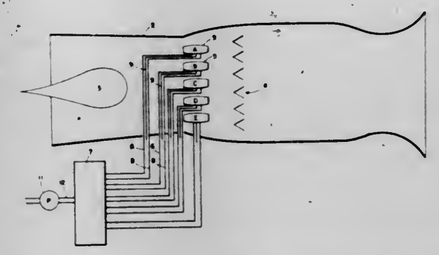
1. A system for supplying hydraulic fluid to a hydraulic starter motor of a gas turbine engine having a predetermined light-up speed, comprising an electric battery, a direct current electric motor having a falling load-speed characteristic, electrical connections from said battery to said electric motor, a variable displacement hydraulic pump, fluid connection means connecting said pump to said hydraulic starter motor, a driving connection between said electric motor and said pump, means for adjusting the volumetric delivery per revolution of said pump, means for sensing the delivery pressure of said pump, and an operative connection between said sensing means and said adjusting means, said sensing means, said operative connection and said adjusting means together serving to produce a reduction in volumetric delivery per revolution upon a rise in delivery pressure and conversely an increase in volumetric delivery per revolution, up to the maximum volumetric delivery per revolution, upon a fall in the delivery pressure, whereby said delivery pressure and the load imposed by said pump on said electric motor and the speed of said electric motor remain substantially constant up to said maximum volumetric delivery per revolution of said pump, and whereby a fall in delivery pressure at said maximum delivery per revolution of said pump reduces the load imposed by said pump on said electric motor and thereby increases the speed of said electric motor and said pump, and in which the maximum volumetric delivery per revolution of said pump and the volumetric capacity per revolution of said hydraulic starting motor are so selected that said maximum volumetric delivery of said pump is attained approximately at said light-up speed.

3,020,717
UNIFORM FUEL-AIR RATIO FUEL INJECTION SYSTEM

Rufus B. Pearce, Jr., Fullerton, Calif., assignor to North American Aviation, Inc.

Filed Jan. 16, 1958, Ser. No. 709,418
8 Claims. (Cl. 60—39.28)

1. Means for controlling the distribution of fuel being injected into a fuel-air burning power plant having a combustion chamber, said means comprising a plurality of fuel nozzles in substantially transversely spaced relationship within the inlet passage to a combustion chamber of a power plant, said nozzles substantially constructed and arranged in a plane which is at right angles to said inlet passage; fuel conducting means, means communicating with said fuel nozzles through said conducting means for controlling the overall amount of fuel to be injected

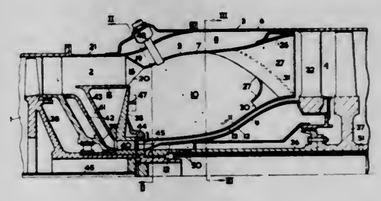


into said inlet passage through said nozzles, means adjacent each of said spaced nozzles to sense uneven air distribution in said passage, and means responsive to each of said last mentioned adjacent means for secondarily controlling the fuel flow to their respective adjacent nozzles individually to compensate for said uneven air-flow through said inlet passage so that burning occurs at a uniform fuel-air ratio.

3,020,718
COMBUSTION CHAMBER FOR A GAS TURBINE POWER PLANT PROVIDED WITH A ROTATING FUEL ATOMIZER AND A FLAME STABILIZING INLET STRUCTURE

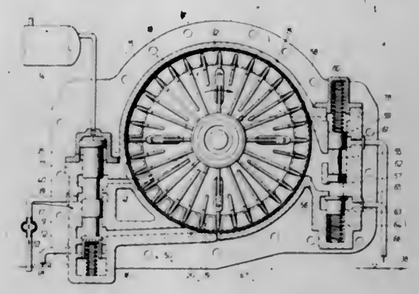
William Deacon, Church Crookham, Glyn Trevor Golesworthy, Barton-on-Sea, Edward Langford Hartley, Farnborough, and Peter Martin, Farnham, England, assignors to Power Jets (Research & Development) Limited, London, England, a British company

Filed July 20, 1959, Ser. No. 828,085
Claims priority, application Great Britain July 31, 1958
9 Claims. (Cl. 60—39.74)



1. Combustion apparatus comprising an outer wall externally bounding a combustion space; means defining an annular air inlet to the combustion space at one end thereof; a fuel-distributing member coaxially mounted within said inlet; means for introducing liquid fuel onto said member; means for rotating said member about its axis so that the fuel is discharged therefrom outwardly across said inlet; and fingers extending across said inlet, said fingers being circumferentially spaced from one another and being inclined from the radial direction in the direction of rotation of the fuel-distributing member so that they extend in the direction of fuel discharge and define flame stabilising zones on their downstream sides.

3,020,719
VARIABLE SLIP FLUID COUPLING
Ernst G. Seibold and Helmut K. Müller, Heidenheim (Brenz), Germany, assignors to J. M. Voith G.m.b.H. Maschinenfabrik, Heidenheim (Brenz), Germany
Filed June 20, 1957, Ser. No. 667,315
Claims priority, application Germany June 25, 1956
8 Claims. (Cl. 60—54)



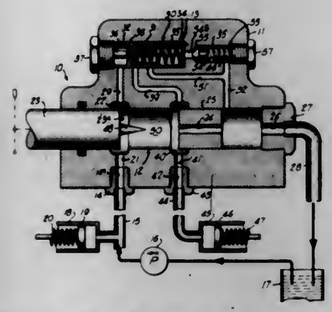
7. In a fluid coupling, a stationary housing, a pumping wheel and a turbine wheel within said housing forming a working chamber for receiving actuating fluid for said coupling, fluid supply means to supply fluid pressure to said chamber to provide a superimposed pressure, said pumping wheel circulating said fluid in said chamber to drive said turbine wheel and to produce a resultant centrifugal pressure in said fluid, said fluid coupling having a discharge outlet, and control means to control the flow of fluid from said discharge outlet, said control means being actuated by the centrifugal pressure in the fluid coupling to change the discharge from said outlet with change in said centrifugal pressure, the total force of said superimposed pressure acting on said control means being equal to zero, so that fluid is emitted through said outlet and the effective area of said outlet is varied as the centrifugal pressure and the slip of said coupling increases with increase of speed of said pumping wheel to reduce the relative speed of said turbine wheel.

3,020,720
METHOD AND MEANS FOR PRODUCING HYDRAULIC VIBRATIONS
Albert K. Spalding, 4240 Arcady St., Dallas, Tex.
Filed Feb. 20, 1957, Ser. No. 641,289
7 Claims. (Cl. 60—54.5)



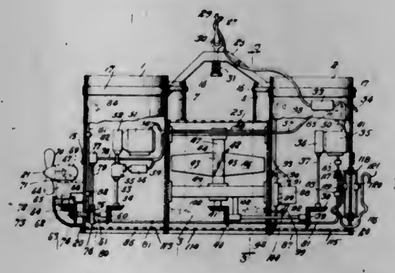
1. A method of creating vibrations consisting of directing the flow of a hydraulic fluid into intermittent contact with a fluid column for producing intermittent hydraulic pressure throughout the length of the fluid column, controlling the rate of frequency of the intermittent flow of the hydraulic fluid, translating the intermittent hydraulic pressures into mechanical vibrations, and recirculating the hydraulic fluid into contact with the fluid column for a continuous cycle.

3,020,721
CLUTCH AND BRAKE VALVE
William J. Hipp, Mount Pleasant, Wis., assignor to Webster Electric Company, Racine, Wis., a corporation of Delaware
Filed May 9, 1960, Ser. No. 27,715
14 Claims. (Cl. 60—97)



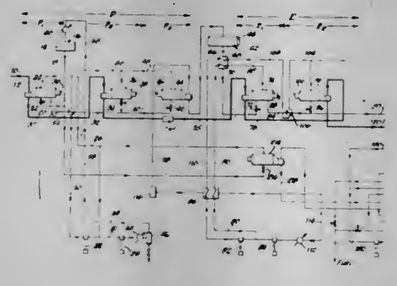
13. Control valving for use in a hydraulic system to direct fluid under a predetermined pressure to a first fluid operated device and to direct variable pressure fluid to a second fluid operated device, said valving including a manually operated valve piston movable in sequence within a valve bore from a neutral position through a first operating range and then by continued movement in the same direction through a second operating range, said valving including means effective when said valve is moved through the first range to conduct fluid under a predetermined pressure to said first fluid operated device and operable when said valve is moved through said second range to conduct said fluid under said predetermined pressure to said first fluid operated device and, at the same time, to conduct to said second fluid operated device fluid having a pressure which varies in accordance with the position of said valve piston.

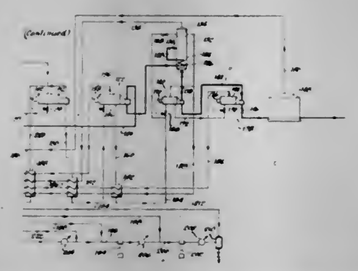
3,020,722
SUBMARINE VEHICLE
James R. R. Harter, 4953 Brandywine St. NW., Washington, D.C.
Filed Mar. 25, 1957, Ser. No. 648,364
6 Claims. (Cl. 61—69)



1. A submarine vehicle comprising in combination a carriage, at least one gas chamber having an open bottom, a source of pressurized gas and drive means mounted on said carriage, said gas chamber having sufficient gas capacity to displace more than its weight in water, conduit means interconnecting said source of pressurized gas and said gas chamber, said conduit including pressure sensitive valve means intermediate the ends thereof, said valve being responsive to a pressure difference between said chamber and ambient water pressure, the valve being located inside the chamber and in direct communication with the ambient water through said open bottom and an open exhaust conduit through the wall of said chamber the outer end of the exhaust conduit being positioned below the inner end, said exhaust conduit being operative when the pressure in said chamber exceeds the ambient water pressure, whereby the gas volume of the chamber remains constant under varying pressure.

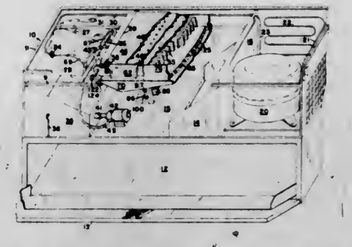
3,020,723
METHOD AND APPARATUS FOR LIQUEFACTION OF NATURAL GAS
James De Lury and Alexander Russell Young, Kansas City, Mo., and William W. Bodle, Deerfield, Ill., assignors, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed Nov. 25, 1957, Ser. No. 698,667
11 Claims. (Cl. 62—9)





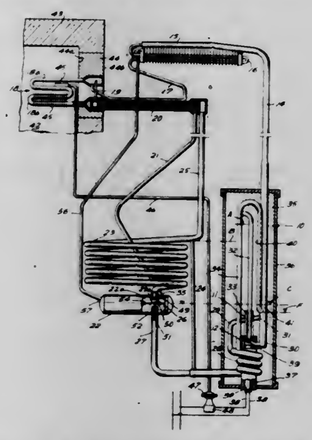
1. The method of liquefying a gas comprising the steps of supplying the gas in a process stream at an elevated temperature and pressure, removing heat from the gas to refrigerate the gas to a temperature at which it is condensed to a liquefied state at the pressure conditions existing, expanding the liquefied gas to lower pressures for storage and transportation whereby a portion of the cold liquefied gas is flashed off upon expansion with further reduction in temperature, separating the flashed vapors from the liquid, removing moisture from the process stream to reduce the moisture content to a level below the dew point at temperature conditions existing during the process to prevent the formation of frozen solids, and in which the refrigeration system for heat exchange to remove heat from the process stream comprises a substantially closed system embodying a compression and expansion cycle wherein the expansion is subdivided into a high pressure segment and a low pressure segment with the refrigerant from the high pressure segment flowing to the lower pressure segment for further expansion and cooling and wherein the process stream passes in heat exchange relation with the refrigerant first with the high pressure segment and then with the low pressure segment.

3,020,724
ICE MAKING
William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,719
8 Claims. (Cl. 62—68)



1. In an ice making machine, the combination of a grid containing a plurality of refrigerated cells within which a liquid to be frozen may be confined and frozen to form ice of a desired configuration, means for closing the bottoms of the refrigerated cells to confine the liquid to be frozen, and means for supplying liquid to the cells of the grid, said supplying means comprising distribution means directing liquid to be frozen into the tops of the cells of the grid; and deflecting means arranged over the grid to restrict the opening of the cells to cause agitation of the liquid supplied thereto, whereby the liquid to be frozen will be agitated in the cells to release impurities therefrom providing relatively pure ice.

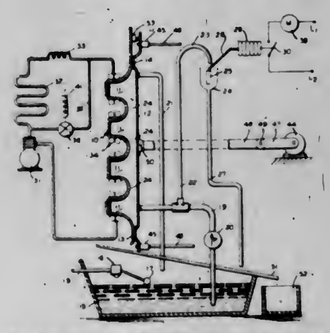
3,020,725
ABSORPTION REFRIGERATION
Wilhelm Georg Kogel, Stockholm, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed June 9, 1959, Ser. No. 819,098
Claims priority, application Sweden June 11, 1958
10 Claims. (Cl. 62—110)



1. In the art of refrigeration with the aid of a system in which refrigerant vapor is expelled from absorption liquid in a vapor expulsion unit, refrigerant vapor is condensed to liquid in a condenser cooled by ambient air, liquid refrigerant condensed in the condenser is introduced into an evaporator and evaporates therein in the presence of an inert gas to form a gas mixture, refrig-

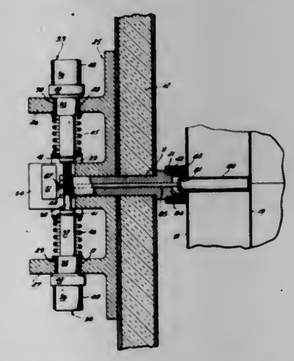
erant vapor is absorbed from inert gas by absorption liquid in an absorber cooled by ambient air, inert gas is circulated in a circuit through and between the evaporator and absorber and absorption liquid is circulated in a path of flow through and between the vapor expulsion unit and the absorber, the improvement which comprises the steps of flowing absorption liquid through the absorber by gravity in the presence of the inert gas in an elongated path having an inlet at one level and an outlet at a lower level, holding in a first place in communication with the inert gas circuit a body of absorption liquid having a liquid surface which is at a lower level than that of the absorber outlet and whose level is dependent upon the absorption liquid discharged from the outlet into a body of liquid in a second place having a region below its surface in communication with a region below the surface of the liquid body in the first place, supplying substantially pure liquid refrigerant in the system to the liquid body in the first place to increase the concentration of refrigerant in the top liquid surface layer of the liquid body to a value which exceeds the concentration of refrigerant in the absorption liquid flowing from the outlet of the absorber, maintaining in a vapor space in the first place, in intimate physical contact with the liquid body therein, a gaseous blanket comprising a mixture of inert gas and refrigerant vapor which is relatively stagnant and sufficiently unaffected by circulation of inert gas in its circuit to increase the partial pressure of refrigerant vapor in the gaseous blanket until it reaches a state of equilibrium with the liquid and has a value corresponding to the concentration of refrigerant in the top liquid surface layer of the liquid body, flowing uncondensed refrigerant vapor from the outlet end of the condenser to the vapor space in the first place to increase the total pressure in the system in accordance with increases in ambient air temperature, and promoting the increase in the total pressure in the system by introducing the uncondensed refrigerant vapor into the vapor space in the first place as substantially pure refrigerant and in the same physical state as when it leaves the outlet end of the condenser to increase further the concentration of refrigerant in the top liquid surface layer of the liquid body in the first place and also proportionately increase the partial pressure of refrigerant vapor in the gaseous blanket in intimate physical contact therewith.

3,020,726
ICE MAKING APPARATUS
David Earle MacLeod, Syracuse, N. Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Sept. 12, 1957, Ser. No. 683,599
2 Claims. (Cl. 62—138)



1. In an ice making machine, the combination of a plurality of ice forming chambers, cover means to seal the ice forming chambers, a sump, an inlet conduit for conveying water from the sump to said chambers, an outlet conduit for conveying water from the chambers to said sump, means for refrigerating the chambers to form ice therein, means for heating the chambers to harvest the formed ice, a water backup tube connected to the inlet conduit for conducting water from the inlet conduit when the flow of water through the chambers is impeded by the formation of ice, a predetermined increase in pressure of water in the inlet conduit during ice formation causing water to flow through said backup tube, and means responsive to the flow of water through said backup tube to initiate ice harvesting and move the cover means away from the ice forming section.

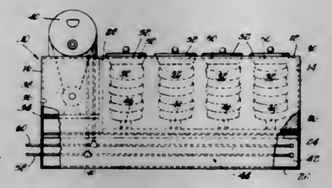
3,020,727
HEAT MOTOR FOR A ROTARY ICE TRAY
James K. Lund, Northfield, Carl C. Bauerlein, Lincolnwood, and Jerry C. Janquart, McHenry, Ill., assignors to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Nov. 2, 1959, Ser. No. 850,371
8 Claims. (Cl. 62—138)



1. In an ice making apparatus comprising a support, an ice tray journalled within said support and disposed within a freezing compartment, means for filling said ice tray with fluid to be frozen into ice blocks, said ice tray being rotatable to permit gravitational ejection of ice blocks therefrom, the improvement of means for rotating said ice tray comprising a shaft connected to said ice tray along the rotational axis thereof, a mechanical transducer tangentially disposed relative to said shaft and drivingly connected therewith, power means disposed at opposite ends of said transducer, and means for alternately energizing said power means to effect longitudinal movement of said transducer and consequent rotational movement of said shaft and tray, said power means being movably mounted relative to each other in the direction of movement of said transducer.

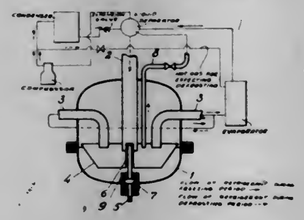
3,020,728
APPARATUS FOR MAKING AND STORING A FROZEN CONFECTION
Morris M. Lande, 601 W. 110th St., New York, N.Y.
Filed Aug. 31, 1959, Ser. No. 837,183
2 Claims. (Cl. 62—199)

1. Apparatus for producing and storing a frozen confection comprising: cabinet means; a plurality of vertically disposed container-receiving means secured within said cabinet means, each of said container-receiving means being laterally encircled by refrigerant flow-channels; refrigeration means disposed within said cabinet means, including refrigerant inlet and vacuum lines communicating with the flow channels in each of said container-receiving means to connect said container-receiving means in a parallel refrigeration circuit, said vacuum line including a main line and a plurality of forked branch lines, each of said forked branch lines including a conduit associated with relatively high rates of refrigerant flow and a conduit associated with relatively low rates of refrigerant flow, each of said branch lines connecting the refrigerant flow channels of one of said container-receiving means to said main line; and control means for regulating the flow of refrigerant in said refrigeration means and in said flow channels to establish and maintain a selected, low temperature within each of said container-receiving means, said control means including valve means in each



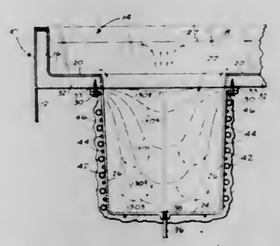
conduit of each of said branch lines, the valve means in said high rate line being normally closed for maintaining the corresponding receiving means at a relatively high, dispensing temperature and the valve means in said low rate line being responsive to opening of said first mentioned valve means for establishing and maintaining a relatively low temperature in said corresponding receiving means, said control means further including inlet valves in said refrigerant inlet line individually associated with each of said container-receiving means, each of said inlet valves being slaved to the temperature in the corresponding branch line upstream of said fork whereby to regulate the refrigerant flow to the respective container-receiving means.

3,020,729
VALVE FOR REFRIGERATING MEDIUM EVAPORATORS
Johan Axel Ivar Brandin, Hogalidsvagen 8, Finspong, Sweden
Filed Dec. 30, 1958, Ser. No. 783,816
Claims priority, application Sweden Jan. 13, 1958
5 Claims. (Cl. 62—218)



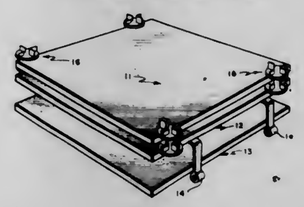
1. A valve for use in a refrigeration system in which, during defrosting periods warm gas is caused to flow through the evaporator of the system in the direction opposite to that in which the cooling medium flows during a refrigeration period so that the liquid cooling medium is driven from the evaporator during the defrosting period and stored in a receiving container connected in a conduit between the condenser and evaporator of the refrigeration system, comprising a closed receptacle connected in conduits between the receiving container and the evaporator, said closed receptacle having an upwardly open basin-shaped valve located therein and freely movable in the vertical direction, the conduit between the evaporator and said closed receptacle extending into said basin-shaped valve in the downward direction and having egress means arranged symmetrically with respect to the center of said basin-shaped valves, the imaginary plane extending through said agress means being parallel to the bottom of said basin-shaped valve, said valve in its uppermost position closing the conduit to said receiving container, while leaving a small play between itself and the egress means of the conduits leading to the evaporator.

3,020,730
ICE MAKING APPARATUS
Gilbert W. Harris, Sr., Portland, Oreg., assignor to Water Process Corporation, Portland, Oreg., a corporation of Oregon
Filed Aug. 3, 1959, Ser. No. 831,270
9 Claims. (Cl. 62—307)



1. In block ice making machinery having air jet means for producing a stream of air through a block of ice, air supply means for said air jet means comprising the combination of an air compressor for compressing air having an intake and an outlet, conduit means connecting the outlet of said compressor and said air jet means, and a bleeder valve with an outlet wasting said air jet means included in said conduit means providing for the bleeding through its outlet of controlled amounts of compressed air from the conduit means, said bleeder valve and air jet means in concert providing for the discharge of compressed air from said air compressor.

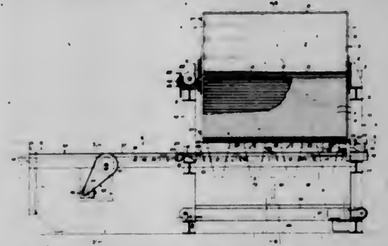
3,020,731
SPACER FOR FREEZER PLATES
Frank W. Knowles, 2021 Alaska St., Seattle 8, Wash.
Filed July 8, 1960, Ser. No. 41,609
9 Claims. (Cl. 62—341)



1. A pair of freezer plates and a spacer therefor, comprising: a pair of freezer plates with each plate having extensive top and bottom congruent planar sides, and each of said plates having a rim bordering, between, and narrowly spacing its said sides, and said plates being in congruency, one above the other with free surfaces of said sides in spaced opposition; and a spacer turret between and spacing apart said plates, said turret having: a bracket secured to the rim of one of said plates, said bracket having a surface coplanar with said one plate free sur-

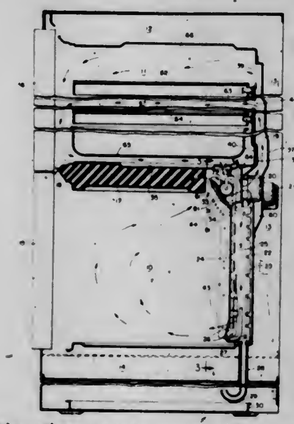
face; a plinth having opposite faces with one of said faces contacting said coplanar surfaces; pivot means centrically of said plinth pivoting it to said bracket; blocks peripherally arranged about and secured to the other face of said plinth, said blocks being of various heights measured normal to said plinth one face, and said plinth and blocks being so dimensioned and located that said blocks may be selectively and operatively positioned between said free surfaces of said plates by rotation of said plinth on said pivot whereby the spacing of said plates may be varied.

3,020,732
APPARATUS FOR FREEZING COMESTIBLES
Walter H. Carpenter, 4802 S. 19th Ave., Tampa, Fla.
Filed Oct. 30, 1958, Ser. No. 770,741
33 Claims. (Cl. 62—345)



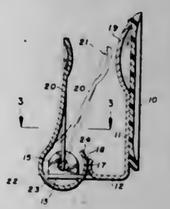
1. Apparatus for individually freezing comestibles comprising an internally refrigerated surface movably mounted in an insulated refrigerating chamber, means for applying comestibles to said surface at a pressure which at the temperature of said surface causes said comestibles on application to adhere individually thereto, means for moving said surface in said chamber without relative movement between said surface and the applied comestibles for freezing said comestibles, and means for detaching the applied comestibles after freezing from said surface.

3,020,733
HOME APPLIANCE
Earl F. Hubacker and John E. Krug, Evansville, Ind., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Apr. 20, 1959, Ser. No. 807,671
17 Claims. (Cl. 62—414)



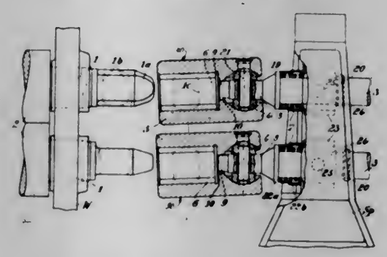
1. Refrigerating apparatus, comprising: means forming a relatively low temperature first chamber; means forming a relatively high temperature second chamber; means forming a mixing chamber; means for circulating a first air stream in a closed circuit through the first chamber and a second air stream in a closed circuit through the second chamber; means directing both air streams through the mixing chamber for intermingling therein; and means for cooling only said first air stream at a point downstream from said mixing chamber, the means for circulating the second stream being free of cooling means downstream from said mixing chamber.

3,020,734
ADJUSTABLE SPRING CLAMP FOR EARRINGS
Harold E. Withers, 30 Massachusetts Ave., Poland 14, Ohio
Filed Apr. 25, 1960, Ser. No. 24,433
1 Claim. (Cl. 63—14)



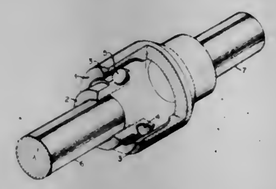
An earring having a support arm with an ornament thereon, an arcuate member and a pair of spaced oppositely disposed apertured brackets on said support arm, one surface of said arcuate member being serrated, a spring arm having separate spaced side sections the ends of which are axially aligned, outturned and pivotally engaged in said apertured brackets, said spring arm having a resilient central portion extending between said side sections and including a resilient free end portion formed on a radius, said end portion extending substantially 260 degrees about a center lying on a line joining said outturned ends, the outer surface of said end portion having a serrated surface engaging said serrated surface on said arcuate member.

3,020,735
AUTOMATICALLY OPERABLE ARTICULATED COUPLING MEANS BETWEEN THE ROLLS OF A ROLLING MILL AND THEIR DRIVE SPINDLE MEANS
Ludwig Wegmann, Duisburg, Germany, assignor to Demag Aktiengesellschaft, Duisburg, Germany
Filed Jan. 12, 1960, Ser. No. 1,928
Claims priority, application Germany Jan. 16, 1959
12 Claims. (Cl. 64—8)



1. A coupling connecting a driving and a driven member for rotation together, comprising a sleeve mounted on one of said driving and driven members for pivotal movement about at least one axis other than the member rotational axis and being secured to said member for rotation therewith, said sleeve and the associated member being jointly displaceable in an axial direction, and means to bias said members with said sleeve in a direction toward the other of said members, the other of said driving and driven members being insertable into said sleeve, said insertable member and said sleeve having complementary substantially straight faces which are engageable for rotating said driving and driven members together.

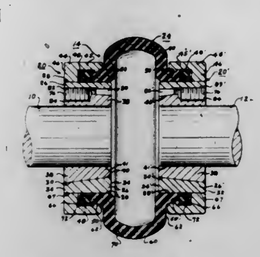
3,020,736
FLEXIBLE COUPLING
Edwin F. Babelay, Knoxville, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 20, 1959, Ser. No. 854,523
3 Claims. (Cl. 64—8)



1. An improved flexible shaft coupling for operation at speeds in excess of 14000 r.p.m. and which requires no lubrication comprising coaxial, concentrically disposed driving and driven sleeve members, one of said sleeve members being provided with at least three equi-angularly disposed axially extending and longitudinally extending ball races, the other of said sleeve members being provided with at least three equi-angularly disposed ball recesses of spherical segment configuration in register with said races, and a nylon ball disposed in each of said recesses and extending into the corresponding race, said balls, recesses, and races having radii of curvature substantially equal, the outer diameter of one of said sleeves being slightly less than the inner diameter of the other of said sleeves to thus provide a radial clearance therebetween, said clearance being sufficiently great to avoid metal-to-metal contact between said sleeve members during operation and to accommodate axial displacement and both parallel and angular misalignments, said clearance also providing a radial clearance between said balls and said recesses during operation to thereby essentially prevent undesirable vibration fluctuations from being transmitted to the driven sleeve member from the driving sleeve member, said sleeve members being respectively affixed to a driving shaft and a driven shaft.

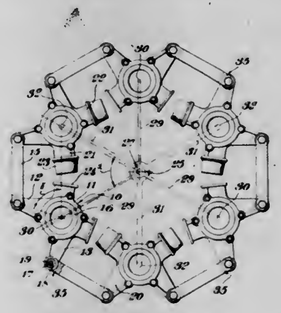
3,020,737
COUPLING
David Firth, South Bend, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana
Filed June 13, 1960, Ser. No. 35,810
17 Claims. (Cl. 64—11)

1. A flexible coupling for connecting two shafts in end-to-end relation, comprising flanges for said shafts, each flange having a split bushing, a split hub surrounding said bushing in face-to-face contact therewith, a ring surrounding said hub but spaced from the external surface thereof, an annular flexible member with annular laterally projecting beads on each side thereof extending into the space between the respective hub and ring, and



means between said bushing and hub for contracting said bushing about the shaft and expanding said hub into firm contact with the bead of said flexible member.

3,020,738
TORQUE TRANSMISSION COUPLINGS
Marcus Horovitz, Leicester, England, assignor to Metalastik Limited, Leicester, England, a British company
Filed Mar. 14, 1960, Ser. No. 14,676
Claims priority, application Great Britain Mar. 17, 1959
9 Claims. (Cl. 64—19)

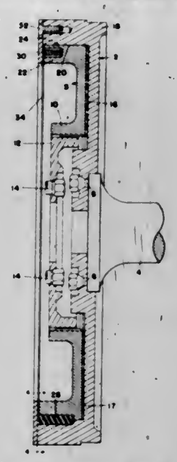


1. A flexible torque transmission coupling for drivably connecting a driving element with a driven element, comprising an articulated ring of rockers and links, there being at least two rockers for pivotal connection to the driving element at points spaced round a common pitch circle and arranged in circumferential alternation with a like number of similar rockers for pivotal connection to the driven element also at points spaced round said common pitch circle, each rocker being connected to the rocker on either side of it by a pair of the links which are hinged to the rockers by torsionally resistant resilient elements.

3,020,739
TORQUE TRANSMITTING DEVICE
Charles C. Roe, East Peoria, Ill., assignor to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Filed May 11, 1960, Ser. No. 28,460
14 Claims. (Cl. 64—27)

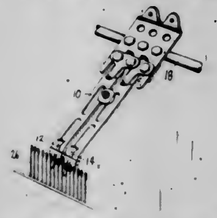
1. A rotatable first mass having a friction surface and a second surface, a rotatable second mass having a friction surface in close proximity to the friction surface of said first mass and having a second surface in close proximity to said second surface of the first mass, the two masses having an equal number of a plurality of recesses

in their respective second surfaces arranged in pairs and cooperating to form cavities, a resilient elastic substance



in each such cavity, and means resiliently biasing the two friction surfaces together.

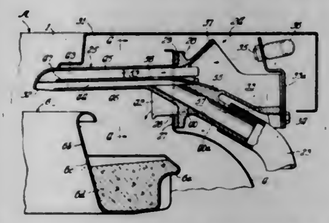
3,020,740
METHOD OF KNITTING FABRIC WITH VARI-COLORED PATTERN
Estephan D. Estephanian, Worcester, and Kenneth V. Packard, Robert L. Clouthier, and Edward J. Boutillette, Oxford, Mass., assignors to M.K.M. Knitting Mills, Inc., Manchester, N.H., a corporation of New Hampshire
Filed Nov. 13, 1959, Ser. No. 852,870
2 Claims. (Cl. 66—136)



1. The method of knitting a patterned fabric on a full-fashioned knitting machine having conventional needles, sinkers and dividers, which comprises laying against said needles for each course a resiliently extensible yarn of one color and a smaller inextensible yarn of another color, the extensive yarn leading the inextensible yarn in every other course, the inextensible yarn leading the extensible yarn in the intervening courses, advancing the sinkers successively to form said yarns into loops as they are laid against successive needles, advancing the dividers to equalize the loops, and drawing down the needles to knit the course.

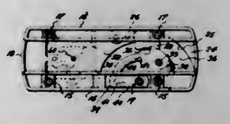
3,020,741
WATER SUPPLY MEANS FOR WASHING MACHINE
Charles R. Waldrop, Herrin, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 31, 1959, Ser. No. 863,169
8 Claims. (Cl. 68—23)

1. In a washing machine comprising a cabinet containing a basket having a top clothes-receiving opening; a backguard extending upwardly of the top of said cabinet at the rear thereof; and means, including a flume, for supplying fresh water under high and low pressures directly to the basket and disposed within said cabinet in spaced relation to said backguard, said basket having an annular receptacle surrounding and disposed adjacent the top thereof and said receptacle also having apertures



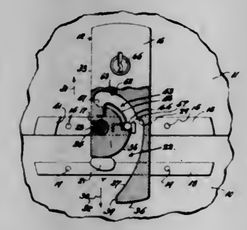
therein communicating with said basket for flow of water from the receptacle into the basket, said flume including separate passages for respectively directing fresh water under high pressure into the clothes-receiving opening in said basket and directing fresh water under low pressure into said receptacle and flow through said apertures into the basket.

3,020,742
LATCH AND LOCK DEVICE FOR CONTAINERS
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed Mar. 7, 1960, Ser. No. 13,243
4 Claims. (Cl. 70—69)



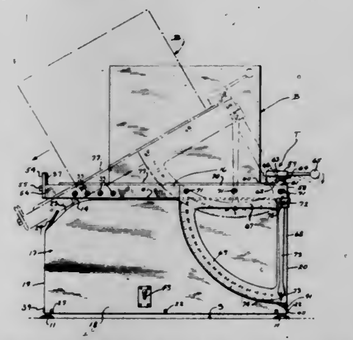
1. A latching device for releasably retaining separable parts of a container or the like closed together comprising a hollow longitudinal pivot bar adapted to be affixed to a marginal edge portion of one of said parts parallel thereto, a pivot element carried by said pivot bar, a hollow substantially rectangular body member having the marginal portion of one of its long sides superposed upon the pivot bar and having an internal bearing boss to journal said pivot element, whereby to rotatably support said body member for scissor-like movement relative to said pivot bar, the journaled end portion of the pivot element having an enlargement countersunk in the bearing boss, an inlay plate seated on and affixed to the bearing boss and over said enlargement of the pivot element and concentric to the latter, whereby to retain said body member against separation from the pivot bar, a longitudinal latching bar adapted to be affixed to a marginal edge portion of the other of said separable parts in spaced away parallel relation to the pivot bar, whereby the marginal portion of the other long side of the body member will overlie said latching bar when the container parts are closed together, a latch lug carried by the latching bar, said body member having an internal latch boss providing a latching shoulder opposed to the pivotal connection of the body member to the pivot bar and defining a passageway between said latch boss and inlay plate adapted to receive said latch lug for engagement by said latching shoulder, a stop boss at the inner end of the latching shoulder and engageable by the latch lug of the latching bar to limit turning movement of the body member to its latching position, an end of the body member having a latch lug entranceway to said passageway, detent means comprising a check piece radially offset from the pivot element and projecting exteriorly from the pivot bar toward the body member, a leaf spring supported within the pivot bar to exert thrust against said check piece, and said inlay plate in the body member having detent means cooperative with said check piece, whereby to yieldably retain said body member in its respective latching or released positions.

3,020,743
LUGGAGE LATCHING DEVICE
Charles S. Gehrie, Montclair, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed Feb. 11, 1959, Ser. No. 792,526
5 Claims. (Cl. 70—69)



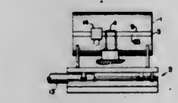
1. A luggage latching device for releasably fastening together separable parts of a container or the like comprising a longitudinal pivot bar adapted to be affixed to a marginal edge portion of one of said parts parallel thereto, a pivot member projecting outwardly from said pivot bar intermediate its ends, a substantially rectangular body member having the marginal portion of one of its long sides superposed upon the pivot bar and journaled on the pivot member so as to be rotatable with scissoring movement relative to said pivot bar, a longitudinal anchor bar adapted to be affixed to a marginal edge portion of the other of said separable parts in spaced apart parallel relation to the pivot bar for cooperation with the other long side of said body member, said long sides of the body member being coextensive with said pivot and anchor bars so as to span and overlie the same in concealing relation thereto in its latching position operative to hold the container parts closed together, a latching lug upstanding from said anchor bar intermediate its ends, said body member having latching means to cooperate with the latching lug of said anchor bar, said latching means comprising inner and outer margins forming a downwardly open arcuate passageway in the underside of the body member, the inner margin being concentric to the pivotal connection of said body member with the pivot bar and the outer margin being eccentric to said pivotal connection, said passageway having an inner end terminating adjacent to the pivotal connection of the body member with the pivot bar and an open outer end providing an entranceway through the juncture of an end and the first mentioned long side of the body member, all whereby, when the body member is turned to a release position to extend transverse to the pivot bar and anchor bar, the latching lug can be entered through said entranceway into the body member, and thereupon, when the body member is turned to be disposed parallel to the pivot bar and anchor bar in its latching position, said anchor lug will ride into the passageway to the inner end thereof so as to be engaged by the body member thereby to hold said separable parts of the container latched together in closed relation.

3,020,744
FRICTION TESTER
Fleming D. Long, Chicago, Ill., assignor, by mesne assignments, to Liberty Engineering Company, Beloit, Wis.
Filed Mar. 17, 1960, Ser. No. 15,725
5 Claims. (Cl. 73—9)



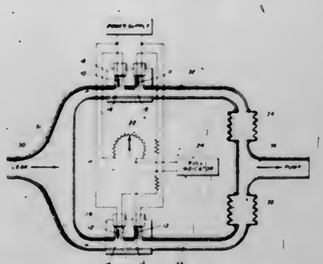
1. A device for testing the skid resistance between materials comprising, a base plate, a reversible motor and a gear reduction mechanism in drive connection with said motor mounted on said plate, said gear reduction mechanism having a drive shaft extending transversely thereof and providing a hub on each end, a cover having front, rear, side and top walls fitted over said motor and gear reduction mechanism and secured to said plate, said cover having an enlarged opening in portions of said top and front walls above and in alignment with said hubs, a pair of brackets, each keyed to a respective hub and in one position projecting vertically through a respective portion of said enlarged opening and terminating above said top wall, a testing table carried by said brackets and being parallel to said base plate in its inactive at rest position, means secured to said table adjacent one end thereof for firmly holding a sample thereto, means including an arcuate scale and indicator for indicating the angle of tilt of said table, stop means at the opposite end of said table for limiting the movement of a loose sample placed thereon, and means between a source of power and said reversible motor for starting and stopping said motor.

3,020,745
METHOD OF FLAW DETECTION IN A METAL MEMBER
Alexander J. Sielicki, Thiensville, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Nov. 13, 1958, Ser. No. 773,602
6 Claims. (Cl. 73—15)



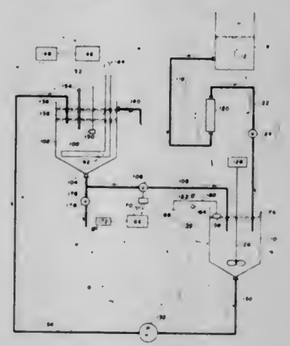
1. In the method of detecting flaws in a metal member by electrically heating the member to establish a temperature pattern having hot spots adjacent the defect and traversing the surface with an infrared sensitive device to detect the hot spots, the improvement which comprises covering the surface to be inspected with a high emissivity material to amplify the emission of the infrared energy from the surface.

3,020,746
THERMAL CONDUCTIVITY LEAK DETECTOR
Clarke C. Minter, 3136 Dumbarton Ave. NW., Washington, D.C.
Filed Dec. 30, 1960, Ser. No. 79,760
2 Claims. (Cl. 73—27)



1. A leak detector for detecting and locating leaks in a vessel being evacuated comprising fixed and variable resistances connected in the form of a Wheatstone bridge in which the active elements on one diagonal of the bridge are mounted in a metal block positioned in the same vertical plane with, and a suitable vertical distance from, a similar metal block in which the active elements of the other diagonal are mounted, a gas conduit bifurcated in a vertical plane to cause the air flowing from the vessel under evacuation to the vacuum pump to form two approximately equal streams to flow through the two similar metal blocks in which the active bridge elements are positioned, means for equalizing the airflow and/or the pressure in the two metal blocks, power means for actuating the bridge, and means for indicating when said bridge is unbalanced.

3,020,747
DYNAMIC DEMULSIBILITY METHOD AND APPARATUS
Elmer W. Brennan, West Dundee, and Robert G. Moyer, Nunda Township, McHenry County, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Mar. 11, 1960, Ser. No. 14,349
8 Claims. (Cl. 73—53)



7. A dynamic demulsibility apparatus comprising, in combination, a reservoir, means for indicating the temperature of said reservoir, means for maintaining said reservoir at a substantially constant temperature, means for maintaining a substantially constant level in said reservoir, a draw-off connected to the bottom of said reservoir, a control valve in said draw-off, a mixing chamber connected to said draw-off, a supply tank, a supply-tank conduit means connected between said supply tank and said mixing chamber, flow-control means in said conduit means, and a return conduit from said mixing chamber to said reservoir, said return conduit terminating in said reservoir at a point above said draw-off and below said liquid level.

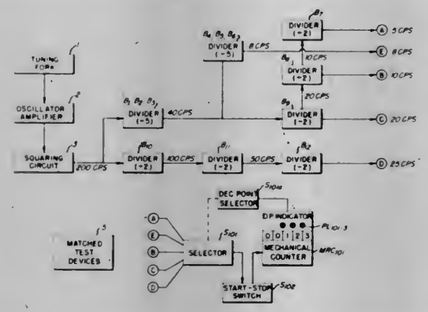
3,020,748
DEVICE FOR USE IN DETERMINING GEL FORMING TIME OF BLOOD
Bruce D. Marshall, 936 El Cajon, Palo Alto, Calif., and Harry C. Ehrmantraut, 541 Hawthorne Ave., Los Altos, Calif.
Filed May 18, 1959, Ser. No. 813,916
12 Claims. (Cl. 73—53)



1. A device for measuring the gel forming time of a blood sample comprising; a rotor motor and a rotor connected therewith for rotation thereby upon actuation of said rotor motor, a timer motor and a recording timer connected therewith for rotation thereby to record the period of time of actuation of said timer by said timer motor, a receptacle for a fluid such as a blood sample, said rotor including a shaft rotatable about its axis upon actuation of said motor and an arm extending generally longitudinally of said shaft spaced radially therefrom and connected with said shaft for revolving about the latter in a circular path and in a vertical plane when said shaft is rotated, means for supporting said receptacle in a position for movement of said arm in one direction into said receptacle and through such blood sample when the latter is in said receptacle during the movement of said arm at its lowermost position in said path whereby gel formed from said sample will be lifted from said receptacle suspended from said arm for movement of said gel in a circular path substantially corresponding with that of said arm, a pair of spaced electrodes in said path of such gel during said upward movement thereof for connection by such gel upon said gel being carried to said electrodes, an electrical circuit including said electrodes, said rotor motor and said timer motor, a switch in said circuit for simultaneously closing the latter for causing simultaneous actuation of said motor rotor and said timer motor, said circuit including means for discontinuing flow of current to said timer motor actuatable by connecting said electrodes by said gel whereby the gel forming time of said sample will be measured and recorded.

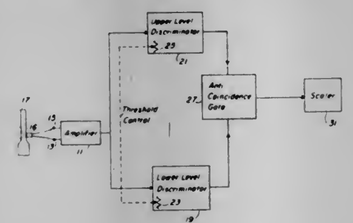
3,020,749
TIMER-COMPUTER
Wendell P. Cropper, Lansing, and Bruce Allen Ritzenthaler, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Dec. 31, 1958, Ser. No. 784,233
1 Claim. (Cl. 73—54)

A viscosimeter-computer apparatus suitable for use with remotely located viscosimeters comprising: a plurality of viscosimeter stations, each station including a plurality of viscosimeters each having a different viscosimeter constant relating a measuring period to fluid viscosity; a central frequency source unit including a single tuning fork oscillator providing accurately timed pulses; a plurality of electronic binary frequency dividers in said source unit adapted to produce a plurality of frequencies from said oscillator corresponding to said viscosimeter constants; a plurality of remotely located counting units, each unit disposed at one of said viscosimeter stations and communicating with said frequency source unit; means in each of said counting units for selecting one of said



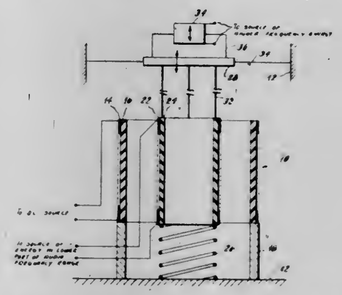
plurality of frequencies corresponding to a selected viscosimeter; means in each counting unit for counting the number of pulses received during a measuring period and for visibly indicating the number of such counts in units of fluid viscosity; and manual switch means in each of said counting units for engaging the counting and visibly indicating means with the selected frequency during the viscosimeter measuring period.

3,020,750
DIGITAL Q METER
William L. Briscoe, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 16, 1960, Ser. No. 56,610
5 Claims. (Cl. 73—67.2)



1. Apparatus for measuring the Q of a resonant device from which device, for a particular mode of oscillation, sinusoidal electrical output pulses proportional to the amplitude of the oscillations can be obtained, comprising means for deriving and amplifying the sinusoidal electrical output pulses from said resonant device, upper level amplitude discriminator means excited by the output pulses from said deriving and amplifying means, said upper level discriminator means being adapted to produce an electrical output pulse of a predetermined duration less than the duration of the excitation pulse each time the excitation exceeds a predetermined operating threshold level, lower level amplitude discriminator means excited by the output pulses from said deriving and amplifying means, said lower level discriminator means being adapted to produce an electrical output pulse of a predetermined duration less than the duration of the excitation pulse each time the excitation exceeds a predetermined operating threshold level below the operating threshold level of said upper level discriminator means, electronic gating means responsive to the electrical output pulses from said upper level and lower level amplitude discriminator means, said electronic gating means being adapted to produce an electrical output pulse only upon receiving an output pulse from said lower level discriminator in the absence of an output pulse from said upper level discriminator, and means adapted to count the output pulses from said electronic gating means, whereby when a series of logarithmically decaying electrical output pulses is derived by said apparatus from said resonant device there is obtained a count of the number of pulses occurring while the pulse amplitude at the output of said deriving and amplifying means decays between the limits determined by the operating threshold levels of said upper level and lower level amplitude discriminator means, thereby affording a measure of the Q of said resonant system.

3,020,751
WIDE FREQUENCY RANGE ELECTRO-MECHANICAL VIBRATOR
Robert J. Wohl, New York, N.Y. (87—23B 217th St., Queens Village 27, N.Y.)
Filed Aug. 29, 1956, Ser. No. 606,934
6 Claims. (Cl. 73—71.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

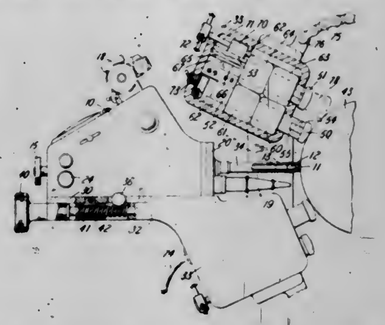


5. A device for subjecting a specimen object to vibratory movements over a wide frequency range, with a displacement which is substantially constant over the entire range of frequencies which comprises a structure, resilient suspension means mounting said structure for vibratory movement, an electrostrictive element supported about midway of its height on said structure and free to vibrate in both directions from its support, having an exposed upper surface on which said specimen object may be supported, means for causing vibratory movement of said structure in one frequency range, means for causing additional vibratory movement of said element in another and higher frequency range, whereby when said object is in contact with said element for vibratory movement therewith, it will partake of the vibrations in both frequency ranges which are added linearly.

3,020,752
ATTACHMENT DEVICES FOR HARDNESS TESTING INSTRUMENTS
James Kitchener Pocknee, Bracknell, England, assignor to Penetrascope Limited, Bracknell, England, a British company
Filed Nov. 8, 1957, Ser. No. 695,449
Claims priority, application Great Britain Nov. 8, 1956
9 Claims. (Cl. 73—81)

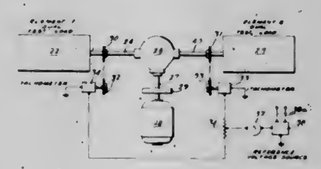
1. A magnetic clamp device for a hardness tester of the kind in which the test piece is indented by an in-

dentor under a known load comprising a frame in which the hardness tester can be adjustably mounted so as to be movable toward and away from the test piece, electromagnetic means on said frame having at least three spaced apart pole pieces of which not more than two are



fixed and of which at least one is freely movable along the axis thereof toward and away from the test piece, said pole pieces being positioned with their axes extending in directions convergent towards said test piece and clamp means operable to secure each adjustable pole piece firmly in its adjusted position in said frame.

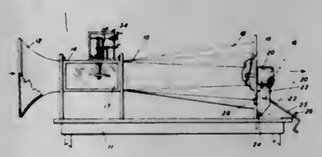
3,020,753
DYNAMOMETER
Lloyd R. Maxwell, Bradford Hills, Downingtown, Pa.
Filed Nov. 5, 1956, Ser. No. 620,472
19 Claims. (Cl. 73—117)



1. A dynamometer comprising a test load device of known power and torque qualities for various speeds, means for coupling the test load device to a device to be tested, a speed indicator adapted to measure dynamometer speed calibrated directly in terms of the known power of the test load device at various speeds and an adjustable reference means opposing the speed indicator adjustable to cause the speed indicator to balance out mechanical frictional effects and read zero under no load conditions.

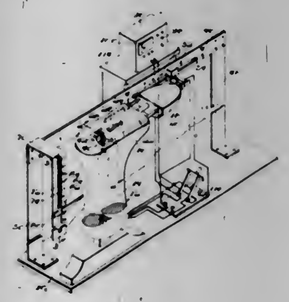
3,020,754
BALANCE APPARATUS FOR WIND TUNNEL
Hilmer Sigfrid Swanson, Canby, Oreg.
(4018 S. 272nd St., Kent, Wash.)
Filed July 14, 1958, Ser. No. 748,504
9 Claims. (Cl. 73—147)

1. Apparatus for supporting an air foil in an air stream to measure the lift and drag on said air foil comprising a base, a vertically extending air foil support strut having means at its lower end for attachment thereto of an air foil, a horizontally extending support arm having one end secured to said base for rotation about a first horizontal axis and its other end pivotally connected to an intermediate point of said strut for pivotal movement of the latter about a second horizontal axis parallel to said first axis, said axes being perpendicular to the direction of said air stream, cooperative indicator means on said strut and said base for indicating any change in position of said strut



relative to said base, first force balance means operatively connected between said base and said support arm including a force indicator for adjusting the force applied to said arm whereby lift forces imposed on said strut by an air foil may be measured and neutralized to retain said strut in a given vertical position, second force balance means including a force indicator for adjusting the force applied to said strut whereby the drag forces imposed on said strut by an air foil may be measured and neutralized to retain said strut in a given horizontal position.

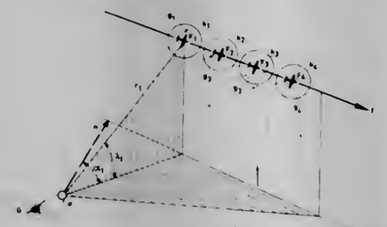
3,020,755
SHRINKAGE MEASURING DEVICE
John Emerson Murdock, Jr., 3000 Sherwood Lane, Hopewell, Va.
Filed June 29, 1959, Ser. No. 823,785
16 Claims. (Cl. 73—159)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device for measuring the size of relatively flexible articles of apparel such as hose comprising a multipart form shaped generally to simulate the form of the article to be measured, means to support the parts of said form for relative movement effective to expand the form without appreciable distortion of an article placed thereon from the normal shape assumed by it when worn and to contract the form from expanded condition, power-operated means for imparting relative movement to the parts of said form, means for deactivating said power-operated means upon the occurrence of relative movement between the said parts of said form sufficient at least to take up the slack in and to fill out an article

fitted on said form to its normal shape and size and means to indicate the size to which the article on said form has been filled out.

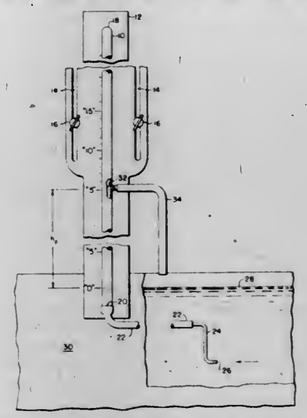
3,020,756
ACCURACY TESTING APPARATUS FOR ANTI-AIRCRAFT GUNS
Max E. Lattmann, Zurich, Switzerland, assignor to Firma Contraves A.G., Zurich, Switzerland
Filed Aug. 26, 1957, Ser. No. 685,770
14 Claims. (Cl. 73—167)



1. Apparatus for testing the accuracy of anti-aircraft guns firing projectiles at a target moving along a flight path by recording the position of the fired projectile relative to the flight path of the moving target, comprising, in combination, at least one gun aiming device controlling the aiming of the anti-aircraft gun being tested at the moving target as it moves along its flight path and providing electrical signals corresponding respectively to the coordinates of the instantaneous position of the moving target with respect to the position of the gun being tested; impulse storing means responsive to the firing of the anti-aircraft gun for producing an impulse at the time a projectile is fired from the gun and for storing said impulse during an adjustable storing time interval, said storing means emitting an output impulse at the end of said storing time interval; computer means responsive to said electrical signals produced by said gun aiming device for determining an initial value of said storing time interval dependent upon said electrical signals corresponding respectively to said coordinates of the position of said target at the time of firing, and for adjusting said initial storing time interval during the flight time of said projectile dependent on variations of said electrical signals respectively corresponding to respectively varying coordinates of the instantaneous positions of said target as they vary during said flight time and photographic recording means oriented at said target jointly with said aiming device and responsive to said emitted output impulse for recording, at the end of said storing time interval as adjusted, the position of the projectile relative to said moving target.

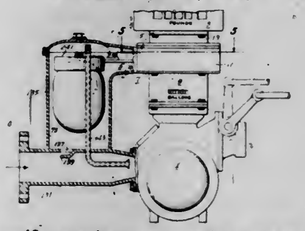
3,020,757
MARINE SPEEDOMETER
Gene T. Parish, 34 Valley Road, Concord, Mass.
Filed Feb. 1, 1960, Ser. No. 5,798
13 Claims. (Cl. 73—181)

1. A device for providing a continuous indication of the impact pressure of a liquid during relative movement of the liquid with respect thereto, comprising an elongated generally vertically arranged hollow member, at least a portion of the wall of said hollow member being transparent over at least a portion of the length of said member, and an impact pressure pickup member having an inlet passage connected at one end to one end of said hollow member, the other end of said passage opening outwardly of said pickup member, said hollow member being closed at the end thereof opposite said one end, said hollow member further being provided with a liquid and air vent communicating with the interior of said hollow member at a point spaced intermediate from the ends of



said hollow member, said vent being smaller in area than the cross section of said other end of said passage in the pickup member.

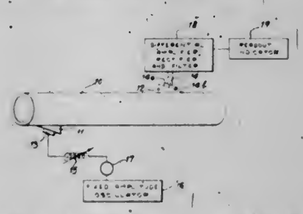
3,020,758
SPECIFIC GRAVITY RESPONSIVE LIQUID METER
Albert J. Granberg and Erik Thuse, Oakland, Calif.; said Granberg assignor to Granberg Corporation, Oakland, Calif., a corporation of California
Filed Apr. 25, 1958, Ser. No. 730,960
4 Claims. (Cl. 73—194)



1. A specific gravity compensating means for coupling, in a liquid meter assembly, a liquid meter shaft and a counter shaft in a rotational speed relationship which will vary with change in specific gravity of a liquid being metered, said coupling means comprising a housing, a variable speed connection for installation between such meter shaft and such counter shaft and located in said housing, said variable speed connection including a planetary gear assembly having a control gear whose rotation will alter the speed relationship between such meter shaft and such counter shaft in accordance with the rate and direction of rotation thereof; adjustable means for establishing different rates and directions of rotation for said control gear, said adjustable means including a rotatable disc, means for continually rotating said disc in response to flow of liquid through a liquid meter, a shaft having a gear drive element and a wheel slidably mounted on said shaft, means shiftably supporting said wheel with its rim frictionally engaging said rotatable disc and with said gear drive element in meshing engagement with said control gear, said shiftable wheel supporting means including a lever at one end shiftably engaging said wheel and having a fulcrum about which said lever may swing, a fixedly mounted screw threadedly connecting with said lever and adapted when rotated in one direction to swing said lever in one direc-

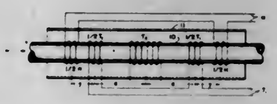
tion about its fulcrum and when rotated in the reverse direction, to swing said lever in the opposite direction, said screw being adjusted to locate said wheel at the center of said disc for recording flow of liquid of a certain specific gravity; and means responsive to changes in specific gravity of liquid to be metered and operating through said screw for altering rotation of said control gear in accordance with such changes in specific gravity of liquid to be metered, said specific gravity responsive means comprising a pipe section for coupling in the main flow line to a liquid meter, a float housing connected to the wall of said pipe section to form a float chamber, said pipe section having a flow connection into said chamber and means for deflecting a portion of such flow into said float housing, a return flow connection for liquid extending from the upper region of said chamber and terminating in the flow path of liquid to be metered, a float in said float housing, reversible clutch means in said coupling housing in clutch relationship to said screw, said reversible clutch means including a pair of rotatable elements, means actuable by liquid flow through a meter for rotating said elements in opposite directions, a clutch element in drive connection with said screw and slidable from a neutral position into engagement with either one or the other of said rotatable elements, means coupled to said float for shifting said clutch element in accordance with changes in both extent and direction in the specific gravity liquid in said float housing from a predetermined value of specific gravity, to cause rotation of said screw and resulting swing of said lever, and means responsive to such swing of said lever for restoring said clutch element to neutral position upon said lever reaching a swing position proportional to the change in specific gravity which produced it.

3,020,759
ULTRASONIC FLOWMETER
Walter Welkowitz, Metuchen, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Feb. 19, 1957, Ser. No. 641,122
7 Claims. (Cl. 73—194)



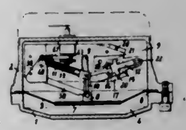
1. An ultrasonic flowmeter comprising fluid flow-containing means, fluid in said fluid flow-containing means, constant amplitude oscillator means, an electromechanically sensitive piezoelectric body mounted on said fluid flow-containing means such that ultrasonic vibrations produced in said electromechanically sensitive piezoelectric body by said oscillator means are propagated across said fluid in said fluid flow-containing means, a variable inductance, the output of said oscillator means being applied to said variable inductance in series with said electromechanically sensitive body, means for indicating when said inductance and said electromechanically sensitive piezoelectric body are tuned to resonance, a differential transducer mounted on said fluid flow-containing means and displaced thereon from said electromechanically sensitive piezoelectric body, amplifying means connected to the output of said differential transducer, detecting means and indicating means, the output of said amplifying means being connected to said detecting means and thence to said indicating means.

3,020,760
FLOW CELL
Nathan Schnoll, West Englewood, N.J., assignor to Flow Measurements Corporation, Kensington, Md., a corporation of Maryland
Filed Oct. 31, 1957, Ser. No. 693,774.
9 Claims. (Cl. 73—204)



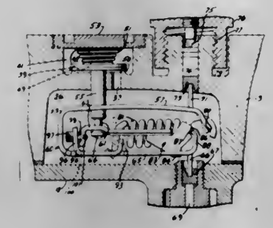
1. A flow cell having a conduit through which the fluid to be measured is adapted to flow and along the axis of flow of which appear undesired normal temperature gradients, a pair of temperature sensing resistance detectors, one of said sensing detectors being divided into two spaced detecting resistors connected in electrically series relation but physically positioned along said conduit on opposite sides of an intermediate location on said conduit, said other temperature sensitive detector being positioned at said intermediate location, the locations of said two spaced resistors being selected such that the net normal temperature difference therebetween relative to said intermediate location is substantially zero, and a heater placed closer to one temperature sensing detector than to the other temperature sensing detector, said pair of temperature sensing resistance detectors and said heater being in thermal contact with the fluid adapted to flow within said conduit.

3,020,761
FUEL CONSUMPTION METER
Karl Binder, Stuttgart, Germany, and Christian W. Holm, deceased, late of Stuttgart-Moehringen, Germany, by Astrid Holm, sole heir, Stuttgart-Moehringen, Germany, assignors to Wurttemberg Gaszahlerfabrik J. Braun & Co., G.m.b.H., Stuttgart, Germany
Filed Oct. 10, 1958, Ser. No. 859,427
18 Claims. (Cl. 73—270)



1. An instrument for measuring the consumption of flowing liquids, especially fuel oil or other liquid fuels, by means of a volumetric measuring mechanism comprising a housing, a diaphragm separating said housing into a first and a second chamber, means conveying liquid into and from said housing and said chambers, said diaphragm being actuated by the pressure of the liquid to be measured within said chambers, a slide valve disposed within one of said chambers, said slide valve being so constructed and arranged as to control the inflow and outflow of the liquid through said conveying means to and from said chambers, control means for said valve so constructed and arranged as to alternately reverse the flow of liquid into and from said chambers upon reciprocation of said diaphragm, said control means comprising lever means so constructed and arranged as to carry out adjustment of said slide valve very suddenly, and including a first and second lever, the outer ends of which are each pivotable about a separate axis and the inner ends of which are pivotable about a common axis, and a loop-shaped guide member forming a drag link, the common connection of said levers being guided within said guide member, said guide member being operatively connected to said diaphragm for movement thereby, and counting means operatively connected with said diaphragm to record the movements thereof and thereby the consumption of the liquid.

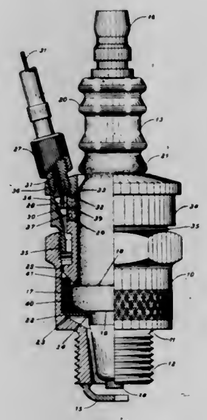
3,020,762
GAS WATER HEATER THERMOSTAT
Donald E. Miller, Mount Prospect, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Oct. 19, 1959, Ser. No. 847,228
4 Claims. (Cl. 73—362.4)



1. The combination with a snap-acting mechanism and an actuator and adjustment member therefor, a generally U-shaped main spring having a closed end portion and horizontally disposed generally parallel legs extending therefrom, said actuator for said snap-acting mechanism comprising a rectilinearly movable member movable generally perpendicularly to said legs, and seated on a first of said legs adjacent the open end of said spring, said adjustment member being movable toward and from said actuator and being spaced outwardly from a second of said legs and facing said actuator and seated on said second leg, a fulcrum member extending vertically from said first leg toward said second leg and having a knife edge fulcrum thereon intermediate said legs, a snap link in contact with and fulcrumed on said knife edge fulcrum and extending from said fulcrum toward the closed end of said spring, a tongue extending from said second leg angularly outwardly therefrom toward the longitudinal centerline of said spring, and a snap spring seated on said tongue at one end and on said snap link at its opposite end and biasing said snap link into engagement with said fulcrum and snapping said snap link past a dead center position upon movement of said actuator member to position said knife edge fulcrum to either side of a dead center position with respect to the point of engagement of said snap spring with the end of said tongue and the point of reaction of said snap spring on said snap link.

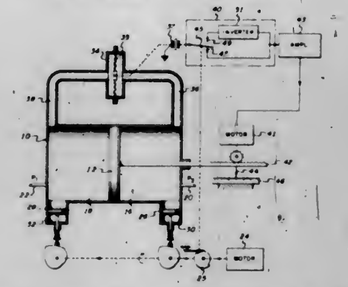
3,020,763
DETONATION PICK-UP AND IGNITER UNIT
Vincent C. Davis, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Nov. 7, 1958, Ser. No. 772,596
1 Claim. (Cl. 73—389)

A combined spark plug and engine pressure pick-up in the form of a normal spark plug comprising a refractory insulating core of generally cylindrical form having an electrode extending axially therethrough, a radially projecting portion formed integrally with said core and positioned adjacent to and in spaced-apart relationship from the lower end thereof and defining radially extending circumferential upper and lower shoulders, a thin layer of electrically conducting material deposited on the exterior surface of said core throughout the middle region thereof and excluded from the end regions of said core, a hollow metallic shell of generally cylindrical form surrounding the lower portion of said core in radially spaced-apart relationship thereto, an annular diaphragm surrounding said core below and adjacent to said lower shoulder and extending radially to the inner wall of said shell and secured in fluid-tight relationship to said core and to said shell, a quantity of metal granules supported on the upper surface of said diaphragm and filling the space between said core and the inner wall of said shell in the region of said radially projecting portion of said core, a packing means circumferentially surrounding said core adjacent said upper shoulder and contacting said projecting portion of said core and the said inner wall of said shell and retaining said metal granules in position,



a hollow cylindrical element surrounding said core in the middle region thereof in slidable relationship and seated at its lower end on said upper shoulder and constructed to apply pressure to said packing means, a radially outwardly extending circumferential shoulder formed on the upper end of said cylindrical element, at least one annular piezoelectric element supported on said shoulder of said cylindrical element, an annular tension member threaded into said upper portion of said shell and extending axially upward therefrom and having a radially inwardly projecting circumferential shoulder formed integrally therewith and positioned to engage the upper surface of said piezoelectric element and compressing said piezoelectric element against said shoulder on said upper end of said cylindrical element and compressing said lower end of said cylindrical element against said upper shoulder of said radially projecting portion of said core, an electrical conductor operatively attached to said piezoelectric element, an electrical connector secured to said tension member and having a passageway therethrough through which said electrical conductor is passed.

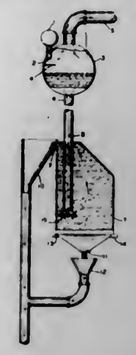
3,020,764
PRESSURE RATIO MEASURING DEVICE
Everett S. Joline, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Jan. 6, 1960, Ser. No. 838
6 Claims. (Cl. 73—398)



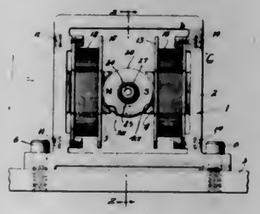
6. Apparatus for measuring the ratio of the pressure of a first source of gas to the pressure of a second source of gas comprising first and second gas containing means, conduit means connecting said first and second sources of gas respectively to said first and second gas containing means, means operable with said first gas containing means to cyclically vary the volume of said first gas containing means at a predetermined rate, means operable with said second gas containing means to cyclically vary the volume of said second gas containing means at said predetermined rate, each of said conduit means maintaining the quantities of gas in said first and second gas containing means substantially constant when the volumes of said first and second gas containing means are cyclically varied at said predetermined rate, means responsive to cyclical variations in the gas pressures in said first and second gas containing means which result from cyclical variations in the volumes of said first and second gas containing means to produce a signal representing the difference between the cyclical pressure change in one gas containing means and the cyclical pressure change in the other, means adapted to vary the volume of said first gas containing means, means adapted to vary the volume of said second gas containing means, means coupled to receive the signal from said means responsive to cyclical variations, said means coupled to receive the signal from said means responsive to cyclical variations being operable with said means adapted to vary the volume of said first gas containing means and said means adapted to vary the volume of said second gas containing means to vary said volumes so as to cause the cyclical pressure changes in the gas containing means to become equal and thereby cause said means responsive to cyclical variations in the pressures in said first and second gas containing means to produce no output signal, and indicator means operable with said means adapted to vary the volume of said first and second gas containing means to indicate the ratio of the pressure of one source to the pressure of the other, said ratio being represented by the relative volumes of said first and second gas containing means.

3,020,765
METHOD AND APPARATUS FOR REGULATING CONSISTENCY
David A. Feigley, Jr., Manor Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Mar. 15, 1957, Ser. No. 646,247
6 Claims. (Cl. 73—434)

1. A method of determining the consistency of a papermaking slurry containing 0.5–15% by weight inorganic solids suspended in water, which comprises removing air bubbles adhering to the fibers in said slurry and determining the weight of a fixed volume of the resulting deaerated slurry.



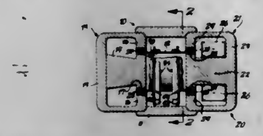
3,020,766
REFERENCE SIGNAL GENERATING MEANS FOR DYNAMIC BALANCING MACHINES
Sylvester Karpchuk, Philadelphia, and Warren M. Gruber, Horsham, Pa., assignors to Tinius Olsen Testing Machine Company, Willow Grove, Pa., a corporation of Pennsylvania
Filed Apr. 4, 1955, Ser. No. 498,979
1 Claim. (Cl. 73—462)



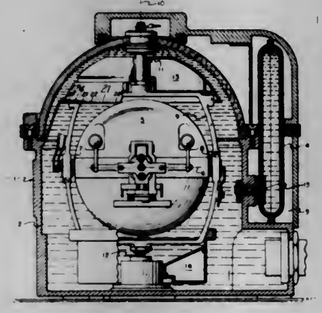
For unbalance determining equipment having means to rotate a test piece and means for measuring the angle of unbalance in each of two planes of correction for the test piece by comparing the phase relationship between a signal proportional to unbalance forces and a reference signal, reference signal generating means usable for both planes including: a signal generator connected with said test piece rotating means and having two coils connected in series adding for developing an alternating signal related in time to a known rotational position of the test piece; a phase shifting network connected in series with said coils including a capacitor, two potentiometers and a switch for alternatively interconnecting one of the potentiometers and said capacitor; and two reference signal terminals, one being connected between said coils and the other between the switch and capacitor.

3,020,767
LINEAR ACCELEROMETER
Walter P. Kistler, North Tonawanda, N.Y., assignor to Kistler Instrument Corporation, North Tonawanda, N.Y., a corporation of New York
Filed Oct. 5, 1959, Ser. No. 844,512
6 Claims. (Cl. 73—497)

1. In a linear accelerometer having a frame and a moving mass arranged for movement along a sensitive axis in said frame, the combination therewith of a suspension for supporting said moving mass, comprising a group of substantially straight rigid arms at each end of said moving mass, the rigid arms of each group being interposed between said moving mass and frame in spaced relation to one another circumferentially about said moving mass tangential to a circle centered on said axis, and flat metal hinge leaves fixed to each end of each rigid arm and connected at their outboard ends respectively to the frame and moving mass, said flat metal hinge leaves of each rigid arm being flexible about parallel axes perpendicular to its arm and tangential to circles centered on said axis whereby said rigid arms restrict said mass to movement lengthwise of said axis plus such slight rotation about said axis as is incident to change in the effective length of said arms.



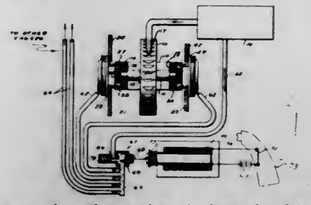
3,020,768
FLOATED GYROSCOPE
Robert A. Falk, Forest Hills, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Apr. 8, 1959, Ser. No. 805,053
13 Claims. (Cl. 74—5)



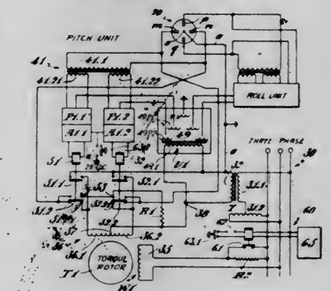
1. An instrument of the floated type comprising in combination a first liquid-tight housing member, a second liquid-tight housing member, means for rotatably supporting said second housing member within said first housing member, and a fluid having a density in the range from about 2.1 to about 2.5 for immersing said second housing member and for floating said immersed second housing member in substantially neutral equilibrium, said fluid remaining in a fluid state at a temperature of about —65° F. and being a polymeric composition of matter comprising polybromotrifluoroethylene.

3,020,769
GYRO CAGING APPARATUS
George P. Bentley, Garden City, N.Y., and Laverne Edward Dueger, Lewisburg, Pa., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Mar. 7, 1946, Ser. No. 652,726
16 Claims. (Cl. 74—5.1)

1. In a gyroscope wherein the rotor bearing frame normally precesses for small angular distances on either side of a neutral position, a caging mechanism comprising a pair of caging devices, for each side of said frame disposed respectively adjacent the rotor shaft ends, separate stop means fixed to the rotor frame overlying the respective ends of the rotor shaft adapted to be engaged by the respective caging devices on the operation thereof and means for operating the caging devices simultaneously whereby uniform caging forces are applied to the stop means to move the rotor shaft accurately to caged position.



3,020,770
SERVO MOTOR CONTROL
William W. Young, Hingham, and Harold B. Wetmore, Needham, Mass., assignors to Waltham Precision Instrument Company, Inc., Waltham, Mass., a corporation of Massachusetts
Filed Jan. 17, 1958, Ser. No. 709,493
13 Claims. (Cl. 74—5.47)

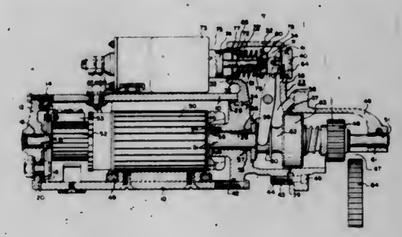


1. In combination with a polyphase electric motor having two direction control windings: signal delivering means of the variable impedance type normally operative to deliver a preponderance of current directly to one or the other of said control windings respectively, to determine the presence and direction of motor torque; and means operative to supply current at a voltage, higher than that normally delivered by the signal means, to one or the other of said direction control windings, said current supply means including discriminatory means for furnishing said higher supply current voltage upon direct delivery thereto of a current preponderance exceeding a predetermined value; whereby the motor develops, upon energization of said higher voltage current supply means, an abnormally high torque, independently of the signal delivering means, after the directly delivered preponderance of current has reached a value insufficient to provide a predetermined torque.

3,020,771
ENGINE STARTER
David C. Redick and Gerald L. Cameron, Anderson, Ind., Ralph H. Bertsche, Jr., Royal Oak, Mich., and Victor W. Yahn, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 30, 1959, Ser. No. 830,500
7 Claims. (Cl. 74—7)

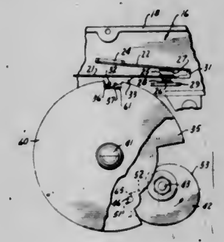
1. An engine starter for an internal combustion engine, comprising, a tubular frame, an armature and field wind-

ing positioned within said frame, a first end frame engaging said frame, an O ring seal compressed between said first end frame and said tubular frame, a first housing having first and second openings facing in opposite directions supported by said tubular frame, an O ring seal compressed between said first housing and said tubular frame, a shaft connected with said armature passing through one of the openings of said first housing, a nose housing adjustably supported by said first housing to a plurality of positions relative to said first housing, a



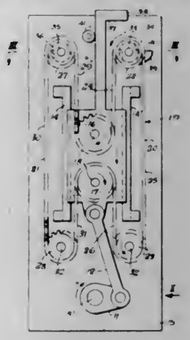
pinion slidably supported by said shaft and positioned within said nose housing, a solenoid supported by said tubular frame, said solenoid having a shaft that passes through the other of said openings of said first housing and into said chamber, and a pinion shifting lever pivotally supported by said housing and positioned entirely within said chamber, said pinion shifting lever connecting said solenoid shaft and said pinion for shifting said pinion into mesh with the ring gear of an engine.

3,020,772
SWITCH ACTUATING TIMER
Carl J. Goodhouse, Litchfield, Conn., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 794,975
4 Claims. (Cl. 74—54)



1. A mechanism actuating timer comprising, in combination, a timing motor, a control cam, means for intermittently stepping said control cam, said means being powered by said motor so that the control cam is stepped through repeating cycles, said cam having a drop-off portion, a mechanism operator biased against said cam and being operated when said drop-off portion is alined therewith at one of said intermediate steps, a timing member for blocking said operator from said drop-off portion, said timing member being driven by said motor through a cycle whose duration is a multiple of said control cam cycle, and said member having a relieved portion which periodically frees said operator for operation under the control of said control cam.

3,020,773
APPARATUS FOR CONVERTING RECIPROCATING INTO INTERMITTENT MOTION
William Frank Golding, 28 Parry's Close, Stoke Bishop, Bristol 9, England
Filed Mar. 23, 1960, Ser. No. 17,026
Claims priority, application Great Britain Mar. 25, 1959
10 Claims. (Cl. 74—138)

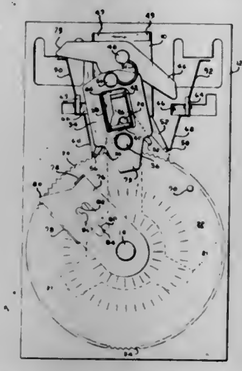


1. Apparatus for converting reciprocating into intermittent motion comprising a reciprocable slide, a pair of drive sprockets mounted for free rotation on said slide, an endless chain trained over said sprockets, means for supporting said chain in a pair of loops each including a run extending from one of said drive sprockets towards a position beyond the position occupied by said one sprocket when the slide has reached one end of its stroke and a run extending from the other one of said drive sprockets towards a position beyond the position occupied by said other drive sprocket when the slide has reached the other end of its stroke, said supporting means being arranged for said runs of said loops to extend in a direction parallel to the direction of reciprocation of said slide, and locking means for locking said loops against travel alternately during the whole of the respective strokes of the slide, all whereby reciprocating movement of the slide is converted into intermittent movement of said loops.

3,020,774
CONTROL MECHANISMS
Donald J. Kullmann, Milwaukee, Wis., assignor to Badger Meter Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 26, 1958, Ser. No. 724,140
8 Claims. (Cl. 74—142)

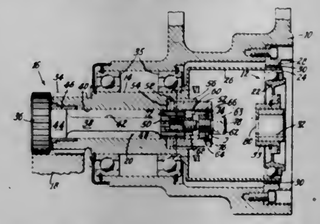
1. A device of the character described comprising a mounting plate, a drive arm pivotally mounted on said plate, means for oscillating said drive arm, a ratchet wheel freely rotatably mounted on said plate, a drive pawl pivotally mounted on said drive arm for movement between one driving position and another, said drive pawl adapted to drive said ratchet wheel step-by-step in either direction when said drive arm is oscillated depending on the position of said drive pawl, reversing means adapted to pivot said pawl from one driving position to another and thereby reverse the direction in which said wheel is driven at intervals defined by a given number of drive arm oscillations, a movable control member mounted on said plate, an actuating member pivotally mounted on said drive arm for actuating said control member at said intervals, said actuating member mounted for pivotal movement between two actuating positions by said reversing means, and a detent member pivotally mounted on said plate adapted to engage said ratchet wheel and properly position and hold said wheel for step-by-step

actuation thereof by said drive pawl, said detent member actuated by said control member between two ratchet



wheel engaging positions corresponding to the direction said ratchet wheel is being driven by said drive pawl.

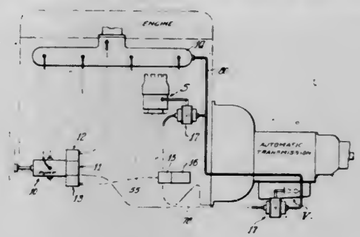
3,020,775
ANTIBACKLASH DEVICES
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed May 12, 1960, Ser. No. 28,632
3 Claims. (Cl. 74—440)



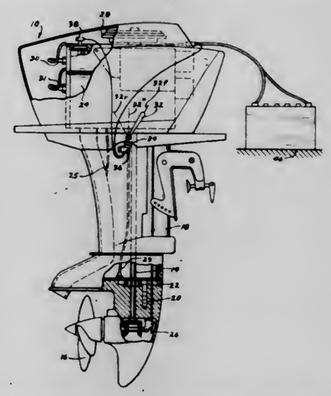
1. An antibacklash device comprising a drive shaft, a split gear on the shaft adapted for engagement with a gear to be driven, the split gear having a first gear element secured to the shaft and a second gear element mounted on the shaft for angular movement relatively to the first gear element, a torsion member carried by the shaft for supporting the second gear element, a sleeve mounted on the shaft and having helical teeth engaging corresponding teeth on the shaft, an axial spline on the torsion member engaging the sleeve to provide for relative axial movement between the member and sleeve and for angular movement of the torsion member with the sleeve, a nut in the sleeve, an adjusting screw making threaded connections with the nut and member whereby rotation of the screw effects relative axial movement of the sleeve and torsion member thereby effecting relative angular movement of the first and second gear elements.

3,020,776
VACUUM REFERENCE CONTROL FOR PRESSURE COMPENSATION
Charles W. May, Decatur, and Robert W. Halberg, Des Plaines, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 25, 1960, Ser. No. 31,655
10 Claims. (Cl. 74—472)

10. In an automotive vehicle having an automatic transmission with a control valve, an internal combustion engine with an air-intake manifold and an ignition spark adjusting mechanism, and a fuel injection pump for supplying fuel to the engine, the combination of means responsive to manifold vacuum for simultaneously controlling the output of said fuel injection pump and the spark adjusting mechanism and the control valve, a vacuum pump for establishing a reference vacuum, means responsive to said reference vacuum for simultaneously controlling the output of said fuel injection pump and adjusting said spark mechanism and adjusting said control valve, whereby the output of said fuel injection pump and the spark adjusting mechanism and the control valve of the transmission are all controlled as a function of absolute manifold pressure.



3,020,777
TWO-CYCLE ENGINE IDLING SPEED LIMITER
Wilford B. Burkett, Minneapolis, Minn., assignor to McCulloch Corporation, Marine Products Division, Minneapolis, Minn., a corporation of Minnesota
Filed Aug. 19, 1959, Ser. No. 834,740
7 Claims. (Cl. 74—472)



1. In an outboard motor having a two-cycle engine, a gear shift means having a neutral position, an ignition system, an engine cooling system including a coolant pump operatively connected to the engine for creating a coolant pressure related to engine speed, a pressure responsive switch operatively connected to said system for actuating at a predetermined coolant pressure, switch means operatively connected to the shift means for actuation when said gear shift means is in a neutral position, said pressure responsive switch and said switch means being electrically connected in conjunctive controlling circuit relation to the ignition system for making the ignition ineffective when said pressure responsive switch and said switch means have been actuated.

3,020,778
BICYCLE GEAR SHIFT CONTROL
Frithjof C. Davidson, Ridgecrest, Calif.
(2316 Vine St., Eau Claire, Wis.)
Filed Aug. 5, 1954, Ser. No. 448,109
2 Claims. (Cl. 74—489)



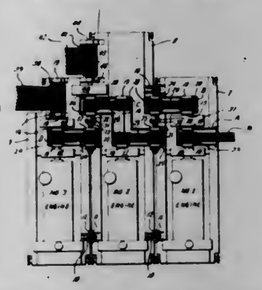
1. A yielding connector for use in the train of elements that operatively connects a gear shift control lever having a predetermined limit of travel on the handlebar of a bicycle with a variable speed transmission in the hub of the rear wheel of the bicycle, which train includes a slide member operatively connected to the lever by a first flexible means, a longitudinal connecting pin that is threaded into the slide member axially thereof, and a second flexible means connecting the longitudinal connecting pin with the variable speed transmission, said yielding connector comprising: a hollow body open at one end and having a threaded axial stem at the other end dimensioned to screw into said slide member for connection thereby with said first flexible means; a plunger slidingly mounted in said hollow body and having a threaded longitudinal bore to receive said longitudinal pin for connection thereby to said second flexible means; a coiled spring surrounding said plunger inside said hollow body in compression between the plunger and the body to urge said plunger toward said other end of the hollow body, said yielding means being substantially unyielding to forces normally required to operate said gear-shift control, but being substantially yielding to forces tending to cause the fracture of any component part of the transmission, said yielding means having a limit of travel greater than said predetermined limit of travel of said gear-shift control.

3,020,779
ROCKER ARM FOR INTERNAL-COMBUSTION ENGINES
John R. Winter, Jr., 18012 Wildemere Ave., Detroit, Mich.
Filed Mar. 25, 1959, Ser. No. 801,835
5 Claims. (Cl. 74—519)



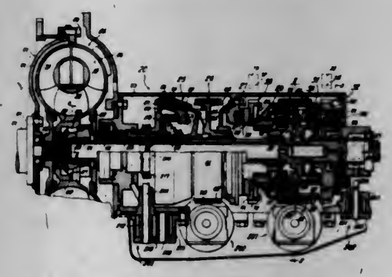
1. A rocker arm construction for internal-combustion engines comprising a sheet metal body member having openings punched through predetermined portions thereof, said body member being bent upon itself to form a pair of substantially identical laminae positioned side by side and having pairs of said openings aligned in said laminae, said body being bent to form loops at opposite ends of said laminae, said laminae being formed with means providing for the formation of passages for fluid between said laminae when said laminae are positioned side by side in tight engagement with each other, said body member having a pair of overlapping ends adjacent one of said loops, a first rivet extending through a pair of said openings extending through said ends for securing said ends together, and a second rivet extending through aligned openings through intermediate portions of said laminae, said first and second rivets cooperating to maintain said laminae in sufficiently tight engagement with each other to prevent substantial leakage of fluid from said passages, said laminae in their unriveted condition diverging from each other so that said rivets will result in said tight engagement of said laminae intermediate said rivets.

3,020,780
COMPOUND DRIVE ASSEMBLY
Archie R. McLerran, Beaumont, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Oct. 31, 1958, Ser. No. 771,032
6 Claims. (Cl. 74—665)



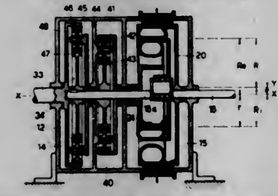
1. A compound drive assembly adapted to be readily separated into individually transportable sections comprising a plurality of support bases, drive shafts rotatably mounted on the bases, a pair of axially aligned stub shafts between the drive shafts, means rotatably mounting one stub shaft on one base and the other stub shaft on an adjacent base, drive connections between one drive shaft and one stub shaft and between the other drive shaft and the other stub shaft, at least one of the drive connections including an axially hollow drive element rotatably supported by the base and mounted with one stub shaft extending therethrough, flexible means connecting opposite ends of said one stub shaft respectively to an adjacent end of the other stub shaft of the pair and to the drive element on its side remote from the other stub shaft whereby said one stub shaft can rotate about an axis inclined at an angle with the axis of rotation of the other stub shaft.

3,020,781
TRANSMISSION MECHANISM
Everett R. Burtnett, China Lake, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 2, 1957, Ser. No. 687,824
7 Claims. (Cl. 74—688)



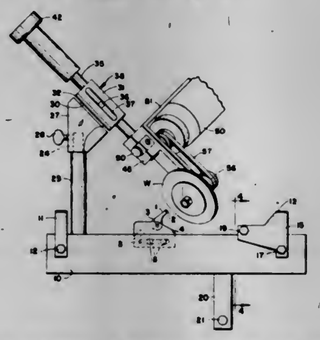
1. In a transmission, the combination of a drive shaft; a driven shaft; a hydraulic torque converter having a driving member or impeller, a driven member or turbine, and a reaction element or stator; first and second planetary gear sets, each having drive, drive receiving, and driven elements, and said turbine being connected with a driving element of each of said gear sets, said driven element of said second gear set being connected to drive said driven shaft; a brake for said driven element of said first gear set and for said drive receiving element of said second gear set effective to complete a drive from said drive shaft through said torque converter and through both of said gear sets to said driven shaft, said stator being connected by a one-way engaging device with said drive receiving element of said first gear set for transmitting reverse driving torque to said drive receiving element of said first gear set to convert the reverse driving torque into forward driving torque by said first gear set to be combined with forward driving torque of said turbine for driving said driven shaft.

3,020,782
SPEED CHANGE DEVICE HAVING RESILIENTLY DEFORMABLE WHEELS
Giulio Sacchi, Via Borgonuovo 10, Milan, Italy
Filed Jan. 24, 1958, Ser. No. 711,043
Claims priority, application Italy Jan. 24, 1957
16 Claims. (Cl. 74—796)



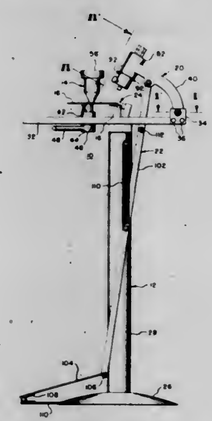
1. A transmission device comprising a ring, means for preventing rotation of said ring, a pneumatic tire on the inner periphery of said ring, a first shaft coaxial with said ring and carrying a bearing in eccentric position, means for varying the eccentricity of said bearing, a wheel mounted for idle rotation on said bearing and engaging at its outer periphery said pneumatic tire, a second pneumatic tire on the inner periphery of said wheel, a second shaft coaxial with said first shaft, and a second wheel affixed to said second shaft and engaging said second pneumatic tire.

3,020,783
CHAIN SAW SHARPENER
Emil H. Hill, 6316 SE. 65th Ave., Portland, Oreg.
Filed Dec. 8, 1958, Ser. No. 778,913
1 Claim (Cl. 76—37)



In a saw sharpener, a support, an angle bracket swivel mounted on said support, means for clamping said bracket rigid with said support, a head block swivel mounted for rotation about an axis on said bracket inclined to said first axis, means for clamping said head block rigid with said bracket, an inclined arm mounted for longitudinal sliding movement in said head block, a stop nut on the upper end of said arm to limit the downward sliding movement of said arm in said head block, means to prevent rotation of said arm in said head block, a tool support mounted for rotation on the lower end of said arm about the axis of said arm, means for indexing said tool support to different rotative positions on said arm, and a grinding disc carried by said tool support with its axis perpendicular to said arm.

3,020,784
SAW SET APPARATUS
Byron G. Daggett, 3836 Centraloma Drive, San Diego 7, Calif.
Filed Dec. 1, 1958, Ser. No. 777,345
2 Claims. (Cl. 76—63)

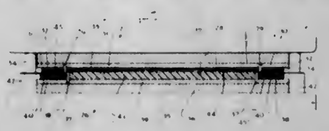


1. Saw set apparatus comprising a frame; an anvil element mounted upon said frame, said anvil element having a first facet disposed in a first plane and a second facet forming a continuation of said first facet and disposed in a plane sloping away from said first plane; support means carried by said frame for supporting a saw, said support means being slidable along the longitudinal axis of said frame to bring a tooth of said saw into cooperative relationship with said second facet, said support means being adapted to adjust the height of said saw with respect to said first facet; an index element mounted adjacent to said anvil element and adapted to cooperate with said tooth to locate it in position along an axis substantially transverse to said longitudinal axis, said index element being pivotable through approximately 180 degrees to locate alternate teeth of a saw which must be spring set; and a set element carried by said frame and operable to impart a deforming force against said tooth.

3,020,785
DUAL STEEL RULE BLANKING DIE AND METHOD OF MAKING IT
George W. Leavesley, Levittown, and John O. Trimble, Havertown, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 7, 1958, Ser. No. 726,939
2 Claims. (Cl. 76—107)

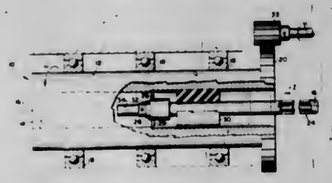
1. The method of making a blade-type blanking die having a pair of co-acting rule-type shear blades, which

comprises, hardening and final-mounting a first one of the co-acting blades, leaving the second blade soft and temporarily mounting it for co-action with the hardened



blade, operating the blades together to shear the unhardened blade by the hardened blade, removing and hardening the unhardened blade when sheared to shape, and final-mounting the second blade.

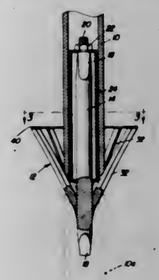
3,020,786
ELECTRONIC TOOL RUN-OUT INDICATOR FOR USE IN DEEP BORING OPERATIONS
Albert L. de Graffenried, 95 Glenwood Road, Roslyn Harbor, N.Y., and William A. Folsom, 10—07 Maryland Ave., Schenectady 8, N.Y.
Filed July 20, 1960, Ser. No. 44,066
22 Claims. (Cl. 77—3)



1. An apparatus for indicating run-out during the boring operation within a rotating object comprising means for rotating the object to be bored about a predetermined center line; a boring tool adapted to be advanced in parallel with said center line and including a cutting head for cutting the interior of the rotating object, means for mounting said boring tool in a rotationally stationary position and for advancing said boring tool axially approximately along the predetermined center line of rotation of the object, sensing means positioned proximate to said boring tool for indicating run-out of said boring tool from the predetermined center line of rotation, said sensing means including movable means mounted on said boring tool for sensing movement of the boring tool and for responding to the kinetic quantities imparted to said boring tool upon said boring tool being moved transverse to the predetermined center line, whereby upon said boring tool being subjected to run-out, the center of said boring tool orbits about the predetermined center line and imparts oscillatory motion to said movable means, and electrical means responsive to the movement of said movable means for indicating the existence and degree of run-out as determined by the kinetic quantities sensed by said movable means.

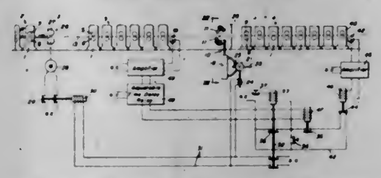
3,020,787
PIPE TAPERING TOOL
Herman D. Cusick, 2977 Merriman Road, Medford, Oreg.
Filed Nov. 12, 1959, Ser. No. 852,341
4 Claims. (Cl. 77—73)

1. A combination inside and outside reamer comprising an elongate spindle having chuck receiving ends adapted for selective use in engagement with the chuck of a turning tool, a cutter assembly fixed to said spindle and having inner and outer cutting edges which are selectively positionable in engagement with the inner and outer edges of an end of a pipe whereby upon rotation of said spindle either inner or outer bevels are formed on the end of the pipe, said cutter assembly consisting essentially of a plurality of cutters having inner ends fixed to said spindle between the ends thereof and diverging outwardly, the outer ends of said cutters spaced laterally from the longitudinal axis of said spindle to form the generally truncated conical configuration of the cutter assembly, means secured to said outer ends of said cutters to brace said cut-



ters and form a rigid assembly thereof, a centering guide adapted to be inserted in a pipe when an outside bevel is being formed on one end of the pipe, said centering guide including a sleeve, and means connected with said spindle for separably securing said sleeve to said spindle with said sleeve surrounding a portion of said spindle and located between portions of said cutters and said spindle immediately laterally adjacent to said cutters.

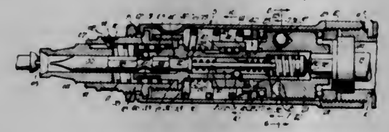
3,020,788
SHEAR CONTROL SYSTEM FOR MULTI-LINE CONTINUOUS ROD MILLS
Anthony E. Peters, 4416 W. 60th St., Cleveland, Ohio
Filed June 4, 1958, Ser. No. 739,916
12 Claims. (Cl. 80—35)



1. In rod rolling apparatus comprising a finishing mill having a plurality of successively arranged reducing passes, means for feeding a rod to said finishing mill, and a rod cutting shear arranged between said feeding means and finishing mill, the combination therewith of a first scanning means operating in response to entry movement of a rod into said finishing mill, a second scanning means operating in response to exit movement of said rod from said finishing mill, and means controlled by both of said scanning means for actuating said shear.

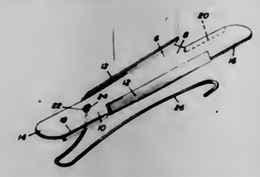
3,020,789
PREDETERMINED TORQUE RELEASE HAND TOOL
Elmer F. Etzkorn, Park Ridge, Ill., assignor to Skil Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,269
11 Claims. (Cl. 81—52.4)

1. In a tool attachment of the class described for driving and tightening rotary fastener elements, in combination: a sleeve-like casing; a hollow spindle the front end of which constitutes a tool holder; front bearing means in said casing for supporting the front end of said spindle for rotation and co-axial sliding movement within said casing; a main torque clutch in the rear portion of said casing comprising a power-receiving clutch member, a driven clutch member, and completely disengageable camming means normally directly interconnecting said clutch members and tending to separate said driven clutch member from said power-receiving clutch mem-



ber, said clutch members having co-axial spindle-receiving openings therein with the rear end of said spindle being slidable and rotatable therein; spring means within said casing resiliently urging said driven clutch member into driving engagement and resisting separation by said camming means until a predetermined torque value is exceeded; and, secondary clutch means for drivingly connecting said power-receiving clutch member with said hollow spindle when said tool is driving a fastener element.

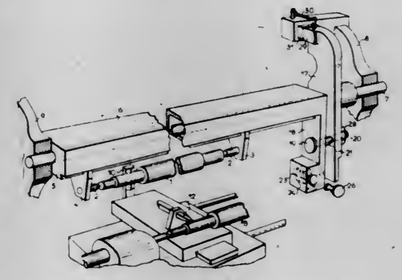
3,020,790
CRANKCASE DRAIN PLUG WRENCH
Wilbur A. Davis, Mahomet, Ill., assignor of five percent to Howard F. Wagner and Dorothy M. Wagner, jointly, both of Champaign, Ill., and twelve percent to Rivard Brothers Inc., Glenview, Ill., a corporation of Illinois
Filed Sept. 4, 1959, Ser. No. 838,118
9 Claims. (Cl. 81—119)



1. A manually usable wrench comprising an elongated plate having a flat surface portion thereof designed to bear firmly against the head of a bolt, the longitudinal edges of said plate having longitudinal flanges, said flanges converging lengthwise toward one end of the plate and defining a wedge-like space between themselves into which the bolt head may be moved to seat itself whereupon the flanges then jam upon and frictionally grip the then lodged head and serve as jaws when torque is applied, said flanges being relatively inclined and outwardly convergent to one side of said plate, and a flexible element having one end secured to said plate.

3,020,791
PENDULOUS TEMPLET HOLDER
René Jean Nicolas Le Brusque, Malakoff, France, assignor to H. Ernault-Batignolles S.A., Paris, France, a company of France
Filed July 16, 1958, Ser. No. 748,838
Claims priority, application France July 23, 1957
11 Claims. (Cl. 82—14)

1. In a templet controlled machine tool having mounting means for supporting a templet parallel with the longitudinal axis of the work piece and a tracer structure adapted to trace said templet, said mounting means including a rotatable sleeve member, a crank arm projecting from said sleeve member, a lever mounted to pivot about the same axis as said sleeve member and having two arms, a fixed stop member positioned to engage one of said lever arms upon pivotal movement of the lever in one of two opposite directions to thereby establish a predetermined limit position of the lever, means urging said lever in said one direction toward said limit position,



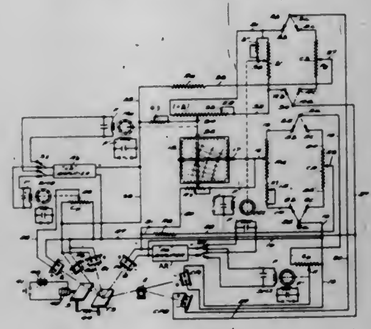
a mechanism for selectively maintaining said lever in different predetermined positions angularly spaced from said limit position, means to adjust the angular position of said crank arm relative to said lever, and means for locking said crank arm, as adjusted by said adjusting means, to the other arm of said lever to thereby determine successive operative positions of said templet relative to the work piece in accordance with said predetermined positions of the lever.

3,020,792
REFLECTOR OPTICAL SYSTEM
Edwin F. Kingsbury, Rutherford, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 23, 1947, Ser. No. 775,695
3 Claims. (Cl. 88—1)



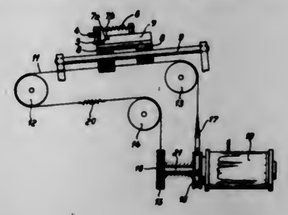
1. An optical system comprising a first zoned concave mirror having a central reflecting zone and an outer reflecting zone spaced from said central zone by a transparent annular mirror, a second concave mirror substantially parallel to said first concave mirror, means positioned between said concave mirrors for transmitting rays towards said second mirror to cause a portion of the reflected rays therefrom to pass through said transparent annular zone, means positioned in the path of said transmitted rays for reflecting incident radiation so that the incident and reflected rays are parallel and spaced apart by a distance not greater than the effective dimension of the device transverse to the days, said dimension also being the dimension of said transparent annular zone transverse to the transmitted rays, said last-mentioned means comprising a plurality of mutually perpendicular plane mirrors, and means located near the axis of said first concave mirror for collecting rays reflected from said reflecting device and further reflected by said mirror reflecting zone.

3,020,793
AUTOMATIC PHOTOELECTRIC COLORIMETER
David A. Neubrech, Takoma Park, Md., and Matthew A. Cattaro, Vienna, Va., assignors to Gardner Laboratory, Inc., Bethesda, Md., a corporation of Maryland
Filed Apr. 20, 1960, Ser. No. 23,515
3 Claims. (Cl. 88—14)



1. In an automatic photoelectric colorimeter for measuring the luminous reflectance (Rd) and chroma ($+b$) values of a test specimen, an "Rd" network and a "$+b$" network electrically independent from said "Rd" network, each of said networks including an automatic measuring potentiometer having a tap thereon actuated by a reversible motor, a calibrating potentiometer having a manually adjustable tap thereon, a self-standardizing potentiometer having a tap thereon actuated by a reversible motor and a comparison photocell, first photocell means for said "Rd" network equipped with a green filter conditioning the same to develop a current proportional to the luminous reflectance value of a test specimen, one output terminal of said first photocell means being connected to the taps on the associated automatic measuring and calibrating potentiometers and the other output terminal being connected selectively through switching means to one end of the associated automatic measuring potentiometer or to one end of the associated calibrating potentiometer, second photocell means for said "$+b$" network including one photocell equipped with a blue filter and another photocell equipped with a green filter having its output terminals connected respectively to the tap and one end of the associated self-standardizing potentiometer, circuit means interconnecting last said potentiometer with said blue filter equipped photocell to develop a current at output terminals proportional to the difference therebetween and which is proportional to the chroma value of the test specimen, one of last said output terminals being connected to the taps on the associated automatic measuring and calibrating potentiometers and the other of last said output terminals being connected selectively through switching means to one end of the associated automatic measuring potentiometer or to one end of the associated calibrating potentiometer, circuit means connecting the output from the comparison photocell of said "Rd" network to the self-standardizing potentiometer thereof and from the latter through selective switching means alternatively to the ends of the automatic measuring or the calibrating potentiometers of said "Rd" network, circuit means connecting the output from the comparison photocell of said "$+b$" network through selective switching means alternatively to the ends of the automatic measuring or the calibrating potentiometers of said "$+b$" network, an auxiliary potentiometer connected in parallel with the automatic measuring potentiometer of said "$+b$" network and having a tap thereon actuated by the reversible motor means which actuates the tap on the automatic measuring potentiometer of said "Rd" network, a first amplifier responsive to any difference between the current proportional to the luminous reflectance value of the test specimen and the current through the automatic measuring potentiometer or alternatively the current through said calibrating potentiometer of said "Rd" network produced by the comparison photocell for actuating the corresponding reversible motor and tap on said automatic measuring potentiometer or alternatively the tap on said self-standardizing potentiometer to balance said currents, a second amplifier responsive to any difference between the current proportional to the chroma value of the test specimen and the current through the automatic measuring potentiometer or alternatively the current through the calibrating potentiometer of said "$+b$" network produced by the comparison photocell for actuating the corresponding reversible motor and tap on said automatic measuring potentiometer or alternatively the tap on said self-standardizing potentiometer to balance said currents, a light source, means for supporting a standard specimen having known luminous reflectance and chroma values and for supporting a test specimen of unknown luminous reflectance and chroma values, means for illuminating said comparison photocells directly from said light source, and means for illuminating from said light source in an alternative manner said test specimen or said standard specimen and reflecting light therefrom to said photocells of said "Rd" and "$+b$" networks.

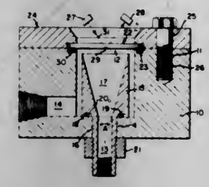
3,020,794
SPECTROMETER GRATING CONTROL ARRANGEMENT
Artur Reichel, Wetzlar (Lahn), Germany, assignor to Ernst Leitz, Gesellschaft mit beschränkter Haftung, Wetzlar (Lahn), Germany
Filed Apr. 3, 1961, Ser. No. 100,301
Claims priority, application Germany Apr. 23, 1960
7 Claims. (Cl. 88—14)



1. A control device for spectrometers and spectrographs comprising a diffraction grating mounted for pivotal movement, a cam follower mounted on said diffraction grating, a linearly moveable carrier having a cam surface thereon cooperating with said cam follower, a rotatable recording drum, and a belt interconnecting said drum and said carrier so that rotation of said drum moves said carrier and pivots said diffraction grating in relationship to the movement of the drum.

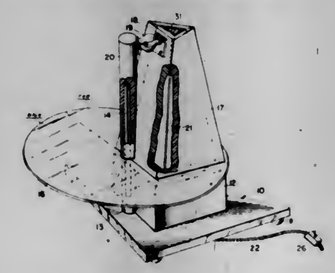
3,020,795
FLUID INSPECTION APPARATUS
Alfred H. McKinney, Chester, Pa., and Charles D. Reilly, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,275
4 Claims. (Cl. 88—14)

1. Apparatus for inspection of a fluid stream comprising a housing having a cavity therein, a light-transmitting window enclosing one end of said cavity, an insert member having a fluid passage of increasing diameter positioned within said cavity, a fluid inlet in communication with said fluid passage, sealing means within said cavity for providing a fluid tight chamber surrounding said insert member, and a fluid outlet in said housing in communication with said fluid chamber, said insert member



being positioned in spaced relationship to said window with the portion of said fluid passage of greatest diameter terminating adjacent to said window thereby providing radial flow of a fluid across said window.

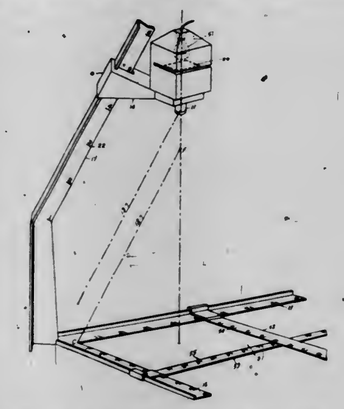
3,020,796
KALEIDOSCOPIC DEVICE
Cudek Kaplan, 561 W. 163rd St., New York 32, N.Y.
Filed Apr. 17, 1959, Ser. No. 807,191
2 Claims. (Cl. 88—15)



1. A kaleidoscopic device comprising a substantially vertical stem, a turntable of translucent material rotatable about said stem, said stem projecting above said turntable, an internally reflecting viewing tube of frusto-pyramidal configuration and triangular cross-section substantially vertically supported on said stem and positioned with clearance above an eccentric portion of said turntable, said tube opening with its wider end onto said turntable, a base for said stem underneath said turntable, a housing on said base open toward said turntable, and an electric lamps within said housing substantially in line with the tube axis.

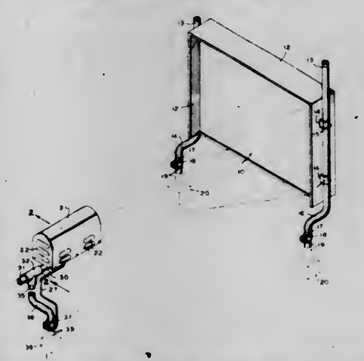
3,020,797
PROJECTOR IMPROVEMENTS
Allan Broms, Beechhurst, N.Y.
(132—45 Maple Ave., Flushing, N.Y.)
Filed Nov. 9, 1956, Ser. No. 621,326
4 Claims. (Cl. 88—24)

1. In a projection optical system having a lens, a frame member to support a transparency with a limiting aperture at one side of said lens, and a field locating member at the other side of said lens, with means for guiding the frame member for focusing movement, and with said field locating member and lens relatively movable with respect to one another, and a straight supporting guide for directing movement of at least one of said lens and field member parallel to a straight line drawn from the principal focal point of the lens on the field side thereof to a corner of the field image of the aperture as projected through the lens when the planes of said aperture and field are in conjugate focus, combined with elongated abutment members on the field locating member arranged parallel to the edges of the frame aperture and having thereon scales the zeros of which are at said corner of the field image and the unit divisions of which are respectively equal to the parallel dimensions of the frame aperture and wherein the straight supporting guide is provided with a scale for setting at least one of said lens and field member and correlated with the scales of the abutment members: masking blades attached to slide along each of said abutment members, each masking blade extending across the field area with its inner edge normal to the



inner edge of the abutment member to which it is attached, and each of said masking blades being provided at its inner edge with a scale of dimensional units the zero of said scale being at the inner edge of the abutment member to which said blade is attached, whereby the positions and scales of the masking blades indicate the size of the field image and by their positions on the abutment scales indicate the proper ratio of enlargement and the proper settings of at least one of said lens and field member relative to the scale on the straight supporting guide and of the frame member in conjugate focus with the field area.

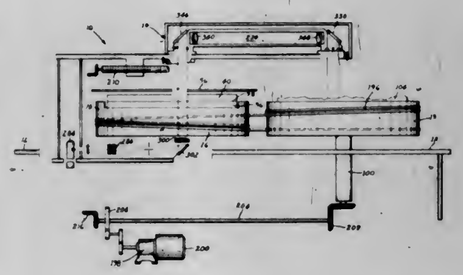
3,020,798
PROJECTION ADVERTISING
Charles M. Chrisman, 20 Tracy Drive, Columbia, Mo.
Filed Sept. 17, 1957, Ser. No. 684,522
4 Claims. (Cl. 88—24)



1. Apparatus for projection advertising comprising in combination a projector with mounting means therefor,

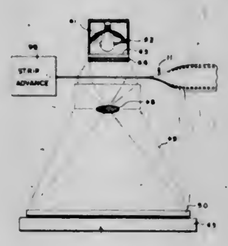
a screen cooperating with and spaced from said projector, a mounting for the screen, the mounting comprising a pair of vertical columns, each column having a vertical upper portion attached to a side of the screen, an intermediate laterally extending portion and a lower vertical portion offset from said upper vertical portion, a pair of spaced anchor posts and means on the lower end of each of said lower offset vertical portions rotatably engaging an anchor post, whereby the screen may be adjusted in position with respect to the projector.

3,020,799
PHOTOGRAPHIC ORTHO PROJECTOR
Frederick Schwarzbach, Irondequoit, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 5, 1957, Ser. No. 694,690
8 Claims. (Cl. 88—24)



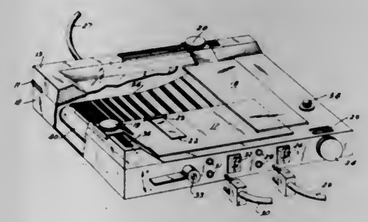
1. A projector for transferring two-dimensional information onto three-dimensional models comprising first means to support a two-dimensional terrain negative, second means in the same plane as said first means to support a three-dimensional model, means connecting said first two means for synchronous rotation in opposite directions and an optical system spaced from said first two means to project the image from the negative on to the three-dimensional model, wherein said first and second means comprise turntables and said connecting means comprises cables wound around said turntables for simultaneous rotation.

3,020,800
PHOTOGRAPHIC SUMMATION SYSTEM
Edward Gordon Perry, Dallas, Tex., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 26, 1957, Ser. No. 705,366
11 Claims. (Cl. 88—24)



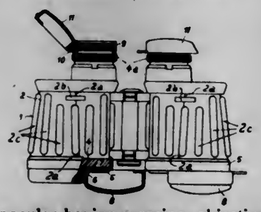
1. In a system for portraying information, the combination comprising an opaque strip defining a plurality of successive portions, said strip containing a plurality of transparent parts representative of information with transparent parts in the same relative position in different portions of said strip representative of the same information, means for advancing said strip, photosensitive means, means for projecting a light image of successive portions of said strip onto said photosensitive means with transparent parts appearing in different portions of said strip and in the same relative position being imaged on the same area of said photosensitive means, means mounted between said strip and said photoesnsitive means for presenting a different density filtering action to different areas of the light passing through each of said transparent parts, and means for reproducing a visual representation of said filtered light impinging on said photosensitive means indicative of the number of times a transparent part appears in a predetermined location.

3,020,801
DEVICE FOR THE OPTICAL COPYING OF PHOTOGRAPHIC NEGATIVES
Fred Lander, Bahnhofstrasse 49, Wil, St. Gall, Switzerland, Max Lattmann, Zurich, and Robert Oberacker, Neuchatel, Switzerland; said Lattmann and Oberacker assignors to said Lander
Continuation of application Ser. No. 419,872, Mar. 30, 1954. This application Oct. 7, 1958, Ser. No. 765,851
Claims priority, application Switzerland Apr. 1, 1953
21 Claims. (Cl. 88—24)



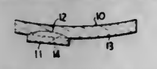
1. A device for the optical copying of photographic negatives, comprising, in combination: a casing, a light-permeable support for the light sensitive paper and an image frame arranged on top of said casing, said light-permeable support defining a light-accessible area thereunder in said casing, a photo electric cell arranged within the said casing outside said area; light transmitting means in said area for transmitting light passing through said light-permeable support into said casing to said photo electric cell; light attenuating means for differentially attenuating light passing through different portions of said support and transmitted to said photo electric cell in such a manner that the quantity of light transmitted to said photo electric cell is substantially proportionate to the overall quantity of light passing through said light-permeable support into said casing, a condenser electrically connected to the said photo electric cell and charged by the photo current thereof produced as a function of the quantity of light penetrating from an external light source of a photographic projector through the said light-sensitive paper and light-permeable support thereof to the said photo electric cell, and a switching relay arrangement electrically connected to the said condenser and to the said external light source automatically discharging the said condenser upon its attaining a predetermined voltage, and by the discharge current thereof switching off the said external light source, the said casing, light-permeable support, photo electric cell, condenser, and switching relay arrangement forming a structural unit with the said image frame.

3,020,802
BINOCULARS HAVING SHOCK ABSORBING COVERING
Kurt Räntsch, Wetzlar (Lahn), and Ludwig Faust, Braunfeld, Krels Wetzlar, Germany, assignors to M. Hensoldt & Söhne, Optische Werke A.G., Wetzlar (Lahn), Germany
Filed Sept. 28, 1959, Ser. No. 842,788
Claims priority, application Germany Sept. 27, 1958
3 Claims. (Cl. 88—34)



1. In a binocular having a casing, objective and ocular lens mounts, an elastic shock absorbing covering extending over the entire outer surface of said casing, elastic shock absorbing sleeves on said objectives and ocular mounts, elastic covers for said sleeves having integral flange portions which are directed away from the respective oculars and objectives in their open position, said elastic covers and flanges being directly attached at one outer portion of the sleeves and being elastically inverted to grip the sleeve ends when the covers are flexed to a closed position.

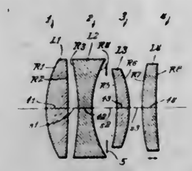
3,020,803
MULTIFOCAL LENS
James E. Duncan, Brackenridge, and Samuel L. Seymour, Oakmont, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed May 13, 1958, Ser. No. 734,847
3 Claims. (Cl. 88—54)



1. A multifocal lens comprising a major glass portion of the lens having a segment glass portion fused thereto, the segment being composed of a boron-free and lithia-free glass having an index of refraction, N_d, between 1.57 and 1.67, a softening point above 1385° F. and a coefficient of thermal expansion of 7 to 10×10^{-6} per ° C. between 25 and 300° C. which consists essentially of the following ingredients in percent by weight: 35 to 52 percent SiO_2, 0 to 12 percent Na_2O, 0 to 10 percent K_2O, the sum of Na_2O and K_2O being 6 to 12 percent, 28.1 to 34 percent BaO, 2 to 15 percent ZrO_2, 0 to 10 percent CaO, 0 to 10 percent ZnO and 0 to 10 percent PbO, the sum of CaO, ZnO and PbO being 5 to 15 percent, the above listed essential ingredients constituting at least 95 percent by weight of the glass, and the major portion of the lens being composed of a crown glass having an index of refraction between 1.520 and 1.540, a coefficient of expansion of 7 to 10×10^{-6} per ° C. between 25 and 300° C. and a softening point which is at least 100° F. lower than the softening point of the segment glass.

3,020,804
OPTICAL OBJECTIVE
Arthur Cox, Park Ridge, and Irving C. Sandback, Morton Grove, Ill., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 8, 1958, Ser. No. 778,802
4 Claims. (Cl. 88—57)

1. In an optical objective, proceeding from front to rear, a positive front component predominantly convex forwardly, a negative biconcave second component, a stop, a positive meniscus third component concave to the front, and an axially movable focusing positive meniscus rear component concave to the rear, and being further characterized in that the objective conforms substantially to the following inequalities in which R_2 to R_8 designate the respective radii of curvature of the surfaces of the components starting with the rear surface of the front component and proceeding to the rear:



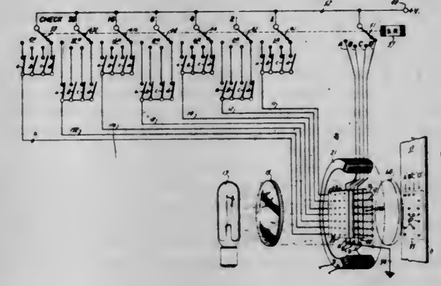
$$7<\frac{R_2}{R_3}<12$$

$$1.7<-\frac{R_3}{R_4}<2.7$$

$$1.5<\frac{R_5}{R_6}<1.8$$

$$2.3<\frac{R_5}{R_7}<3.7$$

3,020,805
OPTICAL RECORDING DEVICE
William A. Goddard, Monte Sereno, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 27, 1958, Ser. No. 724,390
2 Claims. (Cl. 88—61)



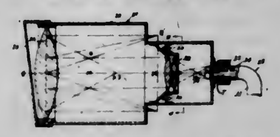
1. A photorecording control element for rapidly recording coded characters upon a photoresponsive medium comprising an opaque mask of highly permeable material having a plurality of holes therein defining discrete light paths through said mask to said medium, said holes being disposed in a rectilinear pattern to form a plurality of columns and rows thereof, a plurality of conductors each positioned to overlay an associated one of said rows of holes normally to block the passage of light therethrough, a plurality of conductive wires each positioned to overlay an associated one of said columns of holes normally to block the passage of light therethrough, means for providing a substantially uniform field of magnetic flux in a direction substantially normal to said mask over all of said conductors and said wires, means for applying electric currents concurrently and selectively to one of said wires and to said conductors to displace said selected wire from the associated column of holes and said selected

conductors from the associated rows of holes to pass light to said medium by way of a selected combination of holes in the column thereof associated with said selected wire to transmit coded characters to said medium in the form of said selected combination of holes only upon the concurrent displacement of both the wire and the conductor associated with the selected holes.

3,020,806
OPTICAL VIEWING SYSTEM

Paul P. Castrucci, 180 Partridge Court, Selfridge AFB, Mount Clemens, Mich.

Filed Oct. 10, 1957, Ser. No. 689,373
1 Claim. (Cl. 88—72)



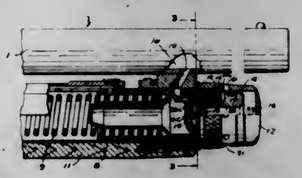
In an optical viewing system, including an optical transmitter comprising a mounting tube, a plurality of wide angle lenses mounted in said tube, said lenses being mounted in pairs, the lenses of each pair being in spaced parallel relation to each other, and the pairs being spaced from each other a greater distance than the lenses of each pair are spaced from each other, a cover mounted on one end of said tube, an optical fiber fasciculus having one end connected to the opposite end of said tube and extended from said transmitter with said end being mounted at one end of said tube in alinement with the centers of said lenses, said optical fiber fasciculus comprising a plurality of flexible glass fibers which are wound together in a flexible bundle, a thin protective sheath covering said fibers, each of said fibers comprising a central glass core of high refractive index covered with a glass coating of low refractive index, the improvement comprising an optical receiver connected to the other end of said optical fiber fasciculus, said receiver comprising a case having said optical fiber fasciculus connected thereto, a pair of convex lenses mounted in said case, the end of the fasciculus being connected to the case in alinement with the centers of convex lenses, lamps mounted in the case and arranged in a circular row that is in circumjacent relation to and laterally of the outer periphery of one of said last named lenses, a convex magnifying lens arranged adjacent the end of said case opposite to the end thereof to which the fasciculus is connected and positioned forwardly of said convex lenses, a glare shield connected to the end of said case in which the convex magnifying lens is mounted and arranged contiguous to said last named lens.

3,020,807
CONTROL DEVICE FOR GAS OPERATED FIREARM

Ellis W. Hallston, Ilion, N.Y., and Lowell E. Huffman, Newark, Del., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Filed Apr. 4, 1958, Ser. No. 726,518
6 Claims. (Cl. 89—193)

1. An automatic compensating valve for a firearm having a barrel, a gas operating cylinder in communication with the bore of the barrel and an operating piston reciprocable in said gas operating cylinder, said compensating valve comprising a cap for the end of said gas operating cylinder remote from the breech of the barrel, a partition member separating said cap into a first portion in continuous communication with said operating cylinder and a second portion in continuous communication with the atmosphere, a gas vent extending through said partition member and communicating between said first and second portion of the cap, an inertia member supported in said second portion of the cap for reciprocating movement therein along an axis substantially parallel to the axis of the bore of the barrel between a position nearest to the breech end of the barrel and a position more remote therefrom, a valve piston integral with said inertia member and disposed to close said vent when said inertia member is in its position nearest the breech end of the barrel and to open said vent only when the inertia member has been moved a substantial distance toward said more remote position, and spring means in said second portion of the cap and arranged to act between the cap

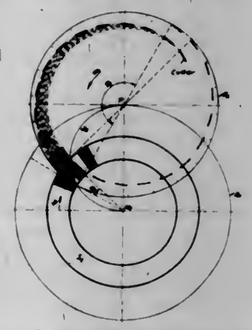


and said inertia member urging said inertia member toward its position nearest the barrel, the force of said spring being so related to the mass of the inertia member that the recoil incidental to the firing of a light load in the barrel of the firearm will be insufficient to produce movement of the inertia member great enough to open the vent, while the recoil incidental to the firing of a heavy load will be sufficient to produce more movement of the inertia member than required to open said vent, the cross-sectional area of the vent opening and of the valve piston closing same being so related to the force of the spring that the valve will not blow open as a pressure relief valve when a light load is fired.

3,020,808
METHOD FOR CONTINUOUSLY GENERATING BEVEL GEARS WITH STRAIGHT TEETH

Gerhard Apitz, Hamburg, Germany, assignor to Heidenreich & Harbeck, Hamburg, Germany, a German partnership

Filed Sept. 23, 1958, Ser. No. 762,888
Claims priority, application Germany Oct. 1, 1957
16 Claims. (Cl. 90—5)

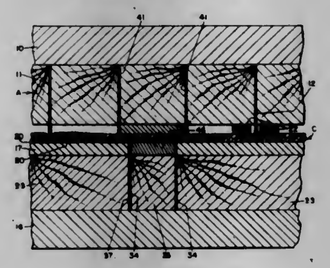


1. A method of cutting straight teeth into the blank of a bevel gear wheel, which comprises continuously rotating a plurality of tools each having spirally arranged cutting edges representing the right and left hand flanks of an imaginary gear wheel meshing with said blank, rolling circles concentric with the centers of rotation of said tools on a circle concentric with said blank, whereby the tool axes move relative to the blank on paths concentric with the blank axis, and rotating said last-mentioned circle on its own axis, whereby a longitudinally linear flank line on each workpiece tooth is the envelope for successively generated cycloidal cutting arcs.

3,020,809
APPARATUS FOR DIE CUTTING PAPERBOARD

Reynolds Guyer, White Bear Lake, and Nels H. Sandberg, St. Paul, Minn., assignors to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota

Filed July 14, 1958, Ser. No. 748,533
9 Claims. (Cl. 93—58.3)

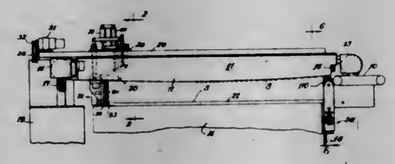


1. An apparatus for die cutting both sides of paperboard sheets and the like including a fixed platen having a metal die cutting plate thereon, said plate having a flat outer surface, a lower die including die cutting edges projecting from said cutting plate, a movable platen cooperable with said fixed platen, a wooden die supported by said movable platen and including die cutting rule projecting therefrom, and inserts having flat outer surfaces in said wooden die opposite said die cutting edges projecting from said die cutting plate, said surfaces of said inserts being spaced from said outer surface of die cutting plate a distance substantially equal to the thickness of the sheets being die cut in cutting position of said platens, said die cutting edges of said die cutting plate being spaced substantially from said die cutting rule of said wooden die when said dies are in cutting position.

3,020,810
MECHANISM FOR STAGGER PILING OF METAL SHEETS

Dario Buccicone, Gary, Ind., assignor to Bucciconi Engineering Co., Inc., Gary, Ind., a corporation of Indiana

Filed Oct. 22, 1959, Ser. No. 847,956
18 Claims. (Cl. 93—93)

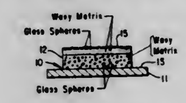


1. A sheet piler of the class described comprising an overhead magnetic conveyor and an end stop mechanism located adjacent the conveyor in position to receive the impact of the leading edges of successive sheets of material advanced by said conveyor and released for deposit in a horizontal position on a pile in front of said stop mechanism, said stop mechanism comprising a main bumper plate, means mounting said main bumper plate for limited retractive movement in a horizontal direction upon initial impact of the sheets with the stop mechanism, an auxiliary bumper plate mounted for vertical movement in front of said main bumper plate, means to selectively position said auxiliary bumper plate at predetermined vertical positions relative to said main bumper plate, a pivotally mounted sheet edge supporting finger resiliently held in a substantially horizontal position at the lower edge of said auxiliary bumper plate, said finger being adapted to engage beneath the sheet and guide the edge of the sheet against the face of the auxiliary bumper member so as to prevent movement of the same beneath the bumper member.

3,020,811
ARTIFICIAL SNOW

John W. Lincoln, Lincoln, and William J. J. Gordon, Cambridge, Mass., assignors, by mesne assignments, to Cataphote Corporation, Toledo, Ohio, a corporation of Ohio

Filed Feb. 21, 1958, Ser. No. 716,647
15 Claims. (Cl. 94—3)

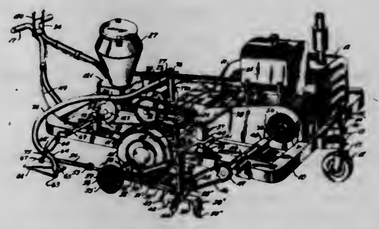


1. An artificial snow suitable for skiing and tobogganing purposes comprising a predominant amount of glass beads of varying sizes having a particle size distribution within the range of about 10 to 1000 microns in diameter in admixture with a small amount of a binder composition which comprises a major portion of scale wax and a minor portion of microcrystalline wax, said binder composition having the property at ambient temperatures of increasing in fluidity upon application of pressure thereby enabling said particles to have free rolling motion in or on the surface of said binder and of decreasing in fluidity upon removal of said applied pressure whereby said particles are readhered in said binder composition.

3,020,812
JOINT FILLING MACHINE

Charles P. Gross, Brigantine, N.J., assignor to Joint Filling Equipment Company, Brigantine, N.J.

Filed Dec. 17, 1952, Ser. No. 326,471
4 Claims. (Cl. 94—39)



1. A machine for cleaning and filling joints comprising a frame, ground-engaging supporting wheels for movably supporting said frame on a surface, power means on said frame, a vertically adjustable bracket projecting from said frame and having a substantially horizontal bearing, a shaft rotatably mounted in said bearing, a cutter mounted on said shaft, a vertically adjustable pilot gouge mounted on said bracket, arm means projecting rearwardly from said bracket, a nozzle pivotally connected to the rear end of said arm means and projecting downwardly therefrom, a ground-engaging plate extending rearwardly from said nozzle and having a downward-

ly projecting rib in alignment with said nozzle on the lower side of said plate, a rotatable brush mounted in a bearing of said arm means, means connecting said cutter and said brush to said power source for operating the cutter and brush in a direction to feed the machine forwardly, and means for supplying joint filling material under pressure to said nozzle whereby the machine will excavate the joint to uniform dimensions and fill the same in a manner that substantially all of the filling material will be below the upper portion of the joint.

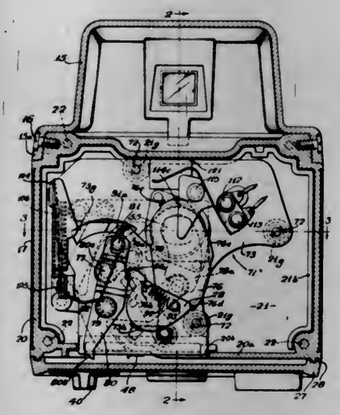
3,020,813
JOINT CLEANING AND FILLING MACHINE
Charles P. Gross, 4205 Brigantine Blvd., Brigantine, N.J.
Filed July 23, 1956, Ser. No. 599,594
3 Claims. (Cl. 94—39)



1. A nozzle for applying extremely viscous joint filling material within a groove to effectively seal such groove when exposed to both high and low temperatures, comprising a blade having two portions arranged at a dihedral angle greater than 180° and having a nozzle projecting from said dihedral substantially bisecting the angle thereof with said nozzle having a forward wall approximately adjacent one end of the apex of said dihedral angle defining the front of said blade, said nozzle having generally parallel side walls and being open at the bottom and rear, said blade having a portion extending rearwardly from said nozzle, and a downwardly projecting convex means on said rearwardly extending portion in alignment with the rearward direction of discharge for engaging the edges of the pavement and depressing the joint filling material into a concave shape, and tubular means to guide the joint filling material into said nozzle.

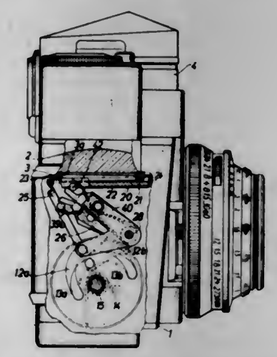
3,020,814
CAMERA
Arthur C. Mueller, Maine Township, Cook County, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed June 8, 1959, Ser. No. 818,619
2 Claims. (Cl. 95—11.5)

1. In a flash camera, a spring contact member having a contact portion and urged toward an operative position and movable to an inoperative position, a cam member of electrical insulation having a first flat thereon and a second flat thereon, the cam member having an operating arm and movable between a first position in which the contact member engages the first flat and is held thereby in its operative position and a second position in which the contact member engages the second flat and is held thereby in its inoperative position, and conductive shutter blade means movable from a retracted position through an exposure stroke to an actuated position and a return stroke and adapted to contact the contact portion of the contact member when the contact portion is in the operative position thereof, the shutter blade means having a tab for engaging the operating arm to move the cam member to the second position thereof near the end of the exposure stroke and a second tab for engaging the operating arm to move the arm to the first position thereof after the



blade means has been moved in its return stroke beyond the contact portion.

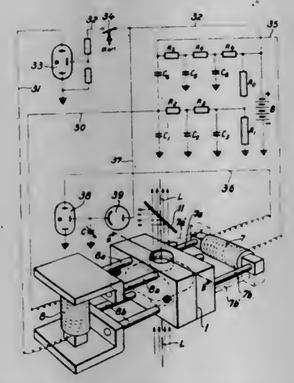
3,020,815
SINGLE LENS REFLEX CAMERA
Franz Landbrecht, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Aug. 5, 1959, Ser. No. 831,738
Claims priority, application Germany Aug. 6, 1958
11 Claims. (Cl. 95—42)



1. In a single lens reflex camera, in combination, a viewfinder located over the optical axis of the camera; a reflector movable between a viewing position where it intersects the optical axis to reflect an image to the viewfinder and an exposure position where the reflector is spaced from the optical axis while an exposure is made; means cooperating in a light-tight manner with said reflector when it is in said exposure position thereof; a light shield having a shielding position preventing light from having access to film which is to be exposed and also having an exposure position providing access of light along the optical axis to the film to expose the latter; and moving means cooperating with said reflector and light shield for first moving said reflector from said viewing to said exposure position thereof, for then moving said light shield from said shielding to said exposure position thereof, for thereafter returning said light shield from said exposure

to said shielding position thereof, and for finally returning said reflector from said exposure to said viewing position thereof, said moving means maintaining said reflector in a rigid, vibration-proof manner in its exposure position and said light shield in a rigid, vibration-proof manner in its shielding position, said moving means including first and second rigid motion transmitting elements and acting exclusively through said first rigid motion transmitting elements on said reflector during movement of the latter from said viewing to said exposure position thereof and said moving means acting exclusively through said second rigid motion transmitting elements on said light shield during movement of the latter from said exposure to said light shielding position thereof.

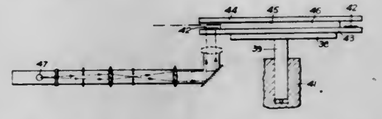
3,020,816
SHUTTER FOR PHOTOGRAPHIC APPARATUS
Helmüth Frenk, Wetzlar (Lahn), Germany, assignor to Ernst Leitz Gesellschaft mit beschrankter Haftung, Wetzlar (Lahn), Germany
Filed Feb. 26, 1960, Ser. No. 11,266
Claims priority, application Germany Feb. 28, 1959
9 Claims. (Cl. 95—58)



1. A shutter for photographic apparatus comprising a plurality of shutter blades consisting at least partly of magnetizable material, at least two magnet systems the respective fields of which are disposed perpendicularly relative to one another, means for reversing the polarity of the two magnet systems, said blades being positioned within the effective range of the fields of said magnet systems and being aligned with the fields of said magnet systems in one predetermined direction for opening said shutter, and being aligned with the fields in another predetermined direction upon reversal of said two fields according to the prevailing polarity thereof, thereby opening and closing, respectively, the shutter.

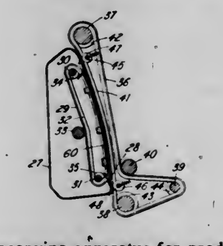
3,020,817
COPYING OF OPTICAL GRATINGS
James Morriss Burch, Surbiton, England (% National Physical Laboratory, Teddington, England)
Filed Mar. 16, 1959, Ser. No. 799,625
Claims priority, application Great Britain Mar. 19, 1958
4 Claims. (Cl. 95—73)

1. In a method of copying an optical grating photographically by exposing behind the grating a sensitised surface fixed in relation thereto and traversing the grating relative to a collimated beam of monochromatic light of smaller cross section than the grating, the spacing between the grating and the sensitised surface being approximately such that the zero order beam from one ruling meets the first order diffraction beam from two neighbouring rulings at the sensitised surface, the steps which comprise previously ascertaining the spacing errors of the grating and varying the inclination of the collimated beam about



a centre lying in the axis of the collimated beam and within the space between the grating and the sensitised surface, during the traverse to correct the ascertained spacing errors in the grating.

3,020,818
DIAZOTYPE AND LIKE PHOTO-COPYING APPARATUS
Joseph Gerald Brocton Halden, Loughton, England, assignor to Ozalid Company Limited, Loughton, England, a British company
Filed Apr. 20, 1959, Ser. No. 807,567
Claims priority, application Great Britain Apr. 24, 1958
10 Claims. (Cl. 95—89)

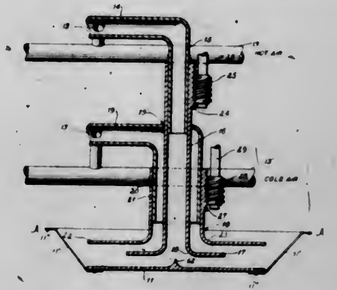


1. In photocopying apparatus for producing copies on light sensitive sheet material, a developing section including means for applying developer to light sensitive sheet material after exposure, continuous means in the developing section for supporting such sheet material during application of the developer and belt conveyor means for carrying light sensitive sheet material through the developing section, said conveyor means comprising a flexible belt and guide and driving means to cause the belt to travel over said sheet material supporting means with the sheets being processed held between the belt and the support means, said belt having longitudinally extending stiffening ribs for maintaining the belt in firm engagement with said sheet material supporting means.

3,020,819
AIR CONDITIONING CONTROL UNITS
Alfred E. Kunen, 59 Kings Walk, Massapequa Park, N.Y.
Filed June 6, 1958, Ser. No. 740,358
7 Claims. (Cl. 98—38)

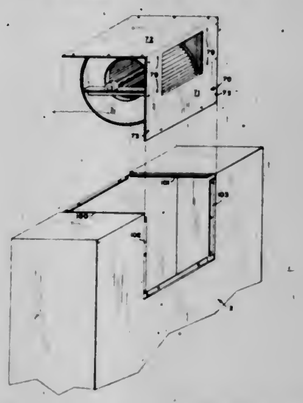
1. A control unit for mixing and regulating the relative volumes of hot air and cold air flowing from a pair of separate supply pipes, comprising a pair of independent concentric, tubular air nozzles aligned longitudinally and one nozzle having a greater diameter than the other, a sleeve individual to and mounted for sliding movement on each nozzle, means for individually sliding the sleeves along the tubular nozzles to provide longitudinal adjustment thereof, the sleeve on the smaller nozzle concentrically passing through the other sleeve and nozzle, said sleeves constituting independent extensions of their respective nozzles, parallel outstanding flanges carried by the ends of said sleeves remote from the nozzles and one of said flanges having a greater width than the other, and

a stationary diffusing plate mounted adjacent and parallel to said flanges so as to dispose the smaller flange between the plate and the larger flange, whereby adjustment of the position of the sleeves by sliding movement thereof cor-



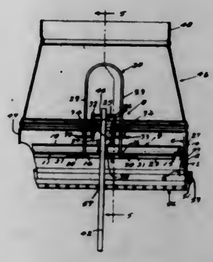
respondingly varies the spacing of the flanges relative to each other and to the diffusing plate to control the volumes of hot air and cold air allowed to flow out therebetween.

3,020,820
SELF-CONTAINED AIR CONDITIONING UNITS
Harold H. Hopkinson, Manlius, Maurice D. Irwin, De Witt, and Vernon R. Kessler, Fayetteville, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Dec. 16, 1955, Ser. No. 553,501, now Patent No. 2,959,031, dated Nov. 8, 1960. Divided and this application Nov. 9, 1959, Ser. No. 851,655
5 Claims. (Cl. 98—40)



1. In a self-contained air conditioning unit, the combination of a casing and a fan discharge mounting, said casing comprising a top and side wall members, said casing having an opening extending into the top and one side wall member, said fan discharge mounting including an L-shaped member having equal leg portions, one leg portion having an opening therein, the other leg portion being imperforate, a fan secured to said fan discharge mounting and discharging through the opening in said one leg portion thereof, said fan discharge mounting being complementary to the opening in the casing, and connecting means for mounting the L-shaped member into the casing so as to permit orientation of the leg portion having the fan discharge opening in either the top or side wall member of the casing, said fan and said fan discharge mounting being movable as an assembly.

3,020,821
DAMPER ASSEMBLY
Alton C. Garrison, 2902 Carters Ferry Road, Marshall, Tex.
Filed Aug. 22, 1960, Ser. No. 51,140
5 Claims. (Cl. 98—41)

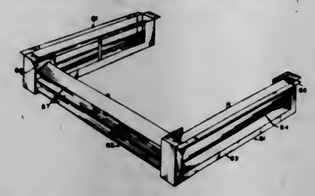


1. A damper assembly comprising an elongated frame adapted to be disposed within a conduit and having a bar portion spanning the conduit and end portions disposed at an angle to the bar portion, means anchoring said end portions to the conduit with the plane of the bar portion disposed normal to the axis of the conduit, a pair of damper plates, means pivotally connecting said damper plates to said frame for mounting the damper plates in positions straddling the bar portion, a guide member including spaced substantially parallel legs supported by said frame within the conduit and disposed perpendicular to the bar portion and substantially parallel to the axis of the conduit, a crosshead having substantially coplanar apertured portions slidably engaging said legs and mounting the crosshead on the guide member for reciprocating movement of the crosshead toward and away from the frame, said crosshead having substantially parallel portions disposed between and spaced from said legs, a pair of links having adjacent ends pivotally connected to said substantially parallel portions and remote ends pivotally connected to the damper plates, and an actuating rod extending slidably through said bar portion between the legs of the guide member and having one end secured to the crosshead, between said substantially parallel portions, and an opposite end disposed beyond an end of said conduit, said actuating rod being adapted to be manually actuated for moving the rod and crosshead longitudinally of the guide member for exerting a pulling or a pushing force on the links for swinging the damper plates relative to the frame between open and closed positions.

3,020,822
SELF-CONTAINED AIR CONDITIONING UNITS
Harold H. Hopkinson, Manlius, Maurice D. Irwin, De Witt, and Vernon R. Kessler, Fayetteville, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Dec. 16, 1955, Ser. No. 553,501. Divided and this application Nov. 9, 1959, Ser. No. 851,653
3 Claims. (Cl. 98—121)

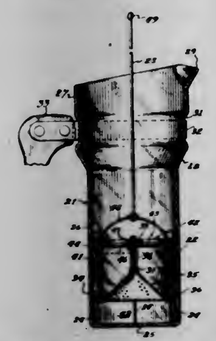
1. In a base member for an air conditioning unit, the combination of first and second side members and a front member, said side members being parallel and disposed in spaced relationship, said side members each comprising a U-shaped member having an elongated base portion to the ends of which are secured upright legs, a plurality of parallel louvers angularly disposed between said legs, flanged portions extending from said legs, said flanged portions adapted to be connected to said air conditioning unit, one leg of each side member having an upper pin member and a lower pin member extending

therefrom, said front member including a plurality of parallel louvers and parallel end plate members connected to the ends of said louvers, each of said end plate



members having an indentation for engaging said upper pin member on a leg whereby the said front member is removably disposed between said side members.

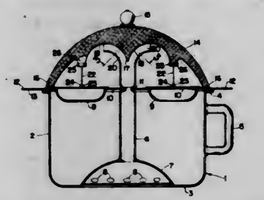
3,020,823
PISTON AND CYLINDER ACTION COFFEE MAKER
Ferdinando Pasquale Musso, LaSalle Hotel, Chicago, Ill.
Filed Apr. 6, 1959, Ser. No. 804,507
7 Claims. (Cl. 99—287)



1. A coffee maker having an open top coffee vessel with a bottom, a cylindrical sleeve integral with the bottom, and an enlarged cylindrical upper portion fixed to the cylindrical sleeve; a coffee basket comprising an imperforated open end retainer, a perforated top closure engaged with the retainer across the top thereof and having a diameter slightly less than the interior diameter of the cylindrical sleeve, a perforated bottom closure engaged with the retainer across the bottom thereof and having a conical surface, a steam passage tube attached to the bottom closure extending from the center of the conical surface throught the top closure, and fastening means for attaching the top closure to the steam passage tube; a bridge attached to the top closure; a handle attached to said bridge; and legs attached to the coffee basket supporting the basket above the bottom of the vessel and forming a steam chamber therebetween, said coffee basket being freely movable within said cylindrical sleeve and having a loose, sliding fit therewith whereby steam formed between the bottom of the basket and the vessel causes the basket to rise and fall within said sleeve during the brewing of the coffee.

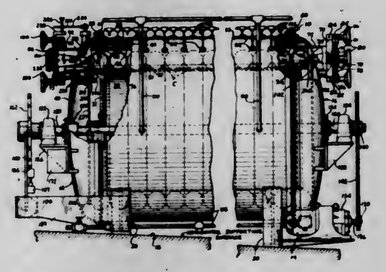
3,020,824
COOKING APPARATUS
Carl Pantermoller, 2844 S. Herman St., Milwaukee, Wis.
Filed Apr. 27, 1959, Ser. No. 809,245
6 Claims. (Cl. 99—346)

1. A cooking apparatus, comprising an open top container having an upper peripheral edge and adapted to contain water to be heated, a riser disposed centrally within the container and adapted to conduct heated water from the lower portion of the container to the upper portion thereof, abutment means connected to said riser at a vertical level corresponding to said peripheral edge, a series of separate egg cups disposed in circularly spaced relation within the container and adapted to contain eggs to be cooked, each of said egg cups having a rim with a portion of said rim disposed to engage said abutment means and a second portion of said rim being disposed to rest on said peripheral edge of the container



whereby said egg cup is supported between said riser and said peripheral edge of the container, and a cover to enclose the upper end of the container, said cover being provided with a central downwardly extending apex disposed in vertical alignment with the riser and being provided with a series of arched surfaces extending radially from said apex and corresponding in number and alignment with said egg cups, said arched surfaces deflecting the heated water being discharged from the upper end of said riser to the respective egg cups and into contact with the eggs therein.

3,020,825
CANNING RETORT WITH END-OVER-END AGITATION
John Schmidt, 322 Greenwood Ave., Jenkintown, Pa.
Filed July 10, 1959, Ser. No. 826,248
5 Claims. (Cl. 99—362)



1. In an end-over-end cooker for the processing of mobile material confined in cylindrical containers, in combination, a retort adapted to contain a heat-exchange fluid therein, said retort including an elongated substantially cylindrical shell, a closure head for each end of the shell, the axis of the shell being inclined slightly relative to a horizontal plane whereby one end of the shell is slightly elevated with respect to the other end, there being a feed opening for containers in the closure head at the elevated end of the shell, there being a discharge opening in the other closure head said openings being in longitudinal alignment relative to the shell and being disposed in the upper regions of the latter, a substantially cylindrical reel disposed concentrically within said shell and mounted for rotation about the inclined axis of the latter, a plurality of circumferentially spaced elongated container-confining guideways having open ends each adapted

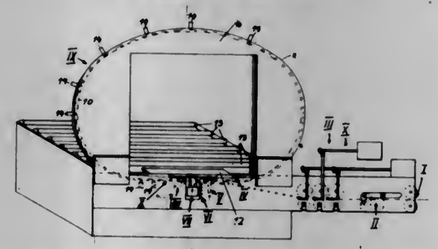
to receive a succession of the containers sidewise therein whereby, upon rotation of the reel, the containers will revolve about said inclined axis in end-over-end fashion, the ends of said guideways, upon rotation of the reel, moving successively into receiving and discharge register with said feed and discharge openings respectively, a container-confining segment ring fixedly mounted within the retort and in concentric relation to the reel and positioned adjacent to the closure head at the lower end of the retort for preventing egress of the lowermost container in each guideway, said segment ring being interrupted to provide a gap in the upper regions thereof and in longitudinal register with the discharge opening and permit discharge of containers from the various guideways by gravity through said discharge opening, a door for said discharge opening, hinge means connecting the door and said other closure head whereby the door is movable into and out of sealing register with the opening, and an abutment on said door, said abutment being movable bodily with the door, upon positioning of the door over said discharge opening, into said gap for blocking register with said guideways as the latter assume their uppermost positions relative to the axis of the reel.

3,020,826
COOKING UTENSIL
Luis Silva, % Spanish Gardens, 1349 S. 26th St., Kansas City, Kans.
Filed Oct. 26, 1959, Ser. No. 848,786
1 Claim. (Cl. 99—426)



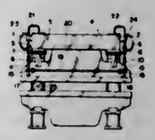
A holder for cooking a taco shell comprising, a pair of spaced elongated horizontally extending handle members joined at one end respectively thereof in a spring coil so that said handle members will normally be spaced apart and movable in the same plane, the other end of each of said handle members being turned laterally toward each other forming arms, said arms being turned laterally so as to extend in horizontal position substantially oppositely relative to said handle members, one of said laterally extending arms extending slightly upwardly over the other and then both of said arms being turned substantially vertically downwardly and terminating in substantially horizontally extending portions, said horizontally extending portions of said arms extending in the same planes as the respective vertical portions and laterally turned portions of said arms, first and second taco holding members secured respectively to said arms on said horizontally extending portions said holding members each being of substantially U-shape and the first member nesting within the second member when the holder is in normal position and both U-shaped members having spaced apart curved arms, U-shaped wires having their free ends secured on the outside of the spaced apart arms of the first nested holding member forming taco supporting surfaces, a pluarlity of spaced wires secured to the inside of said spaced arms of said member and running transversely to said wires on said first member, said first member being of smaller external dimension in side elevation than the internal dimension of said second member for nesting therein, said spring coil urging said members into nesting position, said members being horizontally separated by movement of said handle members toward each other for placement of the taco over the first member and release of said handle members will cause the second member to close over the taco and hold it in place on the first member during cooking and the wires on the second member gripping the taco when the handle members are moved toward each other to remove said taco from the first member.

3,020,827
MEANS FOR MAGNETICALLY MAINTAINING METAL TAPE IN A LOOP IN BANDING APPARATUS
Hans Lüthi, Zurich, Switzerland, assignor to Erapa Etablissement fuer Rationelle Verpackung und Spedition, Vaduz, Liechtenstein
Filed Sept. 24, 1958, Ser. No. 762,985
Claims priority, application Germany Mar. 21, 1955
1 Claim. (Cl. 100—26)



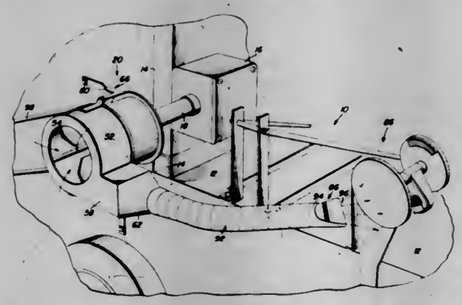
In a package banding machine, a guide means for a metal banding material in the form of a loop about the package, the guide means being unobstructed inwardly toward the package and having an outer wall on the inner surface of which the metal banding material is adapted to slide, the outer wall being formed with a plurality of apertures therein which extend therethrough, and a plurality of magnets spaced from each other supported in the outer wall of the guide means, each magnet extending through an individual outer wall aperture so that a magnet pole face is adjacent to, and spaced from, the inner surface of the outer wall and is adapted to attract the metal banding material to the outer wall as it is fed into the guide means to prevent the banding material from dropping out of the guide means.

3,020,828
PARALLEL CONTROL GEAR FOR HYDRAULIC PRESSES, SHEARS, OR THE LIKE, HAVING SEVERAL PRESS CYLINDERS
Johann Niederreither, Munich, Germany, assignor to Karl Mengele & Söhne, Gunzburg (Danube), Germany, a firm of Germany
Filed Oct. 11, 1956, Ser. No. 615,302
2 Claims. (Cl. 100—46)



2. Control mechanism for hydraulic presses, shears and similar machines having a frame and a plurality of spaced press cylinders mounted on said frame with cylinders having pistons and a press beam actuatable by said pistons; comprising self-acting parallel guidance means for said beam including a plurality of control valves mounted in said frame adjacent each of said cylinders, each of said control valves being provided with operating piston rods, said guidance means further including toothed rods, variable means operatively connecting said toothed rods to said piston rods for automatically adjusting the relative position thereof, and a camshaft mounted on said beam, said camshaft having spaced pinions thereon, said toothed rods meshing with said pinions to actuate said valves to thereby compensate for variations emanating from flexing of said beam during pressing operation, and hydraulic means connecting said cylinders to the respective variable means for adjusting the length of said variable means, said variable means including an upper portion connected to each of said piston rods and a base connected to each of said toothed rods, said upper portion being received in said base, an adjusting piston disposed in and extending between said upper portion and said base, spring means disposed in said base yieldingly engaging said adjusting piston for biasing the same further into said upper portion, said hydraulic means being connected to said upper portion for urging said adjusting piston outwardly of said upper portion.

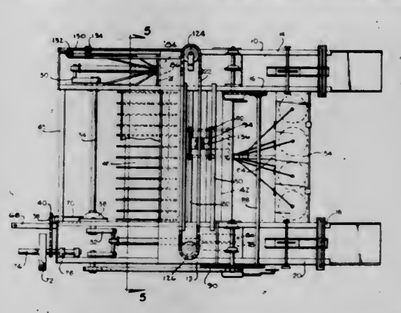
3,020,829
BLOWER FOR HAY BALER
Fred Pearson, Box 1023, Quincy, Wash.
Filed Apr. 27, 1961, Ser. No. 106,059
7 Claims. (Cl. 100—102)



1. In combination, a hay baler having a frame, a source of power for operating the hay baler comprising a belt pulley rotatably mounted on the frame driven by a source of power, a fan fixed directly to and rotated by the pulley, a stationary housing enclosing said fan, a knotter assembly mounted on the frame, conduit means conducting the air moved by said fan from the housing to the knotter assembly.

3,020,830
DUAL CHAMBER AUTOMATIC HAY BALER
Joseph J. Harrington, % Harrington Mfg. Co. Inc., Lewiston, N.C.
Filed May 22, 1959, Ser. No. 815,041
1 Claim. (Cl. 100—209)

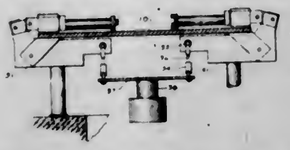
In the known hay baler construction comprising a pair of parallel baling chambers, a pair of plunger heads oscillatable in each of said chambers, a crank arm arrangement for oscillating said plunger heads means interconnecting said plunger heads for timed operation of one with respect to the other, including means interconnecting one plunger head so that it is at its maximum compression stroke while the other plunger head is at its maximum retracted position, a hay sweep platform and chamber interconnecting said bale chambers, each of said bale chambers having hay inlet openings in substantial alignment with ends of said sweep chamber and platform, a hay sweep mechanism movable across said sweep platform and chamber for alternately compacting hay into each of said bale chambers in timed relationship with the plunger head positioned in both of said chambers, said hay sweep mechanism comprising spaced apart sets of finger means, each of said sets of finger means being cooperable with one of said bale chambers, the improvement which comprises the vertical sides of each of said chambers having forward extensions which extend for a considerable distance beyond the forward-most position of said plunger heads and said hay inlet openings, each pair of said forward extensions being shaped so as to provide a lateral flange along substantially the entire length of the crank arm arrangement which is utilized to cause said plunger heads to move in an oscillating manner, each pair of forward extensions being rigidly interconnected at their forward-most ends, the inboard side of each forward extension being rigidly interconnected at their forward-most ends, the vertical sides of each of said baling chambers having rearward extensions which extend rearwardly from said hay inlet openings a distance which is approximately equal to the distance which said forward extensions extend forwardly of said hay inlet openings, the rearward-most ends of the inboard sides of said rearward extensions being rigidly interconnected, whereby a hay baler having a box-like frame is produced which can be easily towed, is extremely rigid, and which can withstand the towing torque applied by a single tractor attached to one side of the baler, said means for rigidly interconnecting the said rearward-most ends of the inboard sides of said rearward extensions comprising an elongated bale twine box, said twine box being substantially perpendicular to said rearward extensions, and said means interconnecting said plunger heads for timed operation including a driving connection extending laterally between said bale chambers, said driving connection being journaled in said forward extension of each of said chambers, gear means connected to said driving connection, said gear means having a driving element extending forwardly of said baler at one side thereof, a power takeoff device connected to said element and adapted to be connected to a tractor power takeoff.



3,020,831
APPARATUS FOR APPLYING CIRCUMFERENTIAL PRESSURE ON THE PERIPHERY OF A CIRCULAR OBJECT
Oliver G. Barnes, Limona, Fla.
Filed Sept. 4, 1958, Ser. No. 759,008
3 Claims. (Cl. 100—232)

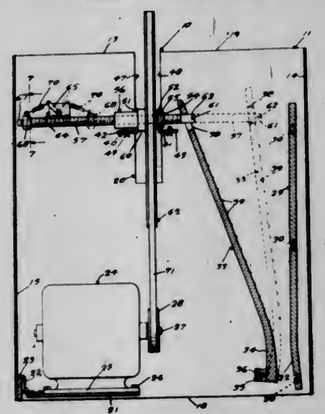
1. A pressure head for the radial plunger of a circumferential press including, an arcuate pressure delivering surface and means on said head for interaction with similar adjacent heads to produce complete circumferential pressure throughout the entire periphery of a circular

work object, said means including fingers and furcations, said fingers and furcations extended laterally from the



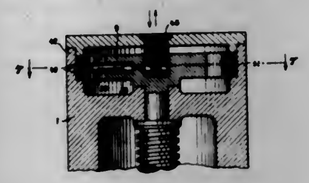
opposite side of the head in an arcuate plane, and being constructed and arranged to permit interdigitation with the fingers and furcations of similar next adjacent heads.

3,020,832
CRUSHING MACHINE WITH FLEXIBLE DRIVE
Edwin E. Sholin, Box 21, Albion, Calif.
Filed May 8, 1961, Ser. No. 108,412
3 Claims. (Cl. 100—233)



1. A crushing machine comprising a rigid frame having side walls, a reversible power source disposed in and supported by said frame, a stationary crushing plate secured in substantially an upright position in the frame and crosswise thereof, a movable crushing plate, means swingably mounting said movable crushing plate in the frame in opposed relation to the stationary crushing plate for swinging movement toward and away from the stationary crushing plate about a substantially horizontal axis disposed adjacent a bottom edge of the movable crushing plate, a pair of rigid braces spanning the frame and connected to said side walls in spaced apart relation to one another, said movable crushing plate being disposed adjacent to the stationary crushing plate and between the stationary crushing plate and said braces, a threaded rod extending across said braces, a nut threadedly engaging on said rod, means reciprocably supporting said rod on the braces for supporting and journaling said nut between the braces, means nonrotatably connecting one end of said rod to the movable crushing plate remote from the pivot thereof for sliding movement of the rod relative to said movable crushing plate toward and away from the axis of said pivot, said power source having a rotatably driven part, a large belt pulley disposed around and fixed to the nut, a small belt pulley fixed to the rotatably driven part, and an endless belt trained over the belt pulleys and forming a flexible driving connection between the power source and nut for rotating the nut in opposite directions to feed the threaded rod back and forth therethrough for oscillating the movable crushing plate toward and away from said stationary crushing plate.

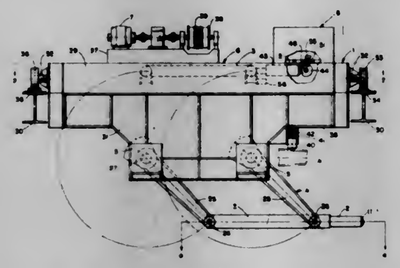
3,020,833
SCREW PRESS WHICH IS OPERATED BY HYDRAULIC MEANS
Friedrich Keilholz and Lajos Alfoldi, Hamm, Germany, assignors to J. Banning Aktiengesellschaft, Maschinenfabrik, Hamm, Westphalia, Germany
Filed May 6, 1958, Ser. No. 733,387
Claims priority, application Germany May 9, 1957
3 Claims. (Cl. 100—271)



1. A screw press comprising, in combination:
(*a*) a support device;
(*b*) a stationary abutment on said support device;
(*c*) screw spindle means having a flywheel device and rotatably mounted on said support device;
(*d*) a press element in threaded engagement with said spindle means and being moved by the latter, upon rotation thereof, relative to said stationary abutment; and
(*e*) fluid pressure operated means for rotating said spindle means and oriented to exert thereon a rectilinear driving force which acts in a plane that is at right angles to the axis of said spindle means, said fluid pressure operated means including
(1) a plurality of sets of cylinders and pistons which are in star-shaped arrangement about the axis of said spindle means, said cylinders being provided in one of said devices and said pistons being slidably arranged in said cylinders, respectively, the other of said devices being provided with camming means engaged by the exposed ends of said pistons, and
(2) means for distributing a pressure fluid to said cylinders.

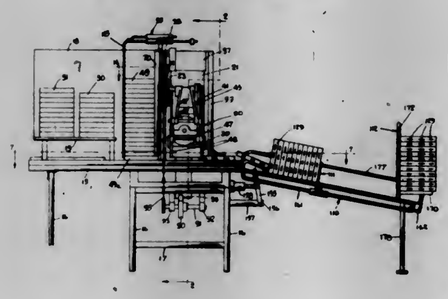
3,020,834
STAMPING MECHANISM
Alvin M. Brown, Penn Township, Allegheny County, John S. Ayers, Scott Township, Allegheny County, Robert L. Shields, Brentwood Boro, John M. Maloney, Munhall Boro, and Thaddeus Jacob Kmiecik, Bethel Park Boro, Pa., assignors to Jas. H. Matthews & Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 22, 1958, Ser. No. 737,041
7 Claims. (Cl. 101—4)

1. A stamping mechanism comprising, a stamping head having a stamping face adapted to be directed toward a surface to be stamped, impact means for ramming said stamping head against said surface, said stamping head including at least one die conditionable to present different characters in said face, an indexing mechanism for conditioning said head to present a selected character in said face, said indexing mechanism being isolated from said impact means and said stamping head during a stamping operation to reduce the degree of vibration received from the stamping operation, actuating means for bringing the stamping head and the indexing mechanism together in operative engagement, and pawl means for effecting said operative engagement comprising a ratchet wheel rotatably mounted in the casing of the indexing mechanism and having teeth spaced so as to fit into the spaces between the characters on said die to effect a rotative connection therewith, a wheel operating bar capable of reciprocating motion in said casing, a pawl pivotably mounted on said operating bar and extending into the path of said teeth, said pawl being rockable in one direction by movement of the bar in a certain direction to pass over the next tooth to be advanced and adapted to be blocked by a stop on the operating bar from rocking in the opposite direction past the point of making contact with the back side of the latter tooth when said bar moves in the direction opposite to said certain direction, and a detent rockably mounted in said casing and normally



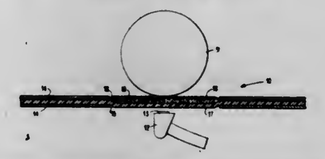
held by said bar in locking engagement with the front side of another tooth against movement of the first mentioned tooth in a direction away from said pawl and operable by said bar when the bar moves in said certain direction to be rocked out of said locking engagement to permit advancing rotation of said wheel and to drop said detent into the path of the oncoming tooth in response to motion of the bar opposite to said certain direction.

3,020,835
BOX PRINTING MACHINE
Clarence R. Hyder, Jr., and David D. Vestal, Burlington, N.C., assignors to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Mar. 1, 1961, Ser. No. 92,654
10 Claims. (Cl. 101—44)



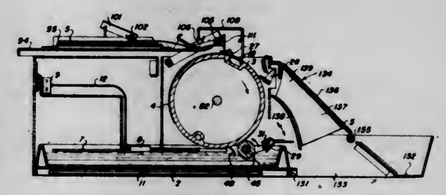
1. In a machine for continuously printing boxes and the like, a framework, vertical guides for positioning a stack of boxes at one end of said framework, a reciprocating pusher foot mounted in the framework and positioned underneath said stack to individually strip the bottom box from the stack and advance it to a printing area on the framework, a vertically oscillating plunger on the framework underneath the printing area, a bladelike anvil adjustably mounted on the framework in an elevated position over the printing area, means for actuating the plunger to elevate one end of the box and insert the anvil between the box bottom and a cover flap of the box, a movable printing head for printing indicia on the cover flap when the box end is in said elevated position, a kicker for ejecting the box onto an unloading rack, and means for sequentially actuating the pusher foot, the plunger, and the kicker.

3,020,836
STENCIL APERTURE TABULATING CARD
Harry R. Palmer and Merle P. Prater, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1960, Ser. No. 78,717
7 Claims. (Cl. 101—125)



1. A stencil aperture tabulating card adapted for conversion into a printing stencil by the impact of type thereon which comprises in assembly a pair of outer sheets of thin card stock, each of said sheets having an apertured window portion, a pair of inner sheets of plastic film secured to the inner faces of said card stock sheets and extending across the apertured portions thereof to form a stencil area defined by the boundary of said apertured portions, a sheet of highly porous ink filled plastic resin secured between said film sheets and within the boundary of said stencil area, and a plurality of small glass beads imbedded in said ink filled sheet for effecting internal cutting of said stencil area under the impact of type thereon.

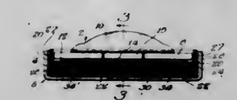
3,020,837
PHOTOGRAPHIC COPYING APPARATUS
Clarence R. Taylor and William C. Wilson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 28, 1959, Ser. No. 816,639
21 Claims. (Cl. 101—132.5)



1. In a copying apparatus for transferring an image from a developed sheet to an image-receiving sheet when the two are fed into face to face contact, the combination comprising a processing fluid container into which an exposed sensitized sheet is adapted to be inserted for development; a rotatable drum adjacent said container; drive means for rotating said drum through a predetermined loading cycle and a transfer cycle in succession; means for stopping said drum after said loading cycle is completed; means for removing said developed sensitized sheet from said container and wrapping it around the periphery of said drum during said loading cycle; pressing means adjacent said drum and movable from a normally inoperative position to an operative position for pressing into intimate face to face contact with said sensitized sheet carried by said drum an image-receiving sheet adapted to be fed thereto in superposed relation; and control means actuable by the image-receiving sheet being fed onto said drum to substantially simultaneously

cause said pressing means to move to its operative position and said drive means to rotate said drum through said transfer cycle during which said image-receiving sheet is pressed into face to face intimate contact with said sensitized sheet.

3,020,838
PRINTING KIT
Raymond J. Prost, 100 S. Jefferson St., Chicago, Ill.
Filed Jan. 4, 1960, Ser. No. 321
7 Claims. (Cl. 101—333)



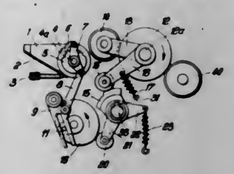
1. A printing kit comprising three superimposed members whose outermost dimensions progressively diminish in size, the uppermost member comprising a stamping member having a printing die on the bottom thereof and a handle extending upwardly from the central portion thereof, the intermediate member comprising an open top receptacle into which the stamping member is telescoped and having an ink pad in the bottom thereof against which said printing die may be urged, means for releasably locking said stamping member within the latter receptacle, the bottommost member being an open top receptacle into which the upper receptacle is substantially completely telescoped, where insufficient area thereof is exposed to be grasped and the overall height of the telescoping receptacles is of the order of the height of the lower receptacle, the lower receptacle having openings in opposite sides thereof which expose sufficient areas of the upper receptacle to enable the user to grasp the upper receptacle and selectively remove the same from the lower receptacle or hold the same within the lower receptacle as the stamping member is removed from the upper receptacle, and there being a space between the bottom of the upper receptacle and the bottom of the lower receptacle for holding a printing accessory.

3,020,839
PLANOGRAPHIC PRINTING PLATES
Leslie E. Richard, South Hadley Center, Mass., assignor to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts
No Drawing. Filed Sept. 21, 1959, Ser. No. 840,999
5 Claims. (Cl. 101—149.2)

1. An unimaged planographic printing plate comprising a paper base and a coating thereon having a planographic printing surface, said coating comprising an insoluble hydrophilic adhesive and a finely divided inert mineral pigment and having therein capillary interstices and pores containing the evaporation residue of a solution of a divalent metal salt and a multivalent metal salt, the weight ratio of said salts to each other being within the range from 1 to 9 to 9 to 1.

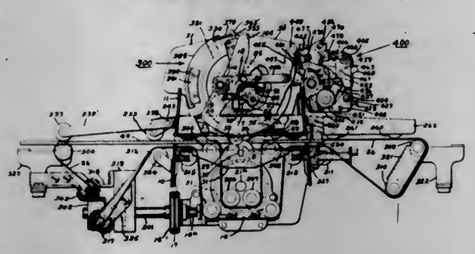
3,020,840
INKING MECHANISM FOR PRINTING MACHINES
Werner Koch, Offenbach (Main), Germany, assignor to Roland Offsetmaschinenfabrik Faber & Schleicher A.G., Offenbach (Main), Germany, a body corporate of Germany
Filed Jan. 11, 1960, Ser. No. 1,687
Claims priority, application Germany Jan. 17, 1959
2 Claims. (Cl. 101—350)

1. In an inking mechanism for printing machines having an ink fountain roller, means for intermittently rotating said ink fountain roller at always even distances, an ink transmitting roller, a ductor roller in permanent contact with said transmitting roller, and means for moving said ductor roller into and out of contact with said fountain roller, the provision of means for controlling the intermittent movement of said fountain roller, comprising a revoluble disc, a crank pin on said disc, a forked lever operable by said crank pin during the rotations of said



disc so as to perform a rocking movement, a ratchet mechanism between said lever and fountain roller including a ratchet wheel on said fountain roller, a double-arm lever, a pawl on said double-arm lever, and a connecting rod for transmitting the movement of said forked lever to said double-armed pawl lever, the means intermediate said revoluble disc and said ductor roller for imparting timed raising and lowering movement of the said ductor roller into and out of contact with said fountain roller during periods of rotation of the latter.

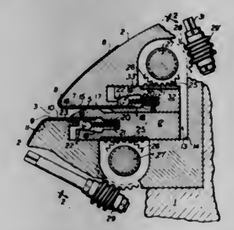
3,020,841
PRINTING APPARATUS AND INKING ARRANGEMENT THEREFOR
Paul John Thut, Penfield, and Robert Wesley Beachner, Irondequoit, N.Y., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Original application Dec. 29, 1955, Ser. No. 556,360, now Patent No. 2,933,038, dated Apr. 19, 1960. Divided and this application Dec. 2, 1959, Ser. No. 856,762
1 Claim. (Cl. 101—350)



Printing apparatus, comprising: a rotary printing member having peripheral printing elements; means for driving said rotary printing member through separate rotational printing cycles and for initiating a printing cycle; an ink reservoir; a pickup roll disposed for contact of a longitudinal portion of its periphery with ink in the reservoir; means for rotating said pickup roll by an incremental amount during each rotational printing cycle only; a doctor blade disposed adjacent to the periphery of said pickup roll for regulating the thickness of ink carried by the pickup roll after contact thereof with ink in the reservoir; a series of distributor rolls having axes parallel to the axis of said pickup roll and having surfaces in mutual frictional rotational driving contact but spaced from the surface of the pickup roll; means for rotatably mounting one of said series of distributor rolls, including a cradle pivotable about an axis coaxial with the axis of a contiguous distributor roll; means coupled to said cyclically rotatable printing member for rocking said cradle about said axis during each rotational printing cycle to move,

once during each rotation of said printing member, said one distributor roll from its spaced relationship with said pickup roll through an adjustable pivotal throw into and back out of ink-transferring relationship with a portion of the periphery of said pickup roll which carries a thickness of ink regulated by the rotation thereof in said incremental amounts and by said doctor blade, while maintaining driving contact between said one distributor roll and said distributor roll contiguous thereto; an inking roll the surface of which is disposed in frictional rotational driving contact with a roll in said series of distributor rolls and also is disposed in rotational inking relationship to the peripheral printing elements of said rotary printing member; and means for driving a roll in said series of distributor rolls to effect continuous rotation of all of the distributor rolls and of the inking roll during operation of the printing apparatus.

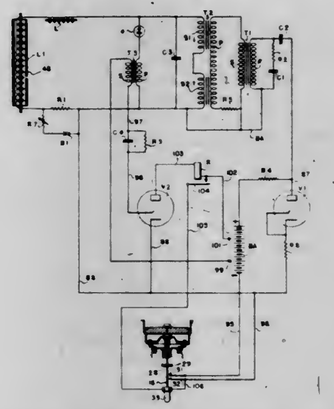
3,020,842
OFFSET PRINTING PLATE CLAMP
Frank Neal, New City, N.Y., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed May 12, 1960, Ser. No. 28,573
2 Claims. (Cl. 101—415.1)



1. A plate clamping mechanism for printing machine cylinders comprising a cylinder body portion having a slot at substantially 45° to the cylinder axial plane, a pair of clamping elements, means for mounting the said elements in the said slot for movement independently of each other, and comprising opposed parallel guiding surfaces supporting the elements slidably against each other, each element having a recess for receiving a plate end, the said recess having opposed walls, one positioned substantially parallel to the said guiding surfaces for supporting the plate end and the other being beveled, a roller positioned between the two said walls for clamping the plate, a spring within the recess for urging the said roller to wedge the same and a plate engaged thereby between the two said opposed walls, thus clamping it in the element, means for moving the said element between a plate clamping and plate releasing position and means engaging the roller in the latter said position and holding it back against the action of the spring to release the plate end, one of the said pair of clamping elements having a portion positioned beyond the other said clamping element and engaging against a plate end held by the said other element when in clamping position.

3,020,843
HIGH GAIN SIGNAL AMPLIFYING DEVICE ADAPTED FOR USE WITH A MARINE MINE
Waldron S. Macdonald, Westgate, and Charles B. Brown, Colmar Manor, Md.
Filed June 4, 1942, Ser. No. 445,750
16 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a submarine mine adapted to be arranged on the bed of a body of water adjacent the path of travel of a vessel, the combination of detecting means for generating an electrical signal variably in accordance with changes in the magnetic field adjacent the mine, a saturable transformer having a pair of opposedly connected secondary windings in circuit with said detecting means, a pair of balanced magnetic cores respectively associated with said secondary windings, means including a cold cathode tube for magnetically saturating said cores at regular predetermined intervals of time, a connecting transformer hav-



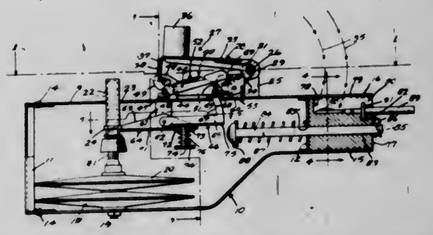
ing the primary winding thereof operatively connected to said opposedly connected secondary windings, a gaseous discharge tube having the grid element thereof operatively connected to the secondary winding of said connecting transformer, and means including an electro-responsive device operatively connected to the plate of said gaseous discharge tube for firing the mine selectively in accordance with a predetermined voltage applied to said grid element by the secondary winding of said connecting transformer.

3,020,844
EXPLOSIVE DEVICE
Ross J. Miller, Pitman, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,454
5 Claims. (Cl. 102—27)



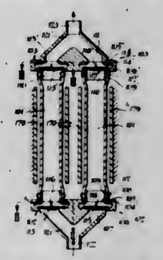
1. A blasting initiation assembly for cordlike explosive devices which comprises a tubular metal shell closed at one end and containing a cap-sensitive detonating explosive charge and a tubular sleeve having a portion of larger diameter than said shell, one end of which portion is disposed around at least the closed end portion of said shell, and the other end portion of said sleeve being of reduced diameter and having an inside diameter essentially equal to the inside diameter of said shell, said sleeve having a pair of apertures disposed directly opposite each other in said portion of larger diameter so that the axis of said apertures is normal to the longitudinal axis of said sleeve, each of said apertures forming an opening of at least the diameter of conventional detonating fuse and being so located that the closed end of said shell is essentially contiguous to said apertures.

3,020,845
TEMPERATURE RESPONSIVE FIRING MECHANISM
Jules M. Hardesty, Rte. 2, Box 22, Rivesville, W. Va.
Filed Nov. 4, 1960, Ser. No. 67,308
7 Claims. (Cl. 102—70)



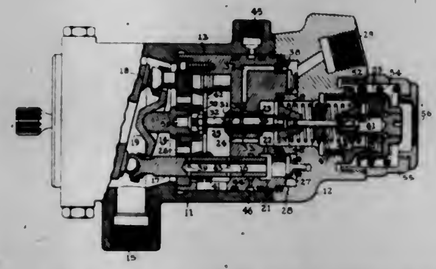
1. A temperature responsive firing mechanism comprising a frame, a hammer, means swingably mounting said hammer on the frame, an anvil mounted in the frame, a spring urging said hammer to swing toward and into engagement with the anvil for detonating an element supported by the anvil, latch means supported by said frame and engaging the hammer for releasably retaining the hammer in a retracted, cocked position against the tension of said spring, a temperature responsive unit secured to said frame and including a movable part, and a latch actuator pivotally supported by said frame and including a part disposed to be engaged and actuated by said movable part of the temperature responsive unit in response to a temperature change, and another part disposed to engage said latch means for moving the latch means to a position to disengage the hammer when said latch actuator is moved by the temperature responsive unit.

3,020,846
BLOOD PUMP
André Thomas, Paris, France, assignor to Societe de Constructions Mecaniques de Stains, Stains, France, a corporation of France
Filed Jan. 30, 1959, Ser. No. 790,254
Claims priority, application France Feb. 5, 1958
10 Claims. (Cl. 103—37)



1. A pumping mechanism for circulating a liquid with a pulsating action comprising two resilient tubes arranged in parallel, a suction valve and a discharge valve for each tube, both suction valves being at the same ends of the tubes and both discharge valves being at the other ends of the tubes, a common fluid inlet leading to both suction valves, a common fluid outlet leading from the discharge valves, each of said valves comprising a housing forming a valve chamber having upper and lower walls with outlet and inlet openings respectively, a flexible valve disc having a scalloped peripheral edge disposed in said housing, said lower wall having a seat to receive said valve disc for closing said inlet opening and a stop member positioned to limit the movement of the central portion of said disc for preventing said disc from seating against said upper wall to close said outlet openings whereby liquid flows around said scalloped peripheral edge of said disc to said outlet openings, and means for alternately subjecting the tubes to a predetermined compression over substantially the entire length of each tube.

3,020,847
VARIABLE DISPLACEMENT PUMP
Paul W. Rohrberg, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed June 15, 1959, Ser. No. 820,187
4 Claims. (Cl. 103—37)



1. In a pump of the type including a housing having an internal space which is connected with the inlet port and subject to inlet pressure, a displacement-controlling element mounted within the housing and shiftable between maximum and minimum displacement-establishing positions, a control motor comprising a working chamber and a movable member connected with the displacement-controlling element, the member having a first reaction surface subject to the pressure in the working chamber for developing a force which urges the displacement-controlling element toward one of said displacement-establishing positions and a second reaction surface which is subject to the pressure in said internal space and develops a force which urges the displacement-controlling element toward the other of said displacement-establishing positions, and a spring-biasing the displacement-controlling element toward the other of said displacement-establishing positions, the improvement which comprises a spring seat for the biasing spring that is shiftable in spring-expanding and spring-compressing directions, the seat being impositively connected with the displacement-controlling element through the spring so that the seat, throughout its range of motion, is movable relatively to the displacement-controlling element; and means connected with the seat and responsive to the pressure in said internal space for moving the seat in the spring-expanding direction as the pressure in said internal space rises and for moving the seat in the spring-compressing direction as the pressure in said internal space decreases.

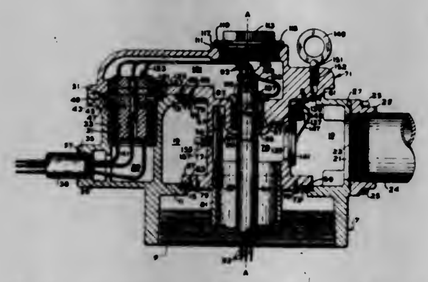
3,020,848
OIL WELL PUMP
William G. Green, Tulsa, Okla.
(3210 46th Ave. N., St. Petersburg, Fla.)
Filed July 23, 1958, Ser. No. 750,390
1 Claim. (Cl. 103—46)

A pump assembly for an oil well having a pressurized gas zone, an oil zone below the gas zone and subjected to the pressure therefrom at the oil level in the well bore, comprising: a tube containing atmospheric pressure extending from the surface of the well bore down to the pump body, a free piston in the tube, an oil port in the tube above the free piston, an oil passageway connecting the oil port to the pressurized oil, a gas port in the tube below the piston, a gas passageway connecting the pressurized gas zone through the gas port with the underside of the piston, a central valve in said pump body initially operated by the combined oil and gas pressure to introduce oil through the oil passageway and into the tube, a channel through the central valve to the oil zone at the lower end of the pump body, a lower valve operated by the combined oil and gas pressure to close



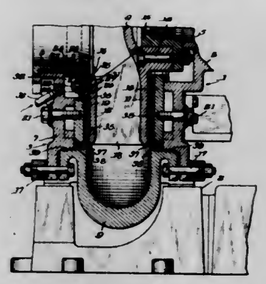
the channel when this combined pressure is below a certain valve, means in said central valve operated by the weight of the oil in said first named passageway to shut off the oil passing through said oil port and introduce pressurized gas through said gas port and lift said free piston and oil there above to the surface of the well, and means in said central valve to shut off the gas port when the pressure in said tube drops sharply, and means to shut off said lower valve when the pressure in said gas zone drops off.

3,020,849
HEADER FOR SUBMERGED PUMP AND MOTOR UNIT
James A. Reynolds, Fort Wayne, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Nov. 5, 1956, Ser. No. 620,427
20 Claims. (Cl. 103—87)



19. In a liquid dispensing system having a tank provided with an opening therein and supporting means adjacent said opening, an electric motor-pump unit within said tank and removable through said opening, a discharge pipe extending through said opening and to said motor-pump unit to suspend said unit in said tank and to convey liquid from said pump, a motor wire conduit within said discharge pipe encasing wires of the circuit for said motor, a two-part header, one part of said header comprising a first body having a delivery outlet and mounted on said supporting means to form with said supporting means and tank a normally fixed structure, the other part of said header comprising a second body connected to said discharge pipe to form with said discharge pipe and motor-pump unit a unitary organization adapted to be moved in a direction axially of said pipe to be assembled with and removed as a whole from supported relation on said normally fixed structure, said header defining passage means connecting said discharge pipe to said delivery outlet, said wire conduit extending through said discharge pipe to the exterior of said passage means, and electrical connector means including two axially separable parts having complementary axially engageable connections, one part of said connector being mounted on said normally fixed structure adjacent the mounting for said second body and the other part being mounted on said second body in axial alinement with said one part when said second body is assembled on said fixed structure for connection and separation of said connections by relative axial motion of said second body and said fixed structure.

3,020,850
DREDGE PUMP SEAL
John W. Meckenstock, Ottawa, Ill., assignor to Meckum Engineering, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 27, 1958, Ser. No. 717,900
2 Claims. (Cl. 103—103)



1. In a pump structure, the combination of a pump casing comprising a pair of spaced side plates and an annular peripheral shell extending between and connecting said side plates, a hollow impeller having spaced sidewalls connected by radially extending blades, positioned within said casing and carried by a driving shaft extending through one of the side plates, the opposite side plate having a central suction fluid inlet therein, cooperable with a suction inlet in said impeller, a tubular member forming a liner for the suction throat of the casing, the outer peripheral surface of which adjacent the suction inlet of the impeller is provided with a covering of a semi-resilient material, an annular shaped member carried by said impeller having a tubular portion of semi-resilient material concentric with the covering on said throat liner, said casing having an annular shaped chamber therein adjacent said tubular portion, said casing having a fluid inlet communicating with said chamber whereby fluid may flow between and lubricate portions of opposed faces of said resilient covering and resilient portion, and respective annular shaped liner structures carried by said side plates, the inner faces of said liners being covered with semi-resilient material, the outer peripheral edges of said liner members being beveled and provided with resilient wedge shaped gasket rings associated with said covering, said shell having tapered annular surfaces engageable with the outer peripheral surfaces of the respective gasket rings operable to compress the latter between such surfaces and the peripheral edges of the associated liners.

3,020,851
SALT BATH PUMP
Lewis E. Frazier, Lancaster, Ohio, assignor to North American Aviation, Inc.
Filed Dec. 21, 1959, Ser. No. 860,999
2 Claims. (Cl. 103—153)



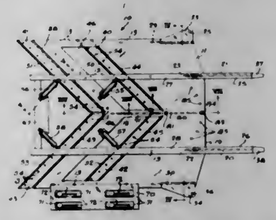
1. An improved pump for removing accumulated molten sludge from within a heat treat furnace, and comprising: separation plate means having an interiorly-located inlet opening, foot members secured to and projected downwardly from said plate means, tube members secured to and projected upwardly from said plate means, gravity valve members contained in said tube members, opposed stop means contained in said tube members in limiting relation to said valve members, piston-cylinder means connected to said tube members in fluid-conducting relation intermediate said gravity valve members, actuator means connected to said piston-cylinder means, and discharge means, said actuator means being positioned vertically above said discharge means, said piston-cylinder means being positioned a substantial distance vertically below the upper extreme of said discharge means, and one of said tube members being connected to said inlet opening and the other of said tube members being connected to said discharge means.

3,020,852
PLUNGER LIFT FOR WELLS
Erskine E. Roach and Ivan W. Baker, Houston, Tex., assignors to Harold Brown Company, a corporation of Texas
Filed Apr. 17, 1958, Ser. No. 729,171
14 Claims. (Cl. 103—225)



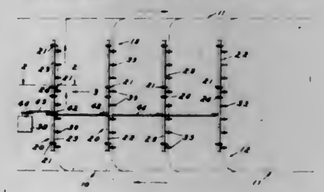
1. A well plunger of the free piston type, comprising, a tubular body adapted to be inserted in a well tubing for longitudinal movement therein, a plurality of continuous ring-shaped elements mounted about the body with a degree of annular clearance to permit lateral and angular shifting of the elements relative to the longitudinal axis of the body and to each other to form a slidable seal between the body and the tubing, and elastic means arranged between the body and the elements to yieldably urge the elements to positions laterally off-set with respect to the axis of the body.

3,020,853
UNDER-TRACK DEVICE FOR USE ON RAILROADS
James W. Christoff, Minneapolis, Minn., assignor to Mannix Co. Ltd., Calgary, Alberta, Canada
Filed July 3, 1958, Ser. No. 746,451
7 Claims. (Cl. 104—7)



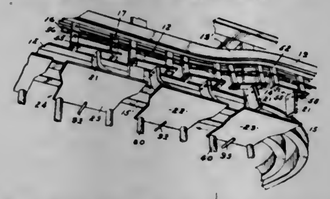
1. An under-track device for handling ballast under railroad tracks and ties, said device comprising a generally flat framework constructed to be drawn along between the roadbed and the ties while supporting the weight of said ties and a span of track, said framework comprising under-runner means secured to the underside of the framework to space said framework above the bottom of the device so that a substantial portion of the ballast passes under said plate, a pair of spaced apart, parallel, upper runners mounted on the upper side of said framework to extend upwardly therefrom for engagement with the undersurfaces of the ties, at least one elongated blade extending at an inclination to the transverse direction of the device, means pivotally mounting said blade on said framework to be movable between a plowing position in which it projects downwardly and forwardly of said framework and a ballast levelling position in which it extends downwardly and rearwardly of said framework, and control means for moving said blade between said positions and for retaining said blade, as desired, at either of said positions and at any other position intermediate therebetween, the sweep-back angle of each said blade being of sufficient magnitude for said blade when in said plowing position to deflect ballast to a side of the device.

3,020,854
RETARDER MECHANISM FOR FREE CONVEYOR LINE
Paul Klamp, St. Clair Shores, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Sept. 21, 1959, Ser. No. 841,199
22 Claims. (Cl. 104—249)



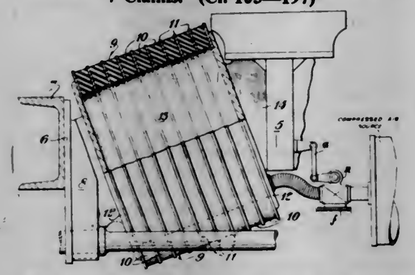
1. A retarder mechanism of the type described, comprising an elongated shaft unit, means to mount the same in generally parallel relation to the longitudinal path of travel of a load unit, a series of retarder blades secured to said shaft unit at spaced points therealong, and means to operate said shaft unit in an arc to periodically bring said blades into travel obstructing position relative to said load unit.

3,020,855
CONVEYOR STOP, RELEASE AND ADVANCE MECHANISM
Gerald E. Perkins, Westfield, N.J., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed July 29, 1959, Ser. No. 830,378
8 Claims. (Cl. 104—250)



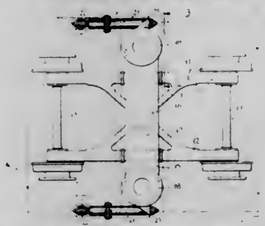
1. In a conveyor system of the type characterized by a load track supporting trolleys or like units for travel therealong under propelling engagement by a driven conveyor, the improvement for the retardation and release of flat-surfaced article carriers adapted to be carried by said units for travel therewith, comprising a conveyor having means guiding the same for movement in a path adjacent and along at least a portion of said first named track at a predetermined zone of the latter, said last named conveyor having pusher elements positioned thereon for propelling engagement with said article carriers in advancing the latter along said zone, means for interrupting propelling engagement of said first named conveyor with said units in said zone as said units and article carriers are propelled by said pusher elements, and means adjacent said zone to impede travel of said article carriers at said zone, said pusher elements being constructed to move out of propelling engagement with said carriers when the travel thereof is impeded and to pass along the flat surface thereof.

3,020,856
VEHICLE SUSPENSION SYSTEM
Archie John Hirst, Leicester, England, assignor to Metalastik Limited, Leicester, England, a British company
Filed Oct. 2, 1958, Ser. No. 764,877
Claims priority, application Great Britain Oct. 3, 1957
7 Claims. (Cl. 105—197)



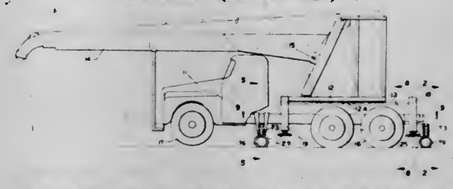
1. In a vehicle a suspension supporting a suspended part of the vehicle from a supporting part thereof, the suspension comprising a hollow spring block defined by a plurality of rings of rubber-like material having interleaves affixed therebetween, said block being inclined to the vertical so as to be in combined shear and compression under the vertical load of the suspended part, the hollow interior of said spring block constituting at least part of a gas tight space, regulating means for supplying gas under pressure into said space and for allowing its escape therefrom, thereby to regulate the pressure of gas in said space, and actuating means responsive to changes in load of the suspended part of the vehicle, said actuating means being operatively connected to actuate said regulating means to regulate the pressure of gas in said space thereby predeterminedly to limit the vertical deflection of the spring block under the load of the suspended part of the vehicle regardless of the load of the suspended part.

3,020,857
CAR BODY AND TRUCK ASSEMBLY WITH TRUCK BOLSTER STABILIZING MEANS
Albert G. Dean, Narberth, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 19, 1960, Ser. No. 63,538
4 Claims. (Cl. 105—199)



1. A car body and truck assembly with truck bolster stabilizing means, comprising in combination with a car body unit and a truck frame unit turnably supporting the car body unit upon a bolster, together with vertical springs between the bolster and one of said units, of a longitudinal stay bar having turnable connections at its ends with an end of said bolster and with one of said units respectively, said stay bar including separate relatively longitudinally movable end parts and buffer means interposed therebetween which allows relative movement between the ends of the stay bar along the length thereof to reduce oscillatory movements between the parts connected to the ends of the stay bar.

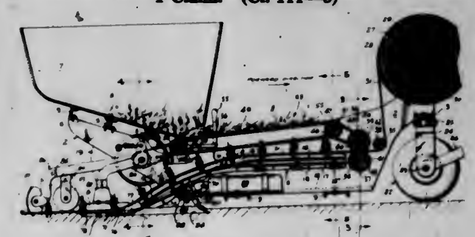
3,020,858
ROAD-RAIL VEHICLE
Origen S. Perkins, Hales Corners, and Melvin R. Krueger, South Milwaukee, Wis., assignors to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware
Filed Oct. 8, 1957, Ser. No. 688,878
8 Claims. (Cl. 105—215)



1. In a combined road and rail vehicle: a body structure; a plurality of longitudinally-spaced transverse axles connected to the body structure; a pair of laterally-spaced road wheels rotatably carried by each of said axles front and rear; outrigger means mounted on said body structure actuable for lateral and vertical movement relative to said body structure to shift said body structure; first ram

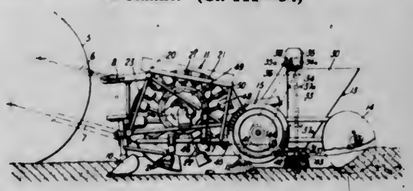
means for actuating the outrigger means to shift the body structure vertically; second hydraulic means for actuating the outrigger means to shift the rear end of the vehicle laterally with respect to the outrigger means; at least two longitudinally-spaced pairs of laterally-spaced, flanged pilot wheels adapted to run upon rails in tandem with said road wheels; mounting means on the body structure for mounting each pair of said pilot wheels on the body structure; said mounting means actuable to shift the pilot wheels to and from a rail guiding position; and third ram means for actuating said mounting means to shift the pilot wheels into rail engaging position when said first ram means has actuated the outrigger means to raise the vehicle vertically.

3,020,859
METHODS OF PLANTING
Lawrence S. C. Kang, 3052 Hibiscus Drive, Honolulu, Hawaii
Original application Jan. 30, 1956, Ser. No. 562,185, now Patent No. 2,890,665, dated June 16, 1959. Divided and this application Mar. 16, 1959, Ser. No. 799,677
1 Claim. (Cl. 111—3)



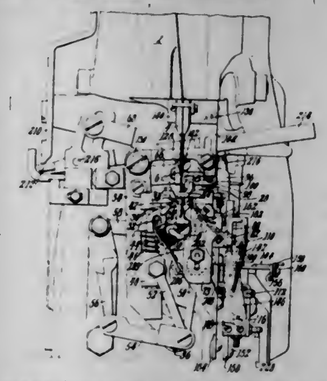
The method of planting pineapple plants which comprises forming spaced plant receiving apertures having locking tongues or flares surrounding each aperture in a mulch sheet before it is laid on the ground, inserting the butt ends of the plants into said plant receiving apertures substantially perpendicularly through the mulch sheet so that the plants are locked therein by the locking tongues or flares, and then laying the mulch sheet flat on the ground with the butt ends of the plants which are locked therein extending down into the soil.

3,020,860
PLANTING MACHINES FOR POTATOES AND OTHER SEEDS
Percival James Packman, % Packman Machinery Limited, Twyford, England
Filed Apr. 4, 1958, Ser. No. 726,397
Claims priority, application Great Britain July 22, 1957
6 Claims. (Cl. 111—34)



1. In combination with a planter having furrow opening means and means for placing a row of substantially equally spaced seeds in the ground, said planter including a framework, means mounted on said framework for releasing fertilizer in a pattern registering with one of said seeds but spaced therefrom comprising a hopper having a circular outlet at the bottom thereof, a shaft mounted within said hopper and having one end projecting into said outlet, a conical plate mounted on said one end of said shaft and having its downwardly and outwardly extending surface spaced from said outlet and defining a gap therebetween for permitting a quantity of fertilizer to flow from said outlet onto said surface, a cylinder disposed about said outlet and normally engaging said conical plate surface to prevent flow of fertilizer down said conical plate surface and thus store a predetermined quantity of fertilizer in the form of a ring on said plate surface within said cylinder, means on said hopper for continuously rotating said shaft and said plate at a substantially constant speed, and means on said seed placing means connected to said cylinder for periodically abruptly raising said cylinder out of engagement with said plate in synchronism with the operation of said seed placing means as one of said seeds is placed on the ground to thereby encircle one of said seeds with a ring of fertilizer circumferentially spaced from and out of contact with the said one seed.

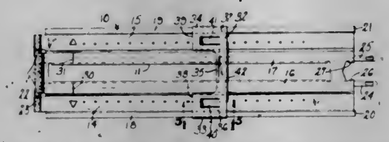
3,020,861
SEWING MACHINES
Edward Quinn, Peabody, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Original application Nov. 13, 1956, Ser. No. 621,796, now Patent No. 2,954,748, dated Oct. 4, 1960. Divided and this application Jan. 30, 1959, Ser. No. 790,244
20 Claims. (Cl. 112—34)



1. A sewing machine for connecting together the parts of a slip lasted shoe including a wrapper strip, comprising an eye-pointed needle, a work supporting block having a needle reinforcing bore in the path of the needle and into which the needle enters after penetrating the shoe parts, looper means to which loops of needle thread are presented after being carried through the work by the needle, over-feeding strip advancing means ahead of and operating in time relationship with the needle for bulging the strip away from the work supporting block about the point of needle operation, presser foot means timed with the needle and with the strip advancing means for clamping the strip and the other shoe parts against the block thereby longitudinally compressing the strip, needle loop orienting means including a notch adjacent the looper means and communicating with the needle reinforcing bore to present each needle loop with certainty in looper means engaging position, thread storage means including an indentation for forcing kinks in the thread out of the needle eye during initial withdrawal of the needle after penetrating the shoe parts, lubricating means including a pad of compressible material positioned in touching engagement with the looper means during each sewing cycle, and means for moving the pad into squeezing engagement with the looper means when the machine is stopped

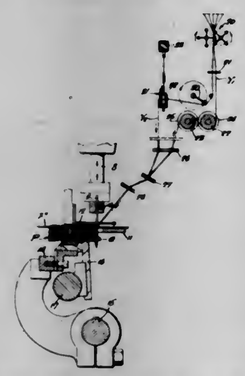
for depositing upon the looper means a surplus quantity of lubricant, whereby the thread passing through the eye of the needle and moving through the shoe parts is protected against abrasion and the needle loop orienting notch and the thread storage indentation are maintained free of accumulations of foreign substances.

3,020,862
BOUND BUTTONHOLE ATTACHMENT
Helen Gorton, Stony Creek, Conn., assignor, by mesne assignments, to Mite Corporation, New Haven, Conn., a corporation of Delaware
Filed Apr. 21, 1960, Ser. No. 23,830
1 Claim. (Cl. 112—77)



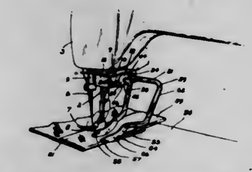
A device for making bound buttonholes comprising an elongated base plate having a longitudinally extending slot therein, the plate having longitudinal parallel grooves in the upper surface thereof at opposite sides of said slot, a yoke member hinged to the plate adjacent one end thereof and having legs extending toward the other end, one on each side of said slot, said members being disposed on the under side of the plate, and a guide member at the upper side of said plate and extending thereacross having its edges crimped over the edges of the base plate to slidably mount it thereon, said guide member having a recess in an edge thereof facing one end of the base plate to provide a relatively narrow portion spanning the slot, and the guide member having resilient tongues frictionally engaging the bottom of the respective grooves in the base plate to hold the guide member in adjusted position.

3,020,863
INDUSTRIAL APPARATUS, METHOD, AND PRODUCT
John E. Smith, Norristown, Pa., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Jan. 17, 1957, Ser. No. 634,786
5 Claims. (Cl. 112—79)



1. The method of fabricating a cut pile tufted fabrics to provide pattern areas which comprises stitching a first series of pile yarns and a second series of pile yarns simultaneously through a backing fabric, one of said series of yarns being under constant tension and the other series of yarns being under variable tension with one of said series of yarns being under a greater tension than the other of said series of yarns, holding said first and second series of pile yarns on looper means, simultaneously cutting both of said series of yarns on one side of the backing fabric while said yarns are held under their respective tensions on said looper means, whereby the yarn series under greater tension when cut will relax and contract to produce tufts of a length less than the tufts formed from the other yarn series.

3,020,864
QUILTER GAUGE
Sam Katz, % Fashionbilt Garment Co., 815 Washington, Kansas City 5, Mo.
Filed Aug. 18, 1959, Ser. No. 834,512
3 Claims. (Cl. 112—153)

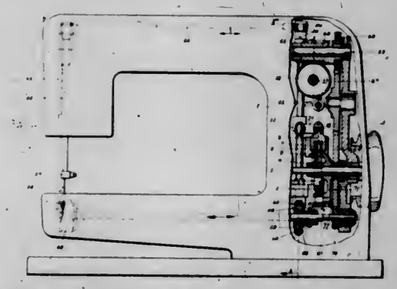


1. A quilter gauge for attachment to a sewing machine comprising, a block adapted to be secured to the presser foot bar of said machine, said block having openings extending therethrough, said openings facing on each side of said block and said block having an offset portion in said openings forming a shoulder therein, bearing members having a sleeve portion for engaging in said openings in the block, said bearing members having an enlarged portion forming second shoulders thereon facing the first named shoulders, a collar on said bearing members, a pair of guide members having feet engaging in said bearing members, means for holding the guide members in adjusted position in said block with respect to said presser bar, said collars on said bearing members having two plane surfaces angled with respect to each other, leaf spring means secured to said block and having their end portions engaging said plane surfaces of said collars and extending parallel to the sleeve bearing members whereby the leaf spring members will retain the guide arms either in use position or out of use position, means engaging the shoulders of said block and said bearing members for exerting tension on the guide members to urge the feet in a downward direction, and means for adjusting the tension on the feet of the guide members, one end of the sleeve portions of the bearing members extending through the openings in said block and having an annular groove therein, and a keeper member in said groove for retaining the bearing members in said block.

3,020,865
SEWING MACHINE FOR PRODUCING VARIABLE STITCHES
Jakob Forster and Erich Grünke, Hinwil, Switzerland, assignors to Gebr. Forster, Hinwil, Switzerland, a firm
Filed Nov. 29, 1955, Ser. No. 549,785
Claims priority, application Switzerland Nov. 30, 1954
1 Claim. (Cl. 112—159)

In a zig-zag type sewing machine having a vertically reciprocating needle bar for mounting and moving a needle at the lower end of said needle bar, a rotating loop taker disposed below and spaced from the lower end of the needle bar, a main drive shaft including transmissions connected to the needle bar and to the loop taker to operate the same in unison, a vertical shaft, a first displacement lever at the top portion of said vertical

shaft, means connecting said first lever to the needle bar to control transverse movement thereof, a second displacement lever at the lower portion of said vertical shaft, means connecting the second lever to the loop taker to control transverse movement thereof; the improved mechanism for controlling the transverse movement of the needle bar and of the loop taker through said vertical shaft comprising a first control member mounted for reciprocation, cam means mounted on said main drive shaft for reciprocating said first control member, a second control member mounted about a pivot for horizontal reciprocation, said second control member having one portion thereof spaced from said pivot being connected to said first control member, another portion of said second control member spaced from said pivot being connected to said vertical shaft, means for displacing said pivot of said second control member so that the center points of



the oscillating movement of the needle bar and of the loop taker are commensurately displaced, and means for automatically changing the amplitude of reciprocation of the first control member, driving gears on said main shaft, an auxiliary cam shaft, speed reducing means connecting the auxiliary cam shaft to one of said gears connected to said main drive shaft, a first and a second cam mounted on said auxiliary cam shaft, first cam follower means connecting said first cam to said means for changing the amplitude of reciprocation of said first control member, second cam follower means connecting said means for displacing said pivot of said second control member for displacing the center points of oscillation of the needle bar and loop taker whereby both of the amplitude and the center points of the oscillating movement of the needle bar and loop taker are displaced automatically in a predetermined manner.

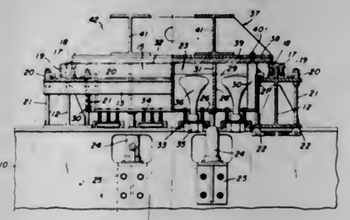
3,020,866
NEEDLE BAR FOR SEWING MACHINE
Toshio Fujita, Moriguchi City, Osaka-fu, Japan, assignor to Sanwa Mishin Seizo Kabushiki Kaisha (Sanwa Sewing Machine Mfg. Co., Ltd.), Osaka-fu, Japan
Filed Oct. 15, 1959, Ser. No. 846,603
Claims priority, application Japan Oct. 24, 1958
1 Claim. (Cl. 112—226)

A combined sewing machine needle bar and needle holder comprising an elongated bar terminating at the lower end in a reduced needle receiving portion having a flat needle engaging inner surface, the width of said surface being equal to the sum of the diameters of the base portions of two needles engaging said surface, said surface terminating at the upper end in an inclined shoulder, a recess in said bar above said shoulder, socket means comprising a sleeve received on the lower end of said bar and enclosing said surface and said recess, a screw threaded member securing said sleeve to said bar and having a reduced non-threaded end projecting into said recess, a needle engaging presser piece received in the space between said sleeve and said surface, said presser piece projecting into said recess and having an aperture slidably receiving said non-threaded end, the width of said presser piece being equal to the width of said surface, a longitudinal groove in the center of said presser piece in alignment with the axis of said bar, parallel needle engaging flat surfaces on opposite sides of said groove and a clamping screw threadedly received in said sleeve



and engaging said presser piece, whereby two needles may be clamped against said inner surface by said presser piece with the upper ends of said needles in engagement with said inclined shoulder to dispose the lower ends of said needles at different elevations, said groove serving to receive and clamp a single needle in alignment with the axis of said bar.

3,020,867
APPARATUS FOR MAKING METAL PANELS
William I. Ballentine, Jr., and James W. Molden, Whittier, Calif., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 16, 1957, Ser. No. 703,209
13 Claims. (Cl. 113—99)

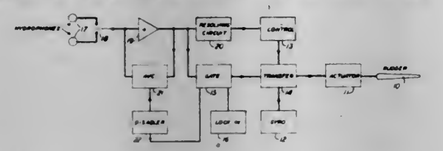


1. Apparatus for making metal panels comprising a horizontal frame including a polygonal assembly of connected structural members adapted, respectively, to support the rails of a panel frame, a heating tray including a plurality of spaced sheet supports, slidable vertically within said first-mentioned frame, and means mounted in said tray for heating a sheet disposed on said supports prior to being secured to said rails.

3,020,868
TORPEDO STEERING SYSTEM
Alton C. Dickieson, Mountain Lakes, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 27, 1945, Ser. No. 637,385
5 Claims. (Cl. 114—23)

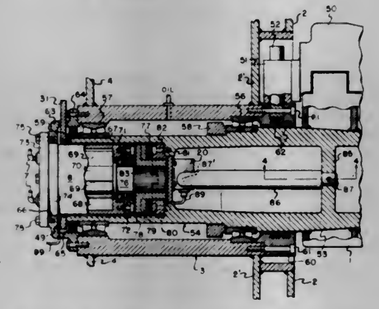
1. A steering system for a moving body comprising a steering member, means for actuating said member, a first control means for controlling said actuating means to steer the body upon a preassigned course, signal responsive control means for controlling said actuating means in accordance with the bearing relative to the body of the

source of the signals received by said signal responsive means, said signal responsive means including an amplifier and normally disabled automatic gain control means for said amplifier, transfer means for selectively associating said actuating means with one or the other of said



first and signal responsive control means, gate means controlled in accordance with the output of said amplifier for operating said transfer means when said output is of a prescribed magnitude, and means responsive to operation of said gate means for enabling said gain control means.

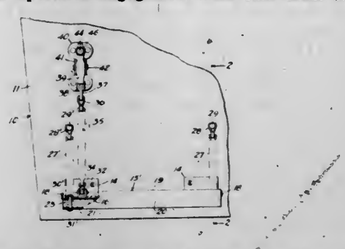
3,020,869
ACTIVATED FIN SHIP STABILIZER
Lennox F. Beach, Sea Cliff, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Aug. 12, 1959, Ser. No. 833,285
8 Claims. (Cl. 114—126)



1. In a marine vessel with a non-retractable stabilizing fin movable about an axis, a double-ended inboard bearing frame providing the fin axis fixed at one end to a portion of the hull of the vessel below its waterline, a spar having a hollow inboard trunnion part open at one end journaled in the bearing frame to move about the axis and having an outboard fin part, a fin drive motor having a removable casing and rotor connected to the other end of the frame as a cantilever member supporting the rotor within the hollow trunnion part of the spar, and a coupling between the rotor and trunnion part permitting removal of the motor from the inboard open end of the spar trunnion part.

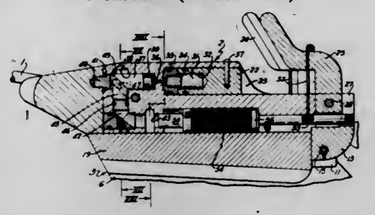
3,020,870
BOARDING PLATFORM ACTUATED PUMP
John Skovranek, 44 Luther Ave., Perth Amboy, N.J.
Filed May 17, 1960, Ser. No. 29,739
9 Claims. (Cl. 114—183)

1. A boarding platform actuated pump for boats of the character defined, comprising a platform hingedly supported to the outer surface of the lower portion of the back wall of a boat and normally submerged below the water line when the boat is in use, a pump supported upon the inner surface of said back wall above and in alinement with one side portion of said platform, the pump including a pump actuating shaft mounted in said wall and projecting through the rear surface thereof, and means including a flexible member coupled with the platform and in operative engagement with said shaft for



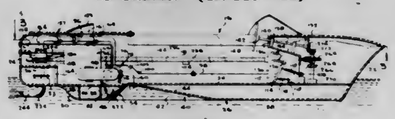
actuating the shaft in reciprocating swinging movement of said platform.

3,020,871
MULTIPLE BARREL MINE ANCHOR-LINE CUTTER
Robert Temple and Joseph L. Giebel, Swissvale, and Ernest E. Temple, Murraysville, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 14, 1959, Ser. No. 786,736
8 Claims. (Cl. 114—221)



3. A mine anchor-line cutter comprising a frame, a pair of laterally spaced parallel cutting elements slidably mounted in the frame, means connected to the frame adjacent the cutting ends of said elements for receiving anchor-lines in position for cutting, the frame being formed to support explosive means adjacent the opposite end of said elements for driving them toward said line-receiving means, said frame being provided with a central longitudinal slot for receiving a sweep line, said slot opening to the rear of the frame, and a stabilizing fin having its front end mounted in said slot and formed to hold a sweep line against the front wall of the slot.

3,020,872
WATER JET-PROPELLED CRAFT
Richard P. Gierczic, Metairie, La.
(10139 Seawood Drive, New Orleans 27, La.)
Filed Mar. 24, 1961, Ser. No. 98,226
13 Claims. (Cl. 115—12)



1. In combination, a water craft having a hull, said hull having a bottom, upstanding sides, a transom, and a stem, said bottom comprising a main flat horizontal portion, said main portion terminating at its rear end in a kick-up spaced forwardly from the transom, said bottom having a rear portion behind said kick-up into which said kick-up merges, said bottom being indented to provide a centered longitudinally elongated water scoop spaced forwardly from said kick-up, said water scoop having

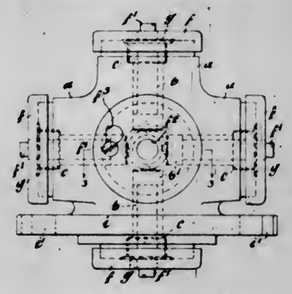
parallel side walls, and a rearwardly inclined top wall, said top wall terminating at its rear end in a rearwardly and downwardly hull elevating plate, a power plant mounted on the hull behind the scoop and having a pump having a water intake pipe opening through said elevating plate, said pump having a water supply pipe leading therefrom, and a water jet assembly mounted on the hull and having a vertical rotary tube to which said supply pipe is connected, said rotary tube having a lower end located in an opening in said rear bottom portion, an elbow having a vertical arm connected to the lower end of the tube and a horizontal arm terminating in a water jet nozzle, and steering means mounted in the hull and operatively connected to said rotary tube.

3,020,873
BRAKE WITH WEAR DETECTING MEANS
Lawrence E. Bodkin, 1833 Ryar Road, Jacksonville, Fla.
Filed Jan. 22, 1959, Ser. No. 788,286
6 Claims. (Cl. 116—114)



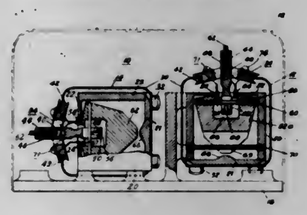
1. A brake comprising a wearable friction lining, means upon which said lining is mounted for disposing said lining adjacent to a frictional braking surface, and a heat sensitive odor producing compound incorporated and hermetically sealed in said lining adjacent to said means.

3,020,874
DEVICE FOR RECORDING OR REGISTERING SHOCK
Alastair Douglas Bruce, Westwood, Bradford-on-Avon, and Charles William Pierce, Hounslow, England, assignors to The Enfield Cycle Company Limited, Redditch, England, a company of Great Britain
Filed Oct. 26, 1959, Ser. No. 848,809
8 Claims. (Cl. 116—114)



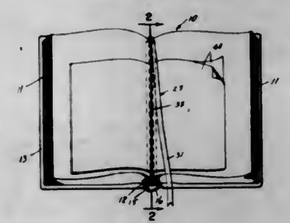
1. Shock recording apparatus, comprising, a housing having a cavity formed therein; plunger means slidably mounted in said cavity; adjustable biasing means for said plunger including spring means bearing against said plunger and screw plug means, having an axially formed aperture, bearing against said spring means; said cavity in said housing being internally threaded to receive said screw plug means; a marker, registering with said aperture in said screw plug, positioned within said cavity and responsive to movement of said plunger; and target means for receiving a mark from said marker means in response to a predetermined movement of said plunger; said target means being removably secured to said housing in registration with said axially formed aperture in said screw plug.

3,020,875
SHOCK OVERLOAD INDICATOR
Harrison Browning, Catalina Foothills Estates, Tucson, Ariz.
Filed Dec. 1, 1959, Ser. No. 856,600
4 Claims. (Cl. 116—114)



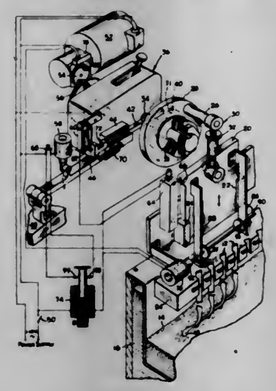
1. In a shock sensitive unit including a housing having a bottom wall, an encompassing sidewall and a cover, a port in said cover, and a flat spring encompassing said housing, the ends of said spring terminating in spaced relation superjacent said port, the improvement comprising, hinged means including a hinge pin supported by said ends of said spring and being biased thereby, shaped, upstanding stop means on said bottom wall, a weight swingably supported by said hinge pin within said housing superjacent said stop means, said weight having an annular shoulder normally disposed within said port in such a manner that said weight will cant about a pivot between said shoulder and the peripheral edge of said port, the lower portion of said weight corresponding in shape to said stop means.

3,020,876
COMBINATION BOOK MARK AND LOOSE LEAF BINDER
Kenneth R. Riden, 117 Orchard St., Cambridge City, Ind.
Filed Aug. 3, 1959, Ser. No. 831,266
2 Claims. (Cl. 116—119)



1. In combination a backing strip, a ribbon connected by one end to said strip, said ribbon being capable of being arranged in an overlying aligned relationship to said strip in which position said ribbon extends beyond one end of said strip, said ribbon having an elastic portion at least a part of which is alongside said strip when the ribbon is in said position and when said elastic portion is contracted, a hook mounted on said ribbon at such a point that, when said ribbon is in said position and when said elastic portion is contracted, said hook is alongside said strip and, when said ribbon is in said position and said elastic portion is extended, said hook is beyond the one end of said strip, said hook opening in the direction of the length of said ribbon and toward the proximal end thereof, an elastic thread connected to said strip, and an apertured member mounted upon a distal end of said thread for connecting the distal end of said thread to said hook, said elastic portion of said ribbon having greater resilience than said elastic thread.

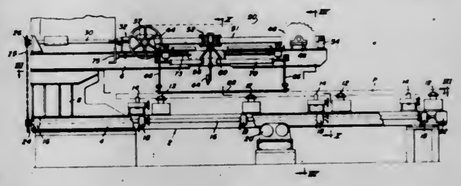
3,020,877
WORKPIECE DIPPING MACHINE
William T. Wallace, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed Dec. 14, 1959, Ser. No. 859,340
2 Claims. (Cl. 118—11)



2. Workpiece handling apparatus comprising a rigid elevator slide, means for mounting said slide for smooth vertical travel, means for lowering said slide, means for stopping said slide at a lower limit position, means including a timing device for raising said slide after a predetermined dwell time at said lower limit position, a leaf spring fixed at one end to said slide and having a free end, means for securing a workpiece to said free end, a solenoid connected to said free end for deflecting said spring away from its normal unstressed position, and control means for periodically momentarily energizing said solenoid during said dwell time, said control means including means for keeping said solenoid deenergized at all other times, said control means for periodically momentarily energizing said solenoid having a period at least several times as long as the natural period of vibration of said spring and a workpiece supported thereon.

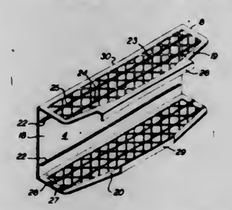
3,020,878
APPARATUS FOR STENCILLING PIPE
Steve Andrews, Fairless Hills, and Frank C. Spraitzar, Lower Makefield Township, Bucks County, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Jan. 28, 1959, Ser. No. 789,634
2 Claims. (Cl. 118—301)

2. Apparatus for marking elongated articles comprising means for supporting elongated articles in position to be marked, means for advancing elongated articles sidewise and depositing them on said support means, a stencil-carrying frame pivoted above said support means and extending downwardly thereto from the entrance side of the support means so as to be engaged and displaced by an elongated article as it is advanced and to lie on an elongated article resting on said support means when deposited thereon, a bearing bar adjustably mounted on said frame and adapted to be engaged by an elongated



article on said elongated article advancing means, means for securing the bearing bar in selective position relative to said frame, a guide track spaced vertically above said support, a carriage reciprocable along said track in a plane parallel with said support, and a spray gun on said carriage adapted to discharge marking fluid onto a stencil carried by said frame.

3,020,879
APPARATUS FOR COATING CONTAINERS
John Podlipnik, Palos Heights, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
Filed Mar. 13, 1959, Ser. No. 799,244
11 Claims. (Cl. 118—423)

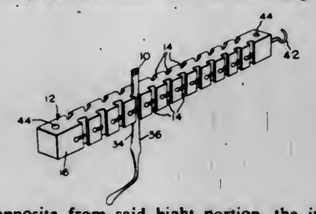


1. In a coating apparatus for coating a container with wax compositions comprising an immersion tank for containing liquid wax, an open ended basket having side panels for holding said container, means for moving the basket into and out of said wax with the container resting on at least one of said side panels, the improvement comprising said basket having a center panel, side panels attached at a substantially perpendicular angle at each side of the center panel, ribs attached to said side panels and extending toward said open end for holding said container out of contact with the side panels, said side panels having a maximum area of contact with the container of about 10%, and each side panel having a solid surface area of less than about 60% of the total surface area of the side panel.

3,020,880
WORK PIECE HOLDER
William T. Wallace, Irondequoit, N.Y., assignor to Bausch & Lomb Incorporated, a corporation of New York
Filed Dec. 14, 1959, Ser. No. 859,180
3 Claims. (Cl. 118—503)

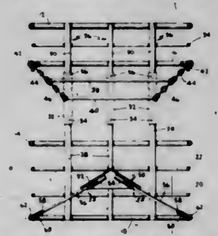
1. A work piece holder for holding a slat-like work piece comprising a body of generally rectangular cross sectional shape having a cylindrical recess, said recess being open at both ends and of generally C-shaped cross-

sectional configuration, and a resilient member for engagement against the edge of a slat-like work piece when the work piece is placed in said recess with its flat side generally parallel to the inner wall of said recess, a bight portion between said inner wall and the mouth of said recess, said resilient member extending into said



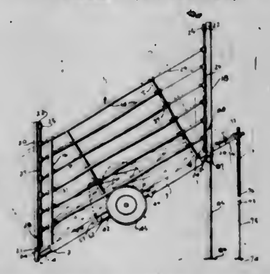
recess opposite from said bight portion, the inner wall of said recess sloping generally outwardly away from said resilient member and generally inward and into said bight portion so that when the work piece is so positioned said resilient member bears inwardly upon the edge of the work piece.

3,020,881
CATTLE FEEDER
Edgar T. Strom, Beulah, N. Dak.
Filed June 23, 1959, Ser. No. 822,360
14 Claims. (Cl. 119—58)



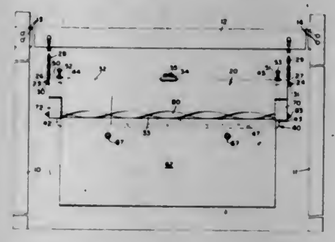
1. A cattle feeder comprising a plurality of vertically spaced circular ring members, a number of vertical posts secured to angularly spaced portions of the ring members for maintaining said ring members in their vertically spaced relationship, and an intermediate pair of said ring members being spaced sufficiently to form openings of a size to permit access of the heads of cattle to feed placed within the confines of said members.

3,020,882
ANIMAL HOLDING AND LOADING CHUTE
Marion T. Browning, Urich, Mo.
(Star Rte. 2, Box 47, Marble Falls, Tex.)
Filed May 3, 1960, Ser. No. 26,569
7 Claims. (Cl. 119—82)



1. A portable chute for loading livestock into a transporting vehicle comprising, a bottom, side walls including horizontally extending tubular members rigidly supported on said bottom, standards at the respective corners of said bottom, means securing the lower ends of the standards to said bottom for pivotal movement of the standards longitudinally of the chute, rods having one end pivotally connected to said standards and the other end telescoping with said tubular members of said side walls, means for locking said rods in adjusted position with respect to said side walls, and means having connection with one end of the bottom for raising one end of said chute to align with said vehicle.

3,020,883
ANIMAL INSECTICIDE APPLICATOR
Keith D. Elwick, Vinton, Iowa, assignor to Hawk Bilt Mfg. Corp., Vinton, Iowa, a corporation of Iowa
Filed Oct. 26, 1959, Ser. No. 848,671
12 Claims. (Cl. 119—157)



5. A device for applying liquid insecticide to an animal comprising: a fluid container; means supporting the container whereby the container will have a bottom facing downwardly and a top facing upwardly and will be free to move in a plurality of directions; a fluid conduit including an elongated horizontally disposed portion spaced from but adjacent the bottom of the container and extending substantially the length thereof and having fluid discharge means therein, and at least one upwardly projecting portion fixed to and extending through the container wall with an upper open end thereof terminating spacedly but proximate the internal surface of the top of the container; a threaded member extending through the top of the container into engagement with the open end of the pipe for restricting the passage of fluid into the open end and engaging the end of the pipe to afford support thereof from the top of the fluid container; a fluid transferring medium supported adjacent the horizontally disposed portion for receiving fluid through the fluid discharge means and having a depending portion thereof for contacting the upper body portion of an animal.

3,020,884
WRITING IMPLEMENT WITH A REPLACEABLE FLUID-HOLDING CARTRIDGE
Helmuth Riepe and Hermann Fritz Kaiser, Hamburg, Germany, assignors to L. & C. Hardtmuth, Inc., Bloomsbury, N.J., a corporation of New Jersey
Filed Nov. 18, 1958, Ser. No. 774,627
11 Claims. (Cl. 120—44)

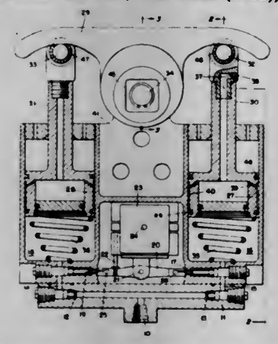
1. In a writing implement, a fountain pen structure having a replaceable fluid-carrying cartridge, a removable, but normally tightly fitting closure for the upper cartridge end, a hollow fountain pen barrel composed of two normally interconnected but separable components, one being a fixed component having means for accommodating exchangeable writing instrumentalities, the other component being mobile relative to the fixed component, said cartridge being held within the barrel and comprising two cooperating elements, one being a fluid-holding,

operative element, having a closure for its upper end and a perforated abutment wall at its lower end, the other element being immobile and serving as fluid-dispensing element, provided with a through passage, said latter element being firmly seated in the fixed barrel component to effect a leakproof and immovable connection therewith, a writing instrumentality removably associated with the lowermost end of the fixed barrel component, the interior end of said instrumentality being located below said fluid-dispensing element, said operative cartridge ele-



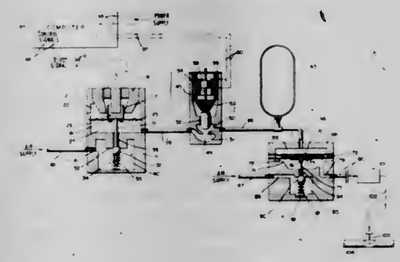
ment being rotatable relative to said firmly held fluid-dispensing element, the latter's through passage being directed toward said writing instrumentality, the upper end of the fluid-dispensing element engaging the abutment wall of said fluid-holding element, said closure for the upper cartridge end having means for facilitating turning of the cartridge to effect either dispensing or stopping the flow of fluid to the writing instrumentality by way of the cooperation between the perforated abutment wall and the through passage of the fluid-dispensing element.

3,020,885
ROTARY SERVO VALVE CONTROLLED MECHANISM
Manuel Weinstock and Raymond C. Sutter, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Sept. 1, 1961, Ser. No. 136,407
4 Claims. (Cl. 121—38)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a mechanism to be operated by a command signal, the combination of an output torque arm pivoted at its midpoint, a pair of cylinders, a pair of pistons each movable in a different one of said cylinders and each having a rod extending therefrom, a pair of rollers each rotatable in the end of a different one of said rods and each biased into contact with a different end of said arm, an inlet for admitting a gas under pressure, a pair of control orifices, a pair of metering orifices each connecting said inlet with a different one of said cylinders and control orifices, a rotor for controlling the effective areas of said control orifices, and means for positioning said rotor in accordance with a command signal whereby said output torque arm is positioned in accordance with said signal.

3,020,886
METHOD AND APPARATUS FOR A CONTROL SYSTEM
Hershul T. Jones, Port Arthur, Tex., and James M. Jones, Jr., Teaneck, N.J., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed June 2, 1959, Ser. No. 817,533
10 Claims. (Cl. 121—38)



1. In a pneumatic system having signals in the form of pressure variations therein and employing an electrical transducer for determining said signals, the improvement comprising in combination pneumatic reservoir means connected to the pneumatic system for receiving and floating with said signals, normally closed pneumatic valve means being electrically actuated to open position and located between said transducer and said reservoir means in said pneumatic system, and electrical circuit means connecting said valve means to the source of electrical power for said transducer whereby electrical failure will cause said valve to close and so cut off said transducer and leave said reservoir means holding the then existing signal pressure on the system.

3,020,887
LINEAR MOTION-PRODUCING DEVICE AND IMPROVED LOCKING MEANS THEREFOR
Robert R. Hobson and Hayden G. Wilcox, San Jose, Calif., assignors to General Electric Company, a corporation of New York
Filed July 1, 1959, Ser. No. 824,246
16 Claims. (Cl. 121—40)

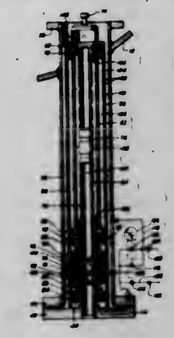
1. In a linear motion-producing apparatus which comprises stationary coaxial inner and outer tubular elements with an annular space therebetween, a double-acting driving piston reciprocably disposed in said annular space, a connecting tube secured to said driving piston and extending from said annular space for connection to a load, and means for introducing and removing actuating fluid to and from said annular space to move said driving piston and said connecting tube in either direction, the improved locking means which comprises, in combination with at least one peripheral groove providing a lock surface in the outer surface of said connecting tube at at least one position intermediate the ends of said tube; a collar supported adjacent one end of said outer tubular element, at least one spring finger extending longitudinally from said collar to a point adjacent a bearing surface on said outer tubular element, a locking block at the end of said fingers

and normally biased thereby adjacent said bearing surface into contact with the outer surface of said connecting tube and adapted to engage said groove and transmit a load on said connecting tube through a very short moment arm from said lock surface through said locking block to said



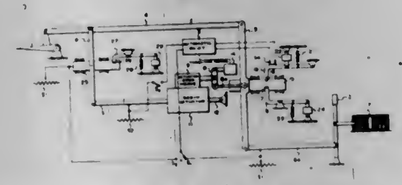
bearing surface thereby locking the connecting tube in a fixed position intermediate the extreme positions of connecting tube travel, and means for moving said block out of said peripheral groove to unlock said connecting tube from said outer tubular element.

3,020,888
LINEAR MOTION-PRODUCING DEVICE WITH LOCK
Howard E. Braun, San Jose, Calif., assignor to General Electric Company, a corporation of New York
Filed July 2, 1959, Ser. No. 824,670
19 Claims. (Cl. 121—40)



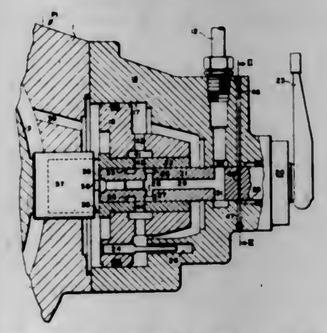
1. A linear motion-producing apparatus which comprises a stationary element, a reciprocable element disposed coaxially with respect to said stationary element and including a driving piston and a connecting element secured to said piston, means for supplying actuating fluid to move said driving piston and said connecting element relative to said stationary element, one of said elements being provided with a plurality of peripheral grooves spaced apart from one another and each providing a lock surface in a surface of said element immediately adjacent the surface of the other of said elements, the other element being provided with at least one lateral bearing surface, and a locking means laterally movable adjacent said bearing surface and normally biased into contact with the grooved surface of said one element and adapted to engage one of said grooves and thereby lock said reciprocable element to said stationary element at any one of a plurality of positions corresponding to the location of said peripheral grooves.

3,020,889
AIRCRAFT CONTROL APPARATUS
Frederick Arthur Summerlin, Isleworth, and Ruben Hadekel, London, England, assignors to The Sperry Gyroscope Company Limited, Brentford, England, a British company
Filed Aug. 6, 1958, Ser. No. 753,440
Claims priority, application Great Britain Aug. 7, 1957
9 Claims. (Cl. 121—41)



1. Apparatus for controlling the deflective surface of an aircraft including a servo actuator operatively connected to the surface, a manual controller, means for coupling the surface and manual controller including a first differential link operatively connected to the surface and controller having an output link pivotally connected thereto, automatic pilot means having an output, means for operating said servo actuator including a second differential link responsive to the outputs of said automatic pilot means and said output link, and means for conditioning said output link to fix its pivot axis on the first differential link in relation to the aircraft and thereby null the input to said second differential link from said first differential link.

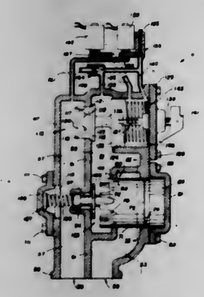
3,020,890
PUMP CONTROL VALVE WITH BYPASS
Adolf R. Grad, Milwaukee, Wis., assignor to The Oilgear Company, Milwaukee, Wis.
Filed July 20, 1959, Ser. No. 828,402
9 Claims. (Cl. 121—41)



1. A control for a reversible variable stroke hydrostatic machine having a displacement member for varying the stroke of the machine, means urging said displacement member in one direction, a cylinder, a piston operable in said cylinder to urge said displacement member in an opposite direction, a source of fluid under pressure, said control comprising a valve supported in a bore in a supporting member and operable to selectively connect said

cylinder to said source and to an exhaust and to cut off such flow, said valve also having a neutral position for effecting zero displacement of said displacement member, said control including bypass means interconnecting supply and discharge ports of the machine when said valve is in said neutral position, said bypass means comprising inlet and outlet passages to said bore spaced circumferentially of each other and connected respectively to said supply and discharge ports of said machine, bypass passages extending transversely through said valve and having peripheral edge portions cooperating with said inlet and outlet passages in said bore to form a pair of orifices in series between said ports when said valve is in said neutral position and arranged so that initial rotation of said valve from said neutral position closes one of said orifices.

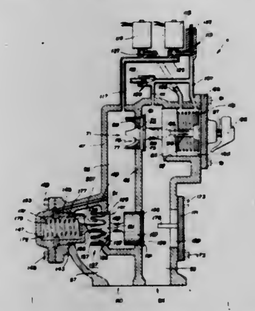
3,020,891
CONSTANT FLOW VALVE
Lawrence F. Jaseph, Memphis, Tenn., assignor to Dover Corporation, Washington, D.C.
Filed June 1, 1959, Ser. No. 817,358
13 Claims. (Cl. 121—46.4)



1. In a hydraulic elevator control system of the type provided with a fluid inlet chamber connected to a source of fluid under pressure, means providing an intermediate chamber, means providing a cylindrical opening communicating said inlet chamber with said intermediate chamber, a throttling member slidably mounted in said opening and movable to various positions to control the flow through the opening and into said intermediate chamber, said throttling member being exposed to said inlet chamber adjacent the side walls only of said throttling member whereby the pressure in said inlet chamber does not directly influence the position of said throttling member, controlled valve means communicating with said intermediate chamber and operable to various degrees of opening for controlling the discharge of fluid from said intermediate chamber, positioning means associated with said throttling member and sensitive to fluid pressure in said intermediate chamber to adjust the throttling effect of said throttling member so that the fluid pressure in said intermediate chamber is substantially constant for any selected opening of said controlled valve means.

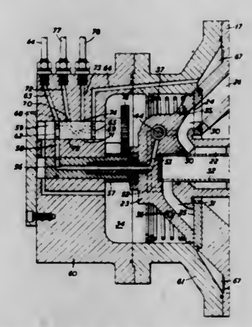
3,020,892
CONSTANT FLOW VALVE ASSEMBLY
Dunne J. Arbogast, Shelby County, and Lawrence F. Jaseph, Memphis, Tenn., assignors to Dover Corporation, Washington, D.C.
Filed Nov. 4, 1959, Ser. No. 850,958
17 Claims. (Cl. 121—46.4)

1. In a hydraulic elevator control system having a jack cylinder and an elevator car supporting plunger reciprocable therein, means establishing a passageway including an opening therein, conduit means communicating said jack cylinder with said passageway whereby during descent of said elevator car supporting plunger hydraulic fluid is adapted to flow from said jack cylinder through said passageway and through said opening, controlled valve means for selectively varying the effective size of said opening, regulator valve means in said passageway downstream of said opening for changing the fluid back pressure on said



opening in accordance with changes in the fluid pressure upstream of said opening so that the pressure drop through said opening is substantially constant for any given effective size of said opening, whereby the volumetric fluid flow through said opening and said passageway is substantially constant to maintain the lowering speed of said elevator car supporting plunger substantially constant for any selected size of said opening.

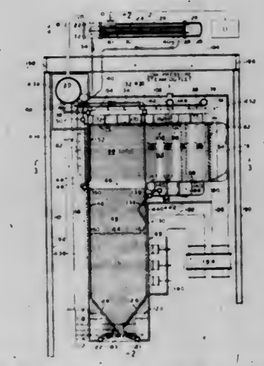
3,020,893
MOTORS FOR HYDROSTATIC POWER TRANSMISSION SYSTEMS
Henry Joel Hamblin, Putnoe, and Harry James Nation, Silsoe, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed June 23, 1959, Ser. No. 822,228
Claims priority, application Great Britain June 24, 1958
7 Claims. (Cl. 121—59)



7. A cut-off valve for a working cylinder of a hydraulic motor comprising a valve body having a bore therein, motive fluid inlet port means in said body adapted for connection to a supply of motive fluid, motive fluid outlet port means in said body adapted for connection to said working cylinder, motive fluid drain port means in said body, a valve member having two end faces and slidable axially in said bore, said valve member having an operative end position in which it blocks said motive fluid inlet port means and an inoperative position, passage means in said valve member which when said valve member is in said operative end position connect said motive

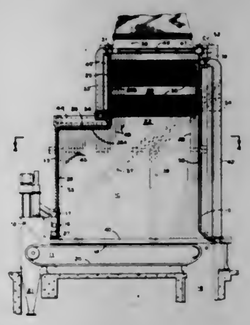
fluid outlet port means to said drain port means and when said valve member is in said inoperative end position connect said motive fluid inlet port means to said motive fluid outlet port means and end walls of said valve body each defining a pressure chamber with one of said end faces of said valve member and part of said bore, separate pressure fluid connections to said pressure chambers, detent means to retain said movable valve member in said inoperative position, said detent means comprising wall means defining a detent-actuating pressure chamber, a detent pin extending through said valve body into said chamber, spring means urging said detent pin outwardly of said body, and a pressure connection to said chamber whereby pressure can be applied to said chamber to force said detent pin inwardly into said bore against the action of said spring.

3,020,894
STEAM GENERATING AND SUPERHEATING UNIT
Will H. Rowand, Short Hills, N.J., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 1, 1955, Ser. No. 544,192
2 Claims. (Cl. 122—33)



1. In an apparatus of the character described; a high pressure steam generator including a vertically elongated fuel fired furnace having upright steam generating tubes along its walls, a steam and water drum at the upper part of the high pressure steam generating unit receiving the steam generated in said wall tubes, contiguously arranged and horizontally disposed radiant superheater tubes of a second superheating stage constituting parts of the walls of gas confining enclosure leading from the upper part of the furnace, banks of successive upright and horizontally spaced superheater tubes constituting a convection heated section of a second superheating stage and arranged transversely of gas flow in said gas pass, independent sources of low pressure steam at substantially different pressures; separate steam superheating circuits for the steam of said different pressures and a first stage of superheating constituted by an indirect heat exchanger for each of said circuits; means for conducting low pressure steam from said independent sources through the first superheating stages; means for conducting high pressure steam from the steam and water drum for effecting indirect heat transfer to the low pressure steam in the first superheating stages by condensing the high pressure steam; means for returning condensate from the first superheating stages to the liquid space of the high pressure steam generating means, and means for conducting the superheated steam from the first superheating stages to and through the tubular components constituting second superheating stages for the different circuits and also constituting a unitary part of the unit in which the high pressure steam is generated.

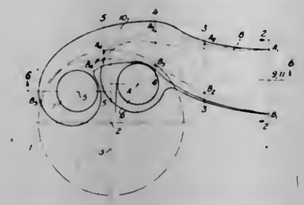
3,020,895
HIGH TEMPERATURE FLUID HEATER
Edwin Durham, Wadsworth, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 6, 1959, Ser. No. 844,707
3 Claims. (Cl. 122—235)



3. A hot water heater comprising walls defining the front, rear and sides of a furnace and a roof extending across one portion of said furnace, an upright convection gas pass positioned above and opening at its lower end directly to the other portion of the furnace, means for burning fuel in said furnace, a row of water tubes extending upwardly along the front wall and roof of said furnace and upwardly along the front wall of said convection gas pass, a bank of horizontally arranged convection heated water tubes positioned in said convection gas pass below the upper end of said front wall tubes, external downcomers for passing partially heated water from the upper end of said front wall tubes to the lower end of said convection heating tubes for upward flow therethrough, vertically arranged water tubes extending along the side and rear walls of said furnace for parallel upward flow of water therethrough, and external downcomer means for conducting heated water from the upper end of the convection heated tubes in said gas pass to the lower ends of said furnace side and rear wall tubes, whereby a water flow is provided upwardly through all of the heated water tubes.

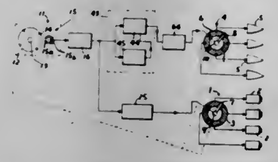
3,020,896
CYLINDER HEAD WITH AIR INTAKE PASSAGES
Siegfried Meurer, Klaus Wiebicke, Horst Lachmann, and Georg Dusold, all of Nurnberg, Germany, assignors to Maschinenfabrik Augsburg-Nurnberg A.G., Nurnberg, Germany
Filed Aug. 3, 1960, Ser. No. 47,242
Claims priority, application Germany Aug. 7, 1959
4 Claims. (Cl. 123—30)

1. In a cylinder head for a self-ignition engine operated with a unidirectional air swirl around the longitudinal axis of the engine cylinder, and having two intake valves in said head for said cylinder and for each valve a swirl producing air intake passage of the type directing the air generally in a direction tangential or nearly tangential relative to the cylinder wall, the improvement comprising each passage having an air entrance portion and an air outlet portion with the latter twisted around its respective valve and communicating with the valve opening, a partition separating the passages and extending through the outer wall of the cylinder head, and at least the air



entrance portions being superimposed starting from said outer wall.

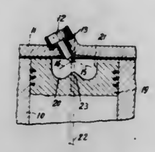
3,020,897
IGNITION SYTEM FOR AN INTERNAL COMBUSTION ENGINE
Shigenobu Sekine and Shoichi Muramoto, Tokyo, Japan, assignors to Sony Corporation, a corporation of Japan
Filed Nov. 15, 1960, Ser. No. 69,422
Claims priority, application Japan Nov. 18, 1959
7 Claims. (Cl. 123—32)



1. An ignition and fuel injection system for internal combustion engine comprising a non-contact pulse generator for generating pulse signals which are synchronized with the revolution of the engine, an electrical circuit which is connected to said non-contact pulse generator for producing pulse signals which control the ignition time in accordance with engine speed, an ignition distributor having a first movable contact and a plurality of first stationary contacts, said first movable contact being connected to the output of said electrical circuit, said first stationary contacts being adapted to be connected to a plurality of spark plugs, a fuel injection controlling circuit which is responsive to a source of pulse signals and produces pulses that vary in accordance with a condition of the engine, a fuel injection distributor having a second movable contact and a plurality of second stationary contacts, said second movable contact being connected to the output of said fuel injection controlling circuit, and said second stationary contacts being adapted to be connected to a plurality of fuel injection electromagnetic bulbs.

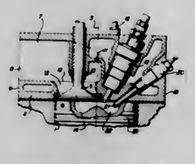
3,020,898
DIESEL ENGINE
Otto Hartmann, Stuttgart-Bad Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Dec. 30, 1958, Ser. No. 783,750
Claims priority, application Germany Jan. 2, 1958
10 Claims. (Cl. 123—32)

1. In a diesel engine the combination comprising a cylinder, a piston movable therein through fuel injecting positions, said piston being provided with a recess constituting a combustion space, the top face of said piston surrounding said recess constituting an uninterrupted plane surface, the boundary wall of said recess being essentially formed by a surface of revolution, a fuel injector carried by said cylinder and provided with a plurality of nozzles, the axis of each of said nozzles including an angle of not more than 45° with a transverse plane of said piston and intersecting said wall of the combustion space when said piston is in said fuel injecting positions



at an angle of at least 45°, the points of intersection of the axes of said nozzles with said wall being spaced different distances from the associated nozzles, the axis of said surface of revolution being spaced from the axis of said cylinder, said latter axis extending between said nozzles.

3,020,899
AIR-COMPRESSING INJECTION-TYPE INTERNAL COMBUSTION ENGINE
Alfred H. Mueller, Waiblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Jan. 27, 1959, Ser. No. 789,416
Claims priority, application Germany Feb. 11, 1958
11 Claims. (Cl. 123—32)

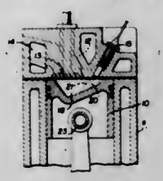


1. An air-compressing, injection type internal combustion engine with direct injection, comprising cylinder means, piston means slidably arranged in said cylinder, a combustion chamber, cylinder head means including inlet valve means with valve seat means and with valve guide means, inlet channel means provided in said cylinder head means, and passage means connecting said inlet channel means with said valve seat means for imparting a rotary movement about said valve guide means to the combustion air flowing through said passage means, said passage means slanting downwardly toward said valve seat means and the center line of said passage means being directed toward the axis of said cylinder.

3,020,900
COMBUSTION CHAMBER FOR COMPRESSION IGNITION, INJECTION-TYPE INTERNAL COMBUSTION ENGINES
Heinrich Hoffmann, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 9, 1959, Ser. No. 797,972
Claims priority, application Germany Mar. 15, 1958
7 Claims. (Cl. 123—32)

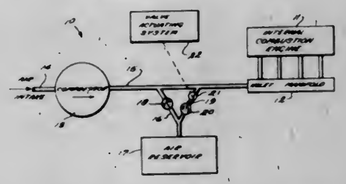
1. A combustion chamber for compression ignition, injection-type internal combustion engines comprising cylinder means, piston means slidably mounted in said cylinder means, a combustion chamber having wall means formed by said piston means, cylinder head means, injection means injection means located in said cylinder head means for injecting at least one jet of fuel into said combustion chamber, the direction of said jet forming an angle with the wall of said combustion chamber ranging between approximately 10° to 90°, said cylinder head means being provided with inlet means for supplying combustion air to said cylinder means including means for imparting a

rotary movement to said combustion air about an axis essentially parallel to the axis of said cylinder means and essentially in the direction of said fuel jet, said wall means of said combustion chamber being of a shape comprising



an essentially spiral conformation as viewed in a plan view thereof whereby the flow energy of said fuel is not appreciably suppressed and said spiral conformation being enlarged from a point of contact of said fuel with said chamber wall in the direction of said fuel jet.

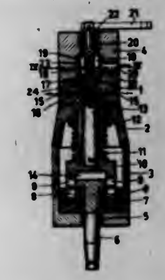
3,020,901
SUPERCHARGER FOR INTERNAL COMBUSTION ENGINES
Harvey A. Cook, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 24, 1961, Ser. No. 84,550
9 Claims. (Cl. 123—119)



1. A supercharger for an internal combustion engine comprising an air compressor having an inlet and an outlet, said outlet being adapted to be connected to the manifold intake of the engine, a reservoir also connected to said compressor outlet and said manifold intake, and valve means responsive to the fuel control means of the engine for charging said reservoir with air from said compressor during periods of relatively steady state engine operation and discharging said air from reservoir during periods of increased fuel flow to the engine.

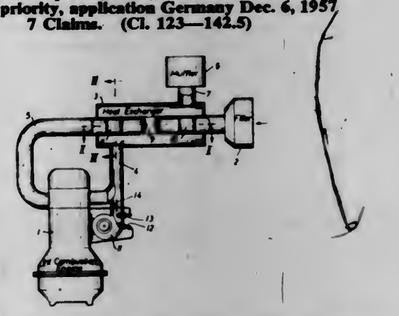
3,020,902
FUEL INJECTION PUMP FOR MULTI-CYLINDER INTERNAL COMBUSTION ENGINES
Anders Georg Sjöblom, Sommarogatan 45B, Eskilstuna, Sweden
Filed Dec. 29, 1958, Ser. No. 783,290
4 Claims. (Cl. 123—139)

1. A fuel injection pump for multicylinder internal combustion engines, said pump containing a fuel inlet chamber, a working chamber and a plunger performing reciprocating axial movement relative to said working chamber and at the same time performing a continuous rotary movement which is reversed with reversing of the engine, one part of said pump plunger being constructed as a distributing circular slide valve by means of which, during the pressure stroke of the pump, the fuel injectors of the engine are successively placed in communication with said working chamber, and a second part of said pump plunger being constructed as a second circular slide valve by means of which, during the suction stroke of the pump, said working chamber is placed in communication with said fuel inlet chamber of said pump, characterized in that second circular slide valve is provided with a passage and is surrounded by a cylindrical sleeve valve adjustable about the axis of said second circular slide valve in a rotational but non-axial manner, the inner cylindrical surface of said sleeve valve constituting the sliding surface for said second circular slide valve and the peripheral wall of said sleeve valve being provided with at least one opening therethrough leading to said fuel inlet chamber, the configuration and position of said opening being such that during operation of the pump said working chamber is, in one position of said sleeve valve, placed in communication with said fuel inlet chamber via said passage in said second circular slide valve and said opening in the peripheral wall of said sleeve valve during the whole of the pressure as well



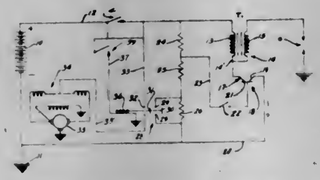
as the suction stroke of said pump plunger, while in another position of said sleeve valve, said working chamber is placed in communication with said fuel inlet chamber via said passage in said second circular slide valve and said opening in the peripheral wall of said sleeve valve during only part of the pressure stroke of said pump plunger and during the whole suction stroke of said pump plunger, the fuel quantity and the time for the beginning of the fuel injection being variable by adjusting the position of said sleeve valve, said sleeve valve also serving to prevent any unintentional reverse motion of the engine when said sleeve valve is positioned to let said pump plunger press back the fuel into said fuel inlet chamber.

3,020,903
AIR COMPRESSING FUEL INJECTION INTERNAL COMBUSTION ENGINE
Richard Kloss, Koln-Buchforst, Germany, assignor to Klockner-Humboldt-Deutz Aktiengesellschaft, Koln, Germany
Filed Apr. 28, 1960, Ser. No. 25,322
Claims priority, application Germany Dec. 6, 1957
7 Claims. (Cl. 123—142.5)



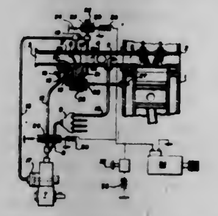
1. In combination with an air compressing fuel injection engine having an intake manifold for taking in combustion air, and a discharge manifold for discharging combustion gases from said engine: heat exchanging means surrounding a portion of said intake manifold, said discharge manifold communicating with said heat exchanging means, hot gas supply means, conduit means adapted to establish communication between said hot gas supply means and said discharge manifold for preheating said portion of said intake manifold prior to starting said engine, and means arranged in said conduit means and operable selectively to establish or interrupt communication of said heat supply means with said heat exchanging means.

3,020,904
TRANSISTOR IGNITION SYSTEM
Fred S. Kerr, Royal Oak, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Oct. 20, 1958, Ser. No. 768,414
2 Claims. (Cl. 123—179)



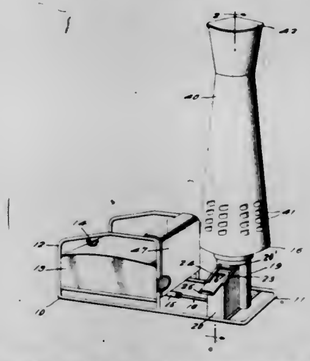
1. An ignition system for an internal combustion engine having a starting motor for cranking the same, comprising a main electrical circuit including, in series-connected relation, a source of current, operably connected emitter, base and collector elements of a transistor, and an ignition coil primary winding; a distinct secondary electrical circuit including said current source and electrical resistance means connected in series thereto to provide a path for current in addition to said main circuit; a circuit breaker connecting said transistor base element to said resistance means and opening and closing in timed relation to operation of the engine; and control means having an operative connection to said starting motor by which said control means is rendered operative during energization of the motor and periods of engine cranking for removing a portion of said resistance means from said secondary circuit.

3,020,905
FUEL INJECTION SYSTEM
Karl-Heinz R. Göschel, Stuttgart-Unterturkheim, and Heinz Lamm, Stuttgart-Bad Cannstatt, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Sept. 8, 1959, Ser. No. 838,502
Claims priority, application Germany Sept. 13, 1958
27 Claims. (Cl. 123—179)



1. A fuel injection system for a mixture-compressing internal combustion engine having a plurality of cylinders comprising common intake means for drawing in combustion air, individual intake ducts branching off from said common intake means and leading from said common intake means to the individual cylinders of the engine, main fuel supply means including fuel injection means and individual fuel lines leading to the individual intake ducts for supplying fuel to said individual intake ducts, and auxiliary fuel supply means operatively connecting said main fuel supply means with said common intake means for supplying a predetermined quantity of fuel to said common intake means, means to maintain said main fuel supply means normally closed during starting of the engine. and means to maintain said auxiliary fuel supply means normally open during starting.

3,020,906
PORTABLE KEROSENE HEATER
Eric E. Randmark, Stockholm, Sweden, assignor to Victor J. Randmark, Rossford, Ohio
Continuation of application Ser. No. 291,210, June 2, 1952. This application Jan. 18, 1961, Ser. No. 84,478
3 Claims. (Cl. 126—59.5)



1. A portable liquid fuel heater comprising a base for mounting on a horizontal support, a fuel tank on the base in spaced relation to the bottom of the latter, and a burner structure mounted on the base in spaced relation to the fuel tank and in communication with the latter, a protector plate between the fuel tank and burner structure to shield the fuel tank from the heat of the burner, the burner including a fuel chamber, a fire chamber, with air openings, a chimney mounted on the fuel chamber and communicating with the latter, an inverted cup baffle, with explosion reducer openings, mounted centrally within the fire chamber, the top of the baffle being formed to provide a sump for priming fluid, the fuel chamber including a cylindrical portion and an elongated housing communicating therewith, the roof of the housing slanting downwardly away from the cylindrical fuel-receiving portion of the housing, a concave-convex shield depending from the roof of the fuel chamber, the shield being slightly spaced from the sidewalls of the elongated chamber, a wick supporting member suspended beneath an air inlet opening in the roof, through which opening the wick may be ignited, and a closure movably mounted on the roof for closing the opening in whole or in part.

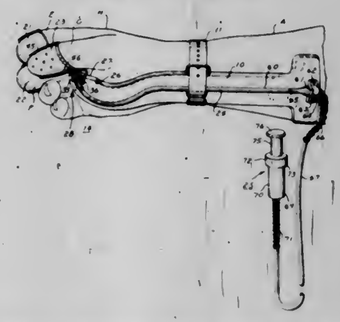
3,020,907
EXTRUSION GUN HEATER
Kenneth C. Lease, Sr., E. Rock Road, Allentown, Pa.
Filed Apr. 1, 1959, Ser. No. 803,478
4 Claims. (Cl. 126—229)

1. A heater for extrusion guns of the type including a barrel, said heater comprising a generally cylindrical jacket for receiving and enclosing an extrusion gun barrel, said jacket including a fuel chamber and further

including a cover hingedly mounted on said fuel chamber, and burners in the jacket mounted on the fuel chamber and operatively connected thereto for heating the interior of said jacket.

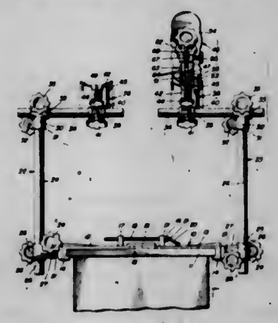


3,020,908
MECHANICAL HAND
Charles J. Daniels and Thomas A. Smith, Wilmington, Del., assignors to All American Engineering Company, Wilmington, Del., a corporation of Delaware
Filed June 27, 1960, Ser. No. 39,014
6 Claims. (Cl. 128—26)



3. Means for providing motive power to a paralyzed hand of a quadriplegic comprising a hand held C-shaped spring, servo means secured in the said spring for spreading the same as it is held in the hand, flexible thimble means mounted on each free end of the spring, and master control means operatively connected to said servo means actuated by the quadriplegic.

3,020,909
LIMB SUPPORTING ATTACHMENT FOR OPERATING TABLES
Richard L. Stevens, Broken Arrow, Okla., assignor to Rollin W. Hudson, Tulsa, Okla.
Filed June 18, 1958, Ser. No. 742,934
10 Claims. (Cl. 128—70)



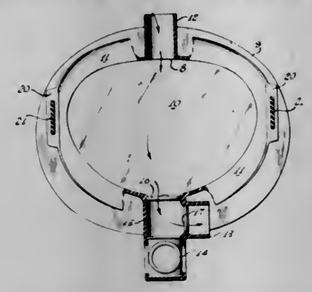
1. A limb supporting attachment comprising a longitudinally extensible clamp adapted to span a table-like support transversely and including parts to grip the opposite longitudinal edges of the support, trunnions carried by the ends of said clamp and projecting outwardly thereof horizontally, coupling members swiveled to said trunnions and adjustably clampingly secured thereto and having sleeve portions extending substantially at right angles to the trunnions, a first pair of elongated bars adjustably clampingly secured within said sleeve portions of the coupling members and movable lengthwise of the sleeve portions, said bars independently swingable in vertical planes with the coupling members upon the axes of said trunnions, second coupling members swiveled to the ends of said bars remote from the trunnions and adjustably clampingly secured thereto and having sleeve portions extending substantially at right angles to said bars and substantially parallel to the axes of said trunnions, a second pair of elongated bars shorter than the bars of the first-named pair adjustably clampingly secured within the sleeve portions of the second coupling members and shiftable lengthwise therein and extending at substantially right angles to the bars of the first-named pair and bodily movable with the bars of the first-named pair when the latter are swung vertically, and limb supporting means adjustably clampingly secured to the bars of the second-named pair and adapted to be secured in selected adjusted positions thereon.

3,020,910
DECUBITUS PAD
Thomas C. Ward, P.O. Box 34, San Dimas, Calif.
Filed May 11, 1960, Ser. No. 28,298
2 Claims. (Cl. 128—132)

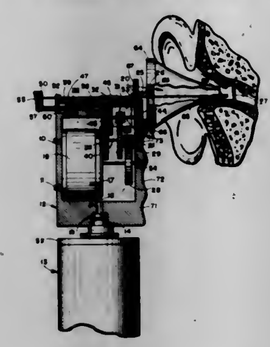
2. A decubitus pad for a patient resting on his back on a bed, said pad comprising a flexible strip adapted to lie flat on the bed and extend transversely beneath the lower portion of the body for underlying the high point of the pelvis, means for securing the strip at an intermediate point only to the patient's back, the end portions of said strip being longitudinally curved whereby said end portions will underlie and receive thereon the high points of the hips should the patient roll to either side, and spaced cushions on the strip for receiving said high points of the pelvis and the hips therebetween, said means including a loop on one of the longitudinal edges of the strip, and a body encircling strap mounted in said loop.

3,020,911
MASK
Barney B. Girden, 32 W. 76th St., New York, N.Y.
Filed May 24, 1960, Ser. No. 31,413
3 Claims. (Cl. 128—141)

1. The combination of a face mask dimensioned to enclose at least a user's nostrils and having a transparent window, said mask further having a first opening defining an inlet for oxygen containing gas and a second opening, a mouthpiece and valve housing assembly of very large cross-section and short longitudinal extent so as to impose minimum resistance to the flow of gas therethrough while containing a minimum volume, said mouthpiece having a short length and large diameter and said valve housing having a first large aperture opening into said mouthpiece, said valve housing further having a second large aperture immediately adjacent to said first large aperture and opening externally of said housing and a third large aperture in said housing immediately adjacent to said second large aperture and communicating with said opening of the mask, and check valves of maximum diameter in said second and third apertures of said housing, said check valve in said second aperture opening outwardly of said housing and said check valve in said third aperture opening inwardly of the housing to permit flow through said third aperture only in the direction from said mask into said housing and to permit flow through said second aperture only in the direction from the interior of the housing to atmosphere, whereby the user may breathe with maximum ease and rapidity by inhaling oxygen containing gas from the nostril enclosing mask and by exhaling from the mouth only through said second aperture of the valve housing, with a minimum amount of the exhalation being retained in said housing and with freedom from fogging of said transparent window.

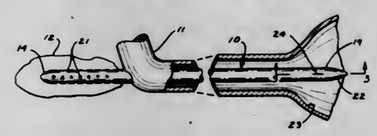


3,020,912
MOTOR DRIVEN SURGICAL KNIFE
Martin H. Chester, 16000 S. Vermont Ave., Gardena, Calif.
Filed Oct. 6, 1958, Ser. No. 766,640
4 Claims. (Cl. 128—310)



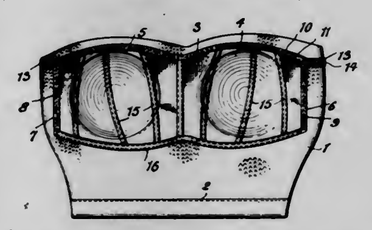
1. A surgical instrument for making an incision comprising a cutting member, a drive shaft, said cutting member being attached to said drive shaft, a main frame, said drive shaft being rotatably and slidably mounted on the top portion of said main frame, a drive gear fixedly attached to said drive shaft, gear means rotatably mounted on said main frame, said main frame having an aperture in the top portion thereof, said gear means extending through said aperture, motor means fixedly mounted on said main frame for rotatably driving said gear means, said drive gear slidably engaging said gear means for rotation therewith, an actuator adapted for thumb actuation, said drive shaft being rotatably attached to said actuator, a plunger rod fixedly attached to said actuator, said main frame having a recess formed in the top portion thereof, said plunger rod being slidably mounted within said recess, a speculum mounted on said main frame, said speculum surrounding a portion of said drive shaft, and spring means for constraining a portion of said plunger rod against a surface of said main frame to hold said cutting member within said speculum, said cutting member extending out from said speculum with actuation of said actuator.

3,020,913
SURGICAL DRAIN
William T. Heyer, 411 N. Wilson Ave., Pasadena, Calif.
Filed July 15, 1958, Ser. No. 748,652
9 Claims. (Cl. 128—350)



1. A surgical drain for the removal of fluid from a body cavity comprising: a flexible tube having a central axis, and a concentric inner wall and outer wall, said inner wall forming an axial interior passage therein, inlet means connecting the passage with the outside of the tube at at least one axial location so as to permit fluid to drain into the passage, and uni-directional outlet means at a location spaced axially from the inlet means and from the end of the tube, said outlet means comprising an axial slit extending through the tube between the walls, said slit having substantially planar faces lying in a plane which includes the axis, said faces being substantially coplanar, said slit being opened when fluid pressure is greater on the inner wall than on the outer wall, and closed when the pressure differential is reversed, said slit having no substantial spacing between the faces, and therefore being closed when the tubing is in its undistorted condition with equal pressure on both walls, and a backing member within said passage disposed axially opposite the slit so as to be contactable by the inner wall to reduce the tendency of the wall to kink at the slit, and an end wall closing the tube at the opposite side of the slit from the inlet means.

3,020,914
GARMENTS
Arthur Garson, 941 Park Ave., New York, N.Y.
Filed July 27, 1959, Ser. No. 829,676
2 Claims. (Cl. 128—444)



1. A strapless self-supporting body encircling garment comprising, a tubular and seamless knitted member adapt-

ed to encircle the body of a wearer, said member being formed of a material including elastic threads extending circumferentially of said tubular member whereby to impart elasticity and extensibility to said member in a direction circumferentially of the wearer, and a brassiere secured to said tubular member along the inner surface of the upper front part thereof whereby said brassiere is concealed from view when said garment is worn by the wearer, said brassiere having non-elastic breast cups and being stitched to said member while the latter is in a stretched condition thereof, and a narrow elastic strip secured to the inner surface of said member and extending circumferentially thereof between the outer opposite side edges of said brassiere, said strip being adapted to extend around the back of the wearer when said garment is worn.

3,020,915
SMOKING DEVICE
Anthony P. Miller, Atlantic City, N.J., assignor to Achilles Corporation, Atlantic City, N.J., a corporation of New Jersey
Filed Sept. 22, 1958, Ser. No. 762,377
6 Claims. (Cl. 131—9)



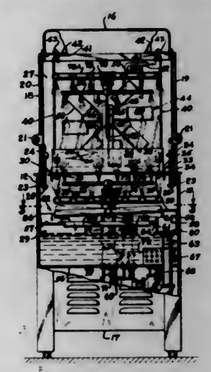
1. A smoker's article comprising means providing a flexible wrapper for said article, a filler for said wrapper filling said wrapper for at least a portion of its length with tobacco, said wrapper being provided with an array of slits adjacent to one end of the tobacco filled portion of said wrapper providing flap portions of the wrapper forming vents variably operating in response to pressure differences on opposite sides of the flap portions to admit proportionally varying amounts of air.

3,020,916
ELECTRICALLY CONTROLLED COIN DISPENSING MACHINE
Arnold R. Buchholz and Frank Haban, Watertown, Wis., assignors to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Filed Dec. 16, 1958, Ser. No. 782,346
7 Claims. (Cl. 133—2)



1. In a coin payer having penny channels, a five cent channel, ten cent channels, a quarter channel and a half dollar channel; a plurality of electro-responsive devices for controlling the dispensing of coins from said channels; control apparatus for said devices including a keyboard having tens keys 1 to 9, digit keys 1 to 9 and zero; a plurality of switches selectively controlled by said keys. said switches including a one penny switch, a pair of two penny switches, a pair of five cent switches comprising a single pole switch and a double pole switch, the actuation of the single pole five cent switch being controlled by the digit keys 5–9, inclusive, the double pole switch having a first and second operating position and arranged for normal serial connection, while in said first position, with the single pole switch upon actuation thereof and being movable to its second operating position under the control of the tens keys 3, 4, 8 and 9 respectively, first and second single pole ten cent switches, said first ten cent switch being controlled by the 1, 2, 4, 6, 7 and 9 tens keys and the second ten cent switch being controlled by the 2 and 7 tens keys, a quarter switch and a half dollar switch; a plurality of circuits selectively controlled by said switches for selectively rendering certain predetermined electro-responsive devices operable to dispense from said channels the least number of coins to make up the desired amount of money to be dispensed; a pair of relays each having a solenoid and contacts operable thereby which contacts are interposed in the respective circuits of the double pole five cent switch, the first ten cent switch and the quarter switch to provide alternative electrical connections to the electro-responsive device controlled thereby operable for dispensing said least number of coins, the energization of one of said relays being dependant upon the closure of said single pole five cent switch, and the energization of the other of said relays being dependant upon the closure of said second ten cent switch; and electrically operated means operable to dispense at least one coin from each of the channels whose electro-responsive devices have been rendered operative.

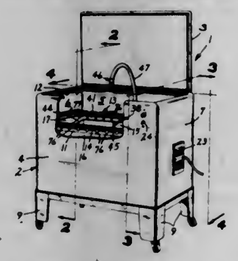
3,020,917
DISHWASHING MACHINE WASH AND RINSE FLUID DISCHARGE APPARATUS
Homer F. Lyman, 44 Windsor Place, Nutley, N.J.
Filed Nov. 18, 1958, Ser. No. 774,771
5 Claims. (Cl. 134—58)



1. In article cleaning apparatus of the class described which operates in a wash cycle and a rinse cycle, a vertically disposed casing having a cleaning chamber, rack means horizontally disposed in said cleaning chamber for accommodating an article to be cleaned, wash spray means for spraying a wash liquid onto the article to be cleaned during the wash cycle, rinse spray means for spraying a rinse liquid onto the article to be cleaned during the rinse cycle, a wash liquid compartment in said casing and disposed below the cleaning chamber, said wash liquid compartment having a substantially horizontal top with a portion thereof perforated and in communication with the cleaning chamber to permit flow of wash liquid into said wash liquid compartment for collection therein, a substantially flat tray member horizontally arranged in

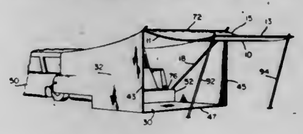
said cleaning compartment above the perforated wall portion of said wash liquid compartment for intercepting flow of liquid after the liquid is sprayed onto the article to be cleaned, pivot means for said tray member to permit the latter to pivot in two directions about a horizontal pivot axis extending transversely of the cleaning chamber, said tray member having upstanding walls along the parallel edges extending transversely of the pivot axis of said tray member to constrain flow of liquid off the tray member at oppositely disposed edges thereof extending parallel to the pivot axis of the tray member, an elongated box-like compartment defining a rinse drain compartment arranged along one of the oppositely disposed edges of the tray member, said rinse drain compartment having vertical side walls disposed parallel to the pivot axis of the tray member and vertical end walls extending transversely of the pivotal axis, one of the vertical side walls of said rinse drain compartment being spaced from the top thereof to define an inlet in communication with the cleaning chamber and accommodating said one oppositely disposed edge of the tray member and portions of the upstanding walls of the said parallel edges extending transversely of the pivot axis, the top of the rinse drain compartment adjacent said one vertical side wall of the latter having a pair of slots therein to accommodate movement of the said upstanding walls of the tray member within the rinse drain compartment, the top of said rinse drain compartment serving to limit movement of said tray in one direction and the upper spaced edge of said one vertical side wall of the drain compartment serving to limit movement of the tray in the other direction, actuating means connected to the tray member for pivoting the latter in the two directions, said actuating means being adapted to pivot the tray member in said one direction during the wash cycle whereby wash liquid flows off of the tray member at the other of said oppositely disposed edges and passes through the perforated portion of the top of the wash liquid compartment, and being adapted to pivot the tray member in said other direction during the rinse cycle whereby the rinse liquid flows off the tray member at said one oppositely disposed edge of the tray member into the drain compartment, and means in communication with the wash liquid compartment and the wash spray for recirculating the wash liquid to the wash spray means.

3,020,918
PARTS WASHER
Robert V. Albertson and Victor N. Albertson, Minneapolis, Minn., assignors, by mesne assignments, to Practical Mfg. Co., Minneapolis, Minn., a corporation of Minnesota
Filed Nov. 3, 1960, Ser. No. 67,124
2 Claims. (Cl. 134—98)



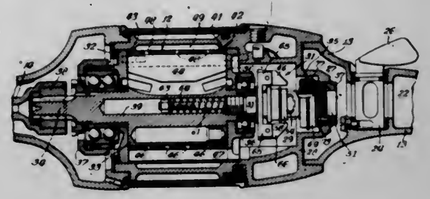
1. A parts washer comprising an open-topped cabinet, a sump containing cleaning solution and defined by the lower portion of said cabinet, an open-topped washing container disposed above said sump and adapted to contain a portion of said cleaning solution for washing dirty machinery parts, a generally tubular cleaning solution distributing element disposed within said washing container, a conduit leading from said sump to said distributing element, pump means interposed in said conduit for recirculating said cleaning solution from said sump, through said distributing element into said container, the cleaning solution overflowing back into said sump, said distributing element being generally U-shaped and defining connected elongated portions disposed on opposite sides of said washing container, one of said elongated portions being disposed adjacent the top of one side of said container and the other of said elongated portions being disposed adjacent the bottom of the other side of said container, said elongated portions being connected at corresponding ends to a transversely inclined portion of said distributing element, said elongated portions of said distributing element defining longitudinally spaced cleaning solution outlet orifices which open into said container in a generally horizontally inwardly extending direction so as to create a turbulent agitation of the cleaning solution within said washing container, a rinsing nozzle disposed adjacent the top of said cabinet, valve means interposed in said conduit, secondary conduit means connecting said rinsing nozzle to said cleaning solution conduit, and a filter element interposed between said secondary conduit and said valve means, said valve means being movable between a washing position wherein said cleaning solution is recirculated from said sump through said cleaning solution conduit to said washing container and a rinsing position wherein said cleaning solution is recirculated from said sump through said filter element and through said secondary conduit means to said rinsing nozzle, the cleaning solution dispensed from said rinsing nozzle flowing back into said sump, said rinsing nozzle being adapted to discharge filtered cleaning solution over machinery parts in said cabinet.

3,020,919
COLLAPSIBLE SHELTER
Jack G. Crump, Columbus, Ohio
(1211 N. Chestnut, Arlington Heights, Ill.)
Filed Dec. 5, 1958, Ser. No. 778,408
2 Claims. (Cl. 135—1)



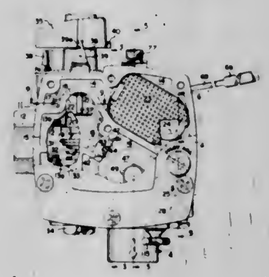
1. A collapsible shelter particularly adaptable to a motor vehicle having a body, a pair of fender skirts on the rear of said body, and a front and rear bumper comprising: a pair of side walls, roof, and floor sections, said sections joined to form a box-like shelter having a pair of open ends; means for fitting one of said open ends over the rear section of said motor vehicle; means for fastening one end of the roof section of said open end to the forward section of said motor vehicle, and means for fastening one end of the wall sections of said open end to said fender skirts; said wall sections having a section removed therefrom extending from said fender skirts to its lowermost portion and extending in the transverse direction from its forward end to the position generally defined by said rear bumper, said floor section extending from its forward end to said bumper adapted to be raised, and means for securing said raised floor section to said rear bumper; support mounts fixedly positioned on said rear bumper of said motor vehicle, and a pair of rigid pole pieces joined to said support mounts and the upper part of the open end of said shelter opposite the end secured to said motor vehicle to rigidly support said shelter.

3,020,920
PNEUMATIC MOTOR GOVERNOR
Frank A. Kaman, Aurora, Ill., assignor to Thor Power Tool Company, Chicago, Ill., a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,353
12 Claims. (Cl. 137—50)



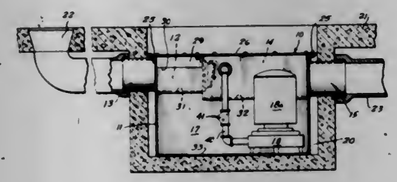
1. A governor for a pneumatic motor having a rotatably driven member, said governor comprising a support adapted to be connected to said member and rotated thereby, said support having a fluid passage therein adapted to interconnect a fluid source and the motor, a pair of closure elements shiftably mounted on said support in operative relation to said passage, speed responsive mechanism connected to one of said closure elements for shifting said one element toward and away from a position closing said passage in response to variations in the rotative speed of said support, means for continuously urging the other of said closure elements from a retracted position to a passage closing position, and means for holding said other closure element at its retracted position until the member reaches a predetermined maximum rotative speed and for releasing said other closure member from its retracted position when said maximum speed is reached.

3,020,921
MANIFOLD VALVE
Courtland B. Currie, Los Angeles, and Hugh M. Morgan, Culver City, Calif., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 4, 1958, Ser. No. 778,102
4 Claims. (Cl. 137—66)



1. A manifold valve comprising a valve body having an inlet and a main outlet and a pilot outlet, a plug valve between said inlet and said outlets, a safety valve between said inlet and said plug valve, said plug valve having passages therein for conducting gas from said inlet to said outlets, said plug valve being movable between "off" and "pilot" and "on" positions, means for moving said safety valve to its open position, a knob for turning said plug valve, said means being arranged to be actuated by movement of said knob when the plug valve is in its pilot position, a pointer on said valve body for indicating the position of said plug valve, said pointer having an outwardly bowed portion intermediate its ends, and an abutment on said knob so positioned as to engage the outer end of said pointer in the "off" and "pilot" positions of said plug valve and movable axially with said knob to align said abutment on said knob with said outwardly bowed portion to permit turning of said knob past said pointer.

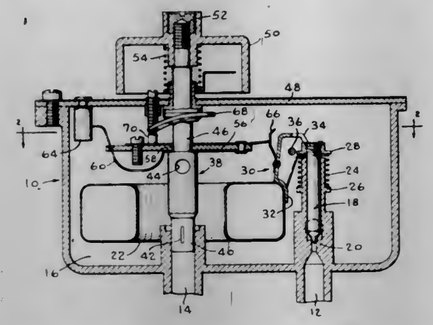
3,020,922
FLOOD CONTROL UNIT
Levi I. Oury, Wheaton, Ill.
Filed Dec. 9, 1957, Ser. No. 701,383
4 Claims. (Cl. 137—115)



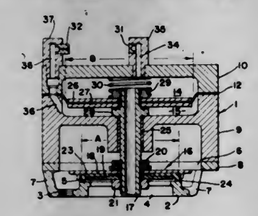
2. A flood control unit comprising in combination: a housing having bottom and side walls and an inlet and an outlet disposed immediately adjacent to the upper periphery thereof for connection in a sewer conduit; a pair of upper compartments in said housing in communication with each other and with the inlet and outlet respectively; a check valve operatively intermediate said upper compartments and arranged to be securely closed by sewage entering one of said upper compartments from the outlet and to permit sewage flow from the inlet to said one upper compartment when no sewage is entering said one upper compartment from the outlet; the other of said upper compartments having an elongated horizontal opening in a side wall thereof defining a weir having an upper edge vertically spaced from the bottom of said other upper compartment; a lower compartment having a bottom disposed lower than said upper edge and communicating therewith for receiving any overflow sewage therefrom; said housing having removable means lying in a common plane sealably defining the top of each of said compartments; and a pump connected to transfer any overflow sewage from said lower compartment to said one upper compartment.

3,020,923
OIL CONTROL
Roy W. Johnson, Milwaukee, and William A. Biermann, Brookfield, Wis., assignors to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed May 15, 1959, Ser. No. 813,491
5 Claims. (Cl. 137—316)

1. An oil control device of the character described comprising a casing having a fuel chamber including an inlet and an outlet, means for regulating flow through the inlet, float means in the chamber to control the inlet regulating means, stem means for regulating flow through the outlet, said stem means being rotatable to an "on" and an "off" position, a fixed post within the chamber, spring means rotatable with the stem means to engage the post when the outlet regulating means is in the "off" position, a metering slot in the stem means to drain the supply chamber when the stem means is in the "off" position, a resilient bracket secured to the float means, and a projection rotatable with the stem means to engage the bracket and resiliently suspend the float means within the chamber when the stem means is in the "off" position.

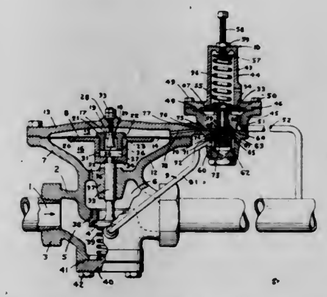


3,020,924
AUTOMATIC SHUT-OFF VALVE
Robert H. Davies, Aurora, Ohio, assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 14, 1959, Ser. No. 839,823
11 Claims. (Cl. 137—386)



1. An automatic shut-off valve for use in filling a tank with liquid to a predetermined level comprising a housing formed with a passage for flow of liquid therethrough into the tank, such passage being formed with a valve seat whereby passage portions on opposite sides of said seat constitute an inlet port and an outlet port through which liquid is adapted to be introduced into the tank; a spring-closed valve member supported in said housing for movement into and out of engagement with said seat to thus close and open said passage; said housing and valve member defining a pressure unseating chamber of which a portion of said valve member constitutes a movable wall disposed so that liquid pressure therein of two different magnitudes acting on said movable wall is effective at the lower pressure to permit movement of said valve member into engagement with said seat, and at the higher pressure to move said valve member away from said seat; and a jet assembly operatively connected with said housing and adapted to be disposed in the region of the level to which the tank is to be filled; said jet assembly including a nozzle in liquid communication with said inlet port, and a receiver spaced from said nozzle and in liquid communication with said pressure unseating chamber, said receiver being arranged to have the jet of liquid emerging under pressure from said nozzle impinge thereon to transform the velocity head of the jet to pressure energy in the unseating chamber at such higher pressure and thus maintain the valve member in open position for flow of liquid into the tank through such passage until such time that a portion of the velocity head at said receiver is dissipated by submersion of the jet in the rising liquid level in the tank whereby there is a substantial loss of pressure energy in the unseating chamber to the aforesaid lower pressure which permits movement of said valve member to closed position to discontinue the tank filling operation.

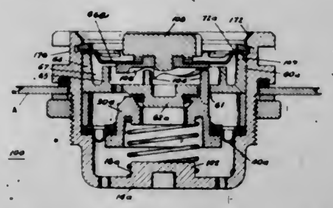
3,020,925
PILOT OPERATED REGULATOR MECHANISM
Ross D. Randall, Needham, and Hans D. Baumann, Sharon, Mass., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Dec. 8, 1959, Ser. No. 858,262
2 Claims. (Cl. 137—489.5)



1. A mechanism to regulate the flow of pressurized fluid comprising, a casing having a flow channel for the pressurized fluid, a transverse partition in said casing to divide the flow channel into an upstream side and a downstream side, a valve port in said partition, a control valve in said casing in operative association with the valve port to control the flow of fluid from the upstream side to the downstream side of the flow channel, chamber means formed in said casing, diaphragm means to divide said casing chamber means into a working portion and a balancing portion, said diaphragm means having at least one opening to communicate said working portion with said balancing portion, passage means in said casing to communicate said balancing portion with the downstream side of the flow channel, conduit means to communicate said working portion with the upstream side of the flow channel whereby pressurized fluid from the upstream side of the flow channel enters said working portion, said diaphragm means operative responsive to the pressure differential between said working portion and said balancing portion, said control valve connected to said diaphragm and adapted to open on said diaphragm means moving towards the flow channel, a pilot valve disposed in said conduit means to regulate the flow of pressurized fluid from the upstream side of the flow channel to said working portion, spring means to actuate said pilot valve to a normally open position, chamber means formed in said pilot valve, tube means to communicate said chamber means of said pilot valve with the downstream side of the flow channel whereby pressurized fluid from the downstream side of the flow channel enter said chamber means, a diaphragm member in said pilot valve in operative association therewith, said diaphragm member in said pilot valve to separate said spring means and said chamber means, said diaphragm member of said pilot valve operative responsive to the pressure differential of the spring means and the pressure in said chamber means of said pilot valve, a stationary member connected to said casing and disposed in the opening of said diaphragm means in operative association therewith, said stationary member having an increasing cross-section in the direction away from said casing and adapted to progressively decrease the opening in said diaphragm means on said diaphragm means movement in the direction of the flow channel to

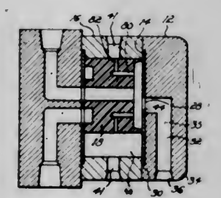
throttle the passage of pressurized fluid therethrough whereby the lessened force of the extended pilot valve spring is compensated for and the pressure of the downstream side of the flow channel is maintained.

3,020,926
BREATHER VALVES
Harrison Browning, 3544 E. Fort Lowell Road; Wesley C. Patterson, 5346 E. 18th St.; and Ilya S. Livney, 2926 E. Glenn St., all of Tucson, Ariz.
Filed Sept. 8, 1958, Ser. No. 759,709
7 Claims. (Cl. 137—495)



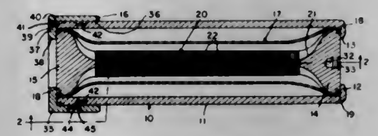
1. A low-pressure, high-flow breather valve for controlling the pressure within a closed container comprising; an open-topped housing having an upstanding sidewall and a bottom wall; ports in said bottom wall; a valve seat including a spring seat and a sidewall; said sidewall of said valve seat encompassing said spring seat; a convoluted, torus-shaped, flexible diaphragm having an inner lip and an outer lip; said diaphragm encircling the sidewall of said valve seat and having said inner lip affixed thereto; the outer lip of said diaphragm being affixed to the sidewall of said housing; an annular, resilient valve member mounted in said housing adjacent said valve seat; a spring having one end mounted in said spring seat and another end mounted in said housing in such a manner that said spring biases said valve seat in valve closing direction; and a sand-moisture trap rigidly mounted in said open top of said housing superjacent said valve seat; said trap including passage means placing said open-top of said housing in fluid communication with said valve seat, an annular chamber and a sand-moisture deflecting plate; said plate being mounted superjacent said annular chamber and including a substantially flat, recessed portion and a sloping wall exposed directly to ambient atmosphere.

3,020,927
THREE- AND FOUR-WAY SLIDING BLOCK VALVE
William I. McLaughlin, 245 Cumberland Lane, Crystal Lake, Ill.
Filed Jan. 9, 1961, Ser. No. 81,652
17 Claims. (Cl. 137—622)



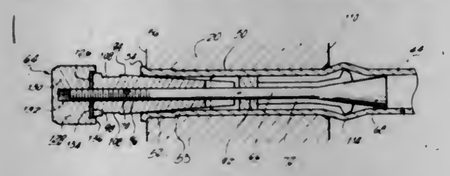
1. A three- and four-way valve comprising a body member having a slot therein, a block shorter than said slot mounted in said slot for movement between two positions, said block having a hole therethrough, means providing a duct in communication with said hole for delivering fluid under pressure to one side of said block, a member having a first reversible flow duct therein, said duct having a port in register with said hole on the other side of said block in one of said positions of said block, said member having a second reversible flow duct having a port in register with said hole in the other position of said block, said member also having an exhaust duct therein having a port opening against the said block away from the line of movement of said hole, said block having bridging passages formed therein to connect said second reversible flow port to said exhaust port when said hole is in register with said first reversible flow port and connect said first reversible flow port with said exhaust port when said hole is in register with said second reversible flow port.

3,020,928
ACCUMULATOR
William Harold Peet, 2115 Devonshire Road, Ann Arbor, Mich.
Continuation of application Ser. No. 753,521, Aug. 6, 1958. This application Oct. 2, 1961, Ser. No. 143,025
10 Claims. (Cl. 138—30)



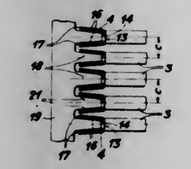
1. An accumulator comprising an elongated tubular casing closed at the ends, a flexible tube of a material impermeable to gases and liquids extending axially within said casing and cooperating with said casing to form a chamber around said tube, a backing for said tube comprising a core supported within said tube, said core having a plurality of elongated, liquid permeable, angularly spaced tubular portions, each tubular portion having a hollow interior, the hollow interiors of said respective tubular portions being separate and spaced from each other, said tubular portions extending lengthwise of said casing with their axes displaced radially from the axis of said casing, the external surfaces of said tubular portions being convex, said core having a central portion bridging the space between said tubular portions and having external surfaces shaped to blend smoothly with the external surfaces of said tubular portions for the uniform support of said tube when collapsed without sharp bends, and means providing a liquid passage to the hollow interiors of said tubular portions.

3,020,929
HEAT EXCHANGER (FLUID COOLER) TUBE PLUG
Forrest E. Knecht, Catawba Ave., Newfield, N.J.
Filed Aug. 4, 1959, Ser. No. 831,681
4 Claims. (Cl. 138—89)
(Granted under Title 35, U.S. Code (1952), sec. 266)



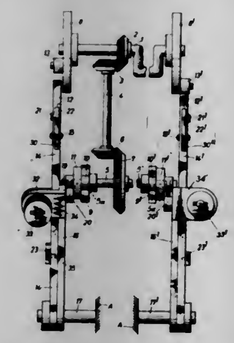
1. A device for plugging the open end of a tube secured in a wall plate comprising a rod having an enlarged tapered head on one end, an expandable metallic sleeve slideably carried on said rod having a surface adapted to receive said tapered head of said rod and to be expanded thereby with axial movement of said rod in one direction, said rod and sleeve thereon being adapted for insertion into said tube, an enlarged portion on said sleeve adapted to grip the inner surface of said tube at a point therein beyond said plate with expansion of said sleeve and thereby anchor same, a tapered plug adapted to be wedged into the end of said tube in sealing engagement therewith slideably carried on said rod, the other end of said rod extending through said plug, means on opposed ends of said plug and sleeve interconnecting against rotation while permitting axial movement relative each other, and retaining means on the other end of said rod for securing said plug on said rod in sealing engagement with said tube.

3,020,930
HEALD FRAMES AND GUIDES THEREFOR IN LOOMS FOR WEAVING
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed June 20, 1960, Ser. No. 37,264
Claims priority, application Switzerland Mar. 31, 1960
4 Claims. (Cl. 139—82)



1. In a weaving machine, a plurality of heald frames, each frame including an upper and a lower frame bar and lateral stays interconnecting the ends of said bars, and comblike guides for vertically guiding said stays, said stays having at least a portion of U-shaped cross sectional configuration, said guides having rib portions individually extending into the grooves formed by said portions of U-shaped cross sectional configuration.

3,020,931
PICKING MECHANISM FOR LOOMS FOR WEAVING
Khin Moung, 9 Shwegondine Road, Rangoon, Burma
Filed Nov. 23, 1959, Ser. No. 854,618
4 Claims. (Cl. 139—147)



1. A picking motion for the shuttle of a weaving loom comprising, a crankshaft, a samshaft, gear means for transmitting motion from said crankshaft to said camshaft, a fly wheel mounted on said crankshaft, a cam mounted on said camshaft, a main picking lever capable of being actuated by said fly wheel, an auxiliary picking lever pivotally connected to said main picking lever, an auxiliary picking arm pivotable relative to said auxiliary picking lever, a slotted sliding bar reciprocated rectilinearly by said cam, said auxiliary picking lever being pivoted by the movement of said sliding bar, said auxiliary picking arm being pivoted by the movement of said sliding bar, an adjustable picking arm fixed to said auxiliary picking lever for movement therewith, and a picking stick engaged indirectly through a linkage with said adjustable picking arm for picking the shuttle across the loom, said sliding bar reciprocating said auxiliary picking arm and said auxiliary picking arm reciprocating said main picking lever and said auxiliary picking lever as said crankshaft and said camshaft are set into simultaneous motion, said fly wheel serving to drive said picking lever and auxiliary picking lever at timed intervals through a pivotal arc greater than the pivoted arc imparted to said picking lever and said auxiliary picking lever by said auxiliary picking arm and said sliding bar.

3,020,932
LOOM PICKER
Jose Luis Herrerra Rivera, Austria 920, Guadalajara, Jalisco, Mexico
Filed Feb. 19, 1960, Ser. No. 9,987
3 Claims. (Cl. 139—159)

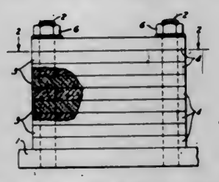


1. A picker for a shuttle loom including a body portion of truncated, quadrangular, pyramidal form having a recessed rear wall at its smaller end and a cylindrical portion at its larger end integral with and offset from the body portion, a pair of oppositely disposed shoulders at the junction of said cylindrical portion and the body portion, the cylindrical portion longitudinally bored and internally threaded at its outer end, a cylindrically formed and separable head recessed at its outer end and having a longitudinal bore spaced from said recess and connected therewith by an aperture, the said head complementally externally threaded to mate the threads of the body portion, the bored portion in the head and body portion of the picker adapted to receive material to cushion the strikes of the shuttle, the outer peripheral edges of the cylindrical portion of the body portion, the cylindrical head, the recess of the head and the aperture defining a plurality of concentric circles with said aperture the centermost circle whereby alignment, leveling and checking the set of pickers is facilitated.

3,020,933
BUFFER STOP FOR POWER LOOMS
Heinrich Nagenborg, Jr., Vreden, Bezirk Munster, and Franz Gottfried Reuter, Lemforde, Hannover, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Feb. 16, 1959, Ser. No. 793,513
Claims priority, application Germany Feb. 22, 1958
8 Claims. (Cl. 139—166)

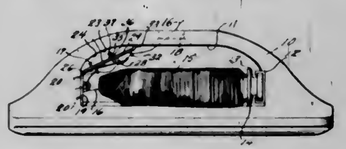
1. A buffer stop for a loom adapted to check the movement of a picker stick which comprises a support member and an elastic cushion including a plurality of leather layers and cellular elastic polyurethane layers arranged alternately and disposed on said support member, said

polyurethane layers having a density of at least about 20 pounds per cubic foot, the layer furthest removed from said support member being leather, the edges of



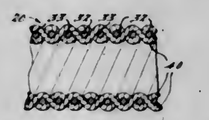
substantially all of said layers having a plurality of notches and a plurality of stud members secured to said support member and disposed within said notches for holding said plurality of layers in position.

3,020,934
TENSIONING ATTACHMENT FOR LOOM SHUTTLES
Mack D. Waters, 734 Ormewood Ave. SE., Atlanta 12, Ga.
Substituted for abandoned application Ser. No. 750,539, July 28, 1958. This application Mar. 28, 1960, Ser. No. 18,012
3 Claims. (Cl. 139—200)



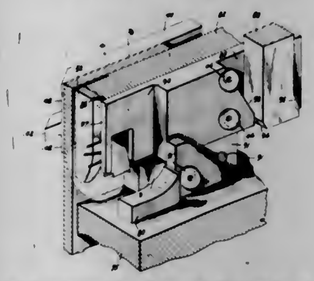
1. A tensioning attachment for loom shuttles of the type having a central opening, a top wall and side walls surrounding said opening, a bobbin attached to one inner wall of said opening and extending horizontally across said opening, a thread outlet opening in the top of said shuttle from which a single thread of filling is fed from said bobbin, said attachment including a substantially L-shaped plate having a leg mounted on the other inner side wall and another leg extending from the latter said inner wall to the inner top wall, a closed eye mounted on the leg mounted on said inner side wall and a plurality of closed eyes mounted on the leg extending from said inner side wall to said inner top wall through which a single thread of filling is adapted to pass, and spring means bearing against the inner surface of one of said plurality of eyes, said thread being adapted to pass between said one of said plurality of eyes and said spring means.

3,020,935
METHOD OF MAKING PLASTIC REINFORCED FABRIC AND ARTICLES MADE THEREBY
Charles B. Balis, Birmingham, Mich., assignor to Frank D. Saylor & Son, Detroit, Mich., a partnership
Filed Feb. 21, 1958, Ser. No. 716,691
8 Claims. (Cl. 139—388)



1. Method of making a tubular fabric having improved hoop strength comprising first applying a hardenable resinous thermosetting material to a flexible yarn, coating said yarn so impregnated with a sealing material, then weaving said yarn as the spiral weft in a tubular woven fabric, and thereafter hardening said hardenable resinous material to rigidify said yarn and thereby to increase the compression hoop strength of said woven tubular fabric.

3,020,936
LEAD FORMING APPARATUS
Delphio J. Bracci, Haverhill, Mass., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 26, 1957, Ser. No. 642,560
3 Claims. (Cl. 140—71)

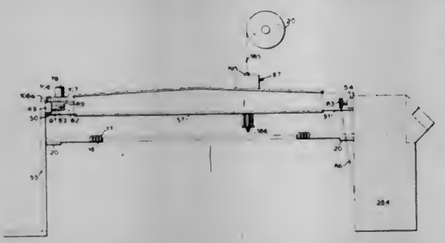


1. In an apparatus for forming the leads of electrical components each having a group of leads with co-planer portions extending given distances from ends of the leads fixed to a face of the component and offset bends in the remaining lengths of the leads to provide lateral intermediate portions lying in a given plane and free end portions disposed at predetermined spaced positions, a stationary holder having a surface against which the lateral portions rest and apertures disposed at predetermined spaced positions to receive the free end portions in their respective positions, hold them against bending and position the co-planar portions in a given plane to be bent, a first forming element supported for movement in a plane parallel with the surface of the holder between a normal position away from the apertures and a forming position adjacent the apertures, a forming member fixed to the first forming element, cooperating therewith to form a slot disposed in the plane of the co-planar portions and having a forming surface disposed parallel with the slot, means to move the first forming element into its forming position where the co-planar portions of the leads will be in the slot and the forming surface will be disposed at one side of the co-planar portions, a second forming element having a forming surface disposed on the other side of the co-planar portions and positioned with respect to the forming surface of the forming member to cooperate therewith, when moved through a forming cycle, to bend the co-planar portions of the leads at the juncture of the forming surfaces and move the component with the fixed ends of the leads relative to the held free end portions of the leads, and means actuable to move the second forming element to move the forming surface thereof through a forming cycle between a normal position short of the slot of the first forming element and an operated position beyond the slot thereof.

3,020,937
CABLE MACHINE
Donald H. Fryklund, Plainfield, N.J., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 31, 1957, Ser. No. 693,584
4 Claims. (Cl. 140—71)

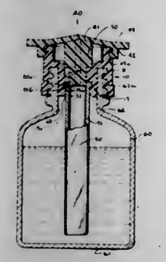
1. A wire laying apparatus comprising, a wire feed mechanism, means for slidably mounting said mechanism

on horizontal guides above an area where wire is to be laid, carriage means for movably supporting said guides whereby said mechanism is movable in a coordinate manner, wire dispensing means mounted on said mechanism, means connecting said wire dispensing means to said guides to provide operating movement to said dispensing means as said wire feed mechanism is moved relative to said guides, motor means, means selectively connecting said motor means to said dispensing means



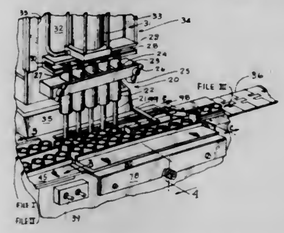
to operate the same at terminal points, measuring means selectively connected to said dispensing means for measuring wire and providing an indication of the length of wire as dispensed by said motor means, control means indicating a length of wire to be dispensed by said mechanism, and means responsive to equal indications from said control means and said measuring means to terminate operation of said motor whereby predetermined lengths of wire may be dispensed at predetermined terminal coordinate positions.

3,020,938
LIQUID DROPPER ASSEMBLY WITH METERING MEANS
Gene Ballin, Valley Stream, N.Y., assignor to Dosamatic Dropper Corporation, Valley Stream, N.Y., a corporation of New York
Filed Sept. 8, 1959, Ser. No. 838,678
10 Claims. (Cl. 141—24)



2. A liquid dropper assembly comprising a cap for bottles and the like having an outer end with at least a partial central opening and a peripheral wall which has an axis, a resilient compression member mounted on said end over and completely enclosing said opening and having an axially movable portion biased to normal outer position, said cap and compression member forming an airtight compression chamber, an axially extending tube, means mounting said tube on said cap with the bore of said tube in airtight communication with said compression chamber, a plunger fixed to said compression member portion on the interior side thereof and axially movable in unison therewith, a guide member mounted on said cap and positioned and shaped to receive said plunger axially slidably, and stop means for engaging said guide member with said plunger to limit inward movement of said compression member portion, said guide member being a sleeve located radially inwardly of said cap peripheral wall and having an outer end edge, said plunger extending axially inwardly and centrally from said compression member and shaped to extend slidably into said sleeve, said compression member being turnable about said axis, said plunger having at least one radially outwardly extending projection which opposes said sleeve and edge and which is normally spaced therefrom, said projection and said sleeve end edge being cooperatively shaped to vary the distance therebetween depending upon the turned position of said compression member.

3,020,939
CONTAINER HANDLING MEANS
Alfonso M. Donofrio, Toledo, Ohio, assignor, by mesne assignments, to Silver Creek Precision Corporation, Silver Creek, N.Y., a corporation of New York
Filed Oct. 16, 1959, Ser. No. 846,986
6 Claims. (Cl. 141—169)

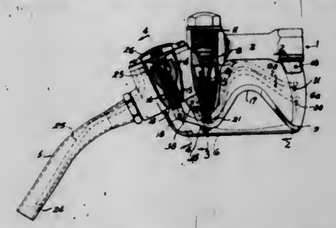


1. Container handling mechanism in a machine for filling open top containers in groups, said machine having an aligned bank of downwardly extending discharge nozzles, said mechanism comprising, a constantly running horizontal conveyor belt extending across said machine beneath and parallel to said bank of nozzles, container shifting means overlying said conveyor and comprising a center guide and two parallel sidge guides spaced equidistantly therefrom and on opposite sides thereof a distance equal to the lateral dimension of a container group, said guides forming two open-ended, parallel container group ways, means for laterally shifting said container shifting means between positions with said ways alternately centered beneath said nozzles, a stationary stop extending across and above said conveyor and positioned to obstruct movement of a container group out of each of said container group ways from beneath said nozzles, and means for serially feeding container groups alternately into the container group ways of said shifting means.

3,020,940
DISPENSING NOZZLE WITH AUTOMATIC CONTROL
Clifford V. M. Sutcliffe, 41 Morton St., New York, N.Y., and Eugene G. Sutcliffe, 3706 Greenwood Blvd., St. Louis, Mo.
Filed Dec. 3, 1959, Ser. No. 857,174
6 Claims. (Cl. 141—209)

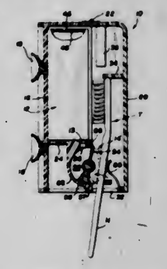
1. An automatic shut-off nozzle for delivering liquid to a tank, comprising a body having a liquid conduit therethrough and a discharge spout, a control valve in the conduit including a spring urging the valve into closed position, a manually operable valve opening member movably mounted on the body and having a manually engageable handle for moving it against the thrust of said spring, an element fixed on the body and projecting toward the path of movement of said member handle, said member handle being shiftable manually transversely of said path of movement to frictionally engage an attendant-

selected one of said elements, a spring seated on the body and distorted by said handle when the latter is shifted transversely, means freeing said member handle from the thrust of said valve spring when the liquid in the tank rises to a predetermined level above the discharge end



of said spout, said second-mentioned spring automatically shifting said member handle in the opposite direction, when said member is free of said valve spring pressure against the engaged element, to dislodge the handle from the engaged element.

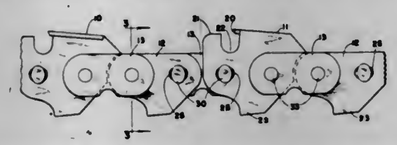
3,020,941
TOOTHBRUSH HOLDER AND DENTIFRICE DISPENSER
Clifton Corley, 232 Brazilian Ave., Palm Beach, Fla.
Filed Mar. 27, 1959, Ser. No. 802,540
11 Claims. (Cl. 141—360)



1. A device for holding a toothbrush and a dentifrice and for automatically dispensing the dentifrice upon the brush face upon removal of the brush, comprising a cabinet, a dentifrice container removably seated in said cabinet and having an opening for dispensing the dentifrice, a movable dispensing element mounted in said cabinet to move backwardly and forwardly in a fixed path and having a cavity to receive a measured quantity of the dentifrice through said opening when in a first position, a brush handle gripping means in said element separated from the cavity to receive and hold the handle of the toothbrush in a stored position within the cabinet, said means allowing entry and defining a path for movement of the brush head upon insertion of the brush into the cabinet towards said stored position, and a projection on said dispensing element engageable by the brush head to move said element into a second position in the path of the brush face to wipe the brush head through said cavity and deposit the dentifrice on the brush head upon withdrawal movement of the brush from the cabinet.

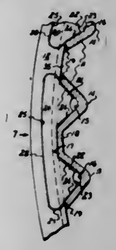
3,020,942
DETACHABLE LINK SAW CHAIN
Emil H. Hill, 6316 SE. 65th Ave., Portland, Oreg.
Filed Nov. 28, 1958, Ser. No. 777,014
3 Claims. (Cl. 143—135)

1. A detachable link saw chain comprising alternate cutter links and drive links disposed in a common plane, end holes of uniform width in said links elongated in a direction lengthwise of the chain, and a single connector link interconnecting each cutter link and drive link, each connector link having a pair of studs with cylindrical



bearing surfaces adjacent to a face of the link engaging the ends of said elongated holes, and oblong heads on said studs transverse to the direction of the elongation of said holes overlying said cutter and drive links above and below said holes.

3,020,943
BARKING DRUM
Jacob Johansson Hjärtsäter, Gjovikbanen, Norway, assignor to Fibre Making Processes, Inc., Chicago, Ill., a corporation of Illinois
Filed June 5, 1958, Ser. No. 740,053
Claims priority, application Norway June 18, 1957
6 Claims. (Cl. 144—208)

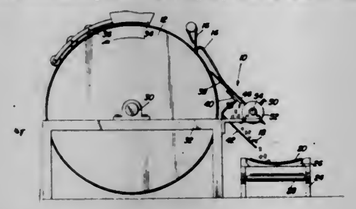


1. In a rotary barking drum providing a log receiving chamber and comprising a plurality of circular rings the side walls of which are disposed in a longitudinal spaced arrangement about the axis of said drum, and an annular series of elongated circumferentially spaced barking irons extending normal to the sides of said rings and adjacent the inner periphery thereof within said chamber, the improvement comprising each of said barking irons having cooperating walls converging inwardly of said chamber from said rings and providing therebetween outwardly facing recesses on one side of said cooperating walls and a barking surface on the opposite side thereof facing said chamber, relatively flat plates having portions connecting and reinforcing said irons from said rings, one of said portions having an elongated outer edge and side lying flush against a side wall of an associated ring and being welded thereto, and another of said portions having converging inner edges extending into said recesses in said irons and being welded to the corresponding converging walls thereof, whereby to provide a circumferentially reenforced functionally integral drum structure for the purpose intended.

3,020,944
POTATO FLAKE CUTTER
Guthrie B. Stone, % Stone Conveyor Co., Inc., Honeoye, N.Y.
Filed Aug. 28, 1959, Ser. No. 836,725
1 Claim. (Cl. 146—117)

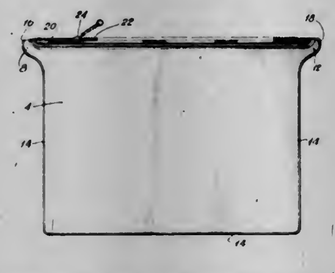
A rotary cutter comprising a cylindrical body having an axial bearing member, said body having at least one cutter member extending therefrom in a radial direction.

said cutter having a plurality of projections with recesses therebetween constituting its cutting portion, and a stationary bar having complementary projections and recesses interfitting with said projections and recesses on



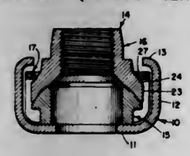
said cutter, there being a small clearance between the interfitting portions of said cutter and said bar, whereby material acted upon by said rotary cutter will be broken instead of being sheared.

3,020,945
PORTFOLIO
Sam W. Brunner, 166 E. 63rd St., New York, N.Y.
Filed Apr. 25, 1961, Ser. No. 105,378
1 Claim. (Cl. 150—3)



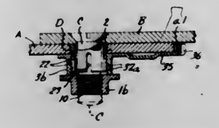
A portfolio the walls of which are separable along their upper edges and inseparable along their ends and bottom, the material of each portfolio wall being shaped to provide a pair of integral ears at each of the two upper corners of the portfolio, said ears projecting lengthwise of the portfolio beyond the portfolio ends; the ears of each pair being sealed directly to each other; and a closure slide fastener extending along and secured to the upper edges of the portfolio walls for drawing said edges closed, said fastener terminating short of the seal by which the ears are sealed directly to each other.

3,020,946
ANCHOR NUT WITH SPHERICAL SURFACE TO PERMIT ANGULAR MOVEMENT
Malcolm E. Mills, Millburn, N.J., assignor to Elastic Stop Nut Corporation of America, Union, N.J., a corporation of New Jersey
Filed Feb. 28, 1957, Ser. No. 643,136
10 Claims. (Cl. 151—41.71)



1. A gang-channel fastening device comprising in combination an elongated channel member having a web, sidewalls, inturned overhanging edge flanges on said sidewalls and a plurality of longitudinally spaced apertures in said web, a plurality of nut assemblies disposed in said channel member for longitudinal sliding movement, each assembly being substantially in alignment with an aperture in said web and comprising a base element with the lower end engaging the inner surface of said web, an axial bore in said base element, an annular flange on said base element providing an upwardly facing convex spherical bearing surface, a nut element having an axial threaded bore, said threaded bore terminating at the lower end in a downwardly opening recess having a concave spherical surface engaging said bearing surface to support said nut element thereon and permit angular movement of said nut element with respect to said base element, an annular flange on said nut element having an outwardly and downwardly inclined upper surface, diametrically disposed outwardly extending ears on said last named flange, a clip element for retaining said nut element and said base element in said channel member and for preventing rotation of said nut element with respect to said channel member, said clip element comprising a generally rectangular web portion, downwardly extending flanges on opposite end edges of said web portion, an aperture in said web portion of less diameter than the annular flange on said nut element but of greater diameter than said nut element above the annular flange thereon and vertical slots in said downwardly extending flanges, whereby with said clip element disposed in said channel member below said inturned flanges with the portion of said nut element above the annular flange thereon projecting through the aperture in said clip element and with said ears received in said slots, said nut element and said base element will be retained in said channel member with said nut element retained against rotation with respect to said channel member but permitting angular movement of said nut element with respect to said base element and channel member and upwardly projecting tabs on the web of said channel member spaced from the flanges on said clip member to limit longitudinal movement of said nut assembly in said channel member.

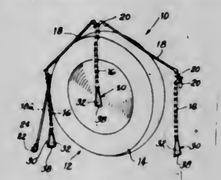
3,020,947
FASTENER MEANS HAVING SUPPORTING MEANS TO HOLD NUT ELEMENT TO A WORKPIECE
Richard B. McKelvey, Kirkland, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Sept. 8, 1959, Ser. No. 838,493
9 Claims. (Cl. 151—41.75)



1. A fastening device for engagement with a cooperating headed bolt to secure together two work pieces which have approximately aligned holes, comprising a sleeve of an internal diameter somewhat exceeding the diameter of the shank of the bolt which is to be used, said sleeve being headed at one end for engagement with one face of a first work piece when passed through the hole in such first work piece, a cage separate from and which in use surrounds the end of said sleeve opposite its head, and engages the opposite face of the first work piece, of the sleeve and the cage at least one having ratchet teeth for ratcheting engagement with the cooperating portion of the other, as the cage is pressed axially towards the headed end of the sleeve, a stop means carried by the cage and

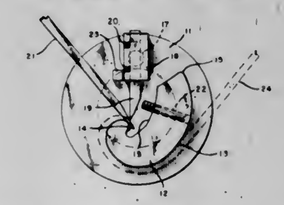
located for engagement with a complemental stop means upon the first work piece, to restrain rotative movement of the cage, a nut for engagement by the bolt when the latter is inserted through the hole in the second work piece and through said sleeve, and a connection between said cage and said nut arranged to prevent their relative rotation, the nut hence being held from rotation by the stop means, and the nut when threaded onto the bolt urging the cage in the ratcheting sense, by reaction from the head of the bolt engaging the distant face of the second work piece.

3,020,948
ANTISKID DEVICES FOR VEHICLE WHEELS
Abraham Branitzky, 500 E. 33rd St., Chicago 16, Ill.
Filed Aug. 29, 1960, Ser. No. 52,508
5 Claims. (Cl. 152—233)



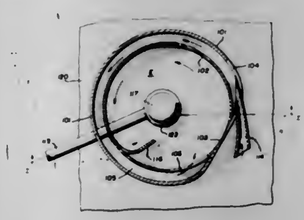
1. In an antiskid device for a vehicle wheel, the combination comprising at least three chains adapted to extend across the tread of the wheel between its inner and outer sides, said chains being spaced at equal angular intervals, at least three rods corresponding in number to said chains and connected between the inner ends of said chains to form a closed polygon, chain lengths connecting the ends of said rods to the inner ends of said chains, one end of one of said rods having a hook thereon for detaching said end of said one rod to open said polygon for easy installation of the antiskid device on the vehicle wheel, said rods acting as members in pure tension for interconnecting the inner ends of said chains, triangular loops connected to the outer ends of said chains, and a belt disengageably strung through said loops and forming a pure tension member interconnecting the outer ends of said chains for tightening said chains on the vehicle wheel.

3,020,949
MACHINE FOR MAKING ORNAMENTAL IRON WORK
Cecilio Garcia, 1455 Silver Ave., San Francisco 24, Calif.
Filed Oct. 23, 1959, Ser. No. 848,329
2 Claims. (Cl. 153—40)



1. A device for use in bending the end of a metal bar into a scroll form, comprising: a rotatable shaft; a plate secured to the end of said shaft in a plane perpendicular to the axis of rotation of said shaft; a scroll-forming member secured to the outer face of said plate and extending axially therefrom; said member having its radially outermost surface scroll-shaped; said scroll-shaped surface beginning in a line which is parallel to and lies in close proximity to the axis of rotation of said plate; a first block, pivotally mounted on said plate to swing on an axis parallel to the axis of rotation of said plate; a locking blade slidably mounted to said block to extend therefrom to said beginning surface of said scroll-shaped member; said locking blade terminating in a knife edge which is parallel to the said line in which said beginning surface lies; means associated with said block to secure said locking blade in selectively fixed positions with reference thereto to provide spaces of selective widths between said knife edge and said beginning surface of said scroll-shaped member to permit said knife edge to bite into the upper surface near the end of a metal bar that is inserted endwise between said knife edge and said beginning surface of said scroll-shaped member; and a second block, secured to the outer face of said plate and extending outwardly therefrom; said second block being positioned in the path in which said locking blade swings outwardly and at a point to block the outward swing of said blade when said blade has bitten into said metal bar and the said bar is pulled outwardly from its said inserted position.

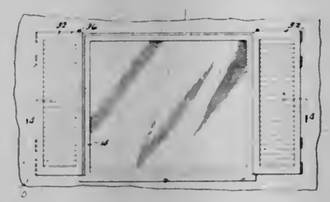
3,020,950
FUEL TANK CONSTRUCTION, ESPECIALLY FOR MOTOR VEHICLES
Horst Schraivogel, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Nov. 10, 1959, Ser. No. 852,072
Claims priority, application Germany Nov. 19, 1958
7 Claims. (Cl. 158—46)



1. In a fuel tank for internal combustion engines, especially motor vehicles, a damming-up, collecting and storage structure comprising wall means forming a storage space at the fuel tank bottom including inner and outer walls extending upwardly from said fuel tank bottom and forming therebetween an inlet channel having an essentially continuous curvature, said channel being open at one end thereof to provide a communication with the inside of the fuel tank, said inner wall being provided with an aperture near the other end of said channel to constitute a communicating passage between said channel and said storage space, fuel intake line means extending near the bottom of said storage space for the withdrawal of fuel from said space, and return line means for returning the excess fuel from said internal combustion engine terminating approximately tangentially in said inlet channel near said one end thereof.

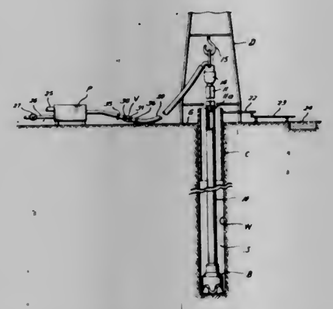
3,020,951
STORM SHUTTER ASSEMBLY
Hubert Graulich, 6801 Brighton Place, Coral Gables, Fla.
Filed June 10, 1960, Ser. No. 35,208
3 Claims. (Cl. 160—35)

1. The combination with a building wall having an opening therein, of a storm shutter assembly comprising a plurality of panels arranged in folded position and connected together for movement from the folded position to a linear extended position, said panels being disposed so that one of said panels faces toward and abuts against the portion of said wall adjacent said opening, means fixedly attaching said one panel to said wall portion, a shallow receptacle open at its front positioned so that the receptacle completely houses and conceals said panels in folded position with the open front bearing against said wall portion, means connecting said receptacle to the side edge of said one panel remote from said opening for swinging movement of said receptacle from the



concealing position to a position wholly away from and uncovering said folded panels, and a pair of bar support members arranged in side-by-side relation positioned within said shallow receptacle and each having one end connected to said one panel for swinging movement of the adjacent bar member from the position within said receptacle to a position extending over the opening and bearing against the panels when in linear extended position.

3,020,952
METHOD OF VOLUMETRIC DETERMINATION OF WELL BORES AND THE LIKE
Daniel W. Sullivan, Odessa, Tex., assignor to Drilprodco, Inc., a corporation of New Mexico
Filed Dec. 28, 1959, Ser. No. 862,327
5 Claims. (Cl. 166—4)

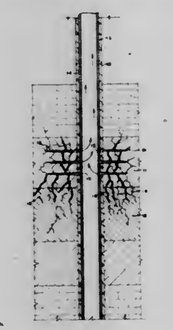


5. A method of determining the volume of a well bore and annular portions thereof during the drilling of the well bore without lowering any well tools into the well bore for such purpose, comprising the steps of, discharging drilling fluid from a pump through a flow line to drill pipe in a well bore and then downwardly through the drill pipe, drill bit thereon, and upwardly in the annulus between the drill pipe and the wall of the well bore to the top of the well bore for discharge therefrom, introducing flagging material into the drilling fluid and allowing it to flow with the drilling fluid downwardly in and through the drill pipe and upwardly in the annulus to the top of the well bore, and measuring the volume of the drilling fluid discharged from the pump during the time it takes for the flagging material to travel downwardly in the drill pipe from the upper end thereof and to return to the top of the well bore through the annulus, whereby such measured volume of the drilling fluid from the pump may be used in calculating the volume of the well bore.

3,020,953
SECONDARY RECOVERY OF OIL
Werner Zerweck, Frankfurt am Main, Walter Bulian, Frankfurt am Main, Fechenheim, Wilhelm Kunze, Hannover, and Alfred Kiesewetter, Celle, Hannover, Germany, assignors to Wintershall Aktiengesellschaft, Kassel, Germany, and Cassella Farbwerke Mainkur Aktiengesellschaft, Frankfurt am Main, Fechenheim, Germany
No Drawing. Filed Nov. 26, 1957, Ser. No. 698,910
10 Claims. (Cl. 166—42)

9. In a method of recovery of oil from oil bearing formations by injecting into said oil bearing formations an aqueous solution of at least one water soluble salt of a cation selected from the group consisting of Na, K, Mg, Ca, Fe and an anion slected from the group consisting of Cl, HSO_4, SO_4, HCO_3, CO_3, said salt being present in a concentration of between 20 grams per liter of said solution and its saturation concentration and of between 10 and 50 g. per liter of at least one polyacrylic acid amide having a K-value between 75 and 160, the step of beginning said process of injection with said solution and continuing and finishing it with a solution of said salts only without an addition of polyacrylic acid amide.

3,020,954
METHOD OF FRACTURING IN WELLS
John W. Graham, Bellaire, and John K. Kerver and Charles L. Prokop, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Feb. 3, 1958, Ser. No. 712,745
5 Claims. (Cl. 166—42)



1. A method for restricting the production of sand along with hydrocarbons produced from a hydrocarbon bearing stratum located adjacent an impermeable nonhydrocarbon bearing stratum, both said hydrocarbon bearing stratum and said impermeable stratum being penetrated by a borehole comprising the steps of sealing off the face of said hydrocarbon-bearing stratum exposed to said borehole to prevent direct fluid flow from said hydrocarbon-bearing stratum into said borehole; gun perforating only said impermeable stratum; locating fracturing fluid adjacent the gun perforations in said impermeable stratum; initiating fractures only in said impermeable stratum sufficiently close to said hydrocarbon-bearing stratum by applying pressure to said fracturing fluid so that fractures form which extend through said impermeable stratum into said

hydrocarbon-bearing stratum, and then producing said hydrocarbon-bearing stratum only through the perforations and fractures in said impermeable stratum.

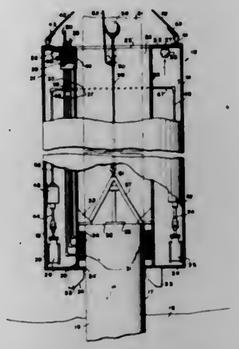
3,020,955
SAND WASHING METHOD AND APPARATUS
Gilbert H. Tausch, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 717,245
8 Claims. (Cl. 166—44)



1. A method for conducting sand operations in a well having a tubing string arranged therein provided with a landing nipple adapted to engage a pack-off arranged movably on an open-ended flexible tubular extension comprising the steps of inserting said tubular extension in said tubing string, inserting a plug packer behind said tubular extension, pumping said plug packer and said tubular extension downwardly through said tubing string until said pack-off engages said landing nipple, reverse circulating up said tubing string through said tubular extension to reverse circulate said plug packer from said tubing string, then pumping fluid down said tubing string through said tubular extension to wash sand from the well below said tubing string, said tubular extension being restrainedly movable relative to said pack-off whereby the tubular extension moves downwardly as the sand is circulated out, then pumping a plug packer pulling tool down said tubing string until said pulling tool latches onto said tubular extension, and then pumping fluid up said tubing string to remove said pulling tool and tubular extension therefrom.

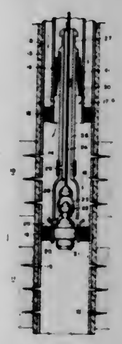
3,020,956
APPARATUS AND METHOD FOR CONNECTING AN ACCESS CAISSON TO A SUBMERGED WELL CASING
George E. Suderow, New York, N.Y., assignor to De Long Corporation, New York, N.Y., a corporation of Delaware
Continuation of application Ser. No. 514,223, June 9, 1955. This application Jan. 28, 1959, Ser. No. 789,644
5 Claims. (Cl. 166—66.5)

1. A caisson for providing access in the dry to a submerged well having its head enclosed in a casing provided with a removable watertight closure in the top thereof, comprising spaced inner and outer concentric shells closed at their ends to form an airtight buoyancy chamber therebetween, said inner shell forming a longitudinal through access opening, valve means for controlling the introduction of fluid into said chamber, one end of said longitudinal opening being arranged to fit over the end of a submerged well casing, sealing means within said inner shell and engageable with the well casing to provide a watertight connection therewith when the caisson is fitted over and around the upper end of the casing, stop means



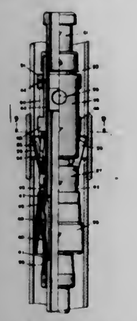
on said caisson for limiting the downward movement thereof onto the well casing, and means for controlling the operation of the valve means.

3,020,957
APPARATUS FOR REMOVING SAND FROM WELLS
Gilbert H. Tausch, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed July 11, 1958, Ser. No. 747,948
5 Claims. (Cl. 166—99)



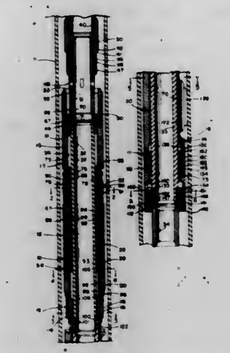
1. An apparatus for sand washing stuck wire line operated objects from a well having a production tubing arranged in the well comprising: a tubular member of less outside diameter than the production tubing adapted to be lowered down the production tubing to rest upon the sand, said tubular member having a bottom portion of increased inside diameter to encompass the stuck object; and fluid pressure operated locking means mounted on the tubular member adapted to lockingly engage the inside of the production tubing upon application of fluid pressure whereby fluid pressure may be applied down the well and outside the production tubing and upwardly in the production tubing to operate the locking means, and also up through the tubular member and out the production tubing above the locking means whereby the sand is washed from around the stuck object.

3,020,958
WELL TOOL
John W. Kenneday, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,697
9 Claims. (Cl. 166—118)



6. For use in tubing arranged in a well, said tubing having a plurality of vertically spaced collar internal recesses formed therein: a tubular extension member having a circular shoulder formed on its outer periphery; an elongated sleeve member mounted about the tubular extension member and slidable axially with respect to the tubular extension member and including, as a portion thereof, leaf springs each having at least one locking shoulder to prevent upward movement of the tubular extension member by engaging said circular shoulder during reverse circulation; a pair of diametrically spaced slotted latching dogs pivotally connected to the upper portion of the sleeve member to latch into a said recess during reverse circulation; a downwardly facing cup packer integrally bound to said sleeve member above the leaf springs and below at least one port formed in the sleeve member whereby fluid flowed through the port on direct circulation equalizes the pressure across the leaf springs to release the latching dogs and disengage the leaf spring locking shoulders from the tubular extension member circular shoulder; a mandrel integrally connected to the upper portion of the tubular extension member, said mandrel having diametrically opposite elongated cut-outs and an upper ring portion having inside diameter cut-outs extending along substantially the same longitudinal and axial plane as the latching dogs, and at least one port in communication with the tubing-mandrel annulus; a fishing neck; a pair of cone supports connected to the fishing neck and extending through the inside diameter cut-outs of the upper ring portion of the mandrel; a concave cone segment connected to each cone support and adapted for slidable movement within the elongated cut-outs in the mandrel, the tapered portion of each concave cone segment being slotted and serving to guide a latching dog during movement of the latching dog into said recess; a rocker arm pivotally mounted in each of said cone segment slots and connected to a latching dog; and a shear pin interconnecting each cone support to the ring portion of the mandrel whereby when the tubular extension member is lowered into the borehole, reverse circulation will move the sleeve member upwardly and latch the latching dogs into said recess by cam action against the tapered means and the leaf spring locking shoulders against the tubular extension member, and, after completion of a wash cycle, terminating the reverse circulation and initiating a direct circulation will unlatch the latching dogs and the leaf spring locking shoulders, and in case of malfunction of the latching dogs, the jerking of the fishing neck upwardly will shear the shear pins and retract the latching dogs.

3,020,959
WELL PACKERS
Benjamin P. Nutter, Houston, Tex., assignor to Johnston Testers, Inc., Houston, Tex., a corporation of Texas
Filed Nov. 19, 1958, Ser. No. 774,910
9 Claims. (Cl. 166—134)



1. A full-opening packer for setting in a well bore or casing comprising: an outer housing assembly including a first tubular housing member, an elastomer packing element, slip means, and a second tubular housing member, said slip means including relatively movable portions thereof respectively connected to one end of said packer element and to said second housing member, one of said portions being movable outwardly for gripping engagement with the walls of the well bore in response to relative longitudinal movement of said packer element and said second housing member toward one another, the remaining end of said packer element being secured to said first housing member whereby relative movement of said first housing member towards said slip means expands said packer element outwardly of said assembly; wall-engaging friction means fixed to said second housing member; an inner tubular mandrel assembly received by said outer housing assembly for limited relative longitudinal movement therein between upper and lower longitudinally-spaced positions; engageable shoulders on said inner mandrel assembly and said first housing member arranged to engage when said inner mandrel assembly is intermediate of one of said positions whereby engagement of said shoulders serves to permit movement of said first housing member and said packer element relative to said second housing member to set said slip means and thereafter permit movement of said first housing member relative to said slip means to compress said packer element; first threaded means coupled between said mandrel assembly and said second housing and releasably locking said mandrel assembly against longitudinal movement relative to said second housing in said upper position; and second threaded means coupled between said mandrel assembly and said second housing and releasably locking said mandrel assembly against longitudinal movement relative to said second housing in said lower position, said first and second means being threaded in opposite directions.

3,020,960
TOOL FOR INJECTING FLUENT MATERIAL INTO WELLS
Landes H. Hayward, Long Beach, Calif., assignor to F. P. Gribbin
Filed Jan. 27, 1958, Ser. No. 711,200
11 Claims. (Cl. 166—146)

1. Fluid injection apparatus for wells, comprising a fluid conducting cross-over assembly; a fluid discharge and re-entry assembly; and means interconnecting said

assemblies; said assemblies each including inner and outer concentrically disposed and spaced tubular members; said cross-over assembly including fluid passage means sealed off from the interior of said outer tubular member for directing fluid between said inner tubular member and the exterior of said outer tubular member; said discharge and re-entry assembly having a port extending through the outer tubular member and an opening in said inner tubular member spaced from said port axially of the discharge and re-entry assembly, whereby fluid may be discharged from said discharge and re-entry



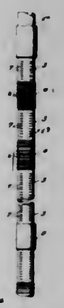
assembly through said port and re-enter said discharge and re-entry assembly through said opening; and means for preventing flow through said outer tubular member of the discharge and re-entry assembly between said port and said opening; the means interconnecting said assemblies comprising a pair of tubular conduits interposed between and interconnected with the respective inner and outer tubular members of said assemblies; the conduit interconnected with said inner tubular members of said assemblies having a sliding fit with one of said inner tubular members.

3,020,961
LIQUID CHEMICAL INJECTOR FOR USE IN WELLS
Willis P. Orr, Tyler, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 702,909
8 Claims. (Cl. 166—165)



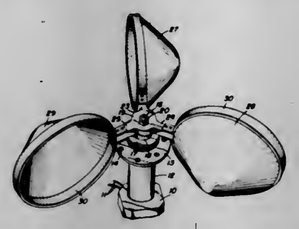
1. A device for depositing a chemical in a well comprising: a normally vertical elongated tubular container provided with an elongated chamber defined by the inside of the tubular container and having one elongated portion of larger cross-section than another elongated portion, and an outlet orifice in fluid communication with the smaller cross-sectional portion; a chemical contained within the smaller cross-sectional portion; means normally preventing the ejection of the chemical through the orifice and responsive to a predetermined well pressure to permit the ejection of the chemical through the orifice; a smaller piston having a cross-sectional area substantially the same as the smaller cross-sectional portion of the chamber and a larger piston having a cross-sectional area substantially the same as the larger cross-sectional portion of the chamber; a piston shaft interconnecting said pistons and having a length sufficiently long to restrain movement of the smaller piston to within the smaller cross-sectional portion regardless of the position of the larger piston; said pistons being disposed within the chamber so that the chemical in the smaller cross-section of the chamber normaly rests against the free end of the smaller piston; and means permitting the well pressure to be exerted against the free end of the larger piston causing at a predetermined well presure the overcoming of the means normally preventing the ejection of the chemical through the orifice.

3,020,962
WELL INSTALLATIONS AND IMPROVED TUBING THEREFOR
John L. Holmquist, Aliquippa, Pa., assignor, by mesne assignments, to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed Feb. 3, 1958, Ser. No. 712,879
6 Claims. (Cl. 166—242)



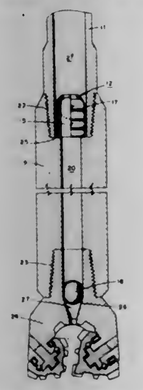
1. In a deep well installation for producing fluid from an underground earth formation subject to being compacted as fluid is withdrawn therefrom, the combination of a casing lining said borehole and including a lower portion extending into said formation and an upper section extending through the earth overlying said formation, said lower casing portion being so tightly gripped by said compactable earth formation that relative movement between said formation and lower casing portion is substantially precluded as said formation is compacted during withdrawal of fluid therefrom, said lower casing portion comprising alternate plain and transversely corrugated sections, said corrugated sections including transversely disposed corrugations extending wholly outwardly from the casing, said corrugations each having a wall thickness substantially less than the casing proper and being effective to allow said intermediate casing portion to shorten, substantially without decrease in the inner diameter thereof, as said formation is compacted.

3,020,963
CUP ANEMOMETER
William Hakkarinen, Hyattsville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 9, 1958, Ser. No. 727,507
4 Claims. (Cl. 170—36)
(Granted under Title 35, U.S. Code (1952), sec. 266)



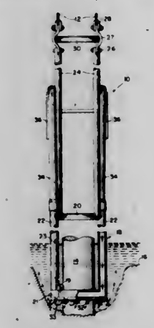
1. An anemometer, comprising a base, a support member mounted on said base, a shaft vertically mounted on said support member, a spider fixedly secured to the uppermost end of said shaft, a plurality of radial arms projecting from said spider, each of said arms being substantially rectangular in cross section and having a flat upper and lower face, a securing band fixedly secured to each of said radial arms, a plurality of cups of annular cross section having an open end and a closed end, said open end of said cups being formed with an outer bounding rim of rectangular cross section, said bounding rim being capable of receiving said securing band of rectangular cross section, each of said securing bands having one end attached to said upper face of said radial arm and the other end attached to said lower face of said radial arm with the open side of each cup lying in a plane parallel to said shaft and facing the closed side of an adjacent cup whereby said cup in cooperation with said securing band and said radial arm is prevented from rotating about the axis of said radial arm.

3,020,964
DEVICE FOR INTRODUCING FLUID IN WELLS
John W. Graham, Bellaire, and Nils L. Muench and Robert E. Williams, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,840
6 Claims. (Cl. 175—237)



1. A device for introducing fluid into a well having a pipe string arranged therein which comprises a free, rigid cylindrical member having an open bore and having an outside diameter less than the inside diameter of said pipe string, said cylindrical member being adapted for insertion in and movement through said pipe string, a deformable sleeve fixedly attached to the outer surface of said cylindrical member, said sleeve being formed for sealing engagement with the inner surface of said pipe string, a deformable member normally arranged in said bore and having a diameter normally greater than the diameter of said bore, and means formed by said cylindrical member on its upper end thereof narrowing said bore for retaining said deformable member in said bore, said deformable member being ejectable from said bore through its lower end by imposition of fluid pressure against said upper end and against said deformable member.

3,020,965
HYDRAULIC PILE EXTRACTOR
Richard F. Keller, Jr., 4448 49th St. San Diego 15, Calif.
Filed Aug. 19, 1959, Ser. No. 834,901
1 Claim. (Cl. 175—422)
(Granted under Title 35, U.S. Code (1952), sec. 266)

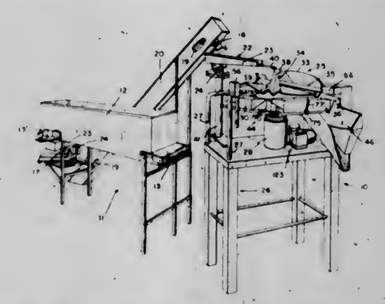


A hydraulic pile extractor comprising a frame including vertically spaced upper and lower rings capable of sliding longitudinally over an embedded pile to be extracted, means for suspending the frame around the pile, said upper ring being pivotally mounted on the frame about an axis transversely of the pile and capable of being pivoted by the suspending means, said lower ring supporting a plurality of downwardly-directed jet nozzles, the lower ring being hollow to form a manifold for said nozzles, a portion of said frame providing a conduit means connecting the lower ring to a source of pressurized water, all of said nozzles being axially inclined radially toward the pile and canted in the same circumferential direction, said rings centering the extractor around the pile and maintaining the nozzles in close proximity thereto, whereby the nozzles direct multiple jet fluid streams against the soil surrounding the base of the pile to create a swirling flow around the pile.

3,020,966
AUTOMATIC WEIGHING MACHINE
Gustav A. Olofsson, Lansing, and Donald W. Garnett, Grand Ledge, Mich., assignors to The Olofsson Corporation, Lansing, Mich., a corporation of Michigan
Filed Nov. 7, 1955, Ser. No. 545,246
13 Claims. (Cl. 177—61)

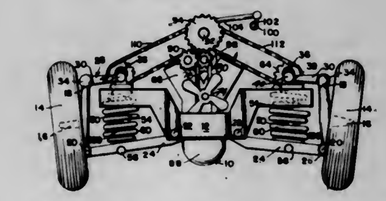
1. Apparatus for the high speed weighing of bulk material, comprising a continuously travelling support, a plurality of weighing units arranged in succession on said support in the direction of travel thereof, a weighing receptacle carried by each of said weighing units, a switch operatively connected with each of said weigh-

ing units and operated by the latter in accordance with the weight of material in said receptacle, a plurality of electrically actuated vibratory feed devices arranged in succession along the path of travel of said receptacles and operative when actuated to discharge material to said receptacles, actuating circuitry for said feed devices including commutator means electrically connected to said respective feed devices and to said switches to electrically energized and de-energize, and thereby control actuation



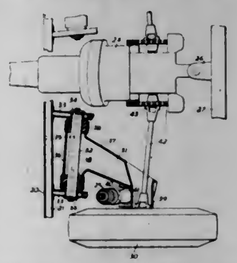
of, said feed devices in response to operation of said respective switches, as determined by the increasing weight of material in said respective receptacles, and means to predeterminedly counterbalance said respective weighing receptacles under diminishing increments of added force in their order of travel past said devices to cause actuation of the respective switches in response to progressively decreasing feeds of material from said feed devices to said receptacles.

3,020,967
VEHICLE SHIFTING APPARATUS
Blanchard D. Smith, 18 Peachtree Circle NE., Atlanta, Ga.
Filed June 23, 1955, Ser. No. 517,462
10 Claims. (Cl. 180—1)



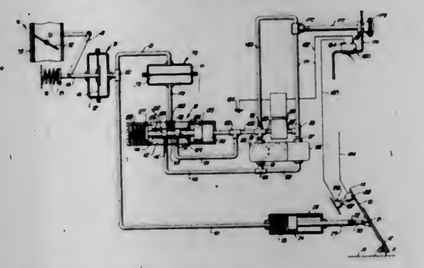
1. In an apparatus for shifting one end of a vehicle about the other end thereof, said vehicle having a frame and body supported on wheels, resilient tires mounted on said wheels, means mounting each of the wheels supporting said one end of the vehicle for pivotal movement about corresponding axes which extend longitudinally of the vehicle and are laterally spaced outwardly of a respective side of said frame at said one end, means connected with said mounting means and said frame for compressing the tires on said one end and including means to inactivate said compressing means during normal road operation of said vehicle, other means secured to a portion of said mounting means synchronized with said compressing means for starting said vehicle on said one end of said vehicle body and frame in motion in the direction lateral to the normal direction of movement of the vehicle, said means for compressing including means releasing said compression on said tires creating a time of minimum load on said tires and permitting said vehicle body and frame to spring upwardly while moving in said lateral direction, and said other means being operable about the time of minimum load on said tires to shift the bottoms thereof about said longitudinal axes in the direction the frame and body is moving, whereupon said vehicle has moved in said lateral direction and said wheels are caused to follow the movement.

3,020,968
AUTOMOBILE WHEEL SUSPENSION SYSTEMS
Achille Carlos Sampietro, 286 Puritan, Birmingham, Mich.
Filed Dec. 16, 1957, Ser. No. 703,093
Claims priority, application Great Britain Dec. 19, 1956
8 Claims. (Cl. 180—73)



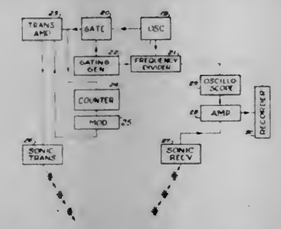
1. In an automobile vehicle having a chassis assembly including a frame and a differential gearing unit mounted on the frame, a rear wheel suspension system comprising a swing arm; pivot means for mounting said arm on the chassis assembly, said pivot means permitting angular movement of the swing arm relative to the assembly and translational movement of the swing arm along said pivot means; a stub axle carried by the swing arm; a rear wheel mounted on the stub axle; spring means supporting the assembly on the swing arm; and drive means of fixed length, including a drive shaft and at least two universal joints, drivably coupling the rear wheel to the differential gearing unit, said drive means axially locating the swing arm on said pivot means.

3,020,969
DEVICE FOR CONTROLLING THE SPEED OF OPERATION OF AN INTERNAL COMBUSTION ENGINE
Richard E. Von Berg, Anaheim, and Howard Laurent, Corona del Mar, Calif., assignors to Rheem Manufacturing Company, New York, N.Y., a corporation of California
Filed Mar. 1, 1960, Ser. No. 12,013
12 Claims. (Cl. 180—82.1)



1. A device for controlling the speed of operation of an internal combustion engine comprising: an accelerator pedal; a hydraulically filled and sealed conduit system operatively connected to said accelerator pedal so as to be actuated by movement of said accelerator pedal; a first hydraulically actuated diaphragm; a hydraulic fluid line connection between said first diaphragm and said conduit system; a carburetor butterfly valve operatively connected to said first diaphragm and disposed so that increased pressure on said accelerator pedal will increase pressure on said first diaphragm and move said carburetor butterfly valve toward open position; a hydraulic pump; a slide valve assembly; a hydraulic fluid line connection between said slide valve assembly and said pump; and a second hydraulically actuated diaphragm operatively connected to said slide valve assembly, and also operatively connected to said first diaphragm and said conduit system so that increased speed of operation of said pump will decrease pressure on said second diaphragm, and in turn, on said first diaphragm, and move said carburetor butterfly valve toward closed position.

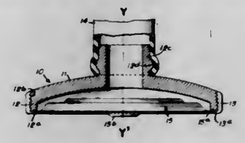
3,020,970
APPARATUS FOR SONIC GEOPHYSICAL EXPLORATION
Arthur F. Hasbrook, Bexar County, Tex., assignor to Olive S. Petty, San Antonio, Tex.
Filed Jan. 13, 1958, Ser. No. 708,464
1 Claim. (Cl. 181—.5)



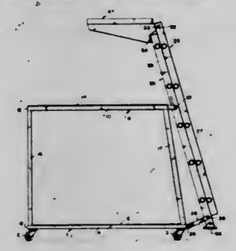
Apparatus for use in sonic geophysical exploration comprising an oscillator for generating a continuous carrier wave having separate cycles of constant frequency and amplitude, a transmitting amplifier coupled to said oscillator, a modulator coupled to said transmitting amplifier, an electronic gate interposed between said oscillator and said transmitting amplifier, a source of periodic gating waveform coupled to and synchronized with said oscillator, means connecting said source and said gate for applying said gating waveform to said gate so as to effect periodic excitation of said amplifier by said oscillator, modulating means coupled to said apparatus for distinctively marking one cycle of said carrier wave during each periodic excitation of said amplifier, a sonic transmitter coupled to said amplifier for translating the distinctively marked output of said transmitting amplifier into sonic impulses, a sonic receiver remotely positioned from said sonic transmitter for intercepting distinctively marked sonic signals resultant from said sonic impulses, said receiver converting said sonic signals into distinctively marked electrical signals, and a recorder coupled to said receiver for making a visual tracing of said distinctively marked electrical signals.

3,020,971
ACOUSTIC STETHOSCOPE
Ralph Cefaly, Brentwood, Md., assignor, by mesne assignments, to Taylor Instrument Companies, Rochester, N.Y., a corporation of New York
Filed Oct. 23, 1958, Ser. No. 769,114
11 Claims. (Cl. 181—24)

1. In an acoustic stethoscope having a pick up device having means for receiving and retaining a diaphragm and an acoustic coupling conduit connected at one end to said pick up device and adapted to be connected at its other end to a detector, a readily flexible diaphragm received in said pick up device and having an annular peripheral portion for securing to said pick up device, a central vibration sensing flat portion lying adjacent and parallel to a plane extending to include at least a part of said peripheral portion of the diaphragm in its annular extent, said central vibration sensing flat portion protruding axially and outwardly from the pick up device for abutting contact with a body portion to be sensed, a generally concave in cross section portion surrounding and joining with said central sensing portion and extending to and joining with said annular peripheral portion and lying generally symmetrically about an axis extending through the center of said central portion and normal to said plane, said generally concave in cross-section portion receding from said annular peripheral portion, the central portion and said plane so that its maximum distance from said plane is approximately midway the distance along said plane between the annular peripheral portion and said central portion.



3,020,972
COMBINATION UTILITY CART AND EXTENSION LADDER
John A. Hockett, 4701 SE. 128th Ave., Portland 33, Oreg.
Filed Mar. 7, 1960, Ser. No. 13,261
2 Claims. (Cl. 182—15)



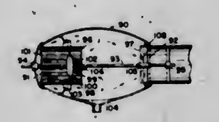
1. A utilitary cart comprising a floor covered wheel supported bottom frame, a floor covered top frame secured in elevated relation to said bottom frame by vertical front corner posts and by forwardly inclined rear corner posts, an extension ladder made up of forward and rearward sections carried as a unit by the cart, the forward section of said ladder pivotally slidably and lockably attached to one end of the cart and the ladder in its entirety tilted forwardly relative to the rearward end of the cart and at all times extending above said top frame, a pair of spaced apart tray-supporting plates, a tray secured to said plates, means integrated with said plates interengaging the top end of both ladder sections when said rearward ladder section is retracted relative to said forward section whereby to support said tray in a horizontal position, and means carried by said forward ladder section and engageable with a floor for preventing unintentional movement of the cart with said forward section or the ladder in its entirety in a lowered position or with said forward section in a lowered position and said rearward section in any extended position relative to said forward section.

3,020,973
LADDER SUPPORT FOR HORIZONTAL TIMBER
William Howard Barrow, 803 N. 15th Ave., Laurel, Miss.
Filed Dec. 30, 1960, Ser. No. 79,881
3 Claims. (Cl. 182—214)



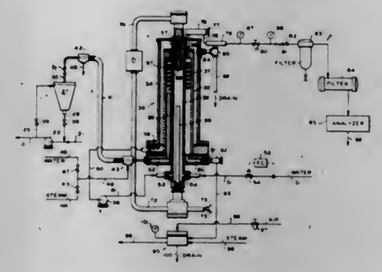
1. A bracket for mounting a timber edgewise on a rung of a ladder comprised by a plate adapted to rest on the rung of the ladder, upwardly and inwardly inclined members united at their lower ends to the respective outer ends of said plate, parallel vertically disposed members positioned transversely of said plate and united at their upper ends to the upper ends of the upwardly and inwardly inclined members and at their lower ends secured to said plate, and pairs of parallel bars secured to said plate on its opposite sides adjacent the junctures with the upwardly and inwardly inclined members for receiving between the bars of each pair at least one lower rung of the ladder.

3,020,974
APPARATUS FOR TREATING AIR
Ernest C. Hungate, Liverpool, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Apr. 2, 1956, Ser. No. 575,560, now Patent No. 2,932,360, dated Apr. 12, 1960. Divided and this application Jan. 28, 1960, Ser. No. 5,224
5 Claims. (Cl. 183—22)



1. An apparatus for treating air comprising a casing having a circular air intake and a discharge opening, a double inlet centrifugal fan, said fan having a first inlet adjacent to said air intake and a second inlet remote therefrom, said fan including a hub having a conical surface between the inlets of said fan, a ring secured to said casing and concentrically mounted about said fan between the ends thereof, said fan inducing air through said air intake and said first inlet of the fan and into the vicinity of said ring, means for supplying water to said conical surface whereby the rotation of the fan will impinge water against said ring to cause the water to break into finely divided particles, said fan recirculating air through said second inlet from the casing into the vicinity of said ring, means for removing water from said casing, and a rotary eliminator situated adjacent said discharge opening, said rotary eliminator consisting of a rotatably mounted hub having a plurality of blades radially extending therefrom, said blades each having first and second members intersecting at a line drawn radially from said hub thereby giving said blades a general V-shaped cross-section.

3,020,975
SAMPLING SYSTEM FOR A PROCESS ANALYZER
Dale E. Lupfer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 17, 1957, Ser. No. 690,815
4 Claims. (Cl. 183—32)



4. Apparatus for continuously preparing samples of material for analysis comprising a cyclone separator having an inlet port adapted to continuously receive a sample of material and an outlet port in the upper region thereof through which a substantially solids-free sample can be removed, a first hollow cylinder having a spiral fin externally mounted thereon, a second hollow cylinder enclosing said first cylinder and said fin, a third hollow cylinder enclosing said second cylinder, heated conduit means communicating between said outlet port and the region between said first and second cylinders adjacent one end of said fin to continuously supply vapor to said region between said first and second cylinders, means to continuously remove vapor from the region between said first and second cylinders adjacent the second end of said fin, means to maintain a predetermined pressure in the region between said first and second cylinders, and means to circulate a heating medium through said first cylinder and the region between said second and third cylinders to supply heat to vaporize liquid in the region between said first and second cylinders, said means to maintain a predetermined pressure in the region between said first and second cylinders comprising a housing, a diaphragm dividing the interior of said housing into first and second chambers, means forming a valve seat in said first chamber which is adapted to be closed by said diaphragm, means to apply a predetermined fluid pressure to said second chamber to urge said diaphragm toward said valve seat, conduit means communicating between the region between said first and second cylinders and said first chamber, and means forming an outlet passage in said housing which communicates with said first chamber through said valve seat when said diaphragm is moved off said valve seat by the pressure of fluid in the region between said first and second cylinders.

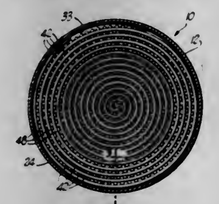
3,020,976
AIR FILTER CONTROL UNIT
Philip L. Hyatt, Bryan, Ohio, assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Dec. 31, 1957, Ser. No. 706,490
7 Claims. (Cl. 183—62)

1. A web advance control system for air filter apparatus wherein advance of a web of filter material from a supply thereof through an air filtering zone is effected by rewinding said material on a rewind spool in a discharge zone comprising a motor for rotating said rewind spool upon energization thereof, an electrical energizing circuit for said motor, a normally open switch member included in the energizing circuit for said motor, actuating means for controlling the closure periods for said switch member operatively responsive to satisfaction of two conditions, first condition satisfying means for said actuating means operatively responsive to the passage of predetermined amounts of operating time and second condition



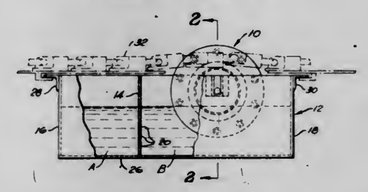
satisfying means for said actuating means operatively responsive to predetermined amounts of lineal advance of said filter medium whereby advance of said filter medium is effected independent of the depth of filter material upon said rewind spool.

3,020,977
FILTER DEVICE
Glen P. Huppke, Beaver Falls, N.Y., and Robert L. McIlvaine, Winnetka, Ill., assignors to Herbert Simpson Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 19, 1959, Ser. No. 834,857
2 Claims. (Cl. 183—73)



1. A generally cylindrical filter device for removing solid contaminants from a contaminated fluid medium, said device being formed of a first filter layer including a first filter sheet and a first corrugated spacer of substantially the same width as the filter sheet, and a second filter layer including a second filter sheet and a second corrugated spacer of substantially the same width as said second filter sheet, the corrugations of said spacers extending parallel to the axis of the device, said layers being disposed one about the other and cooperating to form a round cylindrical structure having a first flat face and a second flat face with the corrugations extending entirely between said faces to define first and second contiguous groups of channels extending longitudinally of the filter device, adhesive sealing tape at one end of said first filter layer adhering to the marginal ends of said first filter sheet and said first corrugated spacer of the said first filter layer with one edge of said tape adhesively secured to one surface of said first filter sheet and to one surface of said second corrugated spacer and the other edge of said tape being adhesively secured to one surface of said first corrugated spacer and to one surface of said second filter sheet, adhesive sealing tape at the other end of the second filter layer adhering to the marginal ends of said second filter sheet and said second corrugated spacer of said second filter layer with one edge of the last-mentioned tape adhesively secured to one surface of said second filter sheet and one surface of said first corrugated spacer and the other edge of said last-mentioned tape adhesively secured to one surface of said second corrugated spacer and one surface of said first filter sheet, medium entering the device through the open end of the channels provided in one of said filter layers passing through the filter sheets in said layers into the channels provided in the other one of the filter layers thereby to leave the filter device through the open ends of the channels provided in said other one of the filter layers.

3,020,978
CHAIN LUBRICATOR DEVICE
Joseph J. Bocchino, Rockaway, N.J., assignor to Bell Fabricating Co. Inc., Paterson, N.J., a corporation of New Jersey
Filed July 24, 1958, Ser. No. 750,694
1 Claim. (Cl. 184—17)

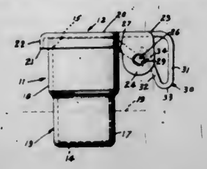


In combination with a horizontally extending chain having a plurality of pivotally interconnected links and a lubricator unit having two discs, a cylinder supporting said discs in spaced alined relationship, a plurality of spaced bunches of bristles circumferentially carried by said discs, the bristles upon one disc facing the bristles upon the other disc and being spaced therefrom a distance which is less than the width of said chain, said cylinder having a surface supporting said chain and extending between said discs, said bristles being located at a distance from said surface which is less than the height of said chain, and an axle centrally supporting said cylinder; a lubricating device comprising a trough having two parallel elongated side walls, parallel shorter end walls interconnecting said side walls, and a bottom connected with said side walls and said end walls, said trough having an open top, said side and end walls being of equal height; a partition located within said trough and connected to said end walls and said bottom, said partition extending parallel to said end walls substantially closer to one end wall than the other end wall to separate the interior of said trough into a smaller soap compartment and a larger lubricator compartment, two brackets carried by said side walls within said lubricator compartment and supporting said axle at a height from said bottom at which a portion of said surface of the cylinder projects above said trough and at which said discs are spaced from said bottom, and two brackets carried by said end walls and located substantially opposite each other, the last-mentioned brackets having chain-supporting surfaces extending away from said end walls in alinement with the top of said trough, said partition having a plurality of openings located in parallel rows at different levels between said bottom and said lubricator unit, at least the uppermost row of said openings being located at a level which is greater than the distance between said bottom and said discs.

3,020,979
OIL CUP DEVICE
Hilmar A. Andresen, Barrington, Ill., assignor to Gits Bros. Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Nov. 24, 1959, Ser. No. 855,035
12 Claims. (Cl. 184—91)

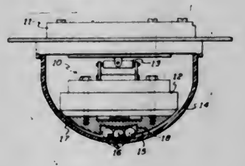
1. An oiler assembly comprising an oil cup defining an oil chamber therein with an opening, a pivotal cover for

closing said chamber opening, means pivotally mounting the cover on said cup for pivotal movement about an axis at the rear of the cover with the front edge extending over said opening, a cover closing strip attached to the



cover at the rear edge of the cover and formed of a resilient material, and a stationary reaction member positioned rearwardly of the pivotal axis of the cover with said resilient closing strip engaging said reaction member.

3,020,980
MECHANICAL DAMPING APPARATUS FOR A PENDENT MEMBER
Donald H. Baker and Donald J. Kesselring, Phoenix, Ariz., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,279
10 Claims. (Cl. 188—1)



1. Apparatus including a frame having a curved surface providing a ball track, a plurality of free balls that roll on the track surface responsive to the resultant influence of gravitational and transverse acceleration thereon, and an oscillatory member supported pendulously on the frame having a convex undersurface with a recess therein of a wall configuration conforming to that of the balls as a collection of contacting balls on the track that confines the freedom of the balls with relation to one another and with relation to the member to close relative limits, said apparatus providing mechanical damping for the oscillations of the member by the interaction between the rolling balls and between the rolling balls and the confining wall of the recess in the member.

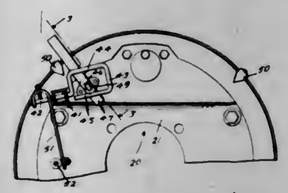
3,020,981
HYDRAULIC SHOCK ABSORBERS
Alan Robert Andrew Day, York, England, assignor to Armstrong Patents Co. Limited, Beverley, England
Filed July 24, 1959, Ser. No. 829,382
Claims priority, application Great Britain Aug. 1, 1958
2 Claims. (Cl. 188—100)

1. A hydraulic shock absorber comprising a pressure cylinder, a piston displaceable in said pressure cylinder, a tubular vessel surrounding the pressure cylinder and arranged coaxially with the pressure cylinder, a cylinder head arranged to close one end of the pressure cylinder and the tubular vessel, said cylinder head having a passage connecting the pressure cylinder with the tubular vessel, a discharge tube extending into the tubular vessel from said passage, a frusto-conical flexible diaphragm, a rigid collar having an external diameter smaller than the internal diameter of said tubular vessel and larger than the internal diameter of the large end of said frusto-conical flexible diaphragm, said collar being adapted to frictionally hold and seal said large end of said flexible diaphragm against said tubular vessel and below the discharge end of said discharge tube, an annular bead formed on the other end of said frusto-conical flexible diaphragm, a dished cup member having an annular



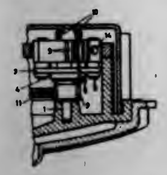
recess complementary to and receiving said bead for securing the small end of said frusto-conical flexible diaphragm to an end of said tubular vessel, the wall of the tubular vessel being bored on the side of the diaphragm remote from the pressure cylinder.

3,020,982
POWER ACTUATED EMERGENCY BRAKE
George Rushing, Jr., 7616 Kanis Road, Little Rock, Ark.
Filed May 27, 1958, Ser. No. 738,089
11 Claims. (Cl. 188—140)



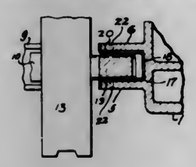
1. In a brake system for vehicles having brakes including a stationary plate, a rotatable drum concentrically positioned with respect to said plate, arcuate brake shoes pivotally mounted on said stationary plate and movable into engagement with said drum, and a spring interconnecting said brake shoes for biasing same out of engagement with said rotatable drum, an auxiliary operating means for said brake system comprised in part by at least one abutment on said rotatable drum, a connector bar slidably mounted on said stationary plate and pivotally secured at one end to one of said brakes shoes, cam follower bars disposed in closely spaced parallel relationship on the other end of said connector bar and the other of said brake shoes, respectively, a shaft journalled in said stationary plate, a cam on the shaft positioned between said cam follower bars, and means on said shaft engageable with the abutment on the rotatable drum for partially rotating the shaft to spread apart the cam followers bars and force the brake shoes into engagement with the drum.

3,020,983
GOVERNOR FOR TELEPHONE DIALS
Heinrich Kallhardt, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany
Filed Sept. 2, 1958, Ser. No. 758,521
Claims priority, application Germany Sept. 10, 1957
3 Claims. (Cl. 188—184)



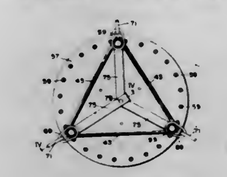
1. A governor for controlling the operation of a telephone dial and the like, comprising a brake cylinder, a carrier member rotatably disposed within said cylinder, means for rotating said carrier member, arcuately shaped brake shoes of synthetic material, a pivot pin carried by said carrier member for each shoe, each of the latter having a bore therein adjacent one end thereof of a size to receive such a pivot pin with the synthetic material comprising said shoe forming bearing means on which the shoe may pivot, brake nipples formed integrally with said shoes from the synthetic material thereof for frictional brake engagement with the inner wall of said brake cylinder, each brake shoe having a weight embedded therein adjacent the free end thereof remote from pivotal axis thereof, said brake shoes spreading responsive to rotation of said carrier member angularly radially outwardly to effect engagement of said brake nipples with the inner wall of said brake cylinder, said brake shoes being provided with a plurality of grooves formed in the walls thereof which face the inner wall of said brake cylinder, and restoring spring means looped about the governor axis and having legs anchored in said grooves, the depth of said grooves decreasing with increasing distance from the pivotal axes of said brake shoes.

3,020,984
RAILWAY BRAKE BEAM LEVELING DEVICE
Richard A. Le Beau, Palos Heights, Ill., assignor, by mesne assignments, to American Seal-Kap Corporation of Delaware, New York, N.Y., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,744
3 Claims. (Cl. 188—212)



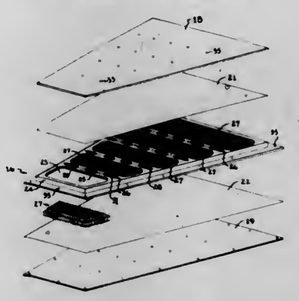
1. In combination with a railway brake beam having at each end of a tang part projecting from the end of the beam into a truck frame bracket having vertically spaced support and guide parts extending transversely of the tang part and between which the tang part slides during application and release of the brakes, a wear plate of hardened steel secured to the truck frame bracket parts and comprising a structure U-shaped in vertical cross section with an upright cross bar and with upper and lower legs slit lengthwise of the plate to form tongues which are displaced from said legs toward each other and yieldingly engage upper and lower faces of the beam tang part to maintain the angular relation between the parts in the movement of the beam lengthwise of the tongues to and from the wheels.

3,020,985
SECTIONAL TOWER MEANS
Benjamin R. Turner, Memphis, Tenn., assignor to Rohn Manufacturing Company, Peoria, Ill., a corporation of Illinois
Filed June 26, 1958, Ser. No. 744,694
4 Claims. (Cl. 189—19)



1. In a tower structure comprising an upright elongated framework having a plurality of upright legs, and guy cables for maintaining said structure in upright condition, a like plurality of guy brackets connecting said cables to said structure; each said bracket including a collar fitted around a tower leg adjacent the upper end of said leg, a link rigidly secured to said collar and extending diagonally downwardly and outwardly from said collar, said link embracing said collar and the leg on which said collar is fitted, and at its lower and outer portion being spaced away from said collar, said lower and outer portion being connected to a guy cable, a plate rigidly and perpendicularly secured to said collar adjacent said link and extending inwardly from said collar; the plates of said brackets being positioned with their inner ends in overlapping register substantially at the vertical center line of said structure and adjacent the top of said structure; and means attaching said overlapping inner plate ends to interconnect said brackets for transmission of strains from one bracket to another of said brackets.

3,020,986
COMPOSITE STRUCTURAL PANEL
Donald R. Kirk and Larz M. Smith, Fort Worth, Tex., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,505
3 Claims. (Cl. 189—34)

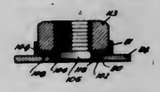


1. A composite structural panel comprising a rigid, internal frame member having a peripheral wall and having a plurality of through openings within the area bounded by said peripheral wall, an integral peripheral continuous attachment flange extending laterally from said peripheral wall, a plurality of transverse wall portions separating said openings, said transverse wall por-

tions having a plurality of spaced through openings therealong, a cellular core element disposed in each of said first mentioned plurality of openings and said second mentioned plurality of openings and having a shape conforming to the shape of its opening and filling such opening, and a thin metallic surface sheet positioned at each of the opposite faces of said frame member extending thereover to cover the opposite ends of said openings, each of said surface sheets being adhesively bonded in place to said frame member and said cellular core elements.

3,020,987
METHOD OF AND MEANS FOR FORMING WELDING CONNECTIONS BETWEEN METALLIC BODIES OF DIFFERENT WELDING CHARACTERISTICS

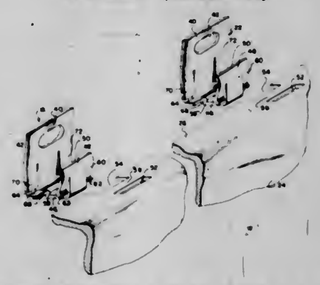
Paul Schaurte, Vaduz-Bartlegrosch, Liechtenstein
Filed Feb. 27, 1958, Ser. No. 718,040
Claims priority, application Germany Aug. 20, 1957
8 Claims. (Cl. 189—36)



1. A welded structure comprising, in combination, a first member made of a metallic material and having a bottom surface; a second member having a top surface slightly spaced from the bottom surface of said first member and made of a metallic material not easily weldable to the material of said first member; and connecting means between the surfaces of said first and said second members, said connecting means comprising a first component of a metallic material easily weldable to the material of said first member and being formed with at least one protuberance extending beyond one of its surfaces and at least one aperture, a second substantially flat component of a metallic material easily weldable to the material of said second member and having at least one protuberance extending beyond one of its surfaces and at least one aperture so disposed that the protuberance of said first component extends therethrough and the protuberance of the second component extends through the aperture in said first component, said second component being adjacent to said first member and having its protuberance welded to said second member, and said first component being adjacent to said second member and having its protuberance welded to said first member.

3,020,988
SNAP-IN PANEL CLIP

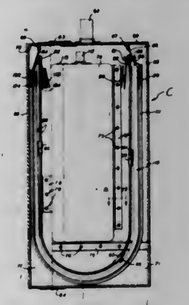
Ernest O. Bransford, Jr., Greensboro, N.C., assignor to Beaman Corporation, a corporation of North Carolina
Filed Oct. 21, 1960, Ser. No. 64,046
8 Claims. (Cl. 189—88)



3. For use in securing a facing panel to a surface, a clip comprising a back wall, a bottom joined to the lower edge of said back wall and substantially perpendicular thereto, a front wall joined to the edge of said bottom opposite from said back wall and extending generally parallel to said back wall, a pair of tabs each extending from opposite edges of said bottom and being substantially parallel to said bottom and spaced above it, and a pair of yieldable resilient legs extending from opposite edges of said front wall toward said back wall and having their lower ends spaced above the upper surface of said bottom.

3,020,989
CLOTHES AND VALISE CARRYING DEVICE

Herbert E. Hipps, 1612 Columbus St., Waco, Tex.
Filed July 26, 1957, Ser. No. 674,529
5 Claims. (Cl. 190—41)

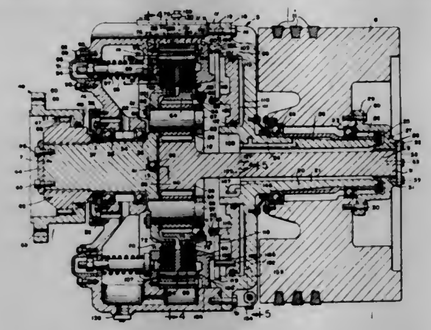


3. A suit case and valise structure comprising two main sections separable on a plane perpendicular to the base of the structure, one of said sections having bracket means at each end thereof disposed w dthwise and above said base and providing relatively narrow ledges to support a valise and also having bracket means to one side of and above said first bracket means for abutment by the side of a valise, the other setion at its inner face and substantially along said perpendicular plane having bracket means located above said first bracket means for engagement w th a valise to retain same within the suit case, said first bracket means extending substantially the distance between the planes of said second and third bracket means, a suit holder comprising a flexible body for suspension in the suit case and for lowering and/or lifting of its central portion vertically past said first bracket means, said flexible body having stiffening strips transversely disposed at each end thereof, means carried by the structure located in each of said sections adjacent the upper ends thereof for detachably suspending said suit holder in U-form with the major portions thereof materially spaced from both the side walls of said sections and from the valise occupying zone, suit-securing means carried by the holder adjacent said strips, the structure serving to prevent or minimize wrinkling of a contained suit.

3,020,990
TRANSMISSIONS

John K. Liu, Chicago, Ill., assignor to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed July 7, 1958, Ser. No. 746,984
12 Claims. (Cl. 192—4)

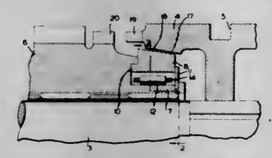
1. In a transmission including supporting means, a drive shaft rotatably mounted in said supporting means, a driven shaft rotatably supported in said supporting means, means for rotating said drive shaft, brake means for holding said driven shaft against rotation, and means for connecting said driven shaft to said drive shaft for rotation thereby, means for simultaneously actuating said brake means and said connecting means to thereby simultaneously engage said brake means and disengage said connecting means, and disengage said brake means and engage said connecting means, respectively, said actuating means including a plurality of lever members



disposed in side by side relation to each other around a circle, said lever members being simultaneously movable axially of said circle into and out of position to so actuate said brake means and said connecting means, and means in said supporting means for moving said lever members into and out of said position.

3,020,991
SELECTIVELY ENGAGEABLE TRANSMISSION

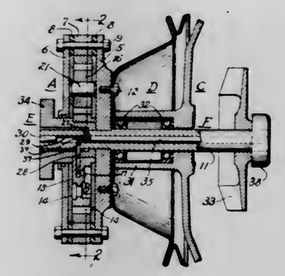
Werner E. Altmann, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Jan. 13, 1958, Ser. No. 708,523
Claims priority, application Germany Jan. 19, 1957
6 Claims. (Cl. 192—53)



1. In a step-like selectively engageable change-speed transmission having engaged and disengaged positions, a gear, shaft means, means freely rotatably supporting said gear on said shaft means, and means for selectively connecting said gear and said shaft means with each other including a first part operatively connected with said shaft means and engageable with said gear and a second part operatively connected with said gear and constituting radially compressible synchronizing ring means, both of said parts being provided with complementary friction surfaces, and connecting means including wedging roller means and means maintaining said wedging roller means spaced from said synchronizing ring means in said disengaged position, said connecting means connecting said synchronizing ring means with said gear in such a manner that upon the occurrence of a friction moment at said friction surfaces, a relative rotational movement between said synchronizing ring means and said gear takes place to bring said wedging means into an effective position in which said wedging means rigidly connects said synchronizing ring means with said gear and therewith prevents the final engagement of said first part with said gear, said gear and said first part being supported for relative axial movement toward each other and having a first position relative to each other in which they are blocked from engagement with each other, when said wedging means are in said effective position, and being movable beyond said first position toward each other for mutual engagement when they rotate in synchronism.

3,020,992
MODULATING POWER-TRANSMISSION UNIT

Earl G. Gunn, Racine, Wis., assignor to Young Radiator Company, Racine, Wis., a corporation of Wisconsin
Filed June 8, 1959, Ser. No. 818,733
2 Claims. (Cl. 192—61)



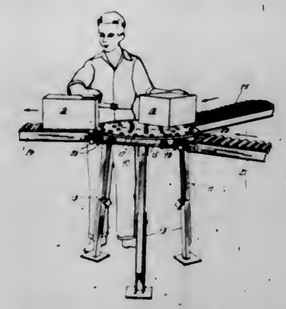
1. A modulating power-transmission unit comprising a bearing support, an axially-channeled shaft journaled on the support, a pair of members mounted concentrically of the shaft in coplanar relationship for relative rotation, one of the members being fixed with the shaft and connected to a driving element, the other member being rotative on the shaft and connected to a driven element, an internal gear integrated with the one member and embracively contacting the other member, the other member being recessed radially outward of the relative support of the other member on the shaft to form a nearly-annular fluid reservoir within the thickness of the other member and a walled-off substantially semi-circular peripheral pocket in radial coplanar relationship and equal in width with the reservoir, a pinion journaled on the other member within the pocket and meshing with the gear, the other member having ports communicating with spaces oppositely contiguous to the meshing pinion and gear, one of which ports communicates directly with the reservoir, the other member also having radial channels which afford communication respectively between the shaft channel and the other port of the reservoir at a point remote from the communication therewith of the one port, and a thermostatically-actuated valve rod slidably mounted in the shaft channel relative to the ports for regulating the flow of fluid through the other-member radial channels for determining the degree of the permissible rotation between the two members.

3,020,993
BALL TRANSFER TABLES

Chester J. Heinrich, Wayne, Andrew T. Kornylak, Jersey City, and Michael Toscano, East Orange, N.J., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 5, 1960, Ser. No. 20,232
4 Claims. (Cl. 193—38)

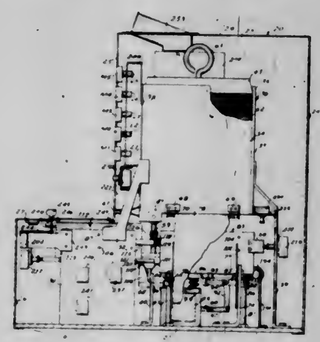
1. A ball transfer table unit comprising a table base provided with a plurality of universal bearing means spaced at predetermined distances on the upper surface thereof, a top plate secured to said base and having openings therethrough corresponding with the positions of said bearing means to permit said bearing means to extend above said openings, an encircling apron secured to the peripheral edge of said base and providing flanges

extending above and below said base, and a plurality of tie rods adapted to secure an end of a gravity conveyor,



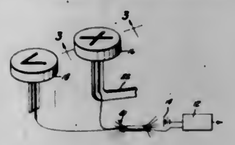
and means to secure said tie rods slidably upon the upper flange of said apron.

3,020,994
DEPOSIT RECEIVING AND RECORDING MACHINE
Claude R. Kirk, 412 Bibb St., Montgomery, Ala.
Filed May 10, 1956, Ser. No. 584,035
8 Claims. (Cl. 194—10)



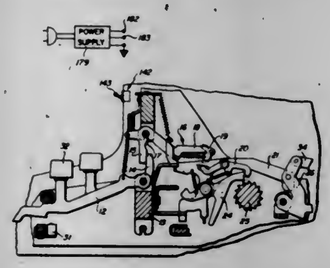
2. A deposit receiving and recording machine comprising a housing, a door hinged on said housing, a pin on said door projecting into said housing when said door is closed, an on-off switch mounted below said pin to be closed when said pin projects into said housing, a moveable printer frame within said housing, supporting means for normally supporting said printer frame adjacent said door, a moveable cradle adjacent said supporting means adapted to receive said printer frame from said supporting means, a card chute positioned over said cradle, a printer wheel on said frame, a multi-terminal switch on said frame, a coin chute projecting through said housing through which a plurality of coins may be introduced into said machine, means for indexing said printer wheels in response to the number of coins received by said machine, means for indexing said multi-terminal switch concurrently with the indexing of said printer wheels, a plurality of lights mounted on said machine, circuits leading from a source of current through said on-off switch and through said multi-terminal switch to said lights for lighting certain of said lights when said switch is in certain positions, a motor connected to said source of current, drive means connected to said motor for moving said printer frame from said support means to said cradle and from said cradle to said support means, tape printing means interposed between said chute and said cradle, electro-mechanical means actuatable when said printer frame is received by said cradle to move said cradle and said printer frame into printing position to print indicia from said printer wheel onto a card mounted in said chute, means for dispensing a card after printing, and means for returning said printer wheel from its indexed position.

3,020,995
TYPEWRITER KEY CAP SWITCH FOR ADDITIONAL SIGNALS
Arthur W. Holt, Silver Spring, Md., assignor to Rabinow Engineering Co., Inc., Takoma Park, Md.
Filed Apr. 10, 1961, Ser. No. 102,054
7 Claims. (Cl. 197—1)



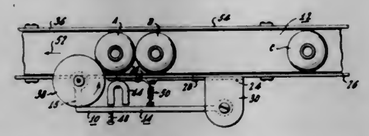
5. For use with any of a plurality of conventional typewriters, each of which has keys supported by key levers that are moved when the keys are depressed to cause the typewriter to operate, the improvement comprising a separate assembly forming an attachment capable of being connected to the typewriter while requiring no substantial modification of the existing structure of the typewriter, said assembly comprising a utilization device to provide output signals corresponding to each key of the typewriter, a plurality of conductors extending from said utilization device, a key cap for each key, and a switch incorporated in each key cap, said conductors operatively connected with respective key cap switches to operate said utilization device in accordance with the particular key which is depressed.

3,020,996
SYSTEMS FOR AUTOMATICALLY CONTROLLING LINE FEEDING AND TABULATING MECHANISMS IN TYPEWRITERS OR LIKE MACHINES
Anthony D'Onofrio, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Sept. 1, 1959, Ser. No. 837,391
18 Claims. (Cl. 197—133)



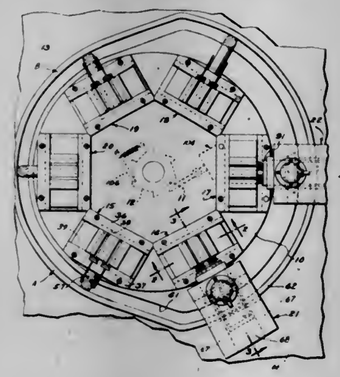
1. In a typewriter having a frame and a carriage mounted for movement on said frame in tabulating and carriage return directions, said carriage including a platen adapted to be indexed whereby a worksheet having marks thereon and supported by said carriage may be fed in horizontal and vertical directions, means for initiating tabulating movement, means for initiating indexing movement of said platen, signal generating means for generating signals when said marks are passing immediately before the typewriter printing station, means responsive to signals generated during tabulating movement for stopping tabulating movement of said carriage, and means responsive to signals generated during indexing movement of said platen for stopping indexing movement of said platen.

3,020,997
ARTICLE CONTROL APPARATUS FOR FEEDING CONVEYORS
Roger E. Schell, Woodbury, N.J., assignor, by mesne assignments, to Crown Cork and Seal Company, Inc., Philadelphia, Pa., a corporation of New York
Filed Aug. 28, 1958, Ser. No. 757,788
10 Claims. (Cl. 198—34)



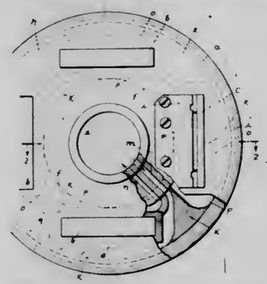
1. Apparatus adapted for use with a feeding conveyor, said apparauts comprising a control member, means mounting said control member for movement towards and away from said conveyor, said control member including a part normally extending over said conveyor when said control member is in one extreme position of movement, yieldable means coupled to said control member tending constantly to urge said control member in a direction toward its said one extreme position and to maintain said part extended over said conveyor, said last-named means being yieldable in response to a force applied to said control member in a direction to move said control member away from its said one extreme position, and magnetic means associated with said control member disposed to force said control member toward said conveyor in said first mentioned direction.

3,020,998
APPARATUS FOR CLAMPING AND INDEXING ARTICLES
Robert G. Webb, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 19, 1958, Ser. No. 736,062
3 Claims. (Cl. 198—210)



3. In a clamping and indexing apparatus including a turntable, a stationary cam track adjacent to said turntable, means for indexing said turntable, a pair of threaded article clamping segments and a worm movably mounted on said turntable said worm being adapted to cause relative motion of said clamping segments to closed and opened positions, the combination which comprises, a gear secured to and rotatable with said worm, a rack meshed with said gear and a cam follower secured to said rack and engaging said cam track, whereby as said turntable is being indexed said cam follower moves said rack and rotates both said gear and said worm to impart said relative motion to said clamping segments.

3,020,999
LINE CASTING MACHINES
Karl Debus, Berlin-Waidmannslust, Germany, assignor to Mergenthaler Linotype Company, a corporation of New York
Filed May 29, 1953, Ser. No. 358,390
1 Claim. (Cl. 199—56)



In a line casting machine, the combination of a rotatable casting wheel having a pocket in which a mold is mounted for ready removal and replacement as a whole in a facewise direction and formed radially outward of the pocket with a gear tooth rim portion by which the wheel is rotated, at least one wall of said pocket being constituted by a flat faced mold cooling jacket which makes direct contact with the mold and which has a flow passage located in close proximity to the mold, said mold cooling jacket forming a permanent part of the casting wheel and serving to locate the mold in proper position thereon, and said cooling jacket being arranged to permit the removal of the mold as a whole without necessitating its own removal and without disturbing the fluid connections to the flow passage, a cylindrical bearing sleeve protruding rearwardly from the casting wheel, a fixed cylindrical journal stud on which said bearing sleeve is rotatably mounted with a floating fit between the casting wheel and the journal stud to permit the proper alignment of the mold during slug casting and slug ejection, a distributor rotatably mounted in the forward end of the fixed journal stud and connected to the casting wheel for rotation therewith, said connection comprising relatively movable elements which permit a radial floating movement of the casting wheel with relation to the distributor, a fluid tight seal between the distributor and the journal stud, and inlet and outlet passages for the cooling agent formed in the fixed journal stud and the rotatable distributor and leading to and from the mold cooling jacket.

3,021,000
DISPLAY PORTFOLIOS
Harold S. Meyers, Minneapolis, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed Mar. 20, 1959, Ser. No. 800,850
1 Claim. (Cl. 206—44)

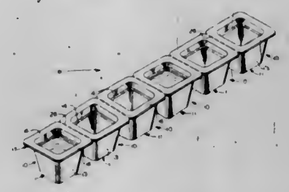
A display portfolio including a front panel, flanges of equal width foldably connected to opposite sides of said

front panel, and end panels foldably connected to said flanges along fold lines parallel to those connecting said flanges to said front panel, said end panels being folded to extend rearwardly of said front panel in slightly converging relation, a connecting flange hinged to the upper edge of said front panel, an easel panel foldably connected to the upper edge of said connecting flange and extending upwardly ad rearwardly therefrom, a second connecting flange hinged to the upper edge of said easel panel, and a supporting panel hingedly connected to the edge of said second connecting flange along a fold line parallel to said upper edge of said easel panel and extending down-



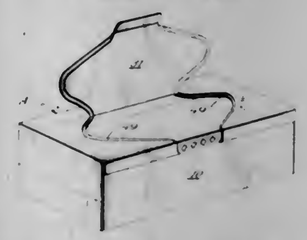
wardly therefrom, the lower end of said supporting panel engaging the upper portions of said end panels, said easel panel and said supporting panel being of a width substantially equal to the width of the front panel, said connecting flanges being of a width not exceeding that of the first named flanges, whereby when said portfolio is folded into collapsed form, said easel panel and supporting panel may be folded into parallel relation overlying said front panel, said end panels may be folded to overlie said easel panel, and said connecting flanges may form closure walls between the edges of said front panel and said end panels.

3,021,001
PACKAGE FOR AN INDIVIDUAL PORTION
Thomas F. Donofrio, Toledo, Ohio, assignor, by mesne assignments, to Silver Creek Precision Corporation, New York, N.Y., a corporation of New York
Filed Sept. 1, 1960, Ser. No. 53,558
2 Claims. (Cl. 206—56)



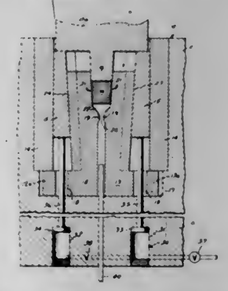
1. A package comprising a molded cup-shape body having a generally flat bottom and upwardly extending, divergent side walls, outwardly extending shoulders at the upper ends of said walls forming an outwardly extending generally horizontal shelf around said body, upwardly and inwardly extending shelf margins on the outer side of said shelf, turned out lips at the upper ends of said margins, said lips forming a continuous planar flange extending horizontally around the perimeter of the upper edges of said margins and said body; a removable cover having a central recess with a generally flat bottom and generally vertical side walls and a continuous, planar flange extending horizontally around the perimeter of the recess at the upper edge of the recess, the outside horizontal dimensions of said recess side walls being snugly insertable in the space between the shelf margins of said package body and the generally vertical walls of said recess being downwardly flared complementarily to the upward and inward extent of the shelf margins of said package body, the flange on said cover extending horizontally beyond the flange on said package body on at least one side when said cover is inserted in said package.

3,021,002
TISSUE PACKAGES
Reynolds Guyer, Peninsula Road, White Bear Lake, Minn.
Filed Sept. 10, 1959, Ser. No. 839,261
2 Claims. (Cl. 206—57)



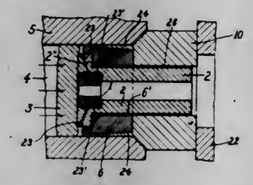
1. A tissue carton including a tubular body of paperboard including a front wall, a bottom wall, a rear wall and a top wall foldably connected together, a front flap hingedly connected to the forward edge of said top wall and secured outwardly of the upper portion of said front wall, a potential cover flap forming a part of said top wall and being defined by two weakened lines of separation extending across said front flap in spaced relation diverging toward the ends of the top wall, curving along arcs spaced from the ends of the top wall, and converging toward the rear edge of the top wall, the ends of said weakened lines terminating short of the rear edge of said top wall and being connected by a fold line parallel to the lines of fold connecting said walls.

3,021,003
EXTRUSION DEVICE
Raymond M. Bluck, Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Feb. 21, 1958, Ser. No. 716,611
6 Claims. (Cl. 207—2)



1. An extrusion die assembly for use between the bed and reciprocable ram of a press, comprising in combination: a pair of die blocks having spaced extrusion faces jointly defining an opening corresponding to the transverse section of the extruded workpiece, said extrusion faces each blending smoothly into confronting tapered walls which define a workpiece-blank-receiving recess; means reactively supporting said die blocks in such manner that at least one of said die blocks is movable toward and away from the other of said die blocks; and a plunger adapted to be reciprocated by the ram into, and to close one end of, said recess and to act against the end of the workpiece blank opposite to said die opening, said plunger being receivable between said die blocks, and having tapered side surfaces complemental to said tapered walls of said die blocks and slidably engageable therewith while said plunger engages the workpiece blank.

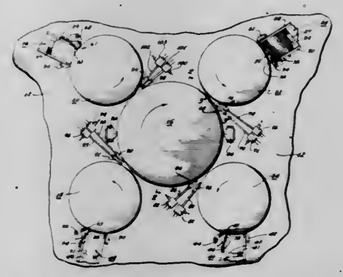
3,021,004
APPARATUS FOR PLATING PROFILES
Paul-Günther Erbslöh, Wuppertal - Barmen - Blombach, and Harry Wilke, Wuppertal-Ronsdorf, Germany, assignors to Julius & August Erbsloh Kommanditgesellschaft, Wuppertal-Barmen, Germany
Filed Jan. 7, 1959, Ser. No. 785,388
3 Claims. (Cl. 207—2)



1. In an extrusion press for producing profiled bodies, in combination, a billet container with a generally elongated billet chamber having a discharge extremity that is closed except for a bore therethrough coaxial with said chamber, a longitudinally displaceable die holder slidably disposed in said bore, said die holder having an annular flange projecting radially therefrom at the billet-engaging end thereof, said flange being spaced from the the walls of said chamber, thereby forming with said walls an annular compartment opening toward the other extremity of said chamber; a die in said holder at said billet-engaging end, said die having an extrusion orifice extending therethrough; and ram means reciprocable in said chamber remote from said die for forcing a billet of a first material flowable under pressure out of said chamber and through said die and concurrently exerting pressure on said flange causing the latter to force a continuous flow of a second material flowable under pressure from said compartment between said flange and said walls of said chamber into contact with said first material whereby said second material is carried by said first material through said die and forms a surfacing layer on the body thus produced.

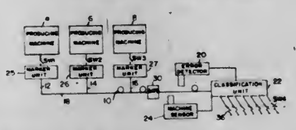
3,021,005
CARD PROCESSING SYSTEM
Robert M. Hayes, Los Angeles, Alfred M. Nelson, Redondo Beach, Jerome B. Wiener, Granada Hills, and Philip N. Armstrong, Santa Monica, Calif., assignors to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed Nov. 26, 1957, Ser. No. 699,132
17 Claims. (Cl. 209—72)

1. In a system for processing information cards each having a plurality of bits of information recorded on the cards, the combination of: means including a plurality of rotatabled rums disposed in paired relationship for maintaining cards in fixed position on the drums during the drum rotation; means including gate means for obtaining a controlled transfer of cards from one of the drums in each paired relationship to the other drum in the paired relationship; means including a plurality of stations disposed in coupled relationship to the drums and including a plurality of reversible control means each associated with a different station for obtaining a transfer of cards from the associated station to the drums in one relationship of the control means and for obtaining a transfer of cards from the drums to the station in a second relationship of the control means; transducing means disposed in coupled relationship to the cards on the drums for processing information on the cards moving with the drums; means including electrical circuitry for operating on the reversible control means to obtain a transfer of cards to the drums from a first pair of stations in the plurality for processing of information of particular significance on the cards and to obtain a transfer of the cards to a second pair of stations in the



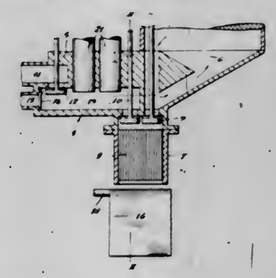
plurality in accordance with the processed information and to obtain a transfer of cards to the drums from successive pairs of stations in the plurality for processing of information of progressive significance on the cards and to obtain a transfer of the cards from the drums to next successive pairs of stations in the plurality in accordance with the processed information; and means including electrical circuitry for operating on the gate means to obtain a transfer of cards between successive pairs of drums in the plurality in accordance with the information processed on the cards.

3,021,006
APPARATUS FOR SORTING AND IDENTIFYING SOURCES OF WORKPIECES
Joel M. Beckman, Jr., Pontiac, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Sept. 21, 1959, Ser. No. 841,249
12 Claims. (Cl. 209—111.5)



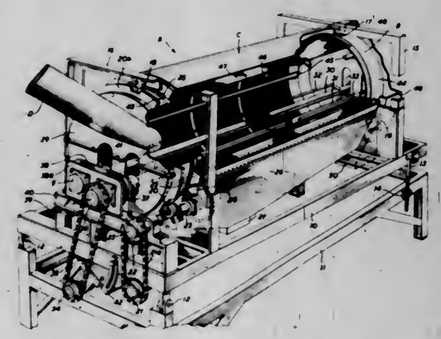
1. Apparatus for sorting similar articles from different sources according to the source of said articles and selected characteristics common to all of said articles using a single classification unit, comprising a plurality of sources of said articles, marker means associated with said sources to impart a distinctive characteristic to articles from each source representative of said source, a classification unit, means for transferring individual articles from said plurality of sources past said marker means to said classification unit, sensor means operably associated with said classification unit for developing a signal representative of said distinctive characteristic of each individual article transferred to said classification unit, and error detector means also operably associated with said classification unit for developing a signal representative of the particular common characteristics of each of said individual articles, said classification unit being operable in response to said signals to classify said individual articles both as to source and said common characteristics.

3,021,007
IMPROVEMENTS IN MEANS FOR MAGNETICALLY SEPARATING SOLID MAGNETIC PARTICLES FROM A FLUID CURRENT
George Henry Jones, Sea View, Connor Downs, Hayle, Cornwall, England, assignor of fifty-one percent to William John Dennis Stone, Ottawa, Ontario, Canada
Filed Jan. 15, 1960, Ser. No. 2,742
Claims priority, application Great Britain Jan. 28, 1959
4 Claims. (Cl. 209—223)



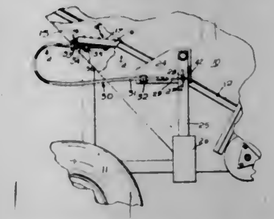
1. Apparatus for separating solid magnetic particles from liquid, comprising, in combination, a collector-plate box, a collector plate mounted in said box, means for introducing liquid to be treated into said box and about said plate, means for creating a magnetic field in the vicinity of said plate to cause solid particles in said liquid to adhere to said plate, means for carrying-off treated liquid from said box, liquid-conducting means for introducing a flow of washing liquid through said box and about said plate, and agitating means operatively connected to said liquid-conducting means and adapted to impart, to liquid in said box, a severe pulse of short duration, to dislodge solid particles from said plate; said magnetic-field-creating means operating, at the end of said pulse, to cause such solid particles, of a magnetic character, to re-adhere to said plate, leaving non-magnetic particles free to be carried off with liquid passing from said box.

3,021,008
APPARATUS FOR CLEANING AND GRADING ASBESTOS
John D. Christian, Toronto, Ontario, Canada, assignor to Cassiar Asbestos Corporation Limited, Toronto, Ontario, Canada
Filed Mar. 23, 1960, Ser. No. 17,082
3 Claims. (Cl. 209—299)



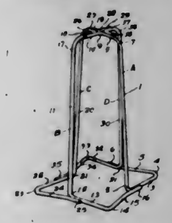
1. Apparatus for screening asbestos fibres comprising an inclined rotatably supported cylindrical screen, means for introducing asbestos fibre concentrate therewithin, to form a moving bed along the bottom of said screen, means for rotating said screen, a pair of beaters extending longitudinally through the interior of said cylindrical screen and below the centre longitudinal axis thereof, said beaters having a plurality of radially spaced apart beater elements, said beaters when mounted having said beater elements disposed in staggered relation to those of the other and capable of interlapping the beater elements of each other in spaced apart relation to one another when said beaters are rotated, said beater elements being capable of entering said bed of fibre concentrate, and means for rotating said beaters in opposite directions to one another to cause upward movement of fibre concentrate between said beaters and to forcefully discharge said concentrate upwardly and radially outwardly against said screen, and means for rotating said screen.

3,021,009
AUTOMATIC GRAIN SEPARATOR CONTROL
Joe L. Scott, Rte. 1, Box 46, Lewiston, Idaho
Filed Nov. 16, 1959, Ser. No. 853,413
4 Claims. (Cl. 209—394)



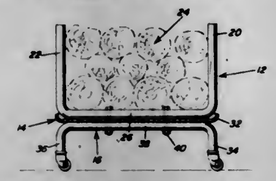
1. In a separating apparatus, an automatic control device for varying the openings of a sieve comprising an adjusting means on the sieve adapted to vary the sieve openings, pendulum means pivotally mounted on the frame of the apparatus, and motion transmitting means operatively connected between said pendulum means and said adjusting means adapted to transmit movement of said pendulum means relative to the frame from said pendulum means to said adjusting means.

3,021,010
WIRE STORAGE COIL CARRIER
Robert A. McMasters, Birmingham, Ala., assignor to Southeastern Metals Company
Filed June 9, 1960, Ser. No. 34,936
9 Claims. (Cl. 211—49)



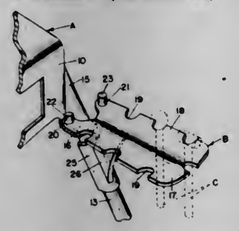
6. A carrier for coiled material comprising a plurality of tubular elements each having a straight medial portion, a laterally extending V-shaped lower end portion and an L-shaped laterally extending upper end portion, each of said elements having its end portions overlapping corresponding end portions of an adjacent element, and attached thereto providing an open carrier base at one end and a flat open top at the opposite end.

3,021,011
FIRE WOOD RACK
Vern N. Visneski, St. Cloud, Minn. (1205 2nd Ave. S., Sauk Rapids, Minn.)
Filed June 27, 1960, Ser. No. 38,871
5 Claims. (Cl. 211—49)



1. A fireside log rack comprising, in combination, spaced, parallel, generally inverted U-shaped base members and spaced, parallel, generally U-shaped log cradles mounted thereover in vertically opposed parallelism therewith and in back-to-back relation thereto, a pan interposed between the base members and the log cradles and including a single ply bottom directly engaged thereby, and means securing the assembly together.

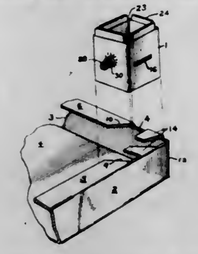
3,021,012
TOOL HOLDER
Barnett C. Brown, 303 N. Greeley St., Stillwater, Minn.
Filed Jan. 20, 1960, Ser. No. 3,570
5 Claims. (Cl. 211—60)



1. A tool support for use on a portable stand having diverging legs, and having a generally horizontal flange provided with a generally vertical aperture adjoining the upper end of at least one of said legs, the support comprising an elongated body having longitudinally spaced notches in an edge thereof, a vertically projecting pin on the undersurface of said body adjacent one end thereof adapted to extend into said aperture in said flange, a web extending downwardly from said body at said one end thereof, and a channel adapted to embrace a portion of said one leg secured to said web at an acute angle to said body, the open side of said channel being directed away from said body.

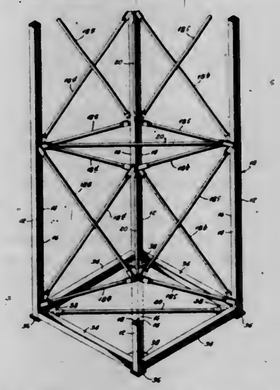
3,021,013
SHELF BRACKET CONSTRUCTION
Herbert L. Shivek, Brookline, Mass., assignor to Eastern Steel Rack Company, Dorchester, Mass., a corporation of Massachusetts
Filed May 4, 1961, Ser. No. 107,715
4 Claims. (Cl. 211—136)

1. A shelf bracket construction comprising, in combination, a shelf having a horizontal surface portion terminating in transversely-extending vertically-depending sills forming an open box structure, said horizontal portion being formed with an opening adjacent at least one of said sills and with transversely-extending locating flanges depending therefrom about the edges of said opening, a tubular bracket receivable in interior abutment upon said one of said sills and interiorly receiving said locating flanges in snugly-fitting relation therein, a locating tab extending transversely from said one of said sills, said bracket being formed with a slot for receiving said locking tab, said locking tab being adapted to be upset into engagement with the interior surface of said bracket for securing said bracket in assembled relation



with said shelf, said bracket being adapted to slidably receive a supporting post transversely through said opening in said shelf, and locking means for releasably securing said bracket in an adjusted vertical position along said post.

3,021,014
CRANE BOOM STRUCTURE
Edwin Korensky and Robert E. Thune, Cedar Rapids, Iowa, assignors to Link-Belt Speeder Corporation, a corporation of Illinois
Filed Jan. 19, 1959, Ser. No. 787,544
10 Claims. (Cl. 212—144)

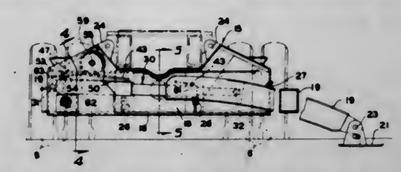


1. A crane boom, comprising four longitudinal chords and a plurality of struts connecting each of said chords to each of said chords, such struts and chords defining a longitudinal series of tetrahedrons within the space defined by said chords.

3,021,015
OUTRIGGERS FOR POWER SHOVELS, CRANES, OR THE LIKE
Spencer Bowman, Lakewood, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Filed Apr. 2, 1959, Ser. No. 803,597
14 Claims. (Cl. 212—145)

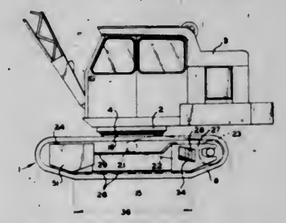
1. In an outrigger of the type which is characterized by the provision of a beam and actuating means therefor which are adapted to be mounted on a carrier for longitudinal movement of said beam by said actuating means simultaneously outwardly and downwardly from a retracted position clearing the ground to an extended position whereat an end thereof is engaged with the ground;

the combination therewith of support means on said carrier engaging the top and bottom sides of said beam at points that are located to resist upward swinging of said



beam by upward reaction of the ground against such one end and to provide frictional locking of said beam in extended position without aid of said actuating means.

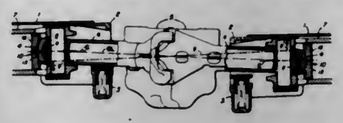
3,021,016
OUTRIGGERS FOR CRAWLER CRANES, SHOVELS, HOES AND THE LIKE
George C. Noll and Paul E. Wesebaum, Elyria, Ohio, assignors to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Filed Dec. 15, 1959, Ser. No. 859,723
14 Claims. (Cl. 212—145)



1. In hoisting, excavating, and like equipment, the combination of a crawler carrier; a superstructure journalled on said carrier for swinging about a vertical axis; an outrigger beam longitudinally slidably mounted on said carrier from a retracted position within the sides and ends of said carrier to a protracted stabilizing position with one end engaging the ground at a point spaced outwardly of said carrier, and power means for so moving said outrigger beam, said beam comprising inner and outer tubular sections which are telescoped one within the other in the retracted position of said beam; said beam being mounted for sliding along an inclined path such that the ground-engaging end simultaneously moves downwardly and outwardly as said beam is moved to protracted position, the inclination of the path of movement of said beam being such that said beam is frictionally locked against retraction by upward reaction of the ground on the ground-engaging end thereof.

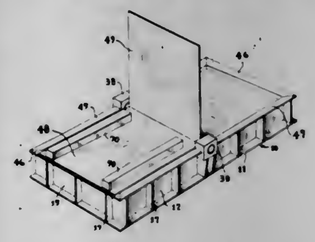
3,021,017
COUPLER BUTT AND FOLLOWER CONSTRUCTION
Geoffrey W. Cope, Williamsville, and Albert E. Martin, Lancaster, N.Y., assignors to Symington Wayne Corporation, Salisbury, Md., a corporation of Maryland
Filed June 9, 1960, Ser. No. 34,910
9 Claims. (Cl. 213—72)

1. In a draft rigging including a coupler member connected for universal angling to a yoke, a follower member confronting a butt end of said coupler member and interfitting corresponding spherical surfaces on confronting faces of said members intermediate sides thereof, the improvement comprising a continuous flat surface on one of said said faces encircling the spherical surface thereon and disposed normal to a longitudinal centerline of the member having said one face, and abutment means on the other face about the spherical surface thereon and inclined outwardly and away from said one face, said abutment means including a plurality of angu-



larly related flat surfaces and being engageable with said flat surface on said one face for limiting relative angling of said members in any direction.

3,021,018
COIL TURNING DEVICE
Homer D. Paxson, P.O. Box 214, Salem, Ohio
Filed Jan. 6, 1958, Ser. No. 707,160
3 Claims. (Cl. 214—1)

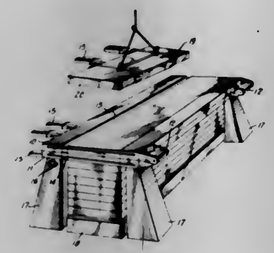


1. A compact coil turning device, comprising a metal fabrication providing a horizontally disposed open faced, closed bottom rectangular box, said fabrication having longitudinal and cross bracing members which provide a plurality of compartments at either end of said box and an intermediate compartment, a drive motor and a hydraulic pump disposed in compartments at one end of said box, said pump being supported from a bracing member forming said compartments and connected to said drive motor, a liquid reservoir in said intermediate compartment and a pair of hydraulic cylinders in the compartments at the other end of said box, a shaft supported for rotation across the open face of said box approximately midway of the ends of the latter, link means connecting each of said hydraulic cylinders to driving relation with spaced parts of said shaft, a pair of steel plates, each of a size to overly and close approximately one-half of the open face of said box, said plates being rigidly connected to said shaft and extending therefrom generally ninety degrees apart to provide an upwardly facing V-shaped support which is rotatable to dispose one or the other of said plates in generally horizontal relation overlying said box, valve means for controlling flow of pressure liquid pumped from said reservoir to said cylinders, a horizontally disposed plate being adapted to receive a coil disposed sidewise thereon and said coil being transferred to endwise support on the other plate when said support is rotated to move said other plate to horizontal position.

3,021,019
DEVICE FOR THE SEPARATION OF CONCRETE BODIES
Johnny Fagrell, Orebro, Sweden, assignor to International Ytong-Stabalite Co. Ltd., London, England, a corporation of Great Britain
Filed Mar. 5, 1958, Ser. No. 719,239
2 Claims. (Cl. 214—1)

1. An apparatus for separating a plurality of stacked lightweight building bodies of concrete and the like com-

prising upper and lower frame boxes which are pivotably connected and adapted to fit around the outside of the bodies, a longitudinal pressing plate slidably mounted within each of said frame boxes, means for urging said pressing plates towards a body disposed within each of



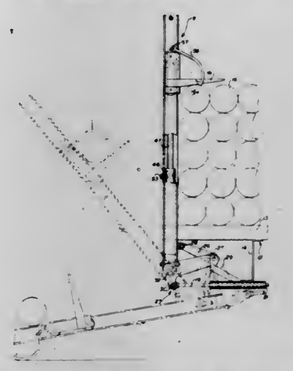
said frame boxes to grasp said body, and means for pivoting said upper frame box about an axis of rotation parallel to the longitudinal axis of the bodies and externally thereof, away from said lower frame box whereby the bodies therein are separated.

3,021,020
APPARATUS FOR HANDLING AND TRANSPORTING TOBACCO LEAVES
Johannes Jacobus Lodewickus de Kock, Oukar Farm, Inyazura, Southern Rhodesia, and Johannes Mathys de Kock, Inyazura, Southern Rhodesia (42 Saambou Bldg., Andries St., Pretoria, Transvaal, Union of South Africa)
Filed Mar. 3, 1958, Ser. No. 718,791
Claims priority, application Union of South Africa Jan. 15, 1958
2 Claims. (Cl. 214—5.5)



1. Portable apparatus for handling tobacco leaves comprising an elongated frame, forked shoulder-engaging hooks secured to one end of the frame and bent transversely to the axis of the frame, a substantially U-shaped bracket connecting the hooks and extending from the hooks in a direction opposite to that of the frame, bobbin support means mounted on the U-shaped bracket for a pair of bobbins, thread guides on the U-shaped bracket, and a second bracket at the other end of the frame extending transversely to the frame in a direction opposite to the shoulder-engaging hooks for string to be tied to the second bracket.

3,021,021
APPARATUS FOR LOADING AND UNLOADING POLES AND THE LIKE TO AND FROM TRUCKS
Edwin G. Warren, 17031 Cull Canyon, Hayward, Calif.
Filed Sept. 11, 1959, Ser. No. 839,458
4 Claims. (Cl. 214—77)

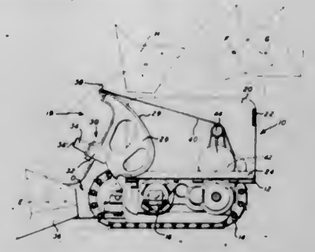


1. In a vehicle having a relatively flat horizontal bed on which cylindrical objects may be transported, a longitudinally extending boom normally vertically disposed adjacent one edge of said bed with the lower end of the boom extending below said bed, a load engaging element carried by said boom, means for moving said element longitudinally of said boom for selectively raising and lowering a load when said boom is in a generally vertical position, a cylinder pivotally carried by said vehicle subjacent said bed and having an extensible piston rod extending towards said one edge of the bed, means supporting said boom subjacent said bed for movement from said vertical position to a downwardly inclined position, said means including a link having one end thereof pivotally connected to a medial portion of said boom subjacent said bed and the other end thereof pivotally connected to a fixed portion of said vehicle inwardly of said edge and subjacent said bed, a bell crank having one end pivotally connected to said fixed pivotal connection and the other end pivoatlly connected to the distal end of said piston rod, and means pivotally connecting the medial portion of said bell crank to the lower end of said boom whereby upon retraction of said piston rod said lower end of the boom will follow an arcuate downward and inward path relative to said bed edge and to said fixed pivotal connection as the boom is lowered from its vertical position to its downwardly inclined position.

3,021,022
MATERIAL HANDLING MACHINE
Daniel M. Schwartz, Salt Lake City, Utah, assignor to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware
Filed Nov. 2, 1960, Ser. No. 66,882
4 Claims. (Cl. 214—131)

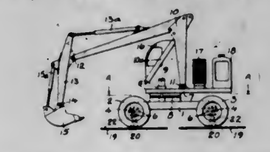
1. A material handling structure of an overhead material handling machine comprising paired rocker arms, a shovel bucket supported by and extending from said rocker arms, cooperating bumper means on the rocker arms and the material handling machine, said rocker arms having curved surfaces adapted for rolling engagement with trackways on the material handling machine from a low forward material digging position to an elevated rearward material discharge position of the bucket to provide a digging-discharge cycle, a portion of the curved surfaces of said rocker arms being shaped to bring the trace of the geometrical center of the bucket through a substantially rectilinear path generally parallel to the

ground and normal to the line connecting said geometrical center and the point of instantaneous rolling contact between the curved surface and the trackways when the



rocker arms are adjacent the point of initial contact between the cooperating bumper means to provide maximum discharge rearwardly of the machine of the mucked material from the bucket.

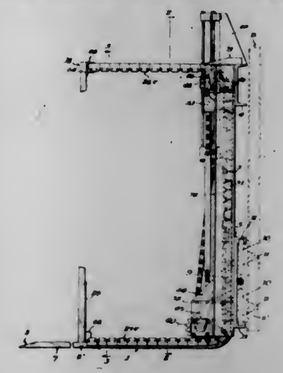
3,021,023
ARRANGEMENT IN MOBILE EXCAVATORS
Ingebret Söyland and Kristian Söyland, Bryne, near Stavanger, Norway
Filed Aug. 2, 1960, Ser. No. 47,039
Claims priority, application Norway Aug. 19, 1959
3 Claims. (Cl. 214—138)



1. A mechanical shovel comprising, in combination, a chassis frame, pairs of freely rotatable front and rear wheels, a rotatably driven shovel supporting platform pivotally mounted for rotation on said frame about a vertical axis, wheel-locking means operable at will to releaseably look at least one pair of wheels to preclude rotation of at least said one pair of wheels, an angle-shaped jib arm having one end pivotally mounted on the platform and movable in a vertical plane, a shovel arm having opposite ends and pivotally connected intermediate its opposite ends to the other free end of said jib arm, a shovel bucket pivotally connected to one end of the shovel arm, a double acting mechanism connected to the shovel arm and to the jib arm for actuating the bucket, a second double acting mechanism pivotally connected to the platform and intermediate opposite ends of the jib arm for raising and lowering said jib arm, a circular carrying disc placed below each of the pairs of wheels, said disc having a diameter at least equal to the distance between the outer sides of the wheels of the pair in question, support means connecting each of said discs to the adjacent end of the chassis frame, said means being pivotally secured to the frame about an axis coinciding with the axis of rotation of the wheels and to the plane centrally thereof, for rotation about a vertical axis.

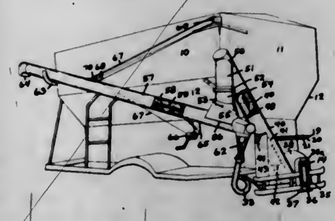
3,021,024
FORK LIFT TRUCK PUSHER MECHANISM
Tony Nagin, 14016 S. Indiana Ave., Riverdale, Ill.
Filed Apr. 18, 1960, Ser. No. 22,866
9 Claims. (Cl. 214—514)

1. In a pusher mechanism for lift trucks and the like, the combination of a pusher assembly comprising a plurality of horizontally extending fork tines, a base structure from which said fork tines are carried, a pusher structure movable along said tines for pushing articles therefrom, a first pair of laterally spaced chain pusher members each having a free end secured to the lower portions of said pusher structure, a second pair of laterally spaced chain pusher members each having a free end secured to the upper portion of said pusher structure, said chain members being constructed to be relatively rigid under compression when the links thereof are disposed in a straight line, upper and lower sprocket means engageable with the respective chain members for moving the same in the direction of movement of said pusher



structure, guide means for said lower chains extending between said sprockets and the pusher structure throughout the range of pusher movement, operative to maintain the pushing section of said chains disposed therebetween in alignment, said upper chain members being self-supporting in a straight line, chain means operatively connecting the upper and lower sprocket means for rotation thereof in directions to move all of said chain members in the same direction, a hydraulic cylinder having its piston rod operatively connected to said chain means for operatively moving the latter to advance or retract said chain members and the pusher structure connected thereto, and vertically extending guide means for the opposite end portions of said chains.

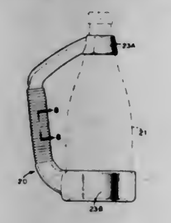
3,021,025
ADJUSTABLE DELIVERY SPOUT FOR BULK MATERIAL DELIVERY TRUCKS
Jay G. Sudenga and Floyd H. Sudenga, George, Iowa
Filed Apr. 3, 1959, Ser. No. 804,013
4 Claims. (Cl. 214—522)



4. A bulk material delivery truck comprising a truck body, said body including a plurality of compartments therein, said body including a lower longitudinal chamber, a helical conveyor in said chamber, separate covering members in said compartments for covering portions

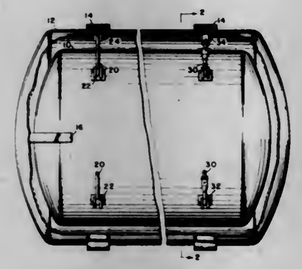
of said helical conveyor, means for individually rotating any of said covering members including concentric pipe sections, each of said sections being attached to each of said covering members, rotating handles attached to each of said pipe sections.

3,021,026
BOTTLE HOLDER
George Clare, 475 Richmond Ave., Maplewood, N.J.
Filed Jan. 18, 1961, Ser. No. 83,407
1 Claim. (Cl. 215—100)



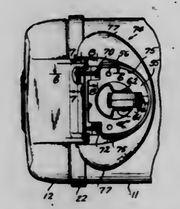
An integrally formed bottle holder comprising a pair of cooperating half sections, each of said half sections including complementary upper arcuate portions adapted to form an annulus for embracing the upper circumference of a bottle, an integrally formed web connecting the adjacent ends of said upper complementary arcuate portion, a handle portion connected to the other end of each of said complementary upper arcuate portions, and lower complementary arcuate portions connected to each of said handle portions, said lower complementary portions forming an annulus for embracing a lower circumference of the bottle, an integrally formed web connecting the adjacent ends of said lower arcuate portions, said handle portions being arcuate in cross-section, and cooperating latching means associated with each of said handle portions to frictionally releasably lock said half section in operative bottle embracing position; said latching means including a female catch in the handle portion of one half section, and a cooperating male latch in the handle portion of said other half section, and locating means for aligning said half sections in the operative position thereof, said locating means including aligned pin and hole located in the edge portion of the respective half sections.

3,021,027
MEANS FOR SUPPORTING THE INNER MEMBER OF A DOUBLE-WALLED TANK
David R. Claxton, 90 Maple St., Wenham, Mass.
Filed Oct. 8, 1958, Ser. No. 766,038
1 Claim. (Cl. 220—15)



A double-walled tank comprising an inner cylindrical tank and a similarly shaped outer tank enclosing said inner tank, and means mechanically connecting said inner and outer tanks, said means comprising rigid connecting members at one end of the inner tank secured to the inner and outer tanks to prevent relative longitudinal movement thereof, a series of rigid links distributed around the circumference of the inner tank near said end thereof and extending substantially tangentially therefrom in the same sense to the outer tank, said links having pivoted joints at their ends connecting them to said tanks with freedom of movement in at least a plane perpendicular to the axis of the tanks, and a second series of links near the other end of the inner tank extending from the inner tank substantially tangentially to the outer tank in the same said sense and spaced around the circumference of said inner tank, the links of said second series having joints permitting freedom of movement in any direction.

3,021,028
VACUUM CLEANER STRUCTURE
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 1, 1958, Ser. No. 725,727
13 Claims. (Cl. 220—35)

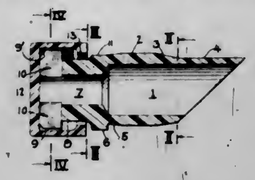


11. In a horizontal tank-type suction cleaner, an elongated casing having an open end, an end ring at the open end of the casing, the end ring being disposed in a plane perpendicular to the longitudinal axis of the casing, a cover to close the open end of the casing, means for pivotally mounting the cover on the end ring for angular movement thereon, the mounting means comprising structure forming a unitary part of the end ring which provides a pair of spaced apart apertured elements which are disposed in the plane of the end ring and project downwardly therefrom, the cover having a pair of spaced apart apertured parts projecting therefrom, the elements and parts projecting in planes transverse to the axis about which the cover is angularly movable, the cover parts being positioned closely adjacent to and alongside the end ring elements to provide two pairs of spaced apart hinge brackets having horizontally aligned apertures, connecting means comprising a pin in the apertures of each pair of hinge brackets having a head to limit axial movement thereof in one direction only and being axially movable in the opposite direction, and means for detachably securing the end ring to the casing, the end ring securing means including stationary parts which are spaced from the hinge brackets and in axial alignment with the pins and at the vicinities of their heads to limit axial movement of each pin in its opposite direction.

3,021,029
VENT TUBE AND CAP ASSEMBLY
William McKinlay, Sodus, N.Y., assignor to The Danielson Manufacturing Company, Danielson, Conn., a corporation of Rhode Island
Filed Jan. 21, 1959, Ser. No. 788,173
1 Claim. (Cl. 220—44)

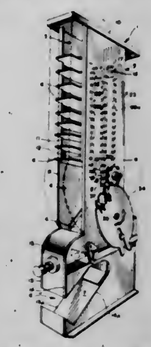
A vent tube and cap assembly designed to fit in a hole in a housing, comprising a tubular body of nylon having

an inner portion of smaller diameter than said hole, a housing-engaging portion of larger diameter than said hole, an intermediate portion tapering inwardly from said



larger portion to said smaller portion, and an outwardly projecting end portion terminating in an enlarged and radially slotted head, and a radially inwardly flanged cap snap-fitted over said head.

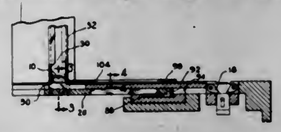
3,021,030
VENDING DEVICES
Ernest H. Thompson, Evanston, Ill., assignor to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware
Filed Sept. 26, 1958, Ser. No. 763,597
10 Claims. (Cl. 221—77)



2. A vending device for vending individual articles comprising a housing having a storage area in the upper portion thereof, a discharge outlet in the lower portion thereof, and a display area between said storage area and said discharge outlet, a plurality of shelves movably mounted in said housing, an abutment member movably mounted in said housing, said abutment member normally being disposed in supporting engagement with one of said shelves to hold the latter in said display area, and means, including a drive wheel oscillatable through a predetermined path of travel, for moving said one shelf from said display area to said discharge outlet and simultaneously moving another of said shelves from said storage area to said display area, said means including means movable with said drive wheel for moving said abutment member out of said supporting engagement with said one shelf and into supporting engagement with said other shelf during said oscillation of said drive wheel.

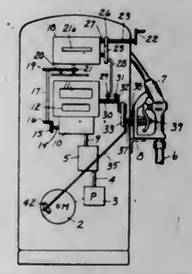
3,021,031
ANCHOR PLATE FEED IN EYE SETTING MACHINE
William V. DeNicolo, Chicago, Ill., assignor, by mesne assignments, to The North & Judd Manufacturing Co., a corporation of Connecticut
Filed Dec. 20, 1957, Ser. No. 704,144
1 Claim. (Cl. 221—273)

In an eye setting machine, a feed slide shiftable linearly in one direction during operation of the machine through a cycle, a feed chute, means for feeding anchor plates linearly in a different direction from the stack of the anchor plates located in a feed chute to an anvil in the machine comprising a guide bar extending from beyond the feed chute to the anvil and having a linear feed groove in the upper surface thereof having a height and width corresponding to the height and width of each anchor plate and with the base flush with the portion of the anvil immediately adjacent the base for sliding movement of the anchor plates in end to end relation through the groove to the anvil, means mounting the feed chute on one end portion of the guide bar with the lowermost of the anchor plates in the stack resting in the feed groove and with the leading bottom edge of the chute being spaced from the base of the groove by an amount greater than the height of one anchor plate but less than two to enable only the lowermost of the anchor plates to be displaced endwise from the feed chute through the groove, a single abutment mounted for linear displacement through the groove between a nor-



mal position outwardly of the stack of anchor plates to an operated position underlying the stack of anchor plates with the abutment having a portion confronted by the lowermost of the anchor plates in the stack when in position of rest in the feed groove, and means for transmitting linear movement of the feed slide in one direction to linear movement of the abutment in the other direction to displace the abutment between normal and operated positions whereby the lowermost anchor plate in the stack is displaced from the feed chute into the feed groove during movement of the abutment from normal to operated position and whereby the stack of anchor plates in the feed chute drops onto the base of the feed groove responsive to return of the abutment to normal position, the guide bar being formed with a second groove underlying the feed groove and in spaced relation therewith, and an actuator bar dimensioned to have a length less than the second groove and slidably received therein and in which the abutment is operatively connected to the actuator bar for movement therewith.

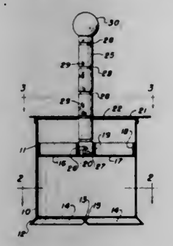
3,021,032
FUEL DISPENSING UNIT
Rehl W. Swank, Venango Township, Crawford County, Pa., assignor, by mesne assignments, to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 2, 1958, Ser. No. 758,356
7 Claims. (Cl. 222—30)



1. A fuel dispensing unit having a switch for the fuel delivery, a computer register for the fuel delivery with

an associated interlock means compelling resetting to zero before the unit can be used for another delivery, a printing register for sequentially printing the initial status of the computer register at the start of a fuel delivery and the final status of the computer register at the end of a fuel delivery and resetting the printing register to zero, said printing register having an associated interlock preventing changing the sequence, a trip member for the computer register interlock which must be actuated before the start of the delivery to reset the computer register and to permit engagement of the computer register, a crank for actuating the printing register for the two successive printing steps, a cam shaft connected to the computer register and to the switch and driven by the crank, and interlock means operated by said cam shaft in the first printing step for operatively engaging the computer register and turning the switch on to permit the start of fuel delivery and operated by said cam shaft in the second printing step for turning the switch off to stop the fuel delivery and operatively disengaging the computer register to prevent further use of the unit until said trip member is actuated.

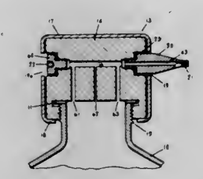
3,021,033
SELF PACKING SHORTENING MEASURE DEVICE
Donald D. Maurer, P.O. Box 355, Alamo, Calif.
Filed June 12, 1959, Ser. No. 819,902
1 Claim. (Cl. 222—47)



A self packing shortening measure device comprising a hollow cylindrical body member having an outwardly flaring skirt on its lower end, a horizontally disposed bar contiguous to said skirt and said bar embodying angularly arranged end sections and an intermediate twisted portion, a piston adjustably mounted in said body member, and said piston including a circular plate portion and an upwardly disposed outer circular rim, a circular collar affixed to the central section of said plate portion, a pin affixed to said collar, a keeper mounted on the upper end of said body member and said keeper being provided with a slot, said slot being shaped to include a first portion of reduced size and a second portion of increased size, an adjustable rod extending through said slot and having a cutaway portion on its lower end defining a lug for selective engagement with the pin in said collar whereby movement of the rod will cause movement of the piston in the body member, a knob on the upper end of said rod for facilitating the manual manipulation thereof, there being a plurality of spaced apart grooves in said rod, and indicia on said rod providing a means whereby the rod can be accurately set to the desired position to give the required amount of shortening.

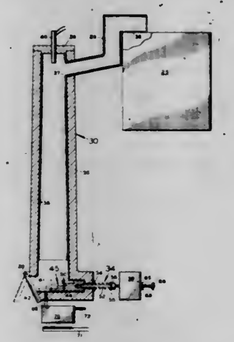
3,021,034
TAMPER PROTECTIVE CLOSURE
Hans Maack, 321 E. 92nd St., New York, N.Y.
Filed Aug. 24, 1959, Ser. No. 836,572
6 Claims. (Cl. 222—153)

1. A tamper proof closure for a container comprising a cap having a threaded aperture and being threadably engageable with the rim of a container; a tapering pouring channel formed within said cap; and apertured member jacketing said cap and being freely rotatable with respect thereto to align the apertures with said pouring channel and being restrained from vertical movement with respect to said cap; a plug for said pouring channel; a key



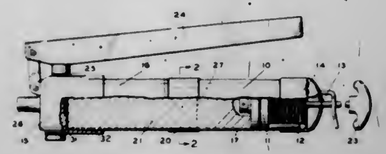
interchangeably associated with and adapted to removal of said plug through said apertures and having angularly extended and connecting channels therein, one of said channels serving as a pouring spout, the other channel providing means for relieving the surface tension of fluid dispensable through said key from said container.

3,021,035
ICE DISPENSER FOR BEVERAGE VENDING MACHINES
James J. Hill, North Miami, Fla., assignor to Apco, Inc., a company of New York
Filed Aug. 18, 1958, Ser. No. 755,575
6 Claims. (Cl. 222—245)



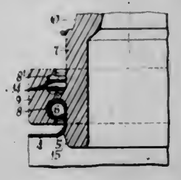
1. In a cold beverage dispensing machine having an ice making machine and a cup station, the combination comprising an elongated receptacle having an opening at an upper portion, said receptacle having an increasing cross sectional area in the direction of its lower portion, a chute connecting said opening and said ice making machine for delivering ice to said receptacle, said receptacle having an ice discharge opening at said lower portion, a door, pivot means mounting said door at said discharge opening, a plunger slidably mounted at said lower portion of said receptacle for reciprocation in a direction toward and away from said opening, a rod secured to said plunger and extending outwardly of said receptacle, a second rod secured to said door and extending in the direction of said first named rod, means connecting said rods and power operated means operatively connected to said rod connecting means for simultaneously operating said door and said plunger for dispensing ice through said lower opening, and a chute mounted below said lower opening for directing said dispensed ice to said cup station.

3,021,036
GREASE GUN
Noel Guedon, Rte. 2, Box 316, Newberg, Oreg.
Filed Oct. 22, 1958, Ser. No. 768,988
1 Claim. (Cl. 222—256)



A hand grease gun comprising a grease pressure pump, an internally threaded cylindrical cap integrally formed on said grease pump and extending outwardly therefrom, a first single walled cylindrical section externally threaded at its opposite ends with one end thereof threaded into said cap, a second single walled cylindrical section including an internally threaded coupler integrally formed on the end thereof threadedly engaged with said first cylindrical section and arranged in axially aligned relation therewith providing a smooth interior joint, said first and second cylindrical sections being of substantially the same length and of the same diameter, a closure for said second cylindrical section, a piston of a diameter substantially equal to the internal diameter of said cylindrical sections in said second section, and an operating handle for said piston extending outwardly through said closure, the threaded coupling for securing said first and second sections together in end to end relation being of a length equal to at least one-half the internal diameter of said cylinder in order to compress grease contained therein to expel air therefrom when the sections are assembled.

3,021,037
SPOUT-CLOSURE FOR CONTAINER WITH REVERSIBLE MOUNTING MEANS THEREFOR
Gordon N. Parker, Buffalo, N.Y., assignor to Cling-Surface Company, Buffalo, N.Y.
Filed May 27, 1959, Ser. No. 816,310
3 Claims. (Cl. 222—498)



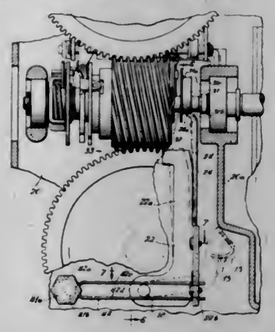
1. A closure for a container comprising, in combination with a container neck portion having an annular lateral bead, a closure member having a body formed with a dispensing spout portion extending generally axially thereof, said closure member body being of resiliently yieldable material and having a pair of annular grooves spaced apart along said body and facing in opposite directions generally axially thereof, said grooves each having a cross sectional configuration generally complementing that of said bead for alternately receiving the same in snap fitting relation thereto, whereby said closure member can be applied to said neck portion with said dispensing spout portion in one position, and whereby upon removal of said closure member from said neck portion the former can be inverted and re-applied to the latter in inverted position.

3,021,038
BOW MAKING FORM
Marjorie L. Dean, 15817 Pitts Ave., Paramount, Calif.
Filed Aug. 1, 1960, Ser. No. 46,489
3 Claims. (Cl. 223—46)



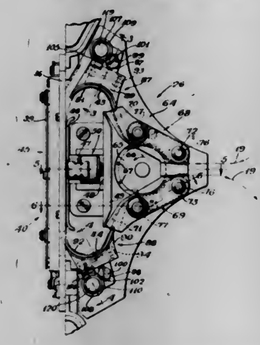
1. A form for making ribbon bows comprising a flat plate having a central circular opening therein and a series of radially extending points, said points being of a length substantially less than the radius of said circle for the reception of a ribbon extended first through the center opening and then successively looped over the points in circumferential sequence with the end of the last loop extending through the opening to form, with the other end so extended a central knot, and a second series of radially disposed points concentric with said first series over which the second circular ribbon points may be looped.

3,021,039
LOOP RESTORING MOTION PICTURE PROJECTOR
Bruno Michaels, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 20, 1959, Ser. No. 800,674
4 Claims. (Cl. 226—36)



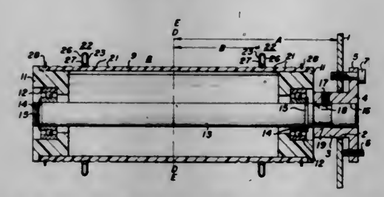
4. In a projector including an intermittent film feeder and a continuous film feeder, a loop restorer comprising a pivotally mounted arm having a film engaging shoe, means urging the arm to an intermediate position in which the shoe is out of engagement with a normal loop of the portion of the film between the feeders and permitting movement of the arm in one direction to an actuated position by force on the shoe from the film when the loop is lost and also permitting movement of the arm in the opposite direction from its intermediate position to a restoring position in which the shoe restores the loop, a continuously rotatable cam, resilient cam follower means comprising a leaf spring having an end portion for engaging the cam and mounted on the arm in a position in which the end portion is at one side of the cam when the arm is in its intermediate position and is urged into the path of the cam when the arm is moved to its actuated position for urging the arm to its restoring position, and means operable to disengage the cam follower from the cam after the loop is restored.

3,021,040
MOTION PICTURE DEVICES
David M. MacMillin, Wilmette, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed June 3, 1957, Ser. No. 663,215
8 Claims. (Cl. 226—91)



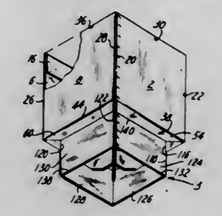
5. A loop forming unit comprising a mounting bracket member, a loop forming member, means mounting the loop forming member pivotally on the bracket member, a spring urging the loop forming member toward a loop forming position, a guide member mounted on the bracket member, and a pusher member slidable along the guide member for moving the loop forming member to a retracted position.

3,021,041
WEB GUIDING MECHANISM
John Maksymiak and John S. Pollock, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed May 7, 1958, Ser. No. 733,556
4 Claims. (Cl. 226—199)



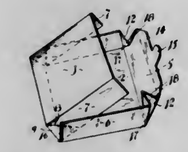
1. In a web guiding mechanism, the combination comprising: a mounting plate; a bushing fixedly secured to said plate; a shaft slidably carried by said bushing and adapted to be releasably secured to said bushing in one of two predetermined positions; a cylinder rotatably mounted on said shaft and having a plurality of axially spaced peripheral grooves at each end thereof which are spaced apart a fixed distance between successive grooves; and a pair of spaced apart guide plate mechanisms carried by said cylinder, each of said guide plate mechanisms selectively cooperating with one of said grooves at one end of said cylinder to guide webs of different widths therebetween, the longitudinal center of said webs being maintained a fixed distance from said mounting plate in each of said predetermined positions of said shaft, the longitudinal center of said cylinder being coincident with the longitudinal center of said webs in one of said predetermined positions and spaced apart therefrom a distance equal to one-half said fixed distance in the other of said predetermined positions.

3,021,042
DISPLAY CONTAINER
Howard Stumpf, Jr., Sandusky, Ohio, assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,915
3 Claims. (Cl. 229—16)



1. A display container made of foldable sheet material comprising at least three upright wall panels of equal width at their bases connected to each other along vertical fold lines, a bottom panel connected to each upright wall panel along a bottom fold line perpendicular to the said vertical fold lines, each bottom panel being scored diagonally from the ends of said bottom fold lines to provide isosceles triangular bottom panels of equal size with a supporting rib panel on either side thereof, the bottom panels being folded inwardly toward each other from their respective associated upright wall panels along said bottom fold lines and the supporting rib panels being folded outwardly along said diagonal score lines, each of said equal isosceles triangular bottom panels meeting at the apex of the others to form the bottom of the container and each of said supporting rib panels being in juxtaposition with a supporting rib panel of an adjoining bottom panel to form an integral supporting base rib of double thickness extending along the bottom of the container from a corner thereof, each supporting base rib having a slot in an outer edge thereof, and a supporting collar fitted into the slot of each supporting base rib to reinforce and hold together the supporting base ribs and providing an offset base for the container.

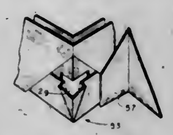
3,021,043
CARTONS
Sydney R. Phin, Toronto, Ontario, Canada, assignor to Package Forming Machinery Company Limited, Torouto, Ontario, Canada
Filed June 16, 1958, Ser. No. 742,275
6 Claims. (Cl. 229—16)



1. In a carton formed from a material having a heat sealable coating thereon, a pair of spaced parallel side wall panels, each having a top edge, end edges and a bottom edge, and a bottom wall panel joining the bottom edges of said side wall panels, the bottom wall having end edges registering with the end edges of said side wall panels, each of said side wall panels having a flap portion along the entire extent of each of its end edges, and said bottom wall panel having a flap portion along the entire extent of each of its end edges, the side wall flap portions and bottom wall flap portion at each end being overlapped

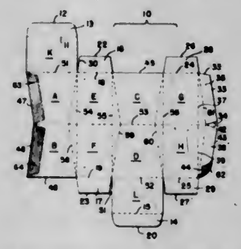
and heat sealed together to define a liquid tight end wall formation with liquid tight bottom corners, one of the side wall flap portions and bottom wall flap portion of each end wall formation being arranged and having a configuration to fit together in co-planar relation and the other of said side wall flap portions of each end wall formation having an extent to overlap with and bridge the juncture between said co-planar side wall flap portion and end wall flap portion.

3,021,044
CORRUGATED CONTAINER
Kenneth M. Schubert, Geneva, N.Y., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed June 24, 1959, Ser. No. 822,474
7 Claims. (Cl. 229—17)



1. A container for shipping or storing material in bulk, comprising open ended inner and outer sleeves with the outer sleeve telescoped over and engirdling the inner sleeve, a top cap closing the upper ends of said sleeves, a bottom cap extending in the lower open end of said outer sleeve and closing the lower end of said inner sleeve, said bottom cap having upstanding walls juxtaposed with and extending between the opposed inner and outer surfaces of said outer and inner sleeves, said inner sleeve having an opening formed in the wall thereof adjacent to its bottom end, and said bottom cap having a plurality of gusset folds in an upstanding wall thereof extending over substantially the full height thereof and forming a collapsible spout in registration with said opening in the wall of said inner sleeve.

3,021,045
FLEXIBLE FOLDING BOX
Daniel I. Morris, 420 Rose Lane, Haverford, Pa.
Filed Mar. 3, 1959, Ser. No. 796,784
11 Claims. (Cl. 229—37)



1. A folded box formed from a foldable blank comprising a plurality of side walls adjacent one another, said walls having vertical fold lines forming at least two alternative junctures between each of said walls, said vertical fold lines forming each of said junctures terminating at the same point at the upper and lower ends of said walls, said vertical fold lines forming at least two sets of cooperating junctures in said box, one of said sets of junctures being adapted to provide substantially uniplanar walls in said box and the other of said sets of junctures being adapted to provide substantially dual planar walls in said box, said walls having a horizontal score line therearound extending transversely to said vertical means intermediate said upper and lower ends of said walls, a pair of end sections formed integrally with at least two of said walls and extending from the top and bottom thereof, and closure means extending from opposing side walls for closing the top and bottom of said box, said closure means having retaining means associated therewith at the terminal end thereof for retaining said closure means in position against said walls.

3,021,046
CONTAINER FOR SHIPPING POTTED PLANTS
Joseph A. Pullen, Houma, La., assignor to Pullen Molded Products, Inc., New Iberia, La., a company of Louisiana
Filed June 3, 1958, Ser. No. 740,179
1 Claim. (Cl. 229—39)

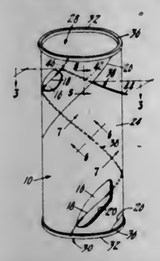


A plant container formed from a single piece of flat material, characterized by the following features:

(*a*) a first pair of opposite side walls,
(*b*) a second pair of opposite side walls,
(*c*) means for foldably joining contiguous edges of adjacent side walls,
(*d*) a top end and bottom end for said container and partition means between the ends of the container dividing the container into a pot receiving zone adjacent the bottom end on one side of the partition means and a plant receiving zone adjacent the top end on the other side of the partition means, the plant receiving zone being larger than the pot receiving zone,
(*e*) a plurality of closure flaps on the bottom end of the container on the pot receiving side of the partition means, said flaps serving the dual purpose of supporting the bottom of the pot within the pot receiving zone and also serving as a flat and stable support base for the entire container,
(*f*) said partition means including a first member joined along its upper side to one side wall of the first pair of opposed side walls for swinging movement inwardly of the container to a position substantially perpendicular to the one side wall,
(*g*) said partition means including a second member joined along its upper side to the other side wall of the first pair of the opposed side walls for swinging movement inwardly to the container to a position substantially perpendicular to the other side wall,
(*h*) the lower sides of said first and second members having medially disposed cut-out areas so that the first and second members present an opening substantially centrally disposed in the container upon the members being moved to respective substantially perpendicular positions and said lower sides being located nearer the bottom of the container than said upper sides of each member,
(*i*) the depth of the pot containing zone measured between the closure means and the first and second members when in respective substantially perpendicular positions substantially determining the depth of a pot adapted to be placed in the container,

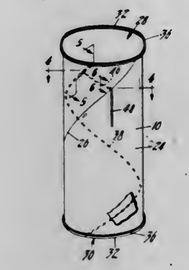
(*j*) means for engaging the first and second members upon their movement into respective substantially perpendicular positions to prevent further swinging movement of said first and second members in a direction away from the pot receiving zone,
(*k*) said first and second members each being cut from the respective side wall to which it is attached whereby when a potted plant is inserted bottom first into the top end of said container and caused to drop to the bottom end of said container, said first and second members can be pressed inwardly as soon as the top edge of the pot passes below the lowermost extension of said members, and said cut-out portions of said members can be fitted around the stem of the plant in the pot at the same time that the pot is being pushed upwardly toward the top end of the container, whereupon the top edge of the pot will force said first and second members into a substantially perpendicular position with respect to the said side walls, whereafter the closure at the bottom end can be closed and the pot secured fastened in position so that it cannot be dislodged by turning the container in any direction, including side-ways and upside down.

3,021,047
CONTAINER
Ralph K. Pottle, Georgetown, Conn., and William B. Elam, Jersey City, N.J., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 18, 1958, Ser. No. 729,366
14 Claims. (Cl. 229—51)



1. A tear string container comprising a fibre body composed of an inner and an outer helically wound body ply, the helical edges of each of said body plies being abutted to form a helical butt joint in each of said body plies, the butt joint in said inner body ply being offset from the butt joint in said outer body ply, a perforation formed in said outer body ply adjacent extending radially therethrough at a point spaced axially from an end thereof and substantially aligned with a point on the butt joint of said inner body ply, a liner covering the inner surface of said inner body ply, a helically wound label covering the outer surface of said outer body ply, the helical edges of said label being overlapped to form a lap joint offset from said perforation, a pair of metal end members clampingly secured to the ends of said fibre body, and a tear string interposed between said body plies in registration with the helical butt joint of said inner body ply, said tear string being secured against movement from said position along said helical butt joint by the pressure applied thereto by said plies and further secured at one end by one of said metal end members and extending helically around said body from said latter end member to said perforation and passing through said perforation and thence extending substantially circumferentially of said body between said outer body ply and said label and passing through said label lap joint and terminating in a free end disposed exteriorly of said label, whereby when said tear string is pulled the label alone is torn from its lap joint to said perforation and thereafter a helical line of tear is created in said outer body ply and said label in registration with said inner ply butt joint.

3,021,048
CONTAINER
Ralph Kennicott Pottle, Georgetown, Conn., and William Binford Elam, Jersey City, N.J., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 24, 1959, Ser. No. 801,647
9 Claims. (Cl. 229—51)



1. A tear string container comprising a spirally wound fibre body composed of an inner and an outer body ply, a pair of end members secured to the ends of said body to close the same, a helical line of opening formed in said outer ply and extending around said body from one end to the other, and a tear string secured on the inner surface of said inner ply in a helical path substantially parallel with said line of opening and spaced radially inwardly therefrom by said inner ply, an end portion of said string passing radially outwardly through a perforation in said inner ply adjacent one end thereof and through said line of opening in said outer ply at a point spaced axially from one of said end members and terminating in a free end positioned exteriorly of said container, said line of opening in said outer ply thereby providing a guideway along which said string travels when said free end is pulled to ensure that said inner ply is torn along a neat line which follows the same helical path as said line of opening in said outer ply.

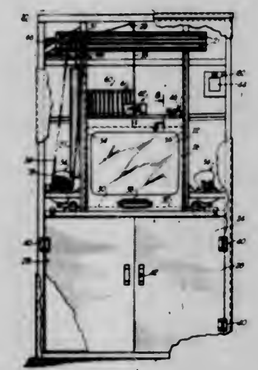
3,021,049
TAPERED CLAMPING RING FOR FAN AND IMPROVED HUB DESIGN
Joseph F. Settle, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 31, 1957, Ser. No. 637,389
6 Claims. (Cl. 230—134)



1. An air impeller adapted for mounting on a machine shaft comprising a hub having a plurality of blades in-

separably cast therewith and extending radially therefrom, a generally tapered exterior surface on said hub having axial slots therein and a clamping ring having a like tapered surface arranged for mating contact therewith, and a plurality of bolts extending axially through a portion of said hub and into said ring for drawing the latter onto said tapered surface and thereby compressing said hub on said shaft.

3,021,050
AUTOMATIC DEPOSITORY
Richard S. Rogers, Scituate, Mass. (48 Big Blue Drive, Milton, Mass.)
Filed Sept. 4, 1959, Ser. No. 838,100
4 Claims. (Cl. 232—43.1)



1. An automatic depository comprising a receiving receptacle for receiving parcels, a storage receptacle below said receiving receptacle for storing said parcels, access means to said receiving receptacle for depositing a parcel in said receiving receptacle, coin operated means for opening said access means, means for storing packaging material in said depository, means operatively associated with said opening means for automatically dispensing said packaging material into said receiving receptacle in sequence with the operation of said access means from where it may be removed while said access means is open, closure means between said receptacles, means for automatically opening said closure means after said access means is closed thereby permitting any parcel in said receiving receptacle to drop into said storage receptacle, and means in said depository for permitting removal of parcels from said storage receptacle.

3,021,051
FLASHPROOF SIDE WALL MOUNTED FLUE PORT
Charles Francie Day, 262 Argyle St., Brooklyn, N.Y.
Filed Mar. 10, 1961, Ser. No. 94,897
10 Claims. (Cl. 232—44)

10. A self-sealing port device for installation in the side wall of a flue comprising:

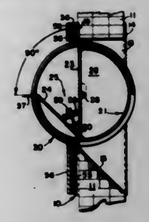
a frame for installation in said side wall;

a horizontal shaft rotatably carried by said frame;

a pair of discs mounted on said shaft and arranged to rotate therewith;

an arcuate plate defining about three-quarters of the circumference of a first cylinder, coaxial with said shaft, said plate being mounted between said discs to provide two horizontal edges spaced apart about one-quarter the circumference of said first cylinder and defining a loading port;

a first barrier extending between one said horizontal edge of said arcuate plate and an intermediate point of said arcuate plate between said edges and a second barrier extending from the other said horizontal edge of said plate and joining said first barrier at an arcuate angle;

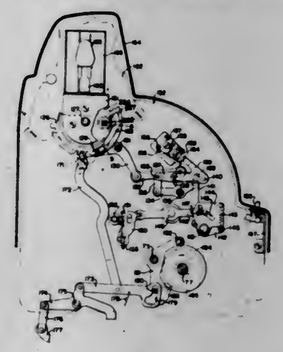


a second partial cylinder coaxially surrounding said first cylinder comprising a pair of approximately quarter round arcuate segments spaced uniformly apart and a pair of transverse end plates to define top and bottom edges of a loading port and a discharge port;

means to prevent rotation of said second cylinder;

and a plate supported by said frame under said second cylinder, said plate being inclined toward said flue.

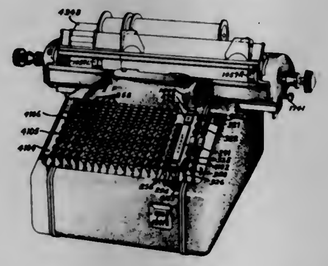
3,021,052
OPERATION SIGNALLING MECHANISM FOR CASH REGISTERS
Kenneth C. Flint, West Carrollton, and Frank R. Werner, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed July 30, 1956, Ser. No. 601,045
4 Claims. (Cl. 235—23)



1. In a machine of the class described, capable of performing item-entering and item-total operations, and having a totalizer in which the items are accumulated, the combination of manually-operable means to select the totalizer for an item-total operation to clear or zeroize said totalizer; means operable by the manually-operable means to initiate operation of the machine; a light to signal operation of the manually-operable means; a switch for the light; an arm to operate the switch; a beam to operate the arm; means positioned by the manually-operable means and coacting with the beam to operate the arm and the switch to cause the light to light; and connections between the beam and the initiating means whereby operation of said initiating means to initiate machine operation causes the beam to operate

the arm and the switch to prevent lighting of the light under control of the manually-operable means until near the end of machine operation to indicate that a zeroizing operation has been performed in the totalizer.

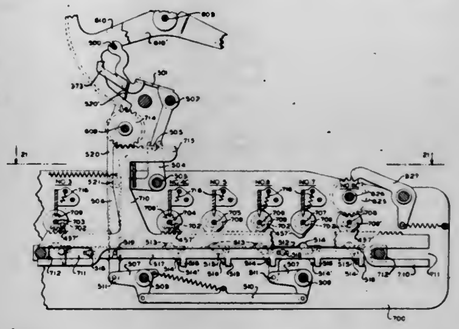
3,021,053
ACCOUNTING MACHINES
Byron A. Runde, Farmington, and Irvin William Borutzke, Detroit, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed July 18, 1955, Ser. No. 522,430
18 Claims. (Cl. 235—60)



1. An accounting machine having a totalizer comprising an amount section and a count section each comprising a plurality of orders of accumulating pinions, amount entering means comprising reciprocable amount differential actuators cooperable with said amount section pinions for entering amounts additively or subtractively therein, function control means conditionable to select additive or subtractive operation of the amount section pinions by said amount entering means, means cooperable with said count section and activatable to enter a count therein additively or subtractively, a traveling carriage movable to any of a plurality of positions, means controlled by said carriage in accordance with its position to activate said count entering means, means conditionable to determine the additive or subtractive operation of the count section pinions by said count entering means and normally conditioned for additive count entry upon activation of said count entering means when said function control means is conditioned for either additive or subtractive amount entry, and means to condition said last-named conditionable means for subtractive operation of said count entering means.

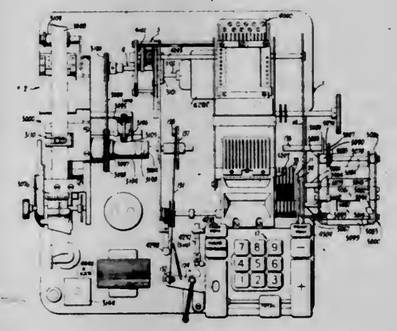
3,021,054
PROGRAM CONTROL FOR ACCOUNTING MACHINE
James W. Dodsworth, Mount Tabor, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Original application Sept. 11, 1958, Ser. No. 760,501. Divided and this application Dec. 18, 1959, Ser. No. 860,554
14 Claims. (Cl. 235—60.2)

1. In a listing calculator or the like the combination comprising a shiftable record carriage, a plurality of amount registers, value actuators therefor having printing type displaceable therewith, cyclic operating means for said actuators, a mechanical program means operable in accordance with a predetermined columnar position of the record carriage for determining a selection and sign character of operation for said amount registers, a counter register having actuator means operable with the amount register actuators, electromagnetic program control devices including means adapted relative to said predetermined position of the record carriage to effect a selection of said counter register and to control an operation thereof in opposite sign character to the sign character of operation of the selected one of said amount registers, means normally conditioned ineffective of advancing the



counter actuator a one-step movement, and sensing means controlled by the carriage in said predetermined columnar position and operable by the mechanical program devices for rendering the said counter advancing means effective.

3,021,055
ZERO SETTING CONTROL MEANS
Harold J. Chall, Castro Valley, and Russell K. Brunner, Cupertino, Calif., assignors to Friden, Inc., a corporation of California
Filed Dec. 31, 1956, Ser. No. 631,834
6 Claims. (Cl. 235—60.4)



6. A calculating and recording apparatus comprising a calculator, a recorder, a readout switch in said calculator, an electrical system extending from said readout switch to said recorder, a selector in said calculator operable to selectively enter values in said calculator, a carriage in said selector operable to move column by column as values are entered in columnar positions in said calculator, a switch device between said readout switch and said recorder, sets of relatively fixed contacts in said switch device arranged in pairs in columnar positions, movable contacts in said switch device operable into and out of engagement with one or another of the fixed contacts in said relatively fixed contacts, movable members supporting said movable contacts, a pawl operable to be selectively moved into and out of register with said movable members, a bail operable to move said pawl into operative engagement with said movable members, means to operate said bail and an arm supporting said pawl and in mechanical connection with said carriage, said switch

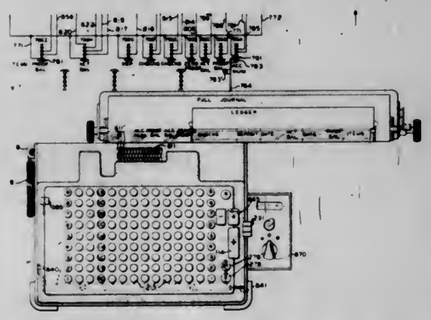
device being operable to control said recorder to make records of zeros preceding values of higher than zero when zeroes are entered in said calculator in columnar positions preceding those in which higher values are entered.

3,021,056
REGISTER CONTROL FOR ACCOUNTING MACHINE

James W. Dodsworth, Mount Tabor, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware

Original application Sept. 11, 1958, Ser. No. 760,501. Divided and this application Dec. 18, 1959, Ser. No. 860,553

13 Claims. (Cl. 235—60.31)



1. In an apparatus of the class described, the combination of a group of amount registers including a support shaft for each one of said registers, counter registers each one mounted upon a corresponding support shaft for selected ones of the said amount registers, a counter register mounted upon a support shaft independent of any amount register, differentially adjustable actuators and associated printing type related in common to said amount registers, actuator and printing type adjacent thereto and related in common to all the said counter registers, cyclically operable means adapted for adjusting any said actuators and related printing type for the amount and counter registers to selected digit value positions and for effecting a printing operation of said printing type, clutch control means therefor, register selection control means, total taking means adapted for concomitantly zeroizing selective ones of said amount registers together with selective ones of said counter registers whereby to adjust the related printing type in accordance with values stored thereon, and means controlled jointly by a zeroizing of an amount register and a zeroizing of a counter register whereby to release the said clutch and thereby effect a printing operation of the said cyclic operating means.

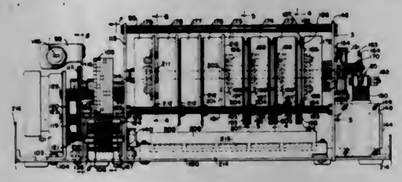
3,021,057
RATE DEVICES

Everett H. Placke and Howard A. Mullen, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Filed Sept. 9, 1960, Ser. No. 54,865

6 Claims. (Cl. 235—61)

6. In an apparatus of the class described, the combination of a counter having a plurality of wheels mounted for rotation; a solenoid operable when energized for rotating said counters; switching means operable for energizing said solenoid; a plurality of control disks, coaxially mounted and each containing a predetermined number of notches located on its edge, each notch being so positioned as not to overlap any other notch of any other disk; means associated with each of said control disks for sensing the notches on said disk, each of said sensing means being mounted for independent operation and operable for actuating said switching means when sensing a notch in the control disk; and means for controlling the number of notches to be sensed during a predetermined length of time including a timing motor for driving said control disks at a predetermined speed and a key having longitudinal slots located thereon in a predetermined position, said key being insertable into the apparatus to a position



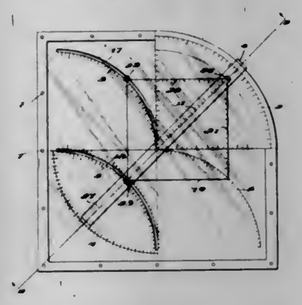
between the control disks and their associated sensing means such that only those sensing means registering with the slotted portion of said key will operate to sense the notches of their associated disks, thereby rotating said counters at a rate commensurate with the number of notches sensed and the rotational speed of the disks, said rates varying with the positioning of the slots located on the key, thus enabling a plurality of keys, each having differently located slots, to selectively provide a plurality of different rates.

3,021,058
MATHEMATICAL INSTRUMENTS

Joseph R. Horton, 1201 Hiwassee Ave., Knoxville, Tenn.

Filed June 26, 1958, Ser. No. 744,731

4 Claims. (Cl. 235—61)



1. In a device of the class described, a flat base member having inscribed thereon intersecting X and Y axes forming quadrants; an elongated vector member of transparent material having a hair line running lengthwise thereof, said vector member being pivotally mounted with respect to said base member at the intersection of said X and Y axes and adapted to be grasped at one end and adjusted, an intersector member of substantially square configuration; means for pivotally connecting one corner of said intersector member with said vector member near the end of the vector member which is to be grasped; and means for mounting one of the remaining adjacent corners of said intersector member for guided arcuate movement with respect to said base member, the arc of said movement beginning at the intersection of said X and Y axes and having the end of one of said axes as the center thereof, pivotal movement of said vector member causing arcuate movement of each corner of said intersector member within one of the quadrants wherein the

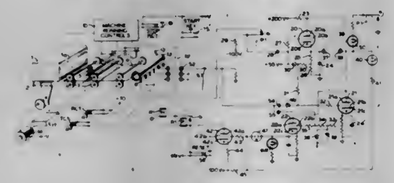
sides of said intersector member remain parallel to either said X or Y axis; said base member having inscribed thereon at least one arcuate scale aligned with the path followed by one of the remaining corners of said intersector member, and an arcuate scale near the end of the vector member which is to be grasped extending between the X and Y axes and having the intersection of said axes as the center thereof.

3,021,059
DETECTION CIRCUIT FOR UNWANTED DESIGNATIONS AND BLANK COLUMNS

James P. Hammer, Endwell, and Jay W. Slater, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed June 10, 1957, Ser. No. 664,586

3 Claims. (Cl. 235—61.11)



1. Apparatus for detecting blanks or unwanted designations in columns of a record, each column having spaced index positions in which a valid character is manifested by the presence of a designation in but one of the index positions thereof comprising: index sensing means for sensing the index positions for designations; a three-stage open-ended ring, each stage including a thyratron having a plate connected to an appropriate supply voltage, a control grid, and a cathode, and interstage coupling means, including other appropriate supply voltages, connecting the cathode of one stage with the control grid of the next succeeding stage whereby the latter is conditioned when the previous stage is in conduction and whereby a preceding stage is extinguished when the next succeeding stage is set into conduction; means for setting the first stage into conduction prior to the beginning of a sensing operation; input means connected to said index sensing means and coupled to the control grids of stages 2 and 3 and effective in response to the first sensed designation to set the second stage on and the first stage off and thereafter in response to the first unwanted designation to set the third stage on and the second stage off; and gas type diode means responsive to the first and third stages to manifest a blank column or the presence of an unwanted designation depending upon whether the first or third stage is on.

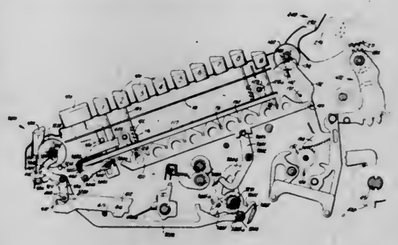
3,021,060
CALCULATING MACHINE

Walter Edward Mathi, Oakland, and George Vladislav Nolde, Santa Monica, Calif., assignors to Smith-Corona Marchant Inc., a corporation of New York

Filed June 6, 1958, Ser. No. 740,335

1 Claim. (Cl. 235—79)

A calculating machine having a numeral wheel register; adjustable actuators for driving the numeral wheels; a selectively settable value entry mechanism for adjusting the actuators; and normally enabled detents for holding the value entry mechanism in selectively set position; in combination with means for setting the value entry mechanism to a value corresponding to a value standing in the numeral wheel register, comprising: a step cam carried by each numeral wheel for rotation therewith to respective value representative positions; a rockable follower for each step cam; a plurality of ordinal members each mounted for rocking movement about a fixed center; a shoulder on each member overlying an element of the value entry mechanism and also having a camming surface; an intermediate device in each order also mounted for rocking movement about a fixed center and having an extension for determining the extent of rocking movement of the follower; a stud carried by the device for cooperation with said camming surface; a nor-



mally disabled means for moving the member, the intermediate device and the cam follower to the extent permitted by contact of said cam follower with said cam; and a cyclically operable means for first disabling the detents, enabling the moving means and then re-enabling the detents, to thereby set and lock said members and the associated value entry mechanism in accordance with the value representative positions of the respective numeral wheels.

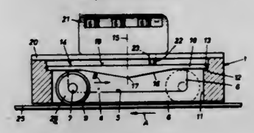
3,021,061
AUTOMATICALLY OPERATING COUNTING MECHANISM, MORE PARTICULARLY FOR COUNTING ROWS OF STITCHES ON HAND KNITTING MACHINES

Herbert Schurich, Berlin-Frohnau, Germany, assignor to Karl Steinhof Apparatefabrik, Berlin, Germany

Filed Mar. 2, 1959, Ser. No. 796,400

Claims priority, application Germany Mar. 7, 1958

2 Claims. (Cl. 235—91)



1. An automatically operated counting mechanism for counting rows of stitches on hand knitting machines provided with a needle bed, comprising a reciprocating slide, a casing secured to said slide, a loosely mounted cam member adapted for up and down movement in said casing, a rolling track arranged on said needle bed, a roller mounted in said casing for longitudinal displacement on said rolling track and on said cam member to cause said cam member to move upwardly and downwardly upon longitudinal displacement thereof, a counter mechanism secured to said casing, said mechanism including a counter actuating pin in contact with said cam member.

3,021,062
METHODS AND APPARATUS FOR DIFFERENTIATING DIFUNCTION SIGNAL TRAINS

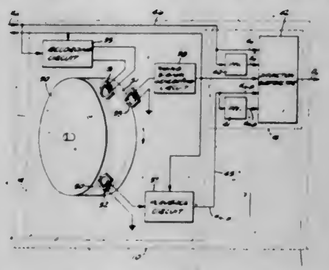
Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.

Filed Aug. 8, 1955, Ser. No. 526,933

14 Claims. (Cl. 235—152)

1. A difunction differentiating apparatus for operating upon successively applied bivalued electrical signals of

an input difunction signal train non-numerically representing a varying quantity to produce a resultant signal train non-numerically representative of the rate of change of the varying quantity, said difunction differentiating apparatus comprising: a delay element having an input terminal and an output terminal and operable for receiving each of the successively applied signals of said difunction signal train at said input terminal and for presenting each received signal at said output terminal at the same time that the corresponding p^{th} later applied

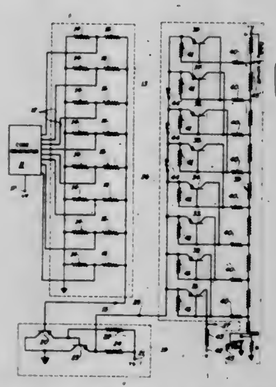


signal is received at said input terminal, where p is a predetermined integer greater than two, and a signal combining unit connected to said input terminal and to said output terminal for combining each signal presented at said output terminal with the corresponding p^{th} later signal being applied at said input terminal to produce a resultant signal representative of the difference in value of the corresponding pair of signals, whereby the successive resultant signals produced by said signal combining unit comprise the resultant signal train representing the rate of change of the varying quantity.

3,021,063
PARITY CHECK APPARATUS

Ferdinand G. von Kummer, Bloomfield, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York

Filed Feb. 23, 1960, Ser. No. 10,130
4 Claims. (Cl. 235—153)



1. Apparatus for checking code patterns having n binary digits for odd or even parity comprising,

means collectively responsive to said code patterns for developing output signals whose amplitudes are directly related to the number of "one" bits in said code patterns,

a chain of n electronic amplifying elements,

means for biasing said elements off in an ascending degree from the lowest to the highest element in the chain such that the lowest element in the chain will conduct in response to output signals of at least a predetermined amplitude and elements higher in the chain will conduct in response to output signal amplitudes representative of code patterns having progressively more "one" bits than the number resulting in said predetermined amplitude signal,

means connecting each of the elements in the chain to its immediately preceding element whereby conduction of an element in the chain prevents conduction of its immediately preceding element,

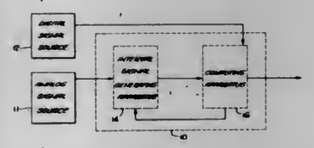
means for applying said output signals simultaneously to all of said elements in said chain,

and means for deriving an output from the lowest element in the chain when the parity of a code pattern is incorrect.

3,021,064
ORDERED TIME INTERVAL COMPUTING SYSTEMS

Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.

Filed May 24, 1955, Ser. No. 510,736
29 Claims. (Cl. 235—154)



1. In an electrical computing system operable upon a number of analog signals respectively representative of a corresponding number of input quantities: interval signal generating means receiving said analog signals and selectively actuable for producing a plurality of electrical interval signals, said generating means including generating apparatus selectively actuable in response to application of predetermined actuating signals for producing each interval signal at a time interval after actuation of said apparatus which is proportional to a predetermined function of the input quantities; computing means coupled to said interval signal generating means and responsive to said interval signals for producing an electrical output signal train representative of a predetermined function of the time intervals defined by said interval signals, said computing means including actuating means for producing said predetermined actuating signals and for selectively applying said actuating signals to said generating apparatus.

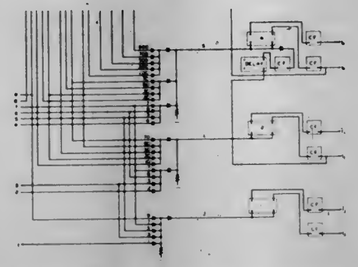
3,021,065
DECIMAL TO BINARY TRANSLATORS

Andrew Craig Reynolds, Jr., Waterbury, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Original application Feb. 26, 1957, Ser. No. 642,509, now Patent No. 2,969,912, dated Jan. 31, 1961. Divided and this application Mar. 16, 1959, Ser. No. 799,733
7 Claims. (Cl. 235—155)

1. A decimal to binary translator comprising a multiple wire bit trunk for successively transmitting thereover a plurality of decimal digits, a matrix for translating said

decimal digits into a binary number, bit stores for each order of said binary number and delay means between

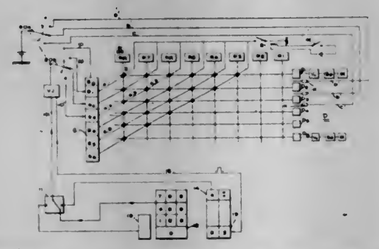


said bit stores to accommodate carries produced in the step by step entry of said decimal digits.

3,021,066
ELECTRONIC CALCULATOR

Günter Martens, Schliersee, Upper Bavaria, Germany, assignor to Kienzle Apparate G.m.b.H., Villingen im Schwarzwald, Germany

Filed Dec. 16, 1957, Ser. No. 703,166
Claims priority, application Germany Dec. 17, 1956
22 Claims. (Cl. 235—160)

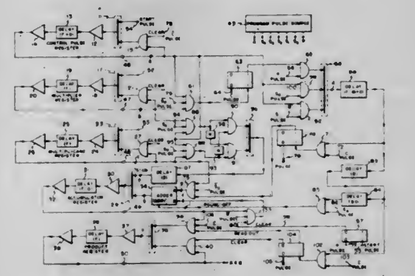


1. In an electronic calculator of the type described, in combination, a first mechanism including a first set of pulse-emitter means associated, respectively, with a first series of decimal orders, for emitting, in parallel relation from said set of pulse-emitter means, pulses representing, respectively, digits arranged in said first series of decimal orders; a second mechanism including a second set of pulse-receiver means associated, respectively, with a second series of decimal orders, for receiving, in parallel relation, pulses emitted from said pulse-emitter means; a set of first lines emanating from said pulse-emitter means, respectively, and assigned to the respective orders thereof; a set of second lines emanating from said pulse-receiver means, respectively, and assigned to the respective orders thereof; and a plurality of control means thereof for selectively transferring pulses from said pulse-emitter means to said pulse-receiver means, each of said control means serving to operatively connect a different combination of one of said first lines with one of said second lines, and each of said control means including an active element responding to application of a control pulse by transferring a pulse appearing in the first line of the respective combination of said lines to the second line of that combination; and actuating means for selectively applying said control pulses to said control means and comprising a series of individually operable actuating units respectively associated with said second series of decimal orders, said actuating units being operatively connected with respectively different ones of said control means in such a manner that pulses emitted from at least one of said pulse-emitter means associated with a particular order are transferred, upon operation of a selected one of said actuating units, to a selected one of said pulse-receiver means which is associated with the same decimal order as said selected actuating unit, whereby parallel pulses representing values containing digits in a plurality of orders and emitted from one of said mechanisms are transmitted in parallel relation to the other one of said mechanisms in a selected association of the corresponding orders of said first and second series thereof depending upon selective application of a control pulse to selected control means.

3,021,067
TIME-SHARING COMPUTER

Dale M. Jahn, Garden City, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Jan. 14, 1957, Ser. No. 634,120
9 Claims. (Cl. 235—164)



6. Apparatus for performing a computation on each set of a plurality of sets of numbers wherein each computation includes a plurality of successive operations and each of said sets includes first and second digital numbers, said apparatus comprising a first storage means adapted to store a repeating first group of signals, each first group representing in a predetermined sequence said first digital numbers, a second storage means adapted to store a repeating second group of signals, each second group representing in said predetermined sequence said second digital numbers, computing means coupled to said first and second storage means and adapted to read in said predetermined sequence said corresponding first and second digital numbers represented by the signal groups stored in said first and second storage means, said computing means being further adapted in response to each reading to perform a respective one of said successive operations and to produce a discrete output signal representing the result of said respective one of said operations, and third storage means connected to said computing means for separately storing the discrete output signals which result from operations in the computation on the same set of numbers.

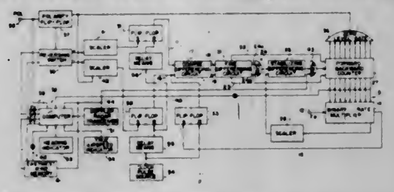
3,021,068
COMPUTING APPARATUS

Edward D. Ostroff, South Sudbury, Mass., assignor to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware

Filed Jan. 8, 1959, Ser. No. 785,725
7 Claims. (Cl. 235—164)

1. Computing apparatus comprising, first and second signal sources respectively supplying first and second variable rate signals, a source of a reference frequency signal, a binary rate multiplier having a rate input, rate control leads for receiving electrical signals in parallel binary form effective in causing the rate of a signal applied to said rate input to be altered by a factor related to the digital number thus represented in parallel binary form and provided

as an output signal, means for applying said reference signal to said rate input, a reversible counter storing a count therein and providing a digital signal representative of said count in parallel binary form, means for coupling said digital signal to said rate control leads to control the rate of said rate multiplier output signal, means coupled to said first and second signal sources and responsive to the occurrence of a zero level in said reversible counter for switching said first and second signals into separate signal channels, means for combining said rate multiplier

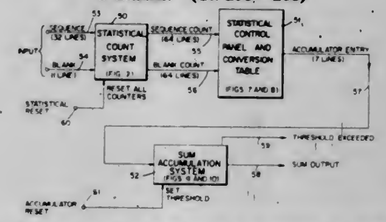


output signal with that one of said first and second signals having the lower rate to provide a third signal having a rate equal to the sum of the rate of said binary rate multiplier output signal and said lower rate, means for combining said third signal with that one of said first and second signals having the higher rate to provide a fourth signal having a rate equal to the difference between said third signal rate and said higher rate, and means for applying said fourth signal to said reversible counter to alter the count stored therein until the rate of said fourth signal is substantially zero.

3,021,069
STATISTICAL ANALYZING SYSTEM

Russell A. Rowley, Binghamton, and Francis V. Adams and John F. Gaffney, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Nov. 2, 1956, Ser. No. 620,148
6 Claims. (Cl. 235—168)



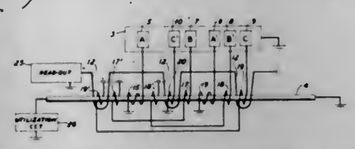
1. In a system for analyzing a sequence of input signals, the combination of: a plurality of input lines to which input signals are applied one at a time, a plurality of sequence count output lines, counting means associated with each said input line and adapted to signal the one of said sequence count output lines corresponding to the total count of signals on said input line, means for accumulating values corresponding to said signalled sequence count output lines to provide a sum output, and means for providing an output signal whenever said sum output exceeds a predetermined value.

3,021,070
BINARY ADDERS

Paul Mallery, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Oct. 2, 1958, Ser. No. 764,986
12 Claims. (Cl. 235—176)

1. In a binary adder, the combination comprising an elongated magnetic conductor exhibiting a substantially two-state magnetization characteristic beyond a minimal dimension, binary signal source means including at least three selectively actuable binary "1" signal sources, readout means coupled to said conductor, means for coupling said source means to said conductor to direct a magnetic spot of at least said minimal dimension to said readout means when one of said binary "1" source is actuated,

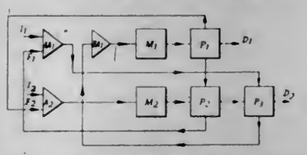


means for coupling said source means to said conductor selectively to terminate said spot short of said readout means when another of said binary "1" signal sources is actuated, and means for coupling said source means to said conductor to effect a directed spot of at least said minimal dimension at said readout means when all of said binary "1" sources are actuated.

3,021,071
SERVO SYSTEMS

Christopher E. G. Bailey, London, England, assignor to The Solartron Electronic Group Limited, Thames Ditton, Surrey, England

Filed Oct. 25, 1956, Ser. No. 618,291
Claims priority, application Great Britain Nov. 9, 1955
4 Claims. (Cl. 235—180)



1. An electro-mechanical servo arrangement comprising a first servo system including first and second amplifier portions each having an input and an output, a first electro-mechanical transducer electrically coupled to the output of said second amplifier portion, a second electro-mechanical transducer mechanically coupled to said first transducer, a second servo system including a third amplifier portion, a third electro-mechanical transducer electrically coupled to the output of said third amplifier portion, a fourth and a fifth electro-mechanical transducer mechanically coupled to said third transducer, means electrically connecting said fourth transducer to the input of said first amplifier portion and means electrically connecting said fifth transducer between the output of said first amplifier portion and the input of said second amplifier portion.

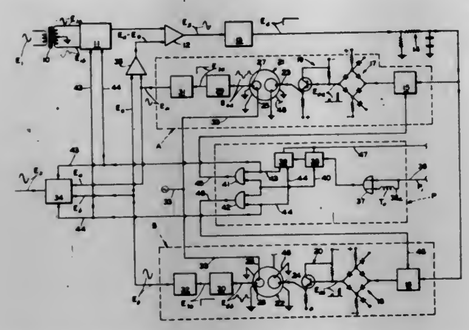
3,021,072
PRECISION INFINITE MEMORY INTEGRATOR

Arthur S. Robinson, Allendale, N.J., assignor to The Bendix Corporation, a corporation of Delaware

Filed Mar. 1, 1960, Ser. No. 12,202
14 Claims. (Cl. 235—183)

1. An integrator having an input adapted to receive command signals and having an output for providing voltages corresponding to the integral of the command signals, comprising a pair of synchronizers, each synchronizer having an input and an output, the outputs of the synchronizers being connected together and to the input of the integrator, means alternately connecting the inputs of the synchronizers to the input of the integrator for applying control signals to the connected synchronizer

input corresponding to the algebraic sum of the command signals and voltages at the outputs of the synchronizers,

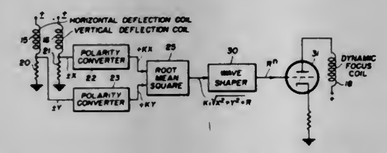


and means for alternately connecting the outputs of the synchronizers to the output of the integrator.

3,021,073
DYNAMIC FOCUSING

Louis F. Mayle, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation

Filed May 14, 1956, Ser. No. 584,668
10 Claims. (Cl. 235—192)



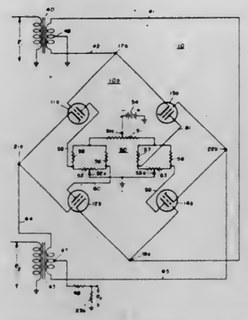
1. In combination in a device for generating a voltage approximately proportional to the hypotenuse of a right angle triangle, two sources of voltages analogous, respectively, to the length of the right-angle legs of said triangle; two multiple-grid amplifier tubes having control grids, screen grids and anodes respectively, said sources being coupled, respectively, to the control grids thereof, the screen grids being connected in parallel, and the anodes being connected in parallel to an output terminal; and means for varying the gain of said tubes in response to the level of the smaller of the two voltages from said sources comprising two unidirectionally conducting devices having anodes and cathodes respectively, the last-mentioned anodes being connected together, means connecting said last-mentioned anodes to said screen grids for varying the voltage on the latter inversely with respect to voltage changes on said last-mentioned anodes, means applying a biasing potential to said last-mentioned anodes, and means coupling the last-mentioned cathodes to said two sources, respectively.

3,021,074
ELECTRONIC TRIODE BRIDGE MULTIPLIER

Goethe M. Groenendyke, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York

Filed May 8, 1957, Ser. No. 657,841
8 Claims. (Cl. 235—194)

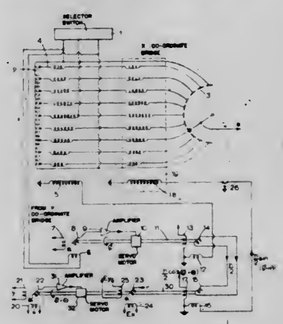
1. An arrangement for multiplying the magnitudes of two signals comprising a bridge circuit having four branches, a triode connected in each of said branches, said triodes being connected in series with a grid of each triode connected to a cathode of an adjacent one of said triodes, a first circuit means for applying a first of said signals to grids of two of said triodes connected in two opposite branches of said bridge circuit, a second circuit means for applying a second of said signals to grids of two more of said triodes connected in the two remaining opposite branches of said bridge circuit, biasing means connected to the plates of said tubes for equalizing the conductivity characteristics of said tubes, and an output circuit connected between said first and second circuit means for development therein of a signal proportional to the product of said first and second input signals.



3,021,075
INTERPOLATING DEVICES, ESPECIALLY FOR CONTROLLING AUTOMATIC MACHINE TOOLS

Rolf Edmund Spencer, London, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

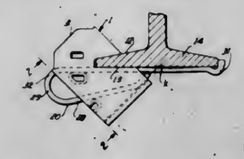
Filed July 9, 1957, Ser. No. 670,738
Claims priority, application Great Britain July 10, 1956
7 Claims. (Cl. 235—197)



1. An interpolating device comprising two parabolic bridges, one bridge for each of two co-ordinate directions, each bridge comprising three input terminals for input signals representing the respective co-ordinate values of three spaced points, an auto-transformer connected from a first of said input terminals to a third of said input terminals, said auto-transformer being tapped at a plurality of points, conductive connections from said points to said output terminals, a second transformer having a first winding connected from the second of said input terminals to a tap on said auto-transformer and having a plurality of lift windings selectively included in said conductive connections, said second transformer having a quadratic law predetermined to produce in said lift windings voltages representing the lifts of the parabolic arc above its chord at points corresponding to said output terminals;

a first selector for deriving an output signal from a selected output terminal of one bridge; a second selector for deriving a second output signal from a selected output terminal of said other bridge; means responsive to derivatives of said output signals for generating a representation of the direction of the normal to the curve defined by the signals set up at the output terminals of said bridges; means responsive to the second transformers of said bridges for deriving an additional lift signal; means for resolving said additional lift signal from said normal direction to derive two signals representing components of said lift signal in the two co-ordinate directions; means for injecting predetermined fractions of one component signal into said conductive connections of the corresponding one of said bridges; means for injecting predetermined fractions of the other component signal into said conductive connections of the other bridge, said fractions being predetermined to cause the resultant signals set up at the output terminals of said bridges to represent co-ordinate values of relatively close points on a circular arc.

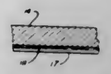
3,021,076
RAIL ANCHORS
Charles A. Finch, Girard, Pa., assignor to True Temper Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 19, 1957, Ser. No. 703,962
6 Claims. (Cl. 238—321)



5. A retainer bar for a two-piece rail anchor of the type comprising a channel-shaped clamp having a pair of laterally interspaced upstanding arms rearwardly and upwardly notched from their forward edges to afford corresponding pairs of upper and lower rail base flange engaging jaws and an intermediate web interconnecting the lower portions of said arms, said retainer bar having superposed relatively longer upper and shorter lower spring arms, the said arms being joined by an intermediate curved connector portion, said connector portion being more sharply curved adjacent said upper arm and progressively flattened in the direction of the relatively shorter lower spring arm, the more sharply curved portion of said connector portion affording a striking area for driving said rail anchor, said striking portion adapted to uncoil when struck to more nearly approximate the curve of said progressively flattened portion, the lower arm throughout the greater part of its length being disposable between said clamp arms, said lower arm having an outer free end parallel to and in abutting relationship with a portion of the upper surface of said web, said free end adapted to engage the bottom surface of said longer, upper spring arm, the upper arm having a substantial portion of its length extending forwardly beyond the forward portion of the clamp arms and having a hook end adapted to be driven onto the rail base flange opposite the flange on which the clamp member is seated.

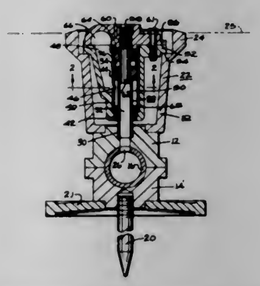
3,021,077
ELECTROSTATIC COATING APPARATUS
William D. Gauthier, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana
Filed Mar. 20, 1956, Ser. No. 572,718
10 Claims. (Cl. 239—15)

10. In apparatus for electrostatically spray-coating a surface with discrete particles of liquid coating material, an atomizing device, comprising: an atomizing member terminating in a peripheral edge, including an electrically conducting layer having a predetermined multimegohm per square electrical resistivity and a substantially electrically insulating layer in contact with the electrically conducting layer; means operatively associated with said electrically conducting layer for supplying an electric current to said electrically conducting



layer at a point remote from said peripheral edge sufficient to establish between said peripheral edge and the surface being coated an electrostatic field having an average potential gradient of at least several thousand volts per inch; and means operatively associated with one of said layers for supplying liquid coating material thereto for flow thereover to said peripheral edge for atomization therefrom.

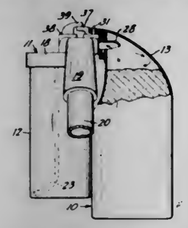
3,021,078
IRRIGATION SYSTEM
Claude H. Nickell, Dearborn, Mich., assignor of fifty percent to Peninsular Distributing Company, Detroit, Mich.
Filed Mar. 5, 1959, Ser. No. 797,539
6 Claims. (Cl. 239—97)



6. A water sprinkler to spray a square area comprising a sleeve having a plurality of angularly related supply passages connected circumferentially by grooves of varying contour, a rotary hub having a differently numbered plurality of angularly related discharge passages in axial alignment with the supply passages, providing a separate discharge chamber in the hub in communication with each of the plurality of fluid supply passages, providing angularly related outlet ports from the discharge chambers to exert on the hub a rotational reaction force to rotate the hub and manually adjustable means to control the axial alignment of the discharge passages relative to the supply passages.

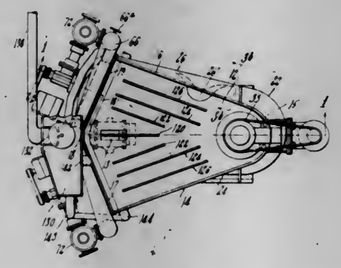
3,021,079
APPARATUS FOR APPLYING FLOCK
Cedric C. Sovia, Forest Lake, Minn., and Henry Papp, Santa Clara, Calif., assignors, by mesne assignments, to General Mills, Inc., Minneapolis, Minn., a corporation of Delaware
Filed Jan. 9, 1959, Ser. No. 785,945
8 Claims. (Cl. 239—306)

1. A hand-supported, finely divided fibrous materials applicator gun comprising, a liquid container, a conduit mounted on the exterior of said container and adapted to be connected to a source of a rapid flow of air, a branch conduit connected in communicating relation with said air conduit to receive a rapid flow of air therefrom, said branch conduit having a discharge end portion, a tube of relatively small bore extending from the interior of said container into said branch conduit and terminating at the discharge end portion thereof and directed outwardly therefrom whereby the liquid in said container will be drawn outwardly through said tube and discharged in a fine spray flow longitudinally of said branch conduit when such a rapid flow of air flows therethrough, a material-conveying branch conduit connected in communicating relation with said air conduit to receive a rapid flow of air therefrom and having a terminal portion disposed adjacent the discharge end portion of said first mentioned branch conduit and through which the flow of air is dis-



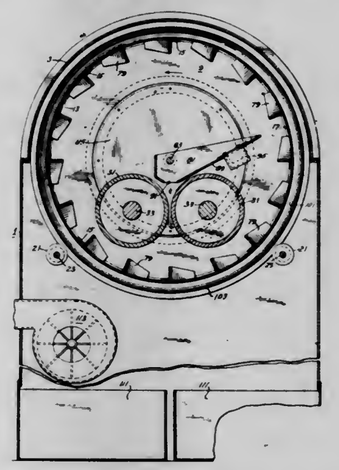
charged and directed in converging relation with the flow of liquid spray from said first mentioned branch conduit, a receptacle containing fibrous materials connected to said material-conveying branch conduit in communicating relation with the interior thereof to permit a portion of the flow of air through said material-conveying branch conduit to pass through said receptacle and thereby entrain a portion of the contents of said receptacle and convey the same to the terminal portion of said material-conveying branch conduit, whereby an airborne flow of such materials will be discharged from said terminal portion of said branch conduit in an unconfined flow into an unconfined flow of liquid spray from the discharge end portion of said first mentioned branch conduit.

3,021,080
PULPER
Merle P. Chaplin, South Portland, Maine, assignor, by mesne assignments, to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 17, 1959, Ser. No. 799,964
1 Claim. (Cl. 241—69)



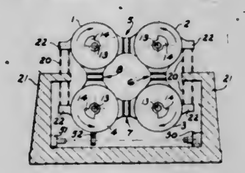
A pulper comprising a tank adapted to contain a mixture of liquid and fibrous material to be pulped, said tank having a bottom wall, a side wall providing a horizontal cross section throughout the major portion of its length in the form of an acute V with a circularly rounded apex and generally straight sides diverging at an angle of about 40 degrees and of a length about three times the radius of said circular apex, with the portion of said side wall adjacent the bottom wall being displaced outwardly in the general form of a volute from a point adjacent the junction of said circular apex and said side around said apex to a maximum of about one and one-half the radius of said circular apex and thereafter at a decreasing distance along the other side to merge therewith adjacent the end thereof, and an end wall extending between the ends of said side wall providing a pair of flat screen portions in the form of a shallow V of about 140 degrees with apex outward, with said flat screen portions being of about twice the radius of said circular apex, a rotatable screw feeding device extending downwardly into said tank generally concentric with the axis of said circular apex to feed a stream of mixture downwardly, an impactor disk within the volute of said tank and having a radius of about half the circular radius of said apex subjacent to and coaxial with the screw feeding device and rotatable independently thereof, and means for rotating the feeding device and the impactor disk with said impactor disk rotating at high speed in the direction of the increasing radial spacing of the volute portion of the tank whereby the fibrous material is disintegrated and the mixture in the tank is caused to circulate past the end wall screen portions of said tank for selective removal of fibers therefrom.

3,021,081
FLUX GRINDING APPARATUS
Forest Leader, Oakland, Calif., assignor to L & B Welding Equipment, Inc., a corporation of California
Filed Apr. 18, 1960, Ser. No. 22,797
3 Claims. (Cl. 241—91)



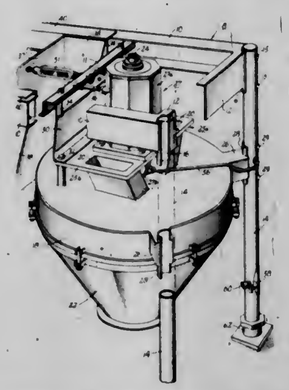
2. Welding flux grinding apparatus comprising a cylindrical screen, means rotatably supporting said screen with its longitudinal axis horizontal, means for rotating said cylindrical screen about its axis, means within said cylindrical screen for grinding flux and dropping the same onto said screen for passing flux particles up to the size of said screen openings and retain particles of larger size, and means for lifting and feeding said larger size particles to said grinding means, said means including a plurality of pockets disposed at spaced intervals about the inner surface of said screen, and a hopper supported in position to receive the particles discharged from said pockets and guide the same to said grinding means, and a magnet in the path of movement of such particles to attract and hold magnetic material mixed in with such particles.

3,021,082
VIBRATORY BALL MILL SYSTEM
Ralph Major Edward Sullivan, Bayswater, London, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Jan. 21, 1960, Ser. No. 3,759
Claims priority, application Great Britain Jan. 22, 1959
5 Claims. (Cl. 241—175)



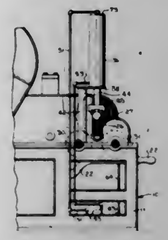
1. A vibration ball mill comprising four containers symmetrically arranged at equal spacings and adapted to carry grinding elements and a charge of material to be ground; a primary suspension unit interconnecting each pair of adjacent containers and tuned at least approximately to resonance at the frequency which induces a condition of fluidization of the mass of grinding elements in each container, said primary suspension unit consisting of leaf springs coupled in series and interconnecting each pair of adjacent containers; an exciter for exciting each container in at least two mutually inclined directions, the excitation of each pair of adjacent containers being in anti-phase along one common direction; and a secondary suspension system having a lower natural frequency of vibration than that of the primary suspension.

3,021,083
HEAVY DUTY CENTRIFUGAL PROCESSING APPARATUS
Kurt H. Conley, Hamden, Conn., assignor, by mesne assignments, to Entoleter, Inc., a corporation of Delaware
Filed June 25, 1958, Ser. No. 744,602
10 Claims. (Cl. 241—275)



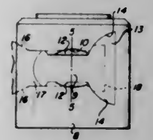
2. In rotary processing equipment, in combination, a frame provided with a horizontal bracing member running crosswise of said frame and secured thereto, a plurality of supporting legs secured to said frame, a rotor housing depending from said frame and adjacent some of said legs, a rotor adapted to be power driven within said housing, a shaft connected to said rotor, a bearing assembly rotatably supporting said shaft, a horizontal plate joining said bearing assembly to said housing, a vertical support plate adjustable in a vertical direction and fixed at one end to said horizontal plate and to said housing and at its other end secured adjustably to said bracing member, and means securing said housing to two of said supporting legs, whereby said shaft may be positionally adjusted relative to said frame.

3,021,084
APPARATUS FOR CONTROLLING THE THICKNESS OF TEXTILE LAPS
John R. Long, Hickory, N.C., assignor to Granite Machine Company, Hickory, N.C., a corporation of North Carolina
Continuation of application Ser. No. 327,796, Dec. 24, 1952. This application Mar. 19, 1958, Ser. No. 723,080
4 Claims. (Cl. 242—55.1)



1. In a lap forming machine having a frame, a pair of supporting rollers journaled in the frame, a rotatable lap pin onto which a lap of textile fibers is wound into a compressed roll supported on said rollers, and a pair of head blocks disposed above and engageable with opposite ends of the lap roll; means for maintaining uniform pressure on the lap roll throughout its width and diameter and throughout the length of the lap of textile fibers forming the roll comprising a pair of double-acting cylinders spaced above the respective head blocks and being fixedly supported relative to said frame, a piston in each cylinder, a piston rod fixed to each piston and extending downwardly and being attached to the respective head block, first and second conduit means connected to the respective upper and lower ends of said cylinders and leading from a source of fluid pressure, a control valve interposed in said conduit means for selectively directing fluid pressure to either of said first and second conduit means, and a pressure regulator valve in said conduit means.

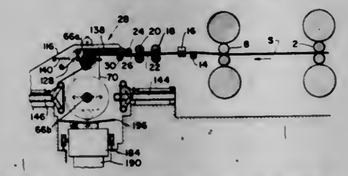
3,021,085
WEB WIND UP HUB
Lester P. Freer, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Mar. 9, 1959, Ser. No. 797,976
2 Claims. (Cl. 242—74)



1. A unitary wind-up hub for receiving a flexible web, one end of which has a necked-down portion terminating in a transverse flap which is wider than the necked-down portion and of less width than the main portion of the web, said flap having shoulders merging with the edges of said necked-down portion, said hub comprising: a cylindrical portion having a substantially T-shaped recess

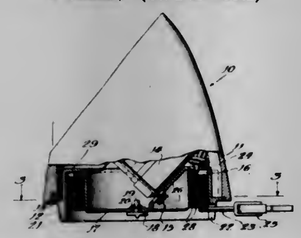
in which the part of the cylindrical portion forming the bottom of the recess extends substantially along a chord of the cylindrical portion, the narrow portion of said recess being at least as wide as the necked-down portion of the web end and the wide portion of said recess being at least as wide as said transverse flap; a pair of spaced-apart walls provided by said cylindrical portion transverse to the bottom of said recess and connecting the outer periphery of said cylindrical portion to the bottom of said recess and further defining the outer boundary of said wide portion and providing stop means for said shoulders of said flap; and a pair of spaced apart, substantially parallel peripheral ribs provided by said cylindrical portion in overhanging relation with the narrow portion of said recess and having one end of each rib merging with one of said walls, said ribs defining an entrance slot for said recess of less width than the necked-down portion of said web.

3,021,086
METHOD AND APPARATUS FOR COILING STRIP
Alfred Teplitz, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 3, 1959, Ser. No. 790,886
10 Claims. (Cl. 242—80)



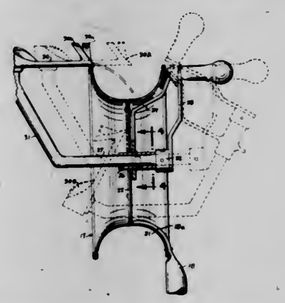
1. Apparatus for coiling strip comprising a shear in the path of travel of said strip, a belt wrapper aligned with the path of travel of said strip, means for directing the leading end of said strip in substantially a straight line from said shear to said belt wrapper, a pair of rotatable reel blocks, a rotatable yoke for supporting said reel blocks in spaced apart relationship, means for rotating said yoke to selectively position said reel blocks in cooperative relationship with said belt wrapper to receive an end of said strip, the reel block in cooperative relationship with said belt wrapper being movable to a position remote from said belt wrapper after several convolutions of strip have been wrapped therearound, and means for rotating each of said reel blocks independently of the rotation of the other reel block, said last named means being operative regardless of the position of its associated reel block.

3,021,087
CORD STORAGE DEVICE
Robert W. Rudolph, Bellwood, Ill., assignor to Jefferson Electric Company, Inc., a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 803,951
2 Claims. (Cl. 242—85.1)



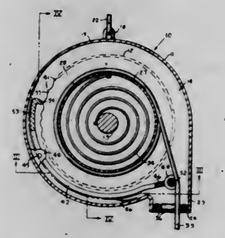
1. In an electrical appliance the combination of a base member having a central depressed portion, a downwardly facing annular cavity surrounding the same, and supporting means projecting downwardly below the level of said central depressed portion and located exteriorly of said annular cavity, a guide member rotatably mounted on said central depressed portion and beneath the same, and having at least two outer portions extending beneath said annular cavity, and an attachment cord for said electrical applince extending downwrdly through said base member into said annular cavity, a portion of said attachment cord being disposed in coiled relationship within said annular cavity, and said guide member being concentrically mounted with respect to said annular cavity so that said outer portions thereof will always overlap said annular cavity to engage the convolutions of said cord in supporting relationship, said supporting means serving to maintain said guide member clear of a supporting surface.

3,021,088
WATER SKI TOW LINE REEL
Harvey E. Bennett, 11240 10th S., Seattle, Wash.
Filed Apr. 18, 1960, Ser. No. 22,794
9 Claims. (Cl. 242—86.8)



1. A reel assembly for a water ski tow line comprising, a non-rotary reel adapted to be mounted on a boat, a bracket hinged to said reel and carrying a journal, said bracket being swingable to and from an active position whereat said journal is located at the center of the reel, and line winding means mounted in said journal for winding a line about the reel when said bracket is in said active position.

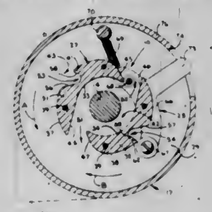
3,021,089
SAFETY ARM FOR CORD REEL
Rodger F. Becker, Kalamazoo, Mich., assignor to Aero-Motive Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
Filed Jan. 4, 1960, Ser. No. 88
4 Claims. (Cl. 242—107.3)



1. A safety device, comprising: a cord reel including a casing having a peripheral wall and a tangentially disposed outlet opening in the peripheral wall, and a spring-

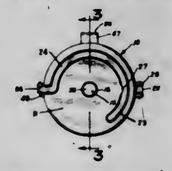
biased drum rotatably supported in said casing; an arcuate brake arm substantially concentrically disposed within said casing between said wall and said drum; pivot means on said wall pivotally secured to said arm between the ends thereof, one end of said arm extending across said outlet opening; a cord secured at one end to said drum and engageable with said one end of said arm when said cord is pulled outwardly through said opening; means defining an irregular surface along the peripheral edge of said drum; drag means on the other end of said brake arm engageable with said irregular surface; resilient means associated with said arm and said casing for resiliently urging said drag means away from said irregular surface, engagement between said drag means and said irregular surface being effected to oppose rotation of said drum in response to an abnormal outward movement of said cord past said one end of said arm.

3,021,090
SIGNAL LOCK
Rodger F. Becker, Kalamazoo, Mich., assignor to Aero-Motive Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
Filed June 30, 1958, Ser. No. 745,365
8 Claims. (Cl. 242—107.7)



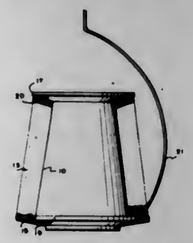
1. In a ratchet structure for a cord reel rotatably supported upon a shaft and having spring means urging rotation of said reel in one direction with respect to said shaft, the combination comprising: means defining inner and outer circular paths concentric with each other and with said shaft; a follower alternatively positionable within said inner and outer paths; one of said follower and said means defining said inner and outer paths being mounted on said reel and the other being fixed with respect to said shaft; stop means along said outer path engageable with said follower when same is substantially within said outer path to prevent relative movement between said follower and said means defining said inner and outer paths in said one rotational direction; a flag movable in response to movement of said follower between said inner path and said outer path to indicate the path in which said follower is located.

3,021,091
PORTABLE CLOTHESLINE
Daisy Shadoan Swanson, 3701 48th Ave. S., Minneapolis, Minn.
Filed Jan. 29, 1958, Ser. No. 711,832
1 Claim. (Cl. 242—107)



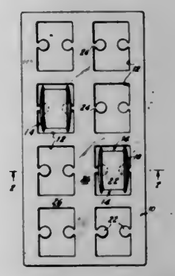
A portable clothesline apparatus having a housing, means to permit extension and automatic retracting of a clothesline out from and into said housing, and foldable hook means attached to said housing and to said line for securing the said housing and clothesline in position for hanging laundered articles on said line, the opposite faces of said housing being provided with a generally arcuate recess, one of said foldable hook means being hinged to said housing and adapted to be folded into one of said recesses and the other hook means secured to said clothesline being adapted to be received in the other of said recesses when said clothesline is fully retracted into the housing.

3,021,092
TAPERED SPOOL
Robert L. Whearley, Fort Wayne, Ind., assignor, by mesne assignments, to Rea Magnet Wire Company, Inc., Fort Wayne, Ind., a corporation of Delaware
Filed Feb. 20, 1958, Ser. No. 716,316
3 Claims. (Cl. 242—128)



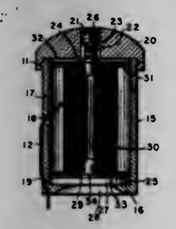
2. A spool having a central tapered curvilinear body, a base plate on the body and extending beyond the inclined surface of the tapered body at the larger end of the tapered body, and a cap plate mounted on the other and smaller end of the tapered body, the extension of the plates beyond the tapered body being equal, the faces of the plates fronting on the said tapered body being in parallel relation, and the lateral angle of said tapered body being greater than about 80 degrees and less than about 85 degrees.

3,021,093
HOLDER FOR SEWING MACHINE BOBBINS, AND THE LIKE
Joseph Halpern, 2760 Grand Concourse, New York, N.Y.
Filed Aug. 13, 1959, Ser. No. 833,519
2 Claims. (Cl. 242—134)



1. A device for holding a plurality of spool-shaped bodies each having a core and an axially-extending opening in each end of said core, said device comprising a sheet of material having a plurality of openings formed therein arranged in at least one row, each of said openings having a pair of parallel edges spaced apart a distance greater than the length of said body core, each of said parallel edges having a resiliently flexible projection extending therefrom in register with the projection of the other edge, said projections spaced apart a distance less than the length of said core and adapted to resiliently enter said core openings to support said body between them, said sheet material having extensions normal thereto adapted to support same in elevated relation on a supporting surface.

3,021,094
STRAND DISPENSING AND BINDING TOOL
Myer Waranch, 2919 Rosalind Ave., Baltimore, Md.
Filed Feb. 26, 1958, Ser. No. 717,734
4 Claims. (Cl. 242—137.1)



1. A strand dispensing and binding tool, comprising a substantially cylindrical casing, the said casing having a top end and a bottom end, a cover for the said top end of the said casing the bottom end of the said casing having an annular rim integrally mounted on the inside diameter of the said casing and forming an opening in the said bottom of the said casing, a reel within the said casing, the said reel being a container for binding material, a first reel support mounted in the said cover of the said casing, the said first reel support rotatably and slidably supporting one end of the said reel, a second reel support in the said bottom end of the said casing, the said second reel support rotatably and slidably supporting the other end of the said reel, the said second reel support retained within the said bottom end of the said casing by the said annular rim of the said cylindrical casing, the said cylindrical casing having guiding and aligning portions for slidably receiving the said binding material from the reel and dispensing the said binding material from within the said annular rim in the said bottom end of the said cylindrical casing.

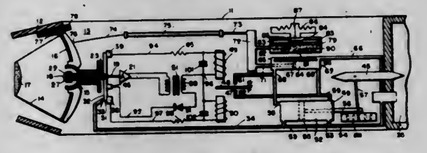
3,021,095
PROPULSION UNIT
Wendell F. Moore, Youngstown, N.Y., assignor, by mesne assignments, to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware
Filed June 10, 1960, Ser. No. 35,315
5 Claims. (Cl. 244—4)

1. A propulsion unit for an individual such as a foot soldier comprising a first assembly adapted to be attached to the individual's torso for carrying the weightier components of the unit and a second assembly adapted to be carried by the user's shoulders and including propulsion nozzle means, said first assembly including a harness of corset-like form and having a back panel, and propellant supply and discharge means attached to said back panel, said second assembly including a gas generator having a pair of hot gas tubes emanating therefrom and extending generally in laterally opposite directions from such gas generator and each having a downturned end portion mounting a nozzle, a shoulder engaging ring fixed to each gas tube and projecting forwardly therefrom for engagement with the user's shoulders and thereabout, and manual control means carried by said rings for controlling the deflection of said nozzles relative to the hot gas tubes and for controlling the supply of propellant to



said gas generator, said propellant supply and discharge means being connected to said gas generator.

3,021,096
INFRARED GUIDANCE SYSTEM
Dale H. De Mott, Los Angeles, Calif., assignor to North American Aviation, Inc.
Filed Dec. 7, 1956, Ser. No. 627,028
21 Claims. (Cl. 244—14)

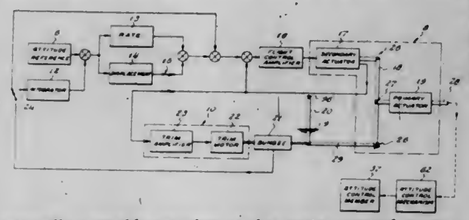


17. A movable dirigible object comprising a body, a receiver directably mounted with respect to said body, said receiver being responsive to an object radiating an amount of energy different than its background, said receiver further comprising a rotatable reticle adapted to modulate the energy received by said receiver according to the deviation of said object from the line of sight of said receiver, aerodynamic control surface means connected to said body, first motive means for controlling said control surfaces, said motive means connected to be responsive to the output of said receiver and to control said control surface means so as to minimize deviation of said radiating object from the line of sight of said receiver, second motive means connected to be responsive to the output of said receiver and to control the angular orientation of said receiver with respect to said body, the response of said second motive means being slower than the response of said first motive means, means for controlling said first and second motive means, and distributor means for selectively connecting the output of said receiver to said control means.

3,021,097
AUTOMATIC PILOT FOR DIRIGIBLE CRAFT
Herbert Hecht, Wantagh, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed June 28, 1956, Ser. No. 594,492
29 Claims. (Cl. 244—77)

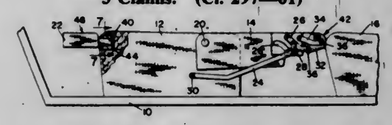
23. A control system for aircraft for controlling the attitude control mechanism of the craft comprising means including attitude reference means for providing a control signal in accordance with the rate of craft deviation from a predetermined attitude, actuator means including

a primary actuator for controlling said attitude control mechanism and a secondary actuator for controlling said primary actuator, a manually operable member coupled to said primary actuator for controlling the attitude of the craft in accordance with the magnitude and direction of the force applied to said member, resiliently centering means, a portion of which is resiliently coupled to said manually operable member including a signal generating means for providing a control signal in accordance with the magnitude and direction of the force applied to said



manually operable member, and actuator control means responsive to the signals from said attitude reference means and from said resiliently coupled means for controlling the secondary actuator in accordance with a desired rate of change of craft attitude, said secondary actuator including means for supplying a feedback signal as a function of secondary actuator position to said actuator control means whereby the craft is controlled to a rate of attitude change proportional to the force applied to the manually operable member.

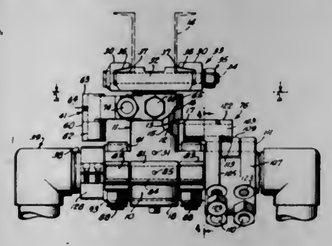
3,021,098
RECLINING VEHICLE SEAT CONSTRUCTION
Albert M. Spound, Wellesley Hills, Mass.
(% Charlton Co., Fitchburg, Mass.)
Filed Sept. 26, 1960, Ser. No. 58,395
3 Claims. (Cl. 297—61)



1. A device of the class described comprising a seat, a backrest pivoted thereon providing for motion of the backrest from a generally upright sitting condition to a rearwardly inclined position, a headrest on said backrest adapted for movement from a substantially concealed position in the sitting position of the backrest to an advanced and raised position acting as a headrest when the backrest is inclined, said headrest being removable, and means at the forward portion of said seat receiving said headrest in extension of said seat to form a footrest with the backrest fully reclined.

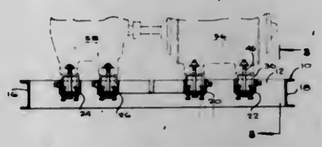
3,021,099
UNIVERSAL HYDRAULIC DRILL POSITIONER
Donald F. Samhammer and Earl B. Lear, Utica, N.Y., assignors to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 4, 1958, Ser. No. 771,862
14 Claims. (Cl. 248—16)

2. A device for effecting angular positioning of a drill slide guide, comprising in combination with a U-boom having a pair of laterally spaced supporting arms and a non-rotatable shaft bridging the ends of the arms, a casting mounted upon the shaft for rotation around the latter between the arms of the U-boom, the shaft defining a horizontal axis for the casting, a trunnion rotatable in the casting and having an axis of rotation normal to the said horizontal axis, the trunnion integrally carrying externally of the casting a saddle adapted to support a drill slide guide in a plane at right angles to the said normal axis, a dump crank having a mounting portion received upon the shaft and adjustable around the shaft to a plurality of circumferentially spaced selectable positions, releasable fastening means fixing the mounting portion to the shaft in a selected one of said positions, and the dump crank having an arm portion extending from the mounting portion at right angles to the shaft, a first hydraulic cylinder pivoted upon the casting on an axis parallel to the said horizontal axis, a piston hydraulically workable in the cylinder and having a piston rod, a crank pin at the end of the latter having a pivot connection with the outer end of the arm of the dump crank for effecting turning of the casting about the shaft relative to the dump



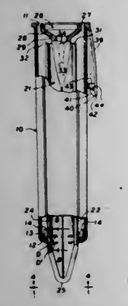
crank upon working of the piston, a swing crank having a mounting portion received upon the trunnion externally of the casting and adjustable around the trunnion to a plurality of circumferentially spaced selectable positions, releasable fastening means fixing the latter mounting portion to the trunnion in a selected one of said positions, and the swing crank having an arm portion extending from the related mounting portion at right angles to the trunnion, a second hydraulic cylinder pivoted upon the casting on an axis parallel to the said normal axis, a piston hydraulically workable in the second cylinder having a piston rod, and a crankpin at the end of the latter having a pivot connection with the outer end of the arm of the swing crank for effecting turning of the trunnion on its normal axis relative to the casting upon working of the piston in the second cylinder.

3,021,100
SUPPORT
Robert J. Verhota, 1116 Badger St., La Crosse, Wis.
Filed Sept. 2, 1960, Ser. No. 53,675
3 Claims. (Cl. 248—23)



3. In a support, a frame including a pair of spaced side pieces, at least two slats arranged in parallel spaced relation positioned transversely of said side pieces intermediate the ends thereof and having their ends fixedly attached to said side pieces, a plurality of mounting pads each including a pair of laterally spaced upright side members, a top piece extending over the upper ends of said side members, and a horizontally disposed flange projecting inwardly from the lower end of each of said side members, the free ends of the flanges of each pad being spaced apart to form an opening for a mounting bolt, at least two of said pads being superimposed upon each of said slats, there being a closed slot in each of said slats adjacent each pad, a bolt including a shank and a head on one end of the shank disposed with the head exteriorly of and below each of said slots and having the shank extending through said slot, through the opening between the flanges of the adjacent pad, and through a hole provided in the top member of said pad, and means operatively connected to the portion of each slat adjacent each pad and engageable with the flanges of said pad for effecting limited up and down movement of said pad.

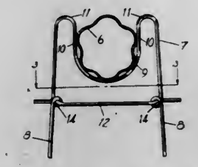
3,021,101
FISHING ROD HOLDER
Francis J. Gliebe, Jamaica, N.Y.
(1154 Myrtle Ave., Brooklyn 21, N.Y.)
Filed July 31, 1958, Ser. No. 752,278
2 Claims. (Cl. 248—44)



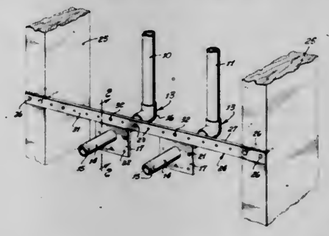
1. A collapsible holder for fishing rods comprising a hollow, elongated socket member arranged to receive the butt of a fishing rod and a stake member arranged to be selectively secured in collapsed position within said socket member for storage or in extended position relative to said socket member, said socket member having an open end through which said butt is inserted and a partially closed end having portions outlining a plurality of angularly disposed slots, the stake having a plurality of longitudinally extended, angularly disposed walls corresponding in cross section to, and disposed within, said slots, a head portion at one end of said stake of a size to cooperate with said partially closed end to prevent endwise removal of said stake through said end, a reduced clearance portion formed in said walls adjacent said head arranged to enable said angularly disposed walls to clear said slots in the extended position of said stake, whereby said stake may be rotated relative to said socket, a locking lug defined by the upper terminal edge of at least one of said walls adjacent said clearance portion, and a resilient cam member formed on the outer face of said partially open end, said cam member including in trailing position relative thereto, a stop shoulder portion and a seating recess portion, said cam member being arranged to cooperate with said lug when said stake is rotated with said clearance portion in registry with said slots to seat said lug against said shoulder and in said recess portion, thereby maintaining said stake in extended position.

3,021,102
SUPPORT FOR DOWNSPOUTS, DISCHARGE CONDUITS AND THE LIKE
Stanley G. Kuempel, 728 E. Colfax St., Hastings, Mich.
Filed Aug. 4, 1958, Ser. No. 753,057
7 Claims. (Cl. 248—49)

1. A discharge conduit assembly for a downspout of an eavestrough and the like having a laterally turned terminal at its lower end, comprising a discharge conduit releasably telescopingly and supportedly engageable with such a terminal, a conduit support member disposed adjacent the outer end of the conduit and formed of wire and comprising laterally spaced legs connected at their upper ends by a top cross piece integral therewith and having a downwardly offset upwardly facing U-shaped seat in which said conduit is disposed and springably retained, and a combined ground engaging support element and leg cross rod disposed below said seat and in upwardly spaced relation to the lower ends of the legs, said cross rod having offsets therein spaced from its ends providing leg engaging shoulders supportingly engaging the inner sides of the legs, the legs having inwardly projecting coils therein retainingly embracing the said offsets, the legs below said cross rod constituting ground engaging prongs.



3,021,103
PLUMBING ASSEMBLY
Peter J. Beyerle, 2880 Wightman, San Diego, Calif.
Filed July 27, 1959, Ser. No. 829,568
5 Claims. (Cl. 248—57)



1. In a plumbing assembly: a supporting strip including a leg portion and a flange portion extending from said leg portion at a substantial angle thereto, said leg portion having a longitudinal row of equidistant holes, one or more holes at the end portions of said leg portion being adapted to receive fastening elements to secure said strip to the structural members of a building; a plumbing fitting combination including a tubular portion and a plate portion secured thereto, said plate portion having an edge and containing openings adjacent to said edge and spaced from each other by a predetermined distance such that the placing of such plate portion against said leg portion and with its edge contiguous said flange portion will enable an opening to be aligned with a hole in said leg portion; and means passing into said leg portion hole and an aligned opening to secure said plate portion to said strip with said edge contiguous said flange portion.

3,021,104
CASING BRACKET
Merrill E. Keller, 1426 SE. Main, Roseburg, Oreg.
Filed May 21, 1958, Ser. No. 736,768
2 Claims. (Cl. 248—222)

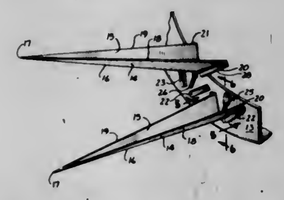
1. A self-contained bracket for mounting in an inside corner defined by a building wall and the outer edge of

a window casing mounted thereon, said bracket comprising an invertible, reversible angle bar insertable in the corner and including apertured flanges, either of said flanges being engageable with the casing for attachment thereto with the other of said flanges in face-abutting engagement with the wall, an arm mounted on an inner side of one of the flanges at right angles thereto and extending therefrom in spaced parallelism to the inner side of the other flange, whereby said arm extends at right angles to the wall when said one flange is engaged



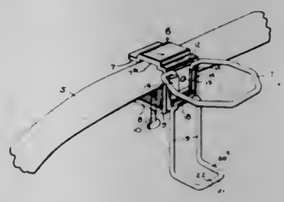
therewith and parallels the wall when said one flange is attached to the casing, a vertical spindle fixed on the arm, and a hook mounted for swinging movement on said spindle, said spindle being invertible and including duplicate tapered end portions, said hook comprising a yoke on its inner end, said yoke including an apertured end portion journaled and seated on the upper end portion of the spindle and further including a fork on its other end straddling and abutting the lower end portion of said spindle.

3,021,105
FLANGE TO BASE MOUNTING STRUCTURE
Sidney Swislow, Glencoe, Ill., assignor to Harwood Manufacturing Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 17, 1959, Ser. No. 860,153
5 Claims. (Cl. 248—223)



1. Mounting structure comprising a base element and an attachable element, said attachable element comprising a front portion, a pair of flexible side portions extending angularly from said front portion, said side portions being flexible to be compressible to reduce the angular relation therebetween, a rear edge on each of said flexible side portions, and a pair of co-planar flanges each extending in opposite directions from a respective one of said flexible side portions at one end of said attachable element between the front portion and a respective one of said rear edges, said base element comprising a wall portion, a pair of slideways on said wall portion, each of said slideways comprising means for slidably receiving a respective one of said flanges slidably inserted from a first direction, means for limiting sliding movement of said received flanges through the slideways in a second direction opposite said first direction and means for compressing said flexible side portions, said front portion extending outwardly from between the slideways when the flanges are in the slideways and said flexible side portions compressed by said compressing means; and yieldable means attached to the wall portion between the slideways, said front portion being disposed to one side of said yieldable means in said second direction therefrom, a portion of said yieldable means normally extending outwardly from the wall portion and in said second direction and including means for engaging said attachable element behind said front portion thereof when the latter is disposed and its flexible sides compressed between the slideways to restrict a reactive movement in said first direction urged by said compressed flexible side portions and to prevent sliding movement of the attachable element in said first direction and thereby prevent sliding withdrawal of said received flanges from the slideways.

3,021,106
UTILITY CUP HOLDER FOR ATTACHMENT TO ALUMINUM CHAIRS OR THE LIKE
Joseph Kramer, 6717 SW. 27th Court, West Hollywood, Fla.
Filed Aug. 2, 1960, Ser. No. 47,045
1 Claim. (Cl. 248—226)

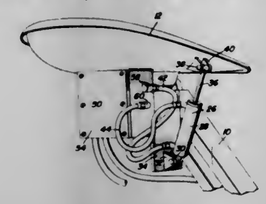


A receptacle support for detachable connection to the arms of chairs or the like that comprises a supporting bracket of U-shape that is adapted to have a connection with a tubular arm of the chair or the like, the bracket having a set screw whereby to support the bracket against vertical rotative movement upon the tubular arm of chairs or the like, the bracket having an outer wall section that is vertically disposed, a connector plate pivotally connected upon the wall, the opposite vertical edges of the plate being bent upon themselves to form vertical channels, the channels being spaced apart and in opposed relation, a receptacle supporting frame that comprises an open relatively large head portion and a horizontally disposed foot portion, the frame being formed of a continuous section of wire and with the head portion and the foot portion being connected by leg portions, the frame and the leg portions being yieldable toward and from each other whereby the leg portions may be engaged within the channels, the said connector plate and its supported receptacle frame being rockable to dispose a receptacle that is supported within the frame in a vertical manner when the arms of the chair are downwardly inclined, the said leg portions being tied together by a strap to limit the outward flexing of the legs beyond the engagement of the legs into the channels, the said strap permitting the inward flexing of the legs toward each other for disengaging the frame from the bracket.

3,021,107
SELF LEVELING TRACTOR AND IMPLEMENT SEAT
Kenneth C. Salo, Aura, County of Baraga, Mich.
Filed Dec. 18, 1958, Ser. No. 781,271
10 Claims. (Cl. 248—376)

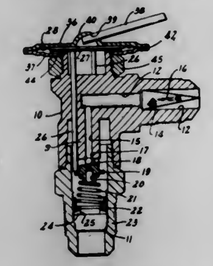
1. A self leveling seat for a seat supporting structure comprising a pivot to which the seat is secured, a cylinder connected to said seat and said structure, and means responsive to non-vibratory tilting of said structure and to the exclusion of inertia and unidirectional accelerating forces for actuating said cylinder in a direction to pivotally move said seat in a direction to restore the seat to a predetermined position, said cylinder actuating means in-

cluding a multi-position valve having a valve core, means for connecting said valve to a source of fluid under



pressure, pressure lines connecting said valve with opposite ends of said cylinder.

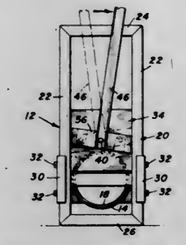
3,021,108
REFRIGERANT EXPANSION VALVES
Thomas Edmund Noakes, Detroit, Mich., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 12, 1957, Ser. No. 652,605
1 Claim. (Cl. 251—61)



An expansion valve comprising a housing internally contoured to define an inlet passage, an outlet passage, and a port therebetween; a port-closing element seatable against said port; a casing for pressure fluid positioned on the housing in axial alignment with said port; said casing comprising two relatively flat disks of substantial thickness and rigidity having their rims offset toward one another; a relatively thin flexible metal diaphragm having its rim positioned between the disk rims; a weld around the edges of said rims; and push-rod means between the diaphragm and port-closing element for transmitting diaphragm movement into movement of the port-closing element; the material for the diaphragm having a sufficiently greater coefficient of heat expansion than the disk material such that during the welding operation the diaphragm expands and contracts with the disk with little relative movement therebetween.

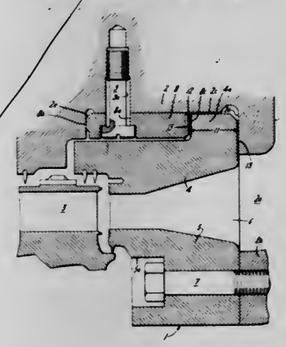
3,021,109
IRRIGATION VALVE
Emil J. Young and Lucile F. Young, both of P.O. Box 145, Garfield, N. Mex.
Filed Dec. 16, 1958, Ser. No. 780,815
5 Claims. (Cl. 251—204)

1. An irrigation valve comprising a pipe section having first and second ends, a trackway secured to said pipe section in alignment with said first end, said trackway being disposed in a plane disposed substantially parallel to said first end, a valve member slidably mounted in said trackway for movement between a pipe closing position and an open position, and an operator connected to said valve member for positioning said valve member, said operator including a handle, a plate fixedly secured to said handle, opposite ends of said plate being engaged for slidable movement in said trackway, means pivotally connecting a central part of said plate to said valve member, and cam means on said plate and said valve member urging said plate and said valve member apart upon



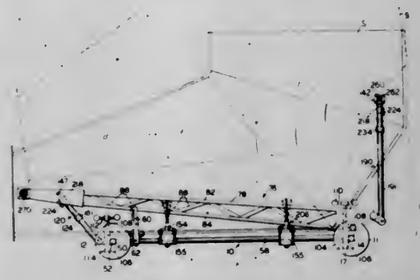
rotation of said plate relative to said valve member, said cam means including a pair of spaced recesses formed in said plate, each of said pair of recesses disposed on opposite sides of said central part and defining cam surfaces therein, and pins carried by said valve member engaged with said cam surfaces.

3,021,110
HIGH TEMPERATURE TURBINE NOZZLE RETAINING MEANS
Andrew W. Rankin and James W. Eberle, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Mar. 1, 1960, Ser. No. 12,175
6 Claims. (Cl. 253—78)



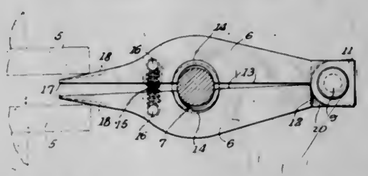
5. Nozzle locking means for a high temperature turbine nozzle or the like comprising a cylindrical shell defining a circumferential groove therein with opposed axially facing end walls, said shell also defining a radially inward axially facing circumferential flange, arcuate nozzle means arranged to be secured to said shell flange and including an outer circumferential radial flange extending into said shell groove adjacent one end wall thereof, and key means comprising a plurality of arcuate segments disposed in the shell circumferential groove between said nozzle means outer flange and the other shell groove end wall and defining a clearance gap therewith for ease of disassembly of the shell from the nozzle means at room temperatures, the linear coefficient of expansion of said key means being greater than that of the shell to a degree sufficient for the key means to close the clearance gap and exert a holding force on the nozzle outer flange at a preselected elevated temperature.

3,021,111
UNDERCARRIAGE FOR A SOUND SUPPRESSOR
Robert J. Emary, Grand Rapids, Mich., assignor to The Colson Corporation, Elyria, Ohio, a corporation
Filed Oct. 9, 1959, Ser. No. 845,421
9 Claims. (Cl. 254—2)



1. An undercarriage for a sound suppressor comprising a main frame, a sound suppressor support pivotally mounted to the rear portion of said main frame, a first pair of movable hoists pivotally mounted to the rear of said support, a second pair of movable hoists pivotally mounted to a front portion of said support and to said main frame, means on said first pair of hoists adapted to engage said sound suppressor, and means on a front portion of said support adapted to engage said sound suppressor.

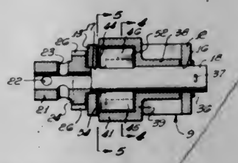
3,021,112
WEDGING TOOL
Michael L. Forman, 700 W. Bennett St., Compton, Calif.
Filed Nov. 9, 1959, Ser. No. 851,612
4 Claims. (Cl. 254—100)



1. A wedging tool comprising two hinge-connected wedge members having thin, tapered edges opposite their connection, a tapered screw seat, half in one member and half in the other, and extending along the seam between the members, and a tapered screw in said seat arranged parallel with the longitudinal axis of the hinge connection, said screw having an end larger diametrally than the large end of the seat, and spreading the thin edges of said wedge members apart when rotated to feed said large end into the seat.

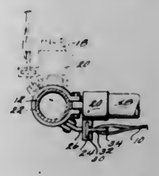
3,021,113
AUTOMOTIVE CABLE WINCH
Court J. Kinnison, Oakland, Calif., assignor to Western Piping & Engineering Co. Inc., a corporation
Filed Jan. 11, 1960, Ser. No. 1,461
2 Claims. (Cl. 254—165)

1. An automotive cable winch comprising a frame, a driving tube journalled near its opposite ends in said frame, a cable tube encompassing said driving tube and journalled thereon between said ends, a drum integral with said cable tube and disposed between said ends in surrounding relationship with said driving tube, an integral disc extending from said cable tube to said drum and forming an end abutment, an end wall extending from said drum toward said driving tube and forming another end abutment, a radial plate extending outwardly from said driving tube and disposed partially within said drum, a radial abutment extending between said disc and said end wall and extending inwardly from said drum into the circumferential path of said radial plate, a rubber block interposed between said disc and



said end wall and between said plate and said abutment within said drum and adapted to be deflected upon circumferential movement of said abutment toward said plate, and a radial face on said end wall extending radially inwardly from said drum into the circumferential path of said plate alongside said block and positioned to abut said plate after a predetermined circumferential deflection of said block.

3,021,114
VERTICALLY ADJUSTABLE FENCE
John F. O'Connell, 5422 Varnum St., Bladensburg, Md.
Filed Jan. 14, 1959, Ser. No. 786,752
6 Claims. (Cl. 256—24)

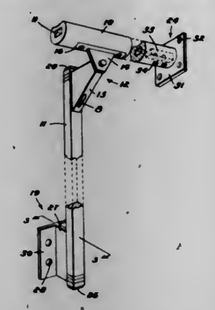


1. In a fence construction having spaced supporting posts and wire panels supported thereon at least one of which panels is vertically adjustable, the improvement comprising rails interconnecting the upper ends of adjacent posts to afford longitudinal rigidity to the fence, and post-mounted means having a slidable connection with the adjacent ends of the panel supporting the adjustable panel in offset spaced relation to its rail to enable the adjusting movement of the panel.

3,021,115
HAND RAILING SYSTEM
Norman W. Dake, 2334 Blake Blvd. SE., Cedar Rapids, Iowa
Filed July 3, 1958, Ser. No. 746,534
3 Claims. (Cl. 256—65)

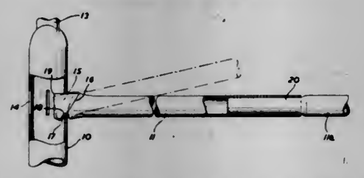
1. A railing system comprising a plurality of hollow handrail members each having a rectangular central opening extending longitudinally therethrough, each said handrail having attached thereto and being supported by a plurality of offset bracket means each comprising a spacer member extending transversely from the underside of said handrail, a transverse end terminating member rotatably positionable with respect to and mounted on said spacer member by a bracket securing bolt, said end member formed with a surface adapted to conform to the undersurface of said handrail and secured thereto by fastening means, a plurality of space separated hollow baluster posts, and means for securing each said post in a fixed position to define a balustrade contour, each said post provided with access holes through which said

bracket securing bolts may be received, each post closed top and bottom with cap terminating members, said terminating members adapted to have a portion thereof received within the hollow center opening in said post and including an extended tab-like portion which extends longitudinally within said post and adjacent at least the in-



side surface of the bracket mounting side of said post, and said tab-like portion including means to threadedly receive and secure at least one said bracket-securing bolt, whereby certain ones of said handrails may be secured to said posts in an offset and preselected angular relationship with respect thereto.

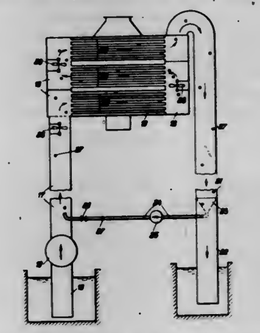
3,021,116
FENCE CONSTRUCTION
Robert Edward Querengesser, 73 Starlight Crescent, Richmond Hill, Ontario, Canada
Filed May 11, 1959, Ser. No. 812,544
4 Claims. (Cl. 256—72)



1. A fence comprising a post and a rail, said post having a substantially vertical slot, said rail having a flat terminal portion of a thickness slightly less than the lateral dimension of said slot, said terminal portion having a notch in one edge adjacent to the end thereof, the distance from the bottom of said notch to the opposite edge of the terminal portion being substantially the vertical dimension of said slot, whereby said terminal portion may be placed in said slot with said notch in engagement with the lower or upper edge of said slot, and when the rail is swung about said notch as a pivot said terminal portion will be locked in said post, said rail comprising at least two sections in separable telescoping engagement with each other.

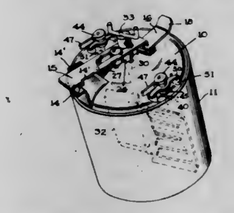
3,021,117
SELF-CLEANING HEAT-EXCHANGER
Josef Taprogge, Manteuffelstrasse 19, Duisburg, Germany
Filed July 23, 1957, Ser. No. 673,634
14 Claims. (Cl. 257—1)

1. An apparatus for self-cleaning the tubes of a heat exchanger having a plurality of tubes, an inlet conduit connected with said tubes for conducting a heat exchange fluid to said tubes, an outlet conduit connected with said tubes, a plurality of rubbing elements in said heat exchange fluid for circulation therewith through said inlet conduit, all of said tubes and said outlet conduit, said rubbing elements being made of elastic material having an average specific gravity about equal to that of said heat exchange fluid and of a free diameter at least as great as the internal diameter of said tubes to assure as great as possible a rubbing surface thereof in the cooling tubes and unobjectionable passage through the individual tubes by the pressure drop between the ends of the tubes, an intercepting device for said rubbing elements disposed in said outlet conduit to intercept said elements while affording free passage therethrough for said heat exchange fluid, and means connected with said intercepting device to conduct said rubbing elements from said intercepting



device to said inlet conduit to provide continuous circulation of said rubbing elements, said intercepting device including first sieve means in said outlet conduit to intercept said rubbing elements with a discharge opening and second sieve means of the funnel type adjacent to said discharge opening, and means for rotatably supporting said first and second sieve means to enable selective positioning thereof in a position in which impurities deposited thereon are washed away in the counterflow principle by the heat exchange fluid in said outlet conduit or another position in which at least a substantial portion of each sieve means is disposed parallel to the flow of heat exchange fluid to minimize flow losses when the self-cleaning apparatus is out of operation.

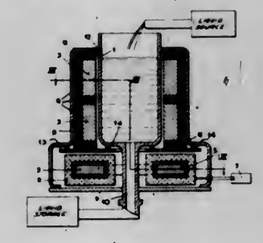
3,021,118
PAINT MIXING RECEPTACLES
Arnold A. Dedoes, 2070 W. Eleven Mile Road, Berkley, Mich.
Filed Mar. 25, 1959, Ser. No. 801,811
3 Claims. (Cl. 259—43)



1. In a receptacle cover attachment for use with a receptacle in a fluid mixing machine, a removable die-cast closure member having rim portions for engaging and sealing the top edge of the receptacle, said closure including a substantially V-shaped spout member formed integrally with said closure and extending above the same, said spout having a top horizontal pouring edge, a vertically disposed agitator shaft bearing member formed

centrally of the closure member, a horizontal surface formed at the top portion of said bearing and in planar relation to said horizontal spout edge, an agitator shaft extending through said bearing, a horizontally disposed slidable closure plate for the spout opening and having a substantially straight forward end edge for engaging the edges of said spout, guide means for said spout closure plate including a longitudinally disposed slot formed in said closure plate and straddling said agitator shaft, and upwardly extending flanges formed on the opposite side edges of said spout, said bearing surface additionally guiding and supporting the rear portion of said closure plate by contact therewith, means for limiting the forward movement of the closure plate including the agitator shaft bearing, the shaft extending through the bearing and the plate slot, a manually operated lever pivotally mounted on said receptacle closure adjacent to said bearing, and means at one end of the lever for engaging the rear end of the spout closure plate to operate the same in contact relation with the spout edges and the bearing surface.

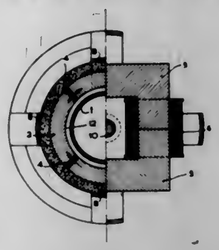
3,021,119
ULTRASONIC IRRADIATING DEVICE
Cornelis Martinus van der Burgt, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 9, 1959, Ser. No. 785,830
Claims priority, application Netherlands Feb. 5, 1958
4 Claims. (Cl. 259—72)



1. In an ultrasonic irradiating device comprising an electrically conductive vessel adapted to hold a liquid, a piezomagnetic ferrite ring positioned substantially coaxially around the said vessel, said ring being coupled to said vessel for transmitting vibrations thereto, a primary transformer winding and input means for electrical energy generating means operating at an ultrasonic frequency for energizing said primary winding, means for inducing piezomagnetic vibrations in said ring comprising a secondary transformer winding, said secondary winding comprising said vessel and an extending portion thereof and being positioned substantially surrounding said ring and in inductive proximity to the said ring and to said primary winding, at least a part of said extending portion comprising at least a pair of current conducting strips arranged symmetrically around said vessel.

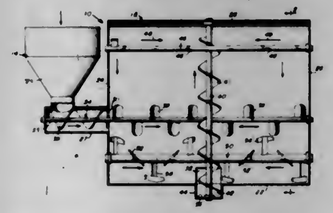
3,021,120
ULTRASONIC IRRADIATING DEVICE
Cornelis Martinus van der Burgt, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 16, 1959, Ser. No. 793,565
Claims priority, application Netherlands Feb. 20, 1958
5 Claims. (Cl. 259—72)

1. In an ultrasonic irradiating device comprising an electrically conductive vessel adapted to hold a liquid, a piezomagnetic ferrite ring positioned substantially coaxially around the said vessel, said ring being coupled to said vessel for transmitting vibration thereto, a primary transformer winding and input means for electrical energy generating means operating at an ultrasonic frequency for energizing said primary winding, means for inducing piezomagnetic vibrations in said ring comprising a secondary transformer winding, said secondary winding comprising said vessel and an extending por-



tion thereof and being positioned substantially surrounding said ring and in inductive proximity to the said ring and to said primary winding, at least a part of said extending portion comprising at least a pair of current conducting strips arranged symmetrically around said vessel.

3,021,121
FEED MIXER
James R. Moss, Springfield, Edward T. Koch, Jr., Goodlettsville, and James E. Stevens, Jr., Nashville, Tenn., assignors to Seco, Inc.
Filed Sept. 16, 1960, Ser. No. 56,421
4 Claims. (Cl. 259—97)

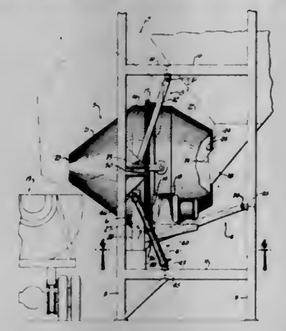


1. A feed mixer comprising in combination, a hopper housing having a rounded bottom, sloping side walls and a pair of vertical end walls defining a mixing chamber having a front portion and a rear portion, a vertical conveyor extending through said rear portion and having an extension through said bottom, a housing for said extension in communication with the interior of said hopper, one of said end walls having a feed inlet opening substantially midway of the vertical length of said end wall, a first horizontal conveyor in said hopper extending through said opening, a second horizontal conveyor along said bottom, a third horizontal conveyor in said hopper spaced above said first and second horizontal conveyors, said first and second horizontal conveyors being in said front portion of said chamber and said third horizontal conveyor being in said rear portion.

3,021,122
CONCRETE MIXING APPARATUS
Glenway Maxon, Jr., 1744 N. Farwell Ave., Milwaukee, Wis.
Filed Nov. 7, 1960, Ser. No. 67,586
6 Claims. (Cl. 259—171)

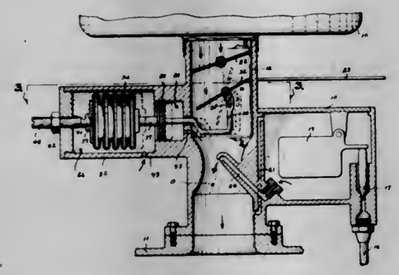
1. In concrete mixing apparatus: a rotatable mixing drum having a discharge opening in its forward axial end; a cradle transversely embracing a portion of the drum and in which the drum is constrained to turn on its axis;

a supporting framework; and means mounting the cradle on the supporting framework for motion of the cradle and the drum thereon from a defined mixing position of the drum to a discharging position at which the rear of the drum is elevated and the discharge opening in its forward axial end is lowermost, said mounting means comprising a drum suspending structure providing a link having its lower end portion pivotally connected with the cradle to provide for tilting movement of the drum relative to the link about a horizontal axis normal to the drum axis and intersecting wall portions of the drum intermediate its ends, means pivotally connecting the upper



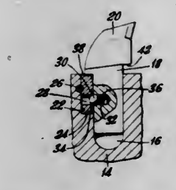
end portion of said link to the supporting framework for back-and-forth swinging motion of the lower portion of the link about an axis located above the drum and parallel to said pivot axis at the lower end portion of the link, whereby the cradle and drum are swingably suspended from said link, and guide means on the supporting framework connected with the cradle and cooperating with said link during movement of the cradle and the drum thereon out of the mixing position of the latter to cause substantial upward motion of the rear portion of the drum relative to its front portion simultaneously with bodily motion of the drum in the forward direction.

3,021,123
CARBURETOR AND MEANS FOR CONTROLLING THE SAME
Glen R. Morton, 7025 Sarpy Ave., Omaha, Nebr.
Filed Sept. 16, 1959, Ser. No. 840,389
4 Claims. (Cl. 261—39)



1. In combination, a carburetor having a conduit, one end of said conduit operatively communicating with the outside atmosphere, the other end of said conduit operatively communicating with the intake manifold of an internal combustion engine, a diameter restricted venturi area within said conduit, a fuel nozzle in communication with a source of fuel and disposed so as to discharge said fuel into said diameter restricted area, a manually actuated butterfly throttle valve disposed within said conduit near said end operatively communicating with the outside atmosphere, a second butterfly valve disposed within said conduit between said first mentioned butterfly valve and said diameter restricted area, an air pressure actuated barometric bellows operatively secured to said carburetor exterior of said conduit and in communication with the outside atmosphere, a mechanical linkage means slidably extending into said conduit between said second butterfly valve and said diameter restricted area, one end of said mechanical linkage means hingedly secured to said second butterfly valve and its other end rigidly secured to said barometric bellows, said mechanical linkage means directly connecting said second butterfly valve and said barometric bellows whereby as the variations in the outside atmospheric pressure respectively expand and contract said barometric bellows, said second butterfly valve is yieldingly actuated respectively open and closed, and means for adjusting the force of said barometric bellows.

3,021,124
MINING CUTTER BIT HAVING SPRING BIASED DETENT MEANS
John T. Bowen, La Habra, Calif., assignor to Union Carbide Corporation, a corporation of New York
Filed Dec. 17, 1956, Ser. No. 628,659
5 Claims. (Cl. 262—33)



1. In a mining machine, the combination with a driven member having at least one elongated socket of polygonal cross section provided with a lateral recess, of a replaceable cutter bit for said mining machine having an elongated shank of polygonal cross section shaped to fit said socket and longitudinally insertable therein and removable therefrom, said cutter bit also having a shoulder bearing against said member defining the limit of longitudinal movement of said shank into such socket, said shank having a lateral blind bore facing said recess, said bore having an annular shoulder adjacent its outer end, a ball detent mounted within said bore for limited movement by virtue of such shoulder, axially of the bore, toward and away from such recess, a compression spring in such bore, urging said ball detent toward its outer limit into contact with such annular shoulder and thus effectively sealing such bore against the entrance of water and dirt back of said ball detent, said spring being yieldable when said ball detent is pressed into such bore by engagement with the wall of said socket when said shank is inserted in or removed from said socket, and acting as the sole means to retain said bit in operational position by pressing said ball detent into said recess, holding said shoulder against said member, which latch can be quickly released by simply withdrawing said bit from said socket, said detent and urging means mounted in said shank being discardable as a unit when said cutter bit is dulled, and automatically replaceable when a similar unit with a sharp cutter bit is substituted, whereby avoidance of corrosion or fouling of said detent and urging means is periodically and automatically reassured.

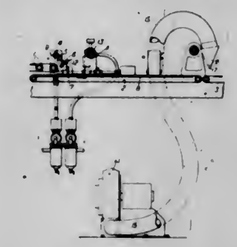
4. A mining machine-cutter bit having a polygonal shank provided with a lateral bore, said bore having an annular stop, a detent carried by said bore for limited

movable axially therein, a spring in such bore urging said detent towards its outer limit into contact with such annular stop to effectively seal such bore against the entrance of water and dirt back of said ball detent, said spring being yieldable to allow said detent to be forced inwardly into said bore, said bit also having a shoulder spaced from said detent for limiting inward movement of the shank in the socket of a support therefor, the entire bit and detent assembly being discardable after use.

3,021,125
APPARATUS FOR FLAME TREATING METAL SHEETS

Arthur Leslie Stuchbery, Enfield, England, assignor to The Metal Box Company Limited, London, England, a British company

Filed May 8, 1958, Ser. No. 734,033
8 Claims. (Cl. 263—6)

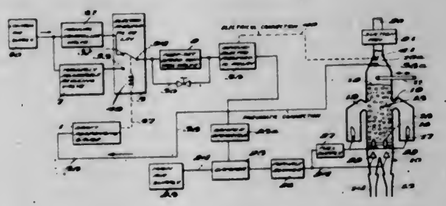


5. An apparatus for flame treating members comprising conveying means for conveying members along a predetermined path and in spaced relation to one another, a burner directing a flame towards said conveying means and from one side of the path of the members carried by said conveying means for flame treating the members, said conveying means extending directly in the path of the flame from said burner and receiving the direct effect of said burner thereon and a major portion of the heat radiating therefrom in the absence of a member on said conveying means, and means disposed on the other side of the path of the members from the burner for providing an air blast directed across the path of the members and at an angle towards the flame for diverting the flame from said conveying means when members are not passing the flame on said conveying means and diverting the air blast from the flame.

3,021,126
DRAFT CONTROL SYSTEM FOR SHAFT-TYPE FURNACES

Bernard F. Borgel, Hoyt Lakes, Minn., assignor to Erie Mining Company, a corporation of Minnesota

Filed Sept. 9, 1960, Ser. No. 54,882
4 Claims. (Cl. 263—29)

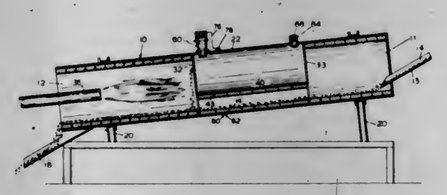


1. A draft control system for a pellet indurating furnace of the generally vertical shaft type composed of, in series, an upper hood portion, an intermediate portion adapted to have a stock line region therein, and a lower portion, said furnace having blower means adapted for supplying air into the lower portion of the furnace said blower means being controlled by a blower damper, means for supplying air into the lower portion of the furnace, means adapted for supplying heated gases into said intermediate portion of the furnace below the stock-line thereof, and suction fan exhaust means for withdrawing gases from the upper hood portion of the furnace, said draft control system comprising a pneumatically-controlled damper operator controlling the degree of opening of the blower damper as a direct function of the quantity of control air supplied to said damper operator, a source of damper control air, a three-way solenoid-operated valve having an outlet and first and second inlets, a manual controller valve having an inlet connected to said control air source and an outlet connected to the first inlet of said three-way valve, a manually adjustable reducing valve having an inlet connected to said control air source and an outlet connected to said second inlet of said three-way solenoid valve, a flow-set speed control valve having an inlet connected to the outlet of said three-way solenoid valve and an outlet connected to said damper operator, said flow-set speed control valve including a restricted orifice by-pass passage, the outlet of said three-way solenoid valve being normally solely in communication with the first inlet thereof to feed a predetermined quantity of damper control air from said controller valve to said damper operator through said flow-set speed control valve, said predetermined quantity of air causing opening of said damper to a substantially fully open first position, and electrical means responsive to decreases in furnace hood suction pressure below a predetermined value for actuating said three-way solenoid valve to cause the outlet thereof to be solely in communication with the second inlet thereof to supply damper control air from said reducing valve to said damper operator through said flow-set speed control valve, said reducing valve being set to provide control air to said damper operator of lower pressure than that provided by said controller valve so that said damper will be displaced to a partially-open second position, said electrical means being automatically operable upon return of the hood suction pressure to said predetermined value to actuate said three-way valve to cause the outlet thereof to again communicate with said first inlet, said flow-set speed control valve causing delay of the control air pressure supplied from said controller valve to said damper operator to delay the return of the damper to its fully open position.

3,021,127
ROTARY KILN

Warford A. Reaney, 264 W. Lincoln Ave., and David W. Reaney, 487 W. Central Ave., both of Delaware, Ohio

Filed Mar. 17, 1960, Ser. No. 15,665
6 Claims. (Cl. 263—32)

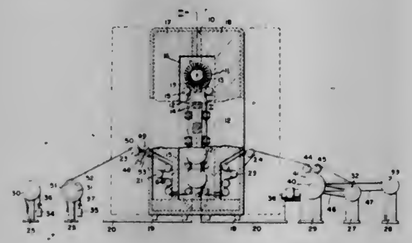


1. A kiln comprising, in combination, a drum including a drum wall provided with a plurality of circumferentially spaced fluid intake openings and a plurality of circumferentially spaced fluid discharge openings, said discharge openings being spaced longitudinally from said intake openings; mounting means for rotatably supporting said drum for rotation about a longitudinal axis; a plurality of inner walls mounted on and spaced from said drum wall and forming therewith a plurality of pre-heater sections disposed radially of said axis of rotation, said inner walls including inner surfaces spaced from one another to form together with said drum wall a longitudinally extending passage means connecting said fluid intake and discharge openings; cap plates on the ends of said inner walls and forming end closures for said longitudinally extending passage means; and a plurality of coolant fans carried in said drum, each of said fans being disposed at a respective one of said openings for producing flows of coolant through said longitudinally extending passage means.

3,021,128
METHOD AND MEANS FOR CONTINUOUSLY ANNEALING METAL STRIPS, WIRE AND THE LIKE

Karl Gunnar Jonason, Finspang, Sweden, assignor to Aktiebolaget Svenska Metallverken, Vasteras, Sweden, a limited joint-stock company of Sweden

Filed Dec. 4, 1956, Ser. No. 626,256
Claims priority, application Sweden Dec. 6, 1955
3 Claims. (Cl. 263—52)



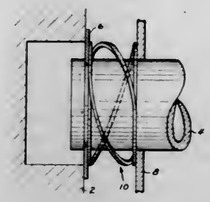
1. In a heat treating process of the kind in which metallic strip is continuously fed to a heat treating station at which it is heated with heat derived from an outside source, that improvement which comprises regeneratively preheating the strip by feeding the strip serially past a series of heat transferring stations on its way to said heat treating station, feeding the strip serially past said heat transferring stations in reverse order after it has left said heat treating station, absorbing heat by conduction from the heated strip at each of said heat transferring stations and transmitting by conduction at each of said heat transferring stations the heat absorbed at that station to the strip being fed to said heat treating station.

3,021,129
SPRING DEVICE

James H. Maker, Bristol, Conn., assignor to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware

Original application Sept. 1, 1959, Ser. No. 837,512. Divided and this application July 26, 1960, Ser. No. 45,318
1 Claim. (Cl. 267—1)

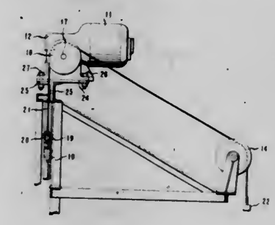
A spring device comprising a plurality of integral spring elements connected to form a cylindrical spring device having an annular member at each end thereof, each of said spring elements comprising a flat arcuate part at each end thereof and a helical part connecting said arcuate parts, the arcuate parts of said elements being connected at each end of the spring device to provide the annular member at that end and the helical parts of said elements being arranged in spaced circumferential relation to connect the annular end members of the spring device.



3,021,130
LABORATORY FUME HOOD DOOR

Joseph M. Allerdice, Landenberg, Pa., and Travie W. Stricklin, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Oct. 4, 1956, Ser. No. 613,889
2 Claims. (Cl. 268—42)



1. A laboratory fume hood door operating apparatus comprising in combination a reversible motor, a door support strap driving sheave driven by said motor, at least one door support strap threaded over said driving sheave connected at one end to the fume hood door and at the other end to a movable counterweight counterbalancing at least part of the weight of the fume hood door, a normally open weight-operated switch disposed in front of said laboratory hood door, a reversing magnetic starter in circuit between said motor and the power supply for said motor, a first powered relay coil operating said magnetic starter to actuate said motor to raise said hood door to open position when said weight-operated switch is closed and a second powered relay coil operating said magnetic starter to actuate said motor to lower said hood door to closed position when said weight-operated switch is open.

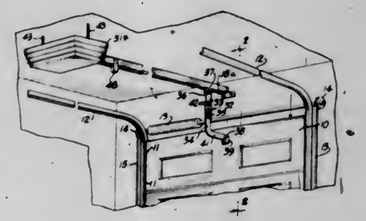
3,021,131
DOOR OPENER

William C. Bornemann, Villa Park, Ill., assignor to Liftron Corp., Franklin Park, Ill., a corporation of Illinois

Filed June 20, 1957, Ser. No. 666,963
5 Claims. (Cl. 268—59)

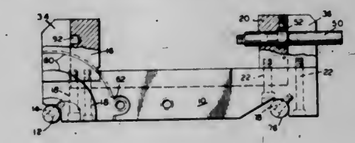
1. In combination with a vertical closed door movable upwardly and inwardly to a substantially horizontal open position for garages and the like having a door frame, a door operating mechanism including a worm shaft, a member connected to drive said worm shaft, a straight support member journalling said shaft to carry a load in an axial direction, a self-reversing electric motor supported on one end of said support member, means for supporting said support member at opposite ends in-

cluding a vertically adjustable member at the end adjacent said motor disposing the support member in an angular orientation defining a line of convergence toward the innermost end of said door when the door is in the open position thereof, a follower engaging in mesh with said shaft and traveling on said support member to transmit axial loads to said worm shaft, a bi-partite arm connecting said follower with said door comprising a relatively straight section having one end adapted to be pivotally secured to said follower, and a substantially right-angled section adjustably secured to said straight section at the other end thereof, said right-angled section



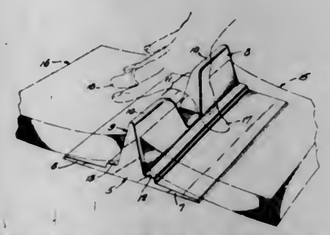
having the other end thereof pivotally secured to said door, the distance between said pivots being only slightly greater than the closest distance from the support member to the pivotal connection to the door when said door is in a vertical closed position, said pivotal connection to said follower being carried by said follower for movement through and beyond a position at which said support member is closest to the pivotal connection to the door as the door is closed and back through said position as the door is opened, and switch means located for actuation by said follower for stopping said motor when said pivotal connection to the follower passes beyond said position.

3,021,132
VISE
John Jesionowski, 1437 Chrysler Ave., Schenectady, N.Y.
Filed Oct. 16, 1959, Ser. No. 846,991
3 Claims. (Cl. 269—79)



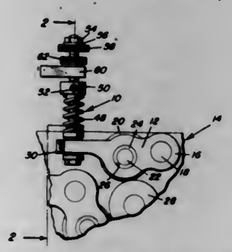
1. A work holding device comprising in combination a vise base including a generally horizontal grooved base and upwardly-extending grooved stationary jaw and screw retaining post members fixed thereto at opposite ends thereof, a C-shaped vise clamp member including a pair of interconnected vertically extending jaw portions, one of the jaw portions of said vise clamp member being receivable in the complemental groove of the stationary jaw member of said vise base and the other of the jaw portions of said vise clamp being receivable in the complemental groove of the screw retaining post member of said vise and the interconnecting portion of said vise clamp being receivable in the complemental groove of said vise base whereby said vise clamp member acts as a reinforcecradle for said vise base, a slidable jaw slidable relative to said vise base, and operating means for moving said slidable jaw toward work holding position under pressure relative to the stationary jaw of said vise base.

3,021,133
COLLATING RACK
Robert E. Ostwald, 112 Ramblewood Ave., Staten Island, N.Y.
Filed Jan. 13, 1960, Ser. No. 2,288
1 Claim. (Cl. 270—58)



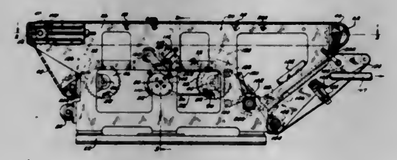
A collating rack comprising a horizontally disposed base member having a planar surface tapering gradually upwardly from each opposite side edge thereof in the direction of one another, with each planar surface adapted to receive a stack of sheets in flat relation thereon, a vertically disposed web portion centrally positioned on said base, the opposed side surfaces of said web portion tapering downwardly and outwardly in the direction of the respective inclined planar surfaces of said base and adapted to receive the end edges of the respective stacked sheets placed thereagainst, a step portion uniting each inclined planar surface of said base member to the respective tapered surface of said web portion, each of said step portions raising the end of said stack of sheets adjacent each of the tapered surfaces of said web portion from said planar surfaces, and a notch portion centrally disposed in and extending laterally through said web portion.

3,021,134
ADJUSTABLE ROLLER HANGER FOR PAPER FOLDING MACHINES
George T. Appell, Washington, D.C., assignor, by mesne assignments, to Liberty Folder Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 21, 1959, Ser. No. 861,043
3 Claims. (Cl. 270—68)



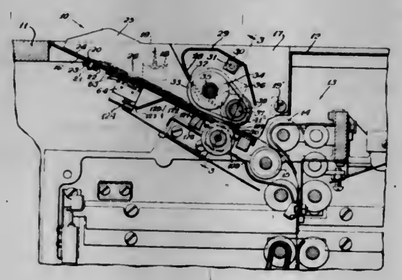
1. A roller hanger comprising a bracket, means pivotally supporting said bracket, a roller journaled on the bracket in spaced relation to said support means, and a hanger connected to the bracket in spaced relation to the roller and supporting means, said hanger including a rod, said bracket having a bore receiving one end of the rod, and means interconnecting said rod and bracket providing universal relative movement therebetween, said interconnecting means including a partial spherical projection on the upper surface of the bracket in encircling relation to said bore, a partial spherical projection on the lower surface of the bracket in encircling relation to said bore, adjustable caps on the rod engaging the projections, each of said caps having a partial spherical recess on the inner face thereof for engagement with the projections on the bracket, the bore through the bracket having a diameter slightly larger than the rod at the center thereof with the bore tapering outwardly towards both partial spherical projections thereby permitting limited universal relative movement between the bracket and rod.

3,021,135
METHOD AND APPARATUS FOR CUTTING AND FOLDING PAPER OR CLOTH WEBS
Curt G. Joa, Ocean Ridge, Fla. (P.O. Box 1121, Boynton Beach, Fla.)
Filed Aug. 10, 1959, Ser. No. 832,660
17 Claims. (Cl. 270—70)



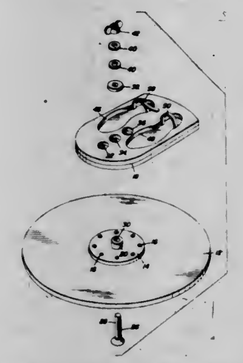
1. In a web cutting and folding machine the combination with means defining the path of a web to be folded into bights, of a conveyor having a run extending along said path, clamps longitudinally spaced on the conveyor and comprising relatively movable web-receiving jaws, means for actuating said jaws between relatively open and closed positions, means for periodically tucking successive bights of said web between the jaws of clamps spaced longitudinally of said conveyor, means for severing the web intermediate bights thereof engaged by said spaced clamps, means for effecting superposition of portions of a length of web thus severed while an intermediate bight thereof remains engaged by one of said clamps, whereby said web length is folded intermediate its ends, and means for engaging a bight of the folded web in the jaws of another clamp of said conveyor whereby to effect a second fold therein.

3,021,136
SHEET FEEDING MECHANISM
Merrill J. Fox, Chicago, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 2, 1957, Ser. No. 700,171
8 Claims. (Cl. 271—36)



6. In a document feeding mechanism, in combination, a document support plate having upstanding sides, a feed shaft journaled at its ends in said sides and carrying intermediate its ends a feed roller having a document engaging surface positioned to frictionally feed documents from a stack on said support plate to recording apparatus, driving means for said feed shaft at one end thereof, disengageable clutch means between said driving means and said one end of said feed shaft, means for controlling said clutch means, an elongated bearing support plate extending underneath said document support plate and aligned generally with said feed shaft, said plates having registering apertures aligned with said feed roller, spring means biasing said bearing support plate toward said document support plate, a pair of bearings depending in spaced relation from said bearing support plate, a retard shaft journaled in said bearings and carrying intermediate its ends a retard roller projecting through said apertures into opposed relations to said feed roller, said retard roller and retard shaft being rotatable in the same direction as said feed roller and the former having a document engaging surface to cause said documents to be fed singly by said feed roller, means for driving said retard roller, an extension from said bearing support plate disposed underneath said document support plate and having a free end, and means operatively interconnecting said clutch control means and said free end of said extension for operating said clutch control means on predetermined movement of said retard roller away from said feed roller to disengage said clutch means and stop further rotation of said feed roller.

3,021,137
SKI TRAINER
Dale W. Palmer, G–1184 Whitfield Drive, Flint 7, Mich., and William R. McTaggart, 702 Church St., Flint 3, Mich.
Filed Apr. 15, 1959, Ser. No. 806,661
7 Claims. (Cl. 272—57)



1. A ski trainer comprising a horizontal running base having a flat upper peripheral surface and adapted to be located on a supporting surface, a circular turning base having a flat upper surface on said running base and fixed with respect to said running base, an elongated flexible and substantially horizontally disposed turning board simulating skis, said turning board having means in one end for establishing feet positions and for securing the feet of an operator therein and a flat under surface on the other end disposed in surface to surface contacting frictional engagement with the upper surface of said turning base, means on the other end of said board rotatably journaling the latter about an axis extending perpendicular to and through the center of said turning base, said journaling means including means for adjusting friction generated between the confronting upper and lower surfaces of said turning base and turning board respectively, said turning board being flexible and when an operator

is supported by said one end of said turning board, having the lower surface of said one end in frictional engagement with the upper peripheral portion of said running base.

3,021,138
ARROWHEAD STRUCTURE
Burton D. Smith, Duarte, Calif.
(7125 SW. Highway 217, Beaverton, Oreg.)
Filed July 6, 1959, Ser. No. 825,324
1 Claim. (Cl. 273—106.5)



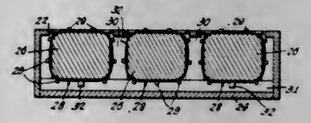
An arrowhead construction comprising a ferrule adapted to be fixed on the forward end of an arrow shaft, the ferrule having a body, a solid leading locating lug centered across the front end of the body, a pair of substantially coextensive spaced flanges extending laterally from each of opposite sides of the body and approximately in a common plane with the leading lug, each pair of flanges defining therebetween an open longitudinal channel, and also having a pair of trailing locating lugs respectively interconnecting said spaced flanges of each pair on opposite sides of the body and extending across said channels, said ferrule having an opening through each pair of flanges and an open slot which extends laterally around its body between said openings in the flanges, a cooperating substantially flat blade detachably insertable on said ferrule, the rear outline of the blade having a deep central recess and a relatively shallow recess on each side of the central recess, with the crotches of the central and side recesses matching the front configuration of the leading and trailing locating lugs respectively for abutting the same and with portions of the blade between the central and side recesses fitting within said longitudinal channels, said portions of the blade located between the central and side recesses having notches therein which register with the openings through the flanges, and locking means engageable with said portions of the blade located between the central and side recesses for releaseably locking the blade on the ferrule, the locking means comprising an open ended snap ring which fits into said slot with its opposite ends extending through said openings in the flanges and registering notches in the blade.

3,021,139
SPREAD SHOT ARROW HEAD
Henry P. Buerosse, Rte. 1, Box 174, Pewaukee, Wis.
Filed Aug. 19, 1959, Ser. No. 835,383
19 Claims. (Cl. 273—106.5)



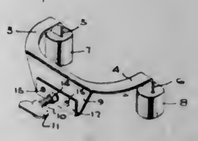
1. A spread shot arrow head comprising: means defining a tubular housing, the bore of which opens to its front and which has a transverse slot therein intermediate its ends; means defining a forwardly facing circumferential shoulder in the rear of the housing bore; means on the rear of the housing defining a rearwardly opening coaxial socket in which the front end portion of an arrow shaft is coaxially engageable; a cylindrical plunger axially slidable in the bore of the housing, said plunger having a forwardly opening well therein in which small shot is receivable; a compression spring confined in the bore in the housing between said shoulder and the plunger, whereby the plunger is biased forwardly; a tab insertable through said slot in the housing and adapted to extend across the housing bore to block forward motion of the plunger past said slot and to confine shot in the plunger well; and means on the housing biasing said tab in the direction to effect its retraction out of said slot, clear of the bore in the housing, said last named biasing means being insufficiently powerful to withdraw the tab from said slot when the plunger is engaged against the tab under the normal biasing force of the compression spring but effecting withdrawal of the tab when the plunger moves rearwardly relative to the housing in response to inertia of the plunger during forward acceleration of the housing.

3,021,140
GAME APPARATUS
Edward F. Lushansky, Jr., 127 W. 77th St., New York, N.Y.
Filed Aug. 20, 1958, Ser. No. 756,258
6 Claims. (Cl. 273—130)



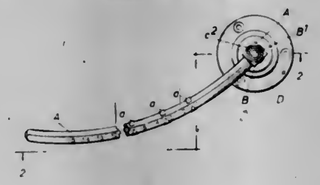
1. A game device comprising a casing having a base and a top provided with nine openings therein, said openings being arranged in rows of three in longitudinal and transverse alignment, a flexible member for each opening having finger engaging means thereon, a mounting means, and means comprising three supporting members connected together at one end only to said mounting means, said mounting means being inserted into the casing and cooperating with the base to position said supporting members under the openings, said supporting members slidably mounting one of said flexible members in each opening with the finger engaging means projecting through the openings, said members each having an X and an O thereon and being of a length to permit said X or O to be selectively moved from a retracted position into a position to be exposed through the openings.

3,021,141
GOLF CLUB HEAD ATTACHMENT
Irving Polsky, 1433 W. Crestwood, and Joseph L. Beasley, 2849 W. Lakeland Drive, both of Memphis, Tenn.
Filed July 15, 1960, Ser. No. 43,110
5 Claims. (Cl. 273—194)



1. A training attachment for golf club heads comprising a frame of U-form having transverse tabs at the ends of the arms of the frame and a transverse tab at the bight section of the U on the same side of the frame as the tabs on the arms, a bumper carried on each of the tabs at the ends of the arms, and a thumb screw carried by the tab at the bight of the U-frame said bumpers being spaced apart to provide a clearance in excess of the diameter of a standard golf ball.

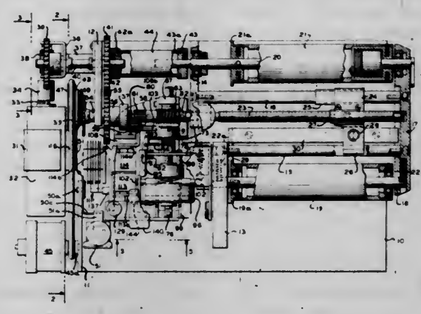
3,021,142
GRAMOPHONE PICK-UP MECHANISM
Aubrey G. Carroll, Guildford, England, assignor of one-half to Brinnand Seddon, Shevington, England
Filed Mar. 20, 1957, Ser. No. 647,434
7 Claims. (Cl. 274—1)



1. In a gramophone assembly having a rotatable turntable adapted to receive a record and a pick-up arm pivotally mounted for movement over the turntable and flexibly mounted for raising and lowering movement with respect to the turntable, an elongated control arm for lowering the pick-up arm onto a record on the gramophone turntable and for lifting the pick-up arm therefrom, support means fixed to said pick-up arm and carried by said control arm to enable said control arm to support said pick-up arm for raising and lowering said pick-up arm, an air cushioned-controlled plunger non-rotatably mounted on said assembly and rigidly connected to one end of said control arm to support the control arm in a position to extend over the turntable, said control arm being of sufficient length to support the pick-up arm during lowering thereof onto a record on the turntable and lifting of the pick-up arm therefrom at any point on said record, and means mounting and guiding said plunger to one side of said turntable for movement limited to vertical displacement with respect to the turntable during raising and lowering movement of the pick-up arm, said mounting and guiding means comprising a cylinder having a closed bottom and an open top, said plunger being slidably received in said cylinder from the top thereof; and means carried by said plunger providing for a gradually depletable air cushion between said plunger and the bottom of said cylinder, said plunger and said mounting and guiding means cooperating with said support means to allow said control arm to continue to lower after said pick-up arm engages said record, and said support means being arranged relative to said control arm to become detached therefrom when said control arm continues to lower after said pick-up arm engages said record to thereby allow said pick-up arm to ride clear of said control arm.

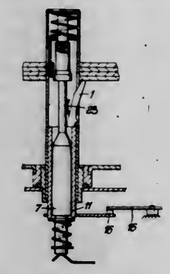
3,021,143
PHONOGRAPHIC MACHINE
William G. Whitney, Wayne Township, Passaic County, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Oct. 21, 1959, Ser. No. 847,799
16 Claims. (Cl. 274—4)

1. In a phonographic machine including a record supporting device and a record-cooperable translating device, one of said devices being mounted for advance and backspace movement relative to the other: a mechanism for measuring the displacement of said one device from any selective position in its path of travel comprising a first measuring element, a second cooperating measuring element mounted for movement in a helical path having a pitch sufficient to clear said first element in



the first revolution thereof from its home position, and a clutch engageable to couple said second element to said one device in any position of the latter to move said second element in its helical path in correspondence with the displacement of said one device.

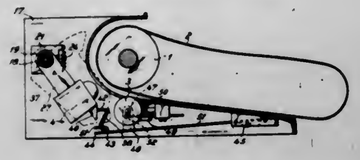
3,021,144
RECORD CHANGING MECHANISM
Joachim Harnisch, Bundesstrasse 1a, and Hans Hermann, Sommeranerstrasse 14, both of St. Georgen, Black Forest, Germany
Filed Dec. 22, 1958, Ser. No. 782,113
Claims priority, application Germany Dec. 21, 1957
10 Claims. (Cl. 274—10)



1. In a phonograph having a turntable and a tone arm operable cyclicly to play successive records in a stack, a record changing device comprising, a post in the center of a turntable for receiving a stack of records, means forming a support mounted on said post for movement to a position for supporting the lowest record in a stack and a retracted position, means forming a clamping element mounted on said post for movement both radially and axially thereof, operating mechanism for said support and element including first and second members relatively axially movable, means forming a yieldable connection interconnecting said members for movement together relative to said post, one of said members being operable responsive to movement thereof to shift said clamping element axially out of alignment with the lowest record in a stack and radially outwardly into clamping engagement with a center opening in a record next above the lowest in the stack, the other of said members being engageable with said support responsive to movement thereof with said one member, means providing a yieldable stop restraining axial movement of said clamping

element under the action of said one member to an extent approximating the thickness of a record, whereby said stop, clamping element, the records engaged thereby and said support through engagement with the bottom record and said other member provide a static train operable to arrest movement of said other member, means operable under the influence of arrested movement of said other member to effect continued cyclic operation of the tone arm, said yieldable connection and stop facilitating continued movement of said one member when said movement of said other member is arrested, and means operable responsive to said continued movement of said one member to shift said support to retracted position to release the lowest record in the stack for descent onto the turntable.

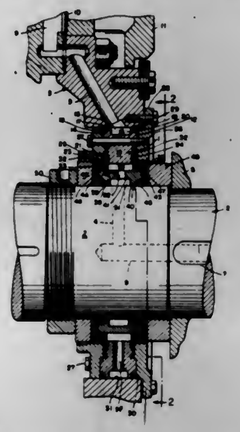
3,021,145
SOUND RECORDING AND REPRODUCING APPARATUS
Heinz Matusche, Dall-Armistr. 23, Munich, Germany
Filed Jan. 29, 1958, Ser. No. 711,991
Claims priority, application Germany Feb. 4, 1957
5 Claims. (Cl. 274—11)



1. In a sound recording and reproducing apparatus including a sound box for use with a wide endless sound band as record carrier adapted to be slipped on a rotary band feed cylinder from one end thereof, a pressing-on device for urging said band into contact with said cylinder, driving means for imparting rotary motion to said cylinder means defining a lateral insertion aperture for the band, means for blocking and clearing respectively said aperture simultaneously with causing said sound box and said pressing-on device to respectively engage the band with and disengage the band from said cylinder, and means including a contact responsive to said blocking and clearing means opening said aperture for disabling said driving means.

3,021,146
SEALS
Gordon M. Sommer, Hinsdale, and Vincent J. Mankowsky, Chicago, Ill., assignors to U. S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 10, 1958, Ser. No. 708,327
2 Claims. (Cl. 277—3)

1. A seal of the type adapted to feed working fluid radially outwardly from a shaft to a radially outwardly disposed part mounted on said shaft in rotatable relation to said shaft, said seal comprising an outer sleeve and having two oppositely disposed outer end portions having inwardly projecting axially extending splines on the inner end portions of said outer end portions, an inner sleeve mounted in said outer sleeve and rotatable as a unit relative to said outer sleeve, said inner sleeve including two ring members mounted in said outer end portions axially outwardly of said splines, said outer sleeve having two other ring members having outwardly projecting axially extending splines, said other ring members being mounted in respective ones of said inner end portions of said outer end portions with said splines on said respective other ring members and said inner end portions operatively engaged with each other, said outer sleeve also including two annular-shaped diaphragms disposed inwardly of said other ring members in position to sealingly engage said other ring members, and means in said sleeves for feeding working fluid outwardly therethrough between said diaphragms, in position to press said diaphragms outwardly away from each other and against respective ones of said other ring members and thereby press said other

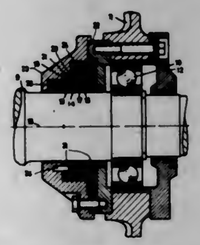


ring members outwardly against respective ones of said first mentioned ring members, said diaphragms being freely movable inwardly away from said other rings and said other rings being freely movable inwardly away from said first mentioned ring member when said diaphragms are not so pressed outwardly by said working fluid.

ERRATUM

For Class 277—37 see:
Patent No. 3,021,161

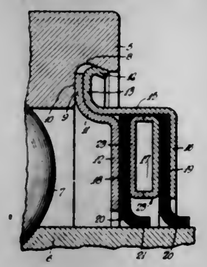
3,021,147
SHAFT BUSHING FOR EXPLOSION-PROOF ELECTRICAL MACHINES
Karl Haas and Siegfried Voll, Nurnberg, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed June 10, 1959, Ser. No. 819,261
Claims priority, application Germany June 13, 1958
13 Claims. (Cl. 277—53)



1. A shaft journal for the shaft of an explosion-proof electrical machine, comprising a journal housing, a shaft bushing axially off-center relative to said housing and having axially spaced relatively narrow annular ridges centering said shaft concentric with said bushing, said ridges being of such dimensions and material so as to be grindable down radially during operation of the machine

to form annular spaced surfaces seating said shaft in said bushing, said bushing being provided with at least one groove having a predetermined depth disposed between said ridges, whereby said surfaces formed from said ridges during operation of said shaft and said grooves together define at least one annular air tight space around said shaft, thus preventing said shaft from jamming within said housing in the event of an explosion occurring within the machine.

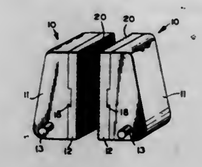
3,021,148
BEARING SEAL
Thorn W. Dickinson, New Britain, Conn., assignor to The Fafnir Bearing Company, New Britain, Conn., a corporation of Connecticut
Filed Apr. 30, 1957, Ser. No. 656,135
3 Claims. (Cl. 277—58)



1. A seal for an antifriction bearing comprising a unitary seal washer of resilient material having a presser member with spring fingers at the inner periphery embedded in said resilient material substantially throughout the radial dimension of said material, said seal washer being adapted to be secured to the outer bearing ring of a bearing and having its said inner periphery adapted to fit in sealing engagement with the outer cylindrical surface of an inner bearing ring and said inner periphery of resilient material being urged into such sealing engagement by said spring fingers so that said washer is spring loaded to form a tight and effective seal. a second seal washer of resilient material having spring fingers embedded in the inner periphery, said second seal washer being adapted to be secured to said outer ring and having its inner periphery adapted to fit in sealing engagement with the cylindrical surface on the inner of said rings and urged into such sealing engagement by its said spring fingers, a radially inwardly directed plate portion formed integrally at its outer periphery with a cylindrical portion, and a thick annular spacer intermediate the seal washers so that the washers are held in place to form a tight and effective seal.

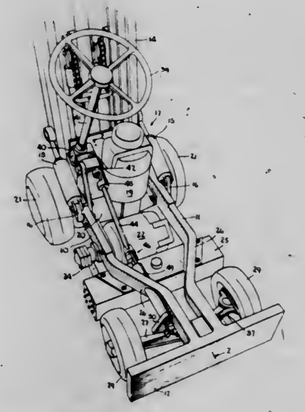
3,021,149
GRIPPING JAWS FOR MATERIALS TESTING MACHINES
Alvin G. Griffin, Blackridge, Pa.
(106 Old Gate Road, Pittsburgh, Pa.)
Filed Sept. 10, 1959, Ser. No. 839,157
5 Claims. (Cl. 279—123)

1. An improved testing machine grip assembly for material comprising, a gripping block having a longitudinally-extending supporting surface, a removable grip insert having a back surface adapted to complement said supporting surface and a toothed front side for gripping the material, one of said surfaces having a projection extending transversely thereacross, said projection having opposed edges extending transversely across said one surface with one of said edges being undercut and normally intersecting a longitudinal edge of said one surface, the opposite edge of said opposed edges being normal to and extending diagonally across said one surface, the other of said surfaces having a transversely-extending recess formed therein with opposed side edges thereof extending transversely across the said other surface, one of said op-



posed sides edges being undercut and normally intersecting a longitudinal edge of said other surface, the opposite side edge being normal to and extending diagonally across said other surface, and said transversely-extending projection being adapted to be slid sidewise into said transversely-extending recess to slidably connect and removably secure the grip insert on the gripping block.

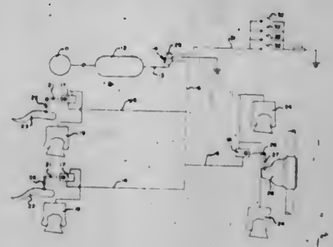
3,021,150
STEERING MECHANISM FOR INDUSTRIAL TRUCK
Bronislaus I. Ullnski, Flossmoor, Ill., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Oct. 16, 1958, Ser. No. 767,696
1 Claim. (Cl. 280—87)



In a truck of the class described, a main frame comprising a pair of longitudinal complementary bars widely spaced for part of their length running from the front end and then bent toward one another and narrowly spaced at the rear end, a traction unit mounted at the forward end of said main frame and comprising opposed traction wheels, a pair of steered wheels mounted for steering movement at the rear end of said main frame, a steering rod mounted at the forward end of said main frame adjacent said traction unit and having a manually operated steering wheel at its upper end, a bearing sleeve fixed to said main frame with a portion thereof outside the frame at its narrowed portion and the remainder

inside the frame at said bent portion, said sleeve terminating at its rear in substantial alignment with the steered wheels, a shaft mounted in said bearing sleeve and protruding at said rear end of the bearing sleeve, a lever fixed to said protruding end of the shaft for movement therewith, a link connected to said lever and to said steered wheels for movement by said lever in a direction transversely of said truck for steering said steering wheels, and means for driving said shaft including a rotating bar connected at one end to the steering rod and connected universally through a fixed angle at the other end to the forward end of said shaft for rotating said shaft.

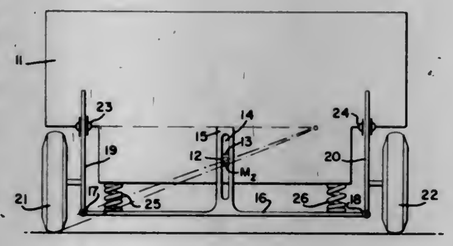
3,021,151
MOTOR VEHICLE AIR SUSPENSION SYSTEM AND FLOW RATE CONTROL VALVE
Charles Haddad, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 12, 1957, Ser. No. 652,554
15 Claims. (Cl. 280—124)



1. In a motor vehicle having a chassis member resiliently supported upon a wheel member by means of an air spring, and a source of air under pressure for said air spring, leveling valve means responsive to variations in the relationship between said members to control the flow of air from said air source to said air spring and from said air spring to exhaust, control valve means in series with said leveling valve means to vary the rate of air flow to and from said air spring between a slow rate and a faster rate, a single conduit connecting said control valve means and said leveling valve means to said air source, and means for varying the pressure in said conduit between a lower and a higher pressure to shift said control valve means between said slow rate position and said faster rate position.

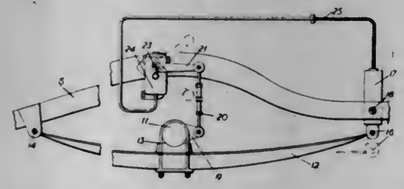
3,021,152
INDEPENDENT WHEEL SUSPENSION
Ernst J. H. Fiala, Sindelfingen, Kreis Boeblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 11, 1958, Ser. No. 720,726
12 Claims. (Cl. 280—124)

1. A wheel suspension for vehicles having a superstructure and a plurality of wheel carrier means for supporting thereon the vehicle wheels, guiding means for independently and pivotally connecting the upper end of each wheel carrier means to said superstructure, rigid connecting means including a rigid member pivotally interconnecting the lower ends of two said wheel carriers disposed on opposite sides of the vehicle for correlating movement of the two wheel carriers with respect to each other and for pivotally connecting each lower end of said wheel carrier to said superstructure, and joint means for pivotally supporting said rigid interconnecting member to said vehicle superstructure, said joint means being so constructed and arranged as to allow up and down movement of said rigid interconnecting member



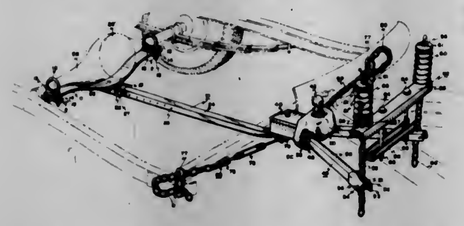
parallel with respect to itself as well as pivotal movement thereof.

3,021,153
LOAD COMPENSATING ARRANGEMENT FOR A VEHICLE SUSPENSION
Ronald Sidney Dickinson, Osbaldwick, York, England, assignor to Armstrong Patents Co. Limited, Beverly, England, a British company
Filed Dec. 3, 1959, Ser. No. 857,114
Claims priority, application Great Britain May 30, 1957
19 Claims. (Cl. 280—124)



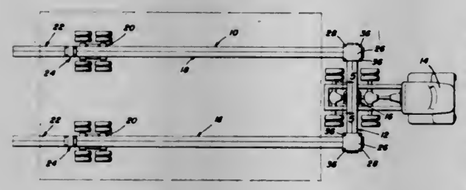
1. In a vehicle suspension system comprising a vehicle wheel mounting, a vehicle frame, a suspension spring supporting said frame upon said wheel mounting, and a double acting hydraulic shock absorber coupled between said frame and said wheel mounting to damp vibrations of said suspension spring, said shock absorber having a compression chamber and rebound chamber containing hydraulic medium connected to each other by a valve controlled passage, and a piston assembly positioned within said chambers in accordance with the displacement between said frame and said wheel mounting and operable to displace fluid from one of said chambers to the other through said valve controlled passage in accordance with relative movement between said wheel member and said frame; the improvement comprising means defining a hydraulic reservoir, a hydraulic ram means having a cylinder member and a movable member therein for varying the displacement between said wheel mounting and said frame in accordance with the pressure of hydraulic medium in said cylinder member, a first conduit connecting said cylinder member to said reservoir for transferring hydraulic medium between said cylinder member and said reservoir, a first one way valve in said conduit adjacent said reservoir normally seated to prevent flow of hydraulic medium into said reservoir, a second conduit connecting said valve controlled passage to said first conduit at a location between said first one way valve and said cylinder member, a second one way valve in said second conduit permitting flow of hydraulic medium therethrough only from said valve controlled passage into said first conduit when the pressure in said passage exceeds the pressure in said first conduit, and cam means coupled to said piston assembly for opening said first one way valve when the displacement between said wheel mounting and said frame differs from a predetermined range of displacements.

3,021,154
TRAILER HITCH
Edward B. Hedgepeth, 2819 St. Mary's Way, Salt Lake City, Utah
Filed July 31, 1959, Ser. No. 830,798
3 Claims. (Cl. 280—406)



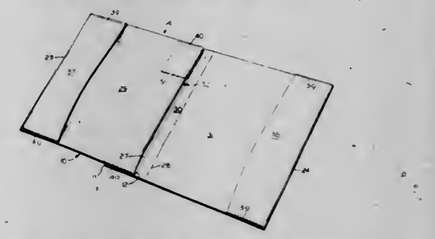
3. A coupling head for a trailer hitch including a body, a coupling ball affixed to and above said body, said body having an internally open, depending skirt and a horizontal flange disposed beneath said skirt and indented with respect thereto, pivot means upstanding from said horizontal flange beneath and inwardly of and spaced from said skirt, and lever means removably pivoted upon said pivot means and engaging said flange as reaction means and said skirt as a fulcrum.

3,021,155
HOUSE MOVING UNIT
William O. Sherman, Jr., Bayside, Va., assignor to Norfolk Iron & Wire Works, Inc., Norfolk, Va., a corporation of Virginia
Filed Dec. 18, 1958, Ser. No. 781,257
5 Claims. (Cl. 280—423)



1. A house moving trailer comprising a forward transversely extending horizontal load beam, a fifth wheel connector assembly supporting the latter and adapted for support upon a fifth wheel of a tractor vehicle, means pivotally mounting said horizontal load beam to said fifth wheel connector assembly for movement about a horizontal axis extending transversely of said load beam, two rearwardly extending, substantially parallel, horizontal load beams, means connecting the latter at their forward ends to the ends of said forward beam, a pair of wheel support means each connected to and supporting the rearward portion of one of said parallel load beams, each support means having a supporting surface engaging and supporting one of said parallel beams, said support means including pivoted members having said supporting surfaces thereon and being disposed for rotation about horizontal axis extending longitudinally and transversely of said horizontal beams, a pair of extension beams, means connecting one end of said extension beams to the rearwardmost end of one of said parallel load beams with the adjacent ends of said extension and load beams being in aligned abutting relation, said load beams and said extension beams each comprising upper and lower horizontal longitudinally extending flanges having at least one vertical longitudinal extending web portion secured therebetween intermediate the side edges thereof, said connecting means including aligned notches formed in the confronting ends of said web portions with one of said notches having secured therein a semi-circular transversely extending flange and a transversely extending shear plate receivable in said first mentioned notch and secured within the other notch, and fastening means removably secured to the outer surfaces of the confronting ends of said flanges in overlapped relation.

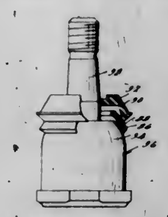
3,021,156
COMBINED BOOK PROTECTOR AND MEMO-CALENDAR WITH CONCEALED ADVERTISEMENT
Golda R. Coillot, San Jose, Calif. (609 Grand Fir, Apt. 14, Sunnyvale, Calif.)
Filed Nov. 20, 1959, Ser. No. 854,455
4 Claims. (Cl. 281—17)



1. A combined book protector and advertising calendar comprising a sheet of protective material having contiguous portions thereof adapted to enclose, respectively, the front cover, back binding, and rear cover of a book of known size, a portion at the outer end of each cover-enclosing portion of the protector material for attaching the protector to the covers of a book to which it is applied, a pair of reverse folds formed in parallel, spaced apart relation in the front cover enclosing portion of the protector material, one of said reverse folds being spaced outwardly from, and the other being adjacent the back binding enclosing portion of said material, the portion of the protector material between said reverse folds being folded down to closely overlie the front cover enclosing portion of said material, means securing the upper and lower edges of said overlying material to the front cover enclosing portion of said material to thereby form a pocket between the overlying material and the front cover portion upon which it is superposed, said pocket facing toward the free end of the front cover enclosing portion of said material, and being of a width substantially less than that of said front cover enclosing portion, an insert of sheet material of a height less than the length of such pocket, so as to be insertable therein to the full depth of the pocket and of a width corresponding substantially to that of the front cover protecting portion so as to project a substantial distance laterally beyond said pocket when inserted therein, the portion of the insert adapted to be inserted in said pocket having an advertising message thereon which advertising message is fully concealed by the pocket when the insert is inserted therein to the full depth of the pocket, and the projecting portion of

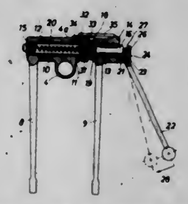
the insert having non-advertising dated material thereon, which non-advertising material is fully exposed beyond the pocket when the insert is so inserted.

3,021,157
SEAL
Milton A. Moskovitz, 8135 Antler Drive, Richmond Heights, Mo., assignor of one-half to Harry Frankel, St. Louis, Mo.
Filed Jan. 20, 1958, Ser. No. 709,921
2 Claims. (Cl. 287—90)



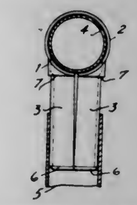
1. In a ball and socket joint unit including a socket casing for connection to one body and a stud for connection to a second body to secure those bodies for relative tilting and rotational movements, the casing having an apertured externally convex end through which the stud projects, a seal for enclosing the aperture comprising a pair of seal elements each of which includes a resilient cupped member having a central aperture to accept the stud and a peripheral lip, and a relatively inflexible shell member surrounding and engaging the outer surface of said resilient member to provide rigidity for the same, one of said resilient members of one of said seal elements sealingly engageably receiving the stud shank and also having an inner surface which differs in contour from the opposed contour of said convex end of the casing, the lip of the resilient member of the other seal element engaging said convex end of the casing, the lip of the resilient member of the first of said seal elements engaging the shell member of the other seal element, whereby axial pressure on said first seal element toward said casing forces the lip of said one seal element into intimate engagement with the casing.

3,021,158
ADJUSTING STRUCTURE FOR ENLARGERS OR THE LIKE
August Seizinger, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany
Filed Jan. 21, 1960, Ser. No. 3,900
Claims priority, application Germany Jan. 24, 1959
11 Claims. (Cl. 287—14)



11. In an assembly for adjusting the position of an enlarger head or the like, in combination, a stationary support member having a pair of opposed end faces and being formed with a bore passing therethrough from one end face to the other end face thereof; an elongated tube extending slidably through said bore of said support member and extending beyond said end faces thereof; holding means cooperating with one of the end faces of said support member and with the portion of said tube extending beyond said one end face for maintaining said tube in a fixed angular position with respect to said support member when said holding means is engaged; an elongated pin located slidably within said tube and extending beyond an end thereof distant from said holding means; a stop member fixed to said pin, extending through a longitudinal slot of said tube and engaging the other end face of said support member; spring means fixed to said pin, extending along the interior of said tube, and cooperating with the end portion of the latter located beyond said one end face of said support member for urging said stop member against said other end face of said support member and for maintaining said holding means engaged; clutch means having a clutch member fixed to and surrounding said tube located adjacent said stop member but spaced at a given distance therefrom when said holding means is engaged; an adjusting element surrounding and freely slidable both angularly and axially on said tube and located next to said clutch member on the side thereof opposite from said stop member, said adjusting element carrying a second clutch member of said clutch means and said clutch means when engaged serving to fix said adjusting element to said tube; and a lever turnably carried by said adjusting element for turning movement with respect thereto about an axis perpendicular to that of said tube, said lever carrying a projection which extends into a cutout of said pin and, when said lever is turned with respect to said adjusting element, engages said pin to act as a fulcrum for said lever which then shifts said element toward said first-mentioned clutch member of said clutch means to engage the latter and then shifts said pin along the axis of said tube for disengaging said stop member from said other face of said support member and omitting pressure from said holding means for disengaging said holding means.

3,021,159
IMPROVED MEANS FOR CONNECTING TUBULAR, ROD-LIKE OR OTHER STRUCTURAL MEMBERS
Hymie Back, Raedene, Johannesburg, Union of South Africa, assignor to B.U.T.C.O.N. Sales Division (Proprietary) Limited, Johannesburg, Union of South Africa
Filed Sept. 4, 1959, Ser. No. 838,077
Claims priority, application Union of South Africa Nov. 13, 1958
5 Claims. (Cl. 287—54)

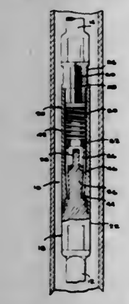


1. A connector composed of a sheet-like material having an elastic limit, said connector for use, singly and in combination, to connect hollow-ended structural members having outer surfaces and inner end surfaces, said connector comprising: a clamping part shaped to conform to said outer surfaces positionable embracing one of said structural members; at least two lever extensions extending from said clamping part positioned to be drawn together in opposed combination for constricting said clamping part around an outer surface of a said embraced structural member, each of said lever extensions having a free end, and each pair of said opposed lever extensions having a shape conforming to said inner end surfaces for forced sleeve-like engagement therein to a preselected axial extent in assembled condition in said sleeve-like engagement, said opposed lever extensions being drawn together in opposed combination in an assembled condition with free ends in contact defining a wedge and having opposing longitudinal edges defining therebetween wedge-shaped spaces opening inwardly toward said clamping part, said inner end surfaces when disposed in said forced sleeve-like engagement closing said wedge-shaped spaces from said free ends to cause said lever extensions to constrict said clamping part to tightly embrace the outer surface of one said hollow ended structural member, said clamping part being elongated thereby to an extent dependent on said preselected axial extent of said forced sleeve-like engagement of said opposed lever extensions with the inner end surfaces of another said hollow ended structural member, to thereby connect said structural members.

ERRATUM

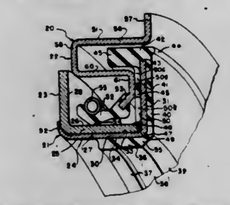
For Class 287—90 see:
Patent No. 3,021,157

3,021,160
WELL TOOL COUPLING DEVICE
Donald Q. Hooks, 205 Frisco St., Henderson, Tex.
Filed June 12, 1959, Ser. No. 820,048
3 Claims. (Cl. 287—119)



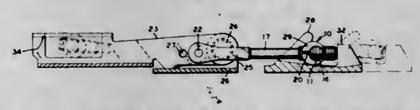
1. For use with a well tubing including a pump plunger positioned within said tubing, and a sucker rod positioned within said tubing and spaced above said plunger, a coupling device for securing said sucker rod to said plunger, said device comprising a lower coupling member having the lower end provided with means for securing said coupling member to said plunger, an upper coupling member having the upper end provided with means for securing said upper coupling member to said sucker rod, a first wedging means embodying a plurality of slips connected to the lower end of said upper coupling member for movement toward and away from said upper coupling member, a cooperating second wedging means embodying a flared mandrel on said lower coupling member, the coupling device further including means connecting said upper coupling member to said lower coupling member so that said first wedging means is moved into wedging engagement with said second wedging means responsive to the movement of said first wedging means away from said upper coupling member and said first wedging means is moved out of wedging engagement with said second wedging means responsive to execution of the movement of said first wedging means toward said upper coupling member, spring means operatively connected to said first wedging means urging the latter to the away movement position, said means embodying a female element on said upper coupling member interengaging coupling means embodying a male element on said lower coupling member when said first wedging means is in the away movement position and operable to shift said first wedge means to the toward movement position responsive to rotary movement of said upper coupling member relative to said lower coupling member.

3,021,161
UNITIZED SHAFT SEAL
George D. Rhoads, Redwood City, Vasalie L. Peickii, Hillsborough, and Brian H. Carson, Woodside, Calif., assignors to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Filed Sept. 14, 1959, Ser. No. 839,784
6 Claims. (Cl. 277—37)



1. In a plural-part annular unitized seal assembly for preventing lubricant loss between two relatively rotatable machine members, an outer annular casing part having a stationary leak-tight fit with one said machine member and an annular radial flange surrounding the second said machine member, an inner annular casing part within said outer casing part having an annular radial flange at one side thereof in opposed relation to said flange of said outer casing part, an annular resilient lip element secured to and extending from said flange of said outer casing part to sealing engagement with said inner casing part, and an annular two ply mounting sleeve assembly laminated on said inner casing part including an elastomeric facing ply for resilient mounting thereof in engagement with the other of said machine members, whereby said unitized seal assembly may be produced without flash or other deleterious effect on any of said casing parts.

3,021,162
TOGGLE LATCH
Robert E. Jahn, West Englewood, N.J., assignor to Camloc Fastener Corporation, Paramus, N.J., a corporation of New York
Filed Jan. 18, 1960, Ser. No. 3,199
7 Claims. (Cl. 292—66)



2. A nut of generally cylindrical shape and having an eccentrically disposed bore extending from end-to-end and forming opposed thinner and thicker walls, said latter wall having a threaded opening therein and a narrow longitudinal slot extending from end-to-end and passing through said threaded opening therein.

3,021,163
LOCKING DEVICE
George Hoffmann, 19 Northcote Road, Hampstead, Quebec, Canada
Filed May 15, 1959, Ser. No. 813,495
Claims priority, application Canada Apr. 2, 1959
1 Claim. (Cl. 292—147)

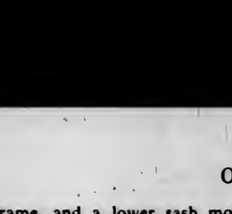
In a window locking device for use on a window including a frame, an upper sash mounted in the upper

part of said frame, and a lower sash mounted in the lower part of said frame, the upper sash and the lower sash being slidably movable relative to one another, said locking device comprising in combination: a groove along the longitudinal axis of the upper rail of the lower sash; a latch slidable in said longitudinal groove, said latch including a projection laterally outwardly therefrom and including an enlarged head; a detent, secured to the bottom rail of the upper sash, said detent including a longitudinal slot having an enlarged closed end,



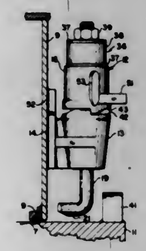
adapted to engage said lateral projection of said latch and adapted to be in sliding, frictional, face-to-face engagement with said latch; and a spring, in the longitudinal groove of the upper rail of the lower sash, normally urging said latch upwardly and adapted, when said latch is slid into engagement with said detent, to maintain the enlarged head in frictional engagement with the enlarged closed end of said slot, to limit the movement of the latch away from the detent, whereby to maintain the latch in its locked position whereby said window is locked in its fully closed position.

3,021,164
LATCH CONTROL APPARATUS
George N. Weaver, Los Angeles, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed July 2, 1956, Ser. No. 595,364
5 Claims. (Cl. 292—219)



1. In a latch device adapted to be mounted on a door, said latch device including a latch box, a pivoted latch member mounted in said latch box having a detent portion and a keeper engaging portion extending from said latch box, said pivoted latch member adapted to be moved by manually operable means in a clockwise direction between a first position in which the keeper engaging portion is engaged with a keeper means, a second position in which the keeper engaging portion is releasably retained out of engagement with said keeper means and against movement in a counter-clockwise direction to thereby permit opening movement of said door and a third position in which the latch member is free to return to said first position under the influence of a spring means, said latch device further comprising a combined holding and by-passing member pivotally mounted on said latch box, said last-mentioned member including a plate having means thereon to receive said detent portion of the latch member when said latch member is moved from said first position to said second position to thereby hold said latch member in said second position and a by-pass member pivotally mounted on said plate and overlying said plate means, said by-pass member having means thereon adapted to engage said detent portion after said latch member is moved from said second position to said third position, said last-mentioned means preventing said detent portion from being received in said plate means whereby said latch member can be returned to the keeper engaging or first position thereof under the influence of said spring means.

3,021,165
HATCH COVER DOG
Wallace Hamilton, Chagrin Falls, and Peter P. Surso, Euclid, Ohio, assignors, by mesne assignments, to PneumoDynamics Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 15, 1959, Ser. No. 859,770
8 Claims. (Cl. 292—256.5)

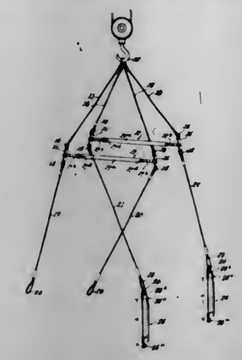


8. A latching device for securing one element to another element comprising, a keeper on one element and a hook on said other element, said hook being formed on a rod and said rod being rotatable to move the hook from a first position clear of said keeper to a second position in latching engagement with said keeper, a base member supporting said rod for rotation, an operating member for rotating the rod, drive means connected to the operating member and to the rod to rotate the rod by actuation of the operating member, the operating member having a slippable connection with the drive means to permit continued rotation of the operating member independently of the drive means when the hook is disposed in said second position, and means operative by said continued rotation of the operating member to reciprocate the rod axially to draw said elements together to secure said elements to each other.

3,021,166
VEHICLE HOISTING ARRANGEMENT
Hubert Kempel, Washington 16, D.C. (4801 Dover Road, Md.), and Edgar C. Seward, 2008 S. Randolph St., Arlington 4, Va.
Filed Dec. 8, 1959, Ser. No. 858,297
14 Claims. (Cl. 294—74)
(Granted under Title 35, U.S. Code (1952), sec. 266)

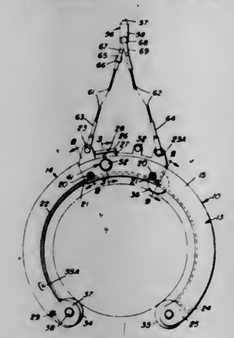
1. In a vehicle hoist for a vehicle having a chassis, a suspension system, and abutment means on said chassis, and hook means on said suspension system spaced downwardly and inwardly from said abutment means, the combination which comprises: an elongated hoist member having a hook portion and an abutment portion which are spaced from each other a distance equal to the distance which said abutment means and hook means of the vehicle are spaced from each other, so that said hoist member may be placed into engagement with the vehicle in an operative position in which said hoist member is upwardly and outwardly inclined while said hook portion is hooked to said hook means and said abutment portion abuts said abutment means; and a cable attached to said hoist member

for applying thereto an upwardly directed force which when said hoist member is in said operative position



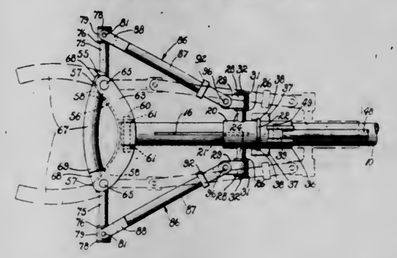
thereof, causes a force-transmitting connection to be established between said hoist member and the vehicle.

3,021,167
LIFTING SLING
Francis R. Ostdiek, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 26, 1960, Ser. No. 52,315
5 Claims. (Cl. 294—86)



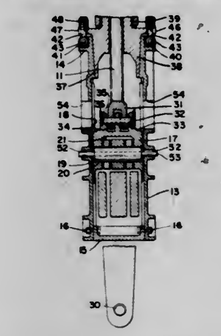
1. A lifting sling including a pair of interconnected substantially semi-circular devices, each device of said pair of devices comprising an outer U-shaped member and an inner T-shaped member disposed within the U-shaped member, means for interconnecting the outer U-shaped member and the inner T-shaped member on each device of said pair of devices in mutually parallel spaced relationship, a cable secured to the outer member of each device of said pair of devices at the outermost ends thereof, and additional cable secured to the inner member of each device of said pair of devices at the outermost ends thereof, a spreader, means connecting the opposite ends of the cables of the outer members to said spreader, additional means connecting the opposite ends of the cables of the inner members to said spreader, the inner member and outer member on each device of said pair of devices being slidable in unison from initially open positions to finally closed positions to surround and engage a body to be lifted, and latch means carried by the outer U-shaped member of each device of said pair of devices and engageable with the inner T-shaped member thereof for latching the members in either of said positions, lifting force applied to the cables on the outer and inner members tending to tighten the grip of the members on the body to be lifted.

3,021,168
WORKPIECE GRASPING APPARATUS
George C. Bodine, 31029 Road 160, Visalia, Calif.
Filed Mar. 28, 1960, Ser. No. 17,830
11 Claims. (Cl. 294—88)



1. In a workpiece grasping apparatus, an elongated, substantially rigid mounting member having a predetermined longitudinal axis; an elongated workpiece engaging plate having opposite ends; means connected to the plate intermediate its ends and fastening the plate to the mounting member, the plate having a longitudinal dimension extended outwardly in opposite directions from the mounting member and transversely of said axis; elongated jaws individually mounted on opposite ends of the plate for pivotal movement about an axis disposed transversely of the longitudinal dimension of the plate and said axis of the mounting member, the jaws being pivotal between a workpiece engaging position in opposed overlying relation to the plate and a retracted position outwardly extended from the plate; a slide longitudinally slidably fitted on the mounting member; means interconnecting the jaws and the slide for moving the jaws between their engaging and retracted positions incident to movement of the slide on the mounting member; and powered means connected to the slide for moving the slide along the mounting member.

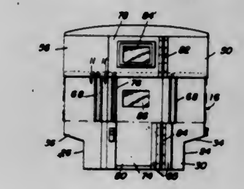
3,021,169
CRANES
Robert J. Harry, Alliance, Ohio, assignor to The Alliance Machine Company, a corporation of Ohio
Filed Dec. 21, 1959, Ser. No. 860,755
11 Claims. (Cl. 294—115)



1. In a soaking pit crane having a lift column suspended from a moving trolley the improvement comprising a tongs housing having a crowned portion with a tapered

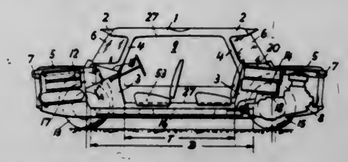
opening therein, tongs elements pivoted in said housing, drive means operable through the lift column to open and close the tongs element upon engagement therewith, a releasable drive arm member on said drive means adapted to engage said tongs element, said lift column having a tapered head element with said drive means extending therethrough, the taper of said head element corresponding to the taper of said crown opening whereby said head element is compatibly received within said crown opening in engagement with said tongs housing, and means releasably engaging the lift column and housing to retain said tapered head element within said tapered crown opening in engagement with said tongs element.

3,021,170
TELESCOPING COVER FOR TRUCKS
Ray D. Cornelius, 80 Galway Court, Eugene, Oreg.
Filed Sept. 3, 1958, Ser. No. 758,739
1 Claim. (Cl. 296—23)



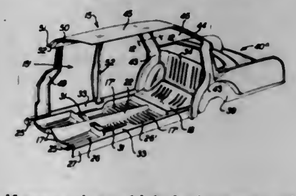
A cabin to be removably mounted on a truck body, said cabin comprising side walls, a front wall and a rear wall having an opening therein, said cabin further comprising a lower section and an upper section mounted telescopically for vertical sliding adjustment thereon, and a door for the opening, said door including upper and lower parts, vertically aligned hinges mounting said door parts on the upper and lower cabin sections, respectively, and means connecting the door parts for operation in unison in all adjusted positions of the upper cabin section.

3,021,171
ALL-PURPOSE PASSENGER CAR
Béla Barényi, Stuttgart-Valhingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Aug. 4, 1959, Ser. No. 831,621
Claims priority, application Germany Aug. 4, 1958
27 Claims. (Cl. 296—24)



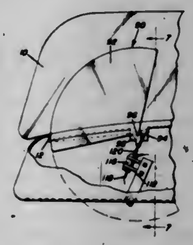
1. In a passenger car, the combination of a lower frame having wheels, a car body on said frame having front and rear parts substantially symmetrical to each other about a central vertical transverse plane of said car, said car body enclosing a passenger compartment having a substantially level floor adapted to support movable loads along its entire extent, said body comprising front and rear windows and a substantially flat horizontal car top, side walls forming an upper frame enclosing said windows and supporting said car top only at points directly adjacent to said windows, at least one of said side walls having a door opening therein of a length substantially equal to the length of said floor and of a height substantially equal to the vertical distance between said floor and said car top, said door opening extending substantially symmetrically toward both sides of said central plane, at least one door for opening and closing said door opening, said car top having an upper surface for directly supporting movable loads along its entire extent and having outwardly projecting edge portions extending along and protruding over at least said side walls intermediate said front and rear windows and over said door opening and said door when in the closed position, an engine mounted substantially within an area outside of the wheel base of said car, removable seats within said compartment, the total area of said floor and said car top adapted to support movable loads amounting to substantially two-thirds of the total area of said car as seen in a plan view.

3,021,172
SELF-SUPPORTING VEHICLE BODY
Ernst J. H. Fiala and Heinrich Haselmann, Sindelfingen, Kreis Boeblingen, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed July 3, 1958, Ser. No. 746,522
Claims priority, application Germany July 5, 1957
18 Claims. (Cl. 296—28)



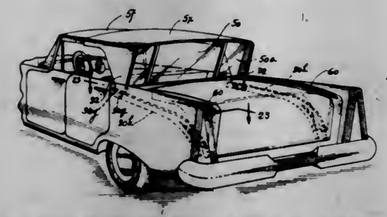
16. A self-supporting vehicle body composed of a plurality of main body parts made of pressed sheet metal members comprising a floor plate part, a front part, a rear part and two lateral wall parts, said floor part including a reinforced floor plate and having over at least a portion of its length angularly bent longitudinal rim portions having a hat-shaped cross-section with the open side facing downwardly, additional profile means reinforcing said hat-shaped cross-section, and said rear and front parts each including upwardly extending portions cooperating with complementarily shaped portions of said lateral wall parts to form box-like bearer members.

3,021,173
GLARE REDUCER FOR ONCOMING HEADLIGHTS
Leon Levin, 50 E. Sunbury St., Shamokin, Pa.
Filed Mar. 7, 1960, Ser. No. 13,118
5 Claims. (Cl. 296—97)



1. A glare reducing device for vehicle drivers comprising a glare shield, mounting means for pivotally supporting said shield for vertical swinging movement adjacent a vehicle windshield, said mounting means positioning said shield for movement between a retracted inoperative position and an extended operative position disposed in the line of vision of a vehicle driver and the windshield, operating means including a solenoid connected to said shield for relatively instantaneous movement of the latter from its retracted position to its extended position, said shield comprising a single quadrant-shaped blade, said mounting means and said operating means being disposed below the top of the vehicle dash.

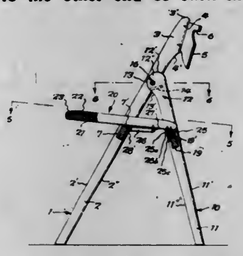
3,021,174
HARDTOP CONVERTIBLE AUTOMOBILE STRUCTURE
John C. Rund, 12222 25th SW., Seattle, Wash.
Filed Sept. 4, 1958, Ser. No. 759,021
4 Claims. (Cl. 296—107)



1. In combination; an automobile body comprising a passenger compartment and a trunk compartment rearwardly thereof, a windshield across the body at the front of the passenger compartment, a rigid top structure having a back portion formed with opposite side flanges, means at the forward end of the top structure adapted to be supportingly fixed to the windshield frame, guide rails mounted within the body structure along opposite sides of the trunk compartment with their forward end portions disposed along the base portions of said side flanges of the top structure, each rail having a longitudinal slot and said top having roller mounting means rigidly fixed to each of the opposite side flanges, and extended therefrom into the corresponding rail through its longitudinal slot, two rollers mounted on said roller mounting means in spaced relationship along the rails, adapted for rolling and guiding contact with the rail for the moving of the top between a closed position over the passenger compartment to an open position in the area of the trunk compartment, each of said guide rails including a substantially horizontal longitudinal portion extending along the corresponding side of the trunk compartment and terminating at its rear end in two downwardly curved and diverging branches in the vertical plane of the rail into which the two rollers, as applied to the corresponding flange of the top structure, are respectively received when the top is moved to full open position.

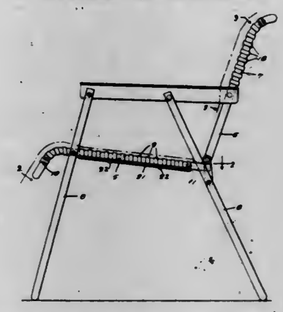
3,021,175
FOLDING CHAIRS
Francis A. Norquist, 107 Westminster Drive, Jamestown, N.Y.
Filed June 2, 1958, Ser. No. 739,132
10 Claims. (Cl. 297—58)

1. A folding chair including in combination; a front leg assembly presenting a pair of wood front legs rigidly joined by a rigid outbowed backrest member and a wood front crossbar, said front crossbar having relatively flat front and rear faces inset with respect to the front and rear faces of said front legs; a rear leg assembly presenting a pair of wood rear legs, means pivotally connecting the upper end of each rear leg to the inner face of the adjacent front leg in the area between the front crossbar and backrest member of the front leg assembly, said pivoting means being forwardly offset with respect to the longitudinal centerline of said rear legs so that the rear faces of the rear legs project rearwardly of the rear faces of the front legs when the chair is fully folded; a seat assembly presenting a relatively thin seat panel free of any projecting seat frame and whose upperface is covered by a resilient cushioning pad embraced within upholstery covering, means positioned below said rear leg-pivoting means and secured to the underface of the seat panel for supporting and pivotally connecting the seat assembly to said rear legs, and linkage means for swingably connecting the seat assembly to said front crossbar which includes a pair of linking struts, a bracket element pivotally connected to one end of each linking strut and fixedly secured to the underface of the seat panel in inwardly spaced relation to the sides thereof, and a bracket element pivotally connected to the other end of each linking strut and



fixedly secured to the front crossbar in inwardly spaced relation to the ends thereof, said front crossbar being positioned directly adjacent the underface of said seat panel when the seat assembly is in seating position, the lower portions of said front legs which extend below said front crossbar being free of cross-bracing and other obstructions whereby the lower limbs of the chair-seated occupant may be freely swung under the seat assembly and between the lower portions of said front legs, said seat assembly being designed and proportioned to be supported from said front crossbar when in seating position and to be upswung between the upper portions of the paired front legs when in folded position; said folding chair being designed when fully folded for interlocking stacking with similar folded chairs with the front legs of the following folded chair partially telescoped over the rear legs of the preceding chair.

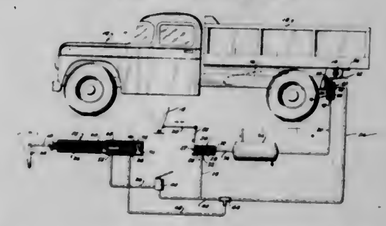
3,021,176
FURNITURE CONSTRUCTION
Harold O. Eads, Vienna, W. Va., and James W. Robison, Belpre, Ohio, assignors to O. Ames Company, Parkersburg, W. Va.
Filed Nov. 26, 1958, Ser. No. 776,500
2 Claims. (Cl. 297—452)



1. Furniture comprising a frame embodying a seat section and back section comprised of tubular side rails

having circular openings extending transversely therethrough adjacent to the ends thereof, flexible plastic normally tubular continuous cords wrapped consecutively from one side rail to the other of said seat section and said back section, providing spaced tubular supporting strands temporarily collapsible under pressure, said cords being wrapped under pressure flattening said normally tubular plastic cords at the points of contact with said side rails adjacent to said openings, securing said cords, and the ends of said plastic cords being wedged within said openings respectively, for expansible contact with the walls of said openings, securing the ends of said cords to said side rails against accidental displacement.

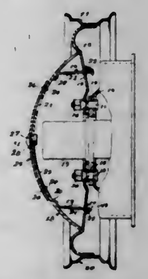
3,021,177
DUMP BODY CONTROL SYSTEM
Raymond S. Gresko, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Mar. 8, 1960, Ser. No. 13,466
3 Claims. (Cl. 298—21)



2. In combination with an engine operated dump body including raising mechanism and a power take-off lever movable between positions for operatively connecting and disconnecting said raising mechanism with said engine, fluid pressure operated means for controlling the speed of said engine including a pressure source and a manually operable throttle valve, two-way valve means normally connecting said throttle valve and said source and being responsive to movement of said power take-off lever to its connecting position for disconnecting said throttle valve and said source while simultaneously effecting operation of said fluid pressure operated speed control means to cause said engine to operate at a predetermined rate of speed for raising said dump body, and means responsive to the movement of said dump body to its fully raised position for effecting operation of said fluid pressure operated speed control means to cause said engine to operate at a second predetermined rate of speed less than the first predetermined rate.

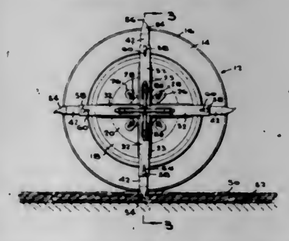
3,021,178
LOCKING DEVICE FOR VEHICLE HUB CAPS
Stuart R. Thornton, 3700 26th St., San Francisco, Calif.
Filed Apr. 5, 1960, Ser. No. 20,040
4 Claims. (Cl. 301—37)

1. In a device of the character described, a wheel including a main body portion provided with openings for the projection therethrough of studs, securing elements arranged in engagement with said studs, there being a plurality of spaced apart openings in said main body portion, an arcuate hub cap arranged contiguous to the outer surface of said wheel and said hub cap having its outer peripheral portion abutting said main body portion, a plurality of lugs each having an offset end portion secured to said hub cap, each lug further including a main straight section which terminates in an angularly disposed finger, said lugs extending through the last named openings in said main body portion and said fingers adapted to engage the inner surface of said main body portion, there being a plurality of spaced apart holes in said hub cap which are arranged in alignment with said studs, said hub cap having a plurality



of indentations therein, a cover member arranged adjacent the outer surface of said hub cap, and a pin on said cover member for selectively engaging an indentation.

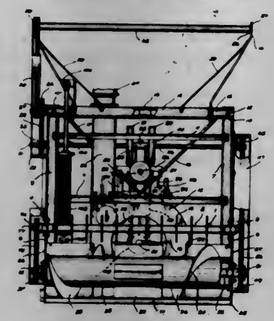
3,021,179
WHEEL TRACTION DEVICE
William L. Lindner, 1755 E. 224th St., Sauk Village, Ill., and Henry J. Rokosz, 5534 S. Loomis Blvd., Chicago, Ill.
Filed Feb. 24, 1961, Ser. No. 91,426
5 Claims. (Cl. 301—47)



1. In combination, a vehicle wheel having a pneumatic tire thereon having a tread and a wheel disc having an annular central portion, a traction device comprising a spider having a central portion, mounting means removably securing the same to the outboard side of the central portion of the wheel disc, said spider having spaced radial arms, tubes fixed to and extending along said arms, said tubes having closed inner ends and open outer ends, traction bars slidably and non-rotatably engaged in the outer ends of the tubes, said traction bars having traction points on their outer ends, said traction bars having inner ends, spring means urging said traction bars out of the outer ends of the tubes, means limiting outward and inward movements of the traction bars in said tubes, the traction bar points normally reaching beyond the tread of the tire for digging into penetrable ice or snow on a hard road surface, said spring means being yieldable to enable inward displacement of the traction bar points on contact thereof with a hard road surface devoid of penetrable snow or ice, and means for releasably locking the traction bars in retracted positions in said tubes wherein the traction bar points are located inwardly of the tire tread, said means comprising holes in the sidewalls of the tubes located intermediate the ends of the tubes, locking sockets in the traction bars, and locking pins movably mounted on the tubes and engageable through the tube holes into the locking sockets, radially elongated leaf springs extending along the tubes and having inner ends fixed to the tubes and outer ends

spaced away from the tubes, said locking pins being fixed on the outer ends of the leaf springs, and operating and retaining means comprising an axial stub shaft fixed on and extending outboardly from the central portion of the spider, an operating plate having a central tubular hub extending inboardly therefrom and slidably and frictionally engaged on said stub shaft, said plate being positioned at the outboard sides of the leaf springs and being movable in an inboard direction in said stub shaft to engage and push the locking pins into and retain the pins in the traction bar locking sockets.

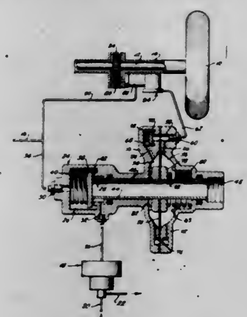
3,021,180
OVERLOAD BREAKER
Owen De Murrel Crump, 501–11 S. Kansas Ave., Olathe, Kans.
Filed Apr. 18, 1960, Ser. No. 22,976
2 Claims. (Cl. 302—56)



1. In an apparatus for picking up ensilage from a pile and depositing same in a truck; a frame, a pan supported by said frame and having an auger therein adapted to move ensilage in a path of travel from said pan, a blower housing containing a fan and having an intake opening in said path of travel and adjacent said auger for receiving the ensilage moved thereby, said blower housing communicating with a delivery chute for transporting and depositing the ensilage impelled by said fan, means mounting said auger on said frame for rotation on an axis extending transversely of said path of travel, an ensilage breaking element, means rotatably mounting said breaking element on said frame adjacent said auger and in said path of travel between said pan and said intake opening, said ensilage breaking element rotating on an axis extending parallel to the auger axis and said breaking element including a plurality of rows of radially extending spaced blades extending over substantially the length of said auger, a digger element mounted on said frame forwardly of said pan and adapted to move ensilage rearwardly of said apparatus and into said pan, means for driving said auger and digger element simultaneously, and means for rotatably driving said breaking element in a direction urging ensilage against said path of travel whereby said auger and breaknig element cooperate to disintegrate large chunks of ensilage to facilitate the entry of same into said intake opening.

3,021,181
BRAKING SYSTEM SKID CONTROLLER
Ellery R. Fitch, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Dec. 28, 1959, Ser. No. 862,299
6 Claims. (Cl. 303—21)

1. In combination with a brake system for a vehicle wheel comprising a service conduit and a relay valve connected to said conduit for controlling the flow of fluid pressure to and from a brake chamber associated with said wheel, a valve body having inlet and delivery ports respectively connected to said service conduit and said relay valve and having an exhaust port, a valve member in said body movable from a normal position connecting said service conduit and said relay valve to a second position disconnecting said service conduit and relay valve and connecting the latter to the exhaust port, a fluid pressure responsive element operatively connected to said valve, said element having opposed motive areas so as to be movable in opposite directions depending on the relative magnitude of the pressures acting on the respective areas, fluid pressure delivery means operatively connected to said wheel so as to be driven in synchronism therewith, conduit means connecting the opposed motive areas of said element to the outlet of said pressure delivery means, restricted orifice means connecting the outlet of

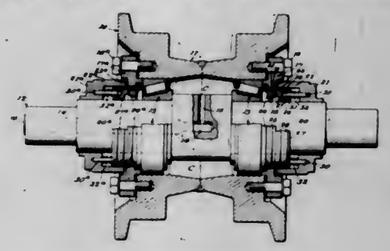


said pressure delivery means to atmosphere, said orifice means being so arranged and constructed that the pressure delivered to said motive areas is proportional to the speed of operation of said delivery means and of said wheel, check valve means for preventing the backflow of delivered pressure from one of said motive areas to said restricted orifice means, and second restricted orifice means interconnecting said motive areas, said operative connection between said element and said valve member being arranged and constructed that upon a sudden decrease in pressure delivered by said delivery means because of greater than normal deceleration of said wheel and consequent movement of said element in the direction of the area receiving the decreased pressure, said valve member is moved to a position connecting said relay valve to said exhaust port, and resilient means connected to said element for moving it to its first normal position when pressure is equalized through said second orifice means on both areas of said element.

3,021,182
SEALED BEARING AND SHAFT ASSEMBLY
Walter H. Schnacke, 1016 E. Columbia St., Evansville, Ind.
Filed May 29, 1959, Ser. No. 816,810
7 Claims. (Cl. 308—187)

1. In a sealed bearing-and-shaft assembly having means for admitting grease under pressure; sealing means for the injected grease constructed and arranged to act without injury as pressure relief means for allowing the extrusion of old grease while new grease is being injected, said sealing means including an axially separable inner and an outer sealing ring having juxtaposed sealing and bearing surfaces; and spring means yieldably holding said outer ring in sealing contact with said inner ring, said outer ring having a portion of its inner side sufficiently

exposed to the grease within the assembly so as to allow the increased pressure caused by injection of new grease to force said outer ring axially from contact with said inner ring, axially displacing said sealing and bearing surfaces and permitting used grease to be forced from between said sealing and bearing surfaces and carrying said used grease and foreign matter away from said bearing

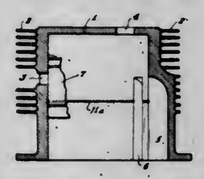


and shaft assembly, said assembly including a portion communicating with the exterior of said seals to permit the passage of used grease therefrom, said inner ring being of considerably greater internal diameter than said outer ring to provide an exposed pressure responsive portion at the said inner side of said outer ring and subject to the new grease pressure.

3,021,183
CYLINDER AND PISTON STRUCTURES

Wendell C. Cheney and Harold Morehouse, Lake City, Minn., and Marshall G. Whitfield, Garden City, N.Y.; said Cheney and said Morehouse assignors, by direct and mesne assignments, to Gould-National Batteries, Inc., St. Paul, Minn., a corporation of Delaware

Filed Nov. 28, 1958, Ser. No. 777,036
11 Claims. (Cl. 309—6)



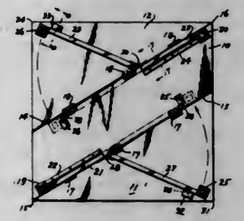
1. In combination, in an internal combustion engine, a cylinder having an interior surface, a piston in sliding engagement with said interior surface and having a head and a skirt, the interior surface of said cylinder having an oil-receiving reservoir in the form of at least one indentation, said reservoir being limited in extent longitudinally of said cylinder to a position at which it will be uncovered by the skirt of said piston at one extreme of the piston travel but covered by said skirt at the other extreme, the said reservoir having a substantial extent circumferentially of said cylinder.

3,021,184
ADJUSTABLE TABLE

Marjorie B. Leffler, 17 Soundview Drive, Tuckahoe, N.Y.

Filed Sept. 6, 1960, Ser. No. 54,083
1 Claim. (Cl. 311—63)

In a table, a square top formed of three sections defined by a pair of spaced parallel lines extending across the top from a pair of opposite corners, whereby the middle section is an oblique parallelogram, hinges connecting each outer section in drop-leaf fashion to the middle section, a pair of fixed legs secured to the acute-angled corners of the middle section, and a pair of adjustable legs swingably secured to the middle section and movable between inner positions beneath the middle section adjacent to the obtuse-angled corners thereof and outer positions directly beneath the free corners of the outer sections, whereby the table when extended is square with the legs directly at the corners of the square, said

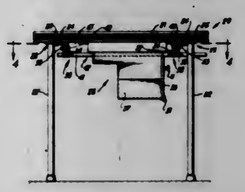


middle section having a width equal to about one-quarter the length of the diagonal of the table so that when the triangular outer sections of the table are dropped the middle section can itself serve as a self-sustaining stable four-legged table with the legs arranged at the corners of an oblique parallelogram.

3,021,185
CONTROLLABLY EXTENDABLE AND RETRACTABLE STORING AND CARRYING APPARATUS ADAPTED TO BE MOUNTED UNDERNEATH A HORIZONTAL SURFACE IN AN OTHERWISE UNUSED, UNOBTRUSIVE LOCATION

Walter Kowalczyk, Wyandotte, Mich., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California

Filed Nov. 12, 1959, Ser. No. 852,428
5 Claims. (Cl. 312—29)

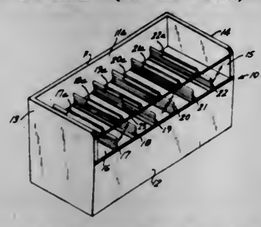


1. Horizontal controllably extendable and retractable storing and carrying apparatus adapted to be mounted underneath a substantially horizontal table top or the like in an otherwise unused, unobstrusive location and adapted to carry a utilitarian device of a type adapted to be intermittently and relatively infrequently used, comprising: hollow housing means defining an interior carrying and storing chamber therein and having a front access opening thereinto at one end thereof provided with manually controllably openable and closable closure means adapted to normally close said housing and interior chamber; mounting means for mounting said housing means immediately under a substantially horizontal table top of a table of a type having downwardly directed supporting legs fastened thereto by suitable fastening means, with said mounting means being adapted to engage the table leg fastening means whereby to be fastened to the underside of the table thereby; said housing being provided with longitudinal rail means extending from within the interior chamber within said housing outwardly through said access opening thereinto into an extended displaced position completely outside of the housing; and carriage means provided with rotary rail-engaging means rollably engaging said longitudinal rail means for extension outwardly from the interior chamber within said housing into an extended displaced use position and for retraction entirely within said interior chamber into a retracted non-use storage position.

3,021,186
INTERLOCKING DIVIDER AND MOLDING ASSEMBLY

Milton Immermann, Piermont, N.Y., assignor to The Hopp Press, Inc., New York, N.Y., a corporation of New York

Filed Mar. 15, 1960, Ser. No. 15,099
2 Claims. (Cl. 312—140.3)



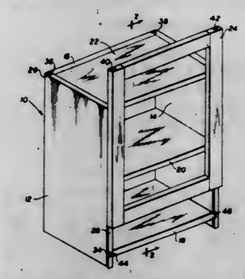
1. In combination, a merchandise divider comprising a vertical body, an enlarged portion at the upper end of said body and extending longitudinally thereof, a molding formed with a longitudinally extending cavity and having a slot midway of its lower face affording access thereto, said slot having a width greater than the thickness of the divider body below said enlarged portion but less than the width of the latter, said cavity in cross section presenting an area of greater size than a configuration complementary to said enlarged portion, the molding interlocking with said divider against detachment therefrom by the introduction of said enlarged portion into an end of said cavity and the moving of the molding and divider longitudinally of each other to slidably mount the molding upon the divider, said enlarged portion being triangular in section with upwardly extending side faces inclined towards each other, card retaining lips extending upwardly adjacent the upper and lower edges of said faces and with the lower lips positioned below said slot.

3,021,187
DOVETAIL METHOD OF CABINET CONSTRUCTION

George M. Mitchell, 25 Alicia Court, Hempstead, N.Y.

Filed Dec. 17, 1959, Ser. No. 860,160
1 Claim. (Cl. 312—257)

A cabinet construction of the character described, comprising a pair of side walls having a pair of dovetail grooves formed therein on their facing inner sides, said dovetail grooves extending vertically of said side walls and adjacent their respective back edges, a back wall having a pair of dovetail formations formed along its two side edges vertically thereof, said dovetail formations being in engagement with said dovetail grooves formed in the side walls, whereby the back wall and the side walls are secured together, a plurality of dovetail grooves formed in each of the side walls, on their facing inner sides, and extending horizontally thereof, there being at least one such horizontal dovetail groove formed adjacent the upper edges of each said side wall, a second horizontal dovetail groove formed adjacent the lower edge of each said side wall, and a third horizontal dovetail groove formed on each said side wall intermediate said upper and lower horizontal grooves, a top wall having a pair of dovetail formations formed along its side edges, said dovetail formations of said top wall being in engagement with the upper dovetail grooves formed in said side walls, whereby the top wall is held in place on said side walls and forms the top of the cabinet, a bottom wall having a pair of dovetail formations formed along its side edges, said dovetail formations of the bottom wall being in engagement with the lower dovetail grooves of



the side walls and said bottom wall and constituting the floor of the cabinet, an intermediate wall having a pair of dovetail formations formed along its side edges, said dovetail formations of said intermediate wall being in engagement with the intermediate dovetail grooves of said side walls, said intermediate wall constituting the shelf of the cabinet, a pair of dovetail formations formed along the front edges of said side walls, vertically thereof, and an open frame consisting of a pair of vertical side members and top and bottom horizontal members secured together, the side members of said frame having a pair of dovetail grooves formed therein, vertically thereof, said dovetail grooves of said side members of the frame being in engagement with the dovetail formations on the front edges of the side walls, whereby said frame is secured to said side walls and forms the front facing of said cabinet, said side members of said frame extending partially across the top, bottom and intermediate walls of the cabinet and holding said walls in place within the cabinet, whereby all of the walls and said frame of said cabinet are in dovetail locking engagement with each other.

CHEMICAL

3,021,188
TEXTILE MATERIALS RESISTANT TO FADING

Anthony Bernard Conciatori, Chatham, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 24, 1958, Ser. No. 710,870
15 Claims. (Cl. 8—61)

14. Process which comprises heat-treating a dyed textile material having a basis of a cellulose organic acid ester containing at most 0.29 hydroxyl groups per anhydroglucose unit in the cellulose molecule thereof, said cellulose ester having incorporated therein an anthraquinone dye and a minor amount of a compatible compound having isolated non-conjugated aliphatic carbon-to-carbon unsaturation free of salt-forming groups and for protecting said dyed material against O-fading.

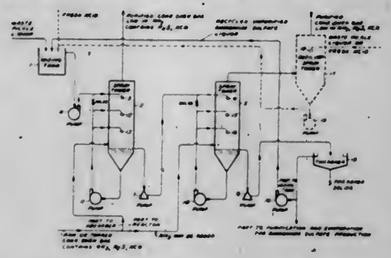
3,021,189
TREATMENT OF COKE OVEN GAS

Edgar B. Mancke, Joseph E. Schmuk, and Frank M. Temmel, Bethlehem, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania

Filed Oct. 2, 1958, Ser. No. 764,955
8 Claims. (Cl. 23—3)

1. In a continuous process, the method of removing ammonia and acidic gases from coke oven gas which

comprises treating a portion of said gas with sulfate liquor of low pH containing sulfuric acid and ferrous sulfate and continuing the treatment until the pH of

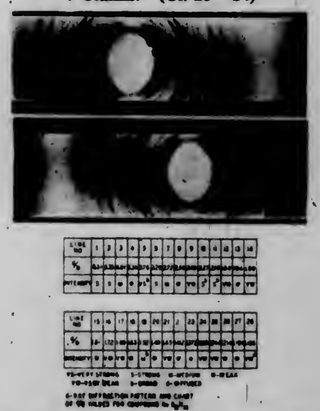


the treating liquor rises to about 3.5, then using the liquor to treat a fresh portion of said gas until the pH of the liquor rises to at least 6.8.

3,021,190
ALKALI METAL DERIVATIVES OF DECABORANE

Albert D. McElroy, Evans City, Pa., and Joseph P. Nigon, Washington, D.C., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 25, 1956, Ser. No. 561,375
7 Claims. (Cl. 23—14)



1. As a new composition of matter, an alkali metal derivative of decaborane having the general formula $MB_{10}H_{14}$ where M is an alkali metal selected from the class consisting of sodium, potassium and lithium.

3,021,191
PRUSSIAN BLUE PIGMENT

William H. Rhodes, Huntington, W. Va., assignor to Standard Ultramarine & Color Co., Huntington, W. Va., a corporation of West Virginia

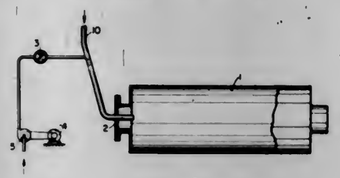
No Drawing. Filed June 9, 1958, Ser. No. 740,578
5 Claims. (Cl. 23—77)

1. In a process for forming Prussian Blue pigment in which a washed Berlin White is made into an ammonium complex in an aqueous slurry and the slurry then oxidized under alkaline conditions, the improvement which comprises completely oxidizing the complex ferrous ferrocyanide to the ferric ferrocyanide by adding hydrogen peroxide to the slurry in an amount equal to at least 75% of the stoichiometric amount required for oxidation of the ferrous iron present in the form of an independent cation in its salts, thereby forming a pigment slurry characterized by the fully developed red shade of Prussian Blue, freedom from grit, and being capable of being flushed directly into paint and ink media without necessity for further color development by elevated temperature air drying and oxidation.

3,021,192
METHOD AND APPARATUS FOR THE CONTINUOUS PRODUCTION OF CALCIUM CYANAMIDE

Franz Kaess, Thomas Fischer, and Hermann Kronacher, Trostberg, Germany, assignors to Suddeutsche Kalkstickstoff-Werke A.G., Trostberg, Germany

Filed May 27, 1959, Ser. No. 816,089
Claims priority, application Germany May 28, 1958
11 Claims. (Cl. 23—78)



4. A method for the continuous production of calcium cyanamide in a rotary kiln comprising continuously propelling calcium carbide powder of substantially homogeneous particle size by a nitrogen stream into the kiln, continuously and evenly oscillating the angle of injection of said nitrogen-calcium carbide stream into the kiln so as to deposit the calcium carbide powder homogeneously in a reaction zone of substantially constant length, reacting the deposited calcium carbide with said nitrogen in said reaction zone to calcium cyanamide, and continuously discharging the calcium cyanamide.

3,021,193
PRODUCTION OF SODIUM FLUORIDE

George L. Cunningham, Burtonsville, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 29, 1958, Ser. No. 770,287
5 Claims. (Cl. 23—88)

1. The method of converting SiF_4 in the off-gases of phosphate rock acidulation to utilizable products which comprises absorbing the SiF_4 in water to form H_2SiF_6 of about 20–30% concentration, filtering said solution to remove insoluble impurities, slowly and with vigorous stirring adding to the filtered H_2SiF_6 a stoichiometric quantity of KCl in concentrated form, thereby forming a slurry of potassium fluosilicate in HCl solution, distilling and recovering the HCl, adding to the residue a stoichiometric amount of NaOH, thereby yielding a thick slurry of NaF in potassium silicate solution, filtering the slurry and washing the residue to obtain substantially pure NaF, concentrating the filtrate by evaporation at an elevated temperature to crystallize additional NaF, cooling and filtering the concentrate to remove additional NaF, continuing the alternate concentrating and filtering steps until potassium silicate of desired concentration is obtained, whereby there are obtained substantially pure potassium silicate, hydrochloric acid and sodium fluoride.

3,021,194
PRODUCTION OF AMMONIUM HYDROGEN FLUORIDE

George L. Cunningham, Burtonsville, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

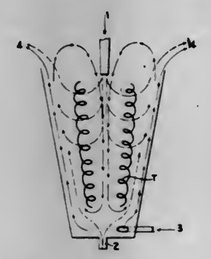
No Drawing. Filed Jan. 16, 1959, Ser. No. 787,116
9 Claims. (Cl. 23—88)

1. The method of making ammonium acid fluoride comprising admixing concentrated fluosilicic acid and ammonium fluoride in stoichiometric quantities to form a concentrated solution of ammonium acid fluoride containing solid ammonium silicofluoride, filtering to remove said solid and evaporating the filtrate to dryness, thereby yielding highly pure ammonium acid fluoride as a product.

3,021,195
TREATMENT OF SILICATES

Ernst Podschus, Leverkusen-Bayerwerk, and Werner Joseph, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Filed Dec. 30, 1958, Ser. No. 783,658
Claims priority, application Germany Jan. 2, 1958
11 Claims. (Cl. 23—110)



1. A method of treating a water insoluble natural aluminosilicate containing bound water, in a finely divided, pulverulent state, which comprises establishing a vortex of hot inert gas heated to drying temperature, said vortex having an entry end, an outlet end, and a central area in which there is a flow of gas toward the entry end of the vortex, said central area being surrounded by an external area in which there is circular flow of hot gas around said central area and toward the outlet end of the vortex, introducing the aluminosilicate into said central area and thereby suspending the aluminosilicate in the hot gas and producing a suspension having a temperature of 500 to 1200° C., and removing the resulting suspension from the vortex so rapidly that the average retention time of the alumino silicate in the vortex is less than 5 seconds.

3,021,196
METHOD FOR PRODUCING MULTI-COMPONENT SUBSTANCES COMPRISING A COMPONENT OF HIGH VOLATILITY

Hans Merkel, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany

Filed Sept. 6, 1956, Ser. No. 608,334
Claims priority, application Germany Sept. 23, 1955
17 Claims. (Cl. 23—204)



9. A process of preparing an inorganic material composed of substances whose partial vapor pressures at the temperature of the process are different from each other, by heating the substances together, comprising heating, in a first zone, the substance having the lesser partial vapor pressure in an atmosphere of the substance having the greater partial vapor pressure, to react them with each other, said atmosphere being produced by heating, in a second communicating zone, a stoichiometric compound of a metal and the substance having the greater partial vapor pressure, which compound decomposes in said second zone to yield the latter substance. the partial vapor pressure of the latter substance so yielded being at least equal to the partial vapor pressure of the same substance of the inorganic material being prepared, at the temperature that the latter material is heated to in the first zone, said communicating zones comprising a reaction enclosure which is at least sufficiently enclosed to prevent egress of phosphorus vapor, the reaction taking place under application of the pressure of the vapor of the substance having the higher partial vapor pressure, the metal having a boiling point higher than the temperature in said second zone, said inorganic material being an $A_{III}B_V$ multicomponent semiconductor material, which dissociates at the temperature of the reaction when at atmospheric pressure, the $A_{III}B_V$ material being allowed to cool down to a temperature at which it is stable, while in said enclosure and in said atmosphere, said stoichiometric compound being one which can decompose to yield the substance of greater partial vapor pressure at the temperature of the reaction.

3,021,197
PREPARATION OF DIBORANE

Charles C. Clark, Kenmore, and Frank A. Kanda and Aden J. King, Syracuse, N.Y., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

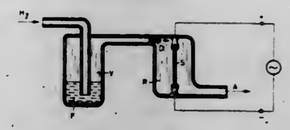
No Drawing. Filed Nov. 20, 1956, Ser. No. 623,512
2 Claims. (Cl. 23—204)

1. A method for the production of diborane which comprises reacting polymeric boron monoxide with gaseous hydrogen at a temperature of about 850° C. to 1500° C. and recovering diborane from the gaseous reaction effluent.

3,021,198
METHOD FOR PRODUCING SEMICONDUCTOR SINGLE CRYSTALS

Theodor Rummel, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed July 24, 1958, Ser. No. 750,797
12 Claims. (Cl. 23—223.5)

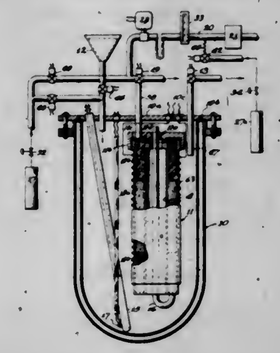


1. A method of producing semiconductor single crystals by separation, in a separation vessel, of highly pure semiconductor material from a gas phase, comprising the steps of exposing the single crystalline surface structure of a solid carrier consisting of the identical semiconductor material involved, heating said carrier to a temperature below the melting point thereof but sufficiently high to effect crystallization in free condition of said semiconductor material on the solid single crystal carrier surface from a gaseous compound of the semiconductor contained in reaction gas flowing through such separation vessel in which is disposed the carrier, effecting a turbulent flow of the reaction gas about the single crystal structure exposed on the surface of the carrier, maintaining the separation temperature at the carrier surface so low that an increase thereof would result in the increase of the separation velocity at such surface, and maintaining the separation velocity so low that an over-saturation of the carrier surface with available semiconductor material, which would hinder the single crystal growth, does not take place.

3,021,199
INSTRUMENT TO MEASURE COMBUSTIBLES IN LIQUID OXYGEN

Sixt Frederick Kapff, Homewood, and Irwin Ginsburgh, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Nov. 13, 1957, Ser. No. 696,252
6 Claims. (Cl. 23—230)

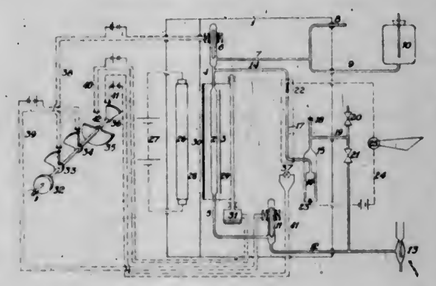


5. A method for monitoring the concentration of hydrocarbons in liquid oxygen-rich streams flowing in air liquefaction plants which comprises vaporizing a sample of such liquid oxygen within a confined space to produce a gasiform stream of gaseous oxygen and hydrocarbon vapors, flowing the gasiform stream through an adsorption zone, maintaining said zone at a low temperature by heat exchange contact with the liquid sample and said gasiform stream, separating hydrocarbons from said stream in said adsorption zone, heating said zone to desorb the adsorbed hydrocarbons, simultaneously with said heating flowing a stream of gaseous oxygen through said zone as a sweep gas, and effecting combustion of the desorbed hydrocarbons in said gaseous oxygen on a combustion-catalyzing element, said combustion being a measure of the concentration of hydrocarbons in said liquid oxygen-rich streams.

3,021,200
GAS MEASURING DEVICE

Robert Schoberle, Roermond, Netherlands, and Robert de Greef, Wemmel-Brussels, Belgium, assignors to Solvay & Cie, Brussels, Belgium, a Belgian company

Filed July 9, 1959, Ser. No. 825,968
Claims priority, application Belgium July 11, 1958
6 Claims. (Cl. 23—255)

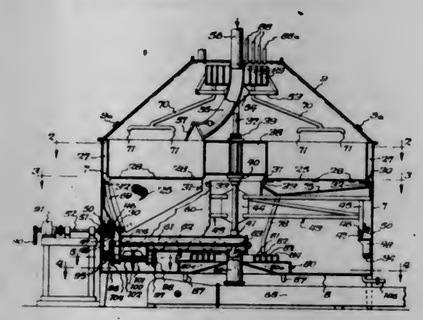


1. An apparatus for measuring the constituents of a gaseous mixture which comprises, in combination, a reaction chamber permeable to actinic radiation, inlet means for supplying the gaseous mixture to be analyzed to said chamber, first valve means in said inlet means, outlet means for removing the products of the reaction from said reaction chamber, second valve means in said outlet means, means for inducing a predetermined vacuum in said reaction chamber, a manometric assembly in fluid communicating relationship with said reaction chamber, said manometric assembly including a manometric liquid which is a conductor of electricity, a reading unit and an indicator unit in an electrical circuit adapted to be closed by said manometric liquid to indicate a predetermined limit of concentration of a gas in said gaseous mixture, means for effecting periodic illumination of the reaction chamber by said actinic light, and automatic control means for selectively operating said first valve means, said second valve means, and said means for effecting periodic illumination of said reaction chamber, said manometric assembly comprising a receiver provided with a feed tube and means for degassing the manometric liquid, a bell submerged in said receiver and fitted with a reading tube connected with the reaction chamber, and said indicator unit comprising an electrode constantly submerged in the manometric liquid, an electrode disposed in the reading tube at a height corresponding to an amount of gas corresponding to said predetermined limit well below the explosive limit, and an audible indicator in said circuit which operates when said electric circuit is closed.

3,021,201
SOLVENT EXTRACTION APPARATUS

Charles B. Upton, Piqua, Ohio, assignor to The French Oil Mill Machinery Company, Piqua, Ohio

Filed Dec. 17, 1957, Ser. No. 703,368
15 Claims. (Cl. 23—272.5)

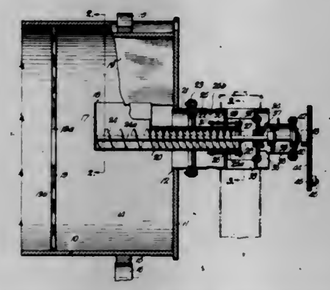


1. A continuous solvent extracting apparatus having a stationary housing and a series of containers for the material to be treated mounted in fixed relation to said housing and arranged in a substantially circular horizontal path and each having a foraminous wall, a rotatable carriage arranged in said housing, said carriage having an upper part arranged to move above said containers and a lower part which passes below said containers, said upper part having mounted thereon a chute located at the beginning of its cycle of travel for depositing material to be treated successively into said containers one at a time, conduits on said upper part of said carriage following said chute and successively following each other for discharging successively weaker miscella on the contents of the containers, means for supplying to the final of said conduits fresh solvent liquid, collecting devices each including a collecting pan on the lower part of the carriage, the first of which is directly under the container which is being filled, the other of said collecting devices being arranged successively below other conduits, the last drainage pan extending beyond the last of said conduits to permit drainage of material, a discharge hopper on the lower carriage part following the last collecting pan at the end of said cycle, means on the hopper for effecting the discharge of the treated material from a container, and liquid elevating means mounted on said apparatus which feed liquid from said collecting means to said conduits in a manner so that the strongest miscellas are applied to the containers closest to the beginning of the cycle.

3,021,202
DISCHARGE SEAL DEVICE FOR ROTATING VESSELS

John E. Peirce, Joliet, Ill., and Jack H. Phillips, Tulsa, Okla., assignors to Ozark-Mahoning Company, Tulsa, Okla., a corporation of Delaware

Filed July 10, 1959, Ser. No. 826,179
10 Claims. (Cl. 23—286)



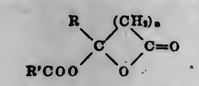
1. In a cylindrical vessel rotatable around its longitudinal axis in a substantially horizontal orientation, an opening in one end of the vessel on the axial line, a spiral conveyor case positioned in said opening and extending into said vessel with its longitudinal axis on the axis of the vessel, means fixing said case to said vessel to rotate therewith and fix its position in said opening, a spiral conveyor on a conveyor shaft rotatably mounted in said case and extending both into and outside of said vessel, means in said vessel for feeding material therefrom into said case, means on the end of the case external of the vessel resiliently resisting extrusion of material therefrom whereby to force formation of a gas sealing plug in said case and means for rotating said conveyor shaft resiliently coupled therewith whereby to permit motion of the conveyor shaft relative the rotating means without stressing the former.

3,021,203
MOTOR FUEL CONTAINING AN OCTANE APPRECIATOR

Harry Chafetz, Poughkeepsie, and George W. Eckert, Wappingers Falls, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 2, 1960, Ser. No. 6,093
8 Claims. (Cl. 44—63)

1. A hydrocarbon fuel in the gasoline boiling range containing an organo-lead anti-knock agent, high octane components selected from the group consisting of olefinic hydrocarbons, aromatic hydrocarbons and mixtures thereof in a concentration of at least 5.0 volume percent of said fuel, and an acyloxy lactone having the general formula



in which R is selected from the group consisting of hydrogen and hydrocarbyl radicals containing 1 to 10 carbon atoms, R' is a hydrocarbyl radical containing 1 to 11 carbon atoms and *n* is an integer selected from the group consisting of 2 and 3, said acyloxy lactone being present in a concentration between 0.1 and 5.0 volume percent which concentration is sufficient to effect substantial octane appreciation of said leaded fuel.

3,021,204
MOTOR FUEL CONTAINING AN OCTANE APPRECIATOR

Alfred Arkell, Fishkill, N.Y., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed May 8, 1959, Ser. No. 811,796
10 Claims. (Cl. 44—63)

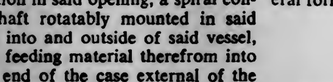
1. A hydrocarbon fuel in the gasoline boiling range containing an organo-lead anti-knock agent, at least 10 volume percent high octane components selected from the group consisting of olefinic hydrocarbons, aromatic hydrocarbons and mixtures thereof and an acyl aldoxime in a minimum concentration of 0.1 to 5.0 volume percent, said concentration being sufficient to effect substantial octane appreciation of said fuel, said acyl aldoxime having the general formula: RCH=NOOCR' wherein R is selected from the group consisting of the furfuryl radical and a hydrocarbyl radical containing 1–20 carbon atoms, and R' is a hydrocarbyl radical containing 1–18.

3,021,205
MOTOR FUEL

Harry Chafetz, Poughkeepsie, and George W. Eckert, Wappingers Falls, N.Y., assignors to Texaco Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 1, 1960, Ser. No. 11,980
10 Claims. (Cl. 44—66)

1. A hydrocarbon fuel in the gasoline boiling range containing an organo-lead anti-knock agent, high octane components selected from the group consisting of olefinic hydrocarbons, aromatic hydrocarbons and mixtures thereof in a concentration of at least 5.0 volume percent of said fuel, and an acyloxy nitrile having the general formula



in which R is a C_1–C_{10} hydrocarbyl radical, R' is selected from the group consisting of a hydrogen atom and a hydrocarbyl radical containing 1–8 carbon atoms, R'' is selected from the group consisting of a hydrogen atom, a hydrocarbyl radical containing 1–8 carbon atoms and a C_1–C_8 hydrocarbyl radical substituted with a COOR''' in which said R''' is a C_1–C_8 aliphatic hydrocarbyl radical and *n* has a value selected from the group consisting of 0 and 1, said acyloxy nitrile being present in a concentration between 0.1 and 5.0 volume percent, said concentration being sufficient to effect substantial octane appreciation of said leaded fuel.

3,021,206
GASOLINE CONTAINING DIALKANOLAMINE BORONIC ACID BIS-ESTERS

Stephen J. Groszos, Cincinnati, Ohio, and Clyde S. Scanley, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 7, 1959, Ser. No. 832,159
9 Claims. (Cl. 44—75)

1. Gasoline containing boronic acid bis-ester of a member of the group consisting of 2-hydroxy and 3-hydroxy dialkanolamines, said ester being further derived from an acid selected from the group consisting of aliphatic hydrocarbon boronic acid and aryl boronic acid, and said ester being present in antiknock quantities.

3,021,207
PROCESS FOR PRODUCING MIXED AMMONIUM NITRATE

Leonard A. Stengel, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland

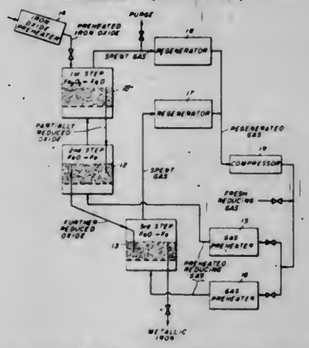
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,133
7 Claims. (Cl. 71—64)

1. The process of making a mixed solid fertilizer product in the form of a crystalline matrix of solid ammonium nitrate in which substantially discrete particles of finely divided solid soil additive selected from the group consisting of calcium carbonate, magnesium carbonate, ammonium sulfate, calcium sulfate, sodium nitrate, super phosphate, triple super phosphate, potassium nitrate, limestone and their mixtures are imbedded therein which consists essentially of continuously producing substantially anhydrous molten ammonium nitrate with a temperature greater than 337° F., continuously and uniformly mixing it with a predetermined amount of finely divided substantially discrete particles of said solid soil additive at a temperature at which the resultant mixture will remain in a freely flowing condition, said solid soil additive having been preheated to prevent subsequent undesirable thickening of the resultant mixture, then flowing the fluid mixture of said solid additive in molten ammonium nitrate onto a moving flat endless cooling belt at a rate sufficient to cool and solidify the mixture before discharge from the belt as a mechanical mixture in the form of crystals without settling of the solid particles and with the particles uniformly imbedded therein and comminuting the crystalline mass to predetermined particle size.

3,021,208
METHOD OF REDUCING ORE IN A FLUIDIZED BED

Jerome Feinman, Pitcairn, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Filed Mar. 23, 1961, Ser. No. 98,281
1 Claim. (Cl. 75—26)



In a continuous fluidized bed direct reduction process in which iron oxide fines are preheated to a temperature of about 1500 to 1900° F. and flow through first, second and third reduction steps in series, reducing gas consisting essentially of hydrogen is preheated to a temperature of about 1200 to 1500° F. and introduced separately to the second and third steps in parallel, off-gas from one of these steps is introduced to the first step, off-gas from the other of the second and third steps and off-gas from the first step are regenerated and combined for recycling, and the oxide is reduced substantially to FeO at the end of the first step, the combination therewith of a method of improving the utilization of said reducing gas and the degree of reduction of the final product comprising controlling the ratio of solids-to-gas in the second step to a range of about 35 to 65 pounds of iron per 1000 standard cubic feet of hydrgen plus water vapor and thereby limiting the reduction which takes place in the second step to furnish an intermediate product about 63 to 71 percent reduced, and reducing the intermediate product of the second step to a final product about 90 to 95 percent reduced in the third step.

3,021,209
RECOVERY OF METALS

Maurice J. Murray, Palatine, and Edward J. Bicek, La Grange, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Dec. 8, 1959, Ser. No. 858,049
14 Claims. (Cl. 75—83)

1. A method of removing a noble metal from a composite containing said noble metal which comprises treating said composite with an oxide of nitrogen and a volatilizable inorganic chlorine-containing compound at a temperature sufficient to convert the noble metal to a volatile form.

3,021,210
PREPARING LITHIUM FERROSILICON ALLOYS

Joseph S. Mathias, Riverton, N.J., assignor to Foote Mineral Company, Berwyn, Pa., a corporation of Pennsylvania

No Drawing. Filed May 26, 1960, Ser. No. 31,845
8 Claims. (Cl. 75—129)

1. The process of preparing a homogeneous casting of a lithium ferrosilicon alloy which comprises (1) reducing the temperature of a substantially homogeneous lithium ferrosilicon alloy melt, from an initial temperature at which said melt is substantially completely molten, to a lower temperature at which from about 60% to about 90% of said melt has solidified into a solid alloy phase; (2) intimately mixing said solid alloy phase with the liquid alloy phase comprising the remainder of said melt to form an intimate mixture of solid and liquid alloy phases; and (3) reducing the temperature of said intimate mixture of solid and liquid alloy phases to a temperature at which said alloy is entirely solidified.

3,021,211
HIGH TEMPERATURE NICKEL BASE ALLOYS

Paul A. Flinn, Franklin Township, Westmoreland County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 5, 1959, Ser. No. 818,453
9 Claims. (Cl. 75—170)

1. A wrought member suitable for use in a high temperature environment consisting of an alloy composed of, by weight, 79% to 81% nickel, 9% to 11% aluminum, and the remainder iron except for incidental impurities, said alloy characterized in having a substantially fine-grain structure, ductility enabling the member to be cold worked, and an ordered crystalline lattice structure which is relatively stable up to a temperature of approximately 1150° C.

3,021,212
DEVELOPERS FOR PHOTOGRAPHIC REVERSAL PROCESSES

Nancy H. King, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,685
20 Claims. (Cl. 96—29)

20. A method of producing direct positive images comprising developing an exposed photographic silver halide emulsion in contact with a receiving layer containing silver precipitating material for unexposed silver halide, said development being carried out in the presence of an alkaline solution comprising an organic silver halide developing agent for reducing exposed silver halide to metallic silver, and from about 0.2 to about 50.0 grams per liter of solution of an alkali metal selenocyanide, and diffusing unexposed silver halide from said exposed photographic silver halide emulsion into said receiving layer.

3,021,213
PHOTOGRAPHIC MATERIALS AND METHOD OF PRODUCING THE SAME

Fritz Dersch and Stanley P. Popeck, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

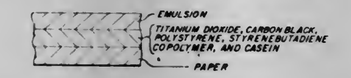
No Drawing. Filed Apr. 14, 1958, Ser. No. 728,048
11 Claims. (Cl. 96—67)

8. A light-sensitive element comprising a base, a layer of a silver halide emulsion thereon, and a separate layer containing polyvinylpyrrolidone-iodine adjacent said first-mentioned layer, said last-mentioned layer serving as an antifogging and stabilizing compound for said emulsion.

3,021,214
WATERPROOF PAPER NEGATIVE

Cornelius J. Murphy, Jr., and George F. L. Wood, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 17, 1958, Ser. No. 721,783
13 Claims. (Cl. 96—85)



5. A paper support for a photographic paper negative for use in a diffusion type photographic process comprising a paper support having thereon a coating comprising 15–23% titanium dioxide, 0–6% carbon black, 44.3–49.2% styrene-butadiene copolymer, 28.7–31.4% polystyrene, and 3.8–4.2% casein by weight.

3,021,215
POLYTHIAALKYLENEDIOLS AS SENSITIZERS FOR PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Jack L. R. Williams and Bernard C. Cossar, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 1, 1959, Ser. No. 843,638
18 Claims. (Cl. 96—100)

1. A photographic silver halide emulsion sensitized with a non-polymeric sensitizer selected from the class represented by the following general formula:

$$HO—R(—S—R_1)_d—S—R—OH$$

wherein R and R_1 each represents a hydrocarbon alkylene group containing from about 2 to 10 carbon atoms and d represents a positive integer of from 1 to 3.

3,021,216
ANIMAL FEED COMPOSITIONS

Walter Rosenthal, 740 West End Ave., New York 17, N.Y., and Gerald Schorsch, 494 Hunts Point Ave., New York 59, N.Y.

No Drawing. Filed July 21, 1960, Ser. No. 44,263
14 Claims. (Cl. 99—2)

1. A composition for oral ingestion by livestock comprising nutrient feed material with which is combined, as an additive, a member of the group consisting of an 8-hydroxyquinoline compound substituted in the 7-position by a halogen atom and in the 5-position by a member of the group consisting of a halogen atom, the sulfonic acid radical and non-toxic salts of sulfonic acid, and the corresponding 8-hydroxyquinaldines, the amount of additive being sufficient to provide 10 mg. to 10 grams per day per 1,000 pounds of body weight when the animal ingests its normal daily ration of the nutrient feed material, and the amount of said substituted 8-hydroxyquinaldine compound being sufficient to enhance nutrition of the livestock and to create in their intestines optimum conditions for nutrition substantially free from bacterial overgrowth.

3,021,217
BACITRACIN PRODUCT AND PROCESSES UTILIZING COBALT COMPOUNDS

Ralph Allan Zorn, Muscatine, Iowa, assignor to Grain Processing Corporation, Muscatine, Iowa, a corporation of Iowa

No Drawing. Filed June 13, 1958, Ser. No. 741,726
6 Claims. (Cl. 99—2)

1. In a process for recovering bacitracin, the steps of adding a water-soluble cobalt salt to a bacitracin-containing aqueous fermentation mash and thereafter removing water from said mash by evaporation.

3. A dry fermentation mash containing macitracin having added thereto in the presence of water a small amount of a water-soluble salt of cobalt in an amount sufficient to stabilize the bacitracin in the mash.

3,021,218
PRODUCING A STABLE COFFEE AROMA PRODUCT

William P. Clinton, Morris Plains, N.J., and Esra Pitchon, Flushing, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 21, 1959, Ser. No. 788,033
13 Claims. (Cl. 99—71)

1. A process for producing a stable coffee aroma product characterized by its improved storage stability which comprises collecting coffee-aroma bearing gas containing carbon dioxide, moisture and oxygen by condensing said gas as an aroma bearing frost, depositing said frost in a chilled container, tempering said frost by warming to about —78° C. to vaporize carbon dioxide and oxygen contained therein so that the carbon dioxide purges the frost environment of oxygen by removing vaporized oxygen from the environment of said frost and thereafter vaporizing desirable coffee aroma components from said frost by heating said frost to a temperature of —78° C. to 70° C. in the presence of vaporized carbon dioxide whereby said desirable coffee aroma components are separated in a more stable form from moisture, oxygen and undesirable aroma components occluded in the condensate residuum.

3,021,219
PROCESS FOR PRESERVING BAKED PRODUCTS

Daniel Melnick, Teaneck, N.J., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,501
9 Claims. (Cl. 99—90)

1. A process for preventing mold spoilage of a baked product containing at least 20% moisture and at least 1% fat, the lower crust surfaces of said baked product being particularly vulnerable to mold spoilage comprising bringing the lower surfaces of a dough into contact with a fat containing about 0.5 to 10% by weight of sorbic acid, placing said dough in a heating zone, heating said dough to baking temperatures so as to solubilize the sorbic acid, maintaining the dough at said baking temperatures in the heating zone until the dough is baked and then removing the baked product from the heating zone.

3,021,220
PREPARED BATTERS

Louis H. Going, Loveland, and Cornelis H. Japikse, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Aug. 3, 1959, Ser. No. 830,997
8 Claims. (Cl. 99—92)

1. The method of making a culinary batter capable of being stored for extended periods of time without refrigeration which comprises the steps of forming a homogeneous slurry containing farinaceous material, sugar and aqueous material, heating said slurry to a temperature within the range of about 180° to 200° F., maintaining

said slurry in said temperature range for about 8 to 10 minutes, rapidly cooling said slurry to a temperature not greater than about 140° F., adding to said slurry water-soluble acidic material in an amount capable of supplying about 30 to 65 milliequivalents of hydrogen ions per 1000 grams of slurry and if the acidic material does not possess the properties of a microbiological inhibitor, adding a microbiological inhibitor.

3,021,221
PLASTICIZER FOR YEAST
John E. Farbak, Chicago, Ill., Harry Gebel, Hammond, Ind., and Paul Gibson, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 9, 1959, Ser. No. 858,312
21 Claims. (Cl. 99—96)

1. A composition adapted for incorporation in an edible vegetable triglyceride oil having a substantial amount of unsaturation which comprises: coconut oil, sodium lauryl sulfate, and a fatty acid monoester of a polyhydric alcohol, at least half the amount of said monoester being monoglycerides of coconut oil.

3,021,222
THICKENING AGENT AND METHOD OF MAKING THE SAME
Ralph W. Kerr, Riverside, and Frank C. Cleveland, Jr., Oak Park, Ill., assignors to Corn Products Company, a corporation of Delaware
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,926
8 Claims. (Cl. 99—139)

1. A pudding composition which is cold mixing and setting comprising a pregelatinized orthophosphate ester of starch, and flavoring materials.

3,021,223
PROCESS FOR INCREASING BULK DENSITY OF POTATO FLAKES
Roderick K. Eskew, Glenside, Pa., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed Sept. 13, 1960, Ser. No. 55,807
5 Claims. (Cl. 99—207)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process comprising hydrating potato flakes to a moisture content of about from 25 to 35% with a hydrating medium, manipulating the hydrated potato flakes to produce aggregates and laminates thereof, thereby to thicken them and increase their bulk density, and drying the thus-thickened flakes to obtain dehydrated flakes having a bulk density of about from 35 to 52 pounds per cubic foot.

3,021,224
DEHYDRATED POTATO PRODUCT AND PROCESS
Arthur F. Stagmeier, New York, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,236
5 Claims. (Cl. 99—207)

1. A process for producing a readily reconstitutable dehydrated mashed potato product which comprises combining preswelled dried potato granules with approximately 70–85% by weight of moisture to produce a potato mash, extruding said potato mash into filaments wherein the hydrated granules are loosely agglomerated, and rapidly drying said filaments to set them in a substantially uncollapsed state to yield a porous, rehydratable product characterized by its plurality of cavities and interstices and the intact unruptured condition of its starch granules.

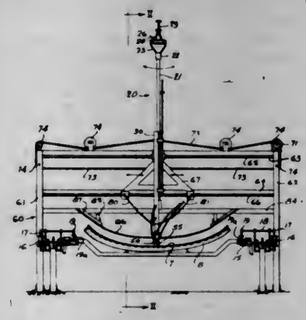
3,021,225
WATERPROOFING COMPOSITIONS
Erna Emilie Ziak, 14 Addison Gardens, London W. 14, England
No Drawing. Filed Aug. 21, 1959, Ser. No. 835,177
Claims priority, application Great Britain Aug. 27, 1958
2 Claims. (Cl. 106—78)

1. A waterproofing composition consisting of proportionally 1.40 kg. curd soap, 3.75 litres water, 5.00 kg. slaked lime and 0.40 litre sodium silicate.

3,021,226
CARBON BLACK SLURRIES AND LATEX-CARBON BLACK MASTERBATCHES
Gerard Kraus and Kent W. Rollmann, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,412
11 Claims. (Cl. 106—238)

8. A carbon black slurry of low foaming tendencies consisting essentially of carbon black, water, and, per 100 parts of weight of carbon black, from 5 to 15 parts of a rosin acid soap and from 0.3 to 1.5 parts of a base selected from the group consisting of the alkali metal and ammonium hydroxides, the amount of water present being sufficient to give a carbon black slurry having a solids content in the range from 8 to 20 weight percent.

3,021,227
METHOD AND APPARATUS FOR COATING GLASS
Ronald E. Richardson, Oshawa, Ontario, Canada, assignor to Pittsburgh Plate Glass Company, Pittsburgh, Pa.
Filed Sept. 13, 1960, Ser. No. 55,742
Claims priority, application Canada June 8, 1960
12 Claims. (Cl. 117—37)

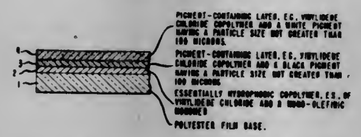


3. A method of coating a portion of the concave surface of a longitudinally curved glass sheet comprising supporting said sheet generally horizontally with its concave surface uppermost and with a portion only of its concave surface disposed in the path of a spray, directing a spray of a coating composition along an axis extending from an origin towards said concave surface, moving said spray origin relative to said concave surface in a path curved in two dimensions while continuing to direct said spray towards said concave surface, the movement of said spray origin in said curved path having a first component of motion in a substantially vertical plane and substantially parallel to the longitudinal curvature of said sheet and a second component of motion in a generally horizontal plane and defining a curved line in a plane projected on said concave surface, and adjusting the axis of the spray during the movement of said spray origin relative to said concave surface so that the spray impinges on said concave surface at a substantially constant angle of incidence.

3,021,228
INHIBITION OF WET STORAGE STAIN
Paul Gibson, South Holland, and John E. Farbak, Chicago, Ill., and Philip D. Murphy, Highland, Ind., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Oct. 14, 1960, Ser. No. 62,524
10 Claims. (Cl. 117—71)

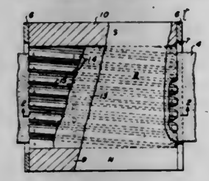
1. A method of inhibiting the development of wet storage stain on zinciferous metals which normally tend to undergo degradation upon storage comprising: treating a zinciferous metal with a mixture of chromium ion supplying component and a condensation product of an alkylolamine of 2–20 carbon atoms and having at least 1 free amino hydrogen and a halohydroxy fatty acyl component.

3,021,229
LEADER FILM
James Gail Morgan, Cranbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 26, 1960, Ser. No. 31,799
7 Claims. (Cl. 117—76)



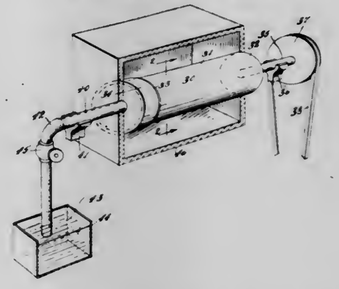
1. A leader film comprising a base film of highly flexible, biaxially-oriented, macromolecular polyester film corresponding to the polyesterification product of a dicarboxylic acid and a dihydric alcohol having on one surface thereof, in order, (1) a thin layer of an adherent, film-forming, essentially hydrophobic copolymer of 35 to 96% vinylidene chloride and from 4 to 65% of at least one other polymerizable mono-olefinic monomer copolymerizable therewith; (2) a layer of from 0.1 to 0.2 mil in thickness of a vinylidene chloride copolymer coated from an aqueous dispersion comprising said copolymer and a black pigment, and (3) a layer of from 0.2 to 0.3 mil in thickness of a vinylidene chloride copolymer coated from an aqueous dispersion comprising said copolymer and a white pigment; said vinylidene chloride copolymer of layers (2) and (3) being selected from the group consisting of (*a*) a copolymer obtained from 35 to 96% vinylidene chloride and 4 to 65% acrylonitrile, and (*b*) a terpolymer obtained from 35 to 96% vinylidene chloride, 3.5 to 64.5% methyl acrylate and 0.5 to 25% itaconic acid.

3,021,230
APPARATUS AND METHOD FOR MAGNETICALLY ORIENTING PARTICLES
Jean-Pierre Dériaud, Paris, France, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Apr. 17, 1959, Ser. No. 807,237
14 Claims. (Cl. 117—93)



13. The method of transversely orienting magnetic particles loosely secured to a carrier strip by a hardenable binder which comprises moving said strip, prior to hardening of said binder, in the direction of its length past and close to a plurality of regions of high magnetic permeability spaced laterally from one another in a direction substantially transverse to the direction of movement of said strip while subjecting said regions to a magnetic field having its field direction extending from side to side of said strip across said plurality of regions to induce magnetic flux therein.

3,021,231
CHROMIZING
George A. Samuel, White Plains, N.Y., Jerome V. Bell, Newark, Del., and Alvah W. Grosvenor, Havertown, and Joseph Gray Jackson, Bala-Cynwyd, Pa., assignors to Alloy Surfaces Company, Inc., Wilmington, Del., a corporation of Delaware
Filed Aug. 13, 1959, Ser. No. 833,560
24 Claims. (Cl. 117—107)



1. The process of chromizing iron or steel work, which comprises placing within a closed retort the work, a porous metal source of chromium containing at least 30 percent by weight of chromium, having a particle size between 0.02 and 3.00 inches and having an interconnected porosity of 5 to 60 percent by volume, said porous source of chromium having a content within its pores of at least one chromous halide equivalent to the following individual concentrations.

Halide:	Grams per hundred pounds of porous source of chromium
CrF_2	220–830
$CrCl_2$	300–1200
$CrBr_2$	510–2070
CrI_2	750–3000

said source of chromium being within a distance of 12 inches from the work in the closed retort, and a purger, sealing the retort against entrance of air while leaving an escape port which is protected against entrance of air, expelling air contained in the retort, heating the retort and its contents to a temperature between 1650 and 2400° F., maintaining the retort and its contents within said temperature range for a time of at least 30 minutes, and allowing the retort and its contents to cool.

3,021,232
PROCESS FOR RENDERING SYNTHETIC HYDROPHOBIC MATERIAL ANTISTATIC AND THE PRODUCT OBTAINED THEREFROM
John Edward Pretka, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 17, 1958, Ser. No. 774,138
13 Claims. (Cl. 117—138.8)

1. A process of minimizing the accumulation of charge of static electricity upon a synthetic, hydrophobic shaped structure which comprises applying to the said structure

at a pH below 7.0 and in the presence of an epoxide curing catalyst, a mixture of a polyepoxide and a polyamine of the formula:

$$H[-X-CH_2CH_2-(OCH_2CH_2)_m-O-R-O-CH_2CH_2O)_n-CH_2CH_2]_p-X-H$$

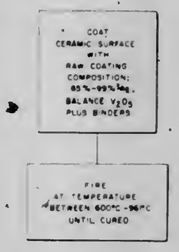
wherein —R— is an organic divalent radical, —X— is a member of the class consisting of amino nitrogen and divalent radical terminating in amino nitrogen, *m* and *n* are small whole numbers from about 3 to about 40 and *p* is an integer no greater than about 10 and thereafter reacting the said polyepoxide and the said polyamine together.

3,021,233

METHOD OF APPLYING AN ELECTRICALLY CONDUCTIVE CONTACT MATERIAL AND RESULTING COATED ARTICLE

Robert D. Fenity, Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed May 22, 1959, Ser. No. 815,095
5 Claims. (Cl. 117—227)



1. The method of preparing electrically conductive film on a surface of a refractory body, said method including applying to the surface of said body a coating composition consisting of from about 85% up to about 99% of silver, balance vanadium pentoxide, firing said coated body at a temperature ranging from between 600° C. and 961° C. for a period sufficient to mature said film.

3,021,234

EPOXY COATING COMPOSITION AND METHOD OF COATING ELECTRICAL ARTICLE THEREWITH

James S. Casement and James R. Hinkley, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Oct. 24, 1957, Ser. No. 692,039
7 Claims. (Cl. 117—232)

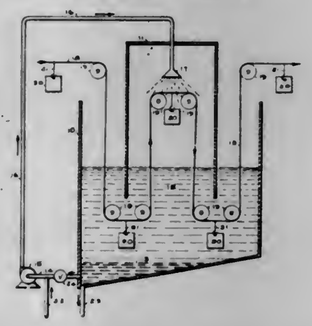
4. The method of coating electrical articles with uniform insulating coatings of between 10 and 40 mils thickness by a single dipping comprising dipping a preheated electrical article into a solvent-free mixture comprising 100 parts of a liquid epoxy resin having a 1,2-epoxy equivalency greater than one, an epoxy reactive polycarboxylic acid anhydride, and between 1 and 100 parts of an ammonium cation-modified base-exchange clay in which the exchangeable inorganic cation of the clay has been exchanged for an ammonium base having a molecular area of at least 70 square angstrom units and having at least 3 hydrocarbon radicals attached to the nitrogen atom, and heating said coated article at a temperature between 150° and 350° F. for a period of time sufficient to cure the coating, said period of time being not in excess of about two hours, and said coating composition remaining in place and resisting vertical laminar flow during said heating step.

3,021,235

METAL CLEANING PROCESS

Frederick G. Schumacher, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed June 4, 1957, Ser. No. 663,454
1 Claim. (Cl. 134—26)



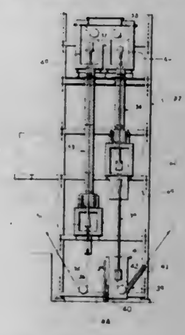
The process of cleaning non-porous, surface contaminated articles at ambient temperatures with water and a chlorinated hydrocarbon solvent comprising, providing a tank having an upper layer of water and a lower layer of a chlorinated hydrocarbon solvent selected from the group consisting of trichloroethylene, perchloroethylene, and methylene chloride, conveying said articles into said tank through the upper layer of water into a completely water-sealed air dome, spraying said articles with said chlorinated hydrocarbon solvent in said air dome over said water layer said chlorinated hydrocarbon solvent settling to the bottom of said tank for subsequent reuse, and conveying said articles out of said air dome through the upper layer of water.

3,021,236

CONVECTIVE HEAT TRANSFER FURNACE AND METHOD

Donald Beggs, Toledo, Jack Huebler, Sylvania, Darrel B. Sabin, Martin, and John C. Scarlett and John J. Turin, Toledo, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio

Filed May 28, 1958, Ser. No. 738,912
13 Claims. (Cl. 148—13)



2. A method for heat treating cold worked metal strip work to effect grain recrystallization and consequent annealing, which method comprises passing the work in a substantially vertical direction through an enclosed heating zone and then through a separate and enclosed

cooling zone, causing a heated compressible fluid to flow within the heating zone in heat transfer relationship with the work to effect heating thereof, in a heating region, from below a minimum temperature at which the work is subject to marking due to roll pick-up and to a temperature sufficiently high to cause grain recrystallization and consequent annealing, and cooling the work, in a cooling region of the cooling zone, to below the minimum temperature at which the work is subject to marking by roll pick-up, by causing a cool compressible fluid to flow at high velocity within the cooling zone in heat transfer relationship with the work and by maintaining a body of liquid water in contact with the work adjacent the strip discharge end of the cooling region, and wherein the work is unsupported during its travel from entering the heating region to leaving the cooling region, but is maintained under tension by forces applied exteriorly of said regions.

3,021,237

PROCESSING OF METAL

Robert H. Henke, Pittsburgh, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 5, 1958, Ser. No. 753,216
4 Claims. (Cl. 148—111)

1. In the method of producing electrical steel strip from silicon steel having a silicon content of between 0.25% and 4.5% and a carbon content of up to 0.07% characterized in that a continuous heat treatment operation utilizing a single atmosphere is effective for decarburizing, recrystallizing, developing a large grain size and improving the magnetic characteristics of the steel, the steps comprising, hot rolling the silicon steel to a strip having a thickness of between 0.060 and 0.125 inch, descaling, cold rolling the descaled hot rolled strip to a final thickness of between 0.014 and 0.031 inch, and normalizing the steel, the normalizing heat treatment being effected by passing the scale-free cold rolled strip through a continuous furnace in a time period ranging between 3.5 and 8 minutes, said furnace having two contiguous temperature zones and a common atmosphere, in which the temperature zones in said furnace progressively increase in temperature from not less than 1400° F. up to a high temperature zone of between 1725° F. and 2150° F. in predetermined increments, the furnace having a low temperature zone of between 1400° F. and 1650° F. and comprising between about 38% to about 49% of the total length of the furnace, admitting a controlled atmosphere of a hydrogen-containing protective gas atmosphere having a dew point of less than +60° F. adjacent the strip exit end of the high temperature zone of the furnace to flow throughout the furnace countercurrent to the direction of movement of the strip therethrough, said atmosphere being common to both the high temperature zone and the low temperature zone of the furnace, the furnace atmosphere having a minimum of 12% hydrogen by volume and reacting at least in the low temperature zone of the furnace to provide a dew point in excess of +60° F. therein, the furnace atmosphere having a dew point in excess of +60° F. cooperating with the carbon of the strip in the low temperature zone of the furnace to effectively decrease the carbon content of the strip in the low temperature zone of the furnace to produce a final strip at the exit end of the furnace having a carbon content of below 0.013%, the hydrogen content of the protective gas atmosphere cooperating with the strip in the high temperature zone of the furnace to maintain a scale-free surface thereon.

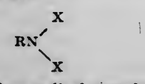
3,021,238

FAST BURNING FUELS

John E. Mahan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 12, 1952, Ser. No. 320,100
31 Claims. (Cl. 149—1)

1. A fuel composition consisting essentially of at least 10 percent by volume of at least one alkenyl monoamine having the general formula:



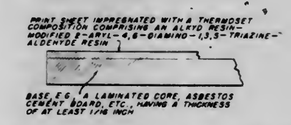
wherein R is a hydrocarbon radical containing at least one olefinic double bond between adjacent carbon atoms, any cyclic groups therein containing not more than 8 carbon atoms, X is selected from the group consisting of R, hydrogen, alkyl, aryl, aralkyl, alkaryl, and cycloalkyl, the total number of carbon atoms in the molecule being no more than 20; and at least 10 percent by volume of at least 1 mercaptan having the formula RSH wherein R is selected from the group consisting of alkyl and alkenyl radicals having not more than 10 carbon atoms.

3,021,239

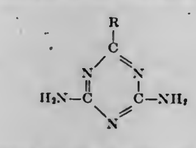
STRUCTURES COMPRISING A MODIFIED DIAMINOTRIAZINE-ALDEHYDE RESINOUS COMPOSITION

Richard Lindenfelser, Darien, and Martha K. Layman, nee Martha K. Kilthau, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Apr. 9, 1957, Ser. No. 651,629
13 Claims. (Cl. 154—45.9)



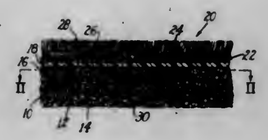
1. An article of manufacture comprising a decorative structure including (1) a base member having a thickness of at least 1/16 inch, said thickness being correlated with the density of said base member whereby said base member is adapted to retain its normal form under moderate stress; (2) a thermoset resin-impregnated print sheet bonded directly to said base member, and (3) a clear thermoset resin layer, integral with said print sheet, comprising a thermoset alkyd resin-modified diaminotriazine-formaldehyde resin, said clear thermoset resin layer being, in an uncured state, a curable resinous composition comprising a compatible blend of (A) a thermosetting resinous reaction product consisting essentially of formaldehyde and a diaminotriazine represented by the general formula:



where R represents an aryl radical, wherein the mol ratio of formaldehyde to said diaminotriazine is from about 1:1 to about 4:1, respectively, said thermosetting resinous reaction product having been formed by reacting formaldehyde and said diaminotriazine at a temperature of from about 60° C. to about 200° C. until a 50 ml. solution of the resulting reaction product in ethyl alcohol was stable at 20–25° C. for at least 5 hours, with the reaction not being allowed to proceed beyond the point at which said reaction product had a plasticity of about 60 mils as

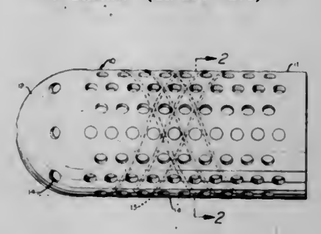
determined by the Cyanamid test method, and (B) from about 10% to about 50% by weight, based on the total weight of (A) and (B), of an alkyd resin which is compatible with (A).

3,021,240
FLOCKED SOLVENT ACTIVATABLE STIFFENER SHEET MATERIAL
Stanley M. Griswold, Newton, Mass., assignor to B. B. Chemical Co., Boston, Mass., a corporation of Massachusetts
Filed June 1, 1959, Ser. No. 817,191
4 Claims. (Cl. 154—46)



1. As an article of manufacture, a laminated sheet comprising a layer of intermixed non-woven fibers and particles of a coalescible stiffening agent and a firm resilient anchoring layer of elastomer coated cloth adhesively bonded thereto.

3,021,241
METHOD OF FORMING PERFORATED REINFORCED PLASTIC CONTAINERS
Herman Schneiderman, Arcadia, Robert H. Bendarzewski, Monrovia, and John D. Barney, Altadena, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Jan. 13, 1958, Ser. No. 708,583
9 Claims. (Cl. 156—173)

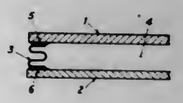


9. A method of forming a perforated reinforced plastic container comprising the steps of: painting a plastic coat on a removable core having a longitudinal axis and a plurality of projections thereon, applying a mat of glass fiber on the projections on the ends of a removable core, wrapping a plurality of rovings between the projections on the removable core and over the mat of the glass fiber in a crisscross manner at an angle of 55° to the longitudinal axis of the core, impregnating the rovings and mat with a plastic material, curing the plastic material, and removing the core.

3,021,242
BONDING ADDITIVES ONTO FILAMENT FILTERS
George P. Touey, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,804
8 Claims. (Cl. 156—180)

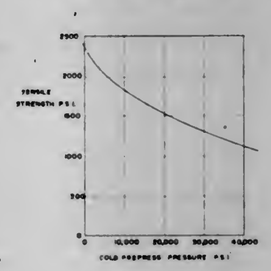
6. The method of manufacturing a cellulose acetate tobacco smoke filter which carries an acetyl containing additive on the surface of the filaments and wherein the additive is strongly bonded to the filaments, which comprises opening up a bundle made up of several thousand crimped continuous cellulose acetate filaments, spraying both sides of the opened up bundle with a plasticizer for the cellulose acetate filaments, applying to the sprayed filaments a powder of a particle size of 1–30 microns, said powder being of a composition having an acetyl content within the range of 15–44.7%, compacting the dusted filaments into the desired filter form and wrapping the periphery of the filter with a wrapper.

3,021,243
METHOD OF PRODUCING A DURABLE MECHANICAL BOND BETWEEN GLASS AND ANOTHER MATERIAL
Walther Bethge, 5 Rue de Soleure, Moutier/J.B., Switzerland, assignor of one-third to Jean Pierre de Montmollin, and one-third to René Gugger, Neuchatel, Switzerland
Filed Dec. 5, 1956, Ser. No. 626,505
Claims priority, application Switzerland Aug. 27, 1956
3 Claims. (Cl. 156—272)



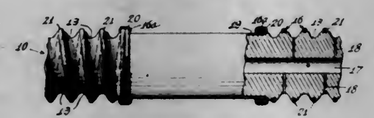
1. A method of producing a durable mechanical bond between glass and metal comprising the steps of: distilling in a vacuum a thermosetting organic synthetic substance containing vaporizable substances to reduce the content therein of all substances boiling at a temperature below 100° C. to a content of less than 0.1% by weight, intermixing therewith an inorganic substance having a low coefficient of thermal expansion than said organic substance, thereupon introducing said mixture between said glass and said metal, and while said content of vaporizable substances is thus reduced exposing said glass to infra-red radiation to raise the temperature of said glass, and thereby, and by conduction of heat through and from said glass heat said mixture to a hardening temperature upward to 150° C.

3,021,244
PROCESS FOR PRODUCING HIGH DENSITY HARDBOARD
John G. Meiler, Tacoma, Wash.
(3755 Bowman Circle NE., Cleveland 7, Tenn.)
Filed Dec. 23, 1955, Ser. No. 555,077
14 Claims. (Cl. 156—30)



1. In the production of high density hardboard, the improvement which comprises incorporating in a mass of lignocellulose particles containing from 5 to 15% of moisture based on the bone dry weight of the lignocellulose a resinous binding material, compacting said mass of particles into a compact mat, while said compact mat is at normal room temperature subjecting it to a pressure of from 1000 to 5000 p.l.i. to at least final density, and then curing the resultant sheet at a pressure from 25 to 300 p.s.i. at an elevated temperature to final density.

3,021,245
METHOD OF MAKING A REINFORCED CORRUGATED HOSE
Fred T. Roberts and Robert E. Roberts, both of Danbury Road, Wilton, Conn.
Filed June 29, 1956, Ser. No. 594,781
14 Claims. (Cl. 156—144)



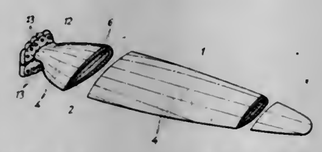
1. The method of making reenforced corrugated hose having a molded inner surface and the reenforcements accurately located with respect to the corrugations, comprising the steps of positioning resilient reenforcing means on a corrugated mandrel with coils of the reenforcing means positioned and held on the crests of the corrugations of the mandrel, said mandrel being hollow and having passages extending to the corrugated surface thereof, covering the corrugated mandrel with the coils of the reenforcement means positioned on the crests thereof with a layer of elastomeric material to form the body of the hose and securing the layer in an airtight manner to the mandrel beyond the corrugated portion thereof, applying suction to the mandrel to draw the elastomeric layer into surface contact with the mandrel and reenforcement means to mold the inner surface of the hose, and surrounding the mandrel with heated fluid under pressure to cure the body and cause the reenforcement means to become permanently attached to the inner wall of the body in the crests of the corrugations thereof.

ERRATA

For Class 156—173 see:
Patent No. 3,021,241

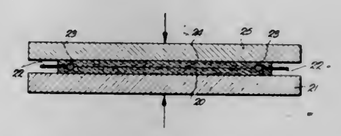
For Class 156—180 see:
Patent No. 3,021,242

3,021,246
PROCESS FOR PRODUCING A STRUCTURE OF FIBER REINFORCED PLASTIC MATERIAL
Ulrich Hütter, 93 Schlierbacher Strasse, Kirchheim (Teck), Germany, and Eugen Hänle, Schlattstall, Kreis Nurtingen, Germany
Filed Apr. 24, 1958, Ser. No. 730,565
Claims priority, application Germany May 17, 1957
11 Claims. (Cl. 156—196)



1. Process for the production of fibre-reinforced shells or plates of plastic material, which comprises impregnating a plurality of separate bundles of unconnected fibres with a plastic polymerizable binder which is plastic at room temperature, forming said impregnated bundles separately into strips of constant cross-sectional area but varying cross-sectional shape, laying thereafter said impregnated bundles in contacting side-by-side relation on a mold form surface with the fibres extending in the direction of the principal stress, and thereafter polymerizing the binder.

3,021,247
METHOD OF FORMING WALL PANEL TILES
Joseph F. Stephens, Kansas City, Mo., assignor to Gustin-Bacon Manufacturing Company, a corporation of Missouri
Original application Mar. 30, 1956, Ser. No. 575,130. Divided and this application July 5, 1957, Ser. No. 670,330
2 Claims. (Cl. 156—222)

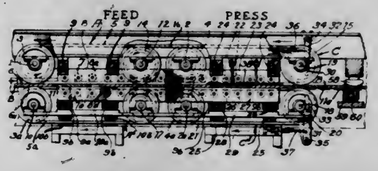


1. A method of forming resilient, deformable wall panel tiles with grooved edges to receive the groove engaging feet of mounting arms comprising the steps of laying a half thickness of green uncured mat on the bottom platen of a mold, laying a framing member on the green mat having a cutout portion therein so shaped as to define with the noncutout portions thereof the areas of the tile edge in which grooves are to be formed, placing a second half thickness of green uncured mat on top of said framing member, and applying the upper platen of the mold on top of the assembly under such conditions of heat and pressure as to cure the mat and form an integral finished panel of the desired density and resilience with edge grooves of the desired form and removing said framing member from the edge grooves of said panel after curing of the mat and formation of said integral finished panel.

ERRATUM

For Class 156—272 see:
Patent No. 3,021,243

3,021,248
RADIO-FREQUENCY EDGE-GLUING PROCESS
Julius W. Mann and George F. Russell, both of 711 St. Helens Ave., Tacoma, Wash.
Filed Apr. 4, 1955, Ser. No. 499,116
4 Claims. (Cl. 156—274)



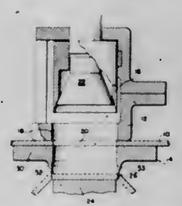
1. In a continuous method of bonding dielectric materials lying in a single layer and in abutting relation with adhesive therebetween; which comprises the steps: establishing a high-frequency field of force with at least one zero voltage gradient extending along a path in the field; continuously moving the pieces of dielectric material

through the field while maintaining adjacent pieces in contact with each other and in a single flat plane; and in applying pressure from opposite surfaces of the pieces for holding the pieces in a flat plane while still permitting them to move continuously, the pressure on the surfaces being at points along the path of the zero voltage gradient.

3,021,249
METHOD AND MEANS FOR PRODUCING TIGHT-FITTING PATCHES FOR USE IN PLYWOOD-PATCHING MACHINES

Per Olof Skoog, Rte. 1, Box 290, Olympia, Wash.

Filed Apr. 30, 1957, Ser. No. 656,096
6 Claims. (Cl. 156—293)

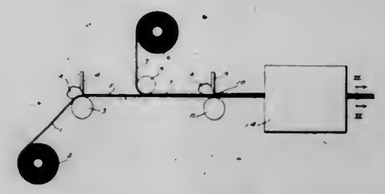


6. A method of producing and inserting tight-fitting patches in veneer sheets comprising: (1) cutting a defective portion out of a sheet of plywood veneer to provide a cut-out opening having a peripheral wall perpendicular to the face of said veneer; (2) punch cutting a plywood veneer replacement patch having a peripheral wall perpendicular to the surface of the patch using a cutter member having vertical interior walls, said patch having a width exceeding the corresponding width of said cut-out opening by an amount up to 0.007" at the cross-grain axis and decreasing to a maximum of 0.001" at the with-grain axis; (3) forcing said replacement patch through a tapered opening into a hollow member having vertical interior walls the same size as said cut-out opening to thereby laterally compress said replacement patch to reduce the width of said replacement patch to the size of said cut-out opening, and ejecting said cut-out patch from said hollow member into said cut-out opening in said veneer.

3,021,250
DOUBLE-FACED ADHESIVE MATERIAL AND METHOD OF MAKING SAME

William E. La Vole, Chicago, Ill., assignor to Chicago Backing Co., Chicago, Ill., a corporation of Illinois

Filed Sept. 27, 1957, Ser. No. 686,620
4 Claims. (Cl. 156—324)



1. The method of making a double-faced adhesive material, including the steps of feeding a facing sheet having a release surface along a predetermined path, applying a thin spread of non-drying and tacky pressure sensitive adhesive to the release surface of said sheet, laying a thin film-like sheet firmly over said adhesive spread, and applying another similar adhesive spread over the exposed face of said film-like sheet.

3,021,251
TRANSFER APPLYING APPARATUS

Robert E. Merritt, Rte. 2, Box 262, Mount Airy, N.C.

Filed June 3, 1959, Ser. No. 817,932
10 Claims. (Cl. 156—542)



1. Dry transfer applying apparatus comprising tape supply roll means, self-actuated tape snubbing means spaced from said roll means for receiving tape therethrough from the supply roll means, said snubbing means having a vertically expandable passageway therethrough of a normal thickness less than the thickness of the printed portion of the tape, said snubbing means capable of being vertically expanded to enable the printed portion of the tape upon application of force thereto to be drawn therethrough, vertically movable heating means spaced from said snubbing means on the side opposite said supply roll means for engagement with the surface of the tape, means to actuate the vertical movement of said heating means, braking means engaging the tape after passing beyond said heating means, tape take-up means for receiving the tape after use, and means actuated by the downward vertical movement of said heating means to lock said braking means during only the initial portion of the downward movement of said heating means, but releasing said braking means before the full travel of said heating means thereby enabling one printed portion carried by said tape when in engagement with said snubber means to present another printed portion of the tape beneath the heating means when in its lowermost extended position.

3,021,252
PROCESS OF MAKING WAX-CONTAINING PAPER USING WASTE WAX PAPER

Justin D. Hill and Dean J. Cain, Lawrence, Kans., assignors to The Lawrence Paper Company, Lawrence, Kans., a corporation of Kansas

Filed Mar. 31, 1960, Ser. No. 18,963
5 Claims. (Cl. 162—7)



5. A process of making moisture-resistant paper from wax paper waste, said process comprising, the comminution of wax paper waste into wax paper fibers capable of passing through a ¼-inch to 2 inch screen, combining wax paper fibers and paper fibers to form a papermaking stock having a wax constituent of 6 percent to 12 percent by weight, adding water to said papermaking stock to form an aqueous mixture of approximately 1 gallon of water to 3 pounds of said stock, treating said aqueous mixture with a bleaching agent, heating said aqueous mixture during said treatment to a temperature sufficient to melt said wax constituent, disintegrating said paper stock in said aqueous mixture in a beater to form said paper stock into paper pulp in suspension in the water while heating same to a temperature above the melting point of said wax, mixing a paper sizing agent and diatomaceous earth into said suspension to achieve a uniform distribution therein, fixing the wax to the fibers of the paper pulp by adding aluminum sulphate to said suspension in the beater, forming a web from said paper pulp on a screen while maintaining the temperature approximately the melting point of said wax, compressing and drying said web into a wax-containing paper sheet, calendering said sheet to smooth the surface thereof, and applying discrete particles of granular material in dispersed relation to one surface of said sheet and embedding said granular material therein during the calendering to make said sheet surface slip resistant.

3,021,253
PRODUCTION OF PERGAMYN

Fritz Opderbeck, Frankfurt am Main-Okriftel, and Gunther Trapp and Gunther Worner, Okriftel (Main), Germany, assignors to Phrix-Werke A.G., Hamburg, Germany

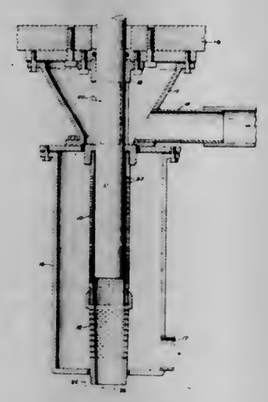
No Drawing. Filed Feb. 3, 1958, Ser. No. 713,046
Claims priority, application Germany Feb. 2, 1957
9 Claims. (Cl. 162—13)

2. In a method of producing pergamyn, the steps of digesting wood pulp; beating the thus-formed digested cellulose pulp in the presence of a cellulose-digesting enzyme; and converting the thus-beaten pulp to pergamyn.

3,021,254
METHOD AND APPARATUS FOR DEWATERING PULP AND THE RESULTING PRODUCT

Frederick D. Helversen, Burlingame, Oliver F. Chaplin, Antioch, and Clair W. Tellier, Jr., Concord, Calif., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Filed Sept. 25, 1959, Ser. No. 842,269
11 Claims. (Cl. 162—100)

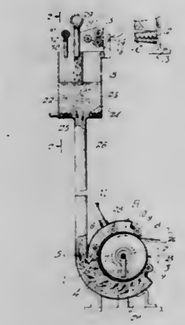


1. The method of dewatering wood pulp slurry and forming a compressed solid wood pulp mass therefrom for transportation which comprises providing a tubular perforated passageway open at one end and terminating adjacent its opposite end in an inwardly tapered perforate restricted terminal portion, maintaining a continuous supply of said slurry in communication with said open end; and while the slurry supply is thus continuously maintained, constantly and alternately reciprocating a plunger in and retracting it from said passageway to allow slurry to flow through said open end into said passageway from said supply upon each retraction stroke of the plunger from said passageway, and upon each compression stroke of the plunger in said passageway to express liquid from the slurry through the perforations in the passageway and its terminal portion, and also to compress the slurry to form said solid pulp mass and extrude said mass from said restricted portion.

3,021,255
METHOD OF AND MACHINE FOR FORMING STRIPS OF MATERIAL FROM WET MIXES, INCLUDING FIBERS

Alvan D. Simpson, Plainfield, N.J., assignor to The Forming Machine Company of America, Inc., Bound Brook, N.J., a corporation of Delaware

Filed June 27, 1958, Ser. No. 744,940
7 Claims. (Cl. 162—156)



1. A method of forming on a screen a mat from a wet mix including a liquid and glass fibers suspended therein, said method including the steps of gravitationally dropping a multitude of short dry glass fibers haphazardly freely through the atmosphere into a body of liquid with the fibers pointing lengthwise in different directions, conducting the resultant mix with minimum turbulence to one side of said screen and causing the liquid from the mix to flow through the screen and deposit said fibers in crisscross relation to each other on said screen in matted condition.

3,021,256
INDUSTRIAL PROCESS WATER TREATMENT

Carol H. Bollenback, Palos Park, George R. Hunt, La Grange, and Jerry J. Svarz, Joliet, Ill., assignors to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed June 2, 1958, Ser. No. 738,918
13 Claims. (Cl. 162—161)

7. A suspension comprising water which contains from 0.1% to 15% by weight of suspended cellulose fibers and a biologically-active amount of a halogenated ketone containing more than three carbon atoms but less than eighteen carbon atoms.

3,021,257

PAPER CONTAINING PIGMENT OR FILLER

Walter H. Stauffenberg, Doylestown, Pa., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 31, 1958, Ser. No. 752,169
10 Claims. (Cl. 162—162)

1. In the manufacture of paper wherein a water-dispersible pigment and a water-soluble cationic resin are added to an aqueous suspension of cellulosic fibers, a part of said pigment is deposited on said fibers by the action of said resin, said fibers are sheeted to form a water-laid web and said web is dried, the improvement of increasing the amount of pigment deposited which comprises adding an effective amount up to about 1%, based on the dry weight of the fibers, of a water-soluble anionic polymer to said suspension subsequent to addition to said cationic resin.

3,021,258

DIPHENYL SULFIDE NEMATOCIDE

Harry L. Haynes, Irvington, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,310
2 Claims. (Cl. 167—30)

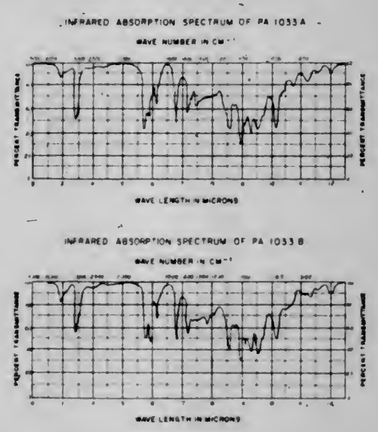
1. The method of controlling nematodes which comprises exposing said nematodes to a nematocidal composition comprising a carrier and as the toxicant, diphenyl sulfide.

3,021,259

ANTIBIOTICS PA-1033A AND PA-1033B

Walter D. Celmer, Garden City, and Kotaro Murai, Hicksville, N.Y., John B. Routien, Tenafly, N.J., and Ben A. Sobin, Manhasset, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

Filed June 19, 1958, Ser. No. 743,182
4 Claims. (Cl. 167—65)



1. A process for producing the antibiotic substances PA1033A and PA1033B which process comprises cultivating the microorganism *S. griseofaciens* ATCC13180 in an aqueous nutrient medium containing a source of carbohydrate, a source of organic nitrogen and inorganic salts, under submerged aerobic conditions until substantial antimicrobial activity is imparted to said medium.

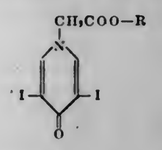
3,021,260

MONO-GLYCOL ESTERS OF 3,5-DI-IODO-4-PYRIDONE-N-ACETIC ACID X-RAY CONTRAST AGENTS IN BRONCHOGRAPHY

Alfred Distelmaier and Werner Scholtan, Wuppertal-Elberfeld, Germany, assignors, by mesne assignments, to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany

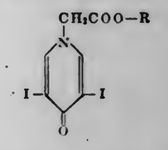
No Drawing. Filed Aug. 26, 1958, Ser. No. 757,181
Claims priority, application Germany Sept. 11, 1957
7 Claims. (Cl. 167—95)

1. A chemical compound represented by the formula:



wherein R is a member selected from the group consisting of monoglycol and mono-1,2-propylene glycol.

6. Process for rendering the bronchi of a subject radiopaque that comprises introducing into said bronchi a compound of the formula:



wherein R is a member selected from the group consisting of monoglycol and mono-1,2-propylene glycol.

3,021,261

CULTURE PROCESS FOR GIBBERELLIC ACID

Donald E. Bergman, Waukegan, Frank W. Denison, Jr., North Chicago, and Waldo C. Friedland, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Aug. 14, 1959, Ser. No. 833,689
9 Claims. (Cl. 195—36)

1. A process for preparing consistently high yields of gibberellic acid comprising the cultivation of active strains of cultures selected from the class consisting of *Gibberella fujikuroi* and *Fusarium moniliforme* in an aerated nutrient solution characterized in that the source of carbon for said nutrient solution is dextrin and sucrose, said dextrin being present in said nutrient solution in a range of about 4–12% w./v. and said sucrose being present in a range of about 2–10% w./v., the total of said dextrin and sucrose being present in the range of about 10–15%.

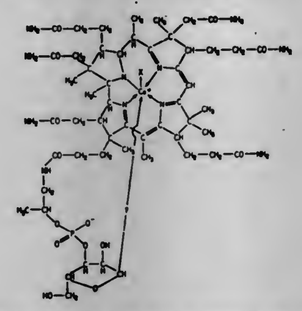
3,021,262

PREPARATION OF COBALAMINS

David Perlman, Princeton, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N. Y., a corporation of Virginia

Filed Dec. 11, 1958, Ser. No. 780,181
14 Claims. (Cl. 195—96)

1. A process for preparing a physiologically active cobalamin, which comprises culturing a vitamin B_{12}-producing microorganism in a cobalt-deficient nutrient medium, separating the cells from the medium, treating the separated cells with a utilizable source of cobalt,



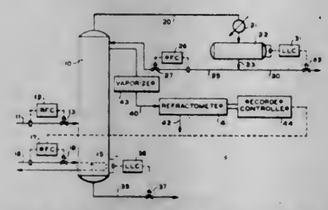
aerating the thus-treated cells and recovering the resulting physiologically active cobalamin.

3,021,263

FRACTIONATION COLUMN CONTROL

Donald E. Berger and Elmer C. Miller, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Sept. 24, 1956, Ser. No. 611,704
5 Claims. (Cl. 202—40)



1. A method of separating a hydrocarbon mixture which comprises passing the hydrocarbon mixture to be separated to a fractionation zone, withdrawing a liquid sample stream consisting essentially of two vaporizable isomeric compounds and isomers of each compound, each said compound and its isomers having the same molecular weight, the refractive indices of each isomeric compound and its own isomers being equal to the fourth decimal place when in the vaporized state and different from the refractive indices of the other said compound and its isomers in the mixture from said zone, vaporizing all of said sample stream, measuring the refractive index of the gas produced by said vaporizing step, and adjusting the heat balance in said zone in response to the measurement so as to tend to maintain the measured refractive index of said sample stream constant.

3,021,264

PURIFICATION OF PENTABORANE

Norman Kirk, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed July 28, 1958, Ser. No. 751,110
4 Claims. (Cl. 202—52)

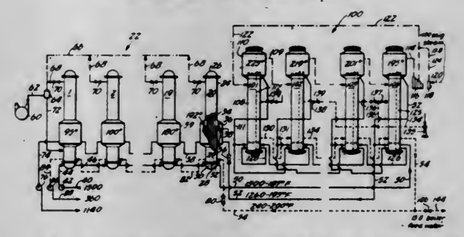
1. The process of obtaining pure pentaborane from a mixture of the latter with at least one boron hydride including tetraborane which comprises rapidly removing the tetraborane from the mixture before the tetraborane has a chance to react with the pentaborane by subjecting the impure pentaborane to a pressure below 760 mm. of Hg at a temperature below 50° C. until all the tetraborane is removed, and thereafter isolating the purified pentaborane.

3,021,265

MULTIPLE EFFECT EVAPORATING SYSTEM

Philip B. Sadtler, South Norwalk, Conn., and Henry M. Hunter, Brooklyn, N.Y., assignors to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois

Filed July 5, 1957, Ser. No. 670,198
3 Claims. (Cl. 202—174)



1. An evaporating system comprising in combination a multi-stage heater for heating a liquor to be evaporated, each stage of said heater having a liquor side through which the liquor to be evaporated flows and a vapor side wherein vapor is condensed to supply heat to said liquor, a flash chamber communicating with the vapor side of each stage of said heater, said flash chambers being interconnected for series flow of heated liquor therethrough, a multiple effect evaporator comprising a first effect, a last effect, at least one intermediate effect and transfer pipes for transferring liquor to be evaporated from each effect except the last effect to a successive effect of said evaporator, a compressor connected to receive vapor from said last effect and deliver it at higher pressure as heating medium to said first effect, a first conduit interconnecting the last stage of said heater to said evaporator to conduct heated liquor from said heater to said evaporator, and a second conduit interconnecting said evaporator and the flash chamber communicating with the last stage of said heater for conducting concentrated liquor from said evaporator to said last-named flash chamber.

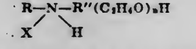
3,021,266

ADDITIVE FOR COPPER PLATING BATH

Barnet D. Ostrow, North Bellmore, and Fred I. Nobel, North Valley Stream, N.Y.

Filed Aug. 12, 1957, Ser. No. 677,505
4 Claims. (Cl. 204—44)

1. An alkaline cyanide copper plating bath consisting of copper cyanide, alkali cyanide, alkali hydroxide, lead in the form of a soluble compound thereof, arsenic in the form of a soluble compound thereof, and a quaternary nitrogen compound, said arsenic and said lead being present in the ratio of 4–7 to 1, the amount of arsenic being about .01 to 1.5 g./l. and the amount of lead being about .02 to .30 g./l., said nitrogen compound having the formula



wherein R″ is an alkyl radical having 1 to 5 carbon atoms, R is an alkyl radical having 6 to 20 carbon atoms, *n* is from 10 to 100 and X is a negative radical, said nitrogen compound being present in said bath in amounts of from .001 to 1.0 g./l.

3,021,267

PLATING BATH AND PROCESS

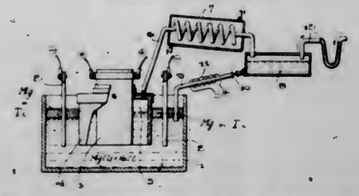
Talivaldis Berzins, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 3, 1960, Ser. No. 47,139
6 Claims. (Cl. 204—51)

1. An aqueous electrolytic plating bath for the plating of bright chromium plate, said bath comprising a mix-

ture of chromic formate, chromic glycolate, formic and glycolic acids, sodium formate and sodium glycolate, sodium fluoride, and boric acid, said bath having a pH of between 2.7 and 4.5 and containing, per liter, a total of between 0.1 and 1 gram-mole of said chromic carboxylates, a total of between 0.6 and 7 gram-moles of said sodium carboxylates and carboxylic acids, between 0.2 and 2 gram-moles of boric acid and between 0.2 and 5 gram-moles of sodium fluoride.

3,021,268
ELECTROLYTIC PRODUCTION OF $TiCl_4$ AND Mg BY MEANS OF A SPECIAL ANODE
Ichiro Egami, 150 3-chome, Shinden-cho, Ichikawa, Chiba, Japan
Filed June 26, 1957, Ser. No. 668,197
Claims priority, application Japan June 29, 1956
6 Claims. (Cl. 204—64)



1. A process for upgrading titanium values and producing magnesium, which comprises electrolyzing a fused magnesium chloride-sodium chloride bath in the presence of an anode consisting essentially of a mixture of carbonaceous material and a titanium compound of the group consisting of titanium dioxide, titanium hydroxides and mixtures thereof, in the weight ratio of titanium compound to carbonaceous material between about 10:1 and about 1:3, so conducting said electrolysis that a layer of electrolyzed magnesium metal floats on the surface of the bath, removing the same from the bath, collecting electrolyzed chlorine at the anode and allowing the same to react with said titanium compound thereof to form a titanium tetrachloride-carbon monoxide mixture, removing the thus formed mixture from the vicinity of the anode and condensing titanium tetrachloride therefrom.

3,021,269
PREPARATION OF BRANCHED POLYMERS
Mary L. Miller, New York, N. Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed June 5, 1957, Ser. No. 663,594
7 Claims. (Cl. 204—154)



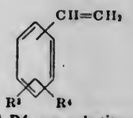
1. A method of preparing a branched polymer which comprises cross-linking polymers of compounds selected from the group consisting of those having the general formulas

(a)



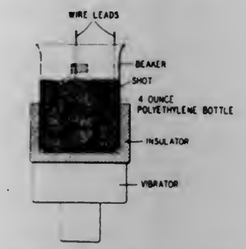
and

(b)



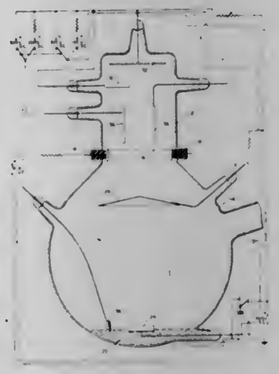
wherein R^1, R^2, R^3 and R^4 are substituents selected from the group consisting of hydrogen, methyl and ethyl, and X is a substituent selected from the group consisting of $-CN$, $-CONH_2$, $-COOH$, $-OH$ and $-OR^5$ wherein R^5 is an alkyl radical of 1 to 4 carbon atoms, and copolymers thereof, to a polymeric gel and subjecting said polymeric gel to high frequency sonic waves having frequencies between 5 kilocycles and 10 megacycles until the cross-linked polymeric gel is substantially dissociated thereby producing a branched chain polymer.

3,021,270
TREATING PLASTIC ARTICLES
Albert E. Tarbox, Bridgewater Township, Somerset County, and Sherwood Leeds, Franklin Township, Somerset County, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Oct. 6, 1958, Ser. No. 765,290
15 Claims. (Cl. 204—168)



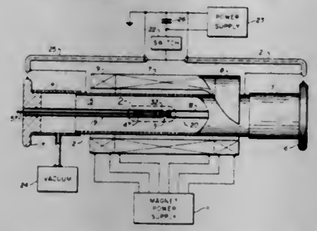
1. Method of treating the surface of a plastic material which comprises bringing a conforming electrode comprising conducting particles adjacent to said plastic surface, providing an air gap between said particles and said plastic surface and impressing a voltage on said particles whereby a corona discharge is produced which acts on said surface of said plastic material.

3,021,271
GROWTH OF SOLID LAYERS ON SUBSTRATES WHICH ARE KEPT UNDER ION BOMBARDMENT BEFORE AND DURING DEPOSITION
Gottfried Wehner, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 809,237
3 Claims. (Cl. 204—192)



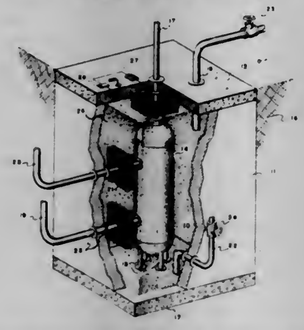
1. In the growing of solid layers on substrates the steps of immersing the substrate and the material to be deposited thereon as separate electrodes in a low pressure supported gas discharge plasma of high density established between two other electrodes, subjecting said substrate and said material to ionic bombardment to effect the removal of contaminant material therefrom, then lowering the potential of said substrate and said material so the potential of said material is more negative than the potential of said substrate, and subsequently subjecting said substrate and said material to selective ionic bombardment such that atoms of said material are sputtered from said material to said substrate and from said substrate in a manner such that the rate of said atoms arriving at said substrate is higher than the rate of said atoms leaving said substrate.

3,021,272
PLASMA HEATING AND CONFINING DEVICE
William R. Baker, Orinda, and Alexander Bratenahl and Wulf B. Kunkel, Berkeley, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 21, 1960, Ser. No. 37,816
13 Claims. (Cl. 204—193.2)



1. In a plasma generating and containment device, the combination comprising a cylindrical hermetically sealed outer electrode, an inner electrode disposed within said outer electrode and having an opening in the wall and an interior passage communicating therewith, means supplying gas to said passage of said inner electrode, a fast opening valve controlling the emission of gas from said opening of said inner electrode, means for applying an electrical potential to a first of said electrodes relative to the other thereof, and means providing a longitudinally directed magnetic field within said outer electrode around said opening.

3,021,273
SUBSURFACE CONTAINMENT FOR NUCLEAR POWER REACTORS
George P. Dix, Baltimore, Md., assignor to Martin-Marietta Corporation, a corporation of Maryland
Filed Aug. 11, 1958, Ser. No. 754,324
11 Claims. (Cl. 204—193.2)



1. In combination with a nuclear reactor enclosed within a pressure vessel, means for containment of the products of accidental reactor excursion from said pressure vessel comprising an outer wall member surrounding and spaced from said pressure vessel and defining a chamber of substantial volume between said pressure vessel and said wall member, recticular enclosures located in said chamber adjacent to said pressure vessel, and a filling of substantially spherical particles of heat conducting solid material in said chamber, said reticular enclosures defining void spaces by excluding said filling material, the volume within said void spaces and within interstices between said spherical particles containing only gas.

3,021,274
TEMPERATURE MEASURING APPARATUS FOR FUEL ELEMENTS OF NUCLEAR REACTORS
Charles Herbert Quinton Fifield, Wilmslow, Derek Randall Smith, Sale, and John Albert Robinson, Wincham, Northwich, England, assignors to A. E. I.-John Thompson Nuclear Energy Company Limited, London, England, a British company
Filed Feb. 9, 1959, Ser. No. 792,162
Claims priority, application Great Britain Feb. 12, 1958
4 Claims. (Cl. 204—193.2)

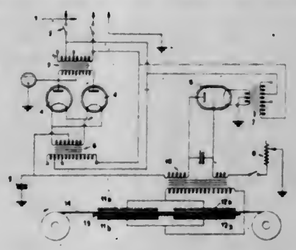


1. In a nuclear reactor having fuel element supported in carriers located in fuel channels, fuel temperature measuring apparatus comprising at least one thermocouple inserted in the metal of the canning around a fuel element, laterally displaceable contact members located in the carrier supporting the fuel element and electrically connected with the thermo-couple, spring biassing means urging said contact members laterally outwards from the carrier, contact strips mounted on the face of the fuel channel wall and positioned to engage the contact members, ramp surfaces located above and below said contact strips for guiding the contact members to engage the contact strips when a fuel element is raised or lowered, and electrical connections between said contact strips and measuring apparatus external to the reactor.

3,021,275
ELECTRON DISCHARGE APPARATUS FOR TREATMENT OF PLASTIC MATERIALS
Amerigo Sestini, Via Pisana 59, Florence, Italy
Filed Dec. 20, 1956, Ser. No. 629,725
Claims priority, application Italy Dec. 29, 1955
1 Claim. (Cl. 204—312)

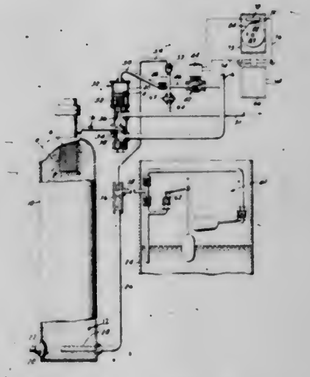
A device for the treatment of sheets and plates of synthetic material, particularly of polyethylene, for the preparation of their surfaces for the reception of inks and colors so that with the subsequent printing on said surfaces an adherence of the ink and color will occur, comprising: a voltage change device; a voltage rectifying

device; a high frequency auto-oscillating electronic circuit including at least a triode; a step-up transformer wherein one winding is fed by said auto-oscillating circuit; a second primary winding on said step-up transformer connected on one side of the grid of said triode and on the other side to an adjustable dissipation resistor; a secondary for said step-up transformer energized with



a high frequency and high voltage; at least a pair of electrode means, relatively approached and extended, for the generation of a high frequency and voltage electric field; a dielectric material layer separating said electrodes means; means for the conveying of the sheet material between said electrode means whereby the surface of said sheet material, which is opposite to that facing said dielectric material layer, is treated.

3,021,276
METHOD AND APPARATUS FOR REVERSE FLOW WATER SOFTENER REGENERATION
Glenn L. Mast, 3145 N. 124th St., Milwaukee, Wis.
Filed Dec. 4, 1959, Ser. No. 857,411
11 Claims. (Cl. 210—35)



10. In a water filter including a tank having opposite ends, said tank being adapted to hold a bed of water filtering granules between said ends, a water pipe leading into one end of said tank and a reticulated filter therefor, a service outlet for the other end of said tank, a source of regenerating material, conduit means connecting said source of regenerating material with said other end of said tank, supply means for water to be treated, said water normally containing sediment as well as other undesirable impurities, a waste pipe, and a fluid control system connected to said supply means, said source, said waste pipe and said water pipe including valve means switchable between a first condition establishing a service fluid flow circuit from said source through said water pipe and said reticulated filter into said one end of said tank and thence through the bed and out the service connection, and a second condition in which a regenerating fluid flow circuit is established including said source of regenerating material, thence through said conduit means into the other end of the tank, thence through the bed, thence through the reticulated filter and water pipe and thence out the waste pipe, the improvement which comprises valve control means including an energizing circuit for periodically switching said valve means from said first condition to said second condition for a period of over-all duration corresponding to the time required for said regenerating material to regenerate the bed and to wash said sediment therefrom through said reticulated filter and water pipe and thence out said waste pipe, and means actuated by said energizing circuit for switching said valve means back from said second condition to said first condition for a series of intervals spaced from one another throughout said period and of durations brief with respect to said period.

3,021,277
OIL BASE DRILLING AND FRACTURING FLUID
Raymond W. Hoeppel, P.O. Box 5, Oak View, Calif.
No Drawing. Filed Dec. 23, 1957, Ser. No. 704,314
6 Claims. (Cl. 252—8.5)

1. An oil base drilling and fracturing fluid consisting essentially of: an oil base; 0.5 to 70 percent by weight of an aqueous phase containing sufficient alkaline earth base dissolved therein to raise the pH of the aqueous phase above 9; 0.2 to 5 percent by weight of a polyvalent metal soap of a monocarboxylic fatty acid containing at least 12 carbon atoms; and 0.05 to 1.0 percent by weight of a polyvalent metal polymerized soap of a polymerized monocarboxylic fatty acid, said polymerized acid containing at least two carboxyl groups and at least twenty-four carbon atoms.

3,021,278
METHOD OF PREVENTING CORROSION OF FERROUS METALS
Joseph A. Caldwell and Melba L. Lytle, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
No Drawing. Original application June 20, 1956, Ser. No. 592,496, now Patent No. 2,906,708, dated Sept. 29, 1959. Divided and this application Feb. 12, 1959, Ser. No. 792,717
9 Claims. (Cl. 252—8.55)

1. A method for preventing corrosion of ferrous metal exposed to sulfate-reducing bacteria in an aqueous nutrient medium which comprises introducing a sufficient amount of a silicon-containing medium selected from the group consisting of dibutylamine silicofluoride, aniline silicofluoride, and methylamine silicofluoride, said amount being within the range from 0.01 to 0.5 weight percent of the aqueous nutrient medium, into contact with said metal at least where said metal is exposed to said bacteria to inhibit the growth of said bacteria.

3,021,279
METHOD FOR THE SECONDARY RECOVERY OF OIL
Clyde S. Scanley, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 31, 1959, Ser. No. 830,710
5 Claims. (Cl. 252—8.55)

1. A method for the secondary recovery of oil from a subterranean oil-bearing limestone-containing formation which comprises forcing through said formation toward an output well located therein an aqueous flooding liquid

contaminated by small quantities of dissolved iron and rendered alkaline by contact with said limestone, said flooding liquid also containing, in quantities of from about one-fifteenth mol to one mol for each mol of iron present, a compound selected from the group consisting of bis-(1-carboxy-1-hydroxy-1-alkyl) phosphinic acid and water-soluble salts thereof whereby precipitation of said iron in the formation is avoided.

3,021,280
METHOD OF DISPERSING BARIUM HYDROXIDE IN A NON-VOLATILE CARRIER
Robert L. Cariyle, Lake Jackson, Tex., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Oklahoma
No Drawing. Filed Dec. 17, 1956, Ser. No. 628,537
19 Claims. (Cl. 252—33)

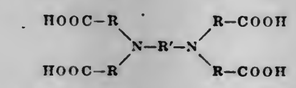
1. (1) The process of forming a stable, fluid dispersion of barium hydroxide in a non-volatile carrier which comprises:

A. admixing under atmospheric conditions of temperature and pressure
- (1) one part by weight of an oil-soluble dispersing agent selected from the class consisting of sulfonic acids, metal sulfonates, ammonium sulfonates and amine sulfonates;
- (2) a volatile hydrocarbon solvent for said oil-soluble dispersing agent, the volume of said volatile solvent being from 3 to 10 times the combined volume of the other components;
- (3) about 1 to about 6.25 parts by weight of a nonvolatile carrier selected from the group consisting of petroleum mineral oil, aliphatic diesters, silicate esters, and polyalkylene glycols;
- (4) an alcoholic solution of an oil-insoluble barium inorganic base wherein the alcohol is a monohydric aliphatic alcohol containing from 1 to 3 carbon atoms and the anion of said base is selected from the group consisting of oxide and hydroxide radicals and characterized further in that the amount of said inorganic base varies from about 1½ to 7 times that required to react with the sulfonic acid where this material is used as dispersing agent and ½ to 6 times the number of chemical equivalents of the dispersing agent where said dispersing agent is a salt of a sulfonic acid;
- (5) 0.025 to 0.75 parts by weight of water;

B. removing the residual solvents and water by evaporation to condense from such a mass, oil-insoluble barium hydroxide in particles the diameters of which are less than 0.25 micron.

3,021,281
EXTREME PRESSURE LUBRICANT COMPOSITION
Howard J. Matson, Harvey, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,129
5 Claims. (Cl. 252—47.5)

1. A lubricating oil composition consisting essentially of a mineral lubricating base oil, and about 0.1 to 10% of an oil-soluble tetraester of an alcohol having about 6 to 20 carbon atoms and a carboxylic acid having the following molecular structure:



wherein R is a divalent hydrocarbon radical of 1 to 5 carbon atoms and R′ is a divalent hydrocarbon radical of 2 to 6 carbon atoms, and about 1 to 15 percent of a sulfurized fatty oil.

3,021,282
HEAVY MEDIUM FOR GRAVITY SEPARATIONS
Everett L. Joppa, Duluth, Minn., assignor to P-M Associates, Cleveland, Ohio, a partnership
No Drawing. Filed Sept. 4, 1958, Ser. No. 759,049
2 Claims. (Cl. 252—60)

1. A heavy medium for use in the gravity separation of a mixture of solid mineral particles of different specific gravities, said heavy medium consisting essentially of an aqueous liquid suspension of a magnetic fraction of fly ash composed of generally spherical particles consisting essentially of magnetite and of varying sizes all of which are finer than 35 mesh and the greater part of which are finer than minus 325 mesh particles, the particles of said magnetic fraction assaying more than 53% by weight of iron mostly as magnetite and less than 16% by weight of silica, said heavy medium having a specific gravity within the range 1.45 and 2.45.

3,021,283
FERROMAGNETIC MATERIALS WITH LOW COEFFICIENT OF TEMPERATURE OF THE INITIAL MAGNETIC PERMEABILITY
Charles Guillaud, Bellevue, France, assignor to Centre National de la Recherche Scientifique, Paris, France, a corporation of France
Filed Jan. 3, 1958, Ser. No. 707,049
Claims priority, application France Jan. 8, 1957
2 Claims. (Cl. 252—62.5)

1. A ferromagnetic ceramic material with a temperature coefficient of initial permeability over a temperature range of at least 50° C. between −40° C. and +80° C. less than a nickel-zinc ferrite over the same temperature range, comprising the reaction product formed by compressing a mixture of 33–50 mol. percent Fe_2O_3, 16 to 20 mol. percent NiO, containing 5 to 15 mol. percent of a mixture of Al_2O_3 and Cr_2O_3 with the Cr_2O_3 being at least 5 mol. percent and the remainder ZnO, and heating the compressed mixture in an oxygen atmosphere at a temperature between 1100° C. and 1350° C. for from two to four hours.

3,021,284
LIQUID DETERGENT COMPOSITIONS
Robert B. Doan, Drexel Hill, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Oct. 30, 1958, Ser. No. 770,583
6 Claims. (Cl. 252—110)

4. An improved heavy duty liquid detergent composition consisting essentially of an aqueous solution of the following ingredients in weight percent based on the total weight of the solution:

Trisodium phosphate	2.5– 5.0
Sodium tripolyphosphate	0 – 2.5
Potassium tripolyphosphate	5.0– 7.5
Alkyl benzene sulfonate	7.5–15.0
Laurylethanolamide	2.5– 7.5
Morpholine oleate	5.0–12.0

wherein the alkyl benzene sulfonate consists of a mixture of 95 percent to 70 percent by weight of a water soluble salt of a mono-alkylated benzene sulfonic acid in which the alkyl group contains from 9 to 15 carbon atoms and 5 percent to 30 percent by weight of a water soluble salt of an alkylated benzene sulfonic acid from the group consisting of xylene sulfonic acid and ethyl benzene sulfonic acid.

3,021,285
METHOD OF PRODUCING LUMINESCENT MATERIALS

Bennett Bovarnick, 11 Cummings Road, Boston, Mass., and Hans S. Joachim, deceased, late of 505 Ocean Ave., Boston, Mass., by Elfriede Jacobi, legal representative, Brooklyn, N.Y.; said Elfriede Jacobi assignor of one-sixth to Elfriede Jacobi, Brooklyn, N.Y., one-sixth to Gunther Joachim, Tel Aviv, Israel, one-eighteenth to Ingeborg Joachim, Berlin, Germany, one-eighteenth to Margot von Riebnits, Beirut, Lebanon, and one-eighteenth to Annemarie Joachim, Berlin, Germany

No Drawing. Filed Nov. 15, 1956, Ser. No. 622,497
Claims priority, application Great Britain Nov. 15, 1955
4 Claims. (Cl. 252—301.4)

1. A method of preparing a luminescent material comprising thoroughly mixing powdered Al_2O_3 with 3% by weight of powdered carbon, pressing the mixture at a pressure of 40,000 lbs. per square inch, then heating the pressed mixture at a temperature of 1700° C. for 4 hours to sinter the same and to diffuse the carbon into the Al_2O_3 crystal lattice.

3,021,286
METHOD FOR PRODUCING RADIATION SENSITIVE ALKALI HALIDE CRYSTALS

Howard W. Etzel, Forest Heights, Md. (335 Onondaga Drive, Washington 21, D.C.), and David A. Patterson, 6508 Walnut St., Temple Hills, Md.

No Drawing. Filed Mar. 30, 1959, Ser. No. 803,034
7 Claims. (Cl. 252—408)
(Granted under Title 35, U.S. Code (1952), sec. 266)

6. The method of preparing a substantially colorless sodium chloride crystal sensitive to ionizing radiation comprising growing a single crystal from a melt of sodium chloride containing in said melt about 0.1 mole percent of sodium hydroxide, baking the sodium chloride crystal in excess sodium vapor at a temperature in the range of about 650–750° C. for a time sufficient to introduce sodium atoms into the crystal and cooling the baked crystal slowly to room temperature.

3,021,287
SUGAR REFINING ADSORBENT AND THE PRODUCTION THEREOF

Elliott P. Barrett, Baltimore, Md., assignor, by mesne assignments, to The Baugh Chemical Company, Baltimore, Md., a corporation of Maryland

No Drawing. Filed May 8, 1958, Ser. No. 733,833
6 Claims. (Cl. 252—421)

1. A method of making a sugar refining adsorbent comprising the steps of forming an intimate plastic mixture consisting essentially of, by weight, about 40 to 90 percent of steamed bone meal, about 10 to 30 percent of starch, zero to 30 percent of bone black fines, zero to 35 percent of activated carbon, and water, forming said mixture into shapes, drying said shapes, and firing the dried shapes in the substantial absence of air to carbonize the starch and harden them.

3,021,288
MANUFACTURE OF ANION-EXCHANGE RESINS

Theodore Roger Ernest Kressman, Watford, England, assignor to The Permutit Company, Limited

No Drawing. Filed Apr. 8, 1960, Ser. No. 20,827
Claims priority, application Great Britain Apr. 15, 1959
7 Claims. (Cl. 260—2.1)

1. In a process for the manufacture of particles of an anion-exchange resin by the haloalkylation of particles of a cross-linked synthetic aromatic polymer by treatment with at least one haloalkylating agent in the presence of a Friedel-Crafts catalyst to form a swollen intermediate haloalkylated product containing a complex formed from the Friedel-Crafts catalyst and the haloalkylating agent, and subsequent amination of the intermediate product to form the final resin, the improvement which comprises contacting a liquid organic complex-decomposing agent that is capable of diffusing into the swollen polymer with the still swollen intermediate haloalkylated product before it has been contacted with water until substantially all of the complex in such still swollen intermediate product has been decomposed.

3,021,289
PREPARATION OF POLYACETAL-POLYISOCYANATE POLYMERS

Erwin Müller, Leverkusen, Hans Holtschmidt, Koln-Stammheim, and Günther Braun, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Mar. 17, 1958, Ser. No. 721,656
Claims priority, application Germany Mar. 19, 1957
11 Claims. (Cl. 260—2.5)

1. A method of preparing a polyurethane plastic which comprises reacting an organic polyisocyanate with a member selected from the group consisting of (1) a polyacetal and a member selected from the group consisting of a fatty acid ester having at least two hydroxyl groups and at least ten carbon atoms and a condensate of an alkylene oxide having from two to five carbon atoms and a fatty acid ester having at least two hydroxyl groups and at least ten carbon atoms, said polyacetal having been prepared by condensation of a monomeric aldehyde and a polyhydric alcohol having a molecular weight of up to about 400; and (2) a polyacetal which has been prepared by reacting (*a*) a polyhydric alcohol having a molecular weight of up to about 400, (*b*) a monomeric aldehyde and (*c*) a member selected from the group consisting of a fatty acid ester having at least two hydroxyl groups and at least ten carbon atoms and a condensate of an alkylene oxide having from two to five carbon atoms and a fatty acid ester having at least two hydroxyl groups and at least ten carbon atoms.

3,021,290
CELLULAR POLYURETHANE CONTAINING WOOD CELLULOSE AND METHOD OF PREPARING SAME

George T. Gmitter, Akron, Edwin M. Maxey, Stow, and Merle J. Sanger, Akron, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 27, 1958, Ser. No. 769,576
4 Claims. (Cl. 260—2.5)

1. In a process for producing a foamed polyurethane material in which polyurethane forming reactants comprising (1) a hydroxyl terminated polyalkylene ether polyol having a molecular weight of at least 750 and having an acyclic molecular chain containing only carbon to carbon links and carbon to oxygen links; (2) an organic polyisocyanate having two to three functional isocyanato groups; and (3) an activator mixture comprising water and a reaction catalyst which influences the polyurethane reaction, are reacted in the equivalent weight ratio of polyisocyanate to polyalkylene ether polyol of about 1.1/1 to 12/1 to form a polyurethane foamed material, the improvement which comprises bringing together and reacting said reactants with about 2 to 60 parts by weight based on 100 parts by weight of said polyalkylene ether polyol plus polyisocyanate of finely divided particles of wood cellulose.

3,021,291
PREPARATION OF CONCRETE CONTAINING EXPANDED POLYMERIC PARTICLES

Gilbert Thiessen, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Filed Dec. 15, 1958, Ser. No. 781,183
8 Claims. (Cl. 260—2.5)

5. A method of producing cellular concrete products of desired shape which comprises incorporating into a concrete mixture having therein a porosity producing agent expandable polystyrene in the form of small particles, said polystyrene having a hydrocarbon expanding agent incorporated therein and being in an amount to fill the pores produced by the porosity producing agent, casting said concrete mixture to the desired shape, permitting sufficient set of said concrete mixture for said porosity producing agent to act to produce voids and steam curing said casting whereby said polystyrene expands under the influence of heat to fill said pores and thereby prevent the absorption or transmission of water through the concrete.

3,021,292
HYDROCARBON RUBBER-VINYL CONTAINING ORGANOPOLYSILOXANE COMPOSITION AND METHOD OF MAKING SAME

Dallas T. Hurd, Burnt Hills, and Robert C. Osthoff, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 16, 1954, Ser. No. 450,230
13 Claims. (Cl. 260—3)

1. A sulfur covulcanizable mixture comprising (*a*) from 45 to 99%, by weight, of a mixture containing on a weight basis from 25 to 95 parts of a vulcanizable gum selected from the class consisting of natural rubber, a copolymer of a diolefin and a monoolefin wherein the diolefin is equal to at most 5%, by weight, of the total weight of the diolefin and the monoolefin, a copolymer of butadiene and acrylonitrile, a copolymer of butadiene and styrene, and a homopolymer of 2-chlorobutadiene, and from 5 to 75 parts of an organopolysiloxane gum composition convertible to the cured, solid, elastic state having the formula

$$(CH_2{=}CH)_a(R)_bSiO_{\frac{4-(a+b)}{2}}$$

where *a* has a value of from 0.0086 to 0.18, *b* has a value of from 1.80 to 2.0014, the sum of $a+b$ has a value from 1.98 to 2.01, and R represents a member selected from the class consisting of alkyl, cycloalkyl, aryl, aralkyl, alkaryl and haloaryl radicals and mixtures of the aforesaid radicals, at least 50 mole percent of said members being methyl radicals, and the said vinyl groups in the organopolysiloxane being the only silicon-bonded alkenyl radicals in the covulcanizable mixture, and (*b*) up to 50%, by weight, of an inorganic filler.

3,021,293
FIRE RETARDANT PROTECTIVE AND DECORATIVE COATINGS

Paul Simon, Montreal, Quebec, Canada, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Aug. 12, 1959, Ser. No. 833,149
6 Claims. (Cl. 260—3.3)

1. A solvent reducible fire retardant liquid paint product having applicability and performance quality of a standard protective and decorative coating for interior wall areas which comprises in combination a finely divided heterogeneous suspension of ammonium phosphate; pentaerythritol; an inorganic pigment; and an aqueously condensed dried, powdered, non-alkylated water-soluble melamine-aldehyde condensation product, all of said powders dispersed in a liquid suspension medium comprising a volatile organic solvent solution of a chlorinated rubber, said rubber solids containing more than 20% but not more than about 70% chlorine content; the chlorinated rubber solids constituting at least 5% but not more than about 12% of the total wet paint weight; the ratio of ammonium phosphate to pentaerythritol within the weight range of 5:1 to 2:1; and the mol ratio of amine to aldehyde in said amine-aldehyde condensation product within the range of 1:1 to 1:4.

3,021,294
FLOOR POLISH COMPOSITIONS

George J. Fuld, Wakefield, and Richard C. Brogle, Watertown, Mass., and Melvin Fuld, Baltimore, Md., assignors to Fuld Brothers, Inc., a corporation of Maryland

No Drawing. Filed May 26, 1958, Ser. No. 737,521
5 Claims. (Cl. 260—28.5)

1. A floor polish composition comprising a wax emulsion and from about 0.001 to about 0.03% by weight, based upon the emulsion, of a colloidal material selected from the group consisting of colloidal silver, colloidal gold, colloidal copper, colloidal mercury, colloidal tin, colloidal aluminum and colloidal clays.

3,021,295
PROCESS FOR REMOVING HAZINESS FROM AN AQUEOUS SOLUTION OF A BLEND OF POLYMERS

Robert Saxon, Stamford, and Tzeng J. Suen, New Canaan, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 16, 1960, Ser. No. 15,281
8 Claims. (Cl. 260—29.4)

1. A process for removing haziness from a hazy, aqueous resinous solution comprising passing a gas, that is substantially inert to the constituents in said solution, through said solution at a temperature between about 0° C. and reflux until the haze has been substantially completely dissipated, wherein said resinous solution is a mixture of (1) 50% to 10% by weight of a water-soluble potentially thermosetting polymethyl ether of a polymethylol melamine and (2) 50% to 90% by weight of a water-soluble ammonium salt of a copolymer comprising (*a*) 5% to 50% by weight of an ethylenically unsaturated carboxylic acid and (*b*) 50% to 95% by weight of an alkyl ester of an alpha, beta-ethylenically unsaturated monocarboxylic acid.

3,021,296
COMPOSITIONS AND FILMS COMPRISING POLYETHYLENE AND N,N'-ETHYLENE BIS OLEAMIDE AND PROCESS OF PRODUCING SAME

Clayton J. Ammondson, Tinley Park, Ill., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 1, 1959, Ser. No. 824,204
10 Claims. (Cl. 260—32.6)

1. A process for improving the slip and anti-blocking characteristics of self-supporting polyethylene films which comprises forming a homogeneous mixture of a film-forming polyethylene and an anti-blocking amount of at least 0.01 percent by weight thereof of N,N'ethylene bis oleamide to polyethylene and melt extruding said mixture into films.

3,021,297
POLYSILOXANE RESINS

Philip Donald George, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Jan. 21, 1960, Ser. No. 3,735
7 Claims. (Cl. 260—37)

1. The process for making an air drying methylpolysiloxane which comprises contacting chloromethylheptamethylcyclotetrasiloxane with a catalytic amount of anhydrous ferric chloride under anaerobic conditions.

3,021,298

SOIL STABILIZATION WITH A COMPOSITION CONTAINING AN ACRYLAMIDE, A BISACRYLAMIDE, AND ALUMINUM AND ACRYLATE IONS

David H. Rakowitz, Riverside, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Mar. 3, 1959, Ser. No. 796,804
9 Claims. (Cl. 260—41)

1. The method of stabilizing soil which comprises contacting soil with an aqueous solution of a polymerizable composition comprising from about 50% to about 90% by weight of an acrylamide, from about 0.5% to about 20% by weight of an alkylidene bisacrylamide, a trivalent metal ion selected from the group consisting of aluminum and chromium, and an acrylate ion in a molar ratio falling within the range of from about 1:2.5 and 1:8 metal ion to acrylate respectively, said acrylate ion being present in the polymerizable composition in amounts ranging from about 10% to 50% by weight and effecting, under atmospheric conditions, polymerization and water insolubilization of said polymerizable composition on the soil, by introduction into said solution of polymerizable material, from about 0.1% to about 25% by weight of a water soluble oxygen-containing polymerization catalyst, wherein said percentages by weight are based on the total weight of the polymerizable material.

3,021,299

BLOCK COPOLYMER OF A POLYAMINOTRIAZOLE AND AN AROMATIC POLYAMIDE, AND METHOD OF PREPARING SAME

William L. Evers, Summit, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,056
10 Claims. (Cl. 260—42)

1. A block copolymer of a polyaminotriazole having a chain length of at least 20 monomeric units and an amine-terminated polyamide, said polyamide having a molecular weight of at least as high as that of the polyaminotriazole, and having the nitrogen atoms of its amide groups linked to aromatic nuclei in the chain by attachment of said nitrogen atoms to carbon atoms, all of whose other valences are satisfied by atoms of the group consisting of carbon and hydrogen.

3,021,300

IMPROVED POLYSTYRENE COMPOSITION CONTAINING VULCANIZED BUTADIENE-STYRENE COPOLYMER RUBBER

Stanley Maurice Ardley, Penarth, Glamorgan, and James Arthur Jones, Twyncyn, Dinas Powis, Glamorgan, Wales, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Jan. 13, 1956, Ser. No. 558,824
Claims priority, application Great Britain Jan. 20, 1955
4 Claims. (Cl. 260—45.5)

1. A composition comprising a homogeneous mixture of polystyrene having an elongation at break of 2% and an impact strength of 2.5×10^{-6} ergs/cm.^{3} and from 1% to 20%, by weight of the polystyrene, of a rubbery butadiene-styrene synthetic copolymer containing 50% to 80% copolymerised butadiene and having its Mooney number raised from an initially lower value to a value between 40 and 125 by reaction with a sulfur-containing vulcanising agent, and having a gel content between 55% and 75% by weight, which synthetic copolymer can be dispersed in the polystyrene to give a homogeneous product and said composition having a percentage elongation at break and an impact strength greater than polystyrene.

3,021,301

PROCESS FOR PRODUCING A NOVEL HYDROLYZED POLYACRYLONITRILE REACTION PRODUCT CONTAINING POLYVINYL ALCOHOL AND THE PRODUCT PRODUCED THEREBY

Tzeng Jiueq Suen and Arthur Maurice Schiller, New Canaan, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 19, 1958, Ser. No. 735,986
7 Claims. (Cl. 260—45.5)

1. A process of producing hydrolyzed polyacrylonitrile which comprises polymerizing acrylonitrile in an acidic aqueous medium having from about .1% to about 5%, based on the weight of acrylonitrile, of polyvinyl alcohol dissolved therein, at a temperature of between about 20° C. and 70° C. in the presence of an oxidizing agent selected from the group consisting of chloric acid and its water-soluble salts and a reducing agent of the group consisting of sulfurous acid and its water-soluble salts in which the chlorate ion content amounts to between about 0.02 and about 2.4% of the weight of acrylonitrile and the ratio of gram atoms of sulfur in the reducing agent to gram atoms of chlorine in the oxidizing agent is between about 1:1 and 9:1, and hydrolyzing the resulting polyacrylonitrile after substantial completion of the polymerization reaction by reacting it with an aqueous solution of between about 0.5 and about 0.8 mol of alkali metal hydroxide for each mole of acrylonitrile in the polymer.

3,021,302

POLYMERIC STANNONIC ACID STABILIZED POLYMERS CONTAINING VINYL CHLORIDE

Hans Helmut Frey, Frankfurt am Main, and Christoph Dörfelt, Altotting, Upper Bavaria, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Jan. 28, 1959, Ser. No. 789,496
Claims priority, application Germany Feb. 4, 1958
10 Claims. (Cl. 260—45.5)

4. A composition of matter comprising (1) a mixture consisting mainly of polyvinyl chloride and containing in addition thereto a member selected from the group consisting of a copolymer of butadiene and acrylonitrile, a copolymer of butadiene and styrene, a chlorinated polyolefin, a sulfochlorinated polyolefin and mixtures thereof, and (2) as a stabilizer 0.05 to 5 percent by weight, calculated on the composition, of a polymeric product of the general formula

$$(RSnX_{1.6})_n$$

wherein R is a member selected from the group consisting of an alkyl radical having 1 to 20 carbon atoms, an aryl radical and a cyclo-alkyl radical, X is selected from the group consisting of oxygen, sulfur and a mixture of oxygen and sulfur containing these elements in a by weight proportion ranging between 1:10 and 10:1; and n is an integer between 2 and about 1000.

3,021,303

HEAT STABILIZATION OF POLYCARBONATES

Bart Paul Jibben, Arnhem, Netherlands, assignor to N. V. Onderzoekingsinstituut Research, Arnhem, Netherlands, a corporation of the Netherlands

No Drawing. Filed Mar. 23, 1960, Ser. No. 16,909
Claims priority, application Netherlands Apr. 10, 1959
14 Claims. (Cl. 260—45.75)

1. A polycarbonate stabilized against degradative effects of heat by the addition of a small amount of a silicate of an element selected from the group consisting of lead, zinc, and elements of groups I and II of the periodic system having an electronegativity of not more than 1.0 to said polycarbonate.

3,021,304

EPOXIDE RESIN COMPOSITIONS

Sylvan Owen Greenlee, Racine, Wis., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York

No Drawing. Filed Aug. 5, 1954, Ser. No. 448,157
4 Claims. (Cl. 260—47)

1. The three-step process of producing insoluble infusible products, which comprises first reacting a dihydric phenol free from reactive groups other than phenolic hydroxyl groups with an excess of a chlorhydrin selected from the class which consists of epichlorhydrin and glycerol dichlorhydrin in the presence of caustic alkali to form a low melting point epoxide resin, admixing with the epoxide resin a dihydric phenol free from reactive groups other than phenolic hydroxyl groups, with the proportion of dihydric phenol to epoxide resin less than that corresponding to the epoxide equivalent of the resin, heating to effect reaction of the dihydric phenol with said epoxide resin to form a higher molecular weight and higher melting point epoxide resin, and further reacting the resulting resin with a polyhydric phenol containing only aromatic nuclei and having more than two phenolic hydroxyl groups.

3,021,305

CROSS-LINKED POLYCARBONATE RESINS

Eugene P. Goldberg, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 22, 1957, Ser. No. 679,744
4 Claims. (Cl. 260—47)

1. The method for cross-linking a linear, high molecular weight, carbonate polymer comprising the reaction product of a dihydric phenol in which the hydroxyl groups are the sole reactive groups, and a carbonate precursor selected from the class consisting of carbonate esters, carbonyl halides and haloformates of dihydric phenols, said method comprising heating said linear polymer in the presence of oxygen at a temperature of from 200° to 600° C. for a period of time, varying inversely with the temperature, from a few seconds to more than an hour, to render said polymer insoluble in a solvent selected from the group consisting of dioxane and chloroform.

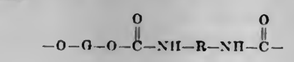
3,021,306

POLYURETHANE ELASTOMERS CURED WITH N,N-DIMETHYLOLETHYLENEUREA

Ernest Csendes, Christiana Hundred, and John Joseph Verbanc, Brandywine Hundred, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1958, Ser. No. 745,262
6 Claims. (Cl. 260—67.5)

1. A cured polyurethane elastomer obtained by heat-curing a curable polyether polyurethane polymer with N,N'-dimethylolethyleneurea, said polyurethane polymer being substantially free of uncombined isocyanate radicals and consisting essentially of a plurality of units of the formula



wherein —O—G—O— is a bivalent radical obtained by removing the terminal hydrogen atoms from a polyether glycol having a molecular weight of from about 750 to about 5,000, said glycol being selected from the group consisting of polyalkyleneether glycols, polyalkylene-ether-thioether glycols and polyalkylene-aryleneether glycols, and R is a bivalent organic radical which is inert to isocyanate groups.

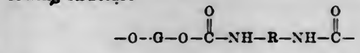
3,021,307

POLYURETHANE ELASTOMERS CURED WITH PARAFORMALDEHYDE

Ernest Csendes, Christiana Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1958, Ser. No. 745,282
2 Claims. (Cl. 260—72)

1. A process for preparing a cured elastomer which comprises heating to a temperature of from about 120 to 160° C. a polyether polyurethane polymer with from about 3.0 to 10.0 percent by weight of said polymer of paraformaldehyde in the presence of from about 0.2 to 1.0 percent by weight of said polymer of a zinc halide quinoline complex, said polyurethane polymer being substantially free of uncombined isocyanate radicals and consisting essentially of a plurality of units having the following structure



wherein —O—G—O— is a bivalent radical obtained by removing the terminal hydrogen atoms from a polyether glycol having a molecular weight of at least 750 and being selected from the group consisting of polyalkylene-ether glycols, polyalkylene-aryleneether glycols and polyalkyleneether-thioether glycols and R is a bivalent aromatic radical which is inert to isocyanate groups.

3,021,308

RESINOUS POLYESTERS FROM AN ALIPHATIC POLYHYDRIC ALCOHOL AND A CYCLOPENTANE POLYCARBOXYLIC ACID

Stanley W. Caywood, Jr., Swarthmore, Pa., and Frederick J. Keene, Haddon Heights, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 15, 1959, Ser. No. 820,102
6 Claims. (Cl. 260—75)

1. A polyester resin made by the reaction of an aliphatic polyhydric alcohol and an acidic material selected from the group consisting of 1,2,3,4-cyclopentanetetracarboxylic acid, 1,2,4-tricarboxy-3-carboxymethylcyclopentane, and the dianhydrides of these acids.

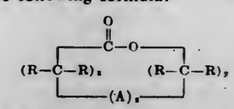
3,021,309

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,904
24 Claims. (Cl. 260—78.3)

1. A process which comprises contacting as the sole polymerizable reagent at least one cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl halo, haloalkyl, alkoxyalkyl, alkoxy, aryloxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group; wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (a) the sum of

$x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester, of an organometallic compound characterized by the following formula:

$$MR'$$

wherein M is selected from the group consisting of lithium, sodium, potassium, rubidium, and cesium; and wherein R' is selected from the group consisting of a monovalent hydrocarbon radical, a pyridyl radical, and a furyl radical; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer.

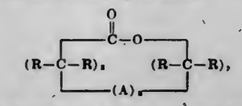
3,021,310

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,905
26 Claims. (Cl. 260—78.3)

1. A process which comprises contacting a cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, aryloxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group; wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent, based on the weight of said cyclic ester, of an organometallic compound characterized by the following formula:

$$R_a—M—R_b$$

wherein M represents a group II metal in the periodic table; wherein R_a is selected from the group consisting of a monovalent hydrocarbon radical, a pyridyl radical, and a furyl radical; and wherein R_b is selected from the group consisting of hydrogen, halo, a monovalent hydrocarbon radical, a secondary amino radical, a hydrocarbyloxy radical, a pyridyl radical, and a furyl radical; for a period of time sufficient to produce a polymer.

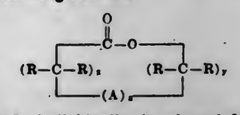
3,021,311

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,907
22 Claims. (Cl. 260—78.3)

1. A process which comprises contacting as the sole polymerizable reagent at least one cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, aryloxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group; wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester, of a compound selected from the group consisting of (*a*) $H_2N—M—NH_2$, (*b*) $H_2N—M—OR_1$ wherein R_1 is a monovalent hydrocarbon radical, and (*c*) mixtures of (*a*) and (*b*), the variable M being selected from the group consisting of magnesium, calcium, zinc, strontium, cadmium, and barium; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer.

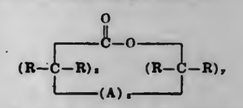
3,021,312

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,908
22 Claims. (Cl. 260—78.3)

1. A process which comprises contacting a cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, aryloxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group; wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent of a polymerization catalyst, based on the total weight of cyclic ester; under substantially anhydrous conditions; for a

period of time sufficient to produce a polymer; said polymerization catalyst being prepared by a process which comprises reacting alkaline earth metal hexammoniate with from about 0.3 to 1.0 mol of olefin oxide and from about 0.2 to 0.9 mol of saturated aliphatic organic nitrile, based on 1.0 mol of said alkaline earth metal hexammoniate, said reaction being conducted in an excess liquid ammonia medium, and subsequently evaporating from the resulting product mixture the excess liquid ammonia.

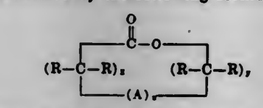
3,021,313

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,909
14 Claims. (Cl. 260—78.3)

1. A process which comprises polymerizing a cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, arylpxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group; wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and where in z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester, of aluminum trialkoxide; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer.

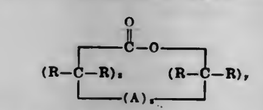
3,021,314

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,910
14 Claims. (Cl. 260—78.3)

1. A process which comprises polymerizing a cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, aryloxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group, wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester, of aluminum trialkoxide; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer; said polymerization catalyst being prepared by a process which comprises reacting alkaline earth metal hexammoniate with from about 0.3 to 1.0 mol of olefin oxide and from about 0.2 to 0.9 mol of saturated aliphatic organic nitrile, based on 1.0 mol of said alkaline earth metal hexammoniate, said reaction being conducted in an excess liquid ammonia medium, and subsequently evaporating from the resulting product mixture the excess liquid ammonia.

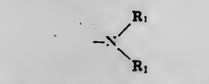
3,021,315

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,912
15 Claims. (Cl. 260—78.3)

1. A process which comprises polymerizing a cyclic ester characterized by the following formula:



wherein each R_1, individually, is selected from the group consisting of hydrogen and a monovalent hydrocarbon radical; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer.

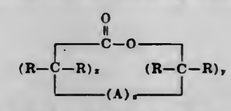
3,021,316

POLYMERIZATION OF CYCLIC ESTERS

Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 3, 1959, Ser. No. 856,913
15 Claims. (Cl. 260—78.3)

1. A process which comprises polymerizing a cyclic ester characterized by the following formula:



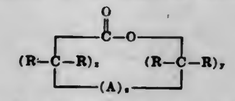
wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, aryloxy, a portion of an aromatic hydrocarbon nucleus which nucleus is fused to the cyclic ester ring, and a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms and which is fused to the cyclic ester ring; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group, wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, and (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester of a compund characterized by the following formula:

$$ABH_4$$

wherein A is selected from the group consisting of lithium, sodium, potassium, rubidium, and cesium; wherein B is selected from the group consisting of boron, aluminum, gallium, and indium; and wherein H is hydrogen; under substantially anhydrous conditons; for a period of time sufficient to produce a polymer.

3,021,316
POLYMERIZATION OF CYCLIC ESTERS
Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 3, 1959, Ser. No. 856,911
30 Claims. (Cl. 260—78.3)

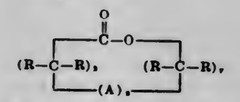
1. A process which comprises polymerizing a cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, and aryloxy; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group; wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four, (*d*) from 2 to 4 continuously linked carbon atoms contained in the cyclic ester ring can represent a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms, and (*e*) the four R variables attached to any two adjacent carbon atoms contained in the cyclic ester ring can represent a portion of a fused aromatic hydrocarbon nucleus; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester, of a metal hydride selected from the group consisting of lithium hydride, potassium hydride, sodium hydride, rubidium hydride, cesium hydride, calcium hydride, strontium hydride, and barium hydride; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer.

3,021,317
POLYMERIZATION OF CYCLIC ESTERS
Eugene F. Cox and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Dec. 3, 1959, Ser. No. 856,913
23 Claims. (Cl. 260—78.3)

1. A process which comprises contacting as the sole polymerizable reagent at least one cyclic ester characterized by the following formula:



wherein each R, individually, is selected from the group consisting of hydrogen, alkyl, aryl, alkaryl, aralkyl, cycloalkyl, halo, haloalkyl, alkoxyalkyl, alkoxy, and aryloxy; wherein A is selected from the group consisting of an oxy group, a thio group, and a divalent saturated aliphatic hydrocarbon group, wherein x is an integer in the range of from 1 to 15 inclusive; wherein y is an integer in the range of from 1 to 15 inclusive; and wherein z is an integer selected from the group consisting of zero and one; with the provisos that (*a*) the sum of $x+y+z$ cannot equal three, (*b*) the total number of atoms forming the cyclic ester ring does not exceed 18, (*c*) the total number of organic substituents attached to the carbon atoms contained in the cyclic ester ring does not exceed four, (*d*) from 2 to 4 continuously linked carbon atoms contained in the cyclic ester ring can represent a portion of a saturated cycloaliphatic hydrocarbon nucleus which nucleus contains from 4 to 10 carbon atoms, and (*e*) the four R variables attached to any two adjacent carbon atoms contained in the cyclic ester ring can represent a portion of a fused aromatic hydrocarbon nucleus; with from about 0.001 to about 10 weight percent, based on the total weight of cyclic ester, of a group IA metal of the periodic table; under substantially anhydrous conditions; for a period of time sufficient to produce a polymer.

3,021,318
PARTIAL SAPONIFICATION AND PARTIAL DEHYDROHALOGENATION OF VINYL HALIDE-VINYL ESTER COPOLYMERS
Xavier V. Laporta, Ewingville, N.J., assignor to American-Marietta Company, Stoner-Nudge Co. Division, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Oct. 24, 1957, Ser. No. 692,033
7 Claims. (Cl. 260—87.1)

1. A method of partially saponifying and partially dehydrohalogenating a copolymer of vinyl chloride and vinyl fatty acid ester containing from about 60% to about 96% by weight of vinyl chloride comprising forming a reaction mixture comprising a suspension of said copolymer in a liquid organic medium comprising a lower aliphatic alcohol containing from 1 to 4 carbon atoms, and less than approximately 5% by weight of water, any organic solvent present in said liquid organic medium being in an amount insufficient to alter the particulate entity of the suspended copolymer during reaction, said liquid organic medium having incorporated therein a strongly basic material selected from the group consisting of alkali metal hydroxides, alkali metal alcoholates and quaternary ammonium hydroxides, said reaction mixture containing from about 0.013 to about 0.18 mol pounds of strongly basic material per 100 pounds of dispersed copolymer, maintaining said suspension at a temperature of from about 60° C. to about 80° C. to convert from 15–85% of said vinyl ester to vinyl alcohol and to provide a corrected Iodine number of from 2.0–10 and washing the reaction product to remove occluded salts from said copolymer.

3,021,319
POLYMERIZATION OF ETHYLENE WITH ALKYL TITANIUM HALIDE CATALYSTS
Edward H. de Butts and Albert S. Matlack, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 30, 1956, Ser. No. 625,243
3 Claims. (Cl. 260—94.9)

1. The process of polymerizing ethylene which comprises contacting ethylene with a catalyst consisting essentially of at least one alkyltitanium halide selected from the group consisting of isobutyltitanium trichloride and dimethyltitanium dichloride.

3,021,320
POLYMERIZATION OF ETHYLENE WITH CATALYSTS OF ALKALI METAL BOROHYDRIDES, ALUMINUM HALIDES AND GROUP IVB METAL HALIDES
Carl N. Zellner, Berkeley Heights, N.J., and Alfred J. Porck, Buffalo, N.Y., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 7, 1957, Ser. No. 664,188
17 Claims. (Cl. 260—94.9)

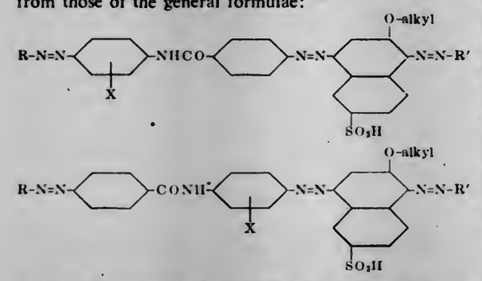
1. Process for the production of polymers which comprises catalytically polymerizing ethylene in the presence of a catalyst consisting essentially of the product formed by mixing an alkali metal borohydride, an aluminum halide and a halide of a metal of group IV*b* to obtain solid polymers.

3,021,321
PROTEIN DERIVATIVES
Harland H. Young, Western Springs, and Prince G. Harrill, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Sept. 8, 1958, Ser. No. 759,443
10 Claims. (Cl. 260—117)

1. A method for producing proteinyl urea compound which comprises: mixing urea with proteinaceous material, and thereafter heating the mixture to a temperature at which pyrolyzation of said urea occurs to decompose the urea into ammonia gas and isocyanic acid, whereby said isocyanic acid reacts with said proteinaceous material.

3,021,322
TRISAZO CUPRIFEROUS DYESTUFFS
Marcel Jirou, Sotteville-les-Rouen, and Vassili Urné, Rouen, France, assignors to Compagnie Francaise des Matieres Colorantes, Paris, France, a French company
No Drawing. Filed Nov. 14, 1958, Ser. No. 773,842
Claims priority, application France Nov. 16, 1957
6 Claims. (Cl. 260—145)

1. Cupriferous complexes of trisazo dyestuffs selected from those of the general formulae:



in which R represents the salicylic acid residue, R′ represents a member selected from the group consisting of the acetylamino - monosulpho-1-hydroxynaphthyl, benzoylamino-monosulpho-1-hydroxynaphthyl, ethoxycarbonylamino-monosulpho-1-hydroxynaphthyl, methoxyethoxycarbonylamino - monosulpho-1-hydroxynaphthyl, ureidomonosulpho-1-hydroxynaphthyl, and hydroxyethylureidomonosulpho-1-hydroxynaphthyl fixed on the azo group at the position 2, and X represents a member selected from the group consisting of the hydrogen atom and the sulphonic group, the divalent copper in these complexes being attached to the trisazo dyestuff through the hydroxyl groups of the o:o′-dihydroxyazo grouping resulting from the hydrolysis of the O-alkyl grouping in the proportion of one atom of metal per molecule of dyestuff.

3,021,323
PHOSPHOMANNAN NRRL Y-2448
Robert G. Benedict, Allene R. Jeanes, and Lynferd J. Wickerham, Peoria, and S. Peter Rogovin, Pekin, Ill., assignors to the United States of America as represented by the Secretary of Agriculture
Original application Feb. 3, 1959, Ser. No. 790,982. Divided and this application Apr. 5, 1960, Ser. No. 23,595
1 Claim. (Cl. 260—234)
(Granted under Title 35, U.S. Code (1952), sec. 266)

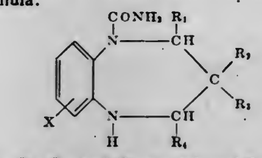
Phosphomannan NRRL Y-2448, said phosphomannan being a phosphorylated mannan polymer comprising about 850 anhydromannose units arranged in 1,3-linked main chains, an average every fourth anhydromannose unit of which is cross-linked through a fifth anhydromannose unit having on its number 6 carbon atom a monopotassium phosphate group which is further bound in di-ester linkage, said phosphomannan being further characterized by comprising about 3.3 percent phosphorus, by having a Somogyi-derived average molecular weight of about 157,000, a specific rotation in 0.01 M KCl of +102°, and by having atypical concentration-related viscosity response in aqueous solution, said viscosity response consisting of an increase to a maximum at a polymer concentration of about 1.5 percent followed by a decrease as the polymer concentration is further increased from the level of about 1.5 percent to the level of about 3 percent, and then an increase as the concentration of the polymer is further increased from about the level of 3 percent to a level of at least about 5 percent.

3,021,324
PREPARATION OF SUGAR ESTERS
Guy Knafo, 527 Riverdale Ave., Yonkers, N.Y.; Robert Fuhrmann, Stephen St., Dover, N.J.; Torben E. Neesby, Essex St., Boonton, N.J.; and Vigen K. Babayan, Livingston, N.J.; said Babayan assignor to Drew Chemical Corporation, a corporation of Delaware
No Drawing. Filed Jan. 28, 1958, Ser. No. 739,448
(Filed under Rule 47(b) and 35 U.S.C. 118)
5 Claims. (Cl. 260—234)

1. A method of making partial esters of sugar polyols having at least six hydroxyl groups which comprises dissolving said sugar polyol in an amount of water not more than the polyol, adding thereto an amount of an alkali taken from the class consisting of alkali metal hydroxides, carbonates and bicarbonates to provide a pH of about 8 to 11, introducing the chloride of a higher fatty acid having 8 to 22 carbon atoms in amount less than that necessary to completely esterify said polyol, the temperature of the reaction is not over about 40° to 50° C., whereby a reaction takes place forming partial esters of said sugar polyols.

3,021,325
CARBAMYL SUBSTITUTED 2,3,4,5-TETRAHYDROBENZODIAZEPINE COMPOUNDS
Otis E. Fancher, Gust Nichols, and Dale A. Stauffer, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,436
7 Claims. (Cl. 260—239)

1. The carbamyl substituted benzodiazepine derivative of the formula:



wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen and lower alkyl and wherein X is selected from the group consisting of hydrogen, halogen and lower alkyl.

3,021,326
PURIFICATION OF CAPROLACTAM
Orvill E. Snider, Petersburg, Reed H. Belden, Hopewell, and Donald R. Beuerman, Chester, Va., and Donald W. Seebohm, East Aurora, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed Sept. 8, 1958, Ser. No. 759,729
3 Claims. (Cl. 260—239.3)

1. Process for removing, from crude epsilon-caprolactam, impurities therein oxidizable by potassium perman-

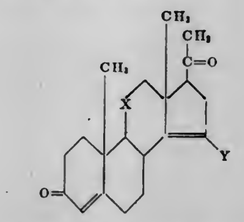
ganate which process comprises forming a mixture consisting essentially of the three ingredients epsilon-caprolactam; alkali metal hydroxide of the group consisting of sodium hydroxide, potassium hydroxide, and their mixtures; and water and containing not more than about ten parts by weight of impurities per 90 parts of caprolactam, said mixture having therein at least about 1% by weight of caprolactam and at least about 5% alkali metal hydroxide; the weight proportions of caprolactam:alkali metal hydroxide:water lying about in the quadrilateral on an equilateral triangular composition diagram bounded by the lines connecting points at about the point [1% lactam, 69% alkali metal hydroxide, 30% water], [1% lactam, 19% alka metal hydroxide, 80% water], [55% lactam, 5% alkali metal hydroxide, 40% water], [93% lactam, 5% alkali metal hydroxide, 2% water]; and establishing in said mixture temperatures within the range from about 15° C. to about 75° C.; separating liquid caprolactam phase from the aqueous alkali metal hydroxide phase; and recovering purified caprolactam by distilling the separated caprolactam.

3,021,327
14-DEHYDRO AND 15-DEHYDRO-11-OXYGENATED PROGESTERONES

Philip F. Beal III, Kalamazoo, and Robert W. Jackson, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed July 20, 1961, Ser. No. 125,386
21 Claims. (Cl. 260—239.55)

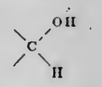
1. Compounds of the formula



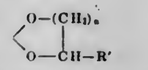
wherein X is selected from the group consisting of the β-hydroxymethylene radical



the α-hydroxymethylene radical



and the carbonyl radical, >C=O, Y is selected from the group consisting of hydrogen and methyl, and the 3,20-bis(alkylene ketals) thereof wherein the alkylene ketal radicals are of the formula



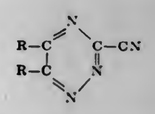
wherein *n* is selected from the integers one and two and R′ is selected from the group consisting of hydrogen and a lower-alkyl radical containing from one to six carbon atoms, inclusive.

3,021,328
3-CYANO-1,2,4-TRIAZINES AND THEIR PREPARATION

Lucille Theresa Morin and Ken Matsuda, both of Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 6, 1960, Ser. No. 27,283
3 Claims. (Cl. 260—248)

1. The cyano-asymmetrical triazine having the structure:



wherein each R is a radical selected from the group consisting of a lower alkyl, phenyl and naphthyl.

3,021,329
DIALDEHYDE STARCH-MELAMINE DERIVATIVES

Peter J. Borchert, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,705
5 Claims. (Cl. 260—249.6)

1. A condensation product obtained by reacting in slurry a dialdehyde polysaccharide with an amino triazine selected from the group consisting of melamine, benzoguanamine and N,N-diallylmelamine in the presence of an inert reaction medium selected from the group consisting of water, n-butanol, dioxan, and mixtures thereof, and an acid catalyst selected from the group consisting of sulfuric acid and acetic acid, at a temperature of about from 50° C. to 110° C. for about from 1 to 4 hours.

3,021,330
METHOD FOR PURIFYING 2,5-DIMETHYLPIPERAZINE

George W. Fowler and Donald G. Crosby, South Charleston, and William R. Proops, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 28, 1959, Ser. No. 829,963
6 Claims. (Cl. 260—250)

1. The method of refining 2,5-dimethylpyrazine containing a small quantity of monoisopropanolamine which comprises distilling under reflux a mixture of said dimethylpyrazine and a volatile liquid hydrocarbon having a boiling point between 100° and 200° C., washing the distillate with water to remove monoisopropanolamine therefrom, returning the washed distillate as reflux to the hydrocarbon-dimethylpyrazine mixture, continuing the distillation of said mixture until substantially all of said monoisopropanolamine has been transferred to the wash water, and separating said hydrocarbon from said dimethylpyrazine by distillation.

3,021,331
AZABENZOPYRIDOCOLINES

Joseph G. Lombardino, Brooklyn, William M. McLamore, Kew Gardens, and Gerald D. Laubach, Jackson Heights, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed July 20, 1959, Ser. No. 828,007
13 Claims. (Cl. 260—251)

7. A 2-oxo-3-dimethylamino lower alkylaza-9,10-di(lower alkoxy)-1,2,3,4,6,7-hexahydro-11b-H-benzopyridocoline.

3,021,332
PYRIDO (2,3-d) PYRIMIDINE COMPOUNDS AND METHOD OF MAKING

George H. Hitchings, Yonkers, N.Y., and Roland K. Robins, Tempe, Ariz., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Jan. 9, 1958, Ser. No. 707,853
Claims priority, application Great Britain Jan. 4, 1954
5 Claims. (Cl. 260—256.4)

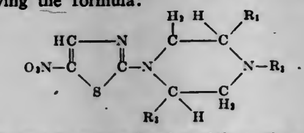
2. 2-amino-4-hydroxy-6-methyl-7-ethylpyrido 2,3-d) pyrimidine.

3,021,333
SUBSTITUTED NITROTHIAZOLYL PIPERAZINES

David B. Reisner, Cedar Grove, and John V. Scudi, Springfield, N.J., assignors to Wallace & Tiernan Incorporated, Belleville, N.J., a corporation of Delaware

No Drawing. Filed Jan. 13, 1960, Ser. No. 2,137
4 Claims. (Cl. 260—268)

1. A compound selected from the group consisting of those having the formula:



wherein R_1 and R_2 are each selected from the group consisting of hydrogen and lower alkyl, and R_3 is selected from the group consisting of hydrogen, lower alkyl, hydroxy lower alkyl, lower alkanoyl, phenyl lower alkanoyl, benzoyl, halogeno lower alkanoyl, carbamyl, carbo-lower alkoxy, lower alkylsulfonyl, and lower alkanoyl-aminophenylene-sulfonyl; and the non-toxic acid addition salts of said compounds in which R_3 is selected from the group consisting of hydrogen, lower alkyl and hydroxy lower alkyl.

3,021,334
PROCESS FOR N-METHYLACRIDONE

William D. Smart, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed June 24, 1959, Ser. No. 822,417
3 Claims. (Cl. 260—279)

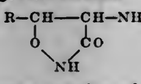
1. In a method for preparing N-methylacridone from N-phenylanthranilic acid, the improvement comprising reacting a mole of N-phenylanthranilic acid with about 2 moles of phosphorous oxychloride in chlorobenzene, heating the reaction mixture at an initial temperature of 55–60° C. until formation of acridone is substantially complete, thereafter increasing the temperature of the reaction mixture to 95–100° C. until formation of 9-chloroacridine is substantially complete, separating the solvent layer and adding thereto a methyl quaternizing agent, extracting said quaternary salt of 9-chloroacridine with water and treating said water extraction with mineral acid to obtain N-methylacridone.

3,021,335
METHOD FOR THE PRODUCTION OF ISOXAZOLIDONES

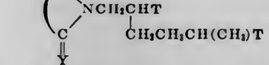
Andor Fürst, Basel, and Emilio Kyburz, Riehen, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 9, 1959, Ser. No. 805,124
Claims priority, application Switzerland Apr. 26, 1958
8 Claims. (Cl. 260—307)

1. A method for the preparation of isoxazolidone compounds having the general formula



wherein R represents a member of the group consisting of hydrogen and lower alkyl, which comprises treating an ethylenimine-2-carboxylic acid ester having the general formula



wherein R is the same as above, with a strong acid in a solvent, treating the reaction product with hydroxylamine and a strong base in the presence of water and isolating the isoxazolidone compound obtained.

3,021,336
3-CYANO-5-METHYL-1,2,4-TRIAZOLE

Lucille Theresa Morin and Ken Matsuda, both of Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 6, 1960, Ser. No. 27,282
1 Claim. (Cl. 260—308)

As a novel compound: 3-cyano-5-methyl-1,2,4-triazole.

3,021,337
PREPARATION OF 5-CYANOTETRAZOLES

Lucille Theresa Morin and Ken Matsuda, both of Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 6, 1960, Ser. No. 27,284
4 Claims. (Cl. 260—308)

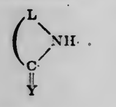
1. A process for the preparation of 5-cyanotetrazole which comprises the steps of: reacting 1-cyanoformimidic acid hydrazide with an alkali metal nitrite in the presence of nitric acid and a soluble silver salt to effect nitrosation and cyclization of said hydrazide; and thereafter recovering 5-cyanotetrazole thus-formed.

3,021,338
ADDUCTS OF HETEROCYCLIC AMIDES

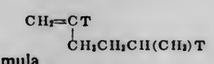
Newman M. Bortnick, Oreland, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Dec. 5, 1956, Ser. No. 626,294
5 Claims. (Cl. 260—309.7)

1. An adduct of the compounds

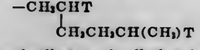


and



having the formula

in which L is a divalent chain of two to three carbon atoms and one nitrogen atom wherein said nitrogen atom is at least two carbon atoms removed from the other nitrogen atom in the heterocyclic amide when that amide is considered in a counterclockwise direction, the remaining available carbon valences in said L chain being satisfied by members from the group consisting of a hydrogen atom and alkyl groups whose total carbon content is no greater than eighteen, the available valence of said nitrogen atom in said L chain being satisfied by a member from the group consisting of the



group, alkyl, cycloalkyl and alkylcycloalkyl groups of one to eighteen carbon atoms, aryl, alkylaryl, arylalkyl

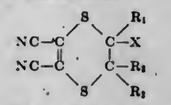
and alkylarylalkyl groups of six to eighteen carbon atoms, hydroxyalkyl groups of two to eight carbon atoms in which the hydroxy group is no closer than the beta position with respect to said nitrogen atom in said L chain, alkenyl groups of two to eighteen carbon atoms, aminoalkyl groups of two to eight carbon atoms in which the amino group is no closer than the beta position with respect to said nitrogen atom in said L chain, alkoxyalkyl groups containing up to nineteen carbon atoms in which the alkoxy portion contains up to eight carbon atoms and the alkyl portion contains at least two carbon atoms, alkenoxyalkyl groups containing up to nineteen carbon atoms in which the alkenoxy portion contains up to eight carbon atoms and the alkyl portion contains at least two carbon atoms, cyano groups, and cyanoalkyl groups in which the alkyl group contains up to eight carbon atoms, Y is a chalcogen having an atomic weight of 16 to 32, and T is a member from the group consisting of a cyano group, the group —CONZ$_2$ in which Z is a member from the group consisting of a hydrogen atom and alkyl groups of one to eight carbon atoms, and the group —COOR in which R is a member from the group consisting of alkyl groups of one to fourteen carbon atoms, alkoxyalkyl groups of two to fourteen carbon atoms, aralkyl and alkaralkyl groups of seven to fourteen carbon atoms, and cycloalkyl and alkylcycloalkyl groups of three to fourteen carbon atoms.

3,021,339
2-SUBSTITUTED-2,3-DIHYDRO-5,6-DICYANO-1,4-DITHIINS

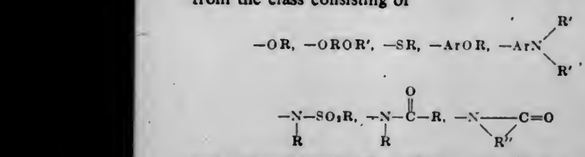
Dale C. Blomstrom and Blaine C. McKusick, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 5, 1959, Ser. No. 844,181
14 Claims. (Cl. 260—326.5)

1. A compound of the formula



wherein R_1, R_2 and R_3 are selected from the class consisting of hydrogen and hydrocarbon and X is selected from the class consisting of



and oxygen joined to R_2 to form an oxyalkylene radical, Ar standing for an aromatic hydrocarbon group, R′ for an alkyl group, R for any hydyrocarbon group free from nonaromatic unsaturation and R″ for an alkylene group.

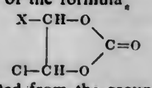
6. 5,6 - dicyano - 2 - (2 - ketopyrrolidinyl) - 2,3 - dihydro-1,4-dithiin.

3,021,340
2-OXODIOXOLANES

John L. Anderson, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 13, 1953, Ser. No. 348,580
8 Claims. (Cl. 260—340.2)

1. A compound of the formula



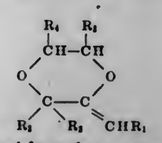
wherein X is selected from the group consisting of chlorine and hydrogen.

3,021,341
METHYLENE DIOXANES

Willard J. Croxall and Norman D. Dawson, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,022
8 Claims. (Cl. 260—340.6)

1. A substituted heterocyclic compound having the formula:



wherein R_1 is selected from the group consisting of hydrogen, lower alkyl, lower alkenyl and phenyl and R_2, R_3, R_4 and R_5 are selected from the group consisting of hydrogen, lower alkyl and phenyl, provided that R_2 and R_3 are not both hydrogens.

3,021,342
HYDROGENATION OF PYRANS AND FURANS

Donald G. Manly, Barrington, Ill., assignor to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

No Drawing. Filed July 7, 1958, Ser. No. 746,642
11 Claims. (Cl. 260—345.1)

1. In a process of hydrogenating a compound of the group consisting of furan, methylfuran and dihydropyran which comprises contacting said compound in the vapor phase in the presence of a nickel catalyst with hydrogen at a hydrogenating temperature of below about 120° C.; the improvement wherein said catalyst is a nickel catalyst which has been reduced at a temperature below about 450° C., reoxidized by passing a gas containing free oxygen over the reduced catalyst, and again reduced by passing a gas thereover containing free hydrogen at a temperature below about 250° C., and wherein said contacting is in the presence of an amine selected from a group consisting of strongly basic hydrocarbon monoamines free of aliphatic unsaturation and heterocyclic amines containing no substituents other than carbon, nitrogen, hydrogen and oxygen, said amine being employed in an amount corresponding to at least 0.01% by weight of the compound being hydrogenated.

3,021,343
HYDROGENATION PROCESS

Donald G. Manly, Barrington, Ill., assignor to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

No Drawing. Filed July 7, 1958, Ser. No. 746,648
10 Claims. (Cl. 260—345.1)

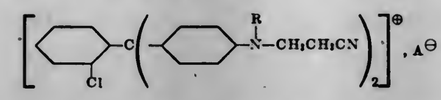
1. In a process of hydrogenating a compound of the group consisting of furan, methylfuran and dihydropyran which comprises contacting said compound in the vapor phase in the presence of a nickel catalyst with hydrogen at a hydrogenating temperature of below about 120° C.; the improvement wherein said catalyst is a nickel catalyst which has been reduced at a temperature below about 450° C., reoxidized by passing a gas containing free oxygen over the reduced catalyst, and again reduced by passing a gas thereover containing free hydrogen at a temperature below about 250° C., and wherein said contacting is in the presence of a catalyst poison of the group consisting furfuryl alcohol and tetrahydrofurfuryl alcohol, said catalyst poison being present in an amount corresponding to at least 0.1% by weight of the compound being hydrogenated.

3,021,344
TRIPHENYLMETHANE DYES

Donald Robert Baer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 19, 1959, Ser. No. 834,645
3 Claims. (Cl. 260—393)

1. A dye having the structure



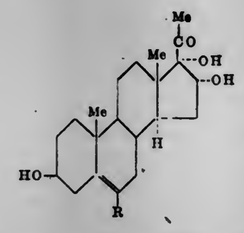
wherein R is a C_{1-4} alkyl radical and $A^{\ominus}$ is a water-solubilizing anion.

3,021,345
16α,17α-DIHYDROXYPREGNEN-20-ONES AND PROCESS FOR PREPARATION OF SAME

Sheila M. Waddington-Feather (neé Booker), Bernard Ellis, and Vladimir Petrow, all of London, England, assignors to The British Drug Houses Limited

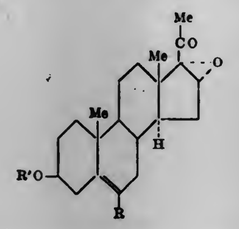
No Drawing. Filed Sept. 19, 1960, Ser. No. 56,700
Claims priority, application Great Britain Sept. 24, 1959
5 Claims. (Cl. 260—397.4)

1. A process for the preparation of 3β,16α,17α-trihydroxypregn-5-en-20-ones having the general formula



(I)

where R is selected from the class consisting of hydrogen and a methyl group, which process comprises reacting a 16α,17α-epoxypregnen-20-one having the general formula



(II)

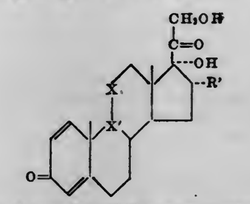
where R has the same meaning as above and R′ is selected from the class consisting of hydrogen and ar aliphatic acyl radical containing from 1 to 8 carbon atoms, with an alkoxy carbonyl hydrazine and a lower alkanoic acid containing up to 3 carbon atoms to give the corresponding alkoxy carbonyl hydrazone of a 16α-alkanoyloxy-17α-hydroxypregnen-20-one, saponifying the alkoxy carbonyl hydrazone to give a 16α,17α-dihydroxy derivative and hydrolysing the foregoing 16α,17α-dihydroxy derivative by treatment with a mixture of acetic acid and not less than 1.2 molar proportions of pyruvic acid to the required 3β,16α,17α-trihydroxypregn-5-en-20-one.

3,021,346
METHOD OF PREPARING 1,4-PREGNADIENES

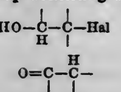
Sidney Fox, Spring Valley, and Mitchell Stanley Blicharz, Blauvelt, N.Y., and Victor Emil Origoni, Emerson, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 21, 1958, Ser. No. 710,189
7 Claims. (Cl. 260—397.45)

1. In a process for the preparation of 3-keto-1,4-pregnadienes having the general formula:



in which R is a member of the group consisting of hydrogen and lower alkanoyl radicals, R′ is a member of the group consisting of hydrogen, hydroxyl and lower alkanoyloxy radicals and —X—X′< is a trivalent ethylene radical of the group consisting of



and



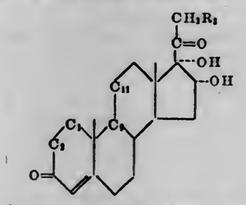
by heating the corresponding 1,2-hydrogenated steroid with selenium dioxide, the improvement which comprises removing by filtration insoluble residual selenium, mixing the filtrate with partially deactivated Raney nickel catalyst at a temperature within the range of 0 to 50° C., filtering said catalyst from the reaction mixture and recovering said 3-keto-1,4-pregnadienes substantially free from other steroids.

3,021,347
PROCESS FOR HYDROLYZING 16,17 STEROID ACETONIDES

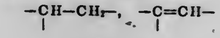
George R. Allen, Evansville, Ind., and Michael Marx, Leonia, and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 13, 1959, Ser. No. 846,054
6 Claims. (Cl. 260—397.45)

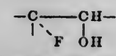
4. A method of preparing compounds of the formula:



wherein R_3 is a member of the group consisting of hydrogen and a hydroxyl radical, >C_9—C_{11}— is a trivalent radical of the group consisting of

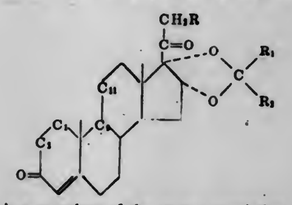


and

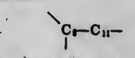


radicals and —C_1—C_2— is a divalent radical of the group consisting of —CH_2—CH_2— and —CH=CH— radicals

which comprises heating to a temperature within the range of 50° to 110° C., a steroid having the formula:



wherein R is a member of the group consisting of hydrogen, hydroxyl and lower alkanoyloxy radicals, R_1 and R_2 are members of the group consisting of hydrogen and lower alkyl radicals and



and $—C_1—C_2—$ are as defined above, and a lower fatty acid, said acid being present in an amount within the range of 20 to 60%, the remainder consisting of water.

3,021,348
REMOVAL OF NITROGEN COMPOUNDS

Vincent P. Kuceski, Park Forest, Ill., assignor to The C. P. Hall Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Aug. 24, 1954, Ser. No. 451,949
5 Claims. (Cl. 260—413)

1. The improvement in the process of treating the oxidation product of a starting material which contains at least 4 carbon atoms in a saturated chain and is of the class consisting of saturated and unsaturated, cyclic and acyclic, aliphatic hydrocarbons and oxygenated derivatives thereof, with the production of a carboxylic acid which has at least 4 carbon atoms in a saturated chain and contains nitro impurity from the class in which a nitro group is connected to a primary carbon atom of the carboxylic acid and in which a nitro group is connected to a secondary carbon atom of the carboxylic acid, the oxidizing agent being at least partially of the class consisting of nitric acid, nitrous acid and oxides of nitrogen greater than N_2O, which improvement comprises esterifying carboxylic acid thus formed with the nitro impurity therein by reaction with an alcohol and producing water-insoluble ester, treating the ester and the portion of said nitro compound which is dissolved therein, with aqueous alkali metal base of the class consisting of lithium, sodium and potassium hydroxides, carbonates and bicarbonates, and thus producing an alkali metal derivative of the nitro compound which in aqueous solution is immiscible with the ester.

3,021,349
DIMETHYL TITANIUM DICHLORIDE

Edward H. de Butts, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 29, 1959, Ser. No. 862,474
3 Claims. (Cl. 260—429.5)

1. The method of producing dimethyl titanium dichloride which comprises reacting a material of the group consisting of titanium tetrachloride and methyl titanium trichloride with bis(cyclopentadienyl) dimethyl titanium at a temperature in the range of —80° C. to 0° C.

3,021,350
STABLE LEAD ALKYL COMPOSITIONS AND A METHOD FOR PREPARING THE SAME

Shirl E. Cook and Hymin Shapiro, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 21, 1960, Ser. No. 70,410
4 Claims. (Cl. 260—437)

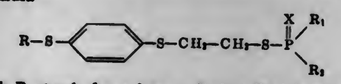
1. A method of inhibiting the decomposition of an alkyllead compound at temperatures of from about 100° C. to about 195° C. which comprises incorporating with said compound from about 0.25 to about 0.50 mole of ethylene dibromide per mole of said compound, and from about 0.1 to about 0.4 mole of trimethyl phosphate per mole of said compound.

3,021,351
PHOSPHORUS DERIVATIVES AND PROCESS FOR THEIR PRODUCTION

Ernst Schegk, Wuppertal-Elberfeld, and Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,211
Claims priority, application Germany May 2, 1959
11 Claims. (Cl. 260—461)

8. A phosphorous-containing compound of the following formula



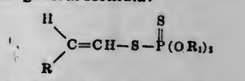
in which R stands for a lower alkyl radical having up to four carbon atoms, R_1 stands for a member selected from the group consisting of a lower alkoxy radical having up to four carbon atoms, a lower alkyl radical having up to six carbon atoms, a lower alkenyl radical having up to 6 carbon atoms, an amino group, a lower alkyl amino group having up to four carbon atoms and a lower dialkyl amino group having up to four carbon atoms, R_2 stands for a member selected from the group consisting of a lower alkoxy group having up to four carbon atoms, a lower alkyl radical having up to six carbon atoms lower alkenyl radical having up to 6 carbon atoms, cyclohexyl and a phenyl group, and X stands for a chalcogen having an atomic weight between 16 and 33.

3,021,352
PREPARATION OF S-(1-ALKENYL) PHOSPHORODITHIOATES

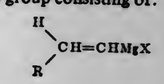
Bernard Miller, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 2, 1960, Ser. No. 53,613
5 Claims. (Cl. 260—461)

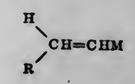
1. A method for preparing phosphorodithioates represented by the general formula:



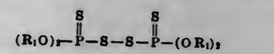
wherein R is a radical selected from the group consisting of lower alkyl, monocyclic aryl and dicyclic aryl and R_1 is a lower alkyl radical, which comprises: reacting in substantially equimolar amounts a metal vinyl compound selected from the group consisting of:



and



where R is as defined above, X is a halogen atom and M is an alkali metal, with a dithiophosphonothioate of the structure:



where R_1 is a lower alkyl radical.

3,021,353
DIETHYL 3,3,3-TRINITROPROPANEPHOSPHONATE AND PROCESS OF PREPARING SAME

Pliny O. Tawney, Passaic, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed June 22, 1949, Ser. No. 100,749
2 Claims. (Cl. 260—461)

1. As a new compound, diethyl 3,3,3-trinitropropanephosphonate.

2. The process which comprises bringing together trinitromethane and diethyl ethenephosphonate at ambient temperature and thereby effecting addition reaction thereof, and recovering diethyl 3,3,3-trinitropropanephosphonate from the resulting reaction mixture.

3,021,354
2-CHLORO-4,6-DIMETHYL-2-OXO-1,3,2-DIOXAPHOSPHORINANES

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed July 8, 1954, Ser. No. 442,174
1 Claim. (Cl. 260—461)

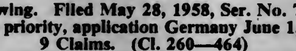
As a new product, 2-chloro-4,6-dimethyl-2-oxo-1,3,2-dioxaphosphorinane.

3,021,355
PROCESS FOR THE PRODUCTION OF UNSATURATED NITRILE COMPOUNDS OF THE VITAMIN A SERIES

Karl Eiter, Koln, and Ernst Truschelt, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 28, 1958, Ser. No. 738,275
Claims priority, application Germany June 1, 1957
9 Claims. (Cl. 260—464)

1. A process for the production of unsaturated compounds of the vitamin A series, which comprises the steps of (1) reacting in an inert organic solvent medium selected from the group consisting of tetrahydrofurane, dioxane, benzene, toluene, xylene and mixtures of these solvents with ether, a halogen nitrile of the general formula



wherein X represents a member selected from the group consisting of chlorine, bromine and iodine, R represents a member selected from the group consisting of hydrogen and a lower alkyl group and *n* is one of 0 and 1 with a member selected from the group consisting of β-ionone, β-cyclocitral, β-ionylidenacetaldehyde, β-ionylidenacetone and 1-(2',6',6'-trimethyl cyclohexene-1'-yl)-3-methyl-1,3,5-octatriene-7-one, in the presence of zinc; (2) reacting the cooled reaction mixture thus obtained with an aqueous solution of an acid to thereby produce the corresponding hydroxy nitrile; (3) contacting the thus produced hydroxy nitrile with a dehydrating agent under splitting off of water without any retro-ionylidene rearrangement taking place; and (4) recovering the unsaturated compound of a vitamin A series thereby produced.

3,021,356
PROCESS FOR THE PRODUCTION OF ALLYL 6-CYANOHEXANOATE

Benjamin T. Freure, Charleston, and Samuel W. Tinsley, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 20, 1959, Ser. No. 847,474
2 Claims. (Cl. 260—465.4)

1. A process for producing allyl 6-cyanohexanoate which comprises reacting an allyl halide, selected from the group consisting of allyl fluoride, allyl chloride, and allyl bromide, with an alkali metal salt of 6-cyanohexanoic acid in contact with an amine catalyst at from about 75° C. to about 150° C. at a pressure of from about 50 p.s.i.g. to about 500 p.s.i.g.

3,021,357
DIALKYL ESTERS OF 5-t-ALKYLISOPHTHALIC ACID

Edward A. Swakon, Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 15, 1959, Ser. No. 806,464
3 Claims. (Cl. 260—475)

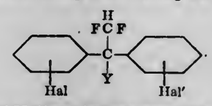
1. The dialkyl ester of 5-t-alkylisophthalic acid wherein the t-alkyl group contains 4 carbon atoms and each alkyl group contains 8 carbon atoms and at least 1 of these carbon atoms is in a branched position.

3,021,358
INSECTICIDAL BIS-HALOPHENYL DI-FLUORO-ALIPHATIC COMPOUNDS

Joseph Bornstein, Brighton, Mass., Murray S. Blum, Baton Rouge, La., and John J. Pratt, Jr., Wayland, Mass., assignors to the United States of America as represented by the Secretary of the Army

No Drawing. Original application July 28, 1958, Ser. No. 751,579, now Patent No. 2,990,321, dated June 27, 1961. Divided and this application Jan. 29, 1960, Ser. No. 9,154
6 Claims. (Cl. 260—488)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An insecticidal compound having the formula:



wherein Hal and Hal' are halogen atoms having an atomic weight not above 80 and wherein Y is a member of the group consisting of hydrogen, hydroxyl and acetoxyl.

3,021,359
UNSATURATED ACYCLIC ESTERS, AND METHOD OF PRODUCING SAME

Walter Kimel, Highland Park, N.J., and Marc Montavon, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 1, 1960, Ser. No. 11,969
Claims priority, application Switzerland Mar. 20, 1959
5 Claims. (Cl. 260—488)

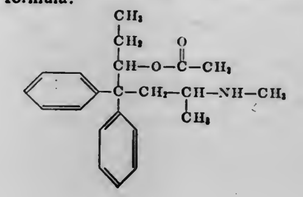
1. A compound selected from the group consisting of 2-acetoxy - 6,10 - dimethyl - 2,4,6,9 - undecatetraene and 2-acetoxy-6,9,10-trimethyl-2,4,6,9-undecatetraene.

3,021,360
3-ACETOXY-4,4-DIPHENYL-6-METHYL-AMINOHEPTANE

Albert Pohland, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Mar. 25, 1959, Ser. No. 801,701
5 Claims. (Cl. 260—490)

1. A member of the group consisting of the organic base, 3-acetoxy-4,4-diphenyl-6-methylaminoheptane, and its acid addition salts, said base being represented by the following formula:



3,021,361
l-PROPOXYPHENE N-OXIDE AND SALTS THEREOF

Albert Pohland, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Sept. 10, 1959, Ser. No. 843,329
3 Claims. (Cl. 260—490)

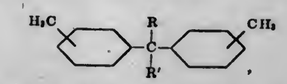
1. A member of the group consisting of *l*-propoxyphene N-oxide and the nontoxic acid addition salts thereof.

3,021,362
PURIFICATION OF CRUDE ALKYLIDENE BIS-(BENZOIC ACIDS) BY SOLVENT EXTRACTION

John C. Petropoulos, Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 5, 1958, Ser. No. 739,983
12 Claims. (Cl. 260—525)

1. A method of removing nitrogen-containing impurities from a crude alkylidene bis-(benzoic acid) prepared by the nitric acid oxidation of a ditolylalkane of the formula



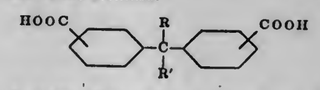
in which R is an alkyl radical containing from 1 to 2 carbon atoms and R′ is an alkyl radical containing from 1 to 4 carbon atoms which consists in: extracting said crude with a mononuclear aromatic hydrocarbon solvent and thereby dissolving said nitrogen-containing impurities while retaining the alkylidene bis-(benzoic acid) as a solid therein and then filtering the resulting suspension.

3,021,363
PURIFICATION OF BIS-(CARBOXYPHENYL)-ALKANES BY PERMANGANATE OXIDATION

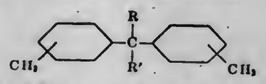
John C. Petropoulos and Henry F. Lederle, Norwalk, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 5, 1958, Ser. No. 739,985
6 Claims. (Cl. 260—525)

1. A method of purifying an impure alkylidene bis-benzoic acid of the formula:



wherein R is an alkyl radical of from 1 to 2 carbon atoms and R′ is an alkyl radical containing from 1 to 4 carbon atoms, said acid being obtained by nitric acid oxidation of a compound of the formula:



wherein R and R′ are the same as defined above, followed by the solvent-extraction of the resultant alkylidene bis-benzoic acid with a mononuclear aromatic hydrocarbon selected from the class consisting of benzene, toluene and xylene to recover an alkylidene bis-benzoic acid together with small quantities of terephthalic acid, benzophenone dicarboxylic acids, picric acid and other unidentified impurities which darken the color of alkyd resins prepared from such impure alkylidene bis-benzoic acid, which consists essentially in the steps of: converting said solvent-extracted bis-benzoic acid to the corresponding alkali metal salt in an aqueous medium, oxidizing the latter mixture by adding thereto from about 2% to about 8% of an alkali metal permanganate based on the weight of the alkylidene bis-benzoic acid being so-treated, heating said mixture and removing any insolubles formed, and thereafter recovering a purified alkylidene bis-benzoic acid substantially free from the hereinabove stated impurities by acidifying the latter solution to a pH of between about 5 and 6, thereby precipitating said purified alkylidene bis-benzoic acid.

3,021,364
PREPARATION OF DRY SODIUM METHACRYLATE

John A. Cornell, Berwyn, and Daniel J. Gowman, Strafford, Pa., assignors to Sartomer Resins, Inc., Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 12, 1960, Ser. No. 1,864
13 Claims. (Cl. 260—526)

1. A method of preparing dry alkali metal methacrylate salt comprising saponifying under anhydrous conditions stoichiometric reacting quantities of liquid methyl methacrylate with solid alkali metal hydroxide selected from the group consisting of LiOH, NaOH and KOH at a temperature of 55° C.–80° C. whereby dry alkali metal methacrylate salt is substantially immediately formed to serve as a seeding agent for further saponification and to prevent temperature surge during mixing and reacting, said methyl methacrylate being added at a uniformly slow rate to said alkali metal hydroxide with efficient positive scraping agitation to prevent said temperature from rising above 80° C. and to convert the mixture of said alkali metal hydroxide and said methyl methacrylate liquid into a paste which is formed quickly under agitation into a dry paste whereby there is recovered dense dry alkali metal methacrylate in the form of a dry powder product having an alkalinity of less than about 4% as alkali metal hydroxide.

3,021,365
PROCESS FOR THE MANUFACTURE OF SORBIC ACID

Hans Fernholz, Bad Soden (Taunus), and Eberhard Mundlos, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed June 3, 1957, Ser. No. 662,968
Claims priority, application Germany June 7, 1956
7 Claims. (Cl. 260—526)

1. A process for the manufacture of sorbic acid, which comprises reacting ketene with croton aldehyde at a temperature in the range from 20° C. to 50° C. in the presence of an inert solvent and in the presence of a salt of a fatty acid containing four to eighteen carbon atoms and a bivalent transition metal selected from the group consisting of cadmium, iron, nickel, mercury, cobalt, and zinc, distilling off vaporizable compounds and thermally decomposing the residue which still contains said fatty acid salt.

3,021,366
PROCESS FOR THE CONVERSION OF UNSATURATED ALDEHYDES TO THE CORRESPONDING UNSATURATED ACIDS

James D. Idol, Jr., Shaker Heights, James L. Callahan, Bedford, and Robert W. Foreman, Cleveland, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 10, 1958, Ser. No. 766,387
3 Claims. (Cl. 260—530)

1. A process for the manufacture of acrylic acid which comprises the step of contacting a gaseous mixture of acrolein and oxygen with a solid catalyst having a surface area below about 250 square meters per gram comprising at least one member of the group consisting of phosphotungstic acid and the silver salt thereof at a temperature in the range of 400° F. to 850° F. and a contact time of about 7.5 to 25 seconds.

3,021,367
PREPARATION OF CARBOXYLIC ACIDS

Louis Schmerling, Riverside, and Walter G. Toekelt, Downers Grove, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed June 2, 1958, Ser. No. 739,002
13 Claims. (Cl. 260—533)

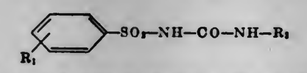
1. A process for the preparation of a salt of a carboxylic acid which comprises catalytically reacting a mono-olefinic alkene, at a temperature of from about 50° to about 300° C., with a compound selected from the group consisting of alkali metal and alkaline earth metal salts of saturated carboxylic acids having at least one hydrogen atom on an alpha carbon atom, the catalyst in said catalytic reaction being selected from the group consisting of alkali metals, alkali metal hydrides, alkali metal amides, alkali metal alkyls and alkali metal aryls, and hydrolyzing the resultant product.

3,021,368
SUBSTITUTED TRIFLUOROMETHYLTHIO- AND TRIFLUOROMETHOXYPHENYL SULFONYL-UREAS

Benjamin Blank, Philadelphia, and James F. Kerwin, Broomall, Pa., assignors to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 22, 1959, Ser. No. 807,998
9 Claims. (Cl. 260—553)

1. A chemical compound having the following formula:



in which R_1 is a member selected from the group consisting of trifluoromethylthio and trifluoromethoxy; and R_2 is a member selected from the group consisting of lower alkyl of from 2 to 5 carbon atoms; lower cycloalkyl of from 5 to 6 carbon atoms; lower alkoxyalkylene, the lower alkoxy moiety is from 1 to 3 carbon atoms and the alkylene moiety is of from 2 to 4 carbon atoms; and lower alkyl mercapto-alkylene, the lower alkyl mercapto moiety is of from 1 to 3 carbon atoms and the alkylene moiety is of from 2 to 4 carbon atoms.

3,021,369
PREPARATION OF 2,3,6-TRICHLORO-PHENYL-ACETAMIDE

Edwin Dorfman, Grand Island, Edward D. Weil, Lewiston, and Jack S. Newcomer, Wilson, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed Mar. 9, 1960, Ser. No. 13,693
5 Claims. (Cl. 260—558)

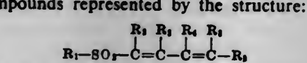
1. A process for the production of 2,3,6-trichlorophenylacetamide which comprises dissolving trichlorophenylacetonitrile in sulfuric acid and adding the resultant solution to an agitated two-phase mixture of water and an organic solvent.

3,021,370
POLYUNSATURATED SULFIDES AND SULFONES AND METHOD OF PREPARING SAME

Henry Bluestone, University Heights, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Filed Oct. 6, 1958, Ser. No. 765,330
18 Claims. (Cl. 260—607)

1. Compounds represented by the structure:



wherein R_1 is selected from the group consisting of alkyl and hydroxy alkyl; R_2, R_3, R_4, R_5 and R_6 are selected from the group consisting of chlorine and alkyl sulfonyl radicals of the structure $R_1—SO_2—$, wherein R_1 is as defined above.

3,021,371
1,3-BIS(1′-ETHYNYL-1′-CYCLOHEXYLOXY)-2-PROPANOL

Edward J. Watson, Jr., Norwich, N.Y., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 20, 1961, Ser. No. 96,723
1 Claim. (Cl. 260—611)

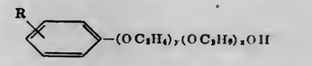
1,3-bis(1′-ethynyl-1′-cyclohexyloxy)-2-propanol.

3,021,372
LOW FOAM, HIGH WETTING POLYPROPYLENE-TERMINATED ALKYLPHENOXYPOLYETHOXY-ALKANOLS

Jean Dupre, Levittown, and Robert E. Wolfrom, Jenkintown, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 16, 1959, Ser. No. 827,465
6 Claims. (Cl. 260—613)

1. As a composition of matter, the compound having the formula



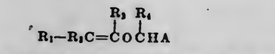
in which R is an alkyl group of 8 to 9 carbon atoms, x is a number ranging from 5.8 to 20, y is an integer ranging from 5 to 10, and x/y is a ratio which may be represented by a number from about 1.2 to about 2.1.

3,021,373
PREPARATION OF 1-ALKENYL, ALKENYL ETHERS

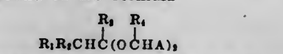
Amelio E. Montagna and Donald H. Hirsh, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 11, 1956, Ser. No. 558,425
13 Claims. (Cl. 260—614)

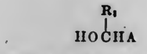
1. The method of making a 1-alkenyl alkenyl ether of the formula



wherein R_1, R_2 and R_3 are selected from the group consisting of H and alkyl radicals of from 1 to 8 carbon atoms; R_4 is selected from the group consisting of H and alkyl radicals of from 1 to 4 carbon atoms; and R_1, R_2, R_3 and R_4 taken collectively contain at most 12 carbon atoms; and A is an alkenyl radical containing from 2 to 11 carbon atoms, which comprises heating the corresponding compound of the formula



in the liquid phase in a reaction vessel to a temperature sufficient to vaporize the ether and the alcohol of the formula



thereafter introducing a strong acid catalyst which is substantially non-volatile under the reaction conditions into the reaction vessel, and causing the de-alcoholation of said compound to form said 1-alkenyl alkenyl ether and said alcohol co-product, said catalyst being introduced as a solution in a solvent inert with respect to reaction with the acetal, inert with respect to the alcohol co-product, and inert with respect to the ether save for reaction to form said acetal; partially rectifying the vapors

so produced, to separate the compound heated from the ether and alcohol formed from said compound; and recovering said vapors.

3,021,374
SEPARATION OF ALCOHOLS
Pierre de Radzitzky, Brussels, Belgium, assignor to Labofina, Neder-Over-Humbeek, Belgium
No Drawing. Filed Oct. 3, 1958, Ser. No. 765,053
Claims priority, application Great Britain Oct. 9, 1957
6 Claims. (Cl. 260—631)

1. A method of separating alcohols from organic mediums, comprising the steps of subjecting an organic medium comprising at least one alcohol selected from the group consisting of methanol, ethanol, propanol, isopropanol, n-butanol, sec-butanol, tert-butanol, n-pentanol, iso-pentanol, n-hexanol, iso-hexanol, 2-ethylbutanol, cyclohexanol, heptanol-3, n-octanol, octanol-2, 2-ethylhexanol, nonanol and dodecanol and also a substance selected from the group consisting of sebacic acid and phthalic acid esters of said alcohol and benzene to absorption by a polystyrene cationic ion exchange resin acidified with a group selected from the class consisting of sulfonic, phosphonic, carboxylic and phenolic groups and cross-linked by an agent selected from the class consisting of divinyl acetylene, divinyl benzene and methylallyl chloride the absorptive capacity of which is greater for said alcohol than for the other components of said organic medium, thereby selectively absorbing said alcohol by said resin; and desorbing said alcohol from said resin, thereby obtaining said alcohol.

3,021,375
PROCESS FOR THE PREPARATION OF 2,4-BIS-(CHLOROMETHYL)-TOLUENE
Ted Henry Wald, Montreal, Quebec, and Denis Coleman, Westmount, Quebec, Canada, assignors to Monsanto Canada Limited, La Salle, Quebec, Canada
No Drawing. Filed Jan. 9, 1959, Ser. No. 785,803
6 Claims. (Cl. 260—651)

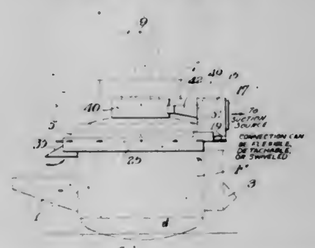
1. A process for the production in major amounts of a member of the group consisting of 2,4-bis-(chloromethyl)-toluene and 2,5-bis-(chloromethyl)-p-xylene by chloromethylation of an aromatic hydrocarbon having the formula

$$CH_3C_6H_4X$$

in which X is a member of the group consisting of hydrogen, methyl and chloromethyl, which comprises depolymerizing a polymer of the group consisting of paraformaldehyde and trioxymethylene by suspending said member in an amount in excess of the theoretical amount of the aromatic hydrocarbon to be reacted and zinc chloride in a ratio of about 0.2 mole to about 0.7 mole per mole of the aromatic hydrocarbon in an inert diluent, saturating the suspension with hydrochloric acid, following depolymerization bringing together the inert diluent mixture and said aromatic hydrocarbon and continuing the reaction at a temperature of from about 30° C. to about 80° C. to form major amounts of the dichloromethylated hydrocarbon.

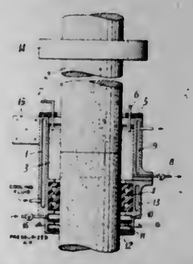
ELECTRICAL

3,021,376
FURNACE HOOD
Walter O. Vedder and Harry N. Patronik, Hagerstown, Md., assignors to Pangborn Corporation, Hagerstown, Md., a corporation of Maryland
Filed Apr. 10, 1961, Ser. No. 101,908
9 Claims. (Cl. 13—9)



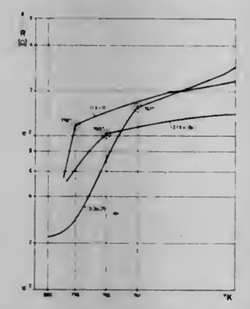
1. A suction hood for open top electrical furnaces having removable roofs provided with heating electrodes, said hood comprising a distribution box for mounting at a top portion of the furnace periphery, said box having a connection for a suction source, a ring-shaped conduit for positioning around the remainder of the furnace top periphery, connection means for providing a suction connection between said conduit and said box, ports in the conduit for applying the box suction at selected locations around the top of the furnace, an electrode manifold hood portion for mounting on the furnace roof in electrode-encircling arrangement, said hood having a connector extension for connecting the electrode manifold hood portion to said box, said extension and box having automatic engaging elements connected to automatically establish a suction connection between the box and the manifold when the roof is in place over the furnace body, and to automatically close this suction connection when the roof is removed from the furnace body, said box and ring conduit being shaped to leave roof travel clearance over the furnace body.

3,021,377
ELECTRICAL CURRENT TRANSFER DEVICE
Victor J. Jamal, Lewiston, and Henry S. Newhall, Niagara Falls, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed Mar. 22, 1960, Ser. No. 16,692
3 Claims. (Cl. 13—15)



1. An improved current transfer device for transducing electrical current from an electrical power source to an electrode which comprises an electrically conductive receptacle connectable electrically to said power source, said receptacle normally movable longitudinally but adapted to be fixedly positioned with respect to said electrode and adapted to surround an intermediate longitudinal portion of said electrode, first annular sealing means fixedly positioned at the lower portion of said receptacle sealably contacting said receptacle and arranged to sealably contact a portion of the surface of said electrode and permitting longitudinal movement of said electrode therethrough upon fixedly positioning said receptacle, said receptacle adapted to receive liquid metal to contact a portion of the surface of said receptable and a portion of the surface of said electrode, at least one supplemenatry annular sealing means fixedly positioned at the lower portion of said receptacle sealably contacting said receptacle and arranged to sealably contact a portion of the surface of said electrode and permitting longitudinal movement of said electrode therethrough upon fixedly positioning said receptacle, said supplementary sealing means positioned below said first annular sealing means and separated therefrom by a pressurized air chamber, said air chamber defined by a portion of the inner surface of said receptacle, the lower surface of said annular sealing means, the upper surface of said supplementary sealing means and a portion of the surface of said electrode.

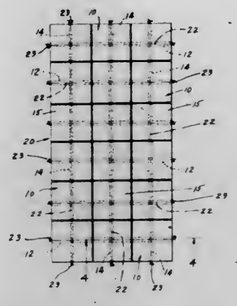
3,021,378
METHOD FOR PRODUCING THERMOELECTRIC COMPONENTS ON ZINC-ANTIMONY BASIS
Eduard Justi and Georg Neumann, Braunschweig, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Mar. 16, 1960, Ser. No. 15,314
Claims priority, application Germany Mar. 21, 1959
8 Claims. (Cl. 136—5)



1. The method of producing a thermoelectric component from a composition of the system $Zn_xCd_{1-x}Sb$ wherein x is larger than zero but not larger than unity, which comprises melting the composition, freezing the melt and thereafter tempering it in the solid state for more than one hour at a temperature between about 741° K. and 778° K. corresponding substantially to the conversion temperature of the composition as manifested by a discontinuity point of its conductance-temperature characteristic.

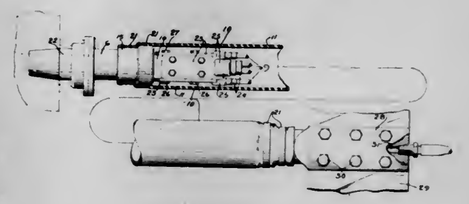
3,021,379
CERAMIC SEPARATORS FOR PRIMARY BATTERIES
Roland D. Jackel, 3110 19th St. NW., Washington, D.C.
Filed Apr. 21, 1960, Ser. No. 23,859
6 Claims. (Cl. 136—145)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. A basic separator unit for assembly into a large area separator adapted for insertion between the active elements of a fuel combustion type of primary electric battery comprising a thin parallelepiped having two principal faces in the form of rectangular parallelograms and four thin edges also in the form of rectangular parallelograms, said parallelepiped being composed of 80 parts by weight of talc, 10 parts by weight of barium carbonate, 10 parts by weight of ceramic clay, 1½ parts by weight of an hydrocarbon emulsion and 1½ parts by weight of suitably mesh graded corn meal and having two apertures formed therein, said apertures being coaxial with those axes of the parallelepiped which are perpendicular to the opposed edges thereof and parallel to the principal faces thereof;



each of said apertures extending from one opposed edge to the other opposed edge, and said apertures intersecting each other on the third axis of said parallelepiped, which third axis is perpendicular to the principal faces and parallel to the four thin edges thereof.

3,021,380
LIQUID-COOLED CABLE FOR ELECTRIC FURNACES AND CONNECTORS THEREFOR
Richard A. Barrass, Pocatello, Idaho, assignor to FMC Corporation, a corporation of Delaware
Original application Nov. 30, 1955, Ser. No. 550,088. Divided and this application June 11, 1959, Ser. No. 830,972
2 Claims. (Cl. 174—15)



1. In a flexible liquid-cooled electric power transmission cable comprising flexible metal conductors, a flexible insulated hose surrounding said conductors, terminal plugs at the ends of said conductors, said terminal plugs having a forward portion, an intermediate portion, a rearward portion and a continuous longitudinal bore extending through said plugs, and means for removably clamping said hose to said intermediate portion of said terminal plugs, the improvement which consists of metal extensions permanently attached to the ends of said conductors and means for removably fastening said extensions to the rearward portions of said terminal plugs.

3,021,381
CABLE SPREADER
Henry R. Wengen, Poughkeepsie, N.Y., assignor to Fargo Mfg. Company, Inc., Poughkeepsie, N.Y., a corporation of New York
Filed Dec. 28, 1960, Ser. No. 79,018
5 Claims. (Cl. 174—146)

1. A spreader assembly including in combination: a spreader body, an arm having its inner end connected to

said body and extending laterally therefrom, an enlarged head at the outer end of said arm, a cable extending across the upper surface of said arm, a single retainer of dielectric material, preformed coiled end portions included in said retainer, a preformed loop also forming a part of said retainer intermediate said coiled portions, said loop extending in contact with the lower edge surface of said arm and having a height such that said coiled

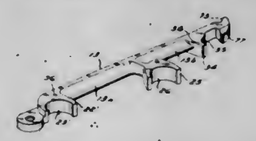


end portions extend in line with the upper surface of said arm, said retainer being flexible to an extent such that the ends thereof are rotatable around said cable to encircle and grip the latter with its coiled end portions and thus prevent axial cable movement while the retainer is secured against displacement with respect to said arm solely by having its loop portion bearing against the lower surface of said arm.

3,021,382
APPARATUS FOR SUPPORTING AND SPACING AERIAL CABLES

Raymond G. Horrocks, Lakewood, and Carroll de V. Miller and Theodore J. Brenner, Rocky River, Ohio, assignors to PLM Products, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Mar. 7, 1960, Ser. No. 13,091
6 Claims. (Cl. 174—174)

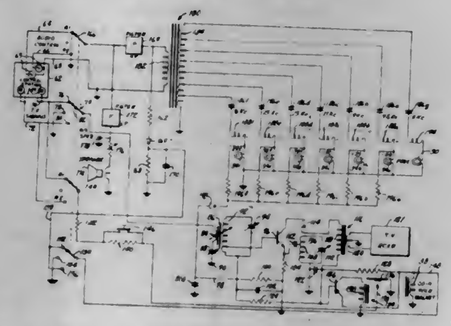


1. A device for use in supporting and spacing aerial cables, said device consisting essentially of alumina, having hardness, rigidity and strength characteristic of fused alumina and being substantially free from warpage, distortion and surface cracks, said device comprising a body including elongated, parallel, integral, thick parts and parts relatively thin as compared with the thick parts and at least two, spaced apart, boss parts projecting from the body and being relatively short as compared with said elongated parts, said boss parts having surfaces adapted to engage aerial cables substantially without deforming them and to space them at least about 3" apart, at least one of said boss parts being near one end of the body, the thick parts of the body being partly defined on one side thereof by narrow surface portions lying in one plane, the thin parts of the body having surface portions adjacent to and wider than said narrow surfaces and inclined at an angle to said plane, the boss parts having end surface portions lying in said plane, the said surface portions of the body and end surfaces of the boss parts being sufficient in width and length to support the device on a plane surface, during manufacture, against warpage and distortion and to permit it to shrink without cracking.

3,021,383
COIN OPERATED TELEVISION DISTRIBUTION SYSTEM

Garrard Mountjoy and John Drysdale Reid, Little Rock, Ark., assignors to AR & T Electronics, Inc., North Little Rock, Ark., a corporation of Arkansas

Filed Oct. 7, 1958, Ser. No. 765,901
13 Claims. (Cl. 178—5.1)



1. A centrally controlled closed-circuit television distribution system for distributing television programs on a program-by-program payment basis comprising means for distributing a television signal by a closed circuit to a plurality of subscriber stations, means for distributing a control signal of a frequency controllable within a predetermined range to said subscriber stations and a coin-operated control box connected to receive said control signal at each subscriber station for controlling the utilization of said television signal, said control box comprising a high-pass filter adapted to accept signals within the predetermined frequency range of said control signals and to reject signals of lower frequency, an inductive coin detection apparatus comprising a plurality of coin stations, means for guiding coins to said coin stations, said previous two means being formed of a non-magnetic material, a plurality of resonant circuits each including a capacitance and a coil having a core in proximity to said coin station, said circuits being connected to receive the output of said filter, a respective electric lamp connected to indicate the resonance condition of said each resonant circuit, an enabling circuit for providing a television signal from said control box which may be utilized by a conventional television receiver, and means for disabling said enabling circuit in response to the reception of a control signal having a frequency corresponding to the normal resonant frequency of one of said resonant circuits, whereby a control signal of a particular frequency may be transmitted to said subscriber stations to indicate the cost of a transmitted program and only those subscribers depositing the indicated number of coins will be able to view the television program being transmitted.

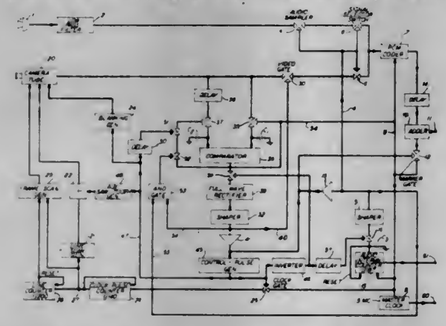
3,021,384
TIME DIVISION MULTIPLEXING OF TELEVISION AND TELEPHONE MESSAGES

Earl F. Brown, New Brunswick, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 28, 1959, Ser. No. 862,228
6 Claims. (Cl. 178—5.6)

1. In combination with a video signal generator having a variable speed scanner and an audio signal generator, apparatus for transmitting the signal outputs of said generators on a time-shared basis over a common medium which comprises means defining a regular sequence of discrete time slots, equal in number to the distinguishable picture elements of a scene to be transmitted, means

for deriving a periodic control wave of which the frequency is an integral submultiple of the time slot frequency, means for deriving a normally regular sequence of samples of said audio signal under control of said control wave, means for encoding each of said samples, the encoding of each such sample occupying an audio code interval, means under control of said time-slot defining means for causing said scanner to sweep along successive lines of said scene in discrete jumps, one for each time slot, sweeping uniform-brightness elements of each line at high speed and pausing at the time slot immediately following each brightness transition in excess of a preassigned threshold, means for generating, at each said pause, a video code signal representative of the brightness of the scene at each said transition, said generation occupying a video code interval, whereby



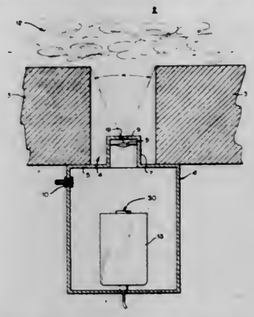
successive line scans occupy times that are dependent on the number of brightness transitions encountered and hence are normally unequal, means operative throughout the duration of each code interval of either kind for inhibiting the subsequent generation of a code signal of the other kind, means operative on the coincidence, within a single slot, of the inception of a video code interval with the inception of an audio code interval for inhibiting the generation of the video code signal, means for transmitting each generated code signal to a receiver station and, at said receiver station, a variable-speed image reproducer, means constraining each movement of said reproducer to be spatially congruent with a corresponding movement of said scanner, means including said reproducer for synthesizing an image of said scene from said video code signals, and means for reproducing a sound from said audio code signals.

3,021,385
FLAME OBSERVATION SYSTEM

Harry R. Summerhayes, Jr., and Ernest S. Sampson, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Mar. 30, 1960, Ser. No. 18,699
7 Claims. (Cl. 178—6)

1. In combination an enclosure which houses a reaction process, means for televising the reaction process for remote display of said process and means to convey optically an image of said reaction process to said television means, said enclosure being apertured, a lens and a protective housing enclosing said lens, said protective housing being of configuration and disposed to protrude into said enclosure aperture and extend partly within said enclosure, said televising means being connected in said housing opposite said enclosure protruding end, and in alignment with and behind said lens such that it can pick up images in the image plane of said lens, said housing having a relatively small diameter aperture through its front face portion protruding into said enclosure to expose the interior of said enclosure to the face of said lens, said lens being in alignment with and in proximity to the aperture in said housing, means to supply compressed air connected to said housing, said

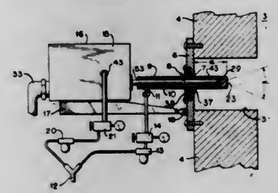


air flowing into said housing past said lens and being ejected through said aperture to cool said lens and act as a barrier to protect the lens face from particles from the reaction striking the lens.

3,021,386
BOILER PORT VIEWING SYSTEM

Richard J. Clark, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed Mar. 30, 1960, Ser. No. 18,581
16 Claims. (Cl. 178—6)



1. In combination with an apertured enclosure wherein a high temperature reaction is being performed, apparatus for remote viewing of said reaction comprising a shroud, said shroud having a front, a rear and longitudinal walls, an adjustable focal length lens having a front face in proximity to said front shroud wall and being enclosed along its length and at said front by said shroud and in spaced relationship to form a plenum chamber therebetween, means to supply air under pressure to said plenum chamber, means to cause turbulent flow of said air under pressure, said shroud being apertured at its front end wall with a small chamfered outwardly extending aperture, said front end of said lens and a portion of said shroud adjacent and including said shroud front end wall being inserted in said enclosure aperture, means to cause turbulent flow of said air under pressure, a television camera secured to said lens at the end opposite said enclosure entering end and being disposed to televise the scene imaged by said lens.

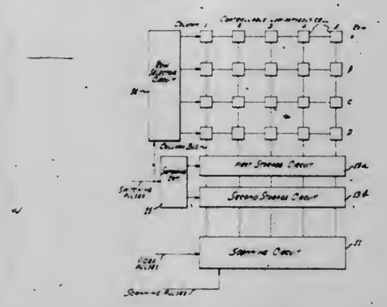
3,021,387
ELECTRICAL DISPLAY DEVICE

Jan Aleksander Rajchman, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Apr. 13, 1956, Ser. No. 578,065
19 Claims. (Cl. 178—7.3)

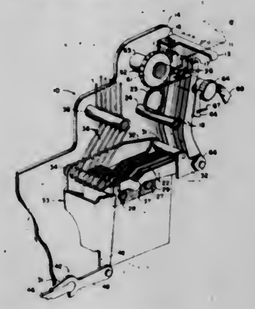
3. In combination, a circuit to provide a set of signals, each of said set of signals representative of information

relating to a corresponding elemental area of an image; a signal utilization means; means to successively store less than complete portions of said set of signals, said



storage means including means operable while each of said portions is being stored to apply a previously stored portion of said set of signals to said signal utilization means.

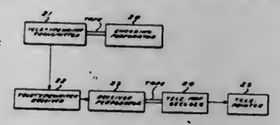
3,021,388
TAPE READER
William P. Byrnes, Glenview, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,633
11 Claims. (Cl. 178—17)



1. In a tape reader, a plurality of tape sensing means, a reader main bail for moving said tape sensing means to effectuate a tape reading operation, a constantly operating eccentric drive means, a toggle linkage interconnected between said bail and said drive means, an impinging means integrally associated with said toggle linkage, and an electromagnetically controlled abutment means cooperable with said impinging means under a predetermined condition of operation of said abutment means to govern the effectiveness of said toggle linkage to control said bail.

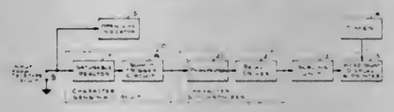
3,021,389
TELE-MAP SYSTEM
Henry Hoffmann, Jr., 2015 W. Madison St., Rome, N.Y., and James Barbieri, 132 Knollwood Circle, Waterbury, Conn.
Filed Dec. 19, 1958, Ser. No. 781,813
13 Claims. (Cl. 178—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A device for transmitting map coordinate information over teletypewriter communication facilities, comprising: means for converting the map coordinate information into teletypewriter code information representing the coordinate position of the information to be sent, means for transmitting said information to a receiver, a teleprinter, means for comparing the received information with standard teleprinter space information, and



means for controlling the spacing and printing operation of said teleprinter in response to the compared information and the received information to produce the original map coordinate information.

3,021,390
TELETYPE WORD COUNTER
William H. Fiden, Woodland Hills, and Robert E. Gottfried, Torrance, Calif., assignors to Thompson Ramo Wooldridge Inc., Los Angeles, Calif., a corporation of Ohio
Filed June 22, 1959, Ser. No. 821,990
8 Claims. (Cl. 178—69)

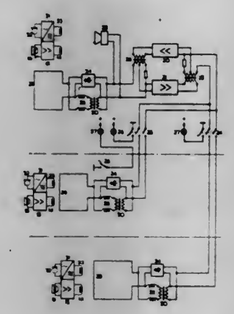


1. An electronic word counter for determining the number of words transmitted over a Teletype system, each word comprising a predetermined number of characters and each character being represented by a waveform comprising a predetermined combination of mark and space conditions, said counter comprising: a character sensing circuit that is sensitive to mark-to-space transitions in a character waveform to produce trigger pulses substantially coincident in time with said mark-to-space transitions; a character synchronizer unit coupled to said character sensing circuit and operable in response to said trigger pulses to produce a single output pulse whose duration is substantially equal to the duration of the waveform representing a character, whereby said single output pulse represents a character; and scaler means coupled to said character synchronizer, said scaler means being operable to deliver one output signal for each sequence of pulses produced by said character synchronizer equal in number to the predetermined number of characters in a word, whereby said one output signal represents a word.

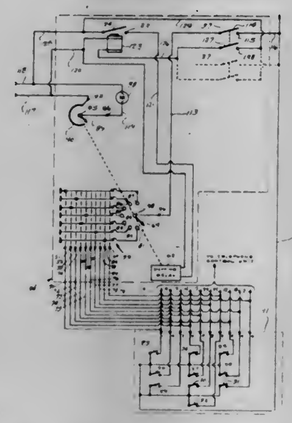
3,021,391
SHIP'S ORDER TELEGRAPH SYSTEM
Gottfried Wagensell, Hamburg-Klein-Borstel, and Kurt Dohmstreich, Hamburg, Germany, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 28, 1958, Ser. No. 724,735
Claims priority, application Germany Apr. 2, 1957
4 Claims. (Cl. 179—82)

1. A communication system comprising a main station, a sub-station, an audio frequency electrical signal transmission channel interconnecting said main station and said sub-station, means for applying first audio frequency intelligence signals to said transmission channel at said main station, means connected to said transmission channel at said sub-station for producing within said sub-station a magnetic induction field having audio frequency variations as determined by audio frequency signals in said transmission channel, a portable receiver in said sub-station responsive to said induction field for converting

said induction field variations into audible signals, a portable wireless transmitter in said sub-station comprising means for emitting a carrier wave and means for modulating said carrier wave with second audio frequency intelligence signals, carrier wave detector means responsive to said wireless transmitter and arranged within said sub-station and connected to said transmission channel, and means connected to said transmission channel at said main station for reproducing said second intelligence signals.

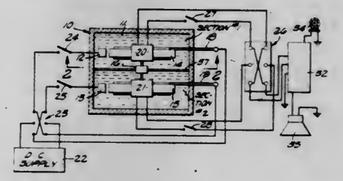


3,021,392
AUTOMATIC TELEPHONE DIALING SYSTEM
Kenneth W. Wrede, Warner Robins, Ga. (OMR 3041–B, Box 77, Sqd. 3401, Keesler AFB, Miss.), and Richard W. Elliott, Lot A–16 Walkers MHE, Warner Robins, Ga.
Filed Sept. 11, 1959, Ser. No. 839,491
9 Claims. (Cl. 179—90)



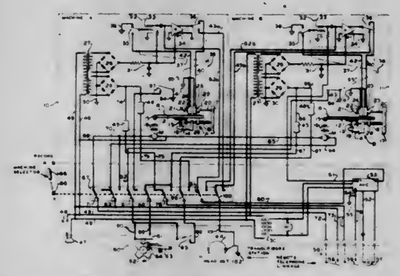
1. In an automatic dialing attachment of the character described, a switch assembly having a plurality of switch terminals, respective parallel conductor plates connected to said terminals, a plurality of spaced rows of contact elements extending perpendicularly through said conductor plates, each being in electrical contact with a selected conductor plate, a stepping relay assembly including a plurality of circularly arranged banks of contacts, means connecting the contacts of each bank to a row of said contact elements, and respective rotary switch arms sequentially engageable with the banks of contacts responsive to energization of the stepping relay, a line terminal, and means to selectively connect said switch arms to said line terminal and simultaneously energize said stepping relay.

3,021,393
MEANS AND TECHNIQUES FOR RECORDING AND REPRODUCING SOUND
Robert E. Youell, 4313 Camellia Ave., North Hollywood, Calif.
Filed Feb. 25, 1957, Ser. No. 641,941
11 Claims. (Cl. 179—100.1)



1. In a sound recording and reproducing system the combination comprising, an electrolytic cell having spaced electrodes, a source connected to said electrodes for electroplating material from one electrode onto the other electrode, an audio source of variable frequency and means connected to said audio source and modulating the flow of material from said one electrode to the other electrode in accordance with sound variations from said audio source to produce a recording of said sound on said second electrode.

3,021,394
RECORD-REPRODUCE SYSTEM
George W. Esser, West Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,389
5 Claims. (Cl. 179—100.1)

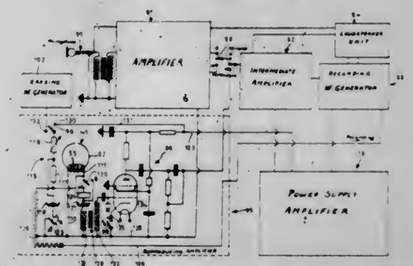


1. In a dictating and transcribing machine comprising means for supporting a record for revolving movement, a record-cooperable record-reproduce means, and drive means for revolving said record supporting means and concurrently imparting traveling movement between said recording supporting means and said record-reproduce means: the combination of means for selectively conditioning said machine either for use as a dictating instrument or for use as a transcribing instrument; a dictator's start-stop control; a transcriber's start-stop control; means for selectively connecting said dictator's and transcriber's start-stop controls to said machine; and means controlled jointly by said conditioning means and said connecting means for rendering said drive means inoperable by said transcriber's start-stop control when said transcriber's start-stop control is connected to said machine and the machine is conditioned for recording.

3,021,395
MAGNETIC RECORDING APPARATUS WITH CORRECTION DEVICE

Eugen Beyer, 107 Bismarckstrasse, Heilbronn (Neckar), Germany

Filed Dec. 23, 1958, Ser. No. 782,548
3 Claims. (Cl. 179—100.2)

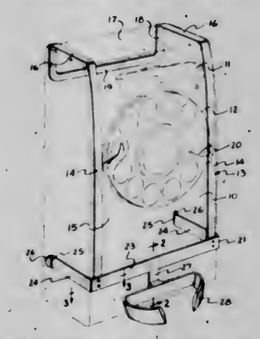


1. In an apparatus for magnetically recording signals on a record carrier and for electromagnetically reproducing the recorded signals therefrom, in combination, an electromagnetic recording and pick-up device including one single magnet and coil means responsive to electrical signals and capable both of causing magnetization of said record carrier in accordance with said signals, and of being influenced by such magnetization of said record carrier in accordance with said signals for reproducing the latter; reproducing amplifier means comprising input transformer means having a primary and a secondary winding, said primary winding being connected in circuit with said coil means; means including a source of high frequency for electromagnetically at least partly removing said magnetization of said record carrier by applying to said coil means a demagnetizing high frequency current from said source of a frequency substantially higher than audio frequency, substantially in that portion of said record carrier by which said electromagnetic recording and pick-up device is being influenced during reproduction of the particular signals; and low-pass filter means connected between said coil means and said primary winding for blocking the passage of said high frequency current from said coil means to said primary winding.

3,021,396
AUXILIARY HANGER FOR TELEPHONE HANDSETS

Herbert N. Nagel, 6225 N. Bell Ave., Chicago, Ill.

Filed Dec. 16, 1958, Ser. No. 780,693
5 Claims. (Cl. 179—146)

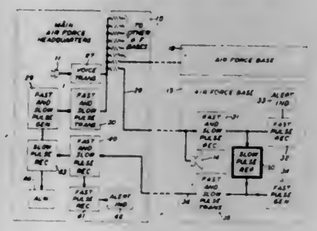


1. An auxiliary hanger for telephone handsets and the like comprising a yoke-shaped hanger having a pair of depending straps, said straps disposed along the opposite sides of the front face of a telephone box; a clamp connected to the lower ends of said straps and gripping the sides of said box, and an auxiliary hook connected to said clamp and adapted to support a telephone handset in cantilever fashion from the lower end portion of the box.

3,021,397
REPEATER FOR CHECKING CIRCUIT CONTINUITY OF A SIGNALING SYSTEM

Cecil H. Barnett, Prairie Village, Kans., Wayne V. K. Large, Locust Valley, N.Y., and Harold M. Pruden, Maplewood, N.J.; said Barnett assignor to American Telephone and Telegraph Company, said Large and said Pruden assignors to Bell Telephone Laboratories, Incorporated, both corporations of New York

Filed May 26, 1960, Ser. No. 31,852
15 Claims. (Cl. 179—175.3)

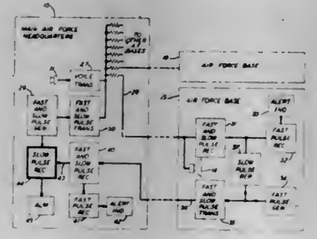


1. In a circuit for continuously checking the continuity of a signaling system including a generator of signaling pulses having positive polarity and predetermined time duration and magnitude, each pulse occurring once at the beginning of each of a plurality of repetitive signaling cycles of preselected time duration, a first line for signaling transmission in one direction, a first transmitter connecting said generator to one end of said first line for applying said signaling pulses thereto, a first receiver at the opposite end of said first line for receiving said signaling pulses transmitted thereon, a second line for signaling transmission in the opposite direction, a second transmitter to supply signaling pulses corresponding to the received signaling pulses to one end of said second line, and a second receiver at the opposite end of said second line to receive and observe thereat the received corresponding signaling pulses, means for repeating the received signal pulses in the output of said first receiver to the input of said second transmitter, said means comprising an amplifier including a control grid and an anode, a source of positive voltage to energize said anode, said control grid connected to the output of said first receiver and normally biased to cutoff conduction in said amplifier in the absence of said signaling pulses at said control grid, a capacitor having one plate connected to said anode and source and substantially charged to the positive voltage of said source during conduction cutoff in said amplifier for supplying a positive voltage at its other plate, and means having an input and an output, said last-mentioned input connected to said other capacitor plate and responsive to the positive voltage charge thereon for producing zero voltage at said last-mentioned output, said last-mentioned output connected to the input of said second transmitter, said signal pulses received at said opposite end of said first line and applied to said control grid to overcome the normal bias thereon for establishing conduction in said amplifier during the time duration of the respective signal pulses, said capacitor discharging through said conducting amplifier to provide effectively a negative voltage at its other plate, said means responsive to the effective negative voltage at said other capacitor plate for producing a voltage pulse at said last-mentioned output, each of said last-mentioned output pulses corresponding in polarity, predetermined time duration and magnitude, and preselected repetition rate with said last-mentioned received signal pulses, whereby said second transmitter is activated to supply the corresponding signal pulses applied to said one end of said second line.

3,021,398
CONTINUOUS CHECKING OF CIRCUIT CONTINUITY OF A SIGNALING SYSTEM

Cecil H. Barnett, Prairie Village, Kans., Wayne V. K. Large, Locust Valley, N.Y., and Harold M. Pruden, Maplewood, N.J.; said Barnett assignor to American Telephone and Telegraph Company, New York, N. Y., and said Large and said Pruden assignors to Bell Telephone Laboratories, Incorporated, New York, N. Y., both corporations of New York

Filed May 26, 1960, Ser. No. 31,924
19 Claims. (Cl. 179—175.3)

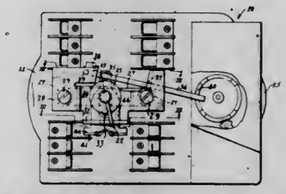


1. In a circuit for continuously checking the continuity of a signaling system by registering repetitive signal voltage pulses, each having a predetermined time duration and occurring once at the beginning of each of a plurality of repetitive signaling cycles of preselected time duration but blocking the registration of false pulses received subsequent to the signal pulses in the respective signaling cycles, said signal and false pulses being transmitted on said signaling system, said circuit receiving said signal pulses after their transmission on said signaling system and comprising an input for said signal and false pulses, an amplifier device including a control grid and an anode and normally activated to conduction, a first capacitor charged by each received signal pulse of the respective signaling cycles, said first capacitor discharging through said conducting device upon the termination of each received signal pulse to bias said grid for driving said device into nonconduction for a time interval substantially equal to the time duration of each received signal pulse whereby said anode attains substantially maximum voltage, resistive means connected between ground and a point common to said first capacitor and said grid for discharging said last-mentioned capacitor thereby restoring conduction in said device, a load, a second capacitor having one terminal connected to ground and an opposite terminal connected to said anode and load whereby said last-mentioned capacitor is charged to the voltage of said anode during the nonconduction of said device for energizing said load to register each received signal pulse, and means connected between said input and an intermediate point on said resistive means to monitor said input for false pulses received thereat after the registration of the received signal pulses in the respective signaling cycles, said monitoring means being deactivated when none of said last-mentioned false pulses are received at said input after the registration of the received signal pulses in the respective signaling cycles, said first capacitor being charged by a false pulse received at said input after the registration of the received signal pulse in a given signaling cycle whereby said last-mentioned capacitor charge tends to bias said grid for driving said device into nonconduction, said monitoring means being activated by the last-mentioned received false pulse to cause current flow in the portion of said resistive means between said intermediate point and ground to develop a voltage across said resistive portion for overriding the last-mentioned bias on said grid to maintain said device in conduction thereby blocking the registration of the false pulse in said given signaling cycle, said registration of successively received signal pulses within at least a further predetermined time interval, indicating the continuity of said signaling system.

3,021,399
TIMER CONTROL STRUCTURE

Joe Bowman, Greentown, Ind., assignor to Kingston Products Corporation, Kokomo, Ind., a corporation of Indiana

Filed Aug. 31, 1960, Ser. No. 53,152
14 Claims. (Cl. 200—38)

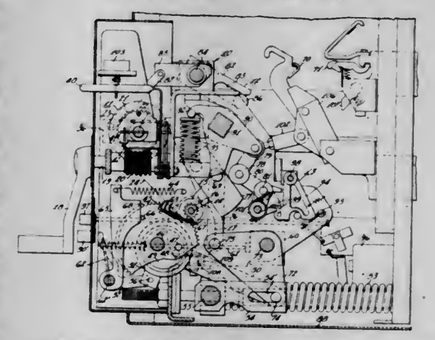


1. A shaft-control structure comprising in combination: a housing having a shaft aperture extending through a side thereof, said housing having a pair of raised outwardly directed support surfaces adjacent to said aperture and disposed on opposite sides thereof; a shaft reciprocably disposed in said aperture and having at least one axially directed cam shoulder defining a circumferentially directed recess; a spring carried by said housing and having at least one resilient finger tangentially receivable in said recess, said finger being yieldable radially of said shaft in response to axial movement thereof; and a retaining member secured against said support surfaces, said member having a generally U-shaped abutment portion extending between said support surfaces and engageable at the closed end of the U-shape with said spring in a direction parallel to the axis of said shaft for retaining said spring against movement parallel to the shaft axis.

3,021,400
MANUALLY CONTROLLED CONTACT ACTUATING MECHANISM

Edwin C. Goodwin, Jr., Canton, Mass., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Mar. 11, 1960, Ser. No. 14,408
13 Claims. (Cl. 200—50)



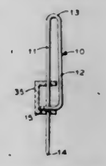
1. A circuit breaker structure comprising in combination, a pair of cooperating relatively movable contacts, a

closing device comprising a load means for closing said contacts upon bias thereof, an opening device comprising a load means for opening said contacts upon bias thereof, said closing means being connected to said opening means for biasing said opening means upon closure of said contacts, means for rendering said closing means ineffective when said closing means is in its biased position, and manual means rendered effective upon ineffectiveness of said closing means for actuating said contacts in contact opening and closing direction.

3,021,401
THREAD OR YARN BREAKAGE DETECTOR

Ephraim S. Young, 333 Everit Ave., Hewlett Harbor, N.Y.

Filed Sept. 27, 1960, Ser. No. 58,692
4 Claims. (Cl. 200—61.18)

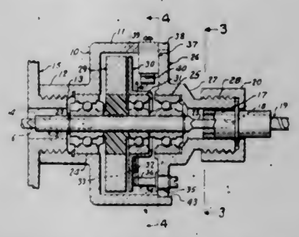


1. For use in apparatus including a metal frame supporting thread or yarn guiding and tensioning means, a thread or yarn breakage detector comprising, in combination, a first conductive metal member mounted on said frame and formed with vertically extending aperture means; a relatively elongated conductive metal circuit closer slidably mounted for free vertical movement in said aperture means, said circuit closer having a relatively large opening in its upper portion to receive a depending loop of thread; the thread, when under tension, restraining said circuit closer against downward movement through said aperture means under the influence of gravity; and a second conductive metal member mounted on said frame below said first member and having a surface positioned for engagement by the lower end of said circuit closer, while the latter is still engaged in said aperture means, only when said thread breaks; said members being electrically isolated from each other, and said members and said circuit closer being connected in series with each other and with a source of potential in a normally open control circuit; said surface of said second member sloping downwardly and outwardly.

3,021,402
SPEED RESPONSIVE SWITCH

Robert W. La Warre, 1870 Rose Ave., Lima, Ohio, and Myron D. Markley, 126 Wenthrop Terrace, Meriden, Conn.

Filed Nov. 30, 1959, Ser. No. 856,138
3 Claims. (Cl. 200—61.46)

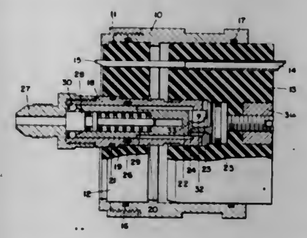


1. A speed responsive switch adapted to be assembled to a speedometer drive shaft normally connected to a speedometer cable, said switch comprising a shaft having one end connected to the speedometer cable and the other end connected to the speedometer drive shaft, said shaft adapted to be rotated by the speedometer cable, a radially extending element mounted on said shaft for rotation therewith, a second radially extending element journaled for free rotation on said shaft, said elements comprising magnetic material and at least one of said elements being magnetized, the second of said elements being responsive to magnetic torque generated by rotation of said first element, a resilient member connected to said second element for tending to restrain said second element against rotation, a switch mounted near said second element, and cooperating means on said switch and said second element for actuating said switch when said second element is rotated a distance corresponding to a certain speed.

3,021,403
QUICK DISCONNECT DEVICE

Jack Goldberg and Herbert L. Rosenberg, Levittown, and Robert F. Le Vino, Huntingdon Valley, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed Mar. 11, 1960, Ser. No. 14,485
2 Claims. (Cl. 200—82)
(Granted under Title 35, U.S. Code (1952), sec. 266)



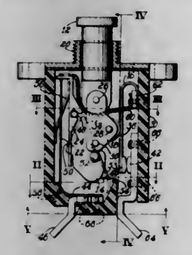
1. An electrical switch including a casing closed at one of its ends by a fixed insulation member having a first electrical conductor extending therethrough, an insulation member movable in said casing to form an enclosure between said insulation members and having a second electrical conductor extending therethrough, means fixed to said movable insulation member and having a flange extending transversely of said casing, a housing fixed to and extending through said fixed insulation member, said housing having at its inner end an opening receiving said flange, a piston movable in said housing, and a latch pivoted to the inner end of said piston and cooperating with said opening and said flange to lock said piston to said housing, said piston being movable to unlock said piston from said housing and to move said movable insulation member away from said fixed insulation member.

3,021,404
HEAT RESPONSIVE WIRE CONTROLLED OVERLOAD CIRCUIT BREAKER

Morris B. Wood, Newburyport, Mass., assignor to Wood Electric Corporation, Lynn, Mass., a corporation of Massachusetts

Filed Oct. 9, 1959, Ser. No. 845,387
9 Claims. (Cl. 200—116)

1. A trip-free overload circuit breaker having a frame, a fixed contact in the frame, a movable contact, a resilient support to which the movable contact is secured and mounted for movement toward and from the fixed contact, a lockable releasable cam member, a wedging member acting between the releasable cam member and the resilient support for engaging the movable contact with the fixed contact, and a detent engaged with the releasable member to lock said releasable cam member against movement under the influence of said resilient support when actuated by the wedging member, in combination with a heat responsive wire stretched between

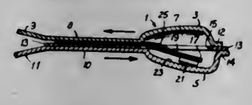


the detent and the frame for restraining the detent in locking relation with the releasable member when the heat responsive wire is cold and for freeing the detent from the releasable member when the wire is heated.

3,021,405
THERMOSTATIC SWITCH

Henry David Epstein, Cambridge, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed Feb. 26, 1959, Ser. No. 795,792
14 Claims. (Cl. 200—138)



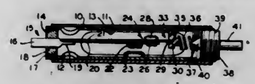
1. A thermostatic switch comprising two conductive members shaped to form a hollow capsule when assembled, and providing line connections, an insulating member sandwiched between said members and attached thereto by means of a set synthetic resin to form a seal, said insulating member having an opening therethrough, and a snap-acting thermostatic member attached to one of said conductive members and supporting a contact engageable and disengageable interiorly with the other one of said conductive members, said thermostatic member extending operatively through said opening, each of said conductive members having a marginal flat-flange means for engagement with said insulating member around said opening, whereby one conductive member shall have been slidable relative to the other on opposite sides of the insulating member prior to setting of said resin to adjust the relationship between said contact and said other conductive member, said other conductive member being provided with a portion extending toward and adjacent the contact on the thermostatic member, whereby through sliding prior to resin setting one of various possible contact pressures inheres at a given temperature after the resin has set.

3,021,406
THERMOSTATIC SWITCH

Robert D. Graf, Flora, and William M. Parkins and Robert E. Prouty, Logansport, Ind., assignors to Essex Wire Corporation

Filed Nov. 16, 1959, Ser. No. 853,101
5 Claims. (Cl. 200—138)

1. A miniature thermostatic switch comprising a tubular elongated frame of conductive metal; a fixed support mounted within said frame and insulated therefrom; a spring arm disposed within said frame; a bimetallic element disposed within said frame; said spring arm and bimetallic element being secured to said support and extending therefrom in the same direction toward the second end of said frame; a fixed contact conductively secured to said frame; a movable contact carried on said spring arm for cooperation with said fixed contact; an adjusting screw threaded in said second end of the frame; a bearing member of insulation material pivotally seated upon the free end of said bimetallic element; overcenter

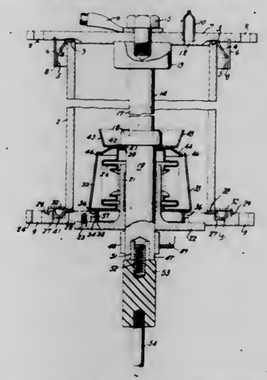


spring means comprising a coil spring confined under compression between said screw and said bearing member; lost motion means connecting said spring arm and said bimetallic element to impart a snap action to said spring arm when said bimetallic element snaps over center; and said bearing member having a portion engageable with said frame to limit overcenter movement of said bimetallic element in one direction.

3,021,407
VACUUMIZED ELECTRIC SWITCH

Jo Emmett Jennings, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware

Filed Sept. 16, 1958, Ser. No. 761,315
8 Claims. (Cl. 200—144)



1. In a vacuumized electrical implement, a dielectric cylindrical shell, an end plate having a central opening, means integrally uniting the end plate to one end of the shell, a bearing extending through said central opening of the plate into the shell and having a flange fixed to the end plate and extending across the central opening, a stem journaled in the bearing, and a bellows at one of its ends integrally connected to the stem and at its other end integrally connected to and functionally severable from the end plate, said central opening of the end plate being larger than the largest diameter of the bellows to permit passage of the bellows and attached stem therethrough in assembly and disassembly.

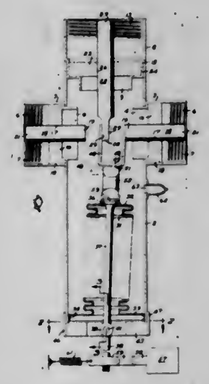
3,021,408
COAXIAL SWITCH

Jo Emmett Jennings, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware

Filed May 18, 1959, Ser. No. 813,935
11 Claims. (Cl. 200—144)

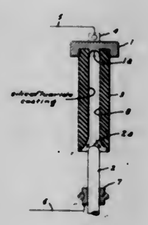
1. A miniature vacuum coaxial switch comprising a vacuumized envelope including the outer metallic con-

ductor of the switch, a plurality of inner conductors rigidly supported on the envelope and extending thereinto to constitute spaced contact points within the envelope and terminal leads outside the envelope, a mobile contact within the envelope movable from outside thereof to engage or disengage selected contact points, said mobile contact having portions thereof so positioned with respect to said contact points on the conductors that



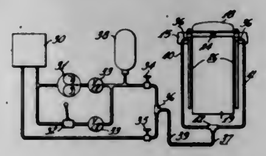
movement of the mobile contact to engage selected contact points shieldingly interposes one of said portions of the mobile contact between the engaged contact points and a disengaged contact point whereby power leakage to the disengaged contact point is prevented, and actuator means mounted on the envelope and operatively connected to the mobile contact to effect movement thereof to make or break a circuit through selected inner conductors.

3,021,409
CIRCUIT INTERRUPTER
James D. Cobine, Rexford, and Newell C. Cook, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 24, 1959, Ser. No. 842,011
10 Claims. (Cl. 200—149)



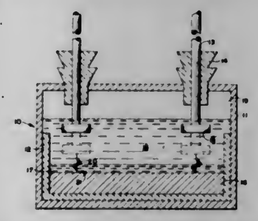
1. A circuit interrupter comprising in combination: means defining a substantially enclosed chamber; a pair of spaced electrodes within the chamber defining an arc-space to be spanned by an arc prior to interruption; and means located within the zone of thermal influence of said arc and containing a metal silico-fluoride which upon heating by said arc generates silicon tetrafluoride gas that momentarily occupies said arc-space to provide a medium of rapid dielectric strength recovery upon arc extinction, the gas further recombining with residual material within the chamber over a period of time to regenerate metal silico-fluoride and to condition the interrupter for future interruptions.

3,021,410
DEVICE FOR LOWERING AND RAISING A MOVABLE STRUCTURE FROM OR TO ITS SUPPORT
Elijah R. Perry, Dallas, Tex., and Henry L. Peek, Wellesley, Mass., assignors to Allis Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 30, 1957, Ser. No. 656,149
9 Claims. (Cl. 200—150)



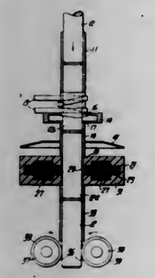
1. A device for raising and lowering a tank of a circuit breaker supported above ground or floor level by a frame structure comprising in combination a pair of single directional acting fluid motors arranged for parallel operation, said motors each comprising relatively movable cylinder and piston elements, said cylinder element of each of said motors being provided with a port, means for directly connecting one of said elements of each of said motors to said frame structure, means for supporting the tank of the circuit breaker by another of said elements of each of said motors, means comprising a source of fluid under pressure connected to said port of each of said cylinder elements of said motors, a reservoir connected to said port of each of said cylinder elements of said motors, and valve means for draining fluid under pressure from said cylinder elements to said reservoir for causing relative movement of said elements to lower the tank from the circuit breaker and for sequentially causing fluid under pressure to flow from said source to said cylinder elements to cause relative movement of said elements to raise the tank to the circuit breaker structure.

3,021,411
HIGH VOLTAGE ARC-EXTINGUISHING SWITCH
John A. Cooley, Chevy Chase, Md.
(6505 Wilmett Road, Bethesda 14, Md.)
Filed July 7, 1960, Ser. No. 41,452
4 Claims. (Cl. 200—150)
(Granted under Title 35, U.S. Code (1952), sec. 266)



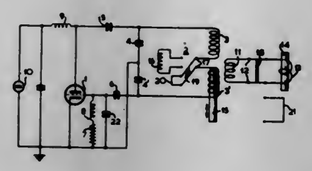
1. An electrical switch comprising a conductive contact, a thin layer of expansible liquid material supported by said contact, a layer of non-expansible liquid insulating material supported by said expansible liquid material, at least one movable contact adapted to be raised and lowered through said insulating material and said expansible material to make and break contact with said conductive contact.

3,021,412
HEAT TREATING METHOD AND APPARATUS
Carl G. Whitman, Mukwonago, and Alfred T. Swain, Waterford, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 14, 1958, Ser. No. 735,252
9 Claims. (Cl. 219—10.41)



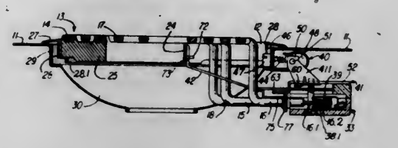
5. In an apparatus for heat treating a solid metallic article: a heating unit; means for moving said article through said unit; an array of coils positioned around the path of said articles for producing a magnetic field that rotates around the path of the heat treated article whereby said article continuously rotates while passing through said unit.

3,021,413
HIGH-FREQUENCY FURNACE FOR INDUCTIVE HEATING
Lourens Blok, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 18, 1959, Ser. No. 860,424
Claims priority, application Netherlands Dec. 22, 1958
9 Claims. (Cl. 219—10.75)



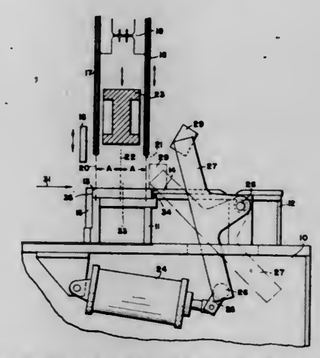
1. A high frequency furnace for induction heating of workpieces comprising an electron discharge device having an output electrode, oscillatory circuit means coupled to said output electrode, said oscillatory circuit means comprising a circuit coil means and capacitance means, coupling coil means in inductive coupling relationship with said circuit coil means, means to vary said inductive coupling relationship, first load circuit means having a low resistance load impedance, said first load circuit means comprising a first heating coil, second load circuit means having a high-resistance load impedance, said second load circuit means having a second heating coil, and an interconnection device having first switching means to couple said first heating coil to said coupling coil means to provide said induction heating for work-pieces associated with said first load circuit, and second switching means to short circuit said coupling coil means and couple said second heating coil to said circuit coil means for said inductive heating of workpieces associated with said second load circuit.

3,021,414
PLUG-IN SURFACE UNIT
Robert E. Sand, Itasca, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 31, 1959, Ser. No. 863,271
6 Claims. (Cl. 219—37)



1. In an electric range having a cooking top formed with a cutout for receiving a cooking unit and in which said cooking unit comprises an electrical heating element nested in said cooking top substantially parallel thereto in an operative position, a plurality of rigid terminal members extending from said heating element in stepped fashion, a terminal block including means for completing an electrical circuit to said terminal members, hinge means for controlling the movement of said terminal blocks pivotally between a first position and a second position oblique to said cooking top, means for resiliently latching said hinge means to thereby hold said terminal block in either said first or said second position, and a bayonet arm secured to and extending from said heating element collaterally with said terminal members, said terminal block including a channel for slidably engaging said bayonet arm to the hinge means to thereby render said heating element jointly pivotal with said terminal block, said bayonet arm slidably removable from said channel to thereby detach said heating element from said hinge means.

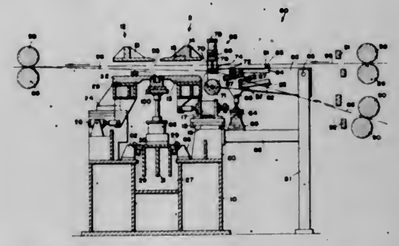
3,021,415
REVERSIBLE PLATEN MOUNTING FOR TRAVEL TYPE STRIP WELDERS
Foster R. Woodward, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed Apr. 9, 1959, Ser. No. 805,301
1 Claim. (Cl. 219—82)



In apparatus for joining strip having a slab-like current-conductive platen extending transversely of the path of strip travel and a pair of spaced electrode wheels adapted to be moved transversely across the face of the platen the improvement comprising a flat support for said platen, a flat plate extending outwardly from said support in the direction of the path of strip travel and having a flat top surface to support said strip and an edge surface to engage a side edge of said platen, said top surface lying in

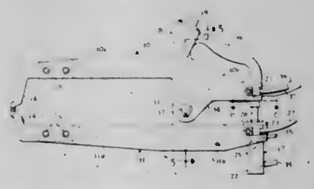
the same plane as the top surface of said platen, and means engaging the opposite side edge of said platen and having an upper surface lying in said plane, the transversely extending center line of said platen being offset with respect to the median plane of said wheels, the arrangement being such that said support and said edge surface of said plate as well as said means form an upwardly open channel to receive and retain said platen against edgewise movement and wherein upon said platen being turned end-for-end the lines of contact or reaction between said wheels and platen will be shifted edgewise of said platen.

3,021,416
APPARATUS FOR WELDING STRIP
John E. Mallett, Chagrin Falls, and Joseph H. Cooper, Warren, Ohio, assignors to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed Nov. 6, 1959, Ser. No. 851,287
16 Claims. (Cl. 219—82)



1. Strip welding apparatus for welding the adjacent ends of metal strips which comprises a pair of spaced clamping assemblies mounted in the normal path of strip travel, transversely movable welding means, means to move said welding means transversely of said normal path of strip travel between said clamping assemblies to weld said adjacent ends of metal strips, a deflector clamping assembly, said deflector clamping assembly being positioned adjacent one of said clamping assemblies in said normal path of strip travel, said deflector clamping assembly comprising means to clamp a first metal strip passing along a first pass line, means to clamp a second metal strip passing along a second pass line, and said first pass line being vertically disposed with respect to said second pass line.

3,021,417
PORTABLE WELDING TOOL OR GUN
Charles C. Halberstadt, Philadelphia, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 16, 1959, Ser. No. 820,653
8 Claims. (Cl. 219—89)



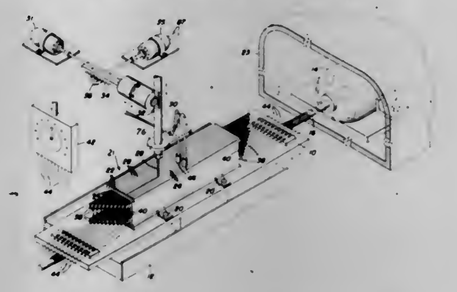
1. A scissors-type portable welding tool comprising in combination, a first electrode lever having an outer metal shell and an interior rigidifying non-metallic filler, a second electrode lever pivotally connected intermediate its length to the first said electrode lever and having an outer metal shell and an interior rigidifying non-metallic filler, the non-metallic fillers extending from near the operating electrode end of the levers back past the hinge point between the levers to form insulated handle means, an inwardly extending non-metallic projection intermediate the length of one of said levers, said projection being an extension of said filler, inwardly extending metallic projections intermediate the length of the other lever and overlying the sides of the non-metallic projection at its end, and a hinge pin passing through said projections to hinge the levers together.

3,021,418
STUD-WELDING FERRULE
Willem Pieter van den Blink, Karel Christiaan ter Haar, and Eelke Herman Ettema, all of Utrecht, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 6, 1958, Ser. No. 740,438
Claims priority, application Netherlands June 12, 1957
4 Claims. (Cl. 219—99)



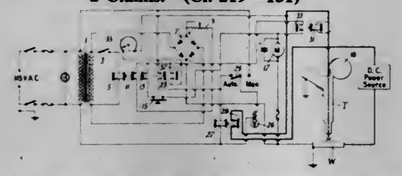
1. A ferrule for use in stud welding comprising a body of slag-forming material provided with a bore having an intermediate cross-section less than, and end cross-sections greater than, the cross-section of the stud to be welded; and means for holding the ferrule to the stud with a pinching fit including the inner surface of the body between the intermediate section and one end section.

3,021,419
WELDING APPARATUS
Salvatore A. Rascati, Wallingford, Conn., and Victor S. Peterson, Springfield, Mass., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Jan. 22, 1959, Ser. No. 788,451
9 Claims. (Cl. 219—124)



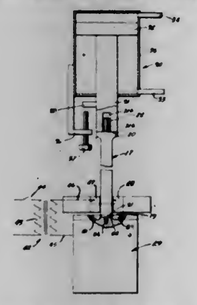
1. In a welding organization for welding a longitudinal seam of a pair of members of nonmagnetic metal including means for supporting said members, a conductor disposed adjacent said seam at the side thereof opposite that from which the welding is to take place and having an alternating current passed therethrough, said conductor extending longitudinally of the seam and being insulated from the said members and supported by said members so it remains in a predetermined relation with said seam, a welding member disposed adjacent the other side of said seam, means for moving said welding member and said pair of members relative to each other in a direction such that the welding member moves longitudinally of said seam, additional means for moving these members relative to each other laterally of said seam, a pair of inductors adjacent the seam at said other side and in front of the welding member with respect to the relative movement of said members and said seam, said inductors being supported so they move with said welding member and an electrical circuit of which said inductors form a part and which is in a predetermined state when the inductors are disposed relative to the conductor corresponding to the welding member being accurately aligned with the seam with this predetermined state being altered when the inductors are not so disposed, and means for utilizing this alteration of said predetermined state to bring the welding member back into alignment with the seam and return said circuit to said predetermined state.

3,021,420
WELDING CONTROL CIRCUIT
Edward J. Ruland, Jr., West Caldwell, John P. C. Allen and Roscoe R. Lobosco, Fanwood, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Sept. 15, 1959, Ser. No. 840,093
2 Claims. (Cl. 219—131)



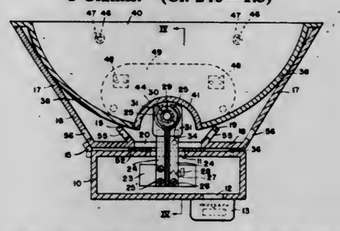
1. An improved welding control circuit for use with a gas shielded consumable metal arc welding apparatus, including a welding current generator and a torch, said circuit comprising an A.C. power inlet adapted to be connected to an A.C. power source, a single transformer having its primary winding connected to said power inlet, means manually energized from the secondary winding of said transformer causing an electrode to be advanced a desired distance prior to initiation of the arc, means also energized from the secondary winding of said transformer for initiating the flow of welding current from the welding current generator, and means energized by said generator for automatically initiating and controlling the electrode feed rate during welding.

3,021,421
METAL GATHERING PROCESS AND ARTICLES PRODUCED THEREBY
Heber Linden Orgill, La Mirada, Calif., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Oct. 15, 1958, Ser. No. 767,367
7 Claims. (Cl. 219—150)



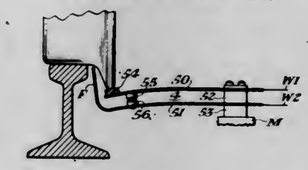
5. The method of forming a planar end surface on a first end of a spacer bar or the like which comprises first applying thermal energy only to a first end of a bar to be shaped, next engaging the other end of the bar and forcing the first heated end of the bar axially against a raised portion on a planar surface, forcing the heated material of said first end of the bar axially inwardly in the center of said first end with the bar spreading and engaging the planar surface to form a planar end for determining the finished end length of the bar whereby the outer cooler portions of the planar surface will determine said length, and limiting the forcing of said other end of the bar terminating the force when said other end is a predetermined distance from said planar surface.

3,021,422
PHOTOGRAPHIC LIGHT UNIT
Baxter B. Ogier and Louis A. Umbach, Youngstown, Ohio, assignors to The Photogenic Machine Company, Youngstown, Ohio, a corporation of Ohio
Filed Feb. 17, 1960, Ser. No. 9,248
8 Claims. (Cl. 240—1.3)



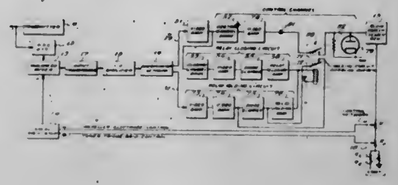
1. A light unit comprising a rear housing, said rear housing having a front wall, a pair of vertically spaced openings in said front wall, a clamping and contact assembly extending forwardly through each of said openings, an elongated illuminating element mounted by said clamping and contact assemblies forwardly of said front wall and generally parallel therewith, a front housing having a rear wall, an elongated vertical slot in said rear wall, a generally semi-cylindrical light-transmitting protective member, means mounting said protective member in said front housing forwardly of said rear wall, and means releasably securing said front housing to said rear housing with said rear wall adjacent said front wall whereby said illuminating element is nestingly received within said protective member.

3,021,423
BROKEN RAILWAY WHEEL FLANGE DETECTORS
Chalmers W. Gilbert, Penn Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 13, 1957, Ser. No. 658,694
6 Claims. (Cl. 246—169)



4. Apparatus for the detection of broken flanges of wheels having rims traversing a rail, said apparatus comprising a first means for detecting a flange of a wheel, a second means for detecting the rim of said wheel simultaneously, a third means controlled by said flange detecting means for controlling said rim detecting means, and indication circuit means controlled by said third means for controlling said indication circuit means when a wheel passes having a broken flange.

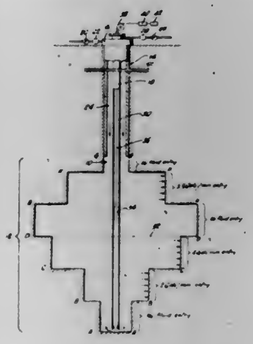
3,021,424
AUTOMATIC FREQUENCY CONTROL SYSTEM
William E. Morgan, Jr., Levittown, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Aug. 30, 1952, Ser. No. 307,197
11 Claims. (Cl. 250—20)



1. A radar receiver frequency control system for maintaining a predetermined difference between the frequencies of local oscillator and carrier wave radio signals, comprising a variable frequency local oscillator having input frequency control means responsive to changes in voltage for changing the frequency of said oscillator, a frequency discriminator having an output circuit and having a response with a null at a predetermined cross over frequency and an output of first polarity at frequencies on one side of said cross over frequency and an output of second and opposite polarity on the other side thereof, means including a mixer coupled between said local oscillator and discriminator for supplying to said discriminator superheterodyne converted versions of carrier wave radio signals supplied to said mixer, sweep voltage generator means coupled to said input frequency control means of said local oscillator for providing a scanning control voltage for recurrently sweeping the frequency of said local oscillator in one direction through a wide frequency sweep range, from one frequency limit to another so that said superheterodyne converted versions of carrier wave radio signals supplied to said mixer pass through said first and second discriminator frequency ranges and then abruptly returning the frequency of said local oscillator back to said one frequency limit, a control channel including a unidirectional current device and a generator arresting and regulating means between said discriminator and said sweep voltage generator, said control channel being responsive to an output voltage of said second polarity only from said discriminator for arresting the scanning voltage of said generator means and regulating the local oscillator frequency therethrough, said arresting and regulating means including a switch having a first position conditioning said arresting and regulating means for operation during a discriminator response and a second position for conditioning said arresting and regulating means for inoperation, means for maintaining said switch in its second position in the absence of a discriminator response, first means including a unidirectional current device responsive only to output voltage from said discriminator of said first polarity for initially actuating said switch into its first position, and second means rendered operative in response to operation of said first means for retaining said switch in its first position coextensively with a substantially uninterrupted output of said frequency discriminator thereafter.

3,021,425
METHOD OF MEASURING BOREHOLE CAPACITY
Dee B. Waldroop, Salem, Ill., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 6, 1957, Ser. No. 701,139
6 Claims. (Cl. 250—43.5)

3. An improved method of determining the average diameter of a well bore traversing a given formation which comprises introducing a first fluid into said bore below said formation, introducing a second fluid into said bore above said formation to establish an interface between said fluids at one vertical limit of said formation, continuously adding a small amount of radioactive material to one of said fluids, adjusting the rates of flow of each of the fluids so as to move the interface to the



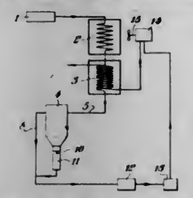
other vertical limit of the formation while maintaining a constant total rate of flow of the two fluids, the amount of change of the flow rate being equal to the flow rate into the formation, again adjusting the rate of flow of said fluids to a predetermined value sufficient to move said interface between said vertical limits of said formation and noting the time required for said interface to travel between said limits.

3,021,426
SUBSURFACE SURVEYING
George M. Wood, Houston, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 758,989
14 Claims. (Cl. 250—43.5)



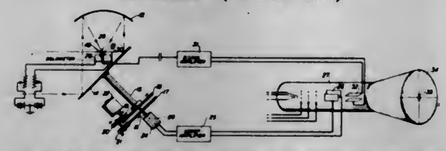
1. A method of surveying a borehole which comprises incorporating into a stream of fluid flowing through the borehole a first radioactive substance having a given relatively low gamma ray energy level, determining the radioactivity in the borehole, then incorporating into a stream of fluid flowing through the borehole prior to any substantial decay of the energy level of said first radioactive substance a second radioactive substance having a gamma ray energy level substantially greater than that of said first radioactive substance at the time said second radioactive substance is introduced, and again determining the radioactivity of the borehole.

3,021,427
LIGHT WATER ANALYSER
John G. Bayly and William H. Stevens, Deep River, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a corporation
Filed Jan. 27, 1959, Ser. No. 789,348
9 Claims. (Cl. 250—43.5)



1. A monitoring system for providing an indication of the heavy water content of air comprising means for condensing water vapour from the air, means for collecting the condensate, and means for estimating the deuterium content of the condensate by measuring the degree of absorption of infra-red radiation by said condensate in the neighbourhood of an absorption wavelength of the H—D—O molecule.

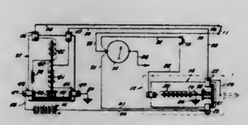
3,021,428
RADIANT-ENERGY TRANSLATION SYSTEM
Charles F. Mattke, Jackson Heights, N.Y., and Frederick W. Reynolds, Ridgewood, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 23, 1947, Ser. No. 770,248
10 Claims. (Cl. 250—83.3)



2. In a thermal-energy detection system, for elliptically scanning an area to detect the position of a temperature anomaly situated therein the combination of, a parabolic reflector, means for causing a thermal image of said anomaly to impinge upon said parabolic reflector, said means comprising a scanning reflector mounted upon a rotatable tubular shaft and forming an acute angle in relationship to the longitudinal axis of said shaft, a flexible shaft, said flexible shaft secured to said tubular shaft and imparting rotary motion thereto, rotary and pivotal bearings for said tubular shaft at an end adjacent to said scanning reflector, an eccentrically driven rotary bearing for the other end of said tubular shaft, means for simultaneously rotating said rotatable tubular shaft and said eccentrically driven bearing in opposite directions at the same rate of speed, a bridge circuit network, and a plurality of thermal-sensitive elements forming arms of said bridge network, said elements situated in the focal plane region of said parabolic reflector so that said parabolic reflector may direct said thermal image upon members of said element plurality in succession.

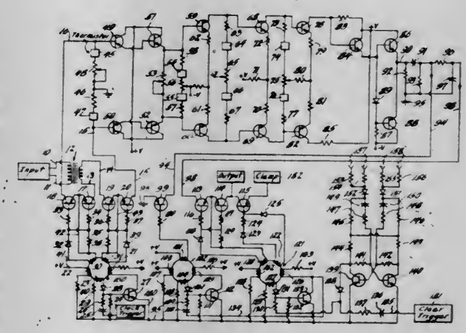
3,021,429
SAFEGUARD DEVICE FOR AUTOMOTIVE ELECTRICAL SYSTEMS
Noel L. Starck, 6526 West Blvd., Los Angeles, Calif.
Substituted for abandoned application Ser. No. 396,239, Dec. 4, 1953. This application Dec. 28, 1960, Ser. No. 85,441
7 Claims. (Cl. 307—10)

7. A unit for installation into the electrical system of an internal combustion engine and the like, which system includes a source of electrical energy, an ignition switch, a starter switch, and a starter relay including an energizing coil and a pair of normally open contacts; said unit including in combination: a second relay having a pair of normally open contacts; means for connecting said normally open contacts of said second relay in series with the starter switch, the energizing coil of the starter relay and the source of electrical energy; a coil for said second



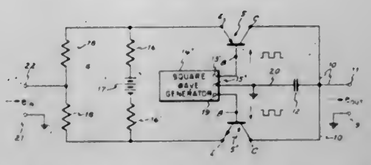
relay; means for connecting said main coil in series with the source of electrical energy and the ignition switch to cause the normally open contacts of said second relay to be closed in response to the closure of the ignition switch: a booster coil for said second relay; and means for energizing said booster coil in response to the closure of the starter relay contacts to increase the contact pressure of said normally open contacts of said second relay when the starter relay is energized.

3,021,430
SWITCHING SYSTEM COMPRISING SEQUENTIALLY OPERATED GATING MEANS
Thomas J. Lynch, Philadelphia, Pa., assignor to Vector Manufacturing Company, Incorporated, a corporation of Pennsylvania
Filed Aug. 22, 1960, Ser. No. 50,900
14 Claims. (Cl. 307—88.5)



1. In a high speed switching system for rapidly applying and disconnecting signals from an input line to an output line, an input gate for receiving the signals from the input line and being actuable to close the gate and transmit said signals, said input gate including a time delay means for automatically opening the gate after a given time interval after each actuation, an output gate for receiving said transmitted signals and being actuable to close the gate and convey said signals to said output line, said output gate including a shorter time delay means than said input gate for automatically opening after a shorter time interval after each actuation, and means for sequentially actuating first the input gate and thereafter the output gate whereby said input gate is opened before the output gate and automatically closed after the output gate.

3,021,431
TRANSISTORIZED INTEGRATOR CIRCUIT
Francis C. Wellman, Bellmore, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 618,785
5 Claims. (Cl. 307—88.5)



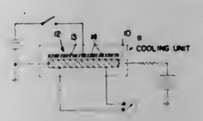
3. An integrating circuit comprising a transistor having first, second and third electrodes, each of said first and second electrodes having forward and reverse bias directions with respect to said third electrode, a common terminal, a first voltage source connected between said first electrode and said common terminal in the forward direction of said first electrode, a capacitor connected between said second electrode and said common terminal and a second voltage source connected in series with said capacitor and said common terminal between said second and third electrodes, said second voltage source being capable of providing at different times a voltage bias in the reverse direction of said second electrode and a low-impedance connection between said second and third electrodes.

3,021,432
NON-CUTOFF TRANSISTOR SWITCHING CIRCUIT
George D. Bruce, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1957, Ser. No. 706,394
3 Claims. (Cl. 307—88.5)



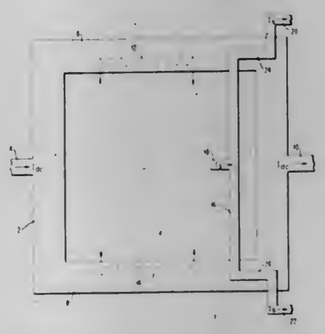
1. A transistor switching circuit comprising first and second transistors having complementary symmetry with each other, each transistor having input and output electrodes, a direct current conductive degenerative feedback connection between the output electrode of the first transistor and the input electrode of the second transistor, a direct current conductive regenerative feedback connection between the output electrode of the second transistor and the input electrode of the first transistor, said feedback connections being effective to balance one another and establish an OFF state of the circuit in which said second transistor carries a substantial output current and the output current of the first transistor is larger than the cutoff output current of said first transistor, signal input means connected to the input electrode of the first transistor and shiftable rapidly between a no-signal condition in which said OFF state is established by said feedback connections, and a signal condition substantially separated from said no-signal condition in which the first transistor produces an ON output current substantially increased from its OFF value, and the second transistor is cut off, and means for taking an output signal from the output electrode of the first transistor.

3,021,433
ASYMMETRICALLY CONDUCTIVE DEVICE EMPLOYING SEMICONDUCTORS
Stanley R. Morrison, Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 31, 1957, Ser. No. 706,442
7 Claims. (Cl. 307—88.5)



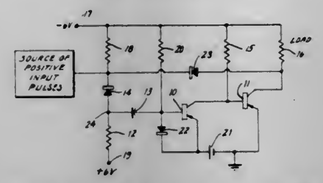
7. Asymmetrical conducting apparatus including a semi-conductor body of predetermined resistivity having a pair of spaced ohmic contacts thereon defining a current path therebetween, means for establishing an electrical current flow along said path, means for generating an electrical field gradient adjacent said body and adjacent said current path to alter said predetermined resistivity, means for generating minority current carriers in said semi-conductor body adjacent to said path, and means for maintaining said semi-conductor body at a temperature level below 195° K.

3,021,434
LOW TEMPERATURE CURRENT SWITCH
Rex H. Blumberg, Wappingers Falls, and Charles J. Kraus, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 25, 1958, Ser. No. 723,682
2 Claims. (Cl. 307—88.5)



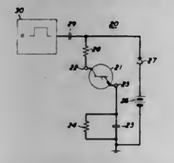
1. A switching element comprising in combination a first hard superconductive path and a second hard superconductive path in electrical parallel with said first path, a source of direct current common to both paths wherein only one superconductive path carries the entire direct current, means for diverting said direct first current from the current-carrying path to the other path comprising a resistive element lying in electrically-insulated but heat-conducting relationship with said current-carrying path, means for selectively pulsing said resistive element with a source of electrical energy so as to momentarily heat such resistive element sufficient to drive its associated superconductive path normal resistive, whereby said direct current will switch to flow only through said other path and stay there until driven back to said first parallel path.

3,021,435
STABLE OUTPUT PULSE PRODUCING SYSTEM
Francis P. Keiper, Jr., Oreland, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Jan. 16, 1959, Ser. No. 787,231
8 Claims. (Cl. 307—88.5)



1. In a system for producing output pulses of fixed duration in response to triggering pulses, a first controllable normally-operative device, a second controllable normally-inoperative device having its input connected to the output of said first device so as to be rendered operative to produce an output pulse when said first device is rendered inoperative, a normally-charged energy-storage capacitor connected to said first device so as to render the latter inoperative coincidentally with discharge of the capacitor, a discharge circuit for said capacitor independent of said devices, said circuit including said capacitor and a resistor whose time constant determine the discharge current characteristic, and means for initiating discharge of said capacitor in response to a triggering pulse, and for abruptly terminating the discharge when the voltage at the junction of said capacitor and said resistor reaches a predetermined value, whereby to produce an output pulse in time coincidence with the flow of discharge current.

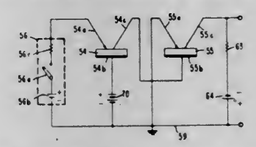
3,021,436
TRANSISTOR MEMORY CELL
William C. Jones, Florham Park, and Philip G. Ridinger, Boonton, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 11, 1959, Ser. No. 798,746
9 Claims. (Cl. 307—88.5)



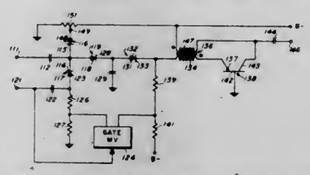
9. A memory cell comprising a PNPN transistor having a first and a second terminal, a source of potential, a first resistor and a diode serially connecting said source of potential to said first terminal, a second resistor and a capacitor in shunt therewith serially connecting said source of potential to said second terminal, and a source of input pulses connected to said first resistor.

3,021,437
TRIGGER CIRCUITS EMPLOYING DIRECT COUPLED TRANSISTORS
Harold Fleisher, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application Oct. 29, 1953, Ser. No. 389,115, now Patent No. 2,903,602, dated Sept. 8, 1959. Divided and this application July 13, 1959, Ser. No. 826,708
8 Claims. (Cl. 307—88.5)

1. A bistable circuit comprising two transistors, each having input, output and common electrodes, a load impedance, a source of direct electrical energy, means connecting the load impedance and the source in series between the output electrode of one of the transistors and a junction, means coupling the input electrode of said one transistor to the output electrode of the other transistor directly and conductively, without intervening coupling impedances, so that the output electrode current-potential characteristic of the other transistor is determined at least in part by the one transistor and includes two separate ranges of output electrode potential wherein the circuit is stable and an intervening range of output electrode potential wherein the circuit is unstable, means connecting the common electrode of said one transistor to said junction directly and conductively, without intervening coupling impedances, means connected to the common electrode of the other transistor and effective to main tain said common electrode at a fixed potential different from that of said junction, and signal input means connected between said junction and the input electrode of said other transistor and operable to shift the output electrode potential of said other transistor between values respectively located in said two separated ranges.



3,021,438
TRANSISTOR ENERGY STORAGE COUNTER
Thomas M. Moore, Glen Burnie, Md., and Edward R. Arnold, Brooklyn, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 7, 1959, Ser. No. 845,045
7 Claims. (Cl. 307—88.5)

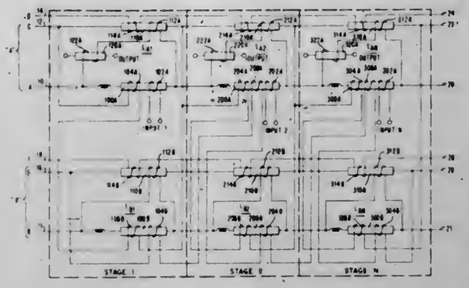


1. A transistor energy storage counter comprising a semiconductor having at least emitter, base and collector elements, said base element being connected to a common reference potential, trigger responsive control means for applying a predetermined potential across said emitter and collector electrodes to maintain the proper initial count following a zero time condition, positive feedback means connected between said collector and emitter electrodes, unidirectional coupling means having anode and cathode elements coupling input pulses to said emitter electrode, a first coupling capacitor coupling input pulses to said unidirectional coupling means, a second capacitor and means connecting said second capacitor between said emitter and said common reference potential.

3,021,439
SUPERCONDUCTIVE SHIFT REGISTERS
John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,582
15 Claims. (Cl. 307—88.5)

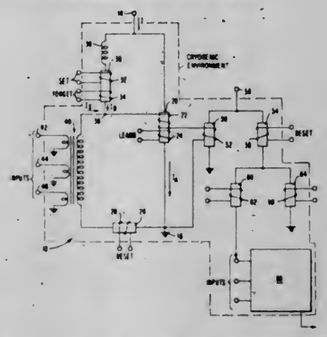
1. A shift register comprising: a plurality of stages each of which includes a plurality of cryotrons; a first plurality

of loop circuits in which persistent currents may exist simultaneously and a second plurality of loop circuits in which persistent currents may exist simultaneously, each of said loop circuits including two of the cryotrons of



each stage; first means to establish a first persistent current in a first of said loop circuits; and second means to apply pulses to the shift register, whereby upon the occurrence of said pulses a second persistent current is established in another of said loop circuits.

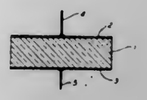
3,021,440
CRYOGENIC CIRCUIT WITH OUTPUT THRESHOLD VARIED BY INPUT CURRENT
John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 31, 1959, Ser. No. 863,322
9 Claims. (Cl. 307—88.5)



1. A superconductive circuit comprising: a first circuit means connected in parallel with a second circuit means; input means for increasing the current in increments in said first circuit means to a predetermined value; third circuit means connected with said first circuit means and having two current paths; means applying a signal current to said third circuit means whereby said signal current is diverted from a first to a second of said two current paths of said third circuit means when the current in said first circuit means increases to said predetermined value.

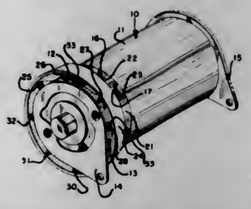
3,021,441
PIEZOELECTRIC TRANSDUCER
Glenn N. Howatt, Metuchen, N.J., assignor to Gulton Industries, Inc.
Filed Dec. 26, 1957, Ser. No. 705,452
14 Claims. (Cl. 310—8)

3. An electrical circuit element comprising in combination a ceramic body, and a pair of metal foil electrodes thermally bonded to said body, wherein said body comprises a solid solution consisting essentially of lead oxide, lead fluoride, and at least one crystalline compound selected from the group consisting of titania, and zirconia, wherein the ratio of lead oxide to lead fluoride



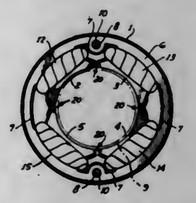
varies over the range of combinations from substantially 30 mole percent PbO, 70 mole percent PbF_2 to 90 mole percent PbO, 10 mole percent PbF_2, said combination of lead fluoride and lead oxide being 100 mole percent and said crystalline compound being 100 mole percent.

3,021,442
DYNAMOELECTRIC MACHINE
Joseph J. Rodak, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 26, 1958, Ser. No. 783,041
5 Claims. (Cl. 310—60)



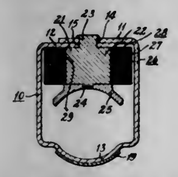
1. In a dynamoelectric machine having a slot for the passage of cooling and ventilating air, a protective cover, said protective cover comprising a band constructed of an elastomer and positioned around said dynamoelectric machine and in contact therewith adjacent said slot, a shroud connected to said band and extending in spaced relationship over said slot, and a plurality of spaced struts extending from said shroud and engaging said dynamoelectric machine for maintaining said shroud in spaced relationship over said slot, certain of said struts having tabs extending therefrom into said slot.

3,021,443
ELECTRIC MOTORS
Emil S. Tamm, Elyria, Ohio, assignor to The General Industries Company, Elyria, Ohio, a company of Ohio
Filed Mar. 31, 1959, Ser. No. 803,243
2 Claims. (Cl. 310—190)



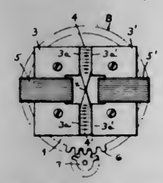
1. A magnetic bridge inserted between adjacent pole tips of an electric motor stator, said pole tips having adjacent, upwardly converging edges, said magnetic bridge formed of resilient material and comprising a flat-bottomed, channel-shaped member having upstanding walls and laterally projecting flanges at the upper edges of said walls, said bridge resiliently distorted whereby said walls converge upwardly complementarily with said converging edges of said pole tips and exert a lateral reactive force thereupon, said flanges projecting laterally above said pole tips, said converging edges of said poles and said resiliently distorted walls resulting in a downward component of force tending to urge said magnetic bridge downwardly whereby said flanges are held resiliently against said pole tips.

3,021,444
DYNAMO ELECTRIC MACHINE
Milton E. Simmons, Carl J. Finsterwalder, and Frank J. Terkoski, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1957, Ser. No. 664,009
10 Claims. (Cl. 310—259)



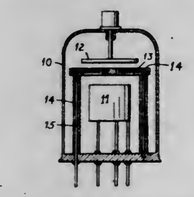
1. In a dynamo electric machine, a single piece sheet metal frame of substantially rectangular cross-section having an arcuate portion constituting a pole, said sheet metal frame having contiguous end portions opposite said pole with longitudinally extending slots spaced from the marginal edges thereof, and a pole piece assembly having lug means extending through said slots and deformed thereover for securing the end portions together.

3,021,445
ELECTRON LENS
Rolf Widerøe, Nussbaumen, and Max Sempert, Ennetbaden, Switzerland, assignors to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Filed July 18, 1960, Ser. No. 43,559
Claims priority, application Switzerland July 24, 1959
3 Claims. (Cl. 313—84)



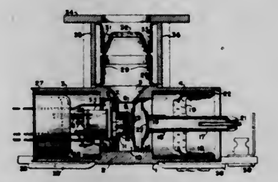
1. In an electron lens for concentrating electrons of a high-speed electron beam, the combination comprising a diaphragm arranged in the path of the electron beam, said diaphragm being disposed transverse to the beam axis and including at least one aperture for electrons extending along a radius of the beam from the center of the diaphragm which is coincident with the beam axis, a magnet mounted on said diaphragm, said magnet including an air gap in alignment with a radially outer portion only of said aperture and across which a magnetic field is produced which deflects the electrons passing through said aligned aperture and air gap in the direction of the beam axis while those electrons passing through the radially inner portion of said aperture are uninfluenced by said magnetic field, and means for rotating said diaphragm on the beam axis.

3,021,446
GASEOUS ELECTRIC DISCHARGE TUBE
Gysbert Jacob Ekkers, Wettingen, and Aldo Patriarca, Laufohr, near Brugg, Switzerland, assignors to Patelhold Patentverwertungs- & Elektro-Holding A.G., Glarus, Switzerland
Filed May 16, 1955, Ser. No. 508,343
Claims priority, application Switzerland May 15, 1954
4 Claims. (Cl. 313—204)



1. In an electric discharge tube having cathode, anode and control grid elements and filled with an alkali metal vapor, the improvement wherein the surface of said control grid element is covered at least for the most part with a non-conductive material.

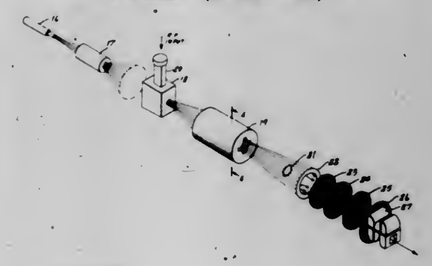
3,021,447
ELECTRON TUBE APPARATUS
Robert L. Jepsen, Palo Alto, Frederick L. Salisbury, Redwood City, and Curtis E. Ward, Palo Alto, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Filed Feb. 6, 1953, Ser. No. 335,438
13 Claims. (Cl. 315—5.19)



1. In an electron beam discharge device, a main body comprising a rectangular metallic block having oppositely extending cylindrical end portions protruding from two opposite sides of the rectangular block, the body having an axially aligned bore extending through the cylindrical end portions and the rectangular block, the body having a slit-like window opening on one other side of the rectangular block extending perpendicular to the axis of the bore, a metallic cylindrical header having an axially aligned bore therethrough defining a re-entrant tube within the header, an accelerator grid fixedly mounted on this header at one end of the bore and a first resonator grid fixedly mounted on this header at the opposite end of the bore, the header and associated grids being mounted within the bore of the body adjacent the window opening, a second round metallic header having an axially aligned bore therethrough and a second resonator grid mounted thereon, the second header being mounted within the bore of the body adjacent to and on the opposite side of the window from the first header and so positioned as to provide a predetermined spacing between the first and second resonator grids, whereby the bore

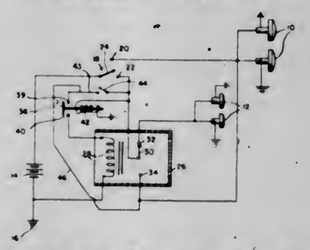
of the body, the surfaces of the two headers, and the two resonator grids form a resonator cavity within the body having the window in the side wall thereof.

3,021,448
ATOMIC BEAM FREQUENCY STANDARD
Richard T. Daly, New Rochelle, N.Y., assignor to TRG, Incorporated, Syosset, N.Y., a corporation of New York
Filed Feb. 20, 1959, Ser. No. 794,677
9 Claims. (Cl. 315—5.35)



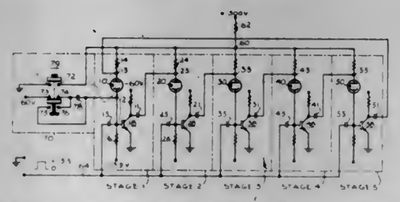
3. An atomic beam frequency reference comprising a source of atoms of a selected element having a predetermined electron precessional reference frequency, means for directing said atoms in an uncharged beam along a predetermined path, means along the path of said beam for producing a first magnetic field having an intensity varying continuously from the axis of said atom beam radially outwardly toward the periphery of said beam, a resonant cavity placed along the path of said beam and having means for interaction of its field with atoms of said beam, said first magnetic field being located to cause atoms of a selected electron precessional mode to be directed into interaction with said cavity field and to cause atoms of the opposite mode to diverge and be removed from said beam, means for supplying to said cavity a radio frequency signal to be compared with said atomic beam reference frequency, further means placed along said beam path following said cavity for producing a magnetic field having an intensity varying continuously from the center of the atom beam radially outward toward the periphery of said beam, and conversion means placed in the path of the beam from the last said means for producing a flow of charged particles in response to impingement of atoms on said conversion means.

3,021,449
AUTOMATIC HEADLIGHT SELECTOR
Fred S. Kerr, Royal Oak, and Lon H. Romanski, Detroit, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Dec. 30, 1958, Ser. No. 783,885
16 Claims. (Cl. 315—79)



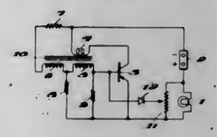
1. A control system for vehicle lights, the vehicle having an internal combustion engine, said system including headlights and parking lights, a circuit including a manual switch for selectively energizing said lights, said circuit including a relay effective when energized to break the circuit to said parking lights and to establish a circuit to said headlights, and a control switch in series with said relay responsive to an engine vacuum condition and effective when said engine vacuum is above parking speed to energize said relay.

3,021,450
RING COUNTER
Richard Jiu, San Pedro, Calif., assignor to Thompson Ramo Wooldridge Inc., Canoga Park, Calif., a corporation of Ohio
Filed Apr. 7, 1960, Ser. No. 20,744
12 Claims. (Cl. 315—84.5)



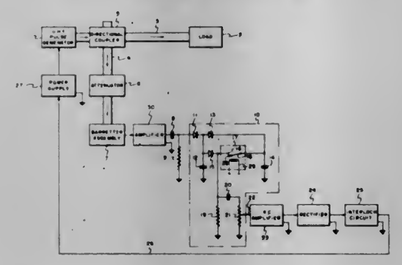
1. A counter having a plurality of stages connected in cascade, each stage comprising: a load impedance, a gas-filled diode and a bias impedance connected across a source of potential; a transistor comprising a base electrode connected to the junction of said gas-filled diode and bias impedance, an emitter electrode connected to a reference potential, and a collector electrode; a source of pulses; an input capacitor for coupling said source of pulses to the base electrode of said transistor; and a coupling capacitor connected between the collector electrode of said transistor and the junction of the load impedance and gas-filled diode in the succeeding stage.

3,021,451
FLASHING DEVICE
Lars Olof Lundahl, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden
Filed Feb. 5, 1959, Ser. No. 791,326
Claims priority, application Sweden Feb. 20, 1958
2 Claims. (Cl. 315—219)



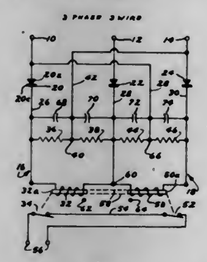
1. A flashing device comprising a series loop for an oscillator circuit connected to include a lamp, a source of current, and a first winding of said oscillator circuit, a transistor connected by a feedback winding to one end of the first winding, and by a blocking winding to the other end of the first winding, a core for said first, feedback and blocking windings in which a magnetic field is built up therein to saturation for effecting periodically the energization and de-energization of said transistor to effect corresponding energization and deenergization of said lamp, and a voltage reference circuit connected to be responsive to the voltage across said lamp and including a diode circuit connecting a portion of said voltage across said lamp to the connection of said blocking winding to said transistor for limiting the voltage applied to said lamp.

3,021,452
SIGNAL DECREMENT DETECTOR
Edward E. Eberle, Floral Park, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Mar. 20, 1959, Ser. No. 800,758
3 Claims. (Cl. 317—9)



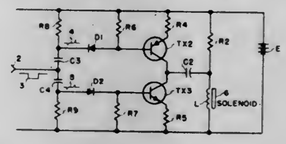
1. Apparatus for detecting abrupt decrements in the amplitude of a recurrent series of a pulses under surveillance, said apparatus comprising first and second capacitors and first and second unidirectional impedances, said first impedance applying said pulses to said first capacitor and said second impedance applying said pulses to said second capacitor, a third impedance for discharging said first and second capacitors, means for connecting said first capacitor across said third impedance to provide a first circuit for discharging said first capacitor, and means for intermittently connecting said second capacitor across said third impedance means to provide a second circuit for discharging said second capacitor, the time constant of one of said circuits being different from the time constant of the other of said circuits, whereby an alternating signal component is developed across said third impedance having a peak-to-peak amplitude related to the amplitude differential between the potentials developed across said first and second capacitors.

3,021,453
POLYPHASE ELECTRORESPONSIVE APPARATUS
Jack C. Faglie, 143 Friar Tuck Road, San Antonio, Tex., assignor to Jack C. Faglie, trustee, San Antonio, Tex.
Filed Jan. 12, 1959, Ser. No. 786,230
16 Claims. (Cl. 317—27)



1. An electroresponsive apparatus for connection to a polyphase electrical system having N phase conductors, comprising; N asymmetrical current conducting devices, each having a first terminal for connection to respective phase conductors and a second terminal for providing a uni-directional voltage; $N-1$ impedance means interconnecting the second terminals on different pairs of said asymmetrical current conducting devices, each of said impedance means including an intermediate terminal; means interconnecting said intermediate terminals to first terminals of different asymmetrical current conducting devices; and voltage responsive means connected to each of said impedance means so as to be responsive to the voltage across each of said impedance means.

3,021,454
CONTROL CIRCUIT FOR ELECTRO-MAGNETIC DEVICES
Robert A. Pickens, Baltimore, Md., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 11, 1958, Ser. No. 727,986
6 Claims. (Cl. 317—148.5)

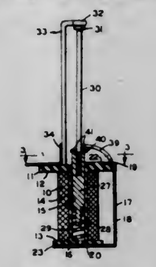


1. A circuit for activating an electromagnet having a core movable from a position of rest to an activated positon, comprising: a source of electromotive force, means including a resistor connecting said electromagnet in series with said source in a sense such as to establish a biasing current flow through said electromagnet tending to activate the core thereof, said resistor having such resistance that said biasing current is insufficient to move said core to its activated position but is sufficient to maintain said core in said activated position, a capacitor, means for applying voltage impulses to said circuit, means responsive to a voltage impulse of a first sense to momentarily establish a first conductive path connecting said capacitor in charging relation in series with said source and said electromagnet in a sense such that current flows through said electromagnet incident to the charging of said capacitor is in aiding relationship to said biasing current, the resistance of said path being such that the sum of said biasing and charging currents is sufficient to activate said electromagnet core to said activated position, means responsive to a voltage impulse of a second sense to momentarily establish a second conductive path connecting said capacitor in discharging relation in series with said electromagnet in a sense such that current flow through said electromagnet incident to the discharging of said capaictor is in opposing relationship to said biasing current thereby reducing the current flow through said electromagnet to a value which is insufficient to maintain the activated position of said electromagnet core.

3,021,455
ELECTROMAGNET
Leo L. Weber, Logansport, Ind., assignor to Essex Wire Corporation, Fort Wayne, Ind., a corporation of Michigan
Filed Jan. 6, 1960, Ser. No. 817
3 Claims. (Cl. 317—191)

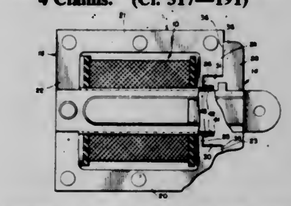
1. In an electromagnet of the type having a coil wound upon a bobbin of non-magnetic material, said bobbin having a hollow barrel and two end flanges, a core armature movable in said barrel and projecting from one end thereof through an opening in one of said flanges, said armature being adapted to have its inner end attracted further into the bobbin upon energization of the coil, and a frame of magnetic material extending between the ends of said barrel; the improvement wherein said frame comprises a generally U-shaped member formed of resilient sheet metal and adapted to be sprung over said bobbin in snapping engagement therewith, said frame member comprising a pair of legs spaced apart a distance substantially equal to the spacing between the outer faces of said flanges, one of said legs overlying the outer face of said one flange, the other of said legs overlying the outer face

of the other of said flanges, said legs being connected by a connecting portion extending lengthwise along the outside of said bobbin; the end of said one leg being shaped to define a pole piece spaced slightly from said projecting end of said armature and having a configuration corresponding to the configuration of a portion of the outer surface of said projecting end of said armature, the outer face of said one flange having a projecting lug spaced



from said opening in said one flange, said one leg being provided with a hole receiving said lug to position said pole piece in respect to said armature, and the end of said other leg being provided with a bent extension disposed in clasping engagement with the edge of said other flange and cooperating with means including said hole in said one leg and said lug for effecting quick attachment of said frame member to said bobbin and for retaining the same in assembled relation.

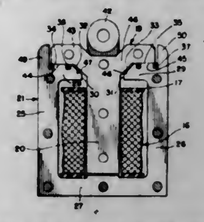
3,021,456
SOLENOID CONSTRUCTION
Hardin Y. Fisher, Hillside, Ill., assignor to Albert F. Dormeyer, Chicago, Ill.
Filed June 12, 1959, Ser. No. 820,045
4 Claims. (Cl. 317—191)



1. In a solenoid, a coil with a hollow center, a substantially C-shaped frame embracing said coil having a narrow opening at one end aligning with the hollow center of the coil, a plunger slide structure including a pair of spaced non-permable slides arranged in the opening of said frame and the hollow of the coil, said slides having plunger supporting rails and a plunger, said plunger having an elongated stem reciprocable in said slides and guidably supported by said plunger supporting rails, a transversely extend ng bar at the outer end of said stem, and projections extending from said bar along opposite sides of the stem defining slots for freely receiving the outer free ends of said rails which are of sufficient length to extend into said slots when the plunger is in seated position.

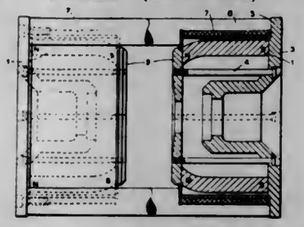
3,021,457
SOLENOID FRAME STRUCTURE
Kenji Yatsushiro, Chicago, Ill., assignor to Albert F. Dormeyer, Chicago, Ill.
Filed Dec. 14, 1959, Ser. No. 859,185
5 Claims. (Cl. 317—191)

1. A laminated solenoid comprising a coil having an axial bore therethrough, a frame embracing the coil and having an opening at one end thereof aligning with said bore, and a plunger having a stem reciprocably received in the opening of said frame and the bore of said coil, said frame including a pair of upstanding parallel spaced leg portions, a bight portion interconnecting the legs together at their lower ends, inwardly extending arm portions at the upper ends of said legs terminating in beveled faces, and upwardly extending projection portions at the



upper ends of said leg portions extending above said arm portions, said plunger having a seating bar extending perpendicular to said stem and adapted to seat on said arm portions, and a cross bar beneath said seating bar having opposed beveled faces mating with the beveled faces on said frame, the opposite ends of said seating bar being substantially within the confines of said projection portions.

3,021,458
PERMANENT MAGNET SYSTEMS
Brian William Manley, Horley, and Bernard Thomas Murphy, Salfords, England, assignors to North American Philips Company, Inc., New York, N.Y.
Filed Apr. 10, 1959, Ser. No. 805,515
Claims priority, application Great Britain May 13, 1958
6 Claims. (Cl. 317—200)

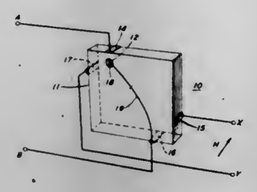


1. A permanent magnet system for focussing a beam of charged particles, comprising, in order, four coaxial, axially-spaced pole pieces having aligned central openings and defining between them three air-gaps, the portions of the pole pieces bounding their openings being symmetrically disposed about the axis, two spaced hollow permanent magnets both magnetized axially and in the same sense, one of said magnets being disposed between the first and second pole pieces and being magnetically coupled thereto, the other of said magnets being disposed between the third and fourth pole pieces and being magnetically coupled thereto, and means for maintaining said magnets and said pole pieces in assembled relationship to provide said system with three regions along the axis in the air-gaps between the pole pieces of substantially uniform flux that is in opposite directions in adjacent regions.

3,021,459
INTEGRATED SEMICONDUCTIVE DEVICE
William J. Grubbs, Jr., New Brunswick, Marion E. Hines, Summit, and Lawrence J. Varnerin, Jr., Murray Hill, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 16, 1960, Ser. No. 50,029
5 Claims. (Cl. 317—234)

1. A semiconductive device comprising a semiconductive wafer which serves as a Hall-effect element, the

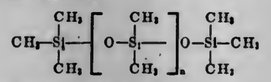
bulk of which is of one conductivity type and at least one localized portion of which is of the opposite conductivity type, the junction formed therebetween being such that a tunnel diode characteristic results across opposite sides of the junction, a plurality of electrodes connected to the



wafer such that in a steady magnetic field nonreciprocal properties result between different pairs of electrodes, and means forming at least one low resistance path external to the wafer interconnecting two electrodes, at least one of which is connected to a localized portion of the wafer.

3,021,460
SEMICONDUCTOR TRANSLATING DEVICE WITH SILICONE FLUID FILLER
David L. Milam, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 20, 1957, Ser. No. 679,178
5 Claims. (Cl. 317—234)

1. In combination with an encapsulated semiconductor translating device, a filler composition consisting essentially of the mixture of silicone fluid with 40% to 80% by weight of a metal oxide from the group consisting of TiO_2 and Al_2O_3, said silicone fluid being of the type represented by the formula:



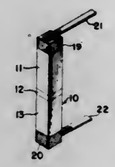
where n is an integer from 0 to 2000.

3,021,461
SEMICONDUCTOR DEVICE
Philip Noel Oakes and Ronald Neil Wilkes, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 10, 1958, Ser. No. 760,137
10 Claims. (Cl. 317—235)



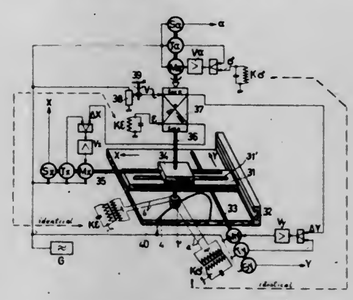
1. A semiconductive device comprising a block of insulating material having a plurality of spaced conductive areas thereon, a bar of semiconductor material having a pair of end portions each conductively mounted on and secured to one of said conductive areas, an intermediate portion of said bar in flexible conductive contact to a third of said areas, and means for making electrical connections to said conductive areas.

3,021,462
OHMIC CONNECTIONS FOR SILICON SEMICONDUCTOR DEVICES
Morton E. Jones, Dallas, Tex., assignor to Texas Instruments, Incorporated, Dallas, Tex., a corporation of Delaware
Original application Jan. 4, 1957, Ser. No. 632,547, now Patent No. 2,929,137, dated Mar. 22, 1960. Divided and this application Mar. 19, 1959, Ser. No. 803,817
5 Claims. (Cl. 317—240)



1. A silicon semiconductor element, a portion of which is coated with an adhering coating of an alloy comprised of approximately 90% tin and the remainder substantially entirely gold, and an electrical connection affixed to said coating.

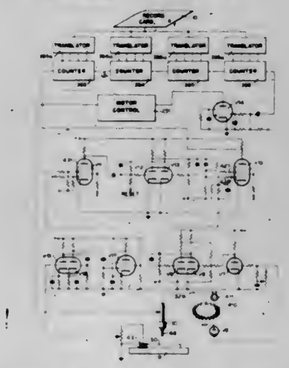
3,021,463
AUTOMATIC CURVE SENSING SYSTEM
Heinz Haldemann, Zurich, Switzerland, assignor to Contraves A.G., Zurich, Switzerland
Filed Mar. 24, 1958, Ser. No. 723,516
Claims priority, application Switzerland Mar. 22, 1957
14 Claims. (Cl. 318—162)



1. In a sensing system for electrically sensing the configuration of a given lineal object, particularly of a graph curve of any shape related to two coordinates and representing the functional relation between two quantities, in combination, a source of alternating voltage; two-plate differential condenser means having a reference center and being connected in circuit with said source; supporting means adapted to carry on one face a lineal object in a position adjacent to but spaced from and opposite said condenser means, said condenser means including two substantially triangular condenser plates, each being bounded on two sides by edges diverging at an angle from said reference center and insulated from each other, said plates being arranged with faces, respectively, in a common plane substantially parallel with said face of said supporting means, and symmetrically with respect to a center plane perpendicular to said common plane and passing through said reference center; a lineal object representing said graph curve and carried by said supporting means and consisting of a material adapted to cause an unbalance of the electric field of said condenser when at least that portion of said lineal object which is located opposite said condenser is in a position other than substantially in alignment with said reference

center; moving means for moving said condenser means and said supporting means carrying said lineal object, relative to one another; and electrical control means operatively connected between said condenser means and said moving means for controlling the latter depending upon said unbalance so as to operate said moving means in a manner causing said portion of said lineal object to assume a position substantially in alignment with said reference center.

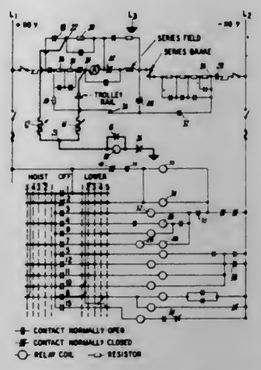
3,021,464
TOOL DEPTH CONTROL SYSTEM
George O. Philip, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 27, 1958, Ser. No. 724,471
6 Claims. (Cl. 318—162)



1. A condition responsive distance measuring apparatus for a movable member comprising a circuit for algebraically summing a plurality of digital inputs, means responsive to equal digital inputs in said summing circuit to generate an output, means for entering a number into said circuit referrable to a predetermined distance said member is to travel, a digital generator for generating pulses in response to movement of said member and a condition responsive element for detecting movement of said member past a predetermined point for connecting said pulse generator to said summing circuit.

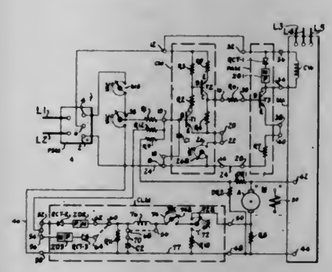
3,021,465
PROTECTIVE RELAY CIRCUITRY FOR HOIST MOTOR CONTROLS
Harry G. Garten, Alloy, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 8, 1957, Ser. No. 695,282
4 Claims. (Cl. 318—247)

1. A protective device for a direct current hoist motor and motor controller utilizing series operation for hoisting and shunt operation for dynamic lowering and supplied from a three-wire grounded neutral power line whereby protection is afforded in the event of a discontinuity in the armature or in the armature circuit or in the event of plugging, said device comprising a first variable resistor having one terminal connected to the armature side of a main lowering contactor which connects power to the motor on the lowering cycle, a second variable resistor having one terminal connected to the armature terminal most remote from said main lowering contactor, the other terminals of said two resistors being connected to one terminal of a relay coil, the other terminal of said relay coil being connected to ground, said resistors being adjusted to give substantially zero voltage between their junction point and ground, the contactor associated with said relay being normally closed and located in the controller circuit to remove power from the motor when opened, and means coacting with a main hoisting con-



tactor to remove electrical connection from one side of said relay coil during hoisting operations of the motor.

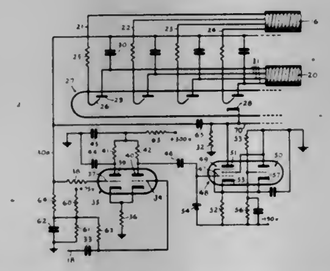
3,021,466
MOTOR CONTROL SYSTEMS
Donald J. Greening, Thiensville, and Charles E. Smith, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Apr. 6, 1959, Ser. No. 804,301
9 Claims. (Cl. 318—327)



1. In an adjustable voltage system comprising a direct current motor having a shunt field winding energized from a source of unidirectional voltage, an armature winding and an alternating current source, in combination, power translating means comprising a magnetic amplifier energized from the alternating current source for controlling supply of unidirectional voltage to the armature winding to effect operation of the motor, said magnetic amplifier having a control winding energizable to control the output thereof, means for controlling energization of said control winding comprising a modular rectifying power supply network, a modular comparator network, a modular power amplifier network and a modular current limit network, each of said networks having input terminals and output terminals, the input terminals of said power supply network being connected to said alternating current source, a selectively adjustable speed setter connected between the output terminals of said power supply network and the input terminals of said comparator network for adjusting the rectified input reference voltage to the latter, means for deriving a voltage proportional to armature current and applying the same to the input terminals of said current limit network, said current limit network comprising semi-conductor means

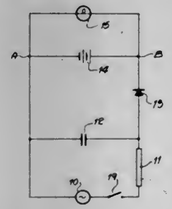
responsive to a predetermined value of voltage applied thereto and adjustable means for preselecting the value of armature current at which said semi-conductor means responds, means for connecting the output terminals of said current limit network to the input terminals of said comparator network, said comparator network comprising semi-conductor means for providing a resultant control voltage in response to the voltages applied to its input terminals, means for connecting the output terminals of said comparator network to the input terminals of said power amplifier network, and means for connecting the output terminals of said power amplifier network to said control winding whereby said magnetic amplifier controls the armature voltage.

3,021,467
MULTI-CHANNEL COUNT STORAGE APPARATUS
Charles W. Johnstone, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Mar. 19, 1958, Ser. No. 722,434
7 Claims. (Cl. 320—1)



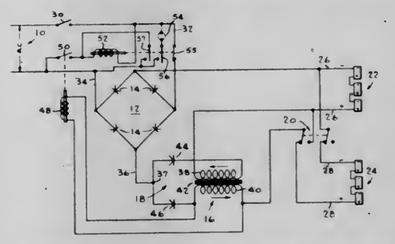
1. Apparatus for charging a capacitor at a uniform rate comprising electron discharge means including a cathode electrode, a plate electrode connected to the capacitor to be charged and a control electrode operative to direct an electron beam current to the plate electrode in response to a signal which alters the potential difference between the control electrode and the cathode electrode, feedback circuit means responsive to the plate electrode current, and difference amplifier means for comparing a signal from the feedback circuit means with a standard signal and regulating the potential difference between the cathode electrode and the control electrode in response thereto.

3,021,468
RECHARGEABLE FLASHLIGHT BATTERY AND CIRCUIT FOR RECHARGING SAME
Robert Walter Reich, Freiburg im Breisgau, Germany
Filed Aug. 20, 1956, Ser. No. 604,923
6 Claims. (Cl. 320—2)



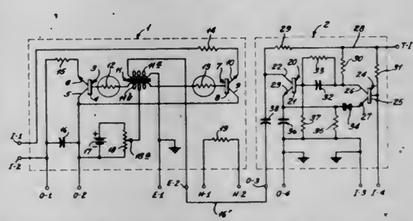
1. A circuit for recharging batteries comprising a resistance and capacitor in a series circuit across the A.-C. power supply; the time constant of said series circuit being much longer than that of the period of said A.-C. supply; a rectifier connected from the junction of said resistance and said capacitor in series with the battery to be charged to the other side of said capacitor.

3,021,469
DIVIDER CIRCUIT FOR BATTERY CHARGER
Herbert C. Ganiere and Robert Schimek, Milwaukee, and Edwin T. Sherwood, Bayside, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,259
8 Claims. (Cl. 320—15)



1. A battery charging circuit for charging two groups of batteries in a parallel arrangement from a common source of alternating current comprising, a rectifier means for converting alternating current to direct current, a balancing transformer connected to the output of said rectifier means, said balancing transformer having two coils wound on a common core with said coils connected so that the charging current in the coils will produce opposing flux in said core, the current from each coil being fed to a group of batteries, and a pair of blocking diodes, said diodes being connected in a back-to-back arrangement across the input ends of said balancing transformer.

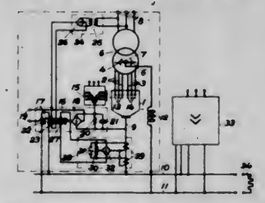
3,021,470
TRANSISTORIZED CHOPPER CIRCUIT
Billy L. Lawrence, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,767
3 Claims. (Cl. 321—16)



1. In a transistorized chopper circuit for converting a low level unidirectional input voltage to an alternating type output potential; a first transistor provided with base, collector, and emitter electrodes; a second transistor provided with base, collector, and emitter electrodes; means including two input terminals connected to apply said input potential between said emitter electrodes; transformer means provided with a tapped secondary connected between said base electrodes and a primary winding connected to receive switching potentials therefor, a source of D.-C. potential connected between the tap of said secondary and said collector electrodes of said first and

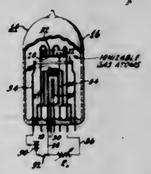
second transistors, and thermo-sensitive resistor means conductively interposed between the opposite ends of said secondary winding and each of said base electrodes circuit means including output terminals connected between one of said input terminals and both collectors to provide an output circuit.

3,021,471
DIRECT VOLTAGE SYSTEM COMPRISING STATIC CONVERTERS INTERCONNECTED THROUGH INTER-PHASE TRANSFORMERS
Gunnar P. Engström, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed Aug. 26, 1958, Ser. No. 757,313
Claims priority, application Sweden Aug. 31, 1957
10 Claims. (Cl. 321—19)



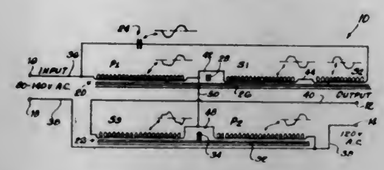
1. A rectifier station fed from an A.C. network and feeding a D.C. network; said rectifier station comprising groups of commutating discharge paths, each including grid controlled rectifier means, said groups being displaced in phase in relation to each other, an inter-phase transformer interconnecting said groups, the pulse number of each of said groups being at least two and means sensitive to the voltage of said D.C. network and of said A.C. network for influencing the grid voltage of said rectifier means, when said D.C. voltage at under-critical load exceeds the ideal no-load D.C. voltage so as to block those of said commutating groups the current of which first temporarily becomes zero.

3,021,472
LOW TEMPERATURE THERMIONIC ENERGY CONVERTER
Karl G. Hernqvist, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 15, 1958, Ser. No. 780,520
20 Claims. (Cl. 322—2)



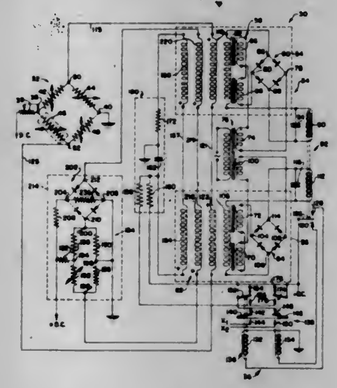
20. A thermionic energy converter comprising an envelope including a thermally conductive portion and containing a thermionic cathode, a collector spaced from said cathode, means for producing positive ions in the space between said cathode and said collector for neutralizing the space charge of electrons emitted by said cathode, said ion producing means including at least one electrode adapted to operate at a temperature near that of said cathode, and means mounting said cathode and said electrode in electrically insulated relation with each other and in thermally conductive relation with each other and with said thermally conductive portion of said envelope, whereby said cathode and said electrode can be heated by a common external heat source.

3,021,473
VOLTAGE REGULATORS
Bert K. Naster, 3000 Taft Road, Hollywood 4, Fla.
Filed Dec. 21, 1959, Ser. No. 860,909
9 Claims. (Cl. 323—45)



1. In a voltage regulator, the combination comprising a first transformer having a first primary winding and first and second secondary windings, a second transformer having a second primary winding and a secondary winding, a pair of input terminals for receiving alternating current, means connecting said first and second primary windings in series across said terminals, a pair of output terminals for delivering alternating current, means connecting said secondary primary winding and said secondary winding of said second transformer in series across said output terminals, a capacitor, and a circuit connecting said capacitor, said first primary winding, and first and secod secondary windings in a closed series loop in which said capacitor tends to neutralize the inductive reactances of said first primary winding and said first and second secondary windings.

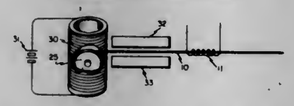
3,021,474
MAGNETIC AMPLIFIER CONTROL APPARATUS
Robert C. Byloff, Gardena, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed June 3, 1955, Ser. No. 513,091
21 Claims. (Cl. 323—89)



1. A control apparatus for a process variable, comprising: activation element means for changing the process variable; conversion element means for providing a signal in accordance with a desired change of the process variable; signal modification means including magnetic amplifier means coupled between said activation and conversion element means, said magnetic amplifier means having a control winding coupled to one of said element means and a sensitivity modification winding adapted to provide a change in the instantaneous sensitivity state of said magnetic amplifier means; and means coupled

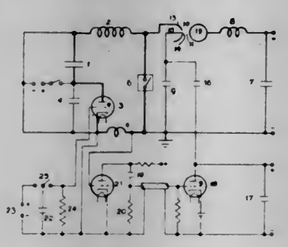
with said sensitivity modification winding for providing a change of current therein for a predetermined time interval dependent upon a characteristic of the signal provided by said conversion element.

3,021,475
NUCLEAR MAGNETIC RESONANCE MEASURING SYSTEM
Anthony D. Cennamo, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Mar. 31, 1958, Ser. No. 724,956
2 Claims. (Cl. 324—.5)



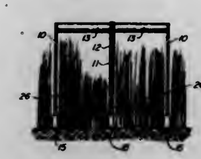
1. In nuclear magnetic apparatus for subjecting spirally-wound elongated cordlike material withdrawn from a storage spool to the mutually perpendicular magnetic and radio-frequency fields for attaining the nuclear magnetic resonance phenomenon, the improvement comprising a solenoid coil housing the spool and the cordlike material stored thereon within the centermost portion of the solenoid bore, and a direct-current power supply energizing the solenoid coil to subject thereby the cordlike material stored on the spool to a steady magnetizing field prior to entry of the cordlike material into the mutually perpendicular fields.

3,021,476
TESTING CIRCUIT FOR CIRCUIT BREAKERS
Mohamed M. Khalifa, Cairo, Egypt
Filed June 11, 1956, Ser. No. 590,784
3 Claims. (Cl. 324—28)



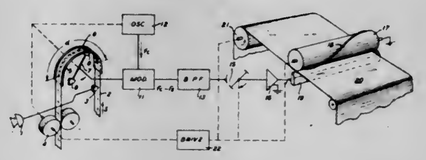
1. In a testing circuit for alternating current circuit breakers; two terminals between which the circuit breaker to be tested is to be connected; a generator of a high voltage high frequency surge with a prescribed polarity connected between said two terminals; a source of a unidirectional high current impulse of a prescribed polarity, composed of one inductance coil connected between one of said two terminals and a capacitor, and a pickup inductance coil connected between the other of said two terminals and another capacitor, a gas discharge tube connected in shunt with said other capacitor, said two capacitors being connected in series, a low-current direct-current supply and means for charging said capacitors from said supply, means for initiating conduction of said gas discharge tube whereby said capacitors discharge through said coils and said tube to cause flow of said unidirectional high current impulse through said circuit breaker, said one inductance coil isolating said capacitors from said high voltage high frequency output; and means for releasing said high voltage surge from said generator at the instant of natural or forced interruption of said high current impulse.

3,021,477
METHOD AND APPARATUS FOR ESTIMATING FORAGE DENSITY
Max E. Robinson, Rawalpindi, Pakistan (573 W. 3rd North, Richfield, Utah)
Filed Jan. 13, 1956, Ser. No. 559,086
2 Claims. (Cl. 324—61)



1. A quadrat method of estimating forage production, in which sampling quadrats are marked off in a field of standing forage whose production is to be estimated, comprising first establishing reference data derived by electrical measurements utilizing, as a capacitor dielectric, conventionally clipped and weighed forage of similar type from similar quadrats along with reference data derived by drying and weighing said clipped forage; making corresponding electrical measurements utilizing the standing forage of said sampling quadrats as a capacitor dielectric; and comparing the last-named electrical measurements with the said reference data.

3,021,478
WAVE ANALYSIS AND REPRESENTATION
Larned A. Meacham, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 21, 1951, Ser. No. 257,628
5 Claims. (Cl. 324—77)



1. Apparatus for analyzing a complex wave having components of interest in the range f_1 to f_2, which comprises means for continuously making a space-variant record of said wave at a speed s, means for defining a short segment, of length d, of said record, the portion of said wave occupying said segment being of duration T, means, operating simultaneously with said record-making means, for continuously advancing said record past said segment-defining means at said speed s, wherefore

$$s=\frac{d}{T}$$

means for scanning said segment at a high speed v that is N-fold higher than said speed s, wherefore

$$v=Ns=N\frac{d}{T}$$

and for repeating said scanning N times during the interval T, whereby the duration of each scan is equal to T/N, to produce a time-variant wave comprising a sequence of accelerated reproductions of that portion of the original complex wave which is contained in said record segment, each of said reproductions containing components, in the frequency range Nf_1 to Nf_2, which are respectively N-fold greater in frequency than the corresponding components

of said portion of the original wave, a band pass filter of bandwidth

$$\Delta f_s = f_2 - f_1 = \frac{v}{d}$$

and midband frequency f_0, a source of an oscillation of frequency variable through the range

$$f_0 + Nf_1 \text{ to } f_0 + Nf_2$$

means for varying the frequency of said oscillation through a range equal to the filter bandwidth Δf_s between each scan and the next, a modulator connected to said filter and supplied with said variable frequency oscillation and with the time-variant wave produced by said scanning means, for systematically translating, during consecutive ones of said accelerated reproductions, successive different contiguous subgroups of components of the original wave, each of extent

$$\frac{f_2 - f_1}{N}$$

to the pass band of said filter, said filter being further so proportioned that its transient response time

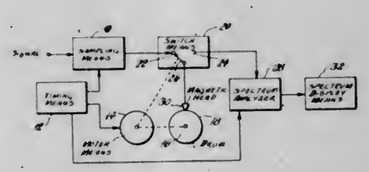
$$\Delta ts = \frac{1}{\Delta f_s}$$

is equal to the duration

$$\frac{T}{N}$$

of any one of said scans, whereby the energy in each of the N contiguous subgroups of components of the original wave is determined, for each consecutive selected record segment, in the course of one and only one of the N successive scans, without either overlaps or underlaps, and means for visually displaying the filter output in time-frequency coordinates.

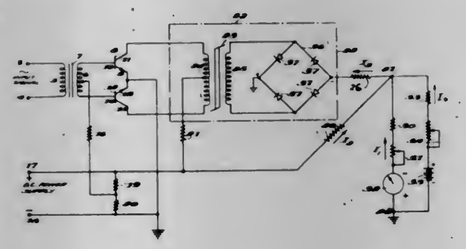
3,021,479
METHOD AND MEANS FOR SPECTRUM ANALYSIS OF RADIO SIGNALS
Michael J. Di Toro, Massapequa, and Walton Graham, East Meadow, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 26, 1959, Ser. No. 795,877
18 Claims. (Cl. 324—77)



6. In combination with a spectrum analyzer, connections for a signal of which a spectrum analysis is to be made, means for sampling said signal with a plurality of pulses, the number of sampling pulses being sufficient to define said signal, a recording medium, a rotatable drum carrying said recording medium, magnetic recording and pickup means for selectively recording the defining pulses upon said recording medium and deriving the recorded pulses therefrom, each consecutive defining pulse being physically recorded directly behind its preceding pulse after at least one complete rotation of said drum has occurred, the effect of such method of recording being to compress the time interval between the recorded pulses with reference to the time interval between the defining pulses, means for selectively connecting said recording and pickup means to said sampling means and to said spectrum analyzer, motor means for rotating said drum and actuating said selective connection means, timing means connected to said sampling means and said motor means for synchronizing the rate of rotation of said drum with the pulse repetition rate of the sampling pulses so that each consecutive pulse will occur and be recorded directly behind its preceding pulse, as mentioned heretofore, and for effecting the actuation of said selective connection means so as to switch the connections of said recording and pickup means at the correct instants of time after all of the defining pulses have been recorded and after all the recorded pulses have been derived from the recording medium.

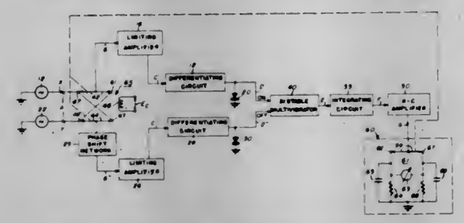
9. A method for accomplishing a continuous spectrum analysis of a signal by means of a single-filter spectrum analyzer comprising the steps of: sampling the signal with a plurality of pulses sufficient to define the signal, the sampling pulses being separated from each other by a definite time spacing; recording the defining pulses upon a recording medium which moves at a constant cyclical rate relative to the recording means; during said step of recording, compressing the time spacing between the defining pulses by suitable physical disposition of the pulses on the recording medium; deriving the recorded pulses from the recording medium with a pickup device having the same rate of cyclical movement relative to said medium as said recording means, the derived pulses having a greater repetition rate than the defining pulses because of the compression of the time spacing between pulses during the step of recording; and applying the derived pulses to a single-filter spectrum analyzer for a spectrum analysis of said signal.

3,021,480
VOLTAGE COMPENSATION
Dudley D. Nye, Jr., Fort Lauderdale, Fla., assignor to Airpax Electronics Incorporated, Fort Lauderdale, Fla., a corporation of Maryland
Filed Dec. 14, 1959, Ser. No. 859,478
1 Claim. (Cl. 324—78)



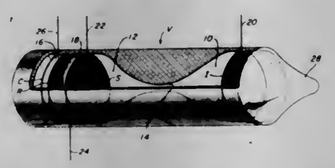
A stabilized frequency detecting circuit comprising a core material having a substantially rectangular hysteresis characteristic, first and second mutually inductive windings wound thereon, rectifying means comprising diodes connected to one of said windings, an amplifier means comprising a pair of matched transistors having emitter, base and collector electrodes, said collector electrodes connected to the other of said windings, a power supply means connected to said amplifier means, an indicating means connected to the output of said detecting circuit, and means establishing a current path between said power supply and the output to supply a current of sufficient magnitude to compensate for an offset current in said detecting circuit so that the current flowing through said indicating means is maintained constant with variations in said power supply means.

3,021,481
PHASEMETER FOR MEASURING VERY SMALL PHASE DIFFERENCES
Henry P. Kalmus, 3000 University Terrace NW., Washington, D.C., and Albert L. Hedrich, 7606 Geranium, Bethesda 14, Md.
Filed Jan. 7, 1959, Ser. No. 785,537
4 Claims. (Cl. 324—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



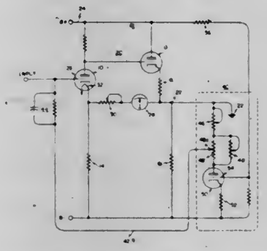
1. Means for detecting small differences in phase between two signals, said means comprising in combination: a bistable circuit having an output and two inputs, said circuit producing rectangular pulses at its output having a duration dependent upon the phase difference between signals applied to its inputs, a first path to one of said inputs and a second path to the other of said inputs, a phase shift means in one of said paths, a switching means interposed between said paths and said two signals for alternately switching said two signals between said two paths, the rectangular pulses produced by said circuit thereby having a first duration for one position of said switching means and a second duration for the other position of said switching means, the difference between said first and second durations being a measure of the phase difference between said two signals, and a detection means connected to the output of said circuit for producing an indication of the difference between said first and second durations.

3,021,482
ELECTRICAL READOUT INTEGRATOR
Nelson N. Estes, Austin, Tex., assignor to Union Carbide Corporation, a corporation of New York
Filed Nov. 28, 1958, Ser. No. 777,009
4 Claims. (Cl. 324—94)



1. An electrical readout integrator comprising a vessel containing a solution of an electrolyte comprising a reversible redox system, said vessel having two compartments connected by a capillary, said compartment being physically and electrically connected by said electrolyte within said capillary, an input electrode in one of said compartments and, in the other of said compartments a shield electrode adjacent to said capillary, a common electrode, and a readout electrode between said shield electrode and said common electrode, the concentration of a measured species being high in said compartment containing said input electrode, variable in said other compartment between said common electrode and said readout electrode and low between said shield electrode and said readout electrode, said capillary acting to prevent diffusion of said measured species from said first compartment to said other compartment and said shield electrode acting to convert any measured species passing through said capillary to unmeasured species whereby to prevent variation of concentration of measured species between said readout electrode and said common electrode by diffusion, said shield electrode being biased negative with respect to said input electrodes, and said readout electrode being biased negative with respect to said common electrode, said readout electrode and said common electrode being provided with leads for connection to a meter.

3,021,483
MEASURING INSTRUMENT
Arthur F. Spero, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Oct. 27, 1958, Ser. No. 769,902
3 Claims. (Cl. 324—131)

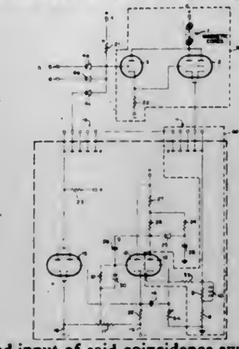


1. A voltmeter for measuring the potential of an electrical signal relative to a predetermined level comprising an amplifier having a pair of input terminals to receive said signal and a pair of output terminals for providing an output voltage in response to the potential difference between said input terminals, a resistive network, an electron discharge device having anode, cathode, and grid electrodes, means for serially connecting said anode and cathode electrodes with said resistive network, means for connecting a source of D.C. potential across said series connection, means connected to said grid electrode for biasing said electron discharge device to provide a constant current through said resistive network, adjustable tap means connected to said resistive network for providing a feedback voltage having a magnitude in accordance with said predetermined level, means for connecting said feedback voltage in series opposition to said voltage to be measured, means for connecting said series-opposed voltages across said pair of input terminals, and means connected across said pair of output terminals for indicating the value of said output voltage.

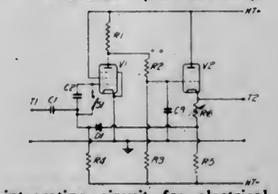
3,021,484
PLURAL GATED PULSE GENERATORS CONTROLLED BY COMMON FEEDBACK PATH
Auguste F. Mestre, Saint-Maur-des-Fosses, France, assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 18, 1957, Ser. No. 646,892
Claims priority, application France Apr. 12, 1956
10 Claims. (Cl. 328—63)

7. A regulated pulse generator comprising a common feedback circuit having a plurality of input terminals and a plurality of output terminals, a plurality of driver circuits, an output for each of said driver circuits connected to one of said plurality of input terminals, a coincidence switch for each of said driver circuits having a plurality of inputs and an output connected to control the associated driver circuit, means connecting one of

said output terminals to a first input of each of said coincidence switches, and means for applying control signals to a second input of said coincidence switches whereby a single feedback circuit accommodates a plurality of driver circuits to regulate output pulses therefrom.



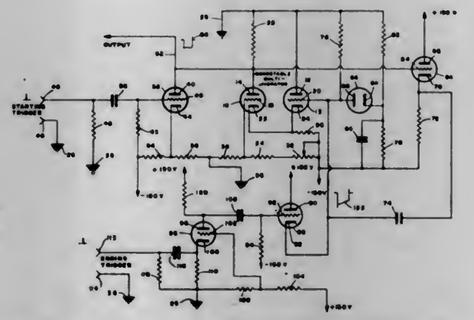
3,021,485
PULSE INTEGRATING CIRCUIT WITH SERIALLY CONNECTED FEED AND RESERVOIR CAPACITORS
Edmund Harry Cooke-Yarborough, Longworth, England, assignor to The United Kingdom Atomic Energy Authority, London, England
Filed Jan. 24, 1958, Ser. No. 711,050
Claims priority, application Great Britain Feb. 1, 1957
5 Claims. (Cl. 328—127)



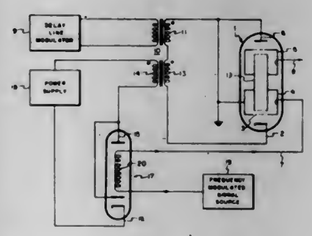
5. An integrating circuit for electrical pulses comprising a feed condenser, a reservoir condenser and a phase-reversing direct-current amplifier having a first electronic switching device, said device having a current input electrode, a control electrode and a current output electrode, one side of said reservoir condenser being connected to said control electrode and said feed condenser being connected between the other side of said reservoir condenser and an input terminal whereby an input pulse may cause said condensers to charge in series through the control-electrode/current-input-electrode path of the device, and a feedback connection between said other side of said reservoir condenser and an output of said amplifier, the arrangement being such that said reservoir condenser receives a substantially constant charge increment during each pulse and said feed condenser is discharged after each pulse, an output voltage being obtainable from said amplifier which is substantially the voltage across said reservoir condenser.

3,021,486
TIMING MULTIVIBRATOR
Marvin Korff, Haddonfield, N.J., and Howard M. Scott, Philadelphia, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 9, 1959, Ser. No. 805,352
5 Claims. (Cl. 328—129)

1. A timing circuit comprising: a mono-stable multivibrator type device including first and second translating means each with a current flow path and a current flow regulating element, and a time constant circuit coupled from the current flow path of the first translating means to the current regulating element of the second translating device, a point of reference potential, impedance means returning the current regulating element of said second translating device to said point of common reference potential; a cathode follower type translating device having as its load the current regulating element circuit of said second translating device, said cathode follower translating device being normally in a cutoff condition; and means for causing said cathode follower device to conduct thereby to cause conduction of said second translating device substantially instantaneously therewith.

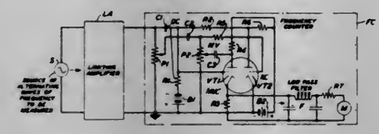


3,021,487
FREQUENCY MODULATION DISTORTION CANCELLATION SYSTEM
William W. Kestenbaum, Long Beach, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,217
6 Claims. (Cl. 328—162)



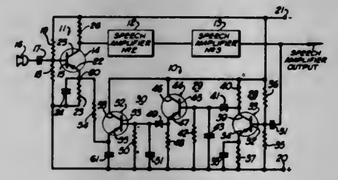
3. In combination, first and second velocity modulation amplifiers connected in cascade for amplifying a desired signal, one of said amplifiers being adapted to receive a pulse modulating signal for gating said one amplifier on and off, means for generating said pulse modulating signal and for applying said modulating signal to said one of said amplifiers, said modulating signal containing an undesired ripple component giving rise to non-uniformity in the amplitude thereof, means for obtaining said ripple component from said modulating signal, and means for applying the obtained ripple component to the other of said amplifiers whereby to produce therein frequency modulation of said desired signal opposite in sense to the frequency modulation produced in said one of said amplifiers by the pulse modulating signal.

3,021,488
MONOSTABLE MULTIVIBRATOR RESPONSIVE TO POSITIVE AND NEGATIVE TRIGGER PULSES FROM SINGLE SOURCE
Robert C. Edson, West Orange, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1944, Ser. No. 570,405
1 Claim. (Cl. 328—196)



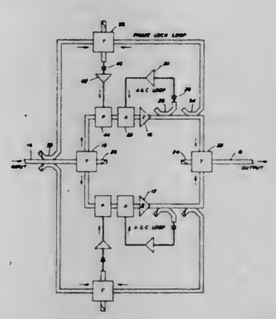
In combination, means to produce an alternating voltage wave containing a sharp positive voltage peak and a sharp negative voltage peak in alternate half cycles thereof, a pair of electric discharge devices each having a heated cathode, an anode and a control grid, control grid-cathode circuits for said devices, anode-cathode circuits for said devices including a common source of anode voltage, a capacitor connected between the anode of one device and the control grid of the second device, a resistor connected between the anode of said second device and the control grid of said one device, a second resistor connected in common to the control grid-cathode circuit and anode-cathode circuit of said one device between the cathode thereof and ground, a third resistor connected between the grid and cathode of said second device, the grid terminal of said capacitor being connected to ground through at least a portion of said third resistor, means biasing the control grids of said devices so that said one device is normally non-conducting and said second device is normally conducting, means to apply said voltage wave to the control grid-cathode circuits both of said devices, the conducting conditions of said devices being reversed in response to each applied voltage peak for a time interval determined primarily by the time constant of said capacitor and said portion of said third resistor, which is selected so as to make the conducting time of said one device longer than each of said voltage peaks and shorter than the time spacing between successive voltage peaks in said wave and an output circuit for said devices connected across said second resistor.

3,021,489
DOUBLE TIME-CONSTANT AGC FOR SPEECH AMPLIFIER
Jorgen Louis Nielsen, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,391
7 Claims. (Cl. 330—29)



1. In an automatic gain control circuit for a transistor amplifier of the type having an input signal applied to its base and an output signal derived from its collector, a source of D.C. power having positive and negative terminals, means connected to the base of the transistor to bias the amplifier, and the collector being connected to one terminal of said source through a load resistor, a power detector circuit responsive to speech signals derived from the amplifier, a gated circuit excited by the signal output from said power detector circuit and including a diode coupled to pass only signals of one polarity from said power detector, said gated circuit including an emitter-follower transistor circuit having a slow time constant resistor-capacitor network in the base circuit of said emitter-follower transistor, a stabilizing circuit including said diode and the resistance of said slow time constant network coupled across said terminals for maintaining said diode in conducting condition throughout the temperature range of the equipment, a resistor, the transistor of said emitter-follower having an emitter connected through said resistor to the emitter electrode of said amplifier, means including a resistance connected between the other terminal of said D.C. source and the emitter electrode of said amplifier for maintaining substantially constant the total current through the emitter circuits of said amplifier and the emitter-follower for holding the emitter electrode voltage of the amplifier substantially constant irrespective of variations in emitter current flow through the transistor of said emitter-follower, whereby the signal passed by said diode differentially increases and decreases, respectively, the currents flowing in the emitter circuits of said emitter-follower and said amplifier.

3,021,490
PARALLEL HIGH FREQUENCY AMPLIFIER CIRCUITS
Rudolf Kompfner, Holmdel, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 23, 1958, Ser. No. 782,423
3 Claims. (Cl. 330—53)



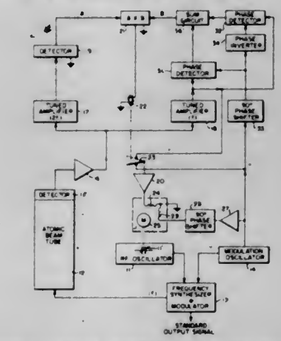
1. In an amplifier for microwave signals arranged for connection in parallel with other similar amplifiers, a microwave amplifier stage, an output circuit therefor, means for sampling the amplitude of the signal in said output circuit, a source of microwave signals to be amplified, means for sampling the amplitude of said microwave signals, means for comparing the two amplitude samples to derive a control signal, means applied to the input circuit of said amplifier for adjusting the gain of said amplifier in response to said control signal, and means for adjusting the phase of the output signal from said amplifier to match that of the microwave signals to be amplified, said phase adjusting means including means for sampling the phase of said output signal, means for sampling the phase of said microwave signals to be amplified, means comparing the outputs of said two phase sampling means for developing a control quantity representative of the phase difference between said samples, a voltage tunable oscillator connected to the input of said amplifier for determining the frequency of said amplifier, and means

for applying said control quantity to said oscillator for varying the phase and frequency of said oscillator in correspondence with said microwave signals.

3,021,491
FREQUENCY CONTROL APPARATUS FOR AN ATOMIC BEAM TUBE

Arthur Orenberg, Lexington, Mass., assignor to National Company, Inc., Melrose, Mass., a corporation of Massachusetts

Filed July 26, 1960, Ser. No. 45,447
6 Claims. (Cl. 331—3)



1. Frequency control apparatus for an atomic beam tube having a detector or the like, said apparatus comprising means for producing a standard radio frequency signal and applying it to said beam tube, means to produce a modulating signal for angle modulation of said radio frequency signal at a substantially fixed frequency, means coupled to the detector of said beam tube for selectively transmitting a second harmonic output signal from the detector having twice the frequency of said fixed frequency modulating signal, means to produce a first error signal which is selectively responsive to the magnitude of said second harmonic output signal, means coupled to the detector for selectively transmitting a fundamental output signal having the same frequency as said modulating signal, means to produce a second error signal which is selectively responsive to the component of the fundamental output signal which is in phase quadrature with respect to the modulating signal, means to vary the standard frequency throughout the operating frequency range of said beam tube, and means to disable said means to vary the standard frequency upon the occurrence of a first error signal of predetermined threshold value and the non-occurrence of said second error signal.

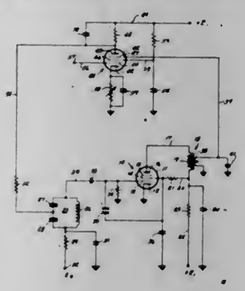
3,021,492
AUTOMATIC PHASE CONTROL SYSTEM

Bruce A. Kaufman, Los Angeles, Calif., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Continuation of application Ser. No. 765,902, Oct. 7, 1958. This application Apr. 11, 1961, Ser. No. 102,317
1 Claim. (Cl. 331—28)

A combined automatic phase and frequency control system for controlling the phase and stabilizing the frequency of the output signals of an oscillator, comprising:

an electron discharge comparator device of the gated-beam pentode type having cathode, first grid, second grid, third grid, and anode electrodes;
a by-passed cathode resistor connected between said cathode and a point of reference potential;
a source of space current having positive and negative terminals, the negative terminal of said source being connected to said point of reference potential;
first and second resistive connections between said positive terminal and said anode and second grid, respectively;
an oscillator tube having a cathode, a first grid, a second grid, and an anode;
a third resistive connection between said positive terminal and the second grid of said oscillator tube;
an oscillator output transformer having a primary connected between the anode of the oscillator tube and a point on the third resistive connection, said output transformer also including a secondary connected in series between the third grid of the comparator device and said point of reference potential for applying to said third grid the output signals of said oscillator;
a direct connection between the cathode of the oscillator device and said point of reference potential;
a grid resistor connected between the first grid of said oscillator tube and said point of reference potential;
a piezoelectric crystal connected between the first and second grids of said oscillator tube for stabilizing its frequency;
a first by-pass capacitor connected between the second grid of the oscillator tube and said point of reference potential;



means for applying reference signals to the first grid of said comparator device;
the combination of a coupling capacitor and a resonant tank circuit and a second by-pass capacitor connected in series and in the order named between the first grid of said oscillator and said point of reference potential, said resonant circuit comprising two parallel branches, one of said branches consisting of an inductor and the other of said branches consisting of a series pair of voltage-sensitive capacitors having a junction therebetween;
and a fourth resistive connection between the anode of said comparator device and said junction for coupling the output of said comparator device to said voltage-sensitive capacitors to control the phase of the output signals of said oscillator;
the first-mentioned by-passed resistor biasing said comparator device so that it is driven to cut-off by signals applied to either its first or third grid, whereby the comparator device produces in its output circuit phase error signals which are a function of the phase difference between the signals applied to its first and third grid electrodes.

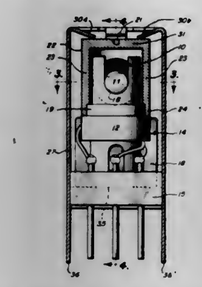
3,021,493
TUNING DEVICES

Charles Farquhar, Lombard, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware

Filed Aug. 22, 1960, Ser. No. 50,903
8 Claims. ((Cl. 333—78)

1. An intermediate-frequency transformer for use in miniaturized radios and the like comprising: a cylindrical

core of high-permeability ferrite material; primary and secondary windings encompassing said core; a support member of insulating material including a base portion and a pair of spaced vertically extending members for receiving and maintaining said cylindrical core with its axis horizontally oriented, said vertically extending members each having a cylindro-segmental external bearing surface intermediate said core and said base portion; a

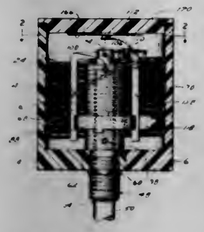


cup-shaped ferrite tuning member surrounding said core and comprising a ring portion and a lip portion having a cylindrical internal surface in slidable frictional engagement with said external bearing surfaces of said vertically extending members to establish a magnetic circuit including said ring portion and said core with a pair of air gaps at least one being adjustable by rotation of said tuning member.

3,021,494
MULTI-TURN POTENTIOMETER

Frank R. Perier and Angelo Di Bella, Tucson, Ariz., assignors to Acton Laboratories, Inc., Acton, Mass., a corporation of Massachusetts

Filed Aug. 5, 1960, Ser. No. 47,691
16 Claims. (Cl. 338—148)



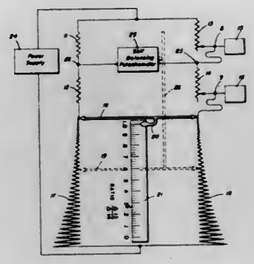
1. A multi-turn potentiometer comprising a cylindrical housing formed in two matching parts, each part comprising a semi-cylindrical side wall and an end wall, the end wall of one part having a semi-circular slot disposed in coaxial relation to said side wall of said one part, the end wall of the other part having a semi-circular projection disposed so as to fit in and fully occupy said slot when said two parts are placed together, said end wall of said other part also having a central opening, and means for supporting an operating shaft in said central opening.

3,021,495
RATIO-MEASURING CIRCUIT

Clarke C. Minter, 3136 Dumbarton Ave., Washington 7, D.C.

Filed Jan. 11, 1961, Ser. No. 82,078
2 Claims. (Cl. 338—176)

1. Ratio-measuring electrical circuit comprising two exactly similar combinations of resistances in parallel including in the first combination two equal fixed reference resistances in series, in the second combination two equal independently variable resistances in series for creating a potential difference between two fixed points, one lying between said reference resistances and the other lying between said independently variable resistances, a pair of

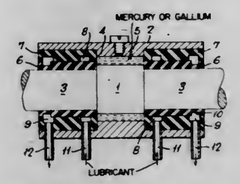


equal fixed calibrated resistances suitably connected in each of the two combinations, means for cross-connecting at similar calibrated points exactly equal portions of said equal fixed calibrated resistances to reduce to zero any potential difference between said two fixed points, power supply means for energizing the circuit and a scale suitably calibrated to indicate the desired ratio.

3,021,496
LIQUID ELECTRICAL CONNECTIONS BETWEEN RELATIVELY ROTATING ELECTRICAL CONDUCTORS

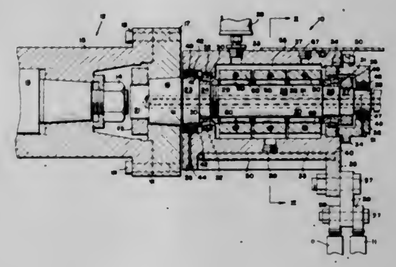
Harold Frederick Kenyon, Reading, England, assignor to Metropolitan-Vickers Electrical Company Limited, London, England, a British company

Filed Mar. 27, 1959, Ser. No. 802,444
Claims priority, application Great Britain Mar. 31, 1958
3 Claims. (Cl. 339—5)



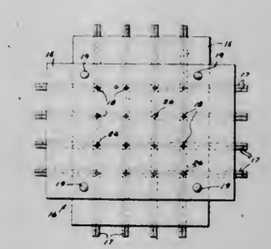
1. An electrical connection between relatively rotating inner and outer conductors, comprising surfaces defining an annular channel between said conductors, a liquid metal filling to said annular channel providing a continuous electrical connection between said conductors, a mechanical bearing for the rotating conductors on each side respectively of the annular channel, said bearings having co-acting surfaces of a material not wetted by the liquid metal with a small clearance so as to act as a liquid metal seal, surfaces defining an inlet lubricant channel around each of said bearings, surfaces defining an outlet lubricant channel around each of said bearings, the inlet lubricant channels being located between the liquid metal channel and the respective outlet lubricant channel, means for supplying lubricant to each inlet channel whereby said lubricant will flow axially along said co-acting surfaces towards the respective outlet channels, and means for draining the lubricant from each said outlet channel.

3,021,497
LOW LOSS ANTI-FRICTION CURRENT TRANSFER MEANS FOR ROTATING DEVICES
Joseph J. Riley, Warren, Ohio, assignor to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio
Filed Sept. 18, 1959, Ser. No. 840,848
11 Claims. (Cl. 339—5)



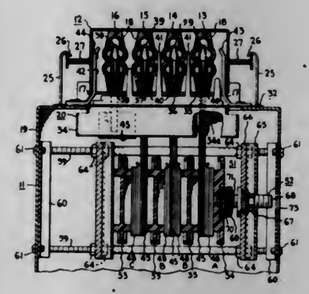
6. A rotary current transfer device for carrying heavy duty electrical currents comprising a current conductive housing, a current conductive spindle, means journaling said spindle in said housing, said spindle having a contact portion, a plurality of elongated current conductive anti-friction rollers encircling said contact portion, a plurality of circumferentially positioned and circumferentially spaced current conductive roller cage portions encircling said spindle and said rollers, means for transferring current from said housing to said roller cage portions, and spring means engaging each of said roller cage portions intermediate the ends thereof for radially urging the same into electrical contact with said rollers and towards said spindle.

3,021,498
UNIVERSAL CIRCUIT BOARD
Rudolph Spillar, Cicero, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 10, 1959, Ser. No. 792,306
4 Claims. (Cl. 339—18)



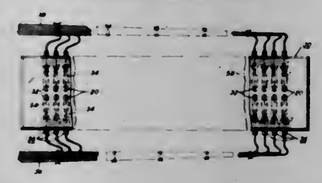
3. A universal circuit assembly comprising a plurality of stacked insulator boards, pairs of malleable conductors embedded in individual insulator boards in spaced relationship, and electrically conductive pins forced through said insulator boards and through and between said pairs of malleable conductors to plastically deform said conductors for electrically interconnecting said embedded conductors of adjacent insulator boards and mechanically interlocking said boards.

3,021,499
BUSWAY PLUG UNITS
Salvatore A. Rascati, Wallingford, Conn., assignor to General Electric Company, a corporation of New York
Filed July 21, 1959, Ser. No. 828,535
7 Claims. (Cl. 339—22)



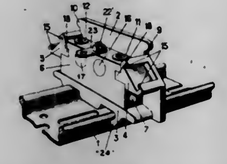
1. A busway plug unit comprising: a sheet metal enclosure; a plurality of electric conductors within the enclosure, each of said conductors having a flat contact area disposed in parallel spaced relation with respect to flat contact areas of the other conductors; all of the contact areas being in substantial alignment in a row; a base member detachably mounted on the enclosure, said base member including a plurality of spaced conducting elements extending from within to without the enclosure, said conducting elements having external ends disposed outside the enclosure for plug-in connections to bus bars of a busway and having internal ends located inside the enclosure, each of said internal ends having a flat contact area disposed in overlapping electrically contacting engagement with the flat area of a different one of said conductors to provide a row of overlapped pairs of contact areas; and clamping means supported by the enclosure for exerting clamping pressure endwise on the row of contact areas to clamp all of the overlapped pairs of contact areas together simultaneously.

3,021,500
CONNECTOR ASSEMBLY
Karl-Heinz H. Pohl, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 22, 1959, Ser. No. 841,539
14 Claims. (Cl. 339—75)



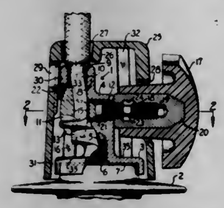
13. An electrical connector comprising a terminating member having a pair of arms and a pair of diverging legs for securing a conductor therebetween, said arms having lateral projections, a receptacle having an aperture therein for receiving said terminating member, said aperture including an enlarged portion, the positioning of said terminating member within said aperture in said receptacle moving and holding said legs together in a conductor securing relationship, means positionable between said arms of said terminating member for spreading said arms apart to move said lateral projections into said enlarged portion, said means spreading said arms apart when said terminating member is positioned within said aperture in said receptacle, said arms when spread apart holding said terminating member in said receptacle, and thereby holding said legs in a conductor securing relationship.

3,021,501
REMOVABLE INSULATING BASE FOR A METALLIC JUNCTION BLOCK FOR CABLES
Lucien Blanchet, 35 Rue du Cinq Mars, Colombes (Seine), France
Filed Dec. 14, 1960, Ser. No. 75,839
Claims priority, application France Dec. 21, 1959
5 Claims. (Cl. 339—198)



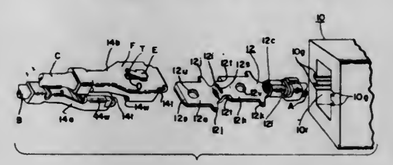
1. In combination, a metallic junction block of the type provided with sockets for receiving the ends of conductors and threaded passageways intersecting said sockets, said passageways being adapted to receive screws for clamping the ends of said conductors to said block, and an insulating support for said block, said support being made of a resilient insulating material and comprising a vertical plate dimensioned to shield one side of said block and a plurality of projections extending from one side of said plate, said junction block being provided with openings mating with and receiving said projections, the peripheries of said openings intersecting the peripheries of said threaded passageways, so that when screws are screwed into said passageways, the threads thereon cut into said projections and the resilient material thereof frictionally grips said screws, so as to resist withdrawal of either said screws or said projections from said block.

3,021,502
TERMINAL CONNECTOR AND GUARD ASSEMBLY
Eugene J. Lehman, Zanesville, Ohio, assignor to McGraw-Edison Company, a corporation of Delaware
Filed Oct. 9, 1956, Ser. No. 614,905
10 Claims. (Cl. 339—202)



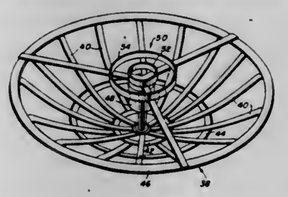
6. An electrical terminal connection and guard assembly comprising, a cap formed of an electrically conductive material and adapted to be secured to an electrical terminal, connecting means for removably securing a power lead to the cap, an insulating guard disposed around said cap and having an end wall and a side wall, a series of ribs disposed on the inner surface of the side wall of said guard and extending longitudinally from said end wall to the open end of said guard, said ribs being provided with shoulders disposed adjacent the open end of the guard and adapted to engage the cap and support the guard in spaced relation to the cap, and means disposed externally of the guard and extending through an opening in said guard for actuating said connecting means to selectively connect and disconnect said power lead to the cap.

3,021,503
TERMINAL MEANS
Joseph H. Hopkins, Warren, and Allan S. Van Slyke, Phalanx Station, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Aug. 13, 1959, Ser. No. 833,449, now Patent No. 2,989,723, dated June 20, 1961. Divided and this application Dec. 5, 1960, Ser. No. 79,101
4 Claims. (Cl. 339—213)



4. Electrical connector means for conductors, comprising, a housing of insulating material having a passage therethrough including two pairs of laterally-outwardly extending grooves opposite and parallel to each other, dual male-blade terminal means having first and second male-blade portions laterally-offset and longitudinally spaced relative to each other, a ferrule portion adapted to be crimped into engagement with an end of a conductor as well as in intermediate terminal portion interconnecting said first and second male-blade portions, and one pair of laterally-outwardly extending projections located transversely relative to a plane longitudinal in alignment with a longitudinal axis through said first and second male-blade portions and each adapted to fit into engagement with a groove in said housing relative to which said projections anchor and stabilize said dual male-blade terminal means.

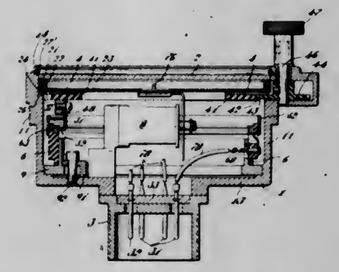
3,021,504
APPARATUS FOR CONTROLLING THE EFFECTIVE COMPRESSIBILITY OF A LIQUID
William J. Toulis, 2324 Palermo Drive, San Diego, Calif.
Filed July 2, 1956, Ser. No. 595,563
18 Claims. (Cl. 340—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



10. An apparatus for controlling the effective compressibility of a liquid while being submerged therein comprising in combination a plurality of compliant tubes each of which has a thin resilient wall, a hollow interior, and a substantially elliptical cross section, a vacuum sealed within the hollow interiors of said compliant tubes, means for supporting said compliant tubes in a predetermined skeletal lattice configuration, means connected to said

supporting means spacially disposed from said compliant tubes for timely compressing and decompressing same with pressure energy vibrating within the acoustical frequency spectrum and being compressed and decompressed by pressure energy received therefrom within said acoustical frequency spectrum, and means connected to said supporting means adapted for connecting same to a carrier vehicle while submerged within the aforesaid liquid.

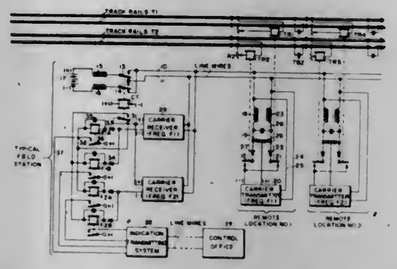
3,021,505
ELECTRICAL INDICATING INSTRUMENT
Roscoe A. Ammon, Manchester, N.H., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Filed Oct. 2, 1956, Ser. No. 613,558
11 Claims. (Cl. 340—27)



1. An indicating instrument comprising a case having an internal cylindrical wall and a window at one end, annular dial plate means mounted within said case to rotate about an axis through the case and carrying indicia visible through said window, said dial plate means being supported at its periphery on said wall, means extending exteriorly of the case and engaging the plate means at a location spaced from said axis for rotating the plate means, resistance means extending in curved form concentric with said axis and close to said wall, a wiper carried by and extending directly from a peripheral portion of said plate means and protruding in a direction inwardly and away from the window end of said case, said wiper being further positioned to slidingly engage said resistance and said opening formed by the inside diameter of said annular dial plate providing a space for accommodating an electrical meter positioned therein.

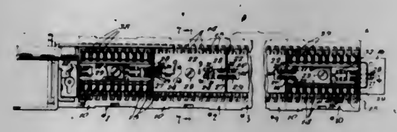
3,021,506
COMMUNICATION SYSTEM
Robert B. Haner, Scottsville, and Henry C. Sibley, Spencerport, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.
Filed Mar. 25, 1957, Ser. No. 648,189
5 Claims. (Cl. 340—147)

1. In a railway communication system, a pair of line wires connecting a receiving station to a remote location, a source of energy at said receiving station, pole changing means connected to said source of energy and said line wires at said receiving station effective to energize said line wires alternately with energy of opposite polarities, circuit means including a transmitter at said remote location operative when activated to apply energy of a distinctive frequency to said line wires, input circuit means for said transmitter including a pair of contacts, each being selectively operable to open and closed positions, said input circuit means including first rectifier circuit means and one of said contacts effective to render said transmitter active when energy of one polarity is applied to said line wires and also including second rectifier circuit means and the other of said contacts effective to render said transmitter active when energy of opposite polarity is applied to said line wires, a receiver having an input circuit connected across said line wires at said receiving location and being operative to provide output energy upon the reception of energy of said distinctive frequency over said line wires from said transmitter, a pair of electroresponsive means for said receiver, circuit means including said pair of electroresponsive means con-



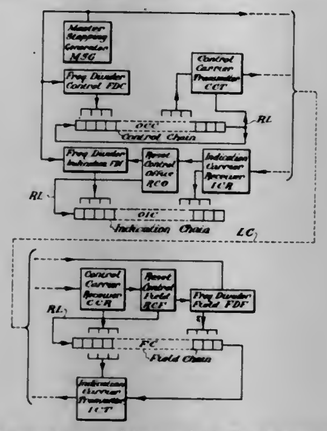
trolled by said pole changing means effective to apply the output energy of said receiver to operate one of said electroresponsive means when energy of one polarity is applied to said line wires and effective to apply the output energy of said receiver to operate the other of said electroresponsive means when energy of opposite polarity is applied to said line wires, whereby each electroresponsive means is alternately energized when a respectively associated contact at said remote location is closed.

3,021,507
SELECTORS FOR AUTOMATIC PHONOGRAPHS
Richard B. McFarland, Glenview, Ill., assignor, by mesne assignments, to The Seeburg Corporation, a corporation of Pennsylvania
Filed Aug. 20, 1956, Ser. No. 605,077
8 Claims. (Cl. 340—162)



1. For use in automatic phonographs having a record magazine and a movable selector member with a pair of electrically energizable brushes or the like mounted thereon, a toroid assembly including: a mounting frame; a plurality of contacts, one for each recording in the magazine, mounted on said frame and arranged in two rows which extend approximately from one end of said magazine to the other and are parallel thereto, the contacts in each row having the same spacing as that of the records in the magazine and said rows being spaced apart the same as said brushes for cooperation therewith; and a plurality of record-selecting toroids mounted on said frame, one for each recording in the magazine and each made of a material having a substantially rectangular hysteresis loop characteristic, said toroids being mounted in two rows each of which is substantially parallel to and in proximity to a corresponding one of said two rows of contacts, the toroids in each row also having approximately the same spacing as the records in the magazine.

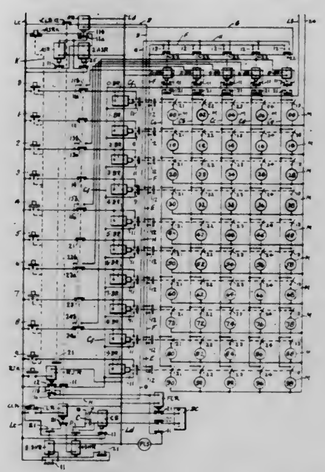
3,021,508
REMOTE CONTROL SYSTEMS
Edgar Ian White, London, England, assignor to Westinghouse Brake and Signal Company, Limited, London, England
Filed Mar. 20, 1959, Ser. No. 800,775
Claims priority, application Great Britain Mar. 24, 1958
8 Claims. (Cl. 340—163)



1. In a remote control system including a control office location and at least one remote station location connected by a communication channel, each location being provided with code transmitting and receiving apparatus controlled by counting chain arrangements adapted to be driven through similar sequential cycles of operation by the application of stepping pulses thereto, said transmitting and receiving apparatus being connected to said channel for the transmission and reception of code functions in each direction between said control and said remote locations, the combination comprising, a master pulse generator for generating a continuous sequence of pulses at a preselected frequency, stepping pulse generating means at each location controlled by said master pulse generator for generating a series of stepping pulses at a predetermined sub-multiple of said preselected frequency and having connections for supplying said stepping pulses to drive the associated counting chains through continuously recurring cycles of operation, a reset control means associated with each code transmitting apparatus and controlled by the corresponding counting chain for transmitting a unique reset pulse to the other location at the end of each cycle of operation of said corresponding counting chain arrangement, and synchronizing means associated with each code receiving apparatus and responsive to the reception of the reset pulse from the other location for shifting the phase of the next cycle of operation of the counting chain arrangement associated with that code receiving apparatus in comparison with the next cycle of operation of the counting chain arrangement associated with the other location code transmitting apparatus to compensate for the transmission delay times of said code functions over said communication channel.

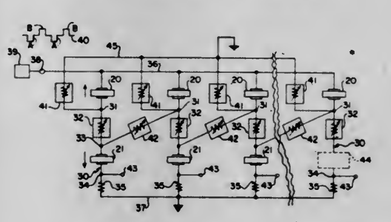
3,021,509
DOUBLE-DIGIT RELAY SELECTOR SYSTEM
Richard L. Swartz, Columbia, S.C., assignor to Universal Business Machines, Inc., Columbia, S.C., a corporation of South Carolina
Filed Dec. 24, 1958, Ser. No. 782,846
10 Claims. (Cl. 340—166)

1. A double-digit electrical selecting system comprising a plurality of normally open manually operated switches, a plurality of selectively energizable electrical devices, one terminal of each of said devices being connected together to one terminal of a power source, the other terminal of each of said devices being connected to one terminal of a normally open "block" switch respectively, selected groups of said "block" switches having their other terminals connected together to form a plurality



of separate junctions, a normally open "digit" switch between each junction and the other terminal of the power source, means operated by a first closure of one of said manually operated switches to close one "block" switch in each group, and means operable upon a subsequent closure of one of the said manually operated switches to close a selected one of the "digit" switches to energize a predetermined one of the electrical devices.

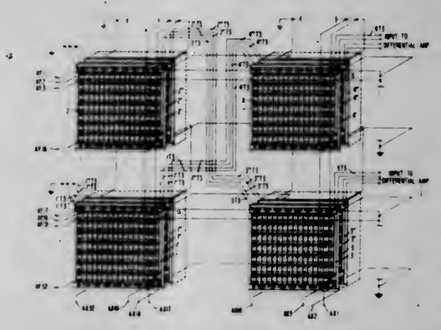
3,021,510
STORAGE DEVICES
John R. Anderson, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed June 11, 1958, Ser. No. 741,281
3 Claims. (Cl. 340—173.2)



1. A sequentially operable device comprising, in combination, a plurality of stages, each stage including a pair of bistable ferroelectric elements; first photoconductive switching means coupling the pair of ferroelectric elements in each stage; second photoconductive switching means coupling the ferroelectric elements of adjacent stages; input photoconductive switching means for each stage to enable information to be stored in the ferroelectric elements of the various stages of said device by

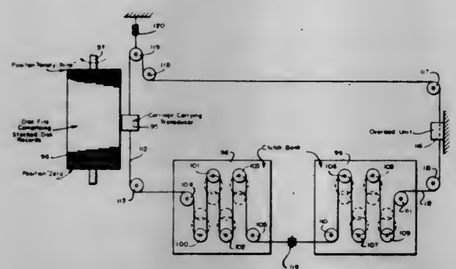
causing one of the ferroelectric elements of selected stages to be switched from one state to the other; signal-generating means for generating a shifting signal having a regular wave form which includes both positive and negative excursions and for applying the shifting signal to the plurality of stages; first control means operating in timed coincidence with one of said excursions of the wave form produced by the signal-generating means to illuminate the first photoconductive switching means simultaneously with said excursion and thus vary the impedance thereof to apply the shifting signal to a first combination of the ferroelectric elements; second control means operating in timed coincidence with the other of the excursions of the wave form produced by the signal-generating means to illuminate the second photoconductive means simultaneously with said excursion to vary the impedance thereof to apply the shifting signal to a second combination of the ferroelectric elements; and input control means to control the illumination of selected input photoconductive switching means for storage of information in selected stages, the sequentially operable device being thus capable of storing information by changing the state of a ferroelectric element of a given stage, and being capable of shifting said stored information from one stage of the device to the next by switching the ferroelectric elements from one state to the other in the various stages by application of signals from the signal generating means over paths provided by varying the impedance of the first and second photoconductive switching means.

3,021,511
MAGNETIC MEMORY SYSTEM
Albert W. Vinal, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,797
5 Claims. (Cl. 340—174)



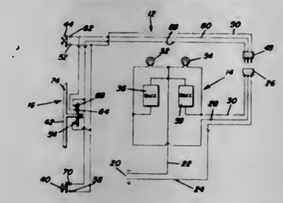
1. A digital information memory system including two reading cycles for every writing cycle and comprising many ferrite memory cells, each having a positive and negative remanent condition for defining a first and second binary digital condition; said memory cells being arranged along plural parallel planes with said memory cells along each plane being divided into a first, second, third and fourth group, each group having numerically the same number of said memory cells, each of said groups having a third winding which is effectively passed serially through the apertures of said memory cells within each group; said first group of memory cells in each plane corresponding to a binary bit within the first half of the orders of significance of a binary coded word and the second group of memory cells in each plane corresponding to a binary bit within the other half of the orders of significance of a binary coded word having its first half of orders of significance stored in said first group; said third group of memory cells in each plane corresponding to a binary bit within the first half of the orders of significance of a binary coded word; said fourth group of memory cells in each plane corresponding to a binary bit within the other half of the orders of significance of a binary coded word having its first half of orders of significance stored in said third group; plural X address conductors passing serially through the apertures of all the memory cells having an identical X coordinate; plural Y address conductors passing serially through all of the apertures of all of the memory cells having an identical Y coordinate; current driver means for coincidentally passing an address current pulse having a first polarity during the writing cycle and the other polarity during the two reading cycles through both the selected X and Y coordinate conductors passing through one of said memory cells within one of said groups in each parallel plane and half-addressing all of said memory cells having the same Y coordinate; the total flux change within each of said memory cells to which both of said selected X and Y coordinate conductors pass being sufficient to drive each of said memory cells to the magnetic remanent condition corresponding to the first polarity during said writing cycle and to the other magnetic remanent condition corresponding to the other polarity during said two reading cycles; the flux changes within said memory cells being sufficient to drive half-address voltages during said reading and writing cycles within said corresponding third winding without permanently changing its magnetic remanent condition; said first, second, third and fourth groups of memory cells being arranged physically with respect to one another so that when said third winding of said second group of memory cells is connected in series to said third winding of said third group of memory cells and said third winding of said first group of memory cells is connected in series with said third winding of said fourth group of memory cells, an equal total half-address voltage is induced in each; a differential means having one input serially connected to said serially connected third windings of said first and second groups and the other input connected to the serial connection of the third winding of said second and third groups for deriving an output voltage commensurate with the change in magnetic remanent condition of the coincidentally addressed memory cell during said two reading cycles; a first reading storage means connected to receive an output voltage commensurate with the change in magnetic remanent condition of the coincidentally addressed memory cell in said first or third groups during said first reading cycle; a second reading storage means connected to receive an output voltage commensurate with the change in magnetic remanent condition of the coincidentally address memory cell in said second or fourth groups during said second reading cycle; a first inhibit current driver connected to the series connection of said third winding of said second and third groups for deriving, in response to the binary condition of said first read storage means, a current pulse equal in magnitude and opposite in polarity to the current addressing pulse derived by said addressing current driver during said writing cycle in accordance with the binary condition it is desired to store in said second and third groups of memory cells, a second inhibit current driver connected to the series connection of said third winding of said first and fourth groups for deriving, in response to said second read storage means, a current pulse equal in magnitude and opposite in polarity to the current addressing pulse derived by said addressing current driver during said writing cycle in accordance with the binary condition it is desired to store in said first and fourth groups of memory cells.

3,021,512
SELECTOR MECHANISMS
Herbert Frazer Welsh and Norman J. Appleton, Philadelphia, and Morton Silverberg, Elkins Park, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 27, 1956, Ser. No. 581,235
23 Claims. (Cl. 340—174.1)



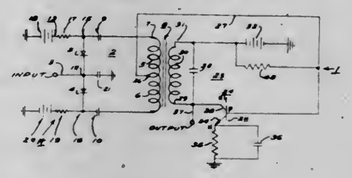
1. In a positioning mechanism, a first movable body, means for moving said body in a first reference direction, a second movable body carried by said first body, selector means for moving said second body in a second reference direction substantially orthogonal to said first reference direction, said selector means comprising a cable coupled at one of its ends to said first body and coupled at the other of its ends to said second body so that motion of said first body in said first reference direction does not cause motion of said second body in said second reference direction, a plurality of non-displaceable idler pulleys adjacent said cable for establishing a reference location of said cable, and a plurality of signal responsive actuators coupled to said cable for selectively moving portions of said cable through predetermined displacements with respect to said idler pulleys to thereby move said second body in said second reference direction.

3,021,513
SIGNAL FOR WATER SKIER
Raymond D. Lankey, 630 Chautauqua St., Pittsburgh 14, Pa.
Filed Jan. 27, 1959, Ser. No. 789,412
3 Claims. (Cl. 340—213)



1. A signal combination for a skier being towed by a tow line behind a power driven vehicle to provide a communication between said skier and an operator of said vehicle located therein comprising a handle connected to said tow line and adapted to be grasped by said skier, an electrical circuit including a source of electrical power, a left turn electrically operative signal producing means mounted upon said vehicle, a right turn electrically operative signal producing means mounted on said vehicle, both said signal producing means being connected in parallel to said source, said left turn signal producing means generating a first audible signal distinguishable from a second audible signal generated by said right turn signal producing means, a right turn signal switch and a left turn signal switch carried by said handle and operatively connected to current carrying conductors extending from said signal producing means, each of said right hand and left hand switches being normally open and adapted to be selectively closed by said skier, a master control switch mounted upon said handle and connected to said conductors extending from said signal producing means to operate both said signal producing means simultaneously, said master control switch being normally closed to energize both said signal producing means and adapted to be held open by said skier when grasping said handle.

3,021,514
VOLTAGE COMPARATOR
Lawrence J. Regis and William E. Richeson, Jr., Fort Wayne, Ind., assignors to International Telephone and Telegraph Corporation
Filed Mar. 27, 1958, Ser. No. 724,398
10 Claims. (Cl. 340—248)
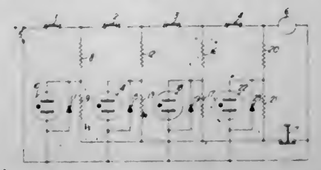


1. A voltage comparator circuit comprising: a test voltage input circuit for connection to the voltage to be compared; two reference voltage input circuits respectively including reference voltage sources equally above and below the nominal test input voltage; regenerative feedback oscillator means including a feedback circuit; and a voltage-deviation sensing circuit having two branches respectively coupling said reference voltage input circuits to said test voltage input circuit for providing a positive feedback voltage in one of said branches responsive to deviation of the test voltage in one direction from the mid potential between the reference voltages and a negative feedback voltage in the other of said branches responsive to deviation of the test voltage in the other direction from the mid-potential between the reference voltages; said oscillator feedback circuit having two branches respectively coupled to said sensing circuit branches thereby providing two feedback paths for said feedback voltages respectively so that deviation of said test voltage in one direction from said mid potential provides said positive feedback voltage in one said feedback path to cause said oscillator means to oscillate and deviation of said test voltage in the opposite direction from said mid potential provides said negative feedback voltage in the other said feedback path to block said oscillator means against oscillation.

3,021,515
FAULT INDICATOR
Edward H. Christian, Milwaukee, and Eugene C. Ureda, West Allis, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 27, 1957, Ser. No. 699,393
9 Claims. (Cl. 340—253)

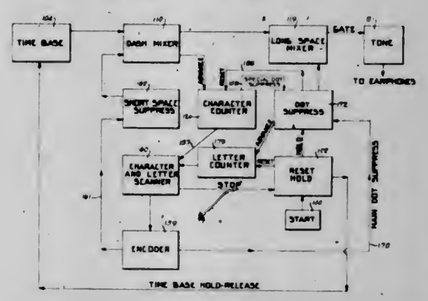
8. In a protective system having in order a first terminal connected to a power source, a first switch, the winding of an electroresponsive device and a second terminal connected to a power source, each in series circuit with the other, indicator means responsive to the condition of said switch comprising impedance means, means normally connecting one end of said impedance means to the side of said first switch that is connected to a first end of said winding and normally connecting the other end of said impedance means a second end of said wind-

ing to produce a voltage across said impedance which corresponds to the voltage across said winding, a two element glow tube, means connecting the elements of said tube across a portion of said impedance means to pick off a voltage in excess of that required to maintain conduction through said tube and less than the voltage required to initiate conduction through the tube, a reset switch in



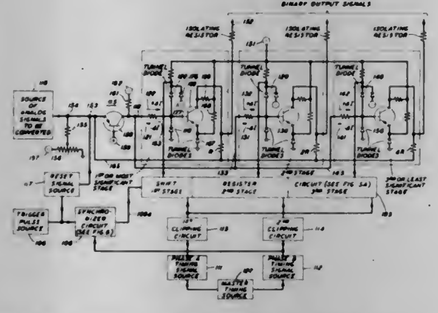
circuit with said impedance means to place said source voltage across said elements to initiate conduction through said tube, rectifier means in parallel circuit with said glow tube to present a high impedance to the normal voltage across said tube and a low impedance to the induced voltage resulting from an interruption of the current flowing in said winding.

3,021,516
AUTOMATIC ELECTRONIC SIGNAL KEYER
Theodore S. Spitz, Bronx, N.Y., and Charles F. Zahner, Clifton, and Ralph L. Samson, Wyckoff, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 23, 1957, Ser. No. 685,492
20 Claims. (Cl. 340—345)



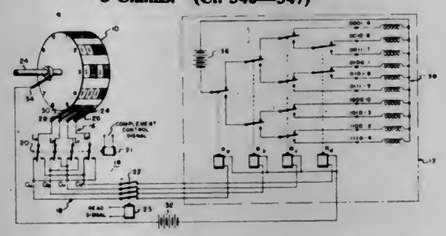
1. Apparatus for keying a signal generator for transmission of a station-identification call-letter sequence in Morse code, comprising square wave generating means for producing alternately a dot pulse and a short space pulse of like predetermined durations and opposite polarities, dash inserting pulse mixing means having an input connected to said square wave generating means, long space inserting pulse mixing means having an input connected to an output of said dash inserting pulse mixing means and having an output connected to said signal generator, a plurality of multi-wafer-multi-position switches each settable in its positions to encode at a set of contacts, comprising one contact in each of its wafers for any given desired letter in the alphabet, characters of the selected letter, means providing a dash output circuit for switch contacts encoding a required dash and means providing a long space output circuit for switch contacts encoding a long space, character counter means advanceable responsive to an output of said dash inserting pulse mixing means and adapted to provide at a plurality of outputs thereof sequentially the character count pulses of a selected letter, commutator means connecting said counter outputs respectively to the contacts of said selected set of one switch, dot bridging pulse generating means responsive to arrival of a dash count pulse at said dash output circuit for delivering to an input of said dash inserting pulse mixing means a pulse bridging two consecutive delivered dot pulses thereby to effect transmission of a dash to said signal generator, and first, second, and third distinct means each responsive to arrival of a long space count pulse at said space output circuit for performing respectively the three functions of delivering to said long space pulse mixing means a pulse bridging two consecutive short space pulses thereby to effect transmission of a long space to said signal generator, of resetting said character counter means to readiness for the sequence of counts for the following letter, and of advancing said commutator means to connect the outputs of said character counter means respectively to the contact of the set of said following letter.

3,021,517
ANALOG-TO-DIGITAL CONVERTER
Reginald A. Kaenel, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 22, 1960, Ser. No. 51,017
16 Claims. (Cl. 340—347)



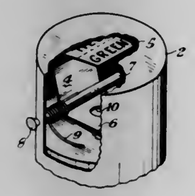
12. In combination in an analog-to-digital converter stage, two negative resistance diodes of the voltage-controlled type connected in series-aiding, summing amplifier means directly connected to the midpoint of said diodes, and shift register means connected in parallel with said series-aiding diodes.

3,021,518
COMPLEMENTING APPARATUS
Merwin Kilman, Glen Head, and Seymour Kass, Syosset, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 709,872
8 Claims. (Cl. 340—347)



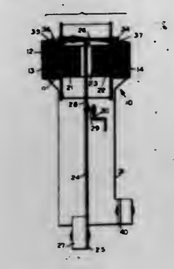
7. Apparatus for 9's complementing comprising a source of representations of decimal numerals in the form of an *n*-bit binary code wherein *n* is at least 4 and the digits have such a positional relation that an interchange with each other of positions of at least some of the digits within a representation of a numeral in a uniform interchange pattern applicable to the representations of all the sets of 9's complementary numerals will yield the representation of a 9's complement of the numeral originally represented, transmission means having *n* input and *n* output channels, the input channels being coupled to said source, utilization means coupled to said output channels, two-mode coupling means between said input and output channels, which in one mode supplies the output channels with a representation in said code carried by the input channels, and in the other mode supplies the output channels with a representation in said code of the 9's complement of the numeral whose representation is carried by the input channels, said coupling means comprising a two-mode switch having *n* input terminals connected to said input channels and *n* output terminals connected to said output channels, said input terminals being electrically isolated from each other, in one mode each input terminal being connected solely to a different output terminal in accordance with the pattern of the input to provide an output terminal array similar to the input terminal array, in the other mode each input terminal being connected solely to a different output terminal in accordance with said interchange pattern to provide an output terminal array differing from the input terminal array by said interchange pattern, and means for selectively operating said switch in either of said modes.

3,021,519
RELAY ENERGIZATION INDICATOR
Edward G. McLaughlin, Eastmont, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1958, Ser. No. 779,888
8 Claims. (Cl. 340—373)



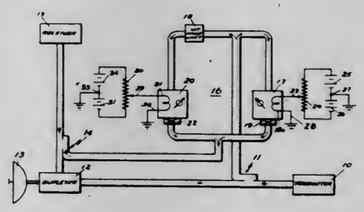
8. A relay energization indicator for determining the energized or deenergized state of an electromagnetic relay of the type having an external magnetic field when energized which extends beyond the outer casing of said relay, comprising, in combination, a housing adapted for attachment to the casing of said relay; an indicating element pivotally mounted within said housing and having a first and a second position, first and second indicia on said indicating element, an aperture in said housing adapted to display one or the other of said indicia according as said indicating element is in its first or second position respectively, and a spring with one end thereof connected to said indicator and having an opposite end positioned to engage a portion of the casing of said relay, when said housing is attached thereto, to resiliently bias said indicator to its first position, said indicator being attracted to its second position when said relay is energized.

3,021,520
ELECTRIC SIGNALING DEVICE
Leo L. Weber, Logansport, Ind., assignor to Essex Wire Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Dec. 12, 1960, Ser. No. 75,276
3 Claims. (Cl. 340—384)



2. An electric signaling device comprising, in combination: a magnetic core including two pairs of cooperating poles; an energizing coil for said core; a vibratory reed of magnetic material having a predetermined natural frequency of vibration; said reed being mounted with a free end positioned intermediate a first pair of said poles whereby energization of said winding will drive said reed; normally open electric contact means associated with said reed and being alternately opened and closed upon vibration of said reed whereby said contact means may be closed when electrical energy at said predetermined frequency is applied to said coil; a magnetic clapper for producing an audible signal; said clapper being mounted adjacent the second pair of said poles and being vibrated in accordance with flux pulsations of said core when said coil is energized with power considerably in excess of that required for driving said reed; a magnetic armature mounted adjacent said first pair of poles and movable from a normal position to an attracted position whenever said coil is energized with power considerably in excess of that required for driving said reed; said armature having a notch into which said free end of the reed moves when said armature moves to its attracted position to limit the amplitude of vibration of said reed whereby said electric contact means are held open; and spring means biasing said armature to said normal position.

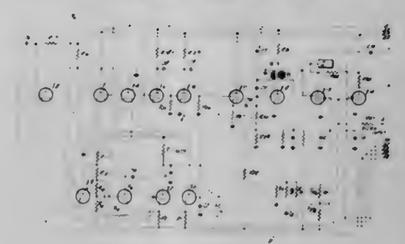
3,021,521
FEED-THROUGH NULLING SYSTEMS
William R. Hutchins, Lexington, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Nov. 30, 1955, Ser. No. 549,916
9 Claims. (Cl. 343—5)
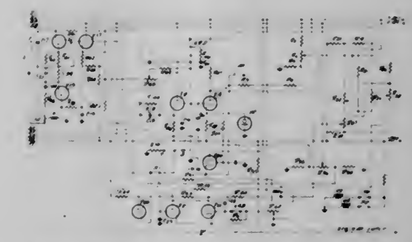


1. In combination, a transmitter for producing an output signal cooperating with a receiver, means for feeding a feed-through signal derived from said output signal, means for continuously sampling a portion of said out-

put signal and producing a first signal in phase with said output signal and a second signal in phase quadrature with said output signal, means for feeding said first signal through a first gyrator and said second signal through a second gyrator to provide a correction signal from the outputs of said first and second gyrators, which correction signal is equal in magnitude and opposite in phase to said feed-through signal, and means for combining said correction signal with said feed-through signal in order to cancel said feed-through signal fed to said receiver.

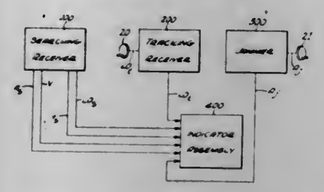
3,021,522
RADAR RANGE SEARCH SYSTEM
Joseph P. Gleason, Encino, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 15, 1953, Ser. No. 380,379
3 Claims. (Cl. 343—7.3)





1. In a radar range unit having a transmitter that generates periodic outgoing pulses and a receiver that detects incoming echo pulses a range search circuit comprising a sweep circuit having a relatively high sweep frequency, said sweep circuit being synchronized with the periodic outgoing pulses of the transmitter; a capacitor element; a charging circuit for the capacitor element; a voltage source; a resistor divider network connected across said voltage source; a diode having a cathode which is coupled to the capacitor element and an anode which is coupled to the resistor divider network; a multivibrator circuit which includes a normally conducting and a normally cutoff electron tube, the plate circuit of the normally conducting tube also being coupled to the resistor divider network; means responsive to the presence of a predetermined maximum potential across the capacitor element for firing the normally cutoff tube of the multivibrator, cutting off the normally conducting tube of the multivibrator and raising the potential of the anode of the diode such that the capacitor element is periodically discharged a predetermined amount at a relatively low frequency rate; and means responsive when the output potential of the relatively high frequency sweep circuit is substantially equal to the relatively low frequency changing potential across the capacitor element for conditioning the receiver for receipt of an incoming echo pulse.

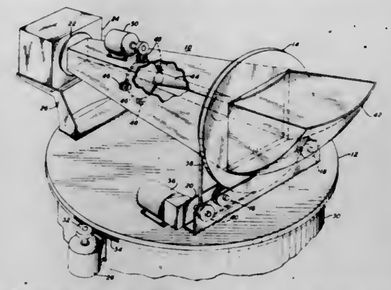
3,021,523
SYSTEM FOR COUNTERMEASURES
Donovan C. Davis, Pasadena, and Paul M. Brown, East Whittier, Calif., assignors to Gilfillan Bros., Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 19, 1956, Ser. No. 611,809
4 Claims. (Cl. 343—18)



1. In a system for countermeasures including a searching receiver having a directional antenna and means for producing first and second output signals with amplitudes respectively changing in proportion to the angular position of the searching receiver directional antenna and the frequency to which the searching receiver is tuned, one of said searching receiver output signals having a period short in comparison to that of the other, said system including at least a tracking receiver having an output signal representative of the frequency to which the tracking receiver is tuned and a jammer transmitter having a directional antenna and an output signal representative of the angular position of the jammer transmitter directional antenna, said system also including a cathode-ray type indicator having an evacuated envelope, an electron gun at one end of the envelope, a luminescent screen at the other end of the envelope, and first and second deflection means for deflecting the cathode-ray across the luminescent screen in two different directions, an arrangement for deflecting the cathode-ray of said indicator across the luminescent screen thereof in a manner to display indicia representative of the frequency and the position of an enemy source of radiant energy, to generate a strobe line representing the frequency to which the tracking receiver is tuned, and to generate a strobe line representing the angular position of the jammer transmitter directional antenna, said arrangement comprising: means for generating a fly-back gate approximately at the end of at least one period of said one searching receiver output signal, means for producing a sample signal proportional to the amplitude of said one searching receiver output signal at a time during said one period when the amplitude of said one searching receiver output signal is proportional to the magnitude of a corresponding one of said tracking receiver and jammer transmitter output signals, means for storing said sample signal until said fly-back gate is generated, means for applying only said one searching receiver output signal to said first cathode-ray deflection means between the times that said fly-back gate is generated and for applying only said stored sample signal to said first deflection means only during the time that said fly-back gate is generated, means for generating a sweep voltage having a period substantially equal to that of said fly-back gate, means for applying said sweep voltage to said second deflection means, said sweep voltage having a range sufficiently large to sweep the cathode-ray of said indicator over a substantial portion of the luminescent screen, means for additionally applying said other searching receiver output signal to said second deflection means, and means for gating the cathode-ray of said indicator on only when said searching receiver receives input signals, when said fly-back gate is generated, and when the amplitude of said other searching receiver output signal becomes proportional to the magnitude of the other of said corresponding tracking receiver and jammer transmitter output signals.

3,021,524
SCANNING HORN-REFLECTOR ANTENNA
Rudolf Kompfner, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 28, 1959, Ser. No. 816,514
2 Claims. (Cl. 343—781)

1. In a scanning antenna system, a horn-reflector antenna having a waveguide feed horn and a paraboloidal reflector spaced from said feed horn along the longitudinal axis of said feed horn and interconnected by a shield horn, and means for varying the radiation pattern of said antenna comprising an elongated body of dielectric material of maximum cross-section less than the corresponding cross-section of said shield horn, means supporting said body within said shield horn including a member of material substantially transparent to radio frequency energy mounted within said shield horn for rotation about the longitudinal axis of said feed horn, said member supporting said body to extend generally between said feed horn and said reflector with the longitudinal axis of the body intersecting that of said feed horn and

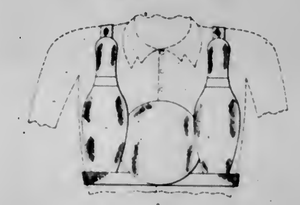


means external to said shield horn for rotating said member about its axis.

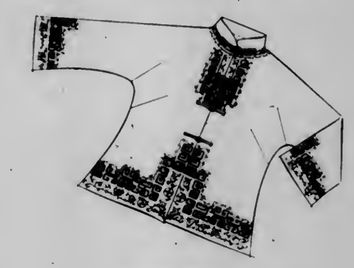
DESIGNS

FEBRUARY 13, 1962

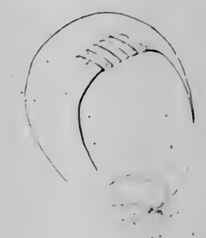
192,204
VEST
Lorena G. Bedient, Marshall, Wash. (Rte. 1, Spokane, Wash.), and Julia E. Mewes, 2511 N. Vista, Spokane, Wash., assignors of one-third to Ruth W. Dobson, Spokane, Wash.
Filed Feb. 24, 1961, Ser. No. 64,054
Term of patent 14 years
(Cl. D3—4)



192,205
JACKET OR SIMILAR ARTICLE
Kunisaku Ino, 347 Grant Ave., San Francisco, Calif.
Filed Aug. 21, 1961, Ser. No. 66,425
Term of patent 14 years
(Cl. D3—4)



192,206
HAIR NET
Ruthard Dietze, Helmstedt, Germany, assignor to Solida Textil- und Netzwaren-Manufaktur Ruthard Dietze K.G., Helmstedt, Germany
Filed Mar. 22, 1960, Ser. No. 59,922
Claims priority, application Germany Sept. 22, 1959
Term of patent 14 years
(Cl. D3—13)



192,207
SEWING CABINET
David Owens, Jr., 112 Manor Ave., Poland, Ohio
Filed Jan. 23, 1961, Ser. No. 63,659
Term of patent 14 years
(Cl. D3—19)



192,208
SHOE HEEL PROTECTOR
Ira Bradley and Branch B. Ray, both of 3710 Ruthelen St., Los Angeles, Calif.
Filed Aug. 7, 1961, Ser. No. 66,228
Term of patent 14 years
(Cl. D7—5)



192,209
BABY SHOE
Anthony Longo, Brooklyn, N.Y., assignor to U-Need-Em Specialty Co., Inc., New York, N.Y., a corporation of New York
Filed June 2, 1961, Ser. No. 65,431
Term of patent 14 years
(Cl. D7—7)



192,210
DISPOSABLE SANDAL
John T. Webster, 11131 Maple St., Los Alamitos, Calif., and Ernest L. Julian, 13231 Cannery St., Garden Grove, Calif.
Filed Oct. 3, 1961, Ser. No. 66,956
Term of patent 14 years
(Cl. D7—7)



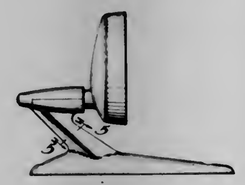
192,211
HANDLE AND LATCH COMBINATION FOR DOORS
Harry M. Riegelman, Rolling Hills, Calif., assignor to Security Aluminum Corporation, Compton, Calif., a corporation of California
Filed Aug. 16, 1961, Ser. No. 66,367
Term of patent 14 years
(Cl. D10—8)



192,212
CANOPY
Joseph Schlager, 9051 Hickory Place, Thornton, Colo., and John L. Edler, 1399 Scranton, Aurora, Colo.
Filed Mar. 22, 1960, Ser. No. 60,044
Term of patent 14 years
(Cl. D13—1)



192,213
REAR VIEW MIRROR
Robert K. Stortz, Brookfield, Wis., assignor to C. M. Hall Lamp Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 4, 1960, Ser. No. 60,019
Term of patent 14 years
(Cl. D14—6)



192,214
FENDER ORNAMENT FOR AN AUTOMOBILE OR THE LIKE
George W. Walker, Bloomfield Hills, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Nov. 25, 1960, Ser. No. 62,972
Term of patent 7 years
(Cl. D14—6)



192,215
CHAIR
Frederic Weinberg, 1514 Chew St., Philadelphia, Pa.
Filed June 15, 1961, Ser. No. 65,603
Term of patent 14 years
(Cl. D15—1)



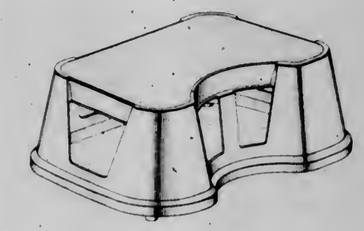
192,216
CHAIR
Frederic Weinberg, 1514 Chew St., Philadelphia, Pa.
Filed June 15, 1961, Ser. No. 65,604
Term of patent 14 years
(Cl. D15—1)



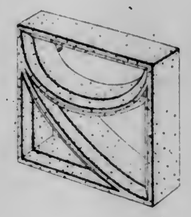
192,217
CHAIR
Frederic Weinberg, 1514 Chew St., Philadelphia, Pa.
Filed June 15, 1961, Ser. No. 65,605
Term of patent 14 years
(Cl. D15—1)



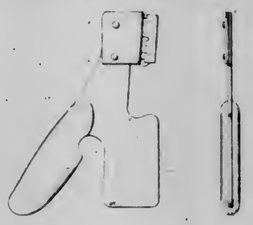
192,218
STEP STOOL
Fred O. Forsman, Thousand Oaks, and George H. McCutcheon, Los Angeles, Calif., assignors to Westland Plastics, Inc., Newbury Park, Calif., a corporation of California
Filed May 15, 1961, Ser. No. 65,160
Term of patent 14 years
(Cl. D15—8)



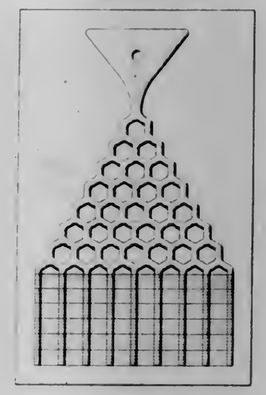
192,219
SCREEN WALL BUILDING BLOCK
Jozef Bilman, Los Angeles, Calif., assignor to General Concrete Products Company, Inc., Van Nuys, Calif., a corporation of California
Filed July 5, 1961, Ser. No. 65,813
Term of patent 14 years
(Cl. D18—2)



192,220
TRIMMER FOR WALL PAPER OR THE LIKE
Frank A. Armon, 718 Plymouth Ave. N., Rochester, N.Y.
Filed July 31, 1961, Ser. No. 66,120
Term of patent 14 years
(Cl. D22—3)



192,221
TEACHING DEVICE DEMONSTRATING BINOMIAL DISTRIBUTION CURVES
Hyman Ruchlis, Brooklyn, N.Y., and Edmund C. Berkeley, Newtonville, Mass., assignors to Science Materials Center
Filed Aug. 25, 1961, Ser. No. 66,494
Term of patent 14 years
(Cl. D25—1)

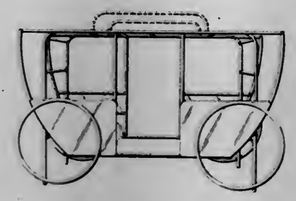


192,222
HAND REEL FOR STORING FISHING LINES OR THE LIKE
William A. Stewart, 1605 E. Center St., Pocatello, Idaho
Filed June 10, 1959, Ser. No. 56,307
Term of patent 14 years
(Cl. D31—4)

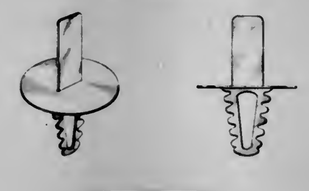
192,223
FISHING LURE
Wilbur A. Huntley, Minneapolis, Minn., assignor to National Expert Bait Company, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 21, 1960, Ser. No. 62,572
Term of patent 14 years
(Cl. D31—4)



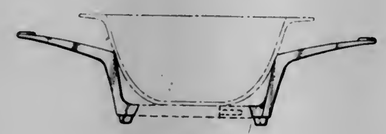
192,224
PLAYGROUND CLIMBER
Wayne Haubert, Mifflintown, Pa., assignor to The Mexico Forge, Inc., Mexico, Pa., a corporation of Pennsylvania
Filed June 12, 1961, Ser. No. 65,565
Term of patent 14 years
(Cl. D34—5)



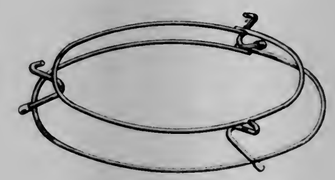
192,225
COMBINED HANDLE STICK AND CUP COVER FOR FROZEN CONFECTIONS OR THE LIKE
Nelson R. Coleman, 2301 Ravenview Road, Timonium, Md.
Filed May 24, 1961, Ser. No. 65,314
Term of patent 14 years
(Cl. D44—1)



192,226
DISH STAND OR SIMILAR ARTICLE
William M. Curtis, Painted Post, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Feb. 10, 1961, Ser. No. 63,894
Term of patent 14 years
(Cl. D44—10)



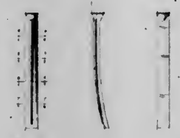
192,227
PLATE HOLDER
Ralph W. Theisen, 7315 N. Ridgeway Ave., Skokie, Ill.
Filed June 5, 1961, Ser. No. 65,446
Term of patent 7 years
(Cl. D44—10)



192,228
SERVING SPOON OR SIMILAR ARTICLE
Robert A. Eckersberg and James L. Hvale, Chicago, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 64,433
Term of patent 14 years
(Cl. D44—29)



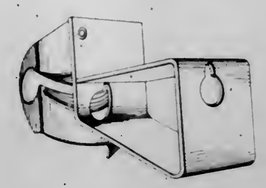
192,229
SERVING SPOON OR SIMILAR ARTICLE
Robert A. Eckersberg and James L. Hvale, Chicago, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Mar. 22, 1961, Ser. No. 64,434
Term of patent 14 years
(Cl. D44—29)



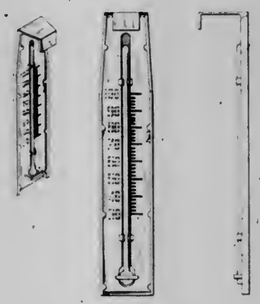
192,230
SPOON HOLDER OR SIMILAR ARTICLE
Adeline R. Zucca, CMR–14, Allen Ave., P.O. Box 497, Vineland, N.J.
Filed Aug. 31, 1961, Ser. No. 66,579
Term of patent 14 years
(Cl. D44—29)



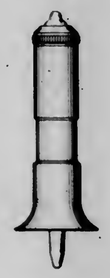
192,231
COMBINED WALER BRACKET AND TIE-ROD CLAMP FOR CONCRETE FORMS
Carl M. Jahn, 2640 St. Paul St., Denver, Colo.
Filed Dec. 7, 1959, Ser. No. 58,565
Term of patent 14 years
(Cl. D51—1)



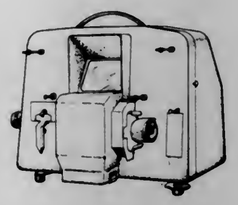
192,232
THERMOMETER
Allan H. Willinger, 56 Gail Drive, and Harding W. Willinger, 16 Stoney Run, both of New Rochelle, N.Y.
Filed Jan. 16, 1961, Ser. No. 63,568
Term of patent 14 years
(Cl. D52—7)



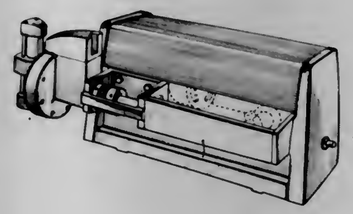
192,233
COOKING THERMOMETER FOR MEAT OR THE LIKE
Charles L. De Martin, Brighton, and Edwin J. Smith, Irondequoit, N.Y., assignors to Scott Thermo-Meter Corporation, Rochester, N.Y., a corporation of New York
Filed Apr. 21, 1961, Ser. No. 64,843
Term of patent 3½ years
(Cl. D52—7)



192,234
COMBINED MOTION PICTURE PROJECTOR AND FILM EDITOR
Morris Schwartz and William Castedello, both of Hultenius St., Plainville, Conn.
Filed May 4, 1960, Ser. No. 60,452
Term of patent 14 years
(Cl. D61—1)



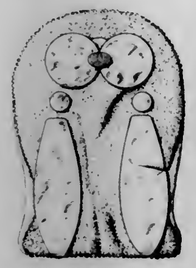
192,235
PUMP
Dennis L. Eldson, Barrington, Ill., assignor to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 18, 1960, Ser. No. 59,440
Term of patent 14 years
(Cl. D65—1)



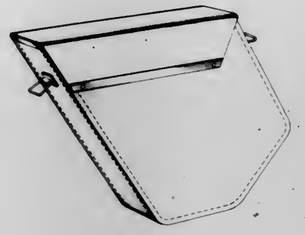
192,236
COMBINED DISPLAY AND MERCHANDISING RACK FOR LIPSTICKS OR THE LIKE
Rüdiger Behnke, Rhonstrasse 79, Frankfurt am Main, Germany
Filed June 9, 1961, Ser. No. 65,534
Term of patent 14 years
(Cl. D80—11)



192,237
POWDER PUFF OR THE LIKE
Del Schmidt, New York, N.Y., assignor to Cheramy, Inc., New York, N.Y.
Filed Mar. 1, 1961, Ser. No. 64,111
Term of patent 3½ years
(Cl. D86—10)



192,238
CARRYING CASE FOR A PHOTOGRAPHIC CAMERA OR SIMILAR ARTICLE
Allen R. Obergfell, Niles, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 23, 1961, Ser. No. 67,222
Term of patent 14 years
(Cl. D87—5)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 13TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Barker, Ray C. Excess breather oil recovery system. Re. 25,121, 2–13–62, Cl. 123—41.86.

Hope, Boneva L.: *See*—
Page, Rory E. Re. 25,122.

Hope, Charles L.: *See*—
Page, Rory E. Re. 25,122.

MacNeill, John H., to Soroban Engineering, Inc. High speed punch device. Re. 25,123, 2–13–62, Cl. 234—115.

Page, Beverly J.: *See*—
Page, Rory E. Re. 25,122.

Page, Rory E., ½ to C. L. and B. L. Hope, and ½ to R. E. and B. J. Page. Safety-first underwater breathing apparatus. Re. 25,122, 2–13–62, Cl. 128—142.

Soroban Engineering, Inc.: *See*—
MacNeill, John H. Re. 25,123.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Home Nursery Products Corp. Rose plant. 2,130, 2–13–62, Cl. 47—61.

Home Nursery Products Corp.: *See*—
Boerner, Eugene S. 2,130.

LIST OF DESIGN PATENTEES

Armon, Frank A. Trimmer for wall paper or the like. 192,220, 2–13–62, Cl. D22—3.

Bedient, Lorena G., and J. E. Mewes, ½ to R. W. Dobson. Vest. 192,204, 2–13–62, Cl. D3—4.

Behnke, Rüdiger: Combined display and merchandising rack for lipsticks or the like. 192,236, 2–13–62, Cl. D80—11.

Bell & Howell Co.: *See*—
Obergfell, Allen R. 192,238.

Berkeley, Edmund C.: *See*—
Ruchlis, Hyman, and Berkeley. 192,221.

Bilman, Jozef, to General Concrete Products Co., Inc. Screen wall building block. 192,219, 2–13–62, Cl. D18—2.

Bradley, Ira, and B. B. Ray. Shoe heel protector. 192,208, 2–13–62, Cl. D7—5.

Castedello, William: *See*—
Schwartz, Morris, and Castedello. 192,234.

Cheramy, Inc.: *See*—
Schmidt, Del. 192,237.

Coleman, Nelson R. Combined handle stick and cup cover for frozen confection or the like. 192,225, 2–13–62, Cl. D44—1.

Corning Glass Works: *See*—
Curtis, William M. 192,226.

Curtis, William M., to Corning Glass Works. Dish stand or similar article. 192,226, 2–13–62, Cl. D44—10.

De Martin, Charles L., and E. J. Smith, to Scott Thermo-Meter Corp. Cooking thermometer for meat or the like. 192,233, 2–13–62, Cl. D52—7.

Dietze, Ruthard, to Solida Textil- und Netzwaren-Manufaktur Ruthard Dietze K.G. Hair net. 192,206, 2–13–62, Cl. D3—13.

Dobson, Ruth W.: *See*—
Bedient, Lorena G., and Mewes. 192,204.

Eckersberg, Robert A., and J. L. Hvale, to Ekco Products Co. Serving spoon or similar article. 192,228, 2–13–62, Cl. D44—29.

Eckersberg, Robert A., and J. L. Hvale, to Ekco Products Co. Serving spoon or similar article. 192,229, 2–13–62, Cl. D44—29.

Ekco Products Co.: *See*—
Eckersberg, Robert A., and Hvale. 192,228.
Eckersberg, Robert A., and Hvale. 192,229.

Edler, John L.: *See*—
Schlager, Joseph, and Edler. 192,212.

Eidson, Dennis L., to Hills-McCanna Co. Pump. 192,235, 2–13–62, Cl. D65—1.

Ford Motor Co.: *See*—
Walker, George W. 192,214.

Forsman, Fred O., and G. H. McCutcheon, to Westland Plastics, Inc. Step stool. 192,218, 2–13–62, Cl. D15—8.

General Concrete Products Co., Inc.: *See*—
Bilman, Jozef. 192,219.

Hall, C. M., Lamp Co.: *See*—
Stortz, Robert K. 192,213.

Haubert, Wayne, to The Mexico Forge, Inc. Playground climber. 192,224, 2–13–62, Cl. D34—5.

Hills-McCanna Co.: *See*—
Eidson, Dennis L. 192,235.

Huntley, Wilbur A., to National Expert Bait Co., Inc. Fishing lure. 192,223, 2–13–62, Cl. D31—4.

Hvale, James L.: *See*—
Eckersberg, Robert A., and Hvale. 192,228.
Eckersberg, Robert A., and Hvale. 192,229.

Ino, Kunisaku. Jacket or similar article. 192,205, 2–13–62, Cl. D3—4.

Jahn, Carl M. Combined waler bracket and tie-rod clamp for concrete forms. 192,231, 2–13–62, Cl. D51—1.

Julian, Ernest L.: *See*—
Webster, John T., and Julian. 192,210.

Longo, Anthony, to U-Need-Em Specialty Co., Inc. Baby shoe. 192,209, 2–13–62, Cl. D7—7.

McCutcheon, George H.: *See*—
Forsman, Fred O., and McCutcheon. 192,218.

Mewes, Julia E.: *See*—
Bedient, Lorena G., and Mewes. 192,204.

Mexico Forge, Inc., The: *See*—
Haubert, Wayne. 192,224.

National Expert Bait Co., Inc.: *See*—
Huntley, Wilbur A. 192,223.

Obergfell, Allen R., to Bell & Howell Co. Carrying case for a photographic camera or similar article. 192,238, 2–13–62, Cl. D87—5.

Owens, David, Jr. Sewing cabinet. 192,207, 2–13–62, Cl. D3—19.

Ray, Branch B.: *See*—
Bradley, Ira, and Ray. 192,208.

Riegelman, Harry M., to Security Aluminum Corp. Handle and latch combination for doors. 192,211, 2–13–62, Cl. D10—8.

Ruchlis, Hyman, and E. C. Berkeley, to Science Materials Center. Teaching device demonstrating binominal distribution curves. 192,221, 2–13–62, Cl. D25—1.

Schlager, Joseph, and J. L. Edler. Canopy. 192,212, 2–13–62, Cl. D13—1.

Schmidt, Del, to Cheramy, Inc. Powder puff or the like. 192,237, 2–13–62, Cl. D86—10.

Schwartz, Morris, and W. Castedello. Combined motion picture projector and film editor. 192,234, 2–13–62, Cl. D61—1.

Science Materials Center: *See*—
Ruchlis, Hyman, and Berkeley. 192,221.

Scott Thermo-Meter Corp.: *See*—
De Martin, Charles L., and Smith. 192,233.

Security Aluminum Corp.: *See*—
Riegelman, Harry M. 192,211.

Smith, Edwin J.: *See*—
De Martin, Charles L., and Smith. 192,233.

Solida Textil- und Netzwaren-Manufaktur Ruthard Dietze K.G.: *See*—
Dietze, Ruthard. 192,206.

Stewart, William A. Hand reel for storing fishing lines or the like. 192,222, 2–13–62, Cl. D31—4.

Stortz, Robert K., to C. M. Hall Lamp Co. Rear view mirror. 192,213, 2–13–62, Cl. D14—6.

Theisen, Ralph W. Plate holder. 192,227, 2–13–62, Cl. D44—10.

U-Need-Em Specialty Co., Inc.: *See*—
Longo, Anthony. 192,209.

Walker, George W., to Ford Motor Co. Fender ornament for an automobile or the like. 192,214, 2–13–62, Cl. D14—6.

Webster, John T., and E. L. Julian. Disposable sandal. 192,210, 2–13–62, Cl. D7—7.

Weinberg, Frederic. Chair. 192,215, 2–13–62, Cl. D15—1.

Weinberg, Frederic. Chair. 192,216, 2–13–62, Cl. D15—1.

Weinberg, Frederic. Chair. 192,217, 2–13–62, Cl. D15—1.

Westland Plastics, Inc.: *See*—
Forsman, Fred O., and McCutcheon. 192,218.

Willinger, Allan H. and H. W. Thermometer. 192,232, 2–13–62, Cl. D52—7.

Willinger, Harding W.: *See*—
Willinger, Allan H. and H. W. 192,232.

Zucca, Adeline R. Spoon holder or similar article. 192,230, 2–13–62, Cl. D44—29.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 13TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Hawkins, Donald K. 3,020,650.
Schierhorst, Albert E. 3,020,651.

A.E.I.-John Thompson Nuclear Energy Co. Ltd.: *See*—
Fifield, Charles H. Q., Smith, and Robinson. 3,021,274.

A R & T Electronics, Inc.: *See*—
Mountjoy, Garrard, and Reid. 3,021,383.

Abbott Laboratories: *See*—
Bergman, Donald E., Denison, and Friedland. 3,021,261.
Smart, William D. 3,021,334.

Achilles Corp.: *See*—
Miller, Anthony P. 3,020,915.

Acker, Agnes R.: *See*—
Glenn, Edward R. 3,020,580.

Acker, John C.: *See*—
Glenn, Edward R. 3,020,580.

Acton Laboratories, Inc.: *See*—
Perler, Frank R., and Di'Bella. 3,021,494.

Adams, Francis V.: *See*—
Rowley, Russell A., Adams, and Gaffney. 3,021,069.

Admiral Plastics Corp.: *See*—
Fishman, Aaron H. 3,020,572.

Aerojet-General Corp.: *See*—
Schneiderman, Herman, Bendarzewski, and Barney. 3,021,241.

Aero-Motive Mfg. Co.: *See*—
Becker, Rodger F. 3,021,089.
Becker, Rodger F. 3,021,090.

Agfa Aktiengesellschaft: *See*—
Landbrecht, Franz. 3,020,815.
Seizinger, August. 3,021,158.

Airpax Electronics Inc.: *See*—
Nye, Dudley D., Jr. 3,021,480.

Aktiebolaget Electrolux: *See*—
Descarries, Raymond. 3,020,573.
Descarries, Raymond. 3,021,028.
Kogel, Wilhelm G. 3,020,725.

Aktiebolaget Svenska Metallverken: *See*—
Jonuson, Karl G. 3,021,128.

Aktiengesellschaft Brown, Boveri & Cie: *See*—
Wideroe, Rolf, and Sempert. 3,021,445.

Albertson, Robert V. and V. N., to Practical Mfg. Co. Parts washer. 3,020,918, 2–13–62, Cl. 134—98.

Albertson, Victor N.: *See*—
Albertson, Robert V. and V. N. 3,020,918.

Alderfer, Sterling Co.: *See*—
Alderfer, Sterling W., and Bodley. 3,020,587.

Alderfer, Sterling W., and H. D. Bodley, to Sterling Alderfer Co. Process and apparatus for the manufacture of sealing strips or gaskets. 3,020,587, 2–13–62, Cl. 18—4.

Alfoldi, Lajos: *See*—
Keilholz, Friedrich, and Alfoldi. 3,020,833.

All American Engineering Co.: *See*—
Daniels, Charles J., and Smith. 3,020,908.

Allegheny Ludlum Steel Corp.: *See*—
Henke, Robert H. 3,021,237.

Allen, John P. C.: *See*—
Ruland, Edward J., Jr., Allen, and Lobosco. 3,021,420.

Allen, George R., M. Marx, and M. J. Weiss, to American Cyanamid Co. Process for hydrolyzing 16,17 steroid acetonides. 3,021,347, 2–13–62, Cl. 260—397.45.

Allerdice, Joseph M., and T. W. Strickjin, Jr., to E. I. du Pont de Nemours and Co. Laboratory fume hood door. 3,021,130, 2–13–62, Cl. 268—12.

Allgauer Alpenmilch A.G.: *See*—
Luther, Justus. 3,020,689.

Alliance Machine Co., The: *See*—
Harry, Robert J. 3,021,169.

Allied Chemical Corp.: *See*—
Snider, Orvill E., Belden, Beuerman, and Seebohm. 3,021,326.

Allis-Chalmers Mfg. Co.: *See*—
Christian, Edward H., and Ureda. 3,021,515.
Goodwin, Edwin C., Jr. 3,021,400.
Perry, Elijah R., and Peek. 3,021,410.
Whitman, Carl G., and Swain. 3,021,412.

Allmanna Svenska Elektriska Aktiebolaget: *See*—
Engstrom, Gunnar P. 3,021,471.

Alloy Surfaces Co., Inc.: *See*—
Samuel, George A., Bell, Grosvenor, and Jackson. 3,021,231.

Altmann, Werner E., to Daimler-Benz Aktiengesellschaft. Selectively engageable transmission. 3,020,991, 2–13–62, Cl. 192—53.

American Air Filter Co., Inc.: *See*—
Hyatt, Philip L. 3,020,976.

American Can Co.: *See*—
Makowski, Alexander G. 3,020,594.
Pottle, Ralph K., and Elam. 3,021,047.
Pottle, Ralph K., and Elam. 3,021,048.

American Cyanamid Co.: *See*—
Allen, George R., Marx, and Weiss. 3,021,347.
Fox, Sidney, Blicharz, and Origoni. 3,021,346.
Groszos, Stephen J., and Scanley. 3,021,206.
Lindenfelser, Richard, Layman, and Klithau. 3,021,239.
Miller, Bernard. 3,021,352.
Miller, Mary. 3,021,269.

American Cyanamid Co.: *See*—Continued
Morin, Lucille T., and Matsuda. 3,021,328.
Morin, Lucille T., and Matsuda. 3,021,336.
Morin, Lucille T., and Matsuda. 3,021,337.
Petropoulos, John C. 3,021,362.
Petropoulos, John C., and Lederle. 3,021,363.
Rakowitz, David H. 3,021,298.
Saxon, Robert, and Suen. 3,021,295.
Scanley, Clyde S. 3,021,279.
Stauffenberg, Walter H. 3,021,257.
Suen, Tzeng J., and Schiller. 3,021,301.

American Enka Corp.: *See*—
Van Dijk, Pieter. 3,020,700.

American-Marietta Co., Stoner-Mudge Co. Division: *See*—
Laporta, Xavier V. 3,021,318.

American Radiator & Standard Sanitary Corp.: *See*—
Noakes, Thomas E. 3,021,108.

American Seal-Kap Corp. of Delaware: *See*—
Le Beau, Richard A. 3,020,984.
Soddy, Thomas C. 3,020,603.

American Telephone and Telegraph Co.: *See*—
Barnett, Cecil H., Large, and Pruden. 3,021,397.
Barnett, Cecil H., Large, and Pruden. 3,021,398.

Ames, O., Co.: *See*—
Eads, Harold O., and Robison. 3,021,176.

Ammon, Roscoe A., to Minneapolis-Honeywell Regulator Co. Electrical indicating instrument. 3,021,505, 2–13–62, Cl. 340—27.

Ammondson, Clayton J., to Union Carbide Corp. Compositions and films comprising polyethylene and N,N'-ethylene bis oleamide and process of producing same. 3,021,296, 2–13–62, Cl. 260—32.6.

Ampsco Corp.: *See*—
Potter, Frederick T. 3,020,671.

Anderson, Hattie T. and M. Self-tucking fitted sheet. 3,020,566, 2–13–62, Cl. 5—334.

Anderson, John L., to E. I. du Pont de Nemours and Co. 2-oxodioxolanes. 3,021,340, 2–13–62, Cl. 260—340.2.

Anderson, John L., to International Business Machines Corp. Superconductive shift registers. 3,021,439, 2–13–62, Cl. 307—88.5.

Anderson, John L., to International Business Machines Corp. Cryogenic circuit with output threshold varied by input current. 3,021,440, 2–13–62, Cl. 307—88.5.

Anderson, John R., to The National Cash Register Co. Storage devices. 3,021,510, 2–13–62, Cl. 340—173.2.

Anderson, Martin: *See*—
Anderson, Hattie T. and M. 3,020,566.

Andresen, Hilmar A., to Gits Bros. Mfg. Co. Oil cup device. 3,020,979, 2–13–62, Cl. 184—91.

Andrews, Steve, and F. C. Spraitzar, to United States Steel Corp. Apparatus for stenciliing pipe. 3,020,878, 2–13–62, Cl. 118—301.

Apco, Inc.: *See*—
Hill, James J. 3,021,035.

Apitz, Gerhard, to Heidenreich & Harbeck. Method for continuously generating bevel gears with straight teeth. 3,020,808, 2–13–62, Cl. 90—5.

Appell, George T., to Liberty Folder Co. Adjustable roller hanger for paper folding machines. 3,021,134, 2–13–62, Cl. 270—68.

Appleton, Norman J.: *See*—
Welsh, Herbert F., Appleton, and Silverberg. 3,021,512.

Arbogast, Duane J., and L. F. Jaseph, to Dover Corp. Constant flow valve assembly. 3,020,892, 2–13–62, Cl. 121—46.4.

Ardley, Stanley M., and J. A. Jones, to The Distillers Co. Ltd. Improved polystyrene composition containing vulcanized butadiene-styrene copolymer rubber. 3,021,300, 2–13–62, Cl. 260—45.5.

Arkell, Alfred, to Texaco Inc. Motor fuel containing an octane appreciator. 3,021,204, 2–13–62, Cl. 44—63.

Armco Steel Corp.: *See*—
Holmquist, John L. 3,020,962.

Armstrong Cork Co.: *See*—
Feigley, David A., Jr. 3,020,765.

Armstrong Patents Co. Ltd.: *See*—
Day, Alan R. A. 3,020,981.
Dickinson, Ronald S. 3,021,153.

Armstrong, Philip N.: *See*—
Hayes, Robert M., Nelson, Wiener, and Armstrong. 3,021,005.

Arnold, Edward R.: *See*—
Moore, Thomas M., and Arnold. 3,021,438.

Associated Spring Corp.: *See*—
Maker, James H. 3,021,129.

Atlantic Refining Co., The: *See*—
Doan, Robert B. 3,021,284.

Atomic Energy of Canada Ltd.: *See*—
Bayly, John G., and Stevens. 3,021,427.

Automatic Canteen Co. of America: *See*—
Thompson, Ernest H. 3,021,030.

Avco Corp.: *See*—
Kaufman, Bruce A. 3,021,492.

Ayers, John S.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,020,834.

Ayton, William R., W. H. Ginnings, and R. P. Hocking, to Belling & Lee, Ltd. Method and apparatus for slitting tubes. 3,020,636, 2–13–62, Cl. 29—533.

Augustin, Alex. Compass pencil clamp. 3,020,641, 2–13–62, Cl. 33—27.

Austin, Harry W., to Mine Safety Appliances Co. Helmet shell suspension with adjustable height sweat band. 3,020,551, 2–13–62, Cl. 2—3.

B.B. Chemical Co.: *See*—
Griswold, Stanley M. 3,021,240.

B.U.T.C.O.N. Sales Division (Proprietary) Ltd.: *See*—
Back, Hymie. 3,021,159.

Babayan, Vigen K.: *See*—
Knafo, Guy, Fuhrmann, Neesby, and Babayan. 3,021,324.

Babcock & Wilcox Co., The: *See*—
Durham, Edwin. 3,020,895.
Rowand, Will H. 3,020,894.

Babelay, Edwin F., to United States of America, Atomic Energy Commission. Flexible coupling. 3,020,736, 2–13–62, Cl. 64—8.

Back, Hymie, to B.U.T.C.O.N. Sales Division (Proprietary) Ltd. Improved means for connecting tubular, rod-like or other structural members. 3,021,159, 2–13–62, Cl. 287—54.

Badger Meter Mfg. Co.: *See*—
Kullmann, Donald J. 3,020,774.

Baer, Donald R., to E. I. du Pont de Nemours and Co. Triphenylmethane dyes. 3,021,344, 2–13–62, Cl. 260—393.

Bailey, Christopher E. G., to The Solartron Electronic Group Ltd. Servo systems. 3,021,071, 2–13–62, Cl. 235—180.

Baker, Donald H., and D. J. Kesselring, to Sperry Rand Corp. Mechanical damping apparatus for a pendent member. 3,020,980, 2–13–62, Cl. 188—1.

Baker, Ivan W.: *See*—
Roach, Erskine E., and Baker. 3,020,852.

Baker, William R., A. Bratenahl, and W. B. Kunkel, to United States of America, Atomic Energy Commission. Plasma heating and confining device. 3,021,272, 2–13–62, Cl. 204—193.2.

Balis, Charles B., to Frank D. Saylor & Son. Method of making plastic reinforced fabric and articles made thereby. 3,020,935, 2–13–62, Cl. 139—388.

Ballentine, William I., Jr., and J. W. Molden, to United States Steel Corp. Apparatus for making metal panels. 3,020,867, 2–13–62, Cl. 113—99.

Ballin, Gene, to Dosamatic Dropper Corp. Liquid dropper assembly with metering means. 3,020,938, 2–13–62, Cl. 141—24.

Barbieri, James: *See*—
Hoffmann, Henry, Jr., and Barbieri. 3,021,389.

Barenyi, Bela, to Daimler-Benz Aktiengesellschaft. All-purpose passenger car. 3,021,171, 2–13–62, Cl. 296—24.

Barnes, Oliver G. Apparatus for applying circumferential pressure on the periphery of a circular object. 3,020,831, 2–13–62, Cl. 100—232.

Barnett, Cecil H., W. V. K. Large, and H. M. Pruden; said Barnett assor. to American Telephone and Telegraph Co., said Large and said Pruden assors. to Bell Telephone Laboratories, Inc. Repeater for checking circuit continuity of a signaling system. 3,021,397, 2–13–62, Cl. 179—175.3.

Barnett, Cecil H., W. V. K. Large, and H. M. Pruden; said Barnett assor. to American Telephone and Telegraph Co., said Large and said Pruden assors. to Bell Telephone Laboratories, Inc. Continuous checking of circuit continuity of a signaling system. 3,021,398, 2–13–62, Cl. 179—175.3.

Barney, John D.: *See*—
Schneiderman, Herman, Bendarzewski, and Barney. 3,021,241.

Barrass, Richard A., to FMC Corp. Liquid-cooled cable for electric furnaces and connectors therefor. 3,021,380. 2–13–62, Cl. 174—15.

Barrett, Elliott P., to The Baugh Chemical Co. Sugar refining adsorbent and the production thereof. 3,021,287, 2–13–62 Cl. 252—421.

Barrow, William H. Ladder support for horizontal timber. 3,020,973, 2–13–62, Cl. 182—214.

Bauerlein, Carl C.: *See*—
Lund, James K., Bauerlein, and Janquart. 3,020,727

Baugh Chemical Co., The: *See*—
Barrett, Elliott P. 3,021,287.

Baumann, Hans D.: *See*—
Randall, Ross D., and Baumann. 3,020,925.

Bausch & Lomb Inc.: *See*—
Wallace, William T. 3,020,877.
Wallace, William T. 3,020,880.

Bayly, John G., and W. H. Stevens, to Atomic Energy of Canada Ltd. Light water analyser. 3,021,427, 2–13–62, Cl. 250—43.5.

Beach, Lennox F., to Sperry Rand Corp. Activated fin ship stabilizer. 3,020,869, 2–13–62, Cl. 114—126.

Beachner, Robert W.: *See*—
Thut, Paul J., and Beachner. 3,020,841.

Beal, Philip F., III, and R. W. Jackson, to The Upjohn Co. 14-dehydro- and 15-dehydro-11-oxygenated-progesterones. 3,021,327, 2–13–62, Cl. 260—239.55.

Beall, Richard W., Jr., ½ to L. H. Chandler. Battery cable make-up tool. 3,020,623, 2–13–62, Cl. 29—33.5.

Beaman Corp.: *See*—
Bransford, Ernest O., Jr. 3,020,604.
Bransford, Ernest O., Jr. 3,020,988.

Beaman Engineering Corp.: *See*—
Bransford, Ernest O., Jr. 3 020.604.
Bransford, Ernest O., Jr. 3,020,988.

Beasley, Joseph L.: *See*—
Polsky, Irving, and Beasley. 3,021,141.

Becker, Rodger F., to Aero-Motive Mfg. Co. Safety arm for cord reel. 3,021,089, 2–13–62, Cl. 242—107.3.

Becker, Rodger F., to Aero-Motive Mfg. Co. Signal lock. 3,021,090, 2–13–62, Cl. 242—107.7.

Beckman, Joel M., Jr., to National Broach & Machine Co. Apparatus for sorting and identifying sources of workpieces. 3,021,006, 2–13–62, Cl. 209—111.5.

Bedick, Robert, to Merit Associates, Inc. Swimming pool construction and related method. 3,020,560, 2–13–62, Cl. 4—172.

Beggs, Donald, J. Huebler, D. B. Sabin, J. C. Scarlett, and J. J. Turin, to Midland-Ross Corp. Convective heat transfer furnace and method. 3,021,236, 2–13–62, Cl. 148—13.

Belden, Reed H.: *See*—
Snider, Orvill E., Belden, Beuerman, and Seebohm. 3,021,326.

Bell Aerospace Corp.: *See*—
Moore, Wendell F. 3,021,095.

Bell Fabricating Co. Inc.: *See*—
Bocchino, Joseph J. 3,020,978.

Bell & Howell Co.: *See*—
Cox, Arthur, and Sandback. 3,020,804.
Fox, Merrill J. 3,021,136.
MacMillin, David M. 3,021,040.
Michaels, Bruno. 3,021,039.
Mueller, Arthur C. 3,020,814.

Bell Intercontinental Corp.: *See*—
Brandt, William E. 3,020,683.

Bell, Jerome V.: *See*—
Samuel, George A., Bell, Grosvenor, and Jackson. 3,021,231.

Bell Telephone Laboratories, Inc.: *See*—
Barnett, Cecil H., Large, and Pruden. 3,021,397.
Barnett, Cecil H., Large, and Pruden. 3,021,398.
Brown, Earl F. 3,021,384.
Dickieson, Alton C. 3,020,868.
Edson, Robert C. 3,021,488.
Grubbs, William J., Jr., Hines, and Varnerin. 3,021,439.
Jones, William C., and Ridinger. 3,021,436.
Kaenel, Reginald A. 3,021,517.
Kingsbury, Edwin F. 3,020,792.
Kompfner, Rudolf. 3,021,490.
Kompfner, Rudolf. 3,021,524.
Mallery, Paul. 3,021,070.
Mattke, Charles F., and Reynolds. 3,021,428.
Meacham, Larned A. 3,021,478.
Pohl, Karl-Heinz H. 3,021,500.

Belling & Lee, Ltd.: *See*—
Ayton, William R., Ginnings, and Hocking. 3,020,636.

Bendarzewski, Robert H.: *See*—
Schneiderman, Herman, Bendarzewski, and Barney. 3 021,241.

Bendix Corp., The: *See*—
Colt, Rutger B. 3,020,567.
Pickens, Robert A. 3,021,454.
Robinson, Arthur S. 3,021,072.
Williamson, Joseph R., and Billmeyer. 3,020,634.

Bendix-Westinghouse Automotive Air Brake Co.: *See*—
Fitch, Ellery R. 3,021,181.
Gresko, Raymond S. 3,021,177.

Benedict, Robert G., A. R. Jeanes, L. J. Wickerham, and S. P. Rogovin, to United States of America, Agriculture. Phosphomannan NRRL Y–2448. 3,021,323, 2–13–62, Cl. 260—234.

Bennett, Harvey E. Water ski tow line reel. 3,021,088, 2–13–62, Cl. 242—86.8.

Bentley, George P., and L. E. Dueger, to Sperry Rand Corp. Gyro caging apparatus. 3,020,769, 2–13–62, Cl. 74—5.1.

Berger, Donald E., and E. C. Miller, to Phillips Petroleum Co. Fractionation column control. 3,021,263, 2–13–62, Cl. 202—40.

Bergman, Donald E., F. W. Denison, Jr., and W. C. Friedland, to Abbott Laboratories. Culture process for gibberellic acid. 3,021,261, 2–13–62, Cl. 195—36.

Berthon, Lucien.: *See*—
Charpentier, Maurice, and Berthon. 3,020,586.

Berthon, Lucien, M. Levecque, and P. Piot, to Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey. Process and apparatus for the manufacture of fiber linings or mats. 3,020,585, 2–13–62, Cl. 18—2.5.

Bertin, Jean H., M. Kadosch, and F. M. L. Maunoury, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Control means of the flow of a fluid by another flow. 3,020,709, 2–13–62, Cl. 60—35.6.

Bertin, Jean H., and M. Kadosch, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Thrust spolling device for jet propulsion units. 3,020,713, 2–13–62, Cl. 60—35.54.

Bertsche, Ralph H., Jr.: *See*—
Redick, David C., Cameron, Bertsche, and Yahn. 3,020,771.

Beteiligungs-und Patentverwaltungsgesellschaft mit beschrankter Haftung: *See*—
Linden, Günter. 3,020,656.

Bethge, Walther, ½ to J. P. de Montmollin, and ½ to R. Gugger. Method of producing a durable mechanical bond between glass and another material. 3,021,243, 2–13–62, Cl. 156—272.

Bethlehem Steel Co.: *See*—
Mancke, Edgar B., Schmuk, and Temmel. 3,021,189.

Beuerman, Donald R.: *See*—
Snider, Orville E., Belden, Beuerman, and Seebohm. 3,021,326.

Beyer, Eugen. Magnetic recording apparatus with correction device. 3,021,395, 2–13–62, Cl. 179—100.2.

Beyerle, Peter J. Plumbing assembly. 3,021,103, 2–13–62, Cl. 248—57.

Beyer-Olsen, Knut, and O. Steffensen. Inflatable buoyant body having conical fastening member thereon. 3,020,669, 2–13–62, Cl. 43—43.1.

Berzins, Talivaldis, to E. I. du Pont de Nemours, and Co. Plating bath and process. 3,021,267, 2–13–62, Cl. 204—51.

Bicek, Edward J.: *See*—
Murray, Maurice J., and Bicek. 3,021,209.

Bielfeldt, Friedrich B.: *See*—
Breher, Rudolf, and Bielfeldt. 3,020,591.

Biermann, William A.: *See*—
Johnson, Roy W., and Biermann: 3,020,923.

Billmeyer, James G.: *See*—
Williamson, Joseph R., and Billmeyer. 3,020,634.

Binder, Karl, and C. W. Holm, deceased; by A. Holm, sole heir, to Wurttemberg Gaszahlerfabrik J. Braun & Co., G.m.b.H. Fuel consumption meter. 3,020,761, 2–13–62, Cl. 73—270.

Blanchet, Lucien. Removable insulating base for a metallic junction block for cables. 3,021,501, 2–13–62, Cl. 339—198.

Blank, Benjamin, and J. F. Kerwin, to Smith, Kline & French Laboratories. Substituted trifluoromethylthio- and trifluoromethoxyphenyl sulfonylureas. 3,021,368, 2–13–62, Cl. 260—553.

Blankenship, Ernest B., and H. A. Bowers, to Research Products Mfg. Co. Incinerator toilet. 3,020,559, 2–13–62, Cl. 4—131.

Blicharz, Mitchell S.: *See*—
Fox, Sidney, Blicharz, and Origoni. 3,021,346.

Blok, Lourens, to North American Philips Co., Inc. High-frequency furnace for inductive heating. 3,021,413, 2–13–62, Cl. 219—10.75.

Blomstrom, Dale C., and B. C. McKusick, to E. I. du Pont de Nemours, and Co. 2-substituted-2,3-dihydro-5,6-dicyano-1,4-dithiins. 3,021,339, 2–13–62, Cl. 260—326.5.

Bluck, Raymond M., to Thompson Ramo Wooldridge Inc. Extrusion device. 3,021,003, 2–13–62, Cl. 207—2.

Bluestone, Henry, to Diamond Alkali Co. Polyunsaturated sulfides and sulfones and method of preparing same. 3,021,370, 2–13–62, Cl. 260—607.

Blum, Murray S.: *See*—
Bornstein, Joseph, Blum, and Pratt. 3,021,358.

Blumberg, Rex, H., and C. J. Kraus, to International Business Machines Corp. Low temperature current switch. 3,021,434, 2–13–62, Cl. 307—88.5.

Bocchino, Joseph J., to Bell Fabricating Co. Inc. Chain lubricator device. 3,020,978, 2–13–62, Cl. 184—17.

Bodine, George C. Workpiece grasping apparatus. 3,021,168, 2–13–62, Cl. 294—88.

Bodkin, Lawrence E. Brake with wear detecting means. 3,020,873, 2–13–62, Cl. 116—114.

Bodle, William W.: *See*—
De Lury, James, Young, and Bodle. 3,020,723.

Bodley, Harry D.: *See*—
Alderfer, Sterling W., and Bodley. 3,020,587.

Boecker, Nevelyn C. Goose caller. 3,020,675, 2–13–62, Cl. 46—180.

Boeing Airplane Co.: *See*—
Dolliver, David M. 3,020,712.
McKelvey, Richard B. 3,020,947.

Bollenback, Carol H., G. R. Hunt, and J. J. Svara, to Naico Chemical Co. Industrial process water treatment. 3,021-256, 2–13–62, Cl. 162—161.

Bont'llette, Estephan D.: *See*—
Estephanian, Estephan D., Packard, Clouthier, and Bontillette. 3,020,740.

Borchert, Peter J., to Miles Laboratories, Inc. Dialdehyde starch-melamine derivatives. 3,021,329, 2–13–62, Cl. 260—249.6.

Borgel, Bernard F., to Erie Mining Co. Draft control system for shaft-type furnaces. 3,021,126, 2–13–62, Cl. 263—29.

Borg-Warner Corp.: *See*—
Burtnett, Everett R. 3,020,781.
May, Charles W., and Halberg. 3,020,776.
Waldrop, Charles R. 3,020,741.

Bornemann, William C., to Liftron Corp. Door opener. 3,021,131, 2–13–62, Cl. 268—59.

Bornstein, Joseph, M. S. Blum, and J. J. Pratt, Jr., to United States of America, Army. Insecticidal bis-halophenyl di-fluoroaliphatic compounds. 3,021,358, 2–13–62, Cl. 260—488.

Bortnick, Newman M., to Rohm & Haas Co. Adducts of heterocyclic amides. 3,021,338, 2–13–62, Cl. 260—309.7.

Borutzky, Irvin W.: *See*—
Runde, Byron A., and Borutzke. 3,021,053.

Bovarnick, Bennett, H. S. Joachim, deceased, by E. Jacobi, legal representative; said E. Jacobi, legal representative, assor. of ⅛ to E. Jacobi, ⅛ to G. Joachim, ⅛ to I. Joachim, ⅛ to M. von Riebnits and ⅛ to A. Joachim. Method of producing luminescent materials. 3,021,285, 2–13–62, Cl. 252—301.4.

Bowen, John T., to Union Carbide Corp. Mining cutter bit having spring biased detent means. 3,021,124, 2–13–62, Cl. 262—33.

Bowers, Harry A.: *See*—
Blankenship, Ernest B., and Bowers. 3,020,559.

Bowler, Raymond M., and M. Clamp, to United Shoe Machinery Corp. Lasting machines. 3,020,571, 2–13–62, Cl. 12—8.8.

Bowman, Joe, to Kingston Products Corp. Timer control structure. 3,021,399, 2–13–62, Cl. 200—38.

Bowman, Spencer, to The Thew Shovel Co. Outriggers for power shovels, cranes, or the like. 3,021,015, 2–13–62, Cl. 212—145.

Bracci, Delphio J., to Western Electric Co., Inc. Lead forming apparatus. 3,020,936, 2–13–62, Cl. 140—71.

Brakeley, Paul W., to Johns-Manville Corp. Apparatus and method for forming floor tile. 3,020,584, 2–13–62, Cl. 18—2.

Brandin, Johan A. I. Valve for refrigerating medium evaporators. 3,020,729, 2–13–62, Cl. 62—218.

Brandt Automatic Cashier Co.: *See*—
Buchholz, Arnold R., and Haban. 3,020,916.

Brandt, William E., to Bell Intercontinental Corp. Fluid ballast control system for machine for precision finishing of parts by controlled vibration. 3,020,683, 2–13–62, Cl. 51—163.

Branitzky, Abraham. Antiskid devices for vehicle wheels. 3,020,948, 2–13–62, Cl. 152—233.

Bransford, Ernest O., Jr., to Beaman Corp. Friction pivot block for projected type windows and the like. 3,020,604, 2–13–62, Cl. 20—42.

Bransford, Ernest O., Jr., to Beaman Corp. Snap-in panel clip. 3,020,988, 2–13–62, Cl. 189—88.

Bratenahl, Alexander: *See*—
Baker, William R., Bratenahl, and Kunkel. 3,021,272.

Braun, Gunther: *See*—
Muller, Erwin, Holtschmidt, and Braun. 3,021,289.

Braun, Howard E., to General Electric Co. Linear motion-producing device with lock. 3,020,888, 2–13–62, Cl. 121—40.

Breher, Rudolf, and F. B. Bielfeldt, to F. Stubbe. Injection molding machine. 3,020,591, 2–13–62, Cl. 18—30.

Brennan, Elmer W. and R. G. Moyer, to The Pure Oil Co. Dynamic demulsibility method and apparatus. 3,020,747, 2–13–62, Cl. 73—53.

Brenner, Theodore J.: *See*—
Horrocks, Raymond G., Miller, and Brenner. 3,021,382.

Brinnand, Seddon: *See*—
Carroll Aubrey G. 3,021 142.

Briscoe, William L., to United States of America, Atomic Energy Commission. Digital Q meter. 3,020,750, 2–13–62, Cl. 73—67.2.

British Drug Houses Ltd., The: *See*—
Waddington-Feather, Sheila M. (nee Booker), Ellis, and Petrow. 3,021,845.

Brogle, Richard C.: *See*—
Fuld, George J., Brogle, and Fuld. 3,021,294.

Broms, Allen. Projector improvements. 3,020,797, 2–13–62, Cl. 88—24.

Brown, Barnett C. Tool holder. 3,021,012, 2–13–62, Cl. 211—60.

Brown, Charles B.: *See*—
Macdonald, Waldron S., and Brown. 3,020,843.

Brown, Earl F., to Bell Telephone Laboratories, Inc. Time division multiplexing of television and telephone messages. 3,021,384, 2–13–62, Cl. 178—5.6.

Brown, Harold, Co.: *See*—
Roach, Erskine E., and Baker. 3,020,852.

Brown, Lloyd H., and J. W. Hill, to The Quaker Oats Co. Process of forming a shell mold from a water furfuryl alcohol, sand and catalyst composition. 3,020,609, 2–13–62, Cl. 22—193.

Brown, Paul M.: *See*—
Davis, Donovan C., and Brown. 3,021,523.

Browning, Harrison. Shock overload indicator. 3,020,875, 2–13–62, Cl. 116—114.

Browning, Harrison, W. C. Patterson, and I. S. Livney. Breather valves. 3,020,926, 2–13–62, Cl. 137—495.

Browning, Marion T. Animal holding and loading chute. 3,020,882, 2–13–62, Cl. 119—82.

Bruce, Alastair D., and C. W. Pierce, to The Enfield Cycle Co. Ltd. Device for recording or registering shock. 3,020,874, 2–13–62, Cl. 116—114.

Bruce, George D., to International Business Machines Corp. Non-cutoff transistor switching circuit. 3,021,432, 2–13–62, Cl. 307—88.5.

Brunner, Russell K.: *See*—
Chall, Harold J., and Brunner. 3,021,055.

Brunner, Sam W. Portfolio. 3,020,945, 2–13–62, Cl. 150—3.

Buccicone, Dario, to Bucciconi Engineering Co., Inc. Mechanism for stagger piling of metal sheets. 3,020,810, 2–13–62, Cl. 93—93.

Bucciconi Engineering Co., Inc.: *See*—
Buccicone, Dario. 3,020,810.

Buchholz, Arnold R., and F. Haban, to Brandt Automatic Cashier Co. Electrically controlled coin dispensing machine. 3,020,916, 2–13–62, Cl. 133—2.

Bucyrus-Erie Co.: *See*—
Perkins, Origen S., and Krueger. 3,020,858.

Budd Co., The: *See*—
Dean, Albert G. 3,020,857.
Haiberstadt, Charles C. 3,021,417.
Leavesley, George W., and Trimble. 3,020,785.

Buerosse, Henry P. Spread shot arrow head. 3,021,139, 2–13–62, Cl. 273—106.5.

Bullan, Walter: *See*—
Zerweck, Werner, Bullan, Kunze, and Kiesewetter. 3,020,953.

Burch, James M. Copying of optical gratings. 3,020,817, 2–13–62, Cl. 95—73.

Burkett, Wilford B., to McCulloch Corp., Marine Products Division. Two-cycle engine idling speed limiter. 3,020,777, 2–13–62, Cl. 74—472.

Burlington Industries, Inc.: *See*—
Hyder, Clarence R., Jr., and Vestal. 3,020,835.

Burroughs Corp.: *See*—
Runde, Byron A., and Borutzke. 3,021,053.
Thut, Paul J., and Beachner. 3,020,841.

Burroughs Wellcome & Co. (U. S. A.) Inc.: *See*—
Hitchings, George H., and Robins. 3,021,332.

Burtnett, Everett R., to Borg-Warner Corp. Transmission mechanism. 3,020,781, 2–13–62, Cl. 74—688.

Brown, Alvin M., J. S. Ayers, R. L. Shields, J. M. Maloney, and T. J. Kmiecik, to Jas. H. Matthews & Co. Stamping mechanism. 3,020,834, 2–13–62, Cl. 101—4.

Butts, Harvey L., to United States of America, Atomic Energy Commission. Glove box attachment. 3,020,647, 2–13–62, Cl. 34—92.

Byloff, Robert C., to The Garrett Corp. Magnetic amplifier control apparatus. 3,021,474, 2–13–62, Cl. 323—89.

Byrnes, William P., to Teletype Corp. Tape reader. 3,021,388, 2–13–62, Cl. 178—17.

Cain, Dean J.: *See*—
Hill, Justin D., and Cain. 3,021,252.

Caldwell, Joseph A., and M. L. Lytle, to Jersey Production Research Co. Method for preventing corrosion of ferrous metals. 3,021,278, 2–13–62, Cl. 252—8.55.

California Research Corp.: *See*—
Davis, Vincent C. 3,020,763.

Callahan, James L.: *See*—
Idol, James D., Jr., Callahan, and Foreman. 3,021,366.

Callaway Mills Co.: *See*—
Henry, James S. 3,020,697.

Callery Chemical Co.: *See*—
McElroy, Albert D., and Nigon. 3,021,190.

Cameron, Gerald L.: *See*—
Redick David C., Cameron, Bertsche, and Yahn. 3,020,771.

Camloc Fastener Corp.: *See*—
Jahn, Robert E. 3,021,162.

Carabet, George F., to The Hoover Co. Suction cleaners. 3,020,577, 2–13–62, Cl. 15—323.

Carbide Grinders, Inc.: *See*—
Hite, Bernard E. 3,020,681.

Carlyle, Robert L., to Continental Oil Co. Method of dispersing barium hydroxide in a non-volatile carrier. 3,021,280, 2–13–62, Cl. 252—33.

Carpenter, Walter H. Apparatus for freezing comestibles. 3,020,732, 2–13–62, Cl. 62—345.

Carrier Corp.: *See*—
Hopkinson, Harold H., Irwin, and Kessler. 3,020,820.
Hopkinson, Harold H, Irwin, and Kessler. 3,020,822.
Hungate Ernest C. 3,020,974.
MacLeod, David E. 3,020,726.
McGrath, William L. 3,020,724.

Carroll, Aubrey G., ¼ to B. Seddon. Gramophone pick-up mechanism. 3,021,142, 2–13–62, Cl. 274—1.

Carson, Brian H.: *See*—
Rhoads, George D., Peickii, and Carson. 3,021,161.

Casement, James S., and J. R. Hinkley, to Minnesota Mining and Mfg. Co. Epoxy coating composition and method of coating electrical article therewith. 3,021,234, 2–13–62, Cl. 117—232.

Cassiar Asbestos Corp. Ltd.: *See*—
Christian, John D. 3,021,008.

Castrucci, Paul P. Optical viewing system. 3,020,806, 2–13–62, Cl. 88—72.

Catáphote Corp.: *See*—
Lincoln, John W., and Gordon. 3,020,811.

Cattaro, Matthew A.: *See*—
Neubrech, David A., and Cattaro. 3,020,793.

Caywood, Stanley W., Jr., and F. J. Keene, to E. I. du Pont de Nemours and Co. Resinous polyesters from an aliphatic polyhydride alcohol and a cyclopentane polycarboxylic acid. 3,021,308, 2–13–62, Cl. 260—75.

Cefaly, Ralph, to Taylor Instrument Companies. Acoustic stethoscope. 3,020,971, 2–13–62, Cl. 181—24.

Celanese Corp. of America: *See*—
Conciatori, Anthony B. 3,021,188.
Evers, William L. 3,021,299.
Zeller, Carl N., and Porck. 3,021,320.

Celmer, Walter D., K. Murai, J. B. Routien, and B. A. Sobin, to Chas. Pfizer & Co., Inc. Antibiotics PA–1033A and PA–1033B. 3,021,259, 2–13–62, Cl. 167—65.

Cennamo, Anthony D., to Industrial Nucleonics Corp. Nuclear magnetic resonance measuring system. 3,021,475, 2–13–62, Cl. 324—5.

Centre National de la Recherche Scientifique: *See*—
Guillaud, Charles. 3,021,283.

Chafetz, Harry, and G. W. Eckert, to Texaco Inc. Motor fuel containing an octane appreciator. 3,021,203, 2–13–62, Cl. 44—63.

Chafetz, Harry, and G. W. Eckert, to Texaco Inc. Motor fuel. 3,021,205, 2–13–62, Cl. 44—66.

Chall, Harold J., and R. K. Brunner, to Friden, Inc. Zero setting control means. 3,021,055, 2–13–62, Cl. 235—60.4.

Chandler, Linden H.: *See*—
Beall, Richard W., Jr. 3,020,623.

Chaplin, Merle P., to Diamond National Corp. Pulper. 3,021 080, 2–13–62, Cl. 241—69.

Chaplin, Oliver F.: *See*—
Helversen, Frederick D., Chaplin, and Tellier. 3,021,254.

Charpentier, Maurice, and L. Berthon, to Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey. Apparatus for producing fibers. 3,020,586, 2–13–62, Cl. 18—2.5.

Cheney, Wendell C., H. Morehouse, and M. G. Whitfield; said Cheney and said Morehouse assors. to Gould-National Batteries, Inc. Cylinder and piston structures. 3,021,183, 2–13–62, Cl. 309—6.

Chester, Martin H. Motor driven surgical knife. 3,020,912, 2–13–62, Cl. 128—310.

Chicago Backing Co.: *See*—
La Vote, William E. 3,021,250.

Chicago Bridge & Iron Co.: *See*—
Sadtler, Philip B., and Hunter. 3,021,265.

Chicago Pneumatic Tool Co.: *See*—
Sambammer, Donald F., and Lear. 3,021,099.

Chodacki, Joseph, and R. Zdrojkowski. Toilet ventilation system. 3,020,564, 2–13–62, Cl. 4—213.

Chrisman, Charles M. Projection advertising. 3,020,798, 2–13–62, Cl. 88—24.

Christian, Edward H., and E. C. Ureda, to Allis-Chalmers Mfg. Co. Fault indicator. 3,021,515, 2–13–62, Cl. 340—253.

Christian, John D., to Cassiar Asbestos Corp. Ltd. Apparatus for cleaning and grading asbestos. 3,021,008, 2–13–62, Cl. 209—299.

Christoff, James W., to Mannix Co. Ltd. Under-track device for use on railroads. 3,020,853, 2–13–62, Cl. 104—7.

Cinco, Francisco R.: *See*—
Olmsted, Bernie A., and Cinco. 3,020,593.

Clamp, Melvin: *See*—
Bowler, Raymond M., and Clamp. 3,020,571.

Clapp, Robert J., and J. E. Jameson, to Swedlow Inc. Method for free forming of stretched sheet material. 3,020,596, 2–13–62, Cl. 18—56.

Clare, George. Bottle holder. 3,021,026, 2–13–62, Cl. 215—100.

Clark, Charles C., F. A. Kanda, and A. J. King, to Olin Mathieson Chemical Corp. Preparation of diborane. 3,021,197, 2–13–62, Cl. 23—204.

Clark, James L. Bracelet. 3,020,657, 2–13–62, Cl. 40—21.

Clark, James L., to Mark-Clark Products, Inc. Identification bracelet. 3,020,658, 2–13–62, Cl. 40—21.

Clark, Richard J., to General Electric Co. Boiler port viewing system. 3,021 386, 2–13–62, Cl. 178—6.

Claxton, David R. Means for supporting the inner member of a double walled tank. 3,021,027, 2–13–62, Cl. 220—15.

Cleveland, Frank C., Jr.: *See*—
Kerr, Ralph W., and Cleveland. 3,021,222.

Cling-Surface Co.: *See*—
Parker, Gordon N. 3,021,037.

Clinton, William P., and E. Pitchon, to General Foods Corp. Producing a stable coffee aroma product. 3,021,218, 2–13–62, Cl. 99—71.

Clouthier, Robert L.: *See*—
Estephanian, Estephan D., Packard, Clouthier, and Bontillette. 3,020,740.

Cobine, James D., and N. C. Cook, to General Electric Co. Circuit interrupter. 3,021,409, 2–13–62, Cl. 200—149.

Coillot, Golda R. Combined book protector and memo-calendar with concealed advertisement. 3,021,156, 2–13–62, Cl. 281—17.

Coleman, Denis: *See*—
Waid, Ted H., and Coleman. 3,021,375.

Colson Corp., The: *See*—
Emery, Robert J. 3,021,111.

Colt, Rutger B., to The Bendix Corp. Buoy and like floating object incorporation means for resiliently connecting same to its anchor. 3,020,567, 2–13–62, Cl. 9—8.

Combustion Engineering, Inc.: *See*—
Rascati, Salvatore A., and Peterson. 3,021,419.

Commercial Solvents Corp.: *See*—
Stengel, Leonard A. 3,021,207.

Compagnie Francaise des Matieres Colorantes: *See*—
Jirou, Marcel, Urné, and Rogovin. 3,021,322.

Conch International Methane Ltd.: *See*—
De Lury, James, Young, and Bodle. 3,020,723.

Conciatori, Anthony B., to Celanese Corp. of America. Textile materials resistant to fading. 3,021,188, 2–13–62, Cl. 8—61.

Conley, Kurt H., to Entoleter, Inc. Heavy duty centrifugal processing apparatus. 3,021,083, 2–13–62, Cl. 241—275.

Continental Can Co., Inc.: *See*—
Szajna, John L. 3,020,595.

Continental Oil Co.: *See*—
Carlyle, Robert L. 3,021,280.

Contraves A.G.: *See*—
Haldemann, Heinz. 3,021,463.

Controls Co. of America: *See*—
Johnson, Roy W., and Biermann. 3,020,923.

Cook, Harvey A., to Thompson Ramo Wooldridge Inc. Supercharger for internal combustion engines. 3,020,901, 2–13–62, Cl. 123—119.

Cook, Newell C.: *See*—
Cobine, James D., and Cook. 3,021,409.

Cook, Shirl E., and H. Shapiro, to Ethyl Corp. Stable lead alkyl compositions and a method for preparing the same. 3,021,350, 2–13–62, Cl. 260—437.

Cooke, Helen. Expanding toy. 3,020,673, 2–13–62, Cl. 46—90.

Cooke-Yarborough, Edmund H., to The United Kingdom Atomic Energy Authority. Pulse integrating circuit with serially connected feed and reservoir capacitors. 3,021,485, 2–13–62, Cl. 328—127.

Cooley, John A. High voltage arc-extinguishing switch. 3,021,411, 2–13–62, Cl. 200—150.

Coon, Audrey M. Sunbathing glasses. 3,020,552, 2–13–62, Cl. 2—15.

Cooper, Joseph H.: *See*—
Mallett, John E., and Cooper. 3,021,416.

Cope, Geoffrey W., and A. E. Martin, to Symington Wayne Corp. Coupler butt and follower construction. 3,021,017, 2–13–62, Cl. 213—72.

Copson, David A., to Raytheon Co. Method and apparatus for control of freeze drying. 3,020,645, 2–13–62, Cl. 34—5.

Corley, Clifton. Toothbrush holder and dentifrice dispenser. 3,020,941, 2–13–62, Cl. 141—360.

Corn Products Co.: *See*—
Kerr, Ralph W., and Cleveland. 3,021,222.
Meinick, Daniel. 3,021,219.

Cornelius, Ray D. Telescoping cover for trucks. 3,021,170, 2–13–62, Cl. 296—23.

Cornell, John A., and D. J. Gowman, to Sartomer Resins, Inc. Preparation of dry sodium methacrylate. 3,021,364, 2–13–62, Cl. 260—526.

Cossar, Bernard C.: *See*—
Williams, Jack L. R., and Cossar. 3,021,215.

Cotting, Roger B. Bathtub construction. 3,020,561, 2–13–62, Cl. 4—173.

Cowden, Robert R.: *See*—
Lewis, James T., Jr., Crabiel, and Cowden. 3,020,678.

Cox, Arthur T., to Arthur Cox and Sons, Inc. Sliding door hanger. 3,020,582, 2–13–62, Cl. 16—105.

Cox, Arthur, and I. C. Sandback, to Bell & Howell Co. Optical objective. 3,020,804, 2–13–62, Cl. 88—57.

Cox, Arthur, and Sons, Inc.: *See*—
Cox, Arthur T. 3,020,582.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,309, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,310, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,311, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,312, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,313, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,314, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,315, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,316, 2–13–62, Cl. 260—78.3.

Cox, Eugene F., and F. Hostettler, to Union Carbide Corp. Polymerization of cyclic esters. 3,021,317, 2–13–62, Cl. 260—78.3.

Crabiel, Charles A.: *See*—
Lewis, James T., Jr., Crabiel, and Cowden. 3,020,678.

Cropper, Wendell P., and B. A. Ritzenthaler, to Standard Oil Co. Timer-computer. 3,020,749, 2–13–62, Cl. 73—54.

Crosby, Donald G.: *See*—
Fowler, George W., Crosby, and Proops. 3,021,330.

Crown Cork and Seal Co., Inc.: *See*—
Schell, Roger E. 3,020,997.

Crown Zellerbach Corp.: *See*—
Heiversen, Frederick D., Chaplin, and Tellier. 3,021,254.

Croxall, Willard J., and N. D. Dawson, to Miles Laboratories, Inc. Methylene dioxanes. 3,021,341, 2–13–62, Cl. 260—340.6.

Crump, Jack G. Collapsible shelter. 3,020,919, 2–13–62, Cl. 135—1.

Crump, Owen D. M. Overload breaker. 3,021,180, 2–13–62, Cl. 302—56.

Csendes, Ernest, and J. J. Verbanc, to E. I. du Pont de Nemours and Co. Polyurethane elastomers cured with N,N-dimethylolethyleneurea. 3,021,306, 2–13–62, Cl. 260—67.5.

Csendes, Ernest, to E. I. du Pont de Nemours and Co. Polyurethane elastomers cured with paraformaldehyde. 3,021,307, 2–13–62, Cl. 260—72.

Cunningham, George L., to W. R. Grace & Co. Production of sodium fluoride. 3,021,193, 2–13–62, Cl. 23—88.

Cunningham, George L., to W. R. Grace & Co. Production of ammonium hydrogen fluoride. 3,021,194, 2–13–62, Cl. 23—88.

Currie, Courtland B. and H. M. Morgan, to Minneapolis-Honeywell Regulator Co. Manifold valve. 3,020,921, 2–13–62, Cl. 137—66.

Curtiss-Wright Corp.: *See*—
Samson, Ralph L. 3,020,649.
Spitz, Theodore S., Zahner, and Samson. 3,021,516.

Cusick, Herman D. Pipe tapering tool. 3,020,787, 2–13–62, Cl. 77—73.

Cutler-Hammer, Inc.: *See*—
Greening, Donald J., and Smith. 3,021,466.

Daggett, Byron G. Saw set apparatus. 3,020,784, 2–13–62, Cl. 76—63.

Daimler-Benz Aktiengesellschaft: *See*—
Altmann, Werner E. 3,020,991.
Barenyi Bela. 3,021,171.
Fiala, Ernst J. H. 3,021,152.
Fiala, Ernst J. H., and Haselmann. 3,021,172.
Göschel, Karl-Heinz R., and Lamm. 3,020,905.
Hartmann, Otto. 3,020,898.
Hoffmann, Heinrich. 3,020,900.
Mueller Alfred H. 3,020,899.
Schraivogel, Horst. 3,020,950.

Dake, Norman W. Hand railing system. 3,021,115, 2–13–62, Cl. 256—65.

Dalglish, John, & Sons Ltd.: *See*—
Hill, Ian M. 3,020,620.

Daly, Richard T., to TRG, Inc. Atomic beam frequency standard. 3,021,448, 2–13–62, Cl. 315—5.35.

Daniels, Charles J., and T. A. Smith, to All American Engineering Co. Mechanical hand. 3,020,908, 2–13–62, Cl. 128—26.

Danielson Mfg. Co., The: *See*—
McKinley, William. 3,021,029.

Davidson, Frithjof C. Bicycle gear shift control. 3,020,778, 2–13–62, Cl. 74—480.

Davies, Robert H., to Parker-Hannifin Corp. Automatic shut-off valve. 3,020,924, 2–13–62, Cl. 137—386.

Davis, Donovan C., and F. M. Brown, to Gilfillan Bros., Inc. System for countermeasures. 3,021,523, 2–13–62, Cl. 343—18.

Davis, Vincent C., to California Research Corp. Detonation pick-up and igniter unit. 3,020,763, 2–13–62, Cl. 73—389.

Davis, Wilbur A., 5% to H. F. and D. M. Wagner, and 12% to Rivard Bros. Inc. Crankcase drain plug wrench. 3,020,790, 2–13–62, Cl. 81—119.

Dawson, Norman D.: *See*—
Croxall, Willard J., and Dawson. 3,021,341.

Day, Alan R. A., to Armstrong Patents Co. Ltd. Hydraulic shock absorbers. 3,020,981, 2–13–62, Cl. 188—100.

Day, Charles F. Flashproof side wall mounted flue port. 3,021,051, 2–13–62, Cl. 232—44.

Day, Cyril L., to International Telephone and Telegraph Corp. Method of making target electrode for barrier storage grid tube. 3,020,622, 2–13–62, Cl. 29—25.18.

Deacon, William G. T. Golesworthy, E. L. Hartley, and P. Martin, to Power Jets (Research & Development) Ltd. Combustion chamber for a gas turbine power plant provided with a rotating fuel atomizer and a flame stabilizing inlet structure. 3,020,718, 2–13–62, Cl. 60—39.74.

Dean, Albert G., to The Budd Co. Car body and truck assembly with truck bolster stabilizing means. 3,020,857, 2–13–62, Cl. 105—199.

Dean, Marjorie L. Bow making form. 3,021,038, 2–13–62, Cl. 223—46.

Debus Karl, to Mergenthaler Linotype Co. Line casting machines. 3,020,999, 2–13–62, Cl. 199—56.

De Butts, Edward H., to Hercules Powder Co. Dimethyl titanium dichloride. 3,021,349, 2–13–62, Cl. 260—429.5.

De Butts, Edward H., and A. S. Matlack, to Hercules Powder Co. Polymerization of ethylene with alkyl titanium halide catalysts. 3,021,319, 2–13–62, Cl. 260—94.4.

De Curtis, Joseph, and H. L. Ferragamo. Jewelry catch. 3,020,614, 2–13–62, Cl. 24—232.

Dedoes, Arnold A. Paint mixing receptacles. 3,021,118, 2–13–62, Cl. 259—43.

De Graffenried, Albert L., and W. A. Folsom. Electronic tool run-out indicator for use in deep boring operations. 3,020,786, 2–13–62, Cl. 77—3.

De Greef, Robert: *See*—
Schoberle, Robert, and De Greef. 3,021,200.

De Kock, Johannes M.: *See*—
De Kock, Johannes J. and J. M. 3,021,020.

De Kock, Johannes J. and J. M. Apparatus for handling and transporting tobacco leaves. 3,021,020, 2–13–62, Cl. 214—5.5.

De Long Corp.: *See*—
Suderow, George E. 3,020,956.

De Lury, James, A. R. Young, and W. W. Bodle, to Conch International Methane Ltd. Method and apparatus for liquefaction of natural gas. 3,020,723, 2–13–62, Cl. 62—9.

Demag Aktiengesellschaft: *See*—
Wegmann, Ludwig. 3,020,735.

De Montmollin, Jean P.: *See*—
Bethge, Walther. 3,021,243.

De Mott, Dale H., to North American Aviation, Inc. Infrared guidance system. 3,021,096, 2–13–62, Cl. 244—14.

De Nicolo, William V., to The North & Judd Mfg. Co. Anchor plate feed in eye setting machine. 3,021,031, 2–13–62, Cl. 221—273.

Denison, Frank W., Jr.: *See*—
Bergman, Donald E., Denison, and Friedland. 3,021,261.

De Radzitzky, Pierre, to Labofina. Separation of alcohols. 3,021,374, 2–13–62, Cl. 260—631.

Deriaud, Jean-Pierre, to Eastman Kodak Co. Apparatus and method for magnetically orienting particles. 3,021,230, 2–13–62, Cl. 117—93.

Dersch, Fritz, and S. P. Popeck, to General Aniline & Film Corp. Photographic materials and method of producing the same. 3,021,213, 2–13–62, Cl. 96—67.

Descarries, Raymond, to Aktiebolaget Electrolux. Tool harness. 3,020,573, 2–13–62, Cl. 15—49.

Descarries, Raymond, to Aktiebolaget Electrolux. Vacuum cleaner structure. 3,021,028, 2–13–62, Cl. 220—35.

Devoe & Raynolds Co., Inc.: *See*—
Greenlee, Sylvan O. 3,021,304.

Diamond Alkali Co.: *See*—
Bluestone, Henry. 3,021,370.

Diamond National Corp.: *See*—
Chaplin, Merle P. 3,021,080.

Di Bella, Angelo: *See*—
Perler, Frank R., and Di Bella. 3,021,494.

Dickieson, Alton C., to Bell Telephone Laboratories, Inc. Torpedo steering system. 3,020,868, 2–13–62, Cl. 114—23.

Dickinson, Ronald S., to Armstrong Patents Co. Ltd. Load compensating arrangement for a vehicle suspension. 3,021,153, 2–13–62, Cl. 280—124.

Dickinson, Thorn W., to The Fafnir Bearing Co. Bearing seal. 3,021,128, 2–13–62, Cl. 277—58.

Digital Control Systems, Inc.: *See*—
Steele, Floyd G. 3,021,062.
Steele, Floyd G. 3,021,064.

Di Lemme, Philip. Combined glazing and weather stripping. 3,020,605, 2–13–62, Cl. 20—56.

Distelmaier, Alfred, and W. Scholtan, to Farbenfabriken Bayer Aktiengesellschaft. Mono-glycol esters of 3,5-di-iodo-4-pyridone-N-acetic acid X-ray contrast agents in bronchography. 3,021,260, 2–13–62, Cl. 167—95.

Distillers Co. Ltd., The: *See*—
Ardley, Stanley M., and Jones. 3,021,300.

Di Toro, Michael J., and W. Graham, to United States of America, Navy. Method and means for spectrum analysis of radio signals. 3,021,479, 2–13–62, Cl. 324—77.

Dix, George P., to Martin-Marietta Corp. Subsurface containment for nuclear power reactors. 3,021,273, 2–13–62, Cl. 204—193.2.

Doan, Robert B., to The Atlantic Refining Co. Liquid detergent compositions. 3,021,284, 2–13–62, Cl. 252—110.

Dodge Mfg. Corp.: *See*—
Firth, David. 3,020,737.

Dodsworth, James W., to Monroe Calculating Machine Co. Program control for accounting machine. 3,021,054, 2–13–62, Cl. 235—60.2.

Dodsworth, James W., to Monroe Calculating Machine Co. Register control for accounting machine. 3,021,056, 2–13–62, Cl. 235—60.31.

Dohmstreich, Kurt: *See*—
Wagenseil, Gottfried, and Dohmstreich. 3,021,391.

Dole Valve Co., The: *See*—
Lund, James K., Bauerlein, and Janquart. 3,020,727.
Miller, Donald E. 3,020,762.

Dolliver, David M., to Boeing Airplane Co. Reversible-thrust sound suppression jet nozzles with movable ejector rings. 3,020,712, 2–13–62, Cl. 60—35.6.

Donofrio, Alfonso M., to Silver Creek Precision Corp. Container handling means. 3,020,939, 2–13–62, Cl. 141—169.

D'Onofrio, Anthony, to Royal McBee Corp. Systems for automatically controlling line feeding and tabulating mechanisms in typewriters or like machines. 3,020,996, 2–13–62, Cl. 197—133.

Donofrio, Thomas F., to Silver Creek Precision Corp. Package for an individual portion. 3,021,001, 2–13–62, Cl. 206—56.

Dopera, Rudolph. Supports for ceramic ware. 3,020,617, 2–13–62, Cl. 25—153.

Dörfelt, Christoph: *See*—
Frey, Hans H., and Dörfelt. 3,021,302.

Dorfman, Edwin, E. D. Weil, and J. S. Newcomer, to Hooker Chemical Corp. Preparation of 2,3,6-trichloro-phenylacetamide. 3,021,369, 2–13–62, Cl. 260—558.

Dormeyer, Albert F.: *See*—
Fisher, Hardin Y. 3,021,456.
Yatsushiro, Kenji. 3,021,457.

Dosamatic Dropper Corp.: *See*—
Bailin, Gene. 3,020,938.

Dotti, Euterio L. Apparatus for conveying roving in a textile machine. 3,020,598, 2–13–62, Cl. 19—65.

Dover Corp.: *See*—
Arbogast, Duane J., and Jaseph. 3,020,892.
Jaseph, Lawrence F. 3,020,891.

Dow Chemical Co., The: *See*—
Watson, Edward J., Jr. 3,021,371.

Dowdle, Walter F., to Essex Wire Corp. Method of assembling relays. 3,020,626, 2–13–62, Cl. 29—155.5.

Dresser Industries, Inc.: *See*—
McLerran, Archie R. 3,020,780.

Drew Chemical Corp.: *See*—
Knafo, Guy, Fuhrmann, Neesby, and Babayan. 3,021,324.

Driliprodco, Inc.: *See*—
Sullivan, Daniel W. 3,020,952.

Dueger, Laverne E.: *See*—
Bentley, George P., and Dueger. 3,020,769.

Duncan, James E., and S. L. Seymour, to Pittsburgh Plate Glass Co. Multifocal lens. 3,020,803, 2–13–62, Cl. 88—54.

Du Pont de Nemours, E. I., and Co.: *See*—
Allerdice, Joseph M., and Stricklin. 3,021,130.
Anderson, John L. 3,021,340.
Baer, Donald R. 3,021,344.
Berzins, Tallvaldis. 3,021,267.
Blomstrom, Dale C., and McKusick. 3,021,339.
Caywood, Stanley W., Jr., and Keene. 3,021,308.
Csendes, Ernest. 3,021,307.
Csendes, Ernest, and Verbanc. 3,021,306.
McKinney, Alfred H., and Reilly. 3,020,795.
Miller, Ross J. 3,020,844.
Morgan, James G. 3,021,229.
Nijkamp, Derk J. E., Van Lochem, and Vos. 3,020,699.
Pretka, John E. 3,021,232.
Sacks, David. 3,020,621.
Schumacher, Frederick G. 3,021,235.

Dupre, Jean, and R. E. Wolfrom, to Rohm & Haas Co. Low foam, high wetting polypropylene-terminated alkylphenoxy-polyethoxyalkanols. 3,021,372, 2–13–62, Cl. 260—613.

Durham, Edwin, to The Babcock & Wilcox Co. High temperature fluid heater. 3,020,895, 2–13–62, Cl. 122—235.

Dusold, Georg: *See*—
Meurer, Siegfried, Wiehicke, Lachmann, and Dusold. 3,020,896.

Eads, Harold O., and J. W. Robison, to O. Ames Co. Furniture construction. 3,021,176, 2–13–62, Cl. 297—452.

Eastern Steel Rack Co.: *See*—
Shivek, Herbert L. 3,021,013.

Eastman Kodak Co.: *See*—
Deriaud, Jean-Pierre. 3,021,230.
Freer, Lester P. 3,021,085.
King, Nancy H. 3,021,212.
Maksymiak, John, and Pollock. 3,021,041.
Murphy, Cornelius J., Jr., and Wood. 3,021,214.
Taylor, Clarence R., and Wilson. 3,020,837.
Touey, George P. 3,021,242.
Williams, Jack L. R., and Cossar. 3,021,215.

Ebbert, Robert J.: *See*—
Wallace, Richard B., and Ebbert. 3,020,570.

Eberle, Edward E., to Sperry Rand Corp. Signal decrement detector. 3,021,452, 2–13–62, Cl. 317—9.

Eberle, James W.: *See*—
Rankin, Andrew W., and Eberle. 3,021,110.

Eckert, George W.: *See*—
Chafetz, Harry, and Eckert. 3,021,203.
Chafetz, Harry, and Eckert. 3,021,205.

Edson, Robert C., to Bell Telephone Laboratories, Inc. Monostable multivibrator responsive to positive and negative trigger pulses from single source. 3,021,488, 2–13–62, Cl. 328—196.

Egami, Ichiro. Electrolytic production of $TiCl_4$ and Mg by means of a special anode. 3,021,268, 2–13–62, Cl. 204—64.

Eggers, Gerhard, and G. Ernst, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Device for controlling the jet of a reaction propulsion motor. 3,020,714, 2–13–62, Cl. 60—35.54.

Ehrmantraut, Harry C.: *See*—
Marshall, Bruce D., and Ehrmantraut. 3,020,748.

Elmco Corp., The: *See*—
Schwartz, Daniel M. 3,021,022.

Eiter, Karl, and E. Truscheit, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of unsaturated nitrile compounds of the vitamin A series. 3,021,355, 2–13–62, Cl. 260—464.

Ekkers, Gysbert J., and A. Patriarca, to Patelhold Patentverwertungs- & Elektro-Holding A.G. Gaseous electric discharge tube. 3,021,446, 2–13–62, Cl. 313—204.

Elam, William B.: *See*—
Pottle, Ralph K., and Elam. 3,021,047.
Pottle, Ralph K., and Elam. 3,021,048.

Elastic Stop Nut Corp. of America: *See*—
Mills, Malcolm E. 3,020,946.

Electric & Musical Industries Ltd.: *See*—
Spencer, Rolf E. 3,021,075.

Elgin National Watch Co.: *See*—
Wadsworth, Arthur W. 3,020,703.

Elliott, Richard W.: *See*—
Wrede, Kenneth W., and Elliott. 3,021,392.

Ellis, Bernard: *See*—
Waddington-Feather, Sheila M., Ellis, and Petrow. 3,021,345.

Elwick, Keith D., to Hawk Bilt Mfg. Corp. Animal insecticide applicator. 3,020,883, 2–13–62, Cl. 119—157.

Emary, Robert J., to The Colson Corp. Undercarriage for a sound suppressor. 3,021,111, 2–13–62, Cl. 254—2.

Enfield Cycle Co. Ltd., The: *See*—
Bruce, Alastair D., and Pierce. 3,020,874.

Engstrom, Gunnar P., to Allmanna Svenska Elektriska Aktiebolaget. Direct voltage system comprising static converters interconnected through inter-phase transformers. 3,021,471, 2–13–62, Cl. 321—19.

Entoleter, Inc.: *See*—
Conley, Kurt H. 3,021,083.

Epstein, Henry D., to Texas Instruments Inc. Thermostatic switch. 3,021,405, 2–13–62, Cl. 200—138.

Erapa Etablissement Fuer Rationelle Verpackung und Spedition: *See*—
Lüthi, Hans. 3,020,827.

Erbsloh, Julius & August, Kommanditgesellschaft: *See*—
Erbslöh, Paul-Günther, and Wilke. 3,021,004.

Erbslöh, Paul-Günther, and H. Wilke, to Julius & August Erbsloh Kommanditgesellschaft. Apparatus for plating profiles. 3,021,004, 2–13–62, Cl. 207—2.

Erico Products, Inc.: *See*—
Gelfand, Leonard. 3,020,608.
Rejdak, Melvin F. 3,020,610.

Erie Mining Co.: *See*—
Borgel, Bernard F. 3,021,126.

Ernault-Batignolles, H., S.A.: *See*—
Le Brusque, René J. N. 3,020,791.

Ernst, Gunther: *See*—
Eggers, Gerhard, and Ernst. 3,020,714.

Eskew, Roderick K., to United States of America, Agriculture. Process for increasing bulk density of potato flakes. 3,021,223, 2–13–62, Cl. 99—207.

Esser, George W., to McGraw-Edison Co. Record-reproducer system. 3,021,394, 2–13–62, Cl. 179—100.1.

Essex Wire Corp.: *See*—
Dowdle, Walter F. 3,020,626.
Graf, Robert D., Parkins, and Prouty. 3,021,406.
Weber, Leo L. 3,021,455.
Weber, Leo L. 3,021,520.

Estephanian, Estephan D., K. V. Packard, R. L. Clouthier, and E. J. Bontillette, to M.K.M. Knitting Mills, Inc. Method of knitting fabric with vari-colored pattern. 3,020,740, 2–13–62, Cl. 66—136.

Estes, Nelson N., to Union Carbide Corp. Electrical read-out integrator. 3,021,482, 2–13–62, Cl. 324—94.

Ethyl Corp.: *See*—
Cook, Shirl E., and Shapiro. 3,021,350.

Ettema, Eelke H.: *See*—
Van den Blink, Willem Pieter, Ter Haar Karel Christiaan, and Ettema. 3,021,418.

Etzel, Howard W., and D. A. Patterson. Method for producing radiation sensitive alkali halide crystals. 3,021,286, 2–13–62, Cl. 252—408.

Etzkorn, Elmer F., to Skil Corp. Predetermined torque release hand tool. 3,020,789, 2–13–62, Cl. 81—52.4.

Evers, William L., to Celanese Corp. of America. Block copolymer of a polyaminotriazole and an aromatic polyamide, and method of preparing same. 3,021,299, 2–13–62, Cl. 260—42.

Eward, Lee E. Concrete form. 3,020,618, 2–13–62, Cl. 25—154.

FMC Corp.: *See*—
Barrass, Richard A. 3,021,380.

Fafnir Bearing Co., The: *See*—
Dickinson, Thorn W. 3,021,148.

Fagile, Jack C., to J. C. Fagile, trustee. Polyphase electroresponsive apparatus. 3,021,453, 2–13–62, Cl. 317—27.

Fagile, Jack C., trustee: *See*—
Fagile, Jack C. 3,021,453.

Fagrell, Johnny, to International Ytong-Stabalite Co. Ltd. Device for the separation of concrete bodies. 3,021,019, 2–13–62, Cl. 214—1.

Falk, Harold W., to Wright Products, Inc. Door check. 3,020,581, 2–13–62, Cl. 16—66.

Falk Robert A., to Sperry Rand Corp. Floated gyroscope. 3,020,768, 2–13–62, Cl. 74—5.

Falls Paper & Power Co.: *See*—
Joa, Curt G. 3,020,687.

Fancher, Otis E., G. Nichols, and D. A. Stauffer, to Miles Laboratories, Inc. Carbamyl substituted 2,3,4,5-tetrahydrobenzodiazepine compounds. 3,021,325, 2–13–62, Cl. 260—239.

Farbak, John E.: *See*—
Gibson, Paul, Farbak, and Murphy. 3,021,228.
Farbak, John E., H. Gebel, and P. Gibson, to Swift & Co. Plasticizer for yeast. 3,021,221, 2–13–62, Cl. 99—96.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Distelmaier, Alfred, and Scholtan. 3,021,260.
Eiter, Karl, and Truscheit. 3,021,355.
Müller, Erwin, Holtschmidt, and Braün. 3,021,289.
Podschus, Ernst, and Joseph. 3,021,195.
Joseph, Werner, Kaule, and Podschus. 3,020,646.
Schegk, Ernst, and Schrader. 3,021,351.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Fernholz, Hans, and Mundlos. 3,021 365.
Frey, Hans H., and Dörfelt. 3,021,302.
Fargo Mfg. Co., Inc.: *See*—
Wengen, Henry R. 3,021,381.
Farquhar, Charles, to Zenith Radio Corp. Tuning devices. 3,021,493, 2–13–62, Cl. 333—78.
Farr, John D.: *See*—
Krikorian, Nerses H., Farr, and Whitteman. 3,020,632.
Faust, Ludwig: *See*—
Räntsch, Kurt, and Faust. 3,020,802.
Federal-Mogul-Bower Bearings, Inc.: *See*—
Rhoads, George D., Feickli, and Carson. 3,021,161.
Feigley, David A., Jr., to Armstrong Cork Co. Method and apparatus for regulating consistency. 3,020,765, 2–13–62, Cl. 73—434.
Feinman, Jerome, to United States Steel Corp. Method of reducing ore in a fluidized bed. 3,021,208, 2–13–62, Cl. 75—26.
Feldman, Lawrence. Timeplace movement. 3,020,702, 2–13–62, Cl. 58—52.
Fenity, Robert D., to Minneapolis-Honeywell Regulator Co. Method of applying an electrically conductive contact material and resulting coated article. 3,021,233, 2–13–62, Cl. 117—227.
Fernholz, Hans, and E. Mundlos, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the manufacture of sorbic acid. 3,021,365, 2–13–62, Cl. 260—526.
Ferragamo, Henry L.: *See*—
De Curtis, Joseph, and Ferragamo. 3,020,614.
Ferrari, Neal N., and D. N. Menichella; said Menichella assor. to said Ferrari. Neurological manikin. 3,020,652, 2–13–62, Cl. 35—17.
Fiala, Ernst J. H., to Daimler-Benz Aktiengesellschaft. Independent wheel suspension. 3,021,152, 2–13–62, Cl. 280—124.
Fiala, Ernst J. H., and H. Haselmann, to Daimler-Benz Aktiengesellschaft. Self-supporting vehicle body. 3,021,172, 2–13–62, Cl. 296—28.
Fibre Making Processes, Inc.: *See*—
Hjärtstäter, Jacob J. 3,020 943.
Fiden, William H., and R. E. Gottfried, to Thompson Ramo Wooldridge Inc. Teletype word counter. 3,021,390, 2–13–62, Cl. 178—69.
Fifield, Charles H. Q., D. R. Smith, and J. A. Robinson, to A.E.I.-John Thompson Nuclear Energy Co. Ltd. Temperature measuring apparatus for fuel elements of nuclear reactors. 3,021,274, 2–13–62, Cl. 204—193.2.
Finch, Charles A., to True Temper Corp. Rail anchors. 3,021,076, 2–13–62, Cl. 238—321.
Finsterwalder, Carl J.: *See*—
Simmons, Milton E., Finsterwalder, and Terkoski. 3,021,444.
Firma Contraves A.G.: *See*—
Lattmann, Max E. 3 020,756.
Firma J. Banning Aktiengesellschaft, Maschinenfabrik: *See*—
Kellholz, Friedrich, and Alfoldi. 3,020,833.
Firth, David, to Dodge Mfg. Corp. Coupling. 3,020,737, 2–13–62, Cl. 64—11.
Fischer, Thomas: *See*—
Kaess, Franz, Fischer, and Kronacher. 3 021,192.
Fischer, Hardin Y., to A. F. Dormeyer. Solenoid construction. 3,021,456, 2–13–62, Cl. 317—191.
Fishman, Aaron H., to Admiral Plastics Corp. Lateral expandable shoe form. 3,020,572, 2–13–62, Cl. 12—116.8.
Fitch, Ellery R., to Bendix-Westinghouse Automotive Air Brake Co. Braking system skid controller. 3,021,181, 2–13–62, Cl. 303—21.
Flegel, George J.: *See*—
Manas, Vincent T., and Flegel. 3,020,565.
Fleisher, Harold, to International Business Machines Corp. Trigger circuits employing direct coupled transistors. 3,021,437, 2–13–62, Cl. 307—88.5.
Flinn, Paul A., to Westinghouse Electric Corp. High temperature nickel base alloys. 3,021,211, 2–13–62, Cl. 75—170.
Flint, Kenneth C., and F. R. Werner, to The National Cash Register Co. Operation signalling mechanism for cash registers. 3,021,052, 2–13–62, Cl. 235—23.
Flow Measurements Corp.: *See*—
Schnoll, Nathan. 3,020,760.
Folsom, William A.: *See*—
De Graffenried, Albert L., and Folsom. 3,020,786.
Foote Mineral Co.: *See*—
Mathias, Joseph S. 3,021,210.
Ford Motor Co.: *See*—
Haddad, Charles. 3,021,151.
Rodak, Joseph J. 3,021,442.
Foreman, Robert W.: *See*—
Idol, James D., Jr., Callahan, and Foreman. 3,021 366.
Forman, Michael L. Wedging tool. 3,021,112, 2–13–62, Cl. 254—100.
Forming Machine Co. of America, Inc., The: *See*—
Simpson, Alvan D. 3,021,253.
Forster, Jakob, and E. Grünke, to Gebr. Forster. Sewing machine for producing variable stitches. 3,020,865, 2–13–62, Cl. 112—159.
Foshee, Clarence B., and J. A. McCauley. Tree clearing attachment for tractor. 3,020,694, 2–13–62, Cl. 56—26.
Fowler, George W., D. G. Crosby, and W. R. Proops, to Union Carbide Corp. Method for purifying 2,5-dimethylpiperazine. 3,021,330, 2–13–62, Cl. 260—250.
Fox, Merrill J., to Bell & Howell Co. Sheet feeding mechanism. 3,021,136, 2–13–62, Cl. 271—36.
Fox, Sidney, M. S. Blicharz, V. E. Origoni, to American Cyanamid Co. Method of preparing 1,4-pregnadienes. 3,021,346, 2–13–62, Cl. 260—397.45.
Frankel, Harry: *See*—
Moskovitz, Milton A. 3,021,157.
Frazier, Lewis E., to North American Aviation, Inc. Salt bath pump. 3,020,851, 2–13–62, Cl. 103—153.
Freer, Lester P., to Eastman Kodak Co. Web wind up hub. 3,021,085, 2–13–62, Cl. 242—74.
French Oil Mill Machinery Co., The: *See*—
Upton, Charels B. 3,021,201.
Frenk, Helmuth, to Ernst Leitz Gesellschaft mit beschrankter Haftung. Shutter for photographic apparatus. 3,020,816, 2–13–62, Cl. 95—58.
Freure, Benjamin T., and S. W. Tinsley, to Union Carbide Corp. Process for the production of allyl 6-cyanohexanoate. 3,021,356, 2–13–62, Cl. 260—465.4
Frey, Hans H., and C. Dörfelt, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Polymeric stannonic acid stabilized polymers containing vinyl chloride. 3,021,302, 2–13–62, Cl. 260—45.5.
Friden, Inc.: *See*—
Chall, Harold J., and Brunner. 3,021,055.
Friedland, Waldo C.: *See*—
Bergman, Donald E., Denison, and Friedland. 3,021,261.
Fryklund, Donald H., to International Business Machines Corp. Cable machine. 3,020,937, 2–13–62, Cl. 140—71.
Fuhrmann, Robert: *See*—
Knafo, Guy, Fuhrmann, Neesby, and Babayan. 3,021,324.
Fujita, Toshio, to Sanwa Mishin Seizo Kabushiki Kaisha (Sanwa Sewing Machine Mfg. Co., Ltd.). Needle bar for sewing machine. 3,020,866, 2–13–62, Cl. 112—226.
Fuld Bros., Inc.: *See*—
Fuld, George J., Brogle, and Fuld. 3,021,294.
Fuld, George J., R. C. Brogle, and M. Fuld, to Fuld Brothers, Inc. Floor polish compositions. 3,021,294, 2–13–62, Cl. 260—28.5.
Fuld, Melvin: *See*—
Fuld, George J., Borgle, and Fuld. 3,021,294.
Fuller, John D.: *See*—
Stambaugh, Richard H., and Fuller. 3,020,601.
Fürst, Andor, and E. Kyburz, to Hoffmann-La Roche Inc. Method for the production of isoxazolidones. 3,021,335, 2–13–62, Cl. 260—307.
Gadget-of-the-Month Club, Inc.: *See*—
Kowalczyk, Walter. 3,021,185.
Weaver, George N. 3,021,164.
Gaffney, John F.: *See*—
Rowley, Russell A., Adams, and Gaffney. 3,021,069.
Ganiere, Herbert C., R. Schimek, and E. T. Sherwood, to Globe-Union Inc. Divider circuit for battery charger. 3,021,469, 2–13–62, Cl. 320—15.
Garcia, Cecilio. Machine for making ornamental iron work. 3,020,940, 2–13–62, Cl. 153—40.
Gardner Laboratory, Inc.: *See*—
Neubrech, David A., and Cattaro. 3,020,793.
Garnett, Donald W.: *See*—
Olofson, Gustav A., and Garnett. 3,020,966.
Garrett Corp., The: *See*—
Byloff, Robert C. 3,021,474.
Garrison, Alton C. Damper assembly. 3,020,821, 2–13–62, Cl. 98—41.
Carson, Arthur. Garments. 3,020,914, 2–13–62, Cl. 128—444.
Garten, Harry G., to Union Carbide Corp. Protective relay circuitry for hoist motor controls. 3,021,465, 2–13–62, Cl. 318—247.
Gartner, Benjamin: *See*—
Stegmaier, Hermann. 3,020,704.
Gauthier, William D., to Ransburg Electro-Coating Corp. Electrostatic coating apparatus. 3,021,077, 2–13–62, Cl. 239—15.
Gebel, Harry: *See*—
Farbak, John E., Gebel, and Gibson. 3,021,221.
Gebr. Forster: *See*—
Forster, Jakob, and Grünke. 3,020,865.
Gehrie, Charles S., to Presto Lock Co. Latch and lock device for container. 3,020,742, 2–13–62, Cl. 70—69.
Gehrie, Charles S., to Presto Lock Co. Luggage latching device. 3,020,743, 2–13–62, Cl. 70—69.
Gelfand, Leonard, to Erico Products, Inc. Frangible mold. 3,020,608, 2–13–62, Cl. 22—116.
General Aniline & Film Corp.: *See*—
Dersch, Fritz, and Popeck. 3,021,213.
General Dynamics Corp.: *See*—
Kirk, Donald R., and Smith. 3,020,986.
Nielsen, Jorgen L. 3,021,499.
General Electric Co.: *See*—
Braun, Howard E. 3,020,868.
Clark, Richard J. 3,021,386.
Cobine, James D., and Cook. 3,021,409.
George, Philip D. 3,021,297.
Goldberg, Eugene P. 3,021,305.
Hobson, Robert R., and Wilcox. 3,020,887.
Hurd, Dallas T., and Osthoff. 3,021,292.
Kirk, Norman. 3,021,264.
Oakes, Philip N., and Wilkes. 3,021,461.

General Electric Co.: *See*—Continued
Rankin, Andrew W., and Eberle. 3,021,110.
Rascati, Salvatore A. 3,021,499.
Sand, Robert E. 3,021,414.
Settle, Joseph F. 3,021,049.
Summerhayes, Harry R., Jr., and Sampson. 3,021,385.
General Foods Corp.: *See*—
Clinton, William P., and Pitchon. 3,021,218.
Stagmeier, Arthur F. 3,021,224.
General Industries Co., The: *See*—
Tamm, Emil S. 3,021,443.
General Mills, Inc.: *See*—
Sovia, Cedric C., and Papp. 3,021,079.
Webner, Gottfried. 3,021,271.
General Motors Corp.: *See*—
Hopkins, Joseph H., and Van Slyke. 3,021,503.
Miller, Andrew J., Nellis, and Waymire. 3,020,661.
Redick, David C., Cameron, Bertsche, and Yahn. 3,020,771.
Simmons, Milton E., Finsterwalder, and Terkoski. 3,021,444.
Ziffer, Walter. 3,020,606.
General Railway Signal Co.: *See*—
Haner, Robert B., and Sibley. 3,021,506.
General Time Corp.: *See*—
Goodhouse, Carl J. 3,020,772.
Spetzler, August L., and Richards. 3,020,682.
General Tire & Rubber Co., The: *See*—
Gmitter, George T., Maxey, and Sanger. 3,021,290.
George, Philip D., to General Electric Co. Polysiloxane resins. 3,021,297, 2–13–62, Cl. 260—37.
Gerber, Dale C., to The Hoover Co. Suction washing appliance. 3,020,576, 2–13–62, Cl. 15—320.
Gibson, Paul: *See*—
Farbak, John E., Gebel, and Gibson. 3,021,221.
Gibson, Paul, J. E. Farbak, and P. D. Murphy, to Swift & Co. Inhibition of wet storage stain. 3,021,228, 2–13–62, Cl. 117—71.
Giebel, Joseph L.: *See*—
Temple, Robert, Giebel, and Temple, E. E. 3,020,871.
Gierczie, Richard P. Water jet-propelled craft. 3,020,872, 2–13–62, Cl. 115—12.
Gilbert, Chalmers W., to Westinghouse Air Brake Co. Broken railway wheel flange detectors. 3,021,423, 2–13–62, Cl. 246—169.
Gilfillan Bros., Inc.: *See*—
Davis, Donovan C., and Brown. 3,021,523.
Ginnings, William H.: *See*—
Ayton, William R., Ginnings, and Hocking. 3,020,636.
Ginsburgh, Irwin: *See*—
Kapff, Sixt F., and Ginsburgh. 3,021,199.
Girden, Barney B. Mask. 3,020,911, 2–13–62, Cl. 128—141.
Gits Bros. Mfg. Co.: *See*—
Andresen, Hilmar A. 3,020,979.
Gleason, Joseph P., to United States of America, Navy. Radar range search system. 3,021,522, 2–13–62, Cl. 343—7.3.
Glenn, Edward R., to J. C. & A. R. Acker. Door closer. 3,020,580, 2–13–62, Cl. 16—61.
Gliebe, Francis J. Fishing rod holder. 3,021,101, 2–13–62, Cl. 248—44.
Globe-Union Inc.: *See*—
Ganiere, Herbert C., Schimek, and Sherwood. 3,021,469.
Gmitter, George T., E. M. Maxey, and M. J. Sanger, to The General Tire & Rubber Co. Cellular polyurethane containing wood cellulose and method of preparing same. 3,021,290, 2–13–62, Cl. 260—2.5.
Goddard, William A., to International Business Machines Corp. Optical recording device. 3,020,805, 2–13–62, Cl. 88—61.
Going, Louis H., and C. H. Janikse, to The Procter & Gamble Co. Prepared batters. 3,021,220, 2–13–62, Cl. 99—92.
Goldberg, Eugene P., to General Electric Co. Cross-linked polycarbonate resins. 3,021,305, 2–13–62, Cl. 260—47.
Goldberg, Jack, H. L. Rosenberg, and R. F. Le Vino, to United States of America, Army. Quick disconnect device. 3,021,403, 2–13–62, Cl. 200—82.
Golding, William F. Apparatus for converting reciprocating into intermittent motion. 3,020,773, 2–13–62, Cl. 74—138.
Golesworthy, Glyn T.: *See*—
Deacon, William, Golesworthy, Hartley, and Martin. 3,020,718.
Goodhouse, Carl J., to General Time Corp. Switch actuating timer. 3,020,772, 2–13–62, Cl. 74—54.
Goodwin, Edwin C., Jr., to Allis-Chalmers Mfg. Co. Manually controlled contact actuating mechanism. 3,021,400, 2–13–62, Cl. 200—50.
Gordon, William J. J.: *See*—
Lincoln, John W., and Gordon. 3,020,811.
Gorton, Helen, to Mite Corp. Bound buttonhole attachment. 3,020,862, 2–13–62, Cl. 112—77.
Göschel, Karl-Heinz R., and H. Lamm, to Daimler-Benz Aktiengesellschaft. Fuel injection system. 3,020,905, 2–13–62, Cl. 123—179.
Gottfried, Robert E.: *See*—
Fiden, William H., and Gottfried. 3,021,390.
Gould, Russell D., and J. E. Richter. Tree shaking device. 3,020,695, 2–13–62, Cl. 56—328.
Gould-National Batteries, Inc.: *See*—
Cheney, Wendell C., Morehouse, and Whitfield. 3,021,183.
Gowman, Daniel J.: *See*—
Cornell, John A., and Gowman. 3,021,364.
Grace, W. R., & Co.: *See*—
Cunningham, George L. 3,021,193.
Cunningham, George L. 3,021,194.
Grad, Adolf R., to The Oilgear Co. Pump control valve with bypass. 3,020,890, 2–13–62, Cl. 121—41.
Graf, Robert D., W. M. Parkins, and R. E. Prouty, to Essex Wire Corp. Thermostatic switch. 3,021,406, 2–13–62, Cl. 200—138.
Graham, John, J. K. Kerver, and C. L. Prokop, to Jersey Production Research Co. Method of fracturing in wells. 3,020,954, 2–13–62, Cl. 166—42.
Graham, John W., N. L. Muench, and R. E. Williams, to Jersey Production Research Co. Device for introducing fluid in wells. 3,020,964, 2–13–62, Cl. 175—237.
Graham, Phillip. Graphic machine. 3,020,640, 2–13–62, Cl. 33—23.
Graham, Walton: *See*—
Di Toro, Michael J., and Graham. 3,021,479.
Grain Processing Corp.: *See*—
Zorn, Ralph A. 3,021,217.
Granberg, Albert J., and E. Thuse; said Granberg assor. to Granberg Corp. Specific gravity responsive liquid meter. 3,020,758, 2–13–62, Cl. 73—194.
Granberg Corp.: *See*—
Granberg, Albert J., and Thuse. 3,020,758.
Granite Machine Co.: *See*—
Long, John R. 3,021,084.
Graulich, Hubert. Storm shutter assembly. 3,020,951, 2–13–62, Cl. 106—35.
Green, William G. Oil well pump. 3,020,848, 2–13–62, Cl. 103—46.
Greening, Donald J., and C. E. Smith, to Cutler-Hammer, Inc. Motor control systems. 3,021,466, 2–13–62, Cl. 318—327.
Greenlee, Sylvan O., to Devoe & Raynolds Co., Inc. Epoxide resin compositions. 3,021,304, 2–13–62, Cl. 260—47.
Greenly, Kenneth H., to D. Napier & Son Ltd. Starting systems for gas turbine engines. 3,020,716, 2–13–62, Cl. 60—39.14.
Gresko, Raymond S., to Bendix-Westinghouse Automotive Air Brake Co. Dump body control system. 3,021,177, 2–13–62, Cl. 298—21.
Gribbin, F. P.: *See*—
Hayward, Landes H. 3,020,960.
Griffin, Alvin G. Gripping jaws for materials testing machines. 3,021,149, 2–13–62, Cl. 279—123.
Griswold, Stanley M., to B.B. Chemical Co. Flocked solvent activatable stiffener sheet material. 3,021,240, 2–13–62, Cl. 154—46.
Groenendyke, Goethe M., to Socony Mobil Oil Co., Inc. Electronic triode bridge multiplier. 3,021,074, 2–13–62, Cl. 235—194.
Gross, Charles P., to Joint Filling Equipment Co. Joint filling machine. 3,020,812, 2–13–62, Cl. 94—39.
Gross, Charles P. Joint cleaning and filling machine. 3,020,813, 2–13–62, Cl. 94—39.
Grosvenor, Alvah W.: *See*—
Samuel, George A., Bell, Grosvenor, and Jackson. 3,021,231.
Groszos, Stephen J., and C. S. Scanley, to American Cyanamid Co. Gasoline containing dialkanolamine boronic acid bisesters. 3,021,206, 2–13–62, Cl. 44—75.
Grubbs, William J., Jr., M. E. Hines, and L. J. Varnerin, Jr., to Bell Telephone Laboratories, Inc. Integrated semiconductive device. 3,021,459, 2–13–62, Cl. 317—234.
Gruber, Warren M.: *See*—
Karpchuk, Sylvester, and Gruber. 3,020,766.
Grünke, Erich: *See*—
Forster, Jakob, and Grünke. 3,020,865.
Guedon, Noel. Grease gun. 3,021,036, 2–13–62, Cl. 222—256.
Gugger, Rene: *See*—
Bethge, Walther, and Gugger. 3,021,243.
Guillaud, Charles, to Centre National de la Recherche Scientifique. Ferromagnetic materials with low coefficient of temperature of the initial magnetic permeability. 3,021,283, 2–13–62, Cl. 252—62.5.
Gulton Industries, Inc.: *See*—
Howatt, Glenn H. 3,021,441.
Welkowitz, Walter. 3,020,759.
Gunn, Earl G., to Young Radiator Co. Modulating power-transmission unit. 3 020,992, 2–13–62, Cl. 192—61.
Gustin-Bacon Mfg. Co.: *See*—
Stephens, Joseph F. 3,021,247.
Guyer, Reynolds, and N. H. Sandberg, to Waldorf Paper Products Co. Apparatus for die cutting paperboard. 3,020,909, 2–13–62, Cl. 93—58.3.
Guyer, Reynolds. Tissue packages. 3,021,002, 2–13–62, Cl. 206—57.
H. & L. Tooth Co.: *See*—
Launder, Richard L. 3,020,655.
Haas, Karl, and S. Voll, to Siemens-Schuckertwerke Aktiengesellschaft. Shaft bushing for explosion-proof electrical machines. 3,021,147, 2–13–62, Cl. 277—53.
Haban, Frank: *See*—
Buchholz, Arnold R., and Haban. 3,020,916.
Haddad, Charles, to Ford Motor Co. Motor vehicle air suspension system and flow rate control valve. 3,021,151, 2–13–62, Cl. 280—124.
Hadekel, Ruben: *See*—
Summerlin, Frederick A., and Hadekel. 3,020,880.
Hailston, Ellis W., and L. E. Huffman, to Remington Arms Co. Inc. Control device for gas operated firearm. 3,020,807, 2–13–62, Cl. 89—193.
Hakkarinen, William, to United States of America, Navy. Cup anemometer. 3,020,963, 2–13–62, Cl. 170—36.
Halberg, Robert W.: *See*—
May, Charles W., and Halberg. 3,020,776.
Halbertstadt, Charles C., to The Budd Co. Portable welding tool or gun. 3,021,417, 2–13–62, Cl. 219—89.
Haldemann, Heinz, to Contraves A.G. Automatic curve sensing system. 3,021,463, 2–13–62, Cl. 318—162.
Halden, Joseph G. B., to Ozalid Co. Ltd. Diazotype and like photo-copying apparatus. 3,020,818, 2–13–62, Cl. 95—89.
Hall C. P., Co., The: *See*—
Kuceski, Vincent P. 3,021,348.
Halpern, Joseph. Holder for sewing machine bobbins, and the like. 3,021,093, 2–13–62, Cl. 242—134.

Hamblin, Henry J., and H. J. Nation, to National Research Development Corp. Motors for hydrostatic power transmission systems. 3,020,893, 2–13–62, Cl. 121—59.

Hamilton, David R.: *See*—
Snyder, Edward D., and Hamilton. 3,020,664.

Hamilton, Wallace, and P. P. Surso, to Pneumo Dynamics Corp. Hatch cover dog. 3,021,165, 2–13–62, Cl. 292—256.5.

Hammer, James P., and J. W. Slater, to International Business Machines Corp. Detection circuit for unwanted designations and blank columns. 3,021,059, 2–13–62, Cl. 235—61.11.

Haner, Robert B., and H. C. Sibley, to General Railway Signal Co. Communication system. 3,021,506, 2–13–62, Cl. 340—147.

Hänle, Eugen: *See*—
Hütter, Ulrich, and Hänle. 3,021,246.

Hardesty, Jules M. Temperature responsive firing mechanism. 3,020 845, 2–13–62, Cl. 102—70.

Hardtmuth, L. & C., Inc.: *See*—
Riepe, Helmuth, and Kaiser. 3,020,884.

Harnisch, Joachim, and H. Hermann. Record changing mechanism. 3,021,144, 2–13–62, Cl. 274—10.

Harrill, Prince G.: *See*—
Young, Harland H., and Harrill. 3,021,321.

Harrington, Joseph J. Dual chamber automatic hay baler. 3,020,830, 2–13–62, Cl. 100—209.

Harris, Gilbert W., Sr., to Water Process Corp. Ice making apparatus. 3,020,730, 2–13–62, Cl. 62—307.

Harry, Robert J., to The Alliance Machine Co. Cranes. 3,021,169, 2–13–62, Cl. 294—115.

Harter, James R. R. Submarine vehicle. 3,020,722, 2–13–62, Cl. 61—69.

Hartley, Edward L.: *See*—
Deacon, William, Golesworthy, Hartley, and Martin. 3,020,718.

Hartmann, Otto, to Daimler-Benz Aktiengesellschaft. Diesel engine. 3,020,898, 2–13–62, Cl. 123—32.

Harwood Mfg. Co.: *See*—
Swislow, Sidney. 3,021,105.

Hasbrook, Arthur F., to O. S. Petty. Apparatus for sonic geophysical exploration. 3,020,970, 2–13–62, Cl. 181—.5.

Haselmann, Heinrich: *See*—
Fiala, Ernst J. H., and Haselmann. 3,021,172.

Hawk Bilt Mfg. Corp.: *See*—
Elwick, Keith D. 3,020,883.

Hawkins, Donald K., to ACF Industries, Inc. Dynamic servo driven magnetostrictive delay line. 3,020,650, 2–13–62, Cl. 35—10.4.

Hayes, Robert M., A. M. Nelson, J. B. Wiener, and P. N. Armstrong, to The Magnavox Co. Card processing system. 3,021,005, 2–13–62, Cl. 209—72.

Haynes, Harry L., to Union Carbide Corp. Diphenyl sulfide nematocide. 3,021,258, 2–13–62, Cl. 167—30.

Hayward, Landes H., to F. P. Gribbin. Tool for injecting fluent material into wells. 3,020,960, 2–13–62, Cl. 166—146.

Hecht, Herbert, to Sperry Rand Corp. Automatic pilot for dirigible craft. 3,021,097, 2–13–62, Cl. 244—77.

Hedgepeth, Edward B. Trailer hitch. 3,021,154, 2–13–62, Cl. 280—406.

Hedrich, Albert L.: *See*—
Kaimus, Henry P., and Hedrich. 3,021,481.

Heidenreich & Harbeck: *See*—
Apitz, Gerhard. 3,020 808.

Heinrich, Chester J., A. T. Kornyiak, and M. Toscano, to United States of America, Navy. Ball transfer tables. 3,020,993, 2–13–62, Cl. 193—38.

Helversen, Frederick D., O. F. Chaplin, and C. W. Tellier, Jr., to Crown Zellerbach Corp. Method and apparatus for dewatering pulp and the resulting product. 3,021,254, 2–13–62, Cl. 162—100.

Henke, Robert H., to Allegheny Ludlum Steel Corp. Processing of metal. 3,021,237, 2–13–62, Cl. 148—111.

Henry, James S., to Callaway Mills Co. Method and apparatus for producing multicolored single yarn in simulation of ply yarn. 3,020,697, 2–13–62, Cl. 57—36.

Hensley, James L., to Ty-Sa-Man Machine Co. Machine tools. 3,020,679, 2–13–62, Cl. 51—34.

Hensoldt, M., & Sohne, Optische Werke A.G.: *See*—
Rantsch, Kurt, and Faust. 3,020,802.

Hercules Powder Co.: *See*—
De Butts, Edward H. 3,021,349.
De Butts, Edward H., and Matlack. 3,021,319.

Hermann, Hans: *See*—
Harnisch, Joachim, and Hermann. 3,021,144.

Hernqvist, Karl G., to Radio Corp. of America. Low temperature thermionic energy converter. 3,021,472, 2–13–62, Cl. 322—2.

Herzog, Stephen H., to United States of America, Navy. Sealing means for rocket nozzles. 3,020,710, 2–13–62, Cl. 60—35.6.

Heuer, Charles A., to Olin Mathieson Chemical Corp. Fabrication of hollow articles. 3,020,633, 2–13–62, Cl. 29—421.

Heyer, William T. Surgical drain. 3,020,913, 2–13–62, Cl. 128—350.

Hickok Mfg. Co., Inc.: *See*—
Meeker, William H. 3,020,612.

Hill, Emil H. Chain saw sharpener. 3,020,783, 2–13–62, Cl. 76—37.

Hill, Emil H. Detachable link saw chain. 3,020,942, 2–13–62, Cl. 143—135.

Hill, Ian M., to John Dalgliish & Sons Ltd. Bow straightening device. 3,020,620, 2–13–62, Cl. 26—51.3.

Hill, James J., to Apco, Inc. Ice dispenser for beverage vending machines. 3,021,035, 2–13–62, Cl. 222—245.

Hill, Jiminy W.: *See*—
Brown, Lloyd H., and Hill. 3,020,609.

Hill, Justin D., and D. J. Cain, to The Lawrence Paper Co. Process of making wax-containing paper using waste wax paper. 3,021,252, 2–13–62, Cl. 162—7.

Hill, Walter P., Inc.: *See*—
Hill, Walter P. 3,020,705.

Hill, Walter P., to Walter P. Hill, Inc. Positioning system including a prime mover and locking means therefor. 3,020,705, 2–13–62, Cl. 60—6.

Hines, Marion E.: *See*—
Grubbs, William J., Jr., Hines, and Varnerin. 3,021,459.

Hinkley, James R.: *See*—
Casement, James S., and Hinkley. 3,021,234.

Hipp, William J., to Webster Electric Co. Clutch and brake valve. 3,020,721, 2–13–62, Cl. 60—97.

Hipps, Herbert E. Clothes and valise carrying device. 3,020,980, 2–13–62, Cl. 190—41.

Hirsh, Donald H.: *See*—
Montagna, Amelio E., and Hirsh. 3,021,373.

Hirst, Archie J., to Metalastik Ltd. Vehicle suspension system. 3,020,856, 2–13–62, Cl. 105—197.

Hitchings, George H., and R. K. Robins, to Burroughs Wellcome & Co. (U.S.A.) Inc. Pyrido (2,3-d) pyrimidine compounds and method of making. 3,021,332, 2–13–62, Cl. 260—256.4.

Hite, Bernard E., to Carbide Grinders, Inc. Tool finishing process and apparatus. 3,020,681, 2–13–62, Cl. 51—122.

Hjärtsäter, Jacob J., to Fibre Making Processes, Inc. Barking drum. 3,020,943, 2–13–62, Cl. 144—208.

Hobson, Robert R., and H. G. Wilcox, to General Electric Co. Linear motion-producing device and improved locking means therefor. 3,020,887, 2–13–62, Cl. 121—40.

Hockett, John A. Combination utility cart and extension ladder. 3,020,972, 2–13–62, Cl. 182—15.

Hocking, Ronald P.: *See*—
Axton, William R., Ginnings, and Hocking. 3,020,636.

Hoe, R., & Co., Inc.: *See*—
Neal, Frank. 3,020,842.

Hoeppel, Raymond W. Oil base drilling and fracturing fluid. 3,021,277, 2–13–62, Cl. 252—8.5.

Hoffmann, George. Locking device. 3,021,163, 2–13–62, Cl. 292—147.

Hoffmann, Heinrich, to Daimler-Benz Aktiengesellschaft. Combustion chamber for compression ignition, injection-type internal combustion engines. 3,020,900, 2–13–62, Cl. 123—32.

Hoffmann, Henry, Jr., and J. Barbieri. Tele-map system. 3,021,389, 2–13–62, Cl. 178—23.

Hoffmann-La Roche Inc.: *See*—
Fürst, Andor, and Kyburz. 3,021,335.
Kimel, Walter, and Montavon. 3,021,359.

Holley Carburetor Co.: *See*—
Kerr, Fred S. 3,020,904.
Kerr, Fred S., and Romanski. 3,021,449.

Holm, Astrid: *See*—
Binder, Karl, and Holm. 3,020,761.

Holm, Christian W.: *See*—
Binder, Karl, and Holm. 3,020,761.

Holmquist, John L., to Armco Steel Corp. Well installations and improved tubing therefor. 3,020,962, 2–13–62, Cl. 166—242.

Holt, Arthur W., to Rabinow Engineering Co., Inc. Typewriter key cap switch for additional signals. 3,020,995, 2–13–62, Cl. 197—1.

Holtschmidt, Hans.: *See*—
Müller, Erwin, Holtschmidt, and Braün. 3,021,289.

Hooker Chemical Corp.: *See*—
Dorfman, Edwin, Weil, and Newcomer. 3,021,369.

Hooks, Donald Q. Well tool coupling device. 3,021,160, 2–13–62, Cl. 287—119.

Hoover Co., The: *See*—
Carabet, George F. 3,020,577.
Gerber, Dale C. 3,020,576.

Hopkins, Joseph H., and A. S. Van Slyke, to General Motors Corp. Terminal means. 3,021,503, 2–13–62, Cl. 339—213.

Hopkinson, Harold H., M. D. Irwin, and V. R. Kessler, to Carrier Corp. Self-contained air conditioning units. 3,020,820, 2–13–62, Cl. 98—40.

Hopkinson, Harold H., M. D. Irwin, and V. R. Kessler, to Carrier Corp. Self-contained air conditioning units. 3,020,822, 2–13–62, Cl. 08—121.

Hopp Press, Inc., The: *See*—
Immermann, Milton. 3,021,186.

Horgen, Helge, to Societe d'Etudes et de Participations Eau, Gaz, Electricite Energie S.A. Control means for free-piston or semi-free piston engines. 3,020,706, 2–13–62, Cl. 60—13.

Horovitz, Marcus, to Metalastik Ltd. Torque transmission couplings. 3,020,738, 2–13–62, Cl. 64—19.

Horrocks, Raymond G., C. D. Miller, and T. J. Brenner, to PLM Products, Inc. Apparatus for supporting and spacing aerial cables. 3,021,382, 2–13–62, Cl. 174—174.

Horton, Joseph R. Mathematical instruments. 3,021,058, 2–13–62, Cl. 235—61.

Hostetler, Stanley F.: *See*—
Oldfield, Andrew H., and Hostetler. 3,020,684.

Hostettler, Fritz: *See*—
Cox, Eugene F., and Hostettler. 3,021,309.
Cox, Eugene F., and Hostettler. 3,021,310.
Cox, Eugene F., and Hostettler. 3,021,311.
Cox, Eugene F., and Hostettler. 3,021,312.
Cox, Eugene F., and Hostettler. 3,021,313.
Cox, Eugene F., and Hostettler. 3,021,314.
Cox, Eugene F., and Hostettler. 3,021,315.
Cox, Eugene F., and Hostettler. 3,021,316.
Cox, Eugene F., and Hostettler. 3,021,317.

Howatt, Glenn H., to Gulton Industries, Inc. Piezoelectric transducer. 3,021,441, 2–13–62, Cl. 310—8.

Hubacker, Earl F., and J. E. Krug, to Whirlpool Corp. Home appliance. 3,020,733, 2–13–62, Cl, 62—414.

Hudson, Rollin W.: *See*—
Stevens, Richard L. 3,020,909.

Huebler, Jack: *See*—
Beggs, Donald, Huebler, Sabin, Scarlett, and Turin. 3,021,236.

Huffman, Lowell E.: *See*—
Hallston, Ellis W., and Huffman. 3,020,807.

Hull, R. Dell. Combination fishing rod, handle and reel. 3,020,665, 2–13–62, Cl. 43—20.

Hull, R. Dell. Combination fishing rod, handle and reel. 3,020,666, 2–13–62, Cl. 43—20.

Hungate, Ernest C., to Carrier Corp. Apparatus for treating air. 3,020,974, 2–13–62, Cl. 183—22.

Hunt, George R.: *See*—
Bollenback, Carol H., Hunt, and Svarz. 3,021,256.

Hunter, Henry M.: *See*—
Sadtler, Philip B., and Hunter. 3,021,265.

Huppke, Glen P., and R. L. McIlvaine, to Herbert Simpson Corp. Filter device. 3,020,977, 2–13–62, Cl. 183—73.

Hurd, Dallas T., and R. C. Osthoff, to General Electric Co. Hydrocarbon rubber-vinyl containing organopolysiloxane composition and method of making same. 3,021,292, 2–13–62, Cl. 260—3.

Hutchins, William R., to Raytheon Co. Feed-through nulling systems. 3,021,521, 2–13–62, Cl. 43—5.

Hütter, Ulrich, and E. Hänle. Process for producing a structure of fiber reinforced plastic material. 3,021,246, 2–13–62, Cl. 156—196.

Hyatt, Philip L., to American Air Filter Co., Inc. Air filter control unit. 3,020,976, 2–13–62, Cl. 183—62.

Hyde, Gertrude L. Sawyer's apron. 3,020,553, 2–13–62, Cl. 2—52.

Hyder, Clarence R., Jr., and D. D. Vestal, to Burlington Industries, Inc. Box printing machine. 3,020,835, 2–13–62, Cl. 101—44.

Idol, James D., Jr., J. L. Callahan, and R. W. Foreman, to The Standard Oil Co. Process for the conversion of unsaturated aldehydes to the corresponding unsaturated acids. 3,021,366, 2–13–62, Cl. 260—530.

Immermann, Milton, to The Hopp Press, Inc. Interlocking divider and molding assembly. 3,021,186, 2–13–62, Cl. 312—140.3.

Industrial Nucleonics Corp.: *See*—
Cennamo, Anthony D. 3,021,475.
Spero, Arthur F. 3,021,483.

International Business Machines Corp.: *See*—
Anderson, John L. 3,021,439.
Anderson, John L. 3,021,440.
Blumberg, Rex H., and Kraus. 3,021,434.
Bruce, George D. 3,021,432.
Fleisher, Harold. 3,021,437.
Fryklund, Donald H. 3,020,937.
Goddard, William A. 3,020,805.
Hammer, James P., and Slater. 3,021,059.
Mestre, Auguste F. 3,021,484.
Palmer, Harry R., and Prater. 3,020,836.
Philip, George O. 3,021,464.
Reynolds, Andrew C., Jr. 3,021,065.
Rowley, Russell A., Adams, and Gaffney. 3,021,069.
Vinal, Albert W. 3,021,511.

International Paper Co.: *See*—
Schubert, Kenneth M. 3,021,044.

International Telephone and Telegraph Corp.: *See*—
Day, Cyril L. 3,020,622.
Mayle, Louis F. 3,021,073.
Regis, Lawrence J., and Richeson. 3,021,514.

International Ytong-Staballite Co. Ltd.: *See*—
Fagrell, Johnny. 3,021,019.

Irwin, Maurice D.: *See*—
Hopkinson, Harold H., Irwin, and Kessler. 3,020 820.
Hopkinson, Harold H., Irwin, and Kessler. 3,020,822.

Isley, Jacob D., to Liberty Hosiery Mills, Inc. Combination garment. 3,020,556, 2–13–62, Cl. 2—224.

Jackel, Roland D. Ceramic separators for primary batteries. 3,021,379, 2–13–62, Cl. 136—145.

Jackson, Joseph G.: *See*
Samuel, George A., Bell, Grosvenor and Jackson. 3,021,231.

Jackson, Robert W.: *See*—
Beal, Philip F., III, and Jackson. 3,021,327.

Jacobi, Elfriede: *See*—
Bovarnick, Bennett, and Joachim. 3,021,285.

Jahn, Dale M., to Sperry Rand Corp. Time-sharing computer. 3,021,067, 2–13–62, Cl. 235—164.

Jahn, Robert E., to Camloc Fastener Corp. Toggle latch. 3,021,162, 2–13–62, Cl. 292—66.

Jamal, Victor J., and H. S. Newhall, to Union Carbide Corp. Electrical current transfer device. 3,021,377, 2–13–62, Cl. 13—15.

Jameson, John E.: *See*—
Clapp, Robert J., and Jameson. 3,020,596.

Janquart, Jerry C.: *See*—
Lund, James K., Bauerlein, and Janquart. 3,020,727.

Japikse, Cornelis H.: *See*—
Going, Louis H., and Japikse. 3,021,220.

Jaseph, Lawrence F.: *See*—
Arbogast, Duane J., and Jaseph. 3,020,892.

Jaseph, Lawrence F., to Dover Corp. Constant flow valve. 3,020,891, 2–13–62, Cl. 121—46.4.

Jeanes, Allene R.: *See*—
Benedict, Robert G. Jeanes, Wickerham, and Rogovin. 3,021,323.

Jefferson Electric Co., Inc.: *See*—
Rudolph, Robert W. 3,021,087.

Jennings, Jo E., to Jennings Radio Mfg. Corp. Vacuumized electric switch. 3,021,407, 2–13–62, Cl. 200—144.

Jennings, Jo E., to Jennings Radio Mfg. Corp. Coaxial switch. 3,021,408, 2–13–62, Cl. 200—144.

Jennings Radio Mfg. Corp.: *See*—
Jennings, Jo E. 3,021,407.
Jennings, Jo E. 3,021,408.

Jepsen, Robert L., F. L. Salisbury, and C. E. Ward, to Varian Associates, Electron tube apparatus. 3,021,447, 2–13–62, Cl. 315—5.19.

Jersey Production Research Co.: *See*—
Caldwell, Joseph A., and Lytle. 3,021,278.
Graham, John, Kerver, and Prokop. 3,020,954.
Graham, John W., Muench, and Williams. 3,020,964.
Kenneday, John W. 3,020,958.
Orr, Willis P. 3,020,961.
Tausch, Gilbert H. 3,020,955.
Tausch, Gilbert H. 3,020,957.

Jeslonowski, John. Vise. 3,021,132, 2–13–62, Cl. 269—79.

Jibben, Bart P., to N. V. Onderzoekingsinstituut Research. Heat stabilization of polycarbonates. 3,021,303, 2–13–62, Cl. 260—45.75.

Jirou, Marcel, and V. Urné, to Compagnie Francaise des Matieres Colorantes. Trisazo cupriferous dyestuffs. 3,021,322 2–13–62, Cl. 260—145.

Jin, Richard, to Thompson Ramo Wooldridge Inc. Ring counter. 3,021,450, 2–13–62, Cl. 315—84.5.

Joa, Curt G., to Falls Paper & Power Co. Method and apparatus for forming individual wrapped pads from otherwise continuous batt strips. 3,020,687, 2–13–62, Cl. 53—23.

Joa, Curt G. Method and apparatus for cutting and folding paper or cloth webs. 3,021,135, 2–13–62, Cl. 270—70.

Joachim, Annemarie: *See*—
Bovarnick, Bennett, and Joachim. 3,021,285.

Joachim, Gunther: *See*—
Bovarnick, Bennett, and Joachim. 3,021,285.

Joachim, Hans S.: *See*—
Bovarnick, Bennett, and Joachim. 3,021,285.

Joachim, Ingeborg: *See*—
Bovarnick, Bennett, and Joachim. 3,021,285.

Johns-Manville Corp.: *See*—
Brakeley, Paul W. 3 020 584.
Siering, Robert L. 3,020,602.

Johnston, Roy W., and W. A. Biermann, to Controls Co. of America. Oil control. 3,020,923, 2–13–62, Cl. 137—316.

Johnston Testers, Inc.: *See*—
Nutter, Benjamin P. 3 020,959.

Johnstone, Charles W., to Schlumberger Well Surveying Corp. Multi-channel count storage apparatus. 3,021,467, 2–13–62, Cl. 320—1.

Joint Filling Equipment Co.: *See*—
Gross, Charles P. 3,020,812.

Joline, Everett S., to Sperry Rand Corp. Pressure ratio measuring device. 3,020,764, 2–13–62, Cl. 73—398.

Jonason, Karl G., to Aktiebolaget Svenska Metallverken. Method and means for continuously annealing metal strips, wire and the like. 3,021,128, 2–13–62, Cl. 263—52.

Jones, George H., 51% to W. J. D. Stone. Improvements in means for magnetically separating solid magnetic particles from a fluid current. 3,021,007, 2–13–62, Cl. 209—223.

Jones, Hershul T. and J. M., Jr., to Texaco Inc. Method and apparatus for a control system. 3,020,886, 2–13–62, Cl. 121—38.

Jones, James A.: *See*—
Ardley, Stanley M., and Jones. 3,021,300.

Jones, James M., Jr.: *See*—
Jones, Hershul T. and J. M., Jr. 3,020,886.

Jones, Morton E., to Texas Instruments, Inc. Ohmic connections for silicon semiconductor devices. 3,021,462, 2–13–62 Cl. 317—240.

Jones, William C., and P. G. Ridinger, to Bell Telephone Laboratories, Inc. Transistor memory cell. 3,021,436, 2–13–62, Cl. 307—88.5.

Joppa, Everett L., to P-M Associates. Heavy medium for gravity separations. 3,021,282, 2–13–62, Cl. 252—60.

Josam Mfg. Co.: *See*—
Manas, Vincent T., and Flegel. 3,020,565.

Joseph, Werner: *See*—
Podschus, Ernst, and Joseph. 3,021,195.

Joseph, Werner, G. Kaule, and E. Podschus, to Farbenfabriken Bayer Aktiengesellschaft. Process for drying fillers of silica acid or silicate. 3,020,648, 2–13–62, Cl. 34—10.

Joslow, Karl P., to S. Joslow. Manually operated tachistoscope. 3,020,653, 2–13–62, Cl. 35—35.

Joslow, Samuel: *See*—
Joslow, Karl P. 3,020,653.

Jubelt, Warren L., to National Broach & Machine Co. Gear gauging apparatus. 3,020,644, 2–13–62, Cl. 33—179.5.

Just Mfg. Co.: *See*—
Just, Matyas J. 3,020 563.

Just, Matyas J., to Just Mfg. Co. Clamping arrangement for sink structure. 3,020,563, 2–13–62, Cl. 4—187.

Justi, Eduard, and G. Neumann, to Siemens-Schuckertwerke Aktiengesellschaft. Method for producing thermoelectric components on zinc-antimony basis. 3,021,378, 2–13–62, Cl. 136—5.

Kadosch, Marcel: *See*—
Bertin, Jean H., and Kadosch. 3,020,713.
Bertin, Jean H., Kadosch, and Maunoury. 3,020,709.

Kaenel, Reginald A., to Bell Telephone Laboratories, Inc. Analog-to-digital converter. 3,021,517, 2–13–62, Cl. 340—347.

Kaess, Franz, T. Fischer, and H. Kronacher, to Suddeutsche Kalkstickstoff-Werke A.G. Method and apparatus for the continuous production of calcium cyanamide. 3,021,192, 2–13–62, Cl. 23—78.

Kaiser, Hermann F.: *See*—
Riepe, Helmuth, and Kaiser. 3,020,884.

Kallhardt, Heinrich, to Siemens & Halske Aktiengesellschaft Berlin and Munich. Governor for telephone dials. 3,020,983, 2–13–62, Cl. 188—184.

Kalmus, Henry P., and A. L. Hedrich. Phasemeter for measuring very small phase differences. 3,021,481, 2–13–62, Cl. 324—83.

Kaman, Frank A., to Thor Power Tool Co. Pneumatic motor governor. 3,020,920, 2–13–62, Cl. 137—50.

Kanda, Frank A.: *See*—
Clark, Charles C., Kanda, and King. 3,021,197.

Kang, Lawrence S. C. Methods of planting. 3,020,859, 2–13–62, Cl. 111—3.

Kapff, Sixt F., and I. Ginsburgh, to Standard Oil Co. Instrument to measure combustibles in liquid oxygen. 3,021,199, 2–13–62, Cl. 23—230.

Kaplan, Cudek. Kaleidoscopic device. 3,020,796, 2–13–62, Cl. 88—15.

Karpchuk, Sylvester, and W. M. Gruber, to Tinius Olsen Testing Machine Co. Reference signal generating means for dynamic balancing machines. 3,020,766, 2–13–62, Cl. 73—462.

Karpovich, George P.: *See*—
Karpovich, Peter V. and G. P. 3,020,639.

Karpovich, Peter V. and G. P., to United States of America, Army. Method and apparatus for measuring angles of body joints. 3,020,639, 2–13–62, Cl. 33—1.

Kass, Seymour: *See*—
Kliman, Merwin, and Kass. 3,021,518.

Katz, Sam. Quilter gauge. 3,020,804, 2–13–62, Cl. 112—153.

Kaufman, Bruce A., to Avco Corp. Automatic phase control system. 3,021,492, 2–13–62, Cl. 331—28.

Knule, Gnatav: *See*—
Joseph, Werner, Kaule, and Podschus. 3,020,646.

Keene, Frederick J.: *See*—
Caywood, Stanley W., Jr., and Keene. 3,021,308.

Keilholz, Friedrich, and L. Alfoldi, to Firma J. Banning Aktiengesellschaft, Maschinenfabrik. Screw press which is operated by hydraulic means. 3,020,833, 2–13–62, Cl. 100—271.

Keiper, Francis P., Jr., to Philco Corp. Stable output pulse producing system. 3,021,435, 2–13–62, Cl. 307—88.5.

Keller, Merrill E. Casing bracket. 3,021,104, 2–13–62, Cl. 248—222.

Keller, Richard F., Jr. Hydraulic pile extractor. 3,020,965, 2–13–62, Cl. 175—422.

Kempel, Hubert, and E. C. Seward. Vehicle hoisting arrangement. 3,021,166, 2–13–62, Cl. 294—74.

Kenneday, John W., to Jersey Production Research Co. Well tool. 3,020,958, 2–13–62, Cl. 166—118.

Kennedy, Edward R., to Republic Industrial Corp. Method of making hose clamps. 3,020,631, 2–13–62, Cl. 29—417.

Kenyon, Harold F., to Metropolitan-Vickers Electrical Co. Ltd. Liquid electrical connections between relatively rotating electrical conductors. 3,021,406, 2–13–62, Cl. 339—5.

Kerr, Fred S., to Holley Carburetor Co. Transistor ignition system. 3,020,904, 2–13–62, Cl. 123—179.

Kerr, Fred S., and L. H. Romanski, to Holley Carburetor Co. Automatic headlight selector. 3,021,449, 2–13–62, Cl. 315—79.

Kerr, Ralph W., and F. C. Cleveland, Jr., to Corn Products Co. Thickening agent and method of making the same. 3,021,222, 2–13–62, Cl. 99—139.

Kerver, John K.: *See*—
Graham, John, Kerver, and Prokop. 3,020,954.

Kerwin, James F.: *See*—
Blank, Benjamin, and Kerwin. 3,021,368.

Kesselring, Donald J.: *See*—
Baker, Donald H., and Kesselring. 3,020,980.

Kessler, Vernon R: *See*—
Hopkinson, Harold H., Irwin, and Kessler. 3,020,820.
Hopkinson, Harold H., Irwin, and Kessler. 3,020,822.

Kestenbaum, William W., to Sperry Rand Corp. Frequency modulation distortion cancellation system. 3,021,487, 2–13–62, Cl. 328—162.

Khalifa, Mohamed M. Testing circuit for circuit breakers. 3,021,476, 2–13–62, Cl. 324—28.

Kiekhaefer Corp.: *See*—
Post, Lloyd P., and Shanahan. 3,020,707.

Kienzle Apparate G.m.b.H.: *See*—
Martens, Gunter. 3,021,066.

Kiesewetter, Alfred: *See*—
Zerweck, Werner, Bullan, Kunze, and Kiesewetter. 3,020,953.

Kilthau, Martha K.: *See*—
Lindenfelser, Richard, Layman, and Kilthau. 3,021,239.

Kimberly-Clark Corp.: *See*—
Pukis, Paul H., and Rutkus. 3,020,599.

Kimel, Walter, and M. Montavon, to Hoffmann-La Roche Inc. Unsaturated acyclic esters, and method of producing same. 3,021,359, 2–13–62, Cl. 260—488.

King, Aden J.: *See*—
Clark, Charles C., Kanda, and King. 3,021,197.

King, Nancy H., to Eastman Kodak Co. Developers for photographic reversal processes. 3,021,212, 2–13–62, Cl. 96—29.

Kingsbury, Edwin F., to Bell Telephone Laboratories, Inc. Reflector optical system. 3,020,792, 2–13–62, Cl. 88—1.

Kingston Products Corp.: *See*—
Bowman, Joe. 3,021,399.

Kinnison, Court J., to Western Piping & Engineering Co, Inc. Automotive cable winch. 3,021,113, 2–13–62, Cl. 254—165.

Kirk, Claude R. Deposit receiving and recording machine. 3,020,994, 2–13–62, Cl. 194—10.

Kirk, Donald R., and L. M. Smith, to General Dynamics Corp. Composite structural panel. 3,020,986, 2–13–62, Cl. 189—34.

Kirk, Norman, to General Electric Co. Purification of pentaborane. 3,021,264, 2–13–62, Cl. 202—52.

Kistler Instrument Corp.: *See*—
Kistler, Walter P. 3,020,767.

Kistler, Walter P., to Kistler Instrument Corp. Linear accelerometer. 3,020,767, 2–13–62, Cl. 73—497.

Klamp, Paul, to Mechanical Handling Systems, Inc. Retarder mechanism for free conveyor line. 3,020,854, 2–13–62, Cl. 104—249.

Kliman, Merwin, and S. Kass, to Sperry Rand Corp. Complementing apparatus. 3,021,518, 2–13–62, Cl. 340—347.

Klockner-Humboldt-Deutz Aktiengesellschaft: *See*—
Kloss, Richard. 3,020,903.

Kloss, Richard, to Klockner-Humboldt-Deutz Aktiengesellschaft. Air compressing fuel injection internal combustion engine. 3,020,903, 2–13–62, Cl. 123—142.5.

Kmiecik, Thaddeus J.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,020,834.

Knafo, Guy, R. Fuhrmann, T. E. Neesby, and V. K. Babayan; said Babayan assor. to Drew Chemical Corp. Preparation of sugar esters. 3,021,324, 2–13–62, Cl. 260—234.

Knecht, Forrest E. Heat exchanger (fluid cooler) tube plug. 3,020,929, 2–13–62, Cl. 138—89.

Knowles, Frank W. Spacer for freezr plates. 3,020,731, 2–13–62, Cl. 62—341.

Koch, Edward T., Jr.: *See*—
Moss, James R., Koch, and Stevens. 3,021,121.

Koch, Werner, to Roland Offsetmaschinenfabrik Faber & Schleicher AG. Inking mechanism for printing machines. 3,020,840, 2–13–62, Cl. 101—350.

Koch, William J., to Radio Corp. of America. Firing process for forsterite ceramics. 3,020,619, 2–13–62, Cl. 25—157.

Kogel, Wilhelm G., to Aktiebolaget Electrolux. Absorption refrigeration. 3,020,725, 2–13–62, Cl. 62—110.

Kompfner, Rudolf, to Bell Telephone Laboratories, Inc. Parallel high frequency amplifier circuits. 3,021,490, 2–13–62, Cl. 330—53.

Kompfner, Rudolf, to Bell Telephone Laboratories, Inc. Scanning horn-reflector antenna. 3,021,524, 2–13–62, Cl. 343—781.

Koppers Co., Inc.: *See*—
Thiessen, Gilbert. 3,021,291.

Korensky, Edwin, and R. E. Thune, to Link-Belt Speeder Corp. Crane boom structure. 3,021,014, 2–13–62, Cl. 212—144.

Korff, Marvin, and H. M. Scott, to United States of America, Navy. Timing multivibrator. 3,021,486, 2–13–62, Cl. 328—129.

Kornylak, Andrew T.: *See*—
Heinrich, Chester J., Kornylak, and Toscano. 3,020,993.

Kowalczyk, Walter, to Gadget-of-the-Month Club, Inc. Controllably extendable and retractable storing and carrying apparatus adapted to be mounted underneath a horizontal surface in an otherwise unused, unobstrusive location. 3,021,185, 2–13–62, Cl. 312—29.

Kramer, Joseph. Utility cup holder for attachment to aluminum chairs or the like. 3,021,106, 2–13–62, Cl. 248—226.

Kraus, Charles J.: *See*—
Blumberg, Rex H., and Kraus. 3,021,434.

Kraus, Gerard, and K. W. Rollmann, to Phillips Petroleum Co. Carbon black slurries and latex-carbon black masterbatches. 3,021,226, 2–13–62, Cl. 106—238.

Kressman, Theodore R. E., to The Permutit Co. Ltd. Manufacture of anion-exchange resins. 3,021,288, 2–13–62, Cl. 260—2.1.

Krikorian, Nerses H., J. D. Farr, and W. G. Whitteman, to United States of America, Atomic Energy Commission. Method of joining carbides to base metals. 3,020,632, 2–13–62, Cl. 29—420.

Kronacher, Hermann: *See*—
Kaess, Franz, Fischer, and Kronacher. 3,021,192.

Krueger, Melvin R.: *See*—
Perkins, Origen S., and Krueger. 3,020,858.

Krug, John E.: *See*—
Hubacker, Earl F., and Krug. 3,020,733.

Kuceski, Vincent P., to The C. P. Hall Co. Removal of nitrogen compounds. 3,021,348, 2–13–62, Cl. 260—413.

Kuempel, Stanley G. Support for downspouts, discharge conduits and the like. 3,021,102, 2–13–62, Cl. 248—49.

Kullmann, Donald J., to Badger Meter Mfg. Co. Control mechanisms. 3,020,774, 2–13–62, Cl. 74—142.

Kunen, Alfred E. Air conditioning control units. 3,020,819, 2–13–62, Cl. 98—38.

Kunkel, Wulf B.: *See*—
Baker, William R., Bratenahl, and Kunkel. 3,021,272.

Kunze, Wilhelm: *See*—
Zerweck, Werner, Bullan, Kunze, and Kiesewetter. 3,020,953.

Kurek, Frank L. Process and apparatus for filling pressure tight cans. 3,020,685, 2–13–62, Cl. 53—7.

Kyburz, Emilio: *See*—
Flirst, Andor, and Kyburz. 3,021,335.

L & B Welding Equipment, Inc.: *See*—
Leader, Forest. 3,021,081.

Labofina: *See*—
De Radzitzky, Pierre. 3,021,374.

Laboratory For Electronics, Inc.: *See*—
Ostroff, Edward D. 3,021,068.

Lachmann, Horst: *See*—
Meurer, Siegfried, Wiebicke, Lachmann, and Dusold. 3,020,896.

Lamar, Heber C. Fishing lure. 3,020,667, 2–13–62, Cl. 43—35.

Lamm, Heinz: *See*—
Göschel, Karl-Heinz R., and Lamm. 3,020,905.

Landbrecht, Franz, to Agfa Aktiengesellschaft. Single lens reflex camera. 3,020,815, 2–13–62, Cl. 95—42.

Lande, Morris M. Apparatus for making and storing a frozen confection. 3,020,728, 2–13–62, Cl. 62—199.

Lander, Fred, M. Lattmann, and R. Oberacker; said Lattmann and Oberacker assors. to said Lander. Device for the optical copying of photographic negatives. 3,020,801, 2–13–62, Cl. 88—24.

Lanham, William M., to Union Carbide Corp. 2-chloro-4,6-dimethyl - 2 - oxo - 1,3,2 - dioxaphosphorinanes. 3,021,354, 2–13–62, Cl. 260—461.

Lankey, Raymond D. Signal for water skier. 3,021,513, 2–13–62, Cl. 340—213.

Lapeyre, Fernand S. and J. M., to The Peelers Co. Apparatus for separating shrimp from a mixed catch and/or removing the shrimp heads. 3,020,583, 2–13–62, Cl. 17—2.

Lapeyre, James M.: *See*—
Lapeyre, Fernand S. and J. M. 3,020,583.

Laporta, Xavier V., to American-Marietta Co., Stoner-Mudge Co. Division. Partial saponification and partial dehydrohalogenation of vinyl halide-vinyl ester copolymers. 3,021,318, 2–13–62, Cl. 260—87.1.

Large, Wayne V. K.: *See*—
Barnett, Cecil H., Large, and Pruden. 3,021,397.
Barnett, Cecil H., Large, and Pruden. 3,021,398.

Lattmann, Max: *See*—
Lander, Fred, Lattmann, and Oberacker. 3,020,801.

Lattmann, Max E., to Firma Contraves A.G. Accuracy testing apparatus for anti-aircraft guns. 3,020,756, 2–13–62, Cl. 73—167.

Laubach, Gerald D.: *See*—
Lombardino, Joseph G., McLamore, and Laubach. 3,021,331.

Launder, Richard L., to H. & L. Tooth Co. Wear plate mounting for digger tooth construction. 3,020,655, 2–13–62, Cl. 37—142.

Laurent, Howard: *See*—
Von Berg, Richard E., and Laurent. 3,020,969.

La Vole, William E., to Chicago Backing Co. Double-faced adhesive material and method of making same. 3,021,250, 2–13–62, Cl. 156—324.

La Warre, Robert W., and M. D. Markley. Speed responsive switch. 3,021,402, 2–13–62, Cl. 200—61.46.

Lawrence, Billy L., to Texas Instruments Inc. Transistorized chopper circuit. 3,021,470, 2–13–62, Cl. 321—16.

Lawrence Paper Co., The: *See*—
Hill, Justin D., and Cain. 3,021,252.

Layman, Martha K.: *See*—
Lindenfelser, Richard, Layman, and Kilthau. 3,021,239.

Leader, Forest, to L & B Welding Equipment, Inc. Flux grinding apparatus. 3,021,081, 2–13–62, Cl. 241—91.

Lear, Earl B.: *See*—
Samhammer, Donald F., and Lear. 3,021,099.

Lease, Kenneth C., Sr. Extrusion gun heater. 3,020,907, 2–13–62, Cl. 126—229.

Leavesley, George W., and J. O. Trimble, to The Budd Co. Dual steel rule blanking die and method of making it. 3,020,785, 2–13–62, Cl. 76—107.

Le Beau, Richard A., to American Seal-Kap Corp. of Delaware. Railway brake beam leveling device. 3,020,981, 2–13–62, Cl. 188—212.

Le Brusque, René J. N., to H. Ernault-Batignolles S.A. Pendulous templet holder. 3,020,791, 2–13–62, Cl. 82—14.

Lederle, Henry F.: *See*—
Petropoulos, John C., and Lederle. 3,021,363.

Lee Rubber & Tire Corp.: *See*—
McCormick, Clarence E. 3,020,701.

Leeds, Sherwood: *See*—
Tarbox, Albert E., and Leeds. 3,021,270.

Lees, James, and Sons Co.: *See*—
Smith, John E. 3,020,863.

Leffler, Marjorie B. Adjustable table. 3,021,184, 2–13–62, Cl. 311—63.

Lehman, Eugene J., to McGraw-Edison Co. Terminal connector and guard assembly. 3,021,502, 2–13–62, Cl. 339—202.

Leitz, Ernst, Gesellschaft mit beschrankter Haftung: *See*—
Frenk, Helmüth. 3,020,816.
Reichel, Artur. 3,020,794.

LeTourneau-Westinghouse Co.: *See*—
Roe, Charles C. 3,020,739.

Levecque, Marcel: *See*—
Berthon, Lucien, Levecque, and Piot. 3,020,585.

Levin, Leon. Glare reducer for oncoming headlights. 3,021,173, 2–13–62, Cl. 296—97.

Le Vino, Robert E.: *See*—
Goldberg, Jack, Rosenberg, and Le Vino. 3,021,403.

Lewis, James T., Jr., C. A. Crabiel, and R. R. Cowden, to The Lewis Welding & Engineering Corp. Abrading machine for surface finishing work pieces. 3,020,678, 2–13–62, Cl. 51—14.

Lewis Welding & Engineer Corp., The: *See*—
Lewis, James T., Jr., Crabiel, and Cowden. 3,020,678.

Libbey-Owens-Ford Glass Co.: *See*—
White, Gerald. 3,020,677.

Liberty Engineering Co.: *See*—
Long, Fleming D. 3,020,744.

Liberty Folder Co.: *See*—
Appell, George T. 3,021,134.

Liberty Hosiery Mills, Inc.: *See*—
Isley, Jacob D. 3,020,556.

Liftron Corp.: *See*—
Bornemann, William C. 3,021,131.

Lilly, Eli, and Co.: *See*—
Pohland, Albert. 3,021,360.
Pohland, Albert. 3,021,361.

Lincoln, John W., and W. J. J. Gordon, to Cataphote Corp. Artificial snow. 3,020,811, 2–13–62, Cl. 94—3.

Lind, Carl J.: *See*—
Rueckert, Dean E., and Lind. 3,020,686.

Linden, Günter, to Beteiligungs-und Patentverwaltungsgesellschaft mit beschrankter Haftung. Bucket wheel. 3,020,656, 2–13–62, Cl. 37—190.

Lindenfelser, Richard, M. K. Layman, and M. K. Kilthau, to American Cyanamid Co. Structures comprising a modified diaminotrinzinealdehyde resinous composition. 3,021,239, 2–13–62, Cl. 154—43.9.

Lindner, William L., and H. J. Rokosz. Wheel traction device. 3,021,179, 2–13–62, Cl. 301—47.

Link-Belt Speeder Corp.: *See*—
Korensky, Edwin, and Thune. 3,021,014.

Lionel Corp., The: *See*—
Zion, Moses. 3,020,672.

Liu, John K., to U.S. Industries, Inc. Transmissions. 3,020,990, 2–13–62, Cl. 192—4.

Livney, Ilya S.: *See*—
Browning, Harrison, Patterson, and Livney. 3,020,926.

Lobosco, Roscoe R.: *See*—
Ruland, Edward J., Jr., Allen, and Lobosco. 3,021,420.

Lockhart, Hervey D. Fishing float. 3,020,670, 2–13–62, Cl. 43—44.91.

Lombardino, Joseph G., W. M. McLamore, and G. D. Laubach, to Chas. Pfizer, & Co., Inc. Azabenzopyridocolines. 3,021,331, 2–13–62, Cl. 260—251.

Long, Fleming D., to Liberty Engineering Co. Friction tester. 3,020,744, 2–13–62, Cl. 73—9.

Long, John R., to Granite Machine Co. Apparatus for controlling the thickness of textile laps. 3,021,084, 2–13–62, Cl. 242—55.1.

Lund, James K., C. C. Bauerlein, and J. C. Janquart, to The Dole Valve Co. Heat motor for a rotary ice tray. 3,020,727, 2–13–62, Cl. 62—138.

Lundahl, Lars O., to Svenska Aktiebolaget Gasaccumulator. Flashing device. 3,021,451, 2–13–62, Cl. 315—219.

Lupfer, Dale E., to Phillips Petroleum Co. Sampling system for a process analyzer. 3,020,975, 2–13–62, Cl. 183—32.

Lushansky, Edward F., Jr. Game apparatus. 3,021,140, 2–13–62, Cl. 273—130.

Luther, Justus, to Allgauer Alpenmilch A.G. Method and apparatus for the continuous filling of plastic tubing with sterile liquids. 3,020,689, 2–13–62, Cl. 53—140.

Lüthi, Hans, to Erapa Etablissement Fuer Rationelle Verpackung und Spedition. Means for magnetically maintaining metal tape in a loop in banding apparatus. 3,020,827, 2–13–62, Cl. 100—26.

Lyman, Homer F. Dishwashing machine wash and rinse fluid discharge apparatus. 3,020,917, 2–13–62, Cl. 134—58.

Lynch, Thomas J., to Vector Mfg. Co., Inc. Switching system comprising sequentially operated gating means. 3,021,430, 2–13–62, Cl. 307—88.5.

Lytle, Melba L.: *See*—
Caldwell, Joseph A., and Lytle. 3,021,278.

M. K. M. Knitting Mills, Inc.: *See*—
Estephanian, Estephan D., Packard, Clouthier, and Bontillette. 3,020,740.

Maack, Hans. Tamper protective closure. 3,021,034, 2–13–62, Cl. 222—153.

Maccaferri, Mario. Plasticizing cylinders for injection molding and the like machines. 3,020,592, 2–13–62, Cl. 18—30.

Macdonald, Waldron S., and C. B. Brown. High gain signal amplifying device adapted for use with a marine mine. 3,020,843, 2–13–62, Cl. 102—18.

MacLeod, David E., to Carrier Corp. Ice making apparatus. 3,020,726, 2–13–62, Cl. 62—138.

MacMillin, David M., to Bell & Howell Co. Motion picture devices. 3,021,040, 2–13–62, Cl. 226—91.

Magnavox Co., The: *See*—
Hayes, Robert M., Nelson, Wiener, and Armstrong. 3,021,005.

Mahan, John E., to Phillips Petroleum Co. Rocket propellants and their utilization. 3,020,708, 2–13–62, Cl. 60—35.4.

Mahan, John E., to Phillips Petroleum Co., Fast burning fuels. 3,021,238, 2–13–62, Cl. 149—1.

Maker, James H., to Associated Spring Corp. Spring device. 3,021,129, 2–13–62, Cl. 267—1.

Makowski, Alexander G., to American Can Co. Injection molding. 3,020,594, 2–13–62, Cl. 18—42.

Maksymiak, John, and J. S. Pollock, to Eastman Kodak Co. Web guiding mechanism. 3,021,041, 2–13–62, Cl. 226—199.

Mallery, Paul, to Bell Telephone Laboratories, Inc. Binary adders. 3,021,070, 2–13–62, Cl. 235—176.

Mallett, John E., and J. H. Cooper, to The Taylor-Winfield Corp. Apparatus for welding strip. 3,021,416, 2–13–62, Cl. 219—82.

Maloney, John M.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney and Kmiecik. 3,020,834.

Manas, Vincent T., and G. J. Flegel, to Josam Mfg. Co. Carrier and fitting. 3,020,565, 2–13–62, Cl. 4—252.

Mancke, Edgar B., J. E. Schmuk, and F. M. Temmel, to Bethlehem Steel Co. Treatment of coke oven gas. 3,021,189, 2–13–62, Cl. 23—3.

Mankowsky, Vincent J.: *See*—
Sommer, Gordon M., and Mankowsky. 3,021,146.

Manley, Brian W., and B. T. Murphy, to North American Philips Company, Inc. Permanent magnet systems. 3,021-458, 2–13–62, Cl. 317—200.

Manly, Donald G., to The Quaker Oats Co. Hydrogenation of pyrans and furans. 3,021,342, 2–13–62, Cl. 260—345.1.

Manly, Donald G., to The Quaker Oats Co. Hydrogenation process. 3,021,343, 2–13–62, Cl. 260—345.1.

Mann, Julius W., and G. F. Russell. Radio-frequency edge-gluing process. 3,021,248, 2–13–62, Cl. 156—274.

Mannix Co. Ltd.: *See*—
Christoff, James W. 3,020,853.

Maritano, Oddino S., to Olivetti, Ing. C., & C., S.p.A. Device for molding articles by compacting powder material. 3,020,589, 2–13–62, Cl. 18—16.5.

Mark-Clark Products, Inc.: *See*—
Clark, James L. 3,020,658.

Markley, Myron D.: *See*—
La Warre, Robert W., and Markley. 3,021,402.
Marpe, Frederick W. Steel band form tie insert. 3,020,616, 2–13–62, Cl. 25—131.
Marshall, Bruce D., and H. C. Ehrmantraut. Device for use in determining gel forming time of blood. 3,020,748, 2–13–62, Cl. 73—53.
Martens, Gunter, to Kienzle Apparate G.m.b.H. Electronic calculator. 3,021,066, 2–13–62, Cl. 235—160.
Martin, Albert E.: *See*—
Cope, Geoffrey W., and Martin. 3,021,017.
Martin-Marietta Corp.: *See*—
Dix, George P. 3,021,273.
Martin, Peter: *See*—
Deacon, William, Golesworthy, Hartley, and Martin. 3,020,718.
Marx, Michael: *See*—
Allen, George R., Marx, and Weiss. 3,021,347.
Maschinenfabrik Augsburg-Nurnberg AG.: *See*—
Meurer, Siegfried, Wiebicke, Lachmann, and Dusold. 3,020,896.
Mast, Glenn L. Method and apparatus for reverse flow water softener regeneration. 3,021,276, 2–13–62, Cl. 210—35.
Mathi, Walter E., and G. V. Nolde, to Smith-Corona Marchant Inc. Calculating machine. 3,021,060, 2–13–62, Cl. 235—79.
Mathias, Joseph S., to Foote Mineral Co. Preparing lithium ferrosilicon alloys. 3,021,210, 2–13–62, Cl. 75—129.
Matlack, Albert S.: *See*—
De Butts, Edward H., and Matlack. 3,021,319.
Matson, Howard J., to Sinclair Refining Co. Extreme pressure lubricant composition. 3,021,281, 2–13–62, Cl. 252—47.5.
Matsuda, Ken: *See*—
Morin, Lucille T., and Matsuda. 3,021,328.
Morin, Lucille T., and Matsuda. 3,021,336.
Morin, Lucille T., and Matsuda. 3,021,337.
Matthews, Jas. H., & Co.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,020,834.
Mattke, Charles F., and F. W. Reynolds, to Bell Telephone Laboratories, Inc. Radiant-energy translation system. 3,021,428, 2–13–62, Cl. 250—83.3.
Matusche, Heinz. Sound recording and reproducing apparatus. 3,021,145, 2–13–62, Cl. 274—11.
Maunoury, Francois M. L.: *See*—
Bertin, Jean H., Kadosch, and Maunoury. 3,020,709.
Maurer, Donald D. Self packing shortening measure device. 3,021,033, 2–13–62, Cl. 222—47.
Maxey, Edwin M.: *See*—
Gmitter, George T., Maxey, and Sanger. 3,021,290.
Maxon, Glenway, Jr. Concrete mixing apparatus. 3,021,122, 2–13–62, Cl. 259—171.
Maxwell, Lloyd R. Dynamometer. 3,020,753, 2–13–62, Cl. 73—117.
May, Charles W., and R. W. Halberg, to Borg-Warner Corp. Vacuum reference control for pressure compensation. 3,020,776, 2–13–62, Cl. 74—472.
Mayle, Louis F., to International Telephone and Telegraph Corp. Dynamic focusing. 3,021,073, 2–13–62, Cl. 235—192.
McCann, Donald H. Auxiliary sole for sport shoes. 3,020,654, 2–13–62, Cl. 36—7.5.
McCauley, Joe A.: *See*—
Foshee, Clarence B., and McCauley. 3,020,694.
McCormick, Clarence E., to Lee Rubber & Tire Corp., d.b.a. Republic Rubber Division. Method of winding wire reinforcing members on a resilient tube. 3,020,701, 2–13–62, Cl. 57—160.
McCulloch Corp., Marine Products Division: *See*—
Burkett, Willford B. 3,020,777.
McElroy, Albert D., and J. P. Nigon, to Callery Chemical Co. Alkali metal derivatives of decaborane. 3,021,190, 2–13–62, Cl. 23—14.
McFarland, Richard B., to The Seeburg Corp. Selectors for automatic phonographs. 3,021,507, 2–13–62, Cl. 340—162.
McGillivray, Harold J. Method of fertilizing and controlling soil moisture with phosphate sliime. 3,020,676, 2–13–62, Cl. 47—58.
McGrath, William L., to Carrier Corp. Ice making. 3,020,724, 2–13–62, Cl. 62—68.
McGraw-Edison Co.: *See*—
Esser, George W. 3,021,394.
Lehman, Eugene J. 3,021,502.
Whitney, William G. 3,021,143.
McIlvaine, Robert L.: *See*—
Huppke, Glen P., and McIlvaine. 3,020,977.
McKay Machine Co., The: *See*—
Menster, Gilbert F. 3,020,624.
McKelvey, Richard B., to Boeing Airplane Co. Fastener means having supporting means to hold nut element to a workpiece. 3,020,947, 2–13–62, Cl. 151—41.75.
McKinlay, William, to The Danielson Mfg. Co. Vent tube and cap assembly. 3,021,029, 2–13–62, Cl. 220—44.
McKinney, Alfred H., and C. D. Reilly, to E. I. du Pont de Nemours and Co. Fluid inspection apparatus. 3,020,795, 2–13–62, Cl. 88—14.
McKusick, Blaine C.: *See*—
Blomstrom, Dale C., and McKusick. 3,021,339.
McLamore, William M.: *See*—
Lombardino, Joseph G., McLamore, and Laubach. 3,021,331.
McLaughlin, Edward G., to Westinghouse Air Brake Co. Relay energization indicator. 3,021,519, 2–13–62, Cl. 340—373.
McLaughlin, William I. Three- and four-way sliding block valve. 3,020,927, 2–13–62, Cl. 137—622.
McLerran, Archie R., to Dresser Industries, Inc. Compound drive assembly. 3,020,780, 2–13–62, Cl. 74—665.
McMasters, Robert A., to Southeastern Metals Co. Wire storage coil carrier. 3,021,010, 2–13–62, Cl. 211—49.
McTaggart, William R.: *See*—
Palmer, Dale W., and McTaggart. 3,021,137.
Meacham, Larned A., to Bell Telephone Laboratories, Inc. Wave analysis and representation. 3,021,478, 2–13–62, Cl. 324—77.
Mechanical Handling Systems, Inc.: *See*—
Kiamp, Paul. 3,020,854.
Perkins, Gerald E. 3,020,855.
Meckenstock, John W., to Meckum Engineering, Inc. Dredge pump seal. 3,020,850, 2–13–62, Cl. 103—103.
Meckum Engineering, Inc.: *See*—
Meckenstock, John W. 3,020,850.
Meeker, William H., to Hickok Mfg. Co., Inc. Safety belt buckle and inertia resistor. 3,020,612, 2–13–62, Cl. 24—170.
Meiler, John G. Process for producing high density hardboard. 3,021,244, 2–13–62, Cl. 156—30.
Melnick, Daniel, to Corn Products Co. Process for preserving baked products. 3,021,219, 2–13–62, Cl. 99—90.
Mengele, Karl, & Sohne: *See*—
Niederreither, Johann. 3,020,828.
Menster, Gilbert F., to The McKay Machine Co. Apparatus for cleaning and processing metal strip. 3,020,624, 2–13–62, Cl. 29—81.
Mergenthaler Linotype Co.: *See*—
Debus, Karl. 3,020,999.
Merit Associates, Inc.: *See*—
Adick, Robert. 3,020,560.
Merkel, Adam. Repeating magazine rifle with rotatable and forwardly movable barrel. 3,020,662, 2–13–62, Cl. 42—11.
Merkel, Hans, to Siemens-Schuckertwerke Aktiengesellschaft. Method for producing multi-component substances comprising a component of high volatility. 3,021,196, 2–13–62, Cl. 23—204.
Merritt, Robert E. Transfer applying apparatus. 3,021,251, 2–13–62, Cl. 156—542.
Mestre, Auguste F., to International Business Machines Corp. Plural gated pulse generators controlled by common feedback path. 3,021,484, 2–13–62, Cl. 328—63.
Metal Box Co. Ltd., The: *See*—
Oxborrow, Bernard H. 3,020,691.
Stuchbery, Arthur L. 3,021,125.
Metalastik Ltd.: *See*—
Hirst, Archie J. 3,020,856.
Horovitz, Marcus. 3,020,738.
Metropolitan-Vickers Electrical Co. Ltd.: *See*—
Kenyon, Harold F. 3,021,496.
Meurer, Siegfried, K. Wiebicke, H. Lachmann, and G. Dusold, to Maschinenfabrik Augsburg-Nurnberg AG. Cylinder head with air intake passages. 3,020,896, 2–13–62, Cl. 123—30.
Meyer, N. S., Inc.: *See*—
Raeburn, Abner A. 3,020,558.
Meyers, Harold S., to Waldorf Paper Products Co. Display portfolios. 3,021,000, 2–13–62, Cl. 206—44.
Michaels, Bruno, to Bell & Howell Co. Loop restoring motion picture projector. 3,021,039, 2–13–62, Cl. 226—36.
Midland-Ross Corp.: *See*—
Beggs, Donald, Huebler, Sabin, Scarlett, and Turin. 3,021,236.
Milam, David L., to Texas Instruments Inc. Semiconductor translating device with silicone fluid filler. 3,021,460, 2–13–62, Cl. 317—234.
Miles Laboratories, Inc.: *See*—
Borchert, Peter J. 3,021,329.
Croxall, Willard J., and Dawson. 3,021,341.
Fancher, Otis E., Nichols, and Stauffer. 3,021,325.
Miller, Andrew J. U. P. Nellis, and R. C. Waymire, to General Motors Corp. Method of polishing and deflashing molded plastic articles. 3,020,661, 2–13–62, Cl. 41—41.
Miller, Anthony P., to Achilles Corp. Smoking device. 3,020,915, 2–13–62, Cl. 131—9.
Miller, Bernard, to American Cyanamid Co. Preparation of S-(1-alkenyl) phosphorodithioates. 3,021,352, 2–13–62, Cl. 260—461.
Miller, Carroll deV.: *See*—
Horrocks, Raymond G., Miller, and Brenner. 3,021,382.
Miller, Donald E., to The Dole Valve Co. Gas water heater thermostat. 3,020,762, 2–13–62, Cl. 73—362.4.
Miller, Elmer C.: *See*—
Berger, Donald E., and Miller. 3,021,263.
Miller, Mary L., to American Cyanamid Co. Preparation of branched polymers. 3,021,269, 2–13–62, Cl. 204—154.
Miller, Ross J., to E. I. du Pont de Nemours and Co. Explosive device. 3,020,844, 2–13–62, Cl. 102—27.
Mills, Malcolm E., to Elastic Stop Nut Corp. of America. Anchor nut with spherical surface to permit angular movement. 3,020,946, 2–13–62, Cl. 151—41.71.
Mine Safety Appliances Co.: *See*—
Austin, Harry W. 3,020,551.
Temple, Robert, Glebel, and Temple. 3,020,871.
Minneapolis-Honeywell Regulator Co.: *See*—
Ammon, Roscoe A. 3,021,505.
Currie, Courtland B., and Morgan. 3,020,921.
Fenity, Robert D. 3,021,233.
Morrison, Stanley R. 3,021,433.
Minnesota Mining and Mfg. Co.: *See*—
Casement, James S., and Hinkley. 3,021,234.
Minter, Clarke C. Thermal conductivity leak detector. 3,020,746, 2–13–62, Cl. 73—27.
Minter, Clarke C. Ratio-measuring circuit. 3,021,495, 2–13–62, Cl. 338—176.
Mitchell, George M. Dovetail method of cabinet construction. 3,021,187, 2–13–62, Cl. 312—257.
Mite Corp.: *See*—
Gorton, Helen. 3,020,862.
Mobay Chemical Co.: *See*—
Muller, Erwin, Holtschmidt, and Braun. 3,021,289.
Nagenborg, Heinrich, Jr., and Reuter. 3,020,933.
Modderno, John P., to Modern-Lab., Inc. Method for filling and assembling a compartmented pressurized dispensing device. 3,020,688, 2–13–62, Cl. 53—36.

Modern-Lab., Inc.: *See*—
Modderno, John P. 3,020,688.
Molden, James W.: *See*—
Ballentine, William I., Jr., and Molden. 3,020,867.
Monroe Calculating Machine Co.: *See*—
Dodsworth, James W. 3,021,054.
Dodsworth, James W. 3,021,056.
Monsanto Canada Ltd.: *See*—
Wald, Ted H., and Coleman. 3,021,375.
Montagna, Amelio E., and D. H. Hirsh, to Union Carbide Corp. Preparation of 1-alkenyl, alkenyl ethers. 3,021,373, 2–13–62, Cl. 260—614.
Montavon, Marc: *See*—
Kimel, Walter, and Montavon. 3,021,359.
Moore, Thomas M., and E. R. Arnold, to United States of America, Navy. Transistor energy storage counter. 3,021,438, 2–13–62, Cl. 307—88.5.
Moore, Wendell F., to Bell Aerospace Corp. Propulsion unit. 3,021,095, 2–13–62, Cl. 244—4.
Moran, Charlotte B. Collapsible infant height measuring device. 3,020,643, 2–13–62, Cl. 33—138.
Morehouse, Harold: *See*—
Cheney, Wendell C., Morehouse, and Whitfield. 3,021,183.
Morgan, Hugh M.: *See*—
Currie, Courtland B., and Morgan. 3,020,921.
Morgan, James G., to E. I. du Pont de Nemours and Co. Leader film. 3,021,229, 2–13–62, Cl. 117—76.
Morgan, William E., Jr., to Sperry Rand Corp. Automatic frequency control system. 3,021,424, 2–13–62, Cl. 250—20.
Morin, Louis H. Ladder-like burr separable fastener. 3,020,613, 2–13–62, Cl. 24—204.
Morin, Lucille T., and K. Matsuda, to American Cyanamid Co. 3-cyano-1,2,4-triazines and their preparation. 3,021,328, 2–13–62 Cl. 260—248.
Morin, Lucille T., and K. Matsuda, to American Cyanamid Co. 3-cyano-5-methyl-1,2,4-triazole. 3,021,336, 2–13–62, Cl. 260—308.
Morin, Lucille T., and K. Matsuda, to American Cyanamid Co. Preparation of 5-cyanotetrazoles. 3,021,337, 2–13–62, Cl. 260—308.
Morris, Daniel J. Flexible folding box. 3,021,045, 2–13–62, Cl. 229—37.
Morris, Robert A. Ambulant floating seat. 3,020,569, 2–13–62, Cl. 9—347.
Morrison, Stanley R., to Minneapolis-Honeywell Regulator Co. Asymmetrically conductive device employing semiconductors. 3,021,433, 2–13–62, Cl. 307—88.5.
Morton, Glen R. Carburetor and means for controlling the same. 3,021,123, 2–13–62, Cl. 261—39.
Moskovitz, Milton A., ½ to H. Frankel. Seal. 3,021,157, 2–13–62, Cl. 287—90.
Moss, James R., E. T. Koch, Jr., and J. E. Stevens, Jr., to Seco, Inc. Feed mixer. 3,021,121, 2–13–62, Cl. 259—97.
Moung, Khin. Picking mechanism for looms for weaving. 3,020,931, 2–13–62, Cl. 139—147.
Mountjoy, Garrard, and J. D. Reid, to A R & T Electronics, Inc. Coin operated television distribution system. 3,021,383, 2–13–62, Cl. 178—5.1.
Moyer, Robert G.: *See*—
Brennan, Elmer W., and Moyer. 3,020,747.
Mueller, Alfred H., to Daimler-Benz Aktiengesellschaft. Air-compressing injection-type internal combustion engine. 3,020,899, 2–13–62, Cl. 123—32.
Mueller, Arthur C., to Bell & Howell Co. Camera. 3,020,814, 2–13–62, Cl. 95—11.5.
Muench, Nils L.: *See*—
Graham, John W., Muench, and Williams. 3,020,964.
Mullen, Howard A.: *See*—
Placke, Everett H., and Mullen. 3,021,057.
Müller, Erwin, H. Holtschmidt, and G. Braün, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Preparation of polyacetal-polyisocyanate polymers. 3,021,289, 2–13–62, Cl. 260—2.5.
Müller, Helmut K.: *See*—
Seibold, Ernst G., and Müller. 3,020,719.
Mullicane, Joseph B. Weatherproof router trowel. 3,020,575, 2–13–62, Cl. 15—235.3.
Mundlos, Eberhard: *See*—
Fernholz, Hans, and Mundlos. 3,021,365.
Mural, Kotaro: *See*—
Celmer, Walter D., Mural, Routlen, and Sobin. 3,021,259.
Muramoto, Shoichi: *See*—
Sekine, Shigenobu, and Muramoto. 3,020 897.
Murdock, John E., Jr. Shrinkage measuring device. 3,020,755, 2–13–62, Cl. 73—159.
Murphy, Bernard T.: *See*—
Manley, Brian W., and Murphy. 3,021,458.
Murphy, Cornelius J., Jr., and G. F. L. Wood, to Eastman Kodak Co. Waterproof paper negative. 3,021,214, 2–13–62, Cl. 96—85.
Murphy, Philip D.: *See*—
Gibson, Paul, Farbak, and Murphy. 3,021,228.
Murray, Maurice J., and E. J. Bleek, to Universal Oil Products Co. Recovery of metals. 3,021,209, 2–13–62, Cl. 75—83.
Musser C Walton, to United Shoe Machinery Corp. Anti-backlash devices. 3,020,775, 2–13–62, Cl. 74—440.
Musso, Ferdinando P. Piston and cylinder action coffee maker. 3,020,823, 2–13–62, Cl. 99—287.
N.V. Onderzoekingslatitnut Research: *See*—
Jibben, Bart P. 3,021,303.
Nagel Herbert N. Auxiliary hanger for telephone handsets. 3,021,396, 2–13–62, Cl. 179—146.
Nagenborg, Heinrich, Jr., and F. G. Reuter, to Mobay Chemical Co. Buffer stop for power looms. 3,020,933, 2–13–62, Cl. 139—166.
Nagin, Tony. Fork lift truck pusher mechanism. 3,021,024, 2–13–62, Cl. 214—514.
Nalco Chemical Co.: *See*—
Bollenback, Carol H., Hunt, and Svarz. 3,021,256.
Napier, D., & Son Ltd.: *See*—
Greenly, Kenneth H. 3,020,716.
Naster, Bert K. Voltage regulators. 3,021,473, 2–13–62, Cl. 323—45.
Nation, Harry J.: *See*—
Hamblin, Henry J., and Nation. 3,020,893.
National Broach & Machine Co.: *See*—
Beckman, Joel M., Jr. 3,021,006.
Jubelt, Warren L. 3,020,644.
National Cash Register Co., The: *See*—
Anderson, John R. 3,021,510.
Flint, Kenneth C., and Werner. 3,021,052.
Placke, Everett H., and Mullen. 3,021,057.
National Co., Inc.: *See*—
Orenberg, Arthur. 3,021,491.
National Research Development Corp.: *See*—
Hamblin, Henry J., and Nation. 3,020,893.
Sullivan, Ralph M. E. 3,021,082.
Neal, Frank, to R. Hoe & Co., Inc. Offset printing plate clamp. 3,020,842, 2–13–62, Cl. 101—415.1.
Neesby, Torben E.: *See*—
Knafo, Guy, Fuhrmann, Neesby, and Babayan. 3,021,324.
Nellis, Urban P.: *See*—
Miller, Andrew J., Nellis, and Waymire. 3,020,661.
Nelson, Alfred M.: *See*—
Hayes, Robert M., Nelson, Wiener, and Armstrong. 3,021,005.
Neubrech, David A., and M. A. Cattaro, to Gardner Laboratory, Inc. Automatic photoelectric colorimeter. 3,020,793, 2–13–62, Cl. 88—14.
Neumann, Georg: *See*—
Justl, Eduard, and Neumann. 3,021,378.
Newcomer, Jack S.: *See*—
Dorfman, Edwin, Weil, and Newcomer. 3,021,369.
Newhall, Henry S.: *See*—
Jamal, Victor J., and Newhall. 3,021,377.
Newson, Clarence W. Safety trigger lock for firearms. 3,020,663, 2–13–62, Cl. 42—70.
New York Air Brake Co., The: *See*—
Rohrberg, Paul W. 3,020,847.
Nichols, Gust: *See*—
Fancher, Otis E., Nichols, and Stauffer. 3,021,325.
Nickell, Claude H., 50% to Peninsular Distributing Co. Irrigation system. 3,021,078, 2–13–62, Cl. 239—97.
Niederreither, Johann, to Karl Mengele & Sohne. Parallel control gear for hydraulic presses, shears, or the like, having several press cylinders. 3,020,828, 2–13–62, Cl. 100—46.
Nielsen, Jorgen L., to General Dynamics Corp. Double time-constant AGC for speech amplifier. 3,021,489, 2–13–62, Cl. 330—29.
Nigon, Joseph P.: *See*—
McElroy, Albert D., and Nigon. 3,021,190.
Nijkamp, Derk J. E., G. J. van Lochem, and J. G. Vos, to E. I. du Pont de Nemours and Co. Manufacture of crepe yarns and fabrics. 3,020,699, 2–13–62, Cl. 57—157.
Noakes, Thomas E., to American Radiator & Standard Sanitary Corp. Refrigerant expansion valves. 3,021,108, 2–13–62, Cl. 251—61.
Nobel, Fred I.: *See*—
Ostrow, Barnet D., and Nobel. 3,021,266.
Nolde, George V.: *See*—
Mathi, Walter E., and Nolde. 3,021,060.
Noll, George C., and P. E. Wesebaum, to The Thew Shovel Co. Outriggers for crawler cranes, shovels, hoes and the like. 3,021,016, 2–13–62, Cl. 212—145.
Norfolk Iron & Wire Works, Inc.: *See*—
Sherman, William O., Jr. 3,021,155.
Norquist, Francis A. Folding chairs. 3,021,175, 2–13–62, Cl. 297—58.
North & Judd Mfg. Co., The: *See*—
De Nicolo, William V. 3,021,031.
North American Aviation, Inc.: *See*—
De Mott, Dale H. 3,021,096.
Frazier, Lewis E. 3,020,851.
Pearce, Rufus B., Jr. 3,020,717.
North American Philips Co., Inc.: *See*—
Blok, Lourens. 3,021,413.
Manley, Brian W., and Murphy. 3,021,458.
Van den Blink, Willem P., ter Haar, and Ettema. 3,021,418.
Van der Burgt, Cornelis M. 3,021,119.
Van der Burgt, Cornelis M. 3,021,120.
Wagensell, Gottfried, and Dohmstreich. 3,021,391.
Northrop Corp.: *See*—
Swainson, Edward L. 3,020,627.
Nutter, Benjamin P., to Johnston Testers, Inc. Well packers. 3,020 959, 2–13–62, Cl. 166—134.
Nye, Dudley D., Jr., to Airpax Electronics Inc. Voltage compensation. 3,021,480, 2–13–62, Cl. 324—78.
Nysellus, Gustav. Means for controlling the speed of a charging plunger in a die casting machine. 3,020,607, 2–13–62, Cl. 22—68.
Oakes, Philip N., and R. N. Wilkes, to General Electric Co. Semiconductor device. 3,021,461, 2–13–62, Cl. 317—235.
Oakland Corp., The: *See*—
Wallace, Richard B., and Ebbert. 3,020,570.
Oberacker, Robert: *See*—
Lander, Fred, Lattmann, and Oberacker. 3,020,801.
O'Connell, John F. Vertically adjustable fence. 3,021,114, 2–13–62, Cl. 256—24.
O'Connor, Donald J. Paint applying apparatus. 3,020,579, 2–13–62, Cl. 15—553.
Ogier, Baxter B., and L. A. Umbach, to The Photogenic Machine Co. Photographic light unit. 3,021,422, 2–13–62, Cl. 240—1.3.
Oilgear Co., The: *See*—
Grad, Adolf R. 3,020,890.

Oldfield, Andrew H., and S. F. Hostetler, to Textron Inc. Lens blocking device. 3,020,684, 2–13–62, Cl. 51—235.

Olin Mathieson Chemical Corp.: *See*—
Clark, Charles C., Kanda, and King. 3,021,197.
Heuer, Charles A. 3,020,633.
Perlman, David. 3,021,262.

Olivetti, Ing. C., & C., S.p.A.: *See*—
Maritano, Oddino S. 3,020,589.

Olmsted, Bernie A., and F. R. Cinco, to Package Machinery Co. Electro-hydraulic safety mechanism. 3,020,593, 2–13–62, Cl. 18—30.

Olofsson Corp., The: *See*—
Olofsson, Gustav A., and Garnett. 3,020,966.

Olofsson, Gustav A., and D. W. Garnett, to The Olofsson Corp. Automatic weighing machine. 3,020,966, 2–13–62, Cl. 177—61.

O'Neil, John A. Fishing lure. 3,020,668, 2–13–62, Cl. 43—42.16.

Opderbeck, Fritz, G. Trapp, and G. Worner, to Phrix-Werke A.G. Production of pergamyn. 3,021,253, 2–13–62, Cl. 162—13.

Orenberg, Arthur, to National Company, Inc. Frequency control apparatus for an atomic beam tube. 3,021,491, 2–13–62, Cl. 331—3.

Orgill, Heber L., to Thompson Ramo Wooldridge Inc. Metal gathering process and articles produced thereby. 3,021,421, 2–13–62, Cl. 219—150.

Origoni, Victor E.: *See*—
Fox, Sidney, Blicharz, and Origoni. 3,021,346.

Orr, Willis P., to Jersey Production Research Co. Liquid chemical injector for use in wells. 3,020,961, 2–13–62, Cl. 166—165.

Ostdiek, Francis R., to United States of America, Navy. Lifting sling. 3,021,167, 2–13–62, Cl. 294—86.

Osthoff, Robert C.: *See*—
Hurd, Dallas T., and Osthoff. 3,021,292.

Ostroff, Edward D., to Laboratory For Electronics, Inc. Computing apparatus. 3,021,068, 2–13–62, Cl. 235—164.

Ostrow, Barnet D., and F. I. Nobel. Additive for copper plating bath. 3,021,266, 2–13–62, Cl. 204—44.

Ostwald, Robert E. Collating rack. 3,021,133, 2–13–62, Cl. 270—58.

Oury, Levi I. Flood control unit. 3,020,922, 2–13–62, Cl. 137—115.

Oxborrow, Bernard H., to The Metal Box Co. Ltd. Carton-closing machines. 3,020,691, 2–13–62, Cl. 53—376.

Ozalid Co. Ltd.: *See*—
Halden, Joseph G. B. 3,020,818.

Ozark-Mahoning Co.: *See*—
Peirce, John E., and Phillips. 3,021,202.

PLM Products, Inc.: *See*—
Horrocks, Raymond G., Miller, and Brenner. 3,021,382.

P-M Associates: *See*—
Joppa, Everett L. 3,021,282.

Package Forming Machinery Co. Ltd.: *See*—
Phin, Sydney R. 3,021,043.

Package Machinery Co.: *See*—
Olmsted, Bernie A., and Cinco. 3,020,593.

Packard, Kenneth Y.: *See*—
Estephanian, Estephan D., Packard, Clouthier, and Bontillette. 3,020,740.

Packman, Percival J. Planting machines for potatoes and other seeds. 3,020,860, 2–13–62, Cl. 111—34.

Palmer, Dale W., and W. R. McTaggart. Ski trainer. 3,021,137, 2–13–62, Cl. 272—57.

Palmer, Harry R., and M. P. Prater, to International Business Machines Corp. Stencil aperture tabulating card. 3,020,836, 2–13–62, Cl. 101—125.

Pangborn Corp.: *See*—
Vedder, Walter O., and Patronik. 3,021,376.

Pantermoller, Carl. Cooking apparatus. 3,020,824, 2–13–62, Cl. 99—346.

Papp, Henry: *See*—
Sovia, Cedric C., and Papp. 3,021,079.

Parish, Gene T. Marine speedometer. 3,020,757, 2–13–62, Cl. 73—181.

Parker, Gordon N., to Cling-Surface Co. Spout-closure for container with reversible mounting means therefor. 3,021,037, 2–13–62, Cl. 222—498.

Parker-Hannifin Corp.: *See*—
Davies, Robert H. 3,020,924.

Parkins, William M.: *See*—
Graf, Robert D., Parkins, and Prouty. 3,021,406.

Patelhold Patentverwertungs- & Elektro-Holding A.G.: *See*—
Ekkers, Gysbert J., and Patriarca. 3,021,446.

Patriarca, Aldo: *See*—
Ekkers, Gysbert J., and Patriarca. 3,021,446.

Patronik, Harry N.: *See*—
Vedder, Walter O., and Patronik. 3,021,376.

Patterson, David A.: *See*—
Etzel, Howard W., and Patterson. 3,021,286.

Patterson, Wesley C.: *See*—
Browning, Harrison, Patterson, and Livney. 3,020,926.

Paulini, Harry H. J., to United Sweets of America, Inc. Candy or pill dispensing container. 3,020,659, 2–13–62, Cl. 40—307.

Paxson, Homer D. Coil turning device. 3,021,018, 2–13–62, Cl. 214—1.

Pearce, Rufus B., Jr., to North American Aviation, Inc. Uniform fuel-air ratio fuel injection system. 3,020,717, 2–13–62, Cl. 60—39.28.

Pearson, Fred. Blower for hay baler. 3,020,829, 2–13–62, Cl. 100—102.

Peek, Henry L.: *See*—
Perry, Elijah R., and Peek. 3,021,410.

Peelers Co., The: *See*—
Lapeyre, Fernand S. and J. M. 3,020,583.

Peet, William H. Accumulator. 3,020,928, 2–13–62, Cl. 138—30.

Peglow, William E., to Swift & Co. Packaging. 3,020,692, 2–13–62, Cl. 53—392.

Peickii, Vasalie L.: *See*—
Rhoads, George D., Peickii, and Carson. 3,021,161.

Peirce, John E., and J. H. Phillips, to Ozark-Mahoning Co. Discharge seal device for rotating vessels. 3,021,202, 2–13–62, Cl. 23—286.

Penetrascope Ltd.: *See*—
Pocknee, James K. 3,020,752.

Peninsular Distributing Co.: *See*—
Nickell, Claude H. 3,021,078.

Perier, Frank R., and A. Di Bella, to Acton Laboratories, Inc. Multi-turn potentiometer. 3,021,494, 2–13–62, Cl. 338—148.

Perkins, Gerald E., to Mechanical Handling Systems, Inc. Conveyor stop, release and advance mechanism. 3,020,855, 2–13–62, Cl. 104—250.

Perkins, Origen S., and M. R. Krueger, to Bucyrus-Erie Co. Road-rail vehicle. 3,020,858, 2–13–62, Cl. 105—215.

Perlman, David, to Olin Mathieson Chemical Corp. Preparation of cobalamins. 3,021,262, 2–13–62, Cl. 195—96.

Permutit Co. Ltd., The: *See*—
Kressman, Theodore R. E. 3,021,288.

Perrochat, Jean L., to A. Raymond. Fastening device for molding. 3,020,611, 2–13–62, Cl. 24—73.

Perry, Edward G., to Sperry Rand Corp. Photographic summation system. 3,020,800, 2–13–62, Cl. 88—24.

Perry, Elijah R., and H. L. Peek, to Allis-Chalmers Mfg. Co. Device for lowering and raising a movable structure from or to its support. 3,021,410, 2–13–62, Cl. 200—150.

Peters, Alfred H. Conduit molding form. 3,020,615, 2–13–62, Cl. 25—128.

Peters, Anthony E. Shear control system for multi-line continuous rod mills. 3,020,788, 2–13–62, Cl. 80—35.

Peterson, Victor S.: *See*—
Rascati, Salvatore A., and Peterson. 3,021,419.

Petropoulos, John C., to American Cyanamid Co. Purification of crude alkylidene bis-(benzoic acids) by solvent extraction. 3,021,362, 2–13–62, Cl. 260—525.

Petropoulos, John C., and H. F. Lederle, to American Cyanamid Co. Purification of bis-(carboxyphenyl)-alkanes by permanganate oxidation. 3,021,363, 2–13–62, Cl. 260—225.

Petrow, Vladimir: *See*—
Waddington-Feather, Sheila M. (nee Booker), Ellis, and Petrow. 3,021,345.

Petty, Olive S.: *See*—
Hasbrook, Arthur F. 3,020,970.

Pfarrwaller, Erwin to Sulzer Freres, S.A. Heald frames and guides therefor in looms for weaving. 3,020,930, 2–13–62, Cl. 139—82.

Pfizer, Chas., & Co., Inc.: *See*—
Celmer, Walter D., Murai, Routien, and Sobin. 3,021,259.
Lombardino, Joseph G., McLamore, and Laubach. 3,021,331.

Philco Corp.: *See*—
Keiper, Francis P., Jr. 3,021,435.

Phillip, George O., to International Business Machines Corp. Tool depth control system. 3,021,464, 2–13–62, Cl. 318—162.

Phillips, Jack H.: *See*—
Peirce, John E., and Phillips. 3,021,202.

Phillips Petroleum Co.: *See*—
Berger, Donald E., and Miller. 3,021,263.
Kraus, Gerard, and Rollmann. 3,021,226.
Lupfer, Dale E. 3,020,975.
Mahan, John E. 3,020,708.
Mahan, John E. 3,021,238.

Phin, Sydney R., to Package Forming Machinery Co. Ltd. Cartons. 3,021,043, 2–13–62, Cl. 229—16.

Photogenic Machine Co., The: *See*—
Ogier, Baxter B., and Umbach. 3,021,422.

Phrix-Werke A.G.: *See*—
Opderbeck, Fritz, Trapp, and Worner. 3,021,253.

Pickens, Robert A., to The Bendix Corp. Control circuit for electromagnetic devices. 3,021,454, 2–13–62, Cl. 317—148.5.

Pierce, Charles W.: *See*—
Bruce, Alastair D., and Pierce. 3,020,874.

Pinnes, Robert W., to United States of America, Navy. Multiunit turbojet engine. 3,020,711, 2–13–62, Cl. 60—35.6.

Piot, Paul: *See*—
Berthon, Lucien, Levecque, and Piot. 3,020,585.

Pitchon, Esra: *See*—
Clinton, William P., and Pitchon. 3,021,218.

Pittsburgh Plate Glass Co.: *See*—
Duncan, James E., and Seymour. 3,020,803.
Richardson, Ronald E. 3,021,227.

Placke, Everett H., and H. A. Mullen, to The National Cash Register Co. Rate devices. 3,021,057, 2–13–62, Cl. 235—61.

Pneumo Dynamics Corp.: *See*—
Hamilton, Wallace, and Surso. 3,021,165.

Pocknee, James K., to Penetrascope Ltd. Attachment devices for hardness testing instruments. 3,020,752, 2–13–62, Cl. 73—81.

Podesta, Armando, and C. Vignati. Capping devices. 3,020,690, 2–13–62, Cl. 53—353.

Podilpnik, John, to Sinclair Refining Co. Apparatus for coating containers. 3,020,879, 2–13–62, Cl. 118—423.

Podschus, Ernst: *See*—
Joseph, Werner, Kaule, and Podschus. 3,020,646.

Padschus, Ernst, and W. Joseph, to Farbenfabriken Bayer Aktiengesellschaft. Treatment of silicates. 3,021,195, 2–13–62, Cl. 23—110.

Pohl, Karl-Heinz H., to Bell Telephone Laboratories, Inc. Connector assembly. 3,021,500, 2–13–62, Cl. 339—75.

Pohland, Albert, to Eli Lilly and Co. 3-acetoxy-4,4-diphenyl-6-methylaminoheptane. 3,021,360, 2–13–62, Cl. 260—490.

Pohland, Albert, to Eli Lilly and Co. 1-propoxyphene n-oxide and salts thereof. 3,021,361, 2–13–62, Cl. 260—490.

Pollock, John S.: *See*—
Maksymiak, John, and Pollock. 3,021,041.

Polsky, Irving, and J. L. Beasley. Golf club head attachment. 3,021,141, 2–13–62, Cl. 273—194.

Popeck, Stanley P.: *See*—
Dersch, Fritz, and Popeck. 3,021,213.

Porck, Alfred J.: *See*—
Zeller, Carl N., and Porck. 3,021,320.

Post, Lloyd P., and R. J. Shanahan, to Kiekhaefer Corp. Engine exhaust manifold construction. 3,020,707, 2–13–62, Cl. 60—31.

Potter, Frederick T., to Ampsco Corp. Insect trap. 3,020,671, 2–13–62, Cl. 43—139.

Pottle, Ralph K., and W. B. Elam, to American Can Co. Container. 3,021,047, 2–13–62, Cl. 229—51.

Pottle, Ralph K., and W. B. Elam, to American Can Co. Container. 3,021,048, 2–13–62, Cl. 229—51.

Power Jets (Research & Development) Ltd.: *See*—
Deacon, William, Golesworthy, Hartley, and Martin. 3,020,718.

Practical Mfg. Co.: *See*—
Albertson, Robert V. and V. N. 3,020,918.

Prater, Merle P.: *See*—
Palmer, Harry R., and Prater. 3,020,836.

Pratt, John J., Jr.: *See*—
Bornstein, Joseph, Blum, and Pratt. 3,021,358.

Presto Lock Co.: *See*—
Gehrle, Charles S. 3,020,742.
Gehrle, Charles S. 3,020,743.

Prestole Corp.: *See*—
Weinstein, Donald A. 3,020,630.

Pretka, John E., to E. I. du Pont de Nemours and Co. Process for rendering synthetic hydrophobic material antistatic and the product obtained therefrom. 3,021,232, 2–13–62, Cl. 117—138.8.

Procter & Gamble Co., The: *See*—
Going, Louis H., and Japikse. 3,021,220.

Prokop, Charles L.: *See*—
Graham, John, Kerver, and Prokop. 3,020,954.

Proops, William R.: *See*—
Fowler, George W., Crosby, and Proops. 3,021,330.

Prost, Raymond J. Printing kit. 3,020,838, 2–13–62, Cl. 101—333.

Prouty, Robert E.: *See*—
Graf, Robert D., Parkins, and Prouty. 3,021,406.

Pruden, Harold M.: *See*—
Barnett, Cecil H., Large, and Pruden. 3,021,397.
Barnett, Cecil H., Large, and Pruden. 3,021,398.

Pukis, Paul H., and H. V. Rutkus, to Kimberly-Clark Corp. Manufacture of cellulosic product. 3,020,599, 2–13–62, Cl. 19—147.

Pullen, Joseph A., to Pullen Molded Products, Inc. Container for shipping potted plants. 3,021,046, 2–13–62, Cl. 229—39.

Pullen Molded Products, Inc.: *See*—
Pullen, Joseph A. 3,021,046.

Pure Oil Co., The: *See*—
Brennan, Elmer W., and Moyer. 3,020,747.

Quaker Oats Co., The: *See*—
Brown, Lloyd H., and Hill. 3,020,609.
Manly, Donald G. 3,021,342.
Manly, Donald G. 3,021,343.

Querengesser, Robert E. Fence construction. 3,021,116, 2–13–62, Cl. 256—72.

Quinn, Edward, to United Shoe Machinery Corp. Sewing machines. 3,020,861, 2–13–62, Cl. 112—34.

Rabinow Engineering Co., Inc.: *See*—
Holt, Arthur W. 3,020,995.

Radio Corp. of America: *See*—
Hernqvist, Karl G. 3,021,472.
Koch, William J. 3,020,619.
Rajchman, Jan A. 3,021,387.

Raeburn, Abner A., to N. S. Meyer, Inc. Sash construction. 3,020,558, 2–13–62, Cl. 2—300.

Rajchman, Jan A., to Radio Corp. of America. Electrical display device. 3,021,387, 2–13–62, Cl. 178—7.3.

Rakowitz, David H., to American Cyanamid Co. Soil stabilization with a composition containing an acrylamide, a bis-acrylamide, and aluminum and acrylate ions. 3,021,298, 2–13–62, Cl. 260—41.

Randall, Ross D., and H. D. Baumann, to Worthington Corp. Pilot operated regulator mechanism. 3,020,925, 2–13–62, Cl. 137—489.5.

Randmark, Eric E., to V. J. Randmark. Portable kerosene heater. 3,020,906, 2–13–62, Cl. 126—59.5.

Randmark, Victor J.: *See*—
Randmark, Eric E. 3,020,906.

Rankin, Andrew W., and J. W. Eberle, to General Electric Co. High temperature turbine nozzle retaining means. 3,021,110, 2–13–62, Cl. 253—78.

Ransburg Electro-Coating Corp.: *See*—
Gauthier, William D. 3,021,077.

Rantsch, Kurt, and L. Faust, to M. Hensoldt & Sohne, Optische Werke A.G. Binoculars having shock absorbing covering. 3,020,802, 2–13–62, Cl. 88—34.

Rascati, Salvatore A., and V. S. Peterson, to Combustion Engineering, Inc. Welding apparatus. 3,021,419, 2–13–62, Cl. 219—124.

Rascati, Salvatore A., to General Electric Co. Busway plug units. 3,021,499, 2–13–62, Cl. 339—22.

Raymond, A.: *See*—
Perrochat, Jean L. 3,020,611.

Raytheon Co.: *See*—
Copson, David A. 3,020,645.
Hutchins, William R. 3,021,521.
Redgrift, Harry F. 3,020,635.

Rea Magnet Wire Co., Inc.: *See*—
Wheatley, Robert L. 3,021,092.

Reaney, David W.: *See*—
Reaney, Warford A. and D. W. 3,021,127.

Reaney, Warford A. and D. W. Rotary kiln. 3,021,127, 2–13–62, Cl. 263—32.

Redgrift, Harry F., to Raytheon Co. Soldering methods. 3,020,635, 2–13–62, Cl. 29—495.

Redick, David C., G. L. Cameron, R. H. Bertsche, Jr., and V. W. Yahn, to General Motors Corp. Engine starter. 3,020,771, 2–13–62, Cl. 74—7.

Regis, Lawrence J., and W. S. Richeson, Jr., to International Telephone and Telegraph Corp. Voltage comparator. 3,021,514, 2–13–62, Cl. 340—248.

Reich, Robert W. Rechargeable flashlight battery and circuit for recharging same. 3,021,468, 2–13–62, Cl. 320—2.

Reichel, Artur, to Ernst Leitz Gesellschaft mit beschrankter Haftung. Spectrometer grating control arrangement. 3,020,794, 2–13–62, Cl. 88—14.

Reid, John D.: *See*—
Mountjoy, Garrard, and Reid. 3,021,383.

Reilly, Charles D.: *See*—
McKinney, Alfred H., and Reilly. 3,020,795.

Reisner, David B., and J. V. Scudi, to Wallace & Tiernan Inc. Substituted nitrothiazolyl piperazines. 3,021,333, 2–13–62, Cl. 260—268.

Rejdak, Melvin F., to Erico Products, Inc. Method of welding aluminum and other metals. 3,020,610, 2–13–62, Cl. 22—203.

Remington Arms Co., Inc.: *See*—
Hallston, Ellis W., and Huffman. 3,020,807.

Republic Industrial Corp.: *See*—
Kennedy, Edward R. 3,020,631.

Republic Rubber Division: *See*—
McCormick, Clarence E. 3,020,701.

Research Products Mfg. Co.: *See*—
Blankenship, Ernest B., and Bowers. 3,020,559.

Reuter, Franz G.: *See*—
Nagenborg, Heinrich, Jr., and Reuter. 3,020,933.

Reynolds, Andrew C., Jr., to International Business Machines Corp. Decimal to binary translators. 3,021,065, 2–13–62, Cl. 235—155.

Reynolds, Frederick W.: *See*—
Mattke, Charles F., and Reynolds. 3,021,428.

Reynolds, James A., to Tokheim Corp. Header for submerged pump and motor unit. 3,020,849, 2–13–62, Cl. 103—87.

Reynolds, John A. Tub and shower mat with magnetic holding means. 3,020,562, 2–13–62, Cl. 4—185.

Rheem Mfg. Co.: *See*—
Von Berg, Richard E., and Laurent. 3,020,969.

Rhoads, George D., V. L. Peickii, and B. H. Carson, to Federal-Mogul-Bower Bearings, Inc. Unitized shaft seal. 3,021,161, 2–13–62, Cl. 277—37.

Rhodes, William H., to Standard Ultramarine & Color Co. Prussian blue pigment. 3,021,191, 2–13–62, Cl. 23—77.

Richard, Leslie E., to S. D. Warren Co. Planographic printing plates. 3,020,839, 2–13–62, Cl. 101—149.2.

Richards, John A.: *See*—
Spetzler, August L., and Richards. 3,020,682.

Richardson, Ronald E., to Pittsburgh Plate Glass Co. Method and apparatus for coating glass. 3,021,227, 2–13–62, Cl. 117—37.

Richeson, William E., Jr.: *See*—
Regis, Lawrence J., and Richeson. 3,021,514.

Richter, John E.: *See*—
Gould, Russell D., and Richter. 3,020,695.

Rickey, Irvin J. Drafting instrument. 3,020,642, 2–13–62, Cl. 33—93.

Riden, Kenneth R. Combination book mark and loose leaf binder. 3,020,876, 2–13–62, Cl. 116—119.

Ridinger, Philip G.: *See*—
Jones, William C., and Ridinger. 3,021,436.

Riepe, Helmuth, and H. F. Kaiser, to L. & C. Hardtmuth, Inc. Writing implement with a replaceable fluid-holding cartridge. 3,020,884, 2–13–62, Cl. 120—44.

Rieter, Joh. Jacob, & Co. Ltd.: *See*—
Schlitknecht, Adolf. 3,020,698.

Riley, Joseph J., to The Taylor-Winfield Corp. Low loss anti-friction current transfer means for rotating devices. 3,021,497, 2–13–62, Cl. 339—5.

Ritzenthaler, Bruce A.: *See*—
Cropper, Wendell P., and Ritzenthaler. 3,020,749.

Rivard Brothers Inc.: *See*—
Davis, Wilbur A. 3,020,790.

Rivera, Jose L. H. Loom picker. 3,020,932, 2–13–62, Cl. 139—159.

Roach, Erskine E., and I. W. Baker, to Harold Brown Co. Plunger lift for wells. 3,020,852, 2–13–62, Cl. 103—225.

Roberts, Fred T. and R. E. Method of making a reinforced corrugated hose. 3,021,245, 2–13–62, Cl. 156—144.

Roberts, Robert E.: *See*—
Roberts, Fred T. and R. E. 3,021,245.

Robins, Roland K.: *See*—
Hitchings, George H., and Robins. 3,021,332.

Robinson, Arthur S., to The Bendix Corp. Precision infinite memory integrator. 3,021,072, 2–13–62, Cl. 235—183.

Robinson, John A.: *See*—
Fifield, Charles H. Q., Smith, and Robinson. 3,021,274.

Robinson, Max E. Method and apparatus for estimating forage density. 3,021,477, 2–13–62, Cl. 324—61.

Robson, James W.: *See*—
Eads, Harold O., and Robson. 3,021,176.

Rodak, Joseph J., to Ford Motor Co. Dynamoelectric machine. 3,021,442, 2–13–62, Cl. 310—60.

Roe, Charles C., to LeTourneau-Westinghouse Co. Torque transmitting device. 3,020,739, 2–13–62, Cl. 64—27.

Rogers, Richard S. Automatic depository. 3,021,050, 2–13–62, Cl. 232—43.1.

Rogovin, S. Peter: *See*—
Benedict, Robert G., Jeanes, Wickerham, and Rogovin. 3,021,323.

Rohm & Haas Co.: *See*—
Bortnick, Newman M. 3,021,338.
Dupre, Jean, and Wolfrom. 3,021,372.

Rohn Mfg. Co.: *See*—
Turner, Benjamin R. 3,020,985.

Rohrberg, Paul W., to The New York Air Brake Co. Variable displacement pump. 3,020,847, 2–13–62, Cl. 103—37.

Rokosz, Henry J.: *See*—
Lindner, William L., and Rokosz. 3,021,179.

Roland Offsetmaschinenfabrik Faber & Schleicher A.G.: *See*—
Koch, Werner. 3,020,840.

Rollmann, Kent W.: *See*—
Kraus, Gerard, and Rollmann. 3,021,226.

Romanski, Lon H.: *See*—
Kerr, Fred S., and Romanski. 3,021,449.

Rosenberg, Herbert L.: *See*—
Goldberg, Jack, Rosenberg, and Le Vino. 3,021,403.

Rosenthal, Sidney N., to Speedry Chemical Products, Inc. Combination ink well and felt nib pen. 3,020,578, 2–13–62, Cl. 15—517.

Rosenthal, Walter, and G. Schorsch. Animal feed compositions. 3,021,216, 2–13–62, Cl. 99—2.

Routien, John B.: *See*—
Celmer, Walter D., Mural, Routien, and Sobin. 3,021,259.

Rowand, Will H., to The Babcock & Wilcox Co. Steam generating and superheating unit. 3,020,894, 2–13–62, Cl. 122—33.

Rowley, Russell A., F. V. Adams, and J. F. Gaffney, to International Business Machines Corp. Statistical analyzing system. 3,021,069, 2–13–62, Cl. 235—168.

Royal McBee Corp.: *See*—
D'Onofrio, Anthony. 3 020,996.
Von Kummer, Ferdinand G. 3,021,063.

Rudolph, Robert W., to Jefferson Electric Co., Inc. Cord storage device. 3,021,087, 2–13–62, Cl. 242—85.1.

Rueckert, Dean E., and C. J. Lind, to Swift & Co. Packaging in plastic film. 3,020,686, 2–13–62, Cl. 53—22.

Ruland, Edward J., Jr., J. P. C. Allen, and R. R. Lobosco, to Union Carbide Corp. Welding control circuit. 3,021,420, 2–13–62, Cl. 219—131.

Rummel, Theodor, to Siemens and Halske Aktiengesellschaft Berlin and Munich. Method for producing semiconductor single crystals. 3,021,198, 2–13–62, Cl. 23—223.5.

Rund, John C. Hardtop convertible automobile structure. 3,021,174, 2–13–62, Cl. 296—107.

Runde, Byron A., and I. W. Horuitzke, to Burroughs Corp. Accounting machines. 3,021,053, 2–13–62, Cl. 235—60.

Rushing, George, Jr. Power actuated emergency brake. 3,020,982, 2–13–62, Cl. 188—140.

Russell, George F.: *See*—
Mann, Julius W., and Russell. 3,021,248.

Rutkus, Harold V.: *See*—
Pukis, Paul H., and Rutkus. 3,020,599.

S-J Chemical Co.: *See*—
Smith-Johannsen, Robert. 3,020,597.

Sabin, Darrel B.: *See*—
Beggs, Donald, Huebler, Sabin, Scarlett, and Turin. 3,021,236.

Sacchi, Giulio. Speed change device having resiliently deformable wheels. 3,020,782, 2–13–62, Cl. 74—796.

Sachs, David. Flag raising and saluting toy. 3,020,674, 2–13–62, Cl. 46—120.

Sacks, David, to E. I. du Pont de Nemours and Co. Draw roll. 3,020,621, 2–13–62, Cl. 28—71.3.

Saco-Lowell Shops: *See*—
West, Paul B. 3,020,600.

Sadtler, Philip B., and H. M. Hunter, to Chicago Bridge & Iron Co. Multiple effect evaporating system. 3,021,265, 2–13–62, Cl. 202—174.

Sage, John G., to United States Steel Corp. Apparatus for disassembling top roll bearing riders. 3,020,628, 2–13–62, Cl. 29—200.

Sage, John G., to United States Steel Corp. Apparatus for changing bearing slippers in rolling mill universal drive assemblies. 3,020,629, 2–13–62, Cl. 29—200.

Salisbury, Frederick L.: *See*—
Jepson, Robert L., Salisbury, and Ward. 3,021,447.

Salo, Kenneth C. Self leveling tractor and implement seat. 3,021,107, 2–13–62, Cl. 248—376.

Samhammer, Donald F., and E. B. Lear, to Chicago Pneumatic Tool Co. Universal hydraulic drill positioner. 3,021,099, 2–13–62, Cl. 248—16.

Sampietro, Achille C. Automobile wheel suspension systems. 3,020,968, 2–13–62, Cl. 180—73.

Sampson, Ernest S.: *See*—
Summerhayes, Harry R., Jr., and Sampson. 3,021,385.

Samson, Ralph L.: *See*—
Spitz, Theodore S., Zahner, and Samson. 3,021,516.

Samson, Ralph L., to Curtiss-Wright Corp. Simulated radio navigational aids marker receiver. 3,020,649, 2–13–62, Cl. 35—10.2.

Samuel, George A., J. V. Bell, A. W. Grosvenor, and J. G. Jackson, to Alloy Surfaces Co., Inc. Chromizing. 3,021,231, 2–13–62, Cl. 117—107.

Sand, Robert E., to General Electric Co. Plug-in surface unit. 3,021,414, 2–13–62, Cl. 219—87.

Sandback, Irving C.: *See*—
Cox, Arthur, and Sandback. 3,020,804.

Sandberg, Nels H.: *See*—
Guyer, Reynolds, and Sandberg. 3,020,809.

Sanger, Merle J.: *See*—
Gmitter, George T., Maxey, and Sanger. 3,021,290.

Sanwa Mishin Seizo Kabushiki Kaisha (Sanwa Sewing Machine Mfg. Co., Ltd.): *See*—
Fujita, Toshio. 3,020,866.

Sartomer Resins, Inc.: *See*—
Cornell, John A., and Gowman. 3,021,364.

Sazon, Robert, and T. J. Suen, to American Cyanamid Co. Process for removing haziness from an aqueous solution of a blend of polymers. 3,021,295, 2–13–62, Cl. 260—29.4.

Saylor, Frank D., & Son: *See*—
Balis, Charles B. 3,020,935.

Scanley, Clyde S.: *See*—
Groszos, Stephen J., and Scanley. 3,021,206.

Scanley, Clyde S., to American Cyanamid Co. Method for the secondary recovery of oil. 3,021,279, 2–13–62, Cl. 252—8.55.

Scarlett, John C.: *See*—
Beggs, Donald, Huebler, Sabin, Scarlett, and Turin. 3,021,236.

Schaurte, Paul. Method of and means for forming welding connections between metallic bodies of different welding characteristics. 3,020,987, 2–13–62, Cl. 189—36.

Schegk, Ernst, and G. Schrader, to Farbenfabriken Bayer Aktiengesellschaft. Phosphorus derivatives and process for their production. 3,021,351, 2–13–62, Cl. 260—461.

Schell, Roger E., to Crown Cork and Seal Co., Inc. Article control apparatus for feeding conveyors. 3,020,997, 2–13–62, Cl. 198—34.

Scherotto, John. Collapsible imitation tree. 3,020,660, 2–13–62, Cl. 41—15.

Schierhorst, Albert E., to ACF Industries, Inc. Automatic magnetic deviation effects in flight simulators. 3,020,651, 2–13–62, Cl. 35—12.

Schiller, Arthur M.: *See*—
Suen, Tzeng J., and Schiller. 3,021,301.

Schlitknecht, Adolf, to Joh. Jacob Rieter & Co. Ltd. Flyer with presser. 3,020,698, 2–13–62, Cl. 57—117.

Schimek, Robert: *See*—
Ganiere, Herbert C., Schimek, and Sherwood. 3,021,469.

Schlumberger Well Surveying Corp.: *See*—
Johnstone, Charles W. 3,021,467.

Schmerling, Louis, and W. G. Toekelt, to Universal Oil Products Co. Preparation of carboxylic acids. 3,021,367, 2–13–62, Cl. 260—533.

Schmidt, John. Canning retort with end-over-end agitation. 3,020,825, 2–13–62, Cl. 99—362.

Schmuk, Joseph E.: *See*—
Mancke, Edgar B., Schmuk, and Temmel. 3,021,189.

Schnacke, Walter H. Sealed bearing and shaft assembly. 3,021,182, 2–13–62, Cl. 308—187.

Schneiderman, Herman, R. H. Bendarzewski, and J. D. Barney, to Aerojet-General Corp. Method of forming perforated reinforced plastic containers. 3,021,241, 2–13–62, Cl. 156—173.

Schnoll, Nathan, to Flow Measurements Corp. Flow cell. 3,020,760, 2–13–62, Cl. 73—204.

Schoberle, Robert, and R. De Greef, to Solvay & Cie. Gas measuring device. 3,021,200, 2–13–62, Cl. 23—255.

Scholtan, Werner: *See*—
Distelmaier, Alfred, and Scholtan. 3,021,260.

Schorsch, Gerald: *See*—
Rosenthal, Walter, and Schorsch. 3,021,216.

Schrader, Gerhard: *See*—
Schegk, Ernst, and Schrader. 3,021,351.

Schralvogel, Horst, to Daimler-Benz Aktiengesellschaft. Fuel tank construction, especially for motor vehicles. 3,020,950, 2–13–62, Cl. 158—46.

Schubert, Kenneth M., to International Paper Co. Corrugated container. 3,021,044, 2–13–62, Cl. 229—17.

Schumacher, Frederick G., to E. I. du Pont de Nemours and Co. Metal cleaning process. 3,021,235, 2–13–62, Cl. 134—26.

Schurich, Herbert, to Karl Steinhof Apparatefabrik. Automatically operating counting mechanism, more particularly for counting rows of stitches on hand knitting machines. 3,021,061, 2–13–62, Cl. 235—91.

Schwartz, Daniel M., to The Elmco Corp. Material handling machine. 3,021,022, 2–13–62, Cl. 214—131.

Schwarzbach, Frederick, to United States of America, Navy. Photographic ortho projector. 3,020,799, 2–13–62, Cl. 88—24.

Scott, Howard M.: *See*—
Korff, Marvin, and Scott. 3,021,486.

Scott, Joe L. Automatic grain separator control. 3,021,009, 2–13–62, Cl. 209—394.

Scudi, John V.: *See*—
Reisner, David B., and Scudi. 3,021,333.

Sears, Ralph C. Windrowing attachment for rotary lawn mowers. 3,020,693, 2–13–62, Cl. 56—25.4.

Seco, Inc.: *See*—
Moss, James R., Koch, and Stevens. 3,021,121.

Seebohm, Donald W.: *See*—
Snider, Orvill E., Belden, Beuerman, and Seebohm. 3,021,326.

Seeburg Corp., The: *See*—
McFarland, Richard B. 3,021,507.

Seibold, Ernst G., and H. K. Müller, to J. M. Voith G.m.b.H. Maschinenfabrik. Variable slip fluid coupling. 3,020,719, 2–13–62, Cl. 60—54.

Seizinger, August, to Agfa Aktiengesellschaft. Adjusting structure for enlargers or the like. 3,021,158, 2–13–62, Cl. 287—14.

Sekine, Shigenobu, and S. Muramoto, to Sony Corp. Ignition system for an internal combustion engine. 3,020,897, 2–13–62, Cl. 123—32.

Sempert, Max: *See*—
Wideroe, Rolf, and Sempert. 3,021,445.

Sestini, Amerigo. Electron discharge apparatus for treatment of plastic materials. 3,021,275, 2–13–62, Cl. 204—312.

Settle, Joseph F., to General Electric Co. Tapered clamping ring for fan and improved hub design. 3,021,049, 2–13–62, Cl. 230—134.

Seward, Edgar C.: *See*—
Kempel, Hubert, and Seward. 3,021,166.

Seymour, Samuel L.: *See*—
Duncan, James E., and Seymour. 3,020,803.

Shanahan, Robert J.: *See*—
Post, Lloyd P., and Shanahan. 3,020,707.

Shapiro, Hymin: *See*—
Cook, Shirl E., and Shapiro. 3,021,350.

Sherman, William O., Jr., to Norfolk Iron & Wire Works, Inc. House moving unit. 3,021,155, 2–13–62, Cl. 280—423.

Sherwin-Williams Co., The: *See*—
Simon, Paul. 3,021,293.

Sherwood, Edwin T.: *See*—
Ganiere, Herbert C., Schimek, and Sherwood. 3,021,469.

Shields, Robert L.: *See*—
Brown, Alvin M., Ayers, Shields, Maloney, and Kmiecik. 3,020,834.

Shivek, Herbert L., to Eastern Steel Rack Co. Shelf bracket construction. 3,021,013 2–13–62, Cl. 211—136.

Sholin, Edwin E. Crushing machine with flexible drive. 3,020,832, 2–13–62, Cl. 100—233.

Sibley, Henry C.: *See*—
Maner, Robert B., and Sibley. 3,021,506.

Siegert, Walter. Bending tool for plastic tile. 3,020,590, 2–13–62, Cl. 18—19.

Sielicki, Alexander J., to A. O. Smith Corp. Method of flaw detection in a metal member. 3,020,745, 2–13–62, Cl. 73—15.

Siemens & Halske Aktiengesellschaft Berlin and Munich: *See*—
Kallhardt, Heinrich. 3,020,983.
Rummel, Theodor. 3,021,198.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Haas, Karl, and Voll. 3,021,147.
Juetl, Eduard, and Neumann. 3,021,378.
Merkel, Hans. 3,021,196.

Siering, Robert L., to Johns-Manville Corp. Wallboard fastener. 3,020,602, 2–13–62, Cl. 20—4.

Silva, Luis. Cooking utensil. 3,020,826, 2–13–62, Cl. 99—426.

Silver Creek Precision Corp.: *See*—
Donofrio, Alfonso M. 3,020,939.
Donofrio, Thomas F. 3,021,001.

Silverberg, Morton: *See*—
Welsh, Herbert F., Appleton, and Silverberg. 3,021,512.

Simmons, Milton E., C. J. Finsterwalder, and F. J. Terkoski, to General Motors Corp. Dynamo electric machine. 3,021,444, 2–13–62, Cl. 310—259.

Simon, Paul, to The Sherwin-Williams Co. Fire retardant protective and decorative coatings. 3,021,293, 2–13–62, Cl. 260—3.3.

Simpson, Alvan D., to The Forming Machine Co. of America, Inc. Method of and machine for forming strips of material from wet mixes, including fibers. 3,021,255, 2–13–62, Cl. 162—156.

Simpson, Herbert, Corp.: *See*—
Huppke, Glen P., and McIlvaine. 3,020,977.

Sinclair Refining Co.: *See*—
Matson, Howard J. 3,021,281.
Podlipnik, John. 3,020,879.

Sjöblom, Anders G. Fuel injection pump for multi-cylinder internal combustion engines. 3,020,902, 2–13–62, Cl. 123—139.

Skil Corp.: *See*—
Etzkorn, Elmer F. 3,020,789.

Skoog, Per O. Method and means for producing tight-fitting patches for use in plywood-patching machines. 3,021,249, 2–13–62, Cl. 156—293.

Skovranek, John. Boarding platform actuated pump. 3,020,870, 2–13–62, Cl. 114—183.

Slater, Jay W.: *See*—
Hammer, James P., and Slater. 3,021,059.

Smart, William D., to Abbott Laboratories. Process for N-methylacridone. 3,021,334, 2–13–62, Cl. 260—279.

Smith, A. O., Corp.: *See*—
Sielicki, Alexander J. 3,020,745.
Swank, Rehl W. 3,021,032.

Smith, Blanchard D. Vehicle shifting apparatus. 3,020,967, 2–13–62, Cl. 180—1.

Smith, Burton D. Arrowhead structure. 3,021,138, 2–13–62, 273—106.5.

Smith, Charles E.: *See*—
Greening, Donald J., and Smith. 3,021,466.

Smith-Corona Marchant Inc.: *See*—
Mathl, Walter E., and Nolde. 3,021,060.

Robinson, John Albert: *See*—
Fifield, Charles H., Smith, and Robinson. 3,021,274.

Smith-Johannsen, Robert, to S-J Chemical Co. Method of making microporous film. 3,020,597, 2–13–62, Cl. 18—57.

Smith, John E., to Lees, James and Sons Co. Industrial apparatus, method, and product. 3,020,863, 2–13–62, Cl. 112—79.

Smith Kline & French Laboratories: *See*—
Blank, Benjamin, and Kerwin. 3,021,368.

Smith, Lars M.: *See*—
Kirk, Donald R., and Smith. 3,020,986.

Smith, Thomas A.: *See*—
Daniels, Charles J., and Smith. 3,020,908.

Snider, Orvill E., R. H. Belden, D. R. Beuerman, and D. W. Seebohm, to Allied Chemical Corp. Purification of caprolactam. 3,021,326, 2–13–62, Cl. 260—239.3.

Snyder, Edward D., and D. R. Hamilton. Fishing signal device. 3,020,664, 2–13–62, Cl. 43—17.

Sobel, Morton. Garment bone. 3,020,557, 2–13–62, Cl. 2—260.

Sobin, Ben A.: *See*—
Celmer, Walter D., Mural, Routien and Sobin. 3,021,259.

Societe Anonyme des Manufactures des Glaces & Produits Chimiques de Saint-Gobain, Chauny & Cirey: *See*—
Berthon, Lucien, Levecque, and Piot. 3,020,585.
Charpentier, Maurice, and Berthon. 3,020,586.

Societe de Constructions Mecaniques de Stains: *See*—
Thomas, André. 3,020,846.

Societe d'Etudes et de Participations Eau, Gaz, Electricite Energie S.A.: *See*—
Horgen, Helge. 3,020,706.

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
Bertin, Jean H., and Kadosch. 3,020,713.
Bertin, Jean H., Kadosch, and Maunoury. 3,020,709.
Eggers, Gerhard, and Ernst. 3,020,714.

Socony Mobil Oil Co., Inc.: *See*—
Groenendyke, Goethe M. 3,021,074.

Soddy, Thomas C., to American Seal-Kap Corp. of Delaware. House car side door structure. 3,020,603, 2–13–62, Cl. 20—23.

Soderman, George W., to Western Electric Co., Inc. Contour grinder. 3,020,680, 2–13–62, Cl. 51—73.

Solartron Electronic Group Ltd., The: *See*—
Bailey, Christopher E. G. 3,021,071.

Solvay & Cie: *See*—
Schoberle, Robert, and De Greef. 3,021,200.

Sommer, Gordon M., and V. J. Mankowsky, to U.S. Industries, Inc. Seals. 3,021,146, 2–13–62, Cl. 277—3.

Sony Corp.: *See*—
Sekine, Shigenobu, and Muramoto. 3,020,897.

Southeastern Metals Co.: *See*—
McMasters, Robert A. 3,021,010.

Sovia, Cedric C., and H. Papp, to General Mills, Inc. Apparatus for applying flock. 3,021,079, 2–13–62, Cl. 239—306.

Söyland, Ingebret, and K. Arrangement in mobile excavators. 3,021,023, 2–13–62, Cl. 214—138.

Söyland, Kristian: *See*—
Söyland, Ingebret, and K. 3,021,023.

Spalding, Albert K. Method and means for producing hydraulic vibrations. 3,020,720, 2–13–62, Cl. 60—54.5.

Speedry Chemical Products, Inc.: *See*—
Rosenthal, Sidney N. 3,020,578.

Spencer, Rolf E., to Electric & Musical Industries Ltd. Interpolating devices, especially for controlling automatic machine tools. 3,021,075, 2–13–62, Cl. 235—197.

Spero, Arthur F., to Industrial Nucleonics Corp. Measuring instrument. 3,021,483, 2–13–62, Cl. 324—131.

Sperry Gyroscope Co. Ltd., The: *See*
Summerlin, Frederick A., and Hadekel. 3,020,889.

Sperry Rand Corp.: *See*—
Baker, Donald H., and Kesselring. 3,020,980.
Beach, Lennox F. 3,020 869.
Bentley, George P., and Duever. 3,020,769.
Eberle, Edward E. 3,021,452.
Falk, Robert A. 3 020,766.
Hecht, Herbert. 3,021,097.
Jahn, Dale M. 3,021,067.
Joline, Everett S. 3,020,764.
Kestenbaum, William W. 3,021,487.
Kliman, Merwin, and Kass. 3,021,518.
Morgan, William E., Jr 3,021,424.
Perry, Edward G. 3,020,800.
Wellman, Francis C. 3,021,431.
Welsh, Herbert F., Appleton, and Silverberg. 3,021,512.

Spetzler, August L., and J. A. Richards, to General Time Corp. Poising machine for balance wheels. 3,020,682, 2–13–62, Cl 51—145.

Spillar, Rudolph, to Western Electric Co., Inc. Universal circuit board. 3,021,498, 2–13–62, Cl. 339—18.

Spitz, Theodore S., C. F. Zahner and R. L. Samson, to Curtiss-Wright Corp. Automatic electronic signal keyer. 3,021,516, 2–13–62, Cl. 340—345.

Spound, Albert M. Reclining vehicle seat construction. 3,021,098, 2–13–62, Cl. 247—61.

Spraitzar, Frank C.: *See*—
Andrews, Steve, and Spraitzar. 3 020.878.

Stagmeier, Arthur F., to General Foods Corp. Dehydrated potato product and process. 3,021,224, 2–13–62, Cl. 99—207.

Stambaugh, Richard H., and J. D. Fuller. Prefabricated knock-down building structure. 3,020,601, 2–13–62, Cl. 20—2.

Standard Oil Co. (Indiana): *See*—
Cropper, Wendell P., and Ritzenthaler. 3,020,749.
Kapff, Sixt F., and Ginsburgh. 3,021,199.
Swakon, Edward A. 3,021,357.

Standard Oil Co. (Ohio), The: *See*—
Idol, James D., Jr., Callahan, and Foreman. 3,021,366.

Standard Ultramarine & Color Co.: *See*—
Rhodes, William H. 3 021,191.

Starck, Noel L. Safeguard device for automotive electrical systems. 3,021,429, 2–13–62, Cl. 307—10.

Stauffenberg, Walter H., to American Cyanamid Co. Paper containing pigment or filler. 3,021,257, 2–13–62, Cl. 162—162.

Stauffer, Dale A.: *See*—
Fancher, Otis E., Nichols, and Stauffer. 3,021,325.

Steele, Floyd G., to Digital Control Systems, Inc. Methods and apparatus for differentiating difunction signal trains. 3,021,062, 2–13–62, Cl. 235—152.

Steele, Floyd G., to Digital Control Systems, Inc. Ordered time interval computing systems. 3,021,064, 2–13–62, Cl. 235—154

Steffensen, Otto: *See*—
Beyer-Olsen, Knut, and Steffensen. 3,020,669.

Stephens, Joseph F., to Gustin-Bacon Mfg. Co. Method of forming wall panel tiles. 3,021,247, 2–13–62, Cl. 156—222.

Stegmaier, Hermann, to B. Gartner. Link closing machine having magazine loading clip. 3,020,704, 2–13–62, Cl. 59—1.

Steinhof, Karl, Apparatefabrik: *See*—
Schurich, Herbert. 3,021,061.

Stengel, Leonard A., to Commercial Solvents Corp. Process for producing mixed ammonium nitrate. 3,021,207, 2–13–62, Cl. 71—64.

Stevens, James E., Jr.: *See*—
Moss, James R., Koch, and Stevens. 3,021,121.

Stevens, Richard L., to R. W. Hudson. Limb supporting attachment for operating tables. 3,020,909, 2–13–62, Cl. 128—70.

Stevens, William H.: *See*—
Bayly, John G., and Stevens. 3,021,427.

Stone, Guthrie B. Potato flake cutter. 3,020,944, 2–13–62, Cl. 146—117.

Stone, William J. D.: *See*—
Jones, George H. 3,021,007.

Stricklin, Travie W., Jr.: *See*—
Allerdice, Joseph M., and Stricklin. 3,021,130.

Strike, George N. Clothes pre-conditioner and dryer. 3,020,648, 2–13–62, Cl. 34—133.

Strom, Edgar T. Cattle feeder. 3,020,881, 2–13–62, Cl. 119—58.

Stubbe, Friedrich: *See*—
Breher, Rudolf, and Bielfeldt. 3,020,591.

Stuchbery, Arthur L., to The Metal Box Co. Ltd. Apparatus for flame treating metal sheets. 3,021,125, 2–13–62, Cl. 263—6.

Stumpf, Howard, Jr., to West Virginia Pulp and Paper Co. Display container. 3,021,042, 2–13–62, Cl. 229—16.

Suddeutsche Kalkstickstoff-Werke A.G.: *See*—
Kaess, Franz, Fischer, and Kronacher. 3,021,192.

Sudenga, Floyd H.: *See*—
Sudenga, Jay G. and F. H. 3,021,025.

Sudenga, Jay G. and F. H. Adjustable delivery spout for bulk material delivery trucks. 3,021,025, 2–13–62, Cl. 214—522.

Suderow, George E., to De Long Corp. Apparatus and method for connecting an access caisson to a submerged well casing. 3,020,956, 2–13–62, Cl. 166—66.5.

Suen, Tzeng J.: *See*—
Saxon, Robert, and Suen. 3,021,295.

Suen, Tzeng J., and A. M. Schiller, to American Cyanamid Co. Process for producing a novel hydrolyzed polyacrylonitrile reaction product containing polyvinyl alcohol and the product produced thereby. 3,021,301, 2–13–62, Cl. 260—45.5.

Sullivan, Daniel W., to Driliprodco, Inc. Method of volumetric determination of well bores and the like. 3,020,952, 2–13–62, Cl. 166—4.

Sullivan, Ralph M. E., to National Research Development Corp. Vibratory ball mill system. 3,021,082, 2–13–62, Cl. 241—175.

Sulzer Freres, S.A.: *See*—
Pfarrwaller, Erwin. 3,020,930.

Summerhayes, Harry R., Jr., and E. S. Sampson, to General Electric Co. Flame observation system. 3,021,385, 2–13–62, Cl. 178—6.

Summerlin, Frederick A., and R. Hadekel, to The Sperry Gyroscope Co. Ltd. Aircraft control apparatus. 3,020,889, 2–13–62, Cl. 121—41.

Surso, Peter P.: *See*—
Hamilton, Wallace, and Surso. 3,021,165.

Sutcliffe, Clifford V. M. and E. G. Dispensing nozzle with automatic control. 3,020,940, 2–13–62, Cl. 141—209.

Sutcliffe, Eugene G.: *See*—
Sutcliffe, Clifford V. M. and E. G. 3,020,940.

Sutter, Raymond C.: *See*—
Weinstock, Manuel, and Sutter. 3,020,885.

Svarz, Jerry J.: *See*—
Bollenback, Carol H., Hunt, and Svarz. 3,021,256.

Svenska Aktiebolaget Gasaccumulator: *See*—
Lundahl, Lars O. 3,021,451.

Swain, Alfred T.: *See*—
Whitman, Carl G., and Swain. 3,021,412.

Swainson, Edward L., to Northrop Corp. Coil-fabricating method. 3,020,627, 2–13–62, Cl. 29—155.57.

Swakon, Edward A., to Standard Oil Co. Dialkyl esters of 5-t-alkylisophthalic acid. 3,021,357, 2–13–62, Cl. 260—475.

Swank, Rehl W., to A. O. Smith Corp. Fuel dispensing unit. 3,021,032, 2–13–62, Cl. 222—30.

Swanson, Daisy S. Portable clothesline. 3,021,091, 2–13–62, Cl. 242—107.

Swanson, Hilmer S. Balance apparatus for wind tunnel. 3,020,754, 2–13–62, Cl. 73—147.

Swartz, Richard L., to Universal Business Machines, Inc. Double-digit relay selector system. 3,021,509, 2–13–62, Cl. 340—166.

Swedlow Inc.: *See*—
Clapp, Robert J., and Jameson. 3,020,596.

Swift & Co.: *See*—
Farbak, John E., Gebel, and Gibson. 3,021,221.
Gibson, Paul, Farbak, and Murphy. 3,021,228.
Peglow, William E. 3,020,692.
Rueckert, Dean E. and Lind. 3,020,686.
Young, Harland H., and Harrill. 3,021,321.

Swislow, Sidney, to Harwood Mfg. Co. Flange to base mounting structure. 3,021,105, 2–13–62, Cl. 248—223.

Symington Wayne Corp.: *See*—
Cope, Geoffrey W., and Martin. 3,021,017.

Szajna, John L., to Continental Can Co., Inc. Hollow plastic article molding machine. 3,020,595, 2–13–62, Cl. 18—42.

TRG, Inc.: *See*—
Daly, Richard T. 3,021,448.

Tamm, Emil S., to The General Industries Co. Electric motors. 3,021,443, 2–13–62, Cl. 310—190.

Taprogge, Josef. Self-cleaning heat-exchanger. 3,021,117, 2–13–62, Cl. 257—1.

Tarbox, Albert E., and S. Leeds, to Union Carbide Corp. Treating plastic articles. 3,021,270, 2–13–62, Cl. 204—168.

Tausch, Gilbert H., to Jersey Production Research Co. Sand washing method and apparatus. 3,020,955, 2–13–62, Cl. 166—14.

Tausch, Gilbert H., to Jersey Production Research Co. Apparatus for removing sand from wells. 3,020,957, 2–13–62, Cl. 166—99.

Tawney, Pliny O., to United States Rubber Co. Diethyl 3,3,3-trinitropropanephosphonate and process of preparing same. 3,021,353, 2–13–62, Cl. 260—461.

Taylor, Clarence R., and W. C. Wilson, to Eastman Kodak Co. Photographic copying apparatus. 3,020,837, 2–13–61, Cl. 101—132.5.

Taylor Instrument Companies: *See*—
Cefaly, Ralph. 3,020,971.

Taylor, Samuel S. Umbrella-style hat. 3,020,555, 2–13–62, Cl. 2—177.

Taylor-Winfield Corp., The: *See*—
Mallett, John E., and Cooper. 3,021,416.
Riley, Joseph J. 3,021,497.
Woodward, Foster R. 3,021,415.

Teletype Corp.: *See*—
Byrnes, William P. 3,021,388.

Tellier, Clair W., Jr.: *See*—
Helversen, Frederick D., Chaplin and Tellier. 3,021,254.

Temmel, Frank M.: *See*—
Mancke, Edgar B., Schmuk and Temmel. 3,021,189.

Temple, Ernest E.: *See*—
Temple, Robert, Giebel, and Temple. 3,020,871.

Temple, Robert, J. L. Giebel, and E. E. Temple, to Mine Safety Appliances Co. Multiple barrel mine anchor-line cutter. 3,020,871, 2–13–62, Cl. 114—221.

Teplitz, Alfred, to United States Steel Corp. Method and apparatus for coiling strip. 3,021,086, 2–13–62, Cl. 242—80.

Ter Haar, Karel C.: *See*—
Van den Blink, Willem P., ter Haar, and Ettema. 3,021,418.

Terkoski, Frank J.: *See*—
Simmons, Milton E., Finsterwalder and Terkoski. 3,021,444.

Texaco Inc.: *See*—
Arkell, Alfred. 3,021,204.
Chafets, Harry, and Eckert. 3,021,203.
Chafetz, Harry, and Eckert. 3,021,205.
Jones, Hershul T. and J. M., Jr. 3,020,886.
Waldroop, Dee B. 3,021,425.
Wood, George M. 3,021,426.

Texas Instruments Inc.: *See*—
Epstein, Henry D. 3,021,405.
Jones, Morton E. 3,021,462.
Lawrence, Billy L. 3,021,470.
Milam, David L. 3,021,460.

Textron Inc.: *See*—
Oldfield, Andrew H., and Hostetler. 3,020,684.

Thew Shovel Co., The: *See*—
Bowman, Spencer. 3,021,015.

Noll, George C., and Wesebaum. 3,021,016.

Thiessen, Gilbert, to Koppers Co., Inc. Preparation of concrete containing expanded polymeric particles. 3,021,291, 2–13–62, Cl. 260—2.5.

Thomas, André, to Societe de Constructions Mecaniques de Stains. Blood pump. 3,020,846, 2–13–62, Cl. 103—37.

Thompson, Ernest H., to Automatic Canteen Co. of America. Vending devices. 3,021,030, 2–13–62, Cl. 221—77.

Thompson Ramo Wooldridge Inc.: *See*—
Bluck, Raymond M. 3,021,003.
Cook, Harvey A. 3,020,901.
Fiden, William H., and Gottfried. 3,021,390.
Jiu, Richard. 3,021,450.
Orgill, Heber L. 3,021,421.

Thomsen, Alfred M. Method of improving the thermal efficiency of a gas producer-gas turbine assembly. 3,020,715, 2–13–62, Cl. 60—39.12.

Thor Power Tool Co.: *See*—
Kaman, Frank A. 3,020,920.

Thornton, Stuart R. Locking device for vehicle hub caps. 3,021,178, 2–13–62, Cl. 301—37.

Thune, Robert E.: *See*—
Korensky, Edwin, and Thune. 3,021,014.

Thurow, Harold H. and H. J. Combine attachment for retrieving down ears of corn. 3,020,606, 2–13–62, Cl. 56—364.

Thurow, Herbert J.: *See*—
Thurow, Harold H. and H. J. 3,020,696.

Thuse, Erik: *See*—
Granberg, Albert J., and Thuse. 3,020,758.

Thut, Paul J., and R. W. Beachner, to Burroughs Corp. Printing apparatus and inking arrangement therefor. 3,020,841, 2–13–62, Cl. 101—350.

Tierney, Louis R. Water ski with spout. 3,020,568, 2–13–62, Cl. 9—310.

Tinius Olsen Testing Machine Co.: *See*—
Karpchuk, Sylvester, and Gruber. 3,020,766.

Tinsley, Samuel W.: *See*—
Freure, Benjamin T., and Tinsley. 3,021,356.

Toekelt, Walter G.: *See*—
Schmerling, Louis, and Toekelt. 3,021,367.

Toffemire, Benjamin F. Combination dental instrument defining a matrix band retainer and clamping block for the band. 3,020,638, 2–13–62, Cl. 32—63.

Tokheim Corp.: *See*—
Reynolds, James A. 3,020,849.

Toscano, Michael: *See*—
Heinrich, Chester J., Kornylak, and Toscano. 3,020,903.

Touey, George P., to Eastman Kodak Co. Bonding additives onto filament filters. 3,021,242, 2–13–62, Cl. 156—180.

Toulis, William J. Apparatus for controlling the effective compressibility of a liquid. 3,021,504, 2–13–62, Cl. 340—5.

Trapp, Gunther: *See*—
Opderbeck, Fritz, Trapp, and Worner. 3,021,253.

Trimble, John O.: *See*—
Leavesley, George W., and Trimble. 3,020,785.

True Temper Corp.: *See*—
Finch, Charles A. 3,021,076.

Truran, Charles. Flower bed and sod edger. 3,020,637, 2–13–62, Cl. 30—315.

Truschelt, Ernst: *See*—
Elter, Karl, and Truschelt. 3,021,355.

Turin, John J.: *See*—
Beggs, Donald, Huebler, Sabin, Scarlett, and Turin. 3,021,236.

Turner, Benjamin R., to Rohn Mfg. Co. Sectional tower means. 3,020,985, 2–13–62, Cl. 189—19.

Ty-Sa-Man Machine Co.: *See*—
Hensley, James L. 3,020,679.

Ulinski, Bronislaus I., to The Yale and Towne Mfg. Co. Steering mechanism for industrial truck. 3,021,150, 2–13–62, Cl. 280—87.

Umbach, Louis A.: *See*—
Ogier, Baxter B., and Umbach. 3,021,422.

Union Carbide Corp.: *See*—
Ammondson, Clayton J. 3,021,296.
Bowen, John T. 3,021,124.
Cox, Eugene F., and Hostettler. 3,021,309.
Cox, Eugene F., and Hostettler. 3,021,310.
Cox, Eugene F., and Hostettler. 3,021,311.
Cox, Eugene F., and Hostettler. 3,021,312.
Cox, Eugene F., and Hostettler. 3,021,313.
Cox, Eugene F., and Hostettler. 3,021,314.
Cox, Eugene F., and Hostettler. 3,021,315.
Cox, Eugene F., and Hostettler. 3,021,316.
Cox, Eugene F., and Hostettler. 3,021,317.
Estes, Nelson N. 3,021,482.
Fowler, George W., Crosby, and Proops. 3,021,330.
Freure, Benjamin T., and Tinsley. 3,021,356.
Garten, Harry G. 3,021,465.
Haynes, Harry L. 3,021,258.
Jamal, Victor J., and Newhall. 3,021,377.
Lanham, William M. 3,021,354.
Montagna, Amello E., and Hirsh. 3,021,373.
Ruland, Edward J., Jr., Allen, and Lobosco. 3,021,420.
Tarbox, Albert E., and Leeds. 3,021,270.

United-Carr Fastener Corp.: *See*—
Willis, Grant N. 3,020,625.

U.S. Industries, Inc.: *See*—
Liu, John K. 3,020,990.
Sommer, Gordon M., and Mankowsky. 3,021,146.

United Kingdom Atomic Energy Authority, The: *See*—
Cocke-Yarborough, Edmond H. 3,021,485.

United Shoe Machinery Corp.: *See*—
Bowler, Raymond M., and Clamp. 3,020,571.
Musser, C Walton 3,020,775.
Quinn, Edward. 3,020,861.

United States of America
Agriculture: *See*—
Benedict, Robert G., Jeanes, Wickerham, and Babayan. 3,021,323.
Eskew, Roderick K. 3,021,223.

Army: *See*—
Bornstein, Joseph, Blum, and Pratt. 3,021,358.
Goldberg, Jack, Rosenberg, and Le Vino. 3,021,403.
Karpovich, Peter V. and G. P. 3,020,639.
Weinstock, Manuel, and Sutter. 3,020,885.

Atomic Energy Commission: *See*—
Babelay, Edwin F. 3,020,736.
Baker, William R., Bratenahl, and Kunkel. 3,021,272.
Briscoe, William L. 3,020,750.
Butts, Harvey L. 3,020,647.
Krikorian, Nerses H., Farr, and Whitteman. 3,020,632.

Navy: *See*—
Di Toro, Michael J., and Graham. 3,021,479.
Gleason, Joseph P. 3,021,522.
Hakkarinen, William. 3,020,963.
Heinrich, Chester J., Kornylak, and Toscano. 3,020,993.
Herzog, Stephen H. 3,020,710.
Korff, Marvin, and Scott. 3,021,486.
Moore, Thomas M., and Arnold. 3,021,438.
Ostdiek, Francis R. 3,021,167.
Pinnes, Robert W. 3,020,711.
Schwarzbach, Frederick. 3,020,799.

United States Rubber Co.: *See*—
Tawney, Pliny O. 3,021,353.

United States Steel Corp.: *See*—
Andrews, Steve, and Spraitzar. 3,020,878.
Ballentine, William I., Jr., and Molden. 3,020,867.
Feinman, Jerome. 3,021,208.
Sage, John G. 3,020 628.
Sage, John G. 3,020 629.
Teplitz, Alfred. 3,021,086.

United Sweets of America, Inc.: *See*—
Paulini, Harry H. J. 3,020,659.

Universal Business Machines, Inc.: *See*—
Swartz, Richard L. 3,021,509.

Universal Oil Products Co.: *See*—
Murray, Maurice J., and Bicek. 3,021,209.
Schmerling, Louis, and Toekelt. 3,021,367.

Upjohn Co., The: *See*—
Beal, Phillip F., III, and Jackson. 3,021,327.

Upton, Charles B., to The French Oil Mill Machinery Co. Solvent extraction apparatus. 3,021,201, 2–13–62, Cl. 23—272.5.

Ureda, Eugene C.: *See*—
Christian, Edward H., and Ureda. 3,021,515.

Urné, Vassili: *See*—
Jirou, Marcel, and Urné. 3,021,322.

Van den Blink, Willem P., K. C. ter Haar, and E. H. Ettema, to North American Philips Co., Inc. Stud-welding ferrule. 3,021,418, 2–13–62, Cl. 219—99.

Van der Burgt, Cornelis M., to North American Philips Co., Inc. Ultrasonic irradiating device. 3,021,119, 2–13–62, Cl. 259—72.

Van der Burgt, Cornelis M., to North American Philips Co., Inc. Ultrasonic irradiating device. 3,021,120, 2–13–62, Cl. 259—72.

Van Dijk, Pieter, to American Enka Corp. Production of curled yarn. 3,020,700, 2–13–62, Cl. 57—157.

Van Lochem, Gerrit J.: *See*—
Nijkamp, Derk J. E., van Lochem, and Vos. 3,020,699.

Van Slyke, Allan S.: *See*—
Hopkins, Joseph H., and Van Slyke. 3,021,503.

Varian Associates: *See*—
Jepson, Robert L., Salisbury, and Ward. 3,021,447.

Varnerin, Lawrence J., Jr.: *See*—
Grubbs, William J., Jr., Hines, and Varnerin. 3,021,459.

Vector Mfg. Co., Inc.: *See*—
Lynch, Thomas J. 3 021,430.

Vedder, Walter O., and H. N. Patronik, to Pangborn Corp. Furnace hood. 3,021,376, 2–13–62, Cl. 13—9.

Verbanc, John J.: *See*—
Csendes, Ernest, and Verbanc. 3,021,306.

Verhota, Robert J. Support. 3,021,100, 2–13–62, Cl. 248—23.

Vestal, David D.: *See*—
Hyder, Clarence R., Jr., and Vestal. 3,020,885.

Vignati, Carlo: *See*—
Podesta, Armando, and Vignati. 3,020,690.

Vinal, Albert W., to International Business Machines Corp. Magnetic memory system. 3,021,511, 2–13–62, Cl. 340—174.

Visneski, Vern N. Fire wood rack. 3,021,011, 2–13–62, Cl. 211—49.

Voith, J. M., G.m.b.H. Maschinenfabrik: *See*—
Selbold, Ernst G., and Müller. 3,020,719.

Voll, Siegfried: *See*—
Haas Karl, and Voll. 3,021,147.

Von Berg, Richard E., and H. Laurent, to Rheem Mfg. Co. Device for controlling the speed of operation of an internal combustion engine. 3,020,969, 2–13–62, Cl. 180—82.1.

Von Kummer, Ferdinand G., to Royal McBee Corp. Parity check apparatus. 3,021.063, 2–13–62, Cl. 235—153.

Von Riebnits, Margot: *See*—
Bovarnick, Bennett, and Joachim. 3,021,285.

Vos, Jan G.: *See*—
Nijkamp, Derk J. E., van Lochem, and Vos. 3,020,699.

Vosbikian, Peter S. and T. S. Mops having extracting mechanism. 3,020,574, 2–13–62, Cl. 15—119.

Vosbikian, Thomas S.: *See*—
Vosbikian, Peter S. and T. S. 3,020 574.

Waddington-Feather, Sheila M. (nee Booker), B. Ellis, and V. Petrow, to The British Drug Houses Ltd. 16α,17α-dihydroxypregnen-20-ones and process for preparation of same. 3,021,345, 2–13–62, Cl. 260—397.4.

Wadsworth, Arthur W., to Elgin National Watch Co. Sealed watch case. 3,020,703, 2–13–62, Cl. 58—90.

Wagenseil, Gottfried, and K. Dohmstreich, to North American Philips Co., Inc. Ships' order telegraph system. 3,021,391, 2–13–62, Cl. 179—82.

Wagner, Dorothy M.: *See*—
Davis, Wilbur A. 3,020,790.

Wagner, Howard F.: *See*—
Davis, Wilbur A. 3,020,790.

Wald, Ted H., and D. Coleman, to Monsanto Canada Ltd. Process for the prenaration of 2,4-bis-(chloromethyl)-toluene. 3,021,375, 2–13–62, Cl. 260—651.

Waldorf Paper Products Co.: *See*—
Guyer, Reynolds, and Sandberg. 3,020,809.
Meyers, Harold S. 3,021,000.

Waldroop, Dee B., to Texaco Inc. Method of measuring borehole capacity. 3,021,425, 2–13–62, Cl. 250—43.5.

Waldrop, Charles R., to Borg-Warner Corp. Water supply means for washing machine. 3,020,741, 2–13–62, Cl. 68—23.

Wallace, Richard B., and R. J. Ebbert, to The Oakland Corp. Method of making threaded fasteners with locking insert therein. 3 020,570, 2–13–62, Cl. 10—10.

Wallace & Tiernan Inc.: *See*—
Reisner, David B., and Scudi. 3,021,333.

Wallace, William T., to Bausch & Lomb Inc. Workpiece dipping machine. 3,020,877, 2–13–62, Cl. 118—13.

Wallace, William T., to Bausch & Lomb Inc. Work piece holder. 3,020,880, 2–13–62, Cl. 118—503.

Waltham Precision Instrument Co., Inc.: *See*—
Young, William W., and Wetmore. 3,020,770.

Waranch, Myer. Strand dispensing and binding tool. 3,021,094, 2–13–62, Cl. 242—137.1.

Ward, Curtis E.: *See*—
Jepsen, Robert L., Salisbury, and Ward. 3,021,447.

Ward, Thomas C. Decubitus pad. 3,020,910, 2–13–62, Cl. 128—132.

Warren, Edwin G. Apparatus for loading and unloading poles and the like to and from trucks. 3,021,021, 2–13–62, Cl. 214—77.

Warren, S. D., Co.: *See*—
Richard Leslie E. 3,020,839.

Water Process Corp.: *See*—
Harris, Gilbert W., Sr. 3,020,730.

Waters, Mack D. Tensioning attachment for loom shuttles. 3,020,934, 2–13–62, Cl. 139—200.

Watson, Edward J., Jr., to The Dow Chemical Co. 1,3-bis(1′-ethynyl-1′-cyclohexyloxy)-2-propanol. 3,021,371, 2–13–62, Cl. 260—611.

Waymire, Richard C.: *See*—
Miller, Andrew J., Nellis, and Waymire. 3,020,661.

Weaver, George N., 1/10 to Gadget-of-the-Month Club, Inc. Latch control apparatus. 3,021,164, 2-13-62, Cl. 292—219.

Webb, Robert G., to Western Electric Co., Inc. Apparatus for clamping and indexing articles. 3,020,998, 2-13-62, Cl. 198—210.

Weber, Leo L., to Essex Wire Corp. Electromagnet. 3,021,455, 2-13-62, Cl. 317—191.

Weber, Leo L., to Essex Wire Corp. Electric signaling device. 3,021,520, 2-13-62, Cl. 340—384.

Webster Electric Co.: *See*—
Hipp, William J. 3,020,721.

Wegmann, Ludwig, to Demag Aktiengesellschaft. Automatically operable articulated coupling means between the rolls of a rolling mill and their drive spindle means. 3,020,735, 2-13-62, Cl. 64—8.

Webner, Gottfried, to General Mills, Inc. Growth of solid layers on substrates which are kept under ion bombardment before and during deposition. 3,021,271, 2-12-62, Cl. 204—192.

Weil, Edward D.: *See*—
Dorfman, Edwin, Weil, and Newcomer. 3,021,369.

Weinstein, Donald A., to Prestole Corp. Machine for making a staple fastening belt. 3,020,630, 2-13-62, Cl. 29—211.

Weinstock, Manuel, and R. C. Sutter, to United States of America, Army. Rotary servo valve controlled mechanism. 3,020,885, 2-13-62, Cl. 121—38.

Weiss, Martin J.: *See*—
Allen, George R., Marx, and Weiss. 3,021,347.

Welkowitz, Walter, to Gulton Industries, Inc. Ultrasonic flowmeter. 3,020,759, 2-13-62, Cl. 73—194.

Wellman, Francis C., to Sperry Rand Corp. Transistorized integrator circuit. 3,021,431, 2-13-62, Cl. 307—88.5.

Welsh, Herbert F., N. J. Appleton, and M. Silverberg, to Sperry Rand Corp. Selector mechanisms. 3,021,512, 2-13-62, Cl. 340—174.1.

Wengen, Henry R., to Fargo Mfg. Co., Inc. Cable spreader. 3,021,381, 2-13-62, Cl. 174—146.

Werner, Frank R.: *See*—
Flint, Kenneth C., and Werner. 3,021,052.

Wesebaum, Paul E.: *See*—
Noll, George C., and Wesebaum. 3,021,016.

West, Paul B., to Saco-Lowell Shops. Fly removing apparatus. 3,020,600, 2-13-62, Cl. 19—157.

West Virginia Pulp and Paper Co.: *See*—
Stumpf, Howard, Jr. 3,021,042.

Western Electric Co., Inc.: *See*—
Bracci, Delphio J. 3,020,936.
Boderman, George W. 3,020,680.
Spiliar, Rudolph. 3,021,498.
Webb, Robert G. 3,020,998.

Western Piping & Engineering Co. Inc.: *See*—
Kinnison, Court J. 3,021,113.

Westinghouse Air Brake Co.: *See*—
Gilbert, Chalmers W. 3,021,423.
McLaughlin, Edward G., 3,021,519.

Westinghouse Brake and Signal Co., Ltd.: *See*—
White, Edgar I. 3,021,508.

Westinghouse Electric Corp.: *See*—
Flinn, Paul A. 3,021,211.

Wetmore, Harold B.: *See*—
Young, William W., and Wetmore. 3,020,770.

Wheatley, Robert L., to Rea Magnet Wire Co., Inc. Tapered spool. 3,021,092, 2-13-62, Cl. 242—128.

Whirlpool Corp.: *See*—
Hubacker, Earl F., and Krug. 3,020,733.

White, Edgar I., to Westinghouse Brake and Signal Co., Ltd. Remote control systems. 3,021,508, 2-13-62, Cl. 340—163.

White, Gerald, to Libbey-Owens-Ford Glass Co. Apparatus for controlling the heating of the glass sheet during bending. 3,020,677, 2-13-62, Cl. 49—67.

Whitfield, Marshall G.: *See*—
Cheney, Wendell C., Morehouse, and Whitfield. 3,021,183.

Whitman, Carl G., and A. T. Swain, to Allis-Chalmers Mfg. Co. Heat treating method and apparatus. 3,021,412, 2-13-62, Cl. 219—10.41.

Whitney, William G., to McGraw-Edison Co. Phonographic machine. 3,021,143, 2-13-62, Cl. 274—4.

Whitteman, Willard G.: *See*—
Krikorian, Nerses H., Farr, and Whitteman. 3,020,632.

Wickerham, Lynferd J.: *See*—
Benedict, Robert G., Jeanes, Wickerham, and Rogovin. 3,021,323.

Wideroe, Rolf, and M. Sempert, to Aktiengesellschaft Brown, Boveri & Cie. Electron lens. 3,021,445, 2-13-62, Cl. 313—84.

Wiebicke, Klaus: *See*—
Meurer, Siegfried, Wiebicke, Lachmann, and Dusold. 3,020,896.

Wiener, Jerome B.: *See*—
Hayes, Robert M., Nelson, Wiener and Armstrong. 3,021,005.

Wilcox, Hayden G.: *See*—
Hobson, Robert R., and Wilcox. 3,020,887.

Wilke, Harry: *See*—
Erbslöh, Paul-Günther, and Wilke. 3,021,004.

Wilkes, Ronald N.: *See*—
Oakes, Philip N., and Wilkes. 3,021,461.

Williams, Jack L. R., and B. C. Cossar, to Eastman Kodak Co. Polythiaalkylenediols as sensitizers for photographic silver halide emulsions. 3,021,215, 2-13-62, Cl. 96—100.

Williams, Robert E.: *See*—
Graham, John W., Muench, and Williams. 3,020,964.

Williamson, Joseph R., and J. G. Billmeyer, to The Bendix Corp. Process for mounting friction segments. 3,020,634, 2-13-62, Cl. 29—470.

Willis, Grant N., to United-Carr Fastener Corp. Socket feeding method and apparatus. 3,020,625, 2-13-62, Cl. 29—155.5.

Wilson, William C.: *See*—
Taylor, Clarence R., and Wilson. 3,020,837.

Winter, John R., Jr. Rocker arm for internal-combustion engines. 3,020,779, 2-13-62, Cl. 74—519.

Wintershall Aktiengesellschaft, and Cassella Farbwerke Mainkur Aktiengesellschaft: *See*—
Zerweck, Werner, Bullan, Kunze, and Kiesewetter. 3,020,953.

Withers, Harold E. Adjustable spring clamp for earrings. 3,020,734, 2-13-62, Cl. 63—14.

Wohl, Robert J. Wide frequency range electromechanical vibrator. 3,020,751, 2-13-62, Cl. 73—71.6.

Wolanski, Zdenek. Hook-on neck-tie. 3,020,554, 2-13-62, Cl. 2—153.

Wolfrom, Robert E.: *See*—
Dupre, Jean, and Wolfrom. 3,021,372.

Wood Electric Corp.: *See*—
Wood, Morris B. 3,021,404.

Wood, George F. L.: *See*—
Murphy, Cornelius J., Jr., and Wood. 3,021,214.

Wood, George M., to Texaco Inc. Subsurface surveying. 3,021,426, 2-13-62, Cl. 250—43.5.

Wood, Morris B., to Wood Electric Corp. Heat responsive wire controlled overload circuit breaker. 3,021,404, 2-13-62, Cl. 200—116.

Woodward, Foster R., to The Taylor-Winfield Corp. Reversible platen mounting for travel type strip welders. 3,021,415, 2-13-62, Cl. 219—82.

Worner, Gunther: *See*—
Opderbeck, Fritz, Trapp, and Worner. 3,021,253.

Worthington Corp.: *See*—
Randall, Ross D., and Baumann. 3,020,925.

Wrede, Kenneth W., and R. W. Elliott. Automatic telephone dialing system. 3,021,392, 2-13-62, Cl. 179—90.

Wright Products, Inc.: *See*—
Falk, Harold W. 3,020,581.

Wurttemberg Gaszahlerfabrik J. Braun & Co., G.m.b.H.: *See*—
Binder, Karl, and Holm. 3,020,761.

Yahn, Victor W.: *See*—
Redick, David C., Cameron, Bertsche, and Yahn. 3,020,771.

Yale and Towne Mfg. Co., The: *See*—
Ulinski, Bronislaus I. 3,021,150.

Yatsushiro, Kenji, to A. F. Dormeyer. Solenoid frame structure. 3,021,457, 2-13-62, Cl. 317—191.

Youell, Robert E. Means and techniques for recording and reproducing sound. 3,021,393, 2-13-62, Cl. 179—100.1.

Young, Alexander R.: *See*—
De Lury, James, Young, and Bodle. 3,020,723.

Young, Emil J. and L. F. Irrigation valve. 3,021,109, 2-13-62, Cl. 251—204.

Young, Ephraim S. Thread or yarn breakage detector. 3,021,401, 2-13-62, Cl. 200—61.18.

Young, Harland H., and P. G. Harrill, to Swift & Co. Protein derivatives. 3,021,321, 2-13-62, Cl. 260—117.

Young, Lucile F.: *See*—
Young, Emil J. and L. F. 3,021,109.

Young Radiator Co.: *See*—
Gunn, Earl G. 3,020,992.

Young, William W., and H. B. Wetmore, to Waltham Precision Instrument Co., Inc. Servo motor control. 3,020,770. 2-13-62, Cl. 74—5.47.

Zahner, Charles F.: *See*—
Spitz, Theodore S., Zahner, and Samson. 3,021,516.

Zdrojkowski, Roman: *See*—
Chodacki, Joseph, and Zdrojkowski. 3,020,564.

Zeller, Carl N., and A. J. Porck, to Celanese Corp. of America. Polymerization of ethylene with catalysts of alkali metal borohydrides, aluminum halides and group IVB metal halides. 3,021,320, 2-13-62, Cl. 260—94.9.

Zenith Radio Corp.: *See*—
Farquhar, Charles. 3,021,493.

Zerweck, Werner, W. Bullan, W. Kunze, and A. Kiesewetter, to Wintershall Aktiengesellschaft and Cassella Farbwerke Mainkur Aktiengesellschaft. Secondary recovery of oil. 3,020,953, 2-13-62, Cl. 166—42.

Ziak, Erna E. Waterproofing compositions. 3,021,225, 2-13-62, Cl. 106—78.

Ziffer, Walter, to General Motors Corp. Sealing strip assembly. 3,020,606, 2-13-62, Cl. 20—69.

Zion, Moses, to The Lionel Corp. Collapsible toy bridge. 3,020,672, 2-13-62, Cl. 46—17.

Zorn, Ralph A., to Grain Processing Corp. Bacitracin product and processes utilizing cobalt compounds. 3,021,217, 2-13-62, Cl. 99—2.

CLASSIFICATION OF PATENTS

ISSUED FEBRUARY 13, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

2—	3: 3,020,551	29—	417: 3,020,631	62—	9: 3,020,723	95—	42: 3,020,815	121—	41: 3,020,889	166—	134: 3,020,959
	15: 3,020,552		420: 3,020,632		68: 3,020,724		58: 3,020,816		3,020,890		146: 3,020,960
	52: 3,020,553		421: 3,020,633		110: 3,020,725		73: 3,020,817		46.4: 3,020,891		165: 3,020,961
	153: 3,020,554		470: 3,020,634		138: 3,020,726		89: 3,020,818		3,020,892		242: 3,020,962
	177: 3,020,555		495: 3,020,635		3,020,727	96—	29: 3,021,212		59: 3,020,893	167—	30: 3,021,258
	224: 3,020,556		533: 3,020,636		190: 3,020,728		67: 3,021,213	122—	33: 3,020,894		65: 3,021,259
	260: 3,020,557	30—	315: 3,020,637		218: 3,020,729		85: 3,021,214		235: 3,020,895		95: 3,021,260
	300: 3,020,558	32—	63: 3,020,638		307: 3,020,730		100: 3,021,215	123—	30: 3,020,896	170—	36: 3,020,963
4—	131: 3,020,559	33—	1: 3,020,639		341: 3,020,731	98—	38: 3,020,819		32: 3,020,897	174—	15: 3,021,380
	172: 3,020,560		23: 3,020,640		345: 3,020,732		40: 3,020,820		3,020,898		146: 3,021,381
	173: 3,020,561		27: 3,020,641		414: 3,020,733		41: 3,020,821		3,020,899		174: 3,021,382
	185: 3,020,562		93: 3,020,642		121: 3,020,822		3,020,900		3,020,900	175—	237: 3,020,964
	187: 3,020,563		138: 3,020,643	63—	14: 3,020,734		Re.25,121		41.86: Re.25,121		422: 3,020,965
	213: 3,020,564		179.5: 3,020,644	64—	8: 3,020,735	99—	2: 3,021,216		119: 3,020,901	177—	61: 3,020,966
	252: 3,020,565	34—	5: 3,020,645		3,020,736		3,021,217		139: 3,020,902	178—	5.1: 3,021,383
5—	334: 3,020,566		10: 3,020,646		11: 3,020,737		71: 3,021,218		142.5: 3,020,903		5.6: 3,021,384
8—	61: 3,021,188		92: 3,020,647		19: 3,020,738		90: 3,021,219		179: 3,020,904		6: 3,021,385
9—	8: 3,020,567		133: 3,020,648		27: 3,020,739		92: 3,021,220		3,020,905		3,021,386
	310: 3,020,568	35—	10.2: 3,020,649	66—	136: 3,020,740		96: 3,021,221		3,020,905		7.3: 3,021,387
	347: 3,020,569		10.4: 3,020,650	68—	23: 3,020,741		139: 3,021,222	126—	59.5: 3,020,906		17: 3,021,388
10—	10: 3,020,570		12: 3,020,651	70—	69: 3,020,742		207: 3,021,223		229: 3,020,907		23: 3,021,389
12—	8.8: 3,020,571		17: 3,020,652		3,020,743		3,021,224	128—	26: 3,020,908		69: 3,021,390
	116.8: 3,020,572		35: 3,020,653	71—	64: 3,021,207		287: 3,020,823		70: 3,020,909	179—	82: 3,021,391
13—	9: 3,021,376	36—	7.5: 3,020,654	73—	9: 3,020,744		346: 3,020,824		132: 3,020,910		90: 3,021,392
	15: 3,021,377	37—	142: 3,020,655		15: 3,020,745		362: 3,020,825		141: 3,020,911		100.1: 3,021,393
15—	49: 3,020,573		190: 3,020,656		27: 3,020,746		426: 3,020,826		142: Re.25,122		3,021,394
	119: 3,020,574	40—	21: 3,020,657		53: 3,020,747	100—	26: 3,020,827		310: 3,020,912		100.2: 3,021,395
	235.3: 3,020,575		3,020,658		3,020,748		46: 3,020,828		350: 3,020,913		146: 3,021,396
	320: 3,020,576		307: 3,020,659		54: 3,020,749		102: 3,020,829		444: 3,020,914		175.3: 3,021,397
	323: 3,020,577	41—	15: 3,020,660		67.2: 3,020,750		209: 3,020,830	131—	9: 3,020,915		3,021,398
	517: 3,020,578		41: 3,020,661		71.6: 3,020,751		232: 3,020,831	133—	2: 3,020,916		3,021,406
	553: 3,020,579	42—	11: 3,020,662		81: 3,020,752		233: 3,020,832	134—	26: 3,021,235	180—	1: 3,020,967
16—	61: 3,020,580		70: 3,020,663		117: 3,020,753		271: 3,020,833		58: 3,020,917		73: 3,020,968
	66: 3,020,581	43—	17: 3,020,664		147: 3,020,754	101—	4: 3,020,834		98: 3,020,918		82.1: 3,020,969
	105: 3,020,582		20: 3,020,665		159: 3,020,755		44: 3,020,835	135—	1: 3,020,919	181—	.5: 3,020,970
17—	2: 3,020,583		3,020,666		167: 3,020,756		125: 3,020,836	136—	5: 3,021,378		24: 3,020,971
18—	2: 3,020,584		35: 3,020,667		181: 3,020,757		132.5: 3,020,837		145: 3,021,379	182—	15: 3,020,972
	2.5: 3,020,585		42.16: 3,020,668		194: 3,020,758		149.2: 3,020,839	137—	50: 3,020,920		214: 3,020,973
	3,020,586		43.1: 3,020,669		3,020,759		333: 3,020,838		66: 3,020,921	183—	22: 3,020,974
	4: 3,020,587		44.91: 3,020,670		204: 3,020,760		350: 3,020,840		115: 3,020,922		32: 3,020,975
	14: 3,020,588		139: 3,020,671		270: 3,020,761		3,020,841		316: 3,020,923		62: 3,020,976
	16.5: 3,020,589	44—	63: 3,021,203		362.4: 3,020,762		415.1: 3,020,842		386: 3,020,924		73: 3,020,977
	19: 3,020,590		3,021,204		389: 3,020,763	102—	18: 3,020,843		489.5: 3,020,925	184—	17: 3,020,978
	30: 3,020,591		66: 3,021,205		398: 3,020,764		27: 3,020,844		495: 3,020,926		91: 3,020,979
	3,020,592		75: 3,021,206		434: 3,020,765		70: 3,020,845		622: 3,020,927	188—	1: 3,020,980
	3,020,593	46—	17: 3,020,672		462: 3,020,766	103—	37: 3,020,846	138—	30: 3,020,928		100: 3,020,981
	42: 3,020,594		90: 3,020,673		497: 3,020,767		3,020,847		89: 3,020,929		140: 3,020,982
	3,020,595		120: 3,020,674	74—	5: 3,020,768		46: 3,020,848	139—	82: 3,020,930		184: 3,020,983
	56: 3,020,596		180: 3,020,675		5.1: 3,020,769		87: 3,020,849		147: 3,020,931		212: 3,020,984
	57: 3,020,597	47—	58: 3,020,676		5.47: 3,020,770		103: 3,020,850		159: 3,020,932	189—	19: 3,020,985
19—	65: 3,020,598		61: P.P.2,130		7: 3,020,771		153: 3,020,851		166: 3,020,933		34: 3,020,986
	147: 3,020,599	49—	67: 3,020,677		54: 3,020,772		225: 3,020,852		200: 3,020,934		36: 3,020,987
	157: 3,020,600	51—	14: 3,020,678		138: 3,020,773	104—	7: 3,020,853		388: 3,020,935		88: 3,020,988
20—	2: 3,020,601		34: 3,020,679		142: 3,020,774		249: 3,020,854	140—	71: 3,020,936	190—	41: 3,020,989
	4: 3,020,602		73: 3,020,680		440: 3,020,775		250: 3,020,855		3,020,937	192—	4: 3,020,990
	23: 3,020,603		122: 3,020,681		472: 3,020,776	105—	197: 3,020,856	141—	24: 3,020,938		53: 3,020,991
	42: 3,020,604		145: 3,020,682		3,020,777		199: 3,020,857		169: 3,020,939		61: 3,020,992
	56: 3,020,605		163: 3,020,683		489: 3,020,778		215: 3,020,858		209: 3,020,940	193—	38: 3,020,993
	69: 3,020,606		235: 3,020,684		519: 3,020,779	106—	78: 3,021,225		360: 3,020,941	194—	10: 3,020,994
22—	68: 3,020,607	53—	7: 3,020,685		665: 3,020,780		238: 3,021,226	143—	135: 3,020,942	195—	36: 3,021,261
	116: 3,020,608		22: 3,020,686		688: 3,020,781	111—	3: 3,020,859	144—	208: 3,020,943		96: 3,021,262
	193: 3,020,609		23: 3,020,687		796: 3,020,782		34: 3,020,860	146—	117: 3,020,944	197—	1: 3,020,995
	203: 3,020,610		36: 3,020,688	75—	26: 3,021,208	112—	31: 3,020,861	148—	13: 3,021,236		133: 3,020,996
23—	3: 3,021,189		140: 3,020,689		83: 3,021,209		77: 3,020,862		111: 3,021,237	198—	34: 3,020,997
	14: 3,021,190		353: 3,020,690		129: 3,021,210		79: 3,020,863	149—	1: 3,021,238		210: 3,020,998
	77: 3,021,191		376: 3,020,691		170: 3,021,211		153: 3,020,864	150—	3: 3,020,945	199—	56: 3,020,999
	78: 3,021,192		392: 3,020,692	76—	37: 3,020,783		159: 3,020,865	151—	41.71: 3,020,946	200—	38: 3,021,399
	88: 3,021,193	56—	25.4: 3,020,693		63: 3,020,784		226: 3,020,866		41.75: 3,020,947		50: 3,021,400
	3,021,194		26: 3,020,694		107: 3,020,785	113—	99: 3,020,867	152—	233: 3,020,948		61.18: 3,021,401
	110: 3,021,195		328: 3,020,695	77—	3: 3,020,786	114—	23: 3,020,868	153—	40: 3,020,949		61.46: 3,021,402
	204: 3,021,196		364: 3,020,696		73: 3,020,787		126: 3,020,869	154—	45.9: 3,021,239		82: 3,021,403
	3,021,197	57—	36: 3,020,697	80—	35: 3,020,788		183: 3,020,870		46: 3,021,240		116: 3,021,404
	223.5: 3,021,198		117: 3,020,698	81—	52.4: 3,020,789		221: 3,020,871	156—	30: 3,021,244		138: 3,021,405
	230: 3,021,199		157: 3,020,699		119: 3,020,790	115—	12: 3,020,872		144: 3,021,245		3,021,406
	255: 3,021,200		3,020,700	82—	14: 3,020,791	116—	114: 3,020,873		173: 3,021,241		144: 3,021,407
	272.5: 3,021,201		160: 3,020,701	88—	1: 3,020,792		3,020,874		180: 3,021,242		3,021,408
	286: 3,021,202	58—	52: 3,020,702		14: 3,020,793		3,020,875		196: 3,021,246		149: 3,021,409
24—	73: 3,020,611		90: 3,020,703		3,020,794		119: 3,020,876		222: 3,021,247		150: 3,021,410
	170: 3,020,612	59—	1: 3,020,704		3,020,795	117—	37: 3,021,227		272: 3,021,243		3,021,411
	204: 3,020,613	60—	6: 3,020,705		15: 3,020,796		71: 3,021,228		274: 3,021,248		
	232: 3,020,614		13: 3,020,706		24: 3,020,797		76: 3,021,229		293: 3,021,249	202—	40: 3,021,263
25—	128: 3,020,615		31: 3,020,707		3,020,798		93: 3,021,230		324: 3,021,250		52: 3,021,264
	131: 3,020,616		35.4: 3,020,708		3,020,799		107: 3,021,231		542: 3,021,251		174: 3,021,265
	153: 3,020,617		35.54: 3,020,713		3,020,800		138.8: 3,021,232	158—	46: 3,020,950	204—	44: 3,021,266
	154: 3,020,618		3,020,714		3,020,801		227: 3,021,233	160—	35: 3,020,951		51: 3,021,267
	157: 3,020,619		35.6: 3,020,709	34:	3,020,802		232: 3,021,234	162—	7: 3,021,252		64: 3,021,268
26—	51.3: 3,020,620		3,020,710		54: 3,020,803	118—	11: 3,020,877		13: 3,021,253		154: 3,021,269
28—	71.3: 3,020,621		3,020,711		57: 3,020,804		301: 3,020,878		100: 3,021,254		168: 3,021,270
29—	25.18: 3,020,622		3,020,712		61: 3,020,805		423: 3,020,879		156: 3,021,255		192: 3,021,271
	33.5: 3,020,623		39.12: 3,020,715		72: 3,020,806		503: 3,020,880		161: 3,021,256		193.2: 3,021,272
	81: 3,020,624		39.14: 3,020,716	89—	193: 3,020,807	119—	58: 3,020,881		162: 3,021,257		3,021,273
	155.5: 3,020,625		39.28: 3,020,717	90—	5: 3,020,808		82: 3,020,882	166—	4: 3,020,952		3,021,274
	3,020,626		39.74: 3,020,718	93—	58.3: 3,020,809		157: 3,020,883		42: 3,020,953		312: 3,021,275
	155.57: 3,020,627		54: 3,020,719		93: 3,020,810	120—	44: 3,020,884		3,020,954	206—	44: 3,021,000
	200: 3,020,628		54.5: 3,020,720	94—	3: 3,020,811	121—	38: 3,020,885		44: 3,020,955		56: 3,021,001
	3,020,629		97: 3,020,721		39: 3,020,812		3,020,886		66.5: 3,020,956		57: 3,021,002
	211: 3,020,630	61—	69: 3,020,722	95—	11.5: 3,020,814		40: 3,020,887		99: 3,020,957	207—	2: 3,021,003
							3,020,888		118: 3,020,958		3,021,004

209— 72: 3,021,005
111.5: 3,021,006
223: 3,021,007
299: 3,021,008
394: 3,021,009
210— 35: 3,021,276
211— 49: 3,021,010
3,021,011
60: 3,021,012
136: 3,021,013
212— 144: 3,021,014
145: 3,021,015
3,021,016
213— 72: 3,021,017
214— 1: 3,021,018
3,021,019
5.5: 3,021,020
77: 3,021,021
131: 3,021,022
138: 3,021,023
514: 3,021,024
522: 3,021,025
215— 100: 3,021,026
219—10.41: 3,021,412
10.75: 3,021,413
37: 3,021,414
82: 3,021,415
3,021,416
89: 3,021,417
99: 3,021,418
124: 3,021,419
131: 3,021,420
150: 3,021,421
220— 15: 3,021,027
35: 3,021,028
44: 3,021,029
221— 77: 3,021,030
273: 3,021,031
222— 30: 3,021,032
47: 3,021,033
153: 3,021,034
245: 3,021,035
256: 3,021,036
498: 3,021,037
223— 46: 3,021,038
226— 36: 3,021,039
91: 3,021,040
199: 3,021,041
229— 16: 3,021,042
3,021,043
17: 3,021,044
37: 3,021,045
39: 3,021,046
51: 3,021,047
3,021,048
230— 134: 3,021,049
232— 43.1: 3,021,050
44: 3,021,051
234— 115: Re.25,123
235— 23: 3,021,052
60: 3,021,053
60.2: 3,021,054
60.31: 3,021,056
60.4: 3,021,055
61: 3,021,057
3,021,058
61.11: 3,021,059
235— 79: 3,021,060
91: 3,021,061
152: 3,021,062
153: 3,021,063
154: 3,021,064
155: 3,021,065
160: 3,021,066
164: 3,021,067
3,021,068
168: 3,021,069
176: 3,021,070
180: 3,021,071
183: 3,021,072
192: 3,021,073
194: 3,021,074
197: 3,021,075
238— 321: 3,021,076
239— 15: 3,021,077
97: 3,021,078
306: 3,021,079
240— 1.3: 3,021,422
241— 69: 3,021,080
91: 3,021,081
175: 3,021,082
275: 3,021,083
242— 55.1: 3,021,084
74: 3,021,085
80: 3,021,086
85.1: 3,021,087
86.8: 3,021,088
107: 3,021,091
107.3: 3,021,089
107.7: 3,021,090
128: 3,021,092
134: 3,021,093
137.1: 3,021,094
244— 4: 3,021,095
14: 3,021,096
77: 3,021,097
246— 169: 3,021,423
248— 16: 3,021,099
23: 3,021,100
44: 3,021,101
49: 3,021,102
57: 3,021,103
222: 3,021,104
223: 3,021,105
226: 3,021,106
376: 3,021,107
250— 20: 3,021,424
43.5: 3,021,425
3,021,426
3,021,427
83.3: 3,021,428
251— 61: 3,021,108
204: 3,021,109
252— 8.5: 3,021,277
8.55: 3,021,278
3,021,279
33: 3,021,280
47.5: 3,021,281
60: 3,021,282
62.5: 3,021,283
110: 3,021,284
301.4: 3,021,285
408: 3,021,286
421: 3,021,287
253— 78: 3,021,110
254— 2: 3,021,111
100: 3,021,112
165: 3,021,113
256— 24: 3,021,114
65: 3,021,115
72: 3,021,116
257— 1: 3,021,117
259— 43: 3,021,118
72: 3,021,119
3,021,120
97: 3,021,121
171: 3,021,122
260— 2.1: 3,021,288
2.5: 3,021,289
3,021,290
3,021,291
3,021,292
3: 3,021,293
3.3: 3,021,294
28.5: 3,021,295
29.4: 3,021,296
32.6: 3,021,297
37: 3,021,298
41: 3,021,299
42: 3,021,300
45.5: 3,021,300
3,021,301
3,021,302
45.75: 3,021,303
47: 3,021,304
3,021,305
67.5: 3,021,306
72: 3,021,307
75: 3,021,308
78.3: 3,021,309
3,021,310
3,021,311
3,021,312
3,021,313
3,021,314
3,021,315
3,021,316
3,021,317
87.1: 3,021,318
94.9: 3,021,319
3,021,320
117: 3,021,321
145: 3,021,322
234: 3,021,323
3,021,324
239: 3,021,325
239.3: 3,021,326
239.55: 3,021,327
248: 3,021,328
249.6: 3,021,329
250: 3,021,330
251: 3,021,331
256.4: 3,021,332
268: 3,021,333
279: 3,021,334
307: 3,021,335
308: 3,021,336
3,021,337
309.7: 3,021,338
326.5: 3,021,339
340.2: 3,021,340
260—340.6: 3,021,341
345.1: 3,021,342
3,021,343
393: 3,021,344
397.4: 3,021,345
397.45: 3,021,346
3,021,347
413: 3,021,348
429.5: 3,021,349
437: 3,021,350
461: 3,021,351
3,021,352
3,021,353
3,021,354
464: 3,021,355
465.4: 3,021,356
475: 3,021,357
488: 3,021,358
3,021,359
490: 3,021,360
3,021,361
525: 3,021,362
3,021,363
526: 3,021,364
3,021,365
530: 3,021,366
533: 3,021,367
553: 3,021,368
558: 3,021,369
607: 3,021,370
611: 3,021,371
613: 3,021,372
614: 3,021,373
631: 3,021,374
651: 3,021,375
261— 39: 3,021,123
262— 33: 3,021,124
263— 6: 3,021,125
29: 3,021,126
32: 3,021,127
52: 3,021,128
267— 1: 3,021,129
268— 42: 3,021,130
59: 3,021,131
269— 79: 3,021,132
270— 58: 3,021,133
66: 3,021,134
70: 3,021,135
271— 36: 3,021,136
272— 57: 3,021,137
273—106.5: 3,021,138
3,021,139
130: 3,021,140
194: 3,021,141
274— 1: 3,021,142
4: 3,021,143
10: 3,021,144
11: 3,021,145
277— 3: 3,021,146
37: 3,021,161
53: 3,021,147
58: 3,021,148
279— 123: 3,021,149
280— 87: 3,021,150
124: 3,021,151
3,021,152
280— 124: 3,021,153
406: 3,021,154
423: 3,021,155
281— 17: 3,021,156
287— 14: 3,021,158
54: 3,021,159
90: 3,021,157
119: 3,021,160
292— 66: 3,021,162
147: 3,021,163
219: 3,021,164
256.5: 3,021,165
294— 74: 3,021,166
86: 3,021,167
88: 3,021,168
115: 3,021,169
296— 23: 3,021,170
24: 3,021,171
28: 3,021,172
97: 3,021,173
107: 3,021,174
297— 58: 3,021,175
61: 3,021,098
452: 3,021,176
298— 21: 3,021,177
301— 37: 3,021,178
47: 3,021,179
302— 56: 3,021,180
303— 21: 3,021,181
307— 10: 3,021,429
88.5: 3,021,430
3,021,431
3,021,432
3,021,433
3,021,434
3,021,435
3,021,436
3,021,437
3,021,438
3,021,439
3,021,440
308— 187: 3,021,182
309— 6: 3,021,183
310— 8: 3,021,441
60: 3,021,442
190: 3,021,443
259: 3,021,444
311— 63: 3,021,184
312— 29: 3,021,185
140.3: 3,021,186
257: 3,021,187
313— 84: 3,021,445
204: 3,021,446
315— 5.19: 3,021,447
5.35: 3,021,448
79: 3,021,449
84.5: 3,021,450
219: 3,021,451
317— 9: 3,021,452
27: 3,021,453
148.5: 3,021,454
191: 3,021,455
3,021,456
3,021,457
200: 3,021,458
234: 3,021,459
317— 234: 3,021,460
235: 3,021,461
240: 3,021,462
318— 162: 3,021,463
3,021,464
247: 3,021,465
327: 3,021,466
320— 1: 3,021,467
2: 3,021,468
15: 3,021,469
321— 16: 3,021,470
19: 3,021,471
322— 2: 3,021,472
323— 45: 3,021,473
89: 3,021,474
324— .5: 3,021,475
28: 3,021,476
61: 3,021,477
77: 3,021,478
3,021,479
78: 3,021,480
83: 3,021,481
94: 3,021,482
131: 3,021,483
328— 63: 3,021,484
127: 3,021,485
129: 3,021,486
162: 3,021,487
196: 3,021,488
330— 29: 3,021,489
53: 3,021,490
331— 3: 3,021,491
28: 3,021,492
333— 78: 3,021,493
338— 148: 3,021,494
176: 3,021,495
339— 5: 3,021,496
3,021,497
18: 3,021,498
22: 3,021,499
75: 3,021,500
198: 3,021,501
202: 3,021,502
213: 3,021,503
340— 5: 3,021,504
27: 3,021,505
147: 3,021,506
162: 3,021,507
163: 3,021,508
166: 3,021,509
173.2: 3,021,510
174: 3,021,511
174.1: 3,021,512
213: 3,021,513
248: 3,021,514
253: 3,021,515
345: 3,021,516
347: 3,021,517
3,021,518
373: 3,021,519
384: 3,021,520
343— 5: 3,021,521
7.3: 3,021,522
18: 3,021,523
781: 3,021,524

Classification of Designs

D 3— 4: 192,204
192,205
13: 192,206
19: 192,207
D 7— 5: 192,208
7: 192,209
D 7— 7: 192,210
D10— 8: 192,211
D13— 1: 192,212
D14— 6: 192,213
192,214
D15— 1: 192,215
D15— 1: 192,216
192,217
8: 192,218
D18— 2: 192,219
D22— 3: 192,220
D25— 1: 192,221
D31— 4: 192,222
192,223
D34— 5: 192,224
D44— 1: 192,225
10: 192,226
192,227
D44— 29: 192,228
192,229
192,230
D51— 1: 192,231
D52— 7: 192,232
192,233
D61— 1: 192,234
D65— 1: 192,235
D80— 11: 192,236
D86— 10: 192,237
D87— 5: 192,238

OFFICIAL GAZETTE ✦ UNITED STATES PATENT OFFICE

February 13, 1962 Volume 775 Number 2

TRADEMARKS

NOTICES

Oppositions Under Section 13 of the Trademark Act of 1946

Section 13 of the Trademark Act of 1946 provides that any person who believes that he would be damaged by the registration of a mark upon the Principal Register may, upon payment of the required fee, file a verified notice of opposition in the Patent Office, stating the grounds therefor, within thirty days after publication under Section 12(a) of the mark sought to be registered.

An unverified opposition may be filed by a duly authorized attorney, but the opposition will be null and void unless verified by the opposer within a reasonable time after such filing to be fixed by the Commissioner.

A notice of opposition will not be accepted unless it complies with the statutory requirements, namely, it must be filed in the Patent Office within thirty days after publication under Section 12(a) of the mark opposed, be accompanied by the fee of $25.00, must state the grounds therefor and, if filed by the opposer, must be verified.

A request to extend the time for filing a notice of opposition under Rule 2.102 must be received in the Patent Office before the expiration of thirty days from date of publication under Section 12(a) of the mark sought to be registered. The request should specify the period of extension desired and be accompanied by a showing of good cause for the extension requested, but in the event circumstances do not permit submission of the showing of good cause with the request, it must be furnished within ten days after filing the request for extension.

Two or more parties may be joined in opposition to the registration of a mark, but separate fees of $25.00 for each party so joined must be paid. Likewise, two or more marks may be opposed in a single opposition, but a separate fee of $25.00 for each mark opposed must accompany the notice of opposition. The required fees must be received in the Patent Office within the opposition period or within such extension thereof as granted by the Commissioner for filing the notice of opposition under Rule 2.102.

HORACE B. FAY, JR.,
Jan. 16, 1962. *Assistant Commissioner.*

CONDITION OF TRADEMARK APPLICATIONS AS OF DECEMBER 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 15,518
Date of oldest new application ..... June 1, 1961
Date of oldest amended application ..... May 8, 1961

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 39, 40, 41, 42, 43, 44, 50	6-1-61	5-8-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-3-61	7-3-61
Renewals (All Classes)	11-16-61	12-26-61
Sec. 12 (c) Publications (All Classes)	12-13-61	

Applications filed during the month of December 1961—1802

Registrations Issued ..... 243—No. 727,349 to No. 727,591
Renewals Issued 51

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 106,813. Lakeland Nurseries Sales Corp., New York, N.Y. Filed Oct. 20, 1960.

Lakeland's

Terrace Roses

The term "Roses" is disclaimed apart from the mark shown.
For Rose Plants.
First use Sept. 12, 1960.

SN 110,274. Garden Fair, Inc., Minneapolis, Minn. Filed Dec. 15, 1960.

GARDEN FAIR

For Lawn Seed.
First use Apr. 1, 1960.

SN 113,218. Eugene W. Hanssen, d.b.a. Hanssen Plastics Co., Dallas, Tex. Filed Feb. 7, 1961.

HANSZITE

For Corrosion and Fire Resistant Polyester Reinforced With Glass Fibers.
First use Aug. 1, 1960.

SN 115,948. Personal Products Corporation, North Brunswick Township, Middlesex County, N.J. Filed Mar. 17, 1961.



For Cellulose Wadding for Use as Textile Carrier, Quilting, Sanitary or Surgical Filler or Filter Fabric.
First use Jan. 31, 1961.

SN 120,765. Seton Leather Company, Newark, N.Y. Filed May 24, 1961.

ANTIGUA

For Leather.
First use Apr. 27, 1961.

SN 122,502. The American Oil Company, Chicago, Ill. Filed June 21, 1961.

AMOCO

Owner of Reg. Nos. 167,769, 657,012, and 722,940.
For Synthetic Resins for General Use in the Industrial Arts.
First use July 13, 1956.

SN 124,653. Kimberly-Clark Corporation, Neenah, Wis. Filed July 25, 1961.

LAB-LITTER

For Treated Cellulose Material Suitable for Litter Boxes for Small Animals, and for Other Absorbent Uses.
First use June 14, 1961.

SN 125,347. Armour and Company, Chicago, Ill. Filed Aug. 4, 1961.

CAMISA

For Leather.
First use Mar. 8, 1961.

Class 2—Receptacles

SN 119,874. Illinois Tool Works, Inc., Chicago, Ill., by merger from Illinois Tool Works, Chicago, Ill. Filed May 12, 1961.



Owner of Reg. No. 650,060.
For Containers—Namely, Cups, Flower Pots, Relatively Small Plastic Packaging Receptacles, and Portable Carriers for Containers.
First use on or about Apr. 13, 1961.

SN 121,158. American Can Company, New York, N.Y. Filed June 1, 1961.

CANCO

Owner of Reg. Nos. 92,935, 703,267, and others.
For Metal Containers for Packaging Foods and Other Products.
First use on or about July 1, 1912.

SN 122,099. The Mead Corporation, Dayton, Ohio. Filed June 15, 1961.

CLUSTER-WRAP

For Folding Paperboard Cartons and Carry-Home Cartons of Paper and Paperboard.
First use March 1958.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 123,682. Pioneer Industries Inc., Darby, Pa. Filed July 10, 1961.

DE ROCHEMONT

Owner of Reg. No. 679,647.
For Wallets, Billfolds, Card Holders, Key-Cases, Pocket-Books and Fitted and Unfitted Travel Cases.
First use June 21, 1961.

Class 6—Chemicals and Chemical Compositions

SN 95,718. W. L. Gore & Associates, Inc., Newark, Del. Filed Apr. 25, 1960.

TETRA-ETCH

For Preparations for Etching Resin Surfaces To Make Them More Receptive to Adhesives for Bonding Fluorocarbon Resins Such as Tetrafluoroethylene Resin to Other Surfaces.
First use Sept. 1, 1959.

SN 98,010. The Mellocraft Company, Toledo, Ohio. Filed May 27, 1960.

MELLOCRAFT

For Alcohol, Ammonia, Carbon Tetrachloride, Iodine, Muriatic Acid, Nitric Acid, Sodium Hydroxide (Lye), Sodium Hypochlorite, Sulphuric Acid; Algaecide, Herbicide, Insecticide, Parasiticide, and Rodenticide; Animal, Bird, and Insect Repellent; Household and Industrial Deodorant; Water Softener; Wetting Compound; Dust Attractant for Mops; Absorbent for Deodorising; De-Icing Compound; Colloidal Silica in Emulsion To Provide Anti-Slip Compound for Floors; Rust Scale and Corrosion Inhibitor; Water Scale Solvent and Boiler Compound; Bleach Disinfectant; Steriliser and Sanitiser; Glass Anti-Fogging Preparation; and a Preparation To Protect the Hands While Doing Industrial and Like Work.
First use in January 1941.

SN 98,015. The Mellocraft Company, Toledo, Ohio. Filed May 27, 1960.

Mellocraft

For Alcohol, Ammonia, Carbon Tetrachloride, Iodine, Muriatic Acid, Nitric Acid, Sodium Hydroxide (Lye), Sodium Hypochlorite, Sulphuric Acid; Algaecide, Herbicide, Insecticide, Parasiticide, and Rodenticide; Animal, Bird, and Insect Repellent; Household and Industrial Deodorant; Water Softener; Wetting Compound; Dust Attractant for Mops; Absorbent for Deodorising; De-Icing Compound; Colloidal Silica in Emulsion To Provide Anti-Slip Compound for Floors; Rust Scale and Corrosion Inhibitor; Water Scale Solvent and Boiler Compound; Bleach Disinfectant; Steriliser and Sanitiser; and a Glass Anti-Fogging Preparation.
First use Dec. 31, 1958, on insecticides.

SN 109,309. Fisher Scientific Company, Pittsburgh, Pa. Filed Nov. 30, 1960.

THAM

For Reagent (Tris(Hydroxymethyl)Aminomethane) for Use in Laboratory Analysis.
First use Nov. 17, 1960.

SN 109,324. Hamblet and Hayes Company, Peabody, Mass. Filed Nov. 30, 1960.

KITO B

For Chemical Compositions Which Are Both Bactericides and Fungicides.
First use May 20, 1960.

SN 110,388. Wood Treating Chemicals Co., St. Louis, Mo. Filed Dec. 16, 1960.

POLE-LIFE

For Chemical Paste Wood Preservative Coating for Prevention of Decay and Termite Damage in Poles.
First use Nov. 9, 1960.

SN 111,019. Texize Chemicals, Inc., Greenville, S.C. Filed Dec. 29, 1960.

BABY FLUF

For Liquid Laundry Rinse for Fluffing and Softening.
First use Dec. 16, 1960.

SN 111,142. American Rubber and Chemical Company, New York, N.Y. Filed Jan. 3, 1961.

CISDENE

For Polybutadiene.
First use Nov. 3, 1960.

SN 111,425. National Chemsearch Corporation of Texas, Dallas, Tex. Filed Jan. 6, 1961.

SLICK CHICK

Owner of Reg. No. 685,666.
For Disinfectant, Detergent, Deodorant Preparation To Control Bacteria and Fungi and Reduce Odors in Food Processing Plants and Hatcheries.
First use Jan. 20, 1960.

SN 112,683. Chapman Chemical Company, Memphis, Tenn. Filed Jan. 30, 1961.

POL-NU PAK

The word "Pak" is disclaimed apart from the mark. Owner of Reg. No. 566,921.
For Wood Preservative Bandages for Application to Poles, Pilings and Posts.
First use Aug. 5, 1959.

SN 113,584. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Feb. 13, 1961.

URASTRAT

For Chromatography Papers for Laboratory Testing of Urea Nitrogen Levels in Plasma or Serum.
First use Jan. 24, 1961.

SN 114,818. Lester Laboratories, Inc., Atlanta, Ga. Filed Feb. 13, 1961.

WATERENE

For Combined Water Purifying Composition, Corrosion Inhibitor and Algae Control for Air Conditioning Systems.
First use Dec. 8, 1960.

SN 118,095. The Newcomer Corporation, Columbia, Mo. Filed Apr. 18, 1961.

SOLO

For Herbicides.
First use Mar. 20, 1961.

SN 119,720. Rohm & Haas Company, Philadelphia, Pa. Filed May 10, 1961.

STAM

For Synthetic Organic Chemicals in Solid Form and/or Solutions and/or Suspensions for Use in Controlling the Growth and/or Eradication of Plants.
First use on or about Aug. 17, 1959.

SN 120,916. Suburban Propane Gas Corporation, Whippany, N.J. Filed May 26, 1961.

Shorgas

For Liquefied Petroleum Gas.
First use at least as early as 1936.

SN 121,257. Avon Products, Inc., New York, N.Y. Filed June 2, 1961.

SUNNY MORNING

For Room Spray Sachet Deodorant.
First use May 16, 1961.

SN 122,717. Pitt-Consol Chemical Company, Newark, N.J. Filed June 23, 1961.

PITT-CONSOL

Owner of Reg. Nos. 665,580, 715,946, and others.
For Rubber Peptising and Rubber Reclaiming Compounds and Compositions.
First use Feb. 20, 1959.

SN 122,864. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed June 26, 1961.

SOLASEPTIC

For Additive to Borax in the Nature of a Cleaning and Germ Combatting Agent.
First use May 24, 1961.

SN 123,348. National Starch and Chemical Corporation, New York, N.Y. Filed July 3, 1961.

NAPON

For Chemically Treated Starch.
First use Jan. 15, 1954.

SN 124,269. Hinckley & Schmitt, Chicago, Ill. Filed July 19, 1961.

NEPTUNE

Owner of Reg. Nos. 151,504 and 687,636.
For Distilled Water for Industrial, Commercial and Household Uses.
First use prior to May 1894.

SN 129,815. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Oct. 12, 1961.

MAGNAPOL

For Amylopectin.
First use Oct. 4, 1961.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 122,203. Kriswork Briar Pipe Trading v. K. R. Kris, Kolding, Denmark. Filed June 16, 1961.

KRISWILL

For Tobacco Pipes.
First use Aug. 8, 1958; in commerce about Aug. 8, 1958.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 111,279. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed Jan. 4, 1961.

SUPER PRIME

Owner of Reg. Nos. 159,784, 706,173, and others.
For Explosives.
First use on or about Sept. 30, 1960.

Class 12—Construction Materials

SN 102,066. H. I. Thompson Fiber Glass Co., Los Angeles, Calif. Filed Aug. 4, 1960.

HITCOMB

Owner of Reg. No. 685,612.
For Woven Filamentary Honeycomb Materials for Structural Applications.
First use May 31, 1960, on fiber glass honeycomb materials.

SN 109,060. Hampton Hardwood Corporation, Newport News, Va. Filed Nov. 25, 1960.

TROPIC-TRIM

For Wooden Mouldings, Trim, and Door Jambs.
First use Sept. 23, 1960.

SN 109,310. Formica Corporation, Cincinnati, Ohio. Filed Nov. 30, 1960.

QUADRILLE

For Decorative Laminated Plastic.
First use Aug. 24, 1960.

SN 123,497. Rheinbau G.m.b.H., Mains (Rhine), Germany. Filed July 6, 1961.

OMNIA

Owner of German Reg. No. 742,927, dated Nov. 25, 1960; and U.S. Reg. Nos. 648,786 and 708,928.
For Construction Materials—Namely, Lattice Girders, Stringers, Trusses, Concrete Shuttering Elements, Ceiling Supports, Steel Mesh Mats, Armor, Tie Clips, Metal Bands, Reinforced Concrete Bricks, Hollow Bricks, Floor Tiles of Natural and Synthetic Stone, Plastic Floor Coverings and Tiles, Handrails, Moldings, Tubing, Wallpaper and Decorative Moldings.

SN 123,618. Dallas Ceramic Company, Dallas, Tex. Filed July 10, 1961.

DAL-DURA

Owner of Reg. Nos. 502,630 and 601,508.
For Ceramic Tile for Construction Purposes.
First use Sept. 1, 1953.

SN 123,782. The Chas. Taylor's Sons Co., Cincinnati, Ohio. Filed July 11, 1961.

TZ

For Shaped Refractory Articles Such as Furnace Lining Bricks.
First use Dec. 15, 1954.

SN 123,783. The Chas. Taylor's Sons Co., Cincinnati, Ohio. Filed July 11, 1961.

TZB

For Shaped Refractory Articles Such as Furnace Lining Bricks.
First use September 1960.

SN 124,733. Formica Corporation, Cincinnati, Ohio. Filed July 26, 1961.

FORMICA

Owner of Reg. Nos. 155,689, 700,435, and others.
For Flakeboard.
First use about Jan. 15, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 118,610. Scovill Manufacturing Company, Waterbury, Conn. Filed Apr. 25, 1961.

SUPER GRIP

Owner of Reg. No. 306,140.
For Couplings.
First use Apr. 5, 1948.

SN 119,802. Stile-Craft Manufacturers, Inc., St. Louis, Mo. Filed May 11, 1961.

DYNA QUIP

For Accessory Equipment for Pneumatic and Hydraulic Industrial Systems, Such as Quick-Connect Couplings.
First use Apr. 26, 1961.

SN 119,871. Illinois Tool Works, Inc., Chicago, Ill., by merger from Illinois Tool Works, Chicago, Ill. Filed May 12, 1961.

itw

Owner of Reg. No. 650,060.
For Thread Cutting Screws, Locking Screws, Assembled Screws and Washers, Lockwashers, Plane Metal Washers, Nuts, Quick Opening Fasteners for Industrial Installations, Snap Fasteners for Industrial Use, Machine Screws, Set Screws, Drive Screws, Molding Clips, Preassembled Nuts and Washers, One Piece Self Expanding Blind Rivets, Self Expanding Grommets, Resilient Shaft Encircling Ring Fasteners, Self Expanding Plugs, Lock Nuts, Nut Elements With or Without Internal Threads, Strain Relief Grommets, Sheet Metal Nuts and Cable Clamps.
First use on or about Apr. 13, 1961.

SN 119,983. Liberal Industries, Inc., Liberal, Kans. Filed May 15, 1961.

THE ONLEE

For Water Closet Float Ball Valve.
First use Feb. 1, 1961.

SN 119,997. Missouri Metal Products, Inc., Hazelwood, Mo. Filed May 15, 1961.

ALUMA-LINK

For Aluminum Chain Link Fencing.
First use Mar. 17, 1961.

SN 120,030. Super Sagless Spring Corporation, Bayonne, N.J. Filed May 15, 1961.



For Hardware for Reclining Chairs Provided With Headrest.
First use Apr. 21, 1961.

SN 120,377. Bride Craft Corporation, Union, N.J. Filed May 19, 1961.

Bride Craft

For Cooking Vessels.
First use Feb. 18, 1960.

SN 120,505. Del Mar Manufacturing Co., Gardena, Calif. Filed May 22, 1961.

Del Mar

For Bathroom Accessories.
First use on or about Sept. 9, 1960.

SN 120,730. Edward Leeds, d.b.a. Edward Leeds & Co., West Hempstead, N.Y. Filed May 24, 1961.

FASTINGE

For Door Hinges.
First use Feb. 1, 1953.

SN 120,741. Parker-Hannifin Corporation, Cleveland, Ohio. Filed May 24, 1961.

HANNIFIN-HUSTLER

For Air Control Valves.
First use Apr. 24, 1961.

SN 120,746. Rain Jet Corporation, Burbank, Calif. Filed May 24, 1961.

SCRUB JET

For Nozzles.
First use June 3, 1959.

SN 120,771. Edward Valves, Inc., East Chicago, Ill. Filed May 24, 1961.

ELASTOSEAL

For Valves.
First use Apr. 27, 1961.

Class 14—Metals and Metal Castings and Forgings

SN 122,669. Wah Chang Corporation, New York, N.Y. Filed June 22, 1961.

SPRAYMET

For Metal Powders for Use in Plasma Spray Applications.
First use June 16, 1961.

Class 15—Oils and Greases

SN 104,363. John Bowen, d.b.a. Bowen Electric Manufacturers, Fort Lauderdale, Fla. Filed Sept. 13, 1960.

LUBA-FOAM

For Wire Lubricant.
First use June 26, 1958.

SN 123,544. Humble Oil & Refining Company, Houston, Tex. Filed July 7, 1961.

SUCROL

For Spray Oils for Agricultural Use.
First use at least May 16, 1961.

SN 123,805. Continental Oil Company, Ponca City, Okla. Filed July 12, 1961.

METLBOND

For Grease.
First use June 30, 1961.

SN 123,879. Joseph Dixon Crucible Company, Jersey City, N.J. Filed July 13, 1961.

GRAPHOKOTE

For Dry Film Graphite Lubricant for Sliding Friction.
First use Feb. 6, 1959.

SN 124,000. The Ohio Oil Company, Findlay, Ohio. Filed July 14, 1961.

MARAGREASE B

Owner of Reg. Nos. 97,301, 717,750, and others.
For Oil and Grease Lubricants.
First use July 10, 1961.

SN 124,001. The Ohio Oil Company, Findlay, Ohio. Filed July 14, 1961.

MARAFLUID HT

Owner of Reg. Nos. 97,301, 717,750, and others.
For Oil and Grease Lubricants.
First use July 10, 1961.

SN 124,198. John R. Ketcham, d.b.a. Ketcham Brothers, Washington, D.C. Filed July 18, 1961.

KETCHAM'S

For Fuel Oil Additive.
First use June 1953.

Class 16—Protective and Decorative Coatings

SN 123,196. R. B. Harwood Products, Inc., Chicago, Ill. Filed June 30, 1961.

TAP-A-DESIGN

For Paints.
First use July 1960.

Class 17—Tobacco Products

SN 123,357. Philip Morris Incorporated, New York, N.Y. Filed July 3, 1961.

PM GOLDLINE

The drawing is lined for red and gold. Owner of Reg. Nos. 327,128, 698,859, and others.
For Cigarettes.
First use June 12, 1961.

SN 123,753. Joseph P. Manning Co., Boston, Mass. Filed July 11, 1961.

MANCO

For Cigars.
First use June 16, 1961.

SN 124,897. Eddies Luncheonette & Cigar Store, Inc., New York, N.Y. Filed July 28, 1961.

MARAVILLA

For Cigars.
First use July 15, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 110,645. American Pharmaceutical Company, New York, N.Y. Filed Dec. 22, 1960.

APC STANDARD OF QUALITY

No claim is made to the letters APC with respect to that medicinal preparation containing aspirin, phenacetin, and caffein known as "APC" tablets. The term "Standard of Quality" is disclaimed apart from the mark as a whole.
For Pharmaceutical and Medicinal Preparations.
First use at least as early as the year 1939.

SN 116,333. Nicholas International Limited, Toronto, Ontario, Canada. Filed Mar. 23, 1961.

COLPERMA

Priority claimed under Sec. 44(d) on Canadian application filed Feb. 14, 1961; Reg. No. 124,160, dated Oct. 27, 1961.
For Veterinary Preparation for the Treatment of Vitamin and Mineral Deficiency.

SN 119,321. Sublinguals, Inc., Gardiner, N.Y. Filed May 4, 1961.

SUBTRATE

For Preparation for the Relief of Muscular Discomfort.
First use May 23, 1960.

SN 121,341. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed June 5, 1961.

THOVRIN

For Medicated Throat Lozenges.
First use May 22, 1961.

SN 123,143. Tobacco Guidance Center, Inc., New York, N.Y. Filed June 29, 1961.

PRONICOTYL

For Tablet Used as an Aid for People Who Wish To Break the Tobacco Habit.
First use Apr. 9, 1961.

SN 124,293. Provident Pharmaceuticals, Inc., Chattanooga, Tenn. Filed July 19, 1961.

For Drugs, Pharmaceutical and Medicinal Preparations.
First use Sept. 9, 1960.

SN 124,427. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed July 21, 1961.

PENITARDON

Owner of German Reg. No. 668,967, dated Dec. 30, 1954.
For Chemotherapeutic Agents.

SN 124,428. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed July 21, 1961.

LONGATREN

Owner of German Reg. No. 682,096, dated Sept. 29, 1955.
For Chemotherapeutic Agents.

SN 124,638. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed July 25, 1961.

DOLVIRAN

Owner of German Reg. No. 446,202, dated June 18, 1932.
For Pharmaceutical Preparations.

SN 124,972. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

ALOBILE

For Laxative and Chologenetic.
First use Sept. 25, 1928.

SN 124,976. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

D-X-L

For Central Nervous System Stimulant.
First use Sept. 1, 1953.

SN 124,983. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

RAFEDRIN

For Bronchial Antispasmodic and Vasoconstrictor.
First use Aug. 23, 1945.

SN 124,984. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

RAUCYLATE

For Relaxant and Tranquilizer.
First use June 14, 1955.

SN 125,575. American Chicle Company, Long Island City, N.Y. Filed Aug. 8, 1961.

IMMACON

For Medicated Cough Tablets.
First use July 14, 1961.

SN 125,613. McKesson & Robbins, Incorporated, New York, N.Y. Filed Aug. 8, 1961.

CALOX

Owner of Reg. No. 42,921.
For Antiseptic.
First use October 1934.

SN 125,789. American Home Products Corporation, d.b.a. Fort Dodge Laboratories, Fort Dodge, Iowa. Filed Aug. 11, 1961.

SEPTOBAC

For Bacterin for Veterinary Use.
First use July 12, 1961.

SN 125,790. American Home Products Corporation, d.b.a. Fort Dodge Laboratories, Fort Dodge, Iowa. Filed Aug. 11, 1961.

ERSIPELIN

For Bacterin for Veterinary Use.
First use July 17, 1961.

SN 125,791. American Home Products Corporation, d.b.a. Fort Dodge Laboratories, Fort Dodge, Iowa. Filed Aug. 11, 1961.

EQUIBAC

For Bacterin for Veterinary Use.
First use Aug. 1, 1961.

SN 125,975. Dome Chemicals, Inc., New York, N.Y. Filed Aug. 14, 1961.

SOY-SITZ

Owner of Reg. Nos. 674,497 and 676,456.
For Dermatological Preparation for Treatment of Skin Irritations.
First use on or before June 21, 1961.

SN 126,193. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Aug. 17, 1961.

PYOSTACINE

Priority claimed under Sec. 44(d) on French Reg. No. 495,505, dated Apr. 13, 1961 (Paris); Natl. Inst. No. 162,506.
For Antibiotic.

SN 126,763. Halsey Drug Co., Inc., Brooklyn, N.Y. Filed Aug. 28, 1961.

ALKA-GEL

For Pharmaceutical Preparation for Relief of Hyperacidity and Gastric Spasm.
First use May 1960.

Class 19—Vehicles

SN 111,071. Dana Corporation, Toledo, Ohio. Filed Dec. 30, 1960.

HI-T

For Structural Steel Elements for Vehicle Body Frame Components.
First use on or about Mar. 8, 1949.

SN 112,089. Transcontinental Bus System, Inc., Dallas, Tex. Filed Jan. 18, 1961.

GOLDEN EAGLE

Owner of Reg. No. 674,001.
For Motor Buses, Motor Bus Bodies, and Parts Thereof.
First use on or about September 1957.

SN 117,416. Robert C. Wood, d.b.a. C. W. Wood Mfg. Inc., Cincinnati, Ohio. Filed Apr. 7, 1961.

SLACK-O-MATIC

For Fifth Wheels Used on Truck-Tractors as Coupling Mechanisms for Towing Trailers.
First use Dec. 15, 1960.

SN 120,595. The Vendmobile Corporation, Hempstead, N.Y. Filed May 22, 1961.

VENDMOBILE

For Motor Vehicle for Vending Foods and Beverages.
First use Mar. 10, 1961.

Class 20—Linoleum and Oiled Cloth

SN 123,799. Armstrong Cork Company, Lancaster, Pa. Filed July 12, 1961.

BALBOA

For Resilient Hard Surface Type Covering for Floors, Walls, and Other Surfaces.
First use June 16, 1961.

SN 124,064. Congoleum-Nairn Inc., Kearny, N.J. Filed July 17, 1961.

PAVILLION

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs, and Tiles.
First use May 12, 1961.

SN 124,341. Congoleum-Nairn Inc., Kearny, N.J. Filed July 20, 1961.

ILLUSTRA

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs, and Tiles.
First use Mar. 9, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 99,048. Control Dynamics Corporation, North Hollywood, Calif. Filed June 15, 1960.



For Electrical Relays.
First use Oct. 8, 1959.

SN 103,475. Pall Corporation, Glen Cove, N.Y. Filed Aug. 26, 1960.

HIPS

For Ultrasonic Cleaning Systems for Cleaning Filter Elements and Other Assemblies.
First use Aug. 8, 1960.

SN 107,660. Webcor, Inc., Chicago, Ill., assignee of Dormeyer Corporation, Chicago, Ill. Filed Nov. 2, 1960.

BRU-VUE

For Handles for Electric Percolators.
First use July 13, 1960.

SN 107,985. Square D Company, Park Ridge, Ill. Filed Nov. 7, 1960.

STATA

For Electric Controllers for Controlling Motions and Speeds of Hoists, Bridges, and Trolleys of Electric Cranes.
First use Aug. 1, 1960.

SN 113,531. International Electric Fence Company, Inc., Albert Lea, Minn. Filed Feb. 13, 1961.

IEFCO

For Battery Chargers and Electric Fence Controllers.
First use Nov. 1, 1960; 1954 as to "IEFCO."

SN 113,775. Standard Industries, Inc., Minneapolis, Minn. Filed Feb. 15, 1961.

LuraLight

For Device Having Suction Fan and Electric Light for Attracting and Killing Insects.
First use Aug. 26, 1960.

SN 114,813. Vacuum Ceramics, Incorporated, Cary, Ill. Filed Mar. 2, 1961.

CERVAC

For Electrical Apparatus and Supplies—Namely, Hermetic Seals, Single and Multiple Terminal Headers, End Seals, Transistor Mounts, Crystal Holders, Infra-Red Window Seals, Hermetically Sealed Thermocouple and Heater Housings, Quartz Cells, High Voltage Hermetic Terminals, and Dielectric Stems for Evacuated and Gas Filled Housings.
First use Feb. 1, 1956.

SN 114,879. Mark Francis Quigley, Boston, Mass. Filed Mar. 3, 1961.

QUIG

For Electrical Connectors.
First use Nov. 14, 1960.

SN 115,041. Cordovan Associates, Incorporated, Dayton, Ohio. Filed Mar. 7, 1961.

CORDOVAN

Owner of Reg. No. 431,993.
For Batteries for Automobiles and Trucks.
First use Aug. 19, 1957.

SN 115,612. Lafayette Radio Electronics Corporation, Jamaica, N.Y. Filed Mar. 14, 1961.

Trantest

For Stereo Amplifiers and Radios.
First use Dec. 12, 1959, on stereo amplifiers.

SN 116,480. Copymation, Inc., Chicago, Ill. Filed Mar. 27, 1961.

LONG LIFE

For Mercury Vapor Quartz Lamps for Use in Whiteprint and Blueprint Apparatus.
First use Dec. 9, 1960.

SN 117,536. Reichert Bros., Glen Rock, N.J. Filed Apr. 10, 1961.

REICHOLDER

For Portable Type Basing Head Having Built-In Electrical Heater for Use in Centering and Fusing a Plastic Base on the End of a Metal-Glass Kinescope Television Picture Tube.
First use Mar. 3, 1955.

SN 118,094. The Muter Company, Chicago, Ill. Filed Apr. 18, 1961.

3-P

For Loudspeakers.
First use Mar. 14, 1961.

SN 119,078. United Electrodynamics, Inc., Pasadena, Calif. Filed May 1, 1961.

UED

For Electronic Amplifiers, Including Direct Current Amplifiers, Buffer Amplifiers and Power Amplifiers; Electronic Regulators Including D.C. Voltage Regulators and Power Regulators, Electronic Power Supplies; Stepping Switches; and Electronic Commutators.
First use Oct. 12, 1960.

SN 119,141. National Radio Institute, Washington, D.C. Filed May 2, 1961.

conar

For Electronic Construction Kits, Communication Equipment, Electrical Apparatus, Testing Sets and Components—Namely, Vacuum Tube Voltmeters, Volt-Ohm Meters; Electronic Probes, Filament Testers, Tube Testers, Signal Generators and Markers, Signal Tracers, Resistor and Capacitor Testers, Oscilloscopes, Battery Eliminators, Portable Transister Radio Receivers, Electrical Appliance Testers, Inventors' Electronic Kits, Television Receivers, Citizens' Band Transceivers, Amateur Band Communication Transmitters, Audio Speakers and Speaker Systems, and Audio Amplifiers.
First use Apr. 7, 1961.

SN 119,472. Buchanan Electrical Products Corporation, Hillside, N.J. Filed May 8, 1961.

BUCHANAN

For Splice Caps and Splice Cap Insulators, Terminal Blocks, Cable and Conduit Fittings, and Electrical Connectors.
First use on or about Nov. 1, 1944.

SN 119,873. Illinois Tool Works, Inc., Chicago, Ill., by merger from Illinois Tool Works, Chicago, Ill. Filed May 12, 1961.

Owner of Reg. No. 650,060.
For Electrical Switch Components—Namely, Precision Snap Switches, Push Button Switches, Hermetic Switches Having as a Part Thereof a Precision Snap Switch or Push Button Switch, Lighted Panel Push Button Switches; and Electro-Mechanical Assemblies—Namely, Aircraft Control Boxes and Limit Switch Devices Which Utilize Electrical Switches.
First use on or about Apr. 13, 1961.

SN 120,591. Tyco Semiconductor Corporation, Waltham, Mass. Filed May 22, 1961.

TYCO

For Semiconductor Products and More Particularly Semiconductor Diodes and Transistors.
First use December 1960.

SN 122,468. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

Scott

For Amplifiers, Including Direct-Current, Differential, Multichannel, Audio, Video, Audio-High-Fidelity, Stereophonic, Radio-Frequency and Broad-Band Amplifiers, Pre-Amplifiers and Power Amplifiers, and Parts Thereof, and Consoles and Housings Therefor; Radio-Wave Receiving Apparatus Including Amplitude-Modulation, Phase- and Frequency-Modulation Tuners and Parts Thereof, Single and Multi-Channel and Multiplex Circuits, Radio-Amplifying Circuits Adapted for Receiving Radio Broadcast and Television-Band Transmissions, Converters, Antennas and Transmission Lines; Radio-Wave Broadcasting, Rebroadcasting and Relay Equipment, Including Radio-Frequency Generating Apparatus and Oscillators and Parts Thereof; Noise Suppressors; Electric Filters, Networks, Attenuators, Equalizers; and Electro-mechanical and Electroacoustical Transducers.
First use in or about early 1955.

SN 122,470. H. H. Scott, Inc., Maynard, Mass. Filed June 20, 1961.

h.h. Scott

For Amplifiers, Including Direct-Current, Differential, Multichannel, Audio, Video, Audio-High-Fidelity, Stereophonic, Radio-Frequency and Broad-Band Amplifiers, Pre-Amplifiers and Power Amplifiers, and Parts Thereof, and Consoles and Housings Therefor; Radio-Wave Receiving Apparatus Including Amplitude-Modulation, Phase- and Frequency-Modulation Tuners and Parts Thereof, Single and Multi-Channel and Multiplex Circuits, Radio-Amplifying Circuits Adapted for Receiving Radio Broadcast and Television-Band Transmissions, Converters, Antennas and Transmission Lines; Radio-Wave Broadcasting, Rebroadcasting and Relay Equipment, Including Radio-Frequency Generating Apparatus and Oscillators and Parts Thereof; Noise Suppressors; Electric Filters, Networks, Attenuators, Equalizers; and Electro-mechanical and Electroacoustical Transducers.
First use in or about the fall of 1955.

Class 22—Games, Toys, and Sporting Goods

SN 110,690. Wallace N. Lee, d.b.a. Master Toy Company, Bloomington, Minn. Filed Dec. 22, 1960.

Revelation

For Educational Apparatus Sold as a Unit for Playing a Parlor Quiz Game.
First use Oct. 15, 1960.

SN 112,076. Remco Industries, Inc., Newark, N.J. Filed Jan. 18, 1961.

FLYING FOX

For Toy Airplane With Simulated Control Panel.
First use Mar. 13, 1960.

SN 113,838. Edward Douglas Krauss, Burbank, Calif. Filed Feb. 16, 1961.

SLOB

For Fishing Lure.
First use Nov. 23, 1960.

SN 115,256. Don Robin Products Company, College Park, Ga. Filed Mar. 9, 1961.

DON ROBIN

The mark "Don Robin" is not the name of any particular living individual.
For Toy Construction Kits.
First use Sept. 1, 1960.

SN 117,632. Hedstrom Union Company, Fitchburg, Mass. Filed Apr. 11, 1961.

SAFJET

For Velocipedes.
First use on or about Mar. 30, 1961.

SN 119,378. Universal Manufacturing Company, Inc., Bossier City, La. Filed May 8, 1961.

LIF-TUP

For Child's Wheeled Vehicle.
First use March 1961.

SN 121,966. Battle Creek of California, Incorporated, Los Angeles, Calif. Filed June 14, 1961.

MEDI-CYCLE

For Motor Driven Exercise Bicycle.
First use May 29, 1961.

SN 122,117. Radio Steel & Mfg. Co., Chicago, Ill. Filed June 15, 1961.

A-O-K

For Coaster Wagons.
First use May 22, 1961.

SN 122,118. Radio Steel & Mfg. Co., Chicago, Ill. Filed June 15, 1961.

ASTRONAUT

For Coaster Wagons.
First use May 22, 1961.

SN 122,181. Fishee Tackle Co., San Francisco, Calif. Filed June 16, 1961.

BLACK BLISTER

For Fish Lures.
First use Apr. 24, 1961.

SN 122,966. The United States Playing Card Company, Cincinnati, Ohio. Filed June 27, 1961.

ASTRONAUT

For Playing Cards.
First use June 13, 1961.

SN 123,380. Tico-Toys, Inc., Pawtucket, R.I. Filed July 3, 1961.

SCAN-O-SCOPE

For Toy Kaleidoscopes.
First use on or about Feb. 20, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 93,382. Tooling Aids, Inc., Salem, Ohio. Filed Mar. 21, 1960.

TOOLING AIDS

For Foundry Patterns, Die Patterns, Scale Models, Die Models, Keller Models, Spotting Racks, Checking Fixtures, Drill Fixtures, and Prototype Parts.
First use approximately Apr. 1, 1957.

SN 112,316. Charles A. Rowley, d.b.a. Chief Products Company, Los Angeles, Calif. Filed Jan. 23, 1961.

CHIEF

For Kitchen Tools, Such as Plain Spoons, Mixing Spoons, Scraper Spoons, Ladles, Cake and Meat Turners, Spatulas, Cake Servers, Egg Whippers, Potato Mashers, Large Kitchen Forks, Measuring Scoops, Corers and Parers, Strainers, Hooked Kitchen Racks, Combined Lifters, Whippers, Mixers, Mashers and Strainers, Kitchen Tongs, Potato Slicers, Shredders, Graters and Barbecue Tools.
First use June 1, 1932.

SN 112,747. Mid-West Abrasive Company, Owosso, Mich. Filed Jan. 30, 1961.

MASTERMOLD

For Honing Device.
First use May 23, 1960.

SN 114,042. Plenty & Son Limited, Newbury, England. Filed Feb. 20, 1961.

PLENTY

Owner of British Reg. No. B746,618, dated Oct. 4, 1955.
For Engines and Motors, Pumps, Mixing Machines, Agitators (Machines); Air-Compressors, Steam Condensers, Stern Tubes and Propeller Shafts, All Being Part of Propulsion or Transmission Systems of Watercraft.
First use 1865 on engines and pumps in connection particularly with marine work; in commerce Jan. 1, 1959.

SN 114,157. Addison Corporation, Paterson, N.J. Filed Feb. 23, 1961.

ORBIT

For Carbide Insert Bit for Use in Mining, Quarrying and Construction.
First use June 6, 1960.

SN 115,059. Hurst-Campbell, Inc., Glenside, Pa. Filed Mar. 7, 1961.

Hurst

For Gear Shift Mechanisms.
First use on or about Aug. 7, 1960.

SN 116,966. Bokum Tool Company, Inc., Detroit, Mich. Filed Apr. 3, 1961.

BOKUMICRO-DIAL

Owner of Reg. No. 682,171.
For Boring Head.
First use May 3, 1960.

SN 117,781. Imperial International Corp., New York, N.Y. Filed Apr. 13, 1961.

LAGOS

For Stainless Steel Flatware.
First use Jan. 3, 1961.

SN 118,317. American Truck Body Company, Martinsville, Va. Filed Apr. 21, 1961.

PACK-GRAB

For Material Handling Equipment Specially for Loading and Unloading Cubes of Material Such as Brick and the Like.
First use Aug. 16, 1960.

SN 119,699. Ideal Roller & Manufacturing Company, Chicago, Ill. Filed May 10, 1961.

DUROGRAVURE

For Rollers for Gravure and Rotogravure Printing Presses.
First use as early as Apr. 5, 1961.

SN 119,700. Ideal Roller & Manufacturing Company, Chicago, Ill. Filed May 10, 1961.

DUROC

For Rubber Covered Rollers for Printing Presses.
First use as early as Mar. 9, 1961.

SN 119,872. Illinois Tool Works, Inc., Chicago, Ill., by merger from Illinois Tool Works, Chicago, Ill. Filed May 12, 1961.

Owner of Reg. No. 650,060.
For Cutting Tools in Connection With Machine Tools, Tools Bits in Connection With Machine Tools, Milling Cutters, Planer Tools, and Friction Resisting Parts of Machinery Such as Bearing Surfaces in General.
First use on or about Apr. 13, 1961.

SN 119,982. Lease Lite Corp., San Francisco, Calif. Filed May 15, 1961.

WASH-A-MATIC

For Machines for Washing Panels.
First use September 1960.

SN 120,097. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed May 16, 1961.

SUPER-KUT

Owner of Reg. No. 646,926.
For Kitchen Knives and Pocket Knives.
First use Apr. 2, 1956.

SN 120,148. Sunbeam Corporation, Chicago, Ill. Filed May 16, 1961.

Owner of Reg. No. 543,696.
For Lawn Maintenance Equipment—Namely, Lawn Mowers and Machines for Pulverising and Mulching Leaves.
First use on or about Jan. 22, 1960.

SN 120,232. James E. Ryan, d.b.a. Servo-Vac, Washington, D.C. Filed May 17, 1961.

SERVO-VAC

For Power Cleaning Equipment for Cleaning Furnaces and Heating and Air Conditioning Systems.
First use Apr. 30, 1961.

SN 120,472. The Anderson Company, Gary, Ind. Filed May 22, 1961.

For Linear Actuators (i.e., Anti-Friction Bearing Screws for Motion or Power Transmission).
First use Aug. 14, 1959; in October 1957 in a different display.

SN 120,577. Service Diamond Tool Co., Ferndale, Mich. Filed May 22, 1961.

COPYFORM

For Diamond Wheel Dressing Fixture for Dressing a Grinding Wheel.
First use Apr. 28, 1961.

SN 120,715. Gary Commodities Corp., New York, N.Y. Filed May 24, 1961.

"SAMO"

For Knitting Machines.
First use May 1, 1958.

SN 122,256. The Aro Equipment Corporation, Bryan, Ohio. Filed June 19, 1961.

SAFE GARD

For Automotive Lubrication Equipment, Automotive Repair Tools, Automotive Washing and Cleaning Equipment, Automotive Jacks and Lifts, and Automotive Vacuum Cleaners.
First use May 19, 1961.

SN 122,913. Central Products Incorporated, Cleveland, Ohio. Filed June 27, 1961.

Can-O-rid

For Can Crushing Machines.
First use June 12, 1961.

Class 24 — Laundry Appliances and Machines

SN 122,572. Temco, Inc., Nashville, Tenn. Filed June 21, 1961.

TEMCO

Owner of Reg. Nos. 381,703, 684,784, and others.
For Clothes Washers.
First use Mar. 23, 1961.

Class 26 — Measuring and Scientific Appliances

SN 97,050. General Dynamics Corporation, New York, N.Y. Filed May 13, 1960.

For Nuclear Reactors and Parts Therefor.
First use Sept. 15, 1958.

SN 98,957. Wilco Products Incorporated, Orange, N.J. Filed June 13, 1960.

CROSS FLOAT

For Turntables Used To Support Automobile Wheels During Alignment.
First use Dec. 1, 1956.

SN 100,462. Photek, Inc., Providence, R.I. Filed July 7, 1960.

PHOTEK

Owner of Reg. No. 602,687.
For Sensitized Papers for Office Reproduction and Other Duplicating Purposes.
First use Feb. 12, 1960.

SN 101,400. International Equipment Co., Boston, Mass. Filed July 25, 1960.

BUCLEAR

For Centrifuge Tubes for Scientific and Laboratory Use.
First use Apr. 10, 1960.

SN 105,978. Gustav F. Gerdts KG., Bremen, Germany. Filed Oct. 7, 1960.

GESTRA

Owner of German Reg. No. 631,025, dated Dec. 3, 1952; and U.S. Reg. Nos. 705,578 and 705,579.
For Navigational Instruments, Water Level Indicators, Water Level Regulators, Apparatus for Removing Condensation Water Actuated by Floats, Thermically, Thermodynamically and by Means of Nozzles, Pneumatically Operated Water Removing Devices, Devices for Controlling and Inspecting Condensation Removers, Valves—Namely, Check Valves, Special Valves for Steam Boilers and Containers for Water and Gases, Rapidly Closing Valves and Thermically Operated Valves for Heating Plants, Apparatus for Removing Deposits From Boilers and Controlling Means for Such Apparatus, Pneumatically, Electrically and Mechanically Operating Regulators for Liquids and Gases and Apparatus and Devices To Guide, Lock, Regulate, Observe and Measure Liquids, Gases and Steam.

SN 106,639. L. L. Ridgway Company, Inc., Houston, Tex. Filed Oct. 18, 1960.

For Photographic Supplies, Including Sensitized Paper, Cloth and Film; Print Making Machines, Drawing Instruments, Architects and Engineers Scales, Map Measures, Planimeters, Slide Rules, Pantographs, Protractors, Triangles, Templates, Parallel Rules, Drafting Machines, T-Squares, Irregular Curves, Drafting Room Furniture, Steel Measuring Tapes, Leveling Rods, Range Poles, Plumb Bobs, Tallying Machines, Surveying Instruments, Surveying Altimeters, Magnifying Glasses, Microscopes.
First use 1936.

SN 109,400. Electro-Voice, Incorporated, Buchanan, Mich. Filed Dec. 1, 1960.

ELECTRO-VOICE

Owner of Reg. Nos. 400,704 and 597,558.
For Sonic Depth Measuring Devices.
First use Aug. 1, 1960.

SN 112,236. Domar Products, Inc., St. Paul, Minn. Filed Jan. 23, 1961.

For Sun Glasses.
First use Feb. 12, 1960.

SN 112,268. International Register Company, Chicago, Ill. Filed Jan. 23, 1961.

LAMP-LYTER

For Synchronous Electric Motor Driven Time Switches.
First use during June 1957.

SN 112,888. Eastman Kodak Company, Rochester, N. Y. Filed Feb. 1, 1961.

POLYLURE

Owner of Reg. No. 677,312.
For Sensitized Photographic Paper.
First use Sept. 14, 1959.

SN 113,027. Riken Optical Industries, Ltd., Obta-ku, Tokyo, Japan. Filed Feb. 3, 1961.

RICOH

Owner of Japanese Reg. No. 480,983, dated May 14, 1956; and U.S. Reg. Nos. 657,420 and 710,232.
For Equipments and Apparatuses for Physics and Chemistry, Medical Science, Measurement, Photography and Education, Glasses, Computers and Their Parts.

SN 113,116. Kollsman Instrument Corporation, Elmhurst, N.Y. Filed Feb. 6, 1961.

KOLLSMAN INSTRUMENTS

Applicant claims the term "Instruments" only in connection with the mark as used.

For Aircraft Instruments—Namely, Accelerometers, Air Speed Indicators, Altitude Instruments, Angle of Attack Indicators, Compasses, Machmeter Indicators, Pitots, Pressure Gages, Pickups, Sextants, Tachometers, and Synchroscopes, Vertical Speed Indicators, Navigating Devices, Astro-Trackers and Optical Instruments.

First use 1927.

SN 113,395. The Budd Company, Philadelphia, Pa. Filed Feb. 10, 1961.

HEATCHECK

For Electro-Magnetic Testing Devices for Detecting Flaws and Other Imperfections in Metals.

First use June 1957.

SN 113,550. Pako Corporation, Minneapolis, Minn. Filed Feb. 13, 1961.

Pakorol-X

For Photographic Film Processing Equipment.

First use Jan. 4, 1960.

SN 113,766. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Feb. 15, 1961.

TIMER-LESS

For Thermostatic Control Devices for Clothes Dryers.

First use Jan. 25, 1961.

SN 115,841. Opto-Metric Tools, Inc., New York, N.Y. Filed Mar. 16, 1961.

IMPERIAL

For Rotary and Inclinable Tables for Testing and Checking of Critical Components and Used Primarily in the Guided Missile Industry.

First use in February 1957.

SN 119,077. United Electrodynamics, Inc., Pasadena, Calif. Filed May 1, 1961.

UED

For Electronic Oscillators, Both Audio Frequency Oscillators and Radio Frequency Oscillators; Transmitters of Electromagnetic Radiation at Radio Frequencies; and Telemetry Systems.

First use Oct. 12, 1960.

SN 121,577. Minneapolis-Honeywell Regulator Company, Denver, Colo. Filed June 7, 1961.

TRAFFITROL

For Device Adapted To Emit Infra-Red Rays and To Change the Infra-Red Rays Reflected Thereto Into Electricity and To Control a Relay by Means of This Electricity.

First use September 1960.

SN 121,947. Spiratone, Inc., Flushing, N.Y. Filed June 13, 1961.

Supertel

For Telephoto Lenses and Leather Cases for the Same.

First use Mar. 28, 1957.

SN 122,943. Northwest-Northern Optical Company, Seattle, Wash. Filed June 27, 1961.

CAREFREE WEARER

For Lenses and Frames for Lenses.

First use Dec. 8, 1960.

SN 123,169. S. Blickman, Inc., Weehawken, N.J. Filed June 30, 1961.

CONFLEX

For Laboratory Casework—Namely, Counter Cabinets, Wall Cabinets, High Storage and Supply Cabinets.

First use Dec. 22, 1960.

SN 124,515. Canoga Electronics Corporation, Van Nuys, Calif. Filed July 24, 1961.

TELCAR

For Passave Direction Finder System To Detect, Indicate, Record, and Transmit the Bearing of a Telemetry Radio Transmitter.

First use Aug. 1, 1960.

SN 124,730. Fisher Scientific Company, Pittsburgh, Pa. Filed July 26, 1961.

MULTI-FLAME

For Blast Burners for Laboratory or Professional Glass Blowing.

First use May 1956.

SN 124,741. Bennett Kleinman, Valley Stream, N.Y. Filed July 26, 1961.

DIAL-X

For Instruments To Align and Localise X-Ray Beams.

First use July 12, 1961.

SN 124,812. Giannini Controls Corporation, Duarte, Calif. Filed July 27, 1961.

RECTIPOT

For Electrical Potentiometers and Potentiometer Assemblies.

First use on or about May 1, 1957.

SN 124,903. Flo-Tronics, Inc., Minneapolis, Minn. Filed July 28, 1961.

MAG-PAC

For Magnetic Conveyor Routing and Control Systems.

First use June 30, 1961.

SN 125,065. Marlen Metal Products Company, Hazel Park, Mich. Filed July 31, 1961.

TINTRITE

For Machine for Measuring and Dispensing Desired Amouts of Liquid in a Vessel To Obtain a Desired Color.

First use June 12, 1961.

Class 27 — Horological Instruments

SN 107,729. Benrus Watch Company, Inc., New York, N.Y. Filed Nov. 3, 1960.

OCEANS 11

For Watches.

First use Oct. 7, 1960.

SN 121,940. Record Watch Co. S.A., Geneva, Switzerland. Filed June 13, 1961.

RECORD

Owner of Swiss Reg. No. 110,644, dated June 6, 1945.

For Timepieces and Parts Thereof.

Class 28 — Jewelry and Precious-Metal Ware

SN 111,187. The Hope Chest Company, Inc., Minneapolis, Minn. Filed Jan. 3, 1961.

HOPE CHEST

Owner of Reg. Nos. 560,553, 625,362, and 672,669.

For Costume Jewelry.

First use Oct. 12, 1960.

SN 122,090. Karlan & Bleicher, Inc., New York, N.Y. Filed June 15, 1961.

I-DO

For Finger Rings of Precious Metals, and Parts Thereof.

First use June 7, 1961.

SN 122,612. Gemex Precision Metals, Inc., Union, N.J. Filed June 22, 1961.

GEMFLEX

Owner of Reg. Nos. 502,413 and 531,501.

For Men's and Ladies' Watch Bands.

First use June 6, 1961.

Class 32 — Furniture and Upholstery

SN 100,937. Schnadig Corporation, Chicago, Ill. Filed July 15, 1960.

"FOAM REST"

No claim is made to the word "Foam" apart from the mark as shown.

For Upholstered Furniture.

First use Apr. 21, 1960.

SN 106,164. The United States Bedding Company, St. Paul, Minn. Filed Oct. 10, 1960.

ORTHOQUILT

For Innerspring Mattresses.

First use August 1960.

SN 111,913. Overesch & Co., Fairfield, Ohio. Filed Jan. 16, 1961.

JEWEL CASE CABINETRY

For Counters, Cases, Cabinets, and Shelving, Counter Tops and Sinks.

First use Jan. 10, 1961.

SN 112,178. The United States Bedding Company, St. Paul, Minn. Filed Jan. 19, 1961.

MASTER

For Mattresses and Box Springs.

First use January 1945.

SN 113,150. Frank G. Shattuck Company, New York, N.Y. Filed Feb. 6, 1961.

QUALITY ISLE

For Store Display Units.

First use May 16, 1959.

SN 114,705. Home Comfort Products Co., Princeville, Ill. Filed Mar. 1, 1961.

COAT-N-HATTER

For Combination Shelf and Hanger Pole Units.

First use Feb. 10, 1961.

SN 115,082. Schnadig Corporation, Chicago, Ill. Filed Mar. 7, 1961.

DUO-TORQUE

For Chairs, Davenports, and Seat Construction.

First use Nov. 26, 1960.

SN 117,581. West Side Mattress Company, Inc., d.b.a. Millerite Mattress Company, Wichita, Kans. Filed Apr. 10, 1961.

The Millerite WAGON MASTER

For Mattress, Springs and Related Bedding.

First use June 11, 1958.

SN 119,116. Adam Donald, Philadelphia, Pa. Filed May 2, 1961.

BOOKCLASPS

For Book-End.

First use April 1934.

SN 122,031. Shelby Williams Manufacturing, Inc., Chicago, Ill. Filed June 14, 1961.

SHELBY WILLIAMS

The mark is fanciful and not the name of any individual.
For Seating Furniture, Including Seats, Back Rests and Legs Therefor, Stools and Benches, Dining and Occasional Tables, Including Legs, Pedestals and Table Tops, All for Use in Offices, Restaurants, Lounges, and Residential and Institutional Buildings.
First use on or about July 1, 1954.

SN 124,744. Medicol, Inc., Pittsburgh, Pa. Filed July 26, 1961.

DARMIN

For Mattresses and Box Springs.
First use June 8, 1961.

Class 33 — Glassware

SN 111,378. Asahi Glass Company Limited, Chiyoda-ku, Tokyo, Japan. Filed Jan. 6, 1961.

ASAHI

The word "Asahi" means "the morning sun" or "the rising sun."
For Sheet Glass, Plate Glass, Figured Glass, Wire Glass, Safety Glass (Laminated and Tempered), All Used in the Construction Industry.
First use August 1909; in commerce on or about July 1956.

SN 128,763. Safetee Glass Company, Philadelphia, Pa. Filed Sept. 27, 1961.

THRIF-T-GLASS

For Coated Monolithic Glass Having Insulating Properties.
First use June 27, 1961.

SN 130,518. T.H.E. Corporation, Richmond, Va. Filed Oct. 23, 1961.

HOPEWARE

For Glassware for Table Use.
First use Aug. 1, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 100,631. Pace Co., Portland, Oreg. Filed July 11, 1960.

PACE

For Air Moving Equipment Including Blowers for Moving Conditioned Air.
First use May 15, 1948.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 96,546. Smith-Blair Inc., South San Francisco, Calif. Filed June 6, 1960.

STA-GRID

For Pipe Repair Gaskets.
First use Feb. 26, 1960.

SN 115,594. Ethylene Corporation, Summit, N.J. Filed Mar. 14, 1961.

POLYTET

For Gaskets, Packing Washers, Grease Retainers, and Liquid-Conducting Conduits, All Formed of Synthetic Resinous Materials.
First use Oct. 4, 1957.

SN 120,214. The Mohawk Rubber Company, Akron, Ohio. Filed May 17, 1961.

MOHAWK STRATO CHIEF

Owner of Reg. Nos. 225,929, 719,325, and others.
For Automobile Tires.
First use Mar. 1, 1960.

Class 36 — Musical Instruments and Supplies

SN 102,025. Christy D. Hengel, d.b.a. Hengel's Concertinas, Waseca, Minn. Filed Aug. 4, 1960.

HENGELS'

For Concertinas.
First use January 1957.

SN 111,472. B-W Music, Inc., Wooster, Ohio. Filed Jan. 9, 1961.



For Phonograph Records.
First use Nov. 10, 1960.

SN 111,874. Duro-Test Corporation, North Bergen, N.J. Filed Jan. 16, 1961.

DUROLA

For Musical Instruments—Namely, Electric Player Pianos and Organs and Supplies Therefor.
First use Nov. 21, 1960.

SN 115,573. Ball Records, Los Angeles, Calif. Filed Mar. 14, 1961.

BALL

For Phonograph Records, Phonograph Record Jackets, Recording Tapes, Recording Tape Boxes.
First use on or about Jan. 22, 1950.

SN 121,104. Ralph C. Kester, Jr., Mishawaka, Ind. Filed May 31, 1961.

HI-STEPPER

For Drum Holder.
First use on about July 1, 1958.

Class 37 — Paper and Stationery

SN 114,269. Sperry Rand Corporation, New York, N.Y. Filed Feb. 23, 1961.

FLEXOGRAPH

For Blank and Partially Printed Cards Which Are Designed for Charting or Scheduling Purposes.
First use 1955.

SN 115,747. Wilson Jones Company, Chicago, Ill. Filed Mar. 15, 1961.

MOHAWK

For Post Binders.
First use 1933.

SN 122,489. Unitech Corporation, Clifton, N.J. Filed June 20, 1961.

BORCO

For Drawing Board Cover Made of Vinyl Plastic Material.
First use Mar. 21, 1960.

SN 124,729. Ever-Lite Company, New York, N.Y. Filed July 26, 1961.

jasimco

For Writing Paper and Writing Pens.
First use May 18, 1961.

SN 126,857. Dritex Corporation, Jersey City, N.J. Filed Aug. 29, 1961.

Dritex

For Copy Paper.
First use Nov. 28, 1960.

SN 127,394. Fort Howard Paper Company, Green Bay, Wis. Filed Sept. 7, 1961.

PAGE

Owner of Reg. No. 611,935.
For Toilet Tissue Paper Napkins and Paper Towels.
First use Sept. 22, 1953, on toilet tissue.

SN 127,626. N.V. Boekelosche Stoombleekerij, Boekelo, Netherlands. Filed Sept. 11, 1961.

BOEKLON

Owner of Dutch Reg. No. 134,897, dated Aug. 28, 1959.
For Sheets and Foils Prepared From Synthetic Materials and for Use in Fitting Books With Protective Coverings.

SN 128,014. Crocker, Burbank Papers Inc., Fitchburg, Mass. Filed Sept. 18, 1961.



Owner of Reg. No. 378,532.
For Coated and Uncoated Papers, Converting Papers, Duplicating Papers, Industrial Papers, and Cardboard and Bristol Board.
First use in September 1938.

SN 129,110. Blandin Paper Company, Grand Rapids, Minn. Filed Oct. 3, 1961.

GRANTONE

For Printing Paper.
First use Aug. 24, 1961.

SN 129,111. Blandin Paper Company, Grand Rapids, Minn. Filed Oct. 3, 1961.

BLANCOTE

For Coated Printing Paper.
First use Aug. 27, 1961.

SN 129,134. Fort Howard Paper Company, Green Bay, Wis. Filed Oct. 3, 1961.

ELFIN

Owner of Reg. No. 530,693.
For Toilet Tissue.
First use Aug. 26, 1961.

Class 38 — Prints and Publications

SN 86,518. S. E. Sanders Company, Inc., Asheville, N.C. Filed Dec. 2, 1959.

CHECKALOG

For Combined Catalog and Checking List.
First use Sept. 1, 1955.

SN 106,624. Globe Newspaper Company, Boston, Mass. Filed Nov. 17, 1960.

The Boston Globe (EVENING EDITION)

The words "Evening Edition" are disclaimed. Owner of Reg. Nos. 199,549, 199,556, and others.
For Evening Edition of a Daily Newspaper.
First use Apr. 25, 1960.

SN 114,577. Gerontological Society, Inc., St. Louis, Mo. Filed Feb. 27, 1961.



For Journal.
First use Jan. 9, 1961.

SN 123,855. American Institute of Chemical Engineers, New York, N.Y. Filed July 13, 1961.

A.I.Ch.E. JOURNAL

For Magazine.
First use at least as early as Mar. 28, 1958.

SN 123,856. American Institute of Chemical Engineers, New York, N.Y. Filed July 13, 1961.

AIChE JOURNAL

For Magazine.
First use at least as early as March 1955.

SN 125,102. Schieffelin & Co., New York, N.Y. Filed July 31, 1961.

CURRENTS IN DERMATOLOGY

For Newsletter.
First use July 1961.

SN 125,272. American Greetings Corporation, Cleveland, Ohio. Filed Aug. 3, 1961.

VISTA-VUES

For Greeting Cards.
First use July 10, 1961.

Class 39—Clothing

SN 89,406. Buscarlet Glove Company, Inc., New York, N.Y. Filed Jan. 21, 1960.

KISLAV

The most famous glove in the world.

Applicant disclaims the phrase "The Most Famous Glove in the World" apart from the mark as shown. Owner of Reg. Nos. 200,331, 326,068, and others.
For Gloves for Women.
First use in July 1959.

SN 99,239. Red Raven Rubber Company, Newark, N.J. Filed June 17, 1960.

ROBIN LEE

The name "Robin Lee" is a fanciful name.
For Infants' Pants.
First use June 20, 1958.

SN 111,313. Baar & Beards, Inc., New York, N.Y. Filed Jan. 5, 1961.

AQUA-BAR

For Ladies' and Misses' Scarves, Stoles, Halters, Caps and Blouses.
First use Dec. 2, 1957.

SN 115,262. Sawyer-Tower, Inc., Watertown, Mass. Filed Mar. 9, 1961.

LIGHTNING BUG

For Light Reflective Protective Clothing—Namely, Raincoats, Capes, Vests, Cap Covers, Sleeve Covers, and Mittens.
First use Feb. 14, 1961.

SN 116,001. Callaway Mills Company, La Grange, Ga. Filed Mar. 20, 1961.

CALLAWAY

Owner of Reg. Nos. 200,025, 418,000, and others.
For Aprons.
First use Feb. 1, 1955.

SN 117,170. H. Daroff & Sons, Inc., Philadelphia, Pa. Filed Apr. 5, 1961.

Compatibles

For Men's and Young Men's Suits, Slacks, Topcoats, and Overcoats.
First use on or about Feb. 1, 1957.

SN 117,439. S. D. Arrowood & Company, Incorporated, New York, N.Y. Filed Apr. 10, 1961.

SALLY STAR

The name "Sally Star" is the name of a fictitious person.
For Hosiery.
First use January 1954.

SN 118,105. Saxone Shoe Company Limited, Kilmarnock, Scotland. Filed Apr. 18, 1961.

GLENEAGLES GOLF MASTERS

Owner of U.S. Reg. Nos. 532,426 and 616,595.
For Golf Shoes.
First use in the year 1953; in commerce in the year 1956.

SN 119,369. The Greenspoon Company, St. Louis, Mo. Filed May 5, 1961.

WEATHERFLEX

For Men's and Women's Coats.
First use Apr. 14, 1961.

SN 119,555. Perfect Plus Vend-A-Hose, Inc., Chicago, Ill. Filed May 8, 1961.

VEND-A-HOSE

For Ladies' Hosiery.
First use Mar. 17, 1961.

SN 119,679. Coat Craft Company, Inc., Philadelphia, Pa. Filed May 10, 1961.

MARINARKA

For Children's Outer Garments in the Form of Jackets and Coats.
First use Mar. 15, 1961.

SN 119,763. Fashion-Bilt Shoe Company, Pontiac, Ill. Filed May 11, 1961.

MAGIC-EASE

For Men's, Women's, and Children's Shoes.
First use June 1960.

SN 120,234. Sarong, Inc., New York, N.Y. Filed May 17, 1961.

LEILANE

For Brassieres and Girdles.
First use May 6, 1961.

SN 120,235. Sarong, Inc., New York, N.Y. Filed May 17, 1961.

MAXIMUM

For Girdles.
First use May 6, 1961.

SN 120,236. Sarong, Inc., New York, N.Y. Filed May 17, 1961.

ICICLE

For Brassieres and Girdles.
First use May 6, 1961.

SN 121,175. Contess Mara, Incorporated, New York, N.Y. Filed June 1, 1961.

REDOLENCE

For Neckties.
First use on or about Mar. 28, 1961.

Class 40—Fancy Goods, Furnishings, and Notions

SN 98,305. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed June 2, 1960.

JEWELENE

Owner of Reg. Nos. 382,241 and 410,035.
For Hair Brush and Comb Sets.
First use Apr. 25, 1960.

SN 98,527. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed June 6, 1960.

PROLON

Owner of Reg. No. 384,669.
For Hair Brush and Comb Sets.
First use Apr. 25, 1960.

SN 107,226. Tip-Top Products Company, Omaha, Nebr. Filed Oct. 26, 1960.

STUBBIES

For Bob Pins.
First use Sept. 12, 1960.

SN 119,015. Leonard Lawrence, d.b.a. L. Lawrence Co., Corona, N.Y. Filed May 1, 1961.

zephyr

For Earring Cushions.
First use Apr. 6, 1961.

SN 119,564. Sovill Manufacturing Company, Waterbury, Conn. Filed May 8, 1961.

PELICAN

For Garment Pins.
First use Apr. 1, 1937.

SN 120,404. The Glencairn Manufacturing Company, Pawtucket, R.I. Filed May 19, 1961.

GLENCO

Owner of Reg. Nos. 148,049 and 164,031.
For Shoe Laces, Corset Laces, Elastic and Non-Elastic Braids.
First use 1918.

SN 121,473. Elastic S.A., Basel, Switzerland. Filed June 6, 1961.

GOLD-ZACK

Owner of Swiss Reg. No. 178,377, dated Dec. 1, 1959.
For Narrow Elastic Braids, Cords, Webbings, and Tapes; and Narrow Elastic Suspender Ends.

SN 123,051. Universal Button Company, Lawrenceburg, Ky. Filed June 28, 1961.

SNAPET

For Snap Fasteners and Snap Fastener Elements.
First use Apr. 8, 1953.

SN 123,287. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed July 3, 1961.

Lido

For Combs.
First use as early as 1939.

SN 123,385. Vulcanized Rubber and Plastics Company, Incorporated, Morrisville, Pa. Filed July 3, 1961.

ATLAS

For Combs for Human Hair.
First use June 22, 1961.

SN 123,701. Taylor-Bell Co. Inc., New York, N.Y. Filed July 10, 1961.

PINKIES

For Hair Curlers.
First use June 22, 1961.

Class 41—Canes, Parasols, and Umbrellas

SN 113,759. John D. Penny, Redlands, Calif. Filed Feb. 15, 1961.

SHADE I D

For Sun Shade.
First use Aug. 31, 1960.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 96,149. Sorelle Fontana, Rome, Italy. Filed Apr. 29, 1960.

FONTANA

Owner of U.S. Reg. No. 653,106.
For Piece Goods and Knitted Fabrics for Dresses, Skirts, Jackets, Blouses, Slacks, Coats, Suits and Sportswear.
First use Jan. 1, 1946.

SN 108,521. The U.S. Pillow Corporation, New York, N.Y. Filed Nov. 15, 1960.

BOLSTERETTE

For Zippered Corduroy Bolster and Pillow Cases.
First use May 21, 1929.

SN 113,361. Products of Asia, Inc., New York, N.Y. Filed Feb. 9, 1961.

JŌTŌ

For Textile Rugs.
First use Oct. 4, 1960.

SN 114,170. Beacon Manufacturing Company, Swannanoa, N.C. Filed Feb. 23, 1961.

GORHAM

For Blankets.
First use Feb. 1, 1940.

SN 114,171. Beacon Manufacturing Company, Swannanoa, N.C. Filed Feb. 23, 1961.

KIMBERLY

For Blankets.
First use Feb. 1, 1940.

SN 115,012. Stevensons (U.S.A.) Inc., North Providence, R.I. Filed Mar. 6, 1961.

DYLANIZE

Owner of Reg. Nos. 609,196 and 610,737.
For Wool-Containing Goods, the Wool Content of Which Has Been Treated To Render the Same Resistant to Shrinkage and Felting When Subjected to Normal Washing—Namely, Blankets, Woven Piece Goods and Fabrics, and Knitted Piece Goods and Fabrics.
First use Feb. 11, 1958.

SN 116,000. Callaway Mills Company, La Grange, Ga. Filed Mar. 20, 1961.

CALLAWAY

Owner of Reg. Nos. 200,025, 418,000 and others.
For Towels, Wash Cloths, Place Mats, Bath Mats, and Shower Curtains.
First use Jan. 1, 1938, on towels, wash cloths, and bath mats.

SN 118,663. Collins & Aikman Corporation, New York, N.Y. Filed Apr. 26, 1961.

EXOTIC

For Textile Carpets and Rugs.
First use Apr. 12, 1961.

SN 121,201. Donald H. Jacobs, Inc., New York, N.Y. Filed June 1, 1961.

PLACE SETTERS

For Coasters and Place Mats of Fabric or Synthetics and Kitchen Towels.
First use Mar. 17, 1961.

SN 123,734. Dan River Mills, Incorporated, Danville, Va. Filed July 11, 1961.

DANFLAIR

Owner of Reg. No. 676,401.
For Textile Fabrics in the Piece of Cotton, Synthetic Fibers or Mixtures Thereof.
First use June 22, 1961.

SN 125,386. James Lees and Sons Company, Bridgeport, Pa. Filed Aug. 4, 1961.

LOVELIGHT

For Textile Carpets and Rugs.
First use July 27, 1961.

SN 125,388. James Lees and Sons Company, Bridgeport, Pa. Filed Aug. 4, 1961.

HAPPY DAY

For Textile Carpets and Rugs.
First use Jan. 5, 1961.

SN 125,457. Artel Textile Co., Inc., New York, N.Y. Filed Aug. 7, 1961.

ThermOTemp

For Draperies and Window Curtains.
First use July 24, 1961.

Class 44—Dental, Medical, and Surgical Appliances

SN 96,909. General Atronics Corporation, Bala-Cynwyd, Pa. Filed May 2, 1960.

ATRONICS

Owner of Reg. No. 657,881.
For Electrical Heart Stimulating and Monitoring Devices of the Portable Type for Generating and Applying Electrical Impulses to Body Muscles or Detecting and Monitoring Electrical Impulses Generated by Body Muscles Through Electrodes.
First use May 1, 1958.

SN 119,341. American Bio-Chemical Laboratory, Inc., Baltimore, Md. Filed May 5, 1961.

TONOFILM

For Protective Cover for Surgical Eye Instruments To Prevent Infection.
First use Nov. 4, 1960.

SN 124,671. Ortho Pharmaceutical Corporation, Raritan, N.J. Filed July 25, 1961.

ALL-FLEX

For Vaginal Diaphragms.
First use May 26, 1961.

SN 124,687. Stat Corporation, Needham, Mass. Filed July 25, 1961.

TEMPO-STAT

For Electrical Thermometers for Medical and Hospital Use.
First use on or about Jan. 1, 1961.

SN 125,093. Piper Brace Sales Corporation, d.b.a. Kinlen Company, Kansas City, Mo. Filed July 31, 1961.

SUSPENS-O

For Trusses.
First use Aug. 21, 1960.

Class 45—Soft Drinks and Carbonated Waters

SN 111,316. Blue Seal Extract Co., Inc., Cambridge, Mass. Filed Jan. 5, 1961.

IRON BREW

For Soft Drinks.
First use Aug. 28, 1889.

SN 115,144. The Grapette Company, Incorporated, Camden, Ark. Filed Mar. 8, 1961.

Orangette

Owner of Reg. Nos. 293,158, 402,356, and 402,357.
For Concentrate for Use in the Preparation of Soft Drinks.
First use 1911.

SN 123,704. Tiser Limited, New Moston, England. Filed July 10, 1961.

JUSODA

Owner of British Reg. No. 748,061, dated Nov. 16, 1955.
For Carbonated Mineral Water Drinks.

Class 46—Foods and Ingredients of Foods

SN 50,290. Eden-Waren G.m.b.H., Bad Soden (Taunus), Germany. Filed Apr. 24, 1958.

EDEN

Owner of German Reg. No. 694,880, dated Sept. 14, 1956.
For Canned Fruits, Canned Vegetables, Marmalades, Fruit and Vegetable Jellies, Canned Fruit Juices, Canned Vegetable Juices, Syrups for Food Purposes, Edible Oil, Fresh Fruits and Fresh Vegetables.

SN 85,037. Norris, Inc., d.b.a. Norris Candy Company, Atlanta, Ga. Filed Nov. 10, 1959.

HAPPY BIRTHDAY

For Candy.
First use June 28, 1957.

SN 90,412. Dairy Dan, Incorporated, Wilkes-Barre, Pa. Filed Feb. 5, 1960.



DAIRY DAN

Owner of Reg. Nos. 694,316, 717,646, and 718,862.
For Ice Cream; Chocolate Syrup; Marshmallow, Strawberry, Pineapple, Crushed Cherry, Whole Cherry, Cobbler Cherry, Butterscotch, Maple Walnut, and Hot Fudge Toppings for Sundaes; Chopped Peanuts; Malt; Vanilla Compound; Black Raspberry, Cherry, Maple Walnut, Chocolate, Banana, Coconut, Strawberry, and Pineapple Flavorings; and Flavor Acid.
First use in February 1958.

SN 103,510. Amalgamated Foods, Inc., d.b.a. Pal Products, Indianapolis, Ind. Filed Aug. 29, 1960.

SLENDERAID

For Dietetic Imitation Maple Syrup.
First use May 28, 1954.

SN 106,425. Miles Laboratories, Inc., Elkhart, Ind. Filed Oct. 14, 1960.

MILEZYME

Owner of Reg. Nos. 60,409, 61,728, and 426,333.
For Enzyme Preparation for Use as an Ingredient in Livestock and Poultry Feeds.
First use May 23, 1960.

SN 110,340. June Dairy Products Company, Inc., Jersey City, N.J. Filed Dec. 16, 1960.



For Vegetable Shortening.
First use in or about 1941.

SN 110,969. Apopka Fruit Co., Orlando, Fla. Filed Dec. 29, 1960.



For Fresh Citrus Fruits.
First use Dec. 28, 1948.

SN 111,062. Bowman Dairy Company, Chicago, Ill. Filed Dec. 30, 1960.

STA-FIT

For Fortified Skim Milk.
First use Dec. 8, 1960.

SN 111,198. The B. Manischewitz Company, Newark, N.J. Filed Jan. 3, 1961.

MANISCHEWITZ

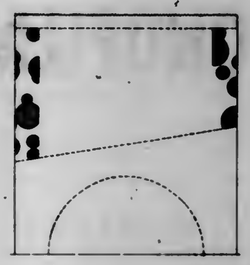
Owner of Reg. Nos. 85,666 and 310,407.
For Matzos, Matzo Meal, Cake, Cookies, Candy, Canned Soups, Canned and Jar Fruits, Fruit Juices, Vegetable Shortening, Spices, Catsup, Vinegar, Pickles and Tomatoes, Preserves, Coffee, Tea, Cocoa and Prepared Vegetables, Fruits and Meats for Babies.
First use Jan. 18, 1889.

SN 112,249. M. A. Gedney Company, Chaska, Minn. Filed Jan. 23, 1961.



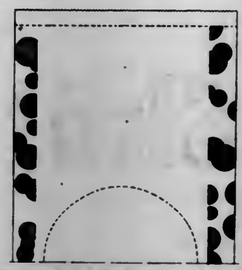
Owner of Reg. Nos. 57,000 and 56,829.
For Pickles, Vinegar, Sauerkraut, Table Syrup, Salad Dressings, Table Sauces, Barbecue Sauces, Prepared Mustard, Relishes, Chow Chow, Sandwich Spread, Hot Peppers, and Spiced Apples.
First use Aug. 10, 1960; July 1, 1888, as to "Gedney's."

SN 112,412. Spencer Kellogg and Sons, Inc., Buffalo, N.Y. Filed Jan. 24, 1961.



The mark consists of dots colored red, black, and blue distributed over portions of the container in the manner shown. The drawing is lined for red and blue. The configuration of the container is disclaimed.
For Feeds for Poultry, Cattle, Swine, and Rabbits.
First use June 12, 1956.

SN 112,413. Spencer Kellogg and Sons, Inc., Buffalo, N.Y. Filed Jan. 24, 1961.



The mark consists of dots colored red, black, and green distributed over portions of the container in the manner shown. The drawing is lined for green and red. The configuration of the container is disclaimed.
For Feeds for Poultry, Cattle, and Swine.
First use July 30, 1956.

SN 113,854. National Dairy Products Corporation, New York, N.Y. Filed Feb. 16, 1961.

VEGE-DILL

For Cottage Cheese.
First use Feb. 1, 1961.

SN 114,899. Wilson & Co., Inc., Chicago, Ill. Filed Mar. 3, 1961.

BAKON POPS

Applicant claims exclusive use of the word "Bakon" as a part of its trademark but not otherwise.
For French Fried Pork Rinds.
First use Feb. 23, 1961.

SN 116,696. Anderson, Clayton & Co., d.b.a. Paymaster Farms and Paymaster Feed Mills, Houston, Tex. Filed Mar. 29, 1961.

MRS. TUCKER'S

Owner of Reg. Nos. 117,149 and 710,029.
For Fresh and Frozen Poultry, Fresh Eggs, Vegetable Shortening, Salad Oil, Wheat Flour, Canned Fruits and Vegetables, Fruit Preserves and Margarine.
First use Aug. 15, 1913, on shortening.

SN 117,143. Superior Food Products Co., Chicago, Ill. Filed Apr. 4, 1961.

Bonne Chere

The French words "Bonne Chere" may be translated as "good cheer."
For Salad Dressings, Tartar Sauce, Barbecue Sauce, Soup Bases, and Pancake Syrup.
First use Mar. 14, 1961.

SN 120,013. S.C.S. Club, Inc., d.b.a. American Nutrition Co., Chicago, Ill. Filed May 15, 1961.

CAL-75

For Concentrated Food Product Consisting of the following Principal Ingredients; Non-Fat Milk Solids, Soya Flour, and Sucrose With Vitamins and Minerals Added, To Be Used in Weight Control.
First use Mar. 31, 1961.

SN 121,042. Tri-Valley Packing Association, San Francisco, Calif. Filed May 29, 1961.

APRI COLA

No claim is made to the word "Cola."
For Apricot Food Drink With Cola Flavor.
First use May 16, 1961.

SN 124,292. The Procter & Gamble Company, Cincinnati, Ohio. Filed July 19, 1961.

PREP

For Edible Vegetable Oil.
First use Feb. 20, 1961.

SN 124,542. Glencliff Dairies, Inc., d.b.a. Glencliff Dairy Products Co., Tulsa, Okla. Filed July 24, 1961.

Glencliff

For Dairy Products—Namely, Fluid Milk, Powdered Milk, Coffee Cream, Whipping Cream, Half and Half, Buttermilk, Chocolate Milk, Ice Cream, Ice Cream Mixes, Ice Milk, Syrup Topping for Ice Cream, Egg Nog, Yoghurt, Cottage Cheese, Cheese Spreads, Fresh Eggs, Butter and Oleomargarine.
First use 1928.

SN 124,827. Meat Industry Suppliers, Inc., Northfield, Ill. Filed July 27, 1961.

HEMGLO

For Seasoning Material for Meats Comprising Specially Processed and Purified Dried Blood Fraction and Pure Spice Extractives of Nutmegs and Other Spices.
First use on or about June 10, 1961.

SN 127,523. Ballantine Produce Co., Inc., d.b.a. Ballantine Produce Co., Sanger, Calif. Filed Sept. 8, 1961.

Dutch Boy

Owner of Reg. No. 323,352.
For Fresh Deciduous Fruits and Grapes.
First use Aug. 1, 1942.

SN 128,527. Custom Farms, Inc., Trenton, N.J. Filed Sept. 25, 1961.

CUSTOM-CREST

For Fresh Eggs.
First use Sept. 7, 1961.

SN 128,528. Custom Farms, Inc., Trenton, N.J. Filed Sept. 25, 1961.

CUSTOM FARM

For Fresh Eggs.
First use Sept. 7, 1961.

Class 47 — Wines

SN 108,239. E. Willm & Cie., Barr, Bas-Rhin, France. Filed Nov. 10, 1960.



CORDON D'ALSACE WILLM

No claim is made to the exclusive right to use the word "d'Alsace" apart from the mark as shown. The English translation of the French term "Cordon d'Alsace" is "ribbon of Alsace."
For Wines.
First use prior to June 15, 1960.

SN 120,843. Agudat Hakormim Hacooperativit Shel Yekvei Richon Le Zion V'Zichron Yaakov B.M., Richon Le Zion, Israel. Filed May 26, 1961.

MIZRACH CARMEL

"Mizrach" is the Hebrew word for "east." Owner of U.S. Reg. Nos. 674,289, 686,441, and 697,647.
For Wines.
First use Aug. 31, 1960; in commerce Aug. 31, 1960.

SN 121,579. Monarch Wine Company, Inc., Brooklyn, N.Y. Filed June 7, 1961.

PACHANGA

The word "Pachanga" is the name of a Latin American dance.
For Wine.
First use June 5, 1961.

Class 48 — Malt Beverages and Liquors

SN 96,583. Esslinger's, Inc., Philadelphia, Pa. Filed May 6, 1960.



Applicant disclaims "Beer." Owner of Reg. No. 711,318.
For Beer.
First use Apr. 12, 1960.

SN 99,225. The National Brewing Company, Baltimore, Md. Filed June 17, 1960.

From the land of pleasant living

For Beer.
First use October 1958.

Class 49 — Distilled Alcoholic Liquors

SN 108,964. J. A. Dougherty's Sons, Inc., Philadelphia, Pa. Filed Nov. 23, 1960.

Sköl

The drawing is lined for red but color is not claimed as part of the mark.
For Vodka.
First use Apr. 27, 1956.

SN 111,904. Mr. Boston Distiller Inc., d.b.a. Essex Importers and Distillers Ltd., Boston, Mass. Filed Jan. 16, 1961.

ONTARIO CLUB

For Canadian Whisky.
First use Nov. 8, 1960.

SN 120,621. Continental Distilling Corporation, d.b.a. Cornwell Distillers Company, Philadelphia, Pa. Filed May 23, 1961.

KING KONG

For Whiskey.
First use May 12, 1961.

SN 121,235. Schenley Industries, Inc., New York, N.Y. Filed June 1, 1961.

BULLETIN

For Whiskey.
First use Mar. 21, 1961.

SN 123,862. Barton Distilling Company, Chicago, Ill. Filed July 13, 1961.

CARAVELLE

For Whiskey.
First use June 28, 1961.

Class 50 — Merchandise Not Otherwise Classified

SN 99,775. Peg-A-Letter Co., Portland, Oreg. Filed June 27, 1960.

PEG A LETTER

For Three Dimensional Letters for Forming Displays.
First use Feb. 19, 1960.

SN 102,133. John J. Paxton, Middlebush, N.J. Filed Aug. 5, 1960.

DRESS RIGHT

For Necktie Hanger With Color Chart.
First use Mar. 28, 1960.

Class 51 — Cosmetics and Toilet Preparations

SN 93,830. Miles Laboratories, Inc., Elkhart, Ind. Filed Mar. 28, 1960.

MILES

Owner of Reg. Nos. 60,409, 61,728, and 426,333.
For After Shave Lotion.
First use Jan. 4, 1960.

SN 96,168. Daggett & Ramsdell, Inc., New York, N.Y. Filed Apr. 21, 1960.



The drawing is lined for red and gold, but no claim is made to color as a feature of the mark apart from the drawing.
For Face and Hand Creams; Talc, Bath, Dusting and Face Powders; Astringent Preparation; Make-Up Lotion; Nail Polish; Toilet Water; Perfume; Sachet; Lipstick and Lipstick Refills; Compacts Containing Powder and Compact Refills; Rouge; Mascara; Eyebrow Pencil and Eyebrow Pencil Refills; Eye Shadow; Deodorant; Hair Spray; Hair Rinse; Bath Oil; and Bubbling Bath Preparation.
First use at least as early as September 1952.

SN 104,734. Jean Leclabart, Paris, France. Filed Sept. 19, 1960.

PERMABEL

Priority claimed under Sec. 44(d) on Reg. No. 488,229, dated May 18, 1960 (Seine); Natl. Inst. No. 144,717.
For Hair Tonics, Hair Oils and Creams for Dry Hair, Hair Degreasing Preparations, Preparations for Brightening the Color of Hair, Brilliantine, Hair Setting Preparations.

SN 106,592. Fritzsche Brothers, Inc., New York, N.Y. Filed Oct. 18, 1960.

MELANGE

For Perfume Oils.
First use Aug. 5, 1960.

SN 108,873. Clairol Incorporated, New York, N.Y. Filed Nov. 22, 1960.

PROTINATOR

For Catalyst To Be Used With a Hair Bleaching Preparation.
First use Mar. 11, 1960.

SN 110,280. The Mitchum Company, Paris, Tenn. Filed Dec. 15, 1960.

PALIDIA

For Cosmetic Face Creams and Lotions.
First use Dec. 9, 1960.

SN 110,656. A. Boake, Roberts & Company Limited, Stratford, London, England. Filed Dec. 22, 1960.

ABRAC

Owner of British Reg. No. 773,623, dated Jan. 28, 1958; and U.S. Reg. Nos. 374,204 and 379,541.
For Perfumes; Non-Medicated Toilet Preparations (Not Being Cleaning or Polishing Preparations); Perfumed Cosmetics, Perfumed Toilet Articles, and Perfumed Compounds for Use in the Manufacture of Perfumes.

SN 110,962. The Warren-Teed Products Company, Columbus, Ohio. Filed Dec. 28, 1960.

WARREN-TEED

For Lotion for Soothing and Smoothing Chapped and Irritated Skin and for Softening and Beautifying the Skin.
First use Dec. 5, 1955.

SN 110,964. The Warren-Teed Products Company, Columbus, Ohio. Filed Dec. 28, 1960.



Applicant claims no registration rights for the word "Lotion" apart from the mark shown, but waives none of its common law rights.
For Lotion for Soothing and Smoothing Chapped and Irritated Skin and for Softening and Beautifying the Skin.
First use July 16, 1958.

SN 112,350. Ar. Winarick, Inc., New York, N.Y. Filed Jan. 24, 1961.

BEAUTY PAT

For Powder and Foundation Makeup Combined.
First use Jan. 17, 1961.

SN 114,915. Beauty-Rama Corporation, Chicago, Ill. Filed Mar. 6, 1961.

CURLIFE

Owner of Reg. No. 703,670.
For Hair Creme, Conditioning Rinse for the Hair, Hair Conditioner, and Permanent Waving Fluid.
First use on or about May 25, 1956.

SN 117,281. Lehn & Fink Products Corporation, Bloomfield, N.J. Filed Apr. 6, 1961.

SPIN

Owner of Reg. No. 712,614.
For Deodorant.
First use in 1959.

SN 120,867. Helene Curtis Industries, Inc., Chicago, Ill. Filed May 26, 1961.

PINK LADY

For Cologne.
First use on or about Mar. 21, 1961.

SN 122,878. Allen B. Wrisley Company, Chicago, Ill. Filed June 26, 1961.

BATHENIA

For Bubble Bath.
First use May 4, 1961.

SN 123,064. Antoine de Paris, Inc., New York, N.Y. Filed June 29, 1961.

ANTOINE

Owner of Reg. Nos. 222,849, 301,503, and 369,057.
For General Beauty Aid Preparations and Cosmetics—Namely, Cleansing Creams, Face Creams, Foundation Creams, Skin Stimulants, Skin Tonics, Astringents, Beauty Oils, Beauty Creams, Beauty Lotions, Blemish Lotions, Hand Lotions, Hand Creams, Fluid Make-Up, Rouges, Face Powders, Bath Powders, Lipsticks, Eye Beauty Preparations, Mascara, Eyeshadow, Eyebrow Pencils, Eye Liners, Eye Creams, Soaps, Suntan Preparations, Powder Puffs, Compacts, Perfumes, Colognes, Toilet Waters; and for Preparations for the Care of the Hair—Namely, Hair Tonics, Wave Lotions, Shampoos, Hair Rinses, Brilliantines, Hair Pomades, Wave Set Creams, Hair Fixatives.
First use Mar. 9, 1926.

SN 123,152. Yardley & Company Limited, Stratford, London, England. Filed June 29, 1961.

MILADY

Owner of British Reg. No. B407,429, dated Sept. 1, 1920.
For Face Powder.

SN 123,527. Helene Curtis Industries, Inc., Chicago, Ill. Filed July 7, 1961.

SUMMER CLOUD

For Cold Waving Lotion and Neutralizer.
First use on or about June 17, 1960.

SN 123,774. Scandia Cosmetics Corporation, New York, N.Y. Filed July 11, 1961.

ARTESIAN

For Moisture Cream, Lotion, and Face Powder.
First use June 29, 1961.

Class 52—Detergents and Soaps

SN 63,324. Lanolin Plus, Inc., Chicago, Ill. Filed Nov. 28, 1958.

WASH 'N SET

For Hair Waving Shampoo.
First use Sept. 10, 1958.

SN 104,186. P.C. Products (1001) Limited, Salford, England. Filed Sept. 9, 1960.

1001

Owner of British Reg. No. 727,763, dated Mar. 9, 1954.
For Cleaning Preparations for Domestic Uses.

SN 110,463. Plunkett Chemical Company, Chicago, Ill. Filed Dec. 19, 1960.

PC-400

Owner of Reg. Nos. 395,666 and 396,320.
For Liquid Toilet Cleanser With Disinfecting and Deodorizing Properties.
First use Oct. 3, 1958.

SN 111,394. Dysart Chemical Corporation, Columbus, Ohio. Filed Jan. 6, 1961.

gpd

For Detergent for Washing Machines and Dry Bleach.
First use Jan. 21, 1960.

SN 113,458. T and W Products Limited, Belleville, Ontario, Canada. Filed Feb. 10, 1961.

WASHETTE

Owner of Canadian Reg. No. 120,612, dated Dec. 23, 1960.
For Dish-Washing Compound Impregnated in Paper.

SN 120,357. United Sanitary Chemicals Company, Baltimore, Md. Filed May 18, 1961.

RESISTO

Owner of Reg. Nos. 404,198 and 405,436.
For Cleaner for Floors, Woodwork, and Painted and Varnished Surfaces.
First use June 1940.

SN 122,753. Francis H. Bellevue, d.b.a. Bellevue Distributors, Everett, Mass. Filed June 26, 1961.



The portrait shown is fanciful and does not identify a particular living person.
For Cleaning Compound for Golf Equipment, Such as Clubs, Balls and the Like.
First use Aug. 8, 1960.

SN 123,449. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 5, 1961.

NUVAT

Owner of Reg. No. 669,412.
For Heavy Duty Cleaning Composition.
First use Oct. 3, 1960.

SN 123,858. American-Lincoln Corporation, Toledo, Ohio. Filed July 13, 1961.

GOLDEN CLEAN

For Rug, Carpet, and Upholstery Shampoo.
First use Oct. 27, 1960.

SN 124,016. Vestal Laboratories, Inc., St. Louis, Mo. Filed July 14, 1961.

SUR-DET

For Surgical Detergent Cream.
First use Feb. 24, 1961.

SN 124,229. Simonis Company, Chicago, Ill. Filed July 18, 1961.

PERMACRYLIC

For Polish Remover.
First use July 14, 1961.

SN 124,448. La Salle Chemical Products, Oak Park, Mich. Filed July 21, 1961.

FIBER GLO

For Cleaner for Rugs, Carpets, and Upholstery.
First use about May 19, 1961.

SN 124,698. A & L Laboratories, Inc., Minneapolis, Minn. Filed July 26, 1961.

AL-DINE

For Detergent for Dairy Equipment.
First use May 22, 1959.

SERVICE MARKS

Class 100—Miscellaneous

SN 87,949. Edward F. Haye, d.b.a. Photogravity Company, Bellaire, Tex. Filed Dec. 24, 1959.

PHOTOGRAVITY

For Obtaining and Interpretating Gravimeter Data.
First use Aug. 24, 1959.

SN 103,402. The Greater New York Fund, New York, N.Y. Filed Aug. 25, 1960.



For Eleemosynary Institution Services—Namely, Soliciting, Collecting, and Distributing Funds for Member Charitable Organizations.
First use Apr. 25, 1960.

SN 109,799. International Telephone and Telegraph Corporation, Chicago, Ill. Filed Dec. 7, 1960.

SITECOM

For Engineering and Consulting Services Rendered to Others on a Contractual Basis—Namely, Conducting Engineering Studies of Locations With Highly Adverse Ambient Conditions and Designing Optimum Communication Systems for Such Locations.
First use July 15, 1960.

SN 110,120. The Vendo Company, Kansas City, Mo. Filed Dec. 12, 1960.

STOP 'N TREAT

For Restaurant Services.
First use Jan. 27, 1960.

SN 121,967. Fred Woodrow Bell, Dallas, Tex. Filed June 14, 1961.

KIP'S

For Restaurant Services.
First use Sept. 29, 1958.

Class 101—Advertising and Business

SN 111,961. Dataservice Corporation, Mount Vernon, N.Y. Filed Jan. 17, 1961.

DSC

For Engineering, Consultative and Other Services in Connection With Electronic Data Processing, and Other Related Electronic Equipment.
First use Dec. 15, 1960.

Class 102—Insurance and Financial

SN 115,071. Monumental Life Insurance Company, Baltimore, Md. Filed Mar. 7, 1961.



For Underwriting Life, Accident, Health and Sickness Insurance.
First use Sept. 12, 1960.

SN 122,602. Commonwealth Life Insurance Company, Louisville, Ky. Filed June 22, 1961.



For Underwriting of Life Insurance.
First use Dec. 14, 1960.

Class 103 — Construction and Repair

SN 91,263. Megal Development Corporation, Butler, Wis. Filed Feb. 19, 1960.



The drawing is lined for orange and gray.
For Construction of Industrial and Commercial Buildings.
First use in December 1959.

SN 96,373. Tioga Equipment Company, Inc., Chanute, Kans. Filed May 3, 1960.



Applicant disclaims the words "Laundry" and "Coin Operated" apart from the mark as shown.
For Coin Operated Public Laundries.
First use Apr. 4, 1960.

Class 106 — Material Treatment

SN 115,949. Sanval Corporation, St. Louis, Mo. Filed Mar. 17, 1961.

VINABIND

For Applying Permanent Jackets to Paperback Books.
First use Feb. 1, 1961.

SN 118,113. Synthetics Finishing Corporation, Philadelphia, Pa. Filed Apr. 18, 1961.

BUTACRYL

For Coating and Impregnating Materials to Textile Fabrics of Others.
First use Mar. 30, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 125,524. National Inventors Club, Inc., Indianapolis, Ind. Filed Aug. 7, 1961.

NATIONAL INVENTORS CLUB

For Indicating Membership in Applicant.
First use June 8, 1961.

CERTIFICATION MARKS

Class A — Goods

SN 51,286. Permachem Corporation, West Palm Beach, Fla. Filed May 8, 1958.

STERI-SEPTIC

The mark certifies that garments and fabrics to which it is applied have been treated with materials and according to processes which are exclusively under applicant's control and the garments and fabrics meet standards set by applicant as to antiseption and resistance to body and mildew odors and growth of bacteria, fungi, and molds.
For Garments and Fabrics.
First use October 1957.

SN 68,529. Textilfabrikantforeningen (The Association of Textile Manufacturers), Copenhagen, Denmark. Filed Feb. 26, 1959.



The mark indicates that the linen fabric to which it is attached is of Danish origin, manufactured by a member of applicant association. Owner of Danish Reg. No. 10–1958, dated Nov. 15, 1958.
For Woven Linen Fabrics.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

727,349. ENDOFACE. Casting Materials Company, Inc. SN 100,886. Pub. 6–13–61. Filed 7–15–60.

727,350. THERMAFACE. Casting Materials Company, Inc. SN 100,887. Pub. 6–13–61. Filed 7–15–60.

727,351. IMC AND DESIGN. International Minerals & Chemical Corporation. SN 114,488. Pub. 11–28–61. Filed 2–27–61.

727,352. PROTECTO-PAK. Denholm Seed Company. SN 117,420. Pub. 11–28–61. Filed 3–17–61.

727,353. CARB-O-CITE. Shamokin Filler Co., Inc. SN 117,653. Pub. 11–28–61. Filed 4–11–61.

727,354. CIP FOAM. Essex Wire Corporation. SN 118,982. Pub. 11–28–61. Filed 5–1–61.

727,355. KEMAT. Fiber Glass Industries, Inc. SN 119,690. Pub. 11–28–61. Filed 5–10–61.

727,356. COLLOIDREZ. American Colloid Company. SN 119,909. Pub. 11–28–61. Filed 5–15–61.

Class 2 — Receptacles

727,357. MARKETEER. Crown Zellerbach Corporation. SN 119,110. Pub. 11–28–61. Filed 5–2–61.

727,358. SYNCROPAK. Olin Mathieson Chemical Corporation. SN 119,550. Pub. 11–28–61. Filed 5–8–61.

727,359. UNITAPE. Nysco Laboratories, Inc. SN 119,636. Pub. 11–28–61. Filed 5–9–61.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

727,360. TRANSPORTER. Abercrombie & Fitch Company. SN 119,907. Pub. 11–28–61. Filed 5–15–61.

727,361. WAYFARER. Sears, Roebuck and Co. SN 120,249. Pub. 11–28–61. Filed 5–17–61.

Class 4 — Abrasives and Polishing Materials

727,362. SHUR-STEP. Pres-On Abrasives, Inc. SN 105,305. Pub. 11–28–61. Filed 9–27–60.

727,363. PINK LADY. J. J. Dougherty, Inc. SN 115,673. Pub. 11–28–61. Filed 3–15–61.

Class 5 — Adhesives

727,364. PARA-SEAL. Red Kap Garment Co., d b.a. Western Textile Products Company. SN 120,337. Pub. 11–28–61. Filed 5–18–61.

Class 6 — Chemicals and Chemical Compositions

727,365. NEUTRO-STAT. The Simco Company. SN 114,542. Pub. 11–28–61. Filed 2–27–61.

727,366. FREE-TIME. Dynamatics, Inc. SN 115,674. Pub. 11–28–61. Filed 3–15–61.

727,367. AMWAY. Amway Sales Corporation. SN 116,286. Pub. 11–28–61. Filed 3–23–61.

727,368. IORESIN. Abbott Laboratories. SN 119,659. Pub. 11–28–61. Filed 5–10–61.

Class 10 — Fertilizers

727,369. GRO-ALL GREEN AND DESIGN. Central Chemical Corporation. SN 98,862. Pub. 11–28–61. Filed 6–13–60.

727,370. ONCE OVER. L. Teweles Seed Co. SN 114,651. Pub. 11–28–61. Filed 2–28–61.

727,371. VIVA. International Minerals & Chemical Corporation. SN 117,873. Pub. 11–28–61. Filed 4–14–61.

727,372. TEMPO. International Minerals & Chemical Corporation. SN 117,874. Pub. 11–28–61. Filed 4–14–61.

727,373. ORBIT. International Minerals & Chemical Corporation. SN 117,876. Pub. 11–28–61. Filed 4–14–61.

727,374. HOMESTEAD AND DESIGN. The American Agricultural Chemical Company. SN 117,936. Pub. 11–28–61. Filed 4–17–61.

Class 12 — Construction Materials

727,375. TERRA VITRA. American Encaustic Tiling Company, Inc. SN 77,714. Pub. 11–28–61. Filed 7–15–59.

727,376. CUCKLER AND DESIGN. Cuckler Steel Span Company. SN 95,257. Pub. 11–28–61. Filed 4–18–60.

727,377. PERFO-MESH. Amsterdam Corporation. SN 99,907. Pub. 11–28–61. Filed 6–29–60.

727,378. THIN-PAK. Borg-Warner Corporation. SN 100,089. Pub. 11–28–61. Filed 7–1–60.

727,379. POLY-SIL. Poly-Sil, Incorporated. SN 108,211. Pub. 11–28–61. Filed 11–10–60.

727,380. EMBER BOX FIREPLACES AND DESIGN. Richard A. Heidenbrand, d.b.a. Ember Box Fireplaces. SN 109,372. Pub. 11–28–61. Filed 11–28–60.

727,381. TOPPER AND DESIGN. Kenneth R. Bixby and Donald L. Bixby (joint owners), d.b.a. Ken Company. SN 115,770. Pub. 11–28–61. Filed 3–16–61.

727,382. PROTECTONE. The Celotex Corporation. SN 117,952. Pub. 11–28–61. Filed 4–17–61.

727,383. TES JAC. Insul-Coustic Corporation. SN 118,079. Pub. 11–28–61. Filed 4–18–61.

727,384. OHEDCO. Overhead Door Corporation. SN 118,098. Pub. 11–28–61. Filed 4–18–61.

727,385. MONOSTRUCTURE. Monostructure, Inc. SN 118,161. Pub. 11–28–61. Filed 4–19–61.

727,386. SNUG-SLIDE. R.O.W. Window Sales Company. SN 118,286. Pub. 11–28–61. Filed 4–20–61.

727,387. MYSTERY-X. Husky Oil Company. SN 118,350. Pub. 11–28–61. Filed 4–21–61.

727,388. SOL-ART. Stauffer Chemical Company. SN 118,378. Pub. 11–28–61. Filed 4–21–61.

727,389. MAYARI R. Bethlehem Steel Company. SN 119,253. Pub. 11–28–61. Filed 4–7–61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

727,390. POLY III. Crane Co. SN 100,891. Pub. 11–28–61. Filed 7–15–60.

727,391. TY-FLEX. The W. S. Tyler Company. SN 103,991. Pub. 11-28-61. Filed 9-6-60.

727,392. P AND DESIGN. Zappia-Paradiso, S.A., assignee of Ludwig Von Kleydorff, d.b.a. Paradiso. SN 108,237. Pub. 11-28-61. Filed 11-10-60.

727,393. TACKANAIL. American Tack Co., Inc. SN 109,231. Pub. 11-28-61. Filed 11-29-60.

727,394. CAPRI. L. R. Nelson Mfg. Co., Inc. SN 112,909. Pub. 11-28-61. Filed 2-1-61.

727,395. STOCK-PAC. National Manufacturing Co. SN 113,130. Pub. 11-28-61. Filed 2-6-61.

727,396. QUISTGAARD. Dansk Importing Co., Inc. SN 115,042. Pub. 11-28-61. Filed 3-7-61.

727,397. HUCK. Huck Manufacturing Company. SN 115,344. Pub. 11-28-61. Filed 3-10-61.

727,398. FERROPLAST. Osnabrucker Kupfer- und Drahtwerk. SN 116,252. Pub. 11-28-61. Filed 3-22-61.

727,399. VISKLAMP. Union Carbide Corporation. SN 116,364. Pub. 11-28-61. Filed 3-23-61.

727,400. FENSTIX. Commonwealth Plastics Corp. SN 116,872. Pub. 11-28-61. Filed 3-31-61.

727,401. ACCU-SPRAY. Plasti-Kote, Inc. SN 116,911. Pub. 11-28-61. Filed 3-31-61.

727,402. NYCAM. A. A. Rice, Inc. SN 116,921. Pub. 11-28-61. Filed 3-31-61.

727,403. SELECT-O-STREAM. Elkhart Brass Manufacturing Company, Inc. SN 116,990. Pub. 11-28-61. Filed 4-3-61.

727,404. JET AERATION AND DESIGN. Albert S. MacLaren. SN 117,028. Pub. 11-28-61. Filed 4-3-61.

727,405. ARMCO AND DESIGN. Armco Steel Corporation. SN 117,158. Pub. 11-28-61. Filed 4-5-61.

Class 14—Metals and Metal Castings and Forgings

727,406. M STEEL AND DESIGN. National Steel Corporation. SN 117,800. Pub. 11-28-61. Filed 4-13-61.

Class 16—Protective and Decorative Coatings

727,407. G AND DESIGN. Shawinigan Resins Corporation. SN 89,606. Pub. 11-28-61. Filed 1-25-60.

727,408. CRYSTAL-VU. Leon Chemical Industries, Inc. SN 99,336. Pub. 5-16-61. Filed 6-20-60.

727,409. PARLOID. Con-Lux Paint Corporation. SN 113,329. Pub. 11-28-61. Filed 2-9-61.

727,410. SERVIS KOTE. Service Painting Corporation. SN 113,448. Pub. 11-28-61. Filed 2-10-61.

727,411. DEK-SEAL AND DESIGN. The Carter-Waters Corporation. SN 125,647. Pub. 11-28-61. Filed 8-9-61.

Class 18—Medicines and Pharmaceutical Preparations

727,412. SINUSAN. Warner-Lambert Pharmaceutical Company. SN 64,371. Pub. 9-29-59. Filed 12-15-58.

727,413. NORCLIFF. McKesson & Robbins, Incorporated, d.b.a. McKesson Laboratories. SN 114,500. Pub. 11-28-61. Filed 2-27-61.

727,414. BREVICURARINE. The Purdue Frederick Company, assignee of Nordson Pharmaceutical Laboratories, Inc. SN 114,509. Pub. 11-28-61. Filed 2-27-61.

727,415. MILURETIC. Carter Products, Inc. SN 118,957. Pub. 11-28-61. Filed 5-1-61.

Class 19—Vehicles

727,416. ROBIN HOOD. Maremont Corporation, by change of name from Maremont Automotive Products, Inc. SN 102,404. Pub. 1-3-61. Filed 8-10-60.

727,417. HORNET AND DESIGN. Mercury Tool and Machine Service. SN 104,291. Pub. 11-28-61. Filed 9-12-60.

Class 21—Electrical Apparatus, Machines, and Supplies

727,418. SIRVON. Chicago Rawhide Manufacturing Company. SN 86,266. Pub. 11-28-61. Filed 11-30-59.

727,419. TRANS-CEL. Radio Industries, Inc. SN 90,948. Pub. 11-28-61. Filed 2-15-60.

727,420. CDE AND DESIGN. Cornell-Dubilier Electric Corporation. SN 95,254. Pub. 11-28-61. Filed 4-18-60.

727,421. DOERING DISK-MATIC. A. L. Doering Mfg. Corp. SN 95,365. Pub. 11-28-61. Filed 4-19-60.

727,422. RACO. Railroad Accessories Corporation. SN 98,306. Pub. 11-28-61. Filed 6-2-60.

727,423. LAWN-MASTER. McGraw-Edison Company. SN 101,633. Pub. 11-28-61. Filed 7-28-60.

727,424. ALRAD. The Alrad Corporation. SN 102,446. Pub. 11-28-61. Filed 8-11-60.

727,425. RACO PRODUCTS ETC. AND DESIGN. Railroad Accessories Corporation. SN 103,806. Pub. 11-28-61. Filed 9-1-60.

727,426. GLIDELITE. Morris Sanders, d.b.a. Superior Instrument Co. SN 108,243. Pub. 11-28-61. Filed 11-10-60.

727,427. NOALA. Altec Lansing Corporation. SN 108,737. Pub. 11-28-61. Filed 11-21-60.

727,428. NORPAK. Square D Company. SN 109,112. Pub. 11-28-61. Filed 11-25-60.

727,429. REPRESENTATION OF MODIFIED K AND DESIGN. Kearfott Semiconductor Corporation. SN 109,422. Pub. 11-28-61. Filed 12-1-60.

727,430. SQUIRTMOBILE. The Lincoln Electric Company. SN 112,616. Pub. 11-28-61. Filed 1-27-61.

727,431. REDAC. Westinghouse Electric Corporation. SN 114,660. Pub. 11-28-61. Filed 2-28-61.

727,432. ZD AND DESIGN. Hagan Chemicals & Controls, Inc. SN 115,232. Pub. 11-28-61. Filed 3-9-61.

727,433. TUBE-R-CAP. Globe-Union Inc. SN 118,223. Pub. 11-28-61. Filed 4-20-61.

727,434. UNITEK. Unitek Corporation. SN 120,593. Pub. 11-28-61. Filed 5-22-61.

Class 22—Games, Toys, and Sporting Goods

727,435. LOAF N' FLOAT. Aeroplastics Corporation. SN 113,045. Pub. 11-28-61. Filed 2-6-61.

727,436. SNAP-SWITCH AND DESIGN. Atlas Tool Co., Inc. SN 117,943. Pub. 11-28-61. Filed 4-17-61.

727,437. KINGSTON 99. Fred J. Wyrembek, d.b.a. Kingston Specialty Manufacturing Co. SN 118,025. Pub. 11-28-61. Filed 4-17-61.

727,438. ZERVOCHESS. George D. Zervopoulos, d.b.a. Zervochess Board Co. SN 118,026. Pub. 11-28-61. Filed 4-17-61.

727,439. CASEY. Casey Games Corp. SN 118,050. Pub. 11-28-61. Filed 4-18-61.

727,440. COLT. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 118,137. Pub. 11-28-61. Filed 4-19-61.

727,441. REPRESENTATION OF A COLT WITHIN A CIRCLE. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 118,138. Pub. 11-28-61. Filed 4-19-61.

727,442. LE MANS. The Avalon Hill Company. SN 118,207. Pub. 11-28-61. Filed 4-20-61.

727,443. WACKY WHEEL. Hassenfeld Bros., Inc. SN 118,691. Pub. 11-28-61. Filed 4-26-61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

727,444. U AND DESIGN. Feinpruf, Feinmess- und Prufgerate Gesellschaft mit beschrankter Haftung. SN 67,333. Pub. 11-28-61. Filed 2-9-59.

727,445. VIBRO-FINISHER. Productive Equipment Corporation. SN 95,196. Pub. 11-28-61. Filed 4-15-60.

727,446. NU-VAT. Cherry-Burrell Corporation, assignee of Meyer-Blanke Company. SN 98,664. Pub. 11-28-61. Filed 6-8-60.

727,447. VIBRA-STAKE. The Thomas & Betts Co. SN 101,905. Pub. 11-28-61. Filed 8-2-60.

727,448. REPRESENTATION OF HACKSAW BLADE. Borg-Warner Corporation. SN 105,049. Pub. 11-28-61. Filed 9-23-60.

727,449. STAPORT. A. E. Staley Manufacturing Company. SN 110,485. Pub. 11-28-61. Filed 12-19-60.

727,450. JET SHAKER. Jetshaker, Inc. SN 111-892. Pub. 11-28-61. Filed 1-16-61.

727,451. TURBOPOWER. The Buehler Corporation. SN 113,081. Pub. 11-28-61. Filed 2-6-61.

727,452. SIMPLIMET. Buehler Ltd. SN 115,772. Pub. 11-28-61. Filed 3-16-61.

727,453. CARTONEER. Diamond National Corporation. SN 116,294. Pub. 11-28-61. Filed 3-23-61.

727,454. STEELPIX. Steelpix Manufacturing Company. SN 116,761. Pub. 11-28-61. Filed 3-29-61.

727,455. OUTSERTS. Outserts, Inc. SN 116,834. Pub. 11-28-61. Filed 3-30-61.

727,456. W AND DESIGN. The Weatherhead Company. SN 116,853. Pub. 11-28-61. Filed 3-30-61.

727,457. YUMBO. Societe Industrielle de Construction d'Appareils Mecano-Hydrauliques S.I.C.A.M. SN 116,928. Pub. 11-28-61. Filed 3-31-61.

727,458. WULPA-LIFT. August Wullschleger. SN 116,951. Pub. 11-28-61. Filed 3-31-61.

727,459. SENTRY SAFE-CUT AND DESIGN. Sentry Manufacturing Company. SN 117,050. Pub. 11-28-61. Filed 4-3-61.

727,460. CARDAIR. Marmon-Herrington Company, Inc. SN 117,200. Pub. 11-28-61. Filed 4-5-61.

727,461. HYDROCLONE. Brown Citrus Machinery Corporation. SN 117,950. Pub. 11-28-61. Filed 4-17-61.

727,462. SLIDEX. Teleflex Incorporated. SN 119,902. Pub. 11-28-61. Filed 5-12-61.

727,463. CITATION. Sears, Roebuck and Co. SN 120,251. Pub. 11-28-61. Filed 5-17-61.

727,464. CONSTELLATION. Sears, Roebuck and Co. SN 120,253. Pub. 11-28-61. Filed 5-17-61.

Class 24—Laundry Appliances and Machines

727,465. FEEDMASTER. The Hydraxtor Company. SN 117,500. Pub. 11-28-61. Filed 4-10-61.

727,466. DYNAMUS. Overseas Industries, Incorporated. SN 119,039. Pub. 11-28-61. Filed 5-1-61.

727,467. FIRMA SOFT. Resilio Press Pad Co. SN 119,313. Pub. 11-28-61. Filed 5-4-61.

727,468. PIP. Con-Tex, Inc. SN 119,359. Pub. 11-28-61. Filed 5-5-61.

Class 25—Locks and Safes

727,469. PEG-LOCK. Edward E. Schaefer, d.b.a. Central Specialties Co. SN 106,146. Pub. 11-28-61. Filed 10-10-60.

Class 26—Measuring and Scientific Appliances

727,470. ZEISS IKON. Zeiss Ikon A.G. SN 49,328. Pub. 11-28-61. Filed 4-8-58.

727,471. CARL MEYER. Burke & James, Inc. SN 107,175. Pub. 5-23-61. Filed 10-26-60.

727,472. REGALENS AND DESIGN. Merit Manufacturing Co., Inc. SN 115,506. Pub. 11-28-61. Filed 3-13-61.

727,473. SK. Science Kit, Inc. SN 120,345. Pub. 11-28-61. Filed 5-18-61.

Class 27—Horological Instruments

727,474. DECI-TIME. Time Card Blotter, Inc. SN 106,954. Pub. 11-28-61. Filed 10-21-60.

727,475. V-VIMETAL. Vimetal S.A. SN 113,163. Pub. 11-28-61. Filed 2-6-61.

727,476. V AND DESIGN. Vimetal S.A. SN 113,164. Pub. 11-28-61. Filed 2-6-61.

727,477. SPORTSMAN. Elgin National Watch Company. SN 118,980. Pub. 11-28-61. Filed 5-1-61.

727,478. GARON. Aaron Stern, Inc. SN 120,767. Pub. 11-28-61. Filed 5-24-61.

Class 28—Jewelry and Precious-Metal Ware

727,479. CADORO. Cadoro. SN 118,325. Pub. 11-28-61. Filed 4-21-61.

727,480. LOVE MATES. Simon Golub & Sons Inc. SN 118,987. Pub. 11-28-61. Filed 5-1-61.

727,481. VANITY FAIR. S. A. Peck & Company. SN 120,221. Pub. 11-28-61. Filed 5-17-61.

727,482. CARROLLTON. The Stieff Company. SN 121,034. Pub. 11-28-61. Filed 5-29-61.

Class 29—Brooms, Brushes, and Dusters

727,483. GLAMORENE. Jerclaydon, Inc. SN 109,186. Pub. 11-28-61. Filed 11-28-60.

727,484. ICE CREAM BRUSHES. Johnson & Johnson. SN 109,699. Pub. 11-28-61. Filed 12-6-60.

Class 31—Filters and Refrigerators

727,485. DF REDI-PAC. Duluth Filter Company. SN 110,416. Pub. 8-1-61. Filed 12-19-60.

727,486. DF. Duluth Filter Company. SN 110,417. Pub. 8-1-61. Filed 12-19-60.

727,487. GRO-WEL CO. Gro-Wel Fish-Ade Co., Inc. SN 116,227. Pub. 11-28-61. Filed 3-22-61.

727,488. FOR TOUGH REQUIREMENTS AND DESIGN. Refrigeration Research, Incorporated. SN 117,998. Pub. 11-28-61. Filed 4-17-61.

727,489. MM MICROMITE AND DESIGN. Carrier Corporation. SN 118,410. Pub. 11-28-61. Filed 4-24-61.

727,490. FD AND TEAR DROP DESIGN. Fluid Dynamics Incorporated. SN 118,529. Pub. 8-1-61. Filed 4-24-61.

727,491. MICROMITE. Carrier Corporation. SN 118,764. Pub. 11-28-61. Filed 4-27-61.

727,492. BFD AND DESIGN. The Bendix Corporation. SN 118,854. Pub. 8-1-61. Filed 4-28-61.

Class 32 — Furniture and Upholstery

727,493. ADJUST-A-BED. Charles Kunzelman, d.b.a. Sleeper Lounge Co. SN 79,174. Pub. 11–28–61. Filed 8–7–59.

727,494. SLEEP-A-GUEST. Smith Furniture Manufacturing Company. SN 79,433. Pub. 11–28–61. Filed 8–12–59.

727,495. NEW IDEA COLLECTION. Kroehler Mfg. Co. SN 117,883. Pub. 11–28–61. Filed 4–14–61.

727,496. DYNAWOOD. Wilhelm W. Brockway. SN 118,220. Pub. 11–28–61. Filed 4–20–61.

727,497. KENISAN. Sears, Roebuck and Co. SN 120,245. Pub. 11–28–61. Filed 5–17–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

727,498. VISCOUNT. Samuel Stamping & Enameling Company. SN 106,654. Pub. 11–28–61. Filed 10–18–60.

727,499. JURA STERI-VAP AND DESIGN. Jura Elektroapparate-Fabriken L. Henzirohs A.G. SN 111,894. Pub. 11–28–61. Filed 1–16–61.

727,500. STERI-VAP. Jura Elektroapparate-Fabriken L. Henzirohs A.G. SN 111,895. Pub. 11–28–61. Filed 1–16–61.

727,501. PYROPORT. Penn Ventilator Co. Inc. SN 113,943. Pub. 11–28–61. Filed 2–17–61.

727,502. ROPER CHARM AND DESIGN. Geo. D. Roper Corporation. SN 115,729. Pub. 11–28–61. Filed 3–15–61.

727,503. SILVER JET. Hydraulics Unlimited Mfg. Co. SN 116,524. Pub. 11–28–61. Filed 3–27–61.

727,504. PERFECT HOST. Ann M. Koziol, d.b.a. Charmglow Products. SN 116,891. Pub. 11–28–61. Filed 3–31–61.

727,505. PARTY-PATIO. Lidco, Inc. SN 116,894. Pub. 11–28–61. Filed 3–31–61.

727,506. STYRODUCT. Hardboard Fabricators, Inc. SN 117,705. Pub. 11–28–61. Filed 4–12–61.

727,507. "HI-VEL." Loftus Engineering Corporation. SN 117,282. Pub. 11–28–61. Filed 4–6–61.

727,508. POWERMITE. Hateo Corporation. SN 117,360. Pub. 11–28–61. Filed 4–7–61.

727,509. WETHER-BEE AND DESIGN. The Haried Company; d.b.a. Heat Pump Systems. SN 117,489. Pub. 11–28–61. Filed 4–10–61.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

727,510. ROADAMATIC PERFORMANCE TESTED. Lester S. Feinberg. SN 106,891. Pub. 11–28–61. Filed 10–21–60.

727,511. TRI-STATE. Harmo Tire and Rubber Corporation. SN 113,524. Pub. 11–28–61. Filed 2–13–61.

727,512. TEMPO PLUG AND DESIGN. Rema-Matic, Inc. SN 117,394. Pub. 11–28–61. Filed 4–7–61.

727,513. BRAND X. Moore Manufacturing Inc. SN 118,471. Pub. 11–28–61. Filed 4–24–61.

727,514. RONSIL. Ronthor Reiss Corporation. SN 120,008. Pub. 11–28–61. Filed 5–15–61.

Class 36 — Musical Instruments and Supplies

727,515. VUE-STROBE. Fred Marrich, d.b.a. American Musical Instrument Company. SN 118,356. Pub. 11–28–61. Filed 4–21–61.

Class 37 — Paper and Stationery

727,516. STANCUT. The Standard Register Company. SN 120,351. Pub. 11–28–61. Filed 5–18–61.

727,517. "REDI-FLO." Consolidated Business Systems, Inc. SN 121,711. Pub. 11–28–61. Filed 6–9–61.

727,518. COLUMN WRITE. Wilson Jones Company. SN 123,250. Pub. 12–5–61. Filed 6–30–61.

727,519. AUTHO-VISOR. Le Febure Corporation. SN 123,108. Pub. 11–28–61. Filed 6–29–61.

727,520. TELE-MESSAGE. Leo Pevsner. SN 123,355. Pub. 11–28–61. Filed 7–3–61.

727,521. INVEST-AIDE. Peck Industries Inc. SN 123,494. Pub. 11–28–61. Filed 7–6–61.

727,522. BANQUET TIME. Straubel Paper Company. SN 123,575. Pub. 11–28–61. Filed 7–7–61.

727,523. ASTROLITE. Monadnock Paper Mills, Inc. SN SN 124,212. Pub. 11–28–61. Filed 7–18–61.

727,524. DUPLIMAKER. Old Town Corporation. SN 124,219. Pub. 11–28–61. Filed 7–18–61.

Class 38 — Prints and Publications

727,525. BISCUIT AND CRACKER BAKER. American Trade Publishing Company. SN 118,937. Pub. 11–28–61. Filed 5–1–61.

Class 39 — Clothing

727,526. ACE OF HEARTS AND DESIGN. Superba Cravats, Inc. SN 87,087. Pub. 11–28–61. Filed 12–10–59.

727,527. LULLABIES THE FAMED HIDDEN COMFORT. Johnson, Stephens and Shinkle Shoe Company. SN 94,070. Pub. 11–28–61. Filed 3–31–60.

727,528. PANTI-LEGS. Glen Raven Knitting Mills, Inc., d.b.a Glen Raven. SN 94,890. Pub. 11–28–61. Filed 4–12–60.

727,529. PRO-AM AND DESIGN. Pro-Am Sportswear Corporation. SN 101,889. Pub. 11–28–61. Filed 8–2–60.

727,530. THE AMERICAN PORTRAIT. A. L. Silver, Inc. SN 105,925. Pub. 11–28–61. Filed 10–6–60.

727,531. HEALTHKNIT. Standard Knitting Mills, Inc. SN 107,382. Pub. 11–28–61. Filed 10–28–60.

727,532. PIX SHOES SAMPLES & CANCELLATIONS AND DESIGN. Pix Shoes. SN 110,226. Pub. 11–28–61. Filed 12–14–60.

727,533. ELLEN GALE. Gordon Peters Co., Inc. SN 110,621. Pub. 11–28–61. Filed 12–21–60.

727,534. AMY PETERS. Gordon Peters Co., Inc. SN 110,622. Pub. 11–28–61. Filed 12–21–60.

727,535. GORDON PETERS. Gordon Peters Co., Inc. SN 110,624. Pub. 11–28–61. Filed 12–21–60.

727,536. DU-BON-ETTE. Du Barry of Hollywood, Inc., d.b.a. Du-Bon-Ette of Hollywood. SN 110,988. Pub. 11–28–61. Filed 12–29–60.

727,537. AMANIT. S. Augstein & Co., Inc. SN 113,607. Pub. 11–28–61. Filed 2–14–61.

727,538. COMFY. Daniel Green Company. SN 113,640. Pub. 11–28–61. Filed 2–14–61.

727,539. FARAHCRON. Farah Manufacturing Company, Inc. SN 113,705. Pub. 11–28–61. Filed 2–15–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

727,540. DUVO-NIT. Edmos Products Corporation. SN 109,247. Pub. 11–28–61. Filed 11–29–60.

727,541. MONOTEX. Milton (Leicester) Limited. SN 112,475. Pub. 11–28–61. Filed 1–25–61.

727,542. COTREL. Dan River Mills, Incorporated. SN 114,755. Pub. 11–28–61. Filed 3–2–61.

727,543. STEVENSTEX. J. P. Stevens & Co., Inc. SN 117,408. Pub. 11–28–61. Filed 4–7–61.

727,544. SUPERFLOW. J. P. Stevens & Co., Inc. SN 117,410. Pub. 11–28–61. Filed 4–7–61.

727,545. FAIRSHEEN FINISH. Greenwood Mills, Inc. SN 117,485. Pub. 11–28–61. Filed 4–10–61.

727,546. MODERN ROSE. Dan River Mills, Incorporated. SN 120,699. Pub. 11–28–61. Filed 5–24–61.

727,547. OLDE KENTUCKY. Louisville Bedding Company, Inc. SN 121,928. Pub. 11–28–61. Filed 6–13–61.

727,548. MOHANTEX. Mohan's Limited. SN 122,100. Pub. 11–28–61. Filed 6–15–61.

Class 43 — Thread and Yarn

727,549. PENN-MADE. Penn Associates, Inc. SN 117,042. Pub. 11–28–61. Filed 4–3–61.

727,550. GOOD SHEPHERD AND DESIGN. Emile Bernat & Sons Company. SN 118,044. Pub. 11–28–61. Filed 4–18–61.

Class 44 — Dental, Medical, and Surgical Appliances

727,551. PROTECTO-SPLINT AND DESIGN. P-C-S Manufacturing Company. SN 74,375. Pub. 11–28–61. Filed 5–25–59.

727,552. VENOPAK MICRODRIP. Abbott Laboratories. SN 119,166. Pub. 11–28–61. Filed 5–3–61.

727,553. ESPREE. Cellulose Products Corporation. SN 119,182. Pub. 11–28–61. Filed 5–3–61.

727,554. KENISAN. Sears, Roebuck and Co. SN 120,254. Pub. 11–28–61. Filed 5–17–61.

Class 46 — Foods and Ingredients of Foods

727,555. C-LECT. Cerojel Products, Inc., assignee of The Acerola Corporation. SN 114,388. Pub. 5–23–61. Filed 2–27–61.

727,556. CHAR-BROIL. S. R. Smith, Inc. SN 114,268. Pub. 11–28–61. Filed 2–23–61.

727,557. NORCLIFF. McKesson & Robbins, Incorporated, d.b.a. McKesson Laboratories. SN 114,499. Pub. 11–28–61. Filed 2–27–61.

727,558. LALANI. Safeway Stores, Incorporated. SN 114,721. Pub. 11–28–61. Filed 3–1–61.

727,559. LADY BIRD. Virginia Valley Processors, Inc. SN 115,553. Pub. 11–28–61. Filed 3–13–61.

727,560. SLIM DIET. Edlo, Inc. SN 117,468. Pub. 11–28–61. Filed 4–10–61.

727,561. KAK-O-PEP. Bak-Kraft Corporation, Ltd. SN 118,546. Pub. 11–28–61. Filed 4–25–61.

727,562. MIRAMAR. Santa Barbara Coastal Lemon Co. SN 119,156. Pub. 11–28–61. Filed 5–2–61.

727,563. DAILY DOUBLE. Continental Baking Company. SN 119,478. Pub. 11–28–61. Filed 5–8–61.

727,564. TODAY. J. H. Filbert, Inc. SN 119,498. Pub. 11–28–61. Filed 5–8–61.

727,565. TREESWEET AND DESIGN OF THREE FACES. Treesweet Products Co. SN 119,816. Pub. 11–28–61. Filed 5–11–61.

727,566. FOAM-SUGAR. Pearson Pharmacal Company, Inc. SN 120,065. Pub. 11–28–61. Filed 5–3–61.

727,567. PEARSON FOAM-SUGAR. Pearson Pharmacal Company, Inc. SN 120,066. Pub. 11–28–61. Filed 5–3–61.

Class 50 — Merchandise Not Otherwise Classified

727,568. "EASY-LIFT." Gotham Chalkboard & Trim Co. Inc. SN 118,065. Pub. 11–28–61. Filed 4–18–61.

727,569. MERRY-MIRACLES. Rene D. Lyon Company, Incorporated. SN 118,794. Pub. 11–28–61. Filed 4–27–61.

Class 51 — Cosmetics and Toilet Preparations

727,570. VIRGENE. Beauty-Rama Corporation. SN 110,395. Pub. 11–28–61. Filed 12–19–60.

727,571. FASTREAT. Beauty-Rama Corporation. SN 110,396. Pub. 11–28–61. Filed 12–19–60.

727,572. LADY LUCIA. Beauty-Rama Corporation. SN 110,397. Pub. 11–28–61. Filed 12–19–60.

727,573. YARDLEY SPONGE & SPARKLE. Yardley & Company Limited. SN 113,385. Pub. 11–28–61. Filed 2–9–61.

727,574. FLIRTI. Paula Payne Products Company. SN 114,136. Pub. 11–28–61. Filed 2–21–61.

727,575. NORCLIFF. McKesson & Robbins, Incorporated. SN 114,501. Pub. 11–28–61. Filed 2–27–61.

727,576. M'SIEU FABERGE. Fabergé, Inc., d.b.a. Fabergé. SN 114,605. Pub. 11–28–61. Filed 2–28–61.

727,577. ANDALUSIA. Studio Girl-Hollywood, Inc. SN 118,187. Pub. 11–28–61. Filed 4–19–61.

727,578. FOLDED FINGERBOWL. Nice-Pak Products, Inc. SN 125,685. Pub. 11–28–61. Filed 8–9–61.

Class 52 — Detergents and Soaps

727,579. R RATH. The Rath Packing Company. SN 112,981. Pub. 11–28–61. Filed 2–2–61.

727,580. EXTRALOX. Anderson Chemical Company. SN 119,916. Pub. 11–28–61. Filed 5–15–61.

727,581. ANALOX. Anderson Chemical Company. SN 119,917. Pub. 11–28–61. Filed 5–15–61.

Service Marks

Class 100 — Miscellaneous

727,582. EOS. Electro-Optical Systems, Inc. SN 104,703. Pub. 11–28–61. Filed 9–19–60.

Class 101 — Advertising and Business

727,583. EO AND DESIGN. Employers Overload Company. SN 117,959. Pub. 11–28–61. Filed 4–17–61.

Class 105 — Transportation and Storage

727,584. GENERAL TOURS AND DESIGN. General Tours, Inc. SN 115,047. Pub. 11–28–61. Filed 3–7–61.

Class 107 — Education and Entertainment

727,585. YOUTHARAMA. Youtharama. SN 105,118. Pub. 11–28–61. Filed 9–23–60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 12 — Construction Materials

727,586. Masonite Corporation, Chicago, Ill. SN 78,795. Filed P.R. 7–31–59; Am. S.R. 12–4–61.

CHAMPAGNE WALNUT

For Construction Board, and More Specifically Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber With Coatings on the Surface Thereof for Decorative and Other Purposes.
First use Apr. 16, 1959.

727,587. Masonite Corporation, Chicago, Ill. SN 78,796. Filed P.R. 7–31–59; Am. S.R. 12–15–61.

ANTIQUE WALNUT

For Construction Board, and More Specifically Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber With Coatings on the Surface Thereof for Decorative and Other Purposes.
First use Apr. 24, 1959.

727,588. Masonite Corporation, Chicago, Ill. SN 78,797. Filed P.R. 7–31–59; Am. S.R. 12–15–61.

ROSÉ WALNUT

For Construction Board, and More Specifically Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber With Coatings on the Surface Thereof for Decorative and Other Purposes.
First use Apr. 15, 1959.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

727,589. Victor Manufacturing & Gasket Company, Chicago, Ill. SN 115,975. Filed P.R. 3–17–61; Am. S.R. 11–16–61.

METALBAC

For Gaskets.
First use Oct. 15, 1960.

727,590. The Frank G. Schenuit Rubber Company, Baltimore, Md. SN 116,577. Filed P.R. 3–27–61; Am. S.R. 11–13–61.

TRAVERS

For Vehicle Tires Composed of Rubber (Natural and/or Synthetic) and Fabric.
First use in or about October 1960.

Class 44 — Dental, Medical, and Surgical Appliances

727,591. The William Getz Corporation, Chicago, Ill. SN 86,140. Filed P.R. 11–27–59; Am. S.R. 11–20–61.

V-NEER

For Plastic Composition Material for Use in Crown, Bridge, and Inlay Work.
First use Oct. 12, 1959.

TRADEMARK REGISTRATIONS RENEWED

21,208. LEA & PERRINS ETC. Cl. 46. 5–31–1802.
149,745. GOODYEAR. Cl. 23. 12–20–21.
150,448. REPRESENTATION OF A BAR AND TRIANGLE DEVICE. Cl. 35. 1–3–22.
150,477. FIAT. Cl. 46. 1–3–22.
150,729. COINER. Cl. 17. 1–10–22.
150,730. DON JOHN. Cl. 17. 1–10–22.
150,731. MAPACUBA. Cl. 17. 1–10–22.
150,732. PRINCE HAMLET. Cl. 17. 1–10–22.
150,956. "VENIDA RULES THE WAVES." Cl. 40. 1–10–22.
152,471. NORTON. Cl. 23. 2–28–22.
152,961. RADIOLA. Cl. 21. 3–7–22.
153,227. FLOR DE MELBA. Cl. 17. 3–14–22.
153,538. AMERICAN MAID. Cl. 32. 3–21–22.
153,659. CHARLES THOMSON. Cl. 17. 3–28–22.
154,313. LIQUID AND DESIGN. Cl. 6. 4–11–22.
154,914. DARLING AND DESIGN. Cl. 13. 5–16–22.
155,106. UNITED PAPER CO. AND DESIGN. Cl. 37. 5–16–22.
155,288. MS & SCO (MONOGRAM). Cl. 36. 5–23–22.
155,382. BAYER. Cl. 18. 5–30–22.
155,547. FEATHER CARD BACK DESIGN. Cl. 22. 5–30–22.
155,562. WHITING & DAVIS CO. AND DESIGN. Cl. 28. 5–30–22.
155,612. BAYER. Cl. 18. 6–6–22.
155,871. LUMINAL. Cl. 18. 6–6–22.
391,256. QUILTMASTER. Cl. 32. 10–28–41.
391,281. PATRIOTIC. Cl. 37. 10–28–41.
391,494. CUSTOM. Cl. 37. 11–11–41.
391,498. ZIP. Cl. 37. 11–11–41.
391,651. TWIST DE CHENE. Cl. 39. 11–18–41.
391,712. CARILLON. Cl. 51. 11–18–41.
392,109. FISH SHANTY. Cl. 46. 12–16–41.
392,177. SILK-WAX. Cl. 37. 12–16–41.
392,184. PAT PENDING. Cl. 38. 12–16–41.
392,748. THE FLORSHEIM SHOE AND DESIGN. Cl. 39. 1–13–42.
392,791. FEATHERLUME. Cl. 40. 1–13–42.
392,792. LIGHTALUME. Cl. 40. 1–13–42.
392,794. MIRALUME. Cl. 40. 1–13–42.
392,839. VENT-O-RAY. Cl. 34. 1–13–42.
393,114. MARCHAND'S. Cl. 51. 1–27–42.
393,173. CALSAMATE. Cl. 18. 1–27–42.
393,296. LUXURY SLEEP. Cl. 32. 2–3–42.
393,458. CONSOLIDATED. Cl. 37. 2–17–42.
393,969. ENGRAN. Cl. 18. 3–10–42.
394,239. SUSY GOOSE. Cl. 22. 3–24–42.
394,564. ZYRONE. Cl. 18. 4–14–42.
394,575. BARBECUE FASHIONS. Cl. 39. 4–14–42.
394,600. DIXIE-BREAKFAST. Cl. 46. 4–14–42.
394,808. MANHATTANITE. Cl. 12. 4–28–42.
395,050. CHRYSALIS. Cl. 39. 5–12–42.
395,529. REPRESENTATION OF 3 FEATHERS. Cl. 49. 6–2–42.
395,652. SHILOH. Cl. 18. 6–2–42.
395,669. GYLSENNID. Cl. 18. 6–2–42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

175,946. DEVIL'S FOOD. Cl. 46. 11–13–23.
310,154. "CHESTERFIELD" AND DESIGN. Cl. 15. 2–13–34.
419,584. COLOREX. Cl. 16. 2–26–46.
617,785. REGENT. Cl. 22. 12–20–55.
617,786. SPORT-SPAIN. Cl. 22. 12–20–55.

The following registrations issued Dec. 27, 1955

618,023. PEEK-PAK. Cl. 2.
618,025. THE STO-AWAY AND DESIGN. Cl. 2.
618,029. U-VUE. Cl. 2.
618,032. UTILI-TRAY. Cl. 2.
618,034. PERMA-REST ETC. AND DESIGN. Cl. 2.
618,035. BASKETOTER. Cl. 2.
618,044. IRGALON. Cl. 6.
618,048. SOLINITE. Cl. 6.
618,052. THECO. Cl. 7.
618,061. PLANTER MAGIC. Cl. 10.
618,071. FREDMAR STONE AND DESIGN. Cl. 12.
618,072. DURASONIC FOAMGLAS. Cl. 12.
618,076. NOMA SPRAY AND DESIGN. Cl. 13.
618,088. CASETTE. Cl. 13.
618,089. "ARTESIAN." Cl. 13.
618,092. TUFFBRAZE. Cl. 13.
618,096. WICHITA. Cl. 14.
618,099. KT–22. Cl. 15.
618,104. HCT HOMOGENIZED CIGARETTE TOBACCO AND DESIGN. Cl. 17.
618,111. CIROTEX. Cl. 18.
618,115. ARTH-RITE AND DESIGN. Cl. 18.
618,116. LITTLE SKIPPER. Cl. 19.
618,119. QTS. Cl. 19.
618,123. RUSTIKLEEN. Cl. 21.
618,134. STM CO. Cl. 23.
618,143. TOPMASTER. Cl. 23.
618,144. REPRESENTATION OF ROBOT AND TOOLS. Cl. 23.
618,147. ACME AND DESIGN OF EAGLE AND WREATH. Cl. 23.
618,152. AUDIOMAT. Cl. 26.
618,153. SUN-LITE. Cl. 26.
618,155. KIN AND DESIGN. Cl. 26.
618,156. OMNIMETER. Cl. 26.
618,161. TRANSTESTER AND DESIGN. Cl. 26.
618,162. RAY-TECTOR. Cl. 26.
618,168. CRUSADER. Cl. 26.
618,170. JARCO SERVICES IN MEASURE CONTROL AND DESIGN. Cl. 26.
618,178. MONOTYPE-HUEBNER. Cl. 26.
618,180. ITEMIZER. Cl. 26.
618,183. VP. Cl. 26.
618,185. OPTI-MAG. Cl. 26.
618,189. SOIL-O-CATOR. Cl. 26.
618,190. TERRY SCOPE. Cl. 26.
618,197. HAMILTON ILLINOIS. Cl. 27.
618,198. BAGA-BELL. Cl. 27.
618,200. PRAESENT. Cl. 27.
618,205. GOLDEN WEST. Cl. 28.
618,207. DIAMOND-GLO. Cl. 28.
618,209. SAVOY. Cl. 28.
618,212. FLOWER OF THE MONTH. Cl. 30.
618,213. DE SPHINX. Cl. 30.
618,214. MAROX. Cl. 31.
618,216. ESSCO GLAMOR-LEGS. Cl. 32.
618,217. NEW WALLACE NUTTING CHERRY HIGHLANDS. Cl. 32.
618,218. DRUM GLASSES. Cl. 33.
618,222. AQUA-TROL. Cl. 34.
618,224. FLAVOR GUARD. Cl. 34.
618,225. KROP KARE ETC. AND DESIGN. Cl. 34.
618,226. THERMADOR "SEVEN LEAGUES AHEAD" AND DESIGN. Cl. 34.
618,234. MAESTROPAQUE AND DESIGN. Cl. 37.
618,235. "ARTUS." Cl. 37.
618,236. KOIL MASTER AND DESIGN. Cl. 37.
618,239. NEU-BOND "STRONGPOINT" ETC. AND DESIGN. Cl. 37.
618,241. PERF-A-SEAL. Cl. 37.
618,244. PETITE AMERICAN AND DESIGN. Cl. 37.
618,253. PAPER-WEIGHT. Cl. 38.
618,254. SAMS AND DESIGN. Cl. 38.
618,261. RISQUE! Cl. 39.
618,262. ANN ADAMS. Cl. 39.
618,263. GOLDEN TEENS AND DESIGN. Cl. 39.
618,264. THE "JEUNE FILLE" LOOK A STANLEY BOUTIQUE AND DESIGN. Cl. 39.
618,270. COUNT DE CLAIRMONT AND DESIGN (FLEUR-DE-LIS). Cl. 39.
618,274. MOMBO-BRA. Cl. 39.
618,276. JACQUA NET. Cl. 39.
618,277. LIFTEASE. Cl. 39.
618,282. STAR-BABY. Cl. 39.
618,283. TAR-BABY. Cl. 39.
618,285. RUNNYMEDE R AND DESIGN. Cl. 39.
618,286. KNO-TWIST. Cl. 39.
618,289. SAN LOO AND DESIGN. Cl. 39.
618,293. PAINT-PUSHERS. Cl. 39.
618,298. CAREER MAKER. Cl. 39.
618,299. BOBBIE G. Cl. 39.
618,301. NYLO-GAITOR. Cl. 39.
618,303. "ROMPALONG." Cl. 39.
618,305. "LA REINE." Cl. 41.
618,306. SUN-EZE. Cl. 41.
618,307. THE CARWAN BLANKET. Cl. 42.
618,308. SHEER-O-LIN. Cl. 42.
618,309. FOUNDATION WORSTED MILLS. Cl. 42.
618,311. NYLCO. Cl. 42.
618,312. VIVASET. Cl. 42.
618,313. FIBERS OF THE WILD. Cl. 42.
618,322. CHAMPION. Cl. 42.
618,323. TRU-TONE. Cl. 42.
618,329. OLD INDIA. Cl. 45.
618,332. DUTCH GOLD AND DESIGN. Cl. 46.
618,344. QUIC-SAC AND DESIGN. Cl. 46.
618,356. TREASURE ISLE. Cl. 46.
618,357. COFFEE-VIT. Cl. 46.
618,359. ENR-G AND DESIGN. Cl. 46.
618,361. SAXON. Cl. 46.
618,365. START-TO-FINISH. Cl. 46.
618,366. GOLDEN GIRL. Cl. 46.
618,368. LUBNORMS. Cl. 50.
618,371. HANG-R-HUG. Cl. 50.
618,382. DUAL SHAKERS. Cl. 2.
618,384. VINYLUSTRE. Cl. 4.
618,388. NADEAU HAND-SKILL LOOMS. Cl. 23.
618,392. 35/8. Cl. 26.
618,393. SALES ACCOMPLISHMENT. Cl. 37.
618,395. THE BEST KIND. Cl. 51.

Erratum

In the OFFICIAL GAZETTE, issue of January 23, 1962, at page TM 151, under the heading "Trademark Registrations Canceled, Section 8" after "617,169," the mark should read *PALITON* and the class should read *Cl. 23.*

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

397,158. COW HEAD DESIGN. Cl. 46. 8–25–42. The Borden Company, New York, N.Y. Amended to appear:



569,549. SIER-BATH. Cl. 23. 1–20–53. Sier-Bath Gear and Pump Co., Inc., North Bergen, N.J. Amended: In the statement, column 1, lines 10 and 11, "gear pumps," and "screw pumps" are deleted.

609,086. HANSA AND DESIGN. Cl. 26. 7–19–55. Omiya Shashin Yohin Kabushiki-Kaisha, Toyko-to, Japan. Corrected: In the statement, column 1, line 3, "No. 3," should be deleted and *No. 23*, should be inserted.

616,132. CINELENS. Cl. 21. 11–15–55. Zenith Radio Corporation, Chicago, Ill. Amended: In the statement, column 2, lines 1 and 2, "television receiving sets and parts thereof, particularly" is deleted, and the drawing is amended to appear:

CINELENS

676,010. HERITAGE BY STETSON. Cl. 30. 3–24–59. Stetson China Company, Lincoln, Ill. Corrected: In the statement, column 1, line 1, "Co." should be deleted and *Company* should be inserted.

677,600. STETSON. Cl. 30. 4–28–59. Stetson China Company, Lincoln, Ill. Corrected: In the statement, column 1, line 1, "Co., Inc." should be deleted and *Company* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

638,568. CREME EMBRYONNAIRE AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 12–11–56. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

652,837. GERMICOLOR. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 10–8–57. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

657,250. MASKODERM AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 1–14–58. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

657,251. REGE-O-DERM AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 1–14–58. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

657,298. REPRESENTATION OF BOTTLE. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot, doing business as Dr. N. G. Payot. 1–14–58. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

657,290. REPRESENTATION OF A CONTAINER. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot, doing business as Dr. N. G. Payot. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

659,489. REPRESENTATION OF A JAR. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot, doing business as Dr. N. G. Payot. 3–11–58. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

659,909. REGE-O-SERUM ETC. AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 3–25–58. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement Vaduz, Liechtenstein.

671,316. CREME N. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 12–16–58. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

674,714. DR. N. G. PAYOT AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 2–24–59. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

674,715. DR. N. G. PAYOT AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 2–24–59. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

684,181. DR. N. G. PAYOT ETC. AND DESIGN. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 8–25–59. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

712,247. "HYDRAMNIOTIQUE." Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 3–7–61. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

712,248. AMNIODERM. Cl. 51. Societe Anonyme Laboratoires du Dr. N. G. Payot. 3–7–61. New Cert. Sec. 7(c) to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein.

INDEX OF REGISTRANTS

FEBRUARY 13, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Abbott Laboratories, North Chicago, Ill. 727,368, pub. 11–28–61. Cl. 6.
Abbott Laboratories, North Chicago, Ill. 727,552, pub. 11–28–61. Cl. 44.
Abercrombie & Fitch Co., New York, N.Y. 727,360, pub. 11–28–61. Cl. 3.
Acerola Corp., The: *See*— Cerojel Products, Inc.
Adams, Ann, Knitwear, Inc., New York, N.Y. 618,262, canc. Cl. 39.
Aeroplastics Corp., Venice, Calif. 727,435, pub. 11–28–61. Cl. 22.
Alrad Corp., The, Philadelphia, Pa. 727,424, pub. 11–28–61. Cl. 21.
Altec Lansing Corp., Anaheim, Calif. 727,427, pub. 11–28–61. Cl. 21.
Altman, B., & Co., New York, N.Y. 618,298, canc. Cl. 39.
American Agricultural Chemical Co., The, New York, N.Y. 727,374, pub. 11–28–61. Cl. 10.
American Colloid Co., Skokie, Ill. 727,356, pub. 11–28–61. Cl. 1.
American Encaustic Tiling Co., Inc., Lansdale, Pa. 727,375, pub. 11–28–61. Cl. 12.
American Lead Pencil Co., Hoboken, N.J., to Venus Pen & Pencil Corp., New York, N.Y. 391,281, ren. 2–13–62. Cl. 37.
American Lead Pencil Co., Hoboken, N.J., to Venus Pen & Pencil Corp., New York, N.Y. 391,498, ren. 2–13–62. Cl. 37.
American Mfg. Co., Inc., Cranston, R.I. 618,244, canc. Cl. 37.
American Musical Instrument Co.: *See*— Marrich, Fred.
American Tack Co., Inc., New York, N.Y. 727,393, pub. 11–28–61. Cl. 13.
American Trade Publishing Co., New York, N.Y. 727,525, pub. 11–28–61. Cl. 38.
Amsterdam Corp., New York, N.Y. 727,377, pub. 11–28–61. Cl. 12.
Amway Sales Corp., Ada, Mich. 727,367, pub. 11–28–61. Cl. 6.
Anderson Chemical Co., Litchfield, Minn. 727,580–1, pub. 11–28–61. Cl. 52.
Arlington Paint & Varnish Co.: *See*— Harris, J. E., Co., The.
Armco Steel Corp., Middletown, Ohio. 727,405, pub. 11–28–61. Cl. 13.
Artmark Associates, Inc., New York, N.Y. 618,214, canc. Cl. 31.
Asco Sound Corp., New York, N.Y. 618,152, canc. Cl. 26.
Atkinson, J. & E., Ltd., London, England. 391,712, ren. 2–13–62. Cl. 51.
Atlas Tool Co., Inc., Hillside, N.J. 727,436, pub. 11–28–61. Cl. 22.
Atomic Metals Corp., Washington, D.C. 618,162, canc. Cl. 26.
Augstein, S., & Co., Inc., College Point, N.Y. 727,537, pub. 11–28–61. Cl. 39.
Avalon Hill Co., The, Baltimore, Md. 727,442, pub. 11–28–61. Cl. 22.
Bak-Kraft Corp., Ltd., Los Angeles, Calif. 727,561, pub. 11–28–61. Cl. 46.
Bates, C. J., & Son, Inc.: *See*— Bates, Hamilton C.
Bates, Hamilton C., to C. J. Bates & Son, Inc., Chester, Conn. 392,791–2, ren. 2–13–62. Cl. 40.
Bates, Hamilton C., to C. J. Bates & Son, Inc., Chester, Conn. 392,794, ren. 2–13–62. Cl. 40.
Baumgartner Freres S.A., Grenchen, Switzerland. 618,198, canc. Cl. 27.
Bayer Co., Inc., The, to Sterling Drug Inc., New York, N.Y. 155,382, ren. 2–13–62. Cl. 18.
Bayer Co., Inc., The, to Sterling Drug Inc., New York, N.Y. 155,612, ren. 2–13–62. Cl. 18.
Bayuk Bros. Inc., Baltimore, Md., and Philadelphia, Pa., to Bayuk Cigars Inc., Philadelphia, Pa. 150,729–32, ren. 2–13–62. Cl. 17.
Bayuk Bros. Inc., Baltimore, Md., and Philadelphia, Pa., to Bayuk Cigars Inc., Philadelphia, Pa. 153,659, ren. 2–13–62. Cl. 17.
Bayuk Cigars Inc.: *See*— Bayuk Bros. Inc.
Beauty-Rama Corp., Chicago, Ill. 727,570–2, pub. 11–28–61. Cl. 51.
Begman, Lee, Inc., New York, N.Y. 618,301, canc. Cl. 39.
Beloff Sure Grip Hanger Clip Co., Meriden, Conn. 618,371, canc. Cl. 50.
Bendix Corp., The, Detroit, Mich. 727,492, pub. 8–1–61. Cl. 31.
Bermingham & Prossner Co., Chicago, Ill. 618,236, canc. Cl. 37.
Bernat, Emile, & Sons Co., Jamaica Plain, Mass. 727,550, pub. 11–28–61. Cl. 43.
Beskind, Sidney, d.b.a. The Tanophene Co., Miami Beach, Fla. 618,395, canc. Cl. 51.
Bethlehem Steel Co., Bethlehem, Pa. 727,389, pub. 11–28–61. Cl. 12.
Biflex Foundations, Inc., New York, N.Y. 618,261, canc. Cl. 39.
Bixby, Donald L.: *See*— Bixby, Kenneth R., and Donald L. Bixby.
Bixby, Kenneth R., and Donald L. Bixby, d.b.a. Ken Co., Galesburg, Ill. 727,381, pub. 11–28–61. Cl. 12.
Bolsey Corp. of America, New York, N.Y. 618,168, canc. Cl. 26.
Borden Co., The, New York, N.Y. 397,158. Am. 7(d). Cl. 46.
Borg-Warner Corp., Chicago, Ill. 727,378, pub. 11–28–61. Cl. 12.
Borg-Warner Corp., Chicago, Ill. 727,448, pub. 11–28–61. Cl. 23.
Brockway, Wilhelm W., Van Nuys, Calif. 727,496, pub. 11–28–61. Cl. 32.
Brown Citrus Machinery Corp., Whittier, Calif. 727,461, pub. 11–28–61. Cl. 23.
Buehler Corp., The, Indianapolis, Ind. 727,451, pub. 11–28–61. Cl. 23.
Buehler Ltd., Evanston, Ill. 727,452, pub. 11–28–61. Cl. 23.
Burke & James, Inc., Chicago, Ill. 727,471, pub. 5–23–61. Cl. 26.
Cadoro, New York, N.Y. 727,479, pub. 11–28–61. Cl. 28.
Calumet & Hecla, Inc., Calumet, Mich. 618,092, canc. Cl. 13.
Camille Designs, Inc., St. Louis, Mo. 618,289, canc. Cl. 39.
Cantrell & Cochrane Corp., New York, N.Y. 618,329, canc. Cl. 45.
Carlson Pharmaceuticals, Inc., Detroit, Mich. 618,115, canc. Cl. 18.
Carolina Underwear Co., Inc., Thomasville, N.C. 618,282–3, canc. Cl. 39.
Carrier Corp., Syracuse, N.Y. 727,489, pub. 11–28–61. Cl. 31.
Carrier Corp., Syracuse, N.Y. 727,491, pub. 11–28–61. Cl. 31.
Carter Products, Inc., New York, N.Y. 727,415, pub. 11–28–61. Cl. 18.
Carter-Waters Corp., The, Kansas City, Mo. 727,411, pub. 11–28–61. Cl. 18.
Carwan Woolen Corp., New York, N.Y. 618,307, canc. Cl. 42.
Case, W. A., and Son Mfg. Co., Buffalo, N.Y. 618,088, canc. Cl. 13.
Casey Games Corp., New York, N.Y. 727,439, pub. 11–28–61. Cl. 22.
Casting Materials Co. Inc., New Rochelle, N.Y. 727,349–50, pub. 6–13–61. Cl. 1.
Cellulose Products Corp., Milltown, N.J. 727,553, pub. 11–28–61. Cl. 44.
Celotex Corp., The, Chicago, Ill. 727,382, pub. 11–28–61. Cl. 12.
Central Chemical Corp., Hagerstown, Md. 727,369, pub. 11–28–61. Cl. 10.
Central Specialties Co.: *See*— Schaefer, Edward E.
Cero'el Products, Inc., Lakeland, Fla., from The Acerola Corp., Sabana Seca, Puerto Rico. 727,555, pub. 5–23–61. Cl. 46.
Charmglow Products: *See*— Koziol, Ann M.
Chattanooga Medicine Co., The, Chattanooga, Tenn. 394,564, ren. 2–13–62. Cl. 18.
Cherie Brassiere Co., Inc., Brooklyn, N.Y. 618,274, canc. Cl. 39.
Cherry-Burrell Corp., Cedar Rapids, Iowa, from Meyer-Blanke Co., St. Louis, Mo. 727,446, pub. 11–28–61. Cl. 23.
Chicago Rawhide Mfg. Co., Chicago, Ill. 727,418, pub. 11–28–61. Cl. 21.
Chiselli Bros., Inc., San Francisco, Calif. 618,366, canc. Cl. 46.
Clemens, George S., d.b.a. Clemens-Joyce, Chicago, Ill. 618,180, canc. Cl. 26.
Clemens-Joyce: *See*— Clemens, George S.
Coffee-Vit Products Inc., New York, N.Y. 618,357, canc. Cl. 46.
Cole of California, Inc., to Cole of California, Inc., Los Angeles, Calif. 394,575, ren. 2–13–62. Cl. 39.
Cole of California, Inc., to Cole of California, Inc., Los Angeles, Calif. 395,050, ren. 2–13–62. Cl. 39.
Colt's Patent Fire Arms Mfg. Co., Inc., Phoenix, Ariz. 727,440–1, pub. 11–28–61. Cl. 22.
Commonwealth Plastics Corp., Leominster, Mass. 727,400, pub. 11–28–61. Cl. 13.
Con-Lux Paint Corp., Metuchen, N.J. 727,409, pub. 11–28–61. Cl. 16.
Consolidated Business Systems, Inc., New Brunswick, N.J. 727,517, pub. 11–28–61. Cl. 37.
Con-Tex, Inc., Grand Rapids, Mich. 727,468, pub. 11–28–61. Cl. 24.
Continental Baking Co., Rye, N.Y. 727,563, pub. 11–28–61. Cl. 46.
Cornell-Dubilier Electric Corp., South Plainfield, N.J. 727,420, pub. 11–28–61. Cl. 21.
Crane Co., Chicago, Ill. 727,390, pub. 11–28–61. Cl. 13.
Crown Fabrics Corp., New York, N.Y. 618,308, canc. Cl. 42.
Crown Zellerbach Corp.: *See*— Silkiln Paper Corp.

Crown Zellerbach Corp., San Francisco, Calif. 727,357, pub. 11–28–61. Cl. 2.
Cuckler Steel Span Co., Monticello, Iowa. 727,376, pub. 11–28–61. Cl. 12.
Dan River Mills, Inc., Danville, Va. 727,542, pub. 11–28–61. Cl. 42.
Dan River Mills, Inc., Danville, Va. 727,546, pub. 11–28–61. Cl. 42.
Dansk Importing Co., Inc., Great Neck, N.Y. 727,396, pub. 11–28–61. Cl. 13.
Darling Valve & Mfg. Co., Williamsport, Pa. 154,914, ren. 2–13–62. Cl. 13.
Davis & Catterall, New York, N.Y. 618,312, canc. Cl. 42.
Denholm Seed Co., Los Angeles, Calif. 727,352, pub. 11–28–61. Cl. 1.
Diamond National Corp., New York, N.Y. 727,453, pub. 11–28–61. Cl. 23.
Division of The Oregon Worsted Co., Inc.: *See*— Foundation Worsted Mills.
Doering, A. L., Mfg. Corp., Bayside, N.Y. 727,421, pub. 11–28–61. Cl. 21.
Doeskin Products, Inc., New York, N.Y. 618,253, canc. Cl. 38.
Dougherty, J. J., Inc., Cincinnati, Ohio. 727,363, pub. 11–28–61. Cl. 4.
Dover Corp.: *See*— Peerless Mfg. Corp., Inc.
Drexel Furniture Co., Drexel, N.C. 618,217, canc. Cl. 32.
Du Barry of Hollywood, Inc., d.b.a. Du-Bon-Ette of Hollywood, Los Angeles, Calif. 727,536, pub. 11–28–61. Cl. 39.
Du-Bon-Ette of Hollywood: *See*— Du Barry of Hollywood, Inc.
Duluth Filter Co., Duluth, Minn. 727,485–6, pub. 8–1–61. Cl. 31.
Dynamatics, Inc., New Canaan, Conn. 727,366, pub. 11–28–61. Cl. 6.
Edio, Inc., San Francisco, Calif. 727,560, pub. 11–28–61. Cl. 46.
Edmont Mfg. Co., Coshocton, Ohio. 618,293, canc. Cl. 39.
Edmos Products Corp., Brooklyn, N.Y. 727,540, pub. 11–28–61. Cl. 42.
Electro-Optical Systems, Inc., Pasadena, Calif. 727,582, pub. 11–28–61. Cl. 100.
Elgin Knit Sportswear, Inc., New York, N.Y. 618,264, canc. Cl. 39.
Elgin National Watch Co., Elgin, Ill. 727,477, pub. 11–28–61. Cl. 27.
Elkhart Brass Mfg. Co., Inc., Elkhart, Ind. 727,403, pub. 11–28–61. Cl. 13.
Ember Box Fireplaces: *See*— Heldenbrand, Richard A.
Employers Overload Co., Minneapolis, Minn. 727,583, pub. 11–28–61. Cl. 101.
En-R-G Foods, Inc., Lancaster, Pa. 618,359, canc. Cl. 46.
Essex Wire Corp., Fort Wayne, Ind. 727,354, pub. 11–28–61. Cl. 1.
Faberge, Inc.: *See*— Faberge.
Faberge, Inc., d.b.a. Faberge, New York, N.Y. 727,576, pub. 11–28–61. Cl. 51.
Farah Mfg. Co., Inc., El Paso, Tex. 727,539, pub. 11–28–61. Cl. 39.
Feature Ring Co., Inc., New York, N.Y. 618,207, canc. Cl. 28.
Feinberg, Lester S., Newton Centre, Mass. 727,510, pub. 11–28–61. Cl. 35.
Feinpruf, Feinmess- und Prufgerate Gesellschaft mit beschrankter Haftung, Goettingen, Germany. 727,444, pub. 11–28–61. Cl. 23.
Fiber Glass Industries, Inc., Amsterdam, N.Y. 727,355, pub. 11–28–61. Cl. 1.
Filbert, J. H., Inc., Baltimore, Md. 727,564, pub. 11–28–61. Cl. 46.
Fine Sound, Inc., New York, N.Y. 618,185, canc. Cl. 26.
Florsheim Shoe Co., The, to International Shoe Co., d.b.a. The Florsheim Shoe Co., Chicago, Ill. 392,748, ren. 2–13–62. Cl. 39.
Fluid Dynamics Inc., New York, N.Y. 727,490, pub. 8–1–61. Cl. 31.
Foundation Worsted Mills, a Division of The Oregon Worsted Co., Inc., Portland, Oreg. 618,309, canc. Cl. 42.
Fredmar Builders Supply Co., Indianapolis, Ind. 618,071, canc. Cl. 12.
Geigy Chemical Corp., New York, N.Y. 618,044, canc. Cl. 6.
General Cigar Co., Inc., New York, N.Y. 618,104, canc. Cl. 17.
General Dynamics Corp.: *See*— Liquid Carbonic Co., The.
General Tours, Inc., New York, N.Y. 727,584, pub. 11–28–61. Cl. 105.
George Umbrella Co., Inc., New York, N.Y. 618,305, canc. Cl. 41.
Getz, William, Corp., The, Chicago, Ill. 727,591. Cl. 44.
Glen Raven: *See*— Glen Raven Knitting Mills, Inc.
Glen Raven Knitting Mills, Inc., Glen Raven, N.C. 727,528, pub. 11–28–61. Cl. 39.
Globe Union Inc., Milwaukee, Wis. 727,433, pub. 11–28–61. Cl. 21.
Golden Girl Frocks, Inc., New York, N.Y. 618,263, canc. Cl. 39.
Goldman, Bob, Sportswear, Inc., New York, N.Y. 618,299, canc. Cl. 39.
Goldman & Spitzer, Inc., New York, N.Y. 618,270, canc. Cl. 39.
Golub, Simon, & Sons Inc., Seattle, Wash. 727,480, pub. 11–28–61. Cl. 28.
Goodman, Edw. C., d.b.a. Neu-Bond Pencil Co., Birmingham, Ala. 618,239, canc. Cl. 37.
Gotham Chalkboard & Trim Co. Inc., New Rochelle, N.Y. 727,568, pub. 11–28–61. Cl. 50.
Grandin, D. H., Milling Co., Jamestown, N.Y. 618,365, canc. Cl. 46.
Green, Daniel, Co., Dolgeville, N.Y. 727,538, pub. 11–28–61. Cl. 39.
Greenwood Mills, Inc., New York, N.Y. 727,545, pub. 11–28–61. Cl. 42.
Gro-wel Fish-Ade Co., Inc., New York, N.Y. 727,487, pub. 11–28–61. Cl. 31.
Gustinettes, Inc., Long Island City, N.Y. 618,277, canc. Cl. 39.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 727,432, pub. 11–28–61. Cl. 21.
Halsey, Turner, Co., New York, N.Y. 618,052, canc. Cl. 7.
Hamilton Watch Co., Lancaster, Pa. 618,197, canc. Cl. 27.
Hand-Skill Looms, Inc., Woonsocket, R.I. 618,388, canc. Cl. 23.
Hardboard Fabricators, Inc., St. Louis, Mo. 727,506, pub. 11–28–61. Cl. 34.
Haried Co., The, d.b.a. Heat Pump Systems, Aurora, Ill. 727,509, pub. 11–28–61. Cl. 34.
Harmo Tire and Rubber Corp., Detroit, Mich. 727,511, pub. 11–28–61. Cl. 35.
Harris, J. E., Co., The, d.b.a. Arlington Paint & Varnish Co., Wooster, Ohio. 419,584, canc. Cl. 16.
Hassenfeld Bros., Inc., Central Falls, R.I. 727,443, pub. 11–28–61. Cl. 22.
Hatco Corp., Milwaukee, Wis. 727,508, pub. 11–28–61. Cl. 34.
Heat Pump Systems: *See*— Haried Co.
Heldenbrand, Richard A., d.b.a. Ember Box Fireplaces, Oklahoma City, Okla. 727,380, pub. 11–28–61. Cl. 12.
Hickok Mfg. Co. Inc., Rochester, N.Y. 618,209, canc. Cl. 28.
Holland-Hessol Co., Inc., New York, N.Y. 618,286, canc. Cl. 39.
Ho-Pet-Inc., d.b.a. Idaho Peat Co., Los Angeles, Calif. 618,061, canc. Cl. 10.
Hornaday, Thos F., Inc., Chicago, Ill. 618,143, canc. Cl. 23.
Huck Mfg. Co., Detroit, Mich. 727,397, pub. 11–28–61. Cl. 13.
Hucky Oil Co., Cody, Wyo. 727,387, pub. 11–28–61. Cl. 12.
Hydraulics Unlimited Mfg. Co., Eaton, Colo. 727,503, pub. 11–28–61. Cl. 34.
Hydraxtor Co., The, Skokie, Ill. 727,465, pub. 11–28–61. Cl. 24.
Hyland Products Co., Portland, Oreg. 618,382, canc. Cl. 2.
Idaho Peat Co.: *See*— Ho-Pet-Inc.
Independent Music Publishers, Inc., New York, N.Y. 618,234, canc. Cl. 37.
Insul-Coustic Corp., Maspeth, N.Y. 727,383, pub. 11–28–61. Cl. 12.
Intercity Oil Co., Philadelphia, Pa. 310,154, canc. Cl. 15.
International Minerals & Chemical Corp., Skokie, Ill. 727,351, pub. 11–28–61. Cl. 1.
International Minerals & Chemical Corp., Skokie, Ill. 727,371–3, pub. 11–28–61. Cl. 10.
International Shoe Co.: *See*— Florsheim Shoe Co., The.
Interstate Offset Products Co., Houston, Tex. 618,222, canc. Cl. 34.
Jarco Services Inc., Tulsa, Okla. 618,170, canc. Cl. 26.
Jay-Gee Fabrics, Inc., New York N.Y. 618,313, canc. Cl. 42.
Jerclaydon, Inc., Clifton, N.J. 727,483, pub. 11–28–61. Cl. 29.
Jetshaker, Inc., Sunnyvale, Calif. 727,450, pub. 11–28–61. Cl. 23.
Johnson & Johnson, New Brunswick, N.J. 727,484, pub. 11–28–61. Cl. 29.
Johnson, Stephens and Shinkle Shoe Co., St. Louis, Mo. 727,527, pub. 11–28–61. Cl. 39.
Johnson, Stewart H., d.b.a. Sales Accomplishment Co., Syracuse, N.Y. 618,393, canc. Cl. 37.
Jones, Paul A., d.b.a. Kiddie Brush & Toy Co., to Kiddie Brush and Toy Co., Inc., Jonesville, Mich. 394,239, ren. 2–13–62. Cl. 22.
Jones, Wilson, Co., Chicago, Ill. 727,518, pub. 12–5–61. Cl. 37.
Jura Elektroapparate-Fabriken L. Henzirohs A.G., Niederbuchsiten-Olten, Solothurn, Switzerland. 727,499–500, pub. 11–28–61. Cl. 34.
Kaynee Co., The, Cleveland, Ohio. 618,029, canc. Cl. 2.
Kayser-Roth Corp.: *See*— Mock, Judson, Voehringer Co. of New York, Inc.
Kearfott Semiconductor Corp., West Newton, Mass. 727,429, pub. 11–28–61. Cl. 21.
Ken Co.: *See*— Bixby, Kenneth R., and Donald L. Bixby.
Kiddie Brush and Toy Co., Inc.: *See*— Jones, Paul A.
Kingston Specialty Mfg. Co.: *See*— Wyrembek, Fred J.
Kleydorff, Ludwig V.: *See*— Zappia-Paradiso, S.A.
Koziol, Ann M., d.b.a. Charmglow Products, Antioch, Ill. 727,504, pub. 11–28–61. Cl. 34.
Kroehler Mfg. Co., Naperville, Ill. 727,495, pub. 11–28–61. Cl. 32.
Kunzelman, Charles, d.b.a. Sleeper Lounge Co., Los Angeles, Calif. 727,493, pub. 11–28–61. Cl. 32.
Laboratoires du Dr. N. G. Payot Etablissement: *See*— Societe Anonyme Laboratoires du Dr. N. G. Payot.
Lakeside Laboratories, Inc., The, Milwaukee, Wis., to Frederick Trout Co., Inc., St. Petersburg, Fla. 393,173, ren. 2–13–62. Cl. 18.
Lamy, C. Josef, G.m.b.H., Heidelberg, Germany. 618,235, canc. Cl. 37.
Lancaster County Dutch Gold Apiaries. 618,332, canc. Cl. 46.

Lanston Monotype Machine Co., Philadelphia, Pa. 618,178, canc. Cl. 26.
Lea & Perrins, Inc.: *See*— Lea & Perrins.
Lea & Perrins, Worcester, England, to Lea & Perrins, Inc., Fair Lawn, N.J. 21,208, ren. 2–13–62. Cl. 46.
Lear, Inc., Grand Rapids, Mich. 618,156, canc. Cl. 26.
Lee Rubber and Tire Corp.: *See*— Lee Tire & Rubber Co.
Lee Tire & Rubber Co., Township of Whitemarsh, Pa., to Lee Rubber and Tire Corp., Conshohocken, Pa. 150,448, ren. 2–13–62. Cl. 35.
Le Febure Corp., Cedar Rapids, Iowa. 725,519, pub. 11–28–61. Cl. 37.
Leipzig & Lippe, Inc., Yonkers, N.Y. 618,035, canc. Cl. 2.
Leon Chemical Industries, Inc., Grand Rapids, Mich. 727,408, pub. 5–16–61. Cl. 16.
Lewis, I., Cigar Mfg. Co., Newark, N.J., to I. Lewis Corp., East Orange, N.J. 153,227, ren. 2–13–62. Cl. 17.
Lewis, I., Corp.: *See*— Lewis, I., Cigar Mfg. Co.
Lidco, Inc., Freeport, N.Y. 727,505, pub. 11–28–61. Cl. 34.
Lincoln Electric Co., The, Cleveland, Ohio. 727,430, pub. 11–28–61. Cl. 21.
Linton Pencil Co., Assor. to Linton Pencil Co., Lewisburg, Tenn., to Venus Pen & Pencil Corp., New York, N.Y. 393,458, ren. 2–13–62. Cl. 37.
Linton Pencil Co., Lewisburg, Tenn., to Venus Pen & Pencil Corp., New York, N.Y. 391,494, ren. 2–13–62. Cl. 37.
Liquid Carbonic Co., The, to General Dynamics Corp., Chicago, Ill. 154,313, ren. 2–13–62. Cl. 6.
Loftus Engineering Corp., Pittsburgh, Pa. 727,507, pub. 11–28–61. Cl. 34.
Louisville Bedding Co., Inc., Louisville, Ky. 727,547, pub. 11–28–61. Cl. 42.
Lyon, Rene D., Co., Inc., New York, N.Y. 727,569, pub. 11–28–61. Cl. 50.
MacLaren, Albert S., Chagrin Falls, Ohio. 727,404, pub. 11–28–61. Cl. 13.
Maison Blanche Co., New Orleans, La. 175,946, canc. Cl. 46.
Manhattan Terrazzo Brass Strip Co., Inc., Norwalk, Conn. 394,808, ren. 2–13–62. Cl. 12.
Marchand, Charles, Co., The, New York, N.Y. 393,114, ren. 2–13–62. Cl. 51.
Maremont Automotive Products, Inc.: *See*— Maremont Corp.
Maremont Corp., from Maremont Automotive Products, Inc., Chicago, Ill. 727,416, pub. 1–3–61. Cl. 19.
Marmon-Herrington Co., Inc., Chicago, Ill. 727,460, pub. 11–28–61. Cl. 23.
Marrich, Fred, d.b.a. American Musical Instrument Co., Detroit, Mich. 727,515, pub. 11–28–61. Cl. 36.
Masonite Corp., Chicago, Ill. 727,586–8. Cl. 12.
Maureen Mfg. Co., Inc., Chicago, Ill. 618,303, canc. Cl. 39.
Mayner, J. R., and Co., Mansfield, Ohio. 618,225, canc. Cl. 34.
McColl, Harold D., d.b.a. McColl Industries Co., South Gate, Calif. 618,089, canc. Cl. 13.
McColl Industries Co.: *See*— McColl, Harold D.
McGraw-Edison Co., Chicago, Ill. 727,423, pub. 11–28–61. Cl. 21.
McKesson Laboratories: *See*— McKesson & Robbins, Inc.
McKesson & Robbins, Inc., d.b.a. McKesson Laboratories, New York, N. Y. 727,413, pub. 11–28–61. Cl. 18.
McKesson & Robbins, Inc., d.b.a. McKesson Laboratories, New York, N.Y. 727,557, pub. 11–28–61. Cl. 46.
McKesson & Robbins, Inc., New York, N.Y. 727,575, pub. 11–28–61. Cl. 51.
Meier, H. E., Praesent Watch Co. Ltd., Zurich, Switzerland. 618,200, canc. Cl. 27.
Mercury Tool and Machine Service, Waco, Tex. 727,417, pub. 11–28–61. Cl. 19.
Merit Mfg. Co., Inc., Central Falls, R.I. 727,472, pub. 11–28–61. Cl. 26.
Meyer-Blanke Co.: *See*— Cherry-Burrell Corp.
Milton (Leicester) Ltd., Leicester, England. 727,541, pub. 11–28–61. Cl. 42.
Minerva, Sociedad Anonima, Malaga, Spain. 150,477, ren. 2–13–62. Cl. 46.
Mock, Judson, Voehringer Co. of New York, Inc., Long Island City, to Kayser-Roth Corp., New York, N.Y. 391,651, ren. 2–13–62. Cl. 39.
Mohan's Ltd., Kowloon, Hong Kong. 727,548, pub. 11–28–61. Cl. 42.
Monadnock Paper Mills, Inc., Bennington, N.H. 727,523, pub. 11–28–61. Cl. 37.
Monostructure, Inc., Sarasota, Fla. 727,385, pub. 11–28–61. Cl. 12.
Moore, Howard N., Washington, D.C. 392,184, ren. 2–13–62. Cl. 38.
Moore Mfg. Inc., San Francisco, Calif. 727,513, pub. 11–28–61. Cl. 35.
Mulhollan, Paige E., Co., Inc., Fort Smith, Ark. 618,224, canc. Cl. 34.
Naamloze Vennootschap Kristal-, Glas- en Aardewerkfabrieken "de Sphinx" Voorheen Petrus Regout & Co., Maastricht, Holland. 618,213, canc. Cl. 30.
National Acme Co., The, Cleveland, Ohio. 618,147, canc. Cl. 23.
National Mfg. Co., Sterling, Ill. 727,395, pub. 11–28–61. Cl. 13.
National Steel Corp., Pittsburgh, Pa. 727,406, pub. 11–28–61. Cl. 14.
National Sure-Fit Quilting Co., Inc., New York, N.Y. 618,322, canc. Cl. 42.
Nelson, L. R., Mfg. Co., Inc., Peoria, Ill. 727,394, pub. 11–28–61. Cl. 13.
Neu-Bond Pencil Co.: *See*— Goodman, Edw. C.
Nice-Pak Products, Inc., New York, N.Y. 727,578, pub. 11–28–61. Cl. 51.
Noma Lites, Inc., New York, N.Y. 618,076, canc. Cl. 13.
Nordson Pharmaceutical Laboratories, Inc.: *See*— Purdue Frederick Co., The.
Northport Products Inc., Northport, N.Y. 618,025, canc. Cl. 2.
Norton Co., Worcester, Mass. 152,471, ren. 2–13–62. Cl. 23.
Nuclear Instrument and Chemical Corp., Chicago, Ill. 618,189, canc. Cl. 26.
Nysco Laboratories, Inc., Long Island City, N.Y. 727,359, pub. 11–28–61. Cl. 2.
Oldetyme Distillers, Inc., to Schenley Industries, Inc., New York, N.Y. 395,529, ren. 2–13–62. Cl. 49.
Old Town Corp., Brooklyn, N.Y. 727,524, pub. 11–28–61. Cl. 37.
Olin Mathieson Chemical Corp.: *See*— Squibb, E. R., & Sons.
Olin Mathieson Chemical Corp., East Alton, Ill. 727,358, pub. 11–28–61. Cl. 2.
Olin Mathieson Chemical Corp., New Haven, Conn. 618,048, canc. Cl. 6.
Omiya Shashin Yohin Kabushiki-Kaisha, Tokyo-to, Japan. 609,086, corr. Cl. 26.
Osnabrucker Kupfer- und Drahtwerk, Osnabruck, Germany. 727,398, pub. 11–28–61. Cl. 13.
Outserts, Inc., Scranton, Pa. 727,455, pub. 11–28–61. Cl. 23.
Overhead Door Corp., Hartford City, Ind. 727,384, pub. 11–28–61. Cl. 12.
Overseas Barters, Inc., New York, N.Y. 618,361, canc. Cl. 46.
Overseas Industries, Inc., Chicago, Ill. 727,466, pub. 11–28–61. Cl. 24.
P-C-S Mfg. Co., Tulsa, Okla. 727,551, pub. 11–28–61. Cl. 44.
PMS, Inc., New York, N.Y. 618,368, canc. Cl. 50.
Paner Manufacturers Co., Philadelphia, Pa. 618,241, canc. Cl. 37.
Paradiso: *See*— Zappia-Paradiso, S.A.
Parke, Davis & Co., Detroit, Mich. 618,111, canc. Cl. 18.
Parsons, A. J., Washington, Pa. 618,144, canc. Cl. 23.
Payne, Paula, Products Co., Charlotte, N.C. 727,574, pub. 11–28–61. Cl. 51.
Payot, Dr. N. G.: *See*— Societe Anonyme Laboratoires du Dr. N. G. Payot.
Pearson Pharmacal Co., Inc., Miami, Fla. 727,566–7, pub. 11–28–61. Cl. 46.
Peck Industries Inc., Flushing, N.Y. 727,521, pub. 11–28–61. Cl. 37.
Peck, S. A., & Co., Chicago, Ill. 727,481, pub. 11–28–61. Cl. 28.
Peerless Mfg. Corp., Inc., to Dover Corp., Louisville, Ky. 392,839, ren. 2–13–62. Cl. 34.
Penn Associates, Inc., Philadelphia, Pa. 727,549, pub. 11–28–61. Cl. 43.
Penn Ventilator Co. Inc., Philadelphia, Pa. 727,501, pub. 11–28–61. Cl. 34.
Perma-Rest Vault Co., Inc., Montgomery, Ala. 618,034, canc. Cl. 2.
Peters, Gordon, Co., Inc., New York, N.Y. 727,533–5, pub. 11–28–61. Cl. 39.
Pevsner, Leo, Chicago, Ill. 727,520, pub. 11–28–61. Cl. 37.
Pittsburgh Corning Corp., Pittsburgh, Pa. 618,072, canc. Cl. 12.
Pix Shoes, Miami, Fla. 727,532, pub. 11–28–61. Cl. 39.
Plasti-Kote, Inc., Cleveland, Ohio. 727,401, pub. 11–28–61. Cl. 13.
Poly-Sil, Inc., Pittsburgh, Pa. 727,379, pub. 11–28–61. Cl. 12.
Pres-On Abrasives, Inc., Addison, Ill. 727,362, pub. 11–28–61. Cl. 4.
Pro-Am Sportswear Corp., Dallas, Tex. 727,529, pub. 11–28–61. Cl. 39.
Productive Equipment Corp., Chicago, Ill. 727,445, pub. 11–28–61. Cl. 23.
Purdue Frederick Co., The, from Nordson Pharmaceutical Laboratories, Inc., New York, N.Y. 727,414, pub. 11–28–61. Cl. 18.
Query, Henry, Salem, Oreg. 618,119, canc. Cl. 19.
Quic Sac Service Store: *See*— Schultz, Leon H.
Quick-Set, Inc., Skokie, Ill. 618,392, canc. Cl. 26.
R.O.W. Window Sales Co., Ferndale, Mich. 727,386, pub. 11–28–61. Cl. 12.
Radio Corp. of America, to Radio Corp. of America, New York, N.Y. 152,961, ren. 2–13–62. Cl. 21.
Radio Industries, Inc., Des Plaines, Ill. 727,419, pub. 11–28–61. Cl. 21.
Railroad Accessories Corp., New York, N.Y. 727,422, pub. 11–28–61. Cl. 21.
Railroad Accessories Corp., New York, N.Y. 727,425, pub. 11–28–61. Cl. 21.
Rath Packing Co., The, Waterloo, Iowa. 727,579, pub. 11–28–61. Cl. 52.
Rawl Engineering & Mfg. Co. Inc., Providence, R.I. 618,123, canc. Cl. 21.
Red Kap Garment Co., d.b.a. Western Textile Products Co., St. Louis, Mo. 727,364, pub. 11–28–61. Cl. 5.
Refrigeration Research, Inc., Brighton, Mich. 727,488, pub. 11–28–61. Cl. 31.
Rema-Matic, Inc., New York, N.Y. 727,512, pub. 11–28–61. Cl. 35.
Resilio Press Pad Co., Chicago, Ill. 727,467, pub. 11–28–61. Cl. 24.
Rice, A. A., Inc., Bayside, N.Y. 727,402, pub. 11–28–61. Cl. 13.

Rieser Co., Inc., The: *See*—
Rieser Co., The.
Rieser Co., The, to The Rieser Co., Inc., New York, N.Y. 150,956, ren. 2–13–62. Cl. 40.
Rite-Form Corset Co., Inc., New York, N.Y. 618,311, canc. Cl. 42.
Ronthor Reiss Corp., New York, N.Y. 727,514, pub. 11–28–61. Cl. 35.
Roper, Geo. D., Corp., Kankakee, Ill. 727,502, pub. 11–28–61. Cl. 34.
Rulison, Earl W., d.b.a. Rulison Photo Products, Chicago, Ill. 618,155, canc. Cl. 26.
Rulison Photo Products: *See*—
Rulison, Earl W.
Runnymede Mills, Inc., Tarboro, N.C. 618,285, canc. Cl. 39.
Safeway Stores, Inc., Oakland, Calif. 727,558, pub. 11–28–61. Cl. 46.
Saint Louis Cristal de France, Inc., New York, N.Y. 618,218, canc. Cl. 33.
Sales Accomplishment Co.: *See*—
Johnson, Stewart H.
Sams, Howard W., & Co., Inc., Indianapolis, Ind. 618,254, canc. Cl. 38.
Samuel Stamping & Enameling Co., Chattanooga, Tenn. 727,498, pub. 11–28–61. Cl. 34.
Sanders, Morris, d.b.a. Superior Instrument Co., Hackensack, N.J. 727,426, pub. 11–28–61. Cl. 21.
Sandoz Chemical Works, Inc., New York, N.Y., to Sandoz, Inc., Hanover, N.J. 395,669, ren. 2–13–62. Cl. 18.
Sandoz, Inc.: *See*—
Sandoz Chemical Works, Inc.
Santa Barbara Coastal Lemon Co., Santa Barbara, Calif. 727,562, pub. 11–28–61. Cl. 46.
Saul, E. S., Seattle, Wash. 618,216, canc. Cl. 32.
Schaefer, Edward E., d.b.a. Central Specialties Co., Chicago, Ill. 727,469, pub. 11–28–61. Cl. 25.
Schenley Industries, Inc.: *See*—
Oldetyme Distillers, Inc.
Schenuit, Frank G., Rubber Co., The, Baltimore, Md. 727,590. Cl. 35.
Schultz, Leon H., d.b.a. Quic Sac Service Store, Magnolia, Ark. 618,344, canc. Cl. 46.
Science Kit, Inc., Tonawanda, N.Y. 727,473, pub. 11–28–61. Cl. 26.
Sears, Roebuck and Co., Chicago, Ill. 393,296, ren. 2–13–62. Cl. 32.
Sears, Roebuck and Co., Chicago, Ill. 727,361, pub. 11–28–61. Cl. 3.
Sears, Roebuck and Co., Chicago, Ill. 727,463–4, pub. 11–28–61. Cl. 23.
Sears, Roebuck and Co., Chicago, Ill. 727,497, pub. 11–28–61. Cl. 32.
Sears, Roebuck and Co., Chicago, Ill. 727,554, pub. 11–28–61. Cl. 44.
Sentry Mfg. Co., Kansas City, Mo. 727,459, pub. 11–28–61. Cl. 23.
Service Painting Corp., Milwaukee, Wis. 727,410, pub. 11–28–61. Cl. 16.
Shamokin Filler Co., Inc., Shamokin, Pa. 727,353, pub. 11–28–61. Cl. 1.
Shawinigan Resins Corp., Springfield, Mass. 727,407, pub. 11–28–61. Cl. 16.
Sier-Bath Gear and Pump Co., Inc., North Bergen, N.J. 569,549. Am. 7(d). Cl. 23.
Silklin Paper Corp., to Crown Zellerbach Corp., San Francisco, Calif. 392,177, ren. 2–13–62. Cl. 37.
Silver, A. L., Inc., Dallas, Tex. 727,530, pub. 11–28–61. Cl. 39.
Simco Co., The, Lansdale, Pa. 727,365, pub. 11–28–61. Cl. 6.
Skinner & Eddy Corp., Inc., to Treasure Isle, Inc., Seattle, Wash. 618,356, canc. Cl. 46.
Sleeper Lounge Co.: *See*—
Kunzelman, Charles.
Sleepmaster Products Co., Inc.: *See*—
Sleepmaster Products Co.
Sleepmaster Products Co., to Sleepmaster Products Co., Inc., Newark, N.J. 391,256, ren. 2–13–62. Cl. 32.
Smith, Alexander, Inc., Yonkers, N.Y. 618,323, canc. Cl. 42.
Smith Bros. of Port Washington, Inc., Port Washington, Wis. 392,169, ren. 2–13–62. Cl. 46.
Smith Furniture Mfg. Co., Waco, Tex. 727,494, pub. 11–28–61. Cl. 32.
Smith, S. R., Inc., Nashville, Tenn. 727,556, pub. 11–28–61. Cl. 46.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 638,568, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 652,837, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 657,250–1, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, d.b.a. Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 657,298–9, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, d.b.a. Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 659,489, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 659,909, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot. Etablissement, Vaduz, Liechtenstein. 671,316, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 674,714–15, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 684,181, new cert. Cl. 51.
Societe Anonyme Laboratoires du Dr. N. G. Payot, to Laboratoires du Dr. N. G. Payot Etablissement, Vaduz, Liechtenstein. 712,247–8, new cert. Cl. 51.
Societe Industrielle de Construction d'Apparells Mecano-Hydrauliques S.I.C.A.M., Lyon, France. 727,457, pub. 11–28–61. Cl. 23.
Socony Mobil Oil Co., Inc.: *See*—
Socony-Vacuum Oil Co., Inc.
Socony-Vacuum Oil Co., Inc., now by change of name, Socony Mobil Oil Co., Inc., New York, N.Y. 618,116, canc. Cl. 19.
Soren Toll Mfg. Co., Inc., Bridgeport, Conn. 618,134, canc. Cl. 23.
Southern States Cooperative, Inc.: *See*—
Southern States Marketing Cooperative, Inc.
Southern States Marketing Cooperative, Inc., to Southern States Cooperative, Inc., Richmond, Va. 394,600, ren. 2–13–62. Cl. 46.
Square D Co., Park Ridge, Ill. 727,428, pub. 11–28–61. Cl. 21.
Squibb, E. R., & Sons, to Olin Mathieson Chemical Corp., New York, N.Y. 393,969, ren. 2–13–62. Cl. 18.
Staley, A. E., Mfg. Co., Decatur, Ill. 727,449, pub. 11–28–61. Cl. 23.
Standard Knitting Mills, Inc., Knoxville, Tenn. 727,531, pub. 11–28–61. Cl. 39.
Standard Register Co., The, Dayton, Ohio. 727,516, pub. 11–28–61. Cl. 37.
Star Bedding Co., to Star Bedding Co., St. Louis, Mo. 153,538, ren. 2–13–62. Cl. 32.
State Mfg. Co., Los Angeles, Calif. 618,306, canc. Cl. 41.
Stauffer Chemical Co., Richmond, Calif. 727,388, pub. 11–28–61. Cl. 12.
Steelpix Mfg. Co., Orange, N.J. 727,454, pub. 11–28–61. Cl. 23.
Stein, Albert L., Atlanta, Ga. 618,032, canc. Cl. 2.
Steinert, M., & Sons Co., Inc.: *See*—
Steinert, M., & Sons Co.
Steinert, M., & Sons Co., to M. Steinert & Sons Co., Inc., Boston, Mass. 155,288, ren. 2–13–62. Cl. 36.
Sterling Drug Inc.: *See*—
Bayer Co., Inc., The.
Winthrop Chemical Co., Inc.
Stern, Aaron, Inc., New York, N.Y. 727,478, pub. 11–28–61. Cl. 27.
Stetson China Co., Lincoln, Ill. 676,010, cor. Cl. 30.
Stetson China Co., Lincoln, Ill. 677,690, cor. Cl. 30.
Stevens, J. P., & Co., Inc., New York, N.Y. 727,543–4, pub. 11–28–61. Cl. 42.
Stieff Co., The, Baltimore, Md. 727,482, pub. 11–28–61. Cl. 28.
Storey Imports Ltd., Vancouver, British Columbia, Canada. 618,212, canc. Cl. 30.
Straubel Paper Co., Green Bay, Wis. 727,522, pub. 11–28–61. Cl. 37.
Studio Girl-Hollywood, Inc., Glendale, Calif. 727,577, pub. 11–28–61. Cl. 51.
Superba Cravats, Inc., Rochester, N.Y. 727,526, pub. 11–28–61. Cl. 39.
Superior Instrument Co.: *See*—
Sanders, Morris.
Tanophene Co., The: *See*—
Beskind, Sidney.
Teleflex Inc., North Wales, Pa. 727,462, pub. 11–28–61. Cl. 23.
Terrytoons, Inc., New Rochelle, N.Y. 618,190, canc. Cl. 26.
Teweles, L., Seed Co., Milwaukee, Wis. 727,370, pub. 11–28–61. Cl. 10.
Thermador Electrical Mfg. Co., Inc., Los Angeles, Calif. 618,226, canc. Cl. 34.
Thomas & Betts Co., The, Elizabeth, N.J. 727,447, pub. 11–28–61. Cl. 23.
Thomas & Co., Inc., Seattle, Wash. 618,205, canc. Cl. 28.
Time Card Blotter, Inc., Wichita, Kans. 727,474, pub. 11–28–61. Cl. 27.
Transistor Products, Inc., Boston, Mass. 618,161, canc. Cl. 26.
Treasure Isle, Inc.: *See*—
Skinner & Eddy Corp., Inc.
Treesweet Products Co., Santa Ana, Calif. 727,565, pub. 11–28–61. Cl. 46.
Troop, Alexander E., d.b.a. Troop-Balas and Co., Philadelphia, Pa. 618,099, canc. Cl. 15.
Troop-Balas and Co.: *See*—
Troop, Alexander E.
Trout, Frederick, Co., Inc.: *See*—
Lakeside Laboratories, Inc., The.
True Temper Corp., Cleveland, Ohio. 617,785–6, canc. Cl. 22.
Tyler, W. S., Co., The, Cleveland, Ohio. 727,391, pub. 11–28–61. Cl. 13.
Union Carbide Corp., New York, N.Y. 727,399, pub. 11–28–61. Cl. 13.
United Paper Co., Atlanta, Ga., to United Paper Co., Tampa, Fla. 155,106, ren. 2–13–62. Cl. 37.
United Shoe Machinery Corp., Boston, Mass. 149,745, ren. 2–13–62. Cl. 23.
United States Playing Card Co., Cincinnati, Ohio. 155,547, ren. 2–13–62. Cl. 22.
Unitek Corp., Monrovia, Calif. 727,434, pub. 11–28–61. Cl. 21.
Van Vleet, J. M., trustee for The Kinder Co., South Milwaukee, Wis. 618,155, canc. Cl. 26.
Venus Pen & Pencil Corp.: *See*—
American Lead Pencil Co.
Linton Pencil Co.
Versailles Products Co., Versailles, Ky. 618,183, canc. Cl. 26.
Victor Mfg. & Gasket Co., Chicago, Ill. 727,589. Cl. 35.

Vimetal S.A., Geneva, Switzerland. 727,475–6, pub. 11–28–61. Cl. 27.
Viny Lustre, Inc., Newark, N.J. 618,384, canc. Cl. 4.
Virginia Valley Processors, Inc., Hinton, Va. 727,559, pub. 11–28–61. Cl. 46.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 727,412, pub. 9–29–59. Cl. 18.
Wells, S. C., & Co., Le Roy, N.Y. 395,652, ren. 2–13–62. Cl. 18.
Western Newell Mfg. Co., Freeport, Ill. 618,023, canc. Cl. 2.
Western Textile Products Co.: *See*—
Red Kap Garment Co.
Westherhead Co., The, Cleveland, Ohio. 727,456, pub. 11–28–61. Cl. 23.
Westinghouse Electric Corp., Pittsburgh, Pa. 727,431, pub. 11–28–61. Cl. 21.
Whiting & Davis Co., Plainville, Mass. 155,562, ren. 2–13–62. Cl. 28.
Wichita Falls Foundry & Machine Co., Wichita Falls, Tex. 618,096, canc. Cl. 14.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N.Y. 155,871, ren. 2–13–62. Cl. 18.
Wispese Corp., New York, N.Y. 618,276, canc. Cl. 39.
Wullschleger, August, Olten, Switzerland. 727,458, pub. 11–28–61. Cl. 23.
Wyrembek, Fred J., d.b.a. Kingston Specialty Mfg. Co., Chicago, Ill. 727,437, pub. 11–28–61. Cl. 22.
Yardley & Co. Ltd., London, England. 727,573, pub. 11–28–61. Cl. 51.
Youtharama, Havertown, Pa. 727,585, pub. 11–28–61. Cl. 107.
Zappia-Paradiso, S.A., Lugano, Switzerland, from Ludwig Van Kleydorff, d.b.a. Paradiso, Norwalk, Conn. 727,392, pub. 11–28–61. Cl. 13.
Zeiss Ikon A.G., Stuttgart, Germany. 727,470, pub. 11–28–61. Cl. 26.
Zenith Radio Corp., Chicago, Ill. 616,132. Am. 7(d). Cl. 21.
Zervochess Board Co.: *See*—
Zervopoulos, George D.
Zervopoulos, George D., d.b.a. Zervochess Board Co., El Paso, Tex. 727,438, pub. 11–28–61. Cl. 22.

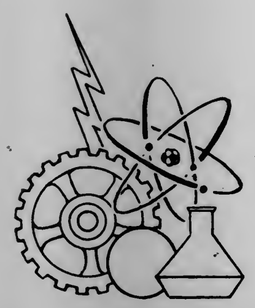
U.S. GOVERNMENT PRINTING OFFICE: 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

February 20, 1962 • Volume 775 • Number 3



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of February 20, 1962	615
New Applications Received	615
Notices	
Title 37—Patents, Trademarks, and Copyrights	615
Board of Appeals Decisions Rendered in the Month of January 1962	616
Disclaimers	616
Disclaimer and Dedication	616
Patents Available for Licensing or Sale	616
Condition of Patent Applications	617
Decisions in Patent and Trademark Cases	
In re Knapp-Monarch Company	619
Patent Suits	622
Reissue Patents Granted	623
Plant Patents Granted	624
Patents Granted	
General and Mechanical	625
Chemical	799
Electrical	843
Design Patents Granted	886
Index of Patentees	i
Classification of Patents	xxv

Trademarks

Issue of February 20, 1962	TM 81
Applications Filed	TM 81
Condition of Trademark Applications	TM 81
Notices	
Oppositions Under Section 13 of the Trademark Act of 1946	TM 81
Trademark Suits	TM 81
Marks	
Marks Published for Opposition (345)	TM 83
Registrations Issued	
Principal Register	TM 111
Supplemental Register	TM 115
Registrations Renewed	TM 118
Registrations Canceled	TM 118
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $2.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

PART 3—FORMS FOR PATENT CASES

MISCELLANEOUS AMENDMENTS

The following amendments are made, to take effect thirty days after publication in the Federal Register.

The text of amendments numbered 2 to 7 was published in the Federal Register for August 15, 1961 (26 F.R. 7550–1), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed amendments and the amendments are adopted after consideration of all the material submitted.

The text of a proposed amendment corresponding to that listed first was similarly published in the Federal Register for October 7, 1961 (26 F.R. 9514–5), and an oral hearing was held on November 20, 1961. Objections to the breadth of the proposal as published were considered with the result that it is narrowed to the amendment as adopted, substantially in accordance with suggestions which were made. As a result of this change, the manner of taking effect originally announced is considered unnecessary and the new provision may be applied to any decision in accordance with its terms.

1. Section 1.14 is amended by adding a new paragraph (d) as follows:

§ 1.14 *Patent applications preserved in secrecy.*

* * * * * * *

(d) Selected decisions of the Board of Appeals, or of the Commissioner, in abandoned applications not otherwise open to public inspection (paragraph (b) of this section) may be published or made available for publication at the Commissioner's discretion, unless the applicant timely presents sufficient reasons for not doing so. The applicant will be notified, through the attorney of record in the application file, when it is proposed to release such a decision and a time not less than thirty days set for presenting any such reasons. The fact that the subject matter of the application has not been made public in any manner, or that the same subject matter is being prosecuted in a pending application, will be considered sufficient reason for not releasing the decision if the applicant so requests unless the text of the decision contains no description of such subject matter. Other reasons presented will be duly considered.

2. Paragraph (a) of § 1.203 is amended by cancelling the last sentence and inserting a sentence in lieu thereof; as amended paragraph (a) reads as follows:

§ 1.203 *Preparation for interference between applications; suggestion of claims for interference.*

(a) Before the declaration of interference, it must be determined that there is common patentable subject matter in the cases of the respective parties, patentable to each of the respective parties, subject to the determination of the question of priority. Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation.

3. Paragraph (a) of § 1.232 is amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form." and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)." As amended, paragraph (a) reads as follows:

§ 1.232 *Motions to dissolve.*

(a) Motions to dissolve an interference may be brought on the ground (1) that there has been such informality in declaring the same as will preclude the proper determination of the question of priority of invention, or (2) that the claims forming the counts of the interference are not patentable, or are not patentable to a particular applicant, while being patentable to another party, or (3) that a particular party has no right to make the claims, or (4) that there is no interference in fact if the interference involves a design or plant patent or application, or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a).

4. Paragraph (d) of § 1.233 is amended to read as follows:

§ 1.233 *Motions to amend.*

* * * * * * * *

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

5. Section 1.235 is amended to read as follows:

§ 1.235 *Motions relating to burden of proof.*

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the

New Applications Received During December 1961

Patents	7,187
Designs	373
Plant Patents	8
Reissues	19
Total	7,587

Issue

Patents	983	No. 3,021,525 to No. 3,022,507, incl.
Designs	46	No. 192,239 to No. 192,284, incl.
Plant Patents	1	No. 2,131
Reissues	4	No. 25,124 to No. 25,127, incl.
Total	1,034	

filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration (see § 1.224).

6. Paragraph (g) of § 1.341 is amended by cancelling "in which he served, on the date he left said division" and inserting in lieu thereof "during his period of service therein". As amended, paragraph (g) reads as follows:

§ 1.341 *Registration of attorneys and agents.*

* * * * * * *

(g) *Former examiners.* No person who has served in the examining corps of the Patent Office will be registered after termination of his services, nor, if registered before such service, be reinstated, unless he undertakes (1) not to prosecute or aid in any manner in the prosecution of any application pending in any examining division during his period of service therein; and (2) not to prepare or prosecute nor to assist in any manner in the preparation or prosecution of any application of another filed within two years after the date he left such division, and assigned to such division, without the specific authorization of the Commissioner. Associated and related classes in other divisions may be required to be included in the undertaking or designated classes may be excluded. In case application for registration or reinstatement is made after resignation from the Office, the applicant will not be registered, or reinstated, if he has prepared or prosecuted, or assisted in the preparation or prosecution of any such application as indicated in this paragraph.

7. Section 3.47 is amended by changing the part of the form following the subheading "Proof of Service". As amended § 3.47 reads as follows:

§ 3.47 *Interference; notice of taking testimony.*

_____ v. _____ } Interference No. _____

_____, 19____

_____
(Name of opposing attorney)

_____
(Address of opposing attorney)

SIR: You are hereby notified that on _____, 19____, at ____ o'clock in the forenoon at the office of _____, _____ Street, _____, _____, I shall proceed to take testimony on behalf of the party _____ in the above identified interference.

The witnesses to be examined are:

_____ (Name of witnesses)	_____ (Residence of witnesses)
_____	_____
_____	_____

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

_____
(Signature of attorney)

PROOF OF SERVICE

_____, 19____

I hereby certify that on _____, 19____, I served a copy of the foregoing notice of taking testimony upon _____, the attorney for the party _____, by mailing a copy thereof to him at his address as set out in the notice.

_____
(Signature of attorney)

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6. Interprets or applies sec. 1, 66 Stat. 801; 35 U.S.C. 122, 135)

DAVID L. LADD,
Commissioner of Patents.

Approved:

HICKMAN PRICE,
Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 62-915; Filed, Jan. 26, 1962; 8:46 a.m.]

Published in 27 F.R. 829, 830.

Board of Appeals Decisions Rendered in the Month of January 1962

Examiner affirmed	440
Examiner affirmed in part	70
Examiner reversed	92
Total	602

Disclaimers

2,844,602.—*Howard J. Ringold* and *George Rosenkranz*, Mexico City, Mexico. 4-METHYL TESTOSTERONE COMPOUNDS. Patent dated July 22, 1958. Disclaimer filed Jan. 11, 1962, by the inventors; the assignee, *Syntex S.A.*, assenting.

Hereby enter this disclaimer to claims 7, 8, and 10 of said patent.

2,855,750.—*Hans Alwin Schrenk*, Arnhem, *Pieter van Dijk*, Velp, and *James Watt Ijsbrand Heijnis*, Arnhem, Netherlands. THREAD TWISTING DEVICE. Patent dated Oct. 14, 1958. Disclaimer filed Jan. 12, 1962, by the assignee, *American Enka Corporation*.

Hereby enters this disclaimer to claims 15 and 16 of said patent.

Disclaimer and Dedication

2,825,668.—*Ronald B. Howes* and *Robert F. Gill, Jr.*, Cincinnati, Ohio. PROCESS OF MAKING A PLATE OXIDE RECTIFIER. Patent dated Mar. 4, 1958. Disclaimer and Dedication filed Dec. 28, 1961, by the assignee, *Jack F. Koons, Jr.*

Hereby disclaims and dedicates to the public the entire remaining term of said patent.

Patents Available for Licensing or Sale

2,939,947. Utility Pocket Level. Edward H. Schultz, 113 S. 7th St., Buffalo, Minn.

2,991,038. Inter-Locking Shelving Bracket. Ralph Vitiello, Newark, N.J. Correspondence to: Richards & Geier, 274 Madison Ave., New York 16, N.Y.

2,997,285. Equipment for Producing Bubble Bath. Emma Lehmann, Erlangen, Germany. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

3,015,274. Model Rocket and Parachute Assembly. Edward F. Papesh, 1504 Theodore St., Joliet, Ill.

3,015,336. Vacuum Hair Cutting Gauge. Jesse W. Caples, R.D. #2, Old Lyme, Conn.

3,016,872. Fire Alarm Sticker. Mrs. Vira Hughey, 502 NE. 5th St., Stigler, Okla.

Fox Products Co., 4720 N. 18th St., Philadelphia 14, Pa., is prepared to grant licenses under the following 5 patents. Correspondence to the company, Attention: Mr. J. B. Godshalk, President.

2,783,541. Gauging Apparatus.

2,802,182. Current Density Responsive Apparatus.

2,892,906. Program Switching Means.

2,978,633. Electrical Control Systems.

2,999,973. Transformer Apparatus.

CONDITION OF PATENT APPLICATIONS AS OF DECEMBER 31, 1961

Total number of pending applications (excluding Designs)	195,563
Total number of pending Design applications	5,704
Total number of applications awaiting action (excluding Designs)	96,342
Total number of Design applications awaiting action	1,854
Date of oldest new application	Sept. 23, 1960
Date of oldest amended application	Sept. 12, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	4-28-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-29-61	5-18-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	1-23-61	1-5-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-16-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-20-61	2-13-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	5-16-61	5-1-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-17-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	2-6-61	1-30-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-5-61	12-14-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-27-60	1-9-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-23-60	11-4-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-30-60	1-4-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	11-21-60	11-23-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-3-61	4-28-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	2-10-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-17-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-27-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-31-61	6-5-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	4-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	2-1-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-3-61	2-1-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders: Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	1-6-61	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	5-9-61	4-26-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	12-1-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	2-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-8-61	3-30-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	1-9-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-30-60	1-16-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	12-16-60	12-16-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-23-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	1-6-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	12-12-60	12-8-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-23-60	9-12-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-10-61	5-8-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-2-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	4-3-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-1-60	11-4-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-27-61	1-16-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-24-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	12-1-60	12-1-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-22-61	5-29-61
53. (IV) NINAS, G. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-16-61	4-7-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-20-60	11-1-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-19-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	1-9-61	1-6-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	11-9-60	12-9-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-4-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	12-23-60	12-2-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-13-61	4-27-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus	1-30-61	1-6-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-27-60	12-14-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	1-9-61
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	11-3-60	11-4-60
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-5-60	10-3-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-28-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	1-24-61	1-23-61
81. (III) MONCURE, J. A., Industrial Arts	8-30-61	8-23-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-24-61	9-1-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	12-14-60	12-19-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	7-20-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	2-8-61	2-1-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-13-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during February 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1963*.

Patents.....Numbers 2,368,613 to 2,370,612 inclusive
Plant Patents.....Numbers 649 to 651 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE KNAPP-MONARCH COMPANY

No. 6726. Decided December 18, 1961

[—CCPA—; —F.2d—; 132 USPQ 6]

1. TRADEMARKS—CONFUSING SIMILARITY—"SPARKLET" SUPERIMPOSED UPON ELONGATED "S" WITH ASTERISK-LIKE SYMBOL AND "SPARKLETS" FOR BAR ACCESSORIES.

Upon reviewing the refusal to register appellant's composite mark consisting of the word "Sparklet" superimposed upon an elongated "S" with a stylized symbol used like an asterisk after the letter "t," for electric drink blenders, in view of prior registrations of "Sparklets," for compressed carbonic acid gas and for covered siphons and bulbs or capulses for containing compressed or liquified gas, *Held* that "* * * we find that appellant's mark is not sufficiently different from the reference marks to prevent the likelihood of confusion or mistake or the deception of purchasers" and that "Neither the addition of the stylized figure of a 'sparkle' over the last letter, nor the use of the singular form of the word 'sparklet,' nor the use of the elongated background 'S' avoids the similarities in appearance, sound, and meaning of the identical word 'Sparklet' found in both reference registrations and in applicant's mark."

2. SAME—SAME—PATENT OFFICE CLASSIFICATION IMMATERIAL.

"The Patent Office classification of particular goods is immaterial in determining the likelihood of confusion or mistake or deception of purchasers as to source or origin of the goods."

3. SAME—SAME—GOODS—BAR ACCESSORIES—EVIDENCE—JUDICIAL NOTICE.

Held that it is a matter of common knowledge that electric drink blenders, compressed carbonic acid gas, and covered siphons and bulbs or capsules for containing compressed or liquefied gas are used as "bar accessories," and are sold in similar trade channels to the same class of purchasers; and *Held* that the "Trademark Trial and Appeal Board properly took judicial notice that such goods are sold in common trade channels."

4. EVIDENCE—JUDICIAL NOTICE.

"Judicial notice permits proof by evidence to be dispensed with where common knowledge supports the truth of a proposition. Judicial notice also may be taken of facts 'though they are neither actually notorious nor bound to be judicially known, yet they would be capable of such instant and unquestionable demonstration, if desired, that no party would think of imposing a falsity on the tribunal in the face of an intelligent adversary.' But a party 'is not prevented from disputing the matter by evidence, if he believes it disputable.'"

5. TRADEMARKS—EVIDENCE—JUDICIAL NOTICE.

"Factual matters of which judicial notice is taken can be challenged by production of evidence to the contrary. If, therefore, appellant * * * wishes to challenge the truth of the matters judicially noted by the Examiner and the Trademark Trial and Appeal Board, he must challenge it by presenting evidence to the contrary. * * * In the absence of such evidence, the Board's finding, based on its judicial notice of the fact that the goods are sold in the same trade channels, is conclusive of the issue here."

6. SAME—CONFUSING SIMILARITY—"SPARKLET" SUPERIMPOSED UPON ELONGATED "S" WITH ASTERISK-LIKE SYMBOL AND "SPARKLETS" FOR BAR ACCESSORIES—SECTION 7(b).

"Appellant * * * contends that its Registration No. 669,376 of November 4, 1958, of the composite mark 'Sparklet' and design for 'bar accessory kits' was improperly ignored by the Examiner and the Board in refusing the registration here in issue. Appellant asserts that section 7(b) of the Trademark Act of 1946 (15 U.S.C. 1057(b)) raises a statutory presumption that the registered mark is dissimilar to other registered marks for similar goods. Based upon this assertion, appellant contends that the owner of the registered mark is entitled to the benefit of any reasonable doubt as to the registrability of the same or a closely similar mark upon a subsequent application to register.

Even if we accept this contention, it does not help appellant for there is no reasonable doubt in this case. Appellant's Registration No. 669,376, as prima facie evidence under section 7(b) of the Trademark Act of 1946, is insufficient to rebut the finding of likelihood of confusion, mistake or deception of purchasers based on the common knowledge, judicially noticed and relied upon by the Examiner, the Board and this court, that electric drink blenders and the reference goods are sold to the same classes of purchasers and in the same trade channels."

APPEAL from the Patent Office. Serial No. 64,308.

AFFIRMED.

George B. Newitt (*Norman Lettvin*, of counsel) for appellant.

Clarence W. Moore (*George C. Roeming*, of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

Appellant filed application Serial No. 64,308 on December 15, 1958 for registration on the Principal Register of a composite mark consisting of the word "Sparklet" superimposed upon an elongated "S" with a stylized symbol (which appellant calls a "sparkle") used like an asterisk after the letter "t," thus, "Sparklet*," for electric drink blenders. Registration of the mark was refused because of prior registrations of the mark "Sparklets" for "compressed carbonic acid gas" (Registration No. 30,214) and "Sparklets" for "covered siphons and bulbs or capsules for containing compressed or liquified gas" (Registration No. 318,546).

The sole issue is whether appellant is entitled to register its mark in view of the provisions of section 2(d) of the Trademark Act of 1946 (15 U.S.C. 1052). Resolution of this issue requires a determination of whether the mark for which registration is sought so resembles the marks previously registered as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers.

Appellant asserts (1) that no confusion or deception of purchasers is likely since the reference marks are different from appellant's mark, and (2) that there is no likelihood of confusion or deception of purchasers since electric drink blenders and the goods of the reference registrations are different.

[1] On appellant's first assertion, we find that appellant's mark is not sufficiently different from the reference marks to prevent the likelihood of confusion or mistake or the deception of purchasers. Neither the addition of the stylized figure of a "sparkle" over the last letter, nor the use of the singular form of the word "sparklet," nor the use of the elongated background "S" avoids the similarities in appearance, sound, and meaning of the identical word "Sparklet" found in both reference registrations and in applicant's mark.

Appellant stresses differences in the goods to which its mark and the reference marks are applied and points out that such goods are classified in different Patent Office classifications. However, the marks when used on the goods of the respective parties would indicate to the average purchaser a common source or origin of all goods on which the marks are used. [2] The Patent Office classification of particular goods is immaterial in determining the likelihood of confusion or mistake or deception of purchasers as to source or origin of

the goods. Rules of Practice in Trademark Cases, Rule 2.85; section 30 of the Trademark Act of 1946 (15 U.S.C. 1112).

[3] It is a matter of common knowledge that electric drink blenders and the reference registration goods are used as "bar accessories," and are sold in similar trade channels to the same class of purchasers. The Trademark Trial and Appeal Board properly took judicial notice that such goods are sold in common trade channels. See *In re Malcolm*, 29 CCPA 1145, 129 F.2d 529, 54 USPQ 235.

[4] Judicial notice permits proof by evidence to be dispensed with where common knowledge supports the truth of a proportion.[1] Judicial notice also may be taken of facts "though they are neither actually notorious nor bound to be judicially known, yet they would be capable of such instant and unquestionable demonstration, if desired, that no party would think of imposing a falsity on the tribunal in the face of an intelligent adversary."[2] But a party "is not prevented from disputing the matter by evidence, if he believes it disputable."[3]

[5] Factual matters of which judicial notice is taken can be challenged by production of evidence to the contrary. If, therefore, appellant here wishes to challenge the truth of the matters judicially noted by the Examiner and the Trademark Trial and Appeal Board, he must challenge it by presenting evidence to the contrary. The record does not show any such evidence. In the absence of such evidence, the Board's finding, based on its judicial notice of the fact that the goods are sold in the same trade channels, is conclusive of the issue here.

[6] Appellant also contends that its Registration No. 669,376 of November 4, 1958, of the composite mark "Sparklet" and design for "bar accessory kits" was improperly ignored by the Examiner and the Board in refusing the registration here in issue. Appellant asserts that section 7(b) of the Trademark Act of 1946 (15 U.S.C. 1057(b)) raises a statutory presumption that the registered mark is dissimilar to other registered marks for similar goods. Based upon this assertion, appellant contends that the owner of the registered mark is entitled to the benefit of any reasonable doubt as to the registrability of the same or a closely similar mark upon a subsequent application to register. Even if we accept this contention, it does not help appellant for there is no reasonable doubt in this case. Appellant's Registration No. 669,376, as prima facie evidence under section 7(b) of the Trademark Act of 1946, is insufficient to rebut the finding of likelihood of confusion, mistake, or deception of purchasers based on the common knowledge, judicially noticed and relied upon by the Examiner, the Board, and this court, that electric drink blenders and the reference goods are sold to the same classes of purchasers and in the same trade channels.

The decision of the Trademark Trial and Appeal Board is affirmed.

AFFIRMED.

WORLEY, *Chief Judge*, concurs in result.

[1] Wigmore on Evidence, 3d edition (1940), vol. IX, sec. 2565.
[2] Wigmore on Evidence, 3d edition (1940), vol. IX, sec. 2571(3).
[3] Wigmore on Evidence, 3d edition (1940), vol. IX, sec. 2567.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,466,311, W. C. Hall, Apparatus for preventing radio interference, **filed** July 8, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1099. *Anslat, Incorporated* v. *The Forest Electric Company*. Patent held valid and infringed Nov. 24, 1961.

2,563,794, Rickes and Wood, Vitamin B_{12}; **2,703,302**, same, Vitamin B_{12}. Active composition and process of preparing same, **filed** Dec. 5, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1541/61, *Merck & Co., Inc.* v. *McGuff Sales Co., Inc. et al.*

2,606,601, E. Saarinen, Chair having a backrest in the form of a shell-like body; **Des. 158,508**, same, Chair or the like, **filed** Dec. 8, 1961, D.C., S.D.N.Y., Doc. 61/4364, *Knoll Associates Inc.* v. *Bright Chair Company, Inc.*

2,618,311, E. M. Parker, Manufacture of laminated furring nail spacers, **filed** Jan. 19, 1960, D.C., N.D. Calif. (San Francisco), Doc. 38/846, *Wire Specialties Company* v. *Hoffler Wire Products Company*. Injunction granted Dec. 12, 1961.

2,672,770, E. W. Buck, Electro-magnetic drill unit, **filed** Dec. 7, 1961, D.C., N.D. Calif. (San Francisco), Doc. 40/375, *Buck Manufacturing Company* v. *Magnetic Tool Company*.

2,698,031, T. Primich, Progressive lock seam for sheet metal pipes, **filed** Dec. 5, 1961, D.C., S.D. Ill. (Peoria), Doc. P-2490, *Products Research and Development Corporation* v. *Champion Furnace Pipe Co. et al.*

2,703,302. (See 2,563,794.)

2,737,719, M. R. Ember et al., Cutting device, **filed** Oct. 10, 1960, D.C., S.D.N.Y., Doc. 60/3932, *National & Transcontinental Trading Corporation* v. *Washington General Trading Company et al.* Stipulation and order of discontinuance Jan. 24, 1961.

2,741,966, A. C. Bernstein, Intercommunication system, **filed** Dec. 2, 1958, D.C., S.D.N.Y., Doc. 140/255, *Du Kane Corporation* v. *Executone, Inc.* Stipulation and order dismissing complaint and counterclaim Dec. 13, 1961.

2,753,277, V. L. Smithers, Absorbent material for floral arrangements, **filed** Dec. 13, 1961, D.C., S.D. Ill. (Peoria), Doc. P-2492, *The V. L. Smithers Manufacturing Company* v. *Illinois Wholesale Florist*.

2,754,240, W. B. Kinney, Casein adhesive composition and laminated structure utilizing same, **filed** Dec. 7, 1961, D.C., N.D. Ohio (Cleveland), Doc. 37/401, *The Borden Company* v. *General Latex & Chemical et al.*

2,773,268, Hurko and Robare, Flush valve, **filed** Dec. 13, 1961, D.C. Del. (Wilmington), Doc. 2404, *American Radiator & Standard Sanitary Corporation* v. *Universal Rundle Corporation*.

2,775,659, E. K. Nelson, Cascade circuits, **filed** June 6, 1957, D.C., S.D.N.Y., Doc. 121/157, *Standard Coil Products Co., Inc.* v. *General Electric Company*. Decree dismissing complaint Dec. 7, 1961.

2,795,682, D. Knoll, Electric heaters, **filed** Aug. 22, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1324, *Berko Electric Manufacturing Corporation* v. *Allied Precision Industries, Inc.* Claims 5, 8, 9 and 13 of patent held valid and infringed Nov. 21, 1961.

2,818,101, R. K. Boyer, Valve stem for tubeless tires, **filed** May 20, 1960, D.C., S.D.N.Y., Doc. 60/2035, *Dill Manufacturing Company* v. *Chieftain Automotive Products Corporation et al.* Stipulation and order of dismissal with prejudice as to all infringements by defendants occurring prior to June 1, 1961.

2,820,910, R. Aronstein, Optical device for therapeutic and other purposes, **filed** Nov. 12, 1959, D.C., S.D.N.Y., Doc. 152/345, *Transmirra Products Corporation* v. *The Dow Chemical Company*. Stipulation and order of dismissal Dec. 5, 1961.

2,851,532, M. G. Crosby, Multiplex communication system, **filed** Sept. 6, 1961, D.C., S.D.N.Y., Doc. 61/3165, *Crosby Teletronics Corporation* v. *General Electric Company*. Voluntary dismissal Dec. 8, 1961.

2,857,872, E. M. Usab, Floating wharf structure made of concrete float units; **Re. 24,837**, same, **filed** Dec. 1, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1529/61-Y, *Ernest M. Usab et al.* v. *RIHA Construction Company et al.*

2,944,931, C. H. C. Yang, Sanitary paper and process of making same, **filed** Dec. 1, 1961, D.C., N.D. Tex. (Dallas), Doc. 8990, *Vanity Fair Paper Mills, Inc.* v. *Lefevere & Clark*.

2,957,793, J. W. Dickey, Method of laminating polyurethane foam, **filed** Dec. 5, 1961, D.C.N.J. (Newark), Doc. 1033/61, *Reeves Brothers, Inc.* v. *Allied Polymer Corporation et al.*

2,959,555, Martin and Abel, Copper and iron containing a scale removal from ferrous metal, **filed** Dec. 8, 1961, D.C., W.D.N.Y. (Buffalo), Doc. 9475, *Dow Chemical Company* v. *Solvent Service Inc. et al.*

2,984,923, R. L. Mitchell, Coin mat with holder for receiving advertising display; **Des. 188,697**, same, Combined coin mat and advertising display, **filed** Dec. 8, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1556/61-Y, *Mitchell Rubber Products, Inc.* v. *Ryan Lighter Company*.

2,995,756, H. B. Latina, Baseball glove; **2,995,757**, same, Baseball glove construction, **filed** Dec. 7, 1961, D.C., S.D.N.Y., Doc. 61/4328, *A. G. Spalding & Bros., Inc.* v. *A. J. Hollander & Co., Inc.*

2,995,757. (See 2,995,756.)

3,000,527, W. C. Jennings, Handle for containers, **filed** Dec. 11, 1961, D.C., N.D. Okla. (Tulsa), Doc. 5307, *Sun Industries, Inc.* v. *Plastic Molding Company, Inc.*

3,002,174, L. J. Rafter, Display lighting apparatus, **filed** Dec. 6, 1961, D.C.N.J. (Trenton), Doc. 1038/61, *George L. Olson* v. *Ameida Corporation*.

3,006,173, F. R. Shoof, Yarn clamping and cutting means and method for knitting machines, **filed** Dec. 7, 1961, D.C., M.D.N.C. (Greensboro), Doc. C-172-G-61, *Floyd R. Shoof et al.* v. *Russell Hosiery Mills, Inc.*

Re. 24,838. (See 2,857,872.)

Des. 158,508. (See 2,606,601.)

Des. 180,573, R. W. Beall, Jr., Vented liquid dispenser; **Des. 187,672**, same, Liquid dispenser, **filed** Dec. 7, 1961, D.C., N.D. Tex. (Lubbock), Doc. 2769, *Richard W. Beall, Jr. et al.* v. *S and R Auto Supply Company*. **Same, filed** Nov. 2, 1961, same, Doc. 2760, *Richard W. Beall, Jr.* v. *Bennett's Auto Supply*. Dismissed without prejudice under Rule 41(a) (notice Dec. 7, 1961). **Same, filed** Dec. 8, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1565-61-WM, *Richard W. Beall, Jr. et al.* v. *E. H. Strickland Company*.

Des. 187,672. (See Des. 180,573.)

Des. 188,697. (See 2,984,923.)

REISSUES

FEBRUARY 20, 1962

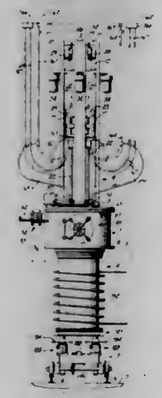
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,124
METHOD AND APPARATUS FOR FORMING INGOTS

Robert James Garmy, Canton, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey

Original No. 2,800,519, dated July 23, 1957, Ser. No. 391,549, Nov. 12, 1953. Application for reissue July 15, 1959, Ser. No. 827,411

29 Claims. (Cl. 13—9)



1. Apparatus for fabricating a metal ingot, comprising a furnace including a crucible for receiving a charge of metal, a plurality of electrodes, means supporting said electrodes within the furnace and projecting downwardly into the crucible and into proximity with the charge therein, means for conducting electric current through the electrodes and the charge to create arcs between the electrodes and the charge and thereby to melt the charge, and means for moving the electrode supporting means about one vertical axis and means for concurrently moving the electrodes along arcuate paths about vertical axes spaced from the said one axis so that said electrodes move over substantial portions of the surface of the charge.

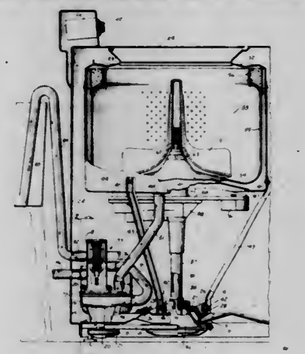
25,125
FLUID CONTROL SYSTEM FOR WASHING MACHINE

Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware

Original No. 2,923,144, dated Feb. 2, 1960, Ser. No. 555,321, Dec. 27, 1955. Application for reissue June 13, 1961, Ser. No. 120,123

14 Claims. (Cl. 68—12)

12. In a washing apparatus for performing a washing operation and a liquid extraction operation, means for performing said washing and extraction operations including a tub and agitation means within said tub, driven means rotatable in one direction to effect a washing operation and rotatable in a reverse direction to effect an extraction operation, a reversible motor driving said reversible driven means, conduit means connected to said tub for conducting liquid from said tub to an external drain, pump means communicating with said conduit means and operated by said reversible motor for pumping toward said tub when said motor is rotated in said first direction during said washing operation and for pumping liquid from said tub to said external drain when said motor is rotated in said



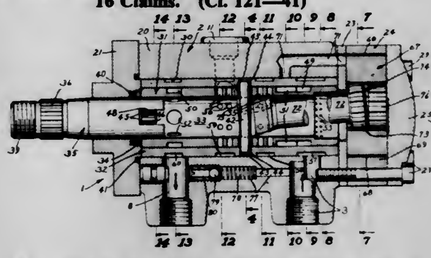
reverse direction during said extraction operation, and control means controlling the operation of said motor during said washing and extraction operations.

25,126
CONTROLLER FOR FLUID PRESSURE OPERATED DEVICES

Lynn L. Charlson, Minneapolis, Minn., assignor to Germane Corporation, Minneapolis, Minn., a corporation of Minnesota

Original No. 2,984,215, dated May 16, 1961, Ser. No. 776,281, Nov. 25, 1958. Application for reissue Aug. 28, 1961, Ser. No. 136,388

16 Claims. (Cl. 121—41)

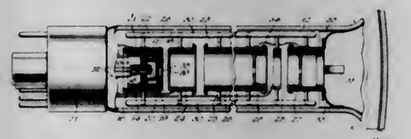


1. A controller for fluid pressure operated devices, said controller comprising; valve structure including a primary movable valve element and a cooperating movable follow-up valve element; means for connecting said primary valve element to a control element for common movement therewith; means coupling said primary valve element to said follow-up valve element for limited movements independently of said follow-up valve element and for common movements therewith; and a fluid servomotor including a movable member coupled to said follow-up valve element for imparting follow-up movements thereto responsive to movement of said movable member; said valve structure defining, an inlet for connection to a source of fluid under pressure and an outlet for return of fluid to said source, a pair of fluid ports for connection to a fluid pressure operated device, and fluid passages communicating with said servomotor;

said valve elements each having valve passages which cooperate to direct flow of fluid from said inlet through said servomotor to one of said ports and to direct flow of fluid from the other of said ports to said outlet responsive to movement of said primary valve element in one direction away from a neutral position relative to said follow-up valve element; movement of said primary valve element in the opposite direction from said neutral position causing said valve element passages to be disposed to direct flow of fluid from said inlet through said servomotor to the other of said ports and to direct the flow of fluid from said one of the ports to said outlet; the arrangement being such that the entire stream of fluid flowing from said inlet to the selected one of said ports is conducted through said servomotor; said valve elements in said neutral position relative to each other cutting off the flow of fluid to said servomotor.

25,127
CATHODE-RAY TUBE
Constantin S. Szegho, Chicago, Ill., assignor to The Rauland Corporation, a corporation of Illinois
Original No. 2,975,315, dated Mar. 14, 1961, Ser. No. 645,813, Mar. 13, 1957. Application for reissue July 26, 1961, Ser. No. 128,322
10 Claims. (Cl. 315—16)

1. In an image reproducer of the cathode-ray type: a thermionic cathode; means including a control electrode having an aperture *of predetermined size and* provided with a superimposed electron-permeable *planar* conductive element and disposed in close proximity to said thermionic cathode for creating an electric field between said thermionic cathode and said control electrode to draw emission therefrom, a portion of which passes through said electron permeable element and said aperture to form an electron stream; means including an accelerator-electrode system for accelerating and forming said elec-



tron stream into a discrete electron beam; an apertured auxiliary electrode disposed intermediate said control electrode and said accelerator-electrode system *with its aperture of approximately said predetermined size*; and means for biasing said auxiliary electrode at a potential of a value relative to that on said accelerator-electrode system and said control grid and of a magnitude enforcing convergence of said electron stream at a point interjacent said auxiliary electrode and said accelerator-electrode system.

PLANT PATENTS

GRANTED FEBRUARY 20, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,131
GLADIOLUS PLANT
Ervin H. Doerr, 1516 N. Broadway, New Ulm, Minn.
Filed Jan. 13, 1961, Ser. No. 82,663
1 Claim. (Cl. 47—60)

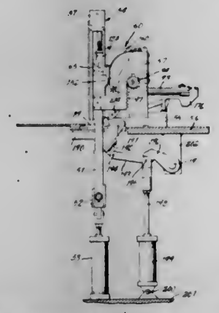
A new and distinct variety of gladiolus plant, substantially as herein shown and described, characterized particularly by the soft and pale pink color of its medium sized double flowers and by the distinct honey-like fragrance of the flowers in bloom.

PATENTS

GRANTED FEBRUARY 20, 1962

GENERAL AND MECHANICAL

3,021,525
MACHINE FOR FORMING AND DRIVING STAPLES AND FOR BINDING BOOKS THEREBY
Ward D. Dayton, 9 Buena Vista Way, Morse Lake, Bloomingdale, N.J.
Filed Aug. 15, 1960, Ser. No. 49,658
31 Claims. (Cl. 1—7)



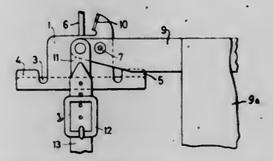
1. A machine for forming and driving staples, comprising means for supplying wires, each of a predetermined length, successively to a given position in which the long dimension of each wire at said position is substantially perpendicular to an edge portion of material to be stapled, and wherein said material has a planiform top surface; means for bending one of said wires to form a staple, including a pair of similar and substantially parallel leg portions and a center portion connecting one end of each of said leg portions; means for rotating said staple through an angle of about 90° about an axis which is parallel to said leg portions and lies therebetween and in the plane thereof to an initial rotated position, means for bodily moving said staple from said initial rotating position to a staple-driving position, wherein said center portion of said staple is substantially parallel to said edge portion of said material to be stapled and said leg portions are substantially perpendicular to the plane of said top surface; and means for driving said staple into said material.

3,021,526
EARPAD SUPPORT FOR PROTECTIVE HELMETS
Abraham L. Lastnik, Framingham, Mass.
Filed June 4, 1958, Ser. No. 739,949
3 Claims. (Cl. 2—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



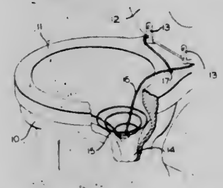
2. In a helmet provided with ear coverings, means mounted thereon for supporting an earpad on each covering, each said means including a series of concentrically arranged substantially rigid rings of rectangular cross section and of progressively varied diameter, the outside diameter of each successive ring being smaller than the inside diameter of the next adjacent outer ring by an amount equal to at least the difference between the outside and inside diameter of said outer ring, resilient annular diaphragms connecting successive rings in said series, said diaphragms having their respective edges attached to the inner edge of one ring and the outer edge of the next adjacent ring, and means for securing an earpad to the innermost ring of each series.

3,021,527
FACE SHIELD FOR DETACHABLE MOUNTING ON A SAFETY HELMET, AND A SAFETY HELMET FOR USE IN CONNECTION WITH THE FACE SHIELD
Hans Andreas Larsen, 11 Rodovrevej, Copenhagen-Vanlose, Denmark
Filed June 23, 1958, Ser. No. 743,814
Claims priority, application Denmark June 27, 1957
4 Claims. (Cl. 2—8)



1. In combination, a safety helmet having an outwardly directed rim, a detachable face shield, two carrying mountings connected to opposite ends of said shield, a plurality of tongues on each of said mountings gripping said rim of said helmet at substantially diametrically opposite points thereon, a resilient substantially semi-circular shaped hoop having each end connected to one of said carrying mountings and having a dimension such that in the unstressed condition of said hoop the distance between said carrying mountings is smaller than the corresponding distance when said mountings are in position at said points on said rim, said rim of said helmet having notches therein at the points of attachment of said carrying mountings, and positioning members on said carrying mountings engaging with said notches.

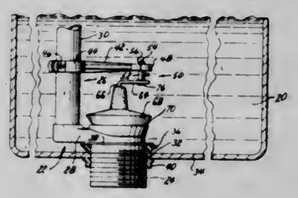
3,021,528
DIAPER WASHER
John A. Hargrave, 728 Greenway Drive, Hurst, Tex.
Filed Nov. 27, 1959, Ser. No. 855,848
1 Claim. (Cl. 4—1)



An apparatus for rinsing diapers adapted to retain a diaper in a toilet bowl in the path of water projected

through the bowl when flushed comprising, in combination; a strainer consisting of a single continuous wire wound to form a resilient conical spiral of convolutions having successively diminished diameters, said strainer at its widest dimension being adapted to rest on the discharge opening of said toilet bowl; and means for attaching said strainer to said toilet bowl including a flexible member attached at one of its ends to the apex of said conical strainer and provided with a clip secured to its other end.

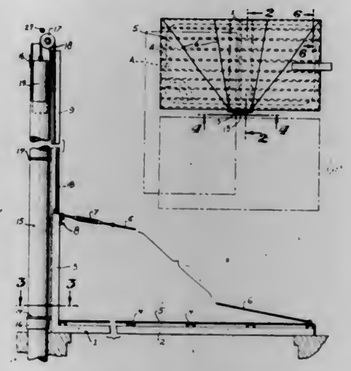
3,021,529
FLUSH TANK VALVE CONSTRUCTION
Dewey Brown, Xenia, Ohio
Filed July 24, 1959, Ser. No. 829,249
4 Claims. (Cl. 4—57)



1. In combination: a toilet water tank having a bottom wall with a flush opening therein; a combined flush and overflow fixture having a relatively large diameter flush pipe sealed in said flush opening with a tank ball receiving opening at the upper end of said flush pipe, said fixture having a relatively long overflow pipe adjacent to and discharging at its lower end into said flush pipe, and having a vertical extension with an inlet above the normal water level in said tank; a substantially horizontal arm having means at one end securing said arm to said combined flush and overflow fixture, said arm extending a generally horizontal direction a substantial distance from said combined flush and overflow fixture; a substantially vertical arm secured adjacent the other end of said horizontal arm in rotational adjustable relationship about a vertical axis and having a transverse hinge opening; a relatively rigid link having a hinge member adjacent one end extending transversely to said link and into said hinge opening; and a tank ball secured adjacent the other end of said link and opening and closing said tank ball receiving opening, in which combination said hinge member has a cylindrical part extending into said hinge opening and has a body adjacent said cylindrical part which has an internally threaded opening transverse to said cylindrical part threadedly receiving said link member.

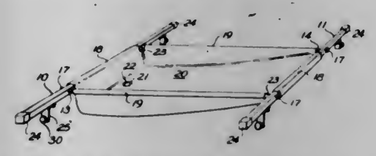
3,021,530
COMBINATION AWNING AND SWIMMING POOL COVER
Sam E. Sears, 444 G St., San Diego, Calif.
Filed Mar. 21, 1960, Ser. No. 16,561
6 Claims. (Cl. 4—172)

1. A swimming pool cover, comprising: a frame structure dimensioned to span a swimming pool; a covering for said frame structure; a post at one side of said frame structure; vertical guide means at opposite sides of said post, said guide means being supported from and rotatable about said post; bracket means having vertical legs extending vertically from said frame structure and adapted to be guided vertically and carried by said guide means to raise and lower said frame structure, said bracket means and frame structure also being rotatable with said guide means about said post, whereby said frame structure and covering may be raised and lowered relative to



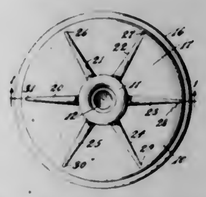
a swimming pool and rotated to positions at least partially displaced from said swimming pool.

3,021,531
BABY'S BATH
George Hinge, 50 Gordon Ave., Campbell, Ohio
Filed Sept. 30, 1959, Ser. No. 843,466
3 Claims. (Cl. 4—177)



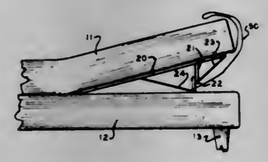
1. A baby's bath comprising a rectangular frame rigid frame having slotted sideward extensions at the opposite ends thereof, a rectangular flexible water receptacle having a tubular edge thereabout engaged on said frame, said tubular edge cut away at the corners of said frame, an inverted L-shaped apertured bracket located beneath each of said slotted sideward extensions, bolts having their heads in said slotted sideward extensions and engaged through said apertured brackets, nuts on said bolts holding said brackets against said slotted sideward extensions and rubber members on the outer sides of the vertical portions of said inverted L-shaped brackets.

3,021,532
FORCE CUP
Stanley B. Gross, 135 S. 2nd St., Philadelphia, Pa.
Filed Dec. 14, 1960, Ser. No. 75,824
2 Claims. (Cl. 4—255)



1. In a force cup designed to clear obstructions in both water closet bowls and conventional drains, the combination of a cup-shaped body portion having a closed top, an outer face, an inner surface, and a large open bottom terminating in a horizontal plane; an integral shank portion centrally positioned above closed top and provided with an opening forming a threaded socket and provided with extra heavy threads; a horizontal annular flange integral with and extending outward from said outer face of body portion and having a flat bottom surface, said annular flange being horizontally juxtapositioned and coextending from said open bottom and said flat bottom surface of annular flange terminating in the same horizontal plane as the said open bottom of body portion; a generally concave flexible skirt having an outer surface, a connecting end and a sealing end, attached to said bottom of body portion and to said flat bottom surface of annular flange at said connecting end, said flexible skirt having a first extended position and a second retracted position, said sealing end making circumferential contact with said inner surface of body portion when in retracted position, whereby a second seal is formed; a plurality of longitudinally spaced, raised sealing rings bonded to said outer surface of flexible skirt said sealing rings extending outwardly from said outer surface of flexible skirt and said sealing rings contacting said water closet bowls and conventional drains, whereby back-splash of water is discouraged; and a first seal formed by one or more of said sealing rings engaging and sealing against said water closet bowl when skirt is in the extended position.

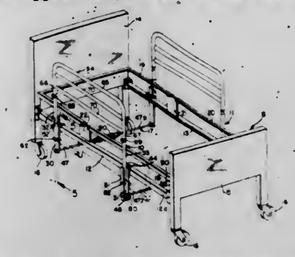
3,021,533
MATTRESS ELEVATORS
William M. Emery, 44 Pittsford Way, New Providence, N.J.
Filed June 22, 1960, Ser. No. 37,967
6 Claims. (Cl. 5—327)



1. A portable folding mattress elevator to angularly support one end of a conventional bed mattress in an elevated position, suitable for positioning and free insertion under and removal from under either end of said mattress comprising, of a relatively flat top, hinge means to allow folding of said top substantially into halves, separate leg means for each of said halves hinged to the under side of said top and positioned toward one end thereof, means to adjust the length of said separate leg means, stop means to separately limit the hinge movements of each of said separate leg means from a substantially horizontal position adjacent to said top to a substantially vertical position, and pre-stressed resilient means to separately actuate said described movement to said substantially vertical position of each of said separate leg means up to the limit of said stop means.

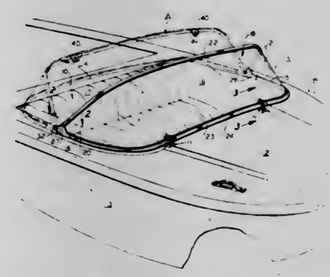
3,021,534
ADJUSTABLE BED RAILS
Ray K. Husted, Medina, Ohio, assignor to Simmons Company, New York, N.Y., a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,693
7 Claims. (Cl. 5—331)

1. A swingable bed rail assembly for use on the side rails of a bed structure, comprising; first and second adaptor brackets secured to said side rails; a pair of link arms pivoted to said brackets and being swingable through a vertical plane; and a rigid frame of generally quadrilateral configuration; said frame having adjacent corner portions that are pivoted to the free ends of said link arms whereby said opposed sides of said frame may be moved



into and out of position in alignment with said link members upon relative pivotal movement therebetween; at least one said bracket having a U-shaped pocket within which said link arm pivoted thereto may be received when the same is in alignment with an opposed side of said frame.

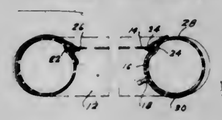
3,021,535
SWING-OVER WINDSHIELD FOR MOTORBOATS
Richard W. Dorst, Menlo Park, Calif., assignor to Textron Inc., Providence, R.I., a corporation of Rhode Island
Filed Dec. 7, 1959, Ser. No. 857,929
5 Claims. (Cl. 9—1)



1. A swing-over windshield for a motorboat having a cockpit with a fore deck forwardly of the cockpit and with a seat at the forward end of the cockpit, said windshield comprising a pair of hinge anchors mounted one on each side of, and spaced rearwardly from the forward end of, such cockpit by a distance equal to approximately one-half the distance from the extreme forward end of the cockpit to a point just aft of said seat, a windshield transparent plate member comprising a forward portion of the windshield and adapted to extend transversely, in spray shielding position, across the forward end of such cockpit, a pair of rearwardly extending windshield side portions secured at their forward ends in supporting relation to said transverse forward portion, and of a length to extend rearwardly from the transverse forward portion along opposite sides of such cockpit to the hinge anchors, said side portions tapering toward their rearward ends, cooperating hinge means on the rearward end of each side portion, each of said cooperating hinge means being hingedly interconnected to one of said hinge anchors, the lower edge of said transverse forward portion in its forwardly swung position being shaped to conform to such deck around the forward end of such cockpit, means releasably retaining the transverse forward portion in its forwardly swung position

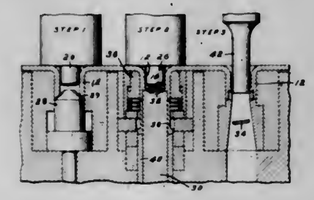
adjacent such deck, and releasable to free the transverse forward portion for rearward swinging movement by said side portions about the hinged interconnection of the hinge means to the hinge anchors and over the head of an occupant of such seat to a position rearwardly of such occupant, thereby clearing the way for access by such occupant to such fore deck.

3,021,536
FLOATING SUPPORT
James D. Haggerty, 9966 S. California Ave., Chicago 43, Ill.
Filed Dec. 3, 1959, Ser. No. 857,170
2 Claims. (Cl. 9—11)



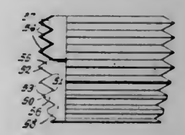
1. A floating support for recreation and lifesaving purposes comprising an inflatable annulus, a circular deck having a plurality of holes formed in uniformly angularly and circumferentially spaced relationship around the margin thereof, and having a diameter approximating the minimum inner diameter of said annulus, a helical lashing threaded through said apertures and wound under, over and around said annulus and an adjustable fastening for said lashing providing selective adjustment of the tension of said lashing so that in a relatively slack condition thereof said deck is positioned adjacent the bottom surfaces of said annulus, in a relatively taut condition thereof said deck is positioned adjacent the upper surfaces of said annulus and in a moderately taut condition thereof said deck is positioned intermediately of said bottom and upper surfaces of said annulus.

3,021,537
METHOD OF SKIVING A T-NUT
Norman J. Hughes, Melrose, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 23, 1959, Ser. No. 808,502
1 Claim. (Cl. 10—86)



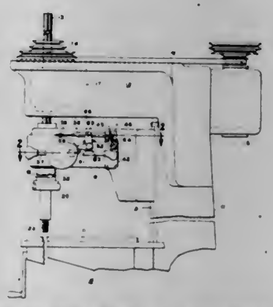
A method of forming a sheet metal nut having a bore surrounded by a wall, said bore having a first portion of lesser diameter than the remaining portion, said first portion being threaded, said portions separated from each other by an internal circumferential shoulder which comprises the steps of drawing a tubular body having an external and internal wall and being open at both ends, internally supporting a substantial length of said body at the first of said ends, chamfering said internal body toward the axis of said tubular body at the other end thereafter, forcing said chamfered internal wall against a shallow annular cutting die at a predetermined point from said other end to skive an annular portion toward said first end while internally supporting said first end, thereby forming said internal circumferential shoulder, then piercing said annular portion to substantially remove the burr formed by the skiving operation and thereafter internally threading said first portion.

3,021,538
THREAD CUTTING TOOL WITH DULLED EDGES ON THE GUIDE TEETH PORTION
Francis M. Linley, Jr., Easton, Conn., assignor to Universal Thread Grinding Company, Bridgeport, Conn., a partnership
Filed Apr. 16, 1956, Ser. No. 578,439
3 Claims. (Cl. 10—111)



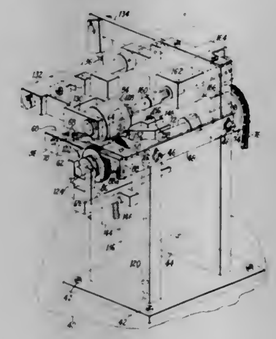
1. A thread cutting tool having roughing teeth followed by at least one finishing tooth followed by guide teeth with each of said teeth having a leading face with the leading faces of the roughing and finishing teeth being cutting faces; the leading face of each guide tooth being no larger than the leading face of the finishing tooth; the edges of each guide tooth formed by the intersection of the leading face and the flanks of the tooth being dulled to render the leading faces of the guide teeth non-cutting.

3,021,539
TAPPING SPINDLE REVERSING MEANS SELECTIVELY ACTUATED AUTOMATICALLY OR MANUALLY BY QUILL ACTUATING MEMBER
Herbert R. Uhtenwoldt, Wilmington, Ohio, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 31, 1960, Ser. No. 32,670
2 Claims. (Cl. 10—136)



1. In a machine tool having a longitudinally movable quill, a spindle rotatably mounted in the quill, and a reversible motor operatively connected to the spindle to rotate the same, the combination of a control member operatively connected to the motor and having a movable member shiftable between extreme positions to reverse the direction of rotation of the spindle, a quill actuating member engaged with the quill and rotatable for longitudinal movement thereof, a hub member including a handle and a collar rotatable therewith, said collar rotatably adjustable relative to said handle, motion transmitting means connecting said hub member to the quill actuating member, said motion transmitting means having a limited amount of lost motion therein, means frictionally connecting said control member to the hub to shift said control member on reverse rotation of the handle, and means to shift said movable member of the control member after a predetermined rotation of said collar.

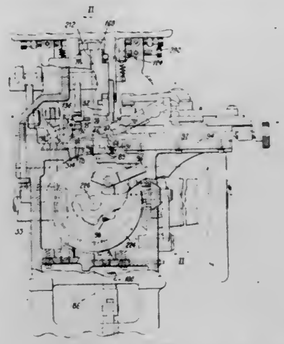
3,021,540
OUTSOLE GOUGING MACHINES
Hans C. Paulsen, Lexington, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Nov. 2, 1959, Ser. No. 850,140
5 Claims. (Cl. 12—27)



1. In a machine for preparing a rubber composition outsole for attachment to a shoe, a rigid work table having a work supporting surface terminating in an edge and adapted to be engaged by an upper face of the outsole, a fixed knife having a cutting edge extending along said edge of the table and arranged above and spaced from the surface of the table to form a gap therewith, feed wheels projecting above the surface of the table adjacent to the opposite ends respectively of its edge and adjacent to the opposite ends of the cutting edge of the knife, a pressure roll adapted to engage a bottom face of the outsole supported by the table and the feed wheels, means for urging the roll yieldingly toward the table, an edge gage adapted to be engaged by the margin of the outsole on said table, and power means for rotating the pressure roll and the feed wheels and thus causing the table and the edge gage to guide the outsole over the table and past the knife as the operator holds the edge of the outsole against said gage whereby to form in the upper surface of the outsole, a groove which is spaced a uniform distance from the edge of the outsole and follows along said edge.

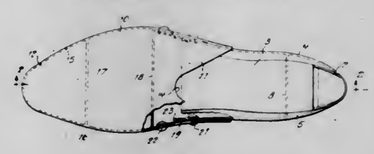
3,021,541
HEEL SEAT FITTING MACHINES
Harold G. Shaw, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Dec. 24, 1959, Ser. No. 861,889
3 Claims. (Cl. 12—31.5)

1. A heel seat fitting machine comprising right and left crease plates which form a U-shaped opening and are movable toward and away from each other to vary the width of said opening, spring actuated means for constantly urging the right and left crease plates toward each other to a closed setting, a gage comprising members adapted to measure a heel widthwise, spring actuated means for constantly urging said members toward each other to close positions in which they are forced against opposite sides of the heel in the heel gage, a stop operatively connected to one of said members and adapted to be positioned in accordance with the width of the heel in the heel gage, power means for moving, against the action of said first-named spring actuated means, the right and left crease plates away from each other and, against the action of said second-named spring actuated means, the members of the heel gage away from each other, and manually actuated means depressible to render said power means active whereby to move against the action of said first-named spring actuated means said crease plates away from each other and for moving against the action



of said second-named spring actuated means the members away from each other, said manually actuated means when released being adapted to render said power means inactive whereby to allow said second-named spring actuated means to move the members toward each other to measure the heel widthwise and also to allow said first-named spring actuated means to move the crease plates to a closed setting determined by said stop.

3,021,542
TWO-PART MOLDED SHOE TREE
Bernard Mack, New York, N.Y., assignor to Plastic-Ware Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 7, 1959, Ser. No. 844,898
4 Claims. (Cl. 12—115.6)

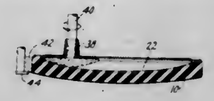


1. A shoe tree comprising a toe portion and a heel portion, the rear end of said toe portion and the front end of said heel portion being connected to permit relative pivotal and sliding movement thereof, said toe portion consisting of a thin walled upper face conforming with the shape of the toe of a shoe, the sides of said face extending downwardly and terminating at the sole of said shoe, a pair of vertical thin walled partitions integral with said face and extending transversely of and within said toe portion, the lower ends of said partitions terminating at said sole, the lower end of said toe portion being open.

3,021,543
METHODS OF MAKING SHOES
Gerald J. Crowley, Quincy, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Feb. 1, 1960, Ser. No. 5,884
4 Claims. (Cl. 12—142)

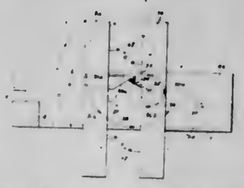
1. The method of manufacturing a cement shoe having an upper supported on and conformed to a last, a pre-

molded thermoplastic outsole having a central recess shaped to conform with the widthwise curvature on the bottom of the last supported upper but not with the lengthwise curvature on the bottom of the upper, the forepart of the outsole extending in a relatively flat plane and the recess in the outsole being of smaller dimensions than the bottom of the upper, which method comprises applying a pressure sensitive adhesive to the inner surface of the recess in the outsole, heating the outsole and



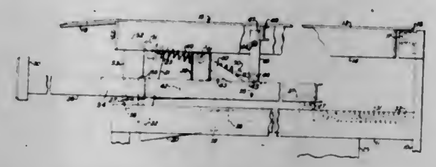
adhesive to increase substantially the plasticity of the outsole and simultaneously to activate the adhesive, stretching the plasticized outsole lengthwise to engage the toe and heel portion of the shoe upper within the recess of the outsole, securing the parts temporarily and applying a thicknesswise attaching pressure to the outsole to cause the outsole to expand in directions widthwise and lengthwise of the shoe while the outsole is heated to its plasticizing temperature.

3,021,544
SELF PROPELLING SECTIONAL FLOATING BRIDGE
Jean Gillois, Rastatt, Germany, and Hermann Walter Gehlen, Pirmasenser Strasse 60, Kaiserslautern, Germany, assignors, by mesne assignments, to Hermann Walter Gehlen, Kaiserslautern, Pfalz, Germany
Filed May 29, 1956, Ser. No. 588,029
14 Claims. (Cl. 14—27)



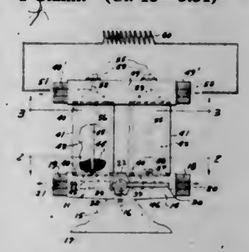
1. A floating bridge comprising a plurality of amphibious self propelling floating units articulatedly connected to one another, each unit comprising a floating element and a bridge element pivotally supported on said floating element for movement into position of transport longitudinally of said floating element and into position of use transversely of said floating element, each said bridge element including a pair of girders connected to each other by spread link means, each girder having a pivot member including a pivot arm supporting the girder on said floating element, said pivot members being offset relative to each other and spaced longitudinally of said floating element, and motor means interposed between and connected to said pivot arms operative to move said girders in unison to be disposed closely to each other with a narrow space therebetween in position of transport and widely spaced from each other in position of use, each of said girders having upper and lower girder portions, each said lower girder portion having a pivot joint member, said pivot joint members at one end of said bridge element including means releasably connecting the pivot joint members at the girder ends of adjacent bridge elements to constitute horizontally disposed articulated joints and each of said girders having abutments endwise of the upper girder portion thereby providing a joint resisting downward tilting movement of an adjacent bridge element.

3,021,545
AUTOMATIC DOCKBOARD
Robert Leslie Le Clear, Murrel B. Sleeper, and Richard Sleeper, Sturgis, Mich., assignors to T & S Equipment Co., Albion, Mich., a corporation of Michigan
Filed Feb. 28, 1957, Ser. No. 643,171
6 Claims. (Cl. 14—71)



1. An automatic dockboard comprising a frame, a platform pivotally mounted adjacent the rear edge on said frame, a cross shaft rotatably mounted on said frame, an arm fixed to said shaft intermediate the length thereof and extending toward the front edge of said platform, a link connecting said arm and said platform, a pair of arms fixed to said shaft and extending toward the rear edge of said platform, a weight suspended from said pair of arms to partially counter-balance the weight of said platform, an actuating bar slidably mounted on said frame for movement longitudinally of said platform, a vehicle engaging abutment on the front end of said bar, spring means for urging said bar forwardly to position said abutment forwardly of the front edge of said platform, an upright on said bar, a rearwardly and downwardly extending member pivotally mounted at the forward end on said upright to provide an inclined trackway offset inwardly of said bar, an upwardly and rearwardly extending ramp secured to the inner side of said bar and terminating in a horizontal portion disposed below said inclined trackway and normally supporting the rear end of said trackway, a downwardly extending actuating arm pivotally mounted on said platform, stop means on said platform for preventing pivotal movement of said actuating arm in a forward direction beyond a vertical position but permitting pivotal movement in the opposite direction, adjustable tension spring means for urging said actuating arm toward vertical position, an offset roller on the lower end of said actuating arm for engaging said trackway and ramp, and cooperating abutment means on said platform and bar for supporting said platform in a horizontal position when said bar is in said forward projected position and upon rearward movement of said bar permitting movement of said platform below a horizontal position.

3,021,546
TUBE OR COIL CLEANING APPARATUS
Bruno Walz, Richmond, Mich., assignor to William Sluma, Harper Woods, Mich.
Filed Mar. 7, 1960, Ser. No. 13,303
1 Claim. (Cl. 15—3.51)



A tube cleaning apparatus comprising a base having a longitudinal passage therethrough defining an inlet

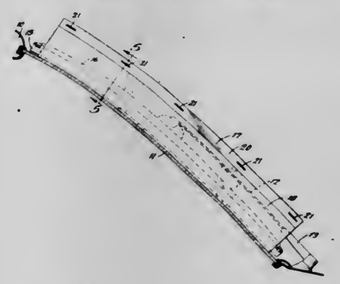
adapted for connection to a source of fluid under pressure and an outlet adapted for connection to a drain, there being a transverse bore in said base communicating with said passage intermediate its ends, a rotatable valve sealed within said bore having a pair of passages extending therethrough and a pair of grooves at right angels thereto adapted for selective alternate connection with said inlet and outlet, a pair of upright transparent sleeves with their lower ends mounted on and enclosed by said base, screens respectively closing the lower ends of said sleeves, there being a first delivery passage in said base at one end communicating with said first sleeve, second and third delivery passages in said base at their one ends communicating with said second sleeve, said three passages at their other ends communicating with said valve bore, a head spaced above said base and secured thereto mounted on and enclosing the upper ends of said sleeves, there being a pair of conduits in said head with their inner ends respectively communicating with the upper ends of said sleeves and with their other ends defining an outlet and inlet adapted for connection to opposite ends of a coil to be cleaned, a plurality of abrasive cleaning elements loosely stored within one of said sleeves, said valve being movable to a first control position so that fluid under pressure flows through one valve passage and the first delivery passage into a corresponding sleeve and out a corresponding conduit in said head carrying said abrasive elements through said coil and back through the other conduit to the second sleeve for collection therein, the fluid escaping said second sleeve through a corresponding second delivery passage connected by the second valve passage to said drain outlet, said valve being rotatable to a second control position reversing the flow of pressure fluid through one valve groove and the third delivery passage to said second sleeve and out the corresponding conduit in said head carrying said abrasive elements through said coil in the reverse direction returning via the corresponding conduit to said first sleeve for collection therein, the fluid escaping through the first delivery passage and through the other valve groove to said drain outlet the securing of said head to the base including a pair of parallel spaced elongated bolts extending normally through said head and axially through said sleeves respectively and threadedly engaging said base.

3,021,547
CLEANING DEVICE HAVING A DETACHABLE HANDLE
Harry H. Henson, Box 505, Urania, La.
Filed June 4, 1959, Ser. No. 818,093
1 Claim. (Cl. 15—145)



A cleaning device comprising a head portion, a stump handle part extending from said head portion, an elongated handle element, and means for connecting said handle element and said stump, said means comprising a split sleeve having permanent fasteners extending transversely through said sleeve and through said handle element for permanently securing said sleeve to said handle element, a portion of said split of said sleeve being cut away to provide spaced edge portions, outturned ears positioned on said spaced edge portions, and means clampingly engaging said ears for temporarily clampingly engaging said stump handle, said means embodying a lever having one end pivotally connected to one of said ears, and a link having one end pivotally connected to the other of said ears, said link being engageable by said lever and shiftable when engaged by said lever to an over center position clamping said ears together.

3,021,548
WINDSHIELD WIPER ATTACHMENT
Benjamin N. Stoller, 6703 S. Merrill Ave., Chicago 49, Ill.
Filed Apr. 20, 1959, Ser. No. 807,559
5 Claims. (Cl. 15—250.36)



1. A windshield wiper attachment for the cleaning of relatively dry windshields, comprising an elongated cover formed of dry dirt-absorbent sheet material, said cover having side walls and having a generally V-shaped cross section, said side walls having free longitudinal edge portions connected to each other at least at one point therealong for retaining a wiper blade disposed between said walls, said cover being open at least at one end thereof for longitudinal self-discarding movement of the same from an oscillating windshield wiper when the windshield-contacting portion of said cover has worn through.

3,021,549
WINDSCREEN WIPERS
William Edward O'Shei, 11a Bath Road, Middlesex, England
Filed May 14, 1958, Ser. No. 735,172
10 Claims. (Cl. 15—250.42)

1. A windscreen wiper comprising a squeegee element having flanges extending outwardly along each side of and adjacent the rear of the squeegee element, grooves formed respectively in the side faces of and extending along said flanges for substantially the whole length of but terminating short of the ends of the flanges so that, the ends of said grooves are closed, at least one flexible flat strip arranged in each of said grooves with its width extending transversely of the squeegee element, the transverse depth of the grooves being such that the faces of the strips are substantially entirely covered by the adjacent parts of the flanges which define the walls of the grooves, endwise movement of the strips in the grooves being prevented by the closed ends of the grooves and a pressure distributing holder extending along the back of the squeegee element and comprising at least one yoke member of which the ends embrace the back of the

squeegee element and the flanges and engage in front of the flanges, thereby securing the squeegee element to the



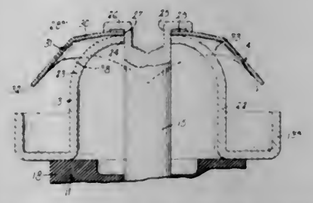
pressure-distributing holder and retaining the flexible strips in the grooves against sideways displacement.

3,021,550
SURFACE-TREATING TOOLS
Alfred Cecil Stratford, St. Pauls Cray, Kent, England, assignor to Cimex Limited, Orpington, Kent, England, a British company
Filed May 9, 1960, Ser. No. 27,553
Claims priority, application Great Britain May 14, 1959
7 Claims. (Cl. 15—359)



1. A surface-treating tool having a body with front and rear ends, wheel means attached to the body to support the rear end of the body, a handle carried by said body whereby the body may be tilted about the axis of said wheel means to raise and lower the front end of said body, a flexible elongated treating element, a support member carrying the said treating element, yieldable mounting means attaching said support member to the front end of the body to depend therefrom, whereby the treating element supports the front end of the body while in use and by frictional engagement of the treating element with the surface the support member may swing about said mounting means in a forward or backward direction, and roller means mounted on the forward side of said support member to move into engagement with the surface being treated as the support member swings backwards thereby to prevent direct engagement of the support member with the surface and allow movement of the tool in either direction while in use.

3,021,551
CASTER GLIDE
Michael Kramcsak, Jr., Bridgeport, Conn., assignor to The Bassick Company, Bridgeport, Conn., a corporation of Connecticut
Filed Aug. 20, 1957, Ser. No. 679,295
2 Claims. (Cl. 16—42)



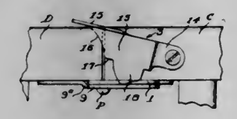
1. In a caster device having a stem adapted to be inserted in one direction into an opening of a supported member, an arrangement for securing the device to the supported member to prevent movement in a second direction opposite the first-mentioned direction, comprising a disc-like substantially square retainer centrally secured to the stem and having a flat contour extending proximate the stem at a sharp angle thereto, said retainer having an arcuate contour depending from the flat contour symmetrical about the stem convex toward the first direction and terminating between the stem and the edges of the retainer to define a circle spaced from the flat contour, said stem having a head covering the flat contour on the side thereof remote from the defined circle and extending to and abutting the arcuate contour, said retainer also having a substantially frustoconical contour diverging from the arcuate contour in the second direction at an angle sharper than the arcuate contour and extending to the corners of the retainer, the retainer plate having edges defining continuous arches between adjacent corners, said corners being flexed inwardly toward the stem upon insertion of the stem into the opening to distort the above contours for establishing a locking engagement with the periphery of the opening.

3,021,552
DRAPERY HOOK
Samuel Perlmutter, Newton, Mass. (% Empire Curtain Mfg. Co., 10 Thacher St., Boston, Mass.)
Filed Jan. 23, 1959, Ser. No. 788,669
6 Claims. (Cl. 16—87.4)



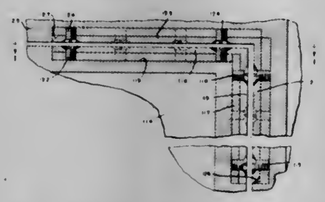
1. A drapery hook for association with a traverse rod supporting an interconnecting member formed with an opening above a downwardly extending lip comprising, a hook-shaped portion formed with an intermediate integral smaller crimped portion having substantially parallel legs interconnected by a bight section, said portion adapted to slide through said opening and rest with said legs snugly engaging said lip to prevent rotation of said drapery hook about an axis parallel to said traverse rod, and a normally vertical drapery supporting member generally parallel to and resiliently urged toward the shank of said hook-shaped portion.

3,021,553
LATCH HINGE FOR PLAY YARD
Charles J. Schlemer, Lancaster, Pa., assignor to Benner, Inc., Mountville, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1960, Ser. No. 68,722
3 Claims. (Cl. 16—146)



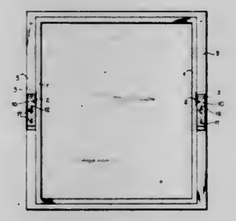
1. A latching hinge for connecting the collapsible side rails of a play pen and latching them when the play pen is opened for use comprising, upper and lower hinge leaves each secured to the inner end of a related collapsible side rail along the bottom thereof, said upper leaf overlying said lower leaf, said upper leaf having a projection and said lower leaf having an offset, said projection and said offset extending laterally outwardly beyond the outer face of said side rails, pivot means at one end of said offset and said projection hinging the leaves together, said upper and lower leaves having a slot in their projection and offset portions, respectively, said slots substantially registering with each other when the play pen is opened for use and the side rails are aligned, a latch pivoted to the outer face of one of the side rails, said latch including a detent at its lower end and supporting means at the upper end thereof cooperating with an adjacent side rail to retain the latch in disengaged position, whereby upon movement of the collapsible side rails from collapsed, parallel position to opened, aligned position, said supporting means is released from engagement with the adjacent side rail permitting said detent to drop into the substantially aligned slots in said hinge leaves and latch said side rails.

3,021,554
NON-LOOSENING HINGES
Lloyd Robert Anderson, 6804 Millwood Road, Bethesda 14, Md.
Filed Sept. 30, 1957, Ser. No. 687,130
11 Claims. (Cl. 16—167)



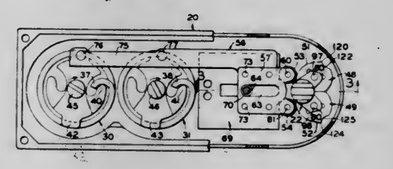
4. A hinge comprising a jamb leaf and a door leaf pivoted together, a strap narrower than said hinge jamb leaf extending from one end of said jamb leaf and overlying the end of said door leaf, means to secure said jamb leaf and strap to a communicating mortise in the hinge jamb and lintel of a door frame in which a relish is provided in the lintel to hide the edge of the strap, and means to secure the door leaf to the door, the free end of one of said jamb leaf and strap being beveled on its unexposed surface when mounted in the dihedral angle between the hinge jamb and lintel of a door frame.

3,021,555
HINGE DEVICES
Sven Anders Högedal, Sollebrunn, Sweden, assignor to Evers & Co. Aktiebolag, Halsingborg, Sweden
Original application May 28, 1957, Ser. No. 662,289, now Patent No. 2,885,745, dated May 12, 1959. Divided and this application Mar. 2, 1959, Ser. No. 796,427
4 Claims. (Cl. 16—175)



1. A hinge device for one side of a separable inclining window with a sash adapted to be pivoted in a frame about a horizontal axis, comprising a plate capable of being attached to one of two opposite side pieces of the sash, a pivot extending from said plate for constituting one side of said axis, a bearing plate having two opposite flat surfaces and being capable of connection to said frame adjacent said pivot with one flat surface on said frame, said bearing plate having a portion providing a single open side bearing yoke in its other flat surface with said pivot extending therein whereby said bearing plate yoke open side in its operative position will face outwardly of said frame for the introduction and removal of its corresponding pivot therethrough, a plane covering plate positioned on said bearing plate and having two opposite flat surfaces with one surface normally covering its corresponding bearing plate yoke retaining its pivot therein and detachable means for connecting said covering plate to its bearing plate in said yoke covering position.

3,021,556
DOUBLE ACTING DOOR CLOSER
Francis H. Pittenger, Shelby, Ohio, assignor to The Shelby Spring Hinge Company, Shelby, Ohio, a corporation of Ohio
Filed May 15, 1959, Ser. No. 813,566
2 Claims. (Cl. 16—185)



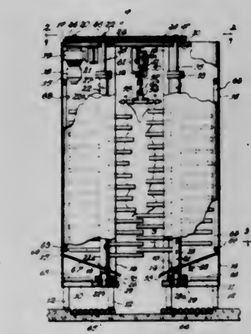
1. A door closer comprising, in combination, casing means including a longitudinal axis; a vertically extending spindle rotatably mounted in said casing means and adapted for attachment to a door whereby opening of said door applies torque to said spindle and the application of torque to said spindle closes said door; a first cam surface on said spindle; a second cam surface on said spindle; a

first radially extending arm pivotally mounted to said casing means and extending laterally in one direction from said longitudinal axis to a first pivot portion; a first torsion spring operative between said first arm and said casing means; a second radially extending arm pivotally mounted to said casing means and extending laterally in said one direction from said longitudinal axis to a second pivot portion longitudinally aligned with said first pivot portion; a second torsion spring operative between said second arm and said casing means; guide means mounted to said casing means between said spindle and said first and second arms; a shiftable member including a head portion longitudinally shiftably mounted on said guide means and a longitudinally extending shank portion rigidly connecting said head portion, said shank portion being laterally offset from and parallel with said longitudinal axis and including third and fourth pivot portions connected to said first and second pivot portions on said arms; and first and second followers on said head portion of said shiftable member and in engagement with said first and second cam surfaces.

3,021,557
MACHINES FOR STRIPPING AND DEHAIRING HOG CARCASSES

John G. Pinta and Fred A. Di Pasquale, Chicago, and John Peasley, Palos Park, Ill., assignors to Reliable Packing Company, Chicago, Ill., a corporation of Illinois

Filed May 13, 1960, Ser. No. 29,036
11 Claims. (Cl. 17—17)

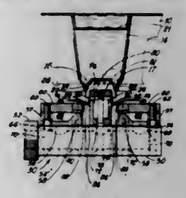


1. In a machine for stripping and dehairing hog carcasses; a pair of inwardly opening vertically extending opposed spaced apart metal casings; vertical standards supporting said casings; a pair of base plates; a top mounting plate connected on both of said casings; a vertical shaft journalled in one of said base plates and in said top plate; a second vertical shaft journalled in the other of said base plates and in said top plate; a prime mover mounted on said top plate; a stub shaft and sprocket thereon operatively connected to said prime mover; a pair of sprockets on the upper ends of said vertical shafts respectively; an endless chain operatively connecting all of said sprockets; and on each said vertical shaft a plurality of circumferentially spaced radially extending flexible metal arms connected at the inner end of each arm to the shaft, the outer end of each arm being free; said arms on one of said shafts being in staggered relation relative to the arms on the other vertical shaft; and the outer end portions of said arms being adapted to engage suspended hog carcasses moved between said vertical shafts and the said radial arms thereon to strip coatings from said carcasses and remove hair therefrom, said arms on each shaft being disposed in staggered relationship therealong to subject all surfaces of the carcasses to engagement with the arms.

3,021,558
METHOD AND APPARATUS FOR PRODUCING FIBERS

Cletis L. Roberson, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Filed May 15, 1959, Ser. No. 813,570
12 Claims. (Cl. 18—2.5)



1. The method of forming fibers from heat-softened mineral material including flowing streams of the material in spaced rows from a supply through walled passages, engaging the material of the streams in each passage with a first gaseous blast discharged from an orifice in the inner wall of each passage, engaging the material of the streams in each passage with a second gaseous blast discharged from an orifice in the outer wall of each passage at a lower region than the zone of engagement of the first blast with the material, and obstructing the flow of blast-induced air at the region between the passages.

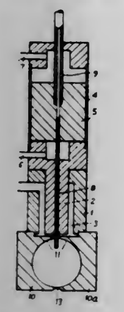
8. Apparatus for producing fibers from heat-softenable material including, in combination, means for feeding spaced groups of streams of the material from a supply, a blower disposed adjacent and beneath the stream feeding means, said blower being formed with a stream receiving passage for each group of streams, a portion of the blower at one side of each passage extending above the portion of the blower at the opposite side of each passage, chambers formed in the portions of the blower at both sides of each of the passages adapted to contain gas under pressure, the walls of the portions of the blower defining the stream receiving passages being formed with outlets through which gas is discharged from said chambers as high velocity blasts adapted to engage and attenuate the material of the streams to fibers, the outlets for each passage being arranged in vertically spaced relation whereby the gases of the blasts engage the material of the groups of streams in vertically spaced regions in each passage.

3,021,559
METHOD OF AND APPARATUS FOR THE MANUFACTURE OF HOLLOW PLASTIC ARTICLES

Bernard Strong, Northwood Hills, England, assignor to E. Shipton & Company Limited, Northwood Hills, England, a British company

Filed July 27, 1959, Ser. No. 829,832
Claims priority, application Great Britain July 31, 1958
8 Claims. (Cl. 18—5)

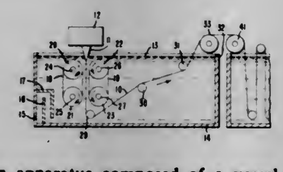
4. Apparatus for manufacturing completely sealed blown hollow plastic articles comprising means for extruding a tube of plastic material, mould parts which when closed together define a mould cavity, means for closing said mould parts around the extruded tube of plastic, a hollow needle of small diameter adapted to fit within the enclosed tube of plastic, means supplying blowing fluid to said needle to expand said tube to conform to the mould cavity, means for injecting extra plastic material around said needle into said mould cavity and means for withdrawing said needle.



3,021,560
APPARATUS FOR CASTING FILM

William Smith Hamilton, Wilmington, Del., and Barton Leslie Hinkle, Richmond, Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 29, 1961, Ser. No. 99,168
6 Claims. (Cl. 18—15)

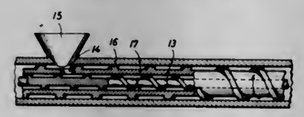


1. In an apparatus composed of a vessel adapted to contain a liquid coagulant; means for extruding a film-forming solution in the form of a sheet disposed above said vessel and adapted to extrude the film-forming solution downwardly into and below the surface of the liquid in said vessel; the improvement which comprises two endless belts mounted in said vessel immediately below said extrusion means, disposed on either side of the extruded film sheet and adapted upon movement thereof to propel liquid coagulant therebetween; means for maintaining the belts out of contact with the extruded film sheet; and means for drawing said film sheet from said vessel.

3,021,561
PLASTICIZING AND INJECTION APPARATUS FOR PLASTIC OR SYNTHETIC MATERIALS

Hans Reifenhäuser, Troisdorf, near Koln, Germany, assignor to Reifenhauser K.G., Troisdorf, Germany

Filed Mar. 4, 1959, Ser. No. 797,162
2 Claims. (Cl. 18—30)

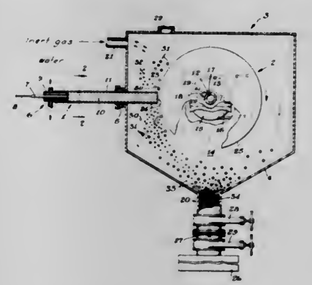


2. A plasticizing and injection apparatus for processing of various types of plastic or synthetic materials, including a screw press, comprising: a casing cylinder, an injection nozzle on one end of the cylinder adapted for cooperative engagement with an injection mold, a screw spindle member axially fixed in the cylinder having an external helix and continually rotatable for advancing material from a material supply opening toward the nozzle, a material collecting space being provided between the nozzle and adjacent end of the screw spindle member, said spindle member having an axial bore therethrough, and a piston member disposed in said bore, one of said members having a helix located interiorly of the spindle member, said spindle member having a radial opening located to provide at all times a passage between the helical spaces formed internally and externally with respect to the spindle member, said piston member having rotary and axially reciprocating movements relative to the spindle member for periodically expelling into a mold material continually supplied through said helical spaces to said collecting space.

3,021,562
PRODUCTION OF GROUP IV, SUBGROUP A, METAL PRILLS

Douglas S. Chisholm and Don F. Hall, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Apr. 1, 1957, Ser. No. 649,809
10 Claims. (Cl. 18—47.2)



2. The method of making substantially solid spheroidal prills of a group IV, subgroup *a*, ductile metal selected from the class consisting of titanium, zirconium, thorium and hafnium, which comprises striking an electric arc between the circumferential periphery of a rotating cylindriform electrode consisting at least of 50 percent of the group IV, subgroup *a*, metal being produced and the nose of an elongated consumable, substantially horizontal electrode advanceable toward the rotating electrode, comprising the same said group IV, subgroup *a*, metal in an impure state, the longitudinal axis of said advanceable electrode being disposed to form angles, each of which is less than 180° with the longitudinal axis of said rotating electrode, the nose of said advanceable electrode being positioned adjacent to but not touching the periphery of said rotating electrode to maintain said electric arc.

3,021,563
METHOD FOR PRODUCING AND TREATING FIBERS

Games Slayter and Henry J. Snow, Newark, and Samuel D. Philipps, Granville, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Original application Feb. 7, 1951, Ser. No. 209,782. Divided and this application July 14, 1960, Ser. No. 42,819
4 Claims. (Cl. 18—47.3)

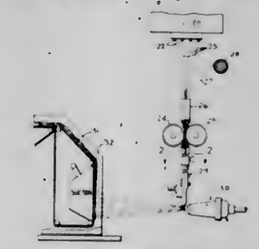
1. A method of producing fibers from heat-softenable mineral material including maintaining a supply of the heat-softenable material in a molten state, flowing a

stream of the molten material from the supply, directing a blast of gas in the general direction of flow of the stream into engagement therewith to attenuate the stream to fibers, conveying a nonaqueous liquid to a zone adjacent and at the side of the stream, flowing the liquid into



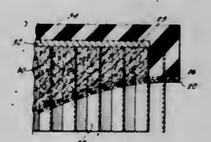
contact with a heated surface normal to the direction of flow of the stream and adjacent the stream, and volatilizing some of the nonaqueous liquid on the surface by the heat from the molten material to establish a vapor of the liquid adjacent the stream.

3,021,564
PRODUCTION OF FIBERS IN INTIMATE ASSOCIATION WITH METAL
Willard L. Morgan and Harry B. Whitehurst, Newark, Robert G. Russell, Granville, and Charles J. Stalego, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,340
5 Claims. (Cl. 18—47.3)



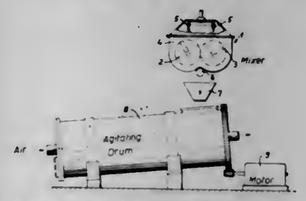
1. In producing filaments of a fusible, fiberizable, material by a method which includes the steps of flowing molten streams of the fusible material from a mass thereof to form primary filaments, introducing the primary filaments so produced into a high velocity blast of combustion products discharged from a burner, projecting and attenuating the primary filaments by the combustion products blast, and collecting the attenuated filaments, the improvement which comprises: concurrently with the introduction of the primary filaments, introducing separately therefrom into the combustion products blast a metal which is in solid form and is inert with respect to said blast, said metal being melted, disintegrated and projected by the blast; and collecting the attenuated filaments intimately associated with the projected metal.

3,021,565
STABILIZER FOR HONEYCOMB CORE
Eldon L. Bowman, Redondo Beach, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed May 9, 1960, Ser. No. 27,624
7 Claims. (Cl. 18—47.5)



2. A method of stable masking honeycomb material comprising: constructing a mold of a water soluble material; shaping the upper surface of said mold into a contoured surface; coating the contoured surface of said mold with a masking material which is insoluble in water; forcing a section of honeycomb material through said masking material and into said mold a predetermined distance whereby a portion of said honeycomb material remains above said masking material to define a plurality of exposed cells; filling all but the outermost of said exposed cells with a water soluble material; filling the outermost exposed cells and sealing the remainder of said exposed cells with a material which is insoluble in water thereby rendering said exposed cells fluid tight; and removing said mold from said honeycomb material by utilizing water sprays.

3,021,566
METHOD FOR THE PRODUCTION OF BITUMINOUS COMPOSITIONS
Albert Sommer, Montagnola, Tessin, Switzerland, assignor to "Straba" Handels-Aktiengesellschaft, Zurich, Switzerland
Filed June 13, 1956, Ser. No. 591,017
Claims priority, application Switzerland June 14, 1955
4 Claims. (Cl. 18—47.5)



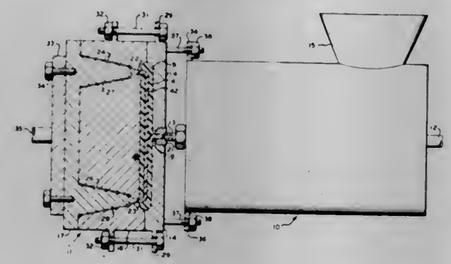
1. In a method of preparing a bituminous composition containing a high melting point bitumen and a mineral aggregate, the steps comprising coating the particles of granulous and pulverulent aggregate material with bitumen by atomization of a liquefied low melting point bitumen onto said particles while they are suspended in air, and then subjecting the mass of bitumen coated particles to the action of hot air while simultaneously agitating said mass, for hardening the bitumen component thereof.

3,021,567
METHOD FOR MOLDING ISOTACTIC POLYPROPYLENE
Franco Ranalli, Milan, Italy, assignor to Montecatini Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy
Filed May 13, 1958, Ser. No. 734,854
Claims priority, application Italy May 23, 1957
2 Claims. (Cl. 18—55)



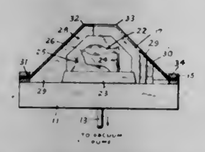
1. A process for molding machinable finished and semi-finished masses comprising highly isotactic and crystalline polypropylene having a high molecular weight which comprises subjecting the polypropylene, in the form of a powder the particles of which have an average diameter between 4 microns and 0.1 mm. to a pressure of at least 200 kg./cm.² at a temperature of between 150° C. and 200° C. until a compact coherent machinable mass is obtained.

3,021,568
INJECTION MOLDING OF PLASTIC MATERIALS
John N. Scott, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 15, 1958, Ser. No. 767,309
2 Claims. (Cl. 18—55)



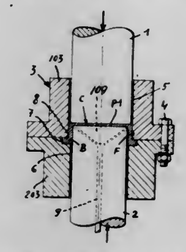
2. A method for forming articles by the injection molding of thermoplastic materials which comprises heating said plastic material in a heating zone until it is in a molten condition; forcing said molten plastic material from said heating zone into a sprue passageway formed in an unheated mold; flowing said molten plastic material through said sprue passageway into a runner passageway formed in said mold, said runner passageway being provided with a solid insulating coating of said plastic material; passing said molten plastic material from said insulated runner passageway through another sprue formed in said mold and into a space formed between a cavity and a core of said mold; withdrawing said core from said cavity; removing a molded article from said core; and continuing the aforementioned steps in a cyclic operation, said plastic material in said runner passageway remaining in a molten condition between cycles.

3,021,569
METHODS AND MEANS FOR MAKING MOLDED PLASTIC ARTICLES
Joseph Lyman, West Neck Road, Lloyd Harbor, Huntington, N.Y.
Filed Jan. 11, 1957, Ser. No. 633,730
5 Claims. (Cl. 18—56)



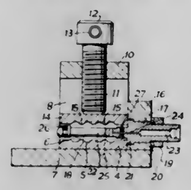
1. In a method for making molds for cast reproductions of an object, the steps of vacuum forming sheet portiors of soft hardenable material against opposite sides of an object, thereby forming in said respective sheet portions accurate impressions of opposite sides of said object adapted to constitute opposed mold portions surrounded by laterally extending engaged boundary portions, allowing said formed sheet portions to harden, separating said sheet portions, removing said sheet portions from the object, and bringing said sheet portions together with said opposed mold portions in accurate registry to form a mold.

3,021,570
PROCESS FOR THE MANUFACTURE OF HOLLOW ARTICLES FROM THERMOPLASTIC RESIN BLANKS BY COLD EXTRUSION
Armando Podesta, 4 Via Petrarca, and Carlo Vignati, 3 Piazza Sicilia, both of Milan, Italy
Filed Sept. 17, 1957, Ser. No. 684,526
Claims priority, application Italy Sept. 19, 1956
2 Claims. (Cl. 18—56)



1. A process for the manufacture of hollow articles of a synthetic resin of the class consisting of polyvinyl and polyethylene resins by cold extrusion starting from disc-shaped blanks, comprising inserting a disc between two oppositely lying co-axial plungers having different diameters and slidably mounted in a pair or corresponding cylinders firmly attached together and forming an annular step at their meeting plane; said cylinders being slidable together in the direction of the smaller diameter plunger; exercising a pressure, on the smaller diameter plunger, which is sufficient to squeeze said material and cause it to flow radially, while in a solid condition, and react in axial direction against said annular step, whereby said cylinders are shifted by the pressure of the squeezed material in the direction of said smaller diameter plunger by the squeezed material which thus fills an annular space formed as a consequence of said shifting between that part of the last named plunger which comes to lie inside said larger diameter cylinder and the corresponding wider bore end of said cylinder, the hollow, article thus produced being constituted by the synthetic resin filling said annular gap and the space between the two plunger ends.

3,021,571
COUPLING FOR PLASTIC TUBES
Harold Ernest Jackson, St. Maurice, and Trevor Frederick Moss, Newton Ferrers, England, assignors, by mesne assignments, to Imperial-Eastman Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 17, 1958, Ser. No. 721,894
Claims priority, application Great Britain Mar. 29, 1957
3 Claims. (Cl. 18—56)



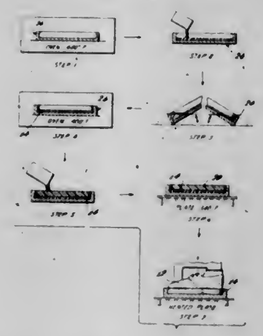
1. A method of deforming a portion of a continuous length of open-ended tube made of a deformable elasto-

meric material to form external and lateral projections thereon adapted to couple or assist in coupling the tube to a member into which it is fitted, said method comprising holding a portion of said tube with a sealing grip at longitudinally spaced points between a nozzle insert into the tube and separable moulding members surrounding said tube to provide a space inside said tube and between said spaced gripping points, supplying a fluid under sufficient pressure from an outside source through the nozzle into the space between said gripping points and between said tube and nozzle to force the walls of the tube outwardly into engagement with the moulding surfaces of the separable moulding members, maintaining said fluid pressure for a period of time until the deformed area of the tube assumes permanently the shape conforming to and determined by the shape of the moulding surfaces, and then separating said moulding members and removing the tube from said nozzle.

3,021,572
METHOD OF MAKING A BOTTOM STRUCTURE FOR SHOES

Maurice C. Smith, Jr., Bristol, R.I., assignor to Marbill Company, Providence, R.I., a corporation of Rhode Island

Filed Mar. 27, 1957, Ser. No. 648,870
1 Claim. (Cl. 18—58)



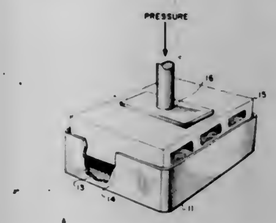
A method of making a bottom structure for shoes comprising: providing an open top mold having a bottom part corresponding in shape to the sole of the shoe and a side wall part at least a portion of which corresponds in shape to a foxing flange; heating the mold; pouring a quantity of plastisol just sufficient to form a sole and foxing flange into the upright mold; tipping the mold progressively around a perpendicular axis sufficiently to flow the plastisol just up to the top of said portion of the side wall part, the plastisol gelling on said portion thereby to form a foxing flange; righting the mold; and reheating the mold to cause further gelling of the plastisol and to cure the thereby formed sole and foxing flange.

3,021,573
PROCESS OF MAKING SURFACE COATS FOR MASONRY BUILDING UNITS

Itzhak Bentov, Cambridge, Mass., assignor to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

Filed Nov. 5, 1958, Ser. No. 771,943
1 Claim. (Cl. 18—60)

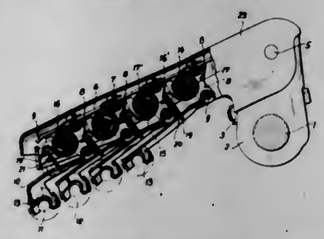
In a process for forming a decorative sand-filled resinous coating on a masonry building block, the improvement comprising: placing sand in a mold having the shape of said coating; vibrating said mold to compact said sand; surmounting said sand with an absorptive, compressible material selected from the group consisting of (1) a nonwoven cotton fabric and (2) expanded mica, said material containing a liquid heat-convertible resin; surmounting said absorptive, compressible material with a masonry building block; applying a downward pressure between 150 and 310 pounds per square inch to said masonry building block to express said resin from said absorptive, compressible material and to shape said material and said resin in said mold; and heating said mold to a temperature between 180° F. and 250° F. for a period of 5 to 10 minutes to solidify said liquid resin in said mold, said absorptive, compressible material being embedded in said solidified resin during said heating stage and said coating being firmly attached to said masonry building block.



3,021,574
TEXTILE DRAWING MECHANISM

Ernst Daüsch, Stuttgart, and Kürt Schrotz, Fellbach, Württemberg, Germany, assignors to SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung, Schweinfurt, Germany, a German company

Filed May 14, 1958, Ser. No. 735,329
Claims priority, application Germany Aug. 23, 1957
18 Claims. (Cl. 19—135)



5. In a textile drawing mechanism, in combination, a support; a guide arm pivoted on said support and carrying a drawing roll: supporting bolt means rotatably mounted on said support; a flat spiral spring on said supporting bolt means and having an inner end portion secured to said bolt means and an outer free end portion; and an intermediate member tiltably connected to said guide arm and defining a seat for the outer end portion of said spiral spring so that the latter urges said guide arm in the direction for weighting said drawing roll carried by said guide arm.

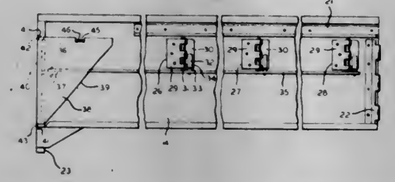
3,021,575
FOLDABLE STAGE

Harold Heisler, Lombard, Ill., assignor to Midwest Folding Products Mfg. Corp., Roselle, Ill., a corporation of Illinois

Filed Aug. 5, 1958, Ser. No. 753,318
8 Claims. (Cl. 20—1.123)

8. In a stage structure having a plurality of hingedly related platform sections movable between folded and

open positions and having also a pair of transversely spaced and longitudinally extending side panels adapted to support said sections in the open position thereof, a pair of hinge elements respectively associated with said said panels and having a fixed component rigidly secured thereto and a movable component pivotal about an axis generally normal to planes defined by said platform sections when said sections are in the open position thereof, and a pair of transversely spaced and longitudinally extending linkage structures respectively associated with said hinge elements and being pivotally connected directly

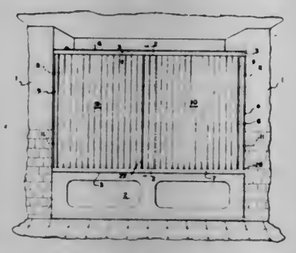


to said movable components, each of said linkage structures being longitudinally reciprocable along the respectively associated side panels and bodily movable inwardly and outwardly relative thereto and being effective to swing the respectively associated movable hinge components between a first retracted position wherein such movable components extend along the associated panels and a second extended position wherein said movable hinge components are oriented transversely with respect to said panels and beneath said platform sections for supporting the same.

3,021,576
FRAME STRUCTURE

John L. Conroy, Lemongrove, Calif., assignor to Alsynite Company of America, a corporation of California

Filed Nov. 18, 1955, Ser. No. 547,791
3 Claims. (Cl. 20—11)

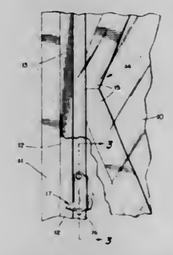


1. A frame, adapted to be cut to fit rectangular openings of various sizes along one dimension thereof, comprising a first pair of parallel frame members of substantially uniform cross-section adapted to extend along one dimension, said cross-section being generally of the shape of an **m** having the legs extending toward the opening bounded by the members, at least one lateral projection on one of said legs, a second pair of parallel frame members of substantially uniform cross-section, said last mentioned cross-section being generally of the shape of an **n**, each of said second pair of members having a slot at each end of the same cross-sectional shape as said leg having said lateral projection, and each of said last-mentioned legs and its lateral projection engaging said slots, the legs of the **n** shape of said second pair of frame members engaging legs of the **m** shape of said first pair of frame members, each of said second pair of frame members being freely slidable along said first pair of frame members, whereby the first pair of frame members are adapted to be cut to any length, and relative movement of said pairs of frame members is substantially restricted to sliding movement parallel to the length of said lateral projection.

3,021,577
FRAME FASTENER FOR WINDOW STRUCTURE

James S. Roberts, Conneaut, Ohio, assignor to Spud's Tool & Die, Inc., Conneaut, Ohio, a corporation of Ohio

Filed Jan. 21, 1960, Ser. No. 3,864
2 Claims. (Cl. 20—40)

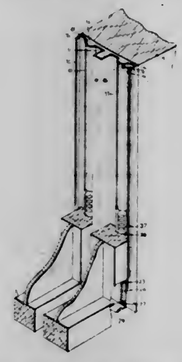


1. A latch structure for a removable grill unit, comprising a pivoted element and a retaining means on said unit for said element, said element having one end pivotally secured to said grill unit, a sharp piercing prong on a free end of said element and moveable into a position of projection beyond the periphery of said unit, a guide track having abutment means on the free end of said element, said track being slidably moveable in said retaining means to cause said abutment means to engage said retaining means to limit pivotal movement of said element.

3,021,578
COMBINATION WEATHERSTRIP AND SASH BALANCE AND VARIOUS ADJUSTMENT MEANS

Zygmunt J. Czubachowski, Rochester, N.Y., assignor to The Caldwell Manufacturing Company, Rochester, N.Y., a corporation of New York

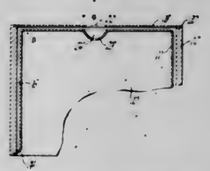
Filed Apr. 25, 1956, Ser. No. 580,659
7 Claims. (Cl. 20—52.2)



1. A weather strip and a sash balance for sliding sashes of window casings, said weather strip comprising a pair of horizontally spaced track portions for receiving said sliding sashes, said horizontally spaced track portions being separated by a parting strip formed from the body of said weather strip, a portion of the outer walls of said

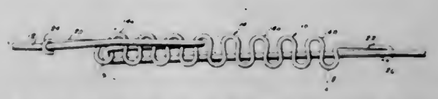
weather strip forming inwardly bent flanges for exerting pressure against said sashes, said weather strip being normally bow-like in cross section for holding said sashes securely with respect to a jamb of said window casings due to the yielding pressure being exerted on said sashes, said weather strip having a guideway for said sash balance comprising a U-shaped housing channel running vertically from the top of the jamb a portion of the length of said track portions and raised flanges running the remaining distance from said housing channel to the bottom of said weather strip for forming a guideway for said sash balance, said sash balance comprising a single spring disposed in said guideway and secured at the top of said weather strip and guideway by a screw; said screw holding said spring in said guideway and holding said weather strip at the top of said jamb and permitting said weather strip to float at its bottom end, the bottom end of said spring having attached thereto a suitable adjustment means including an adjusting rod disengageably connected to said spring and attached at its bottom end to a sash balance bracket, said bracket being removably attached to the bottom of a sash, said suitable adjustment means being used for increasing or decreasing the length of said spring, said sash balance forming means for counterbalancing said sash.

3,021,579
MOLD FOR MAKING COMPOSITE METAL BEARINGS
Leonard J. Schmid, Brownsburg, and Donald R. Scott, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 19, 1957, Ser. No. 647,072
8 Claims. (Cl. 22—116)



1. A mold for use in casting a lining on a cylindrical member, said mold comprising an inverted cup-shaped member disposed within a cylindrical member and having its side walls generally uniformly spatially separated from the cylindrical member to define an annular casting cavity therebetween, said cup-shaped member being secured to the lower edge of the cylindrical member throughout its circumference thereby providing providing an imperforate lower wall for said cavity, and a sheet material cover having a generally central pouring aperture positioned over said cup-shaped member and vertically spaced therefrom.

3,021,580
SLACK TAKE-UP DEVICE
Joseph Rowitz, Chicago, Ill.
Filed Mar. 28, 1960, Ser. No. 18,015
1 Claim. (Cl. 24—71.3)



A slack take-up device for selective tensioning of lines, cables and the like comprising an elongate member forming a plurality of axially spaced recesses configured to receive and engage a line therein, including a pair of adjoining recesses at one end of the member opening in substantially opposite directions from one another and a plurality of recesses intermediate the ends of the member, said recesses intermediate the ends of the member being of an even number and opening in substantially the same direction as the inner recess of said pair of adjoining recesses, a hook on the extremity of said one end of said member and adjacent said pair of adjoining recesses and a hook on the other end of said member, said hook on the other end of said member opening in a direction away from the direction of the hook adjacent said pair of adjoining recesses whereby the line may be threaded through said pair of adjoining recesses and through one of said recesses intermediate the ends of said member and may be engaged in said hooks when the member is turned about an axis substantially perpendicular to its longitudinal axis.

3,021,581
GROUND CLIP FOR ELECTRICAL OUTLET AND SWITCH BOXES
Raymond D. Cook and William A. Lang, Pittsburgh, Pa., assignors to Steel City Electric Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 12, 1958, Ser. No. 773,326
4 Claims. (Cl. 24—73)



3. A one-piece clip of spring metal bent in a U-shape and formed with a plurality of transverse ramps at the end of the legs, sheared edges carried by the ramp on one leg and terminating in sharp corners for digging into the surface of a plate adjacent one edge of the latter, there being a conductor groove provided in another ramp-carrying leg so as to form in the surface of the leg a passage for a conductor lying between the wall of said groove and the surface of the plate holding the clip, there being a conductor slot which is formed in said clip and which for a portion occupies said other leg, said conductor groove extending between the ramp carried by said other leg and said conductor slot, and being aligned with the latter whereby the midplane of the slot substantially bisects the groove.

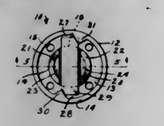
3,021,582
GRADE STRIP SUPPORT
William A. Jennings, Des Moines, Iowa, assignor to Economy Forms Corporation, Des Moines, Iowa, a corporation of Iowa
Filed Mar. 9, 1959, Ser. No. 798,154
4 Claims. (Cl. 24—81)

1. A support for holding a grade strip member against the inside face of a metal concrete form including a flange formed along an edge of said form and extended angularly to the plane of said face; said support comprising means forming a channel adapted to be clamped on said flange and including a pair of spaced fulcrum parts, an elongated resilient strap extending through said channel forming means whereby spaced portions of said strap contact said fulcrum parts while one end of said strap is contiguous with said grade strip member, and retractable means connected to said channel forming means for engageably applying a force to said strap on a portion thereof intermediate said spaced portions whereby to flex said strap



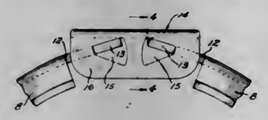
to move said one end of the strap to hold said grade strip member against said face.

3,021,583
SEPARABLE BUTTON
Francis E. Grannen, 5270 North Bend Road, Cincinnati, Ohio
Filed Jan. 2, 1959, Ser. No. 784,543
6 Claims. (Cl. 24—109)



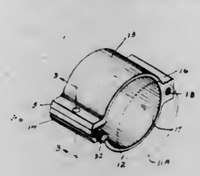
4. A holding mechanism for a detachable button comprising a plate formed of a single piece of material and provided with means for securing it in position on the surface with which it is to be used, said plate being provided substantially centrally thereof with an elongated aperture substantially rectangular in area and having a major dimension and a minor dimension at right angles to one another, upwardly stamped projections from said plate respectively laterally outwardly of the central aperture, each of said projections including an upwardly, inwardly inclined portion and a portion extending parallel with the plate and toward another portion of the other projection and forming beneath each projection a wedge shaped passageway, said parallel portions of said projections being spaced from one another a distance substantially equal to the minor dimension of the aperture to form a way between the projections to the passageways therebeneath, said plate outwardly of the aperture in the direction of its major dimension providing supports, and a leaf spring on said supports between the projections and forming in effect a base for the wedge shaped passageways beneath the projections.

3,021,584
CLAMP HINGE
Frank C. Polanski, Kenosha, Wis., assignor to Ladish Co., Cudahy, Wis., a corporation of Wisconsin
Filed Aug. 18, 1959, Ser. No. 834,621
6 Claims. (Cl. 24—270)



5. In a band clamp, a pair of curved complementary band sections having relatively movable juxtaposed inner end extensions, each of said inner end extensions being formed as a tongue with a T-head having integral lateral projections, and a channeled hinge bracket straddling the adjacent tongue ends of the band sections and having a web portion and having side walls, the side walls of said bracket being formed with pairs of opposed relatively large openings therein, with each opposed pair of said openings being shaped to movably receive the end portions of said integral lateral projections of the T-head of a tongue for swinging movement of portions of said lateral projections toward and away from said web portion of the hinge bracket to provide for opening and closing hinging movements of the band sections, and said openings having edges positioned to be engaged by said end portions of the T-head to form stops.

3,021,585
INSTRUMENT CLAMPS
Alfred Barkley Castle, Brookmont, Md. (4004 Maryland Drive, Washington 16, D.C.)
Original application Apr. 26, 1954, Ser. No. 425,692, now Patent No. 2,938,690, dated May 31, 1960. Divided and this application Oct. 17, 1955, Ser. No. 540,969
8 Claims. (Cl. 24—279)

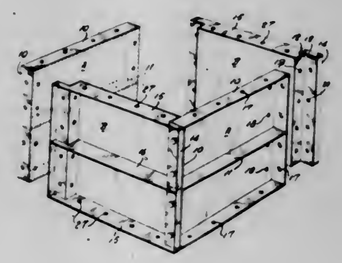


1. A clamp for mounting in a panel having a circular instrument receiving aperture for receiving a cylindrically shaped instrument with a benzel of sufficient size to prevent complete passage of the instrument through the aperture and serving as a handle for rotating the instruments and permitting the mounting of many instruments in a minimum of panel space, said clamp comprising a one piece arcuate band with integral enlargements at its ends and an anchoring lug substantially at its midpoint, the interior of said band being of generally cylindrical shape, said enlargements being provided with opposed aligned interiorly threaded apertures, a U-shaped channel lying between said enlargements and having aligned bearing surfaces adjacent the midpoint of each free edge of the U-shaped channel, said bearing surfaces being in registry with said threaded apertures, a clamping shaft, a worm gear fixed on said clamping shaft intermediate the ends thereof, said clamping shaft being oppositely threaded on its opposed ends for positive connection with the threads in said apertures in the end enlargements of said band, a headed clamping screw of a length between the shoulder formed by its head and its other end to extend from the exposed surface of the instrument panel to beyond said worm gear so the shoulder of said head may engage the exposed surface of the panel and its threads engage the teeth of said worm gear, the inner surface of the bight portion of the U-shaped channel providing a bearing for maintaining said clamping screw in operative position relative to said worm gear whereby the clamp may be actuated from the exposed surface of said panel.

3,021,586
CONCRETE MOLD FORMS
Fernando J. Uruburu, 1 E. 93rd St., New York, N.Y.
Filed Feb. 3, 1959, Ser. No. 790,940
3 Claims. (Cl. 25—121)

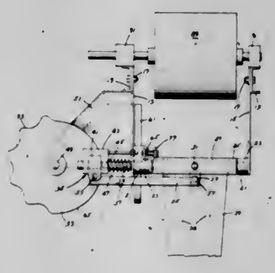
1. A mold unit comprising a first opposed pair of rectangular plates, a second opposed pair of rectangular

plates abutting said first plates normally and enclosing a volume of rectangular section between the inner faces of said plates, stepped flanges extending from and along the lateral opposed sides of said first plates, said stepped flanges including a first wall normal to the inner face of said first plates and a second wall extending normally outwardly from said first wall, planar flanges extending normally from the remainder of the sides of the inner faces of said plates, the lateral margins of the inner



faces of each of said second plates abutting said first walls, and the lateral flanges of said first plates abutting said second walls of said stepped flanges, each of said walls of said stepped flanges and the abutting margins and lateral flanges of said second plates having formed therein a vertically extending line of registering apertures, and pins detachably positioned within said apertures to detachably secure said first and second plates to one another.

3,021,587
TOW PACKAGING PLAITER
Frank Rudbarg, Philadelphia, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Feb. 3, 1959, Ser. No. 790,865
7 Claims. (Cl. 28—21)

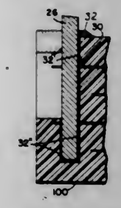


1. Apparatus for depositing a strand along a predetermined pattern including a fixed supporting structure, a frame mounted on the supporting structure for pivotal movement about a first axis, strand-guide means mounted on the frame for pivotal movement about a second axis, means for oscillating said frame and strand-guide means in alternating relation at different frequencies, said last-mentioned means including a cam, means for rotating said cam whereby said frame is oscillated at a high frequency during part of each revolution of the cam and at a low frequency during the remainder of such cam revolution, a second cam operatively connected with said strand-guide means, and means for rotating said cams at a substantially uniform rate.

3,021,588
KNITTED TEXTILE PRODUCTS AND METHODS FOR THEIR PREPARATION
Edgar Dare Bolinger, Clemson, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
No Drawing. Filed Apr. 3, 1958, Ser. No. 726,294
17 Claims. (Cl. 28—76)

1. A method for finishing textile products knitted from elasticized non-torque yarns containing heat settable internal latent stresses in the fibers which cause the yarn to assume a convoluted linear configuration when heated in a relaxed state which comprises wetting said textile products in an aqueous bath having a temperature of not more than about 100° F. and thereafter heating the wetted textile products to a minimum temperature of about 140° F. while continually agitating the same.

3,021,589
METHODS FOR INSTALLING TERMINAL LEADS IN COMPOSITE ELECTRICAL COMPONENTS AND RESULTING PRODUCTS
Barton L. Weller, Easton, Conn., assignor, by mesne assignments, to Vitramon, Incorporated, Monroe, Conn., a corporation of Delaware
Filed June 5, 1958, Ser. No. 740,147
12 Claims. (Cl. 29—25.42)

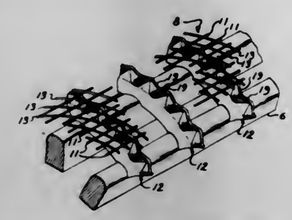


1. The method of making an electrical unit which method comprises the steps of building a body by forming successive layers from suspensions of material having specific electrical properties, at least one of said layers being electrically conductive and lying wholly within said body, said layers each being of a semi-hard consistency, inserting a lead of electrically conductive material into said body transversely to said layers so that there is electrical contact with said electrically conductive layer, and curing said body to harden said layers and shrink them upon said lead for embedding the same in said body.

3,021,590
SUPPORT WIRE FOR DANDY ROLL COVERS
Peter S. Sinclair, South Hadley, Mass., assignor to The Sinclair Company, Holyoke, Mass., a corporation of Massachusetts
Filed Sept. 28, 1959, Ser. No. 842,669
2 Claims. (Cl. 29—121)

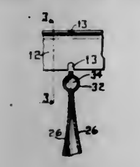
1. In a dandy roll having axially extending, circumferentially spaced support rods and a woven wire cover disposed around said roll; means for supporting said cover in spaced relation to the support rods comprising a metallic ribbon mounted in edgewise relation on said support rods, said ribbon being wound in a continuous spiral around the roll and being of generally rectangular and uniform cross sectional size throughout its length so that the ribbon is of generally equal magnitude from its inner to outer edge, the outer edge of said ribbon being

of convex curvature in tangential contact with the undersurface of said cover, the outer edge portion of said



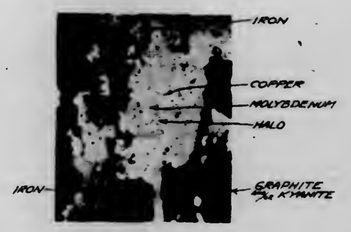
ribbon having a zig-zag configuration throughout its length.

3,021,591
METHOD OF MAKING BLOWER ROTOR
Robert A. Mayne, 45 E. Dixon Ave., Dayton, Ohio, and Arthur F. Leis, Dayton, Ohio; said Leis assignor to said Mayne; Ruth D. Mayne, executrix of said Robert A. Mayne, deceased
Filed Oct. 12, 1953, Ser. No. 385,526
14 Claims. (Cl. 29—156.8)



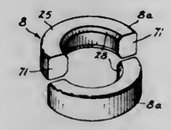
1. The method of making a blower rotor having a cylindrical blade section and a support wheel comprising the steps of forming a sheet of metal into a cylindrical body open at each end thereof and having a plurality of blades attached thereto, each blade having an inner edge within the cylinder, the blades being retained between a pair of end rings, some of the blades projecting inwardly further than some of the other blades, followed by forming a notch at the inner edge of the blades projecting inwardly further than the other blades, forming a pair of circular plates, followed by bending an annular protrusion in each plate adjacent the periphery thereof, said circular plates having a limited annular area between the annular protrusions and the peripheral margin of the circular plates, the limited annular area being such that when the annular protrusions are flattened said annular area is deflected, joining the circular plates one to the other in axial alignment forming a support wheel with the protrusion on each circular plate aligned with the protrusion on the other plate thus forming a tubular bead adjacent the periphery of the support wheel, the combined thickness of the circular plates being less than the width of the notch but not much less, placing the support wheel within the cylindrical body with the peripheral edges of the circular plates aligned with the notches in the inner edges of the blades, squeezing the protrusions forming the tubular bead so that the tubular bead becomes smaller in size thus increasing the diameter of the support wheel and thus causing the peripheral edges of the circular plates to move into the notches in the blades, the peripheral limited annular area of each circular plate diverging one from the other during squeezing of the protrusions, the width of the notch being such that the outer margins of said limited annular areas when deflected engage the sides of the notches, thus causing the edges of the circular plates to abuttingly engage the blades in two spaced areas within the notches thereof, thus locking the blade section to the support wheel.

3,021,592
IRON-MOLYBDENUM SINTERED POWDERED METAL MATRIX
Robert H. Herron, George C. Reed, and Douglas J. Roth, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Oct. 2, 1959, Ser. No. 844,044
14 Claims. (Cl. 29—182.5)



1. A sintered powdered metal matrix consisting essentially of: from about 2.5% to about 82.5% copper, from about 10.0% to about 90% iron, from about 1.0% to about 50% molybdenum and from about 1.0% to about 28.5% of at least one metal from the group consisting of antimony, bismuth, cadmium and lead, and in which some of the iron and molybdenum form a phase in which the two are alloyed together.

3,021,593
METHOD OF MAKING METAL RINGS
Walter F. Cousino, 2160 Mount Vernon, Toledo, Ohio
Filed May 5, 1958, Ser. No. 732,989
7 Claims. (Cl. 29—417)

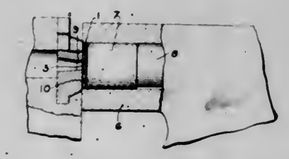


1. A method of making segments a plurality of which form a substantially complete circle having an inner opening to receive a reduced portion of a valve stem of a poppet valve of an internal combustion engine and a flat surface to bear against a shoulder on said valve stem through which said valve is subjected to closure pressure of the valve spring, said process comprising rolling a wire to form a bar having sections of generally keystone shape with two parallel surfaces and having linear relieved portions along each side of the narrower of said two parallel surfaces which relieved portions have a surface which intersects two flattened surfaces of said bar, bending said bar about an axis which is parallel to said two parallel flat surfaces but displaced from said narrower of said parallel surfaces, to form a helix having the said narrower surface as an inner cylindrical surface, separating segments of less than one turn from said helix to form helical segments, and compressing said segments between flat parallel surfaces in a direction generally parallel to the inner and outer surfaces of said segments to reduce the thickness of said segments and to flatten them into circular shape, said relieved portions being unrestrained by contact with rigid surfaces during the said compression.

3,021,594
METAL-SHAPING LUBRICANT COMPOSITIONS AND METHOD

Alfred Clatot, Pavillons-sous-Bois, Georges Lemoine, Bobigny, and Abram Segal, Paris, France, assignors to Societe d'Exploitation des Brevets CLS, Paris, France

Filed Feb. 5, 1958, Ser. No. 713,364
13 Claims. (Cl. 29—424)



1. An infusible, heat-insulating lubricant composition adapted for interposition between the heated surface of a metal to be shaped and the shaping surfaces of the shaping assembly which comprises essentially, a lubricant powder containing about 65% to about 95% by weight of a lamellar solid selected from the group consisting of graphite and molybdenum disulfide, about 3% to about 20% by weight of a heat-insulating, porous, non-abrasive combustible organic substance in finely divided state and about 2% to about 15% by weight of a higher metal oxide selected from the group, consisting of pyrolusite (manganese dioxide), lead dioxide and bismuth tetraoxide, a colloidal dispersing and binding agent and a liquid vehicle selected from the group consisting of organic solvents and water.

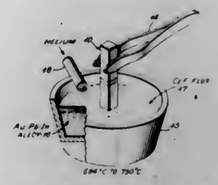
13. In a method of producing a shaped metal body by subjecting a work-piece heated to a plastic condition to a metal shaping operation utilizing shaping dies and pressure, the steps of interposing between said heated metal work-piece and said shaping dies a lubricant layer comprising about one part of a lubricant powder containing about 65% to about 95% by weight of a lamellar solid selected from the group consisting of graphite and molybdenum disulfide, about 3% to about 20% by weight of a heat-insulating, porous, non-abrasive combustible organic substance in finely divided state and about 2% to about 15% by weight of a higher metal oxide selected from the group consisting of pyrolusite (manganese dioxide), lead dioxide and bismuth tetraoxide and about 1 to about 15 parts of a colloidal dispersing and binding agent selected from the group consisting of liquid organic solvents and water, wherein the said lubricant is deposited on and supported by a completely combustible organic backing and is interposed by inserting between said work-piece and said shaping dies, the completely combustible organic backing with said lubricant layer deposited and supported thereon.

3,021,595
OHMIC CONTACTS FOR SILICON CONDUCTOR DEVICES AND METHOD FOR MAKING

David L. Milam, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Filed July 2, 1958, Ser. No. 746,114
5 Claims. (Cl. 29—473.1)

1. A method of making an ohmic electrical connection to a silicon semiconductor element that comprises maintaining an alloy consisting essentially of 40% by weight gold, 55% by weight lead, and 5% by weight indium at a temperature slightly above 684° C., maintaining a cesium fluoride flux on top of said alloy, dipping a portion of a silicon semiconductor element briefly into said alloy through said flux to allow a coating of said alloy to adhere thereto, and thereafter soft soldering an

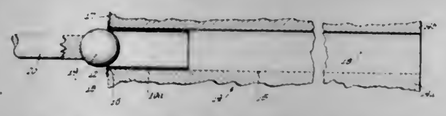


electrically conductive lead to the alloy adhering to the silicon semiconductor element.

3,021,596
VERY THIN WALL TUBING

Joseph Wilson Yowell, Hillspoint Road, Westport, Conn., and Donald B. Miner, Orange Center Road, Orange, Conn.

Filed Jan. 30, 1958, Ser. No. 712,207
6 Claims. (Cl. 29—544)

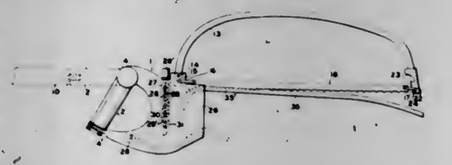


1. The method of making very thin wall seamless tubing comprising providing a short thick-wall piece of seamless tubing, maintaining the outside diameter of the tubing substantially constant, reducing the wall thickness of the tubing by forcing at least one object having a diameter greater than the inside diameter of the tubing relatively axially through the tubing, and restraining the end of the tubing into which the object is introduced against movement with the object while leaving free for movement the other end of the tubing.

3,021,597
PRESSURE BAR WOOD SAW

William John Sampson, 524 W. 42nd St., New York, N.Y.

Filed Oct. 17, 1960, Ser. No. 63,153
3 Claims. (Cl. 30—166)

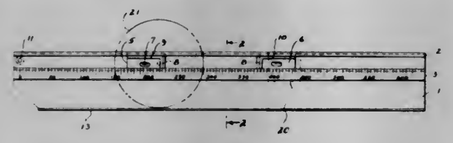


1. A tree branch saw comprising a handle, a straight saw blade mounted on said handle, a pressure bar pivotally mounted on a pivot on said handle, said pivot being spaced away from the axis of said blade a distance substantially equal to a conventional hand grip to prevent any wedging of branches between said bar and said blade, a spring connected to adjustably spring load said pressure bar towards said saw blade, said pressure bar being normally connected and spring loaded to touch said saw blade adjacent its mounting on said handle and being curved toward said blade adjacent said pivot and then extending outwardly in a straight line to present a straight line edge that diverges away from said saw blade so that a branch may easily enter between said saw blade and said pressure bar, and a stiffening member mounted on said handle and connected to the free end of said blade.

3,021,598
APPARATUS FOR GUIDING A PHOTOELECTRIC CELL SENSOR IN A CIRCULAR PATH OF ADJUSTABLE RADIUS

Karl Katzor, Berlin, Germany, assignor to American Messer Corporation, New York, N.Y., a corporation of New York

Filed Sept. 23, 1959, Ser. No. 841,834
2 Claims. (Cl. 33—27)

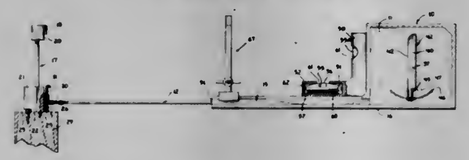


1. Apparatus for guiding a photoelectric sensor in a circular path when said sensor is positioned in scanning relationship to said apparatus comprising a longitudinally extending base member, one longitudinally extending edge of said base member being formed into a U-shaped channel, a longitudinally extending support mounted on said base member, a scale mounted on said support with the scale overhanging said support to form a track in cooperation with the U-shaped edge of said base member, the other longitudinal edge of said base member being formed upwardly to provide a stop, a first guide slidably mounted within said track, said guide carrying an index line transversely of said base member and a starting line extending longitudinally of said member and merging into said index line, and a pivot mounted at one end of said base member.

3,021,599
COMBINATION TOOL

Earl R. Odom, 438 W. Olive Ave., Monrovia, Calif.

Filed June 10, 1960, Ser. No. 35,223
5 Claims. (Cl. 33—46)



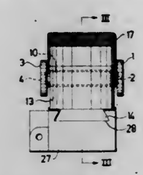
1. A measuring device comprising a casing having a flat, elongated base, a tape coiled within said casing, said casing being formed to dispense the tape parallel to said base, said casing carrying sighting means definiing a line of sight parallel to the length of said base, a target unit, means for securing said target unit to a reference point, said target unit having a target positioned thereon in such a manner as to be spaced from said reference point a distance equal to the spacing of said line of sight from said base, means for detachably connecting the end of said tape to said target unit, and means carried by said casing for indicating when said base is horizontal and vertical.

3,021,600
PEEP SIGHT

Olle Edström, Sillerbo, Tallasen, Sweden, assignor to Aktiebolaget O. Edströms Snickerifabrik, Tallasen, Sweden

Filed Mar. 23, 1959, Ser. No. 801,370
Claims priority, application Sweden Apr. 11, 1958
6 Claims. (Cl. 33—47)

1. A peep sight for aiming a gun and the like at a target, comprising, in combination, two disks formed with a smaller and a larger opening therein respectively, each of said disks having a face about the respective opening; and a support carrying said disks in spaced relationship, the cross sectional area of the opening farther away from said target being greater than that of the opening nearer said target, said openings defining the



optical axis of said sight, and said faces being arranged opposite each other and axially defining therebetween an optical channel having a cross section about said axis greater than the larger one of said openings, and an axial length substantially greater than the greatest cross sectional dimension of said greater opening.

3,021,601
TRACK LINING SCOPE

Brice E. Hayes, 6710 Northwest Highway, Chicago 31, Ill.

Filed May 15, 1957, Ser. No. 659,366
11 Claims. (Cl. 33—60)



1. A lining scope for use in the lateral alignment of railroad track comprising a base having means for rigidly securing the same to a rail of a railroad track, a vertical staff pivotally mounted at its lower end on said base for movement about an axis longitudinal of the rail when said base is mounted thereon, telescope means carried by the upper end of said staff, and means connected between said staff and said base operable from a position disposed substantially above said base for pivoting said staff about said axis so as to dispose the longitudinal axis of said telescope means in the vertical plane of the gauge side of said rail.

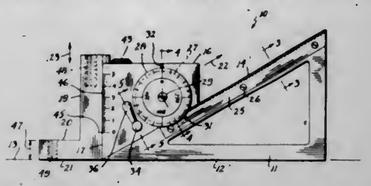
3,021,602
MEASURING INSTRUMENTS

Hans Zimmerman, 162 Southwood Drive, San Francisco, Calif.

Filed Sept. 4, 1959, Ser. No. 838,121
4 Claims. (Cl. 33—170)

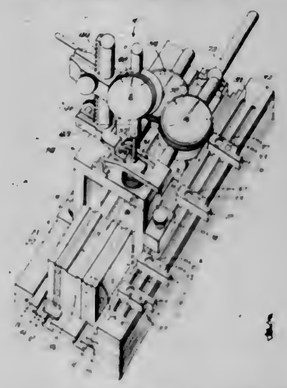
1. In a measuring instrument, the combination of a body having a horizontal base edge adapted for positioning on a supporting surface and an inclined upper edge, a block slidable longitudinally on said inclined edge and having a vertical side edge, a locating member slidable vertically on said side edge and having a horizontal face movable to a contact with and away from

the supporting surface on which said base edge is positioned, and means for indicating the distance of said face



from the plane of said base edge which is positioned on said supporting surface.

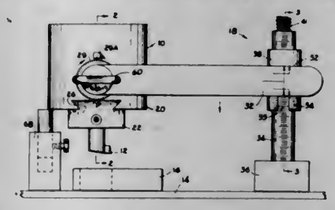
3,021,603
GAUGING DEVICE
Harry R. Beeson, 2134 N. 74th Ave., Elmwood Park, Ill.
Filed Oct. 3, 1957, Ser. No. 688,082
5 Claims. (Cl. 33—174)



1. A gauging device including in combination, a base member, a holding block having front and back ends and longitudinally slidable along said base member, means secured to said block for attaching an article to be gauged to said block, a plurality of setting means longitudinally slidable along said base member adjacent said block and affixable to said base member, support means longitudinally slidable along said base member, means for connecting said support means successively to said setting means, contact means carried on said support means and adapted to be moved adjacent said block for registry with portions of articles attached thereto and a gauge longitudinally slidable along said base member and adapted to be held against the back end of said block so that longitudinal movement of said block is measured by said gauge as said block is slid along said base member in moving portions of articles attached thereto into registry with said contact means as said support means is successively connected to said setting means.

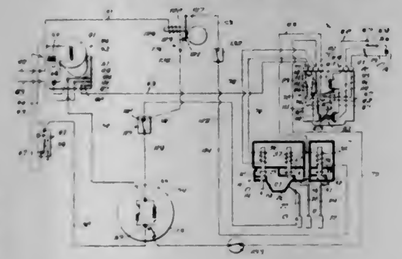
3,021,604
WAYS AND MEANS FOR ADJUSTING WORK TOOLS
Allan N. Moore, 2053 Swensberg NE., Grand Rapids, Mich.
Filed Jan. 22, 1959, Ser. No. 788,388
7 Claims. (Cl. 33—185)

1. A work tool adjustment instrument for work tools adjustable by the manual rotation of a rotatable adjustment member, which comprises: radius arm means; engagement means on said radius arm means for engagement with, and disengagement from, said rotatable member and being readily attachable thereto and detachable therefrom; scale guide means disposed transversely and adjacently to said radius arm means and positioned at a point removed from said engagement means; and scale means movably mountable on said scale guide means, said scale means comprising unit length indicia,



means for establishing and maintaining said scale means in a predetermined position on said scale guide means and said scale means including shoulder means for limiting movement to one direction of said radius arm means, said radius arm being otherwise freely movable with respect to said scale means.

3,021,605
HEATER SYSTEM
Lehman E. Anderson, Two Rivers, Wis., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Filed July 19, 1957, Ser. No. 673,048
13 Claims. (Cl. 34—45)



7. In a laundry dryer, the combination of a pair of main heaters for supplying heat to the dryer, manually set timer means for starting operation of said heaters at the beginning of a drying cycle, thermostat means operable to deactivate and activate at least one of said heaters upon a temperature in said dryer reaching respective predetermined upper and lower limits, and means responsive to said thermostat means for disabling the other of said heaters for the remainder of the drying cycle upon the first operation of said thermostat means, said timer means coacting with said disabling means to set said disabling means when said timer means starts operation of the dryer, said timer means being connected to continuously operate from the beginning to the end of the drying cycle and operable to deactivate said one heater after the passage of a preselected period of dryer operation.

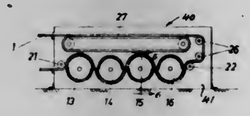
3,021,606
GARMENT FINISHING MACHINE
Virgil R. Carpenter, St. Paul, and William M. Turner, Excelsior, Minn., assignors to The Unipress Company, Incorporated, Minneapolis, Minn., a corporation of Minnesota
Filed Feb. 11, 1959, Ser. No. 792,593
15 Claims. (Cl. 34—103)

14. Apparatus for finishing a garment of the coverall type which has a body having legs and sleeves thereon and a collar and an opening extending up the front of the garment from near the crotch to the collar, said opening having separable edges with cooperating fastening elements therealong, comprising a duct having a terminal edge forming a discharge port, means for delivering a heated fluid through said duct for discharge from said



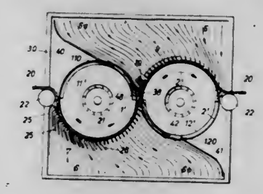
port, means for lightly supporting the front of the garment against said port with the separable edges separated and extending across the edges of said port, means for holding the collar of the garment in an open position with the opening of the collar toward said port and means for closing the neck opening of the garment against substantial outflow of fluid.

3,021,607
COMBINATION DRYING AND TENTERING MACHINE
Heinz Fleissner, Egelsbach, Germany, assignor to Firma Fleissner & Sohn, G.m.b.H., Egelsbach, Frankfurt am Main, Germany
Filed Feb. 4, 1959, Ser. No. 791,125
Claims priority, application Germany Mar. 31, 1958
7 Claims. (Cl. 34—115)



1. A machine for drying and tentering lengthy textile material at full width; comprising enclosure means, hollow drum means arranged in juxtaposition to each other in said enclosure means, tentering means in said enclosure means including movable conveyor means for imparting a stretching action to said material to avoid shrinkage thereof, said enclosure means being provided with inlet means for receiving said material, means in said enclosure means to direct said material onto said drum means, said material being threaded about said drum means, respectively, so that said material contacts adjacent drum means at opposed peripheral portions of the latter, said drum means being provided with perforations passing through the peripheral wall defining each drum means, so that upon forcing through said material and subsequently through said perforations of said drum means contacted by said material a drying medium the latter will be exhausted in axial direction of said drum means, means located in the interior of said hollow drum means for aiding said drying medium to stream in said axial direction, means to prevent entry of said drying medium from without said drum means thereinto at locations of said drum means where said material remains out of contact with said drum means, means in said enclosure means for deviating said material from said drum means to said tentering means, said tentering means and said drum means being disposed adjacent each other and being substantially coextensive in length and breadth so that said drying medium will traverse the entire extent of the web on said tentering means in being sucked into said drum, and outlet means for said enclosure means for discharging said material therefrom.

3,021,608
AIR GUIDING MEANS FOR DRYING APPARATUS
Hans Fleissner, Wolfgratenstrasse 6, Egelsbach, Germany
Filed June 16, 1959, Ser. No. 820,808
Claims priority, application Germany June 18, 1958
10 Claims. (Cl. 34—115)

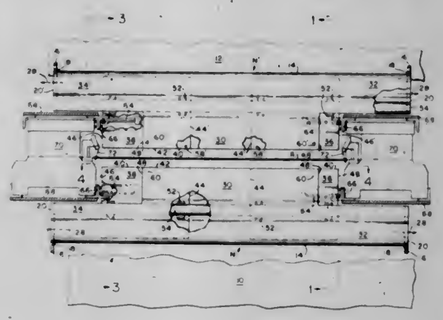


1. Drying apparatus comprising, in combination, at least one rotary perforated tubular member adapted to support and convey a material thereon; means for producing a stream of a gaseous medium in a direction transverse to the axis of rotation of said tubular member so that a peripheral portion of said tubular member is impinged by the stream whereby parts of the stream flow along the sides of said peripheral portion of said tubular member; and guiding means for the gaseous medium and located on the side of said peripheral portion of said tubular member where said peripheral portion of said tubular member and the material thereon move substantially opposite to the direction of the flow of the stream, said guiding means having an inlet portion farther spaced from said tubular member and adapted to extend substantially in the direction of the stream and an outlet portion closer spaced from said tubular member and being shaped for deflecting the gaseous medium to move toward and through said perforated tubular member in a direction having at least a component in the direction of movement of said side of said peripheral portion and of the material conveyed thereon for holding said material on said tubular member.

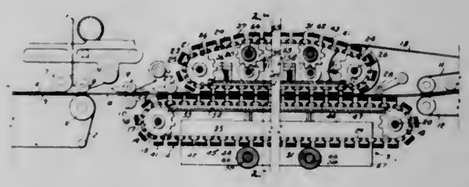
3,021,609
ADJUSTABLE AIR DISCHARGE NOZZLE FOR A DRYING MACHINE
Ralph C. Parkes, Glenside, and Charles H. Schlecht, Cheltenham, Pa., assignors to The National Drying Machinery Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 22, 1958, Ser. No. 730,114
5 Claims. (Cl. 34—158)

1. In a drying machine of the type which includes a drying chamber, a source of fluid drying medium, and means for propelling the material to be dried through said chamber, a plurality of separate elongated, hollow, generally U-shaped shells disposed with their mouths adjacent said material and spaced apart to provide unobstructed air discharged passages therebetween, and means closing the spaces between the adjacent ends of said shells and co-acting with the side walls of adjacent shells to

form elongated nozzles leading from said source to said material, the ends of said shells being open to afford outlets for the fluid medium discharged against said material through said nozzles, each of said shells including a central portion having side walls of a predetermined height and end portions having side walls of a reduced height, the length of said central portion being at least equal to the minimum width of the cloth to be dried, and the combined length of said central and end portions being equal to the maximum width of the cloth to be dried, and end troughs slidable relative to said shell and adapted to be nested relative to said central portion, the side walls of said end troughs being of substantially the same height as the side walls of said central portion whereby when said end troughs register with said end portions of said shell they will constitute continuations of said central portion thereof.

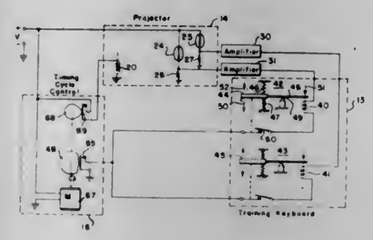


3,021,610
APPARATUS FOR TRANSPORTING BLANKS THROUGH A DRYING ZONE
Richard Winkler, Rengsdorf, near Neuwied, and Kurt Dunnebier, Wollendorf, near Neuwied, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 18, 1958, Ser. No. 774,678
4 Claims. (Cl. 34—162)



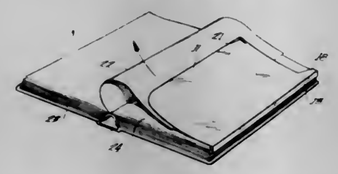
1. Apparatus for conveying envelope blanks in lapped and slightly stepped relation through a drying section of an envelope making machine to expose gummed portions of the blanks to a drying medium, said apparatus including a lower pair of endless chains each composed of interconnected links, blocks of resilient material carried on said links and having frictional faces for supporting contact with portions of said blanks laterally and outwardly of the gummed portions, means for supporting said lower pair of chains to provide upper runs for continuous movement through said drying section in laterally spaced apart parallel relation and providing a substantially uninterrupted space between said upper runs at least corresponding in width to the width of the gummed portions of the blanks for the full length of the drying section for free access of the drying medium to said blanks, separate longitudinal guide means below each of said upper runs for retaining the frictional faces of said blocks in linear alignment for supporting said lateral portions of the blanks thereupon, an upper pair of endless chains having interconnected links, similar blocks of resilient material on the links of the upper chains and having frictional faces for pressing contact with the lateral portions of the blanks, means for supporting the upper pair of chains in correspondingly spaced apart relation and to provide lower runs in registry with and extending longitudinally above the upper runs of the lower chains to operate at the same linear speed, guide means for backing said lower runs for pressing the fractional faces of said blocks on the links of the lower runs into contact with the portions of the blanks supported upon the frictional faces of the blocks on the links of the upper runs of the lower chains for gripping the lateral portions of the blanks between said frictional faces for maintaining the gummed portions of the blanks in substantially taut condition across said space solely by the gripping action on said lateral portions of the blanks while the blanks are being carried through the drying section, and means for delivering the blanks in said lapped relation onto said frictional faces of the blocks of the upper runs of the lower chains.

3,021,611
METHOD AND APPARATUS FOR TEACHING PHYSIOLOGICAL SELECTION SKILLS
John D. Goodell, Silver Spring, Md., and Edwin F. Shelley, New Rochelle, N.Y., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,726
6 Claims. (Cl. 35—6)



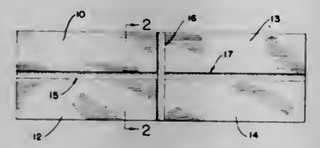
1. Apparatus for training a human trainee to selectively operate the keys of a finger-keyboard apparatus by producing a conditioned reflex action of the trainee's fingers in response to visual symbolic stimuli exhibited to the trainee, comprising a keyboard including a plurality of keys each having a symbolic output significance and each being adapted to be finger operated by said trainee, means for sequentially exhibiting to said trainee visual symbolic stimuli related to the keyboard output symbols, means for producing electrical control signals corresponding to visual symbols exhibited to the trainee, each of said control signals being produced in timed relation with the exhibited symbolic stimuli, and a plurality of electromechanical actuating means, one for each key, actuated by said control signals to momentarily displace each key to be operated by said trainee in a direction opposite to that required in normal operation, whereby the muscles in the trainee's finger in contact with a displaced key are provided with a natural physical stimulus accompanied by an associated visual stimulus exhibited to said trainee, thereby facilitating the conditioning of finger reflex action for the operation of said keys.

3,021,612
TEACHING DEVICE
Alex D. Palmer, Chicago, Ill. (915 Dempster, Evanston, Ill.)
Filed Jan. 18, 1961, Ser. No. 83,568
7 Claims. (Cl. 35—9)



1. A teaching device adapted for use with programmed self-instruction sheets comprising a pair of panels extending along spaced parallel planes and having a pair of straight adjacent side edges, a straight side wall connecting said straight side edges together, said wall being slidably engagable with an edge of at least one programmed self-instruction sheet received between said panels for guiding movement of said device along said sheet, one of said panels comprising a cover panel and being formed from flexible and opaque sheet material.

3,021,613
COLORED MORTAR DISPLAY
Howard J. Horvitz, Shaker Heights, Ohio, assignor to Pre-Mix Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 5, 1961, Ser. No. 80,825
2 Claims. (Cl. 35—16)



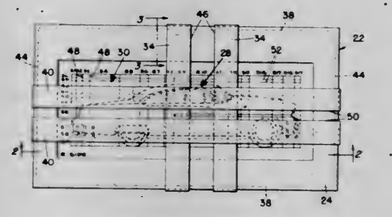
1. A colored mortar display comprising a plurality of colored building materials in adjacent relationship in which at least one face of these building materials is in the same plane and a colored simulated mortar display unit therebetween, said colored simulated mortar display unit comprising a channel member which is the exact thickness of the mortar between these building materials; said channel having colored simulated mortar secured therein filling the channel, whereby a visual impression is created of the colored mortar in the relationship to the building materials.

3,021,614
CIRCULAR CHART ASSEMBLY
Abraham M. Rubin, 6201 N. 10th St., Philadelphia, Pa.
Filed June 27, 1958, Ser. No. 745,099
4 Claims. (Cl. 35—24)



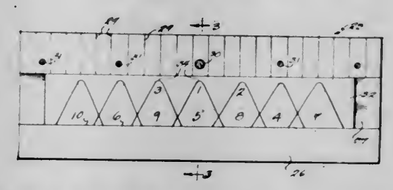
4. A kit for the rapid, accurate and adjustable construction of a pie chart comprising a relatively thin, flexible rectangular backing sheet having a circle imprinted thereon, said backing sheet being substantially larger than said circle, a slot through said backing sheet extending from the center of said circle to the circumference thereof, a plurality of circular discs of relatively thin flexible material adapted to be connected to said backing sheet, each of said discs having a distinctive surface appearance, each of said discs having a slot therethrough extending from the center thereof to the circumference thereof, said slots through said backing sheet and said discs constituting the sole connecting means.

3,021,615
DEVICE FOR ASSESSING DAMAGE TO AUTOMOTIVE VEHICLES
Harry Ostroff and Louis H. Levitt, Philadelphia, Pa., assignors to Collidotronics, Inc., Cheltenham, Pa., a corporation of Pennsylvania
Filed Nov. 3, 1959, Ser. No. 850,723
7 Claims. (Cl. 35—24)



1. An auto damage assessment device comprising photographic views of the front, rear, sides and top of a damaged vehicle, gridworks of intersecting horizontal and vertical lines with code designations along the coordinates thereof, each gridwork being superimposed on each photograph and having code areas specially arranged for each photographic view, a base having a recess receiving one of said photographs, a pair of opaque transversely extending strips and a pair of opaque longitudinally extending strips slidably mounted on said base over said photograph, the inner edges of said strips being adapted to align with the horizontal and vertical lines of said gridwork to isolate each code area for examination and recordation of damage by code area.

3,021,616
SPOT BOWLER'S RULE
Simon Abrams, 1015 Dewey St., Freeland, Pa.
Filed Oct. 19, 1959, Ser. No. 847,289
1 Claim. (Cl. 35—29)



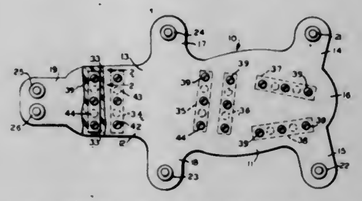
A gauge for use with a bowling alley comprising, an elongated body block having a top surface provided with a plurality of block indicia thereon arranged in a linearly extending, parallel relationship to correspond to the boards of a bowling alley, spot indicia arranged within said block indicia at selected intervals, a movable gauge section mounted in said block for reciprocal longitudinal movement, said movable gauge section having a plurality of triangular indicia thereon with the apices of said triangular indicia pointing toward said block indicia, and said triangular indicia being spaced so that the position of each

triangular indicium corresponds to the relative position of a bowling pin when placed in the correct position on a bowling alley.

3,021,617
NON-SLIP SAFETY SOLE ATTACHMENT FOR FOOTWEAR

Raymond A. Koch, 267 Moraga Ave., Piedmont, Calif.

Filed Apr. 18, 1960, Ser. No. 22,819
4 Claims. (Cl. 36—7.6)



1. An non-skid attachment for footwear comprising a normally flat blank of flexible material having opposed identical faces for reversal for application to right and left footwear at will, and including

a main portion substantially conforming to the underside of the footwear,

said blank including a toe portion, a shank portion, and a heel portion, and including integral therewith,

a pair of opposed ears continuing laterally and diagonally from said toe portion and adapted to be bent upwardly about the two side portions of the toe of the footwear,

a pair of opposed ears continuing laterally from the shank portion and adapted to be bent upwardly at the sides of the instep of the footwear, and

an ear continuing rearwardly from said heel portion and adapted to be bent upwardly at the back of the heel of the footwear,

a pair of eyelets formed in said ear continuing rearwardly, and

a single eyelet formed in each of the others of said ears, and

lacing means threadable through all of said eyelets for drawing all of said ears upwardly about the underside of the footwear and for securing the blank thereto.

3,021,618
LADIES' SHOES

Stanley J. Phillpson, Jamaica, N.Y., assignor to Mr. Stanley, Inc., Brooklyn, N.Y., a corporation of New York

Filed Oct. 27, 1960, Ser. No. 65,472
2 Claims. (Cl. 36—72)

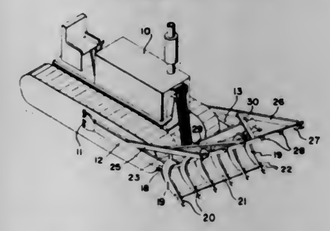


1. A rigid ornamental box toe adapted for protecting the pointed tip of a shoe by force fitting over said toe between the inner lower edges of the toe upper and the pointed outsole tip portion, comprising a conical-shaped body portion having tapering top and sides terminating in a generally semicircular opening at the pointed tip thereof, inturned flanges at the widest opening of the base of said body portion extending forwardly towards said tip, and a bottom shelf portion immediately below and adjacent said opening at the tip, said internal flanges being wider at their rear edges remote from said opening and tapering to a narrower width immediately adjacent said shelf portion, and said shelf portion formed by a recess in back of said flanges forward of said narrower portion of said flanges, said recess adapted to receive the outsole tip in flush engagement with the outer surface of the box toe tip at the base thereof.

3,021,619
ATTACHMENT FOR BULLDOZER OR TRACTOR

Calvin C. McGee, 652 Sweetwater Ave., Florence, Ala.

Filed Sept. 5, 1958, Ser. No. 759,336
3 Claims. (Cl. 37—2)

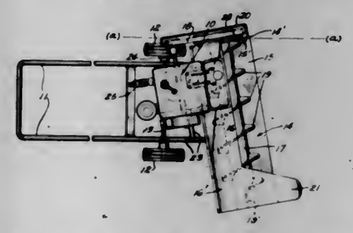


1. An attachment for a tractor comprising a pair of side arms constructed for pivotal connection at their rear ends to the tractor, a lower tie bar connecting the front end portions of said side arms, a series of spaced generally crescent shaped teeth forming a row and attached along their convex surfaces and intermediate their ends to said lower tie bar so that their concave surfaces and their lower pointed ends are disposed forwardly, an upper tie bar uniting the upper end portions of said teeth, angle bars of unequal length extending across said upper tie bar wtih the rear end portions connected to said arms and their front end portions projecting forwardly of said upper tie bar, a pusher bar fixed to the ends of said angle bars and disposed at an angle to the path of movement of the tractor for engaging trees ahead of said teeth, a series of spaced angular projections mounted along said pusher bar between which the trunks of trees are adapted to be engaged and held against sidewise movement until said tree has been moved towards horizontal position sufficiently to permit clearance of said projections whereupon both a sidewise and a horizontal thrust will be imparted to said trees by said pusher bar, and said teeth will be engaged beneath the roots of the trees to forceably disengage them from their moorings and roll the trees to one side of the path of travel of the vehicle as it continues to move forward.

3,021,620
SNOW PLOW

Henry L. Rosenthal, Box 36 Oconomowoc, Wis.

Filed June 10, 1958, Ser. No. 741,136
6 Claims. (Cl. 37—43)



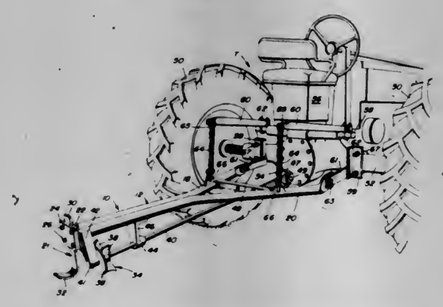
1. In a snow plow having a wheeled frame with a front, a snow engaging plow blade connected to the front

of said frame and having an open discharge end and an opposite closed end, screw means extending longitudinally within said blade for moving snow from within the blade toward and out of said open end, a motor carried by said wheeled frame, and means between said motor and screw means for driving the latter in a direction to move snow out of said open end, said blade being so angled a substantial amount on the frame that said open discharge end is in a leading position and said closed end is in a trailing position.

3,021,621
DRAIN DIGGER

Gideon M. Needham, Old Trap, N.C.

Filed Nov. 20, 1958, Ser. No. 775,197
1 Claim. (Cl. 37—92)

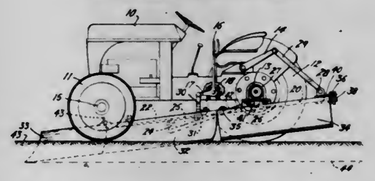


A drain digger for attachment to and powered by a standard farm tractor having a power take-off shaft and lifting mechanism, comprising a rigid frame including two forwardly extending spaced arms, means at the forward free ends of said arms for pivotally connecting said arms to the rear portion of a towing tractor, a brace extending between said arms adjacent the forward free ends thereof, a bearing carried by said brace centrally of said frame, a bracket depending from the rear end of said frame and carrying a journal at the lower end thereof and aligned with said bearing, a shaft disposed longitudinally beneath said frame at an upward inclination toward the forward end thereof with the rear end of said shaft rotatably mounted in said journal and the forward end portion of said shaft rotatably mounted in said bearing, the forward end of said shaft including a telescopic portion connected by a universal joint with a coupling element for connection to a tractor power take-off shaft, digging means fixed on the rear end portion of said shaft immediately in front of said journal, a depth guide element mounted on the rear end of said frame behind said bracket for vertical adjustment relative to said frame, said depth guide element having a bearing portion for engaging the bottom of a ditch dug by said digging means to maintain the latter at a generally uniform level, and lift members respectively connected to said frame arms at points spaced rearwardly from said connecting means and having means for attachment to the tractor lifting mechanism for raising and lowering said frame, said lift members being flexible to permit vertical movement of said frame by said depth guide element without reaction on the tractor lifting mechanism, and said digging means including three digging elements spaced axially of said shaft and each including radially extending flat blades lying in a plane including the shaft axis and of uniform length, whereby they engage the ground at successively lower depths corresponding to the inclination of said shaft, the rearmost said digging element including four equiangularly spaced blades and a back plate perpendicular to the shaft axis and rigidly fixed to the rear edges of said blades, said back plate having radial dimensions less than the length of said blades, and the other two digging elements each including two coplanar blades connected by web portions perpendicular to said shaft and serving as a brace and back plate, the blades of said latter two elements being perpendicular to each other and disposed to bisect the angles between the blades of said rearmost element.

3,021,622
TRACTOR MOUNTED DITCHERS

Clyde J. Whittier, Center, Colo., assignor of one-half to E. B. Meadows, Monte Vista, Colo.

Filed July 24, 1961, Ser. No. 126,196
5 Claims. (Cl. 37—98)

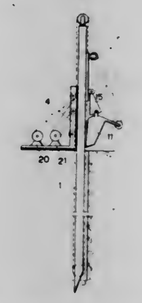


1. A ditch-forming attachment for a tractor having front and rear wheels, a rear axle housing and implement lift arms comprising: a U-shaped pushing member hingedly mounted at its extremities on said rear axle housing and extending forwardly therefrom in a substantially horizontal plane; a flat, angle-sided open frame hingedly and medially attached to the forward extremity of said pushing member beneath said tractor and extending forwardly therefrom; a mold board secured to each angled side of said frame and terminating in a pointed plow; adjustable supporting means between said tractor and said pushing member for raising and lowering the forward extremity of said frame; and suspension means between said implement lift levers and the rear extremity of said frame for raising and lowering the latter.

3,021,623
BUCKET EXCAVATOR SLIDABLE ON RIGID GUIDE PARTICULARLY FOR FRONTAL DIGGING AT VERTICAL WALLS

Ignazio Failla, Viale Bianca Maria 19, Milan, Italy

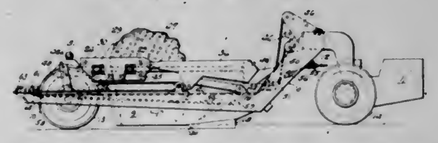
Filed May 25, 1959, Ser. No. 815,441
Claims priority, application Italy May 28, 1958
11 Claims. (Cl. 37—103)



1. An excavator comprising a support, an elongated guide disposed in vertical relation alongside said support, a collar carried by said support and connecting said guide to said support for vertical sliding movement, said guide having a lower pointed end for penetrating the ground, a slide carried by said guide for vertical sliding movement

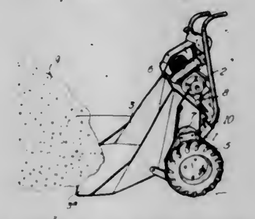
relative to said guide, an arm pivotally mounted on the lower portion of said slide, a depending bucket pivotally connected to the lower end of said arm, said bucket being engageable with said arm after a limited upward pivotal movement of said bucket relative to said arm to effect continued upward movement of said bucket and said arm as a unit, whereby said bucket first pivots upwardly with a short lever action and then swings upwardly with a long lever action, first means carried by said support and connected to said bucket for effecting pivoting and swinging of said bucket, and second means carried by said support and connected to said slide for raising and lowering the same.

3,021,624
EARTH-MOVING APPARATUS
Lolell L. Hyler, 4020 W. 110th St., Oak Lawn, Ill.
Filed Nov. 23, 1959, Ser. No. 854,775
8 Claims. (Cl. 37—129)



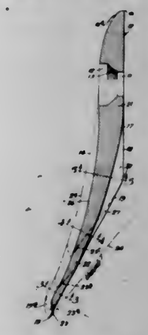
1. A carry-type scraper vehicle comprising a frame; a power source for supplying motive power to the vehicle, said power source having power take-off means; a plurality of travel supporting means for supporting said power source and also said frame adjacent the forward and rearward extremities of said frame, the travel supporting means supporting said power source and said frame and being rotatably secured thereto, respectively, each of said travel supporting means having braking means; and a body including a bowl portion with downward-depending cutting means, said body including the bowl portion thereof being longitudinally movably and pivotally mounted on said frame between the travel supporting means adjacent the forward and rearward extremities of said frame and operatively connected to said power take-off means whereby substantially all of the power from said power source may be applied to said body independently of, and without movement of, said plurality of travel supporting means, so as to move said body substantially horizontally relative to said frame and said plurality of travel supporting means.

3,021,625
ENGINE POWERED WHEELBARROW
Roland Stasse, 2 Rue du Lac (Department of Seine-et-Oise), Igny, France
Filed June 6, 1958, Ser. No. 740,466
Claims priority, application France June 7, 1957
1 Claim. (Cl. 37—130)



A power driven wheelbarrow comprising an axle, a pair of wheels each fixedly mounted on an opposite end of said axle, a flat frame mounted on said axle with said axle extending laterally of a medial portion of said frame, a pair of angular shafts connected at one end to and extending from one end of said frame providing operating handles for the wheelbarrow, an open top concave body including a rear wall, a forwardly inclined front wall and side walls extending between said rear and front walls, an engine mounted on said shafts adjacent the other end thereof rearwardly of said concave body rear wall, transmission means operatively connecting said axle to said engine, said concave body front wall having a portion extending outwardly beyond said body side walls, partial extensions of said side walls connecting said side walls and said frontwall extended portion providing a shovel-like portion to said body, means pivotally connecting said body front wall to the other end of said frame whereby said body can be mounted on said frame in the normal wheeling position for said wheelbarrow to a loading and unloading position with said shovel-like portion engaging the material to be loaded and means for latching said body to said frame when mounted thereon.

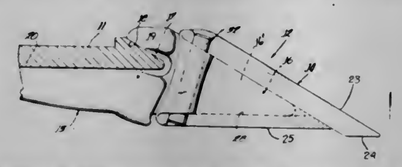
3,021,626
SCRAPER BLADE
Paul Eyolfson, Vancouver, Wash., assignor to Esco Corporation, a corporation of Oregon
Filed Jan. 21, 1958, Ser. No. 710,272
3 Claims. (Cl. 37—141)



1. A scraper blade, comprising a unitary, elongated, generally rectangular metal body arcuate in transverse section to provide a generally concave front face and a generally convex rear face, said body having a lower longer edge providing a ground-cutting edge and an upper longer edge adapted to be secured to a moldboard, portions of the rear face of said body being defined by planes intersecting along a longitudinal line near the body longitudinal center line, said body being transversely tapered from about said center line toward said cutting edge, each face of said body being equipped with transversely-extending, rib-like projections aligned on opposite faces of said body and tapering toward each longitudinal edge, and means for securing said blade to a moldboard, said blade, when so secured, having the rear face portion adjacent said cutting edge disposed approximately parallel with the ground to maintain said cutting edge in sharpened condition, said rib-like projections providing a series of leading points for material penetration, said points all lying in the same plane.

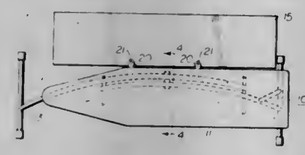
3,021,627
DIGGER TEETH FOR EXCAVATORS AND THE LIKE
Robert A. Johns, Racine, Wis., assignor to Belle City Malleable Iron Company, a corporation of Wisconsin
Filed July 25, 1961, Ser. No. 126,588
10 Claims. (Cl. 37—142)

10. A tooth structure comprising a base member, said base member including a shank, said shank having a surface and a first recess extending transversely with respect to said surface, a removable tooth having inner walls providing a socket receiving said shank in interfitting relation, one of said walls including a second recess positioned with respect to said first mentioned recess to provide an



elongated opening, said wall including said recess having a portion thereof disposed inwardly into said opening to partially constrict the same, and a key tightly driven into said opening, said wall portion including said first recess being flexible to accommodate said key and to exert a locking pressure thereon.

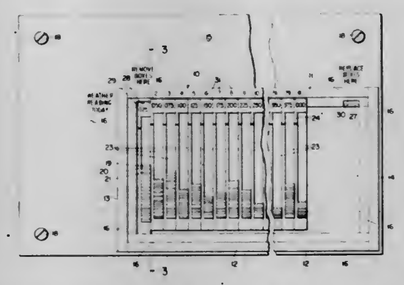
3,021,628
IRONING BOARD
Betty Jean Di Cilfo, 80 Harold Drive, Chesterland, Ohio
Filed Sept. 5, 1958, Ser. No. 759,208
2 Claims. (Cl. 38—111)



1. In combination, an ironing board member, a plurality of collapsible legs adjustably connected to underside of said board member, said legs having a board support position and a collapsed storage position beneath the board, first and second hinges connected to the underside of the board member, a shelf member connected to the hinges and having a storage position beneath the board and a work supporting position outwardly of and generally parallel to the board member, the hinges each having a pivot spaced from and below the bottom of the board member to permit the shelf member to move from the support position to its storage position, said shelf member being spaced from the bottom of said board member when in the storage position to define a leg receiving space, said legs being disposed between said board and said shelf members when the legs and shelf member are in their respective storage positions, first lock means carried by one of the members and coactable with the portion of the hinge connected to the other member to lock said pivots when the shelf member is in said work support position to releasably hold the shelf member in such position, and second releasable lock means for locking the members in the storage position with the legs disposed in the leg storage position between the members.

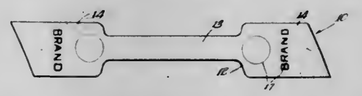
3,021,629
DEVICE FOR SCHEDULING FUEL DELIVERY
Harry B. Fuge, Somerville, and Henry J. Zaorski, Martinsville, N.J., assignors, by mesne assignments, to Plastic & Appliance Co., Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed June 17, 1960, Ser. No. 36,772
5 Claims. (Cl. 40—19.5)

1. A device for scheduling fuel delivery to a group of customers having various known fuel storage capacities and fuel consumption rate factors comprising a supporting track, boxes identified by numbers representing blocks of cumulative weather units, degree days or their equivalent, said boxes being mounted on said track in stepped numerical sequential relation and keyed for sliding horizontally along the track for receiving tabs bearing visual individual customer identification and consumption rate



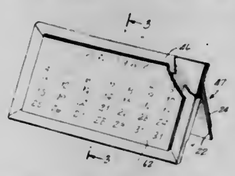
factors in vertically stacked relation in said boxes, and means permitting removal of one box at one end of the track and subsequent insertion of said box in said track at the other end after movement of all of said boxes along said track a distance equal to the width of one box while preserving the relative position of the boxes.

3,021,630
MARKING FOWL OR THE LIKE
Arthur H. Swett, Jr., Butler, N.J., assignor to American Tag Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 17, 1959, Ser. No. 793,712
2 Claims. (Cl. 40—21)



1. A label for marking fowl or the like comprising, an elongated paper strip having an intermediate portion for encircling a limb of the fowl, and end portions for extending in face abutting relation away from the limb of the fowl encircled by the intermediate portion, a heat sealable thermoplastic coating on at least the end portions of the side of the strip which face abut each other for heat sealing the strip in place on the limb of the fowl, printed copy on the other side of the strip which is exposed to view when the strip is applied to the limb of the fowl, and a moisture-barrier coating on the printed side of the strip to prevent moisture absorption and curling.

3,021,631
REINFORCED EASEL STRUCTURE
Carroll N. Cross, Rte. 2, Box 304, Maitland, Fla.
Filed Aug. 10, 1960, Ser. No. 48,771
4 Claims. (Cl. 40—120)



1. In a display mount having a base edge adapted to rest on a supporting surface, a back assembly consisting

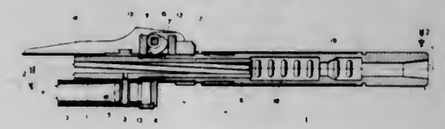
of an inner panel extending to the base edge of said mount and an outer panel in back-to-back contact with said inner panel, said outer panel having an edge terminating above the base edge of said mount, a flexible binding material adhesively attached to the exposed faces of said back assembly, and a supporting prop in said back assembly adapted to swing about a hinge line substantially parallel to and remote from said base edge, said supporting prop being defined by lines of severance from said back assembly which are spaced inwardly from the lateral edges of said back assembly and by a line of severance above said base edge but below said terminal edge of said outer panel.

3,021,632
FISH LURE ACCESSORY
Leslie J. Gombar, 12591 Glenfield, Detroit 13, Mich.
Filed Jan. 21, 1960, Ser. No. 3,764
2 Claims. (Cl. 41—10)



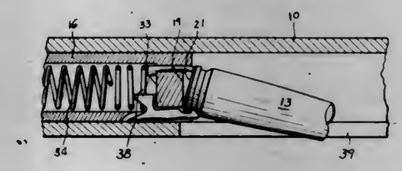
1. An accessory for a fish lure comprising a length of colored, metalized, plastic material, a strip of adhesive material secured along one edge of said length of plastic material and extending beyond the said edge, and a backing strip of plastic coated material freely overlying said edge of the said first named length of plastic material and in adhesive contact with the extending portion of said adhesive strip, there being a plurality of longitudinal slits in said first named length of plastic material extending at least to said adhesive strip.

3,021,633
COMBINATION MUZZLE BRAKE AND GRENADE LAUNCHER FOR PORTABLE FIREARMS
Pier Carlo Beretta, Via Siepi 6, Gardone V.T., Brescia, Italy
Filed June 30, 1960, Ser. No. 40,495
Claims priority, application Italy Apr. 2, 1960
4 Claims. (Cl. 42—1)



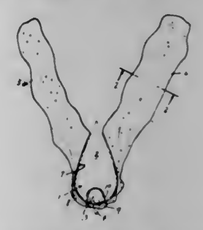
1. The combination with a portable firearm having a barrel with a port therein and through which the gases of firing may escape to effect automatic operation of said firearm, of a combined grenade-launching and muzzle-braking device for said firearm comprising a tubular member secured to said barrel coaxially thereof to project forwardly beyond the muzzle end of said barrel, said tubular member having a plurality of ports extending through its wall, and a member mounted on said tubular member to slide axially thereof and having a plurality of ports therethrough, which are adapted to be moved by sliding movement of said last-named member in opposite directions into and out of registry with the ports of said tubular member to render said muzzle brake operative and inoperative, respectively, and closure means secured to the last-named member and operative upon movement of said last-named member in opposite directions, respectively, to open and close the first-named port in said barrel, respectively.

3,021,634
FIREARMS EXTRACTOR-EJECTOR ASSEMBLY
James H. Johnson, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Apr. 14, 1960, Ser. No. 22,156
1 Claim. (Cl. 42—25)



An ejector-extractor assembly comprising a bolt having a bore, an ejector pin slidably mounted with the bore, an extractor pivotally mounted upon the bolt and a single means for driving the ejector and the extractor comprising a coil spring having a plurality of turns, said coil spring being retained under compression in the bore with the foremost turn thereof being in driving engagement with both the ejector pin and the extractor, said single turn being operative to drive the ejector pin axially and being operative to rotate the extractor about an axis generally perpendicular to the axial path along which the ejector is driven.

3,021,635
ARTIFICIAL WAKE FOR DUCK DECOY
Robert Anthony Sheridan, 3 Brooklands, Bronxville, N.Y.
Filed Apr. 17, 1959, Ser. No. 807,100
3 Claims. (Cl. 43—3)

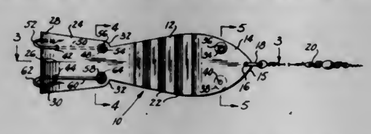


1. An artificial wake for a duck decoy having a body portion, comprising a U-shaped member adapted to fit around the body portion of the decoy along the waterline thereof, and a relatively flat elongated member extending from the rear of the U-shaped member simulating a trailing wake, the U-shaped and trailing wake members comprising buoyant material whereby the artificial wake floats on the surface of the water.

3,021,636
SPLIT-TAIL SPINNING LURE-SPOON
George H. Gowdy, 2411 2nd Ave. N., St. Petersburg, Fla.
Filed June 30, 1958, Ser. No. 745,693
1 Claim. (Cl. 43—42.34)

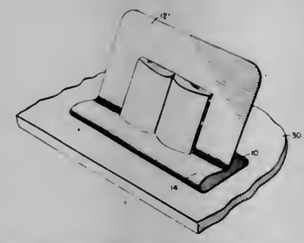
A fish lure comprising a relatively flat body having a head portion, a center portion and an enlarged outwardly tapered tail portion having an inwardly extending shoulder on each side joining the adjacent side of said center

portion, said head portion having means to connect it to a fishing line and said tail portion having a pair of fins, each extending in an opposite direction from the flat plane of said body, a pair of hooks fixed to said tail portion, each hook being associated with one of said fins, one of said hooks being curved in one direction from the flat plane of the body while the other of said hooks is curved in the opposite direction, each hook being integral with a stem having an eyelet releasably connected to said tail portion at laterally spaced points thereon, the stem of one of said hooks being positioned on one surface of said tail portion and the stem of the other of said hooks being



positioned on the opposite surface of said tail portion, each stem extending through an opening in the corresponding fin and having its hook positioned on the opposite side of said opening, transverse corrugations being provided in said center portion, said center portion tapering inwardly from said head portion to said shoulders of said tail portion, and a simulated eye extending from each face of said head portion, each said eye comprising a half-bead simulating an eye iris, and a headed securing screw through said half-bead, said screw securing said half-bead to said head portion, said screw simulating an eye pupil, said eyes being located adjacent opposite edges of said head portion.

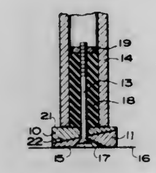
3,021,637
SUPPORT
Kathryn E. V. Huffman, 1510 Sleepy Hollow Road, Covington, Ky.
Filed Apr. 8, 1959, Ser. No. 805,097
4 Claims. (Cl. 45—57)



1. A support fabricated from a single length of resilient sheet material bent upon itself to provide in its free form an elongate, open-ended channel having an open throat remote from and in spaced parallelism with an adjacent edge of a first panel such that a support member can be readily slidably received within said channel at all times, and a second panel along the open edge of said channel extending outwardly and away from said first panel at an acute angle thereto such that said second panel forms an inclined supporting surface for supporting a book or the like thereon in a convenient reading position.

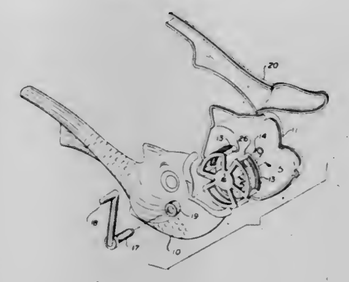
3,021,638
FURNITURE LEG TIP
George E. Kristek, 837 Carter, Wichita 3, Kans., assignor of fifty percent to Olive M. Kennedy, Wichita, Kans.
Filed Oct. 12, 1960, Ser. No. 62,276
3 Claims. (Cl. 45—139)

1. A tip for attachment to the free end of a leg of furniture comprising: two relatively thin washer-like members each having a fastener-receiving bolt or screw hole formed centrally therein, each of said members further having one planar surface perpendicular to its central longitudinal axis and having a second planar surface which slopes at an acute angle to its other planar surface, said members being arranged in superposed relation with their sloping surfaces in flat contact; and a threaded fastener



in engagement with and fitting through said holes in series for anchoring the members in superposed position generally concentrically with respect to one another and to the lower end of said furniture leg, and for simultaneously applying a compressive force against their surfaces for frictionally holding them in a selected position of relative rotational orientation with respect to one another and to the end surface of said lower end of the furniture leg.

3,021,639
SOAP BUBBLE TOY
Robert Y. Allen and Melvin Shaw, Los Angeles, Calif., and Donald E. Umstead, Youngstown, Ohio, assignors, by mesne assignments, to Fran Dee Corporation, Youngstown, Ohio
Filed June 15, 1959, Ser. No. 820,207
2 Claims. (Cl. 46—7)



1. A soap bubble toy comprising a hollow housing having an upwardly directed opening formed therein, a shaft journaled in a wall of said housing and projecting thereinto and terminating in the central portion of the housing, a hub fixed to the terminal inner end of said shaft within said housing and having a plurality of radially positioned arms, a plurality of separate and distinct arcuate rectangular soap film frames secured to the outer ends of said arms in laterally offset relation thereto, each of said soap film frames being circumferentially disconnected to its adjacent frames, each of said frames being defined by a pair of side members and a pair of end members interconnecting said side members, a blow pipe within said housing including a first portion extending from that side of the housing opposite said shaft into the confines of said rectangular frames and including an open-ended extension portion which extends substantially diametrically with relation to the annular path of said frames, said open end of the extension being disposed

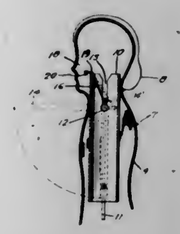
closely adjacent to the inner sides of said rectangular frames, the interrelationship between said open-ended extension and said frames being such that when one of the frames is disposed adjacent said opening in the housing, the open end of said extension is disposed substantially symmetrically with respect to the frame adjacent the opening in the housing whereby the open end is disposed substantially equidistantly between the end members of the associated frame, and the side members of the associated frame are also disposed substantially equidistantly from the open end of the extension and said associated frame will thereby receive the full discharge of a fluid stream issuing from said open end, from one end member of the frame to the other, said blowpipe opening to the outer side of said housing, said housing including a trough-like extension projecting therefrom, a secondary body member secured to said trough-like extension and forming therewith an air passageway leading to said housing, said secondary body member having an extension joined with said housing on the outer side thereof and leading around to said blowpipe opening with such extension forming with the outer side of said body a continuation of said air passage leading to said blowpipe, and means for manually turning said shaft.

3,021,640
SELF-PROPELLED TOY PROJECTILE
Robert E. Moore, 235 W. Vanderbilt Drive, Oak Ridge, Tenn.
Filed July 25, 1960, Ser. No. 45,027
2 Claims. (Cl. 46—74)



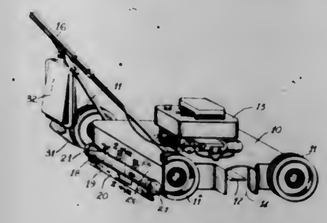
1. A self-propelled toy projectile comprising a rocket-shaped body of elongated, thin walled, tubular construction having front and rear ends and an elongated axial bore extending substantially through the entire length of the projectile body and opening through the rear end thereof, said body comprising a substantially cylindrical tubular central and rearmost portion and a nose cone portion integral with said cylindrical central and rearmost body portion at the front end thereof forming a complete closure for the forward end of said axial bore, said integral body and nose cone portion being formed throughout of highly stretchable elastic rubber-like material to permit potential energy to be stored throughout the length of the projectile body upon stretching thereof, said projectile being adapted to be launched by inserting an elongated launching rod into said axial bore into engagement with said nose cone portion, manually grasping the rearmost end portion of the projectile body, drawing the rearmost end portion of the projectile body rearwardly along the launching rod to extend the projectile body to a stretched state wherein all parts thereof are stretched substantially to the elastic limit of the body whereby potential energy is stored throughout the entire structure of the body, and releasing the projectile body whereby the stored energy is suddenly released to return the body to its unextended state and thereby imparting a force projecting the projectile away from the launching rod, said nose cone portion having thickened walls relative to the walls of said central and rearmost portion, to increase the weight of the nose cone portion so as to impart desired balance to the projectile.

3,021,641
DOLL
Agnes F. Banks, 4084 Muirfield Road, Los Angeles 8, Calif.
Filed July 25, 1960, Ser. No. 44,920
1 Claim. (Cl. 46—135)



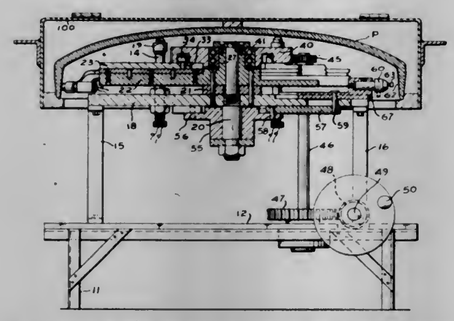
In a doll a hollow body including vertically swinging arms, a neck and hollow head forming a part of said body, said head having a flexible face section, a vertical tube mounted within said body, the upper end of said tube being secured within said neck, said tube having elongated openings extending inwardly from the upper end thereof, an inverted U-shaped member extending into said arms, to move therewith, the bight of said inverted U-shaped member being mounted within said elongated openings, eye members extending upwardly from the bight of said U-shaped member, levers having one of their respective ends secured to the inner face of said flexible face section, hooks on the other ends of said levers hooked into said eye members, pivotally connecting said levers to said inverted U-shaped member, whereby upon swinging movement of said arms, said levers are operated, moving the face section, changing the normal facial expressions of said flexible face section of the head.

3,021,642
LAWN MOWER ATTACHMENT FOR DISTRIBUTING LIQUID
Bernard E. Ewing, 1717 S. Arlington, Indianapolis, Ind.
Filed Oct. 22, 1959, Ser. No. 848,150
3 Claims. (Cl. 47—1.5)



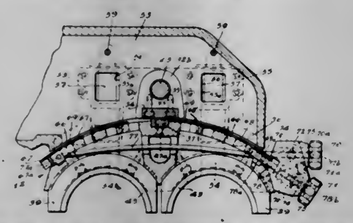
1. In combination with a lawn mower, an elongated liquid reservoir mounted on the lawn mower and extending transversely thereof, said reservoir being provided along its bottom with a longitudinal slot having a length substantially equal to the effective width of the lawn mower, a sheet-like wick extending through said slot and projecting both into the reservoir and downwardly therefrom for a distance equal to at least several times the thickness the downwardly projecting portion of the wick for contact with the lawn, and means for feeding liquid to the reservoir at a controlled rate.

3,021,643
GLASS-METAL UNITING APPARATUS
Wendell S. Blanding, Painted Post, Laurence H. Foster, Corning, and Paul F. Spremulli, Elmira, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Original application June 13, 1956, Ser. No. 591,179, now Patent No. 2,949,702, dated Aug. 23, 1960. Divided and this application May 29, 1959, Ser. No. 816,953
5 Claims. (Cl. 49—1)



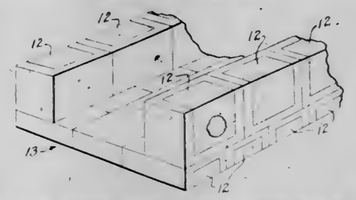
1. An apparatus useful in embedding a metal insert into the inner surface of a panel of glass having a surrounding sidewall, a plate having upstanding elements for the engagement of the inner surface of the panel to support the same at a predetermined height with respect to a reference point, mechanism for shifting a supported panel to a predetermined lateral position with respect to such point, a device movable over a predetermined path with respect to such reference point containing a pocket for receipt of an insert to be embedded in a wall of a supported panel and provided with means for directing heat upon such insert and an oppositely disposed wall surface of such supported panel, and means for moving said device to force such insert into embedding relation with the panel wall when the latter has been heated to plasticity.

3,021,644
GLASS MOLD CARRIER ASSEMBLY
Albert G. Lauck, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 24, 1958, Ser. No. 723,224
2 Claims. (Cl. 49—41)



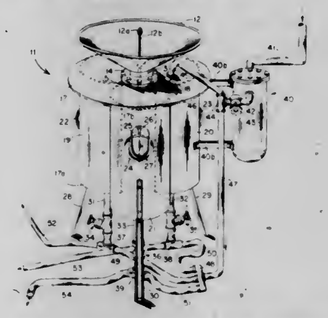
1. A glass forming mold assembly comprising plural, separate side-by-side molds, each comprised of complementary half-sections, a mold carrier frame, mold arms pivotally mounted on the carrier frame for movement toward and away from each other, a mold adapter pivotally attached on each said arm, a pressure member secured to each arm adjacent the pivotal attachment of said arm and said adapter, a corresponding pressure plate attached to each adapter and engaging the pressure member on the arm, whereby the adapter is permitted limited horizontal floating movement on the arm, means for slidably mounting said mold half-sections in side-by-side relationship respectively on the mold adapters, said means permitting horizontal floating movement of said mold half-sections with respect to their adapter, and a plurality of pressure elements secured to and projecting horizontally from each of said adapters, each of said half-sections being engageable with one of said elements on a diametral line normal to the meeting faces of said sections, the last-mentioned pressure elements each providing a pivot point permitting horizontal rocking movement of its mold half.

3,021,645
FURNACE CONSTRUCTION METHOD
William B. Silverman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Sept. 19, 1955, Ser. No. 535,056
2 Claims. (Cl. 50—153)



1. A high temperature furnace construction which comprises side walls comprising a plurality of side-by-side positioned hollow four-walled blocks of a high-grade refractory material, said blocks each having one open face disposed outwardly and the other open face disposed upwardly; a bottom wall comprising a plurality of hollow four-walled blocks of a high grade- refractory material positioned beneath said blocks constituting the side wall and each having one open face disposed outwardly and its other open face disposed downwardly, and a plurality of hollow five-walled blocks of a high-grade refractory material positioned intermediate said last-mentioned four-walled blocks, said five-walled blocks having their open faces disposed downwardly; and a core of heat-hardened low-grade refractory material positioned within said hollow blocks to thereby structurally reinforce said blocks and insulate said furnace, said furnace construction being further characterized by joints between said blocks and between said side walls and said bottom wall which are defined by abutting full-block-depth surfaces of said high-grade refractory material.

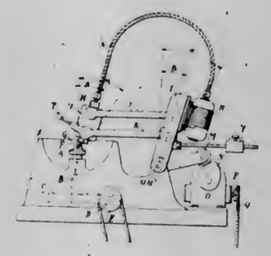
3,021,646
SAND BLAST APPARATUS
Sumner B. Williams, 50 Deborah Road, Newton, Mass.
Filed Apr. 16, 1959, Ser. No. 806,853
7 Claims. (Cl. 51—12)



1. An abrasive containing and feeding apparatus comprising an abrasive container and a plurality of inde-

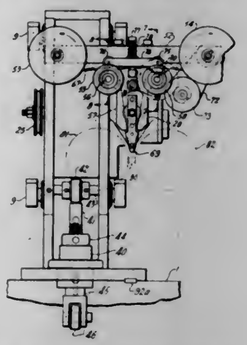
pendent abrasive conductors; said container consisting of a plurality of longitudinally intersecting cylinders enclosed at their tops and bottoms; the upper portion of said container being open and the lower portion of said container being divided into equal sections by partitions each extending laterally from a common longitudinal axis to the vertical edge of an adjacent longitudinal intersection of two of said cylinders; the upper portion of said container being provided with an abrasive inlet; the bottom of each of said sections having a separate outlet pipe connecting to one of said conductors; means being provided for supplying compressed air to each of said conductors and to said upper portion of said container.

3,021,647
HONING MACHINE
Bernard Cretin Maltenaz, Joinville-le-Pont, France, assignor to Societe des Lunetiers Cottet Poichet, Tagnon & Cie, Paris, France
Filed Apr. 7, 1960, Ser. No. 20,730
Claims priority, application France Apr. 7, 1959
2 Claims. (Cl. 51—55)



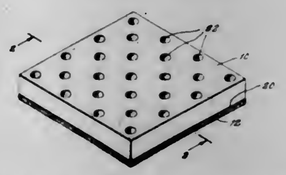
1. A machine for honing a surface of a work piece, which comprises a stand, a mount for said work piece rotatably supported in said stand for rotation about a vertical axis, means for continuously rotating said mount, a frame mounted on said stand for oscillation about a horizontal axis offset laterally from the axis of rotation of said mount a bearing member above said mount, a rotary spindle rotatable in said bearing member and having on its lower end a driving point eccentric of said spindle, a honing member having an axial hole engaging said driving point whereby rotation of said spindle produces orbital movement of said honing member, two pairs of vertically spaced parallel links each pivotally connected at one end to said frame and at the other end to said bearing member whereby oscillation of said frame about its axis produces oscillatory movement of said bearing member, said links being substantially horizontal and having a length greater than the distance between the axis of oscillation of said frame and its pivotal connections of the uppermost pair of said links, a motor mounted on said frame, flexible driving means connecting said motor with said spindle to drive said spindle, a cam rotatably supported by said frame for rotation about an axis parallel to said axis of oscillation of said frame, means for rotating said cam, an arm fixed on said frame, and a cam follower carried by said arm and engaging said cam, whereby rotation of said cam produces oscillation of said frame together with the members moveable therewith including said motor having a center of gravity offset from a vertical plane passing through said axis of oscillation in a direction to maintain said cam follower in engagement with said cam by gravity.

3,021,648
METHOD AND APPARATUS FOR HONING ANNULAR BODIES
Theodore H. Sloan, P.O. Box 58, Charleroi, Pa., assignor of one-fourth to William B. Jaspert, Upper St. Clair Township, Pa.
Filed Nov. 23, 1959, Ser. No. 854,740
13 Claims. (Cl. 51—135)



1. Apparatus for honing annular bodies comprising a honing rest for said bodies in alignment with a reciprocating abrasive honing material, a pair of pinch rolls engaging the side of said bodies for rotating the same, a feed mechanism including a loading rod coaxially aligned with said bodies when in honing position on said rest, a stop above said rod, means for feeding said bodies against said stop above and in sliding engagement with said loading rod, a receiving support below said rod on which said bodies fall when said rod is retracted and means for reciprocating said loading rod to push said bodies from said receiving support to said honing rest.

3,021,649
PERFORATED ABRASIVE FACED SCRUBBING PAD
Ralph Robbins, Jamaica, N.Y., assignor to Imperial Foam Rubber Corp., New York, N.Y., a corporation of New York
Filed Feb. 4, 1959, Ser. No. 791,174
1 Claim. (Cl. 51—185)



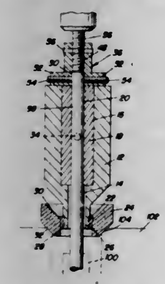
A unitary abrasive cleaning pad comprising a flexible body of liquid absorbent backing material, a substantially homogeneous coating layer on and contiguous with a surface of said body and adherent thereto, said homogeneous coating layer consisting essentially of a water-immiscible adhesive which is solidified in the final article and which exists in said coating layer as a flexible continuous phase and a solid abrasive material in fine granular form existing in said coating layer as a discontinuous phase, and a plurality of apertures extending through said coating layer and through said body of backing material, whereby an aqueous liquid may pass into said absorbent body of backing material and from said body of absorbent backing material through said apertures to the face of said coating layer.

3,021,650
SEAT GRINDING TOOL
Charles H. Reyner, Petoskey, Mich., assignor to Jay Bain, Petoskey, Mich.
Filed Oct. 19, 1959, Ser. No. 847,165
1 Claim. (Cl. 51—205)



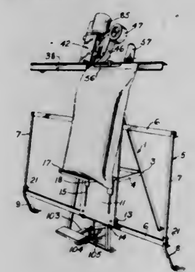
A tool for resurfacing the seat of a flush valve fixture, comprising a rigid tubular supporting member; a flexible drive cable extending through the tubular member and rotatable therein; a crank arm radially disposed with respect to the axis of the cable and having a hub with a bore therein, said hub being fixed to one end of the cable and being journaled on the adjacent end of the tubular member with the latter extending into said bore; a hand-grip fixed to said tubular member near the crank-arm end thereof; and a grinding assembly fixed to the other end of the cable and comprising a bushing having a shoulder around its outer periphery and having a bore extending partway into the bushing through its shoulder, said bore rotatably receiving the other end of the tubular member and said bushing having a smaller bore fixedly receiving said cable, said outer periphery being threaded, a grinding wheel mounted on said bushing; and nut means screwed thereon and retaining said wheel against the shoulder, said fixture having a stand pipe adjacent the seat, and the portions of the tubular member adjacent its ends being mutually parallel and axially offset near said bushing and joined by curved intermediate portions of said tubular member, whereby the spacing between the stand pipe and the axis of the tubular member is greater at the hand grip than at the grinding wheel.

3,021,651
VALVE AND SEAT GRINDING TOOL
Verlon M. Fuller, 206 Country Club Road, North Little Rock, Ark., and Donald A. Weaver, 814 W. 2nd St., Little Rock, Ark.
Filed July 24, 1959, Ser. No. 829,300
2 Claims. (Cl. 51—241)



1. A valve and seat grinding tool comprising a guide body having a first bore extending therethrough adapted to slidingly receive and rotatably journal a valve stem, a coupling having one end adapted to abut against one end of said guide body, a second bore formed through said coupling alignable with said first bore and having a portion adjacent said one end adapted to slidingly receive a valve stem, means on said coupling adapting the latter to be removeably secured to a conventional drill chuck, means in said coupling adapted to removably retain a valve stem in position within said second bore, a valve grinding wheel, said wheel having a recess on one side adapted to grind the face of a conventional form of poppet valve, means removably securing said wheel to said body with said recess remote therefrom, a counterbore formed in said first bore, a cylindrical sleeve slidably disposed in said counterbore, means removably securing said sleeve in position within said counterbore for rotation with said guide body, said sleeve having a third bore formed therethrough in alignment with said first bore and adapted to slidingly receive a valve stem.

3,021,652
BAG SEALING MACHINES
Samuel Greisman, London, England, assignor to Comtex Limited, London, England, a British company
Filed July 21, 1959, Ser. No. 828,654
Claims priority, application Great Britain July 21, 1958
6 Claims. (Cl. 53—66)

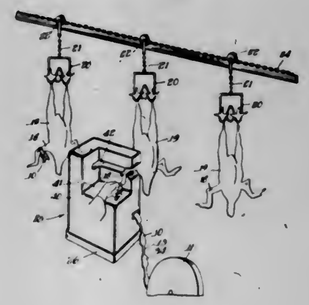


1. A sealing machine for a bag comprising a stand, a frame mounted on said stand having a longitudinally extending track thereon, a carrier slidably mounted for horizontal movement on said track, a platform for supporting a bag disposed on said carrier, operating mechanism for said machine, a support for said mechanism disposed above said track on said stand, a guide rail mounted on said support above and parallel to said track for engagement with the mouth of a bag during the sealing thereof, a pair of feed rollers carried by said support at the level of said guide rail to engage the mouth of a bag therebetween, means for rotating said rollers in opposite rotational direction, a holder for a reel of sealing strip bearing adhesive on one side thereof, folding means shaped and positioned to longitudinally fold said sealing strip upon itself when drawn therethrough by said rollers for sealing application to the mouth of such bag, and manually operated trip means mounted on said guide rail at a distance from said rollers to interrupt the drive thereof upon completion of such sealing operation.

3,021,653
MARKING FOWL OR THE LIKE
Edward C. Marshall, Upper Montclair, N.J., assignor to American Tag Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 17, 1959, Ser. No. 793,713
15 Claims. (Cl. 53—74)

10. An apparatus for marking fowl or the like with heat sealed labels comprising, a pair of heated opposed heat sealing platens which are normally in open posi-

tion, operating means for the platens for moving the platens to closed position and then back to open position, suspending means for releasably suspending at its ends an elongated paper like label strip having a heat sealable thermoplastic coating on one side thereof adjacent and across the normally open heat sealing platens with the heat sealable thermoplastic coating facing away from the platens so that, when a limb of a fowl is passed between the normally open platens, it engages the intermediate portion of the releasably end suspended label strip to draw the label strip between the platens, to cause the intermediate portion of the label strip to encircle the limb of the fowl and to cause the thermoplastic coated end portions of the label strip to face abut each other, said label strip suspending means including a pair of spaced apart longitudinally aligned guides for receiving the end portions of the label strip, feeding means for



successively feeding label strips to the label strip suspending means for releasable end suspension thereby, said label feeding means including at least a pair of rolls receiving between them a continuous web of label strips for advancing the same and the end label strip thereof into the label strip suspending means and cutter means for severing the advanced end label strip from the web, and operating means for said platen operating means and said rolls and cutter means of said label strip feeding means and responsive to passage of a limb of a fowl from between the normally opened heated heat sealing platens for actuating the platens to closed position to heat and press together the face abutting thermoplastic coated end portions of the label strip for heat sealing the same together for securing the label strip to the limb of the fowl, and for actuating the label strip feeding means to feed and releasably end suspend another label strip.

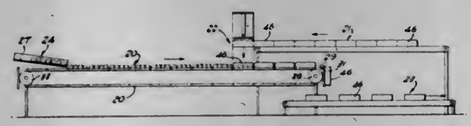
3,021,654
DEVICE FOR PLACING PLASTIC CLIPS ON BAGS
Gerald R. Harris, 410 Leffler St., West Burlington, Iowa, assignor of one-half to John A. Tod and of one-fourth to Claytus Hornung, both of Burlington, Iowa
Filed May 12, 1961, Ser. No. 109,536
8 Claims. (Cl. 53—138)

1. A device for applying plastic clips having a bifurcated end about the necks of bags for closing the latter comprising, a support, a vertical clip magazine, means mounting said magazine upon said support for movement towards and from the latter, a dispensing head on the lower end of said magazine for successively receiving clips therefrom, said head having a bifurcated end for receiving the neck of a bag therein and for discharging clips therefrom, the furcations of said head comprising guide means for reversely flexing the furcations on said clips to thereby facilitate passage of the clip furcations about the neck of a bag, ejecting means connected to said support and slidable in said head for moving clips through



said head and into said guide means when said magazine and head are moved toward said support.

3,021,655
MACHINE AND METHOD FOR PACKING ARTICLES
Jack P. Chadima and Walter E. Saxe, Los Angeles, Calif., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 10, 1959, Ser. No. 792,390
28 Claims. (Cl. 53—243)

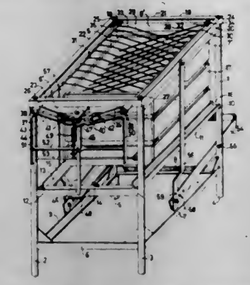


1. A machine for packing articles in cartons including conveyor means having upper and lower reaches, a plurality of supporting means attached to said conveyor means, means for delivering said articles onto each of said supporting means on the upper reach of said conveyor means, means for placing cartons down over said articles on each of said supporting means, plate members hingeably attached to said supporting means and having an axis of rotation substantially parallel to the path of travel of said conveyor means, and means for urging said plate members against the sides of said carton placed over said articles on said supporting means, said means for urging said plate members extending from the upper to the lower reach of said conveyor means, whereby said carton being held with respect to said supporting means is inverted before release from said machine.

3,021,656
DEVICE FOR USE IN FILLING A CONTAINER WITH FRUIT
Siebren de Vries, Leeuwarden, Netherlands, assignor to Hermes Landbouwmachinefabriek S. de Vries N.V., Leeuwarden, Netherlands, a limited liability company of the Netherlands
Filed Dec. 22, 1959, Ser. No. 861,371
Claims priority, application Netherlands Dec. 24, 1958
6 Claims. (Cl. 53—248)

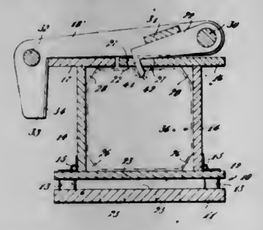
1. A device for filling a container with articles susceptible of damage by impact comprising a frame, two axles parallel and horizontally arranged and rotatably supported by said frame, a plurality of pronged elements attached to said axles and arranged to support said articles, readjusting means attached to said axles resisting rotation of said axles in proportion to the weight of articles in contact with said pronged elements such that the articles are deposited in said container with the latter positioned beneath said pronged elements, said

pronged elements attaining a vertical position upon filling of said container with said articles, and means for effect-



ing a relative vertical displacement between said container said device whereby said container can be removed from said device.

3,021,657
PACKAGING DEVICE
Orville S. Purdy, 185 Lasell St., West Roxbury, Mass.
Filed Apr. 10, 1961, Ser. No. 101,849
8 Claims. (Cl. 53—390)



1. A hand-operable device for packaging containers in a prefabricated foldable carton having interlocking members adapted to hold the carton in assembled relation about a plurality of said containers; said device comprising:

a base having means for positioning a plurality of containers;

opposed side members pivotally mounted to said base;

opposed top members secured respectively to the outer end of each side member, one of said top members having openings aligning with the interlocking members of the folded carton;

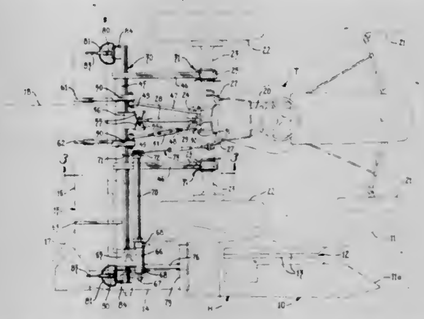
lever arm pivotally mounted to one of said top members;

cam means carried by said arm engaging the other top member to force the top members towards each other, thereby folding the carton tightly about said container; and

a plurality of fingers mounted for pivotal movement with said lever arm, said fingers being adapted to pass through said openings in the top member to interlock the tab members of the carton.

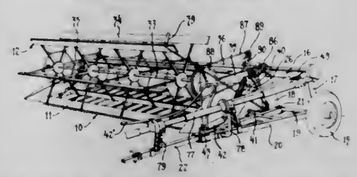
3,021,658
HITCH STRUCTURE FOR TRACTOR MOUNTED HARVESTERS
Melville J. Mitchell, Birmingham, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed May 21, 1959, Ser. No. 814,727
3 Claims. (Cl. 56—15)

1. A hitch structure for coupling a tractor having power operated lift with a row crop harvester having a gathering unit adapted to extend alongside the tractor and a crop treating unit disposed behind the tractor, said hitch structure comprising, in combination, a frame including a transverse member, coupling means on said member cooperating with coupling means adapted to be mounted on the tractor for releasably connecting said member to the tractor with the member extending transversely and projecting at one side of the tractor, means on said member supporting the crop treating unit, a standard rigid with said member disposed adjacent its projecting portion, means on said standard pivotally supporting the gathering unit for movement about a transverse horizontal axis, a shaft rotatably supported on said transverse member, a



crank arm connected to said shaft, a tension link adapted to operatively connect said crank arm with the tractor power lift, a second crank arm connected to said shaft, a thrust link connecting said second crank arm with the gathering unit forwardly of its pivot and operative when connected to raise the forward end of the unit upon rocking of said shaft, an arm rigid with and projecting radially from said transverse member, and a link detachably connected between said arm and said second crank arm operative to maintain the gathering unit in a fixed position relative to the frame with its forward end resting on the ground.

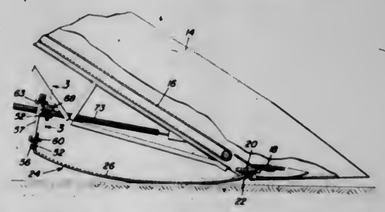
3,021,659
DRIVE MECHANISM FOR SWATHERS
Frank J. Newhouse, Toronto, Ontario, and Eugene Meth, Port Credit, Ontario, Canada, assignors to Massey-Ferguson Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed Feb. 8, 1960. Ser. No. 7,453
4 Claims. (Cl. 56—192)



1. In a swather adapted to be pulled behind a tractor and hving a plurality of power driven components, the combination of a frame supporting the power driven components including an elongated frame member, said member comprising two axially alined tubular sections, a first housing interposed between and rigidly connecting said sections, a second housing secured to the end of one of said sections remote from said first housing, a main drive shaft extending through said one section and into each of said housings, bearings in said housings rotatably supporting said shaft, a tubular neck extending laterally of each housing and connected thereto, a power input shaft rotatably supported in the neck extending from

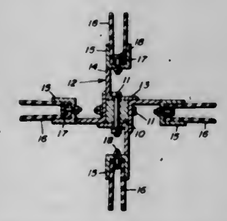
one of said housings, gearing in said one housing drivingly connecting said power input shaft with said main shaft, a component driving shaft rotatably supported in the neck extending from the other housing, and gearing in said other housing drivingly connecting said main shaft with said component driving shaft.

3,021,660
GAUGE ATTACHMENT FOR COMBINES
Martin Huseman, Schaller, Iowa
Filed May 29, 1959, Ser. No. 816,820
1 Claim. (Cl. 56—210)



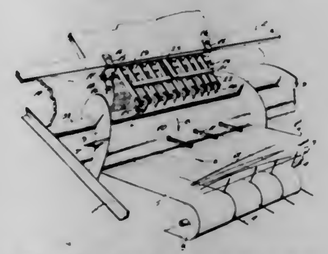
The combination of a harvesting machine having a vertically swingable chute, a height gauge attachment comprising a ground-engaging panel provided under said chute, hinge means provided at one edge of said panel and connecting the same to said chute, means provided at the relatively opposite edge of said panel to yieldably support said chute at a selected height above the ground, upwardly extending straps provided at the rear edge of said panel, a transversely extending member connected to the upper ends of said straps, and clamp means provided at transversely spaced points on said member, said straps having vertical slots, fastening elements extending through said slots for adjustably connecting said straps to said transverse member and to said panel, further horizontally positioned short straps parallel to said transversely extending member and including bolts passing through the same and the ends of said transverse member for providing further attachment means.

3,021,661
NUT AND FRUIT HARVESTING BRUSH
Benjamin L. Couberly, Rte. 1, Box 66, Biggs, Calif.
Filed May 27, 1960, Ser. No. 32,331
6 Claims. (Cl. 56—364)



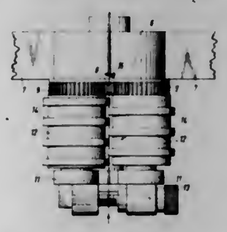
1. A rotary harvesting brush comprising a square shaft, angle bars mounted longitudinally on the faces of said shaft, said angle bars including base flanges secured to the shaft and free flanges, the free longitudinal marginal portions of said base flanges projecting beyond the shaft in face-abutting engagement with the adjacent free flanges, channel members fixed longitudinally on the free longitudinal edges of said free flanges in spaced, opposed relation to the base flanges, and resilient fingers mounted in said channel members.

3,021,662
STRIPPER ASSEMBLY FOR COMBINES
Raymond Yaniuk, Box 175, Teulon, Manitoba, Canada
Filed Oct. 19, 1959, Ser. No. 847,200
1 Claim. (Cl. 56—364)



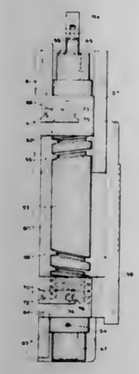
A device for cutting and stripping long grain stalks and weeds from the auger drum of a combine, said device comprising a horizontally elongated support bar of an L-shaped cross-section including a lower flange and a second flange perpendicular thereto, a pair of mounting brackets provided at the ends of said support bar for attaching the same to a combine, a plurality of spaced parallel straps having opposite side faces, upper and lower edges and inner and outer ends, the inner ends of said straps being secured at longitudinally spaced points to said second flange of said bar with the lower flange of the bar supportably underlying lower edge portions of the straps adjacent their inner ends, said straps extending outwardly at right angles from said support bar a reinforcing bar extending transversely of and secured to the upper edges of intermediate portions of said straps in parallel relation to said support bar, the outer end portions of said straps being free, and a plurality of substantially triangular cutting blades secured to the outer end portions of the respective straps at like side faces thereof and projecting downwardly below the lower edges of the straps, said cutting blades having sharp cutting edges disposed in planes parallel to the respective straps and extending obliquely at obtuse angles from the lower edges of the straps.

3,021,663
APPARATUS FOR FALSE TWISTING YARN
Eric Findlow, Macclesfield, England, assignor to Ernest Scragg & Sons Limited, Macclesfield, England
Filed Nov. 4, 1957, Ser. No. 694,218
Claims priority, application Great Britain Nov. 3, 1956
4 Claims. (Cl. 57—77.40)



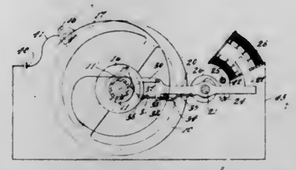
1. Apparatus for imparting false twist to yarn traveling from a supply package to a take-up, comprising, in combination, a first pair of rolls having parallel axes and spaced from each other; a first set of spaced endless belts passing around and carried by said rolls so that when one of said first pair of rolls is rotated about its axis the belts will all be driven; a second pair of rolls located beside said first pair of rolls, respectively, and being parallel thereto; a second set of spaced endless belts passing around and carried by said second pair of rolls with the endless belts carried by said second pair of rolls located in alignment with the spaces between the belts carried by said first pair of rolls, said second pair of rolls being located close enough to said first pair of rolls such that the belts carried by said second pair of rolls extend into said spaces between the belts carried by said first pair of rolls, said first set of belts being aligned with spaces between said second set of belts; drive means cooperating with at least one roll of each pair of rolls for rotating all of said rolls in the same direction; and guide means for guiding yarn to be twisted along a path substantially parallel to the axes of said rolls and located between said axes substantially at the location of the center of a rectangle in a plane normal to said axes of said rolls whose corners are located at said axes so that the yarn which is twisted engages the free runs of the two sets of belts to be twisted thereby.

3,021,664
APPARATUS FOR WINDING PACKAGES OF ROVING
Gaston G. Fornes, Charlottesville, Va., assignor to Institute of Textile Technology, Charlottesville, Va., a corporation of Virginia
Filed Nov. 3, 1959, Ser. No. 850,639
7 Claims. (Cl. 57—99)



1. In a roving frame having a builder screw driving mechanism, means for building packages of roving having curved end profiles, which means comprises a builder cam body having on a first portion thereof a first helical camming surface and having on another portion thereof a second helical camming surface, said first and second camming surfaces being oppositely directed and each of said camming surfaces having continuously varying pitch from one end thereof to the other, means for engaging each of said camming surfaces along an element of substantially zero length along the length of said surface, said engaging means being mounted for motion relative to said cam body in a direction substantially parallel to the axis thereof, the builder screw driving mechanism of the frame being adapted to drive said builder cam body through equal successive increments and thereby displace said engaging means by successively different increments, and means responsive to the position of said engaging means along said camming surfaces for determining the lengths of successive layers wound on the packages.

3,021,665
ELECTRIC WATCH MECHANISM
Gyula Varga, 314 Locust Drive, Phoenixville, Pa.
Filed Mar. 9, 1959, Ser. No. 798,086
3 Claims. (Cl. 58—28)



1. An electric watch mechanism comprising a frame, a balance wheel pivotally mounted in said frame, a balance spring connected to said balance wheel and to said frame, a roller pin movable with said balance wheel, a pallet pivotally mounted intermediate its ends on said frame, one end of said pallet having an armature thereon, an electromagnetic coil for actuating said armature to move said pallet in a predetermined direction, a resilient member connected to said pallet and continuously urging said pallet toward a predetermined position and in opposition to the force exerted by said coil, the other end of said pallet having a rigid impulse input half fork portion extending therefrom for engagement with a face of said pin upon movement of said pallet in a predetermined direction by said coil, said other end of said pallet having a flexible contact arm pivotally mounted thereon with a part thereof on one side of its pivotal mounting disposed in spaced parallel relation to said half fork portion, said contact arm having a contact face portion on one side thereof for contact with said roller pin in one position of said pallet and an electrical insulating portion on the other face thereof for contact by said roller pin in another position of said pallet, and circuit connections for energization of said coil including said balance spring, said balance wheel, said roller pin and said contact face portion of said contact arm.

3,021,666
ANIMATED TOOTH BRUSHING TIMER
Walter V. Stone, 1622 W. 28th Terrace, Topeka, Kans.
Filed June 20, 1960, Ser. No. 37,284
11 Claims. (Cl. 58—152)



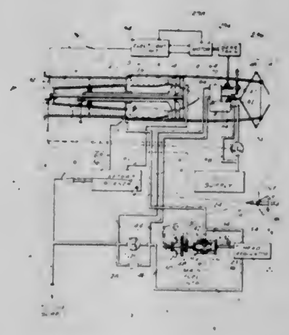
1. In a toy, a housing having an opening therein; animated display means exterior to the housing and including a movable member separate from the housing and a stationary member secured to the housing to present a visual representation thereon; a support within said housing; power mechanism carried within the housing, said mechanism including escapement means mounted on said support, said escapement means comprising an elongated, rotatable shaft, a winding spring operably coupled with the shaft and adapted, when wound in one direction, to rotate the latter in the opposite direction, a ratchet wheel operably coupled to the shaft and having a ratchet means on the periphery thereof, detent means carried by the support and operably coupled with the ratchet means, and counterbalance weight means operably coupled with the detent means for alternately re-

leasing the same from corresponding ratchet means to thereby rotate the wheel under the influence of rotation of the shaft by the spring, said movable member being secured to said weight means for movement therewith, lever means operably coupled with said shaft and mounted within the housing for movement toward or away from said opening between a pair of limits, said spring being wound in said one direction when said lever means is moved toward one of said limits to thereby bias the lever means toward said opening and the other of said limits, said lever means adapted to be engaged by one end of an elongated, removable article and movable thereby toward said one limit when the article is inserted within the housing through the opening thereof; and resilient means within the housing for yieldably holding the article in a fixed position when the latter engages said lever means to thereby prevent the operation of the mechanism except when the lever means is freed for movement toward the opening and said other limit by removal of said article from engagement therewith.

3,021,667
METHOD FOR INITIATING THE COMBUSTION OF HYDRAZINE
Donald N. Griffin, Niagara Falls, and Donald R. Feller, Grand Island, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed June 2, 1953, Ser. No. 359,204
5 Claims. (Cl. 60—35.4)

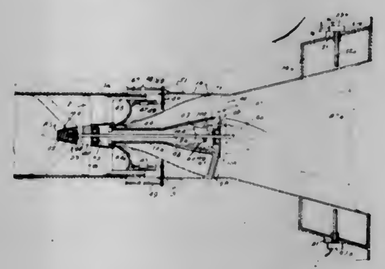
1. A method for initiating the combustion of hydrazine which comprises reacting the hydrazine with a solid silver salt of an oxidizing acid to produce a flaming ignition of the hydrazine, the reaction system consisting essentially of the reactants and the resultants of reaction.

3,021,668
NOZZLE AREA CONTROL FOR TURBOJET ENGINES
Charles S. Longstreet, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 11, 1957, Ser. No. 633,659
6 Claims. (Cl. 60—35.6)



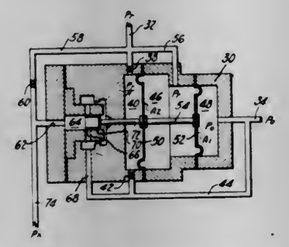
1. In a control system for a gas turbine engine having an air compressor, an air intake for delivering air to the air compressor, an exhaust nozzle, afterburner means, and a control lever operable between a minimum power and a maximum power position, control means for varying the area of said nozzle, a source of high pressure fluid, a conduit connected between said source of high pressure fluid and said control means, a first valve member having an inlet port and first and second outlet ports in series flow with said conduit, feedback mechanism operably connected between said control means and said first valve member, a second valve member adjacent said first valve member, said second valve member being adapted to control the flow rate between said inlet port and said first outlet port when moved in a nozzle opening direction and the flow rate between said inlet port and said outlet port when moved in a nozzle closing direction, a cam operatively connected to said control lever, said cam having a first portion radially contoured as a function of control lever position in the non-afterburning engine operating range and a second portion radially contoured as a function of control lever position in the afterburner operating range, said cam being contoured axially as a function of said air intake temperature, a follower member movable according to the contour of said cam, temperature sensing means responsive to said air intake temperature operably connected to said cam, a stop member fixedly secured to said follower member, abutment means slidably engaged with said stop means, said abutment means being held in contact with said second valve member by a resilient member interposed between said second valve member and said follower member, speed responsive means operably connected to said air compressor for actuating said second valve member, said second valve member being limited in movement by said stop member according to a position established by said first or said second contoured portions of said cam depending upon the control lever position to establish a maximum nozzle area, said cam being positioned axially in response to said temperature sensing means, to modify the position of said stop member, said second valve member being actuated by said speed responsive means to cause a reduction in said nozzle area to maintain the engine at a substantially constant speed.

3,021,669
SECTIONAL FORMED COMBUSTION POWER CHAMBER FOR VARYING DRIVING IMPULSES FOR JET MOTORS
Ralph A. Nye, Los Angeles, Calif.
Filed Mar. 4, 1957, Ser. No. 643,701
6 Claims. (Cl. 60—35.6)



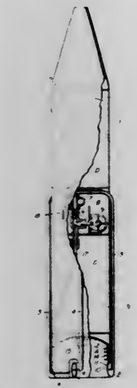
2. In a jet propelled airplane, the combination of a tubular jet motor housing having an air inlet at its forward end, and a rearwardly tapering conical air guide extending longitudinally within the tubular housing, taking the air admitted through the air inlet, said conical guide having its relatively small end disposed toward the rear end of the airplane, said conical guide being substantially unobstructed throughout its entire length, the diameter of the smaller end being so reduced in cross section as to enable it to exert a compressing effect on the air passing through the same from the air inlet, said conical duct including an inner cylindrical wall at its rear end and having an annular air inlet throat leading into a circumscribing annular combustion chamber, an annular concave deflector plate receiving the air flowing through the throat from the smaller end of said conical guide duct and directing said air into the combustion chamber, means for delivering fluid fuel into the air entering the combustion chamber through said throat at a plurality of points spaced circumferentially around said concave deflector plate, said annular concave deflector plate directing the mixture of fluid fuel and air forwardly into the combustion chamber, said combustion chamber including a relatively fixed inner concave body wall portion having an outer cylindrical guide face, an annular relatively movable outer sleeve section surrounding said cylindrical guide face in sliding relation, said sleeve carrying at its rear end an annular concave wall portion constituting a part of said combustion chamber, means guiding said sleeve to slide forwardly and rearwardly on said cylindrical outer guide face, the annular concave wall portion of said sleeve having an inner edge portion registering with an edge of the fixed inner concave body wall portion of the combustion chamber in one position, thereby augmenting the area upon which pressure will be exerted by the gases of combustion when the fuel is ignited, means for adjustably moving the said outer sleeve section toward the rear end of the airplane thereby causing a reduction of the maximum area that is exposed to the pressure of the gases of combustion when the edges of the two sections of the concave wall are in register with each other, and thereby reducing the effective thrust force of the burning gases of combustion exerted to drive the airplane forward.

3,021,670
MACH NUMBER CONTROL DEVICE
Leonard J. Boler and William E. Worley, Mishawaka, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,515
7 Claims. (Cl. 60—35.6)



1. A pressure control device comprising a first fluid flow passage connected between first and second sources of fluid pressure, a second fluid flow passage connected between said first and second sources of fluid pressure, first and second orifices located in said first passage in series flow relationship, said first and second orifices each having predetermined fixed effective flow areas with sonic flow therethrough, third and fourth orifices located in said second passage in series flow relationship, said third orifice having a predetermined fixed effective flow area, said fourth orifice having a variable effective flow area, means for varying the effective flow area of said fourth orifice, said last named means comprising a pressure responsive element having one side thereof exposed to the pressure existing between said third and fourth orifices and the other side thereof exposed to atmospheric pressure, a pressure ratio sensing means communicating with said first and second sources of fluid pressure, means operatively connecting said pressure ratio sensing means with said means for varying the effective flow area of said fourth orifice, and means responsive to the variable pressure existing between said third and fourth orifices.

3,021,671
ROCKET ENGINES
George Wallach, Chapman Camp, British Columbia, Canada (12565 24th Ave., R.R. 3, White Rock, British Columbia, Canada)
Filed Apr. 3, 1958, Ser. No. 726,272
1 Claim. (Cl. 60—35.6)

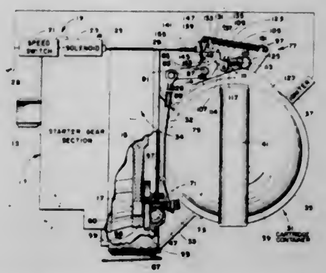


The counter-jet liquid fuel rocket engine including a fuel chamber, an oxidizer chamber, and an engine appliance chamber, said three chambers being contained in the portion of a cylindrical rocket engine wall forward of the rear end thereof, and a combustion chamber located in said rear end behind said three chambers, a two-compartment hollow ring located closely adjacent the rear cylindrical edge of said cylindrical engine wall at the rear of said combustion chamber, a domed ceiling wall separating said combustion chamber from said three forward chambers, a first connecting duct for supplying fuel from said fuel chamber to one of said compartments in said two-compartment ring, a second connecting duct for supplying oxidizer from said oxidizer chamber to the other compartment in said two-compartment ring, said two-compartment ring comprising a hollow ring and an intermediate dividing wall therein, each ring compartment being provided with a narrow circumferentially elongated slit closely adjacent said dividing wall and each slit being angled very slightly toward the other and directed generally toward said domed ceiling wall in the direction of flight whereby fuel and oxidizer ignite while emitted toward each other in the direction of flight toward said dome ceiling and react thereagainst and then eject rearwardly centrally of said hollow ring.

3,021,672
CARTRIDGE-TYPE TURBINE STARTER
John H. Ferguson, Jr., Sauquoit, and Henry R. Schmider, Utica, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed Oct. 2, 1959, Ser. No. 844,032
6 Claims. (Cl. 60—39.14)

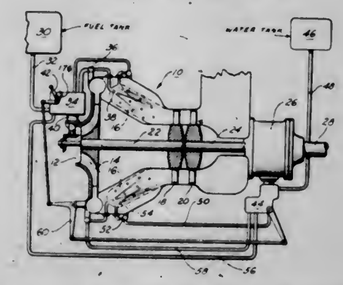
6. A turbine starter comprised of an axial-flow turbine wheel having peripheral blades, starter gearing connected to said wheel, housing means encasing said turbine wheel and including nozzles arranged to direct gases to said blades, a cut-off plate between said nozzles and said blades constructed when in a first position to pass gases from said nozzles to said blades and when in a second position to divert gases leaving said nozzles away from said blades, a gas generating device connected to said nozzles and including a movable element, said gas generating device being constructed so that said movable element is moved a predetermined extent when said de-

vice is prepared for gas generation, control means connected to said plate and normally urging said plate to said second position, said control means including operating means constructed when actuated to move said plate to said first position, said operating means being actuated



by said movable element when said movable element is moved said predetermined extent, speed responsive means connected to said starter gearing and arranged to release said operating means at a predetermined speed of said starter gearing whereby said cut-off plate is turned to said second position by said control means.

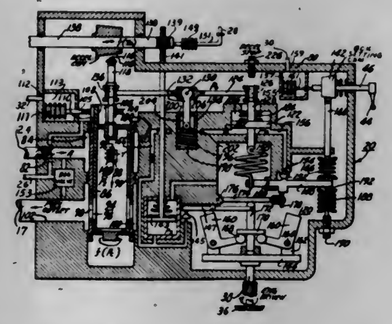
3,021,673
WATER INJECTION SYSTEM FOR GAS TURBINE ENGINES
Frank C. Mock, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 10, 1957, Ser. No. 633,429
14 Claims. (Cl. 60—39.26)



14. A system for feeding fuel and an additional cooling fluid to a gas turbine engine comprising a first conduit for delivering fuel to said engine, a metering valve for controlling the effective area of said conduit, a second conduit for delivering said additional cooling fuel to the engine, means responsive to engine acceleration for controlling flow through said second conduit, and means responsive to the fluid pressure generated by the flow of said additional cooling fluid through said second conduit for controlling the flow of auxiliary fuel to said engine.

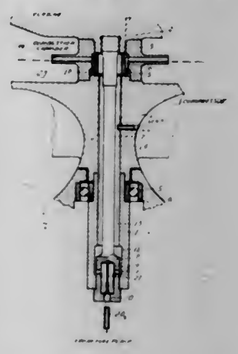
3,021,674
NORMAL FUEL CONTROL WITH ACCELERATION OVERRIDE CONTROL FOR GAS TURBINE ENGINE
Harry C. Zeisloft, Rochester, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Jan. 31, 1955, Ser. No. 485,226
10 Claims. (Cl. 60—39.28)

1. In a fuel-feed and power control system for a gas turbine engine having a burner, a fuel conduit for conducting fuel to the burner, valve means for regulating the flow of fuel through said conduit, a movable maximum flow stop operatively connected to said valve means for limiting the rate of valve opening movement during an acceleration of the engine, and a force type servo governor mechanism operatively connected to said valve means for controlling the flow regulating function of said valve means as an inverse function of engine speed including servo valve means, resilient means operatively connected to said servo valve means for imposing an engine speed selecting force thereon, the force output of said resilient means being substantially constant during governor cut-off action to any given selected engine speed, an engine



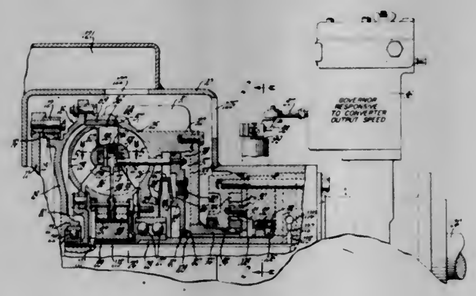
speed responsive element operatively connected to said servo valve means for transmitting a force thereto which opposes said speed selecting force and which varies as a function of existing engine speed, the force output of said speed responsive element varying substantially only with variations in engine speed during governor cut-off action to a selected speed, and a yielding means operatively connecting said servo valve means to said governor valve means for transmitting a force to said servo valve means which varies as a function of the position of said governor valve means during governor cut-off action to a selected engine speed.

3,021,675
FUEL SUPPLY SYSTEM FOR GAS TURBINES
Hans Joachim Schroeder, Munich, Germany, assignor to BMW Triebwerkbau Gesellschaft m.b.H., Munich, Germany
Filed Mar. 15, 1960, Ser. No. 15,180
Claims priority, application Germany May 22, 1959
17 Claims. (Cl. 60—39.74)



1. A fuel supply system within a hollow bore gas-turbine structure including a hollow shaft utilizing the formation of a paraboloid of rotation of a rotating liquid comprising means forming within said rotating structure a plurality of sections one adjacent the other and having each an increased diameter in the direction of flow of the fuel, liquid seal means separating at least some of said sections from each other, and means for venting the internal space of the rotating, annularly-shaped liquid column building up within said shaft.

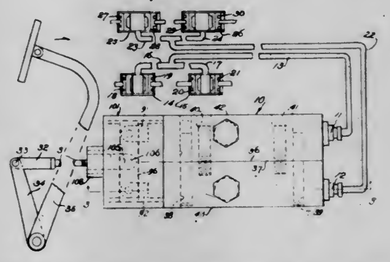
3,021,676
TORQUE CONVERTER TRANSMISSION
Robert M. Tuck and James J. Mooney, Jr., Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 6, 1956, Ser. No. 602,150
19 Claims. (Cl. 60—54)



4. In a torque converter having a pump, a turbine and a stator member mounted for rotation about an axis, each of said members having external wall portions forming a substantially torus shaped housing providing a torque converter chamber having a flow path with a radial outward, an outer axial, a radial inward and an inner axial flow portion, said turbine member having an annular series of turbine blades located in said radial inward flow portion of said chamber, said stator member having stator blades located in the inner axial flow portion of said chamber, said pump member having an annular series of fixed blades and movable blades pivotally mounted on said pump member, said fixed blades being located in said radial outward flow path of said chamber and receiving fluid directly from said stator blades and extending from the inlet edge in a substantially radially outwardly extending direction to the outlet edge substantially at the outer diameter of said chamber, said movable blades having inlet edges directly adjacent to said outlet edges of said fixed blades to receive fluid directly from said fixed blades to form a continuous two part pump blade and extending substantially axially along the outer axial flow portion of said chamber to provide axial fluid flow to the outlet edges directly adjacent the inlet edges of said turbine blades, and means to positively move and selectively position said movable blades in a plurality of angular positions in a range of angular positions relative to said fixed blades to increase the angular momentum of the fluid during passage through said movable blades by controlling the direction of flow of the fluid.

3,021,677
DUAL HYDRAULIC MASTER CYLINDER AND BRAKE SYSTEM
Nickolas P. Miller, 926 N. Front St., McHenry, Ill.
Filed Mar. 1, 1961, Ser. No. 92,591
4 Claims. (Cl. 60—54.6)

1. A dual master cylinder for hydraulic brake systems, comprising a metal housing having a pair of cylindrical master cylinder bores side by side in said housing, each cylinder bore having an outlet bore of reduced diameter at one end and an annular shoulder surrounding each of said outlet bores, a resilient washer in each cylinder bore seated against said annular shoulder, a check valve in each cylinder bore engaging said resilient washer and engaged on its opposite side by a compression spring, a separate piston in each cylinder bore and having a resilient piston cup engaged by each spring, each piston having an elongated reduced central body and a liquid seal about its end opposite to said piston cup, and each piston having a tapered rod socket terminating in a partially spherical socket end, a piston rod in each piston socket, and having a rounded end for pivotal movement of the rod in the tapered socket, a transverse yoke pivotally connected to

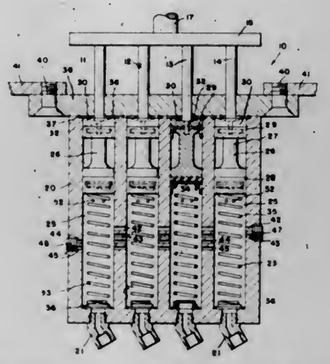


both piston rods and having an intermediate pivotal connection to an actuating rod actuated by a brake pedal, said transverse yoke having its ends projecting beyond each pivotal connection to the piston rods, said housing having a pair of opposite parallel guide slots, and the projecting ends of the yoke sliding in said guide slots, the slots guiding the yoke ends against lateral tilting and permitting pivotal movement of the yoke relative to the piston rods and to its actuating rod, and a fixed stop for limiting the inward movement of each piston, leakage of the hydraulic system of either cylinder permitting the leaking cylinder to move only half of the range of movement of the yoke, and the other half of the range of movement of the yoke remaining effective to actuate the piston in the other cylinder and the brakes controlled thereby.

3,021,678
MASTER CYLINDER FOR FLUID BRAKE SYSTEMS
James V. Pagley, Box 14, Edinburg, Pa.
Filed Dec. 8, 1959, Ser. No. 858,185
2 Claims. (Cl. 60—54.6)

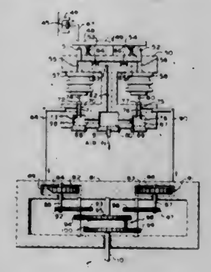
1. A master cylinder assembly for a motor vehicle of the kind having a plurality of hydraulic wheel brake cylinders comprising a block-like housing having a plurality of adjacent vertically disposed cylindrical bores therein, each of said bores having a port in its bottom end for individual conduit connection with said brake cylinders, said bores having common side walls, apertures in said side walls spaced upwardly from said ports to provide intercommunication between said bores, a hydraulic fluid reservoir associated with said housing, other apertures in the side walls of said bores upwardly of the first mentioned apertures communicating with said reservoir, pistons in said bores having normal retracted positions above said other apertures and normal operating strokes extending downwardly past said other apertures to positions above the first mentioned apertures, means interconnecting said pistons for operating the same in unison, and means biasing said pistons to upper retracted positions, the arrangement being such that during normal braking actuations the pressures in said connecting conduits are

equalized and upon a leak developing in any of said conduits or brake cylinders said pistons may descend vertically



below the first mentined apertures to apply fluid pressure to the sound conduits and brake cylinders.

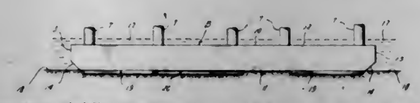
3,021,679
ANALYZER AND CONTROL SYSTEM WITH PNEUMATIC TRANSDUCER
Dale E. Lupfer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 11, 1957, Ser. No. 689,543
6 Claims. (Cl. 60—102)



1. A transducer comprising a differential gear having first and second inputs and an output which rotates in a direction and at a speed representative of the relative rotations of said first and second inputs, a first turbine connected to said first input, a second turbine connected to said second input, said turbines being so adapted as to rotate in opposite directions, a source of fluid under pressure, and valve means responsive to a variable to be measured to control the relative rate of fluid transmission from said source to said first and second turbines to rotate same, the relative rates at which the fluid is transmitted to said turbines being representative of the variable to be measured.

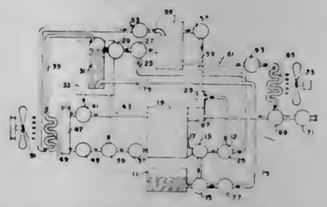
3,021,680
SUBMERGIBLE DRILLING BARGE WITH HULL PROTECTIVE DEVICES
John T. Hayward, 122 Bayside Drive, Clearwater, Fla.
Filed Dec. 29, 1954, Ser. No. 478,335
2 Claims. (Cl. 61—46.5)

1. A submergible barge, comprising, a hollow generally rectangular hull having a substantially flat bottom adapted to rest on a sub-aqueous land surface when the barge is submerged, open work superstructure comprising a plurality of upstanding laterally spaced apart column members on said hull extending above the surface of the water body in which the hull is submerged, a drilling platform supported by said column members above the surface of the water body, a longitudinal slot extending from one end of the hull to a mid-ship portion thereof, a plurality of flange



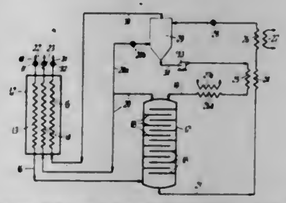
elements rigidly connected to said bottom along the portions of its perimeter and adjoined at the corners thereof and extending downwardly therefrom into contact with said land surface in the path of water in movement about said corners, and an additional flange element extending along the center line of said bottom between the inner end of said slot and the opposite end of said hull.

3,021,681
COMBUSTION ENGINES
George J. Perry 24 Onandaga St., Yonkers, N.Y.
Filed Oct. 15, 1958, Ser. No. 767,423
4 Claims. (Cl. 62—7)



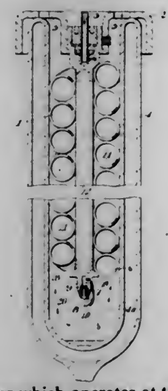
1. A method of cooling the interior of a vehicle propelled by a combustion engine having a cooling system which circulates a coolant between the engine which heats it and a radiator which comprises the steps of distilling some of the more volatile constituents of the fuel by means of said heated coolant, condensing the resulting vapor to obtain a volatile refrigerant, and evaporating said refrigerant in heat transfer relationship with a circulating body of air thereby cooling said air.

3,021,682
PROCESS AND APPARATUS FOR PURIFYING LOW BOILING GASES
Charles R. Baker, Kenmore, and Richard S. Paul, Grand Island, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed Oct. 12, 1960, Ser. No. 62,158
26 Claims. (Cl. 62—17)



1. A process for the low-temperature separation of nitrogen lower boiling impurity from a gas mixture having a major constituent boiling below about —245° C. including the steps of providing a feed stream including the major constituent and containing minor amounts of such lower boiling impurity at a substantial working pressure and a low temperature below —180° C.; providing a subcooled wash liquid at about said low temperature and said working pressure, such liquid having a vapor pressure less than approximately one five-hundredths of the vapor pressure of nitrogen at such temperature; washing the cold gaseous feed stream with the wash liquid thereby transferring substantially all of the nitrogen lower boiling impurity to the wash liquid by absorption therein; removing the lower boiling impurity from the contaminated wash liquid and recycling such cleaned wash liquid for re-use in the washing step.

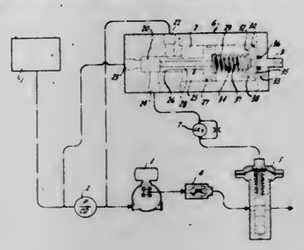
3,021,683
GAS LIQUEFIERS
John McInroy, Whitnash, Leamington Spa, England, assignor to The Hymatic Engineering Company Limited, Redditch, Worcestershire, England, a company of Great Britain
Filed Jan. 18, 1960, Ser. No. 2,964
Claims priority, application Great Britain Jan. 23, 1959
9 Claims. (Cl. 62—42)



1. A gas liquefier which operates at temperatures below —100° C. comprising, in combination, a heat exchanger, a supporting platform from which such heat exchanger is suspended, an inlet for the gas to be liquefied extending through said platform, a thermally insulated container around said heat exchanger, exhaust ports communicating with the space between the heat exchanger and container, a fitting towards the base of the liquefier having a short passage therein to which the end of the heat exchanger is connected, a part with a small bore expansion orifice therein at the lower end of said fitting, and a rigid porous adsorber in the form of a disc between the lower end of said passage and the said part and subjected to the temperature at the orifice, the adsorber having a pore size many times smaller than the bore of the expansion orifice and a diameter several times that of the expansion orifice so as to permit a continuous and reliable flow of gas to be liquefied for relatively long periods with a minimum of pressure drop, any foreign gases, present in the gas to be liquefied being frozen in said adsorber to thus prevent mechanical blockage of the orifice.

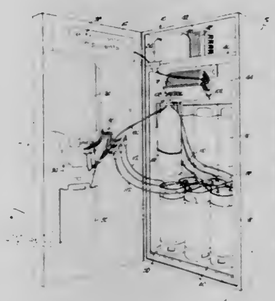
3,021,684
METERING SYSTEM FOR LIQUEFIED GASES
William F. Berck, Hayward, Calif., assignor to Ralph N. Brodie Company, San Leandro, Calif., a corporation of California
Filed Nov. 18, 1958, Ser. No. 774,670
7 Claims. (Cl. 62—49)

1. In a metering system for liquefied gases, the combination comprising a flowline having a meter therein; a source of liquefied gas held under pressure; a valve means connected in said flowline and operative between open and closed positions by a source of operating fluid; means including a shuttle valve responsive to a predetermined



flowline pressure upstream of said meter for connecting said source of operating fluid to said valve means, whereby upon a decrease in pressure below a predetermined level said valve means will be operated to its closed position.

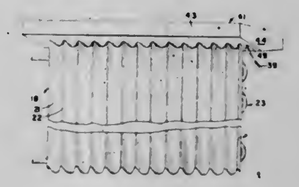
3,021,685
METHOD AND APPARATUS FOR VENDING PRE-MIX TYPE CARBONATED BEVERAGES
Le Roy D. Gore, Independence, Mo., and William M. Barnes, Atlanta, Ga., assignors of one-half to The Vendo Company, Kansas City, Mo., a corporation of Missouri, and one-half to The Coca-Cola Company, Atlanta, Ga., a corporation of Delaware
Filed Jan. 28, 1959, Ser. No. 789,707
4 Claims. (Cl. 62—89)



1. The method of dispensing maltless, nonalcoholic, carbonated beverage through an orifice of fixed size at a constant flow rate and with constant carbonation without the use of an inertia responsive, passage-restricting, liquid flow regulation step, which method comprises the steps of: enclosing a quantity of flowable, heat exchanging medium; refrigerating said heat exchanging medium; introducing into said refrigerated medium a confined quantity of maltless, nonalcoholic beverage liquid at a temperature above the temperature at which the beverage will be dispensed and containing in solution the same proportion of carbon dioxide gas as will be present when the beverage is dispensed; circulating said refrigerated medium in heat exchanging relationship with said confined quantity of liquid until said liquid is cooled to a preselected temperature within the range from 36° F. downwardly to just above the freezing point of said liquid; placing said cooled liquid in direct, pressurized communication with a confined quantity of carbon dioxide gas at a preselected pressure within the range from about 18 p.s.i.g. to 24 p.s.i.g.; maintaining both the pressure and the temperature of said liquid constant at said preselected

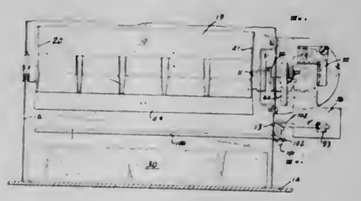
respective levels thereof, while said liquid is within said refrigerated medium and in communication with said gas; then, at intermittent intervals, while so maintaining the pressure-temperature relationship in said liquid constant, placing said liquid in communication with the atmosphere for a predetermined period of time to dispense, at a constant rate of flow, a predetermined volume of said beverage at said constant, preselected temperature and carbonation, the magnitude of said volume, for an orifice of said size, being dependent solely upon and directly proportional to the duration of said period.

3,021,686
ICE MAKING
Carl G. Alt, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed June 20, 1960, Ser. No. 37,327
10 Claims. (Cl. 62—132)



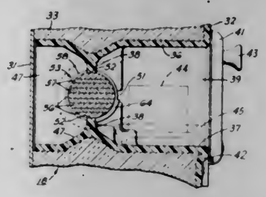
1. In an ice maker, a pair of ice forming elements, each comprising a vertically disposed plate, scallop-shaped in transverse cross-section, the scallops on one plate being offset with respect to the scallops on the other plate, said ice forming elements having opposed ice forming surfaces; means for passing a stream of water in contact with the ice forming surfaces of the ice forming elements; a refrigeration system including an evaporator having a corrugated surface in contact at spaced positions with the other surfaces of said ice forming elements for forming chunks of ice from the water stream at spaced positions on the outer surfaces; and cyclical control means for alternately freezing and harvesting the chunks of ice from the ice forming elements.

3,021,687
ICE TRAY DRIVE ASSEMBLY
Robert H. Dawson, Lake Bluff, and Robert R. Dahl, Lincolnwood, Ill., assignors to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Jan. 4, 1960, Ser. No. 290
7 Claims. (Cl. 62—135)



1. In combination with an ice making assembly including an ice tray adapted to be pivoted through an arc of less than 180° to effect ejection of ice blocks therefrom, the improvement of means for pivoting the ice tray comprising a link arm connected to the ice tray at the pivotal axis thereof and extending radially therefrom, a drive wheel and gear wheel drivingly engaging one another, a link arm connected to said gear wheel and extending radially therefrom, a drive link pivotally interconnecting said link arms, so positioned that the point of connection of said drive link with said second mentioned link arm never crosses the longitudinal axis of said first mentioned link arm, and means energizable as a function of the temperature of fluid within the ice tray for effecting rotatable movement of said drive wheel.

3,021,688
BUTTER STORAGE IN REFRIGERATORS
Howard E. Winfield, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 13, 1961, Ser. No. 95,328
6 Claims. (Cl. 62—159)

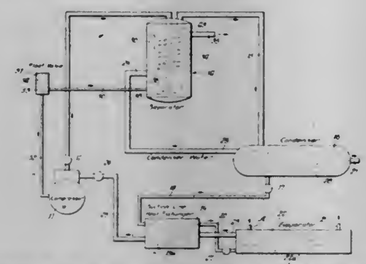


1. In a refrigerator cabinet provided with a food storage chamber bounded by spaced-apart wall members having insulating material therebetween, a refrigerating system associated with said cabinet including a refrigerant evaporator cooling said chamber to a low food preserving temperature, a casing inset in the space between said members of a bounding wall of said chamber and having walls defining a butter storage compartment therein, said casing being provided with an access opening facing the interior of said chamber and a door for the opening exposed to the low temperature within the chamber, a wall of said casing having an aperture therein, an element rotatably mounted on said casing disposed within the aperture in said wall thereof to substantially close same, a portion of said element being in heat exchange relationship with the interior of said compartment and another portion of the element being exposed to warm air ambient said chamber beyond the insulation in said bounding wall, means actuated automatically in response to temperatures within said butter compartment connected to said element for rotating same relative to said casing from one position into another position while the element maintains the aperture in said wall closed, said element when in its said one position conducting heat of said warm air directly into said compartment through the aperture in said casing wall, and said element upon being rotated out of said one position into said another position thereof by said means reducing said conduction whereby to control the temperature of butter placed in said compartment.

3,021,689
OIL SEPARATOR FOR REFRIGERATION SYSTEM
Thomas F. Miller, 111 Park Ave., River Forest, Ill.
Filed July 7, 1959, Ser. No. 825,438
7 Claims. (Cl. 62—192)

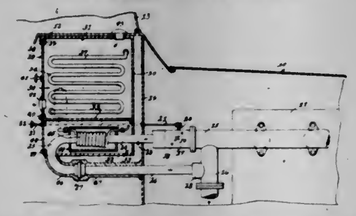
7. In an oil separator for refrigeration system embodying a compressor and a water-cooled condenser, the combination with a separator tank, of pipe coils in the upper end of said tank, means for introducing combined pressurized refrigerant and vaporized oil from the compressor into said tank including a pipe terminal extending downwardly in said tank to a point below said pipe coils but spaced above the lower wall of the tank, a restricted

port in the terminal lower end, an outlet for the gaseous refrigerant adjacent the upper end of the tank and in com-



munication with the condenser, and means for conducting reclaimed oil back to the compressor.

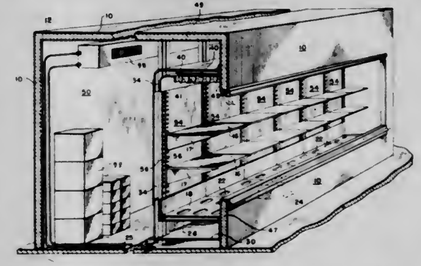
3,021,690
VEHICLE HEAT EXCHANGER FOR USE WITH A REFRIGERATOR, AIR CONDITIONER OR THE LIKE
Rudolf William Kroger, Camp Douglas, Wis.
Filed Sept. 10, 1958, Ser. No. 760,173
4 Claims. (Cl. 62—238)



4. In a device of the character described, an exhaust line, a branch line connected to said exhaust line, a support member connected to said exhaust line, a movable valve member arranged in said support member, a manually operable rod for moving said valve member, a conduit connected to said support member, said conduit including a straight section and a curved section, a pipe section extending between said curved section and said branch line, a hollow housing including a vertically disposed back wall, horizontally disposed spaced parallel top and bottom walls, a horizontally disposed partition arranged in said housing and defining upper and lower compartments therein, a heat actuated mechanism arranged in said upper compartment, a sliding door arranged adjacent the front of the housing, a casing positioned in said lower compartment, the straight section of said conduit extending through said casing, tubing in coiled formation positioned in said casing and surrounding the straight section of said conduit, said tubing being connected to the heat actuated mechanism in the upper compartment, removable plugs connected to said sliding door in the top wall of said housing, insulation on a portion of the curved section of the conduit and also on a portion of the pipe section, and a removable front panel adjacent the front of the lower compartment.

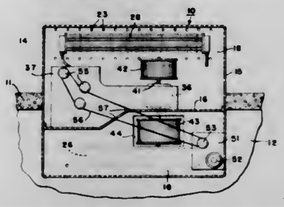
3,021,691
AIR CURTAIN REACH-IN DISPLAY COOLER
Lester G. Jacobs, Kent, Wash., assignor to Birkenwald, Incorporated, Seattle, Wash., a corporation of Washington
Filed Feb. 23, 1960, Ser. No. 10,134
10 Claims. (Cl. 62—256)

9. A refrigerated display case having a display space therein, said case having a lower front wall portion and an upper front wall portion, the upper edge of said lower front wall portion and the lower edge of said upper front wall portion being spaced apart to provide an access opening to said display space at the front of the case, the rear of said case having a door therein movable to provide access to the display space from the rear of the case, the lower portion of said display case at the rear of said lower front wall portion having a chamber therein provided with an air inlet opening below the upper edge of the lower front wall portion of the case, air distributing means above the lower edge of the upper front



wall portion of the case for directing air into the upper portion of said display space, said door having a vertically extending duct therein which, when the door is closed, communicates at its lower end with said chamber and communicates at its upper end with said air distributing means, refrigerating means located in said chamber and means in said chamber for circulating air from the lower portion of the display space through said air inlet to said chamber and refrigerating means and from said chamber to the vertically extending duct in the door and thence to the upper portion of said display space.

3,021,692
AIR CONDITIONING
Richard S. Gaugler, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 20, 1961, Ser. No. 97,054
10 Claims. (Cl. 62—271)



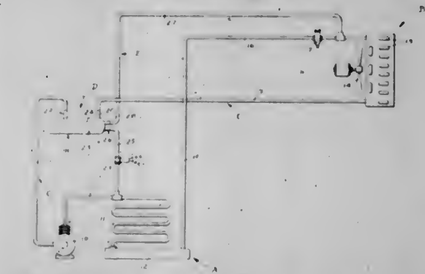
1. In combination, an air conditioning unit having a partition therein dividing the interior thereof into a first chamber and a second chamber, means for circulating air through said first chamber to and fro a zone to be conditioned thereby, means within said unit adapted to remove odors from air contacted thereby prior to circulating air out of said first chamber into said zone, said odor removing means comprising a continuously dry endless belt rotatably mounted in said unit, said belt having substantially all of its air contacting surfaces within said first chamber disposed in parallel relation with respect to air circulated therethrough whereby the air is caused to flow transversely across and in contact with both sides of the belt, means for rotating said belt to shift said surfaces thereof out of said first chamber through said partition into said second chamber, said surfaces of said belt

carrying odor adsorbing material thereon, means for liberating odors from said belt surfaces after shifting them out of contact with air in said first chamber into said second chamber of said unit, and said odor liberating means regenerating said material before said belt surfaces are shifted from said second chamber back into said first chamber by said rotating means.

3,021,693
HOT GAS DEFROSTING REFRIGERATING APPARATUS

Albert W. Aune, Minneapolis, Minn., assignor to McQuay, Inc., Minneapolis, Minn., a corporation of Minnesota

Filed May 21, 1959, Ser. No. 814,860
3 Claims. (Cl. 62—278)



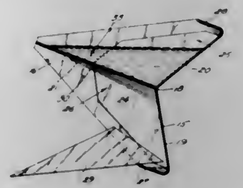
1. Refrigerating apparatus comprising a compressor, a condenser connected with the exhaust side of the compressor, an evaporator, a refrigerant feed line leading from the condenser to the evaporator for cooling the evaporator during refrigerating periods thereof, a hot gas defrost line leading from the exhaust side of the compressor to the evaporator for heating said evaporator during defrosting periods, a refrigerant return line leading from the evaporator to the suction side of the compressor, means associated both with said return line and said hot gas defrost line for accumulating therein liquid refrigerant returning from the evaporator and for supplying heat to said liquid refrigerant derived in exchange from hot gas in the hot gas defrost line to reevaporate such returning refrigerant during defrosting periods of the evaporator, said means comprising an elongated casing adapted to be disposed horizontally, said casing having an inlet leading thereinto at its upper portion near one end thereof and having an outlet leading therefrom at its upper portion adjacent the other end thereof, said inlet and outlet being connected into said refrigerant return line, said casing being provided with a conduit section having a looped U-shaped portion contained within the interior of the casing, the branches of said looped portion of said conduit section extending longitudinally of the casing, one branch being located adjacent to the bottom of the casing at least partly beneath the normal liquid refrigerant level therein, the other branch being located adjacent to the top of the casing at least partly above said liquid level in position beneath said inlet in the path of liquid refrigerant entering said casing via said inlet, said looped conduit section being connected at its ends into the hot gas defrost line of said apparatus.

3,021,694
ROTATABLE ICE TRAY

Carl C. Bauerlein, Lincolnwood, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed May 4, 1959, Ser. No. 810,715
6 Claims. (Cl. 62—349)

2. In an ice making apparatus, an ice tray comprising a fluid confining wall, a common wall secured to said confining wall intermediate the longitudinal edges of said confining wall, spaced partitioning walls disposed on opposite sides of said common wall and secured to said confining wall for forming individual ice molds, wherein each of said walls is formed of a heat conducting material, means for filling the upwardly facing molds formed by the walls with water, and means positioning said ice tray with said common wall closer to the horizontal than the portion of said confining wall thereby defining an upwardly facing mold.



3,021,695
HIGH DENSITY POLYETHYLENE ICE MOLD

Robert C. Voigtmann, Mount Prospect, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois

Filed Mar. 31, 1960, Ser. No. 18,977
1 Claim. (Cl. 62—370)

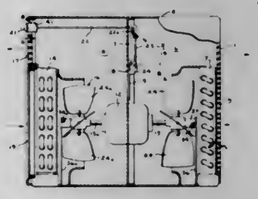


A flexible ice tray comprising a plurality of ice mold wells formed integrally with one another and including outwardly rounded bottom portions and side walls diverging upwardly therefrom, wherein said ice tray is formed entirely of high density polyethylene.

3,021,696
VENT AND EXHAUST ARRANGEMENT FOR AIR CONDITIONING UNIT

William G. Spiegelhalter, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Dec. 27, 1960, Ser. No. 78,613
2 Claims. (Cl. 62—429)

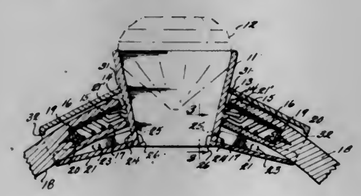


1. A self-contained air conditioning unit for conditioning air within a room comprising a case adapted for mounting within an aperture in a wall of said room, a barrier dividing said case into inner and outdoor compartments having openings leading respectively to said room and to the outdoors, an evaporator fan and a condenser fan mounted respectively in said inner and outer compartments for circulating separate streams of air from said room and from the outdoors through said compartments along opposite sides of said barrier, a motor mounted in said barrier for driving both of said fans, said condenser fan including a hub and a plurality of blades pivotably mounted on shafts extending through said hub for rotation about an axis passing through the longitudinal portion of said blades, heat responsive means mounted on said condenser fan hub, said heat responsive means having an actuator engaging the shafts of said fan blades for rotating said blades from a first position wherein air is blown in one direction to a second position wherein air is blown in the opposite direction during rotation of said fan, a vent opening in said barrier above said motor through which air may be circulated from one compartment to the other, a damper for opening and closing said vent opening in said barrier, damper control means adapted to move said damper to the open or closed position with respect to said vent opening in said barrier, a heater mounted within said case in close proximity to said heat responsive means on said condenser fan for actuating said heat responsive means to move said fan blades from said first position to said second position, and switch means operated by said damper control means for energizing an electrical circuit including said heater when said damper is moved by said damper control means to the open position so that the air stream circulated by said condenser fan is reversed thereby aiding the flow of air through said vent opening from said inner compartment to said outer compartment.

3,021,697
CONTRACTIBLE RING HAVING A DETACHABLE SHANK

Gordon M. Coates, 774 3rd Ave., Troy, N.Y.

Filed Aug. 12, 1960, Ser. No. 49,324
2 Claims. (Cl. 63—15.45)



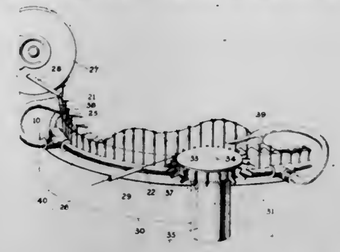
1. An expansible ring comprising a head, apertured lugs on opposed sidewalls thereof and a pair of openings on each of said walls adjacent the bottom thereof, a split shank curved from end to end having a substantially straight bore opening from an end face at each end, a coil spring in each bore, a jeweler's screw securing one end of each spring in its associated bore, a hook formed on the other end of each spring and engaging in the aperture in a respective one of said lugs, a sleeve surrounding each end of said shank, each sleeve having an inner end abutting one of said walls, and hooked fingers on said inner end secured in a respective pair of said openings.

3,021,698
METHOD OF KNITTING A TWO FACED PILE FABRIC

John H. Hill, Wayne, Pa., assignor to Wildman Jacquard Co., Norristown, Pa., a corporation of Pennsylvania

Filed Sept. 25, 1958, Ser. No. 763,344
2 Claims. (Cl. 66—9)

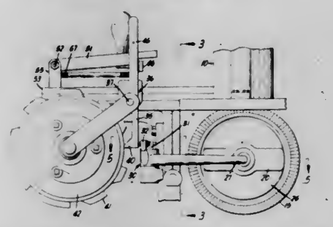
1. A method of knitting a two faced pile fabric which comprises the steps of forming a jersey knitted base fabric, incorporating individual loose tufts of fibers to be held at certain of the stitches of said base fabric and to project to the back of the fabric, raising the needles and fabric and inserting between some at least of the needles while the fabric thereon is raised, bights of a yarn and then drawing the needles and fabric down to trap said bights of yarn so that it will be held in the fabric upon drawing a subsequent course of the base fabric and will appear as pile loops projecting to the fabric face.



3,021,699
CLUTCH OPERATING MEANS FOR KNITTING MACHINES

Herman E. Crawford, Kernersville, N.C., assignor to The H. E. Crawford Company, Incorporated, Kernersville, N.C., a corporation of North Carolina

Filed June 26, 1958, Ser. No. 744,773
3 Claims. (Cl. 66—56)



1. In a circular knitting machine having a needle cylinder, a transfer dial, operating means for said needle cylinder and transfer dial, a driving means, pattern means in driven relationship to said driving means, a clutch for connecting said operating means for said needle cylinder and transfer dial to said driving means, means for operating said clutch to disconnect said needle cylinder and transfer dial operating means from said driving means independently of said relationship between said pattern means and driving means including a pattern lever operated by said pattern means, in combination with a second means for operating said pattern lever independently of said pattern means.

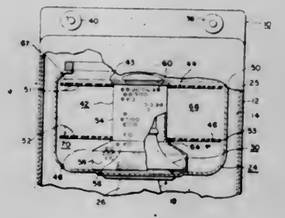
3,021,700
DOMESTIC FABRIC WASHING MACHINE

Margaret J. Andrew, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 17, 1958, Ser. No. 774,201
3 Claims. (Cl. 68—4)

1. A domestic fabric washing machine comprising a tub having a side wall and a top access opening smaller than said tub, an agitator in said tub having a large diameter bottom ring and a small diameter upper ring, a removable perforated shield for said agitator having an upper and lower portion, said upper and lower portions being configured respectively to clear said upper and lower rings and said access opening, means for vertically reciprocating said agitator inside said shield, said shield being stationary relative to said tub during said reciprocating, a flexible first baffle removably attached to and supported by said upper portion and having a dimension

greater than said access opening, and a flexible second baffle removably attached to and supported by said lower portion in spaced, fabric containing relationship to said first baffle and having a dimension equal to that of said first baffle, said baffles each having a peripheral edge in uniformly spaced relationship to said side wall and a

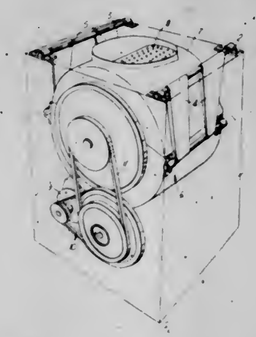


plurality of ports, whereby the vertical reciprocation of said agitator pumps a washing solution through said perforations, said ports and said fabric to wash said fabric without agitating said fabric and whereby the flexibility of said baffles facilitates the removal of said shield and said baffles through said access opening and the insertion of fabric into said tub.

3,021,701
CLOTHES WASHING MACHINE AND SINGLE PHASE INDUCTION MOTOR THEREFOR

Jean Metz, Anthony, France, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 23, 1960, Ser. No. 38,309
Claims priority, application Great Britain Aug. 7, 1959
10 Claims. (Cl. 68—24)

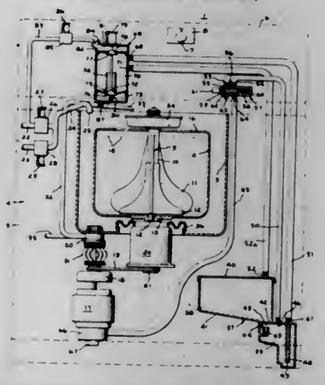


8. A washer machine comprising a cabinet, a tub rotatably mounted in said cabinet about a horizontal axis, a single phase induction motor, and a drive mechanism connecting said motor and said tub, said drive mechanism including a device for changing the gear ratio of said mechanism, and said motor comprising a main winding having tap means between sections extending to opposite ends thereof, a split phase winding, a single pole reversal switch, and a control switch operable to connect said phase winding either in a parallel connection across said main winding with said reversal switch inoperative for high speed unidirectional spinning of said tub as well as for connection of said phase winding in series with said reversal switch between said tap means and opposite ends of said main winding for periodical reversal of slow speed rotation of said tub.

3,021,702
TREATING AGENT DISPENSER SYSTEM FOR LAUNDRY MACHINES

Philip H. Houser, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed June 23, 1960, Ser. No. 38,303
6 Claims. (Cl. 68—207)

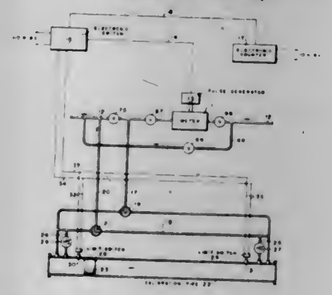


1. In an article-treating machine: a receptacle assembly for articles to be treated; storage container means for a liquid article-treating agent having a first relatively large section and a second relatively small section, said small section being formed to withstand pressure and having the top thereof at a level at least as low as the bottom of said large section, means connecting the bottom of said large section to said small section and providing fluid communication between said sections, and pressure responsive valve means positioned to close said connecting means upon an excess of fluid pressure in said small section over the fluid pressure in said large section and to open said connecting means for liquid flow when the fluid pressures in said sections are substantially equal and said small section is not filled; means for increasing the pressure on the liquid in said small section; and conduit means having one end communicating with said small section and its other end positioned to discharge liquid so that it is introduced into said receptacle assembly, said means for increasing the pressure being effective to force liquid from said one portion through said conduit means.

3,021,703
PROVING METERS

Raymond H. Pfrehm, Houston, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed June 8, 1959, Ser. No. 818,723
19 Claims. (Cl. 73—3)

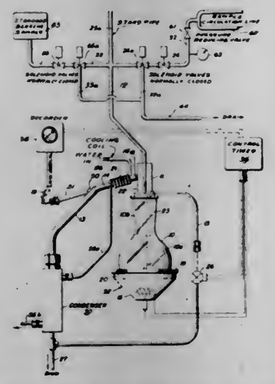


16. Apparatus for calibrating a meter in a pipeline which comprises a calibration conduit separate from said pipeline, reversible means for fluidly connecting said conduit into said pipeline so that a monodirectional flow in said pipeline may be reversed selectively in said conduit by operation of said means, a closely fitting plug means adapted to be propelled in either direction through said conduit by the flowing fluid in said conduit and a pair of spaced control means in said conduit adapted to be actuated respectively to initiate and stop a calibration operation as the plug means passes said control means in sequence in either direction.

3,021,704
FEED SYSTEM FOR AUTOMATIC END POINT APPARATUS

Joseph C. Rhodes, Park Forest, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Dec. 9, 1959, Ser. No. 858,521
4 Claims. (Cl. 73—17)



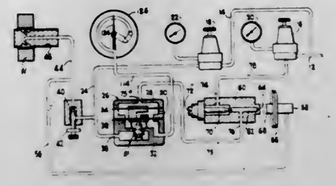
2. An apparatus for determining the end point of a process liquid which comprises in combination a miniature dist llation unit, standpipe means discharging into said distillation unit, reservoir means for standard liquid, first valved conduit means communicating between said reservoir and said standpipe, process sample circulation line means, second valved condu t means between said circulation line and said standpipe, siphon tube means discharging from a lower portion of the distillation unit, a vapor line discharging from said dist llation unit, thermocouple means disposed in an upper part of said vapor line, a first solenoid valve on said siphon tube means, second and third solenoid valve means on each of said valved conduit means, electrical heating means for said distillation unit, said solenoid valve means and said heating means being controlled by program timer means, and temperature indicating means associated with said thermocouple means.

3,021,705
PNEUMATIC GAGING DEVICE

Allen R. Hollister, East Hartford, Conn., assignor to Pratt & Whitney Company, Incorporated, West Hartford, Conn., a corporation of Delaware

Filed Dec. 10, 1958, Ser. No. 779,423
4 Claims. (Cl. 73—37.9)

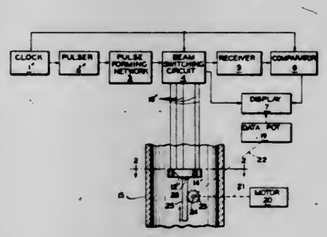
2. A gaging device comprising a primary gaging circuit including a gaging plug member, first and second fluid supply sources, said gaging plug member having orifice means arranged in opposed relation to a surface of a workpiece being gaged, and means connecting said second fluid supply source with said orifice means, a first and a second fluid amplifier means connected in cascade said second amplifier means including a differential diaphragm controlled outlet, means connecting said first fluid amplifier means with said orifice means, and indicator means connected to the output of the second amplifier means.



3,021,706
ULTRASONIC MATERIALS TESTING SYSTEM

Edward G. Cook, Packanack Lake, and William I. Shepley, Boonton, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware

Filed July 2, 1957, Ser. No. 669,592
7 Claims. (Cl. 73—67.8)



1. A transducer for inspecting tubular members which comprises a substantially cylindrical support having a plurality of equally spaced, flat surfaces, said flat surfaces extending parallel to the longitudinal axis of the support and lying in planes which form acute angles with diametrical and intersecting planes passing through said longitudinal axis of said support, a piezoelectric element secured to each of said flat surfaces, and means for electrically pulsing each of said piezoelectric elements to form a plurality of overlapping angularly disposed beams providing beamed vibrations over 360°, said ultrasonic beams impinging upon the inner surface of said tubular member at an acute angle therewith whereby said ultrasonic beams are reflected and travel within said tubular member.

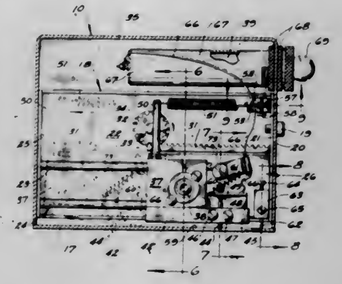
3,021,707
COATING SCRATCH RESISTANCE INDICATOR

Batist R. Haueisen, R.R. 1, Box 339, New Augusta, Ind.

Filed Jan. 12, 1959, Ser. No. 786,213
6 Claims. (Cl. 73—150)

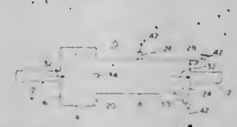
1. For indicating thickness of a dielectric coating on an electrical conducting base, a structure comprising a housing having a slot through its underside; a slide; a slide guide carrying said slide and traversing said housing in parallel relation to said slot and to said underside; a rocker head rockably carried by said slide; a coil spring interconnecting by one end with said head and by the

other end with said housing tending to rock said head upon movement of the slide away from said other spring end; an electrically conducting stylus carried by said head to one side of the axis of rocking of the head toward said other spring end, and directed by a free end into said slot; means shifting said slide along its said guide stretching said spring and tending to carry said stylus increasingly through said slot; a second electrical conducting stylus fixedly carried by said housing and extending from the housing underside adjacent an end of said slot; a second



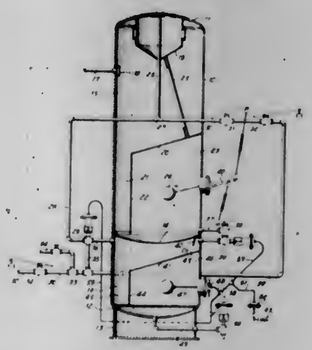
tension spring retaining said head in an up position of said stylus carried by the head; said first spring having an initial zero tension less than that of said second spring; said first spring overcoming the tension of the second spring as said slide travels from said zero tension under the influence of said shifting means; and an electric lamp and source of electric energy carried by said housing in series circuit with both of said styluses, said circuit being closed by bridging of said styluses extending through said coating into contact with said base.

3,021,708
FLOWMETER
Gerald S. November, Swampscott, Mass., and Frank Schute, Towson, Md., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Apr. 23, 1957, Ser. No. 654,627
3 Claims. (Cl. 73—194)



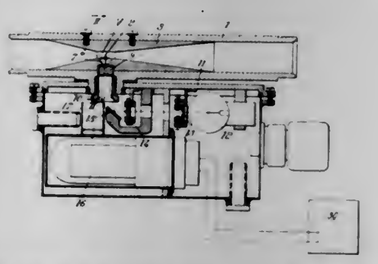
1. A flowmeter for indicating fluid flow rate and fast changes thereof which comprises, in combination: an entrance pipe and an exit pipe for said fluid flow; means between said pipes for establishing a standing wave having an amplitude which is a function of said fluid flow rate, said means consisting of a sensing section having a cylindrical expansion chamber and a cylindrical resonant chamber, said expansion chamber having a discontinuity to create a disturbance in said fluid, whereby said disturbance generates said standing wave in said resonant chamber; a detector sensitive to said standing wave on said resonant chamber to yield an electric voltage wave amplitude-modulated by a signal frequency reflecting variations in said flow rate, said wave thereby containing information concerning said flow rate and said fast changes thereof; a recording section, said recording section connected to receive said electric voltage wave and including an electric circuit to separate said signal frequency from said wave, said electric circuit having a band-pass filter and demodulation means in series, said demodulation means including a rectifier and a low-pass filter, and a recorder for indicating said flow rate and said fast changes thereof.

3,021,709
METHODS AND MEANS FOR SEPARATING LIQUIDS FROM PETROLEUM STREAMS AND METERING THE SEPARATED LIQUIDS
Jay P. Walker and Clarence O. Glasgow, Tulsa, Okla., assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Feb. 24, 1958, Ser. No. 716,968
24 Claims. (Cl. 73—200)



1. The method of separating liquids from a well stream and metering the separated liquids including, flowing the well stream into a gas separation chamber wherein the stream is resolved into gaseous and liquid portions, flowing the liquid portion into a metering chamber, maintaining the gas separation chamber at a higher pressure than the metering chamber, discharging a predetermined quantity of separated liquid from the metering chamber, and increasing the pressure on the metering chamber while the separated liquid is being discharged.

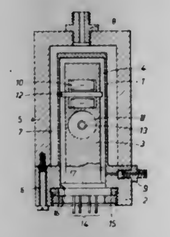
3,021,710
FLOW METER
Marcel Barrere and André Moutet, Villaine par Massy, France, assignors to "Office National d'Etudes et de Recherches Aeronautiques" (O.N.E.R.A.), Chatillon-sous-Bagneux, France, a society of France
Filed Mar. 8, 1954, Ser. No. 414,744
Claims priority, application France Mar. 12, 1953
1 Claim. (Cl. 73—229)



A liquid rate of flow meter which comprises, in combination, a structure forming a conduit for conveying a

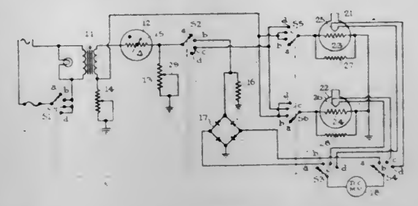
stream of the liquid under pressure the rate of flow of which is to be measured, said conduit being constricted to form a throat, the portions of said conduit respectively upstream and downstream of said throat being of gradually varying cross section, one side of said throat being provided with a housing, a bladed wheel made of a plastic material and including several radial blades of substantially rectangular shape the outer edge of each of said blades parallel to the axis of said wheel being provided with a groove running along said edge and of a width nearly equal to the thickness of said blade, a stainless steel rod housed in each of said grooves with a light reflecting flat face flush with said edge, said wheel being pivoted in said conduit with its axis at right angles to the direction of said condut and substantially tangent to the surface of said throat, means forming a transparent window in said conduit opposite said throat to enable light from the outside of said conduit to strike said meter wheel, a source of light, optical means for directing through said window a beam from said source onto the edges of the blades of said meter wheel as they pass at a given point, and optico-electronic means responsive to said light beams for measuring the number of light beams reflected per unit of time from said blade edges as they are passing at said point.

3,021,711
DEVICE FOR MEASURING PRESSURE OR DIFFERENCE OF PRESSURE IN FLUIDS
Gunnar Arvidson, Trollhattan, Sweden, assignor to Svenska Flygmotor Aktiebolaget, Trollhattan, Sweden
Filed Feb. 10, 1958, Ser. No. 714,217
Claims priority, application Sweden May 10, 1957
2 Claims. (Cl. 73—398)



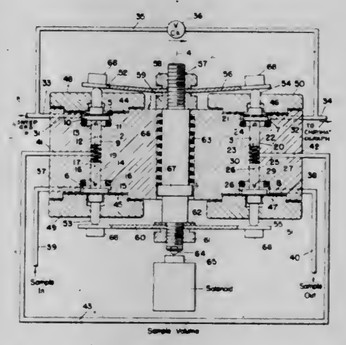
1. A device for measuring pressure or difference in pressure in fluid comprising in combination, a hollow body in the shape of a circular cylinder of magnetic material closed at one end, an electromagnet energized by alternating current symmetrically positioned inside said cylinder with its axis at right angles to the axis of the cylinder for imparting to said cylinder a vibration in one of the natural vibrating modes characterized by circular nodes at the ends of the cylinder and a plurality of straight nodes along the cylinder the cylinder having in this vibration node a natural frequency which may be influenced by the difference of pressures inside and outside of the cylinder, another electromagnet also symmetrically positioned inside the cylinder with its axis at right angles to the longitudinal axis of the cylinder for testing the vibrations thereof, means for supplying the medium or media under consideration to said body on the internal or external surface thereof, the said testing electromagnet being connected to the input of an amplifier having two outputs, one of which for delivering the driving current to the vibration generating electromagnet and the other being connected to a frequency measuring means.

3,021,712
PRESSURE GAUGE
Richard A. Denton, Rene P. Le Riche, and Michael P. Rivera, Haddonfield, N.J., assignors to The New York Air Brake Company, a corporation of New Jersey
Filed Feb. 25, 1958, Ser. No. 717,355
7 Claims. (Cl. 73—399)



1. In a vacuum gauge of the type including a sealed envelope having an inlet connection, an electrical heater element, within the envelope, and a thermocouple for measuring the temperature of the heater element, the improvement which comprises a resistance connected in parallel with the heater element and having a magnitude such that the thermocouple has a preselected output range.

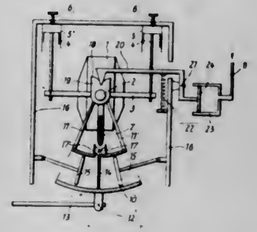
3,021,713
FLUID SAMPLING VALVE
J Rondle Wright, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed July 27, 1959, Ser. No. 829,574
16 Claims. (Cl. 73—422)



9. A fluid sampling valve comprising a pair of chambered valve body sections, a first on-off valve member positioned in the first chamber for selectively placing one end of said first chamber in fluid communication with an intermediate portion thereof, a second on-off valve member positioned in the first chamber for selectively placing the other end of said first chamber in fluid communication with said intermediate portion thereof, a third on-off valve member positioned in the second chamber for selectively placing one end of said second chamber in fluid communication with an intermediate portion thereof, a fourth on-off valve member positioned in the second chamber for selectively placing the other end of said second chamber in fluid communication with said intermediate portion thereof, means connecting said one of said first chamber and said one end of said second chamber directly into a main fluid conduit, means connecting said other end of said first chamber into an upstream section of an auxiliary fluid conduit, means connecting said other end of said second chamber into a downstream section of

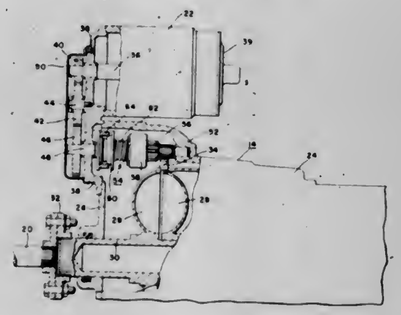
said auxiliary conduit which is separate from said upstream section thereof, means connecting together the intermediate portions of said first and second chambers, thereby to provide an interconnection between the upstream and downstream sections of said auxiliary conduit, and means for applying a common operating force to all four of said valve members.

3,021,714
STABILIZING AND CONTROL DEVICE FOR SMALL AIRBORNE OBJECTS
Waldemar Möller, Uberlingen (Bodensee), Germany, assignor to Bodenseewerk Perkin-Elmer & Co., G.m.b.H., Uberlingen (Bodensee), Germany
Filed Nov. 24, 1959, Ser. No. 855,052
5 Claims. (Cl. 74—5.6)



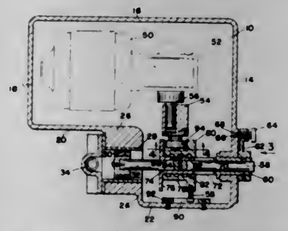
1. Control apparatus which comprises a base; gyroscopic means mounted on said base having an axis of rotation and an axis of precession; fluid nozzle means affixed to said gyroscopic means to rotate about the precession axis thereof; and controlling means pivoted to rotate about said precession axis, in receiving relationship with the fluid from said nozzle means and rotatable thereby, said controlling means comprising an arcuate portion of a hollow toroid having its axis of revolution coincident with said precession axis, a transverse dividing wall extending across the toroidal space to divide said space into two abutting toroidal chambers, and a piston in each of said chambers supported by said base.

3,021,715
MOTOR VEHICLE ENGINE STARTING APPARATUS
John Z. De Lorean, Birmingham, Mich., and George B. Shaw and Brooks H. Short, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 28, 1960, Ser. No. 18,089
3 Claims. (Cl. 74—7)



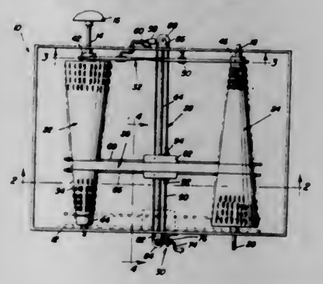
1. Starting apparatus for cranking an internal combustion engine comprising, a support, an electric starting motor having a housing secured to said support, a nose housing secured to said support and extending therefrom in the same direction as said starting motor, an armature shaft having one end thereof journalled for rotation in said support, a second shaft journalled for rotation in said support and said nose housing, the longitudinal axis of said armature shaft being parallel to the longitudinal axis of said second shaft and spaced therefrom, a starter drive carried by said second shaft including a pinion shiftable into engagement with a ring gear, and gearing connecting said armature shaft and said second shaft disposed closely adjacent said support.

3,021,716
PROPORTIONING PUMP
Francis Henry Goyette and James B. Gabler, % Lodding Engineering Corporation, 73 Beacon St., Worcester, Mass.
Filed Sept. 25, 1958, Ser. No. 763,268
8 Claims. (Cl. 74—50)



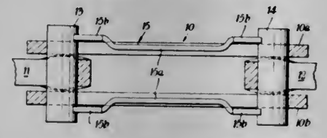
1. A device of the class described comprising a casing, a cylinder therein, a piston in the cylinder, a piston rod connected to the piston, means for reciprocating the piston rod, said means comprising a pair of radially arranged elements on said piston rod, adjusting means for causing separation or advance of said elements to and from each other, means mounted on the casing to actuate the adjusting means, one of said elements being non-rotatably connected to said piston rod, and means between said elements to impinge upon the same to cause reciprocation of said piston rod, said means impinging upon said elements to a greater or lesser degree depending upon the relative axial adjustment of said elements.

3,021,717
UNIFORM SPEED CHANGER OR TRANSMISSION
John C. Bondurant, 300 Moulton, Hickman, Ky.
Filed Dec. 20, 1960, Ser. No. 77,147
6 Claims. (Cl. 74—217)



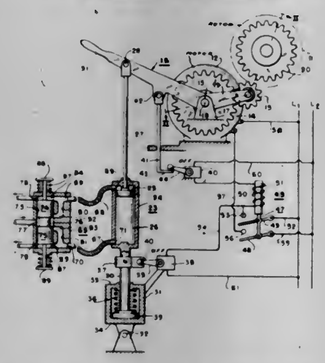
1. An infinitely variable ratio drive transmission comprising variable diameter drive means, means rotatably mounting said drive means in axially fixed relation to a rotational axis, driven transmitting means drivingly engageable with said variable diameter drive means and movable parallel to said rotational axis for varying the drive ratio between the drive means and transmitting means, guide means operatively mounted on the drive means for engagement by the transmitting means to restrict relative movement between the drive means and transmitting means in all directions except directions parallel to the rotational axis and means drivingly independent of the drive means for shifting the transmitting means in a direction parallel to said rotational axis to infinitely vary the drive ratio between the drive means and the transmitting means during power transmission, said guide means comprising a plurality of closely spaced externally projecting guide rollers rotatably mounted by the drive means about axes disposed perpendicular to said rotational axis.

3,021,718
CHAINS FOR USE IN CONVEYOR SYSTEMS
Donald Mayer King, % Argyle Works, Stevenage, Hertfordshire, England
Filed June 2, 1960, Ser. No. 33,581
Claims priority, application Great Britain June 4, 1959
2 Claims. (Cl. 74—254)



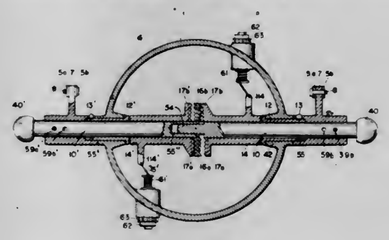
1. A chain comprising a plurality of longitudinally spaced inner links each having opposite ends, a pair of outer links extending between and overlapping the ends of adjacent inner links, each of said outer links having an elongated opening therein, each inner link being provided with an opening adjacent each of said ends, a connecting pin extending through aligned openings of the inner links and outer links, each connecting pin being provided with at least one slot, and a rigid keeper plate in part in the elongated opening of said outer links and engageable in one of the slots of adjacent connecting pins whereby said keeper plate prevents displacement of said pins.

3,021,719
ROTOR TURNING GEAR CONTROL APPARATUS
Joseph D. Conrad, Jr., Glen Mills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 21, 1960, Ser. No. 44,509
5 Claims. (Cl. 74—472)



1. In combination, a rotor having a gear connected thereto, an electric motor, means including a pinion driven by said motor for selectively engaging and disengaging said gear, means including a switch movable to an "on" position for energizing and to an "off" position for deenergizing said motor, means for providing a fluid pressure signal, and a mechanism responsive to said signal, said mechanism including means for initially moving said pinion into contact with said gear and means for subsequently actuating said switch to said "on" position said two last mentioned means being operable in a sequential manner.

3,021,720
CONTROL DEVICES FOR ADJUSTABLE DRIVING MOUNTS
Klaus-Jürgen Schulze and Oswald Kubatschka, Nordhausen, Germany, assignors to VEB Schlepperwerk Nordhausen, Nordhausen (Harz), Germany, a corporation of Germany
Filed June 24, 1959, Ser. No. 822,599
Claims priority, application Germany July 7, 1958
20 Claims. (Cl. 74—481)



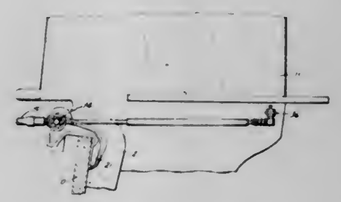
1. A driving mount for automotive vehicles, comprising a support, a control shaft on said support, operating means for rotating said shaft in either direction, a double-arm lever member on said shaft, a rotatable member spaced from said shaft, coupling means operatively connecting said rotatable member with a load to be controlled by said operating means, and two unidirectionally deformation-resistant links extending from opposite ends of said lever member toward said rotatable member and engaging the latter at substantially the same location, thereby translating rotation of said lever member in either sense into a rotation of said rotatable member in an invariable direction.

3,021,721
VEHICLE STEERING MECHANISM
Frederick J. Hooven, Bloomfield Hills, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 7, 1957, Ser. No. 676,825
3 Claims. (Cl. 74—496)



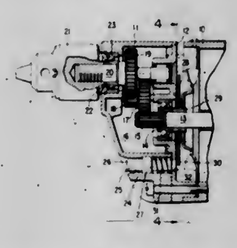
1. In a steering mechanism, a housing, a shaft journaled in said housing having a helical thread thereon, a traveling nut having an aperture containing a helical thread, said threads being in mating position to prevent endwise separation without rotation but in spaced relation due to the relative widths of the threads and grooves, a low friction layer having one face slidably engaging one of said threads, a backing material engaging the other face of said layer and said other thread and filling the space therebetween, a pivot mounted on said housing having a sector, and crossed flexible means connecting opposite ends of said sector to opposite ends of said nut.

3,021,722
BOAT STEERING DEVICES
Otto J. Bratz, Adrian, and William J. Gilmore, Manitou Beach, Mich., assignors to American Chain & Cable Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 3, 1960, Ser. No. 6,459
5 Claims. (Cl. 74—501)



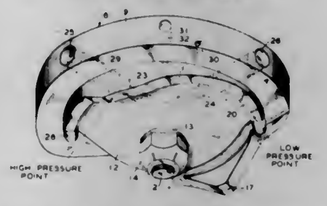
1. A boat steering device for use with an outboard motor secured to a boat transom comprising a pair of telescopingly related elements, means for operatively connecting one end of one of said elements to the transom, said means permitting pivoting of the element about its point of attachment in a vertical and in a horizontal plane, means operatively connecting the other element to a portion of the motor for pivoting in a horizontal plane, whereby telescoping of said elements causes steering pivotal movement of the motor with respect to the transom, means connecting the conduit of a flexible push-pull mechanism comprising a conduit and a cable therewithin to one of said telescoping elements at the transom and means connecting the cable of said push-pull mechanism to the other of said elements.

3,021,723
SPINDLE LOCKING MEANS FOR PORTABLE TOOLS
Reynold Happe, Princeton, N.J., assignor to Diehl Manufacturing Company, Somerville, N.J., a corporation of New Jersey
Filed Sept. 10, 1958, Ser. No. 760,264
2 Claims. (Cl. 74—527)



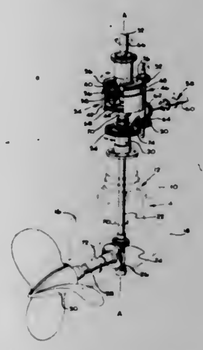
1. A spindle locking device for a portable electric tool having a gear housing, a gear containing cavity formed in said gear housing, a cover for said cavity, a power take-off spindle journaled in said housing and a motor shaft journaled in said cover and having a terminal portion extending into said cavity, comprising a gear transmission within said cavity drivably connecting the motor shaft with the power take-off spindle, a disc secured to said shaft externally of said cavity but internally of said tool, peripheral notches formed in said disc, and a spring-retracted plunger manually operative through an aperture in said gear housing and in said cover in a region outside said cavity for selectively engaging one of said notches to hold the shaft and thus the spindle against rotation.

3,021,724
ADJUSTABLE CAM DEVICE
Fritz O. Seger, Erie, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Apr. 28, 1960, Ser. No. 25,266
7 Claims. (Cl. 74—568)



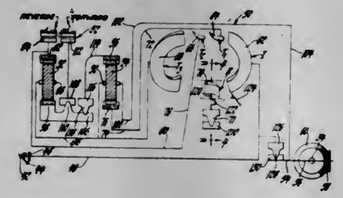
1. An adjustable cam arrangement comprising, in combination, a rotatable shaft, a primary cam plate, mounting means for mounting said primary cam plate on said shaft in predetermined position substantially at right angles thereto and permitting limited angular movement of said primary cam plate out of said predetermined position to another position not at right angles to said shaft, an auxiliary cam plate fixed on said shaft in axially spaced relation to said primary cam plate, means coupling said primary cam plate and said auxiliary cam plate for rotation together, said primary cam plate having thereon a circular cam surface providing axial cam action parallel to the axis of said shaft, and a plurality of cooperating bearing means carried partly on said primary cam plate and partly on said auxiliary cam plate for providing three angularly spaced bearing points therebetween, at least one of said bearing means being adjustable to vary the axial spacing between said primary cam plate and said auxiliary cam plate at the corresponding bearing point for effecting angular adjusting movement of the primary cam plate with respect to its predetermined position.

3,021,725
RIGHT ANGLE DRIVE STEERABLE PROPELLER
Arthur J. R. Schneider, San Marino, Calif., assignor to Waste King Corporation, Los Angeles, Calif., a corporation of California
Filed June 2, 1958, Ser. No. 739,297
1 Claim. (Cl. 74—665)



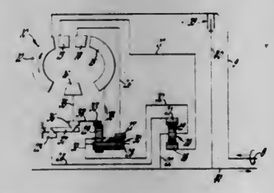
In combination: an input shaft; an output shaft coaxial with said input shaft; a rotatable structure pivotable about the axis of said input and output shafts; rotation transmitting means coupling said input shaft and said output shaft together and providing a rotatable torque reaction member, said rotation transmitting means comprising a planetary transmission having a sun gear on said input shaft, planet gears meshed with said sun gear and rotatably mounted on said torque reaction member, and a ring gear meshed with said planet gears and connected to said output shaft; a reaction gear on said rotatable structure; a reaction gear on said torque reaction member; a counterbalance shaft disposed parallel to said axis and including gears meshed with said reaction gears on said rotatable structure and said torque reaction member, respectively, for connecting said rotatable structure and said torque reaction member in torque opposing relationship; and control means comprising a control shaft geared to said counterbalance shaft so as to rotate said gears of said counterbalance shaft.

3,021,726
TRANSMISSION
Gilbert K. Hause, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 24, 1957, Ser. No. 654,771
22 Claims. (Cl. 74—677)



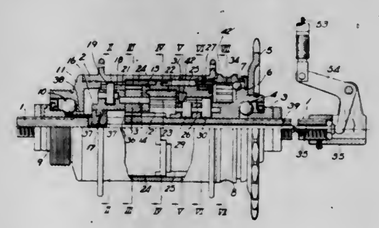
1. A speed-reducing transmission and final drive assembly comprising in combination, a differential housing, a differential in the housing adapted to drive a pair of axles, a differential input shaft in the housing, a torque converter housing secured to the differential housing adjacent the shaft, a hydrodynamic torque converter in the torque converter housing having a power input member and a power output member, a gear housing secured to that side of the torque converter housing which is opposite the differential housing, forward and reverse speed reducing gearing in the gear housing having a power input and a power output, the power input of the gearing being drivingly connected to the output of the torque converter and the power output of the gearing being drivingly connected to the differential input shaft and a power input shaft extending through the gear housing and drivingly connected to the torque converter input member.

3,021,727
TRIPLE TURBINE BUS AND TRUCK TRANSMISSIONS
Oliver K. Kelley and Gilbert K. Hause, Bloomfield Hills, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 13, 1958, Ser. No. 766,781
19 Claims. (Cl. 74—677)



1. A torque multiplying transmission comprising in combination a driving member, a driven member, a planet carrier connected to said driven member for driving said driven member, first and second pinion gears journalled on the carrier in mesh with each other, a sun gear and a reaction ring gear in mesh with said first pinion gear, means for permitting forward rotation of said reaction ring gear and for preventing reverse rotation thereof, a second ring gear in mesh with said second pinion gear, means for transmitting torque from said driving member to said sun gear, additional means for transmitting torque from said driving member to said second-mentioned ring gear, and additional means for transmitting torque from said driving member to said planet carrier.

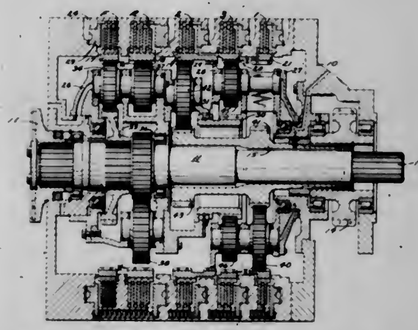
3,021,728
THREE STAGE SPEED CHANGE MECHANISM FOR A BICYCLE
Kelzo Shimano, 50 Takasago-cho Nicho, Sakai, Japan
Filed July 21, 1959, Ser. No. 828,597
Claims priority, application Japan July 22, 1958
2 Claims. (Cl. 74—750)



1. A three stage speed change mechanism with high, low and intermediate stages for a bicycle which comprises: a rear dead axle having a dead end central bore and a radial slot defined adjacent said dead end; a push rod, having oppositely disposed ends, slidably mounted in said central bore with one end inserted therein and the other end extending thereout; a driving annular body, including a sprocket wheel, rotatively mounted on said dead axle; a hub, having two ends, rotatably mounted on said driving annular body and having a first internal ratchet gear defined in one said end; a sun wheel fixed on said axle within said hub; a plurality of planetary gears adapted to axially slide along said sun wheel while meshing therewith; an axially slidable supporting frame for said planetary gears; disc means for operatively engaging the inserted end of said push rod with said axially slidable supporting frame; means operatively engaging the other end of said push rod to axially shift said push rod and engaged frame for changing said stages; an internal ring gear surrounding and meshing with said planetary gears; first driving pawls rockably mounted in one end of said supporting frame and adapted to slidably engage and disengage with said first internal ratchet gear; second and third driving pawls rockably mounted in said driving annular body; a second internal ratchet gear united and extending from the other end of said supporting frame and adapted to slidably engage and disengage with said second driving pawls; a ring gear extension united to said internal ring gear, said ring gear extension forming a third internal ratchet gear in line with said second ratchet gear and adapted to slidably engage and disengage with said third driving pawls; a fourth internal ratchet gear formed on the other end of said hub; and fourth driving pawls rockably mounted in the outer part of said ring gear extension and adapted to slidably engage and disengage with said fourth internal ratchet gear; said driving pawls and associated ratchet gears being arranged whereby when said push rod is farthest advanced in said bore for said first and third driving pawls and ratchet gears to respectively engage said hub and said driving annular body in said low

stage, and when said pushrod is farthest retracted out of said bore for said second and fourth driving pawls and ratchet gears to respectively engage said hub and driving annular body in said high stage, and when pushrod is between said advanced and retracted positions, for said first and second driving pawls and ratchet gears to respectively engage said hub and driving annular body in said intermediate stage.

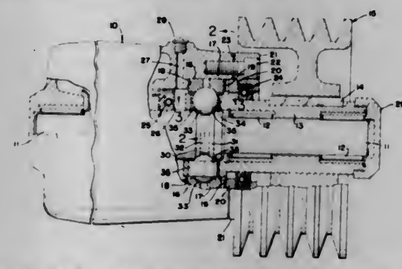
3,021,729
PLANETARY TRANSMISSION FOR TRACTORS OR THE LIKE
Robert O. Chambers, Elmwood, Seth P. Nordling, Washington, and Charles A. Ramsel, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Mar. 18, 1959, Ser. No. 800,286
10 Claims. (Cl. 74—768)



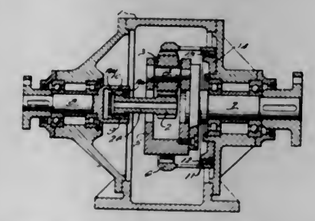
1. A power transmission comprising a first rotatable planet carrier,
a power input member driving said first planet carrier,
an output shaft,
a first sun gear on said output shaft,
first planet gear means on said first carrier for driv- said first sun gear,
a rotatable ring gear engaging said first planet gear means,
a second planet carrier connected to said rotatable ring gear to rotate therewith,
a second sun gear on said output shaft,
second planet means on said second planet carrier for driving said second sun gear,
a second ring gear engageable by said second planet means, and
low speed high power brake means selectively engageable to hold said second ring gear against rotation thereby to produce rotation of said second planet carrier and said rotatable ring gear in the same direction as said first planet carrier so that said first and second planet gear means drive said first and second sun gears, respectively.

3,021,730
PLANETARY SPEED-RATIO DEVICE
Oscar H. Banker, Evanston, Ill., assignor to Fawick Corporation, a corporation of Michigan
Filed Mar. 30, 1959, Ser. No. 802,987
6 Claims. (Cl. 74—798)

1. In a planetary power-transmitting device having means defining an outer annular ball race, means defining an inner ball race disposed radially inward from said outer race, a plurality of balls engaged between said outer and inner races, and rotatable ball-carrying means extending between said outer and inner races and carrying said balls, said ball-carrying means having radial openings therein which receives said balls, the improvement which comprises a plurality of ball-engaging shells of anti-friction material received in said openings and rotatably supporting said balls individually therein, each of said shells extending substantially completely around the respective ball in a direction perpendicular to the radial depth of the respective radial opening, and each of said shells being spherically curved internally to conform throughout its internal extent snugly to the respective ball and having sliding contact with the ball throughout substantially the entire radial depth of the corresponding opening.



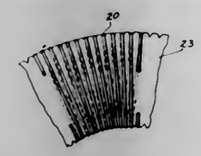
3,021,731
PLANETARY GEAR TRANSMISSION
Wilhelm G. Stoeckicht, 4 Rugendasstrasse, Munich-Solln, Germany
Filed June 13, 1958, Ser. No. 742,973
Claims priority, application Germany Nov. 10, 1951
8 Claims. (Cl. 74—801)



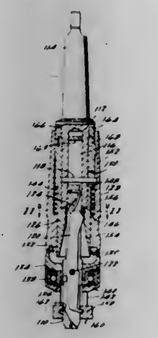
1. In a gear transmission, a casing member, first and second shaft members rotatably supported by said casing member on a common axis, a gear carrier fixed to one of said members, a plurality of at least three equidistantly spaced non-central gears rotatably supported by said carrier, a first central gear connected to another of said members and meshing with said non-central gears, a second central gear, an axial extension directly connected to said second central gear, a flexible connection between said axial extension and the remaining one of said members, and mating sets of gear teeth on said second central gear and said non-central gears, the flanks of at least one of said sets of teeth being of crowned shape in a longitudinal direction.

3,021,732
PIN STUDDED PUNCH ROLL INCLUDING METHOD OF FABRICATION
Milton O. Schur, Asheville, N.C., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Dec. 18, 1959, Ser. No. 860,513
4 Claims. (Cl. 76—101)

1. A method of fabricating a pin studded web perforating roll comprising the steps of providing a plurality of metal washers or apertured discs, providing a quantity of metallic strand material, assembling the discs and the strand material on a mandrel to form a roll where the roll is formed compositely of metal strands sandwiched between discs in alternating fashion, said metallic strands being disposed radially so as to project toward the exterior of the roll and selectively dissolving portions of the roll effective to expose a circumferential array of pins projecting radially from the roll.



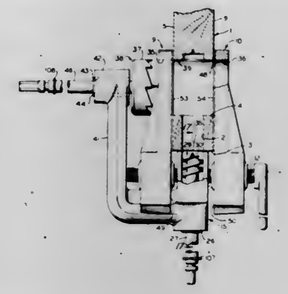
3,021,733
CUTTING TOOL
Stuart A. Cogsdill, Orchard Lake, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich., a corporation of Michigan
Filed Aug. 7, 1957, Ser. No. 676,840
7 Claims. (Cl. 77—58)



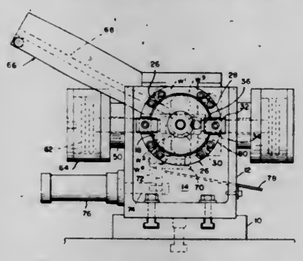
5. In a cutting tool for machining the bore of a workpiece, a spindle, a member carried by said spindle and movable axially thereof, and a pivoted cutting blade carried by said member, said spindle having an internal conical camming surface below an extending cylindrical surface, the axes of said surfaces being offset relative to the axis of the member whereby the camming surface moves the blade outwardly to a degree depending upon its adjusted rotative position while the cylindrical surface permits overrun after the cutting edge has reached said adjusted cutting position.

3,021,734
BORING JIG
Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation
Filed Dec. 1, 1958, Ser. No. 777,515
8 Claims. (Cl. 77—62)

1. A boring jig for use on a door having a pair of opposite faces and a side edge comprising: a pair of opposed clamping jaws adapted to engage said opposite faces, a support on which said jaws are mounted, and means carried by said support for adjustably moving said jaws relative to said support and toward and away from each other, first guide means formed on said support for guiding a bit entering said edge parallel to said faces, and second guide means carried by said support and fixed relative to said first guide means for guiding a bit disposed at right angles to said faces.



3,021,735
WORK LOCATING AND CLAMPING MECHANISM
Meredith M. Windsor and Herbert R. Lincoln, Detroit, Mich., assignors to Star Cutter Company, Farmington Township, Mich., a corporation of Michigan
Filed Mar. 9, 1959, Ser. No. 798,104
19 Claims. (Cl. 77—62)

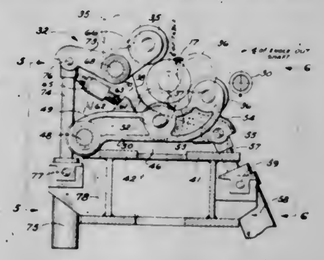


1. In a machine tool, work locating and support means comprising a pair of work gripping members movable toward and away from each other, a fixed locating member, said work gripping members being simultaneously engageable with said locating member and a work piece, said locating member having a portion therof shaped to operate as a tool guide.

3,021,736
MANDREL BAR STEADIER
James W. Schuetz, Pittsburgh, Pa., assignor, by mesne assignments, to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 6, 1957, Ser. No. 701,254
5 Claims. (Cl. 80—13)

1. A mandrel bar steadier for a piercing mill outlet table along which pierced pipe advances, said mandrel bar steadier being adapted to engage and support a longitudinally extending mandrel bar and comprising a base, a lower rollers supporting arm having an end pivotally mounted on said base at one side thereof relative to said outlet table, said lower rollers supporting arm extending transversely of said outlet table and curving upwardly remote from said pivotally mounted end, said mandrel bar steadier also comprising a pair of longitudinally extending lower rollers carried by said lower rollers supporting arm and spaced apart by said curved portion thereof, a lower rollers supporting arm hydraulic operat-

ing cylinder pivotally secured to said base and having a piston with a connecting rod pivotally secured to said lower rollers supporting arm, adjustable co-acting stop and stop engaging means carried by said base and said lower rollers supporting arm, an upper roller supporting arm pivotally supported on said base and extending transversely of said outlet table and supporting a longitudinally extending upper roller, an upper roller supporting arm operating cylinder pivotally secured to said base and having a piston with a connecting rod pivotally secured to said upper roller supporting arm, said rollers being positioned by said cylinders respectively and having a closed position adapted to engage said mandrel bar and an open position out of engagement with said mandrel



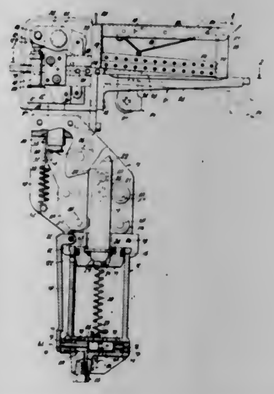
bar, said rollers having ends and being arcuately spaced about said mandrel bar when in said closed position, said lower rollers supporting arm engaging said stop when said rollers are in said closed position, and means to actuate said cylinders to open said rollers in response to engagement of said mandrel bar steadier by said pipe as it advances along said table; said last named means including a pressure switch responsive to an increase in pressure in said upper roller operating cylinder to actuate said cylinders to open said rollers, and a bevel on one said end of said upper roller, said beveled end being longitudinally nearer the direction from which said pipe advances along said outlet table than the other said ends of said lower rollers.

3,021,737
METHOD OF PRODUCING METAL STRIPS BILATERALLY TAPERED IN CROSS SECTION BY COLD ROLLING
Karl Titze, Vienna, Austria, assignor to Martin Miller Aktiengesellschaft, Vienna, Austria
Filed Oct. 21, 1958, Ser. No. 768,751
Claims priority, application Austria Jan. 10, 1958
1 Claim. (Cl. 80—60)



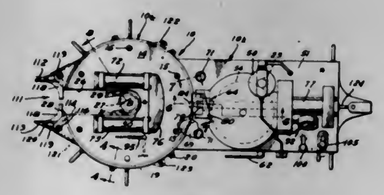
A method of producing a metal strip which is bilaterally tapered in cross-section from a blank strip substantially rectangular in cross-section and of greater width than thickness, comprising cold rolling said rectangular blank longitudinally to reduce the cross-section thereof at a decreasing rate from the edges thereof towards the longitudinal center line of the blank to create a bilaterally tapered cross-section of increasing thickness toward the center line thereof, starting said reduction from the edges of the blank along narrow strips, only allowing metal to flow freely toward the center of the blank and widening the rolling area from said edges toward the center line of the blank in successive rolling operations until the bilateral cross-section is obtained.

3,021,738
COMPRESSING TOOL WITH OPPOSED MOVABLE DIES
James D. Anderson and Ernest L. Cheh, Norwalk, Conn., assignors to Burndy Corporation, a corporation of New York
Filed Nov. 24, 1958, Ser. No. 775,815
6 Claims. (Cl. 81—15)



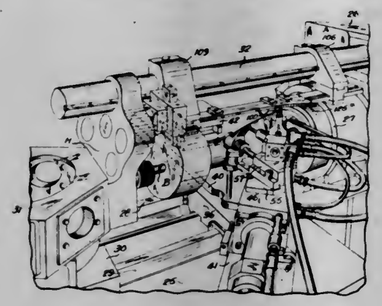
1. In a plunger operated tool a compressing mechanism comprising a pair of die parts, means for moving both of said die parts towards each other about an article to be compressed, a cartridge block for supporting a plurality of articles therein, means for advancing said cartridge block towards said die parts, a stop for retarding the movement of said cartridge block when one of said articles is in position for compression, and means for advancing said cartridge block to another article for compression when the first compressed article has been removed.

3,021,739
HYDRAULICALLY CONTROLLED AND OPERATED POWER TONG
John F. Grundmann, Redondo Beach, Calif., assignor, by mesne assignments, to Joy Manufacturing Company, a corporation of Pennsylvania
Filed Dec. 23, 1957, Ser. No. 704,817
19 Claims. (Cl. 81—53)



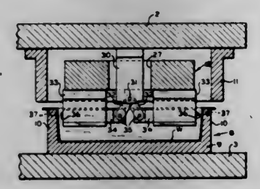
14. In a power tong for pipes: a rotatable head portion; a plurality of pipe gripping members carried by said head portion and arranged for movements into gripped and non-gripped positions with respect to the outer surface of a pipe; means for actuating said members to said positions; a fluid pressure source; fluid pressure actuated power means connected to said source for applying a torque force to said head portion; a passage forming a fluid pressure bypass with respect to said power means; and an adjustable valve in said bypass; whereby such torque force applied to said head portion may be varied.

3,021,740
CONTOUR FOLLOWING APPARATUS
Ross B. Treer, Lakewood, Ohio, assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed July 22, 1954, Ser. No. 445,036
13 Claims. (Cl. 82—14)



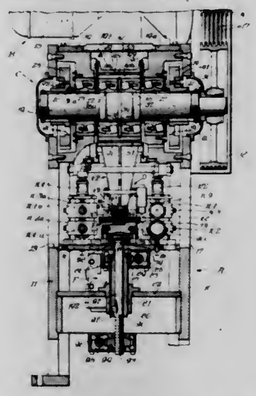
1. In a machine tool having a headstock mounting a work spindle, a bed provided with longitudinal ways, a carriage movable on said ways toward and from the headstock, a stationary pilot bar carried by said headstock above said spindle and extending longitudinally of said bed parallel to said spindle and having a free end remote from said headstock, a turret slide supported on said ways and beyond the carriage from the headstock for movement toward and away from said carriage, an indexible turret on said turret slide and mounting on a face thereof a tool holder having a portion slidably telescoping the free end of the pilot bar, a contour slide carried by said carriage for movement relative thereto in a direction transverse to the axis of said spindle and the path of movement of said carriage, a follower movably mounted on said contour slide, power means for moving said contour slide relative to said carriage, means carried by said contour slide and actuated by the movement of the follower for controlling said power means, and a template mounted on said pilot bar inwardly of the free end of the latter and cooperating with said follower to control said power means during movement of said carriage on said ways and movement of said contour slide relative to said carriage transversely of the spindle axis.

3,021,741
DIE SET COMPRISING PUNCHES OPERABLE IN A DIRECTION WHICH HAS AN ANGULAR RELATIONSHIP WITH THE DIRECTION OF MOTION OF THE RAM
Frederick O. Miller, 1267 Passolt St., Saginaw, Mich., assignor of one-half to Louis N. Miller, Saginaw, Mich.
Filed Feb. 20, 1958, Ser. No. 716,480
5 Claims. (Cl. 83—618)



1. A die set comprising a work supporting base member; a ram plate; means for moving said ram plate in directions toward and away from said base member; guide means reacting between said member and said plate to guide the movements of the latter; an intermediate member interposed between said base member and said ram plate; lost motion means connecting said intermediate member solely to said plate for sequential movement of said intermediate member concurrently with and relative to said plate; arresting means interposed between said base member and said intermediate member for engagement therebetween in response to concurrent movement of said plate and said intermediate member toward said base member to arrest further movement of said intermediate member toward said base member, said lost motion means permitting further movement of said ram plate toward said base member and relative to said intermediate member upon the arresting of movement of the latter; work fabricating means movably supported by said intermediate member for movement laterally of the directions of movement of said ram plate; and link means positively interconnecting said fabricating means and operable solely in response to relative movement of said ram plate and said intermediate member to move said fabricating means relatively to said intermediate member.

3,021,742
PUNCH PRESS WITH DIE HOLDER ADJUSTING AND LOCKING MEANS
Paul S. Jackson, Rockford, Ill., assignor, by mesne assignments, to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois
Original application Feb. 7, 1952, Ser. No. 270,377, now Patent No. 2,808,736, dated Oct. 8, 1957. Divided and this application July 10, 1957, Ser. No. 671,018
4 Claims. (Cl. 83—700)

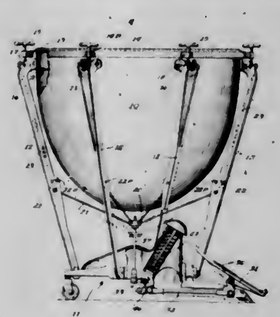


1. Means for adjusting the position of the die of a punch press having a ram and a frame comprising, a base plate, means on the base plate for securing the die thereto, a plurality of screw devices threadedly engaging the frame and carrying the base plate, means for rotating said screw devices simultaneously to raise and lower the base plate toward and away from the ram of the press, and means, including an elongated rod having a shoulder engaging the top of said base plate, slidably connected to said base plate and to at least one of said screw devices for axially stressing the threads of said screw devices against the threaded portion of said frame and locking said base plate in adjusted position.

3,021,743
TUNING MECHANISM FOR DRUMS
William F. Ludwig, 1421 Forest Ave., River Forest, Ill.
Filed Jan. 19, 1959, Ser. No. 787,710
3 Claims. (Cl. 84—419)

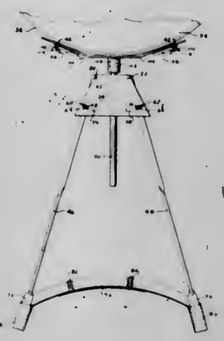
1. In a drum, a kettle, a resonant head spanning the upper end of said kettle, a plurality of means spaced cir-

cumferentially about said kettle for tensioning said head on said kettle, base structure, manually adjustable means mounted to said base structure and including a vertically shiftable connection head located beneath said kettle, a plurality of external struts secured to the base structure at points thereof spaced circumferentially about and located lower than said connection head, said struts extending upwardly and supportingly engaged to the kettle at points thereof spaced circumferentially about the upper end thereof for suspending the kettle in spaced relation above said base structure with said connection head disposed



intermediately therebetween, and a plurality of mechanical linkages spaced externally about said kettle and individually associated with separate ones of said struts, each linkage extending between said connection head and a separate one of said tensioning means to transmit motion therebetween, each linkage having means intermediately therealong engaged to the corresponding strut to mount such linkage for movement about a fixed point located intermediately along the corresponding strut and thereby maintain the linkage spaced from contact with the kettle.

3,021,744
DRUM HOLDER
Ralph C. Kester, Mishawaka, Ind. (513 24th St., South Bend, Ind.)
Filed June 22, 1959, Ser. No. 821,758
8 Claims. (Cl. 84—421)



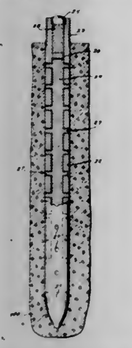
1. A holder for parade and tenor drums having top and bottom heads and hoops with tensioning rods therebetween, comprising a horizontally positioned flat plate-like member having a sleeve with a hole therethrough in the direction of the drum, a fixture having a bar-like member generally paralleling the lower hoop and a clamp on each end of the bar for engaging separate tensioning rods for supporting the lower portion of the drum, a lug joined to said bar at the center thereof and having a hole therein extending toward the drummer, a shaft seated in the hole in said lug and extending through the hole in said sleeve, a set screw for locking said shaft in said first mentioned hole, two rods pivotally joined at one end to said plate, a half belt for seating at the waist of the drummer and having pockets at each end for supporting the other end of the rods, an arcuate slot in said plate adjacent each rod, a bolt extending through each slot for clamping the respective rod in an adjusted lateral position, and a harness joined to the upper portion of the drum at spaced points and adapted to extend over the shoulders of the drummer.

3,021,745
WEDGE DEVICE FOR ANCHORING BOLTS IN HOLES
Karl Helmer Libom, Bredbyn, Sweden, assignor to Aktiebolaget Kerel, Sundsvall, Sweden
Filed June 3, 1958, Ser. No. 739,541
3 Claims. (Cl. 85—2.4)



1. A device for anchoring a screw bolt in a hole, mainly borings, said screw bolt having a substantially cylindrical outer surface at one end and a threaded surface at the other end thereof and being provided with an axially disposed open recess close to said one end of said bolt and extending along a chord of the substantially circular cross-section of said bolt, said recess being limited by an inclined surface disposed at an acute, downwardly and outwardly extending angle to the longitudinal axis of said bolt, and at least one wedge member having an inclined surface complementary to said inclined surface of said bolt, said inclined surface of said wedge member cooperating with and at least partly engaging said inclined surface of said bolt in the locking position between said bolt and said wedge member, and said wedge member having additionally two inner, partly cylindrical surfaces merging with said inclined surface thereof and complementary to and engaging a portion of said cylindrical surface of said bolt substantially along the entire axial length of and adjacent to said inclined surface of said wedge member in the locking position between said bolt and said wedge member, and said wedge member having a partly, cylindrical outer surface engaging the surface of said hole in said locking position, arrived at upon relative axial movement between said bolt and said wedge member, said bolt being firmly pressed radially and secured against the wall of said hole due to the frictional engagement between said inclined surface and said smooth outer surface of said bolt, on the one hand, and said inclined surface and said two inner, partly cylindrical surfaces of said wedge member, on the other hand.

3,021,746
FASTENING DEVICE
Roger Marsh, Hudson, Ohio, assignor, by mesne assignments to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Mar. 7, 1956, Ser. No. 570,175
11 Claims. (Cl. 85—10)



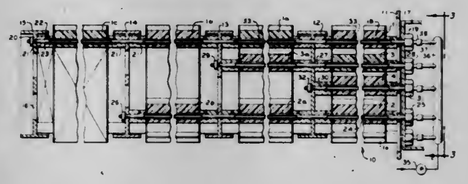
1. A projectible fastener comprising a piercing point, an elongated shank portion, said point and shank portion adapted to be forceably driven into and remain intact in a solid heat softenable material and protectively housed therein, a core of calefacient material in said shank, said shank having a multiplicity of perforations forming discharge openings between said fastener-heating core and the exterior surface of said shank.

3,021,747
METHOD AND WASHER MEANS INCLUDING A CALIBRATED RUBBER LAYER FOR MEASURING BOLT TENSION
John E. Garrett, St. Marys, Ohio, assignor, by mesne assignments, to The Goodyear Tire & Rubber Company, a corporation of Ohio
Filed Mar. 19, 1953, Ser. No. 343,480
9 Claims. (Cl. 85—62)



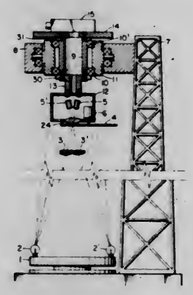
1. A load measuring washer for use with bolts such as those used in supporting the roof of a mine passage, comprising a pair of plates having flat opposed surfaces, a layer of rubber of known calibrated load deformation characteristics interposed between said plates and vulcanized thereto, said plates and said rubber layer having aligned openings with the opening in one plate being of substantially the same diameter as the opening in said rubber and the opening in the other plate being somewhat smaller than that in the rubber, and a sleeve mounted in the openings in said rubber and said first plate and having an outer diameter substantially that of the openings in said first plate and rubber, the end of the sleeve adjacent said other plate being in abutting relation to said other plate and being connected thereto to move therewith, said sleeve being of a length materially less than the combined thickness of said rubber and said first plate under no-load conditions, the outer edges of said layer being exposed for measurement of the deformation thereof under load whereby, when said layer is compressed by said plates on application of load applied thereto, the lateral deformation of the edges of the layer may be measured and the load on the washer, and thus the tension in the bolt with which it is used, may be determined by reference to the known calibration for the rubber.

3,021,748
METHOD FOR BONDING SUPPORT RODS IN PROPELLANT GRAINS
Kenneth F. Miller, McGregor, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,392
4 Claims. (Cl. 86—1)



1. A process for simultaneously bonding a plurality of perforated, external burning rocket grains to support rods positioned in the perforations thereof so as to withstand the forces of acceleration which comprises forming each support rod with an axial opening therethrough and a plurality of radial openings therethrough in communication with said axial opening; assembling the plurality of grains into a unitary bundle with the support rods passing through the perforations of the grains, through a plurality of support plates and through a plurality of spacer means; securing the support rods in position so as to form an annulus between each rod and grain; filling the axial openings and radial openings of the rods and the annulus with a fluid bonding agent; and curing said bonding agent.

3,021,749
AZIMUTH TRANSFER SYSTEM
Monty M. Merlen, Stamford, Conn., assignor to Barnes Engineering Company, Stamford, Conn., a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 13,947
4 Claims. (Cl. 88—1)



1. An azimuth transfer system comprising in combination and in optical alignment,

(a) first and second relatively rotatable elements,

(*b*) means for separating the elements by a relatively long distance, means for maintaining the two elements at least roughly parallel to each other and with approximately coincident centers,

(*c*) two linearly separated sources of radiation on the first element at least a portion of the radiation producing two convergent beams,

(*d*) a reticle having opaque and transparent spokes, means for rotating the reticle and for maintaining its plane substantially parallel to the second element,

(*e*) two radiation detectors,

(*f*) means for imaging the beams from the two radiation sources onto a spot in the plane of the recticle and

(*g*) means, acting as a field lens, illuminating the detectors from each beam respectively, the beam imaging means and field lens means being rigidly connected to the second element,

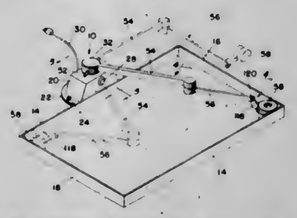
(*h*) amplifying circuits producing output signals, means for applying electric signals from said radiation detectors to said circuits,

(*i*) at least one phase sensitive detector circuit and means for connecting the outputs of the amplifiers in said phase sensitive detector to produce an output signal proportional to relative phase of the two detector outputs.

3,021,750
HALF-TONE VISUAL FILM SCANNER

Philip Taylor, 1903 E. Moyamensing Ave., Philadelphia, Pa., and Elwood E. Bowers, Philadelphia, Pa., said Bowers assignor to said Taylor

Filed June 16, 1959, Ser. No. 820,787
5 Claims. (Cl. 88—14)



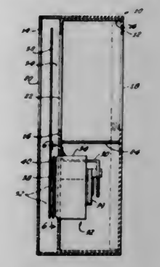
1. For use in scanning film during processing of halftone negatives or positives and the like, a viewing device comprising a casing, a lens tube mounted in said casing having an upper viewing end and a lower light-receiving end, illumination means mounted in said casing externally of said lens tube, a safelight filter mounted beneath said illumination means and a liquid-tight shield sealingly secured to said casing including a transparent portion covering said filter and the light-receiving end of said lens tube whereby said viewer can be inserted into a processing bath without damaging the elements in the casing.

3,021,751
TACHISTOSCOPES

Gaspar Cisneros Barnette, Sunland, Calif., assignor to Learning Through Seeing, Inc., Sunland, Calif., a corporation of California

Filed May 26, 1960, Ser. No. 31,931
5 Claims. (Cl. 88—20)

4. A tachistoscope assembly including: a casing having a front cover and a rear wall, said front cover and rear wall having respectively axially aligned openings therein through which images may be projected to a viewing screen, tubular shielding means extending from the rear wall and coaxial with said opening therein for receiving an image projecting means through the opening in said rear wall, a solenoid means including an energizing coil mounted in said casing, shutter means coupled to the solenoid means and movable thereby from a first position in which the shutter means is interposed between the openings in the front cover and in the rear wall to a second position in which the shutter is out of the optical path through said opening, said solenoid means

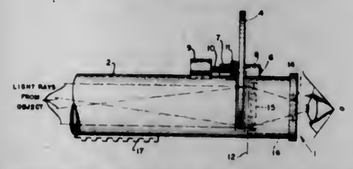


being movable from said first position to said second position upon the flow of electric current through the energizing coil, and spring means coupled to said shutter means and to said casing for returning said shutter means to its first position upon the termination of such current flow through said energizing coil.

3,021,752
IMAGE STABILIZER AND DIMMER FOR OPTICAL DEVICES

Richard L. Avery, Baltimore, Md.
(319 N. Yale, Wichita 8, Kans.)

Filed Oct. 23. 1959, Ser. No. 848,245
2 Claims. (Cl. 88—32)



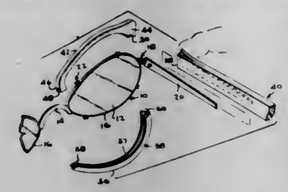
1. A shuttering device for high power long distance and astronomical telescopes having an objective system producing a real image and an ocular system for observing said real image, comprising a rotary shutter having a plurality of equally spaced narrow slots providing a total opening area of approximately 48° of arc of openings, mounting means for said shutter on said telescope whereby said shutter is rotatably mounted substantially at the real image plane of said telescope, and drive means for said shutter adapted to drive said shutter at approximately 120 revolutions per minute, whereby shimmer of said real image is reduced by intermittently cutting off said real image from an observer using said ocular system for observing said image.

3,021,753
SPECTACLE FRAME

Roscoe C. Vinson, P.O. Box 1982, Birmingham, Ala.

Filed Sept. 12, 1958, Ser. No. 760,610
1 Claim. (Cl. 88—41)

A demountable frame for glasses having a pair of lenses supported in side-by-side relation by means of a rim for each of said lenses extending peripherally around said lenses and a bridge connecting adjacent sides of said rims, said demountable frame comprising a pair of oppositely disposed top and bottom frame members for each of said lenses, each of said top and bottom frame members having a channel formed therein corresponding to the configurations of the top and bottom portions of each of said rims, each of said top and bottom frame members having a plurality of spaced sockets formed therein opening into the respective said channels, and

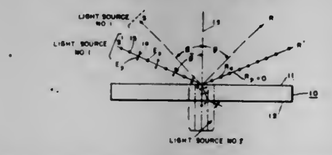


a plurality of spaced clips projecting radially from said rims for registry with said sockets, said top and bottom frame members receiving and embracing said rims in said channels with said clip means being releasably received within said sockets.

3,021,754
LIGHT POLARIZING APPARATUS OR THE LIKE

Bernd Ross, Chicago, Ill., assignor to Hoffman Electronics Corporation, a corporation of California

Filed Sept. 26, 1956, Ser. No. 612,272
3 Claims. (Cl. 88—61)



1. An optical system for controllably altering the properties of a light beam, comprising, in combination, a light beam source, a body of semiconducting material having an optically polished surface oriented to receive from outside said body a beam of light from said source at an acute angle of incidence relative to said surface, and control means operatively associated with said body; said control means including a source of energy coupled to said body for altering the quantity of free charge carriers within the body near said surface thereof, whereby the light of the incident beam reflected from said surface is controllably modulated as to one of the factors in the group consisting of amplitude of a polarized component, preferential polarization azimuth, and polarization type.

3,021,755
REFLECTING STANDARD WITH RETRACTABLE LEGS

George Karchenes, Watertown, Mass., assignor to Malcolm May, Waltham, Mass.

Filed Apr. 2, 1959, Ser. No. 803,710
6 Claims. (Cl. 88—79)

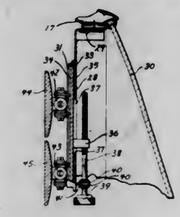


1. A standard comprising guide means, a weight slidable on an axis along the guide means, a plurality of legs pivotally connected around the weight, and means at one end of the guide means forming a single opening through which the legs may be extended in directions divergent from said opening, the opening forming means being shaped to spread the legs and cause the legs to cross and bear against each other so as to support each other in divergent position, and lock each other in divergent position even when not resting on the ground.

3,021,756
REAR VISION MIRRORS

Thomas W. Milton and Robert H. Milton, both of 8619 Mack, Detroit, Mich.

Filed June 1, 1956, Ser. No. 588,839
1 Claim. (Cl. 88—86)

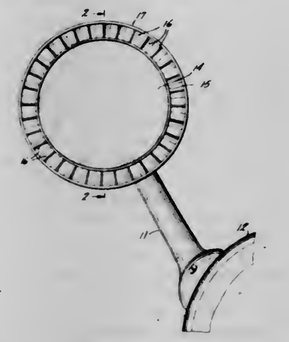


In a vehicle having a windshield and an interior moulding mounted along the upper edge of said windshield, an opaque supporting body mounted on and depending from said interior moulding on said windshield adjacent the center thereof and blocking off the sun's rays through said center portion of the windshield; a channel formed along each of the vertical edges of said body; a mirror supporting member having its side edges slidably mounted in said channels; means for moving said mirror supporting member upwardly and downwardly in said channels; a plurality of rear vision mirrors mounted on said mirror supporting member; and, means for adjusting said mirrors on said mirror supporting member about horizontal and vertical axes.

3,021,757
REFLECTOR DEVICE

Carleton Ellis, Jr., 814 Hulls Farm Road, Southport, Conn.

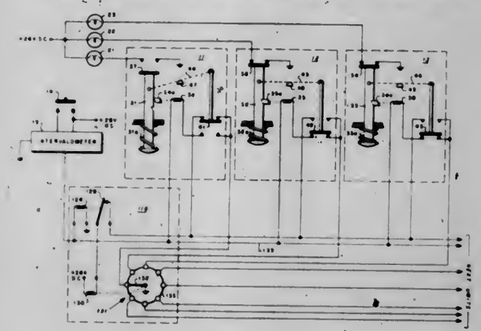
Filed Sept. 16, 1958, Ser. No. 761,368
4 Claims. (Cl. 88—98)



1. A reflector device comprising a mirror, a supporting stem, means to fasten said mirror to said stem in a manner such that said mirror may be rotated with respect to said stem about an axis perpendicular to the reflecting surface of said mirror, and a plurality of radially extend-

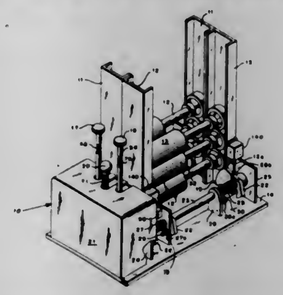
ing vanes attached to the periphery of said mirror to cause said mirror to rotate when air passes through said vanes in a direction which is substantially parallel to said axis of rotation of said mirror.

3,021,758
ELECTRICAL SYSTEM FOR BOMB RELEASE MECHANISMS
Mitchell D. Sholtz, 211 Carolina Ave., Mounted Route, Phoenixville, Chester County, Pa.
Original application Sept. 29, 1959, Ser. No. 843,318, now Patent No. 2,991,700, dated July 11, 1961. Divided and this application Jan. 28, 1960, Ser. No. 5,316
2 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



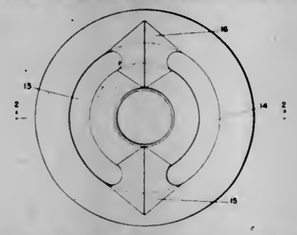
1. On a bomb release system, first bomb release means, second bomb release means, a first actuating plunger in said first bomb release means, a second actuating plunger in said second bomb release means, a first spring biasing said first plunger from a cocked position to a fired position, a second spring biasing said second plunger from a cocked position to a fired position, first solenoid means having a first armature adapted to engage and hold said second plunger in a cocked position, first switch means operated by said first plunger in said first bomb release means, second switch means operated by said second plunger in said second bomb release means, intervalometer means for emitting a series of pulses, first circuit means connecting said first solenoid and said second solenoid to said intervalometer means, a stepping switch having a first position to connect said first switch to ground and a second position to connect said second switch to ground, said first solenoid being responsive to a first of said pulses through said first switch to fire said first bomb release mechanism when said stepping switch is in said first position, said second solenoid being responsive to a second of said pulses thorugh said second switch to fire said second bomb release mechanism when said stepping switch is in said second position, a third switch normally closed, a first relay coil connected through a source, said third switch and said first switch to ground when said stepping switch is in said first position, said first relay coil connected through said source, said third switch and said second switch to ground when said stepping switch is in said second position, said first relay coil operative when energized to move said stepping switch from said first position to said second position, a second relay coil connected between said intervalometer and ground and operative with receipt of a pulse from said intervalometer to open said third switch for the duration of said pulse wherein said stepping switch is inhibited from stepping from said first position to said second position until said pulse has expired and thereby insuring that said second bomb release mechanism will not be fired by said first pulse.

3,021,759
PRACTICE DEPTH CHARGE DISPENSER
James Somerville, Chalfont, Joseph N. Yaccarino, Center Square, and Raymond A. Starry, Levittown, Pa., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 18, 1959, Ser. No. 840,985
8 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



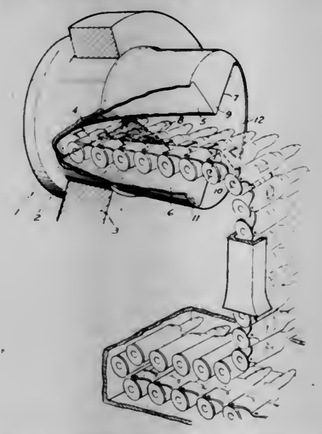
1. A practice depth charge dispensing apparatus comprising, a base plate having a bay opening formed therein, chute means mounted upon said base plate in such a manner that practice depth charges stacked in said chute means may be guided through said opening, at least one pair of transverse vertically-arranged parallel plates fixed to said base plate and said chute means, ejector shaft means journaled in said plates laterally disposed about said chute means and said opening, a pair of parallel ejector feet fixed to said ejector shaft means and each of said ejector feet having a toe portion adapted to extend into said chute means for the purpose of having the lowermost practice depth charge in said chute means resting thereon when said ejector shaft means is in a cocked position, each of said ejector feet having a heel portion for intercepting and supporting the stack of practice depth charges when in a fired position, torsion spring means normally biasing said ejector shaft means into the fired position, sear means pivotally connected to said base plate and having a latch portion adapted to latch said ejector shaft means in a cocked position, spring-returned first release rod means for operating said sear means for releasing said ejector shaft means and permitting said torsion spring means to bias said ejector shaft means and said ejector feet from the cocked position to the fired position, jettison stop means pivotally mounted on an adjacent one of said transverse plates, resilient spring means normally biasing said jettison stop means into a position for stopping the pivotal movement of said ejector shaft means at the fired position and causing the heel portions of said fired ejector feet to support the practice depth charges in said chute means after a practice depth charge has been dispensed by said ejector feet being moved from the cocked to the fired position, spring-returned jettisoning release rod means having a yoke fixed at the lower end thereof, said first release rod means having a flange fixed thereto supporting said yoke in such a manner that the operation of said jettisoning release rod means causes the depression of said first release rod means and said respective sear means for causing the release of a practice depth charge from said chute means, pulley means, a journal pin fixed to said one transverse plate and having said pulley means journaled thereon, armature means slidably guided for vertical movement, a jettisoning pin connected to said armature means, pulley cable means having one end fixed to said jettison stop means with the other end disposed over said pulley and connected to said jettisoning pin, said jettisoning pin having a portion adapted to be engaged by said yoke and biased downwardly for biasing said jettison stop to a position permitting said torsion springs to bias both said ejector shaft means and said ejector feet to a jettisoning position whereby said heel and toe portion of said ejector feet are moved out of said chute means and all of said practice depth charges are jettisoned.

3,021,760
SHEET METAL NOZZLE
C Walton Musser, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 13, 1960, Ser. No. 2,314
1 Claim. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



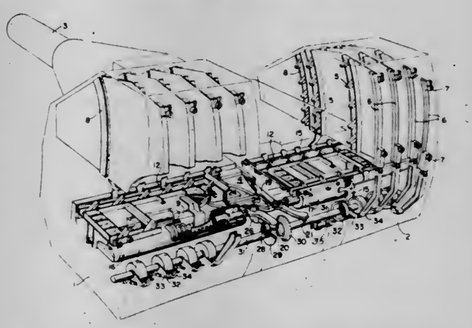
In a nozzle for use in a lightweight recoilless rifle, the combination of a plate having a plurality of kidney shaped openings in the form of a throat, an outer hollow sheet metal member circular in form and increasing in diameter from one end to the other, said outer hollow member having its small diameter end fixed to the outer sides of said openings, an inner hollow sheet metal member circular in form and decreasing in diameter from one end to the other, said inner hollow member having its large diameter end fixed to the inner sides of said openings, and a plurality of inserts, each of said inserts being arranged to extend along the outer slopes of said hollow members to the opposed ends of said openings.

3,021,761
DEVICE FOR BELT-FED GUNS
Folke Gustav Tillander, Bofors, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden
Filed Jan. 20, 1960, Ser. No. 3,606
Claims priority, application Sweden Jan. 31, 1959
5 Claims. (Cl. 89—33)



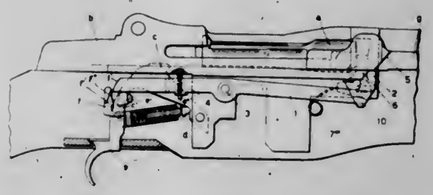
1. In a belt-fed elevating gun having a stationary magazine and an elevating mass including a breech, an ammunition guide comprising a trunnion secured to said breech for rotation about a substantial horizontal elevational axis relative to said stationary magazine, said trunnion having one end adjacent to said breech and another end adjacent to said stationary magazine and including a passageway extending longitudinally through said trunnion adapted to receive ammunition fed from said magazine and means disposed in said passageway and comprising cooperating opposing surfaces defining a passageway having a wide entry opening at the end of the trunnion adjacent the magazine and narrowing toward the end of the passageway at the breech side, said passageway being adapted to receive ammunition in various angular positions with reference to the passageway entry and to orient ammunition in the passageway in correspondence with the ramming direction of the breech.

3,021,762
DEVICE FOR FEEDING ROUNDS OF AMMUNITION FROM A MAGAZINE TO THE RAMMING POSITION OF A GUN
Karl Olof Söderqvist, Karlskoga, Sweden, assignor to Aktiebolaget Bofors, Bofors, Sweden, a company of Sweden
Filed June 11, 1958, Ser. No. 741,414
Claims priority, application Sweden June 14, 1957
4 Claims. (Cl. 89—33)



1. A device for feeding rounds of ammunition from a magazine to the ramming position of a gun comprising, in combination, a magazine including a plurality of open ended, parallel compartments, each one of said compartments receiving a plurality of rounds of ammunition, a feeding table mounted below one end of said compartments and extending substantially normal thereto for feeding rounds to a ramming position, a round feeding frame slidably supported within each one of said compartments for longitudinal movement relative thereto, each one of said frames having a plurality of longitudinally spaced apart pawls for supporting and releasing the rounds in each respective compartment, displacement of each said frame in a direction toward said table releasing the lowermost round in each such compartment for feeding upon said table, drive means for imparting reciprocatory motion to each of said frames, control means transmitting said motion to each such frame devoid of a round of ammunition upon said feeding table directly beneath each said compartment, said control means including a slip coupling interposed between said drive means in each one of said frames, said magazine comprising two groups of compartments disposed on opposite sides of a ramming position of the gun, and separate drive means and control means for said groups of compartments for effecting and controlling the feeding of rounds from the compartments to either group thereof.

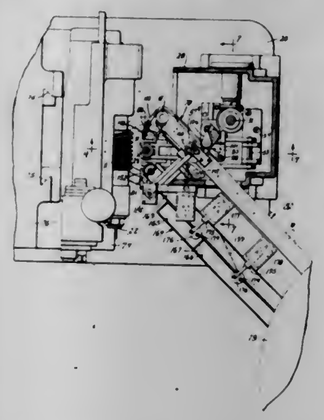
3,021,763
MECHANISM FOR CONVERTING A RIFLE FROM SEMI-AUTOMATIC TO AUTOMATIC FIRING
Pier Carlo Beretta, Via Siepi 6, Gardone Valtrompia, Italy
Filed Apr. 6, 1960, Ser. No. 20,394
Claims priority, application Italy May 23, 1959
2 Claims. (Cl. 89—140)



1. In a semi-automatic rifle of the Garand type or the like wherein upon the firing of said rifle a bolt and operating rod reciprocate in a receiver rearwardly to cock a hammer and then move forwardly to chamber a cartridge and lock said bolt before release of the cocked hammer, a device for rendering said rifle fully automatic comprising a trigger, a sear pivotally mounted on said trigger and movable therewith, upon movement to and retention of said trigger in its fired position, to engage and hold said hammer in its cocked position, a cam surface on said operating rod, a spring-loaded lever extending longitudinally of said rifle and pivoted intermediate its ends to the side of said receiver, said lever having a cammed surface on the rear end thereof disposed to engage said sear when said trigger is in its fired position, said lever having a projection on the forward end thereof positioned to be in the path of movement of said operating rod when said trigger is in its fired position, a manually adjustable selector bracket mounted on one side of said receiver and adjustable to render said rifle automatic or semi-automatic, said bracket having spaced upper and lower lateral lugs thereon, which, when said bracket is adjusted for automatic operation of said rifle, extend respectively over and under the forward end of said lever, whereby upon the firing of said rifle and the cocking of said hammer during automatic rifle operation, said operating rod moves forwardly so that the cam surface thereon engages said projection, thereby causing said lever to be pivoted against its spring load, the forward end thereof to be urged downwardly against said lower lug, and the cammed surface on the rear end of said lever to pivot said sear on said trigger to release said hammer from its cocked position.

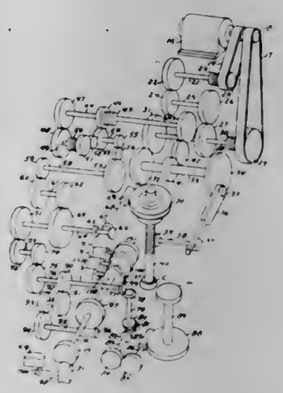
3,021,764
AUTOMATIC HOBBING MACHINE
Augustus C. Durdin III, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Aug. 30, 1956, Ser. No. 607,085
15 Claims. (Cl. 90—1)

8. In a machine tool, the combination of, a base, a work spindle journaled on said base to turn about a vertical axis and operable to support a workpiece during a machining operation, an arm pivotally mounted on said base to swing about a second vertical axis between a first position in which the free end portion is at one side of the spindle axis and a second position in which said end portion is axially alined with the spindle, a device carried on said end portion and operable to support a workpiece, and mechanism operable in timed relation with the swinging of said arm to move said device



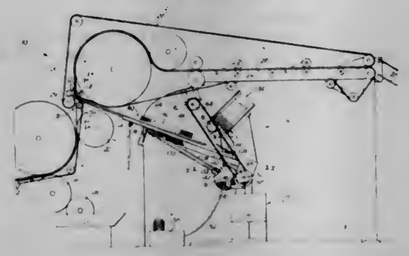
and release said workpiece thereby to transfer the workpiece from the arm to said spindle.

3,021,765
VARIABLE FEED AND SPEED MECHANISM FOR GEAR SHAPING MACHINES AND THE LIKE
Neal L. Cobb, Springfield, Vt., assignor to The Fellows Gear Shaper Company, Springfield, Vt., a corporation of Vermont
Filed May 6, 1958, Ser. No. 733,308
10 Claims. (Cl. 90—7)



1. In a gear shaper of the character described having a base, a reciprocating cutter spindle mounted in said base, a work spindle rotatably mounted in said base adjacent to said first mentioned spindle, means to reciprocate said first mentioned spindle, means to relatively rotate said second mentioned spindle with respect to said first mentioned spindle and means operable in timed relation to the reciprocation of said reciprocating spindle and the relative rotation of said spindles to change the relative number of reciprocations of said reciprocating spindle.

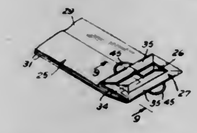
3,021,766
MATERIAL HANDLING APPARATUS
George W. Mossor, Wellsburg, W. Va., assignor to Hudson Pulp & Paper Corp., New York, N.Y., a corporation of Maine
Filed Aug. 5, 1957, Ser. No. 676,342
9 Claims. (Cl. 93—8)



1. In a bag making machine having belts for advancing successive partially formed bags to one zone in the machine at a constant velocity and separate belts for advancing the partially formed bags from said zone to provide a space therebetween, the combination with said bag making machine of an apparatus for transferring sleeves from a remote source to said machine where the sleeves are incorporated into partially formed bags comprising a magazine for holding a stack of said sleeves and having an opening in the bottom through which the sleeves may be withdrawn, a reciprocating conveyor for feeding sleeves to the partially formed bags at the zone between the separate conveyor belts of the bag forming machine, a carriage mounted to slide on a track and having a sleeve transferring head thereon with a suction opening for picking a sleeve from the opening in the bottom of the magazine, means operated by the movement of the carriage to rotate the head comprising a gear mounted on the carriage and connected to the head, a rack on said track engaging said gear and means for moving said carriage along said track, a negative pressure source communicating with said head, a valve for controlling the negative pressure source and suction in said head for transferring sleeves from said magazine to the reciprocating conveyor, said reciprocating conveyor having a stationary support, a feeding plate with pushing lugs for engaging and advancing sleeves along the stationary support, means for actuating said feed plate and pushing lugs thereon through a forward stroke in a path to engage the lugs with the sleeves and advance the sleeves on the support and through a return stroke in a different path out of contact with the sleeves to advance sleeves with a step-by-step motion, and a common driving means for operating said belts, reciprocating conveyor and means for moving the carriage in timed relation to each other to feed a sleeve and bag to the same location simultaneously to overlie each other whereby the sleeve is incorporated in the bag during its continuous movement through the machine.

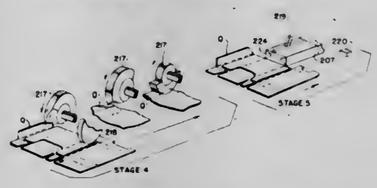
3,021,767
MANUFACTURE OF BAGS
James S. Hamilton, Ridgewood, N.J., assignor to Potdevin Machine Co., Nyack, N.Y., a corporation of New York
Filed Nov. 5, 1959, Ser. No. 851,154
4 Claims. (Cl. 93—35)

1. The method of making a bag of the type having a re-enforcing cuff which comprises: first forming sheet material into a flattened, pleated tube having an open end and having front and rear panels in superimposed relationship interconnected by inwardly folded, pleated sides each formed of two similar sections connected to the sides edges of the front and rear panels and to each other by longitudinal fold lines; then providing the said tube with a pair of transverse score lines adjacent the open end thereof with the first score line spaced from the end of the tube a distance equal to the height of the cuff and the second score lines spaced from the first score line a distance qual to the depth of the pleat when the tube is in flat folded position; then folding the open end of at least one of the two panels outwardly with respect to the other panel along the said second score line thereby providing an open face with the two end portions of the panels disposed at an angle of approximately 180° to each other, and forming simultaneously therewith two gussets at the two pleated sides of the bag in the form of inverted isosceles triangles extending between the said first and second score lines, the forming of said open face resulting in an upstanding collar folded along the said



first score line and extending completely around the open end of the tube; and then folding the two opposite sides of the collar inwardly and downwardly along the first score line forming a first pair of inwardly folded cuff flaps integrally connected with the base portions of the gussets at the sides of the tube and folding the front and rear portions of the collar inwardly and downwardly along the said first score line, forming a second pair of inwardly folded cuff flaps having their end portions arranged in overlapping relationship with the end portions of said first pair of cuff flaps and connected thereto by triangular gussets; and providing openings in the front and rear panels of the tube adjacent the first score line and assembled handle members having a supporting base and a projecting loop inside the second pair of flaps with the loops projecting outwardly through the openings prior to the time that the front and rear portions are folded downwardly to form the second pair of flaps.

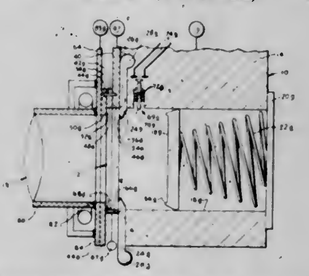
3,021,768
APPARATUS FOR WRAPPING
Oskar Graulig, Middle Village, and John Jackson, Brooklyn, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 24, 1956, Ser. No. 630,249
1 Claim. (Cl. 93—44.1)



In an attachment for converting a cigarette packaging machine of the type having an intermittently driven rotatable turret, and a plurality of hollow mandrels carried by the turret in such fashion that rotation of the turret moves the mandrels successively through a plurality of work stations, each of the mandrels having an elongated body of rectangular transverse cross-section and extending generally transversely to the plane of rotation of the turret, each mandrel carrying a folded inner wrap as the mandrel passes through one of the work stations, from a

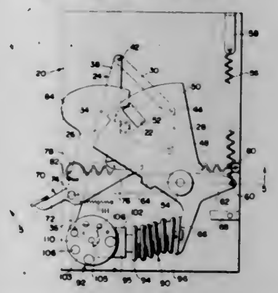
machine for packaging cigarettes in a soft pack to a machine for packaging cigarettes in a hard pack, the combination of means for feeding to each of the mandrels at the one work station a partially assembled paperboard carton blank having an inner front panel, an outer front panel, a back panel, side panels and a flap; said means comprising an elongated support frame extending generally transversely to the plane of rotation of the turret, conveyor means operatively supported by said frame and disposed in alignment with the one work station, supply means supported by said frame for successively feeding flat blanks to one end of said conveyor means for transfer through a plurality of work stages to the mandrels, applicator means disposed at one of said work stages for applying a coating of adhesive to portions of each blank, means for folding the inner front panels of the blanks into superposition upon the outer front panels for adhesively joining the front panels of each blank together, and folding means for bending each flap to a position substantially perpendicular to one of the side panels in each blank, said conveyor means being operative to transfer each blank from said folding means to a mandrel at another work station in such manner that the front panels lie adjacent to a portion of the body of the mandrel; means for folding said side panels around side portions of the body of the mandrel so that said flap overlaps the portion of the body of the mandrel opposite to that portion adjacent to the front panels; and means for bending said back panel into engagement with said flap for adhesively joining them together.

3,021,769
PHOTOGRAPHY MEANS AND METHOD
Raymond R. Mann, 821 N. Pennsylvania, Apt. 2, Indianapolis, Ind.
Filed Dec. 29, 1958, Ser. No. 783,380
7 Claims. (Cl. 95—1.1)



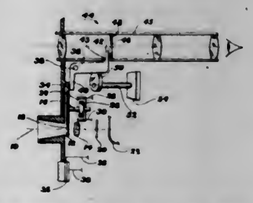
1. A photography device for use with an associated lens system, comprising, a magazine provided with longitudinally extending chambers for storing a plurality of stacked series of a plurality of types of exposure-blanks, means for relatively moving said magazine for positioning a selected one of said chambers into operative registry with the lens axis, spring means disposed in said chambers to urge the blanks therein longitudinally toward an exposure position, blocking means associated with the chambers to normally block blanks from moving into exposure position, means for retracting the blocking means to permit the leading exposure blank in the selected chamber to move into exposure position, a receiver-plate means provided with a plurality of exposure-stations operatively co-ordinated with the diameter and thickness of the types of exposure-blanks stored in said magazine and located between said magazine and the lens, means for relatively moving said receiver-plate means to position its exposure-station corresponding to the selected type of exposure-blanks into exposure-position in operative registry with the lens axis, a picture-supplement plate-means overlying said receiver-plate means and containing a picture-supplement, means for moving said picture-supplement to overlie the exposure-station in exposure position, and means for exposing portions of the exposure-blank in the exposure-station by light shining across said picture supplement.

3,021,770
PHOTOGRAPHIC SHUTTER
Milton S. Dietz, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 29, 1958, Ser. No. 763,859
8 Claims. (Cl. 95—54)



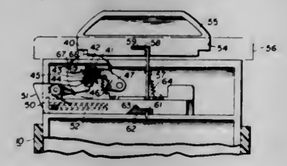
1. A shutter mechanism comprising, in combination, means for defining an exposure aperture, a movable shutter means for covering and uncovering said aperture to effect an exposure through said aperture, means for moving said shutter means, the time interval of said exposure being a function of the speed of the uncovering movement of said shutter means, an expansible and collapsible pneumatic means so connected to said shutter means that the speed of said uncovering movement is a function of the time rate of change of a predetermined dimension of said pneumatic means, movable diaphragm means cooperating with said exposure aperture for variably establishing an effective exposure aperture, and a manually operable, unitary means for controlling exposure, said unitary means including valve means mounted for movement so as to variably control said rate of change of said pneumatic means, and cam means mounted for movement so as to move said diaphragm means, said unitary means being so constructed that said movements of said cam means and said valve means are in predeterminedly fixed relation to one another thereby establishing a plurality of exposure values.

3,021,771
FINDER SIGNAL FOR PHOTOGRAPHIC CAMERAS
Robert A. Kirk, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 2, 1959, Ser. No. 844,114
11 Claims. (Cl. 95—10)



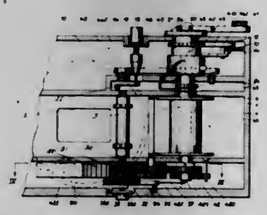
1. In a photographic camera having a finder and having an automatic exposure control system including a photocell adapted to be energized by scene light and a member moved under control of said photocell as a function of scene brightness to regulate the exposure of film in said camera, the combination comprising: a signal control device moving in timed relation with said member; a cyclically moving member; and signaling means including a flag adapted to move into and out of said finder and controlled jointly by said cyclically moving member and said signal control device for movement as a function of the position of said exposure regulating member.

3,021,772
FILM HOLDER
Harry C. Graham, Cleveland, Ohio, assignor of one-half to Ewald Gottwig, one-fourth to Gilbert Savransky and Robert L. Keyes, jointly, and one-fourth to Agnes D. Graham
Original application Nov. 12, 1957, Ser. No. 695,953, now Patent No. 2,929,306, dated May 22, 1960. Divided and this application Jan. 22, 1960, Ser. No. 15,004
3 Claims. (Cl. 95—30)
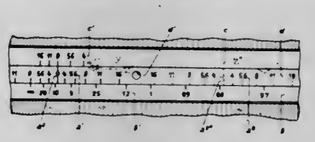


1. In a film holder having a housing and a relatively reciprocal slide drawer element, the improvement therein which comprises an indicia member exposed to the exterior of the holder, a toothed member in driving relationship to said indicia member, a drive pawl, means coacting between said housing and drawer to cycle said pawl each complete open and close cycle of said drawer, said toothed member having a selected number of regularly spaced teeth in sequence followed by a space unengageable by said pawl, and means actuatable by said tooth member engageable with said slide drawer element at a preselected position of the toothed member to prevent movement of film in the slide drawer element, whereby cyclic open and close movement of the drawer will be counted by said indicia member up to the said selected number of teeth whereafter further cycles will fail to register.

3,021,773
PHOTOGRAPHIC CAMERAS WITH RECIPROCATING OPERATING HANDLE
Klaus Hintze, Dresden, and Kurt Heinze, Solingen-Ohligs, Germany, assignors to VEB Kamera- und Kinowerke Dresden
Filed Oct. 29, 1958, Ser. No. 770,527
Claims priority, application Germany Dec. 24, 1957
6 Claims. (Cl. 95—31)



1. In a photographic camera having a housing and an interlens shutter mounted in said housing, said shutter being provided with an outwardly extending release member, the improvement comprising: a cover and walls in said housing defining an upper space, a median space, and a lower space; a shutter winding mechanism and a film feeding mechanism mounted in said lower space; a reciprocating cooperating handle above said cover, and a shaft secured to said handle and extending through said cover continuously into each of said spaces, said shutter-winding mechanism meshingly engaging said shaft for operation thereby; said film feeding mechanism meshingly engaging said shaft for operation thereby and including a film-contacting film transport sprocket rotatably mounted in said median space offset from said shaft; a film wind-up spool mounted coaxially about said shaft in said median space; means connecting said shaft to said wind-up spool for rotating said spool upon each reciprocation of said handle, said last-named means including a ratchet gear lock above said spool; and double-exposure-preventing locking gear means positioned in said upper space, said locking gear means including at least two rockable locking levers secured to said housing and operatively interconnecting said release member and said shutter-winding mechanism, so that, on the one hand, actuation of said operating handle is positively prevented by one of said locking levers before said release member has been actuated, and, on the other hand, operation of said release member is positively locked before said shutter-winding mechanism has been actuated; film counting means mounted coaxially about said shaft in said upper space and connected to said shaft for operation thereby, said film counting means including a reading face above said cover; manually operable releasing means having a portion operatively connected with said release member of said shutter, said releasing means being engageable with said one locking lever for control thereof; said shutter-winding mechanism including a gear drive engageable with said shaft and a rack; said film feeding mechanism including a free running drive mounted in said lower space and connected to said film transport sprocket and said shaft for driving said sprocket by said shaft; and a direction changing mechanism mounted in said lower space and connected with said free running drive.

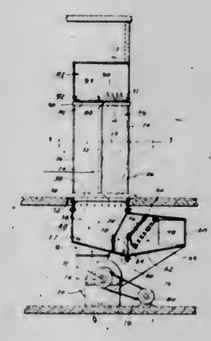
3,021,774
DEPTH-OF-FOCUS INDICATOR FOR PHOTOGRAPHIC INSTRUMENTS
Waldemar Ewald, Bad Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed Apr. 10, 1959, Ser. No. 805,559
Claims priority, application Germany Apr. 17, 1958
1 Claim. (Cl. 95—45)



In a photographic instrument, in combination, an objective provided with focusing means including a rotatable ring bearing a distance scale, depth-of-focus indicator means positioned for co-operation with said distance scale to establish a plurality of focusing ranges with different degrees of definition, said indicator means comprising a rotatable annular member on said objective bearing a stationary scale, said stationary scale being divided into several subscales positioned on different peripheral zones of said annular member, said annular member being located adjacent said ring and having a plurality of positions of rotary adjustment in which respective subscales

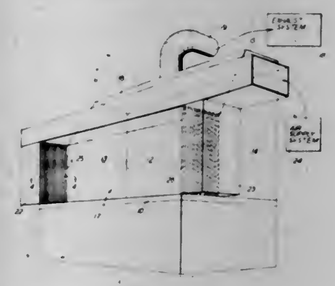
register with said distance scale, each of said subscales bearing duplicate values of diaphragm stops on opposite sides of a reference mark, said duplicate values being spread over arcs of different lengths at said several subscales, and indexing means for selectively retaining said annular member in any of said positions of adjustment.

3,021,775
DEVICES FOR PRODUCING AIR SCREENS
Ernest F. Gygax, Glendale, Mo., assignor, by mesne assignments, to Universal Match Corporation, Ferguson, Mo., a corporation of Delaware
Filed Dec. 10, 1956, Ser. No. 627,303
4 Claims. (Cl. 98—36)



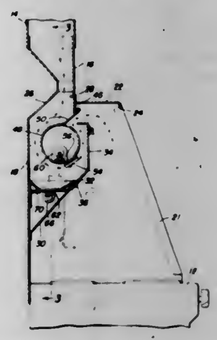
1. A structure that can be disposed adjacent a doorway to generate an air screen which spans and fills said doorway and that comprises a vertically-directed air duct, a pit that is adjacent the bottom of said doorway and that is in communication with the bottom of said air duct, said pit having a bottom, a drain opening in said bottom of said pit, a water spray in said pit, an opening in the top of said pit, a grid in said opening in the top of said pit, a plenum chamber that is adjacent the top of said doorway and that is in communication with the upper end of said air duct, an opening in the bottom of said plenum chamber, said opening in the bottom of said plenum chamber being above and generally in register with said opening in the top of said pit, a plurality of air-moving devices in said plenum chamber, a plurality of air-directing surfaces in said plenum chamber adjacent said opening in the bottom of said plenum chamber, a heating device, said heating device being mounted exteriorly of said plenum chamber, an air passage that extends from the outlet of one of said air-moving devices to the air inlet of said heating device, and a second air passage that extends from the air outlet of said heating device to a space that is within said plenum chamber and is above said air-directing surfaces, the outlets of other of said air-moving devices communicating directly with said space in said plenum chamber above said air-directing surfaces, whereby the heated air from said heating device can commingle with the air from said other air-moving devices prior to passing downwardly between said air-directing surfaces, said air-moving devices forcing air past said air-directing surfaces and through said opening in the bottom of said plenum chamber to form said air screen, drawing said air screen across said doorway to and through said grid in said opening in the top of said pit, and drawing the air from said pit through said air duct to said plenum chamber, said water spray being operable while said air screen is being maintained.

3,021,776
METHOD AND APPARATUS FOR VENTILATING LABORATORY FUME HOODS
Walter W. Kennedy, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Feb. 19, 1958, Ser. No. 716,091
4 Claims. (Cl. 98—115)



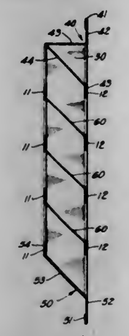
1. In a laboratory fume hood having an open hood face lying in a plane dividing the interior of the hood from the outside room and an air exhaust system for the interior of the hood, a ventilating apparatus for preventing the air exhaust system from drawing conditioned room air through the plane of the hood face comprising, in combination, an air supply chamber positioned on the room side of said plane and having a wall extending from said plane adjacent one edge of said open hood face, an air supply system for maintaining a static air pressure in said chamber, said wall having a plurality of adjacent, elongated air discharging ports extending from end to end of said hood face edge and opening into said chamber for directing adjacent, curtain-like streams of air from said chamber parallel to said plane and over a portion of the hood face, and means interposed between said chamber and said ports for causing the air streams discharged from the latter to have progressively-varying velocities with the outermost stream being the fastest, said streams thus blanketing said hood face portion with uniformly moving air from said supply system.

3,021,777
GREASE EXTRACTING VENT WITH HEATING MEANS
William A. Smith, 2016½ Elm St., Dallas 1, Tex.
Filed June 17, 1958, Ser. No. 742,571
3 Claims. (Cl. 98—115)



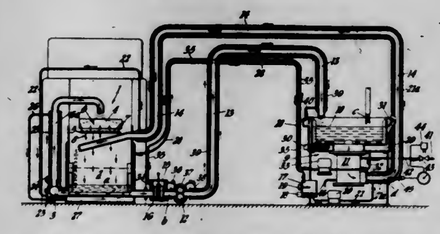
2. In combination with a grease extracting vent including an enlarged generally rectangular canopy for collecting grease laden fumes, a discharge conduit extending from the upper end of the canopy for venting the canopy to the atmosphere, a vertical plate extending into the interior of the canopy and forming a continuation of the front side of said discharge conduit, a bracket on each side wall of the canopy, a cylindrical drum supported from said plate and said brackets, said drum and vertical plate extending horizontally and completely across the interior of the canopy thereby forming a fume barrier, a baffle extending across said canopy and extending to the rear wall of the canopy in spaced relation to the drum and plate and being located between the drum and a source of fumes disposed forwardly of the drum, said baffle terminating in spaced relation to the top of the canopy and above the lower periphery of the drum and outwardly of the drum and plate, said discharge conduit being disposed on the opposite side of the drum from the baffle whereby grease laden fumes must pass over the upper end of the baffle and downwardly around the drum and upwardly through the discharge conduit for extracting grease from the fumes by centrifugal force as they pass around the lower periphery of the drum, said baffle having a lower section rigidly attached to the canopy and extending under the drum, a receptacle disposed on the lower section of the baffle, said receptacle being positioned under said drum for collecting grease from the fumes, said receptacle being mounted with one end at a lower elevation than the other, and means communicated with the lower end of the receptacle for draining grease therefrom, said last named means including a hollow box-like member mounted exteriorly of the canopy and communicated with the interior of the receptacle, said member having a drain pipe in the bottom for connection with a disposable container, and a pivotal lid for providing access to the interior of the box-like member for inspection and cleaning thereof, and an electric heating element connected with a source of electrical energy and mounted on the undersurface of the bottom of the receptacle for melting grease in the receptacle.

3,021,778
LOUVERED VENTILATING DEVICES AND METHOD FOR PRODUCING SAME
Emil Slatkovski, 3502 Poplar, Riverside, Calif.
Filed July 16, 1959, Ser. No. 827,635
1 Claim. (Cl. 98—121)



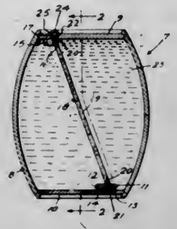
A louvered ventilating device of the character described comprising: a top portion consisting of a strip of rigid material formed in an angular shape to provide a front face and a rearwardly extending brace leg adaptable to fasten to and engage with the two sides hereinafter described; a bottom comprising a strip of rigid material bent so as to provide a front face with a rearwardly extending angularly disposed portion suitable to engage with and fasten to the sides hereinafter described; two sides, each of said sides formed from a strip of rigid material which has had a first series of L shaped slots punched at one edge and a second series of L shaped slots inverted relative to the first series of L shaped slots, punched intermediate said edge and the other edge of said strip, each of said sides being bent so as to form a central portion, a double thickness T shaped flange at right angles to said central portion and at right angles thereto so that said flange and leg are parallel to each other and each perpendicular to said central portion, said flange is formed with one series of the heretofore described L shaped slots located on one side of the central portion of said side and on the portion of the double thickness facing said leg, and the said leg is formed with the second series of said L shaped slots located in the portion of the double thickness of said leg facing and opposed to the said L shaped slots in said flange; said sides and said top and bottom are fastened together at their shoulders to form a rectangular structure; and a series of vanes each comprising a main vane portion having its upper and lower edges each bent at an angular relation to the main portion thereof, said upper and lower edges extending in opposite directions from each other but parallel to each other, so that the ends of each vane at the edges thereof are engaged in the said slots formed in the said sides of the device.

3,021,779
CIRCULATION TEMPERING OF CHOCOLATE AND SIMILAR SUBSTANCES
Robert Sollich, 101 Volkhausenstrasse, Bad Salzuflen, Germany
Filed Feb. 16, 1959, Ser. No. 793,531
5 Claims. (Cl. 99—236)



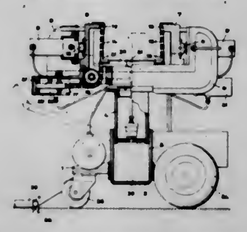
1. Chocolate treatment apparatus for the purpose indicated comprising a treatment of device of the character indicated for utilizing the chocolate, a first storage receptacle associated with the treatment device, first conduit means connecting said first storage receptacle with said treatment device, pump means associated with said first conduit means to cause chocolate to be passed from said first storage receptacle to said treatment device, a heated second storage receptacle for detempering chocolate, a re-tempering device of the character indicated having an inlet and an outlet and associated with said second storage receptacle, means forming a communication between said second storage receptacle and the inlet of said retempering device such that chocolate can pass from said receptacle to said device, second conduit means extending from said first storage receptacle to a point to discharge into said second storage receptacle, pump means associated with said second conduit means to cause chocolate to pass through said second conduit means from said first receptacle to said second receptacle, third conduit means extending from the outlet of said retempering device and extending to a point to discharge into said first storage receptacle, and pump means associated with said retempering device to cause chocolate to be passed through said third conduit means from said retempering device to said first storage receptacle.

3,021,780
WHISKY AGING APPARATUS
Arden B. Bobbe, Rte. 1, Scandinavia, Wis.
Filed May 27, 1960, Ser. No. 32,280
6 Claims. (Cl. 99—277.1)



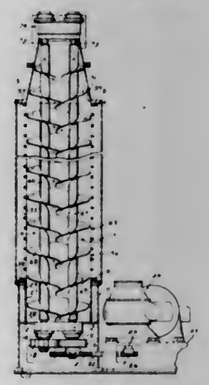
6. In an apparatus for containing whisky to be aged comprising, in combination with a barrel for storing whisky including a bottom and a top wall, a plurality of aging grates detachably mounted in said barrel, each of said grates comprising a plurality of elongated bars formed of charred white oak and means connecting said bars together in spaced apart relation to one another, cleat members secured to inner sides of the bottom and top wall in offset substantially parallel relation to one another and engaged by opposite sides of end portions of the grates for maintaining the grates at an incline within the barrel, and said top wall having an access opening to accommodate the passage of the grates therethrough between said cleat members.

3,021,781
STRAPPING APPARATUS
Ernst Meister and Hans Bannach, Hagen-Haspe, Germany, assignors to Rudolf Schluckebier & Co., Hagen-Haspe, Germany, a firm of Germany
Filed June 11, 1957, Ser. No. 665,042
Claims priority, application Germany June 12, 1956
9 Claims. (Cl. 100—8)



1. In a strapping apparatus for strapping an article having a plurality of face portions, in combination, a stationary support for holding the article to be strapped in a fixed position; a bending assembly including a support member; means for moving said bending assembly toward and away from a position in which said support member abuttingly engages a first face portion of said article held by said support; a bending member mounted on said bending assembly for movement therewith and having a flexible portion moving with said bending member in a path adjacently spaced from and extending along a second face portion of said article adjacent said first face portion when said assembly is moved by said means; and means for moving said bending member relative to said bending assembly in a direction transverse to said path for movement along a third face portion of said article adjacent said second face portion, when said bending assembly is in said position thereof, whereby a strap interposed between said first face portion and said support member and projecting into said path will be clamped between said support member and said first face portion and will be bent along said second face portion during movement of said assembly toward said position thereof, and will be bent by a part of said flexible portion along said third face portion during said movement of said bending member relative to said assembly.

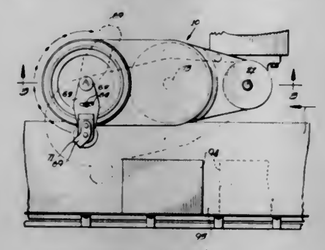
3,021,782
DEWATERING DEVICE AND PRESSURE FEEDER
Marvin E. Ginaven, Springfield, Ohio, assignor to The Baur Bros. Co., Springfield, Ohio, a corporation of Ohio
Filed Mar. 27, 1959, Ser. No. 802,508
8 Claims. (Cl. 100—146)



1. In the art of pulp processing, a pulp thickening device including a pair of feed screws in parallel nearby relation to one another, means supporting said screws for rotation, said screws including shafts of uniform diameter and continuous lefthand and righthand helicoid surfaces on said respective shafts interfitting with one another to define spaced apart low clearance zones intermediate said screws, a closely fitting cage having an inlet and an outlet, said cage surrounding said screws to contain the pulp solids in their movement along said feed screws from said inlet to said outlet while permitting escape of released fluids therefrom, a restrictive extension on said cage at said outlet exercising a restrictive influence upon movement of the pulp therethrough, said screws extending into said restrictive extension, means introducing a fluid pulp into said inlet at one end of said screws, and means for rotating said screws in opposite directions, the helicoid surfaces thereof conducting the pulp toward said outlet conditions of intermittently applied and released pressure.

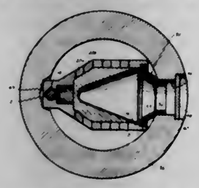
3,021,783
MARKING MACHINE FOR MARKING SUCCESSIVE CONVEYED ARTICLES
Thomas J. Casey, Arlington Heights, Ill., assignor to Thomas Engineering Co., Inc., a corporation of Illinois
Filed July 1, 1960, Ser. No. 40,320
6 Claims. (Cl. 101—35)

1. A marking apparatus for applying markings to successive conveyed articles comprising a base, means supporting said base adjacent the path of movement of the conveyed articles, a first spindle supported on said base, a marking roller rotatably supported on said first spindle, a printing element on said marking roller, a cylindrical cam member on said marking roller, said cam member including an annular cam extending circumferentially from a high portion to a low portion, an arm pivoted on said base, a roller on one end of said arm, adjustable spring means resiliently urging said roller in engagement with said annular cam to urge said marking roller during rotation to return to a predetermined position after each marking cycle, a crank arm connected to said marking roller, said crank arm extending outwardly from



the periphery of said marking roller, a spur element projecting outwardly from said crank arm, said spur element being adapted to engage a moving article whereby rotation is imparted to said marking roller, and an ink roller rotatably positioned adjacent said marking roller for imparting ink to said printing element.

3,021,784
SHAPED CHARGE UNIT FOR WELL PERFORATORS
Lorrain D. Meddick, Whittier, Calif., assignor, by mesne assignments, to Borg-Warner Corporation, Vernon, Calif., a corporation of Illinois
Filed Sept. 21, 1955, Ser. No. 535,586
6 Claims. (Cl. 102—20)



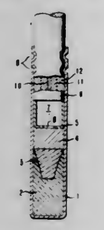
1. In a shaped charge perforating apparatus for use in a well borehole including a liquid-tight, generally cylindrical housing having a longitudinal axis and adapted to be lowered into a well borehole, at least one shaped explosive charge perforating unit mounted in said housing, said unit including a body of high explosive material formed with a forwardly facing concavity symmetrical about an axis transverse to the longitudinal axis of the housing, and with a surrounding exterior surface coaxial with the axis of said concavity and extending rearwardly from adjacent the forward edge portion of said concavity to the inner end of the latter, a liner lining the walls of said concavity, a metal case about said body of high explosive material, and means at the rear of said body of high explosive material for detonating the latter, said perforating unit being adapted to fire a perforating jet through a wall of said housing into the surrounding wall of the well, said body of explosive material being adapted to fracture said case and to scatter its fragments forcefully against the inner walls of said housing, the improvement for reducing damage to said housing caused by the scattered fragments of said case which comprises said metal case having an annular wall portion disposed about said surrounding exterior surface of said body of high explosive material, said wall portion comprising several substantially separate, solid ring members, said ring members being longitudinally disposed with adjacent ring members substantially abutting each other, said ring members being coaxial with the axis of said concavity and closely encompassing said body of high explosive material along its substantially entire longitudinal length, said ring members being adapted to be ruptured successively as the explosive wave progresses forwardly through said body of high explosive material upon detonation of the letter.

3,021,785
COUNTERFORCE INITIATION
Joseph R. Hradel, Mount Pleasant, and John C. Cline, Midland, Mich., assignors, by mesne assignments, to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 4, 1959, Ser. No. 810,649
5 Claims. (Cl. 102—24)



1. In an initiator for base charges of explosive material the combination comprising: a pair of electrically conducting encasements; a strand of Primacord explosive looped and each end passed through the length of each of said conducting encasements; means securing said conducting encasements in adjoining abutting parallel relationship; a blasting cap secured to the ends of said Primacord an equal distance from each of said encasements so as to simultaneously detonate said strand along its entire length.

3,021,786
BLASTING DEVICE
Ross Jay Miller, Pitman, and George Adelbert Noddin, Sewell, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed July 21, 1958, Ser. No. 749,848
3 Claims. (Cl. 102—27)

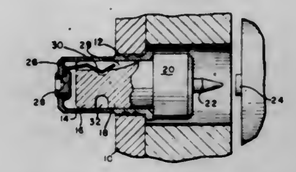


1. A non-electric delay initiator in combination with and adapted to be initiated by a low energy connecting cord having an explosive core of from 0.5 to 2 grains per foot of length comprising a rigid tubular shell integrally closed at one end and containing in sequence a base charge of a detonating explosive at said closed end, a priming charge of a heat-sensitive detonating explosive, a delay charge of an exothermic-burning composition and a tubular capsule positioned axially within the said shell contiguous to the said delay charge, said capsule having a closure at one extremity provided with a central orifice therethrough and one open extremity positioned in abutting relationship with said connecting cord.

3,021,787
ANTICREEP CONSTRUCTION FOR PROJECTILES DETONATED ON IMPACT

Henry R. Michaels, Mercer, Wis., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Mar. 15, 1957, Ser. No. 646,497
1 Claim. (Cl. 102—73)

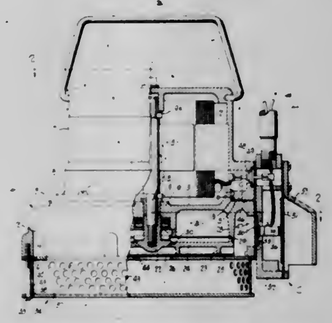


An inertia operated firing pin assembly for cooperation with a fuze having a detonator comprising a cylindrical housing having one open and one closed end; a firing pin having a reduced cylindrical portion slidable in the housing, a larger diameter portion outside the housing, and a point on the larger portion for engagement with the detonator; the reduced portion defining a slot longitudinally on its outer periphery tapering as it progresses from an intermediate portion to the outer end; the reduced portion defining a circumferential groove intermediate the ends of the slot; a narrow elongated flat spring rigidly secured to the closed end of the housing, received in the slot, and having a V-shaped section held in the groove under tension to hold the firing pin from movement toward the detonator until the fuze is decelerated rapidly incident to grazing or direct impact with a target or terrain.

3,021,788
SUBMERSIBLE PUMP

Herbert W. Kaatz, Elyria, Ohio, assignor to The American Crucible Products Company, Lorain, Ohio, a corporation of Ohio

Filed May 2, 1957, Ser. No. 656,630
8 Claims. (Cl. 103—25)

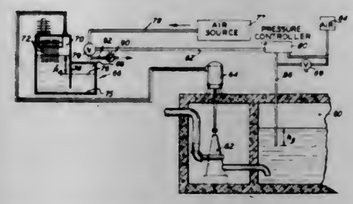


1. A submersible pump comprising a housing forming a volute chamber and a passageway having a discharge outlet extending therefrom, an impeller mounted for rotation within said chamber and adapted to pump fluid from said volute chamber through said passageway and outlet, a motor for driving said impeller, a pressure responsive control connected with said volute chamber and responsive to a predetermined static pressure within said volute chamber to actuate said motor and impeller, and valve means in said passageway intermediate said chamber and outlet and adapted to prevent flow of fluid through said outlet and passageway into said volute chamber.

3,021,789
MOTOR SPEED CONTROL ARRANGEMENT

Carl E. Ryden, 1600 Western Ave., Corvallis, Oreg.

Filed Aug. 25, 1958, Ser. No. 756,899
7 Claims. (Cl. 103—35)

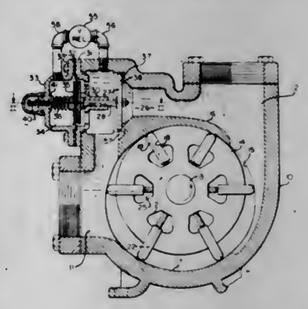


1. A fluid system having a fluctuating head, motor, a control arrangement system for controlling the speed of said motor in response to changes in the fluid head of said system, said control arrangement including a liquid rheostat connected to said motor to control the speed thereof, said rheostat comprising means defining a pair of side-by-side electrolyte chambers, an electrolyte in said chambers, means connecting the lower portions of said chambers for permitting electrolyte freely to flow between said chambers, one of said chambers being sealed save for said connecting means and the other chamber being vented, said rheostat comprising a plurality of vertical electrodes fixedly mounted in one of said chambers, air supply means connected to said sealed chamber for supplying air under pressure to said sealed chamber so that by variation in such pressure electrolyte may be transferred between said chambers so as to vary the amount of immersion of said electrodes, means for sensing the pressure head of the fluid in said fluid system, and means operatively connecting said sensing means and said air supply means for controlling the pressure of air supplied to said sealed chamber in response to changes in the pressure in said fluid system.

3,021,790
PUMP DELIVERY CONTROL MECHANISM

Virgil A. Brunson, Grand Rapids, Mich., assignor to Blackmer Pump Company, Grand Rapids, Mich., a corporation of Michigan

Filed May 23, 1958, Ser. No. 737,327
6 Claims. (Cl. 103—42)

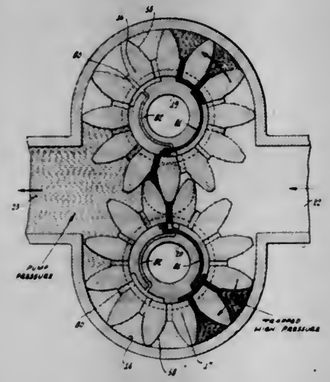


1. In a pump control, in combination, a pump housing having inlet and outlet ports, means in the housing for forcing fluid from the inlet port to the outlet port, a passage in the housing leading from the outlet port to the inlet port, a valve in said passage for controlling the flow therethrough, said housing having an opening in a wall thereof in communication with said passage between said valve and said inlet port, a diaphragm closing said opening, means mechanically coupling the valve and the diaphragm, a cap enclosing the diaphragm, said diaphragm having an effective area at least as large as the effective area of the valve, throttling means for admitting fluid from the outlet port into the cap, conduit means connecting the spaces on opposite sides of the diaphragm, and control means responsive solely to a pressure to be controlled for controlling the flow of fluid from the cap through the conduit means to maintain a fluid pressure in the cap in accordance with the desired value of the pressure to be controlled.

3,021,791
ROTARY FLUID DISPLACEMENT DEVICE AND MECHANISM THEREFOR

Edward A. Rockwell, 167 Ashdale Place, Los Angeles 49, Calif.

Original application Aug. 24, 1950, Ser. No. 181,203, now Patent No. 2,758,548, dated Aug. 14, 1956. Divided and this application Aug. 9, 1956, Ser. No. 603,041
9 Claims. (Cl. 103—126)

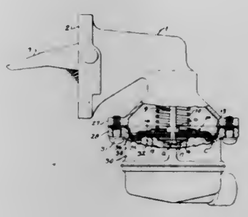


1. A reversible fluid displacement device which may be operated in either of two directions comprising: a housing with a work performing chamber having inlet and outlet openings, one of which is high pressure and the other low pressure for a given operative direction of the device; a pair of meshed gears rotatably mounted in a close running fit in said chamber, said gears and housing being adapted to cooperate when the gears are rotated to pressurize the fluid trapped in closed pockets at the point of meshing to a higher pressure than the high pressure of the device; a pair of normally stationary cylindrical plugs coaxially positioned in said gears and having a close running fit therein; a plurality of radical passages in each of said gears and each having a central port; passage means in each of said plugs in one position thereof being adapted for successive alignment with said ports, said passage means at one end aligning only with the ports leading to said closed pockets and at the other end only with selected inter-tooth spaces of said gears, all of said selected inter-tooth spaces being closed and located on the low pressure side of the common axial plane of the gears; and means mounting said plugs for selective rotation to either of two positions, one for each operative direction of said device; and additional passage means in said plug interconnecting said closed pockets and selected inter-tooth spaces on the opposite side of said axial plane in the second positions of said plugs whereby all of said selected inter-tooth spaces are always located on the side of said axial plane which is opposite said high pressure chamber opening.

3,021,792
FUEL PUMP DIAPHRAGM MOUNTING

Eldon A. Johnson, St. Louis, and Jack M. White, Florissant, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Continuation of application Ser. No. 725,193, Mar. 31, 1958. This application Oct. 30, 1959, Ser. No. 849,984
15 Claims. (Cl. 103—150)



1. A fuel pump comprising a casing with internal walls defining a pumping chamber, said pumping chamber having one of said walls provided with a fluid inlet and a fluid outlet, a rounded lip around said casing at the periphery of said pumping chamber, a pumping element including a diaphragm having its outer periphery secured in said casing adjacent said rounded lip to form the other wall of said pumping chamber, backing plates disposed on opposite sides of the central portion of said diaphragm with one on the chamber side thereof, a centrally positioned operating stem connected with said pumping element, and means for clamping said backing plates to said diaphragm, said diaphragm being provided with an annular bight portion between the outer periphery of said backing plates and said pump casing projecting in one direction with respect to said pumping chamber, the outer peripheral edge of the backing plate on the chamber side of said diaphragm having a rounded lip for engaging said diaphragm, said rounded lip on the backing plate being spaced a sufficient distance from the wall of said pumping chamber and casing to provide an annular space between the outer periphery of said rounded lip on the backing plate and the wall to permit said bight portion to project therebetween in the direction of the pumping chamber, an annular shaped supporting means separate from said backing plates having a surface shaped to conform with the concave surface of the bight portion of the diaphragm, means in said casing for urging said annular shaped supporting means in the direction of said bight portion, said annular shaped supporting means having a portion in opposed relationship with one of said rounded lips for securing a portion of the bight of said diaphragm against one of said lips to hold the bight portion against reversal with respect to said backing plates.

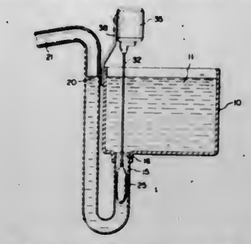
3,021,793
FLUID PUMP

Luther L. Bolstad, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Dec. 9, 1959, Ser. No. 858,464
12 Claims. (Cl. 103—152)

1. A fluid pump comprising, a casing, a piston type member positioned in said casing and providing a gap therebetween, a fluid supply source common to one end of said casing and outlet means connected to the other end of said casing, and means included in part with said piston member to impart a plurality of shocks thereto at a predetermined frequency to oscillate said piston member in said casing, said piston member being made of an

elastic material such that said shocks imparted thereto generate waves on the surface thereof which cooperate



with the casing to force fluid through said gap in the direction of propagation of said waves.

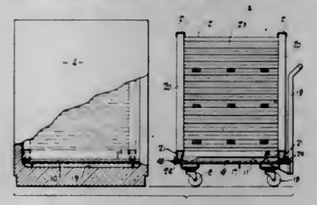
3,021,794
OIL WELL PUMPING ROD SHOCK ABSORBER
Floris B. Knox, R.D. 4, Robinson, Ill.
Filed Nov. 12, 1959, Ser. No. 852,317
3 Claims. (Cl. 103—202)



1. The combination of a working valve of an oil well rod assembly and an oil well pumping rod shock absorber comprising an elongated casing threaded internally at the ends, a plug threaded in the lower end of the casing, means for attaching the plug to the working valve of the assembly, a shaft extended from the upper end of the casing, a plunger on the lower end of the shaft, a spring positioned on the plunger, a spring in the casing and positioned between the plunger and plug, a nut threaded in the upper end of the casing and having a bore therethrough, said shaft being extended through the bore of the nut so that the lower end thereof is the end on which the plunger is mounted, a threaded nipple on the upper end of the shaft that is adapted to be connected to the rod assembly, spaced collars on the upper part of the shaft, said nut having a groove in the upper end, and dogs extended from the shaft and positioned to mesh with the groove in the upper end of the nut to couple the shaft to the casing for attaching the absorber to a standing valve in the lower end of the well for pulling the standing valve from the well after the working valve has been removed from the well casing.

3,021,795
LATCHING MECHANISM
Franklin P. Hayba, Euclid, and Robert F. Hotaling, Elyria, Ohio, assignors to Crescent Metal Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Nov. 4, 1958, Ser. No. 771,866
5 Claims. (Cl. 104—48)

1. In combination with an integrated transportation and storage system for a wheeled vehicle including a length of stationary storage track and a length of transportation track fixedly mounted on a movable dolly and adapted to have a matching end-to-end relationship with said storage track, a latching system for controlling the relationship between said storage track and said transportation track and for controlling said wheeled vehicle on said tracks, said latching system comprising means for automatically engaging and holding said transportation track in said relationship with said storage track, means for manually releasing said transportation track from said



matching relationship with said storage track, means for automatically engaging and holding said wheeled vehicle at predetermined positions on and along said transportation and said storage track comprising a spring-loaded bolt associated with said wheeled vehicle and a discontinuous cam extending longitudinally along said tracks and adapted to receive and engage said bolt at its points of discontinuity and means for manually releasing said wheeled vehicle from said predetermined positions whereby said wheeled vehicle may be moved on and along said transportation and storage tracks.

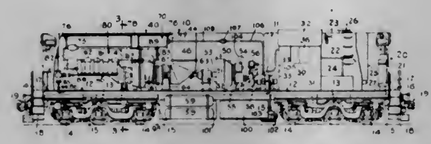
3,021,796
TRANSFER MECHANISM
Bert B. Parshall, Wood Dale, and Clifford A. Glass, Chicago, Ill., assignors to Link-Belt Company, a corporation of Illinois
Filed Jan. 9, 1959, Ser. No. 785,887
11 Claims. (Cl. 104—172)



1. In a floor truck propelling system including two chains traveling below the floor level in closed paths with one portion of each of the two paths arranged in adjacent parallel relationship at a given location in said system, a propelling dog connected to each of said chains, and a floor truck having a tow pin engageable with either one of said dogs for propelling movement thereby, the combination comprising stationary means at said given location defining a transfer path between said parallel portions of said chain paths, first means including a member movable between two operative positions, said member when in one of said operative positions obstructing the path of movement of a tow pin engaging the dog of one of said drive chains and employing the movement of said one chain for disengaging said tow pin from the dog of that chain and for deflecting said tow pin into the adjacent end portion of said transfer path, said member when in the second of said operative positions obstructing the adjacent end portion of said transfer path, and second means responsive to the movement of a tow pin through said adjacent end portion of said transfer path and including mechanism movable independently of the member of said first means for engaging the tow pin and moving the same through the remainder of the transfer path into

the path of the dog on the other chain, the movement of the mechanism of said second means effecting the movement of the member of the first means into its said second operative position.

3,021,797
PULVERIZED COAL BURNING GENERATING ELECTRIC LOCOMOTIVE
Peter Robert Broadley, Elizabeth, N.J., assignor to Bituminous Coal Research, Inc., Washington, D.C., a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 631,663
7 Claims. (Cl. 105—36)



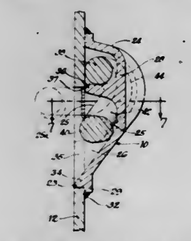
1. In a coal burning locomotive of the character described, including, a completely enclosed cab mounted on a chassis and coextensive therewith; wheeled trucks pivotally secured to and supporting the chassis; power translating means coupled to at least one set of wheels; power generating means in the cab coupled to the power translating means; at least one engine driver's station and controls in the cab, the controls being operatively connected to the said power generating and translating means; a gas turbine incorporated in the power generating means and serving as a prime mover; a pressurized combustor coupled to the turbine and supplying pressurized motive fluid therefore and thereto; separate primary and secondary air supply means coupled to the combustor, the improved coal storage, feeding and conveying system for delivering coal to the combustor, comprising crushed coal supply means including at least one crushed solids fuel tank incorporating pneumatic fluid transfer means; conduit means for the primary air supply to the combustor incorporating, seriatim, a rotary crushed solids transfer pump in free communication with the solids fuel tank, and a unit pulverizer; ash separating means incorporated in the motive fluid supply line and including atmospheric ash-quenching and storage means, and means for venting cleaned turbine exhaust gas to the atmosphere.

3,021,798
SLIDING HOPPER GATE OPERATING MECHANISM
Walter L. Floehr, Toledo, Ohio, assignor to Unitcast Corporation, Toledo, Ohio, a corporation of Ohio
Filed Aug. 13, 1958, Ser. No. 754,834
6 Claims. (Cl. 105—282)



1. In a slide gate assembly for closing a discharge opening of a hopper car, the combination with a frame attachable to said car about said opening, a slide gate horizontally slidable in said frame, rack means fixed to said slide gate, and pinion means engaging said rack means and having a shaft carried by said frame, of operating mechanism for said gate comprising a housing attached to a side of said frame about an end of said pinion shaft, an internally toothed outer gear in said housing and secured for rotation to said shaft, an externally toothed inner gear in said housing and meshing with said outer gear, means acting between said inner gear and housing for limiting said inner gear to reciprocal movement, and crank means in said housing concentric with said outer gear and eccentrically mounting said inner gear, said crank means on rotation reciprocating said inner gear and therethrough rotating said outer gear and shaft.

3,021,799
LADING STRAP ANCHOR
Gilbert F. Oakley, Chicago, Ill., assignor to MacLean-Fogg Lock Nut Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 30, 1959, Ser. No. 810,050
7 Claims. (Cl. 105—369)

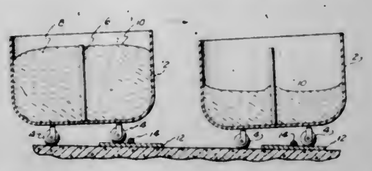


1. In combination with a metal wall plate of a freight vehicle wherein the wall plate has inner and outer surfaces and an opening of predetermined size extending therethrough, a lading strap anchor comprising a housing for mounting over said opening on the outer surface of the wall plate and having integral side and back walls, said housing having a height greater than that of the opening and a width such that it covers the opening laterally, said housing being mounted to cover the opening vertically and overlying a portion of the outer surface of the wall plate above the opening, said housing also having an integral fin therein at the lateral mid-portion thereof and extending from the back wall thereof to a position adjacent the top of said opening, said fin being shorter than the width of the opening and leaving spaces between the opposite ends thereof and the side walls of the housing, said back wall of the housing sloping downwardly and forwardly into contact with the wall plate at the lower edge of said opening to provide for the gravitational movement of extraneous material from the housing through the opening, and a closed loop-type lading strap anchoring element having opposed mounting and tie anchoring portions in spaced and generally coplanar relationship to one another and integral side portions joining opposite ends of the mounting and tie anchoring portions, said lading strap anchoring element being narrower than said opening and having a height less than that of the interior of the housing, and the mounting portion of the lading strap anchoring element being supported for rotational movement on said fin between said wall plate and the back wall of the housing with said side portions normally extending through said spaces.

3,021,800
DOUGH KNOCKBACK DEVICE
Lawrence F. Marnett, Kansas City, Mo., and William B. Hampton, Oklahoma City, Okla., assignors to C. J. Patterson Company, Kansas City, Mo., a corporation of Missouri
Filed Feb. 20, 1958, Ser. No. 716,331
1 Claim. (Cl. 107—54)

A method of partially degasifying a risen leavened dough contained in a bowl and during bulk fermentation and before dividing the dough into loaf size weight pieces comprising sharply vertically jolting said bowl by pulling

said bowl over a floor mounted abutment rod to produce a force sufficient to tear the dough away from the vertical bowl surfaces to which the dough has adhered and thus

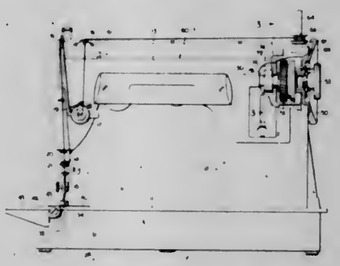


rupturing large gas bubbles so that the weight of the settling mass of dough ruptures additional gas bubbles to expel the gas from the ruptured bubbles from the dough.

3,021,801
SPOOL-WINDING MECHANISM FOR SEWING MACHINES

Ralph E. Johnson, Mountainside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Filed Feb. 17, 1960, Ser. No. 9,330
9 Claims. (Cl. 112—218)



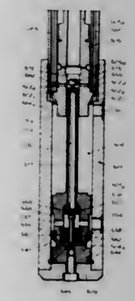
1. In a sewing machine having an endwise work penetrating needle, a loop-taker, actuating means operatively connecting said needle and said loop-taker for cooperating movement in the formation of lock stitches, a thread carrying bobbin journaled in said loop-taker, and a drive means separable at will from said actuating means, means for rotatably supporting a thread spool on said sewing machine, an operator influenced control member shiftable into and out of a position operatively connecting said drive means to rotate said thread spool supporting means, operator influenced means for positively stopping said actuating means in a predetermined position of said needle and loop-taker, and means for rendering said positive stopping means effective, simultaneously with movement of said operator influenced control member into a position operatively connecting said drive member to rotate said thread spool supporting means.

3,021,802
HYDRAULIC PRESS

Maurus Glas, Jordanstrasse 10, Frankfurt am Main, Germany

Filed Mar. 8, 1957, Ser. No. 644,758
Claims priority, application Germany Mar. 13, 1956
11 Claims. (Cl. 113—45)

1. In a hydraulic press, a cylindrical hollow body, a dividing wall disposed perpendicularly to the longitudinal axis of said body and a cover plate at one end of said body, to define one chamber in said body on each side of said dividing wall, at least one coaxially disposed piston reciprocating in each of said chambers, one of said pistons operating as working ram and another of said pistons operating as a set-off piston and having a portion of reduced diameter, the latter projecting into the chamber receiving said working ram, said dividing wall having a bore of a diameter complementary with the outer diameter of said portion of reduced diameter of said set-off piston, said cylindrical body including means for feeding to and releasing from, respectively, said chambers pressure fluid for operation of said pistons, and said set-off piston having an axial bore, a valve member disposed at and closing one end of said bore adjacent said working ram, and an operating ram disposed between said valve member and said cover plate closing the chamber receiving said set-off piston, said operating ram being adapted to lift said valve in one of the end positions of

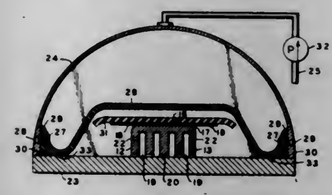


said set-off piston, said cylindrical body defining an opening opposite said set-off piston when in its starting position, said opening constituting said means for feeding to and releasing from, respectively, said chambers pressure fluid, said set-off piston defining an annular recess at its outer periphery, and said annular recess communicating with said opening of said cylindrical body in the starting position of said set-off piston, so that during the starting movement of said set-off piston said pressure fluid is fed into said annular recess, means for communicating said annular recess with said axial bore of said set-off piston, the latter defining additionally a bore of small diameter disposed parallel to the piston axis connecting said annular recess with the space of the chamber receiving said set-off piston below the latter.

3,021,803
DIE FOR METAL FORMING

Elbert M. Lacey, Jr., Chula Vista, Calif., assignor to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California

Filed Dec. 16, 1957, Ser. No. 703,204
3 Claims. (Cl. 113—49)

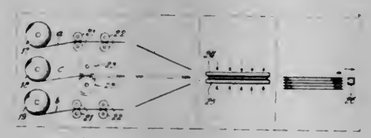


1. A rigid forming die for use with a supporting base and a flexible mat to conform a sheet of metal to the exposed face of the die in response to pressure applied through the mat to the opposite surface of the sheet and to the support surface of the base, said die having a generally flat bottom face disposed in face adjacency to said support surface of the base, a top face and a peripheral side face connecting said top and bottom faces, said unformed sheet being projected beyond the edges of said top face and said mat being projected beyond the edges of said unformed sheet, said projection of said unformed sheet being less than the height of said peripheral side face, the interior of said die being provided with a plurality of spaced apart cavities each terminating in said bottom face and the top of each cavity being a substantial distance below said top face, said die closely adjacent said bottom face being provided with a plurality of passages connecting said cavities and at least one passage terminating in one of said cavities and said side face whereby air entrapped between said mat, said support surface, and said peripheral face of the die may escape into said cavities.

3,021,804
METHOD OF FABRICATING HEAT EXCHANGERS

Clyde S. Simpelaar, Racine, Wis., assignor to Modine Manufacturing Company, Racine, Wis., a corporation of Wisconsin

Filed Feb. 18, 1955, Ser. No. 489,081
3 Claims. (Cl. 113—118)

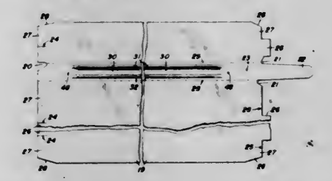


1. The method of making a heat exchanger including fluid conducting members of narrow width and with flat walls of substantial depth comprising the steps of simultaneously advancing and forming a pair of strips to provide a pair of heat exchanger walls, said heat exchanger walls formed as recessed flat parallel walls and having longitudinally peripheral portions formed to mate with like portions of cooperable walls for providing fluid conducting members of narrow width and with flat walls, simultaneously advancing and forming a third strip as said pair of strips are simultaneously advanced and formed to provide a secondary heat transfer structure, assembling said walls with said secondary structure disposed therebetween and the longitudinal peripheral portions of the walls extending transversely outwardly therefrom and laterally beyond the corresponding edges of the secondary structure for mating with corresponding portions of like walls, applying pressure to the intermediate portions of the recessed flat parallel walls of the sub-assembly thus formed to place the portions of the secondary structure abutting said recessed flat parallel walls in intimate contact therewith and maintaining the areas of the respective walls, coextensive with the secondary structure, in spaced parallel relation, bonding said recessed flat parallel walls to the abutting portions of the secondary structure while the latter portions are maintained in intimate contact with said recessed flat parallel walls, maintaining such pressure until completion of the bonding operation, assembling the unitary sub-assembly thus formed with like unitary sub-assemblies with adjacent recessed flat parallel walls of adjoining sub-assemblies having their corresponding longitudinally extending peripheral portions in mating engagement and spaced laterally outward from the secondary structures, and connecting such mating portions of adjacent recessed flat parallel walls, while maintaining the original bonded relation between the respective recessed flat parallel walls and the secondary structures substantially unchanged, to form a unitary heat exchange structure with each pair of united heat exchanger walls forming a fluid conducting member having narrow width and recessed flat parallel walls, and each adjacent pair of fluid conducting members being connected by a respective intermediate heat transfer element.

3,021,805
METHOD OF MAKING A TEAR STRIP CAN BODY

John Henchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed Jan. 14, 1960, Ser. No. 2,445
3 Claims. (Cl. 113—120)

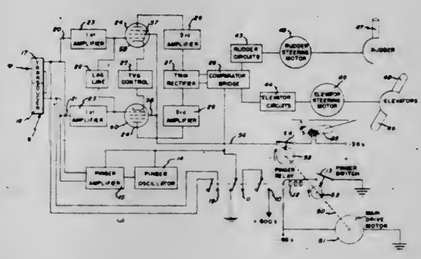


1. The method of preparing a body blank for a tear strip can comprising the steps of feeding the blank in the direction of its length through scoring roll means to define a tear strip paralleling one long margin of the blank, and feeding the scored blank through embossing and flattening roll means to simultaneously flatten out waves created in said margin incidental to the scoring action and to form at least three parallel spaced ribs along the tear strip with an intermediate rib projecting in one direction beyond the plane of the blank and the two immediately adjacent ribs projecting in the opposite direction beyond the plane of the blank, thereby providing a flexing roll-like function in breaking the grain in the tear strip and removing therefrom substantially all tendency to spring outwardly from around a key when wound upon the key and released.

3,021,806
RANGE BLANK FOR ECHO-CONTROLLED TORPEDO

Paul C. Gardiner, Scotia, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

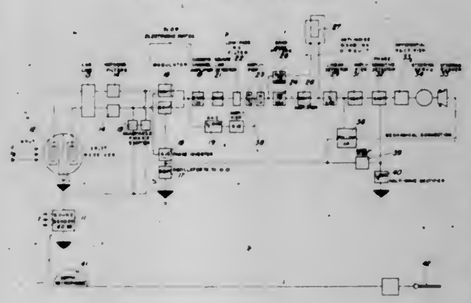
Filed Oct. 4, 1950, Ser. No. 188,471
6 Claims. (Cl. 114—23)



6. In an echo controlled torpedo equipped with steering gear, a transmitter adapted upon energization to project acoustic signals underwater, control means adapted to energize said transmitter during regularly spaced transmission times separated by listening intervals, said control means including a pinger switch and a motor-driven pinger cam intermittently closing said switch, a receiver

adapted to translate echoes of said acoustic signals, upon reception, into electrical signals for controlling said steering gear, and a range reducing circuit adapted on energization to disable said receiver, said circuit including a range reducing switch, a range reducing cam synchronized with said pinger cam and adapted to close said range reducing switch only upon the expiration of a predetermined fraction of each of said listening intervals, and a gravity operated switch adapted to close only responsive to pitching of the torpedo beyond a predetermined angle, said range reducing switch and said gravity operated switch being serially connected in said range reducing circuits so that the range of the echo control system is reduced upon excessive pitching of the torpedo.

3,021,807
HOMING SYSTEM FOR TORPEDO
Cecil K. Stedman, Seattle, Wash., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 1, 1946, Ser. No. 666,223
3 Claims. (Cl. 114—23)



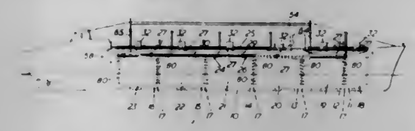
1. In a self-propelled mine, a sound sender, a directionally selective sound receiver for receiving sound echoes from underwater targets and sound reverberations from the water and further adapted to convert said sound echoes to target signals having characteristics defining target direction, a square law detector connected to said receiving means for producing beat frequency signals between said target signals and sound reverberations, a bandpass filter connected to the detector output for selecting beat frequency signals produced by echoes from moving targets, said selected beat frequency signals similarly having characteristics defining target direction, and control means connected to said filter responsive to said characteristics of the selected signals to steer the torpedo toward the echo-reflecting moving target.

3,021,808
SHIP
James J. Henry, Short Hills, N.J., assignor, by mesne assignments, to Conch International Methane Limited, Nassau, Bahamas, a corporation of the Bahamas
Filed May 7, 1956, Ser. No. 582,965
5 Claims. (Cl. 114—74)



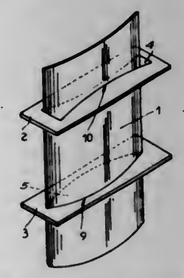
1. A ship for the transportation of an extremely cold liquid cargo comprising the combination of an outer hull of a high strength fluid- and vapor-impervious material, an inner hull of a high strength fluid- and vapor-impervious material spaced a short distance from the outer hull and in substantially parallel relationship therewith throughout the major length of the hold space of the ship, a plurality of cofferdams extending cross-wise between the hulls in longitudinally spaced-apart relation, a relatively thick layer of thermal insulating material lining the inner surfaces of the inner hull and the cofferdams to define an insulated hold space therebetween, and cargo tanks mounted within the insulated hold space for housing the cold liquid cargo, and means for stabilizing the positions of the tanks within the hold space while permitting movement relative to the ship's structure in response to expansions and contractions due to temperature change.

3,021,809
MARINE TANKERS
Robert Henry Brown, Worting, near Basingstoke, England, assignor to Wm. Cory & Son Limited, London, England
Filed Apr. 1, 1958, Ser. No. 725,709
Claims priority, application Great Britain Apr. 5, 1957
7 Claims. (Cl. 114—74)



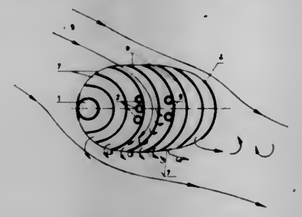
6. A marine tanker for the bulk transport in the liquid state at low temperature of methane, comprising a plurality of cargo tanks to contain the liquid methane, additional storage means for a relatively small reserve supply of liquid methane which does not form part of the cargo discharged, at least one spray unit in each cargo tank, connections between the spray units and the reserve storage means arranged for effecting, throughout the period in which the cargo tanks are empty between the discharge of one cargo and the loading of the next, the spraying of liquid methane from the reserve supply into the tanks in quantity sufficient to keep the tanks at a low temperature and maintain therein an atmosphere of methane, the spray units being located near the tops of the tanks and arranged to direct their discharge reasonably uniformly over substantial areas of the internal surfaces toward the bottoms of the tanks, and connections and spray-rate controls whereby the same spray units can be employed for filling the tanks with their liquid cargo.

3,021,810
RUDDER AND DROP-KEEL CONSTRUCTION
Jacques Marie Albert Charles Berge, Chateau d'Areyt, Prechac, France
Filed Apr. 18, 1960, Ser. No. 23,063
7 Claims. (Cl. 114—138)



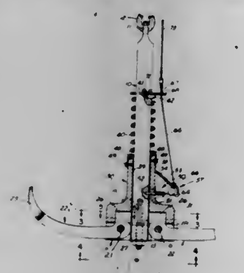
1. In a steering means for a seacraft an upper rigid support member and a lower rigid support member substantially parallel to said upper support member, each of said support members having provided therein a slot of symmetrical configuration with curved edges, a plate means fitted in said slots and having on its edges protruding means abutting against said support member, said plate means being made of flexible sheet material whereby said curved edges cause said plate means to assume automatically a curved configuration when it is pressed against said edges by the water reaction.

3,021,811
SMOKESTACK, MORE ESPECIALLY A SHIP'S FUNNEL
Nikolaas Feis, Amsterdam, Netherlands, assignor to Stichting Nationaal Luchtvaartlabortorium, Amsterdam, Netherlands, a corporation of the Netherlands
Filed Dec. 16, 1958, Ser. No. 780,892
Claims priority, application Netherlands Dec. 23, 1957
6 Claims. (Cl. 114—187)



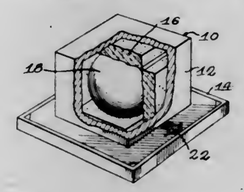
1. A smokestack comprising an outermost stack having a substantially streamlined outer periphery, at least one other stack extending within the outermost stack, and a series of fins extending substantially parallel to the longitudinal axis of and above the top of said outermost stack adjacent said outer periphery thereof, the fins being disposed in spaced relationship along at least a part of both sides of the outermost stack to form slit-like openings between fins, and at least a portion of the fins on one of said sides of the outermost stack connecting with corresponding fins on the other side thereof to form a series of arcuate channels extending transverse said outermost stack between said sides thereof.

3,021,812
RELEASABLE ANCHOR
Roy Swalls, 335 31st Ave., East Moline, Ill.
Filed Aug. 5, 1959, Ser. No. 831,839
11 Claims. (Cl. 114—208)



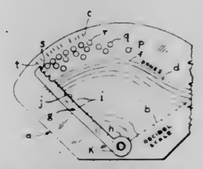
1. An anchor comprising a shank, a support at the lower end of the shank and providing a plurality of pairs of outwardly extending apertured lugs, pivot means carried by each pair of lugs and disposed in the associated apertures, a plurality of anchor arms swingably mounted on each pivot means and each arm including an upwardly disposed extension lying alongside the adjacent portion of the shank when the arms are in their normal extended position, each arm extension having generally flat opposite sides, a locking member slidable along said shank above said support and including socket portions, each including means shaped to snugly embrace the associated arm extension at opposite sides of each arm extension, biased means connected to raise said locking member out of locking engagement with said arm extensions, and latch means connected to hold the locking member in locked position about said arm extension against the action of said biased means.

3,021,813
SHOCK GAUGE
Julius L. Rips, Montreal, Quebec, Canada (6277 Commodore Sloat Drive, Los Angeles 48, Calif.)
Filed July 25, 1960, Ser. No. 44,946
8 Claims. (Cl. 116—114)



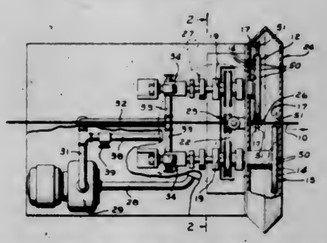
1. A method of producing a translatable record of the direction and intensity of shock impacts imparted to a movable body, comprising the steps of completely confining a central body of predetermined weight and surface hardness within an enclosure having surrounding surfaces of lesser deformation resistance than said central body, fixing said enclosure to said movable body and finally interpreting any deformation of said enclosure surface by said central body in terms of shock impact imparted to said movable body.

3,021,814
LOUDNESS INDICATOR
Donald R. Hyatt, Old Bridge, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Sept. 19, 1960, Ser. No. 56,883
3 Claims. (Cl. 116—133)



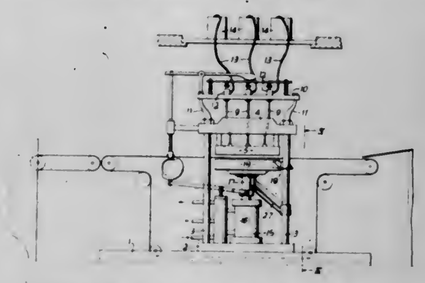
1. A device for indicating loudness comprising, a base member, a dial member pivotally connected to said base member to allow relative movement therebetween, said base member having a frequency band scale and sone nomographs thereon with the frequency band scale, in spaced relationship with the sone nomograph, said dial member having a decibel scale thereon, said dial member adapted to be positioned relative said base member along the frequency band scale thereof to indicate a point on the sone nomographs for a corresponding point on the decibel scale of said dial member.

3,021,815
APPARATUS FOR MARKING ARTICLES WITH A LIQUID
Joseph L. Burke and John F. Sheehan, Jr., Omaha, Nebr., assignors to Western Electric Company, Incorporated, a corporation of New York
Filed Nov. 17, 1960, Ser. No. 69,896
4 Claims. (Cl. 118—314)



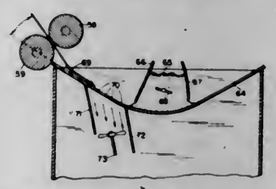
1. An improved apparatus for marking an advancing elongated article with a liquid at spaced intervals along the length thereof, the marking apparatus being of the general type including at least one hollow rotary wheel having a group of spaced peripheral apertures through which the liquid is forced in radiating streams, the wheel being so positioned with respect to the path of advancement of the article that the streams of liquid impinge upon the advancing article at spaced points therealong; the improved apparatus being characterized in that the wheel is provided with a second group of spaced peripheral apertures corresponding in number and in relative spacing with those of the first group, each aperture in the second group being so displaced axially and angularly with respect to a corresponding aperture in the first group that the stream from each aperture in the second group impinges upon the advancing article at substantially the same point therealong as the stream from the corresponding aperture in the first group but at a different time, whereby the article is normally marked twice at each marking point therealong to provide a stronger marking and substantially longer runs are achieved before any given number of marking points is missed entirely due to plug up of the apertures.

3,021,816
APPARATUS FOR THE DEPOSITION OF LIQUID MATERIALS
Evelyn Stewart Lansdowne Beale, Wraysburg, England, assignor to McCorquodale Colour Display Limited, London, England, a British company
Filed May 5, 1958, Ser. No. 732,935
Claims priority, application Great Britain May 7, 1957
2 Claims. (Cl. 118—411)



2. Apparatus for depositing thin layers of liquid in accurately defined areas on surfaces comprising a matrix having a plurality of shallow cavities in one face, means for controllably feeding liquids to be deposited onto the surfaces through the body of the matrix to the cavities, support means supporting said matrix in fixed position with the cavity-containing face lowermost, at least two fixed and parallel vertical guide posts, a vertically movable platen, said guide posts being in a common vertical plane spaced from the center of said platen, power-operated means including a ram connected with the centre of the underside of the platen and applying lift to the platen, a pair of spaced guides fixed to said platen in the region of the general plane of the platen and each slidably engageable with a close guiding fit with one of said vertical guide posts, an arm, a yoke rigid with one end of said arm and in a plane inclined to said arm and fixed to the underside of the platen with the yoke embracing the ram and the said arm extending downwards at an inclination to the vertical, and a further guide carried at the lower end of said arm and slidably engageable with a close guiding fit with one of said vertical guide posts as the platen is raised and lowered, said arm being normally rigid but having a sufficient degree of inherent resiliency to permit said platen to assume parallelism with the matrix when in contact therewith, under the force of the power-operated means.

3,021,817
COPYING OF DOCUMENTS
Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany, a German company
Original application Aug. 16, 1957, Ser. No. 678,685, now Patent No. 2,972,332, dated Feb. 21, 1961. Divided and this application Dec. 23, 1958, Ser. No. 782,603
8 Claims. (Cl. 118—637)

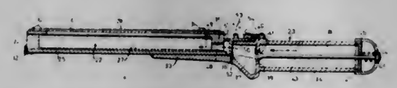


1. An apparatus for developing electrostatic images on flexible sheets, comprising a trough-shaped stationary toner support with a pair of side walls flanking a partly curved, upwardly concave stationary guide member having a continuous sheet-supporting upper surface, a pile of comminuted toner deposited in the concavity of said member and confined by said side walls, and feed means for moving a flexible sheet carrying an upwardly facing xerographic layer across said upper surface and under said pile, thereby temporarily exposing said layer to the action of said toner, said guide member having a curved center portion merging into two substantially planar and upwardly sloping diverging end portions, said toner pile being substantially limited to said center portion, said feed means including sheet-driving means positioned above said guide member in a region between the planes of said end portions and forwardly of said center portion for directing said sheet downwardly onto the forward one of said end portions head of said toner pile.

3,021,818
DEVICE FOR DEVELOPING AND FIXING XEROGRAPHIC IMAGES
Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany
Original application Apr. 12, 1957, Ser. No. 652,400. Divided and this application Sept. 1, 1959, Ser. No. 841,917
6 Claims. (Cl. 118—637)

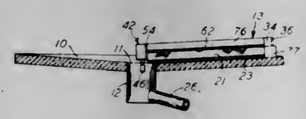
1. A device for developing a latent image on a xerographic sheet, comprising a mobile assembly including

substantially closed box capable of being opened, said box being provided with a substantially horizontal base plate, a hollow handle extending substantially horizontally from said box, said handle being provided with an internal partition dividing its interior into a first chamber close to said box and a second chamber remote from said box, said second chamber containing a supply of developing pigment, said partition being provided with a first passage interconnecting said chambers, means in said box for fastening said sheet to said base plate, a supply of mobile pigment carriers in said first chamber, said first passage being narrow enough to confine said



carriers to said first chamber while permitting the transfer of developing pigment from said second chamber to said first chamber upon a slight tilting of said assembly, closure means forming an elevated second passage between said first chamber and said box for enabling the transfer of said pigment and said carriers from said first chamber to the interior of said box and vice versa upon a more extensive tilting of said assembly, shutter means in said first passage, and shutter-control means externally of said handle operatively linked with said shutter means for temporarily blocking the transfer of pigment between said chambers during said more extensive tilting.

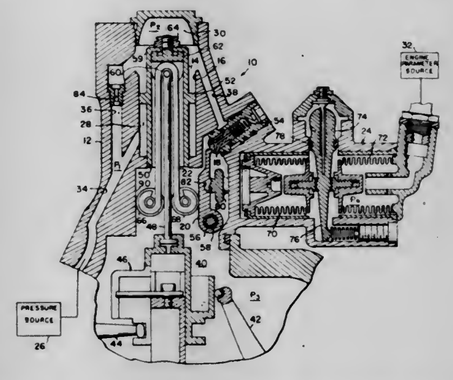
3,021,819
BARN FLOOR CLEANER
Donald J. Krahn, Box 675, Rte. 1, Salem, Wis.
Filed June 10, 1959, Ser. No. 819,338
5 Claims. (Cl. 119—22)



1. A barn cleaner comprising an elongated conveyor mountable on the barn floor for revolving movement about a center point of said floor and having a discharge opening adjacent said center point, rotatable pickup means connected to said conveyor and disposed to the side thereof in advance of said conveyor and being rotatable about an axis parallel to the elongation axis of said conveyor for directing manure into said conveyor, power means connected to said conveyor for operating the latter to move the manure toward said center point, and a receptacle disposed aligned with said center point and in said floor and directly below said discharge opening for receiving the manure from said conveyor.

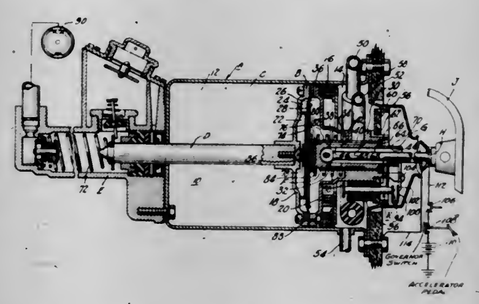
3,021,820
FORCE BALANCE SYSTEM
Robert S. Fleming, Warren H. Cowles, and Raymond L. Ensinger, Detroit, Mich., assignors to Holley Carburetor Company, Warren, Mich., a corporation of Michigan
Original application Feb. 18, 1959, Ser. No. 794,016. Divided and this application Aug. 22, 1960, Ser. No. 51,108
12 Claims. (Cl. 121—41)

1. A force balance system for producing an output movement which varies according to the variations of an input parameter, comprising a pivotally mounted lever having a control surface, pressure responsive means, a U-shaped leaf spring pivoted to said pressure responsive means at the mid point of said spring whereby said spring is movable with respect to said lever on movement of said pressure responsive means, rollers secured to both ends of said leaf spring, a fixed surface engaging one of said rollers during movement thereof, the other of said rollers engaging said control surface of said lever during movement of said spring to exert a constant force on



said lever at different points longitudinally thereof valve means located adjacent and positioned by said lever for regulating the pressure applied to the pressure responsive means and therefore the movement thereof in accordance with the position of said lever, and means responsive to the variations of the input parameter engaged with said lever for urging said lever in the opposite direction.

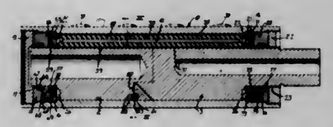
3,021,821
AUTOMATIC BRAKE HOLDING SYSTEM
Edwin E. Prather, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Original application Oct. 23, 1957, Ser. No. 691,877, now Patent No. 2,973,844, dated Mar. 7, 1961. Divided and this application Dec. 8, 1959, Ser. No. 858,263
8 Claims. (Cl. 121—41)



1. A servomotor comprising: a support, a power actuated member mounted in said support, control means carried by said power actuated member and having a control element which when moved in one direction causes said power actuated member to move a first direction, reaction means opposing actuating movement of said control element by an amount generally proportional to the delivered force of said power actuated member first means for normally moving said control member in said one direction and a solenoid carried by said power actuated member including an armature operatively con-

nected to actuate said control element and whereby an override of said first means is accomplished by said solenoid.

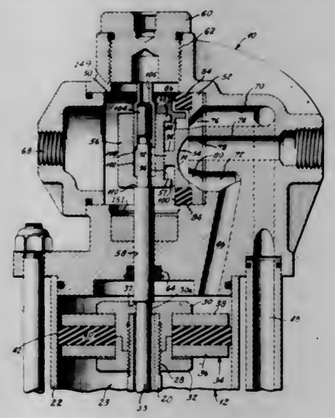
3,021,822
ROTARY ACTUATOR SEAL
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Aug. 28, 1957, Ser. No. 680,795
3 Claims. (Cl. 121—99)



1. In a seal for the relatively movable parts of fluid pressure devices having a chamber having an inner cylindrical wall and end walls extending perpendicular thereto, a vane rotatably mounted within said chamber between said end walls for movement along said cylindrical wall and dividing said chamber into opposed working chambers of increasing and decreasing volume, an elongated slot extending along said vane and opening to said cylindrical wall and said end walls, fluid pressure connections leading from opposite sides of said vane into said slot for supplying fluid under pressure thereto in each direction of rotation of said vane and including check valves preventing the backflow of fluid from said slot into said chambers, the improvement comprising unitary sealing means insertable in said slot as a unit, having an elongated spacer block made of a relatively stiff material, a resilient O-ring extending about said spacer block, and a non-metallic seal, stiffer than said O-ring and having a continuous internal wall conforming to the form of said O-ring on said spacer block and extending thereabout and having an outer flat sealing surface extending for the length of said vane and end sealing surfaces perpendicular to said outer sealing surface, said sealing surface having slidable sealing engagement with said cylindrical wall and said end walls, and maintained in sealing engagement therewith by fluid under pressure entering said slot in the spaces between said spacer block and the inner side of said O-ring.

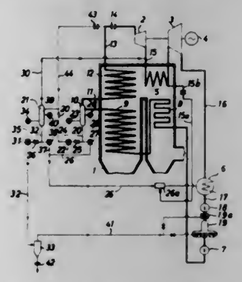
3,021,823
RECIPROCATING AIR MOTOR
Henry T. Dinkelkamp, Mount Prospect, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Apr. 28, 1959, Ser. No. 809,401
9 Claims. (Cl. 121—164)

1. In a D-slide valve structure for a reciprocating fluid motor including a valve body having three adjacent passageways therein and including an actuator rod reciprocably received in the valve body, a valve seat plate positioned over the ends of the passageways and having three ports respectively in communication with the passageways and aligned in order in the direction of the actuator rod movement, the plate forming a valve seat, a generally rectangular D-slide valve reciprocable over the valve seat and the ports in the direction of the actuator rod movement, a short projection on the valve extending outwardly in a direction away from the valve seat, a pair of aligned transverse grooves formed within each side wall of the valve in longitudinally spaced relation, a solid detent ball positioned adjacent the valve along each side wall and adapted to move toward and away from the side wall, means biasing each ball toward its respective side wall, a valve operator slidably carried by the actuator rod having shoulders adjacent its ends spaced from each other a distance greater than the length of the valve projection and alternately engaging the valve projection to move the valve between one operative position and another operative position whereby each ball rolls alternately from a position within one of its recesses to a position within its other recess, and a spring-biased toggle mechanism pivotally connected to and extending radially from the operator to cause snap action movement of the valve to the operative positions, the mechanism including a



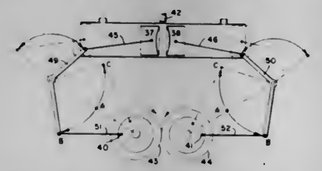
toggle link support member movable perpendicularly to the movement of the valve operator, a toggle link pivotally connected at its opposite ends to the support member and valve operator, and a pair of springs engageable with the support member to urge it towards the valve operator, one of the springs continuously engaging the support member throughout its movement while the other of the springs engages the support member only when the toggle mechanism is in close proximity to its neutral position.

3,021,824
FORCED FLOW STEAM GENERATING PLANT
Paul Profos, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Nov. 12, 1957, Ser. No. 695,873
Claims priority, application Switzerland Nov. 22, 1956
8 Claims. (Cl. 122—406)



1. A forced flow steam generating plant comprising a source of feedwater supply, a tube system connected to said source for receiving feedwater therefrom, said tube system including an evaporating section wherein water is converted into steam, said tube system including a superheating section connected to said evaporating section for receiving steam therefrom, a first separator interposed in said tube system between said evaporating section and said superheating section and adapted to tap liquid operating medium from said tube system, a second separator connected to the outlet of said superheating section and adapted to tap liquid operating medium therefrom, each of said separators having an outlet for the liquid operating medium, valved first conduit means connected to both outlets and to said source of feedwater supply for returning water thereto during the heating up period of said tube system when the plant is started and at abnormal operating conditions of the plant, valved second conduit means connecting the outlet of said first separator to said second separator for conducting operating medium from said first separator into said second separator during normal operation of the plant, and blowdown means connecting the outlet of said second separator to the outside of the plant for removing contaminated water from the plant.

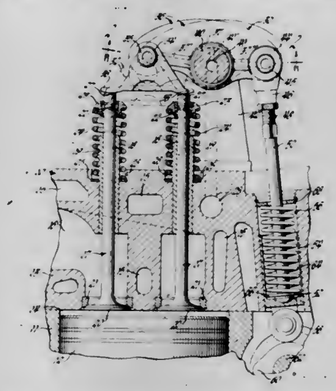
3,021,825
INTERNAL COMBUSTION ENGINE
Georges Jacques Marie Gaston Garcia de la Para, 14 Rue de l'Amiral Courbet, Saint-Mande, France
Filed Sept. 30, 1958, Ser. No. 764,404
Claims priority, application France Oct. 1, 1957
9 Claims. (Cl. 123—51)



9. Internal combustion engine operating according to a cycle consisting of two unequal strokes during two crankshaft revolutions, comprising a common expansion chamber, two opposed pistons in said chamber, two crankshafts each corresponding to one of said pistons, toothed synchronizing wheels interconnecting said crankshafts, and means for operatively connecting each piston to the relevant crankshaft which comprise a first connecting rod pivoted on the piston pin, a rocker oscillating about a fixed fulcrum pin and having one arm connected to said connecting rod, a crankshaft, another connecting rod connecting said crankshaft to the other arm of said rocker, said members being timed in relation to one another so as to cause said crankshaft to rotate through more than one revolution upon each downward stroke of the relevant piston and through the complement of the second revolution during the upward stroke of the piston, an arm resiliently mounted on the fulcrum pin of said rocker, resilient means engaging said rocker and said arm, a plate driven at half the crankshaft speed, a link connecting said plate to said arm resiliently mounted on said rocker fulcrum pin, an eccentric pin acting as a short link which connects one arm of said rocker to said other connecting rod of said crankshaft.

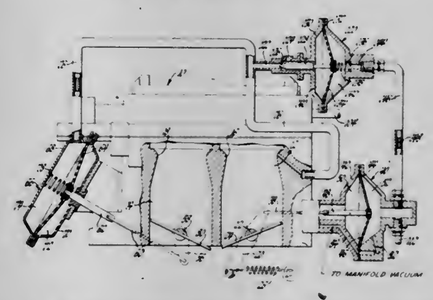
3,021,826
ROCKER ARM AND MULTIPLE VALVE ACTUATING MECHANISM
Albert De Fezzy, Detroit, George P. Hanley, Northville, William S. Kenyon, Huntington Woods, and Joseph A. Peak, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 23, 1959, Ser. No. 854,637
19 Claims. (Cl. 123—90)

1. In an internal combustion engine, a plurality of valves mounted for parallel reciprocation between valve opened and valve closed positions, individual spring means for biasing each of said valves toward its closed position; a rocker arm, a shaft extending transversely of the reciprocable axes of two adjacent valves and mounting said rocker arm for oscillatory movement relative thereto, timing means operable to oscillate said rocker arm in timed relation to the operation of said engine, and a floating bridge pivotally connected to one end of said



rocker arm for swinging movement with respect thereto about an axis extending between and spaced from the ends of said two valves and normal to a plane including the axes of said two valves; said floating bridge having spaced arcuately formed pallet portions thereon maintained in slidable and pivotal thrust contact with the adjacent ends of said two valves.

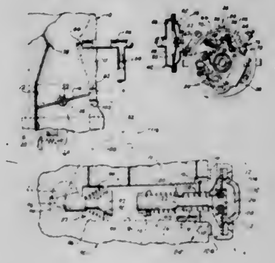
3,021,827
CARBURETOR GOVERNOR
Richard J. Brunner, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 23, 1957, Ser. No. 691,853
6 Claims. (Cl. 123—103)



1. A charge forming device for an internal combustion engine comprising primary and secondary induction passages, a throttle valve in each of said passages, means for opening the primary throttle valve, a servo mechanism operatively connected to the secondary throttle valve, said mechanism including a member biasing the secondary throttle in a closing direction, vacuum conduit means communicating the servo mechanism with the primary induction passage to control the operation of the secondary throttle in accordance with the air flow through the primary induction passage, a governor device, means operatively interconnecting said governor device and the primary throttle valve, said device being adapted to move

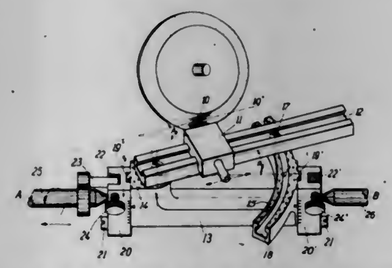
the primary throttle valve in a closed direction and in so doing to reduce the vacuum in said conduit means, and venting means coacting with said vacuum conduit, said governor device being adapted to actuate the venting means to admit atmospheric pressure to the vacuum conduit permitting the biasing member to close the secondary throttle.

3,021,828
VACUUM ACTUATED IGNITION TIMING DEVICE
Robert K. Frank, Mount Clemens, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Feb. 16, 1961, Ser. No. 89,848
3 Claims. (Cl. 123—117)



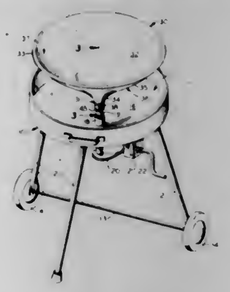
1. An ignition system for an internal combustion engine having an induction passage with a throttle valve controlling the flow of air therethrough; comprising an ignition distributor having a housing; a switch in said housing, a cam member normally rotatable in accordance with engine speed and adapted to intermittently open said switch for effecting a make and break of the ignition circuit, a breaker plate normally supporting said switch and having relative angular motion with respect to said housing; pressure responsive means secured to said housing and operatively connected to said breaker plate for rotating said breaker plate in accordance with engine requirements; a venturi formed in said induction passage upstream of said throttle valve; first conduit means communicating between the throat of said venturi and said pressure responsive means; second conduit means communicating between said induction passage at a point upstream of said throttle valve when said throttle valve is in its normally closed position and said first conduit means; first valve means connected serially in said second conduit means adapted to at times control the communication through said second conduit means; said first valve means comprising a diaphragm member, a valve member secured to said diaphram member and adapted to be positioned thereby, said diaphragm member being responsive to the vacuum sensed by said second conduit means at its point of communication with said induction passage and effective to move said valve member in the opening direction upon the attainment of a predetermined vacuum valve; third conduit means communicating between said induction passage at a point downstream of said throttle valve when said throttle valve is in a substantially closed position and said second conduit means on the first conduit means side of said first valve means; second valve means connected serially in said third conduit means adapted to control the communication of said third conduit means with said second conduit means; and a cam member rotatably positioned in accordance with the position of said throttle valve and adapted to at times abut against and urge said second valve means in the opening direction so as to allow complete communication between said second and third conduit means.

3,021,829
APPARATUS FOR THE DRESSING OF PROFILED GRINDING DISKS FOR THE GRINDING OF HELICAL INVOLUTE SPUR GEARS
Johannes Looman, Friedrichshafen am Bodensee, Germany, assignor to Zahnradfabrik Friedrichshafen, Aktiengesellschaft, Friedrichshafen am Bodensee, Germany
Filed July 6, 1959, Ser. No. 825,113
Claims priority, application Germany July 8, 1958
16 Claims. (Cl. 125—11)



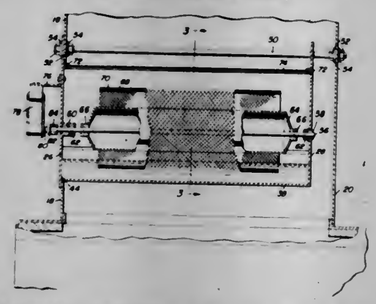
1. In a mechanism for profiling grinding disks for grinding helical involute spur gears from blanks, a carrier means and means for supporting said carrier means between the head stock and tail stock of a gear blank grinding lathe, a guide rail carried by said carrier means at a predetermined angle with respect to the axis of said head stock and tail stock, said angle being the helix angle of the gear to be ground by a grinding disk profiled by said mechanism, a cutting tool holder mounted on said guide rail and being reciprocally movable thereon during operation of the mechanism, whereby said device may be removed from said grinding machine and a gear blank substituted therefor to be ground by said grinding wheel.

3,021,830
REFLECTOR-SNUFFER FOR BARBECUE
Donald H. Witcher, 3682 Randolph Ave., Santa Clara, Calif.
Filed Aug. 5, 1960, Ser. No. 47,805
2 Claims. (Cl. 126—25)



1. An accessory for use on a conventional barbecue brazier of the type having a dish-like fire pan with a crank operated elevator rod extending upwardly through its bottom for raising and lowering a food support above fuel in said fire pan comprising a cone-like metal body having an annular peripheral bead from which said cone-like body extends radially inwardly in a sinuous curve configuration terminating in a central hub portion open at its apex end, and means for adapting said hub portion for mounting on said elevator rod comprising an annular internal shoulder formed within said hub portion in spaced relation to the open end thereof, a plug between said shoulder and said open end and secured against said internal shoulder within said hub portion for closing the same to snuff out the fire in fuel in said fire pan when the beaded periphery of said metal body rests upon said fire pan to completely cover the fire therein, said plug having a central recessed seat exposed to the open end of said hub portion to receive the upper end of said elevator rod for supporting thereon the said metal body in inverted condition for reflecting infra red rays from burning embers in said fire pan radially outward therefrom.

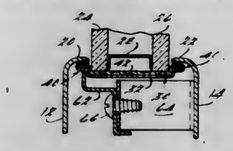
3,021,831
FURNACE HUMIDIFIER
Jerome J. Byrge, 3609 N. Sherman Ave., Madison, Wis.
Filed Nov. 22, 1957, Ser. No. 698,128
2 Claims. (Cl. 126—113)



1. A furnace comprising a hot air plenum having a pair of opposite side walls, a humidifier including a casing disposed in the interior of said plenum for the passage of air therethrough, said casing having at least one downwardly directed opening for the passage of heated air upwardly thereinto from said furnace, said casing having therein a plurality of reticulated members disposed for the passage of air therethrough from said opening, means for wetting said reticulated members whereby said heated air will absorb moisture therefrom to raise the humidity of said heated air, a pair of rods extending transversely of and between said opposite walls of said plenum and supported thereby, said casing having end walls embracing and supported by said rods, said plenum having an opening in one of said opposite walls through which said casing is received, the other end wall of said casing removably secured to said one plenum wall and closing said opening, said rods having one end of each secured to said other end wall, a shaft rotatably supported between said end walls, a cylindrical drum mounted on said shaft, said reticulated members comprising an outer screen of generally cylindrical shape disposed about and spaced from the outer surfaces of said drum and an inner screen mounted upon said drum, said inner screen comprising radially directed V-shaped portions extending longitudinally thereof, said outer screen being mounted on and secured to the apices of said V-shaped portions, means for rotating said shaft, said rotary means being mounted upon the exterior of said other end wall of said casing.

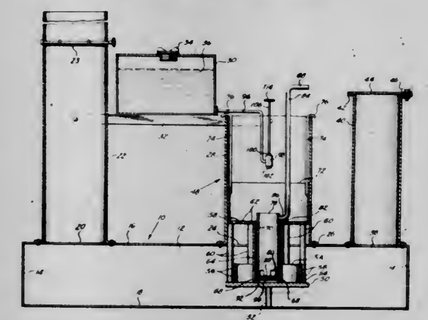
3,021,832
STOVE DOOR WINDOW UNIT
Herbert E. Mills, Detroit, Mich., assignor to Mills Products, Inc., Walled Lake, Mich., a corporation of Michigan
Filed Jan. 12, 1959, Ser. No. 786,139
8 Claims. (Cl. 126—200)

1. A window unit for use with a stove door, comprising a pair of spaced window panels, a continuous spacer between said panels at the edges thereof, a continuous clamping and sealing element for clamping said panels against said spacer, said element comprising a one-piece clamping frame of channel shaped cross section with the opposing sides of the channel having flanges bent laterally outwardly and then inwardly to overlap said outwardly bent portions, and a strip of flexible, heat resistant sealing material lining the base and opposing sides of



the channel and having its side edges clamped between said overlapped portions of the flanges on said clamping frame to secure said strip to said frame, said frame with said strip secured thereto being wrapped entirely around the peripheral edges of said window panels with said strip sealingly engaging the outer sides of said panels adjacent said peripheral edges to cushion and insulate said panels from contact with said frame.

3,021,833
HEATER
Joseph Kohorst, Rte. 1, Arcadia, Iowa
Filed Oct. 20, 1958, Ser. No. 768,323
8 Claims. (Cl. 126—360)

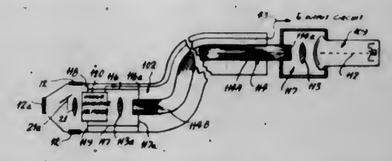


8. A heater, comprising a horizontally elongated closed housing having vertically spaced horizontal top and bottom walls, spaced vertical stacks rising from said housing and each in communication with the interior thereof, a vertical cylinder rising from said housing intermediate said stacks and in communication with the interior thereof, a burner assembly disposed within said cylinder and having a combustion chamber extending into said housing so as to be spaced below said top wall, said combustion chamber having draft outlets within the interior of said housing, said burner assembly receiving down draft air for combustion through said cylinder, and the draft communication between said stacks through said housing carrying away the products of combustion from said burner assembly.

3,021,834
ENDOSCOPES
Edward Emanuel Sheldon, 30 E. 40th St., New York, N.Y.
Filed Nov. 28, 1956, Ser. No. 624,829
9 Claims. (Cl. 128—6)

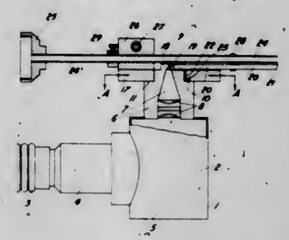
1. A device for examination of an inaccessible part comprising in combination an elongated tubular housing

having a flexible portion adapted in size and shape for introducing into said part, a source of light for illumination of the examined area of said part carried by said housing, a window in said housing for admitting the image of said area, optical means comprising an image demagnifying member for reducing the image of said examined area, a bundle of fibers comprising a plurality of fibers operating by internal reflection of light disposed in said housing and having its end-face mounted adjacent said optical means for receiving and transporting said image, each of said plurality of fibers having a core of light transparent material having a high index of refraction and each of said plurality of fibers covered by its own separate coating secured thereto and independent of the coating of



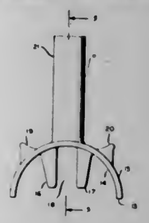
adjacent fibers, said coating being of material having a lower index of refraction than said light transparent material, said coating being relatively thin in comparison to said core having the thickness of the order of microns and spacing each of said fibers from adjacent fibers for preventing escape of light from one fiber to another, said fibers being free from each other along the major part of their length and being long in relation to their diameter so that the light is reflected in said fibers internally a number of times without appreciable loss of intensity, said fibers furthermore being assembled as to provide an end-face of an appreciable cross-section, said bundle comprising in addition means for maintaining said fibers at each end-face of said bundle in a fixed spatial relationship to each other.

3,021,835
ENDOSCOPIC APPARATUS
Yves Rose, Paris, France, assignor to Centre National de la Recherche Scientifique, Paris, France, a corporation of France
Filed Jan. 22, 1958, Ser. No. 710,469
Claims priority, application France Feb. 24, 1957
4 Claims. (Cl. 128—6)



1. In combination with an end scope tube, a separable and independent illuminating and observation unit enabling photographic or cinematographic views to be made of cavities of the body, said unit comprising: a source of light constituted by an electric lamp; a forced-ventilated cylindrical casing housing said lamp; a tubular coaxial extension of said casing; an optical condenser system and a total reflection prism housed in said extension; a straight cylindrical light-guide rod detachably mounted transversely in the extremity of said extension, the near extremity of said light-guide receiving the light rays directed by said prism; a clamping device for slidably mounting said complete unit on said endoscope tube, with said light-guide rod in parallel juxtaposition with regard to the endoscope tube; a first block fixed to the longitudinal outer face of said clamping device; a second block in juxtaposition with and serving to support said light-guide; diametrically-opposite shoulders formed in the wall of said tubular extension; and means for detachably fixing said blocks on said shoulders.

3,021,836
RESUSCITATOR
Herman A. Marsden, 22721 Sylvan, Woodland Hills, Calif.
Filed Aug. 17, 1959, Ser. No. 834,060
1 Claim. (Cl. 128—29)

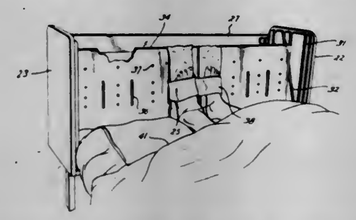


A resuscitator having no moving or adjustable parts for applying mouth-to-mouth insufflation to an asphyxiating patient while preventing direct contact between the patient and the one applying the insufflation, said resuscitator including a unitary, molded, plastic member having a hollow elongated tube portion, a substantially rectangular resilient member formed in a semicircular configuration and having a convex and a concave surface at one end of said tube portion for externally sealing the mouth cavity of said patient, said resilient member defining an opening therethrough continuous with the opening through said tube portion, a pair of flat protrusions each having a base and a terminal portion, said protrusions being affixed at their base portions to said concave surface and transverse of the longitudinal axis of said resilient sealing member one on each side of said opening, said base portion of said protrusions being wider than said terminal portion thereby to fit between the front teeth of said patient and allowing the lower jaw of said patient to be moved upwardly to open the throat passage of said patient to permit air to be forced into the lungs of said patient, and a substantially triangular member having an inwardly curved side extending upwardly from said convex surface of said sealing member on each side of said tube portion and spaced therefrom by an amount sufficient to provide, in conjunction with the exterior wall of said tube, a pair of finger grips for urging said rectangular resilient sealing member into sealing engagement about the exterior of said patient's mouth.

3,021,837
TRACTION FOOTBOARD
Flora Ellen Newell, Mobile, Ala., assignor to Madeline N. Brown and J. Allan Brown
Filed May 12, 1958, Ser. No. 734,516
10 Claims. (Cl. 128—71)

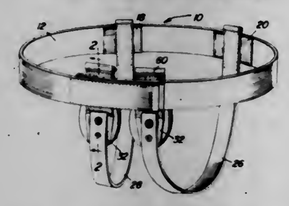
1. In combination with a bed having springs and a mattress supported on said springs, a traction footboard device comprising a cross member of flat form having substantially parallel ends and disposed between said springs and mattress of said bed with an end thereof to each side of said bed, a pair of vertical members each of flat form each carried at an end of said cross member and each extending upwardly parallel to a side of said

mattress to above said mattress, connection means at the side of each said vertical member facing said bed, footboard means having substantially parallel ends and dis-



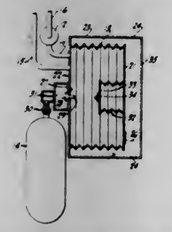
posed between said connection means at opposite sides of said bed with said ends engaging said connection means, and means firmly securing said device against movements longitudinally of the mattress.

3,021,838
TRUSS
Charles C. Fine, Rear 287 E. Main St., Nanticoke, Pa.
Filed July 6, 1959, Ser. No. 825,336
4 Claims. (Cl. 128—96)



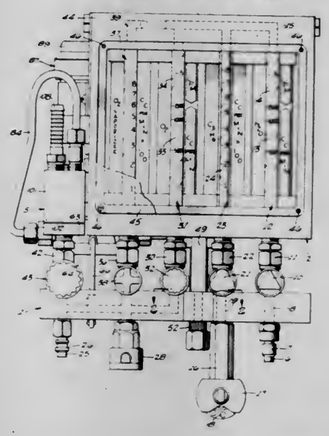
1. A truss comprising an elongated waist encircling belt having overlapping end portions, means releasably retaining the end portions in overlapping relation, a leg strap, means rigidly and detachably connecting the ends of the strap to the belt, a truss pad having a bolt extending outwardly from the surface thereof opposite to the surface adapted to engage the body of a wearer, said bolt extending through the leg strap in spaced relation below the belt and adjustably connected thereto for adjustably mounting the pad in position, said pad including a backing plate, the inner end of said bolt being rigidly affixed to the backing plate for the truss pad, said leg strap including a main body and a longitudinal extension, said bolt also forming the sole connection between the main body of the leg strap and the extension of the leg strap.

3,021,839
UNDERWATER BREATHING APPARATUS
De Loss L. Marsh, 1453 Revere Ave., Hayward, Calif.
Filed Aug. 31, 1956, Ser. No. 607,406
6 Claims. (Cl. 128—142)



1. In an underwater breathing apparatus, a collapsible breathing bag having opposed end surfaces, port means in the bag for use in connecting the bag to breathing apparatus, said end surfaces adapted to be relatively positioned adjacent each other on contraction of said bag and away from each other on expansion of said bag, one of said end surfaces having a valve port formed therethrough, a valve having a valve stem extending through said port into said bag, a sealed bellows mounted on the inside surface of the other end, said bellows being adapted to contact said valve stem on contraction of said bag.

3,021,840
PORTABLE ANESTHESIA APPARATUS
Kim Hallamore, Los Angeles, and Bernard E. Carlson, La Crescenta, Calif., assignors, by mesne assignments, to Don Baxter, Inc., Glendale, Calif., a corporation of Nevada
Filed Apr. 17, 1957, Ser. No. 658,476
12 Claims. (Cl. 128—188)



1. A light-weight, portable anesthesia apparatus comprising: a flow meter panel; a clamp attached to said panel and adapted to clamp the apparatus to a flat support; at least one flexible tube connected to said panel and to a source of anesthetic gas; an oxygen manifold connected to the panel; a flexible hose connecting a source of oxygen to the manifold; a liquid anesthetic vaporizer connected with the manifold and having a transparent body of low heat conductivity and a metal head; a liquid anesthetic in said vaporizer; valve means associated with the manifold for regulating the flow of oxygen to the vaporizer; an inlet passage and an outlet passage in the vaporizer head; a nebulizer body telescoped into the inlet passage; a sealing means between the inner end of the nebulizer body and the inlet passage wall; a second sealing means between the nebulizer body and the outer end of the inlet passage walls; an axial passage through the nebulizer body, said passage having a section of reduced diameter at the inner end of the nebulizer body; a jet body in a portion of the nebulizer passage axially, outwardly spaced from the reduced diameter section to provide a space between the nebulizer body and the jet body; an oxygen jet, smaller than the nebulizer passage, in the jet body; a suction tube attached to the vaporizer head and leading from the space to a position below the level of liquid anesthetic in the vaporizer body; baffle means projecting from the vaporizer head between the nebulizer passage and the outlet passage for deflecting gases from said nebulizer passage downwardly across the liquid anesthetic surface; an anesthetic inlet opening in the vaporizer head above and directly in front of the nebulizer passage; an anesthetic reservoir above and con-

nected to the anesthetic inlet; a sharp spike at the bottom of said reservoir; a top threaded on said reservoir and adapted to force a can of anesthetic against the spike; an interrupter valve connected to the vaporizer outlet and including a housing having an anesthetic gas inlet connected to a gas outlet, and an oxygen inlet connected to said outlet; a slidable valve body in the housing; an enlarged head on said valve body closing the oxygen inlet and exposed to the full pressure of gas in said inlet; and a normally open passage connecting the anesthetic gas inlet with the gas outlet, said passage being closed by the valve body when pressure against the valve body head moves said valve to open the oxygen passage.

3,021,841
INTRAVENOUS ADMINISTRATION EQUIPMENT

George K. Burke, Bethlehem, Pa., assignor, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware

Filed Mar. 14, 1957, Ser. No. 646,088
10 Claims. (Cl. 128—214)



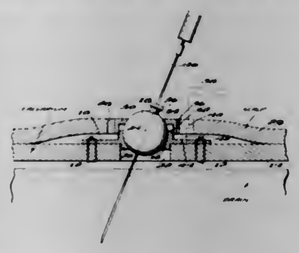
6. In an intravenous administration apparatus of the type adapted to provide a continuous channel for injection fluid flowing from a source of supply to a hypodermic cannula and including a drip observation chamber, a pump below the chamber and connected in series relation therewith, and a check valve between the pump and chamber, the improvement characterized by said valve comprising a fitting formed of rigid plastic material, said drip observation chamber comprising a housing formed of plastic material and secured rigidly to said valve fitting, said chamber being formed in part by said fitting, and said pump comprising a tubular section of deformable plastic material, said section being rigidly secured at one end to said fitting, said pump being formed in part by said fitting.

3,021,842
HYPODERMIC NEEDLE GUIDE

John F. Flood, 1383 Cosgrove St., Watertown, N.Y.

Filed Nov. 5, 1958, Ser. No. 771,997
5 Claims. (Cl. 128—215)

1. A device for orienting and guiding a cannula, needle, or the like, through a bone surface of a living body, comprising a mounting plate for positioning over said bone surface, said plate having a spherical socket containing a ball with a passage therethrough adapted to be fixed relative to said plate, one surface of said plate surrounding said socket being substantially planar and adapted for juxtaposition with said bone surface, said plate having openings above and below said socket, said ball having substantial surface portions that surround the ends of said passage protruding through said openings, respectively, the cross dimension of said passage being substantially less than the correponding cross dimension of said openings, and the ends of said passage being spaced



from the margins of said openings, respectively, by said ball surface portions, whereby said ball may be turned in said socket through a wide range of angles while maintaining said passage ends exposed.

3,021,843
STOMA RECEIVING APPLIANCE WITH SEALING SLEEVE HAVING ENLARGED ATTACHMENT PORTION

Murle Perry, 3803 E. Lake St., Minneapolis, Minn.

Filed May 13, 1958, Ser. No. 734,932
1 Claim. (Cl. 128—283)



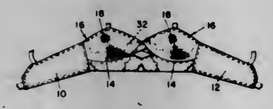
In a stoma receiving and collection appliance in combination with a bag made from highly flexible, waterproof sheet material and having an attachment flap sealingly connected thereto, said bag and flap having an aperture formed through the interconnected portions thereof, a substantially rigid annular mounting member defining an opening for loosely surrounding a stoma and having a circular flange integrally formed therewith, said interconnected portions of said bag and flap being mounted on said mounting member in close fitting relation therewith, a stoma engaging sleeve member extending through said opening and having a body for sealingly engaging the exterior of the stoma and having an enlarged integrally formed, resiliently stretchable, annular attachment portion detachably engaging said annular mounting member, said attachment portion extending first radially outwardly from the circumference of said sleeve body and then doubled over and extending inwardly to form a deep, annular internal channel with an outer overlying flange, said attachment portions having a normal unexpanded diameter, prior to stretching and attachment to the mounting member, greater than the opening in the mounting member so that the circular flange is positively and sealingly received within the annular channel of the attachment portion upon stretching of the same, and means for anchoring said annular mounting member to the body of a

wearer in appropriate position to cause a stoma to project in spaced relation through the opening of said mounting member.

3,021,844
SEAMLESS MOLDED BRASSIERE CUPS

John E. Flagg, Worcester, and Norman A. Cormier, Leicester, Mass., assignors to David Clark Company Incorporated, Worcester, Mass., a corporation of Massachusetts

Filed Jan. 22, 1960, Ser. No. 4,100
2 Claims. (Cl. 128—463)

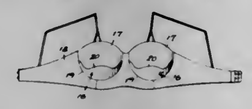


1. A bust cup for brassieres comprising an inner sheer, smooth sheet of uninterrupted, seamless thermoplastic fabric material, an outer thermoplastic lacy sheet, said sheets being in conoidal dome shape, and a generally elliptical bust-supporting panel of relatively stiff material in an edge portion of said shape, said panel being located between the two sheets of material, said panel including a generally central inwardly-extending portion generally at the center of the shape.

3,021,845
BODY SUPPORTING GARMENTS

Raymond H. Smith, Fairfield, Conn., assignor to The La Resista Corset Company, Bridgeport, Conn., a corporation of Connecticut

Filed May 1, 1959, Ser. No. 810,385
1 Claim. (Cl. 128—463)



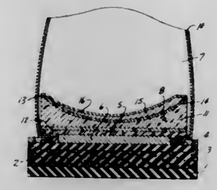
A flexible laminated garment insert having substantially greater stiffness in one direction than in a transverse direction at right angles to said one direction, comprising outer and inner co-extensive layers of flexible fabric material each having substantially uniform flexibility in all directions, an intermediate stiffening layer of woven fabric material co-extensive with said outer and inner layers, and adhesive layers co-extensive with and disposed between the opposite sides of said intermediate layer and said outer and inner layers, said intermediate woven layer comprising sets of warp and filling yarns interwoven with each other, the yarns of each set extending throughout the entire area of said intermediate layer in uniformly spaced relation, one of said sets being parallel to said one direction and consisting of yarns substantially stiffer than those of the other set and providing greater stiffness to said insert in its said one direction, and the yarns of said other set providing greater flexibility to said insert in its said transverse direction.

3,021,846
ORTHOPEDIC ARTICLE OF FOOTWEAR

William M. Scholl, 211–213 W. Schiller St., Chicago, Ill.

Original application Nov. 13, 1957, Ser. No. 696,274, now Patent No. 2,917,757, dated Dec. 22, 1959. Divided and this application Sept. 11, 1959, Ser. No. 839,406
5 Claims. (Cl. 128—595)

1. An orthopedic shoe of the oxford type including an outer sole and an upper connected to said sole, a thick orthopedic inlay including a material on its upper face molded to conform it to an individual foot and serving as the insole for the shoe, said upper being higher than the standard for the particular size of shoe so as to ac-

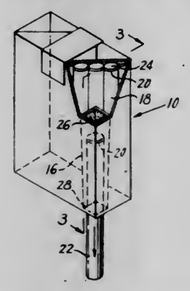


commodate the foot above said thick insole inlay, and said upper being lower on the outer side than on the inner side to accommodate the outer ankle bone of said foot.

3,021,847
COMBINATION PACKAGE AND SELF-LIGHTING CIGARETTES

Dewey C. May, Steubenville, Ohio (Madison, Va.), assignor of one-third to Valeria F. May, Steubenville, Ohio, and one-third to Clara Louise May, Madison, Va.

Filed Apr. 10, 1961, Ser. No. 101,878
12 Claims. (Cl. 131—7)



9. In combination, a package, a plurality of cigarettes each having a paper cover and a filler, a frictionally ignitable material affixed to each cover adjacent one end of the cigarette, a tube, open at both ends, of somewhat shorter length than said cigarettes, affixed to and mounted within said package and friction means on the inner wall of said tube for igniting said frictionally ignitable material on a cigarette cover to thereby ignite when the cigarette is pulled through said tube, said tube being affixed in a corner of said package, said package having a sealed top perforated so as to readily provide a tear opening adjacent the entrance end of said tube, said entrance end of said tube being spaced somewhat below the top of said package, said tube having its exit end opening through the bottom of said package.

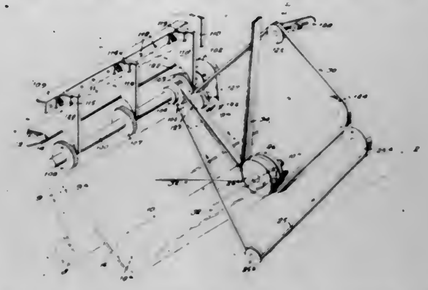
3,021,848
TOBACCO HAND OPENER

Arther L. Isley, 6312 Hanover Ave., Richmond, Va.

Filed Dec. 8, 1958, Ser. No. 778,677
5 Claims. (Cl. 131—130)

1. In an opener for hands of tobacco leaves, a frame, a shaft journaled at one end in said frame, a plurality of toothed gear elements fixed on said shaft in adjustably spaced positions therealong, a bar, means mounting said bar over and parallel with said shaft for adjustment about an axis parallel with said shaft, a plurality of cutter elements, means fixing each said cutter element to said bar for adjustment therealong and toward and from said

shaft, each said cutter element being coplanar with a respective one of said gear elements and having a plurality of teeth arranged in arcuately concave sequence, the distance between the teeth of each said gear element and



those of its cutter element progressively decreasing in the operating direction of rotation of said shaft, and means translating hands of tobacco leaves between said gear elements and said cutter elements, in parallel with said shaft.

3,021,849
CIGARETTE HOLDER
John Alles, Four Alwington Road, Chestnut Hill 67, Mass.
Filed Dec. 21, 1959, Ser. No. 860,825
3 Claims. (Cl. 131—182)



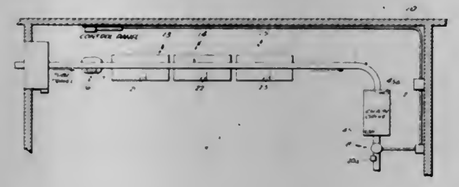
1. A cigarette holder comprising a substantially unobstructed tube for the internal reception of a filtering element, a mouth piece at one end of said tube and a cigarette receiving piece at the other end of said tube, at least one of said pieces being detachable from said tube, the tube having a slot in the wall thereof extending from the end thereof adjacent the detachable one of said pieces, a slide inserted in said slot having an outer manually engageable portion and an inner transversely arcuately shaped inner portion having radially extending filter engaging means projecting therefrom for engaging a filter element in said tube, said slide being movable along said slot to eject a smoked cigarette and, upon detachment of said piece, to withdraw said slide away from said tube and remove with said slide a used filter element.

3,021,850
CARTRIDGE TOOTHBRUSH
David C. Smith, 1336 Brown St., Des Plaines, Ill., and Richard F. Mikes, Chicago, Ill.; said Richard F. Mikes assignor to said David C. Smith
Filed Apr. 22, 1959, Ser. No. 808,103
5 Claims. (Cl. 132—84)



1. A fountain-type toothbrush comprising, in combination, a bristle equipped head having a longitudinally bored passage with an outlet for toothpaste at one end and a toothpaste intake at the other end, a tubular handle rigidly connected at a forward end to an adjacent rearward end of the head, said handle embodying an elongated hollow portion defining a chamber for an insertable and removable cartridge having a valve at one end and charged with pressurized toothpaste, the forward end of said chamber communicating operatively with the intake end of the passage by a duct having sloping side walls which comprise camming means, the longitudinal axes of said chamber and said bored passage being substantially parallel and offset from one another and connected by said duct, said chamber being of a length substantially equal to the length of said handle and greater than the length of the cartridge so that when the cartridge is inserted and fitted into the chamber it and the valves are capable of being slid toward and from said camming means for causing the camming means to operate the valve means, said handle being open at the rearward end to allow the cartridge to be inserted into or removed from the chamber, and manually actuatable chamber-closing and cartridge actuating means for actuating and sliding the cartridge toward the camming means and alternatively releasing it for movement in a direction away from the camming means.

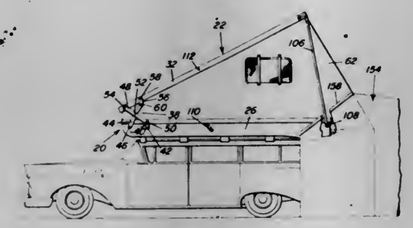
3,021,851
CATHODE RAY TUBE WASHING MACHINES
Ralph H. Morin, Squantum, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Aug. 29, 1956, Ser. No. 606,885
3 Claims. (Cl. 134—46)



1. In combination, a movable conveyer system, moving means for intermittently moving said conveyer system at a varying rate, a plurality of tube-holding means each adapted to hold a cathode ray tube, attaching means for suspending each of said tube-holding means from said conveyer system, said moving means being responsive to a predetermined positioning of said tube-holding means for maintaining synchronism between the position of said tube-holding means and said moving means and driving said conveyer system and hence said tube-holding means at a varying rate that imparts substantially zero acceleration at zero speed thereby preventing oscillations of said tube-holding means which normally result from starting and stopping, said moving means propelling said tube-holding means through a station at which process means is located, and means for stopping said conveyer system when said tube-holding means is at said station.

3,021,852
CAR TOP TENT
Norman A. Hoffman, 1202 Fort Howard Ave., West De Pere, Wis.
Filed Apr. 10, 1959, Ser. No. 805,490
9 Claims. (Cl. 135—1)

2. A car top tent comprising a base, a cover, side flaps extending between said base and cover, means mounting said cover to said base for movement between a collapsed position directly overlying said base and an extended position with one end thereof spaced vertically above said base and with said cover and side flaps defining a tent enclosure, said base being elongated and adapted to have one end positioned over the rear end of a car top, said one end of said base having an extension connected to said one end movable between the retracted position forwardly of said one end of said base and an extended posi-



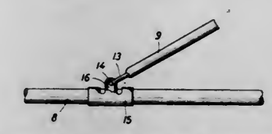
tion extending rearwardly of said one end of said base to project beyond the rear end of a car top to which said base is secured, an entrance opening in said base extension and said side flaps enclosing said base extension whereby said tent when erected encloses said base extension.

3,021,853
CLAMP
Charles D. O'Leary, 103 Churchill Road, McLean, Va.
Filed Dec. 10, 1959, Ser. No. 858,830
5 Claims. (Cl. 135—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)



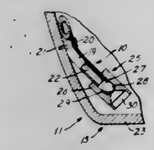
1. The combination with an inflatable tent or the like having a sleeve portion adjacent the ground, said sleeve having a series of spaced openings throughout its length, a pipe positioned in said sleeve having a series of spaced openings registering with said openings in said sleeve, a plurality of ground anchors secured beneath the surface of the ground around the perimeter of the tent, a line carried by each of said ground anchors extending through said openings in said sleeve and in said pipe; of a plurality of readily releasable clamps, each clamp comprising a housing positioned on said pipe, said housing having a passageway therethrough to receive said line, a second passageway communicating with said first-mentioned passageway, and means cooperating with said second passageway to wedgingly clamp said line in said first-mentioned passageway thereby holding said line taut to maintain said housing, said pipe, and said sleeve on the ground when said tent is inflated and to readily release said line when said tent is to be struck.

3,021,854
HINGE CONNECTION FOR UMBRELLA TOP RIBS AND STRUCTURES
Wolfgang Uthemann, Leichlingen, Rhineland, Germany, assignor to Rosenkaimer G.m.b.H., Leichlingen, Rhineland, Germany
Filed Mar. 23, 1959, Ser. No. 801,165
Claims priority, application Germany Mar. 25, 1958
2 Claims. (Cl. 135—32)



2. A hinge plate for connecting an umbrella strut to a top rib, said hinge plate comprising an elongated bendable plate having a thin intermediate portion and thickened end portions, and transverse ribs extending across said plate intermediate said thin intermediate portion and said thickened end portions, said transverse ribs having opposed curved faces and together with said intermediate portion being adapted to form a top rib encircling sleeve, and said thickened end portions having pin receiving portions adjacent said ribs.

3,021,855
SELF-MOTIVATING AUTOMATIC SYPHONING AND EQUALIZING TANK SYSTEM
Theodore R. Cartwright, 401 Clinton St., St. Clair, Mich., and Louis A. Werner, 9489 Hemonger St., Algonac, Mich.
Filed Mar. 10, 1958, Ser. No. 720,299
13 Claims. (Cl. 137—38)

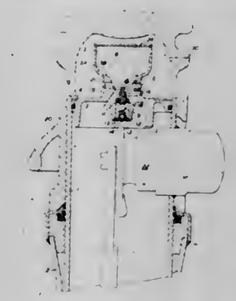


12. A self-syphoning, mobile liquid retaining unit motivated by movement thereof bodily, comprising a mobile liquid container of substantial rigidity and non-deformable in the normal use thereof, and a syphon conduit including an intake portion disposed in said container having an intake mouth which is positioned to receive liquid from said container and initiate syphoning action in said conduit under the force of liquid surges in the container due to said movement of the unit bodily.

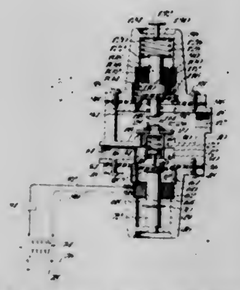
3,021,856
BREATHER VALVES FOR PIT PROPS
Herbert Bend, Chesterfield, and John James Wilson, Watendlath, Mitton, Tewkesbury, England, assignors to Dowty Mining Equipment Limited, Ashchurch, Tewkesbury, England
Filed Dec. 29, 1958, Ser. No. 783,305
Claims priority, application Great Britain Jan. 2, 1958
5 Claims. (Cl. 137—43)

1. A breather valve assembly at the top of a liquid reservoir which is more or less upright in use, but which at times may be horizontally disposed, a passage in a wall of said reservoir affording communication between the interior of such reservoir and the ambient atmosphere, a valve seating, a valve member arranged to seat thereon and so closing said passage, a spring urging said valve member to closed seated position, and a valve-operating member operatively connected to the valve, a cup formed with a central recess and a surrounding annular recess,

the walls of the central recess being slightly divergent upwardly from the vertical when the reservoir is upright, and the walls of the annular recess being more greatly divergent from the vertical when the reservoir is upright, the walls of the two recesses merging about a circular zone, a ball weight received in said cup and of a size to enter and remain within the central recess in all upright positions of the reservoir, but to roll therefrom into the annular recess when the reservoir is horizontally disposed, said cup and said valve-operating member being relatively located to effect engagement of the ball with the valve-operating member when the ball is in the central recess, and consequent opening movement of the valve and its valve-operating member, and hence opening of said passage to the atmosphere, and the walls of the annular recess, outside the circular merging zone, being of a height in relation to the size of the ball to constitute a step barring reentry of the ball into the central recess under impetus, so long as the reservoir is horizontally disposed.

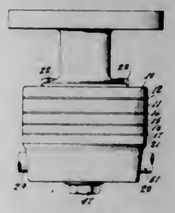


3,021,857
CONTROL VALVE
Thomas J. Davidson, Santa Ana, Calif., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Mar. 6, 1959, Ser. No. 797,797
8 Claims. (Cl. 137—66)



1. In a flow control device, the combination comprising valve head means movable between an open position and a closed position, first solenoid means including a first armature engageable with one side of said valve head means to move said valve head means to said open position when said first solenoid means is energized, second solenoid means including a second armature engageable with the other side of said valve head means to define said open position when said second solenoid means is energized, first resilient means biasing said second armature in a direction urging said valve head means toward said closed position, second resilient means in said valve head means engageable with said first armature when said first solenoid means is energized to resiliently bias said valve head means toward said open position, said first biasing means being operable upon deenergization of said second solenoid means to overcome the biasing force of said second resilient means to cause said second armature to shift said valve head to said closed position irrespective of the energization of said first solenoid means.

3,021,858
FLUID PRESSURE TRANSMITTERS
David B. Kirk, Oreland, Pa., assignor to Moore Products Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed July 20, 1960, Ser. No. 44,081
5 Claims. (Cl. 137—85)

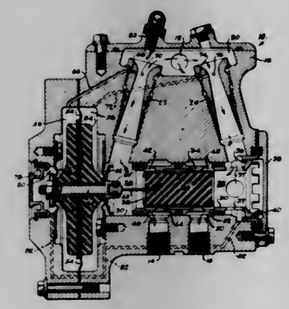


1. In a fluid pressure transmitter, a supply fluid connection, a transmitted fluid connection, a process fluid connection, a pressure responsive member having said process fluid connection in communication with one side thereof and said transmitted fluid connection in communication with the other side thereof, valve means interposed between said supply fluid connection and said transmitted fluid connection, a pressure responsive device controlling said valve means having a first pressure responsive portion with which said transmitted fluid connection is in communication, said pressure responsive device having second and third pressure responsive portions opposed to said first portion, a pilot pressure circuit comprising a member having a restriction and a nozzle connected in series between the supply pressure connection and the transmitted pressure connection, said pressure responsive member being movable in spaced relation to said nozzle for establishing a pilot pressure, a fluid connection having a restriction therein communicating with said second pressure responsive portion for applying the pilot pressure thereagainst, and a fluid connection in communication with said third pressure responsive portion for applying the pilot pressure thereagainst.

3,021,859
DIAPHRAGM CONSTRUCTION
Vito Liantonio, Passaic, and John B. Minnich, Glen Rock, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Mar. 23, 1956, Ser. No. 573,488
8 Claims. (Cl. 137—101)

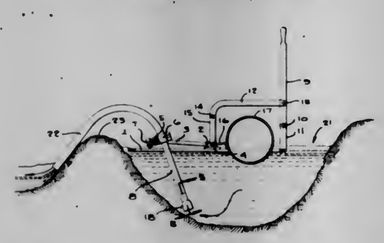
1. A mechanism comprising a housing; means including a flexible diaphragm and float member dividing said housing into a pair of chambers, said float member being connected to the center of said diaphragm so that said diaphragm extends radially outwardly from the periphery of said float member; and means for supplying a liquid to each of said chambers so that said diaphragm and float member are immersed in said liquid, the weight of the liquid displaced by said diaphragm and float member being at least substantially equal to the weight of said diaphragm and float member.

6. Liquid flow dividing mechanism comprising a housing having first and second chambers, an inlet port, a pair of passageways each communicating at one end with said inlet port and at the other end with said first chamber and each having a venturi-type portion; a pair of outlet ports, one for each of said passageways; a valve member slidable in said first chamber for controlling communication of each passageway with its associated outlet port such that motion of the valve member in one direction increases the communication of one passageway with its outlet port and decreases the communication of the other passageway with its outlet port and motion of the valve member in the opposite direction has the reverse effect; a movable wall member dividing said second chamber into opposed chamber portions and



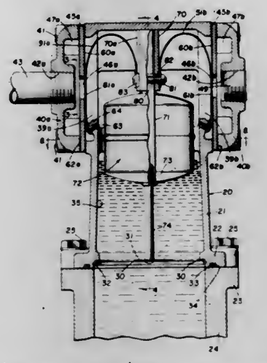
operatively connected to said valve member for moving said valve member to control the division of flow to said outlet ports; passage means connecting one of said chamber portions to the throat of one of said venturi portions and connecting the other of said chamber portions to the throat of the other of said venturi portions such that upon unbalance of the pressures in said chamber portions said movable wall member is effective to move said valve member in a direction to restore balance of the pressures in said chamber portions; said movable wall member and valve member each having a lightweight construction and being of such size that the weight of the liquid displaced by each said member is at least substantially equal to the weight of said member.

3,021,860
APPARATUS FOR SETTING IRRIGATION TUBES
Robert B. Gandy, Idalou, Tex.
Filed June 17, 1960, Ser. No. 36,913
9 Claims. (Cl. 137—124)



8. A siphon system for irrigation ditches comprising a supporting platform, a plurality of siphon tubes, a rocker frame having a float on one end and an attaching rack for said siphon tubes on the other end, means journalling said rocker frame for pivotal movement on said platform along an axis intermediate said float and said rack, and means connected to said rack for manually pivoting the same on said platform.

3,021,861
LIQUID-LEVEL CONTROLLED DEVICES
Henry Robert Billeter and George B. Richards, Deerfield, Ill., assignors to Liquid Controls Corporation, North Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 512,551, June 1, 1955. This application Nov. 19, 1958, Ser. No. 775,077
11 Claims. (Cl. 137—192)

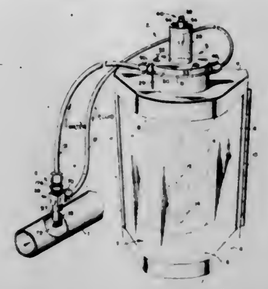


1. Apparatus of the type described comprising casing means defining a chamber and having an opening therein communicating with said chamber and having a plurality of internal face portions disposed symmetrically about an axis, a valve actuator movable in said chamber along said axis, a plurality of normally flat, resilient strip members having first portions secured to said casing means adjacent said face portions, second portions secured to said actuator, said first and second portions being spaced apart by intermediate portions which are free and maintained in bowed shape, said strip members being bent back upon themselves and being of sufficient length so that they form two substantially parallel portions, one at the corresponding face portion and one at said second portion, whereby said strip members exert equal forces on the faces with which they cooperate respectively and position said actuator on said axis for free movement therealong, at least one of said face portions having an orifice therein in position to be closed by the corresponding strip member when said actuator is in a first position along said axis and to be exposed when said actuator is in a second position along said axis.

3,021,862
FLUID INJECTION SYSTEM
Carl A. Miller, St. Paul, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware
Filed Oct. 5, 1960, Ser. No. 60,624
12 Claims. (Cl. 137—205.5)

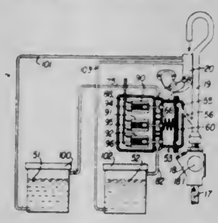
1. In a fluid dispensing unit, a fixture comprising a bottom portion and a top member having upper and lower surfaces, means for supporting a fluid container beneath said top member, fluid-flow controlling and indicating means mounted on the upper surface of said top member, said controlling and indicating means comprising an upstanding member of solid material at least part of which is transparent, first and second fluid passages extending downwardly in said upstanding member, said first passage being visible through said transparent part, a flow indicating float slidably disposed in said first passage, a counterbore in the top of said upstanding member in which the upper ends of both of said passages terminate, a valve sealed in the counterbore and arranged to inter-connect said bores, means for adjusting said valve to control the flow from said first bore to

said second bore, coupling means for connecting a fluid discharge line to the lower end of said second bore, means for removably securing a fluid container within



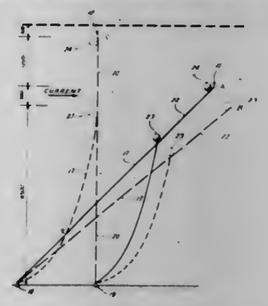
the bottom portion of said fixture and beneath said top member, and a fluid intake tube depending from the under side of said top member and connecting to the bottom of said first passage.

3,021,863
DISPENSING MECHANISM
Frank D. Low, La Grange Park, Ill., assignor to General Electric Company, a corporation of New York
Filed Aug. 26, 1960, Ser. No. 52,175
5 Claims. (Cl. 137—209)



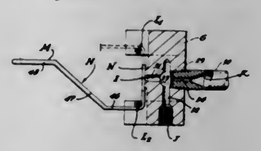
1. In a washing machine having a tub for bearing articles to be washed, control means for driving said machine through a sequence of operations, a water inlet path in communication with said tub, a water valve operated between closed and open positions by said control means for feeding water through said inlet path at predetermined periods during said sequence; means for injecting individual liquid additives into said inlet path at said predetermined periods for transmission into said tub, said injecting means comprising a chamber for receiving a flow of water from said inlet path during said feeding, a second chamber, a deformable diaphragm positioned between and separating said chambers, said diaphragm deformably responsive to the flow of liquid in said first chamber for moving into said second chamber to thereby increase the pressure in said second chamber, a plurality of individual additive reservoirs each substantially closed to the ambient atmoshpere, individual tubes extending from each of said reservoirs to said second chamber, individual valve closure mechanisms normally isolating each of said tubes from said second chamber, means including said control means for selectively operating each of said valve mechanisms in desired time relationship to the opening of said water valve to place the tube individual to said selected mechanism in communication with said second chamber whereby said increased pressure in said second chamber is transmitted to the reservoir individual to said selected mechanism, and a second tube leading from each of said reservoirs to said water inlet path to carry additive displaced by said pressure increase from the reservoir individual to said selected mechanism to said water inlet path.

3,021,864
PIPELINE
Farrile S. Young, Houston, Tex., assignor to Gulf Interstate Oil Company, Houston, Tex., a corporation of Delaware
Filed May 2, 1958, Ser. No. 732,497
4 Claims. (Cl. 137—236)



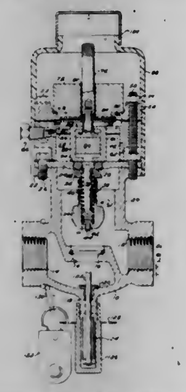
1. A pipeline suspended under water comprising, a plurality of sections of metallic pipe, a plurality of flexible connectors connecting the pipe sections into a continuous pipeline, said pipeline being puoyant when containing gas, primary anchoring means provided by a plurality of primary cables secured to the pipeline at spaced points and to a plurality of primary anchors resting on bottom upstream of the pipeline, said primary cables being of greater length than the water depth, the length of the primary cables and the degree of buoyancy of the pipeline being selected relative to the maximum current conditions expected to provide a predetermined depth beyond which the pipeline will not descend, and secondary anchoring means provided by a plurality of secondary cables secured to the pipe at spaced points and to secondary anchors resting on bottom, said secondary cables being of lesser length than the depth of the water to limit ascending of the pipeline to a predetermined depth as the force of the current reduces.

3,021,865
PRESSURE REGULATOR
Joseph K. Beckett, Yorba Linda, Calif.
(P.O. Box 264, Bakersfield, Calif.)
Filed Oct. 26, 1959, Ser. No. 848,840
2 Claims. (Cl. 137—270)



1. A pressure control valve comprising a valve body having a first opening formed in one exterior surface portion thereof and second and third openings formed in other exterior surface portions thereof, said openings providing fluid passageways interconnected internally of said valve body; a pair of fulcrum means rigidly supported from said valve body on opposing sides of said first opening; and a valve member pivotally supported from one of said fulcrum means, said valve member having a short lever arm adapted to completely close said first opening and a long lever arm actuable for controlling the spacing of said short lever arm from said completely closed position, said lever arms being joined together at a right angle whereby said valve member is reversible between two alternate positions provided by said pair of fulcrum means.

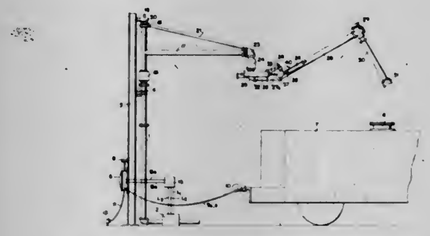
3,021,866
SAFETY CONTROL SYSTEM FOR FLUID DISTRIBUTION AND APPARATUS
Harold E. Handley, Jackson, Mich., assignor, by mesne assignments, to Economy Governor Company, a corporation of Indiana
Filed July 28, 1958, Ser. No. 751,559
8 Claims. (Cl. 137—458)



1. In an automatic fluid flow control valve comprising a valve casing having inlet and outlet ports in communication through a valve seat and a magnetic valve element releasable to sealingly engage said valve seat, valve actuating means including a variable volume chamber in communication with the pressurized fluid whose flow is to be controlled, a diaphragm defining a portion of said chamber and movable between first and second positions in response to desired maximum and minimum pressure conditions, respectively, within said chamber, a fluid tight uninterrupted non-magnetic partition interposed between said chamber and said casing and affixed to the latter, a magnet within said chamber normally in contiguous relation with said partition and creating a flux passing through said partition capable of maintaining said valve element adjacent thereto, means interconnecting said diaphragm and said magnet operable to vertically lift said magnet from said partition thereby reducing the flux passing therethrough and releasing said valve element upon diaphragm movement exceeding said first position, and magnetic flux shunting means responsive to diaphragm movement operable by changing the flux path to reduce the flux passing through said partition supporting said valve element thereby releasing said valve element upon diaphragm movement exceeding said second position.

3,021,867
GROUNDING SYSTEM FOR LIGHT OIL LOADING STATIONS
James E. Gallagher, Eddystone, Pa., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
Filed Apr. 6, 1959, Ser. No. 804,359
1 Claim. (Cl. 137—565)

In a light oil loading station rack including an oil loading line, an oil loading line pump and an electric motor driving the pump, a system for preventing the transfer of the oil to a truck to be loaded until there is established a proper electrical connection between the truck and a ground, the system comprising an electrical connecting means between the truck and the ground, an electronic grounding detecting means, energizing means between the electronic grounding detecting means and the electric motor driving the pump, a generally horizontally disposed loading rack arm assembly including a normally vertically inclined loading rack spout and a pipe connecting means connecting the oil loading line and the loading rack arm assembly and a vertically swivelling pipe connecting means connecting the loading rack spout to the remainder of the loading rack arm assembly, a receiving means positioned on the vertically swivelling pipe connecting means to receive a piston rod which locks the loading rack spout in the normally vertically inclined position, a piston cylinder positioned on the loading rack arm assembly having fluid inlet means and containing the piston rod, compressible spring means

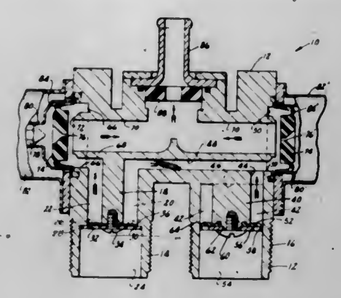


for holding the piston rod in the receiving means, piston head means connected to the piston rod and disposed between the fluid inlet means and the compressible spring means, and a fluid connecting means between the loading rack arm assembly and the fluid inlet means of the piston cylinder, whereby the electronic grounding detecting means detects the establishment of a proper electrical connection by the electrical connecting means between the truck and the ground and operates the energizing means between the electronic grounding detecting means and the electric motor driving the pump, the pump draws the oil from the oil loading line into the loading rack arm assembly and the fluid connecting means between the loading rack arm assembly and the fluid inlet means of the piston cylinder, the oil in the piston cylinder compresses the compressible spring means, the piston rod is withdrawn from the receiving means, and the loading rack spout in the normally vertically inclined position is unlocked.

3,021,868
NON-THERMAL MIXING VALVE
Julius William Kovach, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,716
5 Claims. (Cl. 137—607)

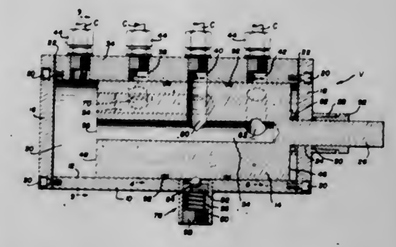
1. A mixing valve comprising a valve body having separate hot and cold inlets; an outlet chamber; a first passageway from the hot inlet to the outlet chamber; a first valve device in said first passageway for controlling flow therethrough; a second passageway from the cold inlet to the outlet chamber; a second valve device in said second passageway for controlling flow therethrough; a first check valve in said first passageway for preventing reverse flow therethrough; a second check valve in said second passageway upstream of the second valve device for preventing reverse flow therethrough; a third passageway extending from the hot inlet at a point upstream from the first passageway to a point in the second passageway between the second check valve and second valve device; a third check valve in said third passageway for preventing reverse

flow therethrough; the sole reverse flow communication between the first passageway and hot inlet being through



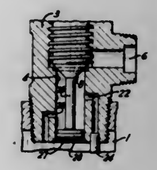
the first check valve; and the sole reverse flow communication between the third passageway and hot inlet being through the third check valve.

3,021,869
ROTARY TYPE HYDRAULIC VALVE
James F. Ross, 1308 33rd St., Columbus, Ga.
Filed July 30, 1959, Ser. No. 830,551
12 Claims. (Cl. 137—621)



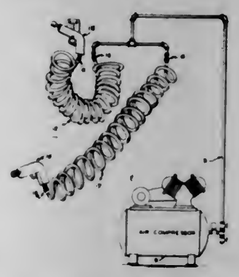
1. A valve comprising a casing having a valve bore therein, a valve plug rotatably mounted in said casing and having an outer surface in close proximity to the surface of said valve bore, said plug having an internal supply passage with an inlet, said casing having a supply port communicating with said inlet and adapted to be connected to a source of fluid, said casing having additional ports extending through the wall of said bore, said additional ports including a reservoir port adapted to be connected to a fluid reservoir, and a pair of load ports adapted to be connected to a load, said supply passage having three ports extending to the wall of said casing bore and being aligned with said reservoir port and said load ports, respectively, for three corresponding operating positions of said plug, said valve plug having two additional internal passages, one of said additional passages having ports extending to said bore wall and aligned with one of said load ports and said reservoir port, respectively, when said plug is in a first of said positions and in which the remaining load port is aligned with its associated supply passage port, the other of said additional passages having ports extending to said bore wall and aligned with said reservoir port and said remaining load port, respectively, when said valve plug is in a second of said positions and in which said one load port is aligned with its associated supply passage port, said load ports being blocked by said plug when said plug is in a third of said positions and in which said reservoir port is aligned with its associated supply passage port.

3,021,870
TOP VALVE FOR A PRESSURE VESSEL
George R. Allen, 21 Woodland Drive, Pittsburgh, Pa.
Filed Oct. 14, 1959, Ser. No. 846,494
5 Claims. (Cl. 137—625.12)



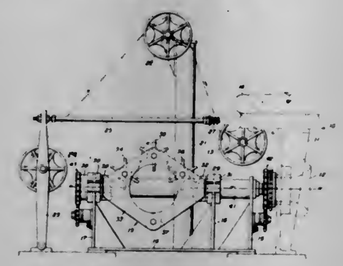
1. A top valve for a pressure vessel containing liquefied gas and vapor under pressure, the valve comprising a body provided with an inlet passage extending upward from its lower end, the upper end of the passage forming an upwardly facing seat, said body having an outlet above said passage and connecting with it, a vertically movable valve closure normally engaging said seat, means for raising the closure away from its seat, the side wall of said passage having a vapor inlet port at one level and a liquid inlet port at another level, said body having bores connecting said ports with its lower end, a tube depending from the liquid inlet bore and extending downward below said body and having an open lower end to locate the liquid inlet at a lower level than the vapor inlet, and a slide valve in said passage engaging its side wall and connected with said closure for vertical movement thereby as the closure is moved from its seat to a wide open position or an intermediate position, the slide valve including a passage-sealing member at its lower end disposed below said inlet ports while the closure is on its seat and in its intermediate position, said sealing member being disposed between said inlet ports when the closure is raised to wide open position, and the slide valve being formed to connect the lower inlet port with said outlet when the closure is in its intermediate position and to connect only the upper inlet port with said outlet when the closure is wide open.

3,021,871
HOSE FOR PORTABLE PNEUMATIC EQUIPMENT
Frank J. Rodgers, 545 Boulevard, Westfield, N.J.
Filed May 14, 1958, Ser. No. 735,268
3 Claims. (Cl. 138—118)



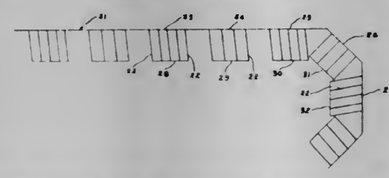
1. A recoilable thermoplastic flexible hollow coiled tube adapted to transmit fluids under high pressure comprising a seamless resilient nylon tube having a substantially circular cross-section and in the form of a series of normally contacting, compact, adjacent convolutions and a wall-thickness sufficient to adapt it to withstand high internal pressures and to provide self-restoring ability.

3,021,872
APPARATUS FOR TWISTING BARBED WIRE
William H. Johns, Highland Heights, and Albert L. Stoeckel, Euclid, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey
Filed Jan. 2, 1959, Ser. No. 784,627
1 Claim. (Cl. 140—60)



In a barbed-wire machine including a rotating twister, the combination therewith of a preliminary twister comprising a rotary frame axially alined with said first-mentioned twister, said frame having three sheaves journaled therein, the middle one offset from the other two, said other two being adjacent the axis of rotation of said frame, said frame having hollow journals at its ends, and means driving said preliminary twister in the same direction as but at a speed greater than that of said first-mentioned twister, whereby parallel wires introduced through one of said journals and trained under the adjacent end sheave, over the middle sheave and under the other end sheave are twisted by said preliminary twister and partially untwisted by said first-mentioned twister.

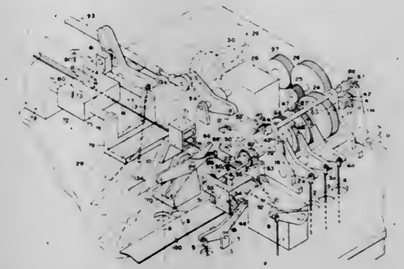
3,021,873
METHOD OF MAKING WIRE RACKS
John W. Barnstead, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Original application June 20, 1957, Ser. No. 666,869. Divided and this application July 28, 1958, Ser. No. 751,538
6 Claims. (Cl. 140—71)



1. The method of making a wire rack which comprises the steps of fixedly attaching a plurality of groups of wire elements at spaced locations along a single continuous substantially straight piece of wire stock, and bending said piece of wire stock at points between said groups of wire elements so as to enclose said wire elements within an area generally defined by said piece of wire stock and fixedly attaching the resulting structure together to form a rigid rack design.

3,021,874
COIL WINDING MEANS
Floyd A. Lyon, Brookville, and Theodore F. Aronson, Glen Cove, N.Y., assignors to Halm Instrument Co., Inc., Glen Head, N.Y., a corporation of New York
Filed June 25, 1958, Ser. No. 744,599
3 Claims. (Cl. 140—92.2)

1. Coil winding means for winding parallel connected coils from a single straight length of wire, comprising a first driven mandrel for winding a first coil, a second mandrel rotatably mounted about an axis perpendicular to and offset from said first mandrel axis and adapted to be moved into coaxial relation to said first mandrel to wind a second coil continuous with said first coil from said straight wire, means to then rotate said offset second



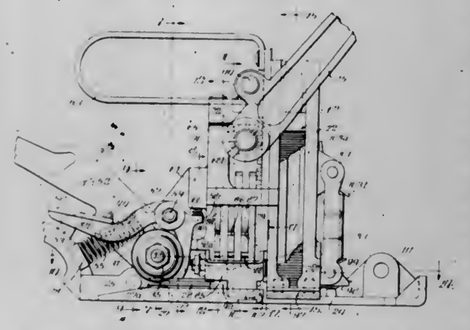
mandrel parallel to said first mandrel to bend said first and second coils into predetermined parallel space relation, whereby said first and second coils are made parallel and spaced a predetermined amount, and means to eject said continuous parallel coils from said first and parallel second mandrels.

3,021,875
HOT STICK FOR APPLYING PREFORMED ARMOR
Eldridge Coleman, 1540 E. Cambridge, Phoenix, Ariz.
Filed Mar. 23, 1959, Ser. No. 801,321
2 Claims. (Cl. 140—93)



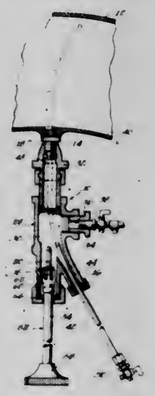
2. A hot stick tool for wrapping preformed spiral armor strands on an energized line wire, consisting of a pole shaped handle of insulating material, a head attached to the top of said handle having a bracket, a vise operating on said bracket including a stationary horizontal upper jaw at the top of said bracket and having a centrally disposed arcuate notch on its under face and a slot co-extensive with the jaw opening on its under face, a lower jaw slidably supported on said upper jaw and having an upper face adapted to slidably enter the slot on the lower face of said upper jaw and provided with an arcuate notch in registering position with the arcuate notch in the upper jaw, said jaws defining an opening extending away from said bracket, a push rod slidably supported in said head and connected to said movable jaw at its upper end and extending downward from said bracket parallel to said handle, a sleeve having a locking screw and slidably supported on the lower portion of said handle and attached to the lower end of said push rod, and a C shaped double hook attached to the top of said stationary jaw, extending in the same plane as said vise and having the opening between its tines facing in the same direction as the opening of the space between said vise jaws.

3,021,876
STRAPPING TOOL
Marchand B. Hall, Olympia Fields, Douglas O. Anderson, Jr., Park Forest, and Edward Staron, Evergreen Park, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 30, 1956, Ser. No. 607,044
12 Claims. (Cl. 140—93.4)



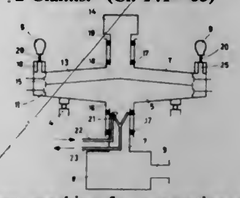
1. The combination in a strapping tool, of a main frame, a gripping member mounted on said frame for engaging the underside of the free end of a metal strap looped around a package, an auxiliary frame movably mounted on said main frame, a resilient shearing blade mounted on said main frame to press said free end of said strap against said gripping member, tensioning means mounted on said auxiliary frame to engage the upper side of the supply portion of said strap to press it against said shearing blade, means to elevate said auxiliary frame to move said tensioning means away from said supply portion, and means connected to said auxiliary frame and coupled detachably to said shearing blade for elevating the latter with respect to said gripping member.

3,021,877
MEANS FOR SERVICING LIQUID-FILLED PNEUMATIC TIRES
Henry Wellsch, Swift Current, Saskatchewan, Canada
Filed Sept. 8, 1959, Ser. No. 838,712
8 Claims. (Cl. 141—38)



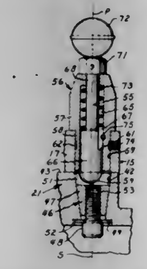
1. An air-liquid exchange device for working through the valve stem of a pneumatic tire with the valve core removed to replace air in the tire with liquid or to expel liquid in the tire with air under pressure; said device comprising a single elongated hollow body, coupler means at one end of said body for connecting the same to the valve stem in fixed position during manipulation of the valve core and exchange of air or liquid in the tire, said body having a pair of aperture means extending generally toward said coupler means, a valve core removing element slidably mounted in one of said aperture means and including means engageable with the valve core and an exteriorly accessible operating handle for manipulating said element to remove the valve core from the valve stem along a predetermined fixed longitudinal axis of the body and coupler means to an inoperative position housed within the end of the body remote from said coupler means, means providing a fluid-tight seal between the body and the valve core removing element, a retractable discharge tube slidably extending through the other aperture means in the body for movement between a retracted position out of the path of movement of said valve core removing element along said predetermined fixed longitudinal axis and an advanced position projecting through the coupler means and valve stem with a portion of the tube disposed generally along a portion of the said fixed longitudinal axis within said coupler means from which portion the valve core removing element has been retracted, means providing a fluid-tight seal between said discharge tube and the body, and means on the body forming a liquid supply inlet communicating with the interior of said hollow body for the passage of liquid through the valve stem and around the inserted discharge tube in its advanced position.

3,021,878
EXHAUST MACHINE FOR LAMP AND RADIO BULBS AND THE LIKE
Oskar Herrmann, Heidenheim (Brenz), Germany, assignor to Patent-Treuhand-Gesellschaft für Elektrische Glühlampen m.b.H., Munich, Germany
Filed Sept. 16, 1957, Ser. No. 684,009
Claims priority, application Germany Sept. 17, 1956
2 Claims. (Cl. 141—65)



1. An exhaust machine for evacuating a number of bulbs each having a tubulation, comprising a generally circular enclosure rotatable about an axis, said enclosure providing a large tank vacuum chamber therein of generally circular contour coaxial with said enclosure and extending diametrically across said axis, said enclosure also constituting a rotatable turret having loading and unloading stations and intermediate stations therebetween at some of which at least exhaust of the bulbs is effected, a pump fixed on said enclosure for maintaining a vacuum in said tank chamber, and a plurality of heads next to the periphery of and carried by said enclosure, said chamber having a series of valve seats each opening next to and into a respective one of said heads, each of said heads adapted to mount a bulb by its said tubulation, a series of valves, one for each of said valve seats, each said head having direct communication with said tank chamber by unseating the respective valve therefor, said turret transferring said bulbs sequentially step-by-step from said loading station to said unloading station, said tank chamber having a volume in excess of the total volumes of all of said bulbs, said pump rotating with said turret and having exhaust capacity sufficient to maintain a substantially constant vacuum in said tank chamber not withstanding admission of air to said vacuum tank chamber from each bulb inserted in a head at the loading station at each step of rotation of said turret, whereby the pressure in said tank chamber increases only so little that the pump will continue to operate within the pressure range of its greatest suction work, said vacuum tank chamber being located in close proximity both to said pump and to all of said tubulations.

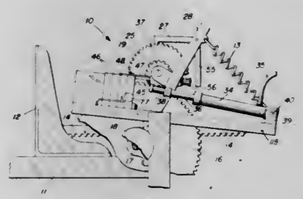
3,021,879
ADJUSTABLE INDEXING MECHANISM
Emerson R. Berends, Tupelo, and Rex P. Deghuee, Amory, Miss., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1959, Ser. No. 809,004
17 Claims. (Cl. 143—6)



1. An adjustable multiposition indexing mechanism for a pair of members interconnected for relative movement along a constrained path and having opposed relatively movable surface areas comprising a plurality of socket members mounted in one of said members in spaced relation centered along a center line in its opposed movable surface area determined by the path of relative movement of said members, said socket members comprising plug-like elements mounted in said one of said members for respective rotational movement around a respective axis intersecting said center line; a pin mounted in the other of said members for axial movement in and out of the opposed movable surface area of said other member, said pin being positioned for selectively entering any of said plurality of plug-like elements along an axis offset to one side of said center line in the opposed movable surface area of said one of said members and providing an eccentric engagement contact with a selected plug-like element whereby said relatively movable pair of members will have a predetermined relative position when said pin is engaged with a respective plug-like element; and means individual to each plug-like element for releasably clamping the respective plug-like elements in a preselected relative position to said one relatively movable member whereby upon releasing actuation of said releasable clamping means of the selected plug-like element and engagement of said pin in the released plug-like element the predetermined relative position of said relatively movable members determined by said pin and said released plug-like element may be finely adjusted upon rotation of said pin to shift the eccentric engagement contact between said pin and the released plug-like element.

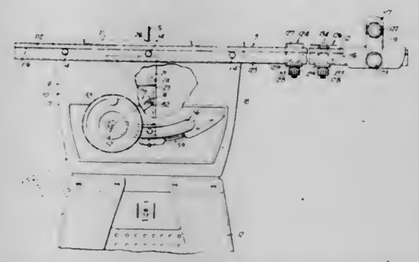
3,021,880
SAWMILL SET WORKS
Owen C. Smith, 1285 N. Church St., Richland Center, Wis.
Filed Aug. 6, 1959, Ser. No. 832,062
13 Claims. (Cl. 143—118)

1. In a sawmill set works of the type described in juxtaposition with a sawmill set shaft and drive gear fixedly attached thereto the combination of a member rotatively mounted on said set shaft and radially extending therefrom adjacent to said drive gear mounted on said radially extending member, a restraining gear and a pawl operably mounted on said radially extending member both said restraining gear and said pawl being fixedly coupled with said drive gear in at least one direction of rotation of said drive gear, said drive gear and said set shaft being rotatable in said one direction of rotation by movement



of said radially extending member, said restraining gear comprising a gear portion operably engageable with said drive gear and a ratchet portion operably engageable with said pawl, said ratchet portion and pawl enabling said gear portion to be rotated in said one direction by movement of said lever member rotatively about said set shaft, providing and preventing said gear portion from being rotated in the opposite direction of rotation by counter movement of said member.

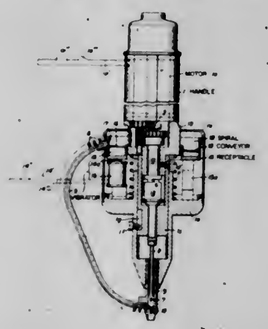
3,021,881
POWER SAW
John W. Edgemond, Jr., Los Altos, and John J. O'Connor, Menlo Park, Calif., assignors to Yuba Consolidated Industries, Inc., San Francisco, Calif., a corporation of Delaware
Original application Dec. 31, 1956, Ser. No. 631,820, now Patent No. 2,945,516, dated July 19, 1960. Divided and this application Jan. 28, 1959, Ser. No. 792,942
1 Claim. (Cl. 143—174)



In a power saw construction of the type having a saw table and a rotatable saw blade, an elongated outrigger member secured across the front of said saw table and a similar elongated outrigger member secured across the rear of said saw table, wherein the outrigger members extend considerably beyond one side of the table, and wherein further the upper surfaces of the outrigger members define a plane which is parallel to and spaced below the plane defined by the work surface of said saw table, the combination of a work piece supporting member supported between said elongated outrigger members to support a workpiece laterally of said blade and said table, the supporting surface of said work piece support member lying coplanar with the work surface of said saw table and above the plane of said outriggers, a rip fence movable along and supported by said outrigger members and disposed generally parallel to the plane of the saw blade and to said work piece support member, said fence being

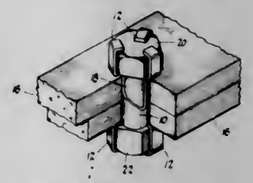
spaced to clear the work surface of said saw table and said support member to permit uninterrupted movement of said fence across said work surface and said support member, whereby said fence can be utilized to guide work pieces narrower than the spacing between the edge of the saw table and the saw blade as well as those extending laterally substantially to the limits of the outriggers.

3,021,882
SCREW FEED AND DELIVERY MEANS FOR A POWER-OPERATED SCREW DRIVER
Joseph Knoll, Berlin-Buckow, Erwin Bestel, Berlin-Schoneberg, and Heinz Stolp, Berlin, Germany, assignors to Allgemeine Elektricitäts-Gesellschaft, Berlin-Grunewald, Germany
Filed Nov. 27, 1959, Ser. No. 855,582
Claims priority, application Germany Dec. 2, 1958
6 Claims. (Cl. 144—32)



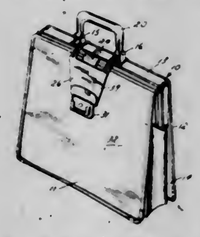
1. In an electrically operated screw driver having a screw driver blade formed at its end with a bit and a motor for turning said blade, said blade and motor being arranged along the axis of the screw driver, a screw feed and delivery means which comprises: a receptacle arranged about said axis, said receptacle being able to receive an indeterminate number of similar screws; a spiral conveyor arranged in said receptacle; vibrating means for vibrating said receptacle and conveyor therein for aligning screws received in said receptacle, and feed channel means for receiving aligned screws from said receptacle and feeding them to said bit of said screw driver blade in a position in which said bit will be able to engage said screws for turning the same.

3,021,884
BOLT LOCKING SLEEVE
Arthur D. Provenzano, Chattanooga, Tenn., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,912
1 Claim. (Cl. 151—8)



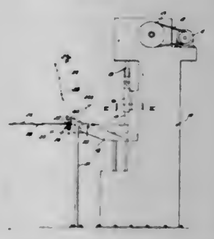
A bolt assembly for structural members having aligned apertures comprising a sleeve extending through the apertures and having at least three outwardly turned fingers overlying the surface of the members at each end of the aligned apertures, a bolt the shank of which extends through said sleeve with the head of the bolt engaging the fingers at one end of the sleeve, a nut threaded on the bolt and engaging the fingers at the other end, said fingers being bent over the respective head and nut with the fingers extending along the side and over a portion of the outer face thereof, said head and nut being polygonal in transverse section and the fingers being related thereto so that they are in flat overlying relation with the side thereof with the relative angular disposition of the fingers being such that the angle between each pair of adjacent fingers, taken circumferentially in either direction from any finger is less than 180° so as to prevent removal of the head or the nut should the bolt be severed.

3,021,883
BRIEF CASE CONSTRUCTION
Seymour Kanner, Brooklyn, and Ben Sonkin, Yonkers, N.Y., assignors to Kanner Leather Goods Corp., New York, N.Y., a corporation of New York
Filed Jan. 9, 1961, Ser. No. 81,581
4 Claims. (Cl. 150—1.6)



1. In an article of luggage having a hinged frame, a pair of panel elements attached to portions of said frame, and a gusset element interconnecting said panel elements, said frame having a pair of post elements attached thereto and a handle element associated with said post elements, an improved locking flap comprising: a main body portion and a pair of leg portions, said main body portion including an outwardly disposed edge having lock hasp means thereon and an inner edge, said leg portions being interconnected to said main body portion at opposite ends of said inner edge and being disposed in mutually parallel relation, there being an elongated slot extending axially along each of said leg portions, said slots being laterally spaced a distance corresponding to the distance between said pair of post elements and disposed upon said post elements.

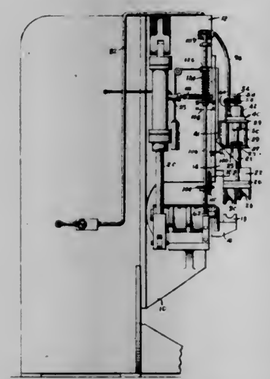
3,021,885
APPARATUS FOR ASSEMBLING CROSS-BRACES ON A MULTI-LEG TOWER
Ivan Dwight Rohn, 116 Limestone Bellevue, Peoria, Ill.
Filed July 26, 1955, Ser. No. 524,345
9 Claims. (Cl. 153—1)



3. In a tower section forming apparatus for attaching a plurality of longitudinally spaced connecting straps to

spaced uprights, a press, a series of strap receiving stations each comprising a pair of spaced fixed arms and a rocking arm mounted between and pivoted on said fixed arms between its opposite ends, and a strap bending die disposed on said rocking arm at each station, the press being connected to the rocking arms for contemporaneously causing said rocking arms at each station to rock to cause the straps to be wrapped around the upright by means of said dies.

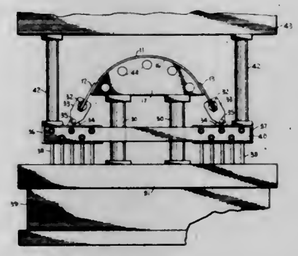
3,021,886
TURRET PUNCH FOR PIPE BENDING MACHINE
Kenneth D. Ferris, Seymour, Ind., assignor to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Mar. 16, 1960, Ser. No. 15,308
14 Claims. (Cl. 153—48)



1. In a turret punch for a pipe bending machine having a ram vertically movable with respect to a pair of pivotally mounted horizontally aligned dies, a sleeve rigidly mounted on said ram for movement therewith, a rotatable shaft carried in said sleeve and movable therewith, said shaft extending below said ram and sleeve and rigidly connected to a thrust pad carried against the lower faces of said ram and sleeve, a pair of arcuate punches mounted on said thrust pad and movable upon rotation of said shaft and pad to dispose one of said punches in vertical alignment with said dies, said punches having different radiuses of curvature for forming different radial bends along the axis of a pipe supported on the dies upon movement of said punches through the plane of the pipe, and means for selectively rotating said shaft to dispose the desired punch in alignment with said dies.

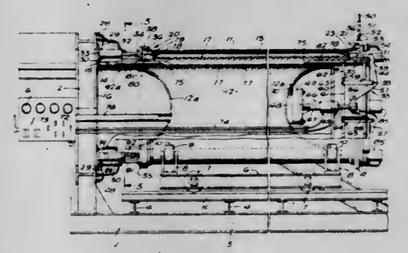
3,021,887
TITANIUM STRETCH FORMING
Kermit W. Maynard, National City, Calif., assignor to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California
Filed July 19, 1956, Ser. No. 598,844
3 Claims. (Cl. 153—48)

1. The method of bending a long thin sheet of titanium to the shape of a curved die face which comprises the steps of resistance brazing the inner ends of thin short stainless steel sheets to the opposite ends of said sheets by interposing strips of brazing alloy in face adjacency respectively between said titanium sheet and each of said stainless steel sheets, pressing each of said strips between the titanium sheet and the stainless steel sheet adjacent thereto and concurrently passing electrical current therethrough and progressively along a line across said sheets with intensity and limited duration sufficient to heat each of said strips along said line to brazing temperature at the melting temperature of said alloy; heating said die face to a temperature within the range of 400° to 800° F.; placing the center portion of said long



sheet against the center of said die face; and pulling the outer ends of said short sheets to stretch said long sheet beyond its elastic limit and along said die face to conform said long sheet to said die face.

3,021,888
PIPE EXPANDING APPARATUS
Samuel G. Marinovich, deceased, late of Los Angeles, Calif., by Melan J. Marinovich, special administrator, Los Angeles, and Eli J. Marinovich, Temple City, Calif., assignors, by mesne assignments, to Yuba Consolidated Industries, Inc., San Francisco, Calif.
Filed Dec. 31, 1956, Ser. No. 631,779
17 Claims. (Cl. 153—79)

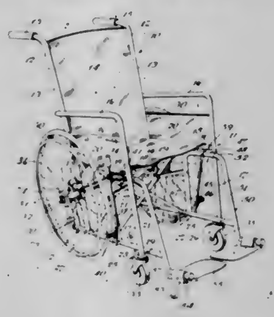


1. In apparatus for producing a pipe of a desired diameter, the combination of a frame structure, a head frame included in said frame structure, a reservoir for operating fluid supported on said head frame and having a diameter approximating but smaller than said desired diameter to enable a pipe to be telescoped over said reservoir, annular clamping and sealing means mounted on said reservoir including an inner tapered ring engaging the end of the pipe on its face, and an outer ring resisting the expanding force of the tapered ring, for closing an end of said pipe clamping and sealing means including an inner tapered ring engaging the end of the pipe on its face and an outer ring resisting the expanding force of the tapered ring, for closing and sealing the other end of said pipe, said reservoir having vents establishing communication from the interior of the reservoir into the space in the pipe surrounding the reservoir, means for actuating the clamping means to hold and seal the ends of the pipe and means for increasing the pressure of the fluid within the pipe to expand the same unrestrictedly from without to approximately said desired diameter.

3,021,889
FOLDABLE WHEEL CHAIR

William E. Mize, Cincinnati, Ohio, assignor to Institutional Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

Continuation of application Ser. No. 513,840, June 7, 1955. This application Jan. 25, 1960, Ser. No. 4,562
7 Claims. (Cl. 297—433)

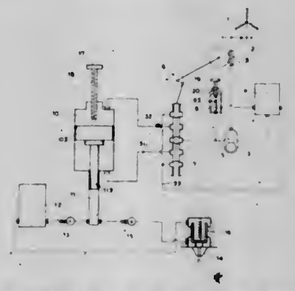


7. A folding wheel chair comprising a pair of vertical side frames each having a bottom horizontal runner, a cross-brace structure including a pair of pivotally joined diagonal members having their lower ends pivotally secured to said runners, a pair of horizontal seat supporting members secured to said diagonal members adjacent the upper ends thereof, a flexible fabric seat secured to and extending between said seat supporting members, and a pair of auxiliary frames secured to said side frames, each of said auxiliary frames having an inverted L-shaped configuration and providing a depending rear leg and a forwardly extending upper leg, linkage means extending between and connecting said diagonal members and the depending leg of said auxiliary frames for maintaining said side frames in parallel relation, said upper legs of said auxiliary frames being disposed below and parallel with said seat supporting members for supporting the same when said seat is occupied.

3,021,890
APPARATUS FOR THE INTERMITTENT AND ADJUSTABLE FEEDING OF FUEL OIL BURNERS FOR BRICKKILNS

Domenico Corrado Donini, Via Borgonuono 10, Milan, Italy

Filed Jan. 17, 1958, Ser. No. 709,491
Claims priority, application Italy-Feb. 19, 1957
5 Claims. (Cl. 158—36.3)

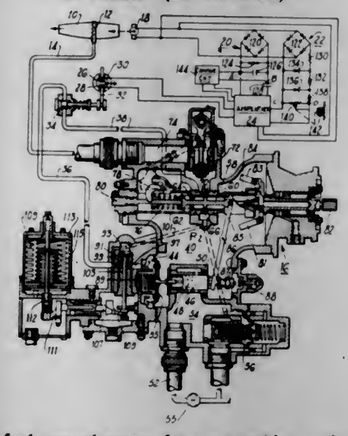


1. An apparatus for the intermittent feeding of fuel oil burners for brick kilns comprising a source of fuel oil, a burner nozzle, feed conduit means connecting the nozzle with the source, a piston pump in communication with said conduit means for delivering fuel oil under pressure from the source to the burner nozzle, fluid pressure means for operating the piston pump and including a fluid circuit having a pump means operatively disposed therein, means regulating the operating pressure in said circuit for varying the pressure in said conduit means and controlling the velocity of flow of the fuel oil from the nozzle and means directly engaging the piston pump for regulating the operating stroke of the piston pump to control the quantity of fuel oil injected through the nozzle.

3,021,891
ACCELERATION LIMITING DEVICE FOR USE WITH HYDRO-MECHANICAL FUEL METERING SYSTEMS

Morrison G. Kitchen and David J. Schaffer, South Bend, Ind., assignors to The Bendix Corporation, South Bend, Ind., a corporation of Delaware

Filed Feb. 24, 1956, Ser. No. 567,639
18 Claims. (Cl. 158—36.4)



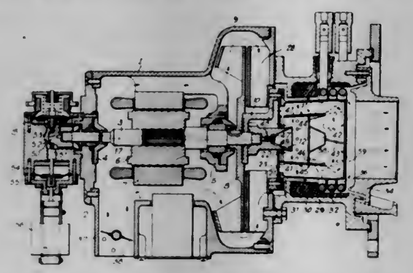
1. A fuel control system for a gas turbine engine, said system having a metering valve and a hydro-mechanical fuel scheduling means including a pump for controlling the flow across said valve, a tachometer for producing an alternating current signal varying in voltage and frequency with the speed of said engine, rectifying and filtering means for converting said signal to a direct current voltage varying with speed, means including a capacitor for differentiating said direct current voltage to produce a signal proportional to engine acceleration, a circuit producing an acceleration reference signal including a voltage divider and means for varying the output of said circuit with changes in altitude conditions, an amplifier including means comparing said acceleration reference signal with said acceleration signal to produce an acceleration error signal, electro-responsive means driven by the output of said amplifier, and means responsive to movement of said electro-responsive means for limiting the flow output of said system during acceleration over the portion of the speed range where compressor stall is encountered.

3,021,892
BURNER APPARATUS

Gabriel Brola, Bourg-la-Reine, France, assignor to Societe Anonyme: Generale Thermique-Procedes Brola, Gervais, France

Filed Jan. 7, 1959, Ser. No. 785,535
9 Claims. (Cl. 158—77)

1. In a burner apparatus, the combination of an outer generally cylindrical wall defining a first combustion chamber which is open at one end, means mounting said first combustion chamber for rotation about its axis, a feeder cup mounted within said first combustion chamber coaxially with the latter adjacent the other end of said first combustion chamber and rotatable therewith, means for supplying liquid fuel to the interior of said feeder cup, an inner generally cylindrical wall disposed coaxially with, and radially between said cup and said outer wall and joined to the latter, said inner wall extending from said other end, and terminating before said one end of the outer wall and defining a second combustion chamber which opens at the end thereof closest to said one open end of the first combustion chamber, said inner wall having apertures therein adjacent the edge of said feeder cup so that liquid fuel discharged from said cup and centrifugally projected onto said inner wall will pass through

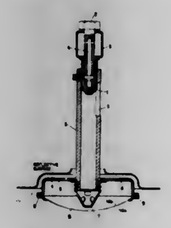


said apertures and engage said outer wall or will be vaporized on the inner wall, means for admitting air into the other end of said second combustion chamber between said inner wall and feeder cup to support the combustion of fuel vaporized in said second combustion chamber with the burning gases of such combustion being subjected to centrifugal force to produce a relatively low pressure at the center of said second combustion chamber, and means for admitting air into said other end of the first combustion chamber between said outer and inner walls to support the combustion of the fuel engaging said outer wall, whereby the burning gases of the combustion in said first chamber have a tendency to be recirculated into said open end of the second combustion chamber by said relatively low pressure at the center of the latter and thus provide a stabilized flame front.

3,021,893
RADIATING GAS BURNER

Guido Hönger, Zuchwil-Solothurn, Switzerland, assignor to Schweiz Gasapparatefabrik Solothurn, Solothurn, Switzerland

Filed Nov. 8, 1954, Ser. No. 467,525
1 Claim. (Cl. 158—116)

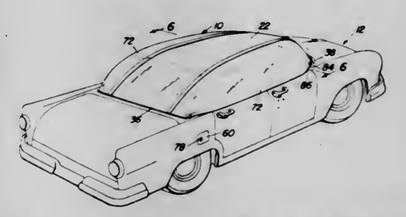


A fast starting radiating gas burner wherein the combustion of an explosive gas-air mixture heats an external diaphragm to incandescence, flash-back is prevented, and the combustion zone is external of this diaphragm, comprising a mixing tube having an air inlet, a gas nozzle directed into said mixing tube for setting up a flow of an explosive gas-air mixture therethrough, a distributing cap on the end of said tube and having discharge openings therein, a burner body attached to said mixing tube and in communication with the said mixing tube through the cap, said body being cup-shaped of large diameter relative to said tube and cap and having a heat reflective inner surface, an outwardly projecting flange on the edge of said body, a diaphragm closing the cup-shaped body and defining together with said body a relatively cool and large fuel distributing chamber, said diaphragm including two slightly spaced gas pervious meshed grids, the edges of said grids being connected to said flange with the innermost grid engaging the entire diaphragm-facing flange surface in efficient heat conducting contact therewith, said diaphragm being outwardly convex for more efficient fuel distribution thereon from the relatively small distributing cap, said inner grid directly facing said cap so that the grid is cooled by the fuel as it flows from said cap into said body and prior to the combustion thereof outside of the outer grid, the openings of the grids being of substantially equal size of not more than one millimeter and said grids being juxtaposed with the strands of the inner grid traversing the openings of the outer grid to reflect heat back through said outer grid, the spacing and alignment of the grids, the heat conducting connection between the body flange and the inner grid, the heat reflection of the internal body wall and inner grid, and the cooling fuel flow directly on the inner grid all cooperating to keep the inner grid relatively cool whereby combustion is restricted to the zone within the meshes and over the outer face of said diaphragm and flash-back is prevented.

3,021,894
CAR TOP PROTECTIVE COVER

George F. La Due, River St., Milton, Vt.

Filed Apr. 13, 1959, Ser. No. 805,866
3 Claims. (Cl. 160—23)



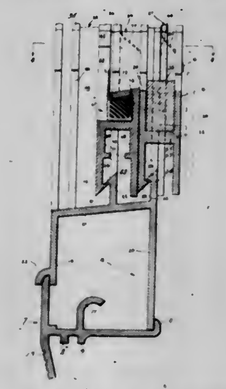
1. A cover assembly for a vehicle body, said assembly comprising an elongated housing adapted to be carried by said body and to extend transversely thereof rearwardly of the top of said body, said housing having a longitudinal slot formed in one side thereof, a shaft journaled longitudinally in said housing, a flexible extendable cover having one end mounted on said shaft, said cover having a center longitudinally extending section and a pair of opposite side flaps spaced slightly from said one end of said covering and adapted to at least partially cover the sides of the top of the vehicle over which said center section extends and to be folded back over opposite side portions of said center section prior to the latter being wound about said shaft, said center section including a pair of opposite side longitudinally extending flexible stiffeners secured thereto, extending the entire length thereof and secured at said one end of said cover to said shaft whereby said cover may be extended over a vehicle body or rolled into a storage position wound about said shaft upon rotation of the latter, said center section having a width slightly less than the length of said slot, a transversely extending retaining and molding strip secured

to the other end of said covering comprising a closure for said slot and including a plurality of rollers journaled thereon at points spaced longitudinally therealong about an axis extending longitudinally of said strip adapted to engage a vehicle top over which said cover is being moved to support said strip in a slightly elevated position over said vehicle top.

3,021,895
WINDOW STRUCTURE

Bernard E. Mendelsohn, Newton, Mass. (% Harvey Window Corp., 309 Main St., Watertown 72, Mass.)

Filed May 16, 1956, Ser. No. 585,352
4 Claims. (Cl. 160—90)



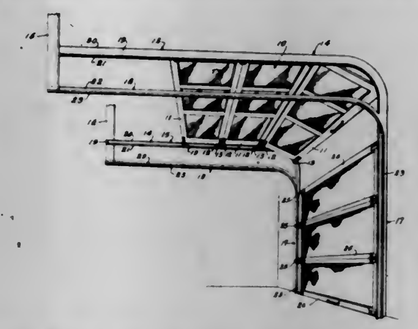
1. A storm window having a rectangular frame, removable runners positioned at each side of said frame, upper and lower window sashes and a screen slidably engaged by said runners, a removable locking member positioned over the bottom of said frame and for locking said lower window sash in a closed position, and means positioned below and hidden by said locking member and forming a pivotal support for said window sashes at the lower edge thereof when said locking member and runners are removed.

3,021,896
OVERHEAD GARAGE DOOR AND SCREEN COMBINATION

Joseph A. Buono, 15 Shannon Ave., Watertown, Conn., and Richard J. Mascoli, 514 Piedmont St., Waterbury, Conn.

Filed Nov. 18, 1959, Ser. No. 853,747
1 Claim. (Cl. 160—113)

In a garage having a rectangular front opening, the combination of a sliding door and a sliding open screen for selective storing horizontally below the ceiling of said garage, the front opening of said garage being adapted to selectively and interchangeably receive said door and said screen in vertical position, said door and said screen each consisting of a plurality of hinged articulated panels, said garage having a pair of horizontal door side guide rails supported immediately below the ceiling thereof, a pair of horizontal screen side guide rails supported in spaced parallel relation to and below said horizontal door side guide rails, said screen guide rails being narrower than and spaced farther apart than said door side guide rails, each of said horizontal door side guide rails and each of said horizontal screen side guide rails being connected to separate vertical laterally offset coplanar side guide rails at the front of said garage by curved merging side guide rails, said door and said screen each having outwardly extending side guide rollers of appropriate lengths and diameters fitting within their respective side guide rails, the tops of the vertical sections of said door guide rails having side openings to permit said screen rollers to pass from said

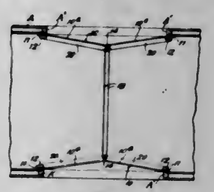


curved screen guide rails into said vertical side guide rails, whereby said door and said screen may be selectively guided from the horizontal storage position at the top of said garage into close fitting vertical position in the front opening of said garage.

3,021,897
GRAIN CAR DOOR STRUCTURE

Michael J. Ford, Hartsdale, N.Y., assignor, by mesne assignments, of one-half to International Paper Company, New York, N.Y., a corporation of New York, and one-half to The Stanley Works, New Britain, Conn., a corporation of Connecticut

Filed Mar. 16, 1959, Ser. No. 799,683
5 Claims. (Cl. 160—114)



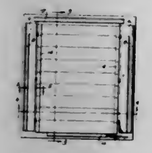
1. In combination with a freight vehicle having opposite door openings enclosed by frames, a door across each opening having a central bar and door portions inclined outwardly therefrom, means for anchoring the sides of said portions to said frames, each of said doors being equipped with a central pocket enclosing its associated bar, an opening in each bar and a pair of openings in the associated central pocket aligned with said bar openings, and tension means extending through the openings of said doors to draw said doors inwardly, whereby said door panels form a V recess with the panels inclined from the center of the door outwardly to said door frames.

3,021,898
WINDOW PROTECTION

Alberto Crusellas, 312 22nd St., Miramar, Havana, Cuba, and Arturo Goudie, Riomar Bldg., Miramar, Havana, Cuba

Filed Jan. 27, 1958, Ser. No. 711,507
1 Claim. (Cl. 160—364)

A protective device for a window structure comprising a rectangular frame having side, top and bottom members forming a window opening, a channel member attached to the bottom member and a pivoted member attached to each side member, these latter members being pivoted by means of a flange, a channel member at right angles to this flange forming a continuation of this flange so that when the pivoted members are swung into the

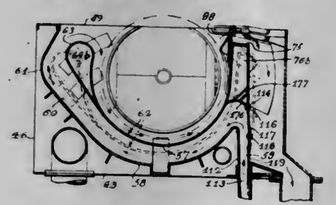


window opening, these pivoted members and the bottom channel member form guide means for a protective curtain that may be slid down from inside the opening to cover a series of slats that are inside the opening and knobs attached to the top frame member to hold the top of the curtain in place.

3,021,899
ADJUSTABLE CYLINDER PAPERMAKING MACHINE

Philip H. Goldsmith, 2255 Closse St., Montreal, Quebec, Canada

Filed Mar. 31, 1960, Ser. No. 18,899
4 Claims. (Cl. 162—329)



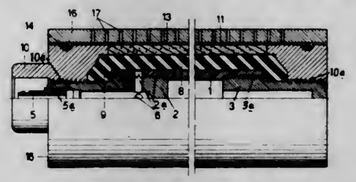
1. A cylinder machine comprising a vat having end and side walls, a mold journalled for rotation on a horizontal axis in the vat, a back head extending transversely of and adjacent one end of the vat, a similarly extending front head adjacent the other end of the vat, an inner circle of uniformly flexible sheet metal having its ends secured to and supported exclusively by said heads, the ends of said heads adjacent the side walls of said vat having pins protruding therefrom through slots provided in the side walls of said vat with said pins acting as keys and said vat side wall slots acting as keyways guiding the travel of said keys and means for selectively adjusting said heads and the intervening circle portion relative to said mold, said adjusting means including actuating members mounted on the exterior of said vat and operatively contacting said protruding circle head pins.

3,021,900
APPARATUS FOR MANUFACTURING PIPES FROM PLASTIC MATERIALS

Giorgio Marchioli, Via Morgagni 22, and Giuseppe Gremigni, Via Lomellina 52, both of Milan, Italy

Filed Oct. 1, 1958, Ser. No. 764,625
Claims priority, application Italy Oct. 10, 1957
4 Claims. (Cl. 162—402)

1. Apparatus for manufacturing cylindrical pipes of uniform cross-section from plastic material, comprising a core including a tubular, radially expansible resilient sleeve and removable heads clamping the opposite ends of said sleeve and having cylindrical outer surfaces with diameters greater than the outer diameter of said sleeve, the inner ends of said heads defining annular end faces projecting radially beyond the outer surface of said sleeve so that the plastic material can be deposited on said outer surface between said end faces, a liquid pervious sheet wrapped around said core and extending axially onto said cylindrical outer surfaces of the heads, retaining means releasably securing said sheet to said heads and being flush with said cylindrical outer surfaces of the heads, a one-piece, perforated tubular mould having a uniform internal diameter as large as the outer diameter of said pervious sheet on said outer surfaces of the heads



and opening axially at least at one end, said mould having a length substantially larger than the axial distance between said annular end faces of the heads and telescopically receiving said core with said pervious sheet secured on the latter, and means for supplying fluid under pressure to act against the inner surface of said resilient sleeve and thereby radially expand the latter for compressing the plastic material against said pervious sheet and one-piece mould.

3,021,901
TREATMENT OF FLUID-PRODUCING FORMATIONS

Robert Charles Earlougher, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 7, 1959, Ser. No. 785,527
8 Claims. (Cl. 166—42)

1. The process of fracturing a subterranean formation penetrated by a wellbore which consists essentially of admixing, with a liquid fracturing composition, between 10 and 250 pounds, per thousand gallons of the liquid portion of said composition, of a low-solubility polyphosphate selected from the class consisting of alkali metal magnesium polyphosphates, alkali metal calcium polyphosphates, alkali metal calcium magnesium polyphosphates, and mixtures thereof to prepare a slurry of said polyphosphate and injecting the slurry down the wellbore and back into the formation with sufficient force to effect fractures in the formation and to embed at least a portion of the polyphosphate contained in the slurry in the interstices, pores, passageways, and fissures remote from the wellbore, including fissures newly made by the fracturing pressures, and to cause the polyphosphate so embedded to be held in said interstices, pores, passageways, and fissures to provide a front comprising said polyphosphate within said formation remote from said wellbore and so lodged that underground water moving in the direction of said wellbore must pass through said front and thereby cause low-solubility salt producing ions therein to come in contact with the polyphosphate comprising said front and thereby lessen the tendency to form low-solubility salts in said fluid-bearing formation.
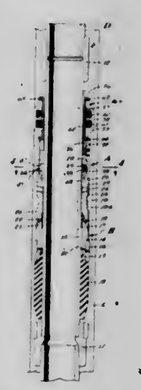
3,021,902
CONTROL APPARATUS FOR SUBSURFACE WELL TOOLS

Julian D. Keithahn, Anaheim, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California

Original application May 19, 1958, Ser. No. 736,138, now Patent No. 2,975,837, dated Mar. 21, 1961. Divided and this application Jan. 20, 1959, Ser. No. 787,955
10 Claims. (Cl. 166—237)

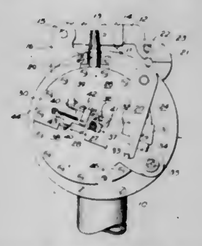
1. In a well tool for operation in a well bore: a body member connectible to a running-in string for moving the

tool within the well bore: a clutch member slidable longitudinally on said body member; one of said members having a plurality of clutch teeth disposed along the length of said one member and about a portion of its circumference; a clutch element on the other of said members having clutch teeth adapted to mesh with said other clutch teeth to couple said members for longitudinal movement together when said members occupy one relative position; said one member having a smooth surface extending alongside said clutch teeth on said one



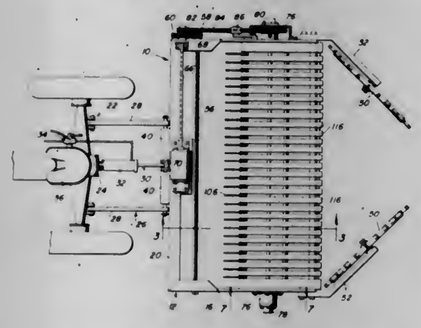
member about another portion of its circumference and movable into engagement with said clutch element upon relative angular movement between said members to another relative position to uncouple said members from each other, the teeth on said clutch element being circumferentially displaced from the teeth on said one member when the members occupy said another relative position, whereby said clutch element teeth and teeth on said one member are prevented from meshing with each other.

3,021,903
PRESSURE ACTUATED VALVE
Wayne E. Ault, Youngstown, Ohio, assignor to Automatic Sprinkler Corporation of America, Youngstown, Ohio, a corporation of Delaware
Filed Apr. 2, 1959, Ser. No. 803,599
5 Claims. (Cl. 169—19)



1. In combination, a pipe having a discharge nozzle at the end thereof through which fluid is supplied, a valve cap for closing said nozzle, a lever having one end pivotally mounted on said pipe and a central section pivoted to said valve cap, supports on said pipe, a rod positioned transversely of and journaled in said supports, a secondary lever secured to said rod and movably engaging the end of the first mentioned lever, an arm secured to said rod, a secondary arm pivoted at one end to said supports, a release mechanism incorporating a diaphragm in a diaphragm case secured to said supports, both sides of said diaphragm case having openings to atmosphere, a pitot tube defining one of said openings in one side of said diaphragm case, said pitot tube having an open outer end facing in substantially the same direction as the discharge nozzle on said pipe whereby rapid increases in pressure from a particular point of origin are rapidly detected and fluid is directed through the discharge nozzle toward such point of origin, a third lever in said release mechanism engaging said diaphragm and said secondary arm, said third lever acting when moved by said diaphragm to free said secondary arm to permit said arm and said secondary lever to move to free said first mentioned lever.

3,021,904
BEAN HARVESTER
Dale H. Larson, deceased, late of Othello, Wash., by B. Frances Larson, executrix, P.O. Box 114, Othello, Wash.
Filed July 30, 1959, Ser. No. 830,655
3 Claims. (Cl. 171—53)

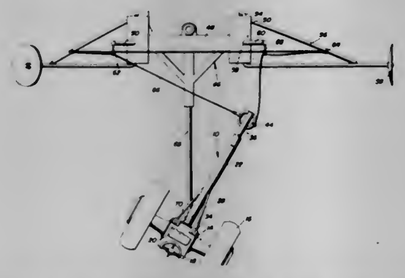


1. A bean harvester for attachment to a farm tractor comprising a frame, means disposed forwardly on the frame for attachment to a tractor, a horizontally disposed rotatable polygonal bar journaled on the frame, a transverse shaft journaled on the frame rearwardly of the bar, drive means mounted on the frame and adapted to be driven from the power take-off of a tractor, means connecting the drive means to the bar and the shaft for drivingly rotating the bar and shaft, a plurality of circular disks mounted on said shaft for rotation therewith, a plurality of circumferentially spaced fingers pivotally mounted on the disks for rotation therewith, each finger having an offset arm thereon, cam means engaging the offset arms for pivoting the fingers in relation to the disks during rotation of the disks and orientating the fingers in various angular relations to the disks during rotation and disposing the fingers vertically as the disk moves them over the top and rearwardly for moving bean vines pulled out of the ground surface by the rotating bar upwardly and rearwardly while loosening dirt therefrom, and windrowing means mounted on the frame and disposed rearwardly of the fingers, said windrowing means including freely rotatable wheel members having radial tines thereon for moving the bean vines into a windrow.

3,021,905
AUTOMATIC MARKER CHANGER
Vearl J. Quibell, Kennedy, Minn.
Filed Mar. 24, 1958, Ser. No. 723,353
3 Claims. (Cl. 172—127)

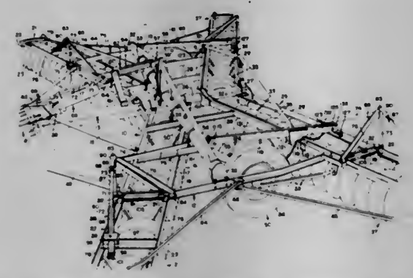
1. A tractor drawn marking implement combination comprising, tractor vehicle means, marker mounting means pivotally connected to said tractor vehicle means about a vertical axis and extending rearwardly therefrom, a pair of marker means pivotally mounted on the

mounting means and extending laterally therefrom for angular positioning in a common plane perpendicular to the direction of travel of the implement, flexible means interconnecting said marker means at points in spaced relation to the mounting means and limiting angular positioning of the marker means with respect to each other, said flexible means including connecting portions, and



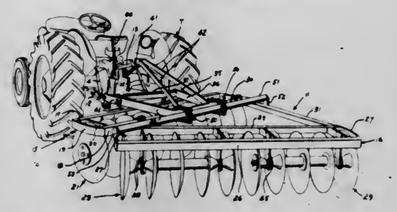
changer means rigidly mounted on the tractor vehicle means and extending rearwardly from the vertical axis in operative connection to said connecting portions of the flexible means to effect angular displacement of one of the marker means in response to turning of the tractor vehicle means relative to the mounting means in one direction about the vertical axis.

3,021,906
DISK HARROW WITH EXTENSION GANGS
Charles H. Youngberg, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Original application Dec. 5, 1958, Ser. No. 778,412. Divided and this application Jan. 14, 1960, Ser. No. 2,394
5 Claims. (Cl. 172—397)



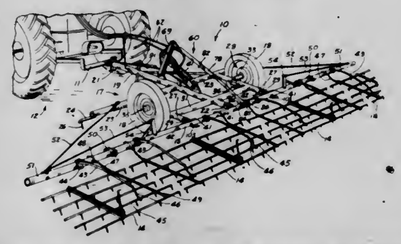
1. In a wheel barrow comprising a main frame, swingable ground wheel means movable to raise and lower said main frame, a disk gang movable generally vertically relative to said main frame when the latter is lowered, a part shiftably carried by said main frame and having one portion connected with said ground wheel means to be shifted when said ground wheel means is shifted to raise said main frame, a lifting connection between the rear portion of said part and said disk gang and including tension means connected between said disk gang and said wheel means and reacting against said shiftable part whereby movement of the wheel means when raising said gang serves to exert a lifting effect through said tension means on said disk gang, and means acting between said main frame and said part in response to movement of the latter when the main frame is raised relative to said ground wheel means for raising said part so as to exert additional lifting effect on said disk gang.

3,021,907
GROUND WORKING IMPLEMENT
Alvin William Lapins, Fresno, Calif., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Nov. 10, 1958, Ser. No. 773,015
3 Claims. (Cl. 172—441)



1. In a groundworking implement having front and rear sections, in combination, means securing said sections together as a unit, a hitch frame extending over the front section and having means adjacent its forward end for coupling with the hitch linkage of a tractor, means releasably connecting said hitch frame to the front section, means for coupling said hitch frame to the rear section including a transverse bar mounted on and at an angle to said rear section, and a pair of coupling elements mounted on and spaced laterally of the hitch frame cooperating with said bar for supporting and guiding the coupled sections for lateral movement as a unit relative to the hitch frame upon release of the means connecting said front section to the hitch frame.

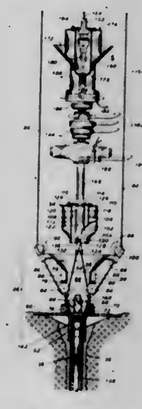
3,021,908
FARM IMPLEMENT TRANSPORT CARRIER
Paul A. Dlugosch, Storm Lake, Iowa, assignor to Noble Manufacturing Company, Sac City, Iowa, a corporation of Iowa
Filed Jan. 3, 1958, Ser. No. 707,053
1 Claim. (Cl. 172—466)



A transport carrier for an earth working implement adapted to be connected in a towed relation with a tractor having a power unit, said transport carrier including a wheel supported frame having a longitudinally extended center member, a drawbar to which the implement is attachable in a trailing manner extended transversely of said frame and pivotally connected thereto and to the center member at the rear end thereof, rock arm means secured to said drawbar and in axial alignment with said center member, an elongated pivot unit pivotally mounted at one end to said center member and adapted to assume a generally upstanding position wherein the other end thereof is free, a fluid pressure type piston and cylinder unit pivotally mounted at one end to said center member rearwardly of said pivot unit connection and with the piston thereof extended upwardly and forwardly toward said tractor and pivotally connected to said pivot unit intermediate the ends thereof, and lift means secured at one end to said rock arm means and at the other end to said pivot unit free end whereby said lift means extend over and substantially parallel to said piston and cylinder

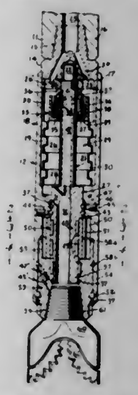
unit, said lift means including a pair of telescopically connected outer and inner sections, said inner section having a pair of openings formed therein spaced longitudinally of said inner section, said outer section having an elongated slot formed therein registrable with said openings and of a length greater than the distance between said openings, and a pin insertable through said slot and either of said openings, whereby when said pin is inserted in one of said openings, upon a full power stroke of said piston the implement is raised above the surface of the ground at approximately a forty-five degree angle, and whereby when said pin is inserted in the other of said openings, upon a full power stroke of said piston the implement is raised above the surface of the ground at approximately a ninety degree angle, a stop plate secured to said inner section for engagement with an end of said outer section whereby to limit the movement together of said sections to prevent shearing said pin, and means mounted on said center member forwardly of said pivot unit connection for locking said pivot unit in an operative position thereof.

3,021,909
MEANS FOR OFFSHORE DRILLING
William R. Postlewaite, Menlo Park, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Oct. 1, 1958, Ser. No. 764,615
6 Claims. (Cl. 175—7)



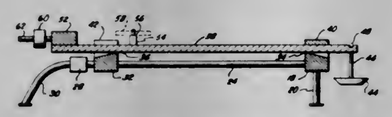
1. Apparatus for use in working in a well in an offshore location comprising a drilling vessel at the surface of a body of water and anchored above a submerged well site, a submerged well having an opening at said well site, a base assembly at the bottom of said water and affixed to the submerged earth at said well site, said base assembly formed with a passageway therethrough in alignment with said submerged well, a pair of pulley means mounted on said base assembly in spaced-apart diametrically opposed relationship relative to the axis of said passageway, a respective towline mounted over each of said pulley means, a respective winch means on said drilling vessel for each said towline, a single towing head formed with a vertical passageway therethrough, means operably connecting one end of each said towline to a said respective winch means and the other end of each said towline to said single towing head in substantially coaxial alignment with said passageway through said towing head, complementary means on said base assembly and said towing head to center said towing head on said base assembly with said passageway in said towing head in coaxial alignment with said passageway in said base assembly when said towing head is in engagement with said base assembly, means displacing said other end of each said towline from said coaxial alignment with said passageway in said towing head and said passageway in said base assembly when said towing head and said base assembly are in engagement, a string of tubing supported in a vertical position by said drilling vessel, means on said drilling vessel and connected to said string of tubing for lowering and raising said string of tubing vertically through said water, means connecting the lower end of said string of tubing to said towing head and in axial alignment with said passageway through said towing head, means to operate said winch means to forcibly pull said towing head downwardly through the water and into engagement with said base assembly, said means for lowering said string of tubing vertically through said water being operable to lower said string of tubing through said towing head and said base assembly and into said submerged well.

3,021,910
COMBINATION DRILL COLLAR AND TURBINE DRIVEN BIT
John H. Martin, Rte. 1, Box 472, Brazoria, Tex.
Continuation of application Ser. No. 616,084, Oct. 15, 1956. This application Jan. 6, 1960, Ser. No. 880
8 Claims. (Cl. 175—25)



8. A tubular drill collar and turbine driven bit assembly for employment on the end of a drill stem in the rotary method of drilling wells, as oil wells, said assembly comprising a tubular drill collar adapted upwardly for connection to said drill stem to establish fluid communication therewith, and having successively below said connection outer turbine blades extending inwardly, an inwardly extending ring and internal gear teeth concentrically formed therein, said assembly also including an axially extending shaft having inwardly extending, vertically spaced apart, inner turbine blades supported thereon above said ring to extend with turbine blade clearance into the interstices between said outer turbine blades, said shaft also having a portion extending through said ring concentrically therewith and having therebelow a portion eccentric to said concentric portion, a planetary gear mounted on the eccentric portion of said shaft with upper teeth thereon with part to mesh progressively with said drill collar teeth and with part to be progressively spaced therefrom, and with lower teeth therebelow, a flow passage opening into said shaft between said blades and said ring and extending downwardly therethrough, a connection member, anti-friction means rotatably connecting said connection member to said drill collar, seal means below said anti-friction means to effect a seal between said connection member and said drill collar, said connection member having internal teeth therein upwardly with said lower teeth in part to mesh progressively therewith and with part to be progressively spaced therefrom, said connection member having a shoulder therein to support said planetary gear, an anti-friction means between said concentric shaft portion and said ring to rotatably support said shaft against axial movement, and a hollow drilling bit connected to the lower end of said connection member to establish fluid communication with said flow passage whereby pressure fluid pumped down said drill stem thus passes through said turbine blades to rotate said shaft to drive through said planetary ring gear as it meshes with drill collar teeth and rotates said connection member and said drilling bit therewith in drilling.

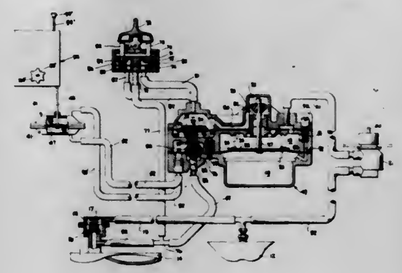
3,021,911
WEIGHING APPARATUS
Edwin A. Pecker, Los Angeles, Calif.
(P.O. Box 1965, Lausanne 1, Switzerland)
Filed May 6, 1960, Ser. No. 27,338
10 Claims. (Cl. 177—251)



1. A weighing apparatus comprising a frame including a horizontal guide member, a first support fixedly mounted on the frame adjacent one end of the horizontal guide member, a second support mounted on the horizontal guide member and movable therealong, the first and second supports providing a pair of spaced parallel ridges located in a common horizontal plane, an elongated beam having a smooth horizontal under surface resting on the ridges of the first and second supports with the ridges extending transversely to the longitudinal axis of the beam, guide means associated with the supports for constraining the beam against lateral and vertical movement but permitting free movement of the beam along its longitudinal axis, means for applying the weight of an object to be weighed to the end of the beam nearest the fixed support, a fixed weight secured to the beam adjacent the opposite end of the beam for shifting the center of gravity of the beam away from the fixed support, means positioned at the center of gravity of the beam and fixed weight assembly for receiving additional weights, whereby known weights can be applied at the center of gravity of the beam, and a graduated scale along the length of the beam extending from the center of gravity in the direction toward the end of the beam where the object of unknown weight is applied, the scale being calibrated in units of weight with zero on the scale being located at the center of gravity of the beam assembly.

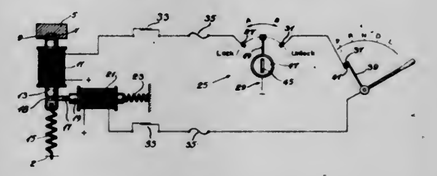
3,021,912
VEHICLE DOOR LOCKING SYSTEM
Frederick R. Weymouth, Jr., Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Feb. 25, 1960, Ser. No. 11,024
6 Claims. (Cl. 180—82)

3. A control for an automatic door locking system for a vehicle comprising a housing, a diaphragm in said housing dividing said housing into first and second chambers, means for biasing said diaphragm in a first direction, means for causing a source of fluid pressure to communicate with said first chamber to thereby cause said diaphragm to deflect against the bias of said biasing means, energy supplying means for a door locking motor adapted to be actuated when said diaphragm is deflected, and metering means located between said first and second chambers whereby said second chamber will be subjected to the influence of said fluid pressure source later in time than said first chamber to thereby cause said biasing means to return said diaphragm to the position which it occupied



before it was deflected by the influence of fluid pressure in said first chamber, the return of said diaphragm to its original position being accompanied by the attendant returning of said energy supply means to a deactuated condition.

3,021,913
AUTOMOBILE TRANSMISSION LEVER LOCKING DEVICE
Jean Ouimet, 6327 St. Andre St., and Bernard Dansereau, 12200 Jasmin St., both of Montreal, Quebec, Canada
Filed July 25, 1960, Ser. No. 45,116
1 Claim. (Cl. 180—82)



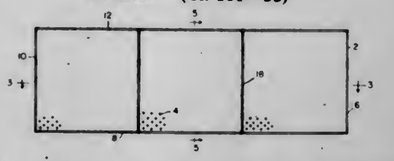
In an automobile having a transmission selection lever shiftable from one position to another, the locking combination therefor comprising; a housing rigidly secured to said lever so as to be movable therewith; a member in close proximity to said housing; said housing being movable in relation to said member; a recess in said member facing said housing; a plunger in said housing engageable into said recess in one predetermined position of the housing so as to lock said housing and member together; a first electrical circuit containing a first coil and a second electrical circuit containing a second coil; said circuits having a common point connected to a key operated switch alternatively closing said first and second circuits; a core in said first coil, one end of which is the aforesaid plunger, the other end being provided with a groove; a core in said second coil, one end of which is a pin movable in said groove when the plunger is engaged into the recess in locking engagement; said second core being spring pressed radially against said first core; energization of said first coil moving said plunger into said recess while energization of the second coil moves said pin out of engagement with said plunger; said key-operated switch further having a neutral position wherein both said circuits are opened; said second circuit including a further switch operated by said lever and closing said second circuit only when said lever has reached said predetermined position.

3,021,914
ACOUSTICAL PANEL
Albert Gerald Wilson, 403 2nd St., Lexington, Mass.
Filed July 11, 1958, Ser. No. 747,981
9 Claims. (Cl. 181—33)



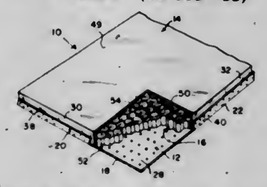
1. In a sound absorbing panel, a supporting casing of rigid sound impervious material having an outer periphery, a lightweight substantially rigid sound dampening member bonded to said impervious material, a sound absorbing material mounted on said casing adjacent to said dampening member having an exposed surface, the density of said sound absorbing material being such as to be of a maximum value adjacent the periphery of said casing and of a minimum value at the center of said casing.

3,021,915
ACOUSTICAL UNIT WITH ATTENUATION MEANS
William G. Kemp, 2275 E. Hammond Lake Drive, Pontiac, Mich.
Filed Apr. 6, 1959, Ser. No. 804,392
4 Claims. (Cl. 181—33)



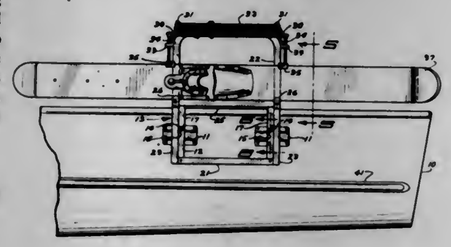
1. An acoustical panel, comprising a first substantially flat rigid rectangular pan for supporting sound absorbing members, said pan having a plurality of perforations therein and also having the edges thereof turned up to form sides, each of said sides having a groove therein parallel to and spaced from the plane of said pan providing an interior shoulder on said sides, a rectangular sound absorbing mat within and substantially filling said pan, and a second rectangular pan of sound reflecting material covering said mat, said second pan having the edges thereof depending downward at an obtuse angle which terminate in lips extending behind said interior shoulders on the sides of said first rectangular pan to lock said two pans and said sound absorbing mat in assembly, whereby sound waves passing through the said first pan and the sound absorbing mat and impinging on said second pan are reflected back into said mat.

3,021,916
REINFORCED ACOUSTICAL UNIT
William G. Kemp, 2275 E. Hammond Lake Drive, Pontiac, Mich.
Filed Apr. 6, 1959, Ser. No. 804,393
13 Claims. (Cl. 181—33)



1. An acoustical panel, comprising a substantially flat perforated pan adapted to be exposed to sound which it is desired to deaden and having opposed sides inclined at an angle of less than ninety degrees to the inner surface of said pan to facilitate the removal of said panel from an installation thereof, and sound deadening means attached to and behind said pan with respect to the sound which it is desired to deaden.

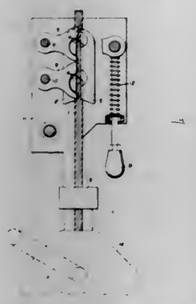
3,021,917
WATER SKI AND TOW LINE STORAGE RACK AND BOAT BOARDING LADDER
Edwin L. Holt, 6714 Girard Ave. S., Minneapolis 23, Minn.
Filed Dec. 5, 1960, Ser. No. 73,732
5 Claims. (Cl. 182—95)



1. A combination boat boarding ladder and line storage rack including a first ladder section having side rails and at least one rung fixedly attached between said rails, means for removably fastening said first section to a boat, a second ladder section having side rails each pivotally attached to one of said side rails of said first section at a point above the water line of said boat, said second section having at least one rung fixedly attached between said side rails, said second section being movable from a first position wherein said rung of said second section extends below the water line of said boat to a second position wherein said rails of said second section are substantially parallel to the rails of said first section and extend upwardly from said pivot point, releasable means for retaining said second section in said second position, and a finger fixedly attached with respect to each of said rails of said second section and extending upwardly from said second section when said second section is in said second position, said tow line being coiled around said fingers to encompass said cross member of said second section, said cross member of said second section, said fingers and interior portions of said tow line defining an upwardly open handle receiving enclosure, and said rigid tow line handle being attached to said tow line at one end thereof and positioned within said enclosure.

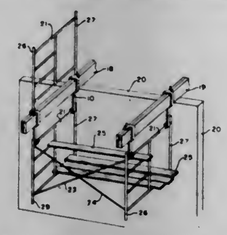
3,021,918
SAFETY DEVICES FOR LIFTING APPLIANCES
André Antoine Medawar, Luxembourg-Schleifmuhl, France (% Ste. Congolaise Bunge Boîte Postale 620, Leopoldville, Belgian Congo)
Filed June 23, 1959, Ser. No. 822,356
Claims priority, application Luxembourg July 5, 1958
7 Claims. (Cl. 182—112)

7. A safety mechanism for a load member which is lifted and lowered by a load lifting and lowering member along a suspended tensioned cable comprising a support device slidable on said cable, jaw-carrying means movably mounted on the support device, a plurality of opposed jaws movably mounted in the jaw-carrying means, means constantly biasing said jaw-carrying means to move the jaws into frictional engagement with the cable, the mountings of the jaw-carrying means and jaws being such that frictional engagement of the cable with the jaws moves the jaw-carrying means in the direction of its bias to position the jaws into tight clutching engagement with the cable upon downward movement of the support device, and means attaching the load member



to the support device, upward movement of the support device by one of the members causing the jaws to slip on the cable to allow lifting movement of the load.

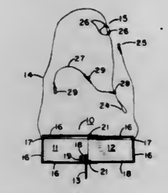
3,021,919
SCAFFOLD HANGER AND SUPPORT DEVICE
Plenny M. Peters, 9172 Montoro Drive, Cincinnati, Ohio
Filed Sept. 24, 1959, Ser. No. 842,106
3 Claims. (Cl. 182—150)



1. A scaffold hanger and support member comprising a central band portion having a general rectangular inner opening of approximately 4 x 10 inches, a rigid arm portion depending from the bottom of said band portion, a hook provided at the lower end of said rigid arm portion, said hook being large enough to accommodate standard size scaffolding frame members and having a diameter of approximately 1½ inches, a rigid bracket secured to the upper portion of said band and projecting horizontally outwardly from said band, an upstanding rod rigidly secured to said bracket, said depending rigid arm portion and hook being in alignment with the vertical axis of said band portion taken across a diameter of said band portion and said upstanding rod being offset from said vertical axis, said upstanding rod having a hole provided therein to receive a pin, said rod adapted to receive and support scaffolding frame members above the level of said band portion and said pin adapted to secure said frame members to said rod, said band portion adapted to encircle suitable supporting frame members projecting from a wall and said hook portion adapted to receive and support scaffolding frame members below said band portion.

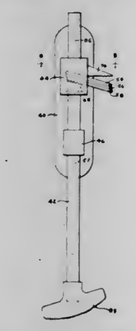
3,021,920
PORTABLE SEAT
Warren A. Seely, 730 S. Allen St., State College, Pa.
Filed Feb. 23, 1961, Ser. No. 91,073
2 Claims. (Cl. 182—188)

1. A portable and foldable tree seat, comprising a pair of rigid complementary hinged seat sections, one adapted to fit within the other, each being substantially rectangular in configuration and having flanges on three sides depending from a top portion, and each open at the hinged side, hinge means connecting said seat sections and so located with reference to the unflanged ends of the seat that a substantial overlap of the respective top portions results,



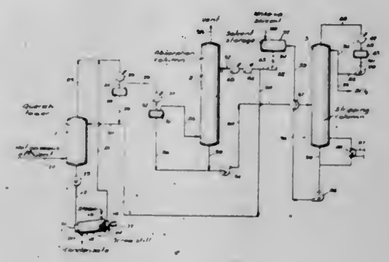
and means providing a three-point support for said seat when in expanded operative position, comprising cord means adapted to be engaged with a tree, and supporting said seat at opposite ends thereof at points substantially removed from the side of the seat adjacent the tree, and means carried by the seat contacting the tree at the side of the seat adjacent the tree.

3,021,921
LADDER EXTENSION
Clement C. Poelvoorde, 1002 W. 7th St., Mishawaka, Ind. and Stanley A. Kapusta, 19519 E. Reasor St., South Bend, Ind.
Filed May 22, 1959, Ser. No. 815,005
3 Claims. (Cl. 182—201)



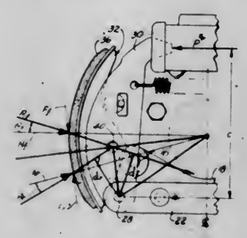
1. An extension mechanism for the legs of ladders and the like, comprising a plate having a plurality of holes for securing said mechanism to the legs of the ladder, two generally vertically arranged brackets secured to said plate and having aligned rectangularly shaped openings therethrough, a shaft having a rectangularly shaped cross section slightly smaller than said openings extending through said openings and downwardly beyond said plate, a shoe of rubber or rubber-like material on the lower end of said shaft, three fingers in face-to-face contact with each other in the upper bracket and extending outwardly therefrom and having a position substantially perpendicular to said shaft, each of said fingers having a rectangularly shaped hole for receiving said shaft in said bracket, a rigid arm secured to the bracket adjacent to and above said fingers, a rigid shoulder on said arm serving as pivot point for said fingers between the holes therein and the portion extending from the respective bracket, and a spring operatively positioned in said upper bracket exerting a force on said fingers and urging said fingers about said pivot point upwardly away from said perpendicular position.

3,021,922
RECOVERY AND PURIFICATION OF BORON TRICHLORIDE
Eldred L. Dance and Thomas E. Drisko, Jr., Concord, and Earl A. McLain, Pleasant Hill, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed July 29, 1958, Ser. No. 751,726
7 Claims. (Cl. 183—115)



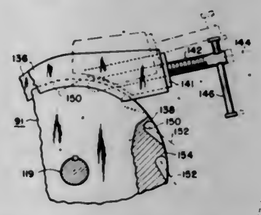
1. A process for the recovery of boron trichloride from a hot gaseous effluent containing entrained particles and non-condensible gases resulting from the reaction of a boron compound with carbon and chlorine at a temperature above 600° C., which comprises passing the hot gaseous effluent in contact with an inert liquid having a boiling point in the range of 70° to 200° C. which is a solvent for the boron trichloride in a ratio such that substantially all of said inert liquid is vaporized, cooling the gaseous and vaporous effluent resulting from the contacting of the hot gases with the inert liquid to condense a major portion of the inert liquid, separating the condensed inert liquid from the uncondensed portion of the gaseous and vaporous effluent, returning the condensed inert liquid as reflux to be contacted with more hot gases, passing the uncondensed portion of the gaseous and vaporous effluent in contact with additional inert liquid cooled to a temperature below —15° C. to absorb and condense substantially all of the boron trichloride in the gaseous stream leaving a gaseous portion comprising essentially of non-condensible gases, separating non-condensible gases from the cold inert liquid containing the boron trichloride, and separating the boron trichloride from the inert liquid.

3,021,923
BRAKE
Richard T. Burnett, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed May 23, 1958, Ser. No. 737,259
8 Claims. (Cl. 188—78)



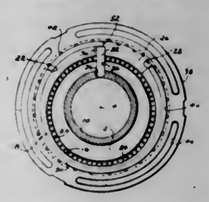
1. A brake comprising a fixed support member, a torque taking member rigidly secured to said support member near the lower end thereof, a pair of oppositely-located applying levers each pivotally mounted at its lower end to said torque taking member, actuating means interposed between the upper ends of said levers, and a pair of arcuate friction elements one pivotally secured to each of said applying levers, the pivot points of each of said friction elements and its respective lever being on a straight line forming substantially the radial right angle with a line interconnecting the friction element pivot point and the center of the brake.

3,021,924
REVERSE MOTION PREVENTING MECHANISM
William W. Patterson III, Coraopolis, and Eugene F. Grapes, Irwin, Pa., assignors to W. W. Patterson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Original application Nov. 15, 1957, Ser. No. 696,816. Divided and this application Jan. 2, 1959, Ser. No. 784,768
10 Claims. (Cl. 188—82.7)



1. Locking means to releasably lock a rotatable drum member against a load, comprising socket means formed in the periphery of said member with the axis extending diagonally in the direction in which said member is being urged to rotate, a pawl holder pivotally mounted adjacent said drum member and having a fixed pivot point spaced from the center of rotation of said drum member, with the pawl holder disposed in the path of said periphery so as to confront said socket means, locking pawl means threaded through the pawl holder in a position adapted to register with the confronting socket means, said socket and pawl means having portions which present a socket floor and cam nose and a companion ball nose on their respective contacting parts, and also which when in fully socketed position prevent rotation of the drum member under bias of said load and which furthermore, when relatively rotated so the one follows the other, reach a dead center point beyond which the bias of the load forces the cam nose portion to wipe the pawl means away from the engaged socket in a direction out of the path of the periphery of said drum member.

3,021,925
ONE-WAY BRAKE
William B. Osborne, 2811 Godfrey Ave., Muncie, Ind., assignor of one-third to George A. Gust and one-third to Robert G. Irish, both of Fort Wayne, Ind.
Filed June 4, 1958, Ser. No. 739,919
11 Claims. (Cl. 188—82.8)



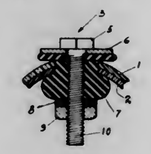
1. A brake comprising a stationary shaft, a first ring mounted on said shaft and having an eccentric outer peripheral surface, a second ring encircling said first ring and having an eccentric inner peripheral surface complementary to said first ring eccentric surface, said second ring having an outer peripheral surface which is concentric with respect to said shaft, a plurality of needle spacer bearings interposed between the eccentric surfaces of said first and second rings, an elongated slot in the side of said second ring and having opposite end abutments, a stop pin secured to and radially extending from said shaft through said first ring and entering said slot, said pin being selectively engageable with said end abutments, said second ring being rotatable with respect to said first ring, a drum having a cylindrical inner surface complementary with and rotatably encircling the outer surface of said second ring, a plurality of circumferential and transverse oil grooves in the facing surfaces of said drum and said second ring, a plurality of arcuate hollow sections in said drum, a resilient C-shaped friction ring frictionally engaging the inner surface of said drum and having an axially projecting finger on one end which enters said slot and is selectively engageable with said end abutments, and two side plates rotatably mounted on said shaft and secured to the opposite sides respectively of said drum, said second ring being frictionally engageable with said drum to prevent relative rotation therebetween, and said drum being radially deformable in the vicinities of said hollow sections.

3,021,926
SHOCK ABSORBERS OR VIBRATION DAMPERS
William Kenneth Wasdell, "Highbury," Barker Road, Sutton Coldfield, Warwickshire, England
Filed Jan. 14, 1958, Ser. No. 708,921
Claims priority, application Great Britain Feb. 6, 1957
3 Claims. (Cl. 188—88)



1. In a shock absorber, a tubular body formed by a single length of metal tubing of uniform thickness and defining a longitudinally extending cylindrical piston working chamber, a valved piston mounted for reciprocation in said working chamber, a piston rod fixedly extending from said piston through one end of said working chamber and adapted to be connected to a part subjectable to shock, means for closing said one end of said working chamber about said piston rod, said tubular body forming an integral radially expanded tubular extension at the opposite end of said working chamber and providing a recuperation chamber of larger internal diameter than said piston working chamber and of sufficient volume for containing displaced damping fluid during piston action, said extension being formed with an outer annular end face, means separating said recuperation chamber from said piston working chamber including a transversely disposed diaphragm plate in rigid engagement with said tubular body at the juncture of said piston working chamber and said recuperation chamber, said diaphragm plate having damping fluid control valves for metering the displacement of damping fluid between said chambers, cap means formed with a skirt detachably secured to the exterior of said tubular extension and closing the end of said recuperation chamber opposite from said diaphragm plate, said cap means having an annular shoulder extending inwardly substantially in alignment with said annular end face, a cup retainer having an annular lip axially clamped between said shoulder and the end face of said tubular extension, said cup retainer being formed with an endless radially outwardly opening rigid peripheral channel extending into said extension radially inwardly of said lip, a self-supported domed resilient walled cup located wholly within said recuperation chamber, said cup being free of internal support and having a larger open end rim section disposed in the end of said recuperation chamber opposite from said diaphragm plate and having a smaller closed end disposed adjacent diaphragm plate, said end rim section being formed with a radially inwardly extending annular bead portion which is received in said peripheral channel with a fluid tight fit between said tubular extension and said cup retainer and which is substantially free of the axial clamping action exerted on said lip, and means adapted for anchoring said piston working chamber, said recuperation chamber and said cap means to a second part movable relative to said first part, said cup being surrounded in said recuperation chamber by damping fluid and being deformed by pressure of additional damping fluid displaced through said plate into the recuperation chamber as the piston moves toward said diaphragm plate and resiliently expanding to displace sufficient damping fluid back through said diaphragm plate to maintain said working chamber filled with said damping fluid as the piston moves away from said diaphragm plate.

3,021,927
LAP-LOX FASTENER
John R. McKee, Jr., 1900 Murdstone Drive, Pittsburgh 34, Pa.
Filed Apr. 6, 1959, Ser. No. 804,478
2 Claims. (Cl. 189—36)

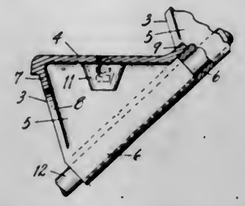


1. A resilient sealing fastener connection between lapped sheet material having concentric fastener receiving apertures therein, comprising an axially compressible and radially expandable resilient hollow sleeve member freely slidably mounted in said apertures and extending outwardly from the under side of said lapped sheets, a rigid apertured member overlying said sleeve at the outer side of said lapped sheets, an apertured member having its opposite surfaces coated with resilient material and one coated face abutting the outwardly extending end of the sleeve at the under side of said sheets, an apertured internally threaded member abutting the other face of said coated member, and a headed member having an externally threaded shank extending axially through all of said members and into threaded contact with said internally threaded member whereby upon rotation of the head of said headed member said sleeve member is compressed between said apertured members and axially shortened and radially expanded securing the sheets in fixed lapped relation.

3,021,928
STAIR STRUCTURE
Francis J. Blair, 4149 Minnetonka Drive, Loon Lake, Linden, Mich.
Filed May 22, 1957, Ser. No. 660,808
2 Claims. (Cl. 189—43)

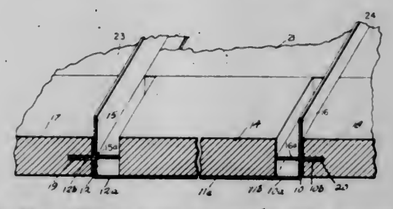
1. A metal stair assembly comprising laterally spaced rod-like stringers, a plurality of step units, each step unit being integrally moulded and comprising a tread and depending triangular end members having outwardly projecting continuous tubular bead-like enlargements on their lower edges sleeved upon said stringers with their ends

in thrust abutting engagement, said steps having upturned flanges on the rear edges thereof disposed between and



in end and in lateral thrust supporting engagement with the inner sides of the end members of the adjacent upper step unit.

3,021,929
ACCESS PANEL FOR TILE CEILINGS
Kenneth G. Carlin, 16 E. Cottage St. (Dorchester District), Boston, Mass., and Herbert W. Griffin, 4037 Washington St. (Roslindale District), Boston, Mass.
Filed May 15, 1958, Ser. No. 735,403
4 Claims. (Cl. 189—85)



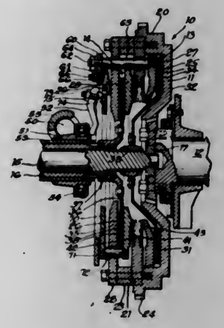
1. In a ceiling assembly composed of tiles having edge grooves and portions below said grooves; an access panel comprising a quadrilateral frame having outwardly projecting flanges received in the edge grooves of the adjacent tiles supported on the portions below the grooves, said outwardly projecting flanges supporting said frame, and said frame also having inwardly projecting flanges defining an opening, and a panel tile larger than said opening loosely supported on said inwardly projecting flanges.

3,021,930
MOLDING STRIPS FOR A LUGGAGE CASE
Frederick M. Storey, 1434 Charles St., Vancouver, British Columbia, Canada
Filed Jan. 26, 1960, Ser. No. 4,819
1 Claim. (Cl. 190—41)



A molding strip for a luggage case, said strip comprising a flat ribbon-like base portion having parallel side edges, an integral channel superposed upon the base portion adjacent each side edge, each of said channels having side walls and a top wall disposed in parallel relation to the base portion, said top walls each being spaced above the base portion and having a centrally disposed longitudinal slot and said strip being secured to the case by a row of stitching applied to the base portion beneath each of the channel top walls.

3,021,931
FRICTION CLUTCH MECHANISM
Harold O. Holz, Detroit, Mich., assignor to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Apr. 1, 1958, Ser. No. 725,772
4 Claims. (Cl. 192—48)

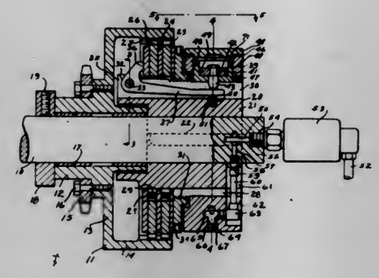


1. In a clutch mechanism, in combination, a rotary driving member presenting a rearwardly facing friction driving surface on one face, said member having an annular peripheral flange extending rearwardly from said one face, a first member supported on said flange and extending inwardly therefrom to present an annular abutment in spaced relation to said one face, a second member supported on said first member and extending inwardly therefrom to present an annular friction driving surface opposed to said first driving surface and spaced from said abutment member, a pair of pressure plates disposed respectively at opposite sides of said abutment member and in operatively opposed relation to the respective friction driving surfaces, means supporting and guiding said plates for movement axially toward and from the adjacent friction driving surfaces and for rotation with said driving member, driven clutch elements interposed between the pressure plates and the respective adjacent friction driving surfaces, means releasably securing said first member and said second member to said driving member to facilitate assembly of said clutch elements therewith, extensions fixed to said pressure plates and projecting rearwardly of said second member, spring means acting between said first member and each of said pressure plates urging them in directions to drivingly engage said clutch elements with the associated friction surfaces, and a single set of clutch actuating levers pivoted on said second member in position to coact with said extensions to retract said pressure plates against their associated spring means and thereby disengage the drive for said clutch elements.

3,021,932
FRICTION CLUTCH
Raleigh Becknell, Cincinnati, Ohio, assignor to The Conway Clutch Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 19, 1958, Ser. No. 762,135
11 Claims. (Cl. 192—85)

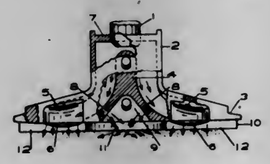
1. In a friction disc clutch the combination of a driving clutch member, a driven clutch member, a friction disc operatively connected with each clutch member with said discs adapted to be pressed into driving engagement with one another, an abutment carried by one of said clutch members against which the friction discs are pressed, a lever-actuator pivotally mounted on one of said clutch members with said lever-actuator including on one side of its pivot means for pressing said clutch discs into driving

engagement, said lever-actuator being adapted to be oscillated about its pivot for pressing said friction discs into driving engagement, said lever-actuator also including on the other side of its pivot means through which the said



lever-actuator is oscillated, and a fluid pressure medium actuated piston engaging the lever-actuator operating means for oscillating said lever-actuator and pressing the friction discs into driving engagement.

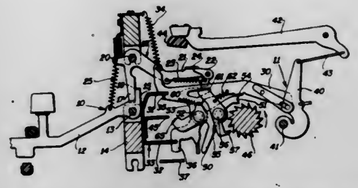
3,021,933
SEED DISTRIBUTING SHOE
Robert Edgar Wade, Consort, Alberta, Canada
Filed Feb. 24, 1960, Ser. No. 10,703
2 Claims. (Cl. 193—9)



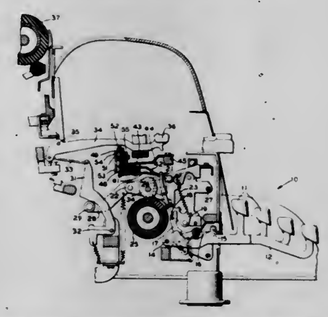
1. A seed distributing shoe having a base and a column on the base with center saddle portion and diverging passages through which seed passes to cored outlets for discharge over recessed ledges in which the lower part of the saddle portion of the shoe is formed with inwardly directed seed outlets leading from the diverging passages, said saddle portion having a cavity forming a rearward outlet through which seed passing through the inwardly directed outlets discharges, and including an integral ridge on the under side of the shoe forming a support on which the shoe travels, said ridge including a center curved portion in advance of the cavity into which the inwardly directed outlets discharge and side portions extending from the center portion laterally in advance of the cored outlets.

3,021,934
TYPE ACTION
John A. Enders, Simsbury, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Mar. 17, 1960, Ser. No. 15,653
7 Claims. (Cl. 197—17)

1. In a typewriter having a frame, a type bar actuating linkage movably mounted on said frame, a power roll, and a key operated linkage adapted to control the operative engagement of said actuating linkage and said power roll; the improvement comprising a trip pawl movably mounted on said type bar actuating linkage, and means movably mounted on said pawl adapted to be moved relative to said pawl and into operative engagement with said power roll for immediately and positively driving said pawl into operative engagement with said power roll.



3,021,935
MECHANICAL INTERLOCK DEVICE
Oscar Walter, Norwalk, and Harold W. Steeves, Trumbull, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed May 13, 1960, Ser. No. 29,091
6 Claims. (Cl. 197—17)

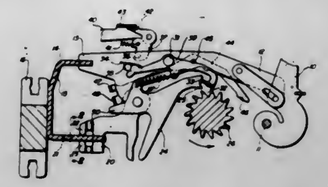


1. In a keyboard controlled machine of the class described having individual cyclically operable and colinearly arranged power mechanisms associated with individual keys of the keyboard, each of said mechanisms including an actuator movable under the influence of its associated key to an effective position for initiating a cycle of operation of said mechanism and self-restoring to its ineffective position during said cycle of operation, a plurality of lockup members disposed adjacent to said actuators and mounted for shifting into and out of blocking relation to said actuators, each of said members being formed to prevent the movement of only a selected group of said actuators to the effective cycle initiating position, and means for shifting said members selectively into and out of blocking relation to their respective actuators.

3,021,936
TYPE ACTION
Harry L. Lambert, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N. Y., a corporation of New York
Filed Dec. 28, 1960, Ser. No. 78,909
7 Claims. (Cl. 197—17)

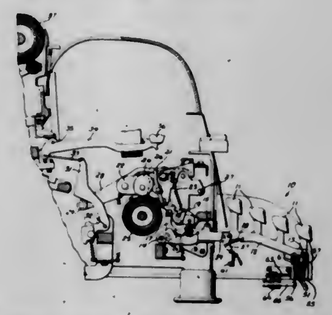
1. In a type action having a rotating power roll, a type bar actuating linkage, a power roll engaging member movably mounted on said linkage and adapted to operatively engage said power roll so as to drive said type bar actuating linkage, means for biasing said member towards engagement with said power roll, and latch means for retaining said member in an inoperative position away from said power roll; the improvement comprising a reset element supported on said type bar actuating link-

age and having a power roll engaging portion formed thereon, said reset element when engaged with said power



roll urging said member towards its inoperative latched position away from said power roll.

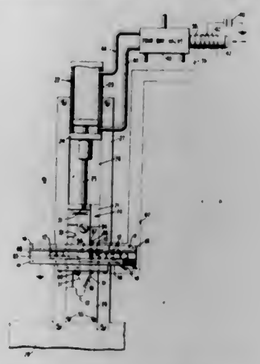
3,021,937
SELECTIVE INTERLOCK MECHANISM
Raymond E. Seymour, Norwalk, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 12, 1960, Ser. No. 21,687
11 Claims. (Cl. 197—107)



7. In apparatus of the character described having a keyboard including a plurality of key levers, keyboard lock-up means including a shiftable lock-up member underlying the key levers of said keyboard and provided with interponents for blocking the movement of associated key levers when said member is shifted to an effective lock-up position, said interponents being longitudinally disposed between said member and associated key levers and formed of a material and shape to provide positive resistance in a longitudinal direction to key lever movement and yieldable resistance in a lateral direction to the shifting movement of said lock-up member.

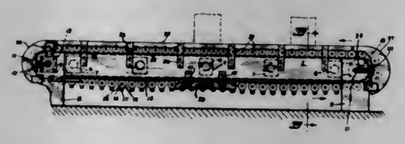
3,021,938
ELEMENT FEEDING AND ORIENTING MECHANISM
Robert H. Cadwallader, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1960, Ser. No. 78,448
11 Claims. (Cl. 198—33)

1. An element feeding and orienting mechanism comprising: means for guiding a series of elements along a path to a first predetermined position therein; transfer means movable transversely of said path between first and second locations and including first and second cams; means responsive to the presence of one of said elements at said position in said path for moving said transfer means from said first to said second location and causing said first cam to displace said one element beyond said first predetermined position to a second predetermined position; means responsive to the presence of said one element in said second predetermined position for orienting said one element in a predetermined relation in said second position; and means responsive to said one element in said predetermined relation for returning said transfer



means to said first location and simultaneously causing said second cam to displace said one element beyond said second predetermined position while in said predetermined relation.

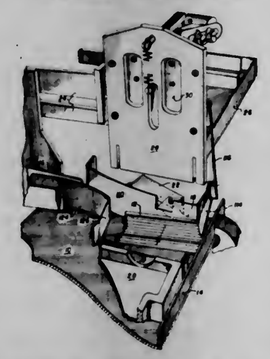
3,021,939
CONVEYORS
Frank L. Hopkins and Harold K. Fox, Minneapolis, Minn., assignors to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Filed Aug. 15, 1955, Ser. No. 528,467
3 Claims. (Cl. 198—131)



1. In a conveyor of the class described, a supporting frame comprising inwardly facing longitudinal side members of channel cross-section, tie members securing together said side members in spaced parallel relation to provide a rigid unitary frame structure, leg means at the ends of said frame for upwardly spacing said side frame members from the floor, a drive shaft rotatably mounted in one end of said frame and having means for connecting it to a source of power, a pair of sprockets secured to said shaft between said side frame members in proximity thereto, a shaft mounted at the opposite end of said frame, a pair of sprockets rotatably mounted on said second shaft and cooperating with said first pair of sprockets to support a pair of spaced parallel endless chains, L-shaped brackets arranged in pairs transversely of the conveyor and having their horizontal legs secured to said chains at spaced intervals the lengths thereof, anti-friction rollers mounted on the vertical legs of said brackets for rotation about horizontal axes, the upper surfaces of said side frame members providing longitudinally extending tracks for said anti-friction rollers to travel upon the length of the conveyor, a slat secured to each pair of L-shaped brackets, said slats cooperating to provide an open V-shaped load-carrying surface for transporting large filled bags having V-shaped bottoms, said open load-carrying surface preventing spillage of finely disintegrated material from accumulating thereon, said anti-friction rollers and tracks carrying the weight of the load and said chains propelling the load

along the conveyor, and means secured to the supporting frame and extending inwardly over the ends of said slats to prevent said ends from engaging foreign objects.

3,021,940
LINE-UNIT DROPPING MECHANISM FOR LINECASTING MACHINES
Jason H. S. Fan, Huntington, N.Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed June 29, 1960, Ser. No. 39,606
15 Claims. (Cl. 199—61)



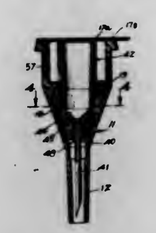
1. In a linecasting machine of the type including a galley tray, means for delivering upstanding line slugs endwise in sequence to an assembly position on said tray, nudger means for sequentially displacing each newly delivered slug laterally of its delivery path to clear said path and thereby to add said slug to an assembled galley stack, a movable stack-end follower in said tray for establishing a standing position of the slugs forming said stack, and means for periodically dropping into said assembly position other line units from a magazine of such units; the improvement which comprises means on said follower establishing a leaning position for all of the slugs and line units assembled in said tray, which position is inclined at a small angle away from both the endwise arrival direction of said slugs and from the downward arrival direction of said units; whereby the action of said nudger means clears the access paths to said assembly position from both of said directions.

3,021,941
METHOD OF DRAWING WIRE AND A LUBRICANT THEREFOR
Raymond J. Huet, Chagrin Falls, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
No Drawing. Filed Nov. 8, 1957, Ser. No. 695,223
2 Claims. (Cl. 205—21)

2. The method of cold drawing wire comprising coating the wire with methylene bis-octadecanamide in powder form diluted by dimethylhexynediol in powder form, drawing the coated wire while utilizing the heat of drawing to bring the mixture of powders into solution and then heating the drawn wire to change the physicals of the wire and simultaneously remove the lubricant from the wire.

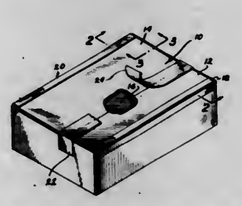
3,021,942
NEEDLE PACKAGE
Donald A. Hamilton, Burbank, Calif., assignor to Don Baxter, Inc., Glendale, Calif., a corporation of Nevada
Filed June 27, 1957, Ser. No. 668,419
13 Claims. (Cl. 206—43)

4. A hypodermic needle unit comprising: a tubular container; a section of the container adapted to receive a needle cannula; a cylindrical hub section and a relatively large, adapter section; two rectangular lugs extending into said hub section from opposite sides and running substantially the length of said hub section, the inner surface of said lugs tapering inwardly towards the cannula section; a needle mounted in the tubular container;



the hub of said needle having two rectangular grooves on opposite sides thereof; the bottom surface of said grooves tapering inwardly towards the needle cannula; a space between the needle hub and the hub section of the container, the container lugs being wedged into the hub grooves to provide the sole means for holding and aligning the needle in the container.

3,021,943
CIGAR BOX
Robert A. Greene, Suite 4, 550 Seabreeze Blvd., Daytona Beach, Fla.
Filed Jan. 12, 1959, Ser. No. 786,172
1 Claim. (Cl. 206—45.2)

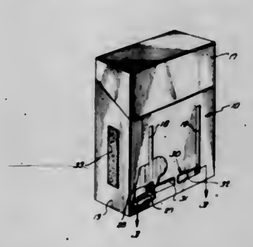


In a box adapted for containing cigars, a plurality of unequal size members which form a lid for the top of said box, said lid being divided between the front and back edges in a direction parallel with the front and back edges thereof and dividing the lid into a short front portion and a longer rear portion, said longer rear portion being hinged to the back edge and said longer rear portion being substantially greater in width than the depth of said box whereby said longer lid portion can be turned down and back of the box to form a rear support for said box, said short front portion being of substantially the same dimensions front to back as the height of the box, said short front portion being hinged to the front edge of the box whereby the same when swung about its hinged front edge lies against the front side of the box, the adjacent edges of the lid portions being shaped to have corresponding inter-engaging bevels, a removable sealing strip extending across the joint between said front and rear portions of the lid and extending down the sides of the box to hold said lid portions together and close said box, and an insertible member of no greater width than said short front portion of the lid and extending laterally across the box beneath said short portion of the lid, said inserted members comprising end strips extending downwardly inside the end walls of said box and forming a removable element for carrying lettering and configurations for describing the contents of said box.

3,021,944
CIGARETTE AND MATCH CONTAINER

Thomas B. Moore, Covina, Calif., assignor to Hunt Foods and Industries, Inc., Fullerton, Calif., a corporation of Delaware

Filed June 1, 1959, Ser. No. 817,282
2 Claims. (Cl. 206—48)

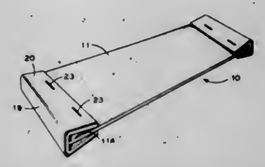


1. A cigarette and match container comprising a base, a front wall, a back wall and two side walls defining a cigarette enclosure, the front wall having two parallel spaced-apart slots extending vertically with respect to the base, a liner disposed within the enclosure to define a match space between it and the front wall, a set of matches including a crosspiece having two apertures spaced apart to coincide with the vertical slots, and a plurality of detachable matches joined to project vertically from the crosspiece, said set of matches being disposed in the match space, and a clamping band fitted through each slot and coinciding aperture of the crosspiece and including at its ends two prongs bent over to slidably engage the front wall for enabling reciprocating movements of the crosspiece and the matches joined thereto along the vertical length of the slots.

3,021,945
CLOTH WINDING BOARD

Earl H. Robinson, Wayne Township, N.J., assignor to The Baxter Corporation, Paterson, N.J., a corporation of New Jersey

Filed May 5, 1959, Ser. No. 811,129
7 Claims. (Cl. 206—50)

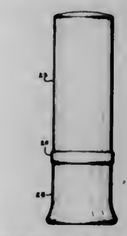


1. A cloth winding board comprising a paperboard body portion of uniform thickness, a stiff, reinforcing edging strip overlying an edge and marginal portions of said body portion, said edging strip having a longitudinally extending flat medial portion and longitudinally extending lateral portions on each side of said medial portion, a thin display strip having longitudinally extending flat medial and lateral portions overlying the medial and lateral portions respectively of said edging strip, said flat medial portions of the edging and display strips having a width greater than the thickness of said body portion, the medial portion of said edging strip abutting the edge of said body portion and disposed at right angles thereto, and means passing through the lateral portions of said strips and the marginal portions of said body portion securing said strips to said body portion.

3,021,946
LIPSTICK CONTAINER

William H. Harris, Litchfield, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut

Filed Feb. 14, 1961, Ser. No. 89,168
5 Claims. (Cl. 206—56)

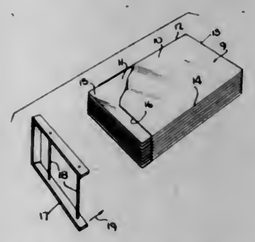


1. A lipstick container of the swivel type comprising an exterior casing and an interior shell rotatably mounted in said casing, an operating head member connected to said interior shell and located entirely outside of said casing, said head member being divided with upper and lower sections and an intermediate circumferential raised annulus therebetween, the upper and lower sections each having a plurality of elongated ribs arranged longitudinal of and equally positioned about said sections, an elongated cover cap of sufficient length to slip over the exterior casing and be frictionally received on the ribs of said upper section, and an ornamental base telescopically fitted over the lower section and having frictional engagement upon the ribs of said lower section, the frictional engagement between the ornamental base and the ribs of the lower section being sufficiently greater than the frictional engagement between the ribs of the upper section and the cover cap to permit the latter to be withdrawn without disturbing the telescopic frictional fit of said ornamental base on said lower section.

3,021,947
FUSED-TOGETHER UNIT OF STACKED ARTICLES

John D. Sylvester, Garden City, and Edwin E. Messmer, Roslyn Heights, N.Y., assignors to Amsco Packaging Machinery, Inc., Long Island City, N.Y., a corporation of New York

Filed Feb. 27, 1959, Ser. No. 796,022
3 Claims. (Cl. 206—57)

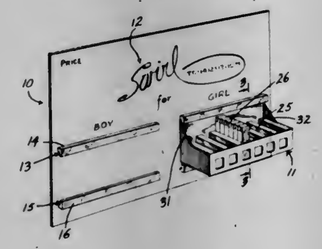


1. An article of manufacture comprising, in combination, a plurality of articles formed at least in part from heat fusible material, said articles being arranged in a stacked relationship with their marginal edges in vertical alignment, all of said articles being breakably interconnected by a heat fusion of adjacent articles at one or more overlying locations common to all of said stacked articles to thereby maintain said articles in aligned relationship, said stacked articles having minute openings at said common locations with said openings extending through all of said articles and defining an inner wall and said articles being fused together at the inner wall of said openings, said fusion being of a limited extent to permit said articles to be forcibly torn apart at said fused locations without otherwise damaging said articles.

3,021,948
SHIPPING AND DISPLAY UNIT

David E. Burge, Garden City, N.Y., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

Filed July 29, 1959, Ser. No. 830,360
5 Claims. (Cl. 206—78)

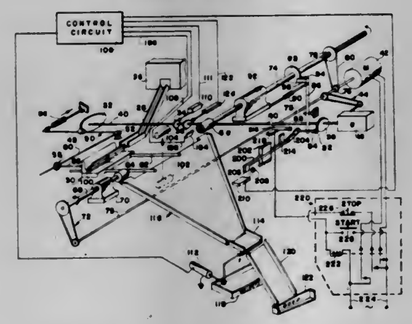


1. A shipping carton and display board comprising a carton having an open top and adapted to contain and display a plurality of articles, a front surface of said carton being wider than it is high, a back surface of said carton being the same width as said front surface and having at least a portion that is higher than the height of said front surface, sides connected between said front and said back surfaces, said higher portion of said back surface also being higher than the height of the rearmost portions of said sides, a bottom enclosing the lower end of said carton, another portion of said back surface extending therefrom in a direction opposite said higher portion and to a point below said bottom, a display board having at least two channel means formed in spaced-apart relation to receive said portions extending from said back surface to support said carton.

3,021,949
QUILL INSPECTION SYSTEM

James C. Hogg and Ross L. Pfaff, West Point, Ga., assignors to West Point Manufacturing Company, West Point, Ga., a corporation of Georgia

Filed Nov. 8, 1960, Ser. No. 68,001
21 Claims. (Cl. 209—75)

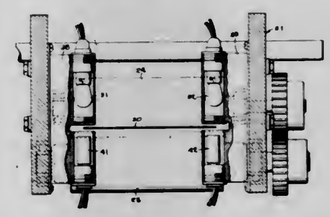


1. Apparatus for inspecting cylindrical articles such as quills for runout and the like comprising means for rotating a quill about its longitudinal axis, light source means for directing light substantially transverse to said axis, light sensing means disposed to receive a non-constant amount of light when a quill having at least a predetermined amount of runout or the like is rotated by said rotating means for producing a varying output signal due to said runout or the like, means for clamping said varying output signal to a base potential, means for base clipping the clamped signal by a given potential to produce a pulse each time the clamped signal exceeds that given potential, and means responsive to at least one such pulse for indicating when any quill which has at least said predetermined amount of runout or the like has been rotated by said rotary means.

3,021,950
CARD WIDTH SENSING DEVICE

James L. Quinn, Chicago, and James K. Duncan, Park Ridge, Ill., assignors to Cummings-Chicago Corp., Chicago, Ill., a corporation of Illinois

Filed Nov. 15, 1956, Ser. No. 622,476
5 Claims. (Cl. 209—82)



1. In a card handling apparatus having a path along which cards are conveyed seriatim, a card width sensing device comprising, in combination, two photocells positioned one on each side of said path, a source of radiation for each cell positioned to direct a beam of light toward each cell, said beams being spaced so that the beams are partially blocked by the opposite lateral edge portions of a standard width card passing along said path between the beams, said beams being of equal cross section so that lateral shifting of the card will uncover one beam an amount equal to the further blocking of the opposite beam whereby the total radiation received by the two cells will remain a constant for a card of standard width, circuit means connecting said cells in opposed, compensating electrical balance so that said constant amount of total radiation received by the two cells, no matter how distributed between them, will give no circuit output, while an increase or decrease in total radiation from said constant will result in a circuit output, and means including a card handling device responsive to an output from said circuit.

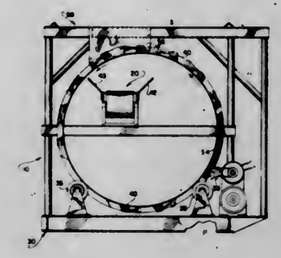
3,021,951
MAGNETIC SEPARATOR

William M. Holt, Van Nuys, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Apr. 20, 1961, Ser. No. 104,273
8 Claims. (Cl. 209—221)

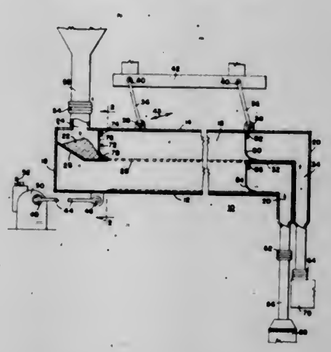
1. Apparatus for separating the magnetic materials from a mixture of magnetic and non-magnetic materials comprising a non-magnetic material tubular drum which is open at its opposite ends, support means rotatably supporting the drum in an inclined position, means for rotating the drum around its longitudinal axis, means for feeding the mixture into the higher end of the drum, discharge conveyor means extending into the drum adjacent the downwardly moving side of the drum, a plurality of magnetic field producing means carried in circumferentially spaced relation around the periphery of the drum, each

said magnetic field producing means being arranged to produce a separate magnetic field about the drum for attracting magnetic materials in the mixture in the drum and means for moving the magnetic field producing means



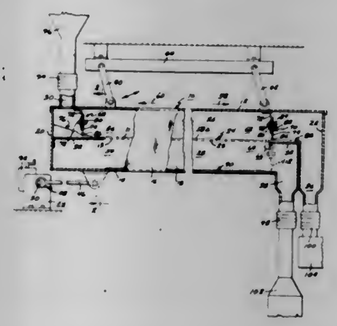
outwardly from the exterior surface of the drum in the upper half of the downwardly moving side of the drum for dropping the attracted magnetic material into the said discharge conveyor means.

3,021,952
CLASSIFYING APPARATUS
Keith R. Powell, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,872
9 Claims. (Cl. 209—339)



1. In a vibratory classifying unit comprising a sifting surface having receiving and discharge ends, a body portion having top, bottom, side and end walls enclosing said sifting surface and providing substantially closed upper and lower chambers above and below said surface, means for reciprocating said body chambers and sifting surface as a unit longitudinally along a desired path and thereby conveying stock from said receiving end to said discharge end while classifying the stock by said surface, an inlet for stock at one end of said upper chamber, and an outlet for stock at the other end of each chamber, the improvement comprising an anti-surging partition located in said upper chamber between said inlet and the receiving end of the sifting surface at a point adapted to provide desired dynamic air pressures above said sifting surface, said partition having its upper edge secured in air tight relation adjacent said top wall and its upper portion extending downwardly across the entire width of the upper chamber toward said sifting surface and secured for longitudinal reciprocation with said body and sifting surface, at least the lower portion of said partition consisting of flexible, airtight material extending toward said outlet and located to engage the top of the stock on said sifting surface and maintain a substantial air seal between the main portion of said upper chamber and said inlet.

3,021,953
SIFTER
William A. Brastad, Earl F. Diekhoff, and Stanley C. Rustad, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,873
9 Claims. (Cl. 209—339)

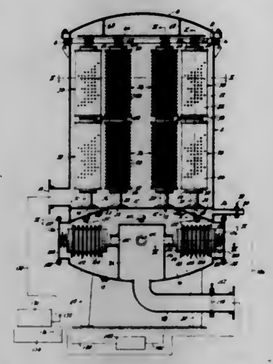


1. In a reciprocating sifter comprising a conveying and sifting surface having an imperforate receiving end, a discharge end, and a perforated sifting area between said ends, a body portion having walls enclosing said conveying and sifting surface and providing separate substantially closed upper and lower chambers extending longitudinally above and below said surface, means for reciprocating said body chambers and sifting surface longitudinally as a unit and thereby conveying stock across said sifting area from the receiving end to the discharge end, an inlet for stock at the receiving end of the upper chamber and an outlet for stock at the other end of each chamber, the improvement comprising an anti-surging partition located in said upper chamber between said inlet and said sifting area at a point adapted to equalize dynamic air pressures in said upper and lower chambers, said partition being secured for reciprocating movement with said body and sifting surface and having an upper edge adjacent said top wall, side edges adjacent said side walls, and a bottom edge spaced closely above said surface and thereby providing a restricted passage adapted to be substantially closed by stock passing from the inlet to the sifting area.

3,021,954
COMBINATION FULL-FLOW AND BY-PASS FILTER
Albert S. Allen, Springfield, Mo., assignor to Hoffman-Allen Corporation, Springfield, Mo., a corporation of Missouri
Filed Nov. 24, 1958, Ser. No. 775,741
3 Claims. (Cl. 210—132)

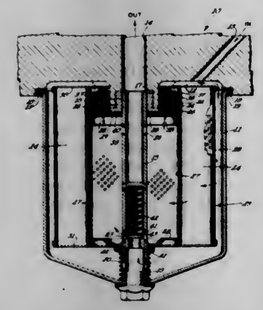
1. A filter device comprising a casing defining a filter chamber having an inlet for liquid to be filtered and a pair of outlets, interchangeable coarse and fine filter cartridges disposed in said filter chamber, said coarse filter cartridges discharging through one of said outlets and said fine filter cartridges discharging through the other of said outlets, said casing forming a pair of outlet chambers interconnected respectively with the two outlets of said filter chamber, said outlet chambers having a common wall with an aperture formed therethrough,

means for selectively opening or sealing said aperture, each of said outlet chambers having an outlet, and an



adjustable flow restriction disposed in each of said last named outlets.

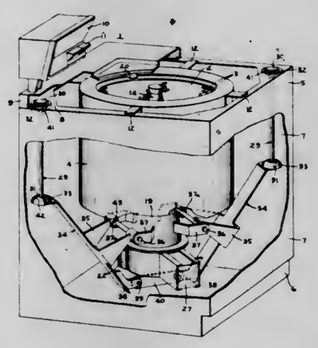
3,021,955
FILTER UNIT WITH RESTRICTOR MEANS
John Joyce, New Brunswick, N.J., assignor to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Jan. 6, 1959, Ser. No. 785,179
1 Claim. (Cl. 210—132)



An oil filter comprising an annular resin impregnated pleated paper element provided with a perforated center tube, an annular end cap sealing off one end of said element and a circular end cap on the opposite end, a filter shell disposed within said center tube having a perforated bottom wall and top wall and side walls formed by a vertical member and the center tube adjacent thereto, a fibrous filter mass in said shell, said top wall having spaced inlet ports therein, said ports being of a sufficient size to permit a predetermined quantity of oil passed through the filter to flow therein and by-pass said paper element.

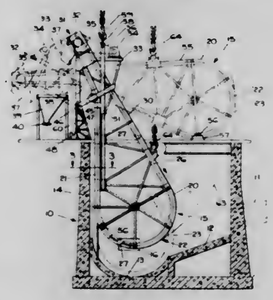
3,021,956
VIBRATION ISOLATING SYSTEM
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Jan. 28, 1960, Ser. No. 5,259
11 Claims. (Cl. 210—364)

1. A machine comprising: a moving system including driving means and means driven at high speed by said driving means; a rigid frame provided for supporting said moving system; and means for supporting said moving system on said frame comprising a pair of elongated members formed to be substantially rigid in tension respectively positioned on opposite sides of said system, each said elongated member having an upper end secured to said frame in swiveling relation thereto and being positioned to extend down from said upper end, said elongated members having a length causing their respective lower ends to be above the center of gravity of said system, a pair of joining members each having one end secured to the lower end of one of said elongated members in swivel-



ing relation thereto, said joining members being also respectively connected to said system on opposite sides thereof, said moving system being pivotally mounted to said joining members for pivoting motion in the plane formed by the lower ends of said elongated members and the moving system center of gravity, and connecting means extending under said moving system connecting together the other ends of said joining members; said elongated members and the moving system center of gravity all lying substantially in a single vertical plane when said system is at rest.

3,021,957
CONVEYING APPARATUS
John A. Lowry, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio
Filed July 28, 1958, Ser. No. 751,253
2 Claims. (Cl. 210—526)



1. A conveying apparatus for collecting a sink product in a tank in which the sink product is washed into the tank by a stream of liquid, a conveyor main frame adapted to be disposed in the tank, a conveyor on the main frame adapted to travel through the tank for collecting the product, means on the main frame for guiding the conveyor through the tank, said tank including an upright

guide track facing the conveyor main frame and forming a shoulder opening towards the conveyor main frame, said conveyor main frame including an upright rail cooperating with the guide track to position the conveyor main frame in the tank in a generally upright position, said conveyor main frame including a beam structure having a pivot thereon, a tower including a seat adjacent the base thereof for the pivot of the beam structure to support the conveyor main frame in the tank, a second seat at the top of the tower for receiving the pivot of the beam structure when the conveyor main frame is raised out of the tank to support the conveyor main frame in elevated position and provide for swinging of said conveyor main frame from a generally upright position to a generally horizontal position outside said tank, and said rail being in engagement with the guide track when the conveyor main frame is raised out of the tank to guide the conveyor main frame.

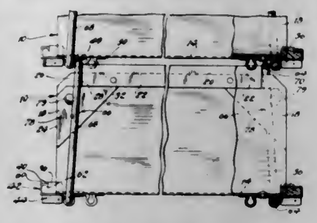
3,021,958
CLOTHES HANGER SUPPORT FOR SHIPPING CONTAINERS
Louis Winkler, 1 Reid Ave., Troy, N.Y.
Filed May 24, 1960, Ser. No. 31,289
10 Claims. (Cl. 211—124)



8. A clothes hanger support for shipping containers comprising a clothes hanger supporting member adapted to receive the hook and neck portions of the clothes hanger, means to mount the said supporting member on the shipping container, said means having a loop, a locking bar movable to and from positions substantially parallel with said supporting member and substantially perpendicular thereto, said locking bar being disposed primarily below and at one side of the upper surface of said supporting member and having first and second end portions, said first end portion extending laterally outwardly away from said supporting member and being pivoted in said loop, said second end portion being of inverted U-shape to rest at its bight on and straddle said supporting member in its locked position with its legs on opposite sides of the latter, one of said legs having a distal end extending below the other leg provided with a portion to clip under said supporting member, and said locking bar being sufficiently elongated to afford leverage to enable it to be locked and unlocked to said supporting member without the use of tools.

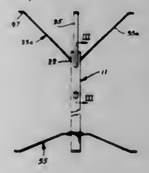
3,021,959
NESTABLE STACKING TRAY
Charles M. Katterjohn, P.O. Box 463, Henderson, Ky.
Filed Dec. 14, 1959, Ser. No. 859,437
14 Claims. (Cl. 211—126)

1. A nestable stacking tray comprising an approximately trough-shaped tray body having a bottom wall and upstanding opposite side walls swingably attached to the opposite edges of said bottom wall and substantially open opposite ends; and a plurality of tray-operating supporting structures having pivot portions pivotally engaging the lower portion of said tray body near the opposite ends thereof and disposed transversely thereto, said tray-operating supporting structures being swingable from retracted positions beneath said bottom wall into up-



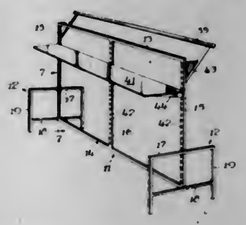
standing tray-supporting positions embracing said side walls and projecting thereabove.

3,021,960
RACK STRUCTURE
John Pipe, Grand Rapids, Mich., assignor to Steelcase Inc., Grand Rapids, Mich., a corporation of Michigan
Filed July 5, 1960, Ser. No. 40,943
7 Claims. (Cl. 211—177)



5. A knocked down clothes rack structure comprising: a tubular post, a base means for maintaining said post in an upright position, said base means including legs one of which is crossed over the other, a locator plate having flanges engaging said legs and orienting one with respect to the other, said locator plate having ears for engaging the interior of said tubular post and locating said post on said locator plate, fastener means for securing said base means to said post; apertures formed in said post, hanger means being insertable into said apertures, and insert means positionable in said post for clamping said hanger means thereagainst whereby said hanger means may support clothes.

3,021,961
RACK
Richard R. Ruhnke, Skokie, Ill., assignor to Garcy Corporation, a corporation of Illinois
Filed Oct. 13, 1958, Ser. No. 767,003
13 Claims. (Cl. 211—177)



2. A rack structure comprising a center frame including upstanding end rails, means connecting said end rails together, vertically spaced slots in said end rails, a pair of end frames each including top and bottom rails, means connecting said top and bottom rails together, a bracket

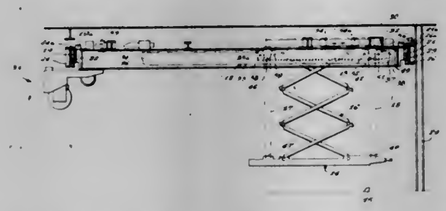
on each top rail engageable in the upper slots of the respective end rails, and a bracket on each bottom rail engageable by the lower slots of the respective end rails, said brackets cooperating with the slots in said end rails to bind the end frames to the center frame firmly.

3,021,962
CRANE CONTROL OPERATING MECHANISM
John E. Minty and Howard C. Stevens, Jr., Muskegon, Mich., assignors to Manning, Maxwell & Moore, Inc., Muskegon, Mich., a corporation of New Jersey
Filed Aug. 7, 1958, Ser. No. 753,776
7 Claims. (Cl. 212—18)



1. A control mechanism for effecting one or more crane motions of hoist, traverse and bridge, comprising a housing, a plurality of rotatable and axially immovable sheave members mounted within said housing, a plurality of rotatable and axially movable sheave members supported within the housing for simultaneous movement in the same direction between and away from the axially immovable sheave members, control means mounting the last-named sheave members for axial movement, and cable means comprising a pair of vertically spaced cable runs extending outwardly from each of the opposite ends of the housing receivable upon the axially immovable and axially movable sheave members and upon effective slackening and tightening thereof and upon movement of the control means to effect one or more motions of hoist, traverse and bridge, one only of said axially movable sheave members being positioned between a pair of axially immovable sheave members during maximum slackening of the cable run received thereon.

3,021,963
CRANE
Earl W. Kasdorf, Muskegon, and Richard T. Fujioka, Oxford, Mich., assignors to Manning, Maxwell & Moore, Inc., Muskegon, Mich., a corporation of New Jersey
Filed Oct. 30, 1958, Ser. No. 770,670
10 Claims. (Cl. 212—128)



1. An overhead hoisting crane comprising in combination, an overhead trolley, tracks supporting said trolley for movement therealong, power means for driving said trolley along said tracks, a laterally rigid pantograph supported from its upper end on the trolley, a rigid strongback connected to the lower end of the pantograph, means on the strongback for connecting to a load, power means connected to move the strongback while it is guided by the pantograph, means for pivotally connecting the strongback at a fixed pivot point to one arm at the end of the pantograph, means for connecting the strongback to another arm at the end of the pantograph including a pinion and a rack in non-twisting engagement with means to hold said rack and pinion in engagement preventing twisting between the pantograph and strongback but permitting extension and compression of the pantograph, means for pivotally connecting one arm at the upper end of the pantograph at a fixed pivot point to the trolley, and means for connecting the trolley to another arm at the end of the pantograph including a pinion and a rack in non-twisting engagement with means to hold said rack and pinion in engagement preventing twisting between the pantograph and trolley but permitting extension and compression of the pantograph.

3,021,964
COUPLER OPERATING MECHANISM
William J. Metzger, East Cleveland, Ohio, assignor to National Castings Company, a corporation of Ohio
Filed May 16, 1957, Ser. No. 659,610
3 Claims. (Cl. 213—167)

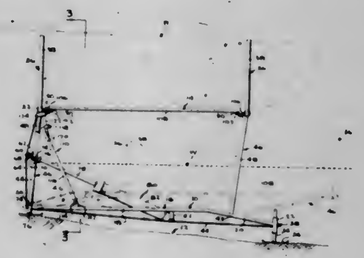


1. In combination: a coupler for a railway vehicle, the coupler having a rotary shaft member mounted thereon comprising a hollow head portion disposed along the axis of rotation of the member, said axis extending transversely of the lengthwise direction of the coupler, said hollow head portion comprising a pair of opposing side walls extending generally parallel to said axis along opposite sides thereof; an uncoupling rod extending, in its operative position, with its length generally lengthwise of said axis and having an end portion normally positioned within said head portion between said pair of opposing walls; said end portion being of greater width in a direction transversely of said axis than the distance between said walls whereby each of opposite sides of the end portion necessarily engages one of said walls in rotation of the member by the rod; one of the walls having a rounded ridge aligned transversely of said axis and disposed approximately midway of said head portion in the lengthwise direction of said axis, and protruding toward the other side wall whereby one of said sides of the rod portion necessarily engages said ridge during said rotation of the member in one direction.

3,021,965
BOAT LIFT
Edward E. Harvey, Gruver, Iowa
Filed Nov. 6, 1959, Ser. No. 851,433
1 Claim. (Cl. 214—1)

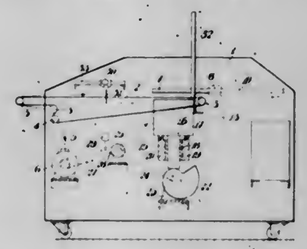
A boat lift comprising a main horizontal frame having forward and rear ends, a forward lift frame hinged on the main frame at the forward end of the main frame, a rear lift frame hinged on the main frame at a point spaced rearwardly from the forward lift frame, tie rod means spaced above the main frame and extending between and pivotally secured to upper parts of the lift frames and maintaining the lift frames in parallel relationship to each other in erect positions and in depressed reclining positions, cradles mounted on the lift frames, and hydraulic jack means extending between and pivoted to the main frame and to one of the lift frames for erecting the lift frames from depressed positions and

for holding the lift frames in erect positions, said cradles comprising U-shaped boat cradles mounted on upper parts of the lift frames having bight portions extending crosswise of the main frame, and pairs of boat chocks mounted on the bight portions, and a locking assembly comprising a normally vertical rod having a lower end pivoted on the main frame at a point spaced behind the forward lift frame, a rearwardly and laterally extending



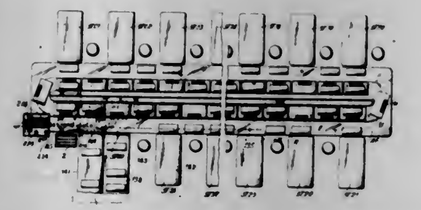
stop arm on the upper end of the vertical rod, a vertical toggle lever pivoted at its lower end to a side of the vertical rod at a point spaced below the stop arm, said toggle lever having a forwardly extending clevis on its upper end to engage a part of the forward lift frame only in the erect position thereof for holding the lift frames in erect position, with the vertical rod in a forward diagonal position with its upper portion over-center with respect to the toggle lever.

3,021,966
STACKING OF FLAT ARTICLES
William Broadbent Gordon Cran, Huddersfield, England, assignor to Thomas Broadbent & Sons Limited, Huddersfield, England, a company of Great Britain
Filed Oct. 14, 1959, Ser. No. 846,321
Claims priority, application Great Britain Oct. 23, 1958
2 Claims. (Cl. 214—6)



1. A machine for stacking semi-rigid flat articles comprising a conveyor having a plurality of spaced gaps in its width for delivering the articles successively to the predetermined stacking position, a movable elevating member comprising a series of parts spaced to conform to the spacing of the gaps in the width of the conveyor, a stop member comprising a plurality of vertically extending laterally spaced parts in a plane transverse to the conveyor and fixed at a location adjacent to the stacking position, a horizontally movable support member including a plurality of prongs projecting in a horizontal plane above the conveyor and spaced from each other transversely of the conveyor to conform to the spacing between the parts of the elevating and stop members, means for moving the support member to alternately move the prongs in one direction through the parts of the stop member to a location above the stacking position and in a reverse direction away from the stacking position to limit the movement of the flat articles being carried by the prongs by engagement with the stop member so that they do not pass beyond the stacking position, a motor for operating a single revolution clutch, means to initiate operation of said clutch under the control of an article travelling along the conveyor to the stacking position, means operated by the clutch through a timed cycle for moving the support in the reverse direction to release any article on the prongs so that it drops on to the article on the conveyor, to raise the elevating member through the gaps in the conveyor to lift any article on the conveyor above the horizontal plane of the prongs, to move the prongs in the one direction into the stacking position and between the respective parts of the elevating member when in raised position and to thereafter lower the elevating member and stacked articles onto the support member in timed relation within the cycle.

3,021,967
CONVEYOR SYSTEM WITH STATION SELECTOR
Georg Pätzold, Günter Myska, and Erwin Grube, Bielefeld, Germany, assignors to Durkoppwerke Aktiengesellschaft, Bielefeld, Germany, a corporation of Germany
Filed Apr. 26, 1960, Ser. No. 24,706
20 Claims. (Cl. 214—11)

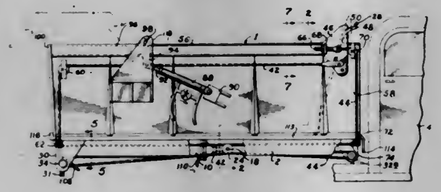


1. In a distributing system, in combination, a conveyor movable along a closed path, a plurality of load carriers entrained by said conveyor, detent means on each of said carriers adapted to hold a load thereon, a plurality of work stations adjacent said conveyor each provided with a controller in the path of said carriers set in a station-identifying pattern, a code selector on each of said carriers adjustable to a plurality of patterns respectively identifying said work stations by matching the patterns of their controllers, release means at said controllers engageable with said detent means during passage of a carrier bearing a matchingly adjusted selector for tripping said detent means into a load-releasing position, a sorting station adjacent said conveyor provided with a reader in the path of said carriers, said reader having a plurality of testing elements positioned for temporary displacement by the selectors of passing carriers in a variety of patterns determined by the setting of each selector, a counter assigned to one of said work stations and connected to said reader for operation by said testing elements upon the detection of a corresponding selector pattern, and signal means at said sorting station controlled by said counter for indicating a predetermined number of occurrences of the same pattern.

3,021,968
LOAD EJECTOR MECHANISM FOR VEHICLE BODIES
Herbert F. Myers, 327 NE. 40th St., Oklahoma City, Okla.
Filed Dec. 1, 1958, Ser. No. 777,502
5 Claims. (Cl. 214—82)

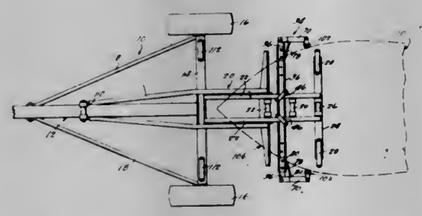
3. In a device for opening the tail gate of a vehicle body, a first hydraulic cylinder mounted on said body in

position to unload the contents of said body, a plunger mounted within said first hydraulic cylinder, a hydraulic pump system for operating the plunger of said first hydraulic cylinder, at least one second hydraulic cylinder pivotally mounted on said body and being pivotally connected to said tail gate for opening said tail gate, a hydraulic fluid supply conduit leading from said hydraulic pump to the inlet port of said second hydraulic cylinder and being connected therewith for applying hydraulic pressure to the plunger thereof to move said plunger outwardly, said second hydraulic cylinder having an outlet port formed therein within the length of travel of the



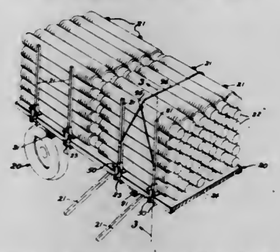
plunger thereof, which port is initially sealed by said plunger with respect to said inlet opening, a conduit connected with said outlet port in said second hydraulic cylinder and to said first hydraulic cylinder so as to direct hydraulic fluid from said second hydraulic cylinder into said first hydraulic cylinder after said plunger in said second cylinder has moved a predetermined distance, a by-pass conduit, a check valve within said by-pass conduit, which conduit is connected with said outlet conduit and with said inlet conduit so as to by-pass said second hydraulic cylinder, and valve means within said inlet conduit to control the flow of hydraulic fluid in said hydraulic fluid inlet conduits to close said tail gate.

3,021,969
BOAT TRAILER BOW GUIDE
Clyde C. Peake, 735 S. Washington, and John E. Hanna, 805 S. Washington, both of Liberal, Kans.
Filed Jan. 8, 1960, Ser. No. 1,220
4 Claims. (Cl. 214—84)



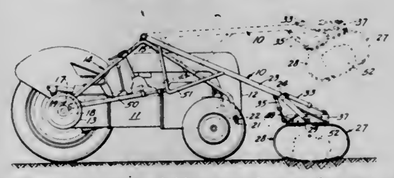
1. In combination, a boat trailer having a horizontal bed having a rear end, transverse rear boat supporting rollers upstanding on said rear end, a horizontal transverse beam extending across and engaging said bed at a point spaced forwardly from said rear rollers, means fixing said beam to the bed, an arm disposed at a right angle with respect to the beam at each end of the beam and extending rearwardly of the beam, the forward end of each arm being pivoted on the beam for movement of the arm about a vertical axis from the right-angular relation position to a position at an angle to the right-angular-relation position, said arms having rear ends, upstanding guide roller means mounted on the rear ends of the pivot arms, and spring means biasing the pivot arms toward each other.

3,021,970
TRAILER STAKE SYSTEM
Henry Wilhelm Bigge, Oakland, and William A. Whitmire, Castro Valley, Calif.; said Whitmire assignor to said Bigge
Filed May 15, 1959, Ser. No. 813,388
12 Claims. (Cl. 214—85)



1. In a vehicle having a fixed frame, a cargo deck, and normally upright load-retaining stakes, the combination therewith of: stake pockets pivotally mounted along the sides of said cargo deck and having receptacles to telescopically receive said stakes; a projection mounted on each said stake pocket; locking pawl means adapted to hold each said projection and retain said stake pocket in an upright position; a connecting rod attached to said locking pawl and extending to the opposite side of said vehicle frame; an actuation linkage means attached to said connecting rod; a release handle attached to said linkage means; stop means on said linkage means; and spring-loaded safety means controllable by a second handle and normally urged against said stop means to prevent inadvertent release of said stake pockets, whereby movement of said release handle moves said connecting rod to release said locking pawl, causing said stakes and stake pockets to pivot downward to serve as ramp means for discharging the vehicle cargo.

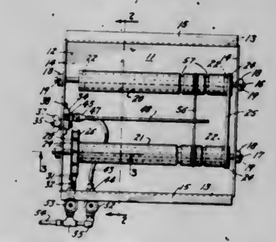
3,021,971
ROCK DIGGER AND LOADER
Joseph T. Rensch, Box 27, Makoti, N. Dak.
Filed Oct. 6, 1958, Ser. No. 765,617
1 Claim. (Cl. 214—147)



A rock-digging and picking attachment for use with a tractor, comprising a pair of spaced and rigid elongate supporting members extending forwardly from the tractor and being vertically swingably mounted thereon about a first axis, power means connected with the supporting members for vertically swinging the same, supporting means at the outer ends of said supporting members, a pair of tine jaws carried in depending position by said supporting means and being swingable toward and away from one another on axes spaced from one another, said tine jaws each including a plurality of tines, said tines being resiliently flexible to facilitate engaging and gripping of unevenly contoured rocks with a multiplicity of tines of each jaw, said latter axes extending transversely of said supporting members and being substantially parallel with said first axis, the tine ends of each jaw extending toward the tine ends of the other jaw when the jaws are in closed position, a pair of individually controllable hydraulic cylinders each anchored

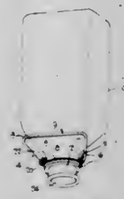
to the supporting members and each being connected with a respective jaw for swinging the jaw toward and away from the other jaw into open and closed position, whereby the rearmost jaw may be projected downwardly into the ground against a rock and the foremost jaw may be subsequently moved downwardly into the ground, along with a simultaneous lifting on the supporting members to provide substantial lifting force on the rock and for rolling the rock out of the ground.

3,021,972
FILTER CLEANING DEVICE
Herbert L. Everroad, Denver, Colo., assignor to Everroad Supply Co., Denver, Colo., a corporation of Colorado
Filed Oct. 10, 1960, Ser. No. 61,638
2 Claims. (Cl. 214—340)



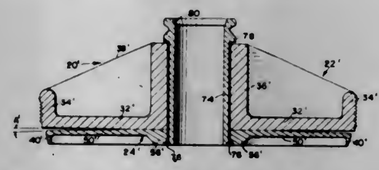
1. In a pneumatic air filter cleaning device of the type having two parallel, spaced-apart, horizontal rollers for supporting an air filter in a horizontal position, means for varying the effective length of said rollers to accommodate filters of various length comprising: spaced-apart belt grooves in each roller in alignment with the belt grooves in the other roller and an endless elastic belt surrounding both rollers and being interchangeable between selected pairs of said aligned grooves to stop longitudinal travel of said air filter along said rollers at any desired point.

3,021,973
WIRE BOTTLE CARRIER
Robert E. Palmer, Rocky River, Ohio, assignor of fifty percent to Marianne C. Palmer and fifty percent to Roberta L. Palmer, both of Rocky River, Ohio
Filed May 24, 1956, Ser. No. 586,973
1 Claim. (Cl. 215—100)



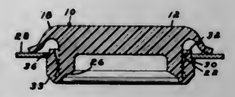
A bottle carrier, comprising in combination, a bottle neck engaging ring formed from a single piece of resilient wire shaped to form an open circle, offset at its ends and including first and second end loops positioned normal to the plane of the circle and lying entirely outside the circumference thereof in normally non-overlapping angular opposition, the ring also having an offset portion, diametrically opposite the two end loops, bent upon itself to form a third loop, positioned normal to the plane of the circle and lying entirely outside the circumference thereof; and a substantially U-shaped wire handle having inturned and opposed end hooks spaced apart a distance less than the diameter of the ring, one of the handle hooks being engageable with the third ring loop and the other of said hooks being engageable with the first and second loops upon diametrical compression of the ring, the so-engaged handle acting to hold the first and second loops in compressed engagement therewith in overlying parallel positions, whereby they frictionally press against the handle to hold same in adjusted positions.

3,021,974
FLUID SEALING ARRANGEMENT
John D. Watts, Houston, Tex., assignor to Gray Tool Company, Houston, Tex., a corporation of Texas
Filed Aug. 1, 1958, Ser. No. 752,639
8 Claims. (Cl. 220—46)



1. In combination with a hollow member having an opening therein and an annular seat formed inwardly of said opening, a fluid tight sealing arrangement for said opening comprising: a sealing element including a disc-like portion and a circumferential lip having an outer surface complementary to said seat, said disc-like portion being of deflectable construction, cap means having surface-to-surface engagement with said disc-like portion, said disc-like portion being separated from said means about its periphery while in a relaxed state, said means and said disc-like portion being adapted to be moved to seal said opening and to cause a deflection of said disc-like portion whereby said opening is sealed under stress by engagement of said circumferential lip with said seal.

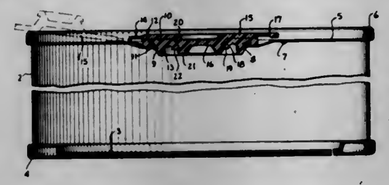
3,021,975
CLOSURE MEMBER
Bruno A. Sarafinas, Saugus, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Apr. 7, 1960, Ser. No. 20,634
5 Claims. (Cl. 220—60)



4. A member for engagement with the edge of the wall of an aperture in a thin support, said member comprising a base element, a flange in acute angular relationship with said base element and a tubular engaging element integral with said base element and extending away from said base element, said flange in spaced relation with and a portion of said tubular engaging element, said tubular engaging element having a support portion and a terminal portion, said support portion and said terminal portion connected by a neck, said terminal portion bent back toward said flange into spaced circumscribed relationship with said support portion.

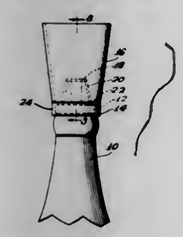
3,021,976
CONTAINER
Gerald T. Tracy, Chicago, Ill., assignor to National Can Corporation, Chicago, Ill., a corporation of Delaware
Filed Sept. 24, 1959, Ser. No. 842,155
1 Claim. (Cl. 220—66)

For use with a container; a sheet metal disk adapted to be secured to one end of the container to form a closure for said end of the container, said disk having a hole which opens into the interior of the container when the disk is secured thereon, the metal of the disk at the periphery of said hole being bent away from the hole to form a curl having a raw edge, a collar of flexible plastic material having a groove for receiving the curl with the raw edge biting into the collar to lock the collar onto the disk, said collar having an annular axially extending flange inwardly of said groove, said flange forming a neck-opening in the collar, and a plastic replaceable



plug mounted on said collar, said plug having a central projection which fits into and closes and seals the neck opening when the plug is in closed position, said plug having an annular groove for snugly receiving the flange when the projection is within the neck opening, a locking lip at one end of the projection for engagement with an end of the flange for retaining the plug in closed position, at least one of said plug and collar being transparent to permit observation of the interior of the container from the outside thereof.

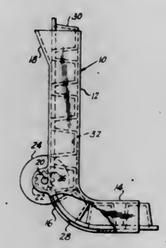
3,021,977
BOTTLE TOP DRINKING CUP
Dwight H. Hester, 315 N. Lorel Ave., Chicago, Ill.
Filed Apr. 14, 1960, Ser. No. 22,227
3 Claims. (Cl. 220—90.4)



1. A drinking cup attachment for a bottle, comprising a cup having means on the bottom thereof to engage the neck of a bottle in substantially liquid-tight relation and support said cup upright upon the neck of said bottle, said cup having an aperture in the bottom thereof to receive liquid from said bottle when said bottle is inclined, a baffle aligned with and upwardly of said aperture and a plurality of struts supporting said baffle in said position extending from said baffle to the bottom of said cup adjacent said aperture to restrain the flow of liquid thereinto through said aperture.

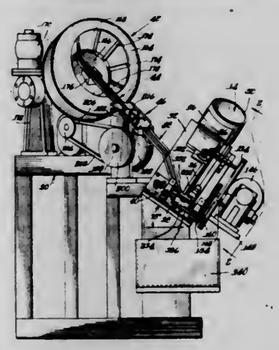
3,021,978
ICE CUBE DISPENSING AND STORAGE DEVICE
Wallace Cunliffe, San Juan, Puerto Rico
(P.O. Box 6784, Loiza Sta., Santurce, Puerto Rico)
Filed Jan. 28, 1959, Ser. No. 789,736
2 Claims. (Cl. 221—64)

1. An ice cube storage and dispensing assembly device arranged for use in a conventional refrigerator comprising in combination a separable, independent ice cube freezing and dispensing flexible tray, and an ice cube dispensing housing for said tray, said tray comprising a plurality of longitudinally spaced apart ice cube compartments each open at one end, a flexible connecting wall securing said compartments together solely at their open ends, a plurality of sprocket teeth receiving apertures extending longitudinally of said tray wall, said tray being rectangular both in elevation and in cross section and arranged for freezing ice cubes in a conventional refrigerator freezing compartment, said dispensing housing being hollow and rectangular in cross section and of a size to permit said tray to pass therethrough, said housing comprising two substantially straight sections at right angles to each other and a connecting curved elbow section connecting the adjacent ends of said straight sections



together, the other end of one section of said housing having an enlarged mouth for inserting said tray therein, the other end of the other section being open to discharge said tray therefrom, an ice cube discharging aperture on the outside of the curve of said elbow section, sprocket tray advancing means in said housing cooperating with said sprocket teeth receiving apertures in said tray wall, means for operating said sprocket tray advancing means to advance said tray from one straight section of said housing through said curved elbow section toward and through the other straight section of said housing to thereby discharge ice cubes from said open compartments through said elbow dispensing aperture as said tray bends as it advances therethrough from one housing section to the other housing section.

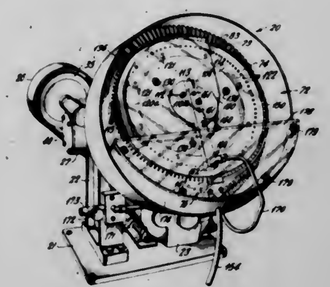
3,021,979
WASHER FEEDING MACHINE AND METHOD
William Stern, Park Ridge, Ill., assignor to Illinois Tool Works Inc., a corporation of Delaware
Original application Oct. 11, 1951, Ser. No. 250,865, now Patent No. 2,752,618, dated July 3, 1956. Divided and this application Apr. 9, 1956, Ser. No. 577,069
5 Claims. (Cl. 221—157)



1. Apparatus for feeding individual, flanged, toothed lock washers, said apparatus comprising a hopper adapted

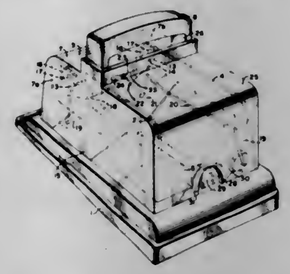
to receive a random mass of individual, flanged, toothed lock washers, an inclined washer track, means for discharging washers from said hopper to the upper end of said track, and shiftable washer selection means extending over the track adjacent the upper end thereof and being substantially parallel to the plane of said track, said shiftable means including a rotating clearance wheel rotatable about an axis substantially normal to the plane of said track and having a plurality of teeth extending over the washer track, said teeth being undercut to provide clearance for washer teeth and substantially complementary to a washer lying with its flange up whereby to pass washers having their flanges upwardly directed and to reject washers having their flanges downwardly directed.

3,021,980
HIGH SPEED PARTS FEEDER
Robert F. Gladfelter, Birmingham, and John T. Faull and Everett Gill, Detroit, Mich., assignors to Detroit Power Screwdriver Company, a corporation of Michigan
Filed Mar. 9, 1960, Ser. No. 13,791
16 Claims. (Cl. 221—167)



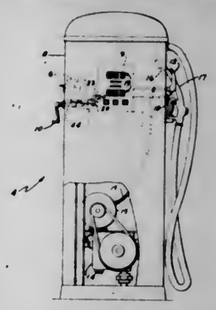
13. A high speed feeder for tubular parts having only one open end, comprising a hopper mounted on a support for rotation about a fixed axis, a collector ring formed as a part of the hopper and having an annular series of radially extending, angularly spaced parts receiving slots formed in an upper surface portion thereof, said slots being open at their inner ends and having their axes sloping downwardly as they pass through a given location in their path of travel, a selector wheel mounted above the collector ring and journaled on a part of the support for the hopper with its axis of rotation at an angle to the hopper axis and being of sufficiently smaller diameter than the inside diameter of the said upper surface portion of the collector ring to permit the wheel to rotate with its periphery spaced radially inwardly of the inner open ends of said slots as the latter pass through the aforesaid given location in their path of travel, an annular series of pins equal in number to that of the slots mounted in the periphery of the wheel to extend radially therefrom with the axis of each successive pin being in alignment with and arranged as a continuation of the axis of each successive slot as the latter passes through said given location in its path of travel so that a part positioned in an aligned slot with its open end facing inwardly will be transferred to the corresponding aligned pin, means for removing the parts from the pins as the selector wheel rotates, and means for driving the collector ring and the selector wheel at the proper relative speeds to effect the aforesaid alignment of the said slots and pins.

3,021,981
DEVICES FOR DISPENSING OBJECTS FROM A CONTAINER
Kallis Hans Männik, Hagersten, Sweden
(48 Gorham St., Rochester 5, N.Y.)
Filed Feb. 3, 1958, Ser. No. 712,715
Claims priority, application Sweden June 13, 1957
14 Claims. (Cl. 221—202)



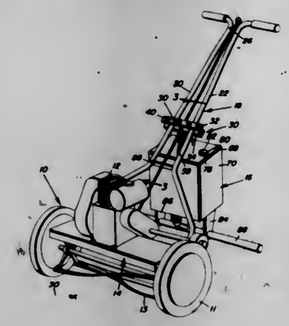
1. A dispensing device for dispensing objects from a container including spaced-apart side walls and a base arranged in fixed relationship, said device comprising a slide disposed adjacent one end of said container and adapted for displacement relative to said fixed walls, a spring in engagement with said slide and opposing displacement thereof, pivotally mounted discharging means having a portion thereof within said container adjacent said base, said means being engaged by said slide whereby displacement of the slide pivots said means, said portion upon pivotal movement of said means swinging along a path generally parallel to said base and being adapted to contact an object resting upon said base and project the object from the container; and additional means mounted within said container for swinging movement from and to a locus spaced from said base to and from a locus adjacent said base to thereby feed an object into the path of movement of said discharging means at least substantially simultaneously with the effective discharging movement of said discharging means, said additional means being moved upon displacement of said slide.

3,021,982
COMPUTER-PRINTER INTERLOCK APPARATUS
George D. Robinson, Jr., Agawam, Mass., assignor to Gilbert & Barker Manufacturing Company, Springfield, Mass., a corporation of Massachusetts
Filed Dec. 23, 1959, Ser. No. 861,617
4 Claims. (Cl. 222—30)



1. In a liquid dispensing apparatus having a computer for registering the amount of liquid delivered by said apparatus including a reset shaft movable to "zero" said computer after each delivery, a printer for imprinting said amount on a ticket or the like and driven by said computer, means for pressurizing said liquid, an operating lever movable between positions for selectively energizing and de-energizing said pressurizing means; a device for imposing a predetermined sequence of operation on said computer and printer comprising: a rotatable operating handle for actuating said printer to print "zero" on a ticket inserted therein and to print the total registered by said computer after delivery of liquid, an interlock responsive to first predetermined rotation of said handle for preventing movement of the computer reset shaft and to further predetermined rotation of said handle for permitting movement of said reset shaft, and means responsive to the position of said operating lever for preventing movement of the printer operating handle until said operating lever has been moved to de-energize said pressurizing means.

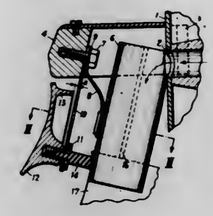
3,021,983
LIQUID DISPENSING ATTACHMENT FOR LAWN MOWERS
Thomas E. Blocksom, 894 Oak Grove Ave., Marion, Ohio
Filed Jan. 27, 1959, Ser. No. 789,318
4 Claims. (Cl. 222—191)



4. A fluid spraying attachment for lawn mowers of the type including a rearwardly and upwardly inclined, elongated handle, said attachment comprising a tank for receiving a fluid to be sprayed, brackets fixed to said tank, a horizontal tube fixedly mounted on said brackets transversely beneath the tank and communicating therewith for receiving the fluid therefrom, said tube having discharge orifices in the upper portion only thereof, and means for non-rotatably suspending the tank from the handle for forward, rearward and lateral swinging movement, said means comprising a clamp including a pair of spaced, opposed upper and lower bars secured together with the handle therebetween, a rod affixed to the lower bar and depending therefrom, a peripherally grooved, vertical segment affixed to said rod in side-abutting engagement therewith, and an upstanding yoke on the tank engageable in the segment from one side thereof for operation therein.

3,021,984
SPOUT CONSTRUCTION FOR COFFEE MILLS AND THE LIKE
Walter Engi, Zurich, Switzerland, assignor to Adolf Ditting, Zurich, Switzerland
Filed Jan. 25, 1960, Ser. No. 4,256
Claims priority, application Switzerland Jan. 23, 1959
7 Claims. (Cl. 222—196)

1. In combination; a mill for grinding coffee and the like, and a spout construction mounted on the mill, said mill comprising a housing with a discharge opening and said spout construction comprising, support means rigidly connected to said housing, a discharge tube leading downwardly at an angle from said discharge opening for conveying the ground material from the mill, said tube having an aperture in its wall adjacent said discharge opening to receive ground material therefrom, first spring means connected between said support means and said tube resiliently supporting said tube, said tube being at least slightly spaced from said housing to permit the discharge tube to vibrate, a manually operable handle member, second spring means connected between said support means and said handle member resiliently supporting said handle member, and an extension portion on the handle member projecting therefrom towards said discharge tube and adapted for being brought into engagement with the said tube, so that said tube can be set in vibration by manually operating the handle member.

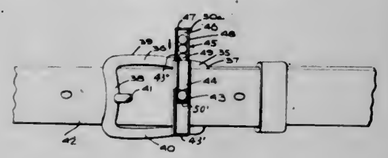


3,021,985
UMBRELLA HOLDER
Paul R. Sarver, 113 Tower Lane, Morgantown, W. Va.
Filed Nov. 3, 1959, Ser. No. 850,682
1 Claim. (Cl. 224—5.1)



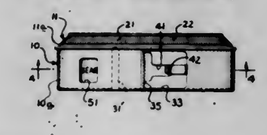
An umbrella holder comprising a pair of saddles adapted to seat on a person's shoulders and conforming substantially to the shape thereof, said saddles including horizontal, inwardly facing yokes comprising legs receiving the shoulders longitudinally therebetween and upwardly bowed cross members extending between said legs and adapted to rest on the shoulders, a generally inverted U-shaped frame having its ends affixed to said cross members and adapted to straddle the person's head, a socket on the bight portion of the frame for mounting an umbrella thereon, underarm straps having their ends connected to the legs for securing the saddles on the shoulders, and means for retaining the saddles against rocking movement on the shoulders, said yokes further comprising upwardly curved, arcuate bight portions engageable with the side portions of the shoulders for retaining the saddles against longitudinal movement thereon, said means comprising generally U-shaped chest and back engaging braces connecting the saddles and having their ends affixed to the legs of the yokes.

3,021,986
PILL HOLDER CONSTRUCTION
Charles Saladino, 500 S. Illinois St., Mercedes, Tex.
Filed July 22, 1958, Ser. No. 750,165
2 Claims. (Cl. 224—26)



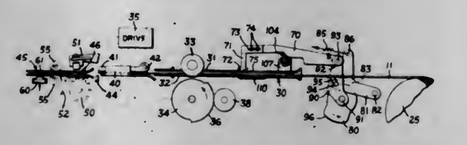
1. An article of manufacture comprising a support adapted to be worn at a readily accessible place over the apparel of a person and having a top and a bottom, an elongated multi-walled housing having a closed bottom and an open top disposed so that the housing extends from the top to the bottom of said support with the closed bottom contiguous to the bottom of said support and the open top contiguous to the top of said support and fixedly attached to said support, a tray having an open front and including a top wall, a bottom wall, a back, and side walls, insertable into said housing through the open top thereof so that the bottom wall rests against the closed bottom of said housing with the side walls and back slidably engaging the adjacent walls of said housing and the top wall closing and seating upon the open top of said housing, the internal area of said tray being such as to support a plurality of medicinal tablets in linear edge-to-edge relation, said tray being operable upon application of an upwardly directed force to the top wall of said tray to be withdrawn out of the open top of said housing to an extent to uncover a portion of the open front of said tray to permit a tablet, when tablets are supported in linear edge-to-edge relation within said tray, to discharge out of the uncovered portion of said tray.

3,021,987
RECEPTACLE FOR TAPE
Arthur P. Scholtz, Chicago, Ill., assignor to National Can Corporation, Chicago, Ill., a corporation of Delaware
Filed Jan. 8, 1958, Ser. No. 707,713
6 Claims. (Cl. 225—25)



1. A tape dispenser comprising inner and outer cylindrical cup members in relatively rotatable telescoped assembly with their lateral walls contiguous, means on at least one of the cup members for engagement by the fingers of one hand to facilitate relative rotation of the cup members while the fingers of the other hand grasp the other cup member, flange means centrally on said members, said dispenser being adapted to receive a roll of tape within the cup members and freely rotatably support the roll on said flange means, the lateral wall of the inner cup member having an axial slot and the lateral wall of the outer cup member providing an opening having an axial margin adapted to constitute a tape tearing edge, relatively engaging means on the cup members limiting relative rotation of the members to and between a tape withdrawal position wherein said slot is substantially exposed in said opening adjacent said tape tearing edge thereof, and a second position wherein said slot is beneath the lateral wall of the outer cup member in predetermined spaced relation to said tearing edge of the opening, the lead end of the tape from a spool within the dispenser being extendable outwardly through said slot and opening in said tape withdrawal position of the cup members, for tape withdrawal in desired length, relative rotation of the cup members to said second position disposing a portion of the tape in extension between said slot and the tearing edge of said opening and forming a tape stub between the lateral walls of the inner and outer cup members upon tape tear-off at said tearing edge, the lateral wall of said inner cup members having a second slot normal to said axial slot and spaced therefrom, and a flexible finger on the lateral wall of said outer cup member, said finger projecting toward said radial slot in a position over said second slot and with its free end extending inwardly of the cup members through the second slot, relative rotation of the cup members to said tape withdrawal position thereby displacing said tape stub into said opening and to engagement with said finger thereover, with resulting elevation of the tape stub by the finger to a position permitting ready grasp of the stub for tape withdrawal in desired length.

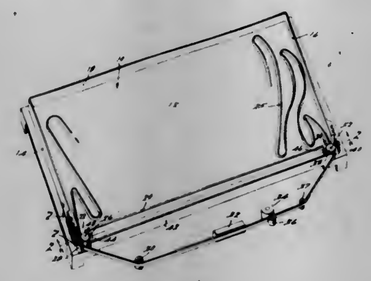
3,021,988
TICKET PRINTER
Ronald E. Focht, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Feb. 23, 1960, Ser. No. 10,314
4 Claims. (Cl. 226—58)



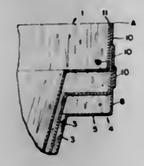
1. Apparatus of the character described for effecting accurately controlled incremental feeding of a continuous strip having therein a plurality of perforations spaced lengthwise thereof by predetermined uniform distances, comprising feeding means for said strip including a feed roll positioned for pressure engagement with said strip, intermittently operable means establishing a cycle of operation for driving said feed roll to effect advance feeding of said strip through a distance slightly greater than the distance between each adjacent pair of said perforations, a movable arm located adjacent the path of said strip having a hook movable in successive said perforations, arm drive means connected for operation by said feed roll and effective upon the completion of said advance feeding during each said cycle for moving said hook into engagement with the surface of said strip in advance of an adjacent said perforation and for moving said hook in a reverse sense on said surface and into said adjacent perforation for effecting limited reverse feeding of said strip into an indexed position corresponding to a total net movement of substantially the spaced length between said perforations.

3,021,989
TAPE HANDLING MECHANISM
Jack D. Sellers, 16722 Oakfield, Detroit, Mich.
Filed Aug. 24, 1959, Ser. No. 835,546
12 Claims. (Cl. 226—118)

4. In a tape handling mechanism for association with a driving capstan for driving the tape, a first roll engageable with the tape ahead of and spaced from the capstan and rotated by and solely in response to movement of the tape, a second roll engageable with the tape following and spaced from the capstan and effective when rotated to drive the tape, and driving means for said second roll comprising said first roll and means for establishing a driving connection from said first roll to said second roll for rotating said second roll in response to rotation of said first roll by the tape.

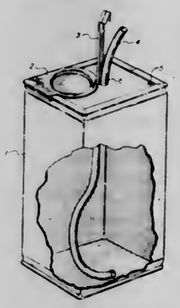


3,021,990
ALUMINUM FOIL CONTAINER
Edmund L. Duskey, Michigan City, Ind., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,666
2 Claims. (Cl. 229—3.5)



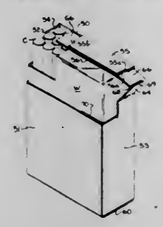
1. A container for food products and the like comprising a receptacle made from thin readily bendable yet self-sustaining aluminum foil of a few thousandths of an inch in thickness, said receptacle comprising a bottom and an outwardly flaring side wall, said side wall terminating in a rim assembly, said rim assembly having corrugations formed therein as a normal incident to the fabrication of the said rim assembly, and said rim assembly including an outwardly directed planar ledge for receiving the marginal edge of a closure, said ledge terminating in a normally upstanding finger engaging lip which flares uniformly slightly outwardly and which is bendable inwardly and downwardly into engagement with the marginal edge of the said closure when the closure is seated on the said ledge, and said finger engaging lip finally terminating in a reversely bent outside hem which lies substantially flat against the outside surface of said lip to form a flat reinforcing bead, said reversely bent hem being of a shorter height than the said lip such that the free edge of the hem is spaced from the point of mergence of the ledge and lip and acts as a nesting stop for the container when it is nested with another container of similar configuration, said hem and lip being connected by a smooth reverse bend in said lip, whereby sharp edges on the lip at the normal point of finger contact are eliminated and the said hem also being adapted to be pressed substantially flat against the outside surface of the lip when the lip engages the said closure so as to effect a smoothing out of the corrugations in the lip and hem and a rigidifying of the closure engaging rim assembly.

3,021,991
COMBINED CONTAINER AND STRAW
Max Cohen and Edward R. Elston, both of 9183 Amador Ave., Ontario, Calif.
Filed June 13, 1961, Ser. No. 116,843
3 Claims. (Cl. 229—7)



1. In a liquid container having an enclosed volume and a ported top, the combination comprising a straw extending from the bottom of said container through a tight-fitting hole in the top center thereof, and extending to a corner of the recessed top and being held in a bent position by a sealing tab which tightly encloses the outer end of the straw and seals a vent opening thereunder, the said sealing tab being held in closed position by crimping at an outer corner and being integrally formed with a conventional pouring spout seal, and being hingedly fastened to the container top to provide access to the straw.

3,021,992
CARTON
Floyd L. Phillips, Jr., Graham, N.C., assignor to Old Dominion Box Company, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Jan. 7, 1958, Ser. No. 707,595
2 Claims. (Cl. 229—17)



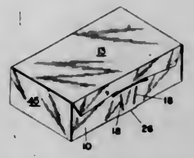
1. A carton for packaging cigarettes or the like comprising side walls, end walls, top and bottom walls, said top wall having an opening therein adjacent one of said end walls and partially defined thereby, the other end wall remote from said opening in the top wall comprising a panel terminating below the top wall, an end wall flap hingedly connected to the upper end of said panel and having its upper end terminating adjacent the top wall, a thumb engageable tab extending from the upper edge of said end wall flap and in alinement therewith, said top wall having proximal portions thereof spaced inwardly from said tab to increase the effective length of the tab to facilitate its being engaged, said end wall flap having a width substantially the same as said panel and a slidably mounted closure flap hingedly connected to the upper edge of said end wall flap and extending inwardly below the top wall, said closure flap having at least a portion thereof having a width substantially the same as

the distance between the side walls to be guided thereby in its movement from one position to another and said closure flap being of sufficient length to extend inwardly below the top wall to normally close the opening therein.

3,021,993
CARTON LOCK

Manley B. Kennedy, Walla Walla, and Lewis B. Alexander, Sunnyside, Wash., assignors to American Can Company, New York, N.Y., a corporation of New Jersey

Filed June 2, 1960, Ser. No. 33,574
3 Claims. (Cl. 229—36)



1. A carton including a pair of opposed panels to be locked together, a wall member to which one of said panels is integrally connected along a hinge line defined by a line of weakness by which said one panel may be resistably hinged to lie at a substantial angle relative to the wall member, locking means comprising a pair of laterally spaced male members on the other of said panels and female means in said one of the panels comprising a laterally positioned cut line the edges of which are adapted to engage edges of said male members for locking enagement therewith, said hinge line being provided by a score line which is discontinuous in at least part of the area beyond said female cut line, the carton also including stiffening means integrally formed into said one panel beyond said cut line and adapted to facilitate opening of said female locking means by planar separation of the portions of said one panel lying to opposite sides of said cut line for engagement therein of the male locking means upon the hinging of said one panel relative to said wall member, said stiffening means comprising a pair of spaced, longitudinally directed score lines impressed into said one of the panels in the area between said female cut line and said discontinuity of the hinge score line.

3,021,994
ALIGNING DEVICE FOR MANUFACTURER'S TAPE JOINTS OF CONTAINERS

Raymond E. Wolfe, Beaver Falls, Pa., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Filed Aug. 18, 1959, Ser. No. 834,513
1 Claim. (Cl. 229—37)

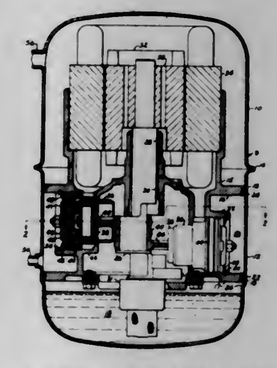


A device for accurately simultaneously and automatically vertically aligning the free abutting side marginal edges of a tubular container during the folding operation prior to the production of a manufacturer's joint, said device including an alignment tab secured to and projecting from a side marginal edge of the container blank, said tab being widest at its juncture with the marginal side edge and of diminished width at its extremity and a tab receiving aperture having a width at least as wide as the tab in the opposite side marginal edge of said blank, said tab and aperture each defined by free side edges, and having points on their side edges at identical levels of the blank, said edges being in slidable contact at said points during the folding operation and serving to automatically align the vertical edge portions of said panels prior to the application of the manufacturer's tape to the finished joint.

3,021,995
COMPRESSOR

Emil T. Neubauer, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

Filed Jan. 6, 1958, Ser. No. 707,381
4 Claims. (Cl. 230—58)



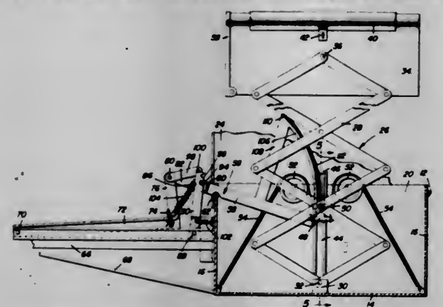
1. In a compressor, a body, a shaft rotatably mounted in said body, drive means on said body and secured to said shaft for rotatably driving said shaft, a wall on said body extending axially of said shaft and being spaced from and surrounding said shaft, spaced radial flanges extending outwardly from said wall and having substantially circular peripheries, cylinders extending from said wall between said radial flanges and having their axes radial of the axis of said shaft, two shells in sealed abutting relationship to each other and enclosing said body and said drive means, an annular member fitting inside of one of said shells, said annular member being in frictional contact at a substantial portion of its outer surface with the inner surface of said one shell whereby vibrations in said annular member are dampened, gasket sealing means in sealing engagement with the substantially circular peripheries of said spaced radial flanges and in sealing engagement with said annular member to form a substantially annular chamber, pistons in said cylinders operating to discharge gas into said substantially annular chamber and connecting rods pivotally secured to said pistons and pivotally secured to said shaft to transmit a driving force from said shaft to said pistons.

3,021,996
DISAPPEARING MAILBOX

Bolvin C. Ranney, R.D. 1, New Albany, Ohio

Filed Nov. 24, 1958, Ser. No. 776,127
8 Claims. (Cl. 232—39)

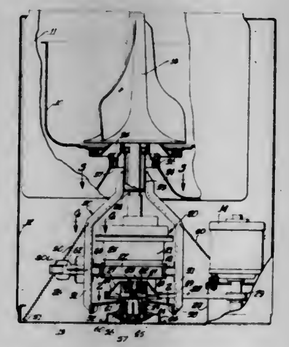
1. A disappearing mailbox construction comprising a housing partially buried and concealed in the ground, said housing having enclosing walls and a movably mounted cover therefor, a mailbox normally disposed and concealed within and enclosed by said walls and cover and movable and elevatable therefrom, a lazy tong assembly secured in and extensible from said housing and supporting said mailbox for vertical movement into and out of said housing, actuating means connected to said lazy tong assembly for forcibly extending the latter to elevate said mailbox, said actuating means including a vehicle wheel engageable and operated linkage extending exteriorly of said housing.



3,021,997
WASHING MACHINES

Clifford F. Czech, Ripon, Wis., assignor to McGraw-Edison Company, Ripon, Wis., a corporation of Delaware

Filed Aug. 19, 1957, Ser. No. 679,033
8 Claims. (Cl. 233—23)



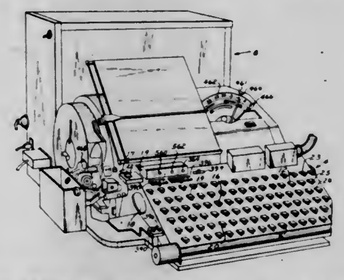
7. In a washing machine, in combination, an assembly including a receptacle, a transmission for rotating said receptacle, a frame carrying said receptacle and said transmission, means supporting said assembly adjacent its lower end for universal pivotal movement, spring means acting on said frame to yieldably urge the assembly to an upright position, and means for damping the movements of the assembly from the upright position including a friction member stationarily supported below the pivot axis of the assembly, a friction shoe supported on said frame for gyrating movement with the assembly and for movement toward and from said friction member, and a spring interposed between said frame and said shoe urging the latter into engagement with said member.

3,021,998
ELECTRICALLY OPERATED TAPE PERFORATING MACHINE

Claire N. Brewer, Indianapolis, Ind., assignor to International Typographical Union of North America, Indianapolis, Ind.

Filed Sept. 26, 1958, Ser. No. 763,568
10 Claims. (Cl. 234—11)

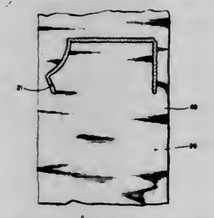
1. A tape perforating machine for producing a perforated tape used to control a typesetting machine, comprising a keyboard having separate upper case and lower case keys for each letter of the alphabet, a plurality of tape perforating punches, a punch bar associated with each punch and normally removed therefrom but movable into operable relation thereto to permit operation of the associated punch, an electrical device connected to each punch bar to operate the same when energized, a shift coding relay having a plurality of switches each of which is connected to one of a pre-determined combination of said electrical devices to produce when energized a tape perforation which is characteristic of upper case, an unshift coding relay having a plurality of switches each of which is connected to one of a pre-determined combination of said electrical devices to produce when energized a tape perforation which is characteristic of lower case, a character coding relay for each letter of the alphabet, each of said character coding relays having a plurality of switches each having a contact connected to one of a pre-determined combination of said electrical devices which is different for each letter thereby to produce a characteristic tape perforation upon operation of each character coding relay, two contact members associated with each of said keys and positioned to be successively engaged upon depression of the associated key, and means operable on depression of any upper case or lower case key to operate the shift coding relay or the unshift coding relay to cause operation of one or another of the pre-determined combinations of said electrical devices to produce a tape perforation characteristic of the case of the depressed key if the preceding depressed key was of different case, and on further depression to cause operation of another combination of said electrical devices which is characteristic of the letter of the depressed key.



3,021,999
MACHINE FOR CUTTING PATTERNS FROM WEBS OF TEXTILE MATERIAL

Kurt Blanz, Stuttgart, Germany, assignor to Krauss & Reichert, Spezialmaschinenfabrik und Apparatebau, Fellbach, Wurttemberg, Germany

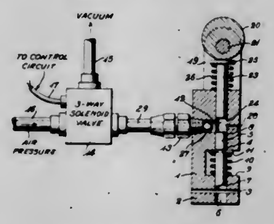
Filed Oct. 14, 1959, Ser. No. 846,407
Claims priority, application Germany Oct. 16, 1958
12 Claims. (Cl. 234—87)



1. A machine for cutting patterns from webs of textile material and the like comprising means for indexing a
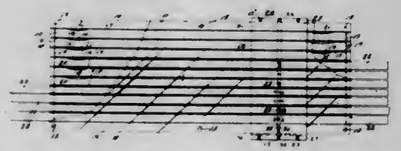
web of fabric material through a prescribed path, a plurality of punching members located above said path and being vertically reciprocable down into said path, said punching members being arranged in rows to effect overlapping of punched holes in the fabric material as it is advanced and complete severance of the fabric along the lines of the punches, means for indexing a templet through a templet indexing path adjacent said web indexing path, and scanning means in said templet indexing path connected to said punch members and effective to initiate reciprocation thereof and punching of said material in accordance with the outline of said templet as each of said templet and said web are indexed through said paths.

3,022,000
MULTIPLE PUNCHING MACHINE FOR PAPER TAPE, CARDS, ETC.
Edwin G. Millis, Houston, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed July 2, 1957, Ser. No. 669,501
4 Claims. (Cl. 234—114)



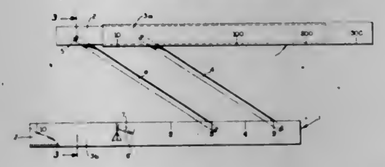
3. A multiple punching mechanism comprising a punch block, a die block, said punch block and said die block defining a slot therebetween to permit the passage therethrough of a material to be punched, a plurality of aligned holes extending through said punch block and said die block, a punching member slidably received in each hole of said punch block extending from adjacent said slot and terminating within said hole, resilient means urging each said punching member away from said slot, a cam follower slidably received in each said hole in said punch block extending from a point external of said punch block on the side opposite said slot and terminating spaced from said punching member in that hole, cam means reciprocating said cam followers in unison, free-moving unattached elements, and means for applying fluid pressure to interpose said free-moving unattached elements between selected ones of said punching members and their associated cam followers to cause said selected ones of said punching members to reciprocate with their associated cam followers.

3,022,001
MULTI-SCALED SLIDE RULES
Mogens Drost Larsen, 23 Amundsensvej, Lyngby, Denmark
Filed June 2, 1959, Ser. No. 817,606
11 Claims. (Cl. 235—69)



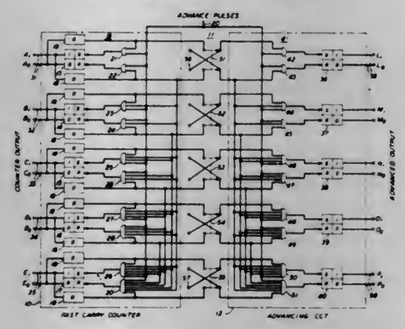
1. A multi-channel slide rule frame for use with a plurality of scale sticks, comprising a hollow device formed of spaced parallel plates at least one of which is transparent, said plates having inner surfaces in mutually confronting relation, and spaced parallel side members connecting said plates, a plurality of longitudinal grooves formed in the inner surfaces of both plates parallel to and in even spacing between said side members, with each groove in one plate in aligned registration with a groove in the other plate to form pairs of grooves, a transverse groove formed on the inner surface of each plate toward each end thereof and intersecting all of the longitudinal grooves therein, partition means in each pair of grooves forming with the plates a plurality of parallel longitudinally extending channels, and linear means recessed in said transverse grooves and anchoring said partition means.

3,022,002
PARALLEL RULE-SLIDE RULE
Lyle W. Dixon, Redwood City, Calif.
Filed Feb. 17, 1959, Ser. No. 793,847
6 Claims. (Cl. 235—70)



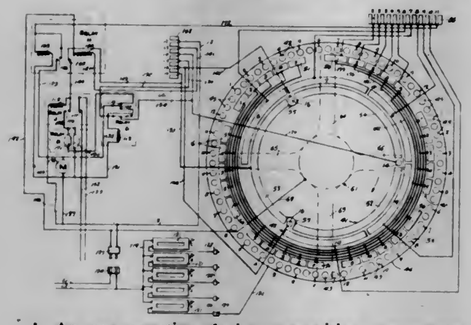
1. A combination parallel rule-slide rule comprising a parallel rule having a pair of cores, a pair of pivoted link members interconnecting said cores for maintaining parallelism of said cores, and at least two manually reciprocable slidable shells carrying cooperating computing scales, one of said shells being mounted on each of said cores.

3,022,003
COUNTING CIRCUIT
Richard F. Garrison, Clinton, and Frederick A. Saal, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1958, Ser. No. 781,755
11 Claims. (Cl. 235—92)



1. In combination, binary counting means including means for producing two-valued signal conditions representative of all output digits substantially simultaneously on a plurality of parallel output conductors, means for selectively inverting said output, a plurality of coincidence circuits equal in number to said output digits and corresponding thereto, means for applying each of said selectively inverted signal conditions to the corresponding one of said coincidence circuits and to all of said coincidence circuits corresponding to digits of higher significance, and means for producng binary signal conditions in accordance with the outputs of said coincidence circuits, thereby to provide binary output numbers selectively advanced with respect to the output numbers from said binary counting circuit means.

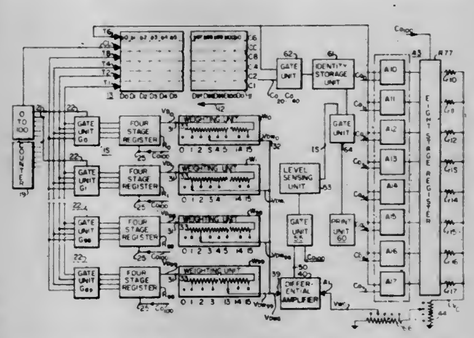
3,022,004
EGG COUNTERS
Walter J. Reading, Agency Road, R.R. 1, Ottumwa, Iowa
Filed Oct. 5, 1956, Ser. No. 614,291
11 Claims. (Cl. 235—98)



1. An egg counting device, comprising commutator means having a plurality of spaced annularly arranged stationary contact buttons and contact segment means concentric therewith, an electrically conductive rotatable contact member engaged with said contact segment means and movable over said buttons for intermittent engagement therewith, a common lead for connecting said buttons together, a motor for driving said rotatable contact member, a support for holding an egg container, said contact segment means being of an arcuate length whereby the number of contact buttons engaged by said rotatable contact member, as the rotatable contact member moves from one end of the contact segment means to the other end thereof, corresponds to the number of eggs required to fill a container, a source of electric current for said motor and said rotatable contact member, switch means associated with said support and connecting said motor and said source of electric current for actuating said rotatable contact member to move through an arc less than the length of said contact segment means to sweep over that number of contact buttons corresponding to the number of eggs in a partly filled container, and a push-off switch on said support engageable by an egg container as the same is removed from the support to connect said source to said motor through said contact segment means and said rotatable contact member to cause the rotatable contact member to be rotated the remaining length of said contact segment means and thereby sweep over that number of contact buttons corresponding to the number of eggs required to fill the container, a totalizer, and a common lead connecting said contact buttons with said totalizer for successively recording the number of eggs in both counts.

3,022,005
SYSTEM FOR COMPARING INFORMATION ITEMS TO DETERMINE SIMILARITY THEREBETWEEN
Wesley E. Dickinson, County of Santa Clara, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 12, 1959, Ser. No. 786,254
7 Claims. (Cl. 235—152)

1. A system for comparing an unknown item of information defined by a plurality of parameters with a library of known items defined by similar parameters to determine those items which have a predetermined degree of similarity to the unknown item comprising in combination, means for storing binary coded digital representations of the numerical amplitude of said parameters of said known items, means for converting each said stored digital representation to a corresponding analog voltage level, a plurality of units coupled to said converting means for weighting each said analog voltage level by a predetermined weight selected in accordance with the corresponding parameter of said unknown item to provide a plurality of weighted voltages, means connecting the output of said weighting units in parallel to sum said weighted voltages, means for generating a control voltage for each stored item proportional to the square root of the

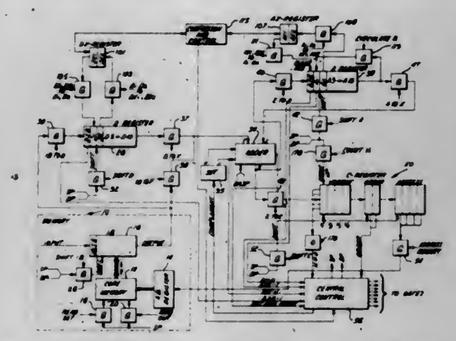


sum of the squares of said numerical amplitude of said parameters defining said item, means connected to said generating means for weighting said control voltage by a conductance factor proportional to the square root of the sum of the squares of said predetermined weights to provide a weighted control voltage, a voltage comparing means having a pair of input terminals and an output terminal for providing an indicating signal only when the voltage applied to one terminal is equal to or greater than the voltage applied to the other terminal, means for supplying said summed voltage to one of said terminals, and means for supplying said weighted control voltage to the other of said terminals whereby an indicating signal is provided when the unknown item has a predetermined degree of correspondence with known items in the library.

3,022,006
FLOATING-POINT COMPUTER
John C. Alrich, Altadena, and David H. Hartke, Glendora, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 26, 1959, Ser. No. 788,901
8 Claims. (Cl. 235—160)

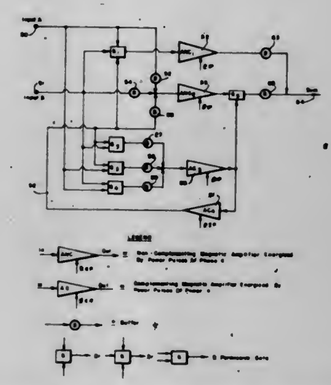
1. A computer for performing floating-point computations in which the normalized precision is preset to any desired number of significant digits, the computer including first and second registers for storing operands, a first group of digits in each register representing an exponent to the base ten and a second group of digits representing a mantissa, the decimal point being assumed to be at the left of the mantissa, a third register for storing an instruction, at least one digit in the instruction indicating the precision required in the mantissa in normalizing the resulting mantissa following an algebraic addition operation, arithmetic means for adding the mantissa of the operands and shifting the resultant sum into the first register, normalizing means for shifting the digits of the resulting mantissa in the first register a number of times in the register equal to the number of significant zero digits to the

left of the most significant non-zero digit occurring in the resulting mantissa, a counter for storing the precision digit of the instruction, the counter being advanced in synchronism with the shifting of the resulting mantissa in



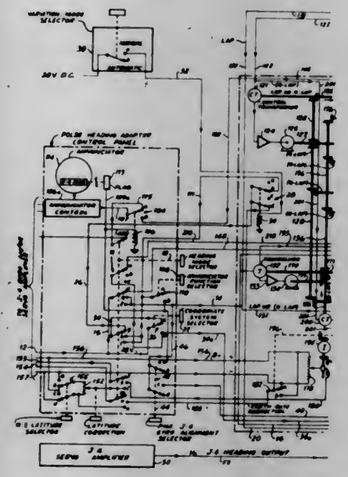
the first register, and means responsive to a predetermined count condition of the counter for inhibiting any subsequent operation of the computer and indicating a loss of precision.

3,022,007
SERIAL BINARY ADDER
William F. Steagall, Merchantville, N.J., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 26, 1954, Ser. No. 471,231
12 Claims. (Cl. 235—176)



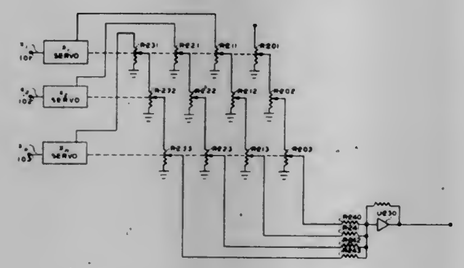
5. A pulse type serial binary adder comprising first means producing a first train of input pulses representative of a first binary digital number, second means producing a second train of input pulses in phase with said first train and representative of a second binary digital number, carry means comprising a complementing magnetic amplifier selectively producing pulses representative of a carry signal in the absence of inputs thereto, a first pulse type magnetic amplifier producing an output pulse at a sum output terminal in response to an input pulse supplied by first gating means which is activated by the simultaneous application of pulses from each of said first means, said second means, and said carry means, a second pulse type magnetic amplifier producing a predetermined characteristic output in response to an input pulse supplied by a second gating means which is controlled by the simultaneous application of at least two pulses from said first means, said second means, and said carry means, means coupling the output of said second magnetic amplifier to the input of said carry means to thereby selectively inhibit the production of said carry signal, a third pulse type magnetic amplifier producing an output pulse at third gating means in response to the application of a pulse from at least one of said first means, said second means, and said carry means to buffer circuit means coupled to the input of said third amplifier, said third gating means being activated to produce a pulse at said sum terminal in response to the simultaneous application of pulses from each of said second and third magnetic amplifiers, means for supplying in phase trains of regularly spaced power pulses to said first, second and third pulse type magnetic amplifiers, and means for supplying a train of regularly spaced power pulses to said carry means in out of phase relationship to said in phase power pulses, said in phase power pulses being in phase with said inut pulses.

3,022,008
POLAR HEADING ADAPTER
Patrick J. McKeown, Syosset, and Stamates I. Frann, Whitestone, N.Y., assignors to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed June 2, 1959, Ser. No. 817,628
9 Claims. (Cl. 235—187)



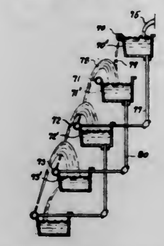
1. A polar heading adapter designed for association with a navigational computer comprising a circuit for selectively conveying magnetic compass heading or gyro heading information to the navigational computer and said adapter, a normal variation correction three-dimensional cam with follower, a transverse variation correction three-dimensional cam with follower, a polar correction three-dimensional cam with follower, computer output shafts settable in accordance with present positions of latitude and longitude in normal or transverse coordinates, the shafts settable in accordance with present position of longitude being connected to rotate said three-dimensional cams and the shafts settable in accordance with present position latitude being connected to position the followers of said cams, means connected to said normal variation correction cam follower for selectively conveying normal variation corrections to the computer, a differential one input side of which is connected to the longitude present position shaft and its other input side connected to the follower for said polar correction cam, a pair of differentials, one input side of each differential of the differential pair being connected to receive the output of said first mentioned differential, the other input side of each differential of the differential pair being connected to the follower for the transverse variation correction cam, a north differential transmitter initially settable to 180° and connected to be driven in a given direction by the output of one differential of the differential pair, a south differential transmitter initially settable to zero degree and connected to be driven in the other direction by the other differential of said differential pair, said north and south differential transmitters being set to respectively provide 180° and 0° angle output at 0° transverse longitude, means for selectively introducing the output of said north or south differential transmitter to the computer, means for computing directional gyro true heading corrections and selectively introducing said corrections to said magnetic compass heading or gyro heading information circuit, said true heading correction computing means including meridian convergency calculating means connected to receive in normal or transverse coordinates present position information from said computer output shafts and a computer transmission error cam in driven connection with said meridian converging calculating means and means for combining the true heading corrections whereby the combined true heading corrections may be selectively introduced to the heading information circuit.

3,022,009
ANALOG COMPUTER FOR GENERATING A POWER SERIES EXPANSION OF A FUNCTION
Laurence E. Fogarty, Binghamton, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Mar. 11, 1957, Ser. No. 645,115
12 Claims. (Cl. 235—193)



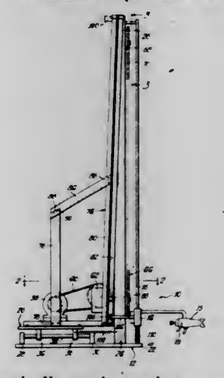
1. Analog computer function generating apparatus comprising in combination, a plurality of servomechanisms each responsive to a computer input quantity commensurate with an independent variable and each operable to provide a steady-state output position commensurate with the value of its associated independent variable, a plurality of function generators operated by said servomechanisms to provide a plurality of output quantities, at least one of said function generators providing an output quantity which is commensurate with the difference between the instantaneous and the steady-state output positions of one of said servomechanisms as modified in accordance with the instantaneous output positions of at least two of said servomechanisms, each of said output quantities being commensurate with the value of a different term of a Taylor series which expresses the value of a desired output function, and means combining said output quantities to provide a further output quantity.

3,022,010
FOUNTAIN
James William Barnett, 7702 N. 10th St., Tacoma, Wash.
Filed June 6, 1960, Ser. No. 34,022
2 Claims. (Cl. 239—17)



1. A fountain of the character described comprising a plurality of water spray producing pipe lines arranged horizontally at successively higher levels each to discharge spray upwardly therefrom, a like plurality of catch basins arranged at successively higher levels, each to receive the falling spray discharged from the corresponding pipe line substantially at the crest of the spray discharged therefrom, means for supplying water under spray producing head pressure to each of the spray producing pipe lines from a catch basin at a higher level, thus to cause each of the succession of sprays as thus produced to overlap the next higher spray.

3,022,011
COATING THICKNESS CONTROL MECHANISM
Moses Hegyi, Orland Park, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 9, 1959, Ser. No. 845,391
12 Claims. (Cl. 239—97)

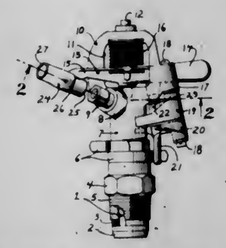


1. In a vertically reciprocating system including a coating device means for compensating for variable hydrostatic pressure on said device, said means including a variable speed drive which regulates the rate of upward and downward movement of said device so that said rate is proportional to said hydrostatic pressure.

3,022,012
PARTIAL CIRCLE WATER SPRINKLERS
Carl R. Sharp and John E. Streeter, Glendora, Calif., assignors to Rain Bird Sprinkler Manufacturing Corp., Glendora, Calif., a corporation of California
Filed May 18, 1959, Ser. No. 813,949
8 Claims. (Cl. 239—230)

1. In an oscillating sprinkler including a body structure having a discharge nozzle, an oscillating mechanism

to effect turning of the body structure by small increments, and a control mechanism for reversing the direction of movement of said body structure whereby said body structure moves back and forth through a preselected arc, a reaction means for effecting oscillation of said oscillating mechanism while substantially confining the discharge of water to said preselected arc, comprising: an S-shaped reaction member carried entirely by

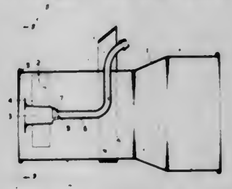


said oscillating mechanism and movable across the path of water jet issuing from said nozzle, said reaction member having an end adapted to receive the water issuing from said nozzle when aligned therefrom and having a laterally disposed outlet end directed in substantial parallelism with said water jet; whereby not only the jet of water discharged by said nozzle but also the water discharged through said reaction member is substantially confined to a common preselected arc.

3,022,013
DEVICE FOR ATOMIZING LIQUIDS

Josephus F. D. Bruinsma, Dodewaard, Netherlands, assignors to Kiekens-Wervelwind-Holland (Kiekens-Whirlwind-Holland) (KWH) N.V., Wadenoijen, Netherlands, a corporation of the Netherlands

Filed May 17, 1961, Ser. No. 110,785
Claims priority, application Netherlands May 18, 1960
2 Claims. (Cl. 239—419)



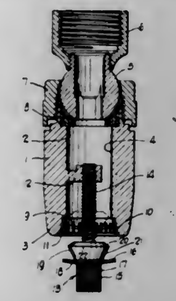
1. A device for atomizing liquids by means of a current of air comprising an air jet nozzle having a liquid atomizing auxiliary nozzle open at both ends centrally arranged therein and a conduit for supplying liquid to said auxiliary nozzle, characterized in that the mouth of the liquid supplying conduit is located centrally and upstream relative to the rear end of the auxiliary nozzle and has a smaller diameter than said auxiliary nozzle and in that between the mouth of said conduit and the rear end of said auxiliary nozzle radially extending air resistance elements are provided.

3,022,014
SHOWER HEAD

Stephen A. Young, R.D. 4, Monticello, Ind.

Filed Nov. 12, 1958, Ser. No. 773,325
2 Claims. (Cl. 239—438)

1. In a shower head of the class described, in combination, a body, an inlet and an outlet therefor of relatively small diameter, spray regulating means at said outlet including a series of grooves, a relatively small diameter disc cooperable with said grooves to vary the quantity of liquid entering said grooves to be discharged in a spray pattern from the said outlet, openings only near the center of said disc for liquid flow therethrough to form a spray pattern irrespective of the quantity of liquid entering the grooves, and a flow directing part closely adjacent the said

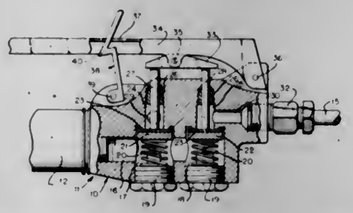


disc arranged to direct liquid outwardly toward said grooves and inwardly toward said openings, a shoulder at the outlet, and the disc being movable to and from the same, to shut off and regulate the flow of liquid to the said grooves.

3,022,015
DUAL CHEMICAL SPRAY VALVE

Elmer C. Burch, Paia, Hawaii, assignor to Alexander & Baldwin, Inc., a corporation of Hawaii

Filed Nov. 13, 1959, Ser. No. 852,703
2 Claims. (Cl. 239—444)



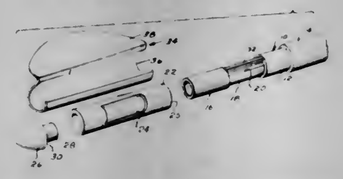
1. A spray device comprising a conduit for connection to a source of supply of fluid, a body member having a portion connected to said conduit, said body member having a fluid inlet passageway in the interior thereof, there being a pair of spaced apart chambers in said body member which communicate with said passageway, a pair of plugs threadedly mounted in the lower ends of said chambers, piston valves arranged in spaced apart relation with respect to said plugs, coil springs interposed between said plugs and piston valves, a disc of resilient material arranged contiguous to each valve, said body member having a pair of spaced apart hollow compartments which communicate with said chambers, bushings mounted in said compartments, piston valve stems slidably extending through said bushings and the inner ends of said stems engaging said discs, outlet ports connected to said compartments, spaced apart discharge nozzles connected to said outlet ports, said stems having their outer ends projecting beyond the top of the body member, a bracket engaging the outer end of the stems, a manually operable lever pivotally connected to said body member, a pin pivotally connecting said lever to said bracket, said last-named pin being arranged off center with respect to the ends of the bracket, a latch having one end pivotally connected to said body member, there being a slot in said lever for the projection therethrough of said latch, and said latch embodying an

off-set shoulder portion intermediate its ends, and said latch providing a means for selectively maintaining the lever in a desired position.

3,022,016
NOZZLE

Robert S. Shrewsbury, Dunedin, Fla., assignor to Vic-Mar Corporation, Dunedin, Fla., a corporation of Florida

Filed Nov. 13, 1959, Ser. No. 852,643
4 Claims. (Cl. 239—521)

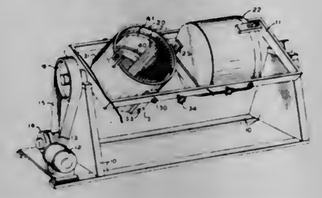


1. A nozzle comprising: a tubular conduit having an outer surface generally of circular cross-sectional configuration and having a longitudinal opening in one side thereof; a sleeve having an inner surface generally of circular cross-sectional configuration having a longitudinal slot therein being otherwise imperforate and concentrically disposed about said conduit adjacent said opening to define a thin circumferential passageway extending around at least a portion of said conduit, said longitudinal slot being circumferentially spaced from said opening, said sleeve including an imperforate section adjacent to and disposed radially outward from said opening, means sealingly engaging said imperforate section to said tubular conduit intermediate said opening and said slot to prevent the fluid passing outwardly through said opening from flowing in a radial direction, whereby fluid passes circumferentially in one direction from said opening around a portion of the outer surface of said conduit in between said conduit and said sleeve and is discharged from said slot substantially tangentially to the outer surface of said conduit.

3,022,017
METHOD OF AND APPARATUS FOR COMMINUTING HARD MATERIALS

Philip M. McKenna, Greensburg, Pa., assignor to Kennametal Inc., Latrobe, Pa., a corporation of Pennsylvania

Filed Dec. 14, 1956, Ser. No. 628,375
4 Claims. (Cl. 241—183)

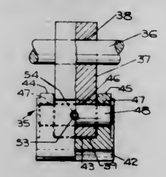


1. A rod mill comprising the combination of a drum mounted to rotate about an axis and having an inner surface, a plurality of rods each having a diameter not greater than five percent of the length of the rod, said rods being loosely housed within said drum and lying substantially longitudinally thereof, a pair of annular members longitudinally spaced apart within said drum and connected thereto, said longitudinal spacing being greater than the spacing between each of said members and the adjacent ends of the drum, said rods and said annular members being of hard material having a modulus of elasticity greater than twice that of steel, each of said members having an inner wall defining a substantially circular opening therein with said inner walls cooperatively engaging said rods and preventing their contact with the inner surface of said drum, and means for rotating the drum about said axis without cascading of said rods at a speed substantially less than that given by the formula r.p.m.$=200/\sqrt{D}$, where r.p.m. is the revolutions per minute of the mill, and D is the internal diameter of the mill in inches.

3,022,018
RENEWABLE TIP HAMMER ASSEMBLY

Lloyd K. Knight, Columbus, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio

Filed July 19, 1960, Ser. No. 43,898
4 Claims. (Cl. 241—197)

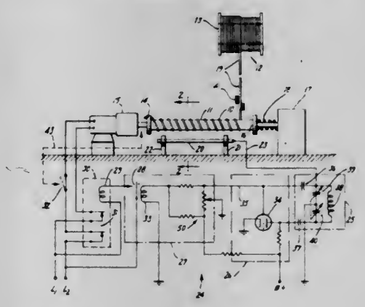


3. A renewable tip hammer assembly for a pulverizer comprising a shank for mounting a hammer in the pulverizer, a hammer adapted to be secured to the shank, said shank including a hammer mounting tongue, said hammer including a recess to receive said tongue, said hammer recess and said tongue being of such relative size that the tongue fits loosely within the hammer recess, a hammer supporting pin extending through the hammer and tongue and loosely received in the hammer and tongue for holding the hammer on the shank, a transverse bore in said hammer supporting pin, a locking pin secured in said transverse bore to maintain the hammer supporting pin in assembly with the shank and hammer, a bore in the hammer aligned with said transverse bore to provide access to said transverse bore for insertion of the locking pin into said transverse bore, and said hammer bore being substantially larger in diameter than the locking pin.

3,022,019
FABRICATION OF ELECTRICAL CIRCUIT COMPONENTS

Charles G. Simpson, Bristol, and Serge Loginow, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

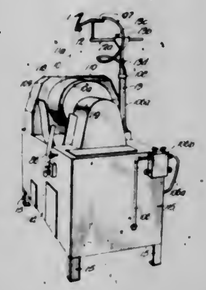
Filed Nov. 27, 1959, Ser. No. 856,330
13 Claims. (Cl. 242—9)



1. In the fabrication of electrical components: gradually forming a component in such manner as to progres-

sively change the electrical resonant frequency thereof; maintaining, during at least part of such forming, an alternating electrical current in a circuit non-conductively coupled to the component being formed; sensing a characteristic of said alternating current which is variable in response to the resonant frequencies, successively prevailing in the component coupled to said circuit; and controlling said gradual forming in direct response to said variable characteristic of said current and thereby in response to the provision of a predetermined resonant frequency of the component.

3,022,020
FIBER DRAWING APPARATUS
Lee James Higgins, Jr., Kansas City, Mo., assignor to Gustin-Bacon Manufacturing Company, a corporation of Missouri
Filed Nov. 30, 1955, Ser. No. 550,078
6 Claims. (Cl. 242—18)



1. In fiber manufacturing apparatus of the type employing a rotary drum to draw the fiber from a fiber generating device and wind up the fiber as it is drawn, a stationary base, said drum being supported on said base, a traversing arm supported on said base for movement in a plane parallel to the axis of the drum, said arm having a portion engaging said fiber ahead of said drum, power means associated with and adapted to engage said arm for reciprocating same between two end positions defining a traversing phase in which said fiber is laid in oppositely directed helical layers over a portion of the length of the drum, said traversing arm having a normal rest position such that said arm is spaced away from said one end of said traversing phase and disengaged from said power means, means continually biasing said arm away from said rest position toward operating engagement with said power means, an electric motor, transmission means operable to drivingly connect said motor with said drum whereby to accelerate the drum from rest to a fiber drawing speed, and means responsive to and controlled by the load on the motor and effective when the speed of the drum reaches the fiber drawing speed to cause said arm to move away from said rest position and into engagement with said power means.

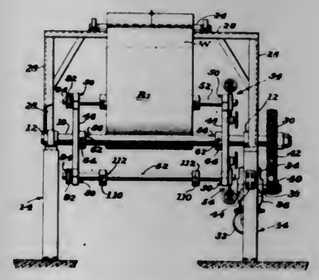
3,022,021
GROOVED DRUM WITH INSERTION PINS
Walter Zollinger, Horgen, Zurich, Switzerland, assignor to Maschinenfabrik Schweiter A.G., Horgen, Zurich, Switzerland, a Swiss company
Filed Aug. 27, 1958, Ser. No. 757,634
Claims priority, application Switzerland Sept. 3, 1957
3 Claims. (Cl. 242—43.2)

1. A drum comprising a single integral piece of material and having a longitudinal axis, said drum having grooves therein intersecting at predetermined locations of said drum subject to wear and tear, said drum having bores therein extending at an acute angle to said axis and disposed laterally of and adjacent to said locations, and guide members of relatively hard material received in said bores reinforcing said locations, each of said guide



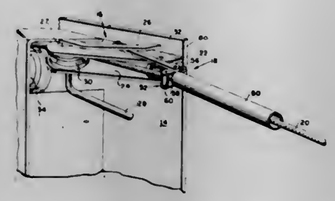
members being solely supported in an individual bore, said reinforcing members being in the form of pins having heads provided with surfaces forming guiding bridges, said surfaces being parallel with said axis of said drum.

3,022,022
ROLL CHANGER
Armistead C. Freeman, Box 1962, Pine Bluff, Ark.
Filed Dec. 23, 1959, Ser. No. 861,691
2 Claims. (Cl. 242—58)



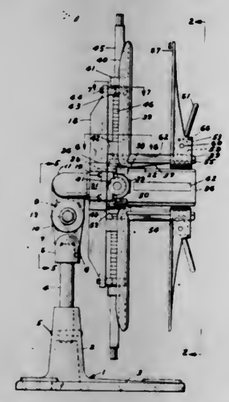
1. An apparatus for changing rolls of running lengths comprising: opposed side frame means; a main shaft rotatably mounted at its ends to said side frame means; drive means operatively joined to said main shaft to selectively effect its rotation; a pair of axially spaced, radially extending arms mounted at their respective centers to said shaft; split bearing housings carried at the free ends of said radial arms; opposed roll supporting shafts carried in opposed split bearing housings in parallel relationship to one another and said main shaft; spaced apart annular members slidably carried by said roll supporting shafts to fix the position of a roll therealong, said annular members carrying means for selectively engaging their respective shafts to fix their axial position therealong; a flange wheel having a tapered circumferential recess joined to each of said roll supporting shafts outwardly of said split bearings; and means associated with each of said flange wheels for selectively braking said roll supporting shafts, including a first link pivotally secured at its center to said radial arm and having opposed free ends, opposed lever arms pivotally secured at their inner ends to the free ends of said link, cooperatively tapered brake members pivotally carried by said lever arms for engagement with said flange wheel, a turnbuckle joined to the outer free ends of said lever arms, hand wheel mounted to said turnbuckle for moving said brake members radially into and out of engagement with said flange wheel, said pivotal link connection including a shaft having a threaded end portion, a second link mounted in coextensive relationship with said first link, a hand wheel joined to said second link and threaded to said shaft, the free ends of said second link being joined to the adjacent ends of said lever arms whereby rotation of said second hand wheel selectively moves said brake members axially relative to the longitudinal axis of said flange wheel.

3,022,023
SHUTTLE CAR FOR MINES
Bernard W. Warf, 644 Central Ave., Welch, W. Va., assignor of fifty percent to W. H. Ballard II, Welch, W. Va.
Filed Dec. 23, 1958, Ser. No. 782,579
5 Claims. (Cl. 242—86.51)



1. A mine shuttle car for use in mines having a power source remote from the shuttle car and a cable for delivering power from the remote power source to the car comprising: frame means; a cable reel attached to said frame means; means for guiding cable onto the cable reel; and safety means for deflecting a mine check curtain away from said cable reel including an elongated shield covering a portion of said cable, said shield being pivotally connected at one end thereof to said cable guide means, and extending towards the power source of the cable.

3,022,024
COIL HOLDER WITH ADJUSTABLE SIDE MEMBERS
Paul Tishken, 13000 W. Eight Mile Road, Detroit 37, Mich.
Filed Dec. 23, 1960, Ser. No. 77,969
4 Claims. (Cl. 242—110.1)



1. A holder for coiled stock comprising a shaft, a support for the shaft engaging an end portion of the shaft, a reel-mounting element rotative on and substantially radial to the shaft, a stock-receiving reel having radially elongated angularly spaced inner side members and having arms substantially parallel to said shaft and respectively rigidly carried by the inner ends of the respective inner side members and similarly spaced from said mounting element, and having a plurality of radially elongated outer side members, said outer members being slidable at their inner ends on and along said arms to selectively vary the spacing of the inner and outer side members, means for locking the outer side members in selective sliding positions thereof upon said arms, a plurality of radially elongated rods for varying the diameter of the reel, each of such rods respectively extending between the reel-mounting element and the respective inner side members, a pair of radially spaced lugs rigidly carried by each inner side member, the reel being mounted by said lugs on the rods, one of each pair of said lugs forming a bearing for the corresponding rod and the other being threaded and engaged by a threaded portion of such rod, means compelling rotation of all said rods responsive to a rotation applied to one thereof, the reel being expansible and contractible by travel on said rods.

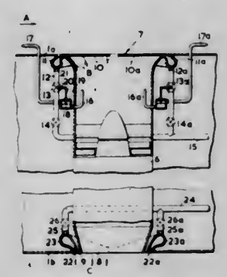
3,022,025
TENSION CONTROL FOR FILAMENTARY MATERIALS
Erwin J. Saxl, Harvard, Mass., assignor to Tensitron, Inc., Harvard, Mass., a corporation of Massachusetts
Filed Aug. 3, 1959, Ser. No. 831,352
8 Claims. (Cl. 242—155)

1. A device, for controlling tension of a running filament, comprising a supporting member, a wheel rotatably mounted on said member and having a peripheral surface adapted to engage said filament, means for maintaining said filament in contact with said surface, a magnetically permeable member attached to and rotatable with said wheel, a magnet mounted on said supporting member and having a first gap and a second gap, said permeable member being rotatable in said first gap and braked by the field of said magnet, a dancer arm mounted on said supporting member and having means engaging said filament, said arm being movable in response to variations in tension of said filament, and a gate of magnetic material mounted on said dancer arm and extending into said second gap and disposed to be moved in and out of said gap by movement of said dancer arm, thereby varying the braking effect of said magnet on said permeable member.

3,022,026
AIR INTAKE FOR JET SUSTAINED AIRCRAFT
Ronald Andrew Shaw, Hemel Hempstead, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Apr. 17, 1959, Ser. No. 807,041
Claims priority, application Great Britain Apr. 23, 1958
3 Claims. (Cl. 244—23)

1. An aircraft having an outer surface formed with an air intake, over which surface, when the aircraft is in forward flight, there is an air flow in a direction transverse to the axis of the intake, said intake having a rounded edge portion at least on its forward side in relation to the direction of said air flow and said edge portion merging into said outer surface and being formed with nozzle means arranged to discharge a fluid stream generally tangentially to said rounded edge portion so that the stream will flow as a thin layer over said edge

portion into said intake, means for sensing the total head of the air flow over said surface, means for sensing the total head of the flow within the intake, and means to supply fluid to said nozzle means, said fluid supply

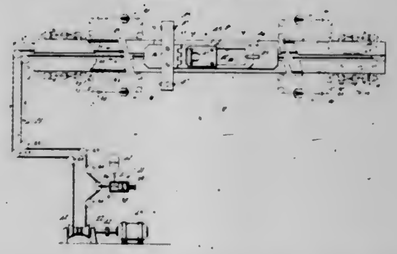


means including a valve operable jointly by said two sensing means to limit the supply of fluid to said nozzle means to that required to maintain said total heads substantially equal.

3,022,027
ENDLESS CABLE CAPSTAN DRIVE LAUNCHER

Sammie G. Keahey, Wilmington, Del., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 28, 1960, Ser. No. 59,129
12 Claims. (Cl. 244—63)



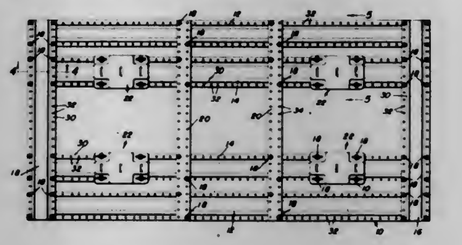
1. In an aircraft launching apparatus, a longitudinally extending launching track having rearward and forward ends, a shuttle assembly mounted for reciprocable movement in said track, means in said track for propelling said shuttle assembly from the rearward to the forward ends of said track, and a resilient arrester means mounted at the forward end of said track adapted to be engaged by said shuttle assembly to thereby halt its forward movement and cause it to rebound to the rearward end of said track.

3,022,028
KNOCKDOWN PLATFORM

Karl J. Reinhard, Marietta, and Leo F. Swoboda, Macon, Ga., assignors to The Tumpane Company of Georgia, Inc., Marietta, Ga., a corporation of Georgia

Filed June 11, 1954, Ser. No. 436,008
2 Claims. (Cl. 248—23)

1. A knockdown machinery platform comprising a plurality of channel-shaped cross-sectional members, certain of said members being longitudinally arranged and forming skids, the others of said members extending transversely of said certain members in overlying relation, said other members being secured to said certain members, mounting plates carried by at least a pair of said certain members, all of said members having wing flanges, wing flanges of said certain members being in face-to-face engagement with wing flanges of said other

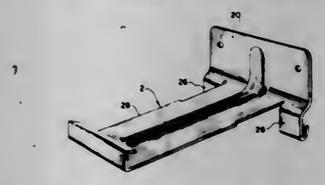


members, said mounting plates resting on wing flanges of said pair of certain members.

3,022,029
GUTTER HANGER

James H. Blayden, Pittsburgh, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 5, 1959, Ser. No. 811,051
3 Claims. (Cl. 248—48.2)

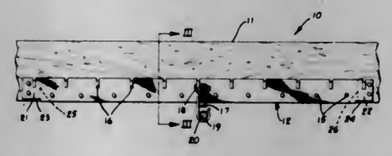


1. The combination of a gutter having inwardly facing rear and front wall marginal downwardly open beads and a one-piece rigid hanger therefor, said hanger being provided with a rear attaching member for abutting attachment to a substantially flat vertical building fascia board and incorporating two spaced lower, outwardly struck, upwardly open hook-shaped members for engagement within the downwardly open rear wall marginal bead, and a rigid integral supporting arm centrally located between the hook-shaped members and extending forwardly with reference to said rear member, said supporting arm having an upwardly extending angularly disposed terminus for engagement within the downwardly open front wall marginal bead.

3,022,030
MULTI-HANGER BRACKET FOR CONDUIT SUPPORT

Harold C. Geer, 1453 Arcadia Drive, Grand Rapids, Mich.

Filed Jan. 6, 1960, Ser. No. 756
4 Claims. (Cl. 248—58)



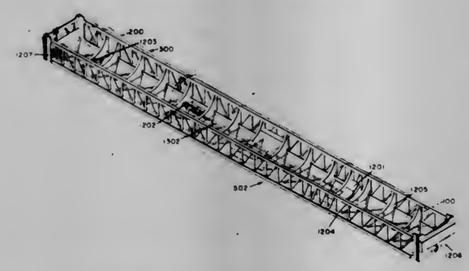
1. A multi-hanger bracket for supporting conduits comprising: an elongated generally L-shaped bracket including a short leg and a long leg disposed normally thereto and integral therewith, portions of said short leg being removed at the ends of said bracket to allow the ends of

said long leg to be folded normally thereto forming tabs; the top edge of said long leg having spaced deformed strips comprising hangers formed therein, said long leg and tabs having apertures adapted to receive means for securing said bracket to supporting structures and a plurality of hook-type elements removably suspended from selected ones of said strip, said elements including hook portions capable of receiving and supporting conduits.

3,022,031
MISSILE VIBRATION DAMPENER AND SUPPORT

Myron J. Bauer, St. Paul, Garold A. Kane, Minneapolis, Milton C. Neuman, Champlin, and John S. Scheurich, Minneapolis, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Feb. 1, 1960, Ser. No. 6,083
3 Claims. (Cl. 248—119)

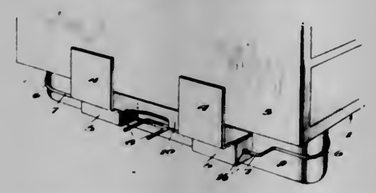


1. In a loading and support structure for an elongated missile airframe part of which is secured to the structure, the combination therewith of a tray for supporting and storing said airframe, a support attachable to said airframe, a receptacle positioned in said tray for receiving said support, a saddle spaced from said receptacle and connected thereto for supporting an unsecured portion of said airframe and a vibration damper means positioned between said tray and said saddle and having spring support means for bearing the weight of said airframe, said damper means having a first hydraulic damping means linked to the secured portion of said airframe to damp out vibration of said unsecured portion and having a second auxiliary hydraulic damping means in shunt to and assisting said first hydraulic means in the latter's damping action at predetermined high vibration loads as well as assisting in tuning the vibration of said secured and unsecured portions of the said airframe, thereby to minimize stress and resultant airframe deformation.

3,022,032
ADJUSTABLE SUPPORTING DEVICE

James E. Walls, 3718 Elmora Ave., Baltimore 13, Md.

Filed Aug. 8, 1960, Ser. No. 47,996
6 Claims. (Cl. 248—205)

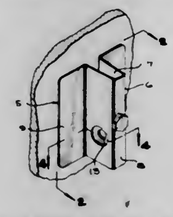


1. A quick detachable equipment mounting device for use with a desk having two supporting slab legs extending throughout the width of said desk and below said desk and desk side panels disposed above and parallel to said slab legs, comprising a sheet metal horizontally disposed rectangular base member, a plurality of side plates supported upon said base member, each plate consisting of a vertical portion and a horizontally disposed portion integral therewith and being at a right angle to said vertical portion, downwardly disposed spaced rod carrying plates arranged at right angles to said base member transversely thereof, a rod common to each of said rod carrying plates and slidably carried by said plate, each of said rods being spaced parallel to said base member and projecting beyond each of said plates forming thereby one end portion constituting a slab leg clamp and a second end portion forming an operating handle, and a coiled spring mounted upon each of said rods to urge said desk slab leg clamp against said slab leg.

3,022,033
SERVICE ATTACHMENT BRACKETS FOR POWER LINES

Archibald Thomas Flower, Queen St. and Ivy Hill Road, Glenside, Pa.

Filed July 6, 1960, Ser. No. 41,071
7 Claims. (Cl. 248—300)

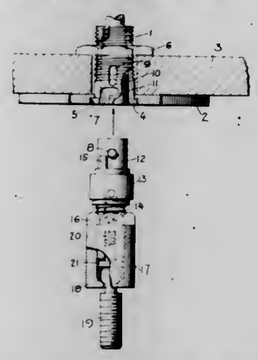


2. A service bracket for attaching a service power line to a building comprising a plate having an outwardly projecting U-shape portion midway its width, the sides of said U-shape portion having alined circular openings with inwardly convexly curved edges, and a bolt extending through an opening in the bight of said U-shape portion and longitudinally of the sides above said openings for attaching the bracket to a supporting surface.

3,022,034
APPARATUS FOR REMOVABLY HANGING FIXTURES

George W. Purdy, 224—05 139th Ave., Laurelton, N.Y.

Filed Jan. 18, 1960, Ser. No. 3,104
2 Claims. (Cl. 248—342)



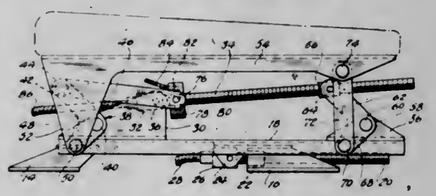
1. The combination which includes, a partially threaded female element having internal and external threads,

means for supporting said female element from a structural element, said means including said internal threads, a cutout wall of said female element, a male member adapted for positively locked connection with said female member, means on said male member adapted for locking engagement with the walls of said female element, a slidable element in said female element for substantially closing access thereinto when said male member is unlocked therefrom, an adjustable swingable element, and means for holding same to the male member, said swingable element being adapted to carry a fixture.

3,022,035
SEAT SUPPORTING AND ADJUSTING MECHANISM

Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan

Filed Nov. 2, 1959, Ser. No. 850,307
13 Claims. (Cl. 248—395)

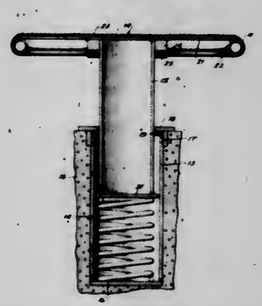


1. In a power seat adjuster, a rail, a seat support bar, lever means connecting opposite ends of said seat support bar to said rail, drive means for said lever means comprising a screw shaft, a first nut on said shaft connected to the lever means at one end of said rail and bar, a second nut on said shaft connected to the lever means at the other end of said rail and bar, and power means for independently selectively rotating said screw shaft and first nut.

3,022,036
PLAYGROUND STRUCTURE

Cleveland G. Bassett, Urbana, Ill.
(673 Craig Woods Drive, Kirkwood 22, Mo.)

Filed Aug. 12, 1959, Ser. No. 833,279
2 Claims. (Cl. 248—402)

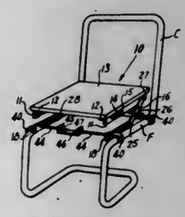


1. A stool for playgrounds and the like comprising a vertical first tube fixed in place beneath a ground surface and being open at its upper end, a second tube telescopingly and slidably received in said first tube and projecting upwardly beyond the upper end of said first tube, a single coil spring vertically disposed within said first tube and having its lower end fixed against downward movement with reference thereto, said spring when in neutral condition having its coils spaced apart to permit both axial compression and expansion thereof, said second tube having its lower end in engagement with the upper end of said spring and having said lower end disposed substantially intermediate the upper and lower ends of said first tube when said spring is in a neutral condition, said second tube being of substantially smaller external diameter than the internal diameter of said first tube to provide an annular spacing therebetween for the free flow of air between opposite ends of said first tube and about the periphery of said second tube as said second tube travels upwardly and downwardly, and a flat horizontal top member fixed to the upper end of said second tube and having horizontal dimensions substantially greater than said tubes, whereby, said second tube may travel upwardly and downwardly in response to forces imposed upon said top member without appreciable resistance to such movement from the flow of air through said first tube.

3,022,037
ADJUSTABLE CHAIR SEAT

Ross G. Stallard, 812 Humboldt St., Vallejo, Calif.

Filed Nov. 4, 1959, Ser. No. 850,967
1 Claim. (Cl. 248—421)

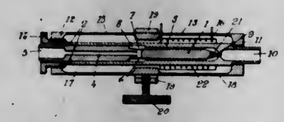


In an adjustable seat for chairs, the combination of spaced parallel upper frame members having elongated slots in the forward ends thereof, a seat releasably secured to said upper frame members, a pair of spaced parallel lower frame members, a pair of first cross bars each having its upper end pivotally mounted in the elongated slot in an upper frame member, a pivot connecting the lower end of each first cross bar to the rear end of a lower frame member, a pair of second cross bars, each pivotally connected at substantially its mid-point to substantially the mid-point of a first cross bar, a pivot connecting the upper end of each second cross bar to the rear end of an upper frame member, a pin comprising a pawl in the lower end of each of said second cross bars, each lower frame member having an elongated slot therein and a plurality of rearwardly inclined notches opening from the lower end of said last mentioned elongated slot, one of said pawls slidably engaging in each of said last mentioned slots and being adapted selectively to engage in a rearwardly inclined notch for varying the relative spacing of said upper and lower cross members relative to each other, said notches forming a ratchet, and means carried by said lower frame member for securing said seat to a chair frame, said last mentioned means including oppositely threaded pairs of opposed rods extending through aligned apertures in the front and rear ends of each lower frame member, turn-buckle means connecting the inner ends of each pair of rods, chair engaging hook members on the outer end of each rod, whereby the frame may be adapted to chairs of various sizes, and means for varying the distance apart of said upper frame members, said last mentioned means comprising right angled inwardly extending overlapping portions on the upper end of each first cross arm, each said portion having an elongated slot in the overlapped portion thereof, said slots being aligned, and bolts extended through said aligned slots.

3,022,038
VALVES FOR CONTROLLING GAS STREAMS FLOWING AT VERY LOW FLOW RATES

Pierre Maurice Roubeau, Palaiseau, Jean Marie Garin, Thiais, and Pierre Prugne, Gif-sur-Yvette, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a state administration

Filed Dec. 4, 1957, Ser. No. 700,710
Claims priority, application France Dec. 8, 1956
5 Claims. (Cl. 251—11)

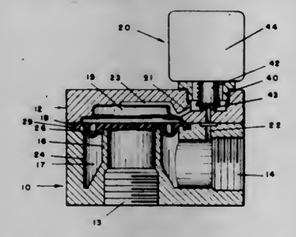


1. A valve for controlling the flow of a gas stream which comprises, in combination, a valve housing in form of a stiff straight-walled tube including a transverse partition provided with a hole of circular cross section forming a valve seat, an elongated valve body inside said tube rigidly joined at one end to the inside wall of said tube, the other end of said body forming a valve needle cooperating with said valve seat, said other end being mounted with a clearance space between it and the inner wall of the tube, said valve body being provided with a central longitudinal conduit communicating with said clearance space and extending therefrom to said first named end, and means actuating the valve body by acting on the valve housing only, said valve actuating means being screw means comprising an annular member coaxial with said tube and directly abutting the outside only of said tube to compress and extend the same in the longitudinal direction, thereby producing indirectly displacement of the valve body and adjustment of the valve opening.

3,022,039
DIAPHRAGM FOR VALVE

Irwin C. Cone, Littleton, and George H. Jenkins III, Denver, Colo., assignors to The Gates Rubber Company, Denver, Colo., a corporation of Colorado

Filed Dec. 22, 1958, Ser. No. 782,251
4 Claims. (Cl. 251—46)

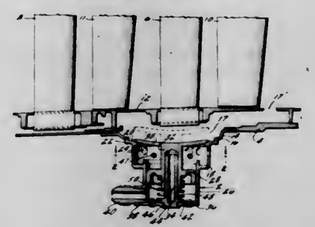


3. In a pilot operated flow control valve having a body defining a chamber and concentrically arranged inlet and outlet conduits separated by a cylindrical valve seat terminating adjacent said chamber, pilot means including a pilot intake and exhaust operable to control the flow of liquid from said chamber therethrough into said outlet, the combination of a resilient, reinforced diaphragm extending across said inlet and outlets conduits so as to partition said conduits from said chamber, said diaphragm having a circular fold extending into said outlet conduit, a flat intermediate portion normally biased against the end of said wall provided with an aperture extending therethrough for liquid flow from said inlet into said chamber, said diaphragm being movable into said chamber upon opening said pilot means to allow unrestricted flow from said inlet into said outlet and further movable upon instantaneous closing of said pilot means to return to a closed position against the flow of liquid through said inlet and over the rim thereof, and a circumferentially extending flexible ridge tapering downwardly from said intermediate portion adjacent said fold, said ridge being circumferentially bounded by said circular fold and including rectangular notched portions at spaced intervals therealong to throttle the flow of water between said diaphragm and said valve seat in opening and closing.

3,022,040
COMPRESSOR BLEED VALVE

Guy W. Miller, Rockville, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed Mar. 25, 1959, Ser. No. 801,911
2 Claims. (Cl. 251—63)

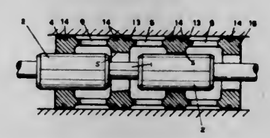


1. A valve construction including a main casing having an opening therein and forming a chamber from which gas under pressure is to be vented, a valve casing mounted on said main casing in surrounding relation to said opening, said valve casing having a valve seat facing the chamber and cooperating with said opening in providing communication between said casings, said valve casing comprising a cylinder forming an integral portion of said valve casing spaced from and coaxial of the valve seat and on the side of the seat remote from said main casing, said valve casing also having a stud thereon concentric with and projecting into said cylinder, and a movable valve element in said valve casing, said valve casing having vents therein between the valve seat and the cylinder, said element including a seat engaging valve, a piston received in said cylinder and a connecting element integral with said valve and piston, said cylinder having port means at the side of the piston remote from said vents, said piston and connecting element having an axial bore receiving said stud.

3,022,041
LININGS FOR GUIDING SLIDE VALVES, DISC VALVES OR LIKE MEMBERS IN A VALVE CASING

Wijbrand J. Tulp, Utrecht, Netherlands, assignor to N.V. Machinefabriek Frans Smulders, Utrecht, Netherlands, a company of the Netherlands

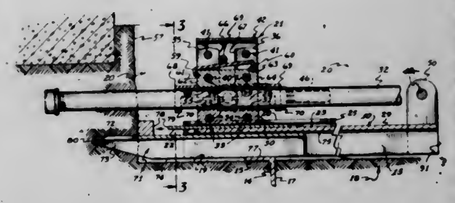
Filed Oct. 5, 1959, Ser. No. 844,460
Claims priority, application Netherlands Oct. 7, 1958
3 Claims. (Cl. 251—324)



1. A slide valve for use in a device for controlling the pressure fluid in a pressure system, comprising a casing, a lining in said casing, and a valve element slidable in

said lining, the inner periphery of said casing being greater than the outer periphery of said lining to provide clearance therebetween, said lining having ports in its circumferential wall separated by bridge portions, each of the bridge portions adjacent at least one of said ports having in its peripheral wall two annular grooves and an annular channel between said grooves, and two elastic sealing rings respectively seated in the two grooves of said bridge portions, said casing having passage means for connection of a low pressure outlet with said channels between the grooves, the sealing rings and their grooves flanking at least one of the ports of the lining being disposed so that the axial distance between the remote edges of the grooves adjacent said port is greater than the axial width of the port on the inside of the lining, but smaller than the sum of this width and the width of the bridge at the inside of the lining.

3,022,042
PIPE RAM
Donald B. Orcutt, El Modeno, Calif., assignor to Mite Pipe Ram Company, Orange, Calif., a corporation of California
Filed Mar. 28, 1960, Ser. No. 18,043
1 Claim. (Cl. 254—29)



A pipe ram machine comprising in combination:

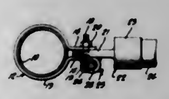
(*a*) a base,
(*b*) means to secure said base to the ground in operative position relative to an embankment face through which a pipe is to be rammed,
(*c*) a carriage plate reciprocatably mounted on said base,
(*d*) a lower pipe alignment and gripper block fixed on said plate having,
(*e*) a pipe engaging surface thereon,
(*f*) an upper pipe gripper block,
(*g*) parallel links pivotally mounted on said carriage and pivotally connected to said upper block so that said upper block is adapted to move in parallel rectilinear motion to and from pipe gripping position relative to said lower block,
(*h*) a power actuator on said base interconnected between said base and said parallel links adapted to move said links and said upper block to and from pipe gripping position with said lower block and to reciprocate said carriage plate when said upper block is in pipe gripping position with said lower block,
(*i*) means for positioning said parallel links for one direction of travel or the other of said upper block comprising,
(*j*) a reversing plate having,
(*k*) opposed abutment surfaces adapted to alternately engage mating opposed abutment surfaces on said upper block,
(*l*) and having further means to alternately engage and arrest swinging movement of said parallel links to effect a reversal of gripping action between said upper and lower jaws and movement of said carriage plate by the repositioning of said reversing plate.

3,022,043
QUICK ACTION JACK
Dewey S. Weiss, 4434 SE. 25th Ave., Portland, Oreg.
Filed Sept. 16, 1960, Ser. No. 56,397
6 Claims. (Cl. 254—98)



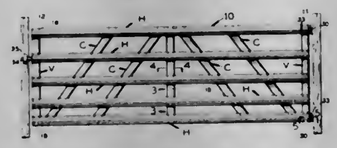
1. A quick action jack comprising a rigid, elongated first member adapted to be engaged in upright condition with a body to be supported by the jack, a rigid, elongated second member slidably guided for vertical movement on said first member, said second member projecting downwardly from said first member, ground-engaging means at the lower end of said second member, a foot shelf projecting laterally from said second member, an elongated jack screw journaled in the upper end of said first member and extending downwardly to a point adjacent the lower end of said first member, a crank mounted on the upper end of said jack screw, an upper partition on said second member at the upper end thereof, a lower partition on said second member spaced downwardly from said upper partition, said partitions each having an opening through which said jack screw extends, a partial nut mounted between said partitions for limited swinging movement into and out of engagement with said jack screw, said partial nut having a vertical dimension less than the distance between said partitions whereby said second member is capable of limited vertical movement with respect to said first member when said partial nut and jack screw are engaged, a manually operable rockshaft journaled in the upper end of said first member and extending downwardly to a point adjacent the lower end of said jack screw, means on said partial nut effecting longitudinally slidable and angularly fixed engagement of said partial nut and said rockshaft, a spring retainer mounted on the lower end of said jack screw, and a coil spring surrounding the portion of said jack screw projecting below said lower partition and compressed between said lower partition and said spring retainer.

3,022,044
COMBINED BRACE BAND AND TENSION BAR RETAINER FOR FENCING
Samuel Gugino, 3424 Bapaume Ave., Norfolk 9, Va.
Filed Nov. 28, 1958, Ser. No. 777,016
4 Claims. (Cl. 256—47)



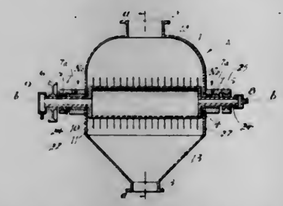
1. A combined brace band and tension bar retainer comprising a circular band for engaging a fence post, said band being provided with substantially flat spaced parallel ears that extend from said band substantially radially with respect to the center of said circular band, means for clamping said band on said post by drawing said ears together, said ears being adapted to receive the eye of a horizontally extending fence brace fitting, a hook extending outwardly from one of said ears and away from both of said ears for engaging a vertically extending fence tension bar to maintain fence wire in stretched condition.

3,022,045
PANEL GATE
Charles Silvers, 6500 N. Bay Road, Miami Beach, Fla.
Filed Sept. 22, 1959, Ser. No. 841,558
4 Claims. (Cl. 256—73)



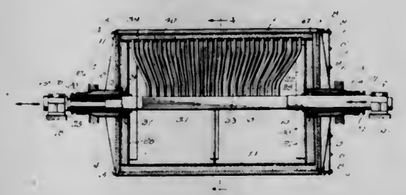
1. A gate panel comprising a plurality of substantially horizontally disposed elongated members and a plurality of substantially vertically disposed elongated members mounted on said horizontally disposed elongated members, said horizontally disposed elongated members having an arched web portion extending along their full length, diagonally disposed leg portions extending along each side of said web portion, flange portions extending outwardly at the free edge of said leg portions, said flange portions extending in opposite directions and lying substantially in a plane, upwardly extending lip portions mounted at the free edges of said flange portions, and said vertically disposed elongated members having a substantially flat base portion in contact relation with said flange portion of said horizontally disposed members, a vertical portion extending at substantially right angle to said base portion at its mid portion, a substantially flat cap portion mounted on the free end of said vertical portion and depending flange portions mounted at the edges of said cap portion and extending in the direction of said base portion.

3,022,046
APPARATUS FOR COOLING GASEOUS SOLID SUSPENSIONS
Otto Breig, Muttenz, Switzerland, assignor, by mesne assignments, to Fabriques de Produits Chimiques de Thann et de Mulhouse, Thann (Haut-Rhin), France, a corporation of France
Filed Nov. 4, 1952, Ser. No. 318,655
8 Claims. (Cl. 257—87)



1. An apparatus for conditioning a hot gaseous suspension of solid particles predominantly of sub-micron particle size for separation of the solids from the carrying gas, comprising a stationary casing having an inlet for the suspension at one end thereof and an outlet at a remote location, said casing forming an enlarged sealed passageway for conducting the suspension from said inlet to said outlet, and means traversing an intermediate portion of said passageway for constricting the flow of the suspension therethrough and continuously buffeting and cooling the constricted flow so as to agglomerate solid particles therein, said means including a plurality of hollow rotary drums extending across said passageway one adjacent to another on relatively fixed axes, means for conducting a cooling fluid through each drum, a multiplicity of cooling elements fixed to and projecting radially from each drum, said projecting elements of each drum being arranged circumferentially thereon and spaced apart therealong in the direction of the drum axis and extending into spaces between said projecting elements of an adjacent drum in closely spaced relation to the latter, said flow of the suspension being constricted predominantly to the free spaces between said elements, and means for rotating said drums about said axes to move said projecting elements relative to said constricted flow at a velocity which exceeds the velocity of the latter and is sufficient to intensively buffet and cool said constricted flow, to cause agglomeration of solid particles therein, and to prevent deposits of said particles from forming on said elements.

3,022,047
STABIL-HEAT DRIER
Robert Casper Swaney, Carlisle, Pa.
Filed Nov. 4, 1957, Ser. No. 694,333
13 Claims. (Cl. 257—95)



1. A dryer drum comprising a first cylindrical shell, a second cylindrical shell receiving the first and closely spaced therefrom to define therewith an annular chamber, a head closing each end of the second shell, means corotatably mounting said second shell and said heads for rotation relative to said first shell, a heat exchange fluid inlet line leading through one of said heads, first orifice means in said first shell extending the length thereof and communicating with said inlet line to flow the fluid into said annular chamber, second orifice means, separate and apart from the first orifice means, in said first shell for withdrawing fluid from said annular chamber, and a drainage line communicating with said second orifice means and leading through one of said heads.

3,022,048
RADIATOR RECEIVABLE IN A WALL RECESS
Thom Lage Henningsson, Sollentuna, Sweden, assignor to Aktiebolaget Vabix, Sollentuna, Sweden, a corporation of Sweden
Filed Nov. 7, 1958, Ser. No. 772,485
Claims priority, application Sweden Nov. 12, 1957
1 Claim. (Cl. 257—136)

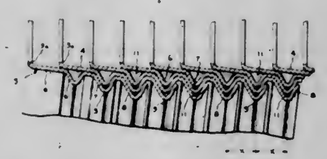
In combination, a wall having a recess and a radiator mounted in said recess, said radiator including an upstanding front plate overlying said recess in line with the surrounding wall portion, an upstanding rear plate spaced from said front plate and from said wall within said recess and registering with an intermediate portion of said front plate, means including said rear plate and said intermediate portion defining a closed heating chamber, said front plate having openings above and below said intermediate portion for the circulation of air through

said recess behind said chamber, a hot-water pipe passing horizontally between said plates near the bottom of said chamber, the interior of said chamber forming a continuous space of relatively large volume about said pipe, said pipe being provided at opposite ends within said chamber with apertures opening upwardly into said



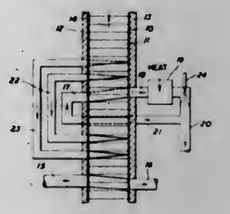
space, and stream guiding means between said apertures partly obstructing said pipe near each aperture and forming upwardly sloping surfaces directed generally toward the center of said space for diverting a part of the incoming hot water from said pipe into said space and recombining returning water from said space with the outgoing flow of water passing through the pipe.

3,022,049
HEAT EXCHANGE TUBING
Roy W. Abbott, Jeffersontown, Ky., assignor to General Electric Company, a corporation of New York
Filed July 10, 1959, Ser. No. 826,241
2 Claims. (Cl. 257—262.13)



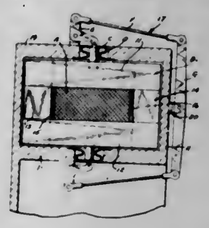
1. A finned tubular structure adapted for heat exchange purposes comprising a thin strip of sheet stock folded along its length into a tube forming flange and an angularly disposed longitudinal fin portion, said longitudinal fin portion being serrated from its outer edge toward said tube forming flange into a plurality of slender fin sections, said tube forming flange having a plurality of equally spaced apart folds formed longitudinally therein and arranged parallel to the length of said strip, said fold closest to said fin portion being smallest in size with said remaining folds progressively increasing in size, said tube forming flange spirally wound into a tubular structure with subsequent wraps overlapping preceding wraps thereof, said folds on said flange extending inwardly and said folds of said flange of subsequent wraps fitting into inwardly extending folds on said flange of preceding wraps, said fin sections extending radially outwardly from said tubular structure, and adhesive bonding means between adjacent wraps of said tube forming flange in the folds thereof for securing adjacent wraps of said tube forming flange together and for sealing the space between adjacent wraps of said flanges so that a sealed tubular structure is provided having integrally formed with the wall structure thereof a plurality of fin sections extending radially outward therefrom.

3,022,050
INTRODUCTION OF VAPORIFIC LIQUID TO A PRESSURE EXCHANGER
Dudley Brian Spalding, 2 Vineyard Hill Road, Wimbledon, London, England
Filed Oct. 24, 1956, Ser. No. 618,101
Claims priority, application Great Britain Oct. 25, 1955
4 Claims. (Cl. 257—267)



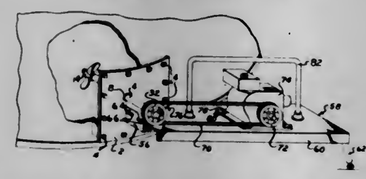
1. Vapor generator apparatus comprising a series of cells arranged in a ring and having open ends, means defining a heat-storing matrix in the cells, means defining common stationary end walls for the cells and a series of ducts communicating with the cells at circumferentially spaced ports in the end walls, means for rotating the ring of cells, said series of ducts including in respective succession in one direction of rotation, a duct for contacting hot fluid with the matrix in the cells and a duct for removing high pressure fluid from the cells, and injection means communicating with the cells at an opening circumferentially spaced in one of the end walls intermediate respectively in said one direction of rotation the ports at which said first and second-named ducts communicate with the cells, to introduce vaporific liquid to the cells for vapor production in said high pressure fluid.

3,022,051
CONTROLLED CLEARANCE REGENERATOR SEAL
Willard C. Gibson, Willoughby, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Apr. 7, 1958, Ser. No. 726,727
6 Claims. (Cl. 257—269)



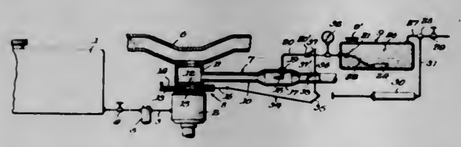
1. A regenerator for gas turbines and the like comprising a housing, an annular matrix rotatably disposed in said housing, a pair of seal shoe assemblies each disposed in substantially radial alignment with a radial section of said matrix and angularly spaced from one another, sealing means cooperating with said seal shoe assemblies to define a pair of compartments affording differential pressure therebetween, each of said shoe assemblies including a pair of seal shoes disposed in axially proximate relationship to said matrix on opposite sides thereof and a pair of seal shoes disposed in radially proximate relationship to said matrix on opposite sides thereof, said pairs of shoes surrounding said matrix, and rigid linkage means on said housing rockably connecting each of a pair of said seal shoes, whereby to transmit force against either of said shoes to the other of said shoes for inward sealing action against the matrix to maintain said shoes in clearance equilibrium and to minimize leakage between said compartments.

3,022,052
MIXING DEVICE FOR OIL TANKS WITH ATTACHABLY CONNECTED POWER UNIT
Onis O. Smith, Wichita Falls, Tex., assignor to Smith Oil Agitator Company, a corporation of Texas
Filed Feb. 9, 1959, Ser. No. 791,946
3 Claims. (Cl. 259—110)



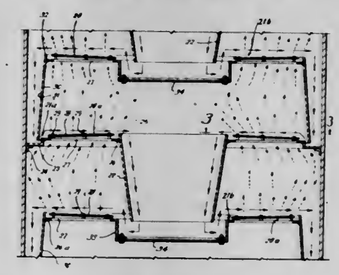
3. A mixing device comprising a tank wall section, an opening formed in said wall section, a shaft extending through said opening formed in said tank wall section, a housing surrounding said shaft, a plate member secured to said housing, bearings journaling said shaft in said housing, mixing means secured to said shaft on one side of said wall section, means forming a fluid tight seal between said housing and said shaft, a base member, said base member and said plate member being interconnected by hole and pin means, one of said members having at least one hole means formed therein, at least one pin means positioned on the other of said members, which hole means complementally receives said pin means to interconnect said base member and said plate member on said housing at a point below said housing to prevent lateral movement of said base member with respect to said housing, power drive means mounted on and secured to said base member, a pulley mounted on said power drive means, a pulley mounted on said first mentioned shaft, an endless transmission belt surrounding said pulleys in driving relation, with said pin means and hole means which interconnect said base member and said plate member on said housing presenting a fulcrum to maintain said belt taut by the weight of said base member and said power means.

3,022,053
EMERGENCY FUEL FEEDING SYSTEM FOR AIRPLANES
William M. Hoyt, Stanley, Iowa
Filed July 13, 1959, Ser. No. 829,178
1 Claim. (Cl. 261—18)



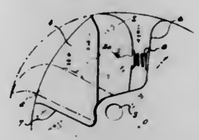
An emergency fuel supply for internal combustion engines, comprising in combination with an engine intake manifold and a carburetor communicable therewith, a conduit, an enlarged and chambered head on one end of the conduit communicating therewith, the remaining end of the conduit being open and valved, said head being removably interposed between the manifold and carburetor and having ports in its opposite sides communicable with said manifold and carburetor, a valve slidably mounted between one side of the head and the carburetor fuel discharge port controlling communication between the carburetor, head and manifold, an intermediate portion of said conduit being enlarged and forming a chamber therein, a spray nozzle in and discharging into the chamber toward the head, valved fuel supply means connected to the nozzle, and means operable to collectively and adjustably open the conduit valve and fuel supply valve and close said slidable valve.

3,022,054
FRACTIONATING APPARATUS
Meinhard H. Kotzebue, Houston, Tex., assignor to Gasoline Plant Construction Corporation, a Texas corporation
Filed Nov. 4, 1958, Ser. No. 771,895
2 Claims. (Cl. 261—114)



1. In a fractionating apparatus including a vertically disposed cylindrical shell, a fractionating tray arrangement for said shell, comprising, a plurality of vertically spaced, horizontally disposed circular trays, alternate ones of said trays having single centrally located circular downcomers, and the intervening trays having continuous annular downcomers about their outer peripheries, the resulting concentric relation of said downcomers cooperating to cause uniformly distributed radial flow of liquid across the tray surfaces between the downcomers, and vapor passage means substantially uniformly distributed through the annular sections of the trays defined between said downcomers, said vapor passage means comprising a plurality of narrow elongate slots extending radially across said annular sections, a narrow elongate closure plate overlying each of said slots and movable vertically relative thereto for opening and closing said slots, and limit means for said plates permitting a greater degree of upward movement of the ends of said plates adjacent the upper ends of said downcomers than of the opposite ends of the plates.

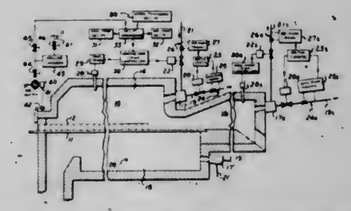
3,022,055
CUTTING DEVICE FOR MACHINES USED IN MINES, QUARRIES OR WORK-SITES
Georges Allmann, Mulhouse, Haut Rhin, France, assignor to Ateliers de Carspach, Carspach (Haut-Rhin), France, a French company
Filed Aug. 31, 1959, Ser. No. 837,114
Claims priority, application France Sept. 27, 1958
2 Claims. (Cl. 262—19)



1. A cutting device for use in mines, quarries, or work sites comprising a rotary drilling plate, a top face on

said rotary drilling plate having at least one recess therein, a forward side wall, a back side wall, and a bottom wall defining each recess, a pick on said top face connected in each recess and fully retracted in the recess when said plate is at rest, said pick comprising a hammer pivotally connected to said top face and moved forward in the recess in said top face by centrifugal action, and a pressure exerting resilient means having a free end and an opposite end fixed to said back side wall behind said hammer whereby said resilient means is an additive force to the centrifugal action of said hammer, said hammer compressing said resilient means when abutting on the free end.

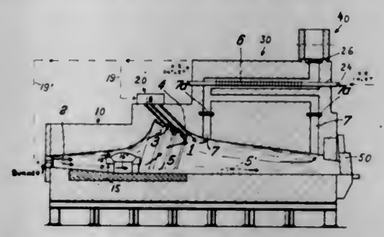
3,022,056
COMBUSTION CONTROLS FOR METALLURGICAL HEATING FURNACES
William H. Dailey, Jr., Toledo, Ohio, assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 29, 1957, Ser. No. 699,570
5 Claims. (Cl. 263—6)



5. A system for controlling the operation of a furnace through which work is moved, said furnace having wall means forming a primary heating zone and a soaking zone, and having first and second means for supplying heat to said primary heating zone and said soaking zone respectively, comprising, in combination: first control means having a first temperature set point, said first control means being operatively connected to said first heat supplying means to maintain the temperature of said primary heating zone substantially equal to the value of said first temperature set point; means operatively connected to said first control means for varying the first temperature set point in response to the rate at which work is moved through the furnace; and second control means having a second temperature set point, said second control means being operatively connected to said second heat supplying means to maintain the temperature of said soaking zone substantially constant and equal to the value of said second temperature set point.

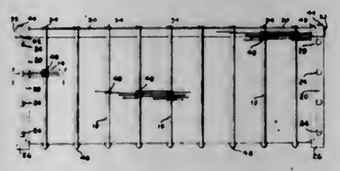
3,022,057
DIRECT-HEATING OVEN
Theodor Schmidt and Kurt Wilde, Essen, Germany, assignors to Indugas, Gesellschaft fur industrielle Gasverwendung m.b.H., Essen, Germany, a corporation of Germany
Filed Oct. 23, 1959, Ser. No. 848,349
Claims priority, application Germany Oct. 29, 1958
4 Claims. (Cl. 263—15)

1. In a heating furnace, in combination, an elongated, generally horizontal combustion chamber with an inlet end and an outlet end, the height of said chamber increasing progressively from said inlet end to an intermediate region and then decreasing toward said outlet end, first injector means at said inlet end for axially introducing an oxygen-unsaturated combustible gas mixture in an ignited state through said inlet end into said chamber, said chamber forming a substantially straight path for said mixture and for an accompanying charge to said outlet end, means for introducing said charge into said chamber at a location between said inlet end and said region, thereby exposing said charge to the flame of said mixture, second injector means positioned in said region at a substantial elevation above the path of said charge for admitting added oxygen into said chamber and causing a secondary combustion at said elevation of ignitable compo-



nents of said mixture, and a roof for said chamber sloping at said region at an angle adapted to reflect radiant heat from said secondary combustion back toward said location while enabling the resulting combustion gases to pass along said roof toward said outlet end, said chamber being free from obstructions interfering with the reflections of said radiant heat to said location.

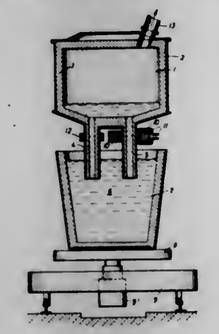
3,022,058
BASKET
Wallace E. Bixby and Leon C. Bixby, Wellington, Ohio, assignors to Bix Company, Wellington, Ohio, a partnership
Filed Mar. 14, 1957, Ser. No. 646,108
7 Claims. (Cl. 263—47)



1. A porous metallic basket for containing articles being heat treated comprising, in combination, a metallic mesh including spaced parallel support rods and normally extending parallel wires, said wires each having a cross-sectional area smaller than that of said support rods, each wire having free ends and an intermediate body portion looped successively about each support rod, the margins of said mesh being bent at right angles to provide a rectangular box having a base, sides, and ends and a rectangular metallic frame including parallel side portions provided with spaced apertures adapted to slidably receive the ends of said support rods, the ends of said support rods being upset to engage the side portions of said frame, said frame further including spaced cross bars extending normal to said side portions for securing said side portions in fixed spaced relation.

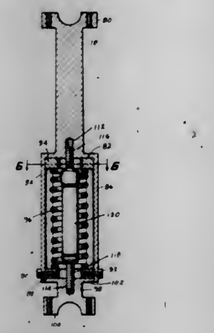
3,022,059
APPARATUS FOR TREATING METAL MELTS
Fritz Harders, Post Ergste uber Schwerte (Ruhr), Germany, assignor to Dortmund-Horder Huttenunion Aktiengesellschaft, Dortmund, Germany
Filed Mar. 4, 1959, Ser. No. 797,157
Claims priority, application Germany Mar. 10, 1958
1 Claim. (Cl. 266—34)

Apparatus for degassing molten metal comprising a refractory lined vessel defining a chamber, means for evacuating said chamber to produce a partial vacuum therein, a container for said molten metal disposed below said chamber, a pair of pipes fixed to the bottom of said vessel and opening into the lower end of said chamber, each of said pipes being constructed and arranged to extend into said container and below the surface of said molten metal, said container and said chamber being relatively movable toward and away from each other, so that by decreasing the distance between said container and



said vessel molten metal is drawn by said partial vacuum through said pipes and into said chamber, a closed core of ferro magnetic material surrounding one of said pipes, a transformer winding surrounding a portion of said core, whereby the molten metal drawn into said chamber and the molten metal within said pipes and said container forms a closed loop of molten metal linking said core, so that the excitation of said transformer winding induces a secondary current in said loop to heat said molten metal.

3,022,060
SHOCK ABSORBER FOR ROAD GRADERS
Fred E. Cook, Des Moines, and Lester S. Vegors, Webster City, Iowa
Filed Nov. 6, 1957, Ser. No. 694,844
5 Claims. (Cl. 267—1)



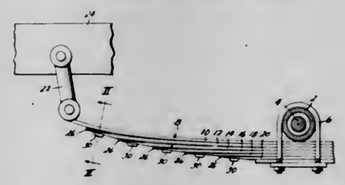
1. A shock absorber unit, comprising an elongated rod member terminating at its lower end in a concentrically enlarged flange, oppositely disposed elongated arcuate arms depending from said flange, a stub shaft having a concentrically enlarged flange on its upper end, oppositely disposed elongated arcuate arms extending upwardly from said flange, said arms on said rod and said stub shaft arranged in meshing relationship to form an enclosed cylindrical housing with said rod and stub shaft in spaced axial alignment, means to secure said meshing relationship of said arms and constituting opposite ends of the housing, a yielding means within said housing connected at respective opposite ends to said rod and said stub shaft to permit said rod and stub shaft to move away from and towards each other respectively in axial alignment, a second yielding means within said housing concentrically disposed relative to said first mentioned yielding means and acting against opposite ends of said housing, and respective fastening means on the upper end of said rod and the lower end of said stub shaft.

3,022,061
OIL VIBRATION-DAMPER FOR VEHICLES
Tatsuya Takagi, 46 Arebisu-machi, Nishinomiya-shi, Hyogo Prefecture, Japan
Filed July 7, 1960, Ser. No. 41,346
Claims priority, application Japan Oct. 16, 1959
7 Claims. (Cl. 267—8)



1. Oil vibration-damper for vehicles, characterized in that a main piston including a non-return valve which admits an upward flow of oil alone and an oil pressure control valve which admits a downward flow of oil alone is slidably inserted into an oil cylinder, compression spring means being disposed below said main piston and effective to apply pressure to said pressure control valve when the main piston lowers into the cylinder beyond the neutral position and engages the top of said means, a regulating piston with a small hole bored in a part thereof to constitute an oil damper inserted in the cylinder below the compression spring, and a restoring compression spring between the said regulating piston and the bottom surface of said cylinder.

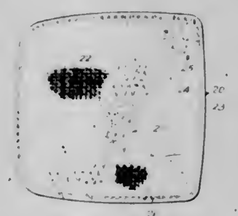
3,022,062
INSERT FOR AUTOMOBILE SPRINGS
Elmo C. Kemp, P.O. Box 484, Miltonvale, Kans.
Filed Dec. 17, 1959, Ser. No. 860,131
8 Claims. (Cl. 267—49)



1. The combination, in a plural-leafed spring assembly wherein one leaf of each adjacent pair of leaves therein has a depression formed therein opening toward the other leaf of the pair and having a floor substantially parallel to the adjacent surface of said other leaf, and an insert

comprising a single spherical bearing ball adapted to be inserted between said pair of leaves, bearing on the floor of said depression of said one leaf and the adjacent surface of said other leaf and having rolling contact therewith, the diameter of said ball being greater than the depth of said depression whereby said leaves are forced apart by said ball, and a retainer disc having an aperture formed therein in which said ball is positioned, said insert engaging in said depression and having frictional engagement with both of said leaves adjacent said ball, whereby to retain said ball in place between said leaves.

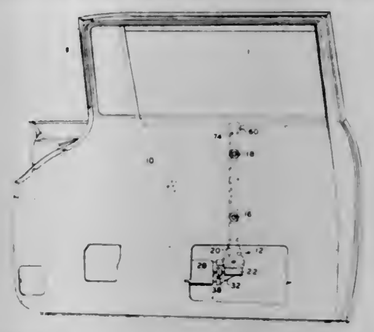
3,022,063
VENTILATING SPACER
Samuel P. Crane, Great Neck, and Stephen D. Kent, Newburgh, N.Y., assignors, by mesne assignments, to Alpha Research Corp., New York, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 824,006
6 Claims. (Cl. 267—110)



1. In a coiled wire unit for a ventilating spacer, a first set of coiled wire rows arranged in one general direction, a second set of coiled wire rows arranged in a direction generally perpendicular to and intersecting the first set of rows whereby certain coils of intersecting rows intersect each other, the axes of the rows being coplanar and arranged in a plane substantially half way between the crests and valleys of the coils, random crests and valleys of the inner of the intersecting coils being indented toward the plane of said axes by an amount substantially equal to the thickness of the wire of the coils at the points where the crests of intersecting coils meet and where the valleys of intersecting coils meet to provide locking indents at said points, said indents receiving respectively the crests and valleys of the outer of the intersecting coils, the inner coils having sufficient resilience to exert outward pressure upon and to resist outward movement of the respective outer crests and valleys out of the indents thereby locking said crests and valleys against accidental relative displacement.

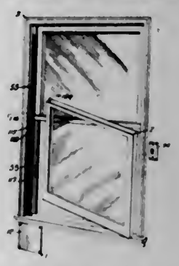
3,022,064
WINDOW REGULATOR
Robert C. Russell, Shaker Heights, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed June 18, 1956, Ser. No. 591,869
3 Claims. (Cl. 268—124)

1. In a window regulating device comprising an elongated channel member having pulley means rotatably mounted thereon, a mounting member means having motor means resiliently supported thereby, drum means rotatably supported by said mounting member, means drivingly connecting said drum means to said motor means, cable means trained between said drum means and said pulley means, means for connecting the cable means to a window carrying means and means for connecting said channel member to a vehicle door, the improvement comprising, in combination with said mounting member, fastening means for adjustably supporting said mounting member on said channel member with the drum means being disposed remote from the pulley means, said fastening means including a plurality of generally



longitudinally elongated openings in one of the members, and a corresponding plurality of elongated fasteners for said openings projecting from the other member through the elongated openings.

3,022,065
POWER APPARATUS FOR WINDOWS AND THE LIKE
Robert L. Martin, Kansas City, Mo., assignor to The Weatherproof Products Corporation, Holmes Park, Mo., a corporation of Missouri
Filed Apr. 23, 1959, Ser. No. 808,505
5 Claims. (Cl. 268—124)

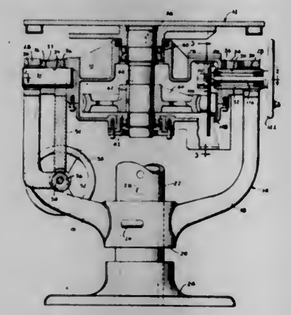


1. In a window including a frame having guideways on opposite sides of the frame, a sash slidable in said guideways and of a type to be removable therefrom, a reciprocatory rod in one of said guideways and having oppositely directed shoulders, a member on the sash having oppositely directed resilient tongues movable over the shoulders to bring the tongues into engagement with the shoulders for suspending the sash therefrom, and electric power means for reciprocating the rod, said tongues being disengageable from the shoulders to permit removal and lowering of the sash when the electrical service is interrupted with the sash in raised position.

3,022,066
DRIVING MECHANISM FOR WORK-POSITIONING TABLES
William S. Benes, Riverside, Ill., assignor to Cullen-Friestedt Company, Chicago, Ill., a corporation of Illinois
Filed June 25, 1958, Ser. No. 744,481
2 Claims. (Cl. 269—61)

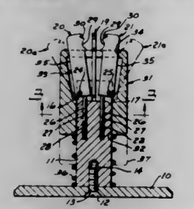
1. In a work positioner of the character described, in combination, a supporting framework including a pair of horizontally aligned trunnion supports, a hollow casing

providing an internal chamber and having trunnions thereon mounted in said supports whereby the casing is mounted for tilting movements in a fore and aft direction about the horizontal axis of the trunnions, a driven shaft rotatably mounted in said casing and extending across said chamber, a work supporting table fixedly mounted on an end of said driven shaft exteriorly of the chamber, a worm wheel mounted on said driven shaft within said chamber, a drive shaft projecting into said casing and having its inner end disposed within the chamber, a boss formed on said casing internally thereof, a sleeve rotatably mounted within said boss, a worm shaft rotatably mounted within said sleeve and having its axis offset



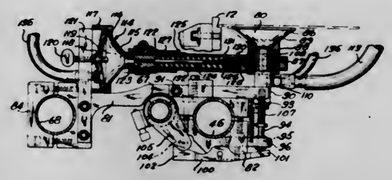
radially from the axis of the sleeve, a gear reduction device including a casing, an input shaft and an output shaft, a reversible electric motor including a motor casing fixedly secured to the gear reduction device casing, and a motor shaft, means connecting said motor shaft and input shaft in driving relationship, means connecting the output shaft and worm shaft in driving relationship, means rotatably mounting said gear reduction device casing for limited turning movement on said hollow casing, means for clamping said gear reduction device casing in any desired position of adjustment on the hollow casing, and means fixedly securing said gear reduction device casing to said sleeve.

3,022,067
WATCH CASE HOLDER
Alfred Stolz, 2594 Manistique, Detroit, Mich.
Filed Mar. 13, 1959, Ser. No. 799,178
4 Claims. (Cl. 269—127)



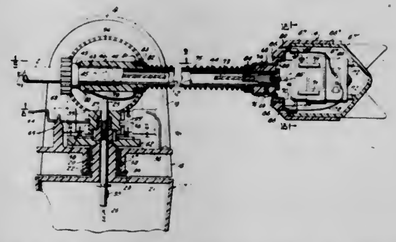
1. A holder device of the class described, comprising: a base; a post on said base; a plurality of jaw members swingably mounted on said post for clamping an article therebetween; a plurality of spring biased members in said post for urging said jaw members into an open position for the reception of said article; each of said spring members engaging and urging a separate jaw member; a sleeve slidably mounted on said post and engageable with said jaw members for moving the same into a closed position against the urging of said spring biased means; and, means for moving said sleeve into an operative engagement with said jaw members.

3,022,068
SHEET FEEDING AND REGISTERING MECHANISM
William H. Weidman, Maple Heights, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,956
5 Claims. (Cl. 271—55)



3. In a feeding and registering mechanism for advancing a sheet along a path and comprising a plurality of gauge members for registering different edges of the sheet as the sheet is advanced, a sheet-gripping element advanceable with the sheet and supported for limited movement in angularly related directions toward said gauge members, an actuator comprising a closed chamber responsive to fluid pressure and a flexible diaphragm forming a wall of said closed chamber, said diaphragm being actuated in response to different pressures on the opposite sides thereof, and a laterally movable mechanical linkage connected at one end to said diaphragm and at its other end to said element to move said element toward one of said gauge members upon movement of said diaphragm in one direction, said mechanical connection being rigid to forces in the direction of movement of said element toward said other gauge member and said diaphragm yielding to accommodate movement of said linkage and said element in a direction toward said other gauge member.

3,022,069
AIRPLANE TOY AND CONTROL THEREFOR
Frank Pettit, 696 Fairway Drive, Union, N.J.
Filed Mar. 22, 1957, Ser. No. 647,834
7 Claims. (Cl. 272—31)

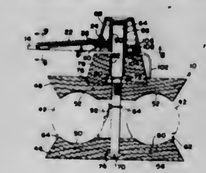


1. In a toy a pylon, an aircraft carrying arm pivotally mounted on said pylon for movement about its own axis, a central vertical axis of the pylon and a horizontal axis, intersecting the vertical axis, a gear coaxially positioned relative to the vertical axis of rotation, a drive gear secured to said arm, gear means coupling said coaxial gear and said drive gear, a shaft axially coincident with said vertical axis and relative to said coaxial gear and clutch means coupling said shaft and coaxial gear, said clutch means including gear fixedly carried by said shaft, a plate having an elongated opening therein with gear teeth formed along one edge of said opening, said plate being movably supported with the gear teeth in engagement with said shaft gear, and coaxial gear engaging tabs carried at opposite ends of said plate whereby partial rotation of said shaft in one direction will move one tab into engage-

ment with said coaxial gear and impart rotation thereto and movement of the shaft in the other direction will first disengage said one tab, then engage the other tab and impart rotation in the other direction to said coaxial gear.

3,022,070
TETHERED TOY AND PYLON THEREFOR
Floyd E. Schlau, Moline, Ill., assignor to Strombeck-Becker Mfg. Co., Moline, Ill., a corporation of Illinois

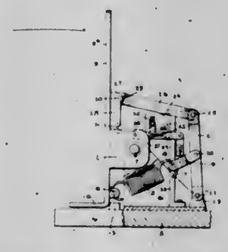
Filed Feb. 26, 1959, Ser. No. 795,840
10 Claims. (Cl. 272—31)



9. A pylon for use with an electrically energizable toy tethered to the pylon, comprising: a horizontal base plate and a horizontal top plate spaced apart vertically to sandwich therebetween a pair of cylindrical dry-cell batteries disposed in spaced apart side-by-side relation with their axes horizontal, said plates being of non-electrically-conductive material, said base plate having thereon a pair of upwardly facing partly cylindrical recesses for accommodating the under portions of the batteries and said top plate having therein a pair of downwardly facing partly cylindrical recesses for accommodating the upper portions of the batteries; upright fastener means disposed between the spaced apart batteries and removably interconnecting the plates to normally clamp the batteries therebetween, said fastener means having an electrical conductor portion connected to the batteries at one side thereof; first electrical conductor means on one plate and extending to and connected to the other side of the batteries and for connection with the toy; and second electrical conductor means having an electrical connection with the fastener means portion and extending to and for connection to the toy.

3,022,071
FOOT EXERCISING DEVICE
Carl E. Malone, 2281 SW. 33rd Way, and James W. Dickey, Jr., 11 SW. 16th St., both of Fort Lauderdale, Fla.

Filed Aug. 13, 1959, Ser. No. 833,540
7 Claims. (Cl. 272—57)



1. An exercising device of the character described comprising a base, a pair of upstanding end plates carried by the base, a horizontal shaft supported by the end plates, a pair of pedals disposed side by side, each pedal being mounted for pivotal movement about said shaft, each of said pedals comprising a relatively flat elongated upstanding face portion and a lower forwardly projecting heel portion, means for limiting inward movement of the heel portions of the pedals, floatingly mounted springs one end of which are connected with the heel portion of its companion pedal and tending to draw said pedal toward its limiting means, connections between said springs and the rear portions of the pedals at points materially above the pivot points of said pedals, said connections comprising elongated links, the lower ends of which are pivotally connected to said base and the intermediate portions of which are connected to the upper ends of said springs and additional links pivotally connected to the upper ends of the last named links and projecting toward the rear faces of said pedals and members carried by the rear faces of the pedals with which the forward ends of the said additional links engage to thrust the upper portions of the pedals forwardly.

3,022,072
EXERCISING APPARATUS
Henry Zinnow, 214 Lawton Ave., Cliffside Park, N.J.

Filed July 6, 1960, Ser. No. 41,089
5 Claims. (Cl. 272—78)

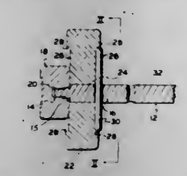


1. A punching bag assembly comprising an outer bag member of airtight elastic material having at least one breathing hole therein for the inlet and outlet of air, a foam material in said bag adapted to take in and let out air, a rigid member extending longitudinally in said bag, means in the upper part of said bag for securing one end of said rigid member thereto, an annular member secured to the lower end of said bag, the lower end of said rigid member fitting therein, a hardened and tempered open wound spring having its upper coils friction-fitted around said annular member and having a major portion of its length as the only supporting means for said bag, the distance between coils of said spring progressively diminishing from its upper to its lower extremity, the lower coils being mutually contacting and wound around a post, said coils having a substantially constant outer diameter, a sleeve for said post, a heavy stepped annular flange for said sleeve, and a supporting base secured to said flange.

3,022,073
WEIGHT LIFTING CONSTRUCTION
Raphael W. Miller, 1406 W. Franklin St., Jackson, Mich.

Filed Jan. 16, 1959, Ser. No. 787,268
6 Claims. (Cl. 272—84)

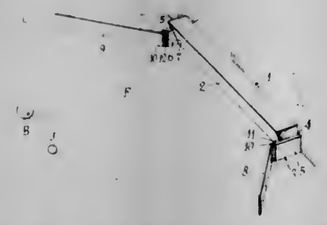
1. Weight lifting apparatus including a shaft having a hand grip portion and weight means, a threaded portion formed on the end of said shaft, a weight axially positionable on said shaft having first and second opposed sides, locating means supportable on said shaft and radially movable with respect thereto adapted to be engaged by and position said weight, means mounted on said weight on said first side thereof cooperating with said locating



means preventing radial movement thereof and nut means cooperable with said threaded portion and engagable with the second side of said weight for maintaining said weight in cooperative engagement with said locating means.

3,022,074
GAME APPARATUS FOR PRACTICE USE BY LAWN BOWLERS
Denison W. Grant, 1 Crescentview Drive, Grantland Park, Franklin, Pa.

Filed Feb. 29, 1960, Ser. No. 11,671
5 Claims. (Cl. 273—39)

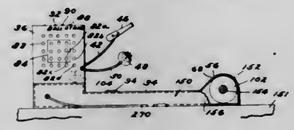


1. A portable game apparatus for practice use by lawn bowlers in connection with a standard lawn bowl, having one side heavier than the other and a standard jack, comprising, in combination: a resilient rebound cushion composed of a solid section of yieldable and resilient material having a length of the order of three feet for support upon a floor, having a body of uniform cross sectional shape and ample dimensions to withstand and cushion the impact of the bowl as thrown by the player and upon such impact to yield with substantial cushioning effect and thereafter to react against the bowl and impel it upon a relatively short return or recoil movement at a retarded rate, the cushion having an active flat front face against which the bowl impinges when thrown, such front face extending upwardly from the floor to an elevation substantially greater than the vertical diametric plane of the bowl as thrown, the front face being inclined to extend in overhanging relation to the floor, the angle of inclination being such as to prevent bouncing of the bowl on its return movement as effected by the cushion, and a floor engaging frame by which the cushion is supported and within which it is secured, the frame exposing the active front face of the cushion to the bowl as thrown by the player.

3,022,075
GAME
Charles J. Danner, 15111 Appoline Ave., Detroit, Mich.

Filed Jan. 18, 1961, Ser. No. 83,526
9 Claims. (Cl. 273—93)

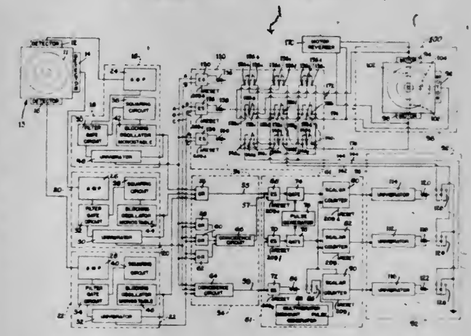
1. In a game device for simulating a competitive sport: a member having a surface exhibiting a plurality of possible plays for determining the progress of the game, an upstanding panel having a plurality of holes extending therethrough from one face to the opposite face thereof, a plug device for removable juxtaposition on one face of the panel and provided with a plurality of electrically conductive prongs extendable through the holes in the panel when the plug device is juxtaposed on the panel, means for selectively energizing individual prongs, a socket device having a lesser number of electrically conductive sockets than the number of prongs on



the plug device with the sockets receivable in electrically conductive relation over the projecting ends of individual prongs when the socket device is juxtaposed on the opposite face of the panel from the plug device, indicating means disposed adjacent said surface of the member for indicating the plays to be read thereon and including electrically operated indicators, and an electric circuit connected to said sockets and selectively connectable with the indicators for selective energization of the indicating means when a socket is received over an energized prong.

3,022,076
IMPACT INDICATING SYSTEM
Ralph Zito, Pelham, N.Y., assignor to American Machine & Foundry Co., a corporation of New Jersey

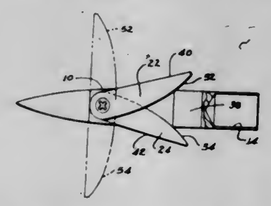
Original application Aug. 1, 1955, Ser. No. 525,433, now Patent No. 2,916,289, dated Dec. 8, 1959. Divided and this application Dec. 15, 1958, Ser. No. 791,243
8 Claims. (Cl. 273—102.2)



1. In a system for remotely indicating the position of impact on a target of the type having discrete areas of selected scoring values, a score indicator for indicating the scoring value of each impact on said target comprising a facsimile of said target, means for marking on said facsimile the position of said impacts on said target, driving means selectively responsive to signals representative of said position of impact for moving said marking means to a corresponding position on said facsimile, means operative to actuate said marking means when said marking means has arrived at a position of impact to be marked on said facsimile, score registering means including a plurality of scoring registers associated with said facsimile for registering the number of impacts in each of said discrete areas of selected scoring values, each of said scoring registers being selectively associated with one of said discrete areas and adapted to indicate the number of impacts in the area associated therewith, and means con-

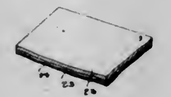
nected to said score registering means and said actuating means for said marking means and operative in response to actuation of said marking means to selectively actuate the scoring register associated with the area in which an impact occurred.

3,022,077
ARROWHEAD CONSTRUCTION
William Doonan, 711 E. De Soto, Ypsilanti, Mich.
Filed Sept. 15, 1958, Ser. No. 761,030
4 Claims. (Cl. 273—106.5)



1. The combination comprising an arrowhead body having a side surface; a first relatively deep recess formed in said side surface; a second relatively shallow recess formed in said side surface immediately rearward of the first recess to cooperate therewith in defining a shoulder; a blade having its leading portion positioned within the first recess and having one of its longitudinally extending edges engaged with the shoulder to position the blade in a location extending angularly out of the arrowhead body; clamping means extending through the forward portion of the blade and into the arrowhead body to pivotally secure the blade therein, whereby the exposed portion of the blade may be manually lifted to move out of engagement with the shoulder and permit manual positionment of the blade substantially entirely within the arrowhead with its rear portion frictionally engaged with the recess-forming surface of the second recess.

3,022,078
MAGNETIC RECORD SHEET FOR A MAGNETIC RECORDING AND READING APPARATUS
Yasushi Hoshino, Minoru Sato, and Mamoru Namikawa, Tokyo, and Shigezo Tochihara, Kawasaki-shi, Japan, assignors to Tokyo Denki Kagaku Kogyo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Filed Jan. 22, 1957, Ser. No. 635,504
Claims priority, application Japan Jan. 25, 1956
1 Claim. (Cl. 274—41.4)



For use on magnetic sound recording and reproducing apparatus of a type which comprises a panel plate provided with setting pins for positioning a magnetic record sheet in predetermined position thereon and a turntable which is provided with a plurality of transducing heads equidistantly spaced around its circumference, the turntable being mounted rotatably around on an axis and being shiftable in a longitudinal direction below the panel plate so that the magnetic record sheet will be scanned by the transducing heads for sound recording and reproducing, a magnetic record sheet comprising a paper sheet having one surface including visual indicating means thereon and another surface, and a magnetic coating film on the other surface and centrally located to define film-free marginal portions on the sheet, the magnetic record sheet being provided with setting holes adapted for engagement with the setting pins of the panel, the sheet comprising two layers respectively of a soft paper material and a hard paper material, the magnetic coating film being located on the hard paper material and the visual indicating means being a developable light-sensitive material.

3,022,079
TRANSFERABLE COATING MAGNETIC FILM FOR PRODUCING MAGNETIC RECORDING SHEETS
Yasushi Hoshino, 462 1-chome Tamagawa-Okusawacho, Tokyo, Japan; Mamoru Namikawa, 664 Kugahara-cho Ota-ku, Tokyo, Japan; and Shigezo Tochihara, Kawasaki-shi, Japan (531 Matsunoki-Jyutaku, Matsunoki-cho Suginami-ku, Tokyo, Japan)
Filed June 11, 1958, Ser. No. 741,423
Claims priority, application Japan June 17, 1957
1 Claim. (Cl. 274—41.4)



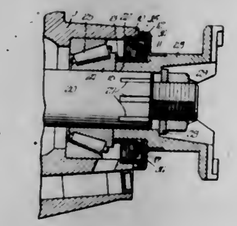
A magnetic film structure adapted to be used for the manufacture of a magnetic sound record sheet which has visible indicia on one surface and which is to be placed for sound transducing in a predetermined position on a magnetic sound transducing apparatus by appropriate registration of holes provided in determinable positions in said sheet, said structure comprising a magnetic film, an adhesive layer provided on one surface of said magnetic film for bonding said magnetic film to the surface of the sheet opposite the surface having visible indicia, reinforcement pieces of substantially the same size as the registration holes, said reinforcement pieces being located with respect to said magnetic film at positions corresponding to said determinable positions, a carrier, and an adhesive on the other side of said film and inferior in adhesive strength to the adhesive on the first said side of the film, the second said adhesive bonding the film to the carrier so that the latter can be easily peeled off after the film is bonded to the sheet.

3,022,080
SELF-CONTAINED SEALING DEVICE
Thomas O. Kosatka, Chicago, Ill., assignor to Victor Manufacturing & Gasket Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 8, 1958, Ser. No. 759,578
3 Claims. (Cl. 277—36)



1. A self-contained face type sealing device comprising: a pair of units each consisting of an outer member and an inner member; interengaged means for preventing relative rotation between said inner and outer members, each said means permitting axial movement between the outer member and its associated inner member; a seal ring fixed upon each inner member; an elastomer annulus extending between each outer member and the associated inner member and bonded to said members; each outer member consisting of a metallic annulus with cylindrical flanges extending in the same direction from its edges, the annulus of one member being wider radially than the annulus of the other member; said units being fitted together with the seal rings engaging each other and with said outer flanges telescoped together and the elastomer annuli stretched to apply pressure to the seal rings; an elastomer O ring engaging the outer surface of the inner telescoped flange and the inner surface of the outer telescoped flange to form a seal therebetween; and a rim extending radially outwardly from the inner telescoped flange and a rim extending radially inwardly from the outer telescoped flange, said rims acting through said O ring to hold the units together as a unitary device.

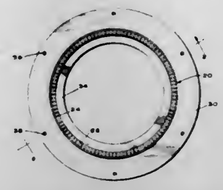
3,022,081
SELF-CONTAINED FLUID SEAL
Thomas O. Kosatka, Chicago, Ill., assignor to Victor Manufacturing & Gasket Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 1, 1957, Ser. No. 675,691
5 Claims. (Cl. 277—39)



1. A device for sealing the space between two relatively rotatable members, comprising: an outer metallic shell member having an outer cylindrical wall dimensioned for press fit in a bore in the outer member and having a radial wall extending inwardly from one end of said cylindrical wall; an inner metallic shell member having a cylindrical wall dimensioned to fit loosely over the inner one of the members between which the device is designed to form a seal, and having a radial wall extending outwardly from one end of the cylindrical wall; said inner and outer members being fitted together with said radial walls adjacent each other; an elastomer member bonded to said inner shell member and including a sealing lip engaged with an inner surface on the outer cylindrical member, a radial portion including concentrically disposed auxiliary sealing lips engaging the inner surface of the radial wall of the outer shell member, and a tube disposed on the inner cylindrical surface of the inner shell member and having an internal diameter less than the outside diameter of the inner one of the members between which the device is designed to form a seal; and an expansion type garter spring disposed in a groove in said sealing lip for maintaining the lip in seal forming engagement with the outer shell.

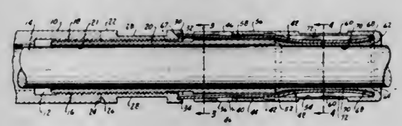
3,022,082
COLLET
Girard S. Haviland, West Hartford, Conn., assignor to The Jacobs Manufacturing Company, West Hartford, Conn., a corporation of New Jersey
Filed June 21, 1960, Ser. No. 37,708
21 Claims. (Cl. 279—1)

1. A collet comprising a plurality of spaced rigid jaws and resilient means interconnecting the jaws to hold them yieldingly in predetermined spaced relationship, with corresponding edges of the jaws engageable with an inclined cam surface in a chuck and opposed peripheral edges of the jaws engageable with a work piece, said re-



silient means comprising a series of similar resilient links each having a head and socket and the socket of each link being expansible to receive the head of an adjacent link, characterized by having rigid wall means overlying a portion of each socket restraining its expansion.

3,022,083
ADJUSTABLE TENSION MASTER FEED FINGER
Webster D. Corlett, Jr., River Forest, Ill., assignor to Corlett-Turner Co., Franklin Park, Ill., a corporation of Illinois
Filed July 31, 1959, Ser. No. 830,891
8 Claims. (Cl. 279—55)

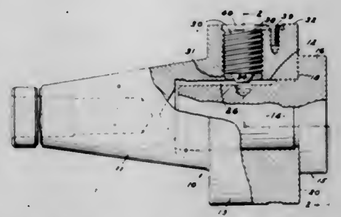


1. A feed finger for use on automatic screw machines or the like including a body member having an axial bore extending therethrough, a nut member and a hollow cap member rotatably mounted on said body member at opposite ends thereof, said feed finger adapted to have a stock piece positioned therein, a portion of said body member extending within said cap member and defining an annular chamber therewith, a plurality of spring members positioned within said chamber and adapted to apply pressure to a stock piece positioned therein, said spring members each having a portion extending axially along said body member and partly within said cap member, said nut member having an end surface bearing against the axially extending portion of said spring members to apply pressure thereto, rotation of said nut member on said body member being effective to increase or decrease the pressure applied to said spring members.

3,022,084
TOOL HOLDER AND TOOL SHANK CONSTRUCTION
David D. Dresback, Gaylord, Mich., assignor to Beaver Tool & Engineering Corporation, Gaylord, Mich., a corporation of Michigan
Filed Aug. 4, 1960, Ser. No. 46,634
7 Claims. (Cl. 279—83)

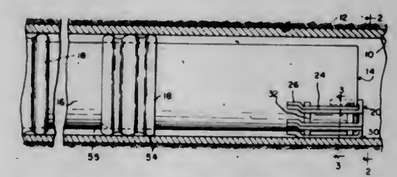
1. In a tool holder having a body with a socket formed therein, means for locating and locking a tool shank in said socket in driving relation with said holder comprising a plunger, thread means mounting said plunger in said body for locking and releasing movement toward and away from the axis of said socket, a detent rigidly projecting from the inner end of said plunger, means limiting the extent of releasing plunger movement to define a released position of said plunger in which at least a portion of said detent extends into said socket,

a recess formed in said tool shank for engagement by said detent and a keyway leading axially along said shank



to said recess, said keyway having a depth less than said recess and being engageable by said plunger detent in the said released position thereof.

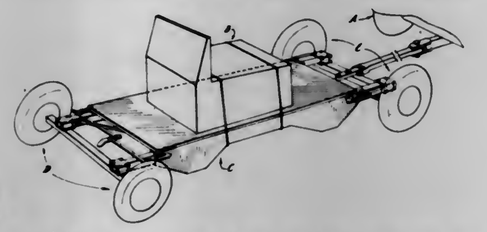
3,022,085
DETACHABLE CASING SPACER
Ted Kennedy, Jr., 1608 Granger Ave., Ann Arbor, Mich.
Filed Dec. 15, 1958, Ser. No. 780,537
9 Claims. (Cl. 280—12)



9. Apparatus for use in combination with a pipe adapted to be supported in predetermined spaced relation within a casing by means including a spacer encircling an intermediate portion of said pipe, said apparatus facilitating the endwise insertion of said pipe and spacer into the casing and comprising an arcuate runner formed on a radius to correspond with that of said pipe, said runner being detachably engageable with the end of said pipe in concentric relation therewith and in longitudinally spaced relation to said spacer, said runner having a radially outer skid surface slidably engageable with the casing which skid surface projects radially outwardly from said pipe farther than said spacer to raise said end of said pipe during insertion, thereby protecting said spacer from damage, the radially outer skid surface of said runner lying in the surface of an imaginary cylinder, and an end of said runner having means providing a hook opening toward the opposite end thereof, said hook engaging and receiving said end of said pipe to effect a releasable connection therewith.

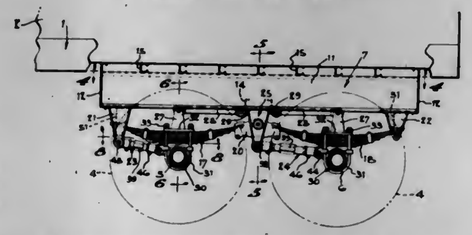
3,022,086
CARGO-CARRYING APPARATUS WITH DETACHABLE WHEELED SUPPORT MEANS
Robert D. Allen, Bellflower, Calif., assignor, by mesne assignments, to Houston Fearless Corporation, a corporation of California
Filed Apr. 28, 1959, Ser. No. 809,477
4 Claims. (Cl. 280—30)

1. Cargo-carrying apparatus comprising, in combination: a cargo-receiving bed having a front end, and a rear end parallel thereto; a parallel pair of channel-shaped members extending from end to end of said cargo-receiving bed in supporting relationship therewith, each of said members having a widened portion at each of its ends providing a downwardly-extending protrusion adapted to rest upon the ground; two parallel pairs of wheel-supported support members adapted for forcible insertion into the corresponding ends of said channel-shaped members, the cooperative action being such that the first-inserted end of each support member engages the upwardly inclined surface at the inward end of the associated widened portion of the corresponding channel-shaped member, for



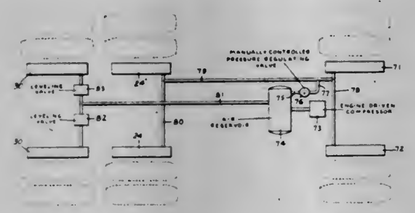
raising the associated end of said bed from the ground as the insertion of the support member proceeds; and means for locking said pairs of support members in longitudinal alignment in their fully-inserted positions within said channel-shaped members.

3,022,087
LEAF SPRING VEHICLE SUSPENSION SYSTEM
James J. Black, Cincinnati, Ohio, assignor to Trailmobile Inc., Cincinnati, Ohio, a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,746
7 Claims. (Cl. 280—104.5)



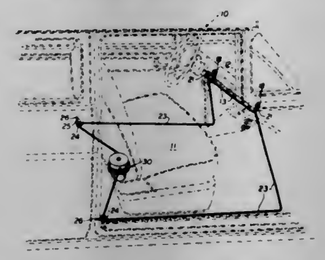
1. A tandem spring suspension system for a roadway vehicle comprising, a pair of tandem axles extending transversely beneath said vehicle, road wheels journalled on said axles and including brake mechanism interconnecting the wheels and axles, tandem leaf springs mounted on said axles at opposite sides of the vehicle, said springs including spring seats, torsionally resilient means interposed between the spring seats and axles adapting the springs to rock relative to the axles about the centers of said axles within the yield limits provided by said torsionally resilient means, means on said vehicle engaging the outer ends of said tandem springs at opposite sides, respective tiltable rocker elements pivotally mounted on the vehicle at opposite sides and having outer ends in bearing engagement with the adjacent inner ends of said tandem springs, whereby the weight load of the vehicle is transmitted to said tandem leaf springs and equalized by said rocker elements, torque resisting means interconnecting the axles and vehicle adapted to lock the axles against rotation under the torque forces which are transmitted to the axles upon application of said brake mechanism, and radius means interconnecting said tandem axles and vehicle, said radius means adapting said axles to shift vertically relative to the vehicle in response to impact forces during road transport, said leaf springs adapted to rock relative to the non-rotatable axles under impact forces through operation of the said torsionally resilient means and to tilt said rocker elements, whereby an impact force imposed upon one axle and leaf spring is transmitted through the rocker element to the tandem leaf spring and equalized by said leaf springs.

3,022,088
TANDEM REAR AXLE AIR SPRING SUSPENSION FOR VEHICLES
Gerald E. Mintz, Emmaus, Pa., assignor to Mack Trucks, Inc., Plainfield, N.J., a corporation of New York
Filed Feb. 25, 1959, Ser. No. 795,444
5 Claims. (Cl. 280—124)



3. A suspension for vehicles comprising a vehicle chassis, a front axle suspension, a first pair of air reservoirs fixed to opposite sides of said chassis, a second pair of air reservoirs fixed to opposite sides of said chassis in lengthwise spaced relation to said first pair of reservoirs, beams extending lengthwise of said chassis below and corresponding to each reservoir, an air spring interposed between each end of each reservoir and the corresponding beam and connecting with said reservoir, axles for supporting wheels carried by said beams, means for stabilizing said beams against substantial lengthwise and lateral movement relative to said chassis, a source of air under pressure connected to each of said reservoirs, a manually-controlled pressure-regulating valve means interposed between said source and said first pair of reservoirs for supplying air selectively at different pressures solely to said first pair of reservoirs and the air springs communicating therewith, and at least one leveling valve responsive to prolonged displacement of said chassis relative to the other pair of beams for regulating solely the air pressure in the second pair of reservoirs and the air springs communicating therewith to maintain a predetermined spacing between said chassis and said axles.

3,022,089
SAFETY BELT WITH DASHBOARD SUPPORT
Bela Botar, 3901 W. 7th St., Los Angeles, Calif.
Filed Oct. 31, 1960, Ser. No. 66,300
8 Claims. (Cl. 280—150)



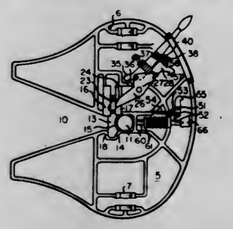
1. Safety belt assembly for a longitudinally extending automobile having a laterally extending seat, a base support for said seat, and a frame member in front of and above said seat; said assembly comprising a strap, means for releasably supporting said strap in laterally extending position on said frame member above and in front of said seat, pulleys adapted to be mounted on said support behind said seat and in approximate longitudinal alignment with the ends of said strap, a pair of reels adapted to be mounted on said support between said pulleys, cables respectively wound on said reels and extending over said pulleys and connected to the respective ends of said strap, operator controlled motor means coupled to said reels for winding in said cables on said reels at the will of the operator, said strap being thereby released from said frame member and drawn downwardly rearwardly taut against the lap of the occupant of the seat, and operator-controlled ratchet means coupled to said reels for preventing unwinding of said cables when said ratchet means are active, said ratchet means being adapted to be made inactive to permit unwinding of said cables and restoration of said strap to its position on said frame.

3,022,090
BOAT TRAILER HAVING IMPROVED FRAME MEANS
James E. Olney, Canfield, Ohio, assignor to Tee-Nee Trailer Company, Youngstown, Ohio, a corporation of Ohio
Filed June 28, 1960, Ser. No. 39,243
9 Claims. (Cl. 280—414)



1. In a boat trailer including a running gear and frame means, the improvement comprising a frame member of generally triangular shape in section having a base which is horizontally directed, said frame member forming a part of said frame means and being made from a metal strip the edges of which are abutted in said base to form a longitudinally extending joint in the frame member, substantially inverted V-shaped connector straps shaped complementary to and overlying said frame member and having end portions extending downwardly therefrom, said frame member having upwardly converging sides forming a rounded apex therefor, bolt means engaging said end portions to secure said connector straps to said frame member, and boat support means secured to and carried by said connector straps.

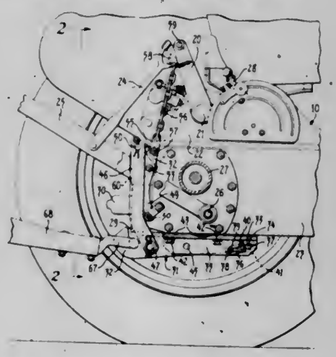
3,022,091
KING PIN LOCK FOR FIFTH WHEELS
Ray A. Braunberger, 221 N. La Salle St., Chicago, Ill.
Filed Jan. 18, 1961, Ser. No. 83,592
5 Claims. (Cl. 280—434)



1. A fifth wheel having a device for locking in place the king pin of a semi-trailer having, in combination, a fifth wheel plate, a slot in said fifth wheel plate into which a king pin can enter, a king pin on a semi-trailer, a bolt movable in the fifth wheel plate to obstruct said slot to prevent said king pin from leaving the slot, a

hand lever carried by said fifth wheel for withdrawing the bolt from said slot, means normally biased to hold the bolt in slot-obstructing position, a latch carried by the fifth wheel plate which engages said hand lever when the lever has withdrawn the bolt, a tripper for releasing said latch comprising an axially movable rod carried by said fifth wheel plate which engages a king pin when in the slot, means biasing the rod to move axially forward when the king pin moves out of the slot, a finger hinged on said rod which passes said latch without tripping it when the rod moves forward but trips the latch when another king pin enters the slot and moves the rod in reverse direction thus allowing the bolt to move to its biased slot obstructing position.

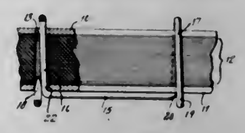
3,022,092
POWER LIFT HITCH MECHANISM
Ernest V. Bunting and Habibur Rahman, Detroit, Mich., assignors to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed Jan. 20, 1960, Ser. No. 3,558
6 Claims. (Cl. 280—479)



5. A hitch attachment for use with a tractor having power operated lift arms located adjacent the upper rear portion of the tractor body, said hitch attachment comprising in combination an elongated coupling member pivotally mounted at its forward end on the underside of the tractor body and having a coupling element at its trailing end, a toggle-like linkage for swinging said coupling member including a first link pivotally connected at one end to said coupling member adjacent the rear end of the latter, a second link pivotally connected at one end to said first link and pivotally mounted at the other end of the tractor body rearwardly of the tractor's rear axle, means including a flexible tension member connecting said second link to the tractor lift arm, said links being dimensioned and their pivots related so that they move into a vertical position and almost to a dead center position when the coupling element is raised to transport position, said second link having a protruding latch ear at the pivoted connection with said first link, and a manually releasable latch for engaging said latching ear to maintain the links near the dead center position when said coupling member is in raised transport position.

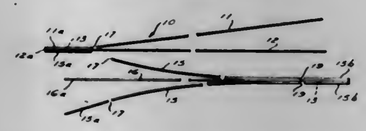
3,022,093
BOOK BINDING MEANS AND BOOKS BOUND THEREBY
Ward D. Dayton, Morse Lake, Bloomingdale, N.J.
Filed Apr. 8, 1959, Ser. No. 805,081
3 Claims. (Cl. 281—25)

1. The combination with book-forming elements including relatively hard and thick front and back covers and a plurality of relatively soft and thin filler sheets, of binding means for said elements, comprising at least one wire member, each said wire member including a cross portion and two leg portions, each said wire member having its leg portions extended through and in tight frictional contact with said back cover and having its cross portion closely adjacent to the outside of said back cover, aligned holes formed in said front cover and in said filler sheets of a size substantially greater than the diameter of the wire of which each of said wire members is formed, and perforations in said back cover at the binding edge of said book-forming elements through which portions of said members extend said leg portions of each said wire member extending freely through said aligned



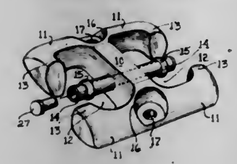
holes but are in tight frictional contact with said back cover and being formed into loop portions, each of which is disposed substantially in a plane perpendicular to the cross portion of each said wire member, and the ends of each of said leg portions extending at least a substantial distance into and in close frictional contact with said back cover at points respectively closely adjacent to those through which said leg portions extended as aforesaid, so as to protect persons using the so-bound book from injury by the ends of said leg portions and so that the frictional contacts between each said wire member and said back cover will tend to prevent relative movement of these parts.

3,022,094
DOUBLE STUB CARD SET
James W. Kehoe, Shelby, Ohio, assignor to The Shelby Salesbook Company, Shelby, Ohio, a corporation of Ohio
Filed Mar. 19, 1959, Ser. No. 800,453
4 Claims. (Cl. 282—22)



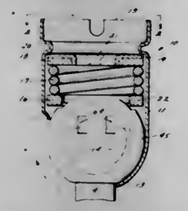
1. A book comprising a plurality of manifold record pads, each pad comprising at least an original sheet, a first carbon sheet thereunder, a first copy sheet below the first carbon sheet, a second carbon sheet below said first copy sheet and a second copy sheet below the second carbon sheet, the original, carbon and copy sheets being arranged with the grain of the paper running lengthwise thereof and being of the same length and width, the said original, carbon and copy sheets being connected at one end to the other pads constituting the book, the original, carbon and copy sheets of each pad having kerfs partly separating them into book stubs and pad stubs near the ends thereof, the first carbon sheet being glued to the original and first copy sheets in the book stub, the first and second copy sheets and the second carbon sheet being glued together in the pad stub, the first carbon sheet having a tongue adjacent to the book stub and a notch in its pad stub, the second carbon sheet having a notch adjacent to the book stub, said pad being removable from the book as a unit by completing the separation at the book stub kerfs and said pad being separable into separate original and first carbon sheets and connected first and second copy sheets and the second carbon sheet.

3,022,095
ANCHORS FOR USE IN CONNECTION WITH SIGNAL HOSE
Albert Mazelka, Chicago, Ill., assignor to Milton Manufacturing Co., Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 16, 1958, Ser. No. 780,841
1 Claim. (Cl. 285—45)



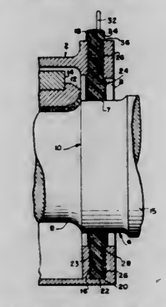
A signal hose anchor comprising a body the underside of which is substantially flat so as to lie in a substantially flat plane, said body providing an elevated flat crossbar, arms extending laterally in opposite directions from opposite ends of said crossbar with each pair of arms on each of the opposite ends of said crossbar having their upper surfaces beveled downwardly and outwardly in opposite directions until the outer edges thereof lie in the same substantially flat plane with respect to said body, each of said arms having their outer ends turned inwardly in the direction of each other to provide therebetween an open slot, a nipple on opposite sides of the crossbar extending in a parallel direction with respect to said arms into said slot and terminating short of the ends of the inwardly extending ends thereof, said nipples having open communication therebetween and adapted to be inserted in the ends of a hose, said arms intermediate the ends thereof having counterbores communicating with openings formed in said arms for the passage therethrough of an anchoring element.

3,022,096
FULL TURN SWIVEL UNIT FOR ELECTRICAL FIXTURES
Nathan R. Schwartz, Yonkers, N.Y., assignors, by mesne assignments, to Swivelier Company, Inc., Nanuet, N.Y., a corporation of New York
Filed Aug. 22, 1957, Ser. No. 679,668
3 Claims. (Cl. 285—164)



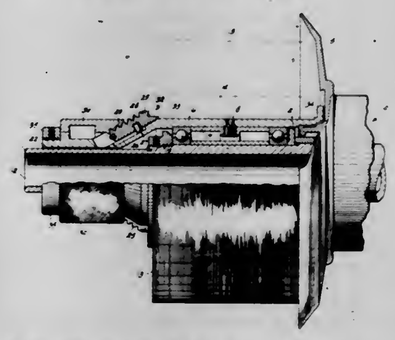
1. A swivel unit, including a ball assembly, for mounting electrical fixtures; said ball assembly comprising a spherically surfaced member having a central opening therethrough defined by an inner wall thereof; a nipple partially disposed within said spherically surfaced member and extending through a first end of said opening; a circumferential seat extending inwardly from the inner wall of said spherically surfaced member and positioned near said first end; said nipple having a collar in operative engagement with said seat to limit outward movement of said nipple through said first end; a lug extending from said nipple collar; a ring member including a stop lug operatively positioned for engagement by said nipple lug; said stop lug also being partially disposed within a stop slot in said inner wall; said stop slot being at least as wide as the width of said nipple lug plus twice the width of said stop lug; said stop lug and said nipple lug cooperating with said stop slot to permit rotation of said nipple relative to said spherically-surfaced member for a full revolution and to limit further rotation; said swivel including a partially loaded spring washer entered into said central opening and bearing against said ring member to maintain the members disposed within said spherically shaped member in frictional engagement; a closing washer entered into said opening and bearing against said spring washer, means preventing relative rotation between said closing washer and said spherically-surfaced member, and means to maintain the loading of said spring washer and to retain the elements entered into said opening.

3,022,097
DUST GUARD
Russell Wade Seniff, Roland Nicholas Fracalossi, and Pell Kangas, all of Pratt and Arlington Sts., Baltimore, Md.
Filed June 27, 1956, Ser. No. 594,127
9 Claims. (Cl. 277—133)



1. In combination, a car axle journal box having a dust guard slot therein, and a dust guard in said slot, said dust guard being made of a foamed polyurethane of normally greater thickness than the interior of said dust guard slot and being compressed to fit into said dust guard slot and substantially filling the entire dust guard slot between the walls thereof.

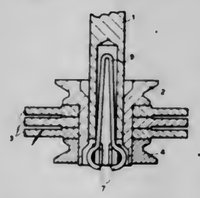
3,022,098
SPOOLING MECHANISM
Frank Wahl, North Bergen, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 8, 1959, Ser. No. 811,991
5 Claims. (Cl. 287—52.07)



1. A spooling mechanism for a sleeve which comprises a rotatable element having an intermediate sleeve receiv-

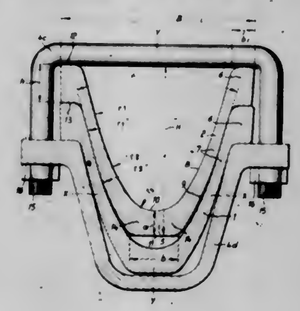
ing portion and end portions, a flange extending from one end portion for engaging one end of a sleeve positioned on the intermediate portion, a plurality of radially spaced inclined ways in the other end portion of the rotatable element, members having sleeve engaging end portions normally retracted within the rotatable elements and movable on the ways for engaging the other end of the sleeve, and means for advancing the members along the ways out from the rotatable element and against the other end of the sleeve to force the sleeve against the flange.

3,022,099
ADJUSTABLE COUPLING
Rafaello Bruscaglioni, Milan, Italy, assignor to Filotecnica Salmoiraghi S.p.A., Milan, Italy, a firm
Filed Dec. 2, 1959, Ser. No. 856,738
Claims priority, application Italy Dec. 9, 1958
7 Claims. (Cl. 287—53)



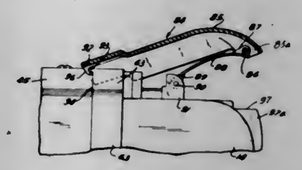
1. A shaft end attachment comprising, in combination, a shaft; a springy finger secured to and extending beyond a free end of said shaft and having an arcuate free end portion located beyond said end of said shaft and having a convex surface directed away from the axis of said shaft and spaced from said axis by a distance greater than the radius of said shaft; and a sleeve into which said shaft slidably extends, said sleeve extending beyond said end of said shaft and being formed in its interior with a groove receiving said arcuate portion of said finger so that the latter connects said sleeve to said shaft in a predetermined angular position with respect thereto.

3,022,100
FLANGED TROUGH SECTIONS FOR SUPPORT STRUCTURES
Hans Friedrich Heintzmann, Bochum, Germany, assignor, by mesne assignments, to Bochumer Eisenhutte Heintzmann & Co., Bochum, Germany
Filed Sept. 21, 1959, Ser. No. 841,291
Claims priority, application Germany Sept. 20, 1958
3 Claims. (Cl. 287—103)



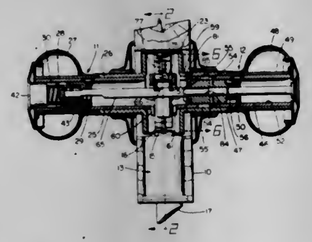
1. A support structure for use in underground excavations and the like, said support structure comprising, in combination, a first and a second substantially U-shaped symmetrical section, said sections of identical dimensions and each including a base, a pair of webs integral with and diverging outwardly from said base, said webs enclosing therebetween an angle of less than 45° and each having an end distant from said base, the thickness of each of said webs diminishing progressively in a direction from said base toward said ends thereof and each web bounded by a concave inner and a convex outer face, said base having a concave inner face with a smooth transition into the concave inner faces of said webs and a flattened outer face, the minimum thickness of said base approximating about one-half the width of said flattened outer face, and an outwardly projecting flange integral with the end of each of said webs, the height of said flanges as measured in a direction perpendicular to the plane of said flattened outer face exceeding the minimum thickness of said base whereby one of said sections is receivable in the other section in such manner that the flattened outer face of the base of said one section is spaced from the inner face of the base of said other section, that the flanges of said one section rest on the flanges of the other section and that the convex outer faces of the webs forming part of said one section define a pair of gaps with the concave inner faces of the webs forming part of said other section, said gaps extending in a direction from the flattened outer face of said one section toward said flanges, the maximum height of each said section as measured in a direction perpendicular to the planes of the respective flattened outer faces approximating between about 3–4 times the width of said flattened outer faces, and the maximum width of said sections as measured in a plane parallel with the planes of the respective flattened outer faces approximating about four times the width of said flattened outer faces; and clamping means for holding the flanges of said one section against movement in a direction away from the flanges of the other section, said clamping means comprising a first member abutting against the flanges of said one section and a second member connected with said first member and abutting against the flanges of said other section.

3,022,101
FASTENING MEANS FOR SUCTION CLEANER END COVER
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Original application Apr. 1, 1958, Ser. No. 725,725. Divided and this application Apr. 22, 1959, Ser. No. 811,247
4 Claims. (Cl. 292—114)



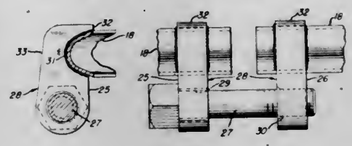
1. In fastening means for an end cover of a casing of an elongated horizontal tank-type suction cleaner, a first lever having at one end thereof a hook adapted to engage a keeper on the cleaner casing at a first region which is removed from the longitudinal axis of the cleaner, a second lever connected at one end to the end cover by a pivot immovable on the end cover and at a second region which is nearer to the longitudinal axis of the cleaner than the first region when the fastening means is rendered operable to fasten the end cover, the opposite ends of the levers being pivoted to one another to form a knuckle of a toggle from which both levers extend in the same direction toward the casing when the hook engages the keeper, the knuckle, when the hook engages the keeper, being movable through an arc to a third region on the end cover which is nearer to the longitudinal axis of the cleaner than the first and second regions, the toggle being so constructed and arranged that when the hook engages the keeper the knuckle is under tension responsive to movement thereof to its third region from one side to the opposite side of a horizontally extending plane passing through the first and second regions, the end cover having a stop upon which rests a part of the second lever remote from the end of the casing to limit movement of the knuckle after it passes through the aforementioned plane to its third region, the second lever part at the vicinity of the stop having a surface facing the longitudinal axis of the suction cleaner, and the end cover having a cavity at the vicinity of the stop between the aforementioned surface and the longitudinal axis of the cleaner for manually pushing the knuckle end of the toggle in a direction radially outward from and in a plane transverse to the longitudinal axis of the cleaner.

3,022,102
EMERGENCY RELEASE BAR
Fred J. Russell, 3800 Don Felipe Drive, Los Angeles, Calif., and Franz J. Netschert, Glendale, Calif.; said Netschert assignor to said Russell
Filed June 29, 1959, Ser. No. 823,447
4 Claims. (Cl. 292—169)



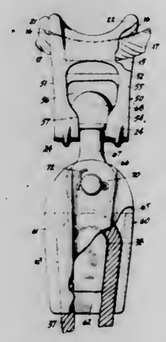
1. In a door lock having a stationary portion for mounting in a door, a reciprocating latch bolt assembly, a retractor in operable engagement with the latch bolt assembly, and an inner and an outer knob assembly for independently actuating the retractor, the combination of a dogging member carried by the outer knob assembly and having an axially slidable mounting relative to said stationary portion between a dogging engagement with said stationary portion and a released position, a spring return means acting against the dogging member, a latching slide having a slidable mounting relative to said retractor, a first bar having a longitudinally reciprocating mounting in said inner knob assembly and extending from said inner knob assembly through said retractor and in axial engagement with said dogging member, a second bar parallel to said first bar having a longitudinally reciprocating mounting in said inner knob assembly and extending from said inner knob assembly through said retractor, means forming latching notches in said first bar receptive of said slide when said first bar is moved with said dogging member into dogging position, release cam means associated with the second bar, a release shaft having a longitudinally slidable mounting in said outer knob assembly and in endwise engagement with said second bar, means forming an access hole in said outer knob assembly, said release shaft being movable axially with said second bar and the cam means thereon to move said latching slide out of engagement with said latching notches in said first bar.

3,022,103
LOCKING RING FOR A REMOVABLE DRUM HEAD
Mindaugas J. Klygis, Chicago, Ill., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 25, 1958, Ser. No. 763,400
1 Claim. (Cl. 292—256.67)



A locking ring for enclosing an open-ended barrel or drum having a flanged curl outwardly depending from the open end with a removable drum head having an outwardly directed head flange cooperating with said curl, said ring comprising a split, channel-shaped ring having the open end of said channel directed inwardly, one portion of said ring engaging the head flange and the other portion of said ring engaging the curl, and a lug element mounted adjacent each terminal end of said ring, each lug element comprising a body fabricated from a forged steel bar having a rectangular cross section with a ratio of width to thickness within the range of about 0.5–0.7, each of said bodies having a notched portion welded to said ring and a dependent connector portion, each of said notched portions being provided with a notch having a configuration similar to the transverse cross section of said channel-shaped ring and having an upper portion welded to said ring and including an integral lip projecting beyond the drum side of said body cooperating with said notch to encompass the portion of said ring engaging the head flange, and a lower portion encompasing the portion of the ring engaging the curl, the depth of said notch being less than about one-half the thickness of said bar, the dependent connector portion of one of said lug elements being provided with an internally threaded opening adapted to receive a threaded fastener, the other of said lug elements being provided with a smooth bore opening whereby the lug elements can be connected.

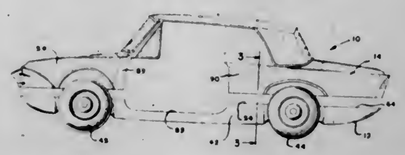
3,022,104
HOOK AND EYE CHOKER ASSEMBLY
Fred Shandel, Box 66, Albion, Calif.
Filed Mar. 31, 1958, Ser. No. 725,393
8 Claims. (Cl. 294—74)



7. A coupling for a choker rope comprising in combination a choker rope, a free-running closed hook member having a transverse passage therethrough for said

rope movably retaining said member thereon, said closed hook member having an opening in one side thereof connecting with an axially curved slot of narrower width for respectively receiving and retaining the balled knob and a portion of the shank of a closed eye bolt and a closed eye bolt having a radial shank of a diameter less than the width of said slot, an integral balled knob at one end thereof of larger diameter than said slot, and a closed eye at the other end, and a body member having four walls defining a passage therethrough, said passage having a taper narrowing outwardly, a tapered wedge block within said passage, said wedge block and said passage adapted to retain the looped end of a cable therebetween, said body member having two opposed walls extending beyond the wider portion of said passage, and means for receiving and retaining the closed eye of said eye bolt between said opposed walls with limited arcuate movement.

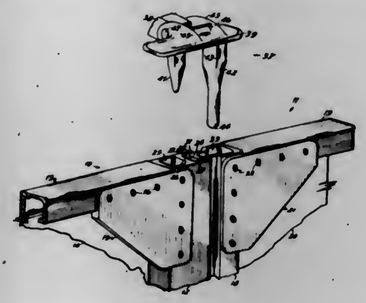
3,022,105
COMPOSITE AUTOMOBILE DESIGN
John Tjaarda, 78349 Kidder Lane, Romeo, Mich.
Filed Sept. 21, 1959, Ser. No. 841,100
7 Claims. (Cl. 296—28)



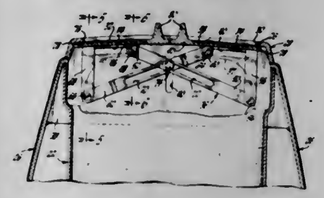
6. A vehicle body comprising a pontoon-shaped underbody including an elongated bottom panel and a peripheral upstanding wall means extending therefrom to provide a flange defining a flat base line; said peripheral wall means having a substantial vertical dimension so that the underbody forms a substantial portion of the viewable vehicle body; a sectionalized upperbody positioned atop the underbody and including a cowl-windshield assembly positioned between the front and rear limits of the underbody and having side portions thereof supported on said flange of said underbody at the base line, two front fender panel assemblies extending along opposite front side areas of the vehicle body in supported positions on said flange at the flat baseline, and two rear fender panel assemblies extending along opposite rear side areas of the vehicle body behind the cowl-windshield assembly in supported positions on said flange at the base line.

3,022,106
ROOF BOW FITTING FOR RACK BODY
James J. Black, Cincinnati, Ohio, assignor to Trailmobile Inc., Cincinnati, Ohio, a corporation of Delaware
Filed Jan. 27, 1961, Ser. No. 85,366
5 Claims. (Cl. 296—29)

1. In a freight vehicle equipped with racks having side posts of the type which interfit in tongue and groove relationship and which have openings at least at the upper portions thereof, a roof bow fitting for preventing gapping between side posts of adjoining racks, said fitting comprising, a body connectable to a roof bow, said body being adapted to straddle the two side posts between adjoining racks, said body having two spaced downwardly extending pins, one of said pins being adapted to be received in the opening of one side post and the other of said pins being adapted to be received in the opening of the other side post, the spacing between said pins and the fit of said pins in their respective openings being such that said pins permit relative longitudinal motion between said racks only over the range in which said posts are interfitted with each other and such that said pins positively prevent relative longitudinal motion of a degree such that gapping would occur between said posts, whereby angular deviation of two adjoining racks tending to cause gapping therebetween is partly transferred to at least one other rack and is uniformly confined to that range over which loss of weather tightness does not occur.



3,022,107
VEHICLE CLOSURE
William H. Daniels, Southfield, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 31, 1960, Ser. No. 66,147
6 Claims. (Cl. 296—37)

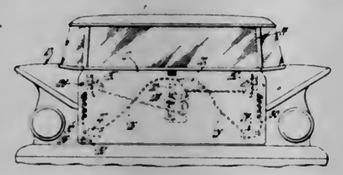


1. In combination with a vehicle body having a compartment therein, a pair of oppositely movable closures movable between a generally aligned closed position wherein said closures have adjacent edge portions located in juxtaposed relationship and an open position wherein said closures are located in generally parallel disposed relationship, a first link having one end thereof pivoted to one of said closures adjacent the adjacent edge portion thereof and the other end thereof pivoted to the other of said closures adjacent the remote edge portion thereof, a second link having one end thereof pivoted to said one closure adjacent the remote edge portion thereof and the other end thereof pivoted to the said other closure adjacent the adjacent edge portion thereof whereby said links are arranged in X fashion, and means for shifting said links transversely of each other upon movement of said closures between open and closed positions.

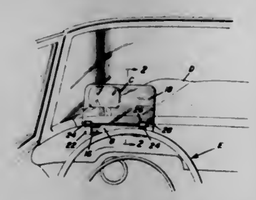
3,022,108
POWER-ACTUATED TAIL GATE
Floyd A. Cooley, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 17, 1960, Ser. No. 36,907
11 Claims. (Cl. 296—57)

1. A vehicle tail gate closure mechanism of the type in which the tail gate is pivotally mounted along its lower edge to the rear opening of the vehicle permitting the tail gate to be rotated about a horizontal axis providing

rear access to the vehicle compartment and including a motor mounted within said tail gate, a pair of reduction gear devices disposed within said tail gate, said motor being operatively connected to said devices to drive the same, each reduction gear device including an output shaft having an end projecting from said tail gate, a lever fixed at one end to the output shaft of said reduction gear device, a cam plate member mounted within the vehicle body proximate the tail gate opening, a follower member disposed on the other end of said lever and coacting with said cam plate, actuation of said motor being adapted to drive the reduction gear devices and rotate said levers whereby the follower members will be caused to traverse the cam plate to effect opening and closing movement of the tail gate.



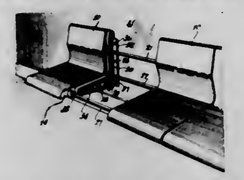
3,022,109
REAR VIEW MIRROR ANTI-GLARE SHIELD
Elmer J. Hauskama, 118 1st St., Highland Park, Glendive, Mont.
Filed June 23, 1960, Ser. No. 38,168
4 Claims. (Cl. 296—97)



1. An anti-glare attachment for the cowl of an automobile windshield structure comprising a bracket embodying a plate having detachable permanent magnets on the bottom of the plate for mounting the plate in a given position on an automobile cowl, said plate being provided on a rear longitudinal edge with spaced upstanding fingers, provided on a forward longitudinal edge with an upstanding finger providing a spring attaching shank, a coil spring having a forward end detachably and adjustably secured to said shank, said rear fingers being provided at upper ends thereof with hinging eyes, and an intercepting panel having a lower edge portion spanning the space between said rear fingers and hingedly joined with said eyes, the rear end of said spring being connected to a cooperating marginal edge portion of said panel.

3,022,110
BENCH CONSTRUCTION
Eric A. Brown, Renfrew, Ontario, Canada, assignor to Polyfiber Limited, Renfrew, Ontario, Canada
Filed Feb. 2, 1959, Ser. No. 790,610
1 Claim. (Cl. 297—248)

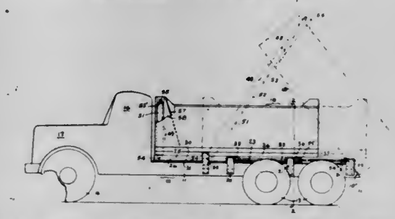
A bench structure comprising a plurality of preformed seats each having a seat section and a back section, each said seat having a flange on each side edge thereof, each said flange having a portion extending downwardly from said seat section and a portion extending rearwardly from said back section, said seats being aligned with at least one of said flanges of one of said seats in abutment with one of said flanges of another of said seats, each said flange having at least one aperture in each of said portions thereof, a rod extending through said apertures in said seat section flange portions, a rod extending through said apertures in said back section flange portions, means on the ends of said rods to lock said seats together, and means engaging said rods to support said rods and seats in upright position comprising at least two wall-supportable brackets, each said bracket having a wall-attachable base plate, a first portion extending longitudinally of said base plate and projecting outwardly therefrom, and a second portion extending substantially perpendicularly from said first portion, each said bracket being disposed between said flanges of one of said seats, each of said bracket portions having a notch therein for reception of one of said rods.



ERRATUM

For Class 297—433 see:
Patent No. 3,021,889

3,022,111
MOVABLE BODY ON A TRUCK FRAME
Archibald D. L. Hutchinson, 2616 Franklin Ave., Seattle, Wash.
Filed Oct. 27, 1959, Ser. No. 849,051
10 Claims. (Cl. 298—14)
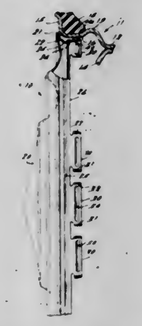


8. A vehicle comprising a substantially horizontal frame, front and rear wheels supporting said frame for highway travel, a sub-frame mounted for longitudinal movement on said horizontal frame, a body capable of receiving a load supported on said sub-frame and having pivotal mounting at its rear end on the sub-frame for dumping action, a horizontally disposed double acting hydraulic jack connected between the vehicle frame and sub-frame for longitudinally moving the sub-frame on the vehicle frame between its front and rear wheel supports, and a hydraulic lift jack connected between the forward portions of the sub-frame and dump body and operable for effecting the dumping and lowering movements of said body.

3,022,112
WHEEL COVER
William A. Mulhern, Detroit, Mich., assignor to Gar Wood Industries, Inc., Wayne, Mich., a corporation of Michigan
Filed Feb. 15, 1960, Ser. No. 8,583
2 Claims. (Cl. 301—37)

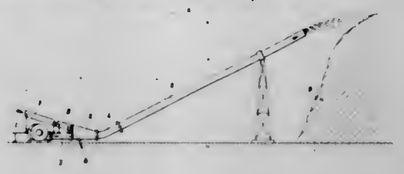
1. A wheel cover for disposition on the outer frontal face of a vehicle wheel, said wheel cover comprising a

circular body portion having an annular flange extending axially rearwardly therefrom, a plurality of cantilevered arms extending axially rearwardly from said flange, said arms including a pair of cantilevered finger portions extending circumferentially and oppositely therefrom, respectively, each of said fingers having a tooth at the circumferential terminal end thereof folded radially outwardly about an axis extending generally parallel to the central axis of said body portion so that each tooth



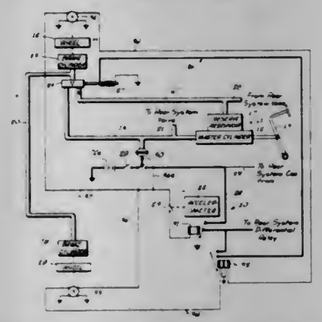
lies in a plane perpendicular to the plane of the cover, each of said teeth having a point spaced axially rearwardly from said flange and circumferentially from the base of the finger portion of the associated arm for biting engagement with the vehicle wheel, engagement of said teeth with the vehicle wheel effecting radial flexure of said arms and finger portions, respectively, disengagement of said teeth from the vehicle wheel being accommodated by radial flexure of said arms, respectively, and movement of said teeth in their own plane.

3,022,113
METHOD OF CONVEYING FOAMED SLAG AND SIMILAR MATERIAL IN A SEMI-PLASTIC STATE
Jaromir Chochola, 150 Hlavni, Doksy, near Kladno, Czechoslovakia
Filed Sept. 9, 1959, Ser. No. 838,970
Claims priority, application Czechoslovakia Sept. 11, 1958
6 Claims. (Cl. 302—20)



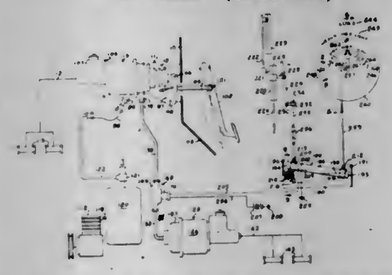
1. An apparatus for conveying foamed semi-plastic slag, comprising a conveying tube, means at one end of said tube defining a chamber having an inlet for the foamed semi-plastic slag to be conveyed, means directing jets of cooling liquid into said chamber adjacent said inlet for the foamed slag for effecting surface chilling of the foamed slag and for wetting and cooling the interior surface of said chamber, blower means having an outlet for air under pressure, and duct means directing said air under pressure from said outlet into said chamber in the direction toward said one end of the tube to further cool the foamed slag and to carry along the latter through said tube for discharge at the other end of the latter, said inlet of the chamber being defined by a trough disposed above said duct means and defining a space therebetween, the apparatus further comprising means closing the sides of said space so that the latter is adapted to contain a cooling liquid for cooling said trough receiving the foamed semi-plastic slag.

3,022,114
BRAKE CONTROL SYSTEM
Achilles C. Sampietro, Detroit, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Jan. 31, 1958, Ser. No. 712,504
14 Claims. (Cl. 303—21)



1. A control system for preventing either of a pair of vehicle wheels from being skidded by its wheel brake, said control system comprising in combination: brake-actuating means adapted to be connected to the wheel brakes; a linear accelerometer adapted to be secured to the vehicle and to be disposed to be responsive to deceleration of the vehicle in the direction of linear movement of the wheels; means for each of the wheels, having an element adapted to be mounted for corotation therewith, said means being responsive to the angular deceleration thereof, and each being adapted to indicate angular wheel deceleration with a signal; means connecting said deceleration indicating means, said linear accelerator, and said brake-actuating means in such manner as to normally balance said signals and to place the brake-actuating means in normal operating condition; said connecting means, under the control of said linear accelerometer, being operative on the brake-actuating means to effect release thereof when one of said signals becomes unbalanced due to loss of angular wheel velocity.

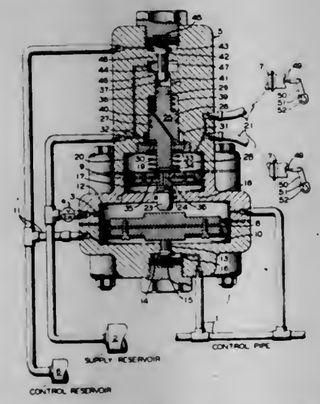
3,022,115
MOTOR VEHICLE BRAKING SYSTEM AND CONTROL MEANS THEREFOR
Edward Govan Hill, Birmingham, Mich., and John X. Phillips, Vienna, Va., assignors to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed July 2, 1959, Ser. No. 824,614
14 Claims. (Cl. 303—24)



1. A motor vehicle braking system comprising a fluid pressure motor having a pressure responsive unit, a master

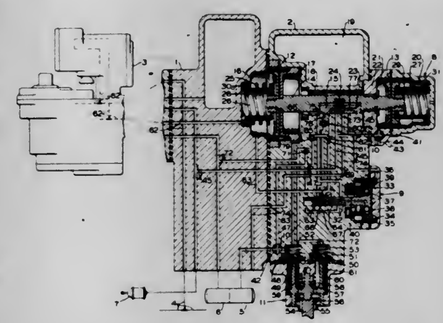
cylinder having a plunger connected to said pressure responsive unit for displacing fluid under pressure to wheel cylinders of the vehicle, a control valve mechanism for said motor having connection with sources of relatively high and low pressures, means including a fluid line connecting said valve mechanism to said motor, a normally open valve in said line, a solenoid connected to said valve and energizable to close it, a circuit for said solenoid including an inertia switch normally inclined upwardly and forwardly of the vehicle and having an inertia responsive conducting body therein movable forwardly in response to vehicle deceleration for closing said circuit, a pair of supports for said inertia switch at spaced points therealong, means for moving one of said supports vertically while the other support remains stationary, to change the inclination of said switch from the horizontal, and means for moving said other support vertically while said one support remains stationary, to change the inclination of said switch to the horizontal.

3,022,116
SINGLE PIPE BRAKE CONTROL SYSTEM FOR AUTOMOTIVE TRAILERS
Ellis E. Hewitt, Ruffsdale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed May 27, 1959, Ser. No. 816,195
12 Claims. (Cl. 303—28)



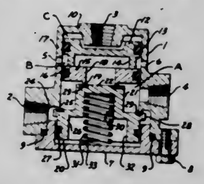
1. A fluid pressure brake system comprising a normally charged control pipe, a normally charged supply reservoir, a control reservoir normally containing fluid at substantially the normal charge value of control pipe pressure, a fluid pressure controlled brake actuator, valve device controlled by control reservoir pressure acting in opposition to control pipe pressure and brake actuator pressure and responsive to variations of control pipe pressure within a predetermined range relative to control reservoir pressure to supply pressure fluid from the supply reservoir to or release pressure fluid from the brake actuator as necessary to provide in the latter fluid at a pressure corresponding substantially to the magnitude of the differential between control pipe pressure and control reservoir pressure, a normally closed valve operative when opened to connect the control reservoir to the supply reservoir for providing a maximum brake actuator pressure and also effecting a limited degree of reduction in control reservoir pressure, and means operatively connecting said valve device and said valve and being responsive when control pipe pressure is reduced beyond said range for causing said valve to be operatively opened by said valve device.

3,022,117
BRAKE CONTROL APPARATUS WITH QUICK SERVICE MEANS
Ellis E. Hewitt, Ruffsdale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Jan. 20, 1960, Ser. No. 3,577
6 Claims. (Cl. 303—39)



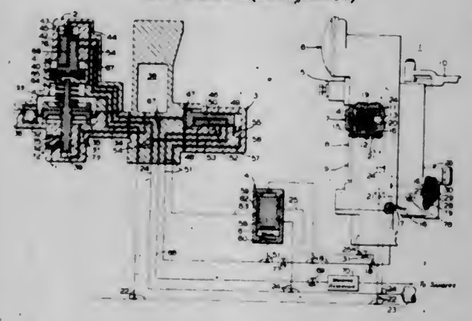
1. In a fluid pressure brake apparatus of the type comprising a brake pipe, a brake cylinder, an auxiliary reservoir, and a volume charged with pressure fluid from the brake pipe, the combination of service valve means controlled by brake pipe pressure and pressure of fluid in a chamber acting in opposition to pressure of fluid in the volume and operative responsively to a reduction in brake pipe pressure to a service position to effect supply of pressure fluid from the reservoir to the brake cylinder and responsive to a subsequent increase in brake pipe pressure to a release position to effect release of pressure fluid from the brake cylinder, and having a lap position in which pressure fluid is bottled up in the brake cylinder, and selector valve means operable selectively to a direct release position to connect the chamber to a vent and connect the volume to the reservoir and to a graduated release position to disestablish such connections and connect the chamber to the brake cylinder, such that with said selector valve means in direct release position said service valve means will assume its lap position when volume pressure reduces to substantially the existing reduced value of brake pipe pressure and will be moved to and remain in release position upon a subsequent increase in brake pipe pressure for effecting a complete release of brakes provided such increase in brake pipe pressure exceeds a slight degree, and such that with said selector valve means in graduated release position said service valve means will assume its lap position whenever brake cylinder pressure corresponds substantially to the magnitude of the differential between brake pipe pressure and volume pressure for thereby permitting brakes to be graduated off according to the degree brake pipe pressure is restored toward the value of volume pressure, and means, including said service valve means and a restriction, defining a quick service communication via which pressure fluid may be locally released from the brake pipe at a restricted rate to cause a local quick service reduction in brake pipe pressure, and wherein said communication is opened by said service valve means in service position and closed thereby in lap position and release position, for thereby effecting such quick service reduction continuously whenever and so long as said service valve means is in service position.

3,022,118
RELAY VALVE
Harold L. Dobrikin, Chicago, Ill., assignor to Berg Airlectro Products Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 22, 1959, Ser. No. 861,264
8 Claims. (Cl. 303—40)



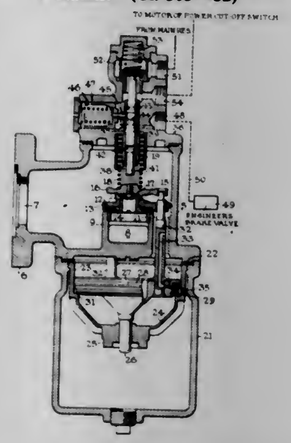
1. A relay valve comprising a cup-shaped housing, an air passage formed in the base wall of said housing, an air pressure inlet formed in the side wall of said housing, an air pressure outlet formed in the side wall of said housing, a valve seat formed in the wall of said housing between said inlet and said outlet, a piston movable within said housing and having a valve portion positioned to seat upon said valve seat, an atmospheric vent opening formed in said housing wall between said air passage and said outlet, a second piston movable in said housing between said vent opening and said outlet, said second piston having an aperture therethrough, a second valve seat formed about said aperture, a second valve element on said first piston positioned to seat upon said second valve seat, yielding means in said housing positioned to urge said first piston toward said second piston, a third piston movable in said housing and positioned between said second piston and said air passage, and between said vent openings and said third passage, said third piston having spaced abutment means in contact with said second piston.

3,022,119
LOCOMOTIVE BRAKE EQUIPMENT WITH IMPROVED VENT VALVE AND BRAKE PIPE CUT-OFF VALVE INTERLOCK
Harry C. May, East McKeesport, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 15, 1958, Ser. No. 780,353
16 Claims. (Cl. 303—67)



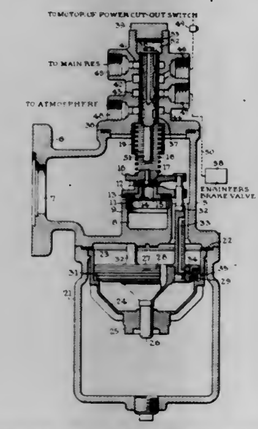
1. In a locomotive brake equipment of the type comprising a normally charged brake pipe from which pressure fluid is vented at an emergency rate for causing an emergency application of brakes, and a control valve means operable by movement of a handle to various positions to normally cause pressure of fluid in the brake pipe to be varied according to the positioning of the handle, the combination of brake pipe cut-off valve means responsive to charging of a normally vented chamber to isolate the brake pipe from control by the control valve means so that the latter will be ineffective to control brake pipe pressure, means defining a communication via which fluid under pressure may be supplied to said chamber, pilot valve means subject to pressure of fluid in a normally vented application chamber acting in opposition to pressure of fluid in another normally charged chamber and normally biased by pressure in said other chamber to a normal position in which said communication is connected to atmosphere, and other valve means controlled by brake pipe pressure and a bias pressure opposing pressure of fluid in a quick action chamber having restricted connection with the brake pipe and operative to supply pressure fluid to said application chamber responsively to and during an emergency rate of reduction in brake pipe pressure for actuating said pilot valve means to an application position in which it vents said other chamber and supplies pressure fluid to said communication for causing such isolation of the brake pipe, said other valve means being operative to vent said application chamber when quick action chamber pressure is substantially equal to brake pipe pressure, whereby with said other chamber vented, said pilot valve means will remain in application position after reventing of said application chamber by said other valve means following termination of the emergency rate of reduction in brake pipe pressure and blowdown of quick action chamber pressure to substantial equality with the vented brake pipe so as thereby to cause the brake pipe to be maintained isolated from control by the control valve means and thus prevent the release of the emergency application of brakes if the handle should be positioned to call for a release of brakes.

3,022,120
EMERGENCY BRAKE VALVE WITH POWER CUT-OFF
Lewis A. Safford, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Oct. 28, 1959, Ser. No. 849,380
3 Claims. (Cl. 303—82)



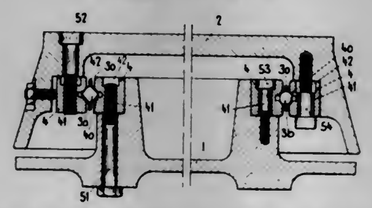
1. The combination of a brake pipe vent valve shiftable reversely between two positions, namely a running position and a venting position; a secondary valve having a normal position which it can assume only when the vent valve is in running position and an abnormal position to which the vent valve positively displaces it as the latter moves to venting position, said secondary valve controlling accessory motor means; means for establishing a bias effective to move the secondary valve to its normal position; and means operable by an engineer's brake valve to render the last-named means effective.

3,022,121
EMERGENCY BRAKE VALVE WITH SECONDARY POWER CONTROL
Lynn I. Pickert, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Dec. 3, 1959, Ser. No. 857,191
4 Claims. (Cl. 303—82)



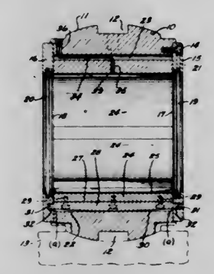
1. The combination of a brake pipe vent valve shiftable between two positions, namely a running position and a venting position; a single-acting motor; a secondary valve connected with said motor; a one-way lost motion thrust connection between said vent valve and said secondary valve, said secondary valve having a normal position to which it is shifted by the motor, and an abnormal position to which the vent valve positively displaces it as the latter moves to venting position, the secondary valve including a pressure connection, a controlled connection and a pilot connection and serving, in its normal position, to interconnect said pressure connection and said motor and in that same position to close said pilot connection and said controlled connection and, in its abnormal position, serving to interconnect said pilot connection and said motor and to interconnect said pressure connection and said controlled connection.

3,022,122
CARRIAGE GUIDE FOR MUTUALLY LONGITUDINALLY MOVABLE MACHINE COMPONENTS
Ernst Pfister, Roggwil, Switzerland
Filed Jan. 28, 1960, Ser. No. 5,242
Claims priority, application Switzerland Dec. 3, 1959
2 Claims. (Cl. 308—6)



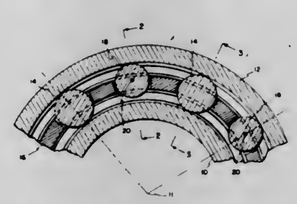
1. Carriage guide for two mutually slidable machine components with identical prismatic guide rails which comprise V-shaped grooves in the flanks facing each other to receive roller bearings or ball bearings between the rails, and which comprise threaded apertures passing through said prismatic guide rails from one side of the prism abutting the bearing side to the other, said apertures being enlarged at one end to form recesses for receiving the heads of bolts.

3,022,123
TILTING PAD JOURNAL BEARINGS
Jerome M. Gruber, Waukesha, Wis., assignor to Waukesha Bearings Corporation, Waukesha, Wis., a corporation of Wisconsin
Filed Sept. 21, 1959, Ser. No. 841,121
7 Claims. (Cl. 308—73)



1. In a tilting pad journal bearing having an annular housing with a peripheral wall and with a bore and having an annular series of arcuate tilting pads within said housing positioned to embrace a shaft therebetween, readily detachable ring-shaped covers on the ends of said housing forming with the housing an annular pad-accommodating groove, the peripheral wall of said housing having oil holes at circumferentially spaced points adapted to conduct oil from an outside source to said pad-accommodating groove, one of said ring-shaped covers having a grooved inner periphery and having radially extending oil holes extending outwardly from said grooved inner periphery and providing for the discharge of oil in a radially outward direction from the shaft.

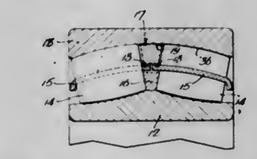
3,022,124
BEARING
Joseph L. Borden, Westport, Conn., assignor to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Filed Dec. 18, 1959, Ser. No. 860,507
8 Claims. (Cl. 308—193)



1. Bearing apparatus which comprises inner and outer coaxial circular bearing race means; a plurality of first rolling member means in separating relationship between said inner and outer race means and adapted to roll therebetween; spacing means comprising a hollow cylinder interjacent the inner and outer races, said cylinder being coaxial with said races, the surface of said cylinder defining a plurality of first openings, each of said first open-

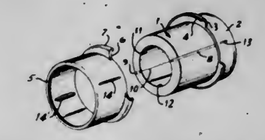
ings containing one of said first rolling member means; second rolling member means affixed to said spacing means and rolling against said outer race to maintain said spacing means in fixed, separated relationship with said outer race.

3,022,125
CAGE FOR DOUBLE ROW SPHERICAL ROLLER BEARINGS
Axel Erland Bratt, Goteborg, and Karl Gustav Einar Derman, Savedalen, Sweden, assignors to Aktiebolaget Svenska Kullagerfabriken, Goteborg, Sweden, a corporation of Sweden
Filed Jan. 13, 1960, Ser. No. 2,269
Claims priority, application Sweden Feb. 6, 1959
8 Claims. (Cl. 308—213)



1. In a roller bearing having concentrically disposed inner and outer races, and at least two axially spaced rows of roller elements in the annular space between said races, a cage for each row of roller elements having a pocket for each roller element thereof, and a connecting member intermediate said cages and interlockingly engaged with the inner edges thereof to connect the cages for simultaneous movement and sliding against the outer race to thereby center the cages relative thereto.

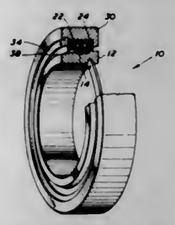
3,022,126
BEARING AND SHROUD COMBINATION
Preston G. Siebert, Underhill Road, Ossining, N.Y.
Filed Apr. 1, 1959, Ser. No. 803,407
5 Claims. (Cl. 308—237)



1. A bearing comprising a cylindrical body having a pair of longitudinal grooves in diametrically opposite positions, said body being split in the area of said grooves, and an annular shroud surrounding and in contact with said body and holding said bearing parts together, said shroud consisting of two elements fitting over the opposite ends of said body, said shroud being removable from said body by endwise movement thereof.

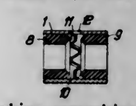
3,022,127
SLEEVE BEARING
Herman Vollmer, 29 Dufferin St., Stratford, Ontario, Canada
Filed Jan. 16, 1961, Ser. No. 82,799
10 Claims. (Cl. 308—238)

1. A sleeve bearing comprising an inner bearing mounting ring, an outer bearing mounting ring, an inner bearing sleeve, means for mounting said inner bearing sleeve in said inner mounting ring, an outer bearing sleeve, means for mounting said outer bearing sleeve in said outer bearing mounting ring with the inner cylindrical bearing surface thereof in bearing contact with the outer cylindrical bearing surface of said inner bearing sleeve, said outer bearing sleeve being circumferentially split and having flanges at each of its ends that extend radially



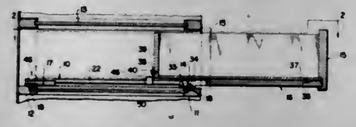
inwardly and that have inner surfaces that embrace said inner bearing sleeve.

3,022,128
BEARING BUSHING
Franz Gottfried Reuter, Lemforde, Germany, assignor to Lemforder Metallwarengesellschaft m.b.H., Lemforde, Germany
Filed July 3, 1959, Ser. No. 824,882
2 Claims. (Cl. 308—238)



1. A bearing bushing comprising an inner bushing of elastic plastic material, a hard metal outer sleeve surrounding said inner bushing, said inner bushing being pressed into said outer sleeve with high initial tension or pre-loading, and means provided on one or both contacting surfaces of said sleeve and said bushing for anchoring them to each other to form a unitary bearing bushing, said inner plastic bushing comprising two bushing parts arranged in spaced-apart relationship, the remaining interspace being filled by an annular spring.

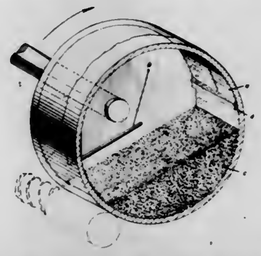
3,022,129
SLIDE BRACKETS
Morris Manson, Great Neck, N.Y., assignor to Corax Corporation, Yonkers, N.Y., a corporation of New York
Filed Nov. 29, 1960, Ser. No. 72,467
4 Claims. (Cl. 312—343)



1. In a drawer slide bracket construction, a stationary channel-shaped guide member comprising a base and two laterally opposite upwardly extending legs, the upper portions of said legs having at the respective inner surfaces thereof recessed ball-bearing tracks and at the respective outer surfaces thereof outwardly protruding tracks, said tracks extending longitudinally of their respective legs; a channel-shaped slide member comprising a base and two laterally opposite downwardly extending legs disposed inwardly of said upwardly extending legs; bearing means in operative engagement with said ball-bearing tracks in said upwardly extending legs and the respective adjacent downwardly extending legs, whereby said slide member is movable longitudinally relative to said stationary member; and separate retaining means on said slide member having opposite hooked portions in underlying slidable engagement with said outwardly protruding tracks.

3,022,130
CONTINUOUS RECORDING OF GRAPHS AND INSTRUMENTS THEREFOR
Francesco Casiglia, 30 Via Siracusa, Palermo, Italy
Filed Dec. 13, 1957, Ser. No. 702,716
8 Claims. (Cl. 346—21)

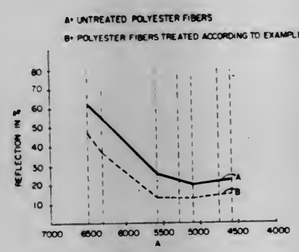
1. Continuous recording of graphs, comprising, in combination, a hollow transparent cylinder, means to support said cylinder, means to rotate said cylinder around its axis, said cylinder containing in its inside a reserve of powder in contact with a part of the cylindrical transparent surface of said cylinder to which said powder adheres spontaneously to form a layer of said powder upon the inner cylindrical surface of said cylinder, recording means contacting the inner surface of said cylinder, means to operate said recording means to make a graph of a physical quantity, said recording means being in contact with the inner surface in that region thereof to which the powder adheres and out of the region containing said reserve of powder, said recording means making the graphs carrying off a layer of powder from that part of the inner cylindrical surface with which it



is in contact, and finally cancelling periodically said graphs and thus bringing again said surface to its original condition.

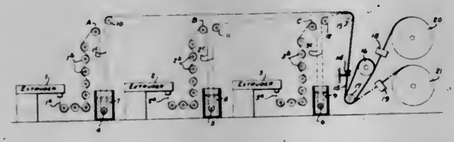
CHEMICAL

3,022,131
PROCESS FOR INCREASING THE COLORABILITY OF POLYESTER TEREPHTHALATE FIBERS AND THE PRODUCTS OBTAINED THEREBY
Hans-Dieter Selle and Angela Ruhnau, Berlin, Germany, assignors to VEB Chemische Fabrik Grünau, Berlin-Grunau, Germany
Filed Sept. 3, 1957, Ser. No. 681,800
Claims priority, application Germany Feb. 20, 1957
12 Claims. (Cl. 8—115.5)



1. The process for improving the colorability of fibers, which comprises contacting polyethylene terephthalate fiber at a temperature of about between 80–100° C. with a treating agent consisting essentially of a N-methylcyclohexylidene-dihydroxyethylamine dissolved in an organic solvent having a boiling point above 80° C.

3,022,132
APPARATUS AND METHOD FOR ORIENTING AND MIXING OF SYNTHETIC FIBERS
Gilbert Shaw, Box 151, Middlebury, Vt.
Filed Feb. 25, 1957, Ser. No. 642,210
1 Claim. (Cl. 18—54)



A process for the simultaneous orientation and mixing of a plurality of dissimilar sets of extruded thermoplastic monofilaments, comprising independently extruding a plurality of dissimilar sets of thermoplastic monofilaments; causing each dissimilar set of monofilaments to be in frictional contact with separate roller surfaces, each dissimilar set of monofilaments-roller surface frictional contact being sufficient to prevent slippage of each dissimilar set of monofilaments on its roller surfaces when tensional force for orientation of each dissimilar set of monofilaments is subsequently applied; orienting each dissimilar set of monofilaments under the conditions required for each dissimilar set of monofilaments; and commingling the dissimilar sets of oriented monofilaments at a common tension applying location while the dissimilar sets of monofilaments are under the tensional conditions required for their respective orientation.

3,022,133
METHODS OF INHIBITING THE PITTING OF IRON AND STEEL
George B. Hatch, Hampton Township, Allegheny County, Pa., assignor to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania
No Drawing. Filed Apr. 23, 1959, Ser. No. 808,320
6 Claims. (Cl. 21—2.7)

1. A method of inhibiting the pitting of iron and steel by chromates and dichromates in concentrations below about 25 parts per million in aqueous solutions comprising adding thereto at least 2 parts per million of zinc ion.

3,022,134
SEPARATION OF CURIUM AND AMERICIUM
Paul R. Fields, Chicago, Ill., and Nadine M. Isaac, Brussels, Belgium, assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 31, 1960, Ser. No. 53,323
7 Claims. (Cl. 23—14.5)

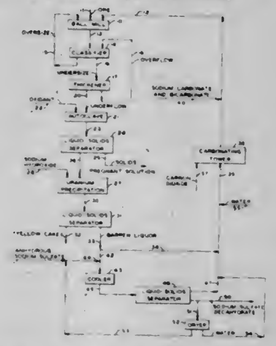
1. A process of separating curium and americium values, comprising contacting at about 150° C. an anhydrous molten salt medium having a melting point below about 150° C. and an alkyl phosphate medium, said latter medium being a less than 0.2 M. solution of alkyl phosphate in an organic diluent that is liquid at about 150° C. and resistant to oxidation and radiation, at least one of said mediums containing the curium and americium values in solution, whereby said curium values are preferentially

held by said alkyl phosphate medium while said americium values are preferentially held by said molten salt



medium, and separating an alkyl phosphate phase from a molten salt phase.

3,022,135
URANIUM RECOVERY PROCESS
James L. Hart, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 26, 1958, Ser. No. 717,580
6 Claims. (Cl. 23—14.5)

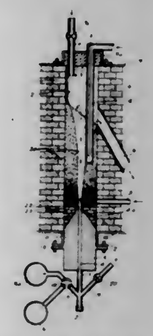


1. The method of extracting uranium values from a sulfur containing uranium bearing ore which comprises contacting the ore with an aqueous solution of sodium carbonate and sodium bicarbonate so as to form a water soluble uranium compound; separating undissolved solids; treating the resulting liquid to precipitate uranium containing material; separating the precipitate from the resulting barren liquid; and removing excess sodium sulfate from the barren liquid by adding anhydrous sodium sulfate to at least a part of said barren liquid and cooling same to form sodium sulfate decahydrate, and removing said sodium sulfate decahydrate; and contacting additional ore with the final resulting liquid having sodium sulfate decahydrate removed therefrom.

3,022,136
MANUFACTURE OF PHOSPHORIC ACID
Roland Syers, Ilford, England, assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 30, 1958, Ser. No. 751,899
5 Claims. (Cl. 23—165)

1. A process for the manufacture of phosphoric acid which comprises reacting phosphate rock with sufficient sulfuric acid waste liquor to produce complete reaction, said liquor containing about 16% by weight of ferrous sulfate and about 24% by weight of free sulfuric acid, heating the reaction mixture to an elevated temperature, filtering said hot reaction mixture to remove solid residue comprising calcium sulfate, cooling the residual solution to crystallize acid iron phosphate ($FeH_4(PO_4)_2$), filtering said cooled solution to remove crystallized solid acid iron phosphate, and recovering a residual phosphoric acid solution mother liqur free of major impurity content.

3,022,137
COMBUSTION OF TITANIUM TETRACHLORIDE WITH OXYGEN
Earl W. Nelson, Lynchburg, Va., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Mar. 26, 1959, Ser. No. 802,181
10 Claims. (Cl. 23—202)



8. A process for the manufacture of titanium dioxide pigment, which comprises burning titanium tetrachloride and oxygen upwardly in a vertical reactor having a lower reagent inlet and a product discharge end as a jet stream through a reaction zone bounded by a fluid wall of downwardly cascading incandescent settled oversized titanium dioxide particles, whereby pigmentary titanium dioxide is formed substantially out of contact with stationary surfaces, said jet stream having an initial velocity sufficiently fast to entrain oversized incandescent titanium dioxide particles from a lower part of said reaction zone and to project said particles against said discharge end, whereby any adherent titanium dioxide is scoured therefrom.

3,022,138
PREPARATION OF DIBORANE
Charles C. Clark, Kenmore, and Frank A. Kanda and Aden J. King, Syracuse, N.Y., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Mar. 16, 1956, Ser. No. 571,878
10 Claims. (Cl. 23—204)

1. A method for the production of diborane which comprises heating a mixture of a reducing agent selected from the group consisting of elemental boron, carbon, boron carbides, alkaline earth metal borides, tungsten carbide and titanium carbide and a material selected from the group consisting of boron trioxide and alkali and alkaline earth metal oxygen-containing borates in which boron is trivalent in a hydrogen atmosphere at a temperature of from 850° C. to 1500° C., and recovering diborane from the resulting gaseous effluent the amount of said reducing agent employed being from 1 to 1000 times that calculated to convert the boron in said mixture to boron suboxide, any carbon present in said reducing agent to carbon monoxide, any alkali metal present in said mixture to its normal oxide form according to the periodic table, any alkaline earth metal present in said mixture to its normal oxide form according to the periodic table, any tungsten present to WO_3, and any titanium present to TiO_2.

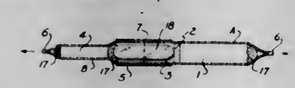
3,022,139
PREPARATION OF DIBORANE
Charles C. Clark, Kenmore, and Frank A. Kanda and Aden J. King, Syracuse, N.Y., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Mar. 16, 1956, Ser. No. 571,879
8 Claims. (Cl. 23—204)

1. A method for the preparation of diborane which comprises reacting a reduced form of boron selected from the group consisting of elemental boron, metal borides and boron carbides with an oxide selected from the group consisting of water vapor, magnesia, alumina, thoria and zirconia in a hydrogen atmosphere at a temperature of from 850° C. to 1500° C. and recovering diborane from the reaction mixture.

3,022,140
DETERMINATION OF DEPOSITIONAL WATER SALINITY
Arman F. Frederickson, Tulsa, Okla., John Hower, Jr., Missoula, Mont., and Robert C. Reynolds, Jr., Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
No Drawing. Filed Mar. 5, 1958, Ser. No. 719,201
15 Claims. (Cl. 23—230)

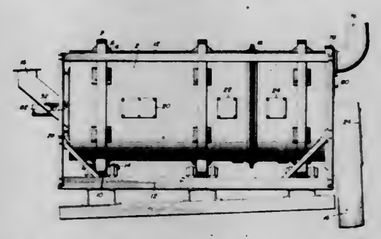
1. A method of prospecting for subsurface mineral deposits which may be related to variations in depositional water salinity, which method comprises the steps of systematically collecting illite-containing sedimentary earth samples from spaced points of a prospecting area, quantitatively analyzing each of said samples for the ratio of boron to illite in the clay-mineral fraction thereof, and correlating the measured values of said ratio with the corresponding sample locations in said area, whereby the variations in depositional water salinity in said area, proportional to the variations in said ratio, may be ascertained.

3,022,141
SMALL TESTING TUBES HAVING THREE OR MORE SEPARATELY ARRANGED REAGENTS OR REAGENT LAYERS
Karl Grosskopf, Lubeck, Germany, assignor to Drägerwerks, Heinr. & Bernh. Dräger, Lubeck, Germany
Filed Apr. 28, 1960, Ser. No. 25,356
Claims priority, application Germany Apr. 29, 1959
6 Claims. (Cl. 23—254)



1. A small testing tube for the detection of methane in air comprising at least three separately positioned reagents in said tube, at least one of said reagents consisting of a mixture of sulphuric acid and salts of permanganic acid being placed in a breakable ampoule within said testing tube and positioned in series with the other of said reagents relative to the inflow of tested air whereby the first in the series of said reagents is an activating layer charged with sulphur trioxide and the last in the series is a carbon monoxide indicating reagent, and said testing tube being provided with fracture line means encased within tight-fitting, impervious tubular sleeve means in the area of said ampoule positioning.

3,022,142
AMMONIATOR-GRANULATOR APPARATUS
Walter J. Sackett, Sr., Baltimore, Md., assignor to The A. J. Sackett & Sons Company, Baltimore, Md., a corporation of Maryland
Filed Feb. 17, 1958, Ser. No. 715,648
3 Claims. (Cl. 23—259.1)



1. A combined ammoniator-granulator apparatus for preparing fertilizer and similar materials, comprising, structure defining a continuous rotatable drum mounted to slope downwardly from the horizontal to progress material therethrough upon axial rotation thereof, spaced roller means for supporting said continuous drum for axial rotation about its longitudinal axis, means including a single chain drive and a single power source connected thereto for rotating said continuous drum, a closure for the inlet and outlet ends of said continuous drum each having an opening therein, an inlet chute and an outlet chute for said inlet and outlet ends of said continuous drum communicating with the respective openings in the closures thereof, said inlet chute being utilized to introduce dry fertilizer material into said continuous drum along the longitudinal axis thereof, an annular retaining ring for dividing the interior of said continuous drum into an integral ammoniator section and a granulator section, structure defining at least two spaced inlet passageways located below the inner edge of said retaining ring and terminating short thereof and arranged substantially parallel to the inner wall of said ammoniator section for introducing liquid chemicals into said ammoniator section, with said dry fertilizer material being mixed with said chemicals due to the location of said inlet passageways below the edge of said retaining ring, said retaining ring being arranged to cause a bed of mixed ammoniated fertilizer material to build up within said ammoniator section, a fixed scraper blade running lengthwise of said ammoniator section and spaced diametrically oppositely from said inlet passageways and from the inner wall of said ammoniator section of said tubular member for scraping the mixed ammoniated fertilizer material from the inner wall of said ammoniator section upon rotation thereof, said mixed ammoniated fertilizer material being gradually moved over said retaining wall into said granulator section of said tubular member for granulation thereof due to the rotation of said tubular member, said granulator section including a plurality of longitudinally extending compartments arranged in series along the longitudinal axis of said tubular member as well as a plurality of circularly and contiguously identical compartments spaced about the axis of rotation of said continuous drum and leaving axially therebetween a substantially circular open surface hardening area for the hardening of said mixed ammoniated fertilizer material into granules as it moves toward the output end of said continuous drum, with each compartment having a substantially plane rolling wall and an opposing retaining wall, the rolling wall of each compartment being substantially tangential to the surface hardening area and joining the retaining wall of the adjacent compartment, and the said respective walls of the several compartments being spaced in the same order about said surface hard-

ening area, with said ammoniated fertilizer material introduced into said granulator section of said continuous drum being granulated therein, means for introducing air into said ammoniator section for mixing with the hot gases liberated during the ammoniating of the reacting materials therein and for cooling of same during the passage thereof to the outlet end of said continuous drum, means for drawing the reaction gases from the ammoniator section through said continuous drum for hardening the granules of material as they are granulated and cascaded from compartment to compartment and roll over the surface hardening area of said granulator section prior to being disposed through said outlet chute, and means including weights positioned adjacent the outer sides of the compartments and movable always in a direction opposite to the direction of rotation of said continuous drum for consecutively striking the sides of the compartments to release material from the compartments and cause reverberations throughout the entire apparatus to speed the chemical reaction and maintain suspension of said material, with the ammonia gases, heat of reaction, moisture tumbling and agitation being a common chemical linkage in one direction of movement of the material and with the telegraphing of the weight-dropping blows reverberating back to the incoming material by the continuous drum being a common linkage in the opposite direction of flow of the material, with said linkages serving to facilitate the ammoniating, granulating, and pelletizing of said material in said drum.

3,022,143

PROCESS FOR DRYING HYDROGEN CYANIDE

Robert Allen Yeo, Cincinnati, Ohio, assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 10, 1959, Ser. No. 798,319
1 Claim. (Cl. 23—293)

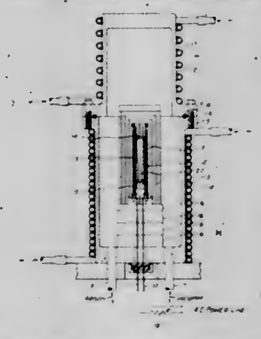
The method of removing small amounts of water from hydrogen cyanide which comprises contacting liquid hydrogen cyanide containing 0.1% to 0.4% of water with sufficient dehydrated crystalline zeolite to selectively adsorb up to 93% of this water from the hydrogen cyanide until the hydrogen cyanide contains less than about 0.03% of water, separating the zeolite from the hydrogen cyanide, and removing the adsorbed water from the zeolite to prepare the zeolite for reuse.

3,022,144

METHOD OF PREPARING SINGLE CRYSTAL MATERIALS

Arrigo Addamiano, Willoughby, Ohio, assignor to General Electric Company, a corporation of New York

Filed Mar. 17, 1958, Ser. No. 721,965
4 Claims. (Cl. 23—294)



1. The method of producing single crystals of zinc sulfide and zinc sulfide phosphors which comprises heating a mass of material of the group consisting essentially of pure zinc sulfide and zinc sulfide phosphor containing activating impurities of luminescence in a closed container maintained in an inert atmosphere at a pressure under 100 atmospheres and above about 50 p.s.i. to a temperature at least about 1830° C. while retaining the products of such heating in the container for a time sufficient to melt the said mass and then gradually cooling the heated mass while maintaining said pressure to carry it to a fused single crystal form.

3,022,145

SEPARATION OF METAL SALTS FROM AQUEOUS SOLUTIONS

Herbert Zima, Darmstadt, Germany, assignor to Rohm & Haas G.m.b.H., Darmstadt, Germany

No Drawing. Filed Oct. 15, 1956, Ser. No. 615,754
Claims priority, application Germany Oct. 24, 1955
6 Claims. (Cl. 23—309)

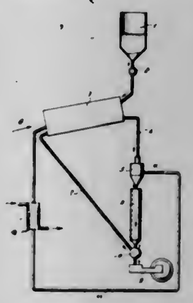
1. Method for extracting a salt of a metal having a standard electrode potential, relative to the electrode potential of hydrogen, more positive than −0.4 volt from an aqueous solution thereof, which process comprises bringing the solution into contact with a solid, brown to black, amorphous polymeric hydrocyanic acid prepared by the polymerization of hydrocyanic acid under the influence of a basic catalyst, whereby said metal salt is bound to said solid polymer, and then separating said solid polymer and metal salt bound thereto from the solution.

3,022,146

METHOD AND APPARATUS FOR BRIQUETTING COAL

Hermann Hullen, Grevenbroich, Germany, assignor to Maschinenfabrik Buckau R. Wolf Aktiengesellschaft, Grevenbroich, Germany

Filed Sept. 9, 1957, Ser. No. 682,930
Claims priority, application Germany Sept. 13, 1956
8 Claims. (Cl. 44—13)



5. A briquetting apparatus, comprising, in combination, first heating means for heating a mass composed of smaller and larger particles of coal to a first elevated temperature; feeding means for introducing measured portions of said mass of coal into said first heating means; separating means for separating said smaller particles of said heated mass from said larger particles thereof; second heating means for further heating said separated smaller particles to a second elevated temperature being higher than said first elevated temperature; mixing means for intimately mixing said further heated smaller particles with said not-further heated larger particles; conduit means operatively connected to said first and second heating means and said mixing means for conveying said separated larger and smaller particles to said mixing means and briquetting means operatively connected to said mixing means for briquetting said intimate mixture of said further heated smaller particles and said not-further heated larger particles.

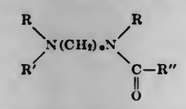
3,022,147

ALKALI METAL COMPOSITION ADDITIVES FOR FUELS OF THE GASOLINE RANGE

Edmund L. Niedzielski, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 17, 1959, Ser. No. 793,673
12 Claims. (Cl. 44—66)

3. A liquid hydrocarbon fuel of the gasoline boiling range for spark-ignition engines, containing an additive composition consisting essentially of (1) an alkali metal carboxylate compound consisting of an alkali metal salt of a branched chain carboxylic acid and from 0 to 10 moles per mole of said salt of a branched chain carboxylic acid, a C_4 to C_{24} hydrocarbyl radical being attached to the carbon atom of the carboxyl group of said salt and said acid through a non-aromatic carbon atom, and, (2) from an equal to a 10-fold amount, by weight, based on said alkali metal salt, of an amino-amide having the formula



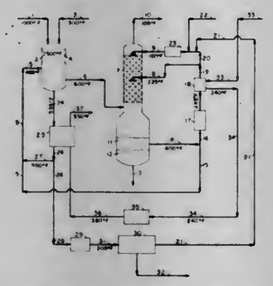
wherein R singly is taken from the group consisting of hydrogen and a lower alkyl radical, R′ singly is an aliphatic hydrocarbyl radical, R and R′ together being taken from the group consisting of an alkylene and an alkylene-ether radical, R″ being a straight chain hydrocarbon radical, and, the carbon atoms in R, R′ and R″ totalling at least 11, where n is an integer from 2 to 3, said additive composition being present in an amount to provide from about 0.0025 gram to 2.0 grams of alkali metal per liter of fuel.

3,022,148

OIL QUENCH PROCESS FOR PARTIAL OXIDATION OF HYDROCARBON GASES

George Russell James, Armonk, N.Y., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Filed Nov. 18, 1958, Ser. No. 774,549
5 Claims. (Cl. 48—215)



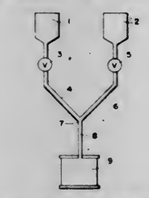
2. Process of generating a gas stream containing principally carbon monoxide and hydrogen by non-catalytic partial oxidation which comprises reacting a hydrocarbon feed material with an oxygen-containing gas at elevated temperature above 1800° F. in a gas generator provided with internal quench means thereby generating a hot gas stream and solid particulate carbon, simultaneously rapidly quench-cooling said hot gas stream from said elevated temperature and removing said solid carbon therefrom by contacting said hot gas stream with a liquid hydrocarbon oil to quench the exothermic reaction between said hydrocarbon and oxygen, thereby heating said oil, separating the cooled hydrogen-carbon monoxide gas stream from said heated oil, cooling said heated oil in heat recovery means, removing solid carbon from said oil, and recycling cooled oil to further contact with said hot gas stream.

3,022,149

PROCESS FOR DISPERSING SOLIDS IN POLYMERIC PROPELLENT FUEL BINDERS

Frank B. Cramer, Reseda, Calif., assignor to North American Aviation, Inc.

Filed Nov. 29, 1957, Ser. No. 699,632
16 Claims. (Cl. 149—19)



1. In a process for the manufacture of a composition comprising substantially uniformly dispersed solid particulate substances in an organic polymer, the improvement which comprises mixing, under turbulent conditions, at least one liquid organic material which forms a propellant fuel binder upon curing with at least one solid particulate filling substance having a particle size of at least one micron, said mixing being conducted in an inert non-solvent liquid carrier; said turbulent conditions operating to combine said filling substance and said liquid organic material into a dispersion on contact such that said dispersion, upon the release of turbulent conditions and in the absence of added colloid coagulating agents separates from said carrier, and upon curing said dispersion is further characterized in that it forms a solid cohesive substance of substantially uniform composition.

3,022,150

HERBICIDAL COMPOSITION AND METHOD EMPLOYING MIXTURES OF SUBSTITUTED UREAS AND TRIAZINES

Mark B. Weed, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 23, 1960, Ser. No. 10,015
4 Claims. (Cl. 71—2.5)

1. A herbicidal composition comprising a herbicidally effective amount of a mixture of:

A substituted urea selected from the group consisting of 1 - phenyl - 3,3 - dimethylurea, 3 - (p - chlorophenyl) - 1,1 - dimethylurea, 3 - (3,4 - dichlorophenyl)-1,1-dimethylurea, and the same in which one methyl group is replaced with a methoxy group, and

A triazine selected from the group consisting of 2-chloro - 4,6 - bis(ethylamino) - s - triazine, 2 - chloro - 4 - ethylamino - 6 - (isopropylamino) - s - triazine, and 2-chloro-4-ethylamino-6-(3-methoxypropylamino)-s-triazine.

3,022,151

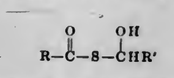
ESTERS OF THIOCARBOXYLIC ACIDS

Norman Edward Searle, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 16, 1957, Ser. No. 659,472
11 Claims. (Cl. 71—2.6)

1. A method for the control of weeds which comprises applying to the locus to be protected in an amount suffi-

cient to exert a herbicidal effect a compound of the formula



wherein R contains up to 7 carbon atoms and is selected from the group consisting of aliphatic hydrocarbon, aromatic hydrocarbon, aryloxymethyl, halogenated hydrocarbon and halogenated aryloxymethyl having no more than two hydrogens attached to the alpha carbon and R′ is selected from the group consisting of hydrogen, aliphatic hydrocarbon of up to 7 carbon atoms, aromatic hydrocarbon of up to 7 carbon atoms and halogenated hydrocarbon of up to 7 carbon atoms with the proviso that at least one of R and R′ contains halogen, said halogen being selected from the group consisting of chlorine and bromine, and both R and R′ being free from open-chain carbon-to-carbon unsaturation.

3,022,152
METHOD OF KILLING PLANTS

Charles W. Osborn and Roger F. Kleinschmidt, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 15, 1957, Ser. No. 690,222
4 Claims. (Cl. 71—2.7)

1. A method of controlling growth of plant foliage by applying to the same, in a quantity effective to substantially kill the plant, at least one compound selected from the group consisting of trans 1,4-dibromo-2-butene and 1,4-dibromo-2-butyne.

3,022,153
METHOD OF PREPARING A STABLE LIQUID FERTILIZER FROM WET-PROCESS PHOSPHORIC ACID

Robert C. Miller, 879 Providence Ave., Webster Groves 19, Mo.

No Drawing. Filed Dec. 8, 1958, Ser. No. 778,585
7 Claims. (Cl. 71—29)

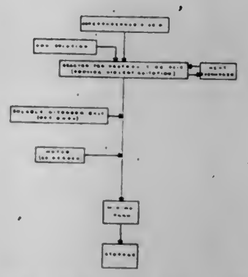
1. A method of preparing a stable sprayable fertilizer composition essentially free of insoluble precipitates including the steps of adding urea to wet-process phosphoric acid containing impurities selected from the group consisting of iron and aluminum compounds, at least an equimolecular amount of urea being added based on the moles of said impurities present, to form unstable urea-phosphoric acid and ammoniating said acid at a temperature above about 65° C. until the composition reaches a pH of from about 7.5 to about 8, the normally insoluble phosphates selected from the group consisting of iron phosphate and aluminum phosphate present in the composition after ammoniation being formed into a soluble complex with the urea.

3,022,154
CONCENTRATED LIQUID FERTILIZERS FROM SUPERPHOSPHORIC ACID AND POTASSIUM HYDROXIDE

John M. Potts, Henry W. Elder, and John Franklin Anderson, Jr., Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed May 6, 1960, Ser. No. 27,457
7 Claims. (Cl. 71—34)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for the production of a temperature-stable fertilizer solution having a salting-out temperature below 32° F. which comprises the steps of simultaneously introducing a stream of superphosphoric acid containing from about 75 to about 77 percent P_2O_5 and a stream of aqueous potassium hydroxide containing from about 40 to about 67 percent KOH into a reaction zone; mixing in said reaction zone said streams with vigorous agitation; respectively maintaining the temperature of the materials in said reaction zone in the range of about 80° F. to 240° F.; controlling the ratio of introduction of each of said streams so as to maintain the pH in said reaction



zone in the range from about 7.0 to 11.5; and withdrawing from said reaction zone a temperature-stable fertilizer solution containing from about 23 to 27 weight percent P_2O_5 and from about 23 to 36 weight percent K_2O.

3,022,155
PRODUCTION OF SUPERPHOSPHATES

Roland Syers, Ilford, England, assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,898
4 Claims. (Cl. 71—40)

1. A process for the production of super-phosphates which comprises intimately admixing ground phosphate rock with a sulphuric acid waste liquor containing about 25% free sulfuric acid and about 6% of combined iron in solution as ferrous sulfate, without the application of heat, in an amount insufficient to react completely with said phosphate rock, to form a semi-solid slurry, allowing the mixture to stand until a partially dried caked product is formed, thereafter breaking up the caked product, drying at elevated temperature, grinding the dried product, intimately admixing the dried ground product with a sufficient further quantity of sulphuric acid waste liquor to form a semi-solid slurry and substantially to complete the reaction with the unreacted phosphate rock, without the application of heat, thereafter allowing the mixture to stand and breaking up and drying the final reaction product and recovering said final superphosphate reaction product.

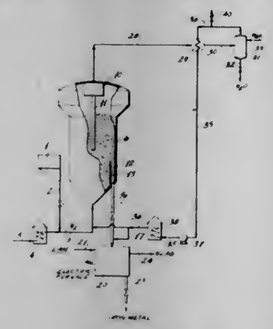
3,022,156
PROCESS FOR REDUCTION OF IRON ORE

Du Bois Eastman, Whittier, Calif., assignor to Texaco Inc., a corporation of Delaware

Filed Sept. 14, 1953, Ser. No. 379,861
6 Claims. (Cl. 75—26)

1. A process for effecting reduction of iron oxide to metallic iron, which comprises passing hydrogen of at least 90 percent purity upwardly through a body of said iron oxide in finely divided particle form in a vertically extended unobstructed reduction zone at a temperature between 700 and 1,050° F. and at a pressure in the range of 250 to 650 pounds per square inch gauge, withdrawing an effluent gas from said reduction zone, removing water from said effluent gas to below 1 percent, recompressing said effluent gas to a pressure of at least 250 pounds per square inch gauge, heating said repressured effluent gas to a temperature above that maintained in said reduction zone, and passing said heated repressured effluent recycle gas together with said fresh feed hydrogen of at least 90 percent purity into said reduction zone in relative proportions such that at least

5 volumes of recycle gas to each volume of fresh hydrogen feed is maintained, the superficial linear velocity of said fresh feed hydrogen together with said recycle gas through said body of iron ore being between 0.5

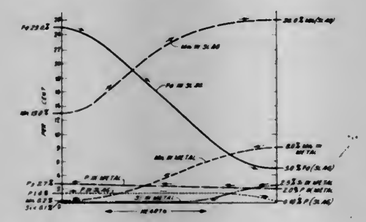


and 5 feet per second such that said body is maintained as a fluidized bed in a dense turbulent state resembling a boiling liquid with minor carryover of solids, and withdrawing a reaction product containing metallic iron from said reduction zone.

3,022,157
METHOD FOR CONTINUOUS HEARTH REFINING OF STEEL AND BENEFICIATION OF ORES OF FERRO ALLOYS

Morgan G. Huntington, Washington, D.C., assignor to Pyromet Corporation, a corporation of Utah

Filed May 21, 1959, Ser. No. 814,875
7 Claims. (Cl. 75—30)

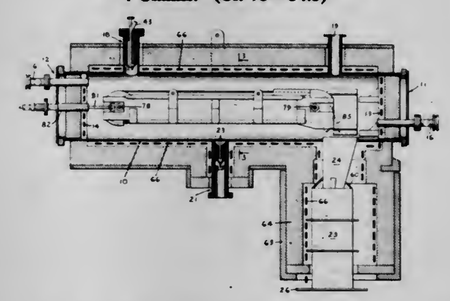


1. A pyrometallurgical process for decontaminating and coincidentally enriching low-grade manganese ore by preferential molal exchange, said method comprising; continuously introducing molten phosphorus and iron containing manganese ore and molten reagent metal containing iron, manganese and amount of silicon slightly in excess of the amount necessary to exchange with all of the phosphorus in the ore, into opposite ends of a continuous hearth metallurgical furnace to produce counterflow thereof across a wide interface area, maintaining the desired temperature for maximum reaction between 2750° F. and 3050° F. whereby the small amount of silicon in the reagent metal will first react with the outflowing superfluent molten ore to exchange with the phosphorus therein, reducing the phosphorus content of the ore to no greater than 0.1%, continuing the counterflow at a rate that exceeds the diffusion and mixing of the counterflowing layers of ore and reagent metal and at such a rate that chemical equilibrium is not reached, reacting the manganese in the incoming reagent metal with the iron in the ore to thereby enrich the ore with manganese and decontaminate the ore of phosphorus, and removing the spent reagent metal and enriched phosphorus free ore from opposite ends of said furnace.

3,022,158
MANUFACTURE OF METALLIC TITANIUM

Alois J. Kallfelz, Syracuse, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Sept. 24, 1959, Ser. No. 842,102
4 Claims. (Cl. 75—84.5)



1. The process for continuously stabilizing the unstable metallic titanium of material consisting of a non-adherent particulate reaction product containing NaCl and unstable Ti and formed by dry-way reaction of metallic Na and $TiCl_4$ at reactive elevated temperature above the melting point of Na and substantially below the melting point of NaCl, which process comprises continuously feeding said material—in non-adherent free-flowing particulate form and having titre substantially in the range of zero up to positive 2%—through a feed nozzle into one end of a high temperature stabilizing zone and onto a supporting surface continuously moving thru said zone, maintaining temperature within the feed nozzle and of the atmosphere immediately adjacent the feed end thereof in the range of about 200–500° C., continuously moving said surface and the material thereon thru said zone while subjecting said material to stabilizing temperature above the melting point of NaCl, regulating rate of movement of said surface and of said material thru said zone so as to provide a retention time for said material such that, on discharge from said zone of said material and cooling thereof to temperature not substantially higher than 100° C., the metallic Ti content of said cooled material is stable in air, continuously draining liquid NaCl away from said material during passage thereof thru said zone and continuously separately discharging such liquid from said zone, and, on termination of said retention time, mechanically disengaging said heat-treated solid material from said surface while maintaining temperature above the melting point of NaCl in the zone of said disengagement, the entire foregoing operation being carried out in an inert atmosphere.

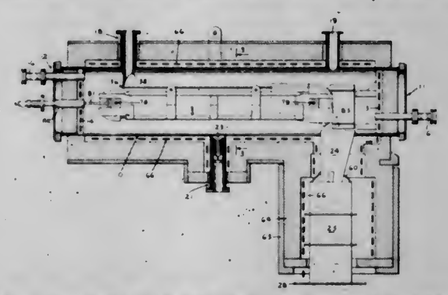
3,022,159
PRODUCTION OF TITANIUM METAL

Carlton J. Howard, Liverpool, and Edmund W. Sobolewski, Syracuse, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Filed Sept. 24, 1959, Ser. No. 842,103
4 Claims. (Cl. 75—84.5)

1. The process for continuously stabilizing the unstable metallic Ti of material consisting of a nonadherent particulate reaction product containing NaCl and unstable Ti and formed by dry-way reaction of metallic Na and $TiCl_4$ at reactive elevated temperature above the melting point of Na and below the melting point of NaCl, which process comprises continuously at pressure not less than 3600 lbs./sq. in. pelletizing said material having a titre substantially in the range of negative 2.5% to positive 0.28%, continuously feeding said pelletized material into one end of a high temperature stabilizing zone and onto a supporting surface continuously moving thru said

zone, continuously moving said surface and the pelletized material thereon thru said zone while subjecting said material to stabilizing temperature above the melting point of NaCl, regulating rate of movement of said surface and of said material thru said zone so as to provide a retention time for said material such that, on discharge from said zone of said material and cooling thereof to temperature not substantially higher than 100° C., the metallic Ti content of said cooled material is stable in



air, continuously draining liquid sodium chloride away from said material during passage thereof thru said zone and continuously separately discharging such liquid from said zone, on termination of said retention time continuously mechanically disengaging such heat-treated solid material from said surface while maintaining temperature below about 750° C. in the zone of said disengagement, the entire foregoing operation being carried out in an inert atmosphere, and continuously recovering stabilized metallic Ti.

3,022,160
RECONDITIONING FUEL ELEMENTS

Herman L. Brandt, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Dec. 5, 1956, Ser. No. 626,556
4 Claims. (Cl. 75—97)

1. A process of decanning a uranium fuel element consisting of a uranium core, an intermediate section of bronze, tin, aluminum-silicon alloy and uranium silicide around said core, and an aluminum can around and bonded to said intermediate section, said process consisting of immersing said fuel element for about 1½ hours in a first aqueous solution, said first aqueous solution containing from 9 to 20% by weight of sodium hydroxide and from 35 to 12% by weight of sodium nitrate, whereby the aluminum can is dissolved; removing the fuel element from said solution; rinsing the fuel element with water for about 15 minutes; immersing the fuel element for about 1½ hours in a second aqueous solution at the boiling point of the latter, said second aqueous solution consisting of sodium hydroxide of a minimum concentration of 50% by weight, whereby the components of the intermediate section are dissolved and a smooth noncorroded uranium surface remains on the core; and again rinsing the fuel element with water for about 15 minutes.

3,022,161
PROCESS OF DETINNING LACQUERED TIN SCRAP DERIVED FROM TIN SHEET METAL

Friedrich Finkener and Johannes Krug, Essen, Hans Loges, Essen-Steele, and Bernhard Rodewald, Essen-Haarzopf, Germany, assignors to Th. Goldschmidt A.-G., Essen, Germany

No Drawing. Filed Mar. 21, 1960, Ser. No. 16,190
Claims priority, application Germany Apr. 4, 1959
10 Claims. (Cl. 75—98)

1. The process of detinning scrap of lacquer-layered tin covered plate material; comprising the steps of first subjecting said scrap to a thermal pretreatment by means of a fluid whose temperature ranges from 160° to less than 350° C. to bring about quick disintegration of the lacquer layer, and then following up the detinning operation proper by applying aqueous alkali solution to said pretreated scrap material without adversity affecting the plate material.

3,022,162
BRAZING ALLOYS

Ralph G. Donnelly, Oak Ridge, Ralph G. Gilliland, Knoxville, and Gerald M. Slaughter, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed July 25, 1960, Ser. No. 45,250
5 Claims. (Cl. 75—165)



1. A brazing alloy which, in the molten state, is characterized by excellent wettability and flowability, said alloy being capable of forming a corrosion resistant brazed joint wherein at least one component of said joint is graphite and the other component is a corrosion resistant refractory metal and consisting essentially of 40–90 percent by weight of gold, 5–35 percent by weight of nickel, and 1–45 percent by weight of tantalum.

3,022,163
DUCTILE NIOBIUM BASE ALLOY

Neil M. Lottridge, Jr., Warren, and Douglas G. McCullough, Rochester, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Filed May 18, 1959, Ser. No. 814,100
5 Claims. (Cl. 75—174)

1. A highly ductile, oxidation-resistant sheet metal article formed of an alloy comprising about 15% to 20% titanium, 9% to 11% molybdenum, 4% to 8% chromium, 1% to 5% zirconium and the balance substantially all niobium.

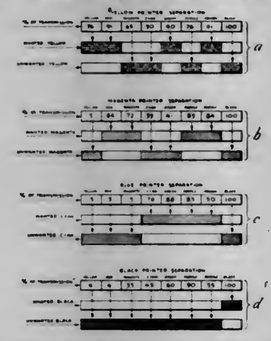
3,022,164
REPRODUCTION OF COLOR DRAWINGS, FILM TRANSPARENCIES AND PHOTOGRAPHS

Ralph Weir, 1306 Evergreen St., Chicago, Ill.

Filed Sept. 25, 1956, Ser. No. 611,954
22 Claims. (Cl. 96—30)

1. In a photomechanical process for the production of properly balanced primary color printers for at least a three color printing process, which comprises preparing a set of corrective dye image silhouette masks each member of which is made by printing in register an uncorrected primary color printer separation and a preliminary silver image silhouette record of other color areas desired to be controlled, onto a light sensitive high contrast orthochromatic layer capable of producing gammas of four to ten, when processed in a high contrast paraformaldehyde developer, to produce master silver image silhouette

masks of uniform density and thereafter projecting light through said master silhouette masks onto a light sensitive high contrast orthochromatic layer, developing exposed portions of said layer in a high contrast paraformaldehyde developer and producing a reversed dye image on the resulting corrective silhouette masks and projecting white light through each of at least three uncorrected primary color printer separations superimposed on a dye colored variable opacity reproduction screen and at least two corrective transparent dye image silhouette masks superimposed on each of said uncorrected primary color separations, onto a light sensitive high contrast orthochromatic layer capable of producing gammas of four to ten when processed with a paraformaldehyde developer, each corrective silhouette mask being dyed to uniform intensity in



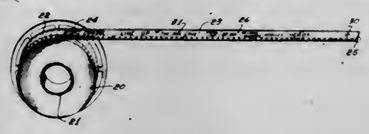
areas corresponding to areas of color distortion in the uncorrected primary color printer separations which are to appear in reduced density in the corrected primary color printers and being substantially transparent elsewhere, one of said corrective silhouette masks being dyed in areas corresponding to the record of the true black areas of the original only, and others of said corrective silhouette masks being dyed in areas corresponding to the non-black areas of the original which are to appear in reduced density in the corrected primary color printers, the colors of the dyes in said corrective silhouette masks being selected so that in combination with the color sensitivity of the orthochromatic layer and the color of the dye colored variable opacity reproduction screen, a reduction of said densities occurs in said areas upon exposure and development.

3,022,165
METHOD OF MAKING AN IDENTIFICATION LEADER FOR MOTION PICTURE FILM

Sidney P. Solow, 1708 Ambassador Ave., Beverly Hills, Calif., and Robert H. Yamin, North Hollywood, Calif. (42 Bradford Road, Scarsdale, N.Y.)

Original application Aug. 17, 1956, Ser. No. 604,846, now Patent No. 2,898,805, dated Aug. 11, 1959. Divided and this application Oct. 2, 1958, Ser. No. 769,966
3 Claims. (Cl. 96—43)

1. The method of making a positive motion picture film print which includes a light reflectively readable and reinforced identification head leader, comprising the steps of exposing a strip of negative film to a head leader identification image, developing and fixing said negative film so as to render said leader identification image visible forming a negative head leader, splicing said negative head leader to a length of exposed and developed negative motion picture film, photographically printing a positive continuous print of generally uniform width and thickness and having sprocket holes along one edge only thereof from said negative motion picture film and said negative head leader, developing and fixing said positive print thereby obtaining a motion picture section and a head leader section extending therefrom and both



sections being in the nature of transparencies with images viewable by light transmitted therethrough, adhesively affixing to the emulsion side of the head leader section of said print a flexible reinforcing opaque backing between the sprocket holes and edge remote from said holes, of a color contrasting with the image on the head leader section to render visible by reflected light the image on the head leader section.

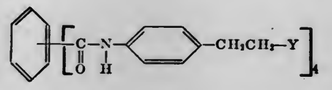
3,022,166
PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS

Milton Green, Newton Highlands, and Myron S. Simon, Newton Center, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Mar. 28, 1957, Ser. No. 649,019
13 Claims. (Cl. 96—61)

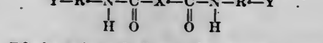
1. As a photographic developer composition for the formation of silver transfer prints, an aqueous solution comprising an alkaline material, a silver halide solvent, said solvent being capable of forming a soluble complex with silver halide, and at least one compound selected from the group consisting of compounds within the formulae:

(A)



and

(B)



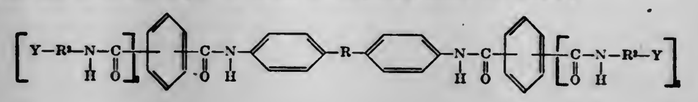
wherein R^3 is selected from the group consisting of phenylene and phenethyl groups, the ethyl substituent of said phenethyl group being linked to said Y radical, X^2 is an octylene radical and Y is selected from the group consisting of ortho-dihydroxyphenyl and para-dihydroxyphenyl radicals.

3,022,167
PHOTOGRAPHIC PRODUCTS, PROCESSES AND COMPOSITIONS

Milton Green, Newton Highlands, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Mar. 28, 1957, Ser. No. 649,020
7 Claims. (Cl. 96—61)

1. As a photographic developer composition for the formation of silver transfer prints, an aqueous solution comprising an alkaline material, a silver halide solvent, said solvent being capable of forming a soluble complex with silver halide, at least one compound selected from the group of compounds within the formula:



wherein R is a methylene group, R^2 is a phenethyl group, the ethyl substituent of said phenethyl group being linked to the Y radical is selected from the group consisting of ortho-dihydroxyphenyl and para-dihydroxyphenyl radicals.

3,022,168
PHOTOGRAPHIC DEVELOPER
Oskar N. Stjärnkvist, Orebro, Sweden, assignor to Aktiebolaget Pharmacia, Uppsala, Sweden
No Drawing. Filed June 24, 1959, Ser. No. 822,443
Claims priority, application Sweden June 28, 1958
14 Claims. (Cl. 96—66)

2. A photographic developer of high developing capacity, comprising an alkaline solution containing ascorbic acid as an active developing agent, an activator having a higher reduction potential than ascorbic acid capable of imparting to the ascorbic acid high developing properties within the pH range of from about 8 to 9, said activator being selected from the group consisting of monomethyl-p-aminophenol sulfate, monomethyl-p-aminophenol sulfate-hydroquinone and phenylpyrazolidone developers, and a buffer system consisting of borax in combination with an aliphatic polyhydric alcohol having at least two adjacent hydroxyl groups in the cis position, said polyhydric alcohol being capable of reacting with the boric acid formed from the borax by hydrolysis with the formation of complex acids which are stronger than the boric acid, the pH of the said developing solution being within the range of from about 8 to 9.

3,022,169
MATTING OF PHOTOGRAPHIC LAYERS
Karlheinz Heckelmann, Koln-Mulheim, and Konrad Hebbel, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 4, 1959, Ser. No. 797,059
Claims priority, application Germany Mar. 5, 1958
9 Claims. (Cl. 96—67)

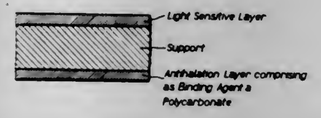
1. A light-sensitive photographic material comprising in combination a support, a light-sensitive silver halide emulsion layer and particles 0.1 to 5 microns in size of a thermoplastic linear polycarbonate of a dihydric phenol dispersed in a hydrophilic binding layer, said polycarbonate having a linear chain length of more than 10 carbonate units and the particles being present in amount that forms a matte surface on the binding layer.

3,022,170
TEMPORARY SEAL FOR PHOTOGRAPHIC FILM ROLL
Rodman F. Flinchbaugh, Natick, Mass., Harold W. Huffman, Fairfield, Ohio, and Robert A. Sands, Winchester, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Dec. 29, 1959, Ser. No. 862,555
4 Claims. (Cl. 96—78)



1. In a photographic film roll, the combination therewith of a temporary, reusable adhesive seal, comprising a piece of pressure-sensitive adhesive tape secured to the outer layer of said film roll and adhesively engaging the next inner layer of said film roll through a first window in said outer layer, said next inner layer having a second window underlying said first window, said first window being formed by removing a portion of said outer layer and said second window being formed by removing portions of said next inner layer to form a plurality of openings therein, the combined area of said plurality of openings being less than that of said first window.

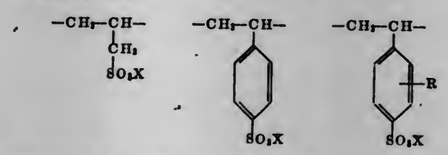
3,022,171
PHOTOGRAPHIC FILTER AND ANTIHALATION LAYERS
Armin Ossenbrunner and Helfried Klockgether, Leverkusen, Germany, assignors to Agfa Aktiengesellschaft
Filed July 16, 1957, Ser. No. 672,199
Claims priority, application Germany July 26, 1956
10 Claims. (Cl. 96—84)



1. A light-sensitive photographic material comprising a light transmitting support, a photographically light sensitive silver halide gelatin layer coated on one side of said support and an alkali-soluble antihalat on layer containing a light absorbing antihalation dyestuff coated on the other side of said support, said antihalation layer containing as a binding agent substantially a major proportion of a high molecular film-forming linear polycarbonic ester of at least one dihydroxy compound selected from the class consisting of aliphatic, cycloaliphatic, araliphatic and aromatic compounds having hydroxy groups selected from the class consisting of alcoholic and phenolic hydroxy groups, at least 30 molar percent of the dihydroxy compound units in the ester also containing from one to two acid groups selected from the class consisting of carboxyl and sulfonic acid groups to render the ester soluble in aqueous alkaline solutions.

3,022,172
PROCESS FOR THE PRODUCTION OF PHOTOGRAPHIC MATERIALS
Seiichi Ohba, Ashigarakami-gun, Kanagawa-ken, and Teruhiko Yonezawa and Akira Kumai, Minamiashigara-machi, Ashigarakami-gun, Kanagawa-ken, Japan, assignors to Fuji Photo Film Co. Ltd., Ashigarakami-gun, Kanagawa-ken, Japan, a corporation of Japan
No Drawing. Filed May 6, 1959, Ser. No. 811,289
Claims priority, application Japan May 13, 1958
3 Claims. (Cl. 96—114)

1. A photographic silver halide gelatin emulsion containing a linear homopolymer selected from the group of homopolymers consisting of recurring units represented by the formulae:

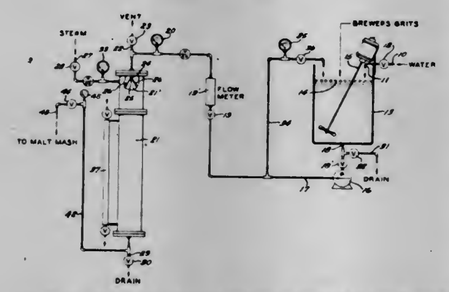


wherein X is a radical selected from the group consisting of hydrogen, ammonium and alkali metals; and R is an alkyl group containing 1 to 4 carbon atoms, the amount of said homopolymer being 0.02–30% by weight on the basis of gelatin in the emulsion.

3,022,173
MAKING COFFEE AND TEA BREWS AND THE RESULTING PRODUCT
Herman Tiedemann, Scotch Plains, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 7, 1956, Ser. No. 582,921
2 Claims. (Cl. 99—28)

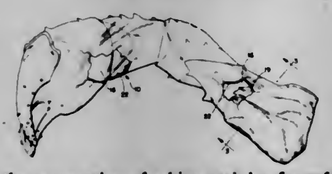
1. A composition of matter comprising a member of the class, consisting of coffee and tea, in the form of a concentrated brew, and polyvinylpyrrolidone, said polyvinylpyrrolidone being present in an amount of from 1 to 10% by weight of the solids present in said concentrated brew.

3,022,174
ART OF PROCESSING CEREAL GRITS
Ernest L. Wimmer, Elm Grove, and Andrew B. Devitt, Milwaukee, Wis., assignors to Chas. A. Krause Milling Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 28, 1959, Ser. No. 842,882
9 Claims. (Cl. 99—51)



1. In the brewing of beer wherein there is a malt mash, the steps of preparing an adjunct in the form of a slurry of starch-bearing granular particles, continuously feeding said slurry substantially free of malt and enzyme additions into a cooking chamber, continuously blending steam with the slurry in the cooking chamber to substantially instantaneously provide a cooking temperature of between 225°–325° F., continuously discharging cooked adjunct from the cooking chamber after it has been subjected to the cooking process for between ten seconds and two minutes, and promptly and continuously discharging the cooked adjunct into the malt mash before the starch has had an opportunity to diffuse completely from the granular particles in the solution to create viscosity problems, the cooking temperature being sufficiently high that the starch which has diffused out of the granular particles is promptly degraded to a low viscosity starch.

3,022,175
PREPARATION OF KING CRAB LEGS
Lowell A. Wakefield, Seattle, Wash., assignor to Wakefield's Deep Sea Trawlers, Inc., Seattle, Wash., a corporation of Washington
Filed Dec. 15, 1958, Ser. No. 780,340
4 Claims. (Cl. 99—111)



1. In the preparation of a king crab leg for refrigerated storage, said leg being upwards of about 10 inches to about 30 inches and being unshelled and severed from a crab body; the method, comprising: sharp freezing the crab leg, manually collapsing a moisture-impervious sheet in enclosing relationship over the severed end of the leg and closely about adjacent shell, and aqueously glazing said leg and its enclosure and simultaneously glaze-sealing the collapsed enclosure to the underlying adjacent shell.

3,022,176
PROCESS FOR IMPROVING THE FLAVOR OF CULTURED MILK PRODUCTS AND THE RESULTING PRODUCT
Robert L. Lawrence, Middlesex, N.J., and George A. Perry, Elmhurst, N.Y., assignors to Corn Products Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 13, 1960, Ser. No. 28,859
21 Claims. (Cl. 99—162)

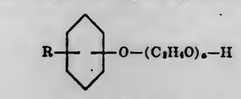
1. A cultured milk product having a pH of about 4.3 to about 5.5 and consisting essentially of a sorbic acid component selected from the group consisting of sorbic acid, sodium sorbate, potassium sorbate, and calcium sorbate in an amount equivalent to about 0.025% to about 0.15% sorbic acid, and large numbers of actively growing flavor microorganisms of the family Lactobacteriaceae.

3,022,177
HALOGENOPLATINOUS MERCAPTIDE-ALKYL SULFIDE COMPLEXES
Howard M. Fitch, Summit, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed Jan. 25, 1960, Ser. No. 4,212
58 Claims. (Cl. 106—1)

1. A decorating composition comprising a halogenoplatinous mercaptide-alkyl sulfide complex and an organic decorating vehicle.

3,022,178
ANTI-FOGGING COMPOSITION FOR POLYSTYRENE FILM AND COATED PRODUCT
William R. R. Park and Richard L. Hill, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Jan. 11, 1960, Ser. No. 1,551
6 Claims. (Cl. 106—13)

1. An anti-fogging composition consisting essentially of an intimate mixture of from 50 to 90 percent by weight of a non-ionic surfactant which is an alkylphenyl polyethylene glycol ether having the general formula



wherein R represents an alkyl radical containing from 8 to 9 carbon atoms, and n is an integer from 3 to 11, and from 50 to 10 percent by weight of an alkali metal alkyl sulfate containing from 8 to 18 carbon atoms in the molecule, the percent by weight being based on the total weight of the alkylphenyl polyethylene glycol ether and the alkali metal alkyl sulfate.

3,022,179
CERAMIC MATERIAL AND METHOD OF MAKING THE SAME
William J. Morrissey, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 23, 1959, Ser. No. 841,678
4 Claims. (Cl. 106—39)

1. A hard, dense, mechanically strong electrically insulating ceramic material formed of a substantially homo-

geneous microcrystalline mass composed essentially of synthetic barium-containing crystals, said material having the following approximate composition in percent by weight:

	Percent
MgO	3–35
SiO_2	25–50
BaO	3–35
Fluxing agent	10–35

said fluxing agent being selected from the group consisting of MgF_2, B_2O_3, Al_2O_3, Li_2O, Na_2O, K_2O, K_2SiF_6, and $Al_2(SiF_6)_3$ and combinations thereof.

3,022,180
CERAMIC MATERIAL AND METHOD OF MAKING THE SAME

William J. Morrissey, Pittsfield, Mass., and James W. Roy, Caldwell, N.J., assignors to General Electric Company, a corporation of New York

No Drawing. Filed Sept. 23, 1959, Ser. No. 841,680
6 Claims. (Cl. 106—39)

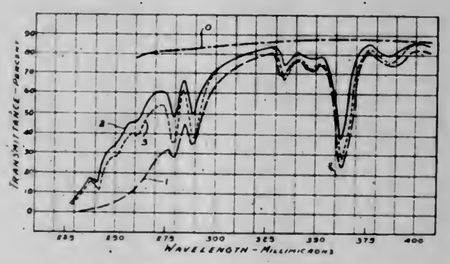
1. A hard, dense, mechanically strong, electrically insulating ceramic material formed of a substantially homogeneous micro-crystalline mass composed essentially of randomly oriented synthetic magnesium silicate crystals, said material having the following approximate composition in percent by weight:

	Percent
MgO	20–50
SiO_2	20–55
Al_2O_3	5–20
Fluxing agent	5–15

3,022,181
GLASS COLOR FILTER

John H. Connelly, Horseheads, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed Feb. 1, 1961, Ser. No. 86,384
2 Claims. (Cl. 106—52)



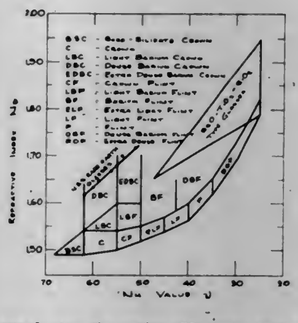
2. A glass having specific, predetermined transmittance peaks and valleys in the ultra-violet region of the spectrum which consists essentially on the oxide basis as computed from the batch in percent by weight of 50–65% SiO_2, 2–6% Al_2O_3, 4–10% Na_2O, 4–10% K_2O, the total of Na_2O and K_2O being 13–15%, 10–15% BaO, and 3–15% Ho_2O_3.

3,022,182
INFRARED TRANSMITTING GLASSES

Given W. Cleek, Arlington, Va., and Edgar H. Hamilton, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

Filed July 17, 1956, Ser. No. 598,482
2 Claims. (Cl. 106—52)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A non-crystalline infrared transmitting glass having a melting point of less than 2750° F., a high refractive index, high deformation temperatures, good resistance to



chemical attack over the entire pH range, and good transmittances at wavelengths below five microns consisting of:

19 mole percent of BaO
20 mole percent of TiO_2
44 mole percent of SiO_2
7 mole percent of La_2O_3
5 mole percent of ZrO_2
4 mole percent of ThO_2
1 mole percent of Ta_2O_5

3,022,183
GLASS COMPOSITION

James E. Duncan, Natrona Heights, and William J. Englert, New Kensington, Pa., assignors to Pittsburgh Plate Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Apr. 20, 1961, Ser. No. 104,240
6 Claims. (Cl. 106—54)

1. A glass having a strain point of 1150 to 1300° F., and a coefficient of thermal expansion of 4.4 to 5.6×10^{-6} per ° C. from 0 to 300° C. and consisting essentially of the following ingredients in percent by weight: 43 to 49 percent SiO_2, 7 to 12 percent CaO, 5 to 8 percent MgO, 19 to 26 percent Al_2O_3, 4 to 10 percent B_2O_3, 6 to 12 percent BaO and 0.1 to 2 percent Na_2O.

3,022,184
STARCH MODIFICATION WITH POLYBORATES

Ralph W. Kerr, Riverside, Ill., assignor to Corn Products Company, New York, N.Y., a corporation of Delaware

Filed Aug. 25, 1959, Ser. No. 835,917
4 Claims. (Cl. 106—210)

4. An amylaceous paste of improved colloidal properties suitable for adhesives, sizes and thickening agents consisting essentially of the reaction product of an amylaceous material in water with about 0.5 to about 20% of a water-soluble decaborate.

3,022,185
WHITE FILLER MATERIAL AND ITS PREPARATION

Pierre Delfosse, % S.A. Du Blanc Omya, 31 Rue Cambaceres, Paris, France

No Drawing. Filed Feb. 10, 1958, Ser. No. 714,070
Claims priority, application France Sept. 2, 1957
14 Claims. (Cl. 106—296)

1. A white mineral filler consisting essentially of particles of an average diameter of about 0.5 to 20 microns of a mineral filler material having affixed thereto particles of an average diameter of no more than about 0.1 micron of a white pigment selected from the group consisting of titanium dioxide and zinc oxide in a vehicle of a normally solid organic acid, the pigment being between about 0.5

to 10% by weight and the organic acid vehicle being between about 0.1 to 10% by weight, both based on the filler material.

3,022,186
MIXED PHASES WITH A RUTILE OR POLYRUTILE STRUCTURE

Franz Hund, Krefeld-Bockum, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 9, 1959, Ser. No. 785,776
Claims priority, application Germany Jan. 11, 1958
8 Claims. (Cl. 106—300)

1. Solid solutions consisting of rutile lattice forming compounds selected from the group consisting of TiO_2, SnO_2, β-MnO_2, PbO_2, VO_2, GeO_2, TeO_2, CrO_2, RuO_2, OsO_2, IrO_2, MgF_2, ZnF_2, MnF_2, FeF_2, CoF_2, NiF_2, PdF_2, $LiSb_3O_8$, $MgSb_2O_6$, $ZnSb_2O_6$, $FeSb_2O_6$, $CoSb_2O_6$, $NiSb_2O_6$, $CuSb_2O_6$, $AlSbO_4$, $GaSbO_4$, $VSbO_4$, $CrSbO_4$, $FeSbO_4$, $RhSbO_4$, $MgTa_2O_6$, $NiTa_2O_6$, $CoTa_2O_6$, $FeTa_2O_6$, $CrTaO_4$, $FeTaO_4$, $RhTaO_4$, $CrNbO_4$, $FeNbO_4$, $RhNbO_4$ and $RhVO_4$, and additional compounds selected from the group consisting of 2-valent metal fluorides, 1-, 2- and 3-valent metal oxides and fluorides, 5- and 6-valent metal oxides, mixtures thereof and mixtures of 2-valent metal fluorides, 1-, 2- and 3-valent metal oxides and fluorides and 5- and 6-valent metal oxides with 4-valent metal oxides, the cations of said additional compounds possess radii between 0.46 A. and 0.91 A., and said additional compounds being present in such proportions, relatively to one another, that the ratio of the sum of their cations to the sum of their anions is 1:2 (±2%) while preserving statistical electroneutrality in the lattice.

3,022,187
POROUS MEMBRANES OF VERY FINE POROSITY AND PROCESSES FOR PRODUCTION THEREOF

Charles Eyraud, Marcel Prettre, Yves Trambouze, Jeannine Lenoir, and Germaine Thomas, Lyon, and Pierre Plurien, Paris, France, assignors to Commissariat a l'Energie Atomique, Paris, France

Claims priority, application France Feb. 24, 1958
Filed Feb. 18, 1959, Ser. No. 793,968
12 Claims. (Cl. 117—16)



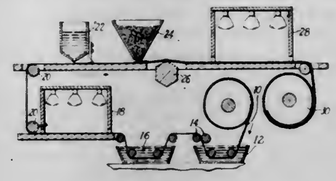
1. In a process for making a porous membrane for separation by gaseous diffusion of the constituents of a mixture, the step of permanently depositing submicronic grains of a metallic oxide having dimensions on the order of 100 to 10,000 A, within a rigid sintered metallic support of relatively large pore size of from ten to several tens of microns by drawing by suction a suspension of the grains in a fluid through the support.

3,022,188
FLOCKED SOLVENT ACTIVATABLE STIFFENING AND SHOE LINING MATERIALS

Stanley M. Griswold, Newton, Mass., assignor to B.B. Chemical Co., Boston, Mass., a corporation of Massachusetts

Filed Aug. 7, 1958, Ser. No. 753,717
7 Claims. (Cl. 117—25)

2. Solvent-activatable stiffener sheet material for lining shoes and the like comprising a base of single napped fabric carrying therein in discontinuous form a solvent coalescible stiffening agent, a layer of flocking adhesive directly engaging the unnapped side of said fabric, said



flock being free of said coalescible stiffening agent and a layer of flock bonded thereto by means of said flocking adhesive.

3,022,189
DAYLIGHT FLUORESCENT COATED FABRIC

Alfred Bruce Malmquist, Stoney Point, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 19, 1961, Ser. No. 83,620
3 Claims. (Cl. 117—33.5)

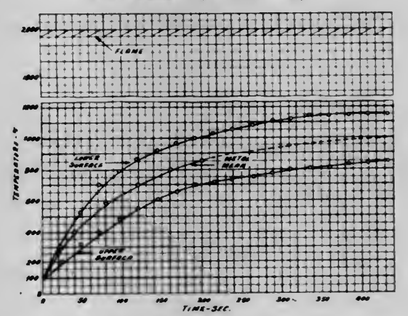
3. A daylight fluorescent coated fabric comprising:

(*a*) a fabric base layer,
(*b*) in adherent contact with said base layer an opaque substratum comprising polyvinyl chloride, plasticizer and white pigment,
(*c*) an adherent intermediate transparent stratum comprising polyvinyl chloride, plasticizer and particulate daylight fluorescent pigment distributed throughout, and
(*d*) an adherent transparent surface stratum comprising polyvinyl chloride, polymethyl methacrylate, silica, and daylight fluorescent colorants dissolved in said polyvinyl chloride.

3,022,190
PROCESS OF AND COMPOSITION FOR CONTROLLING TEMPERATURES

Rubin Feldman, Creve Coeur, Mo., assignor to The Emerson Electric Manufacturing Company, St. Louis, Mo., a corporation of Missouri

Filed Feb. 15, 1960, Ser. No. 15,007
39 Claims. (Cl. 117—37)



1. The process of maintaining the temperature below a predetermined level, of at least part of an element subjected to temperatures above said predetermined level, for a short, predetermined maximum length of time, comprising applying, to the area of said element in which the said lower temperature is to be maintained, sublimating composition having an effective temperature of sublimation, at the pressure to which the said element is to be exposed when it is subjected to temperatures above

the predetermined level, below the said temperature level but above the initial temperature of said element, in an amount sufficient to ensure incomplete exhaustion of said sublimating composition during said predetermined length of time, and thereafter subjecting said area to temperatures above said temperature level.

3,022,191
SHAPED ARTICLES OF PROPYLENE POLYMERS HAVING MODIFIED SURFACE CHARACTERISTICS AND METHOD OF MAKING THE SAME

Vittorio Cappuccio, Avito Monaci, and Alberto Bonvicini, Terni, Italy, assignors to Montecatini Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy

No Drawing. Filed May 27, 1957, Ser. No. 661,618
Claims priority, application Italy June 1, 1956
12 Claims. (Cl. 117—47)

1. A process for modifying the surface characteristics of shaped manufactured articles comprising a propylene polymerizate consisting prevailingly of isotactic polypropylene, without altering the shape or mechanical characteristics of the articles, which process consists essentially of the steps of (A) first contacting the shaped manufactured articles with a gaseous mixture containing from about 10% to 100% of oxygen at a pressure from about 1 atmosphere to 10 atmospheres and at a temperature from about room temperature to 120° C. until the oxygen content of the shaped article is from about 0.01 to 1.0 gram per square meter, (B) then treating the shaped articles with a liquid medium maintained at a temperature between about 65° C. and about 75° C. and comprising a mixture of monomers copolymerizable with a radical mechanism and consisting essentially of (1) at least one monomer selected from the group consisting of vinyl esters of carboxylic acids R—COOH in which R is an alkyl radical containing from 1 to 2 carbon atoms and chlorine-substituted derivatives of said acids, and (2) at least one other monomer copolymerizable with (1), the amount of (2) being equal to at least 5 mols per each 100 mols of (1) that are used, whereby copolymerization of monomers (1) and (2) is initiated by free radicals liberated by decomposition of the peroxidic oxygen groups present in the polypropylene chain at the temperature stated and chains of a copolymer of monomers (1) and (2) are grafted onto the polypropylene chains at the surface of the shaped manufactured articles, (C) washing the articles with a solvent for any unpolymerized monomers (1) and (2) and for any non-grafted copolymers of monomers (1) and (2) formed during the treatment, and (D) drying the surface-modified manufactured shaped articles.

3,022,192
PROCESS FOR IMPROVING THE ADHESION OF FLAT-SHAPED BODIES MADE OF POLYTEREPHTHALIC ACID GLYCOL ESTERS

Wilhelm Brandt, Wiesbaden-Biebrich, Germany, assignor to Kalle Aktiengesellschaft, Wiesbaden-Biebrich, Germany

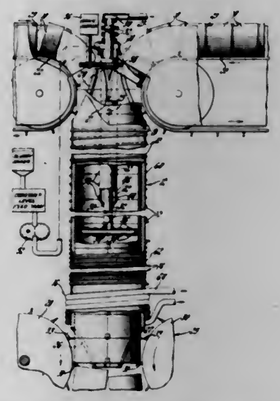
No Drawing. Filed Feb. 25, 1959, Ser. No. 795,321
Claims priority, application Germany Feb. 26, 1958
16 Claims. (Cl. 117—47)

1. A process for increasing the ability of a sheet of polyterephthalic acid glycol ester to adhere to films of another high-molecular film-forming organic material which comprises treating the surface of said sheet with an aqueous solution of trichloroacetic acid and a chromium compound of the group consisting of chromic acid, a water-soluble salt of chromic acid, a water-soluble salt of a polychromic acid, and a water-soluble salt in which the chromium is in the cation, and where said chromium compound is a water-soluble chromium salt in which the chromium is in the cation the solvent is essentially toluene containing 8 to 10 parts of water by weight for every 850 parts of toluene along with sufficient alcohol to render the toluene and water miscible; and drying said sheet to form a surface thereon which contains the applied chromium compound and free trichloroacetic acid.

3,022,193
METHOD OF COATING ALUMINUM

Carl L. Goodzeit, Birmingham, and Howard W. Pearsall, Highland Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed June 12, 1957, Ser. No. 665,282
4 Claims. (Cl. 117—50)



1. The method of making an aluminum backed multilayer bearing which comprises heating an aluminum bearing member while progressively lowering said bearing member within a vertical column, providing a dry air atmosphere within said column, successively spraying a slurry onto said heated bearing member as said bearing member progresses downwardly through said column, said slurry containing a volatile carrier and a eutectic mixture of potassium chloride, sodium chloride and at least one metal salt from the group consisting of metal chlorides and metal bromides and said slurry further containing at least one powdered metal wherein said metal in said metal salt and said powdered metal are each below aluminum in the electromotive series, evaporating the carrier in said slurry and depositing contents thereof on said heated aluminum surface, further lowering said bearing members in said column into a region of high temperature sufficient to fuse said metal and said metal salt to form a metal coating on said bearing member, subsequently lowering said bearing member in said column to a region having a temperature below approximately 400° F., removing said coated bearing member from an opening in the lower end of said column, and washing said metal coated bearing member to remove residual surface salts.

3,022,194
COATING COMPOSITIONS AND METHOD FOR APPLYING SAME

Walter K. Vollmer, North Plainfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

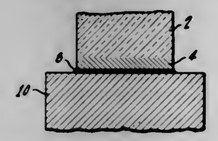
No Drawing. Filed Mar. 7, 1960, Ser. No. 12,934
13 Claims. (Cl. 117—75)

6. The method of coating a metallic surface with polyethylene which includes the steps of applying to said metallic surface at a temperature between about 80° C. and 150° C. a primer coating composition consisting essentially of a normally solid polyethylene dissolved in an inert organic solvent therefor, and a copper soap, said copper soap being a copper salt of a carboxylic acid containing at least 8 carbon atoms, and said copper soap being present in an amount sufficient to impart to the composition from about 0.038 percent to about 0.152 percent by weight copper based on the weight of the polyethylene present, baking said coating on said surface at a temperature between about 200° C. and 235° C. to volatilize the solvent and obtain good adhesion of the primer coating on said surface, and thereafter applying a coating of polyethylene to said primer coating.

3,022,195
FERROSPINEL BODY HAVING INTEGRAL METALLIC SURFACE LAYER

Reginald A. Hackley and Robert L. Harvey, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Original application Nov. 18, 1953, Ser. No. 392,848, now Patent No. 2,957,238, dated Oct. 25, 1960. Divided and this application Dec. 22, 1959, Ser. No. 861,360
7 Claims. (Cl. 117—123)

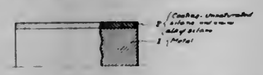


1. A ferrospinel body having a metallic layer on a surface portion thereof, said layer having been derived from said body and being an integral part thereof.

3,022,196
COATING AND ADHESIVE COMPOSITION, METHOD AND PRODUCT

David M. Jenkins and William M. De Crease, Erie, Pa., assignors to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Filed Dec. 4, 1957, Ser. No. 700,587
28 Claims. (Cl. 117—127)



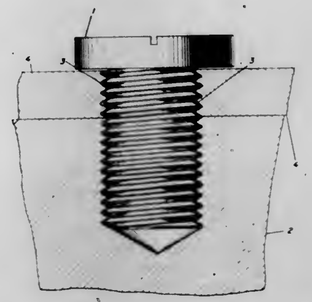
2. The method of providing a protective coating on metal surfaces which comprises applying to a metal surface a composition prepared by dissolving an unsaturated silane having the general formula $R_1—Si(OR)_3$ and an aminoalkyl silane having the general formula $R_2—Si(R_3)_{3-n}(OR)_n$, where R is selected from the group consisting of alkyl groups and aryl groups containing from 1 to 10, inclusive, carbon atoms; where R_1 is an unsaturated aliphatic chain; where R_2 is an aminoalkyl group containing from 3 to 10, inclusive, carbon atoms; where R_3 is an alkyl group containing from 1 to 4, inclusive, carbon atoms, and where n is an integer selected from 2 and 3, in a proportion of said aminoalkyl silane to said unsaturated silane of between about 1:1 to about 1:9, both inclusive, in aqueous alcohol, and letting said composition dry on said surface.

3,022,197
SECURING THREADED CONNECTIONS

Helmut Jedlicka, 56 Zollernstrasse, Schwenningen (Neckar), Germany

Filed Feb. 19, 1958, Ser. No. 716,024
Claims priority, application Germany Feb. 21, 1957
2 Claims. (Cl. 117—132)

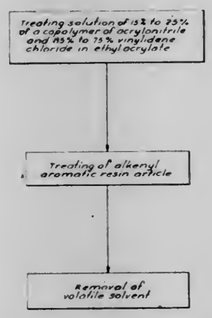
1. A novel method of securing cooperating threaded connections against relative movement under conditions of shock and sudden vibration which comprises placing a small amount of a polysiloxane on at least one of said threaded connections prior to engaging said threaded connections, said polysiloxane being a shock-elastic, kneadable, highly viscous, high molecular weight dimethyl polysiloxane having the properties of slow flow under mild pressure and resiliency when dropped.



3,022,198
COATING OF SHAPED ARTICLES

Harold G. Hahn, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed July 5, 1960, Ser. No. 40,548
5 Claims. (Cl. 117—138.8)



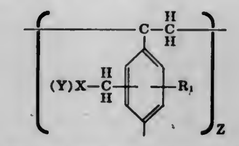
1. A method of coating a shaped article comprising treating the surface of a shaped article prepared from an alkenyl aromatic resin having chemically combined in its polymer molecule at least about 50 weight percent of at least one polymerized alkenyl aromatic compound having the general formula:

$$Ar—CR=CH_2$$

wherein "R" is selected from the group consisting of hydrogen and methyl and "Ar" is an aromatic group of the benzene series and the group $—CR=CH_2$ is attached directly to the aromatic ring with a solution comprising a copolymer of from about 15 to 25 percent by weight acrylonitrile and 85 to 75 percent by weight vinylidene chloride in a volatile solvent comprising ethyl glycolate and subsequently removing the volatile solvent therefrom.

3,022,199
TREATMENT OF FELTS
William G. Lloyd, Bay City, and Turner Alfrey, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 12, 1959, Ser. No. 852,163
8 Claims. (Cl. 117—141)

1. A process for conferring dimensional stability upon felts which comprises; treating said felts with a dilute aqueous solution of a degradable hydrophilic polymer having the general formula



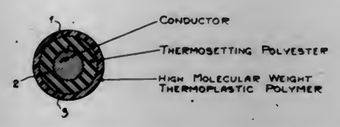
where R_1 is selected from the group consisting of hydrogen and alkyl containing 1 to about 6 carbon atoms, X is a member of the group consisting of (A) an organic sulfur containing radical derived from a compound of the group consisting of (*a*) aliphatic sulfides of the formula, R_2SR_3, wherein R_2 and R_3 each represents a member of the group consisting of (1) alkyl radicals containing from 1 to 6 carbon atoms, (2) haloalkyl radicals containing from 1 to 6 carbon atoms, (3) hydroxyalkyl radicals containing from 1 to 6 carbon atoms, (4) aralkyl radicals containing from 7 to 12 carbon atoms, (5) $-(CH_2CH_2O)_mCH_2CH_2OH$ wherein *m* is an integer from 1 to 5, (6) $-C_nH_{2n}COOH$, (7) $-C_nH_{2n}COOC_nH_{2n+1}$, (8) $-C_nH_{2n}COO$ alkali metal, (9) $-C_nH_{2n}CONH_2$

(10) $-C_aH_{2a}\overset{O}{\overset{\|}{C}}C_aH_{2a+1}$

(11) $-C_nH_{2n}COC_nH_{2n+1}$ and (12) $-C_nH_{2n}CN$, wherein n in substituents (6), (7), (8), (9), (10), (11) and (12) is an integer from 1 to 5 with the total number of carbon atoms in each of substituents (6), (7), (8), (9), (10), (11) and (12) not exceeding 6, and where the total number of carbon atoms of the R_2 and R_3 groups attached to a common sulfur atom does not exceed 18 and (*b*) a heterocyclic sulfur containing radical derived from a compound of the group consisting of tetrahydrothiophene, hydroxy substituted tetrahydrothiophene, halo-substituted tetrahydrothiophene, alkyl substituted tetrahydrothiophene where alkyl is limited to those groups containing from 1 to 5 carbon atoms, thiacyclohexane and p-oxathiane, and (B) a heterocyclic nitrogen radical derived from a compound of the group consisting of pyridine, quinoline and isoquinoline and nucleus alkylated homologs and analogs thereof; Y is a common anionic radical such as halogen, carbonate and the like; and Z is an integer greater than 10.

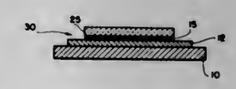
3,022,200
MAGNET WIRE AND METHOD OF MAKING SAME
Ernest C. Koerner, Ralph Hall, and Earl L. Smith, Fort Wayne, Ind., assignors to Phelps Dodge Copper Products Corporation, Fort Wayne, Ind., a corporation of Delaware
Filed Oct. 12, 1960, Ser. No. 62,235
18 Claims. (Cl. 117—218)

13. In the manufacture of insulated magnet wire, the method which comprises passing an electrically conductive wire through a solution of a thermosetting polyester resin, thereby coating the wire with said solution, heating the coated wire to a temperature sufficient to cure the resin to a hard coat on the conductor, repeating said coating and heating steps to form on the wire a thin, uniform and continuous multi-coat layer of the cured resin as a dielectric, passing the coated wire through a solution of a linear thermoplastic polymer in a solvent, said polymer having a melting point of at least 175° C., a relative viscosity above 1.3, and a tensile strength of at least 30,000 lbs./sq. in. at 175° C., said polymer being capable of forming a fiber and of being cold drawn and having a thermal life of at least 4,000 hours at 200° C. as measured by AIEE Twist Procedure No. 57 when coated on a No. 18 Heavy film wire to give a 0.003 inch



increase in diameter and using 1,000 volts as a failure criterion, thereby applying said polymer solution as an over-coating on said multi-coat layer, and heating the over-coated wire sufficiently to substantially remove said solvent and form on the wire a thin, uniform and continuous layer of the linear thermoplastic polymer as a dielectric, said linear polymer layer being substantially thinner than said multi-coat layer but having a thickness of at least 10% of the thickness of the multi-coat layer.

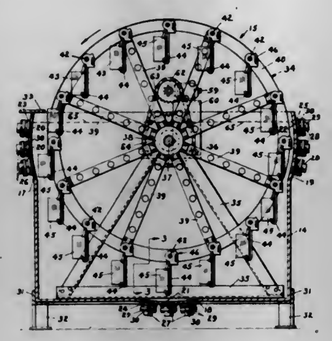
3,022,201
METHOD OF COATING A BODY WITH TITANIUM AND RELATED METALS
Ross A. Quinn, Palo Alto, and Robert F. Kariak, Sunnyvale, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Feb. 11, 1960, Ser. No. 8,157
12 Claims. (Cl. 117—221)



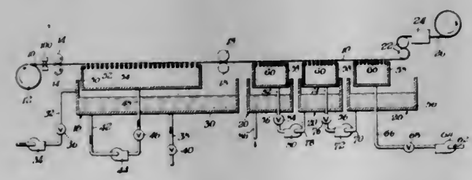
1. A method of forming a metal coating on the surface of a body which comprises sandwiching a thin layer of salt consisting essentially of at least one chosen from the group consisting of the alkali and alkaline earth metal halides between a layer of coating metal from the group consisting of titanium, zirconium, hafnium and uranium and the surface to be coated, and then heating the resultant sandwich assembly to a temperature and for a time sufficient to melt the salt and deposit a coating of metal on the surface of said body, the thickness of the layer of salt being sufficient to provide a liquid boundary between said layer of metal and the surface to be coated when the salt melts.

3,022,202
METHOD OF CLEANING SURFACES
William E. McCown and James W. McAuley, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Original application Apr. 9, 1956, Ser. No. 577,023. Divided and this application Sept. 9, 1957, Ser. No. 682,889
6 Claims. (Cl. 134—1)

5. A method of cleaning sheets comprising the steps of moving said sheets along a substantially closed path through a body of an energy transmitting medium, directing vibratory energy through said medium at one point along said path in a direction substantially normal to the path at that point, and directing additional vibratory energy through said medium at another point along said path in a direction substantially normal to the path at said second point and substantially normal to the direction of said first mentioned vibratory energy.



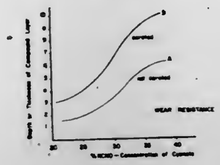
3,022,203
PROCESS FOR STRIP TREATMENT
Gerald H. Mains, Chester County, Pa., and Leon W. McGinnis and Joseph S. Tatnall, New Castle County, Del., assignors to National Vulcanized Fibre Co., Wilmington, Del., a corporation of Delaware
Original application Nov. 2, 1955, Ser. No. 544,564, now Patent No. 2,993,492, dated July 25, 1961. Divided and this application June 9, 1960, Ser. No. 43,264
6 Claims. (Cl. 134—15)



1. A process for uniformly treating the bottom surface of a longitudinally moving strip with a treating liquid comprising the steps of continuously advancing the strip along a substantially horizontal path over a treating zone and supporting the moving strip over the treating zone on a pool of liquid treating agent by impinging a pattern of liquid streams against the bottom surface of the moving strip, each liquid stream issuing from an individual zone subtending an incremental width of the strip and the spacings between individual zones being such that for each liquid stream issuing from an individual zone there is another liquid stream issuing from another individual zone subtending a contiguous incremental width of the strip.

3,022,204
PROCESS FOR NITRIDING METALS
Johannes Müller, Frankfurt am Main, and Carl Albrecht, Kronbert (Taunus), Germany, assignors to Kolene Corporation, Detroit, Mich.
Filed Mar. 20, 1961, Ser. No. 97,060
18 Claims. (Cl. 148—15.5)

1. A process comprising immersing a metal workpiece in a molten alkali metal salt bath comprising between about 25 to 40% cyanate, at least about 40% cyanide, the remainder being substantially carbonate, the said bath being free of sulfur, selenium and tellurium, while aerating the bath with an oxygen-containing gas introduced in well-distributed fine bubbles.



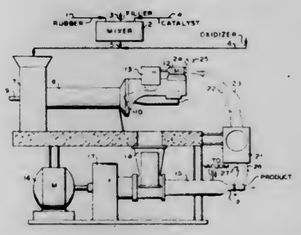
3,022,205
METHOD OF QUENCHING AND QUENCHING LIQUID
Frederic L. Chase, Dayton, and Charles W. Ewing, Centerville, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed May 14, 1958, Ser. No. 735,115
8 Claims. (Cl. 148—20.6)

1. An improved method for quenching heated metal which comprises quickly immersing said heated metal in a liquid bath consisting principally of an aqueous solution containing between 3/10 gram and 4½ grams of a water soluble high polymer of ethylene oxide per gallon of water, said polymer having a molecular weight between 100,000 and several million.

ERRATUM

For Class 149—19 see:
Patent No. 3,022,149

3,022,206
MANUFACTURE OF SOLID PROPELLANT
William M. Hutchinson and Claude G. Long, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed July 21, 1958, Ser. No. 750,035
3 Claims. (Cl. 149—60)



1. In the process for preparing a propellant composition comprising a rubber binder and a solid, inorganic oxidizing salt which comprises intimately admixing said binder and said oxidizer, forming the resulting composition into a grain and curing the grain, the improvement which comprises measuring the electrical resistivity of the admixture during the mixing step and regulating the mixing to maintain the resistivity of said admixture within predetermined limits thereby maintaining the burning rate of the propellant composition within predetermined limits.

3,022,207
METHOD OF PRODUCING DECORATIVE WALL PANELS WITH PREFINISHED SCORE LINES
William George Lang, Toronto, Ontario, Canada, assignor to Abiti Power & Paper Company, Limited, Iroquois Falls, Ontario, Canada
Filed Feb. 8, 1961, Ser. No. 87,795
3 Claims. (Cl. 154—45.9)



1. A method for making decorative wall panels with prefinished score lines comprising forming a board panel having score line grooves preformed in the surface thereof, applying an overlay layer comprising thermoplastic resin to said surface and passing the assembly of said board panel and overlay layer through a set of nip rolls including a heated roll contoured to conform with said score line grooves and a backing roll to laminate the overlay film to said surface and to slit the film centrally of the score line grooves, leaving edges of the overlay layer which become secured to the sides of said score line grooves.

3,022,208
REINFORCING ELEMENT BONDED WITH A CURED MIXTURE OF A BUTADIENE POLYMER AND DIETHYL FUMARATE, AND PROCESS FOR PREPARING SAME
Byron M. Vanderbilt, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Oct. 13, 1958, Ser. No. 766,723
4 Claims. (Cl. 154—43)

3. A reinforced plastic comprising a reinforcing element bonded with a cured mixture of 50–80 parts by weight of a butadiene polymer of 100 to 50% butadiene-1,3 and 0 to 50% styrene and 20–50 parts by weight of diethyl fumarate.

3,022,209
METHOD OF WELDING BUTTED PIPE SECTIONS OF POLYETHYLENE TO FORM A REINFORCED JOINT
Paul E. Campbell, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Nov. 23, 1956, Ser. No. 623,976
4 Claims. (Cl. 156—158)

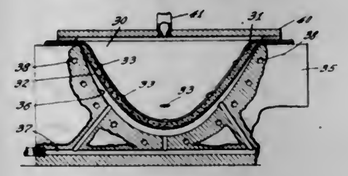


1. A method for welding sections of pipe of ethylene polymers having a crystallinity of at least about 75 percent which comprises butting sections of said pipe together firmly to form a joint; encasing the joint in a sleeve consisting of ethylene polymers having a crystallinity of at least about 75 percent; applying heat at a temperature sufficient to soften said polymers and applying external pressure in the range of 10 to 100 p.s.i. to said joint to soften said sleeve and allowing said sleeve to cool before releasing the pressure.

3,022,210
METHOD OF MAKING MOLDING COMPOUNDS OF GLASS FIBER REINFORCED PLASTICS
Thomas E. Philipps, Manville, R.I., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
No Drawing. Filed Dec. 29, 1955, Ser. No. 556,077
9 Claims. (Cl. 156—180)

1. In the preparation of a thermoplastic molding compound of the combination of a thermoplastic resinous polymer and glass fibers of reinforcing lengths, the steps of heating a polystyrene having an average molecular weight of less than 20,000 to a temperaure sufficient to reduce the polystyrene resinous polymer to a fluid state but below that at which the polystyrene is subject to thermal decomposition, advancing glass fibers through the hot melt of the polystyrene whereby an amount of polystyrene remains as a coating on the glass fiber surfaces sufficient for use as a molding compound, cooling the coated glass fibers to solidify the polystyrene on the surfaces thereof, and then reducing the coated glass fibers to lengths within the range of ⅛ to 1 inch.

3,022,211
PADDED ARTICLES AND METHOD OF MAKING THEM
Glenn E. Wintermute, James K. Smith, and John C. Brighton, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed Apr. 17, 1957, Ser. No. 653,402
9 Claims. (Cl. 156—222)



1. A method of making a padded article, comprising interposing a foam-elastomer pad between a sheet of rigid material and a sheet of flexible, stretchable material, the marginal portions of both sheets extending beyond the edges of the pad, forcing said two sheets toward each other to expel air from and compress the pad, bonding the pad-surrounding marginal portions of the sheets together simultaneously with the step of compressing the pad to prevent air from re-entering the pad, and subsequently perforating one of said sheets within the limits of the pad to permit air to enter the pad.

3,022,212
PROCESS FOR HEAT STAMPING THERMOPLASTIC MATERIALS
Russell L. Butler, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Sept. 10, 1956, Ser. No. 608,712
5 Claims. (Cl. 156—238)

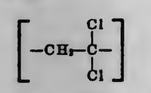
1. A process for marking and stamping thermoplastic films consisting of placing an inked facing of a stamping tape, said tape being composed of a high dielectric material, into contact with a heat-shrinkable, oriented thermoplastic film, thereafter subjecting both said film and said tape to a radio frequency field capable of heating said film, and finally stripping said tape from said film to leave an inked coating on said film.

3,022,213
CONDUCTIVE WEB AND METHOD OF MAKING SAME
Donald K. Pattilloch, New York, and Carl Polowczyk, Elmhurst, N.Y., assignors to Michigan Research Laboratories, Inc., Long Island City, N.Y., a corporation of Michigan, and Electro-Chem Fiber Seal Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 13, 1958, Ser. No. 714,957
12 Claims. (Cl. 162—138)

1. The process for the preparation of an electrically conductive web comprising treating an aqueous suspension of fibrous web-forming material with a dicyandiamide formaldehyde condensation product in an amount of 0.5–5%, treating the suspension with an aqueous colloidal silica solution containing from 1–40% of silica, adding a finely divided conductive material in an amount up to 300% and forming the resulting suspension into a web, said percentages are based on solids on the dry weight of said web-forming material.

3,022,214
PAPER SIZED WITH CATIONIC VINYL COPOLYMER AND PROCESS FOR THE MANUFACTURE THEREOF
John H. Daniel, Jr., Old Greenwich, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 20, 1958, Ser. No. 736,448
5 Claims. (Cl. 162—168)

1. Process for the manufacture of sized paper of about normal dry strength, which comprises forming an aqueous suspension of cellulosic papermaking fibers, adding to said suspension an effective amount as sizing agent, between about 0.1% and 5%, based on the dry weight of said fibers, of an aqueous solution of a water-soluble cationic linear carbon chain vinyl polymer predominantly composed of hydrophobic



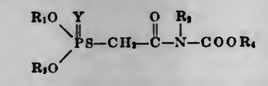
linkages and hydrophilic linkages of the formula

$$—CH_2—CHX—$$

wherein X is an organic substituent containing one quaternary ammonium grouping, the ratio between said linkages being between about 0.5:1 and 5:1, sheeting the suspension to form a waterlaid web, and heating said web at 190° F.–250° F. to dry the same and develop the sizing properties of the polymer thereon.

3,022,215
INSECTICIDALLY AND ACARICIDALLY ACTIVE MONO- AND DITHIOPHOSPHORIC ACID ESTERS
Max Schuler, Arlesheim, Switzerland, assignor to Sandoz A.G., Basel, Switzerland
No Drawing. Filed Mar. 8, 1960, Ser. No. 13,424
Claims priority, application Switzerland Apr. 30, 1959
18 Claims. (Cl. 167—22)

12. A compound of the formula



wherein each of R_1, R_2, R_3 and R_4 is an alkyl group containing a maximum of two carbon atoms, and Y is a member selected from the group consisting of O and S.

3,022,216
SEED DISINFECTION
Antje Kaars Sijpesteijn, Utrecht, Netherlands, assignor to The Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek, The Hague, Netherlands, a corporation of the Netherlands
No Drawing. Filed Nov. 5, 1958, Ser. No. 771,961
Claims priority, application Netherlands Nov. 8, 1957
4 Claims. (Cl. 167—38)

1. A process for combating internal infection in seeds of dicotyledones plants wherein said seeds are treated with a disinfectant containing as active compound a substance selected from the group consisting of 2-pyridine thiol-N-oxide and 2 isothioureum pyridine-N-oxide-hydrohalide.

3,022,217
FUMIGATING COMPOSITION
Clifford C. Roan and Lallan Rai, Manhattan, Kans.
No Drawing. Filed Apr. 13, 1959, Ser. No. 805,661
4 Claims. (Cl. 167—39)

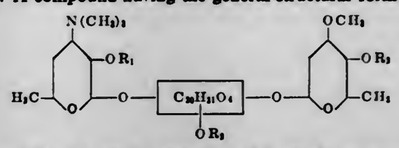
1. A grain fumigant composition comprising as the essential pesticide about 50 to about 97.0% chloroform, about 3.0 to about 15% ethylene dibromide and 0 to about 30% carbon disulfide.

3,022,218
ANTIBIOTICS IN FEEDS
William C. Sherman, Terre Haute, Ind., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 31, 1961, Ser. No. 86,001
10 Claims. (Cl. 167—53)

1. An animal feed composition comprising a therapeutically-effective amount of a tetracycline-type antibiotic and a nutritionally-balanced animal feed containing a source of calcium wherein no more than about 0.5% by weight of the calcium is present in a form other than calcium silicate and the weight ratio of the calcium silicate to calcium X is at least about 3:1, X being an anion other than silicate.

3,022,219
ACYL ESTERS OF OLEANDOMYCIN
Walter D. Celmer, Garden City, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 7, 1958, Ser. No. 719,705
11 Claims. (Cl. 167—65)

1. A compound having the general structural formula:

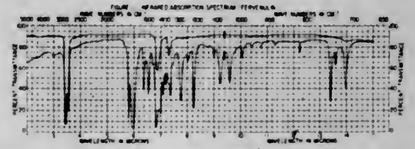


wherein R_1, R_2 and R_3 are selected from the group consisting of a hydrogen atom and an acyl moiety derived from a lower alkane hydrocarbon monocarboxylic acid having from two to three carbon atoms, at least one of said groups being an acyl moiety.

3,022,220
FERVENULIN AND ITS PRODUCTION
Clarence De Boer, Kalamazoo Township, Kalamazoo County, and Thomas E. Eble and Charles M. Large, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
Filed Mar. 25, 1959, Ser. No. 801,876
9 Claims. (Cl. 167—65)

1. A novel composition of matter assaying at least 4.5 mcg./mg. of the compound, fervenulin, which in its essentially pure crystalline form is characterized by a yellow orthorhombic crystalline form; by a melting point of

178–179° C.; by a molecular formula of $C_7H_7N_3O_2$; by solubility in methanol, ethanol, acetone, chloroform, ethyl acetate and water; by insolubility in hydrocarbon



solvents; and by exhibiting characteristic infrared and ultraviolet absorption spectra as shown in the drawings, FIGURES 1 and 2, respectively.

3,022,221
IRON HYDROGENATED DEXTRAN
Nicholas A. Floramo, Easton, Pa., assignor to Chemicals Incorporated, Luquillo, Puerto Rico, a corporation of Puerto Rico
No Drawing. Filed Apr. 16, 1959, Ser. No. 806,791
9 Claims. (Cl. 167—68)

1. A therapeutically useful composition comprising a substantially non-ionic complex which is stable on contact with water of ferric hydroxide and a hydrogenated dextran having an average intrinsic viscosity of about 0.03 to about 0.15 at 25° C., said hydrogenated dextran being substantially non-reducing to the Somogyi reagent.

3,022,222
SCENT COMPOSITION
Henry E. Hennis, Midland, and Earl H. Rosenbrock, Auburn, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Original application Oct. 2, 1958, Ser. No. 764,767. Divided and this application June 27, 1960, Ser. No. 38,700
2 Claims. (Cl. 167—94)

1. A substitute for patchouli oil comprising ½ to 2 parts by weight of 4-tert-butylcyclohexanone, 1 to 4 parts by weight of 2-sec-butylcyclohexyl acetate, 1 to 4 parts by weight of 3-isobutyl-5-methyl-3-hexen-2-one, 1½ to 6 parts by weight of 4-tert-butylcyclohexanol, 1 to 4 parts by weight of 8-tert-butyl-1,4-dioxaspiro[4.5]decane.

3,022,223
BIOSYNTHESIS OF α-KETOGLUTARIC ACID
Eric A. Borel, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 10, 1960, Ser. No. 35,118
3 Claims. (Cl. 195—29)

1. Process for preparing α-ketoglutaric acid which comprises cultivating, under aerobic conditions in an aqueous nutrient medium consisting essentially of (1) a compound selected from the group consisting of D-glutamic acid and mixtures of D-glutamic acid and L-glutamic acid, (2) a phosphate salt, and (3) a magnesium salt, an *Aerobacter aerogenes* microorganism of the strain A.T.C.C. 129, said cultivation being carried out until a substantial quantity of the D-glutamic acid is converted to α-ketoglutaric acid in said nutrient medium.

3,022,224
MAKING L-GLUTAMIC ACID ALONE OR A MIXTURE OF L-GLUTAMIC ACID AND α-KETOGLUTARIC ACID
Eric A. Borel, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 10, 1960, Ser. No. 35,124
6 Claims. (Cl. 195—29)

1. Process of preparing L-glutamic acid comprising cultivating under aerobic conditions in a nutrient medium including D-glutamic acid, a mutant selected from the group consisting (*a*) of those characterized by impairment in the conversion of α-ketoglutaric acid to succinate and (*b*) of those characterized by giving a growth response to hydrolyzed casein, said mutant being obtained from a microorganism of the genus Aerobacter and both the mutant and parential wild type from which the mutant is obtained having the enzyme D-glutamic acid oxidase, said cultivation being carried out until a substantial quantity of the D-glutamic acid is converted to L-glutamic acid.

3,022,225
PROCESS FOR FERMENTING SUGAR-CONTAINING LIQUIDS WITH YEAST
Pierre Colin, Melle, Deux-Sevres, France, assignor to Les Usines de Melle (Societe Anonyme), a corporation of France
No Drawing. Filed June 17, 1960, Ser. No. 36,709
Claims priority, application France May 19, 1960
10 Claims. (Cl. 195—37)

1. A process for producing ethyl alcohol, which comprises fermenting a sugar-containing liquid with yeast in the presence of about 0.1 to 1.5 volumes per one thousand volumes of said sugar-containing liquid of a primary alkyl alcohol containing 6 to 12 carbon atoms.

3,022,226
PROCESS FOR PREPARING 1-DEHYDRO STEROIDS
John W. Ross, East Brunswick, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Nov. 23, 1960, Ser. No. 71,140
6 Claims. (Cl. 195—51)

1. A process for preparing a 1-dehydro steroid which comprises subjecting under aerobic conditions a steroid of the 3,20-diketo-Δ^4-pregnene series to the action of a 1-dehydrogenase enzyme in the presence of an iodoacetate compound selected from the group consisting of iodoacetic acid, salts thereof and esters thereof, said iodoacetate compound being present in a molar concentration of at least about 0.001.

3,022,227
PROCESS FOR THE PREPARATION OF HIGHLY CONCENTRATED COMPOSITIONS OF THE RECEPTOR DESTROYING ENZYME NEURAMINIDASE
Gerhard Schramm and Elisabeth Mohr, Tubingen, Germany, assignors to Behringwerke Aktiengesellschaft, Marburg (Lahn), Germany, a corporation of Germany
No Drawing. Filed Dec. 16, 1958, Ser. No. 780,678
Claims priority, application Germany Dec. 20, 1957
10 Claims. (Cl. 195—62)

1. A process of preparing crystalline neuraminidase which comprises chromatographing a solution containing neuraminidase on hemolyzed erythrocytes (stomata, achromatocytes) admixed with a carrier material, the adsorption being effected at a weakly alkaline reaction and at temperatures below about 10° C. and the elution at a weakly acid reaction and a temperature above about 0° C., adding a stabilizer to the solution thus obtained and separating crystalline needle-shaped neuraminidase from the liquid by addition of a precipitant.

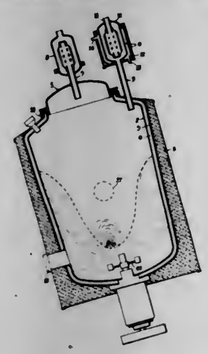
10. Crystalline neuraminidase.

3,022,228
NEOMYCIN FERMENTATION PROCESS
William Moses, Teaneck, N.J., assignor to S. B. Penick and Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 19, 1960, Ser. No. 3,270
5 Claims. (Cl. 195—80)

1. In an aqueous fermentation process for the production of neomycin by organisms of the genus Streptomyces,

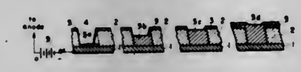
that improvement which comprises incorporating an araliphatic acid auxin of the benzene, naphthalene and indole series and a lower aliphatic alcohol supplement into the culture medium.

3,022,229
CULTIVATION PLANT
Carl Göran Hedén, Stockholm, Sweden, assignor to Getinge Mekaniska Verkstads Aktiebolag, Getinge, Sweden
Filed Jan. 23, 1958, Ser. No. 710,744
Claims priority, application Sweden Apr. 1, 1957
11 Claims. (Cl. 195—142)



1. A cultivation plant, comprising a tank having a double-jacketed casing with a circular inner sectional area, a removable cover for hermetically closing the tank, two opposite trunnions on the tank having their common axis at a right angle to the axis of said sectional area, two bearings for said trunnions, a gear device for tilting the tank and maintaining the same at a desired angle of inclination during operation, a water circulation system passing through a water supply channel in one of said trunnions to the hollow space within the double-jacketed casing and from said space through a water discharge channel in one of said trunnions, a pump in said circulation system, a heating device in said water circulation system, a control device for maintaining a constant water temperature in said circulation system, a plurality of closed openings including sealing joints into the interior of said casing having each a steam passage separated from the interior of the tank for heating the sealing joints along their circumference, a steam pipe connected with a steam supply channel in one of said trunnions and communicating with branched pipes to said steam passages to the closed openings, and return pipe for condensate and steam from said steam passages to a condensate discharge channel in one of said trunnions.

3,022,230
PROCESS FOR ELECTROFORMING GROOVED AND CHANNELED BODIES
Samuel Fialkoff, Roslyn, N.Y., assignor to Camin Laboratories, Inc., Brooklyn, N.Y., a corporation of New York
Filed June 16, 1959, Ser. No. 820,785
8 Claims. (Cl. 204—9)



6. A process for producing a metallic body having a passage below its surface, comprising the steps of applying a non-conductive masking agent as a covering layer to a surface of a conductive support, topping said covering layer with a conductive layer, exposing a selected area of said support by removing a portion of both of said layers while maintaining said conductive layer insulated from said support, cathodically connecting said support in an electroplating circuit, electrolytically depositing a metallic coating on the exposed area of the support thus connected, continuing the buildup of said coating beyond a point at which it completes the circuit to said conductive layer whereby a portion of said coating will extend over both of said layers, and removing said masking agent.

3,022,231
METHOD OF PRODUCING MATCHING EMBOSSING ROLLS
Frank W. Broderick, 52 Pittsford Way, New Providence, N.J.
Filed July 27, 1959, Ser. No. 829,846
2 Claims. (Cl. 204—25)

1. A method of producing the matching surfaces of a pair of cooperating, cylindrical male and female embossing rolls comprising the steps of:

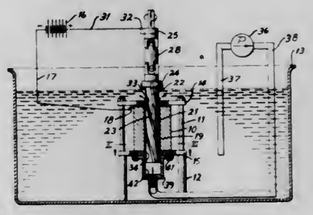
(*a*) forming on the peripheral surface of said female roll an etched, recessed undercut pattern having relatively sharp edges;

(*b*) depositing a thin coat of hard, wear-resistant metal on the peripheral surface of said female roll and in said recessed pattern, filling said undercut edges, maintaining the effective depth of said recessed pattern and substantially rounding off said sharp edges;

(*c*) forming on the peripheral surface of said male roll an etched male pattern complementary to said recessed female pattern including said rounded off edges;

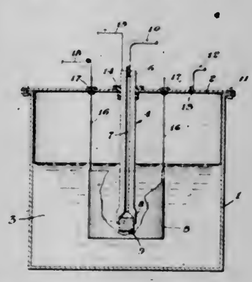
(*d*) deplating said female roll and providing a predetermined clearance between said complementary patterns on said rolls and maintaining said rounded off pattern edges on said female roll pattern.

3,022,232
METHOD AND APPARATUS FOR SIMULTANEOUSLY PLATING AND LAPPING
John M. Bailey, East Peoria, Fred S. Engelking and James L. Hopper, Peoria, and John P. Jero, Washington, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed May 26, 1958, Ser. No. 737,887
5 Claims. (Cl. 204—36)



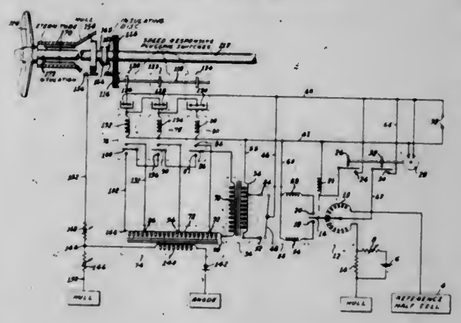
4. The method of producing a surface finish to accurate dimensions which comprises immersing a work piece in an electrolytic bath, moving a lap which has grooves forming intermediate lands conforming to the contour of the surface desired in closely spaced relation to the work piece, and introducing an electric current to said bath through anodes disposed in said grooves to cause plating of the work piece and simultaneously cutting away the deposited plating material until the desired surface conforms in contour to the surface contour of said lands.

3,022,233
PREPARATION OF SILICON
Franciszek Olstowski, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 18, 1959, Ser. No. 853,778
9 Claims. (Cl. 204—60)



1. A process for the preparation of silicon which comprises passing an electric current through an electrolyte between a porous carbon anode and an insoluble cathode at a temperature sufficient to melt the electrolyte to obtain a cathode product, said electrolyte being non-wetting with respect to the anode consisting essentially of at least one metal fluoride which is non-volatile and stable at electrolysis temperature selected from the group consisting of alkali metal fluorides, alkaline earth metal fluorides, and earth metal fluorides to which is added at least one metal silicofluoride selected from the group consisting of alkali metal silicofluorides and alkaline earth metal silicofluorides in an amount of at least 2.0 weight percent.

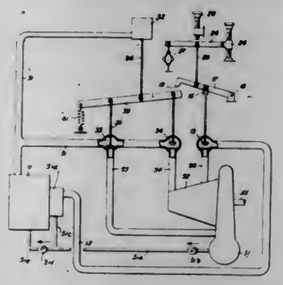
3,022,234
CATHODIC PROTECTION OF SHIPS
Edward P. Anderson, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,618
27 Claims. (Cl. 204—147)



16. A method for cathodically protecting the propeller of a ship floating in water which comprises generating an electromotive force, supplying the electromotive force to an anode immersed in the water and to the propeller as the cathode to produce a potential difference therebetween and adjusting the electromotive force as a direct function of the rotation speed of the propeller.

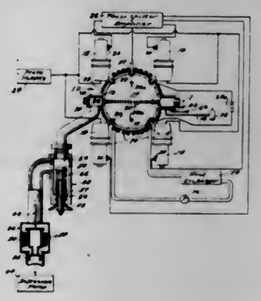
21. In an impressed current cathodic protection system, a metallic object in contact with an electrolyte and a power source for applying a current through the electrolyte to said object as a function of two varying conditions, means for adjusting the current according to the first condition, and means for modifying the adjusted current as a direct function of the second condition.

3,022,235
CONTROL SYSTEM
Dale Henry Brown, Scotia, and David Wilbur Leiby, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Oct. 31, 1956, Ser. No. 619,551
7 Claims. (Cl. 204—154.2)



1. A control system for use with a boiling nuclear reactor power source providing high pressure and low pressure elastic fluid to a load, which system comprises a low pressure valve responsive to load changes and coupled to control the flow of low pressure fluid to the load, said low pressure valve tending to move toward more closed and more open positions on load reductions and increases respectively, a high pressure valve responsive to high pressure fluid pressure changes and coupled to control the flow of high pressure fluid to the load, said high pressure valve tending to move toward more closed and more open positions on high pressure fluid pressure decreases and increases respectively, and means coupling the low pressure valve to the high pressure valve so that said valves operate in accordance with load changes to maintain a substantially constant high pressure fluid pressure at said power source.

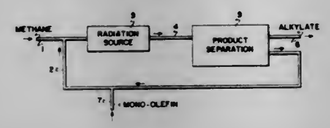
3,022,236
RADIO-FREQUENCY PLASMA CONTAINING DEVICE
Aaron J. Ulrich, Wheaton, James W. Butler, Hinsdale, and Albert J. Hatch, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 14, 1959, Ser. No. 833,894
8 Claims. (Cl. 204—154.2)



1. A device for confining and compressing a plasma discharge comprising a metal housing defining a spherical

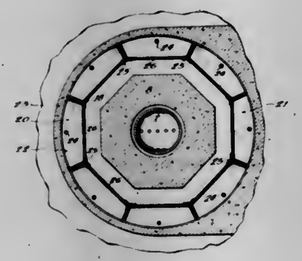
cavity, said housing having a plurality of equi-spaced ports located on a great circle of said spherical cavity, means for exciting electromagnetic waves within the said cavity of the even and odd TE_{111} modes in time quadrature to rotate about an axis of said spherical cavity perpendicular to the plane including said great circle, means in communication with said ports for introducing a heavy hydrogen isotope gas into the cavity at extremely low pressure, whereby the gas will be ionized and compressed towards the center of the spherical cavity by said electromagnetic waves.

3,022,237
RADIATION METHYLATION OF UNSATURATED HYDROCARBONS
Carl E. Heath, Jr., Nixon, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Apr. 30, 1958, Ser. No. 731,931
8 Claims. (Cl. 204—162)



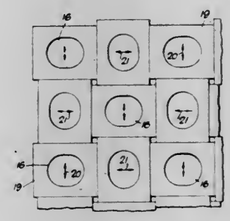
1. A hydrocarbon conversion process which comprises subjecting to high energy ionizing radiation equivalent to at least 30 electron volts, a hydrocarbon system comprising methane and a mono-olefin, the methane/olefin mole ratio in said system being in the range of 9:1 to 200:1, irradiating said system at a temperature in the range of 650° to 900° F. at a pressure in the range of 10 to 55 atmospheres until a total dosage in the range of 10^{-6} to 10^{6} kwh. of radiation energy per pound has been absorbed and recovering a saturated hydrocarbon having a greater number of carbon atoms than said mono-olefin.

3,022,238
SAFETY DEVICE FOR AND METHOD OF PROTECTING NUCLEAR POWER PLANTS
Alf Kolflat, Wilmette, Ill.
(140 S. Dearborn St., Chicago 3, Ill.)
Filed May 23, 1957, Ser. No. 661,229
3 Claims. (Cl. 204—193.2)



1. A nuclear power plant heat absorber comprising in combination: a building-size containment vessel housing for the power plant, a boiling water reactor supported within the containment vessel for heating water directed to the reactor, a retaining wall inside said containment vessel and extending about the reactor in spaced relation thereto leaving an air space between the wall and reactor, said retaining wall surrounding said reactor in relatively close proximity to the reactor, a plurality of trays supported on the side of said retaining wall facing said reactor, water at ambient temperature substantially filling said trays, said trays being closely spaced and in number to contain a large volume of ambient temperature water sufficient to absorb substantially the entire quantity of heat present within said heated water directed to the reactor so as to prevent a pressure rise within the containment vessel in the event of an accidental rapid release and escape of said heated water from the reactor, said trays being positioned around the reactor for immediate direct contact between said ambient temperature water in the trays and said heated water upon such accidental release from the reactor.

3,022,239
NUCLEAR REACTOR MODERATOR STRUCTURES
William Rodwell, Culcheth, near Warrington, England, assignor to United Kingdom Atomic Energy Authority, London, England
Filed July 1, 1958, Ser. No. 746,004
Claims priority, application Great Britain July 1, 1957
3 Claims. (Cl. 204—193.2)



1. A graphite moderator structure comprising stacks of uniform right prismatic graphite blocks positioned in layers extending one beyond the other in the direction of the lengths of the blocks, the blocks defining coolant channels parallel to their length and having minimum Wigner growth properties in the direction of their length and layers of graphite tiles alternating with the layers of blocks said tiles having the following characteristics: first, they define coolant channels continuous with the channels defined by the blocks, second, each tile is in side face contact with all tiles adjacent to it in its layer, third, each tile has minimum Wigner growth properties in a direction which is both perpendicular to the longitudinal axis of the blocks and perpendicular to the direction of minimum Wigner growth in tiles adjacent to it in its layer, fourth, the tiles are wider than the blocks in the direction of minimum Wigner growth in the tiles and fifth, the tiles are keyed to the blocks; and means providing centripetal restraint forces to each layer of tiles.

3,022,240
NUCLEAR REACTOR FUEL ELEMENT
Charles H. Bassett, Riverdale, Md., assignor, by mesne assignments to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 3, 1958, Ser. No. 765,198
15 Claims. (Cl. 204—193.2)

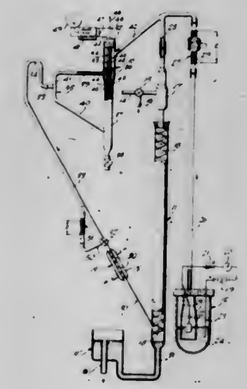
1. In a nuclear reactor fuel element, a tubular housing closed at its ends, a plurality of sets of fissionable fuel pellet segments within said housing, wedge members interposed between said sets of fuel pellet segments, and a

resilient element coacting with said wedge members to urge said fuel pellet segments radially into contact en-



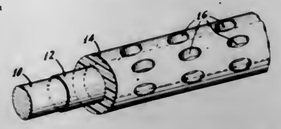
gagement against the inner surface of said tubular housing.

3,022,241
METHOD AND APPARATUS FOR MEASUREMENT OF DISSOLVED OXYGEN
Gilbert Jessop, Cambridge, England, assignor to Cambridge Instrument Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 11, 1958, Ser. No. 714,615
Claims priority, application Great Britain Feb. 15, 1957
9 Claims. (Cl. 204—195)



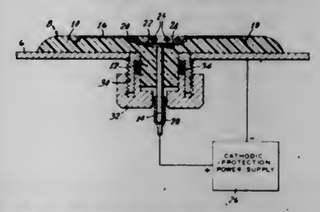
1. An oxygen responsive electro-chemical cell comprising a container having an electrically conductive liquid therein, a pair of electrodes of dissimilar noble metals within said cell and extending into said liquid, hydrogen supply means coupled with said container to maintain said liquid in a substantially uniformly hydrogen saturated condition, means for circulating oxygen through said solution and about at least one of said electrodes, and electrical measuring apparatus including a conductive impedance for direct current connected to said electrodes to indicate the magnitude of electrical output of said cell produced by the presence of oxygen in said liquid.

3,022,242
ANODE FOR CATHODIC PROTECTION SYSTEMS
Edward P. Anderson, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Jan. 23, 1959, Ser. No. 788,631
5 Claims. (Cl. 204—196)



1. In a cathodic protection system, an elongated corrosion-resistant bare conductor serving as the anode, a metal object to be protected, means including an insulating layer having a large number of openings therethrough and covering said conductor for avoiding mechanical contact of said conductor with said metal object, while permitting fluid flow to the surface of said conductor, said conductor being wound around said object, and means for applying direct protective current between said conductor and said object.

3,022,243
ANODE ASSEMBLY FOR CATHODIC PROTECTION SYSTEMS
Edward P. Anderson, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Apr. 28, 1959, Ser. No. 809,565
3 Claims. (Cl. 204—196)



1. An anode assembly comprising a substantially plate-shaped insulating plastic support, a circular thin plate of corrosion resistant metal serving as the anode and having one surface in contact with one circular surface of said support, a circumferential area and a central circular area of said thin metal plate being bent out of the plane of the plate to form a rim and a cup-shaped recess, respectively, said recess having a bottom portion and a substantially annular side wall, a plurality of perforations through said side wall, said recess and said rim being imbedded in the insulating support, the recess being filled with plastic material, which filling material forms a bond with the remainder of the support through said perforations, electrical connecting means secured to the bottom portion of the cup-shaped recess and extending through the insulating support to protrude therefrom at the other surface.

3,022,244
ELECTROLYTIC ALKALI-CHLORINE DIAPHRAGM CELL
Carrol P. Le Blanc, Maplewood, and Lewis W. Henslee, Jr., Lake Charles, La., assignors, by mesne assignments, to Pittsburgh Plate Glass Company
Filed June 26, 1959, Ser. No. 823,025
2 Claims. (Cl. 204—266)

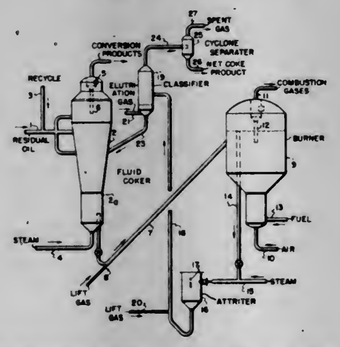
1. In an electrolytic alkali chlorine cell having an anode, a foraminous cathode, a porous asbestos diaphragm in the form of a porous sheet on the cathode and between the anode and the cathode, thus providing an anode compartment between the anode and the diaphragm, means for feeding brine into the anode compartment, means for withdrawing evolved chlorine from the anode compartment, and means behind the foraminous

cathode for withdrawing evolved hydrogen and alkali metal hydroxide, the improvement wherein the diaphragm has discrete carbon particles disposed within the asbestos diaphragm sheet said sheet having been formed by depositing the diaphragm on the cathode from an aqueous slurry of asbestos containing 1 to 60 percent carbon dispersed therein basis the dry weight of asbestos.

3,022,245
REFINING PROCESS FOR PETROLEUM WAX
Byron G. Spars, Madison, Wis., and Patrick P. McCall, New Monmouth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 2, 1959, Ser. No. 850,065
3 Claims. (Cl. 208—26)

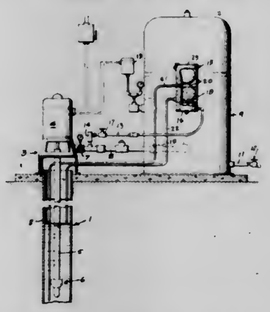
1. The method of upgrading crystalline petroleum waxes which comprises treating the wax in admixture with a hydrogen-rich gas in a first treating stage in contact with a hydrofining catalyst at temperatures between 500 and 650° F. and at pressures of between 400 and 1000 p.s.i.g., at feed rates of 3 to 5 v./v./hr. and treating the reaction mixture from this treatment step in contact with a hydrofining catalyst at temperatures between 400 and 500° F. and at least 100° F. lower than the treatment in the first treating stage and at essentially the same pressure as in the first treating step.

3,022,246
SEED COKE PRODUCTION IN FLUID COKING SYSTEMS
John F. Moser, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Oct. 7, 1954, Ser. No. 460,804
2 Claims. (Cl. 208—127)



1. An improved hydrocarbon oil fluid coking process, comprising injecting a charging stock into a coking zone containing fluidized particulate coke having a size substantially in the range of 40 to 800 microns maintained at a coking temperature to form relatively lighter hydrocarbon vapors and coke which is deposited on said particulate coke causing the particles to grow in size, removing said vapors as product, circulating stripped coke particles from the lower portion of said coking zone to a heating zone wherein the particles are heated to a temperature 50° to 400° F. above said coking temperature, comminuting the reheated coke particles at a conversion to minus 74 micron material per pass in the range of 1 to 5% by impelling all of the particles withdrawn from the heating zone without substantial cooling by means of a high velocity gas stream against an impact surface, elutriating the still hot comminuted particles utilizing the impelling gas to separate relatively fine minus 74 micron particles, passing the remaining hot comminuted particles to said coking zone to supply heat and growth nuclei thereto, and removing said relatively fine particles from said process as net coke product in an amount of from 5 to 30 wt. percent of the hydrocarbon oil charging stock.

3,022,247
DEVICE FOR TREATING WATER AND METHOD
Ernest E. Selby and Rufus R. Knapp, Redding, Calif., assignors to Dean Manufacturing, Inc., Redding, Calif., a corporation of California
Filed July 26, 1957, Ser. No. 674,410
3 Claims. (Cl. 210—59)



1. The method of treating the entire body of water within a well with a water soluble solid treating agent in solution that comprises substantially simultaneously performing the steps of; withdrawing a column of water of said body upwardly out of the latter from a point within the lower portion of said body and moving it to a point of discharge remote from said well for use at said point of discharge, diverting a relatively small portion of the water so withdrawn during said withdrawal and passing it across and in contact with said water soluble solid at a location spaced above said body to form a solution of said treating agents at said location, substantially continuously during said withdrawal discharging the solution that is formed at said location into said body of water at two spaced points respectively positioned below said point of withdrawal of said column and adjacent to the upper level of said body; then stopping the withdrawal of said column and thereafter draining said solution completely away from said solid and discharging it into said body of water and at the same time maintaining said column having said solution mixed therewith between said point of withdrawal thereof from said body and said point of discharge thereof against discharge and return into said body for mixing with the latter whereby only water having said solution mixed therewith will be subsequently discharged at said point of discharge.

3,022,248
LOW FLUID LOSS COMPOSITION
Duane B. Anderson and Arthur Park, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
No Drawing. Filed Sept. 21, 1959, Ser. No. 841,049
20 Claims. (Cl. 252—8.5)

1. A method of forming a substantially water impervious layer on a permeable barrier which comprises contacting said barrier with an aqueous mixture of lignin containing from about 2.5 to about 7.5 weight percent of a water-soluble alkali metal compound, based on the lignin, which is present in said mixture in a concentration of from about 1 to about 10 pounds per barrel.

3,022,249
WELL FRACTURING LIQUID
John F. Eberhard, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 12, 1959, Ser. No. 833,131
7 Claims. (Cl. 252—8.55)

1. An aqueous well treating composition comprising a mixture consisting of between 9 and 2.3 parts by weight of soya flour and 1 part by weight of a lignin compound selected from the class consisting of lignin, sulfonated lignin, alkali metal salts of lignin, and alkali metal salts of lignosulfonic acid, in an amount of between 10 and 100 pounds of said mixture per 1000 gallons of said aqueous composition.

3,022,250
LOW FOAMING DETERGENT FOR AUTOMATIC DISHWASHING MACHINE
Richard A. Grifo, Easton, Pa., and Raymond L. Mayhew, Phillipsburg, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 10, 1958, Ser. No. 708,066
2 Claims. (Cl. 252—135)

1. A low-foam detergent composition for use in a swinging-arm dishwasher consisting essentially of a phenol having therein an aliphatic substituent with an average number of 9 carbon atoms per chain, and a second substituent comprising condensed ethylene oxide in an average number of 4 molecules per molecule of phenol together with builders consisting essentially of a mixture of sodium metasilicate and sodium tripolyphosphate in the proportion of one part of metasilicate to three parts of tripolyphosphate, the builders being present in the proportion of 95 parts of builder mixture to 5 parts of nonylphenol ethylene oxide.

3,022,251
STABILIZED FOAM-PROVIDING COMPOSITION
Bernard J. Thiegs, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 27, 1959, Ser. No. 808,871
4 Claims. (Cl. 252—307)

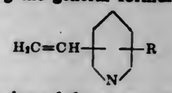
1. A stabilized foam-providing composition consisting essentially of water in which there is dissolved (1) between about 0.25 and 25 percent by weight of alum which is adapted to react chemically with a gas-generating alkali metal carbonate substance in order to be spumed into a foam structure and (2) between about 0.05 and 5 percent by weight of coal acids, both based on the weight of the composition, said coal acids being composed of water-soluble polycarboxylic aromatic products of the oxidation of coal which have an average molecular weight in the range between about 250 and 300, an average equivalent weight between about 70 and 90, and which contain an average of from about 2.5 to 5 carboxylic groups per aromatic nucleus in each molecule.

3,022,252
PLATINUM-ALUMINA CATALYST CONTAINING ADDED ALUMINUM CHLORIDE
Walter R. F. Guyer, Roselle, and Erving Arundale, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 27, 1953, Ser. No. 394,882
5 Claims. (Cl. 252—442)

1. An activated alumina-supported platinum catalyst comprising from 0.01 to 2 weight percent aluminum and containing as an added component aluminum chloride in an amount of from 0.1 to 15 weight percent based on the total catalyst.

3,022,253
RESINOUS INSOLUBLE NITROGEN-CONTAINING POLYMERS DERIVED FROM VINYLBENZYL CHLORIDE AND VINYLPYRIDINES
Elmer L. McMaster, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 24, 1958, Ser. No. 723,134
16 Claims. (Cl. 260—2.1)

1. A polymeric composition which comprises an insoluble cross-linked polymeric product, containing pyridinium groups in the polymer molecules, selected from the group consisting of (A) polymers resulting from the simultaneous copolymerization and reaction of from 50 to 95 mole percent of vinylbenzyl chloride and correspondingly from 50 to 5 mole percent of a vinyl-substituted heterocyclic amine having the general formula:



wherein R is a member of the group consisting of hydrogen and the methyl and ethyl radicals, said polymers containing chloromethyl groups on aromatic nuclei in the polymer molecules, and (B) the aminated polymers resulting from the reaction of the (A) polymers with a nitrogen-containing base selected from the group consisting of ammonia and amines.

3,022,254
LIQUID DIENE POLYMER-OLEFIN/SO_2 COMPOSITION AND PREPARATION OF THERMOSET CELLULAR PRODUCT THEREFROM
Rufus V. Jones and John N. Scott, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 22, 1957, Ser. No. 660,754
9 Claims. (Cl. 260—2.5)

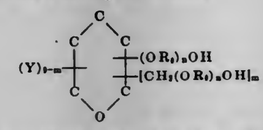
9. A method of preparing a cellular thermoset resin comprising mixing a polymer of a conjugated diene containing 4 to 6 carbon atoms having a viscosity of 100 to 6000 Saybolt Furol seconds at 100° F. with an olefin/SO_2 resin, the amount of said resin being in the range of 0.01 to 15 weight percent based on said polymer of a conjugated diene containing 4 to 6 carbon atoms, heating the resulting mixture at a temperature in the range of 450 to 550° F. for a time in the range of 15 minutes to 10 hours, said heating serving to blow and set said polymer and recovering a thermally cured product.

3,022,255
CELLULAR POLYURETHANE PLASTIC AND METHOD OF PREPARING SAME
Heinrich Morschel, Leverkusen, and Günther Loew, Koln, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 3, 1958, Ser. No. 777,823
Claims priority, application Germany Dec. 3, 1957
8 Claims. (Cl. 260—2.5)

1. A process for the production of improved cellular polyurethane plastics comprising reacting an organic polyisocyanate, water, and an organic polyhydroxyl compound containing ether linkages and at least three hydroxyl groups comprising the polymerization product of tetrahydrofuran, alkylene oxide, and epichlorohydrin, which has been reacted with a glycolate having the formula $HO(CH_2)_nOMe$, wherein n is an integer of from two to six and Me is an alkali metal, to provide hydroxyl groups for the chlorine atoms.

3,022,256
POLYURETHANE FOAM AND METHOD OF PREPARING SAME
Robert K. Barnes, Charleston, Robert W. McLaughlin, Belle, and Fritz Hostettler, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Aug. 10, 1959, Ser. No. 832,470
13 Claims. (Cl. 260—2.5)

1. A foamed polymer comprising a network of isocyanate-modified hydroxypolyalkyleneoxy ethers of substituted tetrahydropyrans in which said ethers are connected to organic polyisocyanate residues by means of urethane groups, said ethers having the formula:



in which Y represents a member selected from the group consisting of hydrogen atoms and lower alkyl groups; R_4 is a member selected from the group consisting of ethylene radicals, propylene radicals and mixtures thereof; m is an integer of 2 to 4; and n is a number having a value of at least one.

3,022,257
COMPOSITION COMPRISING POLYESTER, DIISOCYANATE AND CELLULOSIC FILLER AND WEARING SURFACE FOR SHOE PREPARED THEREFROM
George H. Gates, Cuyahoga Falls, and Anthony F. Finelli, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Oct. 31, 1958, Ser. No. 770,962
10 Claims. (Cl. 260—9)

5. A wearing surface for a shoe comprising a cured polyurethane composition resulting from the reaction of a liquid and pourable mixture comprising (1) a polyethylene adipate polyester having the molecular weight of from 900 to 1500 and an acid number not greater than 5; (2) a reticulator; (3) a diisocyanate selected from the group consisting of tolylene diisocyanate, diphenylmethane-4,4'-diisocyanate and 3,3'-dimethyl-4,4' - diphenylene diisocyanate; and (4) a cellulosic flour selected from the class consisting of wood flours and nut shell flours; the reticulator being present in an amount ranging from 0.5 to 0.8 mol per mol of polyester and being selected from the class consisting of benzidine; tolidene; 1,5-naphthalene diamine; tolylene diamine; methylene bis-ortho-chloroaniline; isopropylidene, bis-ortho-chloroaniline and dichlorobenzidine when the diisocyanate is tolylene diisocyanate and of ethylene glycol; propylene glycol; butane diol-1,4; paraxylene glycol, the bis-hydroxyethyl ether of hydroquinone and the chlorinated derivatives of the aromatic glycols when the diisocyanate is diphenylenemethane-4,4'-diisocyanate and 3,3'- dimethyl-4,4'-diphenylene diisocyanate; the diisocyanate being present in an amount ranging from 1.7 to 2.2 mols per mol of polyester and with the diisocyanate being present in a molar excess of at least 10% more than the sum of the molar amounts of polyester and reticulator; and the cellulosic flour being present in an amount ranging from 60 to 90 parts by weight per 100 parts of polyester and being characterized by yielding a non-viscous pourable mixture when mixed with the above polyester in the above amounts.

3,022,258
AQUEOUS WOOD FINISHING COMPOSITION OF UREA-FORMALDEHYDE CONDENSATE, SUGAR AND SOLVENT
John M. Berry, Martinsville, Va., assignor to Midland Chemical Corporation, Dayton, Ohio, a corporation of Delaware
Filed May 14, 1958, Ser. No. 735,238
2 Claims. (Cl. 260—17.3)

1. An aqueous filler-sealer composition for filling and sealing wood surfaces which consists essentially of

Sugar	pounds	5
Urea-formaldehyde (powdered stage-B resin)	do	15
Monobutyl ether of diethylene glycol	do	4
Monobutyl ether of ethylene glycol	liquid ounces	20
Water	gallons	2½

3,022,259
PROCESS FOR PURIFYING ACID-CONTAINING COMPOSITIONS
John W. Pearce, Racine, Wis.
No Drawing. Filed May 6, 1955, Ser. No. 506,676
4 Claims. (Cl. 260—22)

1. A process for the removal of free non-oxidizing acids from organic compositions containing same, said organic compositions containing oxirane oxygen and being selected from the group consisting of polyepoxide polyesters of tetrahydrophthalic acid and glycols, and esters of epoxidized ethylenically unsaturated vegetable oil, acids, which comprises admixing an inert organic solvent containing said organic composition with a quaternary ammonium anion exchange resin which is insoluble in said organic solvent containing said organic composition, said exchange resin having been rendered substantially water free by heating it to a temperature of about 80° C. for approximately 16 hours, whereby upon said admixing, an acid salt and water is formed, said exchange resin absorbing the water.

3,022,260
DECREASING THE VISCOSITY OF BUTYL RUBBER LATEX BY TREATMENT WITH ANION AND CATION EXCHANGE RESINS
Alfred L. Miller, Cranford, Samuel B. Robison, Roselle, and Anthony J. Petro, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Apr. 21, 1959, Ser. No. 807,766
3 Claims. (Cl. 260—29.7)

1. A method for decreasing the viscosity of a butyl rubber latex obtained by emulsifying a 5 to 35 wt. percent solution in a C_4 to C_{10} hydrocarbon solvent of 100 parts by wt. of a copolymer of a major proportion of a C_4 to C_8 isoolefin and a C_4 to C_{14} diolefin with water containing about 0.15 to about 3.0 parts by wt. of sodium dihydrogen phosphate and an emulsifier selected from the group consisting of the sodium and potassium salts of sulfated nonylphenoxypolyethoxyethanol, the sodium salt of sulfated tridecoxypolyethoxyethanol, the lithium and potassium salts of sulfated duodecoxypolyethoxyethanol, the ammonium and amine salts of sulfated nonylphenoxypolyethoxyethanol, the ammonium and amine salts of sulfated tridecoxypolyethoxyethanol, the ammonium and amine salts of sulfated duodecoxypolyethoxyethanol, sodium lauryl sulfate, potassium lauryl sulfate, and the sodium salt of sulfated octylphenoxypolyethoxyethanol, which comprises contacting the said latex with 0.2 to 30 parts by weight of an alkali-treated anion exchange resin recovering the latex

from the anion exchange resin and then contacting it with an acid-treated cationic exchange resin and finally removing the treated latex from the cationic exchange resin.

3,022,261
VINYL RESIN PLASTICIZED WITH AN ADDUCT OF AN ALKYL VINYLPHOSPHONATE

Joseph E. Fields and John H. Johnson, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application June 25, 1954, Ser. No. 439,486, now Patent No. 2,844,618, dated July 22, 1958. Divided and this application Jan. 2, 1958, Ser. No. 706,583

8 Claims. (Cl. 260—30.6)

1. A resinous composition comprising a polymer selected from the class consisting of polyvinyl chloride and a polyvinyl acetal plasticized with an adduct in which there are chemically combined from 2 to 50 moles of an alkyl vinylphosphonate in which the alkyl radical has from 1 to 8 carbon atoms with 1 mole of a compound which is a solvent for said phosphonate and which is selected from the class consisting of alkyl and dialkyl benzenes having from 1 to 3 carbon atoms in the alkyl radical, normally liquid alkyl phosphites having from 1 to 8 carbon atoms in the alkyl radical and halogenated alkanes having from 1 to 2 carbon atoms and containing at least 3 halogen atoms attached to the same carbon atom.

3,022,262
MODIFIED GLYCIDYL METHACRYLATE COMPOSITIONS

Thomas J. Hyde, Woodbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 31, 1957, Ser. No. 706,255

8 Claims. (Cl. 260—43)

1. A composition of matter comprising glycidyl methacrylate, an anhydride member selected from the group consisting of pyromellitic dianhydride, maleic anhydride, and cyclopentanetetracarboxylic dianhydride, and an alcohol selected from the group consisting of monohydric alcohols of 3 to 11 carbon atoms and polyhydric alcohols having an average molecular weight of less than 1540, said alcohols containing no functional group reactive with the anhydride other than the hydroxyl group and in which each hydroxyl group is attached to a saturated carbon atom, the amount of said anhydride member being that which provides between about 0.55 and about 1.0 anhydride group for each epoxide group and the amount of said alcohol being that which provides between about 0.01 and about 0.9 alcoholic hydroxyl group for each anhydride group of said anhydride member.

3,022,263
PROCESS FOR THE MANUFACTURE OF PLASTICIZED POLYMERS OF VINYL CHLORIDE OR PLASTICIZED POLYMERS OF VINYLIDENE CHLORIDE

Ludwig Orthner, Horst Herzberg, and Hans Helmut Frey, all of Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed July 18, 1957, Ser. No. 672,590

Claims priority, application Germany July 21, 1956

5 Claims. (Cl. 260—45.5)

1. A process for the manufacture of a plasticized resin composition, which comprises admixing (1) a solution of a rubbery polymer in an organic solvent, said rubbery polymer being selected from the group consisting of a chlorinated polyethylene, a sulfochlorinated polyethylene, a chlorinated polypropylene, a sulfochlorinated polypropylene, a chlorinated copolymer of ethylene and propylene, and a sulfochlorinated copolymer of ethylene and propylene, with (2) an aqueous emulsion of a member selected from the group consisting of polyvinyl chloride, polyvinylidene chloride, and copolymers of a predominant amount of vinyl chloride and a monoolefinic monomer, subsequently removing the organic solvent, separating the residual water from the resin and recovering a non-sticky powder of uniform grain size which is a blend of both polymers.

3,022,264
COMPOSITIONS COMPRISING GRAFT COPOLYMERS OF N-VINYL LACTAM MONOMERS ON ACRYLONITRILE POLYMER SUBSTRATES AND METHOD OF MAKING SAME

George W. Stanton, Walnut Creek, and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 29, 1958, Ser. No. 711,929

9 Claims. (Cl. 260—45.5)

1. Dye-receptive graft copolymer composition comprised of (1) an acrylonitrile polymer substrate which is a polymer of polymerizable, acrylonitrile-containing, ethylenically unsaturated monomeric material that has in the polymer molecule at least about 80 weight percent of polymerized acrylonitrile, having chemically attached through carbon linkages thereto a minor proportion of up to about 20 weight percent, based on composition weight, of substituent graft copolymerized units consisting of (2) polymerized N-vinyl lactam monomers.

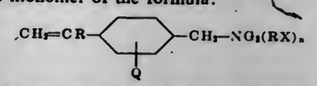
3,022,265
COMPOSITIONS COMPRISING GRAFT COPOLYMERS OF CERTAIN AMINATED ALKENYL AROMATIC MONOMERS ON ACRYLONITRILE POLYMER SUBSTRATES AND METHOD OF MAKING

George W. Stanton, Walnut Creek, and Teddy G. Traylor, Concord, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Jan. 29, 1958, Ser. No. 711,934

9 Claims. (Cl. 260—45.5)

1. Dye-receptive graft copolymer composition comprised of (1) an acrylonitrile polymer substrate which is a polymer of polymerizable, acrylonitrile-containing, ethylenically unsaturated monomeric material that has in the polymer molecule at least about 80 weight percent of polymerized acrylonitrile, said acrylonitrile polymer having chemically attached to carbon atoms in its chain, as graft copolymerized substituents thereon, a minor proportion of units of (2) a polymerized aminated alkenyl aromatic monomer of the formula:



(I)

wherein R is selected from the group consisting of hydrogen and methyl; Q is selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 4 carbon atoms; each G is independently selected from the group consisting of hydrogen, methyl, and hydroxyethyl radicals; X is a halogen and n has a whole number value from 0 to 1.

3,022,266
PROCESS FOR THE PREPARATION OF ACRYLONITRILE COPOLYMERS

Karl Meinel, Burghausen, Upper Bavaria, Germany, assignor to Wacker-Chemie G.m.b.H., Munich, Germany, a firm of Germany

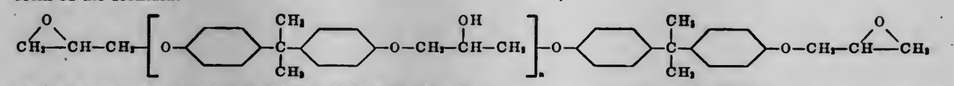
No Drawing. Filed Dec. 16, 1959, Ser. No. 859,839

Claims priority, application Germany Dec. 18, 1958

2 Claims. (Cl. 260—45.5)

1. Process for the production of copolymers of acrylonitrile, which comprises hydrolyzing and condensing

acrylonitrile in an aqueous hydrodysis medium comprising an 80% to 95% by weight sulfuric acid solution containing 0.5 to 0.6 mol of water for each mol of acrylonitrile present while at a temperature of 80° C. to 120° C., said aqueous medium containing a member of the group consisting of a sulfate of a metal of the third to the eighth group of the periodic system, and also an ethoxylin resin of the formula:



having a molecular weight of 2000 to 4000 and wherein n is an integer, diluting the reaction mixture with water, whereby the sulfuric acid concentration is reduced to 2% to 70% by weight, adding acrylonitrile persulfate polymerization catalyst and causing the polymerizable monomers present to undergo polymerization while maintaining the reaction medium at a temperature of from 70° C. to 100° C.

3,022,267
STABILIZED ISOTACTIC POLYPROPYLENE AND METHOD

David W. Young, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

Filed May 14, 1958, Ser. No. 735,130

No Drawing. Filed May 14, 1958, Ser. No. 735,130

6 Claims. (Cl. 260—45.9)

1. A composition of matter consisting essentially of solid, crystalline isotactic polypropylene and 0.005 to 5 percent of N-stearoyl p-amino phenol.

3,022,268
POLYETHYLENE COMPOSITION

John Brian Armitage and Archibald Miller Hyson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 17, 1958, Ser. No. 749,055

2 Claims. (Cl. 260—45.85)

1. A light-resistant composition containing polyethylene and 0.0005% to 1% by weight of the polyethylene content of the composition of octadecylsalicylate and from 0.0005% to 1% on the same basis of 4,4'-thiobis-(6-tert-butyl-m-cresol).

3,022,269
DETERIORATION RETARDERS FOR RUBBER AND COMPOSITIONS COMPRISING THE SAME

Jacob E. Jansen and Henry J. Kehe, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 9, 1959, Ser. No. 785,794

12 Claims. (Cl. 260—45.95)

5. A rubbery composition comprising an unsaturated rubbery diolefinic polymer selected from the class consisting of a polymer of a conjugated diolefin and a copolymer of a conjugated diolefin with a monoolefin through which unsaturated rubbery diolefinic polymer is dispersed from about 0.1 to 10 weight percent based on the weight of the unsaturated rubbery diolefinic polymer of a deterioration retarder comprising the reaction product of 2,2-bis(4-hydroxyphenyl)propane and two olefins, one olefin being selected from the class of alkenyl olefins consisting of isobutylene and diisobutylene, and the other olefin being selected from the class of aralkenyl olefins consisting of styrene, alpha-methyl styrene, para-methyl styrene, para-methyl alpha-methyl styrene and ethyl styrene, the reaction being carried out in an organic solvent inert to the reactants in the presence of an acidic condensation agent and at a temperature ranging from about 50° C. up to the boiling point of the inert organic solvent, and in which about 1 mol of the 2,2-bis(4-hydroxyphenyl)propane and about 4 mols of the two olefins taken as a whole are brought into reactive contact and in which the two olefins are made up of about 8 to 40 mols of the alkenyl olefin to 1 mol of the aralkenyl olefin.

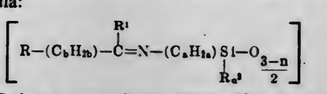
3,022,270
N-(HETEROCYCLIC SUBSTITUTED ALKYLIDENE) AMINO - ALKYLSILICON COMPOUNDS AND PROCESS FOR PRODUCING THE SAME

Robert J. Lisanke, Buffalo, N.Y., assignor to Union Carbide Corporation, a corporation of New York

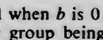
No Drawing. Filed June 27, 1958, Ser. No. 744,901

17 Claims. (Cl. 260—46.5)

2. An organosiloxane consisting essentially of units of the formula:



wherein R is a monovalent heterocyclic group selected from the class consisting of pyridyl, indolyl, acridinyl, pyrryl, piperidinyl, quinolinyl, furyl, benzofuryl, pyranyl, xanthyl, indazyl, pyrimidyl, pyrazyl, cinnolinyl, quinazolyl, phenazinyl, pyrazolyl, para-dioxin, 1,4-oxazinyl, benzoxazinyl, benzisoazolyl, benzisoxazolyl, oxazolyl, isooxazolyl, 1,2-benzopyranyl, naphthyridinyl, pyrido-(3-2-b)-pyridinyl, carbazyl, pyridinyl and pyrazolyl groups, R^1 is a member of the group consisting of the hydrogen atom and monovalent hydrocarbon radicals, R^2 is a member of the group consisting of the hydrogen atom and monovalent hydrocarbon radicals, a is an integer of from 3 to 19 inclusive, b is an integer of from 0 to 3 inclusive, said heterocyclic group being interconnected to the



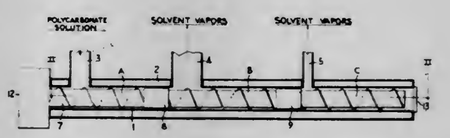
group by a carbon to carbon bond when b is 0 and when b is from 1 to 3 said heterocyclic group being interconnected to the (C_bH_{2b}) group through a carbon to carbon bond, and n is an integer of from 0 to 2.

3,022,271
FINISHING OF SOLID DIPHENOLIC POLYCARBONATES

Donald E. Darr, Pittsburgh, Pa., and Richard P. Nawoski, Barberton, Ohio, assignors, by mesne assignments, to Pittsburgh Plate Glass Company

Filed Aug. 10, 1960, Ser. No. 48,733

8 Claims. (Cl. 260—47)



1. A method of recovering solid polycarbonate of a diphenol from solution in inert solvent normally boiling below the temperature at which the polycarbonate is flowable which comprises heating the solution to volatilize solvent therefrom and raise the solution to a temperature at which the polycarbonate is flowable while maintaining superatmospheric pressure upon the solution sufficient to control the volatilization so as to retain with the polycarbonate sufficient solvent to keep the polycarbonate-sol-

vent mixture flowable until attaining a temperature at which the polycarbonate is flowable and thereafter extruding the solvent-lean flowable polycarbonate.

3,022,272
PROCESS FOR THE PRODUCTION OF HIGH MOLECULAR POLYCARBONATES

Hermann Schnell, Krefeld-Uerdinger, and Gerhard Fritz, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 8, 1956, Ser. No. 614,340
Claims priority, application Germany Dec. 21, 1955
10 Claims. (Cl. 260—47)

1. In the process of producing highly polymeric fibre and film forming polycarbonates by interesterifying reaction mixtures selected from the group consisting of (*a*) dicarbonates selected from the group consisting of aliphatic, cycloaliphatic and aromatic diesters of carbonic acid and organic dihydroxy compounds selected from the group consisting of aliphatic, cycloaliphatic and aromatic dihydroxy compounds, (*b*) bis-carbonates selected from the group consisting of bis-alkyl, bis-cycloalkyl and bis-aryl carbonates of aromatic dihydroxy compounds and said organic dihydroxy compounds, and (*c*) said bis-carbonates of aromatic dihydroxy compounds with themselves, at temperatures from about 50 to about 330° C. in the presence of a basic interesterification catalyst until highly polymeric polycarbonates are obtained, the improvement which comprises neutralizing the basic catalyst at the end of the interesterification reaction by adding to the melt a base-neutralizing compound selected from the group consisting of phenylchloroformate, aromatic sulfonic acid halide, ω-chloroacetophenone, dialkyl sulphate and ammonium hydrogen sulphate in an amount at least equivalent to the amount of the basic catalyst employed in said interesterification reaction.

3,022,273
PROCESS FOR IMPROVING THE COLOR OF RESINS PRODUCED FROM ACROLEIN AND PENTAERYTHRITOL

Howard R. Guest, Charleston, Ben W. Kiff, Ona, and Calvert B. Halstead, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Mar. 12, 1959, Ser. No. 798,809
9 Claims. (Cl. 260—47)

1. In the process for producing solid resins by reacting acrolein with pentaerythritol in a ratio of from about 1 to about 2 moles of said acrolein per mole of said pentaerythritol, at a temperature of from about 50° C. to about 125° C. and in contact with an acid catalyst, to form a liquid resin which is subsequently cured by heating said liquid resin in contact with an acid catalyst, the improvement which comprises curing said liquid resin in contact with an amount of phenyl dichlorophosphine sufficient to inhibit color formation in the resulting solid resinous product.

3,022,274
POLYMERIZATION OF PYRROLIDONE AND PIPERIDONE EMPLOYING CYANURIC CHLORIDE

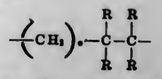
Samuel A. Glickman, Easton, and Edgar Shelley Miller, Bethlehem, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 4, 1958, Ser. No. 726,342
3 Claims. (Cl. 260—78)

1. In the process of polymerizing lactams under essentially anhydrous conditions of the formula



wherein Z represents



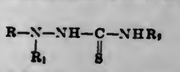
where *n'* is an integer from 1 to 2 and R represents a member of the group consisting of H and lower alkyl groups of 1 to 4 carbon atoms comprising polymerizing said lactam in the presence of a minor amount an up to about 10 mole percent based on said lactam of alkali metal lactam as the polymerization catalyst; the improvement which comprises effecting said polymerization in the presence of a minor amount up to about 10 mole percent based on said lactam of cyanuric chloride.

3,022,275
VULCANIZATION ACCELERATORS

Friedrich Lober, Leverkusen-Bayerwerk, Ernst Roos, Leverkusen, and Theo Kempermann, Koln-Lindenthal, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed June 2, 1959, Ser. No. 817,453
Claims priority, application Germany June 4, 1958
8 Claims. (Cl. 260—79)

1. In a process for the metal oxide vulcanization of a polymer selected from the group consisting of chloroprene homopolymers and chloroprene copolymers containing copolymerized therein in small amounts a monomer selected from the group consisting of dichlorobutadiene, styrene, and acrylonitrile, the improvement comprising mixing the aforesaid polymer with 0.1–5% by weight of a vulcanization accelerator of the general formula:



in which R, R_1 and R_2 stand for a member selected from the group consisting of hydrogen and hydrocarbon radicals of up to 8 carbon atoms, and then vulcanizing said mixture.

3,022,276
PROCESS FOR THE PREPARATION OF CHLORINATED AND SULFOCHLORINATED POLYOLEFINS

Ludwig Orthner, Horst Herzberg, and Franz Landauer, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main Hochst, Germany, a company of Germany

No Drawing. Filed Apr. 24, 1957, Ser. No. 654,649
Claims priority, application Germany Apr. 30, 1956
9 Claims. (Cl. 260—79.3)

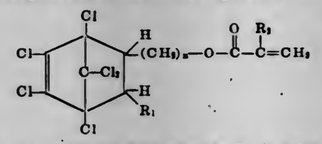
9. An improved process of chlorinating a crystalline low pressure polyolefin selected from the group consisting of homopolymers of monoolefins of 3–8 carbon atoms and copolymers of said monoolefins with each other, said polyolefins being produced by the polymerization of said monoolefins in contact with a catalytic amount of a catalyst mixture consisting of an alumino-organic compound and a salt of the elements of subgroups IV–VI of the periodic table, said polyolefins being characterized by their insolubility in chlorinated aliphatic hydrocarbons boiling below 100° C. at atmospheric pressure, said process comprising the steps of chlorinating said polyolefin in a first stage under elevated pressure at a temperature of 100–160° C. in a chlorinated aliphatic hydrocarbon in which said polyolefin is insoluble and having a normal boiling point below 100° C. at atmospheric pressure to form a solution of the partially chlorinated polyolefin, the latter having a chlorine content of 2–10% by weight of the resulting polymer, and then in a second stage further chlorinating the dissolved polymer under atmospheric pressure at temperatures from 20–80° C. in the presence of sulfur dioxide to obtain a sulfochlorinated polyolefin having a chlorine content in excess of 10% by weight but not greater than 75% by weight of the resulting product.

3,022,277
POLYHALOGEN CONTAINING BICYCLIC ACRYLATE ESTERS

Samuel J. Nelson, Bloomingdale, N.J., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed July 17, 1958, Ser. No. 749,069
12 Claims. (Cl. 260—86.7)

1. A composition of matter having the formula:



wherein *n* is an integer from 0 to 9, R_1 is selected from the group consisting of an hydrogen radical and a methyl radical, and R_2 is selected from the group consisting of an hydrogen radical, an halogen radical, and an alkyl radical containing from 1 to 4 carbon atoms.

3,022,278
VINYLIDENE HALIDE POLYMER SYNTHESIS

John D. Calfee, Dayton, and Lowell E. Erbaugh, Vandalia, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 12, 1957, Ser. No. 652,349
12 Claims. (Cl. 260—87.7)

1. The process which comprises catalytically polymerizing vinylidene fluoride with a free radical catalyst in contact with a mono-olefinic compound selected from the group consisting of ethylene, propylene, styrene, and vinyltrimethylsilane, said mono-olefinic compound being present in an amount of less than about 1.5% by weight but at least 0.05% by weight and sufficient to render the resultant polymer readily processable and of specific viscosity of 0.03 to 0.125 determined as a 0.1% solution in dimethylformamide at 100° C.

3,022,279
PROCESS FOR MAKING HYDROLYZED POLYACRYLAMIDE

Arthur C. Proffitt, Auburn, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed May 6, 1959, Ser. No. 811,272
5 Claims. (Cl. 260—89.7)

1. A method for producing high molecular weight water-soluble hydrolyzed polyacrylamide which comprises the steps of forming a homogeneous aqueous solution containing at least about 5 percent by weight of acrylamide as substantially the sole polymerizable ingredient and sodium carbonate in the amount of from about 0.1 to about 0.67 mole per mole of acrylamide in the reaction mixture, introducing into said solution a polymerization catalyst capable of producing free radicals and initiating polymerization at a temperature of from about 20° to 55° C. to produce a substantially homogeneous water-soluble polymer product.

3,022,280
PROCESS OF MAKING VINYL ETHER POLYMERS

Julius G. Shukys, Chatham Township, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed May 9, 1958, Ser. No. 734,129
2 Claims. (Cl. 260—91.1)

1. A process of making high molecular weight polymers of a vinyl lower alkyl ether in which the lower alkyl radical contains 1 to 4 carbon atoms which comprises polymerizing said ether in admixture with a small but effective amount of a catalyst consisting essentially of zinc chloride and tertiary butyl chloride, the tertiary butyl chloride being present in the proportion of 0.2 to 10 parts by weight per part of zinc chloride.

3,022,281
POLYMERIZATION PROCESS WITH A PEROXYDICARBONATE INITIATOR FORMED IN SITU

Edwin Studley Smith, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

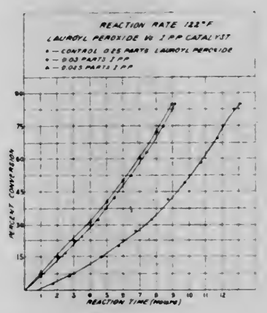
No Drawing. Filed Nov. 24, 1958, Ser. No. 775,726
6 Claims. (Cl. 260—92.8)

1. The polymerization as a separate monomer phase of an unsaturated monomer containing a single methylene group attached to a carbon atom by a double bond and polymerizable by peroxy compounds which comprises initiating the polymerization of the monomer as a separate monomer phase in an alkaline water phase by means of an organic peroxydicarbonate formed in the presence of the monomer by reacting an alkyl haloformate present in the monomer phase with a peroxide present in the water phase while maintaining the temperature of the dispersion at a value sufficient to bring about the reaction but below about 60° C. the haloformate in the monomer phase being present in amount from about 0.005 to about 1.0 part per 100 parts of monomer and sufficient peroxide present to react with the haloformate.

3,022,282
POLYMERIZATION CATALYST FOR VINYL CHLORIDE

Leonard F. Marous, Painesville, Ohio, and Charles D. McCleary, Naugatuck, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 25, 1959, Ser. No. 835,898
4 Claims. (Cl. 260—92.8)



1. A process for preparing granular vinyl chloride polymerization products comprising (1) agitating in a closed reaction vessel a suspension of 100 parts by weight of vinyl chloride monomer in from 100 to 400 parts of an aqueous medium containing a suspension stabilizer, (2) introducing from 0.005 to 0.100 part of dialkyl peroxy dicarbonate as catalyst and, (3) heating the suspension to a temperature of from 100° F. to 160° F. until polymerization of the vinyl chloride monomer is complete.

3,022,283

PRODUCTION OF SOLID OLEFIN POLYMERS IN THE PRESENCE OF ACETYLENIC COMPOUNDS USING ALKYL TITANIUM HALIDE CATALYSTS

John E. Wicklatz and Boris Franzus, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 18, 1959, Ser. No. 821,105
9 Claims. (Cl. 260—93.7)

1. In a process for polymerizing an olefin in the presence of a catalyst comprising a trialkylaluminum and a trihalide of titanium, the improvement which comprises contacting said catalyst with an olefin corresponding to the formula $R—CH=CH_2$, wherein R is an alkyl radical containing from 1 to 4, inclusive, carbon atoms, said contacting occurring in the presence of an acetylenic compound corresponding to the formula $R'—C\equiv C—R'$, wherein R' is selected from the group consisting of an alkyl radical and a phenyl radical, each said radicals containing from 1 to 16, inclusive, carbon atoms, the amount of said acetylenic compound being in the range of 0.01 to 0.5 mol per mol of said catalyst.

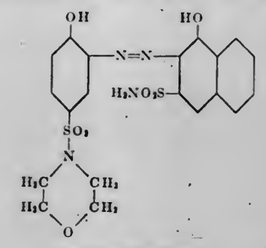
3,022,284

AZO DYESTUFFS

Sigmund C. Catino, Allentown, Pa., Albert F. Strobel, Phillipsburg, N.J., and William W. Williams, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1954, Ser. No. 478,875
1 Claim. (Cl. 260—146)

A chromiferous complex of a dyestuff having the formula



3,022,285

CARBOXYLATEVINYL AND CARBOXYVINYL ETHERS OF SUGARS AND METHOD OF PREPARATION

Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 26, 1959, Ser. No. 822,989
15 Claims. (Cl. 260—209)

1. A method of making a carboxylatevinyl sugar ether comprising reacting a sugar salt of a hydroxide selected from the class consisting of alkali metal and quaternary ammonium hydroxides, with a propiolate of the formula $R'C\equiv CCOOR$ wherein R is an alkyl group having from 1 to 22 carbon atoms and R' is selected from the class consisting of hydrogen and hydrocarbon radicals free of non-benzenoid unsaturation having from 1 to 6 carbon atoms, to form a carboxylatevinyl ether of a sugar.

3,022,286

PROCESS FOR PREPARING HIGHER FATTY ACID SALTS OF NEOMYCIN

Gerald H. van de Griendt, Summit, N.J., assignor to S. B. Penick and Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 14, 1959, Ser. No. 859,160
8 Claims. (Cl. 260—210)

1. The process for preparing higher fatty acid salts of neomycin which comprises: dissolving approximately stoichiometrically equivalent quantities of neomycin base and a higher fatty acid in a lower alkanol so that the final pH of the reaction mixture is between about 6.5 and about 7.5.

3,022,287

METHOD OF PREPARING CELLULOSE ESTERS OF TRIMELLITIC ACID

John W. Mench, John Emerson, and Martin E. Rowley, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Jan. 13, 1960, Ser. No. 2,113
6 Claims. (Cl. 260—224)

1. A method of preparing tricarboxylic acid esters of cellulose which comprises reacting upon a cellulose material containing free and esterifiable hydroxyl groups with trimellitic anhydride in an esterification bath employing lower fatty acid solvent and as the catalyst an acid soluble salt having a basic reaction.

3,022,288

PROCESS FOR PREPARING CARBOXYLATEVINYL AND CARBOXYVINYL ETHERS OF POLYSACCHARIDES

Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 29, 1959, Ser. No. 823,301
20 Claims. (Cl. 260—231)

1. The method of preparing a carboxylatevinyl ester of a polyhydroxy compound selected from the class consisting of cellulose, starches and hydroxyethylated starches which comprises reacting an alkali metal salt of the polyhydroxy compound with an alkyl propiolate having from 1 to 6 carbon atoms in the alkyl radical in the presence of a solvent for the propiolate.

3,022,289

ACYLATION OF STARCH

John V. Tuschhoff and Clifford E. Smith, Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

No Drawing. Filed Feb. 13, 1959, Ser. No. 792,972
24 Claims. (Cl. 260—233.5)

1. The method of chemically modifying starch that comprises reacting starch in the presence of an alkaline catlyst and more than about 10% water by weight of dry substance starch with an ester of a carboxylic acid and an ethylenically unsaturated alcohol radical of fewer than four carbon atoms.

3,022,290

PROCAINE PENICILLIN PRODUCTION

Alfred E. Jurist, Brooklyn, N.Y., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 6, 1957, Ser. No. 700,954
5 Claims. (Cl. 260—239.1)

1. In the preparation of crystalline procaine penicillin for use in animal feeds which essentially comprises the simultaneous, incremental addition of (I) an aqueous solution of an alkali metal penicillin and (II) an aqueous solution of a procaine acid-addition salt to (III) a suspension of crystalline procaine penicillin in water, the improvement which comprises including (IV) a component of the class consisting of urea and water soluble alkyl ureas in a range of about 5% to about 25% in the suspension III, and maintaining in said suspension substantially the same concentration of the component IV during the incremental addition.

3,022,291

PROCESS FOR THE MANUFACTURE OF CAPROLACTAM

Werner Muench, Cesano Maderno, and Luigi Notarbartolo and Giuliana Silvestri, Milan, Italy, assignors to Snia Viscosa Società Nazionale, Industria Applicazioni Viscosa S.p.A., Milan, Italy, a company of Italy

No Drawing. Filed Sept. 14, 1959, Ser. No. 839,597
Claims priority, application Italy Sept. 18, 1958
9 Claims. (Cl. 260—239.3)

1. A process for the preparation of caprolactum, which comprises subjecting the starting material in a sulfuric acid reaction medium, the sulfuric acid employed containing at least sufficient SO_3 to provide 85% by weight of H_2SO_4, to the action of a nitrosating agent which provides NO ions in such sulfuric acid reaction medium, said starting material being cyclohexane which has only one of its hydrogen atoms replaced by a substituent group connected by the carbon atom of a carbonyl group in said substituent group; and continuing the reaction in said sulfuric acid reaction medium until caprolactam is formed and said substituent group is eliminated from the molecule.

3,022,292

INHIBITED MONOMERIC SYSTEMS

Homer J. Sims, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,508
14 Claims. (Cl. 260—239.3)

1. A composition consisting essentially of a polymerizable monomer that has a structure free of vinyl groups attached directly to an aromatic ring and a stabilizing amount of 2,3-dicyanobenzoquinone.

7. A composition consisting essentially of an ethylenically unsaturated polymerizable lactam and a stabilizing amount in the range of about 0.001%–3.0% of 2,3-dicyanobenzoquinone.

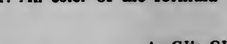
3,022,293

NOVEL ETHYLENIC COMPOUNDS

Lee A. Miller, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Nov. 27, 1959, Ser. No. 855,498
13 Claims. (Cl. 260—239.3)

1. An ester of the formula



in which R is alkyl of from 1 to 5 carbon atoms and A denotes a heterocyclic nitrogen residue bonded through nitrogen to the rest of the molecule of which it forms a part and formed by loss of N-hydrogen from a heterocyclic nitrogen compound selected from the class consisting of lactams having from 4 to 9 members in the ring and cyclic imides having from 4 to 10 members in the ring.

3,022,294

PROCESS FOR THE SEPARATION OF GENINS FROM GLYCOSIDES

Karl Heinz Hauptmann and Karl Zeile, Ingelheim (Rhine), Germany, assignors to C. H. Boehringer Sohn, Ingelheim (Rhine), Germany, a partnership of Germany

No Drawing. Filed Sept. 23, 1958, Ser. No. 762,701
3 Claims. (Cl. 260—239.55)

1. In a process of producing hecogenin from heconin-containing sisal residues which comprises allowing said sisal residues to autolyse, whereby a fermentation sediment is formed which consists essentially of a mixture of partially degraded heconin and non-saponin impurities, drying said fermentation sediment, extracting said partially degraded heconin from said dry fermentation sediment and converting the extracted partially degraded heconin into raw hecogenin by acid hydrolysis, the improvement which consists of extracting the dry fermentation sediment with a hot alkanol which is liquid at room temperature and has a boiling point of more than 100° C., said alkanol being selected from the group consisting of butanol and pentanol, whereby the partially degraded heconin goes into solution in the hot alkanol while the insoluble non-saponin impurities remain substantially undissolved, separating the hot alkanol extract solution from insoluble matter, cooling the alkanol extract solution, whereby the partially degraded heconin dissolved therein precipitates out, separating the precipitate consisting essentially of pure partially degraded heconin from the cool alkanol, and converting the partially degraded heconin contained in said precipitate into hecogenin by acid hydrolysis.

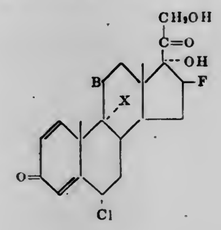
3,022,295

16β-DIFLUORINATED CORTICOSTEROIDS AND INTERMEDIATES

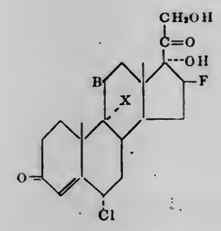
Rudolph G. Berg, New London, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,039
10 Claims. (Cl. 260—239.55)

1. A compound selected from the group consisting of those having the formula:



and



wherein B is selected from the group consisting of carbonyl and β-hydroxymethylene radicals and X is selected from the group consisting of hydrogen and fluorine; and the 21-acylates thereof wherein the acyl radical is that of a hydrocarbon carboxylic acid containing from one to eight carbon atoms, inclusive.

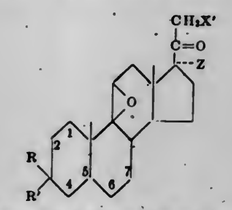
7. The 17,20; 20,21-bismethylenedioxy derivative of 3, 20 - diketo - 5α,6α - oxido - 11α,17α,21 - trihydroxy - 16β-fluoro-pregnane-3-ethylene ketal 11-acetate.

3,022,296
SYNTHESIS OF STEROIDS

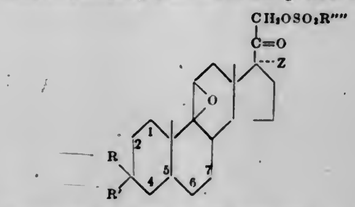
Josef Fried and Josef E. Herz, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Original application Apr. 2, 1956, Ser. No. 575,344, now Patent No. 2,920,084, dated Jan. 5, 1960. Divided and this application May 20, 1959, Ser. No. 817,703
2 Claims. (Cl. 260—239.55)

1. A process for preparing a steroid of the general formula



wherein at least one of the positions 1,2; 4,5; and 6,7 is double-bonded and R is hydrogen, R′ is hydroxy and together R and R′ is selected from the group consisting of keto and ketalized keto, Z is selected from the group consisting of hydrogen and α-hydroxy, and X′ is selected from the group consisting of bromo and chloro, which comprises treating a steroid of the general formula



wherein at least one of the positions 1,2; 4,5; and 6,7 is double-bonded, R″″ is alkyl, and R, R′ and Z are as above-defined with a salt selected from the group consisting of light metal bromides and light metal chlorides under substantially anhydrous conditions in a neutral organic solvent for the salt, and recovering the resultant steroid.

3,022,297
16-FLUORINATED CORTICOSTEROIDS

Rudolph G. Berg, New London, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,032
4 Claims. (Cl. 260—239.55)

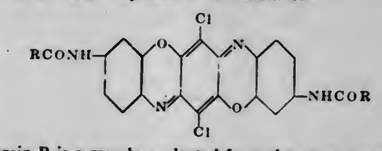
1. 17,20;20,21-bismethylenedioxy - 16β - fluoro-11-desoxyhydrocortisone.

3,022,298
DIOXAZINE DYESTUFFS

Rudolf Mory, Dornach, and Christoph Frey, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed May 2, 1958, Ser. No. 732,432
Claims priority, application Switzerland May 29, 1957
5 Claims. (Cl. 260—246)

1. A dioxazine dyestuff of the formula



wherein R is a member selected from the group consisting of halobenzene radical, lower alkoxy benzene radical, lower alkyl benzene radical, carbocyclic aryl benzene radical, cyanobenzene radical and nitrobenzene radical.

3,022,299
CONDITIONING OF PIGMENTS

Harold N. Schmidt, Plainfield, Volney Tullsen, Westfield, Leon Katz, Springfield, and Lawrence D. Lytle, Plainfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,718
8 Claims. (Cl. 260—246)

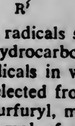
1. A process comprising milling with forces predominantly shearing in nature a mixture in the form of a doughy, kneadable mass comprising a member of the group consisting of water insoluble dioxazine and water insoluble vattable indigoid and quinonoid organic pigments, and about 0.5 to 10 parts by weight per part of said pigment of an aryl sulfonic acid having a concentration of about 75 to 100% and selected from the group consisting of benzene and naphthalene sulfonic acids and their nuclearly mono- and di-substituted hydroxy and lower alkyl derivatives, and then diluting the milled mixture with water.

3,022,300
METHOD OF PREPARING SULFENAMIDES

Albert F. Hardman, Northampton Township, Summit County, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 23, 1954, Ser. No. 458,030
10 Claims. (Cl. 260—247.1)

1. The method of preparing sulfenamides which comprises reacting one mol of an organic disulfide selected from the group consisting of thiazyldisulfides, oxazyldisulfides and imidazyldisulfides with (*a*) at least one mol of ammonia, (*b*) about one mol of a secondary amine having the structural formula:



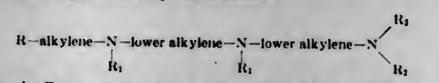
in which R and R′ are radicals selected from the group consisting of aliphatic hydrocarbon, cycloaliphatic hydrocarbon, aralkyl and radicals in which R and R′ form a part of a single ring selected from the group consisting of furfuryl, tetrahydrofurfuryl, morpholyl, piperazyl and piperidyl and (*c*) one mol of an N-chloramine of an amine selected from the same class in a solvent containing not more than 10 percent by weight of water.

3,022,301
AMIDO-DIAMINES AND TRIAMINES

Moses Wolf Goldberg, Upper Montclair, and Sidney Teitel, Nutley, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 20, 1959, Ser. No. 847,463
13 Claims. (Cl. 260—247.2)

1. A compound selected from the group consisting of triamines represented by the formula

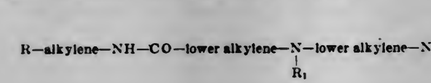


wherein R represents the cyclic moiety of a member selected from the group consisting of saturated and unsaturated ionone, irone and isoionone, R_1 represents a member of the group consisting of hydrogen and lower alkyl, and the group



represents a tertiary amino radical selected from the group consisting of di-lower alkylamino and, when taken together, polymethylene and polymethyleneoxy groups forming a saturated 5 to 6 membered monocyclic ring containing one hetero-nitrogen atom and up to one hetero-oxygen atom, medicinally acceptable acid addition salts and medicinally acceptable quaternary salts of said triamines, said quaternary salts being selected from the group consisting of alkyl and aralkyl quaternary salts.

11. A compound selected from the group consisting of amino-diamines represented by the formula



wherein R represents the cyclic moiety of a member selected from the group consisting of saturated and unsaturated ionone, irone and isoionone, R_1 represents a member of the group consisting of hydrogen and lower alkyl, and the group.



represents a tertiary amino radical selected from the group consisting of di-lower alkylamino and, when taken together, polymethylene and polymethyleneoxy groups forming a saturated 5 to 6 membered monocyclic ring containing one hetero-nitrogen atom and up to one hetero-oxygen atom, medicinally acceptable acid addition salts and medicinally acceptable quaternary salts of said triamines, said quaternary salts being selected from the group consisting of alkyl and aralkyl quaternary salts.

13. α - [3 - (4 - morpholinyl)propylamino] - N - [1-methyl - 3 -(2,6,6 - trimethyl - 1 - cyclohexen - 1 - yl) propyl] - acetamide.

3,022,302
MANUFACTURE OF N,N-DISUBSTITUTED AMIDES OF ARYL ACETIC ACIDS

Olle Mårtensson, Uppsala, Sweden, assignor to Aktiebolaget Pharmacia, Uppsala, Sweden, a company of Sweden

No Drawing. Filed Mar. 8, 1957, Ser. No. 644,717
Claims priority, application Sweden Mar. 15, 1956
1 Claim. (Cl. 260—247.7)

α - benzyl - α - (2 - morpholinoethyl) - N - n - propyl-N-benzyl-phenyl-acetic acid amide.

3,022,303
HALOMETHYL-5-TRIAZINES

Christoph J. Grundmann and Ehrenfried Kober, Columbus, Ohio, assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Aug. 1, 1956, Ser. No. 601,342
8 Claims. (Cl. 260—248)

1. The method of producing 2-dibromomethyl-4,6-dimethoxy-1,3,5-triazine which comprises admixing bromine with 2-diazomethyl-4,6-dimethoxy-1,3,5-triazine at a temperature of about 0° C. to reflux temperature.

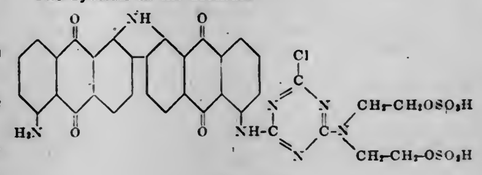
5. 2-dibromomethyl-4,6-dimethoxy-1,3,5-triazine.

3,022,304
ANTHRAQUINONE VAT DYESTUFF CONTAINING A REACTIVE TRIAZINE NUCLEUS

Max Staeuble, Basel, and Kurt Weber, Bottmingen, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Filed May 25, 1959, Ser. No. 815,266
Claims priority, application Switzerland May 30, 1958
1 Claim. (Cl. 260—249)

The dyestuff of the formula

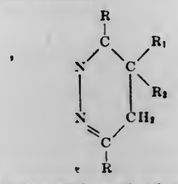


3,022,305
PROCESS FOR PREPARING PYRIDAZINE DERIVATIVES AND NOVEL FLUORINE-CONTAINING PYRIDAZINE DERIVATIVES

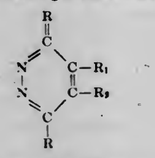
Rudolph A. Carboni, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 17, 1957, Ser. No. 666,254
14 Claims. (Cl. 260—250)

1. Compounds selected from the group consisting of those having the formula



and tautomeric forms thereof, wherein R is a fluoroalkyl radical of 1–13 carbon atoms having at least one hydrogen atom attached to the carbon atom alpha to the heterocyclic ring; R_1 is a member of the class consisting of hydrogen and hydrocarbon of 1–6 carbon atoms, and R_2 is a radical of the class consisting of hydrocarbon of 1–6 carbon atoms, —CN, —CHO, —$CH(OR_3)_2$, —COOH, —$COOR_3$ and —OR_3, R_3 being a hydrocarbon group free from aliphatic unsaturation of 1–6 carbon atoms; and those having the formula



wherein R has the same significance as above and R_1 and R_2 are members of the class consisting of hydrogen and hydrocarbon radicals, the sum of the carbon atoms in R_1 and R_2 together being at most 12.

3. 3,6 - bis(1,2,2,2 - Tetrafluoroethyl) - 4 - phenylpyridazine.

3,022,306
2-TRIFLUOROACETAMIDO-5-NITROPYRIMIDINE

Richard E. Strube, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Substituted for abandoned application Ser. No. 686,601, Sept. 27, 1957. This application Aug. 5, 1960, Ser. No. 47,580
1 Claim. (Cl. 260—256.4)

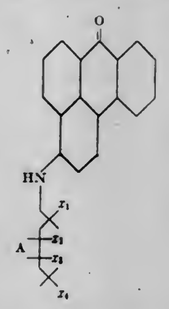
2-trifluoroacetamido-5-nitropyrimidine.

3,022,307
PIGMENT DYESTUFFS FROM 1-N-(Bz-1'-BENZANTHRONYL)-AMINOANTHRAQUINONES BY ACID CONDENSING AGENTS

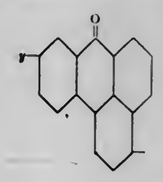
Ernst Gutzwiller, Basel, Switzerland, assignor, by mesne assignments, to Saul & Co., Newark, N.J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust

No Drawing. Filed July 6, 1953, Ser. No. 366,386
Claims priority, application Switzerland July 11, 1952
6 Claims. (Cl. 260—274)

1. A pigment dyestuff of the 1-N1(Bz-1'-benzanthronyl)-aminoanthraquinone series which is a condensation product, prepared by bringing an acid condensing agent into intimate contact with a compound which corresponds to the formula



wherein A stands for a residue selected from the group consisting of the 1-amino-5,10-isothiazoleanthone and 1-aminoanthraquinone residues, each of x_1, x_2, x_3 and x_4 stands for hydrogen when A is a 1-amino-5,10-isothiazoleanthrone residue and for a member selected from the group consisting of hydrogen, halogen, hydroxy, methoxy, methyl, amino and the radical



when A is a 1-aminoanthraquinone residue, y being a member selected from the group consisting of hydrogen and halogen, and stirring the resulting reaction mass into an aqueous medium, whereby the resultant condensation product is precipitated.

3,022,308
DECAHYDROBENZOPYRIDINE QUATERNARIES

Chester John Cavallito and Allan Poe Gray, Decatur, Ill., assignors to Irwin, Neisler and Co., Decatur, Ill., a corporation of Illinois

No Drawing. Filed Dec. 3, 1957, Ser. No. 700,280
7 Claims. (Cl. 260—286)

1. Bis - (quaternary ammonium) - substituted alkane salts; wherein the alkane portion is selected from the group consisting of alkanes having 2–6 carbon atoms; wherein one quaternary ammonium group is selected from the group consisting of trimethylammonium, dimethylethylammonium, diethylmethylammonium, N-methylpiperidinium, N-methylmorpholinium and N-methylpyrrolidinium; wherein the other quaternary ammonium group is N-lower-alkyldecahydrobenzopyridinium; wherein the two quaternary nitrogen atoms are separated by from 2 to 4 carbon atoms, inclusive, of the alkane portion of the molecule; and wherein the two anions are each non-toxic acid residues.

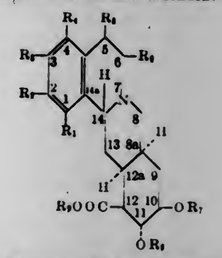
2. Trimethylene - 1 - (1 - methyldecahydroquinolinium)-3-(trimethylammonium) dibromide.

3,022,309
BERBINE DERIVATIVES

Georges Muller, Nogent-sur-Marne, France, assignor to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed May 4, 1960, Ser. No. 26,721
Claims priority, application France May 5, 1959
14 Claims. (Cl. 260—287)

1. Berbine derivatives of the formula:



wherein R_1 to R_4 are radicals selected from the group consisting of hydrogen, halogen, hydroxyl, lower alkyl, lower alkoxy and phenyl lower alkoxy; R_5, R_6 and R_8 are radicals selected from the group consisting of hydrogen and lower alkyl; R_7 is a radical selected from the group consisting of hydrogen, lower alkanoyl, benzoyl, 3,4,5-trimethoxybenzoyl, 3,4,5-trimethoxycinnamyl and naphthoyl; and R_9 is lower alkyl.

3,022,310
β-YOHIMBINE AND β-YOHIMBIC ACID 17-ESTERS

Patrick A. Diassi, Westfield, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Dec. 10, 1957, Ser. No. 701,722
6 Claims. (Cl. 260—287)

2. β-Yohimbic acid 17-acetate.

3,022,311
YOHIMBINE AND α-YOHIMBINE DERIVATIVES

Frank L. Weisenborn, Middlebush, and Samuel C. Pan, Metuchen, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Apr. 25, 1958, Ser. No. 730,796
7 Claims. (Cl. 260—287)

1. A compound selected from the group consisting of 18α-hydroxyyohimbine, 18α-hydroxyyohimbine 17α,18α-di(lower alkanoate), 18-hydroxy-α-yohimbine, and 18-hydroxy-α-yohimbine 17α,18-di(lower alkanoate).

6. 17α,18α-(lower alkylidene) 18α-hydroxyyohimbine.

3,022,312
METHOD OF PREPARING STEROID DERIVATIVES

Bernard S. Wildi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 19, 1956, Ser. No. 572,237
4 Claims. (Cl. 260—289)

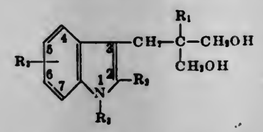
1. A method of preparing 3-keto-4-aza-Δ^5-cyclopentanopolyhydrophenanthrenes which comprises heating a 3,5-seco-5-keto-3-oic cyclopentano-10,13-dimethylpolyhydrophenanthrene with a compound selected from the group consisting of ammonia and R—NH_2 in which R is alkyl of 1 to 8 carbon atoms at temperatures of 100 to 250° C. to form the said 3-keto-4-aza-Δ^5-cyclopentanopolyhydrophenanthrene.

3,022,313
ORGANIC COMPOUNDS

Jacob Szmuszkovicz, Portage Township, Kalamazoo County, and William C. Anthony, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed May 11, 1960, Ser. No. 28,193
9 Claims. (Cl. 260—319)

1. 2-skatyl-1,3-propanediols represented by the formula:



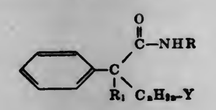
wherein R_1, R_2, and R_3 are selected from the group consisting of hydrogen and alkyl of 1 to 4 carbon atoms, inclusive, and R_4 is selected from the group consisting of hydrogen, benzyloxy, hydroxy, and alkoxy of 1 to 4 carbon atoms, inclusive.

3,022,314
ALPHA-PHENYL-OMEGA-AMINO-ALKANAMIDES

Brooke D. Aspergren and Robert Bruce Moffett, Kalamazoo, and Merrill E. Speeter, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed June 20, 1955, Ser. No. 516,764
12 Claims. (Cl. 260—326.3)

1. A compound having the formula:



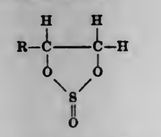
wherein C_nH_{2n} is an alkylene group containing up to 6 carbon atoms, R is a radical containing up to 8 carbon atoms selected from the class consisting of alkyl, alkenyl, cycloalkyl containing 3 to 6 carbon atoms in the ring, methylcyclopentyl, dimethylcyclohexyl, aralkyl, phenyl, chloro-substituted phenyl, bromo-substituted phenyl, iodo-substituted phenyl, methyl-substituted phenyl, 2-hydroxyethyl, 2-pyrrolidinoethyl, R_1 is a radical containing up to 8 carbon atoms selected from the class consisting of phenyl, chloro-substituted phenyl, bromo-substituted phenyl, and iodo-substituted phenyl, and Y is selected from the class consisting of di-lower-alkylamino, pyrrolidino, morpholino, piperidino, 2-methylmorpholino, 2,2-dimethylpyrrolidino and 4-methylpiperidino.

3,022,315
PREPARATION OF CYCLIC SULFITES

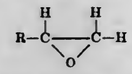
William A. Rogers, Jr., Lake Jackson, and James E. Woehst and Robert M. Smith, Freeport, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 13, 1956, Ser. No. 621,547
8 Claims. (Cl. 260—327)

1. A process for the preparation of a monomeric cyclic sulfite having a general formula:



where R represents a member of the group consisting of alkyl and haloalkyl radicals having from 1 to 4 carbon atoms, a phenyl radical, and hydrogen, which comprises reacting an epoxide having a general formula:



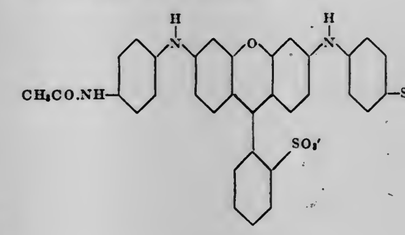
wherein R represents a member of the group as described above with sulfur dioxide in the presence of a synthetic anion exchange resin at a temperature in the range of 70° to 140° C. and a pressure of at least 75 pounds per square inch.

3,022,316
3,6 BIS-PARA-SUBSTITUTED-PHENYL-AMINO-9-(2'-SULFO-PHENYL)XANTHENE

Herbert Bestian and Gustav Schäfer, Frankfurt am Main Hochst, and Ferdinand Quint, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main Hochst, Germany, a company of Germany

No Drawing. Filed Dec. 30, 1952, Ser. No. 328,832
Claims priority, application Germany Dec. 31, 1951
1 Claim. (Cl. 260—336)

The compound of the formula

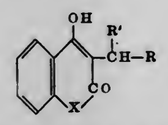


3,022,317
3-BENZYL-4-HYDROXYCOUMARIN AND A PROCESS FOR THE PREPARATION OF DERIVATIVES OF 3-BENZYL-4-HYDROXYCOUMARIN

Erich Ziegler, Graz, and Udo Rossmann, Wels, Austria, and Franz Litvan, Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

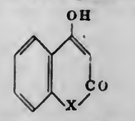
No Drawing. Filed Jan. 18, 1957, Ser. No. 634,816
Claims priority, application Switzerland Jan. 20, 1956
4 Claims. (Cl. 260—343.2)

1. A process for the manufacture of a compound of the formula

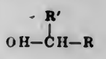


wherein X represents a member selected from the group consisting of O and S, R represents phenyl substituted by a member selected from the group consisting of hydrogen, hydroxy, chloro, methoxy, methyl, hydroxymethyl and tertiary-butyl, and R' represents a member selected from the group consisting of hydrogen, methyl,

ethyl, propyl, phenyl and p-chlorophenyl, which comprises heating 1 mol of a compound of the formula

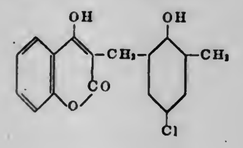


wherein X has the meaning defined above, with 1 mol of a benzyl alcohol of the formula



wherein R and R' have the meanings given above, in the presence of a halide selected from the group consisting of hydrogen chloride, hydrogen bromide, phosphorus oxychloride and thionyl chloride and in the presence of an organic solvent selected from the group consisting of tetrachloroethane and chlorobenzene at ordinary pressure to a temperature between 50 and 150° C.

3. The compound of the formula

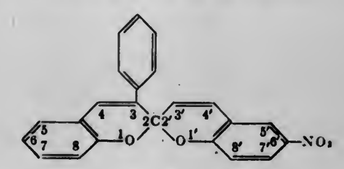


3,022,318
DERIVATIVES OF 3-PHENYL-SPIRO(2H,1-BENZOPYRAN-2,2'[2'H,1'-BENZOPYRAN])

Elliot Berman and David B. McQuain, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

No Drawing. Filed July 15, 1959, Ser. No. 827,175
1 Claim. (Cl. 260—345.2)

The compound 3-phenyl-6'nitro-spiro(2H,1-benzopyran-2,2'[2'H,1'-benzopyran]) having the structure

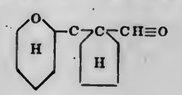


3,022,319
2-(1-ALKYNYLCYCLOALKYLOXY)TETRAHYDROPYRANS

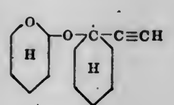
Margaret D. Cameron, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 4, 1956, Ser. No. 588,989
6 Claims. (Cl. 260—345.9)

6. A compound selected from the group consisting of:



and



3,022,320
POLYCARBOXYDIPHENYL SULFONES AND ANHYDRIDES THEREOF

Ovell Francis Bennett, Woodbury, Melvin L. Huber, Pitman, and Robert A. Smiley, Woodbury, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 13, 1959, Ser. No. 786,445
6 Claims. (Cl. 260—346.3)

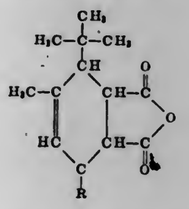
2. As a novel composition of matter, the dianhydride of bis(3,4-dicarboxyphenyl) sulfone.

3,022,321
PREPARATION OF ADDUCTS OF MALEIC ANHYDRIDE AND DIENES DERIVED FROM THE ADDITION OF FORMALS, ACETALS AND ACYLALS TO OLEFINS

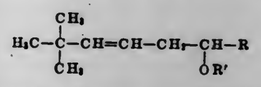
John W. Copenhaver, St. Paul, Minn., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 12, 1957, Ser. No. 702,239
3 Claims. (Cl. 260—346.6)

1. The method of making 4-cyclohexene-1,2-dicarboxylic acid anhydrides of the formula



wherein R represents a member of the group consisting of methyl and phenyl; which comprises heating, in the presence of p-toluene sulfonic acid, equimolar proportions of maleic anhydride and a 4 alkoxy alkene of the formula



wherein R represents a member of the group consisting of methyl and phenyl and R' represents alkyl.

3,022,322
PROCESS FOR THE PRODUCTION OF EPOXIDIZED POLYBUTADIENE

Charles E. Wheelock and Peter J. Canterino, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Sept. 28, 1956, Ser. No. 612,890
10 Claims. (Cl. 260—348.5)

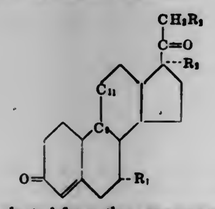
1. A process for producing epoxidized liquid polybutadiene comprising dissolving loquid polybutadiene in an inert solvent; reacting said polymer with an organic peracid formed in situ by adding to the solution of said polymer an organic acid containing two to eight carbon atoms at a temperature of 0 to 80° C., the amount of organic acid being sufficient to provide 0.2 to 2 equivalents per olefinic linkage in said liquid polybutadiene, hydrogen peroxide, and an acid catalyst selected from the group consisting of sulfuric acid, phosphoric acid, trichloroacetic acid and nuclear sulfonic cation exchange resins; separating the organic phase from the aqueous phase and removing the solvent from the organic phase thereby obtaining resulting epoxidized polymer containing 0.08 to 0.7 epoxy oxygen atom per double bond originally present in said polymer.

3,022,323
7-SUBSTITUTED THIO STEROIDS OF THE PREGNENE SERIES

Robert E. Schaub, Paramus, and Martin J. Weiss, Oradell, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed July 22, 1960, Ser. No. 44,519
10 Claims. (Cl. 260—397.3)

1. A compound having the formula:



in which R_1 is selected from the group consisting of lower alkylthio, thiocyano, lower alkylsulfinyl and lower alkylsulfonyl radicals, R_2 is selected from the group consisting of hydrogen and hydroxyl radicals, R_3 is selected from the group consisting of hydrogen, hydroxyl and lower alkanoyloxy radicals and when R_3 is hydrogen R_2 is also hydrogen and C_9–C_{11} is a trivalent radical selected from the group consisting of:

3,022,324
PROCESS FOR THE PREPARATION OF FORMYL STEROIDS AND PRODUCTS OBTAINED THEREBY

Georges Muller, Nogent-sur-Marne, and Milutin Stefanovic, Paris, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed Dec. 15, 1959, Ser. No. 859,577
Claims priority, application France July 8, 1959
8 Claims. (Cl. 260—397.4)

1. A process for the preparation of formylated steroids selected from the group consisting of 17-formyl androstanes and 20-formyl pregnanes which comprise the steps of reacting a keto steroid selected from the group consisting of 17-keto-androstanes and 20-keto-pregnanes with a lower alkoxymethyl magnesium halide in the presence of cycloalkylene ether selected from the group consisting of tetrahydrofuran, 2-methyl tetrahydrofuran, and tetrahydropyran, recovering a lower alkoxymethyl-hydroxy steroid, subjecting said lower alkoxymethyl-hydroxy-steroid to the action of an acid dehydrating agent selected from the group consisting of oxalic acid and phosphorus oxychloride and recovering said formylated steroids.

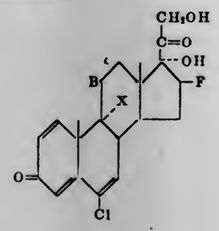
7. 17β-formyl-3-methoxy-$\Delta^{1,3,5(10)}$-androstatriene.

3,022,325
16-FLUORINATED CORTICOSTEROIDS

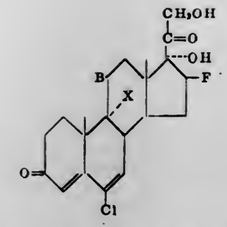
Rudolph G. Berg, New London, and Gerald D. Laubach, Niantic, Conn., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 2, 1959, Ser. No. 850,038
3 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of those having formulae:



and



wherein B is selected from the group consisting of carbonyl and β-hydroxymethylene radicals and X is selected from the group consisting of hydrogen and fluorine; and the 21-acylates thereof wherein the acyl radical is that of a hydrocarbon carboxylic acid containing from one to eight carbon atoms, inclusive.

3,022,326
URETHANE MODIFIED VEGETABLE OIL

Herbert M. Schroeder, Williamsville, and Donald J. Waythomas, Lancaster, N.Y., assignors, by mesne assignments, to Textron Inc., a corporation of Rhode Island

No Drawing. Filed Oct. 29, 1958, Ser. No. 770,258
9 Claims. (Cl. 260—404.5)

1. The method of preparing a urethane modified ethylenically unsaturated vegetable oil having drying properties which comprises reacting, by bringing into contact and heating a hydrocarbon diisocyanate and a diol system comprising a diol ester of an ethylenically unsaturated higher fatty acid of a vegetable oil with a lower hydrocarbon polyol which is at least trifunctional and a polyglycol having a molecular weight in the range 150 to 2000, the amount of said polyglycol comprising from 8% to 50% by weight of said diol system, the amount of diisocyanate employed being substantially equivalent to the total hydroxyl of the diol system, and the amount of diol ester being sufficient to produce a final oil length of 20% to 75%, the reaction being continued under heating until the resultant urethane modified oil possesses substantially no free isocyanate.

3,022,327
URETHANE MODIFIED VEGETABLE OIL

Donald J. Waythomas, Lancaster, N.Y., assignor, by mesne assignments, to Textron Inc., a corporation of Rhode Island

No Drawing. Filed Oct. 29, 1958, Ser. No. 770,259
11 Claims. (Cl. 260—404.5)

1. The method of preparing a urethane modified ethylenically unsaturated vegetable oil having drying properties which comprises reacting, by bringing into contact and heating a hydrocarbon diisocyanate and a diol system comprising a diol ester of an ethylenically unsaturated higher fatty acid of a vegetable oil and a lower hydrocarbon polyol having greater than two hydroxyl groups in the molecule, and 3% to 18% based upon the weight of the diol ester of a hydrocarbon diol having a molecular weight of less than 120, the amount of diisocyanate employed being substantially equivalent to the total hydroxyl of the diol system, and the amount of diol ester being sufficient to produce a final oil length of 30% to 80%, the reaction being continued under heating until the resultant urethane modified oil possesses substantially no free isocyanate.

3,022,328
SEPARATION OF ISOMERS OF TOLYLENE DIISOCYANATE

Raymond L. Cobb, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

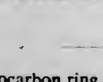
Filed May 9, 1958, Ser. No. 734,362
12 Claims. (Cl. 260—453)

1. A process for separating tolylene diisocyanate isomers which comprises reacting a mixture containing the 2,6-isomer of tolylene diisocyanate, at least one tolylene diisocyanate isomer selected from the group consisting of isomers having an isocyanate group in the 3, 4 and 5 positions with respect to the methyl group and at least one alcohol containing 4 to 14 carbon atoms and represented by the formula



wherein R_1 is selected from the group consisting of hydrogen, alkyl, aryl, cycloalkyl, alkylcycloalkyl, cycloalkylalkyl, alkaryl and arylalkyl radical, R_2 and R_3 are selected from the group consisting of alkyl, aryl, cycloalkyl, alkylcycloalkyl, cycloalkylalkyl, alkaryl and arylalkyl radicals, any two R's being radicals which together with

form a carbocyclic ring structure having 5 to 6 carbon atoms, when R_1 is hydrogen at least one of R_2 and R_3 is selected from the group consisting of a branched alkyl chain, having at least one branch not farther than the second carbon atom from



and a hydrocarbon ring structure having at least 5 carbon atoms, under reaction conditions wherein the temperature is less than the dissociation temperature of the reaction product formed between the alcohol and the 3, 4 and 5 isomers and separating 2,6-isomer from the reaction product.

3,022,329
METHOD FOR THE MANUFACTURE OF O-ARYL PHOSPHORODICHLORIDOTHIOATES

Henry Tolkmith, Harold R. Slagh, and Kenneth C. Kauer, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 5, 1956, Ser. No. 569,299
6 Claims. (Cl. 260—461)

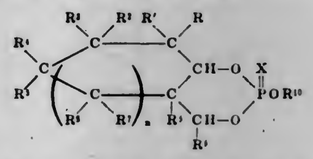
1. A method for the manufacture of an O-aryl phosphorodichloridothioate which comprises reacting at a temperature of at least 120° C. one molecular proportion of an O-aryl dichlorophosphite with at least 1.8 molecular proportions of phosphorus thiochloride while driving off phosphorus trichloride of reaction from the reaction mixture, the O-aryl in said O-aryl phosphorodichloridothioate and O-aryl dichlorophosphite being an O-aryl radical of the benzene series.

3,022,330
NEUTRAL ESTERS OF BICYCLO HETEROCYCLIC PHOSPHORIC ACIDS

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

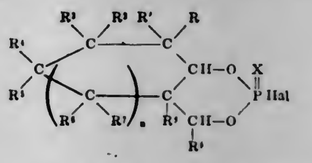
No Drawing. Filed Aug. 21, 1956, Ser. No. 605,413
26 Claims. (Cl. 260—461)

1. As new compounds, neutral esters of bicyclo heterocyclic phosporic acids and thionophosphoric acids, having structures designated by the formula

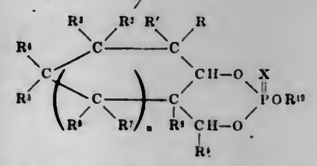


wherein R is hydrogen, R′, R^2, R^3, R^5, R^6, R^7 and R^8, respectively, is of the class consisting of hydrogen and the lower alkyl radicals; R^4 and R^9, respectively, is of the class consisting of hydrogen and the alkyl radicals having from 1 to 20 carbon atoms; X represents a radical of the class consisting of oxygen and sulfur; and R^{10} is a radical of the class consisting of the alkyl radicals having 1 to 17 carbon atoms, and the cyclopentyl, cyclohexyl, halo-lower alkyl, cyano-lower alkyl, benzyl, lower alkoxyethyl, lower alkoxyethoxyethyl, lower alkylmercaptoethyl, lower alkylsulfinylethyl, lower alkylsulfonylethyl, lower alkenyl, cyclopentenyl, cyclohexenyl, phenyl, halophenyl, nitrophenyl and lower alkylphenyl radicals; and *n* is an integer of the class consisting of 0 and 1.

26. Process for making a heterocyclic bicyclo phosphorus-containing ester, which comprises reacting a bicyclo hetero phosphorus-containing halide having the structure:



wherein R and R′ to R^9, respectively, designates a member of the class consisting of hydrogen and the alkyl radicals having 1 to 20 carbon atoms; X is selected from the class consisting of oxygen and sulfur; Hal is selected from the class consisting of chlorine and bromine; and *n* is of the class consisting of 1 and 0; with (1) a monohydric hydroxy compound of the class consisting of the alkanols having from 1 to 17 carbon atoms, the lower alkenols, cyclopentanol, cyclohexanol, the halogen-substituted lower alkanols, the lower alkoxyethanols, the lower alkoxyethoxyethanols, the lower alkylmercaptoethanols, the lower alkylsulfinylethanols, the lower alkylsulfonylethanols, cyclopentenol, cyclohexenol, phenol, the lower alkyl-substituted phenols, the halogen-substituted phenols, the nitro-substituted phenols, and benzyl alcohol, and with (2) alkaline alkali metal compound of the class consisting of the alkali metal hydroxides and carbonates, at temperatures within the range between −20° C. and 70° C. in the ratio of at least one mol of the said hydroxy compound and at least one equivalent of the alkali metal compound per mol of said phosphorus-containing reactant, and recovering from the resultant reaction mixture an ester having the structure:



wherein R, R′ to R^9, X and *n* have the aforesaid meanings, and OR^{10} designates the residue of the hydroxy compound used as reactant.

3,022,331
ARYL PHOSPHATES

Herbert F. Bondy, Chesterfield, and John Gumb, Bolsover, Chesterfield, England, assignors to Coalite and Chemical Products Limited, Bolsover, England

No Drawing. Filed July 2, 1958, Ser. No. 746,083
Claims priority, application Great Britain July 17, 1957
4 Claims. (Cl. 260—461)

1. In a process of reacting phosphating agents with xylenol fractions, the improvement of producing nontoxic triaryl phosphate plasticizers which comprises using as a starting material xylenol fractions which are free from ortho-cresol, mono-ortho-ethyl phenol and mono-ortho-propylphenol.

3,022,332
PROCESS FOR THE PREPARATION OF UNSATURATED CARBOXYLIC ACID NITRILES

Kurt Sennewald, Knapsack, near Koln, Klaus Born, Hermulheim, near Koln, Heinz Erpenbach, Rodenkirchen, near Koln, and Günther Dobek, Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

No Drawing. Filed Mar. 17, 1959, Ser. No. 799,860
Claims priority, application Germany Mar. 22, 1958
7 Claims. (Cl. 260—464)

1. A process for producing a compound selected from the group consisting of α,β,γ,δ-unsaturated carboxylic acid nitriles and α,β-unsaturated carbocyclic cyano compounds which comprises heating a substance selected from the group consisting of crotonaldehydecyanohydrin, acetaldolcyanohydrin, methylvinylketonecyanohydrin, acetoincyanhhydrin, 3-keto-butan-1-ol-cyanohydrin and cyclohexanon cyanohydrin with an acid selected from the group consisting of phosphoric acid, pyrophosphoric acid, meta- and polyphosphoric acids containing not more than 6 phosphorus atoms and hydrochloric acid at a temperature of from about 520°–700° C., the amount of acid by weight being from 1–90% of the total weight of the reactants.

3,022,333
CATALYTIC ESTERIFICATION OF TEREPHTHALIC ACID

Charles D. Kalfadelis, Hammond, and Delbert H. Meyer, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Jan. 26, 1959, Ser. No. 788,726
9 Claims. (Cl. 260—475)

1. In a process for preparing dimethyl terephthalate by reacting terephthalic acid with methanol at a temperature between about 140° C. and 350° C. and at a pressure of at least about atmospheric, the improvement which comprises carrying out said reaction in the presence of a catalyst consisting essentially of (*a*) antimony oxide and (*b*) a member of the class consisting of manganous salts of weak acids, cupric salts of weak acids, zinc salts of weak acids, manganous oxide, cupric oxide, cuprous oxide, zinc oxide (ZnO), zinc oxide (ZnO_2), elemental manganese, elemental copper, and elemental zinc.

3,022,334
PROCESS FOR THE PREPARATION OF POLYURETHANES

August H. Frazer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Jan. 14, 1958, Ser. No. 708,768
15 Claims. (Cl. 260—482)

1. In a process for preparing polyurethanes by reacting an organic diamine with a bishaloformate wherein hydrogen halide is liberated, the improvement which comprises providing N-alkylated polyurethanes of uniform difunctionality by reacting an N,N′-dialkyl-substituted diamine in which the nitrogens bear only one hydrogen atom with a bishaloformate of an organic diol in the presence of an inorganic metalliferous hydrogen halide acceptor, said reaction being carried out by mixing under anhydrous conditions said halide acceptor with said diamine and said bishaloformate in an inert organic solvent for said diamine and said bishaloformate, said halide acceptor being present in an amount in excess of the stoichiometric amount necessary to bind the hydrogen halide liberated by said reaction.

3,022,335
SURFACE ACTIVE POLYOXYALKYLENE COMPOUNDS HAVING A PLURALITY OF HETERIC POLYOXYPROPYLENE - POLYOXYETHYLENE CHAINS

Lester G. Lundsted, Grosse Ile, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,282
10 Claims. (Cl. 260—485)

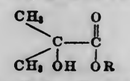
1. A surface active mixture of conjugated polyoxyalkylene compounds containing in their structure oxypropylene groups, oxyethylene groups and the nucleus of a reactive hydrogen compound having from 2 to about 6 reactive hydrogen atoms and having up to and including 6 carbon atoms per molecule and being a member selected from the group consisting of aliphatic polyhydric alcohols, alkylamines, alkylene polyamines, cyclic amines, amides and polycarboxylic acids, said compounds being characterized by having heteric polymeric chains of oxypropylene and oxyethylene groups attached at one of their ends to said nucleus of the reactive hydrogen compound at the sites of its reactive hydrogen atoms and by having chains of oxyethylene groups attached to the other ends of said heteric chains, said heteric polyoxypropylene-polyoxyethylene chains having from 5–40 weight percent of oxyethylene groups, based on the weight of said heteric chains, and having an average molecular weight of at least about 1000 and up to about 25,000 and the oxyethylene groups in said oxyethylene chains being sufficient in weight so as to constitute from about 5–90 weight percent of the mixture of surface active compounds.

3,022,336
PROCESS FOR DEHYDRATING ALPHA-HYDROXY-ISOBUTYRIC ACID ESTERS

Kurt Sennewald, Knapsack, near Koln, Günter Dobek, Koln-Zollstock, and Herbert Joest, Koln-Sulz, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

No Drawing. Filed Sept. 9, 1958, Ser. No. 759,862
Claims priority, application Germany Sept. 17, 1957
10 Claims. (Cl. 260—486)

1. A process for dehydrating esters of alpha-hydroxyisobutyric acid of the general formula



wherein R is a lower alkyl radical with one to four carbon atoms, which comprises introducing a corresponding ester of the alpha-hydroxyisobutyric acid in a first stage in the liquid to vaporous state into a liquid heating bath, composed of at least one substance selected from the group consisting of higher fatty acids, paraffin mixtures and cylinder oils, having a boiling point of above about 300° C., the liquid heating bath containing catalytic amounts of at least one substance selected from the group consisting of phosphoric acids, alkali metal phosphates,

alkaline earth metal phosphates and mixtures thereof, maintaining the heating bath at a temperature in the range from about 170° C. and the boiling point of the heating bath, continuously agitating said bath, condensing in a second stage the reaction products formed which distill off immediately from the heating bath, and fractionating the reaction products.

3,022,337

PROCESS FOR THE CATALYTIC PRODUCTION OF UNSATURATED MONO-CARBOXYLIC ACID ESTERS

Eduard Enk and Fritz Knörr, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

No Drawing. Filed June 1, 1959, Ser. No. 817,075
Claims priority, application Germany June 3, 1958
10 Claims. (Cl. 260—486)

1. A process for the production of α,β-unsaturated monocarboxylic acid esters which comprises contacting a β-alkoxy monocarboxylic acid ester with a catalyst comprising alumina and an oxygen containing compound selected from the group consisting of oxides of metals of group VIA of the periodic system and aluminum silicate at a temperature between 200 and 400° C. to form an α,β-unsaturated monocarboxylic acid ester and an alcohol.

3,022,338

PROCESS FOR THE PRODUCTION OF UNSATURATED MONOCARBOXYLIC ACID ESTERS

Eduard Enk and Fritz Knörr, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

No Drawing. Filed June 23, 1959, Ser. No. 822,218
Claims priority, application Germany June 25, 1958
8 Claims. (Cl. 260—486)

1. A process for the production of α,β-unsaturated monocarboxylic acid esters which comprises contacting a β-alkoxy monocarboxylic acid ester with a catalyst comprising an alkaline earth metal phosphate and a compound of a transition element of group I to group VIII of the periodic system selected from the group consisting of copper, cerium, thorium, vanadium, chromium, iron and nickel at a temperature between 250 and 380° C. to form an α,β-unsaturated carboxylic acid ester and an alcohol.

3,022,339

PRODUCTION OF UNSATURATED MONO-CARBOXYLIC ACID ESTERS

Eduard Enk and Fritz Knörr, Burghausen, Upper Bavaria, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

No Drawing. Filed June 23, 1959, Ser. No. 822,219
Claims priority, application Germany July 5, 1958
7 Claims. (Cl. 260—486)

1. A process for the production of α,β-unsaturated monocarboxylic acid esters which comprises contacting a β-alkoxy monocarboxylic acid ester with boron phosphate as a catalyst at a temperature between 180 and 270° C. to form an α,β-unsaturated monocarboxylic acid ester and an alcohol.

3,022,340

HYDROXYMETHYLATION OF OLEFINIC ORGANIC COMPOUNDS

Herman S. Bloch, Skokie, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 13, 1959, Ser. No. 805,726
7 Claims. (Cl. 260—491)

1. A process for the hydroxymethylation of an olefinic hydrocarbon which comprises forming a mixture consisting essentially of said olefinic hydrocarbon, carbon monoxide and hydrogen in a mol ratio of carbon monoxide to olefinic hydrocarbon of from about 1:1 to about 5:1 and a mol ratio of hydrogen to olefinic hydrocarbon of from about 2:1 to about 10:1, in the presence of a catalyst comprising a solid adsorbent material impregnated with cobalt and boron trifluoride, at a reaction temperature of from about 25° C. to about 200° C., and at a pressure of from about 25 atmospheres to about 750 atmospheres, and recovering the resulting hydroxymethylated hydrocarbon.

3,022,341

OXIDATION PROCESS EMPLOYING SULFITES OR BISULFITES

William G. Toland, Jr., San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Sept. 25, 1958, Ser. No. 763,190
6 Claims. (Cl. 260—524)

1. A process for oxidizing a material of the group consisting of methyl-substituted aromatic hydrocarbons and aromatic carboxylic acids having at least one nuclear hydrogen replaced by a methyl group which comprises heating a mixture consisting essentially of said material, water and an agent selected from the class consisting of ammonium sulfite and ammonium bisulfite to a temperature in the range from 500° to 700° F. under a superatmospheric pressure sufficient to maintain a part of the water in liquid phase.

3,022,342

PROCESS FOR THE MANUFACTURE OF SORBIC ACID

Hans Fernholz, Bad Soden (Taunus), and Kurt Ruths and Klaus Heimann-Trosien, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,198
Claims priority, application Germany January 4, 1958
6 Claims. (Cl. 260—526)

1. In a process for the manufacture of sorbic acid which comprises contacting ketene with crotonaldehyde at a temperature between about 20° C. to about 50° C. in the presence of a fatty acid salt of a bivalent metal selected from the group consisting of cadmium, iron, nickel, mercury, cobalt, and zinc, said fatty acid having 4 to 18 carbon atoms, and in the presence of an inert solvent, the improvement of distilling off vaporizable compounds from the reaction mixture, whereby a polyester residue is produced, and then distilling said polyester, containing said fatty acid salt, at a temperature between about 125° C. and about 270° C. with exclusion of oxygen and in the presence of an inert gas, whereby said polyester is decomposed to form sorbic acid.

3,022,343

SEQUESTRANT DERIVED FROM CORN SYRUP AND PROCESS FOR MAKING THE SAME

Reinhold Behnke, Kenosha, Wis., assignor to Pfanstiehl Laboratories, Inc., Waukegan, Ill., a corporation of Illinois

No Drawing. Filed Nov. 17, 1959, Ser. No. 853,456
3 Claims. (Cl. 260—528)

1. The method of preparing a sequestrant for calcium and other ions from corn syrup comprising adding rapidly in a single portion to an aqueous solution of corn syrup having an initial temperature in the range of 0–30° C. a quantity of solid sodium cyanide stoichiometrically equivalent to the combined dextrose and maltose content of said corn syrup, calculated as glucose, maintaining the reaction mixture until the sodium cyanide is dissolved and the reaction is complete, aerating and gradually heating the reaction mixture to 70° C., and maintaining said aeration and temperature until traces of cyanide are absent in the solution.

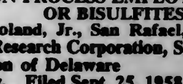
3,022,344

THIO-SUBSTITUTED HALOALKANEAMIDES

Samuel Allen Heininger and Gail H. Birum, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Feb. 21, 1957, Ser. No. 641,472
4 Claims. (Cl. 260—558)

1. Thio-substituted haloalkaneamides of the formula



wherein X is a halogen atom and R'' is selected from the class consisting of the phenyl radical, the halophenyl radical having from 1 to 5 halogen atoms and the alkylphenyl radical having up to 12 carbon atoms.

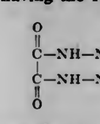
3,022,345

OXALIC ACID HYDRAZIDES

Jacob Szmuszkovicz, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,178
6 Claims. (Cl. 260—561)

1. Compound having the following structural formula



wherein R' is hydroxyalkyl of from 2 to 6 carbon atoms, inclusive, and R'' is selected from the group consisting of hydroxyalkyl of from 2 to 6 carbon atoms, inclusive, and alkyl of from 1 to 6 carbon atoms, inclusive.

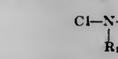
3,022,346

PREPARATION OF ALIPHATIC-N-CHLORO-N-ALKYL-AMIDES

Robert Hügel and Adolfo Pasetti, Milan, Italy, assignors to Montecatini Società Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Filed May 9, 1958, Ser. No. 734,122
Claims priority, application Italy May 17, 1957
12 Claims. (Cl. 260—561)

8. A process for obtaining a compound of the formula:



in which R_1 is a radical taken from the group consisting of methyl and ethyl and R is a hydrocarbon radical having less than nine carbon atoms, comprising chlorinating the corresponding amide, in which a hydrogen atom is present in place of the chlorine atom of said formula, the chlorinating being with chlorine gas in an organic liquid solvent that is inert in the reaction and dissolves both the said corresponding amide and the compound being obtained, the chlorinating being in the presence of a basic compound that neutralizes the hydrochloric acid produced.

10. A process for obtaining a compound of the group consisting of N-monochloro-N-methylacetamide and N-monochloro-N-ethylacetamide, comprising dissolving a substance of the group consisting of N-methylacetamide and N-ethylacetamide in an organic liquid that is inert in the reaction and is a solvent for said substance and said compound being obtained, suspending an alkali carbonate in the solution, and reacting with chlorine gas in the presence of said alkali carbonate, separating the inorganic salt thus formed, dehydrating the organic liquid solution, and separating said compound by fractional distillation under vacuum.

3,022,347

ANTIBIOTICS AND PROCESSES

Fred W. Tanner, Jr., Gales Ferry, Francis A. Hochstein, New London, and Kotaro Murai, Groton, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

Filed Mar. 28, 1960, Ser. No. 17,851
6 Claims. (Cl. 260—571)

1. A compound selected from the group consisting of 2-acetyl-2-decarboxamidooxytetracycline and its acid and basic salts.

3,022,348

PREPARATION OF ALKYLAMMONIUM SULFATE SOLUTIONS

Maurice Rubin, Paris, France, assignor to Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture, Paris, France, a French company

No Drawing. Filed Nov. 5, 1957, Ser. No. 694,501
Claims priority, application France Nov. 9, 1956
7 Claims. (Cl. 260—583)

1. Method of producing a solution of an alkylammonium sulfate having the formula:

$$(NHRR'R'')_2SO_4$$

wherein R is an alkyl radical having from 1 to 4 carbon atoms and R' and R'' are selected from the group consisting of hydrogen and alkyl radicals having from 1 to 4 carbon atoms comprising reacting in an aqueous medium a sulfate of a metal selected from the group consisting of magnesium and calcium with an alkylamine having the formula:

$$NRR'R''$$

and in the presence of carbonic acid gas at a temperature from about 20° C. to about 100° C. thereby forming a solution of the said alkylammonium sulfate and a precipitate of the carbonate of said metal and separating the said precipitate from the solution.

3,022,349

PRODUCTION OF AMINES

Russell C. Lemon, Scott Depot, and Richard C. Myerly, Dunbar, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1957, Ser. No. 705,768
4 Claims. (Cl. 260—585)

1. A process for producing aliphatic amines by reacting together ammonia and an alcohol selected from saturated aliphatic hydrocarbon primary alcohols having between two and ten carbon atoms which comprises passing a vapor phase mixture of ammonia, hydrogen and said alcohol over a reduced copper catalyst in a first reaction zone maintained at a temperature between about 180° C. and 300° C. for a residence time between about 5 and 15 seconds to convert substantially all of the alcohol in the said mixture, and allowing the product effluent from said first reaction zone to pass over a reduced nickel catalyst in a second reaction zone maintained at a temperature between about 150° C. and 250° C. for a residence time between about 5 and 15 seconds to convert completely any alcohol present in the product effluent stream from said first reaction zone; and said ammonia, hydrogen and alcohol being in a ratio of between about one mole and ten moles of ammonia and between about one mole and ten moles of hydrogen for every mole of said alcohol being reacted.

3,022,350
PYROLYSIS OF TRIALLYL BORANE

Paul F. Winternitz, New York, and Arrigo A. Carotti, Bronx, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,808
2 Claims. (Cl. 260—606.5)

1. A method for the preparation of solid pyrolysis products of triallylborane which comprises pyrolyzing triallylborane at a temperature from about 150° C. to 500° C. at a pressure from about 75 to 400 p.s.i.g.

3,022,351
PRODUCTION OF ORGANIC POLYSULFIDES

Clifford H. Mihm, Paul F. Warner, and Jackie E. Duke, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

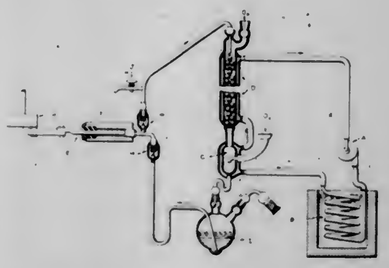
No Drawing. Filed Mar. 7, 1957, Ser. No. 644,452
15 Claims. (Cl. 260—608)

15. The process for the preparation of dialkyl polysulfide which comprises reacting tertiary hexadecyl mercaptan with not more than a stoichiometric amount of sulfur in the presence of a catalyst selected from the group consisting of alkali metal oxides, alkali metal hydroxides, alkali metal alcoholates, alkali metal sulfides, alkali metal polysulfides and alkaline with metal sulfides, and a promoter comprising a minor amount of methanol at temperatures up to 150° F. and recovering di-tertiary hexadecyl polysulfide, comprising a major proportion of tetra- and penta-sulfides.

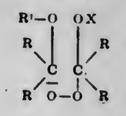
3,022,352
ORGANIC PEROXIDES AND METHODS OF MAKING THEM

Nicholas A. Milas, Belmont, Mass., assignor to Research Corporation, New York, N.Y., a corporation of New York

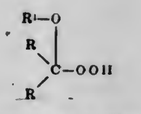
Continuation of application Ser. No. 417,860, Mar. 22, 1954. This application Jan. 25, 1960, Ser. No. 5,089
9 Claims. (Cl. 260—610)



1. Organic peroxides of the group consisting of peroxides of the formulas



and



wherein R is a member of the group consisting of hydrogen, alkyl radicals and monocyclic hydrocarbon radicals, at least one R being a hydrocarbon radical, R^1 is a member of the group consisting of alkyl radicals and monocyclic hydrocarbon radicals, and X is a member of the group consisting of hydrogen and carboxylate radicals of acids selected from the group consisting of benzoate and lower monocarboxylic alkanoates.

3,022,353
PREPARATION OF 4-CHLORODIPHENYL OXIDE

Howard J. Sloane, Fullerton, Calif., and Kenneth B. Bradley, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 25, 1960, Ser. No. 24,219
1 Claim. (Cl. 260—612)

A process for producing a mixture of mono chlorodiphenyl oxides wherein at least 90 percent by weight of said mixture is 4-chlorodiphenyl oxide which consists of reacting by contacting liquid diphenyl oxide and chlorine gas at a temperature of from about 10° to about 50° C., said chlorine being employed in an amount from about 0.5 to 1.2 moles of chlorine per mole of diphenyl oxide, said reaction being conducted in an environment free of solvent and iron catalyst.

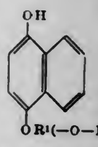
3,022,354
4-POLYALKYLENEOXY-1-NAPHTHOLS

Milton Green, Newton Highlands, and Warren E. Solodar, Watertown, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Filed Aug. 27, 1957, Ser. No. 680,618
7 Claims. (Cl. 260—613)

1. A compound selected from the group of compounds represented by the formula:

(A)



wherein each R^1 is an alkylene group containing from two to five carbon atoms; n is selected from the group consisting of 0, 1, 2, 3 and 4; and R^3 is selected from the group consisting of lower alkyl and benzyl groups.

3,022,355
$\alpha^1,\alpha^3,\alpha^5$-TRIHYDROXYHEXAMETHYLBENZENE

Harold W. Earhart and William G. De Pierri, Jr., Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

No Drawing. Filed July 14, 1959, Ser. No. 826,925
1 Claim. (Cl. 260—618)

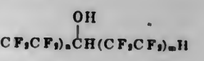
$\alpha^1,\alpha^3,\alpha^5$-trihydroxyhexamethylbenzene.

3,022,356
PROCESS FOR PREPARING BIS(ω-HYDROPERFLUOROALKYL) CARBINOLS

Charles D. Ver Nooy III, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 16, 1958, Ser. No. 767,500
3 Claims. (Cl. 260—633)

1. Process for preparing bis(ω-hydroperfluoroalkyl)-carbinols having the structure.



wherein n and m are integers having a value within the range of 1 to 5, which process comprises (a) telomerizing tetrafluoroethylene and methanol by reaction, at a temperature within the range of 50 to 250° C. and a pressure of from 1 to 100 atmospheres, in the presence of a free radical generator selected from the group consisting of peroxides and azo nitriles to produce a mixture of alcohols containing said bis-carbinols and isomeric ω-hydroperfluoroalkyl carbinols having the structure $H(CF_2CF_2)_{n+m}—CH_2OH$ wherein n and m are integers having a value within the range of 1 to 5, (b) esterifying the ω-hydroperfluoroalkyl carbinol content of said mixture with an esterification agent selected from the group consisting of a carboxylic acid and a carboxylic acid anhydride, and, (c) distilling the resulting mixture to separate the bis(ω-hydroperfluoroalkyl)carbinols from the esters of said isomeric primary alcohols.

3,022,357
PURIFICATION OF FLUOROCARBONS

Klaus Bernd Kasper, Vienna, W. Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 8, 1959, Ser. No. 845,075
7 Claims. (Cl. 260—653.3)

1. A process of separating perfluorobutyne-2 from hexafluoropropylene which comprises reacting a mixture of hexafluoropropylene and perfluorobutyne-2 with ammonia in a liquid phase selected from the class consisting of water and liquefied reagents, the concentration of said ammonia being from 1 to 30 weight percent of the liquid phase when said liquid phase is water, and from 0.01 to 1.5 weight percent when said liquid phase comprises the liquefied reagents, and recovering hexafluoropropylene.

3,022,358
PREPARATION OF ORGANIC DIHALIDES

Edward L. Jenner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 7, 1953, Ser. No. 384,767
12 Claims. (Cl. 260—654)

1. The process for the preparation of organic dihalides which comprises mixing, at a temperature below 100° C. and a pH of less than 7, a polymerizable organic compound having conjugated unsaturation and three to eight carbon atoms with an aqueous solution of an ionizable inorganic halide from the group consisting of chlorides and bromides and an oxidizing agent taken from the group consisting of hydroxyl radicals and ceric ions.

3,022,359
SELECTIVE HYDROGENATION OF CYCLODODECATRIENE TO CYCLODODECENE

Herbert K. Wiese, Cranford, and Samuel B. Lippincott, Springfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 7, 1959, Ser. No. 804,606
18 Claims. (Cl. 260—666)

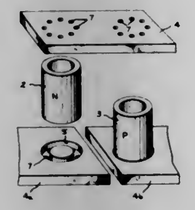
1. The process for the selective hydrogenation of a C_5–C_{24} hydrocarbon more unsaturated than a monoolefin to an olefinic C_5–C_{24} hydrocarbon more saturated than the starting material which comprises reacting the more unsaturated hydrocarbon with at least the stoichiometric amount of a hydrogen source selected from the group consisting of C_3–C_{12} saturated aliphatic monohydric alcohols, C_3–C_{12} saturated cyclic monohydric alcohols, and mixtures of each of these materials with gaseous hydrogen to obtain hydrogenation to the desired olefinic material in the presence of a high surface area hydrogenation catalyst.

ELECTRICAL

3,022,360
THERMOELECTRIC ASSEMBLY

Joseph A. Pietsch, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Filed Nov. 25, 1960, Ser. No. 71,567
4 Claims. (Cl. 136—4)

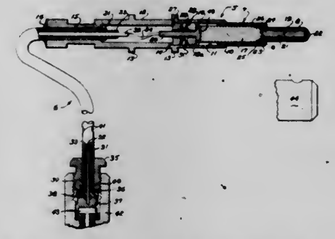


1. A thermoelectric junction for a heating or cooling device utilizing the Peltier effect comprising a tubular shaped thermoelectric element having at least one open end, an electrical current and thermal conductor link having an annular groove adapted to receive said open end of said tubular shaped thermoelectric element with the sides of said annular groove encompassing the inner and outer surface of said end of said tubular-shaped thermoelectric element, and solder means of high electrical and heat conductivity in said annular groove around the inner and outer surface of said end of said tubular-shaped thermoelectric element for securing said open end of said thermoelectric element within said groove in said conductor link.

3,022,361
ELECTRICAL DEVICE

Robert W. Fritts, Elm Grove, Wis., and Sebastian Karrer, Port Republic, Md., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

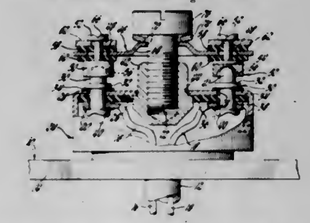
Filed Oct. 24, 1956, Ser. No. 618,063
6 Claims. (Cl. 136—4)



1. A thermoelectric generator comprising a semi-metal thermoelement having a contacting surface, a contact electrode of metal compatible with said semi-metal and having a contacting surface, an hermetically sealed enclosure for said thermoelement and contact electrode, said enclosure including as part thereof an enclosure member having a fused electrically and thermally conductive connection with said contact electrode, and biasing means placing said thermoelement and electrode contacting surfaces in continuous low electrical resistance pressure contact, said enclosure member being made of a metal oxidizable to form a refractory oxide and having a surface portion exposed within said enclosure beyond said thermoelement contacting surface in the direction

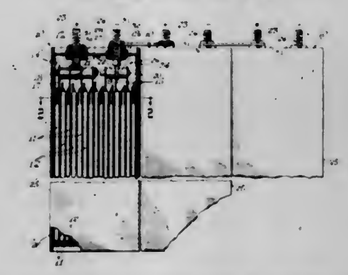
of said contact electrode, the metal of said contact electrode being oxidizable to form an oxide which is more readily reducible than said refractory oxide, wherefore upon occurrence of moisture within said enclosure, reaction thereof with said enclosure member forms refractory oxide and liberates hydrogen which, upon reaction with any oxide of the metal of said contact electrode, reduces said last-mentioned oxide to thereby protect the interface of said pressure-contact therefrom and minimize the electrical resistance of said pressure contact.

3,022,362
THERMOCOUPLE LEAD ATTACHMENT
William J. O'Brien, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 31, 1958, Ser. No. 752,294
2 Claims. (Cl. 136—4)



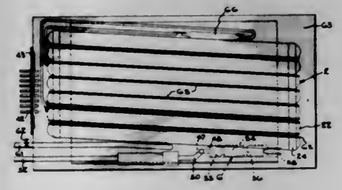
1. A thermocouple assembly comprising a probe casing, a cover casing connected to said probe casing, a plurality of electrically connected thermocouple wires disposed in said probe casing, a plurality of stud contact members mounted on said cover casing and respectively connected to said thermocouple wires, a flexible plate member supported upon and disposed above said cover casing in axially spaced relation thereto, a plurality of connector members mounted upon said plate member and adapted to be aligned and electrically contact with said stud members, said stud and connector members being formed to provide a ball and socket connection through which they coact to make electrical contact, a threaded boss centrally mounted upon said cover casing, a centrally disposed aperture in said plate member, and a stud member adapted to project through said aperture and threadably engage said boss to maintain said connector and said stud members in axial engagement.

3,022,363
HERMETICALLY SEALED STORAGE CELLS
Philip F. Grieger, East Orange, N.J., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Feb. 6, 1956, Ser. No. 563,753
2 Claims. (Cl. 136—6)



1. A storage battery comprising a plurality of independently-sealed storage cells electrically connected in series for discharge through a common load resistance, each of said cells comprising positive and negative electrodes, an electrolyte and separator means permitting flow of oxygen from the surface of one electrode to the other, and all but one of said cells being of a type having a positive electrode tending to evolve oxygen gas on overcharge and having a negative electrode tending to evolve oxygen gas on overdischarge, the positive electrode of each cell of said type having a charge capacity at least equal to that of the negative electrode and having initially a higher state of charge than the negative electrode of the cell by an amount which is at least 10% to 20% of its charge capacity in excess of the difference in the charge capacities of the electrodes when the cell is sealed.

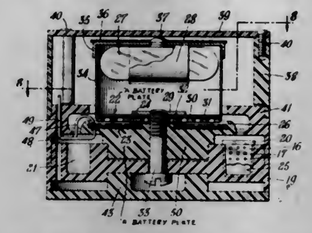
3,022,364
ELECTRIC BATTERY
Melvin F. Chubb and James M. Dines, Joplin, Mo., assignors to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 15, 1957, Ser. No. 696,654
11 Claims. (Cl. 136—90)



1. In an electric battery of the type wherein positive and negative electrodes are associated with bibulous separators which are normally free of electrolyte but which are physically associated with the electrodes to cause the battery to become activated upon introduction of liquid electrolyte into the bibulous separators, means for forcibly introducing liquid electrolyte into the bibulous separators to effect rapid activation of the battery, said means comprising a normally sealed reservoir in the form of an elongated pipe filled with liquid electrolyte wrapped around said battery, conduit means leading from one end of said pipe to said bibulous separators and including at least one rupturable diaphragm normally obstructing escape of fluid electrolyte from said pipe into said conduit means, and releasable means associated with the other end of said pipe for introducing gas directly into said pipe against the electrolyte therein at a pressure sufficient to burst said rupturable diaphragm and in pressure and volume sufficient to expel the electrolyte from said pipe to said bibulous separators through said conduit means.

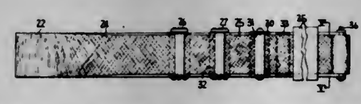
3,022,365
DEFERRED ACTION ELECTRIC BATTERY
Albert G. Saurwein, Cleveland, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, a corporation of New York
Filed Dec. 26, 1946, Ser. No. 718,519
11 Claims. (Cl. 136—90)

4. The combination of an A and B battery, each of the deferred action type, said A battery comprising generally horizontal plates, means above said A battery for supplying a predetermined amount of electrolyte thereto on activation, a weir surrounding said A battery above the active faces of said plates, said B battery being arcuate in shape, comprising more active plates than the A battery and arranged below and around said A battery whereby electrolyte may overflow from the A battery over said



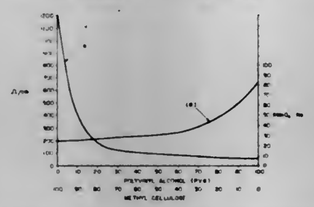
weir and into the B battery when said supplying means feeds electrolyte into the A battery.

3,022,366
BATTERY SEPARATOR AND MANUFACTURE THEREOF
Thomas F. Kilroy, Franklin Square, N.Y., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Mar. 30, 1955, Ser. No. 497,906
5 Claims. (Cl. 136—145)



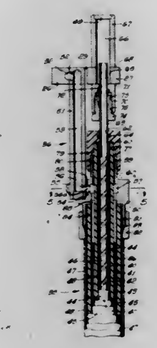
2. A battery separator comprising a single, integral, multilayer, unwoven mat of glass fibers wherein the fibers of each layer are substantially parallel to each other and extend substantially completely across the mat, the fibers in each layer crossing and intertwining with the fibers in each adjacent layer at an angle between 60 and 90° and the fibers of the layers adjacent at least one major surface of the mat being finer and more densely associated than the fibers in other layers of the mat, and a microporous layer adhered to but not substantially impregnating said major surface, the microporous layer comprising finely divided particles and a binder therefor, said particles and binder being inert with respect to battery components and reactions.

3,022,367
SEPARATOR FOR ELECTRIC BATTERIES
Carl Horowitz, Brooklyn, and Meyer Mendelsohn, New York, N.Y., assignors, by mesne assignments, to Yardney International Corp., New York, N.Y., a corporation of New York
Filed Apr. 23, 1958, Ser. No. 730,474
14 Claims. (Cl. 136—146)



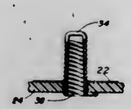
1. An interelectrode separator for electrochemical cells, comprising a permeable support coated with a semi-permeable film composed of a homogeneous mixture of a polyvinyl compound, in a proportion ranging between 20% and 80% by weight of said film, with methyl cellulose.

3,022,368
COAXIAL CABLE ASSEMBLY
Leonidas C. Miller, 4228 8th Ave., Los Angeles, Calif.
Filed Apr. 22, 1959, Ser. No. 808,201
9 Claims. (Cl. 174—15)



1. In a coaxial cable assembly of the type described, the combination of: inner and outer concentric flexible imperforate tubes each formed of electrical insulating material, the tubes defining an annular passageway for coolant therebetween, the inner tube providing a second passageway for coolant, first and second concentric tubular electrical conductors, the first electrical conductor being positioned within said annular passageway, the second electrical conductor being positioned concentrically within the second passageway, a terminal fitting having a body, clamping means on the body securing each of said imperforate tubes thereto, a metal tube connected to and extending coaxially of the said second electrical conductor and projecting exteriorly of said body, the interior of said metal tube communicating with the interior of said inner imperforate tube, the body having a central cavity communicating with the said annular passageway, and the body having a lateral port communicating with said cavity.

3,022,369
WIRE CONNECTOR FOR PRINTED CIRCUIT BOARD OR THE LIKE
Charles C. Rayburn, Falls Church, Va., assignor, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Original application Feb. 2, 1956, Ser. No. 563,091, now Patent No. 2,948,953, dated Aug. 16, 1960. Divided and this application June 16, 1960, Ser. No. 36,507
5 Claims. (Cl. 174—68.5)



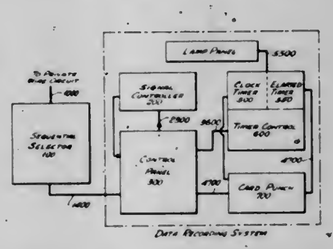
1. An article of manufacture comprising in combination an insulating sheet having parallel surfaces, a coating of metal bonded to a portion at least of one surface of said insulating sheet, a cavity formed to extend through said sheet and said coating, a flexible conductive strand arranged on the other surface of said insulating sheet, and a helix formed from a portion of said conductive strand and passing through said cavity to extend beyond the said coating.

3,022,370
RUN AND TAP CONNECTOR
William G. Osborn, Stamford, Conn., assignor to Burndy Corporation, a corporation of New York
Filed Mar. 5, 1959, Ser. No. 797,538
1 Claim. (Cl. 174—71)



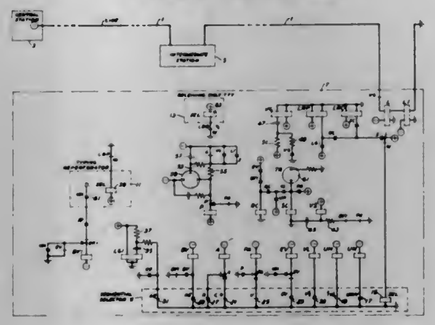
A compressible electrical connector for connecting a run and a tap conductor in spaced apart parallel relation comprising: a connector body made of malleable metal having at least two pairs of arms; each arm of each pair of arms being curved inwardly towards its mate so that, upon compression of said connector, at least a conductor may be enclosed thereby; the curvature of one arm of each said pairs being smaller than the curvature of its mate, so that, upon compression of said connector, said arm of smaller curvature will pass within its mate of greater curvature forming an overlapped connection enfolding the conductor; said arm of greater curvature of one of said pairs being hook-shaped and spaced from the arm of smaller curvature of said pair so as to form an opening between the arms on the side of the connector which is adapted to permit the entrance of a conductor between the ends of the arms in said opening and to permit the connector to hang from said conductor.

3,022,371
PRIVATE-WIRE DATA RECORDING SYSTEM
John W. Arnaud, % Monitron Service Corporation, 551 5th Ave., New York 17, N.Y.
Filed Nov. 1, 1960, Ser. No. 66,515
16 Claims. (Cl. 178—2)



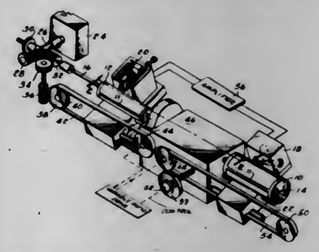
1. A data-recording system for monitoring a multi-station telegraph transmission circuit and for recording station designations of variable length and spacing which are transmitted over said circuit, comprising a signal detector connected to said circuit for detecting transmitted station designations, a recorder and associated multi-field record means for recording the said detected designations, and controller means for analyzing the length and spacing of said received designations and for controlling the said recorder in accordance with said analysis to record each said designation in predetermined ones of said fields of said record means.

3,022,372
STATION SELECTION SYSTEM
Clarence J. Votaw, Bergenfield, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 24, 1958, Ser. No. 776,039
9 Claims. (Cl. 178—4.1)



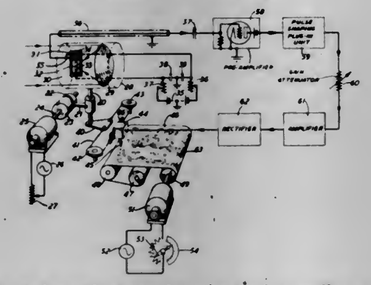
1. In a telegraph system, a communication channel, a telegraph recorder selectable by selection code signals, a further recorder, means individual to said telegraph recorder and selectively responsive to the reception of said selection code signals from said channel for impressing an answerback code signal on said channel and connecting said telegraph recorder with said channel and further means responsive to said selection code signals and effective in the absence of the impression of said answerback signal on said channel for connecting said further recorder with said channel.

3,022,373
ELECTRONIC LINE SCAN AND RECORDING MACHINE WITH OSCILLATING CYLINDER
Samuel W. Levine, Westbury, and Reuben J. Autere, Huntington, N. Y., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed May 20, 1958, Ser. No. 736,612
11 Claims. (Cl. 178—6.6)



10. An apparatus for the electrical reproduction of images, comprising first and second cylindrical drums mounted for rotation about their respective axes, image information transducer means mounted adjacent each of said drums for sliding motion parallel to the axis of such drum, an electrical circuit connecting said transducers, means on said first drum for releasably securing thereto image bearing sheet material, means on said second drum for releasably securing thereto recording sheet material upon which to reproduce such images, means for continuously rotating said first drum, means for moving the transducer means adjacent said first drum in timed relation to the rotation thereof, a variable drive means interconnecting the transducer means adjacent said second drum and said means for moving the transducer adjacent said first drum, and motion translating means for converting the continuous rotating motion of said first drum to an oscillating rotary motion of said second drum.

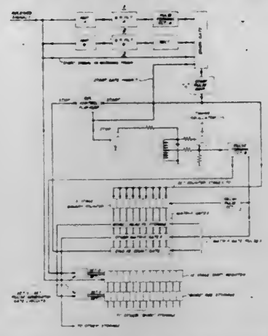
3,022,374
SCANNING INFRA-RED DETECTOR AND RECORDER
Walter H. Brattain and Neill G. Wade 3rd, Morristown, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 22, 1947, Ser. No. 781,278
8 Claims. (Cl. 178—6.6)



1. In a thermal-energy detection and recording system for scanning an area under observation and producing a thermal-energy map depicting the positions of thermal-energy sources situated within said area relative to a reference line upon said map, the combination of a plurality of interchangeable elements each sensitive to thermal energy, means for scanning said area to collect thermal-energy emissions emanating therefrom and to focus said collected emissions upon a selected one of said elements, an indication circuit responsive to said element, means in said circuit for initiating electrical pulses corresponding to variations in the thermal energy focussed upon said element, amplification means including an input circuit and an output circuit, said indication circuit being connected to said input circuit, said amplification means having an adjustable pass-band transmission characteristic extending from frequencies below to far above that of said pulse frequencies, means to adjust the width of said pass band, said adjusting means including means for increasing and decreasing the center frequency of a pass band of selected width, a recording medium providing a surface upon which said map is to be formed, marking means connected to said output circuit and cooperating with said medium, means to move said marking means across said surface and into operative relation with said medium, means for coordinating the relative movement of said marking means with the directional positioning of said scanning means so that each thermal-energy source in said area is identified by a corresponding indication, and means responsive to said pass band width adjusting means to control the resolving power of said marking means.

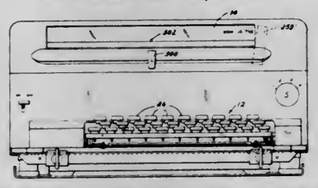
3,022,375
SYNCHRONIZING START-STOP DIGITAL TRANSMISSION SYSTEM
James R. Davey, Franklin Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 22, 1955, Ser. No. 535,824
10 Claims. (Cl. 178—53.1)

1. A receiving synchronizing circuit for a start-stop telegraph signal train, said train comprising a preliminary group of signal elements terminated by a start signal element, said start signal element followed by intelligence bearing signal elements, said preliminary group having a higher pulse repetition rate than that of said intelligence bearing signal elements, said circuit comprising a timing oscillator, a gate for controlling said oscillator, a first, second and third branch for controlling said gate, a common input for said train to said branches, means in one of said branches responsive to said train, for disabling said gate until the arrival of said start signal element,



said means comprising a narrow band pass filter tuned to the frequency of said preliminary signals connected through a full wave rectifier to said gate, so as to disable said gate before said start signal arrives, and means in said gate responsive to the impressing thereon of said start signal element for starting said oscillator.

3,022,376
DISPLAY TRANSMITTER
Bernard Howard, Upper Saddle River, N.J., assignor, by mesne assignments, to Mite Corporation, New Haven, Conn., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,711
42 Claims (Cl. 178—81)

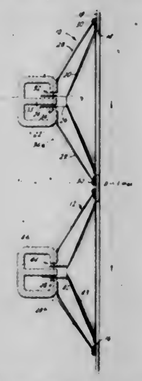


6. A display transmitter comprising a keyboard for producing coded electrical pulses, a printer responsive to coded electrical pulses located at and responsive to said keyboard to print a line of characters and to simultaneously form a plurality of superposed lines of dots corresponding to said characters in a multiple level code, means affording visible display of said line of characters for possible correction, a code reader for reading said dots and producing electrical pulses in response thereto, transmission means responsive to said reader and including output conductors, input conductors for actuating the printer from an outside coded pulse signal, and switch means for causing the printer to respond to either an outside coded pulse signal, or to the local keyboard.

3,022,377
SOUND REPRODUCING SYSTEM
Lloyd J. Bobb, Glenside, Robert B. Goldman, Philadelphia, and George C. Maling, Jr., Glenolden, Pa., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 618,791
10 Claims. (Cl. 179—1)

1. An electroacoustical transducer system comprising first and second electrodynamic loudspeakers; each of said loudspeakers having a cone, a magnet formed with a

cylindrical gap for receiving a voice coil, and a voice coil coupled to said cone and disposed at least partially within said gap with the longitudinal center of said voice coil offset from the longitudinal center of said gap; means positioning said loudspeakers closely adjacent one another with the axis of said cone of said first loudspeaker substantially parallel to the axis of said cone of said second loudspeaker and displaced from said axis of said cone of said second loudspeaker by an amount such that the projections of said cones of said first and second loudspeakers parallel to said axes on a plane perpendicular to said axes are non-overlapping; means connected to said voice coils of said first and second loudspeakers for supplying said first and second loudspeakers with an oscilla-



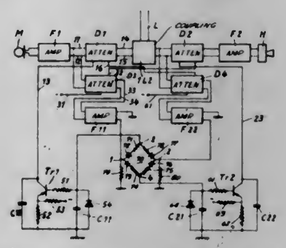
tory electrical signal to be reproduced, the connection of said last mentioned means to said voice coils having a polarity such that the displacement in space of said cone of said first loudspeaker is in the same direction as the displacement in space of said cone of said second loudspeaker for corresponding half cycles of said oscillatory signals supplied to said two voice coils, the forward directions of said two cones having an orientation such that the acoustical even harmonic distortion components generated by said first loudspeaker in response to the application of said oscillatory signal are in phase opposition at points in space which are equidistant from said two axes to the corresponding acoustical even harmonic distortion components generated by said second loudspeaker.

3,022,378
MONAURAL-BINAURAL TRANSMISSION OF SOUND
Floyd K. Becker, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 19, 1959, Ser. No. 794,373
13 Claims. (Cl. 179—1)



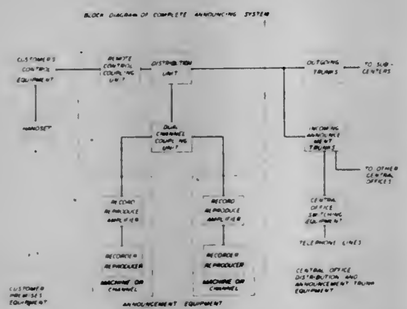
1. Apparatus for generating and transmitting stereosignals which comprises, in combination with a pair of microphones disposed in mutually spaced relation to a sound source in a fashion selectively to receive energy originating in and spreading in different directions from said source, a pair of input points, each arranged to receive energy derived from one of said microphones, a direct transmission channel extending from each of said input points, a reproducer supplied by each of said channels, and a single, reciprocal cross-coupling path interconnecting said channels and providing for simultaneous two-directional transfer of energy from each one of said channels to the other of said channels, said cross-coupling path including means for delaying the transmission of signals therethrough by a preassigned time interval in the range 5–30 milliseconds.

3,022,379
AMPLIFYING DEVICE
Carl Gustaf Söderbaum, Stockholm Sv, and Ingemar Mitnitzky, Stockholm-Bandhagen, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 31, 1959, Ser. No. 803,116
Claims priority, application Sweden Apr. 28, 1958
1 Claim. (Cl. 179—1)



An amplifying arrangement for use in a telephone installation, including a loud speaking telephone instrument having a microphone and a loud speaker connected to a two-wire line for respectively sending and receiving sound currents, said amplifying arrangement comprising, in combination, a first amplifier connected to said two-wire line for amplifying sound currents sent by the microphone, a second amplifier connected to said two-wire line for amplifying sound currents received by said loud speaker, a first attenuating network included in the connection between the microphone and the two-wire line, said attenuating network being substantially non-attenuating during the sending of sound currents by the microphone and substantially attenuating when said first amplifier is inactive, a second attenuating network included in the connection between the loud speaker and the two-wire line, said second attenuating network being substantially non-attenuating during the reception of sound currents by the loud speaker and substantially attenuating when the second amplifier is inactive, each of said attenuating networks including control means for controlling the attenuation thereby, each of said control means including a transistor, a first capacitor and a second capacitor connected in a transistor network, the first capacitor of each transistor network being connected to the input and the second capacitor of each transistor to the output of the respective transistor network, the first capacitor associated with the first attenuating network being charged by sound currents sent by the microphone and the first capacitor associated with the second attenuating network being charged by the sound currents received by the loud speaker, the second capacitor of each transistor network being charged during the inactive condition of the respective amplifiers and abruptly discharged when the transistor of the respective networks are conductive, each of said transistors being rendered conductive by the charging of the respective first capacitors and supplying when conductive a control current reducing the attenuation of the respective attenuating networks.

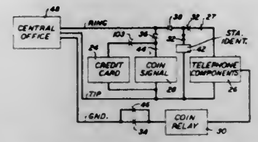
3,022,380
ANNOUNCING SYSTEM
Robert A. Miller, Plainfield, Verne E. Munson, Denville, Harold M. Owendoff, Morris Plains, and Charles M. Taris, Cranford, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 29, 1959, Ser. No. 830,249
12 Claims. (Cl. 179—6)



1. An announcing system comprising a transmission line, two announcing machines, each of said machines including input and output means, electrical circuits for impressing an announcement recorded on said machines upon said transmission line, said circuits being connected to one of said machines, means for recording an announcement on said other machine, means for conditioning the system for transfer of said electrical circuits to said other machine, means responsive to the actuation of said transfer conditioning means for starting the operation of said one machine to reproduce the announcement recorded thereon, means in said one machine for generating a signal after reproduction of the announcement recorded thereon has been completed, means responsive to said signal and the actuation of said transfer conditioning means for transferring said electrical circuits to said other machine, means controlled by said announcement recording means, said transfer conditioning means and said signal responsive means for starting the operation of said other machine and erasing the announcement recorded on said one machine, means in said other machine for generating a signal after reproduction of the announcement recorded thereon has been completed, means responsive to said signal for recycling said other machine, simultaneously starting the operation of said one machine and connecting the output of said other machine to the input of said one machine to record on said one machine the announcement reproduced from said other machine.

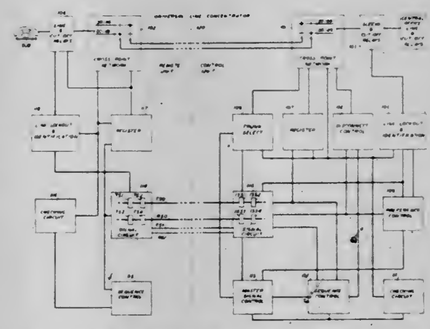
3,022,381
CREDIT CARD OPERATED TELEPHONE
William Pferd, Watchung, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 26, 1959, Ser. No. 795,642
7 Claims. (Cl. 179—6.4)

5. In a credit card operated telephone station comprising substation apparatus and means for receiving a card having circuitry thereon which forms coded representations of each digit of a subscriber account number, means operated by receipt of said card for activating said substation apparatus and connecting said station to a telephone line, means included in said substation apparatus for sensing the encoded digits of the subscriber account number, signal generator means for producing a plurality of discrete frequencies, stepping switch means for inspecting



said sensing means and in accordance with the coding on said card selecting a frequency for each digit of the account number as an output of said signal generator means, and means for impressing the output of said signal generator means on said telephone line.

3,022,382
REMOTE TELEPHONE LINE CONCENTRATOR
James C. Ewin, Colonia, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 31, 1960, Ser. No. 66,320
23 Claims. (Cl. 179—18)

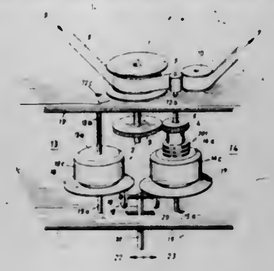


1. A remote telephone line concentrator including a plurality of substation lines, a telephone central office, a plurality of concentrator trunks fewer in number than said lines for coupling said lines to said office, remote switching means for connecting said lines to said trunks, and means at said central office for identifying a particular line connected to one of said trunks perparatory to disestablishing the connection through said trunk.

3,022,383
ROTATABLE ELECTROMAGNETIC TRANSDUCER SYSTEM
Anton M. Springer, Homburg vor der Hohe, Germany, assignor to Telefonbau und Normalzeit G.m.b.H., Frankfurt am Main, Germany, a German firm
Filed Oct. 29, 1956, Ser. No. 618,766
Claims priority, application Germany June 9, 1956
8 Claims. (Cl. 179—100.2)

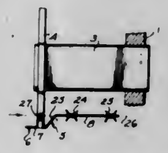
4. In a sound reproducing system for controlling playback speed a chassis, a first electric motor comprising two parts both rotatable about a common axis relative to said chassis and rotatable relative to each other at a fixed angular velocity, a capstan driven by said one of said two parts, a rotatable multiple playback head driven by the other of said two parts, a second electric motor arranged with the axis of rotation thereof parallel to said common axis, a gear mechanism adapted to effect selectively con-

tinuous changes of gear ratio interposed between said second motor and said one said two parts of said first



motor to vary the absolute velocity of said one of said two parts.

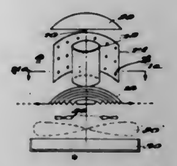
3,022,384
PIEZO-ELECTRIC PICK UP
Machiel de Vries, De Kempenaerstraat 51, Amsterdam, Netherlands
Filed Aug. 21, 1957, Ser. No. 679,438
Claims priority, application Netherlands Aug. 24, 1956
6 Claims. (Cl. 179—100.41)



1. A piezo-electric pick up comprising, in combination, a casing, an elongated crystal element supported at one end by said casing, a coupling element of flexible material extending at right angles to the longitudinal axis of the crystal element and supported by the other end of said crystal element, a stylus holder having a stylus carrying portion bearing against the coupling element, the other end of said holder being supported by said casing, said stylus carrying portion and the said other end of the stylus holder being parallel to but offset with respect to each other and to the longitudinal axis of symmetry of the crystal element, means to support said other end of the stylus holder by the casing to be resiliently rotatable about its longitudinal axis, and said longitudinal axis of said other end intersecting said coupling element at a point about which the section of said coupling element bearing against said stylus carrying portion of the stylus holder vibrates under the influence of movements of the stylus.

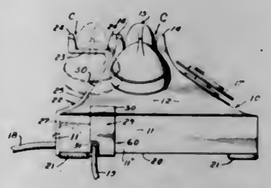
3,022,385
SOUND PRODUCER
Takis N. Panay, 1120 Vermont Ave. NW., Washington, D.C.
Filed Aug. 25, 1958, Ser. No. 757,056
13 Claims. (Cl. 179—113)

1. An ionic device comprising a first circular electrode composed of an electrically conductive substance and including an ion emitting portion thereof for producing a flow of charged particles in a predetermined direction to form a hollow cylindrically configured mass flow of particles, a pair of cylindrically configured electrodes, one spaced within the other and each spaced from the first electrode for receiving ions therebetween from the first electrode and being composed of an electrically conductive substance for controlling the motion of particles in a radial direction and perpendicular to the predetermined flow, said flow interposed uniformly between said pair of electrodes and being substantially continuous and dia-



phragmatic, said controlling being effected when a signal voltage is applied to the pair of electrodes for producing sound in response thereto.

3,022,386
AUXILIARY TELEPHONE CRADLE
George Lewis Ireland, 1205 18th St., Manhattan Beach, Calif.
Filed May 31, 1960, Ser. No. 32,824
7 Claims. (Cl. 179—146)



1. An auxiliary receiver cradle attachment for a hand set telephone with a case having a bottom fitted with downwardly projecting corner pads and sides and back curved inwardly from a base portion to a receiver cradle at the top, said attachment comprising: a horizontal top portion with spaced lugs affording an auxiliary receiver cradle abutting the back of the receiver cradle of the case; a depending plate-like portion connecting at its upper end with the edge of said horizontal portion abutting the back of the receiver cradle of the case and lying against the back of the case; extensions of said plate-like portion lying against the bottom of the case and extending to the side edges thereof; and retaining extensions on said bottom extensions lying against the surface of the base portion of the case.

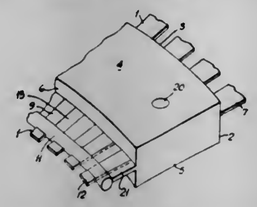
3,022,387
TELEPHONE ATTACHMENT
Richard H. Bair, Camp Hill, Pa., assignor to Laura W. Triest, Annapolis, Md.
Filed Oct. 1, 1958, Ser. No. 764,581
8 Claims. (Cl. 179—182)

6. An attachment for a telephone with a transmitter and a receiver to enable multiple party use of a single telephone which comprises a body member simulating a telephone, said body member including a sound conducting receiving element and a sound conducting speaking element, a pair of sound conducting tubes, said body member being provided with suitable hollowed areas whereby one of said tubes is directed through a hollowed area of the body and into a supported sound conducting relationship with the receiving element and the other of said tubes is directed through the body and into a supported sound conducting relationship with the receiving element and the other of said tubes is directed through the body and into a supported sound conducting relationship with the speaking element, and a pair of sound confining and directing caps, each cap being connected with one of the sound conducting tubes, one of said caps being adapted to direct engagement with a telephone transmitter and the other cap being adapted to direct engagement against a telephone receiver, the at-



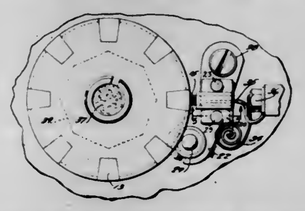
tachment thereby rendering both the telephone and the member simulating a telephone capable of simultaneous multiple party sound transmission and reception.

3,022,388
AUTOMATIC SELECTING SWITCHES AS USED IN AUTOMATIC TELEPHONE SYSTEMS
John Douglas Leslie, London, England, assignor to Siemens Edison Swan Limited, London, England, a British company
Filed Aug. 11, 1959, Ser. No. 832,927
Claims priority, application Great Britain Aug. 19, 1958
1 Claim. (Cl. 200—11)



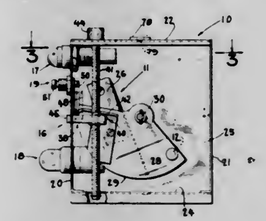
A moulded bank unit comprising a plurality of bank contacts moulded into insulating material to form a row of bank contacts spaced apart from one another, each of said bank contacts having a tag portion protruding clear of the moulded insulating material from a face of a main body of this material, a main embedded portion embedded in the main body of the moulded insulating material and having none of its surface exposed, a wiped portion protruding from a further face of said main body of the moulded insulating material and having its surface partly exposed to form at least one contacting surface to permit of wiper engagement with it, and a further portion extending from said wiped portion in the direction away from said main embedded portion, the moulded insulating material extending, in the form of strips protruding from said main body of this material, into the gaps between said wiped portions of said bank contacts to fill these gaps with insulating material flush with the contacting surfaces of said wiped portions to provide at least one smooth and mechanically unbroken wiper track, and said strips being supported, at their ends remote from said main body of the moulded insulating material, by a supporting portion of the moulded insulating material, this supporting portion taking the form of a continuous length of the moulded insulating material integral with said main body and with said strips and interconnecting said ends of said strips and having said further portions of said bank contacts embedded in it to cause it to be supported by said bank contacts.

3,022,389
ROTARY CIRCUIT BREAKER
Vincent F. Wolrab, R.R. 1, Mount Vernon, Iowa
Filed Dec. 29, 1959, Ser. No. 862,540
4 Claims. (Cl. 200—24)



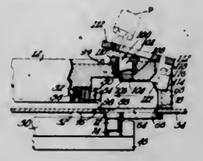
1. A rotary distributor comprising a disc of insulating material, circumferentially spaced radially disposed segments positioned in said disc, a covering disc positioned over the disc of insulating material and having openings therein positioned in registering relation with the segments, a brush, a holder for mounting the brush with the extended end thereof in contact with the periphery of the disc for engaging the segments, and a clip for connecting the brush to terminals of a conventional distributor on the shaft of which the discs are positioned.

3,022,390
CONDITION MONITORING DEVICE
Robert A. Cline, Noroton, Conn., and Eli Levy, Bloomfield, N.J., assignors to Walter Kidde & Company, Inc., Belleville, N.J., a corporation of New York
Filed Mar. 27, 1959, Ser. No. 802,544
4 Claims. (Cl. 200—38)



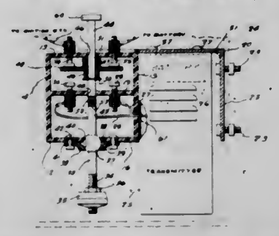
1. A condition monitoring device comprising a casing, a unidirectional rotating drive shaft in said casing, a switch mounted in said casing in a fixed position, a switch actuating member mounted for rotation on said shaft adjacent said switch and extending radially outwardly from one side of said shaft and having a switch operating element and an abutment thereon, a clutch for coupling said member to said shaft, and a stop in said casing for engaging said abutment and allowing the same to rest thereon to support said member in a predetermined position when unclutched and to thereby position the center of gravity of said member in a horizontal plane below said shaft, said drive shaft being adapted to rotate said member to position its center of gravity above that plane when said clutch is effective and to position said element of said member to operate said switch upon rotation of said member through a predetermined angle, whereby said member is adapted to return to its supported position by gravity when said clutch is rendered ineffective.

3,022,391
CIRCUIT BREAKER OR SWITCH HAVING LOCKING PROVISION
John J. Oravec, Union, N.J., assignor to Federal Pacific Electric Company, a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 844,577
8 Claims. (Cl. 200—34)



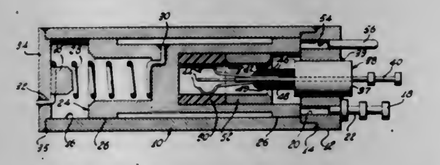
1. An enclosed circuit controlling instrumentality having a front operated twist handle, said handle being mounted on said instrumentality and turnable to a plurality of different positions for correspondingly actuating the mechanism of said instrumentality, and handle-locking means including a locking slide concealed in the handle and a locking device cooperable with said locking slide and movably carried by said handle for movement to operate said slide from handle-releasing position to handle-locking position in at least one of said handle positions, said device having an external padlock-receiving portion mounted for movement between handle-releasing and handle-locking positions, said padlock-receiving portion when in handle-releasing position being disposed too close to the handle to receive a padlock and said padlock-receiving portion when in handle-locking position being spaced from said handle sufficiently for receiving at least one padlock in position to prevent return of said padlock-receiving portion to said handle-releasing position.

3,022,392
IMPACT-RESPONSIVE SWITCH DEVICE
Maurice Clemson, 45 S. Veronica Road, West Chester, Pa.
Filed Mar. 11, 1960, Ser. No. 14,360
3 Claims. (Cl. 200—61.5)



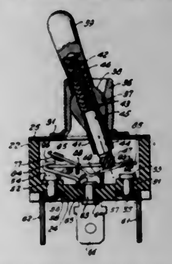
1. An impact switch adapted to be mounted in a vehicle to control the vehicle electrical system and to energize a distress transmitter comprising a housing having an intermediate partition wall, a pendulum pivotally mounted in the bottom wall of said housing, said pendulum having an upstanding shank element extending upwardly into the housing, a vertical plunger member slidably mounted in the top wall and said intermediate partition wall of the housing in vertical alignment with said pendulum, said plunger member having a concave bottom end engageable over and receiving the top end of said shank element, a conductive plate resiliently secured to said plunger member, spring means biasing said plunger member downwardly, a pair of spaced switch contacts mounted in the top wall of the housing and being engageable by said conductive plate when the pendulum is in a vertical position with the top end of the shank element received in said concave bottom end, said contacts being adapted to be connected in circuit with the vehicle electrical system, and a pair of additional spaced switch contacts mounted in the intermediate partition wall below said conductive plate and adapted to be connected in the energizing circuit of a distress transmitter, said conductive plate being movable into bridging engagement with said additional contacts responsive to the pivoting of said shank element out of engagement with the bottom end of said plunger member.

3,022,393
ACCELERATION SWITCH
Preston R. Weaver, Nyack, N.Y., assignor to Maxson Electronics Corporation, a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,538
8 Claims. (Cl. 200—61.45)



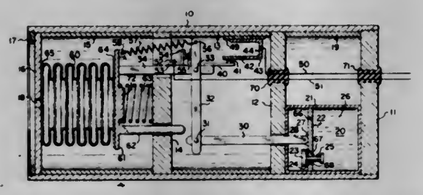
1. An acceleration switch comprising an outer hollow housing member having a longitudinal axis and having a first contact terminal in electrical contact with at least the interior wall of said housing, a second contact terminal extending into said housing and disposed in a plane coplanar with said axis, and a mass member having a conductive portion in contact with the internal wall of said housing and having aligned conductive and non-conductive portions independently engageable with said second fixed contact member along a longitudinal locus parallel to said axis, means to bias said mass in one direction to bring said second fixed contact member into engagement with one of said conductive and non-conductive portions of said mass member, said mass member being movable against said biasing means upon acceleration to move the other of said conductive and non-conductive portions into contact with said contact member.

3,022,394
SINGLE POLE PROGRESSIVE SWITCH
Anthony N. Grotz, Chicago, Ill., assignor to Carling Electric, Inc., West Hartford, Conn., a corporation of Connecticut
Filed Oct. 2, 1959, Ser. No. 844,111
19 Claims. (Cl. 200—68)



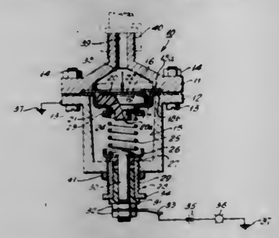
1. A progressive switch comprising a case, first and second spaced apart circuit contacts in said case, a support in said case intermediate said circuit contacts, first and second circuit levers pivotally mounted on said support, said first lever being adapted to make electrical connection with said first contact, said second lever being adapted to make electrical connection with said second contact, said two levers also being operable pivotally relative to each other, said second lever in one pivotal action on said support bearing against said first circuit lever and urging it pivotally into electrical connection with said first contact and in a second pivotal action pivoting on said first lever and coming into electrical connection with said second contact.

3,022,395
PRESSURE RESPONSIVE APPARATUS
Arthur W. Sear, Arcadia, Calif., and Paul D. Schulz, St. Louis Park, and David E. White, St. Paul, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 783,769
7 Claims. (Cl. 200—83)



1. In apparatus of the class described; means displaceable in response to a change in a condition; damping means; lost motion linkage means connecting said displaceable means to said damping means, said linkage means normally biased to a first position and operable to transmit motion between said displaceable means and said damping means upon displacement to another position; and means connected to said lost motion linkage means for indicating the position of said linkage means.

3,022,396
READILY ADJUSTABLE PRESSURE SWITCH
Morton Packer, 76 Kingsley Drive, Yonkers, N.Y., and James R. Arcara, 597 North Ave., New Rochelle, N.Y.
Filed Sept. 10, 1959, Ser. No. 839,153
2 Claims. (Cl. 200—83)

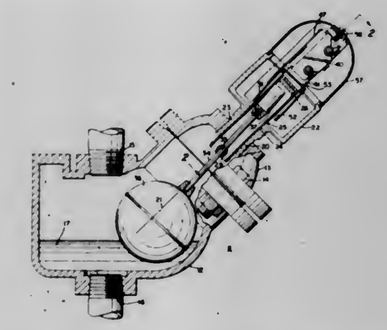


1. A pressure sensing switch for making an electrical contact in response to a change of pressure of a fluid comprising, a frame having an upper and a lower portion, said frame portions having operatively engaging annular flanges, a diaphragm clamped between said flanges, an electrically conductive washer formed also clamped between said annular flanges and having a seat extending into the lower part of said frame, an insulating body normally seated in said seat formed by said washer, said insulating body abutting against a first side of said diaphragm, means adapted to accommodate the variable-pressure fluid in the upper part of said frame and against the second side of said diaphragm, an electrically-conductive and selectively preloaded spring located in the lower portion of said frame, the upper end of said compression spring acting against said insulating body and urging it towards said diaphragm, an electrically conductive member movable with said insulating body and in electric contact with said spring, said member forming the movable part of a normally open electric contact, said seat for said insulating body forming the fixed part of said electric contact, means securing the lower end of said spring relatively fixed with respect to the lower frame portion and also for selectively preloading said spring and including a tubular member having an outer threaded portion engaging a threaded hole in said lower frame portion wherein said tubular member may be axially adjusted in either direction along the spring axis, said tubular member having a through bore, said threaded hole being located adjacent the lower end of said spring, the lower end of said tubular member extending exteriorly of said lower frame portion, a first insulator bushing extending part way into said tubular member bore from the interior side of said lower frame portion, said first bushing having a flange overlapping the upper end of said tubular member for limiting projection of said bushing into said tubular member bore, a second bushing having a flange overlapping the lower end of said tubular member for limiting the amount of projection of said second bushing into said tubular member bore, a conductive retainer resting on said first bushing, the lower end of said spring being seated on said retainer and urging same against said first bushing, said retainer and bushings having aligned openings, a conductive member having an upper end overlapping said retainer, said conductive member extending through the aligned openings of said retainer and bushings and having a lower end projecting exteriorly of said lower frame portion for connection with one side of an electrical signal source the other side of which is connected to said electrical conductive washer, said conductive member making electrical contact with said spring and being electrically insulated from said frame by said bushings, a threaded surface on the lower end of said conductive member, a nut engaging said last-mentioned threaded surface and overlapping said second bushing flange and means for threadedly locking said tubular member in a desired position axially in either direction along said spring axis, said preloading assemblage being clamped together by drawing said nut up against said second bushing flange as said first bushing flange is pulled against the upper end of said tubular member, said spring expands to move said insulating body towards said diaphragm to cause said movable conductive member to contact said conductive washer for closing the normally open switch when the pressure exerted by the preloaded spring against said diaphragm exceeds the pressure exerted by the fluid on said diaphragm.

3,022,397
LIQUID LEVEL INDICATOR
Allan R. Goellner, Parma Heights, Ohio, assignor to The Reliance Gauge Column Co.
Filed Dec. 11, 1959, Ser. No. 859,061
13 Claims. (Cl. 200—84)

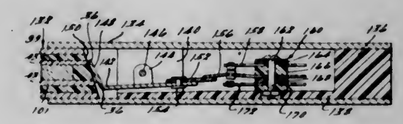
5. A liquid level float switch, comprising, in combination, a float chamber for a liquid, a surface in said float chamber defining an opening with an axis, a non-magnetic tube coaxially fixed in said opening, a float rod pivoted near the inner end of said tube and extending longitudinally in said tube, a float fixed on the inner end of said float rod, first magnetically permeable means substantially coaxially fixed on the outer end of said float rod, an electrical switch mounted near the outer end of said tube and having first and second conditions, a transversely movable actuator arm for said switch connected thereto and extending generally parallel to said axis, second magnetically permeable means acting on said arm and including first and second permeable legs longitudinally extending along the upper and lower sides of said

tube, said legs extending longitudinally adjacent said first permeable means, and one of said first and second permeable means being permanently magnetized, whereby with said float in said float chamber not being supported by liquid the said first permeable means abuts the upper side of said tube to relatively attract said first leg into



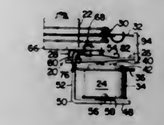
engagement with said upper side of said tube to establish said switch in said first condition, and whereby with said float being flotationally supported by liquid the said first permeable means is moved into engagement with the lower side of said tube and said second leg rapidly moves into engagement with said lower side of said tube to establish said switch in said second condition.

3,022,398
ELECTRIC CONTROL DEVICE
Martin L. Abel, Oak Park, Mich., assignor to Fluidwick Company, Inc., Detroit, Mich., a corporation of Michigan
Filed May 15, 1959, Ser. No. 813,483
11 Claims. (Cl. 200—87)
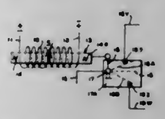


3. An electric switch comprising a casing having a recess therein, a magnetic unit comprising a generally prismatic magnet having pole pieces on the opposite poles thereof so that one of the pole pieces is completely magnetized as a north pole and the other is completely magnetized as a south pole, edges of said pole pieces defining a continuous air gap therebetween, said magnetic unit being mounted in said casing with portions of the pole pieces positioned to expose the air gap therebetween to said recess and other portions of the pole pieces positioned to expose the air gap therebetween to the exterior of the casing, a movable element in said recess extending across said first mentioned portions of the pole pieces so as to be held in one position against a force which would move it to a second position when the number of lines of flux between said first mentioned portions is weakened by the presence of magnetic permeable material adjacent to said other portions of the pole pieces, and contact means within said recess actuated by said movable element.

3,022,399
RELAY
Werner R. Bauer, Columbus, Ohio, assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Sept. 4, 1959, Ser. No. 838,262
7 Claims. (Cl. 200—87)



1. A relay comprising: a U-shaped frame; a coil assembly mounted on one of the legs of said frame and extending towards the other leg but terminating short thereof; an armature pivoted on a portion of the medial section of said frame and extending between said coil assembly and said other leg, said armature being formed with air gap reducing means; a switch assembly including a base plate mounted on said other leg, said switch assembly further including switch means operatively connected to said armature; and spring means sandwiched between said other leg and said base plate and including a portion which abuts said armature to bias the same to a controlling position.

3,022,400
TWO-WAY SOLENOID
Rolf S. von Ahlefeldt, 1325 Greenwood St., Pueblo, Colo.
Filed June 27, 1957, Ser. No. 668,379
16 Claims. (Cl. 200—93)

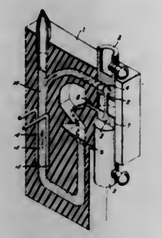


1. An electronic motor comprising a solenoid, a slideable core mounted in said solenoid for sliding movement, said core comprising at least two permanent magnets, said magnets being arranged in end to end relation with like poles at the adjacent ends and the opposite poles at the outer ends of each magnet, the outer ends of each magnet projecting toward the extremities of the solenoid, said core being moveable in one direction by the application of direct current to the leads of the solenoid, said slide being operative in the other direction by the reverse application of direct current to said solenoid.

3,022,401
ELECTRICAL SWITCHING DEVICE AND METHOD EMPLOYING LIQUID CONDUCTOR
Robert B. Wilkerson, Bloomington, Ill., assignor to General Electric Company, a corporation of New York
Filed Nov. 26, 1958, Ser. No. 776,541
11 Claims. (Cl. 200—112)

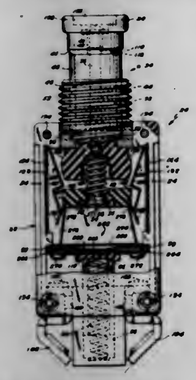
1. An electrical switch comprising: an insulating enclosure containing a reservoir of an electrically conducting liquid; an upper chamber within said enclosure having a restricted orifice to permit liquid in said chamber to flow out of said chamber in a free-falling stream, a container having therein a pool of said liquid, the surface of which is spaced below said orifice in a position to intercept said stream; means for introducing electrically conducting liquid from said reservoir into said chamber at a controlled rate to vary the liquid pressure at said orifice thereby to control the length of the uninterrupted or continuous portion of the liquid stream issuing from said orifice into said pool, the surface of said pool being

spaced below said orifice a sufficient distance that single drops of said liquid do not span the distance from the orifice to said pool but a lesser distance than the maxi-



mum length of the continuous portion of said stream; a first terminal in electrical contact with liquids issuing from said orifice; and a second terminal in electrical contact with said pool.

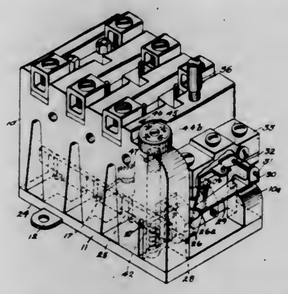
3,022,402
ELECTRICAL SWITCHES
Ralph G. Arey, Brockton, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Sept. 2, 1959, Ser. No. 837,754
17 Claims. (Cl. 200—116)



1. An electrical switch comprising: a base; contact means on said base; movably mounted means carrying contact means for engagement with said first-named contact means; manually operable means movably mounted in said switch for engagement with spaced means on said movably mounted means to move the latter in response to movement of said manually operable means, said spaced means being normally biased toward disengagement with said manually operable means; and thermally responsive means associated with said spaced means for maintaining said spaced means against its bias in a condition for engagement by said manually operable means.

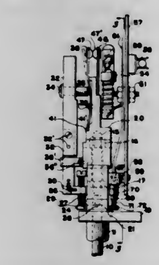
3,022,403
THERMALLY CONTROLLED SWITCH
Erik Pukk, Weymouth, and Robert J. Quinn, Jr., Braintree, Mass., assignors to Monitor Controller, Division of Industrial Electronics Co., Inc., Rockland, Mass., a corporation of Massachusetts
Filed May 2, 1960, Ser. No. 26,331
3 Claims. (Cl. 200—122)

1. A thermally operated switch comprising a frame, a bimetallic helical element having a movable end and an end fixed to said frame, a rocker rotatably mounted on said frame, means connecting said movable end to said rocker and adapted to cause rotation of said rocker upon movement of said end, a contact operating member movably mounted on said frame, a bimetallic strip linking said contact operating member and said rocker, said strip being bendable in such a direction as to prevent transmission of force from said rocker to said contact



operating member when said strip and helical element are subject to the same temperature, an electric heater element disposed adjacent said helical element a pin slidably mounted in said frame, said rocker being mounted on said pin, and means for adjusting the position of said pin with respect to said strip, thereby varying the temperature differential between said strip and said helical element required to move said contact operating member.

3,022,404
LINEALLY - EXPANSIBLE THERMOSTAT FOR MELTING POTS OF TYPE SETTING MACHINES
Enrique Villarreal, Monclova 47 (Col. Roma-Sur), Mexico City, Mexico
Filed Aug. 22, 1960, Ser. No. 51,123
5 Claims. (Cl. 200—137)



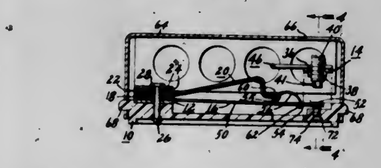
1. A lineal expansible thermostat adapted for use in melting pots of type setting machines to control the heater current supplied to the molten type material, comprising a base, a bridge support mounted upon the base, a rod fixed to the bridge support and suspended through the base, a tube surrounding the rod and supported upon the lower end thereof and adjustable through the base, a vertically-extending flexible diaphragm secured to the bridge support to be flexed thereover, a vertically-extending bar assembly vertically-slidable upon the bridge support and having a member projecting horizontally from the bar assembly and adapted to rub vertically over the diaphragm to flex the diaphragm, means extending between the tube and the bar assembly to vertically move the bar assembly in response to the lineal expansion of the tube, said diaphragm having contacts adapted to be moved laterally upon the diaphragm being flexed, a fixed contact carried on the bridge support and en-

gaged when the diaphragm is unflexed by the contacts of the diaphragm, said operating means for the vertically-extending bar assembly having a laterally-extending piece and a ring supporting said laterally extending piece and carried upon the upper end of the tube, an adjusting screw carried by the vertically-extending bar assembly and adapted to be engaged by the laterally-extending piece.

3,022,405
THERMOSTATIC SWITCH

Bryce L. Stevens, Davison, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,544
3 Claims. (Cl. 200—138)



1. A snap acting thermally actuated electric switch comprising, a base member formed of electric insulating material, a combined terminal and contact support formed of a unitary piece of metal material resting on and secured to said base member, said combined terminal and contact support having a first male terminal portion projecting from said base, a supporting section secured to said base and extending substantially normal to said male terminal portion, a portion located opposite said male terminal portion and extending upwardly from said supporting section and a contact supporting section extending from said upwardly extending portion and substantially normal thereto, said contact supporting section overlying said base member and carrying an electrical contact, a second male terminal extending substantially parallel to said first male terminal portion of said combined terminal and contact support, a bimetallic member, a strut member, a rivet securing said bimetallic member, said strut member and said second male terminal member to said base member in cantilever fashion, said strut member and bimetallic member extending in the same direction and said strut member being longer than said bimetallic member and having a central opening through which said bimetallic member may pass with a snap action, a spring metal member connected between said strut member and said bimetallic member, means electrically insulating said bimetallic member from said strut member, and an electric contact carried by said strut member cooperating with the contact carried by the contact supporting section of said combined terminal and contact support.

3,022,406
SAFETY SWITCH

Frank E. Brown, R.R. 1, Blanchester, Ohio

Filed May 9, 1960, Ser. No. 27,586
1 Claim. (Cl. 200—161)

A safety switch for the electrical system of an automotive vehicle comprising a stationary elongated body of dielectric material, said body having a horizontal, cylindrical head end portion and an integral horizontal, cylindrical rear end hub portion, said head end portion being considerably enlarged relative to said rear end portion and having a common horizontal axis with each other, a chamber formed within said head end portion and adjacent the forward end thereof, a horizontal axial bore formed in the rearward end of said head end portion and extending from said chamber through said hub portion, a poppet valve seat arranged within the vertical wall of the forward end of said body, said valve seat joining said chamber with the forward exterior wall of said body, a poppet valve having a flat exterior face and an angular interior valve surface, said poppet valve arranged with said body with its stem located in said chamber and extending horizontally and rearwardly with its free end extending into said axial bore, the exterior face of said poppet valve being free from contact with any parts, said interior angular surface of said poppet valve arranged to be located adjacent said valve seat when in closed position, a pair of vertically aligned electrical conductors extending into said chamber in said head end portion from opposite side walls thereof, one of said conductors having a connection to the vehicle ground and the other

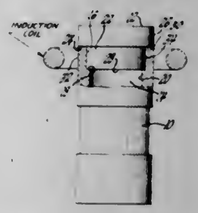


one of said conductors connected to a post of the vehicle battery, said poppet valve movably mounted in said body for movement of its angular face into and out of contact with said electrical conductors, manually operable means for controlling the position of said poppet valve, said means comprising a flexible push-pull cable enclosed within a sheath, one end of said sheath arranged in said bore in said hub portion and secured thereto, the other end of said sheath being connected to a stationary part of the vehicle, one end of said cable connected to said free end of said stem of said poppet valve, and the opposite end of said cable being accessible from the interior of the vehicle for actuating said poppet valve, whereby the electric circuit between said battery and said ground is broken when said poppet valve is moved out of contact with said electrical conductors.

3,022,407
METHOD OF JOINING CAST IRON TO STEEL

George H. Robinson, St. Clair Shores, and Eugene G. Ross, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 29, 1957, Ser. No. 699,670
3 Claims. (Cl. 219—9.5)



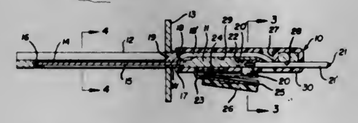
1. A method of making a composite body for an internal combustion engine valve lifter, said method comprising the steps of assembling a tubular steel body member and a cast iron end cap for said tubular member, said end cap having a reduced diameter portion forming an annular shoulder thereon, positioning the reduced diameter portion of said end cap within said tube so as to abut said shoulder against the end of the tube, said reduced diameter portion of said end cap and the inner

surface of said tube being closely fitted together, preferentially heating an area of said tubular member in such a manner as to principally conductively heat said end cap through points of contact with said tubular member, applying said heat to said tubular member to form a temperature gradient between the tubular member and the end cap at all points of contact wherein said end cap melts substantially only at said points of contact, terminating said heating and cooling said tubular body and said end cap while maintaining same in structural relationship.

3,022,408
ELECTRICALLY HEATED KEY

Robert W. Wagner, 1102 Lowenhill St., Pittsburgh, Pa.

Filed Oct. 25, 1960, Ser. No. 64,806
6 Claims. (Cl. 219—19)

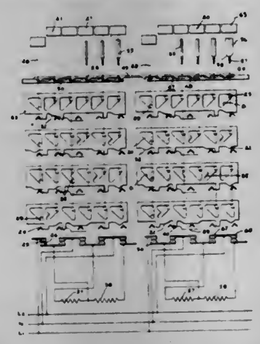


1. An improved key for both thawing-out and unlocking a frozen lock comprising a handle portion, a nose portion and a heat conductive disc member formed on said nose portion adjacent said handle portion, a slotted portion extending longitudinally along said nose portion, a heating element positioned within said slotted portion, means for connecting said heating element to a source of electrical power, and a switch secured to said handle portion and forming a part of said means for energizing said heating element to heat the nose of said key and said heat conductive disc member for efficiently transferring heat to the tumbler and lock cylinder of a frozen lock.

3,022,409
ELECTRIC RANGE WITH MECHANICAL INTERLOCK SYSTEM

Milton S. Williams, Jr., Middletown, and George A. Scott, Jeffersontown, Ky., assignors to General Electric Company, a corporation of New York

Filed July 25, 1960, Ser. No. 45,192
14 Claims. (Cl. 219—20)

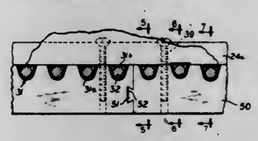


11. An electric range comprising a plurality of surface heating elements and at least one oven heating element, a plurality of multiple pushbutton switches controlling the energization of the various heating elements, and a mechanical interlock system between the switches to limit the maximum wattage drawn by the heating elements so the range may be operated from a 120-volt service, said interlock system comprising a series of slides which are shifted so that the wattage is a direct function of this movement as the wattage load is increased, and stop means for limiting the movement of the slides thereby limiting in effect the wattage drawn by the range.

3,022,410
WALL STRUCTURE FOR ELECTRIFIED COOKING GRATE

Joseph Savio, Floral Park, N.Y., assignor to Electro-Char Corporation, Bronx, N.Y., a corporation of New York

Filed Nov. 16, 1959, Ser. No. 853,028
11 Claims. (Cl. 219—37)

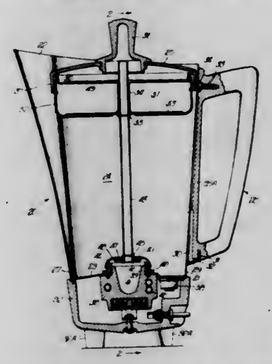


2. An electrified cooking grate comprising a pair of opposing metal clamping members, said clamping members being cooperatively shaped to provide a plurality of apertures extending therethrough and opening upon the proximate surfaces thereof, a plurality of heating elements each comprising a hollow metal tube containing a wire, said tubes extending through said apertures with the ends of said wires extending beyond said tubes, at least one elongated metal contact member disposed between said clamping members and overlying said tubes, said contact member being relatively soft in comparison to said tubes, and means securing together said clamping members sufficiently to crush said contact member between said clamping members and against said tubes to ensure good electrical contact between all of said tubes and said clamping members.

3,022,411
BEVERAGE MAKER

La Vern G. Soper and Lee M. Harris, Eau Claire, Wis., assignors to National Presto Industries, Inc., Eau Claire, Wis., a corporation of Wisconsin

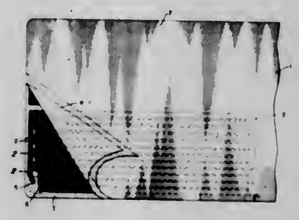
Filed Sept. 16, 1958, Ser. No. 761,318
5 Claims. (Cl. 219—44)



3. In a beverage brewer, comprising a fluid container having a water-tight bottom wall, electrically operated heating means supported by said container beneath its said bottom wall for heating fluid within said container, an electrical circuit including a pair of leads for connecting said heating means with a source of electrical power, thermostatic control means electrically connected into one of said leads for controlled energization of the heating means, said thermostatic control means being in

thermal sensing communication with the bottom wall of the container, the improvement wherein both said heating means and thermostatic control means are disposed entirely inwardly of the outer margin of said bottom wall, and a cup-shaped cover member sized to approximate said bottom wall and having a peripheral portion overlying the outer margin of said bottom wall for enclosing said heating means, thermostatic control means and electrical circuit means, said cover member having a pair of outwardly projecting terminal posts water-proofedly mounted in a wall thereof, said terminal posts having inner ends extending through said wall of the cover member whereby they may be connected to said leads of the electrical circuit means, the peripheral portion of said cover member having a recess which opens toward the outer margin of said bottom wall and having an overlying wall, a heat resistant compressible sealing ring disposed within said recess and engaging said outer margin of the bottom wall of the container, the cover member having a centrally disposed opening and a communicating recessed area about said opening, a headed connection pin having a stud portion extending through said opening, a second heat-resistant compressible sealing ring disposed in said recessed area between the head of said pin and the bottom wall of the recessed area, a bracket carried by said container beneath its said bottom wall, and said connection pin having its stud portion drawn into connected relation with said bracket and compressing said two sealing rings to effectively seal the interior of the cup-like member against moisture penetration whereby said container can be completely immersed into water for cleaning purposes without risk of water entering said cup-like cover and injuring the heating means, thermostatic control means and electrical circuit means enclosed thereby.

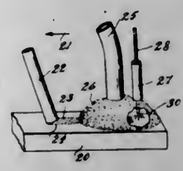
3,022,412
DEICER
Lawrence E. Waters, Tallmadge, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 26, 1958, Ser. No. 763,672
5 Claims. (Cl. 219—46)



1. A deicer for use on aerodynamic surfaces of aircraft comprising an inner dielectric layer, an outer dielectric layer, and an extensible-compressible flat braided electrical heating element formed throughout substantially its entire conductive portion essentially of a braid of uninsulated metallic conductors between said dielectric layers and forming an integral structure therewith.

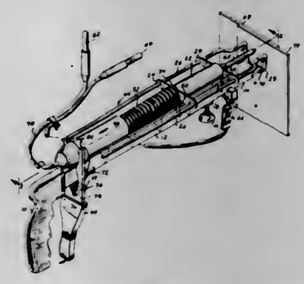
3,022,413
PROCESS AND APPARATUS FOR ARC WELDING
Wallace C. Johnson, Hamden, Conn., assignor to Arcos Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 8, 1960, Ser. No. 7,197
10 Claims. (Cl. 219—73)

1. The process of electric arc welding, which comprises laying down on the work a layer of metallic particles having a thickness of at least one-quarter inch, restraining the sides of the layer of metallic particles as it is laid down to build up the layer to form a relatively steep sided narrow layer, depositing a layer of flux on the layer of metallic particles, maintaining an electric



arc between a consumable metallic electrode and the layer of metallic particles at a position where the flux is located, and relatively moving the arc and the layer of metallic particles, while maintaining the arcing to the layer of metallic particles.

3,022,414
SPOT WELDING GUN
David A. Yoder, 1893 Jermain Drive, Columbus, Ohio
Filed Mar. 16, 1960, Ser. No. 15,291
9 Claims. (Cl. 219—127)

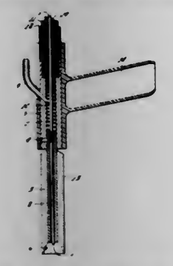


1. In a hand operated welding gun; a frame comprising a first member having a handle at one end and a second member supported for longitudinal adjustment on the said first frame member, sleeve means on said first frame member at the end opposite the handle for reciprocably receiving an electrode holder for longitudinal reciprocation in the frame, and means on the second member for applying pressure to work in a region radially spaced from the tip of an electrode in an electrode holder in the said first member, there being a lever adjacent the handle engageable with the end of the electrode holder opposite said sleeve means for moving the electrode holder in one direction in the sleeve means, and there being a spring between the sleeve means and the electrode holder for urging the electrode holder in the opposite direction.

3,022,415
GUN AND PROCESS FOR SEMI-AUTOMATIC ARC WELDING
Francois Georges Danhier, Anderlecht, Belgium, assignor to La Soudure Electrique Autogene, S.A., Brussels, Belgium, a corporation of Belgium
Filed June 29, 1959, Ser. No. 823,494
Claims priority, application Belgium July 16, 1958
1 Claim. (Cl. 219—130)

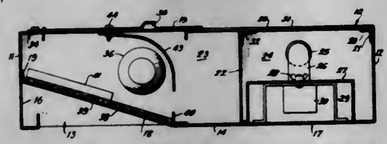
A gun for semi-automatic electric arc welding, comprising a continuous, consumable ferrous electrode having a bare surface, a consumable uncooled ferrous tube surrounding the electrode, in contact therewith and guiding the electrode, a coating on the outside of the

tube, said tube having a wall thickness of at least two millimeters and greater than six tenths of the inside diameter of the tube, the coating having an outside diameter of at least five times the inside diameter of the tube and having a composition containing at least 25 percent by weight of iron powder, the rest of the coating consisting of mineral material which forms a liquid slag



capable of protecting a liquid metal pool formed during the welding operation, means for feeding welding current to the electrode through the tube, and means for introducing protecting gas into the tube, said tube having a great thermal capacity due to its wall thickness and said coating having a great thermal capacity due to its outside diameter and the presence of the iron powder.

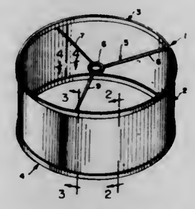
3,022,416
OVERHEAD WALL LIGHT
Ross L. Roberts, Wilmette, Ill., assignor to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois
Filed July 2, 1959, Ser. No. 824,705
5 Claims. (Cl. 240—73)



1. A light fixture adapted to be mounted upon a wall behind a bed comprising an enclosure having a non-transparent and substantially vertical front wall and having a bottom wall providing a horizontal rear portion at substantially the same elevation as the lower edge of said front wall and providing an upwardly sloping front portion terminating intermediate the top and bottom of said front wall, a light element within said enclosure spaced above the sloping front portion of said bottom wall and spaced behind said front wall, said sloping front portion having a lens opening disposed forwardly of said light element and having a non-transparent light barrier portion directly below said light element, and a reflector mounted within said enclosure and extending behind and above said element for reflecting light through said opening, the lower portion of said front wall extending downwardly below said opening to provide a second light barrier in front of said element, whereby, said element is concealed by said barriers from an observer directly beneath or directly in front of said light element of said fixture.

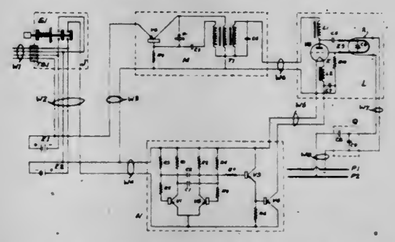
3,022,417
LAMPSHADES
Rodney V. Linderoth, 18 N. Maple, Portville, N.Y.
Filed Dec. 6, 1957, Ser. No. 701,018
3 Claims. (Cl. 240—108)

2. A lampshade comprising upper and lower ring members, each of said ring members being substantially channel-shaped in cross-section and having an inner flange and an outer flange, a flexible annular body member having upper and lower side edges, and inner and outer faces, said upper and lower ring members being mounted on said upper and lower edges, respectively, with said outer flanges disposed in engagement with said outer face, and said inner flanges disposed inwardly of said inner face, said inner flanges having free edge portions projecting at an acute angle to the remainder thereof toward said inner face, said body member having tabs integral with said body member, said tabs being folded inwardly from said



edges and projecting inwardly at an acute angle to said inner face, said tabs being flexibly connected to said body member in such a manner as to tend to move toward alignment with said body member, said tabs being disposed between said inner face and said inner flanges and releasably abuttingly engaged with said free edge portions of said inner flanges in position to hold said rings on said edges, and hanger means, including a central supporting member and a plurality of radially projecting arms connected to said upper ring member, for supporting said body member.

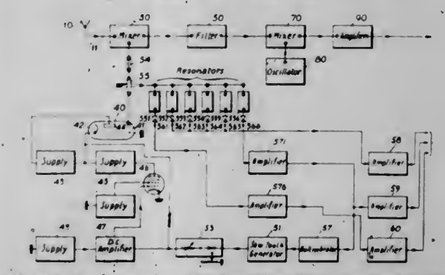
3,022,418
ELECTRONIC CONTROL CIRCUIT
Henry Lyall Ross Smyth, David Mark Makow, and Stanley K. Keays, all of Ottawa, Ontario, Canada, assignors to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada
Filed Sept. 25, 1957, Ser. No. 686,110
Claims priority, application Canada July 31, 1957
6 Claims. (Cl. 250—17)



1. A mobile radio frequency transmitter comprising, in combination, a low voltage direct current battery power supply; a vacuum tube radio frequency oscillator connected to said battery; a plate supply unit connected to said battery and to said radio frequency oscillator and effective to plate modulate said radio frequency oscillator, said plate supply unit comprising a blocking oscillator including a blocking oscillator transformer having a primary winding, a secondary winding and a tertiary winding, said primary to said secondary winding ratio being substantially 1:1, and said tertiary to said secondary winding ratio being at least 10:1, and a ringing capacitor connected across said tertiary winding whereby the output waveform of said plate supply unit taken across said tertiary winding comprises a series of pulse trains spaced at a given recurrence frequency; and an antenna

system adapted for extracting radio frequency energy pulses from said vacuum tube radio frequency oscillator and for radiating said radio frequency energy pulses.

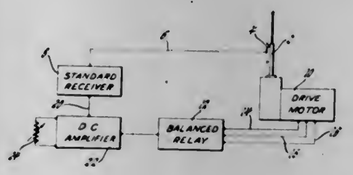
3,022,419
PANORAMIC RECEIVERS
Victor Biggi and Jean-Claude Simon, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed June 14, 1960, Ser. No. 35,919
Claims priority, application France June 19, 1959
1 Claim. (Cl. 250—20)



A panoramic receiver for detecting the electromagnetic wave transmissions in a frequency band extending from high frequencies to super-high frequencies comprising: aerial means for receiving the waves to be detected; a backward wave travelling wave tube having a control electrode for varying the frequency thereof; a saw tooth voltage generator; means for connecting said generator to said control electrode; output means in said travelling wave tube for providing a first local wave having a variable frequency varying according to a saw tooth pattern; a first mixer for mixing said first local wave and said wave to be detected and for providing a variable frequency wave and having an output; means for connecting said first mixer to said aerial, and to said output means of said travelling wave tube; second fixed frequency local oscillator for providing a second fixed frequency local wave; a second mixer having two inputs respectively connected to said output of said first mixer, and to said second local oscillator for mixing said variable frequency wave and said second local wave; output means connected to said second mixer, a first and a second cavity resonators, respectively tuned to the extreme frequencies of said backward wave tube and further resonators respectively tuned to intermediate frequencies comprised between said extreme frequencies, said resonators being coupled to the output of said backward wave tube; a multivibrator for controlling said saw tooth voltage generator; a fixed voltage source, a differential amplifier connected to said fixed voltage source and to said saw tooth voltage generator and having an output; an electron tube having control means connected to said output of said differential amplifier and an anode; a fixed voltage source series connected between said anode of said electron tube and said control electrode of said backward wave tube; means for connecting to said multivibrator said first and second resonators; and output means coupled to said resonators.

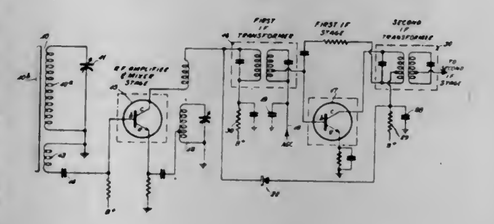
3,022,420
SIGNAL ADJUSTING ANTENNA
Donald E. Brinkerhoff, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 31, 1960, Ser. No. 53,184
4 Claims. (Cl. 250—20)

1. In radio receiving apparatus, extensible antenna means, motive means mechanically connected to the extensible antenna means to either extend or retract the same, a source of electrical power, switching means interconnecting said source of electrical power and said motive means to control energization of the same, amplifying means in said radio receiving apparatus connected to said extensibe antenna and receiving a signal therefrom of an intercepted modulated high frequency wave, means connected to the amplifying means upon which a direct current voltage is developed which is proportional to the



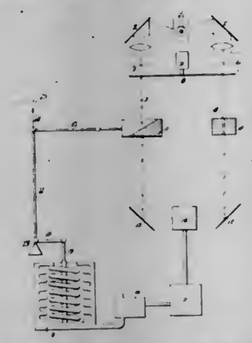
strength of the incoming high frequency wave intercepted by the antenna, and amplifying and control means connecting the means upon which a direct current voltage is developed and the switching means to actuate the same to cause the motive means to extend the antenna if the strength of the incoming wave decreases or retract the antenna if the strength of the incoming wave increases so that only the necessary amount of antenna will project beyond the housing.

3,022,421
AUTOMATIC GAIN CONTROL SYSTEM
James L. Nygaard and Roger R. Webster, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Apr. 2, 1957, Ser. No. 650,126
3 Claims. (Cl. 250—20)



1. In a signal receiving system, a signal translating stage having an input connected to a signal source and having a tuned output, a signal amplifier stage having an input coupled to said tuned output and having an output circuit, a source of automatic gain control voltage connected to said input of said amplifier stage, a voltage-responsive non-linear resistance device, means connecting said resistance device between said tuned output and said output circuit, and means including a substantially fixed voltage for biasing said resistance device toward the low-conduction region of the characteristic thereof, said output circuit presenting a variable voltage to said resistance device, said variable voltage being responsive to said automatic gain control voltage whereby variations in said control voltage tend to change the conductive condition of said resistance device and to thereby change the loading effect presented by said resistance device to said tuned output.

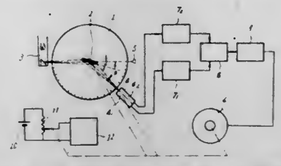
3,022,422
CONTINUOUSLY OPERATING ANALYTICAL INSTRUMENTS
Charles W. Grove-White, Brynddu, Llanfechell, Anglesey, Wales, assignor to Fielden Electronics Limited, Wythenshawe, Manchester, Lancashire, England, a British company
Filed Nov. 6, 1957, Ser. No. 694,787
Claims priority, application Great Britain Nov. 8, 1956
6 Claims. (Cl. 250—43.5)



1. In apparatus for performing quantitative analysis having means for transmitting an undispersed radiation in a plurality of beams at least one of which passes through a body of sample material containing a substance to be estimated, the beams being incident upon a two-element detector means providing an electrical signal dependent upon the difference between the energies incident upon said two elements, said difference being dependent upon the absorption of said radiation by said substance in said body, equalizing means connected to the output of said detector means and operative to reduce said difference to zero by adjustment of the energy transmitted in a controlled one of said plurality of beams and means for measuring said adjustment; the improvement whereby said controlled beam passed through a further body of material containing said substance said further body being so controlled by said equalizing means in dependence upon said electrical signal that absorption by said substance in the path of said controlled beam within said further body is such as to reduce said difference to zero, said further body of material being such that the proportion of said substance in any transverse section increases continuously in one longitudinal direction through said further body, said controlled beam passing transversely through said further body, said equalizing means moving said further body longitudinally and said measuring means measuring the movement of said further body.

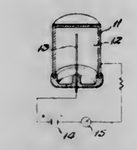
3,022,423
SYSTEM FOR MEASURING THE LATTICE SPACING OF CRYSTAL BY MEANS OF X-RAYS
Yoshihiro Shimula and Hiroshi Uchida, Tokyo, Japan, assignors to Rigaku Denki Company Limited, Tokyo, Japan
Filed Dec. 22, 1959, Ser. No. 861,241
Claims priority, application Japan Dec. 22, 1958
1 Claim. (Cl. 250—51.5)

A device for measuring the change of the lattice spacing of a crystal as a function of a temperature change of the crystal, said device comprising a goniometer of circular shape having a determinable periphery, a counter tube on the periphery of the goniometer, an X-ray source, the crystal being centrally located in the goniometer and adapted to be irradiated by the X-ray source, the X-ray being irregularly diffracted from said crystal, means for varying the temperature of the crystal, said goniometer and said crystal being adapted for angular rotation and providing an angle between said crystal and said X-ray source which is about one-half the angle between said counter tube and said X-ray source, said counter tube being partitioned into two sections, each of said sections



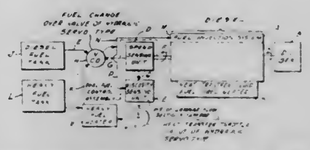
being sensitive to the X-rays that are diffracted from the crystal to provide an output, and detection means attached to said counter tube and responsive to the difference between the output of the sections to rotate the goniometer.

3,022,424
RADIATION DOSIMETER
Nicholas Anton, 1226 Flushing Ave., Brooklyn 37, N.Y.
Filed July 24, 1953, Ser. No. 369,985
32 Claims. (Cl. 250—83.6)
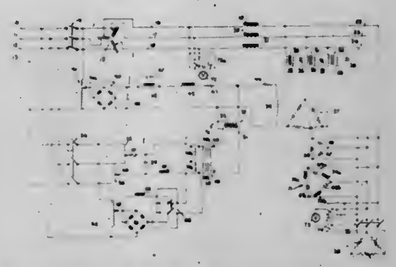


1. A cathode for a radiation detector tube for use in directly reading the dosage of radiation impinging upon a subject, said cathode being composed of material having an atomic weight substantially greater than said subject and having coefficients of gamma ray and beta ray absorption to be responsive to the absorption of radiation over a wide range of energy levels of the order of .08 to 2 million electron volts and responsive thereto to produce free electrons corresponding in number to the magnitude of the effect of said radiation on said subject at each energy level in said range, whereby said tube is rendered direct reading of said effect.

3,022,425
DUAL FUEL CONTROL SYSTEMS FOR ENGINES BURNING DIESEL-TYPE FUELS
Joel B. Rockstead, Seattle, Wash., assignor, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 11, 1956, Ser. No. 597,182
19 Claims. (Cl. 290—40)



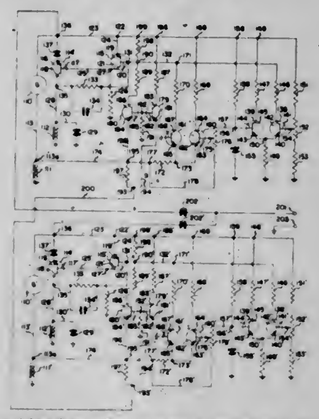
1. A dual fuel control system for an engine burning diesel-type fuel and incorporating a fuel injection system therefor, comprising means for selectively delivering diesel fuel or heavy fuel to said fuel injection system, and further comprising automatic fuel changeover means including engine performance factor sensing means, fuel viscosity sensing means, means for heating said heavy fuel, and means regulating the heat input rate to said heavy fuel under control of said viscosity sensing means to heat said heavy fuel and lower the viscosity thereof to a value satisfying the fuel viscosity requirement of the engine.

3,022,426
REGULATOR
Alexander Kusko, Newton Centre, Mass., assignor to Hevi-Duty Electric Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 21, 1959, Ser. No. 834,368
12 Claims. (Cl. 307—14)



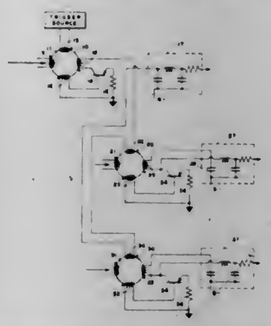
1. In a regulator or the like, the combination including a source of polyphase A.C., a poly-unit polyphase reactor means having at least three saturable cores, with load winding means and control winding means on each core, said reactor means being connected to said source, and means for applying A.C. control power having double the frequency of said source to said control winding means, said A.C. control power producing a negative sequence component of current in the A.C. load winding means of said reactor.

3,022,427
CONTROL APPARATUS
James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 22, 1958, Ser. No. 756,726
1 Claim. (Cl. 307—57)



The combination of generators operating in parallel and control circuits associated therewith: each of said control circuits comprising, semiconductor switching means having input and output terminals, the output terminals of said switching means being connected in circuit with and operative to control the energization of an associated generator, output voltage comparison means including first semiconductor detection means, said detection means being connected in controlling relation to said switching means, output current sensing means including second semiconductor detection means, the output of said detection means being connected in circuit with and operative to actuate said switching means; means connecting said plurality of generators to a common load; and further semiconductor differential detection means connected to sense the output currents of all of said generators, said detection means being responsive to the output current differential of said plurality of generators and being connected to said semiconductor switching means input terminals associated with each of said generators and operative to selectively actuate said switching means in response to unbalance in the outputs of said generators thereby enabling said control circuits to compel said generators to control and distribute the output load in a predetermined manner.

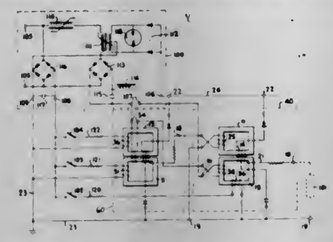
3,022,428
DIGITAL DATA STORAGE AND MANIPULATION CIRCUIT
William M. Carey, Jr., South Lincoln, Mass., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Filed Mar. 13, 1957, Ser. No. 645,812
13 Claims. (Cl. 307—88)



1. An electrical circuit comprising a plurality of magnetic cores each having a rectangular hysteresis characteristic, means producing a shift pulse in a first of said cores, a second core having a trigger winding and an output winding, means connecting said shift pulse producing means in circuit with the trigger winding of said second core, said trigger winding activating a second shift pulse producing means positioned to apply a shift pulse to said second core, an output circuit connected to the output winding of said second core and including a reactance element adapted to store energy when a signal is passed from the output winding of said second core, and means including the output winding of said second core coupling the energy from said reactance element back into said second core to shift said second core back to the state it had immediately prior to the application of a shift pulse to the output winding of said second core.

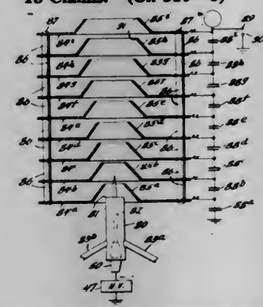
3,022,429
MAGNETIC CONTROL APPARATUS
Raymond E. Morgan, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 25, 1957, Ser. No. 667,945
12 Claims. (Cl. 307—88)

1. Magnetic control apparatus comprising two closed saturable magnetic cores, a gate winding surrounding portions of both cores, a load circuit including a rectifier connected in series with said gate winding, and means for independently introducing magnetic control fluxes in each of said cores respectively, said load circuit having terminals to be connected to a source of voltage to energize the gate winding through said rectifier by unidirectional current sufficient to saturate both cores in the absence of said control fluxes, said gate winding presenting a low impedance to the unidirectional energizing current to pass



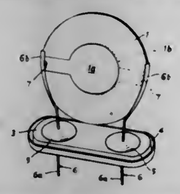
such current through the load circuit only when both cores are saturated.

3,022,430
ELECTROKINETIC GENERATOR
Thomas Townsend Brown, Umatilla, Fla., assignor to Whitehall-Rand, Inc., Washington, D.C., a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,727
18 Claims. (Cl. 310—5)



1. A high voltage generator comprising a body, a fluid stream source including a source of burning fuel connected to the body, an elongated cathode connected to the body and positioned in the combustion path of said burning fuel and a source of voltage connected to said cathode for introducing electrical charges to the stream.

3,022,431
CRYSTAL MOUNTS
Terence Clifford McKnight, Cambridge, England, assignor to Pye Limited, Cambridge, England, a British company
Filed Apr. 25, 1958, Ser. No. 730,849
Claims priority, application Great Britain May 3, 1957
1 Claim. (Cl. 310—9.4)



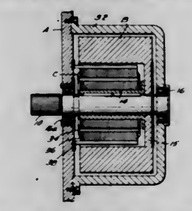
A piezo-electric crystal unit comprising a support member, a pair of mutually insulated one-piece conductors extending through and carried by said support member, a crystal element, an upper end portion integral with each of said conductors blended from the cross-section of the conductor to form a channel having a U-shaped cross-section and extending at least partially beneath and supporting the underside of the crystal element, the sides of each channel embracing around the peripheral edges of the crystal element and the lowermost peripheral edge of the crystal element being closely spaced from the upper surface of the support member, a resilient portion of each conductor below said channel between said channel and said support member whereby the crystal element is capable of withstanding mechanical shock, and vibration, an electrode coating deposited on the two opposite surfaces of the crystal element, a conducting paste securing said crystal element to said channels and electrically connecting one of said electrode coatings to one of said channels and the other of said electrode coatings to the other of said channels, and a portion of each of said conductors on the opposite side of said supporting member being adapted to be directly connected to an external circuit.

3,022,432
ELECTROMAGNETIC DEVICE
David J. Timmer and Kenneth W. Philbrick, Dayton, and David W. Mossberger and Alfred M. Caton, Xenia, Ohio, assignors to Globe Industries, Inc., a corporation of Ohio
Filed Nov. 7, 1958, Ser. No. 772,467
7 Claims. (Cl. 310—37)



1. Locking mechanism for preventing undesired rotation of the output shaft of an oscillating electromagnetic device comprising a housing enclosing a stator means having at least one pole, an output shaft rotatably mounted in said stator means, rotor means rotatably mounted coaxially circumjacent said shaft and having at least one pole, said poles being mutually circumferentially attracted to each other upon effecting of a magnetic field therebetween, said mechanism comprising hammer means movably mounted on said housing, a movably mounted detent means juxtaposed to said hammer means, said shaft being provided with detent receiving means, actuating means mounted upon said rotatably mounted rotor and adapted when in one position to engage said hammer means to drive said detent means into locking engagement with said detent receiving means, thereby locking said shaft against rotation.

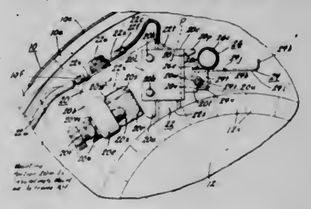
3,022,433
MOTOR-FLYWHEEL UNIT
Albino Ferranti, 19 Via Belinzaghi, Milan, Italy
Filed May 3, 1956, Ser. No. 582,515
Claims priority, application Italy Aug. 27, 1955
12 Claims. (Cl. 310—74)



1. In an electric machine, in combination, support means; shaft means mounted on said support means for

rotation about an axis; a flywheel mounted on said shaft means for rotation relative thereto about said axis; electric machine means including stator and rotor components located radially adjacent said shaft means throughout at least part of its length, said stator component being fixedly secured to said support means and encompassing said rotor component and said rotor component being freely rotatable on said shaft means; motion transmitting means connecting said rotor component to said flywheel for rotation therewith; coupling means operable for uncoupling and coupling said shaft means to said flywheel and said rotor component; and a stationary housing secured to said support means and encompassing said flywheel.

3,022,434
DYNAMOELECTRIC MACHINE BRUSHHOLDER MEANS
Robert C. Kester, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 20, 1959, Ser. No. 800,867
2 Claims. (Cl. 310—246)



1. A brush rigging assembly, comprising, a dynamoelectric machine frame means and commutator means journalled relative thereto, a brush means adapted to engage an outer peripheral surface of said commutator means, a casing suitably attached to said frame means and including a brush passage therein and an opening along one side thereof, a covering member pivotally attached to said casing at a location adjacent to the opening, latching means carried by said casing and engageable by said covering member, and a spring means attached to said covering member and adapted to move through the opening along one side of the casing, said spring means biasing both said brush means relative to said commutator means and said covering member relative to said latching means when said covering member is in latched position, said casing and covering member having pivotal connection to each other subject to predetermined shifting as permitted by a slot for limited latching and unlatching movement therebetween either prior as well as subsequent to pivoting, said covering member being movable a predetermined distance against bias of said spring means while latching and unlatching is accomplished.

3,022,435
ENVELOPE FOR X-RAY GENERATOR
Zed J. Atlee, Chicago, Ill., assignor to Dunlee Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 22, 1958, Ser. No. 782,993
6 Claims. (Cl. 313—59)

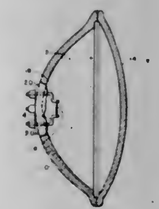


1. An X-ray generator comprising an anode and a cathode, and an evacuated envelope enclosing said anode and cathode, said envelope being formed of glass comprising about the following constituents:

	Percent by weight
SiO_2	74.7
Na_2O	6.4
K_2O	0.5
CaO	0.9
BaO	2.2
B_2O_3	9.6
Al_2O_3	5.6

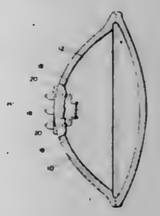
and characterized by its high X-ray transmissibility, its lack of fluorescence during operation of the generator, and its resistance to electron puncture.

3,022,436
ELECTRIC LAMPS
Dexter P. Cooper, Jr., Lexington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 29, 1960, Ser. No. 5,524
4 Claims. (Cl. 313—218)



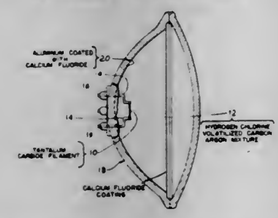
1. In an incandescent lamp, an atmosphere comprising, at operating temperatures, hydrogen and carbon, and a filament positioned within said atmosphere comprising tantalum carbide and about 20% by weight of at least one refractory metal carbide selected from the group consisting of the carbides of zirconium and hafnium.

3,022,437
ELECTRIC LAMPS
Dexter P. Cooper, Jr., Lexington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Jan. 29, 1960, Ser. No. 5,525
3 Claims. (Cl. 313—218)



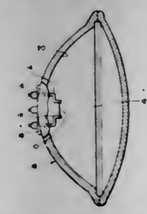
1. In an incandescent lamp, an atmosphere comprising, at operating temperatures, hydrogen and carbon, and a filament positioned within said atmosphere comprising tantalum carbide and from about 1 to about 10% by weight of at least one metal carbide selected from the group consisting of the carbides of titanium, thorium, vanadium, niobium, molybdenum, tungsten and uranium.

3,022,438
ELECTRIC LAMPS
Dexter P. Cooper, Jr., Lexington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 10, 1959, Ser. No. 840,495
22 Claims. (Cl. 313—222)



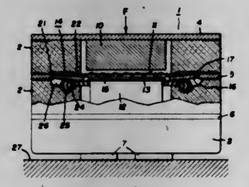
1. In an incandescent lamp, a filament comprising essentially tantalum carbide positioned within at atmosphere comprising, at operating temperatures, a halogen having an atomic weight of less than 100, hydrogen, and vaporized carbon.

3,022,439
ELECTRIC LAMPS
Dexter P. Cooper, Jr., Lexington, and Hazel M. Bryant, Cambridge, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Mar. 11, 1960, Ser. No. 14,254
8 Claims. (Cl. 313—222)



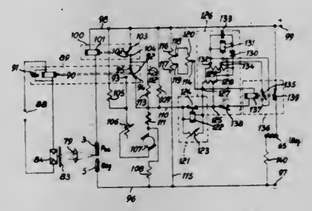
1. In an incandescent lamp, a filament comprising a major percentage of tantalum carbide positioned within an atmosphere comprising, at operating temperatures, hydrogen, vaporized carbon and at least two halogens, one of said halogens being selected from the group consisting of iodine and bromine, said atmosphere being substantially free of oxygen.

3,022,440
ELECTRIC DISCHARGE DEVICE AND METHODS OF MANUFACTURE
Trasimond A. Solleau, Jr., Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed Jan. 29, 1958, Ser. No. 711,982
15 Claims. (Cl. 313—250)



1. An electric discharge device comprising an envelope containing a spaced anode and cathode, a pair of longitudinally arranged annular insulators comprising wall sections of said envelope and having said anode and cathode extending therein, a grid structure interposed between the opposed inner ends of said insulators and between said anode and cathode, said grid structure including a slightly cupped washer and an array of wires extending across the concave side of said washer and secured to the outer edge of said washer, and means resiliently bearing on the inclined surface of said washer for supporting said grid structure and maintaining taut said array of wires.

3,022,441
ARC LAMP
Kurt Müller, Stuttgart, and Josef Schleifer, Krumbach, Schwaben, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Sept. 23, 1959, Ser. No. 841,878
Claims priority, application Germany Sept. 27, 1958
10 Claims. (Cl. 314—69)

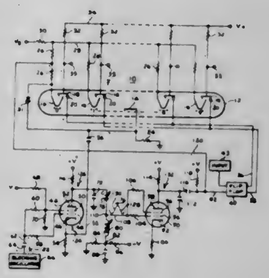


2. In an arc lamp having a negative and a positive carbon, in combination, first feed means for feeding the negative carbon at a predetermined speed; second feed means for feeding the positive carbon alternatively at a predetermined low speed or at a predetermined higher speed; first control means in circuit with the carbons for controlling the power supply to said first and second feed means depending upon the voltage drop across an arc formed between the carbons; second control means connected in series with said first control means for interrupting the feed of the negative carbon and simultaneously increasing the speed of feed of the positive carbon from said low speed to said higher speed; and operating means for operating said second control means and including photosensitive means positioned for scanning the position of the burning tip of the positive carbon so as to operate said second control means depending upon the response of said photosensitive means to radiation from said burning tip of the positive carbon when said burning tip moves a predetermined distance from its desired predetermined position.

3,022,442
PULSE GENERATING CIRCUITS
David Glaser, Greenbrook, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 24, 1959, Ser. No. 822,566
4 Claims. (Cl. 315—8.5)

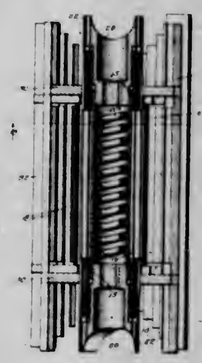
1. A beam clearing and resetting circuit for a magnetron beam switching tube including first and second electron discharge devices each having a cathode, a control grid, and an anode; means normally biasing said devices in an off condition; an adjustable resonant circuit coupled between said discharge devices and coupling the output of the first device to the input of the second, the adjustment of said resonant circuit determining the time delay between the turning on of the first device and the turning on of the second device; a magnetron beam switching tube having a cathode and a plurality of groups of electrodes; each group including a target electrode which receives an electron beam and produces an output signal

therefrom, a spade electrode which holds an electron beam on its associated target electrode, and a switching electrode which serves to switch an electron beam from one group of electrodes to the next; the cathode of said first device being coupled to the cathode of said beam switching tube whereby a positive beam clearing pulse is applied thereto when said first device is turned on; the



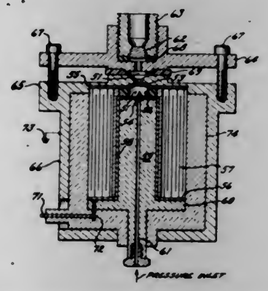
anode of said first device being coupled through said resonant circuit to the control grid of said second device whereby said second device is turned on after a time delay determined by the tuning of said resonant circuit; and the anode of said second discharge device being coupled to the spade electrode of one of said groups of electrodes for coupling a negative pulse thereto and forming an electron beam thereat.

3,022,443
FOLDED TRANSMISSION LINE AND TUBE
Vernon J. Fowler, Bayside, N.Y., assignor to University of Illinois Foundation, Urbana, Ill.
Filed May 9, 1955, Ser. No. 506,756
14 Claims. (Cl. 315—39.3)



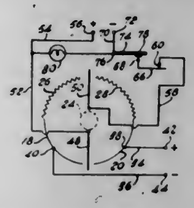
1. An electronic tube structure having cathode, grid and plate electrodes, the cathode being centrally positioned relative to the grid and plate electrodes and the cathode, grid and plate electrodes respectively being adapted to produce, control and collect an electron stream, one of said electrodes being in the form of a folded transmission line including electrically series connected physically parallel arranged conductors, the folded transmission line being symmetrically located relative to the central cathode.

3,022,444
ULTRA SHORT LIGHT PULSE GENERATION
Heinz Fischer, Belmont, Mass.
Original application Mar. 28, 1958, Ser. No. 724,776, now Patent No. 2,911,567, dated Nov. 3, 1959. Divided and this application Oct. 27, 1959, Ser. No. 849,125
8 Claims. (Cl. 315—61)
(Granted under Title 35, U.S. Code (1952), sec. 266)



6. Means for generating light pulses of extreme brilliance and ultra-short duration comprising strips of electrically conductive and non-conductive materials wound in inter-leaving relationship about a central axis, in spaced relation to said axis, to form a toroidal capacitor assembly surrounding a central space of cylindrical contour, said assembly having terminals extending axially beyond said central space to form a chamber having a lateral aperture, and means for causing electrical energy stored in said capacitor assembly to traverse said extended capacitor terminals and discharge across said chamber.

3,022,445
ELECTRICAL CONTROL DEVICE
Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed July 8, 1959, Ser. No. 825,721
12 Claims. (Cl. 317—40)

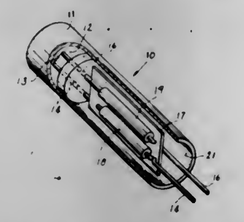


1. A direct current control device comprising a pair of input terminal members, a semi-annular conductor ring connected to each of said input terminal members, a resistance element wire connected to one end of and wound around but insulated from each of said semi-annular conductor ring segments leaving a portion of each of said segments free of such resistance wiring, a first contact arm centrally rotatably mounted between said conductor ring segments and arranged to sweep selectively over a respective one of said resistance wire windings in electrical contact therewith whereby to vary the resistance in a circuit, a first output terminal connected to said first arm, a second arm extending oppositely from said first arm and insulated from said first arm but connected thereto for rotation therewith, and arranged to sweep in electrical contact selectively with one of said conductive ring segments, a second terminal member connected to said second

arm, and control handle means to rotate each of said first and second arms in unison.

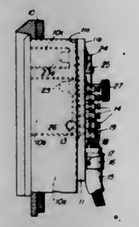
2. A direct current control device according to claim 1, wherein said first output terminal member has an interrupted portion through which no current may pass, one of said portions having a magnetic conductive contact portion, the other of said portion having a bimetallic conductive element connected thereto and having a contact button portion which is normally biased into electrical contact with said conductive contact portion, said bimetallic arm being movable upon the application of a predetermined current overload to a position bringing said contact buttons out of electrical contact.

3,022,446
DETONATOR DEVICE
Charles G. Irish, Jr., Cheshire, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Sept. 22, 1958, Ser. No. 762,409
1 Claim. (Cl. 317—80)



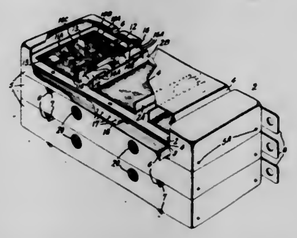
An electrical detonator of the type which is selectively responsive to at least two voltage levels, one voltage level being a test voltage and another voltage level being a firing voltage comprising a housing, an ignition assembly disposed within the housing, said assembly including a pair of lead wires connected at their terminals to a bridge wire, and at least two germanium semi-conductor diodes in series with the lead wires, said diodes being arranged so that the bridge wire is connected to the anode of each diode whereby said test voltage level is of the order of 15 to 50 volts lower than the firing voltage level, and the test current is about 750 microamperes.

3,022,447
CONTROL PANEL FOR MEASURING INSTRUMENTS
Heinrich Henss, Frankfurt am Main, Germany, assignor to Vdo Tachometer Werke, Adolph Schindling G.m.b.H., Frankfurt am Main, Germany, a corporation of Germany
Filed Nov. 5, 1957, Ser. No. 694,604
Claims priority, application Germany Dec. 13, 1956
4 Claims. (Cl. 317—99)



1. For use in a motor vehicle or the like having a permanently installed instrument panel, a multiple measuring instrument apparatus permanently mounted on the front face of said panel, signalling devices for said apparatus, openings for said signalling devices and connector sockets disposed in the rear of said multiple apparatus, a single insulated electrical connector plate for said multiple apparatus removably mounted on the rear thereof behind said panel, said signalling devices being carried by said connector plate, a distribution conduit secured to said plate and connected to the circuits disposed thereon, lamp means mounted on said plate for said signalling devices disposed thereon and for illuminating said instruments when said plate is mounted on the rear of said multiple apparatus, said illuminating lamps and signalling lamps connected to said conduit being adapted to remain lighted when said plate is disconnected from its relatively inaccessible position behind said panel to facilitate detection and replacement of defective elements thereof, and connector pins mounted on said connector plate to mate with said sockets in said multiple apparatus when said connector plate is unitarily attached thereto, said pins connecting said instruments to appropriate circuits in such vehicle when said plate is in such mounted position on said multiple apparatus.

3,022,448
MODULAR ELECTRONIC SUB-ASSEMBLIES AND METHOD OF FABRICATING
Russell I. Mason, Barneveld, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 15, 1958, Ser. No. 728,622
5 Claims. (Cl. 317—101)



1. A modulator sub-assembly for use in fabricating electronic systems including a first frame member having apertures therein, a second frame member having apertures therein to be aligned with the apertures in the first frame member, a non-conductive woven surface positioned between said first and second frame members and stretched beyond the peripheral edges of the respective frame member apertures, means to fasten said first frame member to said second frame member with said apertures in alignment and said woven surface therebetween, said surface being adapted to receive a group of electronic components positioned with portions thereof penetrating the apertures of said surface, and a cover plate positioned to enclose the frame members and the electronic components within the sub-assembly.

3,022,449
ALTERNATING CURRENT ELECTROMAGNETIC DEVICE
Roy Hyink, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Dec. 21, 1956, Ser. No. 629,984
15 Claims. (Cl. 317—123)

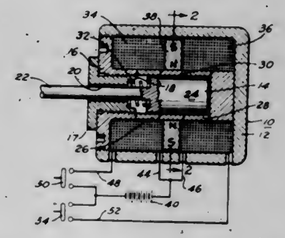
1. In an alternating current electromagnetic device having a cylindrical core with a plurality of angularly spaced pole pieces at one end thereof and operating coils surrounding said pole pieces, a ring shaped armature for attraction by the magnetic forces developed adjacent said pole pieces, said armature having a radial flux path cross-

sectional area approximately seventy percent of the cross-sectional area of a pole piece sealing face and of substan-



tially similar geometrical configuration as said pole piece sealing face.

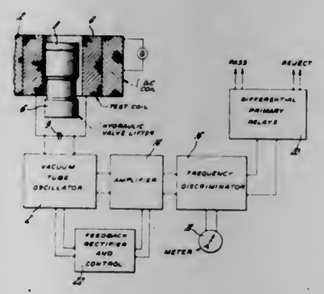
3,022,450
DUAL POSITION LATCHING SOLENOID
Willis E. Chase, Jr., South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,031
7 Claims. (Cl. 317—123)



1. A solenoid device comprising a substantially cylindrical housing of magnetic material having a pair of pole faces positioned along the axis thereof, a cylindrical armature member positioned along said axis and adapted to move linearly between said pole faces, a unitary cylindrical structure sealed at one end forming part of said housing within which said armature reciprocates having inserts of non-magnetic material positioned adjacent each end of said armature for blocking a flux path tending to flow axially through said cylindrical member, a coil of wire positioned adjacent each end of said armature within said housing and concentric with respect to said cylindrical member, an annular, radially magnetized permanent magnet positioned in said housing between said coils of wire and concentrically with respect to said armature, the polarization of said coils being such that the magnetic lines of force produced upon energization of either of said coils of wire always tends to further magnetize said permanent magnet, whereby upon energization of either of said coils of wire said armature is moved in a direction to abut against the pole piece nearest said coil, and upon subsequent de-energizing of said coils of wire said armature is held in position against said pole piece by the magnetic force produced by said permanent magnet.

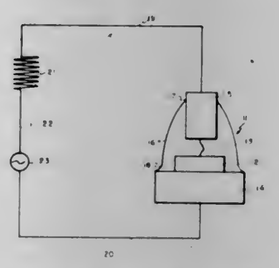
3,022,451
ELECTROMAGNETIC TESTING EQUIPMENT
Frederick W. Chapman, Birmingham, Eugene A. Hanysz, Royal Oak, Edward F. Weller, Jr., Detroit, and Edward J. Martin, Pleasant Ridge, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 26, 1957, Ser. No. 668,146
3 Claims. (Cl. 317—146)

2. In testing means, oscillatory means having a frequency determining section including an inductance adapted to have parts to be tested introduced thereto to vary its value and tune the oscillatory means to different frequencies dependent upon the characteristics of a part, amplifying means having an input and an output circuit, said input circuit of said amplifying means being connected to said oscillatory means, a series feedback circuit including rectifying means and adjustable impedance means connected between said output circuit of the amplifying means and the oscillatory means to provide for amplitude adjustment of the oscillatory waves produced and stabilize operation of the system, a discriminator connected to the output circuit of the amplifying means, said discriminator including an adjustable condenser to



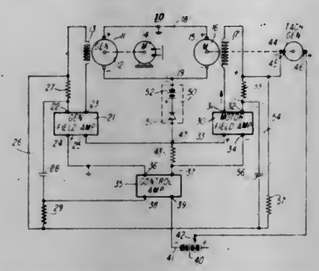
determine the center frequency of operation, a plurality of fixed condensers, switching means connected to said variable condenser and to said fixed condensers for selectively switching one of said fixed condensers in circuit with said variable condenser to change the discriminator center frequency in discrete steps, polarity conscious relay switching means connected to the discriminator moving in opposite directions with different polarity voltage applied and indicating means connected to said relay switching means and controlled thereby to indicate when the oscillator frequency being generated varies from a predetermined frequency and if it is above or below a predetermined frequency.

3,022,452
DIODE
Forrest V. Williams, Robert A. Ruehrwein, and Dale E. Hill, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,850
11 Claims. (Cl. 317—236)



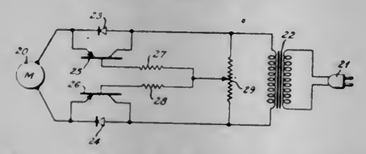
1. A high temperature point-contact rectifier comprising a semiconductor body of boron phosphide, a high melting point conductor attached to said semiconductor body forming an ohmic junction thereon, and a point contact electrode attached to said body.

3,022,453
DIRECT CURRENT SPEED DRIVE SYSTEM
Byron M. Jones, Milwaukee, Wis., assignor to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 30, 1959, Ser. No. 802,992
12 Claims. (Cl. 318—154)



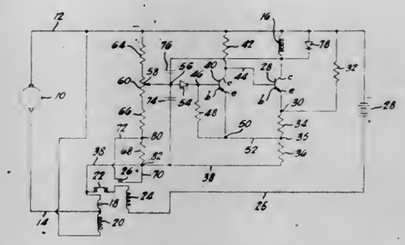
1. In a motor generator arrangement including a D.C. motor the speed of which is to be controlled in accordance with excitation provided by the armature and the field winding thereof and including a generator for controlling the motor armature voltage in accordance with the excitation provided to the generator armature by the generator field winding, the combination comprising, a first amplifier including a pair of output terminals connected to the field winding of the generator and including control terminals, a second amplifier including a pair of output terminals connected to the field winding of said motor and including control terminals, variable voltage output means connected in a series loop circuit with the control terminals of said first and second amplifiers for controlling the energization provided to the control terminals of said amplifiers, shunt means of a low impedance as compared to that of the control terminals of said first and second amplifiers connected across the control terminals of said second amplifier, and voltage responsive means between said loop circuit and said motor armature for completing a conductive path therebetween at potentials greater than a predetermined potential.

3,022,454
TRANSISTOR DIRECT CURRENT MOTOR CONTROL
Edwin G. Millis, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 17, 1956, Ser. No. 604,826
4 Claims. (Cl. 318—257)



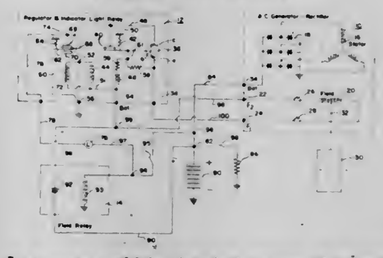
3. The combination of a direct current motor, a source of alternating current, and a control circuit connecting the source of alternating current to the direct current motor for controlling current through the motor, said control circuit comprising two unilaterally conductive elements connected in opposed series relation and in series with the control winding of the direct current motor, a unilaterally conductive variable impedance device connected in shunt across each said unilaterally conductive element, each said device oriented to allow current to flow in a direction opposite to the direction of current flow in said element with which it is in shunt, and means for varying the impedance of each said device to control both the speed and direction of said direct current motor.

3,022,455
REGULATOR CIRCUIT FOR GENERATORS
Lewis R. Hetzler and Leonard J. Sheldrake, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 21, 1958, Ser. No. 716,765
11 Claims. (Cl. 322—25)



1. In a combined voltage and current regulating circuit, a combination comprising, a power source having a control winding, a direct current output circuit including first and second leads energized by said power source, a first transistor, means connecting said first transistor and control winding in series across said two leads, a voltage divider network connected across said two leads and including a first resistor and a second transistor having a base, collector and emitter electrodes, said emitter and collector electrodes of said second transistor being connected in series with said first resistor with said emitter electrode being connected with said first lead, a single voltage responsive means connected to be responsive to the voltage appearing across at least a portion of said voltage divider network and connected in circuit with said first transistor for controlling the conduction of said first transistor, a second resistor having one side thereof connected with said first lead, and having its opposite side connected with said second lead, a third resistor connected in series with said first lead and having one side thereof connected with one side of said second resistor and having its opposite side connected with the emitter electrode of said second transistor, means connecting the base of said second transistor with said second resistor at a point where at least a portion of said resistor is connected between said first lead and said second transistor base electrode, a constant voltage drop circuit element, and means connecting said circuit element across said second resistor.

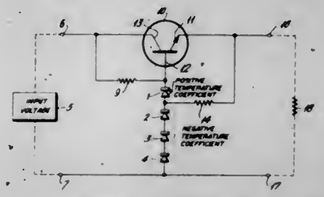
3,022,456
MOTOR VEHICLE ELECTRICAL SYSTEM
Robert L. Larson and Lewis R. Hetzler, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 22, 1958, Ser. No. 756,648
8 Claims. (Cl. 322—28)



1. In a motor vehicle electrical system, the combination comprising; a direct current power source having

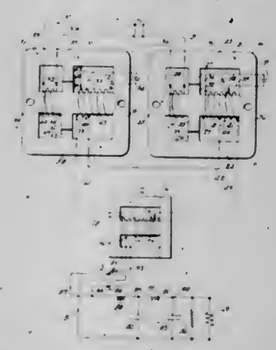
output terminals connected with a charging circuit and having a control winding, voltage regulating means connected in circuit with said control winding and said charging circuit for controlling current flow through the control winding as a function of the voltage appearing across said charging circuit, a control device connected across said charging circuit to be responsive to voltage appearing across said charging circuit, an indicator device, and means for operating said indicator device from said control device whenever the voltage applied to said control device is of a value higher than the battery voltage by a predetermined amount and higher than the voltage setting of said voltage regulating means.

3,022,457
TRANSISTOR VOLTAGE REGULATOR
David B. Doan, Austin, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Feb. 19, 1960, Ser. No. 9,853
4 Claims. (Cl. 323—22)



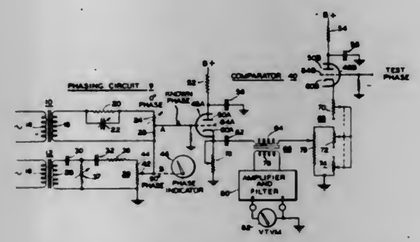
1. A transistor voltage regulator of the emitter-follower type comprising a transistor having an emitter, a base, and a collector, first zener diode means having one type of temperature coefficient of zener voltage connected to said base, second zener diode means having an opposite type of temperature coefficient of zener voltage connected in series with said first diode means, and means establishing a current path interconnecting said emitter and the common junction of said first and second zener diode means.

3,022,458
VOLTAGE REGULATING APPARATUS
Joseph G. Sola, River Forest, Ill.
Filed May 29, 1959, Ser. No. 816,968
7 Claims. (Cl. 323—45)



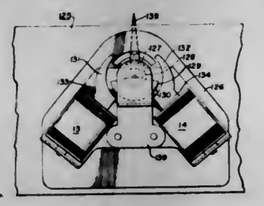
1. Apparatus for supplying a regulated voltage to a load which may be variable over a certain range from a source of alternating voltage which also may be variable over a certain range comprising a load transformer having a first core, a first primary winding disposed on said first core and adapted to be supplied from said source with an alternating voltage of predetermined nominal value and frequency, a first secondary winding disposed on said first core, a high reluctance shunt disposed between said first primary winding and said first secondary winding, and a capacitor connected across said first secondary winding, said capacitor having a capacity value which when taken in combination with said first secondary winding effects under operating conditions a flux density in the portion of said first core associated with said first secondary winding substantially greater than the flux density in that portion of said first core associated with said first primary winding and sufficient to produce a condition of substantial saturation in said first secondary winding core portion, a regulating transformer having a second core, a second primary winding disposed on said second core and adapted to be supplied from said source with said alternating voltage, a second secondary winding disposed on said second core, a high reluctance shunt disposed between said second primary winding and said second secondary winding, and a capacitor connected across said second secondary winding, said capacitor having a capacity value which when taken in combination with said second secondary winding effects under operating conditions a flux density in that portion of said second core associated with said second secondary winding substantially greater than the flux density in that portion of said second core associated with said second primary winding and sufficient to produce a condition of substantial saturation in said second secondary winding core portion, a further transformer having a primary winding and a secondary winding, a portion of said first secondary winding and a portion of said second secondary winding of lesser voltage than said portion of said first secondary winding being connected in series with each other and to the primary winding of said further transformer, and the secondary winding of said further transformer being connectible to a load.

3,022,459
PHASING APPARATUS
David Alper, Fair Lawn, N.J., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 5, 1956, Ser. No. 620,259
15 Claims. (Cl. 324—83)



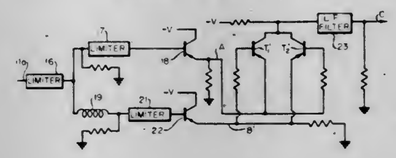
15. A device for determining the phase angle of a test signal, comprising a first phasing circuit adapted to be connected to an alternating current source and providing voltages of a predetermined phase, a second phasing circuit adapted to be connected to the alternating current source and providing voltages in quadrature with the first voltages, means for combining the voltages to provide a signal, means for changing the amplitude of only one of the voltages to vary the phase of the signal, an octant selector including switching means for reversing the phases of the first and second voltages while maintaining the voltages in quadrature with one another, and for connecting the amplitude changing means to the first or the second circuit, said octant selector and said amplitude changing means cooperating to provide signals with phase angles variable from zero to 360 degrees, a comparator having a pair of cathode followers for receiving the reference signal and the test signal, a T pad in the cathode follower circuit receiving the test signal for changing the amplitude of the test signal without shifting its phase, means connecting the cathodes of the cathode followers for comparing the phase and amplitude of the reference signal and the test signal, and means operable by the voltage amplitude changing means to indicate directly the phase angle of the test signal upon equalizing the signals.

3,022,460
METER AND BRAKE THEREFOR
Emmor V. Schneider, Alliance, Ohio, assignor, by mesne assignments, to The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, Alliance, Ohio, a corporation of Delaware
Filed Apr. 13, 1955, Ser. No. 501,030
6 Claims. (Cl. 324—140)



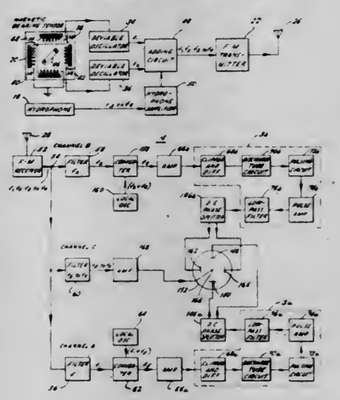
1. An electrical meter, comprising, a magnetically permeable frame, a non-permeable body mounted on said frame, said body having an annular ring portion, first and second tapered arcuate magnetically permeable pole pieces mounted on the side of said annular ring portion remote from said frame, first and second magnetically permeable core members connected to said first and second pole pieces, respectively, magnetically permeable bridging members from said frame to the outer end of said core members, first and second coils surrounding said first and second core members, respectively, a shaft journalled relative to said frame generally coaxial with said annular ring portion and arcuate pole pieces, a magnetically permeable flat vane carried on said shaft, said vane having first and second semicircular portions of first and second different radii, respectively, an arcuate shoulder of approximately two hundred eighty degrees on said annular ring portion adjacent said pole pieces, a stop at each end of said arcuate shoulder generally adjacent said core members, magnetically permeable bridging means extending from said frame to a position adjacent said first semicircular vane portion, said first semicircular vane portion having a radius smaller than the radius of said arcuate shoulder and smaller than the distance to said permeable bridging means to have clearances therewith, said second semicircular vane portion having a radius smaller than the radius of said pole pieces to have a clearance therewith and larger than the radius of said arcuate shoulder, spring means mounted to urge said vane axially to urge said vane second semicircular portion into engagement with said arcuate shoulder as a friction brake, energization of at least one of said coils establishing a magnetomotive force acting on said vane to move same axially substantially into a median plane through the mid-portion of said pole pieces and hence relieve said frictional braking engagement between said vane second semicircular portion and said shoulder so as to permit rotation of said vane in accordance with the proportionate energization on said two coils.

3,022,461
FREQUENCY AND/OR PHASE DEMODULATOR
Dwight D. Wilcox, Jr., Los Altos, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed July 20, 1959, Ser. No. 828,179
7 Claims. (Cl. 329—103)



2. A demodulator for demodulating a signal comprising first and second semiconductive devices having at least first, second and third electrodes, means for applying a voltage to the first electrode of each of said devices, means for applying the signal to be demodulated to the second eectrode of the first device and the third electrode of the second device, frequency sensitive delay means for receiving the signal to be demodulated, means for applying the output of the frequency sensitive means to the third electrode of the first device and the second electrode of the second device, and means for deriving an output signal connected to the first terminal of each of said devices.

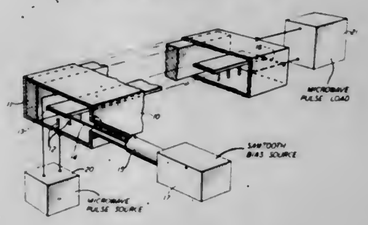
3,022,462
FREQUENCY MODULATION DETECTOR SYSTEM
Francis P. Kelper, Jr., Elkins Park, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Jan. 19, 1953, Ser. No. 331,782
14 Claims. (Cl. 329—126)



9. A receiving system comprising means responsive to a frequency-modulated wave for generating a first signal in the form of a plurality of pulses, the said pulses having a first average repetition rate substantially proportional to the nominal frequency value of the said frequency-modulated wave and undergoing first variations of the first repetition rate substantially proportional to the frequency deviations of the said frequency-modulated wave, means coupled to the said generating means for producing a second signal in the form of a plurality of pulses, said pulses having a second average repetition rate and an average duration substantially proportional to the said first average repetition rate of the said first signal and undergoing variations of the second repetition rate and

of the duration substantially proportional to the said first variations, the said pulses of the said second signal each having an area defined by the amplitude and duration thereof, means coupled to the said second signal-generating means for producing an output wave having a reference level component at an amplitude determined by the said second average pulse repetition rate and by the average area of the said second pulses and having amplitude variations about the said reference level as determined by the amplitude of said second pulses and by the said second variations of the said second pulse repetition rate and by the variations of the duration of the said second pulses, means for varying the amplitude of the said second pulses thereby to vary the amplitude of the variations of the said output wave, and means for varying the duration of the said pulses in a manner inverse to the said variation of the amplitude of the said second pulses thereby to maintain the average area of the said pulses and the amplitude of the said reference level component at substantially constant values.

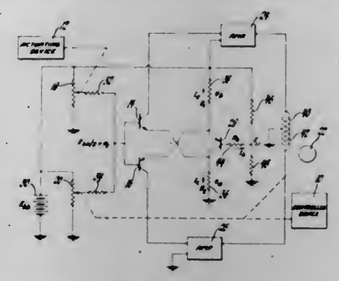
3,022,463
MICROWAVE PULSE AMPLIFIER
Richard L. Comstock, Stanford, Calif., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 17, 1959, Ser. No. 860,168
9 Claims. (Cl. 330—5)



1. A microwave pulse amplifier comprising a medium having an effective propagation constant that is decreased with respect to time over a period and then increased, means for applying said pulse to said medium before said decrease starts for transit through said medium during said decrease, and means for substantially completely removing said pulse from said medium before said decrease stops.

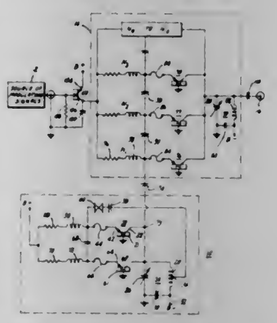
3,022,464
TEMPERATURE COMPENSATION CIRCUIT FOR TRANSISTOR AMPLIFIERS
Robert B. Gelenius, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 10, 1958, Ser. No. 760,249
4 Claims. (Cl. 330—13)

1. In combination, a two channel amplifier comprising a PNP transistor having base, emitter and collector electrodes and an NPN transistor having base, emitter and collector electrodes, a voltage source, bias voltage and signal voltage developing means connected with the voltage source and connected with the base electrodes of the transistors, a first load device connected effectively between one terminal of the voltage source and the collector electrode of the NPN transistor and a second load device connected effectively between the other terminal of the voltage source and the collector electrode of the PNP transistor, a temperature compensating transistor having emitter, base and collector electrodes, a pair of voltage dividing resistors connected across the voltage source, a base resistor connected between the junction of the voltage dividing resistors and the base electrode of the compensating transistor, a first resistor connected between one terminal of the voltage source and the emitter electrode of the compensating transistor and the PNP transistor, a second resistor connected between the other terminal of the voltage source and the collector electrode of the



compensating transistor and the emitter electrode of the NPN transistor, said compensating transistor being of the PNP type and all of the transistors having similar temperature characteristics whereby the currents through the load devices are independent of temperature variations.

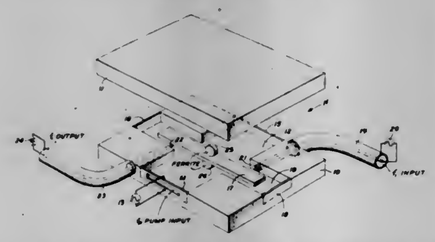
3,022,465
PLURAL-TRANSISTOR CIRCUIT WITH FUSE MEANS
Stephen Slenker, Bristol, Tenn., and Walter C. Kinzinger, Malden, Mass., assignors, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Jan. 15, 1959, Ser. No. 786,948
3 Claims. (Cl. 330—30)



1. A plural transistor signal-translating circuit for high-frequency signals comprising: a first common-base signal-translating stage comprising a first transistor having base, collector and emitter electrodes and an associated collector capacity; a second common-base signal-translating stage comprising a second transistor also having emitter, collector and base electrodes and an associated collector capacity; a common source of collector supply potential for said collector electrodes of said first and second transistors; first and second means for connecting said collector electrodes of said first and second transistors respectively to said common source of supply potential; a common source of emitter bias; third and fourth connecting means for connecting said emitter electrodes of said first and second transistors respectively to said last-named common source; a common signal-input circuit resonant at substantially said high frequency and connected to said emitter electrodes of said first and second transistors; a

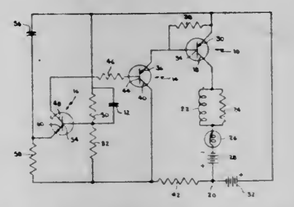
common collector load impedance for said first and second transistors, said load impedance and the combined collector capacities of said first and second transistors forming a circuit combination resonant at substantially said high frequency, said frequency being sufficiently high that said combined collector capacities constitute a substantial fraction of the total capacity of said resonant circuit combination; first fuse means connected between said emitter electrode of said first transistor and each of said common source of emitter bias and said common input circuit, said first fuse means being characterized by an initially low resistance for current of a normal operating intensity supplied to said last-named emitter electrode and by acquiring a substantially higher resistance when said current rises above a predetermined first intensity, said first and third connecting means having a combined resistance sufficiently low to produce a current through said first fuse means in excess of said first predetermined intensity when said emitter electrode of said first transistor is substantially short-circuited to said collector electrode thereof; and second fuse means connected between said emitter electrode of said second transitor and each of said common source of emitter bias and said common input circuit, said second fuse means being characterized by an initially low resistance for current of a normal operating intensity supplied to said emitter electrode of said second transistor and by acquiring a substantially higher resistance when said last-named current rises above a predetermined second intensity greater than said last-named normal intensity, said second and said fourth connecting means having a combined resistance sufficiently low to produce a current through said second fuse means which is in excess of said second predetermined intensity when said emitter electrode of said second transistor is substantially short-circuited to said collector electrode thereof.

3,022,466
FERROMAGNETIC PARAMETRIC MICROWAVE AMPLIFIER
Max T. Weiss, Elizabeth, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 7, 1957, Ser. No. 695,104
3 Claims. (Cl. 330—56)



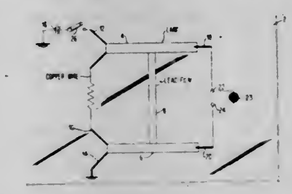
1. A high frequency signal amplifier comprising a composite conductively bounded enclosure for electromagnetic waves having substantially electrically separate but physically intersecting wave paths each capable of supporting an independent wave field within distinct frequency bands centered about a pumping frequency f_p and a signal frequency f_s lower than f_p respectively, an element of magnetically polarizable material capable of exhibiting gyromagnetic effects within said bands of frequencies having an aspect ratio between its greatest and smallest dimensions substantially different than unity disposed at the intersection of said paths in a region occupied in common by said fields, means for inducing magnetostatic resonance in said material at a frequency $f_p—f_s$ comprising a steady magnetic field applied to said element in a direction parallel to said smallest dimension, means for coupling wave energy to both said paths and means for extracting amplified wave energy from one of said paths.

3,022,467
OSCILLATOR CIRCUIT WITH POWER TRANSISTOR OUTPUT STAGE
Harry A. Leeder, Jr., Skaneateles, N.Y., assignor to R. E. Dietz Company, Syracuse, N.Y., a corporation of New York
Filed July 15, 1959, Ser. No. 827,374
4 Claims. (Cl. 331—74)



1. In an electronic switching circuit: a first transistor having its collector and emitter electrodes interconnected through a series circuit including a parallel resistor-inductor combination, a main load and a source of direct current, said first transistor having a temperature stabilizing resistor connected between its base and emitter electrodes, a second transistor of the same semi-conductor type as said first transistor, said second transistor having its emitter electrode connected to the base electrode of said first transistor and its collector electrode connected through an auxiliary load to an intermediate point on said current source, a third transistor of complementary semi-conductor type, said third transistor having its collector electrode connected to the base electrode of said second transistor, means in said circuit to establish a reference potential less than that of said source at one of the remaining electrodes of said third transistor, and means in said circuit including a capacitor to alter the potential at the other remaining electrode of said third transistor relative to said reference potential whereby the third transistor is rendered conductive and energizes the base electrode of said second transistor causing it to conduct, said second transistor in turn causing said first transistor to conduct by reason of said emitter to base coupling whereby the circuit through said load, source and first transistor is completed.

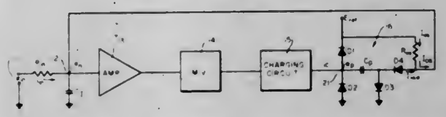
3,022,468
SUPERCONDUCTOR OSCILLATOR
Gerald B. Rosenberger, North Wappingers Falls, and Oliver W. Johnson, Jr., Brooklyn, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 13, 1958, Ser. No. 741,898
8 Claims. (Cl. 331—107)



1. A superconducting oscilaltor comprising a superconducting first path and a normal resistive second path in

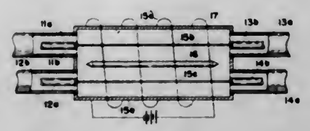
electrical parallel with said superconducting path, a source of direct current applied to said parallel paths, said direct current initially flowing into both paths inversely as their respective inductances and then inversely as their respective resistances, whereby such current will flow entirely through said superconductive path until such current reaches the critical current of said superconductive path.

3,022,469
VOLTAGE TO FREQUENCY CONVERTER
George S. Bahrs, 799 Berkeley Ave., Menlo Park, Calif; Malcolm M. McWhorter, 150 Gabarda Way, Menlo Park, Calif.; and Dalton W. Martin, 3200 Louis Road, Palo Alto, Calif.
Filed Jan. 4, 1960, Ser. No. 338
20 Claims. (Cl. 332—14)



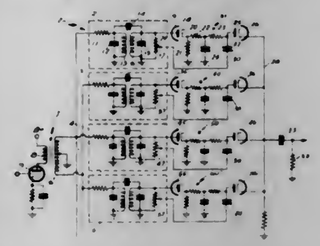
2. A voltage to frequency converter comprising an integrating network connected to receive an input signal, amplifying means connected to amplify the voltage across the integrating network, pulse generating means connected to receive the output of the amplifying means and serving to produce pulses when the amplified voltage reaches a predetermined voltage level, a precision capacitor having first and second terminals, means responsive to the pulses serving to swing the first terminal from a first voltage level to a second voltage level and back once for each applied pulse to cause flow of charging and discharging currents alternately through the precision capacitor, first and second current paths connected to the second terminal and serving to route separately the charging and discharging capacitor, and means for coupling one of said current paths to the integrating network.

3,022,470
EXTREMELY WIDE-BAND, NON-RECIPROCAL COAXIAL COMPONENTS
Arthur A. Oliner, Brooklyn, N.Y., assignor to Merrimac Research and Development Corporation, Flushing, N.Y., a corporation of New York
Filed June 25, 1957, Ser. No. 667,951
10 Claims. (Cl. 333—7)
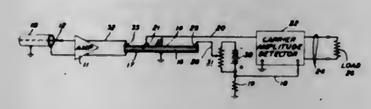


1. A nonreciprocal electromagnetic wave component comprising a pair of elongated conductors spaced from and coextending parallel to each other, a surrounding conductive shield like disposed with respect to both conductors of said pair and forming TEM mode transmission lines therewith, the inner conductor of a separate coaxial transmission line attached to each end of each of the two conductors of said conductor pair, and the outer conductors of each of said coaxial transmission lines connected to said surrounding conductive shield, an elongated element of material magnetically polarized in the axial direction and exhibiting the gyromagnetic effect, coextending parallel to said conductor pair on substantially the plane of symmetry between said pair in the region on substantial circular polarization of the normal modes of the gyromagnetically-loaded structure, and means for exciting separately and independently at least one conductor of said conductor pair.

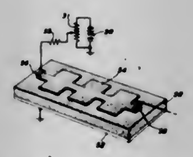
3,022,471
SELF-TUNING FILTER CIRCUITS FOR INCREASING RATIO OF NARROW BAND VARIABLE FREQUENCY SIGNAL TO BROAD BAND NOISE
Raymond P. Mork, Weston, Mass., assignor to Raytheon Company, a corporation of Delaware
Continuation of abandoned application Ser. No. 561,448, Jan. 26, 1956. This application July 28, 1961, Ser. No. 129,198
8 Claims. (Cl. 333—17)



1. A frequency-selective network comprising a signal input section, a plurality of narrow band-pass filters interconnected to embrace a predetermined spectrum composed of contiguous frequency ranges, said filters being connected to said input section and adapted to pass a total signal composed of a primary signal of a variable frequency and a plurality of frequency dependent noise components of various strengths, and means connected respectively to each of said filters and responsive to the strongest frequency component of said total signal for selecting the substantially strongest frequency component of said total signal passed by said filters and passing substantially only said strongest frequency component of said total signal to an output circuit.

3,022,472
VARIABLE EQUALIZER EMPLOYING SEMICONDUCTIVE ELEMENT
Morris Tanenbaum, Madison, and Robert L. Wallace, Jr., Warren Township, Somerset County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 22, 1958, Ser. No. 710,558
7 Claims. (Cl. 333—18)

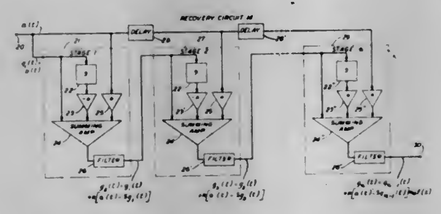




1. In combination, a transmission line, a p-n junction, the junction comprising an elongated thin rectangular member of semiconductive material of one type of conductivity having a very thin layer of the opposite type of conductivity over the entire area of a first major surface, a conductive layer base electrode making ohmic contact with the member over the entire area of the opposite major surface, and three electrodes making ohmic contact to the ends and an intermediate point, respectively, of the very thin layer covering the first surface, back-bias means for said junction, the back-bias means being connected between a first of the end electrodes connecting to the thin layer and the base electrode and having means for adjusting its voltage over a substantial range of amplitudes, its minimum amplitude being sufficient to prevent conduction between the base electrode and all of the three other electrodes, the portion of the junction between the other of the end electrodes and the intermediate electrode electrically simulating an appreciable length of the said transmission line, the length simulated being dependent upon the amplitude adjustment of the back-bias voltage, the portion of the junction between the intermediate electrode and the first of the end electrodes simulating a length of the said transmission line sufficient at all adjustment of the back-bias voltage to effectively suppress the reflection of any energy from that end back to the intermediate electrode, an amplitude detector, a first connecting means connecting said line to said junction at said other end electrode of said junction, a second connecting means connecting said amplitude detector to the intermediate electrode of said junction, and a third connecting means connecting said amplitude detector to said back-bias means to vary the amplitude of the voltage of said back-bias means in accordance with the amplitude of signals received by said detector from said line to compensate for changes in the transmission characteristic of the transmission line with changes in temperature.

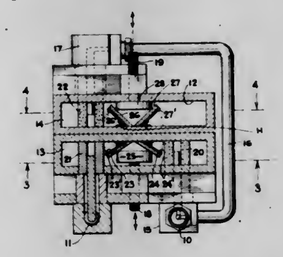
4. A p-n junction comprising a wafer of semiconductive material, said junction comprising a body portion of one type of conductivity, having a conductive base electrode making ohmic contact with the body portion, and a thin layer of the opposite type conductivity on a surface of said body portion, said layer having input and output terminals making ohmic contact with the layer and spaced from each other and a shaped contour of the part of the layer between the input and output terminals providing several portions of differing shape and area, and means for back biasing said junction sufficiently to prevent conduction between the base electrode and the other electrodes, whereby said combination can simulate the electrical characteristics of a multi-element passive electrical network.

3,022,473
SIGNAL RECOVERY CIRCUITS
Henry J. Landau, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 18, 1959, Ser. No. 834,611
6 Claims. (Cl. 333—28)



1. In a distortion-producing signal transmission system having an intelligence-bearing input signal applied thereto and from which there is derived a corresponding but distorted output signal, means for recovering said input signal from said distorted output signal which recovering means comprises a plurality of approximating stages, each of said approximating stages comprising network means simulating the transmission characteristics of said system, means for applying the output of the previous one of said stages to said network means, means for differentially combining the output of said network means and said distorted output signal to form a difference, means for multiplying said difference by a preselected constant, and means for additively combining said multiplied difference and said output of said previous stage to form an approximation of said input signal closer than said previous stage output.

3,022,474
MICRO-WAVE ATTENUATOR
Donald H. Lanctot, Malibu, Calif., assignor to Don-Lan Electronics, Inc., a corporation of California
Filed Jan. 8, 1960, Ser. No. 1,326
6 Claims. (Cl. 333—81)

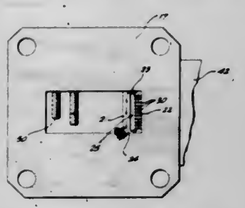


1. An attenuator for high frequency electromagnetic energy comprising, in combination: a wave guide chamber having input and output means for passing said high frequency electromagnetic energy therethrough; a pair of vanes in the form of elongated strips, the longitudinal edge of one strip being hinged to a longitudinal edge of the other strip so that the vanes define a V shape in cross-section, the vertex of said V shape being hinged along a longitudinal central internal surface portion of one wider dimensioned wall of said chamber so that the bisector of said V is substantially normal to said surface; resistive coatings on the outer sides of said strips respectively; and a single actuating screw passing normally through the wall of said chamber opposite said one wall and in alignment with said bisector, said screw terminating in said chamber in an enlarged head of dielectric material passing into the open end of said V-shape to engage simultaneously the inner sides of said strips, whereby threading of said screw to move said head further into said V shape simultaneously rotates said strips in opposite directions to increase the angle of divergence of said strips and thereby decrease the attenuation of said energy in said chamber by said strips.

3,022,475
MICROWAVE DEVICE
Lawrence A. Blasberg, Delaware Township, Camden County, N.J., and Harold D. Perry, Manhattan Beach, and Harold Saltzman, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 12, 1958, Ser. No. 754,664
2 Claims. (Cl. 333—97)

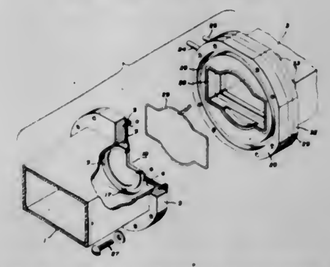
1. A high speed switch for microwave energy comprising a section of rectangular waveguide having broad and narrow walls for propagating microwave energy in a fundamental mode, a substantially thick ferrite slab mounted in said waveguide transversely between said broad walls and extending parallel and substantially adjacent to one of said narrow walls, means for selectively

magnetizing said slab, and conductive tuning means extending into said waveguide through one of said broad



walls and disposed between the centerline of said waveguide and the other one of said narrow walls.

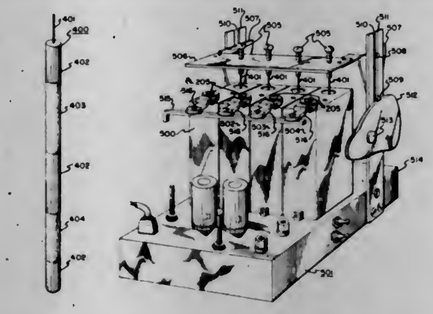
3,022,476
WINDOW ASSEMBLY
Arthur R. Koch, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 27, 1958, Ser. No. 757,576
10 Claims. (Cl. 333—98)



1. A waveguide window assembly comprising a flange adapted for being secured to an end of a waveguide section and having a transversely extending annular surface about a central opening therein, a sheet metal sleeve coaxially secured on said flange outwardly of said annular surface, a dielectric window having a cup-shaped metal frame nested in said sleeve and including a longitudinally extending cylindrical side wall, a bond between the rims of said frame and sleeve, an annular member adapted for being carried on the end of another waveguide section, said annular member including an annular reference surface about a central opening therein and opposing said annular surface on said flange, said annular member further including an annular recess located outwardly of said annular surface on said annular member for receiving and enclosing the bonded rims of said sleeve and frame for thereby isolating said welded rims outwardly of the high radio frequency fields in waveguide sections connected to said flange and annular member at said central apertures therein, and means effecting a uniform low resistance conductive path between said transverse annular surface immediately adjacent the inner edges of said central apertures in said flange and annular member.

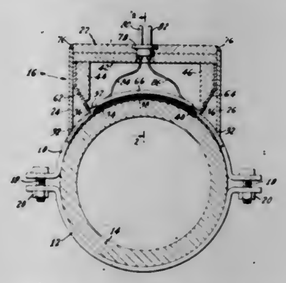
3,022,477
BROAD BAND RADIO RECEIVER PRESELECTOR APPARATUS
Norman J. Regnier, Los Angeles, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Filed June 18, 1958, Ser. No. 742,961
5 Claims. (Cl. 334—77)

2. Multiple-band tuning apparatus for radio receivers and the like, comprising a plurality of metallic shield housings each enclosing a plurality of axially aligned tuning coils adapted selectively to control the tuning of external circuits throughout several bands of frequencies, magnetic isolating means separating at least certain of the coils within each such housing to minimize inter-coil flux linkage, a unitary core element slidably disposed within the coils of each housing and having spaced-apart mutually isolated magnetically permeable sections so positioned as to successively tune all of said coils throughout their respective frequency ranges during a single movement of said core element in one direction for a distance which is a fraction of the aggregate length of said coils, electrical switch means within each such housing for se-



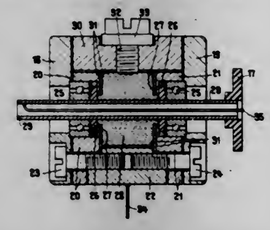
lectively connecting each of the coils within that housing to an external circuit, a common operator for all of the switches in each such housing and extending to a common operating end of all said housings; a common operating slide plate for all of said core elements, adjustable means connecting each core element to said slide plate for relative positional adjustments of said core elements relative to their respective coils, cam mechanism for positioning said slide plate to simultaneously tune all of the coils in said housings, and means mechanically connecting all of said common switch operators for uni-control operation thereof from a position outside said housings.

3,022,478
RESISTANCE TEMPERATURE SENSING DEVICE
Donald H. Fish, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,448
5 Claims. (Cl. 338—31)
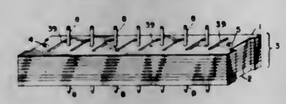


1. In a resistance temperature detector for monitoring the surface temperature of a pipe, a heat-transmissive supporting sheet bent to match the shape of said pipe surface, a sheet-like resistance temperature sensing unit having first and second surfaces, a plurality of insulating heat-resistant tubes in a parallel arrangement and spaced from each other, each of said tubes being supported by a metal wire extending through it, and means for maintaining each of said tubes in contact with said first sensing unit surface to retain said second sensing unit surface in contact with said bent supporting sheet.

3,022,479
DEVICE FOR ESTABLISHING AN ELECTRICAL CONNECTION BETWEEN STATIONARY AND ROTATING CONDUCTORS
Christof Rohrbach, Berlin-Zehlendorf, Germany, assignor to Vibro-Meter A.G., Fribourg, Switzerland
Filed Dec. 16, 1958, Ser. No. 780,765
4 Claims. (Cl. 339—8)



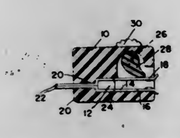
2. A system for establishing independent electrical connections between a number of stationary conductors and a number of rotating conductors, comprising identical contact units having each an outer stationary metallic contact member of substantially cylindrical shape and having opposite ends, bearing means inside the said opposite ends of the outer contact member, a substantially ring-shaped space being formed between the said outer contact member and the said bearing means, a metallic hollow shaft having an axial length exceeding the axial length of the said outer contact member, rotatably mounted in the said bearing means and axially and symmetrically extending on each side from the said outer contact member and bearing means respectively, a quantity of electrically conducting fluid filling the said substantially ring-shaped space between the hollow shaft and outer contact member, a tubular mounting member of insulating material having a bore of a diameter substantially equal to the outer diameter of the said outer contact member and adapted for coaxial accommodation of contact units in axially spaced relation within the bore of the mounting member and electrically insulated from each other, and coupling means of electrically insulating material for mechanically interconnecting ends of the said hollow shafts of contact units coaxially arranged in the said mounting member.

3,022,480
SANDWICH CIRCUIT STRIPS
Frank Emery Tiffany, Midpines, Calif.
Filed Feb. 7, 1957, Ser. No. 638,823
3 Claims. (Cl. 339—18)



2. A sandwich circuit device comprising a plurality of conductor strips separated by dielectric strips and sandwiched between two rigid dielectric face plate strips, a plurality of terminal pins permanently and equidistantly disposed through and beyond and at the center line of said device, groups of disposable clusters of trapezoid configurated converging retentive contact fingers being arranged within equidistantly spaced circular settings at the center line of said conductor strips, saw tooth and opposing wavy configurated edges disposed on said conductor strips to define correct assembly, each group of contact fingers terminating in a small aperture within the center of said circular setting, said rigid dielectric strips having at their center line equidistantly distributed small apertures defining the proper alignment for said terminal pins, said first-mentioned dielectric strips having apertures aligned with said small apertures, divisional slots between said apertures coincidingly disposed on all said strips defining the weakest points for break away at identical lengths of all said strips, said circular settings willfully vacated by said converging contact fingers adapted to provide the necessary clearance around said terminal pins to prevent unwanted electrical continuity between said terminal pins and conductor strips, each of the willfully retained groups of converging retentive contact fingers on each conductor strips being adapted to provide an intimate electrical contact between said terminal pins and said conductor strips, said sandwich circuit device adapted to duplicate unlimited variety of electrical circuit configurations by means of said single type of conductor strips each of which is adapted by disposal or retainment of preselected groups of converging contact fingers to define the path of any combination of electrical circuitry within said sandwich circuit device.

3,022,481
ELECTRICAL CONNECTOR
Theodore Stepoway, 713 Ranier Circle, Garland, Tex.
Filed Feb. 26, 1960, Ser. No. 11,216
4 Claims. (Cl. 339—75)

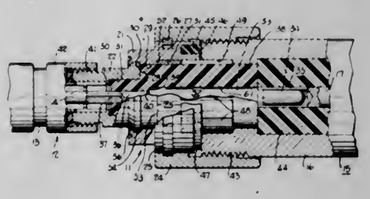


1. An electrical connector comprising a frame of electrical non-conductive material providing a chamber adapted to receive a printed circuit board or the like, said chamber having opposed top and bottom walls forming bearing surfaces and having a back wall, at least one electrical conductive strip secured in place along one of said bearing surfaces and at least one corresponding resilient contact element along the other of said bearing surfaces, supporting means for one end of said resilient contact element, the inherent resilience of said contact element urging a portion thereof, adjacent said supporting means, against said other bearing surface, said resilient contact element having a free end projecting beyond said other bearing surface and overlying, in spaced relation, said corresponding conductive strip, whereby the free end can be flexed toward and away from said conductive strip, a cam having a surface portion of progressively varying radius movably supported with respect to and engageable with the free end of said contact element for urging said element in a direction toward said electrical conductive strip, and means for moving said cam.

3,022,482
COAXIAL LINE TRANSITION SECTION AND METHOD OF MAKING SAME
Clayton F. Waterfield, Cleveland, and Henry J. Calderhead, Euclid, Ohio, assignors to Bird Electronic Corporation, Cleveland, Ohio, a corporation of Ohio
Filed June 12, 1956, Ser. No. 590,906
12 Claims. (Cl. 339—89)

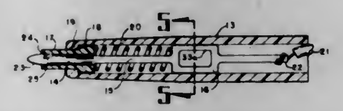
1. An element for connecting relatively large diameter slide terminal inner and screw terminal outer conduc-

tors of one coaxial electrical transmission line of given characteristic impedance to relatively small diameter corresponding conductors of another such line of substantially the same characteristic impedance and similar slide and screw terminals, said element comprising rigid metal conductor tube means formed with an internal stepped diameter wall having an annular shoulder intermediate and spaced from both its ends and constituting the juncture between relatively large and small diameter cylindrical portions of said internal wall, said tube means having on its opposite ends screw fastening means formed and adapted to interfit one with the outer conductor screw terminal of the one large diameter transmission line and the other with the outer conductor screw terminal of the other small diameter transmission line and readily to effect progressive drawing together axially and securing of the element and each of the transmission lines; stepped diameter conductor pin means having an annular shoulder intermediate and spaced from both its ends, said pin means extending through the conductor tube means in coaxial relation and being separated therefrom by an annular space, said pin means having on its opposite ends terminal portions formed and adapted to interfit with and effect sliding frictional electrical connections one with the inner conductor slide terminal of the one transmission line and the other with the inner conductor slide terminal of the other such line upon drawing together axially the pin and the respective inner conductors; solid dielectric body means surrounding the pin means



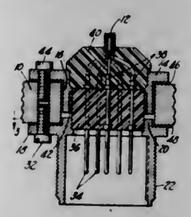
in said space and constituting a support for the pin means in the tube means; the shoulder of the tube means being axially spaced beyond that of the pin means with respect to that end of the element having terminals adapted to interfit with the large transmission line; said pin means having a cylindrical main portion with the maximum cross-sectional area of the pin means located within and concentric to the large diameter portion of said internal wall; said main pin portion, large diameter wall portion and one portion of said dielectric body means being definitive of a main coaxial line section substantially of predetermined characteristic impedance; said portion of the dielectric body means completely filling the annular space between the pin means and the conductor tube throughout the axial extent of said large diameter portion; another portion of the pin means with the small diameter wall portion and another portion of said dielectric body means being definitive of another coaxial line section having substantially said predetermined characteristic impedance; the dielectric body means including a third portion between and locatingly abutted against both the pin and the tube shoulders, said third portion being embraced by and having the same diameter as the large internal wall portion and embracing and having the same cross section as said other pin portion; and said dielectric means being of integral construction throughout its axial extent from the tube shoulder to one of its ends at the axial limit of its said one portion and from the pin shoulder to the other of its ends at the axial limit of its said other portion.

3,022,483
ELECTRICAL TEST PROBE
Robert N. Youger, 1536 Woodburn Ave., Covington, Ky.
Filed Nov. 15, 1957, Ser. No. 696,820
1 Claim. (Cl. 339—108)



A test probe for temporary connection to a test wire comprising an elongated flexible hollow tubular body, an inwardly directed shoulder at one end of said body, a sleeve slidably received in said one end, a first end of said sleeve having an outwardly extending shoulder within said body and in abutting relationship with said inwardly directed shoulder and a second end projecting from said body, an elongated electrically conducting member comprising a first section received in said sleeve, a shank section integral with said first section and extending substantially throughout the length of said body, a flattened locking portion integral with said shank and spaced from said first section, and having a lateral dimension greater than said shank and slightly greater than the interior of said body so that said portion is press-fittedly received therein, said locking portion being slotted for lateral dimensional adjustment, and an extension end terminating near the other end of said body adapted to receive a test lead, a coil spring surrounding said shank and bearing against said outwardly extending shoulder of said sleeve, and said locking portion, said first section having a wire receiving means at its outer end whereby a test wire engageable in said means is forced against said one end of said body by the action of said spring.

3,022,484
ELECTRICAL CONNECTION ASSEMBLY
Earl R. Thompson, Jr., South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 5, 1958, Ser. No. 778,399
3 Claims. (Cl. 339—129)



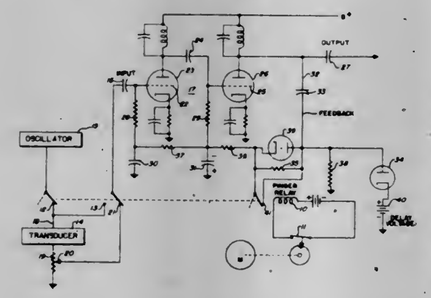
1. An electrical connector for fastening to a bulkhead comprising a first flanged cylindrical member having holes in the flange thereof for receiving a plurality of fastening devices for attaching said member to one side of said bulkhead, a cylindrical insulating member positioned within the interior of said first flanged member having a plurality of connecting pins positioned in spaced relation therein and projecting from one end of said member to receive connecting wires and from the opposite end for axial engagement with a mating connector, a molded cap enclosing said one end of said cylindrical insulating member and the connections between said pins and said wires in a moisture-proof assembly and also providing a moisture-proof seal between said first flanged member and said cylindrical insulating member, a second flanged cylindrical member having holes in the flange thereof for receiving a plurality of fastening devices for attaching said second flanged cylindrical member to the opposite side of said bulkhead in axial alignment with said first flanged member and having threads on the cylindrical portion thereof for engagement with said mating connector, and sealing means positioned between said flanges and said bulkhead.

3,022,485
ELECTRICAL WIRING UNIT
Stephen N. Buchanan, Washington, D.C.
(1514 N. Quincy St., Arlington, Va.)
Filed Oct. 8, 1956, Ser. No. 614,504
2 Claims. (Cl. 339—175)



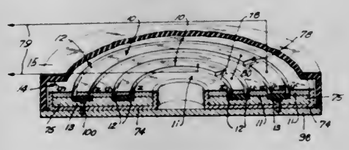
1. In an electrical receptacle comprising means for receiving an elongated conductor and the prong of a plug for effecting electrical connection therebetween, a body having a chamber therein, a contact member in the chamber, the body having means defining an opening for insertion of the prong into the chamber, the contact member having one end bearing against one side of the chamber, the contact member then extending in a direction away from said opening and then back towards said opening to form a U-shaped portion to embrace an inserted prong, and then extending over and in a direction away from the said opening to its other end whereat is provided a portion adapted to bear against the conductor in the chamber, the bottom of the U-shaped portion of the contact member being positioned at substantially the same depth in the chamber as is the conductor, and wherein the conductor lies inwardly of the U-shaped portion of the contact member.

3,022,486
AUTOMATIC PROPORTIONAL PRESET OF AMPLIFIER GAIN
Charles Briggs Gettys, Pittsfield, and Stephen C. Leonard, Cheshire, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 15, 1950, Ser. No. 184,938
2 Claims. (Cl. 340—3)



1. In a system of the character described, an echo signal receiver including an amplifier having an input circuit, means including a capacitor adapted to control the gain of said amplifier inversely of the charge on said capacitor, means including an amplifier output return circuit and a rectifier adapted to charge said capacitor as a function of the output of said amplifier, means normally discharging said capacitor, and means utilizing said output return circuit and gain control capacitor for automatically presetting said amplifier gain including means applying an alternating electric signal to said amplifier input circuit during an interval preceding reception.

3,022,487
ELECTROMAGNETIC TRANSDUCER
Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Southbury, Conn., a corporation of Connecticut
Original application Aug. 11, 1951, Ser. No. 241,470, now Patent No. 2,978,671, dated Apr. 4, 1961. Divided and this application Jan. 7, 1959, Ser. No. 790,998
5 Claims. (Cl. 340—12)



1. An electromagnetic transducer comprising housing means, means including a first medium having substantially the sound-transmitting properties of water and contained by said housing means and defining an acoustic-response face on one side of said housing means, a second medium within said housing means, said second medium being adjacent said first medium behind said face and having substantially the sound-transmitting properties of air, an array of spaced magnets and magnetic-flux gaps within said transducer and behind said face, said array comprising generally radially spaced generally arcuate magnets defining a series of generally radially spaced generally arcuate flux gaps therebetween, generally arcuate metallic conducting strips yieldably supported in the magnetic fields of said gaps, said strips being in direct driving relation with said first medium at the interface between said media, and means making electrical connection with said strips.

3,022,488
DELAYED ACOUSTIC VELOCITY SIGNAL TRANSMISSION
Allen A. Stripling, Dallas, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 17, 1958, Ser. No. 715,818
9 Claims. (Cl. 340—15)

1. In a well logging system where time variant signals corresponding with the time occurrence of acoustic signals at two spaced points in a well bore are to be transmitted to the earth's surface for measurement of the time separation therebetween, the combination which comprises measuring means for determining time separation between signals applied to the input thereof, a signal channel connected to said input and extending into said well bore, control means including a first circuit for applying the first occurring of said time variant signals to said signal channel at the end thereof opposite said measuring means and a second circuit, switching means responsive to a signal from said signal channel for actuating said control means to disrupt the signal channel for said first circuit and for applying the second of said signals to said signal channel through said second circuit, means in said second circuit for delaying transit of said second of said signals to said signal channel for a time interval of predetermined length which is greater than the time required for actuation of said control means to assure transmission of the second of said signals to said measuring means independ-

ent of and distinct from the first of said signals, and means in said measuring means for introducing a function



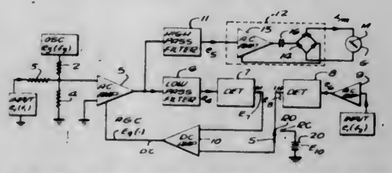
to compensate for the increase by the amount of said time interval in said time separation between the signals as applied to said measuring means.

3,022,489

MEANS AND TECHNIQUES FOR INDICATING THE RATIO OF TWO VARIABLES OR THE RECIPROCAL OF ONE VARIABLE

Richard H. Huddleston, Jr., Houston, Tex., assignor to Halliburton Company, a corporation of Delaware

Filed Mar. 17, 1959, Ser. No. 799,981
10 Claims. (Cl. 340—15)



1. In a well logging system, means producing a logging signal which is indicative of a characteristic of an earth formation within a well bore, a source of a reference signal, said logging signal and said reference signal being of varying character with the frequency of the reference signal being greater than the variations in said logging signal, a common signal transmission channel coupled to said signal producing means and said reference source for transmitting said logging signal and said reference signal therethrough, high-pass filter means having its input coupled to the output of said channel and effective to pass only said reference signal, indicating means coupled to the output of said filter for indicating said reference signal as a function of said characteristic in correlation with the depth of said formation within said well bore, low-pass filter means having its input coupled to said channel for passing only said logging signal, and means coupled between the output of the last-mentioned filter means and said channel for controlling a transmission characteristic of said channel.

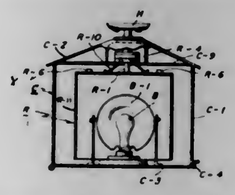
3,022,490

TRAFFIC LIGHTS FOR CONTROLLING THE FLOW OF TRAFFIC AT A TRAFFIC CROSSING

Martin R. Dosal, P.O. Box 53–62, Miami Shores, Fla.

Filed June 22, 1960, Ser. No. 37,933
1 Claim. (Cl. 340—120)

In an apparatus for displaying lights for control of flow of traffic in a single traffic lane, the combination of a casing adapted to be disposed above said lane and having a window so disposed as to be observable from said lane; a quadrilateral rotor journaled in said casing; translucent colored panes mounted in said rotor, comprising a green pane, an amber pane, a first red pane, and a second red pane, said panes being adapted to be disposed in said window by rotation of said rotor; a light source so mounted in said casing as to direct light rays through said panes and said window when said panes are disposed in said window; and means mounted in said casing and adapted to dispose said rotor in successive positions for four rest periods to so dispose said panes as to diplay a green light during one rest period of said rotor, an amber light during the second rest period, a first red light during the third rest period, and a second red light during the fourth rest period, said means to dispose said rotor com-



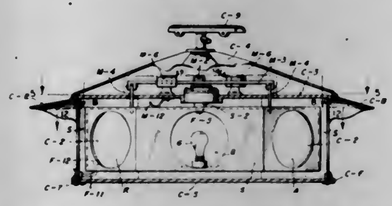
prising an operating arm journaled in said casing for oscillation, an electric motor in said casing adapted to oscillate said arm when energized, means adapted to energize said motor, a depending finger on said arm having a slidable portion biased outwardly, said portion having a rectilinear face on one side and an arcuate face on the opposite side, four lugs symmetrically disposed on the top of said rotor, each of said lugs having a rectilinear face on one side and an arcuate face on the opposite side, said slidable portion and said lugs being so relatively disposed that, when said arm is moved in one direction, the rectilinear face of said portion engages the rectilinear faces of said lugs to move said rotor, and, when said arm is moved in the opposite direction, the arcuate face of said portion passes over the arcuate faces of said lugs without moving said rotor.

3,022,491

TRAFFIC LIGHTS

Martin Roberto Dosal, Box 53–62, Miami Shores, Fla.

Filed Mar. 11, 1960, Ser. No. 14,276
3 Claims. (Cl. 340—133)



1. In an apparatus for displaying traffic lights, the combination of an octagonal casing having four closed sides and four open sides serving as windows, and a top wall having a pair of arcuate slots; a rotor rotatably suspended from said top wall of said casing and having a top wall having therein eight slots symmetrically disposed about the center of said top wall of said rotor; eight translucent, colored panels mounted in said rotor and comprising two diametrical green panels, two diametrical amber panels, a first pair of diametrical red panels and a second pair of two diametrical red panels; a single lamp mounted cen-

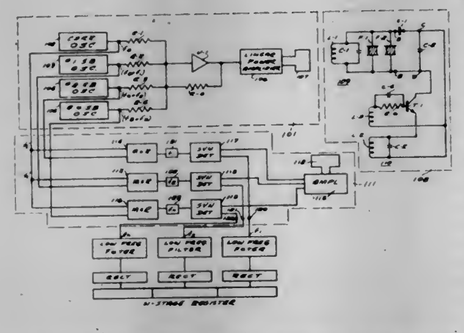
trally of said casing and within said rotor; an operating arm journaled on said top wall of said casing; a spring having one end fixed on said top wall of said casing and its other end fixed on said arm for biasing said arm into normal position; at least one electro-magnet so mounted on said top wall of said casing as to oscillate said arm when energized; means adapted to intermittently energize said electro-magnet; a pair of claws pivotally mounted on the ends of said arm and passed through said slots in said top wall of said casing, respectively, said claws entering said slots in the top wall of said rotor to engage and rotate said rotor when said arm is oscillated by said electro-magnet, and leaving said slots in said top wall of said rotor when said spring returns said arm to normal position.

3,022,492

INTERROGATOR-RESPONDER SIGNALLING SYSTEM

Robert A. Kleist, Sunnyvale, and Clarence S. Jones, Los Altos, Calif., assignors to General Precision, Inc., Binghamton, N.Y., a corporation of Delaware

Filed Feb. 15, 1960, Ser. No. 8,557
2 Claims. (Cl. 340—171)



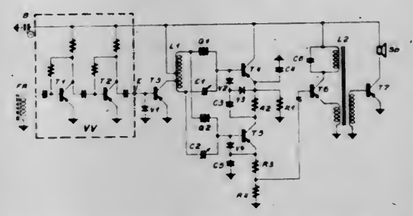
1. An interrogator responder signalling system, comprising in combination; a transmitter unit for providing an interrogator signal comprised of an interrogator carrier component and a first plurality of discrete sideband components, said transmitter unit including a carrier frequency generating means, a plurality of sideband frequency generating means and interrogator output circuit means for combining said signal components and emitting said interrogator signal; a responder unit movable relative to said transmitter unit, said responder unit having response signal generating means operated by said interrogator signal whenever said units are within a selected distance from each other, to provide a coded response signal comprised of a response carrier component differing in frequency from said interrogator carrier component and a second plurality of discrete sideband components; and response receiver means for receiving said coded response signal, said receiver means including a plurality of mixer circuits equal in number to said first plurality of discrete sideband components; circuit means connecting the carrier frequency signal from said carrier frequency generating means of said transmitter unit to each of said mixer circuits, further circuit means connecting the sideband frequency signals from said sideband frequency generating means to respective mixer circuits, thereby to derive a plurality of difference frequency signals from said mixer circuits; and a plurality of synchronous detector circuits, each of said synchronous detector circuits being connected to said response receiver means to receive said coded response signal and connected to an individual one of said difference frequency signals.

3,022,493

PLURAL FREQUENCY RESPONSIVE CIRCUITS FOR PORTABLE RECEIVING SETS

Otto Tschumi, Hans Kappeler, Hans Blöchlinger, and Alois Zimmermann, all of Solothurn, Switzerland, assignors to Autophon Aktiengesellschaft, Solothurn, Switzerland

Filed Nov. 22, 1957, Ser. No. 698,223
Claims priority, application Switzerland Nov. 28, 1956
1 Claim. (Cl. 340—171)



In a circuit including transistors, for initiating an action in response to an incoming signal consisting of a sequence of two distinct frequencies, particularly for use in portable receiving sets, and comprising two channels corresponding to two frequencies contained in said sequence, the received frequencies being passed to said channels in parallel, each channel containing a filter tuned to a specific one of the frequencies of said sequence, and wherein means are provided for blocking the second channel in the condition of rest, and for unblocking this second channel in response to a signal passing through the first channel, the signal passing in the second channel maintaining said unblocked condition, the improvement consisting in that each channel comprises a transistor having a collector, an emitter and a base, the collector and emitter electrodes being connected in series through at least one resistor in such a manner that the said resistor is disposed between the emitter of the first, and the collector of the second transistor, a large condenser and means connecting the emitter of the first transistor with one pole of said large condenser, the other pole of said large condenser being connected to a potential which is substantially constant with respect to the potential of the collector of the first transistor, another condenser, and means connecting said other condenser between a point having at least substantially the potential of the collector of the second transistor and another point, means including a rectifier connecting said other point with the base of the first transistor, and means including another rectifier connecting said other point with the emitter of the first transistor, the forward directions of the said rectifiers being so disposed with respect to the forward direction between base and emitter of the first transistor that said two rectifiers, the base and the emitter of the first transistor form a ring circuit which can be passed in the forward directions of the elements forming said ring circuit.

3,022,494

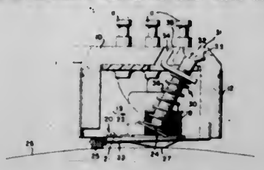
SELF-SEATING CONTACT HEAD FOR MAGNETIC MEMORY DRUM

Jay M. Hansen, Santa Monica, and Zaven Atamian, Sherman Oaks, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Filed Apr. 4, 1960, Ser. No. 19,960
9 Claims. (Cl. 340—174.1)

1. An electromagnetic transducer assembly for recording, reproducing, or erasing information on a magnetizable medium movable relative to said assembly comprising: a support structure; resilient means mounted in said support structure and having a contact surface thereon adapted to engage said medium; a pair of electromagnetic

transducers mounted on said resilient means, each of said transducers having a surface adapted to engage said medium, said transducer surfaces and said contact surface



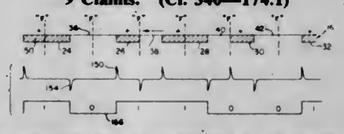
defining a three point support; and means mounted in said support structure and engaging said resilient means for urging said transducer surfaces and said contact surface into engagement with said medium.

3,022,495

INFORMATION STORAGE SYSTEM

Robert R. Williamson, Tujunga, and Robert L. Terry, San Fernando, Calif., assignors to General Precision, Inc., a corporation of Delaware

Filed Sept. 24, 1959, Ser. No. 842,157
9 Claims. (Cl. 340—174.1)



1. In combination for obtaining the recording and reproduction of information by the use of paramagnetic material, a memory member having at least one information channel disposed on the periphery of the member to store a plurality of bits of information, the memory member being provided with filled and non-filled portions, the filled portions being coated with a layer of the paramagnetic material to make the portions receptive to the storage of magnetic information, the filled portions having boundaries with the non-filled portions at regular intervals along the periphery of the information channel, the non-filled portions being formed in a configuration to produce a fixed and irregular pattern of first and second digital signals in the channel to represent a particular pattern of both first and second binary values upon the magnetic polarization of the paramagnetic portions in a particular direction, a first head disposed in contiguous relationship to the information member to record magnetic signals having polarity characteristics in the non-filled portions of the channel in accordance with the phase of electrical signals introduced to the head, a second head disposed in contiguous relationship to the information member to produce electrical signals having phase characteristics in accordance with the polarity of the magnetic information recorded in the filled portions of the channel, the memory member being movable relative to the first and second heads to present successive positions in the channel for the reading and recording of magnetic information, and means responsive to the phase characteristics of the signals induced in the second head by the magnetic information in the magnetizable material in the filled portions to produce clock signals having a periodically recurring pattern.

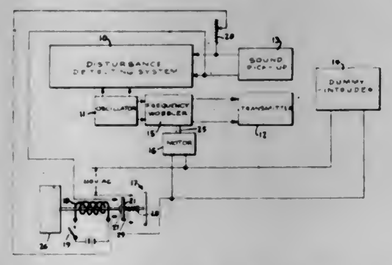
3,022,496

TESTING OF APPARATUS FOR DETECTING DISTURBANCES IN AN ENCLOSURE

Samuel M. Bagno, Belleville, N.J., assignor to Walter Kidde & Company, Inc., Belleville, N.J., a corporation of New York

Filed May 6, 1957, Ser. No. 657,294
7 Claims. (Cl. 340—214)

1. In apparatus for detecting the presence of disturbances within an enclosure comprising an oscillator for producing an output of substantially constant carrier frequency oscillations, a sound transmitter having an input connected to said oscillator and adapted to radiate energy at the frequency of the oscillations at said input to produce a standing wave energy pattern within an enclosure, a sound pick-up for receiving reflections of said transmitted sound energy radiations, and means connected to said oscillator and said pick-up for detecting the difference in frequency between the oscillator output and the received radiations; the combination of means



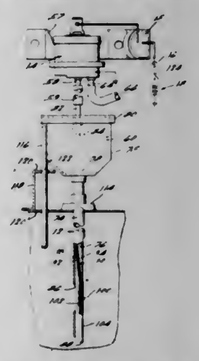
connected to the input of said sound transmitter for slowly producing a small percentage variation in the carrier frequency at said transmitter input, means located within the standing wave energy pattern and received by said sound pick-up for simulating a disturbance within the enclosure to create side bands of a given frequency, and switch means connected for rendering said last mentioned means and said carrier frequency changing means operative, whereby, when the changing carrier frequency is in a phase with the side band frequency, a maximum response will be detected by the apparatus.

3,022,497

VARIABLE ORIFICE DEVICE

Warren C. Tyner, Ann Arbor, Mich., assignor to King-Seeley Thermos Co., a corporation of Michigan

Filed Oct. 10, 1956, Ser. No. 615,138
3 Claims. (Cl. 340—244)



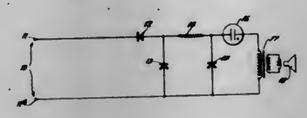
1. A signal system for responding to a critical liquid level condition, comprising a fluid pressure responsive control element, means for applying a fluid pressure differential to said control element, means including a fluid passage opened and closed by changes in liquid level for so modifying said fluid pressure differential as to actuate said control element, and means movable as a function of the temperature of the fluid and operable to maintain the rate of flow through the fluid passage substantially constant.

3,022,498

WARNING DEVICE

Frederick Stanley Alcott, 5717 Dempster St., Morton Grove, Ill.

Filed May 31, 1957, Ser. No. 662,785
7 Claims. (Cl. 340—253)



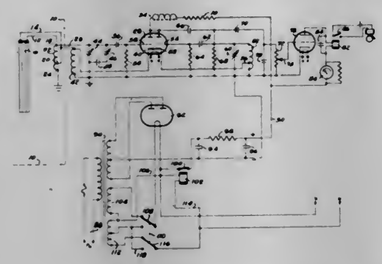
1. In a device for providing an audible warning in the event of failure of electrical power, first potential storage means, resistance means and second potential storage means serially connected and connected in parallel with said first potential storage means, means for applying rectified alternating current electrical potential across said first potential storage means, said applying means constituting the only electrical potential connected to said device, and electronic valve means connected in parallel with said second potential storage means, said valve means being adapted to pass current from said potential storage means only above a predetermined potential, and when said applying means fails, to develop a cyclic current from said potential storage means free of any potential source external to said device.

3,022,499

APPROACH ALARM SYSTEM

Tony Ripepi, Clairton, Pa.
(771 Clairton Blvd., Pittsburgh 36, Pa.)

Filed Nov. 16, 1959, Ser. No. 853,135
2 Claims. (Cl. 340—258)



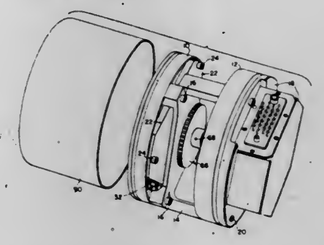
1. A body-capacity intrusion sensing circuit comprising a pair of matched oscillators each including a tapped oscillator coil coupling the grid-cathode and plate-cathode circuits of respective triode amplifiers, one of said coils being located remotely from its associated amplifier with an end portion of its winding connected to said amplifier over a balanced line, the other end of said winding being grounded, a balanced-line sensing antenna connected across said end portion of the said remotely-located coil, a balancing inductance connected in the grid-to-cathode path of said associated amplifier for neutralizing stray capacitance in the balanced-line connections from that amplifier to the remote coil, means for adjusting the frequencies of both oscillators to substantial equality, and a combined mixing and detecting circuit connected to the outputs of both said oscillators for causing a signal operation upon the occurrence of a substantial change in the frequency of the oscillator controlled by said antenna.

3,022,500

TRIGONOMETRIC CONVERTER

Wesley E. Stupar, Burbank, Calif., assignor to General Precision, Inc., a corporation of Delaware

Filed Jan. 13, 1958, Ser. No. 708,627
18 Claims. (Cl. 340—347)



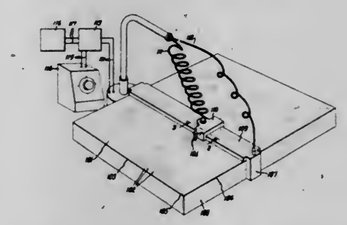
1. In an analogue-to-digital converter, an information member having first and second pluralities of tracks, there being a plurality of first and second segments alternately disposed in each of the tracks in the first and second pluralities, the first and second segments in each track having progressive lengths with progressive distances along the track, the lengths of the first segments at corresponding positions in the different tracks of the first plurality being of progressive values and the lengths of the first segments at corresponding positions in the different tracks of the second plurality being of progressive values, the tracks of the second plurality being arranged in a complementary relationship with respect to the tracks of the first plurality.

3,022,501

DRAWING TAPE PROGRAMMER

William R. Seigle, New Hartford, N.Y., assignor to General Electric Company, a corporation of New York

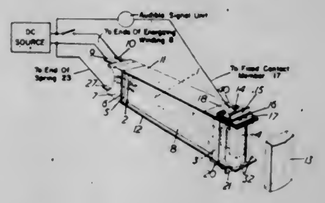
Filed May 28, 1956, Ser. No. 587,552
7 Claims. (Cl. 340—365)



4. An arrangement for translating points on a two coordinate graphical display into binary information comprising a grid having a pattern of incremental apertures therein spaced apart in predetermined increments and adapted to receive a graphical display in overlying relation, scanning means for scanning points on said display, a switching arrangement including first and second groups of switches to define respective coordinates of a point to be scanned in binary code, indexing means associated with said scanning means and movable to be inserted in a selected one of said apertures to index the scanning means to select the coordinates of a point to be scanned with relation to the graphical display and the incremental apertures, means interconnecting said scanning means and said switching arrangement for arranging said switching arrangement to define each coordinate value of the point to be scanned in binary code in ac-

cordance with the indexed position of the scanning means, recording means to sequentially record the binary values defined by said switching arrangement, means associated with said recording means for identifying the coordinate as well as the coordinate value in binary code, and other means associated with said recording means for preventing the successive identification of a coordinate value in binary code of a selected point unless that coordinate value has changed from the coordinate values associated with a prior selected point.

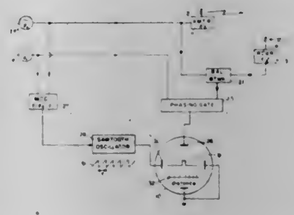
3,022,502
ELECTROMAGNETIC INDICATORS
William Sinclair, Beeston, Nottingham, England, assignor to Ericsson Telephones Limited
Filed Oct. 1, 1957, Ser. No. 687,580
Claims priority, application Great Britain Dec. 29, 1956
9 Claims. (Cl. 340—366)



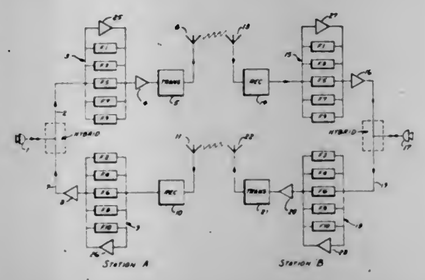
1. In an electromagnetic device, in combination, a pair of magnetizable pole pieces spaced from each other; a pair of symmetrically arranged armatures each having a side portion adapted to cooperate magnetically with said pole pieces, and an edge portion; and support means supporting said armatures adjacent said pole pieces symmetrically with respect to the latter and movably between two positions in a first of which positions the side portions of said armatures are spaced a maximum distance from said pole pieces and the edge portions of the said armatures are adjacent each other, and in the second of which positions the side portions of the said armatures are adjacent the said pole pieces and the edge portions of the said armatures are spaced a maximum distance from each other, said pair of armatures being positioned by said support means in such a manner in relation to said pair of pole pieces and in relation to each other that when the said pole pieces are simultaneously magnetized with different polarities the said armatures are in the magnetic field produced by the said pole pieces and corresponding portions of the said armatures are magnetized with polarities different from that of one of the said pole pieces but similar in each of the said armatures so that said one of the said pole pieces when it is magnetized attracts the said armatures at said corresponding side portions thereof to urge the said armatures from the first position to the second position thereof and the said armatures repel each other at the edge portions thereof also to urge the said armatures from said first position to said second position thereof whereby the said armatures move from the said first position to the said second position thereof by the attraction of said one of the said pole pieces and the mutual repulsion of the said armatures.

3,022,503
CONTINUOUS WAVE ECHO-TYPE DISTANCE FINDER
Karl F. Ross, 5121 Post Road, Riverdale, N.Y.
Filed Jan. 6, 1959, Ser. No. 785,166
8 Claims. (Cl. 343—12)

1. A system for measuring the length of a path traveled by wave energy echoed by a wave-reflecting object, comprising source means for producing a continuous reference sine wave and a continuous outgoing sine wave of different frequencies, the frequency difference between said waves corresponding to a wavelength exceeding the path length to be measured, transmitting means for sending out said outgoing wave, receiving means for intercepting echoes of said outgoing wave reflected by said object, first pulse-producing means responsive to the occurrence of a predetermined phase relationship between said reference wave and said outgoing wave, second pulse-producing means responsive to the occurrence of a like phase relationship between said reference wave and the intercepted echo of said outgoing wave, and output means controlled by said first and second pulse-producing means for indicating the time interval elapsed between said occurrences.

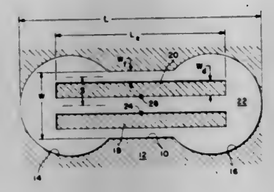


3,022,504
TWO-WAY RADIO TELEPHONE SYSTEM UTILIZING FREQUENCY SUBBANDS TO PROVIDE TRANSMITTER-RECEIVER ISOLATION
Vincent D. Stroud, 3915 Weller Road, Wheaton, Md., and Harold S. Grant, 2414 Fairlawn St., Washington, D.C.
Filed Nov. 18, 1960, Ser. No. 70,292
5 Claims. (Cl. 343—178)



2. A two-station radio communication system comprising, in combination, means at said first station for radiating a radio frequency carrier wave which is modulated with a locally generated subscriber's voice signal from which a first series of audio subbands have been suppressed, means at said second station for radiating a radio frequency carrier wave which is modulated with a locally generated subscriber's voice signal from which a second series of spaced audio subbands have been suppressed, the audio subbands of said second series occurring at those portions of the audio spectrum which are not occupied by said first subbands, said first and second series of subbands substantially occupying the complete audio spectrum, and means at each station for detecting the modulated radio frequency carrier wave radiated by the other station and for converting it to an audio signal.

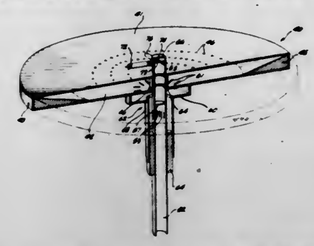
3,022,505
LOADED DOUBLE-FOLDED SLOT ANTENNA
Glenn A. Scharp, Norco, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 29, 1960, Ser. No. 18,453
4 Claims. (Cl. 343—767)
(Granted under Title 35, U.S. Code (1952), sec. 266)



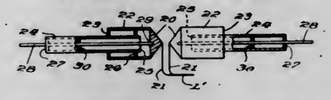
1. A broadband double-folded slot antenna comprising a conducting plane having a rectangular slot therein, two flat ungrounded and spaced-apart parallel rectangular strips of conducting material slightly shorter than the length of said slot symmetrically disposed sdie-by-side within and lying in the plane of said slot, said parallel strips being supported within and parallel to the longer sides of the rectangular slot by a dielectric material of suitable dielectric constant, two feedpoints symmetrically positioned on said flat parallel strips for connection with suitable transmission line, said antenna being resonant and operable to efficiently receive and radiate electromagnetic energy at a frequency whose wavelength is more than twice the antenna length.

3,022,506
ARBITRARILY POLARIZED SLOT ANTENNA
Frank J. Goebels, Jr., Los Angeles, and Kenneth C. Kelly, Gardena, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Mar. 27, 1959, Ser. No. 802,564
18 Claims. (Cl. 343—771)

5. A pencil beam antenna comprising a radial waveguide having parallel conductive plates and a central axis extending normal to the plates, one of the plates having a number of crossed slots therein, the slots lying in at least one annulus about the central axis and having selected attitudes and positions; wave energy termination means coupled between the plates at a radius further from the central axis than the crossed slots; and means coupled to the radial waveguide for exciting modes therein which establish at least two current regions in the plate containing the crossed slots, the current regions and the attitudes and positions of the crossed slots combining to provide uniform operation independent of the direction of excitation of the crossed slots.



3,022,507
MULTI-FREQUENCY ANTENNA
Joseph M. Boyer, Redondo Beach, Calif., assignor to Antenna Engineering Laboratories, Torrance, Calif., a limited co-partnership
Filed Oct. 29, 1953, Ser. No. 388,981
6 Claims. (Cl. 343—818)



4. An antenna for sending and receiving radio signals over any one of a plurality of separate frequencies and disposed remote from a conductive plane; said antenna comprising a pair of identical units arranged in opposed end to end relation along a common axial line above a conductive plane; each of said units comprising a conductive base member which is a feed point, a conductive rod having a proximal end thereof fixed to said base member and projecting therefrom along said axial line to a distal end remote from said base, a tubular conductive member coaxially surrounding and spaced from said rod and including a proximal end adjacent to and spaced from said base member and a distal end disposed at a lesser distance from said base member than the distal end of said rod, conductive means comprising an internally folded, shorted, end fixed to said base member and supporting said tubular member on said base member in coaxial relation to said rod and with the proximal end of said tubular member spaced from said base member; the base members of each of said units being positioned in proximity to each other and being adapted for common connection to radio transmitting and receiving apparatus.

DESIGNS

FEBRUARY 20, 1962

192,239
COMBINED FOUNTAIN BRUSH AND DENTAL CREAM HOLDER
Alfio L. Corbino, 3541 N. 6th Ave., Omaha, Nebr.
Filed Mar. 30, 1960, Ser. No. 59,950
Term of patent 14 years
(Cl. D9—2)



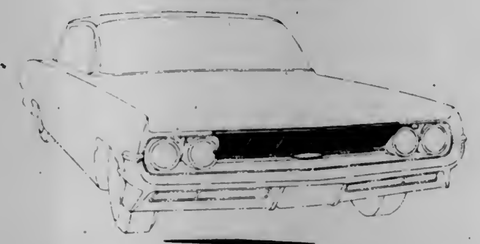
192,240
PULL
La Verne E. Clayton, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Aug. 29, 1960, Ser. No. 61,919
Term of patent 14 years
(Cl. D10—8)



192,241
ORNAMENT FOR AUTOMOBILES OR THE LIKE
Arthur R. Vogel, 458 S. Clark St., Powell, Wyo.
Filed Feb. 9, 1961, Ser. No. 63,877
Term of patent 14 years
(Cl. D14—6)



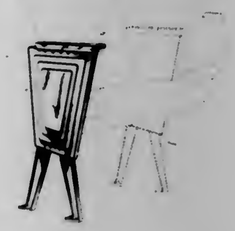
192,242
AUTOMOBILE
Irvin W. Rybicki, Franklin, and Stanley R. Wilen, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 12, 1961, Ser. No. 65,542
Term of patent 7 years
(Cl. D14—18)



192,243
END STANDARD FOR A ROW OF SEATS
Herbert E. Williams, Temple, Tex., assignor to American Desk Manufacturing Company, Temple, Tex., a corporation of Texas
Filed Jan. 16, 1961, Ser. No. 63,558
Term of patent 14 years
(Cl. D15—8)



192,244
END STANDARD FOR A ROW OF SEATS
Herbert E. Williams, Temple, Tex., assignor to American Desk Manufacturing Company, Temple, Tex., a corporation of Texas
Filed Jan. 16, 1961, Ser. No. 63,559
Term of patent 14 years
(Cl. D15—8)

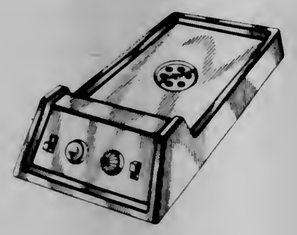


192,245
END STANDARD FOR A ROW OF SEATS
Herbert E. Williams, Temple, Tex., assignor to American Desk Manufacturing Company, Temple, Tex., a corporation of Texas
Filed Jan. 16, 1961, Ser. No. 63,560
Term of patent 14 years
(Cl. D15—8)

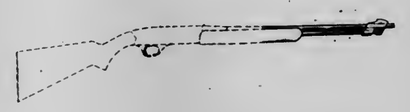


192,246
DENTAL SYRINGE
John A. Maurer and Kenneth R. Lappin, Canton, Ohio, assignors to The Weber Dental Manufacturing Company, Canton, Ohio, a corporation of Ohio
Filed June 9, 1961, Ser. No. 65,535
Term of patent 14 years
(Cl. D24—1)

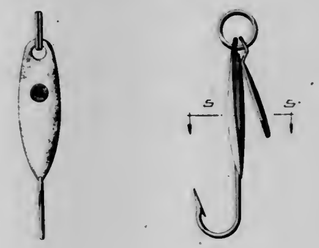
192,247
TELEPHONE CALL INDICATOR
Theodore T. Michals, 350 Fairbank Road, Riverside, Ill.
Filed May 12, 1961, Ser. No. 65,140
Term of patent 3½ years
(Cl. D26—14)



192,248
GUN
Julius E. Brooks, Branford, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Oct. 22, 1959, Ser. No. 58,026
Term of patent 14 years
(Cl. D30—1)



192,249
FISH LURE
George Fofrich, 1802 E. Manhattan Blvd., Toledo, Ohio
Filed Mar. 28, 1961, Ser. No. 64,524
Term of patent 14 years
(Cl. D31—4)



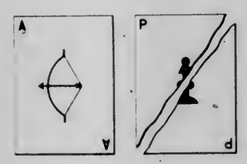
192,250
INFLATABLE TOY BIRD OR THE LIKE
Sukesaburo Sasada, Tokyo, Japan, assignor to C. Itoh & Co. (America) Inc., a corporation of New York
Filed Apr. 21, 1961, Ser. No. 64,851
Term of patent 3½ years
(Cl. D34—2)



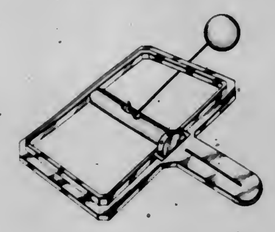
192,251
HAND PUPPET
Elsa Foster, 306 W. 75th St., New York, N.Y.
Continuation of application Ser. No. 58,552, Dec. 4, 1959
This application July 10, 1961, Ser. No. 66,260
Term of patent 14 years
(Cl. D34—2)



192,252
SET OF PLAYING CARDS
Michael Tynio, 4816 Franklin St., Harrisburg, Pa.
Filed Feb. 7, 1961, Ser. No. 63,850
Term of patent 14 years
(Cl. D34—5)



192,253
TETHER BALL GAME PADDLE
Alfred C. Kather, 740 S. Hoover St., Los Angeles, Calif.
Filed July 26, 1960, Ser. No. 61,520
Term of patent 14 years
(Cl. D34—15)



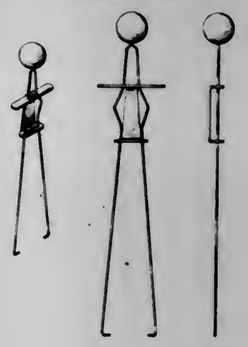
192,254
ANIMAL FIGURE PLAYGROUND DEVICE
Hubert H. Hansen, Coral Gables, Fla., assignor to Fun In The Sun of Florida, Inc., Miami, Fla., a corporation of Florida
Filed Nov. 17, 1961, Ser. No. 67,578
Term of patent 14 years
(Cl. D34—15)



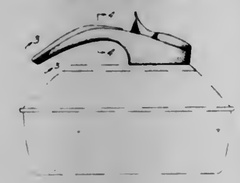
192,255
ANIMAL FIGURE PLAYGROUND DEVICE
Hubert H. Hansen, Coral Gables, Fla., assignor to Fun In The Sun of Florida, Inc., Miami, Fla., a corporation of Florida
Filed Nov. 17, 1961, Ser. No. 67,579
Term of patent 14 years
(Cl. D34—15)



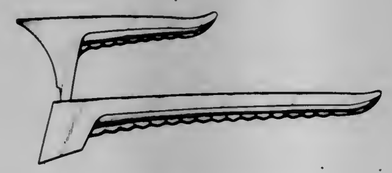
192,256
PICKLE TONGS OR THE LIKE
Alfred Ackerson, 1-N-629, Glen Ellyn, Ill.
Filed June 21, 1961, Ser. No. 65,673
Term of patent 14 years
(Cl. D44—4)



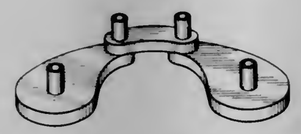
192,257
TEA KETTLE
John W. Ebstein, Roslyn Heights, N.Y., assignor to Federal Enameling & Stamping Co., Pittsburgh, Pa., a corporation of Michigan
Filed Nov. 1, 1960, Ser. No. 62,698
Term of patent 14 years
(Cl. D44—25)



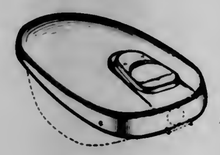
192,258
HANDLE ASSEMBLY FOR COVERED FRYPAN OR THE LIKE
Alfred W. Madl, Milwaukee, Wis., assignor to John Oster Manufacting Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Mar. 29, 1961, Ser. No. 64,538
Term of patent 14 years
(Cl. D44—29)



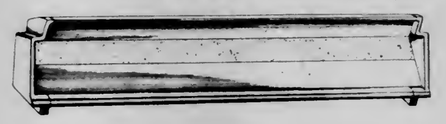
192,259
CANDLESTICK HOLDER
Rolla P. Le Baron, 1426 S. Vine St., Denver, Colo.
Filed Feb. 13, 1961, Ser. No. 63,909
Term of patent 7 years
(Cl. D48—2)



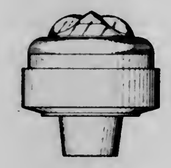
192,260
LUMINAIRE
James H. Fahey, Jr., Chicago, Ill., assignor to Joslyn Mfg. and Supply Co., Chicago, Ill., a corporation of Illinois
Filed Jan. 5, 1961, Ser. No. 63,451
Term of patent 14 years
(Cl. D48—31)



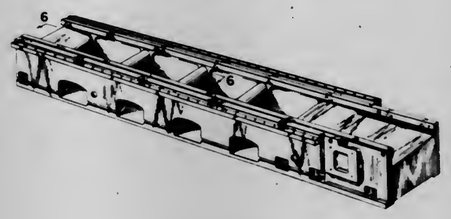
192,261
CONTROL PANEL FOR A WASHING MACHINE OR THE LIKE
Montgomery Ferar, Huntington Woods, Mich., assignor to Whirlpool Corporation, St. Joseph, Mich
Filed July 6, 1959, Ser. No. 56,653
Term of patent 14 years
(Cl. D49—1)



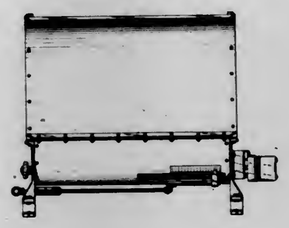
192,262
AIR PRESSURE GAUGE FOR TIRES
Frederick Trinca, 64—12 83rd St., Middle Village, N.Y.
Filed Dec. 7, 1960, Ser. No. 63,138
Term of patent 14 years
(Cl. D52—6)



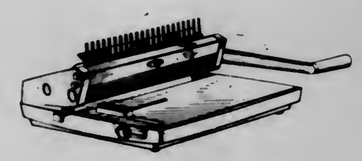
192,263
LATHE BED
Wilbur R. Gerchow, Ann Arbor, Mich., assignor to The Sidney Machine Tool Company, Sidney, Ohio, a corporation of Ohio
Filed July 20, 1960, Ser. No. 61,446
Term of patent 14 years
(Cl. D54—6)



192,264
FEEDING HOPPER
Truman De Vries, Rte. 1, Montevideo, Minn.
Filed Apr. 1, 1960, Ser. No. 59,994
Term of patent 7 years
(Cl. 55—1)



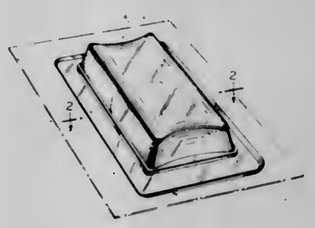
192,265
UNITARY PUNCHING AND BINDING MACHINE
Robert H. Crowle, 2100 Dempster St., Berwyn, Ill., and Charles E. Jones, 2100 Dempster St., Evanston, Ill.
Filed Apr. 11, 1960, Ser. No. 60,136
Term of patent 14 years
(Cl. D55—1)



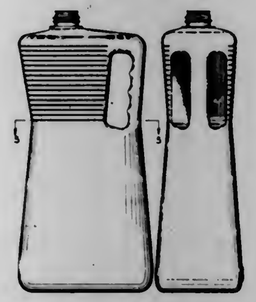
192,266
PAIR OF SUNGLASSES
Albert C. Petitto, Hudson, Mass., assignor to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Filed Mar. 21, 1961, Ser. No. 64,422
Term of patent 14 years
(Cl. D57—1)



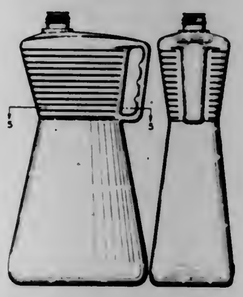
192,267
ENVELOPE FOR ARTICLE DISPLAY
Carlton L. Whiteford, Woodway Ridge Lane, New Canaan, Conn.
Filed May 12, 1960, Ser. No. 60,549
Term of patent 14 years
(Cl. D58—2)



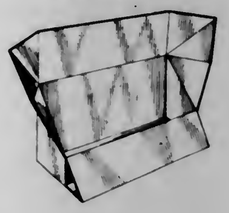
192,268
BOTTLE
Alfred D. Sterges, Los Angeles, and Donald E. G. Glassco, Temple City, Calif., assignors to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Filed June 5, 1961, Ser. No. 65,463
Term of patent 14 years
(Cl. D58—5)



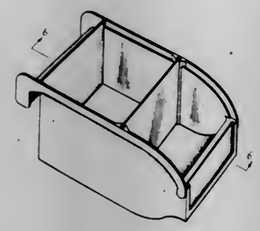
192,269
BOTTLE
Alfred D. Sterges, Los Angeles, Calif., assignor to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Filed June 5, 1961, Ser. No. 65,464
Term of patent 14 years
(Cl. D58—5)



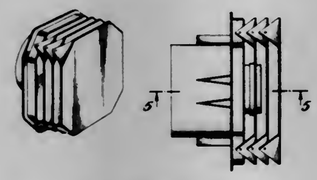
192,270
COMBINATION CARTON AND DISPLAY BOX
Harold E. Downing, Chicago, Ill., and Thomas H. Vaughn, Tenafly, N.J., assignors to Gray Realty Corporation, Benlon Harbor, Mich., a corporation of Delaware
Filed Dec. 24, 1959, Ser. No. 58,806
Term of patent 7 years
(Cl. D58—12)



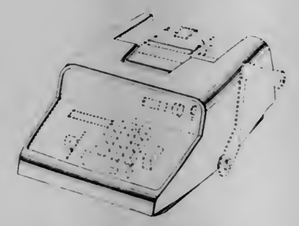
192,271
SMALL FARTS BIN
Arnold P. Gulland, 1 Endwood Road, Etobicoke, Ontario, Canada
Filed June 14, 1960, Ser. No. 60,956
Term of patent 14 years
(Cl. D58—13)



192,272
COMBINED AIR INTAKE AND VENTILATOR CAP
Steven L. Wahlstrom, West Covina, Calif., assignor to Pioneer Manufacturing Co., Los Angeles, Calif., a corporation of California
Filed Apr. 11, 1960, Ser. No. 60,150
Term of patent 7 years
(Cl. D62—3)



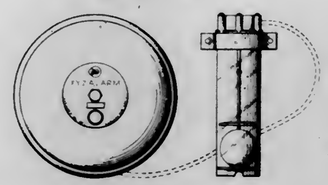
192,273
CALCULATING MACHINE
Marcello Nizzoli, Milan, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Via Jervis, Iurea, Italy, a corporation of Italy
Filed Nov. 25, 1960, Ser. No. 62,961
Term of patent 14 years
(Cl. D64—11)



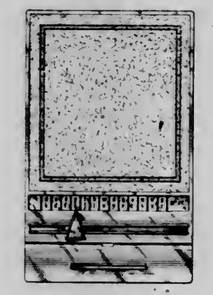
192,274
AQUA SLED
Tak Kimura, 1021 W. 42nd Place, Los Angeles, Calif.
Filed Mar. 9, 1961, Ser. No. 64,206
Term of patent 14 years
(Cl. D71—1)



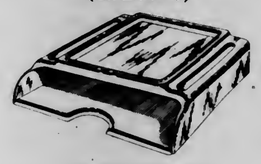
192,275
WARNING SIGNAL UNIT FOR BILGE FLOODING OR THE LIKE
Jack Herscovitz, 5124 Corning Ave., Los Angeles, Calif.
Filed May 5, 1959, Ser. No. 55,787
Term of patent 14 years
(Cl. D72—1)



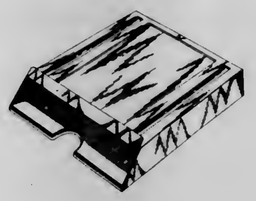
192,276
TELEPHONE INDEX OR THE LIKE
William S. Sherman, Chicago, Ill., assignor to Coy Corporation, Chicago, Ill., a corporation of Delaware
Filed May 22, 1961, Ser. No. 65,275
Term of patent 14 years
(Cl. D74—1)



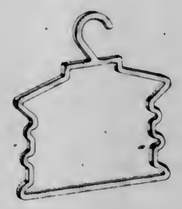
192,277
HOLDER FOR A TELEPHONE BOOK
Carl W. Meyer, 922 W. Lombard, Davenport, Iowa
Filed June 20, 1960, Ser. No. 61,031
Term of patent 14 years
(Cl. D74—9)



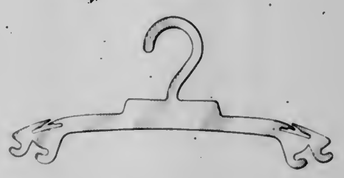
192,278
HOLDER FOR A TELEPHONE BOOK
Carl W. Meyer, 922 W. Lombard, Davenport, Iowa
Filed Aug. 10, 1960, Ser. No. 61,690
Term of patent 14 years
(Cl. D74—9)



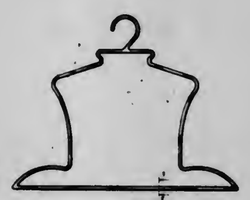
192,279
GARMENT HANGER
Jack M. Zuckerman, Elmhurst, N.Y., assignor to Yankee Plastics, Inc., New York, N.Y., a corporation of New York
Filed June 16, 1961, Ser. No. 65,624
Term of patent 14 years
(Cl. D80—8)



192,280
GARMENT HANGER
Jack M. Zuckerman, Elmhurst, N.Y., assignor to Yankee Plastics, Inc., New York, N.Y., a corporation of New York
Filed June 28, 1961, Ser. No. 65,752
Term of patent 14 years
(Cl. D80—8)



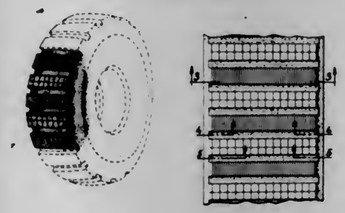
192,281
GARMENT HANGER
Jack M. Zuckerman, Elmhurst, N.Y., assignor to Yankee Plastics, Inc., New York, N.Y., a corporation of New York
Filed June 30, 1961, Ser. No. 65,768
Term of patent 14 years
(Cl. D80—8)



192,282
HAIR FLUFFER
Martin Newman, 1020 N. Curson, Los Angeles, Calif.
Filed Oct. 13, 1961, Ser. No. 67,068
Term of patent 3½ years
(Cl. D86—10)



192,283
TIRE
Joseph P. Biron, St. Raymond, Quebec, Canada
Filed May 31, 1960, Ser. No. 60,793
Term of patent 14 years
(Cl. D90—20)



192,284
INSULATING COVER FOR A WATER CONDITIONING TANK OR THE LIKE
Jean O. Reinecke, Chicago, Ill., assignor to Culligan, Inc., Northbrook, Ill., a corporation of Delaware
Filed June 23, 1959, Ser. No. 56,492
Term of patent 14 years
(Cl. D91—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 20TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Charlson, Lynn L., to Germane Corp. Controller for fluid pressure operated devices. Re. 25,126, 2–20–62, Cl. 121—41.
Garmy, Robert J., to Republic Steel Corp. Method and apparatus for forming ingots. Re. 25,124, 2–20–62, Cl. 13—9.
Germane Corp.: *See*—
Charlson, Lynn L. Re. 25,126.
Maytag Co., The: *See*—
Smith, Thomas R. Re. 25,125.
Rauland Corp., The: *See*—
Szegho, Constantin S. Re. 25,127.
Republic Steel Corp.: *See*—
Garmy, Robert J. Re. 25,124.
Smith, Thomas R., to The Maytag Co. Fluid control system for washing machine. Re. 25,125, 2–20–62, Cl. 68—12.
Szegho, Constantin S., to The Rauland Corp. Cathode-ray tube. Re. 25,127, 2–20–62, Cl. 315—16.

LIST OF PLANT PATENTEES

Doerr, Ervin H. Gladiolus plant. 2,131, 2–20–62, Cl. 47—60.

LIST OF DESIGN PATENTEES

Ackerson, Alfred. Pickle tongs or the like. 192,256, 2–20–62, Cl. D44—4.
American Desk Mfg. Co.: *See*—
Williams, Herbert E. 192,243.
Williams, Herbert E. 192,244.
Williams, Herbert E. 192,245.
Amerock Corp.: *See*—
Clayton, La Verne E. 192,240.
Biron, Joseph P. Tire. 192,283, 2–20–62, Cl. D90—20.
Brooks, Julius E., to Olin Mathieson Chemical Corp. Gun. 192,248, 2–20–62, Cl. D30—1.
Clayton, La Verne E., to Amerock Corp. Pull. 192,240, 2–20–62, Cl. D10—8.
Corbino, Alfio L. Combined fountain brush and dental cream holder. 192,239, 2–20–62, Cl. D9—2.
Coy Corp.: *See*—
Sherman, William S. 192,276.
Crowle, Robert H., and C. E. Jones. Unitary punching and binding machine. 192,265, 2–20–62, Cl. D55—1.
Culligan, Inc.: *See*—
Reinecke, Jean O. 192,284.
De Vries, Truman. Feeding hopper. 192,264, 2–20–62, Cl. D55—1.
Downing, Harold E., and T. H. Vaughn, to Gray Realty Corp. Combination carton and display box. 192,270, 2–20–62, Cl. D58—12.
Ebstein, John W., to Federal Enameling & Stamping Co. Tea kettle. 192,257, 2–20–62, Cl. D44—25.
Fahey, James H., Jr., to Joslyn Mfg. and Supply Co. Luminaire. 192,260, 2–20–62, Cl. D48—31.
Federal Enameling & Stamping Co.: *See*—
Ebstein, John W. 192,257.
Ferar, Montgomery, to Whirlpool Corp. Control panel for a washing machine or the like. 192,261, 2–20–62, Cl. D49—1.
Fofrich, George. Fish lure. 192,249, 2–20–62, Cl. D31—4.
Foster, Elsa. Hand puppet. 192,251, 2–20–62, Cl. D34—2.
Foster Grant Co., Inc.: *See*—
Petitto, Albert C. 192,266.
Fun in the Sun of Florida, Inc.: *See*—
Hansen, Hubert H. 192,254.
Hansen, Hubert H. 192,255.
General Motors Corp.: *See*—
Rybicki, Irvin W., and Wilen. 192,242.
Gerchow, Wilbur R., to The Sidney Machine Tool Co. Lathe bed. 192,263, 2–20–62, Cl. D54—6.
Glassco, Donald E. G.: *See*—
Sterges, Alfred D., and Glassco. 192,268.
Gray Realty Corp.: *See*—
Downing, Harold E., and Vaughn. 192,270.
Gulland, Arnold P. Small parts bin. 192,271, 2–20–62, Cl. D58—13.
Hansen, Hubert H., to Fun in the Sun of Florida, Inc. Animal figure playground device. 192,254, 2–20–62, Cl. D34—15.
Hansen, Hubert H., to Fun in the Sun of Florida, Inc. Animal figure playground device. 192,255, 2–20–62, Cl. D34—15.
Herscovitz, Jack. Warning signal unit for bilge flooding or the like. 192,275, 2–20–62, Cl. D72—1.
Itoh, C., & Co. (America) Inc.: *See*—
Sasada, Sukesaburo. 192,250.
Jones, Charles E.: *See*—
Crowle, Robert H., and Jones. 192,265.
Joslyn Mfg. and Supply Co.: *See*—
Fahey, James H., Jr. 192,260.
Kather, Alfred C. Tether ball game paddle. 192,253, 2–20–62, Cl. D34—15.
Kimura, Tak. Aqua sled. 192,274, 2–20–62, Cl. D71—1.
Lappin, Kenneth R.: *See*—
Maurer, John A., and Lappin. 192,246.
Le Baron, Rolla P. Candlestick holder. 192,259, 2–20–62, Cl. D48—2.
Madl, Alfred W., to John Oster Mfg. Co. Handle assembly for covered frypan or the like. 192,258, 2–20–62, Cl. D44—29.
Maurer, John A., and K. R. Lappin, to The Weber Dental Mfg. Co. Dental syringe. 192,246, 2–20–62, Cl. D24—1.
Meyer, Carl W. Holder for a telephone book. 192,277, 2–20–62, Cl. D74—9.
Meyer, Carl W. Holder for a telephone book. 192,278, 2–20–62, Cl. D74—9.
Michals, Theodore T. Telephone call indicator. 192,247, 2–20–62, Cl. D26—14.
Newman, Martin. Hair fluffer. 192,282, 2–20–62, Cl. D86—10.
Nizzoli, Marcello, to Ing. C. Olivetti & C., S.p.A. Calculating machine. 192,273, 2–20–62, Cl. D64—11.
Olin Mathieson Chemical Corp.: *See*—
Brooks, Julius E. 192,248.
Olivetti, Ing. C., & C., S.p.A.: *See*—
Nizzoli, Marcello. 192,273.
Oster, John, Mfg. Co.: *See*—
Madl, Alfred W. 192,258.
Petitto, Albert C., to Foster Grant Co., Inc. Pair of sunglasses. 192,266, 2–20–62, Cl. D57—1.
Pioneer Mfg. Co.: *See*—
Wahlstrom, Steven L. 192,272.
Purex Corp., Ltd.: *See*—
Sterges, Alfred D. 192,269.
Sterges, Alfred D., and Glassco. 192,268.
Reinecke, Jean O., to Culligan, Inc. Insulating cover for a water conditioning tank or the like. 192,284, 2–20–62, Cl. D91—1.
Rybicki, Irvin W., and S. R. Wilen, to General Motors Corp. Automobile. 192,242, 2–20–62, Cl. D14—18.
Sasada, Sukesaburo, to C. Itoh & Co. (America) Inc. Inflatable toy bird or the like. 192,250, 2–20–62, Cl. D34—2.
Sherman, William S., to Coy Corp. Telephone index or the like. 192,276, 2–20–62, Cl. D74—1.
Sidney Machine Tool Co., The: *See*—
Gerchow, Wilbur R. 192,263.
Sterges, Alfred D., and D. E. G. Glassco, to Purex Corp., Ltd. Bottle. 192,268, 2–20–62, Cl. D58—5.
Sterges, Alfred D., to Purex Corp., Ltd. Bottle. 192,269, 2–20–62, Cl. D58—5.
Trinca, Frederick. Air pressure gauge for tires. 192,262, 2–20–62, Cl. D52—6.
Tynio, Michael. Set of playing cards. 192,252, 2–20–62, Cl. D34—5.
Vogel, Arthur R. Ornament for automobiles or the like. 192,241, 2–20–62, Cl. D14—6.
Wahlstrom, Steven L., to Pioneer Mfg. Co. Combined air intake and ventilator cap. 192,272, 2–20–62, Cl. D62—3.
Weber Dental Mfg. Co., The: *See*—
Maurer, John A., and Lappin. 192,246.
Whirlpool Corp.: *See*—
Ferar, Montgomery. 192,261.
Whiteford, Carlton L. Envelope for article display. 192,267, 2–20–62, Cl. D58—2.
Wilen, Stanley R.: *See*—
Rybicki, Irvin W., and Wilen. 192,242.
Williams, Herbert E., to American Desk Mfg. Co. End standard for a row of seats. 192,243, 2–20–62, Cl. D15—8.
Williams, Herbert E., to American Desk Mfg. Co. End standard for a row of seats. 192,244, 2–20–62, Cl. D15—8.

Williams, Herbert E., to American Resk Mfg. Co. End standard for a row of seats. 192,245, 2–20–62, Cl. D15—8.
Yankee Plastics, Inc.: *See*—
Zuckerman, Jack M. 192,279.
Zuckerman, Jack M. 192,280.
Zuckerman, Jack M. 192,281.
Zuckerman, Jack M., to Yankee Plastics, Inc. Garment hanger. 192,279, 2–20–62, Cl. D80—8.
Zuckerman, Jack M., to Yankee Plastics, Inc. Garment hanger. 192,280, 2–20–62, Cl. D80—8.
Zuckerman, Jack M., to Yankee Plastics, Inc. Garment hanger. 192,281, 2–20–62, Cl. D80—8.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 20TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries Inc.: *See*—
Johnson, Eldon A., and White. 3,021,792.
Abbott, Roy W., to General Electric Co. Heat exchange tubing. 3,022,049, 2–20–62, Cl. 257—262.13.
Abel, Martin L., to Fluidwick Co., Inc. Electric control device. 3,022,398, 2–20–62, Cl. 200—87.
Abiti Power & Paper Co., Ltd.: *See*—
Lang, William G. 3,022,207.
Abrams, Simon. Spot bowler's rule. 3,021,616, 2–20–62, Cl. 35—29.
Acme Steel Co.: *See*—
Hall, Marchand B., Anderson, and Staron. 3,021,876.
Addamiano, Arrigo, to General Electric Co. Method of preparing single crystal materials. 3,022,144, 2–20–62, Cl. 23—294.
Agfa Aktiengesellschaft: *See*—
Heckelmann, Karlheinz, and Hebbel. 3,022,169.
Ossenbrunner, Armin, and Klockgether. 3,022,171.
Air Reduction Co., Inc.: *See*—
Shukys, Julius G. 3,022,280.
Aktiebolaget Bofors: *See*—
Söderqvist, Karl O. 3,021,762.
Tillander, Folke G. 3,021,761.
Aktiebolaget Electrolux: *See*—
Descarries, Raymond. 3,022,101.
Aktiebolaget Kerel: *See*—
Libom, Karl H. 3,021,745.
Aktiebolaget O. Edstroms Enkekerifabrik: *See*—
Edstrom, Olle. 3,021,600.
Aktiebolaget Pharmacia: *See*—
Mårtensson, Olle. 3,022,302.
Stjarnkvist, Oskar N. 3,022,168.
Aktiebolaget Svenska Kullagerfabriken: *See*—
Bratt, Axel E., and Derman. 3,022,125.
Aktiebolaget Vabix: *See*—
Henningsson, Thom L. 3,022,048.
Albrecht, Carl: *See*—
Muller, Johannes, and Albrecht. 3,022,204.
Alcott, Frederick S. Warning device. 3,022,498, 2–20–62, Cl. 340—253.
Alexander & Baldwin, Inc.: *See*—
Burch, Elmer C. 3,022,015.
Alexander, Lewis B.: *See*—
Kennedy, Manley B., and Alexander. 3,021,993.
Alfrey, Turner, Jr.: *See*—
Lloyd, William G., and Alfrey. 3,022,199.
Allen, Albert S., to Hoffman-Allen Corp. Combination full-flow and by-pass filter. 3,021,954, 2–20–62, Cl. 210—132.
Allen, George R. Top valve for a pressure vessel. 3,021,870, 2–20–62, Cl. 137—625.12.
Allen, Robert D., to Houston Fearless Corp. Cargo-carrying apparatus with detachable wheeled support means. 3,022,086, 2–20–62, Cl. 280—30.
Allen, Robert Y., M. Shaw, and D. E. Umstead, to Fran Dee Corp. Soap bubble toy. 3,021,639, 2–20–62, Cl. 46—7.
Alles, John. Cigarette holder. 3,021,849, 2–20–62, Cl. 131—182.
Allgemeine Elektricitats-Gesellschaft: *See*—
Knoll, Joseph, Bestel, and Stolp. 3,021,882.
Alliance Mfg. Co., Division of Consolidated Electronics Industries Corp.: *See*—
Schneider, Emmor V. 3,022,460.
Allied Chemical Corp.: *See*—
Howard, Carlton J., and Sobolewski. 3,022,159.
Kalifelz, Alois J. 3,022,158.
Allmann, Georges, to Ateliers de Carspach. Cutting device for machines used in mines, quarries or work-sites. 3,022,055, 2–20–62, Cl. 262—19.
Allis, Louis, Co., The: *See*—
Jones, Byron M. 3,022,453.
Alper, David, to The Bendix Corp. Phasing apparatus. 3,022,459, 2–20–62, Cl. 324—83.
Alpha Research Corp.: *See*—
Crane, Samuel P., and Kent. 3,022,063.
Alrich, John C., and D. H. Hartke, to Burroughs Corp. Floating-point computer. 3,022,006, 2–20–62, Cl. 235—160.
Alsynite Co. of America: *See*—
Conroy, John L. 3,021,576.
Alt, Carl G., to Carrier Corp. Ice making. 3,021,686. 2–20–62, Cl. 62—132.
Aluminum Co. of America: *See*—
Blayden, James H. 3,022,029.
American Can Co.: *See*—
Kennedy, Manley B., and Alexander. 3,021,993.
American Chain & Cable Co., Inc.: *See*—
Bratz, Otto J., and Gilmore. 3,021,722.
American Crucible Products Co., The: *See*—
Kaatz, Herbert W. 3,021,788.
American Cyanamid Co.: *See*—
Daniel, John H., Jr. 3,022,214.
Nelson, Earl W. 3,022,137.
Schaub, Robert E., and Weiss. 3,022,323.
American Hospital Supply Corp.: *See*—
Roberts, Ross L. 3,022,416.
American Machine & Foundry Co.: *See*—
Graulig, Oskar, and Jackson. 3,021,768.
Zito, Ralph. 3,022,076.
American Messer Corp.: *See*—
Katzor, Karl. 3,021,598.
American Metal Products Co.: *See*—
Hooven, Frederick J. 3,021,721.
American Radiator & Standard Sanitary Corp.: *See*—
Kovach, Julius W. 3,021,868.
American Tag Co.: *See*—
Marshall, Edward C. 3,021,653.
Swett, Arthur H., Jr. 3,021,630.
American Viscose Corp.: *See*—
Rudbarg, Frank. 3,021,587.
Ampex Corp.: *See*—
Wilcox, Dwight D., Jr. 3,022,461.
Amsco Packaging Machinery, Inc.: *See*—
Sylvester, John D., and Messmer. 3,021,947.
Anderson, Douglas O., Jr.: *See*—
Hall, Marchand B., Anderson, and Staron. 3,021,876.
Anderson, Duane B., and A. Park, to Pan American Petroleum Corp. Low fluid loss composition. 3,022,248, 2–20–62, Cl. 252—8.5.
Anderson, Edward P., to Engelhard Industries, Inc. Cathodic protection of ships. 3,022,234, 2–20–62, Cl. 204—147.
Anderson, Edward P., to Engelhard Industries, Inc. Anode for cathodic protection systems. 3,022,242, 2–20–62, Cl. 204—196.
Anderson, Edward P., to Engelhard Industries, Inc. Anode assembly for cathodic protection systems. 3,022,243, 2–20–62, Cl. 204—196.
Anderson, James D., and E. L. Cheh, to Burndy Corp. Compressing tool with opposed movable dies. 3,021,738, 2–20–62, Cl. 81—15.
Anderson, John F., Jr.: *See*—
Potts, John M., Elder, and Anderson. 3,022,154.
Anderson, Lehman E., to Hamilton Mfg. Co. Heater system. 3,021,605, 2–20–62, Cl. 34—45.
Anderson, Lloyd R. Non-loosening hinges. 3,021,554, 2–20–62, Cl. 16—167.
Andrew, Margaret J., to General Motors Corp. Domestic fabric washing machine. 3,021,700, 2–20–62, Cl. 68—4.
Antenna Engineering Laboratories: *See*—
Boyer, Joseph M. 3,022,507.
Anthony, William C.: *See*—
Szniuszkovicz, Jacob, and Anthony. 3,022,313.
Anton, Nicholas. Radiation dosimeter. 3,022,424, 2–20–62, Cl. 250—83.6.
Arcara, James R.: *See*—
Packer, Morton, and Arcara. 3,022,396.
Arcos Corp.: *See*—
Johnson, Wallace C. 3,022,413.
Arey, Ralph G., to Texas Instruments Inc. Electrical switches. 3,022,402, 2–20–62, Cl. 200—116.
Armitage, John B., and A. M. Hyson, to E. I. du Pont de Nemours and Co. Polyethylene composition. 3,022,268, 2–20–62, Cl. 260—45.85.
Arnaud, John W. Private-wire data recording system. 3,022,371, 2–20–62, Cl. 178—2.
Aronson, Theodore F.: *See*—
Lyon, Floyd A., and Aronson. 3,021,874.
Arundale, Erving: *See*—
Guyer, Walter R. F., and Arundale. 3,022,252.
Arvidson, Gunnar, to Svenska Flygmotor Aktiebolaget. Device for measuring pressure or difference of pressure in fluids. 3,021,711, 2–20–62, Cl. 73—398.
Arvin Industries, Inc.: *See*—
Ferris, Kenneth D. 3,021,886.
Wintermute, Glenn E., Smith, and Brighton. 3,022,211.
Aspergren, Brooke D., R. B. Moffet, and M. E. Speeter, to The Upjohn Co. Alpha-phenyl-omega-amino-alkanamides. 3,022,314, 2–20–62, Cl. 260—326.3.
Atamian, Zaven: *See*—
Hansen, Jay M., and Atamian. 3,022,494.
Ateliers de Carspach: *See*—
Allmann, Georges. 3,022,055.
Atlee, Zed J., to Dunlee Corp. Envelope for X-ray generator. 3,022,435, 2–20–62, Cl. 313—59.
Ault, Wayne E., to Automatic Sprinkler Corp. of America. Pressure actuated valve. 3,021,903, 2–20–62, Cl. 169—19.
Aûne, Albert W., to McQuay, Inc.. Hot gas defrosting refrigerating apparatus. 3,021,693, 2–20–62, Cl. 62—278.
Autere, Reuben J.: *See*—
Levine, Samuel W., and Autere. 3,022,373.
Automatic Sprinkler Corp. of America: *See*—
Ault, Wayne E. 3,021,903.
Autophon Aktiengesellschaft: *See*—
Tschumi, Otto, Kappeler, Blochlinger, and Zimmermann. 3,022,493.
Avery, Richard L. Image stabilizer and dimmer for optical devices. 3,021,752, 2–20–62, Cl. 88—32.
B.B. Chemical Co.: *See*—
Griswold, Stanley M. 3,022,188.

BMW Triebwerkbau Gesellschaft m.b.H.: *See*—
Schroeder, Hans J. 3,021,675.

Bagno, Samuel M., to Walter Kidde & Co., Inc. Testing of apparatus for detecting disturbances in an enclosure. 3,022,496, 2–20–62, Cl. 340—214.

Bahrs, George S., M. M. McWhorter, and D. W. Martin. Voltage to frequency converter. 3,022,469, 2–20–62, Cl. 332—14.

Bailey, John M., F. S. Engelking, J. L. Hopper, and J. P. Jero, to Caterpillar Tractor Co. Method and apparatus for simultaneously plating and lapping. 3,022,232, 2–20–62, Cl. 204—36.

Bain, Jay: *See*—
Reyner, Charles H. 3,021,650.

Bair, Richard H., to L. W. Triest. Telephone attachment. 3,022,387, 2–20–62, Cl. 179—182.

Baker, Charles R., and R. S. Paul, to Union Carbide Corp. Process and apparatus for purifying low boiling gases. 3,021,682, 2–20–62, Cl. 62—17.

Baker Oil Tools, Inc.: *See*—
Kelthahn, Julian D. 3,021,902.

Ballard, W. H., II: *See*—
Warf, Bernard W. 3,022,023.

Banker, Oscar H., to Fawick Corp. Planetary speed-ratio device. 3,021,730, 2–20–62, Cl. 74—798.

Banks, Agnes F. Doll. 3,021,641, 2–20–62, Cl. 46—135.

Bannach, Hans: *See*—
Meister, Ernst, and Bannach. 3,021,781.

Barber-Colman Co.: *See*—
Durdin, Augustus C., III. 3,021,764.
Kennedy, Walter W. 3,021,776.

Barnes Engineering Co.: *See*—
Merlen, Monty M. 3,021,749.

Barnes, Robert K., R. W. McLaughlin, and F. Hostettler, to Union Carbide Corp. Polyurethane foam and method of preparing same. 3,022,256, 2–20–62, Cl. 260—2.5.

Barnes, W. F. and John, Co.: *See*—
Jackson, Paul S. 3,021,742.

Barnes, William M.: *See*—
Gore, Le Roy D., and Barnes. 3,021,685.

Barnett, James W. Fountain. 3,022,010, 2–20–62, Cl. 239—17.

Barnette, Gaspar C., to Learning Through Seeing, Inc. Tachistoscopes. 3,021,751, 2–20–62, Cl. 88—20.

Barnstead, John W., to General Electric Co. Method of making wire racks. 3,021,873, 2–20–62, Cl. 140—71.

Barrere, Marcel, and A. Moutet, to "Office National d'Etudes et de Recherches Aeronautiques" (O.N.E.R.A.). Flow meter. 3,021,710, 2–20–62, Cl. 73—229.

Bassett, Charles H., to United States of America, Atomic Energy Commission. Nuclear reactor fuel element. 3,022,240, 2–20–62, Cl 204—193.2.

Bassett, Cleveland G. Playground structure. 3,022,036, 2–20–62, Cl. 248—402.

Bassick Co., The: *See*—
Kramcsak, Michael, Jr. 3,021,551.

Bauer, Myron J., G. A. Kane, M. C. Neuman, and J. S. Scheurich, to United States of America, Navy. Missile vibration dampener and support. 3,022,031, 2–20–62, Cl. 248—119.

Bauer, Werner R., to Robertshaw-Fulton Controls Co. Relay. 3,022,399, 2–20–62, Cl. 200—87.

Bauerlein, Carl C., to The Dole Valve Co. Rotatable ice tray. 3,021,694, 2–20–62, Cl. 62—349.

Baur Bros. Co., The: *See*—
Ginaven, Marvin E. 3,021,782.

Baxter Corp., The: *See*—
Robinson, Earl H. 3,021,945.

Baxter, Don, Inc.: *See*—
Hallamore, Kim, and Carlson. 3,021,840.
Hamilton, Donald A. 3,021,942.

Baxter Laboratories, Inc.: *See*—
Burke, George K. 3,021,841.

Beale, Evelyn S., to McCorquodale Colour Display Ltd. Apparatus for the deposition of liquid materials. 3,021,816, 2–20–62, Cl. 118—411.

Beaver Tool & Engineering Corp.: *See*—
Dresback, David D. 3,022,084.

Becker, Floyd K., to Bell Telephone Laboratories, Inc. Monaural-binaural transmission of sound. 3,022,378, 2–20–62, Cl. 179—1.

Beckett, Joseph K. Pressure regulator. 3,021,865, 2–20–62, Cl. 137—270.

Becknell, Raleigh, to The Conway Clutch Co. Friction clutch. 3,021,932, 2–20–62, Cl. 192—85.

Beeson, Harry R. Gauging device. 3,021,603, 2–20–62, Cl. 33—174.

Behnke, Reinhold, to Pfanstiehl Laboratories, Inc. Sequestrant derived from corn syrup and process for making the same. 3,022,343, 2–20–62, Cl. 260—528.

Behringwerk Aktiengesellschaft: *See*—
Schramm, Gerhard, and Mohr. 3,022,227.

Bell Telephone Laboratories, Inc.: *See*—
Becker, Floyd K. 3,022,378.
Brattain, Walter H., and Wade. 3,022,374.
Comstock, Richard L. 3,022,463.
Davey, James R. 3,022,375.
Ewin, James C. 3,022,382.
Garrison, Richard F., and Saal. 3,022,003.
Landau, Henry J. 3,022,473.
Miller, Robert A., Munson, Owendoff, and Taris. 3,022,380.
Pferd, William. 3,022,381.
Tanenbaum, Morris, and Wallace. 3,022,472.
Votaw, Clarence J. 3,022,372.
Weiss, Max T. 3,022,466.

Belle City Malleable Iron Co.: *See*—
Johns, Robert A. 3,021,627.

Bemis Bro. Bag Co.: *See*—
Hopkins, Frank L., and Fox. 3,021,939.

Bend, Herbert, and J. J. Wilson, to Dowty Mining Equipment Ltd. Breather valves for pit props. 3,021,856, 2–20–62, Cl. 137—43.

Bendix Corp., The: *See*—
Alper, David. 3,022,459.
Boler, Leonard J., and Worley. 3,021,670.
Burnett, Richard T. 3,021,923.
Chase, Willis E., Jr. 3,022,450.
Ferguson, John H., Jr., and Schmider. 3,021,672.
Herron, Robert H., Reed, and Roth. 3,021,592.
Kitchen, Morrison G., and Schaffer. 3,021,891.
Longstreet, Charles S. 3,021,668.
Mock, Frank C. 3,021,673.
Prather, Edwin E. 3,021,821.
Thompson, Earl R., Jr. 3,022,484.
Zelsloft, Harry C. 3,021,674.

Benes, William S., to Cullen-Friestedt Co. Driving mechanism for work-positioning tables. 3,022,066, 2–20–62, Cl. 269—61.

Benner, Inc.: *See*—
Schiemer, Charles J. 3,021,553.

Bennett, Ovell F., M. L. Huber, and R. A. Smiley, to E. I. du Pont de Nemours and Co. Polycarboxydiphenyl sulfones and anhydrides thereof. 3,022,320, 2–20–62, Cl. 260—346.3.

Bentov, Itzhak, to W. R. Grace & Co. Process of making surface coats for masonry building units. 3,021,573, 2–20–62, Cl. 18—60.

Berck, William F., to Ralph N. Brodie Co. Metering system for liquefied gases. 3,021,684, 2–20–62, Cl. 62—49.

Berends, Emerson R., and R. P. Deghuee, to Rockwell Mfg. Co. Adjustable indexing mechanism. 3,021,879, 2–20–62, Cl. 143—6.

Beretta, Pier C. Combination muzzle brake and grenade launcher for portable firearms. 3,021,633, 2–20–62, Cl. 42—1.

Beretta, Pier C. Mechanism for converting a rifle from semi-automatic to automatic firing. 3,021,763, 2–20–62, Cl. 89—140.

Berg Airlectro Products Co.: *See*—
Dobrikin, Harold L. 3,022,118.

Berg, Rudolph G., and G. D. Laubach, to Chas Pfizer & Co., Inc. 16β-difluorinated corticosteroids and intermediates. 3,022,295, 2–20–62, Cl. 260—239.55.

Berg, Rudolph G., and G. D. Laubach, to Chas. Pfizer & Co., Inc. 16-fluorinated corticosteroids. 3,022,297, 2–20–62, Cl. 260—239.55.

Berg, Rudolph G., and G. D. Laubach, to Chas. Pfizer & Co., Inc. 16-fluorinated corticosteroids. 3,022,325, 2–20–62, Cl. 260—397.45.

Berge, Jacques M. A. C. Rudder and drop-keel construction. 3,021,810, 2–20–62, Cl. 114—138.

Berkley Machine Co.: *See*—
Winkler, Richard, and Dunnebier. 3,021,610.

Berman, Elliot, and D. B. McQuain, to The National Cash Register Co. Derivatives of 3-phenyl-spiro(2H,1-benzopyran-2,2'[2'H,1'-benzopyran]). 3,022,318, 2–20–62, Cl. 260—345.2.

Berry, John M., to Midland Chemical Corp. Aqueous wood finishing composition of urea-formaldehyde condensate, sugar and solvent. 3,022,258, 2–20–62, Cl. 260—17.3.

Bestel, Erwin: *See*—
Knoll, Joseph, Bestel, and Stolp. 3,021,882.

Bestian, Herbert, G. Schäfer, and F. Quint, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. 3,6 bis-para-substituted-phenyl-amino-9-(2'-sulfo-phenyl)xanthene. 3,022,316, 2–20–62, Cl. 260—336.

Bigge, Henry W., and W. A. Whitmire; said Whitmire assor. to said Bigge. Trailer stake system. 3,021,970, 2–20–62, Cl. 214—85.

Biggi, Victor, and J.-C. Simon, to Compagnie Generale de Telegraphie Sans Fil. Panoramic receivers. 3,022,419, 2–20–62, Cl. 250—20.

Billeter, Henry R., and G. B. Richards, to Liquid Controls Corp. Liquid-level controlled devices. 3,021,861, 2–20–62, Cl. 137—192.

Bird Electronic Corp.: *See*—
Waterfield, Clayton F., and Calderhead. 3,022,482.

Birkenwald, Inc.: *See*—
Jacobs, Lester G. 3,021,691.

Birum, Gail H.: *See*—
Heininger, Samuel A., and Birum. 3,022,344.

Bituminous Coal Research, Inc.: *See*—
Broadley, Peter R. 3,021,797.

Bix Co.: *See*—
Bixby, Wallace E. and L. C. 3,022,058.

Bixby, Leon C.: *See*—
Bixby, Wallace E. and L. C. 3,022,058.

Bixby, Wallace E. and L. C., to Bix Co. Basket. 3,022,058, 2–20–62, Cl. 263—47.

Black, James J., to Trailmobile Inc. Leaf spring vehicle suspension system. 3,022,087, 2–20–62, Cl. 280—104.5.

Black, James J., to Trailmobile Inc. Roof bow fitting for rack body. 3,022,106, 2–20–62, Cl. 296—29.

Blackmer Pump Co.: *See*—
Brunson, Virgil A. 3,021,790.

Blair, Francis J. Stair structure. 3,021,928, 2–20–62, Cl. 189—43.

Blanding, Wendell S., L. H. Foster, and P. F. Spremulli, to Corning Glass Works. Glass-metal uniting apparatus. 3,021,643, 2–20–62, Cl. 49—1.

Blanz, Kurt, to Krauss & Reichert, Spezialmaschinenfabrik und Apparatebau. Machine for cutting patterns from webs of textile material. 3,021,999, 2–20–62, Cl. 234—87.

Blasberg, Lawrence A., H. D. Perry, and H. Saltzman, to Hughes Aircraft Co. Microwave device. 3,022,475, 2–20–62, Cl. 333—97.

Blaw-Knox Co.: *See*—
Schuetz, James W. 3,021,736.

Blayden, James H., to Aluminum Co. of America. Gutter hanger. 3,022,029, 2–20–62, Cl. 248—48.2.

Bloch, Herman S., to Universal Oil Products Co. Hydroxymethylation of olefinic organic compounds. 3,022,340, 2–20–62, Cl. 260—491.

Blochlinger, Hans: *See*—
Tschumi, Otto, Kappeler, Blochlinger, and Zimmermann. 3,022,493.

Blocksom, Thomas E. Liquid dispensing attachment for lawn mowers. 3,021,983, 2–20–62, Cl. 222—191.

Bobb, Lloyd J., R. B. Goldman, and G. C. Maling, Jr., to Philco Corp. Sound reproducing system. 3,022,377, 2–20–62, Cl. 179—1.

Bobbe, Arden B. Whisky aging apparatus. 3,021,780, 2–20–62, Cl. 99—277.1.

Bochan, John, to General Electric Co. Vibration isolating system. 3,021,956, 2–20–62, Cl. 210—364.

Bochumer, Eisenhutte Heintzmann & Co.: *See*—
Heintzmann, Hans F. 3,022,100.

Bodenseewerk Perkin-Elmer & Co., G.m.b.H.: *See*—
Möller, Waldemar. 3,021,714.

Boehringer, C. H., Sohn: *See*—
Hauptmann, Karl H., and Zelle. 3,022,294.

Boler, Leonard J., and W. E. Worley, to The Bendix Corp. Mach number control device. 3,021,670, 2–20–62, Cl. 60—35.6.

Bolinger, Edgar D., to Deering Milliken Research Corp. Knitted textile products and methods for their preparation. 3,021,588, 2–20–62, Cl. 28—76.

Bolstad, Luther L., to Minneapolis-Honeywell Regulator Co. Fluid pump. 3,021,793, 2–20–62, Cl. 103—152.

Bonanno, Joseph L., to The Lionel Corp. Electrical control device. 3,022,445, 2–20–62, Cl. 317—40.

Bondurant, John C. Uniform speed changer or transmission. 3,021,717, 2–20–62, Cl. 74—217.

Bondy, Herbert F., and J. Gumb, to Coalite and Chemical Products Ltd. Aryl phosphates. 3,022,331, 2–20–62, Cl. 260—461.

Bonvicini, Alberto: *See*—
Cappuccio, Vittorio, Monaci, and Bonvicini. 3,022,191.

Borden, Joseph L., to The Perkin-Elmer Corp. Bearing. 3,022,124, 2–20–62, Cl. 308—193.

Borel, Eric A., to Hercules Powder Co. Biosynthesis of α-ketoglutaric acid. 3,022,223, 2–20–62, Cl. 195—29.

Borel, Eric A., to Hercules Powder Co. Making L-glutamic acid alone or a mixture of L-glutamic acid and α-ketoglutaric acid. 3,022,224, 2–20–62, Cl. 195—29.

Borg-Warner Corp.: *See*—
Hegyi, Moses. 3,022,011.
Meddick, Lorrain D. 3,021,784.

Born, Klaus: *See*—
Sennewald, Kurt, Born, Erpenbach, and Dobek. 3,022,332.

Bosch, Robert, G.m.b.H.: *See*—
Müller, Kurt, and Schleifer. 3,022,441.

Botar, Bela. Safety belt with dashboard support. 3,022,089, 2–20–62, Cl. 280—150.

Bowers, Elwood E.: *See*—
Taylor, Philip, and Bowers. 3,021,750.

Bowman, Eldon L., to Northrop Corp. Stabilizer for honeycomb core. 3,021,565, 2–20–62, Cl. 18—47.5.

Boyer, Joseph M., to Antenna Engineering Laboratories. Multi-frequency antenna. 3,022,507, 2–20–62, Cl. 343—818.

Bradley, Kenneth B.: *See*—
Sloane, Howard J., and Bradley. 3,022,353.

Brandt, Herman L., to United States of America, Atomic Energy Commission. Reconditioning fuel elements. 3,022,160, 2–20–62, Cl. 75—97.

Brandt, Wilhelm, to Kalle Aktiengesellschaft. Process for improving the adhesion of flat-shaped bodies made of polyterephthalic acid glycol esters. 3,022,192, 2–20–62, Cl. 117—47.

Brastad, William A., E. F. Diekhoff, and S. C. Rustad, to General Mills, Inc. Sifter. 3,021,953, 2–20–62, Cl. 209—339.

Bratt, Axel E., and K. G. E. Derman, to Aktiebolaget Svenska Kullagerfabriken. Cage for double row spherical roller bearings. 3,022,125, 2–20–62, Cl. 308—213.

Brattain, Walter H., and N. G. Wade, 3rd, to Bell Telephone Laboratories, Inc. Scanning infra-red detector and recorder. 3,022,374, 2–20–62, Cl. 178—6.6.

Bratz, Otto J., and W. J. Gilmore, to American Chain & Cable Co., Inc. Boat steering devices. 3,021,722, 2–20–62, Cl. 74—501.

Braunberger, Ray A. King pin lock for fifth wheels. 3,022,091, 2–20–62, Cl. 280—434.

Breig, Otto, to Fabriques de Produits Chimiques de Thann et de Mulhouse. Apparatus for cooling gaseous solid suspensions. 3,022,046, 2–20–62, Cl. 257—87.

Brewer, Claire N., to International Typographical Union of North America. Electrically operated tape perforating machine. 3,021,998, 2–20–62, Cl. 234—11.

Brighton, John C.: *See*—
Wintermute, Glenn E., Smith, and Brighton. 3,022,211.

Brinkerhoff, Donald E., to General Motors Corp. Signal adjusting antenna. 3,022,420, 2–20–62, Cl. 250—20.

Broadbent, Thomas, & Sons Ltd.: *See*—
Cran, William B. G. 3,021,966.

Broadley, Peter R., to Bituminous Coal Research, Inc. Pulverized coal burning generating electric locomotive. 3,021,797, 2–20–62, Cl. 105—36.

Broderick, Frank W. Method of producing matching embossing rolls. 3,022,231, 2–20–62, Cl. 204—25.

Brodie, Ralph N., Co.: *See*—
Berck, William F. 3,021,684.

Brola, Gabriel, to Societe Anonyme: Generale Thermique-Procedes Brola. Burner apparatus. 3,021,892, 2–20–62, Cl. 158—77.

Brown, Dale H., and D. W. Leiby, to General Electric Co. Control system. 3,022,235, 2–20–62, Cl. 204—154.2.

Brown, Dewey. Flush tank valve construction. 3,021,529, 2–20–62, Cl. 4—57.

Brown, Eric A., to Polyfiber Ltd. Bench construction. 3,022,110, 2–20–62, Cl. 297—248.

Brown, Frank E. Safety switch. 3,022,406, 2–20–62, Cl. 200—161.

Brown, Madeline N.: *See*—
Newell, Flora E. 3,021,837.

Brown, J. Allen: *See*—
Newell, Flora E. 3,021,837.

Brown, Robert H., to Wm. Cory & Son Ltd. Marine tankers. 3,021,809, 2–20–62, Cl. 114—74.

Brown, Thomas T., to Whitehall-Rand, Inc. Electrokinetic generator. 3,022,430, 2–20–62, Cl. 310—5.

Bruinsma, Josephus F. D., to Kiekens-Wervelwind-Holland (Kiekens-Whirlwind-Holland) KWH N.V. Device for atomizing liquids. 3,022,013, 2–20–62, Cl. 239—419.

Brunner, Richard J., to General Motors Corp. Carburetor governor. 3,021,827, 2–20–62, Cl. 123—103.

Bruscaglioni, Rafaello, to Filotecnica Salmoiraghi S.p.A. Adjustable coupling. 3,022,099, 2–20–62, Cl. 287—53.

Brunson, Virgil A., to Blackmer Pump Co. Pump delivery control mechanism. 3,021,790, 2–20–62, Cl. 103—42.

Bryant, Hazrel M.: *See*—
Cooper, Dexter P., Jr., and Bryant. 3,022,439.

Buchanan, Stephen N. Electrical wiring unit. 3,022,485, 2–20–62, Cl. 339—175.

Bunting, Ernest V., and H. Rahman, to Massey-Ferguson Inc. Power lift hitch mechanism. 3,022,092, 2–20–62, Cl. 280—479.

Buono, Joseph A., and R. J. Mascoli. Overhead garage door and screen combination. 3,021,896, 2–20–62, Cl. 160—113.

Burch, Elmer C., to Alexander & Baldwin, Inc. Dual chemical spray valve. 3,022,015, 2–20–62, Cl. 239—444.

Burge, David E., to Lever Bros. Co. Shipping and display unit. 3,021,948, 2–20–62, Cl. 206—78.

Burke, George K., to Baxter Laboratories, Inc. Intravenous administration equipment. 3,021,841, 2–20–62, Cl. 128—214.

Burke, Joseph L., and J. F. Sheehan, Jr., to Western Electric Co., Inc. Apparatus for marking articles with a liquid. 3,021,815, 2–20–62, Cl. 118—314.

Burndy Corp.: *See*—
Anderson, James D., and Cheh. 3,021,738.
Osborn, William G. 3,022,370.

Burnett, Richard T., to The Bendix Corp. Brake. 3,021,923, 2–20–62, Cl. 188—78.

Burroughs Corp.: *See*—
Alrich, John C., and Hartke. 3,022,006.
Glaser, David. 3,022,442.

Butler, James W.: *See*—
Ulrich, Aaron J., Butler, and Hatch. 3,022,236.

Butler, Russell L., to The Dow Chemical Co. Process for heat stamping thermoplastic materials. 3,022,212, 2–20–62, Cl. 156—238.

Byrge, Jerome J. Furnace humidifier. 3,021,831, 2–20–62, Cl. 126—113.

Cadwallader, Robert H., to International Business Machines Corp. Element feeding and orienting mechanism. 3,021,938, 2–20–62, Cl. 198—33.

Calderhead, Henry J.: *See*—
Waterfield, Clayton F., and Calderhead. 3,022,482.

Caldwell Mfg. Co., The: *See*—
Czubachowski, Zygmunt J. 3,021,578.

Calfee, John D., and L. E. Erbaugh, to Monsanto Chemical Co. Vinylidene halide polymer synthesis. 3,022,278, 2–20–62, Cl. 260—87.7.

California Research Corp.: *See*—
Postlewaite, William R. 3,021,909.
Toland, William G., Jr. 3,022,341.

Cambridge Instrument Co., Inc.: *See*—
Jessop, Gilbert. 3,022,241.

Cameron, Margaret D., to Monsanto Chemical Co. 2-(1-alkynylcycloalkyloxy)tetrahydropyrans. 3,022,319, 2–20–62, Cl. 260—345.9.

Camin Laboratories, Inc.: *See*—
Fialkoff, Samuel. 3,022,230.

Campbell, Paul E., to Phillips Petroleum Co. Method of welding butted pipe sections of polyethylene to form a reinforced joint. 3,022,209, 2–20–62, Cl. 156—158.

Canterino, Peter J.: *See*—
Wheelock, Charles E., and Canterino. 3,022,322.

Cappuccio, Vittorio, A. Monaci, and A. Bonvicini, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Shaped articles of propylene polymers having modified surface characteristics and method of making the same. 3,022,191, 2–20–62, Cl. 117—118.

Carboni, Rudolph A., to E. I. du Pont de Nemours and Co. Process for preparing pyridazine derivatives and novel fluorine-containing pyridazine derivatives. 3,022,305, 2–20–62, Cl. 260—250.

Carey, William M., Jr., to Minneapolis-Honeywell Regulator Co. Digital data storage and manipulation circuit. 3,022,428, 2–20–62, Cl. 307—88.

Carlin, Kenneth G., and H. W. Grillin. Access panel for tile ceilings. 3,021,929, 2–20–62, Cl. 189—85.

Carling Electric, Inc.: *See*—
Grotz, Anthony N. 3,022,394.

Carlson, Bernard E.: *See*—
Hallamore, Kim, and Carlson. 3,021,840.

Carotti, Arrigo A.: *See*—
Winternitz, Paul F., and Carotti. 3,022,350.

Carpenter, Virgil R., and W. M. Turner, to The Unipress Co., Inc. Garment finishing machine. 3,021,606, 2–20–62, Cl. 34—103.

Carrier Corp.: *See*—
Alt, Carl G. 3,021,686.

Caterpillar Tractor Co.: *See*—
Bailey, John M., Engelking, Hopper, and Jero. 3,022,232.
Chambers, Robert O., Nordling, and Ramsel. 3,021,729.
Caton, Alfred M.: *See*—
Timmer, David J., Philbrick, Mossbarger, and Caton. 3,022,432.
Cartwright, Theodore R., and L. A. Werner. Self-motivating automatic syphoning and equalizing tank system. 3,021,855, 2–20–62, Cl. 137—38.
Casey, Thomas J., to Thomas Engineering Co., Inc. Marking machine for marking successive conveyed articles. 3,021,783, 2–20–62, Cl. 101—35.
Casiglia, Francesco. Continuous recording of graphs and instruments therefor. 3,022,130, 2–20–62, Cl. 346—21.
Castle, Alfred B. Instrument clamps. 3,021,585, 2–20–62, Cl. 24—279.
Catino, Sigmund C., A. F. Strobel, and W. W. Williams, to General Aniline & Film Corp. Azo dyestuffs. 3,022,284, 2–20–62, Cl. 260—146.
Cavallito, Chester J., and A. P. Gray, to Irwin Neisler and Co. Decahydrobenzopyridine quaternaries. 3,022,308, 2–20–62, Cl. 260—286.
Celmer, Walter D., to Chas. Pfizer & Co., Inc. Acyl esters of oleandomycin. 3,022,219, 2–20–62, Cl. 167—65.
Centre National de la Recherche Scientifique: *See*—
Rose, Yves. 3,021,835.
Chadima, Jack P., and W. E. Saxe, to Continental Can Co., Inc. Machine and method for packing articles. 3,021,655, 2–20–62, Cl. 53—243.
Chambers, Robert O., S. P. Nordling, and C. A. Ramsel, to Caterpillar Tractor Co. Planetary transmission for tractors or the like. 3,021,729, 2–20–62, Cl. 74—768.
Chapman, Frederick W., E. A. Hanysz, E. F. Weller, Jr., and E. J. Martin, to General Motors Corp. Electromagnetic testing equipment. 3,022,451, 2–20–62, Cl. 317—146.
Chase, Frederic L., and C. W. Ewing, to General Motors Corp. Method of quenching and quenching liquid. 3,022,205, 2–20–62, Cl. 148—20.6.
Chase, Willis E., Jr., to The Bendix Corp. Dual position latching solenoid. 3,022,450, 2–20–62, Cl. 317—123.
Cheh, Ernest L.: *See*—
Anderson, James D., and Cheh. 3,021,738.
Chemical Construction Corp.: *See*—
James, George R. 3,022,148.
Syers, Roland. 3,022,136.
Syers, Roland. 3,022,155.
Chemicals Inc.: *See*—
Fioramo, Nicholas A. 3,022,221.
Chisholm, Douglas S., and D. F. Hall, to The Dow Chemical Co. Production of group IV, subgroup A, metal prills. 3,021,562, 2–20–62, Cl. 18—47.2.
Chochola, Jaromir. Method of conveying foamed slag and similar material in a semi-plastic state. 3,022,113, 2–20–62, Cl. 302—20.
Chubb, Melvin F., and J. M. Dines, to The Eagle-Picher Co. Electric battery. 3,022,364, 2–20–62, Cl. 136—90.
Ciba Ltd.: *See*—
Mory, Rudolf, and Frey. 3,022,298.
Staeuble, Max, and Weber. 3,022,304.
Cimax Ltd.: *See*—
Stratford, Alfred C. 3,021,550.
Cincinnati Milling Machine Co., The: *See*—
Uhtenwoldt, Herbert R. 3,021,539.
Clark, Charles C., F. A. Kanda, and A. J. King, to Olin Mathieson Chemical Corp. Preparation of diborane. 3,022,138, 2–20–62, Cl. 23—204.
Clark, Charles C., F. A. Kanda, and A. J. King, to Olin Mathieson Chemical Corp. Preparation of diborane. 3,022,139, 2–20–62, Cl. 23—204.
Clark, David, Co. Inc.: *See*—
Flagg, John E., and Cormier. 3,021,844.
Clatot, Alfred, G. Lemoine, and A. Segal, to Societe d'Exploitation des Brevets CLS. Metal-shaping lubricant compositions and method. 3,021,594, 2–20–62, Cl. 29—424.
Cleek, Given W., and E. H. Hamilton, to United States of America, Navy. Infrared transmitting glasses. 3,022,182, 2–20–62, Cl. 106—52.
Clemson, Maurice. Impact-responsive switch device. 3,022,392, 2–20–62, Cl. 200—61.5.
Cline, John C.: *See*—
Hradel, Joseph R., and Cline. 3,021,785.
Cline, Robert A., and E. Levy, to Walter Kidde & Co., Inc. Condition monitoring device. 3,022,390, 2–20–62, Cl. 200—38.
Coalite and Chemical Products Ltd.: *See*—
Bondy, Herbert F., and Gumb. 3,022,331.
Coates, Gordon M. Contractible ring having a detachable shank. 3,021,697, 2–20–62, Cl. 63—15.45.
Cobb, Neal L., to The Fellows Gear Shaper Co. Variable feed and speed mechanism for gear shaping machines and the like. 3,021,765, 2–20–62, Cl. 90—7.
Cobb, Raymond L., to Phillips Petroleum Co. Separation of isomers of tolylene diisocyanate. 3,022,328, 2–20–62, Cl. 260—453.
Coca-Cola Co., The: *See*—
Gore, Le Roy D., and Barnes. 3,021,685.
Cogsdill, Stuart A., to Cogsdill Tool Products, Inc. Cutting tool. 3,021,733, 2–20–62, Cl. 77—58.
Cogsdill Tool Products, Inc.: *See*—
Cogsdill, Stuart A. 3,021,733.
Cohen, Max, and E. R. Elston. Combined container and straw. 3,021,991, 2–20–62, Cl. 229—7.
Coleman, Eldridge. Hot stick for applying preformed armor. 3,021,875, 2–20–62, Cl. 140—93.
Colin, Pierre, to Les Usines de Melle (Societe Anonyme). Process for fermenting sugar-containing liquid with yeast. 3,022,225, 2–20–62, Cl. 195—37.
Collidotronics, Inc.: *See*—
Ostroff, Harry, and Levitt. 3,021,615.
Combustion Engineering, Inc.: *See*—
Provenzano, Arthur D. 3,021,884.
Commissariat a l'Energie Atomique: *See*—
Eyraud, Charles, Prettre, Trambouze, Lenoir, Thomas, and Pluvien. 3,022,187.
Roubeau, Pierre M., Garin, and Prugne. 3,022,038.
Compagnie Generale de Telegraphie Sans Fil: *See*—
Biggi, Victor, and Simon. 3,022,419.
Comstock, Richard L., to Bell Telephone Laboratories, Inc. Microwave pulse amplifier. 3,022,463, 2–20–62, Cl. 330—5.
Comtex Ltd.: *See*—
Greisman, Samuel. 3,021,652.
Conch International Methane Ltd.: *See*—
Henry, James J. 3,021,808.
Cone, Irwin C., and G. H. Jenkins III, to The Gates Rubber Co. Diaphragm for valve. 3,022,039, 2–20–62, Cl. 251—46.
Connelly, John H., to Corning Glass Works. Glass color filter. 3,022,181, 2–20–62, Cl. 106—52.
Conrad, Joseph D., Jr., to Westinghouse Electric Corp. Rotor turning gear control apparatus. 3,021,719, 2–20–62, Cl. 74—472.
Conroy, John L., to Alsynite Co. of America. Frame structure. 3,021,576, 2–20–62, Cl. 20—11.
Continental Can Co., Inc.: *See*—
Chadima, Jack P., and Saxe. 3,021,655.
Henchert, John. 3,021,805.
Conway Clutch Co., The: *See*—
Becknell, Raleigh. 3,021,932.
Cook, Edward G., and W. I. Shepley, to Curtiss-Wright Corp. Ultrasonic materials testing system. 3,021,706, 2–20–62, Cl. 73—67.8.
Cook, Fred E., and L. S. Vegors. Shock absorber for road graders. 3,022,060, 2–20–62, Cl. 267—1.
Cook, Raymond D., and W. A. Lang, to Steel City Electric Co. Ground clip for electrical outlet and switch boxes. 3,021,581, 2–20–62, Cl. 24—73.
Cooley, Floyd A., to General Motors Corp. Power-actuated tail gate. 3,022,108, 2–20–62, Cl. 296—57.
Cooper, Dexter P., Jr., to Polaroid Corp. Electric lamps. 3,022,436, 2–20–62, Cl. 313—218.
Cooper, Dexter P., Jr., to Polaroid Corp. Electric lamps. 3,022,437, 2–20–62, Cl. 313—218.
Cooper, Dexter P., Jr., to Polaroid Corp. Electric lamps. 3,022,438, 2–20–62, Cl. 313—222.
Cooper, Dexter P., Jr., and H. M. Bryant, to Polaroid Corp. Electric lamps. 3,022,439, 2–20–62, Cl. 313—222.
Copenhaver, John W., to General Aniline & Film Corp. Preparation of adducts of maleic anhydride and dienes derived from the addition of formals, acetals and acylals to olefins. 3,022,321, 2–20–62, Cl. 260—346.6.
Corax Corp.: *See*—
Manson, Morris. 3,022,129.
Corlett-Turner Co.: *See*—
Corlett, Webster D., Jr. 3,022,083.
Corlett, Webster D., Jr., to Corlett-Turner Co. Adjustable tension master feed finger. 3,022,083, 2–20–62, Cl. 279—55.
Cormier, Norman A.: *See*—
Flagg, John E., and Cormier. 3,021,844.
Corn Products Co.: *See*—
Kerr, Ralph W. 3,022,184.
Lawrence, Robert L., and Perry. 3,022,176.
Corning Glass Works: *See*—
Blanding, Wendell S., Foster, and Spremulli. 3,021,643.
Connelly, John H. 3,022,181.
Cory, Wm., & Son Ltd.: *See*—
Brown, Robert H. 3,021,809.
Couberly, Benjamin L. Nut and fruit harvesting brush. 3,021,661, 2–20–62, Cl. 56—364.
Cousino, Walter F. Method of making metal rings. 3,021,593, 2–20–62, Cl. 29—417.
Cowles, Warren H.: *See*—
Fleming, Robert S., Cowles, and Ensinger. 3,021,820.
Cramer, Frank B., to North American Aviation, Inc. Process for dispersing solids in polymeric propellent fuel binders. 3,022,140, 2–20–62, Cl. 149—19.
Cran, William B. G., to Thomas Broadbent & Sons Ltd. Stacking of flat articles. 3,021,966, 2–20–62, Cl. 214—6.
Crane, Samuel P., and S. D. Kent, to Alpha Research Corp. Ventilating spacer. 3,022,063, 2–20–62, Cl. 247—110.
Crawford, H. E., Co., Inc., The: *See*—
Crawford, Herman E. 3,021,699.
Crawford, Herman E., to The H. E. Crawford Co., Inc. Clutch operating means for knitting machines. 3,021,699, 2–20–62, Cl. 66—56.
Crescent Metal Products, Inc.: *See*—
Hayba, Franklin P., and Hotaling. 3,021,795.
Cretin Maitenaz, Bernard, to Societe des Lunetiers Cottet Poichet, Tagnon & Cie. Honing machine. 3,021,647, 2–20–62, Cl. 51—55.
Cross, Carroll N. Reinforced easel structure. 3,021,631, 2–20–62, Cl. 40—120.
Crowley, Gerald J., to United Shoe Machinery Corp. Methods of making shoes. 3,021,543, 2–20–62, Cl. 12—142.
Crown Zellerbach Corp.: *See*—
Wolfe, Raymond E. 3,021,994.
Crusellas, Alberto, and A. Goudie. Window protection. 3,021,898, 2–20–62, Cl. 160—364.
Cullen-Friestedt Co.: *See*—
Benes, William S. 3,022,066.
Cummins-Chicago Corp.: *See*—
Quinn, James L., and Duncan. 3,021,950.
Cunliffe, Wallace. Ice cube dispensing and storage device. 3,021,978, 2–20–62, Cl. 221—64.

Curtiss-Wright Corp.: *See*—
Cook, Edward G., and Shepley. 3,021,706.
Liantonio, Vito, and Minnich. 3,021,859.
Cutler-Hammer, Inc.: *See*—
Hyink, Roy. 3,022,449.
Czech, Clifford F., to McGraw-Edison Co. Washing machines. 3,021,997, 2–20–62, Cl. 233—23.
Czubachowski, Zygmunt J., to The Caldwell Mfg. Co. Combination weatherstrip and sash balance and various adjustment means. 3,21,578, 2–20–62, Cl. 20—52.2.
Dahl, Robert R.: *See*—
Dawson, Robert H., and Dahl. 3,021,687.
Dailey, William H., Jr., to Midland-Ross Corp. Combustion controls for metallurgical heating furnaces. 3,022,056, 2–20–62, Cl. 263—6.
Dance, Eldred L., T. E. Drisko, Jr., and E. A. McLain, to The Dow Chemical Co. Recovery and purification of boron trichloride. 3,021,022, 2–20–62, Cl. 183—115.
Danhier, Francois G., to La Soudure Electrique Autogene, S. A. Gun and process for semi-automatic arc welding. 3,022,415, 2–20–62, Cl. 219—130.
Daniel, John H., Jr., to American Cyanamid Co. Paper sized with cationic vinyl copolymer and process for the manufacture thereof. 3,022,214, 2–20–62, Cl. 162—168.
Daniels, William H., to General Motors Corp. Vehicle closure. 3,022,107, 2–20–62, Cl. 296—37.
Danner, Charles J. Game. 3,022,075, 2–20–62, Cl. 273—93.
Dansereau, Bernard: *See*—
Ouimet, Jean, and Dansereau. 3,021,913.
Darr, Donald E., and R. P. Naworski, to Pittsburgh Plate Glass Co. Finishing of solid diphenolic polycarbonates. 3,022,271, 2–20–62, Cl. 260—47.
Dausch, Ernst, and K. Schrotz, to SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung. Textile drawing mechanism. 3,021,574, 2–20–62, Cl. 19—135.
Davey, Jame R., to Bell Telephone Laboratories, Inc. Synchronizing start-stop digital transmission system. 3,02,375, 2–20–62, Cl. 178—53.1.
Davidson, Thomas J., to Robertshaw-Fulton Controls Co. Control valve. 3,021,857, 2–20–62, Cl. 137—66.
Dawson, Robert H., and R. R. Dahl, to The Dole Valve Co. Ice tray drive assembly. 3,021,687, 2–20–62, Cl. 62—135.
Dayton, Ward D. Machine for forming and driving staples and for binding books thereby. 3,021,525, 2–20–62, Cl. 1—7.
Dayton, Ward D. Book binding means and books bound thereby. 3,022,093, 2–20–62, Cl. 281—25.
Dean Mfg., Inc.: *See*—
Selby, Ernest E., and Knapp. 3,022,247.
De Boer, Clarence, T. E. Eble, and C. M. Large, to The Upjohn Co. Fervenulin and its production. 3,022,220, 2–20–62, Cl. 167—65.
De Crease, William M.: *See*—
Jenkins, David M., and De Crease. 3,022,196.
Deere & Co.: *See*—
Youngberg, Charles H. 3,021,906.
Deering Milliken Research Corp.: *See*—
Bolinger, Edgar D. 3,021,588.
De Fezzy, Albert, G. P. Hanley, W. S. Kenyon, and J. A. Peak, to General Motors Corp. Rocker arm and multiple valve actuating mechanism. 3,021,826, 2–20–62, Cl. 123—90.
Deghuee, Rex P.: *See*—
Berends, Emerson R., and Deghuee. 3,021,879.
Delfosse, Pierre. White filler material and its preparation. 3,022,185, 2–20–62, Cl. 106—296.
De Lorean, John Z., G. B. Shaw, and B. H. Short, to General Motors Corp. Motor vehicle engine starting apparatus. 3,021,715, 2–20–62, Cl. 74—7.
Denton, Richard A., R. P. Le Riche, and M. P. Rivera, to The New York Air Brake Co. Pressure gauge. 3,021,712, 2–20–62, Cl. 73—399.
De Pierri, William G., Jr.: *See*—
Earhart, Harold W., and De Pierri. 3,022,355.
Derman, Karl G. E.: *See*—
Bratt, Axel E., and Derman. 3,022,125.
Descarries, Raymond, to Aktiebolaget Electrolux. Fastening means for suction cleaner end cover. 3,022,101, 2–20–62, Cl. 292—114.
Detroit Power Screwdriver Co.: *See*—
Gladfelter, Robert F., Faull, and Gill. 3,021,980.
Devitt Andrew B.: *See*—
Wimmer, Ernest L., and Devitt. 3,022,174.
De Vries, Machiel. Piezo-electric pick up. 3,022,384, 2–20–62, Cl. 179—100.41.
De Vries, Siebren, to Hermes Landbouwmachinefabriek & de Vries N.V. Device for use in filling a container with fruit. 3,021,656, 2–20–62, Cl. 53—248.
Diassi, Patrick A., to Olin Mathieson Chemical Corp. β-yohimbine and β-yohimbic acid 17-esters. 3,022,310, 2–20–62, Cl. 260—287.
Di Cillo, Betty J. Ironing board. 3,021,628, 2–20–62, Cl. 38—111.
Dickey, James W., Jr.: *See*—
Malone, Carl E., and Dickey. 3,022,071.
Dickinson, Wesley E., to International Business Machines Corp. System for comparing information items to determine similarity therebetween. 3,022,005, 2–20–62, Cl. 235—152.
Diehl Mfg. Co.: *See*—
Happe, Reynold. 3,021,723.
Diekhoff, Earl F.: *See*—
Brastad, William A., Diekhoff, and Rustad. 3,021,953.
Dietz, Milton S., to Polaroid Corp. Photographic shutter. 3,021,770, 2–20–62, Cl. 95—54.
Dietz, R. E., Co.: *See*—
Loeder, Harry A., Jr. 3,022,467.
Dines, James M.: *See*—
Chubb, Melvin F., and Dines. 3,022,364.
Dinkelkamp, Henry T., to Stewart-Warner Corp. Reciprocating air motor. 3,021,823, 2–20–62, Cl. 121—164.
Di Pasquale, Fred A.: *See*—
Pinta, John G., Di Pasquale, and Peasley. 3,021,557.
Ditting, Adolf: *See*—
Engi, Walter. 3,021,984.
Dixon, Lyle W. Parallel rule slide rule. 3,022,002, 2–20–62, Cl. 235—70.
Dlugosch, Paul A., to Noble Mfg. Co. Farm implement transport carrier. 3,021,908, 2–20–62, Cl. 172—466.
Doan, David B., to Texas Instruments Inc. Transistor voltage regulator. 3,022,457, 2–20–62, Cl. 323—22.
Dobek, Gunther: *See*—
Sennewald, Kurt, Born, Erpenbach, and Dobek. 3,022,332.
Dobek, Günter: *See*—
Sennewald, Kurt, Dobek, and Joest. 3,022,336.
Dobrikin, Harold L., to Berg Airlectro Products Co. Relay valve. 3,022,118, 2–20–62, Cl. 303—40.
Dole Valve Co., The: *See*—
Bauerlein, Carl C. 3,021,694.
Voigtmann, Robert C. 3,021,695.
Dawson, Robert H., and Dahl. 3,021,687.
Donini, Domenico C. Apparatus for the intermittent and adjustable feeding of fuel oil burners for brickkilns. 3,021,890, 2–20–62, Cl. 158—36.3.
Don-Lan Electronics, Inc.: *See*—
Lanctot, Donald H. 3,022,474.
Donnelly, Ralph G., R. G. Gilliland, and G. M. Slaughter, to United States of America, Atomic Energy Commission. Brazing alloys. 3,022,162, 2–20–62, Cl. 75—165.
Doonan, William. Arrowhead construction. 3,022,077, 2–20–62, Cl. 273—106.5.
Dorst, Richard W., to Textron Inc. Swing-over windshield for motorboats. 3,021,535, 2–20–62, Cl. 9—1.
Dortmund-Horder Huttenunion Aktiengesellschaft: *See*—
Harders, Fritz. 3,022,059.
Dosal, Martin R. Traffic lights for controlling the flow of traffic at a traffic crossing. 3,022,490, 2–20–62, Cl. 340—120.
Dosal, Martin R. Traffic lights. 3,022,491, 2–20–62, Cl. 340—133.
Dow Chemical Co., The: *See*—
Butler, Russell L. 3,022,212.
Chisholm, Douglas S., and Hall. 3,021,562.
Dance, Eldred L., Drisko, and McLain. 3,021,922.
Earlougher, Robert C. 3,021,901.
Eberhard, John F. 3,022,249.
Hahn, Harold G. 3,022,198.
Hennis, Henry E., and Rosenbrock. 3,022,222.
Hradel, Joseph R., and Cline. 3,021,785.
Lloyd, William G., and Alfrey. 3,022,199.
McMaster, Elmer L. 3,022,253.
Olstrowski, Franciszek. 3,022,233.
Park, William R. R., and Hill. 3,022,178.
Proffitt, Arthur C. 3,022,279.
Rogers, William A., Jr., Woehst, and Smith. 3,022,315.
Sloane, Howard J., and Bradley. 3,022,353.
Stanton, George W., and Traylor. 3,022,264.
Stanton, George W., and Traylor. 3,022,265.
Thiegs, Bernard J. 3,022,251.
Tolkmith, Henry, Slagh, and Kauer. 3,022,329.
Dowty Mining Equipment Ltd.: *See*—
Bend, Herbert, and Wilson. 3,021,856.
Dragerwerks, Heinr. & Bernh: *See*—
Grosskopf, Karl. 3,022,141.
Dresback, David D., to Beaver Tool & Engineering Corp. Tool holder and tool shank construction. 3,022,084, 2–20–62, Cl. 279—83.
Drisko, Thomas E., Jr.: *See*—
Dance, Eldred L., Drisko, and McLain. 3,021,922.
Duke, Jackie E.: *See*—
Mihm, Clifford H., Warner, and Duke. 3,022,351.
Duncan, James E., and W. J. Englert, to Pittsburgh Plate Glass Co. Glass composition. 3,022,183, 2–20–62, Cl. 106—54.
Duncan, James K.: *See*—
Quinn, James L., and Duncan. 3,021,950.
Dunlee Corp.: *See*—
Atlee, Zed J. 3,022,435.
Dunnebier, Kurt: *See*—
Winkler, Richard, and Dunnebier. 3,021,610.
Du Pont de Nemours, E. I., and Co.: *See*—
Armitage, John B., and Hyson. 3,022,268.
Bennett, Ovell F., Huber, and Smiley. 3,022,320.
Carboni, Rudolph A. 3,022,305.
Frazer, August H. 3,022,334.
Hamilton, William S., and Hinkle. 3,021,560.
Hyde, Thomas J. 3,022,262.
Jenner, Edward L. 3,022,358.
Kasper, Klaus B. 3,022,357.
Malmquist, Alfred B. 3,022,189.
Miller, Ross J., and Noddin. 3,021,786.
Niedzielski, Edmund L. 3,022,147.
Searle, Norman E. 3,022,151.
Ver Nooy, Charles D., III. 3,022,356.
Weed, Mark B. 3,022,150.
Yeo, Robert A. 3,022,143.
Durdin, Augustus C., III, to Barber-Colman Co. Automatic hobbing machine. 3,021,764, 2–20–62, Cl. 90—1.
Durkoppwerke Aktiengesellschaft: *See*—
Pätzold, Georg, Myska, and Grube. 3,021,967.
Duskey, Edmund L., to Kaiser Aluminum & Chemical Corp. Aluminum foil container. 3,021,990, 2–20–62, Cl. 229—3.5.
Eagle-Picher Co., The: *See*—
Chubb, Melvin F., and Dines. 3,022,364.
Earhart, Harold W., and W. G. De Pierri, Jr., to Esso Research and Engineering Co. a^1,a^2,a^3-trihydroxyhexamethylbenzene. 3,022,355, 2–20–62, Cl. 260—618.
Earlougher, Robert C., to The Dow Chemical Co. Treatment of fluid-producing formations. 3,021,901, 2–20–62, Cl. 166—42.

Eastman, Du Bois, to Texaco Inc. Process for reduction of iron ore. 3,022,156, 2–20–62, Cl. 75—26.

Eastman Kodak Co.: *See*—
Kirk, Robert A. 3,021,771.
Mench, John W., Emerson, and Rowley. 3,022,287.

Eaton Mfg. Co.: *See*—
Russell, Robert C. 3,022,064.

Eberhard, John F., to The Dow Chemical Co. Well fracturing liquid. 3,022,249, 2–20–62, Cl. 252—8.55.

Eble, Thomas E.: *See*—
De Boer, Clarence, Eble, and Large. 3,022,220.

Economics Laboratory, Inc.: *See*—
Miller, Carl A. 3,021,862.

Economy Forms Corp.: *See*—
Jennings, William A. 3,021,582.

Economy Governor Co.: *See*—
Handley, Harold E. 3,021,866.

Edgemond, John W., Jr., and J. J. O'Connor, to Yuba Consolidated Industries, Inc. Power saw. 3,021,881, 2–20–62, Cl. 143—174.

Edstrom, Olle, to Aktiebolaget O. Edstroms Snickerifabrik. Peep sight. 3,021,600, 2–20–62, Cl. 33—47.

Elder, Henry W.: *See*—
Potts, John M., Elder, and Anderson. 3,022,154.

Electric Storage Battery Co., The: *See*—
Grieger, Philip F. 3,022,363.

Electro-Char Corp.: *See*—
Savlo, Joseph. 3,022,410.

Electro-Chem Fiber Seal Corp.: *See*—
Partilloch, Donald K., and Polowczyk. 3,022,213.

Ellis, Carleton, Jr. Reflector device. 3,021,757, 2–20–62, Cl. 88—98.

Elston, Edward R.: *See*—
Cohen, Max, and Elston. 3,021,991.

Emerson Electric Mfg. Co., The: *See*—
Feldman, Rubin. 3,022,190.

Emerson, John: *See*—
Mench, John W., Emerson, and Rowley. 3,022,287.

Emery, William M. Mattress elevators. 3,021,533, 2–20–62, Cl. 5—327.

Enders, John A., to Royal McBee Corp. Type action. 3,021,934, 2–20–62, Cl. 197—17.

Engelhard Industries, Inc.: *See*—
Anderson, Edward P. 3,022,234.
Anderson, Edward P. 3,022,242.
Anderson, Edward P. 3,022,243.
Fish, Donald H. 3,022,478.
Fitch, Howard M. 3,022,177.

Engelking, Fred S.: *See*—
Bailey, John M., Engelking, Hopper, and Jero. 3,022,232.

Engl, Walter, to A. Ditting. Spout construction for coffee mills and the like. 3,021,984, 2–20–62, Cl. 222—196.

Englert, William J.: *See*—
Duncan, James E., and Englert. 3,022,183.

Enk, Eduard, and F. Knörr, to Wacker-Chemie G.m.b.H. Process for the catalytic production of unsaturated monocarboxylic acid esters. 3,022,337, 2–20–62, Cl. 260—486.

Enk, Eduard, and F. Knörr, to Wacker-Chemie G.m.b.H. Process for the production of unsaturated monocarboxylic acid esters. 3,022,338, 2–20–62, Cl. 260—486.

Enk, Eduard, and F. Knörr, to Wacker-Chemie G.m.b.H. Production of unsaturated monocarboxylic acid esters. 3,022,339, 2–20–62, Cl. 260—486.

Ensinger, Raymond L.: *See*—
Fleming, Robert S., Cowles, and Ensinger. 3,021,820.

Erbaugh, Lowell E.: *See*—
Calfee, John D., and Erbaugh. 3,022,278.

Ericsson Telephones Ltd.: *See*—
Sinclair, William. 3,022,502.

Erpenbach, Heinz: *See*—
Sennewald, Kurt, Born, Erpenbach, and Dobek. 3,022,332.

Esco Corp.: *See*—
Eyolfson, Paul. 3,021,626.

Esso Research and Engineering Co.: *See*—
Earhart, Harold W., and De Pierri. 3,022,355.
Guyer, Walter R. F., and Arundale. 3,022,252.
Heath, Carl E., Jr. 3,022,237.
Miller, Alfred L., Robison, and Petro. 3,022,260.
Moser, John F., Jr. 3,022,240.
Pfrehm, Raymond H. 3,021,703.
Spars, Byron G., and McCall. 3,022,245.
Vanderbilt, Byron M. 3,022,208.
Wiese, Herbert K., and Lippincott. 3,022,359.

Everroad, Herbert L., to Everroad Supply Co. Filter cleaning device. 3,021,872, 2–20–62, Cl. 241—340.

Everroad Supply Co.: *See*—
Everroad, Herbert L. 3,021,972.

Evers & Co. Aktiebolag: *See*—
Högedal, Sven A. 3,021,555.

Ewald, Waldemar, to Jos. Schneider & Co., Optische Werke. Depth-of-focus indicator for photographic instruments. 3,021,774, 2–20–62, Cl. 95—45.

Ewin, James C., to Bell Telephone Laboratories Inc. Remote telephone line concentrator. 3,022,382, 2–20–62, Cl. 179—18.

Ewing, Bernard E. Lawn mower attachment for distributing liquid. 3,021,642, 2–20–62, Cl. 47—1.5.

Ewing, Charles W.: *See*—
Chase, Frederic L., and Ewing. 3,022,205.

Eyolfson, Paul, to Esco Corp. Scraper blade. 3,021,626. 2–20–62, Cl. 37—141.

Eyraud, Charles, M. Prettre, Y. Trambouze, J. Lenoir, G. Thomas, and P. Plurien, to Commissariat a L'Energie Atomique. Porous membranes of very fine porosity, and processes for production thereof. 3,022,187, 2–20–62, Cl. 117—16.

Fabriques de Produits Chimiques de Thann et de Mulhouse: *See*—
Breig, Otto. 3,022,046.

Failla, Ignazio. Bucket excavator slidable on rigid guide particularly for frontal digging at vertcial walls. 3,021,623, 2–20–62, Cl. 37—103.

Fallchild Camera and Instrument Corp.: *See*—
Fan, Jason H. S. 3,021,940.
Levine, Samuel W., and Antere. 3,022,373.

Fan, Jason H. S., to Fairchild Camera and Instrument Corp. Line-unit dropping mechanism for linecasting machines. 3,021,940, 2–20–62, Cl. 199—61.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Hund, Franz. 3,022,186.
Lober, Friedrich, Roos, and Kempermann. 3,022,275.
Morschel, Heinrich, and Loew. 3,022,255.
Schnell, Hermann, and Fritz. 3,022,272.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Bestian, Herbert, Schäfer, and Quint. 3,022,316.
Fernholz, Hans, Ruths, and Heimann-Trosien. 3,022,342.
Orthner, Ludwig, Herzberg, and Frey. 3,022,263.

Faull, John T.: *See*—
Gladfelter, Robert F., Faull, and Gill. 3,021,980.

Fawick Corp.: *See*—
Banker, Oscar H. 3,021,730.

Federal Pacific Electric Co.: *See*—
Oravec, John J. 3,022,391.

Feis, Nikolaas, to Stichting Nationaal Luchtvaartlaboratorium. Smokestack, more especially a ship's funnel. 3,021,811, 2–20–62, Cl. 114—187.

Feldman, Rubin, to The Emerson Electric Mfg. Co. Process of and composition for controlling temperatures. 3,022,190, 2–20–62, Cl. 117—37.

Feller, Donald R.: *See*—
Griffin, Donald N., and Feller. 3,021,667.

Fellows Gear Shaper Co., The: *See*—
Cobb, Neal L. 3,021,765.

Ferguson, John H., Jr., and H. R. Schmider, to The Bendix Corp. Cartridge-type turbine starter. 3,021,672, 2–20–62, Cl. 60—39.14.

Fernholz, Hans, K. Ruths, and K. Heimann-Trosien, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the manufacture of sorbic acid. 3,022,342, 2–20–62, Cl. 260—526.

Ferranti, Albino. Motor-flywheel unit. 3,022,433, 2–20–62, Cl. 310—74.

Ferris, Kenneth D., to Arvin Industries, Inc. Turret punch for pipe-bending machine. 3,021,886, 2–20–62, Cl. 153—48.

Ferro Stamping Co.: *See*—
Pickles, Joseph. 3,022,035.

Fialkoff, Samuel, to Camin Laboratories, Inc. Process for electroforming grooved and channeled bodies. 3,022,230, 2–20–62, Cl. 204—9.

Fidelity Union Trust Co.: *See*—
Gutzwiller, Ernst. 3,022,307.

Fielden Electronics Ltd.: *See*—
Grove-White, Charles W. 3,022,422.

Fields, Joseph E., and J. H. Johnson, to Monsanto Chemical Co. Vinyl resin plasticized with an adduct of an alkyl vinyl phosphonate. 3,022,261, 2–20–62, Cl. 260—30.6.

Fields, Paul R., and N. M. Isaac, to United States of America, Atomic Energy Commission. Separation of curium and americium. 3,022,134, 2–20–62, Cl. 23—14.5.

Filotecnica Salmoiraghi S.p.A.: *See*—
Bruscaglioni, Rafaelol. 3,022,099.

Findlow, Eric, to Ernest Scragg & Sons Ltd. Apparatus for false twisting yarn. 3,021,663, 2–20–62, Cl. 57—77.40.

Fine, Charles C. Truss. 3,021,838, 2–20–62, Cl. 128—96.

Finelli, Anthony F.: *See*—
Gates, George H., and Finelli. 3,022,257.

Finkener, Friedrich, J. Krug, H. Loges, and R. Rodewald, to Th. Goldschmidt A.-G. Process of detinning lacquered tin scrap derived from tin sheet metal. 3,022,161, 2–20–62, Cl. 75—98.

Firma Fleissner & Sohn, G.m.b.H.: *See*—
Fleissner, Heinz. 3,021,607.

Fischer, Heinz. Ultra short light pulse generation. 3,022,444, 2–20–62, Cl. 315—61.

Fish, Donald H., to Engelhard Industries, Inc. Resistance temperature sensing device. 3,022,478, 2–20–62, Cl. 338—31.

Fitch, Howard M., to Engelhard Industries, Inc. Halogenoplatinous mercaptide-alkyl sulfide complexes. 3,022,177, 2–20–62, Cl. 106—1.

Flagg, John E., and N. A. Cormier, to David Clark Co. Inc. Seamless molded brassiere cups. 3,021,844, 2–20–62, Cl. 128—463.

Fleissner, Hans. Air guilding means for drying apparatus. 3,021,608, 2–20–62, Cl. 34—115.

Fleming, Robert S., W. H. Cowles, and R. L. Ensinger, to Holley Carburetor Co. Force balance system. 3,021,820, 2–20–62, Cl. 121—41.

Fleissner, Heinz, to Firma Fleissner & Sohn, G.m.b.H. Combination drying and tentering machine. 3,021,607, 2–20–62, Cl. 34—115.

Flinchbaugh, Rodman F., H. W. Huffman, and R. A. Sands, to Polaroid Corp. Temporary seal for photographic film roll. 3,022,170, 2–20–62, Cl. 96—78.

Floehr, Walter L., to Unitcast Corp. Sliding hopper gate operating mechanism. 3,021,798, 2–20–62, Cl. 105—282.

Flood, John F. Hypodermic needle guide. 3,021,842, 2–20–62, Cl. 128—215.

Floramo, Nicholas A., to Chemicals Inc. Iron hydrogenated dextran. 3,022,221, 2–20–62, Cl. 167—68.

Flower, Archibald T. Service attachment brackets for power lines. 3,022,033, 2–20–62, Cl. 248—300.

Fluidwick Co., Inc.: *See*—
Abel, Martin L. 3,022,398.

Focht, Ronald E., to The Hobart Mfg. Co. Ticket printer. 3,021,988, 2–20–62, Cl. 226—58.

Fogarty, Laurence E., to General Precision Inc. Analog computer for generating a power series expansion of a function. 3,022,009, 2–20–62, Cl. 235—193.

Ford, Michael J., ½ to International Paper Co., and ½ to The Stanley Works. Grain car door structure. 3,021,897, 2–20–62, Cl. 160—114.

Fornes, Gaston G., to Institute of Textile Technology. Apparatus for winding packages of roving. 3,021,664, 2–20–62, Cl. 57—99.

Foster, Laurence H.: *See*—
Blanding, Wendell S., Foster, and Spremulli. 3,021,643.

Fowler, Vernon J., to University of Illinois Foundation. Folded transmission line and tube. 3,022,443, 2–20–62, Cl. 315—39.3.

Fox, Harold K.: *See*—
Hopkins, Frank L., and Fox. 3,021,939.

Fracalossi, Roland N.: *See*—
Seniff, Russell W., Fracalossi, and Kangas. 3,022,097.

Fran Dee Corp.: *See*—
Allen, Robert Y., Shaw, and Umstead. 3,021,639.

Frank, Robert K., to Holley Carburetor Co. Vacuum actuated ignition timing device. 3,021,828, 2–20–62, Cl. 123—117.

Frann, Stamates I.: *See*—
McKeown, Patrick J., and Frann. 3,022,008.

Franzus, Boris: *See*—
Wicklatz, John E., and Franzus. 3,022,283.

Frazer, August H., to E. I. du Pont de Nemours and Co. Process for the preparation of polyurethanes. 3,022,334, 2–20–62, Cl. 260—482.

Frederickson, Arman F., J. Hower, Jr., and R. C. Reynolds, Jr., to Pan American Petroleum Corp. Determination of deposition water salinity. 3,022,140, 2–20–62, Cl. 23—230.

Freeman, Armistead C. Roll changer. 3,022,022, 2–20–62, Cl. 242—58.

Frey, Christoph: *See*—
Mory, Rudolf, and Frey. 3,022,298.

Frey, Hans H.: *See*—
Orthner, Ludwig, Herzberg, and Frey. 3,022,263.

Fried, Josef, and J. E. Herz, to Olin Mathieson Chemical Corp. Synthesis of steroids. 3,022,296, 2–20–62, Cl. 260—239.55.

Fritts, Robert W., and S. Karrer, to Minnesota Mining and Mfg. Co. Electrical device. 3,022,361, 2–20–62, Cl. 136—4.

Fritz, Gerhard: *See*—
Schnell, Hermann, and Fritz. 3,022,272.

Fuge, Harry B., and H. J. Zaorski, to Plastic & Appliance Co., Inc. Device for scheduling fuel delivery. 3,021,629, 2–20–62, Cl. 40—19.5.

Fuji Photo Film Co. Ltd.: *See*—
Ohba, Seiichi, Yonezawa, and Kumai. 3,022,172.

Fujioka, Richard T.: *See*—
Kasdorf, Earl W., and Fujioka. 3,021,963.

Fuller, Verlon M., and D. A. Weaver. Valve and seat grinding tool. 3,021,651, 2–20–62, Cl. 51—241.

Gabler, James B.: *See*—
Goyette, Francis H., and Gabler. 3,021,716.

Gallagher, James E., to Sinclair Refining Co. Grounding system for light oil loading stations. 3,021,867, 2–20–62, Cl. 137—565.

Gandy, Robert B. Anparatus for setting irrigation tubes. 3,021,860, 2–20–62, Cl. 137—124.

Garcin de la Para, Georges J. M. G. Internal combustion engine. 3,021,825, 2–20–62, Cl. 123—51.

Garcy Corp.: *See*—
Ruhnke, Richard R. 3,021,961.

Gardiner, Paul C., to United States of America, Navy. Range blank for echo-controlled torpedo. 3,021,806, 2–20–62, Cl. 114—23.

Garin, Jean M.: *See*—
Roubeau, Pierre M., Garin, and Prugne. 3,022,038.

Garrett, John E., to The Goodyear Tire & Rubber Co. Method and washer means including a calibrated rubber layer for measuring bolt tension. 3,021,747, 2–20–62, Cl. 85—62.

Garrison, Richard F., and F. A. Saal, to Bell Telephone Laboratories, Inc. Counting circuit. 3,022,003, 2–20–62, Cl. 235—92.

Gasoline Plant Construction Corp.: *See*—
Kotzebue, Meinhard H. 3,022,054.

Gates, George H., and A. F. Finelli, to The Goodyear Tire & Rubber Co. Composition comprising polyester, diisocyanate and cellulosic filler and wearing surface for shoe prepared therefrom. 3,022,257, 2–20–62, Cl. 260—9.

Gates Rubber Co., The: *See*—
Cone, Irwin C., and Jenkins. 3,022,039.

Gaugler, Richard S., to General Motors Corp. Air conditioning. 3,021,692, 2–20–62, Cl. 62—271.

Geer, Harold C. Multi-hanger bracket for conduit support. 3,022,030, 2–20–62, Cl. 248—58.

Gehlen, Hermann W.: *See*—
Gillois, Jean, and Gehlen. 3,021,544.

Geigy Chemical Corp.: *See*—
Ziegler, Erich, Rossmann, and Litvan. 3,022,317.

Gelenius, Robert B., to General Motors Corp. Temperature compensation circuit for transistor amplifiers. 3,022,464. 2–20–62, Cl. 330—13.

General Aniline & Film Corp.: *See*—
Catino, Sigmund C., Strobel, and Williams. 3,022,284.
Copenhaver, John W. 3,022,321.
Glickman, Samuel A., and Miller. 3,022,274.
Grifo, Richard A., and Mayhew. 3,022,250.
Schmidt, Harold N., Tullsen, Katz, and Lytle. 3,022,299.
Tiedemann, Herman. 3,022,173.

General Electric Co.: *See*—
Abbott, Roy W. 3,022,049.
Addamiano, Arrigo. 3,022,144.
Barnstead, John W. 3,021,873.
Bochan, John. 3,021,956.
Brown, Dale H., and Leiby. 3,022,235.
Houser, Philip H. 3,021,702.
Koch, Arthur R. 3,022,476.
Low, Frank D. 3,021,863.
Mason, Russell I. 3,022,448.
Morgan, Raymond E. 3,022,429.
Morrissey, William J. 3,022,179.
Morrissey, William J., and Roy. 3,022,180.
Pietsch, Joseph A. 3,022,360.
Seigle, William R. 3,022,501.
Solleau, Trasimond A., Jr. 3,022,440.
Spiegelhalter, William G. 3,021,696.
Wilkerson, Robert B. 3,022,401.
Williams, Milton S., Jr., and Scott. 3,022,409.

General Mills, Inc.: *See*—
Brastad, William A., Diekhoff, and Rustad. 3,021,953.
Powell, Keith R. 3,021,952.

General Motors Corp.: *See*—
Andrew, Margaret J. 3,021,700.
Brinkerhoff, Donald E. 3,022,420.
Brunner, Richard J. 3,021,827.
Chapman, Frederick W., Hanysz, Weller, and Martin. 3,022,451.
Chase, Frederic L., and Ewing. 3,022,205.
Cooley, Floyd A. 3,022,108.
Daniels, William H. 3,022,107.
De Fezzy, Albert, Hanley, Kenyon, and Peak. 3,021,826.
De Lorean, John Z., Shaw, and Short. 3,021,715.
Gaugler, Richard S. 3,021,692.
Gelenius, Robert B. 3,022,464.
Goodzeit, Carl L., and Pearsall. 3,022,193.
Hause, Gilbert K. 3,021,726.
Hetzler, Lewis R., and Sheldrake. 3,022,456.
Kelley, Oliver K., and Hause. 3,021,727.
Kester, Robert C. 3,022,434.
Larson, Robert L., and Hetzler. 3,022,456.
Lottridge, Neil M., Jr., and McCullough. 3,022,163.
Metz, Jean. 3,021,701.
O'Brien, William J. 3,022,362.
Robinson, George H., and Ross. 3,022,407.
Schmid, Leonard J., and Scott. 3,021,579.
Stevens, Bryce L. 3,022,405.
Tuck, Robert M., and Mooney. 3,021,676.
Winfield, Howard E., Jr. 3,021,688.

General Precision, Inc.: *See*—
Fogarty, Laurence E. 3,022,009.
Kleist, Robert A., and Jones. 3,022,492.
Stupar, Wesley E. 3,022,500.
Williamson, Robert R., and Terry. 3,022,495.

Getinge Mekaniska Verkstads Aktiebolag: *See*—
Heden, Carl G. 3,022,229.

Gettys, Charles B., and S. C. Leonard, to United States of America, Navy. Automatic proportional preset of amplifier gain. 3,022,486, 2–20–62, Cl. 340—3.

Gibson, Willard C., to Thompson Ramo Wooldridge Inc. Controlled clearance regenerator seal. 3,022,051, 2–20–62, Cl. 257—269.

Gilbert & Barker Mfg. Co.: *See*—
Robinson, George D., Jr. 3,021,982.

Gill, Everett: *See*—
Gladfelter, Robert F., Faull, and Gill. 3,021,980.

Gilliland, Ralph G.: *See*—
Donnelly, Ralph G., Gilliland, and Slaughter. 3,022,162.

Gillois, Jean, and H. W. Gehlen, to H. W. Gehlen. Self propelling sectional floating bridge. 3,021,544, 2–20–62, Cl. 14—27.

Gilmore, William J.: *See*—
Bratz, Otto J., and Gilmore. 3,021,722.

Ginaven, Marvin E., to The Baur Bros. Co. Dewatering device and pressure feeder. 3,021,782, 2–20–62, Cl. 100—146.

Gladfelter, Robert F., J. T. Faull, and E. Gill, to Detroit Power Screwdriver Co. High speed parts feeder. 3,021,980, 2–20–62, Cl. 221—167.

Glas, Maurus. Hydraulic press. 3,021,802, 2–20–62, Cl. 113—45.

Glaser, David, to Burroughs Corp. Pulse generating circuits. 3,022,442, 2–20–62, Cl. 315—8.5.

Glasgow, Clarence O.: *See*—
Walker, Jay P., and Glasgow. 3,021,709.

Glass, Clifford A.: *See*—
Parshall, Bert B., and Glass. 3,021,796.

Glickman, Samuel A., and E. S. Miller, to General Aniline & Film Corp. Polymerization of pyrrolidone and piperidone employing cyanuric chloride. 3,022,274, 2–20–62, Cl. 260—78.

Globe Industries, Inc.: *See*—
Timmer, David J., Philbrick, Mossbarger, and Caton. 3,022,432.

Goebels, Frank J., Jr., and K. C. Kelly, to Hughes Aircraft Co. Arbitrarily polarized slot antenna. 3,022,506, 2–20–62, Cl. 343—771.

Goellner, Allan R., to The Reliance Gauge Column Co. Liquid level indicator. 3,022,307, 2–20–62, Cl. 200—84.

Goldberg, Moses W., and S. Teitel, to Hoffmann-La Roche Inc. Amido-diamines and triamines. 3,022,301, 2–20–62, Cl. 260—247.2.

Goldman, Robert B.: *See*—
Bobb, Lloyd J., Goldman, and Maling. 3,022,377.

Goldsmith, Philip H. Adjustable cylinder papermaking machine. 3,021,899, 2–20–62, Cl. 162—329.

Gombar, Leslie J. Fish lure accessory. 3,021,632, 2–20–62, Cl. 41—10.

Goodell, John D., and E. F. Shelley, to U.S. Industries, Inc. Method and apparatus for teaching physiological selection skills. 3,021,611, 2–20–62, Cl. 35—6.

Goodrich, B. F., Co., The: *See*—
Jansen, Jacob E., and Kehe. 3,022,269.

Goodyear Tire & Rubber Co., The: *See*—
Garrett, John E. 3,021,747.
Gates, George H., and Finelli. 3,022,257.
Hardman, Albert F. 3,022,300.
Smith, Edwin S. 3,022,281.
Waters, Lawrence E. 3,022,412.

Goodzeit, Carl L., and H. W. Pearsall, to General Motors Corp. Method of coating aluminum. 3,022,193, 2–20–62, Cl. 117—50.

Gore, Le Roy D., and W. M. Barnes, ½ to The Vendo Co., and ½ to The Coca-Cola Co. Method and apparatus for vending premix type carbonated beverages. 3,021,685, 2–20–62, Cl. 62—59.

Gottwig, Ewald: *See*—
Graham, Harry C. 3,021,772.

Goudie, Arturo: *See*—
Crusellas, Alberto, and Goudie. 3,021,898.

Gowdy, George H. Split-tail spinning lure-spoon. 3,021,636, 2–20–62, Cl. 43—42.34.

Goyette, Francis H., and J. B. Gabler. Proportioning pump. 3,021,716, 2–20–62, Cl. 74—50.

Grace, W. R., & Co.: *See*—
Bentov, Itzhak. 3,021,573.

Graham, Agnes D.: *See*—
Graham, Harry C. 3,021,772.

Graham, Harry C., ½ to E. Gottwig, and ¼ to G. Savransky, and R. L. Keys, jointly, and ¼ to A. D. Graham. Film holder. 3,021,772, 2–20–62, Cl. 95—30.

Grannen, Francis E. Separable button. 3,021,583, 2–20–62, Cl. 24—109.

Grant, Denison W. Game apparatus for practice use by lawn bowlers. 3,022,074, 2–20–62, Cl. 273—39.

Grant, Harold S.: *See*—
Stroud, Vincent D., and Grant. 3,022,504.

Grapes, Eugene F.: *See*—
Patterson, William W., III, and Grapes. 3,021,924.

Graulig, Oskar, and J. Jackson, to American Machine & Foundry Co. Apparatus for wrapping. 3,021,768, 2–20–62, Cl. 93—44.1.

Gray, Allan P.: *See*—
Cavallito, Chester J., and Gray. 3,022,308.

Gray Tool Co.: *See*—
Watts, John D. 3,021,974.

Green, Milton, and M. S. Simon, to Polaroid Corp. Photographic products, processes and compositions. 3,022,166, 2–20–62, Cl. 96—61.

Green, Milton, to Polaroid Corp. Photographic products, processes and compositions. 3,022,167, 2–20–62, Cl. 96—61.

Green, Milton, and W. E. Solodar, to Polaroid Corp. 4-polyalkyleneoxy-1-naphthols. 3,022,354, 2–20–62, Cl. 260—613.

Greene, Robert A. Cigar box. 3,021,943, 2–20–62, Cl. 206—45.2.

Grifo, Richard A., and R. L. Mayhew, to General Aniline & Film Corp. Low foaming detergent for automatic dishwashing machine. 3,022,250, 2–20–62, Cl. 252—135.

Greisman, Samuel, to Comtex Ltd. Bag sealing machines. 3,021,652, 2–20–62, Cl. 53—66.

Gremigni, Giuseppe: *See*—
Marchioli, Giorgio, and Gremigni. 3,021,900.

Grieger, Philip F., to The Electric Storage Battery Co. Hermetically sealed storage cells. 3,022,363, 2–20–62, Cl. 136—6.

Griffin, Donald N., and D. R. Feller, to Olin Mathieson Chemical Corp. Method for initiating the combustion of hydrazine. 3,021,667, 2–20–62, Cl. 60—35.4.

Griffin, Herbert W.: *See*—
Carlin, Kenneth G., and Griffin. 3,021,929.

Griswold, Stanley M., to B. B. Chemical Co. Flocked solvent activatable stiffening and shoe lining materials. 3,022,188, 2–20–62, Cl. 117—25.

Gross, Stanley B. Force cup. 3,021,532, 2–20–62, Cl. 4—255.

Grosskopf, Karl, to Dragerwerks, Heinr. & Bernh. Small testing tubes having three or more separately arranged reagents or reagent layers. 3,022,141, 2–20–62, Cl. 23—254.

Grotz, Anthony N., to Carling Electric, Inc. Single pole progressive switch. 3,022,394, 2–20–62, Cl. 200—68.

Grove-White, Charles W., to Fielden Electronics Ltd. Continuously operating analytical instruments. 3,022,422, 2–20–62, Cl. 250—43.5.

Grube, Erwin: *See*—
Patzold, Georg, Myska, and Grube. 3,021,967.

Gruber, Jerome M., to Waukesha Bearings Corp. Tilting pad journal bearings. 3,022,123, 2–20–62, Cl. 308—73.

Grundmann, Christoph J., and E. Kober, to Olin Mathieson Chemical Corp. Halomethyl-5-triazines. 3,022,303, 2–20–62, Cl. 260—248.

Grundmann, John F., to Joy Mfg. Co. Hydraulically controlled and operated power tong. 3,021,739, 2–20–62, Cl. 81—53.

Guest, Howard R., B. W. Kiff, and C. B. Halstead, to Union Carbide Corp. Process for improving the color of resins produced from acrolein and pentaerythritol. 3,022,273, 2–20–62, Cl. 260—47.

Gugino, Samuel. Combined brace band and tension bar retainer for fencing. 3,022,044, 2–20–62, Cl. 256—47.

Gulf Interstate Oil Co.: *See*—
Young, Farrile S. 3,021,864.

Gumb, John: *See*—
Bondy, Herbert F., and Gumb. 3,022,331.

Gust, George A.: *See*—
Osborne, William B. 3,021,925.

Gustin-Bacon Mfg. Co.: *See*—
Higgins, Lee J., Jr. 3,022,020.

Gutzwiller, Ernst, to Saul & Co., as nominee of Fidelity Union Trust Co., executive trustee under Sandoz Trust. Pigment dyestuffs from 1-N-(β-1'-benzanthronyl)aminoanthraquinones by acid condensing agents. 3,022,307, 2–20–62, Cl. 260—274.

Guyer, Walter R. F., and E. Arundale, to Esso Research and Engineering Co. Platinum-alumina catalyst containing added aluminum chloride. 3,022,252, 2–20–62, Cl. 252—442.

Gygax, Ernest F., to Universal Match Corp. Devices for producing air screens. 3,021,775, 2–20–62, Cl. 98—36.

Hackley, Reginald A., and R. L. Harvey, to Radio Corp. of America. Ferrospinel body having integral metallic surface layer. 3,022,195, 2–20–62, Cl. 117—123.

Hagan Chemicals & Controls, Inc.: *See*—
Hatch, George B. 3,022,133.

Haggerty, James D. Floating support. 3,021,536, 2–20–62, Cl. 9—11.

Hahn, Harold G., to The Dow Chemical Co. Coating of shaped articles. 3,022,198, 2–20–62, Cl. 117—138.8.

Hall, Don F.: *See*—
Chisholm, Douglas S., and Hall. 3,021,562.

Hall, Marchand B., D. O. Anderson, Jr., and E. Staron, to Acme Steel Co. Strapping tool. 3,021,876, 2–20–62, Cl. 140—93.4.

Hall, Ralph: *See*—
Koerner, Ernest C., Hall, and Smith. 3,022,200.

Hallamore, Klm, and B. E. Carlson, to Don Baxter, Inc. Portable anesthesia apparatus. 3,021,840, 2–20–62, Cl. 128—188.

Halliburton Co.: *See*—
Huddleston, Richard H., Jr. 3,022,489.

Halm Instrument Co., Inc.: *See*—
Lyon, Floyd A., and Aronson. 3,021,874.

Halstead, Calvert B.: *See*—
Guest, Howard R., Kiff, and Halstead. 3,022,273.

Hamilton, Donald A., to Don Baxter, Inc. Needle package. 3,021,942, 2–20–62, Cl. 206—43.

Hamilton, Edgar H.: *See*—
Cleek, Given W., and Hamilton. 3,022,182.

Hamilton, James S., to Potdevin Machine Co. Manufacture of bags. 3,021,767, 2–20–62, Cl. 93—35.

Hamilton Mfg. Co.: *See*—
Anderson, Lehman E. 3,021,605.

Hamilton, William S., and B. L. Hinkle, to E. I. du Pont de Nemours and Co. Apparatus for casting film. 3,021,560, 2–20–62, Cl. 18—15.

Hampton, William B.: *See*—
Marnett, Lawrence F., and Hampton. 3,021,800.

Handley, Harold E., to Economy Governor Co. Safety control system for fluid distribution and apparatus. 3,021,866, 2–20–62, Cl. 137—458.

Hanley, George P.: *See*—
De Fezzy, Albert, Hanley, Kenyon, and Peak. 3,021,826.

Hanna, John E.: *See*—
Peake, Clyde C., and Hanna. 3,021,969.

Hansen, Jay M., and Z. Atamian, to Hughes Aircraft Co. Self-seating contact head for magnetic memory drum. 3,022,494, 2–20–62, Cl. 340—174.1.

Hanysz, Eugene A.: *See*—
Chapman, Frederick W., Hanysz, Weller, and Martin. 3,022,451.

Happe, Reynold, to Diehl Mfg. Co. Spindle locking means for portable tools. 3,021,723, 2–20–62, Cl. 74—527.

Harders, Fritz, to Dortmund-Horder Huttenunion Aktiengesellschaft. Apparatus for treating metal melts. 3,022,059, 2–20–62, Cl. 266—34.

Hardman, Albert F., to The Goodyear Tire & Rubber Co. Method of preparing sulfenamides. 3,022,300, 2–20–62, Cl. 260—247.1.

Hargrave, John A. Diaper washer. 3,021,528, 2–20–62, Cl. 4—1.

Harris, Gerald R., ½ to J. A. Tod and ¼ to C. Hornung. Device for placing plastic clips on bags. 3,021,654, 2–20–62, Cl. 53—138.

Harris-Intertype Corp.: *See*—
Weidman, William H. 3,022,068.

Harris, Lee M.: *See*—
Soper, La Vern G., and Harris. 3,022,411.

Harris Transducer Corp., The: *See*—
Harris, Wilbur T. 3,022,487.

Harris, Wilbur T., to The Harris Transducer Corp. Electromagnetic transducer. 3,022,487, 2–20–62, Cl. 340—12.

Harris, William H., to Scovill Mfg. Co. Lipstick container. 3,021,946, 2–20–62, Cl. 206—56.

Hart, James L., to Phillips Petroleum Co. Uranium recovery process. 3,022,135, 2–20–62, Cl. 23—14.5.

Hartke, David H.: *See*—
Alrich, John C., and Hartke. 3,022,006.

Harvey, Edward E. Boat lift. 3,021,965, 2–20–62, Cl. 214—1.

Harvey, Robert L.: *See*—
Hackley, Reginald A., and Harvey. 3,022,195.

Hatch, Albert J.: *See*—
Ulrich, Aaron J., Butler, and Hatch. 3,022,236.

Hatch, George B., to Hagan Chemicals & Controls, Inc. Methods of inhibiting the pitting of iron and steel. 3,022,133, 2–20–62, Cl. 21—2.7.

Haueisen, Batist R. Coating scratch resistance indicator. 3,021,707, 2–20–62, Cl. 73—150.

Hauptmann, Karl H., and K. Zeile, to C. H. Boehringer Sohn. Process for the separation of genins from glycosides. 3,022,294, 2–20–62, Cl. 260—239.55.

Hause, Gilbert K.: *See*—
Kelley, Oliver K., and Hause. 3,021,727.

Hause, Gilbert K., to General Motors Corp. Transmission. 3,021,726, 2–20–62, Cl. 74—677.

Hauskama, Elmer J. Rear view mirror anti-glare shield. 3,022,109, 2–20–62, Cl. 296—97.

Hausted, Ray K., to Simmons Co. Adjustable bed rails. 3,021,534, 2–20–62, Cl. 5—331.

Haviland, Girard S., to The Jacobs Mfg. Co. Collet. 3,022,082, 2–20–62, Cl. 279—1.

Hayba, Franklin P., and R. F. Hotaling, to Crescent Metal Products, Inc. Latching mechanism. 3,021,795, 2–20–62, Cl. 104—48.

Hayes, Brice E. Track lining scope. 3,021,601, 2–20–62, Cl. 33—60.

Hayward, John T. Submergible drilling barge with hull protective devices. 3,021,680, 2–20–62, Cl. 61—46.5.

Heath, Carl E., Jr., to Esso Research and Engineering Co. Radiation methylation of unsaturated hydrocarbons. 3,022,237, 2–20–62, Cl. 204—162.

Hebbel, Konrad: *See*—
Heckelmann, Karlheinz, and Hebbel. 3,022,169.

Heckelmann, Karlheinz, and K. Hebbel, to Agfa Aktiengesellschaft. Matting of photographic layers. 3,022,169, 2–20–62, Cl. 96—67.

Heden, Carl G., to Getinge Mekaniska Verkstads Aktiebolag. Cultivation plant. 3,022,229, 2–20–62, Cl. 195—142.

Hegyi, Moses, to Borg-Warner Corp. Coating thickness control mechanism. 3,022,011, 2–20–62, Cl. 239—97.

Heimann-Troslen, Klaus: *See*—
Fernholz, Hans, Ruths, and Heimann-Troslen. 3,022,342.

Heininger, Samuel A., and G. H. Birum, to Monsanto Chemical Co. Thio-substituted haloalkaneamides. 3,022,344, 2–20–62, Cl. 260—558.

Heintzmann, Hans F., to Bochumer Eisenhutte Heintzmann & Co. Flanged trough sections for support structures. 3,022,100, 2–20–62, Cl. 287—103.

Heinze, Kurt: *See*—
Hintze, Klaus, and Heinze. 3,021,773.

Heisler, Harold, to Midwest Folding Products Mfg. Corp. Foldable stage. 3,021,575, 2–20–62, Cl. 20—1.123.

Henchert, John, to Continental Can Co., Inc. Method of making a tear strip can body. 3,021,805, 2–20–62, Cl. 113—120.

Henningsson, Thom L., to Aktiebolaget Vabix. Radiator receivable in a wall recess. 3,022,048, 2–20–62, Cl. 257—136.

Hennis, Henry E., and E. H. Rosenbrock, to The Dow Chemical Co. Scent composition. 3,022,222, 2–20–62, Cl. 167—94.

Henry, James J., to Conch International Methane Ltd. Ship. 3,021,808, 2–20–62, Cl. 114—74.

Henslee, Lewis W., Jr.: *See*—
Le Blanc, Carrol P., and Henslee. 3,022,244.

Henson, Harry H. Cleaning device having a detachable handle. 3,021,547, 2–20–62, Cl. 15—145.

Henss, Heinrich, to Vdo Tachometer Werke, Adolph Schindling G.m.b.H. Control panel for measuring instruments. 3,022,447, 2–20–62, Cl. 317—99.

Hercules Powder Co.: *See*—
Borel, Eric A. 3,022,223.
Borel, Eric A. 3,022,224.

Hermes Landbouwmachinefabriek & de Vries N.V.: *See*—
De Vries, Siebren. 3,021,656.

Herrmann, Oskar, to Patent-Treuhand-Gesellschaft fur Elektrische Glühlampen m.b.H. Exhaust machine for lamp and radio bulbs and the like. 3,021,878, 2–20–62, Cl. 141—65.

Herron, Robert H., G. C. Reed, and D. J. Roth, to The Bendix Corp. Iron-molybdenum sintered powdered metal matrix. 3,021,592, 2–20–62, Cl. 29—182.5.

Herz, Josef E.: *See*—
Fried, Josef, and Herz. 3,022,296.

Herzberg, Horst: *See*—
Orthner, Ludwig Herzberg, and Frey. 3,022,263.
Orthner, Ludwig, Herzberg, and Landauer. 3,022,276.

Hester, Dwight H. Bottle top drinking cup. 3,021,977, 2–20–62, Cl. 220—90.4.

Hetzler, Lewis R., and L. J. Sheldrake, to General Motors Corp. Regulator circuit for generators. 3,022,455, 2–20–62, Cl. 322—25.

Hetzler, Lewis R.: *See*—
Larson, Robert L., and Hetzler. 3,022,456.

Hevi-Duty Electric Co.: *See*—
Kusko, Alexander. 3,022,426.

Hewitt, Ellis E., to Westinghouse Air Brake Co. Single pipe brake control system for automotive trailers. 3,022,116, 2–20–62 Cl. 303—28.

Hewitt, Ellis E., to Westinghouse Air Brake Co. Brake control apparatus with quick service means. 3,022,117, 2–20–62, Cl. 303—39.

Higgins, Lee J., Jr., to Gustin-Bacon Mfg. Co. Fiber drawing apparatus. 3,022,020, 2–20–62, Cl. 242—18.

Hill, Dale E.: *See*—
Williams, Forrest V., Ruehrwein, and Hill. 3,022,452.

Hill, Edward G., and J. X. Phillips, to Kelsey-Hayes Co. Motor vehicle braking system and control means therefor. 3,022,115, 2–20–62 Cl. 303—24.

Hill, John H., to Wildman Jacquard Co. Method of knitting a two faced pile fabric. 3,021,698, 2–20–62, Cl. 66—9.

Hill, Richard L.: *See*—
Park, William R. R., and Hill. 3,022,178.

Hinge, George, Baby's bath. 3,021,531, 2–20–62, Cl. 4—177.

Hinkle, Barton L.: *See*—
Hamilton, William S., and Hinkle. 3,021,560.

Hintze, Klaus, and K. Heinze, to VEB Kamera- und Kinowerke Dresden. Photographic cameras with reciprocating operating handle. 3,021,773, 2–20–62, Cl. 95—31.

Hobart Mfg. Co., The: *See*—
Focht, Ronald E. 3,021,988.

Hochstein, Francis A.: *See*—
Tanner, Fred W., Jr., Hochstein, and Murat. 3,022,347.

Hoffman, Norman A. Car top tent. 3,021,852, 2–20–62, Cl. 135—1.

Hoffman-Allen Corp.: *See*—
Allen, Albert S. 3,021,954.

Hoffman Electronics Corp.: *See*—
Regnier, Norman J. 3,022,477.
Ross, Bernd. 3,021,754.

Hoffmann-La Roche Inc.: *See*—
Goldberg, Moses W., and Teitel. 3,022,301.

Högedal, Sven A., to Evers & Co. Aktiebolag. Hinge devices. 3,021,555, 2–20–62, Cl. 16—175.

Hogg, James C., and R. L. Pfaff, to West Point Mfg. Co. Quill inspection system. 3,021,949, 2–20–62, Cl. 209—75.

Holley Carburetor Co.: *See*—
Fleming, Robert S., Cowles, and Ensinger. 3,021,820.
Frank, Robert K. 3,021,828.

Hollister, Allen R., to Pratt & Whitney Co., Inc. Pneumatic gaging device. 3,021,705, 2–20–62, Cl. 73—37.9.

Holt, Edwin L. Water ski and tow line storage rack and boat boarding ladder. 3,021,917, 2–20–62, Cl. 182—95.

Holt, William M., to Lockheed Aircraft Corp. Magnetic separator. 3,021,951, 2–20–62, Cl. 209—221.

Holz, Harold O., to Massey-Ferguson Inc. Friction clutch mechanism. 3,021,931, 2–20–62, Cl. 192—48.

Hönger, Guido, to Schweiz. Gasapparatefabrik Solothurn. Radiating gas burner. 3,021,893, 2–20–62, Cl. 158—116.

Hooker Chemical Corp.: *See*—
Nelson, Samuel J. 3,022,277.

Hooven, Frederick J., to American Metal Products Co. Vehicle steering mechanism. 3,021,721, 2–20–62, Cl. 74—496.

Hopkins, Frank L., and H. K. Fox, to Bemis Bro. Bag Co. Conveyors. 3,021,939, 2–20–62, Cl. 198—131.

Hopper, James L.: *See*—
Bailey, John M., Engelking, Hopper, and Jero. 3,022,232.

Hornung, Claytus: *See*—
Harris, Gerald R. 3,021,654.

Horowitz, Carl, and M. Mendelsohn, to Yardney International Corp. Separator for electric batteries. 3,022,367, 2–20–62, Cl. 136—146.

Hostettler, Fritz: *See*—
Barnes, Robert K., McLaughlin, and Hostettler. 3,022,256.

Horvitz, Howard J., to Pre-Mix Corp. Colored mortar display. 3,021,613, 2–20–62, Cl. 35—16.

Hoshino, Yasushi, M. Sato, M. Namikawa, and S. Tochihara, to Tokyo Denki Kagaku Kogyo Kabushiki Kaisha. Magnetic record sheet for a magnetic recording and reading apparatus. 3,022,078, 2–20–62, Cl. 274—41.4.

Hoshino, Yasushi, M. Namikawa, and S. Tochihara. Transferable conting magnetic film for producing magnetic recording sheets. 3,022,079, 2–20–62, Cl. 274—41.4.

Hotaling, Robert F.: *See*—
Hayba, Franklin P., and Hotaling. 3,021,795.

Houdaille Industries, Inc.: *See*—
Ramsey, Rollin D. 3,021,822.

Houser, Philip H., to General Electric Co. Treating agent dispenser system for laundry machines. 3,021,702, 2–20–62, Cl. 68—207.

Houston Fearless Corp.: *See*—
Allen, Robert D. 3,022,086.

Howard, Bernard, to Mite Corp. Display transmitter. 3,022,376, 2–20–62, Cl. 178—81.

Howard, Carlton J., and E. W. Sobolewski, to Allied Chemical Corp. Production of titanium metal. 3,022,159, 2–20–62, Cl. 75—84.5.

Hower, John, Jr.: *See*—
Frederickson, Arman F., Hower, and Reynolds. 3,022,140.

Hoyt, William M. Emergency fuel feeding system for airplanes. 3,022,053, 2–20–62, Cl. 261—18.

Hrudel, Joseph R., and J. C. Cline, to The Dow Chemical Co. Counterforce initiation. 3,021,785, 2–20–62, Cl. 102—24.

Huber, Melvin L.: *See*—
Bennett, Ovell F., Huber, and Smiley. 3,022,320.

Huddleston, Richard H., Jr., to Halliburton Co. Means and techniques for indicating the ratio of two variables or the reciprocal of one variable. 3,022,489, 2–20–62, Cl. 340—15.

Hudson Pulp & Paper Corp.: *See*—
Mossor, George W. 3,021,766.

Huet, Raymond J., to United States Steel Corp. Method of drawing wire and a lubricant therefor. 3,021,941, 2–20–62, Cl. 205—21.

Huffman, Harold W.: *See*—
Flinchbaugh, Rodman F., Huffman, and Sands. 3,022,170.

Huffman, Kathryn E. V. Support. 3,021,637, 2–20–62, Cl. 45—57.

Hugel, Robert, and A. Pasetti, to Montecatini Societa Generale per l'Industria Minerraria e Chimica. Preparation of aliphatic-N-chloro-N-alkyl-amines. 3,022,346, 2–20–62, Cl. 260—561.

Hughes Aircraft Co.: *See*—
Blasberg, Lawrence A., Perry, and Saltzman. 3,022,475.
Goebels, Frank J., Jr., and Kelly. 3,022,506.
Hansen, Jay M., and Atamian. 3,022,494.

Hughes, Norman J., to United-Carr Fastener Corp. Method of skiving a T-nut. 3,021,537, 2–20–62, Cl. 10—86.

Hullen, Hermann, to Maschinenfabrik Buckau R. Wolf Aktiengesellschaft. Method and apparatus for briquetting coal. 3,022,146, 2–20–62, Cl. 44—13.

Hund, Franz, to Farbenfabriken Bayer Aktiengesellschaft. Mixed phases with a rutile or polyrutile structure. 3,022,186, 2–20–62, Cl. 106—300.

Hunt Foods and Industries, Inc.: *See*—
Moore, Thomas B. 3,021,944.

Huntington, Morgan G., to Pyromet Corp. Method for continuous hearth refining of steel and beneficiation of ores of ferro alloys. 3,022,157, 2–20–62, Cl. 75—30.

Huseman, Martin. Gauge attachment for combines. 3,021,660, 2–20–62, Cl. 56—210.

Hutchinson, Archibald D. L. Movable body on a truck frame. 3,022,111, 2–20–62, Cl. 298—14.

Hutchinson, William M., and C. G. Long, to Phillips Petroleum Co. Manufacture of solid propellant. 3,022,206, 2–20–62, Cl. 149—60.

Hyatt, Donald R., to Worthington Corp. Loudness indicator. 3,021,814, 2–20–62, Cl. 116—133.

Hyde, Thomas J., to E. I. du Pont de Nemours and Co. Modified glycidyl methacrylate compositions. 3,022,262, 2–20–62, Cl. 260—43.

Hyink, Roy, to Cutler-Hammer, Inc. Alternating current electromagnetic device. 3,022,449, 2–20–62, Cl. 317—123.

Hyler, Loiell L. Earth-moving apparatus. 3,021,624, 2–20–62, Cl. 37—129.

Hymatic Engineering Co. Ltd., The: *See*—
McInroy, John. 3,021,683.

Hyson, Archibald M.: *See*—
Armitage, John R., and Hyson. 3,022,268.

Illinois Tool Works: *See*—
Rayburn, Charles C. 3,022,369.

Illinois Tool Works Inc.: *See*—
Stern, William. 3,021,979.

Imperial-Eastman Corp.: *See*—
Jackson, Harold E., and Moss. 3,021,571.

Imperial Foam Rubber Corp.: *See*—
Robbins, Ralph. 3,021,649.

Indugas, Gesellschaft fur industrielle Gasverwendung m.b.H.: *See*—
Schmidt, Theodor, and Wilde. 3,022,057.

Inland Steel Co.: *See*—
Klygis, Mindaugas J. 3,022,103.

Institute of Textile Technology: *See*—
Fornes, Gaston G. 3,021,664.

Institutional Industries, Inc.: *See*—
Mize, William E. 3,021,889.

International Business Machines Corp.: *See*—
Cadwallader, Robert H. 3,021,938.
Dickinson, Wesley E. 3,022,005.
Rosenberger, Gerald B., and Johnson. 3,022,468.

International Paper Co.: *See*—
Ford, Michael J. 3,021,897.

International Typographical Union of North America: *See*—
Brewer, Claire N. 3,021,998.

Ireland, George L. Auxiliary telephone cradle. 3,022,386, 2–20–62, Cl. 179—146.

Irish, Charles G., Jr., to Olin Mathieson Chemical Corp. Detonator device. 3,022,446, 2–20–62, Cl. 317—80.

Irish, Robert G.: *See*—
Osborne, William B. 3,021,925.

Isaac, Nadine M.: *See*—
Fields, Paul R., and Isaac. 3,022,134.

Isley, Arther L. Tobacco hand opener. 3,021,848, 2–20–62, Cl. 131—130.

Jackson, Harold E., and T. F. Moss, to Imperial-Eastman Corp. Coupling for plastic tubes. 3,021,571, 2–20–62, Cl. 18—56.

Jackson, John: *See*—
Graulig, Oskar, and Jackson. 3,021,768.

Jackson, Paul S., to W. F. and John Barnes Co. Punch press with die holder adjusting and locking means. 3,021,742, 2–20–62, Cl. 83—700.

Jacobs, Lester G., to Birkenwald, Inc. Air curtain reach-in display cooler. 3,021,691, 2–20–62, Cl. 62—256.

Jacobs Mfg. Co., The: *See*—
Haviland, Girard S. 3,022,082.

James, George R., to Chemical Construction Corp. Oil quench process for partial oxidation of hydrocarbon gases. 3,022,148, 2–20–62, Cl. 48—215.

Jansen, Jacob E., and H. J. Kehe, to The B. F. Goodrich Co. Deterioration retarders for rubber and compositions comprising the same. 3,022,269, 2–20–62, Cl. 260—45.95.

Jaspert, William B.: *See*—
Sloan, Theodore H. 3,021,648.

Jedlicka, Helmut. Securing threaded connections. 3,022,197, 2–20–62, Cl. 117—132.

Jeffrey Mfg. Co., The: *See*—
Knight, Lloyd K. 3,022,018.
Lowry, John A. 3,021,957.

Jenkins, David M., and W. M. De Crease, to Lord Mfg. Co. Coating and adhesive composition, method and product. 3,022,186, 2–20–62, Cl. 117—127.

Jenkins, George H., III: *See*—
Cone, Irwin C., and Jenkins. 3,022,039.

Jenner, Edward L., to E. I. du Pont de Nemours and Co. Preparation of organic dihalides. 3,022,358, 2–20–62, Cl. 260—654.

Jennings, William A., to Economy Forms Corp. Grade strip support. 3,021,582, 2–20–62, Cl. 24—81.

Jensen, James L., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,022,427, 2–20–62, Cl. 307—57.

Jero, John P.: *See*—
Bailey, John M., Engelking, Hopper, and Jero. 3,022,232.

Jessop, Gilbert, to Cambridge Instrument Co., Inc. Method and apparatus for measurement of dissolved oxygen. 3,022,241, 2–20–62, Cl. 204—195.

Joest, Herbert: *See*—
Sennewald, Kurt, Dobek, and Joest. 3,022,336.

Johns, Robert A., to Belle City Malleable Iron Co. Digger teeth for excavators and the like. 3,021,627, 2–20–62, Cl. 37—142.

Johns, William H., and A. L. Stoeckel, to United States Steel Corp. Apparatus for twisting barbed wire. 3,021,872, 2–20–62, Cl. 140—60.

Johnson, Eldon A., and J. M. White, to ACF Industries Inc. Fuel pump diaphragm mounting. 3,021,792, 2–20–62, Cl. 103—150.

Johnson, James H., to Olin Mathieson Chemical Corp. Firearms extractor-ejector assembly. 3,021,634, 2–20–62, Cl. 42—25.

Johnson, John H.: *See*—
Fields, Joseph E., and Johnson. 3,022,261.

Johnson, Oliver W., Jr.: *See*—
Rosenberger, Gerald B., and Johnson. 3,022,468.

Johnson, Ralph E., to The Singer Mfg. Co. Spool winding mechanism for sewing machines. 3,021,801, 2–20–62, Cl. 112—218.

Johnson, Wallace C., to Arcos Corp. Process and apparatus for arc welding. 3,022,413, 2–20–62, Cl. 219—73.

Jones, Byron M., to The Louis Allis Co. Direct current speed drive system. 3,022,453, 2–20–62, Cl. 318—154.

Jones, Clarence S.: *See*—
Kleist, Robert A., and Jones. 3,022,492.

Jones, Rufus V., and J. N. Scott, Jr., to Phillips Petroleum Co. Liquid diene polymer-olefin/SO_2 composition and preparation of thermoset cellular product therefrom. 3,022,254, 2–20–62, Cl. 260—2.5.

Joy Mfg. Co.: *See*—
Grundmann, John F. 3,021,739.

Joyce, John, to Purolator Products, Inc. Filter unit with restrictor means. 3,021,955, 2–20–62, Cl. 210—132.

Jurist, Alfred E., to Olin Mathieson Chemical Corp. Procaine penicillin production. 3,022,290, 2–20–62, Cl. 260—239.1.

Kaat, Herbert W., to The American Crucible Products Co. Submersible pump. 3,021,788, 2–20–62, Cl. 103—25.

Kaiser Aluminum & Chemical Corp.: *See*—
Duskey, Edmund L. 3,021,960.

Kalfadelis, Charles D., and D. H. Meyer, to Standard Oil Co. Catalytic esterification of terephthalic acid. 3,022,333, 2–20–62, Cl. 260—475.

Kalle Aktiengesellschaft: *See*—
Brandt, Wilhelm. 3,022,192.

Kallfelz, Alois J., to Allied Chemical Corp. Manufacture of metallic titanium, 3,022,158, 2–20–62, Cl. 75—84.5.

Kanda, Frank A.: *See*—
Clark, Charles C., Kanda, and King. 3,022,138.
Clark, Charles C., Kanda, and King. 3,022,139.

Kane, Garold A.: *See*—
Bauer, Myron J., Kane, Neuman, and Scheurich. 3,022,031.

Kangas, Pell: *See*—
Seniff, Russell W., Fracalossi, and Kangas. 3,022,097.

Kanner Leather Goods Corp.: *See*—
Kanner, Seymour, and Sonkin. 3,021,883.

Kanner, Seymour, and B. Sonkin, to Kanner Leather Goods Corp. Brief case construction. 3,021,883, 2–20–62, Cl. 150—1.6.

Kappeler, Hans: *See*—
Tschumi, Otto, Kappeler, Blöchlinger, and Zimmermann. 3,022,493.

Kapusta, Stanley A.: *See*—
Poelvoorde, Clement C., and Kapusta. 3,021,921.

Karchenes, George, to M. May. Reflecting standard with retractable legs. 3,021,755, 2–20–62, Cl. 88—79.

Karlak, Robert F.: *See*—
Quinn, Ross A., and Karlak. 3,022,201.

Karrer, Sebastian: *See*—
Fritts, Robert W., and Karrer. 3,022,361.

Kasdorf, Earl W., and R. T. Fujoka, to Manning, Maxwell & Moore Inc. Crane. 3,021,963, 2–20–62, Cl. 212—128.

Kasper, Klaus B., to E. I. du Pont de Nemours and Co. Purification of fluorocarbons. 3,022,357, 2–20–62, Cl. 260—653.3.

Katterjohn, Charles M. Nestable stacking tray. 3,021,959, 2–20–62, Cl. 211—126.

Katz, Leon: *See*—
Schmidt, Harold N., Tullsen, Katz, and Lytle. 3,022,299.

Katzor, Karl, to American Messer Corp. Apparatus for guiding a photoelectric cell sensor in a circular path of adjustable radius. 3,021,598, 2–20–62, Cl. 33—27.

Kauer, Kenneth C.: *See*—
Tolkmith, Henry, Slagh, and Kauer. 3,022,329.

Keahey, Sammie G., to United States of America, Navy. Endless cable capstan drive launcher. 3,022,027, 2–20–62, Cl. 244—63.

Keays, Stanley K.: *See*—
Smyth, Henry L. R., Makow, and Keays. 3,022,418.

Kehe, Henry J.: *See*—
Jansen, Jacob E., and Kehe. 3,022,269.

Kehoe, James W., to The Shelby Salesbook Co. Double stud card set. 3,022,094, 2–20–62, Cl. 282—22.

Keiper, Francis P., Jr., to Philco Corp. Frequency modulation detector system. 3,022,462, 2–20–62, Cl. 329—126.

Keithahn, Julian D., to Baker Oil Tools, Inc. Control apparatus for subsurface well tools. 3,021,902, 2–20–62, Cl. 166—237.

Kelley, Oliver K., and G. K. Hause, to General Motors Corp. Triple turbine bus and truck transmissions. 3,021,727, 2–20–62, Cl. 74—677.

Kelly, Kenneth C.: *See*—
Goebels, Frank J., Jr., and Kelly. 3,022,506.

Kelsey-Hayes Co.: *See*—
Hill, Edward G., and Phillips. 3,022,115.

Kemp, Elmo C. Insert for automobile springs. 3,022,062, 2–20–62, Cl. 267—49.

Kemp, William G. Acoustical unit with attenuation means. 3,021,915, 2–20–62, Cl. 181—33.

Kemp, William G. Reinforced acoustical unit. 3,021,916, 2–20–62, Cl. 181—33.

Kempermann, Theo: *See*—
Lober, Friedrich, Roos, and Kempermann. 3,022,275.

Kennametal Inc.: *See*—
McKenna, Philip M. 3,022,017.

Kennedy, Manley B., and L. B. Alexander, to American Can Co. Carton lock. 3,021,993, 2–20–62, Cl. 229—36.

Kennedy, Olive M.: *See*—
Kristek, George E. 3,021,638.

Kennedy, Ted, Jr. Detachable casing spacer. 3,022,085, 2–20–62, Cl. 280—12.

Kennedy, Walter W., to Barber-Colman Co. Method and apparatus for ventilating laboratory fume hoods. 3,021,776, 2–20–62, Cl. 98—115.

Kent, Stephen D.: *See*—
Crane, Samuel P., and Kent. 3,022,063.

Kenyon, William S.: *See*—
De Fezzy, Albert, Hanley, Kenyon, and Penk. 3,021,826.

Kerr, Ralph W., to Corn Products Co. Starch modification with polyborates. 3,022,184, 2–20–62, Cl. 106—210.

Kester, Ralph C. Drum holder. 3,021,744, 2–20–62, Cl. 84—421.

Kester, Robert C., to General Motors Corp. Dynamoelectric machine brushholder means. 3,022,434, 2–20–62, Cl. 310—246.

Keys, Robert L.: *See*—
Graham, Harry C. 3,021,772.

Kidde, Walter, & Co., Inc.: *See*—
Bagno, Samuel M. 3,022,496.
Cline, Robert A., and Levy. 3,022,390.

Kiekens-Verweiwind-Holland (Kiekens-Whirlwind-Holland) KWH N.V.: *See*—
Bruinsma, Josephus F. D. 3,022,013.

Kiff, Ben W.: *See*—
Guest, Howard R., Kiff, and Halstead. 3,022,273.

Kilroy, Thomas F., to Pittsburgh Plate Glass Co. Battery separator and manufacture thereof. 3,022,366, 2–20–62, Cl. 136—145.

King, Aden J.: *See*—
Clark, Charles C., Kanda, and King. 3,022,138.
Clark, Charles C., Kanda, and King. 3,022,139.

King, Donald M. Chains for use in conveyor systems. 3,021,718, 2–20–62, Cl. 74—254.

King-Seeley Thermos Co.: *See*—
Tyner, Warren C. 3,022,497.

Kinzinger, Walter C.: *See*—
Slenker, Stephen, and Kinzinger. 3,022,465.

Kirk, David B., to Moore Products Co. Fluid pressure transmitters. 3,021,858, 2–20–62, Cl. 137—85.

Kirk, Robert A., to Eastman Kodak Co. Finder signal for photographic cameras. 3,021,771, 2–20–62, Cl. 95—10.

Kitchen, Morrison G., and D. J. Schaffer, to The Bendix Corp. Acceleration limiting device for use with hydromechanical fuel metering systems. 3,021,891, 2–20–62, Cl. 158—36.4.

Kleinschmidt, Roger F.: *See*—
Osborn, Charles W., and Kleinschmidt. 3,022,152.

Kleist, Robert A., and C. S. Jones, to General Precision, Inc. Interrogator-responder signalling system. 3,022,492, 2–20–62, Cl. 340—171.

Klockgether, Helfried: *See*—
Ossenbrunner, Armin, and Klockgether. 3,022,171.

Klygis, Mindaugas J., to Inland Steel Co. Locking ring for a removable drum head. 3,022,103, 2–20–62, Cl. 292—256.67.

Knapp, Rufus R.: *See*—
Selby, Ernest E., and Knapp. 3,022,247.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Sennewald, Kurt, Born, Erpenbach, and Dobek. 3,022,332.
Sennewald, Kurt, Dobek, and Joest. 3,022,336.

Knight, Lloyd K., to The Jeffrey Mfg. Co. Renewable tip hammer assembly. 3,022,018, 2–20–62, Cl. 241—197.

Knoll, Joseph, E. Bestel, and H. Stolp, to Allgemeine Elektricitats-Gesellschaft. Screw feed and delivery means for a power-operated screw driver. 3,021,882, 2–20–62, Cl. 144—32.

Knörr, Fritz: *See*—
Enk, Eduard, and Knörr. 3,022,337.
Enk, Eduard, and Knörr. 3,022,338.
Enk, Eduard, and Knörr. 3,022,339.

Knox, Floris B. Oil well pumping rod shock absorber. 3,021,794, 2–20–62, Cl. 103—202.

Kober, Ehrenfried: *See*—
Grundmann, Christoph J., and Kober. 3,022,303.

Koch, Arthur R., to General Electric Co. Window assembly. 3,022,476, 2–20–62, Cl. 333—98.

Koch, Raymond A. Non-slip safety sole attachment for footwear. 3,021,617, 2–20–62, Cl. 36—7.6.

Koerner, Ernest C., R. Hall, and E. L. Smith, to Phelps Dodge Copper Products Corp. Magnet wire and method of making same. 3,022,200, 2–20–62, Cl. 117—218.

Kohorst, Joseph. Heater. 3,021,833, 2–20–62, Cl. 126—360.

Kolene Corp.: *See*—
Muller, Johannes, and Albrecht. 3,022,204.

Kolflat, Alf. Safety device for and method of protecting nuclear power plants. 3,022,238, 2–20–62, Cl. 204—193.2.

Kosatka, Thomas O., to Victor Mfg. & Gasket Co. Self-contained sealing device. 3,022,080, 2–20–62, Cl. 277—36.

Kosatka, Thomas O., to Victor Mfg. & Gasket Co. Self-contained fluid seal. 3,022,081, 2–20–62, Cl. 277—39.

Kotzebue, Meinhard H., to Gasoline Plant Construction Corp. Fractionating apparatus. 3,022,054, 2–20–62, Cl. 261—114.

Kovach, Julius W., to American Radiator & Standard Sanitary Corp. Non-thermal mixing valve. 3,021,868, 2–20–62, Cl. 137—607.

Krahn, Donald J. Barn floor cleaner. 3,021,819, 2–20–62, Cl. 119—22.

Kramcsak, Michael, Jr., to The Bassick Co. Caster glide. 3,021,551, 2–20–62, Cl. 16—42.

Krause, Chas. A., Milling Co.: *See*—
Wimmer, Ernest L., and Devitt. 3,022,174

Krauss & Reichert, Spezialmaschinenfabrik und Apparatebau: *See*—
Blanz, Kurt. 3,021,999.

Kristek, George E., 50% to O. M. Kennedy. Furniture leg tip. 3,021,638, 2–20–62, Cl. 45—139.

Kroger, Rudolf W. Vehicle heat exchanger for use with a refrigerator, air conditioner or the like. 3,021,690, 2–20–62, Cl. 62—238.

Krug, Johannes: *See*—
Finkener, Friedrich, Krug, Loges, and Rodewald. 3,022,161.

Kubatschka, Oswald: *See*—
Schulze, Klaus-Jürgen, and Kubatschka. 3,021,720.

Kumai, Akira: *See*—
Ohba, Seiichi, Yonezawa, and Kumai. 3,022,172.

Kusko, Alexander, to Hevi-Duty Electric Co. Regulator. 3,022,426, 2–20–62, Cl. 307—14.

Lacey, Elbert M., Jr., to Rohr Aircraft Corp. Die for metal forming. 3,021,803, 2–20–62, Cl. 113—49.

Ladish Co.: *See*—
Polanski, Frank C. 3,021,584.

La Due, George F. Car top protective cover. 3,021,894, 2–20–62, Cl. 160—23.

Lambert, Harry L., to Royal McBee Corp. Type action. 3,021,936, 2–20–62, Cl. 197—17.

Lanctot, Donald H., to Don-Lan Electronics, Inc. Microwave attenuator. 3,022,474, 2–20–62, Cl. 333—81.

Landau, Henry J., to Bell Telephone Laboratories, Inc. Signal recovery circuits. 3,022,473, 2–20–62, Cl. 333—28.

Landauer, Franz: *See*—
Orthner, Ludwig, Herzberg, and Landauer. 3,022,276.

Lang, William A.: *See*—
Cook, Raymond D., and Lang. 3,021,581.

Lang, William G., to Abiti Power & Paper Co., Ltd. Method of producing decorative wall panels with prefinished score lines. 3,022,207, 2–20–62, Cl. 154—45.9.

Lanham, William M., to Union Carbide Corp. Neutral esters of bicyclo heterocyclic phosphoric acids. 3,022,330, 2–20–62, Cl. 260—461.

Lapins, Alvin W., to Massey-Ferguson Inc. Ground working implement. 3,021,907, 2–20–62, Cl. 172—441.

La Resista Corset Co., The: *See*—
Smith, Raymond H. 3,021,845.

Large, Charles M.: *See*—
De Boer, Clarence, Eble, and Large. 3,022,220.

Larsen, Hans A. Face shield for detachable mounting on a safety helmet, and a safety helmet for use in connection with the face shield. 3,021,527, 2–20–62, Cl. 2—8.

Larsen, Mogens D. Multi-scaled slide rules. 3,022,001, 2–20–62, Cl. 235—69.

Larson, B. Frances: *See*—
Larson, Dale H. 3,021,904.

Larson, Dale H., deceased, by B. F. Larson, executrix. Bean harvester. 3,021,904, 2–20–62, Cl. 171—53.

Larson, Robert L., and L. R. Hetzler, to General Motors Corp. Motor vehicle electrical system. 3,022,456, 2–20–62, Cl. 322—28.

La Soudure Electrique Autogene, S.A.: *See*—
Danhier, Francois G. 3,022,415.

Lastnik, Abraham L. Earpad support for protective helmets. 3,021,526, 2–20–62, Cl. 2—3.

Laubach, Gerald D.: *See*—
Berg, Rudolph G., and Laubach. 3,022,295.
Berg, Rudolph G., and Laubach. 3,022,297.
Berg, Rudolph G., and Laubach. 3,022,325.

Lauck, Albert G., to Owens-Illinois Glass Co. Glass mold carrier assembly. 3,021,644, 2–20–62, Cl. 49—41.

Lawrence, Robert L., and G. A. Perry, to Corn Products Co. Process for improving the flavor of cultured milk products and the resulting product. 3,022,176, 2–20–62, Cl. 99—162.

Learning Through Seeing, Inc.: *See*—
Barnette, Caspar C. 3,021,751.

Le Blanc, Carrol P., and L. W. Henslee, Jr., to Pittsburgh Plate Glass Co. Electrolytic alkali-chlorine diaphragm cell. 3,022,244, 2–20–62, Cl. 204—266.

Le Clear, Robert L., and M. B. and R. Sleeper, to T & S Equipment Co. Automatic dockboard. 3,021,545, 2–20–62, Cl. 14—71.

Lecher, Harry A., Jr., to R. E. Dietz Co. Oscillator circuit with power transistor output stage. 3,022,467, 2–20–62, Cl. 331—74.

Leiby, David W.: *See*—
Brown, Dale H., and Leiby. 3,022,235.

Leis, Arthur F.: *See*—
Mayne, Robert A., and Leis. 3,021,591.

Lemforder Metallwarengesellschaft m.b.H.: *See*—
Reuter, Franz G. 3,022,128.

Lemoine, Georges: *See*—
Clatot, Alfred, Lemoine, and Segal. 3,021,594.

Lemon, Russell C., and R. C. Myerly, to Union Carbide Corp. Production of amines. 3,022,349, 2–20–62, Cl. 260—585.

Leonard, Stephen C.: *See*—
Gettys, Charles B., and Leonard. 3,022,486.

Lenoir, Jeannine: *See*—
Wyraud, Charles, Prettre, Tramhouze, Lenoir, Thomas, and Plurien. 3,022,187.

Le Riche, Rene P.: *See*—
Denton, Richard A., Le Riche, and Rivera. 3,021,712.

Les Laboratoires Francais de Chimiotherapie: *See*—
Muller, Georges. 3,022,309.
Muller, Georges, and Stefanovic. 3,022,324.

Les Usines de Melle (Societe Anonyme): *See*—
Colin, Pierre. 3,022,225.

Leslie, John D., to Siemens Edison Swan Ltd. Automatic selecting switches as used in automatic telephone systems. 3,022,388, 2–20–62, Cl. 200—11.

Lever Bros. Co.: *See*—
Burge, David E. 3,021,948.

Levine, Samuel W., and R. J. Autere, to Fairchild Camera and Instrument Corp. Electronic line scan and recording machine with oscillating cylinder. 3,022,373, 2–20–62, Cl. 178—6.6.

Levitt, Louis H.: *See*—
Ostroff, Harry, and Levitt. 3,021,615.

Levy, Ell: *See*—
Cline, Robert A., and Levy. 3,022,390.

Liantonio, Vito, and J. B. Minnich, to Curtiss-Wright Corp. Diaphragm construction. 3,021,859, 2-20-62, Cl. 137—101.

Libbey-Owens-Ford Glass Co.: *See*—
McCown, William E., and McAuley. 3,022,202.

Libom, Karl H., to Aktiebolaget Kerel. Wedge device for anchoring bolts in holes. 3,021,745, 2-20-62, Cl. 85—2.4.

Limberger, Walter, to Lumoprint Zindler K.G. Copying of documents. 3,021,817, 2-20-62, Cl. 118—637.

Limberger, Walter, to Lumoprint Zindler K.G. Device for developing and fixing xerographic images. 3,021,818, 2-20-62, Cl. 118—637.

Lincoln, Herbert R.: *See*—
Windsor, Meredith M., and Lincoln. 3,021,735.

Linderoth, Rodney V. Lampshades. 3,022,417, 2-20-62, Cl. 240—108.

Link-Belt Co.: *See*—
Parshall, Bert B., and Glass. 3,021,796.

Linley, Francis M., Jr., to Universal Thread Grinding Co. Thread cutting tool with dulled edges on the guide teeth portion. 3,021,538, 2-20-62, Cl. 10—111.

Lionel Corp., The: *See*—
Bonanno, Joseph L. 3,022,445.

Lippincott, Samuel B.: *See*—
Wiese, Herbert K., and Lippincott. 3,022,359.

Liquid-Controls Corp.: *See*—
Hilleter, Henry R., and Richards. 3,021,861.

Lisanke, Robert J., to Union Carbide Corp. N-(heterocyclic substituted alkylidene) aminoalkylsilicon compounds and process for producing the same. 3,022,270, 2-20-62, Cl. 260—46.5.

Litvan, Franz: *See*—
Ziegler, Erich, Rossmann, and Litvan. 3,022,317.

Lloyd, William G., and T. Alfrey, Jr., to The Dow Chemical Co. Treatment of felts. 3,022,199, 2-20-62, Cl. 117—141.

Lober, Friedrich, E. Roos, and T. Kempermann, to Farbenfabriken Bayer Aktiengesellschaft. Vulcanization accelerators. 3,022,275, 2-20-62, Cl. 260—79.

Lockheed Aircraft Corp.: *See*—
Holt, William M. 3,021,951.
Quinn, Ross A., and Karlak. 3,022,201.

Loew, Günther: *See*—
Morschel, Heinrich, and Loew. 3,022,255.

Loges, Hans: *See*—
Finkener, Friedrich, Krug, Loges, and Rodewald. 3,022,161.

Loginow, Serge: *See*—
Simpson, Charles G., and Loginow. 3,022,019.

Long, Claude G.: *See*—
Hutchinson, William M., and Long. 3,022,206.

Longstreet, Charles S., to The Bendix Corp. Nozzle area control for turbojet engines. 3,021,668, 2-20-62, Cl. 60—35.6.

Looman, Johannes, to Zahnradfabrik Friedrichshafen, Aktiengesellschaft. Apparatus for the dressing of profiled grinding disks for the grinding of helical involute spur gears. 3,021,829, 2-20-62, Cl. 125—11.

Lord Mfg. Co.: *See*—
Jenkins, David M., and De Crease. 3,022,196.

Lottridge, Neil M., Jr., and D. G. McCullough, to General Motors Corp. Ductile niobium base alloy. 3,022,163, 2-20-62, Cl. 75—174.

Low, Frank D., to General Electric Co. Dispensing mechanism. 3,021,863, 2-20-62, Cl. 137—209.

Lowry, John A., to The Jeffrey Mfg. Co. Conveying apparatus. 3,021,957, 2-20-62, Cl. 210—526.

Ludwig, William F. Tuning mechanism for drums. 3,021,743, 2-20-62, Cl. 84—419.

Lumoprint Zindler K.G.: *See*—
Limberger, Walter. 3,021,817.
Limberger, Walter. 3,021,818.

Lundsted, Lester G., to Wyandotte Chemicals Corp. Surface active polyoxyalkylene compounds having a plurality of heteric polyoxypropylene-polyoxyethylene chains. 3,022,335, 2-20-62, Cl. 260—485.

Lupfer, Dale E., to Phillips Petroleum Co. Analyzer and control system with pneumatic transducer. 3,021,679, 2-20-62, Cl. 60—102.

Lyman, Joseph. Methods and means for making molded plastic articles. 3,021,569, 2-20-62, Cl. 18—56.

Lyon, Floyd A., and T. F. Aronson, to Halm Instrument Co., Inc. Coil winding means. 3,021,874, 2-20-62, Cl. 140—92.2.

Lytle, Lawrence D.: *See*—
Schmidt, Harold N., Tullsen, Katz, and Lytle. 3,022,299.

Mack, Bernard, to Plastic-Ware Inc. Two-part molded shoe tree. 3,021,542, 2-20-62, Cl. 12—115.6.

Mack Trucks, Inc.: *See*—
Mintz, Gerald E. 3,022,088.

MacLean-Fogg Lock Nut Co.: *See*—
Oakley, Gilbert F. 3,021,799.

Mains, Gerald H., L. W. McGinnis, and J. S. Tatnall, to National Vulcanized Fibre Co. Process for strip treatment. 3,022,203, 2-20-62, Cl. 134—15.

Makow, David M.: *See*—
Smyth, Henry L. R., Makow, and Keays. 3,022,418.

Maling, George C., Jr.: *See*—
Bobb, Lloyd J., Goldman, and Maling. 3,022,377.

Malmquist, Alfred B., to E. I. du Pont de Nemours and Co. Daylight fluorescent coated fabric. 3,022,189, 2-20-62, Cl. 117—33.5.

Malone, Carl E., and J. W. Dickey, Jr. Foot exercising device. 3,022,071, 2-20-62, Cl. 272—57.

Mann, Raymond R. Photography means and method. 3,021,769, 2-20-62, Cl. 95—1.1.

Mannik, Kallis H. Devices for dispensing objects from a container. 3,021,981, 2-20-62, Cl. 221—202.

Manning, Maxwell & Moore, Inc.: *See*—
Kasdorf, Earl W., and Fujioka. 3,021,963.
Minty, John E., and Stevens. 3,021,962.

Manson, Morris, to Corax Corp. Slide brackets. 3,022,129, 2-20-62, Cl. 312—343.

Marbill Co.: *See*—
Smith, Maurice C., Jr. 3,021,572.

Marchioli, Giorgio, and G. Gremigni. Apparatus for manufacturing pipes from plastic materials. 3,021,900, 2-20-62, Cl. 162—402.

Marinovich, Eli J.: *See*—
Marinovich, Samuel G. and E. J. 3,021,888.

Marinovich, Melan J.: *See*—
Marinovich, Samuel G. and E. J. 3,021,888.

Marinovich, Samuel G., deceased (by M. J. Marinovich, special administrator), and E. J. Marinovich, to Yuba Consolidated Industries, Inc. Pipe exanding apparatus. 3,021,888, 2-20-62, Cl. 153—79.

Marnett, Lawrence F., and W. B. Hampton, to C. J. Patterson Co. Dough knockback device. 3,021,800, 2-20-62, Cl. 107—54.

Martin, Dalton W.: *See*—
Bahrs, George S., McWhorter, and Martin. 3,022,469.

Martin, Edward J.: *See*—
Chapman, Frederick W., Hanysz, Weller, and Martin. 3,022,451

Marous, Leonard F., and C. D. McCleary, to United States Rubber Co. Polymerization catalyst for vinyl chloride. 3,022,282, 2-20-62, Cl. 260—92.8.

Marsden, Herman A. Resuscitator. 3,021,836, 2-20-62, Cl. 128—29.

Marsh, De Loss L. Underwater breathing apparatus. 3,021,839, 2-20-62, Cl. 128—142.

Marsh, Roger, to Olin Mathieson Chemical Corp. Fastening device. 3,021,746, 2-20-62, Cl. 85—10.

Marshall, Edward C. to American Tag Co. Marking fowl or the like. 3,021,653, 2-20-62, Cl. 53—74.

Mårtensson, Olle, to Aktiebolaget Pharmacia. Manufacture of N,N-disubstituted amides of aryl acetic acids. 3,022,302, 2-20-62, Cl. 260—247.7.

Martin, John H. Combination drill collar and turbine driven bit. 3,021,910, 2-20-62, Cl. 175—25.

Martin, Robert L., to The Weatherproof Products Corp. Power apparatus for windows and the like. 3,022,065, 2-20-62, Cl. 268—124.

Maschinenfabrik Buckau R. Wolf Aktiengesellschaft: *See*—
Hullen, Hermann. 3,022,146.

Maschinenfabrik Schweiter A.G.: *See*—
Zollinger, Walter. 3,022,021.

Mascoli, Richard J.: *See*—
Buono, Joseph A., and Mascoli. 3,021,896.

Mason, Russell I., to General Electric Co. Modular electronic sub-assemblies and method of fabricating. 3,022,448, 2-20-62, Cl. 317—101.

Massey-Ferguson Inc.: *See*—
Bunting, Ernest V., and Rahman. 3,022,092.
Holz, Harold O. 3,021,931.
Lapins, Alvin W. 3,021,907.
Mitchell, Melville J. 3,021,658.
Newhouse, Frank J., and Meth. 3,021,659.

Maxson Electronics Corp.: *See*—
Weaver, Preston R. 3,022,393.

May, Clara L.: *See*—
May, Dewey C. 3,021,847.

May, Dewey C., ⅓ to V. F. May, and ⅓ to C. L. May. Combination package and self-lighting cigarettes. 3,021,847, 2-20-62, Cl. 131—7.

May, Harry C., to Westinghouse Air Brake Co. Locomotive brake equipment with improved vent valve and brake pipe cut-off valve interlock. 3,022,119, 2-20-62, Cl. 303—67.

May, Malcolm: *See*—
Karchenes, George. 3,021,755.

Mayhew, Raymond L.: *See*—
Grifo, Richard A., and Mayhew. 3,022,250.

Maynard, Kermit W., to Rohr Aircraft Corp. Titanium stretch forming. 3,021,887, 2-20-62, Cl. 153—48.

Mayne, Robert A., deceased (R. D. Mayne, executrix), and A. F. Leis; said Leis assor. to said Mayne. Method of making blower rotor. 3,021,591, 2-20-62, Cl. 29—156.8.

Mayne, Ruth D.: *See*—
Mayne, Robert A., and Leis. 3,021,591.

Mazeika, Albert, to Milton Mfg. Co., Inc. Anchors for use in connection with signal hose. 3,022,095, 2-20-62, Cl. 285—45.

McAuley, James W.: *See*—
McCown, William E., and McAuley. 3,022,202.

McCall, Patrick P.: *See*—
Spars, Byron G., and McCall. 3,022,245.

McCleary, Charles D.: *See*—
Marous, Leonard F. and McCleary. 3,022,282.

McCorquodale Colour Display Ltd.: *See*—
Beale, Evelyn S. L. 3,021,816.

McCown, William E., and J. W. McAuley, to Libbey-Owens-Ford Glass Co. Method of cleaning surfaces. 3,022,202, 2-20-62, Cl. 134—1.

McCullough, Douglas G.: *See*—
Lottridge, Neil M., Jr., and McCullough. 3,022,163.

McGee, Calvin C. Attachment for bulldozer or tractor. 3,021,619, 2-20-62, Cl. 37—2.

McGinnis, Leon W.: *See*—
Mains, Gerald H., McGinnis, and Tatnall. 3,022,203.

McGraw-Edison Co.: *See*—
Czech, Clifford F. 3,021,997.

McInroy, John, to The Hymatic Engineering Co. Ltd. Gas liquefiers. 3,021,683, 2-20-62, Cl. 62—42.

McKee, John R., Jr. Lap-lox fastener. 3,021,927, 2-20-62, Cl. 189—36.

McKenna, Philip M., to Kennametal Inc. Method of and apparatus for comminuting hard materials. 3,022,017, 2-20-62, Cl. 241—183.

McKeown, Patrick J., and S. I. Frann, to Sperry Rand Corp., Ford Instrument Co. Div. Polar heading adapter. 3,022,008, 2-20-62, Cl. 235—187.

McKnight, Terence C., to Pye Ltd. Crystal mounts. 3,022,431, 2-20-62, Cl. 310—9.4.

McLain, Earl A.: *See*—
Dance, Eldred L., Drisko, and McLain. 3,021,922.

McLaughlin, Robert W.: *See*—
Barnes, Robert K., McLaughlin, and Hostettler. 3,022,256.

McMaster, Elmer L., to The Dow Chemical Co. Resinous insoluble nitrogen-containing polymers derived from vinylbenzyl chloride and vinylpyridines. 3,022,253, 2-20-62, Cl. 260—2.1.

McQuain, David B.: *See*—
Berman, Elliot, and McQuain. 3,022,318.

McQuay, Inc.: *See*—
Aune, Albert W. 3,021,693.

McWhorter, Malcolm M.: *See*—
Bahrs, George S., McWhorter, and Martin. 3,022,469.

Meadows, E. B.: *See*—
Whittier, Clyde J. 3,021,622.

Medawar, André A. Safety devices for lifting appliances. 3,021,918, 2-20-62, Cl. 182—112.

Meddick, Lorrain D., to Borg-Warner Corp. Shaped charge unit for well perforators. 3,021,784, 2-20-62, Cl. 102—20.

Meinel, Karl, to Wacker-Chemie G.m.b.H. Process for the preparation of acrylonitrile copolymers. 3,022,266, 2-20-62, Cl. 260—45.5.

Meister, Ernst, and H. Bannach, to Rudolf Schluckebier & Co. Strapping apparatus. 3,021,781, 2-20-62, Cl. 100—8.

Mench, John W., J. Emerson, and M. E. Rowley, to Eastman Kodak Co. Method of preparing cellulose esters of trimellitic acid. 3,022,287, 2-20-62, Cl. 60—224.

Mendelsohn, Bernard E. Window structure. 3,021,895, 2-20-62, Cl. 160—90.

Mendelsohn, Meyer: *See*—
Horowitz, Carl, and Mendelsohn. 3,022,367.

Merlen, Monty M., to Barnes Engineering Co. Azimuth transfer system. 3,021,749, 2-20-62, Cl. 88—1.

Merrimac Research and Development Corp.: *See*—
Oliner, Arthur A. 3,022,470.

Messmer, Edwin E.: *See*—
Sylvester, John D., and Messmer. 3,021,947.

Meth, Eugene: *See*—
Newhouse, Frank J., and Meth. 3,021,659.

Metz, Jean, to General Motors Corp. Clothes washing machine and single phase induction motor therefor. 3,021,701, 2-20-62, Cl. 68—24.

Metzger, William J., to National Castings Co. Coupler operating mechanism. 3,021,964, 2-20-62, Cl. 213—167.

Meyer, Delbert H.: *See*—
Kalfadelis, Charles D., and Meyer. 3,022,333.

Michaels, Henry R., to Stewart-Warner Corp. Anticreep construction for projectiles detonated on impact. 3,021,787, 2-20-62, Cl. 102—73.

Michigan Research Laboratories, Inc., and Electro-Chem Fiber Seal Corp.: *See*—
Pattilloch, Donald K., and Polowczyk. 3,022,213.

Midland Chemical Corp.: *See*—
Berry, John M. 3,022,258.

Midland-Ross Corp.: *See*—
Dailey, William H., Jr. 3,022,056.
Rockstead, Joel B. 3,022,425.

Midwest Folding Products Mfg. Corp.: *See*—
Heisler, Harold. 3,021,575.

Mihm, Clifford H., P. F. Warner, and J. E. Duke, to Phillips Petroleum Co. Production of organic polysulfides. 3,022,351, 2-20-62, Cl. 260—608.

Mikes, Richard F.: *See*—
Smith, David C., and Mikes. 3,021,850.

Milan, David L., to Texas Instruments Inc. Ohmic contacts for silicon conductor devices and method for making. 3,021,595, 2-20-62, Cl. 29—473.1.

Milas, Nicholas A., to Research Corp. Organic peroxides and methods of making them. 3,022,352, 2-20-62, Cl. 260—610.

Miller, Alfred L., S. B. Robison, and A. J. Petro, to Esso Research and Engineering Co. Decreasing the viscosity of butyl rubber latex by treatment with anion and cation exchange resins. 3,022,260, 2-20-62, Cl. 260—29.7.

Miller, Carl A., to Economics Laboratory, Inc. Fluid injection system. 3,021,862, 2-20-62, Cl. 137—205.5.

Miller, Edgar S.: *See*—
Glickman, Samuel A., and Miller. 3,022,274.

Miller, Frederick O., ½ to L. N. Miller. Die set comprising punches operable in a direction which has an angular relationship with the direction of the ram. 3,021,741, 2-20-62, Cl. 83—618.

Miller, Guy W., to United Aircraft Corp. Compressor bleed valve. 3,022,040, 2-20-62, Cl. 251—63.

Miller, Kenneth F., to Phillips Petroleum Co. Method for bonding support rods in propellant grains. 3,021,748, 2-20-62, Cl. 86—1.

Miller, Lee A., to Monsanto Chemical Co. Carboxylatevinyl and carboxyvinyl ethers of sugars and method of preparation. 3,022,285, 2-20-62, Cl. 260—209.

Miller, Lee A., to Monsanto Chemical Co. Process for preparing carboxylatevinyl and carboxyvinyl ethers of polysaccharides. 3,022,288, 2-20-62, Cl. 260—231.

Miller, Lee A., to Monsanto Chemical Co. Novel ethylenic compounds. 3,022,293, 2-20-62, Cl. 260—239.3.

Miller, Leonidas C. Coaxial cable assembly. 3,022,368, 2-20-62, Cl. 174—15.

Miller, Louis N.: *See*—
Miller, Frederick O. 3,021,741.

Miller, Martin, Aktiengesellschaft: *See*—
Titze, Karl. 3,021,737.

Miller, Nickolas P. Dual hydraulic master cylinder and brake system. 3,021,677, 2-20-62, Cl. 60—54.6.

Miller, Raphael W. Weight lifting construction. 3,022,073, 2-20-62, Cl. 272—84.

Miller, Robert A., V. E. Munson, H. M. Owendoff, and C. M. Taris, to Bell Telephone Laobratories, Inc. Announcing system. 3,022,380, 2-20-62, Cl. 179—6.

Miller, Robert C. Method of preparing a stable liquid fertilizer from wet-process phosphoric acid. 3,022,153, 2-20-62, Cl. 71—29.

Miller, Ross J., and G. A. Noddin, to E. I. du Pont de Nemours and Co. Blasting device. 3,021,786, 2-20-62, Cl. 102—27.

Miller, Thomas F. Oil separator for refrigeration system. 3,021,689, 2-20-62, Cl. 62—192.

Millis, Edwin G., to Texas Instruments Inc. Multiple punching machine for paper tape cards etc. 3,022,200, 2-20-62, Cl. 234—114.

Millis, Edwin G., to Texas Instruments Inc. Transistor direct current motor control. 3,022,454, 2-20-62, Cl. 318—257.

Mills, Herbert E., to Mills Products, Inc. Stove door window unit. 3,021,832, 2-20-62, Cl. 126—200.

Mills Products, Inc.: *See*—
Mills, Herbert E. 3,021,832.

Milton Mfg. Co., Inc.: *See*—
Mazeika, Albert. 3,022,095.

Milton, Robert H.: *See*—
Milton, Thomas W. and R. H. 3,021,756.

Milton, Thomas W. and R. H. Rear vision mirrors. 3,021,756, 2-20-62, Cl. 88—86.

Miner, Donald B.: *See*—
Yowell, Joseph W., and Miner. 3,021,596.

Minneapolis-Honeywell Regulator Co.: *See*—
Bolstad, Luther L. 3,021,793.
Carey, William M., Jr. 3,022,428.
Jensen, James L. 3,022,427.
Sear, Arthur W., Schulz, and White. 3,022,395.

Minnesota Mining and Mfg. Co.: *See*—
Fritts, Robert W., and Karrer. 3,022,361.

Minnich, John B.: *See*—
Liantonio, Vito, and Minnich. 3,021,859.

Minty, John E., and H. C. Stevens, Jr., to Manning, Maxwell & Moore, Inc. Crane control operating mechanism. 3,021,962, 2-20-62, Cl. 212—18.

Mintz, Gerald E., to Mack Trucks, Inc. Tandem rear axle air spring suspension for vehicles. 3,022,088, 2-20-62, Cl. 280—124.

Mr. Stanley, Inc.: *See*—
Philipson, Stanley J. 3,021,618.

Mitchell, Melville J., to Massey-Ferguson Inc. Hitch structure for tractor mounted harvesters. 3,021,658, 2-20-62, Cl. 56—15.

Mite Corp.: *See*—
Howard, Bernard. 3,022,376.

Mite Pipe Ram Co.: *See*—
Orcutt, Donald B. 3,022,042.

Mitnitzky, Ingemar: *See*—
Söderbaum, Carl G., and Mitnitzky. 3,022,379.

Mize, William E., to Institutional Industries, Inc. Foldable wheel chair. 3,021,889, 2-20-62, Cl. 297—433.

Mobay Chemical Co.: *See*—
Morschel, Heinrich, and Loew. 3,022,255.

Mock, Frank C., to The Bendix Corp. Water injection system for gas turbine engines. 3,021,673, 2-20-62, Cl. 60—39.26.

Modine Mfg. Co.: *See*—
Simpelaar, Clyde S. 3,021,804.

Moffett, Robert B.: *See*—
Aspergren, Brooke D., Moffett, and Speeter. 3,022,314.

Mohr, Elisabeth: *See*—
Schramm, Gerhard, and Mohr. 3,022,227.

Möller, Waldemar, to Bodenseewerk Perkin-Elmer & Co., G.m.b.H. Stabilizing and control device for small airborne objects. 3,021,714, 2-20-62, Cl. 74—5.6.

Monaci, Avito: *See*—
Cappuccio, Vittorio, Monaci, and Bonvicini. 3,022,191.

Monitor Controller, Division of Industrial Electronics Co., Inc.: *See*—
Pukk, Erik, and Quinn. 3,022,403.

Monsanto Chemical Co.: *See*—
Calfee, John D., and Erbaugh. 3,022,278.
Cameron, Margaret D. 3,022,319.
Fields, Joseph E., and Johnson. 3,022,261.
Helminger, Samuel A., and Birum. 3,022,344.
Miller, Lee A. 3,022,285.
Miller, Lee A. 3,022,288.
Miller, Lee A. 3,022,293.
Wildi, Bernard S. 3,022,312.
Williams, Forrest V., Ruehrwein, and Hill. 3,022,452.

Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Cappuccio, Vittorio, Monaci, and Bonvicini. 3,022,191.
Hugel, Robert, and Pasetti. 3,022,346.
Ranalli, Franco. 3,021,567.

Mooney, James J., Jr.: *See*—
Tuck, Robert M., and Mooney. 3,021,676.

Moore, Allan N. Ways and means for adjusting work tools. 3,021,604, 2-20-62, Cl. 33—185.

Moore Products Co.: *See*—
Kirk, David B. 3,021,858.

Moore, Robert E. Self-propelled toy projectile. 3,021,640, 2-20-62, Cl. 46—74.

Moore, Thomas B., to Hunt Foods and Industries, Inc. Cigarette and match container. 3,021,944, 2-20-62, Cl. 206—48.

Morgan, Raymond E., to General Electric Co. Magnetic control apparatus. 3,022,429, 2-20-62, Cl. 307—88.

Morgan, Willard L., H. B. Whitehurst, R. G. Russell, and C. J. Stalego, to Owens-Corning Fiberglas Corp. Production of fibers in intimate association with metal. 3,021,564, 2-20-62, Cl. 18—47.3.

Morin, Ralph H., to Raytheon Co. Cathode ray tube washing machines. 3,021,851, 2–20–62, Cl. 134—46.

Mork, Raymond P., to Raytheon Co. Self-tuning filter circuits for increasing ratio of narrow band variable frequency signal to broad band noise. 3,022,471, 2–20–62, Cl. 333—17.

Morrissey, William J., to General Electric Co. Ceramic material and method of making the same. 3,022,179, 2–20–62, Cl. 106—39.

Morrissey, William J., and J. W. Roy, to General Electric Co. Ceramic material and method of making the same. 3,022,180, 2–20–62, Cl. 106—39.

Morschel, Heinrich, and G. Loew, ½ to Farbenfabriken Bayer Aktiengesellschaft and ½ to Mobay Chemical Co. Cellular polyurethane plastic and method of preparing same. 3,022,255, 2–20–62, Cl. 260—2.5.

Mory, Rudolf, and C. Frey, to Ciba Ltd. Dioxazine dyestuffs. 3,022,298, 2–20–62, Cl. 260—246.

Moser, John F., Jr., to Esso Research and Engineering Co. Seed coke production in fluid coking systems. 3,022,246, 2–20–62, Cl. 208—127.

Moses, William, to S. B. Penick and Co. Neomycin fermentation process. 3,022,228, 2–20–62, Cl. 195—80.

Moss, Trevor F.: *See*—
Jackson, Harold E., and Moss. 3,021,571.

Mossbarger, David W.: *See*—
Timmer, David J., Philbrick, Mossbarger, and Caton. 3,022,432.

Mossor, George W., to Hudson Pulp & Paper Corp. Material handling apparatus. 3,021,766, 2–20–62, Cl. 93—8.

Moutet, André: *See*—
Barrere, Marcel, and Moutet. 3,021,710.

Muench, Werner, L. Notarbartolo, and G. Silvestri, to Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A. Process for the manufacture of caprolactam. 3,022,291, 2–20–62, Cl. 260—239.3.

Mulhern, William A., to Gar Wood Industries, Inc. Wheel cover. 3,022,112, 2–20–62, Cl. 301—37.

Muller, Georges, to Les Laboratoires Francais de Chimiotherapie. Berbine derivatives. 3,022,309, 2–20–62, Cl. 260—287.

Muller, Georges, and M. Stefanovic, to Les Laboratoires Francais de Chimiotherapie. Process for the preparation of formyl steroids and products obtained thereby. 3,022,324, 2–20–62, Cl. 260—397.4.

Muller, Johannes, and C. Albrecht, to Kolene Corp. Process for nitriding metals. 3,022,204, 2–20–62, Cl. 148—15.5.

Müller, Kurt, and J. Schleifer, to Robert Bosch G.m.b.H. Arc lamp. 3,022,441, 2–20–62, Cl. 314—69.

Munson, Verne E.: *See*—
Miller, Robert A., Munson, Owendoff, and Taris. 3,022,380.

Musser, C Walton, to United States of America, Army. Sheet metal nozzle. 3,021,760, 2–20–62, Cl. 89—1.7.

Mural, Kotaro: *See*—
Tanner, Fred W., Jr., Hochstein, and Mural. 3,022,347.

Myerly, Richard C.: *See*—
Lemon, Russell C., and Myerly. 3,022,349.

Myers, Herbert F. Lead ejector mechanism for vehicle bodies. 3,021,968, 2–20–62, Cl. 214—82.

Myska, Günter: *See*—
Pätzold, Georg, Myska, and Grube. 3,021,967.

N.V. Machinefabriek Frans Smulders: *See*—
Tulp, Wijbrand J. 3,022,041.

Namikawa, Mamoru: *See*—
Hoshino, Yasushi, Sato, Namikawa, and Tochihara. 3,022,078.
Hoshino, Yasushi, Namikawa, and Tochihara. 3,022,079.

National Can Corp.: *See*—
Scholtz, Arthur P. 3,021,987.
Tracy, Gerald T. 3,021,976.

National Cash Register Co., The: *See*—
Berman, Elliot, and McQuain. 3,022,318.

National Castings Co.: *See*—
Metzger, William J. 3,021,964.

National Drying Machinery Co., The: *See*—
Parkes, Ralph C., and Schlecht. 3,021,609.

National Presto Industries, Inc.: *See*—
Soper, La Vern G., and Harris. 3,022,411.

National Research Council: *See*—
Smyth, Henry L. R., Makow, and Keays. 3,022,418.

National Tank Co.: *See*—
Walker, Jay P., and Glasgow. 3,021,709.

National Vulcanized Fibre Co.: *See*—
Mains, Gerald H., McGinnis, and Tatnall. 3,022,203.

Naworski, Richard P.: *See*—
Darr, Donald E., and Naworski. 3,022,271.

Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek, The: *See*—
Sijpesteijn, Antje K. 3,022,216.

Needham, Gideon M. Drain digger. 3,021,621, 2–20–62, Cl. 37—92.

Neisler, Irwin, and Co.: *See*—
Cavallito, Chester J., and Gray. 3,022,308.

Nelson, Earl W., to American Cyanamid Co. Combustion of titanium tetrachloride with oxygen. 3,022,137, 2–20–62, Cl. 23—202.

Nelson, Samuel J., to Hooker Chemical Corp. Polyhalogen containing bicyclic acrylate esters. 3,022,277, 2–20–62, Cl. 260—86.7.

Netschert, Franz J.: *See*—
Russell, Fred J., and Netschert. 3,022,102.

Neubauer, Emil T., to The Trane Co. Compressor. 3,021,995, 2–20–62, Cl. 230—58.

Neuman, Milton C.: *See*—
Bauer, Myron J., Kane, Neuman and Scheurich. 3,022,031.

New York Air Brake Co., The: *See*—
Denton, Richard A., Le Riche, and Rivera. 3,021,712.
Pickert, Lynn I. 3,022,121.
Safford, Lewis A. 3,022,120.

Newell, Flora E., to M. N. and J. A. Brown. Traction footboard. 3,021,837, 2–20–62, Cl. 128—71.

Newhouse, Frank J., and E. Meth, to Massey-Ferguson Ltd. Drive mechanism for swathers. 3,021,659, 2–20–62, Cl. 56—192.

Niedzielski, Edmund L., to E. I. du Pont de Nemours and Co. Alkali metal composition additives for fuels of the gasoline range. 3,022,147, 2–20–62, Cl. 44—66.

Noble Mfg. Co.: *See*—
Dlugosch, Paul A. 3,021,908.

Noddin, George A.: *See*—
Miller, Ross J., and Noddin. 3,021,786.

Nordling, Seth P.: *See*—
Chalmers, Robert O., Nordling, and Ramsel. 3,021,729.

North American Aviation, Inc.: *See*—
Cramer, Frank B. 3,022,149.

Northrop Corp.: *See*—
Bowman, Eldon L. 3,021,565.

Notarbartolo, Luigi: *See*—
Muench, Werner, Notarbartolo, and Silvestri. 3,022,291.

November, Gerald S., and F. Schute, to United States of America, Atomic Energy Commission. Flowmeter. 3,021,708, 2–20–62, Cl. 73—194.

Nye, Ralph A. Sectional formed combustion power chamber for varying driving impulses for jet motors. 3,021,669, 2–20–62, Cl. 60—35.6.

Nygaard, James L., and R. R. Webster, to Texas Instruments Inc. Automatic gain control system. 3,022,421, 2–20–62, Cl. 250—20.

Oakley, Gilbert F., to MacLean-Fogg Lock Nut Co. Lading strap anchor. 3,021,709, 2–20–62, Cl. 105—369.

O'Brien, William J., to General Motors Corp. Thermocouple lead attachment. 3,022,362, 2–20–62, Cl. 136—4.

O'Connor, John J.: *See*—
Edgemond, John W., Jr., and O'Connor. 3,021,881.

Odom, Earl R. Combination tool. 3,021,599, 2–20–62, Cl. 33—46.

"Office National d'Etudes et de Recherches Aeronautiques" (O.N.E.R.A.): *See*—
Barrere, Marcel, and Moutet. 3,021,710.

Ohba, Seiichi, T. Yonezawa, and A. Kumai, to Fuji Photo Film Co. Ltd. Process for the production of photographic materials. 3,022,172, 2–20–62, Cl. 96—114.

Old Dominion Box Co., Inc.: *See*—
Phillips, Floyd L., Jr. 3,021,992.

O'Leary, Charles D. Clamp. 3,021,853, 2–20–62, Cl. 135—15.

Olin Mathieson Chemical Corp.: *See*—
Clark, Charles C., Kanda, and King. 3,022,138.
Clark, Charles C., Kanda, and King. 3,022,139.
Diassi, Patrick A. 3,022,310.
Fried, Josef, and Herz. 3,022,296.
Griffin, Donald N., and Feller. 3,021,667.
Grundmann, Christoph J., and Kober. 3,022,303.
Irish, Charles G., Jr. 3,022,446.
Johnson, James H. 3,021,634.
Jurist, Alfred E. 3,022,290.
Marsh, Roger. 3,021,746.
Ross, John W. 3,022,226.
Schur, Milton O. 3,021,732.
Weisenborn, Frank L., and Pan. 3,022,311.
Winternitz, Paul F., and Carotti. 3,022,350.

Oliner, Arthur A., to Merrimac Research and Development Corp. Extremely wide-band, non-reciprocal coaxial components. 3,022,470, 2–20–62, Cl. 333—7.

Olney, James E., to Tee-Nee Trailer Co. Boat trailer having improved frame means. 3,022,090, 2–20–62, Cl. 280—414.

Olstrowski, Franciszek, to The Dow Chemical Co. Preparation of silicon. 3,022,233, 2–20–62, Cl. 204—60.

Oravec, John J., to Federal Pacific Electric Co. Circuit breaker or switch having locking provision. 3,022,391, 2–20–62, Cl. 200—44.

Orcutt, Donald B., to Mite Pipe Ram Co. Pipe ram. 3,022,042, 2–20–62, Cl. 254—29.

Orthner, Ludwig, H. Herzberg, and H. H. Frey, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the manufacture of plasticized polymers of vinyl chloride or plastized polymers of vinylidene chloride. 3,022,263, 2–20–62, Cl. 260—45.5.

Orthner, Ludwig, H. Herzberg, and F. Landauer. Process for the preparation of chlorinated and sulfochlorinated polyolefins. 3,022,276, 2–20–62, Cl. 260—79.3.

Osborn, Charles W., and R. F. Kleinschmidt, to Phillips Petroleum Co. Method of killing plants. 3,022,152, 2–20–62, Cl. 71—2.7.

Osborn, William G., to Burndy Corp. Run and tap connector. 3,022,370, 2–20–62, Cl. 174—71.

Osborne, William B., ½ to G. A. Gust, and ½ to R. G. Irish. One-way brake. 3,021,925, 2–20–62, Cl. 188—82.8.

O'Shei, William E. Windscreen wipers. 3,021,549, 2–20–62, Cl. 15—250.42.

Ossenbrunner, Armin, and H. Klockgether, to AGFA Aktiengesellschaft. Photographic filter and antihalation layers. 3,022,171, 2–20–62, Cl. 96—84.

Ostroff, Harry, and L. H. Levitt, to Collidotronics, Inc. Device for assessing damage to automotive vehicles. 3,021,615, 2–20–62, Cl. 35—24.

Ouimet, Jean, and B. Dansereau. Automobile transmission lever locking device. 3,021,913, 2–20–62, Cl. 180—82.

Owendoff, Harold M.: *See*—
Miller, Robert A., Munson, Owendoff, and Taris. 3,022,380.

Owens-Corning Fiberglas Corp.: *See*—
Morgan, Willard L., Whitehurst, Russell, and Stalego. 3,021,564.
Philipps, Thomas E. 3,022,210.
Roberson, Cletis L. 3,021,558.
Slayter, Games, Snow, and Philipps. 3,021,563.

Owens-Illinois Glass Co.: *See*—
Lauck, Albert G. 3,021,644.
Silverman, William B. 3,021,645.

Packer, Morton, and J. R. Arcara. Readily adjustable pressure switch. 3,022,396, 2–20–62, Cl. 200—83.

Pagley, James V. Master cylinder for fluid brake systems. 3,021,678, 2–20–62, Cl. 60—54.6.

Palmer, Alex D. Teaching device. 3,021,612, 2–20–62, Cl. 35—9.

Palmer, Marianne C.: *See*—
Palmer, Robert E. 3,021,973.

Palmer, Roberta L.: *See*—
Palmer, Robert E. 3,021,973.

Palmer, Robert E., 50% to M. C. Palmer, and 50% to R. L. Palmer. Wire bottle carrier. 3,021,973, 2–20–62, Cl. 215—100.

Panay, Takis N. Sound producer. 3,022,385, 2–20–62, Cl. 179—113.

Pan American Petroleum Corp.: *See*—
Anderson, Duane B., and Park. 3,022,248.
Frederickson, Arman F., Hower, and Reynolds. 3,022,140.

Pan, Samuel C.: *See*—
Weisenborn, Frank L., and Pan. 3,022,311.

Park, Arthur: *See*—
Anderson, Duane B., and Park. 3,022,248.

Park, William R., and R. L. Hill, to The Dow Chemical Co. Anti-fogging composition for polystyrene film and coated product. 3,022,178, 2–20–62, Cl. 106—13.

Parkes, Ralph C., and C. H. Schlecht, to The National Drying Machinery Co. Adjustable air discharge nozzle for a drying machine. 3,021,609, 2–20–62, Cl. 34—158.

Parshall, Bert B., and C. A. Glass, to Link-Belt Co. Transfer mechanism. 3,021,796, 2–20–62, Cl. 104—172.

Pasetti, Adolfo: *See*—
Hügel, Robert, and Pasetti. 3,022,346.

Patent-Treuhand-Gesellschaft fur Elektrische Glühlampen m.b.H.: *See*—
Herrmann, Oskar. 3,021,878.

Patterson, C. J., Co.: *See*—
Marnett, Lawrence F., and Hampton. 3,021,800.

Patterson, W. W., Co.: *See*—
Patterson, William W., III, and Grapes. 3,021,924.

Patterson, William W., III, and E. F. Grapes, to W. W. Patterson Co. Reverse motion preventing mechanism. 3,021,924, 2–20–62, Cl. 188—82.7.

Pattilloch, Donald K., and C. Polowczyk, to Michigan Research Laboratories, Inc., and Electro-Chem Fiber Seal Corp. Conductive web and method of making same. 3,022,213, 2–20–62, Cl. 162—138.

Paul, Richard S.: *See*—
Baker, Charles R., and Paul. 3,021,682.

Pätzold, Georg, G. Myska, and E. Grube, to Durkoppwerke Aktiengesellschaft. Conveyor system with station selector. 3,021,967, 2–20–62, Cl. 214—11.

Paulsen, Hans C., to United Shoe Machinery Corp. Outsole gouging machines. 3,021,540, 2–20–62, Cl. 12—27.

Peak, Joseph A.: *See*—
De Fezzy, Albert, Hanley, Kenyon, and Peak. 3,021,826.

Peake, Clyde C., and J. E. Hanna. Boat trailer bow guide. 3,021,969, 2–20–62, Cl. 214—84.

Pearce, John W. Process for purifying acid-containing compositions. 3,022,259, 2–20–62, Cl. 260—22.

Pearsall, Howard W.: *See*—
Goodzelt, Carl L., and Pearsall. 3,022,193.

Peasley, John: *See*—
Pinta, John G., Di Pasquale, and Peasley. 3,021,557.

Pecker, Edwin A. Weighing apparatus. 3,021,911, 2–20–62, Cl. 177—251.

Penick, S. B., and Co.: *See*—
Moses, William. 3,022,228.
Van de Griendt, Gerald H. 3,022,286.

Perkin-Elmer Corp., The: *See*—
Borden, Joseph L. 3,022,124.

Perlmutter, Samuel. Drapery hook. 3,021,552, 2–20–62, Cl. 16—87.4.

Perry, George A.: *See*—
Lawrence, Robert L., and Perry. 3,022,176.

Perry, George J. Combustion engines. 3,021,681, 2–20–62, Cl. 62—7.

Perry, Harold D.: *See*—
Blasberg, Lawrence A., Perry, and Saltzman. 3,022,475.

Perry, Murle. Stoma receiving appliance with sealing sleeve having enlarged attachment portion. 3,021,843, 2–20–62, Cl. 128—283.

Peters, Plenny M. Scaffold hanger and support device. 3,021,919, 2–20–62, Cl. 182—150.

Petro, Anthony J.: *See*—
Miller, Alfred L., Robison, and Petro. 3,022,260.

Pettit, Frank. Airplane toy and control therefor. 3,022,069, 2–20–62, Cl. 272—31.

Pfaff, Ross L.: *See*—
Hogg, James C., and Pfaff. 3,021,949.

Pfanstiehl Laboratories, Inc.: *See*—
Behnke, Reinhold. 3,022,343.

Pferd, William, to Bell Telephone Laboratories, Inc. Credit card operated telephone. 3,022,381, 2–20–62, Cl. 179—6.4.

Pfister, Ernst. Carriage guide for mutually longitudinally movable machine components. 3,022,122, 2–20–62, Cl. 308—6.

Pfizer, Chas., & Co., Inc.: *See*—
Berg, Rudolph G., and Laubach. 3,022,295.
Berg, Rudolph G., and Laubach. 3,022,297.
Berg, Rudolph G., and Laubach. 3,022,325.
Celmer, Walter D. 3,022,219.
Sherman, William C. 3,022,218.
Tanner, Fred W., Jr., Hochstein, and Mural. 3,022,347.

Pfrehm, Raymond H., to Esso Research and Engineering Co. Proving meters. 3,021,703, 2–20–62, Cl. 73—3.

Phelphs Dodge Copper Products Corp.: *See*—
Koerner, Ernest C., Hall, and Smith. 3,022,200.

Philbrick, Kenneth W.: *See*—
Timmer, David J., Philbrick, Mossbarger, and Caton. 3,022,432.

Philco Corp.: *See*—
Bobb, Lloyd J., Goldman, and Maling. 3,022,377.
Keiper, Francis P., Jr. 3,022,462.
Simpson, Charles G., and Loginow. 3,022,019.
Slenker, Stephen, and Kinzinger. 3,022,465.

Phillipps, Samuel D.: *See*—
Slayter, Games, Snow, and Phillipps. 3,021,563.

Phillipps, Thomas E., to Owens-Corning Fiberglas Corp. Method of making molding compounds of glass fiber reinforced plastics. 3,022,210, 2–20–62, Cl. 156—180.

Phillipson, Stanley J., to Mr. Stanley, Inc. Ladies' shoes. 3,021,618, 2–20–62, Cl. 36—72.

Phillips, Floyd L., Jr., to Old Dominion Box Co., Inc. Carton. 3,021,992, 2–20–62, Cl. 229—17.

Phillips, John X.: *See*—
Hill, Edward G., and Phillips. 3,022,115.

Phillips Petroleum Co.: *See*—
Campbell, Paul E. 3,022,209.
Cobb, Raymond L. 3,022,328.
Hart, James L. 3,022,135.
Hutchinson, William M., and Long. 3,022,206.
Jones, Rufus V., and Scott. 3,022,254.
Lupfer, Dale E. 3,021,679.
Mihm, Clifford H., Warner, and Duke. 3,022,351.
Miller, Kenneth F. 3,021,748.
Osborn, Charles W., and Kleinschmidt. 3,022,152.
Scott, John N., Jr. 3,021,568.
Wheelock, Charles E., and Conterino. 3,022,322.
Wicklatz, John E., and Franzus. 3,022,283.

Pickert, Lynn I., to The New York Air Brake Co. Emergency brake valve with secondary power control. 3,022,121, 2–20–62, Cl. 303—82.

Pickles, Joseph, to Ferro Stamping Co. Seat supporting and adjusting mechanism. 3,022,035, 2–20–62, Cl. 248—395.

Pietsch, Joseph A., to General Electric Co. Thermoelectric assembly. 3,022,360, 2–20–62, Cl. 136—4.

Pinta, John G., F. A. Di Pasquale, and J. Peasley, to Reliable Packing Co. Machines for stripping and debairing hog carcasses. 3,021,557, 2–20–62, Cl. 17—17.

Pipe, John, to Steelease Inc. Rack structure. 3,021,960, 2–20–62, Cl. 211—177.

Pittenger, Francis H., to The Shelby Spring Hinge Co. Double acting door closer. 3,021,556, 2–20–62, Cl. 16—185.

Pittsburgh Plate Glass Co.: *See*—
Darr, Donald E., and Naworski. 3,022,271.
Duncan, James E., and Englert. 3,022,183.
Kilroy, Thomas F. 3,022,366.
Le Blanc, Carrol P., and Henslee. 3,022,244.

Plastic & Appliance Co., Inc.: *See*—
Fuge, Harry B., and Zaorski. 3,021,629.

Plastic-Ware Inc.: *See*—
Mack, Bernard. 3,021,542.

Plurien, Pierre: *See*—
Wyraud, Charles, Prettre, Trambouze, Lenoir, Thomas, and Plurien. 3,022,187.

Podesta, Armando, and C. Vignati. Process for the manufacture of hollow articles from thermoplastic resins blanks, by cold extrusion. 3,021,570, 2–20–62, Cl. 18—56.

Poelvoorde, Clement C., and S. A. Kapusta. Ladder extension. 3,021,921, 2–20–62, Cl. 182—201.

Polanski, Frank C., to Ladish Co. Clamp hinge. 3,021,584, 2–20–62, Cl. 24—270.

Polaroid Corp.: *See*—
Cooper, Dexter P., Jr. 3,022,436.
Cooper, Dexter P., Jr. 3,022,437.
Cooper, Dexter P., Jr. 3,022,438.
Cooper, Dexter P., Jr., and Bryant. 3,022,439.
Dietz, Milton S. 3,021,770.
Flinchbaugh, Rodman F., Huffman, and Sands. 3,022,170.
Green, Milton. 3,022,167.
Green, Milton, and Simon. 3,022,166.
Green, Milton, and Solodar. 3,022,354.

Polowczyk, Carl: *See*—
Pattilloch, Donald K., and Polowczyk. 3,022,213.

Polyfiber Ltd.: *See*—
Brown, Eric A. 3,022,110.

Postlewaite, William R., to California Research Corp. Means for offshore drilling. 3,021,909, 2–20–62, Cl. 175—7.

Potdevin Machine Co.: *See*—
Hamilton, James S. 3,021,767.

Potts, John M., H. W. Elder, and J. F. Anderson, Jr., to Tennessee Valley Authority. Concentrated liquid fertilizers from superphosphoric acid and potassium hydroxide. 3,022,154, 2–20–62, Cl. 71—34.

Powell Keith R., to General Mills, Inc. Classifying apparatus. 3,021,952, 2–20–62, Cl. 209—339.

Power Jets (Research and Development) Ltd.: *See*—
Shaw, Ronald A. 3,022,026.

Prather, Edwin E., to The Bendix Corp. Automatic brake holding system. 3,021,821, 2–20–62, Cl. 121—41.

Pratt & Whitney Co., Inc.: *See*—
Hollister, Allen R. 3,021,705.

Pre-Mix Corp.: *See*—
Horvitz, Howard J. 3,021,613.

Prettre, Marcel: *See*—
Eyraud, Charles, Prettre, Trambouze, Lenoir, Thomas, and Plurien. 3,022,187.

Proffitt, Arthur C., to The Dow Chemical Co. Process for making hydrolyzed polyacrylamide. 3,022,279, 2–20–62, Cl. 260—89.7.

Profos, Paul, to Sulzer Freres, S.A. Forced flow steam generating plant. 3,021,824, 2–20–62, Cl. 122—406.

Provenzano, Arthur D., to Combustion Engineering, Inc. Bolt locking sleeve. 3,021,884, 2–20–62, Cl. 151—8.

Prugne, Pierre: *See*—
Roubeau, Pierre M., Garin, and Prugne. 3,022,038.

Pukk, Erik, and R. J. Quinn, Jr., to Monitor Controller, Division of Industrial Electronics Co., Inc. Thermally controlled switch. 3,022,403, 2–20–62, Cl. 200—122.

Purdy, George W. Apparatus for removably hanging fixtures. 3,022,034, 2–20–62, Cl. 248—342.

Purdy, Orville S. Packaging device. 3,021,657, 2–20–62, Cl. 53—390.

Purolator Products, Inc.: *See*—
Joyce, John. 3,021,955.

Pye Ltd.: *See*—
McKnight, Terence C. 3,022,431.

Pyromet Corp.: *See*—
Huntington, Morgan G. 3,022,157.

Quibell, Vearl J. Automatic marker changer. 3,021,905, 2–20–62, Cl. 172—127.

Quinn, James L., and J. K. Duncan, to Cummins-Chicago Corp. Card width sensing device. 3,021,950, 2–20–62, Cl. 200—82.

Quinn, Robert J., Jr.: *See*—
Pukk, Erik, and Quinn. 3,022,403.

Quinn, Ross A., and R. F. Karlak, to Lockheed Aircraft Corp. Method of coating a body with titanium and related metals. 3,022,201, 2–20–62, Cl. 117—221.

Quint, Ferdinand: *See*—
Bestian, Herbert, Schäfer, and Quint. 3,022,316.

Radio Corp. of America: *See*—
Hackley, Reginald A., and Harvey. 3,022,195.

Rahman, Habibur: *See*—
Bunting, Ernest V., and Rahman. 3,022,092.

Rai, Lalian: *See*—
Roan, Clifford C., and Rai. 3,022,217.

Rain Bird Sprinkler Mfg. Corp.: *See*—
Sharp, Carl R., and Streeter. 3,022,012.

Ramsel, Charles A.: *See*—
Chambers, Robert O., Nordling, and Ramsel. 3,021,729.

Ranalli, Franco, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Method for molding isotactic polypropylene. 3,021,567, 2–20–62, Cl. 18—55.

Ranney, Bolvin C. Disappearing mailbox. 3,021,996, 2–20–62, Cl. 232—39.

Rayburn, Charles C., to Illinois Tool Works. Wire connector for printed circuit board or the like. 3,022,369, 2–20–62, Cl. 174—68.5.

Raytheon Co.: *See*—
Morin, Ralph H. 3,021,851.
Mork, Raymond P. 3,022,471.

Reading, Walter J. Egg counters. 3,022,004, 2–20–62, Cl. 235—98.

Reed, George C.: *See*—
Herron, Robert H., Reed, and Roth. 3,021,592.

Regnier, Norman J., to Hoffman Electronics Corp. Broad band radio receiver preselector apparatus. 3,022,477, 2–20–62, Cl. 334—77.

Reifenhäuser, Hans, to Reifenhauser K.G. Plasticizing and injection apparatus for plastic or synthetic materials. 3,021,561, 2–20–62, Cl. 18—30.

Reifenhauser K.G.: *See*—
Reifenhäuser, Hans. 3,021,561.

Reinhard, Karl J., and L. F. Swoboda, to The Tumpane Co. of Georgia, Inc. Knockdown platform. 3,022,028, 2–20–62, Cl. 248—23.

Reliable Packing Co.: *See*—
Pinta, John G., Di Pasquale, and Peasley. 3,021,557.

Reliance Gauge Column Co., The: *See*—
Goeliner, Allan R. 3,022,397.

Rensch, Joseph T. Rock digger and loader. 3,021,971, 2–20–62, Cl. 214—147.

Research Corp.: *See*—
Milas, Nicholas A. 3,022,352.

Reuter, Franz G., to Leinforder Metallwarengesellschaft m.b.H. Bearing bushing. 3,022,128, 2–20–62, Cl. 308—238.

Reyner, Charles H., to J. Bain. Seat grinding tool. 3,021,650, 2–20–62, Cl. 51—205.

Reynolds, Robert C., Jr.: *See*—
Frederickson, Arman F., Hower, and Reynolds. 3,022,140.

Rhodes, Joseph C., to Standard Oil Co. Feed system for automatic end point apparatus. 3,021,704, 2–20–62, Cl. 73—17.

Richards, George B.: *See*—
Billeter, Henry R., and Richards. 3,021,861.

Rigaku Denki Co. Ltd.: *See*—
Shimuta, Yoshihiro, and Uchida. 3,022,423.

Ripepi, Tony. Approach alarm system. 3,022,499, 2–20–62, Cl. 340—258.

Rips, Julius L. Shock gauge. 3,021,813, 2–20–62, Cl. 116—114.

Rivera, Michael P.: *See*—
Denton, Richard A., Le Riche, and Rivera. 3,021,712.

Roan, Clifford C., and L. Rai. Fumigating composition. 3,022,217, 2–20–62, Cl. 167—39.

Robbins, Ralph, to Imperial Foam Rubber Corp. Perforated abrasive faced scrubbing pad. 3,021,649, 2–20–62, Cl. 51—185.

Roberson, Cletis L., to Owens-Corning Fiberglas Corp. Method and apparatus for producing fibers. 3,021,558, 2–20–62, Cl. 18—2.5.

Roberts, James S., to Spud's Tools & Die, Inc. Frame fastener for window structure. 3,021,577, 2–20–62, Cl. 20—40.

Roberts, Ross L., to American Hospital Supply Corp. Overhead wall light. 3,022,416, 2–20–62, Cl. 240—73.

Robertshaw-Fulton Controls Co.: *See*—
Bauer, Werner R. 3,022,399.
Davidson, Thomas J. 3,021,857.

Robinson, Earl H., to The Baxter Corp. Cloth winding board. 3,021,945, 2–20–62, Cl. 206—50.

Robinson, George D., Jr., to Gilbert & Barker Mfg. Co. Computer-printer interlock apparatus. 3,021,982, 2–20–62, Cl. 222—30.

Robinson, George H., and E. G. Ross, to General Motors Corp. Method of joining cast iron to steel. 3,022,407, 2–20–62, Cl. 219—9.5.

Robison, Samuel B.: *See*—
Miller, Alfred L., Robison, and Petro. 3,022,260.

Rockstead, Joel B., to Midland-Ross Corp. Dual fuel control systems for engines burning diesel-type fuels. 3,022,425, 2–20–62, Cl. 290—40.

Rockwell, Edward A. Rotary fluid displacement device and mechanism therefor. 3,021,791, 2–20–62, Cl. 103—126.

Rockwell Mfg. Co.: *See*—
Berends, Emerson R., and Deghuee. 3,021,879.

Rodewald, Bernhard: *See*—
Finkener, Friedrich, Krug, Loges, and Rodewald. 3,022,-161.

Rodgers, Frank J. Hose for portable pneumatic equipment. 3,021,871, 2–20–62, Cl. 138—118.

Rodwell, William, to United Kingdom Atomic Energy Authority. Nuclear reactor moderator structures. 3,022,239, 2–20–62, Cl. 204—193.2.

Rogers, William A., Jr., J. E. Woehst, and R. M. Smith, to The Dow Chemical Co. Preparation of cyclic sulfites. 3,022,315, 2–20–62, Cl. 260—327.

Rohm & Haas Co.: *See*—
Sims, Homer J. 3,022,292.

Rohm & Haas G.m.b.H.: *See*—
Zlina, Herbert. 3,022,145.

Rohn, Ivan D. Apparatus for assembling cross braces on a multi-leg tower. 3,021,885, 2–20–62, Cl. 153—1.

Rohr Aircraft Corp.: *See*—
Lacey, Elbert M., Jr. 3,021,803.
Maynard, Kermit W. 3,021,887.

Rohrbach, Christof, to Vibro-Meter A.G. Device for establishing an electrical connection between stationary and rotating conductors. 3,022,479, 2–20–62, Cl. 339—8.

Roos, Ernst: *See*—
Lober, Friedrich, Roos, and Kempermann. 3,022,275.

Rose, Yves, to Centre National de la Recherche Scientifique. Endoscopic apparatus. 3,021,835, 2–20–62, Cl. 128—6.

Rosenberger, Gerald B., and O. W. Johnson, Jr., to International Business Machines Corp. Superconductor oscillator. 3,022,468, 2–20–62, Cl. 331—107.

Rosenbrock, Earl H.: *See*—
Hennis, Henry E., and Rosenbrock. 3,022,222.

Rosenkaimer G.m.b.H.: *See*—
Uthemann, Wolfgang. 3,021,854.

Rosenthal, Henry L. Snow plow. 3,021,620, 2–20–62, Cl. 37—43.

Ross, Bernd, to Hoffman Electronics Corp. Light polarizing apparatus or the like. 3,021,754, 2–20–62, Cl. 88—61.

Ross, Eugene G.: *See*—
Robinson, George H., and Ross. 3,022,407.

Ross, James F. Rotary type hydraulic valve. 3,021,869, 2–20–62, Cl. 137—621.

Ross, John W., to Olin Mathieson Chemical Corp. Process for preparing 1-dehydro steroids. 3,022,226, 2–20–62, Cl. 195—51.

Ross, Karl F. Continuous wave echo-type distance finder. 3,022,503, 2–20–62, Cl. 343—12.

Rossmann, Udo: *See*—
Ziegler, Erich, Rossmann, and Litvan. 3,022,317.

Roth, Douglas J.: *See*—
Herron, Robert H., Reed, and Roth. 3021,592.

Roubeau, Pierre M., J. M. Garin, and P. Prugne, to Commissariat a l'Energie Atomique. Valves for controlling gas streams flowing at very low flow rates. 3,022,038, 2–20–62, Cl. 251—11.

Rowitz, Joseph. Slack take-up device. 3,021,580, 2–20–62, Cl. 24—71.3.

Rowley, Martin E.: *See*—
Mench, John W., Emerson, and Rowley. 3,022,287.

Roy, James W.: *See*—
Morrissey, William J., and Roy. 3,022,180.

Royal McBee Corp.: *See*—
Enders, John A. 3,021,934.
Lambert, Harry L. 3,021,936.

Rubin, Abraham M. Circular chart assembly. 3,021,614, 2–20–62, Cl. 35—24.

Rubin, Maurice, to Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture. Preparation of alkylammonium sulfate solutions. 3,022,348, 2–20–62, Cl. 260—583.

Rudbarg, Frank, to American Viscose Corp. Tow packaging plaiter. 3,021,587, 2–20–62, Cl. 28—21.

Ruehrwein, Robert A.: *See*—
Williams, Forrest V., Ruehrwein, and Hill. 3,022,452.

Ruhnau, Angela: *See*—
Selle, Hans-Dieter, and Ruhnau. 3,022,131.

Ruhnke, Richard R., to Garcy Corp. Rack. 3,021,961, 2–20–62, Cl. 211—177.

Rumsey, Rollin D., to Houdaille Industries, Inc. Rotary actuator seal. 3,021,822, 2–20–62, Cl. 121—99.

Russell, Fred J., and F. J. Netschert; said Netschert assor. to said Russell. Emergency release bar. 3,022,102, 2–20–62, Cl. 292—169.

Russell, Robert C., to Eaton Mfg. Co. Window regulator. 3,022,064, 2–20–62, Cl. 268—124.

Russell, Robert G.: *See*—
Morgan, Willard L., Whitehurst, Russell, and Stalego. 3,021,564.

Rustad, Stanley C.: *See*—
Brastad, William A., Diekhoff, and Rustad. 3,021,953.

Ruths, Kurt: *See*—
Fernholz, Hans, Ruths, and Heimann-Troslen. 3,022,342.

Ryden, Carl E. Motor speed control arrangement. 3,021,789, 2–20–62, Cl. 103—35.

SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung: *See*—
Dausch, Ernst, and Schrotz. 3,021,574.

Saal, Frederick A.: *See*—
Garrison, Richard F., and Saal. 3,022,003.

Sackett, A. J., & Sons Co., The: *See*—
Sackett, Walter J., Sr. 3,022,142.

Sackett, Walter J., Sr., to The A. J. Sackett & Sons Co. Ammoniator-granulator apparatus. 3,022,142, 2–20–62, Cl. 23—259.1.

Safford, Lewis A., to The New York Air Brake Co. Emergency brake valve with power cut-off. 3,022,120, 2–20–62, Cl. 303—82.

Saladino, Charles. Pill holder construction. 3,021,986, 2–20–62, Cl. 224—26.

Saltzman, Harold: *See*—
Blasberg, Lawrence A., Perry, and Saltzman. 3,022,475.

Sampietro, Achilles C., to Thompson Ramo-Wooldridge Inc. Brake control system. 3,022,114, 2–20–62, Cl. 303—21.

Sampson, William J. Pressure bar wood saw. 3,021,597, 2–20–62, Cl. 30—166.

Sandoz A.G.: *See*—
Schuler, Max. 3,022,215.

Sandoz Trust: *See*—
Gutzwiller, Ernst. 3,022,307.

Sands, Robert A.: *See*—
Flinchbaugh, Rodman F., Huffman, and Sands. 3,022,170.

Sarafinas, Bruno A., to United-Carr Fastener Corp. Closure member. 3,021,975, 2–20–62, Cl. 220—60.

Sarvansky, Gilbert: *See*—
Graham, Harry C. 3,021,772.

Sarver, Paul R. Umbrella holder. 3,021,985, 2–20–62, Cl. 224—5.1.

Sato, Minoru: *See*—
Hoshino, Yasushi, Sato, Namikawa, and Tochihara. 3,022,078.

Saul & Co.: *See*—
Gutzwiller, Ernst. 3,022,307.

Savio, Joseph, to Electro-Char Corp. Wall structure for electrified cooking grate. 3,022,410, 2–20–62, Cl. 219—37.

Saurwein, Albert G., to Union Carbide Corp. Deferred action electric battery. 3,022,365, 2–20–62, Cl. 136—90.

Saxe, Walter E.: *See*—
Chadima, Jack P., and Saxe. 3,021,655.

Saxl, Erwin J., to Tensitron, Inc. Tension control for filamentary materials. 3,022,025, 2–20–62, Cl. 242—155.

Schäfer, Gustav: *See*—
Bestian, Herbert, Schäfer, and Quint. 3,022,316.

Schaffer, David J.: *See*—
Kitchen, Morrison G., and Schaffer. 3,021,891.

Scharp, Glenn A., to United States of America, Navy. Loaded double-folded slot antenna. 3,022,505, 2–20–62, Cl. 343—767.

Schaub, Robert E., and M. J. Weiss, to American Cyanamid Co. 7-substituted thio steroids of the pregnene series. 3,022,323, 2–20–62, Cl. 260—397.3.

Scheurich, John S.: *See*—
Bauer, Myron J., Kane, Neuman, and Scheurich. 3,022,031.

Schieder, Charles J., to Benner, Inc. Latch hinge for play yard. 3,021,553, 2–20–62, Cl. 16—146.

Schlage, Ernest L., to Schlage Lock Co. Boring jig. 3,021,734, 2–20–62, Cl. 77—62.

Schlage Lock Co.: *See*—
Schlage, Ernest L. 3,021,734.

Schlau, Floyd E., to Strombeck-Becker Mfg. Co. Tethered toy and pylon therefor. 3,022,070, 2–20–62, Cl. 272—31.

Schlecht, Charles H.: *See*—
Parkes, Ralph C., and Schlecht. 3,021,609.

Schleifer, Josef: *See*—
Müller, Kurt, and Schleifer. 3,022,441.

Schluckebier, Rudolf, & Co.: *See*—
Meister, Ernst, and Baanach. 3,021,781.

Schmid, Leonard J., and D. R. Scott, to General Motors Corp. Mold for making composite metal bearings. 3,021,579, 2–20–62, Cl. 22—116.

Schmider, Henry R.: *See*—
Ferguson, John H., Jr., and Schmider. 3,021,672.

Schmidt, Harold N., V. Tulisen, L. Katz, and L. D. Lytle, to General Aniline & Film Corp. Conditioning of pigments. 3,022,299, 2–20–62, Cl. 260—246.

Schmidt, Theodor, and K. Wilde, to Indugas, Gesellschaft fur industrielle Gasverwendung m.b.H. Direct-heating oven. 3,021,057, 2–20–62, Cl. 263—15.

Schneider, Arthur J. R., to Waste King Corp. Right angle drive steerable propeller. 3,021,725, 2–20–62, Cl. 74—665.

Schneider, Emmor V., to Alliance Mfg. Co., Division of Consolidated Electronics Industries Corp. Meter and brake therefor. 3,022,460, 2–20–62, Cl. 324—140.

Schneider, Jos., & Co., Optische Werke: *See*—
Ewald, Waldemar. 3,021,774.

Schnell, Hermann, and G. Fritz, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of high molecular polycarbonates. 3,022,272, 2–20–62, Cl. 260—47.

Scholl, William M. Orthopedic article of footwear. 3,021,846, 2–20–62, Cl. 128—595.

Scholtz, Arthur P., to National Can Corp. Receptacle for tape. 3,021,987, 2–20–62, Cl. 225—25.

Schramm, Gerhard, and E. Mohr, to Behringwerke Aktiengesellschaft. Process for the preparation of highly concentrated compositions of the receptor destroying enzyme neuraminidase. 3,022,227, 2–20–62, Cl. 195—62.

Schroeder, Hans J., to BMW Triebwerkbau Gesellschaft m.b.H. Fuel supply system for gas turbines. 3,021,675, 2–20–62, Cl. 60—39.74.

Schroeder, Herbert M., and D. J. Waythomas, to Textron Inc. Urethane modified vegetable oil. 3,022,326, 2–20–62, Cl. 260—404.5.

Schrotz, Kurt: *See*—
Dausch, Ernst, and Schrotz. 3,021,574.

Schuetz, James W., to Blaw-Knox Co. Mandrel bar steadier. 3,021,736, 2–20–62, Cl. 80—13.

Schuler, Max, to Sandoz A.G. Insecticidally and acaricidally active mono- and dithiophosphoric acid esters. 3,022,215, 2–20–62, Cl. 167—22.

Schulz, Paul D.: *See*—
Sear, Arthur W., Schulz, and White. 3,022,395.

Schulze, Klaus-Jürgen, and O. Kubatschka, to VEB Schlepperwerk Nordhausen. Control devices for adjustable driving mounts. 3,021,720, 2–20–62, Cl. 74—481.

Schur, Milton O., to Olin Mathieson Chemical Corp. Pin studded punch roll including method of fabrication. 3,021,732, 2–20–62, Cl. 76—101.

Schute, Frank: *See*—
November, Gerald S., and Schute. 3,021,708.

Schwartz, Nathan R., to Swiveller Co., Inc. Full turn swivel unit for electrical fixtures. 3,022,096, 2–20–62, Cl. 285—164.

Schweiz Gasapparatefabrik Solothurn: *See*—
Hönger, Guido. 3,021,893.

Scott, Donald R.: *See*—
Schmid, Leonard J., and Scott. 3,021,579.

Scott, George A.: *See*—
Williams, Milton S., Jr., and Scott. 3,022,409.

Scott, John N., Jr.: *See*—
Jones, Rufus V., and Scott. 3,022,254.

Scott, John N., Jr., to Phillips Petroleum Co. Injection molding of plastic materials. 3,021,568, 2–20–62, Cl. 18—55.

Scovill Mfg. Co.: *See*—
Harris, William H. 3,021,946.

Scragg, Ernest, & Sons Ltd.: *See*—
Findlow, Eric. 3,021,663.

Sear, Arthur W., P. D. Schulz, and D. E. White, to Minneapolis-Honeywell Regulator Co. Pressure responsive apparatus. 3,022,395, 2–20–62, Cl. 200—83.

Searle, Norman E., to E. I. du Pont de Nemours and Co. Esters of thiocarboxylic acids. 3,022,151, 2–20–62, Cl. 71—2.6.

Sears, Sam E. Combination awning and swimming pool cover. 3,021,530, 2–20–62, Cl. 4—172.

Seely, Warren A. Portable seat. 3,021,920, 2–20–62, Cl. 182—188.

Segal, Abram: *See*—
Clatot, Alfred, Lemoine, and Segal. 3,021,594.

Seger, Fritz O., to Westinghouse Air Brake Co. Adjustable cam device. 3,021,724, 2–20–62, Cl. 74—568.

Seigle, William R., to General Electric Co. Drawing tape programmer. 3,022,501, 2–20–62, Cl. 340—365.

Selby, Ernest E., and R. R. Knapp, to Dean Mfg., Inc. Device for treating water and method. 3,022,247, 2–20–62, Cl. 210—59.

Selle, Hans-Dieter, and A. Ruhnau, to VEB Chemische Fabrik Grünau. Process for increasing the colorability of polyester terephthalite fibers and the products obtained thereby. 3,022,131, 2–20–62, Cl. 8—115.5.

Sellers, Jack D. Tape handling mechanism. 3,021,989, 2–20–62, Cl. 226—118.

Seniff, Russell W., R. N. Fracalossi, and P. Kangas. Dust guard. 3,022,097, 2–20–62, Cl. 286—6.

Sennewald, Kurt, K. Born, H. Erpenbach, and G. Dobek, to Knapsack-Griesheim Aktiengesellschaft. Process for the preparation of unsaturated carboxylic acid nitriles. 3,022,332, 2–20–62, Cl. 260—464.

Sennewald, Kurt, G. Dobek, and H. Joest, to Knapsack-Griesheim Aktiengesellschaft. Process for dehydrating alpha-hydroxy-isobutyric acid esters. 3,022,336, 2–20–62, Cl. 260—486.

Seymour, Raymond E., to Sperry Rand Corp. Selective interlock mechanism. 3,021,937, 2–20–62, Cl. 197—107.

Shandel, Fred. Hook and eye choker assembly. 3,022,104, 2–20–62, Cl. 294—74.

Sharp, Carl R., and J. E. Streeter, to Rain Bird Sprinkler Mfg. Corp. Partial circle water sprinklers. 3,022,012, 2–20–62, Cl. 239—230.

Shaw, George B.: *See*—
De Lorean, John Z., Shaw, and Short. 3,021,715.

Shaw, Gilbert. Apparatus and method for orienting and mixing of synthetic fibers. 3,022,132, 2–20–62, Cl. 18—54.

Shaw, Harold G., to United Shoe Machinery Corp. Heel seat fitting machines. 3,021,541, 2–20–62, Cl. 12—31.5.

Shaw, Melvin: *See*—
Allen, Robert Y., Shaw, and Umstead. 3,021,639.

Shaw, Ronald A., to Power Jets (Research and Development) Ltd. Air intake for jet sustained aircraft. 3,022,026, 2–20–62, Cl. 244—23.

Sheehan, John F., Jr.: *See*—
Burke, Joseph L., and Sheehan. 3,021,815.

Shelby Salesbook Co., The: *See*—
Kehoe, James W. 3,022,094.

Shelby Spring Hinge Co., The: *See*—
Pittenger, Francis H. 3,021,556.

Sheldon, Edward E. Endoscopes. 3,021,834, 2–20–62, Cl. 128—6.

Sheldrake, Leonard J.: *See*—
Hetzler, Lewis R., and Sheldrake. 3,022,455.

Shelley, Edwin F.: *See*—
Goodell, John D., and Shelley. 3,021,611.
Shepley, William I.: *See*—
Cook, Edward G., and Shepley. 3,021,706.
Sheridan, Robert Anthony. Artificial wake for duck decoy. 3,021,635, 2–20–62, Cl. 43—3.
Sherman, William C., to Chas. Pfizer & Co., Inc. Antibiotics in feeds. 3,022,218, 2–20–62, Cl. 167—53.
Shimano, Keizo. Three stage speed change mechanism for a bicycle. 3,021,728, 2–20–62, Cl. 74—750.
Shimula, Yoshihiro, and H. Uchida, to Rigaku Denki Co. Ltd. System for measuring the lattice spacing of crystal by means of X-rays. 3,022,423, 2–20–62, Cl. 250—51.5.
Shipton, E., & Co. Ltd.: *See*—
Strong, Bernard. 3,021,559.
Sholtz, Mitchell D. Electrical system for bomb release mechanisms. 3,021,758, 2–20–62, Cl. 89—1.5.
Short, Brooks H.: *See*—
De Lorean, John Z., Shaw, and Short. 3,021,715.
Shrewsbury, Robert S., to Vic-Mar Corp. Nozzle. 3,022,016, 2–20–62, Cl. 239—521.
Shukys, Julius G., to Air Reduction Co., Inc. Process of making vinyl ether polymers. 3,022,280, 2–20–62, Cl. 260—91.1.
Siebert, Preston G. Bearing and shroud combination. 3,022,126, 2–20–62, Cl. 308—237.
Siemens Edison Swan Ltd.: *See*—
Leslie, John D. 3,022,388.
Sijpesteijn, Antje K., to The Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek. Seed disinfection. 3,022,216, 2–20–62, Cl. 167—38.
Silverman, William B., to Owens-Illinois Glass Co. Furnace construction method. 3,021,645, 2–20–62, Cl. 50—153.
Silvers, Charles. Panel gate. 3,022,045, 2–20–62, Cl. 256—73.
Silvestri, Giuliana: *See*—
Muench, Werner, Notarbartolo, and Silvestri. 3,022,291.
Simmons Co.: *See*—
Hausted, Ray K. 3,021,534.
Simon, Jean-Claude: *See*—
Biggi, Victor, and Simon. 3,022,419.
Simon, Myron S.: *See*—
Green, Milton, and Simon. 3,022,166.
Simpleaar, Clyde S., to Modine Mfg. Co. Method of fabricating heat exchangers. 3,021,804, 2–20–62, Cl. 113—118.
Simpson, Charles G., and S. Loginow, to Philco Corp. Fabrication of electrical circuit components. 3,022,019, 2–20–62, Cl. 242—9.
Sims, Homer J., to Rohm & Haas Co. Inhibited monomeric systems. 3,022,292, 2–20–62, Cl. 260—239.3.
Sinclair Co., The: *See*—
Sinclair, Peter S. 3,021,590.
Sinclair, Peter S., to The Sinclair Co. Support wire for dandy roll covers. 3,021,590, 2–20–62, Cl. 29—121.
Sinclair Refining Co.: *See*—
Gallagher, James E. 3,021,867.
Young, David W. 3,022,267.
Sinclair, William, to Ericsson Telephones Ltd. Electromagnetic indicators. 3,022,502, 2–20–62, Cl. 340—366.
Singer Mfg. Co., The: *See*—
Johnson, Ralph E. 3,021,801.
Slagh, Harold R.: *See*—
Tolkmith, Henry, Slagh, and Kauer. 3,022,329.
Slatkovski, Emil. Louvered ventilating devices and method for producing same. 3,021,778, 2–20–62, Cl. 98—121.
Slaughter, Gerald M.: *See*—
Donnelly, Ralph G., Gilliland, and Slaughter. 3,022,162.
Slayter, Games, and H. J. Snow, and S. D. Philipps, to Owens-Corning Fiberglas Corp. Method for producing and treating fibers. 3,021,563, 2–20–62, Cl. 18—47.3.
Sleeper, Murrel R.: *See*—
Le Clear, Robert L., M. B. and R. Sleeper. 3,021,545.
Sleeper, Richard: *See*—
Le Clear, Robert L., M. B. and R. Sleeper. 3,021,545.
Slenker, Stephen, and W. C. Kinzinger, to Philco Corp. Plural-transistor circuit with fuse means. 3,022,465, 2–20–62, Cl. 330—30.
Sloan, Theodore H., ¼ to W. B. Jaspert. Method and apparatus for honing annular bodies. 3,021,648, 2–20–62, Cl. 51—135.
Sloane, Howard J., and K. B. Bradley, to The Dow Chemical Co. Preparation of 4-chlorodiphenyl oxide. 3,022,353. 2–20–62, Cl. 260—612.
Sluma, William: *See*—
Walz, Bruno. 3,021,546.
Smiley, Robert A.: *See*—
Bennett, Ovell F., Huber, and Smiley. 3,022,320.
Smith, Clifford E.: *See*—
Tuschhoff, John V., and Smith. 3,022,289.
Smith, David C., and R. F. Mikes, said R. F. Mikes, assor. to D. C. Smith. Cartridge toothbrush. 3,021,850, 2–20–62, Cl. 132—84.
Smith, Earl L.: *See*—
Koerner, Ernest C., Hall and Smith. 3,022,200.
Smith, Edwin S., to The Goodyear Tire & Rubber Co. Polymerization process with a peroxydicarbonate initiator formed in situ. 3,022,281, 2–20–62, Cl. 260—92.8.
Smith, James K.: *See*—
Wintermute, Glenn E., Smith, and Brighton. 3,022,211.
Smith, Maurice C., Jr., to Marbill Co. Method of making a bottom structure for shoes. 3,021,572, 2–20–62, Cl. 18—58.
Smith Oil Agitator Co.: *See*—
Smith, Onis O. 3,022,052.
Smith, Onis O., to Smith Oil Agitator Co. Mixing device for oil tanks with attachably connected power unit. 3,022,052, 2–20–62, Cl. 259—110.
Smith, Owen C. Sawmill set works. 3,021,880, 2–20–62, Cl. 143—118.
Smith, Raymond H., to The La Resista Corset Co. Body supporting garments. 3,021,845, 2–20–62, Cl. 128—463.
Smith, Robert M.: *See*—
Rogers, William A., Jr., Woehst, and Smith. 3,022,315.
Smith, William A. Grease extracting vent with heating means. 3,021,777, 2–20–62, Cl. 98—115.
Smyth, Henry L. R., D. M. Makow, and S. K. Keays, to National Research Council. Electronic control circuit. 3,022,418, 2–20–62, Cl. 250—17.
Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A.: *See*—
Muench, Werner, Notarbartolo, and Silvestri. 3,022,291.
Snow, Henry J.: *See*—
Slayter, Games, Snow, and Philipps. 3,021,563.
Sobolewski, Edmund W.: *See*—
Howard, Carlton J., and Sobolewski. 3,022,159.
Societe Anonyme: Generale Thermique-Procedes Brola: *See*—
Brola, Gabriel. 3,021,892.
Societe des Lunetiers Cottet Poichet, Tagnon & Cie: *See*—
Cretin Maitenaz, Bernard. 3,021,647.
Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture: *See*—
Rubin, Maurice. 3,022,348.
Societe d'Exploitation des Brevets CLS: *See*—
Clatot, Alfred, Lemoine, and Segal. 3,021,594.
Socony Mobil Oil Co., Inc.: *See*—
Stripling, Allen A. 3,022,488.
Söderqvist, Karl O., to Aktiebolaget Bofors. Device for feeding rounds of ammunition from a magazine to the ramming position of a gun. 3,021,762, 2–20–62, Cl. 89—33.
Solleau, Trasimond A., Jr., to General Electric Co. Electric discharge device and methods of manufacture. 3,022,440, 2–20–62, Cl. 313—250.
Sola, Joseph G. Voltage regulating apparatus. 3,022,458, 2–20–62, Cl. 323—45.
Solitch, Robert. Circulation tempering of chocolate and similar substances. 3,021,779, 2–20–62, Cl. 99—236.
Solodar, Warren E.: *See*—
Green, Milton, and Solodar. 3,022,354.
Solow, Sidney P., and R. H. Yamin. Method of making an identification leader for motion picture film. 3,022,165. 2–20–62, Cl. 96—43.
Somerville, James, J. N. Yaccarino, and R. A. Starry, to United States of America, Navy. Practice depth charge dispenser. 3,021,759, 2–20–62, Cl. 89—1.5.
Sommer, Albert, to "Straba" Handels- Aktiengesellschaft. Method for the production of bituminous compositions. 3,021,566, 2–20–62, Cl. 18—47.5.
Sonkin, Ben: *See*—
Kanner, Seymour, and Sonkin. 3,021,883.
Soper, La Vern G., and L. M. Harris, to National Presto Industries, Inc. Beverage maker. 3,022,411, 2–20–62, Cl. 219—44.
Spalding, Dudley B. Introduction of vaporific liquid to a pressure exchanger. 3,022,050, 2–20–62, Cl. 257—267.
Spars, Byron G., and P. P. McCall, to Esso Research and Engineering Co. Refining process for petroleum wax. 3,022,245, 2–20–62, Cl. 208—26.
Speeter, Merrill E.: *See*—
Aspergren, Brooke D., Moffett, and Speeter. 3,022,314.
Sperry Rand Corp.: *See*—
Seymour, Raymond E. 3,021,937.
Steagall, William F. 3,022,007.
Walter, Oscar, and Steeves. 3,021,935.
Sperry Rand Corp., Ford Instrument Co. Div.: *See*—
McKeown, Patrick J., and Frann. 3,022,008.
Spiegelhalter, William G., to General Electric Co. Vent and exhaust arrangement for air conditioning unit. 3,021,696, 2–20–62, Cl. 62—429.
Spremulli, Paul F.: *See*—
Blanding, Wendell S., Foster, and Spremulli. 3,021,643.
Springer, Anton M., to Telefonbau und Normalzeit G.m.b.H. Rotatable electromagnetic transducer system. 3,022,383, 2–20–62, Cl. 179—100.2.
Spud's Tools & Die, Inc.: *See*—
Roberts, James S. 3,021,577.
Staeuble, Max, and K. Weber, to Ciba Ltd. Anthraquinone vat dyestuff containing a reactive triazine nucleus. 3,022,304, 2–20–62, Cl. 260—249.
Stalego, Charles J.: *See*—
Morgan, Willard L., Whitehurst, Russell and Stalego. 3,021,564.
Staley, A. E., Mfg. Co.: *See*—
Tuschhoff, John V., and Smith. 3,022,289.
Stallard, Ross G. Adjustable chair seat. 3,022,037, 2–20–62, Cl. 248—421.
Standard Oil Co. (Indiana): *See*—
Kalfadelis, Charles D., and Meyer. 3,022,333.
Rhodes, Joseph C. 3,021,704.
Stanley, Works: *See*—
Ford, Michael J. 3,021,897.
Stanton, George W., and T. G. Traylor, to The Dow Chemical Co. Compositions comprising graft copolymers of n-vinyl lactam monomers on acrylonitrile polymer substrates, and method of making same. 3,022,264, 2–20–62, Cl. 260—45.5.
Stanton, George W., and T. G. Traylor, to The Dow Chemical Co. Compositions comprising graft copolymers of certain aminated alkenyl aromatic monomers on acrylonitrile polymer substrates and method of making. 3,022,265, 2–20–62, Cl. 260—45.5.
Star Cutter Co.: *See*—
Windsor, Meredith M., and Lincoln. 3,021,735.

Staron, Edward: *See*—
Hall, Merchand B., Anderson, and Staron. 3,021,876.
Starry, Raymond A.: *See*—
Somerville, Yaccarino, and Starry. 3,021,759.
Stasse, Roland. Engine powered wheelbarrow. 3,021,625, 2–20–62, Cl. 37—130.
Steagall, William F., to Sperry Rand Corp. Serial binary adder. 3,022,007, 2–20–62, Cl. 235—176.
Stedman, Cecil K., to United States of America, Navy. Homing system for torpedo. 3,021,807, 2–20–62, Cl. 114—23.
Steel City Electric Co.: *See*—
Cook, Raymond D., and Lang. 3,021,581.
Steelcase Inc.: *See*—
Pipe, John. 3,021,960.
Steeves, Harold W.: *See*—
Walter, Oscar, and Steeves. 3,021,935.
Stefanovic, Milutin: *See*—
Muller, Georges, and Stefanovic. 3,022,324.
Stepoway, Theodore. Electrical connector. 3,022,481, 2–20–62, Cl. 339—75.
Stern, William, to Illinois Tool Works Inc. Washer feeding machine and method. 3,021,979, 2–20–62, Cl. 221—157.
Stevens, Bryce L., to General Motors Corp. Thermostatic switch. 3,022,405, 2–20–62, Cl. 200—138.
Stevens, Howard C., Jr.: *See*—
Minty, John E., and Stevens. 3,021,962.
Stewart-Warner Corp.: *See*—
Dinkelkamp, Henry T. 3,021,823.
Michaels, Henry R. 3,021,787.
Stichting National Luchtvaartlaboratorium: *See*—
Feis, Nikolaas. 3,021,811.
Stjärnkvist, Oskar N., to Aktiebolaget Pharmacia. Photographic developer. 3,022,168, 2–20–62, Cl. 96—66.
Stoeckel, Albert L.: *See*—
Johns, William H., and Stoeckel. 3,021,872.
Stoeckicht, Wilhelm G. Planetary gear transmission. 3,021,731, 2–20–62, Cl. 74—801.
Stoller, Benjamin N. Windshield wiper attachment. 3,021,548, 2–20–62, Cl. 15—250.36.
Stolp, Heinz: *See*—
Knoll, Joseph, Bestel, and Stolp. 3,021,882.
Stolz, Alfred. Watch case holder. 3,022,067, 2–20–62, Cl. 269—127.
Stone, Walter V. Animated tooth brushing timer. 3,021,666, 2–20–62, Cl. 58—152.
Storey, Frederick M. Molding strips for a luggage case. 3,021,930, 2–20–62, Cl. 190—41.
"Straba" Handels- Aktiengesellschaft: *See*—
Sommer, Albert. 3,021,566.
Stratford, Alfred C., to Cimex Ltd. Surface-treating tools. 3,021,550, 2–20–62, Cl. 15—359.
Streeter, John E.: *See*—
Sharp, Carl R., and Streeter. 3,022,012.
Stripling, Allen A., to Socony Mobil Oil Co., Inc. Delayed acoustic velocity signal transmission. 3,022,488, 2–20–62, Cl. 340—15.
Strobel, Albert F.: *See*—
Catino, Sigmund C. Strobel, and Williams. 3,022,284.
Strombeck-Becker Mfg. Co.: *See*—
Schlau, Floyd E. 3,022,070.
Strong, Bernard, to E. Shipton & Co. Ltd. Method of and apparatus for the manufacture of hollow plastic articles. 3,021,559, 2–20–62, Cl. 18—5.
Stroud, Vincent D., and H. S. Grant. Two-way radio telephone system utilizing frequency subbands to provide transmitter-receiver isolation. 3,022,504, 2–20–62, Cl. 343—178.
Strube, Richard E., to The Upjohn Co. 2-trifluoroacetamido-5-nitropyrimidine. 3,022,306, 2–20–62, Cl. 260—256.4.
Stupar, Wesley E., to General Precision, Inc. Trigonometric converter. 3,022,500, 2–20–62 Cl. 340—347.
Sulzer Freres, S.A.: *See*—
Profos, Paul. 3,21,824.
Sun Oil Co.: *See*—
Wright, J Rondle. 3,021,713.
Svenska Flygmotor Aktiebolaget: *See*—
Arvidson, Gunnar. 3,021,711.
Swalls, Roy. Releasable anchor. 3,021,812, 2–20–62, Cl. 114—208.
Swaney, Robert C. Stabil-heat drier. 3,022,047, 2–20–62, Cl. 257—95.
Swett, Arthur H., Jr., to American Tag Co. Marking fowl or the like. 3,021,630, 2–20–62, Cl. 40—21.
Swiveller Co., Inc.: *See*—
Schwartz, Nathan R. 3,022,096.
Swoboda, Leo F.: *See*—
Reinhard, Karl J., and Swoboda. 3,022,028.
Syers, Roland, to Chemical Construction Corp. Manufacture of phosphoric acid. 3,022,136, 2–20–62, Cl. 23—165.
Syers, Roland, to Chemical Construction Corp. Production of superphosphates. 3,022,155, 2–20–62, Cl. 71—40.
Sylvester, John D., and E. E. Messmer, to Amsco Packaging Machinery, Inc. Fused-together unit of stacked articles. 3,021,947, 2–20–62, Cl. 206—57.
Szmuszkovicz, Jacob, and W. C. Anthony, to The Upjohn Co. Organic compounds. 3,022,313, 2–20–62, Cl. 260—319.
Szmuszkovicz, Jacob, to The Upjohn Co. Oxalic acid hydrazides. 3,022,345, 2–20–62, Cl. 260—561.
T & S Equipment Co.: *See*—
Le Clear, Robert L., Sleeper, M. B. and R. 3,021,545.
Takagi, Tatsuya. Oil vibration-damper for vehicles. 3,022,061, 2–20–62, Cl. 267—8.
Tanenbaum, Morris, and R. L. Wallace, Jr., to Bell Telephone Laboratories, Inc. Variable equalizer employing semiconductive element. 3,022,472, 2–20–62, Cl. 333—18.
Tanner, Fred W., Jr., F. A. Hochstein, and K. Mural, to Chas. Pfizer & Co., Inc. Antibiotics and processess. 3,022,347, 2–20–62, Cl. 260—571.
Taris, Charles M.: *See*—
Miller, Robert A., Munson, Owendoff, and Taris. 3,022,380.
Tatnall, Joseph S.: *See*—
Mahns, Gerald H., McGinnis, and Tatnall. 3,022,203.
Taylor, Philip, and E. E. Bowers; said Bowers assor. to said Taylor. Half-tone visual film scanner. 3,021,750, 2–20–62, Cl. 88—14.
Tee-Nee Trailer Co.: *See*—
Olney, James E. 3,022,090.
Teitel, Sidney: *See*—
Goldberg, Moses W., and Teitel. 3,022,301.
Telefonaktiebolaget L M Ericsson: *See*—
Söderbaum, Carl G., and Mitnitzky. 3,022,379.
Telefonbau und Normalzeit G.m.b.H.: *See*—
Springer, Anton M. 3,022,383.
Tennessee Valley Authority: *See*—
Potts, John M., Elder, and Anderson. 3,022,154.
Tensitron, Inc.: *See*—
Saxl, Erwin J. 3,022,025.
Terry, Robert L.: *See*—
Williamson, Robert R., and Terry. 3,022,495.
Texaco Inc.: *See*—
Eastman, Du Bois. 3,022,156.
Texas Instruments Inc.: *See*—
Arey, Ralph G. 3,022,402.
Doan, David B. 3,022,457.
Milam, David L. 3,021,595.
Millis, Edwin G. 3,022,000.
Millis, Edwin G. 3,022,454.
Nygaard, James L., and Webster. 3,022,421.
Textron Inc.: *See*—
Dorst, Richard W. 3,021,535.
Schroeder, Herbert M., and Waythomas. 3,022,326.
Waythomas, Donald J. 3,022,327.
Th. Goldschmidt A.-G.: *See*—
Finkener, Friedrich, Krug, Loges, and Rodewald. 3,022,161.
Thiegs, Bernard J., to The Dow Chemical Co. Stabilized foam-providing composition. 3,022,251, 2–20–62, Cl. 252—307.
Thomas Engineering Co., Inc.: *See*—
Casey, Thomas J. 3,021,783.
Thomas, Germaine: *See*—
Wyraud, Charles, Prettre, Trambouze, Lenoir, Thomas, and Plurien. 3,022,187.
Thompson, Earl R., Jr., to The Bendix Corp. Electrical connection assembly. 3,022,484, 2–20–62, Cl. 339—129.
Thompson Ramo Wooldridge Inc.: *See*—
Gibson, Willard C. 3,022,051.
Sampietro, Achilles C. 3,022,114.
Tiedemann, Herman, to General Aniline & Film Corp. Making coffee and tea brews and the resulting product. 3,022,173, 2–20–62, Cl. 99—28.
Tiffany, Frank E. Sandwich circuit strips. 3,022,480, 2–20–62, Cl. 339—18.
Tillander, Folke G., to Aktiebolaget Bofors. Device for belt-fed guns. 3,021,761, 2–20–62, Cl. 89—33.
Timmer, David J., K. W. Philbrick, D. W. Mossbarger, and A. M. Caton, to Globe Industries, Inc. Electromagnetic device. 3,022,432, 2–20–62, Cl. 310—37.
Tishken, Paul. Coil holder with adjustable side members. 3,022,024, 2–20–62, Cl. 242—110.1.
Titze, Karl, to Martin Miller Aktiengesellschaft. Method of producing metal strips bilaterally tapered in cross section by cold rolling. 3,021,737, 2–20–62, Cl. 80—60.
Tjaarda, John. Composite automobile design. 3,022,105, 2–20–62, Cl. 296—28.
Tochihara, Shigezo: *See*—
Hoshino, Yasushi, Namikawa, and Tochihara. 3,022,079.
Hoshino, Yasushi, Sato, Namikawa, and Tochihara. 3,022,078.
Tod, John A.: *See*—
Harris, Gerald R. 3,021,654.
Tokyo Denki Kagaku Kogyo Kabushiki Kaisha: *See*—
Hoshino, Yasushi, Sato, Namikawa, and Tochihara. 3,022,078.
Toland, William G., Jr., to California Research Corp. Oxidation process employing sulfites or bisulfites. 3,022,341, 2–20–62, Cl. 260—524.
Tolkmith, Henry, H. R. Slagh, and K. C. Kauer, to The Dow Chemical Co. Method for the manufacture of O-aryl phosphorodichloridothioates. 3,022,329, 2–20–62, Cl. 260—461.
Tracy, Gerald T., to National Can Corp. Container. 3,021,976, 2–20–62, Cl. 220—66.
Trailmobile Inc.: *See*—
Black, James J. 3,022,087.
Black, James J. 3,022,106.
Trambouze, Yves: *See*—
Wyraud, Charles, Prettre, Trambouze, Lenoir, Thomas, and Plurien. 3,022,187.
Trane Co., The: *See*—
Neubauer, Emil T. 3,021,995.
Traylor, Teddy G.: *See*—
Stanton, George W., and Traylor. 3,022,264.
Stanton, George W., and Traylor. 3,022,265.
Treer, Ross B., to The Warner & Swasey Co. Contour following apparatus. 3,021,740, 2–20–62, Cl. 82—14.
Trico Products Corp.: *See*—
Weymouth, Frederick R., Jr. 3,021,912.
Triest, Laura W.: *See*—
Bair, Richard H. 3,022,387.
Tschumi, Otto, H. Kappeler, H. Blochlinger, and A. Zimmermann, to Autophon Aktiengesellschaft. Plural frequency responsive circuits for portable receiving sets. 3,022,493, 2–20–62, Cl. 340—171.
Tuck, Robert M., and J. J. Mooney, Jr., to General Motors Corp. Torque converter transmission. 3,021,676, 3,021,676, 2–20–62, Cl. 60—54.
Tullsen, Volney: *See*—
Schmidt, Harold N., Tullsen, Katz, and Lytle. 3,022,299.

Tulp, Wijbrand J., to N.V. Machinefabriek Frans Smulders. Linings for guiding slide valves, disc valves or like members in a valve casing. 3,022,041, 2–20–62, Cl. 251—324.

Tumpane Co. of Georgia, Inc., The: *See*—
Reinhard, Karl J., and Swoboda. 3,022,028.

Turner, William M.: *See*—
Carpenter, Virgil R., and Turner. 3,021,606.

Tuschhoff, John V., and C. E. Smith, to A. E. Staley Mfg. Co. Acylation of starch. 3,022,289, 2–20–62, Cl. 260—233.5.

Tyner, Warren C., to King-Seeley Thermos Co. Variable orifice device. 3,022,497, 2–20–62, Cl. 340—244.

Uchida, Hiroshi: *See*—
Shimuta, Yoshihiro, and Uchida. 3,022,423.

Uhtenwoldt, Herbert R., to The Cincinnati Milling Machine Co. Tapping spindle reversing means selectively actuated automatically or manually by quill actuating member. 3,021,539, 2–20–62, Cl. 10—136.

Ulrich, Aaron J., J. W. Butler, and A. J. Hatch, to United States of America, Atomic Energy Commission. Radio-frequency plasma containing device. 3,022,236, 2–20–62, Cl. 204—154.2.

Umstead, Donald E.: *See*—
Allen, Robert Y., Shaw, and Umstead. 3,021,639.

Union Carbide Corp.: *See*—
Baker, Charles R., and Paul. 3,021,682.
Barnes, Robert K., McLaughlin, and Hostettler. 3,022,256.
Guest, Howard R., Kiff, and Halstead. 3,022,273.
Lanham, William M. 3,022,330.
Leinon, Russell C., and Myerly. 3,022,349.
Lisanke, Robert J. 3,022,270.
Saurwein, Albert G. 3,022,365.
Vollmer, Walter K. 3,022,194.

Unipress Co., Inc., The: *See*—
Carpenter, Virgil R., and Turner. 3,021,606.

Unitcast Corp.: *See*—
Floehr, Walter L. 3,021,798.

United Aircraft Corp.: *See*—
Miller, Guy W. 3,022,040.

United-Carr Fastener Corp.: *See*—
Hughes, Norman J. 3,021,537.
Sarafinas, Bruno A. 3,021,975.

United Kingdon Atomic Energy Authority: *See*—
Rodwell, William. 3,022,239.

United Shoe Machinery Corp.: *See*—
Crowley, Geralfd J. 3,021,543.
Paulsen, Hans C. 3,021,540.
Shaw, Harold G. 3,021,541.

U.S. Industries, Inc.: *See*—
Goodell, John D., and Shelley. 3,021,611.

United States of America
Army: *See*—
Musser, C Walton. 3,021,760.
Atomic Energy Commission: *See*—
Hassett, Charles H. 3,022,240.
Brandt, Herman L. 3,022,160.
Donnelly, Ralph G., Gilliland, and Slaughter. 3,022,162.
Fields, Paul R., and Isaac. 3,022,134.
November, Gerald S., and Schute. 3,021,708.
Ulrich, Aaron J., Butler, and Hatch. 3,022,236.
Navy: *See*—
Bauer, Myron J., Kane, Neuman, and Scheurich. 3,022,031.
Cleek, Given W., and Hamilton. 3,022,182.
Gardiner, Paul G. 3,021,806.
Gettys, Charles B., and Leonard. 3,022,486.
Keahey, Sammie G. 3,022,027.
Scharp, Glenn A. 3,022,505.
Somerville, James, Yaccarino, and Starry. 3,021,759.
Stedman, Cecil K. 3,021,807.

United States Rubber Co.: *See*—
Marous, Leonard F., and McCleary. 3,022,282.

United States Steel Corp.: *See*—
Huet, Raymond J. 3,021,941.
Johns, William H., and Stoeckel. 3,021,872.

Universal Match Corp.: *See*—
Gygax, Ernest F. 3,021,775.

Universal Oil Products Co.: *See*—
Bloch, Herman S. 3,022,340.

Universal Thread Grinding Co.: *See*—
Linley, Francis M., Jr. 3,021,538.

University of Illinois Foundation: *See*—
Fowler, Vernon J. 3,022,443.

Upjohn Co., The: *See*—
Aspergren, Brooke D., Moffett, and Specter. 3,022,314.
De Boer, Clarence, Ehle, and Large. 3,022,220.
Strube, Richard E. 3,022,306.
Szmuszkovicz, Jacob. 3,022,345.
Szmuszkovicz, Jacob, and Anthony. 3,022,313.

Uruburu, Fernando J. Concrete mold forms. 3,021,586, 2–20–62, Cl. 25—121.

Uthemann, Wolfgang, to Rosenkalmer G.m.b.H. Hinge connection for umbrella top ribs and structures. 3,021,854, 2–20–62, Cl. 135—32.

Vdo Tachometer Werke, Adolph Schindling G.m.b.H.: *See*—
Henss, Heinrich. 3,022,447.

VEB Chemische Fabrik Grünau: *See*—
Selle, Hans-Dieter, and Ruhnau. 3,022,131.

VEB Kamera- und Kinowerke Dresden: *See*—
Hintze, Klaus, and Heinze. 3,021,773.

VEB Schlepperwerk Nordhausen: *See*—
Schulze, Klaus-Jürgen, and Kubatschka. 3,021,720.

Van de Griendt, Gerald H., to S. B. Penick and Co. Process for preparing higher fatty acid salts of neomycin. 3,022,286, 2–20–62, Cl. 260—210.

Vanderbilt, Byron M., to Esso Research and Engineering Co. Reinforcing element bonded with a cured mixture of a butadiene polymer and diethyl fumarate, and process for preparing the same. 3,022,208, 2–20–62, Cl. 154—43.

Varga, Gyula. Electric watch mechanism. 3,021,665, 2–20–62, Cl. 58—28.

Vegors, Lester S.: *See*—
Cook, Fred E., and Vegors. 3,022,060.

Vendo Co., The: *See*—
Gore, Le Roy D., and Barnes. 3,021,685.

Ver Nooy, Charles D., III, to E. I. du Pont de Nemours and Co. Process for preparing bis(ω-hydroperfluoroalkyl)carbinols. 3,022,356, 2–20–62, Cl. 260—633.

Vibro-Meter A.G.: *See*—
Rohrbach, Christof. 3,022,479.

Vic-Mar Corp.: *See*—
Shrewsbury, Robert S. 3,022,016.

Victor Mfg. & Gasket Co.: *See*—
Kosatka, Thomas O. 3,022,080.
Kosatka, Thomas O. 3,022,081.

Vignati, Carlo: *See*—
Podesta, Armando, and Vignati. 3,021,570.

Villarreal, Enrique. Lineally-expansible thermostat for melting pots of type setting machines. 3,022,404, 2–20–62, Cl. 200—137.

Vinson, Roscoe C. Spectacle frame. 3,021,753, 2–20–62, Cl. 88—41.

Vitramon, Inc.: *See*—
Weller, Barton L. 3,021,589.

Voigtmann, Robert C., to The Dole Valve Co. High density polyethylene ice mold. 3,021,695, 2–20–62, Cl. 62—370.

Vollmer, Herman. Sleeve bearing. 3,022,127, 2–20–62, Cl. 308—238.

Vollmer, Walter K., to Union Carbide Corp. Coating compositions and method for applying same. 3,022,194, 2–20–62, Cl. 117—75.

Von Ahlefeldt, Rolf S. Two-way solenoid. 3,022,400, 2–20–62, Cl. 200—93.

Votaw, Clarence J., to Bell Telephone Laboratories, Inc. Station selection system. 3,022,372, 2–20–62, Cl. 178—4.1.

Wacker-Chemie G.m.b.H.: *See*—
Enk, Eduard, and Knörr. 3,022,337.
Enk, Eduard, and Knörr. 3,022,338.
Enk, Eduard, and Knörr. 3,022,339.
Meinel, Karl. 3,022,266.

Wade, Neill G., 3rd: *See*—
Brattain, Walter H., and Wade. 3,022,374.

Wade, Robert E. Seed distributing shoe. 3,021,933, 2–20–62, Cl. 193—9.

Wagner, Robert W. Electrically heated key. 3,022,408, 2–20–62, Cl. 219—19.

Wahl, Frank, to Western Electric Co., Inc. Spooling mechanism. 3,022,098, 2–20–62, Cl. 287—52.07.

Wakefield, Lowell A., to Wakefield's Deep Sea Trawlers, Inc. Preparation of king crab legs. 3,022,175, 2–20–62, Cl. 99—111.

Wakefield's Deep Sea Trawlers, Inc.: *See*—
Wakefield, Lowell A. 3,022,175.

Walker, Jay P., and C. O. Glasgow, to National Tank Co. Methods and means for separating liquids from petroleum streams and metering the separated liquids. 3,021,709, 2–20–62, Cl. 73—200.

Wallace, Robert L., Jr.: *See*—
Tanenbaum, Morris, and Wallace. 3,022,472.

Wallach, George. Rocket engines. 3,021,671, 2–20–62, Cl. 60—35.6.

Walls, James E. Adjustable supporting device. 3,022,032, 2–20–62, Cl. 248—205.

Walter, Oscar, and H. W. Steeves, to Sperry Rand Corp. Mechanical interlock device. 3,021,935, 2–20–62, Cl. 197—17.

Walz, Bruno, to W. Sluma. Tube or coil cleaning apparatus. 3,021,546, 2–20–62, Cl. 15—3.51.

Warf, Bernard W., 50% to W. H. Ballard, II. Shuttle car for mines. 3,022,023, 2–20–62, Cl. 242—86.51.

Warner, Paul F.: *See*—
Mihm, Clifford H., Warner, and Duke. 3,022,351.

Warner & Swasey Co., The: *See*—
Treer, Ross B. 3,021,740.

Wasdell, William K. Shock absorbers or vibration dampers. 3,021,926, 2–20–62, Cl. 188—88.

Waste King Corp.: *See*—
Schneider, Arthur J. R. 3,021,725.

Waterfield, Clayton F., and H. J. Calderhead, to Bird Electronic Corp. Coaxial line transition section and method of making same. 3,022,482, 2–20–62, Cl. 339—89.

Waters, Lawrence E., to The Goodyear Tire & Rubber Co. Deicer. 3,022,412, 2–20–62, Cl. 219—46.

Watts, John D., to Gray Tool Co. Fluid sealing arrangement. 3,021,974, 2–20–62, Cl. 220—46.

Waukesha Bearings Corp.: *See*—
Gruber, Jerome M. 3,022,123.

Waythomas, Donald J.: *See*—
Schroeder, Herbert M., and Waythomas. 3,022,326.

Waythomas, Donald J., to Textron Inc. Urethane modified vegetable oil. 3,022,327, 2–20–62, Cl. 260—404.5.

Weatherproof Products Corp., The: *See*—
Martin, Robert L. 3,022,065.

Weaver, Donald A.: *See*—
Fuller, Verlon M., and Weaver. 3,021,651.

Weaver, Preston R., to Maxson Electronics Corp. Acceleration switch. 3,022,393, 2–20–62, Cl. 200—61.45.

Weber, Kurt: *See*—
Staeuble, Max, and Weber. 3,022,304.

Webster, Roger R.: *See*—
Nygaard, James L., and Webster. 3,022,421.

Weed, Mark B., to E. I. du Pont de Nemours and Co. Herbicidal composition and method employing mixtures of substituted ureas and triazines. 3,022,150, 2–20–62, Cl. 71—2.5.

Weidman, William H., to Harris-Intertype Corp. Sheet feeding and registering mechanism. 3,022,068, 2–20–62, Cl. 271—55.

Weir, Ralph. Reproduction of color drawings, film transparencies and photographs. 3,022,164, 2–20–62, Cl. 96—30.

Weisenborn, Frank L., and S. C. Pan, to Olin Mathieson Chemical Corp. Yohimbine and α-yohimbine derivatives. 3,022,311, 2–20–62, Cl. 260—287.

Weiss, Dewey S. Quick action jack. 3,022,043, 2–20–62, Cl. 254—98.

Weiss, Martin J.: *See*—
Schaub, Robert E., and Weiss. 3,022,323.

Weiss, Max T., to Bell Telephone Laboratories, Inc. Ferromagnetic parametric microwave amplifier. 3,022,466, 2–20–62, Cl. 330—56.

Weller, Barton L., to Vitramon, Inc. Methods for installing terminal leads in composite electrical components and resulting products. 3,021,589, 2–20–62, Cl. 29—25.42.

Weller, Edward F., Jr.: *See*—
Chapman, Frederick W., Hanysz, Weller, and Martin. 3,022,451.

Wellsch, Henry. Means for servicing liquid-filled pneumatic tires. 3,021,877, 2–20–62, Cl. 141—38.

Werner, Louis A.: *See*—
Cartwright, Theodore R., and Werner. 3,021,855.

West Point Mfg. Co.: *See*—
Hogg, James C., and Pfaff. 3,021,949.

Western Electric Co., Inc.: *See*—
Burke, Joseph L., and Sheehan. 3,021,815.
Wahl, Frank. 3,022,098.

Westinghouse Air Brake Co.: *See*—
Hewitt, Ellis E. 3,022,116.
Hewitt, Ellis E. 3,022,117.
May, Harry C. 3,022,119.
Seger, Fritz O. 3,021,724.

Westinghouse Electric Corp.: *See*—
Conrad, Joseph D., Jr. 3,021,719.

Weymouth, Frederick R., Jr., to Trico Products Corp. Vehicle door locking system. 3,021,912, 2–20–62, Cl. 180—82.

Wheelock, Charles E., and P. J. Canterino, to Phillips Petroleum Co. Process for the production of epoxidized polybutadiene. 3,022,322, 2–20–62, Cl. 260—348.5.

White, David E.: *See*—
Sear, Arthur W., Schulz, and White. 3,022,395.

White, Jack M.: *See*—
Johnson, Elden A., and White. 3,021,792.

Whitehall-Rand, Inc.: *See*—
Brown, Thomas T. 3,022,430.

Whitehurst, Harry B.: *See*—
Morgan, Willard L., Whitehurst, Russell, and Stalego. 3,021,564.

Whitmire, William A.: *See*—
Bigge, Henry W., and Whitmire. 3,021,970.

Whittler, Clyde J., ½ to E. B. Meadows. Tractor mounted ditchers. 3,021,622, 2–20–62, Cl. 37—98.

Wicklatz, John E., and P. Franzus, to Phillips Petroleum Co. Production of solid olefin polymers in the presence of acetylenic compounds using alkyl titanium halide catalysts. 3,022,283, 2–20–62, Cl. 260—93.7.

Wiese, Herbert K., and S. B. Lippincott, to Esso Research and Engineering Co. Selective hydrogenation of cyclododecatriene to cyclododecene. 3,022,359, 2–20–62, Cl. 260—666.

Wilcox, Dwight D., Jr., to Ampex Corp. Frequency and/or phase demodulator. 3,022,461, 2–20–62, Cl. 329—103.

Wilde, Kurt: *See*—
Schmidt, Theodor, and Wilde. 3,022,057.

Wildi, Bernard S., to Monsanto Chemical Co. Method of preparing steroid derivatives. 3,022,312, 2–20–62, Cl. 260—289.

Wildman Jacquard Co.: *See*—
Hill, John H. 3,021,698.

Wilkerson, Robert B., to General Electric Co. Electrical switching device and method employing liquid conductor. 3,022,401, 2–20–62, Cl. 200—112.

Williams, Forrest V., R. A. Ruehrwein, and D. E. Hill, to Monsanto Chemical Co. Diode. 3,022,452, 2–20–62, Cl. 317—236.

Williams, Milton S., Jr., and G. A. Scott, to General Electric Co. Electric range with mechanical interlock system. 3,022,409, 2–20–62, Cl. 219—20.

Williams, Sumner B. Sand blast apparatus. 3,021,646, 2–20–62, Cl. 51—12.

Williams, William W.: *See*—
Catino, Sigmund C., Strobel, and Williams. 3,022,284.

Williamson, Robert R., and R. L. Terry, to General Precision, Inc. Information storage system. 3,022,495, 2–20–62, Cl. 340—174.1.

Wilson, Albert G. Acoustical panel. 3,021,914, 2–20–62, Cl. 181—33.

Wilson, John J.: *See*—
Bend, Herbert, and Wilson. 3,021,856.

Wimmer, Ernest L., and A. B. Devitt, to Chas. A. Krause Milling Co. Art of processing cereal grits. 3,022,174, 2–20–62, Cl. 99—51.

Windsor, Meredith M., and H. R. Lincoln, to Star Cutter Co. Work locating and clamping mechanism. 3,021,735, 2–20–62, Cl. 77—62.

Winfield, Howard E., Jr., to General Motors Corp. Butter storage in refrigerators. 3,021,688, 2–20–62, Cl. 62—159.

Winkler, Louis. Clothes hanger support for shipping containers. 3,021,958, 2–20–62, Cl. 211—124.

Winkler, Richard, and K. Dannebier, to Berkley Machine Co. Apparatus for transporting blanks through a drying zone. 3,021,610, 2–20–62, Cl. 34—162.

Wintermute, Glenn E., J. K. Smith, and J. C. Brighton, to Arvin Industries, Inc. Padded articles and method of making them. 3,022,211, 2–20–62, Cl. 156—222.

Winternitz, Paul F., and A. A. Carotti, to Olin Mathieson Chemical Corp. Pyrolysis of trialkyl borane. 3,022,350, 2–20–62, Cl. 260—606.5.

Witcher, Donald H. Reflector-snuffer for barbecue. 3,021,830, 2–20–62, Cl. 126—25.

Woehst, James E.: *See*—
Rogers, William A., Jr., Woehst, and Smith. 3,022,315.

Wolfe, Raymond E., to Crown Zellerbach Corp. Aligning device for manufacturer's tape joints of containers. 3,021,994, 2–20–62, Cl. 229—37.

Wolrab, Vincent F. Rotary circuit breaker. 3,022,389, 2–20–62, Cl. 200—24.

Wood, Gar, Industries, Inc.: *See*—
Mulhern, William A. 3,022,112.

Worley, William E.: *See*—
Boler, Leonard J., and Worley. 3,021,670.

Worthington Corp.: *See*—
Hyatt, Donald R. 3,021,814.

Wright, J Rondle, to Sun Oil Co. Fluid sampling valve. 3,021,713, 2–20–62, Cl. 73—422.

Wyandotte Chemicals Corp.: *See*—
Lundsted, Lester G. 3,022,335.

Yaccarino, Joseph N.: *See*—
Somerville, James, Yaccarino, and Starry. 3,021,759.

Yamin, Robert H.: *See*—
Solow, Sidney P., and Yamin. 3,022,165.

Yaniuk, Raymond. Stripper assembly for combines. 3,021,662, 2–20–62, Cl. 56—364.

Yardney International Corp.: *See*—
Horowitz, Carl, and Mendelsohn. 3,022,367.

Yeo, Robert A., to E. I. du Pont de Nemours and Co. Process for drying hydrogen cyanide. 3,022,143, 2–20–62, Cl. 23—293.

Yoder, David A. Spot welding gun. 3,022,414, 2–20–62, Cl. 219—127.

Yonezawa, Teruhiko: *See*—
Ohba, Seiichi, Yonezawa, and Kumai. 3,022,172.

Younger, Robert N. Electrical test probe. 3,022,483, 2–20–62, Cl. 339—108.

Young, David W., to Sinclair Refining Co. Stabilized isotactic polypropylene and method. 3,022,267, 2–20–62, Cl. 260—45.9.

Young, Farrile S., to Gulf Interstate Oil Co. Pipeline. 3,021,864, 2–20–62, Cl. 137—236.

Young, Stephen A. Shower head. 3,022,014, 2–20–62, Cl. 239—438.

Youngberg, Charles H., to Deere & Co. Disk harrow with extension gangs. 3,021,906, 2–20–62, Cl. 172—397.

Yowell, Joseph W., and D. B. Miner. Very thin wall tubing. 3,021,596, 2–20–62, Cl. 29—544.

Yuba Consolidated Industries, Inc.: *See*—
Edgemond, John W., Jr., and O'Connor. 3,021,881.
Marinovich, Samuel G. and E. J. 3,021,888.

Zahnradfabrik Friedrichshafen, Aktiengesellschaft: *See*—
Looman, Johannes. 3,021,829.

Zaorski, Henry J.: *See*—
Fuge, Harry B., and Zaorski. 3,021,629.

Zeile, Karl: *See*—
Hauptmann, Karl H., and Zeile. 3,022,294.

Zelsloft, Harry C., to The Bendix Corp. Normal fuel control with acceleration override control for gas turbine engine. 3,021,674, 2–20–62, Cl. 60—39.28.

Ziegler, Erich, U. Rossmann, and F. Litvan, to Geigy Chemical Corp. 3-benzyl-4-hydroxycoumarin and a process for the preparation of derivatives of 3-benzyl-4-hydroxy coumarin. 3,022,317, 2–20–62, Cl. 260—343.2.

Zima, Herbert, to Rohm & Haas G.m.b.H. Separation of metal salts from aqueous solutions. 3,022,145, 2–20–62, Cl. 23—309.

Zimmerman, Hans. Measuring instruments. 3,021,602, 2–20–62, Cl. 33—170.

Zimmermann, Alois: *See*
Tschumi, Otto, Kappeler, Blochlinger, and Zimmermann. 3,022,493.

Zinnow, Henry. Exercising apparatus. 3,022,072, 2–20–62, Cl. 272—78.

Zito, Ralph, to American Machine & Foundry Co. Impact indicating system. 3,022,076, 2–20–62, Cl. 273—102.2.

Zollinger, Walter, to Maschinenfabrik Schweiter A.G. Grooved drum with insertion pins. 3,022,021, 2–20–62, Cl. 242—43.2.

CLASSIFICATION OF PATENTS

ISSUED FEBRUARY 20, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 7: 3,021,525
2— 3: 3,021,526
8: 3,021,527
4— 1: 3,021,528
57: 3,021,529
172: 3,021,530
177: 3,021,531
255: 3,021,532
5— 327: 3,021,533
331: 3,021,534
8—115.5: 3,022,131
9— 1: 3,021,535
11: 3,021,536
10— 86: 3,021,537
111: 3,021,538
136: 3,021,539
12— 27: 3,021,540
31.5: 3,021,541
115.6: 3,021,542
142: 3,021,543
13— 9: Re.25,124
14— 27: 3,021,544
71: 3,021,545
15— 3.51: 3,021,546
145: 3,021,547
250.36: 3,021,548
250.42: 3,021,549
359: 3,021,550
16— 42: 3,021,551
87.4: 3,021,552
146: 3,021,553
167: 3,021,554
175: 3,021,555
185: 3,021,556
17— 17: 3,021,557
18— 2.5: 3,021,558
5: 3,021,559
15: 3,021,560
30: 3,021,561
47.2: 3,021,562
47.3: 3,021,563
3,021,564
47.5: 3,021,565
3,021,566
54: 3,022,132
55: 3,021,567
3,021,568
56: 3,021,569
3,021,570
3,021,571
58: 3,021,572
60: 3,021,573
19— 135: 3,021,574
20—1.123: 3,021,575
11: 3,021,576
40: 3,021,577
52.2: 3,021,578
21— 2.7: 3,022,133
22— 116: 3,021,579
23— 14.5: 3,022,134
3,022,135
165: 3,022,136
202: 3,022,137
204: 3,022,138
3,022,139
230: 3,022,140
254: 3,022,141
259.1: 3,022,142
263: 3,022,143
294: 3,022,144
309: 3,022,145
24— 71.3: 3,021,580
73: 3,021,581
81: 3,021,582
109: 3,021,583
270: 3,021,584
279: 3,021,585
25— 121: 3,021,586
26— 21: 3,021,587
76: 3,021,588
29—25.42: 3,021,589
121: 3,021,590
156.8: 3,021,591
182.5: 3,021,592
417: 3,021,593
424: 3,021,594
473.1: 3,021,595
544: 3,021,596
30— 166: 3,021,597
33— 27: 3,021,598
46: 3,021,599
47: 3,021,600
60: 3,021,601
170: 3,021,602
174: 3,021,603
185: 3,021,604
34— 45: 3,021,605
34— 103: 3,021,606
115: 3,021,607
3,021,608
158: 3,021,609
162: 3,021,610
35— 6: 3,021,611
9: 3,021,612
16: 3,021,613
24: 3,021,614
3,021,615
29: 3,021,616
36— 7.6: 3,021,617
72: 3,021,618
37— 2: 3,021,619
43: 3,021,620
92: 3,021,621
98: 3,021,622
103: 3,021,623
129: 3,021,624
130: 3,021,625
141: 3,021,626
142: 3,021,627
38— 111: 3,021,628
40— 19.5: 3,021,629
21: 3,021,630
120: 3,021,631
41— 10: 3,021,632
42— 1: 3,021,633
25: 3,021,634
43— 3: 3,021,635
42.34: 3,021,636
44— 13: 3,022,146
66: 3,022,147
45— 57: 3,021,637
139: 3,021,638
46— 7: 3,021,639
74: 3,021,640
135: 3,021,641
47— 1.5: 3,021,642
60: P.P.2,131
48— 215: 3,022,148
49— 1: 3,021,643
41: 3,021,644
50— 153: 3,021,645
51— 12: 3,021,646
55: 3,021,647
135: 3,021,648
185: 3,021,649
205: 3,021,650
241: 3,021,651
53— 66: 3,021,652
74: 3,021,653
138: 3,021,654
243: 3,021,655
248: 3,021,656
390: 3,021,657
56— 15: 3,021,658
192: 3,021,659
210: 3,021,660
364: 3,021,661
3,021,662
57— 77.4: 3,021,663
99: 3,021,664
58— 28: 3,021,665
152: 3,021,666
60— 35.4: 3,021,667
35.6: 3,021,668
3,021,669
3,021,670
3,021,671
39.14: 3,021,672
39.26: 3,021,673
39.28: 3,021,674
39.74: 3,021,675
54: 3,021,676
54.6: 3,021,677
3,021,678
102: 3,021,679
61— 46.5: 3,021,680
62— 7: 3,021,681
17: 3,021,682
42: 3,021,683
49: 3,021,684
89: 3,021,685
132: 3,021,686
135: 3,021,687
159: 3,021,688
192: 3,021,689
238: 3,021,690
256: 3,021,691
271: 3,021,692
278: 3,021,693
349: 3,021,694
370: 3,021,695
429: 3,021,696
63—15.45: 3,021,697
66— 9: 3,021,698
66— 56: 3,021,699
68— 4: 3,021,700
12: Re.25,125
24: 3,021,701
207: 3,021,702
71— 2.5: 3,022,150
2.6: 3,022,151
2.7: 3,022,152
29: 3,022,153
34: 3,022,154
40: 3,022,155
73— 3: 3,021,703
17: 3,021,704
37.9: 3,021,705
67.8: 3,021,706
150: 3,021,707
194: 3,021,708
200: 3,021,709
229: 3,021,710
398: 3,021,711
399: 3,021,712
422: 3,021,713
74— 5.6: 3,021,714
7: 3,021,715
50: 3,021,716
217: 3,021,717
254: 3,021,718
472: 3,021,719
481: 3,021,720
496: 3,021,721
501: 3,021,722
527: 3,021,723
568: 3,021,724
605: 3,021,725
677: 3,021,726
3,021,727
750: 3,021,728
768: 3,021,729
798: 3,021,730
801: 3,021,731
26: 3,022,156
75— 30: 3,022,157
84.5: 3,022,158
3,022,159
97: 3,022,160
98: 3,022,161
165: 3,022,162
174: 3,022,163
76— 101: 3,021,732
77— 58: 3,021,733
62: 3,021,734
3,021,735
80— 13: 3,021,736
60: 3,021,737
81— 15: 3,021,738
53: 3,021,739
82— 14: 3,021,740
83— 618: 3,021,741
700: 3,021,742
84— 419: 3,021,743
421: 3,021,744
85— 2.4: 3,021,745
10: 3,021,746
62: 3,021,747
86— 1: 3,021,748
88— 1: 3,021,749
14: 3,021,750
20: 3,021,751
32: 3,021,752
41: 3,021,753
61: 3,021,754
79: 3,021,755
86: 3,021,756
98: 3,021,757
89— 1.5: 3,021,758
3,021,759
1.7: 3,021,760
33: 3,021,761
3,021,762
140: 3,021,763
90— 1: 3,021,764
7: 3,021,765
93— 8: 3,021,766
35: 3,021,767
44.1: 3,021,768
95— 1.1: 3,021,769
10: 3,021,771
30: 3,021,772
31: 3,021,773
45: 3,021,774
54: 3,021,770
96— 30: 3,022,164
43: 3,022,165
61: 3,022,166
3,022,167
66: 3,022,168
67: 3,022,169
96— 78: 3,022,170
84: 3,022,171
114: 3,022,172
98— 36: 3,021,775
115: 3,021,776
3,021,777
121: 3,021,778
99— 28: 3,022,173
51: 3,022,174
111: 3,022,175
162: 3,022,176
236: 3,021,779
277.1: 3,021,780
100— 8: 3,021,781
146: 3,021,782
101— 35: 3,021,783
102— 20: 3,021,784
24: 3,021,785
27: 3,021,786
73: 3,021,787
25: 3,021,788
35: 3,021,789
42: 3,021,790
126: 3,021,791
150: 3,021,792
152: 3,021,793
202: 3,021,794
104— 48: 3,021,795
172: 3,021,796
105— 36: 3,021,797
282: 3,021,798
369: 3,021,799
106— 1: 3,022,177
13: 3,022,178
39: 3,022,179
3,022,180
52: 3,022,181
3,022,182
54: 3,022,183
210: 3,022,184
296: 3,022,185
300: 3,022,186
107— 54: 3,021,800
112— 218: 3,021,801
113— 45: 3,021,802
49: 3,021,803
118: 3,021,804
120: 3,021,805
114— 23: 3,021,806
3,021,807
74: 3,021,808
3,021,809
138: 3,021,810
187: 3,021,811
208: 3,021,812
116— 114: 3,021,813
133: 3,021,814
117— 16: 3,022,187
25: 3,022,188
33.5: 3,022,189
37: 3,022,190
47: 3,022,191
3,022,192
50: 3,022,193
75: 3,022,194
123: 3,022,195
127: 3,022,196
132: 3,022,197
138.8: 3,022,198
141: 3,022,199
218: 3,022,200
221: 3,022,201
118— 314: 3,021,815
411: 3,021,816
637: 3,021,817
3,021,818
119— 22: 3,021,819
121— 41: Re.25,126
3,021,820
3,021,821
99: 3,021,822
164: 3,021,823
122— 406: 3,021,824
123— 51: 3,021,825
90: 3,021,826
103: 3,021,827
117: 3,021,828
125— 11: 3,021,829
126— 25: 3,021,830
113: 3,021,831
200: 3,021,832
360: 3,021,833
128— 6: 3,021,834
3,021,835
29: 3,021,836
71: 3,021,837
96: 3,021,838
128— 142: 3,021,839
188: 3,021,840
214: 3,021,841
215: 3,021,842
283: 3,021,843
463: 3,021,844
3,021,845
595: 3,021,846
131— 7: 3,021,847
130: 3,021,848
182: 3,021,849
132— 84: 3,021,850
134— 1: 3,022,202
15: 3,022,203
46: 3,021,851
135— 1: 3,021,852
15: 3,021,853
32: 3,021,854
136— 4: 3,022,360
3,022,361
3,022,362
6: 3,022,363
90: 3,022,364
3,022,365
145: 3,022,366
146: 3,022,367
137— 38: 3,021,855
43: 3,021,856
66: 3,021,857
85: 3,021,858
101: 3,021,859
124: 3,021,860
192: 3,021,861
205.5: 3,021,862
209: 3,021,863
236: 3,021,864
270: 3,021,865
458: 3,021,866
565: 3,021,867
607: 3,021,868
621: 3,021,869
625.12: 3,021,870
138— 118: 3,021,871
140— 60: 3,021,872
71: 3,021,873
92.2: 3,021,874
93: 3,021,875
93.4: 3,021,876
141— 38: 3,021,877
65: 3,021,878
143— 6: 3,021,879
118: 3,021,880
174: 3,021,881
144— 32: 3,021,882
148— 15.5: 3,022,204
20.6: 3,022,205
149— 19: 3,022,149
60: 3,022,206
150— 1.6: 3,021,883
151— 8: 3,021,884
153— 1: 3,021,885
48: 3,021,886
3,021,887
79: 3,021,888
154— 43: 3,022,208
45.9: 3,022,207
156— 158: 3,022,209
180: 3,022,210
222: 3,022,211
238: 3,022,212
158— 36.3: 3,021,890
36.4: 3,021,891
77: 3,021,892
116: 3,021,893
160— 23: 3,021,894
90: 3,021,895
113: 3,021,896
114: 3,021,897
364: 3,021,898
162— 138: 3,022,213
168: 3,022,214
329: 3,021,899
402: 3,021,900
166— 42: 3,021,901
237: 3,021,902
167— 22: 3,022,215
38: 3,022,216
39: 3,022,217
53: 3,022,218
65: 3,022,219
3,022,220
68: 3,022,221
94: 3,022,222
169— 19: 3,021,903
171— 53: 3,021,904
172— 127: 3,021,905
397: 3,021,906
172— 441: 3,021,907
466: 3,021,908
174— 15: 3,022,368
68.5: 3,022,369
71: 3,022,370
175— 7: 3,021,909
25: 3,021,910
177— 251: 3,021,911
178— 2: 3,022,371
4.1: 3,022,372
6.6: 3,022,373
3,022,374
53.1: 3,022,375
81: 3,022,376
179— 1: 3,022,377
3,022,378
3,022,379
6: 3,022,380
6.4: 3,022,381
18: 3,022,382
100.2: 3,022,383
100.41: 3,022,384
113: 3,022,385
146: 3,022,386
182: 3,022,387
180— 82: 3,021,912
3,021,913
181— 33: 3,021,914
3,021,915
3,021,916
182— 95: 3,021,917
112: 3,021,918
150: 3,021,919
188: 3,021,920
201: 3,021,921
183— 115: 3,021,922
188— 78: 3,021,923
82.7: 3,021,924
82.8: 3,021,925
88: 3,021,926
189— 36: 3,021,927
43: 3,021,928
85: 3,021,929
190— 41: 3,021,930
192— 48: 3,021,931
85: 3,021,932
193— 9: 3,021,933
195— 29: 3,022,223
3,022,224
37: 3,022,225
51: 3,022,226
62: 3,022,227
80: 3,022,228
142: 3,022,229
197— 17: 3,021,934
3,021,935
3,021,936
107: 3,021,937
198— 33: 3,021,938
131: 3,021,939
199— 61: 3,021,940
200— 11: 3,022,388
24: 3,022,389
38: 3,022,390
44: 3,022,391
61.45: 3,022,393
61.5: 3,022,392
68: 3,022,394
83: 3,022,395
3,022,396
84: 3,022,397
87: 3,022,398
3,022,399
93: 3,022,400
112: 3,022,401
116: 3,022,402
122: 3,022,403
137: 3,022,404
138: 3,022,405
161: 3,022,406
204— 9: 3,022,230
25: 3,022,231
36: 3,022,232
60: 3,022,233
147: 3,022,234
154.2: 3,022,235
3,022,236
162: 3,022,237
193.2: 3,022,238
3,022,239
3,022,240
195: 3,022,241
196: 3,022,242
3,022,243
266: 3,022,244
205— 21: 3,021,941

206— 43: 3,021,942
45.2: 3,021,943
48: 3,021,944
50: 3,021,945
56: 3,021,946
57: 3,021,947
78: 3,021,948
208— 26: 3,022,245
127: 3,022,246
209— 75: 3,021,949
82: 3,021,950
221: 3,021,951
339: 3,021,952
3,021,953
210— 59: 3,022,247
132: 3,021,954
3,021,955
364: 3,021,956
526: 3,021,957
211— 124: 3,021,958
126: 3,021,959
177: 3,021,960
3,021,961
212— 18: 3,021,962
128: 3,021,963
213— 167: 3,021,964
214— 1: 3,021,965
6: 3,021,966
11: 3,021,967
82: 3,021,968
84: 3,021,969
85: 3,021,970
147: 3,021,971
340: 3,021,972
215— 100: 3,021,973
219— 9.5: 3,022,407
19: 3,022,408
20: 3,022,409
37: 3,022,410
44: 3,022,411
46: 3,022,412
73: 3,022,413
127: 3,022,414
130: 3,022,415
220— 46: 3,021,974
60: 3,021,975
66: 3,021,976
90.4: 3,021,977
221— 64: 3,021,978
157: 3,021,979
167: 3,021,980
202: 3,021,981
222— 30: 3,021,982
191: 3,021,983
196: 3,021,984
224— 5.1: 3,021,985
26: 3,021,986
225— 25: 3,021,987
226— 58: 3,021,988
118: 3,021,989
229— 3.5: 3,021,990
7: 3,021,991
17: 3,021,992
36: 3,021,993
37: 3,021,994
230— 58: 3,021,995
232— 39: 3,021,996
233— 23: 3,021,997
234— 11: 3,021,998
87: 3,021,999
114: 3,022,000
235— 69: 3,022,001
70: 3,022,002
92: 3,022,003
98: 3,022,004
152: 3,022,005
160: 3,022,006
176: 3,022,007
187: 3,022,008
193: 3,022,009
239— 17: 3,022,010
97: 3,022,011
230: 3,022,012
419: 3,022,013
438: 3,022,014
444: 3,022,015
521: 3,022,016
240— 73: 3,022,416
108: 3,022,417
241— 183: 3,022,017
197: 3,022,018
242— 9: 3,022,019
18: 3,022,020
43.2: 3,022,021
58: 3,022,022
86.51: 3,022,023
110.1: 3,022,024
155: 3,022,025
244— 23: 3,022,026
63: 3,022,027
248— 23: 3,022,028
48.2: 3,022,029
58: 3,022,030
119: 3,022,031
205: 3,022,032
300: 3,022,033
342: 3,022,034
395: 3,022,035
402: 3,022,036
421: 3,022,037
250— 17: 3,022,418
20: 3,022,419
3,022,420
3,022,421
43.5: 3,022,422
51.5: 3,022,423
83.6: 3,022,424
251— 11: 3,022,038
46: 3,022,039
63: 3,022,040
324: 3,022,041
252— 8.5: 3,022,248
8.55: 3,022,249
135: 3,022,250
307: 3,022,251
442: 3,022,252
254— 29: 3,022,042
98: 3,022,043
256— 47: 3,022,044
73: 3,022,045
257— 87: 3,022,046
95: 3,022,047
136: 3,022,048
262 13: 3,022,049
267: 3,022,050
269: 3,022,051
259— 110: 3,022,052
260— 2.1: 3,022,253
2.5: 3,022,254
3,022,255
3,022,256
9: 3,022,257
17.3: 3,022,258
22: 3,022,259
29.7: 3,022,260
30.6: 3,022,261
43: 3,022,262
45.5: 3,022,263
3,022,264
3,022,265
3,022,266
3,022,267
3,022,268
3,022,269
3,022,270
47: 3,022,271
3,022,272
3,022,273
78: 3,022,274
79: 3,022,275
79.3: 3,022,276
86.7: 3,022,277
87.7: 3,022,278
89.7: 3,022,279
91.1: 3,022,280
92.8: 3,022,281
3,022,282
93.7: 3,022,283
146: 3,022,284
209: 3,022,285
210: 3,022,286
224: 3,022,287
231: 3,022,288
233.5: 3,022,289
239.1: 3,022,290
239.3: 3,022,291
3,022,292
3,022,293
239.55: 3,022,294
3,022,295
3,022,296
3,022,297
246: 3,022,298
3,022,299
247.1: 3,022,300
247.2: 3,022,301
247.7: 3,022,302
248: 3,022,303
249: 3,022,304
250: 3,022,305
256.4: 3,022,306
274: 3,022,307
286: 3,022,308
287: 3,022,309
3,022,310
3,022,311
289: 3,022,312
319: 3,022,313
326.3: 3,022,314
327: 3,022,315
336: 3,022,316
343.2: 3,022,317
345.2: 3,022,318
345.9: 3,022,319
260—346.3: 3,022,320
346.6: 3,022,321
348.5: 3,022,322
397.3: 3,022,323
397.4: 3,022,324
397.45: 3,022,325
404.5: 3,022,326
3,022,327
453: 3,022,328
461: 3,022,329
3,022,330
3,022,331
464: 3,022,332
475: 3,022,333
482: 3,022,334
485: 3,022,335
486: 3,022,336
3,022,337
3,022,338
3,022,339
491: 3,022,340
524: 3,022,341
526: 3,022,342
528: 3,022,343
558: 3,022,344
561: 3,022,345
3,022,346
571: 3,022,347
583: 3,022,348
585: 3,022,349
606.5: 3,022,350
608: 3,022,351
610: 3,022,352
612: 3,022,353
613: 3,022,354
618: 3,022,355
633: 3,022,356
653.3: 3,022,357
654: 3,022,358
666: 3,022,359
261— 18: 3,022,053
114: 3,022,054
262— 19: 3,022,055
263— 6: 3,022,056
15: 3,022,057
47: 3,022,058
266— 34: 3,022,059
267— 1: 3,022,060
8: 3,022,061
49: 3,022,062
110: 3,022,063
268— 124: 3,022,064
3,022,065
269— 61: 3,022,066
127: 3,022,067
271— 55: 3,022,068
272— 31: 3,022,069
3,022,070
57: 3,022,071
78: 3,022,072
84: 3,022,073
273— 39: 3,022,074
93: 3,022,075
102.2: 3,022,076
106.5: 3,022,077
274— 41.4: 3,022,078
3,022,079
277— 36: 3,022,080
277— 39: 3,022,081
133: 3,022,097
279— 1: 3,022,082
55: 3,022,083
83: 3,022,084
280— 12: 3,022,085
30: 3,022,086
104.5: 3,022,087
124: 3,022,088
150: 3,022,089
414: 3,022,090
434: 3,022,091
479: 3,022,092
281— 25: 3,022,093
282— 22: 3,022,094
285— 45: 3,022,095
164: 3,022,096
287—52.07: 3,022,098
53: 3,022,099
103: 3,022,100
290— 40: 3,022,425
292— 114: 3,022,101
169: 3,022,102
256.67: 3,022,103
294— 74: 3,022,104
296— 28: 3,022,105
29: 3,022,106
37: 3,022,107
57: 3,022,108
97: 3,022,109
297— 248: 3,022,110
433: 3,021,889
298— 14: 3,022,111
301— 37: 3,022,112
302— 20: 3,022,113
303— 21: 3,022,114
24: 3,022,115
28: 3,022,116
39: 3,022,117
40: 3,022,118
67: 3,022,119
82: 3,022,120
3,022,121
307— 14: 3,022,426
57: 3,022,427
88: 3,022,428
3,022,429
308— 6: 3,022,122
73: 3,022,123
193: 3,022,124
213: 3,022,125
237: 3,022,126
238: 3,022,127
3,022,128
310— 5: 3,022,430
9.4: 3,022,431
37: 3,022,432
74: 3,022,433
246: 3,022,434
312— 343: 3,022,129
313— 59: 3,022,435
218: 3,022,436
3,022,437
222: 3,022,438
3,022,439
250: 3,022,440
314— 69: 3,022,441
315— 8.5: 3,022,442
315— 16: Re.25,127
39.3: 3,022,443
61: 3,022,444
317— 40: 3,022,445
80: 3,022,446
99: 3,022,447
101: 3,022,448
123: 3,022,449
3,022,450
146: 3,022,451
236: 3,022,452
318— 154: 3,022,453
257: 3,022,454
322— 25: 3,022,455
28: 3,022,456
323— 22: 3,022,457
45: 3,022,458
324— 83: 3,022,459
140: 3,022,460
329— 103: 3,022,461
126: 3,022,462
330— 5: 3,022,463
13: 3,022,464
30: 3,022,465
56: 3,022,466
331— 74: 3,022,467
107: 3,022,468
332— 14: 3,022,469
333— 7: 3,022,470
17: 3,022,471
18: 3,022,472
28: 3,022,473
81: 3,022,474
97: 3,022,475
98: 3,022,476
334— 77: 3,022,477
338— 31: 3,022,478
339— 8: 3,022,479
18: 3,022,480
75: 3,022,481
89: 3,022,482
108: 3,022,483
129: 3,022,484
175: 3,022,485
340— 3: 3,022,486
12: 3,022,487
15: 3,022,488
3,022,489
120: 3,022,490
133: 3,022,491
171: 3,022,492
3,022,493
174.1: 3,022,494
3,022,495
214: 3,022,496
244: 3,022,497
253: 3,022,498
258: 3,022,499
347: 3,022,500
365: 3,022,501
366: 3,022,502
343— 12: 3,022,503
178: 3,022,504
767: 3,022,505
771: 3,022,506
818: 3,022,507
346— 21: 3,022,130

Classification of Designs

D 9— 2: 192,239
D10— 8: 192,240
D14— 6: 192,241
18: 192,242
D15— 8: 192,243
192,244
192,245
D24— 1: 192,246
D26— 14: 192,247
D30— 1: 192,248
D31— 4: 192,249
D34— 2: 192,250
192,251
5: 192,252
15: 192,253
192,254
D34— 15: 192,255
D44— 4: 192,256
25: 192,257
29: 192,258
D48— 2: 192,259
31: 192,260
D49— 1: 192,261
D52— 6: 192,262
D54— 6: 192,263
D55— 1: 192,264
192,265
D57— 1: 192,266
D58— 2: 192,267
5: 192,268
192,269
12: 192,270
D58— 13: 192,271
D62— 3: 192,272
D64— 11: 192,273
D71— 1: 192,274
D72— 1: 192,275
D74— 1: 192,276
9: 192,277
D74— 9: 192,278
D80— 8: 192,279
192,280
192,281
D86— 10: 192,282
D90— 20: 192,283
D91— 1: 192,284

OFFICIAL GAZETTE ✦ UNITED STATES PATENT OFFICE
February 20, 1962 Volume 775 Number 3

TRADEMARKS

NOTICES

Oppositions Under Section 13 of the Trademark Act of 1946

Section 13 of the Trademark Act of 1946 provides that any person who believes that he would be damaged by the registration of a mark upon the Principal Register may, upon payment of the required fee, file a verified notice of opposition in the Patent Office, stating the grounds therefor, within thirty days after publication under Section 12(a) of the mark sought to be registered.

An unverified opposition may be filed by a duly authorized attorney, but the opposition will be null and void unless verified by the opposer within a reasonable time after such filing to be fixed by the Commissioner.

A notice of opposition will not be accepted unless it complies with the statutory requirements, namely, it must be filed in the Patent Office within thirty days after publication under Section 12(a) of the mark opposed, be accompanied by the fee of $25.00, must state the grounds therefor and, if filed by the opposer, must be verified.

A request to extend the time for filing a notice of opposition under Rule 2.102 must be received in the Patent Office before the expiration of thirty days from date of publication under Section 12(a) of the mark sought to be registered. The request should specify the period of extension desired and be accompanied by a showing of good cause for the extension requested, but in the event circumstances do not permit submission of the showing of good cause with the request, it must be furnished within ten days after filing the request for extension.

Two or more parties may be joined in opposition to the registration of a mark, but separate fees of $25.00 for each party so joined must be paid. Likewise, two or more marks may be opposed in a single opposition, but a separate fee of $25.00 for each mark opposed must accompany the notice of opposition. The required fees must be received in the Patent Office within the opposition period or within such extension thereof as granted by the Commissioner for filing the notice of opposition under Rule 2.102.

HORACE B. FAY, JR.,
Jan. 16, 1962. *Assistant Commissioner.*

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 203,616 (BETTER HOMES AND GARDENS), Successful Farming Publishing Co., Monthly publication; **Reg. No. 602,407**, same, Meredith Publishing Company. Title page for a periodic publication; **Reg. No. 608,350**, same, Booklet issued periodically; **Reg. No. 626,692** (BETTER HOMES AND GARDENS, ETC. AND DESIGN), same, Home planning service, **filed** July 31, 1961, D.C., S.D.N.Y., Doc. 61/2714, *Meredith Publishing Company v. Universal Publishing and Distributing Corporation.* Stipulation and order of discontinuance without prejudice Dec. 21, 1961.

Reg. No. 231,389 (ALCOA), Aluminum Company of America, Ingots of aluminum and aluminum base alloys; **Reg. No. 284,996**, same, Aluminum sand mold and permanent mold castings, aluminum billets and ingots, aluminum forgings and extruded shapes, etc.; **Reg. No. 284,997** (ALCOA AND DESIGN), same; **Reg. No. 286,617** (ALCOA), same, Metal cable

CONDITION OF TRADEMARK APPLICATIONS AS OF DECEMBER 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] ---------- 15,518
Date of oldest new application ---------- June 1, 1961
Date of oldest amended application ---------- May 8, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	6-1-61	5-8-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-3-61	7-3-61
Renewals (All Classes)	11-16-61	12-26-61
Sec. 12 (c) Publications (All Classes)	12-13-61	

Applications filed during the month of December 1961—1802

Registrations Issued ---------- 249—No. 727,592 to No. 727,840
Renewals Issued ---------- 55

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

clamps, devices for preventing vibration of electric cables, non-ferrous tubing, rivets and nails; **Reg. No. 286,618** (ALCOA AND DESIGN), same; **Reg. No. 288,976** (ALCOA), same, Aluminum shingles, corrugated roofing, down spouts, gutters and flashings; **Reg. No. 288,977** (ALCOA AND DESIGN), same; **Reg. No. 566,995** (ALCOA), same, Aluminum paint pigment and aluminum paint, **filed** Dec. 26, 1961; D.C., S.D.N.Y., Doc. 61/4588, *Aluminum Company of America* v. *Alcoa Furniture Inc. et al.*

Reg. No. 235,066 (RENAULT AND DESIGN), Societe Anonyme des Usines Renault, Internal combustion or explosion motors and parts thereof and agricultural tractors and other named cutlery, machinery and tool articles, **filed** Dec. 21, 1961, D.C. Mass. (Boston), Doc. 61/1014-W, *Renault, Inc.* v. *European Engineering Corporation.*

Reg. No. 284,996. (See Reg. No. 231,389.)

Reg. No. 284,997. (See Reg. No. 231,389.)

Reg. No. 286,617. (See Reg. No. 231,389.)

Reg. No. 286,618. (See Reg. No. 231,389.)

Reg. No. 288,976. (See Reg. No. 231,389.)

Reg. No. 288,977. (See Reg. No. 231,389.)

Reg. No. 347,467 (ESSO AND DESIGN), Standard Oil Company of New Jersey, Refined, semirefined, and unrefined oils made from petroleum, both with and without admixture of animal, vegetable or mineral oils for illuminating, burning, power, fuel and lubricating purposes, and lubricating greases; **Reg. No. 377,505** (ESSO), same, **filed** Oct. 17, 1961, D.C., M.D. Pa. (Scranton), Doc. 7421, *Humble Oil and Refining Company* v. *Miller Brothers Tire Company.* Injunction granted Nov. 17, 1961.

Reg. No. 377,505. (See Reg. No. 347,467.)

Reg. No. 395,421 (FIELDCREST AND DESIGN), Marshall Field & Company, Lace curtains; **Reg. No. 434,737** (FIELDCREST), same, Electrically heated blankets of animal, vegetable, mineral and synthetic material and mixtures thereof; **Reg. No. 500,882**, same, Bed sheets and sheeting in one piece; pillow cases and tubing; blankets, bedspreads and bed drapes, etc., **filed** Oct. 24, 1960, D.C., S.D.N.Y., Doc. 60/4155, *Fieldcrest Mills, Inc.* v. *Crestfield Industries, Inc.* Consent judgment; defendant enjoined Dec. 22, 1961.

Reg. No. 434,737. (See Reg. No. 395,421.)

Reg. No. 500,882. (See Reg. No. 395,421.)

Reg. No. 542,474 (HARLEM GLOBETROTTERS), A. M. Saperstein, Athletic entertainment services; **Reg. No. 662,372** (MAGICIANS OF BASKETBALL), same, Entertainment services in the nature of basketball exhibitions, **filed** Dec. 29, 1961, D.C., S.D.N.Y., Doc. 61/4640, *A. M. Saperstein* v. *Marques Haynes et al.*

Reg. No. 566,995. (See Reg. No. 231,389.)

Reg. No. 602,407. (See Reg. No. 203,616.)

Reg. No. 606,350. (See Reg. No. 203,616.)

Reg. No. 626,692. (See Reg. No. 203,616.)

Reg. No. 662,372. (See Reg. No. 542,474.)

Reg. No. 693,755 (TOTE GOTE), Bonham Corporation, Motor scooters, **filed** Dec. 26, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1615/61-WM, *Bonham Corporation* v. *Luther Engineering & Mfg. Co. et al.*

Reg. No. 721,097 (CORN CABIN AND DESIGN), Corn Cabin Company, Unpopped kernels of popcorn; **Reg. No. 721,098**, same, Popped popcorn and popped popcorn products having different flavors, colors and shapes, **filed** Dec. 27, 1961, D.C., N.D. Ga. (Rome), Doc. 1391, *Corn Cabin Company, Inc.* v. *Billy J. Givens and David E. Bailey.*

Reg. No. 721,098. (See Reg. No. 721,097.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 110,613. Holmes-Darst Coal Corporation, Knoxville, Tenn. Filed Dec. 21, 1960.



The words "Washed Treated Stoker Coals" are disclaimed apart from the mark as shown. Owner of Reg. No. 414,312.

For Coal.

First use Dec. 21, 1956.

SN 115,683. Franklin Fibre-Lamitex Corp., Wilmington, Del. Filed Mar. 15, 1961.



The words "Insulation Plastics" are merely descriptive of the goods and are not claimed.

For Plastic Sheets, Rods, and Tubes for General Use in the Industrial Arts.

First use June 1958.

SN 117,630. General Aniline & Film Corporation, New York, N.Y. Filed Apr. 11, 1961.

POLECTRON

Owner of Reg. Nos. 403,282 and 589,166.

For Resinous Water-Emulsion Polymers, for Use in Sizing, Priming, Polishing and Other Coating Applications, and for Packaging, Binding and Adhesive Uses.

First use Mar. 7, 1961.

SN 117,971. James H. Knotts Company, Houston, Tex. Filed Apr. 17, 1961.



The words "Qualitie Garantie" and "Made in England" are disclaimed apart from the mark as shown.

For Chamois Leather.

First use Aug. 3, 1960.

SN 119,117. The Doughten Seed Company, Jersey City, N.J. Filed May 2, 1961.

Island green

For Mixed Grass Seed.

First use Feb. 5, 1952.

SN 121,177. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 1, 1961.

DYMETROL

For Thermoplastic Forms and Shapes Extruded or Otherwise Produced to Precise Tolerances for General Use in the Industrial Arts.

First use Apr. 20, 1961.

SN 121,827. Japan Food Corporation, San Francisco, Calif. Filed June 12, 1961.



No claim is made to the representation of a briquet.

For Charcoal Briquets.

First use Apr. 24, 1961.

SN 121,969. Blue Diamond Coal Company, Knoxville, Tenn. Filed June 14, 1961.



The exclusive use of the word "Coal" is disclaimed apart from the mark as shown.

For Coal.

First use Feb. 17, 1961.

SN 123,307. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.

HERCULES

Owner of Reg. Nos. 363,212, 674,017, and others.
For Film Used as a Base for Adhesive or Pressure Sensitive Tapes for Marking, Packaging or Strapping Applications; as a Base for Magnetized Sound Recording, Video or Control Tape; as a Base for Metallic Yarn; as a Base for Scribing Material Used in Cartography or Drafting; and for Further Manufacture in the Industrial Arts.
First use May 8, 1961.

SN 123,312. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.



The mark is a silhouette representation of Hercules. Owner of Reg. Nos. 289,305, 674,018, and others.
For Film Used as a Base for Adhesive or Pressure Sensitive Tapes for Marking, Packaging or Strapping Applications; as a Base for Magnetized Sound Recording, Video or Control Tape; as a Base for Metallic Yarn; as a Base for Scribing Material Used in Cartography or Drafting; and for Further Manufacture in the Industrial Arts.
First use May 8, 1961.

SN 123,342. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 3, 1961.

SCOTCHPLY

For High Structural Strength Fiber Reinforced Plastic Molding Material Sold in the Form of Fibers Containing Uncured Resin, for General Use in the Industrial Arts.
First use Mar. 21, 1957.

SN 125,280. Cedar Rapids Shredding Co., Inc., Cedar Rapids, Iowa. Filed Aug. 3, 1961.

WORM HAY

For Bedding Material for Worms.
First use September 1958.

SN 125,348. Armour and Company, Chicago, Ill. Filed Aug. 4, 1961.

CONTINENTAL

For Leather.
First use Jan. 3, 1961.

SN 125,349. Armour and Company, Chicago, Ill. Filed Aug. 4, 1961.

HERLER

For Leather.
First use May 23, 1961.

SN 131,425. Swift & Company, d.b.a. A. C. Lawrence Leather Co., Chicago, Ill. Filed Nov. 6, 1961.

CONTINENTAL

For Calfskin.
First use Jan. 7, 1960.

Class 2—Receptacles

SN 108,336. Kimberly-Clark Corporation, Neenah, Wis. Filed Nov. 14, 1960.

POP-UP

For Boxes Containing Paper Tissue Products.
First use on or before 1942.

SN 112,793. Triple-A Specialty Company, Chicago, Ill. Filed Jan. 30, 1961.

PRES-PAK

For Transparent Plastic Bags.
First use Nov. 30, 1960.

SN 118,826. Texas Plastics, Inc., Elsa, Tex. Filed Apr. 27, 1961.

STRONG-TEX

For Polyethylene Bags.
First use July 19, 1960.

SN 120,392. Crown Zellerbach Corporation, San Francisco, Calif. Filed May 19, 1961.



Owner of Reg. No. 265,698.
For Multiwall Bags.
First use Mar. 20, 1961.

SN 121,465. Diamond National Corporation, New York, N.Y. Filed June 6, 1961.

BUDGET-PAK

For Egg Cartons.
First use Feb. 18, 1961.

SN 122,113. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed June 15, 1961.

PROLON

Owner of Reg. No. 441,748.
For Boxes or Like Containers Made of Molded Plastic for Cigarettes, Brushes, Notions, Jewelry and Gloves.
First use June 8, 1961.

SN 129,500. Katz Drug Company, Kansas City, Mo. Filed Oct. 9, 1961.

Drury Lane

For Garment Bags.
First use Apr. 4, 1961.

Class 4—Abrasives and Polishing Materials

SN 110,418. Economics Laboratory, Inc., St. Paul, Minn. Filed Dec. 19, 1960.



Owner of Reg. Nos. 367,491 and 707,296.
For Synthetic Floor Polishing Compound for Household and Commercial Use.
First use Oct. 5, 1960.

Class 6—Chemicals and Chemical Compositions

SN 90,442. Relton Corporation, Pasadena, Calif. Filed Feb. 5, 1960.



For Volatile Chlorinated Hydrocarbon Fluid To Aid Tools in the Cutting of Metals.
First use Nov. 13, 1957.

SN 101,565. Morningstar-Paisley, Inc., New York, N.Y. Filed July 27, 1960.

STARFILM

Owner of Reg. No. 639,888.
For Starch Derivative Used in the Textile Industry for Warp Sizing, Thread and Cord Sizing, and in the Paper Industry as a Sizing Agent.
First use Feb. 23, 1960.

SN 106,444. Stecker Chemicals, Inc., Ridgewood, N.J. Filed Oct. 14, 1960.

DIAPHENE

For Halosalicylanilides, a Preparation Sold in Bulk Form To Provide Bacterial and Fungal Inhibition in Textiles, Paper, Plastics, Rubber, and Leather.
First use Nov. 30, 1955.

SN 107,644. Ciba Limited, Basel, Switzerland. Filed Nov. 2, 1960.

UNIDISPERS

Priority claimed under Sec. 44(d) on Swiss Reg. No. 181,950, dated July 27, 1960.
For Dyestuffs.

SN 107,646. Ciba Limited, Basel, Switzerland. Filed Nov. 2, 1960.

UNIMICRON

Priority claimed under Sec. 44(d) on Swiss Reg. No. 181,951, dated July 27, 1960.
For Dyestuffs.

SN 107,648. Ciba Limited, Basel, Switzerland. Filed Nov. 2, 1960.

CROMOSPERS

Priority claimed under Sec. 44(d) on Swiss Reg. No. 181,949, dated July 27, 1960. Owner of U.S. Reg. No. 582,869.
For Dyestuffs Used in the Textile Industries.

SN 108,571. K. J. Quinn & Co., Inc., Malden, Mass. Filed Nov. 16, 1960.

ADDIX

For Leather Dressing.
First use July 6, 1960.

SN 110,659. A. Boake, Roberts and Company Limited, London, England. Filed Dec. 22, 1960.

ABRAC

Owner of British Reg. Nos. 363,979 and 582,230, dated Oct. 19, 1914, and Dec. 18, 1937, respectively; and U.S. Reg. Nos. 374,204 and 379,541.
For Industrial Chemicals and Chemical Substances.
First use in 1903; in commerce in 1947.

SN 111,239. Textilana Corporation, Hawthorne, Calif. Filed Jan. 3, 1961.

TEXTAMINE

For Higher Fatty-Derived Amine.
First use Jan. 29, 1960.

SN 111,240. Textilana Corporation, Hawthorne, Calif. Filed Jan. 3, 1961.

TEXTAMIDE

For Non-Ionic Foam Stabilizer.
First use Mar. 17, 1947.

SN 111,242. Textilana Corporation, Hawthorne, Calif. Filed Jan. 3, 1961.

NITRENE

For Non-Ionic Surface Active Agent.
First use Sept. 2, 1949.

SN 111,628. Jones Products Company, Inc., Madison, Wis. Filed Dec. 14, 1960.

JONES

For Insecticides.
First use Oct. 29, 1940.

SN 112,985. United Carbon Company, Houston, Tex. Filed Feb. 2, 1961.



The word "Carbon" is disclaimed apart from the mark as shown.
For Carbon Black Having a General Use in the Industrial Arts.
First use Dec. 5, 1960.

SN 113,287. Nalco Chemical Company, Chicago, Ill. Filed Feb. 8, 1961.

NALPREP

Owner of Reg. Nos. 506,626 and 664,237.
For Corrosion Inhibitor for Metal Surfaces and a Chemical Preparation To Prevent Pitting or Corrosion on Cooling Water Systems.
First use Nov. 14, 1960.

SN 114,433. Chapman Chemical Company, Memphis, Tenn. Filed Feb. 27, 1961.

POL-KAP

For Wood Preservative for Application to Utility Power Poles and Telephone Poles.
First use Feb. 9, 1961.

SN 114,757. The Dow Chemical Company, Midland, Mich. Filed Mar. 2, 1961.

ZECTRAN

Owner of Reg. Nos. 530,255 and 564,761.
For General Purpose Insecticide.
First use Feb. 9, 1961.

SN 115,115. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany. Filed Mar. 8, 1961.

PRIMASOL

For Dyes.
First use Nov. 30, 1948; in commerce June 28, 1960.

SN 116,526. Hyland Laboratories, Los Angeles, Calif. Filed Mar. 27, 1961.

BETA-L TEST

Owner of Reg. Nos. 691,476, 713,350, and others.
For Diagnostic Reagent for Laboratory Use To Quantitate Serum Beta-Lipoprotein Precipitin.
First use Feb. 28, 1961.

SN 116,528. Hyland Laboratories, Los Angeles, Calif. Filed Mar. 27, 1961.

LE-TEST

Owner of Reg. Nos. 689,310, 713,350, and others.
For Diagnostic Reagent for Laboratory Use To Determine the Existence of Lupus Erythematosus.
First use Feb. 28, 1961.

SN 116,529. Hyland Laboratories, Los Angeles, Calif. Filed Mar. 27, 1961.

UN-TEST

Owner of Reg. Nos. 689,310, 691,476, 713,350, and others.
For Reagent for the Quantitative Determination of Urea Nitrogen.
First use Mar. 8, 1961.

SN 116,693. American Cyanamid Company, New York, N.Y. Filed Mar. 29, 1961.

PRONAR

For Butyl Rubber Modifier.
First use Mar. 10, 1961.

SN 116,694. American Cyanamid Company, New York, N.Y. Filed Mar. 29, 1961.

AEREX

Owner of Reg. Nos. 434,875, 622,502, and 659,970.
For Catalyst.
First use Feb. 27, 1961.

SN 118,096. The Newcomer Corporation, Columbia, Mo. Filed Apr. 18, 1961.

TRIO

For Insecticide Preparation Which Also Kills Weeds and Crabgrass.
First use Mar. 29, 1961.

SN 118,573. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed Apr. 25, 1961.

CAL-TREAT

For Corrosion Inhibitors for Cooling Towers.
First use Mar. 28, 1961.

SN 120,282. American Cyanamid Company, New York, N.Y. Filed May 18, 1961.

CYQUEST

Owner of Reg. No. 662,967.
For Sequestering Agent.
First use Apr. 17, 1961.

SN 120,550. Maumee Chemical Company, Toledo, Ohio. Filed May 22, 1961.

MAUMEE CHEMICALS

The word "Chemicals" is disclaimed apart from the mark as shown.
For Organic Chemicals.
First use on or about Nov. 2, 1953.

SN 120,599. Joseph P. West, d.b.a. West Reproduction, Dearborn, Mich. Filed May 22, 1961.

TRACE

For Drawing Transfer Sensitizing Solution.
First use Dec. 14, 1960.

SN 121,369. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 5, 1961.

7

Owner of Reg. Nos. 646,743, 647,993, and 648,032.
For Rubber Dressing, Cooling System Sealers, Cooling System Leak Preventatives, Brake Fluids.
First use Sept. 13, 1960.

SN 123,237. Shulton, Inc., Clifton, N.J. Filed June 30, 1961.

MELODIE

For Spray Starch Containing Germicidal Ingredients.
First use June 2, 1961.

Class 12—Construction Materials

SN 111,296. Standard Toch Industries, Inc., Philadelphia, Pa. Filed Jan. 4, 1961.

"RIW"

Owner of Reg. Nos. 54,799, 107,399, 278,170, and 294,050.
For Liquid, Semi-Liquid, Powder, Paste, and Plastic Compositions for Waterproofing Wood, Metal, Cement, and Other Structural Materials.
First use 1893.

SN 112,237. Dr. Alois Stankiewicz Gesellschaft mit beschrankter Haftung, Adelheidsdorf, Germany. Filed Jan. 23, 1961.

BARYFOL

Owner of German Reg. No. 730,026, dated Oct. 15, 1959.
For Plates and Mats for Insulation Against Cold, Heat, Sound, Shock, Concussion and Humidity; Building Plates Made of Plastics, Natural and Synthetic Rubber, Bitumin and Similar Materials, Gypsum, Felt, Mineral and Glass Wool, Jute or Textile Fabrics.

SN 120,163. Pacific Plywood Co., Dillard, Oreg. Filed May 12, 1961.

Par-GRIP

For Mastic for Wooden Flooring.
First use Mar. 15, 1961.

SN 123,308. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.

HERCULES

Owner of Reg. Nos. 363,212, 674,017, and others.
For Film for Application to Acoustical Tiles.
First use May 8, 1961.

SN 123,313. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.



The mark is a silhouette representation of Hercules. Owner of Reg. Nos. 289,305, 674,018, and others.
For Film for Application to Acoustical Tiles.
First use May 8, 1961.

SN 124,438. Gustin-Bacon Manufacturing Company, Kansas City, Mo. Filed July 21, 1961.

ULTRA-THERM

For Thermal and Acoustical Insulation in the Form of Fibrous Batts.
First use Oct. 12, 1960.

SN 124,551. Johns-Manville Corporation, New York, N.Y. Filed July 24, 1961.

DUCTITE

Owner of Reg. No. 598,658.
For Joint Sealing Tape and Tubular Couplings, Particularly for Use With Air Ducts.
First use on or about Mar. 2, 1953, on joint sealing tape.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 102,262. The Portland Chain Manufacturing Co., Portland, Oreg. Filed Aug. 8, 1960.

PORTALLOY

For Chains, Chain Rivets, Chain Attachments and Flights.
First use Dec. 1, 1937, on chains, chain rivets and chain attachments.

SN 120,697. Colorguard Corporation, New York, N.Y. Filed May 24, 1961.

VINYLBOND.

For Chain Link Fence.
First use Apr. 21, 1961.

SN 120,874. Fairlane Co., Inc., Philadelphia, Pa. Filed May 26, 1961.

FAIRLANE

For General Wire Hardware—Namely, Hooks and Eyes, Clothes Line Hooks and Brass Shoulder Hooks.
First use May 18, 1961.

SN 121,386. Graning Company, El Monte, Calif. Filed June 5, 1961.

COBRA-LAV

For Cast Iron, Porcelain-Enameled Lavatories.
First use May 4, 1961.

SN 121,444. Swimquip, Inc., El Monte, Calif. Filed June 5, 1961.

U-3

For Automatic Surface Skimmers for Use in Swimming Pool Installations.
First use May 3, 1961.

SN 121,613. Chester Wagner, Eaton, Ohio. Filed June 7, 1961.

Henny Penny PHT Pressure Fryer

Owner of Reg. No. 638,673.
For Pressure Fryers for Cooking Meats and Other Foods.
First use Feb. 21, 1956.

SN 121,618. Aquamatic Inc., Rockford, Ill. Filed May 29, 1961.

THERAX

For Thermally Operated Valves.
First use Jan. 16, 1961.

SN 121,720. The Enterprise Aluminum Company, Massillon, Ohio. Filed June 9, 1961.

Sta-lum

For Base Metal Cooking Utensils.
First use May 15, 1961.

SN 121,904. Central D Manufacturing Co., Culver City, Calif. Filed June 13, 1961.

WATERFLEX

For Plumbing Supplies Such as Flexible Pipe Connectors.
First use January 1959.

SN 121,906. Central D Manufacturing Co., Culver City, Calif. Filed June 13, 1961.

LAVFLEX

For Plumbing Supplies Such as Flexible Pipe Connectors.
First use August 1956.

Class 14—Metals and Metal Castings and Forgings

SN 122,581. Westinghouse Electric Corporation, Pittsburgh, Pa. Filed June 21, 1961.

KROMARC

For Stainless Steel Alloys.
First use on or about Mar. 16, 1961.

Class 15—Oils and Greases

SN 103,176. Mid-States Distributing Company, Inc., St. Paul, Minn. Filed Aug. 22, 1960.

HARVEST KING

The drawing is lined for green and red.
For Lubricating Oils and Greases.
First use July 5, 1951.

SN 106,333. M.F.A. Oil Company, Columbia, Mo. Filed Oct. 13, 1960.

SP 8

For Gasoline Additive.
First use Aug. 3, 1960.

SN 120,921. Union Oil Company of California, Los Angeles, Calif. Filed May 26, 1961.

76 UNIFUEL

Owner of Reg. Nos. 521,424, 566,785, and 720,238.
For Diesel Engine Fuel.
First use Apr. 20, 1961.

SN 121,370. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed June 5, 1961.

7

Owner of Reg. Nos. 646,743, 647,993, and 648,032.
For Penetrating Lubricants for Rubber and Chassis Bearings, Additives for Gasoline and Motor Oil.
First use Sept. 13, 1960.

SN 124,183. Ethyl Corporation, New York, N.Y. Filed July 18, 1961.

TELMEL

For Motor Fuel Additives.
First use at least as early as Apr. 26, 1961.

Class 16—Protective and Decorative Coatings

SN 109,743. Stewart-Mowry Company, Chicago, Ill. Filed Dec. 6, 1960.

GOLD CROSS BRAND MOWRY QUALITY PRODUCTS

Applicant disclaims exclusive right to use of the words "Brand" and "Quality Products."
For Paints, Varnishes, and Paint Enamels.
First use Jan. 2, 1902.

SN 123,258. American Machine & Foundry Company, New York, N.Y. Filed July 3, 1961.

CHEMWELD

For Coating Composition for Bowling Pins.
First use Oct. 16, 1959.

Class 18—Medicines and Pharmaceutical Preparations

SN 92,438. W. J. Bush & Company Limited, London, England. Filed Mar. 9, 1960.

BUSH

Owner of British Reg. No. 721,928, dated Sept. 21, 1953.
For Chemical Products Prepared for Use in Pharmacy.

SN 92,793. Nordic Biochemicals Limited, Montreal, Quebec, Canada. Filed Mar. 14, 1960.

Owner of Canadian Reg. No. 107,412, dated July 26, 1957.
For Pharmaceutical Preparations and Medicinal Products—Namely, Adrenocorticotrophic Hormone, Hydrocortisone Solutions, Pituitary Gland Extracts and Bone Meal Tablets, All for Human and Veterinary Use.
First use Jan. 16, 1956, on adrenocorticotrophic hormone; in commerce Jan. 16, 1956.

SN 92,794. Nordic Biochemicals Limited, Montreal, Quebec, Canada. Filed Mar. 14, 1960.

DURACTON

Owner of Canadian Reg. No. 194, Folio N.S. 49,421, dated Mar. 13, 1954.
For Pharmaceutical Preparation, Specifically a Drug Sold as a Highly Purified Adrenocorticotrophic Hormone Preparation Compounded With Carboxymethylcellulose.

SN 96,232. William R Lawrence, d.b.a. Pink Fluff Company, Huntington, W. Va. Filed May 2, 1960.

PINK FLUFF

Applicant disclaims any exclusive rights in the word "Pink" apart from the mark as shown.
For Medicated Cosmetic Skin Lotion.
First use Feb. 1, 1960.

SN 102,128. Textron Pharmaceuticals, Inc., Providence, R.I., assignee, by mesne assignment, of New Medical Techniques, Stamford, Conn. Filed Aug. 5, 1960.

BANDAMYCIN

For Medicated Bandages in the Form of an Aerosol Spray.
First use June 2, 1958.

SN 108,665. Physicians Supply Company, Inc., Herrin, Ill. Filed Nov. 17, 1960.

ORABARPHEN

For Medicinal Preparations—Namely, Analgesic-Antipyretic Tablets.
First use October 1938.

SN 108,997. Nicholas International Limited, Toronto, Ontario, Canada. Filed Nov. 23, 1960.

SINOPAX

Priority claimed under Sec. 44(d) on Canadian application filed July 6, 1960; Reg. No. 124,148, dated Oct. 27, 1961.
For Preparation for the Treatment of Respiratory Conditions Including Sinusitis, Bronchitis, Asthma and Hay Fever.

SN 111,260. York Pharmacal Company, St. Louis, Mo. Filed Jan. 3, 1961.

medi kay

For Mineral Oil for Internal Use.
First use Dec. 16, 1960.

SN 114,139. Premo Pharmaceutical Laboratories, Inc., South Hackensack, N.J. Filed Feb. 21, 1961.

PREMO

For Pharmaceutical Preparations.
First use Feb. 1, 1929.

SN 119,712. Nicholas International Limited, Toronto, Ontario, Canada. Filed May 10, 1961.

TRIOMYCIN

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 18, 1961; Reg. No. 124,354, dated Nov. 10, 1961.
For Multi-Vitamin Antibiotic Medication for Veterinary Use.

SN 119,715. Nicholas International Limited, Toronto, Ontario, Canada. Filed May 10, 1961.

LUPULENE

Priority claimed under Sec. 44(d) on Canadian application filed Apr. 18, 1961; Reg. No. 124,355, dated Nov. 10, 1961.
For Preparation for the Treatment of Mastitis.

SN 121,234. Savage Laboratories, Inc., Houston, Tex. Filed June 1, 1961.

SOF-2

For Laxative.
First use Oct. 24, 1960.

SN 122,870. The Warren-Teed Products Company, Columbus, Ohio. Filed June 26, 1961.

TEGUMIN

For Preparation for the External Treatment of Skin Disorders.
First use June 12, 1952.

SN 123,466. Carter Products, Inc., New York, N.Y. Filed July 6, 1961.

SILENT NITE

Owner of Reg. No. 671,112.
For Pharmaceutical Preparation for Use as an Aid To Achieve Sleep.
First use May 26, 1961.

SN 123,606. Carter Products, Inc., New York, N.Y. Filed July 10, 1961.

HYPOMIL

For Pharmaceutical Preparation for Use as an Aid To Relieve Pain and To Achieve Sleep.
First use May 26, 1961.

SN 123,918. Olin Mathieson Chemical Corporation, New York, N.Y. Filed July 13, 1961.

RAUDIPRAL

Owner of Reg. No. 634,524.
For Central Nervous System Depressant Combination.
First use July 3, 1961.

SN 124,316. American Cyanamid Company, New York, N.Y. Filed July 20, 1961.

LANZADOSIS

For Antibiotic for Veterinary Use.
First use June 7, 1961.

SN 124,981. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

KETROBARB

For Hydrocholeretic, Choleretic, Sedative, Antispasmodic.
First use June 8, 1950.

SN 124,982. Baxter Laboratories, Inc., Morton Grove, Ill. Filed July 31, 1961.

KODOVEN

For Expectorant, Antipyretic, Sedative.
First use Dec. 12, 1940.

SN 127,011. Hoffmann-La Roche Inc., Nutley, N.J. Filed Aug. 31, 1961.

VERSIDYNE

For Analgesic.
First use Aug. 24, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 79,533. System Development Corporation, Santa Monica, Calif., assignee of Systems Development Corporation, Dayton, Ohio. Filed Aug. 13, 1959.

SDC

For Electrical Filter.
First use April 1958.

SN 92,206. Armel Electronics, Inc., Brooklyn, N.Y. Filed Mar. 7, 1960.

ARMEL HI-RELI

The term "HI-Reli" is disclaimed apart from the mark as shown. Owner of Reg. No. 633,899.
For Sockets and Relays.
First use Dec. 15, 1957; Feb. 1, 1955, as to "Armel."

SN 123,309. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.

HERCULES

Owner of Reg. Nos. 363,212, 674,017, and others.
For Film for Electrical Insulation.
First use May 8, 1961.

SN 123,314. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.



The mark is a silhouette representation of Hercules. Owner of Reg. Nos. 289,305, 674,108, and others.
For Film for Electrical Insulation.
First use May 8, 1961.

Class 22—Games, Toys, and Sporting Goods

SN 78,074. Adolf Seretny, d.b.a. Val Setz, Portland, Oreg. Filed July 20, 1959.

SAT-O-LOOP

For Toy Hoops.
First use May 29, 1959.

SN 97,486. William E. Harnish, d.b.a. Wm. E. Harnish Golf Enterprises, Dayton, Ohio. Filed May 19, 1960.

VETRA-PUTT

For Golf Playing Equipment—Namely, Golf Balls and Clubs; and Prefabricated Layout Equipment for the Installation and Construction of Golf Ranges and Miniature Golf Courses.
First use Apr. 22, 1960.

SN 100,968. Automat Precision Engineering A.G., Zurich, Switzerland. Filed July 18, 1960.

THE AUTOMAT

For Educational Mechanical Construction Sets, Comprising Gears, Transmissions, Couplings, Clutches, Parts for Cam-Mechanisms, Intermittent Motions and All Components for Measuring and Recording Instruments.
First use June 18, 1960; in commerce June 18, 1960.

SN 104,926. Jet-Ski Company, Inc., Grand Rapids, Minn. Filed Sept. 21, 1960.

JET-SKI

For Water Skis.
First use November 1954.

SN 105,165. Ideal Fishing Float Company, Inc., Richmond, Va. Filed Sept. 26, 1960.

BUBBLE BOARD

No claim of exclusive right is made to "Board" apart from the mark as used on contour rafts.
For Sporting Goods and Toys for Play and Outdoor Use—Namely, Contour Rafts or Rafts for Pool, Beach and Boat.
First use June 17, 1960.

SN 107,467. Lafayette Radio Electronics Corporation, Jamaica, N.Y. Filed Oct. 31, 1960.

Lafayette

For Fishing Reels; Fishing Lures; Fishing Rods; Table Tennis, Nets, Balls and Rackets; Fishing Kits (Containing Snelled Hooks, Line, Sinkers, Reels, Guides, Rods, Leaders, Assortment of Flies); Hand Held Skin-Diver's Spear Gun; Fishing Tackle Comprising a Case Containing a Fishing Rod, Reels, Reel Seats, Steel Guides, Brass Ferrules, Nylon Windings, Assorted Flies, Streamers, Hooks, Leaders and Leader Cutting Scissors.
First use May 12, 1959, on fishing reels and lures.

SN 110,308. C. Scott Blakeslee, d.b.a. C. Scott Blakeslee & Associates, Grand Rapids, Mich. Filed Dec. 16, 1960.

TRAV-L-BINGAROO

Owner of Reg. No. 656,372.
For Equipment for Playing Word Games To Be Played While Riding in a Vehicle.
First use May 15, 1956.

SN 115,301. Columbia Products Company, Columbia, S.C. Filed Mar. 10, 1961.

WONDERSHAFT

For Shafts for Golf Clubs.
First use Jan. 21, 1961.

SN 115,409. A & B Games, San Diego, Calif. Filed Mar. 13, 1961.

AMIGOS



For Equipment Comprising Movable Pieces and Playing Board for Playing a Board Game.
First use Nov. 9, 1960.

SN 115,568. Alexander Doll Company, Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Mar. 14, 1961.

"MARGOT"

For Dolls.
First use Jan. 31, 1961.

SN 116,007. Glenn A. Devery, d.b.a. Fun Cards by Gad, Minneapolis, Minn. Filed Mar. 20, 1961.

SKY HOOK

For Toy Novelty Balancing Device.
First use Feb. 6, 1960.

SN 116,189. American Doll & Toy Corporation, Brooklyn, N.Y. Filed Mar. 22, 1961.

HEDDA GET BEDDA

For Dolls.
First use Feb. 20, 1961.

SN 116,730. Wm. Elmer Benjamin Kell, Los Angeles, Calif. Filed S.R. Mar. 29, 1961; Am. P.R. Dec. 4, 1961.

"LEVACAST"

For Anti-Backlash Attachment for Use With Conventional Fishing Reels.
First use June 15, 1959.

SN 116,833. The Oak Rubber Company, Ravenna, Ohio. Filed Mar. 30, 1961.



For Playing Balls and Toy Balloons and Packages of Toy Balloons.
First use October 1960.

SN 116,871. Chemical Sundries Company, Chicago, Ill. Filed Mar. 31, 1961.

GINKUS

For Construction Toy Which Is Comprised of Flexible Tube Lengths and Plastic Jack Shaped Joiners Which Allow the Constructor To Form Geometric Designs, Third Dimensional Objects and Imaginary Forms.
First use Jan. 11, 1961.

SN 117,947. Milton Bradley Company, Springfield, Mass. Filed Apr. 17, 1961.

VIZ U AID

For Educational Toys and Apparatus for Playing Communications and Similar Educational Games.
First use Jan. 9, 1961.

SN 118,208. The Avalon Hill Company, Baltimore, Md. Filed Apr. 20, 1961.

NIEUCHESS

For Equipment Sold as a Unit for Playing a Board Game.
First use Jan. 18, 1961.

SN 118,524. Winston Sales Co., Inc., Chicago, Ill. Filed Apr. 24, 1961.

Psycho Plug Lure

No claim of exclusive right is made to the use of the words "Plug Lure" in connection with the sale of fishing lures.
For Fish Lure.
First use Mar. 31, 1961.

SN 118,540. Alexander Doll Company, Inc., d.b.a. Madame Alexander, New York, N.Y. Filed Apr. 25, 1961.

MADELAINE

For Dolls.
First use May 14, 1940.

SN 118,572. Ethan C. Grant, d.b.a. Sharon Patents Company, Medford, Oreg. Filed Apr. 25, 1961.

VETO

For Equipment Sold as a Unit for Playing a Word Game.
First use Apr. 18, 1961.

SN 118,615. Sportsman's, Inc., Fishersville, Va. Filed Apr. 25, 1961.



The words "Service," "Dependability," "Quality," and "Craftsmanship" are disclaimed apart from the mark as shown.
For Tabulating Guides for Determining Optimum Fishing and Hunting Conditions.
First use Dec. 15, 1960.

SN 118,688. Hassenfeld Bros., Inc., Central Falls, R.I. Filed Apr. 26, 1961.

BEAUX ART

Applicant disclaims the word "Art" separate and apart from the mark as shown.
For Hobby Oil Paint-by-Number Coloring Set.
First use April 1952.

SN 118,689. Hassenfeld Bros., Inc., Central Falls, R.I. Filed Apr. 26, 1961.

PAD-E-PALS

For Toy Set Comprising Stuffing or Fill Material and an Outer Covering for Making a Doll or Similar Type Huggable Toy.
First use on or about Mar. 8, 1961.

SN 118,690. Hassenfeld Bros., Inc., Central Falls, R.I. Filed Apr. 26, 1961.

MR. BIG

For Hobby Color-by-Number Coloring Set.
First use on or about Mar. 22, 1961.

SN 119,240. Fred Silber Co., Ferndale, Mich. Filed May 4, 1961.

SIL-BEAR

For Toys—Namely, Stuffed Teddy Bears.
First use Apr. 10, 1958.

SN 119,282. The Hubley Manufacturing Company, Lancaster, Pa. Filed May 4, 1961.

MIGHTY-METAL TOYS

No claim of exclusive right is made to "Toys" for toy vehicles.
For Toy Model Vehicles.
First use Mar. 22, 1961.

SN 120,089. Ford Products Company, Pawtucket, R.I. Filed May 16, 1961.



Applicant disclaims the words "Ten Pins" and the representation of the bowling pins and the top spinner, separate and apart from the mark as shown.
For Equipment for Playing a Toy Game Comprising a Board and Movable Parts.
First use on or about Mar. 7, 1961.

SN 120,733. E. S. Lowe Company, Inc., New York, N.Y. Filed May 24, 1961.

RENO-KENO

For Equipment Sold as a Unit for Playing a Poker and Keno Game.
First use Mar. 3, 1961.

SN 120,911. Chester T. Schandelmeier, d.b.a. Ski-Ball Manufacturing Co., Bellwood, Ill. Filed May 26, 1961.

Ski-ball

For Footplate or Stance Exercising Device for Simulating and Practicing Skiing Movements.
First use Apr. 27, 1961.

SN 122,967. The United States Playing Card Company, Cincinnati, Ohio. Filed June 27, 1961.

KING

Owner of Reg. No. 338,849.
For Playing Cards.
First use June 13, 1961.

SN 122,969. The United States Playing Card Company, Cincinnati, Ohio. Filed June 27, 1961.

LEISURE

For Playing Cards.
First use June 13, 1961.

SN 122,970. The United States Playing Card Company, Cincinnati, Ohio. Filed June 27, 1961.

METRO

For Playing Cards.
First use June 13, 1961.

SN 122,971. The United States Playing Card Company, Cincinnati, Ohio. Filed June 27, 1961.

QUEEN

For Playing Cards.
First use June 13, 1961.

SN 123,269. Best Tackle Manufacturing Co., Sebewaing, Mich. Filed July 3, 1961.

STUMP JUMPER

For Fishing Lures.
First use June 20, 1953.

SN 123,859. Arcadia Doll Co., Inc., New York, N.Y. Filed July 13, 1961.

ADCO

For Dolls.
First use January 1947.

SN 123,860. Arcadia Doll Co., Inc., New York, N.Y. Filed July 13, 1961.

ARCADIA

For Dolls.
First use January 1947.

SN 123,890. Joseph Guglielmino, Skokie, Ill. Filed July 13, 1961.

WHIRL-A-PAINT

For Toys, Comprising Machine for Whirling a Cardboard Base Upon Which a Futuristic Painting Is Formed by Depositing Drops of Paint on the Cardboard While It is Whirling, and the Paintings Made Thereby, and the Folders Therefor.
First use June 29, 1961.

SN 123,930. Sock-It Company, Inc., High Point, N.C. Filed July 13, 1961.

SPACE WHIRLER

For Return Tops.
First use June 9, 1961.

SN 124,169. Capital Credit Corporation, Washington, D.C. Filed July 18, 1961.

CAPPY

For Dolls.
First use Dec. 20, 1960.

SN 124,717. Color-Along Company, Salem, Va. Filed July 26, 1961.

COLOR-ALONG

For Amusement and Educational Kits Comprising a Coloring Book, Crayons, and a Grooved Phonograph Record Containing a Commentary and Instructions Relating to the Use of Said Coloring Book.
First use Apr. 12, 1961.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 107,465. Lafayette Radio Electronics Corporation, Jamaica, N. Y. Filed Oct. 31, 1960.

Lafayette

For Vises; Wire Strippers; Wrenches; Tool Sets Comprising a Case Containing Insulated Side Cutters, Insulated Chrome Plated Diagonals, Soldering Iron, Wrenches, Tweezers, Shockproof Chuck Handle, Screwdriver Blade, Punch-Awl Blades, Nut Driver Blade, Pliers; Taps and Dies; Files; Anvils; Socket Punch; Camper's Saw; Combination Plier-Cutter-Wrench-Small Screw Driver-Awl-Scriber-Tack Hammer-Tack Lifter; Pruning Shears (Gardening); Drill Bits; Drill Chucks; Hole Saws; Fishing Tools and Knives.
First use June 9, 1958, on vises.

SN 109,311. Gardner Manufacturing Company, Horicon, Wis. Filed Nov. 30, 1960.

KOFFEE KART

The word "Koffee" is disclaimed apart from the mark as shown.
For Coffee Vending Machines.
First use Nov. 11, 1960.

SN 112,001. Seignol, Neuilly-Sur-Seine, France. Filed Jan. 17, 1961.

HELIFLEX

Owner of French Reg. No. 487,651, dated Apr. 22, 1960.
For Rotary Pumps for Pumping and Circulating Liquids.

SN 112,318. Salsbury Corporation, Los Angeles, Calif. Filed Jan. 23, 1961.

SALSBURY

For Automatic Clutches, Transmissions, and Torque Converters; Tire Retreading Machines—Namely, Tread Builders and Casing Buffers; Machines for Mounting and Dismounting Tires on Wheels and Associated Tools—Namely, Bead Breakers and Bead Expanders; Tire Casing Spreaders; Motor Block Repair Tools—Namely, Taper Plugs, Reamers, Countersinks, Drill Jigs, and Taps; Pressure Guns for Applying Viscose Materials; Air Hammers, Grinders, and Saws and Parts Thereof.
First use at least as early as 1948.

SN 113,281. Karl Hehl, d.b.a. Arburg Feingerätefabrik oHG. Hehl & Söhne, Lossburg, Wurttemberg, Germany. Filed Feb. 8, 1961.

ARBURG allrounder

Priority claimed under Sec. 44(d) on German application filed Nov. 26, 1960; Reg. No. 747,196, dated Mar. 29, 1961. Owner of U.S. Reg. No. 723,296.
For Machines, and Parts Thereof, for Molding and Shaping Thermoplastic Materials.

SN 115,121. Caltexa Trust Reg., Vaduz, Liechtenstein. Filed Mar. 8, 1961.

COLFORG

Owner of Liechtenstein Reg. No. 906, dated Nov. 12, 1959.
For Press Machines and Equipment for Cold Forming of Metal.

SN 117,137. S.p.A. V. Rimoldi & C., Milan, Italy. Filed Apr. 4, 1961.

Rimoldi

MILANO (Italia)

The geographic legend "Milano (Italia)" is disclaimed apart from the mark. Priority claimed under Sec. 44(d) on Italian application filed Dec. 16, 1960; Reg. No. 153,931, dated Mar. 11, 1961.
For Sewing Machine Particularly for Industrial Use.

SN 117,980. Jas. H. Matthews & Co., Pittsburgh, Pa. Filed Apr. 17, 1961.

Ident-A-Matic

For Industrial Marking Machines for Impressing Characters in Metal Surfaces and Machines for Imprinting With Metal Foil.
First use on or about Oct. 1, 1959.

SN 118,692. Heart of Dixie Products Company, Montgomery, Ala. Filed Apr. 26, 1961.

VO-AG

For Farm Tractor Seat Cushions.
First use Feb. 3, 1961.

SN 119,689. Feller Jones Corporation, New York, N.Y. Filed May 10, 1961.

FELLER-MATIC

For Automatic Insect Control Unit for Indoor and Outdoor Use, Consisting of a Pump and Motor, Tank, Tubing, Spray Nozzle and Connections Therefor.
First use May 26, 1960.

SN 120,104. The Locke Steel Chain Company, Bridgeport, Conn. Filed May 16, 1961.

LOCKE

For Lawnmowers.
First use 1928.

SN 120,262. United-Greenfield Corporation, Chicago, Ill. Filed May 17, 1961.

UNIBRAZE

For Boring, Cutting, Forming, Threading and Turning Tools and Tool Bits With Sintered Carbide Tips and Inserts, and Sintered Carbide Blanks, Tips and Inserts.
First use Mar. 10, 1961, on sintered carbide tips and sintered carbide blanks.

SN 120,290. The Cincinnati Mine Machinery Co., Cincinnati, Ohio. Filed May 18, 1961.

RAP-LOK

For Socket Members, Resilient Retaining Means for Use Therein, Cutter Bits, Cutter Chains and Cutter Heads.
First use in September 1959.

SN 120,311. International Harvester Company, Chicago, Ill. Filed May 18, 1961.

COMANCHE

For Internal Combustion Engines.
First use Apr. 19, 1961.

SN 120,828. Gerald W. Slocum, d.b.a. Demco, Dowagiac, Mich. Filed May 25, 1961.

AMIGO

For Garden Tractors.
First use Nov. 25, 1960.

SN 120,855. Bostitch, Inc., East Greenwich, R.I. Filed May 26, 1961.

BOSTITCH

Owner of Reg. Nos. 135,920 and 226,587.
For Machinery for Making Corrugated and Solid Fibre Shipping Containers, Including Machines and Equipment for Processing and Handling Solid and Corrugated Fibreboard—Namely, Folders, Gluers, Stitchers, Folder-Gluers, Folder-Stitchers, Scorers, Printers, Printer-Slotters, Flap Cutters, Flap Crushers, Counters, Stackers, Counter-Stackers, Counter-Ejectors, Bundlers, Tapers, Tyers, Elevators and Conveyors.
First use Sept. 26, 1947.

SN 120,857. Calwire, Visalia, Calif. Filed May 26, 1961.

CALWIRE

Owner of Reg. No. 553,029.
For Stapling Machines and Nailing Machines.
First use Oct. 14, 1950.

SN 120,935. American Can Company, New York, N.Y. Filed May 29, 1961.

MARASEAL

Owner of Reg. No. 604,189.
For Adhesive Applying Apparatus.
First use Aug. 31, 1960.

SN 121,714. Conveyor Systems, Inc., Morton Grove, Ill. Filed June 9, 1961.

VE-BE-VEYOR

For Conveyor Systems.
First use September 1955.

Class 26—Measuring and Scientific Appliances

SN 112,232. Daystrom, Incorporated, Murray Hill, N.J. Filed Jan. 23, 1961.

DAYSTROM

Owner of Reg. Nos. 556,739 and 558,047.
For Potentiometric and Bridge Measuring and Recording Devices, Mechanically Actuated Temperature and Pressure Measuring and Recording Devices, X-Ray Gauges, Non-Contact Gauges, Light Meters, Thermometers, and Moving Coil Type Electrical Measuring and/or Indicating Instruments.
First use March 1960.

SN 117,606. Bright Radio Laboratories, Inc., Mineola, N.Y. Filed Apr. 11, 1961.

THERMO-FISHOMETER

For Temperature Measuring Device, Constructed To Show Depth, Indicating the Various Types of Fish Frequenting the Stratified Waters, i.e., the Epilimnion, the Thermocline and the Hypolimnion.
First use Dec. 19, 1960.

SN 118,018. Voigtlander A.G., Braunschweig, Germany. Filed Apr. 17, 1961.

SKOPAGON

Owner of German Reg. No. 643,303, dated Aug. 28, 1953; and U.S. Reg. Nos. 694,896, 696,404, and others.
For Optical and Photographic Instruments, Apparatus, and Accessories—Namely, Photographic Objectives, Ancillary Lenses, Filters, Sun Shields, Finders, Range Finders, Exposure Meters, and Magazines.

Class 27—Horological Instruments

SN 113,102. J. N. Eberle & Cie. G.m.b.H., Augsburg, Germany. Filed Feb. 6, 1961.

INEA

Owner of German Reg. No. 654,706, dated Mar. 10, 1954.
For Clock and Watch Springs.

SN 124,327. Belforte Watch Company, Inc., New York, N.Y. Filed July 20, 1961.

CONTEMPO

For Watches.
First use July 6, 1961.

SN 124,328. Belforte Watch Company, Inc., New York, N.Y. Filed July 20, 1961.

GIBRALTAR

For Watches.
First use July 6, 1961.

SN 124,329. Belforte Watch Company, Inc., New York, N.Y. Filed July 20, 1961.

MONTERREY

For Watches.
First use July 6, 1961.

SN 124,330. Belforte Watch Company, Inc., New York, N.Y. Filed July 20, 1961.

TITLEIST

For Watches.
First use July 6, 1961.

Class 28—Jewelry and Precious-Metal Ware

SN 122,484. Speidel Corporation, Providence, R.I. Filed June 20, 1961.

STEPS TO ROMANCE

For Watch Bracelets.
First use May 12, 1961.

Class 29—Brooms, Brushes, and Dusters

SN 125,494. Jacksonville Paper Company, Jacksonville, Fla. Filed Aug. 7, 1961.

SOUTHERN MAID

Owner of Reg. No. 593,351.
For Mops and Mop Heads.
First use 1936.

Class 31—Filters and Refrigerators

SN 123,104. Indes Industria Elettrodomestici S.p.A., Orbassano, Turin, Italy. Filed June 29, 1961.

INDESIT

Owner of Italian Reg. No. 143,158, dated Apr. 28, 1959.
For Refrigerators.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 120,244. Sears, Roebuck and Co., Chicago, Ill. Filed May 17, 1961.

GUARDSMAN SUPERTRED

Applicant disclaims the word "Supertred" apart from the mark as shown and without prejudice to applicant's common law rights.
For Automobile Tires.
First use Apr. 17, 1959.

Class 36—Musical Instruments and Supplies

SN 94,434. Harry Stewart, Santa Ana, Calif. Filed Apr. 5, 1960.

Imperiale

For Musical Instruments—Namely, Pianos and Guitars.
First use July 10, 1955.

SN 110,848. The Gramophone Company Limited, Hayes, England. Filed Dec. 27, 1960.

ANGEL RECORDS



The word "Records" is disclaimed apart from the mark as shown. Owner of U.S. Reg. Nos. 580,349, 618,589, and 630,452.

For Electro-Magnetic Tapes With Sound Recorded Thereon.
First use Oct. 20, 1958; in commerce Oct. 20, 1958.

Class 37 — Paper and Stationery

SN 107,669. Fort Howard Paper Company, Green Bay, Wis. Filed Nov. 2, 1960.

NEATNAP

For Paper Napkins.
First use Jan. 11, 1960.

SN 115,110. American Artists Group, Inc., New York, N.Y. Filed Mar. 8, 1961.



American Artists
JUNIORS

The applicant disclaims the use of the word "Juniors" apart from the mark as shown. Owner of Reg. No. 643,278.

For Notes, Note Paper and Letter Paper, and Box Assortments Thereof.
First use Mar. 1, 1960.

SN 116,780. Aktiebolaget Jonkoping-Vulcan, Jonkoping, Sweden. Filed Mar. 30, 1961.

CONRIT

Owner of Swedish Reg. No. 62,775, dated Apr. 11, 1947.
For Coated Paper.

SN 118,817. Scholastic Testing Service, Inc., Chicago, Ill. Filed Apr. 27, 1961.

SCOR-VUE

For Scoring Stencils.
First use Dec. 10, 1960.

SN 121,066. Badger Paper Mills, Inc., Peshtigo, Wis. Filed May 31, 1961.

COPYRITE

For Paper Products—Namely, Second Sheets, Bond, Mimeo, and Duplicator Paper.
First use 1938 on second sheets.

SN 121,732. Hollingsworth & Vose Company, East Walpole, Mass. Filed June 9, 1961.

HOVOCIDE

Owner of Reg. No. 688,756.
For Anti-Bacterial and Anti-Fungal Inhibitor Which Is Incorporated in the Applicant's Filter Papers.
First use May 10, 1961.

SN 122,682. Thomas E. D'Arcy, d.b.a. The D'Ar Fi Co., Denver, Colo. Filed June 23, 1961.

D'AR FI

For Bookkeeping Records and Systems.
First use Apr. 30, 1961.

SN 123,310. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.

HERCULES

Owner of Reg. Nos. 363,212, 674,017, and others.
For Film for Packaging.
First use May 8, 1961.

SN 123,315. Hercules Powder Company, Wilmington, Del. Filed July 3, 1961.



The mark is a silhouette representation of Hercules. Owner of Reg. Nos. 289,305, 674,018, and others.
For Film for Packaging.
First use May 8, 1961.

SN 125,337. Venus Pen & Pencil Corporation, New York, N.Y. Filed Aug. 3, 1961.

LINTON

For Lead Pencils, Coloring Pencils, Ball Pens, and Erasers.
First use February 1939.

SN 128,098. Rees, Pitchford & Company Limited, London, England. Filed Sept. 18, 1961.



Owner of British Reg. No. 645,854, dated Mar. 14, 1946.
For Rubber Finger Pads, Rubber Thimbles, Rubber Bands, and Erasers.

SN 128,991. F.D.S. Manufacturing Company, Pomona, Calif. Filed Oct. 2, 1961.

VEN-T-PAK

For Ventilated Cushion-Like Pads, Made of Corrugated Paper for Use in Packing Fresh Fruits and Vegetables and for Packing and Padding All Kinds of Merchandise To Insure Against Breakage.
First use June 12, 1961.

SN 129,113. Blandin Paper Company, Grand Rapids, Minn. Filed Oct. 3, 1961.

ROTOBLADE

For Coated Printing Paper.
First use Aug. 26, 1961.

SN 129,259. Allen Pen Company, Needham, Mass. Filed Oct. 5, 1961.

"FOURTH AVENUE"

For Stationery Supplies—Namely, Index Tabs, Index Cards, Composition Books, Stenographer Notebooks, and Notebook Fillers.
First use June 1, 1961.

SN 129,270. W. R. Grace & Co., Cambridge, Mass. Filed Oct. 5, 1961.

SHRINK-PAK

For Thermoplastic Wrapping and Packaging Films.
First use Sept. 25, 1961.

Class 38 — Prints and Publications

SN 91,949. The Kroger Co., Cincinnati, Ohio. Filed Mar. 1, 1960.

JEAN ALLEN

Owner of Reg. No. 374,631.
For Recipes and Recipe Booklets.
First use Feb. 25, 1935.

SN 97,638. Ebsco Industries, Inc., Birmingham, Ala. Filed S.R. May 23, 1960; Am. P.R. Apr. 21, 1961.



For Information Pamphlets Relating to the Selection of Gifts.
First use May 1, 1937.

SN 112,356. The Bullard Company, Bridgeport, Conn. Filed Jan. 24, 1961.

PROFIT-WISE PRODUCTION

For Periodically Issued Trade Bulletin.
First use Oct. 28, 1960.

SN 112,769. Post Advertising Co., Inc., Chicago, Ill. Filed Jan. 30, 1961.

MONEY TALKS

For Pamphlet Issued Periodically and Distributed for Others.
First use on or about Sept. 28, 1960.

SN 118,929. Arthur F. Kruger, Hamburg-Fuhlsbuttel, Germany. Filed Apr. 28, 1961.

KRUGER

For Postcards, Greeting Cards, Calendars, and Printed Gift Tags.
First use Jan. 1, 1960; in commerce Jan. 1, 1960.

SN 119,532. Lincoln Savings and Loan Association, Los Angeles, Calif. Filed May 8, 1961.



The portrait is that of Abraham Lincoln, sixteenth president of the United States.
For Pamphlet Published Quarterly.
First use Apr. 1, 1959.

SN 122,381. The Southern Lumber Journal & Building Material Dealer, Jacksonville, Fla. Filed June 19, 1961.

THE LUMBER JOURNAL

Owner of Reg. No. 595,575.
For Trade Magazine.
First use June 10, 1961.

SN 122,597. Alfred M. Best Company, Inc., New York, N.Y. Filed June 22, 1961.

Safety Engineering

For Trade Publication Produced Monthly.
First use in March 1913.

SN 122,775. Consogas, Inc., Madison, Wis. Filed June 26, 1961.

CONSOGAS NEWS

For Company Newspaper Published Periodically.
First use in April 1961.

SN 122,778. Clare S. Copeland, Madison, Fla. Filed June 26, 1961.

COPELAND FRAME IT

For Illustrated Note Cards and Greeting Cards Suitable for Framing.
First use May 1, 1961.

SN 123,564. Putman Publishing Company, Chicago, Ill. Filed July 7, 1961.

QUEST

...for tomorrow

Owner of Reg. No. 703,558.
For Magazine Dealing With Various Aspects of the Trade and Business World.
First use Oct. 27, 1960.

SN 123,735. Dell Publishing Co., Inc., New York, N.Y. Filed July 11, 1961.

AROUND THE BLOCK WITH DUNC AND LOO

For Magazine of the Comic Book Type.
First use June 19, 1961.

SN 123,806. Danly Machine Specialties, Inc., Chicago, Ill. Filed July 12, 1961.



For External House Organ.
First use March 1961.

SN 125,486. General Features Corporation, New York, N.Y. Filed Aug. 7, 1961.

SUCCESSFUL INVESTING

For Syndicated Newspaper Feature Column.
First use Jan. 9, 1961.

SN 125,489. Greyhound Publications, Inc., Miami, Fla. Filed Aug. 7, 1961.

THE GREYHOUND RACING RECORD

For Periodical Devoted to Racing.
First use January 1947.

SN 126,393. The Sporting News Publishing Company, d.b.a. Charles C. Spink & Son, St. Louis, Mo. Filed Aug. 21, 1961.



For Newspaper Column.
First use May 9, 1940.

SN 126,412. Woodmen of the World, Denver, Colo. Filed Aug. 21, 1961.

THE PACIFIC WOODMAN

For Monthly Magazine.
First use in the month of October 1894.

SN 126,710. Ziff-Davis Publishing Company, New York, N.Y. Filed Aug. 25, 1961.

POPULAR ELECTRONICS

Owner of Reg. No. 611,586.
For Magazine.
First use Mar. 26, 1954.

SN 126,871. Belle S. Keller, d.b.a. The Keller Publishing Company, New York, N.Y. Filed Aug. 29, 1961.

REPORTERO INDUSTRIAL

For Spanish Language Magazine.
First use June 20, 1961.

Class 39 — Clothing

SN 53,660. Stapleton Leather Co., d.b.a. MacPherson Bros. Leather Co., San Francisco, Calif. Filed June 16, 1958.

Sun & Surf

For Sandals.
First use Apr. 15, 1958.
Subj. to Intf. with SN 59,709.

SN 59,709. H. S. Gale Incorporated of St. Louis, St. Louis, Mo. Filed Sept. 29, 1958.

SUN'N SURF

For Ladies' and Misses' Sportswear, Including Skirts, Blouses, Shorts, Pedal Pushers, Dresses, Jumpers, Jackets, Toreador Pants, and Suits.
First use in September 1953.
Subj. to Intf. with SN 53,660.

SN 84,569. Saxone Shoe Company Limited, Kilmarnock, Scotland. Filed Nov. 3, 1959.

GLENCAIRN

Owner of British Reg. No. B.707,966, dated June 10, 1952.
For Men's Shoes.

SN 92,176. Morpul, Inc., Greensboro, N.C. Filed Mar. 4, 1960.

TOPS FOR COMFORT

For Hosiery.
First use Feb. 24, 1960.

SN 100,597. Great Lakes Shoe Co., Inc., Oconto, Wis. Filed July 11, 1960.

Moby Decks

For Shoes, and Principally Made of Leather.
First use May 18, 1960.

SN 104,393. Kangol Wear Limited, Cleator, England, assignee of Kangol Limited, London, England. Filed Sept. 13, 1960.

KANGOL

Monty

For Hats, Caps, and Berets.
First use Aug. 24, 1948; in commerce Aug. 24, 1948.

SN 106,090. Genesco Inc., Nashville, Tenn. Filed Oct. 10, 1960.

STA-SHINE

For Leather Made Up Into Men's, Women's, and Children's Shoes and Boots.
First use Sept. 1, 1960.

SN 114,082. Bowker & Budd Limited, Bosham, England. Filed Feb. 21, 1961.



Owner of British Reg. No. 726,138, dated Jan. 26, 1954.
For Men's, Women's, and Children's Sport Clothing—Namely, Ski and Sailing Jackets, Smocks, Trousers, Slacks, Shorts, Coats, Hats, Caps, Sweaters, Outer Shirts, Boots and Shoes, and Women's Skirts.

SN 116,144. Millbrooke Fashions Inc., New York, N.Y. Filed Mar. 21, 1961.

MINI PETITE

No claim is made to the word "Petite."
For Women's Coats and Suits.
First use Jan. 4, 1961.

SN 116,204. Carp's, Inc., St. Louis, Mo. Filed Mar. 22, 1961.

KERRY KNIT

No claim is made by applicant to the use of the word "Knit" apart from the mark as shown. Owner of Reg. Nos. 124,762 and 308,754.
For Men's, Women's, and Children's Under-Wear, Made of Cotton, Silk, Nylon, Linen and Mixtures of Said Materials, and Including One and Two Piece Garments.
First use Jan. 16, 1961.

SN 116,400. Hanes Hosiery Mills Co., Winston-Salem, N.C. Filed Mar. 24, 1961.

POLYGARD

For Hosiery.
First use Mar. 17, 1961.

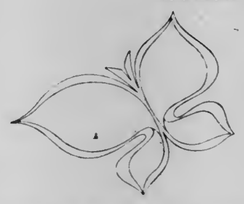
SN 116,530. International Imports of California, Los Angeles, Calif. Filed Mar. 27, 1961.

Marquesa d'Italia

No claim is made to the words "d'Italia" apart from the mark as shown.
For Ladies' Knitted Apparel—Namely, Suits, Dresses, Sweaters, Cardigans, Skirts, Pants, and Coats.
First use Sept. 27, 1960.

SN 117,026. Wm. G. Leininger Knitting Co., Inc., Mohnton, Pa. Filed Apr. 3, 1961.

RAPTURE



The design feature of the mark is a pictorial representation of a flower of orchid-like design with portions thereof cut away, so that when applied to the package, the contents may be displayed therethrough. Owner of Reg. Nos. 263,956 and 669,333.
For Women's, Misses', and Girls' Hosiery.
First use Mar. 9, 1961; May 29, 1929, as to "Rapture."

SN 117,963. Halloween, Inc., Brooklyn, N. Y. Filed Apr. 17, 1961.

SPOOK TOWN

For Costumes.
First use Mar. 28, 1961.

SN 118,089. Marlboro Shirt Company, Inc., New York, N.Y. Filed Apr. 18, 1961.

FROST MASTER

For Men's and Women's Jackets, Sweaters, and Sport Shirts.
First use Mar. 31, 1961.

SN 118,181. Simplex Shoe Manufacturing Company, Milwaukee, Wis. Filed Apr. 19, 1961.

HOPPITY BY SIMPLEX

Owner of Reg. No. 267,555.
For Baby Shoes.
First use Mar. 24, 1961.

SN 119,442. Max Udell Sons & Co., Inc., New York, N.Y. Filed May 5, 1961.

YEARCRAFT

For Men's and Young Men's Suits.
First use on or about Apr. 21, 1932.

SN 120,109. Alice M. McVey, d.b.a. D. T. McVey Leather Co., Boston, Mass. Filed May 10, 1961.

HEM-O-TAN

For Toplifts of Leather and Combinations of Leather and Rubber.
First use Oct. 8, 1935.

SN 120,219. Murray Olewitz, Inc., New York, N.Y. Filed May 17, 1961.

LEAN LEGGERS

For Boys' and Men's Slacks.
First use Jan. 3, 1961.

SN 120,255. Sears, Roebuck and Co., Chicago, Ill. Filed May 17, 1961.

VULCA-TITE

For Men's and Boys' Shoes.
First use on or about Aug. 23, 1959.

SN 120,293. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed May 18, 1961.

JEFFERSON

Owner of Reg. No. 651,583.
For Shoes for Men and Boys.
First use Apr. 20, 1956.

SN 120,294. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed May 18, 1961.

LAMONT

Owner of Reg. No. 651,584.
For Shoes for Men, Women, and Children.
First use Apr. 30, 1956.

SN 120,379. Cambridge Rubber Company, Cambridge, Mass. Filed May 19, 1961.



The drawing is lined for blue. Owner of Reg. No. 545,666.
For Men's, Women's, and Children's Shoes Made of Leather, Rubber, Fabric and/or Plastic and/or Any Combinations Thereof.
First use May 3, 1961; Apr. 30, 1935, as to "Cambridge."

SN 120,564. Petite Miss Co., New York, N.Y. Filed May 22, 1961.

SHEPITA

For Ladies' and Misses' Coats.
First use Mar. 16, 1961.

SN 120,600. Youthcraft Creations, Inc., New York, N.Y. Filed May 22, 1961.

DISCOVER

For Brassieres and Bandeaux.
First use May 10, 1961.

SN 120,689. Bayard Shirt Corp., New York, N.Y. Filed May 24, 1961.

Key Largo

Owner of Reg. No. 629,145.
For Ladies' and Girls' Shirts and Blouses.
First use Apr. 3, 1961.

SN 120,795. The Dayton Company, Minneapolis, Minn. Filed May 25, 1961.

DAYTON'S OVAL ROOM

Owner of Reg. Nos. 408,077 and 645,132.
For Women's and Misses' Clothes—Namely, Coats, Dresses, Suits, Fur Coats, Fur Jackets, Shoes, Hats, Skirts, Blouses, Sweaters, and Scarves.
First use Mar. 29, 1961, on dresses; about 1902 as to "Dayton's"; Aug. 31, 1942, as to "Oval Room."

Class 40—Fancy Goods, Furnishings, and Notions

SN 105,293. Carolyn H. Lavender, d.b.a. The Stacey Clayton Co., Darien, Conn. Filed Sept. 27, 1960.



The representation of a pair of scissors is disclaimed apart from the mark as shown.
For Holder for Scissors.
First use Aug. 22, 1960.

SN 105,578. Tip-Top Products Company, Omaha, Nebr. Filed Sept. 30, 1960.

SOF-TIP

For Bob Pins.
First use Sept. 12, 1960.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 109,144. American Cyanamid Company, New York, N.Y. Filed Nov. 28, 1960.

THE LUMINESCENT LOOK

For Fabrics of Synthetic Fibers, Such as, Greige and Finished Fabrics in the Piece of All Types for Use in Men's, Women's, and Children's Apparel, in Home Furnishings, and in the Industrial Field.
First use Oct. 10, 1960.

SN 111,653. Crown Rubber Company, Fremont, Ohio. Filed Jan. 11, 1961.

FOAMPUFF

For Foam-Coated Fabrics Used for Padding, Cushioning and Upholstery Purposes, and the Like.
First use Nov. 15, 1960.

SN 111,654. Crown Rubber Company, Fremont, Ohio. Filed Jan. 11, 1961.

AIRTUFF

For Foam-Coated Fabrics Used for Padding, Cushioning and Upholstery Purposes, and the Like.
First use Nov. 15, 1960.

SN 111,655. Crown Rubber Company, Fremont, Ohio. Filed Jan. 11, 1961.

VULCOFOAM

For Foam-Coated Fabrics Used for Padding, Cushioning and Upholstery Purposes, and the Like.
First use Nov. 15, 1960.

SN 114,435. Chicopee Manufacturing Corporation, New Brunswick, N.J. Filed Feb. 27, 1961.

FACEMATE

For Heat Sealing Apparel Interlining and Interfacing Fabrics.
First use Dec. 23, 1960.

SN 122,228. Suitime Inc., New York, N.Y. Filed June 16, 1961.

Crepèlan

For Knitted, Laminated, Textured Fabrics for Making Coats, Suits, Jackets, and the Like.
First use during May 1, 1961.

SN 123,373. Shulman Fabrics, Inc., Paterson, N.J. Filed July 3, 1961.

WEATHERWHITE

For Drapery Lining Fabrics or Fabrics Used for Drapery Lining.
First use Mar. 20, 1961.

SN 123,698. Stein-Tex, Inc., New York, N.Y. Filed July 10, 1961.

STYN-STRETCH

For Fabrics Used in the Manufacture of Men's and Women's Wearing Apparel.
First use May 25, 1961.

Class 43—Thread and Yarn

SN 113,619. Emile Bernat & Sons Company, Jamaica Plain, Mass. Filed Feb. 14, 1961.

SPARKLE-LAINE

For Hand-Knitting Yarn Made Wholly or in Substantial Part of Wool.
First use November 1948.

Class 44—Dental, Medical, and Surgical Appliances

SN 97,358. Advance Glove Manufacturing Company, Detroit, Mich. Filed May 18, 1960.

BARIKOS

For Eye Rinse Bottles.
First use October 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 101,287. Topco Associates, Inc., Chicago, Ill. Filed July 21, 1960.

GAYLA

For Carbonated Soft Drinks.
First use June 3, 1960.

SN 115,143. The Grapette Company, Incorporated, Camden, Ark. Filed Mar. 8, 1961.

Lemonette

Owner of Reg. Nos. 293,174 and 402,356.
For Concentrates for Use in the Preparation of Soft Drinks.
First use 1911.

SN 118,699. Jose R. Lindley e Hijos, S.A., Lima, Peru. Filed Apr. 26, 1961.

INCA KOLA

No claim is made to the word "Kola" apart from the mark.
Owner of Peruvian Reg. No. 49,045, dated Dec. 15, 1960.
For Soft Drinks.

SN 121,144. Terme Di S. Pellegrino S.p.A., Milan, Italy. Filed May 31, 1961.



The drawing is lined for blue, orange, green, and red, but applicant does not claim color as a feature of its mark. Applicant disclaims the words "Orange Drink" and the representation of an orange apart from the mark as shown. Owner of U.S. Reg. No. 692,142.
For Orangeade.
First use Jan. 1, 1933; in commerce Jan. 1, 1956.

SN 121,893. Monarch Food Packers, Inc., d.b.a. Monarch Manufacturing Company, Atlanta, Ga. Filed June 22, 1961.

NEW YORKER

For Soft Drinks.
First use June 17, 1961; Jan. 1, 1932, as to "New Yorker"; Sept. 1, 1935, as to the representation of the strolling couple.

SN 122,981. The Acerola Corporation, Toa Baja, Puerto Rico. Filed June 23, 1961.

A-C-RO

Owner of Reg. Nos. 627,502, 716,014, and others.
For Carbonated Soft Drinks.
First use June 10, 1961.

SN 122,982. The Acerola Corporation, Toa Baja, Puerto Rico. Filed June 23, 1961.

CEROLA

Owner of Reg. Nos. 621,873, 718,321, and others.
For Carbonated Soft Drinks.
First use June 10, 1961.

Class 46 — Foods and Ingredients of Foods

SN 84,745. Eugene Fruit Growers Association, Eugene, Oreg. Filed Nov. 6, 1959.

WILAMET

For Canned and Frozen Fruits and Vegetables and Tree Nuts.
First use in the year 1922.

SN 91,705. Paw Paw Grape Juice Company, Paw Paw, Mich. Filed Feb. 26, 1960.

PAW PAW

For Canned Grape Juice and Canned Grape Food Drink.
First use on or about Apr. 10, 1946, on canned grape juice.

SN 96,530. Spangler Candy Company, Bryan, Ohio. Filed May 5, 1960.

Spangler's

For Candy.
First use Apr. 1, 1946.

SN 102,185. Birs Beteiligungs- und Verwaltungsgesellschaft AG, Basel, Switzerland. Filed Aug. 8, 1960.

BIRS T

Owner of Swiss Reg. No. 178,851, dated Nov. 6, 1959.
For Foods for Humans and Animals—Namely, Vegetable, Fruit, Meat, Fish, Coffee, Tea, Cocoa, Egg and Milk Products, Edible Fats and Margarine, as Well as Juices, Extracts, Concentrates, Condensates, Dried Products and Canned Goods of All These Foods; Soups Sauces, Jams, Jellies; Also in Concentrated and Dried Form; Syrups, Powders, and Tablets for the Production of Food Beverages; Ice Cream; Natural, Artificial and Compounded Yeast, Rennet, Starch, Glucose, Fructrose, Dextrose, Saccharose, Enzymes, Pectins, Gelatins, Gelling Agents, Alginates and Dietetic Foods.

SN 103,193. Ivan Peis, d.b.a. Snowy, Burlington, Vt. Filed Aug. 22, 1960.

SNOWY

For Ice Cream and Ice Milk.
First use May 14, 1960.

SN 104,446. Fournier, Inc., Savannah, Ga. Filed Sept. 14, 1960.

Two Feathers

For Pickled, Brandied, Spiced and Preserved Fruits, Fruit Preserves; Fruit Butter and Toppings Made of Fruit, Nuts and Flavorings.
First use Aug. 31, 1960.

SN 104,775. Terry's, Incorporated, Bristol, Va. Filed Sept. 19, 1960.

Terry's

For Packaged Potato Chips, Peanut Butter Sandwiches, Cookies, Salted Peanuts and Popped Popcorn.
First use Oct. 1, 1947.

SN 105,428. Fisher Cheese Company, Wapakoneta, Ohio. Filed Sept. 29, 1960.



No claim of exclusive right is made to "Cheese," said word being the name of the goods.
For Cheese.
First use Sept. 1, 1954.

SN 109,041. Crowe Specialty Foods, Inc., d.b.a. Crowe Specialty Foods Co., Inc., Denver, Colo. Filed Nov. 25, 1960.

MAZOS

For Corn Chips.
First use on or about Oct. 27, 1960.

SN 111,266. Mid Valley Farms, d.b.a. Peter H. Bitter, Fresno, Calif. Filed Jan. 4, 1961.



Applicant disclaims the representation of the goods per se.
For Fresh Grapes.
First use Sept. 1, 1960.

SN 113,245. "SIPAL," Société de Personnes à Responsabilité Limitée, Antwerp, Belgium. Filed Feb. 7, 1961.

SIPAL

Priority claimed under Sec. 44(d) on Belgian Reg. No. 17,913/Antwerp, dated Oct. 3, 1960.
For Cocoa, Cocoa-Butter, Chocolate, Sweets; All Chocolate and Confectionery Items; Essences and Natural and Synthetic Extracts as Well as Substitutes of Cocoa, Cocoa-Butter, of Chocolate and of Sugar; All Food Stuffs Basing on Cocoa, Cocoa-Butter, Chocolate and/or Sugar; of Essences or of Natural or Synthetic Food Extracts or Substitutes of These Stuffs; Meat, Fish, Meat-Extracts, Fruits and Vegetables, Condensed, Dried, Cooked; Jellies, Jams, Eggs, Milk and Other Milk Products; Edible Oils and Fats; Preserves, Pickles, Coffee, Tea, Sugar, Rice, Tapioca, Palm Flour, Coffee Substitutes; Meal and Wheat Preparations (Excluding Wheat Pastes); Bread, Biscuits, Pastries and Bakery Confectioneries, Ice Cream, Honey, Sugar, Syrup, Yeast, Baking Powder, Salt, Mustard, Pepper, Vinegar, Sauces; Spices; Fresh Vegetables and Fruits; Foodstuffs for Animals, Malt for Food Purposes.

SN 115,268. Stavanger Hermetiske Fabrik Aktieselskap, Stavanger, Norway. Filed Mar. 9, 1961.

PRIDE OF NORWAY

For Canned Fish.
First use Oct. 1, 1913.

SN 120,457. Tasty Baking Company, Philadelphia, Pa. Filed May 19, 1961.

TASTY-VEND

For Bakery Products—Namely, Topped Cup Cakes.
First use May 10, 1961.

SN 120,625. Elars Products, Inc., d.b.a. Spencer Pharmacals, Richmond, Va. Filed May 23, 1961.

DIASWEET

For Non-Nutritive Sugar Substitute.
First use May 6, 1961.

SN 123,130. Phar-Med, Incorporated, East Detroit, Mich. Filed June 29, 1961.

DIA-SWEET

For Non-Nutritive Sugar Substitute.
First use Apr. 21, 1961.

SN 124,707. Bien Trading Co., Inc., New York, N.Y. Filed July 26, 1961.

EMPRESS

Owner of Reg. No. 538,110.
For Canned Pimientoes, Mushrooms, Anchovies, and Sardines.
First use Feb. 15, 1946.

SN 124,708. Booth Fisheries Corporation, Chicago, Ill. Filed July 26, 1961.

CENTENNIAL

For Canned Sardines.
First use Jan. 1, 1908.

SN 124,913. Lever Brothers Company, New York, N.Y. Filed July 28, 1961.

SLEEPING BEAUTY

For Dehydrated Vegetables.
First use June 27, 1961.

SN 126,583. John Engelhorn & Sons, Newark, N.J. Filed Aug. 24, 1961.

Pan-Crisp Brand

The word "Brand" is disclaimed.
For Packaged Bacon and Sliced Bacon.
First use July 15, 1960.

SN 128,461. The Pillsbury Company, Minneapolis, Minn. Filed Sept. 22, 1961.

CONEX

For Wheat Flour.
First use Sept. 1, 1956.

SN 128,526. Custom Farms, Inc., Trenton, N.J. Filed Sept. 25, 1961.

DAISY-CREST

For Fresh Eggs.
First use Sept. 7, 1961.

SN 132,500. Clyde Duvall, d.b.a. The Blue Mill Coffee Co., Washington, D.C. Filed May 31, 1961.

Blue Mill

For Coffee.
First use Aug. 20, 1920.

Class 47 — Wines

SN 104,654. Frederick Wildman & Sons, New York, N.Y. Filed Sept. 16, 1960.

BELLESEC

For Vermouth.
First use Aug. 25, 1960.

SN 104,655. Frederick Wildman & Sons, New York, N.Y. Filed Sept. 16, 1960.

POSITANO

For Aperitif Wine.
First use Aug. 25, 1960.

SN 118,374. Societe pour l'Importation et l'Exportation de Produits d'Alimentation, d.b.a. Siepra, Paris, France. Filed Apr. 21, 1961.

Préfontaines

For Wines.
First use 1954; in commerce Oct. 12, 1960.

Class 48 — Malt Beverages and Liquors

SN 108,304. Lucky Lager Brewing Company, San Francisco, Calif., assignee of Fisher Brewing Company, Salt Lake City, Utah. Filed Nov. 14, 1960.

Old FRISCO

Owner of Reg. No. 688,435.
For Beer.
First use Oct. 20, 1960.

SN 121,658. Liebmann Breweries, Inc., Brooklyn, N.Y. Filed July 25, 1961.



No claim is made to the right to the exclusive use of the words "Cream Ale," apart from the mark as shown. The lining on the drawing is intended to indicate the colors green and yellow. The outline of a crown and the line surrounding the outer edge of the label are colored green. Owner of Reg. Nos. 291,673, 632,824, and others.
For Ale.
First use June 30, 1961; about 1882 as to "Rheingold."

Class 49 — Distilled Alcoholic Liquors

SN 92,411. Western Liquor Distributors, Inc., d.b.a. Western Distributing Company, Culver City, Calif. Filed Mar. 8, 1960.



No claim of exclusive right is made to the word "Scotch" as used on Scotch whisky.
For Scotch Whisky.
First use on or about June 1, 1959.

SN 92,437. W. J. Bush & Company Limited, London, England. Filed Mar. 9, 1960.



Owner of British Reg. Nos. 721,929, 721,930, and 721,931, dated Sept. 21, 1953.
For Essences, Extracts, Flavors, and Distillates for Use in Making Alcoholic Liquors.

SN 121,480. Malcolm Fraser & Co. Limited, London, England. Filed June 6, 1961.

MALCOLM FRASER'S

The name "Malcolm Fraser's" does not refer to a particular living person. Owner of British Reg. No. B791,849, dated June 9, 1959; and U.S. Reg. Nos. 305,816 and 401,820.
For Scotch Whisky.

Class 50 — Merchandise Not Otherwise Classified

SN 110,945. Nashua Corporation, Wilmington, Del. Filed Dec. 28, 1960.

PRO-TEK-TIE

For Hanger for a Necktie With Transparent Sleeve for Enclosing and Covering the Tie Hung Thereon.
First use May 24, 1960.

Class 51 — Cosmetics and Toilet Preparations

SN 49,104. A-M-R Chemical Company, Inc., Brooklyn, N.Y. Filed Apr. 7, 1958.



For Preparation for Application to Nails To Reduce the Drying Time of Nail Enamel and To Impart Luster Thereto.
First use Aug. 27, 1954.

SN 73,711. The Make-Up Center, Inc., Boston, Mass. Filed May 14, 1959.

JACK STEIN

For Skin Creams, Face and Body Powders, Hand and Skin Lotions, Powder Bases, Rouges, Lipsticks, Mascaras, Eyelash Pencils.
First use Apr. 29, 1955.

SN. 85,372. Ferdinand Mülhens, d.b.a. Eau de Cologne- & Parfümerie-Fabrik Glockengasse No. 4711, gegenuber der Pferdepost von Ferd. Mülhens, Cologne, Germany. Filed Nov. 16, 1959.

BLUE & GOLD

Owner of Reg. No. 300,579.
For Eau de Cologne.
First use September 1930; in commerce September 1930.

SN 90,800. Les Parfums de Dana, Inc., d.b.a. Dana, New York, N.Y. Filed Jan. 18, 1960.



The flags shown are based on the International Code of Signals, and are so arranged that they spell out the word "Canoe."
For Cologne.
First use Dec. 31, 1945.

SN 92,435. W. J. Bush & Company Limited, London, England. Filed Mar. 9, 1960.



Owner of British Reg. No. 721,927, dated Sept. 21, 1953.
For Perfumes and Perfumed Compounds for Use in the Manufacture of Perfumes.

SN 102,567. Lanolin Plus, Inc., Newark, N.J. Filed Aug. 12, 1960.

COLOR PLUS

For Nail Enamel.
First use Aug. 2, 1960.

SN 104,193. Helena Rubinstein, Inc., New York, N.Y. Filed Sept. 9, 1960.

CLEAR AND LOVELY

For Medicated Cosmetic Make-Up Lotion.
First use Mar. 10, 1960.

SN 108,882. John H. Douglas N.V., Haarlem, Netherlands. Filed Nov. 22, 1960.

SENIOR SERVICE

Priority claimed under Sec. 44(d) on Dutch application filed Sept. 1, 1960; Reg. No. 138,774, dated Oct. 5, 1960.
For After-Shave and Pre-Shave Lotions, Men's Colognes, Shaving Creams, Shaving Soaps, Bath Salts, and Bath Powders.

SN 109,775. Mary Chess, Incorporated, New York, N.Y. Filed Dec. 7, 1960.

TUILERIES

The definition of the word "Tuileries" is "gardens (in Paris)."
For Perfume, Toilet Water, and Bath Oil.
First use Nov. 22, 1960.

SN 112,200. Avon Products, Inc., New York, N.Y. Filed Jan. 23, 1961.

SOMEWHERE

For Cologne.
First use Dec. 21, 1960.

SN 112,614. L. N. Frommes, d.b.a. Merlon Laboratories, Minneapolis, Minn. Filed Jan. 27, 1961.

ZYMAMINE

For Colloidal Scalp Conditioner.
First use Oct. 24, 1960.

SN 113,409. Guillaume d'Ornano, Paris, France. Filed Feb. 10, 1961.

CREME ASTRALE

The English translation of the word "Astrale" is "astral." Without waiving its common law rights herein, no claim is made to the word "Creme" apart from the mark as used. Owner of French Reg. No. 379,475, dated July 30, 1947 (Seine); Natl. Inst. No. 415,255.
For Skin Creams for Basic Night Treatment.

SN 116,194. Amway Sales Corporation, Ada, Mich. Filed Mar. 22, 1961.

Amway

FORMULA ★1886★

Applicant disclaims the word "Formula" apart from the mark.
For Hair Color Restorative.
First use on or about Sept. 1, 1960.

SN 117,655. Societe Technique de Parfumerie "F. Millot," Paris, France. Filed Apr. 11, 1961.

TANAGRA

Owner of French Reg. No. 411,703, dated Apr. 19, 1951 (Paris); Natl. Inst. No. 492,688.
For Perfume, Perfume Extracts, Toilet Water, Cosmetic Lotions and Creams, Rouge, Lipsticks, and Face and Body Powders.

SN 118,139. Commerce Drug Co., Inc., Brooklyn, N.Y. Filed Apr. 19, 1961.

STAZE

For Denture Adhesive.
First use March 1936.

SN 118,806. Penaten Pharmazeutische Fabrik Dr. Med. Riese & Co. G.m.b.H., Rhoendorf, Rhine, Germany. Filed Apr. 27, 1961.

PENATEN

Owner of U.S. Reg. Nos. 286,304 and 663,679.
For Medicated Skin Cream, Baby Powder, and Baby Oil.
First use in 1935; in commerce in 1955.

SN 119,102. Chemway Corporation, Wayne, N.J. Filed May 2, 1961.

LADY ESTHER

Owner of Reg. No. 412,428.
For Face Cream, Hormone Cream, Dry Skin Cream, Hand and Body Lotion, Face Powder, Rouge, Lipstick, Nail Polish, Cologne, and Toilet Water.
First use July 1, 1913.

SN 122,173. Durban's S.p.A., Milan, Italy. Filed June 16, 1961.

DENICOTIN

Owner of Italian Reg. No. 150,691, dated Aug. 24, 1960.
For Toothpaste.

SN 122,872. Watkins Products, Inc., Winona, Minn. Filed June 26, 1961.

LIPCARE

For Colorless Lipstick Which Relieves Dryness and Also Keeps the Lips Soft and Smooth.
First use May 16, 1961.

Class 52 — Detergents and Soaps

SN 63,792. The Angelique and Company, Incorporated, Wilton, Conn. Filed Dec. 8, 1958.



For Soap.
First use Nov. 7, 1958.

SN 70,424. Frank Bette, d.b.a. Frank Bette Co., Burbank, Calif. Filed Mar. 30, 1959.

LITHO-KLEAN

For Cleaning Solution for Lithographers' Rollers, Blankets, Plates, and Miscellaneous Lithographic Press Equipment.
First use Aug. 1, 1958.

SN 73,207. De Mert & Dougherty, Inc., Chicago, Ill. Filed May 8, 1959.

DEEDEE

Owner of Reg. Nos. 501,659, 647,282, and others.
For Waterless Cleaning Composition in the Nature of a Cream for Removing Soil From Hands and Other Surfaces.
First use on or about Apr. 14, 1959.

SN 88,430. Gus J. Schaffner, Jr., d.b.a. Gus J. Schaffner Co., Pittsburgh, Pa. Filed Jan. 4, 1960.

DISOLVIT

For Preparation for Cleaning Walls, Woodwork, Enameled Surfaces and Particularly for Cleaning Hands in Industrial Plants.
First use Mar. 23, 1945.

SN 98,056. Title Insurance and Trust Company of Los Angeles, Los Angeles, Calif., assignee, as trustee, of Bu-Tay Products, Ltd., Los Angeles, Calif. Filed May 31, 1960.

GEORGE

The drawing is lined for red.
For Household Cleaner.
First use Dec. 15, 1951.

SN 105,362. The Kroger Co., Cincinnati, Ohio. Filed Sept. 28, 1960.

KANDU

For Household Detergent for Use on Dishes and Laundry.
First use Aug. 23, 1960.

SN 118,303. U.S. Sanitary Specialties Corporation, Chicago, Ill. Filed Apr. 20, 1961.

SERVO=CHEMERGIC

For Floor and Wall Cleaning Compounds.
First use Mar. 17, 1961.

SN 121,693. W. H. Barber Chemical Company, Minneapolis, Minn. Filed June 9, 1961.

BAR-KEM

For Spray Cleaner for Use on Metals, Fabric, and Wood.
First use on or about May 8, 1961.

SN 122,736. Yardley of London, Inc., d.b.a. Yardley, Union City, N.J. Filed June 23, 1961.

FLAIR

Owner of Reg. No. 225,220.
For Toilet Soaps.
First use June 19, 1961.

SN 124,503. Beacon Chemical Industries, Inc., Cambridge, Mass. Filed July 24, 1961.

PHOSPHONOL

For Surface Active Agents Known as Surfactants and Having Wetting, Emulsifying and Detergent Properties Usable in Solution as Cleaning and Scouring Agents, and as Components of the Same.
First use Dec. 2, 1960.

SN 124,612. Edward C. White, Sr., d.b.a. White Manufacturing Company, Decatur, Ala. Filed July 24, 1961.

GOTIT

For Abstergents and General Cleaning Agents.
First use May 1, 1961.

SN 124,792. Armour and Company, Chicago, Ill. Filed July 27, 1961.

DIAL

Owner of Reg. Nos. 549,768, 690,674, and others.
For Germicidal Liquid Soap.
First use October 1953.

SN 124,964. Elsie C. Witt, d.b.a. Screeno, Dania, Fla. Filed July 28, 1961.

"Screeno"

For Cleansing Material for Insect Screening.
First use in or about January 1941.

SN 125,026. Fuld Brothers, Inc., Baltimore, Md. Filed July 31, 1961.

SPACE AGE

For Cleaner for Floor Surfaces.
First use July 19, 1961.

SN 125,048. Industrial Lubricants, Inc., Omaha, Nebr. Filed July 31, 1961.

KEM-EX-IT

For Chemical Product Used To Remove Hardened Concrete Deposits From Trucks, Equipment, Etc.
First use July 8, 1961.

SERVICE MARKS

Class 100 — Miscellaneous

SN 96,236. Mangineering, Inc., Los Angeles, Calif. Filed May 2, 1960.

MANGINEERING

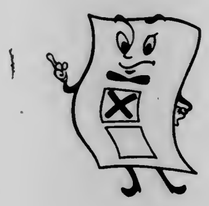
For Testing Services Designed To Assist Business Management in Predicting the Performance of Employees From an Emotional and Phychological Standpoint.
First use Oct. 6, 1959.

SN 106,370. Wellman-Lord Engineering, Inc., Lakeland, Fla. Filed Oct. 13, 1960.



For Plant Evaluation, Process Design, Plant Layout and Plant Design in the Phosphate-Chemical Industry.
First use Jan. 14, 1960.

SN 108,856. Active Ballot Club, Washington, D.C. Filed Oct. 20, 1960.



For Encouragement of Good Government by Enrolling Voting Citizens in an Active Campaign for Full Participation in the Democratic Processes; the Combatting of Legislation Which Appears To Weaken or Impair Labor Unions; the Attainment of the Highest Ideals of Citizenship Through the Distribution of Letters, Pamphlets, and Literature.
First use June 1957.

SN 111,206. National Water Purification Foundation, Chicago, Ill. Filed Jan. 3, 1961.



For Association Services—Namely, Fostering Proper Water Purification and Treatment, Research and Education in Water Conservation and Treatment, and Gathering and Disseminating Information Pertaining to Water Conservation and Treatment.
First use July 20, 1960.

SN 113,546. Mr. Burger, Inc., Nevada, Mo. Filed Feb. 13, 1961.

MR. BURGER

Applicant disclaims the word "Burger."
For Restaurant Services.
First use Nov. 20, 1959.

SN 115,922. Imperial 400 Motels, Inc., Los Angeles, Calif. Filed Mar. 17, 1961.

IMPERIAL 400

For Motel Services.
First use on or about July 1, 1960.

Class 101 — Advertising and Business

SN 79,938. Local Trademarks, Inc., New York, N.Y. Filed Aug. 20, 1959.



Owner of Reg. No. 530,854.
For Advertising Services—Namely, the Formulation and Preparation of Advertising Copy and Literature.
First use in 1921.

SN 119,337. The Premium Service Co., Inc., Teterboro, N.J. Filed May 3, 1961.

QUICK-SAVE

For Exchanging Premium Coupons of Others for Premiums.
First use Nov. 1, 1956.

SN 122,159. Chicago Show Printing Company, Chicago, Ill. Filed June 16, 1961.

CSP

For Creation, Design, and Production of Advertising Material, Including Displays, Banners, Signs, Posters, and Pennants.
First use 1902.

Class 102 — Insurance and Financial

SN 111,366. Universal Bonded-Credit Association, Inc., Boise, Idaho. Filed Jan. 5, 1961.



The words "In God We Trust" appearing in the drawing are disclaimed apart from the other features of the mark.
For Guaranteeing the Credit of Its Members.
First use on or about May 11, 1960.

Class 103 — Construction and Repair

SN 96,729. Phillips Petroleum Company, Bartlesville, Okla. Filed May 9, 1960.

PIER 66

For Maintenance of Watercraft and Laundry Services.
First use Jan. 28, 1957.

SN 104,527. Murphy Corporation, El Dorado, Ark., assignee of Ingram Oil and Refining Company, New Orleans, La. Filed Sept. 15, 1960.

INGRAM

Owner of Reg. Nos. 692,564, 692,570, and 693,712.
For Service Station Vehicle Greasing, Changing Oil, Washing, Repairing Vehicle Tires and Performing Other Minor Mechanical Maintenance Vehicle Repairs.
First use Apr. 1, 1956.

Class 105 — Transportation and Storage

SN 55,748. Trans-American Refrigerated Services, Ltd., Chicago, Ill. Filed July 21, 1958. COLLECTIVE MARK.

TRANS-AMERICAN REFRIGERATED SERVICES

Applicant disclaims the words "Refrigerated Services" when used separate and apart from the mark.
For Refrigerated Warehousing Services for Frozen Food Products.
First use May 1957.

SN 99,079. National Van Lines, Inc., Broadview, Ill. Filed June 15, 1960.

NATIONAL

Owner of Reg. Nos. 548,018, 712,297, and others.
For Transportation of Household Goods and Uncrated New Furniture and Including the Packing of Such Goods in Various Types of Containers, Storing, and Arranging for the Shipment of Goods Incidental to Said Transportation.
First use on or about Oct. 10, 1959.

SN 115,284. Aerovias Nacionales de Colombia, Bogota, Colombia. Filed Mar. 10, 1961.

AVIANCA

For Airline Transportation Services for Cargo and Passengers Between the United States of America and Countries Foreign Thereto.
First use June 1940; in commerce March 1946.

SN 119,457. Aerovias Nacionales de Colombia, Bogota, Colombia. Filed May 8, 1961.

RED RUANA SERVICE

The word "Service" is disclaimed apart from the mark as shown.
For Airline Transportation Services for Cargo and Passengers Between the United States of America and Countries Foreign Thereto.
First use Oct. 13, 1957; in commerce Dec. 7, 1957.

Class 106 — Material Treatment

SN 111,688. Nylon Molded Products Corporation, Garrettsville, Ohio. Filed Jan. 11, 1961.

NYLOCAST

Owner of Reg. No. 588,013.
For Custom Casting of Plastic Industrial Parts.
First use on about Oct. 4, 1960.

SN 119,042. Palatine Dyeing Company, Inc., New York, N.Y. Filed May 1, 1961.

LUXURIZE

For Finishing Treatments for Textile Fabrics of Others.
First use Oct. 28, 1958.

Class 107 — Education and Entertainment

SN 99,599. Scripps-Howard Radio, Inc., d.b.a. Television Station WEWS, Cleveland, Ohio. Filed June 23, 1960.

ONE O'CLOCK CLUB

For Title of a Television Program.
First use July 26, 1957.

SN 109,506. The Metropolitan Oakland Area Football Club, Inc., Oakland, Calif. Filed Dec. 2, 1960.

RAIDERS

For Entertainment Services in the Nature of Football Games and Exhibitions, Some of Which Are Rendered Through the Medium of Television and Radio.
First use July 1960.

SN 109,507. The Metropolitan Oakland Area Football Club, Inc., Oakland, Calif. Filed Dec. 2, 1960.



For Entertainment Services in the Nature of Football Games and Exhibitions, Some of Which Are Rendered Through the Medium of Television and Radio.
First use July 1960.

SN 117,857. Glove Artists, Inc., Brooklyn, N.Y. Filed Apr. 14, 1961.

THE HARMONICA RASCALS

Applicant disclaims "Harmonica" apart from the mark as shown.
For Musical Novelty Act.
First use Mar. 3, 1961.

SN 117,865. Jerome M. Haynes, Dallas, Tex. Filed Apr. 14, 1961.

MR. PEPPERMINT

For Title of a Television Program—Namely, a Children's Program.
First use Mar. 6, 1961.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 25,345. Massachusetts Arborists Association, Waltham, Mass. Filed Mar. 1, 1957.



For Indicating Membership in Applicant's Association of Arborists.
First use Oct. 1, 1933.

SN 120,860. Chicago Truck Drivers, Chauffeurs and Helpers Union of Chicago and Vicinity (Independent), d.b.a. Chicago Teamsters, Chauffeurs, and Helpers of Chicago and Vicinity, Chicago, Ill. Filed May 26, 1961.

CHICAGO TRUCK DRIVERS, CHAUFFEURS AND HELPERS UNION OF CHICAGO AND VICINITY (INDEPENDENT)

Owner of Reg. Nos. 663,267, 664,859, and 684,222.
For Indicating Membership in Applicant.
First use February 1908.

CERTIFICATION MARKS

Class A — Goods

SN 101,950. The International Brotherhood of Teamsters, Chauffeurs, Warehousemen and Helpers of America, Washington, D.C. Filed Aug. 3, 1960.



The mark certifies that the labor in connection with the goods has been performed by members of applicant.

For Goods Produced by Industries in Which There Are Members of the Applicant, Including Brewery Products, Dairy Products, Novelties, Etc.

First use October 1957.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

727,592. CADON. The Chemstrand Corporation. SN 101,542. Pub. 1-3-61. Filed 7-27-60.

727,593. FLOSEAL. Floseal Corporation. SN 102,017. Pub. 12-5-61. Filed 8-4-60.

727,594. SIKUFIT. Simmerwerke W. Simmer K.G. SN 108,580. Pub. 12-5-61. Filed 11-16-60.

727,595. "S-69." G. T. Schjeldahl Company. SN 110,174. Pub. 12-5-61. Filed 12-13-60.

727,596. DESIGN OF TWO TRIANGLES AND A VERTICAL BAR. Armour and Company, d.b.a. Armour Alliance Industries. SN 110,517. Pub. 12-5-61. Filed 12-19-60.

727,597. "SURE-SEAL." The Carlisle Corporation. SN 110,662. Pub. 12-5-61. Filed 12-22-60.

727,598. SANTOSHEEN. Monsanto Chemical Company. SN 113,125. Pub. 12-5-61. Filed 2-6-61.

727,599. SANTOPAK. Monsanto Chemical Company. SN 113,126. Pub. 12-5-61. Filed 2-6-61.

727,600. GRASTURE. L. Teweles Seed Co. SN 115,270. Pub. 12-5-61. Filed 3-9-61.

727,601. ALCAN. Aluminum Company of Canada, Limited. SN 116,368. Pub. 12-5-61. Filed 3-24-61.

727,602. MISCELLANEOUS DESIGN. Industrial Minerals of Canada Limited, by change of name from American Nepheline Limited. SN 118,316. Pub. 12-5-61. Filed 4-21-61.

727,603. I.T. American Enka Corporation. SN 119,910. Pub. 12-5-61. Filed 5-15-61.

727,604. S-X. The Sexauer Company, d b.a. The Sexauer Co. SN 120,131. Pub. 12-5-61. Filed 5-16-61.

727,605. PERM-BASE. Freeland Company. SN 120,400. Pub. 12-5-61. Filed 5-19-61.

727,606. MC. The Polymer Corporation. SN 120,441. Pub. 12-5-61. Filed 5-19-61.

727,607. OLE DIZ. Dizzy Dean Enterprises, Inc. SN 120,971. Pub. 12-5-61. Filed 5-29-61.

727,608. MIPOR. The Electric Storage Battery Company. SN 121,086. Pub. 12-5-61. Filed 5-31-61.

727,609. FIBRO-PLUG. Tumbleweed Designs, Inc. SN 121,150. Pub. 12-5-61. Filed 5-31-61.

727,610. SIERRA. Diamond National Corporation. SN 121,467. Pub. 12-5-61. Filed 6-6-61.

727,611. EXPANDO. Fabric Leather Corporation. SN 121,476. Pub. 12-5-61. Filed 6-6-61.

727,612. SUPER CAL. The Shellbuilder Company. SN 121,605. Pub. 12-5-61. Filed 6-7-61.

727,613. WC AND DESIGN. Caladino Farm Seeds, Inc. SN 121,975. Pub. 12-5-61. Filed 6-14-61.

Class 2 — Receptades

727,614. PEERLESS. Diamond National Corporation. SN 121,464. Pub. 12-5-61. Filed 6-6-61.

Class 4 — Abrasives and Polishing Materials

727,615. BAY STATE WHEELS OF PROGRESS AND DESIGN. Bay State Abrasive Products Company. SN 109,154. Pub. 12-5-61. Filed 11-28-60.

727,616. DESIGN OF TWO TRIANGLES AND A VERTICAL BAR. Armour and Company, d.b.a. Armour Alliance Industries. SN 110,516. Pub. 12-5-61. Filed 12-19-60.

Class 6 — Chemicals and Chemical Compositions

727,617. PHOBITOR. Ciba Company Inc. SN 88,970. Pub. 12-5-61. Filed 1-14-60.

727,618. CLOSET FRESH. Enoz Corporation. SN 91,774. Pub. 12-5-61. Filed 2-29-60.

727,619. IPCO. Texize Chemicals, Inc. SN 101,212. Pub. 12-5-61. Filed 7-20-60.

727,620. KILMAG. Allied Chemical Corporation. SN 101,918. Pub. 12-5-61. Filed 8-3-60.

727,621. FLUO-FLUX. Aluminum Company of America. SN 102,994. Pub. 12-5-61. Filed 8-19-60.

727,622. BAC-STAT 200. Johnson Chemical Industries, Inc. SN 103,459. Pub. 12-5-61. Filed 8-26-60.

727,623. TEX-FLUFF. Johnson Chemical Industries, Inc. SN 103,460. Pub. 12-5-61. Filed 8-26-60.

727,624. DURACOID. T. M. Duché & Sons, Inc. SN 104,597. Pub. 12-5-61. Filed 9-16-60.

727,625. DRILLTEX. T. M. Duché & Sons, Inc. SN 104,598. Pub. 12-5-61. Filed 9-16-60.

727,626. HOUGHTO SAFE 620. E. F. Houghton & Co. SN 104,831. Pub. 12-5-61. Filed 9-20-60.

727,627. SATIN-ETCH. Pemco Corporation. SN 104,853. Pub. 12-5-61. Filed 9-20-60.

727,628. TIN WOODSMAN. Osmose Wood Preserving Co. of America, Inc. SN 106,832. Pub. 12-5-61. Filed 10-20-60.

727,629. MIMI AND DESIGN. Crisp, Inc. SN 106,885. Pub. 12-5-61. Filed 10-21-60.

727,630. ERASE. Stanley R. Mallory, Jr., d.b.a. Mallory & Co. SN 107,202. Pub. 12-5-61. Filed 10-26-60.

727,631. CLEAR VISION ALWAYS AND CVA DESIGN. Consolidated Research and Manufacturing Corporation. SN 107,413. Pub. 12-5-61. Filed 10-31-60.

727,632. WALNUT GROVE. Walnut Grove Products Company, Inc. CONSOLIDATED CERTIFICATE. SN 107,529, pub. 10-31-61, filed 10-31-60, Cl. 6; SN 107,532, pub. 11-21-61, filed 10-31-60, Cl. 18; SN 107,531, pub. 10-31-61, filed 10-31-60, Cl. 46; SN 107,528, pub. 10-31-61, filed 10-31-60, Cl. 50.

727,633. URI-PAK. Uni-Tech Chemical Manufacturing Company. SN 107,607. Pub. 12-5-61. Filed 11-1-60.

727,634. CHOLE-TECH. Uni-Tech Chemical Manufacturing Company. SN 107,615. Pub. 12-5-61. Filed 11-1-60.

727,635. COLACET. Ciba Limited. SN 107,642. Pub. 12-5-61. Filed 11-2-60.

727,636. UNISPERS. Ciba Limited. SN 107,643. Pub. 12-5-61. Filed 11-2-60.

727,637. L.O.K. Madison Chemical Corporation. SN 108,341. Pub. 12-5-61. Filed 11-14-60.

727,638. RADI-AID. Stewart-Warner Corporation. SN 108,407. Pub. 12-5-61. Filed 11-14-60.

727,639. VERDAN. Shell Oil Company. SN 109,900. Pub. 12-5-61. Filed 12-8-60.

727,640. BERELEX. Plant Protection Limited. SN 110,085. Pub. 12-5-61. Filed 12-12-60.

727,641. VYNA-SHIELD. Spectra-Strip Wire & Cable Corporation. SN 112,574. Pub. 12-5-61. Filed 1-26-61.

727,642. TIMSAN. Chapman Chemical Company. SN 112,682. Pub. 12-5-61. Filed 1-30-61.

727,643. FALL. Chapman Chemical Company. SN 114,432. Pub. 12-5-61. Filed 2-27-61.

727,644. SUPER 88. Chapman Chemical Company. SN 115,218. Pub. 12-5-61. Filed 3-9-61.

727,645. ZEOSIL. J. M. Huber Corporation. SN 115,343. Pub. 12–5–61. Filed 3–10–61.

727,646. PYRONOL. Curry-Trol Oil Corporation. SN 115,443. Pub. 12–5–61. Filed 3–13–61.

727,647. ACTOX. The New Jersey Zinc Company. SN 116,148. Pub. 12–5–61. Filed 3–21–61.

727,648. CADOLIN. Geigy Chemical Corporation. SN 116,880. Pub. 12–5–61. Filed 3–31–61.

727,649. GESAPHOS. Geigy Chemical Corporation. SN 116,881. Pub. 12–5–61. Filed 3–31–61.

727,650. VOID. International Minerals & Chemical Corporation. SN 117,879. Pub. 12–5–61. Filed 4–14–61.

Class 12—Construction Materials

727,651. CLIP-STRIP. National Gypsum Company. SN 102,783. Pub. 12–5–61. Filed 8–16–60.

727,652. BASIPATCH. Basic Incorporated. SN 106,382. Pub. 12–5–61. Filed 10–14–60.

727,653. STYLONET 12-SET. Stylon Corporation. SN 106,845. Pub. 12–5–61. Filed 10–20–60.

727,654. QUIETAPE. Daubert Chemical Company. SN 119,194. Pub. 12–5–61. Filed 5–3–61.

Class 14—Metals and Metal Castings and Forgings

727,655. CHANNELOC. True Temper Corporation. SN 96,533. Pub. 11–8–60. Filed 5–5–60.

727,656. NACK. Mine Safety Appliances Company. SN 102,939. Pub. 12–5–61. Filed 8–18–60.

727,657. FLUXCOR. Air Reduction Company, Incorporated. SN 119,737. Pub. 12–5–61. Filed 5–11–61.

Class 16—Protective and Decorative Coatings

727,658. CHEMFORD. H. L. Blachford, Limited. SN 97,030. Pub. 12–5–61. Filed 5–13–60.

Class 18—Medicines and Pharmaceutical Preparations

727,632. CONSOLIDATED CERTIFICATE. See Class 6.

727,659. KREBIOZEN AND DESIGN. Steven Durovic. SN 87,735. Pub. 12–5–61. Filed 12–21–59.

727,660. MICROLAX. Pharmacia Laboratories, Inc. SN 99,450. Pub. 12–5–61. Filed 6–21–60.

727,661. DANFRE AND DESIGN. George A. Arbogast, d.b.a. Arbo Products Company. SN 106,305. Pub. 12–5–61. Filed 10–13–60.

727,662. GYPSIES. Virginia Dare Confections, Inc. SN 107,806. Pub. 12–5–61. Filed 11–3–60.

727,663. SAPACILLIN. Beecham Research Laboratories Limited. SN 108,016. Pub. 12–5–61. Filed 11–8–60.

727,664. METASPAS. Metadier (Canada) Ltd. SN 110,071. Pub. 12–5–61. Filed 12–12–60.

727,665. THERAGENIN. A. Robinson, Inc. of Altoona, d.b.a. Albudon Products Co. SN 111,224. Pub. 12–5–61. Filed 1–3–61.

727,666. GERINAL PLUS. A. Robinson, Inc. of Altoona, d.b.a. Albudon Products Co. SN 111,228. Pub. 12–5–61. Filed 1–3–61.

727,667. COMPLETE M AND DESIGN. Republic Drug Co., Inc. SN 111,353. Pub. 12–5–61. Filed 1–5–61.

727,668. ANDERCID. M & R Dietetic Laboratories, Inc. SN 112,741. Pub. 12–5–61. Filed 1–30–61.

727,669. BREVICIDIN. S. B. Penick & Company. SN 112,764. Pub. 12–5–61. Filed 1–30–61.

727,670. C-LECT. Cerojel Products, Inc., assignee of The Acerola Corporation. SN 114,389. Pub. 7–18–61. Filed 2–27–61.

727,671. SULTRIN. Ortho Pharmaceutical Corporation. SN 114,514. Pub. 12–5–61. Filed 2–27–61.

727,672. THIAZIDE PRE-MENS. The Purdue Frederick Company. SN 114,998. Pub. 12–5–61. Filed 3–6–61.

727,673. PERISORB. Vitaminerals, Inc. SN 115,020. Pub. 12–5–61. Filed 3–6–61.

727,674. PACIFIC TIDE'S OCEANTRATE AND DESIGN. Eugene V. Cordell, d.b.a. Pacific Tide Enterprises. SN 119,480. Pub. 12–5–61. Filed 5–8–61.

727,675. SURIV PRONOUNCED "SERVE" AND DESIGN. Adair Sales Company. SN 122,147. Pub. 12–5–61. Filed 6–16–61.

727,676. VETIDREX. Ciba Limited. SN 122,272. Pub. 12–5–61. Filed 6–19–61.

727,677. VETISULID. Ciba Limited. SN 122,273. Pub. 12–5–61. Filed 6–19–61.

727,678. BARLEVITE. Barth Levitt Products, Inc. SN 122,594. Pub. 12–5–61. Filed 6–22–61.

727,679. UNICAP CHEWABLE. The Upjohn Company. SN 122,664. Pub. 12–5–61. Filed 6–22–61.

727,680. UNICAP SENIOR. The Upjohn Company. SN 122,665. Pub. 12–5–61. Filed 6–22–61.

727,681. BILOPAQUE. Sterling Drug Inc. SN 122,854. Pub. 12–5–61. Filed 6–26–61.

Class 19—Vehicles

727,682. UTILI-TRUCK. Bro-Dart Industries, Inc. SN 78,253. Pub. 1–5–60. Filed 7–23–59.

727,683. CS. Products Research Company, assignee of Cummings & Sander Manufacturing Corporation. SN 104,072. Pub. 12–5–61. Filed 9–8–60.

727,684. PACK-MULE AND DESIGN. Drivex Company. SN 118,423. Pub. 12–5–61. Filed 4–24–61.

Class 20—Linoleum and Oiled Cloth

727,685. TANGIER. Congoleum-Nairn Inc. SN 119,357. Pub. 12–5–61. Filed 5–5–61.

Class 21—Electrical Apparatus, Machines, and Supplies

727,686. MULTI-MILE. The Dayton Tire & Rubber Company, by assignment and change of name from The Dayton Rubber Company. SN 89,900. Pub. 5–3–60. Filed 1–29–60.

727,687. SIPOWID. Siemens & Halske Aktiengesellschaft. CONSOLIDATED CERTIFICATE. SN 103,056, pub. 11–28–61, filed 8–19–60, Cl. 21; SN 103,057, pub. 11–28–61, filed 8–19–60, Cl. 26.

727,688. Q-T. Sierra Electric Corporation. SN 107,979. Pub. 12–5–61. Filed 11–7–60.

727,689. FEDTRO AND DESIGN. Fedtro, Inc. SN 117,856. Pub. 12–5–61. Filed 4–11–61.

Class 22—Games, Toys, and Sporting Goods

727,690. MULTI PLAY AND DESIGN. Jacques Bronstein. SN 97,921. Pub. 12–5–61. Filed 5–26–60.

727,691. SEA BEE. Globe Rubber Products Corp. SN 108,169. Pub. 12–5–61. Filed 11–10–60.

727,692. FUN-WAY. Rev. Maurice R. Warren, d.b.a. Fun-Way Games. SN 112,807. Pub. 12–5–61. Filed 1–30–61.

727,693. CORBETA. The Seamless Rubber Company. SN 115,176. Pub. 12–5–61. Filed 3–8–61.

727,694. SATELLITE. Donald F. Duncan, Incorporated. SN 118,873. Pub. 12–5–61. Filed 4–28–61.

727,695. M AND SHAMROCK DESIGN. MacGregor Sport Products Inc. SN 119,300. Pub. 12–5–61. Filed 5–4–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

727,696. GARDEN GENIE. Sawyer's, Inc. SN 103,686. Pub. 12–5–61. Filed 8–31–60.

727,697. VENDO. The Vendo Company. SN 107,080. Pub. 12–5–61. Filed 10–24–60.

727,698. SIMPLE PRECISION. Vandercook & Sons, Inc. SN 115,645. Pub. 12–5–61. Filed 3–14–61.

727,699. TWO TIMER. Leonard L. Pruyn and Marjorie G. Pruyn (joint owners). SN 116,665. Pub. 12–5–61. Filed 3–28–61.

727,700. DAB MICHIGAN ETC. AND DESIGN. Detroit Aluminum & Brass Corporation. SN 118,971. Pub. 12–5–61. Filed 5–1–61.

727,701. AQUA-BAT. Millers Forge Mfg. Corp. SN 119,708. Pub. 12–5–61. Filed 5–10–61.

727,702. DCMT. Die Casting Machine Tools Ltd. SN 120,192. Pub. 12–5–61. Filed 5–17–61.

Class 24—Laundry Appliances and Machines

727,703. WASCOMAT. Aktiebolaget Wascator. SN 119,095. Pub. 12–5–61. Filed 5–2–61.

Class 26—Measuring and Scientific Appliances

727,687. CONSOLIDATED CERTIFICATE. See Class 21.

727,704. M.C.T.C. Harry E. Morton. SN 71,966. Pub. 12–5–61. Filed 4–21–59.

727,705. XACTROL. Ether Limited. SN 93,910. Pub. 10–25–60. Filed 3–29–60.

Class 32—Furniture and Upholstery

727,706. SHELVADRAWER. Wheeldex Manufacturing Co., Inc. SN 119,335. Pub. 12–5–61. Filed 5–4–61.

727,707. HUMIDGUARD. The Stearns & Foster Company. SN 119,572. Pub. 12–5–61. Filed 5–8–61.

727,708. CANDY-GO-ROUND. E. J. Brach & Sons. SN 119,608. Pub. 12–5–61. Filed 5–9–61.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

727,709. REMALON. Stahlgruber Otto Gruber and Co. SN 81,766. Pub. 12–5–61. Filed 9–21–59.

Class 37—Paper and Stationery

727,710. JOY. Giftwrap Corporation of America, Inc. SN 107,437. Pub. 12–5–61. Filed 10–31–60.

727,711. PLAS-TA-CARD. Wassell Organization, Inc. SN 108,104. Pub. 12–5–61. Filed 11–8–60.

727,712. KALAKORK. KVP Sutherland Paper Company. SN 109,969. Pub. 12–5–61. Filed 12–9–60.

727,713. SPELL-RITE. Western Tablet & Stationery Corporation. SN 113,969. Pub. 12–5–61. Filed 2–17–61.

727,714. GG ETC. AND DESIGN. GG Pens Inc. SN 114,208. Pub. 12–5–61. Filed 2–23–61.

727,715. MINSTREL. Champion Papers Inc., by change of name from The Champion Paper and Fibre Company. SN 115,217. Pub. 12–5–61. Filed 3–9–61.

727,716. FORT PEMBINE. Wisconsin Container Corporation. SN 123,389. Pub. 12–5–61. Filed 7–3–61.

727,717. CROWNFIBRE. Crown Zellerbach Corporation. SN 124,173. Pub. 12–5–61. Filed 7–18–61.

727,718. MIRROPHANE AND DESIGN. Gomar Manufacturing Co., Inc. SN 124,435. Pub. 12–5–61. Filed 7–21–61.

727,719. EDGELESS. Venus Pen & Pencil Corporation. SN 124,605. Pub. 12–5–61. Filed 7–24–61.

727,720. VEL-FOAM. Premold Corporation. SN 124,839. Pub. 12–5–61. Filed 7–27–61.

727,721. RITE-ALL. Catz American Co., Inc. SN 125,001. Pub. 12–5–61. Filed 7–31–61.

Class 38—Prints and Publications

727,722. OM ETC. AND DESIGN. Otto Maier Verlag. SN 93,695. Pub. 12–5–61. Filed 3–25–60.

727,723. AMERICAN CEMETERY ASSOCIATION BULLETIN. American Cemetery Association. SN 106,683. Pub. 12–5–61. Filed 10–19–60.

727,724. SRA. Science Research Associates, Inc. SN 107,593. Pub. 12–5–61. Filed 11–1–60.

727,725. THE HOTEL GREETER. The Hotel Greeter Magazine, Inc. SN 110,189. Pub. 12–5–61. Filed 12–12–60.

727,726. ALPHA BOOKS. Phaidon Press Ltd. SN 114,994. Pub. 12–5–61. Filed 3–6–61.

727,727. CONTINENTAL AND GLOBE DESIGN. The Paramount Line, Inc. SN 115,515. Pub. 12–5–61. Filed 3–13–61.

727,728. CAMPUS LIFE. Campus Life, Inc. SN 115,662. Pub. 12–5–61. Filed 3–15–61.

727,729. PICTURES AND POINTERS. The Purse Company, d.b.a. Purco. SN 115,726. Pub. 12–5–61. Filed 3–15–61.

727,730. NUTSHELL BOOKS AND DESIGN. Nutshell Books, Inc. SN 115,941. Pub. 12–5–61. Filed 3–17–61.

727,731. UNITED BUSINESS SERVICE AND DESIGN. United Business Service Company. SN 116,937. Pub. 12–5–61. Filed 3–31–61.

727,732. DAIRY GOAT JOURNAL. Kent Leach. SN 117,789. Pub. 12–5–61. Filed 4–13–61.

727,733. THE PTA MAGAZINE. The National Parent-Teacher. SN 117,798. Pub. 12–5–61. Filed 4–13–61.

727,734. PTA. The National Parent-Teacher. SN 117,799. Pub. 12–5–61. Filed 4–13–61.

727,735. AMATEUR ROCKETEER. Amateur Rocketeer, Inc. SN 121,527. Pub. 12–5–61. Filed 6–7–61.

727,736. INSIDE YOU AND YOURS. The Hearst Corporation. SN 122,193. Pub. 12–5–61. Filed 6–16–61.

727,737. GREEK LETTER PHI AND DESIGN. Phaidon Press Ltd. SN 122,460. Pub. 12–5–61. Filed 6–20–61.

Class 39—Clothing

727,738. PRINCESS PURITAN. The Puritan Sportswear Corp. SN 86,452. Pub. 12–5–61. Filed 12–1–59.

727,739. LADY PURITAN. The Puritan Sportswear Corp. SN 86,453. Pub. 12–5–61. Filed 12–1–59.

727,740. PAT ARNOLDE'S TALLS AND DESIGN. The Ronsanne Corp. of Washington, d.b.a. Pat Arnolde's Talls. SN 95,320. Pub. 12–5–61. Filed 4–18–60.

727,741. TOPICALS. Edison Brothers Stores, Inc. SN 101,764. Pub. 12-5-61. Filed 8-1-60.

727,742. JUST WEAR A SMILE AND A JANTZEN. Jantzen Inc. SN 102,243. Pub. 12-5-61. Filed 8-8-60.

727,743. WESTIKES ETC. AND DESIGN. Hortex Manufacturing Co., Inc. SN 103,572. Pub. 12-5-61. Filed 8-29-60.

727,744. PLAYMAKER. Hollywood Casuals. SN 107,092. Pub. 12-5-61. Filed 10-6-60.

727,745. GRAPPLER. Edmont Inc. SN 111,085. Pub. 12-5-61. Filed 12-30-60.

727,746. JUDY RHODES. Kabro of Houston, Inc. SN 111,407. Pub. 12-5-61. Filed 1-6-61.

727,747. COLEBROOK ANGOLAMB AND DESIGN. Colebrook Inc. SN 111,860. Pub. 12-5-61. Filed 1-16-61.

727,748. DUKE OF JAMAICA AND DESIGN. Jamaica Associates, Ltd. SN 112,932. Pub. 12-5-61. Filed 12-2-60.

727,749. UNITARD. Danskin Inc. SN 113,694. Pub. 12-5-61. Filed 2-15-61.

727,750. LIVLONS. Claussner Hosiery Company. SN 114,436. Pub. 12-5-61. Filed 2-27-61.

727,751. MOMENTS AND DESIGN. The Williams Manufacturing Company. SN 114,898. Pub. 12-5-61. Filed 3-3-61.

727,752. STURDILINE. Roberts-Hart, Inc. SN 115,003. Pub. 12-5-61. Filed 3-6-61.

727,753. ALNA. Alna Tricots de Luxe. SN 115,028. Pub. 12-5-61. Filed 3-7-61.

727,754. THE MODERNAIRE AND DESIGN. Modern Mfg. Co., Inc. SN 115,070. Pub. 12-5-61. Filed 3-7-61.

727,755. FASHION WAGON AND DESIGN. Minnesota Woolen Company, Inc. SN 115,157. Pub. 12-5-61. Filed 3-8-61.

727,756. HASPEL. Haspel Brothers, Inc. SN 115,338. Pub. 12-5-61. Filed 3-10-61.

727,757. RANGE MASTER. Educator Shoe Corporation. SN 115,454. Pub. 12-5-61. Filed 3-13-61.

727,758. THRIFTY MATE. Granite Hosiery Corporation. SN 115,465. Pub. 12-5-61. Filed 3-13-61.

727,759. RUFFNEX. Red Wing Shoe Company, Inc. SN 115,524. Pub. 12-5-61. Filed 3-13-61.

Class 40 — Fancy Goods, Furnishings, and Notions

727,760. CONTEMPO. Heirloom Needlework Guild, Inc. SN 114,112. Pub. 12-5-61. Filed 2-21-61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

727,761. CHIXEL. Chicopee Manufacturing Corporation. SN 109,670. Pub. 12-5-61. Filed 12-6-60.

727,762. FUTURAMA. Rubin Levine & Co., Inc. SN 111,416. Pub. 12-5-61. Filed 1-6-61.

727,763. INDIA HOUSE LOOMS AND DESIGN. Sani Distributors, Inc. SN 112,170. Pub. 12-5-61. Filed 1-19-61.

727,764. FILTAIRE. J. P. Stevens & Co., Inc. SN 117,412. Pub. 12-5-61. Filed 4-7-61.

Class 46 — Foods and Ingredients of Foods

727,632. CONSOLIDATED CERTIFICATE. See Class 6.

727,765. CARICATURE OF WOMAN. Allied Old English, Incorporated. SN 62,660. Pub. 12-5-61. Filed 11-18-58.

727,766. DOCTOR'S ORDERS. Sidney Wohl, d.b.a. Doctor's Orders Products. SN 66,519. Pub. 12-5-61. Filed 1-26-59.

727,767. HI-FI. Anheuser-Busch, Incorporated. SN 97,606. Pub. 1-17-61. Filed 5-23-60.

727,768. ROYAL PRIDE AND DESIGN. Hallberg Canning Corporation. SN 100,599. Pub. 12-5-61. Filed 7-11-60.

727,769. WOOSH. Continental Enterprises, Inc. SN 105,420. Pub. 12-5-61. Filed 9-29-60.

727,770. CHEEZ-INGER. The Rath Packing Company. SN 109,201. Pub. 12-5-61. Filed 11-28-60.

727,771. FORTI-CAL. Foremost Dairies, Inc. SN 110,835. Pub. 12-5-61. Filed 12-27-60.

727,772. BIG CAT AND DESIGN. Sam H. Bigler, d.b.a. S. H. Bigler Company. SN 111,315. Pub. 12-5-61. Filed 1-5-61.

727,773. GOLDEN HARVEST. George Weston, Limited. SN 116,613. Pub. 12-5-61. Filed 3-27-61.

727,774. 5 GRAND. Leaf Brands, Inc. SN 118,353. Pub. 12-5-61. Filed 4-21-61.

727,775. BEACHPORT. South Australian Fishermen's Co-Operative Limited, d.b.a. South Australian Fishermen's Co-Operative Ltd. SN 119,569. Pub. 12-5-61. Filed 5-8-61.

727,776. HUMDINGER. J. L. Thompson, d.b.a. J. L. Thompson Company. SN 119,814. Pub. 12-5-61. Filed 5-11-61.

727,777. SAUERS INVINCIBLE AND DESIGN. Glister Milling Co., Inc., d.b.a. Glister Milling Co. SN 121,093. Pub. 12-5-61. Filed 5-31-61.

Class 47 — Wines

727,778. DUVINOR. Florida Fruit Distillers, Inc. SN 120,088. Pub. 12-5-61. Filed 5-16-61.

Class 48 — Malt Beverages and Liquors

727,779. MILWAUKEE'S BEST. Gettelman Brewing Corporation, by change of name and assignment from A. Gettelman Brewing Co. SN 91,087. Pub. 12-5-61. Filed 2-17-60.

727,780. HI-EX. Rahr Malting Co. SN 97,094. Pub. 12-5-61. Filed 5-13-60.

727,781. VOLKS=BRAU. Lucky Lager Brewing Company, assignee of Fisher Brewing Company. SN 105,970. Pub. 12-5-61. Filed 10-7-60.

727,782. WHITBREAD TANKARD. Whitbread & Company Limited. SN 108,847. Pub. 12-5-61. Filed 11-21-60.

Class 49 — Distilled Alcoholic Liquors

727,783. SILAS HOWE. General Distillers Corporation of Kentucky, Inc., d.b.a. Silas Howe Distillery. SN 106,897. Pub. 12-5-61. Filed 10-21-60.

727,784. RECOLLECTIONS. H. C. Macpherson, d.b.a. Macpherson & Company and A. & B. Mackay and Company. SN 117,285. Pub. 12-5-61. Filed 4-6-61.

727,785. GLENFALLOCH. H. C. Macpherson, d.b.a. Macpherson & Company and A. & B. Mackay and Company. SN 117,286. Pub. 12-5-61. Filed 4-6-61.

727,786. REBEL YELL. Stitzel-Weller Distillery, Inc. SN 117,658. Pub. 12-5-61. Filed 4-11-61.

727,787. O.M.B. Mr. Boston Distiller Inc. SN 120,553. Pub. 12-5-61. Filed 5-22-61.

Class 50 — Merchandise Not Otherwise Classified

727,632. CONSOLIDATED CERTIFICATE. See Class 6.

727,788. SWISS-TEX. Leonard Embroidery Company, d.b.a. Leonard Embroidery Co., and Leonard. SN 79,865. Pub. 4-19-60. Filed 8-19-59.

727,789. STAR BRAND AND DESIGN. Modell Southwick, d.b.a. Tropical Manufacturing Co. SN 107,959. Pub. 12-5-61. Filed 11-7-60.

Class 51 — Cosmetics and Toilet Preparations

727,790. DELICADO. The Mennen Company. SN 107,482. Pub. 12-5-61. Filed 10-31-60.

727,791. STYLORS. Stylora, Inc. SN 107,514. Pub. 12-5-61. Filed 10-31-60.

727,792. HAPPY-GO-LOVELY. The Mennen Company. SN 108,560. Pub. 12-5-61. Filed 11-16-60.

727,793. CHARMSTICK. The Mennen Company. SN 108,563. Pub. 12-5-61. Filed 11-16-60.

727,794. CELESTE. Angelique and Company, Inc. SN 113,322. Pub. 12-5-61. Filed 2-9-61.

727,795. RINSAL. Santoline Beauty Products, Inc. SN 114,349. Pub. 12-5-61. Filed 2-24-61.

727,796. BON DENT AND DESIGN. The Bon Ami Company. SN 115,035. Pub. 12-5-61. Filed 3-7-61.

Class 52 — Detergents and Soaps

727,797. SANACIDE. Madison Chemical Corporation. SN 82,258. Pub. 12-5-61. Filed 9-28-59.

727,798. CHEMPLEX. Madison Chemical Corporation. SN 105,180. Pub. 12-5-61. Filed 9-26-60.

727,799. TERATEX. Madison Chemical Corporation, d.b.a. Madison Supply and Equipment Company. SN 106,112. Pub. 12-5-61. Filed 10-10-60.

727,800. SOAP DE CENTA. Beautron Corporation. SN 109,157. Pub. 12-5-61. Filed 11-28-60.

727,801. M AND DESIGN. The Mennen Company. SN 111,900. Pub. 12-5-61. Filed 1-16-61.

727,802. ANGEL HAIR. Chesebrough-Pond's Inc. SN 114,092. Pub. 12-5-61. Filed 2-21-61.

727,803. PACKER'S GOLDEN OLIVE OIL SHAMPOO AND DESIGN. Packers Tar Soap, Inc. SN 117,728. Pub. 12-5-61. Filed 4-12-61.

727,804. SPOT-TUBE AND DESIGN. Solar Products, Inc. SN 120,026. Pub. 12-5-61. Filed 5-15-61.

727,805. U-ZIT AND DESIGN. Guardian Laboratories, Inc. SN 123,304. Pub. 12-5-61. Filed 7-3-61.

Service Marks

Class 100 — Miscellaneous

727,806. B-U-TEE SCULPTOR AND DESIGN. George's Health Club, Inc. SN 94,289. Pub. 12-5-61. Filed 4-4-60.

727,807. PERDITAS AND DESIGN. Gordon W. Bennett, d.b.a. Perditas Restaurant. SN 104,136. Pub. 12-5-61. Filed 9-9-60.

727,808. THRIFT COURTS OF AMERICA. Hart Industries, Inc. SN 112,722. Pub. 12-5-61. Filed 1-30-61.

Class 103 — Construction and Repair

727,809. HARBERT AND DESIGN. Harbert Construction Corporation. SN 101,781. Pub. 12-5-61. Filed 8-1-60.

Class 104 — Communication

727,810. S AND DESIGN. R. Peter Straus, d.b.a. The Straus Broadcasting Group. SN 105,934. Pub. 12-5-61. Filed 10-6-60.

Class 105 — Transportation and Storage

727,811. TRANS-AMERICAN WORLD TRANSIT. Trans-American Van Service, Inc. SN 91,039. Pub. 12-5-61. Filed 2-16-60.

727,812. REPRESENTATION OF A BALLOON. Walker-Wilson Travel, Ltd. SN 117,069. Pub. 12-5-61. Filed 4-3-61.

Class 107 — Education and Entertainment

727,813. KNOWLEDGE THROUGH READING AND DESIGN. Evelyn Wood Reading Dynamics Corporation. SN 105,403. Pub. 12-5-61. Filed 9-28-60.

727,814. OZARK OPRY. Lee Mace, d.b.a. Ozark Opry. SN 105,906. Pub. 12-5-61. Filed 10-6-60.

727,815. SRA. Science Research Associates, Inc. SN 107,594. Pub. 12-5-61. Filed 11-1-60.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

727,816. Butler Manufacturing Company, Kansas City, Mo. SN 113,905. Filed P.R. 2-17-61; Am. S.R. 11-28-61.

STOR-TITE

For Grain Bins and Tanks.
First use Sept. 14, 1960.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

727,817. Associated Spring Corporation, Bristol, Conn. SN 83,689. Filed P.R. 10-21-59; Am. S.R. 12-8-61.

LOCK-ON

For Coil Springs Having Hooked Ends.
First use Sept. 25, 1959.

727,818. Spacers, Inc., Moline, Ill. SN 117,672. Filed 4-3-61.



For Pipe Nipples, Fittings and Bolts, With Lubricated Threads.
First use Sept. 3, 1958.

727,819. Crane Co., Chicago, Ill. SN 118,967. Filed 5-1-61. For Bathtubs, Lavatories, Kitchen Sinks, Service Sinks, and Slop Sinks and Trays Therefor.

TENNESSEE

First use Feb. 16, 1960.

Class 14—Metals and Metal Castings and Forgings

727,820. National Steel Corporation, Pittsburgh, Pa. SN 95,614. Filed P.R. 4-22-60; Am. S.R. 12-7-61.

ENAMELSTRIP

For Plastic Coated Steel Sheets and Strip, Plastic-to-Metal Laminated Steel Sheets and Strip and Organic Coated Steel Sheets and Strip.
First use January 1949 on organic coated steel sheets.

Class 15—Oils and Greases

727,821. Musolino and Sons, Inc., Alexandria, Va. SN 110,220. Filed P.R. 12-14-60; Am. S.R. 10-5-61.



The mark consists of a device of the color combination of black and silver disposed, as shown, upon a gasoline dispenser.
For Gasoline.
First use in May 1958.

727,822. Musolino and Sons, Inc., Alexandria, Va. SN 110,221. Filed P.R. 12-14-60; Am. S.R. 10-5-61.



The mark consists of a device of the color combination of gold and black, disposed, as shown, upon a gasoline dispenser.
For Gasoline.
First use in May 1958.

727,823. Musolino and Sons, Inc., Alexandria, Va. SN 110,222. Filed P.R. 12-14-60; Am. S.R. 10-5-61.



The mark consists of a device of the color combination of black and gold disposed, as shown, upon a gasoline dispenser. The drawing is lined for gold.
For Gasoline.
First use May 1958.

Class 19—Vehicles

727,824. Sutone Corporation, Los Angeles, Calif. SN 118,509. Filed P.R. 4-24-61; Am. S.R. 11-20-61.

HOLD-TITE

For Curb Feelers.
First use February 1959.

Class 21—Electrical Apparatus, Machines, and Supplies

727,825. Sarkes Tarzian, Incorporated, Bloomington, Ind. SN 99,399. Filed P.R. 5-31-60; Am. S.R. 12-14-61.

SILVER SEALED

For Electrical Apparatus for Receiving an Electrical Signal—Namely, Television Tuners and the Like.
First use Apr. 25, 1960.

Class 22—Games, Toys, and Sporting Goods

727,826. Société Nobel Bozel, Paris, France. SN 116,085. Filed P.R. 3-20-61; Am. S.R. 11-9-61.

bébé NOBEL

Owner of French Reg. No. 485,946, dated Feb. 10, 1960 (Seine); Natl. Inst. No. 138,887.
For Dolls.

Class 26—Measuring and Scientific Appliances

727,827. Astell Laboratory Service Company Limited, London, England. SN 92,853. Filed 3-15-60.

ASTELL

Priority claimed under Sec. 44(d) on British Reg. No. 801,929, dated Feb. 19, 1960.
For Centrifuges, Laboratory Apparatus Stands, Devices for Filling Liquids Into Tubes and Bottles, Butyrometers, Glass Laboratory Apparatus, Bottle Rotating Apparatus, Bacterial Incubators, Water Baths, Thermometers, Cryoscopes, Bungs and Seals, Calculating Devices, Lactometers, Hydrometers, Glass Bottles, Optical Magnifying Devices, Wire Baskets for Use With Water Baths.

Class 36—Musical Instruments and Supplies

727,828. Audio Fidelity, Inc., New York, N.Y. SN 84,972. Filed P.R. 11-10-59; Am. S.R. 5-26-61.

FOUR ITTI TRAK

For Pre-Recorded Magnetic Tapes.
First use Aug. 24, 1959.

Class 37—Paper and Stationery

727,829. Throway Corp. Inc., New York, N.Y. SN 66,252. Filed P.R. 1-21-59; Am. S.R. 8-9-61.

Throway

For Paper Products—Namely, Disposable Paper Aprons, Handkerchiefs, and Garments.
First use Apr. 29, 1958.

Class 38—Prints and Publications

727,830. Broadcasting Publications, Inc., Washington, D.C. SN 108,609. Filed P.R. 11-17-60; Am. S.R. 11-20-61.

FATES AND FORTUNES

For Section of a Periodical Publication.
First use Jan. 5, 1959.

Class 39—Clothing

727,831. Mainove Specialty Box Co., Omaha, Nebr. SN 111,807. Filed P.R. 1-13-61; Am. S.R. 11-17-61.

HAWAIIAN SUN HAT

For Sun Hats Made of Cardboard.
First use Apr. 30, 1960.

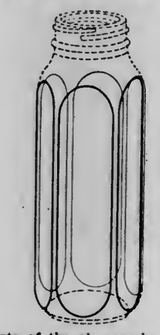
Class 44—Dental, Medical, and Surgical Appliances

727,832. Hirtz & Co. Kommanditgesellschaft, Koln (Rhine), Germany. SN 118,444. Filed P.R. 4-24-61; Am. S.R. 12-4-61.

Clima maske

For Inhalators.
First use Mar. 10, 1958.

727,833. The Pyramid Rubber Company, Ravenna, Ohio. SN 120,223. Filed P.R. 5-17-61; Am. S.R. 7-25-61.



The mark consists of the six panels, spaced equally apart, on the sides of the bottle.
For Nursing Bottles.
First use 1937.

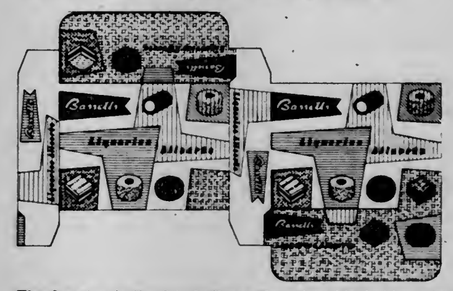
Class 46—Foods and Ingredients of Foods

727,834. Tillie Lewis Foods, Inc., Stockton, Calif., by change of name from Flotill Products, Incorporated, Stockton, Calif. SN 104,933. Filed P.R. 9-22-60; Am. S.R. 6-27-61.

RED RIPE

For Catsup, Tomato Puree, Tomato Paste, and Chili Sauce.
First use Oct. 11, 1949, on catsup.

727,835. Geo. Bassett & Co. Limited, Sheffield, England. SN 109,841. Filed P.R. 12-8-60; Am. S.R. 6-27-61.



The drawing is lined to indicate the colors black, blue, pink, green, yellow, orange and gray. Owner of U.S. Reg. No. 565,586.
For Liquorice Candy.
First use Apr. 13, 1960.

727,836. E. Sokeland & Sohne, Berlin, Germany. SN 110,374. Filed P.R. 12-16-60; Am. S.R. 10-9-61.

SÖKELAND'S

Owner of German Reg. No. 739,054, dated Aug. 9, 1960. For Pumpernickel.

727,837. Saila Società per Azioni Industria Liquirizia Abruzzese, Silvi Marina, Abruzzi, Italy. SN 119,155. Filed P.R. 5-2-61; Am. S.R. 10-23-61.

LIQUIRIZIA SAILA PURISSIMA

Owner of Italian Reg. No. 133,332, dated Sept. 10, 1957. For Liquorice.

Class 52 — Detergents and Soaps

727,838. Kenneth Roth, Paterson, N.J. SN 58,117. Filed P.R. 8-29-58; Am. S.R. 10-31-60.

WAVE GOOD-BY TO DIRT

For Detergent for Household Washing Machines. First use Apr. 1, 1958.

727,839. Stanson Chemicals, Edgewater, N.J. SN 87,457. Filed P.R. 12-16-59; Am. S.R. 7-28-61.

SUPA SAFE

For Household Detergent. First use Nov. 10, 1959.

727,840. Mac's Super. Gloss Co., Inc., Los Angeles, Calif. SN 109,603. Filed P.R. 12-5-60; Am. S.R. 11-6-61.

SUPERIOR

For Degreasing Compounds; Parts Cleaner. First use June 1955.

TRADEMARK REGISTRATIONS RENEWED

21,191. PV AND DESIGN. Cl. 46. 5-24-1892.
147,934. SPIRIT OF '76. Cl. 39. 11-8-21.
148,934. SNAP. Cl. 52. 11-29-21.
149,830. SNOWDRIFT. Cl. 51. 12-27-21.
150,383. SURFALOX. Cl. 16. 1-3-22.
150,454. SUN & MOON. Cl. 18. 1-3-22.
150,474. GOLD BAR. Cl. 46. 1-3-22.
150,650. WILSON BRO'S. Cl. 39. 1-3-22.
151,287. COBBIE. Cl. 39. 1-24-22.
151,645. WINCHESTER. Cl. 21. 2-7-22.
151,699. SIERRA. Cl. 46. 2-14-22.
151,791. CHEER-UP. Cl. 46. 2-14-22.
153,127. STRADTONE. Cl. 36. 3-14-22.
154,243. JUNKET. Cl. 46. 4-11-22.
154,251. QUIKUT. Cl. 23. 4-11-22.
154,513. REPRESENTATION OF A GIRL. Cl. 46. 4-18-22.
154,589. DEXTRI-MALTOSE. Cl. 46. 4-18-22.
154,600. STYLINE. Cl. 39. 4-18-22.
154,734. JACK SPRAT AND DESIGN. Cl. 46. 4-18-22.
154,979. HOT-FLOW. Cl. 23. 5-16-22.
155,298. LINWEAVE AND REPRESENTATION OF TOWN CRIER. Cl. 37. 5-23-22.
155,383. BETHLEHEM. Cl. 9. 5-30-22.
155,942. NATURMADE. Cl. 46. 6-13-22.
388,530. H.F. CORD. Cl. 43. 7-1-41.
391,605. QUASI-ARC. Cl. 14. 11-18-41.
392,356. LIQUISILK. Cl. 51. 12-23-41.
392,502. NATIONAL POULTRY IMPROVEMENT PLAN AND DESIGN. Cl. 46. 12-30-41.
392,742. PENN-CRAFT AND DESIGN. Cl. 39. 1-13-42.
393,032. JUST SAY MIL-KAY. Cl. 45. 1-27-42.
393,084. CHRISTMAS CAROL. Cl. 51. 1-27-42.
393,214. FUNGUSIN. Cl. 18. 1-27-42.
393,239. MORLEX. Cl. 6. 1-27-42.
393,285. EMISALOY. Cl. 21. 2-3-42.
393,461. SORBOCAST. Cl. 14. 2-17-42.
393,536. DEKGRIP. Cl. 16. 2-17-42.
393,589. FUNJOL. Cl. 18. 2-17-42.
393,948. SOFTON. Cl. 42. 3-10-42.
394,050. NYPEN PAPERS AND DESIGN. Cl. 37. 3-17-42.
394,057. GALLO ETC. AND DESIGN. Cl. 47. 3-17-42.
394,105. BUT YES. Cl. 51. 3-17-42.
394,116. "SEL-CAR." Cl. 16. 3-17-42.
394,117. "SEL-NITE." Cl. 6. 3-17-42.
394,118. MAIS OUI. Cl. 51. 3-17-42.
394,214. VANFITZ. Cl. 42. 3-24-42.
394,427. RCA (MONOGRAM). Cl. 26. 4-7-42.
394,541. PETINCO AND DESIGN. Cl. 26. 4-14-42.
394,672. MEADOW GOLD. Cl. 45. 4-21-42.
394,809. BIG JOE. Cl. 13. 4-28-42.
395,248. Q. Cl. 12. 5-19-42.
395,537. SNOW SUGAR. Cl. 46. 6-2-42.
395,550. DURCOPUMP. Cl. 23. 6-2-42.
395,582. LISTERINE TOOTHPASTE AND DESIGN. Cl. 51. 6-2-42.
395,664. HYDROCLEAN. Cl. 52. 6-2-42.
395,665. KLENZINE. Cl. 52. 6-2-42.
395,666. PC AND DESIGN. Cl. 6. 6-2-42.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

600,605. NYLANTHRENE. Cl. 6. 1-11-55.
715,578. KROMORE. Cl. 12. 5-16-61.

Section 8

107,111. TI-O-GA TME AND DESIGN. Cl. 46. 11-9-15.
327,864. CRONITA. Cl. 43. 9-10-35.

330,450. SEAL FLEECE. Cl. 39. 12-3-35.
331,384. SAFETY PLUS. Cl. 13. 1-7-36.
439,912. COOKIE CARR AND DESIGN. Cl. 46. 7-27-48.
608,966. PYRODOME. Cl. 12. 7-19-55.

The following registrations issued Jan. 3, 1956

618,403. GALALITH. Cl. 1.
618,406. HICKORY HILL, HA ETC. AND DESIGN. Cl. 1.
618,410. KITCHENRYTE. Cl. 2.
618,411. TOTE-RACK. Cl. 3.
618,412. CUB SKATE CASE AND DESIGN. Cl. 3.
618,413. GOLD DOT AND DESIGN. Cl. 3.
618,420. NICEWARNER N LEATHER CO. AND DESIGN. Cl. 5.
618,421. STIKETTE. Cl. 5.
618,423. TINCHER IMPREX PROCESS AND DESIGN. Cl. 6.
618,424. BRAZIL KILL. Cl. 6.
618,428. HYDRALIN. Cl. 6.
618,430. FOVAN. Cl. 6.
618,442. MIGASOL AND DESIGN. Cl. 6.
618,446. QUICKIT. Cl. 3.
618,447. MONNET'S MOULIN ROUGE BRAND. Cl. 6.
618,448. AVON AMULSION. Cl. 6.
618,449. AVON ARLAND. Cl. 6.
618,450. AVON ALLSPRAY. Cl. 6.
618,451. AVON AMULSIFINE. Cl. 6.
618,452. REPRESENTATION OF A HUMAN FEMALE. Cl. 6.
618,457. LARVABOR. Cl. 6.
618,458. SELECTOX. Cl. 6.
618,464. GUARDS. Cl. 8.
618,468. DJ—DENISON JALOUSIES AND DESIGN. Cl. 12.
618,471. TYPOLE TRIPLE BRACE. Cl. 12.
618,482. EV-RI-WAY AND DESIGN. Cl. 12.
618,486. LUXOR. Cl. 12.
618,491. UNI-CORP. Cl. 12.
618,492. PARFEN. Cl. 12.
618,495. LOKFIL. Cl. 13.
618,507. BOWKEEP. Cl. 13.
618,515. NYLSLIDES. Cl. 13.
618,517. SCOTTIE AND DESIGN. Cl. 13.
618,519. DURATONE Cl. 13.
618,526. INDESTRUCTIBLE PH-ILM. Cl. 15.
618,527. AQUAKOTE. Cl. 16.
618,539. 2-8-9 OINTMENT. Cl. 18.
618,541. NUTRIFERM. Cl. 18.
618,542. BIVAL AND DESIGN. Cl. 18.
618,544. JUBILEE. Cl. 18.
618,548. WALLOP. Cl. 18.
618,550. P 400. Cl. 18.
618,551. ZIPCOL. Cl. 18.
618,558. ECA AND DESIGN. Cl. 19.
618,567. TEN-TENNA. Cl. 21.
618,574. GOLIATH. Cl. 21.
618,575. MAMMOTH. Cl. 21.
618,576. MOGUL. Cl. 21.
618,580. ROTO-GLO. Cl. 21.
618,582. MUSICLOCK. Cl. 21.
618,583. MAGIC-FRY. Cl. 21.
618,586. CO-THERM. Cl. 21.
618,587. SOLARMATIC. Cl. 21.
618,590. BITE-LITE. Cl. 21.
618,595. RHYTHMBAR. Cl. 22.
618,598. ROL-A-DAM. Cl. 23.
618,600. COSMA AND DESIGN. Cl. 23.
618,602. CLARK ROSS AND DESIGN. Cl. 23.
618,603. M-E. Cl. 23.
618,606. "ROYAL." Cl. 23.
618,608. REPRESENTATION OF A SHIELD. Cl. 23.
618,613. SKANDA. Cl. 23.
618,621. VELLUBOLT AND DESIGN. Cl. 23.
618,627. ACME. Cl. 23.
618,629. MAGNAPUL. Cl. 23.
618,633. BROTHER. Cl. 24.
618,634. RIVAL AND DESIGN. Cl. 25.
618,639. UNITEST. Cl. 26.
618,642. TAYTAL. Cl. 26.
618,646. FLEXTAR. Cl. 26.
618,648. OPTA-COR AND DESIGN. Cl. 26.
618,651. CHEMOMETER. Cl. 26.
618,656. SECOR. Cl. 26.
618,659. TELEV-EYES. Cl. 26.
618,660. BAG-BELL. Cl. 27.
618,665. GRAVEX AND DESIGN. Cl. 31.
618,667. MILLSHAKE. Cl. 31.
618,668. MAGIC MIST SUNTANNER. Cl. 32.
618,669. RE-LAX. Cl. 32.
618,671. AEROIL AUTO-STEAM AND DESIGN. Cl. 34.
618,676. DUAL-VECTOR. Cl. 34.
618,684. JUNIORAMA AND DESIGN. Cl. 38.
618,685. END 'O' RUN. Cl. 39.
618,692. WESTEX. Cl. 39.
618,695. AIR-RATED. Cl. 39.
618,698. ELWOOD. Cl. 39.
618,700. NITEREST. Cl. 39.
618,710. JACK O' TERRY. Cl. 39.
618,712. QUALITY MANCHESTER AND DESIGN. Cl. 39.
618,715. KAJIMAHAL. Cl. 39.
618,716. WHITE BEAR. Cl. 39.
618,719. FLAGSTONE TWEED. Cl. 42.
618,722. RAVENTONES. Cl. 42.
618,724. REPAIR-A-DENT AND DESIGN. Cl. 44.
618,726. CYCLOTHERAPY. Cl. 44.
618,730. HAGGARD'S SAVE-A-LIFE. Cl. 44.
618,731. LIFE. Cl. 44.
618,733. OLD INDIA QUININE WATER AND DESIGN. Cl. 45.
618,734. PECORA'S BABY TOP. Cl. 46.
618,735. BAC-T AND DESIGN. Cl. 46.
618,738. JUSPOR AND DESIGN. Cl. 46.
618,739. CORONET. Cl. 46.
618,762. FONTAINEBLEAU. Cl. 51.
618,764. I'M LOVED. Cl. 51.
618,768. CORLEX. Cl. 52.
618,769. UNION CIRCULATION CO., INC. AND DESIGN. Cl. 100.
618,773. REPRESENTATION OF CHICKEN AND MAP OF TEXAS. Cl. 101.
618,776. PICTURAMA OF HOME BUYS AND DESIGN. Cl. 102.
618,777. CKC PROCESS. Cl. 103.
618,778. THE WHITE GLOVE MOVERS AND GLOVE DESIGN. Cl. 105.
618,779. SKI ANTICS. Cl. 107.
618,782. PITTSBURGH-DIRECT. Cl. 6.
618,783. NO-KORD SASH RUNNER AND DESIGN. Cl. 12.
618,792. THEY DON'T SCRATCH—THEY CUT! Cl. 23.
618,793. BATES. Cl. 23.
618,795. HIGH VELOCITY. Cl. 23.
618,797. HANDY PLAN AND DESIGN. Cl. 26.
618,798. ELECTRO-TESTER. Cl. 26.
618,800. LORD WINDSOR. Cl. 27.
618,806. CRANE'S. Cl. 45.
618,808. BRITTANY HILLS 1850 SAUCE, ETC. AND DESIGN. Cl. 46.
618,809. NU-MAID ETC. AND DESIGN. Cl. 46.
618,812. MR. GREEN FROM CALIFORNIA AND DESIGN. Cl. 46.
618,813. REAL OLD AMERICAN ENRICHED BREAD AND DESIGN. Cl. 46.
618,818. PICTURE BOOK TOILETRIES AND DESIGN. Cl. 51.
618,819. PICTURE BOOK TOILETRIES AND DESIGN. Cl. 51.
618,820. AUTOMOBILE SAFETY SERVICE ASSOCIATION INC. AND DESIGN. Cl. 100.

INDEX OF REGISTRANTS

FEBRUARY 20, 1962

(Registered ; Renewed ; Canceled ; Amended, Disclaimed, Corrected, etc. ; New Certificates ; 12c Publications.)

Acerola Corp., The : *See*—
Cerojel Products, Inc.
Adair Sales Co., Adair, Iowa. 727,675, pub. 12–5–61. Cl. 18.
Aeroil Products Co., Inc., South Hackensack, N.J. 618,671, canc. Cl. 34.
Air Reduction Co., Inc., New York, N.Y. 727,657, pub. 12–5–61. Cl. 14.
Aktiebolaget Wascator, Goteborg, Sweden. 727,703, pub. 12–5–61. Cl. 24.
Albudon Products Co. : *See*—
Robinson, A., Inc. of Altoona.
Allied Chemical Corp., New York, N.Y. 727,620, pub. 12–5–61. Cl. 6.
Allied Old English, Inc., Newark, N.J. 727,765, pub. 12–5–61. Cl. 46.
Alna Tricots De Luxe, Milan, Italy. 727,753, pub. 12–5–61. Cl. 39.
Althouse Chemical Co., Inc., Reading, Pa. 600,605, canc. Cl. 6.
Aluminum Co. of America, Pittsburgh, Pa. 727,621, pub. 12–5–61. Cl. 6.
Aluminum Co. of Canada, Ltd., Montreal, Quebec, Canada. 727,601, pub. 12–5–61. Cl. 1.
Amateur Rocketeer, Inc., Rochester, Ind. 727,735, pub. 12–5–61. Cl. 38.
American Bakers' Service Co., Kansas City, Mo. 618,813, canc. Cl. 46.
American Cemetery Association, Columbus, Ohio. 727,723, pub. 12–5–61. Cl. 38.
American Enka Corp., Enka, N.C. 727,603, pub. 12–5–61. Cl. 1.
American Nepheline Ltd. : *See*—
Industrial Minerals of Canada Ltd.
American Thread Co., The, New York, N.Y. 388,530, ren. 2–20–62. Cl. 43.
American Woolen Co., now by merger and change of name Textron American, Inc., New York, N.Y. 618,722, canc. Cl. 42.
Angelique and Co., Inc., Wilton, Conn. 727,794, pub. 12–5–61. Cl. 51.
Anheuser-Busch, Inc., St. Louis, Mo. 727,767, pub. 1–17–61. Cl. 46.
Aqua-Sun Mfg. Co., The : *See*—
Whiteside, Richard H.
Arbo Products Co. : *See*—
Arbogast, George A.
Arbogast, George A., d.b.a. Arbo Products Co., Chicago, Ill. 727,661, pub. 12–5–61. Cl. 18.
Armour Alliance Industries : *See*—
Armour and Co.
Armour and Co., d.b.a. Armour Alliance Industries, Chicago, Ill. 727,596, pub 12–5–61. Cl. 1.
Armour and Co., d.b.a Armour Alliance Industries, Chicago, Ill. 727,616, pub. 12–5–61. Cl. 4.
Armstrong Cork Co., Lancaster, Pa. 618,768, canc. Cl. 52.
Arons, Adolph, & Sons, Inc., Jersey City, N.J. 618,712, canc. Cl. 39.
Associated Spring Corp., Bristol, Conn. 727,817. Cl. 13.
Astell Laboratory Service Co. Ltd., London, England. 727,827. Cl. 26.
Astor Equipment Corp., New York, N.Y. 618,608, canc. Cl. 23.
Atlantic Products Corp., Trenton, N.J. 618,411, canc. Cl. 3.
Audio Fidelity, Inc., New York, N.Y. 727,828. Cl. 36.
Ayer, Harriet H., to Harriet Hubbard Ayer, Inc., New York, N.Y. 149,830, ren. 2–20–62. Cl. 51.
Ayer, Harriet Hubbard, Inc. : *See*—
Ayer, Harriet H.
B & B Exterminating Co. : *See*—
Brazil, Walter P.
Babson Bros. Co., Chicago, Ill. 618,795, canc. Cl. 23.
Balaban Luggage Co., Council Bluffs, Iowa. 618,412, canc. Cl. 3.
Barnes, Mackie J. S., Pampa, Tex. 618,446, canc. Cl. 3.
Bartley, Ena M., Moseley, Birmingham, England. 618,595, canc. Cl. 22.
Basic Inc., Cleveland, Ohio. 727,652, pub. 12–5–61. Cl. 12.
Bassett, Geo., & Co, Ltd., Sheffield, England. 727,835. Cl. 46.
Bates & Edgerton : *See*—
Craftint Mfg. Co., The.
Baumgartner Freres, S.A., Grenchen, Switzerland. 618,660, canc. Cl. 27.
Bay State Abrasive Products Co., Westboro, Mass. 727,615. pub. 12–5–61. Cl. 4.
Beard, Irving T., d.b.a. Hickory Hill Hatchery, Chandlerville, Ill. 618,406, canc. Cl. 1.
Beatrice Creamery Co., to Beatrice Foods Co., Chicago, Ill. 394,672, ren. 2–20–62. Cl. 45.
Beatrice Foods Co. : *See*—
Beatrice Creamery Co.
Beautron Corp., Dallas, Tex. 727,800, pub 12–5–61. Cl. 52.
Beckman, Arnold O., Inc., Pasadena, Calif. 618,651, canc. Cl. 26.
Beecham Research Laboratories Ltd., Brentford, England. 727,663, pub. 12–5–61. Cl. 18.
Bennett, Gordon W., d.b.a. Perditas Restaurant, Charleston, S.C. 727,807, pub. 12–5–61. Cl. 100.
Berman Watch Co., Inc., New York, N.Y. 618,800, canc. Cl. 27.
Bethlehem Steel Co., Bethlehem, Pa. 155,383, ren. 2–20–62. Cl. 9.
Bigler, S. H., Co. : *See*—
Bigler, Sam H.
Bigler, Sam H., d.b.a. S. H. Bigler Co., Pittsburgh, Pa. 727,772, pub. 12–5–61. Cl. 46.
Biltmore Sportswear, Inc., Boston, Mass. 618,716, canc. Cl. 39.
Bishop, Jim, Inc., Kansas City, Mo. 618,590, canc. Cl. 21.
Bival Laboratory : *See*—
Lee, Kenneth L.
Blachford, H. L., Ltd., Montreal, Quebec, Canada. 727,658, pub. 12–5–61. Cl. 16.
Bon Ami Co., The, New York, N.Y. 727,796, pub. 12–5–61. Cl. 51.
Borax Consolidated, Ltd., d.b.a. Pacific Coast Borax Co., Div. of Borax Consolidated, Ltd., Los Angeles, Calif. 618,457, canc. Cl. 6.
Bossong Hosiery Mills, Inc. : *See*—
Bossong, Joseph C.
Bossong, Joseph C., Brooklyn, N.Y., to Bossong Hosiery Mills, Inc., Asheboro, N.C. 147,934, ren. 2–20–62. Cl. 39.
Bourjois, Inc., New York, N.Y. 394,105, ren. 2–20–62. Cl. 51.
Bourjois, Inc., New York, N.Y. 394,118, ren. 2–20–62. Cl. 51.
Bowser, S. F., & Co., Inc., to Petinco Systems, Inc., Fort Wayne, Ind. 394,541, ren. 2–20–62. Cl. 26.
Brach, E. J., & Sons, Chicago, Ill. 727,708, pub. 12–5–61. Cl. 32.
Brazil, Walter P., d.b.a. B & B Exterminating Co., Jacksonville, Fla. 618,424, canc. Cl. 6.
British Oxygen Co. Ltd. : *See*—
Quasi-Arc Co. Ltd., The.
Broadcasting Publications, Inc., Washington, D.C. 727,830. Cl. 38.
Bro-Dart Industries, Inc., Newark, N.J. 727,682, pub. 1–5–60. Cl. 19.
Bronstein, Jacques, New York, N.Y. 727,690, pub. 12–5–61. Cl. 22.
Brook Hill Farms, Inc., to Medical Dairy Specialties, Inc., Chicago, Ill. 618,735, canc. Cl. 46.
Brooks Oil Co., The, Cleveland, Ohio. 618,526, canc. Cl. 15.
Bruno, C., & Son, Inc., New York, N.Y. 153,127, ren. 2–20–62. Cl. 36.
Burton-Edward Co., Inc., Oklahoma City, Okla. 618,544, canc. Cl. 18.
Butler Mfg. Co., Kansas City, Mo. 727,816. Cl. 2.
Caladino Farm Seeds, Inc., Willows, Calif. 727,613, pub. 12–5–61. Cl. 1.
California Co-operative Canneries, San Jose, Calif., to Tri-Valley Packing Association, San Francisco, Calif. 155,942, ren 2–20–62. Cl. 46.
California Growers Association, Inc., Los Angeles, to Tri-Valley Packing Association, San Francisco, Calif. 151,699, ren. 2–20–62. Cl. 46.
Campus Life, Inc., New York, N.Y. 727,728, pub. 12–5–61. Cl. 38.
Canadian Refractories Ltd., Montreal, Quebec, Canada. 715,578, canc. Cl. 12.
Cantrell & Cochrane Corp., New York, N.Y. 618,733, canc. Cl. 45.
Car Kleen Co., Springfield, N.J. 618,777, canc. Cl. 103.
Carbide and Carbon Chemicals Corp., to Union Carbide Corp., New York, N.Y. 393,239, ren. 2–20–62 Cl. 6.
Carlisle Corp., The, Carlisle, Pa. 727,597, pub. 12–5–61. Cl. 1.
Carr-Consolidated Biscuit Co., Wilkes-Barre, Pa. 439,912. canc. Cl. 46.
Catz American Co., Inc., New York, N.Y. 727,721, pub. 12–5–61. Cl. 37.
Cerojel Products, Inc., Lakeland, Fla., from The Acerola Corp., Sabana Seca, Puerto Rico. 727,670, pub. 7–18–61. Cl. 18.
Champion Paper and Fibre Co., The : *See*—
Champion Papers Inc.
Champion Papers Inc., by change of name from The Champion Paper and Fibre Co., Hamilton, Ohio. 727,715, pub. 12–5–61. Cl. 37.
Chapman Chemical Co., Memphis, Tenn. 727,642–4, pub. 12–5–61. Cl. 6.
Chemstrand Corp., The, Decatur, Ala. 727,592, pub. 1–3–61. Cl. 1.
Chesebrough-Pond's Inc., New York, N.Y. 727,802, pub. 12–5–61. Cl. 52.
Chicago Screw Co., The, Chicago, Ill. 331,384, canc. Cl. 13.
Chicopee Mfg. Corp., New Brunswick, N.J. 727,761, pub. 12–5–61. Cl. 42.
Ciba Co. Inc., Fair Lawn, N.J. 727,617, pub. 12–5–61. Cl. 6.
Ciba Ltd., Basel, Switzerland. 618,442, canc. Cl. 6.
Ciba Ltd., Basel, Switzerland 727,635–6, pub. 12–5–61. Cl. 6.
Ciba Ltd., Basel, Switzerland. 727,676–7, pub. 12–5–61. Cl. 18.
Claremont Products : *See*—
Reed, Maurice J.

Clark Equipment Co., Buchanan, Mich. 618,602, canc. Cl. 23.
Clark Thread Co., The, Newark, N.J. 327,864, canc. Cl. 43.
Claussner Hosiery Co., Paducah, Ky. 727,750, pub. 12–5–61. Cl. 39.
Clyde Castings Co., The, Clyde, to Quikut Inc., Fremont, Ohio. 154,251, ren. 2–20–62. Cl. 23.
Colebrook Inc., New York, N.Y. 727,747, pub. 12–5–61. Cl. 39.
Congoleum-Nairn Inc., Kearny, N.J. 727,685, pub. 12–5–61. Cl. 20.
Consolidated Foods Corp.: *See*—
Western Grocer Co.
Consolidated Research and Mfg. Corp., New Haven, Conn. 727,631, pub 12–5–61. Cl. 6.
Continental Enterprises, Inc., Jacksonville, Fla. 727,769, pub. 12–5–61. Cl. 46.
Cordell, Eugene V., d.b.a. Pacific Tide Enterprises, Salem, Oreg. 727,674, pub. 12–5–61. Cl. 18.
Craftint Mfg. Co., The, assignee of Bates & Edgerton, Cleveland, Ohio. 618,793, canc. Cl. 23.
Crane Co., Chicago, Ill. 727,819. Cl. 13.
Crisp, Inc., Upper Darby, Pa. 727,629, pub. 12–5–61. Cl. 6.
Crown Zellerbach Corp., San Francisco, Calif. 727,717, pub. 12–5–61. Cl. 37.
Cummings & Sander Mfg. Corp.: *See*—
Products Research Co.
Curry-Trol Oil Corp., Hubbard, Iowa. 727,646, pub. 12–5–61. Cl. 6.
Cyclotherapy, Inc., Buffalo, N.Y. 618,726, canc. Cl. 44.
Danskin Inc., New York, N.Y. 727,749, pub. 12–5–61. Cl. 39.
Dare, Virginia, Confections, Inc., Baltimore, Md. 727,662, pub 12–5–61. Cl. 18.
Daubert Chemical Co., Chicago, Ill. 727,654, pub. 12–5–61. Cl. 12.
Dayton, F. E.: *See*—
Dayton Foundry, Inc.
Dayton Foundry, Inc., Hollydale, to F. E. Dayton, South Gate, Calif. 393,461, ren. 2–20–62. Cl. 14.
Dayton Rubber Co., The: *See*—
Dayton Tire & Rubber Co., The.
Dayton Tire & Rubber Co., The, by assignment and change of name from The Dayton Rubber Co., Dayton, Ohio. 727,686, pub. 5–3–60. Cl. 21.
Dehydag Deutsche Hydrierwerke GmbH., Dusseldorf, Germany. 618,428, canc. Cl. 6.
Dell Products Corp., East Orange, N.J. 618,806, canc. Cl. 45.
Denison Corp., North Miami, Fla. 618,468, canc. Cl. 12.
Detroit Aluminum & Brass Corp., Hamtramck, Mich. 727,700, pub 12–5–61. Cl. 23.
Diamond National Corp., New York, N.Y. 727,610, pub. 12–5–61. Cl. 1.
Diamond National Corp., New York, N.Y. 727,614, pub. 12–5–61. Cl. 2.
Diamond Saw Works, Inc., Buffalo, N.Y. 618,792, canc. Cl. 23.
Die Casting Machine Tools Ltd., London, England. 727,702, pub 12–5–61. Cl. 23.
Diesel Control Corp., Denver, Colo. 618,639, canc. Cl. 26.
Dizzy Dean Enterprises, Inc., Jackson, Miss. 727,607, pub. 12–5–61. Cl. 1.
Doctor's Orders Products: *See*—
Wohl, Sidney.
Driver, Wilbur B., Co., Newark, N.J. 393,285, ren. 2–20–62. Cl. 21.
Drivex Co., Madrid, Iowa. 727,684, pub. 12–5–61. Cl. 19.
Duche, T. M., & Sons, Inc., Clifton, N.J. 727,624–5, pub. 12–5–61. Cl. 6.
Duncan, Donald F., Inc., Evanston, Ill. 727,694, pub. 12–5–61. Cl. 22.
Duriron Co., Inc., The, Dayton, Ohio. 395,550, ren. 2–20–62. Cl. 23.
Durovic, Stevan, M.D., Chicago, Ill. 727,659, pub. 12–5–61. Cl. 18.
Edison Brothers Stores, Inc., St. Louis, Mo. 727,741, pub. 12–5–61. Cl. 39.
Edmont Inc., Coshocton, Ohio. 727,745, pub. 12–5–61. Cl. 39.
Educator Shoe Corp., New York, N.Y. 727,757, pub. 12–5–61. Cl. 39.
Electric Storage Battery Co., The, Philadelphia, Pa. 727,608, pub. 12–5–61. Cl. 1.
Electriglas Corp., Bergenfield, N.J. 618,587, canc. Cl. 21.
Electro Tester Co., Malden, Mass. 618,798, canc. Cl. 26.
Elwood Hosiery Mills, Inc., Elwood, N.J. 618,698, canc. Cl. 39.
Empire Products, Chicago, Ill. 618,583, canc. Cl. 21.
Enoz Corp., Chicago, Ill. 727,618, pub. 12–5–61. Cl. 6.
Ether Ltd., Erdington, Birmingham, England. 727,705, pub. 10–25–60. Cl. 26.
Fabric Leather Corp., New Hyde Park, N.Y. 727,611, pub. 12–5–61. Cl. 1.
Fedtro, Inc., Rockville Centre, N.Y. 727,689, pub. 12–5–61. Cl. 21.
Ferguson, Stanley W., Inc.: *See*—
Hall, Martin L., Co.
Fisher Brewing Co.: *See*—
Lucky Lager Brewing Co.
Fisher Governor Co., Marshalltown, Iowa. 394,809, ren. 2–20–62. Cl. 13.
Florida Fruit Distillers, Inc., Lake Alfred, Fla. 727,778, pub. 12–5–61. Cl. 47.
Floseal Corp., San Francisco, Calif. 727,593, pub. 12–5–61. Cl. 1.
Flotill Products, Inc.: *See*—
Lewis, Tillie, Foods, Inc.
Foley & Co., d.b.a. Fovan Chemical Div., Tampa, Fla. 618,430, canc. Cl. 6.
Food Machinery and Chemical Corp., San Jose, Calif. 618,603, canc. Cl. 23.
Foremost Dairies, Inc., San Francisco, Calif. 727,771, pub. 12–5–61. Cl. 46.
Foremost Food & Chemical Co.: *See*—
Meriden Creamery Co., The.
Fovan Chemical Div.: *See*—
Foley & Co.
Freeland Co., Long Beach, Calif. 727,605, pub. 12–5–61. Cl. 1.
Fun-Way Games: *See*—
Warren, Rev. Maurice R.
GG Pens Inc., Roslyn Heights, N.Y. 727,714, pub. 12–5–61. Cl. 37.
Gallo, E. & J., Winery, to E. & J. Gallo Winery, Modesto, Calif. 394,057, ren. 2–20–62. Cl. 47.
General Distillers Corp. of Kentucky, Inc., d.b.a. Silas Howe Distillery, Louisville, Ky. 727,783, pub. 12–5–61. Cl. 49.
General Dynamics Corp.: *See*—
Stromberg-Carlson Co.
George's Health Club, Inc., Albany, N.Y. 727,806, pub. 12–5–61. Cl. 100.
Gettelman, A., Brewing Co.: *See*—
Gettelman Brewing Corp.
Gettelman Brewing Corp., by change of name and assignment from A. Gettelman Brewing Co., Milwaukee, Wis. 727,779, pub. 12–5–61. Cl. 48.
Gerber, Arthur, & Co., Chicago, Ill. 618,812, canc. Cl. 46.
Gibbons, Warren W., Hollywood, Calif. 618,464, canc. Cl. 8.
Glegy Chemical Corp., Ardsley, N.Y. 727,648–9, pub. 12–5–61. Cl. 6.
Giftwrap Corp. of America, Inc., Philadelphia, Pa. 727,710, pub. 12–5–61. Cl. 37.
Glister Milling Co.: *See*—
Glister Milling Co., Inc.
Glister Milling Co., Inc., d.b.a. Glister Milling Co., Chester, Ill. 727,777, pub 12–5–61. Cl. 46.
Gland-O-Lac Co., The: *See*—
Gland-O-Lac Co., The.
Gland-O-Lac Co., The, to The Gland-O-Lac Co., Omaha, Nebr. 393,589, ren. 2–20–62. Cl. 18.
Globe Rubber Products Corp., Philadelphia, Pa. 727,691, pub. 12–5–61. Cl. 22.
Gobeen Corp., The, Wilmington, Del., and Newark, N.J., to Vita-Var Corp., Newark, N.J. 150,383, ren. 2–20–62. Cl. 16.
Gold Dot Marketing Corp., New York, N.Y. 618,413, canc. Cl. 3.
Gomar Mfg. Co., Inc., Linden, N.J. 727,718, pub. 12–5–61. Cl. 37.
Granite Hosiery Corp., Mount Airy, N.C. 727,758, pub. 12–5–61. Cl. 39.
Graver Tank & Mfg. Co., Inc., East Chicago, Ind. 618,665, canc. Cl. 31.
Guardian Laboratories, Inc., Olivette, Mo. 727,805, pub. 12–5–61. Cl. 52.
Guild, L. W., Co., Inc., Boston, Mass., to Guild Mills Corp., Laconia, N.H. 393,948, ren. 2–20–62. Cl. 42.
Guild Mills Corp.: *See*—
Guild, L. W., Co., Inc.
Gunning Mfg. Co., Lansford, N. Dak. 618,598, canc. Cl. 23.
H & K Garment Co., Pontiac, Ill. 618,710, canc. Cl. 39.
Hall, Martin L., Co., to Stanley W. Ferguson, Inc., Boston, Mass. 151,791, ren. 2–20–62. Cl. 46.
Hallberg Canning Corp., Sebastopol, Calif. 727,768, pub. 12–5–61. Cl. 46.
Hansen's, Chr., Laboratory, Inc., Little Falls, N.Y., to Salada-Shirriff-Horsey, Inc., Woburn, Mass. 154,243, ren. 2–20–62. Cl. 46.
Hansen's, Chr., Laboratory, Inc., Little Falls, N.Y., to Salada-Shirriff-Horsey, Inc., Woburn, Mass. 154,513, ren. 2–20–62. Cl. 46.
Harbert Construction Corp., Birmingham, Ala. 727,809, pub. 12–5–61. Cl. 103.
Hardware Designers, Inc., Irvington, N.J. 618,515, canc. Cl. 13.
Hart Industries, Inc., Elkhart, Ind. 727,808, pub. 12–5–61. Cl. 100.
Haspel Brothers, Inc., New Orleans, La. 727,756, pub. 12–5–61. Cl. 39.
Hearst Corp., The, New York, N.Y. 727,736, pub. 12–5–61. Cl. 38.
Hearst Publishing Co., Inc., San Francisco, Calif. 618,684, canc. Cl. 38.
Heirloom Needlework Guild, Inc., New York, N.Y. 727,760, pub. 12–5–61. Cl. 40.
Hickory Hill Hatchery: *See*—
Beard, Irving T.
Hirtz & Co. Kommanditgesellschaft, Koln Am Rhein, Germany. 727,832. Cl. 44.
Hollywood Casuals, Los Angeles, Calif. 727,744, pub. 12–5–61. Cl. 39.
Hortex Mfg. Co., Inc., El Paso, Tex. 727,743, pub. 12–5–61. Cl. 39.
Hotel Greeter Magazine, Inc., The, Denver, Colo. 727,725, pub. 12–5–61. Cl. 38.
Houghton, E. F., & Co., Philadelphia, Pa. 727,626, pub. 12–5–61. Cl. 6.
Howe, Silas, Distillery: *See*—
General Distillers Corp. of Kentucky, Inc.
Huber, J. M., Corp., Borger, Tex. 727,645, pub. 12–5–61. Cl. 6.
Ideal Industries, Inc., Sycamore, Ill. 618,423, canc. Cl. 6.
Indianapolis Glove Co., Indianapolis, Ind. 330,450, canc. Cl. 39.
Industrial Minerals of Canada Ltd., by change of name from American Nepheline Ltd., Toronto, Ontario, Canada. 727,602, pub. 12–5–61. Cl. 1.
Infilco Inc.: *See*—
International Filter Co.
International Filter Co., Chicago, Ill., to Infilco Inc., Tucson, Ariz. 154,979, ren. 2–20–62. Cl. 23.

International Minerals & Chemical Corp., Skokie, Ill. 727,650, pub. 12–5–61. Cl. 6.
International Paint Co., Inc., New York, N.Y. 393,536, ren. 2–20–62. Cl. 16.
Internationale Galalithgesellschaft Aktiengesellschaft, Hamburg-Harburg, Germany. 618,403, canc. Cl. 1.
J.G. Enterprises, Inc., Rochester, N.Y. 618,783, canc. Cl. 12.
Jamaica Associates, Ltd., Kingston, Jamaica, B.W.I. 727,748, pub. 12–5–61. Cl. 39.
Jantzen Inc., Portland, Oreg. 727,742, pub. 12–5–61. Cl. 39.
Johnson Chemical Industries, Inc., Baltimore, Md. 727,622–3, pub. 12–5–61. Cl. 6.
Joslas Mfg. Co., Philadelphia, Pa. 618,507, canc. Cl. 13.
Juspor Foods, Battle Creek, Mich. 618,738, canc. Cl. 46.
KVP Sutherland Paper Co., Kalamazoo, Mich. 727,712, pub. 12–5–61. Cl. 37.
K & W Promotion Co., Ahoskie, N.C. 618,551, canc. Cl. 18.
Kabro of Houston, Inc., Houston, Tex. 727,746, pub. 12–5–61. Cl. 39.
Klekhaefer Corp., Cedarburg, Wis. 618,629, canc. Cl. 23.
Kops Bros., New York, N.Y., to The Alden Mills, New Orleans, La. 154,600, ren. 2–20–62. Cl. 39.
Kuno, Inc., Corpus Christi, Tex. 618,773, canc. Cl. 101.
Lambert Pharmacal Co., Wilmington, Del., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 395,582, ren. 2–20–62. Cl. 51.
Lauhoff Grain Co., Danville, Ill. 618,739, canc. Cl. 46.
Leach, Kent, Columbia, Mo. 727,732, pub. 12–5–61. Cl. 38.
Leaf Brands, Inc., Chicago, Ill. 727,774, pub. 12–5–61. Cl. 46.
Lee, Kenneth L., d.b.a. Bival Laboratory, Alameda, Calif. 618,542, canc. Cl. 18.
Leonard: *See*—
Leonard Embroidery Co.
Leonard Embroidery Co., d.b.a. Leonard Embroidery Co., and Leonard, Philadelphia, Pa. 727,788, pub. 4–19–60. Cl. 50.
Levine, Rubin, & Co., Inc., New York, N.Y. 727,762, pub. 12–5–61. Cl. 42.
Levitt, Barth, Products, Inc., Valley Stream, N.Y. 727,678, pub. 12–5–61. Cl. 18.
Lewis, Tillie, Foods, Inc., by change of name from Flotill Products, Inc., Stockton, Calif. 727,834. Cl. 46.
Lowe, Joe, Corp., New York, N.Y. 395,537, ren. 2–20–62. Cl. 46.
Lowrie, A. W., Inc.: *See*—
Lowrie, Alfred W.
Lowrie, Alfred W., to A. W. Lowrie, Inc., Hartford, Conn. 150,454, ren. 2–20–62. Cl. 18.
Lucky Lager Brewing Co., San Francisco, Calif., from Fisher Brewing Co., Salt Lake City, Utah. 727,781, pub. 12–5–61. Cl. 48.
Luxor Mfg. Co., Detroit, Mich. 618,486, canc. Cl. 12.
M & R Dietetic Laboratories, Inc., Columbus, Ohio. 727,668, pub. 12–5–61. Cl. 18.
Mace, Lee, d.b.a. Ozark Opry, Osage Beach, Mo. 727,814, pub. 12–5–61. Cl. 107.
MacGregor Sport Products Inc., Cincinnati, Ohio. 727,695, pub. 12–5–61. Cl. 22.
Mackay, A. & B., and Co.: *See*—
Macpherson, H. C.
Macpherson & Co.: *See*—
Macpherson, H. C.
Macpherson, H. C., d.b.a. Macpherson & Co., and A. & B. Mackay and Co., San Francisco, Calif. 727,784–5, pub. 12–5–61. Cl. 49.
Mac's Super Gloss Co. Inc., Los Angeles, Calif. 727,840. Cl. 52.
Madison Chemical Corp., Maywood, Ill. 727,637, pub. 12–5–61. Cl. 6.
Madison Chemical Corp., Maywood, Ill. 727,797–9, pub. 12–5–61. Cl. 52.
Madison Supply and Equipment Co.: *See*—
Madison Chemical Corp.
Maison Mendessolle: *See*—
Rodina Inc.
Mallory & Co.: *See*—
Mallory, Stanley R., Jr.
Mallory, Stanley R., Jr., d.b.a. Mallory & Co., Chicago, Ill. 727,630, pub. 12–5–61. Cl. 6.
Malnove Specialty Box Co., Omaha, Nebr. 727,831. Cl. 39.
Marlmark Co.: *See*—
Tenser, Mark.
Massey, Thomas J., & Co., Inc., Richmond, Va. 618,776, canc. Cl. 102.
Mead Johnson & Co., Evansville, Ind. 154,589, ren. 2–20–62. Cl. 46.
Medford Mfg. Co.: *See*—
Mt. Pitt Co., The.
Medical Dairy Specialties, Inc.: *See*—
Brook Hill Farms, Inc.
Melville Shoe Corp., New York, N.Y. 618,695, canc. Cl. 39.
Mennen Co., The, Morristown, N.J. 727,790, pub. 12–5–61. Cl. 51.
Mennen Co., The, Morristown, N.J. 727,792–3, pub. 12–5–61. Cl. 51.
Mennen Co., The, Morristown, N.J. 727,801, pub. 12–5–61. Cl. 52.
Meredith Publishing Co., Des Moines, Iowa. 618,797, canc. Cl. 26.
Meriden Creamery Co., The, Kansas City, Mo., to Foremost Food & Chemical Co., San Francisco, Calif. 150,474, ren. 2–20–62. Cl. 46.
Metadier (Canada) Ltd., Montreal, Quebec, Canada. 727,664, pub. 12–5–61. Cl. 18.
Midwest Electronics Mfg. Corp., San Fernando, Calif. 618,586, canc. Cl. 21.
Millex Products, Chicago, Ill. 618,550, canc. Cl. 18.
Mil-Kay Corp. of America: *See*—
Mil-K-Botl Corp. of America, The.
Mil-K-Botl Corp. of America, The, to Mil-Kay Corp. of America, St. Louis, Mo. 393,032, ren. 2–20–62. Cl. 45.
Millers Forge Mfg. Corp., New York, N.Y. 727,701, pub. 12–5–61. Cl. 23.
Mills, Alden, The: *See*—
Kops Bros.
Mills Industries, Inc., Chicago, Ill. 618,667, canc. Cl. 31.
Mine Safety Appliances Co., Pittsburgh, Pa. 727,656, pub. 12–5–61. Cl. 14.
Minnesota Woolen Co., Inc., Duluth, Minn. 727,755. Cl. 39.
Mr. Boston Distiller Inc., Boston, Mass. 727,787, pub. 12–5–61. Cl. 49.
Modene Paint Co., Inc., The, Chelsea, Mass. 618,527, canc. Cl. 16.
Modern Mfg. Co., Inc., New York, N.Y. 727,754, pub. 12–5–61. Cl. 39.
Monsanto Chemical Co., St. Louis, Mo. 727,598–9, pub. 12–5–61. Cl. 1.
Morton, Harry E., Drexel Hill, Pa. 727,704, pub. 12–5–61. Cl. 26.
Mt. Pitt Co., The, d.b.a. Medford Mfg. Co., Medford, Oreg. 618,730, canc. Cl. 44.
Mount Vernon Mills, Inc.: *See*—
Mount Vernon-Woodberry Mills, Inc.
Mount Vernon-Woodberry Mills, Inc., to Mount Vernon Mills, Inc., Baltimore, Md. 394,214, ren. 2–20–62. Cl. 42.
Musolino and Sons, Inc., Alexandria, Va. 727,821–3. Cl. 15.
National Acme Co., The, Cleveland, Ohio. 618,627, canc. Cl. 23.
National Automobile Safety Service Association, Inc., Thomson, Ga. 618,820, canc. Cl. 100.
National Copper Paint Corp., Chicago, Ill. 394,116–17, ren. 2–20–62. Cl. 16.
National Farm Buildings and Supply Co., Lafayette, Ind. 618,471, canc. Cl. 12.
National Gypsum Co., Buffalo, N.Y. 727,651, pub. 12–5–61. Cl. 12.
National Parent-Teacher, The, Chicago, Ill. 727,733–4, pub. 12–5–61. Cl. 38.
National Steel Corp., Pittsburgh, Pa. 727,820. Cl. 14.
Nesco, Division of New York Shipbuilding Corp.: *See*—
New York Shipbuilding Corp.
New England Lock and Hardware Co., The, South Norwalk, Conn. 618,634, canc. Cl. 25.
New Jersey Zinc Co., The, New York, N.Y. 727,647, pub. 12–2–61. Cl. 6.
New York & Pennsylvania Co., Inc., New York, N.Y. 394,050, ren. 2–20–62. Cl. 37.
New York Shipbuilding Corp., d.b.a. Nesco, Division of New York Shipbuilding Corp., Milwaukee, Wis. 618,410, canc. Cl. 2.
Nicewarner Leather Co., Columbus, Ohio. 618,420, canc. Cl. 5.
Nihon Mishin Seizo Kabushiki Kaisha, Mizuho-ku, Nagoya, Japan. 618,633, canc. Cl. 24.
Nu-Maid Confections: *See*—
Ounmedian, Jacob B.
Nutshell Books, Inc., Chevy Chase, Md. 727,730, pub. 12–5–61. Cl. 38.
OK Van and Storage, El Paso, Tex. 618,778, canc. Cl. 105.
Olin Mathieson Chemical Corp.: *See*—
Winchester Repeating Arms Co.
Optics Mfg. Corp., Chicago, Ill. 618,648, canc. Cl. 26.
Ortho Pharmaceutical Corp., Raritan, N.J. 727,671, pub. 12–5–61. Cl. 18.
Osmose Wood Preserving Co. of America, Inc., Buffalo, N.Y. 727,628, pub. 12–5–61. Cl. 6.
Otto Maier Verlag, Ravensburg, Germany. 727,722, pub. 12–5–61. Cl. 38.
Ounmedian, Jacob B., d.b.a., Nu-Maid Confections, Grand Rapids, Mich. 618,809, canc. Cl. 46.
Ozark Opry: *See*—
Mace, Lee.
Pacific Coast Borax Co., Div. of Borax Consolidated, Ltd.: *See*—
Borax Consolidated, Ltd.
Pacific Tide Enterprises: *See*—
Cordell, Eugene V.
Packers Tar Soap, Inc., Mystic, Conn. 727,803, pub. 12–5–61. Cl. 52.
Pan American Trade Development Corp., of which Cosma Shoe Machinery is a division, New York, N.Y. 618,600, canc. Cl. 23.
Paramount Line, Inc., The, Pawtucket, R.I. 727,727, pub. 12–5–61. Cl. 38.
Parfen Co., Maryland Heights, Mo. 618,492, canc. Cl. 12.
Pass & Seymour, Inc., Syracuse, N.Y. 618,580, canc. Cl. 21.
Pat Arnolde's Tails: *See*—
Ronsanne Corp. of Washington, The.
Peavey, F. H., & Co., to F. H. Peavey & Co., Minneapolis, Minn. 21,191, ren. 2–20–62. Cl. 46.
Pecora Baby Top Products Co., West Hazleton, Pa. 618,734, canc. Cl. 46.
Peerless Camera Stores, Inc., New York, N.Y. 618,646, canc. Cl. 26.
Peerless Corp., The, New York, N.Y. 618,574–6, canc. Cl. 21.
Pemco Corp., Baltimore, Md. 727,627, pub. 12–5–61. Cl. 6.
Penick, S. B., & Co., New York, N.Y. 727,669, pub. 12–5–61. Cl. 18.
Penn Craft Hat Co., to John B. Stetson Co., Philadelphia, Pa. 392,742, ren. 2–20–62. Cl. 39.
Perditas Restaurant: *See*—
Bennett, Gordon W.
Petinco Systems, Inc.: *See*—
Bowser, S. F., & Co., Inc.
Pfeiffer Co., The: *See*—
Pfeiffer, S., Mfg. Co.
Pfeiffer, S., Mfg. Co., to The Pfeiffer Co., St. Louis, Mo. 393,214, ren. 2–20–62. Cl. 18.

Phaidon Press Ltd., London, England. 727,726, pub. 12–5–61. Cl. 38.
Phaidon Press Ltd., London, England. 727,737, pub. 12–5–61. Cl. 38.
Pharmacia Laboratories, Inc., New York, N.Y. 727,660, pub. 12–5–61. Cl. 18.
Phillips Associates, Inc., St. Paul, Minn. 618,731, canc. Cl. 44.
Pinaud, Ed, Inc.: *See*—
Pinaud, Inc.
Pinaud, Inc., to Ed. Pinaud, Inc., New York, N.Y. 393,084, ren. 2–20–62. Cl. 51.
Pittsburgh Coke & Chemical Co., Pittsburgh, Pa. 618,782, canc. Cl. 6.
Plant Protection Ltd., Yalding, Kent, England. 727,640, pub. 12–5–61. Cl. 6.
Plunkett Chemical Co.: *See*—
Plunkett, W. H.
Plunkett, W. H., d.b.a. Plunkett Chemical Co., to Plunkett Chemical Co., Chicago, Ill. 395,664–6, ren. 2–20–62. Cl. 52.
Polymer Corp. The, Reading, Pa. 727,606, pub. 12–5–61. Cl. 1.
Premoid Corp., West Springfield, Mass. 727,720, pub. 12–5–61. Cl. 37.
Products Research Co., Burbank, Calif., from Cummings & Sander Mfg. Corp., Los Angeles, Calif. 727,683, pub. 12–5–61. Cl. 19.
Produits Chimiques Ch. Monnet (Societe Anonyme), Paris, France. 618,447, canc. Cl. 6.
Pruyn, Leonard L., and Marjorie G. Pruyn, Los Angeles, Calif. 727,699, pub. 12–5–61. Cl. 23.
Pruyn, Marjorie G.: *See*—
Pruyn, Leonard L., and Marjorie G. Pruyn.
Purco: *See*—
Purse Co., The.
Purdue Frederick Co., The, New York, N.Y. 727,672, pub. 12–5–61. Cl. 18.
Puritan Sportswear Corp., The, New York, N.Y. 727,738–9, pub. 12–5–61. Cl. 39.
Purse Co., The, d.b.a. Purco, Chattanooga, Tenn. 727,729, pub. 12–5–61. Cl. 38.
Pyramid Rubber Co., The, Ravenna, Ohio. 727,833. Cl. 44.
Quasi-Arc Co. Ltd., The, Westminster & London, England, to The British Oxygen Co. Ltd., London, England. 391,605, ren. 2–20–62. Cl. 14.
Quikut Inc.: *See*—
Clyde Castings Co., The.
RCA Mfg. Co., Inc., Camden, N.J., to Radio Corp. of America, New York, N.Y. 394,427, ren. 2–20–62. Cl. 26.
Radio Corp. of America: *See*—
RCA Mfg. Co., Inc.
Rahr Malting Co., Manitowoc, Wis. 727,780, pub. 12–5–61. Cl. 48.
Rath Packing Co., The, Waterloo, Iowa. 727,770, pub. 12–5–61. Cl. 46.
Red Wing Shoe Co., Inc., Red Wing, Minn. 727,759, pub. 12–5–61. Cl. 39.
Reed, Maurice J., d.b.a. Claremont Products, Cranford, N.J. 618,669, canc. Cl. 32.
Reliance Mfg. Co., New York, N.Y. 618,700, canc. Cl. 39.
Republic Drug Co., Inc., Buffalo, N.Y. 727,667, pub. 12–5–61. Cl. 18.
Roach & Musser Co., Muscatine, Iowa. 618,482, canc. Cl. 12.
Roberts Hart, Inc., Keene, N.H. 727,752, pub. 12–5–61. Cl. 39.
Robertson, H. H., Co., Pittsburgh, Pa. 395,248, ren. 2–20–62. Cl. 12.
Robinson, A., Inc. of Altoona, d.b.a. Albudon Products Co., Altoona, Pa. 727,665–6, pub. 12–5–61. Cl. 18.
Rodina Inc., d.b.a. Maison Mendessolle, San Francisco, Calif. 618,762, canc. Cl. 51.
Ronsanne Corp. of Washington, The, d.b.a. Pat Arnolde's Talls, Washington, D.C. 727,740, pub. 12–5–61. Cl. 39.
Roth, Kenneth, Paterson, N.J. 727,838. Cl. 52.
Sagner's, A., Son, Baltimore, Md. 618,715, canc. Cl. 39.
Saila Societa Per Azioni Industria Liquirizia Abruzzese, Silvi Marina (Abruzzi-Italy). 727,837. Cl. 46.
Salada-Shirriff-Horsey, Inc.: *See*—
Hansen's, Chr., Laboratory, Inc.
Samann, Julius, Zurich, Switzerland. 618,452, canc. Cl. 6.
Sani Distributors, Inc., New York, N.Y. 727,763, pub. 12–5–61. Cl. 42.
Sarkes Tarzian, Inc., Bloomington, Ind. 727,825. Cl. 21.
Santoline Beauty Products, Inc., Basking Ridge, N.J. 727,795, pub. 12–5–61. Cl. 51.
Sawyer's, Inc., Portland, Oreg. 727,696, pub. 12–5–61. Cl. 23.
Schenley Distillers, Inc., New York, N.Y. 618,541, canc. Cl. 18.
Schenley Distillers, Inc., New York, N.Y. 618,548, canc. Cl. 18.
Schjeldahl, G. T., Co., Northfield, Minn. 727,595, pub. 12–5–61. Cl. 1.
Schiff, Connie L., d.b.a. Stikette, Los Angeles, Calif. 618,421, canc. Cl. 5.
Science Research Associates, Inc., Chicago, Ill. 727,724, pub. 12–5–61. Cl. 38.
Science Research Associates, Inc., Chicago, Ill. 727,815, pub. 12–5–61. Cl. 107.
Scott, Patricia, Inc., New York, N.Y. 618,719, canc. Cl. 42.
Scully Signal Co., Cambridge, Mass. 618,495, canc. Cl. 13.
Seaborn, Robert H., Greenville, N.C. 618,539, canc. Cl. 18.
Seamless Rubber Co., The, New Haven, Conn. 727,693, pub. 12–5–61. Cl. 22.
Sexauer Co., The, d.b.a. The Sexauer Co., Brookings, S. Dak. 727,604, pub. 12–5–61. Cl. 1.
Shapiro, H. B., Miami, Fla. 618,764, canc. Cl. 51.
Shell Oil Co., New York, N.Y. 727,639, pub. 12–5–61. Cl. 6.
Shellbuilder Co., The, Houston, Tex. 727,612, pub. 12–5–61. Cl. 1.
Siemens & Halske Aktiengesellschaft, Munich, Germany. 727,687. Pub. 11–28–61, Cl. 21, Cl. 26. (Consolidated certificate, Classes 21 and 26.)
Sierra Electric Corp., Gardena, Calif. 727,688, pub. 12–5–61. Cl. 21.
Sierra Electronic Corp., San Carlos, Calif. 618,656, canc. Cl. 26.
Simmer, Simmerwerke W., K.G., Kufstein, Austria. 727,594, pub. 12–5–61. Cl. 1.
Ski Antics, Inc., Minneapolis, Minn. 618,779, canc. Cl. 107.
Societe Civille Eca, Meudon-Bellevue, Seine, France. 618,558, canc. Cl. 19.
Societe Nobel Bozel, Paris, France. 727,826. Cl. 22.
Sokeland, E., & Sohne, Berlin, Germany. 727,836. Cl. 46.
Solar Products, Inc., Wichita Falls, Tex. 727,804, pub. 12–5–61. Cl. 52.
South Australian Fishermen's Co-operative Ltd., d.b.a. South Australian Fishermen's Co-operative Ltd., Adelaide, Australia. 727,775, pub. 12–5–61. Cl. 46.
Southwick, Modell, d.b.a. Tropical Mfg. Co., San Jose, Calif. 727,789, pub. 12–5–61. Cl. 50.
Spacers, Inc., Moline, Ill. 727,818. Cl. 13.
Spectra-Strip Wire & Cable Corp., Garden Grove, Calif. 727,641, pub. 12–5–61. Cl. 6.
Stahlgruber Otto Gruber and Co., Munich, Germany. 727,709, pub. 12–5–61. Cl. 35.
Stanson Chemicals, Edgewater, N.J. 727,839. Cl. 52.
Stearns & Foster Co., The, Cincinnati, Ohio. 727,707, pub. 12–5–61. Cl. 32.
Sterling Drug Inc., New York, N.Y. 727,681, pub. 12–5–61. Cl. 18.
Stetson, John B., Co.: *See*—
Penn Craft Hat Co.
Stevens, J. P., & Co., Inc., New York, N.Y. 727,764, pub. 12–5–61. Cl. 42.
Stewart-Warner Corp., Chicago, Ill. 727,638, pub. 12–5–61. Cl. 6.
Stikette: *See*—
Schiff, Connie L.
Stitzel-Weller Distillery, Inc., Louisville, Ky. 727,786, pub. 12–5–61. Cl. 49.
Straus Broadcasting Group, The: *See*—
Straus, R. Peter.
Straus, R. Peter, d.b.a. The Straus Broadcasting Group, New York, N.Y. 727,810, pub. 12–5–61. Cl. 104.
Stromberg-Carlson Co., to General Dynamics Corp., Rochester, N.Y. 618,582, canc. Cl. 21.
Stylon Corp., Milford, Mass. 727,653, pub. 12–5–61. Cl. 12.
Stylors, Inc., Jacksonville, Fla. 727,791, pub. 12–5–61. Cl. 51.
Sutone Corp., Los Angeles, Calif. 727,824. Cl. 19.
Sutton Cosmetics, Inc., New York, N.Y. 392,356, ren. 2–20–62. Cl. 51.
Swift & Co., Chicago, Ill. 148,934, ren. 2–20–62. Cl. 52.
Talon, Inc., Meadville, Pa. 618,519, canc. Cl. 13.
Taylor, Taylor & Hobson Ltd., Leicester, England. 618,642, canc. Cl. 26.
Teuser, Mark, d.b.a. Marlmark Co., Los Angeles, Calif. 618,659, canc. Cl. 26.
Teplitz, Leo, Zurich, Switzerland. 618,685, canc. Cl. 39.
Teweles, L., Seed Co., Milwaukee, Wis. 727,600, pub. 12–5–61. Cl. 1.
Texize Chemicals, Inc., Greenville, S.C. 727,619, pub. 12–5–61. Cl. 6.
Textron American, Inc.: *See*—
American Woolen Co.
Thompson, J. L., Co.: *See*—
Thompson, J. L.
Thompson, J. L., d.b.a. J. L. Thompson Co., Somerton, Ariz. 727,776, pub. 12–5–61. Cl. 46.
Thompson, William C., Los Angeles, Calif. 618,724, canc. Cl. 44.
Throwny Corp. Inc., New York, N.Y. 727,829. Cl. 37.
Tide Water Associated Oil Co., New York, N.Y. 618,448–51, canc. Cl. 6.
Tioga Mill & Elevator Co., Waverly, N.Y. 107,111, canc. Cl. 46.
Trans American Van Service, Inc., Chicago, Ill. 727,811, pub. 12–5–61. Cl. 105.
Tri-Valley Packing Association: *See*—
California Co-operative Canneries.
California Growers Association, Inc.
Tropical Mfg. Co.: *See*—
Southwick, Modell.
True Temper Corp., Cleveland, Ohio. 727,655, pub. 11–8–60. Cl. 14.
Tumbleweed Designs, Inc., Monahans, Tex. 727,609, pub. 12–5–61. Cl. 1.
Union Asbestos & Rubber Co., Chicago, Ill. 618,676, canc. Cl. 34.
Union Carbide Corp.: *See*—
Carbide and Carbon Chemicals Corp.
Union Circulation Co.: *See*—
Union Circulation Co., Inc.
Union Circulation Co., Inc., to Union Circulation Co., New York, N.Y. 618,769, canc. Cl. 100.
Union Sand and Supply Corp., The, Painesville, Ohio. 618,491, canc. Cl. 12.
Uni-Tech Chemical Mfg. Co., Panorama City, Calif. 727,633–4, pub. 12–5–61. Cl. 6.
United Business Service Co., Boston, Mass. 727,731, pub. 12–5–61. Cl. 38.
United States Department of Agriculture, Washington, D.C. 392,502, ren. 2–20–62. Cl. 46.
United States Envelope Co., Springfield, Mass. 155,298, ren. 2–20–62. Cl. 37.
United States Shoe Corp., The: *See*—
Wise, Robert, Co., The.

Upjohn Co., The, Kalamazoo, Mich. 727,679–80, pub. 12–5–61. Cl. 18.
Vandercook & Sons, Inc., Chicago, Ill. 727,698, pub. 12–5–61. Cl. 23.
Velth Chemical Co., Inc., Fresno, Calif. 618,458, canc. Cl. 6.
Vellumoid Co., The, Worcester, Mass. 618,621, canc. Cl. 23.
Vendo Co., The, Kansas City, Mo. 727,697, pub. 12–5–61. Cl. 23.
Venus Pen & Pencil Corp., New York, N.Y. 727,719, pub. 12–5–61. Cl. 37.
Vinton, Arthur R., Rock Tavern, N.Y. 618,808, canc. Cl. 46.
Vitaminerals, Inc., Glendale, Calif. 727,673, pub. 12–5–61. Cl. 18.
Vita-Var Corp.: *See*—
Goheen Corp., The.
Waldom Electronics, Inc., Chicago, Ill. 618,567, canc. Cl. 21.
Walker Mfg. Co.: *See*—
Walker, William H.
Walker, William H., d.b.a. Walker Mfg. Co., Calumet City, Ill. 618,517, canc. Cl. 13.
Walker-Wilson Travel, Ltd., Baltimore, Md. 727,812, pub. 12–5–61. Cl. 105.
Wallace, R., & Sons Mfg. Co., Wallingford, Conn. 618,613, canc. Cl. 23.
Walnut Grove Products Co., Inc., Atlantic, Iowa. 727,632. Pub. 10–31–61, Cl. 6, Cl. 18, Cl. 46, Cl. 50. (Consolidated certificate, Classes 6, 18, 46, and 50.)
Warner-Lambert Pharmaceutical Co.: *See*—
Lambert Pharmacal Co.
Warren, Rev. Maurice R., d.b.a. Fun-Way Games, Pellston, Mich. 727,692, pub. 12–5–61. Cl. 22.
Wasco Flashing Co., Cambridge, Mass. 608,966, canc. Cl. 12.
Wassell Organization, Inc., Westport, Conn. 727,711, pub. 12–5–61. Cl. 37.
Western Grocer Co., Marshalltown, Iowa, to Consolidated Foods Corp., Chicago, Ill. 154,734, ren. 2–20–62. Cl. 46.
Western Tablet & Stationery Corp., Dayton, Ohio. 727,713, pub. 12–5–61. Cl. 37.
Westex Boot Co.: *See*—
Westex Boot & Shoe Co.
Westex Boot & Shoe Co., to Westex Boot Co., Wichita Falls, Tex. 618,692, canc. Cl. 39.
Weston, George, Ltd., Toronto, Ontario, Canada. 727,773, pub. 12–5–61. Cl. 46.
Wheeldex Mfg. Co., Inc., Peekskill, N.Y. 727,706, pub. 12–5–61. Cl. 32.
Whitbread & Co. Ltd., London, England. 727,782, pub. 12–5–61. Cl. 48.
Whiteside, Richard H., d.b.a. The Aqua-Sun Mfg. Co., Corcoran, Calif. 618,668, canc. Cl. 32.
Williams Mfg. Co., The, Portsmouth, Ohio. 727,751, pub. 12–5–61. Cl. 39.
Wilson Brothers, Chicago, Ill. 150,650, ren. 2–20–62. Cl. 39.
Winchester Repeating Arms Co., New Haven, Conn., to Olin Mathieson Chemical Corp., East Alton, Ill. 151,645, ren. 2–20–62. Cl. 23.
Wire and Steel Products Co., Inc., The, Brooklyn, N.Y. 618,606, canc. Cl. 23.
Wisconsin Container Corp., Menasha, Wis. 727,716, pub. 12–5–61. Cl. 37.
Wise, Robert, Co., The, to The United States Shoe Corp., Cincinnati, Ohio. 151,287, ren. 2–20–62. Cl. 39.
Wohl, Sidney, d.b.a. Doctor's Orders Products, Chicago, Ill. 727,766, pub. 12–5–61. Cl. 46.
Wood, Evelyn, Reading Dynamics Corp., Washington, D.C. 727,813, pub. 12–5–61. Cl. 107.
Wood, Fay, Corp., New Rochelle, N.Y. 618,818–9, canc. Cl. 51.

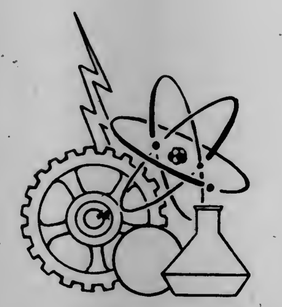
U.S. GOVERNMENT PRINTING OFFICE: 0—1962

Official Gazette

UNITED STATES PATENT OFFICE

Containing Patents, Designs & Trademarks issued

February 27, 1962 • Volume 775 • Number 4



PUBLISHED WEEKLY BY AUTHORITY OF CONGRESS

Contents

Patents

	Page
Issue of February 27, 1962	893
New Applications Received	893
Notices	
Title 37—Patents, Trademarks, and Copyrights	893
Rules 247 and 262(b)	894
Board of Appeals Decisions Rendered in the Month of January 1962	894
Disclaimers	894
Disclaimer and Dedication	894
Patents Available for Licensing or Sale	894
Condition of Patent Applications	895
Decisions in Patents and Trademark Cases	
Ex Parte Olah et al.	897
Patent Suits	900
Reissue Patents Granted	902
Plant Patents Granted	903
Patents Granted	
General and Mechanical	904
Chemical	1062
Electrical	1098
Design Patents Granted	1144
Index of Patentees	i
Classification of Patents	xxiii

Trademarks

Issue of February 27, 1962	TM 121
Applications Filed	TM 121
Condition of Trademark Applications	TM 121
Notices	
Oppositions Under Section 13 of the Trademark Act of 1946	TM 121
Service by Publication	TM 121
Trademark Suits	TM 121
Marks	
Marks Published for Opposition (357)	TM 123
Registrations Issued	
Principal Register	TM 149
Supplemental Register	TM 154
Registrations Renewed	TM 156
Registrations Canceled	TM 156
Registrations Amended, Disclaimed, Corrected, etc.	TM 157
Index of Registrants	TM i

The following are mailed under direction of the Superintendent of Documents, Government Printing Office, Washington 25, D.C., to whom all subscriptions should be made payable and all communications addressed:

The OFFICIAL GAZETTE issued weekly; subscription $30.00 per annum, foreign mailing $10.00 additional; single copies 75 cents each.

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies 20 cents each.

DECISION LEAFLETS, subscription price, $3.00 per annum, foreign mailing, $2.00 additional; single copies, 10 cents each.

CIRCULARS OF GENERAL INFORMATION concerning PATENTS or TRADEMARKS, price 15 cents each.

PRINTED COPIES OF PATENTS are furnished by the Patent Office at 25 cents each; copies of TRADEMARKS and DESIGN PATENTS at 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

PATENTS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

PART 3—FORMS FOR PATENT CASES

MISCELLANEOUS AMENDMENTS

The following amendments are made, to take effect thirty days after publication in the Federal Register.

The text of amendments numbered 2 to 7 was published in the Federal Register for August 15, 1961 (26 F.R. 7550–1), and all persons who desired were invited to submit written data, views, arguments or suggestions in connection with the proposed amendments and the amendments are adopted after consideration of all the material submitted.

The text of a proposed amendment corresponding to that listed first was similarly published in the Federal Register for October 7, 1961 (26 F.R. 9514–5), and an oral hearing was held on November 20, 1961. Objections to the breadth of the proposal as published were considered with the result that it is narrowed to the amendment as adopted, substantially in accordance with suggestions which were made. As a result of this change, the manner of taking effect originally announced is considered unnecessary and the new provision may be applied to any decision in accordance with its terms.

1. Section 1.14 is amended by adding a new paragraph (d) as follows:

§ 1.14 *Patent applications preserved in secrecy.*

• • • • • • • •

(d) Selected decisions of the Board of Appeals, or of the Commissioner, in abandoned applications not otherwise open to public inspection (paragraph (b) of this section) may be published or made available for publication at the Commissioner's discretion, unless the applicant timely presents sufficient reasons for not doing so. The applicant will be notified, through the attorney of record in the application file, when it is proposed to release such a decision and a time not less than thirty days set for presenting any such reasons. The fact that the subject matter of the application has not been made public in any manner, or that the same subject matter is being prosecuted in a pending application, will be considered sufficient reason for not releasing the decision if the applicant so requests unless the text of the decision contains no description of such subject matter. Other reasons presented will be duly considered.

2. Paragraph (a) of § 1.203 is amended by cancelling the last sentence and inserting a sentence in lieu thereof; as amended paragraph (a) reads as follows:

§ 1.203 *Preparation for interference between applications; suggestion of claims for interference.*

(a) Before the declaration of interference, it must be determined that there is common patentable subject matter in the cases of the respective parties, patentable to each of the respective parties, subject to the determination of the question of priority. Claims in the same language, to form the counts of the interference, must be present or be presented, in each application; except that, in cases where, owing to the nature of the disclosures in the respective applications, it is not possible for all applications to properly include a claim in identical phraseology to define the common invention, an interference may be declared, with the approval of the Commissioner, using as a count representing the interfering subject matter a claim differing from the corresponding claims of one or more of the interfering applications by an immaterial limitation or variation.

3. Paragraph (a) of § 1.232 is amended by cancelling "or if the interference involves a patent, a claim of which has been copied in modified form." and inserting in lieu thereof: "or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a)." As amended, paragraph (a) reads as follows:

§ 1.232 *Motions to dissolve.*

(a) Motions to dissolve an interference may be brought on the ground (1) that there has been such informality in declaring the same as will preclude the proper determination of the question of priority of invention, or (2) that the claims forming the counts of the interference are not patentable, or are not patentable to a particular applicant, while being patentable to another party, or (3) that a particular party has no right to make the claims, or (4) that there is no interference in fact if the interference involves a design or plant patent or application, or as to a claim included as a count under the last sentence of § 1.203(a) or the last sentence of § 1.205(a).

4. Paragraph (d) of § 1.233 is amended to read as follows:

§ 1.233 *Motions to amend.*

• • • • • • • •

(d) The proposed claims (1) must be indicated to be patentable in the opinion of the moving party in each of the applications involved in the motion and (2) must, unless they stand allowed, be distinguished from the prior art of record or sufficient other reason for their patentability given. Furthermore, (3) the reason why an additional count is necessary must be stated. When more than one count is proposed, the motion (4) must point out wherein they differ materially from each other and (5) must show why each proposed count is necessary to the interference. The proposed claims (6) must also be applied to the disclosure of each application involved in the motion, except as to an application in which the claims already appear and the claims identified as originating therein.

5. Section 1.235 is amended to read as follows:

§ 1.235 *Motions relating to burden of proof.*

Any party may bring a motion to shift the burden of proof (a) on the ground that he is entitled to the benefit of the

New Applications Received During December 1961

Patents	7,187
Designs	373
Plant Patents	8
Reissues	19
Total	7,587

Issue

Patents	904	No. 3,022,508 to No. 3,023,411, incl.
Designs	29	No. 192,285 to No. 192,313, incl.
Plant Patents	1	No. 2,132
Reissues	3	No. 25,128 to No. 25,130, incl.
Total	937	

filing date of an earlier domestic or foreign application, or (b) on the ground that an opposing party is not entitled to the benefit of an earlier application of which he has been given the benefit in the declaration (see § 1.224).

6. Paragraph (g) of § 1.341 is amended by cancelling "in which he served, on the date he left said division" and inserting in lieu thereof "during his period of service therein". As amended, paragraph (g) reads as follows:

§ 1.341 *Registration of attorneys and agents.*

* * * * * * *

(g) *Former examiners.* No person who has served in the examining corps of the Patent Office will be registered after termination of his services, nor, if registered before such service, be reinstated, unless he undertakes (1) not to prosecute or aid in any manner in the prosecution of any application pending in any examining division during his period of service therein; and (2) not to prepare or prosecute nor to assist in any manner in the preparation or prosecution of any application of another filed within two years after the date he left such division, and assigned to such division, without the specific authorization of the Commissioner. Associated and related classes in other divisions may be required to be included in the undertaking or designated classes may be excluded. In case application for registration or reinstatement is made after resignation from the Office, the applicant will not be registered, or reinstated, if he has prepared or prosecuted, or assisted in the preparation or prosecution of any such application as indicated in this paragraph.

7. Section 3.47 is amended by changing the part of the form following the subheading "Proof of Service". As amended § 3.47 reads as follows:

§ 3.47 *Interference; notice of taking testimony.*

_____ } Interference No. _____
v. }
_____, 19____

_____
(Name of opposing attorney)

_____
(Address of opposing attorney)

SIR: You are hereby notified that on _____, _____, 19____, at____ o'clock in the forenoon at the office of _____, _____ Street, _____, _____, I shall proceed to take testimony on behalf of the party _____ in the above identified interference.

The witnesses to be examined are:

(Name of witnesses)	(Residence of witnesses)
_____	_____
_____	_____

The examination will continue from day to day until completed. You are invited to attend and cross-examine.

_____
(Signature of attorney)

PROOF OF SERVICE

_____, 19____

I hereby certify that on _____, 19____, I served a copy of the foregoing notice of taking testimony upon _____, the attorney for the party _____, by mailing a copy thereof to him at his address as set out in the notice.

_____
(Signature of attorney)

(Sec. 1, 66 Stat. 793, 35 U.S.C. 6. Interprets or applies sec. 1, 66 Stat. 801; 35 U.S.C. 122, 135)

DAVID L. LADD,
Commissioner of Patents.

Approved:
HICKMAN PRICE,
Assistant Secretary of Commerce for Domestic Affairs.

[F.R. Doc. 62-915; Filed, Jan. 26, 1962; 8:46 a.m.]

Published in 27 F.R. 829, 830.

Rules 247 and 262(b)

Attention is directed to the fact that Rule 247 does not exclude an abandonment of the contest or of the application from service upon the other parties in an interference. Many practitioners appear to be confusing these papers with an abandonment of the invention which is included in exception (g) of the rule.

Also, it should be noted that where testimony has been taken in an interference, and an abandonment of the contest or of the application is filed, Rule 262(b) specifically requires consent by all the other parties, if effect is to be given thereto.

E. L. REYNOLDS,
Feb. 8, 1962. *First Assistant Commissioner.*

Disclaimer

2,968,135.—*Stephen A. Boettcher*, Evanston, and *Jack C. Page*, Palatine, Ill. LAPPING MACHINE. Patent dated Jan. 17, 1961. Disclaimer filed Jan. 22, 1962, by the assignee, *Speedlap Corporation*.

Hereby enters this disclaimer to claim 7 of said patent.

Disclaimer and Dedication

2,430,654.—*Clayton B. Voege*, Indianapolis, Ind. WALL STRUCTURES. Patent dated Nov. 11, 1947. Disclaimer and dedication filed Jan. 3, 1962, by the assignee, *John Sneed*.

Hereby disclaims and dedicates to the public the terminal part of the term of said patent.

Patents Available for Licensing or Sale

2,493,595. Rotatable Spray Head. H. M. Rieger, Montgomery County, Ohio. Correspondence to: James C. Denier, 5409 Colerain Ave., Cincinnati 23, Ohio.

2,952,302. Chair (Contour Type Patio Chair). Jacob Mittlieder, 16828 Barbee St., Fontana, Calif.

3,010,723. Puzzle Game. William J. Moss, 20 Welland Ave., Waterbury, Conn.

3,011,182. Bed Sheeting Arrangement. Alice Rowe Burks, 1413 Morton Ave., Ann Arbor, Mich.

3,017,837. Multi Stage Centrifugal Pump. Thomas E. Judd, 1960 Browning Ave., Salt Lake City 8, Utah.

General Electric Company is prepared to grant non-exclusive licenses under the following 9 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 4 patents may be addressed to: Patent Counsel, Turbine Division, General Electric Company, 1 River Road, Bldg. #53, Schenectady 5, N.Y.

2,988,656. Method and Apparatus for Explosion Protection for Hydrogen-Cooled Generators.

3,002,374. Hydraulic Thrust Bearing Wear Indicator.

3,004,804. Pivoted Shoe Bearing With Force-Feed Lubrication.

3,005,119. Ventilation of the End Windings of Large Dynamoelectric Machine Rotors.

Applications for license under the following 3 patents may be addressed to: General Electric Company, Department Patent Counsel, Missile and Space Vehicle Dept., Valley Forge Space Technology Center, P.O. Box 8555, Philadelphia 1, Pa.

3,004,489. Aerodynamic Structural Separation Device and Method.

3,006,582. Stabilizing Device.

3,007,072. Radial Type Arc Plasma Generator.

Applications for license under the following 2 patents may be addressed to: Patent Counsel, General Engineering Laboratory, General Electric Company, 1 River Road, Schenectady 5, N.Y.

2,961,138. Feed Mechanism.

2,985,775. Electronic Switch With Comparator.

Board of Appeals Decisions Rendered in the Month of January 1962

Examiner affirmed	440
Examiner affirmed in part	70
Examiner reversed	92
Total	602

CONDITION OF PATENT APPLICATIONS AS OF DECEMBER 31, 1961

Total number of pending applications (excluding Designs)	195,563
Total number of pending Design applications	5,704
Total number of applications awaiting action (excluding Designs)	96,342
Total number of Design applications awaiting action	1,854
Date of oldest new application	Sept. 23, 1960
Date of oldest amended application	Sept. 12, 1960

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65, 68.
(III) REYNOLDS, E.R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) SPINTMAN, S., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) WHITMORE, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	4-3-61	4-28-61
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	5-29-61	5-18-61
3. (VII) MARMELSTEIN, N. (WINDHAM, R., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloy Electrical Resistors	1-13-61	1-13-61
4. (VI) FALLER, E. A., Material or Article Handling	4-3-61	4-4-61
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	1-23-61	1-5-61
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	1-16-61	1-9-61
7. (IV) ANDERSON, E. G., Optics	2-20-61	2-13-61
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	5-2-61	5-2-61
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	5-16-61	5-1-61
10. (VI) BOYD, S. (HORTON, A. M., acting), Firearms; Ordnance; Ammunition; Explosive Charge Making	3-17-61	2-24-61
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	2-6-61	1-30-61
12. (III) DURHAM, B. G., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	1-5-61	12-14-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-27-60	1-9-61
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal; Metal Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	12-23-60	11-4-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	4-18-61	3-21-61
16. (II) ANDRUS, L. M., Telephony Modulators; Radio Detectors; Telemetering Systems; Pulse Modulation Telegraph Systems	12-30-60	1-4-61
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	11-21-60	11-23-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Measuring Speed or Acceleration Power Driven Conveyors	5-3-61	4-28-61
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	3-13-61	2-10-61
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	4-17-61	4-14-61
21. (III) MADER, R. C., Textiles	1-19-61	1-5-61
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	2-27-61	1-3-61
23. (VI) SMILOW, L., Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters; Education	5-31-61	6-5-61
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	3-27-61	4-4-61
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Wood Treating Apparatus; Paper Making	2-2-61	2-1-61
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	1-3-61	1-3-61
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-3-61	2-1-61
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Wheel Substitutes; Hoists; Elevators; Pneumatic Dispatch; Store Service; Chutes	1-6-61	12-9-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod and Packed Joints; Tool-Handling Fastenings	2-10-61	1-10-61
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	5-9-61	4-26-61

DIVISIONS, EXAMINERS, AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) STERMAN, M., Carbon Chemistry (part) e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils; Distillation	12-1-60	12-1-60
32. (VII) MARTIN, H. L., Gas and Liquid Contact Apparatus; Heat Exchange; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	2-6-61	2-8-61
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	1-9-61	2-8-61
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Agitating	1-31-61	1-24-61
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	3-8-61	3-30-61
36. (V) EVANS, R. L., Measuring and Testing (part)	12-19-60	1-9-61
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	12-30-60	1-16-61
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	12-16-60	12-16-60
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-23-61	12-15-60
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	4-11-61	4-7-61
41. (II) LOVEWELL, N. N., Recorders; Sound Recording; Television; Telegraphy (part); Piezoelectric Devices	1-6-61	1-6-61
42. (II) CAPELLI, S.W., Electric Signaling (part); Non-linear Reactor Systems	12-12-60	12-8-60
43. (I) KNIGHT, W. B., Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	4-12-61	3-15-61
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-23-60	9-12-60
45. (VI) MANIAN, J. A., Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	4-10-61	5-8-61
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-2-60	10-6-60
47. (VI) ARNOLD, P., Mining, Quarrying, and Ice Harvesting; Motor Vehicles: Land Vehicles	4-3-61	3-16-61
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-1-60	11-4-60
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Earth Boring	1-27-61	1-16-61
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber	1-24-61	2-20-61
51. (II) WESTBY, G. N., Antennas; Oscillators; Tuners; Miscellaneous Electron Space Discharge Device Systems; Transistor and Nonlinear Conductor Systems	12-1-60	12-1-60
52. (V) LE ROY, C. A., Supports and Racks; Separating and Assorting Solids (part)	5-22-61	5-29-61
53. (IV) NINAS, O. A., Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures, or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	3-16-61	4-7-61
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	10-20-60	11-1-60
55. (VII) HOFFMAN, R. J., Surgery; Dentistry; Artificial Body Members	12-13-60	12-19-60
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	1-9-61	1-6-61
57. (III) MILLER, A. B. (TOMLIN, C. W., acting), Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	11-9-60	12-9-60
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Cutting	4-3-61	4-4-61
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	12-23-60	12-2-60
60. (I) MANGAN, P. E., Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-3-60	10-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	4-13-61	4-27-61
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices, Mechanical Guns and Projectors; Photographic Apparatus	1-30-61	1-6-61
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-27-60	12-14-60
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-27-60	1-9-61
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers; Electric Signaling (part)	11-3-60	11-4-60
66. (V) LISANN, L, Geometric Instruments; Measuring and Testing (part); Weighing Scales	10-5-60	10-3-60
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Adhesive Bonding (Laminated Fabrics); Ornamentation	1-23-61	2-28-61
68. (II) BURNS, W. W., JR., Data Processors; Digital and Analog Computers	1-24-61	1-23-61
81. (III) MONCURE, J. A., Industrial Arts	8-30-61	8-23-61
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	8-24-61	9-1-61
91. BAILEY, J. S. (KENT, A. P., acting), Glass	12-14-60	12-19-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	5-3-61	3-28-61
93. WAHL, R. A., Wire Working	7-20-61	5-3-61
94. BERLOWITZ, W., Gas Separation	2-10-61	1-11-61
95. ANGEL, C. D., Metallic Building Structures	2-8-61	2-1-61
M. E. DIV. A (I) GASTON, L. H. (LIEBMAN, M., acting), Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes—Butadiene	3-13-61	2-7-61

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during February 1962, except those which may have been extended under the Provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents ..... Numbers 2,368,613 to 2,370,612 inclusive
Plant Patents ..... Numbers 649 to 651 inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

In the United States Patent Office
Before the Board of Appeals

EX PARTE OLAH ET AL.

Appeal No. 328—30. Decided November 8, 1960

1. PATENTABILITY—REFERENCE—STATUTORY BAR UNDER 35 U.S.C. 102(b)—APPLICABILITY OF 35 U.S.C. 21.

"While, considering only the specific language of 102(b) and the fact that the phrase 'taking any action or paying any fee in the United States Patent Office' might normally be taken as referring to actions in connection with applications which are already on file, * * * it could be held that section 21 does not apply to 102(b), nevertheless * * * in considering the patent law as a whole, section 21 should be taken in a broad sense and applied to the filing of an original application for patent, in view of preceding applications to similar situations elsewhere in the statute and the results of these interpretations, to maintain uniformity of meaning of various sections of the statute relating to the date of filing applications."

2. APPLICATION—FILING UNDER 35 U.S.C. 119—APPLICABILITY OF 35 U.S.C. 21.

"The Patent Office has specifically interpreted 35 U.S.C. 21 and its predecessor, section 14 of the Act of 1927, as applying to the twelve-months' period from the foreign filing date for filing on application in the United States with the right of priority of the foreign application."

3. SAME—SAME—SAME—INTERNATIONAL CONVENTION FOR THE PROTECTION OF INDUSTRIAL PROPERTY—EXTENDING ONE YEAR PERIOD WHEN PATENT OFFICE CLOSED ON LAST DAY.

"While the International Convention for the Protection of Industrial Property requires that the one-year period of priority be extended when the last day falls on a day on which the Patent Office is closed for receipt of applications (Article 4C(3), 613 O G. 23), this action of the Patent Office was not under the Convention, since the Convention is not self-executing and requires legislation to carry it into effect, but its action has been under the statute, namely, 35 U.S.C. 119, and its predecessor, taking into consideration section 21 and its predecessor."

4. SAME—SAME—SAME.

"The last clause of the first paragraph of section 119 repeats the statutory bars of section 102(b) as applying from the filing date of the application in the United States, even though that application is entitled to the right of priority for other purposes. The expression 'more than one year' before the date of filing in the United States appears twice in connection with this repetition of the bars recited in 102(b). The time 'one year' as it appears in the last part of section 119 must necessarily also be considered as modified by section 21, otherwise the right conferred by the first part of section 119 could be entirely nullified by a publication occurring after the priority date."

5. PATENTABILITY—REFERENCE—STATUTORY BAR UNDER 35 U.S.C. 102(d)—APPLICABILITY OF 35 U.S.C. 21.

On the matter of the applicability of 35 U.S.C. 21, *Held*, with respect to 35 U.S.C. 102(d), that "The 'twelve months' specified here must also be considered in the same manner as the 'twelve months' of section 119, otherwise the right of priority granted by section 119 could be rendered nugatory by events occurring after the priority date."

APPEAL from the Examiner. Serial No. 702,754 (now Patent No. 3,000,986).

REVERSED.

Griswold and Burdick, *Lester J. Dankert* and *G. V. Moore* for appellants.

Before FEDERICO, ASP and MAGIL, *Examiners-in-Chief*

FEDERICO, *Examiner-in-Chief*.

The claims of this application have been rejected in view of the

publication of the same invention, by appellants themselves, in the issue of the magazine Nature which was published on December 15, 1956. The instant application was filed on December 16, 1957, one year and a day later, and a patent has been refused on the ground that the invention was described in a printed publication more than one year prior to the date of the application for patent in the United States, in accordance with 35 U.S.C. 102(b). This section of the statute provides that a patent cannot be obtained if:

"the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States,"

A patent is in terms barred to appellants by this section, standing alone, but appellants' position is that December 15, 1957, the last day of the year from the date of the publication, fell on Sunday, and hence, by virtue of the language of 35 U.S.C. 21, they are permitted to file the application on the following Monday, namely, December 16, 1957, without losing the right to a patent. As far as we have been able to ascertain, the effect, if any, of section 21 (or its predecessor) on section 102(b) (or its predecessor) does not appear to have been decided.

35 U.S.C. 21 reads as follows:

"When the day, or the last day, for taking any action or paying any fee in the United States Patent Office falls on Saturday, Sunday, or a holiday within the District of Columbia, the action may be taken, or the fee paid, on the next succeeding secular or business day."

If this section applies to section 102(b) to extend the one year period therein provided, then the publication would not bar a patent.

[1] While, considering only the specific language of 102(b) and the fact that the phrase "taking any action or paying any fee in the United States Patent Office" might normally be taken as referring to actions in connection with applications which are already on file, as urged by the Examiner, it could be held that section 21 does not apply to 102(b), nevertheless, we feel that, in considering the patent law as a whole, section 21 should be taken in a broad sense and applied to the filing of an original application for patent, in view of preceding applications to similar situations elsewhere in the statute and the results of these interpretations, to maintain uniformity of meaning of various sections of the statute relating to the date of filing applications.

The provision of section 21 first appeared in the patent law on March 2, 1927, as section 14 of a statute enacted on that date, 44 Stat. 1337. In the amendment and codification of the patent laws of 1952 it became 35 U.S.C. 21 with some changes which do not affect the present question. The following quotation shows the original wording with words added in 1952 italicized and words omitted in 1952 enclosed in brackets:

"*When* [where] the day, or the last day, [fixed by statute] for taking any action or paying any fee in the United States Patent Office falls on *Saturday*, Sunday, or a holiday within the District of Columbia, the action may be taken, or the fee paid, on the next succeeding secular or business day."

Section 102(b) contains the expression "more than one year prior to the date of the application for patent." A similar expression appears in 102(d) where there is a reference to "more than twelve months before the filing of the application in the United States." Section 119 contains several references to twelve months or one year. In the part before the semicolon, which will be referred to as the first part of section 119, there is a reference to the application in the United States being filed "twelve months from the earliest date on which such foreign application was filed," and in the second part of this paragraph, following the semicolon, there are two references to "more than one year before" the filing of the application in the United States. Since the first paragraph of this section is referred to in detail, it is quoted in full.

"119. Benefit of earlier filing date in foreign country; right of priority

An application for patent for an invention filed in this country by any person who has, or whose legal representatives or assigns have, previously regularly filed an application for a patent for the same invention in a foreign country which affords similar privileges in the case of applications filed in the United States or to citizens of the United States, shall have the same effect as the same application would have if filed in this country on the date on which the application for patent for the same invention was first filed in such foreign country, if the application in this country is filed within twelve months from the earliest date on which such foreign application was filed; but no patent shall be granted on any application for patent for an invention which had been patented or described in a printed publication in any country more than one year before the date of the actual filing of the application in this country, or which had been in public use or on sale in this country more than one year prior to such filing."

This paragraph is substantially identical with the second paragraph of R.S. 4887, its predecessor, which was in force in 1927 when the Act of 1927 was passed. It provides, in the first part, that an application filed in the United States within twelve months from the date of filing a corresponding application in a foreign application is entitled to the benefit of the foreign filing date under the conditions specified therein.

[2] The Patent Office has specifically interpreted 35 U.S.C. 21 and its predecessor, section 14 of the Act of 1927, as applying to the twelve-months' period from the foreign filing date for filing an application in the United States with the right of priority of the foreign application. Shortly after the Act of 1927 was passed the Commissioner of Patents issued instructions to the Examiners to this effect. A Commissioner's Order dated July 22, 1927, Order No. 3017, stated, after summarizing section 14 of the Act of March 2, 1927, that "This applies to all periods expiring after May 2, 1927 [the date the act took effect], including the twelve-months' period fixed by Section 4887 R.S." According to these instructions, if the last day of the twelve-months' period fell on a Sunday, an application filed on the following Monday would be given the benefit of the filing in the foreign country, assuming that the other conditions were present. When the statute was codified, effective January 1, 1953, this same interpretation was carried over into section 21 and applied to Saturdays as well as to Sundays and holidays, see the Manual of Patent Examining Procedure, section 201.13.

[3] While the International Convention for the Protection of Industrial Property requires that the one-year period of priority be extended when the last day falls on a day on which the Patent Office is closed for receipt of applications (Article 4C(3), 613 O.G. 23), this action of the Patent Office was not under the Convention, since the Convention is not self-executing and requires legislation to carry it into effect, but its action has been under the statute, namely, 35 U.S.C. 119, and its predecessor, taking into consideration section 21 and its predecessor. As a matter of fact the particular provision of the Convention which has been referred to was not in effect with respect to the United States until March 6, 1931. Hence, there has been a specific and continuous interpretation by the Patent Office that section 21

applies to the one-year period specified in section 119 for filing an application with the right to priority.

[4] The last clause of the first paragraph of section 119 repeats the statutory bars of section 102(b) as applying from the filing date of the application in the United States, even though that application is entitled to the right of priority for other purposes. The expression "more than one year" before the date of filing in the United States appears twice in connection with this repetition of the bars recited in 102(b). The time "one year" as it appears in the last part of section 119 must necessarily also be considered as modified by section 21, otherwise the right conferred by the first part of section 119 could be entirely nullified by a publication occurring after the priority date.

Section 102(d) provides that a patent cannot be obtained in the United States if:

"(d) the invention was first patented or caused to be patented by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application filed more than twelve months before the filing of the application in the United States,"

[5] The "twelve months" specified here must also be considered in the same manner as the "twelve months" of section 119, otherwise the right of priority granted by section 119 could be rendered nugatory by events occurring after the priority date. Section 102(d), in stricter form, was the first paragraph of R.S. 4887 and the Commissioner's Order of 1927 applied, and has been applied by the Patent Office, to this twelve-months' period as well.

In view of the fact that section 21 and its predecessor have uniformly been applied by the Patent Office as modifying the one-year or twelve-months' periods specified in various other parts of the statute with respect to the filing of applications, it is our opinion that it should likewise be held to modify the one-year period of section 102(b).

Hence, it is held that the publication involved in this case does not constitute a bar to the grant to a patent under 35 U.S.C. 102(b).

The decision of the Examiner is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,308,361, R. E. Fearon, Well logging method and device; **2,368,532**, same, Well survey method and apparatus; **2,554,844**, L. M. Swift, Casing collar locator; **2,711,084**, R. A. Bergan, Refrigeration system for well logging instruments; **2,810,076**, E. S. Mardock, Process for making a well log with radioactive tracers; **2,942,112**, D. P. Hearn, Multiple well logging system; **2,945,129**, Swift and Barkalow, Calibrator for radioactivity well logging instruments; **2,967,994**, G. Peterson, Casing joint locator; **3,007,109**, G. Swift, Apparatus for detecting casing joints, **filed** Dec. 12, 1961, D.C., N.D. Calif. (San Francisco), Doc. 5310, *Well Surveys, Inc.* v. *Black Gold Logging and Perforating, Inc.* **Same, filed** Dec. 29, 1961, D.C., E.D. Okla. (Muskogee), Doc. 5097, *Well Surveys, Inc.* v. *Comet Guns, Inc.* **Same, filed** Dec. 26, 1961, D.C., W.D. Okla. (Oklahoma City), Doc. 9542, *Well Surveys, Inc.* v. *Perfo-Log, Inc.*

2,368,532. (See 2,308,361.)

2,388,415, J. W. R. Stewart, Spraying proportioner; **2,592,896**, S. A. Hayes, Eductor device, **filed** Oct. 25, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1369/61-TC, *Hayes Spray Gun Company* v. *Sprayers & Nozzles, Inc. et al.* Consent judgment; patents held valid and infringed; defendants enjoined (notice Dec. 18, 1961).

2,522,365, E. S. Greene, Extrusion machine cylinder, **filed** Aug. 6, 1959, D.C.N.J. (Newark), Doc. C-687/59, *Midland-Ross Corporation* v. *Lucian D. Yokana et al.* Consent judgment; complaint and counterclaim dismissed Dec. 22, 1961.

2,554,844. (See 2,308,361.)

2,587,568, P. Eisler, Manufacture of electric circuit components; **Re. 24,165**, same, **filed** Dec. 20, 1961, D.C.N.J. (Newark), Doc. 1071/61, *Technograph Printed Circuits, Ltd. et al.* v. *Emerson Radio & Phonograph Corporation.*

2,592,896. (See 2,388,445.)

2,599,869, C. W. Shelton, Polish rod hangers, **filed** Dec. 22, 1961, D.C., W.D. Tex. (Austin), Doc. 1234, *J. M. Huber Corporation* v. *Troutman Machine Works et al.*

2,670,569, W. H. Heina, Eye for mannequins and dolls, **filed** Nov. 6, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1427/61, *William M. Heina* v. *Pensick & Gordon et al.*

2,711,084. (See 2,308,361.)

2,752,527, Roplequet and Monlton, Method of magnifying waveforms on a cathode-ray tube and circuit therefor; **2,769,904**, R. L. Roplequet, Gated sweep generator; **2,769,905**, same, Sweep circuit; **2,778,935**, same, Cascode multivibrator; **2,791,642**, J. R. Kobbe, Phase inversion circuit; **2,804,571**, same, Unblanking circuit for cathode ray tubes; **2,826,694**, R. L. Roplequet, Free-running multivibrator; **2,836,807**, Goodfellow and Davis, Ceramic terminal mount; **2,883,619**, Kobbe and Polits, Electrical probe; **2,930,986**, same, Distributed amplifier, **filed** Dec. 18, 1961, D.C.N.J. (Trenton), Doc. 1082/61, *Lavoie Laboratories* v. *Tektronix, Inc.*

2,769,904. (See 2,752,527.)

2,769,905. (See 2,752,527.)

2,778,935. (See 2,752,527.)

2,791,642. (See 2,752,527.)

2,804,571. (See 2,752,527.)

2,797,461(a), B. B. Osher, Clip device; **2,828,790(a)**, same, Wing assembly for wallets, pass cases and the like, **filed** May 28, 1959, D.C., S.D.N.Y., Doc. 146/303, *American Kleer-Vu Plastics, Inc.* v. *Beslen Products et al.* Order of dismissal for lack of prosecution Jan. 5, 1962.

2,797,461(b), B. B. Osher, Clip device; **2,828,790**, same, Wing assembly for wallets, pass cases and the like; **2,926,714**, same, **filed** Dec. 11, 1961, D.C., S.D.N.Y., Doc. 61/4390, *American Kleer-Vu Plastics, Inc.* v. *Skyview Plastics, Inc.*

2,805,191, P. Hersch, Oxygen analysis of gases, **filed** Apr. 21, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 370/59-PH, *Engelhard Industries, Inc.* v. *Research Instrument Corporation et al.* Decree granting defendants' motion for dismissal of complaint (notice Dec. 15, 1961).

2,810,076. (See 2,308,361.)

2,826,694. (See 2,752,527.)

2,828,790. (See 2,797,461 (*a* and *b*).)

2,836,807. (See 2,752,527.)

2,841,056, L. D. Hincher, Paper edge flaring machine, **filed** Dec. 19, 1961, D.C., N.D. Ill. (Chicago), Doc. 61c2162, *Howard F. Hincher* v. *Kroeck Paper Box Company.*

2,842,060, W. R. Barry, High pressure reciprocating pump, **filed** Feb. 7, 1961, D.C., N.D. Okla. (Tulsa), Doc. 5119, *Cardwell Manufacturing Company et al.* v. *W. R. Barry Pump Company et al.* Patent held valid and infringed; defendants enjoined Dec. 18, 1961.

2,883,619. (See 2,752,527.)

2,909,372, A. A. Neri, Arrowheads, **filed** Dec. 20, 1961, D.C. Minn. (St. Paul), Doc. 3/61/219, *Herter's Inc.* v. *Ace Archery Company.*

2,909,384, M. F. Saxton, Magnetic door catch, **filed** Dec. 21, 1961, D.C., E.D. Mich. (Detroit), Doc. 22/013, *The Engineered Products Company* v. *Allied Super-Markets, Inc. et al.*

2,917,590, W. O. Stanton, Magnetic phonograph pickup, **filed** Dec. 19, 1961, D.C.N.J. (Trenton), Doc. 1085/61, *Pickering Company, Inc. et al.* v. *C. A. Clinton et al.*

2,926,714. (See 2,797,461(*b*).)

2,930,986. (See 2,752,527.)

2,942,112. (See 2,308,361.)

2,945,129. (See 2,308,361.)

2,967,994. (See 2,308,361.)

2,989,913, E. Kron, Photocopy means, **filed** Dec. 18, 1961, D.C., S.D.N.Y., Doc. 61/4489, *Nord Photocopy and Electronics Corporation* v. *Rovico, Inc.*

3,007,109. (See 2,308,361.)

Re. 24,165. (See 2,587,568.)

REISSUES

FEBRUARY 27, 1962

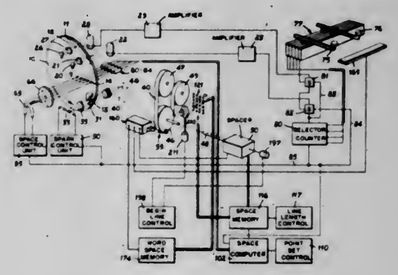
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

25,128
PHOTOGRAPHIC TYPE COMPOSITION

Frederick J. Hooven, Bloomfield Hills, Mich., and Richard C. O'Brien, Cleveland Heights, Ohio, assignors to Harris-Intertype Corporation, a corporation of Delaware

Original No. 2,846,932, dated Aug. 12, 1958, Ser. No. 380,802, Sept. 17, 1953. Application for reissue Feb. 17, 1960, Ser. No. 9,408

25 Claims. (Cl. 95—4.5)



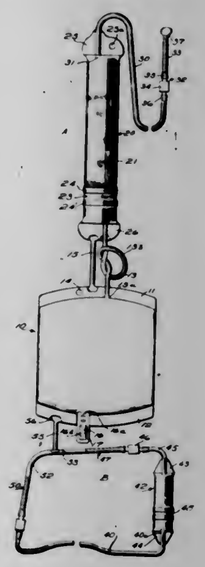
21. In photocomposing apparatus the combination of a continuously rotatable character carrier having characters of different widths located in different angular positions thereon, digital code data on said carrier associated with each of said characters and indicative of the relative width thereof with respect to each other, a flashing light source mounted adjacent said character carrier and adapted to produce a substantially instantaneous high intensity flash of light sufficient to illuminate a selected one of said characters, means driving said character carrier for continuous movement with respect to said light source to bring said characters successively past said light source, means cooperating with said light source to project successively the images of selected characters along a common optical path, means for mounting photosensitive material for movement past said common path to record the projected character images in succession thereon, selectively intermittently operable spacing means arranged to produce relative spacing movement between said material mounting means and said optical path to produce spacing of the recorded characters on the material in accordance with their actual widths, selector means controlling said light source and operable to perform successive illuminations of characters in accordance with a predetermined order of selection of characters to produce a line of composition, reading means cooperating with said character carrier and operative to read the relative width code data for each selected character at the time of projection of its image, and means responsive to the digital code data read by said reading means and having an output connection to said spacing means to produce spacing movement in accordance with the relative unit width of the previously projected character image.

25,129
APPARATUS FOR COLLECTING, STORING, AND DISPENSING WHOLE BLOOD

Carl W. Walter, Holliston, Mass., assignor to Fenwal Incorporated, Ashland, Mass., a corporation of Massachusetts

Original No. 2,702,034, dated Feb. 15, 1955, Ser. No. 174,891, July 20, 1950. Application for reissue Feb. 10, 1956, Ser. No. 564,848

37 Claims. (Cl. 128—214)



1. In apparatus for the collection, storage and use of whole blood, a closed deformable container having major wall areas for blood contact formed of an impermeable flexible material susceptible of sterilization and affording a chemically clean and inert glossy hemorepellent surface, a flexible collecting tube of the like material integrally joined with and opening into the container, a relatively short delivery tube of said material extending through and in sealed union with the container wall at a point spaced from the collecting tube, the delivery tube projecting externally of the container and being initially closed by a pierceable sealing diaphragm, and a protective sheath removably enclosing the projecting portion of the delivery tube.

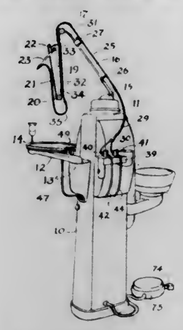
25,130
AUTOMATIC DENTAL COOLING ATTACHMENT

Arthur M. Madsen, Jr., 1704 Saunders Ave., St. Paul, Minn.

Original No. 2,902,762, dated Sept. 8, 1959, Ser. No. 503,296, Apr. 22, 1955. Application for reissue July 29, 1960, Ser. No. 46,324

11 Claims. (Cl. 32—28)

8. In combination, a dental unit including a dental engine, a handpiece connected to said dental engine and operable thereby, an instrument tray, means connecting said instrument tray to said unit, a control for controlling said dental unit, and a circuit including said control, said dental engine and a source of current supply for operating said engine by means of said control, a pressure source of liquid, a pressure source of air, an electrically operable valve connected to each said source to control the flow of fluid therefrom, nozzle means connected to said valves to receive fluid from either of said sources, a circuit including a current supply source connected to said electrically operated valves and switch means in said last named circuit having first, second and third position for controlling the operation of either or both of said electrically operated valves, said last named circuit also including said dental engine control so that said second



circuit will function simultaneously with said dental engine.

PLANT PATENTS

GRANTED FEBRUARY 27, 1962

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

2,132
ROSE PLANT

Herbert C. Swim, Ontario, and O. L. Weeks, Chino, Calif., assignors to The Conard-Pyle Company, West Grove, Pa., a corporation of Pennsylvania

Filed Mar. 30, 1961, Ser. No. 99,649

1 Claim. (Cl. 47—61)

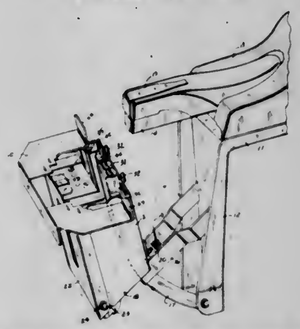
A new and distinct variety of rose plant of the grandiflora class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a vigorous, tall and erect habit of plant growth, long flower stems, heavy, leathery leaves of grey-green cast which are quite resistant to mildew, large, long-pointed to urn-shaped buds, broad petaled flowers, a white general color tonality of the flowers, and very smooth hips, which become quite rounded and yellow in color at maturity.

PATENTS

GRANTED FEBRUARY 27, 1962

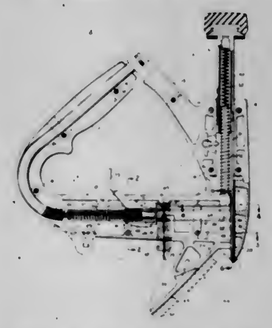
GENERAL AND MECHANICAL

3,022,508
TAG FEEDING MECHANISM
Henry Ruskin, Bayside, N.Y., assignor to Swingline, Inc., Long Island City, N.Y., a corporation of New York
Filed May 26, 1959, Ser. No. 815,927
10 Claims. (Cl. 1—3)



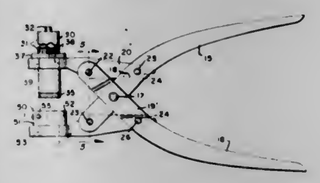
1. A tag feeding mechanism for use with a fastening device comprising a container adapted to hold a series of tags in vertically stacked relationship therewithin, an anvil upon said container, a pair of laterally aligned guide members within said container, each of said guide members being adjacent a side of said container and adapted to engage a side of said tags, a spring propelled vertically movable tag positioning member adapted to lie in abutting relationship with the lowermost member of said series of tags, said tag positioning member being laterally spaced from said guide members, and a transversely movable tag propelling member in operative relationship with the topmost member of said series of tags adapted to propel said topmost member away from said stack of tags and into fastening position over said anvil.

3,022,509
NAILER
Heiko Tjark de Man, Liverpool, N.Y., assignor to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of New York
Filed Feb. 12, 1960, Ser. No. 8,396
17 Claims. (Cl. 1—46)



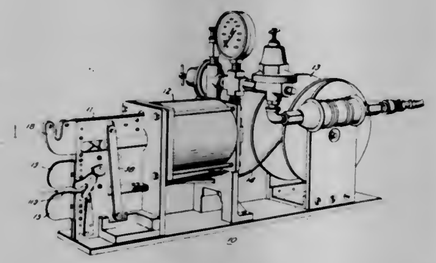
1. A nail driver, a body including a pair of similar shaped body parts secured together in parallel spaced relation, a nail driving passage at the forward end of the body, an elongated nail supporting member mounted in each body part, said members extending lengthwise of the body parts in confronting spaced relation to provide a nail supporting track terminating at said nail delivery passage, spring means urging said nail engaging members into gripping engagement with a row of nails positioned between said members, and a spring actuated pusher urging the row of nails along said members to said delivery passage.

3,022,510
PLIERS TYPE SNAP FASTENER ATTACHING MACHINE
John B. O'Malley, Denver, Colo., assignor to Miller and Co., Denver, Colo., a corporation of Colorado
Filed Apr. 4, 1960, Ser. No. 19,530
6 Claims. (Cl. 1—50)



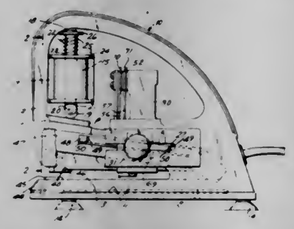
1. A manually operated machine for attaching fastener elements to fabric and the like, comprising a pair of pliers type handles, means extending transversely through said handles between their ends, near their forward ends, pivotally connecting the handles together, a pair of jaws each having a free tool-carrying forward end and a slot in its rearward end, means pivotally connecting each jaw intermediate its ends to the forward end of one of the handles, a pin fixed in each handle rearwardly of the pivotal connection between the handles extending through the slot of a jaw and holding the jaws on the handles in substantially parallel relationship to each other when the handles are moved about their pivotal connection, and fastener attaching tools mounted in said jaws, each of said slots having an inclined bearing surface contacted by one of said pins, said bearing surfaces of the slots of the two jaws being rearwardly inclined toward each other, said pins engaging the forward ends of the slot surfaces when the handles are in open position and said pins being moved rearwardly in the slots into pressure exerting contact with said inclined bearing surfaces when the handles are moved toward each other, closing pressure manually exerted on the handles being transmitted by the pins to said jaws for moving the jaws toward each other and the transmitted closing pressure being automatically increased by the bearing pressure of the pins against said inclined surfaces at the rear ends of the slots when the handles approach closed positions.

3,022,511
PELLICLE FASTENER
James C. Macy, Westfield, N.J., assignor to Ideco Incorporated, Westfield, N.J., a corporation of New Jersey
Filed May 20, 1954, Ser. No. 431,176
11 Claims. (Cl. 1—68)



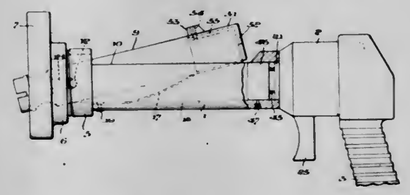
11. A method of applying a fastener to a thin fragile casing or the like in such a way that the wall of the casing is not torn or punctured, said method comprising taking a longer length of a ribbon-like base of a thin bendable metal having a soft plastic covering mounted thereon and leaving one side of the base at least partly bare, cutting a short length of said base and covering from said longer length, and forming said base of said short length into a closed ring around said casing with said covering therebetween, said forming being accomplished by contacting said base along its bare surface and in such way that said covering is forced beyond the ends of said base as it is being closed into a ring.

3,022,512
POWERIZED FASTENER
James J. Oussani, 777 5th Ave., Brooklyn, N.Y.
Filed Aug. 3, 1960, Ser. No. 47,296
2 Claims. (Cl. 1—106)



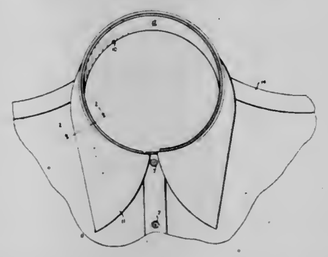
1. An electrically operated fastener comprising a housing, a stapling device secured in said housing and including an anvil, and a staple driver arm vertically movable relative thereto, electrically powered means secured to said housing and including an impeller member shiftable toward and away from said driver arm, a compressible cushion member interposed between said driver arm and said impeller in the path of movement of said impeller, switch means carried by said housing including a laterally extending abutment, said switch means having a single pair of contacts adapted to be closed by insertion of articles to be fastened and released to open position by depression of said abutment, and a longitudinally extending tripper arm affixed to said driver arm to lie in the path of movement of said abutment, said arm being shifted into depressing engagement against said abutment when said driver arm is impelled to a predetermined distance from said anvil.

3,022,513
EXPLOSIVE ACTUATED STUD DRIVING TOOL
Robert Temple, Swissvale, and Ernest E. Temple, Murraysville, Pa., assignors to Mine Safety Appliances Company, a corporation of Pennsylvania
Filed Sept. 20, 1960, Ser. No. 57,203
4 Claims. (Cl. 1—106)



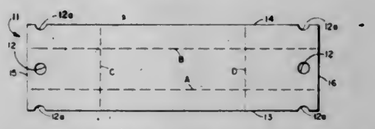
1. A stud driving tool comprising a sleeve, a barrel slidably mounted in the sleeve and projecting from its front end, the barrel having a cartridge-receiving chamber in its rear end, the sleeve having a longitudinal slot in its side wall as wide as the barrel, means pivoting the barrel in the front end portion of the sleeve in a position to permit the rear end of the barrel to swing out of the sleeve through said slot, a spring normally holding the barrel in its swung-out position, resilient means normally holding the barrel in a forward position in the sleeve, a breechblock mounted in the sleeve behind the barrel, a firing pin projectable from the front of the breechblock, a handle rigidly connected to the sleeve for pushing it forward around the barrel when the barrel is inside the sleeve and its front end is pressed against a stationary object, the sleeve being movable forward far enough to move the firing pin against a cartridge in said chamber and to move the breechblock forward around the firing pin, and manually operable means for driving the firing pin forward in the breechblock.

3,022,514
CLOTHING PROTECTOR
Walter L. Kaiser, 928 Beaumont St., Erie, Pa.
Filed Jan. 26, 1959, Ser. No. 788,839
1 Claim. (Cl. 2—60)



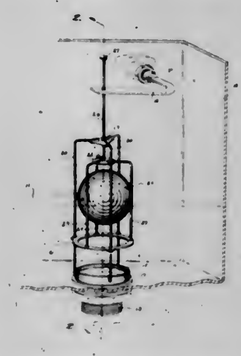
A disposable protector for a shirt collar to be attached to the inside of the neck band thereof adjacent the neck of a wearer comprising a band of thin plastic sheet material approximately the width of the neck band of a shirt having pressure sensitive adhesive on one side thereof, a removable sheet of backing material on said adhesive adapted to be removed when said protector is attached to said shirt collar, and a fibrous material on said plastic sheet material on the opposite side thereof from said adhesive, said fibrous material resembling the material of said shirt collar in appearance, said backing material having marks thereon spaced one inch apart, each fifth said mark being numbered with a similar numeral.

3,022,515
SIMULATED BOW TIE
Joseph Bornstein, Boston, Mass. (105 Lanark Road, Brookline, Mass.); Leonard Bornstein, Boston, Mass. (728 Morton St., Mattapan, Mass.); and Amalia Bornstein, Boston, Mass. (105 Lanark Road, Brookline, Mass.)
Filed Oct. 13, 1958, Ser. No. 766,923
1 Claim. (Cl. 2—151)



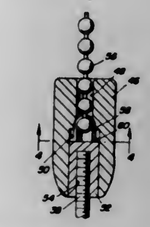
The process of fabricating a bow tie consisting of providing a rectangular blank of flexible and stiff material face downward, bending the upper and lower edges inwardly so that they meet along the back longitudinal center line, punching a hole adjacent each end along said center line, each of said holes being the same distance from its respective end, folding the ends inwardly so that they meet along the back transverse center line, inserting a longitudinal staple parallel and adjacent the upper edge of the so-bent blank, inserting another longitudinal staple parallel and adjacent the lower edge of the so-bent blank, both said staples overlapping said bent-in ends, making a short longitudinal central pleat along the back of the longitudinal center line, inserting a longitudinal staple along said pleat so as to maintain it in position, inserting the arms of a supporting clip into said holes, and encircling the central part of the bow and the central part of the supporting clip with a rectangular knot piece.

3,022,516
FLUID VALVE MEANS FOR CONTAINERS
Raymond E. Trafton, Paton, Iowa
Filed Jan. 15, 1960, Ser. No. 2,761
5 Claims. (Cl. 4—56)



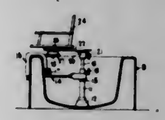
1. In a valve means, a base member having a valve seat, a collar detachably embracing said valve seat, three equidistant post rods extending upwardly from the annular periphery of said collar, a cage means distinct from said post rods, said cage vertically slidably mounted on and interior of the area prescribed by said post rods, a ring in the bottom of said cage, a ball contained free in said cage having a diameter greater than that of the inside diameter of said ring and capable of seating in said valve seat when said cage is in a lowered position of its sliding movement, and a means for facilitating the upward sliding movement of said cage.

3,022,517
MECHANISM FOR SUSPENDING A FLUSH VALVE FROM THE TRIP LEVER
Andrew W. Harkness, 36 Jackson Ave., South Glens Falls, N.Y.
Filed Oct. 14, 1958, Ser. No. 767,167
2 Claims. (Cl. 4—57)



1. A device for suspending the vertical guided lift rod of a toilet tank flush valve from the trip lever comprising a flexible member adapted to be attached to the trip lever, a body member adapted to be rigidly attached to the upper end of the vertical lift rod, and flexible means connected to said body member and said flexible member whereby the forces exerted on the body member are transmitted through a flexible member and the flexible means, said body being provided with a small longitudinal bore communicating with the upper end thereof and a larger longitudinal bore communicating with the lower end thereof, said bores communicating and forming a shoulder, said flexible member extending through the smaller bore, said flexible means including an enlargement means on the inner end of the flexible member for engaging the shoulder defined by the juncture between the smaller and larger bore, said flexible member being in the form of a bead chain, said enlargement means including a split bell-shaped retainer engaging the last bead of the chain for mounting the chain on the body.

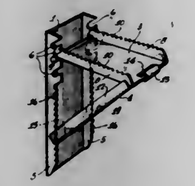
3,022,518
SWIVEL CHAIR FOR BATH TUBS
Noel E. Hayden, 100 Loyola Ave., Atherton, Calif.
Filed June 11, 1959, Ser. No. 819,612
6 Claims. (Cl. 4—185)



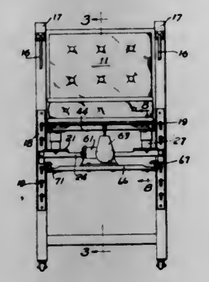
1. For use in a bath tub, a swivel chair comprising an upright standard adapted to be seated in the bottom of a bath tub, a pair of radial arms rigidly attached to said standard, means for attaching the ends of said arms to a side of a bath tub to support said standard in a substantially upright position in the central part of a bath tub, an arm rotatably mounted on said standard above said radial arms, and a chair seat pivotally mounted at the end of said arm.

3,022,519
SINK CLAMPING DEVICE
Robert A. B. Lang, Renfrew, Ontario, Canada
Filed Dec. 10, 1959, Ser. No. 858,721
6 Claims. (Cl. 4—187)

1. In a sink having a side wall, said side wall having an external surface, and an edge flange extending outwardly from said side wall surface in substantially perpendicular relation thereto, an installation clamp therefor comprising a member fixed to said side wall external surface and underlying said flange, said member having an upper portion adjacent said sink edge flange and a lower portion remote from said sink edge flange, said member lower portion having a plurality of vertically spaced teeth, a clamping arm having one end swingably mounted to said member upper portion and having a support-engageable surface, said arm being swingable outwardly from said member into angular relation thereto to place said support-engageable surface in opposed relation to said sink edge flange, and means fixing said arm in said angular relation comprising a leg having one end pivoted to the other end of said arm and its other end freely seated on one of said teeth.



3,022,520
CRADLE RECIPROCATING APPARATUS
Earle W. Finger, 1837 S. 10th Ave., Maywood, Ill.
Filed May 25, 1959, Ser. No. 815,537
6 Claims. (Cl. 5—109)



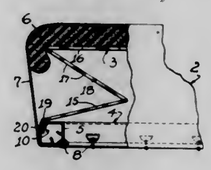
6. An infant's crib comprising: a crib frame having head and foot sections with vertical corner posts at the sides thereof, longitudinally extending frame members extending generally transversely of said head and foot sections along opposite sides of the crib at the lower portion thereof, a crib mattress, a support frame for the crib mattress, each of said vertical corner posts having vertically spaced elevation adjusting means, bracket means associated with each corner post, one of the bracket means and the elevation adjusting means of the corner posts having projecting means and the other having projection engaging means which engage with the projecting means to support the bracket means at different elevations on the corner posts, means interconnecting the bracket means and the corners of said mattress support frame for resiliently supporting the mattress for vertical rectilinear movement with respect to said bracket means at said different elevations, motor support means carried by said crib frame below said crib mattress support frame, and motor means carried by said support means and including a vertically reciprocating rod extending upwardly from said motor means and coupled to said crib mattress support frame for any of a number of different elevations thereof to reciprocate the same up and down.

3,022,521
BORDER STABILIZERS
Joseph Martin, Laurelton, N.Y., assignor to Eclipse Sleep Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed Aug. 26, 1960, Ser. No. 52,269
10 Claims. (Cl. 5—351)



9. A border stabilizer for a mattress or the like having an upper and a lower border wire, said stabilizer having upper and lower longitudinally extending abutments, connecting means connecting said abutments to said upper and lower border wires, said stabilizer having six sides with the upper and lower sides constituting said upper and lower abutments, and the remaining four sides formed into pairs, each pair of equal length forming an acute angle with one another and extending outwardly from said abutments and in turn forming obtuse angles with said abutments, a helical tension spring, and means at the acute angles of each pair of outwardly extending sides connecting the ends of said tension spring to said sides, the six sides of said stabilizer being composed of a resilient material yieldable when said abutments are urged toward one another.

3,022,522
TUBULAR FRAME RAIL
William H. Neely, Cleveland, Ohio, assignor, by mesne assignments, to Hoover Ball & Bearing Co., Saline, Mich., a corporation of Michigan
Filed June 8, 1959, Ser. No. 818,684
2 Claims. (Cl. 5—353.7)



1. In a seat construction which includes a supporting frame, a spring structure mounted on said frame, and cover means stretched over said spring structure, a hollow frame rail of rectangular shape in cross section forming a part of said supporting frame, said rail having pairs of openings formed therein by inwardly bent cutouts arranged in pairs on opposite sides of the vertex of one pair of angularly related side walls of said rail, said rail being formed adjacent the vertex of the other pair of angularly related side walls with openings for receiving portions of said spring structure, and hogring means attached to the edge of said cover means and extended at least partially about a narrow strip of said rail located between the openings in each of said pairs of openings for attaching said cover means to said rail.

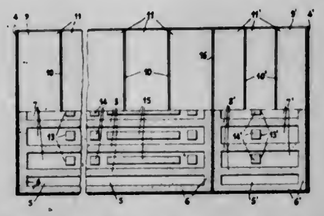
3,022,523

UNDER-MATTRESS

Roland Schmutz, Hauptstrasse 13 (Aargau), Zofingen, Switzerland

Filed Nov. 17, 1959, Ser. No. 853,483
Claims priority, application Switzerland Nov. 20, 1958
7 Claims. (Cl. 5—361)

1. An under-mattress comprising a stable base plate adapted to be supported by a frame having legs, a plate-like upper part which is elastically flexible and forms a substantially flat support surface for any desired type of upper-mattress, and a pressure-elastic intermediate filling supported by said base plate and carrying said upper part, said intermediate filling having an endless edge portion extending between the peripheries of said base plate and upper part and being formed inwardly of said edge portion with a plurality of air chambers, said upper part being subdivided by transverse straight slits into separate strips which have each a plate-like elastical stiffness and



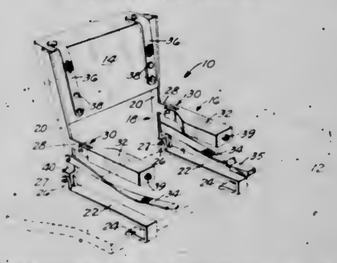
form together said support surface, fabric strips joining adjacent strips forming said upper part, said fabric strips being permeable to air and covering each one of said slits along the whole length on the side of said intermediate filling and said air chambers, said base plate having a plurality of restricted apertures, fabric pieces which are permeable to air covering each one of said apertures on the side of said air chambers, said fabric strips and pieces permitting circulation of air through said slits and apertures upon compression or tension release of said under-mattress.

3,022,524

COMBINATION SEAT ATTACHMENT AND LIFE PRESERVER

John V. Hultquist, 1995 Duluth St., St. Paul, Minn.

Filed Nov. 10, 1960, Ser. No. 68,487
3 Claims. (Cl. 9—312)



2. A combination seat attachment and life-preserver, said attachment comprising a base member for releasably mounting said attachment on a backless seating board or the like, an upright back rest supporting structure, a buoyant back rest carried by said upright structure, arms projecting forwardly from said upright structure, said arms including projecting arm portions rigidly attached to said upright structure and extending forwardly therefrom, and further including buoyant portions swingably attached to the forward ends of said projecting portions for swinging movement upward from a horizontal arm rest position.

3,022,525

METHOD OF ENHANCING THE COLD RADIAL EXPANSION PROPERTIES OF HOLLOW BRASS RIVETS

Alan R. Peis, Stamford, Conn., and Walter A. Backofen, Marblehead, Mass., assignors to National Distillers & Chemical Corporation, Bridgeport, Conn., a corporation of Virginia

No Drawing. Filed Dec. 30, 1958, Ser. No. 783,722
1 Claim. (Cl. 10—27)

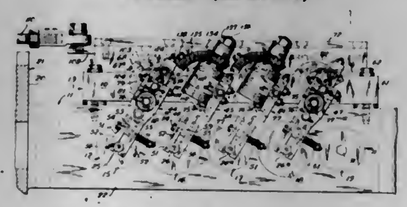
A process for making hollow rivets from brass wire containing not more than about 35% zinc, said process comprising elongating wire made of said brass, annealing said wire, twisting said wire about its axis with sufficient rotation to give it a permanently twisted set, and forming said rivets from said wire so that the latter forms the hollow rivet shanks for radial upsetting thereof, said wire being cold worked by finish drawing the stock to the gauge required for forming the rivet to temper it after said twisting and prior to the formation of said rivets with said cold working limited to a degree avoiding reorienting the wire's structure from the twist imparted by said twisting.

3,022,526

TRANSFER MECHANISM

Frank B. Davis, Lakewood, and John L. Barkocy, Stow, Ohio, assignors to The Lamson & Sessions Company, Cleveland, Ohio, a corporation of Ohio

Filed Apr. 27, 1959, Ser. No. 809,292
9 Claims. (Cl. 10—76)



1. In transfer mechanism for transferring articles from one to another of dies disposed in a spaced parallel-axes relation and comprising at least three dies in a laterally extending row, a stationary support having a substantially vertical front face, spaced hollow bearings on said support and disposed in a row in an offset parallel relation to the row of dies and comprising at least two such bearings, said bearings being located substantially opposite the mid-points of the space intervals between said dies, said support also having pivot pin anchorage openings therein adjacent said bearings, a first rockshaft rockable in one of said bearings on a fixed first pivot axis and having a crank arm thereon, a second rockshaft rockable in another of said bearings on a fixed second pivot axis and having a yoke thereon, upright carriers having holder means extending toward the die row and releasably engageable with articles to be transferred from one to another of said dies, a fixed pivot pin mounted in the anchorage opening associated with the bearing supporting said first rockshaft, a first one of said carriers being supported by said pivot pin for a tilting swinging thereof in a transfer path area extending parallel to said front face from one to another of one pair of said dies, pivot means connecting a second one of said carriers with said yoke for supporting and tilting swinging of said second carrier by said yoke in said transfer path area from one to another of a second pair of said dies, said pivot means having a third pivot axis extending transverse to said second pivot axis and providing for a turn-over pivotal movement of said second carrier, means operable to cause concurrent rocking of said rockshafts in said bearings, co-operating guide and guide follower elements on said crank arm and first

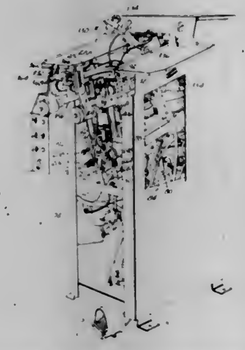
carrier for causing the tilting swinging of the latter in response to rocking of said first rockshaft in opposite directions, a stationary curved gear segment on said support adjacent the bearing of said second rockshaft, and a pinion secured on said second carrier and located on said third pivot axis at a point therealong offset from said second pivot axis, said pinion being in mesh with and rollable on said stationary gear segment for causing the turn-over pivotal movement of said second carrier in response to the rocking of said second rockshaft in opposite directions.

3,022,527

MACHINES FOR SHAPING UPPERS OVER LASTS

Adelbert W. Rockwell, Jr., and Edward F. Mitchell, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Jan. 22, 1959, Ser. No. 788,396
29 Claims. (Cl. 12—8.5)



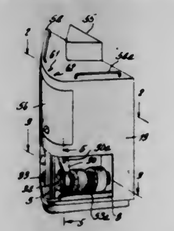
1. In a machine for shaping uppers over lasts and including a gripper for initially tensioning heightwise an upper of a shoe to be lasted, a wiper, air operated devices for yieldingly operating the gripper and the wiper, respectively, jointly to stress a margin of the upper and wrap it snugly about the last adjacent to the shoe bottom, and means acting automatically in the course of a build-up of wiper operating pressure gradually to relieve the pressure operating the gripper whereby the latter exerts diminishing tension and then completely surrenders control of the margin only as the wiper moves inwardly over the edge of the shoe bottom to complete the overlaying action.

3,022,528

AUTOMATIC SHOE SHINE DEVICE

Ralph R. Pagano, 118 87th St., Brooklyn 9, N.Y.

Filed Dec. 23, 1959, Ser. No. 861,481
4 Claims. (Cl. 15—31)



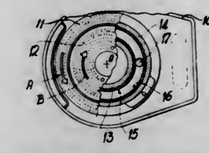
4. An automatic shoe shine device for feeding a measured amount of shoe polish to a rotatably mounted shoe polish applicator brush comprising, means for rotating said brush, a reservoir having a shoe polish discharge means associated therewith, said discharge means being adapted with means to apply a measured amount of polish to said applicator brush, a main electric circuit for automatically controlling the operation of said device including means for energizing said circuit, said energizing means being adapted to isolate itself from the circuit at a given time interval after the main circuit has been energized, a normally closed switch for maintaining said main circuit energized after actuation by said energizing means, subsidiary circuits releasably coupled to said main circuit, one circuit being adapted for actuating the reservoir discharge means, another circuit being adapted to actuate the means for rotating said applicator brush and still another circuit comprising means for sequentially controlling the means for actuating the reservoir discharge means, the means for actuating the applicator brush, and for opening and closing the normally closed switch in accordance with a predetermined cycle.

3,022,529

ROTARY FLOOR POLISHER

Silvio Bonfanti, 31 Via Sammartini, Milan, Italy

Filed Sept. 2, 1959, Ser. No. 837,702
Claims priority, application Italy Sept. 11, 1958
6 Claims. (Cl. 15—49)



6. Rotary brush assembly comprising, in combination, an inner brush and an outer annular brush surrounding said inner brush; an inner drive member having an outer friction surface and an outer drive member having an inner friction surface surrounding and spaced from said outer friction surface; means operatively connecting said inner and outer brushes to said inner and outer drive members, respectively, for rotary movement therewith; a rotary driving pin located between and engaging said friction surfaces; means cooperating with said drive members for urging said friction surfaces thereof against said driving pin; and driving means operatively connected to said rotary pin for driving the same and for thereby rotating said inner and outer drive members and said brushes.

3,022,530

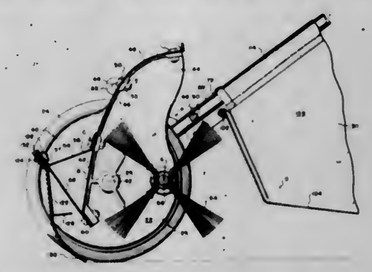
SWEEPER WITH FLEXIBLE HOOD EXTENSION AT LOWER FRONT

Edwin F. Oblinger, Springfield, Ohio, assignor to Parker Sweeper Company, Springfield, Ohio, a corporation of Ohio

Filed Oct. 27, 1958, Ser. No. 769,762
1 Claim. (Cl. 15—79)

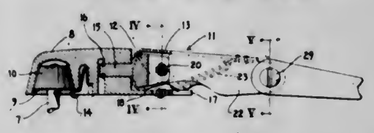
A sweeper comprising, in combination, a sweeper head including a hood closed at the front and open at the bottom and the rear; a rearwardly and upwardly extending handle having the lower end thereof pivotally connected with the head; a debris receptacle disposed rearwardly of the head in debris receiving relationship with the upper portion of the rear of the hood; axle means disposed transversely of the handle and carried by the sweeper head; front wheels carried by the axle means and disposed on opposite sides of the sweeper head for supporting the sweeper head; a shaft arranged parallelly and rearwardly of the last mentioned axle means and carried by the sweeper head; a brush carried by the shaft, said sweeper head being pivotally movable about the last mentioned

axle means for raising and lowering said shaft and for adjusting the vertical height of the hood, within limits, to vary the distance between the lower edge of the hood and the surface over which the sweeper is moved; driving connections between the wheels and the shaft for rotating the brush; a flexible extension carried by the head forwardly of and spaced from the lower edge of the hood



and extending downwardly, the vertical height of the flexible extension being sufficient to substantially touch said surface when the hood is in its uppermost position; means for spacing the lower edge of the flexible strip away from the brush a sufficient distance to prevent the strip from the being engaged by the brush when the hood is in its lowest position; and means for retaining the head in adjusted position.

3,022,531
WINDSHIELD CLEANER
Anthony C. Scinta, Hamburg, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Filed Dec. 27, 1955, Ser. No. 555,483
5 Claims. (Cl. 15—250.35)



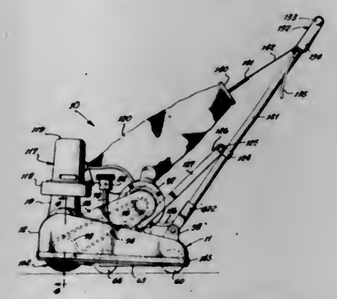
1. A curved windshield cleaner comprising a flexible wiping blade, an oscillatory shaft, a blade actuating arm having a mounting section fixed substantially radially on the shaft and pivotally joined to a blade carrying section for relative movements about longitudinal and transverse axes, position controlling means having pattern cam means on one arm section bearing upon a surface on the other section, and resilient means acting between the arm sections to hold the blade against the surface being wiped and produce relative movement between said cam means and said bearing surface.

3,022,532
WINDSHIELD WIPER BLADE
Max Zaiger, 589 Essex St., Lynn, Mass.
Filed Nov. 21, 1957, Ser. No. 697,866
1 Claim. (Cl. 15—250.42)



In a windshield wiper blade assembly of the type including a flexible blade, and a pressure distributing superstructure engaged with the blade at several longitudinally spaced points; said superstructure comprising a first yoke having two end portions engaged with said blade at two longitudinally spaced points, a second yoke having a pivotal connection with said first yoke intermediate said points, means for distributing pressure from said second yoke to the blade at a third point remote from the two points engaged by said first yoke, a post attached to said first yoke between said connection and that end portion which is disposed nearest said third point, said second yoke having an aperture through which said post passes freely, and a coil spring secured to said post and bearing on said second yoke, said spring being under compression and urging said last named end portion toward said second yoke.

3,022,533
POWER CARPET PILE CONDITIONER
Karl E. Hebenstreit, Burbank, Calif.
(143 N. Western Ave., Los Angeles 4, Calif.)
Filed Feb. 20, 1959, Ser. No. 794,711
1 Claim. (Cl. 15—354)

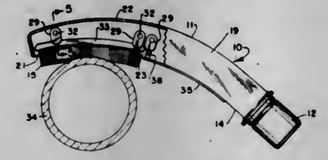


A power carpet pile conditioner comprising: a rectangular unitary shell including a sloping upper wall, side walls, and front and rear walls, the bottom of said shell being open; partition means partitioning off a space adjacent said front wall within said shell to provide a downwardly opening suction chamber; neck means on said upper shell wall forming a vacuum throat communicating downwardly with said chamber; a power vacuum unit mounted on said neck means to suck air upwardly through said throat from said chamber; a pair of wheels within said shell having concentric axles mounted directly on said side walls, said wheels lying close to said side walls and close to said rear wall; a horizontal transverse adjusting bar disposed parallel with said chamber and close to said partition means; a second pair of wheels rotatably concentrically mounted on opposite ends of said bar; a U-shaped frame including a transverse member and two spacer link members bent from opposite ends of said transverse member and lying parallel with said side walls and pivotally connected at their rear ends to said axles and at their front ends to opposite ends of said bar, said transverse member lying close to said rear wall; and screw means mounted in said upper wall, and manually operable from above the latter, said means connecting centrally with said bar and manually accomplishing the vertical adjustment of said second pair of wheels relative to said shell.

3,022,534
UNIVERSAL PIPE CLEANING TOOL FOR VACUUM CLEANERS
John Joseph O'Brien, Baltimore, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Aug. 18, 1960, Ser. No. 50,525
4 Claims. (Cl. 15—400)

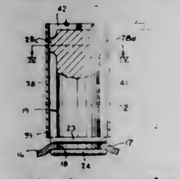
1. A universal pipe cleaning tool for a vacuum cleaner, comprising, a hollow main body including a pair of parallel side walls and further including a curved side

intermediate said parallel side walls, said curved side having an opening therein, a brush secured to said main body and protruding beyond said curved side and through an arcuate portion of said opening, a second brush pro-



truding beyond said curved side through the remaining arcuate portion of said opening, and means to detachably secure said second brush to said main body, whereby pipes of a relatively large diameter may be cleaned.
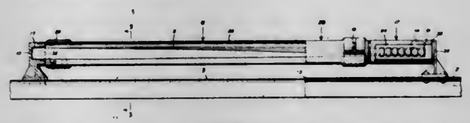
3,022,535
MECHANICAL DEVICE
John W. Black, Kalamazoo Township, Kalamazoo County, Mich., assignor to Pemco Wheel Company, Kalamazoo, Mich., a corporation of Michigan
Filed June 1, 1959, Ser. No. 817,382
3 Claims. (Cl. 16—37)



1. A caster construction for supporting an article, comprising: wall means on said article defining an elongated, straight passageway open at the lower end thereof and having a square cross section; a caster yoke having a mounting plate and a pair of spaced, wheel supporting elements extending downwardly from said mounting plate; a caster wheel rotatably supported upon and between said wheel supporting elements; a single, elongated stem supported upon and extending upwardly from the central portion of said mounting plate and being deformed at a point spaced from the lower end thereof to form four projections uniformly spaced circumferentially around, and extending radially from, said stem beyond the adjacent surface thereof, said stem being circular in cross section substantially throughout its length and having a diameter substantially equal to the diameter of the inscribed circle defined by said wall means, said stem being slidably received within said passageway with said projections extending into the corners defined by said wall means and with opposite portions on the peripheral surface of said single stem engaging said wall means, whereby rotation of said stem with respect to said wall means is positively prevented.

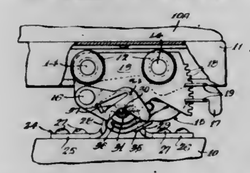
3,022,536
TORSION SPRING ASSEMBLY
Walter L. Floehr, Toledo, Ohio, assignor to Unitcast Corporation, Toledo, Ohio, a corporation of Ohio
Filed June 9, 1959, Ser. No. 819,164
9 Claims. (Cl. 16—75)

1. A torsion spring assembly for a pair of relatively swingable members, comprising bracket means each rigid with one of said members, torsion spring means anchored to one of said bracket means, means attached to one of said bracket means and receiving a portion of said spring means, anchor means connected for relative longitudinal shifting and against relative rotation to said attached means and spring portion and effective on said relative longitudinal shifting thereof for adjusting the force exertible by said spring means on relative swinging of said members, and means effective on comple-



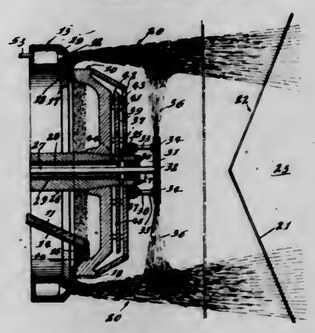
tion of the adjustment for locking said anchor means against shifting relative to said attached means and fixing the adjustment of said spring means.

3,022,537
SLIDING DOOR HANGER ASSEMBLY
Dwight W. Blackmer, Elkhart, Ind., assignor to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 804,028
11 Claims. (Cl. 16—105)



1. A sliding door hanger assembly including a carriage member having track engaging means, a lever pivotally supported on said carriage member for movement relative to the latter from a raised position to a lowered position and intermediate positions therebetween, means for selectively locking said lever in said positions, a hook on said lever, a bracket member for connection to a sliding door, said bracket having a fulcrum pivot with which said hook on the lever is engageable to suspend the door therefrom, and a latch movably supported on said carriage member for movement between first and second positions and effective to trap said hook and said fulcrum pivot against unintentional disengagement in one of said positions of said latch.

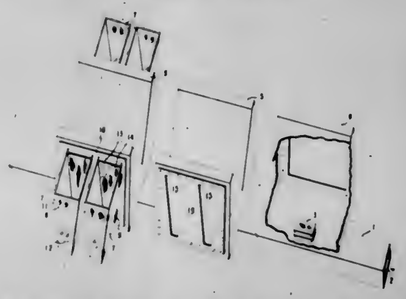
3,022,538
MEANS FOR MANUFACTURING MINERAL WOOL
Carl B. Setterberg, North Plainfield, N.J., assignor, by mesne assignments, to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 3, 1957, Ser. No. 681,650
7 Claims. (Cl. 18—2.5)



1. In apparatus for the manufacture of mineral wool from molten mineral material wherein a stream of attenu-

ated material is projected forwardly from fiberizing means toward a collecting chamber, and a portion of said stream passes through an opening in a portal wall into the collecting chamber and another portion of said stream impinges against said wall adjacent said opening, the improvement comprising a portal wall formed with portions of said wall adjacent said opening inclined forwardly and outwardly for deflecting material impinging on said wall away from the opening therethrough.

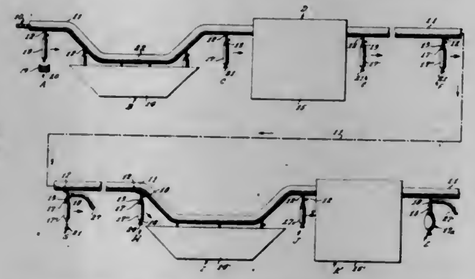
3,022,539
APPARATUS FOR DISTRIBUTING A FLUID MEDIUM TO A PLURALITY OF SPINNING CHIMNEYS
William M. Massey, Signal Mountain, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 17, 1959, Ser. No. 860,137
4 Claims. (Cl. 18—8)



1. A spinning machine for the production of synthetic fibers which comprises a plurality of spinning chimneys and a duct system for distributing fluid medium to the said spinning chimneys, the said system comprising a manifold of decreasing cross-sectional area, an inlet for the said medium at the large end of the said manifold, plenums spaced along the said manifold at varying distances from the said inlet, an outlet for the said medium from the said manifold to each plenum, an outlet from each plenum to each spinning chimney, foraminous fluid flow restricting means at each plenum outlet to provide pressure in the said plenum during flow of the said fluid and foraminous fluid flow restricting means at each manifold outlet to provide pressure in the said manifold during flow of the said fluid said foraminous fluid flow restricting means at each manifold outlet being provided with a permeability of from about 12 to about 18 times the permeability of the foraminous flow restricting means of each plenum outlet.

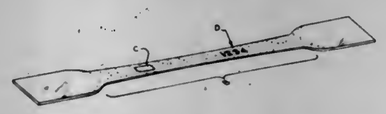
3,022,540
DIPPING APPARATUS FOR FABRICATING FLEXIBLE CONTAINERS
Wallace H. Shapero, Los Angeles, Calif., assignor, by mesne assignments, to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Oct. 6, 1953, Ser. No. 384,493
1 Claim. (Cl. 18—24)

Apparatus for fabricating flexible containers of a type having multiple layers of synthetic resin organic plastic material, comprising: a flexible conveyor; means supporting said conveyor for linear generally horizontal travel and for dipping stages of movement in said path of linear travel; a plurality of dip-tanks for holding respective solutions of resin to form respective layers collectively constituting the wall structure of a flexible container; a plurality of mandrels each comprising a hollow tubular body having an upper end provided with means for releasably suspending the mandrel from said conveyor, having an air passage extending longitudinally therethrough, and having a lower end provided with an outlet constituting the lower extremity of said air passage, for ejecting air into a container formed on said mandrel by dipping the same into said solution of container forming material, and an injection fitting formed as the upper end of said



air passage and extending laterally from the longitudinal axis of the mandrel below the upper end of said suspending means whereby an air nozzle may be applied to said fitting while the mandrel remains suspended on said conveyor, with the conveyor continuing said linear travel, for blowing a formed container off of the mandrel while it remains suspended.

3,022,541
PRODUCING INDICIA IN FILM BY MODIFICATION OF FILM OPACITY
Paul L. Passley and Jack F. Eberle, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 5, 1960, Ser. No. 6,964
2 Claims. (Cl. 18—48)



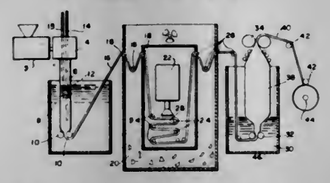
1. A method which comprises stretching a film comprising a mixture of an ethylene/butene-1 copolymer and polyisobutylene, the amount of said copolymer being 50 to 90 parts by weight per 100 parts of the mixture, the amount of stretching being sufficient to cause a substantial reduction in the width of the film and to increase the opacity thereof supporting said stretched film upon a substantially non-yielding surface, and producing indicia by marking with a stylus using a pressure of 500 to 20,000 p.s.i., said indicia being transparent.

3,022,542
POROUS POLYAMIDE ARTICLES AND PROCESS FOR THE PRODUCTION THEREOF
William J. Davis, Wyomissing, Pa., assignor to The Polymer Corporation, Reading, Pa., a corporation of Pennsylvania
Filed Aug. 5, 1958, Ser. No. 753,337
8 Claims. (Cl. 18—55)

5. A method of producing a porous shaped high melting synthetic linear polyamide article which comprises the steps of dissolving the polyamide in a swelling agent for the polyamide at elevated temperatures and a non-swelling agent at room temperature, precipitating the polyamide from solution, freeing the resultant polyamide powder from the swelling agent and drying the polyamide

under non-oxidizing conditions, mixing the polyamide powder with a substantial proportion of an inert filler in particle form, heating the powder mixture to a temperature of from about 250° F. up to a few degrees below the melting point of the polyamide, cooling the powder mixture substantially down to room temperature, cold pressing the powder mixture to form a shaped green article, the cold pressing being carried out with sufficient pressure to allow the resulting shaped green article to be handled, and sintering the shaped green article under non-oxidizing conditions such that the article retains its cold pressed shape, the sintering being effected by heating the article to a temperature sufficiently high to sinter the article but not higher than about 50° F. above the melting point.

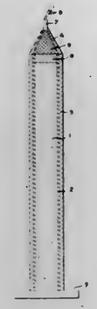
3,022,543
METHOD OF PRODUCING FILM HAVING IMPROVED SHRINK ENERGY
William G. Baird, Jr., Winchester, Carl A. Lindstrom, Jr., Arlington, Arthur L. Besse, Jr., Weston, and Donald J. d'Entremont, East Boston, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed Feb. 7, 1958, Ser. No. 713,848
9 Claims. (Cl. 18—57)



1. A method of producing film of a polymer selected from the group consisting of polyethylene, polypropylene, copolymers of ethylene with an olefin having 3 to 5 carbon atoms, copolymers of ethylene with acetylene, graft copolymers of polyethylene with an olefin having 3 to 5 carbon atoms, graft copolymers of polypropylene with an olefin having 3 to 5 carbon atoms, graft copolymers of polypropylene with acetylene, a mixture of polyethylene and polyisobutylene having improved shrink energy comprising (*a*) continuously extruding a tube of the fused polymer, stretching the polymer while above room temperature in at least one direction, (*b*) cooling the tube, (*c*) irradiating the tube with electrons at a dosage of at least 2×10^6 REP, (*d*) heating the irradiated tube to a temperature of at least 65° C. while the tube is in a heating zone comprising a bath of an inert liquid, (*e*) introducing and maintaining gas pressure in said heated tube between constricting means and a pair of opposed pressure means in sufficient amount to fill the tube and establish internal pressure to distend the tube at least 100% in a lateral direction in the section of the tube immediately adjacent to the heating zone, and (*f*) acting on the tube by said opposed pressure means at a differential rate to stretch the tube at least 100% in a longitudinal direction, from 50 to 95% of the expansion of the tube taking place in the liquid, and cooling prior to release of stretching tension.

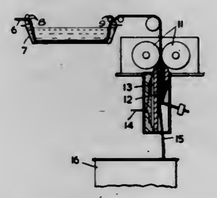
3,022,544
EXPLOSIVE COMPACTION OF POWDERS
David L. Coursen, Newark, Del., and George A. Noddin, Sewell, and James I. Reilly, Woodbury, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 6, 1958, Ser. No. 713,718
2 Claims. (Cl. 18—59.3)

1. A process for compacting powder which comprises surrounding a mass of powder with a layer of high-velocity detonating explosive, said layer being substantially continuous and uniform in composition, and initiating the



entire periphery of one end of said explosive layer substantially simultaneously.

3,022,545
PROCESS FOR CRIMPING CELLULOSE TRIACETATE FIBERS
Joseph Rowland Wylde and James Gordon Napier Drewitt, both of Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain
Filed Aug. 29, 1957, Ser. No. 681,029
Claims priority, application Great Britain Sept. 6, 1956
9 Claims. (Cl. 19—66)



1. Process for imparting crimp of a high degree of permanence to the cellulose tricetate fibres of a strand containing such fibres, which comprises bringing the said fibres of said strand into a crimped condition and heating the strand while it carries an agent consisting essentially of diethylene glycol diacetate and water.

3,022,546
REMOVABLE WINDOW
William M. Nevotti, 3519 Hawthorne Ave., Omaha, Nebr.
Filed June 12, 1959, Ser. No. 819,842
1 Claim. (Cl. 20—52.2)

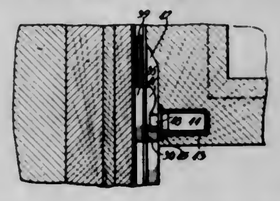
In a window structure, the combination which comprises a window frame having parting strips and blind stops therein, sash in the frame, undulating strips slidably mounted between the parting strips and blind stops and extended continuously throughout the height of the window structure, said undulating strips being integral with channel bars positioned intermediate of said undulating strips and said parting strips and blind stops, undulating supports positioned against said undulating strips, springs behind said undulating strips for urging the undulating strips into sealing relation with the undulating supports of the sash, the edges of the parting strips and blind stops having longitudinally disposed grooves spaced inwardly from the edges thereof and flanges on the channel bars that are integral with the undulating strips of the frame, and an L-shaped brace on each of said flanges,

each of said L-shaped braces having an arm on the inner end thereof, and said arms are extended into the grooves



of the parting strips and blind stops for sealing said sash against said frame.

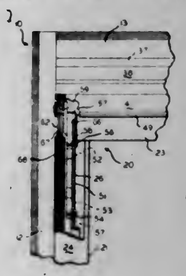
3,022,547
WINDOWS
Brian John Stegley, 43 West St., Brighton, near Melbourne, Victoria, Australia, and Stanley Alfred Pittard, Highett, near Melbourne, Victoria, Australia; said Pittard assignor to said Stegley
Filed Nov. 24, 1959, Ser. No. 855,134
6 Claims. (Cl. 20—52.2)



1. In a window structure; two opposed jambs, a sash guideway mounted on each jamb, a sash member slidably engaging said guideways, at least one of said guideways being resiliently mounted and urged to a position away from its supporting jamb for releasable engagement with said sash, and means to reciprocate the sash within said guideways including a block carried within a guideway between the sash and such guideway for longitudinal movement therealong, counterbalancing means supported on a jamb adjacent said last-mentioned guideway and operatively connected to said block for movement therewith along such guideway said block having a camming surface disposed above a stop member, such surface and stop member being directed toward the sash, and plunger means carried by the sash axially reciprocated by such camming surface and normally bearing against said block between such camming surface and stop means releasably to connect the sash to said reciprocating means.

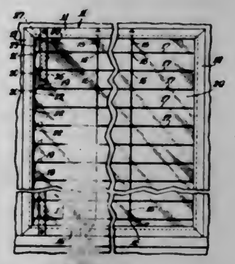
3,022,548
DETAIL FOR AWNING OR JALOUSIE TYPE WINDOWS
Robert H. Brunzie, Chicago, and Frederick M. Fink, Glenview, Ill., assignors to Continental Aluminum Products Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 1, 1960, Ser. No. 46,469
5 Claims. (Cl. 20—53)

1. In an awning type window, a pair of spaced frame jambs and a frame head extending between said jambs including means for securing said jambs to said frame head, a vent sash adapted to pivot within the space defined by said spaced frame jambs to open and closed position, said sash comprising a pair of vent jambs and a vent head connected at each end thereof to said vent jambs, said vent jamb including a flange extending therefrom adapted to overlie and close against a frame jamb, a baffle secured to said vent head and having an end thereof extending substantially to the inner face of its proximate



frame jamb, an operator secured to one of said vent jambs for moving the vent sash to open and closed positions including means on said operator for providing a pivotal connection to said frame jamb, and a baffle on said operator against stray light passing between the end of the first named baffle and its proximate frame jamb and between the end of said vent head and the proximate frame jamb.

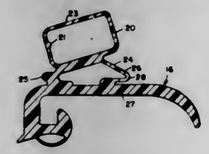
3,022,549
ADJUSTABLE SHUTTER IN HERMETICALLY SEALED CASING
Ralph J. Cummings, Rte. 1, Downers Grove, Ill.
Filed Oct. 4, 1960, Ser. No. 60,467
13 Claims. (Cl. 20—56.5)



8. An adjustable shutter comprising: an imperforate rectangular frame; a plurality of shutter slats of diamagnetic material pivotally supported in said frame on horizontal axes for parallel movement between horizontal planes and inclined planes, said slats overlapping when in said inclined planes; a slug of ferromagnetic material secured to each slat immediately adjacent an edge of the slat, said slugs being vertically aligned with one another; a plurality of slat supports mounted on an upright side of the frame for supporting a corner of each slat when the slats are in their positions parallel to the frame, each said support having a horizontal supporting face and a downwardly extending inclined guide face at an acute angle to the supporting face; means resiliently urging the slats endwise to position their corners in line with the supports, whereby the guide faces cam the slats endwise against the urging of the resilient means as the slats move from inclined to horizontal position, and magnetic force applied to the ferromagnetic slugs may move the

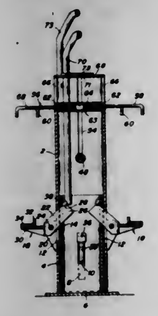
slats endwise off of the supporting faces against the urging of the resilient means to free the slats for return to inclined position; a first pane of glass hermetically sealed to all four sides of said frame, there being minimum clearance between said pane and the edges of the slats carrying the ferromagnetic slugs when the slats are horizontal; and a second pane of glass hermetically sealed to all four sides of the frame opposite said first pane so as to enclose said slats in an airtight and dustproof chamber, said slats being pivotable by moving a magnet along said first pane adjacent said ferromagnetic slugs.

3,022,550
HOME APPLIANCE
Leo G. Beckett, Henderson, Ky., and John T. Woods, Evansville, Ind., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Aug. 11, 1959, Ser. No. 832,988
3 Claims. (Cl. 20—69)



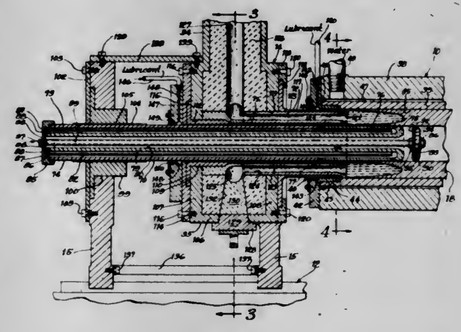
1. In an apparatus including a frame member and a door member hingedly attached thereto at an edge portion of the frame member and an edge portion of the door member, a sealing gasket structure, comprising: a resilient, yielding sealing member; a collapsible bellows means on which the sealing member is mounted; and a base section for mounting the collapsible means on one of said edge portions with the sealing member extending toward the other edge portion, said collapsible means when unrestrained normally urging the sealing member at an acute angle to said one edge portion away from said one edge portion and toward said other edge portion when the door is open, one leg of said angle being substantially parallel to said one edge portion and the other leg of said angle extending toward said other edge portion when said door is approaching closed position.

3,022,551
APPARATUS FOR HANDLING SECTIONAL HOT TOPS
Edgar Marburg, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Mar. 1, 1960, Ser. No. 12,221
13 Claims. (Cl. 22—31)



12. A device for inserting 4-piece hot tops on a mold comprising a first tube, a second tube mounted for axial movement in the lower end of said first tube, means on said second tube limiting downward movement of said first tube with respect thereto, a first pair of hot top supports arranged adjacent the bottom of said device on opposite sides thereof, a second pair of hot top supports arranged in a plane above the first pair of supports in a vertical plane between the first pair of supports, each of said supports including a seat and a radial arm extending inwardly therefrom, said first tube having a slot therein for receiving said seat, said second tube having a slot therein for receiving said arm, a pair of parallel spaced vertical members supported by said second tube adjacent each of said supports, said vertical members having aligned slots therein extending downwardly and outwardly to the corresponding slot in said second tube, means on each arm extending into the aligned slots in the corresponding vertical members, said second tube having opposed vertical slots in the top thereof, means on said first tube extending into said opposed vertical slots, said supports moving from an extended position to a retracted position when said second tube moves downwardly with respect to said first tube, a first pair of hot top holders arranged above the first pair of supports in a plane above the second pair of supports and supported by said first tube, and a second pair of hot top holders arranged above the second pair of supports in a plane above the first pair of holders and supported by said first tube, each of said holders including a downwardly extending portion adapted to bear against the outer side of a hot top piece.

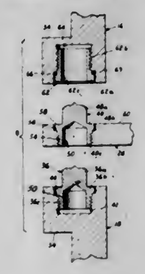
3,022,552
CONTINUOUS CASTING APPARATUS
Alfred H. Tessmann, Chattanooga, Tenn.
Filed Aug. 24, 1959, Ser. No. 835,634
11 Claims. (Cl. 22—57.2)



1. In apparatus for the substantially continuous casting of metal in the form of a hollow section having inner and outer surfaces, the combination comprising an outer metal mold having an opening therethrough which defines the outer surface of a mold cavity having inlet and outlet ends, a metal inner mold extending into the inlet end of said mold cavity in the outer mold and having an outer mold surface in spaced and opposed relationship to said surface of the outer mold, said inner mold terminating at an inner end within the mold cavity in the outer mold, a ring-type nozzle encompassing the inner mold and having a portion extending into the inlet end of the mold cavity, said nozzle having inner and outer surfaces in closely spaced relationship to portions of said surfaces of the inner and outer molds and having a passage therein for the flow of molten metal to the mold cavity, means for cooling the molds, means providing an effective closure for the hollow section of cast metal and an effective seal with the inner surface thereof at a po-

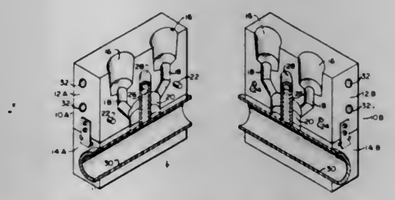
sition within the outer mold and spaced from the inner end of the inner mold, and means for effecting a reduction of the atmospheric pressure to a value below normal atmospheric pressure within the space between the inner mold and the closure providing means.

3,022,553
FLASK FOR MAKING SAND MOLDS FOR CASTINGS
Russell J. Hines, Bay Village, Ohio, assignor to The Hines Flask Company, Cleveland, Ohio, a corporation of Ohio
Filed May 9, 1960, Ser. No. 27,834
3 Claims. (Cl. 22—110)



1. Detachable projection and aperture means for aligning a cope flask section, a drag flask section and an intermediate match pattern plate, adapted to be disposed in stacked relation to form a flask assembly, and for increasing the resistance of the walls of the flask sections to outward deformation during molding operations, said means comprising a first detachable member adapted to be mounted in a threaded and counterbored opening on the top surface of a wall of the drag flask section, said first member comprising an externally threaded base portion having an axially aligned aperture therein opening onto the underside of said base portion and an axially aligned upwardly projecting cylindrical-like head portion and a radially extending shoulder portion disposed intermediate said head portion and said base portion, said shoulder portion being adapted to be received in the counterbored portion of the respective opening in the drag flask section, said aperture being of a transverse cross sectional size and of a depth formed generally complementary to the transverse cross sectional size and height of said head portion, a second detachable member substantially identical to said first member adapted to be mounted in a threaded and counterbored opening in the match plate in axially aligned relation to said first member, the shoulder portion of said second member being adapted to be received in the counterbored portion of the respective opening in the match plate, the aperture in the base portion of said second member being adapted to receive therein in relatively close fitting relation the head portion of said first member, said first and second members being interchangeable, and a third detachable member adapted for mounting in a threaded and counterbored opening on the under surface of the corresponding wall of said cope flask section and in axially aligned relation to said second member, said third member comprising an externally threaded bushing having an axial aperture therein extending downwardly and opening onto the underside of said third member and a radially extending shoulder portion disposed adjacent the bottom extremity of said bushing, the aperture in said third member being adapted to receive therein in relatively close fitting relation the head portion of said second member, said shoulder portion of said third member being of substantially the same diameter as the diameter of the shoulder portions of said first and second members and being adapted to be received in the counterbored portion of the respective opening in the cope flask section, and a spacer member generally encircling said bushing above said shoulder portion thereof, the last mentioned member being detachable from said bushing for providing means for varying the extent of entry of said third member into its opening in the cope flask section, whereby said projection and aperture means may be used with a lesser thickness of match plate resulting in projection of the shoulder portion of said second member above the top surface of the match plate.

3,022,554
EXOTHERMIC MOLD HAVING DETACHABLE LOWER PORTIONS
Donald J. Burke, Tulsa, Okla., assignor to Continental Industries, Inc., a corporation of Oklahoma
Filed Dec. 7, 1959, Ser. No. 857,913
4 Claims. (Cl. 22—116)



1. A mold for exothermically welding a tap to a pipe comprising, an upper mold portion having at least one crucible cavity formed therein, at least one sprue cavity formed therein, a tap cavity formed therein disposed to receive and support said tap, and an upper portion of a weld cavity formed therein; a detachable lower mold portion having a lower portion of a weld cavity formed therein disposed to align with said upper portion of said weld cavity in said upper mold portion, said detachable lower mold portion disposed to conform to external circumference of said pipe to which said tap is to be welded, and means of supporting said detachable lower mold portion to said upper mold portion.

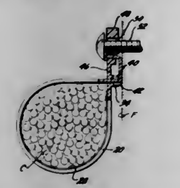
3,022,555
MOLDS
Noel Shaw, Northumberland, England, assignor to Shaw Process Development Corporation, Port Washington, N.Y., a corporation of New York
No Drawing. Filed Sept. 11, 1957, Ser. No. 683,218
4 Claims. (Cl. 22—193)

1. In the method of manufacturing a mold which comprises preparing a slurry comprising comminuted refractory materials and a binder of a liquid lower alkyl silicate, water and a gelling accelerator, pouring said slurry over a pattern, allowing the slurry to gel, separating the gelled mass from the pattern, thereafter igniting the surfaces of the gelled mass and allowing the flames from said ignition to burn until the flammables are consumed thereby to obtain a mold having a porous structure, the improvement which comprises incorporating porous material in the aforesaid slurry that undergoes gellation, said porous material having been prepared by the steps comprising forming a slurry of comminuted refractory materials and a binder of a liquid lower alkyl silicate, water and a gelling accelerator, allowing the slurry to gel, igniting the surface of the gelled mass and allowing the flames from said ignition to burn until the flammables are consumed, said porous material having an average diameter of at least about ⅛ inch.

3,022,556
CASTING PROCESS
George R. Gardner, Berea, and John C. Buck, Solon, Ohio, assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Jan. 30, 1959, Ser. No. 790,044
6 Claims. (Cl. 22—193)

1. A method of making light metal, thin walled castings comprising forming a part of permeable gypsum plaster, immersing the part in a bath of molten pattern wax and withdrawing it therefrom thereby depositing a thin, continuous coating of wax on that portion of said part which is to come in contact with the molten metal, repeating said immersion in and withdrawal from said wax bath, if necessary, to build up a wax layer of the desired thickness, investing the wax and mold part assembly with a permeable gypsum plaster to form the external portion of the mold, said plaster mold parts being formed from a plaster slurry capable of yielding a plaster having a minimum permeability of 20 on the A.F.S scale, heating said mold and wax assembly to a high enough temperature to melt the wax without carbonization, draining off any excess of molten wax from the mold not absorbed by the plaster thereby providing the desired mold cavity, and thereafter introducing the molten light metal into said mold cavity to form the thin walled casting.

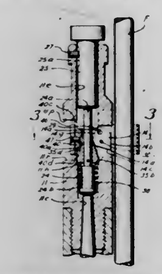
3,022,557
CABLE BUNDLING AND SUPPORTING STRAP
Maurus C. Logan, Elizabeth, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed June 24, 1958, Ser. No. 744,267
5 Claims. (Cl. 24—17)



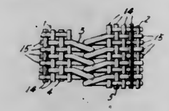
1. A flexible strap for tying a plurality of wire conductors in bunched parallel relation, said strap including an apertured boss at one end thereof and a transverse eyelet portion adjacent thereto defining an opening in outline complementary to the cross-sectional configuration of said strap and adapted for looping the opposite end portion thereof through said eyelet portion in inverted frictional relation, the inner periphery of said boss provided with a dovetail slot transversely of said strap and in adjacent parallelism with said eyelet portion adapted for receiving the extended free end portion of said strap therethrough in final reversed relation relative to that portion thereof extending through said eyelet portion, said apertured boss having one face thereof undercut radially of said dovetail slot to provide clearance for the final reversed end portion of staid strap whereby when said strap is secured to a fixed support by means of a screw through said apertured boss, the extended free end of said strap will be clamped between said boss and fixed support.

3,022,558
LINE LATCH
Myron M. Kinley, Los Angeles, Calif., assignor to John C. Kinley
Filed Aug. 15, 1958, Ser. No. 755,231
8 Claims. (Cl. 24—134)

1. A line latch for gripping engagement with a flexible line, comprising a body, a gripping member, pivot connection means mounting said gripping means on said body for pivotal non-longitudinal movement into gripping engagement with the flexible line, an actuator member, means mounting said actuator member on said body for longitudinal non-pivotal movement relative to said body, coacting surfaces on said gripping member and said actuator member for engagement with each other as said actuator member moves longitudinally for urging said gripping member to pivot into said gripping engagement, resilient means for moving said actuator member longitudinally relative to said body, and a releasable retaining means for preventing movement of said actuator member by said resilient means until released.



3,022,559
SEPARABLE INTERLOCKING FASTENER
Erich Berberich, Stolberg, Germany, assignor to William Prym-Werke K.G., Stolberg, Germany
Filed Nov. 3, 1955, Ser. No. 544,771
Claims priority, application Germany Nov. 4, 1954
23 Claims. (Cl. 24—205.13)

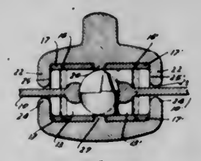


1. A separable interlocking fastener of the slider type, comprising in combination, two stringers made of threads which are interlaced with each other, said stringers having longitudinal edges facing each other; and a row of spaced interlocking elements on said longitudinal edge of each stringer, said interlocking elements being formed by portions of said interlaced threads projecting beyond said edge of each stringer, each of said thread portions forming said interlocking elements extending uninterruptedly from one longitudinal location along said one edge toward the facing longitudinal edge of the other stringer and back to substantially the same longitudinal location along said one edge, and each of said thread portions having at an outer free end an interlocking portion adapted to releasably interlock directly with the corresponding interlocking portion of the other stringer, said interlocking portion on said one stringer being at least in part longitudinally displaced with respect to said longitudinal location, and said interlocking portions on one of said stringers interlock only with the interlocking portions on the other stringer to releasably interlock the two stringers of the fastener.

3,022,560
SURFACE COVERED SEPARABLE FASTENERS
Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 12, 1958, Ser. No. 720,876
3 Claims. (Cl. 24—205.15)

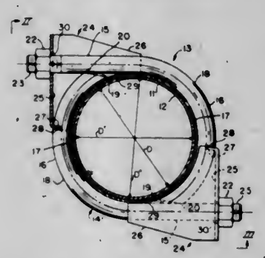
1. A separable fastener employing a pair of opposed stringers comprising a pair of tapes; a bead on an edge of

each tape; scoops spaced along the beaded edge of each tape; a cover ribbon associated with each stringer; said scoops each having a projecting end portion adapted to engage scoops on the opposite stringer and each having a tape-engaging portion having two legs gripping the bead and each also having formed portions for reception of the stitching securing the ribbon to the stringer, said formed portions comprising outwardly tapered apertures at opposed sides of tape-engaging portions of the scoops, the scoops on the opposed stringers having, when engaged, a substantially rectangular cross-section when viewed in a plane perpendicular to the beaded edges of the opposed



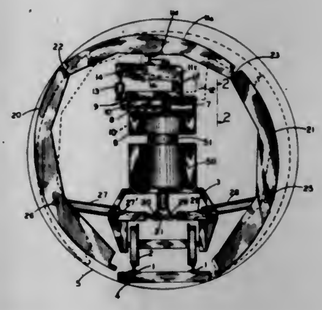
tapes, and each of said scoops being substantially symmetrical on each side of the plane of said tape, a slider movable along the stringers to couple and uncouple the same, said slider having a pair of side flanges on each wall, each side flange adapted to engage an end of a leg of a tape engaging portion of a scoop; each said cover ribbon extending parallel to the tape of the stringer with which it is associated and each said cover ribbon overlying and being located within the end boundaries of the scoops on said tape, stitching for securing each ribbon to the tape with which it is associated and to the scoops of said tape, said stitching and said ribbon reinforcing the grip of the scoops on the tape.

3,022,561
TUBE CLAMP
Zigmund Jagiel, 3106 Algonquin Parkway, Toledo, Ohio
Filed Oct. 22, 1958, Ser. No. 768,943
6 Claims. (Cl. 24—284)



1. A clamp for embracing a cylindrical element comprising a pair of elongated members, a straight shank on each member, a curved bight on each member having an inner face generally conforming to a portion of said cylindrical element, a cam surface on the outer face of each bight adjacent its end, the outer face of each bight having a notch spaced from its end, said members being positioned on opposite sides of an embraced cylindrical element in diametrically opposed relationship, a channel shaped coupling between the shank of each member and the bight of the opposite member, a bottom for each channel generally parallel to a tangent to the bight which it couples and intersected by the shank which it couples, an inturned lip on said bottom hooked into said notch, each bottom having an aperture for its respective intersecting shank, walls for each channel extending along and straddling the intersecting shank, an arcuate edge on each wall adjacent to and engageable with said element over a region from the end of the bight coupled by said coupling to the junction of the shank coupled by said coupling with the bight integral therewith, a thread on each shank, a nut on each thread bearing against said channel bottom whereby the advance of each nut on its shank turns the respective channel about its lip to advance said edges toward said element and each of said cam surfaces is engaged with and advanced along the inner face of the shank of its opposed member.

3,022,562
TUNNEL FORM
David C. Card, Denver, Colo., assignor to C. S. Card Iron Works Co., Denver, Colo., a corporation of Colorado
Filed Apr. 7, 1960, Ser. No. 20,737
6 Claims. (Cl. 25—131.6)

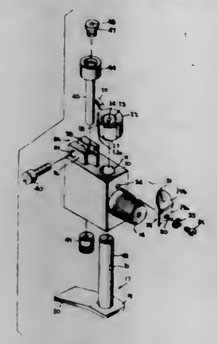


1. Apparatus for tunnel lining comprising a mobile carriage arranged for movement along a tunnel, a pair of upper frame members on said carriage, elevating means interconnecting said carriage and said upper frame members and arranged to move said upper frames along a generally upright path toward and away from said carriage, support members mounted on said upper frame members, a form support secured by pivot means to each said support member, extensible means spaced a substantial distance from said pivot means interconnecting each said support member and its adjacent form support for imparting pivotal movement of said form support about said pivot means, an upper mold form mounted on said form support, at least one side form hinged to said upper mold form adjacent each side edge thereof and cooperatively arranged to provide with said upper mold form at least a substantial portion of a tunnel form, extensible means interconnecting said side forms to said carriage for selective lateral movement thereof, whereby pivotal movement of said form support cants the mold form relative to a vertical plane.

3,022,563
AIR JET
Clifford W. Palm, Frostburg, Md., and Russell L. Bragg, Oak Ridge, Tenn., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Dec. 2, 1958, Ser. No. 777,673
19 Claims. (Cl. 28—1)

1. In a jet for bulking synthetic yarn and having a bulking chamber through which said yarn is fed; the improvement comprising a valve and impingement board unit, the valve part of which is operable to control the inlet for bulking fluid to said chamber, and the board

part of which is so connected with said valve part as to be operatively positioned relative to the outlet of said



chamber only in the fluid flow-permitting state of said valve part.

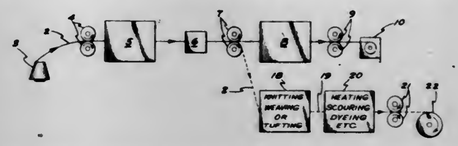
3,022,564
PROCESS AND APPARATUS FOR REMOVING PROTRUDING FIBERS FROM SPUN THERMOPLASTIC LINEAR POLYMER YARNS
Frederick Charles Price, Harrogate, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed June 2, 1958, Ser. No. 739,367
Claims priority, application Great Britain June 6, 1957
11 Claims. (Cl. 28—63)



1. A process for removing protruding fibres from a spun yarn comprising synthetic thermoplastic linear polymer with a singeing device, having a plurality of hot substantially flat surfaces disposed in spaced succession along the yarn path on both sides thereof with the planes of said surfaces at substantially right angles to said yarn path and the edges thereof adjacent said yarn path, which comprises passing said yarn through said device sufficiently close to said surfaces that the protruding fibres strike said surfaces as the yarn passes along said yarn path through the singeing device, and maintaining said surfaces at a substantially uniform temperature above 500° C. whereby the protruding fibres are severed at the edges of said flat surfaces.

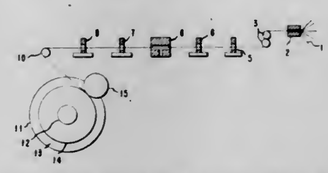
3,022,565
METHOD OF TEXTURING YARNS
Paul F. Fitzgerald, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 758,932
6 Claims. (Cl. 28—72)

1. A method of texturing acrylonitrile polymer carpet yarns which comprises continually drawing a continuous multifilament acrylonitrile polymer tow of at least 750 total denier from a source of supply, stretching the tow at a stretch ratio of from about 1.1 to 3.0 while heated to a temperature above the second order transition temperature of the acrylonitrile polymer to produce a dimensionally unstable tow, concurrently inserting twist in the tow at a twist multiplier value of from 8 to 15 to form a yarn, cooling the yarn below the second order transition temperature to set the twist inserted therein, untwisting



the yarn to remove the twist, and thereafter heating the resulting yarn at a temperature selected from the group consisting of at least 160° F. wet and at least 200° F. dry for a time sufficient to relax, shrink, and develop crimp therein, whereby there is produced a dimensionally stable, crimped and elastic carpet yarn.

3,022,566
FALSE TWISTED YARN BEAM
Charles Edward Daniels, Wilmington, and Nathaniel Convers Wyeth, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 11, 1958, Ser. No. 714,549
6 Claims. (Cl. 28—78)



1. A warp beam wound with a warp sheet of a large number of essentially parallel continuous multifilament yarn ends under tension, having a yarn-to-yarn spacing of less than about one-half inch between the individual yarn ends in the warp winding, each of said individual yarns consisting of a single bundle of filaments having maintained therein solely by being trapped on the beam from about 0.4 to about 0.8 average turn per inch of releasable alternating twist at a period length of from about 4 to about 16 feet as the essential means for maintaining sufficient unity of the filament bundle to provide a beam which backwinds without entangling of filaments and without the formation of filament ringers, the beam being backwindable into a warp with substantially complete removal of the alternating twist by merely providing a free suspended length greater than said period length.

3,022,567
METHOD OF MAKING SHELLS
George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Apr. 26, 1955, Ser. No. 504,015
7 Claims. (Cl. 29—1.21)

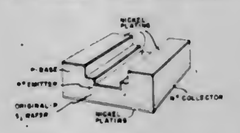
1. In a method especially adapted for making a large size shell from a low carbon steel cup on the order of SAE 1010 steel, which comprises preliminary drawing of the tubular wall of the cup to elongate and reduce the diameter thereof, heat treating the thus drawn cup to change the grain structure to fine pearlite, and thereafter substantially further elongating and reducing the diameter of said tubular wall by cold working the same and by

cold work coining the base of the shell, as well as cold work nosing the mouth end of the shell to impart to the



entire shell work hardness of substantially martensitic steel.

3,022,568
SEMICONDUCTOR DEVICES
Herbert Nelson and John Bernath, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 27, 1957, Ser. No. 648,855
10 Claims. (Cl. 29—25.3)

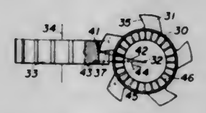


1. A method of making semiconductor devices comprising the steps of lapping regular shallow grooves into a major face of a monocrystalline semiconductive wafer of a given conductivity type, converting the entire surface layer of said grooved face to the opposite conductivity type, covering the bottom of said grooves with a conductivity type-determining material of said given type, heating said wafer so as to diffuse said material into said wafer, lapping said grooved face so as to widen the upper portion of said grooves, dicing said wafers into units containing one groove between two lands, and thereafter attaching suitable electrical leads to said units.

ERRATUM

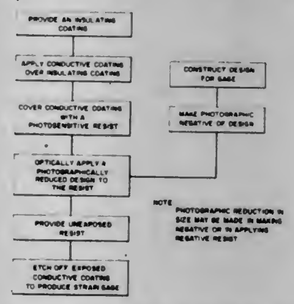
For Class 29—95.1 see:
Patent No. 3,022,710

3,022,569
FORM-CUTTING TOOL
Ernest Wildhaber, Brighton, N.Y.
(124 Summit Drive, Rochester 20, N.Y.)
Filed Apr. 27, 1956, Ser. No. 581,088
13 Claims. (Cl. 29—102)



1. A reciprocatory form-cutting tool having a plurality of cutting teeth equi-angularly spaced about an axis and projecting outwardly therefrom, for cutting without turning on said axis, each of said cutting teeth having a side-cutting edge and an adjacent end-cutting edge formed thereon at the junctures of the front end face of the tooth with one side and with the top of the tooth, respectively, the surfaces formed on each cutting tooth back of said cutting edges being helical surfaces of constant lead that are coaxial with said axis, said lead being the same on both of said surfaces.

3,022,570
VACUUM DEPOSITED STRAIN GAGE AND METHOD OF MAKING SAME
Dudley D. Taylor, 11623 35th Place, Beltsville, Md.
Filed Sept. 21, 1959, Ser. No. 841,420
4 Claims. (Cl. 29—155.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



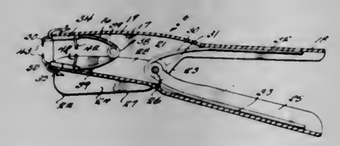
1. The method of making a strain gage comprising the steps of cleaning the surface of a base element; vacuum depositing a thin coating of electroinsulating material uniformly on said surface; heating said base element to about 200° C.; vapor depositing a coating of electroconducting alloy on said insulating coating; reducing the temperature of the base element to room temperature, applying a photosensitive resist to said conductive coating before an appreciable amount of oxide has formed thereon; constructing a pattern for said gage and making a photographic replica thereof of reduced size; applying an image of said replica to said resist; etching said conductive coating to remove the excess thereof and leave a strain gage conducting element of the desired pattern on said coating of insulating material; and attaching a pair of electrical leads to said electroconductive coating at the end portions thereof in a manner such that the transition from said coating to said leads is of gradually increasing cross sectional area whereby local stress concentrations are avoided.

3,022,571
CLIPS FOR SEALING BAGS IN AIRTIGHT MANNER, AND DEVICE FOR ATTACHING SAID CLIPS
Herbert Niedecker, 19 Radilostr., Frankfurt am Main-Rodelheim, Germany
Filed Jan. 16, 1958, Ser. No. 709,728
Claims priority, application Germany Jan. 16, 1957
1 Claim. (Cl. 29—193.5)



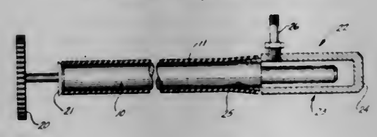
A strip for a fastening machine comprising a plurality of serially arranged clips including end portions and being connected in end-to-end relation, each of said clips including a substantially flat central portion and diverging arms extending in opposite directions from said central portion, said arms being inclusive of said end portions, said end portions being hook-shaped, the end portions of adjacent clips being connected to define a V-shaped opening whereat the clips are adapted for being severed.

3,022,572
APPLICATOR FOR PLACING A HARNESS ON A LIVE MINNOW
Charles Kwisnek, R.F.D. 1, Box 157, Blairsville, Pa.
Original application Aug. 2, 1957, Ser. No. 675,926, now Patent No. 2,984,929, dated May 23, 1961. Divided and this application Aug. 30, 1960, Ser. No. 52,917
1 Claim. (Cl. 29—225)



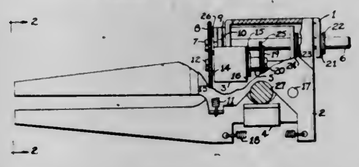
An applicator for applying a harness to a live minnow comprising a fixed jaw and a movable jaw, a pivot bolt connecting said jaws in operational relation to each other, a handle on each of said jaws, and a compression spring positioned between said jaws in circumjacent relation to said pivot bolt, each of said jaws having horizontal portions of substantially triangular formation with the fixed jaw having inwardly converging depending side portions that overlap inwardly converging upstanding side portions on said movable jaw, the forward corners of both the depending and upstanding side portions being rounded, the depending side portions being of substantially greater height than the upstanding side portions and spaced outwardly a substantial distance therefrom.

3,022,573
TOOL FOR INSTALLING AND REMOVING RUBBER ROLLERS
Herbert L. Bullock, % George Bullock & Sons, 530 W. Main St., Cheshire, Conn.
Filed Apr. 15, 1958, Ser. No. 728,638
1 Claim. (Cl. 29—235)



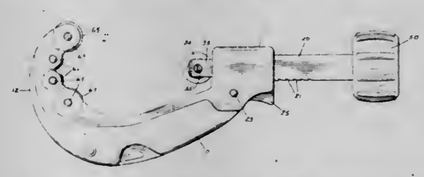
In a tool for installing or removing a soft elastic expansible tubular roll with respect to a cylindrical carrying shaft on which said roll is adapted to be tightly fitted, the combination of a short hollow cylindrical handle member closed at its outer end and terminating at its inner end in a reduced short frusto-conical tapered section, the end diameter of which is slightly greater than the diameter of said shaft, said handle member being knurled and provided on one side with a pneumatic check valve for introducing air under pressure from a source of supply into the interior of said handle member, whereby when said sharp conical tapered section is inserted between the end of said roll and said shaft, air may be introduced into said handle member to expand said roll throughout its entire length and permit said roll to be easily installed upon or removed from said shaft, said handle having an interior chamber substantially larger than said shaft to enclose an air space therebetween of considerable volume when mounted on said shaft, to allow the air pressure in the chamber to be built up and to be retained by said check valve after the removal of said source of air supply.

3,022,574
CABLE ARMOR CUTTERS
Emil Green, 15 Union Place, Lynbrook, N.Y., and Samuel Schlanger, 44 Forest Road, Valley Stream, N.Y.
Filed June 9, 1961, Ser. No. 116,008
4 Claims. (Cl. 30—90.5)



1. A cable armor cutter comprising a main frame, a driving shaft journaled in the main frame, an arm pivoted about the driving shaft of the main frame, driving means on the end of the driving shaft engaged with driving means mounted on a shaft journaled in the pivoted arm, a circular saw blade mounted on the shaft in the pivoted arm, a circular depth stop fastened adjacent to the circular saw blade, means to motivate the driving shaft, means to exert force on the circular saw blade, additional means to clamp the cable, clamping means so arranged that when it is released it removes the circular saw blade from the armored cable, thus allowing the cable to be removed easily.

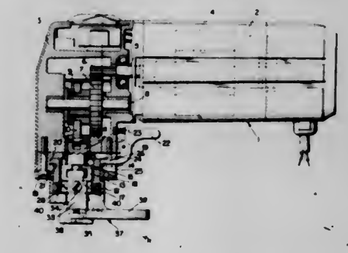
3,022,575
TUBING CUTTER
Clyde E. Wright, Elyria, Ohio, assignor to The Ridge Tool Company, Elyria, Ohio, a corporation of Ohio
Filed July 24, 1959, Ser. No. 829,361
3 Claims. (Cl. 30—102)



1. A tubing cutter including a frame having a cutter supporting boss thereon, said boss having a bore therein of rectangular cross section, a cutter support tube in said bore slidably mounted therein, means to lock said tube in different longitudinally adjusted positions in said bore, said tube having a bore of rectangular cross section in one end and a bore of circular cross section in the other end and a flange separating the two bores, a cutter support member of rectangular cross section slidably disposed in the rectangular bore of said tube and carrying a cutter wheel on its end, a shaft connected to said cutter support member and extending through an opening in said flange, stop means carried by said shaft arranged to engage said flange upon movement of the shaft outward of the cutter support tube, said shaft being provided with a threaded end, a cutter shaft drive member rotatably supported in the outer end of the cutter support tube and having threads for driving engagement with said threaded shaft, said drive member having a flange exteriorly of said cutter support tube, a cap threadingly engaged with the end of the cutter support tube and having an open-

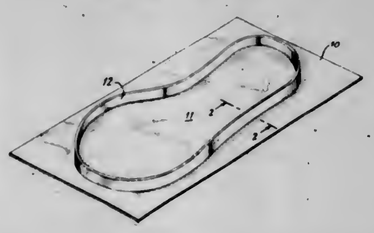
ing therethrough, said flange arranged to engage the inner side of said cap, and a boss formed on said cutter drive member adjacent said flange, said cutter drive member being formed with a reduced extension, an operating handle secured on said extension in engagement with said boss and retainer means for retaining said handle on said extension.

3,022,576
PORTABLE CUTTING TOOL
Louis F. Daman, Martinsville, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Mar. 31, 1961, Ser. No. 99,884
3 Claims. (Cl. 30—241)



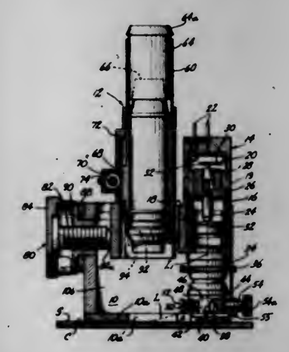
1. A portable cutting tool comprising a housing having a bar mounted therein for reciprocation and means for imparting reciprocation thereto, a slide block, means for connecting said slide block to said bar for unitary reciprocation and providing for lateral movement of said slide block to effect separation of said bar and slide block, a bracket having a guideway receiving said slide block and providing for movement of said slide block therein in a direction axially of said bar and holding said slide block against lateral moveemnt relatively to said bar, means for connecting said bracket to said housing to prevent movement of said bracket relatively to said housing in the direction axially of said bar and providing for lateral movement in a direction coinciding with the direction of lateral movement of said slide block for effecting disconnection of said slide block from said bar, means for releasably securing said bracket to said housing in operative position with the guideway in said bracket aligned axially with said bar, a cutter carried by said slide block, and a ledger carried by said bracket.

3,022,577
SHOE-FIT CHECKING DEVICE
Milton M. Rockmore, 102 Brookby Road, Scarsdale, N.Y.
Filed Oct. 13, 1960, Ser. No. 62,204
3 Claims. (Cl. 33—3)



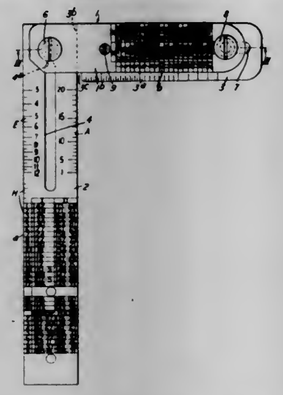
1. A shoe-fit checking device comprising a flat sheet of thin springy material adapted to be placed upon a flat foot-supporting surface or floor, said sheet being provided with an upstanding deflectable wall of similar material disposed along a line defining the outline of a foot of predetermined size and shape, said sheet having its marginal region extending outwardly from said wall to sustain the latter in the desired outline-defining disposition, the deflection of said wall serving as an aid in indicating the extent to which a foot inserted within the confines of said wall is larger than or deviates from said predetermined foot outline.

3,022,578
DISCONTINUITY DEPTH GAUGE
Bobly H. Seibel, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Feb. 26, 1958, Ser. No. 717,588
4 Claims. (Cl. 33—46)



1. A portable surface discontinuity depth measuring gauge comprising a portable base adapted for positioning in predetermined relationship to an external relatively immobile surface, a light source mounted on said base and including means for projecting onto said surface at a relatively large incidence angle a pattern of light rays producing a substantially straight line image, said line image being transverse to the plane of incidence, said base being positionable in relation to said surface for causing said line image to intersect transversely a scratch or other surface discontinuity to be measured for depth and thereby form on said surface an illuminated profile image of such discontinuity magnified in its depth aspect proportionally to said incidence angle, microscope means mounted on said base in predetermined relation to said light source and having an optical axis extending transversely to the surface for viewing said line image including said illuminated profile, said microscope means including a reticle means and a reticle line, said reticle means superimposing said reticle line on the line image and illuminated profile image viewed through said microscope means, said means for projecting the line image including movably mounted means on said base operable to move the line image transversely while maintaing it parallel to itself and while maintaining the incidence angle constant to an initial position in which said reticle line is substantially coincident with a depth extremity of said illuminated profile image, means for moving said reticle line transversely while maintaining it parallel to itself, calibrated means for measuring the amount of the reticle line's movement between depth extremities of said illuminated profile image, thereby to measure the depth of said profile image and thereby the depth of the surface discontinuity represented thereby.

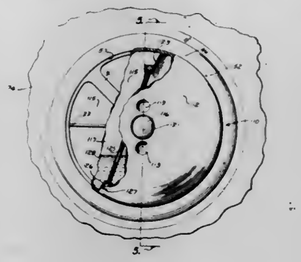
3,022,579
SETTING-OUT-TOOL
Thomas Ernest Marriott, deceased, late of Christchurch, New Zealand, by Catherine Marriott and May E. Marriott, executrixes, assignors to Ernest William Thomas Marriott, Christchurch Builder, New Zealand
Filed Feb. 14, 1958, Ser. No. 715,309
Claims priority, application New Zealand Mar. 8, 1957
2 Claims. (Cl. 33—98)



1. A setting-out tool comprising, a stock defined by a pair of superimposed portions adapted for connection in spaced relation, a pair of blades comprising a longer and a shorter blade mathematically graduated in accordance with predetermined data, and each of said blades including a slot closed at its ends and extending along a part of the length of each blade, at least one of the slots being formed with a narrow neck at one end thereof, means for clamping one end of each blade to an opposed end of said stock for pivotal and slidable attachment to the stock between the superimposed portions thereof, said means including a pivot bolt defined by a stud having a parallel plane faces dimensioned to be registerable with the neck of the one slot to permit sliding movement of the blade on the stud, the shorter blade being of such a length that it can be turned to lie between and in parallelism with the portions of the stock, the free end of the shorter blade being squared and the free ends of said blades being independently movable for selective adjustment to predetermined settings in relation to one another and to said stock, and locking means being provided for wedging the said squared end of the shorter blade against the adjacent edge of the longer blade in such a manner as to lock the longer blade at right angles to the shorter blade and to the stock, said locking means consisting of a locking screw which is screwed through a threaded hole in one portion of the stock and has a tapered end portion which enters a second slot formed in the shorter blade and bears against an extremity of the second slot adjacent to the squared end of that blade.

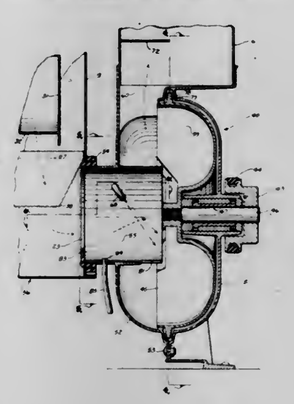
3,022,580
CLOTHES DAMPENING APPARATUS
Roger F. Doty, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed May 22, 1957, Ser. No. 660,890
6 Claims. (Cl. 34—60)

1. In an appliance including a clothes receptacle revoluble about a horizontal axis, a device for dampening fabrics placed within said receptacle and revoluble therewith comprising, fluid reservoir means supported by said receptacle and aligned with said axis, said reservoir means defining a cavity for the storage of a body of fabric dampening fluid, fluid pickup means carried by said reservoir means and radially displaced from said axis within said cavity, conduit means extending from said fluid pickup means and having an effluent port spaced from said fluid pickup means and opening into said receptacle, and means for rotating said receptacle and reservoir whereby



said fluid pickup means is angularly rotated about said axis and through said body of fluid to elevate said fluid pickup means above said effluent port, said conduit means being constructed and disposed to receive a charge of fluid from said pickup means and inject said charge of fluid into said receptacle to dampen said fabrics.

3,022,581
CLOTHES DRIER
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed May 3, 1955, Ser. No. 505,694
22 Claims. (Cl. 34—75)



21. In a clothes drier having means defining a drying chamber and a heating unit for evaporating moisture from damp fabrics placed within said drying chamber, a vapor condenser for removing moisture vapors from said drying chamber, comprising, a blower unit communicating with said drying chamber, said blower unit including a bladed impeller for pumping air and moisture vapors from said drying chamber, an air outlet in said blower unit for discharge of air pumped from said drying chamber, means for directing a stream of cooling fluid onto said bladed impeller of said blower unit to break up said cooling fluid into the fine fluid particles to condense said moisture vapors by coalescence, means for removing the coalesced fluid, and means for rotating said impeller.

3,022,582
TIME TEACHING EDUCATIONAL DEVICE
Catherine J. Pitt, 1606 15th Ave., Menominee, Mich.
Filed May 20, 1960, Ser. No. 30,607
1 Claim. (Cl. 35—39)



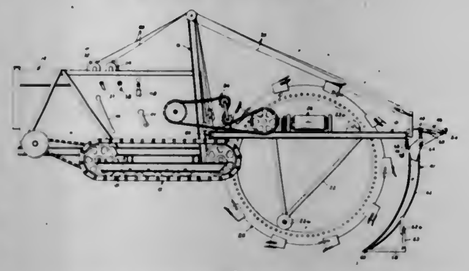
A time teaching educational device of the character described comprising a board inscribed with a circularly arranged succession of twelve numerals corresponding to the numerals on the face of a clock, respective minute and hour hands pivotally mounted on said board centrally of the numerals and being manually movable to indicate various time values, three horizontally aligned spaced pegs secured on the board adjacent said circular arrangement of numerals, a pair of groups of time indicating cards formed with supporting apertures respectively engageable on the two outer pegs, one group of cards comprising minute values and the other group of cards comprising hour values, the board being inscribed with a first sequence designation subjacent the intermediate peg, an additional card having a supporting aperture engageable on said intermediate peg and being of sufficient size to cover said first sequence designation, said additional card being inscribed with a sequence designation opposite in meaning to said first sequence designation, said board being formed with circularly arranged apertures located to indicate respective minute values in groups of five apertures between the successive numerals, and further pegs detachably engageable in said last-named apertures, said further pegs comprising groups of five each, said groups of pegs being of different colors to teach the concept of five minutes between each successive pair of numerals.

3,022,583
WATERPROOF BOOT WITH ENLARGED THROAT OPENING
George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Filed June 8, 1960, Ser. No. 34,733
2 Claims. (Cl. 36—7.2)



1. A waterproof boot having a throat opening extending from the top of the boot to a point approximately above the instep portion thereof, said opening being closed by a bellows tongue comprising a central panel and opposed side panels, said side panels being so shaped and connected to the leg portion of the boot as to form hollow expandable wings at opposite sides of the central panel, said wings extending downwardly from the top of the boot in approximate parallelism such that the lower ends thereof are substantially spaced apart, said wings having interfitting fastening elements adapted to close the throat opening, the outer edge of each wing having a projecting, generally convex portion adjacent the lower end thereof adapted to provide substantial expandable material adjacent said lower end, whereby an enlarged opening is provided to facilitate donning and doffing of the boot.

3,022,584
CRUMBING MECHANISM FOR EXCAVATING MACHINES
Henry L. Meyer, Cleveland Heights, and Fred R. Wilhelm and Edmund Gregorczik, Willowick, Ohio, assignors to The Cleveland Trencher Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 16, 1959, Ser. No. 840,331
16 Claims. (Cl. 37—80)

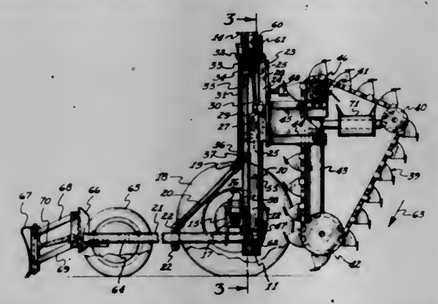


1. In an excavating machine having a generally horizontally extending boom, an excavating unit mounted on said boom, crumbing mechanism including a crumbing shoe pivotally mounted on said boom adjacent said unit, a fluid powered motor unit operatively connected to said boom and to said crumbing shoe for pivoting the latter into and out of operative position and in a generally vertical plane about its pivotal connection to said boom, and automatic locking means including means movable with respect to said shoe and other means adapted for locking coaction with said movable means, for maintaining said crumbing shoe in said operative position.

3,022,585
TRENCHING MACHINE DRIVE TRANSMISSION
William J. Bradley, North Hollywood, Calif., assignor to Earth Equipment Corp'n., Los Angeles, Calif., a corporation of California
Filed Sept. 11, 1959, Ser. No. 839,449
1 Claim. (Cl. 37—86)

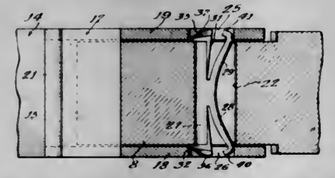
A trenching machine drive transmission structure for a tractor having a power takeoff shaft and a main frame fixed to said tractor, a vertical plate laterally disposed on said main frame and mounted for vertical reciprocable movement on said main frame, power means on said main frame connected to said plate energizable for vertical movements and positioning of said plate vertically on said main frame, a chain line frame fixed to the rear face of said plate on the opposite side of said plate from said main frame, a bucket chain line journaled on said chain line frame, an input drive shaft for said bucket chain line journaled on said chain line frame, a power transmission connected to the power takeoff of said tractor and connected through said plate to said input drive shaft of said bucket chain line so as to drive said bucket chain line for any vertical position of said plate and chain line frame on said main frame, said power transmission being characterized by a transmission shaft journaled on and extending through said plate having means operatively connecting the rearward end of said transmission shaft to said input drive shaft of said bucket chain line, a

sprocket fixed on the front end of said transmission shaft adjacent the forward face of said plate, a pair of idler sprockets journaled on said plate adjacent the forward face of said plate, a third idler sprocket journaled on said main frame, a sprocket fixed to the output shaft of said



tractor, and an endless chain operating over said sprocket on said transmission shaft extending over one of said idler sprockets on said plate then over said third idler and over said sprocket on said power takeoff shaft of said tractor and then finally over said other idler on said plate back to said sprocket on said transmission shaft.

3,022,586
RETAINER FOR BUCKET TEETH
Claude M. Towne, Watertown, Wis., assignor to General Metals Corporation, a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,905
5 Claims. (Cl. 37—142)



1. In an earth digging tooth having a replaceable cap with aligned openings for register with a bore through a supporting base, a retainer for securing the replaceable cap on the base, comprising: a spring steel pin of elongate form having a base portion with end surfaces for receiving end delivered blows to insert and remove the pin from said bore and aligned openings and a pair of integral pin end portions secured to the base portion centrally thereof each offset laterally relative to the base portion of the pin to permit resilient flexing of the pin end portions toward the base portion, said pin end portions having wedge surfaces for flexing said portions upon insertion of the pin endwise into said cap openings and supporting base bore with said end portions bearing only against said cap and exerting pressure against said cap in opposition to said base portion bearing only against said base so that flexure of the pin end portions resiliently holds the cap on said base.

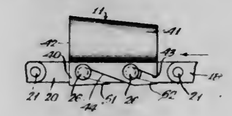
3,022,587
ROAD SCRAPERS
Leo O. Greeley, deceased, late of Cadillac, Mich., by Cadillac State Bank, executor, Cadillac, Mich., assignor to F. J. McCarthy, Inc., a corporation of Michigan
Filed Mar. 16, 1959, Ser. No. 799,769
8 Claims. (Cl. 37—159)

1. In a surface scraper unit for mounting beneath a truck, the combination comprising: a beam and means securing said beam to said truck; a scraper blade and a plurality of hinges pivotally securing said blade to said beam; a plurality of springs urging said blade into retracted position adjacent said beam; a plurality of fluid operated actuators each having one end mounted to and beneath said beam and the other end mounted to said



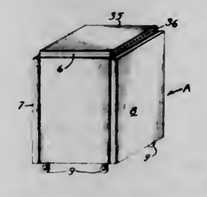
blade and when extended by fluid pressure pivoting said blade downwardly into extended position; said actuators in both retracted and extended position being entirely beneath said beam and behind and below the top of said blade and extending generally parallel to the lengthwise plane of said blade when said actuators and blade are retracted.

3,022,588
CHAIN AND CUTTERS THEREFOR
William Delbert Brown, Woodbine, Iowa
Filed Jan. 13, 1960, Ser. No. 2,146
10 Claims. (Cl. 37—191)



1. A chain and cutter therefor comprising a series of links connected end-to-end by a plurality of transverse connecting pins with one pin connecting adjacent links, an adjacent pair of said pins having lateral extensions outwardly beyond the adjacent links and having enlarged ends, a cutter carried by the chain and having a pair of slots with closed bottoms each receiving one of said pin extensions and removably associated therewith, at least one of said slots opening to the periphery of the cutter, said bottoms seating on said pin extensions and being urged thereagainst during cutting action of the cutter.
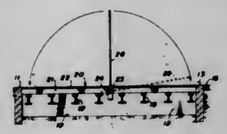
3,022,589
WASHING MACHINE WITH IRONING BOARD
Jacob L. Kleinman, New York, N.Y.
(217 Beach 71st St., Arverne, N.Y.)
Filed July 11, 1957, Ser. No. 671,192
2 Claims. (Cl. 38—104)



1. A housing for a washing machine or the like comprising a body portion having a flat top and side walls provided with a compartment for having laundry placed therein, a cover coextensive with and covering the said flat top, a place, overlying and coextensive with the said cover and hingedly secured thereto, said plate adapted to be swung away from the said cover and having a surface adapted to be on an even line with the top surface of such cover, a supporting structure mounted by piv-

otal means on one of the side walls adjustable to support the said plate while in the said swung away position, said plate and the said cover forming a pressing board of an extended area for pressing laundry thereon.

3,022,590
GROUND HINGED PICKET TYPE GATE
William T. Ohlhausen, 8037 Downe Drive, Fort Worth, Tex.
Filed July 5, 1960, Ser. No. 40,888
2 Claims. (Cl. 39—5)



1. A gate comprising: a roadway including a pit therein, a plurality of beams extending across said pit in alignment with said roadway, a shaft extending across said pit perpendicularly to said beams at a level beneath the surface of said roadway, a plurality of counterweight members respectively journaled to said shaft between said beams and having their centers of gravity beneath said shaft, and a plurality of pickets of spring material respectively attached to said counterweight members and projecting therefrom opposite said centers of gravity of said counterweight members with respect to said shaft.

3,022,591
CHANGEABLE EXHIBITERS
Thomas G. Faulkner, % Faulkner's Laboratories, 4504 E. Hillsborough, Tampa, Fla.
Filed Aug. 11, 1958, Ser. No. 754,206
1 Claim. (Cl. 40—140)



A light-transmitting letter for a changeable exhibiter including in combination a thin hollow translucent plastic body presenting a generally flat aspect surface and substantially parallel side walls directed from said surface toward an exhibiter board for supporting said letter, and a securing clip of flat resilient plastic material integrally secured to one of said walls on the inner face thereof to extend rearwardly therefrom, said clip including a portion protruding from the plane of the letter, and said portion defining an aperture conforming in size and shape to the cross section of a mounting rod carried by said board and communicating with an open throat bounded by parallel resilient fingers.

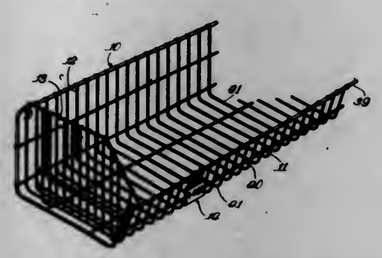
3,022,592
CHANGEABLE EXHIBITERS
Thomas G. Faulkner, 4504 E. Hillsborough Ave., Tampa, Fla.
Filed Nov. 21, 1958, Ser. No. 775,482
3 Claims. (Cl. 40—140)

1. A changeable exhibiter comprising a supporting plate adapted to be positioned upright in a vertical plane, a pair of substantially round rods secured to one face of the plate in vertically spaced horizontal parallel relation, a display character comprising a hollow plastic body having side walls providing substantially vertically extending free edge portions vertically separated by substantially the spacing between said rods, and means for detachably mounting said character on said supporting plate comprising a pair of clips mounted on each side of said character and each clip comprising a relatively thin flat body of resilient plastic disposed in a vertical plane normal to



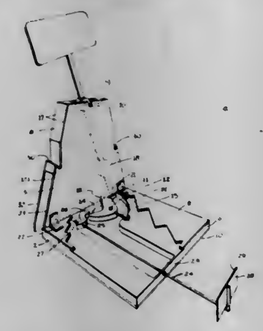
the plane of the supporting plate and having a forward portion integrally secured to one of said side portions and a rear portion rearwardly projecting therefrom and formed with a curved edge, said curved edges of the two clips on each side of the character being relatively opposed whereby said two clips are engageable with opposite surfaces of the respective rods and are adapted to be resiliently snapped onto and off of said rods.

3,022,593
TAG DISPLAY UNIT
Harold I. Sides, % Tote-Cart Company, 226 W. Superior St., Chicago, Ill., assignor, by mesne assignments, to Harold I. Sides and Kitty Bell Sides, both of Chicago, Ill.
Filed Oct. 1, 1959, Ser. No. 843,700
11 Claims. (Cl. 40—308)



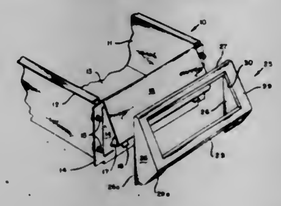
1. A tag display unit for use on wire grocery bins and the like, comprising: an elongated backing member including a hook-shaped upper portion for attaching said unit to said grocery bin, the lower portion of said backing member adapted to be dipped behind a portion of said grocery bin to effect a substantially rigid connection; a tag holder supporting portion on said backing member having an angularly disposed first portion adapted to support said tag holder and a second portion adapted to abut said grocery bin when said unit is attached thereto; a substantially thin and flat tag holder positioned on said supporting portion having a plurality of channels adapted to carry price tags and the like; and a removable transparent cover having a pair of channels adapted to receive said holder to protect said tags, the lower portion of said backing member and the lower portion of said tag holder being adapted to support said unit on a substantially horizontal surface in a displaying position.

3,022,594
DISPLAY DEVICE
Philip F. Wendell, % Acorn Studios, 251 N. Colon Road, Burr Oak, Mich.
Filed Oct. 8, 1958, Ser. No. 766,013
9 Claims. (Cl. 40—319)



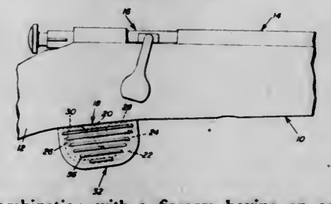
9. An animated display device for coaction with a cash register comprising a base on which the register may rest, an upright on the rear of said base, an animating lever pivotally supported on said upright and extending to adjacent the rear edge of said base, a fixed display panel mounted on said upright, a movable display part mounted for visible animating coaction with said fixed panel and connected to said lever and moved thereby, an actuating member movably mounted on said base and engageable with said animating lever to drive said lever, means biasing said actuating member out of the path of movement of said lever, and a drive member supported by said base and connectable to the cash drawer of a register supported on the base for movement by the drawer, said drive member having a one way driving engagement with said actuating member to move the actuating member against the action of said biasing means.

3,022,595
FILING DRAWER AND FRONT CONSTRUCTION FOR SAME
Jacob J. Ribbens, Mayville, Wis., and Harley M. Leete, Belvedere, and Francis S. Foote, Jr., Berkeley, Calif., assignors to Tab Products Co., San Francisco, Calif., a corporation of California
Filed Nov. 6, 1959, Ser. No. 851,396
7 Claims. (Cl. 40—325)



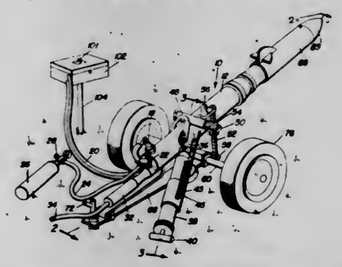
1. A drawer construction of the character described comprising a filing drawer having side walls, a bottom and a front wall, said front wall being bent to define a flat vertical portion for connecting to said side walls and having laterally projecting mounting flanges and a flat sloping portion forming a shield which slopes downwardly and outwardly; said drawer construction also comprising a front block in the form of a rectangular frame having a central opening and a rim surrounding the same, said front block being attached to said flanges with said rim adjacent said shield and said open area exposing the major portion of the shield.

3,022,596
SAFETY DEVICE FOR TRIGGER GUARD
Colbert H. Cannon, Rte. 1, Box 334, Gold Hill, Oreg.
Filed May 11, 1960, Ser. No. 28,282
1 Claim. (Cl. 42—1)



In combination with a firearm having an outwardly projecting trigger and a generally U-shaped trigger guard therefor of the type having a pair of depending and generally parallel legs interconnected at their lower ends by means of a bight portion, the upper ends of said legs including base mounting portions overlying portions of said firearm adjacent said trigger and secured to said firearm, a safety cover comprising a one-piece open topped trough-shaped body of resilient material including opposite side walls interconnected by opposite end walls and a bottom wall, said body snugly and removably receiving said guard with the outer surfaces of said legs and bight portion disposed in surface to surface contacting relation with the inner surfaces of said end walls and said bottom wall respectively, the marginal portions of said side walls adjacent said bottom and end walls being provided with integral inwardly projecting marginal lugs disposed a spaced distance from said end walls and said bottom wall and defining a guard receiving recess inwardly of said bottom and end walls for snugly receiving corresponding portions of said guard between said marginal lugs and said bottom wall and end walls, said marginal lugs formed on both of said side walls with the lugs on each side wall aligned with the lugs on the other side wall and the adjacent free ends of corresponding lugs being spaced apart a distance less than the width of said trigger guard, at least one inwardly projecting upper lug formed on each of said side walls adjacent the upper edges thereof and intermediate the opposite ends thereof frictionally engaging opposite sides of said trigger.

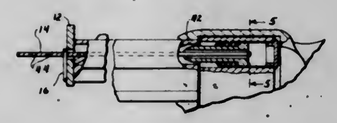
3,022,597
ELECTRIC TOY CANNON
Richard A. Rucker, Moneta, Va. (Box 158, Gretna, Va.)
Filed Feb. 18, 1959, Ser. No. 794,038
6 Claims. (Cl. 42—55)



1. An electric toy cannon comprising an elongated tubular firing chamber having one open end and a wall

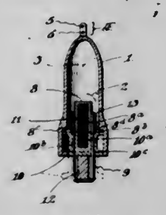
closing the other end, a spark plug mounted in said firing chamber adjacent the closed end, a fuel pump means communicating with said firing chamber adjacent said closed end, means connected with the firing chamber for admitting a supply of oxygen adjacent said closed end, preheating means inserted into said firing chamber adjacent said closed end, and means supportingly engaging said firing chamber with the open end in elevated position.

3,022,598
SAFETY DEVICE FOR A REVOLVER
Hugo M. Wikstrom, Port Washington, N.Y.
(60 E. 42nd St., New York, N.Y.)
Filed Sept. 14, 1960, Ser. No. 56,019
1 Claim. (Cl. 42—66)



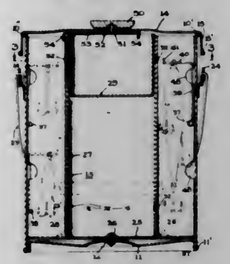
A safety device for a revolver having a barrel and a rotatable cylinder provided with chambers to carry rounds of ammunition into alignment with said barrel of said revolver, said safety device comprising: a dummy round, said dummy round consisting of a cartridge case, a bullet portion movably mounted within said cartridge case and spring means biasing said bullet portion into said cartridge case, said dummy round having the outline dimensions of a live round when said bullet portion is in said biased position, means insertable through said barrel of said revolver to engage said bullet portion and extend said bullet portion into said barrel of said revolver, and means to hold said last-named means in the extended position.

3,022,599
AUTOMATIC BOBBER DEVICE
Charles F. Lawley, 443 Wyoming Ave., Wyoming, Pa.
Filed Mar. 30, 1960, Ser. No. 18,693
2 Claims. (Cl. 43—43.11)



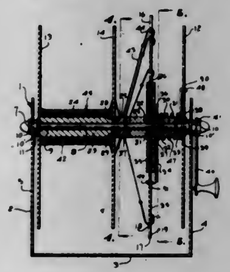
2. A device of the character described comprising, a shell-like body member having an upper tip portion provided with two relatively spaced apertures arranged for the reverse extension therethrough of a fishing line, a U-shaped member the upper leg sections of which are fixedly secured within said body member and the lower section of which extends beyond said body member, a spool for releasably retaining a determined length of the fishing line which spool is slidingly mounted on said U-shaped member for axial movement thereon between a position within said body member to a position outside thereof at which said length of fishing line will be released, and a water soluble element of such size as to be wedgingly positionable between the bottom surface of the spool and the crosswise extending section of the U-shaped member in such manner as to retain the spool in its position within the body member of the device.

3,022,600
FISHING TACKLE BUCKET
Walter G. Glascoff, Waupun, Wis.
Filed Sept. 23, 1960, Ser. No. 58,075
11 Claims. (Cl. 43—54.5)



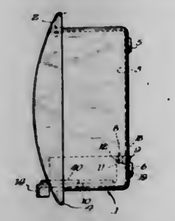
1. A bucket type fishing tackle container including side walls, bottom, and having a removable cover, a vertically mounted rotatable cylindrically shaped compartmented interior frame member pivotally supported centrally of said container, said frame member having a dis-shaped bottom member commensurate with the bucket side walls, said compartmented member having a central cylindrical wall member having its bottom edges united to said disc bottom to form a compartment, a plurality of spaced apart vertically disposed partition wall members formed integral with said disc and said cylinder and extending radially from the exterior wall of said cylindrical compartment to form a plurality of circumferentially disposed open-sided compartments extending substantially the depth of the tackle container, a vertically disposed side opening formed in said container wall and means mounted on the cover for rotating the compartments to selectively register with said side opening.

3,022,601
TROTLINE REEL
Wilferd W. Martin, R.R. 3, Box 322, Liberty, Mo.
Filed May 1, 1961, Ser. No. 106,551
10 Claims. (Cl. 43—54.5)



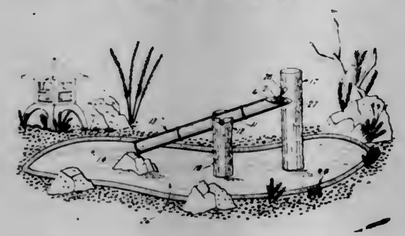
1. A reel for receiving a trotline having a plurality of stage lines spaced thereon provided with hooks comprising, a frame, a shaft rotatably mounted on said frame, said reel including at least one end disk on said shaft, means on said shaft spaced from said end disk and rotatable with said shaft for forming a line receiving drum therebetween, a blade on said shaft and rotatable therewith spaced from said first named means, means on said blade for receiving the hooks on said stage lines, means for rotating said shaft, and means on said first named means for picking up said stage lines and winding the same on said drum with the trotline as the hooks are consecutively secured to said means on said blade for receiving the same.

3,022,602
RECESSED SOAP HOLDER
James R. Turek, Johnstown, Pa., and Eugene C. Petrie, Elmhurst, and Robert B. Attridge, Evergreen Park, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Apr. 20, 1960, Ser. No. 23,398
3 Claims. (Cl. 45—28)



1. A soap holder or the like for mounting in a wall opening, said holder having a housing with a base and defined at a forward portion thereof with a marginal frame and an opening extending rearwardly of the frame, a pin mounted on a wall defining a rear limit of the opening within said frame of the housing, the pin having a head, the underside of the head being tapered and spaced from said opening rear limit, a soap supporting insert for entering and conforming with the base, the said insert having a rear wall substantially conforming with the wall defining said rear limit of the housing opening, the said rear wall of the insert being formed with a socket, the upper portion thereof being suitably cut away to closely engage a shoulder portion of said pin formed by said tapered underside of the head whereby to maintain the said insert against substantial endwise movement relative to the said housing base, an outer peripheral portion of the said insert at this stage of its positioning on the base being snugly drawn against inner wall surfaces defining the said opening to form a relatively tight joint therebetween.

3,022,603
GARDEN WATERFALL DEVICE
Nobue Kawabata, 657 Bartlett Ave., Hayward, Calif.
Filed Sept. 4, 1959, Ser. No. 838,290
3 Claims. (Cl. 46—41)



1. A garden waterfall device comprising, an abutment member; an oscillating tone arm formed of a mult plechambered length of hollow partitioned bamboo providing an enclosed tone-sounding end chamber at a first end thereof; means mounting said tone arm for see-saw pivoting motion intermediate the ends thereof with said ends alternately assuming raised and lowered pos tions and with said arm normally overbalanced for rotation of said first end to lowered position and downwardly striking said abutment member with a tone-sounding impact, the other end of said arm being ob iquely cut off to define a cavity open ng upwardly in the raised position and downwardly in the lowered position; said cavity having a size holding water to apply a reversely overbalancing rotating moment to said tone arm for rotation of said second end to lowered position for the discharge of water, and water supply means positioned for loading said cavity in the raised position, whereby said first end is cyclically raised and dropped for striking said abutment member in a series of pleasing musical tone sounding impacts.

3,022,604
PROCESS FOR BOOSTING THE FLOW OF ROSIN FROM CONIFERS BY APPLYING A SUBSTITUTED UREA
Arthur Greth and Rolf Zimmermann, Wiesbaden-Biebrich, Germany, assignors to Chemische Werke Albert, Wiesbaden-Biebrich, Germany, a corporation of Germany
No Drawing. Filed Nov. 2, 1960, Ser. No. 66,689
Claims priority, application Germany Nov. 6, 1959
10 Claims. (Cl. 47—10)

1. A process for increasing the flow of rosin from conifers, which comprises applying to decorticated parts of the conifer a substituted urea selected from the group consisting of a low molecular alkyl substituted urea, dihydroimidazolone-2, an imidazolone-2, and a benzimidazolone-2.

3,022,605
METHOD OF PACKING SEEDLING PLANTS FOR SHIPMENT
Alfred O. Reynolds, Indianapolis, Ind.
(315 Ballard St., Lebanon, Ind.)
Filed May 11, 1959, Ser. No. 812,413
3 Claims. (Cl. 47—58)



1. The method of packing for shipment seedling plants which have grown in a growing medium contained in a pot until foliage has appeared above the top surface of such medium, said method comprising the steps of embedding such foliage, before the plant root system has imparted any significant cohesion to such medium, in a mass of discrete particles having a density substantially less than that of such growing medium, such mass bearing upon the entire top area of such growing medium, and thereafter confining such mass against any significant movement relative to said pot.

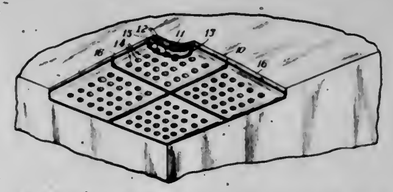
3,022,606
MODEL AIRPLANE VARIABLE-SIZE PAN
Walter E. Harter, Belleville, Ill., assignor to Harter's Hobby Products, Inc., Belleville, Ill., a corporation of Illinois
Filed Apr. 17, 1959, Ser. No. 807,225
4 Claims. (Cl. 46—76)



1. An attachment of the type described comprising a speed pan for fitting to the lower section of a model airplane fuselage, the pan having an open forward end for permitting the passage of a propeller shaft, the pan co-

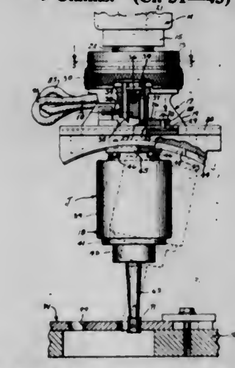
operating with the fuselage to enclose a section of the shaft, the pan having its interior cut out so as to define substantially a hollow shell, the thickness of which is variable along the length of the shell, the pan being of gradually increasing size over a portion of the distance from the forward end, as measured transversely of the axis of the speed pan, with the thickness of the pan wall being maintained substantially thin to maintain as much as possible a light weight pan, the interior of the pan having a bead parallel to and spaced from the forward end, the size and shape of the innermost surface of the pan at a plane through the bead being the same as the size and shape of the internal surface at the forward end so that the pan may have its end forward of the bead cut off, and a second bead rearward of the first-mentioned bead, the size and shape of the innermost surface of the second bead being the same as that of the first bead, rendering the pan adaptable to a plurality of fuselage sizes.

3,022,607
SOUND DEADENING TILE
Harry A. Toulmin, Jr., Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Filed Dec. 1, 1953, Ser. No. 395,469
6 Claims. (Cl. 50—101)



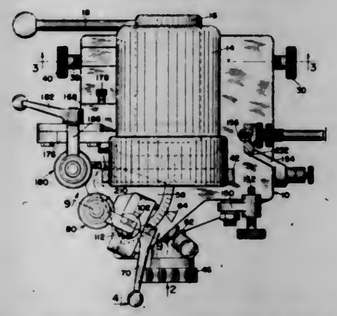
1. A sound-insulating member comprising a ceramic tile having a rigid generally flat body portion, a peripheral lip on said body portion turned inwardly toward the under surface thereof, a plurality of apertures in said body portion, and a sound absorbing fibrous glass mat interlocked with the under surface of said ceramic tile, and a portion of said mat in engagement with the exterior surface of said turned peripheral lip.

3,022,608
TAPER GRINDING TOOL
Charles Tree, Racine, Wis., assignor to Tree Tool & Die Works, Racine, Wis., a firm
Filed Jan. 11, 1960, Ser. No. 1,544
9 Claims. (Cl. 51—43)



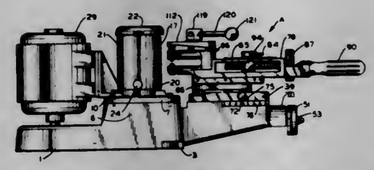
1. A taper grinding tool comprising a head having an axially disposed shank for connection with the chuck of a machine tool, a grinder body disposed below said head including a shell, a quill slidably mounted in the shell, and a spindle rotatably carried by the quill, spring suspension means normally holding the quill in a raised position in the shell, and said quill including a hollow body having an intermediate partition wall defining an upper chamber in the quill and a lower chamber in the quill, the spring suspension being mounted in the upper chamber and the spindle being rotatably mounted in the lower chamber, means for adjusting the grinder body radially on said head relative to the shank, means for angularly adjusting the grinder body on the head, a turbine wheel secured to the spindle and disposed in the lower chamber of the quill, and said head being provided with independent spaced annular ways, one of said ways being for oil under pressure, and the other of said ways being for air under pressure, means for feeding and returning oil to and from its way, means for feeding air under pressure to its way, means including a flexible hose for connecting the way for oil with the interior of the shell and into and from the upper compartment of the quill for reciprocating the quill, the spring suspension aiding in the return stroke of the quill, and means including a flexible hose for feeding air under pressure from the way for air into the lower chamber of the quill and against the turbine wheel.

3,022,609
DRILL SHARPENER AND POINT THINNER
Ivan V. Abadjieff, Worcester, Mass., assignor to Leland-Gifford Company, Worcester, Mass., a corporation of Massachusetts
Filed July 18, 1957, Ser. No. 672,837
7 Claims. (Cl. 51—55)



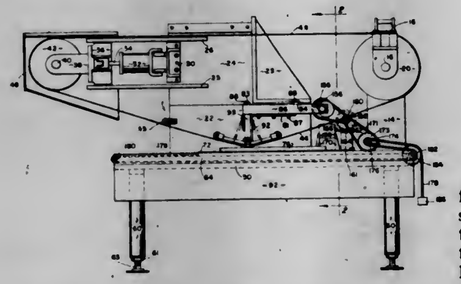
1. Drill sharpening device comprising a base, a movable support on said base, a motor on said support, a grinding wheel driven by said motor, means moving said motor and wheel axially, means to move said motor and wheel laterally, means for releasably holding a drill to be ground by the wheel, said means comprising a standard, means swivelly mounting said standard on an axis normal to the axis of the motor, a swivel pin on an axis normal to the axis of motion of the standard, a drill-holding chuck on said swivel pin, a rocker arm on said standard, the swivel pin being mounted on the rocker arm, a pivot-pin on the standard for said rocker arm, means for angularly moving the rocker arm to angularly adjust the drill chuck and a drill held thereby, means to rectilinearly move the rocker arm as it is angularly moved to maintain the lateral placement of the drill chuck, a magnifying lens mounted on said standard, means mounting said magnifying lens for motion parallel to the standard axis, the point of the drill being located in focus with respect to said magnifying lens when said rocker arm is in a predetermined position of adjustment, said rocker arm and chuck being moved with respect to said magnifying lens upon angular adjustment of the rocker arm, and inter-engaging means between the swivel pin for the drill holding chuck and said magnifying lens effective to cause the latter to move in the direction of the motion of the drill chuck as the latter is moved by adjustment of the rocker arm to keep the drill point in constant focus with respect to the lens regardless of the angular adjustment of the drill chuck, and to hold the drill in vertical position with respect to said base regardless of the adjustment of the rocker arm.

3,022,610
GRINDER
Harry B. Barrett, Clayton, Mo. (18 S. Kingshighway, St. Louis 8, Mo.)
Filed Oct. 14, 1958, Ser. No. 767,192
7 Claims. (Cl. 51—96)



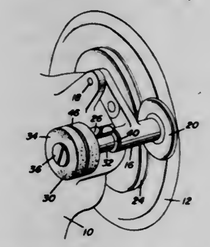
1. A brake shoe grinder comprising a base, a key having a plurality of spaced holes and being slidable on said base, a slide shiftable on said base, a spring biased pin operatively mounted in said slide and being selectively engageable in any one of said holes, means for shifting said key and slide unitarily along the base, a turntable shiftable with and rotatably mounted on said slide, a brake shoe holding slide shiftable along said turnable, and releasable cam means consisting of a rockable cam and lever that move rotatably in a single vertical plane, said cam means being operatively mounted in said brake shoe holding slide for urging spring-biased pin means into holding engagement with the brake shoe.

3,022,611
CONTOUR GRINDING MACHINE
Leo Schaller, Syracuse, N.Y., assignor, by mesne assignments, to Sundstrand Corporation, a corporation of Illinois
Filed Mar. 11, 1959, Ser. No. 798,705
12 Claims. (Cl. 51—141)



1. A contour grinding machine, comprising, a drive roll, an idler roll, an abrasive belt mounted on said rolls, means for imparting a variable transverse contour to the grinding surface of said belt, at a work station including a plurality of individually selectively movable belt engaging members arranged transversely of the belt adjacent to the work station, and means separate from any workpiece in the machine for moving said members individually selective distances toward the grinding run of the belt and holding the members in engagement with the grinding run of said belt to provide a variable contour back-up surface imparting a comparable variable transverse contour to the belt.

3,022,612
NEEDLE GRINDING ATTACHMENT FOR SEWING MACHINES
Suesaboro Aoyagi, 1614 S. King St., Honolulu 14, Hawaii
Filed Dec. 2, 1959, Ser. No. 856,698
6 Claims. (Cl. 51—256)



1. In a sewing machine which has a bobbin rewind spindle and a clamp to hold the bobbin on the spindle during the winding, a grinding attachment comprising a sleeve having a bore to receive said spindle, a pair of spaced flanges protruding laterally outwardly from said sleeve and between which the clamp is adapted to rest to prevent said sleeve from excessive axial movement on said spindle by abutting said flanges, a grinding element carried by said sleeve and abutting a face of one of said flanges, and means carried by said body and engaging said grinding element to fasten the grinding element to said sleeve.

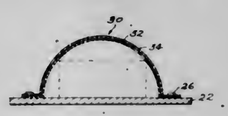
3,022,613
PACKAGING METHOD
Irving Powers, University City, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed June 15, 1959, Ser. No. 820,226
10 Claims. (Cl. 53—28)



1. The method of packaging merchandise comprising forming a continuous envelope having first and second superimposed walls joined along one edge thereof with the first wall having a flap-forming portion joined thereto along the other edge of the continuous envelope overlying the second wall on the outside thereof and free of the second wall, with a series of items of merchandise positioned within said continuous envelope between the said walls thereof at spaced intervals along the length of the envelope, and segmenting the envelope with said items therein on transverse lines between said items and side-seaming said segments throughout the width of the envelope, thereby to form individual bags each having merchandise therein with each bag having first and second walls joined at the bottom, seamed at the sides, and

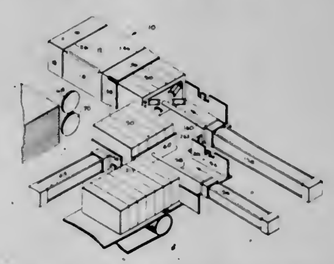
free of one another at the top, and having a closure flap derived from said flap-forming portion joined to the first wall at the upper edge thereof overlying the upper portion of the second wall on the outside thereof and having its ends seamed to the second wall at the bag side seams but being otherwise wholly free of said second wall throughout its entire width, said closure flap being folded over the mouth of the bag without folding said upper portion of the second wall and being reversely foldable to overlie said first wall thereby exposing the mouth of the bag for removal of merchandise therefrom.

3,022,614
VACUUM FORMING OF PLASTIC MATERIAL
Robert L. Dreyfus, Arlington, and John W. Harrison and Robert D. Lowry, Winchester, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut
Filed May 21, 1959, Ser. No. 814,801
3 Claims. (Cl. 53—30)



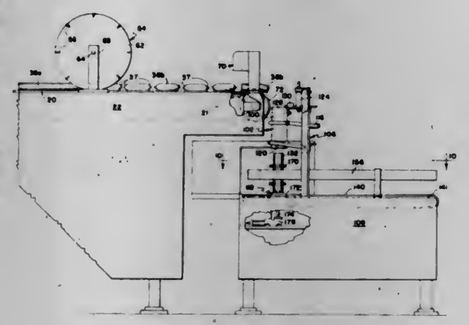
1. A process comprising positioning a plurality of superposed layers of film of polymerized olefin selected from the group consisting of polyethylene and polypropylene across an open portion of a vacuum mold, heating said superposed layers of film while in contact and applying the vacuum to simultaneously biaxially stretch orient the film within said mold and to heat laminate the layers to form a unitary blister.

3,022,615
METHOD AND APPARATUS FOR FORMING CARTONS
Arthur C. Schroeder, Skaneateles, and Richard F. Schneider, North Syracuse, N.Y., assignors to Schroeder Machines Corporation, Syracuse, N.Y., a corporation of New York
Filed Aug. 17, 1959, Ser. No. 834,110
14 Claims. (Cl. 53—37)



9. The method of packaging articles in a carton, the invention consisting of the steps of successively advancing flat preformed collapsed cartons scored at like ends to provide end closure flaps for said ends to a carton expanding and loading station, simultaneously advancing articles to said loading station for insertion in said cartons and, while advancing an article, determining the length thereof and, while advancing said cartons and in response to the determined length of the article, scoring the opposite ends thereof at a distance from said first scoring comparable to the length of the articles for providing end closure flaps for the opposite ends of the cartons.

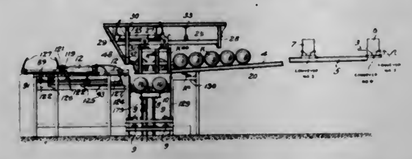
3,022,616
DOUGH PACKAGING APPARATUS
Leo W. Elden, Stanley C. Rustad, and Peter Smirnow, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed Apr. 22, 1959, Ser. No. 808,029
22 Claims. (Cl. 53—56)



1. In a dough packaging apparatus the combination including, movable means for feeding a sheet of dough continuously along a prescribed path, means for forming said sheet into a plurality of continuous cylindrical columns of dough, a movable cutter means to sever said columns into individual sections of dough, said cutter means forming pillow shaped ends on said sections during said severing, an orienting guide means adjacent said movable means for re-forming said pillow shaped ends to the cylindrical configuration of said dough sections, a transfer station at one end of said movable means adjacent said guide means, a dough loading means adjacent said transfer station, said dough loading means provided with a plurality of vertically reciprocal hopper means for receiving said dough sections successively from said transfer station, a plurality of filling stations one below each of said hopper members, supply means for supplying containers successively to each of said filling stations, a fluid pressure source means, a fluid pressure actuator for causing vertical movement of each of said hopper members, a control valve means for each of said actuators, each said control valve means connected to its respective actuator and to said fluid pressure source, an electrically operated valve means connected to each of said control valves, a circuit means provided with a switching means on each of said hopper members, each switching means connected to one of said electrically operated valving means and actuated by a dough section when said section is received by said hopper member at said transfer station, said actuation causing said actuator means to move said hopper into engagement with a container at its filling station, said movement delivering said dough section through said hopper member to said container.

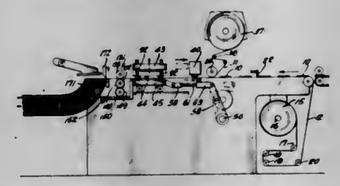
3,022,617
CONVEYOR KEG PALLETIZING DEVICE
John Miller, Cambria Heights, N.Y., and Vincent J. Russoman, Nutley, N.J., assignors to The F. & M. Schaefer Brewing Co., Brooklyn, N.Y.
Filed Apr. 1, 1955, Ser. No. 498,646
46 Claims. (Cl. 53—59)

9. In an automatic conveying and tiering device particularly suitable for forming unit palletized loads of kegs and barrels tiered on a dished base pallet and one or more intermediate dished pallets the combination comprising a pallet conveyor, a hydraulically operated lift, a pallet magazine for supplying the bottom pallet from a stacked array of pallets to said conveyor, a pusher, hydraulically operated control means on said pusher to push said pallet on said lift in synchronism with the lowering motion of said lift to permit barrels to be dropped on



the pallets on said lift, and said lift being adapted to support the pallet transferred to said lift from said conveyor and to support kegs dropped on said pallet.

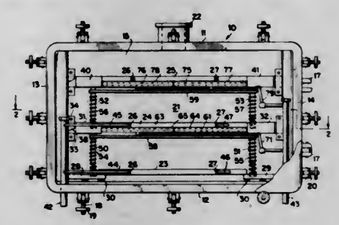
3,022,618
MACHINE SUITABLE FOR PACKAGING AND LIKE FUNCTIONS
Morris A. Schwartz, North Plainfield, and Robert J. Schaefer, Plainfield, N.J., assignors to Johnson & Johnson, a corporation of New Jersey
Filed Nov. 12, 1959, Ser. No. 852,418
13 Claims. (Cl. 53—59)



1. A machine comprising, in combination, pull rolls for advancing a continuous strip of material having indicia thereon identifying predetermined sections therealong, a reciprocable carriage including a functioning means engageable with and disengageable from the predetermined sections during the advance stroke of the carriage and adapted when engaged to perform its intended function, a device for establishing a connection for driving the pull rolls from the movement of the carriage and for disestablishing said connection, and means controlled by the indicia identifying the predetermined sections for disestablishing the driving connection between the carriage and the pull rolls and for positioning a predetermined section appropriately for engagement by the functioning means when said driving connection is reestablished.

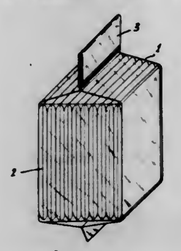
3,022,619
VACUUM CHEST BOTTLE STOPPERING APPARATUS
Richard V. D. Strong, Meadowbrook, William H. Hamilton, Philadelphia, and Elmer W. Hacker, North Hills, Pa., assignors to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1958, Ser. No. 761,817
6 Claims. (Cl. 53—106)

1. In a vacuum chest structure enclosing a chamber, means for evacuating said chamber, fixed means for supporting containers in said chamber, the improvement which includes a platen transversely positioned in said chamber mounted for vertical reciprocation therein spaced above said support means, resilient means in said chamber biasing said platen upwardly away from said support means, means defining a rigid surface on the upper side of said platen, a flexible bladder positioned over said surface and beneath a portion of the structure of said chest, means retaining the edges of said bladder in sealing contact with said rigid surface thereby forming an enclosure between said bladder and said rigid surface, means for admitting gas pressure into said enclosure, means for evacuating said enclosure, whereby when said means for evacuating said bladder is connected thereto said bladder remains deflated and said platen is retained in an upper position by the biasing of said resilient means, and whereby when said means for admitted gas pressure to said enclosure is connected thereto said bladder inflates between



said portion of said chest structure thereabove and said rigid surface, forcing said platen downwardly against the biasing of said resilient means to a lower position, said platen being rectangular, said resilient means including four vertically positioned coil springs mounted at their lower ends on a portion of the chest structure beneath said platen and bearing upwardly at their upper ends against the underside of said platen adjacent the corners thereof.

3,022,620
AUTOMATIC MACHINE FOR PACKING ARTICLES SUCH AS BAGS IN THERMOWELDABLE POUCHES
René Gallet, Sevres, France, assignor to Societe des Thes de l'Elephant, Marseille, France, a French company
Filed Nov. 14, 1960, Ser. No. 69,201
Claims priority, application France Nov. 17, 1959
10 Claims. (Cl. 53—137)



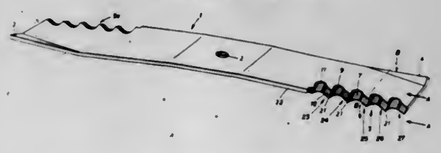
1. A machine for packing articles such as bags, tablets, lozenges and the like inside pouches provided with flat transverse walls terminating at a thermo-weldable opening, comprising a plate revolving round a vertical axis and provided with a plurality of uniformly distributed, radially extending chambers and four stations distributed round the revolving plate and adapted to produce in succession and respectively, the filling of the pouch with articles, the folding of the filled pouch, the sealing of the opening in the pouch, and the removal of the sealed pouch, the first pouch-filling station including a filling funnel extending horizontally provided with an input port and with an output port in alignment, means for fitting over the output port of said funnel the pouch which is to be filled, means for taking a predetermined number of articles and urging them into the said funnel and through the latter into the pouch mounted on the funnel, and means for shifting the filled pouch away from the funnel into the chamber on the revolving plate when aligned radially with the funnel, the second, pouch-fold-

ing station including means for folding the edges of the pouch opening into bellows shape, the third sealing station including means for heating and sealing the opening of the pouch and means for removing at the pouch removing station, the filled, folded and sealed pouches.

3,022,621
BLADE FOR ROTARY CUTTER

Salvatore Zavarella, 51 Otonobee Ave., Willowdale, Ontario, Canada

Filed Aug. 19, 1959, Ser. No. 834,734
4 Claims. (Cl. 56—295)

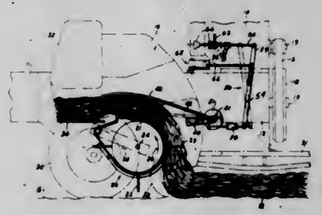


1. A lawn mower blade comprising: an elongated flat body of generally rectangular strip-like construction, embodying a hole disposed substantially centrally thereof for mounting said body for rotary motion thereof about said hole, and having a pair of diagonally opposed leading edges; a plurality of indented cutting edges formed in said leading edges adjacent either end of said body, and disposed in substantially parallel spaced apart arrangement at an angle greater than 90° to a line perpendicular to the longitudinal axis of said body; and a series of troughs formed in said body in substantially parallel arrangement between each said cutting edge and the next and adapted effectively to guide cuttings to a point remote therefrom, the longitudinal axis of each said trough being disposed in substantially perpendicular relationship with said longitudinal axis of said body.

3,022,622
BALER CONTROL DEVICE

Edwin B. Nolt, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Sept. 24, 1959, Ser. No. 841,967
5 Claims. (Cl. 56—341)

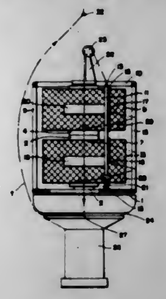


1. In an automatic hay baler having an engine for operating the baler, a throttle on said engine movable between an opened position wherein the baler operates at baling speed and a closed position wherein the engine idles, a pick-up for elevating crop material from the ground and feeding it into the baler, and a pivotally mounted shaft having a plurality of windguard rods affixed thereto which extend over said pick-up, said rods having a normal position adjacent the pick-up and being movable away from the pick-up responsive to material passing over the pick-up, and said shaft being pivoted responsive to such movement, the combination of control means between said shaft and said throttle to close the throttle when the shaft is in one pivotal position and said rods are in said normal position and to open the throttle when the shaft is pivoted to another position on movement of said rods away from said normal position, said means comprising a lever connecting said shaft end to said throttle whereby when said shaft is pivoted said throttle is moved.

3,022,623
THREAD TWISTING APPARATUS

Wilhelm Lenk, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Elberfeld, Germany

Filed Aug. 3, 1960, Ser. No. 47,204
Claims priority, application Germany Nov. 17, 1959
10 Claims. (Cl. 57—58.83)



1. In combination with a thread twisting apparatus for drawing off and twisting equal lengths of thread from a pair of superimposed bobbins independently rotating on a common axis, thread run-off guide means for each bobbin comprising a relatively fixed guide element at the apex of a thread run-off triangle, and a plurality of straight thread guide rods mounted substantially parallel to the bobbin axis and parallel to each other at spaced intervals between the thread take-off locus of said bobbin and said apex guide element, said rods being adapted to engage said thread in running and traversing contact thereover and together with said apex guide element to maintain the thread adjacent to but out of contact with the outer peripheral surface of said bobbin, the distance of the thread path from said take-off locus, over said rods to said apex guide element being at least twice the height of the bobbin.

3,022,624
POSITIVE-DRIVE SYSTEM FOR TEXTILE MACHINE SPINDLES

Otto Wilhelm Burkhardt, Bismarck St. 41, Bayreuth, Germany

Filed July 22, 1959, Ser. No. 828,755
Claims priority, application Germany Nov. 29, 1958
11 Claims. (Cl. 57—102)



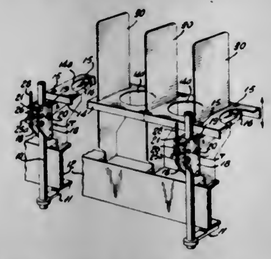
1. A positive-drive system for textile spindles comprising in combination a plurality of sets of spindles arranged in a row, a drive shaft arranged parallel with said row, means providing a positive drive connection from said shaft to one spindle of each set, means for driving the remaining spindles of each set in tandem from a driven spindle comprising a positive-drive, toothed belt running over positive-drive, toothed pulleys mounted on each pair of adjacent pulleys in each set,

and an individually releasable clutch element included in each driving connection from said shaft to said spindle sets, whereby when the clutch element is released, the drive shaft is permitted to rotate to engage only the remaining engaged positive drive connections.

3,022,625
RING RAIL SUSPENSION

Ernest D. Meadows, Atlanta, Ga., assignor to Meadows Manufacturing Company, Atlanta, Ga., a corporation of Georgia

Filed Aug. 3, 1959, Ser. No. 831,214
10 Claims. (Cl. 57—137)



9. In a thread twister, a ring rail assembly to be vertically reciprocated for build-up of bobbins, frame-based vertical guide rods for guiding the vertical reciprocation of the ring rail assembly, said assembly including an elongated horizontal ring rail and a suspension therefor, said suspension comprising at least two trolleys, at least two support arms, each having one end attached to the ring rail at spaced apart points and extending in a direction substantially perpendicular to the length of the ring rail, means to attach one of the trolleys to the opposite end of each support arm for supporting the ring rail at longitudinally spaced locations of the rail, each trolley having two bearing means spaced apart vertically, the uppermost of the bearing means being in rolling engagement with the side of the guide rod furthermost from the ring rail, the lowermost of the bearing means being in rolling engagement with the side of the guide rod adjacent the ring rail so that the ring rail may be pivoted relative to the guide rod, and lifter means connected to the trolleys for controlling impositive up and down strokes of bobbin-building reciprocation of the ring rail assembly on the guide rod.

3,022,626
CLOCK

Harlow B. Grow, 16530 Chattanooga Place, Pacific Palisades, Calif.

Filed Aug. 15, 1958, Ser. No. 755,282
7 Claims. (Cl. 58—50)



1. A clock, including a circular dial completely exposed to view throughout the circumference thereof, index means for indicating the hour of the day on said dial, indicating means for indicating the fractions of an hour on the dial elapsed after the hour indicated by said index means, means for mounting said index means and said indicating means coaxially of the dial, means for continuously advancing the fraction of an hour indicating means over the dial one revolution every twelve hours, means for detaining the index means at the position of the indicated hour while the fractional hour indicating means is advancing over said dial to the next succeeding hour on the dial, and means for advancing the index means from the indicated hour designation to said next succeeding hour designation at the time the fractional hour indicating means arrives at the said next succeeding hour.

3,022,627
TABLE ALARM CLOCK

Helmut Junghans, Schramberg-Sulgen, and Otto Braitsch and Hans Schlenker, Schramberg, Germany, assignors to Gebr. Junghans A.G., Geisshalde, Schramberg, Wurttemberg, Germany

Filed July 17, 1956, Ser. No. 598,472
5 Claims. (Cl. 58—55)



1. Table alarm clock of the spring driven type comprising a front plate to support and receive parts of a clockwork and composed of a plastic material, said plate having a peripheral rim in the form of a flange and a depressed portion opening forwardly to accommodate a drive for a plurality of hands of the clock and an alarm indicator, a dial for the clock connected to the peripheral rim, a transparent cover for the dial to extend over the latter and said cover and rim having means to spring the cover on the front plate of the clock, a plurality of supporting posts secured to and extending rearwardly from a side of the plate, and a rear plate secured to said supporting posts and spaced from the front plate to accommodate an alarm clock movement.

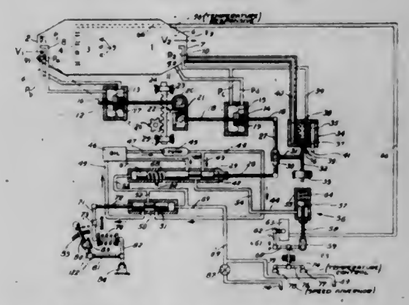
3,022,628
JET ENGINE AUTOMATIC THRUST CONTROL

Augustin M. Prentiss, Hartford, Conn., assignor, by mesne assignments, to Chandler-Evans Corporation, West Hartford, Conn., a corporation of Delaware

Continuation of abandoned application Ser. No. 29,384, filed May 26, 1948. This application Aug. 24, 1954, Ser. No. 451,829
12 Claims. (Cl. 60—35.6)

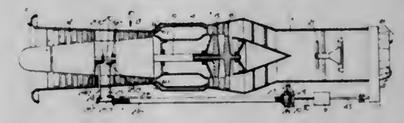
1. In an aircraft propelled by a jet engine having an air inlet, and an exhaust gas outlet, a fuel supply apparatus for controlling the speed of flight by the jet thrust of the engine, comprising: manually movable control means for creating and maintaining a control force

which varies in accordance with the movement of said control means; means for measuring the unit impact and static pressures at said inlet and outlet, first means, responsive to the differential between the said inlet unit impact and static pressures, for creating a first force proportional to said differential; second means, responsive to the differential between said outlet unit impact and static pressures, for creating and maintaining a second force proportional to said last mentioned differential; said first and second forces being proportional to the



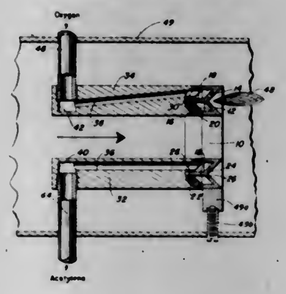
velocity pressures at said inlet and outlet, respectively; third means, responsive to the difference between said first and second forces, for creating and maintaining a regulating force which is proportional to said difference and is opposed to said control force; and fourth means, responsive to the resultant of said control and regulating forces, for regulating said jet thrust in accordance with said last-mentioned resultant force, whereby said jet thrust is varied in proportion to the movement of said control means, and said speed is controlled in accordance with the magnitude of said jet thrust.

3,022,629
EXHAUST NOZZLE CONTROL FOR A TWIN SPOOL JET ENGINE
Rowan Herbert Colley, Sunny Hill, Derby, England, assignor to Rolls-Royce Limited, Derby, England
Filed Nov. 24, 1959, Ser. No. 855,102
Claims priority, application Great Britain Dec. 5, 1958
1 Claim. (Cl. 60—35.6)



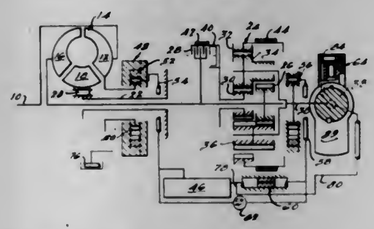
In a gas turbine engine including a jet pipe for defining a working fluid passage, the combination comprising: a low pressure compressor rotor; a high pressure compressor rotor; a low pressure turbine; a high pressure turbine; a first shaft means drivingly connecting said low pressure compressor rotor with said low pressure turbine; a second shaft means drivingly connecting said high pressure compressor rotor with said high pressure turbine for independent rotation with respect to said first-mentioned shaft means; means for maintaining a predetermined constant speed ratio between said low and high pressure compressor rotors throughout an operating region of said engine, said last-mentioned means including a variable area discharge nozzle, and control means responsive to a variation from the constant speed ratio, including a differential gear mechanism having its input operatively connected to said rotors, said mechanism having an output shaft means operatively connected to said variable area discharge nozzle, a pair of overrunning clutches interposed between said mechanism and said discharge nozzle, one of said clutches, when overrunning determining the maximum area of said discharge nozzle and the other of said clutches when overrunning determining the minimum area of said discharge nozzle.

3,022,630
PILOT IGNITER FOR BURNERS
Sterling A. McCollum, Laramie, Wyo., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 29, 1948, Ser. No. 24,022
4 Claims. (Cl. 60—39.82)



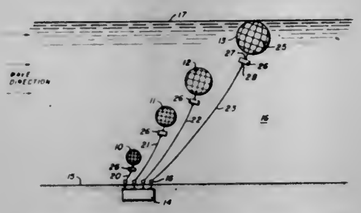
1. In a burner, a pilot igniter mounted in the flow path of the combustible mixture of the burner and having a ring-shaped fuel manifold, a similar oxygen manifold concentric therewith, and fuel and oxygen supply pipes connected to the respective manifolds, said manifolds having paired, converging orifices through the downstream faces thereof providing mutually impinging jets of fuel and oxygen ignitable to form a ring of pilot flames.

3,022,631
SINGLE ORIFICE FLUID PRESSURE GOVERNOR MECHANISM
Michael A. de Corte, Farmington, and Joseph F. Bird, Detroit, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Sept. 13, 1957, Ser. No. 683,793
7 Claims. (Cl. 60—52)



1. A multiple speed power transmission mechanism for delivering power from a driving member to a driven member and including a fluid pressure control system adapted to regulate changes in the effective transmission torque multiplication ratio, a speed governor mechanism for producing a pressure signal which is a function of the speed of rotation of said driven member, a fluid pressure pump, a governor valve assembly drivably connected to said driven member, a fluid pressure delivery conduit communicating with the discharge side of said pump including a first portion extending to a fluid pressure actuated portion of said control system for effecting a change in the effective transmission torque multiplication ratio and a second portion extending to a part of said control system which is sensitive to said pressure signal, a flow restricting orifice in said second portion for creating sufficient back pressure in said first portion to permit said pump to effect a change in the effective torque multiplication ratio, said valve assembly including a rotatable valve casing, a single pressure passage in said casing extending in a generally radial direction and communicating with said second portion at a location downstream from said orifice, a valve opening in said casing situated in transverse disposition relative to the axis of rotation of said driven member, an exhaust port communicating with said valve opening and a valve element mounted in said valve opening and adapted to control the degree of communication between said pressure delivery passage and said exhaust port, said pressure delivery passage communicating with said valve opening at a location radially outward from said valve element, said valve element being subjected to and actuated by balanced and opposed fluid pressure and centrifugal forces.

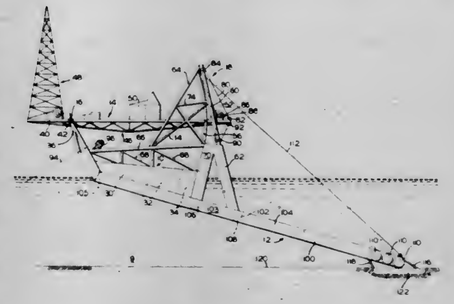
3,022,632
BREAKWATER
Mercer H. Parks, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 31, 1955, Ser. No. 543,744
6 Claims. (Cl. 61—5)



1. A device adapted to protect offshore structure from wave action occurring between the water surface and the earth underlying the water comprising a plurality of vertically spaced, deformable, elastic fluid inflatable, spherically configured bladders of successively increased size in the direction of said water surface, and extending from adjacent the earth underlying the water to adjacent said water surface, and anchoring means connected to said bladders adapted to secure said bladders to said earth.

3,022,633
BARGE
Homer J. Stimson, 4827 Spellman Road, Houston, Tex.
Filed Oct. 19, 1959, Ser. No. 847,158
4 Claims. (Cl. 61—46.5)

1. A barge comprising a floatable hull for buoyantly supporting the barge upon the surface of a body of water; a working platform pivotally mounted above said hull and supported by said hull, said platform being adapted for supporting devices; a swingable stabilizing boom rigidly connected to said hull and extending lengthwise from one side of said hull for a distance at least as great as the length of said hull measured in the same direction, the pivotal axis of said platform being substantially horizontal and transverse of the lengthwise dimension of said boom; said hull and said boom being constructed with tank space that can be both flooded and emptied; controllable means for flooding and emptying said tank space with said hull remaining in floating position while said boom swings between a substantially horizontal position and a lower position engaging the bottom beneath the body of water; and, means for swinging said platform about said pivot in conformity to the



swinging of said hull and stabilizing boom to maintain said platform substantially level and above the water surface.

3,022,634
METHODS FOR DRIVING PILE SHELLS AT SUBMERGED LOCATIONS
William P. Kinneman, Westfield, N.J., and Arthur T. Ippen, Belmont, Mass., assignors to Raymond International, Inc., New York, N.Y., a corporation of New Jersey
Filed June 22, 1960, Ser. No. 38,059
5 Claims. (Cl. 61—54)

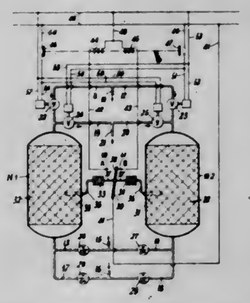


1. In the driving of tubular pile shells at submerged locations under conditions whereby a plug-like mass of earth becomes firmly lodged in the lower end of the shell and which mass is superposed by mud-like material and a column of water in the shell so that said plug-like mass will move downwardly with the pile shell when subjected to impacts and move upwardly with the shell upon the elastic rebound of the shell following the impact, thereby causing momentary cavitation to occur above the plug-like mass and beneath a substantial portion of the water, and tending to cause cracking pressure against the shell due to hydrodynamic impacts of the water against the interior of the shell, the method of preventing the occurrence of such cracking pressures upon collapse of such cavitation comprising: maintaining a substantial volume or volumes of gas within such water column to cushion the force of the hydrodynamic impacts occurring therein and then applying driving impacts to the shell.

3,022,635
METHOD AND APPARATUS FOR CONTROLLING PERIODICALLY REVERSED HEAT TRANSFER DEVICES

Duran L. Hagler, Kenmore, N.Y., and Martin L. Kasbohm, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York

Filed Oct. 13, 1958, Ser. No. 767,005
13 Claims. (Cl. 62—21)



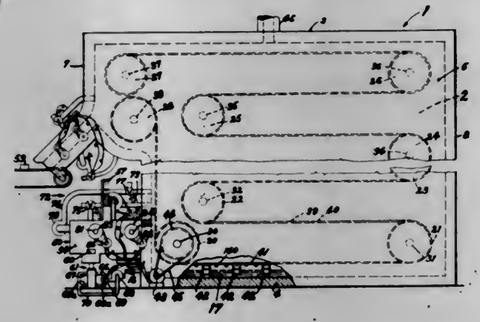
1. A method of cycling and thermally equalizing a plurality of periodically reversed accumulators employed for cooling an initially warm inlet gas containing low-boiling condensable material by a cold purge gas which is initially free of the condensable material, for condensing such material from the inlet gas, and for substantially completely evaporating such material into the purge gas while maintaining a relatively small temperature difference between the cooled inlet gas and the cold purge gas prior to warming, the reversal being effected by a succession of complete reversal cycles including a period during which the initially warm inlet gas flows from a warm end to the coldest zone of a first accumulator while the initially cold purge gas flows from the coldest zone to a warm end of a second accumulator and during at least one subsequent period of the cycle of the initially warm inlet gas flows from a warm end to the coldest zone of said second accumulator and the initially cold purge gas flows from the coldest zone to a warm end of said first accumulator, which method comprises continuously sensing the temperature within each of said accumulators at a thermal level intermediate a warm end and the coldest zone thereof, continuously comparing the sensed temperatures, and reversing the warm inlet and cold purge gas flows between said accumulators each time in response to the difference between the temperatures reaching a predetermined value; and independently of a fixed time interval.

3,022,636
METHOD AND APPARATUS FOR FREEZING COOKED FOODS

Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York

Filed Feb. 29, 1960, Ser. No. 11,801
10 Claims. (Cl. 62—64)

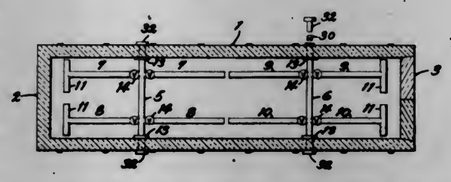
1. A method of freezing foodstuffs so as to preserve their flavors, said method comprising the steps of providing an inlet chamber and admitting the foodstuffs to said inlet chamber, flushing the inlet chamber with a cold gas inert to the foodstuffs, passing the foodstuffs into a freezing chamber containing a cold boiling liquid at a temperature substantially below zero degree F. without exposing the freezing chamber to ambient atmosphere, freezing the foodstuffs to a temperature substantially below zero degree F. by exposing them to the cold boiling liquid and stationary vapors, providing a discharge chamber and purging it with a gas inert to the foodstuffs, passing the frozen foodstuffs into the purged discharge chamber without exposing the freezing chamber to ambient atmosphere, and discharging the frozen foodstuffs from the discharge chamber without exposing the interior of the freezing chamber to ambient atmosphere.



3,022,637
METHOD AND APPARATUS FOR FREEZING PERISHABLE MATERIAL

Willard L. Morrison, Lake Forest, Ill., assignor to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York

Filed Aug. 22, 1960, Ser. No. 24,068
6 Claims. (Cl. 62—64)



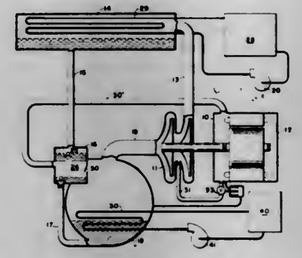
1. The method of chilling perishable material, which consists in filling a closable insulating zone with a multiplicity of packages of the material, pouring liquid nitrogen into the zone at substantially atmospheric pressure, for contact with and boiling by the heat of the contents of the zone, conveying the liquid in the zone to a selected portion thereof by inducing the high velocity flow of the resultant gas from the area where boiling occurs toward one of a plurality of selected gas discharge points.

3,022,638
CONTROLS FOR REFRIGERATION APPARATUS

Howard E. Caswell, East Syracuse, and James W. Endress, Syracuse, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Filed May 6, 1959, Ser. No. 811,463
4 Claims. (Cl. 62—115)

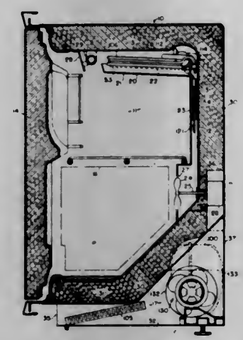
4. The method of operating a refrigeration machine including a compressor, a condenser, an economizer and a cooler connected to form a circuit for the flow of refrigerant, which consists in the steps of supplying gaseous refrigerant to the condenser for liquefaction therein, forwarding the refrigerant to the economizer wherein portions of the liquid refrigerant vaporize and cool the remaining liquid refrigerant, delivering the cooled liquid refrigerant to the evaporator for conversion to the gaseous state and reducing the evaporator pressure by automatically venting the evaporator to the economizer in response to a predetermined pressure relationship between the evaporator and the economizer.



3,022,639
BUILT-IN REFRIGERATION APPARATUS WITH DEFROST CONTROLS

Carl E. Brown and Frank P. Crotser, Adrian, Mich., assignors to Revco, Inc., Deerfield, Mich., a corporation of Michigan

Filed Sept. 18, 1959, Ser. No. 840,977
6 Claims. (Cl. 62—155)



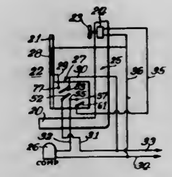
1. Refrigeration apparatus comprising a refrigeration cabinet having a storage compartment and an apparatus compartment; false wall means within said storage compartment forming an air duct; blower means adapted to circulate air into said duct and discharge said air through an exhaust port located in said false wall; said blower means comprising a fan means in said exhaust port; said fan means being driven by a shaft of a motor mounted in a recess on the exterior of said refrigerator cabinet thereby allowing said cabinet to maintain a flush outer wall; air circulation means for cooling said apparatus in said apparatus compartment; means for diverting a portion of said cooling air from said apparatus compartment into said recess whereby said fan motor is cooled.

3,022,640
HOME APPLIANCE

Earl F. Hubacker, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware

Filed Aug. 11, 1959, Ser. No. 833,022
17 Claims. (Cl. 62—156)

1. Defrost control apparatus for warming an electrically controlled refrigerating means to remove frost therefrom after a plurality of refrigerating cycles, comprising: a first switch for the circuit to the electrically controlled refrigerating means; a normally open second switch for an electric defrost heater circuit; means for closing said first switch at a first temperature and opening said first switch at a lower second temperature, said opening and closing being repeated during said plurality of cycles;

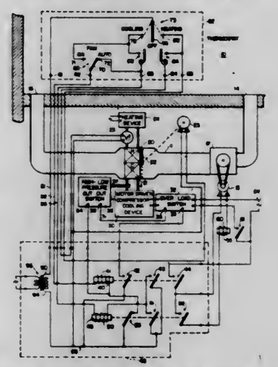


and means for closing said second switch at the end of said plurality of cycles and substantially immediately subsequent to an opening of the first switch while the refrigerating means is at substantially its coldest cycle temperature to initiate a defrost cycle.

3,022,641
CONTROL APPARATUS FOR AIR CONDITIONING SYSTEMS

Edward A. Myck, Edina, and Ralph T. Osen, Golden Valley, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

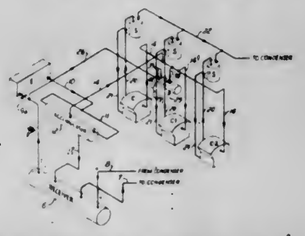
Filed Dec. 28, 1956, Ser. No. 631,143
12 Claims. (Cl. 62—163)



1. In control apparatus for an air-conditioning system having a cooling device and an air-circulating device; first relay means having an energization winding and three sets of normally open contacts; second relay means having an energization winding, two sets of normally open contacts and one set of normally closed contacts; abnormal operating condition sensing means having an open circuit upon the presence of an abnormal condition; temperature responsive switch means; a source of power; circuit means connecting said source of power, said temperature responsive switch means, said energization winding of the second relay means, and a parallel circuit of one set of contacts of said first relay and a normally open set of said second relay, in a series circuit; a parallel circuit comprising a series circuit of said abnormal condition sensing means and a second set of contacts of said first relay means and a circuit including said normally closed set of contacts of the second relay means; second circuit means connecting said source of power, said temperature responsive switch means, said energization winding of the first relay means, and said last mentioned parallel circuit in a series; a second source of power; circuit means including said third set of contacts of said

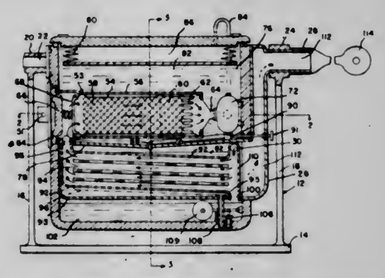
first relay means for connecting said air-circulating means to said second source of power; and circuit means including said last mentioned third set of contacts and said set of normally open contacts of said second relay means for connecting said cooling means to said second source of power.

3,022,642
REFRIGERATION COMPRESSOR CONTROL SYSTEM
Joseph N. Long, Wauwatosa, Wis., assignor to Vilter Manufacturing Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Oct. 7, 1960, Ser. No. 61,133
4 Claims. (Cl. 62—196)



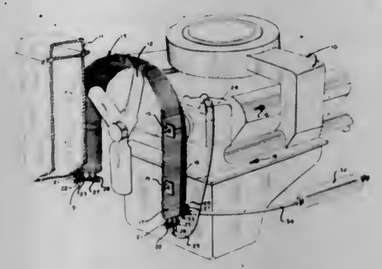
1. In a refrigeration system having pressure and suction sides, a plurality of compressors each having capacity step controlling solenoids, a stepcontroller electrically connected with said solenoids, a source of saturated liquid refrigerant on the suction side of said system, means for maintaining a predetermined level of said source of refrigerant, and temperature responsive means located in and for measuring the temperature of said saturated refrigerant and electrically connected with said controller for changing the capacity of said compressors.

3,022,643
AIR CONDITIONING SYSTEM FOR SPACE VEHICLES
Otto Schueller, 1953 E. Bataan Drive, Dayton 20, Ohio
Filed Apr. 8, 1960, Ser. No. 21,061
14 Claims. (Cl. 62—216)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A recirculating oxygen conditioning system for space vehicles comprising, a package swivel mounted for orientation with respect to G-load changes, a closed oxygen flow system located in said package and communicating by means of outlet and inlet with a space to be ventilated, a coolant storing compartment, a coolant supply in said compartment, an oxygen supply component, an oxygen purifying component, an oxygen compressor and a pressure regulator, each comprising an element in said closed oxygen flow system, and each located in said coolant compartment and surrounded by said coolant to provide pre-cooling, a bellows regulated by said pressure regulator for exerting a predetermined constant pressure on said coolant in said coolant storing compartment, a cooling component located below said coolant storing compartment, a valve in the floor of said storing compartment for regulated flow of coolant from said coolant storing compartment to said cooling compartment, porous coolant containing means in said cooling compartment for receiving said coolant, oxygen flow ducts incorporated into said oxygen flow system, and located to be surrounded by coolant contained in said porous containing means, and means for exposing the exterior surface of said porous means to outside atmosphere for reducing pressure and producing evaporation and the resulting cooling of the oxygen in said oxygen flow ducts.

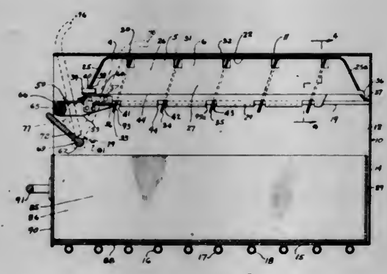
3,022,644
AUTOMOBILE AIR CONDITIONER CONDENSER
Francis E. Grenier, Livonia, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 14, 1959, Ser. No. 859,176
4 Claims. (Cl. 62—243)



1. In an automotive vehicle including an engine, an engine driven fan for cooling said engine, an air conditioning system condenser mounted about the periphery of the fan, said air conditioning system condenser comprising a first section having surfaces substantially parallel to the axis of the fan and lying over the tips of the fan blades, and a second section extending from said first section and lying behind said fan with respect to the air flow therethrough and extending toward the axis of said fan.

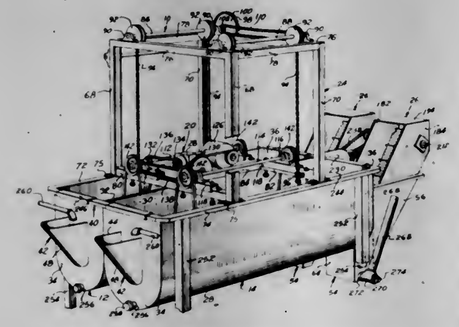
3,022,645
ICE CUBE EJECTORS
Ernest A. Bailiff and Alan J. Koch, Evansville, Ind., assignors to Whirlpool Corporation, a corporation of Delaware
Filed Feb. 18, 1957, Ser. No. 640,899
2 Claims. (Cl. 62—344)

1. In an ice cube ejecting tray assembly, the combination of an ice cube tray with a grid, comprising a longitudinally extending division plate, a plurality of tilted transverse plates, each transverse plate having an elongated vertical slot in its central portion through which said division plate extends, an actuator strip located in the same plane as the divider plate and passing through all of the transverse plate slots, said actuating strip having upwardly open notches at each transverse plate, the walls of said notches engaging transverse plates to move them, a push bracket fixedly secured to said actuator strip at one end, and a roller carried by said push bracket, the said roller being the subject of the application of force to push the actuating strip and move the transverse plates from a tilted position toward a vertical position to loosen the ice cubes, a support for said ice tray in inverted position, comprising a housing having side walls, rear wall, and top wall; said support having inwardly projecting guides on said side walls for supporting the ice tray, and said rear wall and top wall forming stop means for preventing sliding movement of the ice tray when force is applied to said roller, the said guides being spaced from said top wall carried by said support sufficiently to receive the tray in inverted posi-



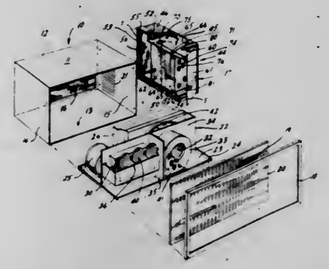
tion, the tray engaging said top wall and rear wall when force is applied to said roller, to prevent the adjacent end of the tray from being moved upward or backward, and force multiplying means carried by said support, comprising a crank arm engaging said roller, a shaft carrying said crank arm and rotatably mounted on said support and a lever fixedly secured to said shaft, and of sufficient length to result in the easy application of force to the roller by the crank arm for ejecting the ice cubes.

3,022,646
MACHINE FOR CONTINUOUS COOLING OF GIBLETS
Ralph S. Zebarth, Hickman Mills, Mo., assignor, by mesne assignments, to Gordon Johnson Company, Kansas City, Mo., a corporation of Missouri
Filed Jan. 19, 1959, Ser. No. 787,718
7 Claims. (Cl. 62—381)



1. A machine for cooling giblets comprising elongated, open-top receptacle means adapted to receive a liquid coolant and provided with inlet means and outlet means at opposed ends thereof; support means overlying the receptacle means and including upright guide means on opposed sides of said receptacle means; and a unit carried by said support means and including horizontal frame means slidable vertically in said guide means, shaft means rotatably mounted on said frame means for rotation on a generally horizontal axis, an elongated, cylindrical, perforated drum of a length generally equal to the inner longitudinal dimension of said receptacle means, horizontally spaced belt and pulley means suspending said drum from said shaft means whereby the drum is rotated on the axis thereof in response to rotation of the shaft means, prime mover means carried by said frame means, means operably coupling the prime mover to said shaft means for rotating the latter to effect rotation of said drum, selectively operable means mounted on said support means and coupled to said frame means for raising and lowering the latter to permit the drum to be lowered from a location above the coolant to a position at least partially submerged in the coolant and aligned with said inlet means and said outlet means for receiving giblets introduced into the receptacle means through said inlet means and for discharging said giblets from the drum through said outlet means whereby the giblets are continuously agitated and tumbled within the drum while being subjected to the coolant, and drum restraining means carried by said frame means, depending therefrom and including roller means engaging the drum on opposed sides thereof for preventing substantial horizontal and vertical movement of the drum relative to said frame means.

3,022,647
AIR CONDITIONING
William H. Mullin, Havertown, Pa., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 20, 1960, Ser. No. 77,149
8 Claims. (Cl. 62—427)



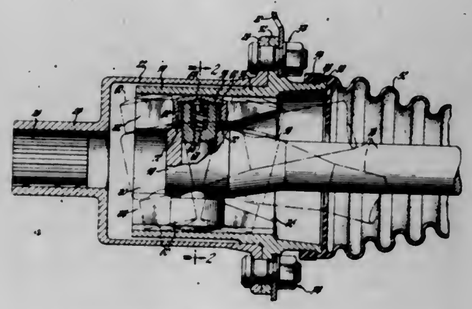
1. For use with air conditioning apparatus of the type comprising a box-like housing having top, bottom and side walls, and open front and rear wall portions, an evaporator chamber in air flow communication with an enclosure to be treated and a condenser chamber in air flow communication with outdoor air, means for moving air through said chambers, and louver means provided in one of said side wall portions and communicating with said condenser chamber, air vent means comprising: a box-like member having top and bottom walls, a single side wall, and an open side wall adapted for disposing against the louvered side wall of such housing, said box-like member having open rear and front walls; a damper within said box-like member operative between a first position adapted to deflect air flowing through such louvers to the outdoors and a second position whereby air flowing through such louvers may be deflected to the enclosure undergoing treatment; a door hingedly mounted to said box-like member along the front edge of its side wall and adapted to open and close said front opening; and means for operatively coupling said door to said damper whereby the latter is moved to said first position when the door is moved to closed position and the damper is moved to said second position when the door is moved to open position, said door in the latter position being disposed and adapted to direct such outdoor air as it flows into the enclosure into the path of air flowing from said enclosure into such evaporator chamber.

3,022,648
VENTILATED FINGER RING
Leo Thaler, Croton-on-Hudson, N.Y. (10 Spring St., Northfield, Vt.)
Filed Aug. 20, 1958, Ser. No. 756,140
7 Claims. (Cl. 63—15)



1. A ventilated finger ring comprising an outer continuous annular ring member, an inner continuous annular ring member connected to and within said outer member and having an inner annular surface defining a finger receiving opening, said members being substantially rigid and having opposed abutting surfaces which are being complemental and are configured to form substantially rigid air conducting means interiorly therebetween, said rigid air conducting means including at least one passage forming wall recessed in a ring member, said inner ring member inner surface having radial perforations providing free communication in the complete ring between said finger receiving opening and said interior air conducting means, and said ring having sides having transverse openings providing free communication in the complete ring between atmosphere at the sides and said interior air conducting means, said interior air conducting means being configured to provide free communication between said radial perforations and the transverse openings on both sides of said ring so as to permit air to freely circulate between the finger receiving opening of said inner member and the atmosphere at the sides of the ring and between the atmosphere at both sides of said ring, and thereby when the ring is worn to provide for free circulation of air between said ring and the finger of the wearer.

3,022,649
UNIVERSAL JOINT
Albert Emil Roller, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 25, 1959, Ser. No. 835,908
2 Claims. (Cl. 64—8)



2. A universal joint for a motor vehicle rear axle comprising a cylindrical housing having an open end, an extension formed on the other end of said housing and having means for connecting said housing to a vehicle driving means, said open end of said housing having an external annular flange extending therefrom, a pot member received within said housing and coaxial therewith and being open at both ends, an external annular flange formed on said pot member and intermediate the ends thereof and engaging said flange formed on said housing for securing said housing and said pot together, said pot member having three longitudinal bores formed therethrough, two of said bores communicating with the third of said bores, an axle shaft extending into said pot member and into the third of said bores, and a trunnion and bearing assembly secured in the end of said axle shaft within said pot member and extending into said two of said bores, said axle shaft and said trunnion and bearing assembly being axially and angularly movable within said pot member for providing universal movement of said axle shaft with respect to said housing and the rest of the vehicle drive means.

3,022,650
LATCH KNITTING NEEDLE AND METHOD OF FORMING
Byron T. Virtue, Litchfield, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Jan. 8, 1958, Ser. No. 707,714
6 Claims. (Cl. 66—122)



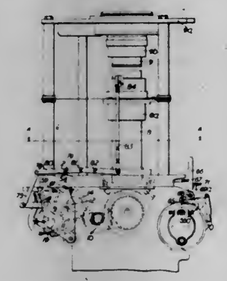
1. A latch needle comprising a shank having continuous imperforate flat sides, said shank having a central slot parallel to said sides, a latch having a transverse bore, and a separate deformed ball in the latch bore, permanently attached over an extended area to the side walls of the slot.

3,022,651
INTEGRAL OFFSET BEARING FOR LATCH OF KNITTING NEEDLE
William C. Oberem, New Hartford, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Feb. 26, 1958, Ser. No. 717,761
6 Claims. (Cl. 66—122)



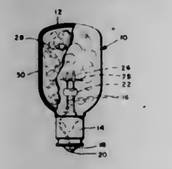
1. A needle having spaced parallel shank portions, a latch therefor having a bearing hole, and a bearing comprising angular overlapping tongues partially sheared and bent inwardly from each shank portion, each tongue having a free end extending across the hole of the latch and a root integral with the shank portion and coextensive with the latter's width.

3,022,652
CONTROL MECHANISM FOR CIRCULAR KNITTING MACHINES
Carlyle Herbert Wainwright and Frederick Edward Deans, Leicester, England, assignors to The Bentley Engineering Company Limited, Leicester, England
Filed Feb. 24, 1960, Ser. No. 10,635
Claims priority, application Great Britain Feb. 28, 1959
6 Claims. (Cl. 66—154)



1. For a circular knitting machine, control mechanism for selective actuation of control means comprising a supporting frame, a cam pack spindle on said frame, a plurality of cam packs mounted side by side on said spindle to turn about the axis thereof and each comprising a rachet wheel and at least one edge cam secured thereto, cam disc followers cooperating respectively with the cams of the cam packs, an oscillatory pawl carrier mounted on said frame, pawls, the tails of which ride on the upper surfaces of the cam disc followers, mounted on said pawl carrier to cooperate respectively with the rachet wheels of the cam packs and which rack the appropriate cam packs to effect machine adjustments through the action of the cam disc followers cooperating with the cams of the cam packs, and a rotary pawl selecting means comprising a plurality of discs having stepped peripheral formations positioned to actuate their respective pawls as required in different rotary settings of the pawl selecting means, and mounted on the frame for selectively controlling engagement of the pawls with the rachet wheels of their associated cam packs.

3,022,653
COATED FLASHLAMP AND COATING COMPOSITION
Norman F. Baird, Bloomfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 24, 1958, Ser. No. 782,701
9 Claims. (Cl. 67—31)



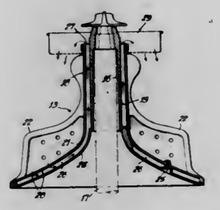
1. A flash lamp having an envelope, a single-layer protective coating on the exterior surface of said envelope, said coating comprising a mixture of from 25% to 50% by weight of cellulose acetate having a viscosity of from 17 to 24 seconds, and from 75% to 50% by weight of cellulose acetate having a viscosity of from 6 to 10 seconds, and said coating having a thickness of at least about 4 mils.

3,022,654
LINT FILTER FOR CLOTHES LAUNDERING MACHINE
Robert C. Aberle, Lombard, Ill., assignor to General Electric Company, a corporation of New York
Filed June 20, 1960, Ser. No. 37,247
6 Claims. (Cl. 68—18)



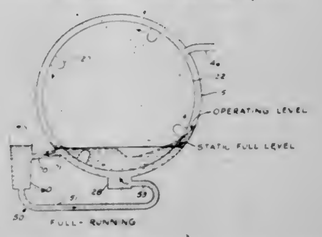
1. In a washing machine of the tumble action type having a perforate rotatable drum disposed within an imperforate stationary tub, a channel-shaped perforate lint filter, means for introducing liquid into said tub to a predetermined static liquid level, means for rotating said drum through said liquid in said tub to produce an upflow of liquid in the direction of rotation of said drum, said liquid assuming a dynamic liquid level at a substantially higher elevation than said static level, and means for securing said filter to said tub wall with the length of the channel web parallel to the axis of said drum but below said dynamic level, the web of said channel being positioned substantially normal to liquid being impelled upwardly along the surface of said tub facing said basket for arresting lint entrained in the liquid against the underside of said filter web, said upwardly directed flow of liquid maintaining said arrested lint against said filter web.

3,022,655
FILTERING AGITATOR
Andrew H. Gerhardt, Birmingham, Mich., and Charles R. Waldrop, Herrin, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 747,373, July 9, 1958. This application Nov. 7, 1960, Ser. No. 67,858
5 Claims. (Cl. 68—18)



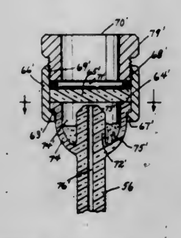
1. In a clothes washing machine, a clothes receiving basket adapted to be filled with clothes and water to a predetermined level, an agitator disposed within said basket, means for oscillating said agitator, a filter disposed adjacent the top of said agitator and above said predetermined level, means defining a water passage through said agitator and communicating with said filter and including a plurality of spaced spiral vanes within said agitator for pumping the water upwardly through said agitator.

3,022,656
DISPENSER FOR LAUNDRY MACHINES
Richard P. Bergeson and Charles T. Bergman, Newton, Iowa, assignors to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Aug. 28, 1959, Ser. No. 836,661
4 Claims. (Cl. 68—207)



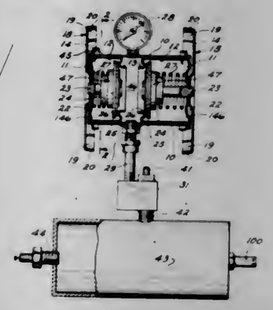
1. In a laundry machine operable through washing and fluid extraction operations, a tub defined by wall members forming a single compartment for containing washing fluids, means for supplying washing fluids to said tub, drum means for rotation about a non-vertical axis in said single compartment of said tub and said wall members openly facing said drum, receptacle means for containing additives to be dispensed into said compartment, a filling opening communicating with said receptacle means for introducing additives, inlet means in one of said wall members of said compartment communicating with said receptacle means, outlet means in said compartment communicating with said receptacle means, means for rotating said drum to create differing dynamic fluid pressures in said compartment, said inlet and outlet means connected to said tub at points of said differing dynamic fluid pressures while said drum is rotating for circulating the washing fluids directly from and into said single compartment through said receptacle means.

3,022,657
PENETROMETER FOR POROSIMETERS
William C. Hampton, Takoma Park, Md., assignor to American Instrument Company, Inc., Silver Spring, Md.
Original application May 12, 1958, Ser. No. 734,778. Divided and this application Feb. 21, 1961, Ser. No. 90,709
5 Claims. (Cl. 73—38)



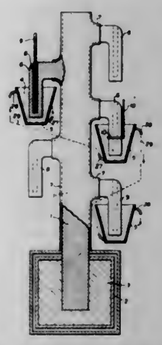
1. In a porosimeter, a penetrometer comprising a bell-shaped element, a sealing plate on said bell-shaped element, means clampingly securing said plate to said bell-shaped element, an elongated, tubular, open-ended stem member rigidly and communicatively connected to said bell-shaped element, and an extension of said tubular stem member in said bell-shaped element extending toward and terminating a relatively short distance from said sealing plate, said extension defining an annular sample-retaining space around the extension in said bell-shaped element.

3,022,658
RADIATOR CAP TESTING DEVICE ACCUMULATOR
John F. Black, 307 Morewood Parkway, Cleveland, Ohio
Filed Dec. 23, 1957, Ser. No. 704,704
3 Claims. (Cl. 73—40)



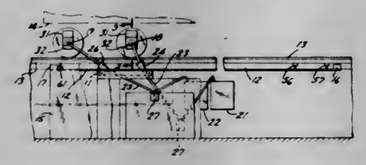
1. A testing device for an automobile pressure radiator cap, comprising, a tube having radiator filler necks formed at opposite ends of said tube, each of said filler necks being adapted to receive a spring loaded radiator cap, a radiator cap having a spring tension of a known value removably connected to the radiator filler neck at one end of said tube, said cap being a safety valve and constituting a closure for one end of the tube, an air guage communicating with said tube intermediate the filler necks, an accumulator tank in communication with said tube intermediate the filler necks, and a valve connected to said accumulator for controlling the admission of air into said tube.

3,022,659
APPARATUS FOR THE FRACTIONAL SEPARATION OF MATERIAL CONTAINED IN A SOLUTION BY FREEZING
Walter Rochus and Reinhold Kickuth, Gottingen, Germany, assignors to Chemieglas, Gebr. Schrickel oHG, Gottingen, Germany, a corporation of Germany
Filed Feb. 4, 1958, Ser. No. 713,129
Claims priority, application Germany Feb. 5, 1957
1 Claim. (Cl. 73—53)



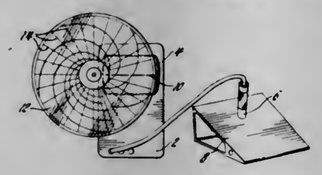
An apparatus for fractional separation of material contained in a solution by freezing with lowering temperatures comprising a heat conductor, cooling means engaging one end of said heat conductor, a plurality of containers adapted to receive said solution and disposed in series along said heat conductor spaced apart from each other, tapping projections extending from said heat conductor into said containers and constituting heat transfer means from said heat conductor into said solution of said respective containers, each of said containers having an inlet conduit adjacent its bottom and an outlet conduit adjacent its top, and means connecting said outlet conduit of each of said containers with the inlet conduit of the next following of said containers in the series of said containers.

3,022,660
NONDESTRUCTIVE TESTING APPARATUS
George A. Klatchko, Levittown, Pa., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed June 6, 1960, Ser. No. 34,074
8 Claims. (Cl. 73—67.8)



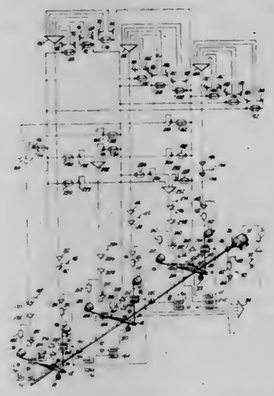
8. In a stationary inspection station for inspecting railroad car axles, apparatus for nondestructively testing the axles of moving railroad cars which comprises a movable carriage; a nondestructive test probe for inspecting said axles for defects; a cable connecting said test probe to said carriage; magnetic means for coupling said test probe to an axle of said moving railroad car in a first position whereby said carriage is drawn by said railroad car between said first position and a second position, said axle being tested during said interval when said carriage is moving between said first and second positions; switching means actuated by said carrier in said second position for controlling said magnetic means to uncouple said test probe from said axle; and motor means mounted on said carriage and controlled by said switching means for returning said carriage to said first position.

3,022,661
AN AUXILIARY SCALE FOR ULTRASONIC THICKNESS MEASURING MEANS
Paul G. Campbell, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 26, 1955, Ser. No. 504,070
3 Claims. (Cl. 73—67.8)



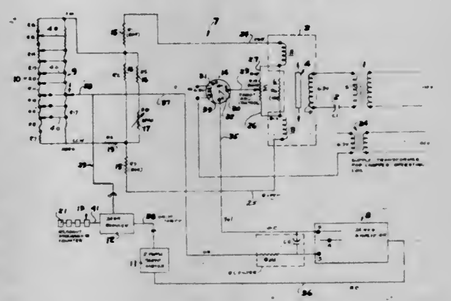
3. In scaling means for use with a measuring instrument of the type having a cathode ray tube and a horizontal trace on which spaced pips are developed by resonances of a part being tested at harmonically related frequencies, a transparent body having a plurality of straight lines thereon, each line representing a different thickness in a progressive order, the differences between lines being of a predetermined magnitude and a second plurality of spaced lines intersecting said straight lines, said intersection points bearing a mathematical relationship representative of locations of harmonically related frequencies, said body being movably positioned with respect to the catode ray tube so that the straight lines may be sequentially moved into alignment with the horizontal trace of the cathode ray tube to compare the locations of the pips on the horizontal trace to the locations of intersections of the said second plurality of lines with a straight line on the transparent body, whereby each straight line when matched so that the intersection points thereon align with said pips represents a given thickness of the part being tested.

3,022,662
APPARATUS FOR DETERMINING STRUCTURAL STRAIN CHARACTERISTICS
Henry K. Hebeler, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Oct. 20, 1958, Ser. No. 768,319
11 Claims. (Cl. 73—93)



1. In apparatus for determining a physical characteristic of an inanimate deformable object, the combination comprising, loading means for applying a force to a region of said object to effect an angular displacement of said object, means for measuring the angular displacement of said object at said region, and means responsive to said measuring means for controlling said loading means in accordance with the angular displacement of said object at said region.

3,022,663
LOAD MEASURING SYSTEM
Paul A. Diddens, Detroit, Mich., assignor to Performance Measurements Co., Detroit, Mich., a corporation of Michigan
Filed Aug. 10, 1959, Ser. No. 832,661
6 Claims. (Cl. 73—141)



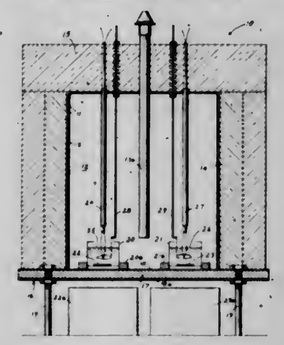
1. In combination, a measuring circuit loop, a linear variable differential transformer, including a pair of

spaced secondaries series connected into said circuit loop, a primary, a phase shift control capacitor, a low voltage A.C. source, said primary being connected in series through said phase shift control capacitor to said low voltage A.C. source, and a movable permeable core, a resistor network connected in series in said circuit loop, a slidewire across said circuit loop in parallel circuit with said network and connected at spaced points with corresponding points in said network, a movable slider in contact with said slidewire to variably regulate the effective resistance of said network for balancing the voltage of said network with the voltage differential between said secondaries produced by longitudinal displacement of said core relative to said primary and secondaries, a two-phase servomotor operatively joined to said slider for selectively moving the same along and upon said slidewire, a synchronous convertor including a coil connected to and energized by said A.C. source connected between said secondaries for sampling differences of voltage between said secondaries and said slidewire due to longitudinal displacement of said core from a central position, a servo-amplifier connected with said slider and connected to and adapted to deliver A.C. signals of predetermined polarity to said servomotor, said convertor having a D.C. outlet joined to said servo-amplifier for delivering a pulsating D.C. signal of predetermined polarity, depending upon the relative potential between said secondaries and said slidewire, an RC filter interposed in the circuit between said servoamplifier and said D.C. outlet and slider respectively, to overcome phase shift in the differential transformer for producing a steady D.C. voltage to said amplifier, said servomotor driving said slider over said slidewire in a direction and amount relative to said resistor network as to reduce and substantially eliminate the error voltage between said slidewire and said secondaries, and a mechanical readout counter connected with said servomotor movable in unison with said slider for reading the amount of displacement of said core, the readings of said counter being a linear function of the amount of slider movement for rebalancing the voltage in said circuit loop.

3,022,664
DIFFERENTIAL CALORIMETER

Jan A. J. Stolwijk, Guilford, Conn., assignor to John B. Pierce Foundation, New Haven, Conn., a corporation of New York

Filed Sept. 22, 1958, Ser. No. 762,339
9 Claims. (Cl. 73—190)

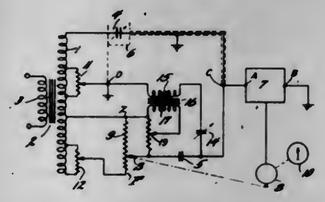


1. A calorimeter comprising a base of alternating layers of substantially rigid nonmagnetic material and thermally insulating material, a plurality of legs for supporting the base, an enclosure supported by the base, the enclosure having sides and a top of thermally insulating material, a metallic housing within the enclosure defining a chamber, a plurality of coils of electrically conductive wire surrounding the chamber and positioned between the metallic housing and the thermally insulating enclosure, a thermostat in communication with the chamber whereby electric current flow in the coils of electrically conductive wire is controlled to establish the temperature within the chamber at a predetermined value, two receptacles supported by the base within the chamber in symmetrical spaced-apart relation, guide means disposed on the base for positioning the respective receptacles, each receptacle being formed of good heat conducting material and being formed to receive a test material, two thermocouples, one thermocouple being positioned to be in thermal contact with a material in one receptacle and the other thermocouple being positioned to be in thermal contact with a material in the other receptacle, first and second heater means, the first heater means being positioned to apply a predetermined, accurately measured quantity of heat to a material in one receptacle, the second heater means being positioned to apply a predetermined, accurately measured quantity of heat to a material in the other receptacle, means connected to at least one of the first and second heater means for measuring the amount of heat added to the material in at least one of the receptacles, means responsive to the two thermocouples for measuring the temperature difference between the material in the two receptacles, a rod of magnetic material in each of the receptacles, and magnetic means disposed outside the chamber but adjacent each of the rods to cause each rod to rotate.

3,022,665
LIQUID CONTENTS GAUGES

Stanley J. Smith, New York, N.Y., assignor to Simmonds Precision Products, Inc., a corporation of New York

Filed Oct. 2, 1950, Ser. No. 187,948
14 Claims. (Cl. 73—304)

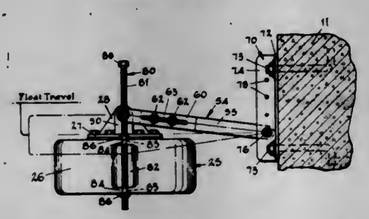


2. A capacitance-type dielectric liquid contents gauge, comprising a supply transformer having primary winding means and secondary winding means, a balanceable network comprising a liquid contents measuring condenser and a reference condenser connected in series, an amplifier having its input electrically coupled between the junction of said condensers and an intermediate point on said secondary winding means, a network-rebalancing potentiometer having its input electrically coupled across a portion of said secondary winding means on one side of said intermediate point and having its adjustable output electrically coupled in series with said reference condenser to control the magnitude of the voltage applied to said reference condenser, said measuring condenser being connected to said secondary winding means on the other side of said intermediate point a second transformer having primary winding means electrically coupled across the adjustable output of said potentiometer to receive a voltage proportional to the setting thereof and having secondary winding means, a third condenser for substantially total immersion in the liquid being measured and electrically coupled in series with said secondary winding means of said second transformer across the input to said amplifier, a reversible motor electrically coupled to the output of said amplifier and having its rotor mechanically coupled to the slider of said potentiometer to adjust said slider in a direction tending to rebalance said network, and liquid contents indicating means driven by said motor.

3,022,666
FLOAT GUIDE FOR A SEWER REGULATOR

Chalmers S. Brown, Lima, Ohio, assignor to Brown & Brown, Incorporated, Lima, Ohio, a corporation of Ohio

Filed Aug. 3, 1960, Ser. No. 47,184
4 Claims. (Cl. 73—322.5)



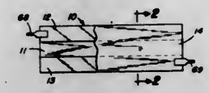
1. For use in a sewer system having a sewer flow control valve between the ends of the sewer system in operative connection with and operated by a movable float in a chamber in flow receiving and discharging relation to the sewer system and responsive to sewer flow therethrough by rising and falling to the rise and fall of sewer flow in and out of the chamber, a non-fouling float supporting means comprising a pair of brackets; each bracket being an angle iron and having a plurality of bearings in one leg thereof and in spaced relation along the length thereof; a plurality of anchor bolts in engagement with the other leg of each bracket and adapted for supporting the brackets in vertically extending spaced parallel relation with the first mentioned leg of each bracket extending outwardly; a pair of side bars having end journals; a pair of stretcher braces in engagement with each side bar and adapted to support the side bars in spaced parallel relation and thereby form a truss therewith; a pivot member in adjustable engagement with each bar end journal and one of the bracket bearings for supporting the truss for pivotal beam movement about one of a plurality of horizontally extending axes; a pair of slotted arms having end journals; bolt and nut assemblies extending through the slot of each arm and in engagement with free ends of each truss side bar for adjustably supporting the arms on the truss and to vary the effective length of the truss; the float having a pair of spaced upstanding ears; each ear having a bearing therein; and a pivot member in engagement with each arm end journal and a float ear bearing whereby the float and truss beam are pivotally connected together to support the float for vertical movement and against lateral movement in response to sewer flow.

3,022,667
ADSORPTION ELECTRIC HYGROMETER

Arnold Wexler, Washington, D.C., and Albert Krinsky, Bethesda, and Samuel B. Garfinkel, Rockville, Md., assignors to the United States of America as represented by the Secretary of the Navy

Original application Jan. 31, 1955, Ser. No. 485,358. Divided and this application Mar. 19, 1959, Ser. No. 800,602
8 Claims. (Cl. 73—336.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An electric hygrometer comprising a hygrometric resistance element the resistance of said hygrometric resistance element varying in a substantially exponential manner with linear variation in relative humidity, means for supporting said element, first circuit means coupled to said element for transposing the exponential variations in element resistance into equivalent linear values of current encompassing thereby one range of currents

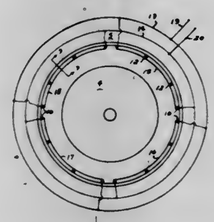


linearly related to relative humidity and meter circuit means coupled to said first circuit means for transposing said linear values of current into linear meter indications.

3,022,668
EXHAUST GAS THERMOMETER

Gerald W. Lawson, Lynnfield Center, Mass., and Anthony J. Arrigo, Lyndhurst, N.J., assignors to the United States of America as represented by the Secretary of the Air Force

Filed Nov. 15, 1957, Ser. No. 696,890
4 Claims. (Cl. 73—342)



1. A device responsive to temperature changes in turbojet exhaust gases passing turbine blades and passing between the tail pipe and the tail cone of a turbojet aircraft having an air frame, the device comprising a plurality of segments of electrically conductive cylindrical tubing that collectively define a substantially continuous annulus exposed to the thermal effects of the turbojet exhaust gases, a plurality of supports mechanically securing the segments of cylindrical tubing to the air frame near the turbine blades of the turbojet, a first collector wire connected to a first end of each of the segments, a second collector wire connected to a second end of each of the segments, and a pair of electrically conducting harness connector wires connected respectively to the first and the second collector wires.

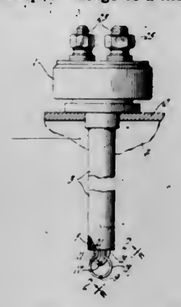
3,022,669
RATE SENSITIVE THERMOCOUPLE

William J. O'Brien, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Nov. 25, 1957, Ser. No. 698,466
2 Claims. (Cl. 73—359)

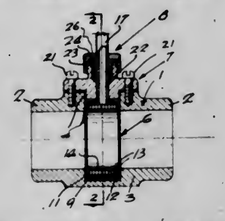
1. A thermocouple system for measuring changes in the temperature of a medium including a pair of adjacent thermocouples having hot junctions equally exposed to said medium, said thermocouple junctions having different masses to provide different response rates, means connected to said thermocouples for producing a first output signal proportional to the instantaneous difference between the output voltages of said thermocouples, means connected to the thermocouple having the fastest response rate for producing a second output signal proportional to the instantaneous voltage of said one thermocouple, and means for combining the said first and

second output signals to produce a final output signal equivalent to the output voltage of a thermocouple having



time constant less than the time constant of the fastest response thermocouple.

3,022,670
THERMO-ELEMENT
Frank C. Sutliffe, Jr., 23 Juno Road, Mill Valley, Calif.
Filed Dec. 7, 1959, Ser. No. 857,667
5 Claims. (Cl. 73—368.4)



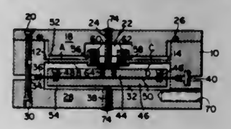
1. In a thermo-element for a conduit system for temperature indication or temperature responsive control, a generally cylindrical casing, said casing having a cylindrical space therein to contain a thermo-responsive liquid, a generally cylindrical heat conductor membrane forming the inner peripheral wall of said casing, a tube extended from said casing and communicating with said space, and means to suspend said element in a conduit so that the inner periphery of said membrane is in registry with the inner periphery of said conduit.

3,022,671
THERMOMETER SUPPORT
Ralph C. Wappner, Springfield, Ohio, assignor to The Ohio Thermometer Company, Springfield, Ohio, a corporation of Ohio
Filed Aug. 1, 1957, Ser. No. 675,736
8 Claims. (Cl. 73—375)



1. A brooder or like thermometer, including a scale plate having normal upper and lower ends, a thermometer tube thereon having its bulb end at the normal lower end of the scale plate, an extension slide in telescopic engagement with the normal upper end of the scale plate, means to maintain said extension slide in a selected position of longitudinal adjustment relatively to said scale plate, and a relatively tiltable disc on said extension slide enabling the thermometer to assume a vertical position when suspended by said disc.

3,022,672
DIFFERENTIAL PRESSURE CELL
John Dimeff and Murray S. Gardner, San Jose, Calif., assignors, by mesne assignments, to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed May 12, 1958, Ser. No. 734,805
4 Claims. (Cl. 73—398)
(Granted under Title 35, U.S. Code (1952), sec. 266)

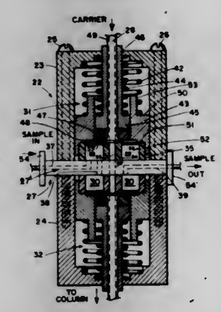


1. In a differential pressure cell, a tubular body member, a top cap for said body member, a bottom cap for said body member, said caps together enclosing said body member to form a chamber of generally cylindrical outline, a disc-shaped piston positioned within said chamber and mounted on a flexible diaphragm, for limited movement along the longitudinal axis of the chamber, said diaphragm effectively dividing said chamber into two fluid receiving compartments, a pair of oppositely-disposed arms lying in a plane essentially normal to the axis of movement of said piston, said arms extending inwardly from the wall of one of said compartments and being formed integrally with said body member, means including a generally U-shaped flexure yoke the extremities of which are respectively rigidly attached to the inner ends of said arms and the mid-point of which is rigidly secured to one surface of said piston for rigidly securing said piston to the inner ends of said arms so that the latter are deflected on a movement of said piston in either direction along its axis of travel, and means for measuring the deflection of the arms as a measure of the difference in the pressures applied to the opposite sides of said diaphragm.

3,022,673
FLUID LINE TRANSFER SWITCH
David H. Fuller, Wrentham, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts
Filed June 9, 1960, Ser. No. 35,082
2 Claims. (Cl. 73—422)

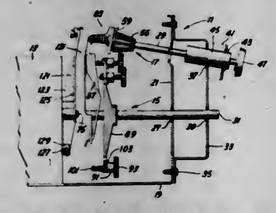
1. A fluid switch assembly for transferring fluid from one flow line into another flow line, comprising a member containing separate passages, one of said passages forming a part of one of said flow lines and another of said passages forming a part of the other of said flow lines, one situation of said switch assembly having one plastic sealing member encompassing one end of said one of said passages to connect said one of said passages into its respective flow line, another plastic sealing member encompassing said one sealing member and one end of said other of said passages to connect said other of said passages into its respective flow line outside of said one sealing member, a flexible joiner between said sealing members whereby a chamber is formed by a surface of said movable member and said flexible joiner as one pair of opposite walls and said sealing members as

another pair of opposite walls, means for effectively independently resiliently biasing said sealing members against said passage containing member, and an exit passage from said chamber, said passage member and said sealing members being relatively movable so as to be



positionable, from the situation described above, by transverse movement between said sealing members and said passage member, to a situation wherein said one of said passages is registered with said other of said flow lines and the other of said passages is registered with said chamber and said exit passage therefrom.

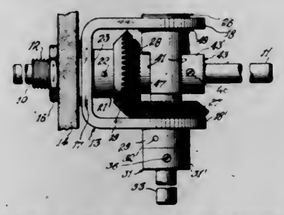
3,022,674
TUNING DEVICE
Donald J. Cross and William F. Scanlon, Tonawanda, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Continuation of application Ser. No. 758,079, Aug. 29, 1958. This application June 8, 1960, Ser. No. 37,824
9 Claims. (Cl. 74—10.85)



1. A tuning device for an electrical unit comprising adjustable cam means for altering the tuning of said unit, a rotatably mounted tuning control formed to provide a driver positioned intermediate the end portions thereof, mounting means for pivotally supporting said control at one of said end portions, biasing means for suspending said control at the opposite one of said end portions for normally maintaining said driver in spaced relationship with said adjustable cam means, and lever means frictionally mounted upon said tuning control for pivoting said control and imparting movement to said driver to affect engagement with said cam means during rotation of said tuning control.

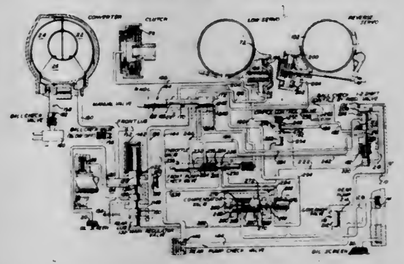
3,022,675
VARIABLE ANGLE GEAR DRIVE MECHANISM
Norman J. Trought, New Vernon, N.J., assignor to Trought Associates, Inc., Belleville, N.J., a corporation of New Jersey
Filed Sept. 28, 1959, Ser. No. 842,753
5 Claims. (Cl. 74—385)

1. In a gear device comprising first and second alignable shafts respectively having first and second bevel gears attached thereto, and a third bevel gear intermeshing with the said first and second bevel gears, the said first and second gears having the same number of teeth and the shaft of the second gear mounted to angle about the axis



of the third gear, so that the first and second gears may lie close to and coaxial with one another, with the front of one gear disposed alongside the back of the other gear, and the teeth of said gears simultaneously engaging the same tooth of the third gear and bridged thereby.

3,022,676
AUTOMATIC TRANSMISSION CONTROLS
James J. Duffy, Scottsdale, Ariz., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Continuation of application Ser. No. 760,681, Sept. 12, 1958. This application Aug. 15, 1960, Ser. No. 49,796
17 Claims. (Cl. 74—472)

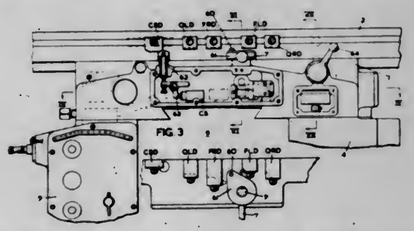


2. In a control system for an automatic power transmission mechanism capable of delivering torque from an engine to a driven member, first and second fluid pressure operated servos, said first servo comprising a pair of opposed servo fluid pressure chambers and a movable member disposed between and partly defining said chambers, said first servo assuming a released condition when both chambers are pressurized and assuming an applied condition when only one of said chambers is pressurized, valve means responsive to engine torque demand for restricting the flow of fluid from the other of said chambers when the torque demand is reduced and for accommodating a relatively unrestricted flow of fluid from said other chamber under increased torque demand, and valve controlled bypass passage means for accommodating a unidirectional transfer of fluid around said valve means to said other chamber.

3,022,677
APPARATUS FOR CONTROLLING THE MOVEMENT OF A RECIPROCATORY DRIVEN ELEMENT
Hans Gronau, London, England, assignor to Victoria Machine Tool Company Limited, London, England, a British company
Filed Dec. 30, 1957, Ser. No. 706,010
Claims priority, application Great Britain Dec. 28, 1956
6 Claims. (Cl. 74—472)

1. Apparatus for controlling the movement of a reciprocatable driven element compris ng, in combination, a

reversible motor, a change-speed transmission connected between said motor and said driven element, said transmission having a first setting for relatively high speed transmission and a second setting for relatively slow speed transmission, a single control element, an actuating mechanism connected between said control element and said change-speed transmission, electric circuit control means for controlling the direction of rotation of



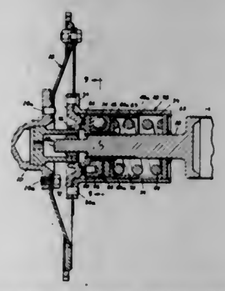
said motor, said control element controlling said control means and controlling by means of said actuating mechanism the setting of said transmission for movement of said driven element in one or the other direction and at one or the other velocity selectively, and mechanical sensing means controlling the movement of said control element in response to changes in the position of said driven element whereby automatic reciprocatory cycles of movement of the driven element may be effected.

3,022,678
TUNNEL MOUNTED GEARSHIFT
James R. McCordic, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Jan. 26, 1960, Ser. No. 4,814
1 Claim. (Cl. 74—473)



A manually operable floor mounted gear shift mechanism for an automobile comprising a support bracket having means therein for securing the same to a vehicle floor, a shaft pivotally mounted in opposite sides of said bracket, a sleeve member rotatably supported on said shaft and having socket means disposed on opposite sides thereof, a gear shift stick having a yoke at one end thereof, bearing studs extending through the legs of said yoke and secured in said socket means to pivotally mount said stick, gear train selecting levers pivotally mounted on said shaft on opposite sides of said stick, one end of said levers having a flat side with a slot therein adjacent said stick, a pin secured to said stick and adapted to fit into said slots, said pin being sufficiently long to engage each of said slots simultaneously at one position of said stick, spring means engaging said stick and urging said pin into engagement with one of said slots, and the other end of said levers being adapted for operative connection to transmission shifting arms.

3,022,679
TORSIONAL VIBRATION DAMPENER
George R. Pipes, South Euclid, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 2, 1959, Ser. No. 850,422
13 Claims. (Cl. 74—574)

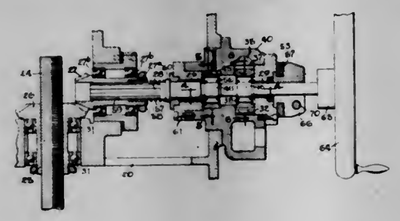


1. In a torsional vibration dampening device adapted to be disposed between a rotary driving member and a rotatable driven shaft member for coupling said members together in driving relation while dampening torsional vibrations in the shaft member, a hollow housing member adapted for connection at one end to said driving member and adapted at the other end to receive said shaft member therein in axially aligned relation, a first cam assembly disposed interiorly of said housing member at the forward end thereof, a second cam assembly disposed interiorly of said housing member at the rearward end thereof, each of said cam assemblies comprising an outer cam member secured to said housing member and an inner cam member adapted to be secured to said shaft member, the outer and inner cam members of each cam assembly being arranged for relative rotary movement therebetween, each of said outer and inner cam members including circumferentially spaced elongated cam slots therein, said slots in said cam members of each of said assemblies being disposed in confronting paired relation with a ball member movably disposed in each pair of said confronting slots, said ball member coacting in rolling engagement with the respective slots, to transfer the power from said driving member to said shaft member and to cause axial movement of the inner cam member away from the respective outer cam member, and resilient means disposed between said inner cam members to oppose said relative axial movement and relative rotary movement of said cam members of each cam assembly, said resilient means being operative to maintain said ball members in the respective slots in at least one rotary direction of said driving member.

3,022,680
INCREMENTAL FEED MECHANISM
Jan van Roojen, Rockford, Ill., assignor to The Ingersoll Milling Machine Co., Rockford, Ill., a corporation of Illinois
Filed July 18, 1960, Ser. No. 43,432
2 Claims. (Cl. 74—625)

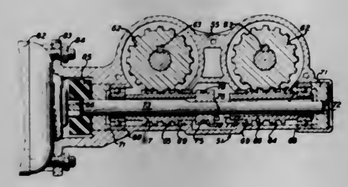
1. The combination of a shaft, means supporting said shaft for turning about a fixed axis and also for axial sliding, an actuating member reciprocable back and forth through forward and return strokes, means for converting the successive forward strokes of said member into

unidirectional step-by-step turning of said shaft comprising an instantly engageable one-way clutch encircling the shaft and comprising an annular series of cams and concentric inner and outer races between which said cams become wedged upon relative turning of the races in one direction, said inner race being cylindrical and rigid with the shaft and concentric with said axis, a similar instantly engageable unit forming a brake for holding said shaft against reverse turning during and after the return strokes of said member and having a cylindrical inner



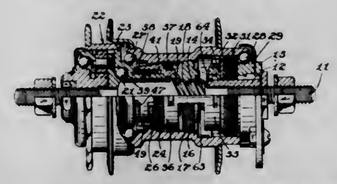
race rigid with said shaft and spaced axially from said first race, the surfaces of said shaft adjacent said inner races being smaller in diameter than the races, and manually operable means for shifting said shaft back and forth axially between two predetermined positions in one of which both of said races are located for gripping engagement with the respective cams, said reduced diameter surfaces on said shaft being disposed in the planes of the respective cams in the other of said positions whereby to disable the clutch and the brake and permit turning of said shaft independently of said reciprocable member.

3,022,681
SEAT ADJUSTER DRIVE UNIT
Ernest F. Cook, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 12, 1958, Ser. No. 734,474
4 Claims. (Cl. 74—665)



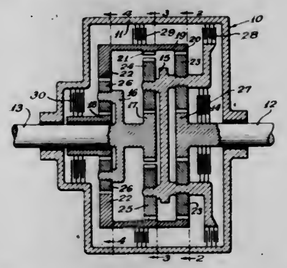
1. A motor drive unit adapted to be coupled to a four-way seat adjuster mechanism comprising a support frame having a longitudinally extending beam portion and upstanding appendages at each of its ends, a pair of rotatable screws journalled at each of their ends in said appendages, said screws lying in proximate parallel relationship to the longitudinal axis and upon opposite sides of said beam portion, nut means carried on said screws for movement therealong between said appendages, a motor mounted on one of said appendages, a shaft coupled to said motor and journalled within said one appendage with its longitudinal axis at a right angle to the longitudinal axis of said beam portion, said shaft carrying a pair of drive elements engaged with driven elements carried on the respective screws, and selectively positionable clutch means carried by said shaft between said drive elements coupling one or the other of the latter and thereby a respective one of said screws to said shaft at all times for rotation by said motor means.

3,022,682
SEMI-AUTOMATIC TWO-SPEED HUB AND COASTER BRAKE
Edwin Elliott Hood and Hollis K. Gleasman, Elmira, N.Y., assignors to The Bendix Corporation, Elmira Heights, N.Y., a corporation of Delaware
Filed July 29, 1960, Ser. No. 46,231
15 Claims. (Cl. 74—750)



1. A two-speed hub for bicycles including a plurality of screw shafts and complementing clutch nuts for drivingly engaging the hub, means for rotating the screw shafts in forward and backward directions at different speeds, indexing mechanisms for selectively blocking and allowing the driving engagement of one of said clutch nuts comprising a thimble member fixedly secured to one of the screw shafts and defining therewith ratchet teeth, a hollow member secured to said one clutch nut and movable therewith to spatially encompass portions of the thimble member, said hollow member having notch means formed thereon, an indexing member swiveled on the thimble member and adapted to interengage the hollow member and ratchet teeth, said indexing member comprising a pawl member biased into engagement with the ratchet teeth, a spring arm biased into engagement with the hollow member, and lug means adapted to be alternately brought into registry with the hollow member notch means upon backward rotation of said one screw shaft to thereby allow said one clutch nut upon subsequent forward rotation to entirely traverse said one screw shaft into driving engagement with the hub.

3,022,683
TRANSMISSION FOR VEHICLES
John P. Simon, Glen Ellyn, Ill., assignor to International Harvester Company, a corporation of New Jersey
Continuation of application Ser. No. 616,829, Oct. 18, 1956. This application Mar. 30, 1959, Ser. No. 803,050
14 Claims. (Cl. 74—759)



1. A transmission comprising a casing, an input shaft rotatably mounted in the casing and operatively connected to a source of power, an output shaft rotatably mounted in the casing in longitudinally aligned relation with the input shaft, a gear with external teeth fixedly secured on the input shaft, a gear with external teeth fixedly secured on the output shaft, a gear rotatably mounted on the output shaft, a first planetary gear set having a planet gear meshing with the gear on the input shaft, a second planetary gear set having a planet gear meshing with the gear fixedly secured on the output shaft,

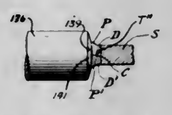
said first and second gear sets having a common carrier, a third planetary gear set meshing with the gear rotatably mounted on the output shaft, ring gears operatively connected to the planet gears of the first, second and third gear sets, means including a clutch operatively connected between the carrier of the first and second planetary gear sets and the input shaft, a first brake operative between the carrier and the casing, a second brake operative between the ring gears and the casing, and means comprising a brake operative between the gear rotatably mounted on the output shaft and the casing.

3,022,684
APPARATUS FOR SWAGING OR FLARING SAW TEETH

Joseph W. Spodobalski, Philadelphia, Pa., assignor to Morris, Wheeler & Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Original application July 1, 1953, Ser. No. 366,743, now Patent No. 2,899,848, dated Aug. 18, 1959, which is a continuation of application Ser. No. 364,528, June 29, 1953. Divided and this application Apr. 3, 1959, Ser. No. 804,017

2 Claims. (Cl. 76—48)



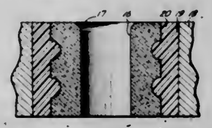
1. Apparatus for flaring teeth of a disk-type saw comprising means for rotatably supporting a saw including a bearing; and means for supporting and reciprocally moving a hammer in a plane substantially perpendicular to the axis of rotation of said support, the striking head of the hammer being in the form of a two-base spherical segment.

3,022,685
CERAMIC DRILL BUSHING

Robert H. Armacost, Los Angeles, Calif., assignor, by mesne assignments, to American Drill Bushing Co., a corporation of Maryland

Filed Apr. 23, 1958, Ser. No. 730,410

6 Claims. (Cl. 77—62)



1. A non-metallic drill bushing comprising a body having a substantially cylindrical form and a concentric drill passage of circular cross-section extending therethrough, the body having a bevelled edge formed therein at an inlet end of said passage, the walls respectively of said body and said drill passage having surfaces reduced to size by mechanical working, said body comprising a compacted double fired ceramic material consisting of about 95% by weight of aluminum oxide and about 5% by weight of a plurality of other metal oxides.

3,022,686
CUTTING TOOL

Benjamin W. Rowley, Davenport, Iowa, assignor, by mesne assignments, to Jancy Engineering Company, Davenport, Iowa, a corporation of Iowa

Filed Jan. 4, 1960, Ser. No. 170

2 Claims. (Cl. 77—73.5)

1. A cutting tool having a holder-receiving portion to mount the tool for normal rotation in one direction and further having a head coaxial with said portion on the axis of rotation, said head being primarily in the form of a cone on said axis and having a terminal pointed apex, said head having therein a single groove cutting the surface of the cone and lying generally parallel to an element of the cone, said groove having a semicylindrical surface formed about an axis generally parallel to said element and interiorly of the surface of the cone, said groove surface intersecting the cone surface at said element to provide a leading cutting edge along said element, said groove surface extending thence beneath said cutting edge and in a trailing direction as respects the normal



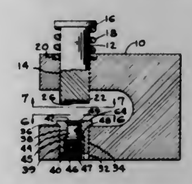
direction of rotation of the tool and curving thence toward the base of the cone and thence in a leading direction to a line paralleling said edge and diametrically opposite said edge as respects the axis of said groove surface, and said groove further having a flat surface tangent to said semicylindrical surface at said line and extending away from said line to cut the surface of the cone along a line spaced angularly from the cutting edge in a leading direction as respects the normal direction of rotation of the tool, and said groove opening at one end to the surface of the cone at the opposite side of the apex from said element and opening at its other end at the base of the cone.

3,022,687
METHOD OF RIVETING

Arthur J. Richards, 4240 Yorkshire, Detroit, Mich.

Original application Nov. 20, 1953, Ser. No. 393,393, now Patent No. 2,914,972, dated Dec. 1, 1959. Divided and this application Sept. 21, 1959, Ser. No. 841,074

2 Claims. (Cl. 78—46)



1. The method of forcing a rivet through unperforated sheet metal by providing a washer to underlie the metal and act as die for the rivet, the aperture of the washer being slightly larger than the shank of the rivet and peening the end of the rivet over the washer which comprises securing the rivet in a ram adapted for movement toward a die holder holding the washer, the aperture of the washer being in alignment with the shank of the rivet, forcing the rivet through the metal by movement of the rivet toward the washer and shearing a slug out of the metal, arresting the slug sheared from out of the metal by an anvil underlying the washer after the slug and end of the rivet have passed through the aperture in the washer, continuing the movement of the rivet with the anvil exerting pressure against the slug and forcing the slug against the end of the rivet to peen the end of the rivet over the washer all in one stroke.

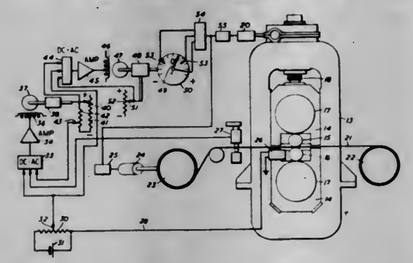
3,022,688
APPARATUS FOR CONTROLLING THICKNESS OF MATERIAL

Raymond Bernard Sims, Sheffield, England, assignor to Davy and United Engineering Company Limited

Filed Mar. 16, 1960, Ser. No. 15,470

Claims priority, application Great Britain Mar. 24, 1959

11 Claims. (Cl. 80—56)



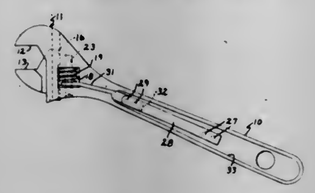
1. An automatic control system for controlling to a desired value the thickness of material issuing from a mill, comprising first measuring means and second measuring means, each for directly measuring independently the thickness of the material issuing from the mill, the first measuring means being situated at a point close to the mill gap and having a relatively short-term stability and the second measuring means being situated more remotely from the mill and having a relatively long-term stability, and means controlled jointly by the first and second measuring means for controlling the thickness of the material issuing from the mill to keep that thickness substantially at the desired value.

3,022,689
WORM-LOCKING MEANS FOR A SLIDABLE SIDE JAW WRENCH

Clarence L. McComb, P.O. Box 795, Sparks, Nev., assignor of fifty percent to Houston O. Bender, Birmingham, Ala.

Filed June 30, 1960, Ser. No. 39,885

2 Claims. (Cl. 81—165)



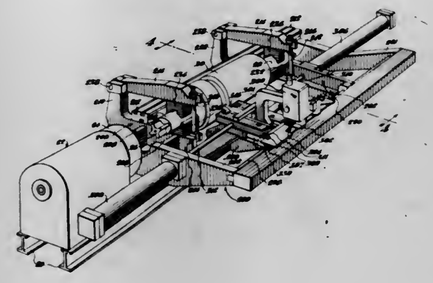
1. In a worm-locking means for a slidable side jaw wrench embodying a head having a fixed jaw with a handle formed integrally therewith, a movable jaw slidable in said head and having a rack thereon, there being a recess in said head adjacent said rack, and a worm mounted for rotation in said recess in driving engagement with said rack, said recess being of a length to permit axial movement of said worm relative to said head, the improvement which comprises spring means urging said worm and said movable jaw toward closed position, and an elongated latch attached to the handle of the wrench in position to be actuated independently of movement of said handle and disposed to move selectively into and out of said recess adjacent said worm to restrain movement of said worm and said movable jaw toward open position while said latch is within said recess and to release said worm and movable jaw for movement toward open position while said latch is out of said recess.

3,022,690
CONTOUR ROLL-TURNING LATHE

Jack N. Binns, 4886 Oaklawn Drive, Cincinnati 27, Ohio

Filed Mar. 25, 1957, Ser. No. 648,396

7 Claims. (Cl. 82—2)



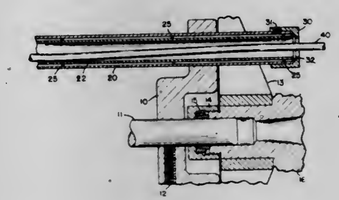
1. A roll lathe comprising a bed, a pair of transverse laterally spaced support members mounted relative to the bed, means on each of said members to rotatably support the necks of a roll to be turned, a headstock assembly secured to and carried by said bed, said assembly including a rotatable face plate, a drive shaft, means for imparting rotary motion to said shaft, a speed reducing planetary train means connecting one of the elements of said planetary train to said shaft, means for selectively placing the faceplate in direct driven relationship with the shaft, and other means for selectively placing the faceplate in driven relationship through that element and the remaining elements of said planetary train for rotating the faceplate in opposite direction to, at slower speed and higher torque than said shaft.

3,022,691
WIRE CASE CARRIER FOR A SCREW MACHINE

Robert A. Lee and Earl W. Brinkman, Rochester, N.Y., assignors to Davenport Machine Tool Company, Inc., Rochester, N.Y., a corporation of New York

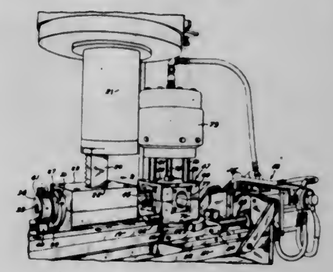
Filed Feb. 19, 1959, Ser. No. 794,361

2 Claims. (Cl. 82—38)



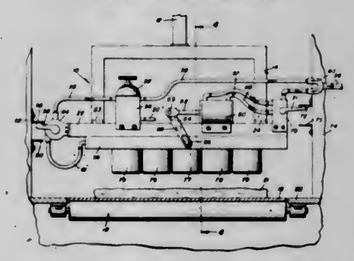
1. A wire case carrier for a screw machine, comprising an outer cylindrical tube, an inner cylindrical tube coaxially mounted in said outer tube and through which bar stock may be fed, said inner tube having a smaller outside diameter than the inside diameter of said outer tube to provide an air space therebetween, said inner tube having a plurality of axially-spaced peripheral grooves in it along its length so that it is of reduced thickness and outside diameter at spaced intervals intermediate its ends along its length, an elastic ring mounted in each of said grooves and interposed between said inner and outer tubes to support said inner tube within and from said outer tube, said inner tube being supported from said outer tube solely by said rings.

3,022,692
TUBE TRIMMING MACHINE
Frank C. Polanski, Kenosha, Wis., assignor to Ladish Co., Cudahy, Wis., a corporation of Wisconsin
Filed Feb. 27, 1958, Ser. No. 718,063
4 Claims. (Cl. 82—59)



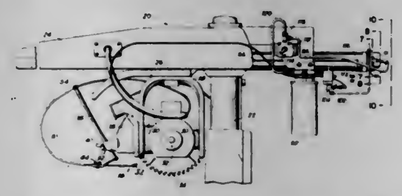
1. Tube trimming apparatus comprising supporting means including a die for embracing the exterior of a tube while permitting an end which is to be trimmed to project, a sleeve mounted for rotation with its axis of rotation in substantial alinement with the axis of said tube end, a spindle journaled eccentrically in said sleeve and having an end projecting toward the tube end to be trimmed, a trimmer fixed to said projecting end to be rotated by said spindle and adapted to be within and overlapped by said projecting tube end, means for rotating said sleeve, means for temporarily locking said spindle against rotation during rotation of said sleeve for a partial revolution so as to cause the trimmer when overlapped by said tube end to be moved outwardly by the eccentrically journaled spindle through the thickness of the metal of the tube, means for automatically releasing said spindle lock, and means for thereafter causing the spindle and trimmer to rotate with the sleeve while the latter moves the trimmer in a circular path around the interior of the tube to trim off the projecting end thereof.

3,022,693
PASTRY CUTTER WITH PNEUMATIC STRIPPER
Edward M. Voorhees, 601 N. Adelle Ave., De Land, Fla., assignor, by mesne assignments, of one-fourth to Edward M. Voorhees, De Land, Fla., one-fourth to Ignatius C. Capdeville, Gretna, La., one-fourth to Clarence M. Funk, Greensboro, N.C., and one-fourth to Lawrence L. Mullins, New Orleans, La.
Filed Apr. 17, 1957, Ser. No. 653,419
4 Claims. (Cl. 83—169)



4. A machine for making patty shells, said machine comprising an air and oil manifold, means to supply air and oil under pressure therein, a plurality of cutters carried by said manifold, means intercommunicating said cutters with said manifold to introduce air and oil thereinto for lubricating dough severed by the cutters, said cutters having strippers which are also lubricated by the air and oil passing into said cutters, and means for laterally shifting said cutters to place said cutters at different relative positions with respect to the uncut dough.

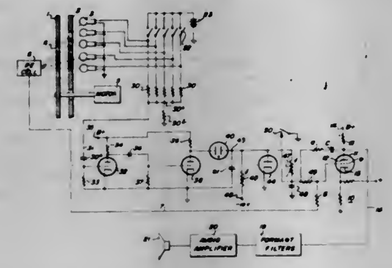
3,022,694
CYCLED JET COOLING MECHANISM
Oscar H. Nuss, Lancaster, Pa., assignor, by mesne assignments, to De Walt, Inc., a corporation of Delaware
Filed Aug. 13, 1958, Ser. No. 754,824
10 Claims. (Cl. 83—169)



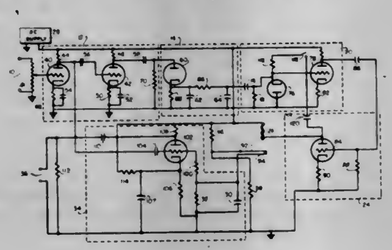
7. In combination, a power tool having a reciprocating carriage, a work-engaging element on said carriage, means to reciprocate said carriage, said means including a pneumatic cylinder having forward and reverse ports and further having an auxiliary port, a slide valve including a reciprocating plunger, a source of compressed air, conduit means from said source to said slide valve, means to actuate said reciprocating plunger in said slide valve, said means including a trip rod actuated by said reciprocating carriage, whereby said slide valve uncovers said forward and reverse ports in sequence to cycle said reciprocating carriage, one of said ports corresponding to a work stroke, a reservoir of liquid coolant, conduit means from said source of compressed air to said reservoir, whereby a constant pressure is maintained on said liquid coolant, a spray coolant nozzle positioned adjacent to said work-engaging element, a liquid control valve, conduit means from said reservoir to said liquid control valve, a throttle valve in said conduit means, conduit means from said liquid control valve to said nozzle, a T-junction, conduit means from said auxiliary discharge port to said junction, conduit means from said junction to said liquid control valve, and conduit means including a throttle valve from said junction to said nozzle, whereby when said plunger in said slide valve reciprocate to uncover said forward and reverse ports in sequence, said auxiliary port will be uncovered on the work stroke to supply compressed air to said junction, thereby supplying compressed air to said nozzle and also actuating said liquid control valve to supply coolant to said nozzle, and whereby a mist spray coolant is supplied to said work-engaging element only during the work stroke.

3,022,695
PERCUSSION CIRCUIT
Richard E. Williams, Box 556, Vienna, Va.
Filed Apr. 1, 1959, Ser. No. 803,420
8 Claims. (Cl. 84—1.18)

1. In a system for producing percussive effects in a photoelectric musical instrument of the type comprising an ensemble of key controlled electric light sources energizable selectively in response to actuation of said keys, photoelectric means for intercepting light from said light sources, a modulating device for modulating the light from each of said light sources according to a musical tone and a gain controllable audio amplifier and acoustic transducer system connected in cascade with said photoelectric cell, the combination of resistive matrix means for generating a pulse of predetermined character only in response to actuation of at least one of said keys, means normally maintaining said audio amplifier in substantially zero gain condition, and means responsive to said pulse of predetermined character for relatively rapidly increasing the gain of said amplifier and for thereafter decreasing the gain of said amplifier to substantially zero gain condition.



3,022,696
ELECTRICAL MUSICAL INSTRUMENTS
Richard H. Dorf, New York, N.Y., assignor to Kinsman Manufacturing Company, Inc., a corporation of New Hampshire
Filed Jan. 29, 1957, Ser. No. 636,905
1 Claim. (Cl. 84—1.26)



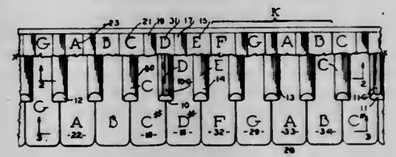
In an electrical musical instrument having musical tone signal producing means, the combination comprising: a first amplifier for said tone signals; means for coupling said first amplifier to said tone signal producing means; means for normally biasing said first amplifier below cut-off; means responsive to an actuating pulse for biasing said first amplifier above cut-off and, after said actuating pulse has terminated, for gradually returning the bias of said first amplifier to a value below cut-off; means for generating said actuating pulse comprising a second amplifier for said tone signals, means for coupling said second amplifier to said tone producing means, means for rectifying signals amplified by said second amplifier to produce a D.C. voltage proportional to the output of said second amplifier, means for sensing changes in the level of said D.C. voltage and for producing a voltage proportional to said changes, and means for amplifying positive changes so sensed to produce said actuating pulses; and said second amplifier adapted to operate below saturation with respect to a signal level in said musical tone signal producing means corresponding to the simultaneous presentation of a plurality of musical notes; whereby the presentation of any note whether played in a succession of notes or played in legato form increases the signal level to said second amplifier, creates said actuating pulse, and biases said first amplifier above cut-off.

3,022,697
ELECTROFORMED MOUTHPIPE AND MOUTHPIECE RECEIVER
Earle L. Kent and David Albert LeFevre, Elkhart, Ind., assignors to C. G. Conn Ltd., Elkhart, Ind., a corporation of Indiana
Filed Dec. 4, 1956, Ser. No. 626,245
2 Claims. (Cl. 84—398)



1. In a brass-wind musical instrument, a unitary electroformed mouthpipe and mouthpiece receiver adapted to support and position a mouthpiece and form a tone chamber with optimum acoustical properties adjacent the received end of the mouthpiece, said mouthpipe and mouthpiece receiver comprising a one-piece elongated tubular body of seamless and jointless construction including a mouthpipe portion and a mouthpiece receiver portion respectively tapering inwardly from opposite ends of said tubular body to a junction of lesser interior diameter than either end, said mouthpipe portion being relatively long and having an interior surface of relatively slight taper, and said mouthpiece receiver portion being relatively short and having a frusto-conical interior surface of greater taper than said mouthpiece portion for receiving and accurately positioning the mouthpiece with respect to said junction, said tubular body comprising an interior electroplating of corrosion resistant metal and an exterior electroplating containing at least a major proportion of copper, said platings being continuous and in mutual contact throughout the length of said tubular body, and said interior plating having a highly finished interior surface of accurate circular cross-section having a diameter at any portion thereof which has a predetermined value with minimum tolerance variation so that the spacing between the received end of the mouthpiece and said junction has a predetermined value with minimum tolerance variation.

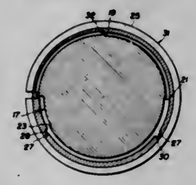
3,022,698
UNIFORM PIANO KEYBOARD
James W. Lucas, Santa Monica, Calif.
(1122 S. Robertson Blvd., Los Angeles 35, Calif.)
Filed Mar. 7, 1957, Ser. No. 644,603
7 Claims. (Cl. 84—423)



1. Means for converting a conventional piano keyboard to a uniform keyboard in which black and white keys are alternately disposed throughout the entire length thereof, comprising: a plurality of variously conformed over-keys being superposable over the normally exposed portions of the conventional keys of a conventional piano keyboard; one-half of said plurality of over-keys being conformed in the general manner of black conventional keys, the other one-half of said plurality of over-keys being conformed in the general manner of white conventional keys; one-half of said black over-keys being of greater depth and adapted to rest upon white conventional keys, the other one-half of said black over-keys being of lesser depth and adapted to rest upon and effective to depress black conventional keys; one-third of said plurality of white over-keys being of lesser depth and adapted to

rest upon and effective to depress black conventional keys, and two-thirds of said white over-keys being of greater depth and adapted to rest upon and effective to depress white conventional keys; adhesive means affixed to the bottom surfaces of said over-keys for removably attaching said over-keys in respective superposition to the upper surfaces of said conventional keys, and identification means defining longitudinal grooves in the upper surfaces of certain of said over-keys whereby the finger positions within a particular octave and relative to the entire uniform keyboard is readily determinable.

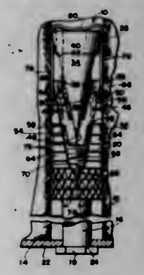
3,022,699
QUICK ACTING BOLT HAVING RADIALLY CONTRACTABLE THREAD THEREON
David Samiran, 2126 Fairhill Road, Suite 18, Cleveland 6, Ohio
Filed July 24, 1956, Ser. No. 599,858
3 Claims. (Cl. 85—1)



1. A quick acting bolt comprising, in combination, a body portion having an annular cam portion adjacent one end, said cam portion having a number of circumferentially arranged portions, the radii of said portions decreasing circumferentially with substantially radial shoulders therebetween, a contractable member having a threaded portion on its outer periphery and adapted to be mounted on the cam portion, said contractable member provided with a similar number of circumferentially arranged portions, the radii of said portions increasing circumferentially with substantially radial shoulders therebetween, said contractable member being normally biased to a size to frictionally engage a cooperating internally threaded member and the normal radii of said portions of said contractable member being larger than the corresponding portions of said cam portion by amounts permitting said contractable member to be contracted on said cam portion to have a maximum diameter less than the minimum diameter of the cooperating threaded member and for non-corresponding portions of said cam and said contractable member to engage when relatively rotated in the direction of advance of the threads to prevent contraction of said contractable member whereby one of the radial shoulders of the circumferentially arranged portions will contact one of the radial shoulders of the contractable member when rotated to move the body axially.

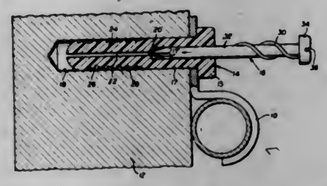
3,022,700
MINE ROOF BOLT ASSEMBLY WITH SEQUENTIAL MULTIPLE EXPANSION MEANS
Joseph B. Dempsey, Marietta, Ohio, assignor to Pattin Manufacturing Company, Inc., Marietta, Ohio, a corporation of Ohio
Filed Mar. 14, 1958, Ser. No. 721,540
5 Claims. (Cl. 85—2.4)

1. In a mine roof bolt assembly, the combination comprising: an outer expansible anchoring shell unit having two diametrically-disposed parts, each shaped as a longitudinally-tapering segment of a hollow cylinder and having longitudinal side edges, each opposed to the corresponding side edge of the other part, each corresponding pair of opposed side edges being divergent toward one end of said outer shell unit to form a generally V-shaped slot between said parts; an inner expansible anchoring shell unit having two diametrically-disposed parts disposed between the opposed side edges of said outer shell unit parts and having planar surfaces complementary thereto and said planar surfaces contracting said opposed side edges adjacent the large end of said V-shaped slot in mutual wedging engagement therewith and extending beyond the large end of said V-shaped slot for effective expansion of said outer shell unit upon relative longitudinal movement between said units in one direction, each of said inner unit parts having longitudinal side edges, each opposed to the corresponding side edge of the other part, each corresponding pair of the opposed edges of said inner shell unit being divergent toward one end of said



inner shell unit to form a generally V-shaped slot between said inner shell unit parts; and wedge means disposed between the opposed side edges of said inner shell unit parts and having planar surfaces complementary thereto and in mutual wedging engagement therewith and extending beyond the large end of said V-shaped slot of said inner shell parts for effecting expansion of said inner shell unit upon relative longitudinal movement between the latter and said wedge means in one direction, and yielding interlocking means releasably securing said inner shell to said outer shell whereby said relative movement and expansion of said inner shell can take place before said relative longitudinal movement between said inner and outer shells.

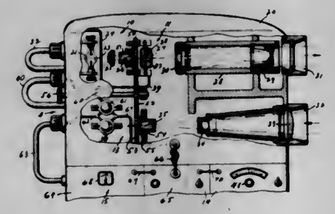
3,022,701
PLASTIC ANCHOR-TYPE FASTENER AND DRIVER MEANS FOR EXPANDING SAME
Robert A. Potruch, Miami Beach, Fla., assignor, by mesne assignments, to U.S. Expansion Bolt Company, York, Pa.
Filed Aug. 10, 1959, Ser. No. 832,759
4 Claims. (Cl. 85—2.4)



1. A re-usable anchor-type fastener, comprising the combination of an expandable insert molded of synthetic resin having the general properties of nylon and hammer-driven means to expand said insert, said insert having a longitudinal hole formed therein at one end to receive said hammer-driven means, the opposite end of said insert being longitudinally slotted to form a plurality of outwardly flexible portions, said hammer-driven means comprising a headed nail having a substantially

cylindrical shank with a pointed tip adapted for wedging entry between said outwardly flexible portions to force them radially outwardly upon being driven through said longitudinal hole and into said slotted end of the insert, said nail having smooth-crested screw-threads, wherein said smooth crest joins the thread faces by rounded edges, said screw threads being formed on said shank adjacent its head and terminating approximately midway of the length of the shank to engage the wall of the longitudinal hole in the insert without reaming action as the same is forced into said insert by a translatory movement and to form transitory threads therein complementary to said nail threads, said head being also formed with means adapted to be engaged by a tool to rotate said nail to cause retrograde movement thereof and removal from the insert.

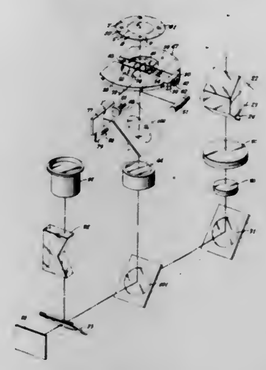
3,022,702
MEASURING DEVICES AND THE LIKE USING CYCLICALLY MODULATED SIGNALS
Hugo Pocher, Berlin-Friedenau, Germany, assignor to Continental Elektroindustrie A.G., Askania-Werke, Berlin-Mariendorf, Germany, a corporation of Germany
Filed Dec. 16, 1958, Ser. No. 780,899
11 Claims. (Cl. 88—1)



1. Apparatus for measuring distances, comprising: means for generating a beam of light; a light beam modulating and splitting system operable by a cyclic, electric voltage for deriving from said beam identically cyclically modulated light beams, one of major and the other of minor intensity; an optical system for transmitting the modulated light beam of major intensity to a light reflector disposed at the end of the distance to be measured; an optical system for receiving the light beam, returning with reduced intensity from the reflector; a photoelectrically responsive device for deriving a cyclic, electric voltage from the received light beam; a second photoelectrically responsive device having a voltage output separate from the first, for deriving a cyclic, electric voltage from the modulated light beam of minor intensity for continuous comparison of the phases of the derived voltages; and power supply means feeding operating electric power symmetrically to both of said photoelectrically responsive devices so that any variations of photoelectrical response due to thermal and other effects on the power supply means occur similarly in both photoelectrically sensitive devices, thereby preventing such variations from distorting said comparison.

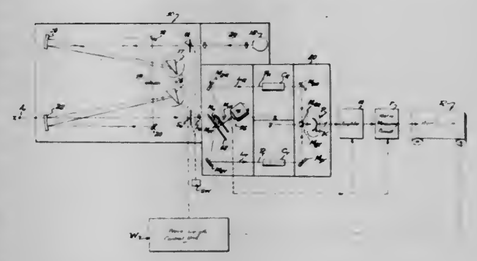
3,022,703
OPTICAL NAVIGATIONAL DEVICE
Maurice R. Pierce, 2237 Panorama Terrace, Los Angeles, Calif.
Filed Jan. 17, 1956, Ser. No. 559,678
5 Claims. (Cl. 88—2.7)

1. An optical navigational device, useful in celestial navigation, for producing a composite optical image of an assumed position and an optical image of a celestial body upon which observation is made comprising means forming a first optical path, means for forming an optical image of the basic reference markings for an assumed position and introducing said optical image into said first optical path, means forming a second optical path, means adjustably positioned in accordance with the altitude of a selected celestial body with respect to the assumed position to introduce into said second optical path



an optical image of said celestial body corresponding to its observed position, means forming a third optical path common to said first and second optical paths and means coupling said first and second optical paths to said common optical path so that the optical images traveling in said first and said second optical paths are united to produce a composite image of said celestial body and said basic reference markings for an assumed position.

3,022,704
SPECTROPHOTOMETER
Henry H. Cary, Alhambra, Calif., assignor to Applied Physics Corporation, Monrovia, Calif., a corporation of California
Filed Feb. 23, 1954, Ser. No. 411,650
38 Claims. (Cl. 88—14)



35. In a photometer,

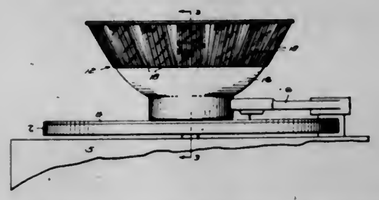
means defining a sample region,

means for causing radiation to emerge from said sample region as an uncollimated beam along diverging paths,

a photosensitive element, and

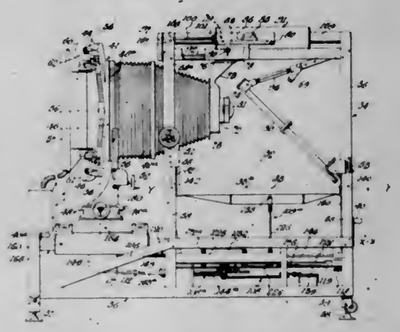
an achromatic focusing means for directing radiation that emerges from said sample region along different sets of parallel paths to common focal points, said photosensitive element being fixedly mounted at said focal points.

3,022,705
AMUSEMENT DEVICE FOR VIEWING ANIMATED PICTURES WITH SOUND ACCOMPANIMENT
D'Arle G. Bash, 1041 Venetia Ave., Coral Gables, Fla.
Filed Sept. 8, 1955, Ser. No. 533,218
2 Claims. (Cl. 88—16.2)



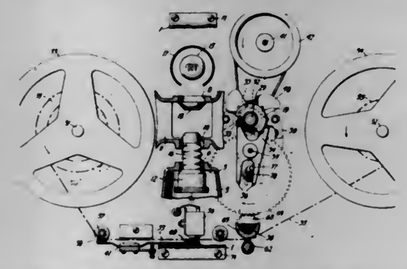
1. An apparatus for use in a sound reproducing machine comprising, a rotated turntable holding a sound record that is rotated therewith, the record having a circumferential succession of pictures on its upper surface, a support mounted above the record and coupled thereto in a manner to cause it to be rotated in company with the record, said support being provided with a circumferential band of inclined flat reflectors arranged inwardly of the pictures, the reflectors converging downwardly, each of said reflectors being provided on its outer surface with a plurality of spaced vertical transparent ribs, said ribs being each substantially rectangular in cross-sectional shape and being operative to obscure images of the pictures other than that which is in radial alignment with a panel under observation.

3,022,706
PORTABLE PHOTOGRAMMETRIC RECTIFIER
Gilard Kargl, San Antonio, Tex., assignor to the United States of America as represented by the Secretary of the Army
Filed June 18, 1958, Ser. No. 742,971
7 Claims. (Cl. 88—24)



1. A photogrammetric rectifier comprising a lens system having objective lens means and reflecting means cooperating with said lens system, easel means for receiving an image produced by said lens system and reflected by said reflecting means, a horizontally disposed scissor inversor means disposed below said easel and connected to said lens means and said easel means, and negative support means including carriage means operatively interconnecting said negative support means and said inversor means whereby said negative, object lens and easel planes intersect in a straight line, an image magnification adjusting mechanism, reciprocable lens carriage means cooperatively interconnecting said objective lens means and said image magnification adjusting mechanism, a lens focal length compensation mechanism, interlinking proportioning linkage means operatively interconnecting said lens focal length compensation means to said image magnification adjusting mechanism, and a tilt compensation mechanism interconnecting said inversor means and said easel means for correction of aerial negatives to accurately produce rectified aerial photographs.

3,022,707
DEVICE FOR PROJECTING STILL PICTURE FILM WITH SYNCHRONIZED SOUND
Stephen A. Platt, 1100 Fulton St., Grand Haven, Mich.
Filed Jan. 20, 1956, Ser. No. 560,384
1 Claim. (Cl. 88—28)

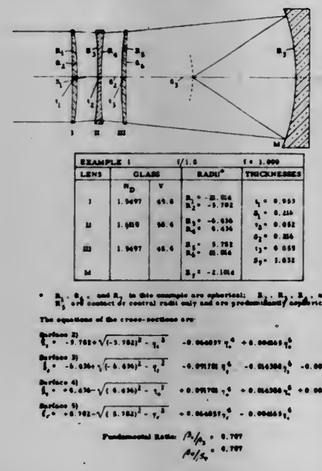


A still picture film projector for attachment to a tape recorder, the latter having a panel on which are located the tape reels, sound head and a tape-driving capstan, said projector including a frame adapted to be positioned opposite to said panel and spaced therefrom and having mounted on said frame an optical projecting system for the film and including a rotary element for engaging and shifting the film, a constantly rotating motor, a slip clutch interconnecting said motor and element, an escapement wheel and pawl with the wheel connected to said element to lock it against rotation except when the pawl is moved to permit the wheel to escape momentarily to effect an intermittent advance of said still pictures, a rotary cam for moving said pawl, and means for connecting said cam to said capstan, of the tape recorder, the recorder having a tape pressure roller for pressing the tape against said capstan, the roller being elastically flexible, and said connecting means comprising a shaft connected to said cam at one end and with its other end toothed and adapted to press on said pressure roller.

3,022,708
CORRECTING OPTICAL SYSTEM
James G. Baker, 7 Grove St., Winchester, Mass.
Filed Dec. 16, 1957, Ser. No. 702,952
20 Claims. (Cl. 88—57)

1. An optical system corrected for longitudinal and lateral chromatic aberration, spherical aberration, coma, astigmatism, and the chromatic variations of spherical aberration, coma and astigmatism, and for oblique spherical aberration in tangential and radial directions, on a curved field, said system comprising an array of at least three aspheric correcting lens components disposed about symmetrically around an optical center substantially at the real stop of the system, which optical center lies approximately at the center of curvature of a primary mirror having predominantly spherical shape, said correcting components presenting at least two distinct aspheric surfaces on each side of a central plane of symmetry, the conditions of symmetry being closely met, said aspheric surfaces in pairs being separated by an axial distance not exceeding 0.3 of the equivalent focal length of the system as a whole, said components having individual

axial thicknesses not exceeding 0.15 of the focal length, said correcting components as a group having a total axial extent not exceeding 0.7 of the focal length of the entire system, said correcting group having at least two kinds of glass in terms of a difference in V-value, said difference lying between 3 and 25, and the system having a curved field of approximately spherical form, the radius of curvature at any given part of the field lying within



EXAMPLE 1			f/1.0	f = 1.000
LENS	GLASS		RADII*	THICKNESSES
	n_D	V		
I	1.5497	45.8	R_1 = -2.154 R_2 = -5.702	t_1 = 0.933 S_1 = 0.233
II	1.6180	36.6	R_3 = -0.536 R_4 = 0.436	t_2 = 0.052 S_2 = 0.186
III	1.5497	45.8	R_5 = 0.702 R_6 = 0.854	t_3 = 0.053 S_3 = 1.032
M			R_7 = -2.1054	

* R_1, R_2, and R_3 in this example are spherical; R_4, R_5, R_6, and R_7 are conic of central radii only and are predominantly aspheric

The equations of the cross-sections are:

Surface 2) $Y_2 = -5.702 + \sqrt{(-5.702)^2 - Y_2^2}$ $-0.044037\,Y_2^4 + 0.000463\,Y_2^6$

Surface 3) $Y_3 = -0.436 + \sqrt{(-0.436)^2 - Y_3^2}$ $-0.091722\,Y_3^4 + 0.016366\,Y_3^6 - 0.000684\,Y_3^8$

Surface 4) $Y_4 = +0.436 - \sqrt{(+0.436)^2 - Y_4^2}$ $+0.091722\,Y_4^4 + 0.016366\,Y_4^6 + 0.000684\,Y_4^8$

Surface 5) $Y_5 = +0.702 - \sqrt{(+0.702)^2 - Y_5^2}$ $+0.044037\,Y_5^4 - 0.000463\,Y_5^6$

Fundamental Ratio: $P_1/f_1 = 0.707$, $P_2/f_2 = 0.707$

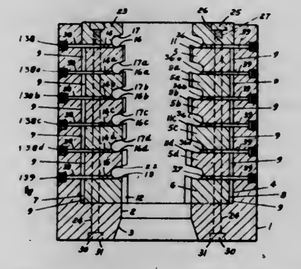
10 percent of the equivalent focal length of the system, said pairs of aspheric surfaces on each side of the central plane of symmetry having numerical values and ratios for the ratio of the coefficients of the 4th degree aspheric terms defining their cross-sections in the meridional plane lying in the range from 0.25 to 1.000, where the coefficient taken in the numerator for each pair is for the aspheric surface farther from the central plane of symmetry.

3,022,709
NOVELTY REFLECTOR DEVICE FOR SELF-VIEWING OF A PERSON BY REFLECTION
Lee M. Duggan, 2019 Princeton Place, Richmond Heights, Mo.
Filed Nov. 20, 1958, Ser. No. 775,303
3 Claims. (Cl. 88—84)



1. A novelty reflector device for self-viewing of a person by reflection, comprising, a support, multiple reflecting units arranged in a contiguous series to present successive optical apertures horizontally along the reflector device, the apertures being arranged in a substantially contiguous plane horizontally along the front of the reflector device, each unit having plane mirrors arranged in relative right-angular relation, the back apexes of the units being arranged vertically on said support, said units being constructed to multiply reflect light emanating from the person close to and in front of the reflector device and substantially at right angles to the apexes and impinging on each of the units to be multiply reflected at varying angles back to the person, the dimensions of each of the units and of the apertures thereof being sufficient so that only the part of the person facing and close to the reflector will be multiply reflected by the several units to cause a series of clear picture images of the person only to appear horizontally side by side along the front of the reflector device.

3,022,710
BROACH ASSEMBLY
Stanley J. Kopec, 597 Randolph St., Northville, Mich.
Continuation of application Ser. No. 394,407, Nov. 25, 1953. This application Nov. 1, 1956, Ser. No. 619,874
6 Claims. (Cl. 29—95.1)



1. A broach assembly for cutting teeth on a generally cylindrical blank comprising two axially aligned annular broach rings having helical cutting teeth on the inner sides thereof, the teeth on one of said ring rough cutting and the teeth on the other said ring finish cutting, and means to guide a blank adapted to be machined through said broach rings, said means comprising a broach ring having blunt edge teeth thereon guiding said blank through said rings in a helical path, said cutting teeth each having cutting edges on the sides and tips thereof, said cutting edges on one stage rough cutting the sides and tips of said teeth being formed and said other ring finish cutting said sides and tips of said teeth.

3,022,711
GARMENT MARKING MACHINE
Philip N. Braun, 237 Robineau Road, Syracuse, N.Y.
Filed Jan. 30, 1961, Ser. No. 85,743
3 Claims. (Cl. 93—88)



1. A machine for affixing identification indicia to garments, or the like, including a tag affixing station, means for affixing a tag presented at said station to a garment juxtaposed with said tag at said station, means for feeding a tape strip having a plurality of tag forming portions toward said station, said means including a guide track, a feed pusher mounted for movement in said track, means normally urging said pusher along said track to feed said tag forming portions on said tape to said station, a stop positioned adjacent said station to halt the feed of said tape with a tag forming portion positioned at said station, means for affixing said tag forming portion to a garment and severing said tag forming portion from said tape, first latch means operable to latch said pusher in its rearwardmost position in said guide track, means operable to release said first latch means upon insertion of said tape strip in said track, second latch means operable to halt feed movement of said pusher intermediate the ends of said track, and means operable to simultaneously render the tag severing means inoperable and release said second latch means.

3,022,712
SHOCK ABSORBING STRUCTURE

Elwin F. Cousino, Los Angeles, Calif., and Rollen E. Brown, Englewood, Colo., assignors to Southern Chemicals, Incorporated, a corporation of Louisiana

Continuation of application Ser. No. 317,338, Oct. 28, 1952. This application Jan. 3, 1957, Ser. No. 632,377
5 Claims. (Cl. 94—7)



1. A shock absorbing structure for absorbing the kinetic energy of a body coming into violent contact therewith, said structure comprising: a membrane at least partially defining an enclosed space, and a mass of tacky elastomeric particles in said space, said particles being bound together only by the tackiness at their external surfaces, this tackiness providing a yielding bond between adjacent particles for controlling the resiliency of said structure by lengthening the time required for said structure to recover its shape after having been deformed by the impact of said body thereagainst, the individual particles because of their resiliency tending to resume their original form and thereby slowly overcoming adhesion to neighboring particles, whereby said structure may slowly and at least partially recover its shape without causing said body to rebound.

3,022,713
PRESTRESSED CONCRETE STRUCTURES

Bengt F. Friberg, 915 Olive, St. Louis, Mo.

Filed Nov. 26, 1954, Ser. No. 471,431
8 Claims. (Cl. 94—24)

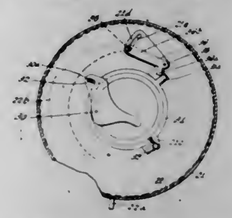


1. The method of constructing a prestressed concrete structure comprising the steps of placing two headers at locations corresponding to the ends of the structure, laying multiwire prestressing cables to extend from one header to the other, the ends of the cables extending through openings in the headers, then, starting at one header, laying a portion of the length of the wires of each cable on a mandrel and forming a sheath around said portion, pouring concrete around the sheathed portions of the cables, withdrawing the mandrels before the concrete has set and advancing them in the direction toward the other header, laying a further portion of the length of the wires of each cable on the respective mandrel and continuing with the formation of the sheath around said further portion, pouring concrete around the further sheathed portions of the cables, again withdrawing the mandrels before the concrete has set and advancing them, repeating the sheath-forming, pouring and mandrel-advancing steps up to said other header, whereby a sheath is formed around each cable throughout its exposed length between the headers, whereby the mandrels are completely withdrawn from within the sheathed cables, and whereby the space between the headers is filled with concrete, the sheathed cables being embedded in the concrete, and then tensioning the cables and anchoring their ends to the headers.

3,022,714
PHOTOGRAPHIC CAMERA

Waldemar T. Reutschler, Calmbach, Enz, Germany, assignor to Alfred Gauthier, G.m.b.H., Calmbach, Enz, Germany, a corporation of Germany

Filed Sept. 14, 1959, Ser. No. 839,819
Claims priority, application Germany Sept. 27, 1958
9 Claims. (Cl. 95—10)

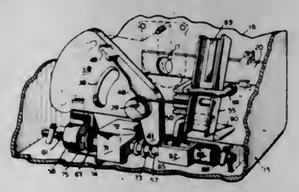


1. In a photographic camera, in combination, a shutter speed setting device; a diaphragm setting device; a single exposure value setting member having a relatively extensive range of movement, said range comprising an extensive daylight exposure portion and an extensive flash exposure portion, said portions being arranged successively one after the other in the said range without overlapping and having distinguishing indicia associated with them, designating their use; means coupling the single setting member to the speed setting device to effect a control over the shutter speed throughout both the daylight and flash exposure portions of the said range of movement; and means coupling the single setting member to the diaphragm setting device to effect a control of the diaphragm throughout both the daylight and flash exposure portions of the said range of movement, said coupling means and setting devices effecting a uniform gradation of exposure values throughout the said daylight and flash exposure portions of the said range.

3,022,715
CAMERA SHUTTER MECHANISM

Zoltan Takats, Vestal, and Steven Ondrusek, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Aug. 5, 1958, Ser. No. 753,299
6 Claims. (Cl. 95—62)

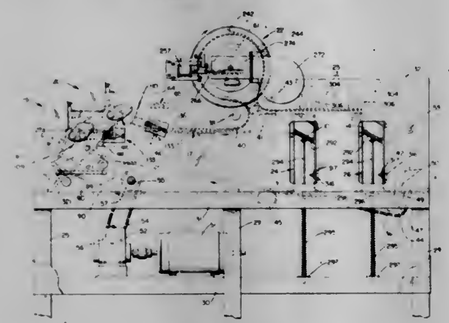


1. In a photographic camera having a film winding spindle, a shutter comprising a base plate having an aperture opening, a pair of overlapping, pendulous shutter leaves covering said opening, an actuator arm rotatable over a pivot attached to said plate, said arm having a pin extending into slots in said leaves whereby reciprocating movement of said arm causes separation and closure of said leaves to effect a photographic exposure, means for effecting said reciprocating movement including spring-biased master member swingable over a stud in said plate and tension mechanism therefor, said master member having a toe portion and cam grooves cut in the body thereof, said grooves accommodating a cam follower pin attached to said arm, a control bar rotatably supported in the direction parallel to said plate, master member tensioning means slidable upon said bar for engaging said toe portion and means actuated upon rotation of said spindle for engaging said tensioning means, and latch means secured to said bar and engaging a cutout in said master member for holding said member in tensioned position, a manually operable shutter release lever adapted to rotate said bar for disengaging said latch means whereby the constraining action of the cam grooves of the master member on said cam follower pin effects reciprocating movement of said arm to open and close said shutter leaves, and stop means slidable on said bar preventing operation of said lever after release of said master member.

3,022,716
PHOTOPRINTING APPARATUS

Edwin K. Smith, Jr., Tarrytown, N.Y., John D. Alexander, Hawthorne, N.J., and Ralph Marks, New York, N.Y., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Filed May 1, 1957, Ser. No. 656,316
27 Claims. (Cl. 95—77.5)



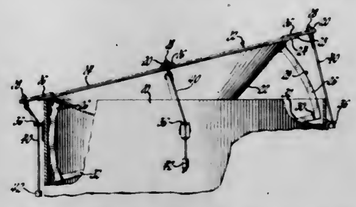
1. A photoprinting machine for printing a set of duplicate card-like members having at least one sensitized portion from a set of original card-like members having a similarly located original printed portion, comprising a driven conveyor having a series of member-receiving pockets thereon, means for driving the conveyor, means for depositing a first member from one set in each pocket, means for depositing a second member from the other set in each pocket in superimposed relation to the first member, means for guiding the edges of said superimposed members as they travel with the conveyor to retain them generally in the plane of the conveyor and against endwise movement, and a photoprinter having a light source and arranged to be traversed by the conveyor so that the members in the pockets of the conveyor are sequentially exposed to the light source to print the duplicate members.

3,022,717
CLOSURES FOR UPRIGHT PIPES OR STACKS

William W. Webster, Lockport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 8, 1958, Ser. No. 754,053
3 Claims. (Cl. 98—59)

1. A closure in combination with the upper end of a vertical ventilation duct, said closure comprising an impervious member having a deflecting surface and a peripheral flange, said flange being arranged to seat on the said end of said duct with the said surface extending into said duct, multiple guiding means attached to said member within the confines of said flange with their upper ends in a normally horizontal plane, and said guiding means presenting curved contours each arcuately extending in a normally vertical plane and bulging outwardly from said impervious member and toward and

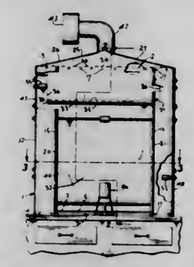


clearing the interior wall of said duct for loose guidance by said wall during vertical movement of said closure with relation to said duct.

3,022,718
LABORATORY FUME HOOD

Jerome B. Thompson, Prairie Village, Kans. (Rte. 3, Box 231, Cumberland, Md.)

Filed May 11, 1960, Ser. No. 28,393
5 Claims. (Cl. 98—115)



1. In a fume hood having a front wall, rear wall, and oppositely disposed side walls and a top wall forming a hollow chamber, said rear wall having a bottom edge; means in said front wall forming an access opening into said chamber, means forming an exhaust opening into said chamber, a baffle between the access and exhaust openings said baffle being of flexible sheet material and having top and bottom edges, means disposed on the respective side walls and inside of said chamber for supporting said baffle in a curved condition and adapted to permit selective positioning of said baffle top and bottom edges, the baffle top edge being disposed close to said top wall and the baffle bottom edge being disposed close to the bottom edge of said rear wall, said baffle top and bottom edges and said chamber defining variable top and bottom openings for the passage of air and fumes toward the exhaust opening, the size of said top and bottom openings being respectively determined by the positions of said top and bottom edges with respect to said chamber.

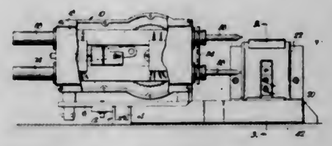
3,022,719
CAN PUNCHING AND COFFEE BREWING APPARATUS

Wilbur C. McNeely, Hickman Mills, Mo., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri

Filed June 5, 1958, Ser. No. 740,013
13 Claims. (Cl. 99—289)

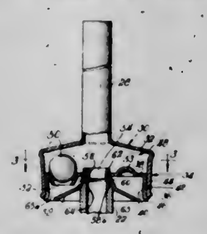
1. In apparatus for the infusion brewing of coffee and analogous liquid beverages by the passage of water under pressure into and out of a disposable, initially imperfo-

rate container through a quantity of beverage forming material packaged within the container, a pair of opposed relatively shiftable assemblies movable relatively toward and away from each other between a standby relationship in which the assemblies are disposed for receiving therebetween a container of the kind hereinbefore mentioned and an operative relationship in which the assemblies oppositely engage said container; power means operably coupled with one of the assemblies for shifting the latter relatively between said standby and operative relationships; a pair of elongated, parallel, tubular, laterally perforate, container-piercing elements each having an open end and a closed, pointed, end, both of said piercing elements being mounted on the same one of said assemblies and being adapted for piercing the container and entering the latter from only that direction proximate said one assembly as the assemblies are relatively shifted from said standby to said operative relationship thereof, one only of said pair of elements including passage means therein coupling said open end thereof with the lateral



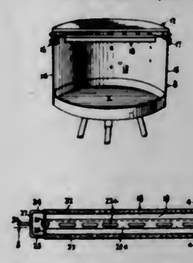
perforations thereof for providing only an inlet coupling to said container within the latter when the assemblies are in said operative relationship thereof, the other only of said pair of elements including passage means therein coupling said open end thereof with the lateral perforations thereof for providing only an outlet coupling to said container within the latter when the assemblies are in said operative relationship thereof; means for providing fluid-tight seals between the container and each of said elements when the assemblies are in said operative relationship thereof; means coupled with said open end of said one element for introducing water under pressure to said passage means of said one element when the assemblies are in said operative relationship thereof; means coupled with said open end of said other element for receiving infused beverage from said passage means of said other element when the assemblies are in said operative relationship thereof; structure for supporting a plurality of said containers; and means for advancing said containers successively to a position between the assemblies.

3,022,720
PUMP FOR COFFEE MAKER
Leo Malz, Chicago, and Alfred E. Schwaneke, Northbrook, Ill., assignors to Dormeyer Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 31, 1955, Ser. No. 498,289
7 Claims. (Cl. 99—310)



1. In a percolator having a container for liquids, a discharge tube and a perforate material holding basket, and a vaporizing well, a valve cage disposed at one end of said tube, said valve cage having a valve cover, a valve wall spaced from said cover, a plurality of countersunk conical inlet ports formed in said wall and a plurality of balls adapted to removably seat in said port, said wall and cover having central apertures adapted to provide a passageway from said well through said tube, a sleeve integrally formed with said cover and having an inward taper and flared outwardly at the lower edge thereof, a depending annular flange formed integrally on said wall having inward taper complementary with the taper on said sleeve and fitting snugly in said sleeve, and having an outwardly flared edge complementary with the edge on said sleeve, said taper portions and said edge portions on said sleeve and flange forming a double-interlock whereby said wall is securely retained in said cage, a substantially conical flow shield, a collar at substantially the apex of said flow shield adapted to be retained within the central aperture in said wall having an annular shoulder formed at the base of said collar abutting said wall, a flared edge on said collar, said shoulder and last mentioned flared edge being adapted to lock said shield axially to said wall, and an upper contoured portion beneath said shoulder on said shield adapted to seat snugly on said well, said shield having its lower edge disposed substantially in the same plane as the edges of said sleeve portion and depending flange and spaced therefrom to provide an annular channel therebetween adapted to direct the flow of fluid into said inlet ports.

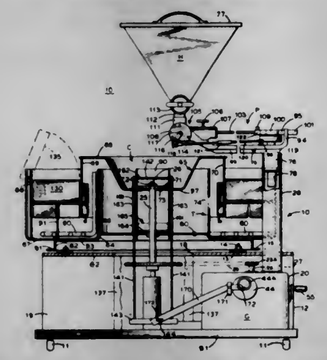
3,022,721
BASTING DISPENSER FOR COOKING
Hermann S. Vath, P.O. Box 686, Mountain View, Calif.
Filed Feb. 9, 1959, Ser. No. 791,921
5 Claims. (Cl. 99—345)



4. For use with a barbecue having a hood with a back wall ending in spaced front edges, a basting dispenser, means mounting said dispenser on said front edges, said basting dispenser comprising a V-shaped trough closed at both ends and having a plurality of holes spaced in the bottom thereof, a bar running from end to end of said trough, said bar having a plurality of screw threaded holes therein spaced to coincide with the holes in the bottom of the trough, and a screw threaded, needle-pointed member in each of said screw threaded holes for regulating the flow of basting through the holes in said trough, said members having thumb screw heads for turning the same.

5. In combination with a barbecue of the character described having a fuel pan with a hood over a portion of said fuel pan, said hood being supported on a wall extending from said fuel pan to said hood, a trough for dispensing a liquid basting over meat being cooked in said barbecue, means for adjustably dispensing basting from said trough, means adjustably mounting said trough on said wall, said last mentioned means including a pair of clamps, each having a slot therein mounted over respective front edges of said wall, a set screw on said clamps fixing said clamps in vertically adjustable positions on said wall, means on said clamps supporting a frame therebetween, said frame having spaced longitudinal rods engaging opposite sides of said trough and slidably support the same thereon, means pivotally mounting one end of said frame on one of said clamps and means detachably supporting the other end of said frame on the other of said clamps.

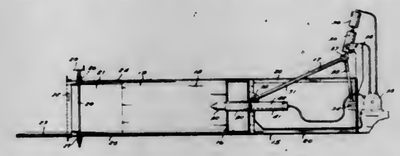
3,022,722
AUTOMATIC COOKING APPARATUS
John Arvan, Port Chester, N.Y., assignor to Luk-O-Ma Corporation, Port Chester, N.Y., a corporation
Filed Mar. 7, 1960, Ser. No. 13,104
14 Claims. (Cl. 99—354)



1. Cooking apparatus comprising, in combination, an annular tank arranged to contain cooking oil; heating means for the oil; a carrier rotatable about a vertical axis substantially coincident with that of said tank and having an annular skirt depending into said tank adjacent the inner annular wall of the latter; a plurality of partition means each slidably mounted on said skirt for movement vertically thereof in circumferentially adjacent relation; each partition means including a pair of circumferentially spaced walls extending transversely between the inner and outer circumferential walls of said tank; driving means for rotating said carrier to move said partition means around said tank; a charging station arranged at a selected position circumferentially of said tank to charge uncooked food items into the latter at such position for movement circumferentially of said tank by said partition means; an ejection station arranged circumferentially adjacent said charging station for removing cooked food items from said tank; said ejection station being in advance of said charging station in the direction of movement of said partition means; a cover hinged to the upper edge of one wall of each partition means for movement between an open position and a closed position extending substantially horizontally toward the other wall thereof; means operable to conjointly elevate each partition means and open the cover thereof as the partition means is advanced to said ejection station; and means operable to conjointly lower each partition means below the surface of the cooking oil and close the cover thereof as the partition means reaches a pre-selected position beyond said charging station to immerse the food items therein completely in the cooking oil.

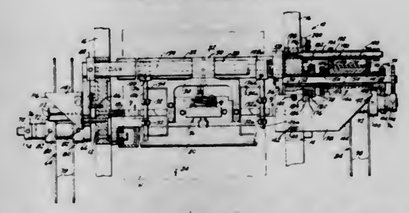
3,022,723
HAY BALER
William E. Templeton, Lexington, Ohio
Filed Mar. 21, 1960, Ser. No. 16,414
2 Claims. (Cl. 100—98)

1. A machine for baling hay and similar material, comprising a trough including side and bottom walls, a compression ram in said trough, first hydraulic drive means connected thereto for the reciprocative movement thereof, a core plunger carried by said ram, said core plunger movable in the path of movement of said ram and having a first position extended beyond said ram and a second position retracted with respect to said ram, a second hydraulic drive means connected to said core plunger for the reciprocative movement thereof, means coordinating the core drive means and said ram drive means causing said core plunger to be retracted during the re-



tractive movement of the ram and to protrude beyond the forward face of the ram during the forward movement thereof, a single hydraulic power source operably connected to said first drive means and to said second drive means, said first drive means including a mechanical linkage contrived to decrease the speed and increase the power of said ram as it moves from the rearward position to the forward position, whereby said plunger will form an opening in the hay being baled during the reciprocative movement of the ram.

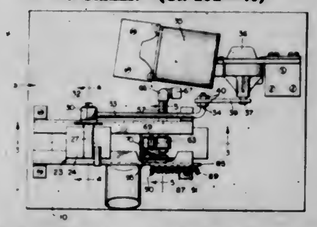
3,022,724
MARKING APPARATUS
Francis C. Worth, Ridgewood, N.Y., assignor to Adolph Gottscho, Inc., Hillside, N.J., a corporation of New York
Filed Mar. 21, 1960, Ser. No. 16,430
13 Claims. (Cl. 101—27)



1. In a marking apparatus for applying markings to a surface that is intermittently advanced along a predetermined path; the combination of support means underlying the path and adapted to support the surface during the marking thereof, a heated die means disposed above said support means and movable cyclically toward said support means, so as to apply heat and pressure to a hot roll leaf stamping tape disposed between the surface to be marked and said die means for transferring a marking from said tape to said surface, and away from said support means, so as to release the marked surface for advancement of the latter, a supply reel rotatably mounted at one side of said path and carrying a supply of the stamping tape, a take-up reel rotatably mounted at the other side of said path and adapted to have the used stamping tape rewound thereon, guide means engaging the tape between said supply and take-up reels and directing the stamping tape laterally across said path between said die means and the surface to be marked, a continuously rotated drive shaft, yieldable transmission means between said drive shaft and said take-up reel for urging the latter to rotate in the direction maintaining the tape in taut condition between said reels, means actuated by said drive shaft for controlling the movements of said die means toward and away from said support means, and feeding means for the stamp-

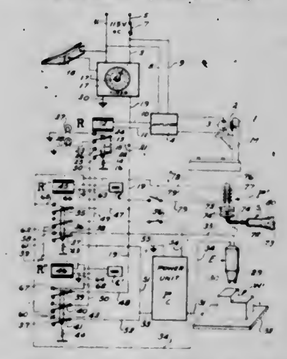
ing tape including a feeding roll rotatably mounted on said drive shaft for rotation independently of the latter and frictionally engaging the stamping tape at a location along the latter between said die means and said take-up reel to positively feed the stamping tape when said feeding roll is rotated, a ratchet wheel rotatably coupled to said feeding roll, a pawl assembly rotatably coupled to said drive shaft and having a pawl spring urged into engagement with said ratchet wheel so that said feeding roll is thereby rotatably coupled to said drive shaft, and control means operative to disengage said pawl from said ratchet wheel during a predetermined portion of each revolution of said drive shaft so that said feeding roll is only rotated during the remaining portion of each revolution and feeds the tape a corresponding predetermined distance.

3,022,725
GOLF BALL MARKING APPARATUS
Lauritz W. Mathiason and Harry J. Bihrle, Wheaton, Minn.
Filed Aug. 11, 1958, Ser. No. 754,413
6 Claims. (Cl. 101—40)



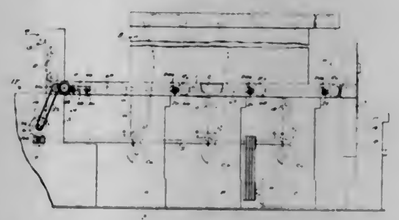
1. A ball marking device including a frame embodying an elongated horizontal track, a carriage reciprocably supported above said track and parallel thereto, marking indicia supported by said carriage at a fixed distance from the base of said track slightly less than the diameter of a golf ball, whereby reciprocation of said carriage over said ball imprints the indicia on said ball and simultaneously moves said ball along said track, a ball supply tube extending transversely of said horizontal track near one end thereof, and means controlled by movement of said carriage for feeding balls one at a time onto said track.

3,022,726
INSPECTION MARKING DEVICE
Elmer H. Schuttenberg, 2170 Arthur Ave., Lakewood, Ohio
Filed Feb. 16, 1960, Ser. No. 9,017
8 Claims. (Cl. 101—42)



7. In marking apparatus for use with a measuring instrument having indicating means responsive to a measurement of a part being gaged, a multiple marking device having a plurality of independent marking units, said marking units being carried by a manually movable body portion of said marking device, means, responsive to said indicating means of said measuring instrument, for selectively rendering one only of said marking units operable at one time, and adjustable timer means for activating said means for rendering a marking unit operable and then deactivating said means after a predetermined time lapse.

3,022,727
WEB FEED DEVICE FOR ROTARY PRINTING PRESS
Peter Zernov, Milwaukee, Wis., assignor to Mercury Engineering Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed July 11, 1960, Ser. No. 41,936
3 Claims. (Cl. 101—181)



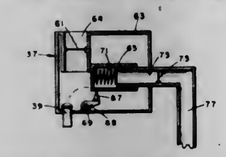
1. A printing press line having a plurality of printing cylinders and an impression roll for each cylinder which forms a nip printing couple therewith and through which a web is adapted to pass, said line also having means adjacent its entry and discharge sides for creating tension in the web in said line, a series of power driven carrier rolls spaced apart in said line for at least partially driving said web, means drivingly connecting said carrier rolls together so as to drive them in synchronization with one another, and a slip clutch for driving one power driven carrier roll in the line whereby the maximum velocity of said carrier rolls is limited to cause said rolls to deliver only a predetermined amount of torque to said web.

3,022,728
PRINTING PLATES AND METHODS AND APPARATUS FOR FORMING THEM
Franz Heller, Mount Vernon, N.Y., assignor to American Type Founders Co. Inc., Elizabeth, N.J., a corporation of Delaware
Filed Nov. 12, 1959, Ser. No. 852,260
3 Claims. (Cl. 101—415.1)



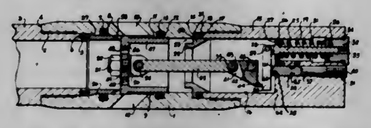
1. A printing plate for application to the printing cylinder of a lithographic offset printing press, said plate being of conventional substantially uniform thickness and having a tail edge portion bent away from the impression face of the plate to form the inwardly directed flanged edge portions for seizure by gripping means in the cylinder gap, a hook flange formed on the leading edge of the plate for anchoring engagement with the similarly angled edge of the cylinder gap, and an arcuate portion immediately adjacent the hook flange at the leading edge, said arcuate portion impressed upon the plate to curve it uniformly and without variation in the general thickness of the plate in a direction away from the impression face of the plate.

3,022,729
APPARATUS FOR DRILLING BOREHOLES WITH EXPLOSIVE CHARGES
Leon Haynsworth Robinson, Jr., Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,616
4 Claims. (Cl. 102—20)



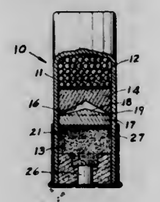
1. An explosive charge capsule for injection into a well pipe having a seating surface at the lower end thereof, comprising: an elongated housing having a compartment for an explosive charge material; an annular seating ring slidably affixed to the elongated housing and longitudinally slidable along the housing, adapted to seat on the seating surface of the well pipe to substantially seal the well pipe against fluid flow downwardly therethrough; a firing apparatus enclosure in said capsule; an inlet line hydraulically coupling the exterior of the upper portion of the capsule to the interior of the enclosure; an outlet line extending into said enclosure hydraulically coupling the interior of said enclosure to the exterior of the lower portion of said capsule; a sleeve in said enclosure slidably fitting over the end of said outlet line, and having a closed end; a coil spring within said sleeve biasing the closed end of said sleeve away from the end of said outlet line within said enclosure, yieldable under differential pressure between said outlet line and said inlet line so that the closed end of said sleeve slides toward said end of said outlet line; first and second resilient diaphragms respectively sealing the interior of said inlet line and the interior of said outlet line so that said enclosure is fluidtight; a substantially incompressible fluid within said enclosure; a detonating charge extending into said enclosure and into said compartment for detonating explosive material within said compartment; a firing pin pivotally supported within said enclosure positioned to strike said detonating charge at one end of its arc of movement, said firing pin being positioned relative to said sleeve so that said sleeve prevents rotation of said firing pin toward said one end of its arc of movement from the other end of its arc of movement until a predetermined differential pressure between said inlet line and said outlet line moves said sleeve a predetermined distance toward said end of said outlet line; and spring means biasing said firing pin for pivotal movement to engage said sleeve and strike said firing pin.

3,022,730
SAFETY BLASTING DEVICE
Edward C. Filstrup, St. Joseph, Mich., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed July 15, 1958, Ser. No. 748,729
2 Claims. (Cl. 102—25)



1. A blasting device comprising a cartridge body having discharge ports, a sleeve valve disposed in the body normally spanning and closing said ports to retain pressurized gas within said body, means for rapidly actuating said valve to open said ports comprising a pair of jointed links connected by a pivot pin, said links defining a connecting link joined to said valve and a pivot link pinned to the cartridge body by means of a shaft, the pivot points of said links being normally disposed in a substantially straight line relationship, a differential pressure plunger disposed within said blasting device, a lever within said device, said lever being connected at one end to the plunger, a pivot shaft disposed generally parallel to but spaced from said plunger providing a fulcrum for the lever, the opposite end of the lever making a driving connection with the pivot link, said plunger being operable to rotate said lever about the pivot shaft to drive the pivot link, and means including a spring operative to hold said plunger and said lever stationary in a position which retains said jointed links in said straight line relationship, said plunger being operative in response to differential fluid pressures acting in opposition to said spring to move the plunger from its normal position effective to pivot the lever about the fulcrum whereby the lever drives the pivot link effective to break the straight line relationship with its connecting link to move the sleeve valve abruptly to open the ports.

3,022,731
SHOTSHELL WAD STRUCTURE
Arthur S. Yeomans, Jr., North Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed May 12, 1959, Ser. No. 812,768
1 Claim. (Cl. 102—42)

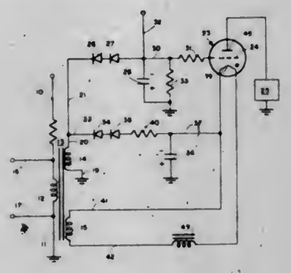


In a shotshell having a propellant cavity and a shot column separated by a cup wad defining a primary seal, the improvement which comprises a pair of cooperating wads disposed between the shot column and the primary seal effective to create a secondary seal, said cooperating wads defining a top wad having a substantially concave face, a bottom wad having a substantially convex face, the radius of curvature of a circle described so that it is tangent to said concave face at at least two points being less than the radius of curvature of a circle described so that it is tangent at at least two corresponding points of said convex face, said cooperating wads being partially telescoped so that the respective concave and convex faces make line contact with one another, said line contact defining a circle whose diameter is substantially equivalent to the internal diameter of the shotshell so that upon firing the shotshell the cooperating wads undergo maximum compression along said line of contact.

3,022,732
THYRATRON FIRING CIRCUIT
Warren D. Paley, Great Neck, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 5, 1958, Ser. No. 759,368
7 Claims. (Cl. 102—70.2)

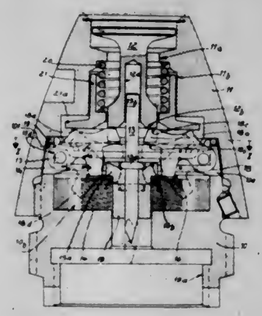
1. An electronic firing circuit comprising an alternating current source, first and second capacitors, a normally non-conducting electron tube having one of its main electrodes connected to said first capacitor and having a

control electrode upon which initiation of its conduction is dependent connected to said second capacitor, rectifying means deriving energy from said source for supply to said first and second capacitors and limiting said energy supplied to said capacitors to half cycles of the same given



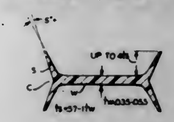
polarity of the voltage of said source, an explosive train primer connected to the other main electrode of said electron tube and means for grounding said second capacitor and control electrode for permitting said tube to conduct and fire said primer.

3,022,733
ROTARY SHELL FUZE
Helmut Junghans, Eckenhof, Schramberg-Sulgen, Germany, and Rudolf Weber, Untere Schillerstr. 24, Schramberg, Germany
Filed Apr. 24, 1959, Ser. No. 808,624
Claims priority, application Germany Apr. 25, 1958
7 Claims. (Cl. 102—71)



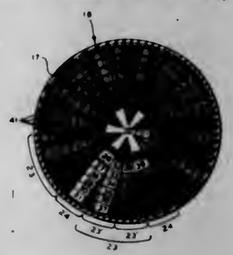
1. A rotary shell self-destroying fuze comprising a base having a recess therein and a central axial opening, a fuze cap mounted on the base and having a bore therein, a core mounted in the central axial opening and having an axial bore therein, a firing pin in the fuze cap and extending through the axial bore in the core, a guide plate in the fuze cap and having a plurality of spaced and radially arranged slots therein, a centrifugal lever rotatably mounted in each slot with a pivot point near the outer peripheral edge of the fuze base, each lever having an upper arm and a projection and a lower arm, a safety coil spring normally coiled around the core and in this position forming an abutment for the lower arms of the centrifugal levers, and a sleeve mounted in the bore of the fuze cap and having a flange to contact the projections of the levers, said spring flying radially due to centrifugal force to pass from under the levers to force the upper arms of the levers to contact the core to permit the sliding actuation of the firing pin.

3,022,734
SHOT SHELL WAD
Marshall J. Kidder, Fairfield, Conn., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Filed July 27, 1959, Ser. No. 829,780
2 Claims. (Cl. 102—95)



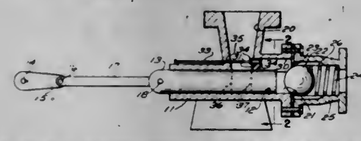
1. A synthetic thermoplastic elastomer shot shell wad having a central transversely extending imperforate planar circular web and circumferentially continuous, opposed frusto-conical skirts each joined at its end of least diameter to said web and extending forwardly and rearwardly from the outer circumference of said circular web, the included interior angle between any segment of said skirt and said web being an angle of greater than 90°, said web having a thickness between limits of about .035" and about .055", and said skirts having a maximum thickness between limits of about .57 and about 1 times the thickness of said web exclusive of any thicker portion which may be formed at the junction of said skirts with said web, said skirts having a thicker portion immediately adjacent said transversely extending web and tapering uniformly to a minimum thickness at their outer peripheral edges, the taper of said skirts being defined by an included angle of between about 5° and about 10°, the length of said skirts being not over about four times the thickness of said skirts immediately adjacent any localized thickness increase at the junction of said skirts with the transverse web, in which the weight per unit volume of the synthetic elastomeric material of which said wad is composed is greater in the central transversely extending web portion than it is in the skirt portions.

3,022,735
SOLID ROCKET PROPELLANTS
Jack F. Eberle, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 10, 1957, Ser. No. 689,448
4 Claims. (Cl. 102—98)



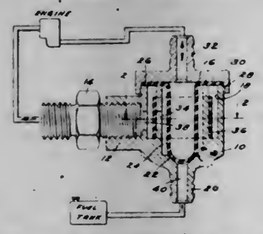
4. A cylindrical rocket grain comprising a plurality of bonded, imperforate blocks of propellant of the composite type comprising a solid inorganic oxidizing salt and a rubbery binder, the outer cylindrical surface and ends of said grain being covered with restricting material, said grain having an axial perforation which is star-shaped in cross-section, said perforation being defined by an exposed initial burning surface of said grain, said blocks of propellant assembled to form circumferentially alternate wedges and truncated wedges, a plurality of thin, parallel metal wires uniformly spaced and embedded in at least a portion of said blocks of propellant, said wires adapted to control the geometry of the progressively generated burning surfaces of said grain, all of said wires oriented in a direction substantially normal to said progressively generated burning surfaces.

3,022,736
VARIABLE VOLUME PUMP FOR VISCOUS FLUIDS
Richard Le Baron Bowen, Jr., 35 Fessenden Road, Barrington, R.I.
Filed Mar. 15, 1961, Ser. No. 96,049
8 Claims. (Cl. 103—37)



1. A variable volume pump comprising a body having a bore therein a suction opening along said bore, a discharge opening at one end of said bore, a piston fitted for reciprocation therein, walls contiguous and opening off said bore forming a recess communicating with said bore, said walls extending to intersect said suction opening so that one end of the recess is located at said suction opening, and the major extent thereof is located along said bore towards said discharge opening, a plug received by the walls within said recess, and means operatively connected to said plug for moving said plug in said recess.

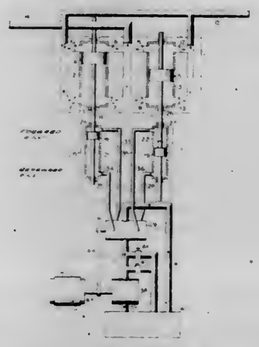
3,022,737
FUEL PUMP
Charles H. Tuckey, Cass City, Mich., assignor to Walbro Corporation, Cass City, Mich., a corporation of Michigan
Filed May 6, 1959, Ser. No. 811,417
2 Claims. (Cl. 103—44)



1. A fuel pump for small engines to operate from a source of pulsating pressure in the engine of the type having a housing with a pumping chamber, an inlet and an outlet to said opening, an inlet valve and a diaphragm within said chamber, that improvement which comprises a means forming an annular chamber around said pumping chamber, a passage through the wall of said pumping chamber connecting to said annular chamber, said annular chamber being connected with the outlet of said pump, and an outlet valve comprising a band of resilient material positioned snugly around the inner walls of the annular chamber overlying the connection with said pumping chamber, said material permitting flow outward from said pumping chamber into said annular chamber and blocking flow in a reverse direction.

3,022,738
PUMP SYSTEMS
Everett Archie Krute, 104 W. 44th St., Sand Springs, Okla.
Filed Apr. 20, 1959, Ser. No. 807,699
5 Claims. (Cl. 103—49)

1. A valve for metering driving fluid comprising an outer housing; a non-rotating cylinder adapted to fit within said housing; a rotating cylinder adapted to rotatable fit within said non-rotating cylinder; first, second, third and fourth longitudinally spaced lateral passages through said rotating cylinder, said passages having rectangular openings of 45° in the periphery of said rotating cylinder and opposite openings of each passage being diametrically opposite, the openings of said first and second passages being longitudinally aligned, the openings of said third and fourth passages being longitudinally aligned, the trailing edges of the openings of said first and second passages being longitudinally aligned with the leading edges of the openings of said third and fourth passages; first, second, third, and fourth longitudinally spaced sets of lateral ports in said non-rotating cylinder, each set of ports comprising three ports spaced 45° from each other laterally, two ports each having an opening of 45° inner periphery of said non-rotating cylinder the third port having an opening of 135°; the ports in said first

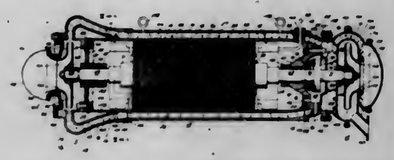


and said third set being similarly disposed laterally and diametrically opposite from the lateral spacing of the ports in said second and fourth sets of ports; first communicating means connecting the 135° port of said first set of ports with the 135° port of said third set of ports and the exterior of said housing; second means fluidly communicating the 135° port of said fourth set of ports and the exterior of said housing; third means fluidly communicating one 45° port of said first set with the longitudinally aligned 45° port of said second set and the exterior of said housing; fourth means for fluidly communicating the other 45° ports of said first and second sets of ports and the exterior of said housing; fifth means fluidly communicating one 45° port of said third set of ports with said longitudinally aligned 45° port in said fourth set of ports and the exterior of said housing; sixth means fluidly communicating the other 45° ports of said third and fourth set of ports and the exterior of said housing.

3,022,739
MOTOR AND PUMP APPARATUS
George H. Herrick, Beloit, Wis., and Richard H. Prescott, South Beloit, and Frank R. Guido, Highland Park, Ill., assignors to Fairbanks, Morse & Co., Chicago, Ill., a corporation of Illinois
Filed July 24, 1959, Ser. No. 829,319
3 Claims. (Cl. 103—87)

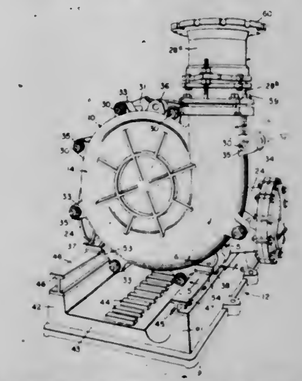
1. In a unitary assembly of the character described for operation submerged in a body of fluid, a casing having an inner tubular wall defining a casing chamber and means including an outer wall about the inner wall defining fluid passageways longitudinally of the casing, a motor in said casing chamber including a longitudinally extending drive shaft, a first wall member closing one end of said casing chamber and providing bearing means rotat-

ably supporting said drive shaft, a second wall member closing the other end of the casing chamber and providing bearing means rotatably supporting said drive shaft, said second wall member providing a recess and having a thrust-bearing seat in the recess, thrust bearing means between said seat and the drive shaft, a closure on said second wall member closing said recess, pump means mounted on said first wall member including a pumping member in driven connection with said drive shaft, said pumping means having a suction inlet for admission of



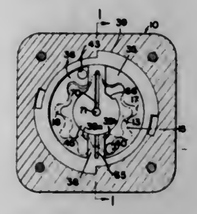
fluid from the fluid body and discharge outlet means connected to said passageways, said first wall member having port means communicating the pumping means with said casing chamber for the admission of pressure fluid to the latter, said second wall member having port means between said casing chamber and said recess for the passage of pressure fluid into the latter and about the thrust bearing means in the recess, and the second wall member further having a discharge outlet from said recess to the casing exterior and passages open to and forming the outlet ends of said passageways.

3,022,740
CENTRIFUGAL PUMP CASE ALIGNMENT MOUNTING
Elmer R. Wilfley and William E. Geer, Denver, Colo., assignors to A. R. Wilfley, and Sons, Inc., Denver, Colo., a corporation of Colorado
Filed July 28, 1959, Ser. No. 830,045
8 Claims. (Cl. 103—103)



1. In a centrifugal pump structure an intake housing, a case detachably secured thereto, a base for supporting the housing and case, the case having supporting feet and the base including spaced portions supporting the feet and extending in a direction paralleling the axis of the pump, means for aligning the center of the case with the center of the said housing comprising sole forming bodies covering the major portions of the undersides of the feet and adapted to bear upon said spaced portions of the base and said sole forming bodies being so joined to the feet that the bottoms of the bodies are at the correct vertical distance from the centerline of the case whereby the case will be exactly aligned with the said housing when the sole forming bodies are resting on said portions of the base and the case may be shifted on the base for separation from the housing and the alignment of the centers of the case and housing maintained to facilitate accurate reverse shifting and rejoining of the case and housing.

3,022,741
VARIABLE VOLUME HYDRAULIC PUMP OR MOTOR
Robert W. Brundage, Willoughby, Ohio (2809 Wakonda Drive, Belnor, St. Louis, Mo.)
Filed May 6, 1957, Ser. No. 657,314
14 Claims. (Cl. 103—120)

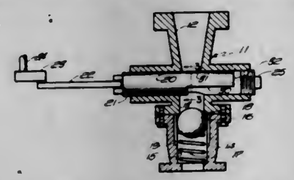


1. A positive displacement hydraulic device comprised of a plurality of members movable relatively to each other and defining a plurality of chambers revolving in a fixed closed path of movement, said chambers gradually increasing in volume after they pass a fixed point of minimum volume on said path of movement until they reach a fixed point of maximum volume on said path of movement and then gradually decreasing in volume until they reach said fixed point of minimum volume, means defining an arcuate inlet and an arcuate outlet manifold including first and second lands, one at each arcuate end of said manifolds and sealingly separating said manifolds one fom the other, an opening for each chamber revolving therewith, each of said openings moving past said lands to alternately communicate its associated chamber with either said inlet or said outlet manifold, said first land being normally located at the point of maximum volume so that as each chamber reaches and passes through maximum volume, its opening shifts from communication with one manifold to the other manifold, said second land being adjustable independently of said first land along the path of movement of said chambers from the point of minimum volume to the point of maximum volume so as to change the point in the path of movement in which each opening moves past said second land and shifts communication of its chamber from one manifold to the other, the improvement which comprises said first land is movable from the point of maximum volume to allow said second land to be adjusted to a point adjacent the point of maximum volume.

3,022,742
PISTON PUMP
Richard Le Baron Bowen, Jr., 35 Fenenden Road, Barrington, R.I.
Filed Mar. 30, 1960, Ser. No. 18,677
2 Claims. (Cl. 103—153)

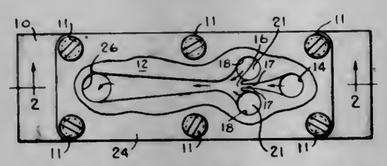
1. In a pump comprising a body having a bore therein, said bore having a uniform diameter throughout its length, a suction opening along said bore, a discharge opening along said bore, said suction and said discharge openings being spaced circumferentially about the bore with the axes thereof in the same plane normal to the axis of said bore, a check valve positioned at said discharge opening, a piston of uniform diameter fitted for reciprocation in said bore having a sealing surface to close the suction opening and a longitudinal recess in said

piston, said recess opening through the wall of said piston and extending from the free end thereof toward the other end a distance sufficient to be in alignment with the discharge opening throughout its reciprocation, the surface area of said recess being greater than the cross sectional



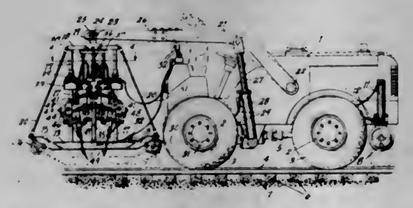
area of the suction opening whereby fluid pressure upon said surface area of said recess opposite the discharge opening will exert a force in a direction normal to the axis of said piston and force the sealing surface of said piston against the end of said suction opening to tightly seal the same.

3,022,743
INJECTOR PUMP
Richard K. Engholdt, Milwaukee, Wis., assignor to Erie Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 19, 1959, Ser. No. 821,482
11 Claims. (Cl. 103—258)



1. An injector pump comprising, a body having a flow inlet conduit, a flow outlet conduit, and a secondary flow conduit, all of said conduits communicating with a face of the body, an integral injector member mounted on said face and including a venturi opening having an inlet communicating with said flow inlet conduit, the venturi outlet communicating with said flow outlet conduit, and a secondary flow opening communicating with the venturi throat and said secondary flow conduit, and means cooperating with said openings to form closed flow passages.

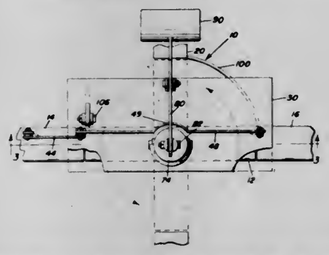
3,022,744
TIE TAMPING OR BALLASTING MACHINE
Corwill Jackson, deceased, late of Ludington, Mich., by The Detroit Bank & Trust Company, Detroit, Mich., and Margie N. Jackson, Ludington, Mich., executors, assignors to Jackson Vibrators, Inc., Ludington, Mich., a corporation of Michigan
Filed Jan. 23, 1957, Ser. No. 635,758
2 Claims. (Cl. 104—12)



2. In a machine of the class described, the combination with a manually controllable powered vehicle pro-

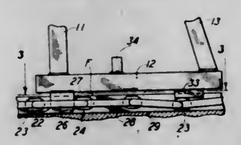
vided with resiliently tired wheels gauged to travel on the rails of a railway track, flanged track engaging wheels mounted on the vehicle to be adjusted to and from track engaging position, a tamper carriage provided with wheels adapted to travel on the rails of a track, vibratory units mounted on said carriage, a boom swingably mounted on said vehicle and connected to said tamper carriage to raise and lower the same to and from the operative position relative to a railway track, said means for adjusting said flanged track engaging wheels of said vehicle being adjustable to raise the body of the vehicle so that the weight thereof or a portion of such weight is carried by said flanged wheels and said tamper carriage, and propelling connections for said vehicle to said tamper carriage permitting the raising and lowering of the tamper carriage.

3,022,745
MECHANICAL MONORAIL DROP SWITCH
J S Roberts, Grove Park Drive, Bristol, Va.
Filed June 26, 1959, Ser. No. 823,056
9 Claims. (Cl. 104—99)



1. In combination with a track forming a portion of a monorail system, said track including spaced aligned first and second parts and a third part constituting a switch track, a mechanical drop switch including a track section interposed between said first and second parts to form therewith a continuous track length, latch means securing said track section to said first and second parts and releasing means responsive to movement of a carrier onto said track section for automatically releasing said latch means permitting movement of said track section into alignment with said third track part.

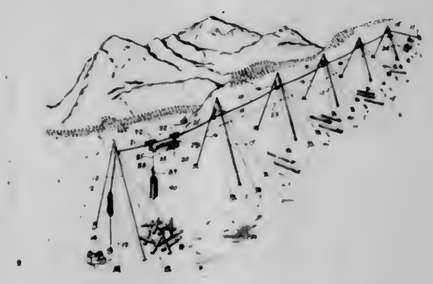
3,022,746
AUTOMOBILE WASHER PUSHER
Henry Wells, Racine, Wis., assignor to Utility Service Company, Inc., Racine, Wis., a corporation of Wisconsin
Filed Aug. 9, 1960, Ser. No. 48,432
4 Claims. (Cl. 104—172)



1. An automobile pusher for a car washer or the like having a chain movably disposed along the floor of said washer and including cross bars spaced apart along said chain, comprising a body having a front face disposed in the direction of chain movement and having a bottom portion rigidly disposed with respect to said front face and extending along and resting on said chain, a resilient member attached to said front face of said body and be-

ing disposed thereon for pushing on the automobile rear bumper, a projection depending from said bottom portion at the location of the plane of said front face and having a toe portion extending forwardly thereon with respect to said chain movement and extending from the bottom of said projection and being of a forward extent sufficient for being disposed directly underneath and in contact with a first one of said cross bars of said chain for removably attaching said pusher in an upright position on said chain, and said projection being of a length sufficient to extend rearwardly along said chain to abut a second one of said cross bars immediately behind said first one of said cross bars for transmitting the movement of said chain to said pusher.

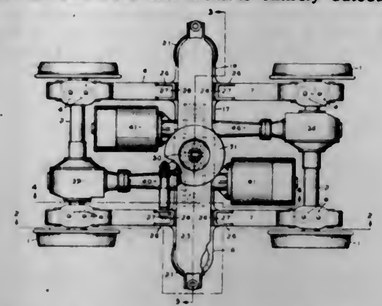
3,022,747
SKYLINE YARDER WITH RADIO CONTROLS
Maurice J. McIntyre, Sedro Woolley, Wash., assignor to The Humboldt Company, Seattle, Wash., a corporation of Washington
Filed Jan. 26, 1959, Ser. No. 788,938
8 Claims. (Cl. 104—178)



1. In a logging system including a skyline cable and a log yarder equipped with means whereby it is suspended from and is adapted for travel along said skyline; said yarder comprising a rigid frame structure, a cable winding drum mounted thereon, a log yarding cable wound on said drum and adapted to be paid out therefrom and extended from the yarder for the pulling in of logs from the area served by the skyline cable and for holding them suspended from said frame for transportation along the skyline, an engine mounted in said frame structure for driving the drum and means associated therewith to control the paying out and winding in of the cable; said yarder frame structure having a sheave wheel mounted at one end and passing the logging cable thereover to the log, and said sheave wheel being rotatable in a block that is mounted for lateral oscillation thus to accommodate the position of said sheave wheel to the direction of pull on the cable as extended thereover to the log.

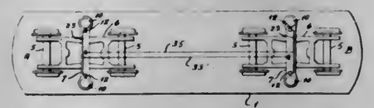
3,022,748
RAPID TRANSIT TRUCKS
Richard L. Lich, Ferguson, Mo., assignor to General Steel Industries, Inc., a corporation of Delaware
Filed Jan. 8, 1958, Ser. No. 707,785
7 Claims. (Cl. 105—192)

1. In a railway truck, wheel and axle assemblies, a frame comprising a pair of longitudinally extending rigid side members resiliently supported from said assemblies and each having vertically spaced top and bottom chords, a rigid transverse member connecting said bottom chords and terminating laterally outboard of each of said bottom chords, said transverse member and said bottom chords having merging substantially vertical side walls and common top and bottom walls, substantially upright springs seated on said transverse member entirely outboard of



said frame side members, and a transverse load-carrying bolster supported on said springs.

3,022,749
PNEUMATIC SUSPENSIONS FOR VEHICLES
Kenneth W. Voertman, St. Louis, and Richard L. Lich, Ferguson, Mo., assignors to General Steel Industries, Inc., a corporation of Delaware
Filed Apr. 3, 1959, Ser. No. 804,006
15 Claims. (Cl. 105—199)

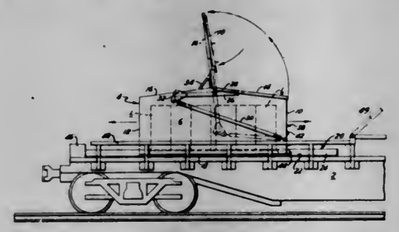


11. In a vehicle, wheels and axles spaced apart longitudinally of the vehicle, separate spring-supporting structures carried by said wheels and axles adjacent to each end of the vehicle, upright fluid pressure springs spaced apart transversely of the vehicle and carried by said spring-supporting structure at each end of the vehicle, a vehicle body structure supported near its ends on said springs, a source of compressed air on said vehicle, separate normally closed valves each connected to said source and to each spring and including means responsive to changes in the vertical distance between said spring-supporting structures and said vehicle body structure for operating said valves to admit air under pressure to the connected spring when said vertical distance is lower than a pre-determined value and to reduce the air pressure from the connected spring when said vertical distance is higher than a pre-determined value, means connected to the valves on one of said spring-supporting structures and extending toward said other spring-supporting structure and connected to one of the structures other than the one spring-supporting structure and operable in accordance with transverse tilting movement of one of the structures at the point of connection to operate the valves whereby the valve on the low side is operated to increase the pressure in its related spring structure and the valve on the high side is operated to reduce the pressure in its related spring structure and the valves are closed when the one structure is stably supported to maintain pressure equal in the springs.

3,022,750
LADING COVER FOR TRANSPORT VEHICLE
Wilbert G. Nichol, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 23, 1960, Ser. No. 30,892
2 Claims. (Cl. 105—377)

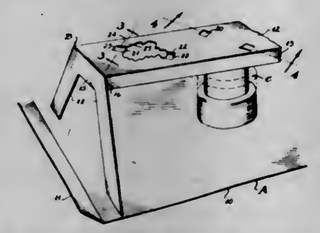
1. A lading cover adapted to be supported on spaced rails comprising side walls, end walls and a roof, roller

means for supporting said cover for movement along said rails when said cover is supported on said rails, said side walls projecting a substantial distance above said rails, said roof including one portion fixed to one of said end walls and to said side walls and another portion hinged to said fixed portion, said hinged portion being adapted to be raised away from said side walls, the end wall opposite said one of said end walls being pivotally connected to the hinged portion of said roof, said hinged portion of said roof having at least one guide channel formed thereon normally disposed adjacent to and extending substantially parallel with the top of one of said side walls, counterbalance means attached to said one of said side



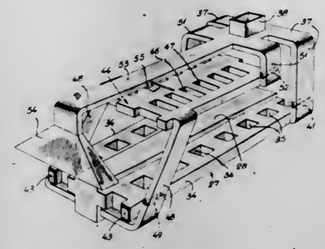
walls, said counterbalance means including a lever pivotally mounted at a point intermediate its ends to said one of said side walls, the pivot point of said lever being disposed subjacent the hinged connection between the two portions of said roof, said lever normally extending in a substantially horizontal plane with one end thereof disposed in said guide channel and its other end extending away from said guide channel, a tension spring attached by one end to said other end of said lever and by its other end to said one of said side walls, said spring being effective to pivot said lever to raise said one end thereof thereby to apply counterbalancing force to said hinged roof portion when the same is raised away from said side walls.

3,022,751
PATTY SHELL BAKING PROCESS
Hans M. Dohring, Los Angeles, Calif. (14838 Lassen St., Sepulveda, Calif.)
Original application May 13, 1958, Ser. No. 734,870, now Patent No. 2,975,699, dated Mar. 21, 1961. Divided and this application July 27, 1959, Ser. No. 829,793
3 Claims. (Cl. 107—54)



1. The method of baking a patty shell which comprises preparing a cylindrical cup-shaped biscuit of patty shell dough; supporting said biscuit upon a flat horizontal baking surface; suspending and holding a closed flat-bottom cylindrical mandrel in contact with the upper face of the biscuit and in concentric relation thereto; and applying heat to the biscuit to cause it to raise around said mandrel with the external surfaces of the biscuit unconfined so as to effect unrestrained expansion of the external surfaces of the biscuit in a raising action in which it rises around the mandrel to form the patty shell.

3,022,752
BAKING OVEN
Ange Emile Voisine, Rue de la Gare, Saint Charles de Bellechasse, Quebec, Canada
Filed Nov. 8, 1960, Ser. No. 67,949
Claims priority, application Canada July 23, 1960
6 Claims. (Cl. 107—63)

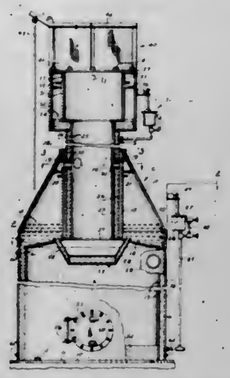


1. In a baking oven, in combination, a conveyor system having substantially horizontal superposed upper and lower runs, food supporting shelves suspended from said conveyor system for movement by said system, a heating arrangement for said oven comprising a lower level of ducts disposed within the oven and underneath the conveyor system and shelves, an intermediate level of ducts disposed between the upper and lower runs of said conveyor system and shelves, and an upper level of ducts disposed above said conveyor system and having an outlet, said lower and intermediate levels of ducts being provided with vertical passages made in said ducts out of communication with the interior thereof for free air circulation of the air in the oven through said vertical passages, the walls of said vertical passages defining baffles in the interior of said ducts, means for feeding hot combustion gases to said ducts, means for establishing communication of the various levels of said ducts and exhaust means at the outlet of the upper level of ducts for exhausting said hot gases through said ducts, said lower level of ducts consisting of a central longitudinally extending duct in the median plane of the oven and of two lateral ducts on each side of said central duct, and co-extensive therewith and provided with said vertical passages, said lateral ducts being in communcation with said central duct at the front of the oven and in communication at the back of the oven with vertical conduits themselves in communication with the upper level of ducts, said means for feeding said ducts with hot combustion gases comprising a burner for emitting a flame within said central duct at the back of the oven.

3,022,753
INCINERATOR
William T. S. Montgomery, Jacksonville, Fla., assignor to Jacksonville Blow Pipe Company, Jacksonville, Fla., a corporation of Florida
Filed Jan. 11, 1955, Ser. No. 481,097
4 Claims. (Cl. 110—7)

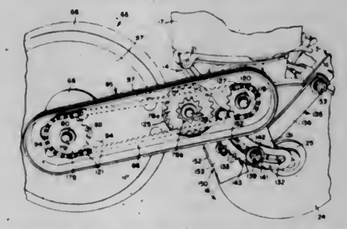
1. A furnace for burning small particles of combustible material comprising an inner side wall shaped to form a substantially vertical combustion chamber of substantially circular horizontal cross-section, means for introducing the particles and the air for combustion adjacent the top of said inner side wall and substantially tangentially thereof, a top wall for said chamber having a vent therein substantially concentric with said side wall, a substantially vertical sleeve secured to said top wall surrounding said vent and extending upward therefrom, an outer wall encircling said inner side wall and said sleeve and secured at its upper end to the upper end of said sleeve, said outer wall being spaced from said inner wall

and sleeve to form a water jacket, a stack mounted in said sleeve, and vent openings in said sleeve and said



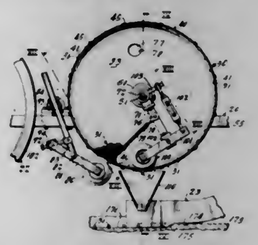
stack whereby steam generated in said water jacket is exhausted through said stack.

3,022,754
AUXILIARY SPROCKET CARRYING MEANS FOR A PLANTER
Knud B. Sorensen, Rock Island, and Arthur J. Bjerkan, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed July 19, 1956, Ser. No. 598,854
1 Claim. (Cl. 111—52)



In a planting unit, the combination of a press wheel shaft, a furrow opener boot carrying seed dispensing means and a shaft to be driven for actuating said dispensing means, a drive housing having openings, one adjacent each end, to receive the adjacent ends of said shafts, said shaft ends having non-circular shouldered portions of substantially identical dimensions, each of said shouldered portions being tapped, a substantially flat hub-less sprocket disposable on each of said shouldered shaft ends, each sprocket having a non-circular opening corresponding to the non-circular portion of the associated shaft end, the sprocket openings also being substantially identical dimensionally and at least no smaller than the shouldered portions of the associated shaft ends, whereby said sprockets are interchangeable from one shaft to the other, means threaded into the tapped portions of each of said shafts to releasably hold said sprockets against the associated shouldered portions, said sprockets being of different diameters whereby interchanging said sprockets serves to change the drive ratio between said press wheel shaft and said seed dispensing shaft, a drive chain interconnecting said sprockets, said housing having a stud therein, the end of said stud being non-circular and shouldered, corresponding to the ends of said shafts, said stud extending from the back portion of the housing to a point between the back of the housing and the plane of said drive chain, an auxiliary sprocket mounted on said stud in said housing and adapted to replace either of said first mentioned sprockets so as to provide further changes in said drive ratio, said auxiliary sprocket having a diameter different than the diameter of either of said first mentioned sprockets and when mounted on the end of the stud being disposed between the back of the housing and said plane, and means removably securing the auxiliary sprocket on said stud and cover means on said housing to complete the enclosure for said sprockets and said drive chain.

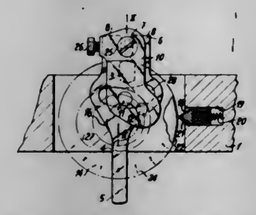
3,022,755
PARTICLE SELECTING AND DISPENSING DEVICE
Edward C. Roepke, 113 S. Toledo St., Elmore, Ohio
Filed Mar. 2, 1959, Ser. No. 796,467
8 Claims. (Cl. 111—77)



1. A particle pick-up and discharging device, comprising:
(A) a support,
(B) a shaft mounted on said support,
(C) a hollow rotatable drum providing a reservoir for a plurality of said particles, said drum having:
1. a circumferential band of elastic material with spaced circumferentially aligned apertures therein normally smaller than the particles to be held in said apertures,
(D) means adapted to be connected to said drum to rotate said drum on said shaft,
(E) a first means adapted to be connected to said support outside said drum to flex said band inwardly to increase the size of said apertures so that each aperture successively engages at least one of said particles, and
(F) a second means adapted to be connected to said shaft in said drum to flex said band outwardly to eject said particles from said apertures successively outside of said drum after said drum has rotated away from said first flexing means.

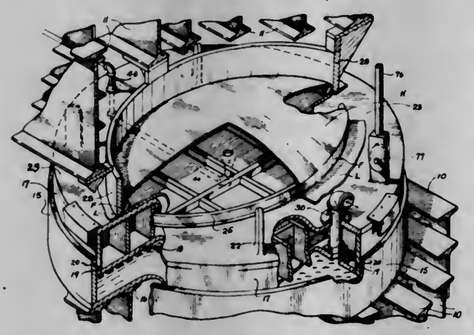
3,022,756
MECHANISM FOR ADJUSTING THE LENGTH OF STITCH ON A SEWING MACHINE
Marcel Fresard, Geneva, Switzerland, assignor to Mefina S.A., Fribourg, Switzerland, a corporation of Switzerland
Filed Jan. 26, 1960, Ser. No. 4,671
Claims priority, application Switzerland Jan. 30, 1959
5 Claims. (Cl. 112—210)

1. A sewing machine having a frame, a control shaft within said frame and adapted to be connected to a feeder, spring means connected to said control shaft and normally urging said shaft to rotate in a clockwise direction, the angular movements of said shaft in one direction or the other from a median position controlling the forward and return movements of said feeder, means for adjusting the length of a stitch, said means comprising a first lever secured to said control shaft and permitting the momentary reversal of the direction of travel of said feeder while maintaining a constant stitch length, one end of said lever serving as a handle, a slide at the other end of said lever, a second lever disposed above said first lever, mounting means for said second lever, said mounting means secured to said frame to permit oscillating movement of said second lever relative thereto, means at one end of said second lever connecting the same to said slide of the first lever, an upwardly projecting stud at the opposite end of said second lever, a control wheel for determining adjustment of stitch length in both a forward and reverse movement connected to said frame and disposed above said second lever, the bottom surface



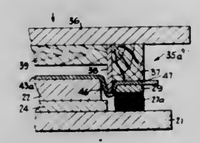
of said wheel having an arcuate shaped aperture therein, the opposite edges of said aperture forming a cam having an inner and outer profile and receiving the stud on said second lever, said stud normally maintained in contact with the inner profile by the action of said spring means on the control shaft, movement of said stud away from said inner profile and against said outer profile by manipulation of said first lever in a counterclockwise direction causing the momentary reversal of the direction of travel of said feeder, and release of said first lever causing return of said stud to engagement with said inner profile of the cam and resumption of initial adjustment of stitch length.

3,022,757
TANK HEAD DISHING MECHANISM
Carroll C. Clough, 2739 6th Ave. S., Seattle, Wash.
Filed Apr. 22, 1960, Ser. No. 23,949
6 Claims. (Cl. 113—44)



1. A tank head dishing and flanging mechanism comprising a main frame including a base structure and an interconnected top structure, an upwardly opening cylinder mounted on the base structure, a piston with a top end closing wall mounted in said cylinder and extendable upwardly therefrom, a removable plate mounted on said end wall, a first annular flange formed on said plate about the peripheral edge thereof and extending upwardly therefrom, a second annular flange mounted by said top structure and extending downwardly therefrom, said second flange surrounding a greater area than said first flange whereby the first flange may be positioned within second flange in close but spaced relationship, means for controlling the application of a fluid pressure medium to and for its release from the cylinder to effect the extending and retracting of the piston, said first flange providing means for supporting a head plate to be dished in spaced relationship above said removable plate, said second flange being adapted, upon the extending of the piston with a head plate of appropriate size concentrically positioned on said first flange, to engage against the top surface of the head plate and bend the peripheral edge portion of said head plate downwardly about said first flange and to cause the edge portion of the head plate to engage about its outer edge against the top end wall of the piston outwardly from said first flange, and thereby form an annular lip completely about the periphery of said head plate and said annular lip on the head plate being in parallel engagement with said top end wall and secured in fluid tight condition against said top end wall and means for controlling the application of a fluid pressure medium to the sealed space between the removable plate and the adjacent surface of said head plate.

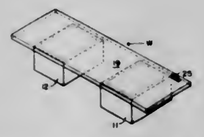
3,022,758
DIE SET FOR DRAWING AND SHAPING SHEET METAL
Lawrence M. Rheingold, Baldwin, and Milton Berlin, Forest Hills, N.Y., assignors to Templet Industries, Incorporated, Brooklyn, N.Y., a corporation of New York
Filed Dec. 30, 1957, Ser. No. 706,042
9 Claims. (Cl. 113—46)



1. A draw die set for working on sheet stock, said set comprising:
a male die member;
a female die member;
means supporting said members for relative movement toward and away from a mutually telescoped position;
said male die member comprising a rigid punch;
said female die member comprising a rule die with an operative edge defining a hollow closed shape;
said female die further comprising a support for said rule die including a first portion circumferentially surrounding and abutting the outer face of said rule die, and a second portion within the rule die and abutting the inner face of said rule die, said first portion projecting downwardly below the bottom face of said second portion;
the shape of said rule die being similar to the shape of said rigid punch and of a uniformly larger size to define a space therebetween when said male and female die members are in mutually telescoped position;
a retaining draw ring encircling said rigid punch and having a central opening of a shape similar to and uniformly larger than said rule die;
said rigid punch and retaining draw ring defining therebetween a space for receiving the full thickness of said rule die when said male and female die members are in mutually telescoped position;
the space between said rule die and said rigid punch being at least about equal to the thickness of the sheet stock when said male and female die members are in mutually telescoped position;

the space between said rule die and said retaining draw ring likewise being at least about equal to the thickness of the sheet stock when said male and female die members are in mutually telescoped position;
and means supporting said retaining draw ring for yieldable movement relative to said punch in response to engagement by the circumferential portion of the female die member therewith during relative movement of said male and female die members toward mutually telescoped position.

3,022,759
CONCRETE FLOATING WHARF
Donald O. McCall, Napa, Calif., assignor to Basalt Rock Company, Inc., Napa, Calif., a corporation of California
Filed Aug. 19, 1959, Ser. No. 834,839
7 Claims. (Cl. 114—.5)



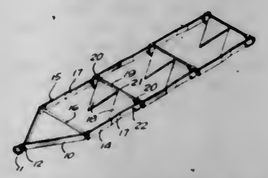
1. A floating wharf unit comprising a pair of concrete pontoons spaced apart longitudinally and a common, horizontal, resilient deck slab rigidly secured directly to the upper portions of both said pontoons, said slab being formed of concrete and including longitudinal, tensioned means maintaining said slab under longitudinal compression, whereby said pontoons are capable of relative motion by flexure of said slab.

3,022,760
ECHO RANGE LIMITATION EQUIPMENT
Paul C. Gardiner, Scotia, N.Y., and Lawrence E. Jewett, Springfield, and George Lupton Broomell, Jr., Lower Gwynedd Township, Pa., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 4, 1950, Ser. No. 188,469
6 Claims. (Cl. 114—23)



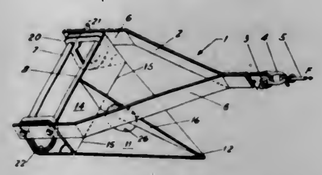
6. In an echo controlled system for steering a torpedo toward a target, a transmitter adapted to project acoustic waves ahead of the torpedo at any one of a plurality of angles of depression during at least one stage of its operation, control means adapted to effect operation of said transmitter during spaced transmission periods separated by listening intervals, a receiver adapted to translate echoes of said projected acoustic waves, upon return from said target, into steering control signals, means for blanking operation of said receiver upon the expiration of a time length following each transmission period so as to limit the effective range of the system, and hydrostatic pressure responsive means coacting with said receiver blanking means adapted to vary said time length directly with variations in torpedo depth.

3,022,761
MULTIPLE FLUKE FOLDING ANCHOR
Philip C. De Beixedon, 1050 Cold Spring Road, Santa Barbara, Calif.
Filed Aug. 8, 1960, Ser. No. 48,290
7 Claims. (Cl. 114—208)



1. An anchor assembly, comprising in combination: a plurality of frames each having a pair of longitudinally extending laterally spaced side bars, the side bars of one frame having ends overlapping the ends of the side bars of an adjacent frame, a plurality of flukes, one fluke being pivotally mounted on each frame and positioned between the side bars thereof, means limiting the extent of pivotal movement of said flukes with respect to the side bars, and pivot means connecting the overlapping ends of the side bars to form a series of frames, whereby the series of frames may be folded about said pivot means from an extended position wherein the flukes are longitudinally spaced to a stacked position wherein the flukes are vertically spaced.

3,022,762
ANCHOR
Carrol W. Hillcourt, 342 Liberty St., San Francisco, Calif.
Filed Dec. 14, 1959, Ser. No. 859,261
9 Claims. (Cl. 114—208)

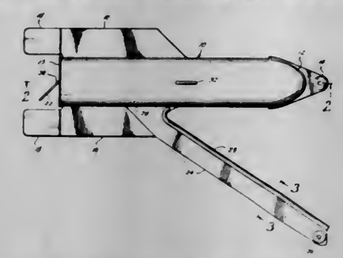


1. An anchor comprising: an elongate yoke-like shank having diverging arms and connecting means at the closed end thereof for attachment to an anchor line, a fluke having a base and a burrowing tip, rearwardly diverging tail sections on said fluke forming a wedge with the apex thereof secured to and extending along said base, journal means mounting said fluke on the other end of said shank between said arms for pivotal movement about an axis generally parallel to and rearward of said apex, and cooperating stop means on said shank and said tail sections to limit the extent of said pivotal movement in opposite directions, said tail sections being disposed at angles relative to said fluke so that when said shank is generally horizontally disposed the angle of the upper one of said tail plates relative to said shank is less than 90 degrees when said pivotal movement is limited by said stop means.

3,022,763
FLOATING BUOY RETRIEVING HOOK
Rudolph A. Turrentine, Houston, Tex., assignor to Brown & Root, Inc., Houston, Tex., a corporation of Tex.
Filed Mar. 9, 1959, Ser. No. 798,109
10 Claims. (Cl. 114—221)

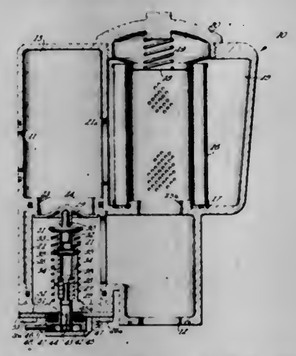
9. A floating retrieving hook comprising a buoyant body member having a forward end and a stern end, ver-

tical and horizontal stabilizers on said body member, a laterally and forwardly diverging arm attached to said



body member intermediate its ends, and a towing cable attached to the outer end of said arm.

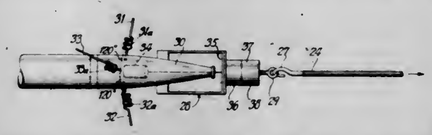
3,022,764
MECHANICAL SIGNAL DEVICE
William J. Scavuzzo, Clark, and William H. Hultgren, Readington, N.J., assignors to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Apr. 21, 1959, Ser. No. 807,846
8 Claims. (Cl. 116—70)



1. An indicator and a valve ring and plate member forming a valve cage, a disc valve having a boss normally seated on said ring, a valve guide having a cylindrical projection thereon extending into said boss, a depending sleeve on said member, a rotatable shaft extending through said depending sleeve and member and fixed axially thereof, means for rotating said shaft, a signal device connected to said shaft adapted to rotate to a signal position when said shaft is rotated, an axially slidable sleeve having one end extending into said depending sleeve adjacent said shaft and the opposite end mounted over said guide projection, said shaft having slots therein, lug means on one end of said slidable sleeve engaged in said slots to prevent said shaft from rotating when the valve is seated, said disc valve being adapted to be unseated to disengage said slidable sleeve and shaft and rotate said signal device to a signal position.

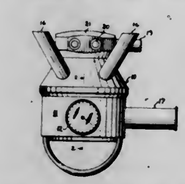
3,022,765
METHOD AND APPARATUS FOR INTERIOR COATING OF PIPES
Constantine P. Xenis, Douglaston, N.Y., assignor to Consolidated Edison Company of New York, Inc., New York, N.Y., a corporation of New York
Filed Apr. 3, 1958, Ser. No. 726,195
1 Claim. (Cl. 118—2)

In apparatus for sealing leaks in the joints of a length of buried gas conduit having exposed opposite extremities formed with openings therein, which apparatus includes nozzle means for insertion into the conduit via one of said openings, a tank for containing a sealant, hose means for placing in communication the aforementioned nozzle means and said tank, pump means for pumping such sealant from the tank to the nozzle means, pulling means for connection to said nozzle means to advance same through said length of gas conduit, and means for actuating said pumping means to maintain said sealant under pressure, the improvement which comprises: detecting means positioned in advance of said nozzle means in the



direction of movement thereof through the conduit for detecting the presence of a joint in the conduit as the apparatus advances therein, valve means normally maintaining the nozzle means closed and responsive to said detecting means upon detection of the presence of a joint to open said nozzle means, and a splash plate having a flat surface disposed in a plane perpendicular to the direction of flow of fluid issuing from said nozzle means and facing said nozzle means to direct sealant issuing therefrom onto the interior of said conduit when said nozzle is opened.

3,022,766
MILKING MACHINE AND TEMPERATURE CONTROL IN COMBINATION THEREWITH
Raymond E. McKinley, 3808 Cherry St., Erie, Pa.
Filed Apr. 23, 1959, Ser. No. 808,446
4 Claims. (Cl. 119—14.14)

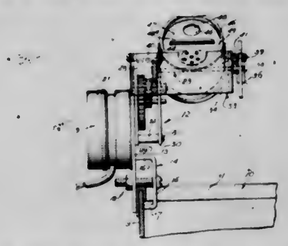


1. In a milking machine having a milk conducting manifold including milk delivery and discharge tubes as a part thereof, a temperature indicating device having a sensing portion within said manifold in thermoconducting relation with milk in said manifold whereby the temperature of said milk will be indicated by said temperature indicating device.

3,022,767
AUTOMATIC FISH FEEDERS
Walter E. Malek, 5603 S. Elizabeth St., Chicago, Ill., assignor of one-third to Robert H. Wendt, Evanston, Ill.
Filed May 27, 1959, Ser. No. 816,145
5 Claims. (Cl. 119—51.11)

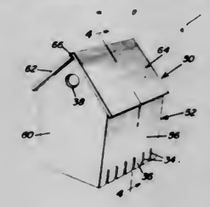
1. An automatic time controlled fish feeding assembly, comprising, a supporting plate, clamping means carried by said supporting plate and having threaded means urging the clamping means into engagement with the said plate, a synchronous clock motor assembly carried by said plate and adapted to be driven by standard A.C. house lighting energization, said motor driving a driven shaft, an oscillating shaft rotatably mounted on said plate, a standard fish food canister containing comminuted fish food and having adjustable fish food dispensing openings in its end,

a canister clamping saddle carried by said oscillating shaft, stop means comprising a part of said driven shaft located on said plate for stopping the oscillating shaft and canister with its dispensing openings in the upward position, a star wheel on said driven shaft, and a radial



vane on said oscillating shaft, said star wheel having a lug engaging and passing by and releasing the vane on the oscillating shaft for moving said canister to the dispensing position, and thereafter permitting the canister to return to upward position.

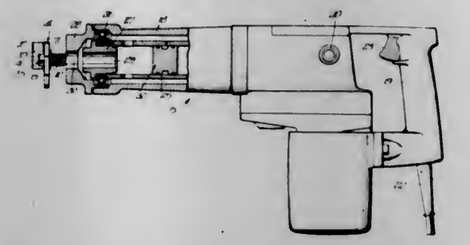
3,022,768
BIRD FEEDER
Walter D. Lynch, 931 W. Cherry St., Cherokee, Iowa
Filed May 13, 1960, Ser. No. 28,937
5 Claims. (Cl. 119—52)



1. In a bird feeder, a housing affording a feed hopper therein and including a pair of upwardly and outwardly sloping side walls provided in their bottom edge portions with rows of spaced upwardly extending slots, said slots communicating directly with the interior of the hopper and being of a width insufficient to permit dropping of feed from the hopper by gravity but sufficient to permit the feed to be picked by birds through said slots, portions of said walls between said slots constituting support elements for birds picking the feed through the slots, and an inverted V-shaped divider positioned in the bottom portion of said hopper for guiding feed to the slots.

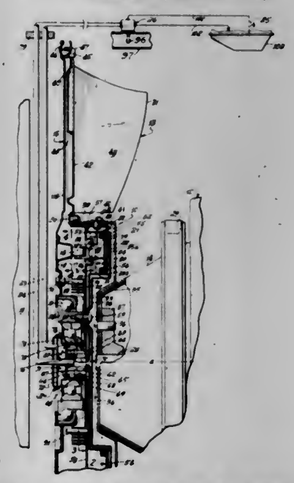
3,022,769
UNIVERSAL TOOL ELEMENT RETAINER FOR ROTARY-HAMMER DEVICES
Oliver O. Amundsen and Harold R. Botefuhr, Chicago, Ill., assignors to Skil Corporation, Chicago, Ill., a corporation of Delaware
Filed May 18, 1960, Ser. No. 30,006
8 Claims. (Cl. 121—32)

1. A retainer for retaining tool elements in a rotary-hammer device comprising, a pair of guide-posts mounted on the nose end of the rotary-hammer device with said posts being located on opposite sides of the rotary axis of the device, a bracket member mounted on the forward ends of said guide-posts and being movable relative to both of said guide-posts in a direction normal thereto and in a straight path between operable and inoperable positions, and an open-ended slot formed in one edge of said bracket whereby said bracket in its operable position is adapted for embracing engagement in a necked portion of a tool element mounted in the device whereby to retain the tool element in the device during actuation



thereof and during withdrawal of the tool element from the material being worked, said bracket when in its inoperable position permitting tool elements to be inserted into the nose end of the device and removed therefrom.

3,022,770
ADJUSTABLE VANED ROTOR ASSEMBLIES
Elmore J. Sanders, 143 N. Grand St., Orange, Calif., and Frederick Winkler, Jr., Morton Grove, and Albert M. Neymark, Elmwood Park, Ill.; said Winkler, Jr., and Neymark, assignors to said Sanders
Filed Apr. 8, 1957, Ser. No. 651,410
11 Claims. (Cl. 121—38)



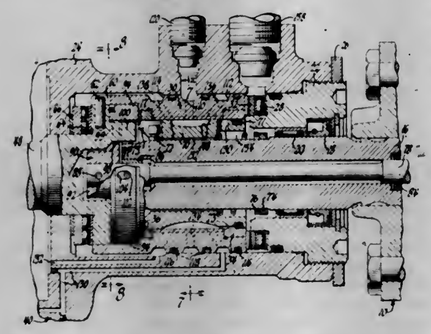
1. A rotor assembly including a structure rotatable about an axis, said structure including three sheet metal plates having radially outer portions forming an annular compartment turning about said axis and centered about but spaced outwardly from said axis, an essentially annular wall in said compartment dividing it into two annular chambers centered about said axis and each containing an actuating fluid, said wall being movable in opposite axial directions in the compartment to relatively inversely vary the effective sizes of the two chambers and being movable in opposite axial directions by fluid pressure in said two chambers respectively while said structure turns about said axis, and said three sheet metal plates having portions radially inwardly of said compartment forming between the plates radially extending passages for leading pressure fluid to and from said two chambers selectively, while said structure turns, to thereby move said wall in said compartment.

3,022,771
UNLOCKING MECHANISM FOR A TWO-PART EXTENSIBLE STRUT
Richard A. Chace, Bellevue, Wash., assignor, by mesne assignments, to Clemco Aero Products, Inc., Gardena, Calif., a corporation of Delaware
Filed Mar. 3, 1959, Ser. No. 796,908
4 Claims. (Cl. 121—40)



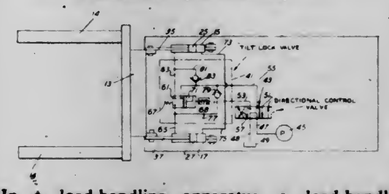
1. A strut comprising, in combination, a guiding element and a guided element relatively reciprocable throughout a given range of movement, one of said elements being shouldered, locking dog means mounted and guided in the non-shouldered element which is complemental to the shouldered element, for movement transversely of the direction of reciprocation between a projected locking position and a retracted unlocked position, for locking engagement of the projected tip of said dog means with the shoulder, and for free relative reciprocation of said elements when retracted, a toggle device operatively connected to said dog means and pivotally mounted upon the non-shouldered element for relative movement in the direction of reciprocation of the elements and for rotation from a locking position, aligned with the dog means, into a released position, out of such alignment, spring means urging said toggle device into the locking position, the shouldered element being formed with a closed cylinder, a piston reciprocable therein and having a plunger projecting from said cylinder towards the toggle device, but separate from the latter, and said cylinder being ported for connection to a pressure fluid source, to move the piston and plunger into engagement with the toggle device for movement thereof in the unlocking sense, and resilient means to return said piston and plunger to their initial position following release of pressure within the cylinder and unlocking movement of the toggle device.

3,022,772
ROTARY POWER STEERING VALVE WITH TORSION BAR CENTERING
Philip B. Zeigler and William Blair Thompson, Saginaw, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 19, 1958, Ser. No. 762,153
12 Claims. (Cl. 121—41)



1. In a servo valve, a housing having therein an inlet port and an outlet port together with a power passage, an outer sleeve member within said housing comprising a pair of annular grooves about the periphery thereof with sealing means located in an annular recess between said grooves, one of said grooves being a pressure groove open to said inlet port, the other of said grooves being open to said power passage, said sleeve member further comprising a pair of spaced internal axial grooves and first and second radial ports, said first radial port communicating one of said internal axial grooves and said pressure groove, said second radial port being located mediate said internal axial grooves and being open to the said other of said annular grooves, and an inner sleeve member within said outer sleeve member having an external axial groove through which said first and second radial ports are communicable and further having a radial exhaust port circumferentially spaced from said external axial groove and communicating with said outlet port, said sleeve members being relatively rotatable to substantially fully open said second radial port to said first radial port and to substantially block communication between said first radial port and said radial exhaust port.

3,022,773
FLOW CONTROL SYSTEM FOR LOAD-HANDLING APPARATUS
John E. Olson and William P. Downey, Portland, Oreg., assignors to Hyster Company, Portland, Oreg., a corporation of Nevada
Filed Oct. 20, 1958, Ser. No. 768,220
14 Claims. (Cl. 121—46)

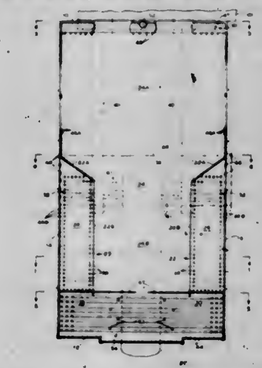


3. In a load-handling apparatus, a load-handling means, a plurality of cylinders, a plurality of pistons for said cylinders, each piston being connected to said load-handling means, a source of fluid under pressure, a check valve for each cylinder, means for simultaneously connecting said source to one set of ends of said cylinders through said check valves in the direction of opening movement of said check valves, or for connecting said source simultaneously to the other set of ends of said cylinders, and means by-passing said check valves for exhausting fluid from said one set of ends, the last-named means including means for preventing the exhaust of fluid from said one set of ends until pressure in the other set of ends of said cylinders has reached a predetermined value, said preventing means including a pilot-operated valve having a valve member movable under the influence of fluid pressure to a position to connect said one set of ends with a discharge line, said pilot-operated valve being connected to the other set of ends of said cylinders to be actuated by the pressure therein.

3,022,774
STEAM GENERATOR
Carl C. Hamilton, Cuyahoga Falls, and Thomas B. Hurst, Akron, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 7, 1959, Ser. No. 811,718
12 Claims. (Cl. 122—478)

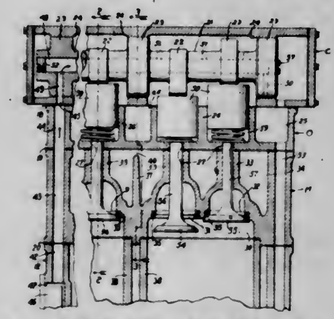
1. A steam generator comprising walls forming a setting, a partition means dividing said setting into a heating gas pass and a furnace chamber laterally adjoining and opening to one end of said heating gas pass, an upper steam and water drum, a lower water drum, a bank of steam generating tubes in said heating gas pass extending

between and connected to said drums, means for supplying heating gases to said furnace and effecting a flow of heating gases longitudinally through said furnace and reversely through said heating gas pass, a superheater disposed across the gas discharge and inlet ends of the furnace and heating gas pass respectively and comprising a plurality of horizontally spaced tubes panels arranged in vertical planes and extending across substantially the full width of the setting, a superheater support tube connected



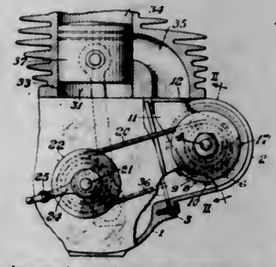
at its opposite ends to said drums and positioned between and extending across said panels of said superheater, and means for supporting said panels from said support tube said last named means including lugs secured to said support tube and each having a recess adapted to carry a superheater tube, with the lugs cooperating to restrain lateral and vertical movements of the superheater tube while permitting completely free longitudinal movement thereof.

3,022,775
CYLINDER HEADS FOR INTERNAL COMBUSTION ENGINES
Christiaan H. Bouvy, Bloomfield Township, Mich., assignor to John Dolza, Fenton, Mich.
Filed Sept. 26, 1960, Ser. No. 58,421
4 Claims. (Cl. 123—41.82)



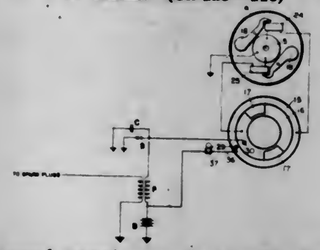
1. In a multiple section cylinder head for an internal combustion engine, a camshaft supporting section including a cam shaft journaled therein, a second section including valve operating mechanism therein said second section being provided with a lubricant chamber for receiving cam shaft lubricant supplied to said cam shaft and draining from said cam shaft supporting section, a third section provided with valve stem guides, intake and exhaust ports, a water jacket chamber and a combustion chamber, valves for opening and closing said ports, said valves having valve stems projecting through said valve stem guides for direct engagement with said valve operating mechanism in said second section, and bolt means securing the several sections into a unitary whole.

3,022,776
SEPARATOR ARRANGEMENT FOR INTERNAL COMBUSTION ENGINE
Gustav Steinlein, Mainberg, near Schweinfurt, and Willi Trunk, Schweinfurt (Main), Germany, assignors to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany
Filed Sept. 11, 1959, Ser. No. 839,498
Claims priority, application Germany Oct. 22, 1958
12 Claims. (Cl. 123—73)



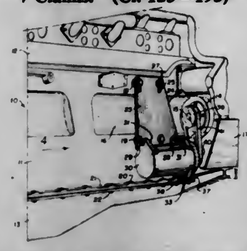
1. In an internal combustion engine, in combination, a cylinder formed with a port for admitting fluid to said cylinder; a crankcase; a crankshaft rotatably mounted in said crankcase; a piston reciprocable in said cylinder for rotating said crankshaft; a centrifugal separator having a rotor, an intake duct communicating with said crankcase, and a discharge duct communicating with said port; and motion transmitting means connected to said rotor and to said crankshaft for rotating said rotor at a speed different from the speed of said crankshaft.

3,022,777
AUTOMOTIVE SPEED CONTROL MEANS
Clark R. McCloy, 7800 NE. 4th Court, Miami 38, Fla.
Original application Jan. 11, 1956, Ser. No. 558,572, now Patent No. 2,851,555, dated Sept. 9, 1958. Divided and this application Aug. 2, 1957, Ser. No. 675,896
11 Claims. (Cl. 123—118)



1. In speed control means for a multi-cylindered internal combustion engine including an ignition system having a speed sensitive switch, rotatable distributor means directing spark inducing circuits serving the cylinders of said engine, a commutator ring rotatable with said distributor means and an interruptor segment in said ring electrically isolated therefrom, the combination of a normally open grounding circuit closeable by said switch and communicating with said ring, conductor means electrically connecting said ring with said spark inducing circuits to effect intermittent interruption of said grounding circuit for the exclusion therefrom of some of the spark inducing circuits whereby to disfunction the cylinders served by the grounded spark inducing circuits but permit the continued operation of cylinders served by said excluded circuits.

3,022,778
ALTERNATOR MOUNT FOR DIESEL ENGINES
Orie J. Stemen, 2150 S. Galapago St., Denver, Colo.
Filed Jan. 31, 1961, Ser. No. 86,027
7 Claims. (Cl. 123—195)



1. In combination with a diesel engine having a generator drive shaft at an outstanding housing portion at one end of the engine block for direct connection of a generator when mounted alongside the block and in axial alignment with the drive shaft, and having mounting lugs with tap holes on the engine block above and below the generator position, a mounting bracket assembly for mounting an alternator, in lieu of a generator, against the side of the engine out of position substantially below the generator position, said alternator having a cylindrical body with mounting flanges at one side thereof, and said bracket comprising a flat plate member adapted to overlay the mounting lugs, vertical slots in registration with the lug tap holes for bolting the plate to the body and for permitting vertical adjustment of the plate on the body, and outstanding ears at the base of the plate adapted to be connected with mounting flanges of the alternator to permit the alternator to hang therefrom.

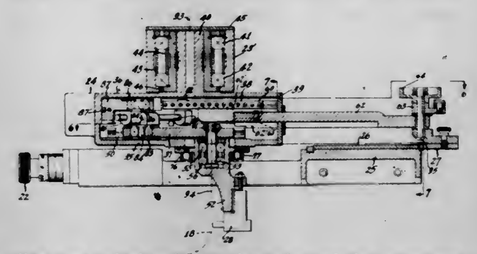
3,022,779
TOY GUNS
Erwin Benkoe, New Hyde Park, N.Y., assignor to Transogram Company, Inc., New York, N.Y., a corporation of Pennsylvania
Filed June 14, 1960, Ser. No. 36,020
5 Claims. (Cl. 124—11)



2. A toy gun comprising, in combination, a stock having a barrel assembly connected therewith, said barrel assembly including a barrel communicating with an adjacent loading chamber, a compressible hollow bellows within said loading chamber having an outlet projecting into said barrel, and a trigger assembly mounted in association with said barrel, said trigger assembly including a hollow tube housed within said barrel having an apertured end within said loading chamber, a spring associated with said tube urging said tube toward said barrel, and a trigger connected to said tube for effecting movement thereof through said loading chamber in opposition to said spring to press said apertured end against said bellows.

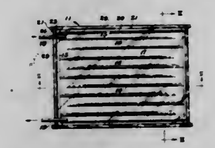
3,022,780
GRINDING WHEEL DRESSING APPARATUS
Nils Hoglund, 296 Hartshorn Drive, Short Hills, N.J.
Filed Mar. 27, 1961, Ser. No. 98,577
12 Claims. (Cl. 125—11)

1. Apparatus for forming contours on a grinding wheel including a support, a housing pivotally mounted on said support, a pair of slides mounted on said housing and movable parallel to each other, a tool mounted on one of said pair of slides, a follower mounted on the other of said pair of slides, a pivot member mounted on each of said slides and said housing, a link mechanism connected to said pivot member for pivotally connecting said pair of



slides and said housing to determine relative movement of said slides, a template mounted on said support, said follower being adapted to contact said template, the pivot members of said housing, said tool and said follower lying in the same plane.

3,022,781
HEATER
Stella Andrassy, Princeton, N.J. (Ridge Road, Kingston Post Office, Monmouth Junction, N.J.)
Filed June 11, 1959, Ser. No. 819,774
2 Claims. (Cl. 126—271)



1. A collapsible solar fluid heater which comprises a single flexible film member folded on itself and secured together at the edges to form a closed container, one side of said folded film member being transparent to pass solar energy and the other side of said folded film member being solar heat absorptive to absorb said solar energy; means formed on the edges of the folded flexible member for receiving interconnecting support members whereby said folded flexible film member is collapsibly supported in a frame formed by said interconnecting support members, the opposite sides of said folded flexible film member being secured together along spaced parallel lines to form a serpentine passageway within said closed container; inlet means connected to said closed container for admitting water into said serpentine passageway; and outlet means connected to said closed container at an opposite end of said serpentine passageway to remove heated liquid from said closed container.

3,022,782
STEAM PRODUCING STOVE FOR FINNISH BATHS
Wesley Byron Bryant, 464 Old La Honda Road, Woodside, Calif.
Filed June 22, 1959, Ser. No. 821,918
1 Claim. (Cl. 126—344)

In a steam generator device of the character described, an upright tubular casing, a burner near the bottom end of the casing, a top plate completely covering the top of said tubular casing, a ring flange around the top of the casing projecting above said plate to form an open receptacle for rocks to be heated; vertical brace bars secured to the inner periphery of said tubular casing being circumferentially spaced and extending from the bottom of the casing to the top thereof to support said top plate and relieve said casing from the stress of the weight of said

rocks, a baffle plate secured to said spaced brace bars and extending from the bottom upwardly and entirely across said tubular casing to divide said casing into a pair of vertical chambers, the top of said baffle plate being spaced from said top plate to form a passage for products of combustion from the chamber on one side of the baffle

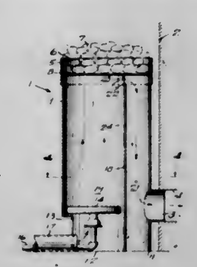


plate to the other chamber on the other side; said burner being on said one side of said baffle plate in the bottom region of the adjacent chamber of said tubular casing, and an outlet flue on the other side of the baffle plate in the lower region of the other chamber of said tubular casing to draw gases of combustion through said chambers and out of said casing.

3,022,783
METHOD OF PRESERVING TISSUE SUCH AS BONES
Eli Jordan Tucker, Jr., Houston, Tex., assignor to National Bone and Tissue Laboratories, Inc., Houston, Tex., a corporation of Texas
No Drawing. Filed Aug. 10, 1960, Ser. No. 48,688
13 Claims. (Cl. 128—1)

1. A method of reducing the antigenicity of dumb animal tissue so as to render it universally compatible with human tissue, such tissue and encouraging cell growth thereof during preservation, comprising testing dumb animals for disease, removing tissue from a tested healthy dumb animal body under sterile conditions, placing the tissue in a container having in normal saline therein a soluble sodium sulfonamide compound, an antibiotic agent, and a blood component bath from the type of animal from which the tissue has been removed, maintaining the container contents at temperatures substantially below normal body temperatures and above freezing, developing osteogenic factor conditioned muco-protein and muco-polysaccharides of tissue during preservation, increasing the hydrogen ion concentration of the of bath during preservation by the reaction of the soluble sodium sulfonamide component of the bath with the tissue to produce sodium salt linked with tissue protein bonded by a double sulphur bond to the amide ring whereby the protein is more denatured and less antigenic, converting peripheral fibroblasts during preservation to fibroblastic tissue and encouraging the growth of tissue cells, testing the preserved tissue at intervals to observe for indications of atrophy and necrosis, and replenishing when necessary the blood components with blood component from the type of animal from which the tissue under preservation has been obtained, whereby upon heterogeneously grafting the tissue thus preserved onto a live animal the osteogenic factor will stimulate tissue graft growth in the graft bed and the depletion of antigens and denaturing results in the graft tissue more readily taking with the graft bed.

3,022,784
INTRAVENOUS ADMINISTRATION EQUIPMENT
Orville P. Nuffer, Evansville, Ind., assignor, by mesne assignments, to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Mar. 10, 1958, Ser. No. 720,491
4 Claims. (Cl. 128—214)



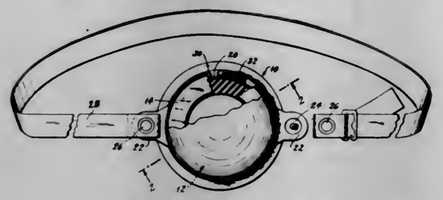
3. Apparatus for use in an intravenous infusion system including an intravenous liquid container and a drip chamber having a projecting tubular inlet, comprising: a spike adapted for engagement with the outlet opening of the intravenous liquid container; a cannula secured to and depending from said spike; and a sleeve of generally tubular resilient material secured to said spike and depending therefrom, surrounding but radially spaced from said cannula and being arranged to grip the projecting tubular inlet of the drip chamber, said sleeve terminating above the lower end of said cannula, and said lower end of the cannula being adapted to function as a drop-forming element.

3,022,785
METHOD OF DELIVERING DRUGS INTO ANIMALS
Jack A. Crockford, 2434 Wingate Road, Chamblee, Ga., and Frank A. Hayes, 626 Hill St., James H. Jenkins, 112 Clover St., and Seldon D. Feurt, 280 King St., Athens, Ga.
Filed Aug. 8, 1957, Ser. No. 677,141
3 Claims. (Cl. 128—218)



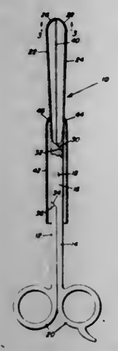
1. A method of delivering a liquid drug into an animal while at a distance from said animal but in visual contact therewith comprising the steps of obtaining a mechanically propellable projectile having injection means thereupon and a liquid drug disposed therewithin mechanically, propelling said projectile into contact with the animal so that the injection means penetrate the animal's body, causing a chemical gas-producing reaction to commence within said projectile wherein the gas produced is operable to propel said drug from said projectile through said injection means, and maintaining said projectile within the body of the animal until the drug is expelled therefrom.

3,022,786
COLOSTOMY DEVICE
Mitzie Cherie Nalon, Los Angeles, Calif. (10518 Wilshire Blvd., West Los Angeles, Calif.)
Filed Dec. 24, 1954, Ser. No. 477,499
2 Claims. (Cl. 128—283)



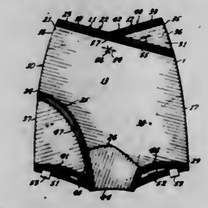
1. A device of the character described adapted for affixation to the body by means of an adhesive comprising annular member of a stiffly flexible material, said annular member having a relatively thin flange of flexible material extending outwardly from one side thereof, said flange having its outer face co-extending with the annulus defined by said annular member and forming therewith a body contacting surface, said annular member having an annular groove formed therein externally thereof, and a cover member formed of thin flexible material and having a beaded elastic edge snugly engaged within said groove, said flange having opposed ears extending therefrom, each of said ears having a separable fastening means adapted for cooperative engagement with the ends of a belt having correlative fastening means, the beaded edge of said membrane being formed with elastic reinforcing means, which beaded edge includes an annular pocket within which is disposed a metallic coil spring.

3,022,787
TOOL FOR RECTAL TREATMENT
Leota M. Daniel, Texline, Tex. (303 W. Flores Drive, Tucson, Ariz.)
Filed May 9, 1960, Ser. No. 27,580
9 Claims. (Cl. 128—321)



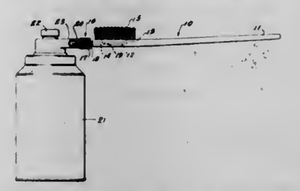
1. A surgical instrument for removing rectal impactions, comprising a pair of elongated members having handles at one end and elongated jaws at the other, pivot means connecting intermediate portions of said members together whereby said jaws may be moved toward and away from each other between closed and open positions of the instrument by actuation of said handles, said jaws being of a concave cross-section and coacting to define therebetween a substantially cylindrical chamber in the closed position of the instrument, each jaw having a pair of elongated side edges parallel to but spaced from the corresponding edges of the other jaw when the instrument is fully closed but divergent from said corresponding edges when the instrument is open, and stop means for limiting movement of said members about said pivot means whereby said jaws are prevented from moving toward each other beyond a position wherein their longitudinal side edges are spaced and parallel when the instrument is closed.

3,022,788
PANTY GIRDLE
Joy Seay Darcey, Los Angeles, Calif., assignor, by mesne assignments, to Beverly Vogue Company, Inc., Los Angeles, Calif., a corporation of California
Filed Feb. 3, 1958, Ser. No. 712,765
7 Claims. (Cl. 128—529)



1. A panty girdle which comprises: a pair of relatively wide bands of elastic material for encircling the lower portion of a torso, each band having a front panel and a rear panel, one of said wide bands being telescopingly disposed in the other of said wide bands and said one wide band diagonally crossing said other band at an intermediate portion of said panels, whereby each wide band exerts a diagonal force from the upper thigh of one leg to the opposite hip of the wearer, each of said wide bands including a relatively narrow band of elastic material extending from an intermediate portion of a lower edge of a front panel to an intermediate portion of a lower edge of the rear panel, the narrow band of said other wide band overlying the narrow band of said one wide band to form a crotch.

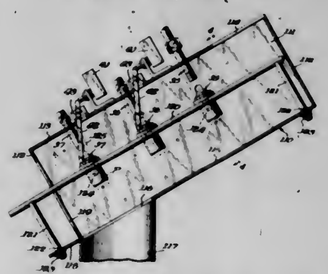
3,022,789
INJECTOR TYPE TOOTHBRUSH FOR RECEIVING TOOTHPASTE FROM AEROSOL BOMB
Theodore Rallis, 99 S. Main St., Beacon Falls, Conn., and Fred Trotta, 109 Church St., New Haven, Conn.
Filed Mar. 11, 1959, Ser. No. 798,615
1 Claim. (Cl. 132—84)



In a device of the class described, the combination comprising a toothbrush having an elongated handle provided with a plurality of tufts of bristles at one end thereof, and also provided with a chamber near the end of said handle having a side opening leading into said tufts of bristles, said handle also having a small cylindrical aperture in its end leading into said chamber, an injector having a small hollow tube provided with a sharp beveled end shaped to tightly fit within said aperture and serving to scrape out said aperture and a portion of said chamber each time it is inserted therein, said tube being adapted to be held in said aperture by friction, said in-

jector having an enlarged central knurled manipulating section and also provided with a tubular section extending in the opposite direction from said tube for insertion into the nozzle of an aerosol bomb containing fluent tooth cleaning material or the like, whereby after scraping said cylindrical aperture, said fluent material may be forced from said bomb through said injector, said aperture, and said chamber, into said tufts of bristles, said injector being detachable from said toothbrush and from said bomb.

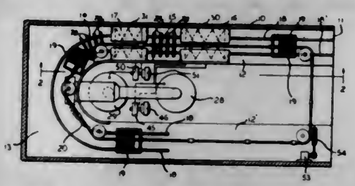
3,022,790
PART WASHING APPARATUS
William D. Carrie, Lisle, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Original application Dec. 12, 1955, Ser. No. 552,516, now Patent No. 2,872,895, dated Feb. 10, 1959. Divided and this application Mar. 31, 1958, Ser. No. 731,565
3 Claims. (Cl. 134—46)



1. Apparatus for interior cleaning of tubular articles, comprising a casing including top and bottom wall portions, a hollow support for the casing, a drain aperture in the casing bottom wall portion providing communication with the support, a plurality of parallel inclined conveyor rods longitudinally supported in the casing, means for adjusting the lateral spacing of the rods, an insertion aperture in the top wall portion over the upper portions of the rods for positioning of articles on the rods for downward movement thereon by gravity with openings thereof directed upwardly, a discharge opening in the casing adjacent the lower portions of the rods for passing articles out of the casing, a plurality of fluid inlet means opening through the top wall portion into the casing over said rods and along the path of movement of the articles directed downwardly to introduce fluids into the article interiors and including at least one fluid injecting inlet means for admitting gas under pressure into the casing, means controlling operation of said injecting inlet means, and means actuated by the articles in said movement thereof to operate said controlling means.

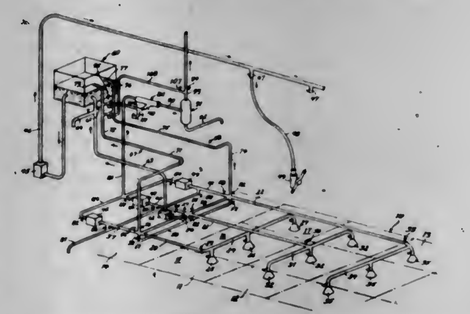
3,022,791
MOBILE TYPE CLEANING UNIT
Alvin Charles Larson, 324 E. Wisconsin Ave., Milwaukee, Wis.
Filed June 10, 1958, Ser. No. 741,141
2 Claims. (Cl. 134—70)

1. In a cleaning apparatus for food conveying containers or the like, a runway having guiding means therealong, overhead conveyor means for moving workpieces along said runway and having a plurality of connecting means for detachable engagement with workpieces for moving the latter along said runway, a spray booth along said runway having nozzles for directing liquid cleaning fluid onto the sides and top of said workpieces as they are moved through said spray booth, and transversely disposed serrations on said runway between said spray booth and a drying means, said serrations being adapted for engagement by said workpieces to shake off excess cleaning fluid from the latter, said drying means being



disposed on said runway adjacent the outlet side of said spray booth and having means for directing heated air across said workpieces.

3,022,792
APPARATUS FOR GAS-FREEING AND CLEANING TANKERS
Charles M. Perkins, R.F.D. 1, Albion, Ill., assignor of one-tenth to Warren K. Price, Viola, Del.
Filed May 25, 1959, Ser. No. 815,589
7 Claims. (Cl. 134—168)

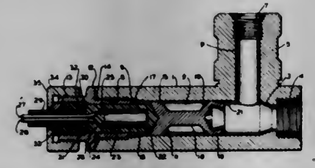


1. Apparatus for gas-freeing and cleaning the tanks of a tanker ship having cargo lines connected to the respective tanks, cleaning means for introducing cleaning liquid into said tanks, and pump means connected to each of said cargo lines and cleaning means, said apparatus comprising: a reservoir for cleaning liquid adapted for connection to said cleaning means; a pair of fluid conduits each connected between said reservoir and said cargo lines for selective communication therebetween; suction-producing means having an inlet and an outlet and connected at its inlet to said pair of conduits for selective communication therewith to withdraw solids, liquids, and gases from a selected tank and located at an elevation sufficient to receive the withdrawn gases but not the withdrawn solids and liquids; branch conduit means connected between the outlet of said suction means and said pair of conduits for selectively discharging the withdrawn gases to the atmosphere or one of said pair of conduits; and additional pump means connected to said cargo lines and reservoir for selectively passing said withdrawn solids and liquids to said reservoir or overboard.

3,022,793
EXPLOSIVELY ACTUATED VALVES
James T. Thorp, Jr., Webster Groves, Mo., assignor to Universal Match Corporation, St. Louis County, Mo., a corporation of Delaware
Filed Oct. 31, 1958, Ser. No. 770,983
7 Claims. (Cl. 137—68)

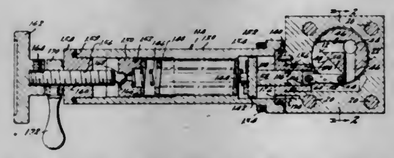
1. A normally open valve comprising a body having a rearward portion and a forward portion and which is

provided with a bore having a cylindrical wall which merges with a conically tapered clearance portion, said bore being provided with inlet and outlet passageways, a valve seat formed in said bore intermediate the passageways, a valve closer formed of malleable metal which includes a piston member disposed within the bore, said piston member being provided with a rearwardly extending skirt portion having an annular cylindrical wall and being rigidly secured at its rearward end to the rearward end of the bore, said skirt portion also being provided with an internal chamber, the annular cylindrical wall of said skirt portion being sized for slidable but snug-fitting engagement with the cylindrical wall of said bore, said skirt portion having a peripheral groove defining a thin-walled zone of weakness lying within the tapered



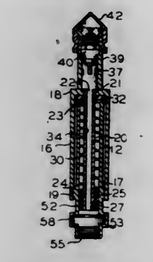
clearance portion, said zone of weakness disposed forwardly in the bore with respect to the secured end of the skirt portion, said valve closer integrally including a forward portion projecting axially from the piston member and having a head normally spaced from said valve seat and being of such shape as to fit tightly within said valve seat, and pyrotechnical means adapted upon detonation for rupturing said valve closer at said zone of weakness and thereby form a severed portion which includes the piston member and that part of the skirt portion which is located forwardly of said zone of weakness, said pyrotechnical means being adapted to expand said skirt portion into gas-tight wiping engagement with the cylindrical wall of said bore and for driving the severed portion of the valve closer along said bore to force said head into fluid-tight closurewise contact with the valve seat.

3,022,794
PRESSURE REDUCING VALVE
John J. Pippenger, Manchester, Mich., assignor to Double A Products Company, Manchester, Mich., a corporation of Michigan
Filed Sept. 22, 1958, Ser. No. 762,534
6 Claims. (Cl. 137—116.3)



1. A fluid pressure reducing valve comprising a body having a chamber with an inlet port and an outlet port and a pressure relief port each communicating with said chamber, port means within said chamber selectively alignable with said inlet port and said pressure relief port, said port means when aligned with said inlet port permitting fluid to freely pass from the inlet port into and through the chamber and out the outlet port, said port means when aligned with said pressure relief port permitting fluid to freely pass therethrough from said chamber, and pressure responsive means for moving said port means from a position wherein it is aligned with said inlet port to a position wherein it is aligned with said pressure relief port in response to increasing fluid pressure in said chamber, said port means moving through an intermediate position between said inlet port and pressure relief port wherein it is completely out of alignment with both said inlet port and said pressure relief port.

3,022,795
PNEUMATIC PRESSURE CONTROL DEVICE FOR INFLATABLE TIRE ELEMENTS
Irving Abrams, 30—100 51st St., Woodside, N.Y.
Filed Oct. 31, 1958, Ser. No. 771,047
5 Claims. (Cl. 137—227)

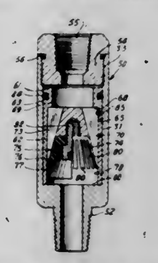


1. Pneumatic pressure control apparatus comprising, in combination, a hollow base member having means at one end for communication with the interior of the stem of an inflatable tire element, a sleeve slidably supported at the inner end upon the opposite outer end of said base member, a pneumatic check valve secured within the opposite outer end of said sleeve opening inwardly to receive a pressurized stream of air therethrough and releasably blocking air flow outwardly from said sleeve, a plunger concentrically secured within said sleeve slidably received within said hollow base member, said plunger defining a central longitudinal bore communicating with the interior of said base member at one end and communicating with said check valve at the opposite end, a depression coil spring encircling said plunger seated at one end upon said one end of said plunger and having an opposite end acting against said bore member adjacent to said opposite end of said plunger, pressure measuring indicia imprinted upon the outside surface of said base member intermediate the ends thereof facing said sleeve, said sleeve and said plunger being responsive to pressurized air within said base member with said check valve blocking air flow outwardly from said sleeve to move outwardly upon said base member, the inner end of said sleeve being movable past said indicia imprinted upon said base member during said outward movement of said sleeve relative to said base member to determine the pressure of air within said base member, and screw threaded means acting between said inner end of said sleeve and said base member releasably securing said sleeve in a fixed position upon said base member against outward movement by pressurized air within the base member.

3,022,796
CHECK VALVES
Leslie L. Cummings, Houston, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Filed Mar. 25, 1958, Ser. No. 723,840
11 Claims. (Cl. 137—454.6)

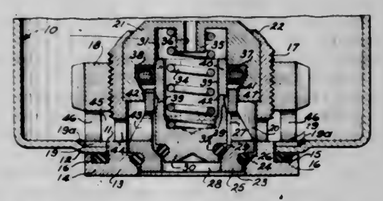
2. In a check valve: a tubular housing means having a shoulder in its bore and a removable apertured closure at the end opposite said shoulder, a resilient cup shaped closure member, a support and seating element slidably and removably mounted in the bore of said housing means between said shoulder and said removable apertured closure member, said element having a substantially conical concave recess, said cup shaped closure member

being disposed in said concave recess, said closure member having a frusto-conical flexible lip portion engageable with the walls of said seating and support element defining said concave recess and also having an outer portion extending outwardly of said support and seating element providing a cylindrical sealing surface disposed outwardly beyond the adjacent end of the support and seating element, said support and seating element having



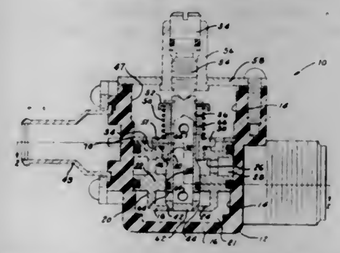
a cylindrical outer surface provided with peripheral circumferentially spaced longitudinal grooves extending inwardly from the outer periphery thereof toward the axis thereof and providing a plurality of flow courses through said element and the flexible lip portion of said closure member overlying the ends of said grooves at the adjacent end of said support and seating element, said grooves being smaller in circumferential width than the thickness of said lip portion.

3,022,797
DRAIN VALVE
Frederick R. Allin, Glendale, Calif., assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 28, 1959, Ser. No. 849,208
5 Claims. (Cl. 137—599.2)



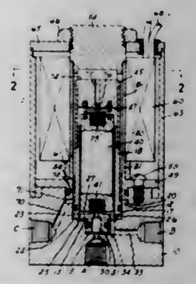
1. A valve comprising a cylindrical body, said body having an upper end closure and an open lower end portion, said body having an annular chamber opening into said lower end portion, said chamber having a valve seat adjacent said open lower end portion, a sleeve axially movable in said chamber having annular closure means for engaging said body valve seat, said sleeve having a chamber interiorly thereof, said sleeve chamber having an outlet adjacent its lower end, a valve seat in said sleeve chamber adjacent said outlet, passage means opening on the exterior of said body and opening into said sleeve chamber above said sleeve valve seat, a plunger axially movable in said sleeve chamber having closure means for engaging said sleeve valve seat, said body having an annular recess extending radially outward about said plunger, an annular groove on the periphery of said plunger, detent means within said annular recess and adapted to engage said annular groove to hold said plunger closure means out of contact with said sleeve valve seat, said sleeve being axially movable to disengage said detent means from said annular groove, and resilient means between said upper end closure and said plunger normally urging said plunger closure means into engagement with said sleeve valve seat and thereby urging said sleeve closure means into engagement with said body valve seat.

3,022,798
HOT FLUID-COLD FLUID MIXING VALVE
William Rood Taylor, Western Springs, Ill., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 29, 1957, Ser. No. 681,120
5 Claims. (Cl. 137—606)



1. A mixing valve comprising an internally partitioned valve body structure defining two axially aligned separate inlet chambers and a mixing chamber, together with a receiver chamber for receiving fluid from one of the inlet chambers; an axially adjustable valve extending through the mixing chamber, the other inlet chamber and receiver chamber; said receiver chamber being connected with its inlet chamber by a first port, and the other inlet chamber being connected to the mixing chamber by a second port; said axially adjustable valve having a central passage therethrough placing the receiver chamber in communication with the mixing chamber; said valve having an imperforate reduced diameter portion thereof clearingly extending through the second port to cooperate therewith in defining a path for fluid flow from the other inlet chamber to the mixing chamber; said axially adjustable valve also having two oppositely facing valve surfaces registering with the ports but spaced distances apart less than the port spacing so that axially adjustable movement of the valve is effective to vary the relative flows through the respective ports.

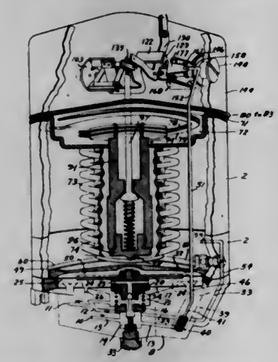
3,022,799
ELECTROMAGNETIC VALVE
Lawrence Dominic Padula, New Britain, Conn., assignor to Skinner Precision Industries, Inc., New Britain, Conn., a corporation of Connecticut
Filed Oct. 22, 1959, Ser. No. 848,021
3 Claims. (Cl. 137—625.27)



1. A three-way solenoid valve assembly comprising a body, a first tube closed at one end and having its other

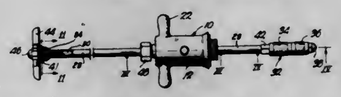
end supported on and in sealing engagement with said body to form a first chamber, a first port formed in said body and communicating with said first chamber through a first valve seat, a second port formed in said body and communicating with said first chamber, a second tube sealed at one end disposed about said first tube in concentric radially spaced relationship therewith, means supporting the other end of said second tube on said body thereby to form a second chamber between said tubes, a third port formed in said body and communicating with said second chamber, a passageway in said first tube extending between said second chamber and said first chamber and including a second valve seat disposed in said first chamber opposite to said first valve seat, a plunger movable in opposite directions in said first chamber and having first and second valve closure means carried on opposite ends thereof to engage said first and second valve seats, said plunger cooperating with said first tube to form a fluid passageway extending between said first valve seat and said second valve seat, a spring urging said plunger toward one of said valve seats, and a solenoid disposed about said second tube to effect movement of said plunger against the force of said spring.

3,022,800
PNEUMATIC TRANSMITTER AND RECEIVER
Julius C. Boonshaft and Edmund D. Haigler, Hatboro, Pa., assignors to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed Sept. 8, 1953, Ser. No. 382,155
(Filed under rule 47(a) and 35 U.S.C. 116)
4 Claims. (Cl. 137—790)



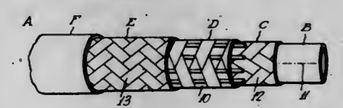
1. A pneumatic-mechanical converter for converting a pneumatic pressure into mechanical motion, and vice versa, in a predetermined ratio, including a rigid pneumatic-pressure-housing closed at one end and open at its other end, a bellows disposed within said housing, said bellows having one closed end and one open end, the closed end of said bellows being nearer to the closed end of said housing and being movable, and the open end of said bellows being affixed and sealed to the opening in the open end of said pressure-housing, whereby a pneumatic pressure chamber is formed between the outside of said bellows and the inside of said pressure-housing, with the outside of said bellows being sealed from the atmosphere while the inside of said bellows is fully exposed to the atmosphere, a pivotally-mounted arm in operative juxtaposition to the open end of said bellows, a connector operatively interposed between said arm and the closed end of said bellows and extending into said bellows through the open end thereof, whereby the compression of said bellows by the pneumatic pressure within said pneumatic chamber will tend to deflect said arm about its povital axis, and a spiral cantilever spring comprising a generally flat band of metal and having an outer peripheral anchorage portion and an inner movable anchorage, operatively interposed between the open end of said pressure-housing and said connector, with the outer anchorage portion thereof affixed to said open end of the pressure housing and with its inner movable anchorage connected with said connector, said spring being so disposed as to oppose the displacement of the closed end of said bellows under the influence of the pneumatic pressure within said pneumatic pressure chamber.

3,022,801
VALVE-TRAVERSING PIPE STOPPER ASSEMBLY
Henry T. Petersen, 349 Woodland Road, Riverside, Mo.
Filed June 24, 1957, Ser. No. 667,449
1 Claim. (Cl. 138—89)



In apparatus for facilitating replacement of a fluid valve stop while the inlet line thereto remains under pressure, an elongated tubular element; an elongated rod of greater length than said element reciprocably carried by the latter whereby the outermost ends of the rod extend outwardly from corresponding ends of the element; a lock nut on one of the outermost ends of the rod; a pair of stoppers shiftably mounted on said one end of the rod between the lock nut and the proximal end of the element, said stoppers being adapted to be moved through the valve stop into the inlet line upon shifting of the rod and element in that direction, each of said stoppers including an elongated, flexible tubular member which expands upon longitudinal compression thereof, said stoppers having rigid members engaging each stopper end face so that the stoppers are subjected to compressive force across their entire cross-sectional area, the stopper adjacent the end of the tubular element being of greater axial length than the outer-most stopper so that upon compression of the stopper members the longer stopper member will expand outwardly and engage the inlet line inner surface during the initial rod movement and before the outermost stopper member engages the inlet line inner surface, the opopsite end of the rod being threaded; a take-up nut complementally threaded on said opposite end of the rod and normally disposed externally of the valve stop when the stoppers are in said inlet line whereby upon rotation of the take-up nut in one direction, the latter engages the proximal end of the element and pulls the lock nut toward said one end of the element and compresses the members longitudinally thereof thereby expanding the same to stop the flow of fluid through the line and permit removal and replacement of the valve stop without substantial loss of fluid.

3,022,802
REENFORCED HOLLOW CIRCULAR PLASTIC OBJECTS
Harvey M. Lewis, 420 E. 79th St., New York 21, N.Y.
Filed Nov. 8, 1954, Ser. No. 467,506
4 Claims. (Cl. 138—125)



1. A laminated wall tubing composed of concentric cylindrical layers of tubular braided textile materials

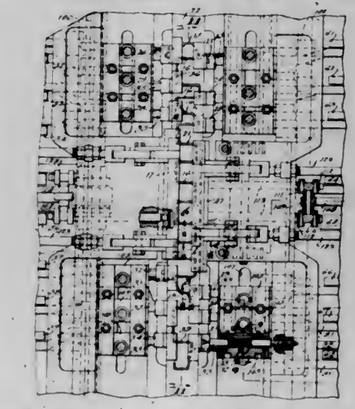
composed of synthetic textile fibers or yarns, said braided materials being of varying angular direction in respect to the longitudinal axis and being impregnated interiorly and coated exteriorly including the fibres and yarns themselves with a thermosetting resin, and longitudinally extending strands located in and enclosed by said tubular braided textile material, the outer braided material being more tightly braided than the interior braided material.

3,022,803
METHOD OF PRODUCING SLIDE FASTENERS
Erich Berberich and Johannes Gilliam, Stolberg, Rhineland, and Gustav Frowein, Rhoden, Waldeck, Germany, assignors to William Prym-Werke K.G., Stolberg, Rhineland, Germany
Filed June 23, 1960, Ser. No. 38,324
Claims priority, application Germany June 26, 1959
30 Claims. (Cl. 139—384)



1. A method of producing slide fasteners having tapes with coupling elements formed thereon by projecting portions of continuous weft filaments from which the tapes of the fastener are woven, said projecting portions being spaced at appropriate intervals for coupling the tapes of the fastener together, the method comprising the steps of looming the tape with the aid of a multiple pirn picking motion and forming coupling elements from at least one weft filament, whereas at least one other weft filaments traverses each tape without forming portions projecting from the loomed tape.

3,022,804
MACHINE AND METHOD OF BENDING THE ENDS OF A SPRING STRIP AND PROVIDING AN ARCH FORM THERETO
Paul M. Corp, Bloomfield Hills, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Dec. 8, 1954, Ser. No. 473,859
16 Claims. (Cl. 140—71)



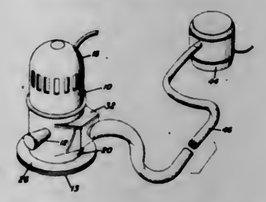
4. In a machine for bending a formed spring having transverse torsion bars joined by bendable bars, a base having upper fixed spaced portions defining a slot, lower clamping blocks at each side of said slot movable into said slot for supporting one of said spring strips, and upper clamping blocks movable downwardly upon the formed spring for clamping it on said lower clamping block, said block being retractable after the spring is bent to permit the bent spring to fall from the slot.

3,022,805
METHOD OF FASTENING WIRE TO A SOLDERING TAG
Inge Gunnar Pilskär, Enskede, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 8, 1957, Ser. No. 695,388
Claims priority, application Sweden Dec. 6, 1956
1 Claim. (Cl. 140—93)



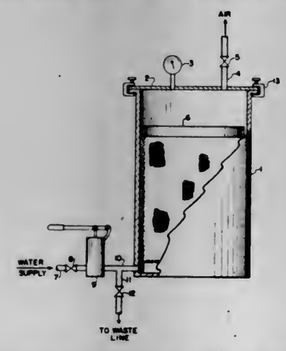
A method of fastening a wire to a soldering tag having an outer bending edge and an opening spaced inwardly therefrom, said method comprising the steps of: placing the wire to be fastened upon said bending edge with the free end of said wire extending outwardly beyond said bending edge a distance not greater than the distance between said bending edge and the innermost extremity of said opening, exposing the two wire portions extending on opposite sides of said bending edge to an inwardly directed pressure force from a pressure tool so as to press each of said wire portions at the same time against a respective tag surface along a section of the wire, and thereafter pressingly sliding the respective legs of said pressure tool along the wire on each tag surface toward said opening to press successive wire sections against the tag surface until passing the outermost edge of the opening so as to subject the wire section of each wire portion adjacent to said edge to a deformation.

3,022,806
ROUTER DUST GUARD
Elmer F. Johnston, 3114 California St., Oakland, Calif.
Filed Jan. 13, 1960, Ser. No. 2,278
2 Claims. (Cl. 144—252)



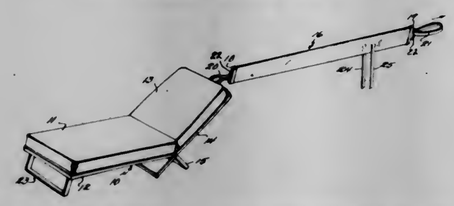
1. In a conventional router which has a housing having dust discharge openings, a dust guard adapted to be connected with a source of vacuum, said dust guard comprising a sleeve having an open upper end and an open lower end and slidably fitting over a lower portion of the router housing about the router opening in the router housing for easy assembly and disassembly thereon, a case connected with said sleeve and defining a pocket which is in registry with one of said openings, a means connected with said case by which to attach a source of vacuum so that the dust created by normal operation of the router may be withdrawn through said pocket by the action of the suction applied to said case, said sleeve being made of one piece and having apertures therein through which the handles of the conventional router are adapted to pass for rotatively locking the sleeve to the router housing.

3,022,807
PROCESS FOR INDUCING SHELL SPLITTING IN PISTACHIO NUTS
Felix Bloch, Oakland, Calif., assignor to the United States of America as represented by the Secretary of Agriculture
Filed Nov. 27, 1959, Ser. No. 855,948
3 Claims. (Cl. 146—227)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for splitting the shells of closed-shell pistachio nuts which comprises contacting the said nuts with water under a superatmospheric pressure in the range from about 50 to 250 pounds per square inch gauge pressure for a time long enough to cause splitting of the shells, said time being within the range from about 5 to about 180 minutes.

3,022,808
COLLAPSIBLE COVER FOR THREE-DIMENSIONAL ARTICLES
Julian Silver, Scarsdale, N.Y., assignor to Instant-Fold Products, Inc., New York, N.Y., a corporation of New York
Filed May 13, 1960, Ser. No. 28,914
2 Claims. (Cl. 150—52)



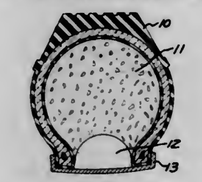
1. In combination, a three-dimensional article, an elongated pleated collapsible cover adapted to be fitted over said article, said cover having a tie strap at one end thereof anchored to one end of the article, said cover having on the opposite end thereof a pull strap for drawing the pleats of the cover together when the cover is being prepared for storage, said pull strap being adapted to be grasped by the hand to snap pull and longitudinally tension the cover into its closed and collapsed condition and with the tie strap remaining anchored to the article, said pleated cover having its pleats fixed together at the ends of the cover whereby upon the cover being expanded over the article it will be drawn inwardly and about the ends of the article so as to conform and roughly contour itself thereto.

3,022,809
NUT AND BOLT LOCK WITH TEETH TO NOTCH THE BOLT THREAD
Edward Kottsieper, Fairfield, Conn., assignor to Sbur-Lok Corporation, Anaheim, Calif., a corporation of California
Filed Jan. 20, 1958, Ser. No. 709,873
3 Claims. (Cl. 151—29)



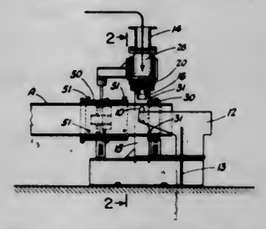
1. In combination with a bolt having threads embodying an uninterrupted helical apex; a nut locking device of stamped sheet-metal construction comprising a circumferentially continuous cylindrical collar, a plurality of axially extending spline-like broaching teeth which are V-shaped in transverse cross section, integral with and projecting radially inwardly from the inner margin of said collar in balanced array on opposite extremities of a diameter thereof, an annular web projecting radially outwardly from the forward end of said collar in a plane normal to the collar axis, and a plurality of clutching jaws of flat tab form bent forwardly from the periphery of said web in a common axial direction in respective positions for clutching engagement with con-circular peripheral surfaces of a nut, said teeth having at their forward ends broaching edges and points for cutting through said thread apex with a broaching action such as to provide a series of notches in said threads, said notches receiving said teeth with a splined connection between them whereby the nut is locked to the bolt threads through said nut-locking device and said splined connection, to resist rotation on the bolt, the inner diameter of said body portion of the collar being larger than the outer diameter of the bolt threads and the inner diameter of said broaching teeth being smaller than said outer thread diameter of said thread apex but larger than the root diameter of the threads, whereby said notches are broached through only the thread apex.

3,022,810
DEFLATION-PROOF TIRES
Donald M. Lambe, 21118 Recreation Drive, St. Clair Shores, Mich.
Filed Aug. 3, 1960, Ser. No. 47,324
7 Claims. (Cl. 152—157)



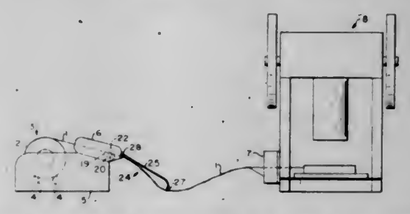
1. A deflation-proof resilient foam filling for a pneumatic tire, comprising a multiplicity of minute individual closed cells containing a gas under pressure, said cells being suspended in a matrix of rubber-like material, the whole having substantially a uniform density throughout, the pressure of the gas contained in said cells being sufficient to cause said resilient foam filling to exert a predetermined superatmospheric pressure against its surroundings.

3,022,811
MACHINE FOR THE MANUFACTURE OF TUBE NECKS ON HEADERS
André Huet, Paris, France, assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,606
3 Claims. (Cl. 153—2)



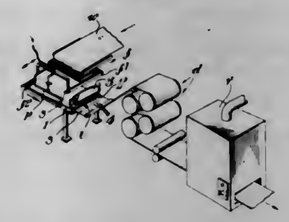
1. Apparatus for forming tubular necks on a hollow cylindrical work-piece by means of a punch and die comprising: a fixed punch disposed in upright relation above the base; means supporting the punch so arranged that one end portion of the work-piece may be slipped over the punch; a matrix die for cooperating with the punch to form and shape a tubular neck on the work-piece; means for supporting the die above the work-piece and punch; reciprocable means for moving the die downwardly on said support to engage it with the outer wall of the work-piece and force the latter onto the punch to form a tubular neck; a ring support for receiving the said end portion of the work-piece; means for securing the work-piece to said ring; and means located in a position axially of the work-piece beyond the punch and die for mounting said ring for vertical reciprocation with respect to said punch.

3,022,812
FEED CONTROL MEANS
Alvin F. Groll, Box 347, Napoleon, Ohio
Filed Feb. 21, 1957, Ser. No. 641,665
2 Claims. (Cl. 153—88)



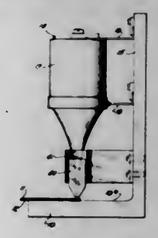
1. Apparatus for straightening strip stock and feeding it to a machine and feed control means for the apparatus comprising, in combination, a cradle for rotatably mounting a coiled supply of strip stock, a plurality of straightening and feeding rolls, drive means including a motor for driving said rolls to move strip stock through the apparatus, a brake for the drive means, brake operating means, means for sensing the length of strip stock between the apparatus and the machine, motor control means for actuating said motor to feed stock from said apparatus to said machine in response to the presence of less than a given amount of strip stock as sensed by said sensing means, machine control means for actuating said machine to utilize strip stock and means for actuating said brake operating means to a brake releasing state in response to either said actuated motor control means or said actuated machine control means..

3,022,813
METHOD OF MAKING BONDED NON-WOVEN FABRIC FROM TEXTILE FIBERS
Benjamin Marshall Glover, "Ashgarth," Bruntcliffe Road, Morley, near Leeds, England
Filed July 24, 1958, Ser. No. 750,730
Claims priority, application Great Britain July 25, 1957
2 Claims. (Cl. 156—148)



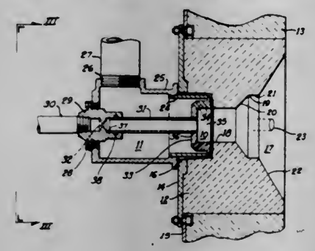
1. A method of manufacturing a bonded, non-woven assembly of layers of textile fibers to form a unitary, multiply non-woven fabric having a fibrous hairy exterior on both outer surfaces, comprising forming a continuous web of sliver from said textile fibers, folding said web on itself by alternating movement to build up a plurality of sliver layers, constituting the intermediate layers of said assembly, spraying the layers forming the intermediate layers during said folding step with a bonding agent, facing the opposite sides of said intermediate layers with a web formed of unbonded and unimpregnated sliver, needling the assembly of outer unbonded facing layers and the intermediate bonded layers with a plurality of smooth sided, thin needles each formed with longitudinal grooves on opposite sides extending to the tip thereof and terminating in an inverted U at the end of the groove at the needle tip, the reciprocating movement of the needles intermingling the horizontally laid fibers in the sliver layers by catching the fibers in the inverted U and carrying them into adjacent layers, and thereafter drying the assembly to set the bonding agent.

3,022,814
METHOD AND APPARATUS FOR SONIC BONDING
Albert G. Bodine, Jr., Van Nuys, Calif. (13120 Moorpark St., Sherman Oaks, Calif.)
Filed Feb. 4, 1957, Ser. No. 637,941
20 Claims. (Cl. 156—73)



1. The method of bonding two thermoplastic bodies to one another that comprises: placing the bodies in contact with one another sonically, vibrating contacting portions of the bodies to generate heat therein until the contacting surfaces of the bodies become soft and tacky and fuse to one another, and simultaneously cooling the outer surface of at least one body to induce a flow of heat away from the fused surfaces of the bodies, then terminating the vibration, and completing the cooling of the bond under compression.

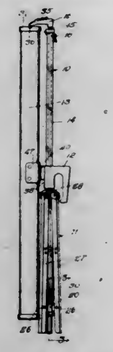
3,022,815
BURNER MECHANISM
Frederick S. Bloom, Mount Lebanon Township, Allegheny County, and Walter Rudin, Baldwin, Pa.; said Rudin assignor to Bloom Engineering Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1958, Ser. No. 725,349
3 Claims. (Cl. 158—109)



1. In a port mix radiant burner mechanism for a furnace or the like, apparatus comprising, in combination, a port member for said furnace or the like having a port with a refractory port surface and a port base opening toward the rear thereof through which a burner discharges, said refractory port surface extending substantially from said port base opening to the front of said port member, an annular recess formed in said refractory port surface of larger diameter than said port base opening and between said port base opening and the inner portion of said port, said annular recess being reentrant relative to the adjoining portion of said refractory port surface inwardly of said annular recess, said refractory port surface being relatively widely diverging and substantially uninterrupted inwardly of said annular recess, a tubular burner in alignment with and rearwardly of said port base opening, said burner having a fixed substantially closed front end member positioned rearwardly of said annular recess, inwardly directed combustion air passageways extending through said front end member and spaced around the axis of said burner, said combustion air passageways having discharge ends adapted to discharge tangentially relative to a circle described about said axis, said closed front end member of said burner having a rearwardly extending recess intercepting said discharge ends of said combustion air passageways and a fuel opening extending through said member, fuel supplying means connected to said fuel opening, means to supply combustion air to the interior of said burner exteriorly of said fuel supplying means, and means to supply fluid fuel to the interior of said fuel supplying means, whereby combustion air and fuel commingle on the recessed side of said front end member of said burner to provide a whirling stable flame to hug said member and spread out over said surface of said port.

3,022,816
PORTABLE MOVIE SCREEN
Edward J. Petrick and Russell E. Petrick, Park Ridge, Ill., assignors to Knox Manufacturing Company, a corporation of Illinois
Filed Mar. 13, 1959, Ser. No. 799,286
11 Claims. (Cl. 160—24)

1. A portable movie screen comprising: an upright standard for supporting the screen, said standard including an elongated tubular member and an extension rod, the extension rod telescoping with an end of the tubular member; first means normally urging said extension rod outwardly of the tubular member when the extension rod is in telescoped position; clamping means operable between the tubular member and the extension rod for selectively varying the position of the extension rod with respect to the tubular member; a screen casing swingably mounted on said standard for movement between a closed position parallel to the standard and an open position perpendicular to the standard, the extension rod having its free end adapted to engage an adjacent end of the screen



casing when in closed position to retain the screen casing parallel with the standard; and second means urging the casing toward open position when the clamping means is released to permit outward projection of the extension rod and release of the screen casing so that said screen casing will swing to open position.

3,022,817
THREE-WAY DOUBLE GARAGE DOOR
Paschal P. Cafardi, 928 Heberton Ave., Pittsburgh 6, Pa.
Filed July 22, 1958, Ser. No. 750,135
16 Claims. (Cl. 160—113)

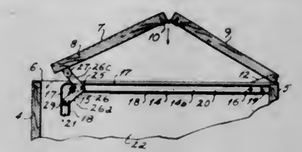


1. A roll top door construction which comprises a vertically partitioned door, said door being partitioned into a plurality of door sections with a support section positioned between adjacent door sections, means positioning said support section for movement simultaneously relative to both said adjacent door sections, means on said support section for guiding one edge of each of said adjacent door sections when they are raised and lowered, guide means adjacent the other edge of each of said adjacent door sections for raising and lowering said door sections, and means for unitarily raising and lowering said support section with said door sections.

3,022,818
DOORWAY CLOSURE
Charles A. Rolfe, Longview, Wash., assignor to International Paper Company, New York, N.Y., a corporation of New York
Filed June 30, 1960, Ser. No. 40,068
1 Claim. (Cl. 160—206)

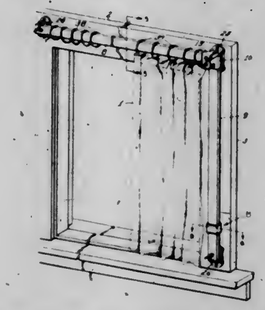
In combination with a doorway frame having a head, a sill, two uprights, and an exterior surface, the head having an underside, an L-shaped guide track having an upper side, a lower side, a first leg, and a second leg, the upper side being abuttingly secured to the underside, the lower side being provided along its edges with downwardly depending flanges, the first leg being disposed parallel to and inwardly of the exterior surface, the second leg being disposed perpendicular to and projecting inwardly from the exterior surface adjacent one upright,

two rollers journaled for rotation movably disposed between the flanges, a bell crank having a first arm, a second arm, and an elbow, the first arm and the elbow being provided with upwardly extending roller journalling means and the two rollers being mounted on the journal-



ling means and a door comprising two hingedly connected sections positioned on and foldable outwardly from the exterior surface, one section being pivotally connected to the second arm, the other section being pivotally connected to the other upright.

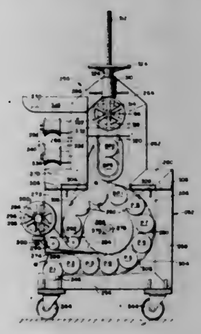
3,022,819
CURTAIN MOUNTINGS
Andrej Lampret, 113 Wolseley St., Toronto, Ontario, Canada
Filed Aug. 24, 1960, Ser. No. 51,655
7 Claims. (Cl. 160—345)



7. A curtain mounting comprising endwise registering, pivotally connected horizontal and vertical pull cord housing sections adapted for attachment to the top horizontal and one vertical side frame, respectively, of a window, an endless pull cord operating lengthwise within said housing sections over idle sheaves mounted in the outer ends of said sections, respectively, idle sheaves positioned at the meeting ends of said horizontal and vertical housing sections providing horizontal runs and vertical runs of said pull cord equi-spaced throughout the combined length of said sections, and a manually operable slider adjustable on said vertical housing section and having fixed connection with one run of said pull cord for effecting and regulating the lengthwise movement of said pull cord, a curtain ring slidable along said horizontal housing section and having fixed connection with one horizontal run of said pull cord, and a curtain connected at one of its top edges to said curtain ring.

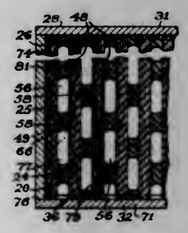
3,022,820
DEVICE FOR DRAPING FOURDRINIER WIRE
Harry H. Hart, Centerville, Del., assignor to John Inglis Co. Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed Mar. 9, 1959, Ser. No. 798,074
11 Claims. (Cl. 162—273)

1. A Fourdrinier wire-draping device for handling a plurality of wire-supporting poles and a Fourdrinier wire bundle of the type including a pair of adjacent inside and outside bundle poles having an endless Fourdrinier wire wrapped therearound comprising a pair of end frames, means extending between the upper portion of said end frames only rigidly securing the same together in horizontally spaced relation so as to receive the wire therebetween, means operatively connected with said end frames for engaging an overhead hoist to suspend said end frames from the hoist means on said end frames for receiving opposite ends of the adjacent bundle poles of the bundle



and for supporting the same for rotation about a longitudinally extending axis to pay out the wire wrapped therearound in a direction extending downwardly from the bundle poles, and means on said end frames disposed below said bundle pole receiving and supporting means for supporting the ends of a plurality of wire-supporting poles within the downwardly extending portion of the endless wire payed out from said bundle poles to provide removal thereof by translational movement away from said end frames.

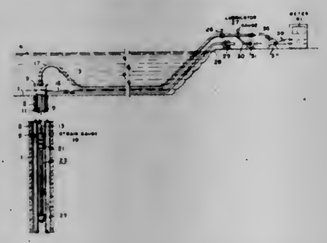
3,022,821
SUCTION BOX COVER
Henry J. McArdle, Bellows Falls, Vt.
Filed Jan. 5, 1959, Ser. No. 785,069
2 Claims. (Cl. 162—374)



1. A suction box cover block adapted to be assembled with identical blocks into a suction box cover, said block comprising a cross strip of uniform, rectangular cross section adapted to extend from one edge of a suction box to an opposite edge thereof; a plurality of elongated filler strips equidistantly spaced apart along one side face of, and in parallelism with, said cross strip from one end thereof to the other, each said filler strip being equal in height with said cross strip and of uniform rectangular cross section, a layer of adhesive between one side face of each filler strip and the adjacent side face of said cross strip supporting and adhesively uniting said filler strips thereon, both said cross strips and said filler strips being

formed of fabric reinforced plastic material with the fabric edges thereof uppermost and with the upper edges thereof in the same flat plane.

3,022,822
METHOD OF MANIPULATING WELL TOOLS
Peter R. McStravick and Samuel E. Loy III, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 21,312
3 Claims. (Cl. 166—4)



1. In a well in the earth having a casing extending substantially the depth of the well, having a tubing string arranged in said casing with a lower open end extending to a predetermined level, and having first and second substantially horizontal flow lines extending from said tubing string and said casing, respectively, to a remote operating location with the first horizontal flow line having a section of short radius connected to the tubing string, the method comprising: hydraulically pumping a well tool at the end of a flexible line into the first horizontal flow line and down the tubing string; sensing the stress in the flexible line at the tool, and producing electrical signals indicative of the stress sensed in the flexible line; transmitting the electrical signals to the operating location; varying the hydraulic pressure applied to the first horizontal flow line to maintain the stress in the flexible line below a predetermined stress in accordance with the electrical signals received at the remote operating location while pumping the tool through the first flow line and down the tubing string; reversing fluid pressure on the tool by hydraulically pressurizing the casing through the second flow line; and maintaining the stress in the flexible line between the operating location and the tool above a predetermined stress while said tool is moving up the tubing string and out the first flow line.

3,022,823
CEMENTING MULTIPLE PIPE STRINGS IN WELL BORES
Joseph A. Caldwell and Bryan E. Morgan, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Sept. 30, 1960, Ser. No. 60,252
6 Claims. (Cl. 166—21)

1. In the multiple tubingless completion of wells in the earth wherein at least two side-by-side production pipe strings of different lengths coextend into a well bore to different depths for the purpose of producing earth fluids from different earth formations traversed by said well bore, the method comprising: injecting cement down the longest pipe string and withdrawing well bore fluid displaced by the cement into the shortest pipe string at a level above the uppermost productive earth formation to be produced until the bottom of the well bore is filled with cement to a level above the upper interface of the uppermost earth formation to be produced; closing said shortest pipe string to entry of well bore fluids thereinto; and lowering said shortest pipe string into the cement



in the borehole until it is in the position in the well bore which it is to occupy when earth fluids from the uppermost earth formation are being produced.

3,022,824
METHOD AND COMPOSITION FOR CEMENTING WELLS
George W. Binkley, Bellaire, and Leon Haynsworth Robinson, Jr., Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,636
10 Claims. (Cl. 166—31)



1. A water-resistant composition which comprises a dry mixture of hydratable cement, a liquid hydrocarbon having a viscosity from about 1.5 to about 400 centipoises at 60° F. and boiling in the range from about 100° to about 800° F. in an amount from about 0.1% to about 10% by weight based on the cement and from about 0.01% to about 10% by weight based on the cement of a salt having a HLB in the range from about 0 to about 8

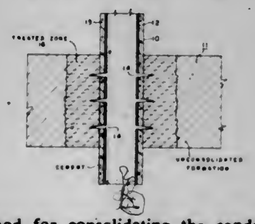
which causes preferential wetting of said cement with said liquid hydrocarbon.

6. A method of cementing wells which comprises forming a water-resistant composition comprising a dry mixture of hydratable cement, a liquid hydrocarbon having a viscosity from about 1.5 to about 400 centipoises at 60° F. and boiling in the range from about 100° to about 800° F. in an amount from about 0.1 to about 10% by weight based on the cement and from about 0.01% to about 10% by weight, based on the cement, of a salt having a HLB in the range from about 0 to about 8 which causes preferential wetting of said cement with said liquid hydrocarbon, introducing said composition into a well in a gasiform fluid, and there contacting said composition with an aqueous solution of a salt having a HLB in the range from about 13 to about 40 which causes wetting of said cement with said solution whereby said cement is caused to set in said well.

3,022,825
METHOD FOR SAND CONSOLIDATION

Weldon O. Winsauer and Jack H. Edwards, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed Sept. 8, 1958, Ser. No. 759,511
8 Claims. (Cl. 166—33)



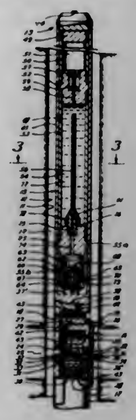
1. A method for consolidating the sands of an incompetent subsurface oil-bearing formation comprising introducing into said formation a mixture of resin-forming liquids comprising a low molecular weight hydroxy aryl compound, a water-soluble aldehyde, and a catalyst, which liquids react and set in said formation and bind the sand particles thereof together; and then overflushing the formation by introducing oil containing a low molecular weight hydroxy aryl compound into the formation following introduction into the formation of the resin-forming liquids and prior to the reaction and setting of the resin-forming liquids, the hydroxy aryl compound in the oil being in an amount sufficient to prevent extraction of the hydroxy aryl compound from the resin-forming mixture by the overflush oil.

3,022,826
EARTH FORMATION FLUID SAMPLER

James W. Kisling III, Houston, Tex., assignor to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed June 4, 1958, Ser. No. 739,865
5 Claims. (Cl. 166—100)

1. In a fluid sample taker adapted to be lowered in a borehole, a sample retaining portion defining a chamber and having a sample-admitting opening; a normally collapsed and flexible enclosure member for receiving a fluid sample disposed in said chamber, said member having inner and outer surface portions, said inner portion in a collapsed position being in substantially contacting relation whereby the volume defined within said inner portion is substantially zero; means to place said inner portion in fluid communication with said sample-admitting opening whereby said enclosure may expand from a collapsed position to an extended position; and hydraulic means associated with the outer surface portion of said enclosure including a fluid and fluid-retarding means

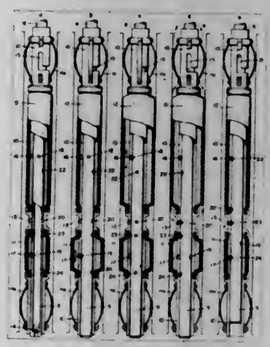


whereby the expansion of said enclosure upon receipt of a fluid sample is regulated.

3,022,827
INTRODUCTION OF FLUID INTO AN EARTH FORMATION

Forrest William Getzen, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Filed July 14, 1958, Ser. No. 748,280
3 Claims. (Cl. 166—187)



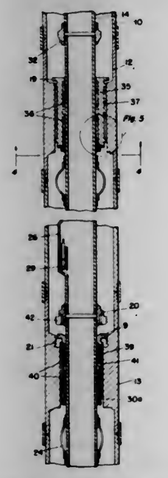
1. Apparatus for introducing fluid into an earth formation penetrated by a well having a filter cake covering an exposed face of said formation which comprises, in combination, a tubing string, a tubular mandrel arranged embraceably and carried on the lower end of said tubing string, said tubing string being rotationally and vertically movable relative to said mandrel, a check valve in the lower end of said tubing string providing flow upwardly but resisting flow downwardly through said tubing string, first and second vertically spaced apart expandable deformable members carried externally by said mandrel, said mandrel and said tubing string each being provided with first, second, and third ports adapted to be placed in correspondence on limited rotational and vertical movement of said tubing string relative to said mandrel, means for limiting rotational and vertical movement of said tubing string relative to said mandrel, the first ports being

arranged in said mandrel and tubing string to provide fluid communication between said tubing string and the interior of the first deformable member on rotation of said tubing string 90° relative to said mandrel, the second ports being arranged in said mandrel and tubing string to provide fluid communication between said tubing string and the interior of the second deformable member on further rotation of said tubing string 90° relative to said mandrel, and the third ports being arranged in said mandrel and tubing string to provide fluid communication between the space and the interior of the tubing string on vertical movement of said tubing string relative to said mandrel, and means for holding said mandrel in said well for movement of said tubing relative to said mandrel.

3,022,828
PACKER ASSEMBLY FOR MULTIPLE COMPLETION WELLS

James W. Hodges, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Oct. 21, 1958, Ser. No. 768,679
9 Claims. (Cl. 166—191)

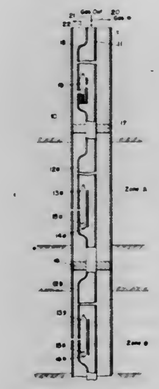


1. A well packing assembly for multiple completion wells comprising a well casing, a plurality of spaced coupling members in the casing each having an internal diameter less than the internal diameter of the casing and with said diameters being progressively smaller from the uppermost to the lowermost coupling member, a well tubing within the casing, a plurality of spaced annular packing elements positioned on the tubing to correspond approximately to the spacing of said coupling members, said packing elements having progressively smaller external diameters from the uppermost to the lowermost element with each being adapted to be positioned within the corresponding coupling member in fluid sealing relationship, and said packing elements and said tubing being relatively movable; abutment means associated with each packing element and engaging its respective coupling member to halt the downward movement of each packing element after such element reaches its fluid sealing position within its corresponding coupling member, and releasable means securing each packing element to the tubing, each of said last-mentioned means releasing in response to the halting of the downward movement of its corresponding packing element to permit the tubing to move downwardly relative to such packing element.

3,022,829
WELL ASSEMBLY FOR REDUCING LIQUID LEVEL IN WELL TUBING

James W. Hodges, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed July 2, 1958, Ser. No. 746,277
9 Claims. (Cl. 166—224)



1. For use in well tubing containing a side pocket mandrel, said mandrel containing a side pocket and having therein an external flow port extending through the pocket wall: an assembly comprising a housing adapted to be positioned in the mandrel side pocket, said housing having a wall passageway for fluid communication with said flow port and having also a valve chamber communicating with said passageway; a valve member slidably mounted in said chamber adjacent said passageway, said valve member having therein a flow channel normally out of alignment with said passageway; a spring in said chamber pushing against one end of said valve member and normally disaligning its flow channel, a ring shoulder in said housing contacting a portion only of the other end of said valve member, the ends of said flow channel communicating respectively with said other end of said valve member and with said chamber, means in the wall of said side pocket and in the wall of said housing providing fluid communication from the interior of the tubing to the valve chamber above said uncontacted portion of said other end of said valve member, whereby application of hydraulic pressure to said uncontacted portion of said valve member moves such member in opposition to said spring to bring said channel into alignment with said passageway; and annular packing means between the housing and said side pocket above and below said port.

3,022,830
TRACTOR DRAFT LOAD CONTROL SYSTEM

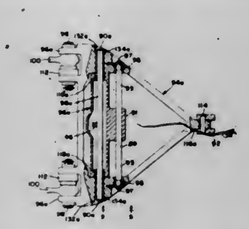
Christian H. Hess, Waterloo, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Original application Apr. 22, 1957, Ser. No. 654,110. Divided and this application July 27, 1960, Ser. No. 45,674

8 Claims. (Cl. 172—7)

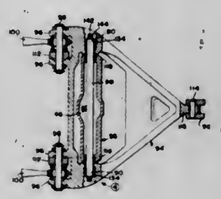
1. For a tractor having power adjusting means for an associated implement and actuating means for activating and deactivating the power adjusting means: draft load control means comprising an elongated inherently resilient beam; support means mounting the beam on the tractor and engaging the beam at one portion and leaving another portion of the beam extending in over-

hanging relation to said support means; implement-connectible draft means connected to said overhanging portion for applying draft load to said overhanging portion to cause same to deflect relative to said one portion; movable signal means connected to the actuating means and engageable with the beam to effectuate said actuating means responsive to deflection of said overhanging portion; and means for automatically increasing the resist-



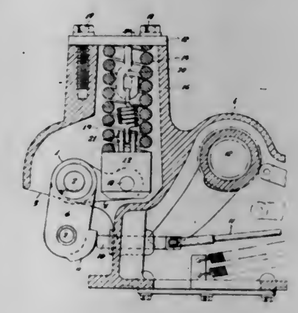
ance of said overhanging portion to deflection as the draft load increases so that responsiveness of the signal part is proportional to draft load, said last-named means comprising an additional resilient element, means mounting said element on the tractor, and a lost-motion connection between said element and the draft-connectible means effective to oppose the draft load upon a predetermined amount of deflection of said overhanging portion.

3,022,831
TRACTOR DRAFT LOAD CONTROL SYSTEM
Christian H. Hess, Waterloo, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Apr. 22, 1957, Ser. No. 654,110
11 Claims. (Cl. 172—7)



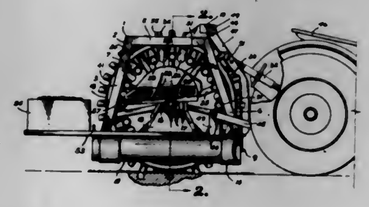
1. For a tractor having power adjusting means for an associated implement and actuating means for activating and deactivating the power djusting means: draft load control means comprising an elongated inherently resilient beam having opposite end portions; support means engaging the beam intermediate said end portions and mounting the beam on the tractor with said end portions overhanging said support means; implement-connectible draft means connected to said end portions for applying draft load to said end portions whereby to deflect said end portions relative to the support means; movable signal means operatively connected to the actuating means and engageable with the beam to effectuate said actuating means responsive to deflection of said end portions; and means on the support means for proportionately engaging the bar respectively closer to said end portions as said end portions are deflected by draft load so as to automatically reduce the overhang of the end portions relative to the support means as the draft load increases so that responsiveness of the signal part is proportional to draft load.

3,022,832
SPRING CONTROL MECHANISM FOR HYDRAULICALLY CONTROLLED IMPLEMENT HITCH
Robert Marindin, Doncaster, England, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 12, 1958, Ser. No. 734,601
Claims priority, application Great Britain May 13, 1957
3 Claims. (Cl. 172—10)



1. A reaction spring arrangement for draft control in a vehicle of the type provided with an implement hitch having a top link having horizontally directed compression and tension forces acting therethrough and a hydraulic implement lifting control means, the improvement comprising a support structure on the vehicle, a movable member mounted on the structure and having a generally horizontal forwardly extending arm and having a generally vertical downwardly extending arm providing an anchorage with the top link on one side thereof and engageable with the hydraulic control means on the other side thereof, a first spring seat being pivotally attached to and atop the forwardly extending arm, a second spring seat on the support structure above said first seat, a first spring disposed between the seats and having its longitudinal axis in a generally vertical position and compressible in an upward direction upon application of the compressive force in the top link, a second spring disposed within and concentric to the first spring and having its longitudinal axis in a vertical position and having an upward portion connected with the second seat and a lower portion connected with the first seat and being placed in tension in a downward direction upon application of a tension force in the top link.

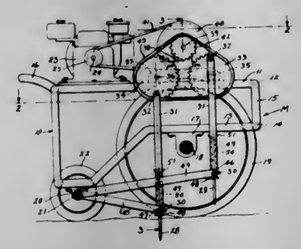
3,022,833
SOD PLUG CUTTING MACHINE
Clinton W. Reaser, 325 E. 27th St., Topeka, Kans.
Filed Apr. 27, 1959, Ser. No. 809,069
2 Claims. (Cl. 172—19)



1. A machine for cutting sod plugs comprising, a wheel having a rim, a plurality of circumferentially spaced cir-

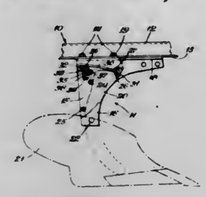
cular apertures in the wheel rim, a tubular member fixed on the wheel rim at each circular aperture and extending radially inwardly therefrom and terminating in an inner portion turned outwardly relative to a side of said wheel, said tubular members each having a through bore with a counterbore extending therein from the wheel rim and in registry with the respective circular aperture, a plurality of tubular digger elements open at each end thereof, said digger elements each having one end portion sleeved in a respective counterbore with the other end of each of said digger elements extending radially and outwardly from said wheel rim, and means removably engaging said tubular member and the respective digger element for securing the digger element to the tubular member, said tubular digger elements each having a bore with a tapered portion adjacent the outer end thereof and terminating in a cutting edge for cutting a cylindrical plug of smaller diameter than the bore in the cutting element and the tubular member remote from said cutting edge whereby plugs are cut and retained in the tapered portion of the bore and subsequent plugs cut by the respective digger element force the first cut plug into the bore remote from the tapered portion for gravitational movement from the open end of the outwardly turned portion of the respective tubular member upon inversion thereof.

3,022,834
TURF AND LAWN CULTIVATOR
William A. Ruka and William L. Caudill, both of 601 Ariana, Rte. 3, Box 600, Lakeland, Fla.
Filed July 13, 1959, Ser. No. 826,632
1 Claim. (Cl. 172—21)



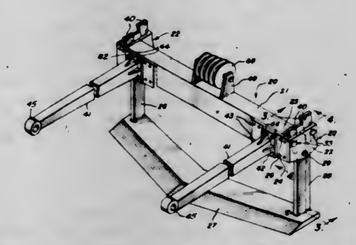
A turf and lawn cultivator comprising a frame having its forward end arched, a transversely extending axle carried by the arched portion of the frame, ground wheels carried by said axle, a rear axle carried by the rear end of the frame, ground wheels of a less diameter than the first mentioned ground wheels carried by the rear axle, transversely extending spaced parallel operating bars disposed below the arched portion of the frame and on opposite sides of the first mentioned axle, said bars being straight and extending substantially the full width of the frame, a plurality of ground working spikes carried by each bar, a pair of crank wheels rotatably mounted on the frame and arranged above the bars and the first mentioned axle, means for synchronously rotating the crank wheels including an engine mounted on said frame, crank pins carried by the crank wheels, depending crank rods rockably mounted upon the crank pins and extending downwardly from the crank wheels to the bars and connected at their lower ends to said bars, and forwardly extending links rockably mounted upon the rear axle and pivotally connected to the terminals of the bars, said links guiding the movement of the bars and spikes during the raising and lowering of the bars by the crank wheels and crank rods, said links being movable in a vertical plane at substantially right angles to the up and down movement of the crank rods.

3,022,835
SPRING TRIP FOR PLOWS
Marvin D. Jennings, Naperville, Ill., assignor to International Harvester Company, a corporation of New Jersey
Continuation of abandoned application Ser. No. 595,524, July 2, 1956. This application Feb. 23, 1960, Ser. No. 10,512
16 Claims. (Cl. 172—269)



1. In a spring trip device for an implement having a support and a movable part mounted thereon for movement relative to the support from an operating position to a tripped or non-operating position in response to forces acting on said part, a spring having a main body portion, means connecting one end of the spring to the support, the main body of said spring extending from the connection thereof to the support in the direction of movement of said movable part to its tripped position, and means operatively engageable with said movable part to hold it against tripping comprising a hook member at the other end of said spring projecting from said body portion at an angle with respect to a line through said connecting means and said hook member and disposed in the path of tripping movement of the movable part, and an intermediate member carried by the support between the hook and the movable part through which force is transmitted from the movable part to said hook member in a direction to open said hook member, the angle of said hook member with respect to said line through said connecting means and said hook being sufficient to keep the movable part from tripping under normal operating conditions and increasable to release the intermediate member from engagement with the movable part.

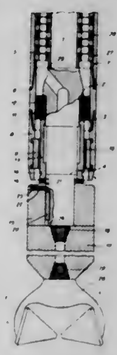
3,022,836
LAND CLEARING IMPLEMENT
William O. Bechman, Chicago, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 30, 1959, Ser. No. 843,433
4 Claims. (Cl. 172—698)



1. An implement including a frame comprising a transversely extending supporting beam, a pair of substantially parallel draft arms supported on said beam and projecting laterally horizontally with respect thereto, said draft arms having pivot ends adapted to be pivotally connected to a tractor whereby said frame may be raised and lowered with respect to the ground, means adjustably connecting said draft arms to said beam whereby said draft arms may

be moved laterally with respect to said beam, a pair of supporting structures connected to opposite ends of said beam, said structure each including a pair of laterally spaced upright plates connected together to form a vertically extending slot, a plow blade disposed below said beam, a pair of upright legs connected to said blade, means on said structures pivotally connecting said legs between said plates whereby said legs and blade may be secured in a plurality of earth engaging positions, each of said legs having an upper tapering edge portion and an upper substantially straight portion within said slots, adjustable means on each structure including a pair of triangular shaped wedge elements engaging said tapering edge and straight portions within said slots, and a pair of rotatable members journalled in said plates, each of said rotatable members having a flat face engaging said wedge elements to maintain the same in engagement with the upper portions of said legs.

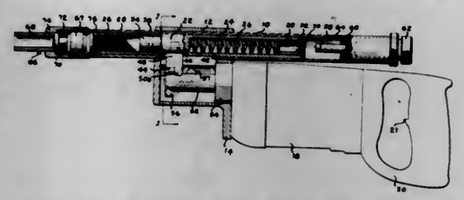
3,022,837
MOTORS FOR SUBTERRANEAN WORK
Wladimir Tiraspolsky, 69 Ave. Victor Cresson, Issy-les-Moulineaux, France
Filed Oct. 14, 1957, Ser. No. 690,134
Claims priority, application France Oct. 12, 1956
7 Claims. (Cl. 175—107)



1. In a motor for subterranean work such as a drilling turbine as those used for the exploitation of oil fields, including a body, a shaft mounted axially in said body, a stack of rotor parts carried by said shaft, a stack of stator parts housed in said body, and a tool fixed to the lower end of said shaft; a primary sleeve fixed to said body, a shoulder provided at the upper end of said primary sleeve, said stator parts resting upon said shoulder, a secondary sleeve removably secured on said primary sleeve, a radial bearing in said secondary sleeve, a wear-taking lining removably mounted on the lower end of the shaft within said secondary sleeve, and removable holding means secured on the lower end of said shaft maintaining said lining upon said shaft.

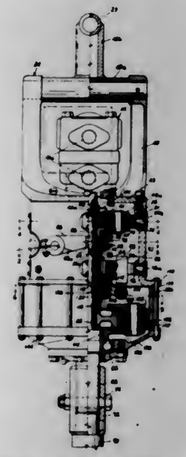
3,022,838
PORTABLE HAMMER
Wallace F. Mitchell, Arlington Heights, Ill., assignor to The Thor Power Tool Company, a corporation of Delaware
Filed Feb. 5, 1959, Ser. No. 791,457
2 Claims. (Cl. 175—147)

2. An impact delivering device comprising, in combination, a housing having an elongate cavity therein, means providing an abutment at the rearward end of said cavity, a tool holder supported at the forward end of said cavity, a piston and a compression spring carried thereby mounted for sliding reciprocal movement in said cavity, said piston having an elongate boring extending into the rearward end thereof receiving said compression spring, a keeper for said spring slidably mounted in said boring and biased rearwardly thereof by said spring, and means providing a retainer in said boring for limiting the rearward movement of the keeper, said housing supporting said abutment and said tool holder at a distance one from the other which exceeds the overall length of the piston



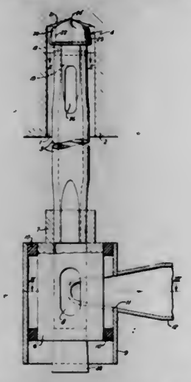
together with the spring carried thereby, and drive means for actuating said piston rearwardly towards said abutment and for releasing said piston at a predetermined rearward position in said cavity, said keeper being aligned with said abutment such that upon the piston being driven rearwardly by said drive means the abutment actuates the keeper to compress the spring, the compressed spring upon release of said piston propelling the piston in unison therewith forwardly to the tool holder to deliver an impact thereto.

3,022,839
EARTH BORING APPARATUS
Herman J. Troche, Fairview Park, Ohio, assignor to Holan Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 7, 1959, Ser. No. 825,610
10 Claims. (Cl. 175—201)



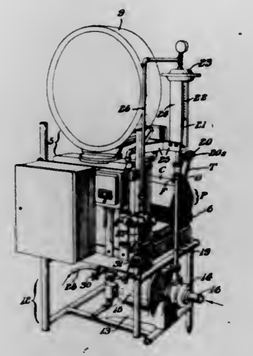
3. A multiple-speed compact geared transmission unit adapted for use with a portable earth boring auger for driving the latter at various speeds comprising in combination, a housing, a transmission output shaft adapted for connection to said earth boring auger, said transmission unit being adapted to be activated by a high speed rotary fluid powered motor, a first geared speed reduction unit rotatably mounted on said transmission shaft and adapted to be coupled to said motor, a second geared speed reduction unit rotatably mounted on said transmission shaft, a shifting coupling element normally coupling said first speed reduction unit to second speed reduction unit, said coupling element being shiftable into coupling relation between first speed reduction unit and said transmission shaft, control means movable from an inactive to an active position for so shifting said coupling element, said control means including resilient means for yieldably resisting shifting of said coupling element and for automatically returning said control means to inactive position and thus returning said coupling element into coupling relation between said first speed reduction unit and said second speed reduction unit, a third speed reduction unit drivingly coupled to said transmission shaft, said third speed reduction unit including means for providing a medium torque normal digging speed for said transmission shaft and a higher torque lower digging speed for said transmission shaft, a second shifting coupling element coacting between said second speed reduction unit and said third speed reduction unit for driving said transmission shaft at either of its selected digging speeds, control means for actuating said second coupling element into either of its coupling positions, and means for yieldably retaining said second control means in its selected position.

3,022,840
DUST COLLECTING ROTARY ROCK DRILL
Edward J. Hohos and George L. Alston, Pittsburgh, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 19, 1959, Ser. No. 800,530
3 Claims. (Cl. 175—324)



1. A dust collecting rotary rock drill for use with rotary drilling means comprising a rotary tubular drill stem having a circular body and having one end portion provided with circumferentially spaced flat side areas spaced inwardly from the projected outer surface of said body, the opposite end of the stem being formed for connection with suction apparatus and rotary driving means, and a rotary drill bit having a base rigidly mounted in said end portion of the stem for rotation thereby, the bit projecting laterally from the stem and being provided with a plurality of uniformly spaced cutting edges extending lengthwise of the stem, the stem having in said end portion uniformly spaced longitudinal slots corresponding in number to the number of said lengthwise cutting edges on the bit, each slot being located in one of said flat areas and being narrower than the inside of the stem but having an unobstructed area at least as great as the internal cross section of the stem, and each of said cutting edges of the bit being located along a line extending lengthwise of the stem between an adjacent pair of said slots.

3,022,841
FILLING MACHINES
Claude N. Campbell, Jr., Edgewater Park, N.J., assignor to Weyerhaeuser Company, a corporation of Washington
Filed June 2, 1958, Ser. No. 739,354
1 Claim. (Cl. 177—80)

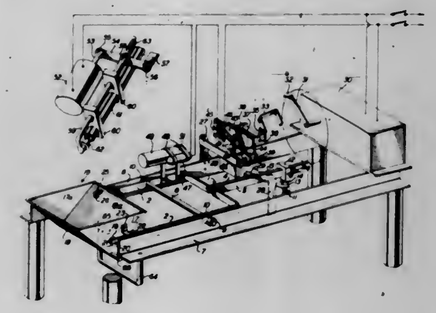


In a filling machine, the combination of a weighing scale having a platform for placement thereon of a container to be charged with a liquid, a pointer for coordination with an indicator dial, and an operating connection between the platform and the pointer; a frame upon which said scale is mounted; a source of liquid supply; a continuously driven low pressure pump for drawing liquid from said source of supply; said pump being mounted on said frame below said scales; a motor for driving said pump operatively connected to said pump; a first delivery conduit leading from said source of supply to said pump, a valve in said first conduit for regulating the flow through said conduit, a second delivery conduit leading from the pump and terminating in a normally closed valve adjacent the scale platform at a level thereabove and operable by a pneumatic diaphragm motor; a housing mounted on said frame, said housing supporting said diaphragm motor; a pipe leading from a compressed air source to the diaphragm motor; a solenoid-operable valve spring biased to a normally closed position in the air pipe; said pipe further including a pressure gauge, a pressure regulator, a shutoff valve, and a trap between said regulator and said solenoid-operable valve; a normally-closed control switch positionally adjustable about the path of the dial pointer and adapted to be opened by a magnet carried by the pointer; a relay having a coil and switch terminals; a manual start switch; an electrical circuit including said start switch, relay coil and normally-closed control switch connected in series; an auxiliary circuit connecting said relay switch terminal across said manual start switch; means connecting the solenoid of said solenoid-operable valve in said electrical circuit for electrical energization whenever said relay coil is electrically energized; whereby upon closing the start switch the relay is operated and the solenoid-operated valve is opened for actuation of the diaphragm motor to open the liquid discharge valve and the latter is held open after release of the start switch, and whereby the liquid discharge valve is automatically closed upon eventual opening of the control switch by the magnet on the pointer, a normally-closed manual stop switch connected in series with said manual start switch; a flexible outlet nipple attached to the outlet of said normally-closed valve.

3,022,842
AUTOMATIC BATCH WEIGHING DEVICE FOR FILLING OR UNLOADING

Leo Mafrica, Pittsburgh, Pa., assignor to the United States of America as represented by the Secretary of the Interior

Filed Dec. 19, 1958, Ser. No. 781,811
5 Claims. (Cl. 177—80)
(Granted under Title 35, U.S. Code (1952), sec. 266)

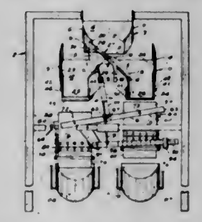


1. Apparatus of the character described for periodically removing a predetermined amount of fluent matter from a container, which comprises, a weighing beam mounted for pivotal movement about a horizontal axis, a receptacle at one end of said beam, electrical switch means including a pair of contacts adapted to make contact at predetermined time intervals, a tilt switch in series circuit with said electrical switch means, said tilt switch being mounted on the weighing beam, whereby a predetermined amount of pivotal movement of the weighing beam causes the tilt switch to open, outlet means connected to said container, valve means in said outlet means, means connected in circuit with said electrical switch means and said tilt switch for opening and closing said valve means, whereby closing said circuit opens the valve means and permits fluent material to leave the container, while opening said circuit closes the said valve means, means for emptying the weighing hopper after it has a predetermined weight of material, and means for thereafter opening said electrical switch means.

3,022,843
AUTOMATIC LOT WEIGHING MACHINES

Clyde E. Watson, 4742 W. Mitchell Drive, and Harold Watson, 6102 N. 14th St., both of Phoenix, Ariz.

Filed Apr. 19, 1960, Ser. No. 23,292
4 Claims. (Cl. 177—98)



1. A weighing machine for weighing lots of flowable material automatically and rapidly comprising

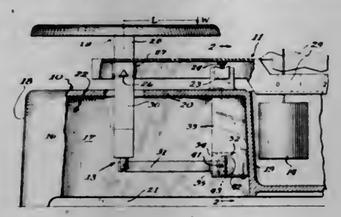
a supporting frame, having a back and a front, a forwardly and downwardly inclined inlet chute having a flat bottom and upstanding side edges; a slanting diverting chute having a single channel inlet end disposed to receive material from said inlet chute and having a flat bottom and upstanding side edge plates and centrally disposed splitter baffles dividing the lower end portion of the chute into right and left chute parts; cut off gates closing the lower ends of said right and left chute parts alternately; a diverter plate shaft operably disposed in said slanting diverting chute forward of the splitter baffles; a pivotally mounted diverter baffle plate disposed in said diverting chute and operating on said shaft below the open lower end of said inlet chute by swinging from side to side to alternately divert material flowing from said inlet chute into either of said right and left diverter chute parts while simultaneously closing the inlet chute from the opposite diverter chute; mechanism interconnecting said diverter baffle plate shaft and said cutoff gates arranged so that the gate at the lower end of the chute into which material is being diverted will be open when material is being diverted into said chute and conversely the gate into which material is not being diverted will be closed; a balancing frame pivotally mounted in said supporting frame below the lower ends of the right and left chute parts of said diverter chute; weighing containers, pivotally supported in said balancing frame and hanging vertically below the lower ends of each of said right and left chutes respectively, and disposed to receive material from said chutes; release doors in the bottoms of said weighing containers; mechanism including latch releasing solenoids operated by tilt switches on said balancing beam to release material held in each of said containers when either container moves downward, after balancing; pivotally mounted delivery chutes disposed below the release doors of said weighing containers, a centrally positioned upwardly extending balance member on said balance frame, havings its upper end portion disposed to move in a double horn piece on said diverter plate shaft, having downwardly extending contact arms with upwardly extending fingers on their ends; an arcuate path; an upwardly and rearwardly extending finger on said upwardly extending balance member adapted to engage either finger on said horn contacting arms to move said baffle plate to angular positions according to the tilted position of said balancing frame; a weighing beam disposed below said balance frame, pivoted at one end, at a point off center relative to the center of said balance frame and provided with a sliding weight on its free end; and an operating rod connecting the weighing beam at a point below the center of the balance frame, to the end of the upwardly extending balance member disposed to lift said weighing beam when said balancing frame moves to a horizontal balancing position and said upwardly extending member moves to the highest point of its arcuate travel.

3,022,844
SHIFT ERROR ADJUSTMENT FOR BEAM BALANCES OF STABILIZED PAN TYPE

Heinz Gabloffsky, Chicago, Ill., assignor, by mesne assignments, to Cenco Instruments Corporation, Chicago, Ill., a corporation of Delaware

Filed June 6, 1956, Ser. No. 589,729
2 Claims. (Cl. 177—190)

1. In a balance including a base providing a main fulcrum, a beam pivoted at an intermediate point on said main fulcrum and providing a pan fulcrum adjacent one end, a pan assembly having an upright carrying a pan at its upper end and pivoted at an intermediate point on said pan fulcrum, and a substantially horizontal stabilizing link mounted at one end in relative pivotal relation to said base and at the other end in relative pivotal relation to the lower end of said upright, said link forming one leg of a four-sided stabilizing system with the other legs being formed by said upright, said beam and said base; the improvement wherein said base includes a vertically extending center post structure arrangement underneath said main fulcrum and terminating at its bottom end in a mounting socket provided by intersecting slots, one of which opens downwardly and the other of which opens transversely, and a rotatable member

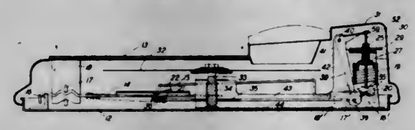


mounted in said socket and rotatable therein and including an eccentric portion pivotally connected to the other end of said link such that rotation of said member varies the vertical position of the link to bring the line of action of the link into substantial parallelism with the line of action defined between said main fulcrum and said pan fulcrum, and means fixed to said base for holding said member in any selected rotational position within said socket.

3,022,845
BATHROOM SCALES

Mike A. Provl, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois

Filed Apr. 28, 1958, Ser. No. 731,283
24 Claims. (Cl. 177—230)



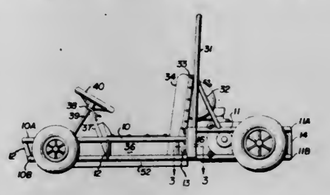
3. A weighing scale comprising a base, weighing levers fulcrumed thereon, a platform movably supported above said base on said levers, a coiled spring serving as the weighing spring mounted on said base and connected with said weighing levers to resist downward deflection thereof under weight applied to the platform, weight indicating means, and means for operating said weight indicating means movable in response to downward deflection of said weighing levers, said operating means being directly operatively connected with and extending upwardly from the movable end of said spring to move in a straight line the same amount as it moves in each weighing operation and having direct low friction pivotal connection with the weight indicating means, whereby to operate the weight indicating means so as to give an accurate weight indication.

3,022,846
MINIATURE MOTOR VEHICLE

Elvin T. Thompson, Alliance, Ohio, assignor to Lewis Engines, Inc., Alliance, Ohio, a corporation of Ohio

Filed Feb. 13, 1961, Ser. No. 88,709
4 Claims. (Cl. 180—11)

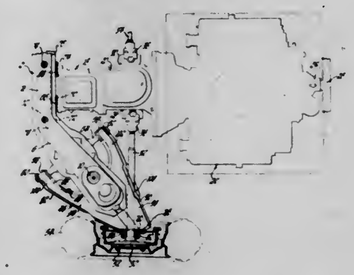
1. A miniature motor vehicle comprising a front frame section and a rear frame section, said front frame section comprising a pair of superimposed substantially U-shaped body members spaced vertically with respect to one another, a floor secured to the lower one of said U-shaped body members, a driver's seat positioned on said floor, steering gear positioned on said floor and extending thereabove, axle brackets secured to said oppositely disposed points on the sides of said front frame section adjacent its forward end, axles pivoted to said axle brackets and ground engaging wheels positioned on said axles, said steering gear engaged on said axles, said rear frame portion comprising a pair of superimposed substantially U-shaped body members having spacing means, and transverse frame members interconnecting the same, journals secured to said rear frame section and an axle rotatably mounted in said journals transversely of said rear frame section and adjacent the rear part thereof and ground engaging wheels on said axle, vertically disposed members secured to the back ends of said U-shaped body members of said front frame section and secondary vertically disposed members secured to the front ends of said U-shaped body members of said rear frame section, fasteners positioned through registering openings in said members normally securing said front frame section and said rear frame section to one another and control means on said front frame section, a tunnel longitudinally of said frame section; said control means being partially disposed in said tunnel and extending therefrom into the area of said rear frame section.



3,022,847
MOTOR VEHICLE CONSTRUCTION

Kai H. Hansen, Detroit, Robert Schilling, Bloomfield Hills, and John McRoberts, Ferndale, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 16, 1959, Ser. No. 840,371
8 Claims. (Cl. 180—64)



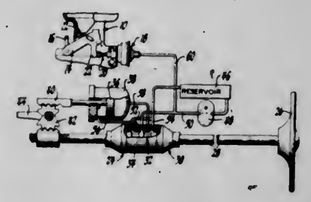
1. In a motor vehicle, a chassis subassembly comprising, a subframe having a unitary engine, transmission and differential mounted thereon, a pair of laterally oppositely directed driving axles universally connected to said differential, a pair of generally triangular laterally spaced wheel suspension control arms pivotally connected to said subframe and extending diagonally rearwardly therefrom in a plane intersecting the axis of each of the adjacent driving axles, each of said control arms terminating in a flange portion surrounding said axle, axle journalling means mounted on said flange, and means forming a hollow passage in each of said arms aligned with said flange providing clearance for vertical deflection of said driving axles.

3,022,848
PROTECTIVE HOOD SHIELD FOR VEHICLES
Bennett John Heiser, 185 W. Sugartree St., Wilmington, Ohio
Filed Sept. 28, 1959, Ser. No. 842,887
3 Claims. (Cl. 180—69)



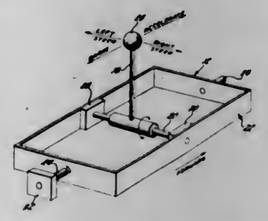
1. A protective shield for protecting the forwardly extending portion of the hood of an automobile comprising a sheet of plastic material formed substantially to the contour of the forwardly directed portion of the hood, the upper edge of the shield being deflected to form an air deflecting portion, the horizontal ends of the shield having dents resting against the margins of the hood, an emblem of the automobile clamping the underlying portion of the shield against the hood of the automobile.

3,022,849
THROTTLE ACTUATOR
Adolph F. Braun, Pittsford, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 22, 1960, Ser. No. 37,886
1 Claim. (Cl. 180—77)



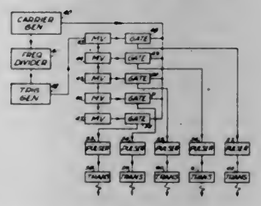
A vehicle including an engine idling speed controlling device comprising a carburetor having a throttle valve, a servo mechanism adapted to operatively engage said throttle valve to move the same in an opening direction beyond its normal idle position, a power steering mechanism, said power steering mechanism including a source of fluid under pressure, conduit means communicating said fluid pressure source with said servo, said servo including casing means, a diaphragm mounted in said casing means and exposed on one side to the fluid pressure in said conduit means, a backing plate concentrically mounted in said casing means on the other side of and proximate to the diaphragm, said plate limiting axial movement of said diaphragm under influence of fluid pressure, a pin axially movable within a central aperture in the backing plate, one end of the pin being engageable with the diaphragm, a stud element slidably mounted in the casing means, a spring urging the stud element into engagement with the pin, and means to increase said fluid pressure to actuate said servo mechanism and move the throttle valve to a more open idling position when said power steering mechanism is operative to create a steering force.

3,022,850
SINGLE STICK MEMBER FOR CONTROLLING THE OPERATION OF MOTOR VEHICLES
Joseph B. Bidwell and Roy S. Cataldo, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 11, 1958, Ser. No. 727,980
4 Claims. (Cl. 180—77)



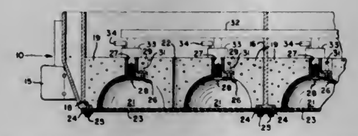
1. A steering system for an automotive vehicle having a pair of dirigible road wheels effective to determine the direction of travel of said vehicle, said steering system comprising a manually actuated control, servo displacement means interconnected with said control for moving said wheels in response to the displacement of said control, signal generating means whose output is proportional to the speed of the vehicle mounted on said vehicle and operatively connected to said servo displacement means to modify the response thereof in accordance with the speed of the vehicle, a mass mounted on said control and responsive to lateral acceleration of said vehicle and effective to oppose manual forces on said control and bias said control in a direction for displacing said wheels in a direction to reduce the amount of lateral acceleration.

3,022,851
SONIC IMPULSE GENERATORS FOR USE IN GEOPHYSICAL EXPLORATION
Arthur F. Hasbrook, Bexar County, Tex., assignor to Olive S. Petty, San Antonio, Tex.
Filed Mar. 31, 1958, Ser. No. 725,282
2 Claims. (Cl. 181—.5)



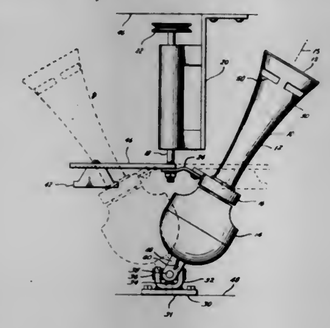
1. Apparatus for use in generating sonic impulses within the earth comprising a source of continuous carrier frequency signal, a plurality of normally non-conducting electronic gates to which the carrier frequency signal is applied, a frequency divider energized by said source to produce a lower frequency signal, a trigger generator actuated by said lower frequency signal to produce trigger pulse output, a plurality of sequentially operating multivibrators triggered by the output from said trigger generator to produce in sequence output gating pulses of duration T and repetition period P, P being not less than T, means applying said output gating pulses to said electronic gates to render said gates conducting, a plurality of pulser circuits connected to the output of said gates, a plurality of transmitting transducers spaced vertically in the earth by a distance equal to VP where V is the velocity of sonic waves in earth, and connecting means for applying the outputs of said pulser circuits to said transducers in vertical order, starting with the transducer nearest the surface.

3,022,852
MEANS FOR PRODUCING A LOW FREQUENCY SEISMIC SIGNAL
George M. Pavey, Jr., Dallas, Tex., assignor to Marine Research Company, Dallas, Tex.
Filed Apr. 8, 1958, Ser. No. 727,089
18 Claims. (Cl. 181—.5)



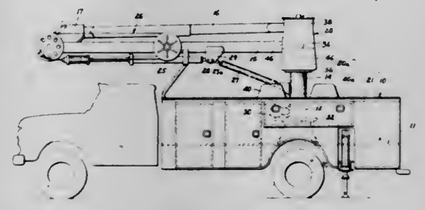
1. In a system for under water seismic prospecting, in combination, a source of low frequency high pressure seismic signals comprising a barge, a massive bottom on said barge, said bottom provided with a plurality of open ended downwardly facing combustion chambers, flexible diaphragm means clamped to said bottom and normally enclosing the open ends of said chambers and in communication with the water subjacent thereto, means including a plurality of ducts connected to said chambers for filling said chambers with a gaseous explosive mixture, and means including a plurality of firing elements disposed respectively within the chambers for firing at will the mixture within the chambers, said bottom having a plurality of exhaust ports therein normally sealed by said diaphragm means and in communication with said chambers when the diaphragm means is suddenly forced downwardly by pressure sufficiently to unseal the exhaust ports as the mixture is fired.

3,022,853
SWIVELING ACOUSTICAL APPARATUS
Harris H. Santl, La Porte, Tex., assignor to Rototone, Inc., a corporation of Texas
Filed July 14, 1958, Ser. No. 748,523
7 Claims. (Cl. 181—27)



1. A swiveling acoustical apparatus comprising, a driver, a horn including an opening at one end directing sound from the driver, supporting means connected to and supporting said horn and driver, rotating means connected to said supporting means for continuously rotating the supporting means and the horn, a swivel joint connected to said driver, and a fixed supporting element, said element rigidly connected to the swivel joint thus prevehting rotation of the swivel joint.

3,022,854
MOBILE AERIAL TOWER
George H. Eckels, Lakewood, and Herman J. Troche, Fairview Park, Ohio, assignors to Holan Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 28, 1960, Ser. No. 46,016
9 Claims. (Cl. 182—2)

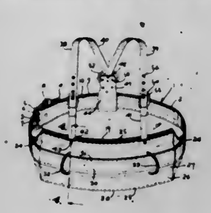


7. In combination, a vehicle providing a base, an aerial tower mounted on said base, said tower comprising a pair of tower sections pivotally interconnected in end-to-end relation for relatively articulated movement in a vertical plane with respect to each other, the free end of one of said sections being mounted on the base for rotation in a generally horizontal plane, the other of said sections adjacent its free end having a work platform structure mounted thereon for supporting a workman, said tower being collapsible into a carried, generally longitudinally extending position, said work platform structure comprising an enclosed, open topped bucket-like member, said member comprising front, rear, outer and inner side walls and a bottom wall, means on said inner side wall pivotally attaching said member in cantilever fashion on said other section so that said member is disposed laterally of said other section in the collapsed condition of said tower, said outer side wall having a ledge disposed intermediate the top and bottom boundaries of said outer side wall and disposed substantially within the confines of imaginary vertically upward extensions of the peripheral extremities of said bottom wall, said ledge providing a substantially horizontal foot supporting surface, said ledge extending completely across said outer side wall in a direction transversely thereof and providing for ready entry into and exit from said bucket-like member from both the front and rear thereof by a workman, said outer side wall being flared outwardly in a downward direction, the flared portion of said outer side wall above said ledge being tapered in directions transversely thereof commencing substantially at the vertical center thereof and extending toward the side extremities thereof, to provide wider horizontal ledge portions at the front and rear ends of said ledge, and raised platform means on said base disposed below the elevation of said surface of said ledge in the collapsed condition of said tower, said platform means being disposed adjacent vertical planes passing through the front and rear extremities of said ledge in a direction longitudinally of said base when said aerial tower is in said collapsed condition.

3,022,855
SAFETY HARNESS
Charles T. Lewis, P.O. Box 4755, Oklahoma City, Okla.
Filed June 20, 1960, Ser. No. 37,213
10 Claims. (Cl. 182—3)

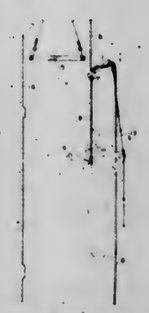
10. A safety harness structure for use by a workman in a derrick having a platform with spaced members extending thereabove in oppositely disposed relation comprising, a broad band of tightly woven material adapted to encircle the waist of the workman with the ends of the band in overlapping relation, means coupling the ends of the band together in adjustable relation circumferentially of the waist, a pair of flexible strands within said

band and positioned in spaced relation to each other and extending longitudinally of said band whereby said strands encircle the waist of the workman, a protecting brace pad having a plurality of fabric layers secured together and a cushion member between an intermediate and innermost layer, an outermost layer secured to the intermediate layer and defining a passage extending longitudinally of the pad through which the band extends to slidably mount the pad on said band, spaced shoulder straps with each having one end portion secured to said protective pad, a connector member having a fabric strip defining spaced loop portions one of which is slidably mounted on said band in opposed relation to the pad whereby the pad en-



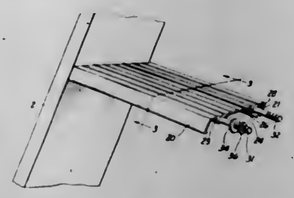
gages the front and the connector member is at the back adjacent the waist of the workman, means securing the other end portions of said shoulder straps to the connector member adjacent the other loop portion thereof, a ring secured to said connector member and adapted to be connected to a life line, a pair of flexible strands within the fabric strip of the connector member and extending around said spaced loop portions whereby said strands extend through said ring and around said band, and spaced rings secured to said protective pad with each ring extending in encircling relation to the band in the elongate passage and forwardly and exteriorly of the pad to form spaced loops for connection to a brace rope having ends connected to spaced portions of the derrick above the platform.

3,022,856
SAFETY DEVICE
Ted Galeano, 83 Dikeman St., Brooklyn, N.Y.
Filed Apr. 24, 1961, Ser. No. 104,942
2 Claims. (Cl. 182—193)



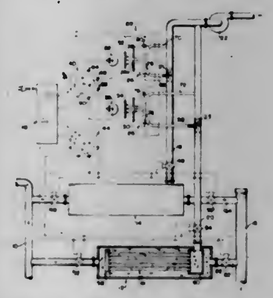
2. A safety device for supporting a workman and permitting lowering of the workman on a safety rope, including a safety rope extending from a higher support through the safety device to a lower location, the safety device having a bar with an upwardly extending hook near one end in which the safety rope is held, a downwardly extending hook secured to the bar of the safety device at the other end and in which the safety device is held, cross-bars on said safety device adjacent said hooks, over which the safety rope is passed, means for supporting a safety rope for a workman at the end of the safety device adjacent the upwardly extending hook, and means for attaching an operating rope to the safety device at the end near the downwardly extending hook to permit movement of the safety device by pulling downwardly on this rope.

3,022,857
STEPLADDER
Howard B. Rich, Carrollton, Ky., assignor to Howard B. Rich, Inc., Carrollton, Ky., a corporation of Kentucky
Filed May 24, 1960, Ser. No. 31,369
1 Claim. (Cl. 182—222)



A ladder which comprises a pair of side rails, a plurality of rigid step members spanning said rails, each of said step members comprising a tread portion, pairs of closely spaced parallel, downwardly projecting flanges integral with the underside of the tread portion, there being a pair of said flanges adjacent each lengthwise edge of the tread portion to form a pair of downwardly opening channels underneath the tread portion, and a pair of tension rods underlying the tread portion, each of said tension rods being received in one of said channels, whereby said rods are prevented from shifting toward or away from one another, the tension rods linking the rails to hold the rails in tight engagement with ends of the step members, edges of the flanges of each channel extending toward each other and underlying the rod received therein, whereby the tension rods are embraced by the flanges to hold the tread portion and tension rods in firmly assembled relation, the tread portion resting on the tension rods.

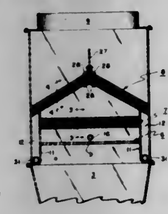
3,022,858
APPARATUS AND METHODS FOR PRODUCTION OF HELIUM BY DIFFUSION
Edgar D. Tillyer, Southbridge, and Willard E. Folland, Sturbridge, Mass., assignors to American Optical Company, Southbridge, Mass., an association of Massachusetts
Filed Sept. 25, 1959, Ser. No. 842,502
16 Claims. (Cl. 183—2)



12. A method for extracting commercially pure helium from a mixture of gases and for monitoring the purity of said helium comprising the steps of separating helium

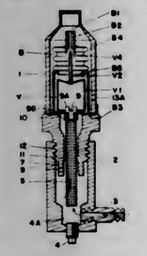
from said mixture, producing an electrical glow discharge in said separated helium, blocking emitted radiation from said glow discharge having the wavelengths of the principal spectral lines of the helium emission spectrum, receiving radiation of other wavelengths from said glow discharge, converting said received radiation into an electrical signal indicating the presence of substances other than helium in said glow discharge, and regulating the purity of the helium being produced by blocking the flow of helium whenever the presence of substances other than helium is indicated by this electrical signal.

3,022,859
GAS CLEANING METHOD AND APPARATUS
Robert W. Sexton, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed May 20, 1959, Ser. No. 814,518
10 Claims. (Cl. 183—15)



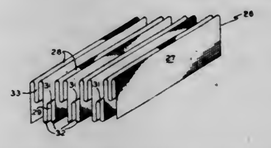
1. A method for removing undesirable vapor and mist constituents from a gaseous stream laden therewith comprising the steps of passing said vapor-mist laden gaseous stream through a liquid entrainment zone to entrain in said gaseous stream a liquid coalescent with the vapor-mist therein, passing said vapor-mist laden gaseous stream with said liquid entrained therein downstream to a liquid flooded contact zone solely within the confines of said gaseous stream and preventing any drainage to a point outside said gaseous stream from said liquid flooded contact zone to bring said vapor-mist and coalescing liquid of said gaseous stream into intimate contact to form liquid droplets in said gaseous stream, and then passing said liquid droplet bearing gaseous stream to a seperating zone to separate such liquid droplets from said gaseous stream.

3,022,860
AIR VENT DEVICE FOR STEAM RADIATORS
Charles C. Bittner, 4122 N. Ashland Ave., Chicago, Ill.
Filed Dec. 2, 1957, Ser. No. 700,120
1 Claim. (Cl. 183—41)



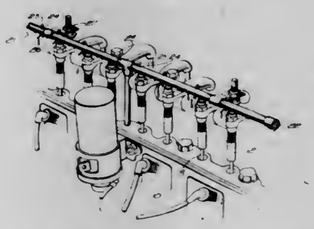
In an air vent device for steam radiators, a casing having an upper section with an air vent adjacent the upper end of said section, valve mechanism in said casing for controlling said air vent, said upper section having a lower drip extension of reduced diameter, said drip extension having a port for preventing the stratification of air and a lower section removably attached to said upper section and extending over said reduced drip extension, a screening filter attached within said upper section and extending substantially two thirds of its length into the lower section, a nipple extending from said lower section adapted for attachment to a radiator and means for draining sludge from said lower section.

3,022,861
FILTER MEDIUM
John D. Harms, Valley Station, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Filed Jan. 8, 1958, Ser. No. 707,770
1 Claim. (Cl. 183—71)



A unit filter assembly comprising an open-ended border frame member and a continuous sheet of filter medium in said frame member transversely disposed across the flow line of a gas flow stream to be treated, said sheet of filter medium being folded back and forth upon itself to form a first set of long folds having a plurality of crests and valleys and a second and third set of short folds, one of said sets of short folds being disposed at the crests of said long folds to increase the face surface thereof and the other of said sets of short folds being disposed in the valleys of said long folds to maintain said long folds in spaced relationship, the crests of each of said first, second and third sets of folds lying in a common plane with the plane determining the crests of one set of folds being parallel to the plane determining the crests of another set of folds, said second and third sets of short folds being of substantially the same depth to form a symmetrical filter medium with either face of said medium equally usable as an upstream face to a fluid stream destined to be filtered.

3,022,862
AUXILIARY OIL DISTRIBUTOR
Benjamin H. Moye, 66 Beach St., Warren, R.I.
Filed July 19, 1960, Ser. No. 43,940
1 Claim. (Cl. 184—6)



In an overhead valve gasoline engine having a hollow rocker arm shaft mounted above said engine on supports, an oil distributor intermediate the ends of said shaft, and a vertical oil line communicating with said oil distributor, the upper end of said oil line being normally extended to form an overflow pipe for the oil, an auxiliary oil distributor comprising an elongated hollow tubular member mounted in horizontal spaced parallel relation over said engine, a plurality of clips surrounding said tubular

member, said clips being attached to said supports, said tubular member having aligned vertical openings over each of the said engine rocker arms, a cotter pin mounted in each pair of vertically aligned openings and bent to provide one horizontal and one vertical leg depending from said openings, and a vertical tubular portion extending from said hollow tubular member and over the upper end of said vertical oil line, whereby said auxiliary oil distributor will replace said overflow pipe.

3,022,863

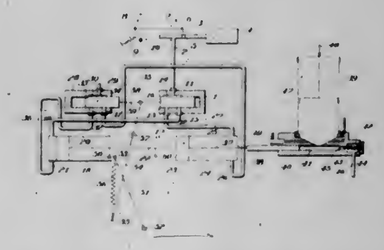
AUTOMATIC GREASING DEVICE FOR VEHICLES

Nobuo Sensui, Yokohama-shi, and Shigeru Aoki, Tokyo-to, Japan, assignors to Shibaura Kyodokogyo Kabushiki Kaisha, Yokohama-shi, Japan, a limited liability company of Japan

Original application Sept. 17, 1958, Ser. No. 761,645. Divided and this application Apr. 27, 1960, Ser. No. 37,012

Claims priority, application Japan Sept. 30, 1957

1 Claim. (Cl. 184—7)



A grease device for a vehicle, which comprises a greasing pump including a reciprocating plunger and arranged between a grease tank and an outlet pipe leading to various parts of said vehicle requiring greasing, a source of a fluid under pressure, a valve actuated by a pedal of said vehicle, a pair of opposed cylinders, each containing a piston therein and each cylinder having a closed end provided with a pair of ports, a piston rod for interconnecting said pistons and said plunger, a pair of spaced projections on said piston rod, a pair of change-over valves for controlling the supply and exhaust of said fluid under pressure to and from said cylinders, one of said change-over valves comprising a casing having an inlet port communicating with said source of fluid through said pedal-actuated valve, and two axially spaced outlet ports communicating respectively with one of the pair of ports of both of said opposed cylinders, and a piston slidable in said casing having a transverse aperture for connecting said inlet port selectively with each of said outlet ports depending on the position of said piston in said casing, and the other of said change-over valves comprising a second casing having a second exhaust port and a pair of axially spaced second inlet ports communicating respectively with the other of said pair of ports of both of said opposed cylinders, and a second piston slidable in said second casing having a transverse aperture for connecting said second exhaust port selectively with each of said second inlet ports depending on the position of said second piston in said second casing, a piston rod interconnecting said pistons of said change-over valves and an over center mechanism actuated by said projections, said mechanism including a pivoted lever arranged to be engaged by said projections, a lever pivoted at an intermediate point and with one end connected to said piston rod of said change-over valves and a spring interposed between the free ends of said levers.

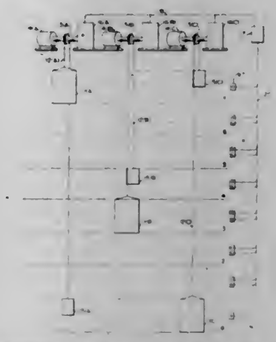
3,022,864

ELEVATOR CONTROLS

Raymond A. Burgy, Maumee, and Paul F. De Lamater, Toledo, Ohio, assignors to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio

Filed July 13, 1960, Ser. No. 42,635

10 Claims. (Cl. 187—29)



10. An elevator system comprising a plurality of cars serving a dispatching landing, a plurality of landings spaced in a first direction from said dispatching landing and at least one landing spaced from said dispatching landing in a second direction opposite said first direction, comprising means to condition a car at said dispatching landing as a load car which is next to be dispatched, means to maintain the status of a car conditioned as a load car while it is spaced from said dispatching landing, means responsive to the arrival of a car other than said conditioned car at said dispatching landing only from said second direction for releasing the conditioned car from said load status and means for conditioning as a load car, said car which arrived at said dispatching landing from a point spaced therefrom in said second direction in preference to any other car at said dispatching landing.

3,022,865

ELEVATOR CONTROL SYSTEM

Stephen Anthony Hornung, New York, N.Y., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey

Filed Aug. 15, 1960, Ser. No. 49,651

13 Claims. (Cl. 187—29)



12. In an elevator installation in which an elevator car serves a plurality of landings; a plurality of landing call registering means, one for each of said landings and each

including a touch button consisting of a cold cathode, gas, electron tube having anode, cathode and control electrodes in a glass envelope, the latter two electrodes being electrically connected to each other, the anode-cathode circuits of said tubes being connected in parallel, said touch buttons being adapted to conduct in response to the touch of a human being on their respective glass envelopes to register the landing calls and to remain conductive after said touch is discontinued; call pickup mechanism for said car for initiating stopping of that car at landings for which landing calls are registered; call cancelling means responsive to operation of said call pickup mechanism for cancelling the registration of the landing calls registered for landings at which the car is to stop by extinguishing the touch button tubes associated with such landings; pulsing means responsive to the registration and cancellation of such landing calls for generating a positive pulse upon registration of a landing call and a negative pulse upon cancellation of a landing call; positive pulse detecting means; negative pulse detecting means; and counting mechanism operatively responsive to said positive and negative pulse detecting means for algebraically counting said positive and negative pulses, thereby indicating the number of landing calls in registration at any given instant.

3,022,866
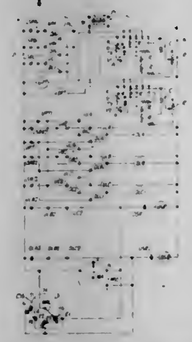
LIFT SYSTEMS

William John Bailey, Bexley, England, assignor, by mesne assignments, to J. & E. Hall Limited, London, England, a British company

Filed Nov. 4, 1958, Ser. No. 771,802

Claims priority, application Great Britain Nov. 13, 1957

31 Claims. (Cl. 187—29)



11. A lift system in which a plurality of cars serve a number of floors, the system comprising means for selecting the mode of operation of the cars in accordance with traffic conditions, the modes including a "down peak" mode of operation suitable for heavy down traffic and an "up peak" mode of operation suitable for heavy up traffic, means at the intermediate floors for registering up and down landing calls, first means for causing upwardly travelling cars to by-pass up floor calls when the system is on "down peak," second means for causing downwardly travelling cars to by-pass down floor calls when the system is on "up peak," means preventing the first causing means from being effective on at least one of the cars so that this car can serve up floor calls whilst the system is on "down peak," means for preventing the second causing means from being effective on at least one of the cars so that this car can serve down floor calls whilst the system is on "up peak," means for each car for causing the car when travelling down and when a certain condition exists to by-pass registered down floor calls, means for registering down floor calls that are by-passed, rejected call means for selecting an upwardly travelling car to stop at the floor of a by-passed down floor call to attend thereto, and means for preventing the rejected call means from selecting, for attending to a by-passed down floor call, said one car that serves up floor calls whilst the system is on "down peak."

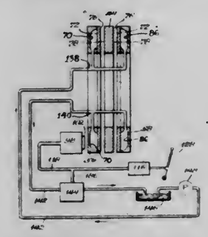
3,022,867

LIQUID COOLED DISK BRAKE ARRANGEMENT

Bernard Maloney, Gary, and Russell G. Altherr, Munster, Ind., and Robert D. Blew, Matteson, Ill., assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Filed May 20, 1958, Ser. No. 736,644

4 Claims. (Cl. 188—264)



1. In a liquid cooled brake arrangement, the combination of: a brake frame; a rotatable friction member carried by said brake frame; a non-rotatable brake element supported by said brake frame for engagement with said friction member; power means supported by said brake frame operative to move the brake element into engagement with said friction member, said brake element having an annular internal cavity, one side of which is closed by a readily detachable plate constituting the portion of the brake element engaging said friction member, said detachable plate having a flexible rim portion operable to clamp over said element and close said cavity, said plate being formed of a relatively thin sheet of metal characterized by a high capacity for thermo conduction; and means for circulating a coolant liquid in said cavity against the inner side of said plate.

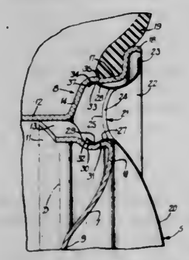
3,022,868

AIR CIRCULATING WHEEL STRUCTURE

George Albert Lyon, Detroit, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware

Original application Jan. 14, 1954, Ser. No. 404,021, now Patent No. 2,885,038, dated May 5, 1959. Divided and this application July 30, 1958, Ser. No. 751,974

9 Claims. (Cl. 188—264)



1. In a wheel structure including a wheel body and a tire rim, said body and rim having confronting spaced generally axially extending portions each of which in-

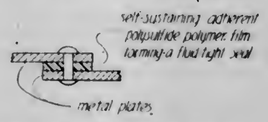
cludes a cover member retaining shoulder structure, a cover for disposition over the outer side of the wheel including an annular portion for disposition over the wheel between said confronting rim and body portions, said cover portion having extending generally axially inwardly therefrom cover retaining means thrusting retainingly against both of said shoulder structures.

3,022,869
WALL PANEL STRUCTURE
John Radek, % Ready Metal Manufacturing Company, 4320 S. Knox Ave., Chicago, Ill.
Filed Sept. 3, 1957, Ser. No. 681,505
5 Claims. (Cl. 189—34)



1. Means for mounting one marginal portion of a metal wall panel, comprising, in combination: a structural member having a row of vertically elongated and narrow aligned slots in its forward face; a one-piece clip member, said clip member having a generally planar base with a slot on its upright center line in register with a slot in the structural member, and said clip member having forwardly extending integral spring clips on its upright margins which are provided with opposed, inwardly facing, arcuate panel-engaging camming surfaces; and a narrow hook member which extends through the registering slots and has closely spaced downwardly extending hook elements engaging the lower margins of both said slots to detachably secure the clip to the strut, said hook member extending forwardly between the spring clips to provide a narrow, upright spacer on the center line of the clip.

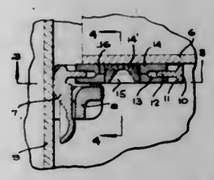
3,022,870
ADHERENT SEALER FILM
Paul C. John, Glendale, and Richard R. Pettit, La Habra, Calif., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Mar. 18, 1957, Ser. No. 646,855
13 Claims. (Cl. 189—36)



1. The method of making a thin polymeric film product capable of forming an adherent, solvent-resistant and pressure-resistant seal when inserted between faying surfaces in making a riveted seam between metal panels, comprising: spreading in a thin uniform layer on a removable slipsheet a self-curing mass containing liquid polyalkylene polysulfide polymer having thiol terminals, maleic anhydride, organic peroxide curing agent, and organic amine activator; and then curing said layer while maintaining its uniform thickness.
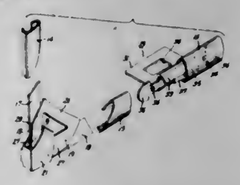
3,022,871
ADJUSTABLE CONNECTION UNIT
Van Rensselaer P. Saxe, 1701 St. Paul St., Baltimore 2, Md.
Filed June 2, 1959, Ser. No. 817,522
3 Claims. (Cl. 189—36)

1. A connection unit for joining right angularly disposed first and second structural members and effecting relative adjustment between said members during their erection to provide the framework of a building, said unit comprising, in combination, a yoke fixed to the second member, and an angle bracket including a right angularly disposed tongue engaging with said yoke, and a flange



rigid with said tongue and disposed at right angles thereto, and means attaching said flange to said first member to slide longitudinally, laterally, diagonally and also pivot in a plane parallel to the face of said first member to which the flange is attached.

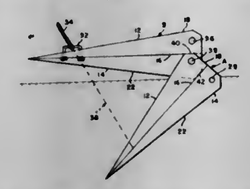
3,022,872
FRAMING APPARATUS
Albert J. Fitzgerald, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Original application May 9, 1956, Ser. No. 583,780, now Patent No. 2,923,038, dated Feb. 2, 1960. Divided and this application Aug. 20, 1959, Ser. No. 840,488
2 Claims. (Cl. 189—36)



1. A jointure for a framing apparatus comprising an inner corner member including first and second angularly disposed legs joined in abutting relation at a predetermined angle, each of said first and second legs having a protuberance formed thereon proximate to their juncture, first and second outer framing members fitted over respective ones of said legs in sliding relation thereto, an outer corner member in overlapping relation with respect to the adjacent ends of said outer framing members, and a spring member coacting with said inner corner member, the adjacent ends of said outer framing members, and said outer corner member for resiliently maintaining all of said members in an assembled relation in which said outer corner member is in slidable overlapping contact with the adjacent ends of said two outer framing members.

3,022,873
LIGHTWEIGHT RECOVERABLE GUY ANCHOR
Albert A. Ondrejka, Delta Ave., Rome, N.Y.
Filed June 15, 1959, Ser. No. 820,563
4 Claims. (Cl. 189—90)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A recoverable guy anchor of the type described comprising a first tapered U channel and a second tapered U channel, said tapered U channels having a top portion and a nose portion, the external width of said first tapered U channel being smaller than the internal width of said second tapered U channel, said U channels having a series of equidistantly spaced holes along the centerline of the bases of each of said U channels, and means for securing the nose portion of said first tapered U channel within



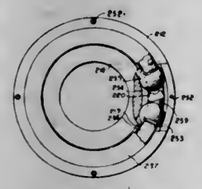
the top portion of said second tapered U channel to form a single unit capable of being driven into the earth.

3,022,874
CONTROL MEMBER FOR OPTICAL DEVICES
Herbert Mahn, Bad Kreuznach, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed Aug. 26, 1960, Ser. No. 52,145
Claims priority, application Germany Sept. 5, 1959
5 Claims. (Cl. 192—4)



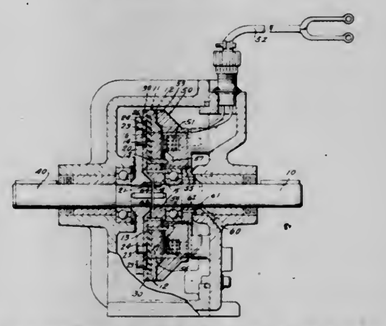
1. A control assembly for an adjustable part of an optical system, comprising a support for said system, a head rotatably mounted on said support, coupling means on said support connecting said head with said part, a handle lodged in said head for generally radial relative displacement between a retracted and an extended position, and blocking means controlled by said handle for immobilizing said head with respect to said support in said retracted position, said handle being provided with a camming recess, said blocking means comprising a swingable arm spring-urged into engagement of a portion thereof with said recess in said retracted position.

3,022,875
OVER-RUNNING CLUTCH AND BEARING STRUCTURE
Frederick L. Davis, Fort Worth, Tex., assignor to Halliburton Company, a corporation of Delaware
Filed Mar. 15, 1957, Ser. No. 646,466
2 Claims. (Cl. 192—45.1)



1. An over-running clutch and bearing structure comprising: an inner race; an outer race spaced therefrom and concentric therewith; said races providing on their opposed surfaces complementary ball bearing grooves symmetrical with respect to the medial plane of said races that is normal to the axis, and complementary cylindrical clutch surfaces at both sides of said grooves; a plurality of arcuately spaced ball bearings in said grooves rotatingly supporting said outer race on said inner race; a plurality of sprags arranged between said ball bearings, each sprag extending across the space between said grooves and between said clutch surfaces at both sides of said grooves for substantially equal distances on either side of the grooves, said sprags being constructed and arranged to cooperate with said clutch surfaces on both sides of said grooves to jam therebetween when said outer race rotates in a given direction with respect to said inner race and to become disengaged from jamming between said cluutch surfaces when said outer race rotates in the opposite direction; and a cage, rotatable independently of said races, providing pockets receiving said ball bearings and other pockets receiving said sprags.

3,022,876
MAGNETIC CLUTCH
Sydney Frankel, 318 Briarcliffe Road, West Englewood, N.J.
Filed July 15, 1958, Ser. No. 748,660
4 Claims. (Cl. 192—84)
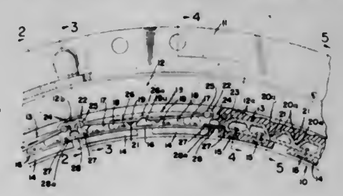


1. In a magnetic clutch of the type having a magnetizable rotor mounted on a first shaft, an armature having a shaft which is separate from but coaxial with the first shaft, and a stationary magnetizing means adapted to control the magnetic attraction between the rotor and the armature, the improvement in which the armature comprises a supporting wheel which is fixedly attached to the armature shaft, an intermediate ring means comprising at least one plate positioned between the supporting wheel and said rotor in close proximity to the latter, and concentric therewith, stud means for loosely mounting said intermediate ring means on said supporting wheel adjacent the periphery of the latter so that said ring means are loosely retained between the supporting wheel and said rotor, the loose mounting of said stud means providing for axial but not for any substantial amount of angular movement of the ring means with respect to the wheel, said ring means being of relatively soft ferromagnetic material whereby the said plate is adapted to be magnetically attracted to said rotor.

3,022,877
ASSEMBLY FOR CLUTCHES AND BRAKES
Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, a corporation of Michigan
Filed Jan. 19, 1959, Ser. No. 787,487
1 Claim. (Cl. 192—88)

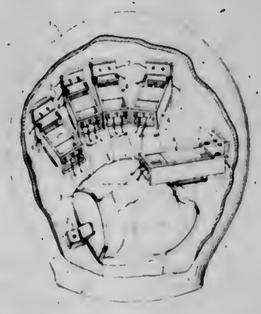
In a friction clutch or brake assembly, the combination of an inflatable fluid-distensible hollow annular diaphragm

of rubber-like material, a plurality of wear shoe plates spaced apart in succession circumferentially at the radially inward side of said diaphragm, each of said wear shoe plates being coupled to said diaphragm to move radially with the diaphragm as the latter is inflated and deflated, a plurality of friction members mounted on the wear shoe plates at the radially inward side thereof, the successive wear shoe plates having axial grooves therein facing toward one another at the neighboring circumferential ends of the wear shoe plates, each of said grooves being open at each axial end of the respective wear shoe plate and being defined by a pair of radially spaced surfaces of the respective wear shoe plate, and a plurality of flexible and resilient leaf springs engaged respectively between the successive wear shoe plates, each of said leaf springs being received in said grooves in two successive wear shoe plates



and bridging the circumferential space between said two wear shoe plates, each leaf spring between its opposite ends axially of the assembly being arched radially outward and bearing resiliently against the radially outward groove surfaces on the respective wear shoe plates, each end of each leaf spring being turned in radially and projecting beyond and bearing resiliently against the adjacent axial end edges of the respective wear shoe plates, said wear shoe plates constituting the sole means of support for the leaf springs, each of said wear shoe plates throughout its extent circumferentially of the assembly having an axial extent at least as great as that of the diaphragm, each of said leaf springs having an axial extent at least as great as that of the diaphragm, and each of said leaf springs being slidably insertable axially into the respective wear shoe plate grooves by flexure of the leaf spring opposite to its curvature.

3,022,878
COMMUNICATION DEVICE
Robert Seibel, Putnam Valley, and Nathaniel Rochester, Mount Kisco, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 11, 1960, Ser. No. 1,768
14 Claims. (Cl. 197—19)



9. A manually-operable, man-machine communication device comprising, in combination: a rigid frame comprising means whereby it can be relatively fixed in position with respect to the metacarpus of a hand and free to move with the metacarpus; a movable control element shaped and mounted on said frame to surround a distal phalanx; and means responsive to movement of said control element with respect to said frame for delivering a signal to the machine.

3,022,879
ATTACHMENT FOR TYPEWRITER RIBBON
William A. Heidt and Donald C. Roller, Lexington, Ky., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 26, 1959, Ser. No. 795,810
4 Claims. (Cl. 197—172)



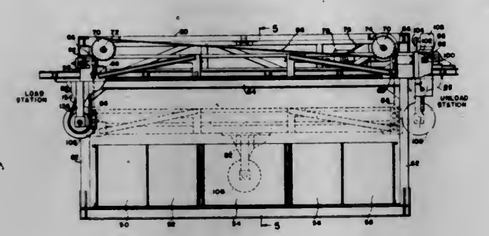
1. An attachment for handling the free end of an inked ribbon while threading the latter through guides and adapted to co-operate with a supply spool on which the ribbon is wound for holding the outer end of the latter against unwinding, said attachment comprising a member made of thin metal stock and having a portion bent about said ribbon for clamping the latter thereto, a handle portion on said member adapted to be grasped manually for moving and directing said ribbon through said guides, and projecting portions on said member frictionally engaging said spool for releasably holding said member in place thereon.

3,022,880
NOVEL TRANSFER MEDIA
Douglas A. Newman, Glen Cove, N.Y., assignor to Columbia Ribbon and Carbon Manufacturing Co., Inc., Glen Cove, N.Y., a corporation of New York
Filed Nov. 16, 1959, Ser. No. 853,148
2 Claims. (Cl. 197—172)

1. A typewriter ribbon of uniform thickness comprising an inked strip of woven multi-filament strands of fiber-forming polymer, in which the individual filaments are of uniform and equal denier, uniformly longitudinally ridged along their entire length, and are intermeshed in said strands to provide the ribbon with increased ink capacity.

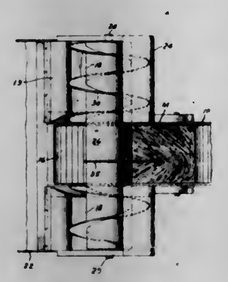
3,022,881
AUTOMATIC CONVERSION IMMERSING MACHINE
Willard J. Harper, Middletown, Paul A. Hauck, Union, and Martvig J. Moll and Donald G. Dutcher, Fair Haven, N.J., assignors to Hanson-Van Winkle-Munning Co., Matawan, N.J., a corporation of New Jersey
Filed Dec. 29, 1958, Ser. No. 783,591
31 Claims. (Cl. 198—19)

11. In a machine of the kind described, a horizontally disposed tubular receptacle having a loading and discharge opening in the side wall thereof, a cover carried movably by the receptacle for uncovering and closing the opening, rotating means for rotating the receptacle, stops between the receptacle and cover engageable in the open and closed positions of the cover for causing rotary entrainment of the cover with the receptacle, a trip member carried externally by said receptacle relatively rotatable thereto and affixed to said cover, and a trigger member mounted on the machine in the path of the trip



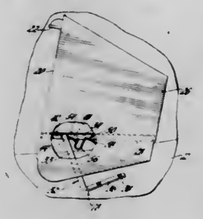
member for engagement to arrest movement of the cover while the receptacle continues to rotate to either open or close the opening.

3,022,882
INFEED MECHANISM
James R. West, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Dec. 19, 1957, Ser. No. 703,812
7 Claims. (Cl. 198—104)



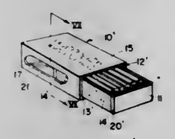
1. In a harvester having a housing provided with a forwardly directed opening, a mechanism for feeding crop material rearwardly into said opening comprising a pair of forwardly extending, relatively spaced platforms, one at each side of said opening, a floor extending forwardly from said opening between said platforms, a shaft rotatable about a generally stationary axis transverse to said floor, said shaft extending above said floor and laterally to each side thereof over said platforms, a pair of oppositely wound helical members carried on the laterally extending portions of said shaft and forming spaced augers for conveying material toward said floor, said floor being disposed below the level of said platforms and forming a pocket therebetween, the material conveyed by said augers sliding over said platforms and then dropping down onto said floor, and means carried on the portion of said shaft above said floor intermittently projectable below the level of said platforms and into said pocket and then movable rearwardly for feeding crop material through said opening, said feeding means comprising a plate connected to said shaft and extending radially thereof, the angular expanse of said plate and the rotation of said shaft being such that during each revolution of said shaft the plate is projected into said pocket, swept rearwardly and then extracted therefrom.

3,022,883
WASTE RECEPTACLE ASSEMBLY
James F. Barton, Jr., and Ernest W. Bickel, Jr., Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 26, 1960, Ser. No. 52,144
3 Claims. (Cl. 206—19.5)



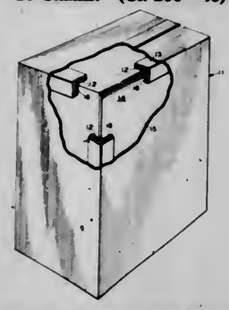
1. A waste receptacle assembly comprising a container, a generally U-shaped mounting rod adapted to be secured to a supporting body, leaf spring members secured at one end thereof to the base of said container and an adjacent opposite sides thereof, each of said spring members having a detent formed centrally thereof and removably receiving said rod, the end opposite said end secured to said container being spaced from said container a distance less than the diameter of said rod, and a leaf spring lock member secured at one end to the base of said container and between said spring members, said lock member having an elongated detent formed centrally therein and a tail extending outwardly from said detent, the junction between said detent and said tail being spaced from said container a distance less than the diameter of said rod, said container being pivotable about said rod and on said spring members such that said elongated detent is moved into engagement with said rod to limit the pivotal movement of said container about said rod.

3,022,884
SAFETY-MATCH BOX
William I. Kreisner, 145 Concord Ave., Oceanside, N.Y.
Filed Nov. 4, 1960, Ser. No. 67,212
1 Claim. (Cl. 206—36)



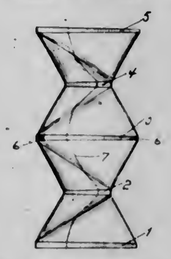
A match box comprising a disposable open-ended sleeve member of prismatic configuration having top and bottom walls and two lateral walls; and a prismatic receptacle member slidably displaceable within said sleeve member, said sleeve and receptacle members being formed of cellulosic material, each of said lateral walls being provided on the outer surface thereof with a striking coating covering substantially all of said outer surface; and a metal-foil sheet covering the top and lateral walls only of said sleeve and adhesively secured thereto in permanent union therewith and coextensively overlying said walls, said metal-foil sheet being provided with two opposite elongated side openings respectively framing said coatings and exposing major portions thereof for enabling the striking of a match therethrough.

3,022,885
ANTIMAR COATED ARTICLES
Ernest R. Mueller and Herbert N. Johnston, Columbus, Ohio, assignors to Inland Container Corporation, Indianapolis, Ind., a corporation of Indiana
Filed Mar. 11, 1957, Ser. No. 645,012
16 Claims. (Cl. 206—46)



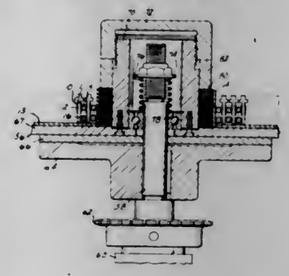
10. A package containing a manufactured article having a finished exterior surface in contact with a coated interior surface of a shipping container, the shipping container being of common fiber-containing packaging materials, such as paper, paperboard, fiberboard, and wood, the coating on said coated surface being a solid coating consisting essentially of fatty acids, said coating characterized as removable by wiping in the event of transfer to the finished exterior surface and as protecting the finished exterior surface from marring.

3,022,886
COMPRESSIBLE CONTAINER FOR LIQUIDS
Bertil Järnhäll, Sodertalje, Sweden, assignor to Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, a company of Sweden
Filed May 7, 1958, Ser. No. 733,610
Claims priority, application Sweden May 9, 1957
6 Claims. (Cl. 206—56)



1. A compressible ampul adapted to be liquid-containing and insertable into a hypodermic syringe to be compressed therein to expel liquid content therefrom, further characterized in consisting of a series of at least two consecutive substantially tetrahedronal-shaped receptacles whose walls are of a flexible and somewhat resilient material, and with each two consecutive receptacles being connected to one another along a common edge of such two tetrahedrons and communicating with one another through said common edge; and which receptacles extending in a relatively straight line have longitudinally spaced apart from each side of said common edge respectively another edge, which such other edges lie in a plane that is normal to a plane passing through said common edge and extending lengthwise through the ampul; and with the distance from said common edge to each of said two other edges being less than the corresponding distance in a regular tetrahedron; said ampul being compressible within a hypodermic syringe by hand pressure as ordinarily applied thereto and thereby to expel its liquid content through the needle of such syringe after being punctured by the inner end of the needle.

3,022,887
LUG PACKAGE
Grant N. Willis, Bristol, Conn., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Original application Feb. 11, 1957, Ser. No. 639,542, now Patent No. 2,898,718, dated Aug. 11, 1959. Divided and this application Mar. 12, 1959, Ser. No. 799,036
3 Claims. (Cl. 206—59)



3. A package of lugs of the type having an elongated stem portion comprising a supporting member having a base portion and a central member extending from the base portion, a plurality of juxtaposed lugs disposed in an elongated row coiled upon said central member with the stems of the lugs in an upright position on said base portion, a flexible pressure sensitive adhesive strip on each side of said row of lugs detachably detaining the lugs in said row, a first elongated flexible spacer member engaged between said next adjacent adhesive strips on next adjacent courses of lugs whereby the strips are maintained in firm engagement with the lugs, and a second elongated flexible spacer member engaged between next adjacent courses of lugs and spaced from said first spacer member thereby to positively position each course of lugs relative to the next adjacent course of lugs.

3,022,888
MULTI-CAN PACKAGE
Rex L. Brunsing, 260 California St., San Francisco, Calif.
Filed Feb. 11, 1960, Ser. No. 8,018
8 Claims. (Cl. 206—65)



1. A multi-can package comprising: a pair of parallel rows of upright, cylindrical cans having heads and radially and axially outwardly projecting chimes at one of their corresponding ends providing oppositely directed axially facing surfaces on said chimes, means for securing said cans together including an elongated member having a pair of flat, coplanar, horizontally disposed marginal portions extending longitudinally of said rows positioned over and against the axially facing surfaces of said chimes that face outwardly of said corresponding ends, can engaging means integral with said marginal portions connected therewith and extending longitudinally thereof between said rows and in engagement with the cylindrical

opposed sides of the cans of said rows and against the axially facing surfaces of said chimes that are opposite said last mentioned axially facing surfaces, spring elements respectively positioned over each of said corresponding ends integrally connected with said marginal portions for springing along lines extending longitudinally of said portions past said axially facing surfaces that face outwardly of said corresponding ends, said elements extending angularly from said marginal portions along said lines toward each other from opposite sides of said can engaging means and into engagement with said heads and with the radially inwardly facing surfaces of said chimes when sprung past said last mentioned axially facing surfaces for holding said corresponding ends of said cans together and for holding said can engaging means in engagement with said sides of said cans and said chimes.

3,022,889
ELECTROSTATIC SEPARATION OF NORMALLY LIQUID MATERIALS
Ira M. Le Baron, Evanston, Ill., and Gene L. Samsel, Mulberry, Fla., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Jan. 19, 1959, Ser. No. 787,384
13 Claims. (Cl. 209—2)

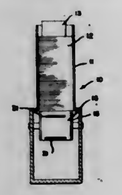
1. A method for separating mixtures of normally liquid materials which comprises reducing the temperature of the mixture until said liquid materials crystallize, inducing the crystals to accept differential electrical charges while at a temperature below the melting point of said crystals, and passing the differentially charged crystals while at a temperature below their melting point into an electrostatic field to separate at least one fraction rich in crystals of one of the components of said mixture of normally liquid materials.

3,022,890
BENEFICIATION OF CALCITE-APATITE-QUARTZ ORES
Robert E. Snow, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,922
3 Claims. (Cl. 209—11)

1. An electrostatic process for beneficiating a calcite-apatite ore containing more than 10% by weight of quartz, which comprises inducing the ore while at a temperature of at least about 150° F. and in a state of subdivision sufficient to substantially completely liberate the calcite, apatite, and quartz components from each other, to accept differential electrical charges by contact electrification, subjecting the differentially charged particles as free falling bodies to an electrostatic field to beneficiate the material, separately recovering a quartz product and a mineral concentrate containing less than 10% by weight of quartz and calcite and apatite components, inducing the particles in the mineral concentrate to accept differential charges by contact electrification while at a temperature of at least about 150° F., subjecting the differentially charged particles in the mineral concentrate as free falling bodies to an electrostatic field to beneficiate the material, and separately recovering a calcite fraction and an apatite concentrate.

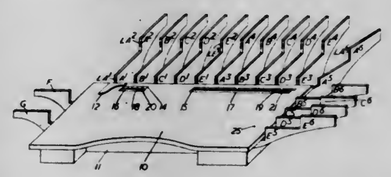
3,022,891
CARD SORTING SYSTEM
Rudolph H. Efram, 18950 Monica, M. Lawrence Applebaum, 4865 Sturtevant, and Mort Henry, 19465 Hubbell, all of Detroit, Mich.
Filed Nov. 18, 1957, Ser. No. 697,191
22 Claims. (Cl. 209—111.5)

1. In a device for sorting cards and the like, of the type having indicia formed thereon in patterns, with the patterns arranged in columns so that the presence or absence of indicia in predetermined positions in such columns indicates information stored on the card or the like, an electrical circuit for receiving electrical impulses in response to the presence or absence of indicia in any particular column and for actuating a rejection means for rejecting those cards whose pattern of indicia do not correspond to a predetermined pattern set into the electrical circuit, said electrical circuit comprising a scanning device which is arranged to successively scan one column at a time and is arranged to detect the indicia in such column and further arranged to transmit an impulse in only one of the two situations where an indicium is present or absent in any particular place in the column, but not in both situations; a series of two position relay switches; each arranged to correspond with one position in a column where an indicium may appear, each relay being normally arranged in one of its two positions for the passage of electrical current but being switchable in the other of its



two positions in response to an impulse transmitted by the scanning device; a three-pole selective switch for each relay, with one pole electrically connected to one of the two relay positions, another pole electrically connected to the other relay position, and the third pole being a dead, non-electrically connected point; the selective switches all being separately connected to a signal output line which in turn is connected to an electrically operated rejection device; an electric power source connected to each of the relays and arranged to pass electric current through whichever of the two positions the relay is switched in and then through any one of the three pole selector switches which is connected to that particular position of the relay, to thus operate the rejection device, and wherein the electric power source is normally connected to pass current to the normally arranged position of the relay, but upon an impulse generated by the scanning device which thus, causes the relay device to switch into its other position, will pass current through this second relay position.

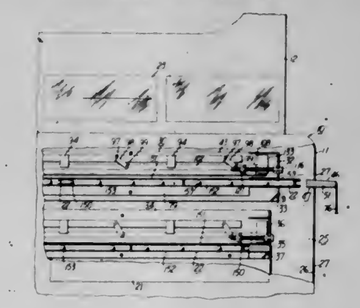
3,022,892
APPARATUS FOR MEASURING AND CLASSIFYING WOMEN'S STOCKINGS
Cyril Hartshorn, 64 Ray St., Heanor, England
Filed Jan. 28, 1960, Ser. No. 5,139
Claims priority, application Great Britain Feb. 2, 1959
11 Claims. (Cl. 209—122)



1. Apparatus for measuring and classifying women's stockings in which a table is provided with two sets of measuring devices, one positioned for heel-splice lengths

and the other for leg lengths, a series of electrical switches associated with each measuring device one switch for each measurement offering a number of alternative switch combinations to correspond with each possible combination of measurements, and a number of stocking supports each having an indicator lamp, each available switch combination being operatively associated with a different lamp and denoting therefore a different measurement combination.

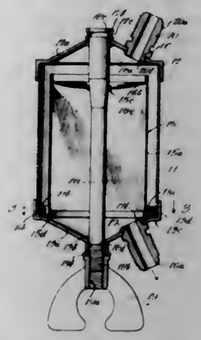
3,022,893
SEALING MECHANISM FOR OSCILLATABLE SEPARATORS
Howard A. Hasley, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Jan. 25, 1960, Ser. No. 4,547
7 Claims. (Cl. 209—405)



1. A mechanism for sealing a frame mounted screen deck in the carrier frame of an oscillatable separator comprising: an upper pair of elongated bar members adapted to be rigidly secured, one each to an inner wall of a carrier frame of an oscillatable separator in spaced opposing relationship to each other; an intermediate pair of elongated bar members, one each being hung from each one of said upper bar members and movable relative thereto; a lower pair of elongated bar members adapted to be rigidly secured to the carrier frame in spaced opposing relationship to each other and in fixed parallel spaced relationship to a corresponding one of said upper pair of bar members, each of said lower pair of bar members coacting with corresponding one of said intermediate pair of bar members to define therebetween a vertically extending elongated screen deck receiving space therebetween; and actuating means connected to each of said intermediate pair of bar members to move said bar members relative to said corresponding ones of said upper and said lower pair of bar members in response thereto to vary the vertical displacement between said corresponding ones of said intermediate and lower pairs of bar members and, upon insertion of a screen deck into said spaces, sealingly engaging said screen deck between corresponding ones of said intermediate and lower pairs of bar members.

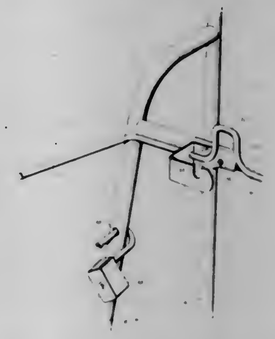
3,022,894
LIQUID FILTER
Harvey R. Karlen, Chicago, Ill., assignor to Cory Corporation, a corporation of Delaware
Filed June 8, 1959, Ser. No. 818,974
6 Claims. (Cl. 210—452)

1. A liquid filter comprising: an enclosure having an open portion and an inlet spaced from the open portion; a post in the enclosure secured thereto to extend axially through the enclosure and outwardly through the open portion; a cup-shaped filter element in the enclosure and having an outer end opening outwardly through said open portion, said filter element further having a generally cylindrical portion and a flexible outwardly dished, inner end portion concentrically around the post; means biasing said dished inner end portion inwardly to engage it sealingly with the post; an annular support in secured relationship with the filter element opposite said end por-



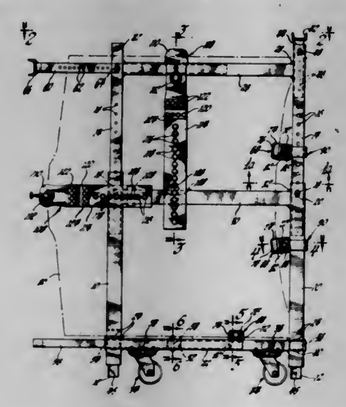
tion and having an outturned flange juxtaposed outwardly to the edge of said open portion; and means co-operating with said post to clamp said flange sealingly to the edge of said open portion and fix said outer end of the filter element concentrically of the post whereby the cylindrical portion of the filter element is retained concentrically of the post.

3,022,895
DISPLAY RACK WITH LOCKING FEATURE
Jerrold L. Kingsley, 2221 Baker St., San Francisco, Calif.
Filed May 5, 1961, Ser. No. 108,045
7 Claims. (Cl. 211—4)



1. Locking means for locking together a plurality of valuable articles, each of which has a neck portion which comprises: an elongated support member, a plurality of bracket portions mounted on said support member at spaced positions along said support member, each of said bracket portions defining, with said support member, a generally U-shaped recess for receipt of the neck portion of one of said articles with said recess having a mouth facing generally in the direction of said support member's length, an elongated latching member mounted on said support member for rotation about an axis generally parallel to said support member's length, said latching member having a plurality of protrusions thereon extending generally radially of said axis of rotation with one of said protrusions positioned adjacent to said mouth of each of said recesses whereby said protrusions move in unison into mouth closing positions extending across said mouths responsive to rotation of said latching member about said axis, and means for locking said latching member against rotation about said axis when said protrusions are in said mouth closing positions.

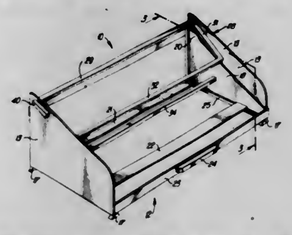
3,022,896
SHIPPING RACK
Joseph H. Dew, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 22, 1959, Ser. No. 815,021
11 Claims. (Cl. 211—13)



4. A material shipping rack comprising a generally open box-like structure formed from first and second post sections and lateral and longitudinal framing members secured thereto, said second post sections having means for adjustable connection with respect to said first post sections and being adjustable relative thereto to vary the height of said shipping rack, floor means secured to some of said lateral framing members to support parts loaded in said shipping rack, a plurality of spacer blocks secured to some of said longitudinal members to maintain the parts loaded in said rack in parallel spaced relation, an inflatable belt member secured to portions of said shipping rack, said belt member being disposable externally of the parts loaded on said shipping rack, and means for inflating said belt member to engage the parts loaded on said shipping rack and thereby prevent movement of said parts during shipment thereof in said rack.

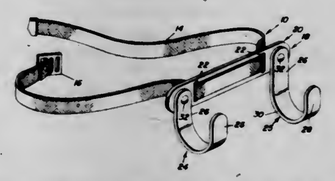
3,022,897
OBJECT-MOUNTING STORAGE RACK
Warren Archer and Genevieve C. Archer, Van Nuys, Calif., assignors of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Feb. 8, 1960, Ser. No. 7,489
6 Claims. (Cl. 211—36)

3. A shoe-mounting storage rack, comprising: a supporting framework having base means at the bottom thereof adapted to rest upon an underlying substantially horizontal surface and having upstanding substantially parallel laterally spaced side portions and means interconnecting same, said laterally spaced side portions defining a frontally open receiving recess; a slide portion slidably received within said receiving recess for forward and rearward slidable movement into and out of said receiving recess for positioning said slide portion in retracted position within said recess or in extended position extending forwardly therefrom, said slide portion being provided with shoe supporting transverse bar means adapted to receive in hooked relationship thereover the heels of one or more pairs of shoes whereby to effectively and readily removably display and support same; the supporting framework being transversely laterally horizontally pivotally provided adjacent the top thereof above said slide portion and above the shoe-supporting means of said slide portion with a lift portion having a forwardly and downwardly offset part including shoe-supporting transverse bar means adapted to receive in



hooked relationship thereover the heels of one or more pairs of shoes whereby to effectively and readily removably display and support same; said slide portion being provided with upwardly projecting cam means underlying and engaging said forwardly offset part of said lift portion for vertically upwardly pivotally moving same in response to forward movement of said slide portion out of said recess into extended position and for allowing downward pivotal movement of said forwardly offset part of said lift portion under the action of gravity in response to rearward slidable movement of said slide portion into retracted position within said recess.

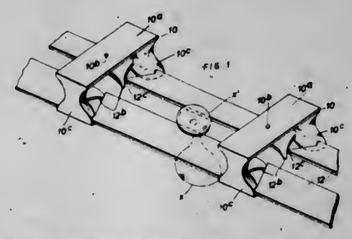
3,022,898
GUN HOLDER
Henry Loeb, 320 Monroe Ave., Memphis, Tenn.
Filed July 15, 1960, Ser. No. 43,198
3 Claims. (Cl. 211—64)



1. A gun rest for supporting a gun on an upstanding support comprising a flexible member adapted to encircle and frictionally embrace an upstanding support, an elongated bar, means mounting said bar on said flexible member for adjustable movement longitudinally of said flexible member with said member extending longitudinally of said flexible bar, a pair of substantially U-shaped support members, means pivotally securing a leg of each support member to said bar for movement about an axis extending transversely of said bar and said leg, the axes of rotation of said U-shaped members being spaced longitudinally of said bar, a buckle carried by one end of said flexible member for engagement by the other end of the latter whereby said flexible member may be adjusted in length, said bar being constructed of a resilient material, and said U-shaped support members each including a bight portion spaced from its axis of rotation and said bight portions being spaced from the corresponding axes of rotation a total distance of slightly less than the spac-

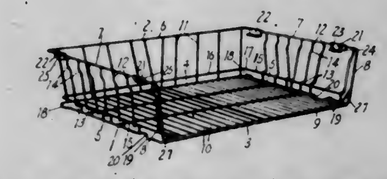
ing between the axes of rotation of said support members, whereby the free ends of said support members may be pivoted toward each other with said support members closely overlying and generally paralleling said bar with said bight portion spaced slightly from each other in order that the free ends of said flexible member may be readily wrapped about said bar and support members for storage of said gun rest in a compact manner.

3,022,899
RACKS FOR HOLDING WINE GLASSES AND LIKE ARTICLES
Alan R. Unsworth, 51 Merton Road, Bootle, Liverpool 20, England
Filed Mar. 8, 1960, Ser. No. 13,680
2 Claims. (Cl. 211—71)



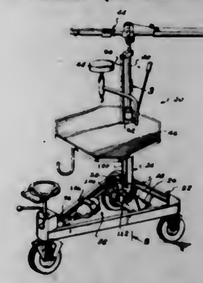
1. A rack structure for supporting wine glasses and the like in pendant position comprising a plurality of brackets each consisting of a cross-piece aperture to receive securing screws and having two depending leg pieces with the inwardly facing surfaces thereof being formed slots, pairs of opposed rail members supported by said brackets in end to end spaced aligned disposition with each end of each rail having a part engaged within the slot of the adjacent bracket of said brackets and each of said rails having one down-turned terminal end disposed adjacent to a straight end of the next succeeding rail to provide a downwardly inclined entry and exit opening whereby the base of a wine glass can pass therethrough when the wine glass is held at the appropriate angle.

3,022,900
STACKING CRATES OR RECEPTACLES
Charles C. Averill, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich.
Filed Jan. 11, 1960, Ser. No. 1,564
14 Claims. (Cl. 211—126)



1. In a receptacle, a bottom comprising rear, front and side border frame members and slats mounted on the upper sides of the front and rear members and fixedly secured thereto, a top border frame comprising rear and side members, the side members terminating at their front ends in downwardly projecting uprights which are connected at their lower ends by an integral crossbar superimposed upon and fixedly secured to the front ends of said bottom slats, laterally spaced side wall slats fixedly connected at their ends to the bottom and top border frame side members, said side wall slats having inward offsets adjacent their lower ends providing upwardly facing inner shoulders and having outward offsets adjacent their upper ends, an intermediate frame member comprising rear and side members disposed on the inner sides of and secured to said rear and side slats respectively, the side members being secured to the side slats below the said upwardly facing shoulders thereof, said bottom frame side members having outward offsets therein merging into said rear border member and providing rear stacking lugs, and outwardly projecting loop-like offsets adjacent their front ends providing front stacking lugs, and upwardly facing front and rear stacking lug seats mounted on and projecting inwardly from said top border frame side members and spaced to receive the corresponding front and rear stacking lugs of a superimposed crate, the rear stacking lug seats being elongated permitting sliding movement of the coacting stacking lugs of a superimposed crate thereby facilitating engagement and disengagement of the stacking lugs with the stacking lug seats, the front stacking lug seats having upwardly projecting stacking lug stops at their front ends and upwardly projecting detents over which the loop-like front stacking lugs of a superimposed crate are engageable.

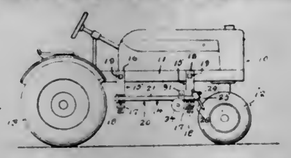
3,022,901
HOIST FOR MICROPHONE DOLLY AND THE LIKE
James L. Fisher, 3981 Weslin Ave., Sherman Oaks, Calif.
Filed Sept. 29, 1958, Ser. No. 764,188
7 Claims. (Cl. 212—34)



1. In a device of the character described, a support, an upright hydraulic cylinder rigidly mounted on said support, a piston movable in said cylinder and including a piston rod extending above the cylinder, a hydraulic system on said support fluidly connected to said cylinder for raising and lowering said piston in the cylinder, said hydraulic system including a control valve on said support including a long rotatable valve stem extending upwardly along said cylinder, a platform fixed to said piston rod, a movable control handle on said platform, link means connected to said handle and slidably keyed to said valve stem for turning of the latter by movement of said handle, said handle being movable to one position to turn said valve stem to a first position for elevating said piston and to another position to turn said control valve stem to a second position for stopping said piston, and the upper end of said valve stem being helically twisted to cause turning of the valve stem from said first position to said second position upon predetermined elevation of said piston with said handle in said one position.

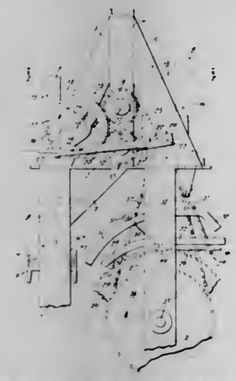
3,022,902
BALE TURNER
August F. Bartels, R.R. 1, Bellevue, Iowa
Filed Oct. 8, 1959, Ser. No. 845,264
3 Claims. (Cl. 214—1)

1. In an agricultural implement, a tractor, a bale turning mechanism operatively connected to the tractor, said bale turning mechanism comprising first and second spaced apart bars each including a radially disposed portion secured to the side of the tractor, an inclined lip on the lower end of each bar, an adjustable screw member extending through said lip, a pair of spaced apart apertured ears extending outwardly from the lower end of said radially disposed portion immediately adjacent to said apertured ears, a frame member including first and second angularly arranged sections hingedly connected to



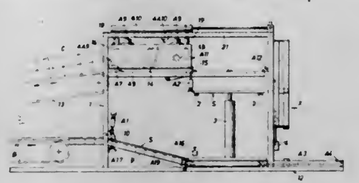
said ears at their inner ends and integrally joined together at their outer ends, said sections adapted to engage said screw members, to limit the downward movement of said sections, a bushing affixed to the outer end of one of said sections adjacent the integrally joined ends of said sections, a pointed prong mounted in said bushing, an arm positioned rearwardly of said prong and adjustably connected to the outer end of the other of said sections adjacent the integrally joined ends of said sections, and a wheel connected to said arm.

3,022,903
TRANSFER MECHANISM FOR BREAD SLICES AND OTHER ITEMS
Bert Weil, New York, N.Y., assignor to Devonsheer Melba Corporation, West New York, N.J., a corporation of New Jersey
Filed Oct. 15, 1959, Ser. No. 846,732
16 Claims. (Cl. 214—1)



1. Apparatus for transferring articles from place to place comprising a frame, a table in the lower part of said frame, a horizontally movable plate spaced from said table in about the same horizontal plane and onto which said articles are adapted to be transferred, a pick-up above said table, an upstanding support secured to said pickup, a vertical post above and between said table and plate, said post fixed to said frame, a pair of parallel links the corresponding ends of which are pivoted to said post and support respectively, said corresponding ends being in substantially vertical alinement, at least one pinion fixed on the post end of at least one of said links and on the pivot thereof, means connected to said pinion for oscillating the same, whereby said pickup is raised from said table and shifted laterally and lowered to said plate and vice versa.

3,022,904
FULLY AUTOMATIC MACHINE FOR LOADING AND UNLOADING CRATES, BOXES AND LIKE CONTAINERS IN STACKS
James William Nutter Shires, Shelf, near Halifax, England, assignor to Express Dairies (Northern) Limited, Sheffield, England
Filed Dec. 3, 1958, Ser. No. 777,932
Claims priority, application Great Britain Dec. 5, 1957
3 Claims. (Cl. 214—6)

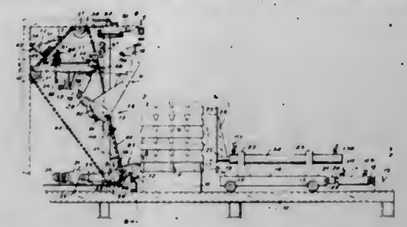


1. A machine for loading and unloading crates in a plurality of layers comprising upwardly inclined conveyor means to convey a succession of crates in layers to a platform support at the upper end of said means, a platform support to receive said succession of conveyed crates, a hoist including a hoist base adjacent the end of said platform support for receiving crates in layers conveyed from said platform, a transfer mechanism above said platform support and said hoist for picking up and gripping a plurality of crates and for carrying said crates into layered arrangement from said platform support to said base and for putting down said crates, said transfer mechanism including means for picking up, transferring and putting down said crates with accurate control in conjunction with step-by-step movement of said hoist, means for causing said hoist base to be given a step-by-step movement to allow successive sets of crates to be stacked thereon and unstacked, this step-by-step movement being controlled automatically by preset means which is arranged to be actuated by a member movable with said base but independent of any crates thereon and which can be adjusted from time to time to suit crates of varying heights, stop means for automatically preventing said transfer mechanism from gripping and transferring crates until a full complement of crates is positioned therein, means for raising and lowering said hoist with step-by-step motion, discharge means for discharging said crates in stacks, means for causing said transfer mechanism to move in a path defined by a rectangle during which it grips a full complement of crates from said platform support, lifts them off their support, transports them, lowers them on to said hoist base, releases them and returns to its initial position, and means for automatically controlling the movements in the cycle of operations required for stacking said crates, for unloading said crates and for the repetition of the cycle of stacking and unloading, said automatically controlling means being actuated directly by the movement of said hoist base and the movements of the remaining elements of the machine, apart from the crate and platform conveyors being interrelated for accurate control.

3,022,905
UNLOADER APPARATUS FOR STACKED ARTICLES OR THE LIKE
Donald G. Lyon, Monticello, Iowa, assignor to Barry-Wehmiller Machinery Company, St. Louis, Mo., a corporation of Missouri
Filed July 25, 1958, Ser. No. 750,907
2 Claims. (Cl. 214—8.5)

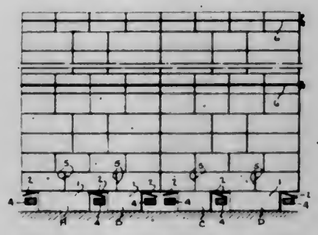
1. Apparatus for unstacking a group of articles arranged in rows and vertical stacks with upper articles resting upon lower articles in the stacks thereof, said apparatus including an upwardly movable conveyor to

elevate stacks of articles thereon and to move between a lower stack receiving position and a higher stack unloading position, an article engaging roll at the higher position to be engaged by the uppermost articles in the stacks and prepare the same to be removed from lower articles in the stacks, article sweep means in said apparatus having a member periodically movable into article abutment to remove the uppermost articles, and stack heighth sensing



means in said apparatus adjacent the higher position of said conveyor including at least two article engaging surfaces in series, one of said surfaces being removable from the sensing means to adapt the apparatus to taller articles, a control element having a surface engageable by the uppermost articles to regulate the periodic movement of said sweep means to remove the uppermost articles successively engaging the surface of said control element.

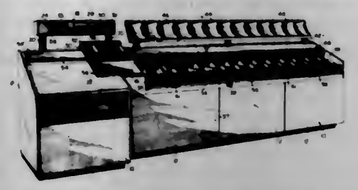
3,022,906
METHOD AND MECHANISM FOR HANDLING ARTICLES
Fred C. Sandusky, Salem, N.J., assignor to Anchor Hocking Glass Corporation, Lancaster, Ohio, a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,737
5 Claims. (Cl. 214—10.5)



1. The method of lifting a stack of articles having flaps which comprises spacing the bottom layer of articles with their flaps extending into the space between the bottom layer of articles, stacking the articles on each other in layers, introducing lifting means in the space between the bottom layer of articles beneath said flaps, and exerting a lifting force to said lifting means to lift said stack of articles.

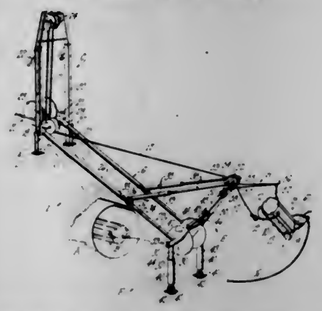
3,022,907
ITEM HANDLING APPARATUS
Felice V. Palasciano, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 26, 1959, Ser. No. 816,005
17 Claims. (Cl. 214—11)

1. Item handling apparatus comprising: a plurality of elongated item chute forming blades arranged in parallel relationship with one end of each blade terminating in the same area to form chute entrances, and the other ends of the blades terminating at item stacker pockets; means adjacent said chute entrances to move said one ends selectively to open a particular chute leading to a selected pocket; means adjacent said blades for moving items through the chutes to the pockets; means for inactivating said last means in response to jamming of items in said chutes; means enabling a portion of said blades to be



moved away from said item moving means while said item moving means exerts a retaining grip on said items; and means operably associated with said blade moving means and movable thereby for subsequently releasing said items from the retaining grip of said item moving means.

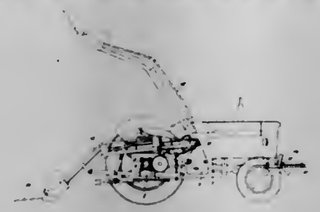
3,022,908
DRAG BUCKET DREDGING AND DUMPING MECHANISM FOR CULVERTS AND THE LIKE
Gordon D. Arnold, Dallas, Tex., assignor to Flexible Sewertool Corporation, Lima, Ohio, a corporation of Ohio
Filed Apr. 18, 1960, Ser. No. 30,514
6 Claims. (Cl. 214—92)



1. A drag bucket apparatus for removing sediment from an underground conduit having a horizontally projecting open end, said apparatus comprising: a winch section including a support adapted to stand upon the brow of the embankment and a winch drum mounted on said support; a bridge section having a rear end attached to said support and a forward portion adapted to extend downwardly and forwardly over the embankment; a boom section including supporting means adapted to stand at the foot of the embankment, a bucket straddling roller mounted for rotation of said supporting means, a boom having at its lower end a yoke with side arms straddling said roller and pivotally attaching the end of said boom to said supporting means on the axis of said roller, with the boom projecting upwardly from said roller, and a pulley mounted on the upper end of said boom.

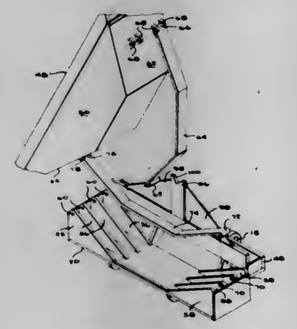
3,022,909
AGRICULTURAL MACHINERY
Eddie T. Y. Gray, Mintlaw Station, Fairbank, Fetterangus, Scotland
Filed June 27, 1958, Ser. No. 745,081
Claims priority, application Great Britain Nov. 29, 1957
5 Claims. (Cl. 214—131)

1. A load elevating attachment for an agricultural tractor comprising a sub-frame mounted upon the tractor, a pair of laterally spaced apart elevating arms pivotally mounted upon said sub-frame, means mounting a load carrying implement between the ends of the arms remote from the sub-frame, hydraulic mechanism operatively connected between the sub-frame and the arms to raise and lower said arms, the elevating arms being mountable on the sub-frame to extend forwardly and rearwardly selectively of the tractor, the hydraulic mechanism being mountable to control the movement of the elevating arms



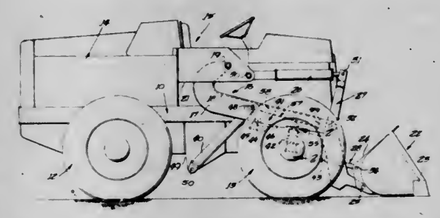
when they extend selectively forwardly and rearwardly of the tractor, a pair of interconnected laterally spaced auxiliary lift arms pivotally mounted at their one ends upon said tractor, and underlying said elevating arms respectively, the other ends of said auxiliary arms operatively engageable with undersurface portions of said elevating arms, and tractor operated power means connected to said auxiliary lift arms intermediate their ends to provide an additional lifting force to the elevating arms over at least a part of their elevating movement.

3,022,910
LOADER BUCKET
Harvey L. Anderson, Jr., 3308 N. Pershing Drive, Arlington, Va., and Zackie S. Lowe, 4617 Wilson Blvd., Arlington 3, Va.
Filed Nov. 4, 1960, Ser. No. 67,254
8 Claims. (Cl. 214—140)



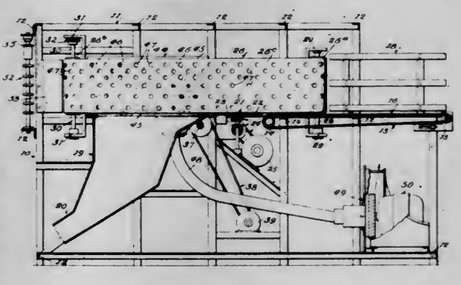
1. An earth handling device of the type tiltably mounted on a swinging boom, comprising a cradle with a flat, central portion and upwardly and outwardly sloping end ramps formed by spaced parallel, wedge-shaped uprights, each ramp having a series of aligned bores near its uppermost portion, a dump pan having a bottom and front and rear walls, and sloping side walls adapted to mate with the ramps of said cradle, a series of hinge straps each having three angularly disposed sections mating with the sides and bottom of said pan, one end of each of said straps pivoted, alternately, on opposite side walls of said pan, and with its other end pivoted in the bores in the uprights remote from the side of the pan to which the said one end is pivoted, and means to selectively tilt the pan about the axis of either of said series of bores comprising a pair of extendable thrust units pivoted at one end on a common axis medially of the pan, and above the plane of the axes of said bores, and with their other ends pivoted on the cradle co-axially with the respective said series of bores.

3,022,911
TRACTOR LOADER BUCKET LIFTING ARRANGEMENT
Thorvald G. Granryd, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Filed Nov. 5, 1959, Ser. No. 851,187
9 Claims. (Cl. 214—140)



1. In a tractor loader, a boom and bucket lifting arrangement comprising a boom pivotally connected to the tractor and extending forwardly thereof, a bucket operatively carried on the forward end of said boom, a lever pivotally carried intermediate its ends on said boom intermediate the ends thereof, a double acting hydraulic ram pivotally connected at one end thereof to said tractor substantially below the pivotal connection of said boom on said tractor, means pivotally connecting the other end of said ram to one end of said lever, pad means carried on a portion of said tractor, the other end of said lever being formed to engage said pad means during the initial portion of the lifting cycle of said boom and bucket, and stop means carried on said boom and being formed to engage said other end of said lever on the substantially complete retraction of said ram to hold said boom against said pad means.

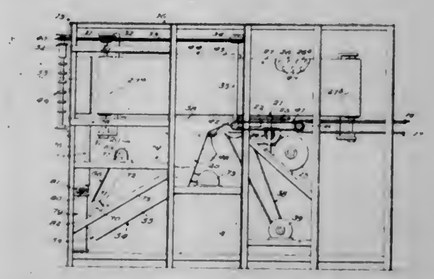
3,022,912
PACKAGE OPENING MACHINE
John N. Vincent, West Hempstead, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Dec. 10, 1958, Ser. No. 779,482
9 Claims. (Cl. 214—305)



1. In a machine for opening sealed packages and allowing the contents thereof to discharge by gravity, means for cutting and removing the sealed bottoms of the package wrappers as the packages are advanced along a path, means spaced along said path from said bottom remov-

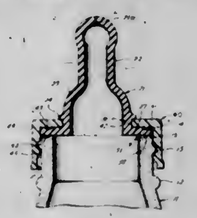
ing means and disposed under said path for receiving the contents discharging from the opened wrappers, conveying means for moving each opened package at a constant height from said bottom removing means over said receiving means, said conveying means including an apertured belt having a reach to contact with one wall of the package wrapper, a stationary suction box having an apertured wall contacting with the outer side of said belt reach, the apertures of said belt being communicable with those of said wall, and means for exhausting air from said suction box to cause said wall of the package wrapper to be suction-held against said belt reach, thereby preventing the opened wrapper from falling into said receiving means.

3,022,913
CAN PACKAGE UNLOADING MACHINE
John N. Vincent, West Hempstead, N.Y., and Howard J. Kuntz, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Dec. 10, 1958, Ser. No. 779,481
11 Claims. (Cl. 214—310)



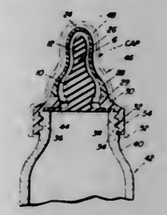
1. In a machine in which packages of cans are uninterruptedly advanced over a package bottom removing means and then over a can receiver into which the cans drop by gravity and wherein each package includes a flexible wrapper; empty wrapper ejecting means to which the emptied package wrappers are advanced, can extracting means mounted to move upwardly into and downwardly from each moving emptied wrapper as it approaches said wrapper ejecting means, thereby removing any can which may have lodged in the flexible wrapper, and means for raising and lowering said can extracting means during the movement of the wrapper.

3,022,914
VENTED NURSER
Carl E. Marsh and Frank E. Boston, Ravenna, Ohio, assignors to The Pyramid Rubber Company, Ravenna, Ohio, a corporation of Ohio
Filed July 27, 1959, Ser. No. 829,765
11 Claims. (Cl. 215—11)



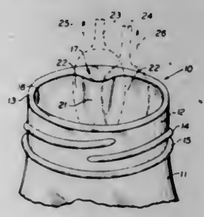
1. A nursing unit comprising a bottle, a nipple, and a screw cap, the bottle having a lip having a circular groove therein providing an inner and an outer annular projection, said outer annular projection having a radial groove extending outwardly from said circular groove to the outer periphery of the bottle lip, and said inner annular projection having a second radial groove circumferentially displaced from the first radial groove extending inwardly from the circular groove to the inner periphery of the bottle lip.

3,022,915
PACIFIER
James A. Mullin, 1970 Ripon Drive, Clearwater, Fla.
Filed Aug. 14, 1959, Ser. No. 833,798
5 Claims. (Cl. 215—11)



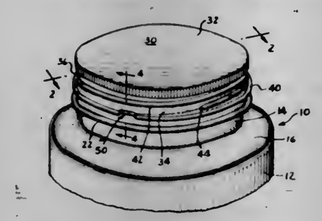
1. In combination, a nursing bottle having a threaded neck at the upper end of the bottle, a composite pacifier removably mounted on said neck and including a hollow flexibly resilient imperforate teat-like sucking member provided with a rigid screw-threaded collar screwed on the neck of said bottle, a protector cap which is readily applicable and removable and which encloses said sucking member and collar and has a fluted portion providing retaining ribs fitting into grooves provided therefor on the outer peripheral surface of said collar and a pliant core removably mounted atop the lip of said neck and projecting upwardly therefrom into the hollow portion of said sucking member.

3,022,916
CONTAINERS OR JARS
Daniel Spooner, 548 E. Bay Drive, Long Beach, N.Y.
Filed Sept. 8, 1960, Ser. No. 54,741
2 Claims. (Cl. 215—31)



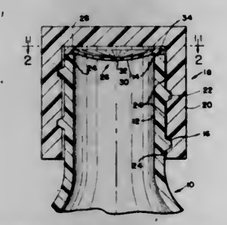
1. In a container for semi-liquids and the like having an outlet opening defining a mouth and bounded by a circumferential wall, the improvement comprising a shaped protuberance extending from a portion of said circumferential wall toward the inside of said mouth, said protuberance having an inner edge that defines the innermost extent of said protuberance, said inner edge having an arcuate convex medial region and adjacent arcuate concave side regions, said regions smoothly merging with each other and with said circumferential wall, said protuberance having a planar upper surface flush with the upper edge of said circumferential wall, said protuberance inner edge lying in said upper surface, said protuberance having an arcuate surface below said upper surface, said last mentioned arcuate surface extending obliquely in a generally downward direction from said inner edge towards said circumferential wall and merging smoothly therewith, whereby said protuberance is adapted for wiping engagement with the convex and concave surfaces of a spoon.

3,022,917
THREADED METAL CLOSURE CAP FOR A CONTAINER
Van H. Montgomery, Evansville, Ind., assignor to Bernardin Bottle Cap Company, Inc., Evansville, Ind., a corporation of Indiana
Filed Oct. 2, 1958, Ser. No. 764,830
1 Claim. (Cl. 215—44)



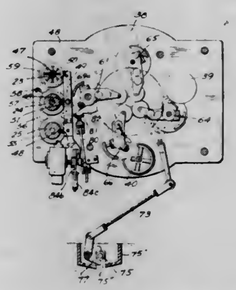
A metal closure cap for a container having a threaded neck portion, said cap having a crown portion and a depending apron provided with a circular bead surrounding its lower rim, a filler disk disposed within the cap in face-to-face contact with the peripheral regions of the crown portion, said apron being formed with an inwardly displaced elongated helical thread of small thread pitch, said thread being disposed wholly within the vertical confines defined by said crown portion and bead and terminating at its lower end above the level of said bead, said bead being formed by a displacement of the metal of the bead bodily both radially inwardly and axially upwardly from its normal cylindrical confines through a limited circumferential extent thereof at the juncture region between the bead and an imaginary linear extension of the thread-helix to provide a pilot lug for guiding said thread into threaded engagement with said threaded neck portion of the container, said pilot lug being inclined relative to a transverse plane of the cap at an angle substantially equal to the pitch angle of said thread.

3,022,918
SEALING MEANS
John W. Smith, Jr., Tecumseh, Mich., assignor, by mesne assignments, to Plas-Tainer Inc., Saline, Mich., a corporation of Michigan
Filed June 13, 1960, Ser. No. 35,671
5 Claims. (Cl. 215—56)



1. A sealed container assembly adapted to permit air to enter the container when the fluid pressure within the container is less than the pressure of the surrounding air, comprising a container having an externally threaded neck open at its upper end, a cap having an internally threaded generally cylindrical closed upper end screwed onto said externally threaded neck, the portions of said cap and said neck between their connected threads being spaced apart to provide a passageway from the surrounding air into the cap to said closed end, and a sealing member having an annular portion held between said neck and said cap in sealing relation on the upper end of said neck and a flexible concave diaphragm closing said annular portion, said annular portion being thicker in an axial direction than said diaphragm so as to provide a raised shoulder above the upper surface of the diaphragm, said annular portion having a generally radially extending groove in the upper surface of said shoulder providing communication between said passageway and the space between said diaphragm and the closed end of said cap, said diaphragm having a short slit at its axis providing when open communication between said space above the diaphragm and the interior of the container, the concave shape of said diaphragm being such that when fluid pressure on the upper side of the diaphragm is greater than on the lower side the slit will open and when the fluid pressure on the lower side is greater than the fluid pressure on the upper side the slit will be urged closed.

3,022,919
APPARATUS FOR DETERMINING COMPOSITION AND PRICE OF A DISPENSED MIXTURE
Attilio Chiantelassa, 100 Corso Ferrucci, Turin, Italy
Filed June 17, 1958, Ser. No. 742,687
Claims priority, application Italy Oct. 12, 1957
5 Claims. (Cl. 222—26)



1. In a device of the type described, in combination, a plurality of turnable members having parallel axes of rotation and being respectively associated with monetary orders, each turnable member having a plurality of axially spaced circumferential parts, each circumferential part having a group of portions uniformly spaced from each other in circumferential direction, sets of said circumferential parts being located in parallel planes perpendicular to said axes of said turnable members; friction coupling means connected to said turnable members; variable transmission means including an element driven at a speed proportional to the volume of a liquid mixture discharged by a pump, said transmission means connecting said element to said turnable members for rotating the latter; a set of first stops respectively attached to selected portions of said circumferential parts of a set of circumferential parts, and respectively representing digits in the respective monetary order; a stop means mounted for movement in axial direction of said turnable members between a plurality of positions, and having a set of second stops located in said parallel planes in said positions of said stop means, each second stop being located in the path of movement of one of said first stops

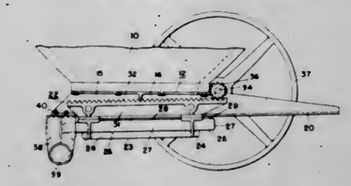
to stop rotation of the respective turnable member in a position associated with the price of a liquid mixture to be dispensed by the pump; control means for varying the ratio of the liquids of the mixtures dispensed by the pump, and for moving said stop means between said positions so that each set of circumferential parts can be associated with a different mixture; operating means for operating said control means, and connected to said friction coupling means for turning said turnable members through said friction coupling means until said first stops abut said second stops; and means actuated by said turnable members to indicate the price of a dispensed volume of the mixture of liquids.

3,022,920
COLLAPSIBLE TUBE SHIELD
James D. Croom, Jr., 625 W. Kivett St., Asheboro, N.C.
Filed Dec. 7, 1959, Ser. No. 857,979
2 Claims. (Cl. 222—105)



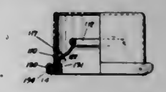
1. The combination with a collapsible tube having a threaded neck, of a shield for said tube, said shield comprising an elongated cylindrical body of rigid material embracing said tube and having an open lower end, said tube extending through said open lower end so that the lower end of said tube may be manually grasped and squeezed, an inwardly extended section on the upper end of said body and having a central opening formed therein, said tube being freely slidable into said body, a cap threaded on said tube neck and overlapping said central opening for retaining said tube when positioned within said body, said tube being freely slidable and withdrawable from said body when said cap is removed.

3,022,921
DISCHARGE GATE APPARATUS
William G. Davenport, Jenkintown, Pa., Robert K. Hampton, Garden City, N.Y., and Alan M. Katzen, Philadelphia, Pa., assignors to Beaumont Birch Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 26, 1960, Ser. No. 31,851
12 Claims. (Cl. 222—108)



1. Under-bunker drained gate apparatus comprising in combination, a chute projecting downward from the bunker, a chute bottom closure gate shiftable between chute opening and chute closing positions, said gate having a bottom portion the top surface of which closely underlies the lower peripheral edge of said chute in spaced relation thereto when said gate is in chute closing position to define a peripherally extending opening therebetween, a drainage channel carried by said gate and communicating adjacent to the bottom thereof with said peripherally extending opening to thereby receive bunker held water passing outward through said opening, a drainage channel discharge means for permitting the escape of drain water out of said drainage channel, and means operatively associated with said drain channel to prevent the drain water from escaping said drain channel except through said discharge means.

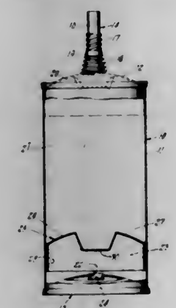
3,022,922
COVER FOR A CONTAINER
Franklin S. Patton, Erie, and Roderick V. King, Girard, Pa., assignors to Sterling Seal Co., Erie, Pa., a corporation of Pennsylvania
Filed Feb. 27, 1958, Ser. No. 718,008
3 Claims. (Cl. 222—182)



1. In combination, an aerosol type can and a cover therefor, said aerosol can having generally cylindrical side portions and a bottom, the upper edges of said generally cylindrical side portions terminating in a seam, a top for said aerosol can, said top having a breast portion generally defining the frustum of a cone attached to said upper edges of said side portions of said can by said seam, said breast portion having an opening in the center thereof closed by a closure, said closure having a valve member disposed therein, said breast portion extending downwardly and outwardly and then upwardly and outwardly and terminating in said seam between said breast portion and said side portions with a groove disposed in said breast portion between said upper edges of said cylindrical side portions and the frusto-conical portion of said breast portion, said groove being concentric with said cylindrical side portions of said can, said groove being below the top of said seam and immediately adjacent thereto and having a downwardly facing portion, said breast portion having portions thereof bent outwardly and slightly overhanging said groove, said overhanging portions being slightly above the plane of the upper edge of said seam, a cup shaped cover having a cylindrical wall terminating at its open end in an inwardly curled bead, the bottom of said cup shaped cover being spaced from the top of said can to form a protection therefor, said bead having an inwardly turned edge portion, said bead in its operative position snugly received in said groove and held removably therein by said overhanging portions of said breast portion, said cover having snap action with respect to said overhanging portions of said breast portion and said groove when placed in closed position.

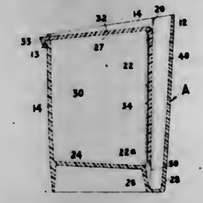
3,022,923
DISPENSING CONTAINER FOR VISCOUS PRODUCTS
Henry T. Hoffman, Jr., Barrington, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Mar. 21, 1958, Ser. No. 722,973
6 Claims. (Cl. 222—387)

1. A pressure can comprising a tubular metal body having upper and lower end closures integral therewith, the upper one of said closures having a dispensing valve mounted therein, and an imperforate cup shaped piston mounted in inverted position within said body, said piston having only a closed end facing toward said valve and a substantially straight skirt depending from said closed end and disposed contiguous the side wall of said body, said piston dividing the interior of said body into an upper viscous product chamber communicating with said dispensing valve and a lower propellant chamber, said propellant chamber adapted to contain a gaseous pressure producing propellant insoluble in said viscous product in said product chamber which maintains a continuing pressure on said piston to force said piston upwardly toward said valve upon actuation of said valve to dispense said product, said closed end being out of contact with said body side wall and the entire length of said skirt having a transverse cross-sectional shape and transverse exterior size the same as and smaller than the transverse cross-sectional shape and transverse interior size



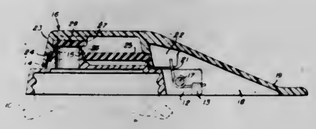
of said body respectively to provide a loose fit between said piston and said body side wall to permit the formation of a thin film of said product between said skirt and said body side wall, said film of product being both a sealant to prevent escape of said propellant around said piston and into said product and a lubricant to facilitate upward movement of said piston upon valve actuation.

3,022,924
SUGAR DISPENSER
John C. Wistrand, St. Paul, Minn., assignor to Standard Packaging Corporation, a corporation of Virginia
Filed Nov. 1, 1957, Ser. No. 693,967
1 Claim. (Cl. 222—456)



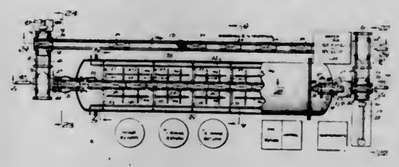
A dispenser for granular materials comprising a case having a pair of side and end walls, a stepped bottom having integrally joined sections, a first section of said bottom being elevated and inclined angularly downward to define the bottom surface of a storage chamber, a second section of said bottom disposed below and adjacent to said first section to define the bottom surface of a dispensing chamber, said bottom also having an inclined wall joining the first and second sections thereof, said side walls having opposed pairs of vertical ribs positioned on the inner surface of said side walls between the storage chamber and the dispensing chamber, a removable tongue partition frictionally held between said pairs of vertical ribs, said tongue partition having its lower end disposed in spaced relationship above said stepped bottom to form a rectangular aperture therebetween, a storage chamber cover flexibly attached to said tongue partition at the top thereof, and inter-engageable latch means on said cover and said case to retain said cover in closed position, the dispensing chamber adapted to receive a metered amount of granular material through the rectangular aperture from the storage chamber when said dispenser is upright, said tongue partition preventing the flow of granular material from the storage chamber to the dispensing chamber when said dispenser is inverted thereby permitting the discharge of only the metered amount of granular material from the dispensing chamber.

3,022,925
DISPENSERS FOR GRANULAR MATERIAL
Frank P. Daniell, P.O. Box 84, Thomasville, Ga.
Filed Apr. 20, 1959, Ser. No. 807,448
2 Claims. (Cl. 222—517)



1. In combination, a closure for a dispensing container, said closure having a raised peripheral rim projecting from the upper surface thereof and a spout portion within and adjacent said rim, the height of said spout being substantially greater than that of said rim, said rim and said spout each having a sharp edge, said sharp edges of the rim and spout each forming a complete circle, the diameter of the rim being substantially greater than that of said spout, a cover hinged to said closure, a first resilient gasket in said cover adapted for sealing cooperation with the entire sharp edge of said rim, said gasket having an opening to permit said spout to project therethrough, a second resilient gasket in said cover disposed in a plane spaced from said first mentioned gasket, and means urging said cover toward said rims whereby said first and second gaskets are brought into sealing relation with the sharp edges of said rim and said spout respectively.

3,022,926
METHOD OF HEAT SETTING, DYEING AND OPTIONALLY SCOURING BOARDED SYNTHETIC THERMOPLASTIC TEXTILES WITH SUPERATMOSPHERIC STEAM
Sidney Bailey, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 27, 1953, Ser. No. 394,603
7 Claims. (Cl. 223—76)



2. In the method of setting and dyeing textile articles made of synthetic thermoplastic yarns capable of being heat-set to predetermined shape and dyed at temperatures within the range of 212° F. to 330° F., the steps which comprise mounting said articles on boards conforming to said predetermined shape, introducing said boarded articles into a treatment zone closed to room atmosphere and containing steam under superatmospheric pressure at a temperature between 212° F. and 330° F., maintaining the articles in said treatment zone at least until said articles are heat-set to said predetermined shape, scouring the boarded articles while in said treatment zone by contacting them until clean with a liquid scouring medium stable at temperatures within the range of 212° F. and 330° F. and capable of cleansing the yarns being treated,

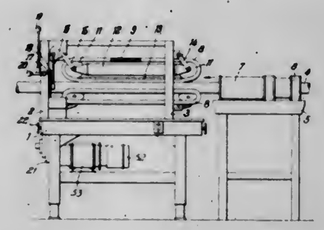
and dyeing said boarded articles while in said treatment zone by contacting the same with liquid dyeing medium capable of dyeing the yarn thereof until the boarded articles are dyed to the desired color and maintaining substantially constant said steam conditions throughout said treatment zone during setting, scouring and dyeing of the boarded articles therein so that said articles are continuously subjected to substantially uniform temperature while in the treatment zone.

3,022,927
HAND NEEDLE THREADERS
Carl E. Carlsen, 867 3rd Ave., New York, N.Y.
Filed May 7, 1959, Ser. No. 811,596
1 Claim. (Cl. 223—99)



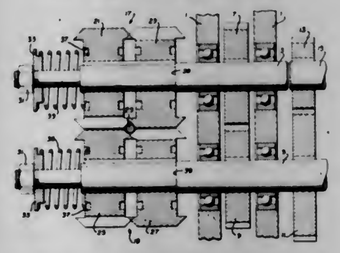
A push-hook needle threader for hand sewing needles and sewing machine needles comprising a relatively elongated member and a threading element supported adjacent one of its ends to one side of an edge of the said member and extending longitudinally thereof in spaced parallel relation, the free end of the said threading element extending to substantially the corresponding end of the said member, the said threading element having a hook formed adjacent its free end with the undercut portion of the hook facing the said free end.

3,022,928
PROCESS FOR CONTINUOUSLY WITHDRAWING OR TRANSPORTING, SHAPED ELEMENTS, TUBES OR THE LIKE
Wilhelm Ulmitz, Troisdorf, Germany, assignor to Anton Reifenhäuser and H. Reifenhäuser, Troisdorf, Germany
Filed Aug. 29, 1956, Ser. No. 606,930
Claims priority, application Germany Aug. 30, 1955
3 Claims. (Cl. 226—172)



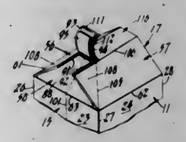
1. An apparatus for continuously advancing a tubular shaped article of indeterminate length along its axis comprising three radially spaced supporting members, a pair of pivoted parallel links of equal length holding each member parallel to said axis, an endless conveyer rotatably carried on each of said members for engagement longitudinally on the article, means for driving said conveyers at an adjustable common speed, and means for simultaneously moving said supporting members equidistantly radially of said article axis.

3,022,929
APPARATUS FOR MOVING SLENDER ELONGATED MEMBERS LENGTHWISE
Curtis B. Myers, Short Hills, and William W. Coffeen, Westfield, N.J., assignors to Metal & Thermit Corporation, Woodbridge Township, N.J., a corporation of New Jersey
Filed Mar. 17, 1959, Ser. No. 799,935
12 Claims. (Cl. 226—184)



1. Apparatus for moving a slender elongated member lengthwise, comprising a pair of opposed roll means rotatable about spaced shafts and adapted to receive a said elongated member between them, at least one of said roll means including a pair of coaxial rolls having portions defining peripheral tapered surfaces oppositely inclined radially inwardly toward each other, at least one roll of said pair of rolls being mounted for axial movement toward and away from the other roll of said pair of rolls to permit reception of various sizes of elongated members between said opposed roll means in contact with said tapered surfaces of both said rolls and with the periphery of the other said roll means, each said roll having a plurality of circumferentially spaced axially extending projections on its end adjacent the other roll, the projections of one roll interfingering between the projections of the other roll, the projections having outer surfaces comprising at least a portion of said tapered surfaces, and means for rotating at least one said roll means to move a said elongated member between said opposed roll means.

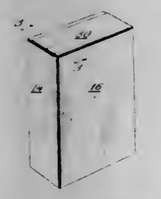
3,022,930
CONTAINER
Morris W. Kuchenbecker, Neenah, Wis., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 16, 1959, Ser. No. 853,365
18 Claims. (Cl. 229—17)



1. A top end closure for a self-sustaining tubular container having a body portion defined by four substantially rectangular side walls, said top end closure comprising a pair of outer closure panels extending from a pair of oppositely disposed side walls, a pair of inner closure panels extending from the remaining pair of oppositely disposed side walls, said inner closure panels being integral with said outer closure panels and being folded under said outer closure panels, tab portions extending from said outer and said inner closure panels, said tab portions being disposed in oppositely directed overlapping relation and secured together to produce a flat, multilayer lap seam disposed generally normal to all four side

walls and entirely between outer closure panels, and tear means in a path extending between termination points remote from both ends of the seam and extending across at least one of said inner closure panels and into both of said outer closure panels along the longitudinal edges of said seam for at least a portion of its length and extending through a location at least adjacent one end of said seam to provide for endwise tearing away and thereby separation of said one of said inner closure panels and of at least one end portion of said seam to release at least said one of said inner closure panels from said seam for displacement to a position outwardly from under said outer closure panels to produce a combined dispensing opening and pouring spout for said container.

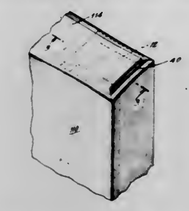
3,022,931
EASY OPENING CARTON
Reynolds Guyer, St. Paul, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed June 11, 1956, Ser. No. 590,471
1 Claim. (Cl. 229—51)



An easy opening carton including tubularly arranged side and end walls, and a closure at one end of said walls including flaps foldably connected to said side and end walls and folded into substantially right angular relation thereto, the closing flaps on said end walls being folded into a common plane, the first side wall closing flap folded to overlie said end wall closing flaps and having a single weakened line of separation extending across the side wall closing flap parallel to, and spaced from, the free edge of said first side wall flap and parallel to, and substantially coextensive with, the line of fold connecting said side wall flap to its side wall, the remaining side wall flap overlying said first named side wall flap and adhered in surface contact thereto, and short cut lines extending into a side edge of said remaining side wall flap at right angles thereto, said short cut lines substantially coinciding with an end of said weakened line of separation and the free edge of said first side wall flap, respectively, said first side wall flap terminating with its free edge spaced from the fold line connecting said remaining side wall flap to its side wall providing a space between the end wall closing flaps and the remaining side wall flap adjoining the free edge of said first named side wall flap, whereby the engagement of the free edge of the first side wall flap is facilitated.

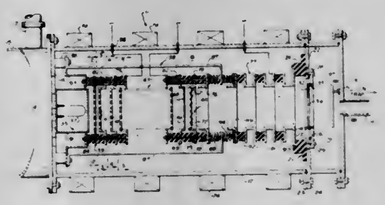
3,022,932
BAG VALVE
Oscar L. Vines, 47 5th Ave., New York 3, N.Y.
Filed June 10, 1960, Ser. No. 35,248
5 Claims. (Cl. 229—62.5)

1. A valve for bags comprising a flattened tubular member adapted to receive a filling nozzle, said tubular member having a discharge opening at one end thereof adapted to communicate with the interior of a bag, a sheath having a base panel connected to said tubular member adjacent to and along a line substantially parallel to said discharge opening, said sheath also being connected to said tubular member along the lateral edges of the latter at a point inset from said connection between said base panel and said tubular member, and a pull tab connected at the junction of said tubular member and said base panel whereby said tubular member and said base panel are rolled inwardly upon themselves when said tab is pulled outwardly and said filling opening and



said base panel are turned under in face-to-face contact, said pull tab at its connection at the junction of said tubular member and said base panel being substantially as wide as said junction whereby force applied to said pull tab is distributed across the width of said junction when said tab is pulled outwardly.

3,022,933
MULTIPLE ELECTRON BEAM ION PUMP AND SOURCE
Robert E. Ellis, Danville, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed June 1, 1959, Ser. No. 817,426
11 Claims. (Cl. 230—69)



1. A gaseous discharge device comprising a vacuum tank enclosing a low pressure region, means carried by said tank for generating a uniform magnetic field axially thereof, electron emitter means disposed within said tank for introducing electrons thereto, a multiple electron beam forming assembly disposed coaxially within said tank and receiving the electrons from said electron emitter means, said assembly coacting with said magnetic field to form said electrons into a plurality of transversely communicating separately defined reflexing electron beams extending longitudinally of the tank, said electron beams ionizing gaseous molecules within the tank to form ions and additional electrons, and means disposed within said tank for withdrawing ions from the region of the reflexing electron beams.

3,022,934
SELF-REGULATING INJECTOR
Curtis F. Gerald, El Paso, Tex., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed Aug. 24, 1960, Ser. No. 51,569
11 Claims. (Cl. 230—103)

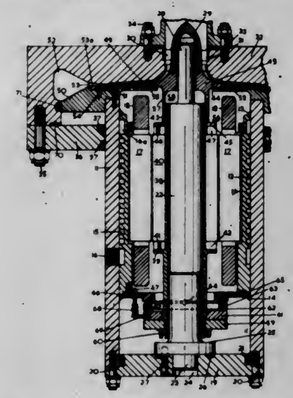
1. An injector comprising in combination first and second mixing tubes open at their downstream ends; first and second flow-restricting means each having an enlarged fluid inlet section and a discharge orifice of reduced cross-section, said fluid inlet sections being parallel-connected and said orifices being adjacent to and in open

communication with said first and second mixing tubes respectively through the upstream ends of the tubes; an injected fluid inlet port in said first mixing tube contiguous to the discharge orifice of said first flow-restricting means; fluid bypass means connecting the interior of the inlet section of said first flow-restricting means with



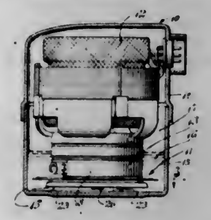
the interior of said second mixing tube at a point contiguous to the discharge orifice of said second flow-restricting means; and the open downstream end of said second mixing tube communicating with the interior of said first mixing tube at a point downstream from said injected fluid inlet port.

3,022,935
GAS BEARINGS
Alan Frost, Coventry, England, assignor, by mesne assignments, to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed Dec. 18, 1958, Ser. No. 781,366
Claims priority, application Great Britain Jan. 13, 1958
5 Claims. (Cl. 230—117)



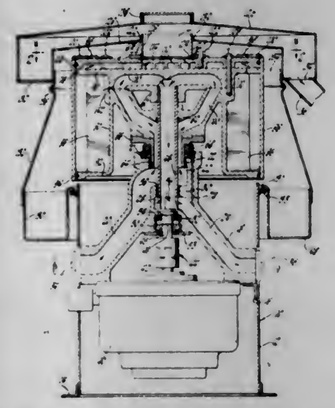
1. In an electric-motor-driven compressor and single hydrodynamic gas bearing combination comprising an electric motor rotor and a compressor rotor aligned and fast with each other, said single hydrodynamic gas bearing being the sole support for the rotors, said electric motor rotor having a coaxial cylindrical bore forming a surface of the gas bearing, said cylindrical bore being free from interruptions, a stationary shaft, said stationary shaft having a cylindrical portion which is of uniform diameter throughout its length, of said shaft forming a coacting surface of the gas bearing, said electric motor rotor bore surrounding said cylindrical portion of said shaft with minute clearance between their respective bearing surfaces, the ratio of the overlapped lengths of said bearing surfaces to their mean diameter being not less than one so that a gas in said minute clearance will act as a sole lubricating fluid for said bearing surfaces, and a casing to contain said electric motor and compressor, said shaft sealingly and rigidly supported at one end from an end wall of said casing, said casing having an opposite end wall provided with an inlet for a gas to be compressed and an outlet for the gas after compression, and said casing providing a communication for said gas to reach said minute clearance whereby the gas which is dealt with by said compressor also acts as lubricant for said bearing, said casing being otherwise hermetically sealed.

3,022,936
HOME APPLIANCE
Ralph F. Connor, Evansville, Ind., assignor to Whirlpool Corporation, a corporation of Delaware
Filed May 19, 1960, Ser. No. 30,128
6 Claims. (Cl. 230—207)



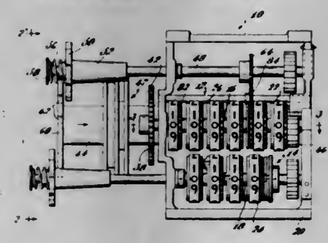
1. In a rotary compressor for use with a volatile refrigerant, means for separating entrained refrigerant from lubricating oil therein, comprising: a housing having a portion defining a sump for holding a body of the lubricating oil; a compressor member having a passage arranged to carry high temperature refrigerant; means for supporting said member in said sump portion of said housing; and a thermally conductive plate in heat exchange with said passage, said plate having a portion extending from said member and into the body of oil for delivering heat from said high temperature refrigerant to said oil to vaporize refrigerant entrained therein and cause the vaporized refrigerant to pass upwardly from the body of oil.

3,022,937
CENTRIFUGE FOR SEPARATING THREE COMPONENTS
Robert L. Dega, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,814
1 Claim. (Cl. 233—28)



A centrifuge comprising a support, two vertical coaxial tubular shafts journaled in said support, a centrifuge rotor body defining an annular series of passages, each of the latter extending radially in a vertical plane including the axis of said shafts, said shafts and rotor body being joined together as a unit and said shafts communicating with opposite ends of each of said passages, pockets in said body located outside said passages, openings leading from intermediate portions of said passages to said pockets, a liquid discharge port in an upper portion of said body coaxial with said shafts, a replaceable restrictive ring mounted in said discharge port to regulate its effective flow capacity and having an inner diameter greater than the inner diameter of each shaft, said rotor body having a cover portion defining discharge passages connecting outer zones of said pockets to said port, and means for rotating said unit.

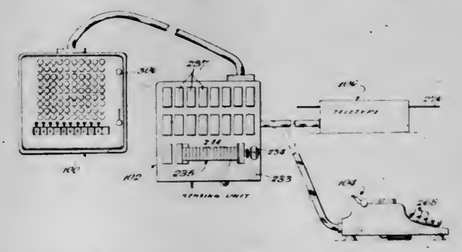
3,022,938
ROTARY-COUNTER REGISTER
Frank P. Rosapepe, Cranston, R.I., assignor, by mesne assignments, to Universal Controls, Inc., New York, N.Y., a corporation of Maryland
Filed Sept. 19, 1956, Ser. No. 610,814
4 Claims. (Cl. 235—42)



1. For use in combination with a coin collection apparatus having coin gauging means, a gauge arm, and a cyclically operable main shaft; a counter having two shafts, a plurality of digital counter-discs of increasing order arranged on one of the counter shafts side by side, the disc of lowest order being fixed to said one counter shaft and the succeeding discs being loose, means, connecting said one counter shaft to the main shaft, conditionable by the position of the gauge arm to cause said one counter shaft to advance the disc fixed thereto a number of digits corresponding to the digital value of any coin gauged, which is an aliquot part of the number of digits on the disc, a one direction clutch on said one counter shaft operably associated with a disc of higher order to rotate said disc, means carried by the disc of next lower order for engaging the clutch once during each complete revolution of the disc of lower order to advance the disc of higher order one digit, means on the other counter shaft for effecting rotation of said disc of higher order in the same direction, independently of the clutch, one or more digits, and other means on said other counter shaft operable when the gauge has contact with a coin of predetermined denomination which is a multiple of the digits on said disc of higher order, plus a fraction, to impart rotation to said other counter shaft to advance said disc of higher order a number of digits corresponding to said multiple while continuing to advance said one counter shaft by an amount corresponding to the number of digits exceeding the multiples in said coin.

3,022,939
REGISTER-CONTROLLED MEANS FOR CONTROLLING AND ACTUATING RECORDING APPARATUS
Andrew Flagge, Glen Ellyn, Ill., assignor, by mesne assignments, to Victor Comptometer Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 6, 1956, Ser. No. 602,122
11 Claims. (Cl. 235—59)

10. In apparatus of the character disclosed, a key-responsive calculating machine having a plurality of denominational orders each having keys indicating 1 to 9 and registering means, each registering means including a numeral wheel having numerals including 0 thereon and being movable between a normal position in which the 0 is in position for viewing and advanced positions for selectively presenting the numerals 1 to 9 to viewing positions, means controlled by movement of the numeral wheels for automatically blanking all numeral wheels to the left of the highest significant digit, said numeral wheels being individual to the orders and permanently related thereto, first switches individual to said denominational orders each having a plurality of points corresponding to the numerals of the numeral wheels and being settable by the wheels and to positions corresponding to the respective positions of the wheels, and being movable only by the numeral wheels, recording means

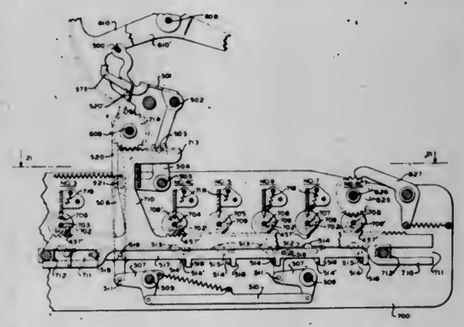


including character impressing elements and electromagnets for operating the latter, a plurality of second switches including at least a switch individual to each of the first switches for connecting said electromagnets selectively with the set points of the first switches, means operative in a single cycle of operation for actuating the second switches serially relative to the denominational orders of the machine, additional switches individual to the orders and controlled by the blanking means, said additional switches being operative for controlling the respective character impressing elements and preventing actuation thereof as controlled by said first switches in orders to the left of the highest significant digit, and control means operative upon momentary energization thereof for operating said actuating means through a single complete cycle.

3,022,940
CARRIAGE CONTROL OF ELECTROMECHANICAL PROGRAM FOR ACCOUNTING MACHINE
James W. Dodsworth, Mount Tabor, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Sept. 11, 1958, Ser. No. 760,501
27 Claims. (Cl. 235—60.48)

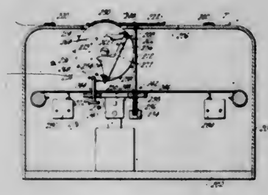
1. In a listing calculator or the like having a transversely shiftable record carriage, a plurality of amount registers, differentially movable value actuators therefor having printing means associated therewith, cyclic operating means therefor, a cyclic operated program control means operable independently of the first said cyclic operating means for determining a selection of an amount register and the character of operation performed thereon including sensing means controlled in accordance with the columnar position of the record carriage and a clutch for said program means uniformly releasable by a movement of the said record carriage; the combination therewith of a plurality of item counter registers having differentially movable value actuators and printing means associated therewith operable by the first said cyclic operating means for selective value displacement concurrently with selective value operations of the differentially movable actuators for the said amount registers, an electromagnetic program control means including a plu-

rality of electromagnets for effecting a selection and determining the character of operation of said item counter registers, circuit control meahs therefor including control switches spaced in accordance with predetermined



columnar positions of the record carriage and unitary control means operable by the record carriage for selectively effecting operation of said control switches upon a movement of the carriage to said predetermined columnar positions.

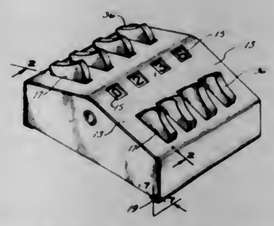
3,022,941
PERFORATED TAPE READER
Harlan L. Baumbach, Los Angeles, and Arthur L. Ford, Granada Hills, Calif., assignors, by mesne assignments, to Pacific Industries, Inc., San Francisco, Calif., a corporation of California
Filed May 7, 1959, Ser. No. 811,746
18 Claims. (Cl. 235—61.11)



1. In a perforated tape reader, the improvements comprising: a frame; a movable tape feed member on the frame for advancing an information storage tape through the reader; a plurality of yieldably extended read-out pins on the frame; a movable operating member on the frame; an actuating means operatively mechanically connected to said operating member for movement by the latter and engageable with said read-out pins to retract the latter upon movement of the operating member from a normal position thereof; and a mechanical lost motion connection between said operating member and tape feed member for moving the latter to advance the tape through the reader after retraction of said read-out pins by said actuating means.

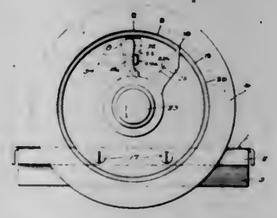
3,022,942
HAND OPERATED CALCULATING DEVICE
Anton Van Veen, Canton Center, Conn. (Box 183, Avon, Conn.)
Filed Sept. 25, 1956, Ser. No. 611,949
9 Claims. (Cl. 235—82)

1. A hand calculating device comprising in combination, a base, a plurality of aligned digit wheels rotatably mounted therein, said wheels having two series of indexing notches on their peripheries, one notch of each series being of greater depth than the others, a series of levers having members engaging one of said series of said notches for individually rotating said digit wheels in one



direction, and a second series of levers having members engaging said second series of said notches for rotating said digit wheels in the opposite direction, whereby additions and subtractions may be made with respect to previous totals and a final total directly indicated.

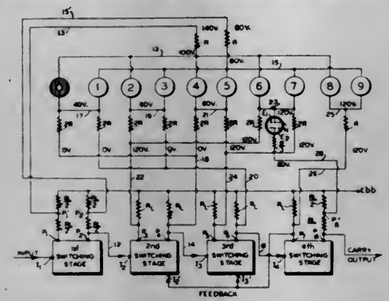
3,022,943
ELECTRIC IMPULSE-TYPE COUNTER
Michael James Dunn, Menomonee Falls, Wis., assignor, by mesne assignments, to Precision Products & Controls, Inc., a corporation of Oklahoma
Filed Feb. 19, 1960, Ser. No. 10,000
5 Claims. (Cl. 235—92)



1. An electric impulse-type counter comprising, a reversible count indicating means including a single shaft having circumferentially spaced pointers secured thereto for rotation therewith, said means adapted to count while moving in either rotational direction, drive means for moving said indicating means, first solenoid means for advancing said drive means and thereby said indicating means in one direction, second solenoid means for advancing said drive means and thereby said indicating means in another direction, and a single switch actuated by said pointers when said indicating means reaches the end of its rotative movement in either direction, said switch directing impulses from a single source to either of said solenoids.

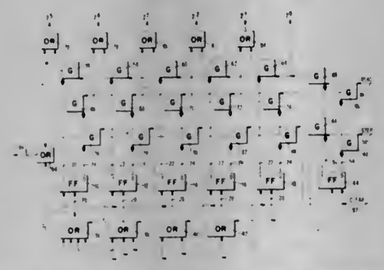
3,022,944
COUNTER AND DISPLAY SYSTEMS
Robert W. Stuart, Jr., Natick, Mass., assignor to General Radio Company, Cambridge, Mass., a corporation of Massachusetts
Filed Nov. 12, 1958, Ser. No. 773,511
16 Claims. (Cl. 235—92)

1. An electric system having, in combination, a plurality of switching circuits for counting successive impulses, an indicator for displaying the resulting count of the switching circuits, and a coupling circuit interconnecting the switching circuits and the indicator and comprising a threshold-voltage operated non-linear device one terminal of which is connected with each of two



switching circuits, and the other with a third switching circuit through electric-circuit connecting means.

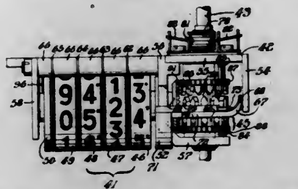
3,022,945
HIGH SPEED COUNTER
William N. Carroll, Rhinebeck, and Renato A. D'Antonio, Kingston, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 21, 1959, Ser. No. 861,027
15 Claims. (Cl. 235—92)



14. A high-speed electronic counting apparatus comprising a storage register having a plurality of stages adapted to hold signals representing the digits above the least significant digit in a number in binary form, control means for indicating whether the count stored in the apparatus is odd or even, and means to apply counter stepping signals to the storage register each adapted to change the value of the number stored in said apparatus by one in accordance with an indication provided by said control means alternately to complement all the stages above that stage which contains the first binary zero and to complement all the stages in said storage register, thereby effectively modifying the number stored in the apparatus by one in response to each stepping signal.

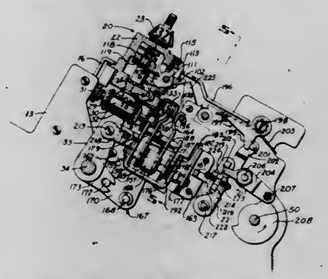
3,022,946
COUNTER REVERSING MECHANISM
John P. Glass, Ardmore, and Frank Zaic, Clifton Heights, Pa., assignors to Clifton Precision Products Co., Inc., Clifton Heights, Pa., a corporation of Delaware
Filed Aug. 21, 1957, Ser. No. 679,416
6 Claims. (Cl. 235—117)

1. A counter for indicating angular movement comprising an input shaft, an output shaft, shiftable clutch means connected between the input and output shafts for transferring input rotation to the output shaft and for reversing the direction of output shaft rotation relative to input shaft rotation, counter wheels mounted on the output shaft, and means actuated by the counter wheels



for shifting said clutch means to reverse the direction of output shaft rotation relative to input shaft rotation while maintaining the direction of rotation of said clutch means.

3,022,947
TENS-TRANSFER MECHANISM
Vito Viola, Oakland, and Cecil Olson, El Cerrito, Calif., assignors to Friden, Inc., a corporation of California
Filed Nov. 2, 1959, Ser. No. 850,184
3 Claims. (Cl. 235—133)



1. In a calculating machine having

a frame,

a register carriage mounted for endwise shifting movement from one end position to another end position on said frame,

a plurality of ordinally arranged register wheels journalled in said carriage,

certain of said register wheels lying inboard of said frame and other of said wheels lying outboard thereof when said carriage is in its left end position,

means settable to control the sign character of registrations in sail inboard register wheels,

a main tens-transfer mechanism within said frame operable to control an incremental transfer into said inboard register wheels,

and a cyclically operable power actuating means: an auxiliary tens-transfer mechanism mounted in said carriage operable for effecting tens-transfer into said outboard register wheels comprising the combination of

a rod supported in said carriage for axial adjustment to either of two positions, relative to the carriage, in accordance with the sign character of registrations in said inboard register wheels;

a plurality of tens-transfer bail-like actuators ordinally arranged relative to said outboard register wheels, and abuttingly mounted for rockable and nonslidable movement on the said rod;

an overlapping means on each lower order tens-transfer bail actuator being in cooperative relationship with an adjacent higher tens-transfer bail actuator whereupon a rocking movement of a lower order bail influences a corresponding rocking movement of an adjacent higher order bail;

a power-actuated positionable means rendered operable by said settable means to selectively adjust said rod to either of its two positions;

a series of auxiliary tens-transfer integrally constructed gear-disks, one associated with each of the said outboard register wheels and one associated with the highest order register wheel of the said inboard register wheel, each of said tens-transfer integral gear-disks having a notch therein representative of the "0" or "9" position of its associated register wheel and operable for engagement by the corresponding tens-transfer actuator upon rocking movement thereof during the subtractive or additive adjustment, respectively, of said rod;

a normally inoperative power operated resilient actuating means spaced from and aligned with the lowest order of the outboard tens-transfer bail-like actuator and operable to rock said actuators into the notches aligned therewith, in timed relation to the operation of said main tens-transfer mechanism to whereby an incremental transfer into the highest inboard register wheels transmits a similar transfer into the outboard register wheels upon axial adjustment of said rod;

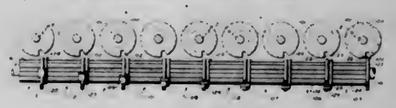
and a disabling means aligned with and spaced from the highest inboard register wheel in a plane parallel to the plane of shifting movement of the inactive positioned tens-transfer bail-like actuators for positvely preventing a rocking movement of any of those tens-transfer actuators that have been moved inboard of said frame upon shifting movement of said register carriage toward the right end position thereof.

3,022,948

TENS-TRANSFER MECHANISM

Arthur J. Malavazos, Hayward, and John W. Jamieson, San Leandro, Calif., assignors to Friden, Inc., a corporation of California

Filed Nov. 2, 1959, Ser. No. 850,153
5 Claims. (Cl. 235—138)



1. In a calculating machine having a frame, a carriage mounted for endwise shifting movement ordinally from one end position to the other end position on said frame, a plurality of ordinally arranged register wheels journalled in said carriage, certain of said register wheels lying inboard of said frame and others lying outboard thereof when said carriage is in the left end position, means settable to control the sign character of registrations in said certain of said register wheels, a main tens-transfer mechanism arranged within said frame operable to execute an incremental transfer into said certain of said register wheels, and a cyclically operable actuating means therefor: an auxiliary tens-transfer mechanism mounted on said carriage for shifting movement therewith rendered operable by said main tens-transfer mechanism to effect an incremental transfer into said other of said ordinal register wheels comprising the combination of a series of auxiliary tens-transfer gear disks, one correlated to the highest order register wheel of said certain of said register wheels and one correlated to each of said other of said register wheels, each of said auxiliary tens-transfer gear disks having a tens-transfer notch therein representative of the "0" registering position of the associated register wheel, a rod supported on said carriage for endwise adjustment to either of two positions in accordance with the sign character of a registration in said certain of said register wheels, a plurality of tens-transfer actuating cylindrical racks ordinally disposed relative to said other of said wheels and adjacently mounted for rockable and non-slidable movement on said rod for adjustment therewith, each of said tens-transfer actuating cylindrical racks including a first portion and a second portion, said first portion of a cylindrical rack corresponding to a lower order register wheel being cooperatively related to the said second portion of a cylindrical rack corresponding to the adjacent higher order register wheel whereby a rocking movement of the lower order cylindrical rack effects a rocking movement of the adjacent higher order cylindrical rack, a shoulder on the said second portion of each of said cylindrical racks angularly displaced relative to each other forming a helix circumferentially about said rod and operable upon adjustment of said rod for engagement in the said notch of the corresponding one of said gear disks upon rocking of the associated cylindrical rack, a plurality of actuating gear sectors ordinally arranged for cooperation with said cylindrical racks and independently operable to cause a rocking movement of the associated tens-transfer cylindrical rack, a shaft supported on said carriage for endwise movement conjointly with said rod and having said actuating gear sectors adjacently mounted for rockable and non-slidable movement thereon, means positionable by said settable means for selectively adjusting said rod and said shaft to either of the said two positions, a drive means operated by said cyclically operable actuating means for controlling the operation of said positionable means subsequent to the positioning thereof by said settable means, means normally operable to bias said actuating gear sectors to an inoperative position in either adjusted position of said shaft, a tens-transfer enabling means operable to rock a predetermined one of said normally inoperative actuating gear sectors to operative position in timed relation to the operation of said main tens-transfer mechanism thereby engaging each of said shoulders of a predetermined one of said tens-transfer actuating cylindrical racks and all higher order cylindrical racks successively with the said notches of the corresponding ones of said tens-transfer gear disks to mechanically continue a tens-transfer operation into said other of said register wheels upon operation of the main tens-transfer mechanism and an incremental transfer into the highest order register wheel of said certain of said wheels, means mounted on said carriage for shifting movement therewith operable to prevent operation of said enabling means when said carriage is in either the right end position or intermediate the ordinally shifted positions thereof, and means for preventing the rocking movement of said cylindrical racks as the corresponding wheels are moved inboard of said frame upon shifting movement of said register carriage toward an end position thereof.

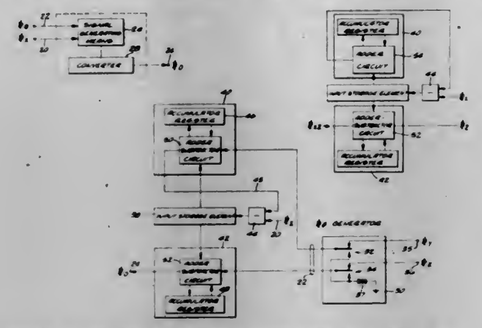
3,022,949

DIFUNCTION COMPUTING ELEMENTS

Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.

Filed May 24, 1955, Ser. No. 510,673
23 Claims. (Cl. 235—152)

1. A difunction computing element for performing one of the mathematical operations of multiplication and division upon first and second numerical quantites nonnumerically represented by first and second difunction signal trains of bivalued electrical signals, each signal of a signal train having either a first value representing a first algebraic number or a second value representing a second algebraic number, the numerical quantity represented by each signal train being equal to the algebraic average of the numbers represented by the signals in the train, said computing element comprising: first means for receiving said first and second difunction signal trains, said first means being responsive to said difunction signal trains for generating electrical signals numerically representative of the result of the mathematical operations; and second means coupled to said first means and responsive to said generated electrical signals for producing an



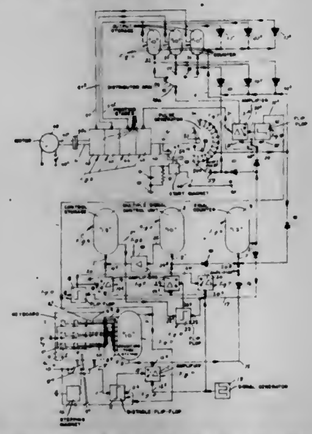
output difunction signal train consonant with said first and second difunction signal trains and non-numerically representing the result of the mathematical operation.

3,022,950

ELECTRONIC COMPUTING MEANS

Gerhard Dirks, 44 Morfelder Landstrasse, Frankfurt am Main, Germany

Filed Oct. 22, 1956, Ser. No. 617,523
Claims priority, application Great Britain Oct. 21, 1955
9 Claims. (Cl. 235—153)



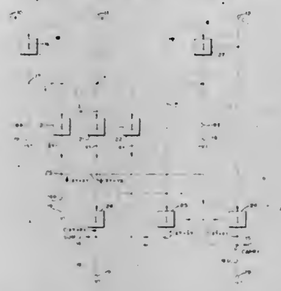
1. An electronic calculating device for calculating a check symbol for a number, the check symbol being equal to the remainder obtained from dividing said number by a prime number, including a control storage; input means operable to set the control storage successively to represent the successive digits of a number; a final counter operable by input pulses applied thereto, said final counter performing a complete cycle of operation in response to the application thereto of a number of input pulses equal to said prime number; a multiple signal control unit; first setting means responsive to each setting of the control storage to represent a digit to set the multiple signal control unit to represent the same digit; second setting means responsive to each setting of the multiple signal control unit to represent a digit to render it effective to generate a number of pulses equal to ten times the digit represented by said unit; and means for applying the pulses generated by the multiple signal control unit as input pulses to said final counter.

3,022,951

FULL ADDER

John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 14, 1957, Ser. No. 659,081
8 Claims. (Cl. 235—176)



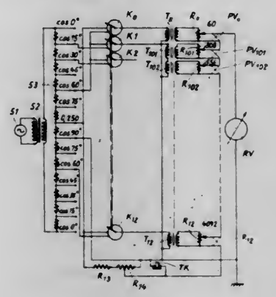
1. An adding circuit for producing sum and carry signals in response to first, second and third input digit signals comprising, first means having an output and responsive to said first and second input signals to produce a first representation at said output when said first and second input signals are of substantially identical value and to produce a second representation at said output when said first and second input signals are of different value, second means responsive to said representations at said output and to said third input signal for producing a sum signal when either of said representations and said third input signal are of substantially identical value, and third means coupled to the output of said first means and to said third input signal for producing a carry signal, whereby said sum and carry signals are indicative of the summation of said input signals.

3,022,952

APPARATUS FOR ATTENUATION CORRECTION OF A COAXIAL CABLE USED FOR CARRIER FREQUENCY TELEPHONY

Nils Olof Johannesson, Hagersten, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Filed Nov. 17, 1958, Ser. No. 774,393
Claims priority, application Sweden Nov. 29, 1957
5 Claims. (Cl. 235—193)



1. An analog computer for computing coefficients conforming to the equation

$$r_n = \sum_{n=0} y_n k_n$$

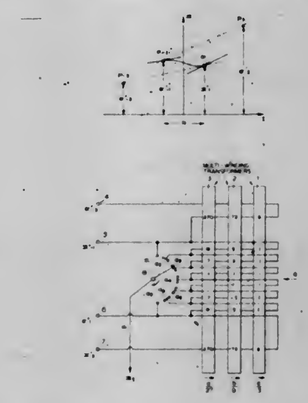
where k_0, k_1 . . . k_n are constants and y_0, y_1 . . . y_n

are variables, said computer, comprising in combination, an A.-C. voltage source, a voltage divider connected in circuit with said voltage source and having n taps, a plurality of ganged selectors each having $n-1$ stationary contacts and a contact selector arm movable into engagement with a selected one of said contacts, said divider taps and selector contacts being connected in a circuit pattern such that said selector arms are settable in positions in which the arms are connected to taps corresponding to the actual values of the constants for the coefficient r_n, a plurality of transformers each having a primary and a secondary, one terminal of each primary being connected to one of the selector arms and the other terminal to a tap common to said transformer terminal, a plurality of potentiometers each connected to the secondary of a respective one of said transformers, and indicating means, said potentiometers being connected in series with each other and with said indicating means, said potentiometers being settable in accordance with said variables.

3,022,953
INTERPOLATORS, ESPECIALLY FOR CONTROL MECHANISM FOR AUTOMATIC MACHINES

Anthony John Shawcross Udall, Addlestone, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain

Filed Oct. 22, 1956, Ser. No. 617,608
Claims priority, application Great Britain Oct. 27, 1955
6 Claims. (Cl. 235—197)

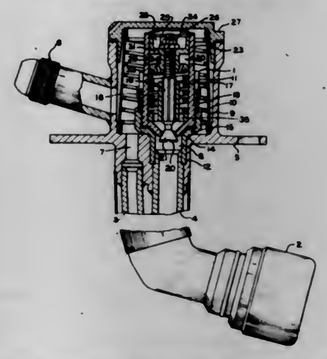


1. An interpolating device comprising at least four input terminals corresponding to a series of relatively widely spaced values of an argument, a series of output terminals corresponding to closer values of said argument, at least three transformers, said input and output terminals being connected each to each by selected windings of said transformers, the turns ratios of the windings of the respective transformers being predetermined to produce at said output terminals, in response to alternating signals applied to said input terminals, a series of signals having amplitudes which conform to a section of a curve which begins at a point determined by the amplitude of the signal applied to the second of said input terminals, ends at a point determined by the amplitude of the signal applied to the second last of said input terminals, has its slope at the beginning point determined by the amplitude difference between the signals applied to the first and third of said input terminals, and has its slope at the end point determined by the amplitude difference between the signals applied to the third last and last of said input terminals.

3,022,954
VARIABLE AREA VALVE

Robert H. Davies, Aurora, and William G. Webster, Lyndhurst, Ohio, assignors to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Oct. 2, 1959, Ser. No. 844,065
8 Claims. (Cl. 239—453)

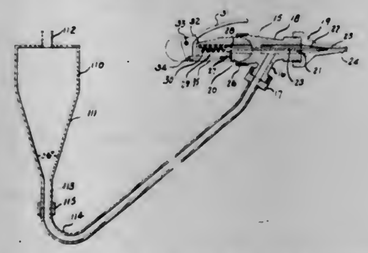


5. A valve assembly comprising a body having an inlet port, an outlet port terminating in a circular valve seat, and a chamber laterally enlarged relative to said outlet port through which fluid is adapted to flow from said inlet port to said outlet port; a valve member axially reciprocable in said body to move into and out of engagement with said seat to thereby close and open said outlet port for flow of fluid therethrough; spring means acting on said valve member to urge the latter into engagement with said seat; said valve member having a laterally enlarged portion that subdivides said chamber into an inlet chamber in communication with said inlet port and an outlet chamber in communication with said outlet port; and said valve assembly having a control orifice communicating said inlet chamber with said outlet chamber; said control orifice being of flow capacity such that, following initial opening of said valve member by fluid pressure acting on the area of said seat and predetermined increase in flow through said outlet port per unit increase in pressure, the flow through said outlet port is substantially increased per unit increase in pressure owing to the predominance of fluid pressure in said inlet chamber as compared with the pressure in said outlet chamber.

3,022,955
APPLICATOR

Robert W. Riddell, Evanston, Ill.; Arthur G. Gilkes, administrator of said Robert W. Riddell, deceased, assignor to Elizabeth White Riddell, Buffalo, N. Y.

Filed Jan. 9, 1957, Ser. No. 633,246
4 Claims. (Cl. 239—456)



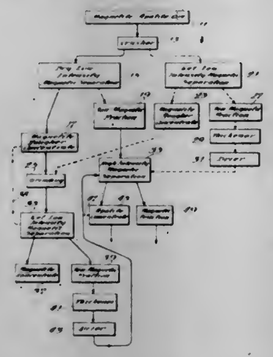
1. A pressure type applicator gun which comprises a smooth bore barrel containing an inlet port at one end

thereof, an outlet port at the other end of said barrel defining a discharge orifice of cylindrical cross section, a conical faced valve seat opening from the bore of said barrel into said port wherein said valve seat is defined by a cone having a section an included angle of not more than 28°, a rod type cylindrical valve closure member having a plastic tip comprising a high melting polymeric plastic material and having a greater cross sectional area at its tip than that of said outlet port, and means for actuating said rod closure member, whereby the valve closure member and seat are characterized in closing by the plastic tip of the closure member seating above the outlet port in end edge to conical surface contact with the internal face of the conical valve seat thereby effecting a wiping squeegee action on said internal face, and in opening by a cross sectional clearance area of the conical valve opening of at least 150% that of the outlet port.

3,022,956
BENEFICIATION OF ORES

Joseph F. Haseman, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

Filed Apr. 14, 1958, Ser. No. 728,122
3 Claims. (Cl. 241—24)



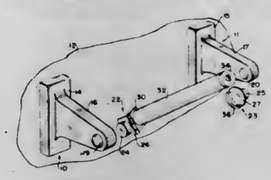
1. A process for beneficiation of a magnetite-apatite ore which comprises comminuting the ore to at least 70% liberation but less than 95% liberation of magnetite from apatite, subjecting the comminuted ore to a dry low intensity magnetic separation and separately recovering a first magnetic fraction containing the larger proportion of the magnetic values and a first non-magnetic fraction containing the larger proportion of the apatite values, subjecting the first magnetic fraction to a comminuting operation to effect substantially complete liberation of magnetite from apatite, subsequently subjecting the comminuted magnetic fraction to a wet low intensity magnetic separation and separately recovering a second magnetic fraction of low apatite content and a second non-magnetic fraction.

3,022,957
PAPER ROLL HOLDER

George Blunt, 186 Sylvan Road, Bloomfield, N.J., and John A. Bennett, 135 N. Mountain Ave., Montclair, N.J.

Filed Oct. 9, 1959, Ser. No. 845,433
2 Claims. (Cl. 242—55.2)

1. A holder for rotatably mounting a roll of paper adjacent a wall surface comprising a pair of opposed supporting elements adapted to be rigidly mounted apart a fixed distance greater than the length of said roll and to intersect a common horizontal axis spaced from said wall surface, a hinge element secured to the first of said supporting elements and defining a hinge axis slanting upwardly toward said wall surface over said horizontal axis and lying in a plane perpendicular to said horizontal axis, said hinge element normally lying across said horizontal axis against said first supporting element between it and the second supporting element, a roll-carrying spindle affixed adjacent one end to said hinge element and normally extending therefrom along said horizontal axis

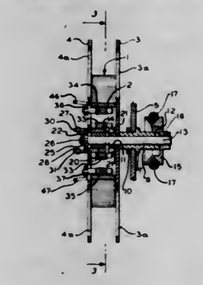


substantially to the second supporting element, said spindle being of magnetic material at the end portion thereof opposite said pivotal member, and magnetized receiving means on said second supporting element for supporting and releasably securing the magnetic end portion of said spindle when said spindle is in its normal position, whereby said spindle may be swung from its normal position upwardly and outwardly from said wall surface about said hinge axis and is aided by the force of gravity to return to and be held in said normal position.

3,022,958
REEL

Charles E. Bieber, Roselle, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware

Filed Dec. 23, 1959, Ser. No. 861,509
9 Claims. (Cl. 242—71.8)



8. In a reel for holding a roll of web material, said reel including spaced side plates between which said roll is disposed; means detachably coupling said side plates together, latching means for maintaining said side plates coupled together, gripping means movable in a given direction to securely hold said roll on said reel, and a single spring connected between said latching means and said gripping means, said spring being effective to operate said latching and gripping means.

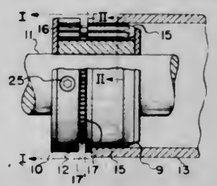
3,022,959
SELF-LOCKING CORE CHUCKS

Arthur T. Blake, 57 Ilford Ave., North Arlington, N.J.

Filed Oct. 14, 1957, Ser. No. 690,062
10 Claims. (Cl. 242—72)

1. A core chuck designed to lock the core of a roll of material during winding and unwinding operations to a mandrel, said core chuck comprising a tubiform cylin-

drical chuck body dimensioned to accommodate a core, means for fastening said chuck body onto a mandrel shaft, said chuck body defining on the surface opposite said core a recess disposed parallel to the rotating axis thereof, said recess having a terraced bottom including at least one step ascending from a common center groove to each side of the recess, the faces of said step and of said common center groove being substantially parallel to and spaced apart at different distances from the opposite smooth face of said core, a toothed roller in said recess with its axis parallel to the axis of said chuck body, said

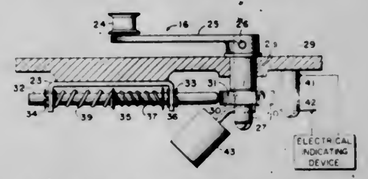


roller having an over-all diameter slightly in excess of the greatest depth of said recess with one tooth resting on the bottom of said common center groove and an opposing tooth adapted to bite into the opposite face of said core to form a pivot point for a turning of said roller, and a tooth adjacent to said one tooth being adapted to mount the step adjacent said common center groove in response to a lateral force acting upon at least said opposing tooth of said roller, and spring means returning said roller into the lowermost position in said recess upon cessation of said lateral force.

3,022,960
MECHANICALLY DAMPED TENSION SYSTEM FOR TAPE RECORDER

Walter E. Foster, Bellevue, Ky., assignor to Avco Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Feb. 8, 1961, Ser. No. 87,942
6 Claims. (Cl. 242—75.3)



4. A tape tension and take-up device for a tape recorder, comprising, in combination, a guide pulley for positioning a magnetic tape in tension between points of origin and destination, crank means having a rotatable shaft and a swingable arm, said guide pulley being rotatably mounted on the end of said arm, and means for yieldably controlling displacement of said arm so that the pulley follows the tape, comprising: a cam rigidly secured to said shaft, and a spring-biased plunger member mounted to exert pressure against said cam.

3,022,961
PICKUP MEANS FOR A SPINNING REEL

Toshio Sawamura and Takeo Hayashi, Tokyo, Japan, assignors to Jorgensen Bros., Pleasanton, Calif.

Filed Dec. 17, 1959, Ser. No. 860,220
3 Claims. (Cl. 242—84.21)

1. In a fishing reel including a frame, a line spool and a spooling member coaxially mounted on said frame with one of said spool or said spooling member being rotatable relative to the other, and means for rotating the rotatable one of said spool and spooling member in a first direction, the combination of a tooth pivotally supported on said rotatable member adjacent the periphery thereof, said tooth normally residing in a retracted position inwardly of the periphery of the spooling member

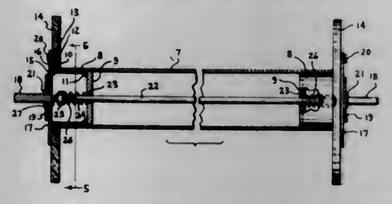


but rotatable to move to a projecting position with the tooth projecting beyond the periphery of said spooling member, and a dog pivotally supported on said rotatable member radially inwardly of said tooth operable to control the movement of said tooth between said retracted and projecting positions.

3,022,962
SPOOL

Henry F. Benoit, P.O. Box 112, Charlton City, Mass.

Filed June 2, 1960, Ser. No. 33,583
7 Claims. (Cl. 242—118.61)



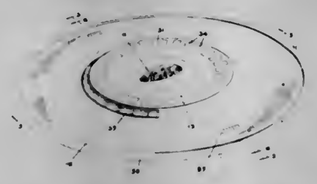
4. A spool comprising a circular tubular barrel portion of relatively rigid material of a controlled diameter and having relatively flat end portions in substantially normal relation with the longitudinal axis thereof, a metallic circular cylinder member extending a substantial distance within each of the opposed ends of said tubular barrel portion, a metallic flange of a diameter greater than the diameter of the barrel carried by each of said cylinder members at a location spaced inwardly of the outer ends of said cylinder members and in relatively intimate engaging relation with the respective flat ends of the barrel portion, said spacing inwardly of said flanges being such as to cause the ends of said cylinder members to protrude outwardly of the flanges, each of said cylinder members having a rigid wall extending transversely adjacent the inner ends thereof and each having a central opening therein, a single rigid rod extending axially of said barrel through said respective central openings in said rigid walls of said cylinder members and having threaded portions on the opposed ends thereof extending and lying within each of said cylinder members, an adjustable nut on each of said threaded end portions, a coil spring on each of said respective end portions of the rod internally of said cylinder members and located between said nuts and the inner side surfaces of the rigid walls of the cylinder members, a pair of circular head portions of a diameter greater than the flanges each having a recess on the inner side surface thereof adapted to receive the respective flanges with the inner side surfaces of said flanges lying in substantially flush relation with the inner side surfaces of said head portions and each having a central opening into which the ends of the cylindrical members which protrude outwardly of the flanges extend, a reinforcing disk of a diameter less than the diameter of the head portions overlying each of the outer surfaces of said head portions and having a pivot

pin extending outwardly thereof in substantially co-axial relation with the axis of the barrel portion with the inner surfaces of said disks lying in adjacent relation with the protruding outer ends of each of the cylinder members, said disks, head portions and flanges having a plurality of spaced aligned openings therein and means extending through said openings for securing said parts together with the inner ends of said means lying in substantially flush relation with the inner surfaces of the disks.

3,022,963
DISC-TYPE AIRCRAFT WITH PERIPHERAL JET CONTROL

John Carver Meadows Frost, Georgetown, Ontario, and Thomas Desmond Earl, Glen Williams, Ontario, Canada, assignors, by mesne assignments, to Avro Aircraft Limited, Malton, Ontario, Canada, a corporation of Canada

Continuation of application Ser. No. 507,098, May 9, 1955. This application Oct. 1, 1957, Ser. No. 688,804
Claims priority, application Great Britain May 11, 1954
23 Claims. (Cl. 244—15)

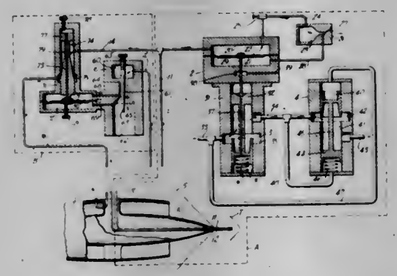


1. An aircraft comprising a lentiform structure, means for ejecting gases at high velocity from said aircraft through a substantially annular outlet generally encompassing the aircraft adjacent its outboard periphery, the gases being ejected in the form of a stream generally radial to the yaw axis of the aircraft at a multiplicity of positions distributed about the outlet, means for bifurcating said stream upon its ejection into two diverging streams and for directing said streams to have components of thrust parallel to said yaw axis but of opposite sense.

3,022,964
ACCELERATION AND MACH NUMBER LIMITING FUEL CONTROLS FOR AIRCRAFT

Bernard I. Seeger, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware

Filed Feb. 23, 1954, Ser. No. 411,870
5 Claims. (Cl. 244—76)

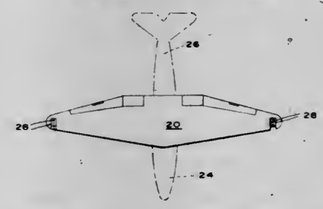


1. Fuel flow control mechanism adapted to control the flow of fuel to the propulsion device of an aircraft, comprising fuel flow regulating means, actuating means operatively connected to said fuel flow regulating means and including first pressure responsive means, first air supply means operable to supply air under pressure to said first pressure responsive means, a Mach No. responsive device including second air supply means operable to supply air substantially at flight impact pressure of the aircraft, a constricted nozzle of the convergent-divergent type having its entrance in communication with said second air supply means for receiving air under pressure therefrom and discharging such air to a substantially lower pressure region, second pressure responsive means, means establishing communication between said second pressure responsive means and the exit of said constricted nozzle for actuating said second pressure responsive means, and means controlled by said second pressure responsive means and operable to control said first air supply means for reducing the pressure of the air supplied thereby to said first pressure responsive means upon the aircraft exceeding a predetermined Mach No. for altering the actuation of said fuel flow regulating means to reduce the flow of fuel therethrough to the aircraft propulsion device.

3,022,965
AIRCRAFT WING

Sergio Caciagli, Avenida Andres Bello Edificio V.A.M. Torre Este, Apartamento 52, Caracas, Venezuela

Filed Nov. 24, 1958, Ser. No. 776,105
14 Claims. (Cl. 244—90)

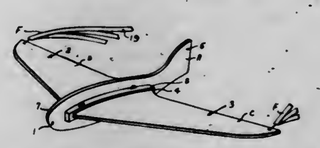


1. An aircraft wing comprising a leading edge, a trailing edge, a tip, a control device comprising two sets of surfaces each pivoted about an axis extending spanwise of said wing and aft of said leading edge, said surfaces of one of said sets being relatively movable and extending forwardly to said leading edge, said surfaces of the other of said sets being relatively movable and extending rearwardly towards said trailing edge, and positive adjusting means connected with said surfaces for imparting pivotal movement thereto between retracted and extended positions relative to said wing.

3,022,966
KITE

Quentin L. Briggs, 5010 Linden Ave., Dayton, Ohio, assignor of one-half to H. Cramer Mahan, Dayton, Ohio

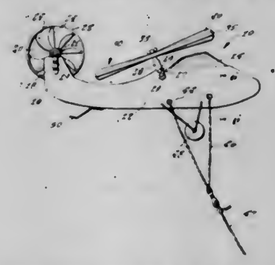
Filed Feb. 17, 1960, Ser. No. 9,295
6 Claims. (Cl. 244—154)



1. An airplane kite, including a streamlined body element having a transverse through opening, a wing adapter installed in said opening, said adapter exceeding said opening in length and having configurations at its ends to interengage with the ends of said opening, said adapter having a transverse through opening, wings projecting later-

ally from said body and having their respective inner ends received in the said transverse through opening in said adapter from opposite sides thereof, vertically extending connectors fixing said wings and said adapter in a unitary assembly, and means for attaching a bridle to the kite.

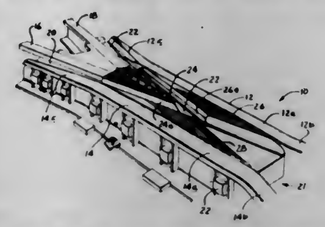
3,022,967
COPTER KITE
John Romeo, 238 Everett Ave., Wyckoff, N.J.
Filed Feb. 9, 1959, Ser. No. 792,061
1 Claim. (Cl. 244—154)



A helicopter kite comprising, in combination, a fuselage, a wing secured transversely adjacent to one forward end of said fuselage, a tail integral with the opposite rear end of said fuselage, landing gear carried by a bottom portion of said fuselage intermediate the opposite ends thereof, ground control cable means secured to said fuselage, rotor means rotatably supported upon said fuselage above the level of said landing gear, said cable means comprising a bridle, longitudinally spaced apart openings in said bottom portion of said fuselage, said bridle being threaded through said spaced apart openings in said fuselage, a length of flexible cable secured at one end to said bridle having an opposite end for manipulation upon the ground for controlling the kite in flight, said rotor means comprising a main rotor, a main rotor bracket secured to an upper portion of said fuselage intermediate said wing and tail, and removable bolt means rotatably securing said main rotor upon said main bracket for rotation about an axis lying in a plane common to the vertical central plane of said fuselage, said main rotor being supported for rotation within a plane defining an acute angle with the plane of said wing, wherein said rotor means further comprises a tail rotor, and a tail bracket secured to said tail and rotatably supporting said tail rotor for rotation within a plane substantially common to the longitudinal central plane of said fuselage and substantially normal to the plane of rotation of said main rotor.

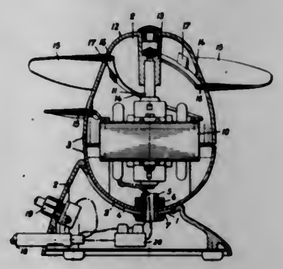
3,022,968
RAILWAY FROG
William A. McGrath, Carlisle, Pa., assignor to The Frog Switch & Manufacturing Co., Carlisle, Pa., a corporation of Pennsylvania
Filed Mar. 5, 1959, Ser. No. 797,359
5 Claims. (Cl. 246—468)

5. The process for producing a surface hardened railroad frog which comprises forming a frog member including a frog point having a wear surface of work hardenable but initially unhardened metal, forming spaced relieved areas in said wear surface thus defining rows of upraised metal portions therebetween positioned for engagement by the wheels of passing railway vehicles, said spaced grooves and upraised metal portions being elongated, of uniform cross section throughout their length, and being alined in the direction of travel of the railway vehicle wheels along the rails, and plastically deforming said upraised metal portions at least partially into said spaced relieved areas by installing the frog member in a rail crossing in use by railway vehicles so



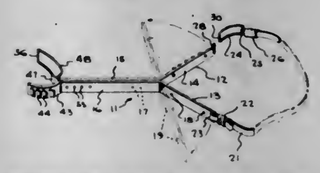
that the vehicle wheels exert pressure upon said upraised portions to thus work harden the wear surfaces.

3,022,969
VENTILATOR
Hans Fleckenstein, Oldenburg, Peter Sieber, Frankfurt am Main, and Lothar Kiesow, Oldenburg, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
Filed Sept. 16, 1958, Ser. No. 761,429
2 Claims. (Cl. 248—13)



1. A supporting structure for a motor driven fan comprising: a stand having an inclined, upwardly directed, concave, spherical-calotte surface, there being a slot in said surface; a housing for the fan motor having a convex spherical surface directly resting on said concave surface of said stand and forming a ball and socket joint permitting movement of said housing with respect to said stand; and force-locking means including a resilient ring receiving a flanged peg, the latter being adjustably received by said slot for connecting said stand and said housing to each other at a desired relative position.

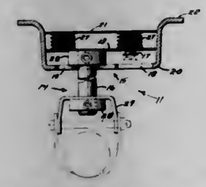
3,022,970
ANTENNA MAST SUPPORT
William B. Watkins, 928 W. Cotton St., Winston-Salem, N.C.
Filed Feb. 9, 1960, Ser. No. 7,602
3 Claims. (Cl. 248—41)



1. An antenna mast support comprising a substantially rigid corner piece adapted to fit the vertical corner of a chimney, said corner piece comprising a pair of abutment

bars arranged substantially at right angles to each other, one of said bars being provided with a plurality of spaced inclined anchor lugs, a flexible strap member secured to the other bar, a resilient arcuately curved locking bail pivoted to the end of said strap member and being lockingly engageable with a selected one of said anchoring lugs, said locking bail having arcuately curved parallel resilient side arms and a transverse bight portion connecting the free ends of said side arms, said side arms being resiliently yieldable in the direction of their length in response to tension exerted on said bight portion, said one bar being formed with an apertured end lug slidably receiving and guiding said strap member, a rigid arm projecting from the apex of said corner piece, a pair of wing elements on the end of said arm, one of said wing elements being concavely arcuately curved to receive an antenna mast, a plurality of spaced locking lugs on the convex outer surface of said one wing element, said last-named lugs being inclined toward said corner piece, and a second resilient arcuately curved bail member pivoted to the other wing element and being lockingly engageable with a selected one of said last-named locking lugs to clamp the antenna mast to said wing elements, said last-named bail member having arcuately curved parallel resilient side arms including end portions of relatively short radius and a transverse bight member connecting said end portions, said end portions being resiliently yieldable in the direction of their length responsive to tension exerted on said last-named bight member.

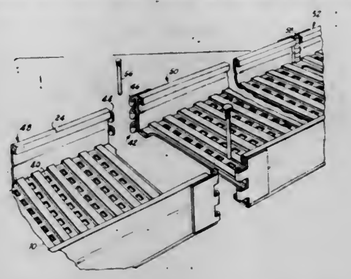
3,022,971
PIPE HANGER INSERT STRUCTURE
Oscar E. Cote, 2039 Culver St., Lansing, Mich.
Filed June 11, 1959, Ser. No. 819,641
6 Claims. (Cl. 248—58)



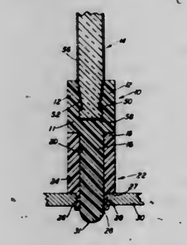
1. In a threadless pipe hanger assembly, the combination including: an elongate insert housing adapted to be fastened to a ceiling and having a base wall portion, said base wall portion defining a keyhole slot having an enlarged portion and a connecting narrow portion; an elongate movable horizontally-oriented pressure plate provided within said insert housing, said pressure plate abutting the inner surface of said base wall portion so as to cover said keyhole slot; spring means provided within said insert structure and above said pressure plate so as to yieldably bias said pressure plate downward against said base wall portion; and a pipe support rod assembly having a head portion insertable through the enlarged portion of said keyhole slot and movable over the narrow portion of said keyhole slot so as to displace said pressure plate upwardly against said spring means, said head portion lockably retained in position against said base wall portion by said displaced pressure plate.

3,022,972
SUPPORTING TROUGH
Roy F. E. Bunston, Markham, Ontario, Canada, assignor to Burndy Corporation, a corporation of New York
Filed July 21, 1959, Ser. No. 828,638
8 Claims. (Cl. 248—68)

1. A supporting trough, comprising: a pair of spaced apart, longitudinally extending side rails; each rail comprising a vertical member and a horizontal member; a plurality of longitudinally spaced apart transverse beams interconnecting said pair of side rails; said plurality of beams comprising a plurality of vertical members and a plurality of upper and lower horizontal members alternately interconnecting the upper edges of adjacent vertical members and the lower edges of adjacent vertical members; each end of each said lower beam horizontal member overlapping a rail horizontal member and attached thereto.



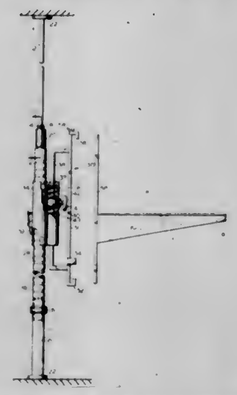
3,022,973
SUPPORT DEVICE
James E. Morrow and Jamie N. Boyle, Portland, Oreg., assignors to Tektronix, Inc., Portland, Oreg., a corporation of Oregon
Filed July 22, 1958, Ser. No. 750,175
1 Claim. (Cl. 248—223)



A support device comprising a fastening member having a body portion and a thin walled tubular fastening sleeve element extending from said body portion for insertion through an aperture in a panel, said fastening member having a pin receiving hole extending through said body portion and axially through said sleeve element to provide a wall around said hole, a support member having a support portion and a pin extending from said support portion for insertion in said hole, said sleeve prior to insertion of said pin in said hole having an internal shoulder spaced axially of said hole from said body portion and providing a constriction of said hole, said sleeve element having an inner wall surface extending parallel to the axis of said hole from within said body portion to said shoulder and having an outer wall surface parallel to said inner wall surface, said sleeve element having a wall thickness less than the wall thickness of said body portion and forming a continuous elastic annular wall around said constricted portion of said hole and an external shoulder between said body portion and said sleeve element, said pin when inserted in said hole having its outer surface fitting said inner wall surface and extending parallel to said inner wall surface through said constricted portion of said hole to deform said sleeve element outwardly adjacent said shoulder and on the opposite side

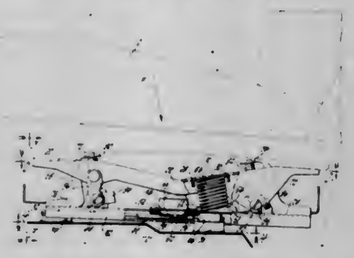
of said panel from said body portion, said support portion having a pair of opposed resilient holding elements spaced from each other to provide a slot for receiving a member to be supported, said holding elements having downwardly directed lugs in said slot for holding said member to be supported in said slot.

3,022,974
ACCESSORY HOLDING DEVICE
Robert R. Knodel, 11751 Clover Lane, Garden Grove, Calif.
Filed Nov. 24, 1959, Ser. No. 855,202
7 Claims. (Cl. 248—354)



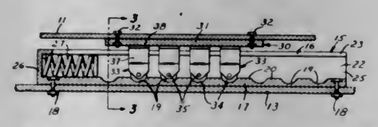
1. A supporting pole structure comprising a base portion adapted for support on a floor surface, extension means slidably engaged with said base portion and adapted to engage a ceiling surface in an extended position, lock means engageable between said base portion and said extension means for locking said two elements together in clamped frictional engagement between the floor and ceiling, a holder slidably mounted on said base portion, a support member on said holder, means in said support member defining a vertical socket for slidably supporting a load engaging member, and spring means in said socket operable on said load engaging member in a manner resiliently to support the latter in both up and down movements.

3,022,975
SEAT ADJUSTER
George B. Horton, Dearborn, and Thomas E. Lohr, Redford, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,751
15 Claims. (Cl. 248—420)



15. Seat adjuster mechanism comprising a support member for a seat, a trackway for horizontal adjustment of said seat, said trackway having a fixed member and a movable member mounted thereon for fore and aft adjustment, said fixed member and said movable member and said support member being aligned one above the other in a vertically stacked relationship, threaded support posts fixed to and supported on said movable member beneath said support member and movable therewith during fore and aft adjustment, nut members cooperatively associated with said support posts, link means interconnecting said nut members and said support member, and power means drivingly associated with said nut members for causing vertical movement thereof relative to said support posts to variably vertically position the seat.

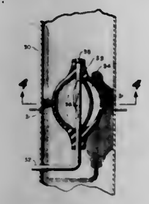
3,022,976
SAFETY ADJUSTABLE-SEAT MOUNTING FOR FRONT SEAT OF A VEHICLE
Yee C. Zia, 6 Sheffield Drive, Levittown, N.J.
Filed Sept. 6, 1960, Ser. No. 53,994
2 Claims. (Cl. 248—430)



1. In a vehicle, the combination comprising a floor, a front seat over said floor, and mounting means for safely and adjustably mounting said seat on said floor, said mounting means comprising a forwardly and rearwardly extending upwardly facing track secured to said floor, said track having a series of upwardly facing depressed regions provided therein, laterally spaced retaining means extending longitudinally along opposite sides of said track fixedly secured thereto and spaced vertically above said track, a series of roller carriers depending from said seat between said retaining means toward said track, rotatable rollers carried by said roller carriers in rolling engagement with said track to mount said seat for forward and rearward movement relative to said track, said depressed track regions being configured and arranged to selectively gravitationally receive said rollers to adjustably position said seat relative to said track, the lower region of each roller carrier being enlarged to a lateral dimension greater than the spacing between said retaining means to prevent upward withdrawal between the latter, and said retaining means being spaced sufficiently above said track for free movement therealong of the rollers both forwardly and rearwardly and vertically into and out of depressed regions without engagement of said enlarged roller-carrier region and said retaining means, whereby said depressed regions are adapted to retain said rollers under normal gravity forces on said seat and to release said rollers for free rolling movement along said track without engagement of said retaining means and lower roller-carrier region under abnormal forward and rearward forces imparted to said seat.

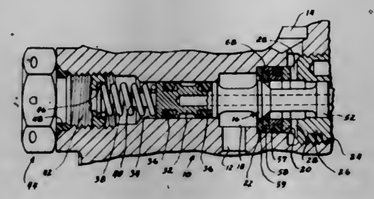
3,022,977
VACUUM OPERATED NORMALLY CLOSED VALVE
Sam A. Jones, Pittsburgh, Pa. (1503 Newport Ave., Lakeland, Fla.)
Filed Sept. 25, 1958, Ser. No. 763,243
4 Claims. (Cl. 251—61)

1. A vacuum-operated, normally closed valve comprising a pipe section, a lining of resilient, deformable material over the inner wall thereof, a hollow resilient collapsible bulb having a circular cross-section of slightly greater normal diameter than the inner diameter of said lining, thereby maintaining said bulb in normally compressive engagement with said lining, a rigid tube extending from and communicating with the hollow portion of said collapsible bulb and through a wall of said pipe section thereby securing said collapsible bulb against longitudinal movement in said pipe section, and means



for connecting the external portion of said rigid tube to a vacuum source for exhausting fluids from said rigid tube and from the hollow portion of said collapsible bulb to cause collapse of said collapsible bulb whereby its outer surface separates from compressive engagement with said lining to provide a flow passageway therebetween.

3,022,978
HIGH PRESSURE VALVE SEAT
Slawomir Kowalski, Rockaway, and John G. Kenann, Millburn, N.J., assignors to Marotta Valve Corporation, Boonton, N.J., a corporation of New Jersey
Filed Dec. 3, 1957, Ser. No. 700,461
3 Claims. (Cl. 251—362)



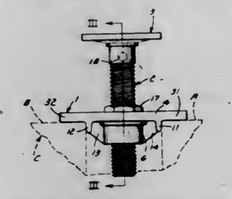
1. In a valve assembly which has a cylindrical valve chamber formed with a smaller diameter section and a counterbore of larger diameter with an annular end face of the counterbore at the location where the diameter of the chamber changes, a valve seat assembly in the counterbore and comprising an annular shell and a plastic seat within the shell and that contacts with an annular end face of the shell, and a tapered valve element having relative movement toward and from the seat to put the valve element selectively in closed and open positions, the improvement which comprises an outside wall of the shell of slightly less axial length than the plastic seat, when the seat is undistorted, a metal ring extending radially inward for a substantial distance beyond the inner limits of the end face of the counterbore but terminating short of the inner radial limit of the seat, the ring being in contact on one side with said end face and having its other side confronting one end of said outside wall of the shell for a portion of the radial extent of the ring and confronting an end face of the plastic seat for another portion of the radial extent of said other side of the ring, the ring clamping the seat against the annular face of the shell, and the seat being stressed in compression and distorted sufficiently to make the ring contact with the confronting end face of the shell, a sealing ring between the shell and the counterbore and a plug that fits into the counterbore and that holds the shell against the ring and the ring against the end face of the counterbore.

3,022,979
CARPET STRETCHER
Edwin A. Dahlke, 208 W. Green Bay St., Shawano, Wis.
Filed Mar. 28, 1960, Ser. No. 17,900
2 Claims. (Cl. 254—62)



2. A carpet stretcher, comprising: a fixedly adjustable extensible structure comprising two members arranged for relative longitudinal movement; carpet engaging head means disposed under an outer end portion of a first of said elongated members and mounted thereon for longitudinal movement relative thereto; a longitudinal slot through the outer end portion of said first elongated member, disposed rearwardly adjacent said carpet engaging head means; a lever pivotally mounted as a first class lever in said slot, said lever having its working end slidably engageable with said carpet engaging head means for driving said head means forward responsive to a downward movement of the lever handle, and the lever handle end disposed over and along said extensible structure; and a bearing member mounted on said carpet engaging head and engageable with the rearward edge of the working end of said lever for driving said head means rearward responsive to an upward movement of said lever handle.

3,022,980
LEVELING DEVICE FOR MOBILE HOMES
James M. Barker, Battle Creek, Mich., assignor to Barker Manufacturing Company, Battle Creek, Mich., a corporation of Michigan
Filed Aug. 13, 1959, Ser. No. 833,543
2 Claims. (Cl. 254—100)

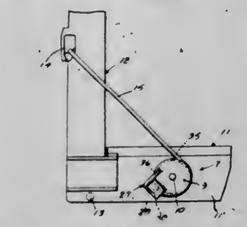


1. In combination with a cement block having wall means defining a substantially rectangular opening therein, a jack structure comprising a base structure having a substantially planar lower surface with a pair of substantially parallel, transversely elongated, vertical flanges extending downwardly therefrom, said flanges being received in said opening closely adjacent opposite sides of said opening and extending therealong, said base structure including a pair of end sections extending sidewardly from the upper ends of said flanges and resting on said wall means; a threaded member removably mounted in non-rotatable position on said base structure; a jack screw threaded through said threaded member and extending substantially vertically from said base structure; and a load-engaging pad mounted on the upper end of said screw.

3,022,981
CABLE SLACK ADJUSTER
John E. Raidel, 15002 Dunton Drive, Whittier, Calif.
Filed Oct. 5, 1960, Ser. No. 60,738
5 Claims. (Cl. 254—164)

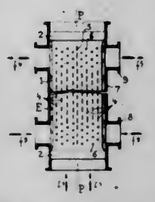
1. A cable slack adjuster comprising a rigid anchor member secured immovably to and disposed to protrude from a substantially flat surface, said anchoring member having equally spaced corresponding radially extending

arms, a body member having an inner side, said body member having a recess opening through said inner side and in which said anchoring member is received, said recess including circumferentially spaced radially disposed and inwardly opening notches in which the outer ends of said arms are selectively received for interlocking said body member to said anchoring member in a plurality of different rotatably adjustable positions of the body member relative to said anchoring member, a bolt extending centrally through the body member and anchoring member and threadedly engaging said anchoring member for retaining the anchoring member in the recess of the



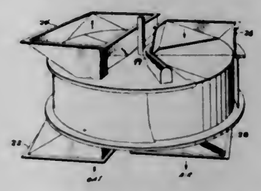
body member when the bolt is tightened, said body member being rotatable on the bolt when the bolt is loosened and the body member is displaced out of engagement with said anchoring member, said body member having a peripheral portion provided with a socket having an open outer end, through which a cable end enlargement is received, and a restricted open inner end through which the cable extends from said anchored enlargement, said body having a peripheral groove extending from the restricted open end of said socket in which a portion of the cable is wound, said body being rotatably adjustable on the bolt and relative to the anchor member for varying the tension applied to the cable.

3,022,982
HEAT EXCHANGER ELEMENT AND APPLICATIONS THEREOF
Roger Demalander, Maidieres-les-Pont-a-Mousson, France, assignor to Compagnie de Pont-a-Mousson, Nancy, France, a body corporate of France
Filed Dec. 30, 1959, Ser. No. 863,009
Claims priority, application France Dec. 31, 1958
2 Claims. (Cl. 257—245)



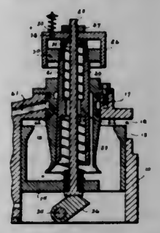
1. An air heating apparatus comprising in combination: a casing having the general shape of a parallelepiped; said casing having an axis and a wall including an inner face, a bottom axial ingress and a top axial egress for fumes heating the air, two lateral bottom air inlets symmetric and at right angle with respect to said axis and two lateral top air outlets symmetric and at right angle with respect to said axis; in said casing, an axial, centrally disposed, heat-exchange walled tubular element inside of which the fumes flow; said tubular element being spaced from the inner face of said casing intermediate the ends thereof and defining an air passageway between said tubular element and said inner face intermediate said ends and having two flat opposite end walls defining end portions situated above and below said air outlets and inlets respectively and being in fluid-tight relationship with said casing; two banks of pins located on said tubular element opposite said air inlets and outlets respectively and projecting from said tubular element; and a bank of fins parallel to said axis, located on an intermediate portion of said tubular element between said end portions.

3,022,983
ROTARY HEAT EXCHANGER
Robert H. Muller, Wellsville, N.Y., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York
Filed Oct. 8, 1958, Ser. No. 766,073
3 Claims. (Cl. 257—269)



1. Rotary regenerative heat exchange apparatus having a cylindrical rotor divided by radial partitions into sector shaped compartments that carry a mass of heat transfer material, and a housing surrounding the rotor provided at opposite ends with sector plates formed with imperforate portions between circumferentially spaced apertures that direct a low pressure heating fluid and a high pressure fluid to be heated to and through spaced portions of the rotor; sealing means mounted on the end edge of the rotor and on the ends of the radial partitions to direct the flow of fluids through predetermined apertures of said sector plates; radial slots formed in the imperforate portions of each sector plate lying between spaced apertures, said slots being displaced arcuately from one aperture a distance at least as great as the arcuate distance between radial partitions while being displaced from the other of said apertures a distance less than the arcuate distance between partitions; and duct means interconnecting said arcuately displaced slots to permit fluid flow therebetween and the equalization of pressure fluids entrained in the sector shaped compartments confronting said slots.

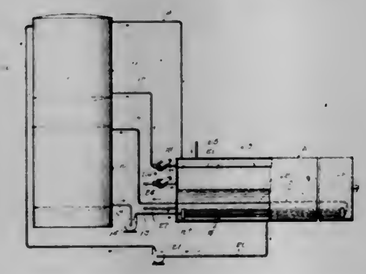
3,022,984
CARBURETOR FOR INTERNAL COMBUSTION ENGINES
Glen R. Morton, 7025 Sarpy Ave., Omaha, Nebr.
Filed Mar. 18, 1960, Ser. No. 15,974
10 Claims. (Cl. 261—27)



1. In a carburetor, a housing, having a bore adapted to have its bottom in communication with the intake manifold of an internal combustion engine, an air passageway in said housing in communication with the

upper area of said bore, a sleeve slidably mounted in said bore, a cylindrical member extending downwardly into said housing and its bore, a hollow valve member loosely slidable in said cylindrical member, a shaft slidably loosely extending through said valve member, an inverted cup on the upper end of said shaft, an air passageway extending through said cup, a piston embracing said valve member and slidably mounted in said inverted cup, a means for slidably moving said sleeve and said shaft, and a fuel passageway operatively communicating with the inner side of said cylindrical member and adapted to be in communication with a source supply of fluid fuel.

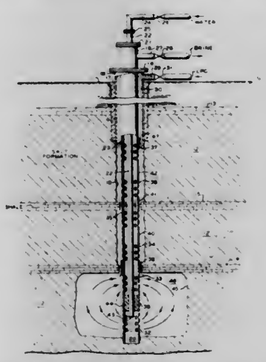
3,022,985
SILENCER AND HEAT RECOVERY SYSTEM
James Mair, Chatham, N.J., assignor to Chicago Bridge & Iron Company, Chicago, Ill., a corporation of Illinois
Filed June 6, 1958, Ser. No. 740,452
9 Claims. (Cl. 261—151)



1. A combination silencer and heat recovery system for reducing noise emitted as a result of the rapid discharge of hot vapors from a pressure vessel and for recovering heat from said vapors, comprising a body portion having a hot vapor inlet and a waste fluid outlet spaced apart from said inlet; means for maintaining a pool of condensate within said body portion; first valve means for controlling the flow of said vapors through said inlet; a plurality of heat exchange tubes in said body portion positioned below the normal surface level of said pool of condensate, so that during normal operation of the system said heat exchange tubes are submerged in said pool of condensate; a cooling-liquid storage tank; means including a first pump for circulating a cooling liquid between said tubes and said storage tank; a condensate surge tank isolated from said cooling liquid storage tank; means including a second pump for withdrawing condensed vapors from said body portion into said condensate surge tank; means including second valve means for intermittently introducing condensate from said condensate surge tank into said body portion; and dispersing means within said body portion for breaking condensate so introduced into discrete particles.

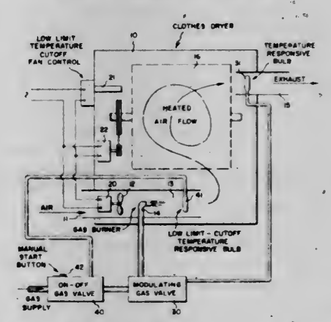
3,022,986
METHOD FOR DEVELOPING CAVITIES IN SOLUBLE FORMATIONS
Carl T. Brandt, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,116
7 Claims. (Cl. 262—3)

1. A method of forming shaped underground reservoirs in soluble underground formations for storage therein of fluids, said method comprising drilling a well into said soluble underground formation, introducing a casing into said well into said soluble underground formation, said casing having a plurality of apertures in the wall thereof in the section of said casing located within said soluble underground formation, fixing said casing in said well, running a tubing string into said casing to a selected elevation above the lower end of said casing, said tubing string being in fluid sealing relation with said casing by a sealing means located adjacent the lower end of said tubing string, introducing solvent into said tubing string and passing the solvent through the lower open end of the tubing stream and thence through apertures in said casing located below said sealing means into contact with said soluble formation to dissolve a portion thereof and form a reservoir, with-



drawing into the annulus between said casing and said tubing string said solvent containing dissolved soluble material therein from said reservoir being formed through apertures in said casing located above said sealing means, removing said solvent containing dissolved soluble material therein from said annulus, changing the elevation of the end of said tubing string after a period in which a reservoir of predetermined shape has been formed, and continuing to introduce solvent, to withdraw solvent containing soluble material, and to change the elevation of said tubing string until the complete reservoir is formed.

3,022,987
CONTROL APPARATUS
Joseph O. Thorsheim, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 23, 1959, Ser. No. 801,298
5 Claims. (Cl. 263—10)



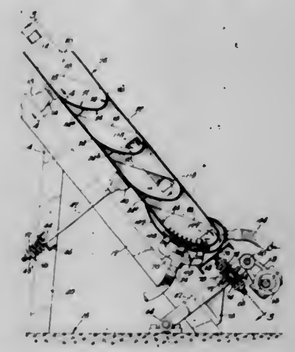
4. In a drying apparatus, a chamber for holding material which is to be dried, heating means for supplying heat to said chamber to accomplish both sensible and latent heating, said chamber having an exhaust opening for ex-

hausting air from said chamber, first means for varying the heat output of said heating means from a high output to a low output, second means responsive to a condition indicative of the temperature of the air leaving said chamber by said exhaust opening, means connecting said second means to said first means to maintain the exhaust air temperature at a predetermined temperature whereby as the moisture is removed from the material and less latent heat is needed to evaporate moisture in the material and more of said heat output is used for sensible heat, said first means is adapted to reduce the heat output of said heating means, second means for terminating the operation of said heating means, second responsive means responsive to a parameter indicative of a predetermined low level of output of said heating means, and means connecting said second responsive means to said second means to terminate the operation of said heating means when said low level of heat output is reached.

3,022,988
MATERIAL TREATING DEVICE

Bolton L. Corson, Plymouth Meeting, and Clifton A. Danforth, Philadelphia, Pa., assignors to G. & W. H. Corson, Inc., Plymouth Meeting, Pa., a corporation of Delaware

Filed July 22, 1958, Ser. No. 750,117
6 Claims. (Cl. 263—21)

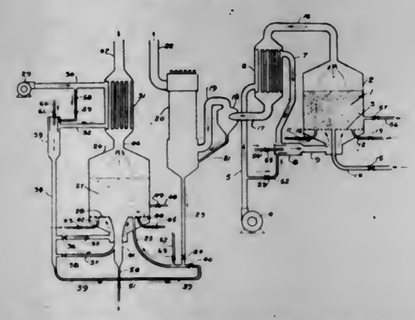


1. A limestone calcining kiln for particulate limestone comprising a material support including an upwardly inclined surface and a trough at the base thereof emerging into said surface and adapted to support a bed of particulate material with the top surface thereof at an angle to the horizontal not greater than the static angle of repose of material in said bed, means for introducing a combustible gaseous medium directly into the bed of material on said support for combustion therein including a plurality of perforations through said material support in proximity to the bottom thereof and means for introducing gas and air separately through said perforations and into the material on said bed, said means for introducing gas through said perforations comprising gas jets mounted in said perforations in spaced relation from the edge thereof, said jets terminating substantially in the plane of the interior surface of the support, the area of the perforations surrounding said jets constituting air passageways, means for vibrating said support in a straight-line motion in a direction at an angle of inclination to the horizontal and at a frequency operable to impel the material upwardly away from said support and along said inclined surface, said inclined surface having an angle of inclination to the horizontal operable to cause, upon movement of said support, material in the bottom of the bed to climb up the inclined surface and particles of the material at the upper end of the bed to roll down over the top surface of the bed into said trough wherein they transmit upward motion of the trough to the material for movement upwardly along said inclined surface, and the particles in said bed of material are intermixed.

3,022,989
HYDRAULIC CEMENT PROCESS

Robert Pyzel, Piedmont, Calif., assignor, by mesne assignments, to Union Commerce Bank, trustee, a corporation of Ohio

Filed Apr. 7, 1954, Ser. No. 421,572
6 Claims. (Cl. 263—53)



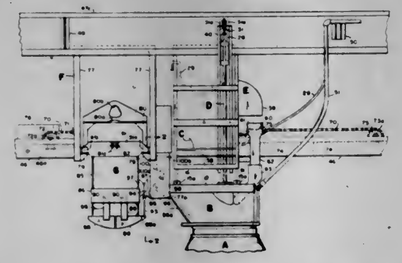
4. The process for the manufacture of hydraulic cement from carbonate-containing raw feed materials, which comprises maintaining a fluidized mass of coarse particles which are inert to the raw feed materials at the temperatures of calcination of said raw feed materials, charging into said fluidized mass at least the carbonate content of the raw feed materials in finely-divided form, raising the temperature of the carbonate content of the raw feed materials while in said fluidized mass to the calcination temperature of such carbonate content, whereby calcination of the carbonate content of the raw feed materials is obtained, said fluidized mass being maintained in its fluidized state by upward flow of gas therethrough at velocities which will carry the finely-divided, pre-treated particles from the fluidized mass in suspension in the gas discharging from the top of the fluidized mass, separating the pre-treated raw material particles from the gases discharging from the fluidized mass, maintaining a mass of coarse particles of cement product by upward flow of a gas through a mass of such particles, charging raw cement-forming materials, including the calcined product of said pre-treating reaction, into said fluidized mass of coarse particles of cement product, raising the temperature of the raw cement-forming materials while in said fluidized mass of coarse cement product particles to the cement-forming reaction temperature, whereby said cement-forming raw materials react to form a cement product in said fluidized mass, and discharging portions of said fluidized mass as the final product of the process.

3,022,990
FURNACE SYSTEM

Harry L. McFeaters, New Castle, and Ira W. Lakin, Volant, Pa., assignors to Pennsylvania Engineering Corporation, New Castle, Pa., a corporation of Pennsylvania

Filed Jan. 5, 1960, Ser. No. 547
11 Claims. (Cl. 266—36)

1. In an overhead system for servicing a furnace such as a tiltable oxygen-blow furnace having an open mouth portion at its upper end through which hot fume issues during a metal refining operation, an overhead support frame having a runway thereon that extends longitudinally along one side of the furnace and beyond opposite sides of a transverse plane that is perpendicular to said runway and that extends across the open mouth portion of the furnace, said runway also extending longitudinally in a spaced relation above and behind the furnace, at least one furnace servicing unit positioned transversely on said runway for movement longitudinally therealong into and out of a transversely-aligned overhead position with respect to the open mouth portion of the furnace, a cantilever member on said unit having an end portion projecting transversely away from said runway to a position above the open mouth portion of the furnace for

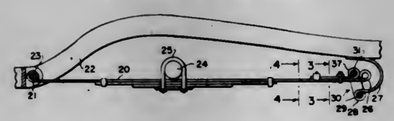


movement with said unit on a longitudinal plane that lies forwardly of the longitudinal plane of said runway and that passes across the open mouth portion of the furnace, means for moving said unit longitudinaly along said runway into and out of the transversely-aligned overhead position while moving said end portion of said cantilever member into a substantially vertically-aligned relation with the mouth portion of the furnace, and means suspended from said end portion of said cantilever member to cooperate with the mouth portion of and service the furnace when said end portion is in its substantially vertically-aligned position thereabove.

3,022,991
SPRING AND SHACKLE CONNECTOR

Anthony F. Billard, Mansfield, Pa.
(32 Dogwood Lane, Tenafly, N.J.)

Filed Mar. 3, 1960, Ser. No. 12,624
8 Claims. (Cl. 267—54)

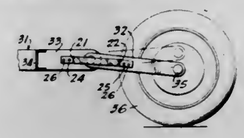


1. The combination with an automobile body of a leaf spring supporting the body and having eyes at its ends for bolts, a bolt in one eye connecting the spring to the body, a shackle formed of a pair of parallel plates connected by bolts at the opposite ends of the shackle, a mounting on the body receiving one shackle bolt to connect one end of the shackle to the body, the other shackle bolt being receivable in the other eye of the spring to hold the shackle at the normal shackle angle with a corresponding spring rate, and means connecting said other shackle bolt to the spring with the shackle held at a shackle angle resulting in a spring rate higher than said first-named spring rate, the connecting means consisting essentially of a plate lying in contact with one horizontal surface of the spring and having an eye receiving said other shackle bolt, the eye of the plate lying in contact with said other spring eye and offset therefrom lengthwise of the spring, and means securing the plate rigidly to the spring.

3,022,992
TORSION SPRING UNIT

Richard E. Hanslip, Toledo, Ohio, assignor to Mather Spring Co., Toledo, Ohio, a corporation of Ohio

Filed Oct. 13, 1958, Ser. No. 766,796
28 Claims. (Cl. 267—57)

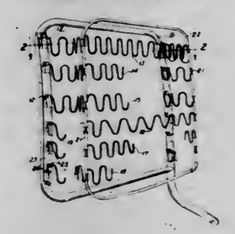


1. A supporting frame and a member pivotally attached to said frame and movable relative to said frame about a single axis, a torsion spring unit straddling said axis, comprising: first and second elongated torsion elements located in the same plane with said axis between the extremes of relative movement between said frame and said member, said extremes being 45° each side of said plane, one of said torsion elements having one of its ends connected to said frame and the other of said torsion elements having one of its ends connected to said member, and a constant moment beam element disposed transversely to said axis and rigidly connected to and spaced from said one end of each of said torsion elements.

3,022,993
MOTOR VEHICLE SEAT

Wilfred Bright, Pech, uber Bad Godesberg, Germany, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Filed June 15, 1959, Ser. No. 820,432
Claims priority, application Germany June 27, 1958
4 Claims. (Cl. 267—107)



1. A seat structure comprising a frame, a plurality of formed wire spring elements, and means securing said spring elements to opposite side elements of said frame in parallel spaced relationship, said spring elements being of varying relative rigidity, at least two of the more rigid of said spring elements having less rigid spring elements interposed therebetween to provide varying degrees of localized anatomical support.

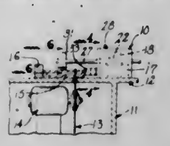
3,022,994
ELECTROMAGNETICALLY OPERATED HOLDING DEVICES

Robert Eklund, 607 Spruce St., Anaconda, Mont.

Filed Nov. 15, 1960, Ser. No. 69,408
3 Claims. (Cl. 269—8)

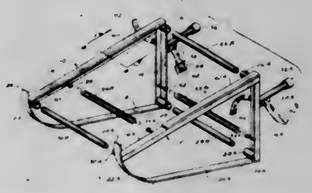
1. In an electromagnetically operated holding device, a body of magnetizable material for resting on a support of magnetizable material, an electromagnetic coil on the body which when energized effects the passage of flux between the support and the body to hold the latter firmly in fixed position on the support, and article-holding means of magnetizable material for support from said body and adjustable extensibly from the latter, said means

also being angularly adjustable with reference to the body and receiving, when the coil is energized, flux to hold said article-holding means in fixed and adjusted position with reference to the body, the body being provided with means defining an opening into which said article-holding means extends, the last-named means comprising a rod telescopically received in said opening in



the body and rotatable therein when said coil is de-energized, said article-holding means also comprising a resilient article-engaging shoe on the rod and having a generally arcuate work-engaging part at the end of a strap-like part extending transversely of the rod, so that said work-engaging part may be raised or lowered on rotation of said rod in the corresponding direction.

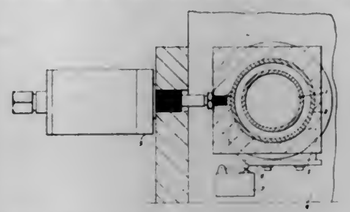
3,022,995
COLLAPSIBLE CRADLE FOR AUTOMATIC WASHERS
Bill W. Sorenson and Carl Denhardt, Jefferson, Iowa
Filed Sept. 27, 1960, Ser. No. 58,733
6 Claims. (Cl. 269—55)



1. In a device of the class described, two symmetrical side frames of the same substantial size and shape, each of said side frames being comprised of two elongated first and second frame members secured together by one of their respective ends and being substantially perpendicularly disposed to each other, a bar secured by one of its ends to the free end of said second frame member, the free end of said bar having an arcuate portion secured to the free end of said first frame member, said bar being completely straight except for said arcuate portion, a plurality of pairs of hollow sleeves secured to said side frames, said pairs of sleeves on said side frames being in axial alignment, elongated rods extending between said pairs of sleeves, said sleeves slidably receiving the ends of said rods, and means secured to said frames for detachably holding the ends of said rods within said sleeves.

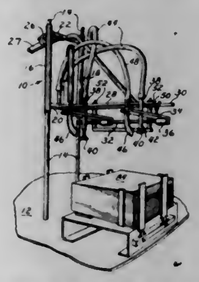
3,022,996
FOLDING MACHINES
Albert A. Crosskey, Croydon, and John O. Crabtree, Caterham, England, assignors to J.O.C. Engineers Limited, Caterham, Surrey, England
Filed Sept. 21, 1959, Ser. No. 841,321
Claims priority, application Great Britain Sept. 22, 1958
7 Claims. (Cl. 270—76)

1. A folding mechanism for processing foldable sheet material, said mechanism comprising two co-operating parts for passing the material to be processed therebetween, bearing means mounting one of said parts movable in reference to the other, pressure operated reversible drive means coupled to said movable part and normally moving the said part toward the other, control means co-acting with said drive means to reverse the same for moving said movable part into the direction away from said other part, and actuating means for ac-



tuating said control means controlled by said movable part moving away from said other part in response to pressure caused by an excessive accumulation of said material at said parts.

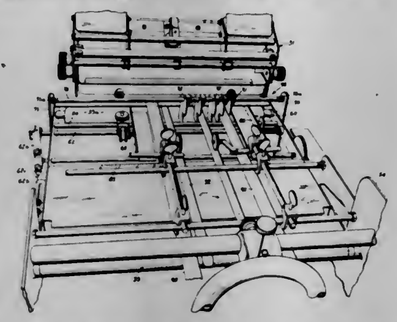
3,022,997
SHEET TRANSFER DEVICE
William Q. Pendley, 184 Luckie St. NW., Atlanta, Ga.
Filed Nov. 24, 1958, Ser. No. 775,781
18 Claims. (Cl. 271—27)



1. In a sheet transfer station for moving sheets from a stack of sheets wherein the sheet station is guided and moved on a moving machine base and a control member moves the station in response to a machine control which also provides suction for engaging a sheet, station support means on said machine movable thereon to transfer a sheet, suction supports mounted for arcuate movement on said station support means, suction means on said suction supports having spaced suction surfaces independently operable against the top of the stack to adjust across any unevenness thereof, and adjustable means on said station for adjusting the point of contact with said stack to bring said suction means evenly into engagement with said stack top.

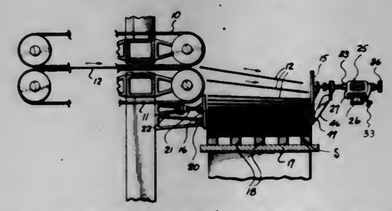
3,022,998
PRINTING APPARATUS
Francis R. Patalon, Willowick, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Apr. 27, 1960, Ser. No. 24,953
14 Claims. (Cl. 271—49)

4. In a side register device for different widths of copy sheets fed to a printing machine or the like having a feed conveyor on which copy sheets are fed to the printing mechanism of the machine with said conveyor comprising power driven longitudinally extending laterally spaced endless tapes, a stationary cross bar extending transversely above said conveyor, a plurality of guide elements supported by said cross bar in depending relation thereto and including means mounting each of said guide elements on said cross bar for individual pivotal movement with respect to said cross bar in a generally vertical plane and parallel to the direction of movement of said conveyor, each of said guide elements being disposed intermediate respective ones of said tapes with the bottom boundary of said guide elements disposed below the top



surface of the upper stretches of said respective tapes in the non-pivoted condition of said guide elements, and an abutment on one side of each of said guide elements adapted for engagement with a respective copy sheet for side registration of the confronting edge of the copy sheet.

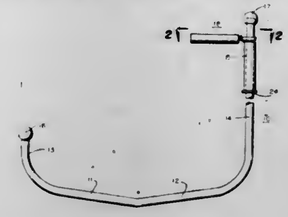
3,022,999
SPRING LOADED PIVOTED FORWARD STOP FOR PAPER STACKING MECHANISM
Gile A. Mead, Hoquiam, Wash., assignor to Lamb Grays Harbor Co., Inc., Hoquiam, Wash.
Filed May 25, 1959, Ser. No. 815,508
5 Claims. (Cl. 271—68)



1. In combination, a conveyor for the delivery of sheet material to a stacking station, a stacking station including a vertically movable platform upon which sheets from the conveyor are individually deposited in rapid succession, a stop device mounted adjacent said platform on the side thereof opposite said conveyor, said stop device comprising a vertically disposed sheet engaging member against which the sheet material is aligned in the formation of a stack, the upper edge of said sheet engaging member being substantially of the same level as said conveyor, means pivotally supporting said sheet engaging member only at the lower end thereof, and means yieldingly engaging the upper portion of said sheet engaging member whereby the upper end of the sheet engaging member is permitted to swing in a limited arc about its pivotal mounting incident to engagement by the sheets delivered from said conveyor.

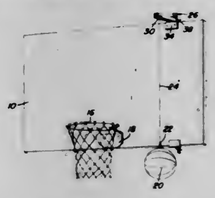
3,023,000
EXERCISING DEVICE AND TOY
James B. Hess, 1532 Poplar, Portsmouth, Ohio
Filed Mar. 3, 1959, Ser. No. 796,801
3 Claims. (Cl. 272—74)

1. A hand-held exercising device and toy comprising, a generally L-shaped member, a first handle means for said member comprising a sleeve rotatably fitting about said L-shaped member adjacent the end of its longer leg, a second handle means for said L-shaped member including



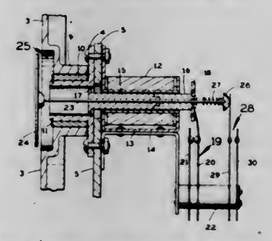
an axial member affixed to and protruding at substantially right angles from said L-shaped member adjacent said first handle means and including also a rod member rotatably affixed to and coaxial with said axial member.

3,023,001
BASKETBALL REBOUND PRACTICE DEVICE
Frank R. Gourdouze, Box 259, Westfield, Ind.
Filed Feb. 7, 1961, Ser. No. 87,662
13 Claims. (Cl. 273—1.5)



1. A basketball rebound practice device comprising a backboard having a basketball hoop mounted on the front face thereof, a support member disposed above the top of said backboard and having ends overlying the front and back faces of the latter, a basketball disposed adjacent the front face of said backboard, a tethering cord having one portion secured to said basketball for suspending the later for movement relative to the backboard and hoop, means on said ends of said support member for slidably supporting said tethering cord, anchor means on the back face of said backboard to which another portion of said tethering cord is secured, mounting means on said backboard supporting said anchor means for vertical adjustment on said backboard.

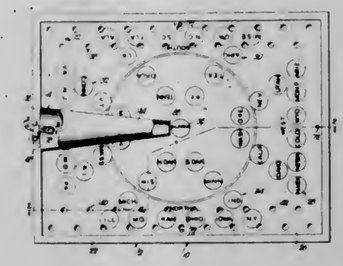
3,023,002
TARGET FOR GAMES
John H. Bond, 7600 NW. 27th Ave., Miami, Fla.
Filed Mar. 23, 1961, Ser. No. 97,962
3 Claims. (Cl. 273—102.2)



1. A target device for propelled missiles comprising means forming a frame, a circular disc forming a target

on the outer face thereof journalled for coaxial rotation in said frame about a substantially horizontal axis, electric drive means operatively associated with said target adapted to rotate same when energized, electric solenoid means secured in said frame centrally adjacent said target with a core therein positioned for coaxial movement along said axis from a rest to an active position, means for normally urging said core into said rest position, a bull's-eye disc coaxially secured to one end of said core positioned for axial movement in close proximity to the said face of said target, a normally closed electric control switch cooperatively associated with said core for de-energizing said drive means when operated by said core, a normally open hold switch cooperatively associated with said core for energizing said solenoid when operated by said core, a source of electric energy, a circuit means connecting said source of energy said drive means said control switch said holding switch and said solenoid whereby the impact of a missile against said bull's-eye will move said core and close said holding switch to energize said relay and simultaneously open said control switch and deenergize said drive means for stopping the rotation of said target.

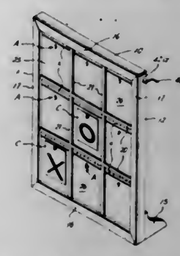
3,023,003
TOY GAME GUN AND TABLE INCLUDING BALL CONTROL
Richard B. Hayter, 2311 E. 28th St., Kansas City, Mo., assignor of twenty-nine and one-sixth percent to Rudolph Barnum, eight and one-third percent to Walter J. Dayton, eight and one-third percent to Edward M. Salone, eight and one-third percent to Bernice G. Salone, and eight and one-third percent to Mary E. Hayter, all of Kansas City, Mo.
Filed Nov. 24, 1958, Ser. No. 775,953
6 Claims. (Cl. 273—119)



1. In a ball control unit for a game board, a tubular, open end, funnel-shaped member; means on said member adapting the same for pivotal mounting on the game board in overlying relationship thereto with the longitudinal axis of the member substantially parallel with the upper surface of the board, and the member being swingable about an axis substantially perpendicular to the plane of the game board surface; and a ball support pivotally mounted within the largest diameter end of the member and including a substantially horizontal arm provided with an upwardly facing depression adapted to receive a portion of the ball.

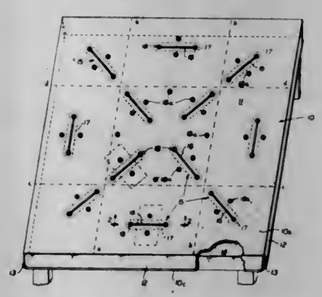
3,023,004
GAME DEVICE
Harold E. Pitts, P.O. Box 1198, Clute, Tex.
Filed Feb. 19, 1959, Ser. No. 794,423
4 Claims. (Cl. 273—130)

1. A game device, comprising a frame having a plurality of openings formed in a predetermined arrangement, said frame having at least three vertical rows of openings with at least three openings in each of said rows, a movable strip mounted with said frame member having indicia thereon for alignment with said openings, said indicia being arranged on said movable strip whereby one of said indicia may be simultaneously aligned with each one of said openings, at least two groups of cards for positioning on said frame, and means on said frame member for receiving a card adjacent each of said open-



ings for the purpose of aligning a series of said cards in one of the groups either horizontally, vertically or diagonally for scoring in a game played therewith, said strip having alternate indicia in addition to the indicia which is aligned with said openings so that said alternate indicia may be aligned with said openings upon a movement of said strip relative to said frame.

3,023,005
TABLE COVER FOR HOLDING PLAYING CARDS
Leonard Hochman, New York, N.Y.
(36 Ridge Ave., Spring Valley, N.Y.)
Filed Apr. 14, 1960, Ser. No. 22,325
8 Claims. (Cl. 273—136)

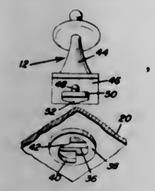


1. A cover for a card game table comprising a panel of flexible material having means for holding the cover on a table top, said panel being provided with a plurality of pairs of spaced eyelets, strips of relatively stiff material rearwardly of the face of said panel, a separate strip spanning each pair of eyelets and secured thereby to the panel and elastic bands tensioned over the face of said panel in overlying relation to each strip with each band extending through the pair of eyelets in each strip.

3,023,006
GAMEBOARD AND GAME PIECE
Joseph Kovacs, North Chicago, Ill.
(2206 Waverly Place, Waukegan, Ill.)
Filed May 6, 1959, Ser. No. 811,378
3 Claims. (Cl. 273—136)

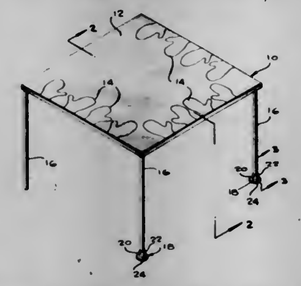
3. In a game apparatus, the combination of a gameboard provided with an oval-shaped opening, and a game piece positionable on said gameboard, said game piece being provided at its bottom with depending means for movement vertically through said opening and lockingly

engaging the gameboard whereby to detachably mount the game piece on the gameboard, said depending means including an oval-shaped head connected to the game piece by a reduced shank, said oval-shaped head being similar in shape but slightly smaller than the gameboard



opening for passage therethrough and locking to the gameboard by a rotational movement of the game piece, and means provided at the underside of the gameboard for limiting rotational movement of the game piece so that said oval-shaped head may be disposed transversely of said opening.

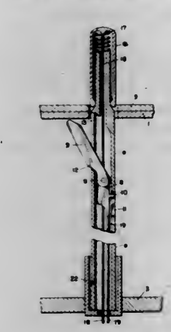
3,023,007
GAME APPARATUS
Lillian D. Lowrey, 3504 Altantic Ave., Virginia Beach, Va.
Filed Apr. 20, 1960, Ser. No. 23,484
1 Claim. (Cl. 273—161)



A game device comprising a table having a generally square top supported by four legs, one leg being in each corner of the top, flexible suction cups each comprising an upwardly extending table leg receiving sleeve, a downwardly extending concave suction foot, and a flexible stem connecting said sleeve to said foot, two of said legs on one side of said table having said flexible suction cups on their lower ends and the opposite two legs being free of such suction cups, and a plurality of hand representations on three sides of said table top while the fourth side is free of said representations, said fourth side being positioned between said opposite two legs which are free from suction cups.

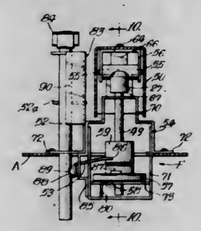
3,023,008
ARRANGEMENT IN A RECORD-CHANGING GRAMOPHONE
Anders Ansar, Nykoping, Sweden, assignor to The Garrard Engineering and Manufacturing Company Limited, Swindon, England
Filed Mar. 23, 1956, Ser. No. 573,376
Claims priority, application Sweden Apr. 1, 1955
2 Claims. (Cl. 274—10)

1. In a phonograph record changer, a central guiding pin, a plurality of supporting members for supporting a pile of discs over the turntable, said supporting members being retractable into said guiding pin for releasing successively the individual discs of the pile, means actuated in response to retraction of said supporting members for supporting the remainder of discs when an individual disc is released, a sleeve axially displaceable within said guiding pin, means pivotally connecting each of said supporting members to said sleeve, a slot being provided in said guiding pin for each supporting member, a cam contour on each supporting member, said cam contour on each supporting member engaging the lower edge of the slot associated therewith to control



the swinging movement of the supporting member, each supporting member being shaped and mounted so that the center of gravity thereof is disposed on the same side of a vertical plane through the pivotal mounting for said supporting member in both the retracted and extended positions of said member, whereby, when said sleeve is moved upwardly in said guiding pin, said supporting members will swing outwardly of the latter, solely by gravity.

3,023,009
PHONOGRAPH
Colin B. Dale, Oak Park, Ill., assignor to Webcor, Inc., a corporation of Illinois
Original application Feb. 27, 1951, Ser. No. 213,009, now Patent No. 2,818,263, dated Dec. 31, 1957. Divided and this application June 25, 1957, Ser. No. 675,788
4 Claims. (Cl. 274—10)



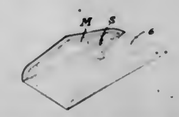
4. In a phonograph, the combination of a supporting base, a record supporting turntable journaled for rotation on the base, a motor connected to drive the turntable, record supporting means arranged above the turntable, mechanism for releasing records one at a time from the record supporting means to playing position on the turntable, a tone arm post journaled on the base for vertical and horizontal movement, a tone arm swingably mounted on the post, tone arm actuating means connected to raise and rotate the post for successively swinging the tone arm away from its playing position and lowering it in its resting position, cam mechanism driven by the motor for coordinating the operation of the tone arm actuating means and the record release mechanism, a vertically shiftable over arm arranged and rotatable from a resting position at one side of the turntable to a working posi-

tion over the turntable, a detent movably mounted on the base; a shoulder on the tone arm post positioned only when raised to be engaged by the detent to limit the swing of the tone arm toward playing position only when said over arm is in its lowermost working position and means on the vertically shiftable over arm for retracting the detent while the over arm is in its resting position and while it is in its working position and supported by a record on the supporting means.

3,023,010
MEANS FOR PROTECTING A MAGNETIC SOUND RECORD SHEET FROM STRAY MAGNETIC FIELD

Yasushi Hoshino, 462 1-chome, Tamagawa-Okusawacho, Setagaya-ku, Tokyo, Japan; Mamoru Namikawa, 664 Kugahara-cho, Ota-ku, Tokyo, Japan; and Shigezo Tochihara, 531 Matsunoki Jyutaku, Matsunoki-cho, Suginami-ku, Tokyo, Japan

Filed June 17, 1959, Ser. No. 820,993
Claims priority, application Japan July 1, 1958
1 Claim. (Cl. 274—41.4)

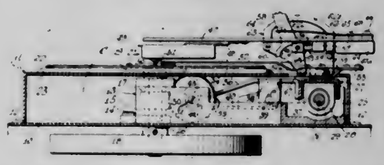


For transporting a magnetic record sheet: an envelope including two generally rectangular sides including and connected along three edge portions thereby defining an opening through which said sheet can be inserted, a flap hingeably connected to a fourth edge portion of one of said sides adjacent said opening, said flap including an adhesive portion whereby said envelope can be sealed; and, on said flaps and sides internally of the envelope, a coating of magnetic material adapted to shield said sheet; at least one of said edge portions being free of said coating to facilitate access to said sheet.

3,023,011
PHONOGRAPHIC RECORDING

Robert Wagner, Ford Road, Denville, N.J.

Filed Mar. 25, 1957, Ser. No. 648,294
4 Claims. (Cl. 274—46)

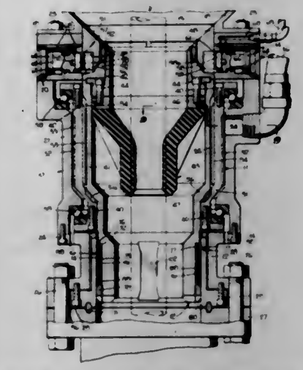


1. In a phonographic machine having a revolvable support for a record of embossable material: the combination of a translating head having a recording stylus for engaging said record and forming a modulated groove therein by embossing, a carriage for said translating head mounted for traveling movement, means for progressively advancing said carriage as said record support is revolved to cause said recording stylus to form a convoluted groove in the record, means mounting said translating head on said carriage with lateral compliance in directions of travel of said carriage a pretracking stylus mounted on said carriage for engaging the record and forming a convoluted track therein ahead of said recording stylus as the record support is revolved, said pretracking stylus having a substantially arcuate record-engaging surface and being biased against the record to cause the track formed thereby to have a width equal approximately to the groove pitch, and shiftable means for selectively disengaging said pretracking stylus from the record and concurrently reducing the pressure of said recording stylus on the record to condition said translating head for operation as a reproducer.

3,023,012
SUBMARINE DRILLING HEAD AND BLOWOUT PREVENTER

Arthur E. Wilde, Santa Ana, Calif., assignor to Shaffer Tool Works, Brea, Calif., a corporation of California

Filed June 9, 1959, Ser. No. 819,083
13 Claims. (Cl. 277—31)



1. A submarine drilling head and blowout preventer, comprising a housing adapted to be fixedly mounted at the floor of an ocean or other body of water, a turbine rotor disposed in said housing, bearing means to mount said turbine rotor in said housing for rotation about a generally vertical axis, a rotating assembly disposed coaxially in said rotor and including a packer member adapted to be sealingly mounted around a drill string and to permit longitudinal shifting of said drill string therethrough, means to prevent relative rotation between said turbine rotor and rotating assembly while permitting longitudinal shifting therebetween whereby said rotating assembly may be lifted out of said turbine rotor and said housing, means to lock said rotating assembly against excessive axial shifting in said turbine rotor while permitting rotation of said rotating assembly, rotary seal means to effect a rotary seal between said rotating assembly and said housing, and passage means to introduce fluid into said housing and to said turbine rotor to effect rotation of said turbine rotor and thus of said rotating assembly.

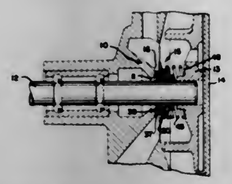
3,023,013
ROTARY SHAFT SEALING MEANS

John M. Lazar, 6540 E. Palmer, Detroit, Mich.

Filed Nov. 3, 1958, Ser. No. 771,597
1 Claim. (Cl. 277—41)

A rotary shaft sealing means comprising a one-piece retainer in the form of a disk having a front face and a rear face and having a central axis and an axially aligned central aperture through which a shaft may be loosely inserted, and having a radially directed channel formed on the rear face of the disk and an axially directed channel formed on the front face of the disk; the radially directed channel being formed of an annular flange integral with and extending normally to said rear face of the disk and with the outer end of the flange being extended radially inwardly substantially parallel to the disk, to form a single radially inwardly opening channel defined by the

disk rear face, the flange, and the outer end of the flange; the axially directed channel being formed by a pair of annular flanges integral with and extending normal to the front face of the disk, with one of the pair of flanges being an inner flange arranged closely adjacent to and surrounding the periphery of the central aperture and being closer to the disk central axis than said radially directed channel annular flange, and with the other of the pair of flanges being an outer flange formed on the outer periphery of the disk and being considerably further from the disk central axis than said radially directed channel annular flange, thus forming an axially directed channel defined by the pair of flanges and the disk front face, and the end of said outer flange being formed into a radially, outwardly extending shoulder arranged in a plane located at the opening of the axially directed channel and spaced axially a considerable distance from the disk and the radially directed channel; a resilient ring fitted into the radially directed channel for sealing against a shaft fitted

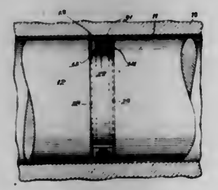


through said central aperture, and acting as a fulcrum, relative to the shaft, about which the retainer may pivot, and a ring shaped sealing means in the form of a resilient backing ring and a substantially non-resilient sealing ring, both axially aligned and both fitted in the axially directed channel and radially confined between the pair of flanges, with the sealing ring extending axially outwardly thereof and having an end face for pressing and sealing against a wall arranged transverse to and surrounding the shaft, the backing ring being formed to resiliently yield in response to wabbling of the seal, to hold the end face of the sealing ring in full face to face contact with the wall, and a coil spring arranged co-axial with the disk and having one of its ends in contact with said shoulder, the spring being positioned to spring force the retainer and therefore the sealing ring end face towards the wall, with the spring force being applied only to the outermost periphery of the retainer, namely to the outer flange, and at a considerable axial distance from the radially directed channel and its sealing ring.

3,023,014
SEAL BETWEEN RELATIVELY ROTATING MEMBERS

Verne P. Donner, Palatine, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Filed Nov. 18, 1957, Ser. No. 697,131
8 Claims. (Cl. 277—78)

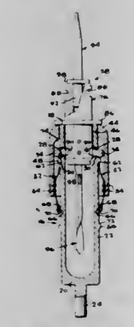


1. A seal between a member having an opening therethrough and a shaft disposed in the opening in the member comprising an annular groove in the shaft, a ring disposed in the annular groove in the shaft and provided with a first annular groove in its outer periphery and a second annular groove in the bottom of the first groove of lesser width than the first groove and provided with a hole in communication between the second groove and the annular groove in the shaft, and a resilient ring disposed in the first groove of the first named ring and and having an outside diameter greater than the outside diameter of the first named ring, fluid flowing between the member and the shaft and between one wall of the groove in the shaft and the first named ring to move the first named ring against the opposite wall of the groove in the shaft to form a sealing surface and fluid entering the hole in the first named ring and flowing into the second groove and urging the resilient ring against the wall of the first groove in the first named ring adjacent said opposite wall of the groove in the shaft to form a second sealing surface and also urging the resilient ring against the inner periphery of the member to form a third sealing surface.

3,023,015
REVERSIBLE BIT DRILL ATTACHMENT

Melvin W. Pankow, 312 W. Follett St., Sandusky, Ohio

Filed Jan. 5, 1960, Ser. No. 625
6 Claims. (Cl. 279—14)



1. A reversible bit attachment for a drill, comprising a tubular holder having an open forward end and a rear end, drill chuck engaging means on the rear end of the holder, a dual bit member comprising a dual socket having first and second ends which are optionally engageable in the open end of the holder, an annular stop shoulder intermediate the ends of the socket engageable with the forward end of the holder, and releasable detent means having cooperating components on opposite sides of the holder and on opposite sides of the dual socket, and a sleeve slidably circumposed on the holder and operatively engageable with components of the detent means.

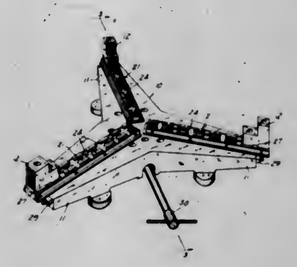
3,023,016
LIGHTWEIGHT CHUCK

Howard Multer, West Hartford, and John J. Roddy, Meriden, Conn., assignors to Skinner Precision Industries, Inc., New Britain, Conn., a corporation of Connecticut

Filed Nov. 30, 1959, Ser. No. 856,040
4 Claims. (Cl. 279—116)

1. A lightweight chuck for large diameter workpieces such as barrels, tanks, pipes and the like comprising a housing having a central body section and three arms extending radially outwardly therefrom, three operating bars, means slidably mounting one of said operating bars on each of said arms for movement radially of the central body section, a clamping jaw mounted on each of said operating bars outwardly of the central body

section, a scroll plate, means rotatably mounting said scroll plate in said central body section, means on each of said operating arms engaged with said scroll plate for



movement radially in response to rotation of the scroll plate, and means for rotating said scroll plate to simultaneously move the operating bars and clamping jaws along said arms radially of the body section.

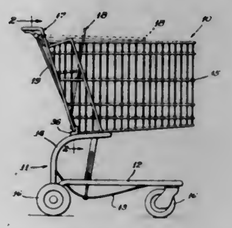
3,023,017
SKI FITTING
Gaetan G. Landry, 39 Henderson Ave., Ottawa, Ontario, Canada
Filed Sept. 14, 1959, Ser. No. 839,727
2 Claims. (Cl. 280—11.35)



1. A ski fitting comprising a heel clamp having a base plate, an upright flange on said plate, a heel cleat having a flange engaging said base plate flange, and means securing said flanges together for adjustment in a direction perpendicularly of said base plate, said cleat having a forwardly extending heel welt engageable edge portion, said edge portion having a central section and a heel contour conforming wing section at each end of said central section extending angularly forwardly thereof, and a toe clamp having a base plate, a plane ski-engageable surface on said toe clamp base plate, a clamping plate hingedly mounted on said toe clamp base plate about an axis transversely thereof and having a rearward portion and a toe welt engageable edge on said rearward portion, and a spring urging said rearward portion towards said toe clamp base plate, said rearward portion being swingable to a first toe welt engageable position and to a second position approaching the plane of said ski engageable surface, said rearward portion in said first position being at a forwardly opening acute angle to said plane of said ski engageable surface, said toe welt engageable edge having a length at least substantially as great as the transverse extent of said toe clamp base plate.

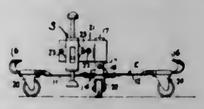
3,023,018
CART SEAT
George I. Welter, Chicago, Ill., assignor to Harold I. Sides
Filed Aug. 3, 1960, Ser. No. 47,186
8 Claims. (Cl. 280—33.99)

1. In a cart, a seat structure comprising: a rear gate having a lower end, a support adjacent the lower end, and an upper end portion defining a pair of leg openings; a front panel having an upper portion defining a seat back, and a lower end; a seat having a rear end and a front end; an intermediate panel having an upper closure portion and a lower end; means pivotally connecting the lower end of the front panel and the lower end of the intermediate panel to said support of the rear gate adjacent said lower end whereby the intermediate panel may selectively be juxtaposed to the rear gate to dispose the closure portion across the leg openings to close the openings, and juxtaposed to the front panel to dispose



the closure portion adjacent the seat back to reinforce the seat back; means pivotally connecting the rear end of the seat to the rear gate adjacent the bottom of the leg openings to extend through the intermediate panel below said closure portion thereof; means slidably connecting the front end of the seat to the front panel; and a support on the front panel limiting the forward pivoting of the seat to a substantially horizontal position.

3,023,019
UNDER-CARRIAGE FOR CONTAINERS
Charles W. Angelo, 380 Arden Road, Menlo Park, Calif.
Filed Mar. 21, 1960, Ser. No. 16,252
2 Claims. (Cl. 280—35)

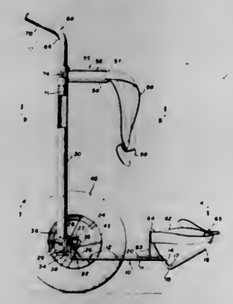


1. An under-carriage for containers comprising three arms, a swivelable caster mounted near the end of each arm, a central clamp for holding said arms in fixed, angular relation to each other, means for adjustably moving each of said arms in said clamp, two of said arms having at the outer ends thereof beyond said casters means for engaging the bottom edge of a container seated on said under-carriage, the third arm having an upstanding portion at the outer end thereof extending substantially parallel to the wall of said container, a screw threaded member mounted in said upstanding portion near the lower end thereof for engaging a lower part of said wall, and means for locking said under-carriage against movement over a floor adjustably mounted on said upstanding portion to adjust the distance of said locking means from said floor.

3,023,020
FOLDING OR KNOCK-DOWN GOLF CART
Robert R. Hasty, 2144½ N. Broadway, Wichita 2, Kans.
Filed May 23, 1960, Ser. No. 30,899
8 Claims. (Cl. 280—36)

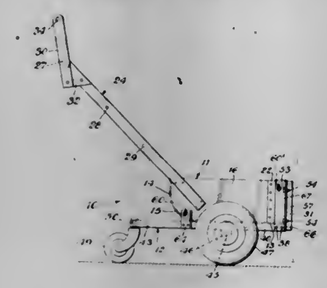
7. A golf cart comprising a lower frame formed of spaced rigid longitudinal bars, cross bars extending between and secured to said longitudinal bars, said longitudinal bars at one end of said frame being connected by a substantially semicircular integral loops, and a cross member connected between said longitudinal bars at the ends of said loop, said cross member and said

loop forming a support for the lower end of a golf club bag, said longitudinal bars at the other end of said frame having upwardly extending integral portions terminating at their upper ends in integral open hooks, an axle extending transversely of said frame and arranged in said hooks and having wheels at opposite ends thereof outwardly of said frame, connecting means between said upwardly extending portions of said frame, a releasable clamping device carried by said connecting



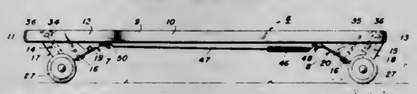
means and having a hook opening opposite to the opening of said first-named hooks and receiving said axle to clamp the latter in said first-named hooks whereby, upon releasing said clamping device, said axle will be released from said first-named hooks, an upwardly extending supporting member secured at its lower end to said connecting means, a handle bar connected to the upper end of said supporting member, and means comprising a strap carried by the upper end of said supporting member to embrace a golf bag.

3,023,021
GARDEN CARRYALL AND SNOW REMOVER
Gerald J. Fricke, 3865 W. Giles Road, Muskegon, Mich., and Edward MacDonald, R.R. 4, Fremont, Mich.
Filed July 8, 1959, Ser. No. 825,847
3 Claims. (Cl. 280—47.34)



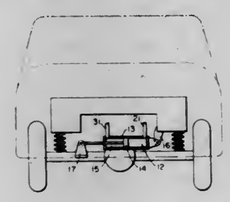
1. A multi-purpose hauling apparatus for agglomerate materials and the like comprising an open-topped container having a bottom, said bottom having smooth, uninterrupted upper and lower surfaces, a pair of side walls, a rear wall, said rear wall having at least its lower portion adjacent the bottom of the container sloping upwardly and rearwardly, a handle secured to the rear portion of the container, said handle extending upwardly and rearwardly from the container a distance sufficient to supply controlling leverage to the apparatus, a wheeled truck frame, container connecting means for releasably securing the container to the frame, a front wall extending across the open end of the container, and connecting means for securing the front wall to the frame in abutting engagement with the forward edges of the side wall whereby the container may be removed from the wheeled truck frame independently of the frame and the front wall.

3,023,022
CHILD'S COASTER
Albert C. Boyden, 3720 Riviera Drive, San Diego, Calif.
Filed May 14, 1959, Ser. No. 813,174
2 Claims. (Cl. 280—87.04)



1. In a child's coaster adapted to be steered solely by the use of the feet and without hands, comprising an elongated platform of a length to permit the child to stand on the platform with one foot in front of the other, triangular blocks having three sides including a hypotenuse side and opposed right angle sides, said blocks being mounted on the underside of the platform located at the front and rear thereof with the hypotenuse side affixed to the underside of said platform, relatively flat triangular shaped, coaster wheel frame plates pivoted to one of the right angular opposed faces of each of said triangular blocks and supported by substantially the entire area of the surface thereof, coaster wheels supported by said frame plates with their axis along one side of said flat triangular shaped coaster wheel frame plates, a spring member connecting said plates to hold the coaster wheels in position for movement along a straight line path, and outrigger bars attached to the sides of the platform to engage and guide the edges of the child's shoe when standing on the platform with one foot in front of the other, said coaster being adapted to be steered by the shifting of weight from one side to the other of a longitudinal center line extending along said platform.

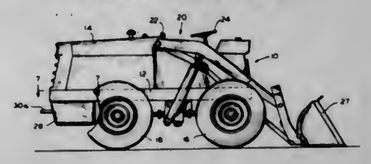
3,023,023
VEHICLE BANKING DEVICE
Merrideth D. Wilson, Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 5, 1960, Ser. No. 27,033
2 Claims. (Cl. 280—112)



1. In apparatus for banking an automotive vehicle provided with power steering and having springs, one associated with each wheel, interconnecting the sprung mass, as the frame carrying the engine, the body, etc., with the unsprung mass, as the drive shaft housing, the axles, the wheels, etc., in combination, an actuator including a pair of relatively movable parts comprising a cylinder and a piston in the cylinder having a connecting rod projecting through a seal from the cylinder, one of the relatively movable parts being coupled to the sprung mass and the other to the unsprung mass, said actuator being positioned on the vehicle the banking of which is to be controlled so that the line of relative movement of the piston and cylinder falls in a horizontal plane below the roll axis of

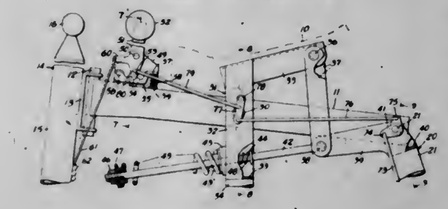
the sprung mass and falls in a plane near the center of gravity of the sprung mass and which plane is substantially normal to the roll axis, whereby relative movement of the relatively movable parts, upon application of a differential fluid pressure on opposite sides of the piston, will cause the sprung mass to tilt about the roll axis, and means coupled to the power steering to so change the pressure of fluid in the cylinder on the two sides of the piston that the sprung mass is tilted toward the inside of the turn being made by the vehicle.

3,023,024
REMOVABLE WEIGHT FOR VEHICLE
Paul F. McAdams, St. Joseph, and Bruce V. Christensen, Berrien Springs, Mich., assignors to Clark Equipment Company, a corporation of Michigan
Filed May 25, 1959, Ser. No. 815,601
8 Claims. (Cl. 280—150)



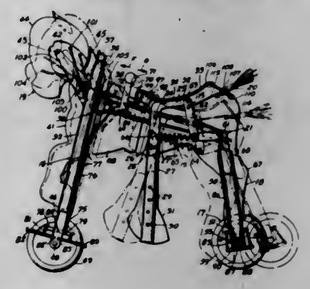
1. A removable weight construction for a vehicle having a main frame portion, comprising a flat weight support secured to the main frame and projecting horizontally, the said support having a pair of openings in the upper surface thereof, a weight having a horizontally disposed slot therein of greater depth than the thickness of said support, a plurality of short foot members projecting downwardly from the upper surface of the said slot, the said weight being adapted to rest on the said support with the support projecting into the said slot and the said foot members in contact with the upper surface of the support, a pair of downward projections from the said upper surface of the said slot extending downwardly farther than said foot members and adapted to project into the said openings in the support, and means for securing the said weight to the said support.

3,023,025
GALLOPING HOBBY HORSE WITH UNITARY DIRECTIONAL CONTROL
Charles K. Grieder, 32 Loyola Place, Oakland, N.J.
Filed Mar. 28, 1960, Ser. No. 17,833
12 Claims. (Cl. 280—218)



1. A vehicle of the character described, comprising a body member, a front wheel supporting post movably mounted on the forward end of said member, means comprising a U-shaped bracket for supporting a front wheel at the lower portion of said post, a rear dual wheel unit, a frame member with which said unit is coupled, means pivotally supporting the frame member on the rear portion of the body member, seat supporting means pivoted with said body member, brake discs fixed to the front and rear wheels of the vehicles, fixed housings arranged at one side of all of said wheels and concealing said discs, brake shoes pivotally supported in said housings and including at end portions thereof disc engaging elements adapted to operatively engage the periphery of said brake discs in braking said wheels against forward and rearward travel, a pair of coil springs operatively engaging each of said shoes, a manually actuated lever pivotally supported in connection with the body member adjacent the forward end of said body member, and means coupled with said lever and extending to and coupled with one of the springs of the brake shoe of each wheel for moving all of said shoes from a neutral position to forward and rearward braking positions.

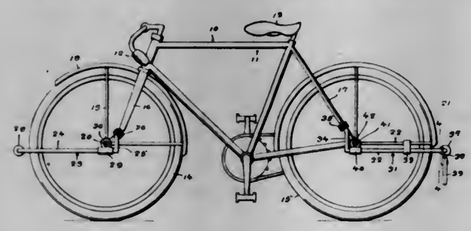
3,023,026
GALLOPING HOBBY HORSE WITH UNITARY DIRECTIONAL CONTROL
Charles K. Grieder, 32 Loyola Place, Oakland, N.J.
Filed Dec. 8, 1958, Ser. No. 778,833
7 Claims. (Cl. 280—218)



1. A vehicle of the character described comprising a body member, a front wheel supporting post movably mounted on the forward end of said member, means comprising a U-shaped bracket for supporting a front wheel at the lower portion of said post, a rear dual wheel unit, a frame member with which said unit is coupled, means pivotally supporting the frame member on the rear portion of the body member, a seat pivotally coupled with the body member between the post and frame member, means placing the seat in operative engagement with said frame member, brake members in operative engagement with the front and rear wheels of the vehicle, a manually actuated lever pivotally supported in connection with the body member adjacent the forward portion of the seat, means directly coupled with said lever for actuating the front wheel brake member, and other means directly coupled with said lever for actuating the brake members of said rear wheels, whereby operation of said lever will simultaneously actuate the brake members of all wheels in controlling forward and reverse progress of the vehicle.

3,023,027
BICYCLE BUMPERS AND LICENSE PLATE HOLDER
Ross B. Franciscus, 284 Brookwood Ave., Hamilton, Ohio
Filed Apr. 7, 1959, Ser. No. 804,711
2 Claims. (Cl. 280—289)

1. In a bicycle of the type including a frame embodying a front fork and a rear fork, a front wheel and a rear wheel and horizontally disposed rear fender braces; the improvement consisting in providing a front bumper assembly embodying a pair of spaced parallel arms arranged on opposite sides of said front wheel, a crosspiece extending between the front ends of said arms, a cylindrical shaped bumper member on said crosspiece, said arms embodying main straight portions and vertically disposed, rearwardly extending end portions which are clamped to said front fork, a bushing mounted on each arm, a support piece on each bushing, a front axle connected to said support pieces, a rear bumper assembly embodying spaced parallel arms and vertically disposed, forwardly extending, end portions which are clamped to



the rear fork, said last named arms being in spaced parallel relation to said rear fender braces, clamps connecting said last named arms to the adjacent rear fender braces, a crosspiece extending between the rear ends of the last named arms, a bumper member on said last named crosspiece, and a license plate holder connected to the rear bumper assembly.

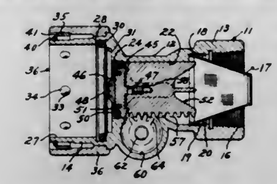
3,023,028
EVENER HINGE ASSEMBLY
Robert J. Hotchkiss, Jr., Bradford, Ill.
Filed Nov. 12, 1957, Ser. No. 695,825
13 Claims. (Cl. 280—411)



1. A harrow evener draw bar assembly comprising at least two strut members, hinge means interconnecting adjacent strut members, the hinge means including two leaf members, each of said leaf members being provided with a socket for receiving the end of one strut member, pin means securing the strut member in its socket against excessive longitudinal movement, one of said members having perpendicular aperture means allowing the leaf member to be turned 90 degrees on the strut member axis, and complemental means on the leaf members interconnecting the members at their adjacent ends.

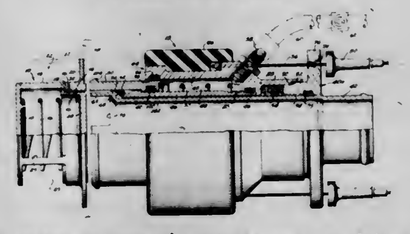
3,023,029
COUPLING NOZZLE
Rolland W. Collar, Sun Valley, Calif., assignor to Roylyn Incorporated, Glendale, Calif., a corporation of California
Filed Sept. 17, 1958, Ser. No. 761,606
9 Claims. (Cl. 284—19)

4. A coupling nozzle comprising a tubular body having a fluid passage therethrough from end to end adapted at one end to be attached to a hose, means at the other end of said body for detachably securing a nipple thereto, said body defining a valve seat in said passage between its ends, a rack mounted for movement in said passage axially thereof, a poppet valve in said passage attached to said rack and adapted to engage said seat, a pinion rotatably mounted in said body and operatively engaging said



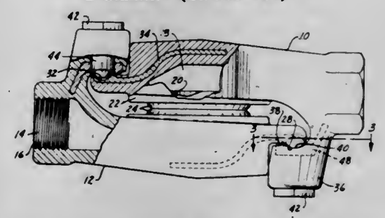
rack, and a handle on the outside of said body operatively connected to said pinion.

3,023,030
QUICK DISCONNECT COUPLING FOR FLUID LINES
Jorge Torres, Los Angeles, Calif., assignor, by mesne assignments, to On Mark Couplings, Inc., Los Angeles, Calif., a corporation of California
Filed July 28, 1958, Ser. No. 751,408
9 Claims. (Cl. 285—18)



9. Means for breaking a joint between two fluid passage means wherein connecting means releasably joins two coupling bodies that are mounted on the ends of the two fluid passage means respectively, said joint-breaking means comprising: a first fluid pressure actuated member on one of said coupling bodies to release said connecting means; a second fluid pressure actuated member on one of said bodies to thrust against the other body for separation of the two bodies; a source of fluid under pressure; and remotely controlled means to release fluid from said source to act on said two fluid pressure actuated members for releasing said connecting means and for exerting separation force between the two coupling bodies.

3,023,031
IDENTICAL REINFORCED HALF COUPLINGS FOR HOSE
Harold L. Dobrikin, Chicago, Ill., assignor to Berg Airlectro Products Co., Chicago, Ill., a corporation of Illinois
Filed Aug. 28, 1958, Ser. No. 757,744
2 Claims. (Cl. 285—69)



1. A hose coupling for use with an air brake system or the like including a pair of oppositely disposed main coupling members each including a chamber therein, a port

and an aperture each in communication with said chamber, a sealing means circumscribing each of said apertures, said main coupling members adapted for assembly whereby an air passage is formed between said ports, a first and second arcuate flange connected to respective main coupling members by a neck portion having a cross section of considerably less thickness than that of the said respective coupling member and extending from opposite ends of each main coupling member, each of the first and second flanges having a wearing face thereon formed by a wearing member made of a material harder and of greater tensile strength than the material forming the main coupling member, each of said wearing members extending through the neck portion into and being embedded within the main coupling members and forming a reinforcement therefor, said wearing members associated with said first flanges extending a substantial distance into a corresponding member, each of said first flanges wearing faces having a protrusion extending therefrom, a notch in each of said protrusions, each of said second flanges having a recession therein which receives said protrusion, a projection extending from said recessions, each of said notches being adapted to receive a projection when the two main coupling members are assembled into an air hose coupling.

3,023,032
COUPLINGS FOR SHEET WIREWAY DUCTS

Frank C. Johnston, West Hartford, and Paul Krauss, Farmington, Conn., assignors to General Electric Company, a corporation of New York

Filed Nov. 9, 1956, Ser. No. 621,354
8 Claims. (Cl. 285—156)



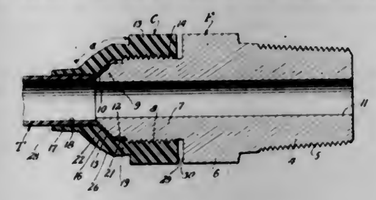
1. A branch connector for use in a prefabricated sectional wireway system including a plurality of elongated tubular duct sections of generally square cross section, comprising a generally cube-shaped body having top and bottom plates and at least two spaced corner posts extending therebetween and detachably connected thereto, said corner posts defining at least three generally square open faces of said body, each of said corner posts including a pair of generally perpendicular walls extending between the top and bottom plates to form sides of the adjacent open faces, the walls of each corner post having integral lugs adjacent the central portions of their edges struck inwardly toward the associated open faces, said lugs being adapted to interfit with slots formed in a connector inserted within a selected one of the open faces, a member between said top and bottom plates forming a wall of said body, said top and bottom plates, said corner posts, and said member being independently detachable from one another to permit the assembly of connectors and the laying in of wires through said branch connector.

3,023,033
TUBE CONNECTOR HAVING ELASTIC DEFORMATION MEANS

Robert B. Koch, Reading, Pa., assignor to The Polymer Corporation, a corporation of Pennsylvania

Filed Jan. 3, 1958, Ser. No. 706,946
2 Claims. (Cl. 285—187)

1. For use in coupling tubing made of synthetic resin capable of cold flow, said tubing having a flared end, to a relatively non-deformable fitting of the kind having an externally threaded barrel terminating in a tip the free edge of which is chamfered to provide a frusto-conical tip surface, a flare nut made of a synthetic resin having substantially the physical properties of nylon, said flare nut having an internal thread to accommodate the threaded end of the fitting and having an internal frusto-conical surface of cone angle substantially equal to that of the frusto-conical tip surface, the frusto-conical surfaces of the nut and tip being adapted to clamp therebetween in tight surface contact the flared end of the tubing when the parts are assembled, the wall of the nut surrounding the internal frusto-conical surface having an external concentric frusto-conical surface of cone angle substantially smaller than that of the internal frusto-conical nut surface, the internal and external frusto-conical surfaces of the nut forming a wall of minimum thickness in the region of the larger bases of the frusto-conical nut

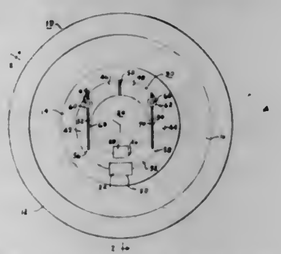


surfaces and of maximum thickness in the region of the smaller bases of the frusto-conical nut surfaces, said nut having an integral collar extending axially from the portion of the wall having maximum thickness, said collar having a bore of large enough diameter to provide a relatively loose fit with the tubing in the untightened position, the radial thickness of the collar being substantially less than the thickness of the portion of the wall from which the collar extends, the wall section of minimum thickness providing for a concentration of stress during assembly of the nut on the fitting, whereby, during normal tightening of the nut on the fitting, the portion of the nut wall of minimum thickness undergoes outward elastic deformation and the free edge of the collar undergoes inward elastic deformation in direction to tighten the fit of the collar on the tubing, the nut having an annular recess into which the free edge of the flared end of the tubing can flow during assembly.

3,023,034
SHAFT BUSHING

Jackson Chung, Mishawaka, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana

Filed July 25, 1960, Ser. No. 44,993
9 Claims. (Cl. 287—52)



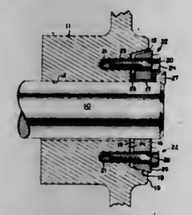
2. A bushing for mounting on a shaft a machine element having a hub with a longitudinal bore, comprising an annular body having an external surface parallel with

the wall of the hub bore and an internal surface parallel with the axis of the shaft, a radial slot extending through said body from the external surface to the internal surface, and a lateral slot on each side of said radial slot extending inwardly from points on said external surface adjacent said radial slot to points adjacent to and spaced inwardly from said external surface and dividing said body into external and internal segments, and means for simultaneously urging said external segments outwardly and the respective internal segments inwardly.

3,023,035
HUB MOUNTING MEANS

Hugh Kelley, Enterprise, Kans., assignor to The J. B. Ehrsam & Sons Manufacturing Company, Enterprise, Kans., a corporation of Kansas

Filed Dec. 23, 1959, Ser. No. 861,598
11 Claims. (Cl. 287—52)

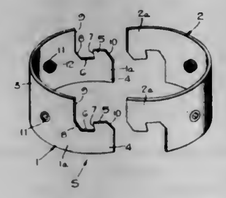


1. The combination with a cylindrical element, of a member having a cylindrical bore minutely larger in diameter than said element, said member being provided, adjacent one end, with a frusto-conical surface concentric with said bore, a collar having a cylindrical bore minutely larger in diameter than said element, said collar being provided with a frusto-conical surface eccentric with respect to the bore of said collar, said member and said collar being sleeved on said element with the frusto-conical surfaces of said member and of said collar in cooperative engagement with each other, and means operatively engaging said member and said collar and manipulable to urge said frusto-conical surfaces axially relative to each other, the recited parts being so constructed and arranged that, upon such manipulation, said frusto-conical surfaces coact to press a portion of the internal wall of said member bore forcibly into frictional engagement with said element and to press a diametrically-opposite portion of the internal wall of said collar bore forcibly into frictional engagement with said element.

3,023,036
STOP COLLAR

Raymond G. Taylor, Jr., Santa Monica, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Oct. 10, 1958, Ser. No. 766,537
4 Claims. (Cl. 287—52.03)

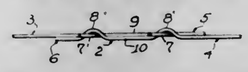


1. A collar device of the class described, comprising a pair of half sections having complemental coengageable ends adapted to be interlocked upon assembly of the half sections about a cylindrical member, said ends each including a circumferentially extending ear disposed at one side of the transverse median plane of the respective half sections, an axially extended lug on said ear having a radially disposed face projecting longitudinally across said median plane, and radially movable die means on each half section for engagement with said cylindrical member for locking said collar to said cylindrical member with said ear on the respective half sections spanning the lug on the ear of the opposed end of the other half section, and said radially disposed face on the lug on each ear projecting toward the ear of the other half section and into interlocking relation to the radially disposed face on the lug on the opposed ear of the other half section, said radially disposed face on the lugs of the respective ears being undercut and locking the half sections against relative axial movement upon coengagement.

3,023,037
WIRE COUPLING CONNECTION

William C. Sandor, Solon, Ohio, assignor, by mesne assignments, to Hoover Ball & Bearing Co., Saline, Mich., a corporation of Michigan

Filed Jan. 15, 1959, Ser. No. 786,998
5 Claims. (Cl. 287—77)

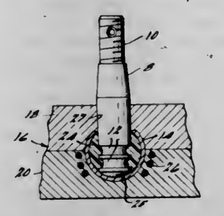


1. In a releasable coupling connection of two substantially parallel, overlapped, portions of high carbon spring steel wire elements arranged side by side in close proximity to each other, a plurality of longitudinally spaced notch-like configurations in each of the overlapped wire portions, said notch-like configurations in said wire portions being engaged in hook-like fashion with each other so that they are at substantially right angles with respect to each other and so that one of said wire portions is on laterally opposite sides of the other wire portion on longitudinally opposite sides of each of said notch-like configurations, whereby said wire portions are interlaced with each other to withstand tensile and torsional stresses applied to the steel wire elements.

3,023,038
BALL STUD AND METHOD OF CONSTRUCTION

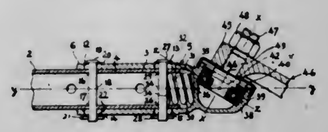
Charles S. White, 30007 Lahser Road, Birmingham, Mich.

Filed May 27, 1957, Ser. No. 661,892
2 Claims. (Cl. 287—87)



1. A ball stud adapted to cooperate with a socket to form a ball joint comprising, a stud having a dome shaped end and an annular groove adjacent said end, an enlarged sheet metal spherical shell disposed over said end of the stud with a portion of the inner surface thereof abuttingly engaging said dome shaped end, and hardened material completely filling the space between said shell and stud for rigidly securing the shell to the stud.

3,023,039
TOOTH BAR MOUNTING FOR PARALLEL RAKES
Elar A. Henningsen, Riverside, and Edward J. Johnston, Cicero, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 27, 1957, Ser. No. 642,804
2 Claims. (Cl. 287—119)

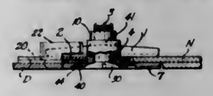


1. For a side delivery rake, a rake bar having an end portion, a connecting element disposed in telescoped relation with said end portion for relative longitudinal movement, said bar and said element having opposed abutments, and rake bar positioning means comprising resilient means including a coil spring coaxially disposed with respect to said bar and interposed between said element and said bar for yieldably resisting said longitudinal movement thereof only in the contracting direction of the spring and said spring having a static length less than the maximum distance that said abutments are movable apart upon longitudinal extension of the bar and element.

3,023,040
COUPLER FOR TOOL AND CABLE
William E. Cawley and Charles E. Frantz, Richland, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Dec. 3, 1959, Ser. No. 857,242
2 Claims. (Cl. 287—119)

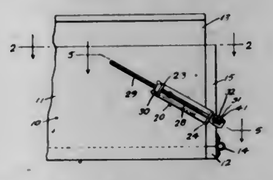
1. In a device for connecting a cable with a tool adapted to be pulled through a tube for splitting the same, a hollow coupler comprising a tubular section having at one end an internal annular shoulder and at the other end a permanent threaded connection, a plug having at one end threads mating with said permanent threaded connection and at the other end of said plug a reduced threaded extension adapted to be removably connected with the tool, a movable member having means at one end for attachment to a cable, and at its other end a projection through the end of the tubular section having the said annular shoulder, the said movable member having an enlarged head of greater lateral dimensions than the inside lateral dimensions of the shoulder but substantially smaller than the inside lateral dimensions of the tubular section, thereby providing a substantial free passage-space between the head and the inside of the tubular section regardless of the position of the head, the longitudinal dimensions of said head being shorter than the distance from the shoulder to the threaded portion at said other end of the tubular member, a bearing held by the annular shoulder adapted to provide for rotation between the movable member and the tubular section while transmitting axial thrust therebetween, and means when the said head is in its forward position within the tubular section for transmitting rotational movement by the cable from the head to the plug, thereby causing the reduced threaded extension of the plug to rotate out of its threaded connection with the tool.

3,023,041
PAWL LATCH ASSEMBLIES
Martin C. Pluylaar, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Aug. 29, 1960, Ser. No. 52,722
4 Claims. (Cl. 292—212)



1. A blind door fastener device for a door mounted in relation to a door frame, comprising an anchor block supported at the inner side of, and adjacent the edge, of the door, an elongated locking bar having a centrally located, interiorly threaded boss, an indicator element formed with a centrally apertured head at its outer end and with means at its inner end interengageable by relative axial movement with said locking bar for conjoint rotation about the axis of said boss, the door being apertured for passage of said interengaging means, but formed with a rotative seat for said head, and a headed screw passing through the centrally apertured head of the indicator element and into the threaded boss of the locking bar, with its head engaging the head of the indicator element and the interengaging means of the latter operatively engaged with the locking bar, and an index mark carried by and rotative with the head of the indicator element, for cooperation with surrounding fixed index marks, to indicate the locked or unlocked position of the locking bar.

3,023,042
ADJUSTABLE STOP MECHANISM FOR END GATES
James S. Hill, P.O. Box 35, South Houston, Tex.
Filed Sept. 11, 1958, Ser. No. 760,345
4 Claims. (Cl. 292—276)

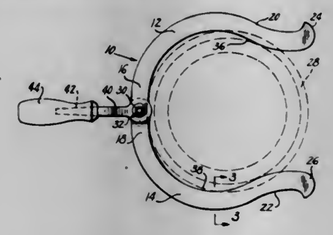


1. An adjustable stop mechanism for a vehicle body having a vertical side wall and an end gate swingable about an axis at right angles to the vertical side wall, including a bracket having a base adapted for pivotal attachment to the side wall of the body and having integral legs at its opposite ends at right angles to the base with aligned openings therein, a rod threaded on one end for a part of its length and slidable through the openings in said legs, adapted for pivotal movement therein and having a flattened head with an elongated slot therein at the other end, a threaded stop nut rotatable on the threaded section of the rod for linear movement therealong adapted to abut one of the legs, and a lug adapted for attachment to the gate engaged in the slot in the flattened head at the latter end of the rod.

3,023,043
PIE AND CASSEROLE LIFTER
Glenn Calvin Ragains, Rte. 4, Boise, Idaho
Filed Sept. 21, 1959, Ser. No. 841,410
2 Claims. (Cl. 294—31)

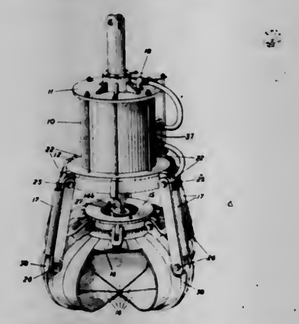
1. A dish lifter comprising a pair of oppositely disposed flat arms fixedly secured together at one inturned

end of each arm, the opposite end of each arm being turned in a curve outwardly of each other, the bottom surfaces of said arms extending in a common plane between said inturned and outwardly turned ends, a handle shank integrally extending upwardly at an off-set angle to said common plane from one inturned end of one arm, the upper surfaces of said arms being beveled downward-



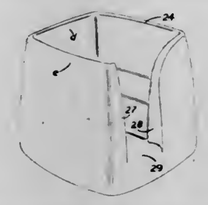
ly from their outside upper edges to a knife edge at their inside lower edges to facilitate supporting the rim of a dish thereon, said arms being longitudinally tapered progressively and gradually from their inturned ends to their outwardly turned ends, the outwardly turned ends being even more sharply tapered to knife edges at their tip ends, and a heat insulating handle fixed on the end of said handle shank above said common plane.

3,023,044
GRAPPLE
James A. Drain, Blair, Ontario, and John A. Read and John E. Gordon, Galt, Ontario, Canada, assignors to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 3, 1956, Ser. No. 575,778
3 Claims. (Cl. 294—88)



1. A fluid operated grapple adapted to be suspended on a hoisting cable and supported thereby during its entire operation and having a vertical reciprocable fluid cylinder, a piston contained in said cylinder, said piston normally remaining relatively stationary with respect to said cylinder and having a piston rod extending in opposite directions through the opposite ends of said cylinder a distance equal at least to the stroke of said cylinder relative to said piston, means connected to the upper end of said piston rod above the cylinder for attaching the cable thereto whereby the grapple is suspended from the cable, a spider mounted on the lower end of the piston rod, a plurality of tines pivotally mounted on said spider, links pivotally connected to said tines respectively and to said cylinder, and means for supplying pressure fluid to said cylinder to effect reciprocation thereof relative to said piston whereby during loading and dumping the tines are respectively closed and opened to load material into said grapple and to dump material therefrom by the reciprocation of said cylinder, the downward stroke of said cylinder effecting closing of said tines and simultaneously allowing the grapple to lower or fall a corresponding distance upon slackening of the cable, the grapple being firmly supported in an upright position by said cable during the operation of loading and dumping the same, said grapple having means for pivotally mounting said spider on the lower end of said relatively stationary piston rod for universal pivotal movement to prevent undue binding between the parts.

3,023,045
ONE-PIECE VEHICLE BODY
Salvatore Cirami, 75—36 Parsons Blvd., Flushing 67, N.Y.
Original application Oct. 21, 1958, Ser. No. 768,793. Divided and this application Jan. 15, 1960, Ser. No. 2,608
2 Claims. (Cl. 296—31)

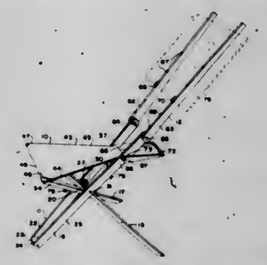


1. A one-piece double-walled reinforced plastic vehicle body of human passenger carrying capacity, comprising: an open-top passenger compartment with completely encircling interior walls except for a narrow entranceway; a partial floor set forward in said compartment and contiguous with the forward and side walls; a seat set aft in the compartment and contiguous with the side and aft walls; a panel extending from the forward end of the seat to the rearward end of the floor, and contiguous at the sides with the side walls; said seat so positioned in height above the floor that passengers seated on same will be head and shoulders above the encircling walls; said entranceway situated forward of said panel and extending from the top of said walls clear to the floor; a channel contiguous at its inboard side with the upper edges of said walls and dipping to coincide wih the entrance opening, to form a shoulder, door jambs, and a door sill; and, exterior encircling walls contiguous with and depending from the outboard side of said channel; said exterior walls adjacent to but spaced apart from said interior walls and extending downward below the level of saic floor—providing in combination in a single molding operation: a passenger compartment with a floor, seat, encircling walls, and an entranceway; a motor housing compartment under the seat contiguous with a chassis compartment under the floor; and, wiring compartments forward, on either side, and aft of the passenger compartment.

3,023,046
COLLAPSIBLE STOOL
Sidney S. Girling, 1560 Mileva Lane, R.R. 5, Victoria, British Columbia, Canada
Filed Dec. 15, 1958, Ser. No. 780,595
13 Claims. (Cl. 297—156)

1. A collapsible stool comprising two side members connected together at lower ends thereof and diverging upwardly therefrom as a longitudinal leg, a pair of transverse legs extending between the side members and crossing each other at a central point at the longitudinal leg, said transverse legs having lower ends spreading away

from each other and from the lower end of the longitudinal leg, means at the central point carried by the side members swingably supporting the crossed transverse legs, the crossed transverse legs and the side members extending upwardly above the central point to form seat supports, said transverse legs being movable together and swingable into a collapsed position side by side between the two side members, a flexible seat, means at



two corners at one end of the seat connecting the latter to the transverse leg supports, and means connecting the opposite end of the seat to the supports of the side members, said seat limiting the spreading movement of the longitudinal and transverse legs away from each other under the weight of a person resting on the seat and said legs forming three bearing points supporting the stool with stability on even and uneven ground.

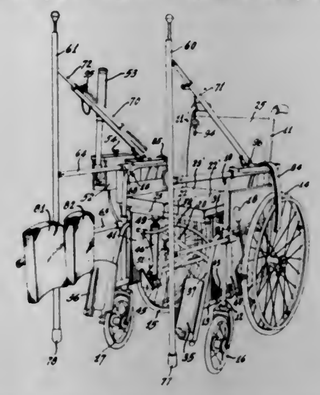
3,023,047
CHILD'S CAR SEAT
Samuel Linden, Swampscott, Mass., assignor to Bunny Bear Inc., Everett, Mass., a corporation of Massachusetts
Filed Feb. 10, 1959, Ser. No. 792,416
2 Claims. (Cl. 297—254)



1. In a child's seat for use in an automobile, a rigidly-backed cushion at the back of the seat, a pair of rigid suspension brackets pivotally mounted on the seat below the top of said cushion, each of said brackets having vertically extending portions for engagement with the front and back sides of the back rest of the front automobile seat, and an intermediate horizontal portion for engagement with the top of said back rest, each of said brackets being adapted for movement between a rearwardly extending operative position and an inoperative position parallel to and laying flat against said cushion, and a pair of flexible straps connected at one end to each side of the seat adjacent the top of said cushion, each strap having a hook at its other end, each of said hooks having horizontally extending portions for engagement with the top and underside of the frame of the back rest of the rear automobile seat, and an intermediate vertical portion for engagement with the back side of said back rest frame.

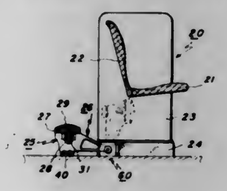
3,023,048
WHEEL CHAIRS
James L. Barton, 371 Willow Drive, Union, N.J.
Filed Oct. 8, 1959, Ser. No. 845,239
4 Claims. (Cl. 297—330)

2. A wheel chair including a pair of laterally spaced side frames, a seat member pivoted at its forward end to said side frames, means connected between said seat member and said side frames for pivoting said seat member from a horizontal to a vertical position, a frame extending forwardly from said side frames and secured thereto, knee pads mounted on said forwardly extending



frame, and a hand rail mounted on said last frame above said knee pads whereby a user may raise himself from a seated position to a standing position with his knees in contact with said knee pads to assist the user in standing position.

3,023,049
KNEELER FOR A CHURCH PEW
James M. Hilliard, Waco, Tex., assignor to Cathedral Kneeler Company, Waco, Tex., a corporation of Texas
Filed Aug. 17, 1959, Ser. No. 834,295
2 Claims. (Cl. 297—426)



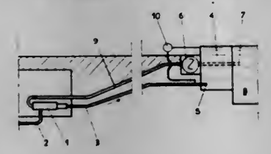
1. In combination with a church pew having spaced vertical supports, a kneeler comprising a longitudinally extending kneeling rail disposed between said supports, a pair of spaced oppositely disposed supporting arms, each secured at one of its ends to the complementary end of said rail, means pivotally securing the other end of each supporting arm to the complementary vertical support of said pew, means associated with said pivot means frictionally resisting pivotal movement of said supporting arms and said rail in both directions of movement thereof, said means pivotally securing said other end of each of said supporting arms to the complementary pew vertical support comprising a channel-shaped mounting bracket fixedly secured to said pew support, a pivot extending through the other end of said supporting arm and into the channel of said mounting bracket, said frictionally resisting means comprising a friction disc on either side of said other end of said supporting arm, and a pressure plate on the outer side of the disc opposite said mounting bracket, said pivot extending through said disc and said pressure plate, said pivot comprising a bolt having a nut on the inner side of the channel of said mounting bracket whereby pressure one said other end of said supporting arm may be regulated by adjusting said bolt, and a nut lock on the inner side of the channel of said mounting bracket, and means limiting pivotal movement of said supporting arm, said last-mentioned means comprising aligned apertures in said mounting bracket and said friction discs, each supporting arm having an arcuate slot therein, and a pin fixed to said pressure plate extending through said aligned openings and said slot.

3,023,050
STOOL CONSTRUCTION
Orabelle H. Jensen, P.O. Box 56, Fairview, Utah
Filed Aug. 26, 1960, Ser. No. 52,089
2 Claims. (Cl. 297—462)



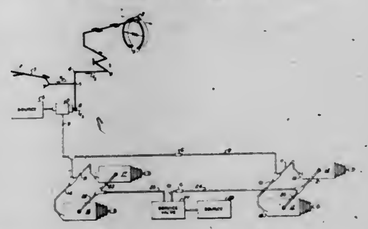
1. A small, light-weight, high-strength, stool construction, comprising: a plurality of upstanding side-by-side hollow, closed, sealed metallic cans having substantially flat parallel tops and bottoms and substantially cylindrical side walls, with all of the tops lying in a substantially flat upper plane and with all of the bottoms lying in a substantially flat lower plane parallel to and spaced below said upper plane; fastening means joining adjacent cylindrical side wall portions of the plurality of cans together to form a rigid, composite, multiple-can, inner stool-supporting structure of high strength and low weight; an upper panel member lying adjacent to the tops of the fastened cans; a lower panel member lying adjacent to the bottoms of the fastened cans; lateral encircling panel means lying adjacent to at least certain of the exterior portions of the fastened plurality of cans; resilient padding means positioned above said top panel member; means fastening the panel members and the padding means in fixed relationship with respect to the inner supporting structure comprising the fastened plurality of cans; and cover means encompassing the joined and fastened plurality of cans, the panel members, and the padding means.

3,023,051
INSTALLATION FOR HYDRAULIC CONDUIT TRANSPORT FOR CONTAINER
Elie Condollos and Andre Michel, Grenoble, France, assignors to Commissariat a l'Energie Atomique, Paris, France
Filed Aug. 19, 1959, Ser. No. 834,720
Claims priority, application France Aug. 30, 1958
10 Claims. (Cl. 302—14)



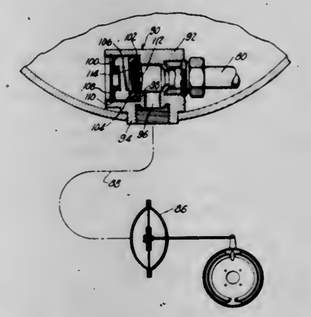
1. In an installation for hydraulically transporting containers, a lock chamber for receiving containers to be transported, an arrival basin for receiving transported containers, a conduit for said containers connecting said lock chamber with said basin, piping and pumping means for moving a liquid from said lock chamber into said basin through said conduit, said lock chamber including a housing, upper and lower parts for said housing, a rotary throttle mounted in said housing, a supply ramp on said housing receiving containers for admission into said housing, a cavity in said throttle for receiving a container, means for rotating said throttle and said cavity alternately from positions opening toward said ramp and opening toward said lower part of said housing, said lower part of said housing being in communication with said conduit and braking means at said basin at the discharge end of said conduit slowing the movement of a container as it discharges into said basin.

3,023,052
BRAKING EQUIPMENT FOR COMPOSITE VEHICLES
Giuseppe Alfieri, Milan, Italy, assignor to Fabbrica Italiana Magneti Marelli S.p.A., Milan, Italy, a company of Italy
Filed July 11, 1958, Ser. No. 747,951
Claims priority, application Italy July 11, 1957
2 Claims. (Cl. 303—2)



1. In a vehicle including a tractor, a trailer towed by said tractor, fluid and mechanical brakes on said tractor, fluids brakes on said trailer, first and second pressure medium systems coupled to and adapted to control the fluid brakes on said tractor and trailer, and a hand control in said tractor for controlling the mechanical brakes on said tractor, said second pressure medium system including a distributor, said hand control being coupled to said distributor for controlling the supply and exhaust in said second pressure medium system concomitant with the operation of the mechanical brake.

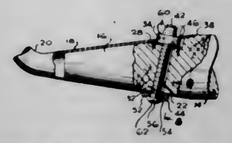
3,023,053
PNEUMATIC SERVOMOTOR UNIT
Robert R. Hager, Elkhart, Ind., assignor to The Bendix Corporation, South Bend, Ind., a corporation of Delaware
Filed June 30, 1960, Ser. No. 39,982
3 Claims. (Cl. 303—7)



1. In a braking system for a vehicle having controlling and controlled portions: a fluid pressure servomotor having a housing forming an internal chamber; a movable wall in said chamber dividing it into opposed power

chambers into one of which power chambers control pressure is communicated to actuate said movable wall, said movable wall actuating said braking system of said controlling portion of said vehicle; a control valve carried by said movable wall and having a high pressure chamber, a low pressure chamber, and a control pressure chamber; a valve control member which when actuated communicates said high pressure chamber of said control valve to said low pressure chamber of said control valve; a coiled flexible tube in one of said power chambers communicating said control pressure chamber externally of said housing for connection to said controlled portion of said vehicle; and back pressure means inside said housing providing restricted flow communication between said flexible tube and said one of said opposed power chambers.

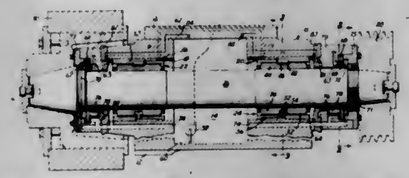
3,023,054
TOOL COUPLING ASSEMBLY
Thomas N. Shigekuni, 1111 E. Rosencrans Ave., Gardena 59, Calif.
Filed June 15, 1960, Ser. No. 36,416
11 Claims. (Cl. 306—31)



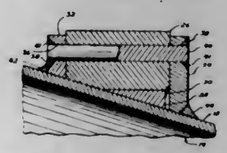
1. In a coupling assembly consisting essentially of a transversely apertured, tubular socket member open at one end to receive a correspondingly shaped and transversely apertured, attachment end of a handle inserted therein and having locking means including a headed bolt adapted to be inserted jointly through the mutually aligned apertures of the handle and socket member, which bolt carries a fastening element on the free end thereof for detachably coupling together the inserted handle and socket member, the improvement wherein the socket and apertured attachment end of said handle are correspondingly conically shaped for frictional registration upon insertion, said socket being formed with its apertures comprising an opposing, dissimilar pair of longitudinally staggered, lateral openings, and said handle end is formed with its transverse bolt-carrying aperture, angularly directed and alignable with the respective staggered, lateral openings of the socket to receive said bolt jointly therethrough, said conical attachment end being shaped with a pair of angularly diverging walls forming a lateral notch, one of said walls being disposed transverse to and surrounding one end of said angular aperture and the other wall being upstanding therefrom, an anchoring element carried by said inserted bolt and held thereby with a transverse face disposed in frictional registration with a wall of said notch and being in such position partially projecting through an adjacent tube opening, the side edges of which opening are disposed in juxtaposition with the respective sides of said element so as to restrain it from turning, said tubular socket member being formed with an opposite lateral opening adapted to receive the shaft of said bolt therethrough, and a locking element carried by the end of said bolt opposite said anchoring element.

3,023,055
PRESSURE FED ROCKER SHOE BEARING
Earl A. Thompson, 1300 Hilton Road, Ferndale 20, Mich.
Filed Mar. 14, 1960, Ser. No. 14,708
12 Claims. (Cl. 308—73)

1. A journal bearing comprising a shaft, a plurality of bearing segments having inner surfaces closely surrounding the shaft, a housing enclosing the segments, means in the housing supporting the segments for individual small rocking movements to vary the relative clearances at the leading and trailing ends of the segments, a source of lubricating fluid under pressure, passages for conducting fluid from the source to the bearing surfaces of the segments at a zone generally coincident with only the leading edge thereof to form between each surface and the shaft a hydrodynamic wedge of lubricating fluid, and means for draining the housing of all lubricating fluid which may escape from the segments to reduce viscous drag on the shaft.

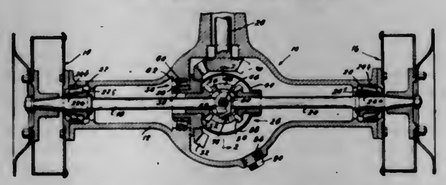


3,023,056
CONCRETE MIXING DRUM AND METHOD OF MAKING SAME
Earl G. Smith, Waterloo, Iowa, assignor to Construction Machinery Company, Waterloo, Iowa, a corporation of Iowa
Filed May 4, 1959, Ser. No. 810,787
8 Claims. (Cl. 308—204)



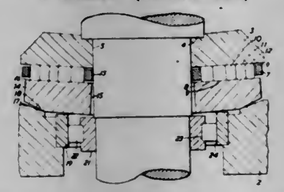
3. In combination, a drum, two parallel spaced apart endless rings secured to and extending around said drum, an endless steel rail continuously engaging said drum in between and adjacent to said rings, said rail extending beyond the outer peripheries of said rings, the lateral width of said rail being confined to the distance between said rings, and means rigidly connecting said rail to said rings; said drum and said rings consisting of an aluminum alloy.

3,023,057
AXLE BEARING ADJUSTING MEANS
Herbert C. Edwards, Canal Fulton, Ohio, assignor to The Timken Roller Bearing Company, Canton, Ohio, a corporation of Ohio
Filed July 30, 1958, Ser. No. 751,909
5 Claims. (Cl. 308—207)



1. A device for adjusting the spacing between the rear axle shaft sections on a vehicle having a rear axle assembly having juxtaposed left and right rear axle sections, wheel bearing assemblies positioned at the ends of said shaft sections, a differential drive operatively positioned between the adjacent ends of said shaft sections, the improvement comprising a divided block assembly positioned in the differential drive between adjacent ends of the axle shaft sections, said block assembly having opposed axle shaft engaging surfaces and said block assembly including two block portions abutting on a plane angularly related to the axis of the axle sections, threaded means connecting said block portions and adjustable therein for changing the position of abutment of the angular abutting surfaces whereby the spacing between the opposed axle section engaging surfaces is changed, said adjustable means including a threaded member having a right-hand threaded portion cooperatively engaged with one of said block portions and a left-hand threaded portion cooperatively engaged with said other block portion, and means associated with one of said block portions for locking the threaded member thereto.

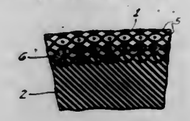
3,023,058
ROTATING AXIAL THRUST BEARINGS
Eric H. Bowers and Oswald Thoma, Cheltenham, England, assignors, by direct and mesne assignments, to Dowty Hydraulic Units Limited, Ashchurch, Tewkesbury, England, a British company, and Unipat A.G., Glarus, Switzerland, a Swiss corporation, jointly
Filed June 29, 1959, Ser. No. 823,547
2 Claims. (Cl. 308—231)



1. A rotating axial thrust bearing comprising a bearing member having a flat bearing surface, and an opposite spherical seating surface, a complemental spherical seating to locate said bearing member in position, a complemental bearing member also having a flat bearing surface, a seating for the complemental bearing member, one of said bearing members and its seating being rotative and the other non-rotative, bearing elements including a plurality of short cylindrical rollers radially disposed and circumferentially spaced between the two bearing surfaces to locate the rollers equally in contact with both bearing surfaces, under no-load conditions, with their rolling axes disposed radially with respect of the axis of rotation, the bearing members each having small thickness compared with their diameters, and being chosen of a material such that each is similarly elastically deformable under axial thrust load, the rotative and the non-rotative seatings acting one on the inner and the other on the outer diameters of their respective bearing members to ensure that the elastic deformations of the bearing members under axial thrust are complementary to the extent that the normally flat bearing surfaces assume shallow conical shapes which are equidistantly spaced to distribute thrust evenly through the rollers, the spherical seating of the one bearing member serving to allow it to settle co-axially with the axis of rotation whilst the elasticity of the bearing members substantially prevents swash movement of the fixed bearing member on the spherical seating.

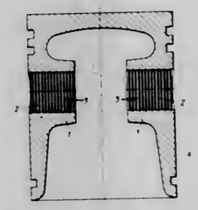
3,023,059
MARINE BEARING
Robert B. Kirk, Los Angeles, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 16, 1957, Ser. No. 678,725
2 Claims. (Cl. 308—238)

1. A non-metallic bearing comprising concentric supporting and bearing sleeves, said supporting sleeve being composed of a plurality of layers of fiberglass fabric bonded into a unitary sleeve by a hardened plastic, said bearing sleeve being composed of a resilient material,



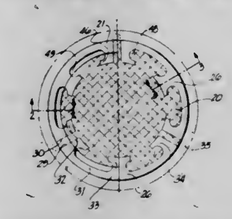
means providing a mechanical interlock between said sleeves including a portion of said resilient material penetrating the interstices of at least one layer of said fiberglass fabric whereby to bond said sleeves together.

3,023,060
PISTONS FOR INTERNAL COMBUSTION ENGINES
Siegfried Pachernegg, Graz, Austria, assignor to Hans List, Graz, Austria
Filed Nov. 10, 1959, Ser. No. 852,053
Claims priority, application Austria Nov. 10, 1958
3 Claims. (Cl. 309—6)



I. A piston for internal combustion engines comprising gudgeon-pin bosses each with cylindrical bearing surfaces, parallel grooved depressions in the bearing surface, the distance between adjacent grooved depressions being less than 5 millimeters, and the remaining bearing surfaces being two to five times as large as the bearing surfaces taken up by the said grooved depressions.

3,023,061
PISTON HEAD STRUCTURE
Rudolph Daub, 9 Hickory Drive, North Caldwell, N.J.
Filed Dec. 10, 1958, Ser. No. 779,371
24 Claims. (Cl. 309—14)



1. A piston structure comprising a piston head of aluminum material, a piston ring groove in said head having radially extending upper and lower piston ring groove surfaces, a member embedded in said piston head extending peripherally and circumferentially around a substantial portion of the circumference of said piston head and having radial portions extending inwardly in the plane of said member a distance greater than the depth of the piston ring groove, said radial portions having radial locking means for holding said member in the piston head, said member having a radial width between said radial

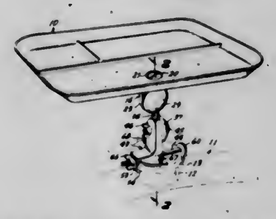
members less than the depth of the groove and having sufficient rigidity and strength to prevent rupture of said member and sufficiently yieldable to respond to the expansion and contraction of said piston head, and said member having at least one axially biased portion for bowing said member away from said piston ring groove to permit the radially inward contraction of said member on cooling of said piston head and to prevent the creation of large internal stresses within said member between said member and said piston head.

3,023,062
SWAB RUBBER UNIT FOR WELL SWAB
Thomas C. Waldrop, Arlington, Tex., assignor to Empire Rubber Co., Grapevine, Tex., a corporation of Texas
Filed May 4, 1961, Ser. No. 107,845
4 Claims. (Cl. 309—52)



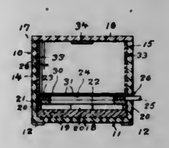
1. In a swab rubber unit for a well swab, the combination of a central tubular core having a plurality of longitudinally spaced, flexible rib-like sealing rings or cups formed thereon and inclined radially outwardly and upwardly therefrom, the flexible sealing rings or cups having a diameter in their at rest position corresponding substantially to the diameter of a well pipe or tubing, and a series of radially outwardly extending annular ribs, of smaller diameter than the flexible sealings rings or cups, formed on the central tubular core, immediately below the sealing rings or cups, respectively, for abutment against the under sides of the sealing rings or cups to resist downward flexing movement thereof, whereby the sealing rings or cups are reinforced or backed up by the annular ribs below them and are thereby adapted to lift greater loads upon upward movement thereof in the well pipe or tubing.

3,023,063
UNDERHOOD TRAY FOR AUTO MECHANICS
Paul E. Hansen, 2246 Cowlin Ave., Los Angeles, Calif.
Filed July 5, 1960, Ser. No. 40,812
3 Claims. (Cl. 311—21)



1. A universal mounting support for a tray to be supported in proximity to an automobile engine in combination, clamping means including an adjustable clamping member configurated for removably clamping to the radiator cap of an automobile, adjustable support bracket members carried by said clamping means comprising relatively rotatable means having a bolt extending therethrough and a wing nut for clamping the relatively rotatable members together, a second support bracket including relatively rotatable members, one of which is carried by one of said first members in a position directly over it and having a clamping bolt extending therethrough and a wing nut for clamping said members together, said last support bracket having its clamping bolt extending in a direction substantially normal to the said first bolt and both of said bolts being substantially parallel to the top of the radiator cap when the mounting support is in position, and one of the members of the said second support bracket having means for carrying a tray whereby the assembly may be removably mounted on a radiator cap and a tray carried by the assembly may be adjusted and set in a horizontal position irrespective of the angle of inclination of the radiator filler spout and cap.

3,023,064
HUMIDOR
Joseph Sosa, 528 N. Rampart St., New Orleans, La.
Filed June 9, 1959, Ser. No. 819,154
2 Claims. (Cl. 312—31)



1. In a humidor, a hollow transparent housing including spaced parallel vertically disposed end walls, vertically disposed spaced parallel front and back walls, a cover hingedly connected to said back wall, said housing further including a horizontally disposed bottom wall, a moisture holding pad supported on said bottom wall, a plurality of spaced apart blocks arranged above said pad, a horizontally disposed grid supported on said blocks and said grid being provided with a plurality of spaced parallel slots, a shiftable plate supported on said grid and said plate being provided with a plurality of slots that are mounted for movement into and out of registry with the slots in said grid, and an article holding case positioned in said housing above said plate, sad case including a horizontally disposed bottom member which is provided with a plurality of spaced apart apertures, said case further including spaced parallel vertically disposed end members and spaced parallel vertically disposed front and back members, manually operable means for moving said plate, said last named means comprising a lever projecting forwardly from said plate, there being an opening in the front wall of said housing for the projection therethrough of said lever, and indicia on said front wall adjacent said opening.

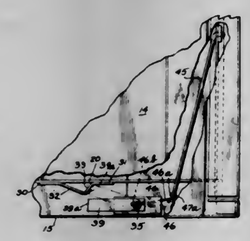
3,023,065
COLLAPSIBLE STORAGE FILE
Herbert W. Marano, Summit, N.J., assignor to Wilson Jones Company, Chicago, Ill., a corporation of Massachusetts
Original application Apr. 16, 1958, Ser. No. 730,042, now Patent No. 2,985,496, dated May 23, 1961. Divided and this application Mar. 17, 1959, Ser. No. 800,035
10 Claims. (Cl. 312—111)

8. An interlock bracket comprising a vertical leg and a pair of horizontal spaced wing elements projecting upwardly and outwardly in opposite directions from the plane of said leg and diverging upwardly relative to each



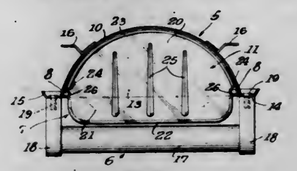
other, the planes of said wing elements forming dihedral angles with the plane of said leg and with each other.

3,023,066
DRAWER LOCK
Robert G. Mohr and Donald A. Bice, Kalamazoo, Mich., assignors to Brunswick Corporation, a corporation of Delaware
Filed Oct. 3, 1958, Ser. No. 765,121
2 Claims. (Cl. 312—219)



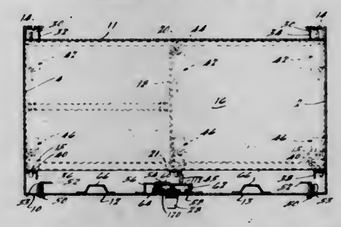
1. A drawer assembly, comprising, a frame, a plurality of drawers mounted one above the other in the frame for sliding movement forwardly and rearwardly between open and closed positions, each drawer having at one side thereof a forwardly facing lock abutment, a locking rod mounted in an upright position in the frame at one side of the drawers for turning about its upright axis, a plurality of lock members fixed on the rod at vertically spaced positions, one for each lock abutment, each movable with the rod between an unlock position enabling lock abutment passage and drawer opening and a lock position in the path of the lock abutment to prevent drawer opening, a key operable lock actuating member pivotable on a horizontal axis in the front of said frame and having a crank arm movable toward and away from the rod on pivoting the actuating member, a single link having one end pivotally connected to the arm, and an arm of resiliently yieldable material having one end fixedly mounted on the rod and the opposite end pivotally connected to the other end of said link for transmitting the motion of the link in either direction to the rod and lock members and yieldable to enable closure of an open drawer while the actuating member and link are in lock position.

3,023,067
BATHROOM FIXTURE
René Maassen, Encino, Calif. (4100 Lankershim Blvd., North Hollywood, Calif.), assignor of one-half to Eldred A. Talbott, Altadena, Calif.
Filed Jan. 10, 1961, Ser. No. 81,714
3 Claims. (Cl. 312—242)



1. A bathroom fixture adapted to be set into a recess in the wall above a bathtub, comprising: a housing formed to extend into said recess with vertical, top and bottom walls; a front frame part extending from the front edge of said walls and surrounding the margin of said housing to lie against the wall around the recess therein, at least the vertical portions of the frame being of channel section and integral with the vertical wall of the housing; brackets secured to the upper portion of said channel section side portions of the frame by securing means located in the channel section; a hand grab with its ends secured in said brackets; an article-supporting plate resting on the bottom wall of said housing and projecting outwardly beyond the front edge of the bottom wall; a skirt depending from the outer edge of said article-supporting plate and at each end abutting the lower portion of the frame; and projections inwardly extending from adjacent the front edges of the vertical wall and spaced above the article-supporting plate, abutments extending vertically from the side margin of said plate to engage against said projections, the inner margin of said plate being rounded and the width of the plate being such that the abutment at one side of the plate may be freed from the projection at that side and the plate swung outwardly and freed from the projection on the opposite side, enabling the plate to be pulled out of the housing.

3,023,068
STORAGE CABINET
Theodore T. Haag, Kalamazoo, Mich., assignor to Borroughs Manufacturing Company, Kalamazoo, Mich., a corporation of Michigan
Filed June 17, 1957, Ser. No. 665,897
3 Claims. (Cl. 312—263)



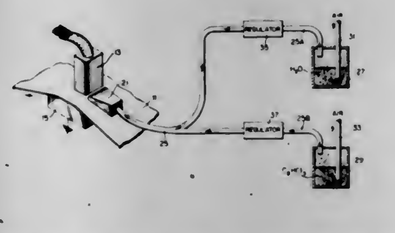
3. A cabinet having top, bottom, back and side panels, a front frame of rectangular shape secured to said panels, a pair of sheet metal doors of unequal width pivoted to the side portions of said frame, a pillarlike formation of box section construction at the meeting edge of one of said doors and disposed centrally with relation to both of the doors when the doors are closed, with the remaining portion of said one door being substantially equal in width to the width of said other door, and a latching mechanism disposed within the box section pillarlike formation, with an operating handle disposed on the outer face thereof.

3,023,069
METHOD OF MANUFACTURING SODIUM-VAPOUR DISCHARGE TUBES
Martinus Henricus Adrianus van de Weijer, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 14, 1959, Ser. No. 859,093
Claims priority, application Netherlands Dec. 9, 1958
2 Claims. (Cl. 316—26)

1. A method of manufacturing a sodium vapor electric discharge tube having a neon gas-filling comprising the steps, filling the tube with argon, producing an electrical discharge in the argon, removing the argon, and thereafter filling the tube with sodium and neon containing about 0.5% by volume of argon.

3,023,070
ATMOSPHERE FOR ELECTROGRAPHIC PRINTING
Robert E. Benn, Broomall, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 20, 1957, Ser. No. 660,408
8 Claims. (Cl. 346—74)

1. In electrostatic printing apparatus having a pair of electrodes forming a gap, means adapted to position a charge retentive medium therebetween, and means for inducing across the said gap between the said electrodes non-arcing electrical discharges adapted to print electrostatic charge patterns on such charge retentive medium

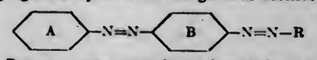


positioned between the said pair of electrodes; the improvement comprising means for supplying to the region in and about the said gap air having a higher water vapor content than the normal atmosphere in which the said apparatus as a whole operates.

CHEMICAL

3,023,071
PROCESS FOR THE COLORATION OF NYLON TYPE 11 FIBRES
Marcel Jirou, Sotteville-les-Rouen, France, assignor to Compagnie Francaise des Matieres Colorantes, Paris, France, a company of France
No Drawing. Filed Sept. 18, 1959, Ser. No. 840,814
Claims priority, application France Sept. 19, 1958
4 Claims. (Cl. 8—55)

1. Process for the coloration of condensation products of ω-aminoundecanoic acid which comprises using as the colouring agent a dyestuff of the general formula:



in which R represents a member selected from the group consisting of the monosulphonated 1-aryl-5-pyrazolones having a radical selected from the group consisting of the methyl, carbonamido and carbonalkoxy radicals in the 3 position, the naphthol monosulphonic acids and the acylamino naphthol monosulphonic acids, the colouring agent being applied from a dyebath having a pH between 3 and 4.

3,023,072
DYEING AND/OR PRINTING
Jan Dabrowski, North Augusta, S.C., assignor to United Merchants and Manufacturers, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 29, 1960, Ser. No. 52,322
24 Claims. (Cl. 8—82)

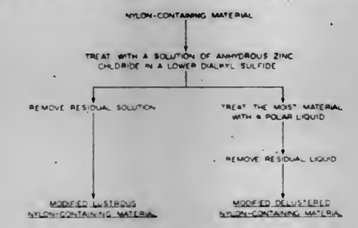
1. The process of conditioning film, fabric, yarn and fiber materials to render them dye receptive, which process comprises treating said material with an aqueous solution of a Werner-type reactive chromium complex and a water-soluble deacetylated chitin in the proportions of from 1 to 6 parts by weight of said water-soluble deacetylated chitin to 1 to 6 parts by weight of the chromium complex, and heating the thus treated material to produce a layer of the reaction product of said Werner-type reactive chromium complex and the deacetylated chitin on said material.

3,023,073
TANNING PROCESS AND TANNING AGENTS THEREFOR
Jürgen Plapper and Rudi Heyden, Dusseldorf, and Gerhard Böhme, Leichlingen, Germany, assignors to Bohme Fettchemie G.m.b.H., Dusseldorf, Germany, a corporation of Germany
No Drawing. Filed June 15, 1955, Ser. No. 515,795
Claims priority, application Germany June 19, 1954
7 Claims. (Cl. 8—94.33)

1. The method of tanning animal skins which comprises applying to said skins two aqueous solutions, by first immersing the untanned skins in one solution containing one resin selected from the group consisting of (1) a 0.5% to 20% aqueous solution of a water-soluble cationic resinous condensation product selected from the group consisting of (*a*) the water-soluble basic condensation product of about 3 to 4.5 mols of formaldehyde and about 1 mol of a compound selected from the group consisting of dicyanodiamide, melamine and mixtures of dicyanodiamide and guanidine and (*b*) the water-soluble acid salts of said basic condensation product and (2) a 0.5% to 5% aqueous solution of a water-soluble anionic resinous condensation product of about 3.5 to 7 mols of formaldehyde, about 1 mol of dicyanodiamide and about 0.2 to 0.8 mol of an acid salt-forming compound selected from the group consisting of alkali metal sulfites and alkali metal bisulfites for a time sufficient to substantially exhaust the bath and adding thereafter to said bath a sufficient amount of the other of the above resins to give the stated concentration, allowing the skins to remain immersed in said baths for a time sufficient to effect tanning.

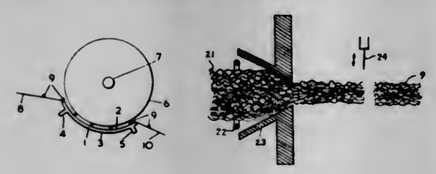
3,023,074
PROCESS FOR MODIFYING NYLON CONTAINING FABRIC WITH A SOLUTION OF ANHYDROUS ZINC CHLORIDE IN A LOWER DIALKYL SULFIDE AND PRODUCTS PRODUCED THEREBY
Robert J. Herschler, Camas, Wash., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Nov. 7, 1958, Ser. No. 772,427
17 Claims. (Cl. 8—130.1)

1. A process for preparing a modified nylon fiber-containing fabric which comprises treating a nylon fiber-containing fabric with a solution of substantially anhydrous zinc chloride in an unsubstituted lower dialkyl sulfide having up to 4 carbon atoms in each alkyl group for a period



in the range of from 1 second to a few minutes and removing the residual solution from the treated fabric, the concentration of zinc chloride in said dialkyl sulfide being from 0.01% to 50% by weight.

3,023,075
FIBROUS MATERIAL
William Thomas Larman, Selwyn George Hawtin, and John Downing, all of Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain
Filed Nov. 14, 1957, Ser. No. 696,562
Claims priority, application Great Britain Oct. 26, 1954
16 Claims. (Cl. 18—54)



1. Process which comprises extruding a solution of a filament-forming substance into a coagulating liquid through at least 200 orifices distributed over substantially the whole of a circular area and spaced apart by less than 2 mm. between centres, drawing the mass of filaments so formed through and out of the coagulating liquid at a take-up speed which is less than half the extrusion speed and compressing said mass into a cylindrical structure of predetermined cross-section.

3,023,076
REMOVAL OF NITRIC OXIDE FROM GAS MIXTURES CONTAINING THE SAME
Ernst Karwat, Pullach im Isartal, Germany, assignor to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft, Munich, Germany, a company of Germany
No Drawing. Filed Aug. 11, 1958, Ser. No. 754,143
Claims priority, application Germany Sept. 3, 1957
8 Claims. (Cl. 23—2)

1. A process for removing NO from an NO-containing gas mixture comprising oxidizable organic components, which comprises the steps of (*a*) adding gaseous ClO_2 to the gas mixture and (*b*) washing out the resulting reaction products with an aqueous alkaline solution.

3,023,077
PROCESS OF PREPARING CYANOGEN HALIDE
Sebastian V. R. Mastrangelo, Brandywine Hundred, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 24, 1959, Ser. No. 841,963
3 Claims. (Cl. 23—14)

1. The process of preparing cyanogen halide which comprises bringing a halogen selected from the group consisting of chlorine and bromine, and nitrogen, in a stoichiometric ratio of nitrogen to halogen of at least 1:1, into contact with carbon at a temperature of from about 1800° to 3600° C. followed by quenching of the product gases to a temperature of not above 500° C. and condensing and separating the cyanogen halide thus obtained.

3,023,078
PRODUCTION OF URANIUM TETRAFLUORIDE
Robert J. Allen, Revere, and Henry G. Petrow, Lexington, Mass., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 25, 1959, Ser. No. 801,977
4 Claims. (Cl. 23—14.5)

1. A process of preparing uranium tetrafluoride from an acid solution of a uranyl salt containing chloride ions which comprises adding cupric ions and fluoride ions thereto, heating said solution to 80–95° C., reducing said solution by means of sulfur dioxide, and recovering the uranium tetrafluoride that precipitates.

3,023,079
METHOD FOR THE PREPARATION OF SELENIDES AND TELLURIDES
Stanley M. Kulifay, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 12, 1958, Ser. No. 760,550
11 Claims. (Cl. 23—50)

1. Method for the preparation of a compound selected from the class consisting of mercury, platinum, palladium, lead, indium, cobalt, tin, bismuth, cadmium, nickel, thallium, ruthenium, rhodium, osmium, iridium, copper, silver and gold tellurides and selenides, which comprises precipitating the desired compounds from media containing the respective members thereof by admixture with precipitating agents of the group consisting of hypophosphorous acid, phosphorous acid, and phosphorus trichloride in the proportion of from 0.1 to 25.0 molecular weight per atomic weight of tellurium and selenium, and isolating the desired compound from the mixture.

3,023,080
METHOD FOR THE PREPARATION OF SELENIDES AND TELLURIDES
Stanley M. Kulifay, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 12, 1958, Ser. No. 760,568
10 Claims. (Cl. 23—50)

1. Method for the preparation of a compound selected from the class consisting of mercury, platinum, palladium, lead, tin, nickel, cobalt, cadmium, thallium, indium, bismuth, ruthenium, rhodium, osmium, iridium, copper, silver and gold tellurides and selenides which comprises precipitating the desired compounds from media containing the respective members thereof by admixture with a precipitating agent consisting of a member of the class of crotonic and malonic acids in the proportion of from 0.1 to 25.0 molecular weight per atomic weight of tellurium and selenium, and isolating the desired compound from the mixture.

3,023,081
METHOD FOR THE PREPARATION OF SELENIDES AND TELLURIDES
Stanley M. Kulifay, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Sept. 12, 1958, Ser. No. 760,569
9 Claims. (Cl. 23—50)

1. Method for the preparation of a compound selected from the class consisting of mercury, platinum, palladium,

lead, indium, cobalt, tin, bismuth, cadmium, nickel, thallium, ruthenium, rhodium, osmium, iridium, copper, silver and gold tellurides and selenides which comprises precipitating the desired compounds from media containing the respective members thereof by admixture with precipitating agents of the group consisting of dextrose, glucose, invert sugar, choral, acrolein and formaldehyde, in the proportion of from 0.1 to 25.0 gram molecular weight per gram atomic weight of tellurium and selenium, and isolating the desired compound from the mixture.

3,023,082
PROCESS FOR THE PRODUCTION OF CALCIUM-MONOFLUORIDE

Dieter Goerrig, Lohmar, and Viktor Lwowski, Leverkusen-Bayerwerk, Germany (both % Farbenfabriken Bayer A.G., Leverkusen-Bayerwerk, Germany); said Lwowski assignor to said Goerrig

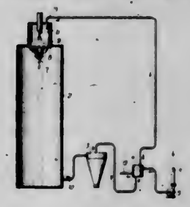
No Drawing. Filed May 8, 1958, Ser. No. 733,812
Claims priority, application Germany May 10, 1957
5 Claims. (Cl. 23—88)

1. Process for the production of calcium monofluoride which comprises heating a mixture of calcium hydride and calcium fluoride to a temperature between about 700 and 1500° C. in the presence of a member selected from the group consisting of CaO, CaC_2 and mixtures thereof, said group member being present in amount sufficient to produce a content thereof in the formed calcium monofluoride of 3 to 30% in the case of CaO, and 1 to 20% in the case of CaC_2.

3,023,083
PROCESS FOR PRODUCING AN ALKALI PHOSPHATE FROM AN AQUEOUS ORTHO-PHOSPHATE

Franz Rodis, Gerhard Hartlapp, and Klaus Beltz, Knapsack, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

Filed May 27, 1957, Ser. No. 661,718
1 Claim. (Cl. 23—107)

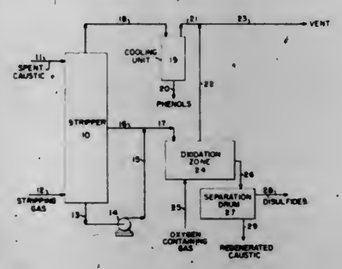


A process for producing an alkali phosphate from an aqueous ortho-phosphate starting solution containing phosphate pentoxide and alkali oxide in a molar ratio of 1:2 to 3:5 comprising the steps of introducing said starting solution into the upper area of the spray-zone, atomizing said solution in said upper area of the spray-zone, simultaneously introducing drying air into the said upper area of the spray-zone, directing the atomized solution downwardly through a downwardly extending cone-shaped flame, setting the distance between the point of atomization and the base of the cone flame to about one-half the diameter of the base of said cone flame, collecting the phosphate in the said lower part of the spray-zone, discharging the phosphate from said lower part of the spray-zone, introducing the discharged phosphate and drying air in the form of waste gases into a separating zone, separating the phosphate from the drying air, passing the drying air in the form of waste gases into a heat exchanger, introducing fresh air into said heat exchanger to be warmed by the hot drying air passing through said exchanger, discharging the cooled drying air in the form of waste gases from said heat exchanger, and passing said hot fresh air as drying air to the point of introduction of said drying air in the said upper area of the spray-zone.

3,023,084
CAUSTIC REGENERATION PROCESS

Arthur M. Thomas, Jr., Rahway, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Jan. 14, 1959, Ser. No. 786,854
7 Claims. (Cl. 23—184)



1. An improved process for regenerating a spent alkaline solution which has previously been employed to wash a hydrocarbon oil containing mercaptans and phenolic materials which comprises, in combination; subjecting said spent alkaline solution to stripping with a gas at a pressure of at least 500 p.s.i.g., and a temperature of at least 400° F. so as to remove a substantial portion of the phenolates from said spent alkaline solution; thereafter removing mercaptans from said thus treated alkaline solution by means of an oxidative regeneration step wherein said mercaptans are converted to disulfides by reaction with oxygen.

3,023,085
METHOD OF COMBINING HYDROGEN AND OXYGEN

John P. McBride, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Mar. 30, 1960, Ser. No. 18,786
7 Claims. (Cl. 23—204)

1. The method of recombining hydrogen and oxygen produced by subjection of a thorium oxide slurry to ionizing radiation in a pressurized system which comprises refluxing thorium oxide prepared by calcination of thorium oxalate at a temperature not exceeding approximately 650° C. in an aqueous medium containing palladium nitrate at a concentration of at least approximately 0.05 gram per gram of thorium oxide until the formation of a sol is completed, contacting the resulting sol with gaseous hydrogen until said sol is converted to a flocculated suspension and adding said flocculated suspension to said thorium oxide slurry.

3,023,086
METHOD OF PRODUCING PHOSPHORUS PENTASULFIDE OF CONTROLLED REACTIVITY

Stephen Robota, North Tonawanda, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Filed May 27, 1959, Ser. No. 816,046
5 Claims. (Cl. 23—206)

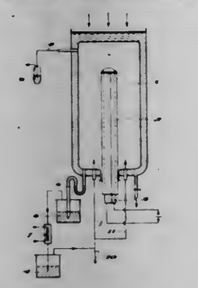
1. A process for controlling the reactivity of phosphorus pentasulfide which comprises controlling the cooling of molten phosphorus pentasulfide through the temperature range of from about two hundred eighty degrees centigrade to two hundred sixty degrees centigrade for a time interval between about 0.125 second and about 2.5 minutes.

2. A process for producing phosphorus pentasulfide of controlled reactivity which comprises reacting molten phosphorus with sulfur in approximately the stoichiometric proportions necessary to form phosphorus pentasulfide, and cooling the molten reaction mixture to yield solid phosphorus pentasulfide, said cooling step comprising a controlled cooling of the phosphorus pentasulfide reaction mixture through the liquid-solid phase transition range for a time interval between about 0.125 second and about 2.5 minutes.

3,023,087
PROCESS FOR THE PRODUCTION OF EXTREMELY PURE SILICON

Eduard Enk and Julius Nickl, Burghausen, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany

Filed Sept. 4, 1958, Ser. No. 758,973
Claims priority, application Germany Sept. 7, 1957
4 Claims. (Cl. 23—223.5)

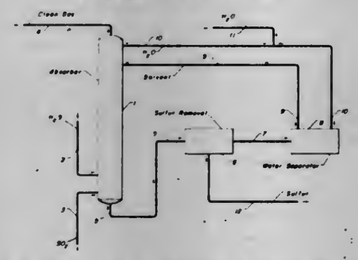


1. A process for the production of pure crystalline silicon which comprises contacting trichlorosilane in a reaction vessel with a silicon body out of contact with the walls of said reaction vessel, said silicon body being heated to 850 to 1050° C. by electric high frequency heating, the walls of said reaction vessel being cooled sufficiently to condense vaporous products in the reaction mixture therein and simultaneously continuously removing by-products and impurities from the neighborhood of the heated silicon body with the aid of the liquid products condensing on the cooled walls of the reaction vessel.

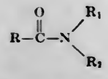
3,023,088
PRODUCTION OF SULFUR

Peter Urban, Northbrook, and Lester G. Massey, Arlington Heights, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed July 5, 1960, Ser. No. 40,840
6 Claims. (Cl. 23—226)



1. A process for the production of sulfur which comprises absorbing sulfur dioxide and hydrogen sulfide in a solvent comprising a carboxamide having the generic formula:

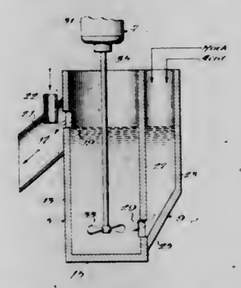


in which R, R_1 and R_2 are selected from the group consisting of hydrogen and alkyl radicals containing from 1 to 4 carbon atoms, and having from about 0.5% to about 40% by volume of water dissolved therein, reacting the sulfur dioxide and hydrogen sulfide in contact with said solvent, thereby forming sulfur, and separating the sulfur from said solvent.

3,023,089
REACTION VESSEL

Howard B. Graves, Jr., Lakeland, and Benjamin P. Bell, Mulberry, Fla., assignors to International Minerals & Chemical Corporation, a corporation of New York

Filed July 28, 1958, Ser. No. 751,522
2 Claims. (Cl. 23—259.2)



1. An apparatus which comprises in combination a main reaction vessel in fluid communication with two separate chambers, (*a*) a preliminary mixing chamber having the lowermost portion thereof and a lower portion of said main reaction vessel connected by a first passageway through which solid particles and liquid may flow from said preliminary mixing chamber into said main reaction vessel, the bottom of said preliminary mixing chamber inclined downward toward said main reaction vessel and meeting said main reaction vessel adjacent said first passageway, and (*b*) a settling chamber having the lowermost portion thereof and a lower portion of said main reaction vessel connected by a second passageway through which solid particles and liquid may flow, the bottom of said chamber being inclined downward toward said main reaction vessel and meeting said main reaction vessel adjacent said second passageway, an opening in an upper portion of said main reaction vessel for withdrawal of solid material from said main reaction vessel, and an outlet in an upper portion of said settling chamber, said outlet positioned below the level of the opening in the upper portion of said main reaction vessel and above the level of said second passageway.

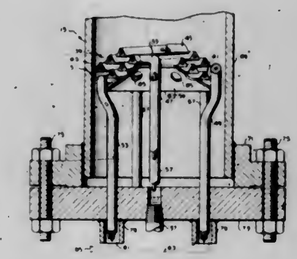
3,023,090
APPARATUS FOR CRYSTALLIZATION

Samuel J. Kolner, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 28, 1955, Ser. No. 490,840
1 Claim. (Cl. 23—273)

An apparatus for separation by crystallization comprising, in combination, an upright elongated cylindrical closed chamber, piston means in the upper portion of said chamber for moving crystals as a compact mass through said chamber, a hollow frusto-conical heater

support plate in the lower portion of said chamber, said plate being positioned with its apex upright and having a plurality of spaced perforations positioned around said plate and generally intermediate the apex and base edges of said plate, a plurality of upright support rods in said chamber, one end of each rod being attached to the lower end of said chamber and the other end of each rod being attached with about equal spacing therebetween to the base of said plate, a pair of frusto-conical spiral heaters

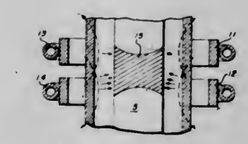


in said chamber, one of said heaters being superposed on said plate and the other of said heaters being superposed on the first-mentioned heater, the outer base edge of said hollow frusto-conical plate and the outer edge of the base turn of said frusto-conical spiral heaters being spaced by a distance about equal to at least one-third of an inch from the inner wall of said chamber, and means in the lower end of said chamber, down-stream of said heaters, for removing purified product from said chamber.

3,023,091
METHODS OF HEATING AND LEVITATING MOLTEN MATERIAL

Charles G. Smith, Weston, Mass., assignor to Raytheon Company, a corporation of Delaware

Filed Mar. 2, 1959, Ser. No. 796,387
15 Claims. (Cl. 23—301)



1. The method of redistributing the ingredients in a body of fusible material, said method comprising subjecting said body to electrical energy of at least two different frequencies to establish a molten region therein and to substantially restrict said molten region therein, and progressively moving said molten region along said body.

3,023,092
MOTOR FUEL

Edwin O. Hook, Chagrin Falls, and David P. Tate, Northfield, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed June 4, 1959, Ser. No. 818,007
1 Claim. (Cl. 44—69)

A leaded gasoline fuel containing an octane increasing phosphorus additive consisting of from 0.004% to 0.08% by weight diethyl N-(2,4-dimethyl phenyl) amido phosphite.

3,023,093
FLUID PRESSURE DISTRIBUTING SYSTEM

George C. Hughes, Anderson, Ind., assignor to Reynolds Gas Regulator Company, Anderson, Ind., a corporation of Indiana

Original application Mar. 25, 1954, Ser. No. 418,613, now Patent No. 2,853,268, dated Sept. 23, 1958. Divided and this application Mar. 14, 1958, Ser. No. 721,479
2 Claims. (Cl. 48—191)



1. In a system for the distribution of gas to a plurality of individual consumers, a source of high pressure, a high pressure main, pressure regulating means between the source and the high pressure main to maintain pressure in said main at substantially a predetermined maximum, a supply line, a pressure regulating valve connecting said high pressure main with the said supply line and including a reciprocal valve mechanism and coacting valve seat, and manually adjustable means readily accessible on said valve, for controlling the flow of gas through said valve, said valve having a pressure responsive means coupled to said valve mechanism and actuated by the pressure in the supply line, to automatically maintain pressure in the supply line substantially at a predetermined maximum below the pressure in said main, flow restricting means including manually adjustable means readily accessible on said valve and coacting with said valve mechanism for providing for selective adjustment of the maximum rate of flow of gas from said high pressure main to said supply line, said manually adjustable means being immune to the pressures in said supply line and in said main, a plurality of independent consumer installations connected with said supply line, each of said consumer installations including a consumer service line individually connected to said supply line, a second pressure regulating valve interposed between each consumer service line and said supply line and including pressure responsive means controlling the flow of gas through the valve and responsive to the outlet pressure in said second valve, to automatically reduce the gas pressure from the supply line pressure to a predetermined lower maximum consumer pressure, said last mentioned pressure responsive means including manually adjustable means readily accessible on said second valve for providing for selective adjustment of the maximum rate of flow of gas from said supply line to the respective consumer service line and to a rate less than that capable of being supplied by said second valve, said last mentioned manually adjustable means being immune to the pressures in the respective consumer service line and said supply line, each of said manually adjustable means being adjustable without stopping the flow of gas through the system, said system providing for the pinpointing of a pressure loss to the consumer reporting the same, and for readily adjusting the system to compensate for such loss.

3,023,094
SEMI-SOLID ROCKET FUEL WITH ALUMINUM NAPHTHENATE CONTAINING ABOUT SEVEN PERCENT COMBINED ALUMINUM

Charles R. Morton, Summit, N.J., and Gerald J. Horvitz, Woodmere, and Nicholas J. Nicholas, Greenlawn, N.Y., assignors to National Research & Development Corp., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 6, 1959, Ser. No. 824,939
9 Claims. (Cl. 149—18)

9. A semi-solid fuel suitable for rocket propulsion consisting essentially of between 20% and 35% of a liquid hydrocarbon gelled by means of aluminum naphthenate containing about 7% of aluminum chemically combined in the aluminum naphthenate and between 80% and 65% of a mixture of oxidizable and oxidizing materials, said mixture being between 5% and 10% of oxidizable material selected from the group consisting of lamp black, finely-divided calcined petroleum coke, ground charcoal and coal, and between 95% and 90% of oxidizing material selected from the group consisting of the nitrates, chlorates, perchlorates, peroxides and picrates of ammonia, alkali and alkaline earth metals, nitrocellulose and nitroglycerine.

3,023,095
DEFOLIANTS

John H. Nolan, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 11, 1956, Ser. No. 597,075
8 Claims. (Cl. 71—2.2)

1. The method of defoliating crop bearing plants which comprises applying to the leaves of said plant an aqueous mixture of elemental sulfur and a water-soluble compound of the group consisting of the salts of iodic acid and the salts of hydroiodic acid, said mixture being applied in an amount sufficient to induce defoliation.

3,023,096
METHOD FOR KILLING WEEDS

Durward O. Guth, 7828 Sunset Ave., Elmwood Park, Ill.

No Drawing. Filed June 20, 1957, Ser. No. 667,041
1 Claim. (Cl. 71—2.4)

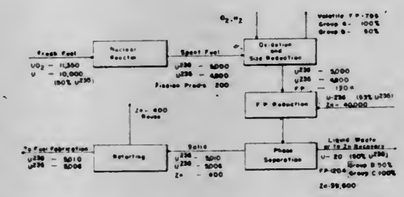
The method of increasing translocation for the control of weeds of the kind exemplified by Canada thistle, bur ragweed, Russian knapweed, smartweed, field bindweed, climbing milkweed, leafy spurge and wild buckwheat to thereby kill the roots of said weeds from application to the foliage which consists of applying to said weeds an aqueous solution containing 2-methyl-4-chlorophenoxyacetic acid sufficient to kill the roots of said plant, and ionizable potassium compound in molar amount more than one and less than about five times the molar amount of said 2-methyl-4-chlorophenoxyacetic acid, whereby said treatment accelerates the translocation of said herbicide through the living sturdy weeds, said aqueous composition being applied to said field to supply at least 5 ounces, but not more than about 32 pounds, of said acid per acre.

3,023,097
REPROCESSING URANIUM DIOXIDE FUELS

Leslie Burris, Jr., and Alfred Schneider, Naperville, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Nov. 23, 1959, Ser. No. 854,989
4 Claims. (Cl. 75—84.1)

1. A method of reprocessing spent oxide fuel consisting of uranium dioxide, and the oxides of the fission products and transmutation products from nuclear reactors, comprising heating said fuel in an oxygen atmosphere to drive off the volatile fission product elements and compounds, then cyclically oxidizing the resulting product at 300°–500° C. with oxygen gas whereby substantially all the UO_2 of the product becomes oxidized to U_3O_8, and partially reducing it with hydrogen gas at 700°–800° C. whereby substantially all the U_3O_8 is partially reduced to UO_2, the said oxidations and reductions being repeated for a sufficient number of cycles to reduce the particle size, then immersing it in a dual purpose liquid selected from the group consisting of

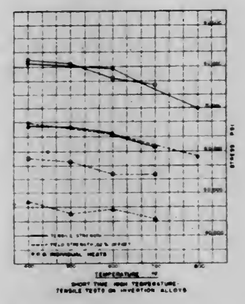


molten zinc and molten cadmium under an inert atmosphere to bring about the reduction to the metallic state of the oxides reducible by the liquid, adding to the liquid uranium in the stoichiometric amount to bring about the reduction of the oxides of the class consisting of the oxides of the rare earth elements and plutonium to the metallic state, then separating the resulting liquid metal phase from the solid oxide phase.

3,023,098
LOW CARBON FERRITIC STAINLESS STEEL

Robert D. Wylie, Barberton, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Nov. 3, 1958, Ser. No. 771,392
10 Claims. (Cl. 75—125)



10. An alloy steel resistant to stress corrosion cracking when subjected to corrosive atmospheres and having good impact strength at low temperatures, good weldability, excellent mechanical properties at moderately elevated temperatures, and characterized by a microstructure of martensite and ferrite; said alloy steel having the following percentage composition by weight:

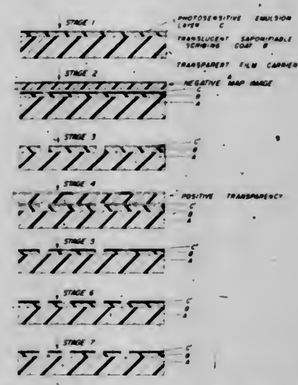
Cr	14.00 to 17.00
Ni	1.00 to 1.50
C	0.035 max.
Mn	0.30 to 0.90
Si	0.75 max.
S	0.030 max.
P	0.030 max.
Cu	up to 1.10
Mo	up to 0.60

and balance iron with the usual impurities.

3,023,099
PHOTOGRAPHIC PROCESS FOR ETCHING SCRIBING MEDIA

Luther L. Yaeger and Risto P. Lappala, Madison, Wis., assignors to Bjorksten Research Laboratories, Inc., Fitchburg, Wis., a corporation of Illinois

Filed Apr. 23, 1956, Ser. No. 579,705
4 Claims. (Cl. 96—35)



1. A process for photochemically etching scribing media having a transparent base, a translucent saponifiable scribing coat solubilizable by a saponifying solution and a photosensitive emulsion layer of water soluble colloid free of hardening agents comprising the steps of photographically exposing said emulsion layer to provide a photographic image of an object thereon, photographically developing and fixing said emulsion layer without insolubilizing said colloid, scribing said emulsion layer and said scribing coat to remove a portion thereof defined by at least a portion of said photographic image thereon, resensitizing the remainder of said emulsion layer with a sensitizer which will harden said colloid on exposure to light, photographically exposing the resensitized portion of said emulsion layer to actinic light to provide a photographic image of a second object, soaking said scribing media in aqueous solution to solubilize and remove all unexposed portions of the resensitized emulsion, soaking said scribing media in a second solution to operably solubilize and remove all of said scribing coat uncovered by removal of said emulsion thereby to yield a composite image in relief on said scribing media.

3,023,100
LIGHT-SENSITIVE COMPOUNDS AND THEIR USE IN THE REPRODUCTION TECHNIQUE

Wilhelm Thoma, Leichlingen, and Otto Bayer and Heinrich Rinke, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Jan. 14, 1958, Ser. No. 708,745
Claims priority, application Germany Jan. 21, 1957
7 Claims. (Cl. 96—35)

1. A soluble polyamide of a dicarboxylic acid and a diamine, said polyamide having as repeating integral units in the main polymer chain the grouping —CH=CHCO— attached through the —CH=CH— end to an aromatic nucleus and through the —CO— end to a member selected from the group selected from aromatic nuclei and amido nitrogen, said aromatic nucleus and said member both being repeating integral portions in the main polymer chain.

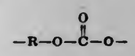
4. A reproduction method which comprises exposing to the action of actinic light a soluble polyamide of claim 1.

3,023,101
PHOTOGRAPHIC FILM

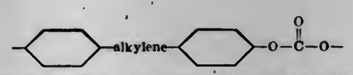
Armin Ossenbrunner, Leverkusen, Hermann Schnell, Krefeld-Uerdingen, Helfried Klockgether and Julius Geiger, Leverkusen, and Joachim Freier, Krefeld-Uerdingen, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 27, 1957, Ser. No. 705,499
Claims priority, application Germany Dec. 31, 1956
2 Claims. (Cl. 96—87)

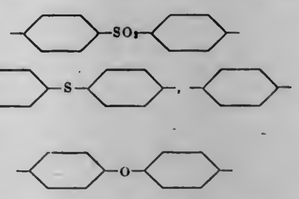
1. Photographic material comprising a film of a high molecular weight linear film-forming thermoplastic polycarbonate as the support, a hydrophilic subbing layer, and a photographic silver halide emulsion layer, said polycarbonate consisting essentially of the units



and



in which R stands for a member selected from the group consisting of



and

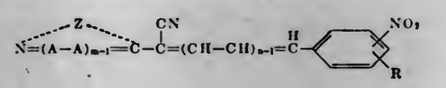
the phenyl radicals of which may be substituted, the total number of said units being at least 10, and the relative proportions of said units to each other varying between about 1:30 and 30:1, said hydrophilic subbing layer being selected from the group consisting of layers of (1) a mixture of gelatin and a film-forming, partially saponified vinyl chloride-organic vinyl ester copolymer, and (2) a mixture of a film-forming, partially saponified vinyl chloride-organic vinyl ester copolymer and a film-forming mixed acetal of polyvinyl alcohol with an aromatic aldehyde containing water-solubilizing groups and an aromatic aldehyde free of water-solubilizing groups.

3,023,102
DIRECT POSITIVE PHOTOGRAPHIC EMULSION

Fritz Dersch, Binghamton, N.Y., and Norman J. Doorenbos, Glen Burnie, Md., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 24, 1957, Ser. No. 685,815
11 Claims. (Cl. 96—101)

1. A direct positive photographic emulsion comprising a silver-halide emulsion containing a desensitizing compound represented by the following general formula:



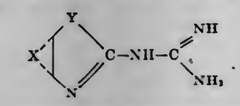
wherein R is selected from the class consisting of hydrogen, halogen, hydroxy, amino and nitro groups, *n* is an integer of from 1 to 2, *m* is an integer from 1 to 2, A is methine group and Z is a heterocyclic nucleus selected from the class consisting of benzimidazole, benzothiazole, pyridine and quinoline nuclei and about 10 mg. per 150 mg. of said desensitizing compound of a water-soluble chloroiridate salt.

3,023,103
ANTIFOGGANTS AND STABILIZERS FOR PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Fritz Dersch and Millet R. De Angelus, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Aug. 2, 1960, Ser. No. 46,906
7 Claims. (Cl. 96—109)

7. The process of minimizing and preventing fog in light-sensitive silver halide materials comprising a base having a light-sensitive silver halide emulsion thereon, which comprises exposing the emulsion and developing the same in the presence of an antifoggant of the following formula:



in which X represents the atoms necessary to form a benzo ring and X is selected from the class consisting of O, S and NH.

3,023,104
FOOD COMPOSITIONS INCORPORATING CELLULOSE CRYSTALLITE AGGREGATES

Orlando A. Battista, Drexel Hill, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed July 5, 1960, Ser. No. 40,517
8 Claims. (Cl. 99—1)

1. A reduced calorie food composition comprising a mixture of a food material and cellulose crystallite aggregates; said aggregates per se comprising the acid-insoluble crystalline residue of the acid hydrolysis of cellulose and being characterized by the uniformity of the lengths of the constituent chains thereof, said aggregates having an average level-off D.P. of 15 to 375 anhydroglucose units, the constituent chains of each aggregate being separate from and free of those in neighboring aggregates, said aggregates being further characterized by having a sharp X-ray diffraction pattern indicative of a substantially crystalline structure, and said aggregates having a bland taste and odor and being edible but not nutritious; said composition having the eating quality of the food material.

3,023,105
STABILIZATION OF ANIMAL AND POULTRY FEED CONTAINING CHLORTETRACYCLINE

Sidney Dayton Upham, Trenton, and Irving Klothen, Princeton, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 10, 1960, Ser. No. 28,012
6 Claims. (Cl. 99—2)

1. An animal feed composition comprising an edible animal feedstuff containing the growth-promoting factors produced by elaboration of the microorganism *Streptomyces aureofaciens* and stabilized against loss of antibiotic potency by the addition of an effective amount of 7-chloro-4-epi-tetracycline.

3,023,106
POWDERED INSTANT BEVERAGE MIX

James L. Common, Briarcliff Manor, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 2, 1958, Ser. No. 758,568
7 Claims. (Cl. 99—78)

1. A fruit flavored beverage mix comprising in combination an edible acidic substance, sugar, fruit flavor and color, and a dried emulsion of a homogenized plastic fat coated with a water-soluble gum, the fat being present in a minor proportion and the gum being present in a major proportion, the dried fat emulsion having a particle size distribution whereat with 10% tricalcium phosphate added 100% passes a No. 20 screen and no more than 25% of the dried fat emulsion alone passes a No. 100 screen.

3,023,107
PRODUCTION OF UNDENATURED DEBITTERED SOYBEAN PRODUCT

Gus C. Mustakas and Edward L. Griffin, Jr., Peoria, and Larry D. Kirk, East Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Filed Jan. 11, 1961, Ser. No. 82,137
3 Claims. (Cl. 99—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A commercial process of treating defatted, substantially undenatured soybean flakes to remove bitter and anti-whipping constituents without reducing the NSI (nitrogen solubility index) to below a value of 68, said process comprising the steps of countercurrently extracting 1 part of said defatted soybean flakes for about 18–36 minutes at 25°–38° C. with 1.5 parts of an alkanol solvent selected from the group consisting of about 95 percent ethanol and about 91 percent isopropanol, draining the alkanol-extracted flakes for about 5 minutes, fluidizing the drained flakes for about 2–5 seconds in a closed system high velocity recycle vapor stream mixture heated by indirect steam at 115–120 p.s.i. to 149°–158° C., said vapor stream mixture comprising a said alkanol, moisture, air, and added carbon dioxide, recovering the flakes from the vapor stream, and cooling the recovered flakes in a stream of air.

3,023,108
PROCESS FOR PREPARING CRANBERRY SAUCE

Edward E. Anderson, Lexington, and Arthur W. Anti, Kingston, Mass., assignors, by mesne assignments, to Ocean Spray Cranberries, Inc., Hanson, Mass., a corporation of Delaware

No Drawing. Filed Feb. 3, 1960, Ser. No. 6,385
5 Claims. (Cl. 99—103)

1. Method of preparing a whole cranberry sauce, characterized by boiling whole cranberries from about 30 seconds to 3 minutes in an aqueous sugar solution with from about 1 to 10% their weight of finely comminuted cranberries, the amount of water and sugar in said solution being such as to form a sauce having a soluble solids content from about 38 to 42% by weight.

3,023,109
METHOD OF TREATING FRESH RED MEAT FOR STABILIZATION OF COLOR

Leonard Russell Hines, Ridgewood, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 1, 1959, Ser. No. 837,370
4 Claims. (Cl. 99—107)

1. The method of treating red meat to produce a durable bright red color of the surface corresponding to that of fresh meat which comprises subjecting the meat to an atmosphere containing from 5% to 25% of ammonia for a period of time ten seconds to five minutes.

3,023,110
DEHYDRATION OF WATER CHESTNUTS

Arthur Feller Stagmeier, New York, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 8, 1961, Ser. No. 94,174
3 Claims. (Cl. 99—204)

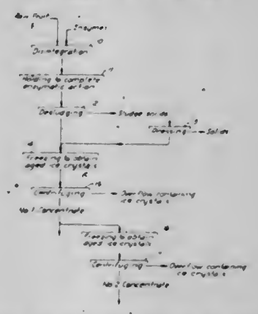
1. A process for the dehydration of water chestnuts comprising treating the whole chestnuts with a caustic solution to soften the skin thereon, abrading said chestnuts to peel the skin therefrom, acid dipping said peeled chestnuts, placing said peeled chestnuts in a treating

vessel, circulating a gaseous medium through said vessel to maintain the atmosphere in the treating vessel at a temperature of from 105° F. to 125° F. and at a relative humidity of from 70 to 80 for a period of time sufficient to reduce the moisture content level of the water chestnuts to 6–12%.

3,023,111
PROCESS FOR THE MANUFACTURE OF FRUIT AND VEGETABLE JUICE CONCENTRATE

Earl B. Huber, 27 E. Monroe St., Chicago, Ill.

Filed Nov. 6, 1958, Ser. No. 772,240
1 Claim. (Cl. 99—205)



In a method for the manufacture of juice from fresh material of a vegetable origin, the steps of extracting juice from the fresh material, chilling the juice below freezing to form a semi-frozen material containing ice crystals in a liquid fraction, said last step being carried out by applying the juice as a thin layer having a thickness of the order of ⅛ inch to a refrigerated surface followed by the removal of the layer in semi-frozen form, the material being on the refrigerated surface for a predetermined time period of the order of 3 to 5 minutes to develop ice crystals favorable for subsequent treatment, and then immediately subjecting the removed semi-frozen material to centrifuging to remove the ice crystals from the remaining concentrate.

3,023,112
CORE OILS, FOUNDRY CORES AND MOULDS AND METHODS OF MAKING THE SAME

August Tobler, Bruneggstrasse 906, Windisch, near Brugg, Switzerland

No Drawing. Filed May 25, 1956, Ser. No. 587,194
12 Claims. (Cl. 106—38.7)

1. A cold setting, non-deforming core oil consisting essentially of an admixture of a blown non-conjugated drying oil and a conjugate bonded oil, said admixture having an iodine number not less than 100 and a diene number not less than 7.

3,023,113
FOUNDRY SAND COMPOSITION

Thomas E. Barlow, McHenry, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Dec. 22, 1958, Ser. No. 781,868
5 Claims. (Cl. 106—38.8)

1. A novel foundry sand composition comprised of a mixture of between about 65 and about 96% by weight of sand, between about 1 and about 20% by weight of clay, between about 2.5 and about 5% by weight of water, and between about 0.5 and about 4% by weight of a carbonaceous material consisting essentially of lignite, an aqueous emulsion of asphaltic pitch having a melting point above about 150° F. and a carbonaceous substance selected from the group consisting of wood flour, coke breeze and mixtures thereof, the proportion of said carbonaceous substance in said mixture being up to about 35% by weight of the lignite, the weight ratio of said aqueous emulsion to said lignite and said carbonaceous substance being between about 1:1 and about 2.5:1 and the weight ratio of asphaltic pitch solids to lignite and carbonaceous substance being between about 0.6:1 and about 1.46:1.

3,023,114
REFRACTORY MATERIAL

Richard D. Becker, Farmington, Mich., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Feb. 19, 1959, Ser. No. 794,230
7 Claims. (Cl. 106—56)

2. An improved plastic refractory composition comprised of plastic clay, calcined flint clay, between about 5 and about 20% by weight on a dry basis of finely divided fluid coke substantially all of a particle size of less than 100 mesh, and sufficient water to provide a moisture content in the composition of between about 5 and about 15% by weight.

3,023,115
REFRACTORY MATERIAL

Eugene Wainer, Cleveland Heights, and Andrew L. Cunningham, Cleveland, Ohio, assignors to Horizons Incorporated, Cleveland, Ohio, a corporation of New Jersey

Filed Feb. 3, 1960, Ser. No. 6,492
6 Claims. (Cl. 106—65)

1. A method of forming refractory inorganic fibers which consists in reacting a gaseous suboxide of aluminum with silicon monoxide vapor in an atmosphere of hydrogen maintained in a heated reaction zone, wherein the relative proportions of aluminum suboxide and silicon monoxide are such that the aluminum suboxide is present in substantial excess of two moles for each three moles of silicon monoxide and recovering the silica-containing alumina-base fibers resulting from said reaction.

3,023,116
METHOD FOR FORMING CONCRETE STRUCTURES WHICH SET IN PLACE WHILE FLOATING

Harvey E. Alford, Amherst, and Franklin Veatch, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 24, 1959, Ser. No. 841,934
6 Claims. (Cl. 106—90)

1. A method for forming a rigid, permanent floating concrete mass in a body of water comprising the steps of introducing onto the surface of the water a concrete mix composition consisting essentially of Portland cement as the binder and hollow, hole-free, glass spheres having a diameter of from 5 to 5000 microns and a gas density of from 0.1 to 0.75 gram/cc. as the aggregate, the volumetric ratio of binder to aggregate being within the range of 1:3 to 1:11, and containing at least 0.5% by weight a cationic surface-active agent evenly dispersed therein, and permitting said concrete mix to set in place while floating on the surface of the water.

3,023,117
ACTIVE ACIDS FOR METAL DRIERS USEFUL IN SICCATIVE COATINGS

Oliver J. Grummitt and James A. Stearns, Cleveland, Ohio, assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 3, 1957, Ser. No. 687,869
11 Claims. (Cl. 106—264)

11. A composition of matter which comprises a drying oil fatty acid ester and a salt of an organic acid containing an azomethine group having the general structure:

$$X-CH=N-Y-\overset{O}{\overset{\|}{C}}-OM$$

where X and Y are selected from the group consisting of alkyl, cycloalkyl, aryl, alkaryl and alkoxyaryl groups containing from 6–14 carbon atoms in a hydrocarbon structure and M is a metal selected from the group consisting of lead, cobalt, manganese, zinc, calcium, cerium, zirconium and iron.

3,023,118
WATER-SOLUBLE CARBON BLACK AND PRODUCTION THEREOF

Jean-Baptiste Alexis Donnet, Mulhouse-Dornach, Haut-Rhin, France, assignor to Societe d'Etude des Industries du Petrole au Port de Strasbourg (Societe a Responsabilite Limitee), Bas-Rhin, France, a company of France

Filed Jan. 13, 1958, Ser. No. 708,634
Claims priority, application France Jan. 16, 1957
5 Claims. (Cl. 106—307)

1. A process for the production of a water-dispersible carbon black, which comprises the steps of maintaining a mixture of an aqueous solution of nitric acid containing from 1 to 40 percent by weight of said acid with from 1 to 400 grams of carbon black per litre of said solution, at a temperature from about 20° C. to the boiling point of said solution, for a period of about 2 to 24 hours; separating the carbon black thus treated from said aqueous solution; and removing any adherent residual nitric acid from said treated carbon black.

3,023,119
COATED MOLD FOR CASTING PLUTONIUM

John W. Anderson, Franklin Miley, and William C. Pritchard, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

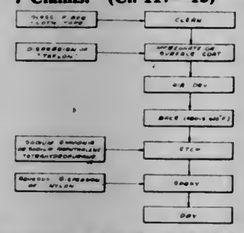
No Drawing. Filed Mar. 5, 1959, Ser. No. 797,554
5 Claims. (Cl. 117—5.1)

1. A mold for the precision casting of plutonium and plutonium alloys in thin sections, comprising a base portion and a uniform, impermeable coating thereon, said base portion being of a material which remains solid and stable at temperatures as high as the pouring temperature of the metal being cast, said coating comprising finely divided calcium fluoride in which the maximum particle size is about 149 microns and said coating having a thickness not exceeding about 0.005 inch.

3,023,120
PLASTIC COATED, FLUOROCARBON RESIN-IMPREGNATED GLASS FIBER CLOTH TAPE AND METHOD OF MAKING THE SAME

Robert Goldsmith, Great Notch, and Paul S. Hess, West Orange, N.J., assignors to General Dispersions Incorporated, Passaic, N.J., a corporation of New Jersey

Filed Aug. 25, 1958, Ser. No. 756,789
7 Claims. (Cl. 117—15)



2. A tape comprising a length of glass fiber cloth impregnated with polymerized tetrafluoroethylene and coated with nylon.

3,023,121
METHOD OF CONSTRUCTING ABRASIVE COATED CYLINDERS

Robert L. Dyar, 1825 S. Kinnickinnic, Milwaukee, Wis.

Filed Aug. 13, 1959, Ser. No. 833,445
2 Claims. (Cl. 117—18)

1. The method of applying a reinforcing coating of adhesive material to abrasive grains adhesively carried on the peripheral surface of a cylinder including the steps of applying a coating of adhesive material, after an initial coating of grain holding adhesive has at least partially cured, to the peripheral face of the grain carrying cylinder with adhesive material so applied filling the spaces between grains and covering some of the grains, then



rotating the so coated cylinder at a speed such, with relation to the viscosity of the adhesive material as to expel excess adhesive material which overlies and covers the grains by centrifugal force while leaving a reinforcing layer of adhesive material from said second coating between the grains, and then allowing the adhesive material to cure.

3,023,122
METHOD OF FORMING DECORATIVE BODIES

Maria V. de Pataky, 7965 Fareholm Drive, Los Angeles, Calif.

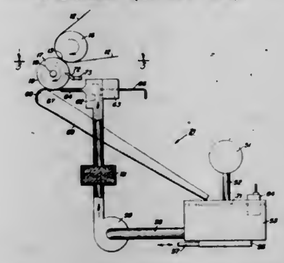
No Drawing. Filed Dec. 18, 1958, Ser. No. 781,210
11 Claims. (Cl. 117—38)

1. The process of decorating a surface with simulated gem-like solid translucent elements attached to the surface, and in which are embedded solid glittering decorative particles, which comprises: registering said surface with a stencil, having openings corresponding to the design to be produced on said surface; covering the surfaces exposed by the stencil with a mixture of gel-like thixotropic material in which is included solid glittering particles, and of sufficient depth to provide raised bodies on the surfaces; said thixotropic material in its normal state being milky and serving to adhere to the surfaces without requiring any other adhesive; separating the stencil from the surface; heating the thixotropic material to a temperature of from 100° F. to 120° F. for a period sufficient for the material to clear; and then continuing the heating at an elevated temperature to complete the hardening of the thixotropic material.

3,023,123
FORMING STRIPES OF MAGNETIC MATERIAL

Richard H. Colwill and Charles J. Levine, Rochester, N.Y., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Dec. 2, 1958, Ser. No. 777,722
6 Claims. (Cl. 117—44)



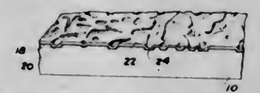
2. The method of forming a stripe of magnetic material on one surface of a relatively wide paper web, comprising: moving the other surface of the paper web in a predetermined direction over a guiding surface; rotating an applicator, having a cylindrical peripheral surface narrower than the width of said stripe and disposed closely adjacent to said one web surface opposite said guiding surface, about a central axis which lies in a plane parallel to said one web surface passing said guiding

surface but which is perpendicular to said direction of motion thereof, said applicator being rotated about said axis in the rotational sense causing said peripheral edge surface to move past said one web surface in the direction opposite to said direction of motion of said web; applying to said peripheral surface as it approaches said one web surface a coating composition of an aqueous synthetic latex dispersion which contains particles of ferromagnetic iron oxide in suspension and a thickening agent; subjecting the web, carrying a wet stripe of the magnetic composition transferred from said peripheral surface, to heat for drying the stripe and providing with a single transfer from said applicator a dried stripe at least 0.003 inch thick, free of tack, and resistant to blocking and smudging under dry and under humid conditions; and rolling the thus-treated surface of the web carrying the dried stripe to obtain at least a 20% reduction in the over-all thickness of the web and the dried stripe, making the stripe dense and smooth yet coherent and adherent to the web.

3,023,124
METHOD OF MAKING TEXTURED LEATHER-LIKE ARTICLE AND PRODUCT THEREOF

Wilfred G. Cryderman and Arthur R. Marshall, Birmingham, Mich., assignors to Kaybar, Inc., Birmingham, Mich., a corporation of Michigan

Continuation of application Ser. No. 819,143, Nov. 28, 1958. This application Mar. 6, 1959, Ser. No. 797,728
11 Claims. (Cl. 117—45)



1. An article having a textured surface of leather-like character comprising, a generally form retaining member having a textured surface with relatively indented portions and projecting portions, a single layer of material formed of a composition containing synthetic resinous material in dissolved form in a plasticizer so that said layer has resiliently distortable properties, said layer being at least about three mils thick, said layer having a reverse face adhered to said textured surface with the material forming said reverse face conforming to said indented and projecting portions, the thickness of the portions of said layer overlying said projecting portions being generally at least as great as the thickness of the layer portions overlying said indented portions so that the obverse face of said layer contains texturing generally reproducing that of said member and the depth of texture in said obverse face is generally at least as great as the depth of texture in said surface of said member.

2. The article defined in claim 1 wherein the thickness of said layer portions overlying said projecting portions is greater than the thickness of the layer portions overlying said indented portions whereby the depth of the texture reproduced in said obverse face is amplified over the depth of texture in said surface of said member.

3,023,125
PROCESS OF TREATING COAL TAR IMPREGNATED WOOD WITH A SOLUTION OF A COMPOUND OF BORON TRIFLUORIDE

Karl Friedrich Lang, Frankfurt am Main, Walter Metzendorf, Kronberg (Taunus), Johannes Turowski, Castrop-Rauxel, and Heinrich Gick, Duisburg-Wanheimerort, Germany, assignors to Rutgerswerke-Aktiengesellschaft, Frankfurt am Main, Germany

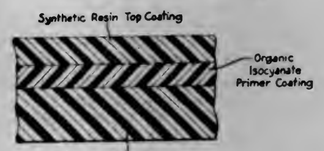
No Drawing. Filed July 20, 1959, Ser. No. 828,066
Claims priority, application Germany July 25, 1958
6 Claims. (Cl. 117—62)

1. A process for the treatment of wood treated with an oil obtained by distillation of coal tar, comprising contacting said wood with the solution of an addition compound of boron trifluoride and a substance selected from the group consisting of organic acids, hydrofluoric acid, alcohols, phenols, ethers and water in order to polymerize said tar oil and harden the surface of the wood.

3,023,126
METHOD OF BONDING A SYNTHETIC RESIN COATING TO A POLYOLEFIN SURFACE AND ARTICLE PRODUCED THEREBY

William F. Underwood, Oak Park, Ill., and Subbaraju V. Urs, Cheshire, Conn., assignors to Union Carbide Corporation, a corporation of New York

Filed Jan. 12, 1959, Ser. No. 786,028
23 Claims. (Cl. 117—76)



3. In a method for applying to a polyolefin surface a top coating resistant to loss of adhesion to the polyolefin surface upon aging, the steps which comprise applying to a coating-receptive polyolefin surface a primer coating comprising a solution in a volatile organic solvent of an organic isocyanate compound containing a terminal isocyanate group —N=C=O and selected from the group consisting of diisocyanates, polyisocyanates, polyurethanes, and polyester-urethanes, drying said primer coating and thereafter applying over said primer coating a top coating containing as the vehicle a synthetic resin.

3,023,127
METAL COATING PROCESS

Erith T. Clayton, Baltimore, Md., assignor, by mesne assignments, to Peen Plate, Inc., Baltimore, Md., a corporation of Maryland

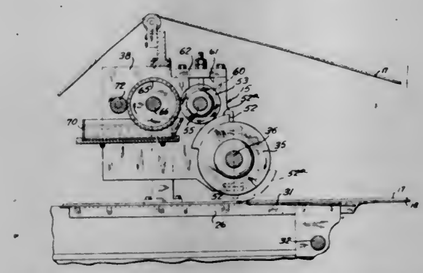
No Drawing. Filed May 25, 1953, Ser. No. 357,203
7 Claims. (Cl. 117—109)

1. A process for joining and uniting metal powder particles of substantially spheroidal shape and selected from the non-refractory group of metals consisting of tin, lead, indium, cadmium, magnesium, aluminum, zinc, copper and silver and of alloys of these metals with each other, to one another and to the surfaces of metals, said process comprising providing in contact with the metal surfaces to be coated a mass of said metal powder particles of spheroidal form in admixture with a liquid carrier medium, said particles being less than 200 microns in diameter and surface filmed with oxide and said liquid carrier medium containing a compound acting as a solvent for said oxide filming, applying forces of impact and attrition between the particles and between the particles and the surfaces to be coated to scour and clean the surfaces of said particles and surfaces to be coated and remove oxide filming therefrom and forthwith as each surface is cleaned, covering said cleaned surface with an organic film forming compound unreactive with said cleaned surface, said organic film covering the cleaned surfaces to a maximum thickness of less than 100 microns and being effective to create a physically continuous barrier excluding oxygen from said surfaces and subjecting said film covered particles and surfaces to be covered to mechanical impact and attrition forces of sufficient magnitude to reduce the average thickness of each particle to less than one-third the original maximum thickness and thereby to increase the surface area of said particles while at the same time reducing the film thickness so that it is cleared from portions of the expanded metal areas of the particles and contacting areas of the metal surfaces to be coated, and welding said cleaned and film cleared areas to similar metal surfaces with which they are in contact.

3,023,128
ENVELOPE MAKING MACHINE

Harry F. Affelder, Shaker Heights, Ohio, assignor to The Wolf Detroit Envelope Company, Detroit, Mich., a corporation of Michigan

Filed Nov. 27, 1957, Ser. No. 699,402
8 Claims. (Cl. 117—111)



8. The method of applying pressure-sensitive material, which is subject to foaming when churned, to a sheet which comprises the steps of providing a reservoir of material and rotating a first member through the material in the reservoir at a speed, which speed is insufficient to effect churning and foaming, to coat the surface of the member with the material to move the material from the reservoir, picking up the coating of material from the first member with a second member rotating in the same direction as the first member, thinning the coating by running the second member at a higher peripheral speed than the peripheral speed of the first member, and applying the thinned coating to a rotating applicator which engages the upper side of said sheet.

3,023,129
CREASE PROOFING OF CELLULOSIC TEXTILE MATERIALS

Solomon P. Hersh, South Charleston, W. Va., and Cal Y. Meyers, Princeton, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 8, 1957, Ser. No. 695,222
9 Claims. (Cl. 117—139.4)

1. A cellulose textile material containing a substantially water-insoluble condensation resin in amounts at least sufficient to impart improved crease and wrinkle resistance but less than that amount imparting stiffness and harsh hand to the said textile material, said condensation resin being the cured product of a water-soluble resin-forming admixture of (*a*) a 2,4,6-trimethylolphenol compound selected from the group consisting of 2,4,6-trimethylolphenol, the alkali metal salts of 2,4,6-trimethylolphenol and the alkaline earth metal salts of 2,4,6-trimethylolphenol, and (*b*) a water-soluble aliphatic polyhydric compound present in amounts of no greater than about four moles per mole of the said 2,4,6-trimethylolphenol compound.

3,023,130
HARD SURFACING MATERIAL

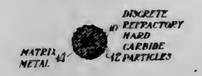
Rene D. Wasserman, Stamford, Conn., and Joseph F. Quaas, Island Park, N.Y., assignors to Eutectic Welding Alloys Corporation, Flushing, N.Y., a corporation of New York

Filed Aug. 6, 1959, Ser. No. 831,937
10 Claims. (Cl. 117—205)

1. A hard surfacing material comprising a matrix metal consisting essentially of the following formulation in parts by weight—

Constituent:	Range in parts by weight
Carbon	.05/.20
Manganese	0.50/2.00
Silicon	2.00 max.
Molybdenum	0.10/4.00
Phosphorus	.030 max.
Sulfur	.030 max.
Chromium	10.00/32.00
Nickel	1.00/20.00
Iron	Balance

and discrete refractory carbide hard particles of 10 to 325 mesh particle size ranging from 10 to 60% by weight of

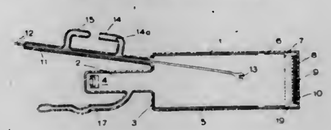


said matrix metal associated with said matrix metal by attachment to a body including said matrix and said particles.

3,023,131
METHOD OF FORMING A PHOTO-EMISSIVE SURFACE AND COATED ARTICLE

Harry Cassman, London, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed June 23, 1958, Ser. No. 743,795
Claims priority, application Great Britain June 26, 1957
7 Claims. (Cl. 117—210)



1. A method of forming a photo-emissive surface comprising antimony sensitized with a plurality of different alkali metals, said method including providing an antimony surface on a support, evaporating a quantity of a first alkali metal onto said surface such that the photo-emissive sensitivity of said surface rises to a value which is less than a peak value, and subsequently evaporating a quantity of another alkali metal onto said surface such that the photo-emissive sensitivity of said surface can be brought to a peak value.

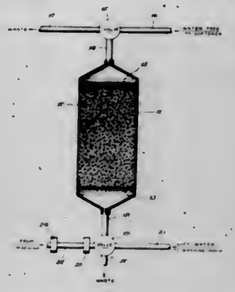
3,023,132
METHOD OF SOFTENING WATER AND WASHING ARTICLES

William J. Diamond, Muskegon, Mich., Harry Levin, Woodland Hills, Calif., and Donald C. Wood, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware

Filed Sept. 14, 1959, Ser. No. 839,944
7 Claims. (Cl. 134—10)

1. The method of washing soiled articles and softening water, comprising: flowing raw water through a bed of base exchange water softening material for softening the water; adding a washing composition containing a member of the class consisting of alkali metal chlorides and alkali metal phosphates to said water subsequent to its

passage through said bed to form a washing solution; utilizing said washing solution in a cleansing action and



subsequently flowing at least a portion of said washing solution through said bed for regenerating the material.

3,023,133
WELDING FLUXES

Wallace J. Lewis and Glenn E. Faulkner, Columbus, Ohio, assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

No Drawing. Filed Nov. 9, 1959, Ser. No. 851,546
6 Claims. (Cl. 148—26)

1. A flux suitable for use in submerged arc welding consisting essentially of.

Material	Weight percent	
	About	To
Sodium oxide	0	14
Potassium oxide	0	12
Magnesium oxide	0	25
Calcium oxide	5	60
Manganese oxide	0	20
Aluminum oxide	0	15
Silicon dioxide	10	30
Titanium dioxide	1	15
Calcium fluoride	7	30

wherein the total of sodium oxide and potassium oxide is about 1 to 16 weight percent and the total of magnesium oxide, calcium oxide, manganese oxide, and aluminum oxide is about 40 to 60 weight percent.

ERRATUM

For Class 149—18 see:
Patent No. 3,023,094

3,023,134
MOLDED ARTICLES AND METHOD OF MAKING THE SAME

Arthur Cresswell, Witold R. Kocay, and Ivor H. Updegraff, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed July 15, 1955, Ser. No. 522,320
18 Claims. (Cl. 154—43)

1. A product comprising a hard, rigid, heat- and compression-molded article having a flexural strength of at least 10,000 pounds per square inch and comprising a cementation of fused synthetic material and fusible synthetic filaments which are fusible under heat and pressure to yield said fused synthetic material, all of the said fusible synthetic filaments having approximately the same fusion point and being molecularly oriented, discontinuous filaments of an acrylonitrile polymer containing an average of at least 80% by weight of combined acrylonitrile, and the said fused synthetic material having the

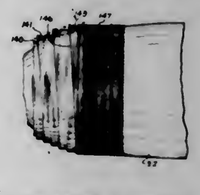


same chemical constitution as the said fusible synthetic filaments.

3,023,135
LAMINATED FIBER GLASS RADOME AND METHOD OF MAKING SAME

Arthur J. Wiltshire, Cleveland, Ohio, assignor to White Sewing Machine Corporation, Lakewood, Ohio, a corporation of Delaware

Filed June 5, 1957, Ser. No. 663,784
5 Claims. (Cl. 154—43)



1. A hollow body which is tapered toward one end comprising a wall formed of fiber glass windings bonded to each other, said wall being coaxial with respect to the major axis of the body and being formed at the smaller end of the body of cylindrical sections, each of said sections having inner and outer surfaces concentric with respect to said axis and being telescopically arranged with one section being overlapped for a portion of its length by the next adjacent larger section.

3,023,136
CHIPWOOD ARTICLES OF HIGH COMPRESSIVE STRENGTH AND PROCESSES FOR PRODUCING THE SAME

Max Himmelheber, 132 Panoramaweg, Baiersbronn, Wurttemberg, Germany; and Gustav Hagen, 15 Rubensstrasse, and Otto Froede, 9 Alwin-Mittasch-Platz, both of Ludwigshafen (Rhine), Germany

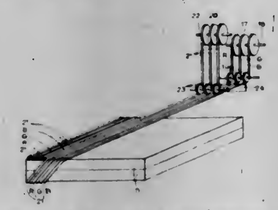
No Drawing. Filed Dec. 17, 1957, Ser. No. 703,240
Claims priority, application Germany Dec. 17, 1956
17 Claims. (Cl. 154—45.9)

1. A chipwood article of high compressive strength comprising chipped wood particles having lengths in the range of 4–18 mm., widths in the range of 1–20 mm. and thicknesses in the range of 0.1–1.2 mm. bonded together as a fibrous mass by 5–20% by weight, based on the chipped wood, of a cured polycondensation resin, the interstices between the bonded chipped wood particles being substantially filled with particles of an organic resin expanded into cellular form, which particles of organic resin are bonded in said article by said cured polycondensation resin to form a chipwood article with the chipped wood particles and the particles of the organic resin expanded into cellular form interbonded by said cured polycondensation resin.

3,023,137
CATHODE RAY TUBES

Ronald Henry Colborne, West Drayton, and Arthur Yoakley Murphy, Ickenham, Uxbridge, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Filed Aug. 1, 1955, Ser. No. 525,645
Claims priority, application Great Britain Aug. 10, 1954
12 Claims. (Cl. 156—67)



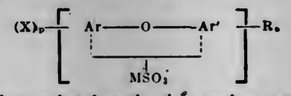
9. A method of forming a luminescent screen on a translucent support comprising coating threads with phosphor material, interleaving said coated threads with other threads of larger thickness to provide spacer threads, securing all said threads on a major surface of said support so as to provide phosphor coated linear threads in a recurring sequence with spacer threads said spacer threads because of their greater thickness projecting beyond and forming lands between said coated threads, depositing a thin coherent electron permeable layer of electrically conducting material so as to cover all said threads and mechanically removing said electrically conducting material covering said lands formed by said spacer threads so as to divide said layer into a plurality of individual conductors of strip form extending over said phosphor coated threads.

3,023,138
POWDERLESS ETCHING BATH AND METHOD OF ETCHING PLATES THEREWITH

John A. Easley, Midland, and Marvin H. Fishaber, Saginaw, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed June 12, 1959, Ser. No. 819,821
9 Claims. (Cl. 156—14)

1. An etching bath comprising (A) 30 to 200 grams per liter of bath of nitric acid; (B) 3 to 150 grams per liter of bath of a water-immiscible organic fluid substantially stable in the presence of dilute nitric acid; (C) 0.5 to 20 grams per liter of bath of a substituted hydrophobic-hydrophilic filming agent characterized by the formula



wherein the enclosed molecular nucleus represents a diaryloxide in which Ar and Ar' are selected from a group consisting of phenyl and naphthyl to which nucleus is appended from 1 to 3 sulfonic groups, R is a hydrophobic substituent having up to 30 carbon atoms, *n* is an integer from 1 to 8, a limitation being that the number of carbon atoms in the entire compound does not exceed 50, X is a halogen, *p* is an integer from 1 to 3 and M is a hydrogen displaceable ion; and (D) water.

9. A method of etching the surface of an acid-soluble metal plate having an acid resistant partial coating thereon, said metal being selected from a group consisting of zinc, zinc base alloys, magnesium and magnesium base alloys which comprises impinging an etching bath upon the metal surface to be etched, such bath comprising (A) nitric acid; (B) a water-immiscible organic fluid substantially stable in the presence of dilute acid; (C) a substituted halogenated diaryloxide sulfonate wherein the substituents on the diaryloxide are selected from a group consisting of hydrophobic hydrocarbons containing from 1 to 30 carbon atoms; and (D) water.

3,023,139
METHOD OF STRENGTHENING SHEET GLASS IN AGITATED LIQUID FLUORIDE BATH

Floris van Tetterode, Blaricum, Netherlands, assignor to Floris van Tetterode and Jan de Gruil, acting as Glasindustrie F. van Tetterode, Amsterdam, Netherlands

Filed Mar. 11, 1958, Ser. No. 720,604
Claims priority, application Netherlands Mar. 16, 1957
6 Claims. (Cl. 156—24)

1. A method for the strengthening of sheet glass by subjecting the surface thereof to the action of an etching agent, which comprises supporting said glass vertically with its entire surface immersed in a liquid bath including a fluoride etching agent, supplying a gas into the lower portion of said bath on opposite sides of said glass and causing said gas to rise as bubbles uniformly dispersed along both surfaces of said glass for agitating said etching agent, said etching operation is continued until at least thirty microns of glass is removed from the surface thereof.

ERRATA

For Class 156—67 see:
Patent No. 3,023,137

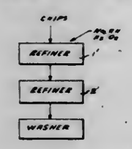
For Class 156—73 see:
Patent No. 3,022,814

For Class 156—148 see:
Patent No. 3,022,813

3,023,140
PULP BLEACHING

Clinton K. Textor, Springfield, Ohio, assignor, by direct and mesne assignments, of one-half to The Bauer Brothers Company, Springfield, Ohio, a corporation of Ohio, and one-half to FMC Corporation, a corporation of Delaware

Filed Nov. 24, 1958, Ser. No. 775,838
10 Claims. (Cl. 162—24)



2. A process for producing bleach pulp from wood chips including the steps of passing raw wood chips in a fluid through a staged refiner system, characterized by adding bleaching and softening agents to the pulp and thoroughly intermixing them with the pulp in the refiner system at selected stages and producing completely bleached pulp of substantial strength in the process.

3,023,141
METHOD OF FORMING A MINERAL WOOL PAD

Frederick J. Hartwig, Alliance, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 30, 1955, Ser. No. 556,463
4 Claims. (Cl. 162—152)

1. The method of forming a mineral wool pad which comprises coating mineral wool fibers with a liquid lubricant consisting of petroleum oil and water held in a stable emulsion by a cation-active agent having good oil dispersing properties, pressure compacting a mass of random oriented lubricated fibers into an interlocked fibrous pad of predetermined cross-sectional shape, heating the fibers while held so compacted to a temperature

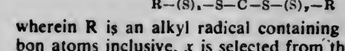
sufficient to burn off substantially all of the oil and cation-active agent from the fibers, and thereafter releasing the compacting pressure from the fibers to permit the pad to retain substantially its compacted shape substantially solely by the physical interlocking of the fibers.

3,023,142
TRITHIOCARBONATES AS BIRD REPELLENTS

Lyle D. Goodhue and Rector P. Louthan, Bartlesville, and Kenneth E. Cantrel, Dewey, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed May 2, 1960, Ser. No. 25,894
20 Claims. (Cl. 167—46)

14. A method for repelling birds which comprises subjecting a bird to the action of at least one compound of the formula



wherein R is an alkyl radical containing from 1–16 carbon atoms inclusive, x is selected from the group consisting of 1 and 2, and y is selected from the group consisting of 0, 1, and 2.

3,023,143
PROCESS FOR PREPARING A VETERINARY COMPOSITION

Frank B. Ablondi, Pearl River, N.Y., James J. Hagan, Cedar Grove, N.J., and Harold L. Easterbrooks, Menden Hall, Pa., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Oct. 14, 1959, Ser. No. 846,366
4 Claims. (Cl. 167—53)

1. In a process of producing a veterinary composition containing human plasminogen and streptokinase by forming an aqueous solution of the two components, the improvement which comprises rapidly reducing the temperature of the components to not over 5° C. and preventing contact of the components in the presence of water at higher temperatures.

3,023,144
BIOCIDAL COMPOSITIONS FOR TOPICAL APPLICATION

Glen A. Greathouse and Aubrey B. Taylor, Orlando, Fla., assignors to Mar-Tay, Inc., Orlando, Fla., a corporation of Florida

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,922
2 Claims. (Cl. 167—58)

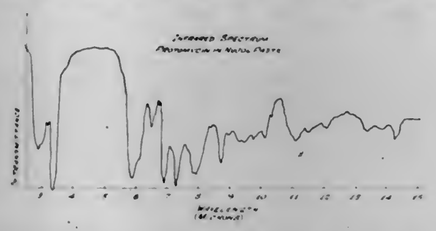
1. A non-irritating biocidal composition effective as a germicide and fungicide for topical use consisting of from about 5.5%–36% by weight of biocidal ingredients and remainder inert carrier selected from the group consisting of bland oils, beeswax, petrolatum, polyoxyethylene ether and glyceryl monostearate, there being present as an essential part of the total about 25% by weight of d-limonene, about 1% based on the total of p-methyl acetophenone, up to about 7% of total weight being concentrated citrus oil foots and from about 0.25% up to about 10% by total weight being salicylic acid, said salicylic acid being soluble in said citrus oil foots, and said citrus oil foots in said composition diminishing the sloughing of skin normally produced by salicylic acid.

3,023,145
PROTOMYCIN AND ITS PRODUCTION

Toju Hata, 745 Nakameguro-1-chome, Meguro-ku, Ryozo Sugawara, 9 Konnocho, Shibuya-ku, and Akihiro Matsumae, 278 Shimofudacho, Chofu-shi, all of Tokyo, Japan

Filed July 6, 1960, Ser. No. 41,109
8 Claims. (Cl. 167—65)

1. Protomycin, said antibiotic being characterized as a pale yellow viscous liquid, soluble in methanol, ethanol, acetone, chloroform, ethyl acetate, butylacetate, dioxane, ether, and benzene, insoluble in carbon tetrachloride, carbon disulphide and petroleum ether, having a molecu-



lar weight of about 274 by the Rast method, having shown upon analysis 64.71% carbon, 8.59% hydrogen, 4.27% nitrogen, and by difference 22.40% oxygen, having absorption maxima in the ultraviolet region at about 209 mμ ($E^{1\%}_{1cm}$ 649) and 233mμ ($E^{1\%}_{1cm}$ 533) and 280−285mμ ($E^{1\%}_{1cm}$ 27) having a rotation of $[\alpha]_D^{27°C.}=126°$ (c.=1.08 $CHCl_3$), having characteristic infrared absorption peaks at about 2.90, 3.05, 3.19, 3.30, 3.40, 5.85, 5.91, 6.20, 6.50, 6.70, 6.90, 7.08, 7.29, 7.82, 7.94, 8.71, 8.95, 9.25, 9.42, 10.10, 10.32, 11.09, 11.45, 11.52, 12.00, 12.12, 13.38 and 14.25 microns, absorbing bromine, discoloring potassium permanganate, giving positive Diazo, Nessler's and Molish color reactions, giving negative Millon's, biuret, Sakaguchi, ferri-chloride, Tollen's, nitroprusside, silver mirror, Liebermann's, Meyer, Wagner and ninhydrin reactions, and forming an acetyl derivative melting at about 110–111° C.

3,023,146
2-PROPIONYL-10[γ-(N'-β-HYDROXYETHYL -PIPERAZINO) - PROPYL] - PHENOTHIAZINE: PROCESS FOR THE TREATMENT OF WITHDRAWN PSYCHOTIC SUBJECTS

Richard F. Tislow, Philadelphia, William F. Bruce, Havertown, and James A. Page, Berwyn, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 6, 1960, Ser. No. 33,894
4 Claims. (Cl. 167—65)

1. The method of treating a chronic psychotic person who exhibits regression predominantly characterized by symptoms of withdrawal and apathy which comprises, administering to such person a therapeutic composition containing a phenothiazine of the group consisting of 2-propionyl-10-[γ-(N'-β-hydroxyethyl piperazino)-propyl]-phenothiazine and pharmaceutically acceptable acid-addition salts thereof, combined with a carrier, said phenothiazine being present in an amount from about 5 to 100 milligrams per dosage unit.

3,023,147
METHOD FOR THE PREPARATION OF 16-ACETYL-DIGITALINUM-VERUM

Kazuo Miyatake, Atsuji Okano, Kazuhiko Hoji, Tosaku Miki, Akio Sakashita, Tokyo, and Yasuo Oshima, Kunitachi-machi, Kitatama-gun, Tokyo-to, and Akira Kasahara, Ichikawa, Japan, assignors to Daiichi Seiyaku Co., Ltd., Tokyo, Japan, a Japanese corporation

Filed Oct. 5, 1959, Ser. No. 844,424
Claims priority, application Japan Oct. 11, 1958
3 Claims. (Cl. 195—30)

1. A method for the production of 16-acetyl-digitalinum-verum, which comprises partially deacetylating digitalinum-verum-hexaacetate with alkali bicarbonate to produce digitalinum-verum-diacetate, and then deacetylating only the digitalose moiety of the said digitalinum-verum-diacetate with esterase consisting essentially of enzyme from the intestinal tract of the snail *Euhadra quaesita* Deshayes.

3,023,148
PRODUCTION OF 5-HYDROXYTETRACYCLINE

Philip Andrew Miller, Valley Cottage, and Jerry Robert Daniel McCormick, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 1, 1960, Ser. No. 72,888
4 Claims. (Cl. 195—80)

1. A process for producing 5-hydroxytetracycline which comprises cultivating a microorganism selected from the group consisting of *Streptomyces rimosus*, *Streptomyces hydroscopicus* and *Streptomyces platensis* in an aqueous nutrient medium containing assimilable sources of carbohydrate, nitrogen and inorganic salts under submerged aerobic conditions and in the presence of anhydrotetracycline whereby said anhydrotetracycline is biologically converted to 5-hydroxytetracycline.

3,023,149
ELECTROLYTIC METHOD OF PRODUCING THIN SHEETS OF ALUMINUM OXIDE

Kenneth P. Zeman, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Oct. 30, 1957, Ser. No. 693,317
10 Claims. (Cl. 204—12)

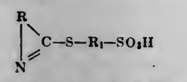
1. A method of producing an integral amorphous coherent aluminum oxide form which comprises anodizing a high purity aluminum body of at least 99.95+% purity with direct current in an acid bath, and reversing the polarity of the aluminum body at the finish of the anodizing process to remove the oxide form.

3,023,150
BATH FOR THE PRODUCTION OF METAL ELECTROPLATES

Wolf-Dieter Willmund and Wennemar Strauss, Dusseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed July 24, 1959, Ser. No. 829,227
Claims priority, application Germany July 29, 1958
19 Claims. (Cl. 204—44)

1. An electroplating bath for producing bright electrodeposits of metals selected from the group consisting of copper, zinc, cadmium, tin, brass, bronze, silver and gold, comprising a solution of a salt of the metal to be deposited and as a brightening agent a water soluble sulfonic acid of the general formula



and water soluble salts thereof, wherein R represents a polymethylene chain and R_1 represents a bivalent hydrocarbon radical, said brightening agent being present in sufficient amount to obtain said bright electrodeposits.

3,023,151
NICKEL ELECTROPLATING BATHS

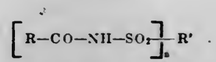
Wennemar Strauss, Dusseldorf-Holthausen, Gregor Michael, Dusseldorf, and Wolf-Dieter Willmund, Dusseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed May 2, 1960, Ser. No. 25,843
Claims priority, application Germany May 6, 1959
14 Claims. (Cl. 204—49)

1. A Watts-type nickel electroplating bath for obtaining nickel electrodeposits free from dull and hazy areas having dissolved therein an N-sulfonyl carboxylic acid amide compound having a structural formula selected from the group of consisting of:



and



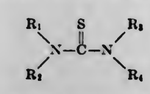
wherein R and R' are selected from the group consisting of alkyl and aryl radicals, and n is a whole number from 1 to 6, said N-sulfonyl carboxylic acid amide being present in sufficient amount to obtain said electrodeposits free from dull and hazy areas.

3,023,152
COPPER ELECTROPLATING BATHS

Wennemar Strauss and Hans Wedell, Dusseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed Apr. 28, 1960, Ser. No. 25,242
Claims priority, application Germany May 6, 1959
22 Claims. (Cl. 204—52)

1. A process for producing a smooth, bright copper electroplate on a rough surface metal base from acidic copperplating baths containing a brightening agent which comprises adding to said bath as a smoothing agent a derivative of thiourea having a structural formula as follows:

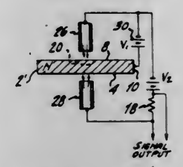


wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen, alkyl, aryl, carboxy-alkyl and carboxyaryl radicals, at least one of R_1 through R_4 being selected from the group consisting of carboxy-alkyl and carboxy-aryl radicals, said smoothing agent being added in sufficient amount to effect said smoothing of the copper plate.

3,023,153
METHOD OF ETCHING SEMI-CONDUCTOR BODIES

Jerome Kurshan, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Original application June 1, 1954, Ser. No. 434,945. Divided and this application Apr. 13, 1959, Ser. No. 806,187
2 Claims. (Cl. 204—143)



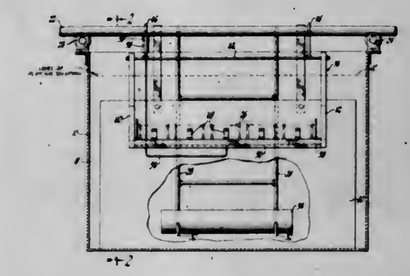
1. A method of controllably etching a preselected portion of one surface of an n-type semi-conductor body having a surface barrier comprising contacting a first electrolyte to said one surface, contacting a second elctrolyte to another surface of said body opposite said one surface, applying an etching potential between said first electrolyte and said body thereby to induce an etching current through said one surface and to bias the surface barrier at said one surface in its reverse direction, applying a balancing potential approximately equal to said etching potential between said first and second electrolytes thereby to maintain said second electrolyte at a potential about equal to

the potential of said body, and continuing said etching until a sudden increase in current occurs through the wafer and the electrolyte.

3,023,154
APPARATUS FOR ELECTROPLATING

Fred O. Hough and Donald R. Scott, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed May 20, 1958, Ser. No. 736,586
4 Claims. (Cl. 204—242)

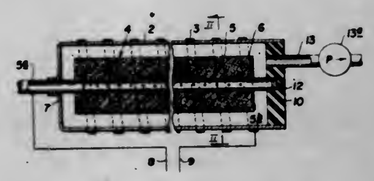


1. A plating apparatus for the electrodeposition of a smooth, uniform, adherent silver plate on semicylindrical, semiannular steel bearing shells comprising a tank, a substantially nonconductive work support in said tank, said work support having a generally flat horizontal base portion for supporting at least one bearing shell on its longitudinal edges, a spring-type electrical contact means on said base of said work support for contacting the inner diameter of the bearing shell, a thief ring on said base of said work support for encircling the bearing shell to inhibit excessive undesirable electrodeposition on the longitudinal edges thereof, a pair of generally parallel semiannular conductive metal bearing shell end plates on said base between which said contact means is disposed, said electrical contacts, said thief ring and said semiannular metal plates in electrical communication with a source of negative potential to induce uniform current distribution on said bearing shell, and an anode in said tank in electrical communication with said source of positive potential.

3,023,155
OZONE GENERATOR

Wilbur W. Castor, 746 Shady Lane, Pittsburgh 34, Pa.

Filed Mar. 16, 1960, Ser. No. 15,497
9 Claims. (Cl. 204—320)



1. An ozone generator comprising spaced electrodes connected with opposite poles of a high voltage source, a porous core interposed between the electrodes, said core being comprised of metal particles individually enveloped in an insulating film and bonded together, and means for forcing oxygen-bearing gas through the core and collecting the same.

3,023,156
COATING COMPOSITION CONTAINING PARAFFIN WAXES AND MICROCRYSTALLINE WAXES

John Podlipnik, Palos Heights, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

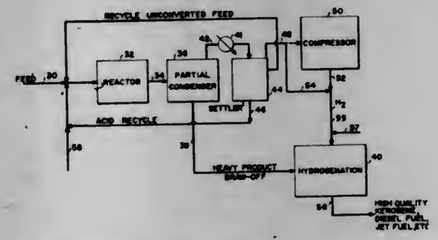
No Drawing. Filed May 22, 1957, Ser. No. 660,752
2 Claims. (Cl. 208—21)

1. A wax composition consisting essentially of about 65 to 91 volume percent of paraffin wax, melting point in the range of 122 to 132° F., viscosity at 175° F. of about 4 to 6 centistokes, and having a maximum of 0.5% oil; about 5 to 25 volume percent of non-normal paraffin wax, melting point in the range of 105 to 120° F., viscosity at 175° F., of 6 to 10 centistokes, maximum of 2.0 percent oil, and refractive index at 70° F. of 1.4375 minimum; about 3 to 10 volume percent of microcrystalline wax, melting point in the range of 130 to 185° F., penetration at 77° F., 100 g. needle of 20 to 50, and viscosity SSU at 210° F. of 100 maximum; and about 0.25 to 2.0 volume percent of tank bottoms microcrystalline wax, melting point in the range of 180 to 200° F., penetration at 77° F., 100 g. needle of 2 to 12, and viscosity at 210° F. of 60 to 90.

3,023,157
CONVERSION OF PARAFFINS TO AROMATICS

Henry George Ellert and Charles Newton Kimberlin, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 1, 1959, Ser. No. 856,392
11 Claims. (Cl. 208—64)



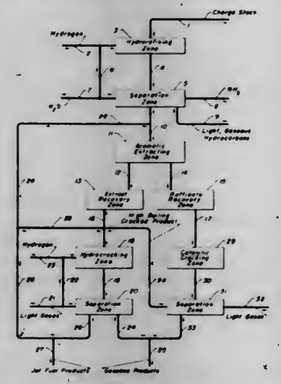
8. An improved process for converting naphthas into high quality middle distillate fuels of high aromatic content which comprises contacting a vaporized stream of said naphtha with vaporized HF and activated carbon at a temperature of about 700° to about 1200° F. and pressure of atmospheric to about 400 p.s.i.g. in a reaction zone, withdrawing an aromatic product stream boiling in the middle distillate range, withdrawing a hydrogen rich stream, passing both said streams to a hydrogenation zone, and hydrogenating said aromatic product at least in part with hydrogen produced in the process.

3,023,158
INCREASING THE YIELD OF GASOLINE BOILING RANGE PRODUCT FROM HEAVY PETROLEUM STOCKS

Charles H. Watkins, Arlington Heights, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Mar. 21, 1960, Ser. No. 16,312
9 Claims. (Cl. 208—89)

1. A process for converting a petroleum stock boiling above the gasoline range and containing aromatic components and nitrogenous contaminants which comprises hydrorefining said stock in the presence of a hydrorefining catalyst at a temperature, pressure and time of contact of the stock with the catalyst sufficient to convert the nitrogen of said nitrogenous contaminants into ammonia, removing ammonia from the liquid portion of the hydrorefined stock to a nitrogen content not substantially in excess of 5 p.p.m., extracting the aromatic components from said liquid hydrorefined stock and recovering an aromatic extract separate from a nonaromatic raffinate, catalytically hydrocracking said aromatic extract in the presence of a catalyst containing

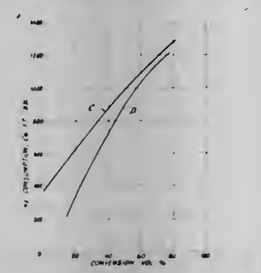


hydrogenating and cracking catalyst components, catalytically cracking said raffinate and separating from the resultant products a fraction boiling in the gasoline range and a heavier residual fraction rich in aromatic and olefinic hydrocarbons, supplying said residual fraction to the hydrocracking step, and blending the gasoline boiling range fractions of the cracked and hydrocracked products.

3,023,159
CONTROLLED HYDROCRACKING PROCESS

Frank G. Ciapetta, Upper Darby, Pa., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Mar. 9, 1956, Ser. No. 570,440
3 Claims. (Cl. 208—110)

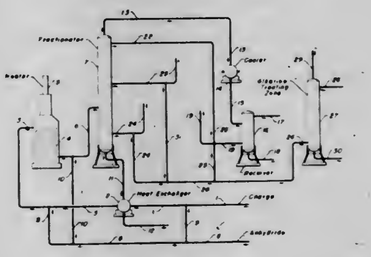


1. In a process for the reaction of a hydrocarbon fraction having an initial boiling point of at least 400° F., a 50 percent point of at least 500° F. and an end boiling point of at least 600° F. with hydrogen in the presence of a catalyst which comprises between about 0.05 and 20 percent by weight of at least one metal of the platinum and palladium series deposited upon a composite of solid oxides of at least two elements of groups IIA, IIIB and IV of the periodic arrangement of elements, said composite having an activity index greater than 25, wherein there is at all times a net consumption of hydrogen by said fraction and at least periodically the hydrocarbon fraction is converted at a reaction temperature within the range about 600° F. to about 900° F., to lower boiling products, the improved method of operation which comprises: adding nitrogenous compounds to said fraction to increase its nitrogen content and periodically adjusting the quantity of nitrogenous compounds added to effect at least a part of the control over the extent to which said hydrocarbon fraction is converted to lower boiling products, the nitrogen content of the fraction varying from time to time but at all times being within the range about 0.01 to 1 percent by weight of the fraction, and at any given time an increase in added nitrogenous compounds being used to decrease the extent of conversion of the fraction to lower boiling products and a decrease in added nitrogenous compounds being used to increase the extent of conversion of the fraction to lower boiling products, whereby the hydrogen consumed during conversion to lower boiling products is lower than when the same control over the extent of conversion is effected by variation of reaction temperature alone.

3,023,160
REFINING OF HYDROCARBONS

Russell F. Stedman, Des Plaines, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Oct. 9, 1959, Ser. No. 845,567
4 Claims. (Cl. 208—240)



1. In the fractionation at an elevated temperature of a hydrocarbon admixed with at least one impurity selected from the group consisting of nitrogen-containing, sulfur-containing and oxygen-containing compounds, the improvement which comprises conducting said fractionation in a vertical fractionation zone in the presence of an organic acid anhydride selected from the group consisting of acetic, propionic, butyric, valeric, stearic, phthalic and benzoic anhydrides in a concentration sufficient to react with at least a portion of said impurity and to thereby form a higher boiling reaction product, withdrawing from the upper portion of said fractionation zone a light vaporous hydrocarbon fraction reduced in said impurity, and separately withdrawing from the lower portion of said zone a heavier residual fraction containing said reaction product.

3,023,161
REMOVING METAL COMPONENTS FROM ORGANIC LIQUIDS

John P. Luvisi, Park Ridge, and Joseph A. Chenicek, Prairie View, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,980
4 Claims. (Cl. 208—251)

1. A process for removing a metal component from an organic liquid containing the same, which comprises contacting said organic liquid with a solid polymer prepared by condensing a methylene-bis-salicylaldehyde with a polyaminoalkane.

3,023,162

DEWATERING AQUEOUS SUSPENSIONS WITH QUATERNIZED DIALKYLAMINOALKYL ACRYLATES OR METHACRYLATES

David B. Fordyce, Moorestown, N.J., and Frank J. Glavis, Elkins Park, and Sidney Melamed, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Mar. 10, 1958, Ser. No. 720,063
17 Claims. (Cl. 210—54)

9. A process of facilitating the dewatering of an acid aqueous suspension of finely divided inorganic material having a pH between 0 and 4 and containing dissolved therein a salt of a metal to be recovered, said suspension being the product of the acid-leaching of a substance selected from the group consisting of an ore containing the aforesaid metal and the product of an alkaline fusion of such an ore, which comprises mixing into such a suspension from 0.001% to 3% by weight, based on the weight of suspended matter, of a water-soluble linear polymer, having a viscosity average molecular weight of at least 300,000, of dimethylaminoethyl methacrylate having at least 45% of its units quaternized with ethylene oxide, and filtering the aqueous system thereby obtained.

3,023,163

DRAWING LUBRICANT COATING COMPOSITION

Angelo M. Fucinari, Detroit, and Edward L. King, Warren, Mich., assignors to The H. A. Montgomery Company, Detroit, Mich., a corporation of Michigan

No Drawing. Original application Feb. 18, 1959, Ser. No. 794,166, now Patent No. 2,966,425, dated Dec. 27, 1960. Divided and this application June 1, 1960, Ser. No. 33,085
6 Claims. (Cl. 252—34.7)

1. A coating composition for the formation of metal working lubricant films consisting essentially of a non-congealing aqueous solution of an amine soap and an alkali metal soap which have been formed from fatty acids having a titer below about 30° C., said amine soap being formed from a water-soluble aliphatic amine having a boiling point above about 100° C., said amine soap comprising between about 25% and 75% by weight of the total soap, the proportion of water in said solution being sufficient to prevent gelation of the solution at ambient temperatures and sufficient to maintain the viscosity of the solution between about 20 and 5000 centipoises at 70° F.

3,023,164

METHOD OF LUBRICATION COMPRISING THE USE OF METAL PHTHALOCYANINE

Emil A. Lawton, Woodland Hills, Calif., and Charles M. Allen and Stanley Cosgrove, Columbus, Ohio, assignors to Battelle Memorial Institute, Columbus, Ohio, a corporation of Ohio

No Drawing. Filed May 21, 1958, Ser. No. 736,693
5 Claims. (Cl. 252—49.7)

1. A method of minimizing friction between metal-containing bearing surfaces comprising applying metal-free phthalocyanine to one of said metal-containing surfaces and moving said bearing surfaces in rubbing relationship to each other, while maintaining said bearing surfaces at a temperature in the range of from about 600° F. to about 1500° F. thereby forming a layer of metal phthalocyanine in situ on said surface, and thereby permitting the bearing surfaces to be moved in rubbing relationship to each other while being maintained at a temperature in the range of from about —90° F. to about 1500° F.

3,023,165

MAGNESIUM FERRITE CONTAINING ALUMINUM AND METHOD OF MAKING SAME

Le Grand G. Van Uitert, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 17, 1956, Ser. No. 604,740
6 Claims. (Cl. 252—62.5)

5. A magnesium ferrite of the general composition $Mg_1Al_{.05-0.2}Mn_{.01-.2}Fe_{1-2}O_x$, in which general formula the maximum amount of manganese present is 10 atomic percent of the amount of iron and in which general formula the total number of atoms of iron, manganese and aluminum is less than 2 by a maximum amount of 10 percent in accordance with the fraction

$$\left[\frac{2Mg-(Fe+Mn+Al)}{2}\right]\times 100$$

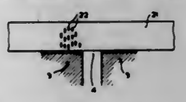
and in which x is sufficient oxygen to make the composition electrically neutral, produced by a process comprising forming a mixture of aluminum hydroxide and compounds which, upon calcining, result in the presence of magnesium oxide, ferric oxide and manganese dioxide, calcining the said mixture and subsequently firing the said mixture in an atmosphere selected from the group consisting of air and oxygen at a temperature of at least 1200° C.

3,023,166

MAGNETIC RECORD CARRIER

Simon Duinker, Andreas Leopoldus Stuijts, Henricus Petrus Johannes Wijn, and Willem Klaas Westmijze, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 5, 1957, Ser. No. 676,221
Claims priority, application Belgium Aug. 18, 1956
4 Claims. (Cl. 252—62.5)



1. A magnetic recording medium adapted to record and reproduce electrical intelligence signals comprising a strip-like non-magnetic carrier having a length and breadth substantially greater than its thickness and a magnetically anisotropic material distributed in said carrier consisting of disc-shaped particles which exhibit a preferred plane of magnetization, said particles being magnetically oriented and having their major surfaces parallel to the direction of thickness of the carrier so that the magnetic permeability thereof in a direction parallel to the direction of thickness of the carrier and at least one other direction is greater than that measured in one of the directions at right angles to the direction of thickness.

3,023,167

ROOM TEMPERATURE FERROELECTRIC MATERIALS

Thomas G. Dunne, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed July 8, 1960, Ser. No. 41,527
5 Claims. (Cl. 252—63.2)

1. A ferroelectric material having the formula

$$BaLi_{2x}Al_{2-2x}F_{4x}O_{4-4x}$$

wherein "x" ranges from 0.15–0.30.

4. A method of making a room temperature ferroelectric crystal which has the formula $BaLi_{2x}F_{4x}O_{4-4x}$ wherein "x" ranges from 0.15–0.30 comprising the steps of heating 12.07 grams of LiF, 87.68 grams BaF_2 and between 0.34 and 8.5 grams $AlF_3 \cdot 3H_2O$ at about 1300° C. for about 4 hours in air and cooling at the rate of about 40° C. per hour to below about 800° C. and thereafter cooling the mass to room temperature and separating the hexagonal crystals from the mass.

3,023,168

HEAVY DUTY LIQUID DETERGENT

Robert B. Doan, Drexel Hill, Pa., assignor to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Nov. 25, 1958, Ser. No. 776,216
5 Claims. (Cl. 252—137)

1. An improved heavy duty liquid detergent composition consisting essentially of a stable aqueous suspension of the following ingredients in weight percent based on the total weight of the composition:

Potassium tripolyphosphate	7.5–25.0
Sodium tripolyphosphate	0–10.0
Triethanolamine C_9–C_{15} alkyl benzene sulfonate	10.0–25.0
Laurylethanolamide	0–5.0
Sodium carboxymethylcellulose	0.2–1.0

wherein the total quantity of the tripolyphosphate salts does not exceed 25.0 weight percent, the sum of the quantities of the triethanolamine alkyl benzene sulfonate and the laurylethanolamide does not exceed 25.0 weight percent and the ratio of the total quantity of tripolyphosphate salts to the sum of the quantities of the triethanolamine alkyl benzene sulfonate and the laurylethanolamide ranges between 0.8 to 1.0 and 1.25 to 1.0.

3,023,169

WATER TREATMENT COMPOSITIONS AND PROCESSES FOR THEIR PRODUCTION AND USE

Alfred O. Walker, Westchester, Ill., assignor to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed Feb. 9, 1959, Ser. No. 791,813
9 Claims. (Cl. 252—175)

1. A solid granular water treatment composition consisting essentially of from 74% to 85% by weight of sodium aluminate, and impurities consisting of water insoluble residues of the reaction between an alkali metal hydroxide and bauxite ore, which residues are commonly called red mud, said impurities being finely divided so that at least 80% of the particles are of colloidal size, said total composition having an Na_2O to Al_2O_3 molar ratio of from 1.11:1 to 1.25:1.

4. The process of producing a water treatment chemical from bauxite which comprises the steps of heating a 45% to 70% by weight solution of an alkali metal hydroxide to a temperature of at least 275° F., adding thereto with agitation a bauxite which contains at least 57% by weight of alumina to produce a reaction mass having an Na_2O to Al_2O_3 ratio between 1.11:1 and 1.25:1, continuing the process whereby the alumina present in the bauxite is substantially converted to sodium aluminate and the water insoluble residual products of said reaction are uniformly suspended throughout the reaction mass, adjusting the specific gravity of the reaction mass to between 1.600 and 1.850, and then drying the resultant product to a moisture content of not more than 2.0% by weight.

3,023,170

PROCESS FOR REDUCING THE SURFACE ACTIVITY OF COMPOUNDS IN AQUEOUS MIXTURES

Carl B. Linn, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Jan. 19, 1959, Ser. No. 787,341
10 Claims. (Cl. 252—321)

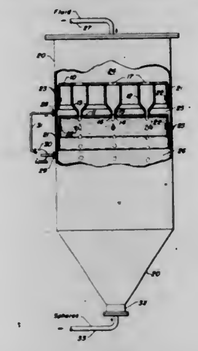
1. A method of diminishing the surface activity of a substance which when distributed in an aqueous liquid tends to cause said liquid to foam or to form an emulsion which comprises adding to the liquid an aryldesoxyglucitol in an amount of from about 0.001% to about 10% by weight of the liquid.

3,023,171

APPARATUS FOR THE MANUFACTURE OF SPHERICAL PARTICLES

Marvin Albert Smith, Shreveport, La., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Aug. 13, 1959, Ser. No. 833,454
6 Claims. (Cl. 252—359)



1. A spherical particle-forming apparatus comprising a closed chamber, an upper horizontal plate and a lower horizontal plate within the chamber, a dropping tip depending from said upper plate, the lower portion of said dropping tip being of circular cross-section, said lower portion terminating in a restricted outlet for droplets at its lower end and being co-axial with and extending partially into but not completely through a larger circular opening in said lower plate and forming an annular space between said dropping tip and the lower plate, an aperture through said upper plate above said dropping tip for supplying fluid material to be gelled to the interior of the dropping tip, and means for passing a gelling liquid downwardly through said annular space.

3,023,172

PREPARATION OF A MICROSPHEROIDAL SILICA-ALUMINA FLUID CRACKING CATALYST

William B. Innes and Malden Michael, Stamford, Conn., and Nicholas Chomitz, Yonkers, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 15, 1959, Ser. No. 806,462
16 Claims. (Cl. 252—455)

1. A process for preparing a microspheroidal silica-alumina fluid cracking catalyst, which comprises intimately associating by precipitating in an aqueous medium a hydrated silica in the presence of a finely divided inorganic silicious additive material, precipitating a hydrated alumina onto said intimately assocated mixture, and spray-drying the resulting product, said catalyst exclusive of the additive material being characterized by a silica content of between 65 and 95% and an alumina content of between about 5 and 35% by weight, said additive material being employed in an amount of from between 10 and about 90%, based on the weight of the catalyst.

3,023,173
MANUFACTURE OF CATALYST

William G. Nixon, Westchester, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Apr. 29, 1959, Ser. No. 809,634
6 Claims. (Cl. 252—466)

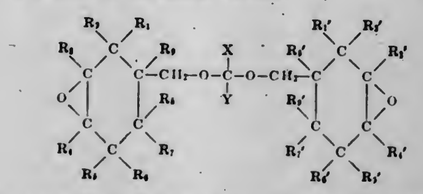
1. A method for manufacturing a catalytic composite comprising a refractory inorganic oxide and a catalytic metal component, which method comprises preparing refractory inorganic oxide particles, drying said particles at a temperature less than about 212° F., contacting the resultant dried particles with wet hydrogen, containing from about 5.0 mol percent about 20.0 mol percent of water, at a temperature in excess of about 400° C., subjecting the hydrogen-treated particles to high-temperature calcination in an atmosphere of air, and thereafter combining said catalytic component with the calcined refractory inorganic oxide particles.

3,023,174
EPOXIDIZED HYDROAROMATIC COMPOUNDS

Hans Batzer, Arlesheim, and Erwin Nikles, Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a firm of Switzerland

No Drawing. Filed July 21, 1959, Ser. No. 828,471
Claims priority, application Switzerland July 22, 1958
7 Claims. (Cl. 260—2)

5. A hardenable composition of matter comprising (1) an epoxide of the general formula



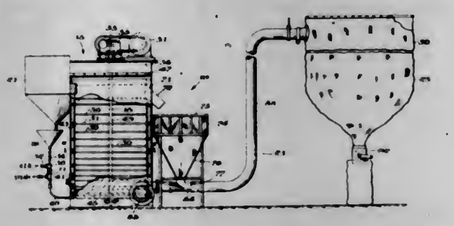
in which R_1 and R_5 taken together and R_1' and R_5' taken together each forms a member selected from the class consisting of two hydrogen atoms, two lower alkyl radicals and one methylene radical, R_2, R_2', R_3, R_3', R_4, R_4', R_6, R_6', R_7, R_7', R_8, R_8', R_9 and R_9' each represents a member selected from the class consisting of a hydrogen atom and a lower alkyl radical, and X and Y are of the group consisting of hydrogen atom, saturated aliphatic hydrocarbon radical, halogen alkyl group, saturated cycloaliphatic hydrocarbon radical, aralkyl hydrocarbon radical and aromatic hydrocarbon radical, and (2) a compound which is reactable with the aforesaid epoxide to convert it into an insoluble and infusible resin.

3,023,175
PROCESS AND APPARATUS FOR THE PRE-EXPANSION OF VINYL POLYMERIC MATERIALS

Hugh Rodman, Jr., Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Oct. 9, 1957, Ser. No. 689,195
3 Claims. (Cl. 260—2.5)

3. In a method of making free-flowing, particulate, low density partially expanded vinyl polymers which are capable of further expansion from foamable vinyl polymers, having incorporated therein 3–15% by weight of a normally liquid, volatile aliphatic hydrocarbon having a boiling point below the softening point of the polymer, by treatment with steam, the improvement comprising continuously feeding the foamable polymer particles to the lower portion of a steam-filled zone wherein the particles are subjected to a temperature at which partial volatilization of the aliphatic hydrocarbon occurs, thereby forming a low density partially expanded polymer capable of further expansion, rapidly agitating the mass of particles in said zone to cause said partially expanded particles to travel centrifugally and upwardly through said zone by rapidly rotatively stirring the mass of particles in said zone while passing steam therethrough thereby eliminating crushing of the individual particles, concomitantly obstructing the centrifugal and upward movement of said mass in said zone thereby restraining the movement of said particles so that the mass moves at a rate less than half of that of the agitation applied thereby preventing agglomeration of said mass, and removing said free-flowing, particulate partially expanded polymer from the top of said mass.



3,023,176
HARDENABLE WATER DISPERSIBLE AMINOPLAST COMPOSITIONS

Armin Hiestand, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed Feb. 29, 1960, Ser. No. 11,423
Claims priority, application Switzerland Mar. 13, 1959
17 Claims. (Cl. 260—21)

1. The new hardenable condensation product which is soluble in water to at least dispersible in water without assistance of a dispersing agent and which has been obtained by condensing at an elevated temperature, (*a*) a member selected from the group consisting of methylolaminotriazines, methylol-ureas and ethers of these methylol compounds with aliphatic alcohols with up to 4 carbon atoms and mixtures of the components giving rise to such methylol compounds and ethers thereof obtained with alcohols with up to 4 carbon atoms, (*b*) a member selected from the group consisting of methylol amides and ethylol amides of fatty acids containing at least 18 carbon atoms, and (*c*) a member selected from the group consisting of a polyethylene glycol having a molecular weight of about 100 to 600, a mono-lower alkyl ether thereof and a monochloride thereof.

3,023,177
WATER-REDUCIBLE COATING COMPOSITION

John B. Boucher, Dearborn, Mich., assignor to Rinshed-Mason Company, Detroit, Mich., a corporation of Michigan

No Drawing. Filed Sept. 11, 1958, Ser. No. 760,304
12 Claims. (Cl. 260—21)

1. A water-reducible coating composition consisting essentially of from 75–95% by weight, based on the polymeric solids content, of an acrylic resin latex, from 5–25% by weight of an oil and amine modified water-soluble alkyd resin dispersed in the latex, and a pigment dispersed in the alkyd resin; said alkyd resin comprising the reaction product of a resin having an acid number of from 25 to 70 and an aliphatic amine; said last mentioned resin comprising the reaction products of a polycarboxylic acid, a monocarboxylic acid and a polyhydric alcohol.

3,023,178
EPOXIDE CONVERSION OF UNSATURATED ACIDS

Sylvan O. Greenlee and John W. Pearce, Racine, Wis., assignors to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Filed June 30, 1955, Ser. No. 519,273
3 Claims. (Cl. 260—22)

1. The process of forming an insoluble, infusible, flexible tack free protective film on a base which comprises applying to a base a miscible mixture comprising an aliphatic ethylenically unsaturated monocarboxylic acid containing at least six carbon atoms in a carbon to carbon unsaturated aliphatic chain and a polyepoxide having an average of more than about 2½ oxirane groups per molecule in a ratio whereby the number of oxirane groups in said mixture are at least as great as the number of carboxyl groups provided by said acid in said mixture, said polyepoxide being selected from the group consisting of epoxidized polyesters of tetrahydrophthalic acid and saturated aliphatic glycols, and epoxidized esters of ethylenically unsaturated vegetable oil acids, the oxirane groups of said ester being in the acid moiety, said monocarboxylic acid and polyepoxide being miscible at both room and esterification temperatures; and heating said film on said base to a temperature from about 100° C. to about 225° C. whereby said acid is simultaneously eserified with said polyepoxide and polymerized through its unsaturated aliphatic chain to form said film on said base, said film consisting essentially of the reaction product of said aliphatic ethylenically unsaturated monocarboxylic acid and said polyepoxide.

3,023,179
SOLID RUBBERY SUBSTANCES HAVING IMPROVED TACK

Conrad J. Jankowski, Metuchen, and Wilbur F. Fischer, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Dec. 1, 1958, Ser. No. 777,213
10 Claims. (Cl. 260—25)

1. Composition of matter having improved adhesive properties which comprises a major proportion of solid rubbery iosobutylene-containing copolymer of a major portion of a C_4 to C_7 isoolefin and a minor portion of a C_4 to C_8 multiolefin and a minor proportion of a mixture comprising a major proportion of para-hydrocarbon substituted phenol-aldehyde resin containing 2 to 6 phenyl groups and a minor proportion of a polyhydric C_4 to C_5 alcohol ester of an acid selected from the group consisting of polymerized wood rosin and cyclic anhydride modified wood rosin, said ester having a softening point of at least 150° C. by the Hercules drop method.

3,023,180
VULCANIZABLE HALOGENATED POLYETHYLENE COMPOSITIONS CONTAINING PHOSPHORUS

Peter J. Canterino and James T. Edmonds, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Aug. 17, 1959, Ser. No. 833,933
14 Claims. (Cl. 260—27)

1. A process comprising reacting halogenated solid polyethylene with phosphorus halide wherein the halogen atom is selected from the group consisting of chlorine, bromine, and iodine in the presence of oxygen to form a reaction product, reacting said reaction product with a compound selected from the group consisting of water and monohydric alcohols containing up to 6 carbon atoms, and recovering the resulting product.

3,023,181
COATING COMPOSITION CONTAINING PIGMENT HAVING A HYDROPHOLIC SURFACE, METHOD OF PRODUCTION, AND ARTICLE COATED THEREWITH

Theodore A. Te Grotenhuis, Olmsted Falls, Ohio, assignor of twenty percent to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed June 2, 1958, Ser. No. 738,986
32 Claims. (Cl. 260—29.2)

1. In a coating composition comprising an aqueous oil-in-water type of emulsion of an alkyd resin, the combination therewith of a pigment having over surface portions thereof aliphatic hydrocarbon groups of one to twenty carbon atoms which are adhered to said surface portions through silicon atoms and which render said surface portions of said pigment unwettable by pure water, whereby a relatively glossy and relatively impervious film is produced by drying of said composition because said pigment particles cause the film-forming droplets of said emulsion to coalesce about them rather than to remain as islands between film portions formed by droplets as is the case with hydrophilic pigments.

3,023,182
POLYVINYL ALCOHOL FIBERS OF IMPROVED DYEABILITY

Kenichi Tanabe and Yasuji Ohno, Kurashiki City, Japan, assignors of three-fourths to Kurashiki Rayon Co., Ltd., Okayama Prefecture, Japan, a corporation of Japan, and one-fourth to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Jan. 19, 1959, Ser. No. 787,386
Claims priority, application Japan Jan. 18, 1958
6 Claims. (Cl. 260—29.6)

1. A spinning solution effective to produce fibers of desirable characteristics particularly with respect to dyeability which comprises water containing dissolved therein polyvinyl alcohol and a water-soluble sulfo-group containing vinyl polymer, the amount of sulfo-group sulfur being 0.01 to 10% of the total polymer weight.

3,023,183
ESTERIFICATION

Douglas C. Nelson, Chicago, Ill., assignor to The Cuban-American Sugar Company, New York, N.Y., a corporation of New Jersey

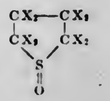
No Drawing. Filed June 29, 1959, Ser. No. 823,349
21 Claims. (Cl. 260—30.2)

14. In the esterification of a carboxylic acid of the formula R—COOH with an alcohol of the formula R'OH having a boiling point higher than that of water to form an ester of the formula R—COOR', each of said groups R and R' being of the class consisting of hydrocarbon and oxygen-containing hydrocarbon, said oxygen being in no form other than hydroxyl, oxo, ether and carboxyl groups, said group R' containing no reactive group that is more reactive with respect to acid, ester and sulfoxide than hydroxyl groups, said group R containing no reactive group that is more reactive with respect of alcohol, ester and sulfoxide than the R—CO group, the improvement which comprises carrying out said esterification in the presence of a low molecular weight sulfoxide solvent, while controlling the temperature to promote said esterification reaction, said sulfoxide being a member of the group consisting of (1) alkyl sulfoxides having the structure

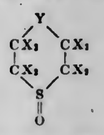


wherein R''' and R'''' are alkyl groups having 1 to 4

carbon atoms; (2) heterocyclic sulfoxides having the structural formula



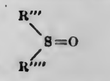
wherein X is a member of the group consisting of H and a lower alkyl group, not more than two X's being an alkyl group and the remainder being an H; and (3) heterocyclic sulfoxides having the structural formula



wherein Y is a member of the group consisting of S=O and CX_2 wherein X has the meaning hereinbefore given and not more than two X's are an alkyl group and the remainder are an H.

17. The method of claim 14 wherein the alcohol is a polyhydric alcohol.

18. The method of claim 17 wherein the alcohol is ethylene glycol, the acid is phthalic acid, the ester is a polyester resin and the sulfoxide has the structure



wherein R''' and R'''' are alkyl groups having 1 to 4 carbon atoms.

3,023,184
SOLUTION OF POLYESTER IN PYRROLE AND PROCESS FOR MAKING SAME

Hobson D. De Witt, New Wilmington, Pa., and Arthur B. Beindorff, Decatur, Ala., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed Aug. 20, 1959, Ser. No. 834,935
20 Claims. (Cl. 260—30.2)

1. Anew composition of matter comprising a solution of a synthetic linear condensation polyester dissolved in pyrrole, said polyester being selected from the group consisting of (A) polyesters formed by the reaction of at least one dicarboxylic acid selected from the group consisting of aromatic dicarboxylic acids and aliphatic dicarboxylic acids and at least one glycol of the series $HO(CH_2)_nOH$ wherein n is an integer from 2 to 10, (B) the polyesters of (A) modified by 0.05 mol percent to 1.0 mol percent, based on the total weight of said dicarboxylic acid, of a chain terminator selected from the group consisting of polyalkylvinyl ethers having one terminal hydroxyl group wherein the alkyl group contains 1 to 4 carbon atoms, and compounds having the formula,

(I) $$R—O—[(CH_2)_mO]_x(CH_2)_n—OH$$

wherein R is selected from the group consisting of alkyl groups containing 1 to 18 carbon atoms and aryl groups containing 6 to 10 carbon atoms, m and n are integers from 2 to 22, and x is an integer from 1 to 100, indicative of the degree of polymerization, and (C) the polyesters of (B) containing 0.05 mol percent to 4.0 mol percent, based on the total weight of said dicarboxylic acid, of said chain terminator, modified by 0.05 mol percent to 2.4 mol percent, based on the total weight of said dicarboxylic acid, of a chain-branching agent selected from the group consisting of pentaerythritol, compounds having the formula,

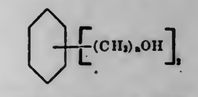
(II) $$R—(OH)_n$$

wherein R is an alkylene group containing from 3 to 6 carbon atoms and n is an integer from 3 to 6, compounds having the formula,

(III) $$R—(CH_2OH)_3$$

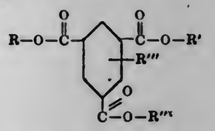
wherein R is an alkylene group containing from 2 to 6 carbon atoms, compounds having the formula,

(IV)



wherein n in an integer from 1 to 6, and compounds having the formula,

(V)



wherein R, R' and R'' are alkyl groups containing 1 to 3 carbon atoms and R''' is selected from the group consisting of hydrogen, methyl and ethyl radicals.

3,023,185
PLASTICIZERS FOR VINYL-TYPE RESINS

Jeffrey H. Bartlett, Westfield, Isidor Kirshenbaum, Union, Fred W. Banes, Westfield, and Clifford W. Muessig, Colonia, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 4, 1956, Ser. No. 607,564
1 Claim. (Cl. 260—31.6)

A plasticized resin comprising 100 parts by wt. of a vinyl resin chosen from the group consisting of polyvinyl chloride, polyvinyl acetate, and copolymers of 80 to 95 wt. percent of vinyl chloride, and 5 to 20 wt. percent of vinyl acetate; and about 25 to 75 parts by wt. of a trimethylol alkane chosen from the group consisting of trimethylol butane, trimethylol isobutane, and trimethylol pentane, which has been completely esterified with normal heptanoic acid.

3,023,186
PROCESS FOR THE DYEING OF SYNTHETIC POLYAMIDES IN THE MASS

Georg Geiger, Binningen, near Basel, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Sept. 12, 1958, Ser. No. 760,537
Claims priority, application Switzerland Sept. 24, 1957
12 Claims. (Cl. 260—37)

1. A process for the level and fast dyeing of synthetic polyamides in the mass which comprises incorporating a condensation product essentially as obtained by reacting a chlorinated metal-phthalocyanine having 4 to 8 chlorine atoms and selected from the group consisting of chlorinated copper-phthalocyanine, chlorinated nickel-phthalocyanine, chlorinated cobalt-phthalocyanine and chlorinated iron-phthalocyanine, with a mercaptan selected from the group consisting of mono- and di-nuclear aryl mercaptans, benzyl mercaptan and alkyl mercaptans with 8 to 12 carbon atoms in presence of an alkali metal hydroxide and benzyl alcohol, into a melt of a synthetic polyamide selected from the group consisting of polyhexamethylene adipamide, polycaprolactam and poly-ω-undecanoic acid, and spinning the dyed mass into filament form.

3,023,187
PROCESS OF COPOLYMERIZING HEXAFLUOROPROPENE WITH VINYLIDENE FLUORIDE IN THE PRESENCE OF SILICA AND THE PRODUCT THEREOF

Elizabeth Shen Lo, Fords, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Apr. 2, 1958, Ser. No. 725,804
7 Claims. (Cl. 260—41)

7. A process which comprises copolymerizing a monomer mixture of between about 5 and about 95 mol percent hexafluoropropene and between about 95 and about 5 mol percent of vinylidene fluoride in the presence of an aqueous polymerization catalyst system containing between about 2 and about 30 parts of an adsorptive silica per 100 parts of total monomer, said adsorptive silica being selected from the group consisting of modified and unmodified silica and having a particle size not exceeding 20 microns, to produce a copolymer of hexafluoropropene and vinylidene fluoride containing said adsorptive silica and having a tensile strength of at least about 1500 p.s.i.

3,023,188
ALCOHOLIC CARBON BLACK SLURRIES AND METHOD OF PREPARING RUBBER-CARBON BLACK MASTERBATCHES THEREWITH

Gerard Kraus and Joseph Dugone, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 13, 1956, Ser. No. 621,527
16 Claims. (Cl. 260—41.5)

1. The method of preparing a rubber-carbon black masterbatch comprising mixing a slurry of carbon black in a monohydric alcohol containing 1 to 3 carbon atoms with a rubber latex, the addition of said slurry causing coagulation of said rubber, the amount of black in said slurry being 5 to 25 weight percent based upon the weight of the alcohol.

3,023,189
TRIFLUOROCHLOROETHYLENE POLYMER-EPOXY RESIN MIXTURE

Julius A. Jupa, Elizabeth, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Dec. 30, 1954, Ser. No. 478,897
1 Claim. (Cl. 260—45.5)

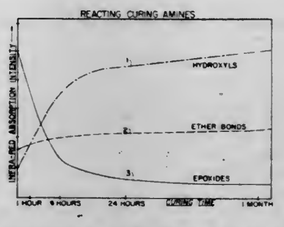
A novel composition comprising an admixture of a minor proportion of a normally solid polymer of trifluorochloroethylene and a major proportion of the condensation product of epichlorohydrin and bisphenol, said condensation product having a melting point of at least 0° C. and an epoxy equivalent of at least 150 and not exceeding about 3400.

3,023,190
METHOD OF AMINE CURING EPOXY RESINS AND COMPOSITION THEREFOR

Adolf Damusis, Cleveland, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 10, 1955, Ser. No. 527,465
2 Claims. (Cl. 260—47)

1. The method of curing a polyepoxy-polyhydroxy ether resin which is a glycidyl polyether of a polyhydric phenol having a 1,2-epoxy equivalency between 1 and 2 which comprises admixing with said ether resin in an amount sufficient to harden said resin, from about 4% to about 12% by weight of said ether resin of a mixture of (*a*) from about 70% to 10% by volume of at least one amine selected from the group consisting of tertiary amines which contain at least one tertiary amino group having attached thereto an alkyl group of from 1 to 3 carbon atoms and no more than one amino-nitrogen atom with available hydrogen, and secondary amines which contain an alkyl group of from 1–3 carbon atoms attached to an amino-nitrogen atom and no more than one amino-nitrogen atom with available hydrogen; and (*b*) from about 30% to about 90% by volume of at least one polyamine selected from the group consisting of primary polyamines, secondary polyamines, and mixed primary-



secondary polyamines which contain at least one available hydrogen atom attached to each of at least two amino-nitrogen atoms, the substituent organic radicals on the secondary amino-nitrogen atoms containing more than 3 carbon atoms.

3,023,191
CONTINUOUS PROCESS FOR CHEMICALLY MODIFYING ISO-OLEFIN-MULTIOLEFIN RUBBERY POLYMER

Bruce R. Tegge, Madison, Francis P. Baldwin, Colonia, and George E. Serniuk, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 3, 1956, Ser. No. 625,637
8 Claims. (Cl. 260—73)

1. In the continuous process for making and recovering a rubbery polymer of a major proportion of a C_4 to C_7 isoolefin with a minor proportion of a C_4 to C_{14} multiolefin made by continuous Friedel-Crafts polymerization in a diluent consisting of insert C_1 to C_3 alkyl halide diluent which is a first non-solvent for the polymer therefrom, whereby there is continuously produced a polymerization reaction first slurry dispersed in a liquid medium consisting essentially of said alkyl halide diluent, the improvement which comprises; contacting said first slurry at a temperature above the boiling point of said diluent with a C_5 to C_{10} liquid hydrocarbon solvent for the polymer to volatize said diluent therefrom and to directly dissolve polymer therein while maintaining the temperature between 20 and 100° C., said solvent boiling above the boiling point of said diluent; reacting the polymer in solution chemically by incorporating into said solution a material selected from the group consisting of sulfenyl halides, selenenyl halides, n-nitroso-p-nitroso alkyl aniline, azomonocarboxylates, azodicarboxylates, C_1 to C_{10} aliphatic aldehydes, C_1 to C_{10} aromatic aldehydes, a halogen and mixtures thereof; contacting said solution having said chemically reacted polymer therein with a second non-solvent aqueous liquid medium at a temperature above the boiling point of said solvent to volatize solvent therefrom and to form a second slurry of copolymer in said second non-solvent, said second non-solvent boiling above the boiling point of said solvent; and subsequently recovering said reacted polymer from said second slurry.

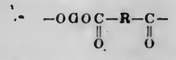
3,023,192
SEGMENTED COPOLYETHERESTER ELASTOMERS

Joseph Clois Shivers, Jr., West Chester, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

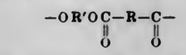
No Drawing. Filed May 29, 1958, Ser. No. 738,637
18 Claims. (Cl. 260—75)

1. A segmented copolymer having an elastic recovery of at least 90% and a stress decay below about 25% con-

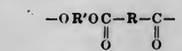
sisting essentially of a multiplicity of recurring intralinear etherester and ester units, said etherester units being represented by the formula



and said ester units being represented by the formula



wherein G is the radical remaining after removal of the terminal hydroxyl groups from a difunctional polyether glycol having a molecular weight in the range from about 350 to about 6000, R is a hydrocarbon radical remaining after removal of the carboxyl groups from a dicarboxylic acid, and R' is a hydrocarbon radical remaining after removal of the hydroxyl groups from an organic diol, at least one of said radicals R and R' being a divalent aromatic radical having the free valences attached directly to an aromatic ring, said radicals R and R' being so selected that the structure



represents a repeating unit of a fiber-forming polyester having a melting point above 200° C. in its fiber-forming molecular weight range, said etherester and said ester units being interconnected to provide a segmented polymeric structure wherein the terminal carbonyl group of one of said etherester units is connected to the terminal oxygen atom of one of said ester units to provide an ester linkage, from about 35% to about 75% by weight of said segmented copolymer being provided by said etherester units and from about 65% to about 25% by weight being provided by said ester units.

3,023,193

SOLUBLE POLYUREAS AND PROCESS FOR PRODUCING THE SAME

Wilhelm Thoma, Leichlingen, and Otto Bayer and Heinrich Rinke, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Apr. 1, 1958, Ser. No. 725,485
Claims priority, application Germany Apr. 6, 1957
11 Claims. (Cl. 260—77.5)

1. A process for producing soluble polymers which comprises reacting a bis-phenyl carbamate, each of the carbamyl nitrogens having attached thereto one hydrogen, and containing at least one acid group selected from sulfonic, carboxylic and phosphoric acid groups, with a diamine having at least one hydrogen atom on each amino group, the reaction being conducted at a temperature of from 0° C. up to about 150° C., wherein both the phenyl carbamate groups of the ester, and the two amino groups of the diamine reactant, are separated from each other by a divalent aromatic radical.

3,023,194

NOVEL PHOSPHORUS COMPOUNDS AND PROCESS

Alexander Kowalski, Levittown, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 15, 1959, Ser. No. 839,989
12 Claims. (Cl. 260—79.3)

2. A condensation homopolymer of triamidophosphazosulfamide obtained by heat and the elimination of ammonia.

3,023,195

PREVENTING SCORCH IN BUTYL RUBBER COMPOSITIONS

James G. Martin, Princeton, John L. Ernst, Westfield, Conrad J. Jankowski, Bayonne, and Alan A. Schetelich, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 26, 1958, Ser. No. 737,476
12 Claims. (Cl. 260—79.5)

1. In the process of preparing a butyl rubber composition, said butyl rubber being a copolymer of 85 to 99.5 wt. percent of a C_4 to C_8 isoolefin and 15 to 0.5 wt. percent of a C_4 to C_{14} multiolefin, wherein said composition contains sulfur-containing curatives in amounts normally tending to cause scorching during compounding and shaping when the sulfur-containing curatives are mixed with the butyl rubber polymer at a temperature of 200° to 280° F. for compounding and shaping, the composition thereafter being cured, the improvement which comprises adding to the composition prior to compounding with sulfur-containing curatives, a scorch-retarding amount of a nonaccelerating copper-containing material selected from the group consisting of copper powder, copper sulfate, copper nitrate, copper chloride, copper salts of fatty acids, and copper naphthenate.

3,023,196

POLYMERIZATION OF PERFLUOROOLEFIN MIXTURES

Mánville Isager Bro, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,196
5 Claims. (Cl. 260—87.5)

1. A process for the preparation of perfluoroolefin copolymers which comprises subjecting tetrafluoroethylene together with from 1 to 19 times its weight of another perfluoromonoolefin of 3 to 9 carbon atoms inclusive and having a terminal perfluoromethylene group, to a temperature of at least 150° C. in contact with an initiator of the general formula $[X(CF_2)_n]_2Z$, wherein X is selected from the group consisting of hydrogen and fluorine, Z is a divalent radical selected from the group consisting of —S—S— and —S—Hg—S—, and n is a whole number from 1 to 12 inclusive.

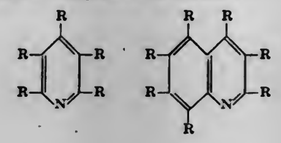
3,023,197

LIQUID DIENE POLYMER LAMINATING AND CASTING COMPOSITIONS

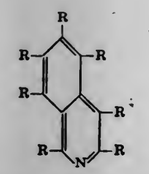
Charles E. Wheelock, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Feb. 18, 1957, Ser. No. 640,610
11 Claims. (Cl. 260—88.1)

1. A new composition of matter, said composition being liquid before cure and comprising (1) 95 to 60 parts by weight of an unhydroxylated liquid polymer of a conjugated diene containing not over six carbon atoms per molecule, said polymer having a molecular weight in the range of about 200 to about 5000 and a viscosity in the range of about 100 to 6000 Saybolt Furol seconds at 100° F.; and (2) 5 to 40 parts by weight of a material selected from the group consisting of (*a*) a hydroxylated liquid polymer prepared by hydroxylating a polymer of a conjugated diene containing not over six carbon atoms per molecule, said polymer having before hydroxylation a molecular weight in the range of about 200 to 5000 and a viscosity in the range of about 100 to 6000 Saybolt Furol seconds at 100° F., said hydroxylated polymer containing one to 20 weight percent oxygen, at least 30 percent of said oxygen being present as hydroxyl oxygen, and (*b*) monomeric compounds of formula



and



where only one R is selected from each group consisting of vinyl and alpha-methylvinyl and each of the remaining R's is individually selected from the group consisting of hydrogen and alkyl; the amounts of (1) and (2) being selected to give 100 parts by weight, said composition being thermosetting.

3,023,198

POLYMERIZATION OF VINYL ETHERS

Gene Nowlin, Princeton, N.J., and Harold D. Lyons, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed June 3, 1957, Ser. No. 662,990
12 Claims. (Cl. 260—88.1)

1. A method which comprises copolymerizing materials consisting essentially of a polymer having a viscosity of at least 100 Saybolt Furol seconds at 100° F. of a conjugated diene containing 4 to 6 carbon atoms with monovinyl ethers containing 3 to 15 carbon atoms per molecule to form a copolymer in the presence of a catalyst comprising at least one member selected from the group consisting of (1) at least one compound selected from the group consisting of organometal compounds and metal hydrides: (2) a mixture of (*a*) at least one compound selected from the group consisting of organometal compounds and metal hydrides, and (*b*) a metal compound selected from the group consisting of group IV, group V, and group VI metal oxides, hydrides, halides, oxyhalides, and salts of organic acids, and group IV alcoholates; and (3) a mixture of (*a*) at least one compound selected from the group consisting of group IV metal halides and (*b*) at least one metal selected from the group consisting of metals of group I, group II, and group III.

3,023,199

POLYVINYL-ALCOHOL RESIN RESISTANT TO WATER AND METHOD OF MAKING IT

John O. Hawthorne, Pittsburgh, and Myron H. Wilt, Monroeville, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

No Drawing. Filed June 8, 1959, Ser. No. 818,520
2 Claims. (Cl. 260—91.3)

1. A method of making polyvinyl-alcohol resin which consists in mixing with an aqueous polyvinyl-alcohol solution from .1 to 1% by weight of the dissolved polyvinyl-alcohol resin, of an acid selected from the group consisting of hydrochloric, sulphuric and phosphoric and from 0.5 to 15% by weight of polyvinyl-alcohol resin, of 5-hydroxy-5H-dibenz[c, e]azepine, and permitting reaction of the mixture to cure it.

3,023,200

DICYCLOPENTADIENE ALKYLATION POLYMERS

Martin E. Epstein, Ashbourne Hills, Del., and Nicholas C. Gangemi, West Chester, Pa., assignors to Pennsylvania Industrial Chemical Corporation, a corporation of Pennsylvania

No Drawing. Filed Feb. 6, 1959, Ser. No. 791,530
3 Claims. (Cl. 260—93.1)

1. A thermoplastic composition consisting essentially of polymer of recurring units of aromatic nuclei alkylated by dicyclopentadiene and represented by the unit

$$Aro(DCPD—Aro)_n$$

where Aro represents the aromatic nucleus, DCPD represents the dicyclopentadiene nucleus, and n is a whole number greater than one, and in which unit the DCPD nuclei contain substantially no residual unsaturation, said polymer being stable against color change under oxidizing conditions.

3,023,201

PROCESS FOR REMOVAL OF CATALYST FROM HYDROGENATED POLYMER SOLUTIONS

Charles W. Moberly and Samuel Renaudo, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Oct. 26, 1955, Ser. No. 543,014
11 Claims. (Cl. 260—94.7)

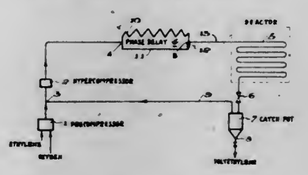
1. In the process for the production of hydrogenated material by hydrogenating polymeric material selected from the group consisting of homopolymers of butadiene and copolymers of butadiene containing not more than 30 percent by weight of styrene wherein said polymeric material is dispersed in a solvent and contacted with hydrogen in the presence of finely divided nickel-kieselguhr catalyst in order to reduce the unsaturation of said polymeric material, the method for removing said catalyst which comprises adding to the dispersion of said hydrogenated polymeric material, solvent and catalyst a member selected from the group consisting of natural rosin acids, hydrogenation, dehydrogenation, and disproportionation reaction products thereof having the same number of carbon atoms per molecule and the same arrangement of carbon atoms as said natural rosin acids, and iron and nickel salts of said rosin acids and said hydrogenation, dehydrogenation and disproportionation reaction products of said rosin acids; adding to the resulting mixture a base whose cation forms an insoluble salt of said rosin acid; and recovering said polymeric material dispersed in a solvent substantially free of catalyst.

3,023,202

ETHYLENE POLYMERIZATION

Hans M. Schappert, Bethel Park, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Filed Jan. 22, 1960, Ser. No. 4,059
6 Claims. (Cl. 260—94.9)



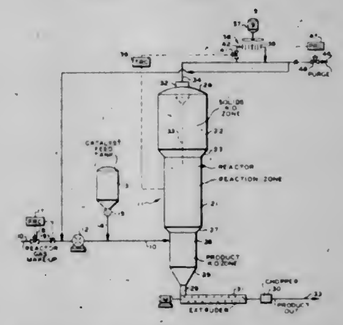
2. In a process for polymerizing ethylene which comprises flowing through a polymerization reactor at high pressures and temperatures a mixture of (1) fresh ethylene to which a free radical yielding ethylene polymerization catalyst has been added and (2) recycle ethylene, previously passed through said polymerization reactor, in which the catalyst has been consumed by polymerizing

a portion of said ethylene to solid polyethylene, said solid polyethylene having been separated and the unpolymerized ethylene and said polyethylene having been periodically released from said polymerization reactor so that when said recycle ethylene is mixed with said fresh ethylene to which a free radical yielding ethylene polymerization catalyst has been added, said mixture contains catalyst rich increments and catalyst poor increments, the improvement comprising: dividing said mixture into a plurality of streams and combining said streams so that a catalyst rich increment of one stream is combined with a catalyst poor increment of another stream prior to the conversion of any of said mixture to polyethylene to thereby obtain in said mixture a more uniform distribution of said free radical yielding catalyst.

3,023,203
POLYMERIZATION PROCESS

Robert F. Dye, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Aug. 16, 1957, Ser. No. 678,687
3 Claims. (Cl. 260—94.9)



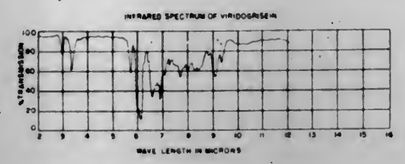
1. A process for producing solid polymers which comprises contacting a gaseous stream containing a polymerizable olefin with a mobile comminuted solid catalyst, which catalyzes the polymerization of said olefin to solid polymer, in a polymerization zone maintained at superatmospheric pressure and at a temperature high enough to effect said polymerization but below the melting point of the polymer formed; removing polymer from a product recovery zone into which polymer coated catalyst particles settle from said polymerization zone, the removal being effected without any pressure letdown in said polymerization zone; withdrawing a gaseous stream from the upper portion of said polymerization zone; returning said gaseous stream to said polymerization zone; and adjusting the temperature of said returned gaseous stream in response to the temperature maintained within said polymerization zone.

3,023,204
VIRIDOGRISEIN, AND ITS FERMENTATIVE PRODUCTION WITH GRISEOVIRIDIN

Quentin R. Bartz, Detroit, John Ehrlich, Grosse Pointe Park, Mildred Penner Knudsen, Birmingham, and Robert M. Smith, Kalamazoo, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan

Filed May 7, 1956, Ser. No. 583,219
6 Claims. (Cl. 260—112)

6. Process for obtaining viridogrisein which comprises cultivating a microorganism of the group consisting of *Streptomyces griseus* NRRL 2426 and *Streptomyces viridogriseus* in contact with a sterile, liquid, aqueous nutrient medium containing proteinaceous materials, minerals and a source of assimilable carbon under sterile aerobic conditions at a temperature of about 20–40° C. for about 2 to



15 days and separating viridogrisein from said cultivated medium.

3,023,205
PROCESS FOR THE PREPARATION OF DIGLYCOSYLUREAS

Paul R. Steyermark, Takoma Park, Md., and Melville L. Wolfrom, Columbus, Ohio, assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Jan. 27, 1960, Ser. No. 4,873
17 Claims. (Cl. 260—211.5)

1. A process for the preparation of diglycosylureas which comprises heating at least 2 moles of an aldose with 1 mole of urea under initially anhydrous conditions in a lower aliphatic acid having 2 to 4 carbon atoms and with a Friedel Crafts catalyst for a period of time sufficient to effect the reaction and recovering the product diglycosylurea.

3,023,206
PROCESS FOR INTRODUCING Δ^1 UNSATURATION INTO STEROIDS

Derek Burn, David Neville Kirk, Vladimir Petrow, and George Oliver Weston, all of London, England, assignors to The British Drug Houses Limited, London, England, a British company

No Drawing. Filed Mar. 11, 1959, Ser. No. 798,609
Claims priority, application Great Britain Mar. 13, 1958
12 Claims. (Cl. 260—239.55)

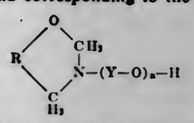
1. A process comprising reacting a steroid compound selected from the group consisting of 3-oxo-Δ^4 and 3-oxo-$\Delta^{4,6}$ derivatives of steroid compounds of the androstane, pregnane, stigmastane, cholestane and spirostane series with a compound selected from the group consisting of 2:3-dicyano-1:4-benzoquinone, and chlorine-substituted 2:3dicyano-1:4-benzoquinone having up to two chlorine atoms, in an organic solvent, to thereby provide the corresponding 1-dehydro compound.

3,023,207
POLYALKYLENEGLYCOL 3,4-DIHYDRO-2H-1,3-BENZOXAZIN-3-YLALKYL MONOETHERS

Raymond H. Rigterink, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 22, 1959, Ser. No. 847,886
5 Claims. (Cl. 260—244)

1. A compound corresponding to the formula



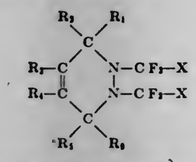
wherein each Y represents an alkylene radical containing from 2 to 3 carbon atoms, inclusive, and having its two valencies on adjacent carbon atoms, *n* represents an integer from 6 to 40, inclusive, and R represents a member of the group consisting of o-phenylene and substituted o-phenylene in which the substituents are selected from the group consisting of chlorine, bromine, phenyl, benzyl, cyclohexyl, and alkyl containing from 1 to 16 carbon atoms.

3,023,208
1,2-BIS-(FLUOROALKYL)-1,2,3,6-TETRAHYDROPYRIDAZINES

William John Chambers, Claymont, Del., and Donald Drake Coffman, West Chester, Pa., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 9, 1960, Ser. No. 7,515
7 Claims. (Cl. 260—250)

1. Compounds of the formula



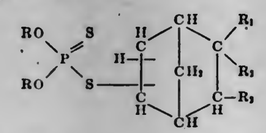
wherein X is selected from the class consisting of fluorine, and perhaloalkyl and ω-hydroperhaloalkyl of from 1 to 12 carbon atoms, the halogen atoms being selected from the class consisting of fluorine and chlorine; R_1, R_2, R_3, R_4, R_5 and R_6, taken individually, are selected from the class consisting of hydrogen, halogen, alkyl of from 1 to 10 carbon atoms and aryl, alkaryl, aralkyl and cycloalkyl of from 6 to 10 carbon atoms and R_1 and R_6, taken together, are divalent alkylene of from 1 to 4 carbon atoms, the total number of carbon atoms in R_1, R_2, R_3, R_4, R_5 and R_6 combined being up to 12.

3,023,209
THIOLTHIONOPHOSPHORIC ESTERS AND THEIR PRODUCTION

Johannes Reese, Wiesbaden-Biebrich, and Berthold Brähler, Wiesbaden, Germany, assignors to Chemische Werke Albert, Wiesbaden-Biebrich, Germany, a corporation of Germany

No Drawing. Filed Mar. 4, 1958, Ser. No. 718,967
Claims priority, application Germany Mar. 8, 1957
26 Claims. (Cl. 260—250)

1. A compound selected from the group of compounds having the general formula:



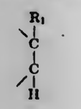
wherein R is an alkyl radical, R_1 is selected from the group consisting of H and a lower alkyl radical, R_2 individually is a radical selected from the group of radicals consisting of



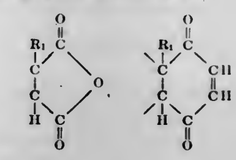
lower alkyl, lower alkanol, halogenated lower alkyl, formal and cyano radicals, R_3 individually is selected from the group consisting of H and a radical selected from the group of radicals consisting of



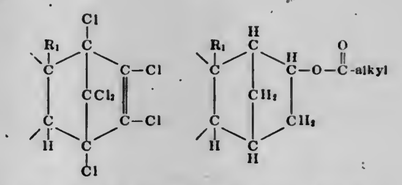
and nitro radicals and R_2 and R_3 jointly with the



to which they are joined form part of a condensed ring selected from the group consisting of

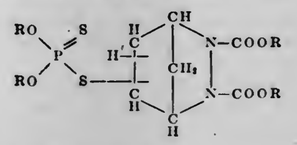


and



in which R and R_1 have the values stated herein.

7. A compound having the formula



wherein R is an alkyl radical.

3,023,210
PRODUCTION OF CARBOXY-SUBSTITUTED HETEROCYCLIC COMPOUNDS

Hartwig Schutt, Hagen, Westphalia, Germany, assignor to Henkel & Cie G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Sept. 11, 1958, Ser. No. 760,297
Claims priority, application Germany Apr. 30, 1956
16 Claims. (Cl. 260—250)

1. The process of producing alkali metal salts of carboxy-substituted heterocyclic compounds by direct introduction of a carboxyl group on a carbon atom of the heterocyclic ring, which comprises reacting a heterocyclic compound selected from the group consisting of indazole, imidazole, pyrazole, 1,2,4-triazole, 1,2,3-triazole tetrazole, pyrazine pyrimidine pyridazine, triazines and tetrazines and their corresponding lower alkyl, phenyl, amino and monocarboxyl substituted analogues, said heterocyclic ring containing at least one carbon atom having a hydrogen atom attached thereto, with carbon dioxide under substantially anhydrous conditions in the presence of an alkaline compound selected from the group consisting of oxides, hydroxides, carbonates, bicarbonates, oxalates and formates of alkali metals, at a temperature between about 150° C. and the decomposition temperature of said heterocyclic starting compound, whereby at least one carboxyl group is added to at least one carbon atom having a hydrogen atom attached thereto in said heterocyclic ring.

3,023,211
METHOD FOR THE PREPARATION OF PIPERAZINE MONOHYDROCHLORIDE

Myrl Lichtenwalter, Austin, Tex., assignor to Jefferson Chemical Company, Inc., Houston, Tex., a corporation of Delaware

No Drawing. Filed Sept. 12, 1960, Ser. No. 55,174
2 Claims. (Cl. 260—268)

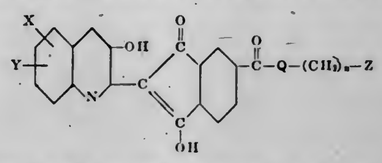
1. A method for the preparation of an essentially neutral aqueous solution of piperazine monohydrochloride containing from about 6.5 to about 8.7 mols of water per mol of piperazine monohydrochloride, said method comprising the steps of dissolving piperazine in excess of the amount of water desired in the said solution, adding from about 1 to about 1.1 mols of ammonium chloride per mol of piperazine to the thus formed piperazine solution over a period of about 0.5 to 5 hours at a temperature within the range of about 20° to about 120° C. whereby the ammonium chloride will react with the piperazine to provide piperazine monohydrochloride and whereby ammonia is liberated, at least a portion of said liberated ammonia remaining dissolved in the thus formed reaction mixture, and, after said ammonium chloride addition, stripping excess water from said reaction mixture, whereby said dissolved ammonia is also stripped from said solution, and filtering the remaining solution after said stripping step to thereby provide said desired aqueous solution of piperazine monohydrochloride.

3,023,212
BASIC DYES OF THE QUINOPHTHALONE SERIES

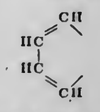
John William Richter, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,756
7 Claims. (Cl. 260—286)

1. A compound selected from the group consisting of the free base forms, salts and quaternary forms of compounds whose free base form is defined by the formula



wherein X and Y represent members of the group consisting of H, Cl, Br, CH_3 and phenyl and when taken together form the benzo configuration



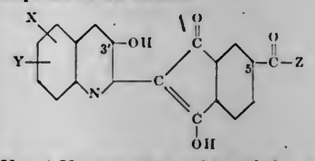
n is an integer from 2 to 4, Q is a link selected from the group consisting of O, NH and N-alkyl, while Z represents an amine radical of the group consisting of dialkylamine, monoalkyl monohydroxyalkyl-amine, dihydroxyalkyl-amine, monoalkyl monobenzyl-amine, monohydroxyalkyl monobenzyl-amine, morpholine, piperidine and pyrrolidine, said quaternary forms being compounds formed by quaternizing said bases with compounds selected from the group consisting of lower alkyl sulfates, chlorides, bromides and iodides, benzyl chloride and methyl p-toluenesulfonate, all alkyls hereinabove mentioned being radicals of 1 to 4 C-atoms.

3,023,213
ESTERS AND AMIDES OF 3'-HYDROXYQUINOPHTHALONE-5-CARBOXYLIC ACID AND DERIVATIVES THEREOF

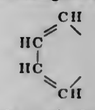
John William Richter, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,755
4 Claims. (Cl. 260—287)

1. A compound of the formula



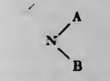
wherein X and Y represent members of the group consisting of H, Cl, Br, CH_3 and phenyl and when taken together form the benzo configuration



Z stands for a member of the group consisting of O—C_nH_{2n+1}, n being an integer from 1 to 8,

OCH_2CH_2OH, $OCH_2CH_2—OCH_2CH_2OH$,
$OCH_2CH_2—OCH_2CH_2—OCH_2CH_2OH$,
OC_2H_4—O—alkyl, OC_3H_6—O—alkyl,
$OC_2H_4—OC_2H_4$—O—alkyl,

homocyclic O—aryl of 6 to 10 C-atoms in the cyclic structure, and



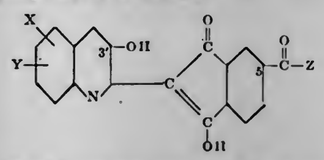
wherein A is a member of the group consisting of H, C_nH_{2n+1}, n being an integer from 1 to 8, hydroxyalkyl, phenyl and benzyl while B is a member of the group consisting of hydrogen, alkyl and hydroxyalkyl, all the alkyl radicals hereinabove mentioned being alkyl radicals of 1 to 4 C-atoms.

3,023,214
3'-HYDROXYQUINOPHTHALONE-5-CARBOXYLIC ACID AND DERIVATIVES THEREOF

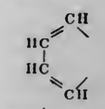
John William Richter, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1960, Ser. No. 39,757
9 Claims. (Cl. 260—287)

1. A compound of the formula



wherein X and Y represent members of the group consisting of H, Cl, Br, CH_3 and phenyl and when taken together form the benzo configuration



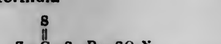
while Z stands for a member of the group consisting of Cl, Br. OH, ONa, OK and ONH_4.

3,023,215
METHOD OF PRODUCING SULFONIC DERIVATIVES OF N-SUBSTITUTED DITHIOCARBAMIC ESTERS

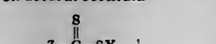
Wolfgang Gündel, Dusseldorf-Oberkassel, Germany, assignor to Dehydag, Deutsche Hydrierwerke G.m.b.H., Dusseldorf, Germany, a corporation of Germany

No Drawing. Filed Apr. 11, 1955, Ser. No. 500,677
Claims priority, application Germany Apr. 24, 1954
3 Claims. (Cl. 260—293.4)

1. The method of producing a compound having the general structural formula



wherein Z represents an organic radical containing at least one nitrogen atom selected from the group consisting of alkyl, cycloalkyl and heterocyclic radicals, wherein said hetero atoms are selected from the group consisting of nitrogen and oxygen atoms, said radicals being linked to the carbon atom through said one nitrogen atom, R_2 represents a radical selected from the group consisting of lower aliphatic, benzyl and cyclohexyl radicals, and X is selected from the group consisting of hydrogen, alkali and alkaline metal atoms, ammonium radicals and organic alkaline radicals, which comprises subjecting a compound having the general structural formula



wherein Z represents a radical as above defined and Y is selected from the group consisting of alkali and alkaline metal atoms, ammonium radicals and organic alkaline radicals, to a condensation reaction with a compound having the general structural formula

$$Q—R_2—SO_3X$$

wherein Q represents a halogen atom and R_2 and X represent radicals as above defined.

3,023,216
PROCESS FOR THE INTRODUCTION OF CARBOXYL GROUPS INTO AROMATIC COMPOUNDS

Bruno Blaser, Dusseldorf-Urdenbach, Werner Stein, Dusseldorf-Holthausen, and Hubert Schirp, Dusseldorf, Germany, assignors to Henkel & Cie, G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,600
Claims priority, application Germany Mar. 7, 1958
14 Claims. (Cl. 260—295.5)

8. The process of producing alkali-metal salts of symmetrical aromatic polycarboxylic acids selected from the group consisting of di- and tricarboxylic acids, said aromatic carboxylic acids containing aromatic rings free of substituents other than carboxyl groups selected from the group consisting of benzene, dicyclic aromatic hydrocarbon, pyridine, quinoline, isoquinoline, dipyridyl, thiophene and thianaphthene, which comprises heating under anhydrous conditions (1) an alkali metal salt of an aromatic carboxylic acid, said aromatic carboxylic acid containing aromatic rings free of substituents other than carboxy groups selected from the group consisting of benzene, dicyclic aromatic hydrocarbon and pyridine, with (2) an aromatic compound free of substituents selected from the group consisting of dicyclic aromatic hydrocarbon, pyridine, quinoline, isoquinoline, dipyridyl, thiophene and thianaphthene, to a temperature between 300° C. and the decomposition temperature of the starting materials and the reaction products in the presence of (A) a catalyst selected from the group consisting of cadmium, zinc, and compounds thereof, and (B) a water-binding agent capable of tying up water under the prevailing reaction conditions without interfering with the reaction, in a substantially oxygen-free atmosphere of an inert gas under superatmospheric pressure to produce a mixture of said alkali-metal salts of symmetrical aromatic polycarboxylic acids and starting compounds, and separating the starting compounds from the symmetrical acid salts.

3,023,217
PROCESS FOR THE INTRODUCTION OF CARBOXYL GROUPS INTO AROMATIC COMPOUNDS

Werner Stein, Dusseldorf-Holthausen, Hubert Schirp, Dusseldorf, and Hartwig Schütt, Dusseldorf-Benrath, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Mar. 24, 1959, Ser. No. 801,456
Claims priority, application Germany Apr. 10, 1958
22 Claims. (Cl. 260—295.5)

1. The process of producing mono- and dicyclic alkali metal salts of aromatic acids selected from the group consisting of aromatic carbocyclic and aromatic heterocyclic acids, said acids having from 1 to 3 carboxyl groups in the molecule, which comprises heating under anhydrous conditions an alkali metal salt of an aliphatic carboxylic acid having a labile carboxyl group selected from the group consisting of oxalic, maleic and trichloroacetic acids and mono- and dicyclic aromatic compounds free from carboxyl groups selected from the group consisting of aromatic hydrocarbon and unsubstituted aromatic heterocyclic compounds having as the only hetero atom a single atom selected from the group consisting of sulfur, nitrogen and oxygen to a temperature between 300° C. and the decomposition temperature of the starting materials and the reaction products in the substantially oxygen-free atmosphere of an inert gas to produce a mixture of said alkali metal salts of aromatic acids and starting compounds and separating the starting compounds from the aromatic acid salts.

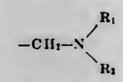
19. The process of producing a mixture of alkali metal salts of pyridine-2,4,6-tricarboxylic acid and alkali metal salts of isocinchomeronic acid which comprises heating, under anhydrous conditions, an alkali metal salt of an aliphatic carboxylic acid having a labile carboxyl group selected from the group consisting of oxalic, maleic and trichloroacetic acids and pyridine to a temperature between about 350° C. and about 450° C. under a superatmospheric pressure of carbon dioxide, recovering a mixture of alkali metal salts of pyridine-2,4,6-tricarboxylic acid and alkali metal salts of isocinchomeronic acid and separating said alkali metal salts.

3,023,218
WATER-SOLUBLE DYESTUFFS OF THE AZAPORPHIN SERIES

Arnold Tartter, Lambsheim, Pfalz, Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,861
4 Claims. (Cl. 260—314.5)

1. A water-soluble dyestuff of the azaporphin series which has been obtained by reacting 1 to 10 parts by weight of a sulfonating agent selected from the class consisting of sulfuric acid, oleum with up to 65% sulfuric acid anhydride and chlorosulfonic acid, with 1 part by weight of an azaporphin in complex combination with a metal selected from the group consisting of copper, iron, cobalt, nickel and aluminum, said azaporphin being selected from the class consisting of phthalocyanine and phenyl substituted tetrabenzo tetraazaporphin, and said azaporphin bearing from 2 to 4 substituents of the formula



wherein R_1 is hydroxy lower alkyl such that the nitrogen

atom and hydroxy group are located on vicinal carbon atoms and R_3 is a member selected from the group consisting of hydrogen, lower alkyl, hydroxy lower alkyl and phenyl, at a temperature between −10° and +60° C.

3,023,219
PRODUCTION OF CARBAZOLE
Matthias Seefelder and Herbert Maisack, Ludwigshafen (Rhine), Gartenstadt, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Sept. 30, 1959, Ser. No. 843,340
Claims priority, application Germany Oct. 2, 1958
10 Claims. (Cl. 260—315)

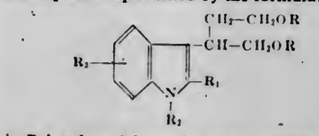
1. A process for the production of carbazole which comprises cyclizing cyclohexanone azine to octahydrocarbazole by heating cyclohexanone azine to a temperature between 150° and 370° C. in the presence of a catalyst selected from the group consisting of boron fluoride, its etherates and alcoholates, a mineral acid, an acid salt of said mineral acid, a neutral salt of the said acid compounds with a weak base and mixtures of said catalysts and dehydrogenating the octahydrocarbazole thus obtained to carbazole by contacting the octahydrocarbazole with at least one dehydrogenation catalyst selected from the group consisting of the metals of groups IB and VIII of the periodic system, oxides of metals of groups IIB, VB and VIB of the periodic system, and sulfides of cobalt, nickel, molybdenum and tungsten at a temperature between 200° and 620° C.

3,023,220
PROCESS OF PREPARING ANTHRAMID VAT DYESTUFF
Joseph S. Milazzo, Palisades Park, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 22, 1959, Ser. No. 847,879
2 Claims. (Cl. 260—316)

1. The process of preparing 1,2,7,8-diphthaloyl-3,6-di-(benzoylamino)-carbazole vat dyestuff which consists treating 1,1'-iminobis-(4-benzoylaminoanthraquinone) with 96% sulfuric acid at about room temperature for a period of time to yield a golden-brown coloration, adding sufficient water as the temperature rises to between 60–85° C. to yield a microcrystalline product, precipitating the sulfuric acid mixture in water and adding sodium bichromate to purify the same followed by isolation of the purified vat dyestuff by filtration.

3,023,221
NOVEL 2-(3-INDOLYL)-1,4-BUTANEDIOLS AND 2-(3-INDOLYL)-1,4-BUTANEDIOL DICARBAMATES
Jacob Szmuszkovicz, Portage Township, Kalamazoo County, and William C. Anthony, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Filed May 11, 1960, Ser. No. 28,254
18 Claims. (Cl. 260—319)

1. A compound represented by the formula:



wherein R is selected from the group consisting of hydrogen and carbamyl, R_1 is selected from the group consisting of hydrogen, alkyl of from 1 to 4 carbon atoms, inclusive, phenyl, hydroxyphenyl, alkoxyphenyl wherein the alkoxy moiety is of from 1 to 4 carbon atoms, inclusive, and halophenyl, R_2 is selected from the group consisting of hydrogen and alkyl of from 1 to 4 carbon atoms, inclusive, and R_3 is selected from the group consisting of hydrogen, hydroxy, benzyloxy, and alkoxy of from 1 to 4 carbon atoms, inclusive.

3,023,222
EPOXIDES OF BICYCLIC ACETALS
Howard R. Guest, Charleston, Joe T. Adams, St. Albans, and Ben W. Kiff, Ona, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 10, 1958, Ser. No. 747,585
1 Claim. (Cl. 260—340.7)

3,9-bis(1,2-epoxy-1-methylethyl)spirobi(meta-dioxane).

3,023,223
PROCESS FOR PRODUCING ISOIDIDE
Leon W. Wright and John D. Brandner, Wilmington, Del., assignors to Atlas Chemical Industries, Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 23, 1960, Ser. No. 10,041
4 Claims. (Cl. 260—347.8)

1. A process for the production of isoidide which comprises heating a member selected from the group consisting of isosorbide, isomannide and mixtures of isosorbide and isomannide at from 220° C. to 230° C. of from 1 to 4 hours, under hydrogen pressure of at least 1500 pounds per square inch, and in the presence of sufficient supported nickel hydrogenation catalyst to furnish from 1% to 4% by weight of nickel based on hexide.

3,023,224
DEHYDROHALOGENATION OF POLY-HALOGENHYDRIN ETHERS
Ferdinand Meyer, Mannheim, and Kurt Demmler, Ludwigshaven (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Apr. 23, 1956, Ser. No. 579,760
1 Claim. (Cl. 260—348.6)

In a method of producing polyepoxy ethers from polyhalogenhydrin ethers of saturated aliphatic polyhydric alcohols selected from the group consisting of glycerine, butane-triol, and pentaerythritol by dehydrohalogenation of said polyhalogenhydrin ethers with a concentrated aqueous solution of an alkali metal hydroxide at a temperature of about −20° C. to about +30° C., the improvement which comprises carrying out said dehydrohalogenation in the presence of a monohydric alcohol selected from the group consisting of n-butanol and alkanols having from 5 to 8 carbon atoms in the molecule in an amount of about 33 to 66% by weight with reference to the amount of the halogenhydrin ether.

3,023,225
PREPARATION OF GLYCIDYL POLYETHERS OF POLYHYDRIC PHENOLS
Norman H. Reinking, Millington, N.J., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Filed July 18, 1957, Ser. No. 672,360
9 Claims. (Cl. 260—348.6)

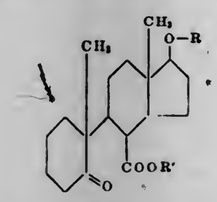
1. Process for the preparation of glycidyl polyethers of polyhydric phenols which comprises reacting at temperatures below about 60° C. a mixture consisting of a polyhydric phenol, about 3 moles of epichlorohydrin per phenolic hydroxyl group, from 0.01 to 0.07 mole per phenolic hydroxyl group of a lithium compound which generates a base on reaction with epichlorohydrin and from 0.001% to 1% by weight water based on the total weight of the components in said mixture, until substantially all of said phenol has reacted with the epichlorohydrin to form the corresponding chlorohydrin ether, removing the unreacted epichlorohydrin from said chlorohydrin ether and dehydrochlorinating said chlorohydrin ether to form the corresponding glycidyl polyether.

3,023,226
PROCESS FOR THE PREPARATION OF ACRYLONITRILE FROM PROPYLENE AND NITRIC OXIDE
David C. England, Wilmington, and Robert E. Foster, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Nov. 3, 1958, Ser. No. 771,353
4 Claims. (Cl. 260—465.3)

1. A process for the preparation of acrylonitrile which comprises reacting nitric oxide with propylene at a temperature in the range of 400°–700° C. in the presence of an alkaline earth metal oxide-promoted silver catalyst extended on a silica gel support containing less than 50 p.p.m. of iron.

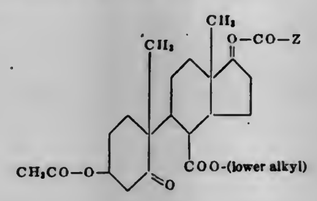
3,023,227
5,7-SECO-B-NORANDROSTANE DERIVATIVES
Norman W. Atwater, Arlington Heights, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Nov. 4, 1959, Ser. No. 850,787
16 Claims. (Cl. 260—468)

1. A compound of the structural formula



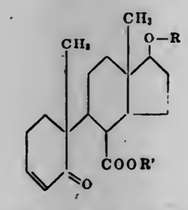
wherein R is a member of the class consisting of hydrogen, lower alkyl-CO—, and benzoyl radicals and R' is a member of the class consisting of hydrogen and lower alkyl radicals.

5. A compound of the structural formula



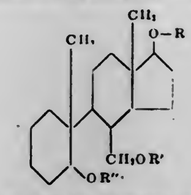
wherein Z is a member of the class consisting of phenyl and cyclohexyl radicals.

9. A compound of the structural formula



wherein R is a member of the class consisting of hydrogen, lower alkyl-CO, and benzoyl radicals and R' is a member of the class consisting of hydrogen and lower alkyl radicals.

13. A compound of the structural formula



wherein R, R', and R'' are members of the class consisting of hydrogen and (lower alkyl)-CO— radicals.

3,023,228
PRODUCTION OF URETHANE POLYISOCYANATE-UREA DIISOCYANATE MIXTURES
Kuno Wagner and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed May 23, 1957, Ser. No. 661,001
Claims priority, application Germany June 8, 1956
9 Claims. (Cl. 260—471)

1. A solid particulate non-resinous mixture of urea diisocyanates and urethane diisocyanates prepared by reacting in an inert solvent an arylene diisocyanate having —NCO groups of unequal reactivity, substantially simultaneously with water and a polyhydric alcohol having from two to three hydroxyl groups, the ratio of water to polyhydric alcohol being within the range of from about 0.5 mol to about 10 mols water per mol of polyhydric alcohol, the total mols of water and polyhydric alcohol hydroxyl groups being less than equivalent to the mols of organic diisocyanate.

2. A solid particulate non-resinous mixture of urea diisocyanates and urethane diisocyanates prepared by reacting in an inert solvent, an organic diisocyanate selected from the group consisting of arylene diisocyanates having —NCO groups of unequal reactivity and a mixture thereof with from about 10 to about 30 percent by weight of an arylene diisocyanate having —NCO groups of substantially equal reactivity, substantially simultaneously with water and a polyhydric alcohol having from two to three hydroxyl groups, the ratio of water to polyhydric alcohol being within the range of from about 0.5 mol to about 10 mols water per mol of polyhydric alcohol, the total mols of water and polyhydric alcohol hydroxyl groups being less than equivalent to the mols of organic diisocyanate.

3. A solid particulate non-resinous mixture of urea diisocyanates and urethane diisocyanates prepared by reacting in an inert solvent, an organic diisocyanate selected from the group consisting of arylene diisocyanates having —NCO groups of unequal reactivity and a mixture thereof with from about 10 to about 30 percent by weight of hexamethylene diisocyanate substantially simultaneously with water and a polyhydric alcohol having from two to three hydroxyl groups, the ratio of water to polyhydric alcohol being within the range of from about 0.5 mol to about 10 mols water per mol of polyhydric alcohol, the total mols of water and polyhydric alcohol hydroxyl groups being less than equivalent to the mols of organic diisocyanate.

6. A method for making a solid particulate non-resinous mixture of urea diisocyanates and urethane diisocyanates prepared by reacting in an inert solvent, an organic diisocyanate selected from the group consisting of arylene diisocyanates having —NCO groups of unequal reactivity and a mixture thereof with from about 10 to about 30

percent by weight of an arylene diisocyanate having —NCO groups of substantially equal reactivity, substantially simultaneously with water and a polyhydric alcohol having from two to three hydroxyl groups, the ratio of water to polyhydric alcohol being within the range of from about 0.5 mol to about 10 mols water per mol of polyhydric alcohol, the total mols of water and polyhydric alcohol hydroxyl groups being less than equivalent to the mols of organic diisocyanate.

3,023,229

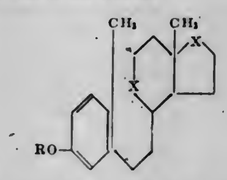
MICROBIOLOGICAL AROMATIZATION OF STEROIDS

Robert D. Muir, Deerfield, and Raymond M. Dodson, Park Ridge, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 8, 1958, Ser. No. 759,412
6 Claims. (Cl. 260—479)

1. The process of aromatizing ring A of androstenedione which comprises subjecting androstenedione to the action of the enzymes of *Pseudomonas dacunhae*.

6. A compound of the formula



wherein X is selected from the group consisting of carbonyl, hydroxymethylene and (lower)alkanoyloxymethylene and R is selected from the group consisting of hydrogen and (lower)alkanoyl.

3,023,230

PRODUCTION OF CHLORALKYL ESTERS OF ACRYLIC ACID AND THEIR SUBSTITUTION PRODUCTS

Hubertus Baron, Ludwigshafen (Rhine), and Herbert Friederich, Worms (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Mar. 2, 1959, Ser. No. 796,217
Claims priority, application Germany Mar. 5, 1958
4 Claims. (Cl. 260—486)

4. A compound of the formula



wherein R is selected from the group consisting of H, CH_3, Cl and Br.

3,023,231

PRODUCTION OF CALCIUM PETROLEUM SULFONATES

Richard S. Logan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,753
7 Claims. (Cl. 260—504)

1. A process of improving the separation of calcium petroleum sulfonates from a lime-neutralized petroleum mixture containing calcium sulfate dihydrate, which comprises heating said mixture at a temperature in the range of 240 to 450° F. which maintaining the liquid phase thereof so as to stabilize the same with respect to ferrous corrosion, dehydrating the resulting stabilized mixture at a temperature in the range of 50 to 200° F. and at a pressure in the range of 0.2 to 28 inches Hg absolute, and separating said calcium petroleum sulfonates from the resulting dehydrated mixture, said steps of heating and dehydrating being carried out at temperatures and pressures sufficient to prevent the dehydration of said calcium sulfate dihydrate.

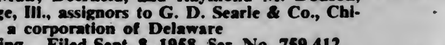
3,023,232

DIBASIC ACIDS AND SALTS THEREOF

Vernon H. Wallingford, Ferguson, Mo., assignor to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri

No Drawing. Filed Dec. 21, 1956, Ser. No. 629,780
8 Claims. (Cl. 260—513)

1. A compound selected from the group consisting of a dibasic acid of the general formula:



in which R represents a lower alkylene radical selected from the group consisting of methylene, polymethylene, and alkyl-substituted methylene radicals, and A represents a monobasic organic acid radical selected from the group consisting of carboxyl and sulfonic radicals, and the salts thereof.

3,023,233

PROCESS FOR MAKING TRICARBOXYCYCLOPENTANEACETIC ACID

Allison Maggiolo, Merion, and Anthony L. Tumolo, Philadelphia, Pa., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed June 3, 1958, Ser. No. 739,476
9 Claims. (Cl. 260—514)

1. The process of producing 2,3,5-tricarboxycyclopentaneacetic acid which comprises subjecting dicyclopentadiene to the action of ozone in a medium comprising a carboxylic acid to form an ozonized product at a reaction temperature in the range of 10° to 45° C. wherein the dicyclopentadiene:ozone mole ratio is 1:about 2 and thereafter oxidizing the ozonized product with hydrogen peroxide in the presence of an acid having an ionization constant at least as great as that of formic acid.

3,023,234

PROCESS FOR THE PRODUCTION OF AROMATIC DI- AND POLYCARBOXYLIC ACIDS

Hartwig Schutt, Dusseldorf-Benrath, and Werner Stein, Dusseldorf-Holthausen, Germany, assignors to Henkel & Cie. G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,858
Claims priority, application Germany Oct. 2, 1956
17 Claims. (Cl. 260—515)

1. A process for producing as products alkali metal salts of unsubstituted cyclic carboxylic acids having from 2 to 3 carboxylic groups wherein the cyclic nucleus is selected from the group consisting of mono- and dicyclic aromatic and heterocyclic nuclei containing one hetero atom in the molecule, selected from the group consisting of oxygen, sulfur and nitrogen atoms, by heating as a starting material an alkali metal salt of a cyclic carboxylic acid having from 1 to 2 carboxyl groups in a different relationship on the cyclic nucleus than the carboxyl groups on the final product and corresponding in structure to the product as above produced which comprises the steps of heating said starting material in the presence of derivatives of cyanic acid selected from the group consisting of alkali metal salts of cyanic acid and its polymers cyanamide and dicyandiamide to a temperature of at least 300° C. but not higher than the temperature at which said starting materials and final products will substantially decompose.

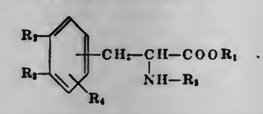
3,023,235

NEW AMINO ACIDS AND DERIVATIVES THEREOF

Frederick Leonard, Yonkers, N.Y., assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,719
6 Claims. (Cl. 260—519)

1. A member selected from the group consisting of a compound of the general formula:



wherein R_1 represents a member selected from the group consisting of hydrogen, lower alkyl groups and the benzyl group,

R_2 represents a member selected from the group consisting of hydroxy, lower alkoxy, lower alkanoyloxy, phenoxy and benzyloxy groups,

R_3 represents a member selected from the group consisting of carboxy, lower carbalkoxy, cyano and carboxamido groups,

R_4 represents a member selected from the group consisting of hydrogen, hydroxy, lower alkyl and lower alkoxy groups, and

R_5 represents a member selected from the group consisting of hydrogen, lower alkanyol groups and the benzoyl group, and an addition salt thereof with a therapeutically acceptable non-toxic acid.

3,023,236

RECOVERY OF GLUTAMIC ACID

Harold L. Fike, Chicago, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed June 13, 1958, Ser. No. 741,730
2 Claims. (Cl. 260—527)

1. In a process for recovering glutamic acid from sugar beet waste liquors, the improvement of commingling thin barium filtrate with concentrated Steffen's filtrate and a strong base in a proportion to produce a mixture containing greater than 40% solids, dry basis, and having a pH above about 11, heating the resulting mixture to a temperature effective to hydrolyze the glutamic acid precursor compounds therein, whereby organic impurities therein are precipitated in association with barium, and segregating the precipitated material from the resulting hydrolyzate, whereby the recovery of glutamic acid values from said hydrolyzate is facilitated.

3,023,237

PROCESS FOR PRODUCING ACRYLIC ACID

Walter Reppe and Robert Stadler, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed May 1, 1959, Ser. No. 810,279
Claims priority, application Germany Feb. 17, 1953
18 Claims. (Cl. 260—533)

1. A process for the production of acrylic acid which consists essentially of contacting a gaseous mixture of acetylene and carbon monoxide under a pressure exceeding 5 atmospheres and at temperatures between 150° and 250° C. with an aqueous reaction mixture of water containing at most 40% by volume of water and at least 60% by volume of an organic, water-miscible inert solvent with respect to the total volume of said water and said solvent, said aqueous reaction mixture having homogeneously dissolved therein ions of a metal of the Iron group, halide ions from the group consisting of chloride, bromide and iodide, and copper ions.

3,023,238

PROCESS FOR RECOVERING ADIPIC ACID FROM THE REACTION PRODUCTS OF THE AIR-OXIDATION OF CYCLOHEXANE

Richard D. Chapman, Charles R. Campbell, and Robert Johnson, Pensacola, Fla., assignors to the Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

Filed Sept. 8, 1959, Ser. No. 838,629
7 Claims. (Cl. 260—533)

1. A process for the removal and recovery of adipic acid and adipic acid esters in the form of adipic acid contained in the reaction product of the oxidation of cyclohexane into primarily cyclohexanone and cyclohexanol with a gas containing molecular oxygen comprising the steps of bringing said reaction product into intimate contact with water, whereby the adipic acid esters therein are hydrolyzed into adipic acid and whereby the thus produced adipic acid together with the free adipic acid is extracted from the reaction product, separating the aqueous extract containing the adipic acid from the organic phase containing primarily cyclohexanone, cyclohexanol, and cyclohexane, subjecting the separated aqueous extract to evaporating conditions for a sufficient time to reduce the water content thereof to less than 5 percent by weight, dissolving the evaporated extract in an organic solvent capable of forming a low boiling azeotrope with water, said solvent being selected from the group consisting of 2-nitropropane, 1-nitropropane, nitroethane, nitromethane, chloroform, and carbon tetrachloride, subjecting the resulting evaporated extract to azeotropic distillation conditions to further reduce the water content thereof, selectively precipitating the adipic acid from the residue of the azeotropic distillation by reducing the temperature thereof, and thereafter separating the precipitated adipic acid in crystalline form from the mother liquor.

3,023,239

RECRYSTALLIZATION OF DEMETHYLCHLORTETRACYCLINE

Victor Emil Origoni, Emerson, N.J., and Robert Winterbottom, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 9, 1959, Ser. No. 858,330
5 Claims. (Cl. 260—559)

1. A process of recrystallizing demethylchlortetracycline which comprises dissolving crude demethylchlortetracycline containing demethyltetracycline in water by the addition of alkali at a pH of from about 7–9, filtering the solution to remove insoluble impurities, and acidifying the filtrate with a mineral acid to a pH of between 0.5–1 whereupon a mineral acid salt of demethylchlortetracycline substantially free from demethyltetracycline is precipitated.

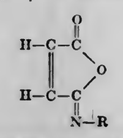
3.023,240

PREPARATION OF N,N'-DISUBSTITUTED MALEAMIDES

Carol K. Sauers, Middlebush, and Robert J. Cotter, New Brunswick, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 24, 1960, Ser. No. 31,256
12 Claims. (Cl. 260—561)

1. Process for the preparation of N,N'-disubstituted maleamides which comprises admixing an organic monoamine having at least one aminohydrogen atom per molecule with an N-substituted isomaleimide having the formula:



wherein R is a monovalent hydrocarbon radical, whereby

the said isomaleimide and the said organic monoamine react to produce the corresponding N,N'-disubstituted maleamide.

2. Process as defined in claim 1 wherein the organic monoamine is n-butyl amine.

3,023,241

PREPARATION OF ACYL HYDRAZINE DERIVATIVES

Robert D. Twelves, Northford, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Dec. 26, 1957, Ser. No. 705,098

2 Claims. (Cl. 260—561)

1. In a process for the preparation of acylhydrazides, the step of reacting at about 35° to 120° C. for at least one hour, hydrazine and an amide of the formula: $R—(CONH_2)_n$ where R is selected from the group consisting of hydrogen, monovalent and divalent saturated alkyl hydrocarbon radicals containing from one to seventeen carbon atoms and n is the valence of R.

2. In a process for the preparationof formylhydrazide, the step of reacting hydrazine and formamide for at least an hour at a temperature of about 40° to 90° C.

3,023,242

PROCESS FOR THE CONTINUOUS PRODUCTION OF ACRYIC ACID AMIDE

Dieter Bornemann, Haan, Rhineland, Manfred Dohr, Dusseldorf, and Günther Renner and Carl Ziegler, Dusseldorf-Holthausen, Germany, assignors to Henkel & Cie, G.m.b.H., Dusseldorf-Holthausen, Germany, a corporation of Germany

Filed Aug. 17, 1959, Ser. No. 833,961

Claims priority, application Germany Aug. 28, 1958

6 Claims. (Cl. 260—561)

6. A continuous process for the production of monomeric acrylic acid amide which comprises continuously passing a mixture of substantially equimolar proportions of acrylonitrile, sulfuric acid and water, said mixture containing a small but effective amount of a copper salt inhibitor, through a reaction zone heated to a temperature between about 150° C. and about 200° C. for a residence time in the heated reaction zone of less than 15 minutes, immediately thereafter passing the reacted mixture through a cooling zone and separating said monomeric acrylic acid amide from the cooled reacted mixture.

3,023,243

LONG CHAIN ALKOXY DIAMINES

Harry A. Stansbury, Jr., South Charleston, and Howard R. Guest, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 19, 1956, Ser. No. 616,936

3 Claims. (Cl. 260—584)

1. A mixture of alkoxy-substituted diamines of the formula—

$$R'HNCH_2CH_2CH_2CH_2\left(\begin{matrix}OR\\|\\CHCH_2\end{matrix}\right)_xCH_2NHR'$$

where R is an alkyl radical having from 1 to 8 carbon atoms, R' is a radical from the group consisting of hydrogen and an alkyl radical having from 1 to 4 carbon atoms and x has an average value from 1.5 to 5.5.

3. Polyethoxytetraminediols of the formula—

$$HOCH_2CH_2NHCH_2CH_2NHCH_2CH_2CH_2CH_2\left(\begin{matrix}OC_2H_5\\|\\CHCH_2\end{matrix}\right)_xCH_2NHCH_2CH_2NHCH_2CH_2OH$$

where x has an average value from 1.5 to 5.5.

3,023,244

PROCESS FOR MAKING PINONIC ALDEHYDE

Habib-Emile Eschinazi, Montclair, N.J., now by judicial change of name Emile Haviv Eschinasi, assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 2, 1959, Ser. No. 803,593

7 Claims. (Cl. 260—586)

1. The process for preparing pinonic aldehyde, which comprises reacting alpha-pinene with ozone in the presence of at least one water-miscible solvent having the formula, ROH, where R is a member selected from H, alkyl and the acyl radical of a carboxylic acid, and subjecting the resulting ozonizate of alpha-pinene to a temperature within the range from about 0° C. to about 100° C. in the presence of a reducing agent, water and a water-immiscible solvent.

3,023,245

MANUFACTURE OF DYPNONE

Robert L. McLaughlin, Woodbury, and John W. Schick, Merchantville, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Sept. 3, 1959, Ser. No. 837,779

10 Claims. (Cl. 260—590)

1. A process for making dypnone and triphenylbenzene that comprises contacting acetophenone with a catalyst selected from the group consisting of acid activated montmorillonite clay and synthetic silica-alumina containing between about 7 percent and about 15 percent alumina, by weight, at a temperature varying between about 125° C. and about 200° C., and for a period of time varying between about 2 hours and about 12 hours; the amount of said catalyst used being between about 5 percent and about 25 percent, by weight of the acetophenone reactant.

3,023,246

PRODUCTION OF BRANCHED UNSATURATED KETONES

Heinrich Pasedach, Ludwigshafen (Rhine), and Matthias Seefelder, Ludwigshafen (Rhine)-Oppau, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Nov. 23, 1956, Ser. No. 623,813

Claims priority, application Germany Dec. 10, 1955

5 Claims. (Cl. 260—595)

1. A process for the production of branched, olefinically-unsaturated ketones which comprises adding a beta, gamma-olefinically unsaturated, tertiary alcohol which boils below 140° C., said alcohol having 5–7 carbons and being of the formula

$$R_1—\overset{OH}{\overset{|}{C}}—C\equiv CH_2$$
$$\quad\ R_2\ R_3$$

wherein R_1 and R_2 are selected from the group consisting of methyl and ethyl and R_3 is selected from the group consisting of hydrogen, methyl and ethyl, the total carbons in R_1, R_2 and R_3 being at least 2 and not more than 4, in small quantities to a reaction zone maintained at 160–250° C. and containing a lower alkyl ester of acetoacetic acid, the alkyl group of which has 1–5 carbons, reacting said alcohol and said ester in the liquid phase at 160° C. to 250° C., thereby producing carbon dioxide, a branched olefinically-unsaturated ketone, and a lower alkanol corresponding with the alcohol portion of said ester and distilling off the low boiling components from the reaction mixture during the reaction.

3,023,247

ALKYLAROMATIC ALDEHYDES AND THEIR PREPARATION

Igor Scriabine, Lyon, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body

No Drawing. Filed July 28, 1958, Ser. No. 751,111

Claims priority, application France Aug. 1, 1957

2 Claims. (Cl. 260—599)

1. A process for the manufacture of alkylaromatic aldehydes of the general formula Ar.CHB.CHA.CHO. in which Ar represents a group selected from the class consisting of a mononuclear aromatic hydrocarbon, a chlorinated mononuclear aromatic hydrocarbon and a lower alkoxy mononuclear aromatic hydrocarbon, A is selected from the class consisting of hydrogen and lower alkyl and B is selected from the class consisting of hydrogen and lower alkyl, which comprises reacting an aromatic compound selected from the class consisting of mononuclear aromatic hydrocarbons, chlorinated mononuclear aromatic hydrocarbons and lower alkoxy mononuclear aromatic hydrocarbons with an aldehyde compound selected from the class consisting of ethylenically, unsaturated aldehydes of the general formula

$$CH_2{:}CA.CHO$$

and alken-2-ylidene diacylates of the general formula CHB:CA.CH $(OOCR)_2$ where R is selected from the class consisting of lower alkyl and aryl, in the presence of titanium tearachloride as catalyst and in the presence of a promoter selected from the class consisting of boron trifluoride and complex compounds of boron trifluoride with oxygenated organic compounds said promoter being present in a proportion of 0.005 to 0.1 mols per mol of titanium tetrachloride, said reaction being effected at a temperature between −30° C. and +20° C. and where a diacylate is employed, subjecting the product to hydrolysis.

3,023,248

PRODUCTION OF ORGANOBORANES

Eugene C. Ashby, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 6, 1959, Ser. No. 804,078

6 Claims. (Cl. 260—606.5)

1. A process for the manufacture of a hydrocarbon boron compound which comprises reacting a hydrocarbon oxy boroxine. $(ROBO)_3$, wherein the hydrocarbon groups contain up to and including about 30 carbon atoms with a hydrocarbon aluminum compound wherein the hydrocarbon groups contain up to and including about 30 carbon atoms.

3,023,249

PREPARATION OF POLYMERIC PEROXIDES FROM CONJUGATED DIOLEFINS

William M. Hutchinson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Original application Mar. 25, 1952, Ser. No. 278,503, now Patent No. 2,879,306, dated Mar. 24, 1959. Divided and this application Dec. 29, 1958, Ser. No. 783,130

10 Claims. (Cl. 260—610)

2. A process for the preparation of normally liquid polymeric butadiene peroxide which (a) has an average composition corresponding to the empirical formula $C_4H_6O_2$, (b) comprises repeating units of said formula $C_4H_6O_2$, (c) contains divalent C_4H_6 radicals bonded to oxygen in the 1 and 2 positions and divalent C_4H_6 radicals bonded to oxygen in the 1 and 4 positions, and (d) is capable of being reacted with hydrogen to yield a mixture of 1.2- and 1,4-four-carbon glycols, which process comprises forming said polymeric butadiene peroxide by reacting butadiene and oxygen at a temperature within the range of 71 to 150° C., said reaction being carried out under a partial pressure of oxygen of at least 20 pounds per square inch sufficient to maintain said butadiene in liquid phase and for a period of time within the range of 0.1 to 25 hours.

3,023,250

PREPARATION OF UNSATURATED ETHERS

Amelio E. Montagna and Donald H. Hirsh, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 10, 1957, Ser. No. 651,812

7 Claims. (Cl. 260—614)

1. In the process for preparing 1-alkenyl 2-haloalkyl ether which comprises heating the corresponding 1,1-di(2-haloalkoxy)alkane in the liquid phase, in the presence of an acid catalyst, to a temperature sufficient to produce a vaporous mixture comprising 1-alkenyl 2-haloalkyl ether and 2-haloalkyl alcohol coproducts, and collecting said coproducts as distillate, the improvement which comprises injecting into the distillation zone an organic nitrogen-containing base whose boiling point under the reaction conditions is between about 10° C. above and 100° C. below the boiling point of the lowest boiling component comprising said vaporous mixture.

3,023,251

PROCESS FOR PRODUCING AQUEOUS TRIMETHYLOLPHENYL SOLUTIONS

Cal Y. Meyers, Princeton, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 12, 1958, Ser. No. 779,834

13 Claims. (Cl. 260—621)

1. A process for the preparation of solutions of 2,4,6-trimethylolphenol which includes the steps of contacting an aqueous solution of a member of the group consisting of alkali and alkaline earth metal salts of 2,4,6-trimethylolphenol with a substantially water-insoluble cation exchanging material having an acid strength greater than 2,4,6-trimethylolphenol for a time sufficient to remove substantially all of the metal cation of the said member from the said solution and thereafter separating the resulting solution from the said cation exchanging material.

3,023,252

CALCIUM TRIMETHYLOLPHENATE

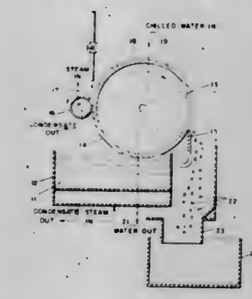
George A. Senior, Jr., Bloomfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,099

8 Claims. (Cl. 260—621)

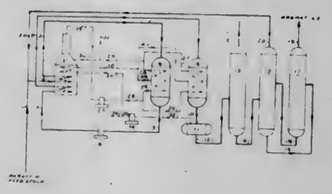
1. A process for the preparation of crystalline calcium 2,4,6-trimethylolphenate which includes the steps of atomizing an aqueous solution of calcium 2,4,6-trimethylolphenate in a heated inert gas stream at a temperature sufficiently high to flash evaporate the water from said solution but below that causing resinification of the solid calcium 2,4,6-trimethylolphenate formed and maintaining the solid calcium trimethylolphenate formed at a temperature less than that causing resinification of such product in the exit gas stream.

3,023,253
FLAKING OF MENTHOL
Joseph P. Bain and Albert H. Best, Jacksonville, Fla., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 26, 1960, Ser. No. 4,615
1 Claim. (Cl. 260—631)



L-menthol flakes 5–50 mils in thickness and about ⅛ to 1 inch in their largest dimension, an agglomerate of fine crystals, exhibiting a white coloration.

3,023,254
DEHYDROCYCLIZATION PROCESS
Donald F. Othmer, Coudersport, Pa., and Denis K. Huang, 99 Livingston St., Brooklyn, N.Y.
Filed Jan. 23, 1958, Ser. No. 710,818
6 Claims. (Cl. 260—673.5)

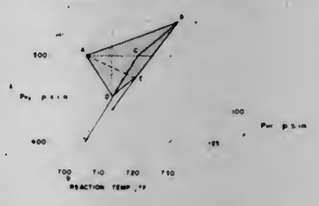


1. The process of dehydrocyclization of tertiary carbon atom free paraffinic compounds containing at least six carbon atoms in a straight chain comprising reacting said compounds at about atmospheric pressure and at from 840° F. to 1100° F. in the presence of platinum and a promoter selected from the group consisting of neodymium oxide and didymium oxide.

3,023,255
PROCESS OF DESULFURIZING CRYSTALLIZABLE AROMATIC HYDROCARBONS
Karl Friedrich Lang, Frankfurt, Walter Metzendorf, Kronberg (Taunus), Johannes Turowski, Castrop-Rauxel, and Heinrich Gick, Duisburg-Wanheimerort, Germany, assignors to Rutgerswerke-Aktiengesellschaft, Frankfurt am Main, Germany
No Drawing. Filed Sept. 25, 1959, Ser. No. 842,191
Claims priority, application Germany Sept. 27, 1958
4 Claims. (Cl. 260—674)

1. A process for desulfurizing crystallizable aromatic hydrocarbons, comprising treating the hydrocarbon to be desulfurized at elevated temperature in the range of 50° to 150° C. with a complex compound of BF_3 in the presence of a solvent selected from the group consisting of nitrobenzene and acetophenone, in which at least part of the hydrocarbon and said complex compound are dissolved.

3,023,256
PROCESS FOR ISOMERIZING NORMAL HEXANE
Norman L. Carr, Allison Park, Pa., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 23, 1959, Ser. No. 861,604
6 Claims. (Cl. 260—683.68)

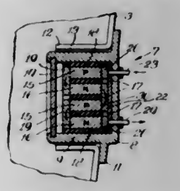


1. A process for isomerization of a sulfur-free hydrocarbon feed consisting essentially of n-hexane containing 20–35% vol. of other hydrocarbons comprising cyclohexane and methylcyclopentane and minor amounts of heptanes as impurities, which comprises contacting said hydrocarbon feed and hydrogen with a catalyst consisting essentially of 0.50–0.75% wt. palladium on silica-alumina, containing 70–90% silica, having 0–5% combined fluorine, at a hydrogen partial pressure of 450–500 p.s.i.a., a hydrocarbon partial pressure of 100–125 p.s.i.a., and temperature of 700–715° F., all lying within the shaded wedge, A—B—C—D—E, in the three-dimensional graph shown in the drawing, said process being characterized by a high reaction rate constant which remains substantially constant for periods of operation in excess of 100 hours.

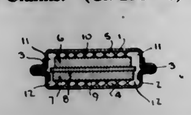
ELECTRICAL

3,023,257
THERMOELECTRIC GENERATOR
Robert W. Fritts, St. Paul, Minn., assignor by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed May 29, 1958, Ser. No. 738,866
6 Claims. (Cl. 136—4)

1. In a thermoelectric generator, the combination of a plurality of parabolic segment members joined along their edges to form a parabolic reflector, a plurality of thermoelectric assemblies each mounted at the abutting edges of a separate pair of said parabolic segment members, and said thermoelectric assemblies, each comprising thermoelectric element means having hot and cold thermojunctions, each of said thermoelectric assemblies having their hot thermojunctions disposed substantially at the focus point of the parabolic segment member opposite the abutting edges between which said thermoelectric assemblies are mounted.

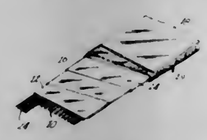


3,023,258
HERMETICALLY SEALED GALVANIC SMOOTHING OR STABILIZATION CELL
Freimut Peters, Hagen, Westphalia, Germany, assignor to Accumulatoren-Fabrik A.G., Hagen, Westphalia, Germany, a corporation of Germany
Filed May 2, 1958, Ser. No. 732,485
5 Claims. (Cl. 136—6)



1. In a hermetically sealed galvanic alkaline smoothing cell, in combination, at least two porous electrode plates of potentially changeable opposite polarity, each of said electrode plates including active mass, said active mass of each of said electrodes consisting exclusively of the type usable as regular active mass of a negative electrode of an alkaline storage battery; a porous separator between and contacting adjacent electrodes of opposite polarity; and an alkaline electrolyte at least the major portion of which is fixed in the pores of said electrodes and said separator, said sealed cell being formed with a gas space in its interior being partly defined by surface portions of at least one of said electrodes, so that gases developed during operation of said cell may be consumed in contact with said surface portions.

3,023,259
FLEXIBLE BATTERY
Myron A. Coler, 56 Secor Road, Scarsdale, N.Y., and Sidney A. Corren, 163 Cherry St., Katonah, N.Y.
Filed Nov. 18, 1959, Ser. No. 853,825
4 Claims. (Cl. 136—6)



1. A flexible rechargeable battery comprising a sealed casing, an alkaline liquid electrolyte within said casing, a pair of flexible electrodes of opposite polarity immersed in said electrolyte, said electrodes being composed of a composition containing electrochemically active material, electrically conductive material, and a synthetic resin binder, said binder being present in sufficient quantity to bind said active material and said conductive material together but comprising less than 25% by volume of said composition and a flexible electrically conductive member embedded in the composition; an electrically conductive terminal member extending from each of the said electrically conductive members, at least one of said electrodes being encapsulated in a flexible sheath porous to said electrolyte, said sheath being composed of a synthetic resin woven fiber wrapping impregnated with a porous coating of a water-insoluble resin selected from the group consisting of: polyvinyl chloride, polyvinyl chloridepolyacrylonitrile compositions, polyvinyl butyral, cellulose acetate, polyvinylidene chloride, and polyvinyl chloridepolyvinyl acetate compositions, and distributed through said resin about 0.5 to 6 parts by weight, per part by weight of said water-insoluble resin, of a water-swellable polymer selected from the group consisting of: polyvinyl alcohol, zein, gelatin, starch, carboxy methyl cellulose, carboxy ethyl cellulose, and collagens; said casing comprising a pair of flexible synthetic resin sheets sealed to each other around their periphery, with said terminals extending through the casing, said sheets being non-porous to said electrolyte, said water-insoluble resin, said water-swellable resin, said synthetic resin, and said casing being mutually non-reactive and chemically resistant to said electrolyte.

3,023,260
COILED ELECTRODE BATTERY
Myron A. Coler, 56 Secor Road, Scarsdale, N.Y., and Sidney A. Corren, 163 Cherry St., Katonah, N.Y.
Filed Nov. 18, 1959, Ser. No. 853,824
4 Claims. (Cl. 136—13)

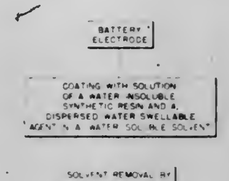


1. A battery comprising a sealed casing, an alkaline liquid electrolyte within said casing, a pair of flexible electrodes of opposite polarity immersed in said electrolyte, said electrodes being composed of a composition containing electrochemically active material, electrically conductive material, and a synthetic resin binder, said binder being present in sufficient quantity to bind said active material and said conductive material together but comprising less than 25% by volume of said composition and a flexible electrically conductive member embedded in the composition; an electrically conductive terminal member extending from each of the said electrically conductive members, at least one of said electrodes being encapsulated in a flexible sheath porous to said electrolyte, said sheath being composed of a synthetic resin woven fiber wrapping impregnated with a porous coating of a water-insoluble resin selected from the group consisting of: polyvinyl chloride, polyvinyl chloride-polyacrylonitrile compositions, polyvinyl butyral, cellulose acetate, polyvinylidene chloride, and polyvinyl chloride-polyvinyl acetate compositions, and distributed through said resin about 0.5 to 6 parts by weight, per part by weight of said water-insoluble resin, of a water-swellable polymer selected from the group consisting of: polyvinyl alcohol, zein, gelatin, starch, carboxy methyl cellulose, carboxy ethyl cellulose, and collagens; said casing comprising a closed tubular member formed of a rigid plastic non-porous to said electrolyte, said electrodes being wound in an intertwined helical relationship, and having said terminals extending through the casing; said water-insoluble resin, said water-swellable resin, said synthetic resin, and said casing being mutually non-reactive and chemically resistant to said electrolyte.

3,023,261
MONOLITHIC ELECTRODE-SEPARATOR STRUCTURE FOR ELECTROCHEMICAL CELLS
Arnold S. Louis, Hastings on Hudson, and Myron A. Coler, 56 Secor Road, Scarsdale, N.Y.
Filed Nov. 18, 1959, Ser. No. 853,826
13 Claims. (Cl. 136—19)

1. The process of encasing a battery electrode with a film porous to alkaline liquid electrolyte normally employed in combination with said electrode, comprising the steps of applying to said electrode a composition comprising a solution of a water-insoluble resin in a water-soluble solvent, having dispersed therein a water-swellable solid not soluble in said solvent, and dissolving out, with water, said water-soluble solvent, said water-insoluble resin and said water-swellable solid being mutually non-reactive and chemically resistant to said electrolyte.

and present in the ratio of from 0.5 to 6 parts of said water-swellable solid to each part of said resin, sufficient

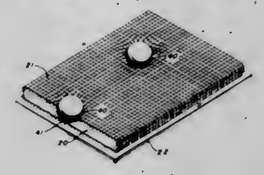


solvent being present to provide a fluid composition containing not more than 95% solvent by weight of composition.

3,023,262
BATTERY ELECTRODE

Anson A. Emmerling, Albany, and Harold B. Kaufman, Jr., New York, N.Y., William J. Osborne, Newton, Pa., and Richard A. Steenrod, Jr., Troy, N.Y., assignors, by direct and mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Aug. 13, 1952, Ser. No. 304,188
5 Claims. (Cl. 136—120)

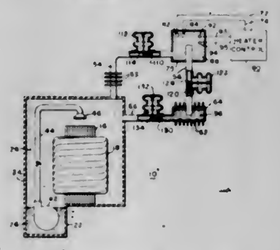


1. A composition for salt type electrodes for electrochemical battery cells comprising an electrochemically reactive salt soluble in the electrolyte and an electrochemically inert binder therefor comprising in part a water soluble wax and in part a water insoluble wax both miscible with said salt to control the rate of solution of said reactive salt.

3,023,263
ELECTRICAL APPARATUS

Daniel Berg, Churchill Borough, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 26, 1960, Ser. No. 31,915
11 Claims. (Cl. 174—14)



1. An electrical apparatus comprising, an enclosing main casing, a source of heat disposed in said main casing, first means for dissipating the heat from said source comprising a supply of fluorinated liquid coolant, the coolant boiling at a temperature between 50° C. and 225° C. at atmospheric pressure, and second means for applying a layer of said coolant over said source to cool it by evaporation of said coolant to a condensable vapor, the vapors of said coolant having an effective dielectric strength, an insulating gas in said main casing comprising a mixture of a gas which is non-condensable over the normal temperature operating range of said apparatus and the vapors of said fluorinated coolant, the non-condensable gas being volumetrically predominant when said apparatus is cold and increasingly of the vapors of said fluorinated coolant as the temperature of said apparatus increases, third means connected to said casing for adsorbing the non-condensable gas when the pressure of said insulating gas exceeds substantially a first predetermined pressure, fourth means for preventing the vapors of said coolant from entering said third means, fifth means connected between said third means and said casing for desorbing said non-condensable gas, and sixth means for returning the latter desorbed gas to said main casing when the pressure of said insulating gas decreases below substantially a second predetermined value to maintain the dielectric strength of said insulating gas above a minimum value.

3,023,264
HEAT-DISSIPATING SHIELD

Donald K. Allison, Albuquerque, N. Mex., assignor to Cool Fin Electronics Corporation, Los Angeles, Calif., a corporation of Nevada

Filed May 18, 1959, Ser. No. 814,091
16 Claims. (Cl. 174—35)



1. A heat dissipating, electrical shield for electronic components comprising: a substantially continuous metallic envelope formed to closely embrace the non-metallic envelope of an electronic component in substantially continuous good heat conducting contact therewith, and forming a shield against ambient electrical fields, said shield having a socket engaging portion thereon providing for low resistance thermal and electrical contact to an electronic chassis; and heat dissipating elements attached to said metallic envelope and extending outwardly therefrom to augment the heat dissipating surface area of the shield.

3,023,265
ELECTRICAL CONNECTOR ENCLOSURE

Frank W. Fork, Pittsburgh, Pa., assignor to H. H. Robertson Company

Filed June 13, 1960, Ser. No. 35,514
13 Claims. (Cl. 174—48)

1. An electrical connector enclosure adaptable for use in combination with an electrical raceway positioned beneath an interior flat surface of a building including a base cup and an exposed casing, said base cup having cup side walls and having a bottom wall maintained in fixed relation to said electrical raceway, a cable passageway in said bottom wall communicating with said electrical raceway, said cup side walls having at least one flat surface, said exposed casing having a flanged base adapted to rest upon said interior flat surface and having casing side walls, a portion of the said casing side walls being removable as a cover plate to permit access to the interior of the casing, a cable aperture at the top of said exposed casing, fastening means for securing said exposed casing

to said base cup including a vertical locking plate extending between the said flat surface of the said cup side walls and one of the said casing side walls, said vertical locking plate being normally secured to one of the said side walls and being engaged over a vertical surface thereof with

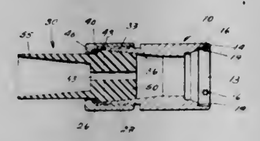


the other of said side walls, lug means secured with respect to the said other of said side walls, and means for securing the said vertical locking plate with respect to the said lugs whereby the said flanged base is compressively engaged with the said interior flat surface.

3,023,266
ENDBELLS FOR EXTENSION CONNECTORS

Robert Friedman, Brooklyn, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York

Filed Sept. 23, 1959, Ser. No. 841,888
1 Claim. (Cl. 174—75)



An endbell device comprising the combination of a tubular body endbell, a flexible boot, and means for securing said flexible boot to said tubular body endbell; said tubular body endbell having an opening at each end thereof and having means within said opening at one end of said endbell for gripping a connector component partially inserted within said opening; said flexible boot having a relatively massive head portion at one end thereof integral with an extending skirt extending toward the other end thereof; said relatively massive head portion of said flexible boot being inserted into the other end of said tubular body endbell and substantially filling said last mentioned opening of said endbell; said relatively massive head of said flexible boot having a tapered exterior portion; said last mentioned opening of said tubular body endbell having a taper complementary with said taper of said relatively massive head portion whereby said relatively massive head portion is held in fixed relationship with respect to tubular body endbell; said flexible boot having a centrally located aperture extending through said relatively massive head portion for receiving and gripping conductor means extending from said one end of said tubular body endbell to the end of said skirt of said flexible boot; said skirt having an internal tapered opening increasing in diameter towards the end of said skirt to a narrow cross-section at said end of said skirt; said means for securing said boot to said tubular body endbell including a cap threadably connected to said endbell body and disposed to force said relatively massive head portion of said boot into the tapered interior portion of said tubular body endbell.

3,023,267
COMBINATION POWER AND COMMUNICATION CABLE

Solomon Rubinstein, Brooklyn, N.Y., and Oscar G. Garner, Westfield, and George S. Eager, Jr., Upper Montclair, N.J., assignors to General Cable Corporation, New York, N.Y., a corporation of New Jersey

Filed Mar. 5, 1959, Ser. No. 797,517
5 Claims. (Cl. 174—115)

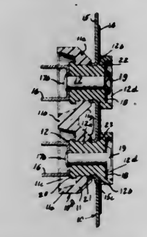


1. A combined power and communication cable including at least three different conductor units cabled together in regular helical conformation and a common outside sheath enclosing said conductor units, two of the conductor units containing power conductors and each of the power conductors having electrical insulation surrounding it, one of the conductor units containing a plurality of communication conductors, each of which is an independent conductor with its own covering of electrical insulation, the communication conductors being cabled together in regular helical conformation with their coverings of insulation forming valleys between the communication conductors, a helically-wound metal tape wrapped around all of the communication conductors with successive convolutions of the helix overlapping one another and providing a continuous shield against electro-magnetic effects from surges in the power conductors and against actual current flow from a broken and arcing power conductor to the communication conductors, and bare wire conductor means contacting with and electrically connecting successive convolutions of the shield including a ground wire in a valley between the communication conductors and cabled with them to the same regular helical conformation as the communication conductors, the bare ground wire being in substantially continuous contact with the inside surface of the helical convolutions.

3,023,268
DUAL TERMINAL INSULATOR

Ralph H. Preiser, James J. McNally, and Joseph D. Kotowski, Peru, Ill., assignors to Electrical Utilities Company, La Salle, Ill., a corporation of Illinois

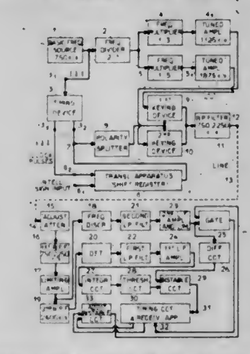
Filed Nov. 23, 1959, Ser. No. 854,758
2 Claims. (Cl. 174—153)



1. A cover assembly comprised of spaced synthetic bushings each having a bushing shoulder, a cover plate carried by said bushing shoulders and having spaced cover plate collars, a one-piece terminal insulator having cups each having upper and lower insulator edges, the lower edges of said cups being mounted on said collars, the cups providing terminal insulator socket areas in which the ends of said bushings are disposed, terminals each being carried on one of said bushings in one of said socket areas and each protruding from the bushing externally of the socket area, the cups and the bushings having aligned passages and fasteners, one disposed in each of said pas-

sages of said bushings and securing one of said terminals and one of said bushings in assembly with said one-piece terminal insulator, said synthetic bushings having upper and lower bulged portions bulged outwardly against the upper and lower edges of said cups to lock and seal the bushings in assembly with said one-piece terminal insulator when said fasteners are assembled with said one-piece terminal insulator, the lower bulged portions of said bushings being disposed between the fasteners and the collars and engaged against the lower edges of said cups and with the collars protectively encasing the lower bulged portions.

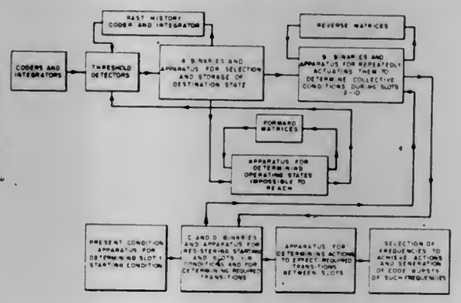
3,023,269
FREQUENCY AND PHASE SHIFT SYSTEM FOR THE TRANSMISSION OF CODED ELECTRIC SIGNALS
Maurice Auguste Francois Joseph Manière and Roger Severin Benoit-Gonin, Conflans-Sainte-Honorine, France, assignors to Lignes Telegraphiques & Telephoniques, Paris, France
Filed Mar. 26, 1959, Ser. No. 802,149
Claims priority, application France June 9, 1958
12 Claims. (Cl. 178—2)



1. A transmitting system using frequency modulated bivalent coded signals having one of two given frequencies according to their coding condition and part of which are non-phase-coherent signals presenting a sudden phase jump when passing from one to the other of said frequencies, comprising a communication link, including a transmitter, a transmission medium and a receiver, frequency filtering means in said link having a passband including both said frequencies, means in said receiver for applying signals filtered through said filtering means to the input of an amplitude limiter, means for applying limited signals including extraneous frequencies generated by the non-linear action of said limiter and received at the output of said limiter to the input of a frequency selective means having a passband located outside that of said filtering means but including at least part of said extraneous frequencies, means for applying signals from the output of said frequency selective means to an amplitude detector, and means for impressing rectified current from said detector upon a working circuit.

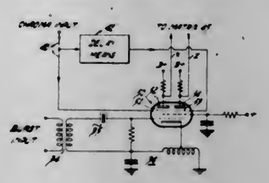
3,023,270
COMPUTER AND A METHOD OF COMPUTING
Carl G. Ellers, Fairbury, Melvin C. Hendrickson, Elmhurst, and Richard C. Herrmann, Chicago, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Filed July 23, 1959, Ser. No. 829,107
9 Claims. (Cl. 178—5.1)

1. A method for producing control effects calculated to change the operating state of a system from its instantaneous state to a selected one of several operating states during each one of a series of spaced state-determining intervals, where, starting from at least some of the operating states, it is impossible to make a transition to all of the other operating states during a state-determining interval, said method comprising the steps of: electronically determining as a starting operating state that state in which said system is established during a first state-determining interval; electronically selecting one destination operating state in which said system is to be established



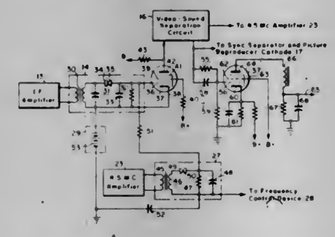
during a subsequent, second state-determining interval; developing an electrical control effect representing a transition from said starting state to said one destination state; electronically determining all of the operating states impossible to reach from said one destination operating state during a subsequent, third state-determining interval; electronically selecting from those operating states which are accessible a second destination state; and developing an electrical control effect representing a transition from said one destination state to said second destination state.

3,023,271
CHROMA CONVERTER
Robert B. Hansen, Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 1, 1956, Ser. No. 601,498
5 Claims. (Cl. 178—5.4)



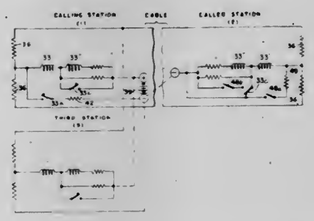
1. In a color television receiver, a source of a chrominance signal comprising a modulated color subcarrier, an electron discharge device having two electron discharge paths and including electrodes common to both of said paths and electrodes exclusively associated with respective ones of said paths, means to couple the output of said source to an electrode exclusively associated with one of said paths, a delay means coupling the output of said source to an electrode exclusively associated with the other of said paths, a source of bursts of oscillation having a frequency equal to the frequency of said color subcarrier, means coupled to said source of bursts and including frequency determining elements intercoupling electrodes common to both of said paths for utilizing said electron discharge device to generate oscillations of color subcarrier frequency in synchronism with said bursts, first output circuit means coupled to an output electrode exclusively associated with said one of said paths for deriving a first color difference signal, and second output circuit means coupled to an output electrode exclusively associated with said other of said paths for deriving a second color difference signal.

3,023,272
AUTOMATIC FREQUENCY CONTROL FOR TELEVISION APPARATUS
Charles W. Baugh, Jr., Montgomery Township, Somerset County, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 1, 1958, Ser. No. 745,961
6 Claims. (Cl. 178—5.8)



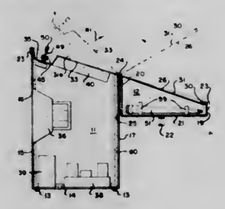
1. In a television receiver for receiving television signals consisting of a video modulated carrier wave of a first frequency and an associated sound modulated carrier wave of a second frequency having a predetermined relation to said first frequency, and in which the output of a local oscillator is heterodyned with said carrier waves so as to develop a separate intermediate frequency carrier signal for each of said carrier waves, an intermediate frequency circuit of sufficient band pass to transmit the two intermediate frequency carrier signals and having a predetermined frequency response characteristic for determining the relative amplitudes of the carrier signals in accordance with the frequencies of said carrier signals relative to said characteristic, amplitude detector and heterodyning means energized from said intermediate frequency circuit to provide an intercarrier sound wave and an amplitude detected signal proportional to the amplitude of said intermediate frequency carrier signals, with the average magnitude of said detected signal being substantially proportional to the amplitude of the video carrier signal when the same is the larger signal transmitted to said detector and being proportional to the amplitude of the sound carrier signal when the sound carrier signal is the larger signal transmitted to said amplitude detector, and with said intercarrier sound wave having an amplitude varying as a function of the amplitude of said intermediate frequency carrier waves, means for producing a first control signal proportional to the average magnitude of said detected signal, means coupled to said amplitude detector and heterodyning means for producing a second control signal varying in accordance with the amplitude of said intercarrier wave, means for controlling the frequency of said local oscillator in response to said first and second control signals, a gain control feedback circuit connected to said amplitude detector and responsive to said detected signal for controlling the gain of said intermediate frequency circuit, said gain control circuit including an automatic gain control detector having input and output terminals with said output terminals being connected to said intermediate frequency circuit to apply gain control bias potential thereto, and further including voltage dividing means connected between said amplitude detector and said input terminals for selectively applying said detected signal to said gain control detector, said dividing means having the property of dividing video frequency components of said detected signal according to a first division ratio and dividing direct current components in accordance with a second division ratio.

3,023,273
COMMUNICATION SYSTEM
Arie Liberman, % Talk A Phone Co., 1512 S. Pulaski Road, Chicago, Ill.
Filed Sept. 25, 1957, Ser. No. 686,241
19 Claims. (Cl. 179—1)



1. In a multi-station intercommunication system: a plurality of stations each including a normally disabled circuit which is necessary for operation; enabling circuit means, including a relay in each station, each relay having an actuating coil and a normally open contact, said contact being located in the disabled circuit of the station containing said relay, a source of relay operating potential; cable means interconnecting said stations and said source; and a station selector switch actuable at one station for selecting another station for communication, actuation of said switch interconnecting the actuating coils of the enabling circuit relays of said one station and the selected other station, said selector switch and said relay coils being connected through said cable means with each other and with the source of relay operating potential to establish communication between the stations, such interconnection completing a circuit through said cable means for energizing both said relay coils to actuate the relays in both said one and said selected other stations, thereby closing the normally open contacts in said both stations to bring both said normally disabled circuits into operative condition for two-way intercommunication between said one and said selected other stations.

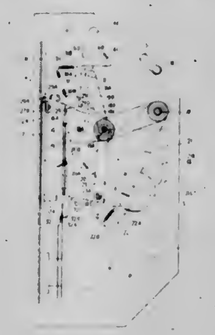
3,023,274
PORTABLE LECTERN
Henry W. Shaw, 661 Rochester Road, Ross Township, Allegheny County, Pa.
Filed Nov. 26, 1958, Ser. No. 776,618
4 Claims. (Cl. 179—1)



1. In a portable sound amplifying lectern, apparatus comprising, in combination, a generally rectilinear case having a body and a cover presenting when closed a relatively rectangular appearance in front elevation and an oblong in side elevation standing on its narrower side, said body having substantially vertical front and back

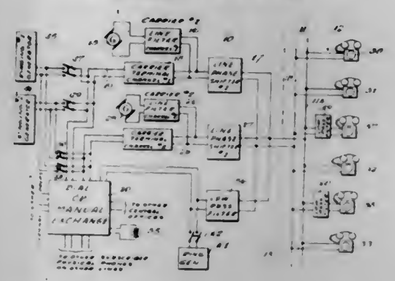
walls with said front wall higher, said cover having less height than said body, said cover further forming at least a substantial portion of the top of said case, said cover having a straight front edge and straight upper and lower back edges, the front of said cover being of lesser height than the back wall of said cover between said back edges, a hinge with a plurality of leaves some of which connect said cover at said lower back edge to the upper back edge of said body, a lower panel fastened to others of said leaves of said hinge to pivot about said hinge, said lower panel being adapted to fit and normally close the open bottom of said cover, an upper panel fastened to still others of said leaves of said hinge to pivot about said hinge, said upper panel being adapted to fit and normally close the open top of said body, the surface portions of said lower and upper panels forming a continuous lectern support when said cover and lower panel are fully open, said front wall of said body having a power speaker cutout, a power speaker fastened to the back of said last-named wall in registry with said cutout, power supply means fastened in and to a lower portion of said body, an amplifier attached to the underside of said upper panel, equipment storage means inside of said cover normally covered by said lower panel, catch means to fasten said cover and body together in closed case position to prevent said cover swinging open about said hinge when said catch means are engaged, and handle means fixed to the outside top of said cover to carry said lectern in upright position when closed.

3,023,275
COIN COLLECTORS FOR TELECOMMUNICATION SERVICES
Frederick William Hall and Andrew Young, Willesden, London, England, assignors to Associated Automation Limited, London, England, a British company
Filed June 23, 1958, Ser. No. 743,858
9 Claims. (Cl. 179—6.5)



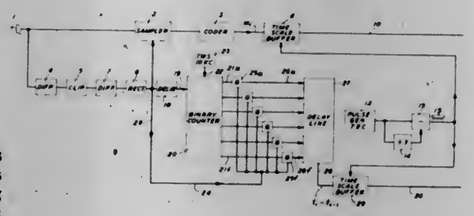
1. A coin collector for telecommunication services comprising a plurality of coin slots, coin actuated means associated with each of said slots, and pulse transmitting means, said pulse transmitting means comprising a pulse transmitting contact, a plurality of contact operating members corresponding respectively to said coin-actuated means, contact-moving means for causing movement of said contact relative to said members for operation of said contact by a selected member, said contact moving means being operatively associated with said coin actuated means, a mechanical drive for said pulse transmitting means, and a governor mechanism for controlling the speed of operation of said drive, said pulse transmitting means preceding said governor mechanism in the drive sequence.

3,023,276
COMMUNICATION SYSTEM
William C. Dillon, Van Nuys, Calif., and Clarence H. Kehm, Chicago, Ill., assignors to W. C. Dillon & Company, Inc., a corporation of Illinois
Filed Aug. 23, 1957, Ser. No. 679,840
3 Claims. (Cl. 179—15)



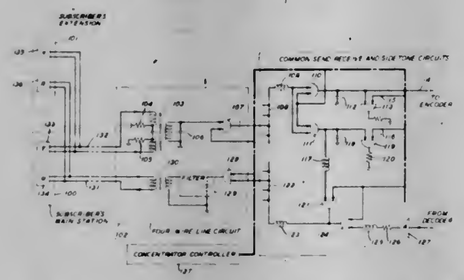
1. In a telephone system: a central station; a plurality of sources of carrier signal of different frequency at said central station; a transmission line connected to said central station for transmitting said carrier signals; a plurality of subscriber units connected to said transmission line at spaced points remote from said central station, there being at least two subscriber units responsive to each of said carrier signals, each of said subscriber units including ringing signal frequency sensitive indicating means with subscriber units responsive to the same carrier signal having ringing signal frequency sensitive indicating means which are responsive to ringing signals of different frequencies; a plurality of ringing signal generators at said central station, each operating at a different frequency; and means for independently connecting said ringing signal generators to modulate one of said carrier signals, the indicating means at a selected subscriber unit being actuated by the selected ringing signal.

3,023,277
REDUCTION OF SAMPLING RATE IN PULSE CODE TRANSMISSION
Max V. Mathews, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 19, 1957, Ser. No. 684,993
12 Claims. (Cl. 179—15)



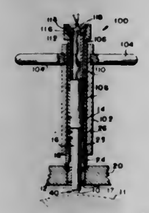
8. Apparatus for constructing a replica of an original wave from a sequence of peak-defining samples of said wave, which comprises means for generating a voltage representing, for each sample, the time interval to the next sample, means for reciprocating said voltage, means for integrating the reciprocal from the instant of the most recent sample to the present time to form an argument, means for terminating said integration at the instant of said next sample, means for generating a wave that is a preassigned continuous function of said argument, said preassigned function having zero slope at both ends of said interval, zero value at the commencement of said interval and the value unity at the conclusion of said interval, means for generating a second voltage representative of the amplitude difference between the most recent sample and the next sample, means for multiplying said second voltage by said generated wave to form a product, means for generating a third voltage that is representative of the amplitude of said most recent sample, and means for adding said third voltage to said product.

3,023,278
FOUR WIRE LINE CONCENTRATOR CIRCUIT
Dennis B. James, Far Hills, and Kenneth P. Kretsch, Harding Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 21, 1960, Ser. No. 44,303
10 Claims. (Cl. 179—18)



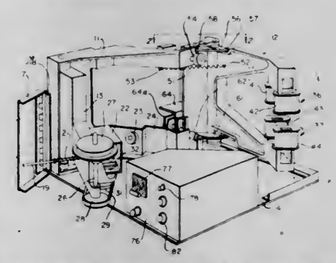
1. In a time division telephone switching system having remote concentrators, the combination comprising a plurality of four wire subscriber stations having separate transmitting and receiving transmission means, a sending transmission means common to said plurality of stations; a receiving transmission means common to said plurality of stations; a side tone transmission means common to said plurality of stations; means for selectively and simultaneously connecting said common sending means and said side tone means to said sending transmission means of one of said plurality of subscriber stations, and means for subsequently, selectively and simultaneously connecting said side tone means and said common receiving means to said receiving transmission means of said one of said plurality of said subscriber stations.

3,023,279
TRANSDUCER MOUNTING
Wesley R. Johnson, Minneapolis, and Dale O. Larson, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed June 4, 1956, Ser. No. 589,227
18 Claims. (Cl. 179—100.2)



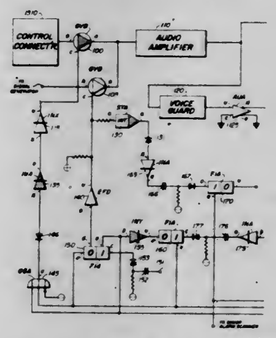
1. Apparatus for mounting a transducer device in predetermined relationship with a record member, comprising main support means disposed at a given distance from said record member, a transducer support member for said transducing device, and releasable locking means for retaining said transducer support member locked at an adjustable substantially perpendicular distance from said record member solely by friction until the locking means releases said transducer support member to allow adjustment of said distance, said last mentioned means being secured to said main support means.

3,023,280
DEGAUSSING APPARATUS
Cyril B. Tronslin, Palo Alto, John F. Sweeney, Jr., Los Altos, Dwight W. Brede, Mountain View, and James W. Dorsett, Jr., Tustin, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed July 30, 1958, Ser. No. 752,118
13 Claims. (Cl. 179—100.2)



13. A degaussing apparatus of the type adapted to erase a coil of magnetic tape comprising, means for mounting and rotating said coil, means straddling said coil for establishing a pair of magnetic fields at right angles to one another in the tangential plane of at least one of the loops of said coil with said fields being spaced in the direction of rotation of said coil, and means for moving said second named means and said coil relative to each other whereby said second named means scan the coil radially.

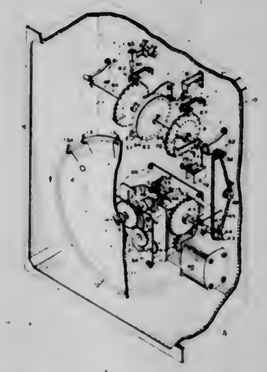
3,023,281
ELECTRONIC SWITCHING SYSTEM
Edward R. Schmidt, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,845
14 Claims. (Cl. 179—175.2)



1. In an electronic switching system, a pair of subscriber lines, switching means for establishing a communication path between said lines in at least partial dependence on control voltages applied to said switching

means, detecting means responsive to plural frequency signals derived from at least one of said lines for supplying said control voltages to said switching means in accordance with the plural frequency signals, a source of plural frequency signals, input means for alternately rendering said detecting means responsive to plural frequency signals from said source or from said lines, a voltage responsive network supplied with said control voltages from said detecting means, and means controlled at least in part by said voltage responsive network for operating said input means.

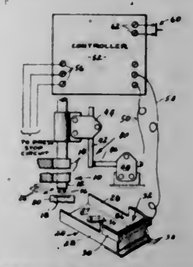
3,023,282
PROCESS CONTROLLERS
Clinton Alfred Blakeslee, Middlebury, and Ernest Freemont Dyson, Cheshire, Conn., assignors to The Bristol Company, Waterbury, Conn., a corporation of Connecticut
Filed May 29, 1959, Ser. No. 816,787
29 Claims. (Cl. 200—38)



1. In a process cycle controller, a plurality of process controlling instrumentalities, sequencing means for operating said instrumentalities in predetermined order, means for intermittently operating said sequencing means, timing means operable at substantially constant speed in a given direction for controlling said operating means to set said sequencing means into operation, means controlled by said sequencing means for rendering said operating means ineffective to actuate said sequencing means until said operating means is again rendered effective by said timing means to set said sequencing means into operation, means responsive to completion of the process cycle for causing said operating means to reset said timing means to an initial position, and one-way transmission means between said operating means and said sequencing means for preventing operation as said sequencing means by said operating means when the latter is resetting said timing means.

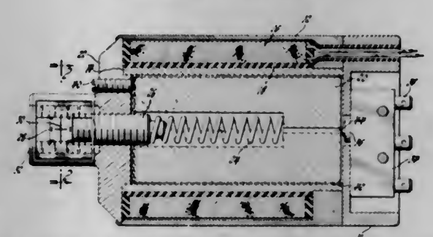
3,023,283
SWITCH APPARATUS FOR DETECTING DELIVERY OF PARTS
George Wintriss, Carversville, Pa.
Filed Nov. 20, 1959, Ser. No. 854,296
11 Claims. (Cl. 200—61.41)

11. A missing-parts detector for location in the paths of movement of parts delivered from a machine, the detector including electric circuit make-and-break means having a plurality of feelers extending downwardly and across the paths of movement along which parts are delivered from the machine, and a make-and-break circuit controlled by said electric circuit make-and-break means and responsive to the displacement of one or more of the feelers by a part passing along said path, and in which the feelers extend downwardly across a face of a support,



and there are magnets located in sockets in said face of the support in position to hold the feelers in their downwardly-extending positions in spite of air blasts delivered along the path which is to be followed by the parts.

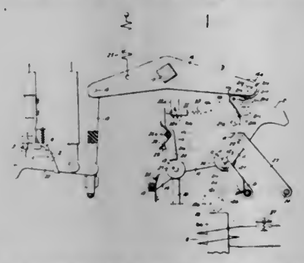
3,023,284
ACCELERATION RESPONSIVE DEVICE WITH CONTROLLED TIME DELAY
Argyle G. Lautzenhiser, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 5, 1959, Ser. No. 797,391
5 Claims. (Cl. 200—61.53)



1. An acceleration responsive device adapted to operate utilization means at a predetermined value of decreasing acceleration comprising a support member, a seismic mass movably supported thereby, force exerting means on the support member and operatively engaging the mass to urge it in one direction toward a reference position with a predetermined constraining force, utilization means including an actuator disposed on the support member for operative engagement by the seismic mass in its reference position, and stop means for limiting the travel of the seismic mass in the opposite direction when an increasing acceleration force exceeds the constraining force, first adjusting means for adjustably positioning the stop means for determining the time delay required for the mass to reach its reference position when a decreasing acceleration force falls below the constraining force, and second adjusting means operatively connected with the force exerting means for adjusting the constraining force independently of the first adjusting means.

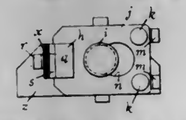
3,023,285
OPERATING MECHANISM FOR CIRCUIT BREAKER
John A. Favre, Broomall, Pa., assignor to General Electric Company, a corporation of New York
Filed Feb. 11, 1960, Ser. No. 8,106
5 Claims. (Cl. 200—87)

1. A circuit breaker closing mechanism comprising a toggle having a first link and a second link pivotally connected to each other to form a toggle knee, a follower on said knee movable from a fully open position to a fully closed position as said breaker is moved through its closing stroke, actuating means comprising an electromagnetic solenoid having a movable armature for driving said follower from said fully open position toward said fully closed position, a pivotally mounted first guide link pivotally connected to said first toggle link remote from



said knee, a circuit breaker operating arm provided with a cam follower, a cam on said second toggle link remote from said knee for engagement with said cam follower, latching means for holding said first guide link in a predetermined position, and a pivotally mounted second guide link pivotally connected to said second toggle link for maintaining said cam in engagement with said cam follower during the closing stroke of said breaker.

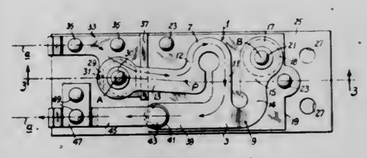
3,023,286
ELECTROMAGNETIC ELECTRIC SWITCHES
William George Bourne, Acton, London, and Charles Ewart Hayter, Oxhey, England, assignors to Rotax Limited, Willesden, London, England
Filed June 11, 1959, Ser. No. 819,629
1 Claim. (Cl. 200—87)



An electromagnetic electric switch comprising in combination an iron core having a head on one end thereof, a winding mounted on the core, an L-shaped iron yoke consisting of a first member to which the other end of the core is detachably secured, and a second member extending along one side of the winding and having on its outer end a lip extending towards the head on the core, an electrically insulating contact carrier removably secured to the core by the engagement of a key-hole slot in the contact carrier with the head on the core, and provided with a gapped end engaging the second member of the yoke and the underside of the lip thereon, so that removal of the contact carrier from the core is prevented until the core is detached from the first member of the yoke, a movable iron armature extending over the head on the core and the lip on the second member of the yoke, a resilient metal strip connecting the armature to the second member of the yoke, and a second electrically insulating contact carrier attached to the armature.

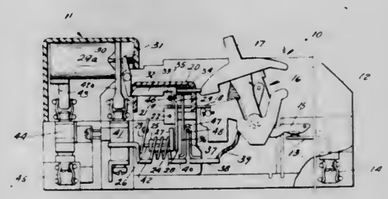
3,023,287
THERMOSTATIC DEVICE
Henry David Epstein, Cambridge, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,514
6 Claims. (Cl. 200—113)

1. A thermostatic device comprising a composite flexible thermostatic plate having bonded layers at least one of which is electrically conductive, said plate being of general S-shape comprising a first loop and an opposed second loop joined by a common intermediate leg, the first loop and the second loop terminating in endwise first and second legs respectively, a first arm extending at an angle from said first leg, a second arm extending from the second loop and in the general direction of said first arm, a movable contact on one face of said second arm and means supporting a fixed contact on that side of the plate corresponding to said face, said fixed contact being positioned to be engaged and disengaged by said movable contact, spaced supporting means for said first arm and an end portion of said second leg adapted to



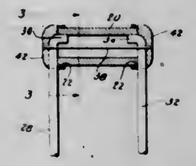
apply warping force to the plate generally along its plane and transversely to the length of the intermediate leg thereby to bias said movable contact against said fixed contact when the plate is comparatively cool, the layers of said plate in at least some parts of said first loop and the first and second arms being composed of materials having relatively high and low thermal coefficients of expansion respectively, the layer of low coefficient being on the side of the plate corresponding to the side on which said movable and fixed contacts are located, and means adapted to supply current to the plate in series through said first arm, the first loop, the intermediate leg and the second arm.

3,023,288
CIRCUIT BREAKER BIMETAL HEATER
August Bodenschatz, Philadelphia, Pa., and Carl E. Gryctko, Haddon Heights, N.J., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 25, 1959, Ser. No. 835,882
6 Claims. (Cl. 200—116)



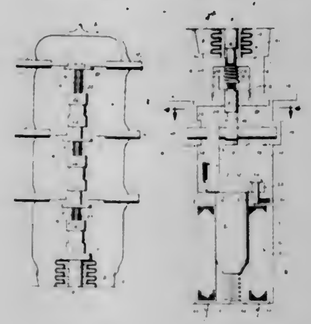
1. A heater for an indirectly heated bimetal; said heater being formed of a substantially U-shaped member having elongated legs joined at a bent portion; said legs having confronting surfaces whose widths are materially greater than the thicknesses of said legs; one of said legs having said bimetal directly connected thereto; said bimetal being an elongated member extending substantially parallel to said leg having said bimetal connected thereto; said bimetal being deflected away from said last mentioned leg at least partially due to heat caused by the flow of electrical current through said substantially U-shaped heater; a heat conductive member; said heat conductive member being connected to said bent portion of said heater and serving as a heat sink for said heater.

3,023,289
PROTECTORS FOR ELECTRIC CIRCUITS
Craig L. McAlister, Overland, Mo., assignor to McGraw-Edison Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 25, 1958, Ser. No. 731,059
13 Claims. (Cl. 200—131)



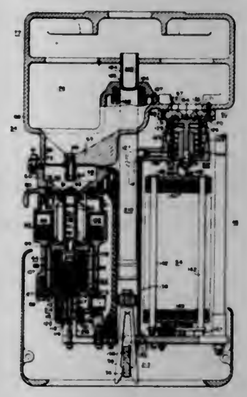
1. The method of making a protector for electric circuits which comprises metallizing the ends of the casing for said protector, electrodepositing a film of metal on each of said metallized ends, inserting a current-responsive element in said casing, disposing terminals adjacent said ends of said casing, and applying electrically conducting bonding material directly to said casing and to said electrodeposited film on said ends of said casing and to said current-responsive element and to the terminals of said protector to electrically connect said terminals and said current-responsive element and to fixedly bond said terminals to said electrodeposited films on said ends of said casing and thereby hermetically seal said ends of said casing by filling and closing said ends of said casing.

3,023,290
RELAY
Jo Emmett Jennings, San Jose, Calif., assignor, by mesne assignments, to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of Delaware
Filed Aug. 18, 1958, Ser. No. 755,688
5 Claims. (Cl. 200—144)



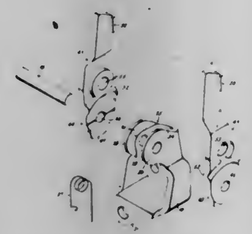
1. A vacuum relay comprising an evacuated envelope including a dielectric shell and a metal end cap closing one end of the shell, an axially movable stem mounted on the end cap and extending into the envelope and tending to be moved into the envelope by atmospheric pressure, a pair of opposed contact rods supported on the shell and extending into the envelope to provide spaced contact points within the envelope and terminal leads outside the envelope, a contact disk within the envelope electrically insulated from said end cap and mounted on the stem for axial movement therewith to selectively engage and disengage said pair of spaced contact points, spring means operatively interposed between said stem and end cap to normally resiliently retain the contact disk in disengaged position against atmospheric pressure, and electromechanical means including a solenoid detachably mounted on the end cap and comprising a magnetizable housing enclosing an energizable coil and a magnetically responsive axially movable armature associated therewith, a pawl on the armature movable therewith, a ratchet wheel journaled for rotation by said pawl, a cam journaled for rotation with said ratchet wheel, and a cam follower operatively interposed between the cam and the stem to limit the outward movement thereof as urged by said spring means and to effect axial movement of the stem into the envelope against the pressure of said spring to engage the contact disk with the contact points when the solenoid is energized.

3,023,291
COMPRESSED GAS CIRCUIT INTERRUPTER
Otto H. Soles, East Pittsburgh, and Richard E. Kane, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1959, Ser. No. 837,227
6 Claims. (Cl. 200—148)



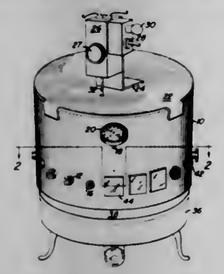
1. A compressed gas circuit interrupter including means defining an enclosure containing pressurized gas, an interrupting assembly disposed interiorly within the enclosure and including a main current interrupter unit and an impedance interrupting unit connected in electrical parallel with each other, said main current interrupting unit having a movable main contact associated therewith, first operating means including a piston movable with said movable main contact and also including first dumping means for exhausing gas from the back side of said piston to effect opening movement of said movable main contact to force current to flow through the parallel disposed impedance interrupting unit, second operating means including a piston movable with said movable impedance contact and also including second dumping means for exhausing the gas from in back of said last-mentioned piston to effect opening movement of said movable impedance contact, means responsive to operation of the first operating means for actuating said second operating means subsequent to the actuation of said first operating means to effect opening movement of the impedance contact only after the opening of the movable main contact, and reclosing valve means operable in response to reclosing of the first dumping means to directly connect the back of the movable impedance piston to the pressurized gas enclosure to effect rapid reclosing of the movable impedance contact.

3,023,292
ELECTRIC CIRCUIT INTERRUPTER
Vincent N. Stewart, Springfield, Pa., assignor to General Electric Company, a corporation of New York
Filed Oct. 1, 1958, Ser. No. 764,639
6 Claims. (Cl. 200—166)



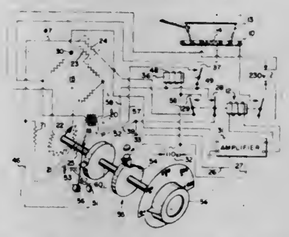
1. In the contact structure of an electric circuit breaker: a base member; a relatively stationary contact member mounted on the base member; an electroconductive bracket mounted on the base member in spaced relation to the stationary contact member; an elongated movable contact arm supported near one end thereof by the bracket for movement of its other end into and out of circuit making engagement with the stationary contact member, the bracket and said one end of said arm having contiguous surfaces forming a current-conducting joint and the movable contact arm having an integral protrusion disposed near said one end to shield said joint from an electric arc and arc products which may be produced during circuit breaking action of the contact structure; and actuating means coupled to the movable contact arm for moving said arm.

3,023,293
CONSTANT TEMPERATURE HEATER FOR MICROTOME OBJECT DISCS
Edwin R. Cornish, Jr., Frederick, Md., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 16, 1959, Ser. No. 853,429
2 Claims. (Cl. 219—19)
(Granted under Title 35, U.S. Code (1952), sec. 266)



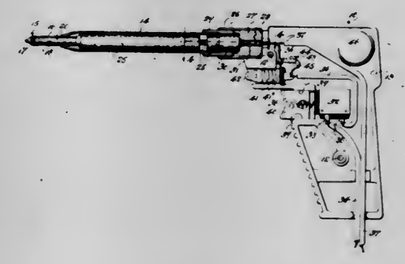
2. A cylindrical tank having a plurality of apertures uniformly spaced above its circumference, insert means being held in each of said apertures, and extending into the interior portion of said tank, microtome object means being held by said insert means, cover and support means attached to said cylindrical tank, automatic temperature control means attached to said cover and support means, heat transfer fluid contained inside said tank, and heat producing means in contact with said tank for heating the heat transfer fluid.

3,023,294
CONTROL APPARATUS
Asbjorn M. Severson and Arlon D. Kompelien, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 2, 1959, Ser. No. 790,429
7 Claims. (Cl. 219—20)



4. In a temperature control system for pre-heating a load to quickly bring the load up to temperature, a first temperature responsive means having a first output which changes with the temperature of a load, second temperature responsive means having a second output, control means adapted to control the supply of heat to the load, means connecting said first and second outputs to said control means, a temperature selector connected to said control means, a heater thermally associated with said second responsive means, a time controlled means for energizing said heater, said time means being adjusted upon a change in said temperature selector so said heater is energized a selected period depending upon the magnitude of said change, said outputs being in opposition so the heating of said second responsive means causes said second output to increase to overcome the effect of said first output to maintain a supply of heat to the load; however, after said time control means deenergizes said heater and said second responsive means cools, the effect of said first output will overcome said second output to cause said control means to terminate said supply of heat of the pre-heating operation and the temperature of the load will arrive at the temperature selected by said selector.

3,023,295
ELECTRIC SOLDERING IRON OF THE INSTANT HEAT TYPE
Arthur L. Johnson, Roselle Park, N.J., assignor to Hexacon Electric Company, Roselle Park, N.J., a firm
Filed July 30, 1958, Ser. No. 752,049
2 Claims. (Cl. 219—26)



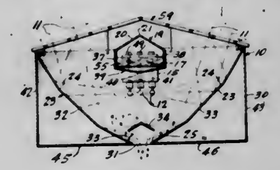
1. In an electric soldering iron of the type having a tubular shank terminating in a hollow soldering tip in which is enclosed a heating element formed by helically coiled high resistance wire, to which heating element are connected ballast coils of wire having a positive coefficient of resistivity disposed to extend rearwardly through

the shank, the combination therewith of a hollow handle member of the pistol grip type to support said shank and soldering tip in outward projection therefrom, means to mechanically and electrically detachably connect said shank and its soldering tip, heating element and ballast coil assembly to the hollow handle member, said handle member having a hand grip portion, electrical conductors entered in the handle member through said hand grip portion thereof and detachably connected to said ballast coils to supply operating current from a source of electrical energy to the ballast coils and heating element, a switch mounted within said hand grip portion of the handle member and connected in the circuit of said electrical conductors, a spring released finger manipulatable trigger supported in connection with the hand grip portion of the handle member and operative by finger applied pressure to close said switch, whereby manipulated closing and opening of the switch controls delivery of operating current to the ballast coils and heating element, an electric lamp socket and bulb mounted in connection with the front of the hand grip port of the handle member, said socket being connected in shunt circuit with the electrical energy supply conductors in series with the switch, ballast coils and heating element, and said shunt circuit including a resistance coil having a positive coefficient of resistivity, whereby, when the switch is closed, to energize the lamp bulb by delivery thereto of a constant selected actuating voltage.

3,023,296
RADIANT HEATING DEVICE

Ira J. Barber, Fostoria, Ohio, assignor to Fostoria Corporation, Fostoria, Ohio, a corporation of Ohio

Filed Feb. 23, 1960, Ser. No. 10,295
4 Claims. (Cl. 219—34)



1. A radiant heating device comprising: a radiant heat source, a hollow shield adjacent said source having at least one convex face, said radiant heat source including at least one tubular infrared radiation element having its ends supported in connectors mounted in said hollow shield, wiring in said hollow shield for electrically connecting said connectors to a source of energy, a concave reflector opposed to said radiant heat source and extending to peripheral edges beyond at least a part of said shield to reflect rays from said source between said shield and said peripheral edges of said reflector, said reflector having an aperture directly opposite said heat source, and a convex reflector intermediate said aperture and said heat source to reflect the rays from said heat source directed toward said aperture to said concave reflector.

3,023,297
WALL TYPE ELECTRIC HEATER ASSEMBLY

Edmund W. Abel, Indianapolis, Ind., assignor, by mesne assignments, to The Lau Blower Company, Dayton, Ohio, a corporation of Ohio

Filed Aug. 22, 1960, Ser. No. 51,150
6 Claims. (Cl. 219—34)

1. A wall insert heater assembly comprising a wall box adapted for mounting within a wall surface and having an open side, a top wall on said box having mounting bracket means projecting downwardly therefrom, a reflector pivotally and releasably supported on said bracket means for operative positioning in said wall box, said reflector being substantially smaller than said box to provide a space therebetween, heating elements supported on said reflector, means for maintaining a spaced relationship between said reflector and said box, a frame member for operatively enclosing the front of said space, means defining a slot in said frame member for venting said

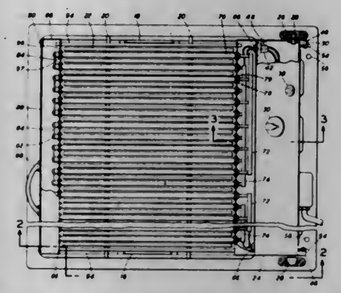


space, said top wall of said box extending forwardly therefrom into the top of said slot to a position forward of the wall surface for supporting said frame member on said wall box and for preventing the air flowing from said space through said slot from seeping between said top wall and said frame member, and means for securing said frame member to said wall box in engagement with said reflector to lock said reflector to said box.

3,023,298
ELECTRIC BROILER

Donald A. Wells, Lafayette, Calif. (220 9th St., San Francisco, Calif.)

Filed Mar. 21, 1960, Ser. No. 16,314
20 Claims. (Cl. 219—37)

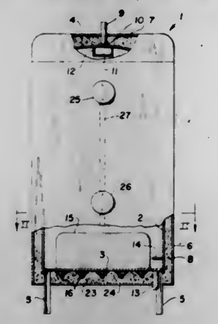


1. An electric broiler comprising a housing, a drip pan mounted on said housing, a generally horizontal grid of grill bars mounted over said pan, a plurality of heating elements removably disposed between said bars of said grid with adjacent grill bars separated by one heating element and with the top surfaces of said heating elements disposed below the top surface of said bars, said heating elements being removable upwardly out of and away from said grid, an electrical control box above said housing adjacent to said pan and supporting said heating elements, and electrical control means in said control box for controlling the supply of electrical current through said heating elements.

3,023,299
ELECTRICAL WATER HEATERS

Raymond P. Mills, R.D. 2, Box 89, Latrobe, Pa.

Filed Aug. 11, 1959, Ser. No. 833,087
2 Claims. (Cl. 219—38)

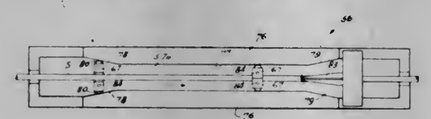


1. In a boiler for hot water heating systems in combination, a metal water container having vertical connected side walls and closed top and bottom walls, an outlet pipe extending through said top wall, an inlet pipe extending through said bottom wall adjacent one side wall, a baffle plate overlying said inlet pipe for deflecting incoming water laterally over said bottom wall, spaced heat exchanger plates extending transversely of said bottom wall from adjacent said baffle plate, each said heat exchanger plate having its bottom edge in contact with and secured to the adjacent inner face of the bottom wall, substantially rectangular heating element disposed upon the outer face of said bottom wall beneath said heat exchanger plates, each said heating elements being engaged by a plurality of bi-metallic members of different expansion characteristics initially exerting pressure upon the heating element to maintain contact with the said bottom wall at room temperatures and maintaining continuous pressure upon the elements under all increased temperature conditions, a casing enclosing the boiler side and top walls in spaced relation thereto and insulation filling said space, a casing plate disposed beneath said boiler bottom wall in spaced relation to said heating elements and insulation filling said space.

3,023,300
METHOD AND APPARATUS FOR FORMING CABLE SHEATH

Guenther Lehnert, Hannover, Germany, assignor to Hackethal Draht- und Kabel Werke A.G., Hannover, Germany, a corporation of Germany

Filed Aug. 10, 1959, Ser. No. 832,665
7 Claims. (Cl. 219—60)

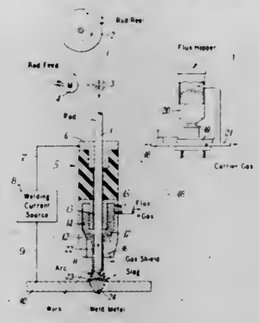


1. The process for continuously forming a tubular sheath from a metal strip comprising continuously feeding said strip in a longitudinal path, continuously forming the moving strip into substantially tubular form and bringing the opposite strip edges toward each other, pressing the opposed marginal edge portions of said tube downwardly toward the axis thereof to locate said strip edges at a predetermined spacing, immediately thereafter welding said strip edges together to form a continuous butt joint, corrugating the welded tubular sheath transversely thereof at a point beyond the welding point, and gripping the welded tubular sheath during the movement thereof between the welding and corrugating points to prevent torsional stresses originating at said corrugating point from being transmitted to the welding point.

3,023,301
SILICA-FREE WELDING FLUX

Gerard E. Claussen, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Filed Mar. 5, 1956, Ser. No. 569,382
4 Claims. (Cl. 219—74)

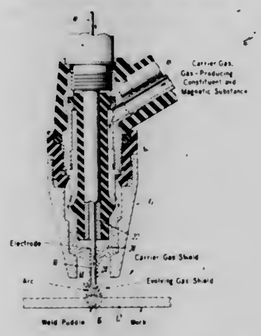


1. A magnetic silica-free flux powder for consumable-electrode gas-shielded metal arc welding of steel, which is composed of 12–40% rutile, 1–10% fluoride, 1–10% silicon, 2–10% manganese, and 15–48% ferromagnetic material.

3,023,302
ELECTRIC ARC WELDING

Harry E. Kennedy, Berkeley, Calif., and Gerard E. Claussen, Summit, N.J., assignors to Union Carbide Corporation, a corporation of New York

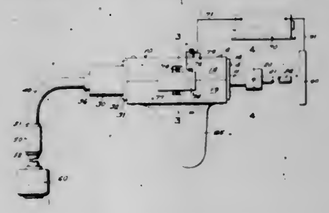
Filed Apr. 3, 1957, Ser. No. 650,383
13 Claims. (Cl. 219—74)



1. Shielded electric metal arc welding process which comprises delivering a stream of gas-carried magnetic flux powder around the end portion of a metal wire electrode to which, after the arc is struck and while welding current is flowing in such wire electrode, such powder is attracted with sufficient magnetic force to dominate the force of gravity and form a flux covering on such a wire electrode, striking a welding arc between the end of such wire and the work to be welded, maintaining such

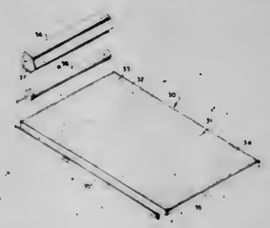
welding arc and feeding the magnetic-powder-covered wire toward such an arc as the end is consumed thereby, characterized in that said magnetic flux powder contains 12–40% of a weld-protective gas-evolving constituent of the class consisting of $CaCO_3$, dolomite, $MgCO_3$, $BaCO_3$, asbestos and mica, which weld-protective gas serves to effectively shield such arc during the welding operation in case the flux carrier gas becomes ineffective for such purpose.

3,023,303
WELDING PROCESS AND APPARATUS
Petro Shajenko, 26218 Crystal, Center Line, Mich.
Filed May 25, 1959, Ser. No. 815,757
2 Claims. (Cl. 219—130)
(Granted under Title 35, U.S. Code (1952), sec. 266)



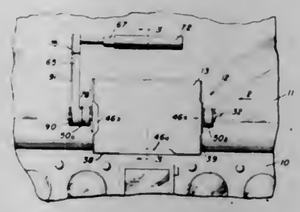
1. In combination, arc welding apparatus comprising a consumable rotatable metal electrode, electrical circuit means connecting said electrode to a metal workpiece, a source of current for energizing an arc between said electrode and workpiece, a housing of insulating material, a rotatable shaft in said housing, means connecting one end of said shaft engaging to said electrode for rotation thereof, a flexible rotatable drive shaft engaging said shaft for rotation thereof, constant speed electrical means for continuously rotating said drive shaft, insulator means disposed in said shaft whereby electrical current is prevented from being shunted to all parts of the welding apparatus.

3,023,304
SHADOW BOX
Lorenz A. Peterson, Golden, Colo., assignor to Sinclair Oil & Gas Company
Filed Aug. 7, 1958, Ser. No. 753,720
1 Claim. (Cl. 240—1)



A shadow box which includes a flat sheet of edge-lighting material, means on one face of said sheet defining a flat substantially roughened working area on said one face of said sheet, means defining a second substantially roughened area on said one face of said sheet, means defining a substantially smooth area on said one face of said sheet separating said second named roughened area from said first named roughened area, and illuminating means positioned adjacent said one face of said sheet overlying said second roughened area whereby said working area of said sheet is lighted by said illuminating means.

3,023,305
ILLUMINATING MEANS
Lawrence S. Shapiro, Los Angeles, Calif., assignor to Clowd, Inc., Arcadia, Calif., a corporation of California
Original application Apr. 13, 1954, Ser. No. 422,734, now Patent No. 2,824,393, dated Feb. 25, 1958. Divided and this application Jan. 29, 1958, Ser. No. 711,956
4 Claims. (Cl. 240—2)



1. An illuminating device, comprising: a supporting member having at the rear end thereof mounting means for attaching it to a supporting wall, and adjacent said mounting means a channel open at one end; a hinge pin projecting from a side edge of said supporting member in spaced relation to said open end of said channel; a lamp holder resting in said channel, one end thereof being disposed contiguous to said open end of said channel; an arm extending along said side edge, one end of said arm being connected to said lamp holder and the other end thereof being connected with said hinge pin so that upon swinging of said arm on the hinge pin said lamp holder is moved from said channel to carry a lamp therein into a position of use spaced outwardly from said supporting member; an electric lamp circuit electrically connected to said lamp holder, said circuit including a first switch contact carried by said hinge pin and a second switch contact supported on said arm for movement therewith and being engageable with said first contact to energize said circuit as said arm is swung so as to raise said lamp holder from said channel; an arcuate resistance element; means supporting said resistance element surrounding the axis of said pin; a slide contact supported for sliding engagement with said element, said resistance element and associated contact being electrically connected in series in said lamp circuit; a rotatably supported knob surrounding the axis of said pin; and means connecting said slide contact to said knob so that by rotation of said knob said slide contact may be moved along said resistance element to vary the current flow in said circuit.

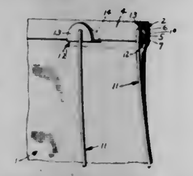
3,023,306
ILLUMINATING ATTACHMENT FOR DENTAL HANDPIECES
Fred J. Kester, Denver, Colo., assignor to Densco, Incorporated, Denver, Colo., a corporation of Colorado
Filed Feb. 16, 1959, Ser. No. 793,360
1 Claim. (Cl. 240—2)



In combination, a contra-angle dental handpiece having a rigid barrel comprised from cylindrical sections progressively reduced in exterior diameter and a head at the end of said barrel section having the smallest exterior diameter operatively mounting an instrument radially of the adjacent barrel section powered through the barrel,

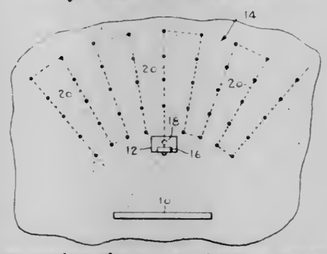
a stiff tube of conductive material diametrically much smaller than any section of the barrel, said tube having a length slightly less than that of the barrel, a spring clip frictionally coacting with a barrel section of intermediate diameter fixed tangentially of and opening away from said tube between the ends thereof detachably engaging said barrel to adjustably attach said tube thereto with one end of the tube directed toward the instrument in the angle between the axes of said instrument and the associated barrel section, an internally-threaded seat in the end of said tube directed toward the instrument, an insulating sleeve fixed interiorly of said tube inwardly adjacent said seat, an insulated, single-wire conductor traversing said tube with a terminal length of its single wire engaged by and extending through said sleeve and having an end exposed centrally of said seat, a miniature electric bulb detachably retained in said seat in operative contact with the exposed end of the conductor wire, an open sided hood shrouding said bulb and detachably and adjustably mounted thereon, a radially-enlarged, end-opening, coaxial socket at and integral with the end of said tube remote from the bulb, an insulating sleeve fixedly closing the end of said socket in slight extension outwardly therefrom, a terminal length of the single wire of the conductor engaged by and extending through said latter sleeve and having an end exposed centrally of the extension thereof, a sleeve of conducting material telescopically coacting with and exteriorly engaging said socket, a plug of insulating material fixed interiorly of the sleeve of conducting material inwardly from an end thereof in opposition to the extension of the insulating sleeve closing the associated end socket of the tube, an insulated, two-wire conductor connectible with a source of supply of electric current terminally received in said sleeve of conducting material at the side of the plug remote from the associated socket, a terminal length of one of the two wires of said conductor engaged by and extending through and having an end exposed centrally of said plug in registered contact with the end of the conductor single wire positioned by the insulating sleeve of the associated socket, and a terminal length of the other of the two wires of the conductor received in the sleeve of conducting material conductively connected to the material of said latter sleeve.

3,023,307
COLLAPSIBLE LAMP SHADE
Yukio Okamoto, 330 Oak Grove, Apt. 117, Minneapolis, Minn.
Filed Apr. 6, 1959, Ser. No. 804,514
2 Claims. (Cl. 240—108)



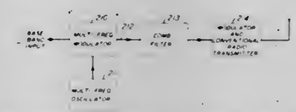
1. A collapsible lamp shade comprising two independently movable endless frame bands or hoops, an elongated shade member composed of a body of tubular flexible fabric material surrounding a hoop adjacent each end of said tubular body, the material of said each end of said tubular body being folded inwardly around its respective hoop thence outwardly between said hoop and said tubular body providing between each hoop and said tubular body inwardly opening endless pockets, a plurality of elongated fabric stretching stays extending from one of said hoops to the other and located inside said tubular body, and outwardly opening generally U-shaped saddle members carried at opposite ends of said stays and straddling the inner edge portions of said hoops at circumferentially spaced points thereon, whereby to extend into said endless pockets and embrace the inner and outer peripheries of said hoops within said tubular body.

3,023,308
SOUND SYSTEM FOR OUTDOOR THEATERS
Richard P. Herzfeld, 3541 North Lake Drive, Milwaukee, Wis.
Filed Feb. 16, 1959, Ser. No. 793,368
2 Claims. (Cl. 250—6)



1. In an outdoor theater sound system, means including a motion picture projector for producing an audio signal, a transmitter to convert said signal to a radio frequency signal within the standard broadcast range, a shielded non-radiating cable connected to said transmitter and extending to the parking and viewing area of said outdoor theater, and a plurality of antennas connected to said shielded cable for radiating said radio signal only in the immediate vicinity of said antennas for reception by radios in automobiles parked in the immediate vicinity of said antennas.

3,023,309
COMMUNICATION SYSTEM
John D. Foulkes, Mountain Lakes, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 19, 1960, Ser. No. 76,830
9 Claims. (Cl. 250—17)

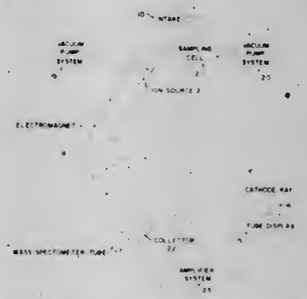


9. In a system for the transmission of signals occupying a frequency band, a harmonic signal generator producing a signal outside said frequency band and a plurality of harmonics thereof, modulation means connected to modulate said frequency band of signals with said produced signal and its harmonics, thereby producing sideband signals at each harmonic frequency, a comb filter connected to the output of said modulation means and selectively passing a different discrete portion of the sideband appearing at each harmonic frequency, and means connected to said comb filter for transmitting the output thereof over a transmission channel.

3,023,310
METHOD AND MEANS FOR DETECTING SUBMARINES
Louis R. Maxwell, 3506 Leland St., Chevy Chase, Md.
Filed July 12, 1955, Ser. No. 521,651
2 Claims. (Cl. 250—43.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The method of locating a source of a predetermined gaseous material comprising the steps of taking at a

first sequential series of geographically spaced points a first series of samples of a fluid medium containing said material, subjecting each of said samples to a mass spectrographic analysis to determine the quantity of said material present, plotting the location of the point at which the sample of maximum quantity was obtained, taking a second series of samples at a second sequential series of geographical points spaced from said first series,



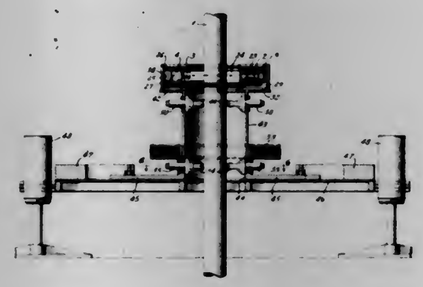
subjecting each of said last named samples to a mass spectrographic analysis, plotting the geographical location at which said second maximum amount of said material was taken, obtaining from the two maximum points the geographical direction of the trail of said material; repeating the above steps until the amount of said material in said samples indicates that said source has been bracketed by the series of samples.

3,023,311
X-RAY DIFFRACTOMETRY
Irwin I. Bessen, New Rochelle, N.Y., assignor to Philips Electronics, Inc., New York, N.Y., a corporation of Delaware
Filed July 30, 1958, Ser. No. 751,942
7 Claims. (Cl. 250—51.5)



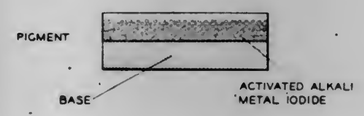
1. A method of making a structural analysis of a polycrystalline sample lying in a first plane, said method comprising the steps of: exposing the sample to a beam of monochromatic X-radiation diverging from a point source having a cross-sectional area smaller than that of crystallites in the sample and located at a fixed, perpendicular distance "*b*" from said first plane; intercepting, on a second plane located at a distance "*a*" from said point source, wherein "*a*" is the perpendicular distance from said point source to said second plane and "*a*" is greater than "*b*," an X-ray image of the sample, including arcs deficient in radiation corresponding to the radiation diffracted by the sample; and measuring the arc length, breadth, and number of the deficiency arcs to determine the size, location, imperfection content, and population of crystallites in the sample, the size of each of said crystallites being b/a times the measured arc length.

3,023,312
RADIOACTIVE PIPE THICKNESS MEASUREMENT
Fenton M. Wood, Houston, Tex., assignor to Tuboscope Company, Harris County, Tex., a corporation of Delaware
Filed Oct. 3, 1957, Ser. No. 687,995
12 Claims. (Cl. 250—52)



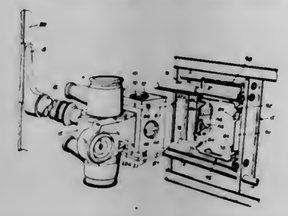
1. Apparatus for detecting the wall thickness of pipe comprising a radioactive source, a detector of radiations from the source operable to transduce the number and intensity of rays reaching it into a voltage of magnitude varying therewith, a carrier for the source and the detector having a central passageway through which the pipe may pass, said source and detector being mounted diametrically opposite each other whereby radiation from said source will pass through both walls of pipe in said passageway in route to said detector, means for rotating said carrier to cause the source and detector to helically scan advancing pipe, and means for indicating the output of said detector.

3,023,313
METHOD OF MAKING AN X-RAY IMAGE INTENSIFYING SCREEN AND RESULTING ARTICLE
George B. De La Mater, St. Johns, and Douglas W. Chapman, Florissant, Mo., assignors to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri
Filed Oct. 13, 1958, Ser. No. 766,676
17 Claims. (Cl. 250—80)



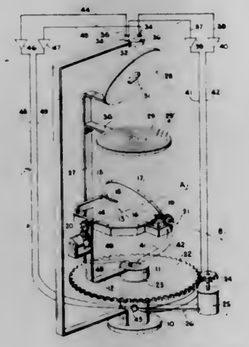
13. The method of making an X-ray intensifying screen which comprises coating a sheet of supporting material with a suspension of a mixture of a thallium-activated alkali metal iodide and a finely ground pigment having a refractive index not substantially less than 1.7 and low absorptivity for light in the blue-violet-ultraviolet region of the spectrum, in a liquid vehicle comprising an organic polymeric binder in an inert organic solvent for the binder, the dry volume of the polymeric binder being insufficient to fill the voids in a dry mixture of the iodide and pigment, allowing a portion of the solvent to evaporate, and applying successive coatings of an organic polymeric binder until the interstices among the iodide and pigment particles are substantially completely filled and there is a thin film of the polymeric binder over the external surface of the coating.

3,023,314
X-RAY APPARATUS
Michael Hura, Cleveland, Ohio, assignor to Picker X-Ray Corporation, Waite Manufacturing Div., Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 13, 1959, Ser. No. 793,154
12 Claims. (Cl. 250—105)



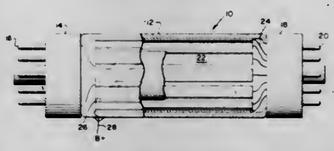
1. In an X-ray apparatus, the combination of an X-ray table, a compact adjustable diaphragm mechanism adapted to be mounted adjacent a source of X-rays for controlling the field of radiation of the X-ray beam, control means on the exterior of said mechanism for selectively adjusting the size of the field of radiation, means movably mounting said mechanism with respect to said table so that said mechanism is selectively positionable either over or under said table, means on said table for detachably coupling said mechanism to the underside of said table, and means adapted for automatic coaction with said control means upon coupling of said mechanism to said table for adjusting said mechanism from an area generally remote therefrom.

3,023,315
SOLAR BEACON FOR AIRCRAFT
Paul H. Muskat, 3447 Beethoven St., Los Angeles, Calif.
Filed Nov. 7, 1958, Ser. No. 772,509
12 Claims. (Cl. 250—201)



1. A solar beacon for aircraft comprising, in combination: a first mirror mounted for movement about two different axes; a second mirror having the plane of its reflecting surface disposed at substantially forty-five degrees with respect to a straight line axis passing through the centers of said first and second mirrors, so that said first mirror is adjustable to reflect the sun's rays in the direction of said axis to strike said second mirror and be reflected to provide a beam in a direction at right angles to said axis; and means for rotating said second mirror about said axis which passes through centers of said first and second mirrors whereby said beam is swept in azimuth three hundred and sixty degrees when said axis is vertically disposed.

3,023,316
ELECTRONIC DEVICE
William Ross Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada
Filed Oct. 23, 1956, Ser. No. 617,878
10 Claims. (Cl. 250—217)



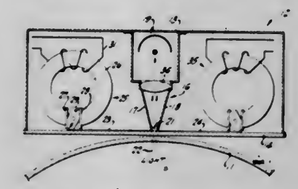
1. A control device for controlling the resistance to the flow of current in a plurality of electrical circuits comprising an array of light radiation responsive elements, each of which has a variable resistance to the flow of electrical current responsive to the application of different light intensities thereto, a light source common to said elements selectively operable to provide a variable light output including a layer of electroluminescent material disposed between a pair of conducting members at least one of which is transparent, a variable density filter disposed adjacent said light source for controlling the intensity of the light emitted from said source which impinges on said array, input means for coupling variable signals to said source to vary the light output thereof, and means for connecting each element of said array in associated electrical circuits.

3,023,317
PARALLAX INTERVAL SENSING DEVICE
Samuel P. Willits, Mount Prospect, and William L. Mohan, Prospect Heights, Ill., assignors to Chicago Aerial Industries, Inc., Village of Barrington, Ill., a corporation of Delaware
Original application Jan. 26, 1956, Ser. No. 561,485, now Patent No. 2,960,908, dated Nov. 22, 1960. Divided and this application Aug. 22, 1960, Ser. No. 51,028
10 Claims. (Cl. 250—220)



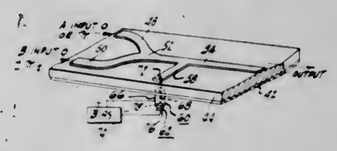
1. In a system for making parallax interval measurements of a rotating aerodynamic member, the improvement of a sensor comprising, in combination, a housing spaced a predetermined distance from said rotating aerodynamic member and in cooperative relation therewith, projection means positioned within said housing for focusing a plurality of radiant energy beams upon a reference plane, said radiant energy beams being in the path of said rotating aerodynamic member, a radiant energy sensitive device within said housing for receiving said beams and responsive to each interruption thereof by said aerodynamic member for producing an electrical signal, and an opaque member disposed intermediate said projection means and said radiant energy sensitive device at said reference plane and having apertures therein positioned so as to transmit therethrough only said plurality of radiant energy beams.

3,023,318
OPTICAL SWITCHING
John H. Jones, 10620 Loyola Drive, Los Altos, Calif.
Filed Jan. 27, 1960, Ser. No. 5,042
8 Claims. (Cl. 250—237)



1. An improved optical switch comprising means defining a light passage, a light source, means carrying a plurality of coded bands between said light source and light passage with segmented light-opaque and light-transmissive portions upon said bands, a plurality of independently movable light-opaque masks each having a pair of light-transmissive portions therein disposed in closing relation to said light passage, and separately operable actuating means engaging each of said masks for controllably moving some in response to received electrical signals whereby light transmitted through said light passage is representative of the instantaneous relative opacity of coded bands and masks in the path of light through said passage.

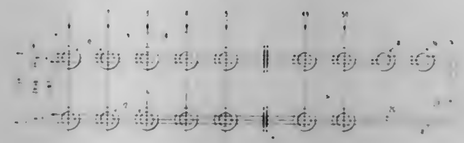
3,023,319
INFORMATION HANDLING DEVICE
Gerald Bernard Herzog, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 14, 1960, Ser. No. 22,143
18 Claims. (Cl. 307—88)



1. A gate for R.F. signals of one phase and a counter phase at the same frequency comprising, in combination: an expander device including a transmission line section and a diode terminating said section, said R.F. signals being applied at the input of said expander device, and means for applying selectively at said input a control signal of said frequency and having a phase between said one phase and said counter phase.

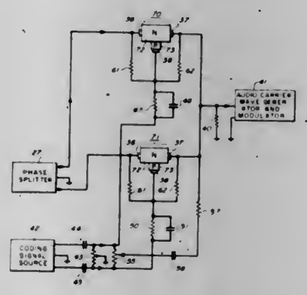
3,023,320
MULTI-PURPOSE LOGICAL ARRAY USING PROGRAMMED SIGNAL CANCELLATION
Allan A. Kahn and Hermann P. Wolff, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Aug. 25, 1960, Ser. No. 51,861
7 Claims. (Cl. 307—88)

1. A logic array comprising a first and second group of saturable cores, a plurality of separate input lines, each input line coupling a core of said first and second group of cores such that when energized one of said coupled cores will be turned to the one state and the other thereof will be turned to the zero state, a sense winding coupling all of said cores, said sense winding being in such direction as to receive a positive voltage from cores of said first group when turned from the one state to the zero state and a negative voltage from cores of said second group when turned from the one state to the zero state, a



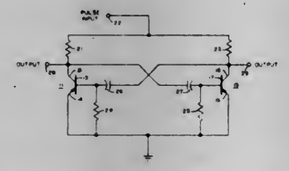
reset winding coupling all of said cores for resetting the same to a predetermined state, and means for applying a read pulse to the cores of said array.

3,023,321
TRANSISTOR SWITCHING APPARATUS WITH LEAKAGE RESISTANCE STABILIZING MEANS
John Isabeau, Mountain View, Calif., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Feb. 15, 1960, Ser. No. 8,633
7 Claims. (Cl. 307—88.5)



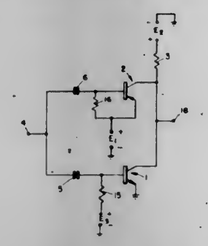
1. Switching apparatus comprising: a semi-conductor device having a zone of P conductivity type forming a PN junction with a zone of N conductivity type and having first, second and third terminals, each of which zones is connected to an assigned one of said terminals and between which zones there is a leakage resistance of a value susceptible of undergoing change, said semi-conductor device in response to one voltage condition on said third terminal assuming a conductive state wherein a relatively low impedance path is provided between said first and second terminals to permit current translation therebetween and responsive to another voltage condition on said third terminal assuming a non-conductive state wherein a relatively high impedance path is provided between said first and second terminals to prevent the translation of current therebetween; a source of a signal; means coupling said source to said first terminal for supplying said signal thereto; a load circuit coupled to said second terminal; means for developing an alternating switching signal; means for applying said switching signal to said third terminal to alternate said semi-conductor device between its conductive and non-conductive states intermittently to translate said signal from said source to said load circuit, said semi-conductor device translating undesired current to said load circuit as a result of undesired leakage current flowing through said PN junction; and a fixed resistor, of a value not greater than said leakage resistance, connected between those of said terminals connected to said zones in order that the undesired current in said load circuit be relatively constant and independent of any variations of said leakage resistance.

3,023,322
PULSE DIVIDING CIRCUIT
Eugene R. Keeler, Flushing, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed July 5, 1960, Ser. No. 40,915
3 Claims. (Cl. 307—88.5)



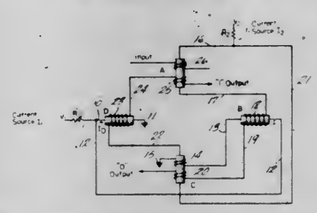
1. A pulse dividing circuit comprising, first and second transistors each having a base, a collector, and an emitter, means for capacitatively coupling the base of each transistor to the collector of the other transistor, means for grounding both of said emitters, first and second resistors connecting said collectors of said first and second transistors respectively to a common input point to which input pulses to be divided are applied, third and fourth resistors connecting said bases of said first and second transistors respectively to ground, and an output conductor connected to one of said collectors.

3,023,323
TRANSISTOR PULSE AMPLIFIER WITH MEANS TO ELIMINATE EFFECTS OF MINORITY CARRIER STORAGE
Anthony M. Kojalowicz, Long Beach, Calif., assignor to North American Aviation, Inc.
Filed July 2, 1956, Ser. No. 595,368
3 Claims. (Cl. 307—88.5)



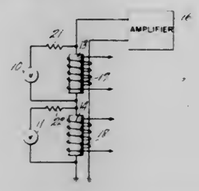
1. In a transistor pulse amplifier, a first transistor, a second transistor, each of said transistors having at least collector, emitter, and base electrodes, a first current path comprising one side of a D.-C. source, an impedance, the collector-emitter circuit of said first transistor and the other side of said D.-C. source, a second current path comprising one side of a second D.-C. source, the emitter-collector circuit of said first transistor, and said one side of said first D.-C. source, means for applying a pulse to the bases of said transistors to cause said first transistor to conduct and said second transistor to be cut off, bias means responsively connected to the base of said second transistor to cause said second transistor to conduct in the absence of a pulse from said means for applying a pulse, said transistors being of oppositely conductive type whereby said second transistor provides the source of collector current for said first transistor when said first transistor ceases conducting.

3,023,324
CRYOTRON SWITCHING CIRCUIT
James B. Mackay, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 17, 1957, Ser. No. 703,445
29 Claims. (Cl. 307—88.5)



1. A cryogenic electrical circuit comprising at least first and second current paths in parallel and having a predetermined inductive-resistive time constant, each of said current paths having at least one cryotron as an operative component therewith, a first source of electric current connected to provide a first electric current flow through said parallel current paths, first winding means connected electrically in series with said first current path and positioned in magnetic field applying relation with the cryotron in said second current path, second winding means connected electrically in series with said second current path and positioned in magnetic field applying relation with the cryotron in said first path, a current input winding positioned in magnetic field applying relation with one cryotron in said first current path, a third current path including at least one superconductive gate conductor, a control winding in series in said third path with said gate conductor and positioned in magnetic field applying relation with one cryotron in said second current path, said control winding having a large inductive-resistive time constant relative to the time constant of said first and second current paths; a second source of electric current for said third path, and inductor means connected electrically in series with said first path and inductively coupled with the gate conductor of said third path.

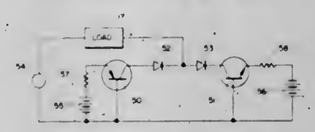
3,023,325
CRYOGENIC COMMUTATOR
Andrew E. Brennemann, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1957, Ser. No. 704,940
6 Claims. (Cl. 307—88.5)



1. Apparatus comprising, a voltage source, a cryotron gate element connected in a first circuit with said source, voltage-responsive means connected in a second circuit with said gate element to sense the presence of voltage developed by said source across said gate elment when the latter is resistive, and inductor means coupled by a first inductive coupling with said gate element and by a second inductive coupling with a current conductive portion of said second circuit other than said gate element, said first and second couplings being adapted in response

to current applied to said inductor means to induce in said gate element and in said portion respective voltages which oppose each other in said second circuit, and said first coupling being further adapted in response to said current to change said gate element from a superconductive to a resistive state.

3,023,326
OVERLOAD PROTECTION CIRCUIT
Ronald D. Cone, Bellflower, Calif., assignor to North American Aviation, Inc.
Filed Jan. 6, 1958, Ser. No. 707,156
3 Claims. (Cl. 307—88.5)



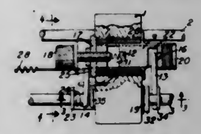
1. A protective circuit for preventing alternating currents through a load from exceeding a predetermined value, said circuit comprising: first and second transistors of opposite conductivity types, each transistor having a collector, emitter, and base electrode; first and second unilateral conducting devices coupled together and disposed between the collectors of said transistors, said first unilateral device being connected to conduct away from the collector of said first transistor, and said second unilateral device being connected to conduct toward the collector of said second transistor; a load circuit having one end connected to the junction between said unilateral devices; each of said base electrodes being connected to a common junction; an alternating current source having a first terminal connected to the other end of said load circuit, said alternating current source further having a second terminal connected to said common junction; and first and second emitter biasing circuits coupled to said first and second transistor emitters, respectively, for biasing said transistors in their respective forward bias directions.

3,023,327
REMOTELY SETTABLE TIMER
John D. Freeman, Forest Hills, N.Y., and Leo Kull, Jersey City, N.J., assignors to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed Oct. 2, 1959, Ser. No. 844,125
10 Claims. (Cl. 307—141.8)



10. In an interval timer for actuating a control circuit after a preselected time interval corresponding to a selected number of impulses of an impulse train, a differential cam system having first and second rotary cams advanced by a uniform angular increment in response to each received impulse, the angular increments of the first and second cams being of different extent to provide a differential movement thereof, said cams having first and second angular coincidence positions, means for applying a train of impulses to said cam system at a selected instant to initiate the time interval and advance said cams towards said first coincidence position, a first cam-controlled switch means responsive to the arrival of said cams at said first coincidence position to actuate said control circuit, a second cam-controlled switch means responsive to arrival of said cams at said second coincidence position for removing impulse train from said cam system and resetting means for advancing the cams from said second coinsidence position independently of said train of impulses to select the number of such impulses required to further advance the cams to said first coincidence position.

3,023,328
REGULATABLE ELECTRIC MOTOR FOR ACCOMPLISHING LINEAR MOVEMENT
John M. Sanford, 4313 S. 12th St., Terre Haute, Ind.
Filed Sept. 6, 1957, Ser. No. 682,480
2 Claims. (Cl. 310—14)

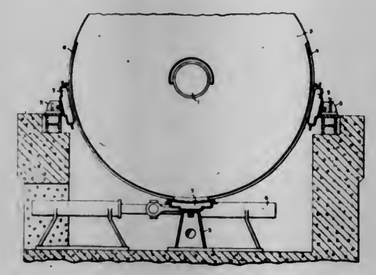


1. In a linear electric motor, a motor block of nonmagnetizable material, first and second spaced parallel rods extending through said block, first and second electro-magnetic solenoids mounted in said block, a movable core for coaction with each of said solenoids, a first coil spring engaging the core in said first solenoid, a stepping plate provided with an opening for the projection therethrough of said second rod, said first solenoid including a frame, a first plug mounted in the end of the frame of the first solenoid, a second plug mounted in the opposite end of the frame, an adjusting screw engaging said first coil spring, a locking plate arranged in engagement with said second rod, a second coil spring abutting said locking plate, a bracket extending from said motor block and having said second coil spring arranged in engagement therewith, a ring mounted on the core of the second solenoid, and a release finger extending downwardly from the core of the second solenoid to engage the locking finger plate and unlock the locking finger plate during the unlocking action of the solenoid, and a second release finger extending downwardly from the core of the second solenoid to engage the stepping plate and unlock the stepping plate during the unlocking action of the solenoid.

3,023,329
DYNAMOELECTRIC MACHINE
Paul L. Kamphaus, Allison Park, and Albert W. Latham, Wilkins Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1958, Ser. No. 725,345
6 Claims. (Cl. 310—91)

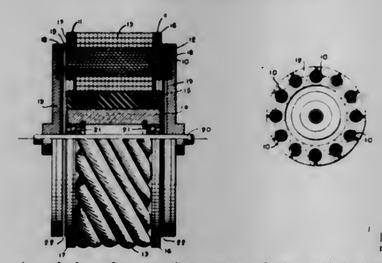
4. In combination, a dynamoelectric machine having a stator member, a rail on said stator member concentric therewith on one end of said stator and another rail concentric therewith on the other end of said stator, a recess in each of said rails on the side adjacent the corresponding end of the stator, three bearing boxes spaced circumferentially about the lower half of each end of said stator, each bearing box comprising a first pivotally

mounted segment and a second pivotally mounted segment engaging one of said rails to support the stator member, each of said bearing boxes having a leaf spring for supporting said first segment at one end and said



second segment at the other end of said spring, a jackscrew equidistant from the center of each segment pivotally supporting said spring in a freely tilting manner, at least one of the bearing boxes at each end of said stator having a projection engaging said recess.

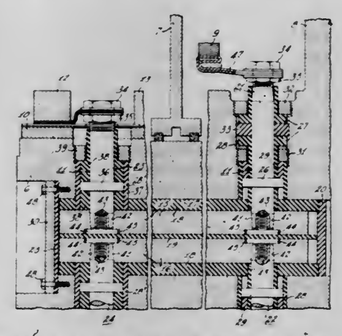
3,023,330
AXIAL AIR-GAP DYNAMOELECTRIC MACHINE
Herbert C. Roters, Kew Gardens, N.Y., assignor to Casner Patents, Inc., a corporation of New York
Filed Apr. 8, 1960, Ser. No. 20,955
1 Claim. (Cl. 310—162)



A yokeless hysteresis motor of the axial air-gap type comprising: an armature structure including a circular array of axially extending magnetic members, a winding system disposed on said members, a first pair of annular magnetic members engaging opposite ends of said axial magnetic members and serving as pole faces therefor, said annular members being greatly reduced in section between each pair of adjacent ones of said axial magnetic members, and a second pair of axially thin annular magnetic members engaging opposite ends of said axial magnetic members and serving as magnetic bridges therefor; and a third pair of annular electromagnetic members disposed at either end of said array and together completing the magnetic circuits of the members of said array, said third annular members and said armature structure being relatively rotatable.

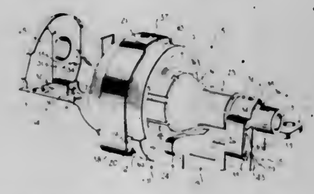
3,023,331
COLLECTOR LEAD ARRANGEMENT
Jack H. Hoffmann, West Allis, and William P. Hogstad, Milwaukee, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed July 1, 1959, Ser. No. 824,366
3 Claims. (Cl. 310—232)

1. A dynamoelectric machine having a gas filled housing, a rotor having a winding, said rotor disposed within said housing and having a shaft extending through said housing, current collecting slip rings mounted on said shaft outside of said housing, said shaft having an axial bore, a first radial aperture in said shaft opening into said bore adjacent said winding, and a second radial aperture in said shaft opening into said bore adjacent said slip rings, terminal leads connected to and extending from said winding and said slip rings, and a collector lead arrangement for connecting a terminal lead of said slip rings to a terminal lead of said winding through said first and second radial aperture and said bore, said collector lead arrangement comprising: a first stud connected to said terminal lead of said slip rings and a second stud connected to said terminal lead of said winding, the end of said stud that is connected to said terminal leads each having a threaded portion, a cap and jam nut threadedly engaging said threaded portion of said stud, and said terminal lead being interposed between said jam nut and said cap nut, said cap nut being tightened on said stud to provide electrical contact between said stud end and said cap nut, and said jam nut turned toward said cap nut to compress said terminal leads between said cap nut and said jam nut thereby providing a good electrical contact between said cap nut and one of said terminal leads, an axially extending conductor within said bore having third and fourth radial apertures and transverse slots milled in the radially innermost surface of said conductor



communicating with said third and fourth apertures in sand conductor, said first and third apertures having a common central axis and said second and fourth apertures also having a common axis; each stud having a cylindrical portion, a smooth surface frusto-conical end portion opposite said one end tapered to point away from said cylindrical portion and said frusto-conical end portion having defined therein a threaded bore coaxial with the axis of said stud, said first stud disposed in said first radial aperture with its tapered end portion projecting part way through said third aperture and a second stud disposed in said second radial aperture with its tapered end portion projecting part way through said fourth aperture, said third and fourth apertures each having surface portion formed to register with the smooth tapered surface of said stud end portion; and bolts securing each stud to said conductors, each of said bolts being disposed in said bore, said bolt having a head and a threaded portion said head being recessed in said milled slot and cooperating with the edges of said slot to prevent said bolt from turning, and said threaded portion of said bolt threadedly engaging said threaded axial bore in said stud to secure said tapered portion of each of said studs in said axial conductor apertures to conduct electric current between the registered smooth and tapered surfaces to thereby provide a collector lead arrangement that can be assembled and disassembled free of damage to the current conducting surface.

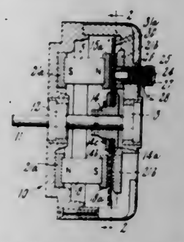
3,023,332
ELECTRIC MOTOR CONSTRUCTION
Gilbert L. St. Charles, Milwaukee, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed July 20, 1959, Ser. No. 828,099
3 Claims. (Cl. 310—254)



1. In an electric motor having a rotor with a coaxial shaft projecting from both ends thereof and journaled in spaced apart coaxial bearings, and having a stator with a magnetically permeable core located between the bearings and coaxially embracing the rotor, means for holding the bearings and stator core in fixed coaxial relationship, said means comprising: a cast unitary frame having a medial portion which has a concave upper surface upon which the core of the stator rests, said medial portion of the frame having downwardly projecting axially extending ridges spaced below its upper surface and spaced opposite sides of a plane substantially normal to said upper surface and through the stator axis, said frame also having integral supporting arms extending axially in both directions from its medial portion, with integral bearing supporting blocks on the remote ends of the arms, each of said bearing supporting blocks having a concave upper surface upon which a bearing rests and a pair of downwardly projecting axially extending ridges spaced below its upper surface and spaced to opposite sides of said plane; a pair of inverted U-shaped spring clips, each having its legs extending downwardly alongside one of the bearing blocks and terminating in inturned hook-like tangs engaged with said ridges on the bearing block to hold the clip astraddle the bearing block with its bight portion over the bearing and confining it against the upper surface of the bearing block to secure the bearing against displacement relative to the bearing block; and a substantially horseshoe shaped spring strap embracing the stator core and extending downwardly along opposite sides of said medial portion of the frame, said strap having inturned hook-like portions near its ends engaged under the ridges on the medial portion of the frame to tension the strap downwardly upon the stator core so that the latter is held by the strap against the medial portion of the frame and thereby secured against movement relative thereto.

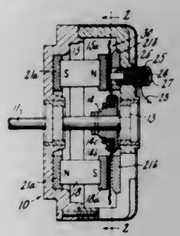
3,023,333
PRINTED CIRCUIT ARMATURE
Robert L. Swiggett, Huntington, N.Y., assignor to Printed Motors, Inc., New York, N.Y., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,531
9 Claims. (Cl. 310—268)

3. An armature for an electrical rotating machine comprising: a thin sheet of insulating material having surfaces coated with conductive patterns which have inner and outer boundaries and which have interconnections disposed in a plurality of rows in said patterns near said boundaries, an insulating disc disposed against the conductive pattern on one surface of said sheet for laterally supporting said sheet, said disc being non-adherent to said sheet to allow thermal dimensional changes of said conductive patterns with respect to said disc, and means for restraining lateral deformation of said sheet with respect



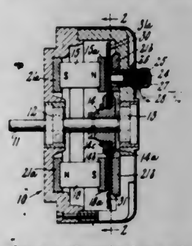
to said disc while allowing relative displacement of said sheet with respect to said disc in the plane of said sheet.

3,023,334
PRINTED CIRCUIT ARMATURE
Robert P. Burr and Raymond J. Keogh, Huntington, N.Y., assignors to Printed Motors, Inc., New York, N.Y., a corporation of New Jersey
Filed May 25, 1959, Ser. No. 815,532
6 Claims. (Cl. 310—268)



1. An armature for an electrical rotating machine comprising: a thin sheet of insulating material having surfaces coated with conductive patterns which have inner outer boundaries and which have interconnections disposed in a plurality of rows near said boundaries, said sheet having an edge region which is transversely displaced with respect to the plane of an adjacent region of said sheet for minimizing deformation of said sheet due to variations of operating temperature over a wide range.

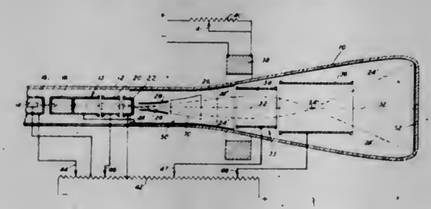
3,023,335
PRINTED CIRCUIT ARMATURE
Robert P. Burr, Huntington, N.Y., assignor to Printed Motors, Inc., New York, N.Y., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,533
6 Claims. (Cl. 310—268)



1. An armature for an electrical rotating machine comprising: a thin sheet of insulating material having surfaces coated with conductive patterns which have inner and

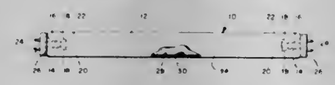
outer boundaries and which have interconnections disposed in a plurality of rows in said patterns near said boundaries, and a disk disposed against the conductive pattern on one surface of said sheet and displaceable relative thereto for laterally supporting said sheet.

3,023,336
CATHODE RAY TUBE HAVING POST ACCELERATION
Lothar Frenkel, Portland, Oreg., assignor to Tektronix, Inc., Portland, Oreg., a corporation of Oregon
Filed Oct. 25, 1957, Ser. No. 692,483
8 Claims. (Cl. 313—78)



1. A cathode ray tube comprising an electron gun for producing a beam of electrons, deflection means for deflecting said beam to provide an image, electron accelerating means for accelerating the electrons in said beam in a direction longitudinally of said beam after said beam has been deflected by said deflection means, said electron accelerating means including an electrostatic converging and accelerating lens surrounding the deflected beam, said lens producing spherical aberration of said image, and a magnetic converging lens also surrounding said deflected beam to correct for said aberration.

3,023,337
DISCHARGE DEVICE HAVING EXTERIOR LUBRICATING PHOSPHATE COATING
Robert W. Repsher, Kinnelon, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1959, Ser. No. 803,310
2 Claims. (Cl. 313—108)



1. A discharge device having an envelope and finely-divided phosphor coated on the envelope interior surface, a thin lubricating coating on the exterior surface of said envelope, said coating comprising substantially transparent phosphate, and the average weight of said phosphate coating as expressed in terms of weight of phosphate radical included therein being from 2×10^{-6} to 3×10^{-5} gram per square centimeter of envelope exterior surface.

3,023,338
ELECTROLUMINESCENT LAMP AND METHOD
Nicholas F. Cerulli, Shingle Springs, Calif., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 12, 1959, Ser. No. 833,184
6 Claims. (Cl. 313—108)

5. An electroluminescent lamp comprising, spaced electrodes, finely-divided electroluminescent phosphor embedded in glass included between said spaced electrodes, said phosphor comprising zinc sulfide and including copper as activator, and said phosphor having been embedded in glass by the method which comprises: preparing a mix comprising phosphor which includes zinc sulfide as matrix and copper as activator and finely-divided glass which when fired at a temperature considerably lower than the temperature required to crystallize the matrix for zinc sulfide electroluminescent phosphor will display substantially no reaction with zinc sulfide and



will form a continuous light-transmitting layer, adding to said mix a predetermined limited amount of copper in compound form, and firing said mix and added copper compound for a predetermined temperature and time to form a continuous phosphor-embedded glass layer and to cause said phosphor to be evenly and brightly electroluminescent.

3,023,339
PHOSPHOR, LAMP AND METHOD
Frank V. Vodoklys, Wayne, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1959, Ser. No. 849,532
14 Claims. (Cl. 313—109)



13. A fluorescent lamp comprising a light-transmitting envelope having electrodes operatively disposed therein and containing an inert ionizable gas and a charge of mercury, a halophosphate phosphor coating on the inner surface of said envelope, said phosphor having been processed after formation by firing and before lamp envelope coating by the method comprising, finely dividing fired halophosphate phosphor so that substantially all resulting phosphor particles have a diameter less than a predetermined value, mixing the finely-divided phosphor and an aqueous acid solution, separating the phosphor from the aqueous acid solution, removing substantially all residual acid from the phosphor, forming a water slurry of the finely-divided phosphor, atomizing the phosphor-water slurry in a gaseous medium heated to a temperature appreciably greater than the boiling point of water and less than the firing temperature used in making the phosphor to evaporate into the hot gaseous medium the water component of the atomized slurry, separating at least a substantial portion of the dried finely-divided phosphor from the hot gaseous medium containing the evaporated water of the slurry, and thereafter stirring the dried and separated finely-divided phosphor together with a volatile vehicle and a small amount of vehicle-soluble binder to form a phosphor-vehicle suspension suitable for phosphor coating a fluorescent lamp envelope.

3,023,340
PHOSPHOR, LAMP AND METHOD
Robert W. Repsher, Kinnelon, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1959, Ser. No. 849,474
10 Claims. (Cl. 313—109)

7. A fluorescent lamp comprising a light-transmitting envelope having electrodes operatively disposed therein and containing an inert ionizable gas and a charge of mercury, a coating on the inner surface of said envelope comprising halophosphate phosphor, said halophosphate phos-

phor having been processed after formation by firing and before lamp envelope coating by the method comprising, finely dividing fired halophosphate phosphor to such degree that substantially all resulting phosphor particles have a diameter less than 20 microns, mixing together the finely-divided phosphor and an aqueous acidic solution, separating the phosphor from the aqueous acidic solution, removing substantially all residual acid from the

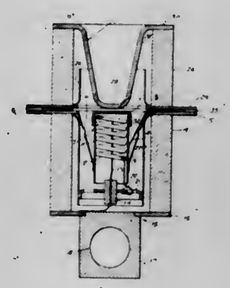


phosphor, washing the phosphor with a solution principally comprising an alcohol having a boiling point not greater than 98° C., separating the phosphor from the alcohol washing solution, volatilizing substantially all residual alcohol from the phosphor, and thereafter stirring the phosphor together with a volatile vehicle and a small amount of vehicle-soluble binder to form a phosphor-vehicle suspension suitable for phosphor coating a fluorescent lamp envelope.

3,023,341
ELECTRON TUBE

Jackson W. Kendall, Jr., Los Altos, Leland G. Perry, Palo Alto, and Raymond H. Hardenbergh, Belmont, Calif.

Filed May 22, 1959, Ser. No. 823,797
5 Claims. (Cl. 313—250)
(Filed under Rule 47(a) and 35 U.S.C. 116)

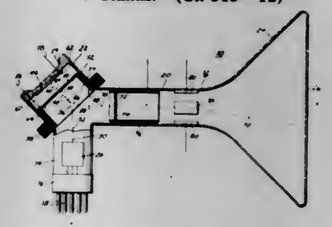


1. An electron tube comprising a first section carrying a cathode and a second section having another electrode, a cylindrical ceramic envelope portion forming part of the envelope for said first section, a metallic lead-in ring secured to one end of said envelope portion and presenting an outwardly facing plane surface, means secured to said metallic lead-in ring for supporting a cathode within said ceramic cylinder, said cathode having a cathode emitting surface coplanar with said surface of said metallic lead-in ring, a second cylindrical ceramic envelope portion forming part of the envelope for said second section, a second ring secured to one end of said second cylindrical ceramic envelope portion and presenting an outwardly facing plane surface, an electrode having a flange at one end, said flange being sealed to the other end of said second cylindrical ceramic envelope portion, said electrode extending downwardly into said second cylindrical ceramic envelope portion to form a planar surface which is coplanar with said surface of said second ring, spacer means having a thickness equal to the desired spacing of said electrodes, said spacer means being disposed between said rings, and means forming a seal between said ring portions to form an evacuated envelope.

3,023,342
BEAM MODULATING DEVICES AND METHOD

Glenn W. Preston, Oreland, Pa., assignor to General Atronics Corporation, Bala-Cynwyd, Pa., a corporation of Pennsylvania

Filed July 18, 1958, Ser. No. 749,555
7 Claims. (Cl. 315—12)

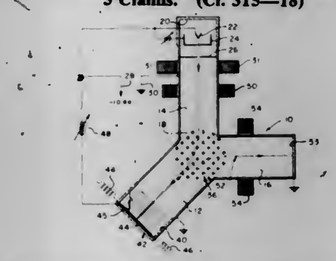


1. A system for modulating the intensity of a beam of electrically charged particles, said system comprising: means for projecting said beam along a predetermined path; means for magnetically deflecting said beam into a different path at an angle to said predetermined path; and means for reflecting along a reciprocal of said different path a fraction of the particles in said beam while absorbing the remainder of said particles.

3,023,343
INFORMATION RECORDING AND DISPLAY APPARATUS

Jack D. Kuehler, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Jan. 11, 1960, Ser. No. 1,641
5 Claims. (Cl. 315—18)



1. Apparatus for visually displaying magnetic information bits on a recording surface comprising means for emitting a beam of electrons in a predetermined direction, a magnetic target surface located laterally removed from the axis of said beam, means along the axis of said beam for turning the beam toward said target surface, means for applying a potential to said target surface for reflecting the beam at a distance from said surface sufficiently close to said surface to expose the approaching electrons to the deflecting effect of magnetic fringe fields originating in said target surface, a light emissive screen placed into the path of the reflected beam, and means adjacent the path of the reflected beam to focus the reflected beam at a point a predetermined distance in front of said screen to create thereon an enlarged image of the target area from which the beam is reflected.

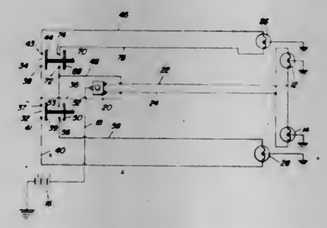
3,023,344
CORNERING LIGHTS

Jack L. Owings, 721 Lincoln Ave., Woodland, Calif.

Filed Oct. 23, 1958, Ser. No. 769,240
5 Claims. (Cl. 315—83)

1. In a motor vehicle that has headlamps with high and low beams and a dimmer switch to energize the high

and low beams respectively, auxiliary lamps mounted to direct their beams of light at an angle outboard of the beams from the conventional headlamps, each auxiliary lamp having a high beam filament and a low beam filament, each one of said auxiliary lamps having its high beam filament connected in a circuit with the portion of the dimmer switch which energizes the headlamp high beam filaments, each one of said auxiliary lamps having its low beam filament connected in a circuit with a por-

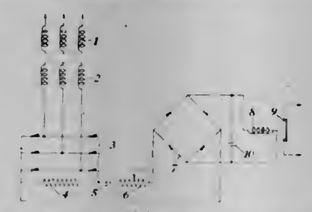


tion of the dimmer switch which energizes the headlamp low beam filaments, a pair of auxiliary lamp switches, one of said switches connected to a first auxiliary lamp and adapted to close the circuit thereto for a selected filament of said first auxiliary lamp, the second of said switches connected to a second auxiliary lamp and adapted to energize the high or low beam filament selectively of said second auxiliary lamp and in response to the position of said dimmer switch.

3,023,345
THREE PHASE PROTECTIVE RELAY SYSTEM RESPONSIVE TO AMPLITUDE OF RIPPLE VOLTAGE

Edward Kenneth Williams, Pinner, England, assignor to Rotax Limited, London, England

Filed Nov. 30, 1959, Ser. No. 856,159
Claims priority, application Great Britain Dec. 1, 1958
2 Claims. (Cl. 317—52)



1. Means for protecting a three-phase electric system, comprising in combination with the system, a transformer having three primary windings and three secondary windings, said primary windings being respectively connected to the three phases of said system, a first full wave rectifier connected to said secondary windings and provided with a pair of output terminals, a resistance connected across said output terminals so that said system, when in action, normally creates a ripple voltage of small amplitude in said resistance, a second rectifier connected in parallel with said resistance, a blocking capacitor connected in series with said second rectifier for normally preventing the flow through the latter of direct current from said first full wave rectifier, and a protective relay having an operating coil which is connected across said second rectifier, and which is prevented from being energised under normal conditions due to the effect of said blocking capacitor, but which is energised for operating said relay in the event of the amplitude of the ripple voltage in said resistance being increased as a result of a fault in said system.

3,023,346
RECTIFIER STRUCTURE

Howard A. Wagner, Irwin, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Nov. 27, 1959, Ser. No. 855,655
2 Claims. (Cl. 317—234)

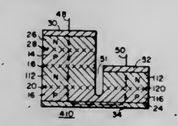


1. A semiconductor device comprising a metal plate, a sheet of insulating material disposed on the metal plate and at least one metal strap disposed on the sheet of insulating material, the sheet of insulating material having an aperture, a semiconductor member having top and bottom electrodes disposed in the aperture so that the bottom electrode is in contact with the plate and the upper electrode is in contact with the strap, solder means joining the electrodes to the plate and strap respectively, an insulating resin filling the space between the walls of the aperture and the semiconductor member, and fastening means including electrical insulation for firmly connecting the strap, the sheet and the metal plate so as to hold the semiconductor member in place while maintaining the strap and plate insulated and spaced from each other except for the semiconductor member.

3,023,347
OSCILLATOR HAVING PREDETERMINED TEMPERATURE-FREQUENCY CHARACTERISTICS

Gene Strull, Pikesville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 15, 1960, Ser. No. 43,037
10 Claims. (Cl. 317—234)



1. An oscillator device having predetermined temperature-frequency characteristics when a direct potential is applied thereto, the device comprising a four-region semiconductor element having a negative resistance characteristic and a two-region semiconductor element, the consecutive regions of the elements being of opposite types of semiconductivity, the two elements being so constructed that they are so correlated in that the saturation current of the two-regions element is within the negative resistance region of the four-region element, and that the breakdown voltage of the two-region element is higher than the breakover voltage of the four-region element and the high impedance characteristics of the four-region element and the saturation characteristics of the two-region element are correlated so as to give rise to a linear temperature-frequency relationship with changes in temperature.

3,023,348
MOTOR CONTROL SYSTEM

Irvin W. Cox, West Allis, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware

Filed May 29, 1959, Ser. No. 816,979
14 Claims. (Cl. 318—138)

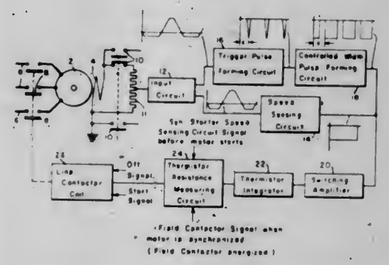
1. In a control system for a motor having a rotor and a plurality of stator windings, a power supply source, and static means for commutating electric energy from

said source to said windings in a selected order to effect operation of the motor, said static means comprising a plurality of solid element gating devices associated with



the respective windings, and radiant energy control means under the control of the motor for rendering said gating devices operative in a predetermined order to effect operation of the motor.

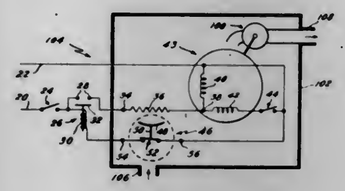
3,023,349
SYNCHRONOUS MOTOR CONTROL
Dean J. MacGregor, Amherst, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 25, 1959, Ser. No. 822,955
8 Claims. (Cl. 318—170)



1. A control system for a synchronous motor having a field winding and a damper winding, said system comprising thermal integrating means having thermal characteristics similar to the damper winding and being responsive to energy input therein, speed sensing means for providing a constant energy input to said thermal means when the slip of the motor is greater than a predetermined level, pulse forming means for providing an energy input pulse of constant magnitude and width for each half cycle of the induced current in the field winding when the slip of the motor is less than said predetermined level, said thermal means providing an output signal upon the integral reaching a predetermined magnitude.

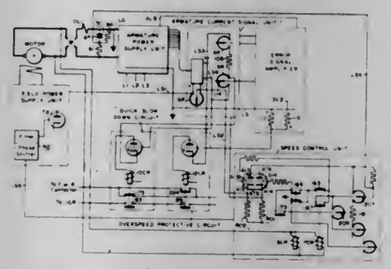
3,023,350
ELECTRICAL SWITCH MEANS
William A. Broadley, East Walpole, and Edward P. Jastram, Jr., Rehoboth, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Mar. 31, 1959, Ser. No. 803,282
16 Claims. (Cl. 318—221)

1. In combination: an electric motor having at least one winding; said winding lying in the path of and being exposed to the convective flow of a fluid medium; electric heater means; an electric switch; said motor winding, heater means and switch being electrically connected in series circuit relation with each other; a thermally responsive device operatively connected for opening said switch upon reaching a predetermined temperature; and a sealed casing encompassing said thermally responsive device; said heater means being associated with said casing in heat-



transfer relation to said thermally responsive device and lying in the path of and being exposed to the convective flow of said fluid medium.

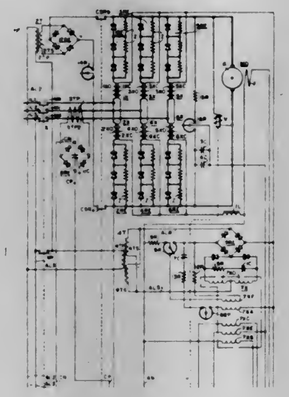
3,023,351
MOTOR CONTROL APPARATUS
Fletcher E. McLane, Lancaster, N.Y., John E. Pollack, St. Paul, Minn., and John M. Cochran, Williamsville, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1956, Ser. No. 581,035
26 Claims. (Cl. 318—338)



1. Apparatus for controlling the operation of a motor having an armature and a field winding comprising in combination, armature power supply means connected to said armature, field power supply means connected to said field, manually actuable means connected to said field supply means for varying the power supplied to said field, means adapted to be connected to said field supply means but normally disconnected therefrom when connected to said field supply means operative to set said field at relatively low excitation, and means responsive to said armature when the voltage thereof is substantially higher than rated voltage for disconnecting said manually actuable means from said field supply means and connecting thereto said means operative to set said field at low excitation.

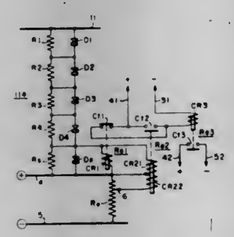
3,023,352
ELECTRIC DRIVE
John M. Cochran, Williamsville, Harlan L. Seelhoff, Tonawanda, and Frank H. Banks, Depew, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 9, 1960, Ser. No. 34,944
3 Claims. (Cl. 318—513)

3. In combination, a motor, a saturable reactor having output winding means, means connecting said output winding means in controlling relationship with said motor, auxiliary power supply means, and means connecting said supply means across said motor with said supply means poled and set to suppress the flow of magnetizing



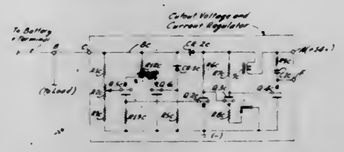
current from said output winding means through said motor.

3,023,353
SILICON DIODE PROTECTIVE CIRCUIT
Charles F. Currey, Penn Hills, Pa., assignor to Canadian Westinghouse Company, Limited, Hamilton, Ontario, Canada
Filed July 10, 1959, Ser. No. 826,217
12 Claims. (Cl. 321—12)



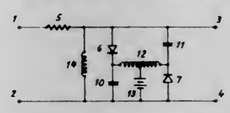
2. In a rectifier system comprising a plurality of rectifier units interconnected with a suitable alternating current input circuit and interconnected with a suitable output circuit receiving the rectified current from the rectifier units, said rectifier units each including a plurality of individual rectifier devices connected in series, in combination, sensing means to detect the failure of any of said rectifier devices of any of said rectifier units, said sensing means including relay means connected across a first device of said rectifier devices, said relay means operative when said first device fails, ratio sensing relay means including two relay coils having a common magnetic circuit with one of said coils being connected across said first rectifier device and the other of said coils, suitably biased, connected across the direct current output, said ratio sensing relay means being operative upon the failure of any of said rectifier devices, other than said first rectifier device, to protect the rectifiers that have not failed against failure and said relay means connected across a first device of said rectifier devices operative upon failure of said first device, to protect the rectifiers that have not failed against failure.

3,023,354
VOLTAGE AND CURRENT REGULATOR
Murray J. Hillman, West Covina, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 709,995
4 Claims. (Cl. 322—25)



4. In an electrical system including a generator having a field winding wherein the generator is mechanically driven to produce an electrical output, and a battery adapted to be charged by the output of the generator, an electrical regulator for regulating the output of the generator, comprising: means for detecting an error signal in the output of the generator, said detecting means including a divider network having the output of the generator applied across said divider network, a series combination of a diode connected in series with a resistor and having the output of the generator applied across said series combination, the diode operating in the reverse current region of the diode reverse voltage breakdown characteristic, and means including a differential amplifier having two inputs respectively connected to an intermediate point on said divider network and to said series combination between the diode and resistor for sensing an error signal in the output of the generator; diode rectifying means connecting the output of the generator to said detecting means; means for amplifying the error signal detected; means responsive to the amplified error signal for regulating current in the field winding to reduce the error signal, whereby the output of the generator is correctly maintained; and means including a relay operatively responsive to a specified maximum output from the generator for de-energizing said amplifying means to reduce the output of the generator and prevent burning out of the same.

3,023,355
AMPLITUDE LIMITING SYSTEM
Jarl Morannar Thorsen, Hagersten, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed May 2, 1956, Ser. No. 582,262
Claims priority, application Sweden May 17, 1955
8 Claims. (Cl. 323—9)

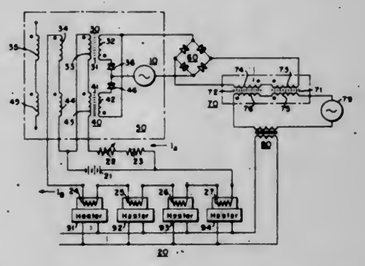


1. A device for equal limiting of the positive and negative amplitudes of a signal, comprising a two-terminal network shunting the signal path and consisting of two parallel branches, wherein each branch contains a diode in series with an element having an impedance low for signal frequencies, the corresponding electrodes in the diodes being, each of them, connected to one of the terminals of the two-terminal network, while the other electrodes of the diodes which are connected to the respective elements are connected to each other through an impedance element, having an impedance low for D.C. current but high for signal frequencies, and a bias source of constant potential common to both branches and connected between a point of a fixed potential and a point on said impedance element.

3,023,356
CONTROL SYSTEM

Keith H. Sueker, Pittsburgh, and Ronald C. Blackmond, Allison Park, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Feb. 12, 1958, Ser. No. 714,785
6 Claims. (Cl. 323—69)

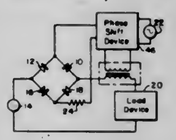


1. In a control system, in combination, a magnetic amplifier having first and second control winding means inductively disposed upon saturable means; regulating circuit means; saturable reactor means; means connecting an output of said magnetic amplifier to control an output of said saturable reactor means; and means connecting the output of said saturable reactor means to a load; said regulating circuit having first and second parallel branches connected to a direct-current voltage source; said first parallel branch comprising sensing means connected to regulate current flow in said first control winding means of said magnetic amplifier; said sensing means having a varying impedance characteristic in response to varying thermal conditions of said load; said second parallel branch comprising reference impedance means serially connected with said second control winding means.

3,023,357
CURRENT CONTROL APPARATUS FOR A LOAD DEVICE

Frank J. Hierholzer, Jr., Monroeville, and Bent Christensen, Monroeville Boro, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Dec. 10, 1957, Ser. No. 701,917
7 Claims. (Cl. 323—66)

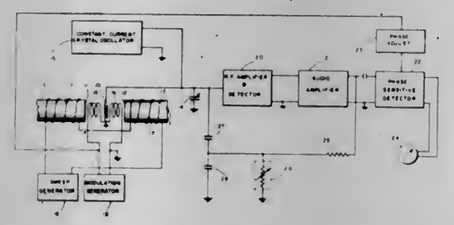


1. In control apparatus for an electrical energy supply circuit including a power supply connected to supply current to a load device, the combination of a first unidirectionally conductive device operative with said circuit for providing a current path through said load device and poled to be conductive in a first direction relative to said load device, a second unidirectionally conductive device operative with said current path and poled to be conductive in a second direction opposite to said first direction, with at least one of said first and second devices having a hyperconductive negative resistance characteristic such that it has a reverse direction breakdown voltage after which its reverse direction conductivity resistance is substantially reduced, and a control voltage source operative with said one device for determining the reverse direction resistance of said one device relative to the current from said power supply to said load device.

3,023,358
CONTROL SYSTEMS

Francois F. Kirchner, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Filed Dec. 12, 1955, Ser. No. 552,401
13 Claims. (Cl. 324—.5)

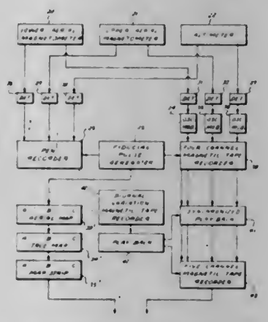


1. In apparatus for detecting magnetic resonance phenomena in a sample of paramagnetic material, coil means adapted to provide a high frequency signal that varies in amplitude in accordance with said resonance phenomena, circuit means including said coil means coupled to means for amplifying said high frequency signal and for detecting said amplitude variations, means responsive to said detected amplitude variations for deriving a signal which is a function of the magnetic resonance properties of said material, and means responsive to the amplitude of said detected amplitude variations for maintaining the impedance of said circuit means substantially constant, whereby the high frequency signal input to said amplifying means is maintained substantially constant.

3,023,359
METHOD AND APPARATUS FOR MAKING HIGH RESOLUTION FUNCTION EARTH'S MAGNETIC FIELD MAPS

William P. Jenny, Bank of The Southwest Bldg., Houston, Tex., and Thomas A. Rabson, Houston, Tex.; said Rabson assignor to said Jenny

Filed Jan. 2, 1959, Ser. No. 784,730
14 Claims. (Cl. 324—4)



1. Method of preparing correlated high resolution function earth's magnetic field maps comprising the steps of

moving an aerial body in a plurality of parallel traverses close above the earth's surface while simultaneously

making a first magnetic tape record of the earth's magnetic field versus time at a point in the vicinity of said traverses that is fixed relative to the earth,

making a second magnetic tape record of the earth's magnetic field versus time during each traverse at a plurality of vertically spaced apart points that are substantially fixed relative to said body and simultaneously

making a photographic record of the topography beneath the body versus time as said topography changes due to the movement of the body,

marking said second magnetic tape record and photographic record simultaneously at successive points of time during each traverse,

simultaneously playing back said first and second magnetic tape records and recording them together on a third magnetic tape record,

preparing from the time-topography record a control tape bearing indicia corresponding in number with said markings on said time-topography record but spaced apart distances proportional to the average velocity of said body during the time intervals between the successive markings of said record divided by the corresponding distances apart of the successive markings on said time-topography record,

scanning at constant speed said third magnetic tape record with respect to said markings and

simultaneously scanning said control tape with respect to said indicia,

determining the differences in arrival times at a first point of said markings and indicia,

producing first electric signals having a parameter successively proportional to each of said differences,

determining the difference in arrival times of said markings and indicia at a second point spaced downstream from said first point with respect to the relative motions of said third magnetic tape record and control tape,

producing second electric signals having a parameter continuously proportional to the accumulated algebraic sum of the last said differences,

producing third electric signals having a parameter proportional to the sum of the parameters of said first and second signals,

varying the speed of scanning of said control tape in response to said parameter of said third electric signals to maintain at a minimum the magnitude of said differences in arrival times at said second point,

simultaneously scanning said third magnetic tape record with respect to the field-time record thereon at a point adjacent said second point to produce fourth electric signals representative thereof,

making from said fourth electric signals a fourth magnetic tape record on a magnetic tape recorded upon in synchronism with the scanning of said control tape,

scanning said fourth magnetic tape record at constant speed to produce fifth electric signals

modifying said fifth electric signals to eliminate therefrom variations in magnitude due to the variable speed of recording of said fourth magnetic tape record,

producing from said fourth magnetic tape upper net signals proportional to the difference between those of the fourth signals derived from the field-time record made at the upper level during each traverse and the signals derived from the first magnetic tape record,

producing from said fourth magnetic tape lower net signals proportional to the difference between those of the fourth signals derived from the field-time record made at the lower level during each traverse and the signals derived from the first magnetic tape record,

producing first difference signals from said upper and lower net signals by subtracting one from the other,

visibly recording said first difference signals,

producing average net signals from said upper and lower net signals by adding said upper and lower net signals,

making a fifth magnetic tape record by simultaneously recording said upper, lower, and average net signals,

scanning said fifth magnetic tape record with respect to each of the three net signals recorded thereon at three equally spaced points for each signal record to produce from the three center scanning points reproductions of said upper, lower and average net signals while combining the signals derived from the outermost scanning points for each recorded signal to produce first, second and third chorded average signals,

simultaneously recording said reproduced upper, lower, and average net signals and said first, second and third chorded average signals to produce a sixth magnetic tape record,

scanning said sixth magnetic tape record with respect to each of the six signals recorded thereon, the scanning of the records of each of said first, second and third chorded average signals being done at each of two spaced apart points spaced differently from the distance between said outermost points of scanning said fifth magnetic tape record and the scanning of the records of each of said reproduced upper, lower, and average net signals being done at a point midway between the adjacent two points of scanning of the adjacent one of the records of said first, second and third chorded average signals to produce second reproductions of said upper, lower and average net signals, and combining the signals produced from scanning at said two spaced apart points as to each of said records of the first, second and third chorded average signals to produce first, second, and third rechorded average signals,

producing second difference signals by subtracting said first re-chorded average signals from said second reproduction of said upper net signals,

producing third difference signals by subtracting said second re-chorded average signals from said second reproduction of said lower net signals,

producing fourth difference signals by subtracting said third re-chorded average signals from said second reproduction of said average net signals, and

visibly recording said second, third, and fourth difference signals,

the visible recording of each of said difference signals each being divided into a plurality of curves, one for each traverse, and the base line being shifted for each curve in proportion to the traverse spacing,

the visible recordings of said first, second, third and fourth difference signals providing four separate but correlated field intensity versus distance maps.

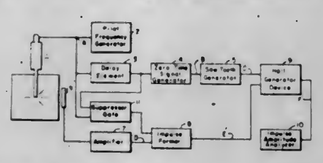
3,023,360
MEASUREMENT METHOD AND APPARATUS

Werner Czulius, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany

Filed June 30, 1959, Ser. No. 824,123
Claims priority, application Germany July 12, 1958
7 Claims. (Cl. 324—68)

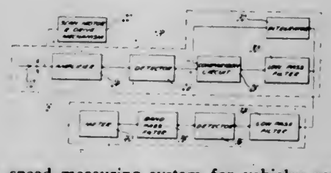
1. Measurement apparatus for determining the time intervals between momentarily occurring random events in a predetermined period of time comprising, semiconductive means for generating a Hall effect voltage output functionally related to the magnetic field applied thereto and the current flow therethrough, means for applying a

magnetic field to said semiconductive means responsive to the magnitude of a linearly increasing signal during said predetermined period of time, and means for applying a current pulse through said semiconductive means



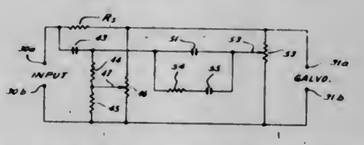
responsive to each random event occurring within said predetermined period of time, the magnitude of said output voltage being proportional to the elapsed time within said predetermined period of time.

3,023,361
RADIOMETER SPEED MEASURING SYSTEM
Leo B. Conner, Jr., Phoenix, Ariz., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 12, 1960, Ser. No. 28,717
5 Claims. (Cl. 324—70)



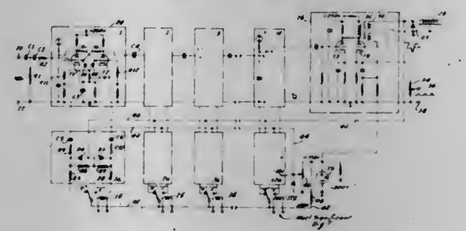
1. A speed measuring system for vehicles comprising a radiometer receiver including an antenna and scanning means connected with the antenna for causing the antenna field pattern to intercept the ground with oscillatory scanning motion having a component in the direction of vehicle motion, said receiver being adapted to develop a signal corresponding to the variation of the received power about the average value of received power, the spectral density of said signal during the forward scan of the antenna beam pattern being less than the spectral density thereof during the rearward scan in accordance with the speed of the vehicle, and means connected with said receiver for developing a signal corresponding to the difference in the spectral density of the received signal during forward and rearward scan as a measure of vehicle speed.

3,023,362
GALVANOMETER SYSTEMS
Robert B. Blizard, Littleton, Colo., and Lee H. Gollwitzer, Houston, Tex., assignors to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Dec. 23, 1959, Ser. No. 861,504
14 Claims. (Cl. 324—125)



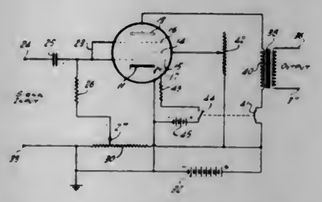
1. An indicating system comprising: indicator means for deriving indications of the magnitude of input signals and having a time lag in response between the instant that an input signal changes to a new value and the instant at which the corresponding indication is derived; and a speed-up circuit coupled to said indicator means and adapted to translate received input signals to decrease the time lag in response including first passive circuit means for providing current to the indicator means which is a direct function of the input voltage, second passive circuit means for providing a first pulse of current of one polarity and of short duration to said indicator means, and third passive circuit means for providing a second pulse of current of an opposite polarity and of short duration at a time immediately following said first pulse to counteract said first positive pulse of current whereby the corresponding indication is derived in a period of time less than said normal time lag.

3,023,363
RATE DIVIDER CIRCUIT
Edward Mundt, Pasadena, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware
Filed Sept. 28, 1959, Ser. No. 842,915
11 Claims. (Cl. 328—30)



1. A rate divider circuit, comprising: a fixed capacity digital counter having a predetermined number content provided therein, said counter including an input adapted to receive a trigger signal of a reference frequency and responsive to each cycle of the trigger signal by cumulatively increasing the predetermined number content by a digit, and an output for providing a cycle of output signal when the predetermined number content of said counter is cumulatively increased to exceed the capacity thereof by a digit; means for generating a reset pulse responsively to each cycle of the output signal, each reset pulse being of a predetermined pulse width equal in time duration to an integral number of cycles of the trigger signal; and means for applying each reset pulse to said counter for resetting the same to the predetermined number content, whereby a cycle of the output signal is produced for a definite number of cycles of the trigger signal according to the predetermined number content originally provided in said counter.

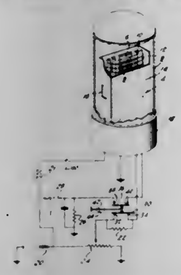
3,023,364
COLD CATHODE VACUUM TUBE AND CIRCUIT
Bernard G. Firth, Newark, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed May 29, 1959, Ser. No. 816,800
9 Claims. (Cl. 328—252)



2. An electron discharge device comprising; an evacuated envelope containing a cold cathode and an anode,

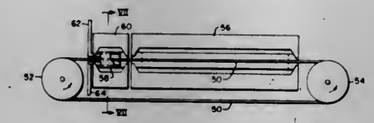
said cold cathode comprising a metal base covered with magnesium oxide, a sustaining grid electrode positioned between the anode and cathode for sustaining electron emission from the cold cathode, a first control grid electrode positioned between the sustaining electrode and the anode, and a second control grid electrode positioned between the sustaining electrode and the cold cathode.

3,023,365
KEEP ALIVE CIRCUIT FOR COLD CATHODE VACUUM TUBES
Bernard G. Firth, Newark, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed June 27, 1958, Ser. No. 745,162
2 Claims. (Cl. 328—267)



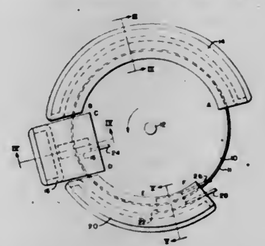
1. The combination with a cold cathode vacuum tube having a cathode having a porous sponge-like oxide coating thereon of a type adapted to emit a copious self-sustaining stream of electrons once emission has been initiated and providing another electrode of higher potential is present for collection of the emitted electrons, and a collector electrode, of a circuit connected across said cathode and collector electrode, said circuit including a source of direct current potential connected at its low potential end to said cathode and at a point of higher potential to said collector electrode through a high resistor of the order of twenty megohms, and switch means operative to provide a shunt across said resistor, said resistor when not shunted reducing the current in said circuit from several milliamperes to about one or two microamperes per square centimeter of cathode coating.

3,023,366
MASER
Peter F. Chester and Dan I. Bolef, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 30, 1957, Ser. No. 656,093
7 Claims. (Cl. 330—4)



1. Apparatus for amplifying electromagnetic wave energy of predetermined frequency by stimulated emission of radiation comprising, in combination, a continuously moving tape member moving in a predetermined path and having paramagnetic material continuously disposed along the length thereof, said tape member moving at a predetermined speed, said paramagnetic material having two discrete energy levels of electrons, said electrons undergoing transitions between said two energy levels when subjected to electromagnetic wave energy of said predetermined frequency, first magnetic field producing means disposed in predetermined position with respect to a first portion of said path for subjecting the paramagnetic material on the adjacent portion of the tape to a first magnetic field of predetermined magnitude and direction, second magnetic field producing means disposed adjacent the first magnetic field producing means and in predetermined position with respect to a second portion of said path, said portion of the tape moving from the first portion of the path substantially directly to the second portion of the path, the second magnetic field producing means producing on said portion of the tape while said portion is adjacent thereto a second magnetic field of predetermined magnitude and of a direction opposite to the direction of the first magnetic field, the speed of movement of said tape being such that any point on the tape moves from the first magnetic field to the second magnetic field in a time which is short compared to the Larmor period of the paramagnetic material, the sudden reversal of the polarity of the magnetic field on the paramagnetic material as the paramagnetic material on the tape moves from the first magnetic field to the second magnetic field causing state preparation in the paramagnetic material with an excess of electrons having high energy spin states and occupying the upper of said two energy levels, resonant cavity means resonant at said predetermined frequency disposed in predetermined position with respect to a portion of the path of said tape and in predetermined position with respect to said means for producing a second magnetic field, said tape passing through said resonant cavity means, and means connected to the resonant cavity means for supplying electromagnetic wave energy to be amplified to the resonant cavity means and conducting electromagnetic wave energy from the resonant cavity means, said portion of said tape passing through said resonant cavity means before spin-lattice relaxation occurs in the paramagnetic material in said portion of said tape, at least some of the electrons with high energy spin states in the paramagnetic material while in the resonant cavity means giving up energy to the electromagnetic wave of predetermined frequency as said last named electrons revert to the lower energy level thereby amplifying said electromagnetic wave, the continuous movement of paramagnetic material through the first and second magnetic fields as the tape moves providing continuous state preparation and providing for continuous amplification of said electromagnetic wave energy.

3,023,367
MASER
Dan I. Bolef and Peter F. Chester, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 29, 1957, Ser. No. 662,415
3 Claims. (Cl. 330—4)

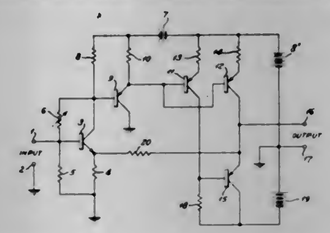


1. In apparatus for amplifying electromagnetic wave energy by stimulated emission of radiation, in combina-

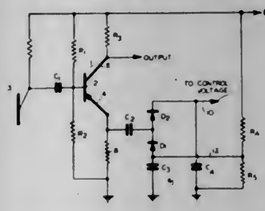
tion, a continuous source of moving paramagnetic material moving in a predetermined path at a predetermined speed, said paramagnetic material having first, second and third discrete energy levels of electrons, said second level being higher than said first level, said third level being higher than said second level, the separation between said energy levels being dependent upon the magnitude of an external magnetic field applied to the paramagnetic material, first and second spaced resonant cavities located in predetermined position with respect to said path and through which the source of paramagnetic material passes as it moves along said path, means adjacent the first resonant cavity for subjecting the paramagnetic material to a first magnetic field of predetermined direction and of a predetermined first magnitude while the paramagnetic material is in the first resonant cavity, means for continuously feeding electromagnetic wave energy of a first predetermined frequency and of at least a predeterminal amplitude to said first resonant cavity, the spacing between the first energy level and the third energy level being such that the electrons in said paramagnetic material while in said first resonant cavity undergo transitions between said first energy level and said third energy level while subjected to electromagnetic wave energy of said first frequency and to the first magnetic field of said first magnitude, said predetermined speed being such that the movement of the paramagnetic material from the first resonant cavity to the second resonant cavity is short compared to the spin-lattice relaxation time of electrons between the third energy level and the second energy level, means adjacent the second resonant cavity for subjecting the paramagnetic material to a second magnetic field of a second predetermined magnitude greater in magnitude than the first magnetic field and having a direction substantially parallel to the direction of the first magnetic field as the paramagnetic material passes through the second resonant cavity, the spacing between the second and third energy levels in the second resonant cavity being greater than the spacing between the first and third energy levels in the first resonant cavity, and means for conducting electromagnetic wave energy of a second predetermined frequency to be amplified to and from the second resonant cavity, the second frequency corresponding to the transition frequency between the third and second energy levels at said second magnetic field magnitude whereby electrons in the third energy level give up energy to the electromagnetic wave of said second frequency as they revert to the second energy level thereby amplifying the wave energy of second frequency, the total length of said predetermined path and said predetermined speed being chosen with respect to each other and the paramagnetic material whereby paramagnetic material after leaving the second resonant cavity traverses a portion of at least a predetermined length of the path in returning to the first resonant cavity, the last-named paramagnetic material remaining in said portion at least a sufficient time to substantially produce a thermal distribution of the electron population between the energy levels.

3,023,368
DIRECT COUPLED TRANSISTOR AMPLIFIER
Louis W. Erath, Houston, Tex., assignor to Southwestern Industrial Electronics Co., Houston, Tex., a corporation of Delaware
Filed July 15, 1958, Ser. No. 748,637
3 Claims. (Cl. 330—14)

1. A transistor amplifier comprising at least four transistors, a voltage source including a pair of voltage supplies having their respective positive and negative terminals connected together to form a point of reference potential and to make available a pair of other terminals, means for connecting the input signal between base and emitter of the first transistor including a first resistor connected between the emitter of said first transistor and the reference point; means connecting the collector of said first transistor to one of said pair of terminals, means connecting the collector of said first transistor in parallel to the bases of the second and third transistors, said last-named means including a direct conductive connection between said bases, second and third resistors connected respectively between said one of said pair of terminals and the emitters of said second and third transistors; conductive connections between the collector of said second transistor and the base of the fourth transistor, between the collector of said fourth transistor and the other of said pair of terminals, between the emitter of said fourth transistor and the collector of said third transistor, and between the emitter of said first transistor and the junction between the collector of said third transistor and the emitter of said fourth transistor; a fourth resistor connected between the base and collector of said fourth transistor, the output of the amplifier being available between said junction and said reference point, said second, third and fourth transistors being all of the same conductivity type.

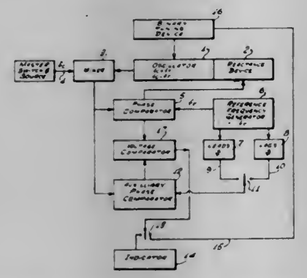


3,023,369
VARIABLE-GAIN TRANSISTOR CIRCUIT
Irving Horowitz, Eatontown, N.J., assignor to Blonder-Tongue Electronics, Newark, N.J., a corporation of New Jersey
Filed Feb. 9, 1959, Ser. No. 792,023
6 Claims. (Cl. 330—24)



1. A variable gain transistor amplifier having, in combination, a transistor provided with at least a base, an emitter, and a collector, a signal-input circuit connected to the base, an output circuit connected between the emitter and the collector, a direct current load connected in the output circuit to the emitter, a signal coupling path connected to said load, a pair of variable impedance elements the impedance of which varies in a predetermined direction as a function of applied electric energy, means connecting said elements to said signal coupling path in parallel with each other and with opposite polarity for signal electric energy such that the impedance of said elements varies in opposite directions with variation of signal energy, and means connecting said elements to a source of control electric energy in series with each other and with the same polarity for control electric energy such that the impedance of said elements varies in the same direction with variation of control electric energy, whereby the gain of the amplifier may be varied by varying said control electric energy.

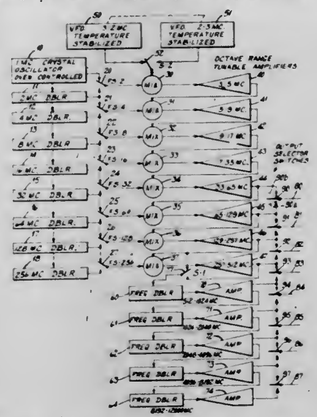
3,023,370
VARIABLE FREQUENCY GENERATOR CONTROL CIRCUIT
Herbert H. Waller, Hicksville, N.Y., assignor to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed Nov. 25, 1959, Ser. No. 855,315
4 Claims. (Cl. 331—11)



1. A circuit for determining the sideband of a frequency generator, comprising a source of energy having a predetermined frequency, a generator producing energy having a frequency equal to said predetermined frequency plus or minus a sideband frequency, a mixer coupled to the outputs of said source and said generator for producing an output having a frequency equal to said sideband frequency; and means for determining whether said sideband is the upper or lower sideband of said predetermined frequency, comprising a reference generator producing energy at said sideband frequency, a first phase comparator coupled to the outputs of said mixer and said reference generator and producing a signal indicative of the phase difference between the applied inputs, a phase-shifting means coupled to the output of said reference generator, a second phase comparator coupled to the outputs of said mixer and said phase-shifting means, said phase-shifting means shifting the phase of said sideband sufficiently so that the output of said second phase comparator differs in magnitude substantially depending on whether the output from said mixer is the upper or lower sideband, and comparator means coupled to the outputs of said first and second phase comparators for relating the inputs applied thereto, and producing an output indicative of the sideband.
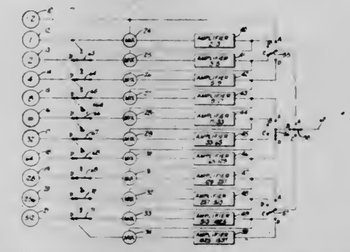
3,023,371
PRECISION VARIABLE FREQUENCY GENERATOR
Frank R. Balish, Willoughby, Paul H. McGarrell, South Euclid, and Charles C. Miller and Arthur F. Naylor, Cleveland, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Mar. 7, 1958, Ser. No. 719,862
21 Claims. (Cl. 331—38)

1. In combination, a series of frequency sources providing successive different output frequencies, a series of frequency adders each having first and second inputs and an output, means for connecting each frequency source to the first input of a respective one of said adders, means for connecting the output of each adder to the second input of the next succeeding adder, a series of frequency multipliers connected in tandem to the output of the last of said series of frequency adders for successively multiplying the output frequency of said series of adders, and switch means connected to the output of a plurality of said frequency multipliers for selectively



providing an output from any one of said plurality of frequency multipliers.

3,023,372
PRECISION VARIABLE FREQUENCY GENERATOR
Frank R. Balish, Willoughby, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Jan. 13, 1958, Ser. No. 708,696
4 Claims. (Cl. 331—39)

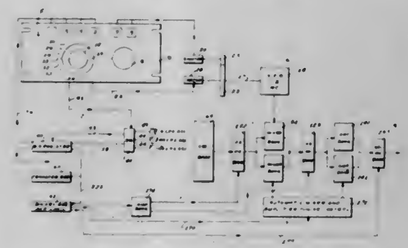


1. In combination, a series of frequency sources having outputs for providing respective output signals of frequencies in the ratio of successive powers of two and corresponding to successive binary code positions, a series of switch means having respective first contact means connected to the outputs of respective ones of said series of frequency sources, having respective second contact means connected to the outputs of the respective frequency sources preceding the frequency sources to which the first contact means are connected and having respective third contact means, each of said switch means in one condition thereof being operative to connect its first and third contact means and in another condition thereof being operative to connect its second and third contact means, a series of frequency mixers having respective outputs, having respective first inputs connected to said third contact means of respective ones of said series of switch means and having respective second inputs, a series of amplifiers interposed between the outputs of respective ones of said series of frequency mixers and the second inputs of the respective next succeeding ones of said series of frequency mixers, and means providing a permanent conductive connection between the output of each amplifier and the second input of the respective next succeeding frequency mixer in said series of frequency mixers.

3,023,373
PRECISION VARIABLE FREQUENCY GENERATOR

Arthur F. Naylor, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio

Filed May 15, 1958, Ser. No. 735,589
13 Claims. (Cl. 331—40)

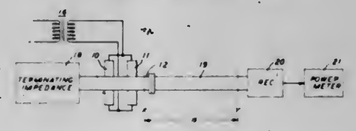


1. In combination, a series of frequency sources, a series of frequency mixers, switch means for interconnecting said frequency sources and frequency mixers in different combinations to provide a plurality of output frequencies in addition to the output frequencies of said frequency sources, electrical register means for registering a number in electrical form, and means for setting said switch means in accordance with the condition of said electrical register means to produce a frequency related to said number by combination of said frequency sources and mixers, said switch means being operative to selectively connect the inputs of at least two of said frequency mixers with the output of each of said frequency sources.

3,023,374
NOISE GENERATOR

William W. Mumford, Parsippany-Troy Hills Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Apr. 20, 1959, Ser. No. 807,726
11 Claims. (Cl. 331—78)



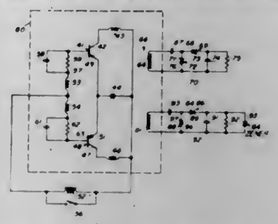
9. In combination, a transmission line, two noise sources for injecting noise power into said transmission line at locations spaced with respect to one another by an odd number of one-quarter wavelengths of the frequency of said noise power to increase noise power in said line, and means for alternately turning said noise sources on and off.

3,023,375
TRANSISTOR BLOCKING OSCILLATOR POWER SUPPLY

Thomas L. Sheridan, 3950 Lamesa Lane, San Jose, Calif., and Richard A. Nyberg, 551 Hearst Ave., San Francisco, Calif.

Filed Jan. 26, 1960, Ser. No. 4,827
4 Claims. (Cl. 331—112)
(Granted under Title 35, U.S. Code (1952), sec. 266)

4. In a transistor power supply of the type employing a transistor blocking oscillator utilizing a blocking capacitor in positive base feedback, said transistor having base and emitter electrodes, said capacitor having a charging path including the base and emitter of said transistor, the improvement comprising an inductance in serial relationship with the charging path of said capacitor, whereby energy stored in said inductance during the initial charging of said blocking capacitor will be returned as

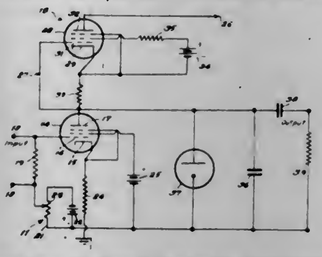


charging current to said blocking capacitor decreases, resulting in a charge on said capacitor proportional to the voltage of said D.C. energy source, the temperature of said transistor, and the beta of said transistor.

3,023,376
ANALOGUE TO DIGITAL INTEGRATOR

Chester L. Smith, Rockaway, N.J., and Clyde W. Pinkley, 107 E. Burgess St., Mount Vernon, Ohio; said Smith assignor to the United States of America as represented by the Secretary of the Army

Filed Oct. 7, 1958, Ser. No. 766,159
1 Claim. (Cl. 331—131)
(Granted under Title 35, U.S. Code (1952), sec. 266)



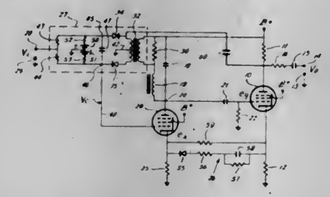
An analogue to digital converter comprising a signal responsive charging circuit including a constant current source, said source having an electron emitting device comprised of a cathode, an anode, and a control electrode, a signal responsive variable resistance means connected to said constant current source having conductor means for applying an input signal to said variable resistance means including an electron emitting device having a cathode, an anode, and a control grid to receive said input signal, a capacitive means connected to said signal responsive charging circuit to alternately receive and discharge electrical energy received from said constant current source, and a discharging means connected to said capacitive means to effect charging and discharging of said capacitive means at predetermined levels of energy, said discharging means comprising a gas discharge tube connected to said capacitive means, said discharge tube having a cathode and an anode, said anode being connected between said constant current source and said variable resistance means.

3,023,377
FREQUENCY MODULATION SYSTEMS

William H. Swain, Sarasota, Fla., assignor to Electro-Mechanical Research, Inc., Sarasota, Fla., a corporation of Connecticut

Filed Dec. 29, 1958, Ser. No. 783,227
16 Claims. (Cl. 332—23)

15. In a frequency modulation system, the combination comprising an oscillator including a first amplifying device having an anode, a cathode and a control electrode, an anode resistor and a cathode resistor for connecting the anode and cathode of said first amplifying device across a source of anode current, a second amplifying device having an anode, a cathode and a control electrode, a capacitor and an inductance in parallel forming a tank circuit for connecting the anode of said second amplifying device to the positive terminal of said anode current source, a second cathode resistor for connecting the cathode of said second amplifying device to the other terminal of said anode current source, a series capacitor and a shunt grid-leak resistor for coupling the anode of said second amplifying device to the control grid of said first amplifying device, a regenerative feedback circuit including a diode rectifier connected between said cathodes in a direction to pass current from the cathode circuit of said first device to the cathode circuit of said second device, a bridge circuit including a pair of semiconductor circuit elements connected in respective branches thereof, each of said elements having a forward operating range wherein its incremental conductivity varies linearly with current therethrough, a pair of equal resistors connected



in the remaining respective branches of said bridge circuit, a high impedance source of biasing current connected between the junction points for said resistors and elements to maintain forward conduction through said elements in said operating range, means for applying a modulating potential between the remaining junction points for said resistors and elements to pass a modulating current through each of said elements, a by-pass capacitor being connected between said remaining junction points, said elements being connected in oppositely poled relation with respect to said modulating currents, whereby the incremental conductivities of said elements are oppositely changed in proportion to said modulating currents, and means responsive to the current flow through said inductance for passing a current of like phase through said elements and said by-pass capacitor, and means for coupling a terminal of said by-pass capacitor with the control electrode of said second amplifying device to apply a control potential therethrough corresponding to said modulating potential and serving to vary the carrier frequency of said oscillator linearly with said modulating potential.

3,023,378
VOLTAGE-CONTROLLED CAPACITANCE CONVERTER-MODULATOR

Richard Harrison Fuller, Playa Del Rey, Calif., assignor to Pacific Semiconductors, Inc., Culver City, Calif., a corporation of Delaware

Filed Nov. 27, 1959, Ser. No. 855,748
10 Claims. (Cl. 332—52)

1. An amplitude modulator for receiving electrical energy from a source of radio frequency carrier waves of a preselected frequency and from a source of modulating voltage, including: first and second L-C resonant circuits tuned by voltage variable capacitances, said first and second resonant circuits being coupled in series, said resonant circuits being responsive to said radio frequency carrier waves and to electrical signals from said source of modulating voltage, said voltage variable capacitances being arranged to simultaneously change in opposite directions the resonant frequencies of said resonant circuits in response to variations in amplitude of electrical signals from said source of modulating voltage, the inductances of said first and second resonant circuits being arranged in series opposing relationship, and output terminals coupled across the series combination of said

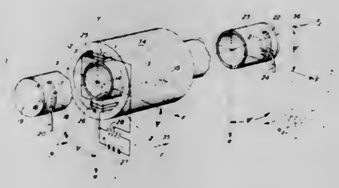


first and second resonant circuits, the resonant frequencies of said first and second resonant circuits in the absence of a modulating voltage being substantially identical and different from said preselected carrier frequency, whereby a net output voltage from said first and second resonant circuits will be obtained across said output terminals only upon application of a modulating voltage.

3,023,379
TRANSVERSELY MAGNETIZED NON-RECIPROCAL MICROWAVE DEVICE

Edward H. Turner, Red Bank, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 27, 1953, Ser. No. 339,289
19 Claims. (Cl. 333—9)



18. In combination, a wave guiding structure having a boundary of substantially uniform transverse cross section and continuous conductivity for high frequency electromagnetic wave energy, said energy when guided by said structure being characterized by a magnetic component which appears to rotate in planes in regions which are substantially removed from the center of said structure, gyromagnetic material extending longitudinally within said structure in energy coupling relationship with said rotating component, and means for magnetically polarizing said material with a biasing magnetic field having a positive sense directed normal to said planes, the relationship between the sense of rotation of said rotating component and said positive sense being the same throughout all of said material for any given direction of propagation of said wave energy through said wave guiding structure.

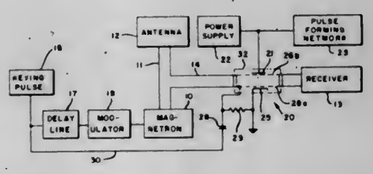
3,023,380
MICROWAVE SWITCH

Robert Matteson Hill, Palo Alto, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware

Filed Feb. 24, 1960, Ser. No. 10,688
10 Claims. (Cl. 333—13)

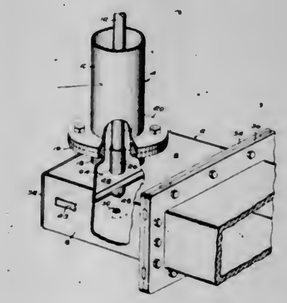
1. A microwave switch comprising a section of rectangular waveguide having two pairs of opposed parallel walls and adapted to propagate electromagnetic waves,

one pair of said walls having transversely aligned openings therein, a hot cathode element disposed externally of and adjacent to the opening in one of the walls, an anode element disposed externally of and adjacent to the opening in the other of the walls, means for hermetically sealing said anode and cathode elements to said section, end walls sealed to opposite ends of said waveguide section and enclosing a volume of ionizable gas, each of said end walls having a microwave permeable window, a source of positive voltage connected to said anode, means



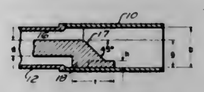
for applying a negative biasing potential to said section whereby electrons from said cathode are prevented from passing through the adjacent opening into the section, means for applying a relatively positive trigger pulse to said section causing an arc discharge between said anode and cathode elements and instantaneously creating an ionized plasma across the waveguide section which blocks transmission of electromagnetic waves through the section, and means for reducing anode voltage below ionization potential of the gas for restoring the switch to its prefired state.

3,023,381
TRANSITION DEVICE
Howard J. Rowland, Egypt, Mass., assignor to D. S. Kennedy & Co., Cohasset, Mass., a corporation of Massachusetts
Filed Sept. 8, 1959, Ser. No. 838,761
13 Claims. (Cl. 333—33)



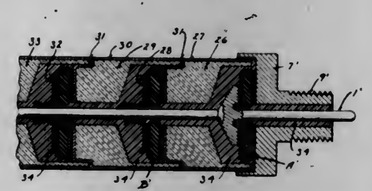
1. A transition system for electromagnetic energy comprising a coaxial conductor transmission line having an outer conductor surrounding an inner conductor, a waveguide having broad faces and narrow faces, said inner conductor extending into said waveguide through an opening in a broad face of said waveguide and forming a probe therein, said outer conductor being connected to said broad face, said probe touching and protruding at right angles through a substantially flat cross-bar being parallel to said broad face, and connected to said narrow faces, and a short circuit termination across said waveguide spaced from said coaxial line.

3,023,382
INLINE WAVEGUIDE TO COAXIAL TRANSITION
Joseph C. Borghetti, Southborough, Mass., assignor to Microwave Development Laboratories, Inc., Wellesley, Mass., a corporation of Massachusetts
Filed July 15, 1960, Ser. No. 43,140
3 Claims. (Cl. 333—34)



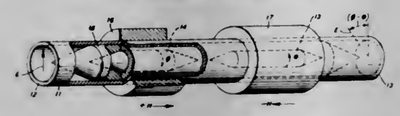
1. An inline waveguide to coaxial transition comprising a rectangular waveguide joined at one end to the outer conductor of a coaxial line, a partition extending transversely across a broadwall of the guide and reducing the guide height across the entire width of the guide, the coaxial line having its center conductor terminating in a loop, the loop having a web portion, and the loop being integral with the partition.

3,023,383
FEED-THROUGH CAPACITOR
Heinz M. Schlicke, Fox Point, Wis., assignor to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 28, 1956, Ser. No. 587,692
2 Claims. (Cl. 333—79)



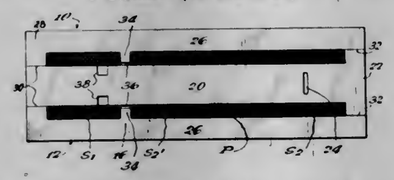
2. A unitary, mechanically cascaded, parallel electrically connected feed-through capacitor unit for application in a high frequency range where inductive reactance in the portions of the line leading to and lying between adjacent cascaded capacitors and magnetic coupling between said line portions and the capacitors tends to produce filter phenomenon comprising; a conducting base; a substantially straight axially disposed main conducting member adjacent said base and insulated therefrom; a first capacitor unit adjacent said base having one electrode connected thereto and the other electrode connected to said main conducting member; an annular ring shaped ferrite body adjacent said first capacitor unit and surrounding a portion of said main conducting member, said ferrite body having a flange portion substantially completely surrounding the outer periphery of said first capacitor and being adapted to introduce losses in high frequency currents traveling on said conducting member and to shield said capacitor, thereby minimizing inductive coupling between said capacitor and the adjacent portion of the conducting member; a second capacitor unit on the side of said ferrite body opposite said first capacitor unit, said second capacitor having electrical connections to said base and to said main conducting member, each of the aforesaid capacitors having a frequency of dimensional resonance above the frequency range of application; and a second annular shaped ferrite body adjacent said second capacitor unit on the side opposite the first ferrite body, said second ferrite body having a flange portion completely surrounding the outer periphery of said second capacitor, whereby said capacitor is shielded from magnetic coupling to said main conducting member by said first and second ferrite bodies.

3,023,384
BROAD-BAND FERRITE POLARIZATION ROTATOR
Fritz K. Bowers, Convent Station, and John P. Schafer, Elberon, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 22, 1955, Ser. No. 535,986
14 Claims. (Cl. 333—98)



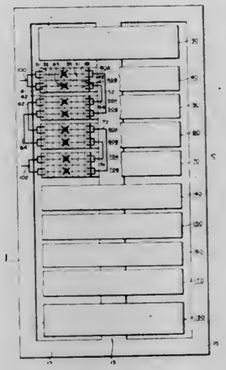
14. A broad band microwave polarization rotating apparatus comprising means for directing plane polarized microwave energy along an axis, a first ferrite polarization rotator disposed along said axis comprised of a first ferrite member and a first magnetic field directed along said axis, said first ferrite rotator rotating the plane of polarization of the energy through a first angle at the lower limit of a predetermined frequency range and through an angle equal to said first angle plus a second angle at the higher limit of the predetermined frequency range, a second ferrite polarization rotator disposed along said axis in successive relation to said first ferrite rotator comprised of a second ferrite member and a second magnetic field directed along said axis, said second ferrite rotator rotating the plane of polarization of the energy through a third angle different in magnitude from said first angle at the lower limit of said predetermined range and through an angle substantially equal to said third angle plus said second angle at the higher limit of the predetermined frequency range, said first and second rotators producing substantially identical rates of change of angle of rotation with frequency throughout said predetermined frequency range, said first and second ferrite rotators rotating the plane of polarization of microwave energy in opposite directions, whereby the net rotation over said predetermined frequency range is substantially constant.

3,023,385
TRANSFORMER CORE CONSTRUCTION
Albert E. Feinberg and Frank S. Endo, Chicago, Ill., assignors to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Original application Jan. 10, 1956, Ser. No. 558,236, now Patent No. 2,892,249, dated June 30, 1959. Divided and this application Nov. 5, 1958, Ser. No. 775,091
5 Claims. (Cl. 336—165)



1. A transformer core of the shell type which comprises a central winding leg and two elongate side parts assembled thereto, the said winding leg and side parts being formed of stacks of laminations of mating edge configuration to enable substantially scrapless formation thereof, the central winding leg being of elongated T-shaped formation and the side parts of elongate L-shaped formation, the short legs of the side parts extending toward one another and being abutted against the end of the central winding leg opposite the cross head, and the said cross head of the central winding leg being abutted against the inside edges of the long legs of said side parts adjacent the ends thereof whereby the longer legs of the side parts and the central leg of the winding leg are parallel and spaced apart to form winding windows, a pair of integral lugs one on each of said side parts extending inwardly toward said winding leg to provide magnetic shunt means between windings adapted to be disposed in said windows on opposite sides of said lugs, a pair of recesses in said winding leg, one each on opposite side edges thereof of configuration substantially identical with the configuration of said lugs, and each recess having an edge spaced from the conforming edge of its adjacent lug along the length of said winding leg by substantially the width of said cross head, and being wholly contained within the length of one window whereby that winding adapted to be disposed within said one window will cover the recesses.

3,023,386
WINDING FOR ELECTRICAL APPARATUS
Edward C. Wentz and Harold R. Moore, Hickory Township, Mercer County, and William D. Albright, Sharon, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 27, 1958, Ser. No. 738,112
12 Claims. (Cl. 336—187)

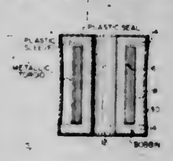


2. An electrical winding comprising a plurality of flat-disc type coils each including at least two sections, each section formed from a subdivided conductor having at least one pair of parallel-connected strands insulated from each other, the strands of each pair being arranged along a path substantially at right angles to the path of the leakage magnetic flux caused by current flowing in said winding, said strands of each section being electrically connected in parallel and being transposed with respect to their relative positions in said magnetic path at a point approximately midway between their points of common connection, said sections of said coils being interconnected in groups to form a closed loop in which the effective voltages induced between the sections of each coil are opposing in alternate coils to thereby reduce the total voltage induced in said loop by said leakage flux to a negligible value.

3,023,387
MAGNETIC CORE ARTICLE
John Paul Jones, Norwood, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Original application Apr. 25, 1955, Ser. No. 503,713, now Patent No. 2,962,803, dated Dec. 6, 1960. Divided and this application Dec. 12, 1957, Ser. No. 702,427
1 Claim. (Cl. 336—198)

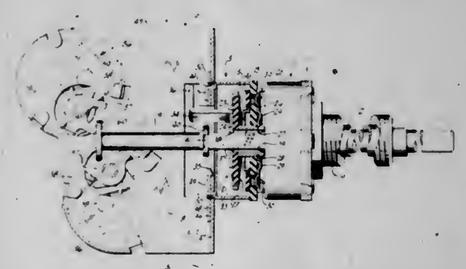
A magnetic core component comprising, in combination, a bobbin of non-magnetic material having a cen-

tral open-ended axial bore extending therethrough and including a pair of exterior laterally projecting shoulders or rims forming therebetween a peripheral recess, magnetizable material disposed in said peripheral recess and having a radial dimension less than the outer radius of the shoulders so as to lie fully within said recess, means immobilizing said magnetizable material on said bobbin, a flexible sleeve of insulating dielectric plastic material normally of less diameter than said shoulders and positioned thereover in a manner overlying the bobbin tightly contractually engaging the shoulders of the bobbin so as to extend between the shoulders in spaced relation to the magnetizable material such that the shoulders make continuous radial con-



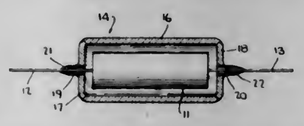
tact with the sleeve thereby forming a protective sheet over the magnetizable material within the recess, dielectric material bonded to the sleeve ends and covering the opposite end surfaces of the bobbin whereby the sleeve and the bobbin are tightly joined together to form a hermetically sealed unitary assembly, and one or more electrical windings distributively disposed on the bobbin inductively coupled to the magnetizable material within the recess, each of said windings extending through the bore of the bobbin and around the outside thereof and closely over the exterior surfaces of the plastic envelope surrounding the bobbin, the envelope in addition to its protective function serving as an electrical insulating medium between the one or more windings of the magnetizable material.

3,023,388
COMPOSITE ELECTRICAL CONTROL DEVICE FOR RADIO RECEIVERS
Joseph Di Girolamo, Mishawaka, Ind., and William L. Kelver, Cassopolis, Mich., assignors to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Sept. 22, 1960, Ser. No. 57,650
11 Claims. (Cl. 338—172)



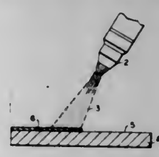
1. In combination: a pair of electric switches each having a pivoted actuating lever; means mounting and securing said switches in fixed relation to one another with the axes about which their pivoted actuating levers swing parallel and said levers projecting toward one another; spring means acting upon each of said pivoted levers and biasing the same in opposite directions; a common actuating shaft for said two switches; means mounting the actuating shaft for endwise movement along an axis which is fixed with respect to the switches, normal to the axes about which the operating levers swing and passes between the pivot axes of the operating levers; and an abutment fixed to the shaft and having the free ends of the actuating levers bearing against opposite sides thereof, so that the bias on said operating levers yieldingly holds the actuating shaft in a neutral position from which it may be pulled or pushed to actuate one or the other of said switches.

3,023,389
ELECTRICAL RESISTOR UNIT
Ray C. Hughes, Ardsley, and Richard C. Sweet, North Tarrytown, N.Y., assignors to Consolidated Electronics Industries Corp., New York, N.Y., a corporation of Delaware
Filed June 16, 1959, Ser. No. 820,800
2 Claims. (Cl. 338—237)



1. In combination, an electrical device having a pair of terminals extending from opposite ends thereof; and a hermetic enclosure surrounding said device and comprising a tubular glass member with integral glass end portions and a pair of hollow metal tubes hermetically fused into said end portions to provide passageways therethrough, one of said tubes being fused into each of said end portions, respectively, with the glass of said end portions hermetically sealed to and encircling the outer surface of said tubes, one of said terminals extending through each of said tubes, respectively, and hermetically sealed outside of said hermetic enclosure.

3,023,390
APPLYING ELECTRODES TO CERAMIC MEMBERS
Christy J. Moratis, Penn Hills, Yoshio Ichikawa, Wilkins Township, Allegheny County, and Edward A. Pigan, Monroeville, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 17, 1960, Ser. No. 15,599
6 Claims. (Cl. 338—309)

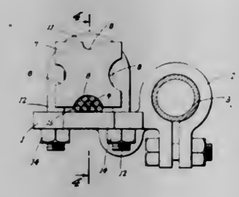


1. A body of electrically conductive ceramic material and an intimately bonded flame sprayed coating applied to at least one surface thereof, said coating comprising by weight from 40 to 55% silver, from 20 to 30% cadmium, from 10 to 20% zinc and from 10 to 20% copper, the flame sprayed coating being adherently bonded whereby the contact between the ceramic body and the metallic coating has a low electrical resistance.

3,023,391
UNIVERSAL CONNECTOR FOR ELECTRIC WIRES
John G. Pahl, Stockton, Calif., assignor to K-P-F Electric Co., Stockton, Calif., a corporation of California
Filed Sept. 21, 1959, Ser. No. 841,075
2 Claims. (Cl. 339—31)

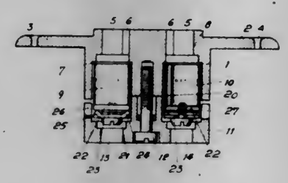
1. A connector for electric cables comprising a base, a socket on and rigid with the base for engagement with

an end of one cable, a multi-sided block superimposed on the base intermediate its ends, the block having a substantially semi-circular saddle groove in each side intermediate the ends thereof, the grooves in said sides being all different sizes whereby the block may be turned to dispose any such groove in facing relation to the base to fit over another cable of corresponding size rested on the base, and means securing the block to the base and arranged to force the block toward the base so as to clamp



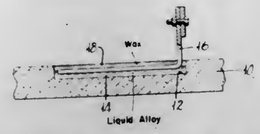
said other cable against the base; said means comprising a U-bolt straddling the block and having legs slidably projecting through the base with nuts on the lower ends of the legs below the base and engaging the same; the block having a continuous peripheral groove thereabout intermediate its ends and disposed transversely of the first named grooves, said peripheral groove being shaped at the bottom to engage the under side of the outer portion of the U-bolt.

3,023,392
PLUG SOCKETS
Paul François Joseph Lamaudiere, 81 Blvd. Suchet, Paris, France
Filed July 1, 1957, Ser. No. 669,074
Claims priority, application France Jan. 3, 1957
3 Claims. (Cl. 339—33)



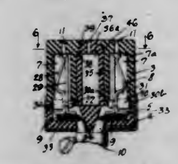
1. A socket for plugs having various shaped pins comprising a body of insulating material provided with parallel recesses each having an opening of a configuration for receiving a plug flat pin and plug round pin, a pair of female members each freely housed and retained by said body within one of said recesses and provided by a metal strip having a U-shaped configuration provided by a base and pair of legs having one edge thereof positioned facing its respective recess opening, each female member further having said legs thereof each bent at a medial portion with the free end portion extending in a reverse direction to and between said legs towards but spaced from the base thereof with the tip of each free end portion and said base providing a gap for receiving a plug flat pin extending from the recess opening facing said member, therebetween, said leg free end portion being curved extending outwardly from one another and then inwardly extending towards one another for receiving a plug round pin extending from the recess opening facing said member, between the free end portions thereof and means for connecting conductive wires to said female members.

3,023,393
LIQUID ELECTRICAL CONNECTION FOR ELECTROLYTIC CELLS
John P. Oliver, Berea, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Filed Oct. 22, 1958, Ser. No. 768,911
9 Claims. (Cl. 339—118)



4. In an electrolytic cell operable at about 30° C. to about 300° C.; an electrical connection between a graphite cover of said electrolytic cell and a solid, conductive bus bar which electrical connection has current passing therethrough continuously during the operation of said cell; said electrical connection being an oxidation resistant, non-toxic alloy having a melting point between about 30° C. and 300° C. molten at least during substantially the entire operation of said cell, said alloy comprising between 5 percent and 25 percent by weight in the aggregate of at least one metal selected from the group consisting of indium and gallium and at least 75 weight percent in the aggregate of at least one metal selected from the group consisting of lead, tin, bismuth, cadmium and aluminum.

3,023,394
MULTI-WIRE CONNECTOR AND PLUG WITH SELECTIVE CENTRAL KEY MEANS FOR DIFFERENT VOLTAGES
Harvey Hubbell, Southport, Conn., assignor to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Mar. 17, 1958, Ser. No. 721,856
6 Claims. (Cl. 339—186)



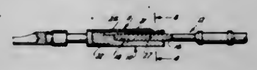
1. A multi-wire connector and plug, said connector comprising an insulating body member provided with chambers for receptacle contacts and a series of contact blade entrance slots leading to said chambers, receptacle contacts in the chambers, said plug including an insulating body and contact blades mounted on said body for insertion in the slots in the connector to engage the contacts therein, interlocking means to prevent separation of the plug and connector mounted to become effective and ineffective by relative turning movement between the plug and connector, said interlocking means being arranged to become effective by relative turning movement between the connector and the plug only after the contact blades have been inserted in the slots in the connector and are in engagement with the receptacle contacts, an insert mounted in the connector body for limited turning movement therein and provided with a key opening having eccentric portions, and a key projecting from the plug body of the same shape as the opening in the insert and positioned in the same eccentric position relative to the axis of the connector body as the opening in the insert so as to enter said opening only when the contact blades of the plug are in position to enter predetermined slots of the connector, said insert adapted to turn with the key on the relative turning movements of the plug and connector.

3,023,395
ELECTRIC POWER OUTLET
Harvey Hubbell, Southport, and Ernest R. Carlson, Fairfield, Conn., assignors to Harvey Hubbell, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Jan. 24, 1957, Ser. No. 636,143
10 Claims. (Cl. 339—191)



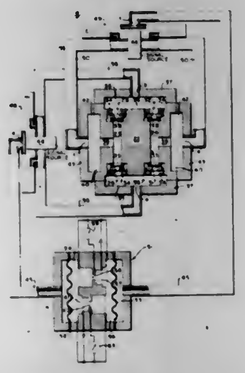
1. A contact for an electric wiring device comprising: a contact portion; a stationary flat supporting plate connected thereto; said plate having a plain opening extending therethrough; a unitary screw supported by said plate and having a head on one side of said plate and a threaded shank extending through the opening; said shank having an annular groove immediately under said head in which the peripheral edge portions of said plate that surround the opening are seated to prevent axial movement while permitting turning movement of said screw relative to said plate; a clamping nut having a threaded opening threaded on said shank and disposed on the side of said plate which is opposite to the side on which said head is disposed for travel thereon, said clamping nut being plate-like and having a straight side edge; and means forming a part of the contact and cooperating with said edge of said clamping nut throughout the total length of travel of said clamping nut on said shank for preventing said clamping nut from rotating on said shank, whereby turning movements of said screw result in axial shifting of said clamping nut on said shank toward or away from said plate, and the bared end of a conductor wire may be clamped between one side of said clamping nut and said opposite side of said plate by disposing it therebetween and turning said screw so as to cause said clamping nut to shift toward said plate.

3,023,396
SOCKET CONTACT
George J. Swanson and Edward Kokalas, Sidney, N.Y., assignors to The Bendix Corporation, a corporation of Delaware
Filed June 13, 1957, Ser. No. 665,557
3 Claims. (Cl. 339—258)



3. An electrical socket contact comprising an elongated cylindrical metallic body having an axial cylindrical bore in one end and terminating short of the other end, an elongated external axially extending flatted zone in the wall of the socket contact around said bore, said flatted zone extending completely across the body, said flatted zone extending from a position adjacent the open end of said bore to a location remote therefrom, a first transversely extending slot in said flatted portion adjacent the open end of said bore and extending into said bore, a second transversely extending slot in said flatted portion and extending into at least the end of said bore, a contact retainer comprising an elongated resilient finger having a generally flat inner face overlying and confronting the flatted zone of the body, the finger having a width which is generally the same as the width of the flatted zone and a length which is generally the same as the length of the bore, an annular groove in the body rearwardly of the flatted zone, the radius of the inner surface of the annular groove being substantially equal to the radius of the central longitudinal portion of the flatted zone, means including a broad collar securely mounted within the annular groove rigidly to secure the root end of the finger to the socket, the other free end of the finger lying adjacent and beyond the end of the flatted zone at the open end of the bore, and means on the free end of the finger to project into the path of the bore when no pin is in the bore, the finger being normally under tension urging the free end portion thereof inwardly toward the axis of the bore.

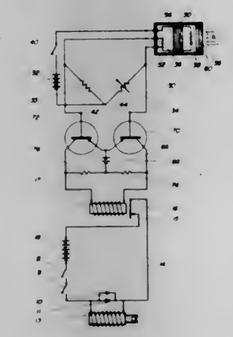
3,023,397
HYDRAULIC PHASE DISCRIMINATOR
Herbert B. Reed, Jr., Silver Spring, and Morton Stimler, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 23, 1957, Ser. No. 685,758
8 Claims. (Cl. 340—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A circuit comprising in combination; a plurality of hydraulic rectifiers disposed in a bridge circuit characterized by having each rectifier serially connected in the preferred conductive direction, a pair of signal producing means connected across diametric junctions of said bridge circuit for applying hydraulic signals to the bridge circuits, the signal produced by one of said signal producing means being of known frequency and phase and the signal produced by the other of said signal producing means being of unknown phase and frequency, a plurality of inertance means each having a center tap and each connected in shunting relation to one of said signal producing means, and means connected to said center taps for deriving an output signal correlative to the differences in the phases of the signals applied to said bridge circuit by said signal producing means.

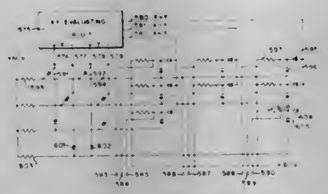
3,023,398
INFRA-RED RADIATION MONITOR
Charles L. Siegert, Manhattan, Kans. (229 Byrd Drive, Midwest City, Okla.)
Filed Apr. 9, 1958, Ser. No. 727,449
4 Claims. (Cl. 340—51)

1. An infra-red radiation detection apparatus to signal changes in the presence of infra-red energy, said apparatus including a control circuit having a bridge provided with an electrical source and four legs, two of said legs having a first and a second thermal resistor respectively which at ambient temperature retain said bridge in balance, means mounting said resistors and exposing each to the same ambient temperature atmosphere, means for magnifying the changes in infra-red energy falling on said first resistor, means for shielding said second resistor, said shielding means including a spherical mirror supported between said thermal resistors by said mounting means whereby said changes will unbalance said bridge and provide an electrical output from



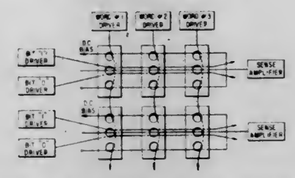
the bridge, said bridge having a pair of output terminals, an amplifying circuit which has a first and a second amplifier connected respectively with the bridge terminals to energize said amplifiers in response to bridge unbalance, and amplifier electric source in said amplifying circuit, said amplifying circuit having output conductors, and an electro-mechanical load device connected to said output conductors.

3,023,399
SITUATION DETERMINING DEVICE
Arthur H. Dickinson, Greenwich, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 22, 1955, Ser. No. 554,703
5 Claims. (Cl. 340—149)



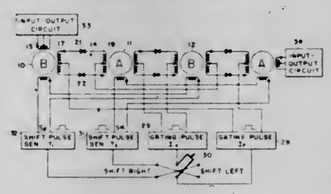
3. An apparatus for determining the relative absolute values of more than two data items, comprising data manifesting means adapted to produce data signals having both sign and magnitude significance for each of the data items whose relativity is to be determined; a plurality of comparing means, each operative responsive to applied data significant signals manifesting two data items to produce a predetermined potential status for each of the possible data relativity statuses; means so connecting the data manifesting means to the plurality of comparing means so as to apply data significant signals manifesting a different pair of data items to each of the comparing means; and means operative responsive to the data relativity status potentials, produced by said plurality of comparing means, for producing a unique output manifestive of the relativity of the absolute values of all said data items.

3,023,400
NON-DESTRUCTIVE READ OUT FERRITE MEMORY ELEMENT
Richard R. Booth, Peekskill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 24, 1960, Ser. No. 64,607
7 Claims. (Cl. 340—174)



4. A matrix of magnetic storage devices for storing binary bits in each of said devices including a plurality of cores arranged in columns and rows, each core comprising a body of magnetic material having two stable states, said body having a central hole therein and first and second holes on opposite sides thereof, a first winding means associated with each column wound through said first and second holes in all cores in said column, a second and third winding means associated with each row wound through said central hole of each core in said row, a bias winding means associated with each row wound through said first and second holes of all cores in said row, bias driving means to continuously supply current to each of said bias winding means, a first driving means associated with each of said first winding means for applying a current pulse thereto, a second driving means associated with each of said second winding means for applying a current pulse thereto whereby concurrent pluses from one of said first driving means and one of said second driving means stores a first type of binary bit in the core associated with said one first driving means and one second driving means and a third driving means associated with each of said third winding means for applying a current pulse thereto whereby concurrent pulses from one of said first driving means and one of said third driving means stores a second type of binary bit in the core associated with said one first driving means and said one third driving means.

3,023,401
REVERSIBLE SHIFT REGISTER
David Loev, Plymouth Meeting, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Continuation of application Ser. No. 452,753, Aug. 30, 1954. This application Sept. 23, 1958, Ser. No. 763,157
4 Claims. (Cl. 340—174)



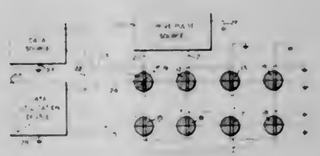
1. In a reversible shift register, a pair of magnetic cores each capable of assuming either of two stable states of magnetic remanence one of which is a reference state, each of said cores having at least a core-switching winding and a transfer winding coupled thereto, said windings being included in separately controllable core-switching and transfer circuits, each of said transfer windings

having a tap at substantially the midpoint thereof; a first asymmetrically conducting device connecting one ond of the transfer winding of one core of the pair to one end of the transfer winding of the other core of the pair; a second asymmetrically conducting device connecting the other end of the transfer winding of said one core to the other end of the transfer winding of said other core, thereby to form two parallel paths between said cores which in combination with said transfer windings form a transfer loop, said first and second asymmetrically conducting devices being opposingly poled to prevent current flow around said loop; means connected between the tap points of said transfer windings of said pair of cores for driving gating currents through said parallel paths in the same direction during a first time period, the circuit parameters being such that in the absence of bias applied to said asymmetrically conducting devices the gating currents in said parallel paths are substantially equal thereby to apply substantially equal and opposing magnetizing forces to each of said cores; circuit switch means for driving during said first time period core-switching current selectively through the core-switching winding of one or the other of said cores as selected by said circuit switch means to switch or to tend to switch the selected core to said reference state, thereby in response to the actual switching of said selected core to induce a voltage in its transfer winding to reverse bias one of said asymmetrically conducting devices and to forward bias the other, thereby to cause gating currents flowing through said parallel paths to be unequal, thereby to apply a net magnetizing force to said non-selected core of sufficient magnitude to switch said non-selected core, whereby the switching of said non-selected core in response to the switching of said selected core is effected but only in the presence of said gating current.

3,023,402
MAGNETIC DATA STORE

Eric E. Bittmann, Downingtown, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Jan. 28, 1959, Ser. No. 789,589
4 Claims. (Cl. 340—174)

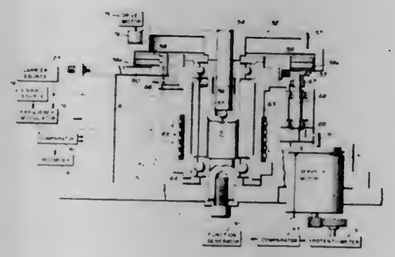


1. A data store comprising arrays of pairs of magnetic elements, each said magnetic element having a preferred direction of remanent magnetization along which it may be stably magnetized in either of two possible senses, the said preferred directions of the magnetic elements of any said pair being parallel to each other; sense conductors traversing said pairs of magnetic elements at an acute angle with each said preferred direction of magnetization, drive conductors orthogonal to said sense conductors in the vicinity of said magnetic elements, each said drive conductor traversing the magnetic elements of a given said pair in antiparallel directions; information conductors of which a given one traverses the same said magnetic elements as are traversed by a given said sense conductor, each said information conductor being composed of segments parallel to said sense conductor and segments orthogonal to said sense conductor, said orthogonal segments traversing the magnetic elements of a given said pair in parallel directions, the locations of homologous junctions of said parallel segments with said orthogonal segments being alternated in successive arrays.

3,023,403
MAGNETIC DELAY LINE

Louis W. Erath, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Filed May 10, 1957, Ser. No. 658,277
5 Claims. (Cl. 340—174.1)



2. In a device for use in seismographic and related work wherein signals are detected, are further handled in frequency modulated form and are recorded magnetically, and wherein the handling of such signals includes time re-orientation of such signals, apparatus comprising

a cylindrical record member mounted and powered for continuous rotation at constant speed about an axis,

two paths on the inside of said record member being adapted to have magnetically recorded thereupon at least two signals;

first and second pairs of heads,

the two heads in each pair being secured to one another,

the pairs of heads being positioned within said record member in spaced relation one to the other with the first head of each pair adapted to scan one of said paths and the second head of each pair adapted to scan the second of said paths,

the first of said pairs of heads being recording heads with one head recording a frequency modulated signal carrying intelligence in the modulations and the other head recording a signal of typical carrier frequency without frequency modulations,

the second of said pairs of heads being pickup heads with one of said second pair of heads being adapted to pickup respectively the signals recorded by each of said first pair of heads,

one of said pairs of heads being mounted to be rotatable through a limited arc about the axis of rotation of said cylindrical record member;

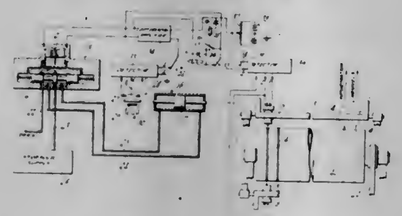
means for moving said rotatable pair of heads within its arc of rotation at varying speed in accordance with a predetermined function;

circuit means for mixing in phase opposition the modulations induced in the two signals by the recording and pickup with incidental movement of heads and owing to variations in relative speed between heads and recording paths and variations in distance between heads and recording path, whereby such frequency modulations as are induced in said intelligence signal by the recording and pickup with incidental movement of heads are substantially eliminated from the resultant intelligence signal.

3,023,404
MAGNETIC DRUM HEAD POSITIONING SYSTEM

Jack A. Dickerson, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 31, 1957, Ser. No. 706,513
5 Claims. (Cl. 340—174.1)

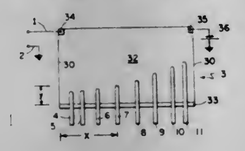


1. The combination with a magnetic transducer head member, a magnetic drum member having a plurality of tracks of information signals arranged circumferentially thereon and spaced longitudinally of said drum, said head and said drum being mounted for relative to and fro movement parallel to the drum axis between selective positions of cooperative relation of transducers of said head member with different ones of said information signal tracks, and an actuator operatively connected to the movable one of said members to produce said movements thereof in either direction; of an electrically operated control for said actuator responsive to electric impulses of different polarities to cause respectively opposite movements of said movable member by said actuator, a first operating circuit for selectively deriving and applying to said control electric impulses of said different polarities and of amplitude and duration such as to cause said actuator to move said movable member between said selected positions, and a second operating circuit, operative on completion of each operation of said control by said first circuit, for selectively deriving and applying to said control electric impulses of said different polarities and of amplitude and duration such as to cause said actuator to move said movable member in the direction and to the extent required to center said transducers with respect to said information tracks at each selected position.

3,023,405
ANALOG CONVERTER

Ronald E. Scott, % Contronics Inc., 37 Leon St., Boston, Mass.

Filed May 17, 1960, Ser. No. 29,761
10 Claims. (Cl. 340—347)

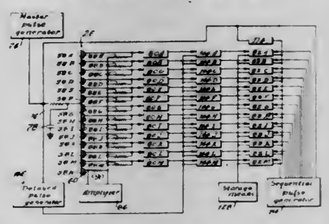


9. An electrical device for measuring the amplitude of an electrical signal which comprises an insulative support, an electrically conductive layer on said support, at least three terminals connected to said layer at spaced locations, one pair of said terminals being adapted to carry a reference voltage and a different pair of said terminals being adapted to carry an electrical signal voltage so as to produce an electrical field in the area of said layer between said terminals whose equipotential lines vary with said signal, a plurality of output conductors connected to said layer at points along a curve in said area, said curve being defined by the maxima of equipotential lines of said electrical field, and a circuit coupled to said conductors for selecting one of said conductors according to the voltage at the point of said layer to which said conductor is connected, and a matrix for converting the signal on respective outputs to digital form.

3,023,406
OPTICAL ENCODER

Edward M. Jones, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 29, 1957, Ser. No. 655,653
29 Claims. (Cl. 340—347)

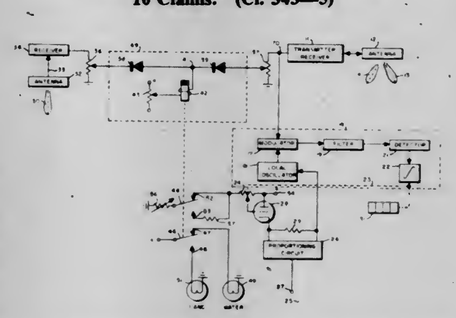


25. An encoder comprising, in combination, a plurality of cells having a pair of confronting electrodes and a mass of semiconductor material disposed therebetween, means for establishing one of two values of interelectrode impedance for each of the cells in combinations uniquely correlated with the values of a function to be encoded, means for periodically generating an indication of the interelectrode impedance of each cell comprising a plurality of storage means electrically connected respectively to said cells, each storage means being responsive to the interlectrode impedance of the cell connected thereto, and a sequential pulse generator having a plurality of output terminals respectively connected to the plurality of storage means, a different output terminal being electrically connected to each storage means, the sequential pulse generator periodically producing a series of pulses on its output terminals, the pulse on each output terminal appearing at a different time than the pulses on the other output terminals.

3,023,407
DOPPLER SYSTEM LAND-WATER DETECTOR

Donald S. Basim, Stamford, Conn., and Robert A. Flower, White Plains, and Michael W. McKay, Tarrytown, N.Y., assignors to General Precision Inc., a corporation of Delaware

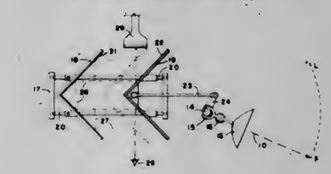
Filed May 18, 1959, Ser. No. 813,846
10 Claims. (Cl. 343—5)



1. In a dead reckoning microwave navigator, a land-water calibration constant corrector comprising, micro-

wave radiating means located on an aircraft for illuminating a surface area located approximately vertically beneath the aircraft and an additional surface area displaced from the aircraft vertical, means for receiving microwave echo signals from each of said respective areas and producing a pair of signals each of which is representative of a respective echo signal, means comparing the amplitudes of said pair of signals and for securing a recognition signal therefrom representative of the amount and sense of disparity between said pair of signals, and means operated by said recognition signal for controlling the calibration constant of said dead reckoning microwave navigator.

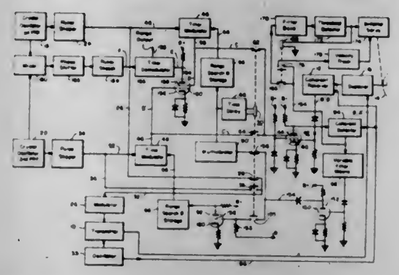
3,023,408
TRI-DIMENSIONAL RADAR
Dale W. Adams, Aurora, Colo.
(1040 Lafayette St., Denver, Colo.)
Filed Jan. 8, 1959, Ser. No. 785,760
1 Claim. (Cl. 343—7.9)



In a tri-dimensional radar system, a rockable reflector antenna; rocking means for simultaneously rocking said antenna in altitude and azimuth, so that the transmitted beam of said antenna scans a desired field of search with a zig-zag pattern; a cathode-ray tube having a screen and connected to said antenna; optical mirror means displaceable in a path substantially perpendicular to a line which is perpendicular to said screen, which latter said line is the normal line of viewing said screen, control means actuatable by said rocking means and adapted to linearly displace said optical mirror means in synchronism with the rocking of said antenna to give the observer a third dimension in viewing the display on said screen, said optical mirror means comprising two plane mirrors mutually perpendicular and symmetrically mounted with relation to the path of displacement of said optical mirror means; and a pair of fixed plane mirrors mounted respectively parallel to the said two plane mirrors of said optical means and symmetrically with relation to the path of the displacement of said mirror means, said optical means being mounted so that it will be successively displaced into and out of the normal line of viewing of said screen.

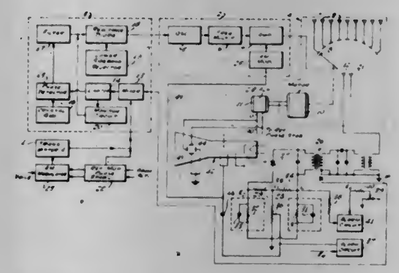
3,023,409
PULSE DOPPLER RADAR SYSTEM
Harry B. Smith, Catonsville, David H. Mooney, Jr., Glen Burnie, and Walter Ewanus, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 9, 1956, Ser. No. 570,444
13 Claims. (Cl. 343—13)

11. In a pulse Doppler radar system, means for receiving energy pulses reflected from a distant object, means for transmitting energy pulses having a first pulse repetition frequency, means responsive to energy pulses received at said first repetition frequency for producing a first voltage whose magnitude is a function of the range of said distant object, means for storing said first voltage, means for causing said transmitting means to transmit energy pulses having a second pulse repetition frequency, means responsive to energy pulses received at said second repetition frequency for producing a second voltage whose magnitude is a function of the range of said distant object, a device for producing voltage pulses having a pulse repetition frequency equal to the difference between said first and second repetition frequencies, and



means responsive to said voltage pulses and to said first and second voltages for producing an output voltage proportional to the range of said distant object.

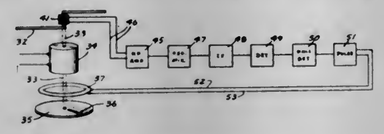
3,023,410
MONITOR FOR DOPPLER BEACON SYSTEM
Paul G. Hansel, Greenvale, N.Y., assignor to Servo Corporation of America, Hicksville, N.Y., a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,551
5 Claims. (Cl. 343—106)



4. A monitor for an antenna system having a plurality of radiating elements disposed in a ring, a commutator for successively coupling a source of signals to said radiating elements and means for rotating said commutating means comprising means to detect the instantaneous power successively radiated by each of said elements, means to develop a signal responsive to said detected instantaneous power, a cathode ray tube, means for generating a pattern signal responsive to said means for rotating said commutator, means for coupling said pattern signal to said cathode ray tube to cause a pattern on the screen thereof, and means coupling the difference between said instantaneous power signal and the average power signal to said cathode ray tube to deflect said pattern responsive to the instantaneous power radiated by said elements.

3,023,411
AUTOMATIC RADIO DIRECTION FINDER
James R. Nerison, Phoenix, Ariz., assignor to Frontier Electronics, Phoenix, Ariz., a corporation
Filed Mar. 23, 1959, Ser. No. 801,180
10 Claims. (Cl. 343—118)

8. A radio direction finder comprising: a rotatable directional receiving antenna having a response pattern with at least one null-signal receiving point indicating a minimum response to radio signals from a transmitting source as the antenna is rotated on an axis approximately perpendicular to the line of direction of said transmitting source, said null-signal receiving point occurring when



said antenna is in a position bearing a predetermined rotational position relationship with said source of radio signals; means for coupling signals induced in said antenna to a receiver including a detector; a null-detecting means coupled to said receiver detector to provide a null signal the amplitude of which is dependent upon the position of said antenna relative to said source of radio signals and which varies from a given level to a null level when said antenna is rotated to a null-signal receiving position and returns from said null level to said given level when said antenna is rotated away from said null-signal receiving position; a voltage level sensitive means responsive to said null detecting means for producing a distinct electrical signal while said null signal from said null detecting means exceeds a predetermined level variation; and means responsive to said electrical signal for manifesting that the level variation of said null-indicating signal exceeds said predetermined level variation.

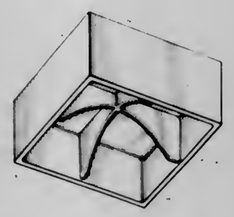
DESIGNS

FEBRUARY 27, 1962

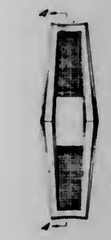
192,285
SOLE FOR A BOOT OR SIMILAR ARTICLE OF FOOTWEAR
Abraham Messinger, Larchmont, N.Y., assignor to Vylyt Corporation, New York, N.Y.
Filed Apr. 13, 1961, Ser. No. 64,724
Term of patent 14 years
(Cl. D7—5)



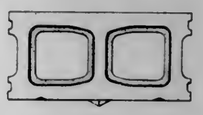
192,286
CEILING PANEL
Carroll S. Delaney and De Forrest R. Roggenbach, Denver, Colo., assignors to De-Arco Diagrid Company, Denver, Colo., a business association
Filed May 2, 1960, Ser. No. 60,397
Term of patent 7 years
(Cl. D13—1)



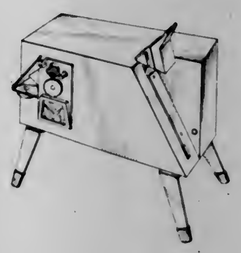
192,287
ORNAMENT FOR A WHEEL COVER
Clarence D. Zierhut, Granada Hills, Calif., assignor to Shore-Calnevar, Inc., Paramount, Calif., a corporation of California
Filed Apr. 17, 1961, Ser. No. 64,789
Term of patent 14 years
(Cl. D14—30)



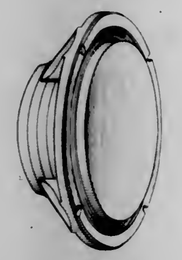
192,288
BUILDING BLOCK
Clement E. Mason, Alpena, Mich., assignor to Besser Company, Alpena, Mich.
Filed Sept. 28, 1961, Ser. No. 66,895
Term of patent 14 years
(Cl. D18—2)



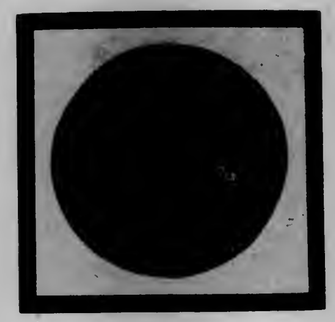
192,289
ELECTRIC CAN OPENER
Michael J. La Forte, Park Ridge, Ill., assignor to Vaughan Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed July 3, 1961, Ser. No. 65,788
Term of patent 14 years
(Cl. D22—2)



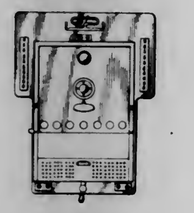
192,290
LOUDSPEAKER
Denis Eads Johnson, Chicago, and Joseph Palma, Jr., Wheaton, Ill., assignors to The Muter Company (Jensen Manufacturing Company Division), Chicago, Ill., a corporation of Illinois
Filed July 6, 1961, Ser. No. 65,853
Term of patent 14 years
(Cl. D26—14)



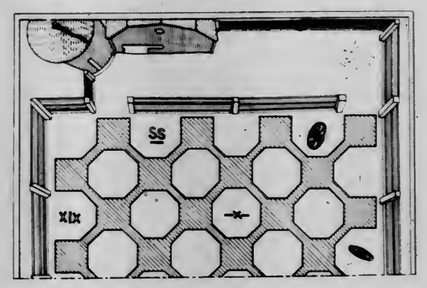
192,291
FRAMED STRING DECORATION
Neil J. White, Los Angeles, Calif.
(929 W. Spruce St., Inglewood, Calif.)
Filed Dec. 29, 1959, Ser. No. 58,839
Term of patent 14 years
(Cl. D29—23)



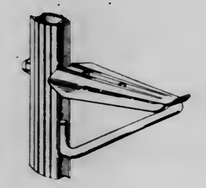
192,292
TARGET GAME CASING
Feodor Keosiff, 11306 Culver Blvd., Culver City, Calif.
Filed Dec. 27, 1960, Ser. No. 63,342
Term of patent 3½ years
(Cl. D34—5)



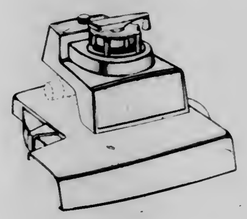
192,293
GAME BOARD
Frank D. Brown, Rte. 2, Lockney, Tex.
Filed Aug. 14, 1961, Ser. No. 66,337
Term of patent 7 years
(Cl. D34—5)



192,294
STILT
John W. Klages, 2630 Sherwood Road, Columbus, Ohio
Filed Dec. 29, 1960, Ser. No. 63,390
Term of patent 14 years
(Cl. D34—5)



192,295
COMBINED ENGINE SHROUD AND BLADE HOUSING FOR A LAWN MOWER
Ross E. Cornwell, Chicago, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed June 15, 1960, Ser. No. 60,975
Term of patent 14 years
(Cl. D40—1)



192,296
CUP OR SIMILAR ARTICLE
Walfred M. Nyman, Cumberland, R.I., assignor to Nyman Manufacturing Company, Providence, R.I., a corporation of Rhode Island
Filed June 12, 1961, Ser. No. 65,557
Term of patent 14 years
(Cl. D44—9)



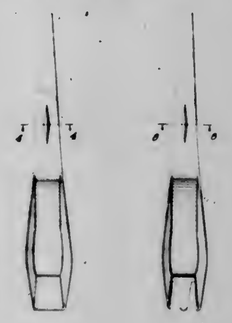
192,297
FEEDING DISH
Avis M. Kiler, Wheatland, Wyo.
Filed Feb. 27, 1958, Ser. No. 49,835
Term of patent 14 years
(Cl. D44—15)



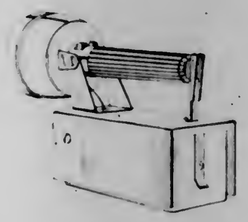
192,298
HANDLE FOR KITCHEN TOOLS OR THE LIKE
James L. Hvale and Robert A. Eckersberg, Chicago, Ill., assignors to Ekco Products Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 17, 1961, Ser. No. 64,779
Term of patent 14 years
(Cl. D44—29)



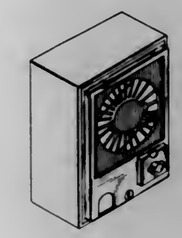
192,299
SALAD IMPLEMENT
Bern E. Wolf and James H. Lee, Los Angeles, Calif., assignors to Prestige Hardware Corporation, Industry, Calif., a corporation of California
Filed Aug. 28, 1961, Ser. No. 66,527
Term of patent 14 years
(Cl. D44—29)



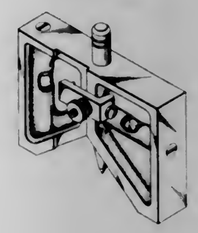
192,300
HAND LANTERN
Nolan K. Rhoades, Beloit, and John V. Hansen, Madison, Wis., assignors to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Continuation of applications Ser. No. 57,004, July 30, 1959, and Ser. No. 57,005, July 30, 1959. This application Oct. 7, 1960, Ser. No. 62,574
Term of patent 14 years
(Cl. D48—24)



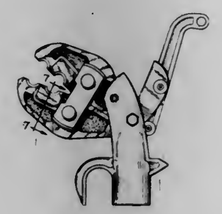
192,301
VENDING MACHINE FOR PENCILS OR THE LIKE
Harold M. Schaef, 5711 W. Grand Ave., Chicago, Ill.
Filed Mar. 7, 1960, Ser. No. 59,634
Term of patent 14 years
(Cl. D52—3)



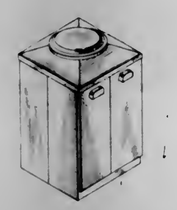
192,302
DRILL CENTERING GAUGE
Theodore R. Fulton, 5317 7th Ave. NE., Seattle, Wash.
Filed June 12, 1961, Ser. No. 65,562
Term of patent 14 years
(Cl. D52—6)



192,303
LEVER HOT STICK FOR COMPRESSING SLEEVES OR THE LIKE
William F. Turner, Taylorville, Ill., assignor to Bodendieck Tool Company, Taylorville, Ill., a corporation of Illinois
Filed Oct. 24, 1960, Ser. No. 62,579
Term of patent 14 years
(Cl. D54—13)



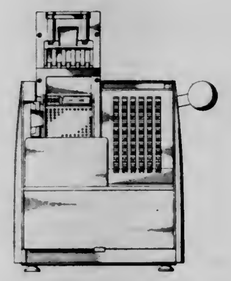
192,304
REFUSE RECEPTACLE
Roy R. Dylla, 3649 W. Armitage Ave., Chicago 47, Ill.
Filed Apr. 20, 1961, Ser. No. 64,837
Term of patent 14 years
(Cl. D58—17)



192,305
DISPLAY CASE FOR A WATCH OR SIMILAR ARTICLE
Howard Ferguson, Valley Cottage, N.Y., assignor to Bulova Watch Company, Inc., Flushing, N.Y., a corporation of New York
Filed Oct. 21, 1960, Ser. No. 62,562
Term of patent 14 years
(Cl. D58—12.7)



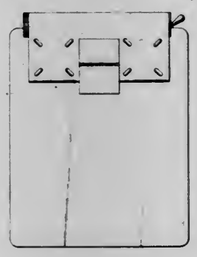
192,306
COMBINED PRINTING AND PUNCHING DATA RECORDING MACHINE
Stanley A. Dashew, Beverly Hills, and Alfred G. Dobrowsky, Los Angeles, Calif., assignors to Dashew Business Machines, Inc., Culver City, Calif., a corporation of Delaware
Filed Apr. 24, 1961, Ser. No. 64,862
Term of patent 14 years
(Cl. D64—11)



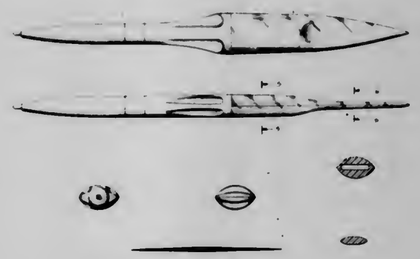
192,307
PASSENGER AIRCRAFT
Lawrence B. Rellis, 5123 W. Deming Place, Chicago, Ill.
Filed Aug. 11, 1960, Ser. No. 61,701
Term of patent 7 years
(Cl. D71—1)



192,308
COMBINED CLIP BOARD AND LIGHT
George J. Cory, 1722 Archwood Ave., North Hollywood, Calif.
Filed Jan. 11, 1961, Ser. No. 63,541
Term of patent 14 years
(Cl. D74—2)



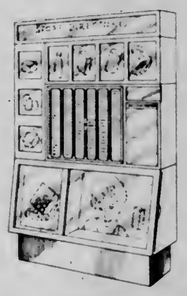
192,309
COMBINED PEN AND LETTER OPENER
Irwin Ross, 50—36 Horatio Parkway, Bayside, N.Y.
Filed Mar. 8, 1961, Ser. No. 64,187
Term of patent 14 years
(Cl. D74—17)



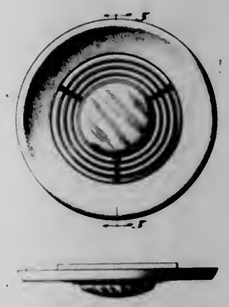
192,310
INK MARKING INSTRUMENT
Samuel Ayres, Jr., Marblehead, Mass., assignor to The Carter's Ink Company, Cambridge, Mass., a corporation of Massachusetts
Continuation of abandoned application Ser. No. 59,400, Feb. 15, 1960. This application Mar. 13, 1961, Ser. No. 64,317
Term of patent 14 years
(Cl. D74—17)



192,311
COMBINED STORE DIRECTORY AND DISPLAY CABINET
Oswald E. Haas, 13500 McGinty Road, Minneapolis, Minn.
Filed June 27, 1960, Ser. No. 61,131
Term of patent 14 years
(Cl. D80—11)



192,312
COMBINED LIGHTING FIXTURE AND COVER FOR A CEILING HEATER AND VENTILATOR COMBINATION
George D. Hart, Cincinnati, Ohio, assignor to Nutone, Inc., Cincinnati, Ohio, a corporation of New York
Filed Mar. 30, 1960, Ser. No. 59,961
Term of patent 14 years
(Cl. D81—10)



192,313
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Mar. 13, 1961, Ser. No. 64,265
Term of patent 14 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 27TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Fenwal Inc.: *See*—
Walter, Carl W. Re. 25,129.
Harris-Intertype Corp.: *See*—
Hooven, Frederick J., and O'Brien. Re. 25,128.
Hooven, Frederick J., and R. C. O'Brien, to Harris-Intertype Corp. Photographic type composition. Re. 25,128, 2–27–62, Cl. 95—4.5.
Madsen, Arthur M., Jr. Automatic dental cooling attachment. Re. 25,130, 2–27–62, Cl. 32—28.
O'Brien, Richard C.: *See*—
Hooven, Frederick J., and O'Brien. Re. 25,128.
Walter, Carl W., to Fenwal Inc. Apparatus for collecting, storing, and dispensing whole blood. Re. 25,129, 2–27–62, Cl. 128—214.

LIST OF PLANT PATENTEES

Conard-Pyle Co., The: *See*—
Swim, Herbert C., and Weeks. 2,132.
Swim, Herbert C., and O. L. Weeks, to The Conard-Pyle Co. Rose plant. 2,132, 2–27–62, Cl. 47—61.
Weeks, O. L.: *See*—
Swim, Herbert C., and Weeks. 2,132.

LIST OF DESIGN PATENTEES

Ayres, Samuel, Jr., to The Carter's Ink Co. Ink marking instrument. 192,310, 2–27–62, Cl. D74—17.
Besser Co.: *See*—
Mason, Clement E. 192,288.
Bodendieck Tool Co.: *See*—
Turner, William F. 192,303.
Brown, Frank D. Game board. 192,293, 2–27–62, Cl. D34—5.
Bulova Watch Co., Inc.: *See*—
Ferguson, Howard. 192,305.
Carter's Ink Co., The: *See*—
Ayres, Samuel, Jr. 192,310.
Cornwell, Ross E., to Sunbeam Corp. Combined engine shroud and blade housing for a lawn mower. 192,295, 2–27–62, Cl. D40—1.
Cory, George J. Combined clip board and light. 192,308, 2–27–62, Cl. D74—2.
Dashew Business Machines, Inc.: *See*—
Dashew, Stanley A., and Dobrowsky. 192,306.
Dashew, Stanley A., and A. G. Dobrowsky, to Dashew Business Machines, Inc. Combined printing and punching data recording machine. 192,306, 2–27–62, Cl. D64—11.
De-Arco Diagrid Co.: *See*—
Delaney, Carroll S., and Roggenbach. 192,286.
Decorative Fabrics Co., Inc.: *See*—
Leavy, Natalie. 192,313.
Delaney, Carroll S., and D. F. R. Roggenbach, to De-Arco Diagrid Co. Ceiling panel. 192,286, 2–27–62, Cl. D13—1.
Dobrowsky, Alfred G.: *See*—
Dashew, Stanley A., and Dobrowsky. 192,306.
Dylla, Roy R. Refuse receptacle. 192,304, 2–27–62, Cl. D58—17.
Eckersberg, Robert A.: *See*—
Hvale, James L., and Eckersberg. 192,298.
Ekco Products Co.: *See*—
Hvale, James L., and Eckersberg. 192,298.
Electric Storage Battery Co., The: *See*—
Rhoades, Nolan K., and Hansen. 192,300.
Ferguson, Howard, to Bulova Watch Co., Inc. Display case for a watch or similar article. 192,305, 2–27–62, Cl. D58—12.7.
Fulton, Theodore R. Drill centering gauge. 192,302, 2–27–62, Cl. D52—6.
Haas, Oswald E. Combined store directory and display cabinet. 192,311, 2–27–62, Cl. D80—11.
Hansen, John V.: *See*—
Rhoades, Nolan K., and Hansen. 192,300.
Hart, George D., to Nutone, Inc. Combined lighting fixture and cover for a ceiling heater and ventilator combination. 192,312, 2–27–62, Cl. D81—10.
Hvale, James L., and R. A. Eckersberg, to Ekco Products Co. Handle for kitchen tools or the like. 192,298, 2–27–62, Cl. D44—29.
Johnson, Denis E., and J. Palma, Jr., to The Muter Co. (Jensen Mfg. Co. Division). Loudspeaker. 192,290, 2–27–62, Cl. D26—14.
Keosiff, Feodor. Target game casing. 192,292, 2–27–62, Cl. D34—5.
Klages, John W. Stilt. 192,294, 2–27–62, Cl. D34—5.
Klier, Avis M. Feeding dish. 192,297, 2–27–62, Cl. D44—15.
La Forte, Michael J., to Vaughan Mfg. Co. Electric can opener. 192,289, 2–27–62, Cl. D22—2.
Leavy, Natalie, to Decorative Fabrics Co., Inc. Flocked textile fabric. 192,313, 2–27–62, Cl. D92—1.
Lee, James H.: *See*—
Wolf, Bern E., and Lee. 192,299.
Mason, Clement E., to Besser Co. Building block. 192,288, 2–27–62, Cl. D18—2.
Messinger, Abraham, to Vylyt Corp. Sole for a boot or similar article of footwear. 192,285, 2–27–62, Cl. D7—5.
Muter Co. (Jensen Mfg. Co. Division), The: *See*—
Johnson, Denis E., and Palma. 192,290.
Nutone, Inc.: *See*—
Hart, George D. 192,312.
Nyman Mfg. Co.: *See*—
Nyman, Walfred M. 192,296.
Nyman, Walfred M., to Nyman Mfg. Co. Cup or similar article. 192,296, 2–27–62, Cl. D44—9.
Palma, Joseph, Jr.: *See*—
Johnson, Denis E., and Palma. 192,290.
Prestige Hardware Corp.: *See*—
Wolf, Bern E., and Lee. 192,299.
Rellis, Lawrence B. Passenger aircraft. 192,307, 2–27–62, Cl. D71—1.
Rhoades, Nolan K., and J. V. Hansen, to The Electric Storage Battery Co. Hand lantern. 192,300, 2–27–62, Cl. D48—24.
Roggenbach, De Forest R.: *See*—
Delaney, Carroll S., and Roggenbach. 192,286.
Ross, Irwin. Combined pen and letter opener. 192,309, 2–27–62, Cl. D74—17.
Schaef, Harold M. Vending machine for pencils or the like. 192,301, 2–27–62, Cl. D52—3.
Shore-Calnevar, Inc.: *See*—
Zierhut, Clarence D. 192,287.
Sunbeam Corp.: *See*—
Cornwell, Ross E. 192,295.
Turner, William F., to Bodendieck Tool Co. Lever hot stick for compressing sleeves or the like. 192,303, 2–27–62, Cl. D54—33.
Vaughan Mfg. Co.: *See*—
La Forte, Michael J. 192,289.
Vylyt Corp.: *See*—
Messinger, Abraham. 192,285.
White, Nell J. Framed string decoration. 192,291, 2–27–62, Cl. D29—23.
Wolf, Bern E., and J. H. Lee, to Prestige Hardware Corp. Salad implement. 192,299, 2–27–62, Cl. D44—29.
Zierhut, Clarence D., to Shore-Calnevar, Inc. Ornament for a wheel cover. 192,287, 2–27–62, Cl. D14—30.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 27TH DAY OF FEBRUARY, 1962

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abadjieff, Ivan V., to Leland-Gifford Co. Drill sharpener and point thinner. 3,022,609, 2–27–62, Cl. 51—55.

Abel, Edmund W., to The Lau Blower Co. Wall type electric heater assembly. 3,023,297, 2–27–62, Cl. 219—34.

Aberle, Robert C., to General Electric Co. Lint filter for clothes laundering machine. 3,022,654, 2–27–62, Cl. 68—18.

Abrams, Irving. Pneumatic pressure control device for inflatable tire elements. 3,022,795, 2–27–62, Cl. 137—227.

Accumulatoren-Fabrik A.G.: *See*—
Peters, Freimut. 3,023,258.

Adams, Dale W. Tri-dimensional radar. 3,023,408, 2–27–62, Cl. 343—7.9.

Adams, Joe T.: *See*—
Guest, Howard R., Adams, and Kiff. 3,023,222.

Addressograph-Multigraph Corp.: *See*—
Patalon, Francis R. 3,022,998.

Advance Transformer Co.: *See*—
Feinberg, Albert E., and Endo. 3,023,385.

Affelder, Harry F., to The Wolf Detroit Envelope Co. Envelope making machine. 3,023,128, 2–27–62, Cl. 117—111.

Agfa Aktiengesellschaft: *See*—
Ossenbrunner, Armin, Schnell, Klockgether, Geiger, and Freier. 3,023,101.

Aiken, William R., to Kaiser Industries Corp. Electronic device. 3,023,316, 2–27–62, Cl. 250—217.

Air Preheater Corp., The: *See*—
Muller, Robert H. 3,022,983.

Air Reduction Co., Inc.: *See*—
Tanabe, Kenichi, and Ohno. 3,023,182.

Aktiebolaget Astra, Apotekarnes Kemiska Fabriker: *See*—
Järnbäll, Bertil. 3,022,886.

Albondi, Frank B., J. J. Hagan, and H. L. Easterbrooks, to American Cyanamid Co. Process for preparing a veterinary composition. 3,023,143, 2–27–62, Cl. 167—53.

Albright, William D.: *See*—
Wentz, Edward C., Moore, and Albright. 3,023,386.

Alexander, John D.: *See*—
Smith, Edwin K., Jr., Alexander, and Marks. 3,022,716.

Alfieri, Giuseppe, to Fabbrica Italiana Magneti Marelli S.p.A. Braking equipment for composite vehicles. 3,023,052, 2–27–62, Cl. 303—2.

Alford, Harvey E., and F. Veatch, to The Standard Oil Co. Method for forming concrete structures which set in place while floating. 3,023,116, 2–27–62, Cl. 106—90.

Allen, Robert J., and H. G. Petrow, to United States of America, Atomic Energy Commission. Production of uranium tetrafluoride. 3,023,078, 2–27–62, Cl. 23—14.5.

Allen, Charles M.: *See*—
Lawton, Emil A., Allen, and Cosgrove. 3,023,164.

Allen-Bradley Co.: *See*—
Schlicke, Heinz M. 3,023,383.

Allin, Frederick R., to The Weatherhead Co. Drain valve. 3,022,797, 2–27–62, Cl. 137—599.2.

Allis Chalmers Mfg. Co.: *See*—
Hasley, Howard A. 3,022,893.
Hoffmann, Jack H., and Hogstad. 3,023,331.

Allison, Donald K., to Cool Fin Electronics Corp. Heat-dissipating shield. 3,023,264, 2–27–62, Cl. 174—35.

Alston, George L.: *See*—
Hobos, Edward J., and Alston. 3,022,840.

Altherr, Russell G.: *See*—
Maloney, Bernard, Altherr, and Blew. 3,022,867.

Aluminum Co. of America: *See*—
Gardner, George R., and Buck. 3,022,556.

American Air Filter Co., Inc.: *See*—
Harms, John D. 3,022,861.
Sexton, Robert W. 3,022,859.

American Can Co.: *See*—
Hoffman, Henry T., Jr. 3,022,923.
Kuchenbecker, Morris W. 3,022,930.

American Cyanamid Co.: *See*—
Albondi, Frank B., Hagan, and Easterbrooks. 3,023,143.
Cresswell, Arthur, Kocay, and Updegraff. 3,023,134.
Hines, Leonard R. 3,023,109.
Jones, William B., Michael, and Chomitz. 3,023,172.
Miller, Phillip A., and McCormick. 3,023,148.
Origoni, Victor E., and Winterbottom. 3,023,239.
Upham, Sidney D., and Klothen. 3,023,105.

American Drill Bushing Co.: *See*—
Armacost, Robert H. 3,022,685.

American Home Products Corp.: *See*—
Tislow, Richard F., Bruce, and Page. 3,023,146.

American Instrument Co., Inc.: *See*—
Hampton, William C. 3,022,657.

American Metal Products Co.: *See*—
Corp, Paul M. 3,022,804.

American Optical Co.: *See*—
Tillyer, Edgar D., and Folland. 3,022,858.

American Radiator & Standard Sanitary Corp.: *See*—
Taylor, William R. 3,022,798.

American Steel Foundries: *See*—
Maloney, Bernard, Altherr, and Blew. 3,022,867.

American Type Founders Co. Inc.: *See*—
Heller, Franz. 3,022,728.

American Viscose Corp.: *See*—
Battista, Orlando A. 3,023,104.

Ampex Corp.: *See*—
Tronslin, Cyril B., Sweeney, Brede, and Dorsett. 3,023,280.

Amundsen, Oliver O., and H. R. Botefuhr, to Skil Corp. Universal tool element retainer for rotary-hammer devices. 3,022,769, 2–27–62, Cl. 121—32.

Anchor Hocking Glass Corp.: *See*—
Sandusky, Fred C. 3,022,906.

Anderson, Edward E., and A. W. Anti, to Ocean Spray Cranberries, Inc. Process for preparing cranberry sauce. 3,023,-108, 2–27–62, Cl. 99—103.

Anderson, Harvey L., Jr., and Z. S. Lowe. Loader bucket. 3,022,910, 2–27–62, Cl. 214—140.

Anderson, John L., to International Business Machines Corp. Full adder. 3,022,951, 2–27–62, Cl. 235—176.

Anderson, John W., F. Miley, and W. C. Pritchard, to United States of America, Atomic Energy Commission. Coated mold for casting plutonium. 3,023,119, 2–27–62, Cl. 117—5.1.

Andrassy, Stella. Heater. 3,022,781, 2–27–62, Cl. 126—271.

Angelo, Charles W. Under-carriage for containers. 3,023,019, 2–27–62, Cl. 280—35.

Ansar, Anders, to The Garrard Engineering and Mfg. Co. Ltd. Arrangement in a record-changing gramophone. 3,023,008, 2–27–62, Cl. 274—10.

Anthony, William C.: *See*—
Szmuszkovicz, Jacob, and Anthony. 3,023,221.

Anti, Arthur W.: *See*—
Anderson, Edward E., and Anti. 3,023,108.

Aoki, Shigeru: *See*—
Sensui, Nobuo, and Aoki. 3,022,863.

Aoyagi, Suesaburo. Needle grinding attachment for sewing machines. 3,022,612, 2–27–62, Cl. 51—256.

Applebaum, M. Lawrence: *See*—
Efram, Rudolph H., Applebaum, and Henry. 3,022,891.

Applied Physics Corp.: *See*—
Cary, Henry H. 3,022,704.

Archer, Genevieve C.: *See*—
Archer, Warren and G. C. 3,022,897.

Archer, Warren and G. C., 1/10% to Gadget-Of-The-Month Club, Inc. Object-mounting storage rack. 3,022,897, 2–27–62, Cl. 211—36.

Armacost, Robert H., to American Drill Bushing Co. Ceramic drill bushing. 3,022,685, 2–27–62, Cl. 77—62.

Arnold, Gordon D., to Flexible Sewertool Corp. Drag bucket dredging and dumping mechanism for culverts and the like. 3,022,908, 2–27–62, Cl. 214—92.

Arrigo, Anthony J.: *See*—
Lawson, Gerald W., and Arrigo. 3,022,668.

Arvan, John, to Luk-O-Mn Corp. Automatic cooking apparatus. 3,022,722, 2–27–62, Cl. 99—354.

Ashby, Eugene C., to Ethyl Corp. Production of organoboranes. 3,023,248, 2–27–62, Cl. 260—606.5.

Associated Automation Ltd.: *See*—
Hall, Frederick W., and Young. 3,023,275.

Atlantic Refining Co., The: *See*—
Doan, Robert B. 3,023,168.

Atlas Chemical Industries, Inc.: *See*—
Wright, Leon W., and Brandner. 3,023,223.

Attridge, Robert B.: *See*—
Turek, James R., Petrie, and Attridge. 3,022,602.

Atwater, Norman W., to G. D. Searle & Co. 5,7-seco-B-norandrostane derivatives. 3,023,227, 2–27–62, Cl. 260—468.

Avco Corp.: *See*—
Foster, Walter E. 3,022,960.

Averill, Charles C., to Union Steel Products Co. Stacking crates or receptacles. 3,022,900, 2–27–62, Cl. 211—126.

Avro Aircraft Ltd.: *See*—
Frost, John C. M., and Earl. 3,022,963.

Babcock & Wilcox Co., The: *See*—
Hamilton, Carl C., and Hurst. 3,022,774.
Hartwig, Frederick J. 3,023,141.
Wylie, Robert D. 3,023,098.

Backofen, Walter A.: *See*—
Pels, Alan R., and Backofen. 3,022,525.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Baron, Hubertus, and Friederich. 3,023,230.
Meyer, Ferdinand, and Demmler. 3,023,224.
Pasedach, Heinrich, and Seefelder. 3,023,246.
Reppe, Walter, and Stadler. 3,023,237.
Seefelder, Matthias, and Malsack. 3,023,219.
Tartter, Arnold. 3,023,218.

Bailey, Sidney, Jr., to Proctor & Schwartz, Inc. Method of heat setting, dyeing and optionally scouring boarded synthetic thermoplastic textiles with superatmospheric steam. 3,022,926, 2–27–62, Cl. 223—76.

Bailey, William J., to J. & E. Hall, Ltd. Lift systems. 3,022,866, 2–27–62, Cl. 187—29.

Bailliff, Ernest A., and A. J. Koch, to Whirlpool Corp. Ice cube ejectors. 3,022,645, 2–27–62, Cl. 62—344.

Bain, Joseph P., and A. H. Best, to The Glidden Co. Flaking of menthol. 3,023,253, 2–27–62, Cl. 260—631.

Baird, Norman F., to Westinghouse Electric Corp. Coated flashlamp and coating composition. 3,022,653, 2–27–62, Cl. 67—31.

Baird, William G., Jr., C. A. Lindstrom, Jr., A. L. Besse, Jr., and D. J. D'Entremont, to W. R. Grace & Co. Method of producing film having improved shrink energy. 3,022,543, 2–27–62, Cl. 18—57.

Baker, James G. Correcting optical system. 3,022,708, 2–27–62, Cl. 88—57.

Baldwin, Francis P.: *See*—
Tegge, Bruce R., Baldwin, and Serniuk. 3,023,191.

Baldwin Piano Co., The: *See*—
Jones, Edward M. 3,023,406.

Ballish, Frank R., P. H. McGarrell, C. C. Miller, and A. F. Naylor, to Thompson Ramo Wooldridge Inc. Precision variable frequency generator. 3,023,371, 2–27–62, Cl. 331—38.

Ballish, Frank R., to Thompson Ramo Wooldridge Inc. Precision variable frequency generator. 3,023,372, 2–27–62, Cl. 331—39.

Banes, Fred W.: *See*—
Bartlett, Jeffrey H., Kirshenbaum, Banes, and Muessig. 3,023,185.

Banks, Frank H.: *See*—
Cochran, John M., Seelhoff, and Banks. 3,023,352.

Barber, Ira J., to Fostoria Corp. Radiant heating device. 3,023,296, 2–27–62, Cl. 219—34.

Barker, James M., to Barker Mfg. Co. Leveling device for mobile homes. 3,022,980, 2–27–62, Cl. 254—100.

Barker Mfg. Co.: *See*—
Barker, James M. 3,022,980.

Barkocy, John L.: *See*—
Davis, Frank B., and Barkocy. 3,022,526.

Barlow, Thomas E., to International Minerals & Chemical Corp. Foundry sand composition. 3,023,113, 2–27–62, Cl. 106—38.8.

Barmer Maschinenfabrik Aktiengesellschaft: *See*—
Lenk, Wilhelm. 3,022,623.

Barnum, Rudolph: *See*—
Hayter, Richard B. 3,023,003.

Baron, Hubertus, and H. Friederich, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of chloralkyl esters of acrylic acid and their substitution products. 3,023,230, 2–27–62, Cl. 260—486.

Barrett, Harry B. Grinder. 3,022,610, 2–27–62, Cl. 51—96.

Barry-Wehmiller Machinery Co.: *See*—
Lyon, Donald G. 3,022,905.

Bartels, August F. Bale turner. 3,022,902, 2–27–62, Cl. 214—1.

Bartlett, Jeffrey H., I. Kirshenbaum, F. W. Banes, and C. W. Muessig, to Esso Research and Engineering Co. Plasticizers for vinyl-type resins. 3,023,185, 2–27–62, Cl. 260—31.6.

Barton, James F., Jr., and E. W. Bickel, Jr., to General Motors Corp. Waste receptacle assembly. 3,022,883, 2–27–62, Cl. 206—19.5.

Barton, James L. Wheel chairs. 3,023,048, 2–27–62, Cl. 297—330.

Bartz, Quentin R., J. Ehrlich, M. P. Knudsen, and R. M. Smith, to Parke, Davis & Co. Viridogrisein, and its fermentative production with griseoviridin. 3,023,204, 2–27–62, Cl. 260—112.

Basalt Rock Co., Inc.: *See*—
McCall, Donald O. 3,022,759.

Bash, D'Arle G. Amusement device for viewing animated pictures with sound accompaniment. 3,022,705, 2–27–62, Cl. 88—16.2.

Basim, Donald S., R. A. Flower, and M. W. McKay, to General Precision Inc. Doppler system land-water detector. 3,023,407, 2–27–62, Cl. 343—5.

Battelle Development Corp., The: *See*—
Lewis, Wallace J., and Faulkner. 3,023,133.

Battelle Memorial Institute: *See*—
Lawton, Emil A., Allen, and Cosgrove. 3,023,164.

Battista, Orlando A., to American Viscose Corp. Food compositions incorporating cellulose crystallite aggregates. 3,023,104, 2–27–62, Cl. 99—1.

Batzer, Hans, and E. Nikles to Ciba Ltd. Epoxidized hydroaromatic compounds. 3,023,174, 2–27–62, Cl. 260—2.

Bauer Bros. Co., The: *See*—
Textor, Clinton K. 3,023,140.

Baugh, Charles W., Jr., to Westinghouse Electric Corp. Automatic frequency control for television apparatus. 3,023,272, 2–27–62, Cl. 178—5.8.

Baumbach, Harlan L., and A. L. Ford, to Pacific Industries, Inc. Perforated tape reader. 3,022,941, 2–27–62, Cl. 235—61.11.

Baxter Laboratories, Inc.: *See*—
Nuffer, Orville P. 3,022,784.

Bayer, Otto: *See*—
Thoma, Wilhelm, Bayer, and Rinke. 3,023,100.
Thoma, Wilhelm, Bayer, and Rinke. 3 023,193.
Wagner, Kuno, and Bayer. 3,023,228.

Beaumont Birch Co.: *See*—
Davenport, William G., Hampton, and Katzen. 3,022,921.

Bechman, William O., to International Harvester Co. Land clearing implement. 3,022,836, 2–27–62 Cl. 172—698.

Becker, Richard D., to International Minerals & Chemical Corp. Refractory material. 3,023,114, 2–27–62, Cl. 106—56.

Beckett, Leo G., and J. T. Woods, to Whirlpool Corp. Home appliance. 3,022,550, 2–27–62, Cl. 20—69.

Beindorff, Arthur B.: *See*—
De Witt Hobson D., and Beindorff. 3,023,184.

Bell, Benjamin P.: *See*—
Graes, Howard B., Jr., and Bell. 3,023,089.

Bell Telephone Laboratories, Inc.: *See*—
Bowers, Fritz K., and Schafer. 3,023,384.
Foulkes, John D. 3,023,309.
James, Dennis B., and Kretsch. 3,023,278.
Mathews, Max V. 3,023,277.
Mumford, William W. 3,023,374.
Turner, Edward H. 3,023,379.
Van Uitert, Le Grand G. 3,023,165.

Beltz, Klaus: *See*—
Rodis, Franz, Hartlapp, and Beltz. 3,023,083.

Bemis Bros. Bag Co.: *See*—
Powers, Irving. 3,022,613.

Bender, Houston O.: *See*—
McComb, Clarence L. 3,022,689.

Bendix Corp., The: *See*—
Hager, Robert R. 3,023,053.
Hood, Edwin E., and Gleasman. 3,022,682.
Swanson, George J., and Kokulas. 3,023,396.

Benkoe, Erwin, to Transogram Co., Inc. Toy guns. 3,022,-779, 2–27–62, Cl. 124—11.

Benn, Robert E., to Burroughs Corp. Atmosphere for electrographic printing. 3,023,070, 2–27–62, Cl. 346—74.

Bennett, John A.: *See*—
Blunt, George, and Bennett. 3 022,957.

Benoit, Henry F. Spool. 3,022,962, 2–27–62, Cl. 242—118.61.

Benoit-Gonin, Roger S.: *See*—
Maniere, Maurice A. F. J., and Benoit-Gonin. 3,023,269.

Bentley Engineering Co. Ltd., The: *See*—
Wainwright, Carlyle H., and Deans. 3,022,652.

Berberich, Erich, to William Prym-Werke K.G. Separable interlocking fastener. 3,022,559, 2–27–62, Cl. 24—205.13.

Berberich, Erich, J. Gilliam, and G. Frowein, to William Prym-Werke K.G. Method of producing slide fasteners. 3,022,803, 2–27–62, Cl. 139—384.

Berg Airlectro Products Co.: *See*—
Dobrikin, Harold L. 3,023,031.

Berg, Daniel, to Westinghouse Electric Corp. Electrical apparatus. 3,023,263, 2–27–62, Cl. 174—14.

Bergeson, Richard P., and C. T. Bergman, to The Maytag Co. Dispenser for laundry machines. 3,022,656, 2–27–62, Cl. 68—207.

Bergman, Charles T.: *See*—
Bergeson, Richard P., and Bergman. 3,022,656.

Berlin, Milton: *See*—
Rheingold, Lawrence M., and Berlin. 3,022,758.

Bernardin Bottle Cap Co., Inc.: *See*—
Montgomery, Van H. 3,022,917.

Bernath, John: *See*—
Nelson, Herbert, and Bernath. 3,022,568.

Besse, Arthur L., Jr.: *See*—
Baird, William G., Jr., Lindstrom, D'Entremont, and Besse. 3,022,543.

Bessen, Irwin I., to Philips Electronics, Inc. X-ray diffractometry. 3,023,311, 2–27–62, Cl. 250—51.5.

Best, Albert H.: *See*—
Bain, Joseph P., and Best. 3,023,253.

Beverly Vogue Co., Inc.: *See*—
Darcey, Joy S. 3,022,788.

Bice, Donald A.: *See*—
Mohr, Robert G., and Bice. 3,023,066.

Bickel, Ernest W., Jr.: *See*—
Barton, James F., Jr., and Bickel. 3,022,883.

Bidwell, Joseph B., and R. S. Cataldo, to General Motors Corp. Single stick member for controlling the operation of motors vehicles. 3,022,850, 2–27–62, Cl. 180—77.

Bieber, Charles E., to Monroe Calculating Machine Co. Reel. 3,022,958, 2–27–62, Cl. 242—71.8.

Bihrle, Harry J.: *See*—
Mathlason, Lauritz W., and Bihrle. 3,022,725.

Billard, Anthony F. Spring and shackle connector. 3,022,-991, 2–27–62, Cl. 267—54.

Bingham, George H., Jr., to Cambridge Rubber Co. Waterproof boot with enlarged throat opening. 3,022,583, 2–27–62, Cl. 36—7.2.

Binkley, George W., and L. H. Robinson, Jr., to Jersey Production Research Co. Method and composition for cementing wells. 3,022,824, 2–27–62, Cl. 166—31.

Binns, Jack N. Contour roll-turning lathe. 3,022,690, 2–27–62, Cl. 82—2.

Bird, Joseph F.: *See*—
De Corte, Michael A., and Bird. 3,022,631.

Bittmann, Eric E., to Burroughs Corp. Magnetic data store. 3,023,402, 2–27–62, Cl. 340—174.

Bittner, Charles C. Air vent device for steam radiators. 3,022,860, 2–27–62, Cl. 183—41.

Bjerkan, Arthur J.: *See*—
Sorensen, Knud B., and Bjerkan. 3,022,754.

Bjorksten Research Laboratories, Inc.: *See*—
Yaeger, Luther L., and Lappala. 3,023,099.

Black and Decker Mfg. Co., The: *See*—
O'Brien, John J. 3,022,534.

Black, John F. Radiator cap testing device accumulator. 3,022,658, 2–27–62, Cl. 73—40.

Black, John W., to Pemco Wheel Co. Mechanical device. 3,022,535, 2–27–62, Cl. 16—37.

Blackmer, Dwight W., to Ekco Products Co. Sliding-door hanger assembly. 3,022,537, 2–27–62, Cl. 16—105.

Blackmond, Ronald C.: *See*—
Sueker, Keith H., and Blackmond. 3,023,356.

Blake, Arthur T. Self-locking core chucks. 3,022,959, 2–27–62, Cl. 242—72.

Blakeslee, Clinton A., and E. F. Dyson, to The Bristol Co. Process controllers. 3,023,282, 2–27–62, Cl. 200—38.

Blaser, Bruno, W. Stein, and H. Schirp, to Henkel & Cie, G.m.b.H. Process for the introduction of carboxyl groups into aromatic compounds. 3,023,216, 2–27–62, Cl. 260—295.5.

Blew, Robert D.: *See*—
Maloney, Bernard, Altherr, and Blew. 3,022,867.

Blizard, Robert B., and L. H. Gollwitzer, to Schlumberger Well Surveying Corp. Galvanometer systems. 3,023,362, 2-27-62, Cl. 324—125.

Bloch, Felix, to United States of America, Agriculture. Process for inducing shell splitting in pistachio nuts. 3,022,807, 2-27-62, Cl. 146—227.

Blonder-Tongue Electronics: *See*—
Horowitz, Irving. 3,023,369.

Bloom Engineering Co., Inc.: *See*—
Bloom, Frederick S., and Rudin. 3,022,815.

Bloom, Frederick S., and W. Rudin; said Rudin assor. to Bloom Engineering Co., Inc. Burner mechanism. 3,022,-815, 2-27-62, Cl. 158—109.

Blunt, George, and J. A. Bennett. Paper roll holder. 3,022,-957, 2-27-62, Cl. 242—55.2.

Bodenschatz, August, and C. E. Gryctko, to I-T-E Circuit Breaker Co. Circuit breaker bimetal heater. 3,023,288, 2-27-62, Cl. 200—116.

Bodine, Albert G., Jr. Method and apparatus for sonic bonding. 3,022,814, 2-27-62, Cl. 156—73.

Boeing Airplane Co.: *See*—
Hebeler, Henry K. 3,022,662.
Pluylaar, Martin C. 3,023,041.
Seeger, Bernard I. 3,022,964.
Selbel, Bobby H. 3,022,578.

Bohme Fettchemie G.m.b.H.: *See*—
Plapper, Jürgen, Heyden, and Böhme. 3,023,073.

Böhme, Gerhard: *See*—
Plapper, Jürgen, Heyden, and Böhme. 3,023,073.

Bolef, Dan I.: *See*—
Chester, Peter F., and Bolef. 3,023,366.

Bolef, Dan I., and P. F. Chester, to Westinghouse Electric Corp. Maser. 3,023,367, 2-27-62, Cl. 330—4.

Bond, John H. Target for games. 3,023,002, 2-27-62, Cl. 273—102.2.

Bonfanti, Silvio. Rotary floor polisher. 3,022,529, 2-27-62, Cl. 15—49.

Boonshaft, Julius C., and E. D. Haigler, to Fischer & Porter Co. Pneumatic transmitter and receiver. 3,022,800, 2-27-62, Cl. 137—790.

Booth, Richard R., to International Business Machines Corp. Non-destructive read out ferrite memory element. 3,023,-400, 2-27-62, Cl. 340—174.

Borghetti, Joseph C., to Microwave Development Laboratories, Inc. Inline waveguide to coaxial transition. 3,023,-382, 2-27-62, Cl. 333—34.

Borg-Warner Corp.: *See*—
Gerhardt, Andrew H., and Waldrop. 3,022,655.
Kirk, Robert B. 3,023,059.
Taylor, Raymond G., Jr. 3,023,036.

Bornemann, Dieter, M. Dohr, G. Renner, and C. Ziegler, to Henkel & Cie, G.m.b.H. Process for the continuous production of acrylic acid amide. 3,023,242, 2-27-62, Cl. 260—561.

Bornstein, Amalin: *See*—
Bornstein, Joseph, L. and A. 3,022,515.

Bornstein, Joseph, L. and A. Simulated bow tie. 3,022,515, 2-27-62, Cl. 2—151.

Bornstein, Leonard: *See*—
Bornstein, Joseph, L. and A. 3,022,515.

Borroughs Mfg. Co.: *See*—
Haag, Theodore T. 3,023,068.

Boston, Frank E.: *See*—
Marsh, Carl E., and Boston. 3,022,914.

Botefuhr, Harold R.: *See*
Amundsen, Oliver O., and Botefuhr. 3,022,769.

Boucher, John B., to Rinshed-Mason Co. Water-reducible coating composition. 3,023,177, 2-27-62, Cl. 260—21.

Bourne, William G., and C. E. Hayter, to Rotax Ltd. Electromagnetic electric switches. 3,023,286, 2-27-62, Cl. 200—87.

Bouvy, Christiaan H., to J. Dolza. Cylinder heads for internal combustion engines. 3,022,775, 2-27-62, Cl. 123—41.82.

Bowen, Richard L., Jr. Variable volume pump for viscous fluids. 3,022,736, 2-27-62, Cl. 103—37.

Bowen, Richard L., Jr. Piston pump. 3,022,742, 2-27-62, Cl. 103—153.

Bowers, Eric H., and O. Thoma, to Dowty Hydraulic Units Ltd., and Unipat A.G. Rotating axial thrust bearings. 3,023,058, 2-27-62, Cl. 308—231.

Bowers, Fritz K., and J. P. Schafer, to Bell Telephone Laboratories, Inc. Broad-band ferrite polarization rotator. 3,023,384, 2-27-62, Cl. 333—98.

Boyden, Albert C. Child's coaster. 3,023,022, 2-27-62, Cl. 280—87.04.

Boyle, Jamie N.: *See*—
Morrow, James E., and Boyle. 3,022,973.

Bradley, William J., to Earth Equipment Corp. Trenching machine drive transmission. 3,022,585, 2-27-62, Cl. 37—86.

Bragg, Russell L.: *See*—
Palm, Clifford W., and Bragg. 3,022,563.

Brähler, Berthold: *See*—
Reese, Johannes, and Brähler. 3,023,209.

Braitsch, Otto: *See*—
Junghans, Helmut, Braitsch, and Schlenker. 3,022,627.

Brandner, John D.: *See*—
Wright, Leon W., and Brandner. 3,023,223.

Brandt, Carl T., to Phillips Petroleum Co. Method for developing cavities in soluble formations. 3,022,986, 2-27-62, Cl. 262—3.

Braun, Adolph F. General Motors Corp. Throttle actuator. 3,022,849, 2-27-62, Cl. 180—77.

Braun, Philip N. Garment marking machine. 3,022,711, 2-27-62, Cl. 93—88.

Brearley Co., The: *See*—
Provi, Mike A. 3,022,845.

Brede, Dwight W.: *See*—
Tronslin, Cyril B., Sweeney, Brede, and Dorsett. 3,023,-280.

Brennemann, Andrew E., to International Business Machines Corp. Cryogenic commutator. 3,023,325, 2-27-62, Cl. 307—88.5.

Briggs, Quentin L., ½ to H. C. Mahan. Kite. 3,022,966, 2-27-62, Cl. 244—154.

Bright, Wilfred, to Ford Motor Co. Motor-vehicle seat. 3,022,993, 2-27-62, Cl. 267—107.

Brinkman, Earl W.: *See*—
Lee, Robert A., and Brinkman. 3,022,691.

Bristol Co., The: *See*—
Blakeslee, Clinton A., and Dyson. 3,023,282.

British Celanese Ltd.: *See*—
Larman, William T., Hawtin, and Downing. 3,023,075.
Wylde, Joseph R., and Drewitt. 3,022,545.

British Drug Houses Ltd., The: *See*—
Burn, Derek, Kirk, Petrow, and Weston. 3,023,206.

Bro, Manville L., to E. I. du Pont de Nemours and Co. Polymerization of perfluoroolefin mixtures. 3,023,190, 2-27-62, Cl. 260—87.5.

Broadley, William A., and E. P. Instram, Jr., to Texas Instruments Inc. Electrical switch means. 3,023,350, 2-27-62, Cl. 318—221.

Broomell, George L., Jr.: *See*—
Gardiner, Paul C., Jewett, and Broomell. 3,022,760.

Brown & Brown, Inc.: *See*—
Brown, Chalmers S. 3,022,666.

Brown, Carl E., and F. P. Crotser, to Revco, Inc. Built-in refrigeration apparatus with defrost controls. 3,022,639, 2-27-62, Cl. 62—155.

Brown, Chalmers S., to Brown & Brown, Inc. Float guide for a sewer regulator. 3,022,666, 2-27-62, Cl. 73—322.5.

Brown, Rollen E.: *See*—
Cousino, Elwin F., and Brown. 3,022,712.

Brown & Root, Inc.: *See*—
Turrentine, Rudolph A. 3,022,763.

Brown, William D. Chain and cutters therefor. 3,022,588, 2-27-62, Cl. 37—491.

Bruce, William F.: *See*—
Tislow, Richard F., Bruce, and Page. 3,023,146.

Brundage, Robert W. Variable volume hydraulic pump or motor. 3,022,741, 2-27-62, Cl. 103—120.

Brunsing, Rex L. Multi-can package. 3,022,888, 2-27-62, Cl. 206—65.

Brunswick Corp.: *See*—
Mohr, Robert G., and Bice. 3,023,066.

Brunzie, Robert H., and F. M. Fink, to Continental Aluminum Products Co. Detail for awning or jalousie type windows. 3,022,548, 2-27-62, Cl. 20—53.

Bryant, Wesley B. Steam producing stove for Finnish baths. 3,022,782, 2-27-62, Cl. 126—344.

Buck, John C.: *See*—
Gardner, George R., and Buck. 3,022,556.

Bullock, Herbert L. Tool for installing and removing rubber rollers. 3,022,573, 2-27-62, Cl. 29—235.

Bunny Bear Inc.: *See*—
Linden, Samuel. 3,023,047.

Bunston, Roy F. E., to Burndy Corp. Supporting trough. 3,022,972, 2-27-62, Cl. 248—68.

Burgy, Raymond A., and P. F. De Lamater, to Toledo Scale Corp. Elevator controls. 3,022,864, 2-27-62, Cl. 187—29.

Burke, Donald J., to Continental Industries, Inc. Exothermic mold having detachable lower portions. 3,022,554, 2-27-62, Cl. 22—116.

Burkhardt, Otto W. Positive-drive system for textile machine spindles. 3,022,624, 2-27-62, Cl. 57—102.

Burn, Derek, D. N. Kirk, V. Petrow, and G. O. Weston, to The British Drug Houses Ltd. Process for introducing Δ^1 unsaturation into steroids. 3,023,206, 2-27-62, Cl. 260—239.55.

Burndy Corp.: *See*—
Bunston, Roy F. E. 3,022,972.

Burr, Robert P., and R. J. Keogh, to Printed Motors, Inc. Printed circuit armature. 3,023,334, 2-27-62, Cl. 310—268.

Burr, Robert P., to Printed Motors, Inc. Printed circuit armature. 3,023,335, 2-27-62, Cl. 310—268.

Burris, Leslie, Jr., and A. Schneider, to United States of America, Atomic Energy Commission. Reprocessing uranium dioxide fuels. 3,023,097, 2-27-62, Cl. 75—84.1.

Burroughs Corp.: *See*—
Benn, Robert E. 3,023,070.
Bittmann, Eric E. 3,023,402.
Colwill, Richard H., and Levine. 3,023,123.
Jones, John P. 3,023,387.
Loev, David. 3,023,401.
Palasciano, Felice V. 3,022,907.

CTS Corp.: *See*—
Di Girolamo, Joseph, and Kelver. 3,023,388.

Caciagli, Sergio. Aircraft wing. 3,022,965, 2-27-62, Cl. 244—90.

Cadillac State Bank: *See*—
Greeley, Leo O. 3,022,587.

Cafardi, Paschal P. Three-way double garage door. 3,022,-817, 2-27-62, Cl. 160—113.

Caldwell, Joseph A., and B. E. Morgan, to Jersey Production Research Co. Cementing multiple pipe strings in well bores. 3,022,823, 2-27-62, Cl. 166—21.

Cambridge Rubber Co.: *See*—
Bingham, George H., Jr. 3,022,583.

Campbell, Charles R.: *See*—
Chapman, Richard D., Campbell, and Johnson. 3,023,238.

Campbell, Claude N., Jr., to Weyerhaeuser Co. Filling machines. 3,022,841, 2-27-62, Cl. 177—80.

Campbell, Paul G., to General Motors Corp. Auxiliary scale for ultrasonic thickness measuring means. 3,022,661, 2-27-62, Cl. 73—67.8.

Canadian Westinghouse Co., Ltd.: *See*—
Currey, Charles F. 3,023,353.

Cannon, Colbert H. Safety device for trigger guard. 3,022,-596, 2-27-62, Cl. 42—1.

Canterino, Peter J., and J. T. Edmonds, Jr., to Phillips Petroleum Co. Vulcanizable halogenated polyethylene compositions containing phosphorus. 3,023,180, 2-27-62, Cl. 260—27.

Cantrel, Kenneth E.: *See*—
Goodhue, Lyle D., Louthan, and Cantrel. 3,023,142.

Capdeville, Ignatius C.: *See*—
Voorhees, Edward M. 3,022,693.

Card, C. S., Iron Works Co.: *See*—
Card, David C. 3,022,562.

Card, David C., to C. S. Card Iron Works Co. Tunnel form. 3,022,562, 2-27-62, Cl. 25—131.6.

Carlsen, Carl E. Hand needle threaders. 3,022,927, 2-27-62, Cl. 223—99.

Carlson, Ernest R.: *See*—
Hubbell, Harvey, and Carlson. 3,023,395.

Carr, Norman L., to The Pure Oil C. Process for isomerizing normal hexane. 3 023,256, 2-27-62, Cl. 260—683 68.

Carrie, William D., to Crane Co. Part washing apparatus. 3,022,790, 2-27-62, Cl. 134—46.

Carrier Corp.: *See*—
Caswell, Howard E., and Endress. 3,022,638.

Carroll, William N., and R. A. D'Antonio, to International Business Machines Corp. High speed counter. 3,022,945, 2-27-62, Cl. 235—92.

Cary, Henry H., to Applied Physics Corp. Spectrophotometer. 3,022,704, 2-27-62, Cl. 88—14.

Casner Patents, Inc.: *See*—
Roters, Herbert C. 3,023,330.

Cassman, Harry, to Electric & Musical Industries Ltd. Method of forming a photo-emissive surface and coated article. 3,023,131, 2-27-62, Cl. 117—210.

Castor, Wilbur W. Ozone generator. 3,023,155, 2-27-62, Cl. 204—320.

Caswell, Howard E., and J. W. Endress, to Carrier Corp. Controls for refrigeration apparatus. 3,022,638, 2-27-62, Cl. 62—115.

Cataldo, Roy S.: *See*—
Bidwell, Joseph B., and Cataldo. 3,022,850.

Cathedral Kneeler Co.: *See*—
Hilliard, James M. 3,023,049.

Candill, William L.: *See*—
Ruka, William A., and Candill. 3,022 834.

Cawley, William E., and C. E. Frantz, to United States of America, Atomic Energy Commission. Coupler for tool and cable. 3,023,040, 2-27-62, Cl. 287—119.

Celanese Corp. of America: *See*—
Palm, Clifford W., and Bragg. 3,022,563.

Cenco Instruments Corp.: *See*—
Gabloffsky, Heinz. 3,022,844.

Ceruill, Nicholas P., to Westinghouse Electric Corp. Electroluminescent lamp and method. 3,023,338, 2-27-62, Cl. 313—108.

Chace, Richard A., to Clemco Aero Products, Inc. Unlocking mechanism for a two-part extensible strut. 3,022,771, 2-27-62, Cl. 121—40.

Chambers, William J., and D. D. Coffman, to E. I. du Pont de Nemours and Co. 1,2-bis-(fluoroalkyl)-1,2,3,6-tetrahydropyridazines. 3,023,208, 2-27-62, Cl. 260—250.

Chandler-Evans Corp.: *See*—
Prentiss, Augustin M. 3,022,628.

Chapman, Douglas W.: *See*—
De La Mater, George B., and Chapman. 3,023,313.

Chapman, Richard D., C. R. Campbell, and R. Johnson, to The Chemstrand Corp. Process for recovering adipic acid from the reaction products of the air-oxidation of cyclohexane. 3,03 238, 2-27-62, Cl. 260—533.

Chemiglas, Gebr. Schrickel oHG: *See*—
Rochus, Walter, and Kickuth. 3,022,659.

Chemische Werke Albert: *See*—
Greth, Arthur, and Zimmermann. 3,022,604.
Reese, Johannes, and Brähler. 3,023,209.

Chemstrand Corp., The: *See*—
Chapman, Richard D., Campbell, and Johnson. 3,023,238.
De Witt, Hobson D., and Beindorff. 3,023,184.
Fitzgerald, Paul F. 3,022,565.

Chenicek, Joseph A.: *See*—
Luvisi, John P., and Chenicek. 3,023,161.

Chester, Peter F.: *See*—
Bolef, Dan I., and Chester. 3,023,367.

Chester, Peter F., and D. I. Bolef, to Westinghouse Electric Corp. Maser. 3,023,366, 2-27-62, Cl. 330—4.

Chiantelassa, Attilio. Apparatus for determining composition and price of a dispensed mixture. 3,022,919, 2-27-62, Cl. 222—26.

Chicago Aerial Industries, Inc.: *See*—
Willits, Samuel P., and Mohan. 3,023,317.

Chicago Bridge & Iron Co.: *See*—
Mair, James. 3,022,985.

Chomitz, Nicholas: *See*—
Innes, William B., Michael, and Chomitz. 3,023,172.

Christensen, Bent: *See*—
Hierholzer, Frank J., Jr., and Christensen. 3,023,357.

Christensen, Bruce V.: *See*—
McAdams, Paul F., and Christensen. 3,023,024.

Chrysler Corp.: *See*—
McCordic, James R. 3,022,678.

Chung, Jackson, to Dodge Mfg. Corp. Shaft bushing. 3,023,034, 2-27-62, Cl. 287—52.

Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Controlled hydrocracking process. 3,023,159, 2-27-62, Cl. 208—110.

Ciba Ltd.: *See*—
Ratzer, Hans, and Nikles. 3,023,174.
Hiestand, Armin. 3,023,176.

Cirami, Salvatore. One-piece vehicle body. 3,023,045, 2-27-62, Cl. 296—31.

Clark Equipment Co.: *See*—
McAdams, Paul F., and Christensen. 3,023,024.

Claussen, Gerard E.: *See*—
Kennedy, Harry E., and Claussen. 3,023,302.

Claussen, Gerard E., to Union Carbide Corp. Silica-free welding flux. 3,023,301, 2-27-62, Cl. 219—74.

Clayton, Erith T., to Peen Plate, Inc. Metal coating process. 3,023,127, 2-27-62, Cl. 117—109.

Clemco Aero Products, Inc.: *See*—
Chace, Richard A. 3,022,771.

Cleveland Trencher Co., The: *See*—
Meyer, Henry L., Wilhelm, and Gregorczik. 3,022,584.

Clifton Precision Products Co., Inc.: *See*—
Glass, John P., and Zaic. 3,022,946.

Clough, Carroll C. Tank head dishing mechanism. 3,022,757, 2-27-62, Cl. 113—44.

Clowd, Inc.: *See*—
Shapiro, Lawrence S. 3,023,305.

Coats & Clark Inc.: *See*—
Morin, Louis H. 3,022,560.

Cochran, John M.: *See*—
McLane, Fletcher E., Pollack, and Cochran. 3,023,351.

Cochran, John M., H. L. Seelhoff, and F. H. Banks, to Westinghouse Electric Corp. Electric drive. 3,023,352, 2-27-62, Cl. 318—513.

Coffeen, William W.: *See*—
Myers, Curtis B., and Coffeen. 3,022,929.

Coffman, Donald D.: *See*—
Chambers, William J., and Coffman. 3,023,208.

Colborne, Ronald H., and A. Y. Murphy, to Electric & Musical Industries Ltd. Cathode ray tubes. 3,023,137, 2-27-62, Cl. 156—67.

Coler, Myron A.: *See*—
Louis, Arnold S., and Coler. 3,023,261.

Coler, Myron A., and S. A. Corren. Flexible battery. 3,023,259, 2-27-62, Cl. 136—6.

Coler, Myron A., and S. A. Corren. Coiled electrode battery. 3,023,260, 2-27-62, Cl. 136—13.

Collar, Rolland W., to Roylyn Inc. Coupling nozzle. 3,023,029, 2-27-62, Cl. 284—19.

Colley, Rowan H., to Rolls-Royce Ltd. Exhaust nozzle control for a twin spool jet engine. 3,022,629, 2-27-62, Cl. 60—35.6.

Columbia Ribbon and Carbon Mfg. Co., Inc.: *See*—
Newman, Douglas A. 3,022,880.

Colwill, Richard H., and C. J. Levine, to Burroughs Corp. Forming stripes of magnetic material. 3,023,123, 2-27-62, Cl. 117—44.

Combustion Engineering, Inc.: *See*—
Huet, André. 3,022,811.

Commissariat a l'Energie Atomique: *See*—
Condolios, Elie, and Michel. 3,023,051.

Common, James L., to General Foods Corp. Powdered instant beverage mix. 3,023,106, 2-27-62, Cl. 99—78.

Commonwealth Engineering Co. of Ohio, The: *See*—
Toulmin, Harry A., Jr. 3,022,607.

Compagnie de Pont-A-Mousson: *See*—
Demalander, Roger. 3,022,982.

Compagnie Francaise des Matieres Colorantes: *See*—
Jirou, Marcel. 3,023,071.

Condolios, Elie, and A. Michel, to Commissariat a l'Energie Atomique. Installation for hydraulic conduit transport for container. 3,023,051, 2-27-62, Cl. 302—14.

Cone, Ronald D., to North American Aviation, Inc. Overload protection circuit. 3,023,326, 2-27-62, Cl. 307—88.5.

Conn, C. G., Ltd.: *See*—
Kent, Earle L., and LeFevre. 3,022,697.

Conner, Leo B., Jr., to General Motors Corp. Radiometer speed measuring system. 3,023,361, 2-27-62, Cl. 324—70.

Connor, Ralph F., to Wirlpool Corp. Home appliance. 3,022,936, 2-27-62, Cl. 230—207.

Consolidated Edison Co. of New York, Inc.: *See*—
Xenis, Constantine P. 3,022,765.

Consolidated Electronics Industries Corp.: *See*—
Hughes, Ray C., and Sweet. 3,023,389.

Construction Machinery Co.: *See*—
Smith, Earl G. 3,023,056.

Continental Aluminum Products Co.: *See*—
Brunzie, Robert H., and Fuink. 3,022,548.

Continental Can Co., Inc.: *See*—
Shapero, Wallace H. 3,022,540.
Vincent, John N. 3,022,912.
Vincent, John N., and Kuntz. 3,022,913.

Continental Elektroindustrie A.G., Askania-Werke: *See*—
Pocher, Hugo. 3,022,702.

Continental Industries, Inc.: *See*—
Burke, Donald J. 3,022,554.

Cook, Ernest F., to Ford Motor Co. Seat adjuster drive unit. 3,022,681, 2-27-62, Cl. 74—665.

Cool Fin Electronics Corp.: *See*—
Allison, Donald K. 3,023,264.

Coonradt, Harry L.: *See*—
Ciapetta, Frank G., Coonradt, and Garwood. 3,023,159.

Cornish, Edwin R., Jr., to United States of America, Army. Constant temperature heater for microtome object discs. 3,023,293, 2-27-62, Cl. 219—19.

Corp, Paul M., to American Metal Products Co. Machine and method of bending the ends of a spring strip and providing an arch form thereto. 3,022,804, 2-27-62, Cl. 140—71.

Corren, Sidney A.: *See*—
Coler, Myron A., and Corren. 3,023,259.
Coler, Myron A., and Corren. 3,023,260.

Corson, Bolton L., and C. A. Danforth, to G. & W. H. Corson, Inc. Material treating device. 3,022,988, 2-27-62, Cl. 263—21.

Corson, G. & W. H., Inc.: *See*—
Corson, Bolton L., and Danforth. 3,022,988.

Cory Corp.: *See*—
Karlen, Harvey R. 3,022,894.

Cosgrove, Stanley: *See*—
Lawton, Emil A., Allen, and Cosgrove. 3,023,162.

Cote, Oscar E. Pipe hanger insert structure. 3,022,971, 2-27-62, Cl. 248—58.

Cotter, Robert J.: *See*—
Sauers, Carol K., and Cotter. 3,023,240.

Coursen, David L., G. A. Noddin, and J. I. Reilly, to E. I. du Pont de Nemours and Co. Explosive compaction of powders. 3,022,544, 2-27-62, Cl. 18—59.3.

Cousino, Elwin F., and R. E. Brown, to Southern Chemicals, Inc. Shock absorbing structure. 3,022,712, 2-27-62, Cl. 94—7.

Cox, Irvin W., to Cutler-Hammer, Inc. Motor control system. 3,023,348, 2-27-62, Cl. 318—138.

Crabtree, John O.: *See*—
Crosskey, Albert A., and Crabtree. 3,022,996.

Crane Co.: *See*—
Carrie, William D. 3,022,790.
Turek, James R., Petrie, and Attridge. 3,022,602.

Cresswell, Arthur, W. R. Kocay, and I. H. Undegraff, to American Cyanamid Co. Molded articles and method of making the same. 3,023,134, 2-27-62, Cl. 154—43.

Crockford, Jack A., F. A. Hayes, J. H. Jenkins, and S. D. Feurt. Method of delivering drugs into animals. 3,022,785, 2-27-62, 128—218.

Croom, James D., Jr. Collapsible tube shield. 3,022,920, 2-27-62, Cl. 222—105.

Cross, Donald J., and W. F. Scanlon, to Sylvania Electric Products Inc. Tuning device. 3,022,674, 2-27-62, Cl. 74—10.85.

Crosskey, Albert A., and J. O. Crabtree, to J.O.C. Engineers Ltd. Folding machines. 3,022,996, 2-27-62, Cl. 270—76.

Crotser, Frank P.: *See*—
Brown, Carl E., and Crotser. 3,022,639.

Crown Zellerbach Corp.: *See*—
Herschler, Robert J. 3,023,074.

Cryderman, Wilfred G., and A. R. Marshall, to Kaybar, Inc. Method of making textured leather-like article and product thereof. 3,023,124, 2-27-62, Cl. 117—45.

Cuban-American Sugar Co., The: *See*—
Nelson, Douglas C. 3,023,183.

Cummings, Leslie L., to Otis Engineering Corp. Check valves. 3,022,796, 2-27-62, Cl. 137—454.6.

Cummings, Ralph J. Adjustable shutter in hermetically sealed casing. 3,022,549, 2-27-62, Cl. 20—56.5.

Cunningham, Andrew L.: *See*—
Wainer, Eugene, and Cunningham. 3,023,115.

Currey, Charles F., to Canadian Westinghouse Co., Ltd. Silicon diode protective circuit. 3,023,353, 2-27-62, Cl. 321—12.

Curtiss Wright Corp.: *See*—
Klatchko, George A. 3,022,660.

Cutler Hammer, Inc.: *See*—
Cox, Irvin W. 3,023,348.

Czullus, Werner, to Siemens-Schuckertwerke Aktiengesellschaft. Measurement method and apparatus. 3,023,360, 2-27-62, Cl. 324—68.

Dabrowski, Jan, to United Merchants and Manufacturers Inc. Dyeing and/or printing. 3,023,072, 2-27-62, Cl. 8—82.

Dahlke, Edwin A. Carpet stretcher. 3,022,979, 2-27-62, Cl. 254—62.

Daiichi Selyaku Co., Ltd.: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara. 3,023,147.

Dale, Colin B., to Webcor, Inc. Phonograph. 3,023,009, 2-27-62, Cl. 274—10.

Daman, Louis F., to The Singer Mfg. Co. Portable cutting tool. 3,022,576, 2-27-62, Cl. 30—241.

Damusis, Adolf, to The Sherman-Williams Co. Method of amine curing epoxy resins and composition therefor. 3,023,190, 2-27-62, Cl. 260—47.

Danforth, Clifton A.: *See*—
Corson, Bolton L., and Danforth. 3,022,988.

Daniel, Leota M. Tool for rectal treatment. 3,022,787, 2-27-62 Cl. 128—321.

Daniell, Frank P. Dispensers for granular material. 3,022,925, 2-27-62, Cl. 222—517.

Daniels, Charles E., and N. C. Wyeth, to E. I. du Pont de Nemours and Co. False twisted yarn beam. 3,022,566, 2-27-62, Cl. 28—78.

D'Antonio, Renato A.: *See*—
Carroll, William N., and D'Antonio. 3,022,945.

Darcey, Joy S., to Beverly Vogue Co., Inc. Panty girdle. 3,022,788, 2-27-62, Cl. 128—529.

Daub, Rudolph. Piston head structure. 3,023,061, 2-27-62, Cl. 309—14.

Davenport Machine Tool Co., Inc.: *See*—
Lee, Robert A., and Brinkman. 3,022,691.

Davenport, William G., R. K. Hampton, and A. M. Katzen, to Beaumont Birch Co. Discharge gate apparatus. 3,022,921, 2-27-62, Cl. 222—108.

Davies, Robert H., and W. G. Webster, to Parker-Hannifin Corp. Variable area valve. 3,022,954, 2-27-62, Cl. 239—453.

Davis, Frank B., and J. L. Barkocy, to The Lamson & Sessions Co. Transfer mechanism. 3,022,526, 2-27-62, Cl. 10—76.

Davis, Frederick L., to Halliburton Co. Over-running clutch and bearing structure. 3,022,875, 2-27-62, Cl. 192—45.1.

Davis, William J., to The Polymer Corp. Porous polyamide articles and process for the production thereof. 3,022,542, 2-27-62, Cl. 18—55.

Davy and United Engineering Co. Ltd.: *See*—
Sims, Raymond B. 3,022,688.

Dayton, Walter J.: *See*—
Hayter, Richard B. 3,023,003.

De Angelus, Millet R.: *See*—
Dersch, Fritz, and De Angelus. 3,023,103.

Deans, Frederick E.: *See*—
Wainwright, Carlyle H., and Deans. 3,022,652.

De Beixedon, Philip C. Multiple fluke folding anchor. 3,022,761, 2-27-62, Cl. 114—208.

De Corte, Michael A., and J. F. Bird, to Ford Motor Co. Single orifice fluid pressure governor mechanism. 3,022,631, 2-27-62, Cl. 60—52.

Deere & Co.: *See*—
Hess, Christian H. 3,022,830.
Hess, Christian H. 3,022,831.
Sorensen, Knud B., and Bjerkan. 3,022,754.

Dega, Robert L., to General Motors Corp. Centrifuge for separating three components. 3,022,937, 2-27-62, Cl. 233—28.

De Grull, Jan.: *See*—
Van Tetterode, Floris. 3,023,139.

Dehydag, Deutsche Hydrierwerke G.m.b.H.: *See*—
Gilndel, Wolfgang. 3,023,215.
Strauss, Wennemar, Michael, and Willmund. 3,023,151.
Strauss, Wennemar, and Wedell. 3,023,152.
Willmund, Wolf-Dieter, and Strauss. 3,023,150.

De La Mater, George B., and D. W. Chapman, to Mallinckrodt Chemical Works. Method of making an X-ray image intensifying screen and resulting article. 3,023,313, 2-27-62, Cl. 250—80.

De Lamater, Paul F.: *See*—
Burgy, Raymond A., and De Lamater. 3,022,864.

Demuläander, Roger, to Compagnie de Pont-A-Mousson. Heat exchanger element and applications thereof. 3,022,982, 2-27-62 Cl. 257—245.

De Man, Heiko T., to The Porter-Cable Machine Co. Nailer. 3,022,509, 2-27-62, Cl. 1—46.

Dammler, Kurt: *See*—
Meyer, Ferdinand, and Demmler. 3,023,224.

Dempsey, Joseph B., to Pattin Mfg. Co., Inc. Mine roof bolt assembly with sequential multiple expansion means. 3,022,700, 2-27-62, Cl. 85—2.4.

Denhardt, Carl: *See*—
Sorenson, Bill W., and Denhardt. 3,022,995.

Densco, Inc.: *See*—
Kester, Fred J. 3,023,306.

D'Entremont, Donald J.: *See*—
Baird, William G., Jr., Lindstrom, Besse, and D'Entremont. 3,022,543.

De Pataky, Maria V. Method of forming decorative bodies. 3,023,122, 2-27-62, Cl. 117—38.

Dersch, Fritz, and M. R. De Angelus, to General Aniline & Film Corp. Antifoggants and stabilizers for photographic silver halide emulsions. 3,023,103, 2-27-62, Cl. 96—109.

Dersch, Fritz, and N. J. Doorenbos, to General Aniline & Film Corp. Direct positive photographic emulsion. 3,023,102, 2-27-62, Cl. 96—101.

Detroit Bank & Trust Co.: *See*—
Jackson, Corwill. 3,022,744.

Devonsheer Melba Corp.: *See*—
Well, Bert. 3,022,903.

De Walt, Inc.: *See*—
Nuss, Oscar H. 3,022,694.

Dew, Joseph H., to General Motors Corp. Shipping rack. 3,022,896, 2-27-62, Cl. 211—13.

De Witt, Hobson D., and A. B. Beindorff, to The Chemstrand Corp. Solution of polyester in pyrrole and process for making same. 3,023,184, 2-27-62, Cl. 260—30.2.

Diamond, William J., H. Levin, and D. C. Wood, to Whirlpool Corp. Method of softening water and washing articles. 3,023,132, 2-27-62, Cl. 134—10.

Dickerson, Jack A., to International Business Machines Corp. Magnetic drum head positioning system. 3,023,404, 2-27-62, Cl. 340—174.1.

Dickinson, Arthur H., to International Business Machines Corp. Situation determining device. 3,023,399, 2-27-62, Cl. 340—149.

Diddens, Paul A., to Performance Measurements Co. Load measuring system. 3,022,663, 2-27-62, Cl. 73—141.

Di Girolamo, Joseph, and W. L. Kelver, to CTS Corp. Composite electrical control device for radio receivers. 3,023,388, 2-27-62, Cl. 338—172.

Digital Control Systems, Inc.: *See*—
Steele, Floyd G. 3,022,949.

Dillon, W. C., & Co., Inc.: *See*—
Dillon, William C., and Kehm. 3,023,276.

Dillon, William C., and C. H. Kehm, to W. C. Dillon & Co., Inc. Communication system. 3,023,276, 2-27-62, Cl. 179—15.

Dimeff, John, and M. S. Gardner, to United States of America, National Aeronautics and Space Administration. Differential pressure cell. 3,022,672, 2-27-62, Cl. 73—398.

Dirks, Gerhard. Electronic computing means. 3,022,950, 2-27-62, Cl. 235—153.

Doan, Robert B., to The Atlantic Refining Co. Heavy duty liquid detergent. 3,023,168, 2-27-62, Cl. 252—137.

Dobrikin, Harold L., to Berg Airlectro Products Co. Identical reinforced half couplings for hose. 3,023,031, 2-27-62, Cl. 285—69.

Dodge Mfg. Corp.: *See*—
Chung, Jackson. 3,023,034.

Dodson, Raymond M.: *See*—
Muir, Robert D., and Dodson. 3,023,229.

Dodsworth, James W., to Monroe Calculating Machine Co. Carriage control of electromechanical program for accounting machine. 3,022,940, 2-27-62, Cl. 235—60.48.

Dohr, Manfred: *See*—
Bornemann, Dieter, Dohr, Renner, and Ziegler. 3,023,242.

Dohring, Hans M. Patty shell baking process. 3,022,751, 2-27-62, Cl. 107—54.

Doiza, John: *See*—
Bouvy, Christiann H. 3,022,775.

Donner, Verne P., to International Harvester Co. Seal between relatively rotating members. 3,023,014, 2-27-62, Cl. 277—78.

Donnet, Jean-Baptiste A., to Societe d'Etude des Industries du Petrole Au Port de Strasbourg (Societe a Responsabilite Limitee). Water-soluble carbon black and production thereof. 3,023,118, 2-27-62, Cl. 106—307.

Doorenbos, Norman J.: *See*—
Dersch, Fritz, and Doorenbos. 3,023,102.

Dormeyer Corp.: *See*—
Malz, Leo, and Schwaneke. 3,022,720.

Dorf, Richard H., to Kinsman Mfg. Co., Inc. Electrical musical instruments. 3,022,696, 2-27-62, Cl. 84—1.26.

Dorsett, James W., Jr.: *See*—
Tronslin, Cyril B., Sweeney, Brede, and Dorsett. 3,023,280.

Doty, Roger F., to The Mayfag Co. Clothes dampening apparatus. 3,022,580, 2-27-62, Cl. 34—60.

Double A Products Co.: *See*—
Pippenger, John J. 3,022,794.

Dow Chemical Co., The: *See*—
Easley, John A., and Fishaber. 3,023,138.
Rigterink, Raymond H. 3,023,207.

Downey, William P.: *See*—
Olson, John E., and Downey. 3,022,773.

Downing, John: *See*—
Larman, William T., Hawtin, and Downing. 3,023,075.

Dowty Hydraulic Units Ltd., and Tunipat A.G.: *See*—
Bowers, Eric H., and Thoma. 3,023,058.

Drain, James A., J. A. Read, and J. E. Gordon, to Joy Mfg. Co. Grapple. 3,023,044, 2-27-62, Cl. 294—88.

Dresser Industries, Inc.: *See*—
Erath, Louis W. 3,023,403.

Drewitt, James G. N.: *See*—
Wylde, Joseph R., and Drewitt. 3,022,545.

Dreyfus, Robert L., J. W. Harrison, and R. D. Lowry, to W. R. Grace and Co. Vacuum forming of plastic material. 3,022,614, 2-27-62, Cl. 53—30.

Duffy, James J., to Ford Motor Co. Automatic transmission controls. 3,022,676, 2-27-62, Cl. 74—472.

Duggan, Lee M. Novelty reflector device for self-viewing of a person by reflection. 3,022,709, 2-27-62, Cl. 88—84.

Dugone, Joseph: *See*—
Kraus, Gerard, and Dugone. 3,023,188.

Duinker, Simon, A. L. Stuijts, H. P. J. Wijn, and W. K. Westmijze, to North American Philips Co., Inc. Magnetic record carrier. 3,023,166, 2-27-62, Cl. 252—62.5.

Dunn, Michael J., to Precision Products & Controls, Inc. Electric impulse-type counter. 3,022,943, 2-27-62, Cl. 235—92.

Dunne, Thomas G., to International Business Machines Corp. Room temperature ferroelectric materials. 3,023,167, 2-27-62, Cl. 252—63.2.

Du Pont de Nemours, E. I., and Co.: *See*—
Bro, Manville I. 3,023,196.
Chambers, William J., and Coffman. 3,023,208.
Coursen, David L., Noddin, and Reilly. 3,022,544.
Daniels, Charles E., and Wyeth. 3,022,566.
England, David C., and Foster. 3,023,226.
Massey, William M. 3,022,539.
Mastrangelo, Sebastian V. R. 3,023,077.
Richter, John W. 3,023,212.
Richter, John W. 3,023,213.
Richter, John W. 3,023,214.
Shivers, Joseph C., Jr. 3,023,192.

Dutcher, Donald G.: *See*—
Harper, Willard J., Hauck, Moll, and Dutcher. 3,022,881.

Dyar, Robert L. Method of constructing abrasive coated cylinders. 3,023,121, 2-27-62, Cl. 117—18.

Dye, Robert F., to Phillips Petroleum Co. Polymerization process. 3,023,203, 2-27-62, Cl. 260—94.9.

Dyson, Ernest F.: *See*—
Blakeslee, Clinton A., and Dyson. 3,023,282.

Eager, George S., Jr.: *See*—
Rubinstein, Solomon, Garner, and Eager. 3,023,267.

Earl, Thomas D.: *See*—
Frost, John C. M., and Earl. 3,022,963.

Earth Equipment Corp.: *See*—
Bradley, William J. 3,022,585.

Easley, John A., and M. H. Fishaber, to The Dow Chemical Co. Powderless etching bath and method of etching plates therewith. 3,023,138, 2-27-62, Cl. 156—14.

Easterbrooks, Harold L.: *See*—
Albondi, Frank B., Hagan, and Easterbrooks. 3,023,143.

Eaton Mfg. Co.: *See*—
Pipes, George R. 3,022,679.

Eberle, Jack F.: *See*—
Passley, Paul L., and Eberle. 3,022,541.

Eberle, Jack F., to Phillips Petroleum Co. Solid rocket propellants. 3,022,735, 2-27-62, Cl. 102—98.

Eckels, George H., and H. J. Troche, to Holan Corp. Mobile aerial tower. 3,022,854, 2-27-62, Cl. 182—2.

Eclipse Sleep Products, Inc.: *See*—
Martin, Joseph. 3,022,521.

Edmonds, James T., Jr.: *See*—
Canterino, Peter J., and Edmonds. 3,023,180.

Edwards, Herbert C., to The Timken Roller Bearing Co. Axle bearing adjusting means. 3,023,057, 2-27-62, Cl. 308—207.

Edwards, Jack H.: *See*—
Winsauer, Weldon O., and Edwards. 3,022,825.

Efram, Rudolph H., M. L. Applebaum, and M. Henry. Card sorting system. 3,022,891, 2-27-62, Cl. 209—111.5.

Ehrlich, John: *See*—
Bartz, Quentin R., Ehrlich, Knudsen, and Smith. 3,023,204.

Ehrsam, J. B., & Sons Mfg. Co., The: *See*—
Kelley, Hugh. 3,023,035.

Eiden, Leo W., S. C. Rustad, and P. Smirnow, to General Mills, Inc. Dough packaging apparatus. 3,022,616, 2-27-62, Cl. 53—56.

Eilers, Carl G., M. C. Hendrickson, and R. C. Herrmann, to Zenith Radio Corp. Computer and a method of computing. 3,023,370, 2-27-62, Cl. 178—5.1.

Ekco Products Co.: *See*—
Blackmer, Dwight W. 3,022,537.

Eklund, Robert. Electromagnetically operated holding devices. 3,022,994, 2-27-62, Cl. 269—8.

Electric & Musical Industries Ltd.: *See*—
Cassman, Harry. 3,023,131.
Colborne, Ronald H., and Murphy. 3,023,137.
Udall, Anthony J. S. 3,022,953.

Electrical Utilities Co.: *See*—
Preiser, Ralph H., McNally, and Kotowski. 3,023,268.

Electro-Mechanical Research, Inc.: *See*—
Swain, William H. 3,023,377.

Ellert, Henry G., and C. N. Kimberlin, Jr., to Esso Research and Engineering Co. Conversion of paraffins to aromatics. 3,023,157, 2-27-62, Cl. 208—64.

Ellis, Robert E., to United States of America, Atomic Energy Commission. Multiple electron beam ion pump and source. 3,022,933, 2-27-62, Cl. 230—69.

Emmerling, Anson A., H. B. Kaufman, Jr., W. J. Osborne, and R. A. Steenrod, Jr., to United States of America, Navy. Battery electrode. 3,023,262, 2-27-62, Cl. 236—120.

Empire Rubber Co.: *See*—
Waldrop, Thomas C. 3,023,062.

Endo, Frank S.: *See*—
Feinberg, Albert E., and Endo. 3,023,385.

Endress, James W.: *See*—
Caswell, Howard E., and Endress. 3,022,638.

Engholdt, Richard K., to Erie Mfg. Co. Injector pump. 3,022,743, 2-27-62, Cl. 103—258.

England, David C., and R. E. Foster, to E. I. du Pont de Nemours and Co. Process for the preparation of acrylonitrile from propylene and nitric oxide. 3,023,226, 2-27-62, Cl. 260—465.3

Enk, Eduard, and J. Nickl, to Wacker-Chemie G.m.b.H. Process for the production of extremely pure silicon. 3,023,087, 2-27-62, Cl. 23—223.5.

Epstein, Henry D., to Texas Instruments Inc. Thermostatic device. 3,023,287, 2-27-62, Cl. 200—113.

Epstein, Martin E., and N. C. Gangemi, to Pennsylvania Industrial Chemical Corp. Dicyclopentadiene alkylation polymers. 3,023,200, 2-27-62, Cl. 260—93.1.

Erath, Louis W., to Southwestern Industrial Electronics Co. Direct coupled transistor amplifier. 3,023,368, 2-27-62, Cl. 330—14.

Erath, Louis W., to Dresser Industries, Inc. Magnetic delay line. 3,023,403, 2-27-62, Cl. 340—174.1.

Erie Mfg. Co.: *See*—
Engholdt, Richard K. 3,022,743.

Ernst, John L.: *See*—
Martin, James G., Ernst, Jankowski, and Schetelich. 3,023,195.

Eschinasi, Emile H.: *See*—
Eschinazi, Habib-Emile. 3,023,244.

Eschinazi, Habib-Emile, now by judicial change of name E. H. Eschinasi, to The Givaudan Corp. Process for making pinonic aldehyde. 3,023,244, 2-27-62, Cl. 260—586.

Esso Research and Engineering Co.: *See*—
Bartlett, Jeffrey H., Kirshenbaum, Banes, and Muessig. 3,023,185.
Ellert, Henry G., and Kimberlin. 3,023,157.
Jankowski, Conrad J., and Fischer. 3,023,179.
Martin, James G., Ernst, Jankowski, and Schetelich 3,023,195.
Tegge, Bruce R., Baldwin, and Serniuk. 3,023,191.
Thomas, Arthur M., Jr. 3,023,084.

Ethyl Corp.: *See*—
Ashby, Eugene C. 3,023,248.

Eutectic Welding Alloys Corp.: *See*—
Wasserman, Rene D., and Quaas. 3,023,130.

Ewanus, Walter: *See*—
Smith, Harry B., Mooney, and Ewanus. 3,023,409.

Express Dairies (Northern) Ltd.: *See*—
Shires, James W. N. 3,022,904.

FMC Corp.: *See*—
Textor, Clinton K. 3,023,140.

Fabbrica Italiana Magneti Marelli S.p.A.: *See*—
Alfieri, Giuseppe. 3,023,052.

Fairbanks, Morse & Co.: *See*—
Herrick, George H., Prescott, and Guido. 3,022,739.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Thoma, Wilhelm, Bayer, and Rinke. 3,023,100.
Thoma, Wilhelm, Bayer, and Rinke. 3,023,193.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Wagner, Kuno, and Bayer. 3,023,228.

Faulkner, Glenn E.: *See*—
Lewis, Wallace J., and Faulkner. 3,023,133.

Faulkner, Thomas G. Changeable exhibiters. 3,022,591, 2-27-62, Cl. 40—140.

Faulkner, Thomas G. Changeable exhibiters. 3,022,592, 2-27-62, Cl. 40—140.

Favre, John A., to General Electric Co. Operating mechanism for circuit breaker. 3,023,285, 2-27-62, Cl. 200—87.

Fawick Corp.: *See*—
Fawick, Thomas L. 3,022,877.

Fawick, Thomas L., to Fawick Corp. Assembly for clutches and brakes. 3,022,877, 2–27–62, Cl. 192—88.

Fehlberg, Albert E., and F. S. Endo, to Advance Transformer Co. Transformer core construction. 3,023,385, 2–27–62, Cl. 336—165.

Feurt, Seldon D.: *See*—
Crockford, Jack A., Hayes, Jenkins, and Feurt. 3,022,785.

Fichtel & Sachs A.G.: *See*—
Steinlein, Gustav, and Trunk. 3,022,776.

Fike, Harold L., to International Minerals & Chemical Corp. Recovery of glutamic acid. 3,023,236, 2–27–62, Cl. 260—527.

Filstrup, Edward C., to Olin Mathieson Chemical Corp. Safety blasting device. 3,022,730, 2–27–62, Cl. 102—25.

Flinger, Earle W. Cradle reciprocating apparatus. 3,022,520, 2–27–62, Cl. 5—109.

Fink, Frederick M.: *See*—
Brunzie, Robert H., and Fink. 3,022,548.

Firth, Bernard G., to Tung-Sol Electric Inc. Cold cathode vacuum tube and circuit. 3,023,364, 2–27–62, Cl. 328—252.

Firth, Bernard G., to Tung-Sol Electric Inc. Keep alive circuit for cold cathode vacuum tubes. 3,023,365, 2–27–62, Cl. 328—267.

Fischer & Porter Co.: *See*—
Boonshaft, Julius C., and Haigler. 3,022,800.

Fischer, Wilbur F.: *See*—
Jankowski, Conrad J., and Fischer. 3,023,179.

Fishaber, Marvin H.: *See*—
Easley, John A., and Fishaber. 3,023,138.

Fisher, James L. Hoist for microphone dolly and the like. 3,022,901, 2–27–62, Cl. 212—24.

Fitzgerald, Albert J., to General Electric Co. Framing apparatus. 3,022,872, 2–27–62, Cl. 189—36.

Fitzgerald, Paul F., to The Chemstrand Corp. Method of texturing yarns. 3,022,565, 2–27–62, Cl. 28—72.

Flagge, Andrew, to Victor Comptometer Corp. Register-controlled means for controlling and actuating recording apparatus. 3,022,939, 2–27–62, Cl. 235—59.

Fleckenstein, Hans, P. Sieber, and L. Kiesow, to Licentia Patent-Verwaltungs-G.m.b.H. Ventilator. 3,022,969, 2–27–62, Cl. 248—13.

Flexible Sewertool Corp.: *See*—
Arnold, Gordon D. 3,022,908.

Floehr, Walter L., to Unitcast Corp. Torsion spring assembly. 3,022,536, 2–27–62, Cl. 16—75.

Flower, Robert A.: *See*—
Baslm, Donald S., Flower, and McKay. 3,023,407.

Folland, Willard E.: *See*—
Tilliyer, Edgar D., and Folland. 3,022,858.

Foote, Francis S., Jr.: *See*—
Ribbens, Jacob J., Leete, and Foote. 3,022,595.

Ford, Arthur L.: *See*—
Baumbach, Harlan L., and Ford. 3,022,941.

Ford Motor Co.: *See*—
Bright, Wilfred. 3,022,993.
Cook, Ernest F. 3,022,681.
De Corte, Michael A., and Bird. 3,022,631.
Duffy, James J. 3,022,676.
Grenier, Francis E. 3,022,644.

Fordyce, David B., F. J. Glavis, and S. Melamed, to Rohm & Haas Co. Dewatering aqueous suspensions with quaternized dialkylaminoalkyl acrylates or methacrylates. 3,023,162, 2–27–62, Cl. 210—54.

Fork, Frank W., to H. H. Robertson Co. Electrical connector enclosure. 3,023,265, 2–27–62, Cl. 174—48.

Foster, Robert E.: *See*—
England, David C., and Foster. 3,023,226.

Foster, Walter E., to Avco Corp. Mechanically damped tension system for tape recorder. 3,022,960, 2–27–62, Cl. 242—75.3.

Fostofin Corp.: *See*—
Barber, Ira J. 3,023,296.

Foulkes, John D., to Bell Telephone Laboratories, Inc. Communication system. 3,023,309, 2–27–62, Cl. 250—17.

Foxboro Co., The: *See*—
Fuller, David H. 3,022,673.

Franciscus, Ross B. Bicycle bumpers and license plate holder. 3,023,027, 2–27–62, Cl. 280—289.

Franked, Sydney. Magnetic clutch. 3,022,876, 2–27–62, Cl. 192—84.

Frantz, Charles E.: *See*—
Cawley, William E., and Frantz. 3,023,040.

Freeman, John D., and L. Kull, to General Time Corp. Remotely settable timer. 3,023,327, 2–27–62, Cl. 307—141.8.

Freier, Joachim: *See*—
Ossenbrunner, Armin, Schnell, Klockgether, Geiger, and Freier. 3,023,101.

Frenkel, Lothar, to Tektronix, Inc. Cathode ray tube having post acceleration. 3,023,336, 2–27–62, Cl. 313—78.

Frosard, Marcel, to Mefina S.A. Mechanism for adjusting the length of stitch on a sewing machine. 3,022,756, 2–27–62, Cl. 112—210.

Friberg, Bengt F. Prestressed concrete structures. 3,022,713, 2–27–62, Cl. 94—24.

Fricke, Gerald J., and E. MacDonald. Garden carryall and snow remover. 3,023,021, 2–27–62, Cl. 280—47.34.

Friden, Inc.: *See*—
Malavazos, Arthur J., and Jamieson. 3,022,948.
Viola, Vito, and Olson. 3,022,947.

Friederich, Herbert: *See*—
Baron, Hubertus, and Friederich. 3,023,230.

Friedman, Robert, to Kollsman Instrument Corp. Endbells for extension connectors. 3,023,266, 2–27–62, Cl. 174—75.

Fritts, Robert W., to Minnesota Mining and Mfg. Co. Thermoelectric generator. 3,023,257, 2–27–62, Cl. 136—4.

Froede, Otto: *See*—
Himmelheber, Max, Hagen, and Froede. 3,023,136.

Frog Switch & Mfg. Co., The: *See*—
McGrath, William A. 3,022,968.

Frontier Electronics: *See*—
Nerison, James R. 3,023,411.

Frost, Alan, to Siddeley Engines Ltd. Gas bearings. 3,022,935, 2–27–62, Cl. 230—117.

Frost, John C. M., and T. D. Earl, to Avro Aircraft Ltd. Disc-type aircraft with peripheral jet control. 3,022,963, 2–27–62, Cl. 244—15.

Frowein, Gustav: *See*—
Berberich, Erich, Gilliam, and Frowein. 3,022,803.

Fucinari, Angelo M., and E. L. King, to The H. A. Montgomery Co. Drawing lubricant coating composition. 3,023,163, 2–27–62, Cl. 252—34.7.

Fuller, David H., to The Foxboro Co. Fluid line transfer switch. 3,022,673, 2–27–62, Cl. 73—422.

Fuller, Richard H., to Pacific Semiconductors, Inc. Voltage-controlled capacitance converter-modulator. 3,023,378, 2–27–62, Cl. 332—52.

Funk, Clarence M.: *See*—
Voorhees, Edward M. 3,022,693.

Gabloffsky, Heinz, to Cenco Instruments Corp. Shift error adjustment for beam balances of stabilized pan type. 3,022,844, 2–27–62, Cl. 177—190.

Gadget-Of-The-Month Club, Inc.: *See*—
Archer, Warren and G. C. 3,022,897.

Galeano, Ted. Safety device. 3,022,856, 2–27–62, Cl. 182—193.

Gallet, René, to Societe des Thes de l'Elephant. Automatic machine for packing articles such as bags in thermoweldable pouches. 3,022,620, 2–27–62, Cl. 53—137.

Gangemi, Nicholas C.: *See*—
Epstein, Martin E., and Gangemi. 3,023,200.

Gardiner, Paul C., L. E. Jewett, and G. L. Broomell, Jr., to United States of America, Navy. Echo range limitation equipment. 3,022,760, 2–27–62, Cl. 114—23.

Gardner, George R., and J. C. Buck, to Aluminum Co. of America. Casting process. 3,022,556, 2–27–62, Cl. 22—193.

Gardner, Murray S.: *See*—
Dimeff, John, and Gardner. 3,022,672.

Garfinkel, Samuel B.: *See*—
Wexler, Arnold, Krinsky, and Garfinkel. 3,022,667.

Garner, Oscar G.: *See*—
Rubinstein, Solomon, Garner, and Eager. 3,023,267.

Garrard Engineering and Mfg. Co. Ltd., The: *See*—
Ansar, Anders. 3,023,008.

Garwood, William E.: *See*—
Cupetta, Frank G., Coonradt, and Garwood. 3,023,159.

Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Waldemar T. 3,022,714.

Gebr. Junghans A.G.: *See*—
Junghans, Helmut, Braitsch, and Schlenker. 3,022,627.

Geer, William E.: *See*—
Wildey, Elmer R., and Geer. 3,022,740.

Geiger, Georg, to Sandoz Ltd. Process for the dyeing of synthetic polyamides in the mass. 3,023,186, 2–27–62, Cl. 260—37.

Geiger, Julius: *See*—
Ossenbrunner, Schnell, Klockgether, Geiger, and Freier. 3,023,101.

Geigy Chemical Corp.: *See*—
Leonard, Frederick. 3,023,235.

General Aniline & Film Corp.: *See*—
Dersch, Fritz, and De Angelus. 3,023,103.
Dersch, Fritz, and Doorenbos. 3,023,102.
Milazzo, Joseph S. 3,023,220.
Tukats, Zoltan, and Ondrusek. 3,022,715.

General Atronics Corp.: *See*—
Preston, Glenn W. 3,023,342.

General Cable Corp.: *See*—
Rubinstein, Solomon, Garner, and Eager. 3,023,267.

General Dispersions Inc.: *See*—
Goldsmith, Robert, and Hess. 3,023,120.

General Dynamics Corp.: *See*—
Schmidt, Edward R. 3,023,281.

General Electric Co.: *See*—
Aberle, Robert C. 3,022,654.
Favre, John A. 3,023,285.
Fitzgerald, Albert J. 3,022,872.
Johnston, Frank C., and Krauss. 3,023,032.
Zeman, Kenneth P. 3,023,149.
Stewart, Vincent N. 3,023,292.

General Foods Corp.: *See*—
Common, James L. 3,023,106.
Stagmeier, Arthur F. 3,023,110.

General Metals Corp.: *See*—
Towne, Claude M. 3,022,586.

General Mills, Inc.: *See*—
Elden, Leo W., Rustad, and Smirnow. 3,022,616.

General Motors Corp.: *See*—
Barton, James F., Jr., and Bickel. 3,022,883.
Bidwell, Joseph B., and Cataldo. 3,022,850.
Braun, Adolph F. 3,022,849.
Campbell, Paul G. 3,022,661.
Conner, Leo B., Jr. 3,023,361.
Dega, Robert L. 3,022,937.
Dew, Joseph H. 3,022,806.
Hansen, Kai H., Schilling, and McRoberts. 3,022,847.
Horton, George B., and Lohr. 3,022,975.
Hough, Fred O., and Scott. 3,023,154.
Lautzenhiser, Argyle G. 3,023,284.
O'Brien, William J. 3,022,669.
Roller, Albert E. 3,022,649.
Webster, William W. 3,022,717.
Zeigler, Philip B., and Thompson. 3,022,772.

General Precision, Inc.: *See*—
Basim, Donald S., Flower, and McKay. 3,023,407.
Keeler, Eugene R. 3,023,322.

General Radio Co.: *See*—
Stuart, Robert W., Jr. 3,022,944.

General Steel Industries, Inc.: *See*—
Lich, Richard L. 3,022,748.
Voertman, Kenneth W., and Lich. 3,022,749.

General Time Corp.: *See*—
Freeman, John D., and Kull. 3,023,327.

General Tire & Rubber Co., The: *See*—
Te Grotenhuis, Theodore A. 3,023,181.

Gerald, Curtis F., to Universal Oil Products Co. Self-regulating injector. 3,022,934, 2–27–62, Cl. 230—103.

Gerhardt, Andrew H., and C. R. Waldrop, to Borg-Warner Corp. Filtering agitator. 3,022,655, 2–27–62, Cl. 68—18.

Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft: *See*—
Karwat, Ernst. 3,023,076.

Getzen, Forrest W., to Jersey Production Research Co. Introduction of fluid into an earth formation. 3,022,827, 2–27–62, Cl. 166—187.

Glck, Heinrich: *See*—
Lang, Karl F., Metzendorf, Turowski, and Glck. 3,023,125.
Lang, Karl F., Metzendorf, Turowski, and Glck. 3,023,255.

Gilkes, Arthur G.: *See*—
Riddell, Robert W. 3,022,955.

Gilliam, Johannes: *See*—
Berberich, Erich, Gilliam, and Frowein. 3,022,803.

Girling, Sidney S. Collapsible stool. 3,023,046, 2–27–62, Cl. 297—156.

Givaudan Corp., The: *See*—
Eschinazi, Habib-Emile. 3,023,244.

Glascoff, Walter G. Fishing tackle bucket. 3,022,600, 2–27–62, Cl. 43—54.5.

Glass, John P., and F. Zaic, to Clifton Precision Products Co., Inc. Counter reversing mechanism. 3,022,946, 2–27–62, Cl. 235—117.

Glavis, Frank J.: *See*—
Fordyce, David B., Glavis, and Melamed. 3,023,162.

Gleasman, Hollis K.: *See*—
Hood, Edwin E., and Gleasman. 3,022,682.

Glidden Co., The: *See*—
Bain, Joseph P., and Best. 3,023,253.

Glover, Benjamin M. Method of making bonded non-woven fabric from textile fibers. 3,022,813, 2–27–62, Cl. 156—148.

Goerrig, Dieter, and V. Lwowski; said Lwowski assor. to said Goerrig. Process for the production of calcium-monofluoride. 3,023,082, 2–27–62, Cl. 23—88.

Gold, Jack: *See*—
Armacost, Robert H. 3,022,685.

Goldsmith, Robert, and P. S. Hess, to General Dispersions Inc. Plastic coated, fluorocarbon resin-impregnated glass fiber cloth tape and method of making the same. 3,023,120, 2–27–62, Cl. 117—15.

Gollwitzer, Lee H.: *See*—
Blizard, Robert B., and Gollwitzer. 3,023,362.

Goodbue, Lyle D., R. P. Louthan, and K. E. Cantrel, to Phillips Petroleum Co. Trithiocarbonates as bird repellents. 3,023,142, 2–27–62, Cl. 167—46.

Gordon, John E.: *See*—
Drain, James A., Read, and Gordon. 3,023,044.

Gottscho, Adolph, Inc.: *See*—
Worth, Francis C. 3,022,724.

Gourdouze, Frank R. Basketball rebound practice device. 3,023,001, 2–27–62, Cl. 273—1.5.

Graes, Howard B., Jr., and B. P. Bell, to International Minerals & Chemical Corp. Reaction vessel. 3,023,089, 2–27–62, Cl. 23—259.2.

Grace, W. R., & Co.: *See*—
Baird, William G., Jr., Lindstrom, Besse, and D'Entremont. 3,022,543.
Dreyfus, Robert L., Harrison, and Lowry. 3,022,614.
Maggiolo, Allison, and Tumolo. 3,023,233.
Steyermark, Paul R., and Wolfrom. 3,023,205.

Granryd, Thorvald G., to The Frank G. Hough Co. Tractor loader bucket lifting arrangement. 3,022,911, 2–27–62, Cl. 214—140.

Gray, Eddie T. Y. Agricultural machinery. 3,022,909, 2–27–62, Cl. 214—131.

Greathouse, Glen A., and A. B. Taylor, to Mar-Tay, Inc. Biocidal compositions for topical application. 3,023,144, 2–27–62, Cl. 167—58.

Greeley, Leo A., deceased, by Cadillac State Bank, executor, to F. J. McCarthy Inc. Road scrapers. 3,022,587, 2–27–62, Cl. 37—159.

Green, Emil, and S. Schlanger. Cable armor cutters. 3,022,574, 2–27–62, Cl. 30—90.5.

Greenlee, Sylvan O., and J. W. Pearce, to S. C. Johnson & Son, Inc. Epoxide conversion of unsaturated acids. 3,023,178, 2–27–62, Cl. 260—22.

Gregorczik, Edmund: *See*—
Meyer, Henry L., Wilhem, and Gregorczik. 3,022,584.

Grenier, Francis E., to Ford Motor Co. Automobile air conditioner condenser. 3,022,644, 2–27–62, Cl. 62—243.

Greth, Arthur, and R. Zimmermann, to Chemische Werke Albert. Process for boosting the flow of rosin from conifers by applying a substituted urea. 3,022,604, 2–27–62, Cl. 47—10.

Grieder, Charles K. Galloping hobby horse with unitary directional control. 3,023,025, 2–27–62, Cl. 280—218.

Grieder, Charles K. Galloping hobby horse with unitary directional control. 3,023,026, 2–27–62, Cl. 280—218.

Griffin, Edward L., Jr.: *See*—
Mustakas, Gus C., Griffin, and Kirk. 3,023,107.

Groll, Alvin F. Feed control means. 3,022,812, 2–27–62, Cl. 153—88.

Gronau, Hans, to Victoria Machine Tool Co. Ltd. Apparatus for controlling the movement of a reciprocatory driven element. 3,022,677, 2–27–62, Cl. 74—472.

Grow, Harlow B. Clock. 3,022,626, 2–27–62, Cl. 58—50.

Grummitt, Oliver J., and J. A. Stearns, to The Sherwin-Williams Co. Active acids for metal driers useful in siccative coatings. 3,023,117, 2–27–62, Cl. 106—264.

Gryctko, Carl E.: *See*—
Bodenschatz, August, and Gryctko. 3,023,288.

Guest, Howard R.: *See*—
Stansbury, Harry A., Jr., and Guest. 3,023,243.

Guest, Howard R., J. T. Adams, and B. W. Kiff, to Union Carbide Corp. Epoxides of bicyclic acetals. 3,023,222. 2–27–62, Cl. 260—340.7.

Guido, Frank R.: *See*—
Herrick, George H., Prescott, and Guido. 3,022,739.

Gündel, Wolfgang, to Debydag, Deutsche Hydrierwerke G.m.b.H. Method of producing sulfonic derivatives of N-substituted dithiocarbamic esters. 3,023,215, 2–27–62, Cl. 260—292.4.

Guth, Durward O. Method for killing weeds. 3,023,096, 2–27–62, Cl. 71—2.4.

Guyer, Reynolds, to Waldorf Paper Products Co. Easy opening carton. 3,022,931, 2–27–62, Cl. 229—51.

Haag, Theodore T., to Borroughs Mfg. Co. Storage cabinet. 3,023,068, 2–27–62, Cl. 312—263.

Hacker, Elmer W.: *See*—
Strong, Richard V. D., Hamilton, and Hacker. 3,022,619.

Hackethal Draht- und Kabel Werke AG: *See*—
Lehnert, Guenther. 3,023,300.

Hagan James J.: *See*—
Albondi, Frank B., Hagan, and Easterbrooks. 3,023,143.

Hagen, Gustav: *See*—
Himmelheber, Max, Hagen, and Froede. 3,023,136.

Hager, Robert R., to The Bendix Corp. Pneumatic servomotor unit. 3,023,053, 2–27–62, Cl. 303—7.

Hagler, Duran L., and M. L. Kasbohm, to Union Carbide Corp. Method and apparatus for controlling periodically reversed heat transfer devices. 3,022,635, 2–27–62, Cl. 62—21.

Haigler, Edmund D.: *See*—
Boonshaft, Julius C., and Haigler. 3,022,800.

Hall, Frederick W., and A. Young, to Associated Automation Ltd. Coin collectors for telecommunication services. 3,023,275, 2–27–62, Cl. 179—6.5.

Hall, J. & E., Ltd.: *See*—
Bailey, William J. 3,022,866.

Halliburton Co.: *See*—
Davis, Frederick L. 3,022,875.

Hamilton Carl C., and T. B. Hurst, to The Babcock & Wilcox Co. Steam generator. 3,022,774, 2–27–62, Cl. 122—478.

Hamilton, William H.: *See*—
Strong, Richard V. D., Hamilton, and Hacker. 3,022,619.

Hampton, Robert K.: *See*—
Davenport, William G., Hampton, and Katzen. 3,022,021.

Hampton, William C., to American Instrument Co., Inc. Penetrometer for porosimeters. 3,022,657, 2–27–62, Cl. 73—38.

Lansel, Paul G., to Servo Corp. of America. Monitor for doppler beacon system. 3,023,410, 2–27–62, Cl. 343—106.

Hansen, Kai H., R. Schilling, and J. McRoberts, to General Motors Corp. Motor vehicle construction. 3,022,847, 2–27–62, Cl. 180—64.

Hansen, Paul E. Underhood tray for auto mechanics. 3,023,063, 2–27–62, Cl. 311—21.

Hansen, Robert B., to Radio Corp. of America. Chroma converter. 3,023,271, 2–27–62, Cl. 178—5.4.

Hanson-Van Winkle-Munning Co.: *See*—
Harper, Willard J., Hauck, Moll, and Dutcher. 3,022,881.

Hanslip, Richard E., to Mather Spring Co. Torsion spring unit. 3,022,992, 2–27–62, Cl. 267—57.

Hardenbergh, Raymond H.: *See*—
Kendall, Jackson W., Jr., Perry, and Hardenbergh. 3,023,341.

Harkness, Andrew W. Mechanism for suspending a flush valve from the trip lever. 3,022,517, 2–27–62, Cl. 4—57.

Harms, John D., to American Air Filter Co., Inc. Filter medium. 3,022,861, 2–27–62, Cl. 183—71.

Harper, Willard J., P. A. Hauck, M. J. Moll, and D. G. Dutcher to Hanson-Van Winkle-Munning Co. Automatic conversion immersing machine. 3,022,881, 2–27–62, Cl. 198—19.

Harrison, John W.: *See*—
Dreyfus, Robert L., Harrison, and Lowry. 3,022,614.

Hart, Harry H., to John Inglis Co. Ltd. Device for draping Fourdrinier wire. 3,022,820, 2–27–62, Cl. 162—273.

Harter, Walter E., to Harter's Hobby Products, Inc. Model airplane variable-size pan. 3,022,606, 2–27–62, Cl. 46—76.

Harter's Hobby Products, Inc.: *See*—
Harter, Walter E. 3,022,606.

Hartlapp, Gerhard: *See*—
Rodis, Franz, Hartlapp, and Beltz. 3,023,083.

Hartshorn, Cyril. Apparatus for measuring and classifying women's stockings. 3,022,892, 2–27–62, Cl. 209—122.

Hartwig, Frederick J., to The Babcock & Wilcox Co. Method of forming a mineral wool pad. 3,023,141, 2–27–62, Cl. 162—152.

Hasbrook, Arthur F., to O. S. Petty. Sonic impulse generators for use in geophysical exploration. 3,022,851, 2–27–62, Cl. 181—5.

Haseman, Joseph F., to International Minerals & Chemical Corp. Beneficiation of ores. 3,022,956, 2–27–62, Cl. 241—24.

Hasley, Howard A., to Allis-Chalmers Mfg. Co. Sealing mechanism for oscillatable separators. 3,022,893, 2–27–62, Cl. 209—405.

Hasty, Robert R. Folding or knock-down golf cart. 3,023,020, 2-27-62, Cl. 280—36.

Hata, Toju, R. Sugawara, and A. Matsumae. Protomycin and its production. 3,023,145, 2-27-62, Cl. 167—65.

Hauck, Paul A.: *See*—
Harper, Willard J., Hauck, Moll, and Butcher.

Hawthorne, John O., and M. H. Wilt, to United States Steel Corp. Polyvinyl-alcohol resin resistant to water and method of making it. 3,023,199, 2-27-62, Cl. 260—91.3.

Hawtin, Selwyn G.: *See*—
Larman, William T., Hawtin, and Downing.

Hayashi, Takeo: *See*—
Sawamura, Toshio, and Hayashi.

Hayden, Noel E. Swivel chair for bath tubs. 3,022,518, 2-27-62, Cl. 4—185.

Hayes, Frank A.: *See*—
Crockford, Jack A., Hayes, Jenkins, and Feurt.

Hayter, Charles E.: *See*—
Bourne, William G., and Hayter.

Hayter, Mary E.: *See*—
Hayter, Richard B.

Hayter, Richard B., 29⅛% to R. Barnum, 8⅓% to W. J. Dayton, 8⅓% to E. M. Salone, 8⅓% to B. G. Salone, and 8⅓% to M. E. Hayter. Toy game gun and table including ball control. 3,023,003, 2-27-62, Cl. 273—119.

Hebeler, Henry K., to Boeing Airplane Co. Apparatus for determining structural strain characteristics. 3,022,662, 2-27-62, Cl. 73—93.

Hebenstreit, Karl E. Power carpet pile conditioner. 3,022,533, 2-27-62, Cl. 15—354.

Heidt, William A., and D. C. Roller, to International Business Machines Corp. Attachment for typewriter ribbon. 3,022,879, 2-27-62, Cl. 197—172.

Heiser, Bennett J. Protective hood shield for vehicles. 3,022,848, 2-27-62, Cl. 180—69.

Heller, Franz, to American Type Founders Co, Inc. Printing plates and methods and apparatus for forming them. 3,022,728, 2-27-62, Cl. 101—415.1.

Hendrickson, Melvin C.: *See*—
Ellers, Carl G., Hendrickson, and Herrmann.

Henkel & Cie. G.m.b.H.: *See*—
Blaser, Bruno, Stein, and Schirp.
Bornemann, Dieter, Dohr, Renner, and Ziegler.
Schutt, Hartwig.
Schutt, Hartwig, and Stein.
Stein, Werner, Schirp, and Schütt.

Henningsen, Etiar A., and E. J. Johnston, to International Harvester Co. Tooth bar mounting for parallel rakes. 3,023,039, 2-27-62, Cl. 287—119.

Henry, Mort: *See*—
Efrain, Rudolph H., Applebaum, and Henry.

Herrick, George H., R. H. Prescott, and F. R. Guido, to Fairbanks, Morse & Co. Motor and pump apparatus. 3,022,739, 2-27-62, Cl. 103—87.

Herrmann, Richard C.: *See*—
Ellers, Carl G., Hendrickson, and Herrmann.

Herschler, Robert J., to Crown Zellerbach Corp. Process for modifying nylon containing fabric with a solution of anhydrous zinc chloride in a lower dialkyl sulfide and products produced thereby. 3,023,074, 2-27-62, Cl. 8—130.1.

Hersh, Solomon P., and C. Y. Meyers, to Union Carbide Corp. Crease proofing of cellulosic textile materials. 3,023,129, 2-27-62, Cl. 117—139.4.

Herzfeld, Richard P. Sound system for outdoor theaters. 3,023,308, 2-27-62, Cl. 250—6.

Herzog, Gerald B., to Radio Corp. of America. Information handling device. 3,023,319, 2-27-62, Cl. 307—88.

Hess, Christian H., to Deere & Co. Tractor draft load control system. 3,022,830, 2-27-62, Cl. 172—7.

Hess, Christian H., to Deere & Co. Tractor draft load control system. 3,022,831, 2-27-62, Cl. 172—7.

Hess, James B. Exercising device and toy. 3,023,000, 2-27-62, Cl. 272—74.

Hess, Paul S.: *See*—
Goldsmith, Robert, and Hess.

Hexacon Electric Co.: *See*—
Johnson, Arthur L.

Heyden, Rudi: *See*—
Plapper, Jürgen, Heyden, and Böhme.

Hierholzer, Frank J., Jr., and B. Christensen, to Westinghouse Electric Corp. Current control apparatus for a load device. 3,023,357, 2-27-62, Cl. 323—66.

Hiestand, Armin, to Ciba Ltd. Hardenable water dispersible aminoplast compositions. 3,023,176, 2-27-62, Cl. 260—21.

Hill, James S. Adjustable stop mechanism for end gates. 3,023,042, 2-27-62, Cl. 292—276.

Hill, Robert M., to Sylvania Electric Products Inc. Microwave switch. 3,023,380, 2-27-62, Cl. 333—13.

Hillegeart, Carrol W. Anchor. 3,022,762, 2-27-62, Cl. 114—208.

Hilliard, James M., to Cathedral Kneeler Co. Kneeler for a church pew. 3,023,049, 2-27-62, Cl. 297—426.

Hillman, Murray J., to Hycon Mfg. Co. Voltage and current regulator. 3,023,354, 2-27-62, Cl. 322—25.

Himmelheber, Max, G. Hagen, and O. Froede. Chipwood articles of high compressive strength and processes for producing the same. 3,023,136, 2-27-62, Cl. 154—45.9.

Hines Flask Co., The: *See*—
Hines, Russell J.

Hines, Leonard R., to American Cyanamid Co. Method of treating fresh red meat for stabilization of color. 3,023,109, 2-27-62, Cl. 99—107.

Hines, Russell J., to The Hines Flask Co. Flask for making sand molds for castings. 3,022,553, 2-27-62, Cl. 22—110.

Hirsh, Donald H.: *See*—
Montagna, Amelio E., and Hirsh.

Hochman, Leonard. Table cover for holding playing cards. 3,023,005, 2-27-62, Cl. 273—136.

Hodges, James W., to Sun Oil Co. Packer assembly for multiple completion wells. 3,022,828, 2-27-62, Cl. 166—191.

Hodges, James W., to Sun Oil Co. Well assembly for reducing liquid level in well tubing. 3,022,829, 2-27-62, Cl. 166—224.

Hoffman, Henry T., Jr., to American Can Co. Dispensing container for viscous products. 3,022,923, 2-27-62, Cl. 222—387.

Hoffmann, Jack H., and W. P. Hogstad, to Allis-Chalmers Mfg. Co. Collector lead arrangement. 3,023,331, 2-27-62, Cl. 310—232.

Hoglund, Nils. Grinding wheel dressing apparatus. 3,022,780, 2-27-62, Cl. 125—11.

Hogstad, William P.: *See*—
Hoffmann, Jack H., and Hogstad.

Hohos, Edward J., and G. L. Alston, to Mine Safety Appliances Co. Dust collecting rotary rock drill. 3,022,849, 2-27-62, Cl. 175—324.

Hoji, Kazuhio: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara.

Holan Corp.: *See*—
Eckels, George H., and Troche.

Hood, Edwin E., and H. K. Gleasman, to The Bendix Corp. Semi-automatic two-speed hub and coaster brake. 3,022,682, 2-27-62, Cl. 74—750.

Hook, Edwin O., and D. P. Tate, to The Standard Oil Co. Motor fuel. 3,023,092, 2-27-62, Cl. 44—69.

Hooker Chemical Corp.: *See*—
Robota, Stephen.

Hoover Ball & Bearing Co.: *See*—
Neely, William H.
Sandor, William C.

Horitz, Gerald J.: *See*—
Morton, Charles R., Horitz, and Nicholas.

Horizons Inc.: *See*—
Wainer, Eugene, and Cunningham.

Hornung, Stephen A., to Otis Elevator Co. Elevator control system. 3,022,865, 2-27-62, Cl. 187—29.

Horowitz, Irving, to Blonder-Tongue Electronics. Variable-gain transistor circuit. 3,023,369, 2-27-62, Cl. 330—24.

Horton, George B., and T. E. Lohr, to General Motors Corp. Seat adjuster. 3,022,975, 2-27-62, Cl. 248—420.

Hoshino, Yasushi, M. Nanikawa, and S. Tochihara. Means for protecting a magnetic sound record sheet from stray magnetic field. 3,023,010, 2-27-62, Cl. 274—41.4.

Hotchkiss, Robert J., Jr. Evener hinge assembly. 3,023,028, 2-27-62, Cl. 280—411.

Hough, Frank G., Co., The: *See*—
Granryd, Thorvald G.

Hough, Fred O., and D. R. Scott, to General Motors Corp. Apparatus for electroplating. 3,023,154, 2-27-62, Cl. 204—242.

Huang, Denis K.: *See*—
Othmer, Donald F., and Huang.

Hubacker, Earl F., to Whirlpool Corp. Home appliance. 3,022,640, 2-27-62, Cl. 62—156.

Hubbell, Harvey, to Harvey Hubbell Inc. Multi-wire connector and plug with selective central key means for different voltages. 3,023,394, 2-27-62, Cl. 339—186.

Hubbell, Harvey, and E. R. Carlson, to Harvey Hubbell Inc. Electric power outlet. 3,023,395, 2-27-62, Cl. 339—191.

Hubbell, Harvey, Inc.: *See*—
Hubbell, Harvey.
Hubbell, Harvey, and Carlson.

Huber, Earl B. Process for the manufacture of fruit and vegetable juice concentrate. 3,023,111, 2-27-62, Cl. 99—205.

Huet, André, to Combustion Engineering, Inc. Machine for the manufacture of tube necks on headers. 3,022,811, 2-27-62, Cl. 153—2.

Hughes, George C., to Reynolds Gas Regulator Co. Fluid pressure distributing system. 3,023,093, 2-27-62, Cl. 48—191.

Hughes, Ray C., and R. C. Sweet, to Consolidated Electronics Industries Corp. Electrical resistor unit. 3,023,389, 2-27-62, Cl. 338—237.

Hultgren, William H.: *See*—
Scavuzzo, William J., and Hultgren.

Hultquist, John V. Combination seat attachment and life preserver. 3,022,524, 2-27-62, Cl. 9—312.

Humboldt Co., The: *See*—
McIntyre, Maurice J.

Hura, Michael, to Picker X-Ray Corp., Waite Mfg. Div., Inc. X-ray apparatus. 3,023,314, 2-27-62, Cl. 252—105.

Hurst, Thomas B.: *See*—
Hamilton, Carl C., and Hurst.

Hutchinson, William M., to Phillips Petroleum Co. Preparation of polymeric peroxides from conjugated diolefins. 3,023,249, 2-27-62, Cl. 260—610.

Hycon Mfg. Co.: *See*—
Hillman, Murray J.
Mundt, Edward.

Hyster Co.: *See*—
Olson, John E., and Downey.

I-T-E Circuit Breaker Co.: *See*—
Bodenschatz, August, and Gryctko.

Ichikawa, Yoshio: *See*—
Moratis, Christy J., Ichikawa, and Pigan.

Ideco Inc.: *See*—
Macy, James C.

Imperial Chemical Industries Ltd.: *See*—
Price, Frederick C.

Ingersoll Milling Machine Co., The: *See*—
Van Roojen, Jan.

Inglis, John, Co. Ltd.: *See*—
Hart, Harry H.

Inland Container Corp.: *See*—
Mueller, Ernest R., and Johnston.

Innes, William B., M. Michael, and N. Chomitz, to American Cyanamid Co. Preparation of a microspheroidal silica-alumina fluid cracking catalyst. 3,023,172, 2-27-62, Cl. 252—455.

Instant-Fold Products, Inc.: *See*—
Sliver, Julian.

International Business Machines Corp.: *See*—
Anderson, John L.
Booth, Richard R.
Brennemann, Andrew E.
Carroll, William N., and D'Antonio.
Dickerson, Jack A.
Dickinson, Arthur H.
Dunne, Thomas G.
Heidt, William A., and Roller.
Kahn, Allan A., and Wolff.
Kuehler, Jack D.
Mackay, James B.
Seibel, Robert, and Rochester.

International Harvester Co.: *See*—
Bechman, William O.
Donner, Verne P.
Henningsen, Etlar A., and Johnston.
Jennings, Marvin D.
Marindin, Robert.
Simon, John P.

International Minerals & Chemical Corp.: *See*—
Barlow, Thomas E.
Becker, Richard D.
Fike, Harold L.
Graes, Howard B., Jr., and Bell.
Haseman, Joseph F.
Le Baron, Ira M., and Samsel.
Snow, Robert E.

International Paper Co.: *See*—
Rolfe, Charles A.

Ippen, Arthur T.: *See*—
Kinneman, William P., and Ippen.

Isabeau, John, to Zenith Radio Corp. Transistor switching apparatus with leakage resistance stabilizing means. 3,023,321, 2-27-62, Cl. 307—88.5.

J. O. C. Engineers Ltd.: *See*—
Crosskey, Albert A., and Crabtree.

Jackson, Corwill, deceased, by The Detroit Bank & Trust Co. and M. N. Jackson, executors, to Jackson Vibrators, Inc. Tie tamping or ballasting machine. 3,022,744, 2-27-62, Cl. 104—12.

Jackson, Margie N.: *See*—
Jackson, Corwill.

Jackson Vibrators, Inc.: *See*—
Jackson, Corwill.

Jacksonville Blow Pipe Co.: *See*—
Montgomery, William T. S.

Jagiel, Zigmund. Tube clamp. 3,022,561, 2-27-62, Cl. 24—284.

James, Dennis B., and K. P. Kretsch, to Bell Telephone Laboratories, Inc. Four wire line concentrator circuit. 3,023,278, 2-27-62, Cl. 179—18.

Jamieson, John W.: *See*—
Malavazos, Arthur J., and Jamieson.

Jancy Engineering Co.: *See*—
Rowley, Benjamin W.

Jankowski, Conrad J.: *See*—
Martin, James G., Ernst, Jankowski, and Schetelich.

Jankowski, Conrad J., and W. F. Fischer, to Esso Research and Engineering Co. Solid rubbery substances having improved tack. 3,023,179, 2-27-62, Cl. 260—25.

Järnhäll, Bertil, to Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. Compressible container for liquids. 3,022,886, 2-27-62, Cl. 206—56.

Jastram, Edward P., Jr.: *See*—
Broadley, William A., and Jastram.

Jefferson Chemical Co., Inc.: *See*—
Lichtenwalter, Myrl.

Jenkins, James H.: *See*—
Crockford, Jack A., Hayes, Jenkins, and Feurt.

Jennings, Jo E., to Jennings Radio Mfg. Corp. Relay. 3,023,290, 2-27-62, Cl. 200—144.

Jennings, Marvin D., to International Harvester Co. Spring trip for plows. 3,022,835, 2-27-62, Cl. 172—269.

Jennings Radio Mfg. Corp.: *See*—
Jennings, Jo E.

Jenny, William P., and T. A. Rabson; said Rabson assor. to said Jenny. Method and apparatus for making high resolution function earth's magnetic field maps. 3,023,359, 2-27-62, Cl. 324—4.

Jensen, Orabelle H. Stool construction. 3,023,050, 2-27-62, Cl. 297—462.

Jersey Production Research Co.: *See*—
Binkley, George W., and Robinson.
Caldwell, Joseph A., and Morgan.
Getzen, Forrest W.
McStravick, Peter R., and Loy.
Parks, Mercer H.
Robinson, Leon H., Jr.
Winsauer, Weldon O., and Edwards.

Jewett, Lawrence E.: *See*—
Gardiner, Paul C., Jewett, and Broomell.

Jirou, Marcel, to Compagnie Francaise des Matieres Colorantes. Process for the coloration of nylon type 11 fibres. 3,023,071, 2-27-62, Cl. 8—55.

Johannesson, Nils O., to Telefonaktiebolaget L M Ericsson. Apparatus for attenuation correction of a coaxial cable used for carrier frequency telephony. 3,022,952, 2-27-62, Cl. 235—193.

John, Paul C., and R. R. Pettit, to Minnesota Mining and Mfg. Co. Adherent sealer film. 3,022,870, 2-27-62, Cl. 189—36.

Johnson, Arthur L., to Hexacon Electric Co. Electric soldering iron of the instant heat type. 3,023,295, 2-27-62, Cl. 219—26.

Johnson, Gordon, Co.: *See*—
Zebarth, Ralph S.

Johnson & Johnson: *See*—
Schwartz, Morris A., and Schaefer.

Johnson, Robert: *See*—
Chapman, Richard D., Campbell, and Johnson.

Johnson, S. C., & Son, Inc.: *See*—
Greenlee, Sylvan O., and Pearce.

Johnson, Wesley R., and D. O. Larson, to Sperry Rand Corp. Transducer mounting. 3,023,279, 2-27-62, Cl. 179—100.2.

Johnston, Edward J.: *See*—
Henningsen, Etlar A., and Johnston.

Johnston, Elmer F. Router dust guard. 3,022,806, 2-27-62, Cl. 144—252.

Johnston, Frank C., and P. Krauss, to General Electric Co. Couplings for sheet wireway ducts. 3,023,032, 2-27-62, Cl. 285—156.

Johnston, Herbert N.: *See*—
Mueller, Ernest R., and Johnston.

Jones, Edward M., to The Baldwin Piano Co. Optical encoder. 3,023,406, 2-27-62, Cl. 340—347.

Jones, John H. Optical switching. 3,023,318, 2-27-62, Cl. 250—237.

Jones, John P., to Burroughs Corp. Magnetic core article. 3,023,387, 2-27-62, Cl. 336—198.

Jones, Sam A. Vacuum operated normally closed valve. 3,022,977, 2-27-62, Cl. 251—61.

Jorgensen Bros.: *See*—
Sawamura, Toshio, and Hayashi.

Joy Mfg. Co.: *See*—
Drain, James A., Read, and Gordon.

Junghans, Helmut, O. Braitsch, and H. Schlenker, to Gebr. Junghans A.G. Table alarm clock. 3,022,627, 2-27-62, Cl. 58—55.

Junghans, Helmut, and R. Weber. Rotary shell fuze. 3,022,733, 2-27-62, Cl. 102—71.

Jupa, Julius A., to Minnesota Mining and Mfg. Co. Trifluorochloroethylene polymer-epoxy resin mixture. 3,023,189, 2-27-62, Cl. 260—45.5.

K-P-P Electric Co.: *See*—
Pahl, John G.

Kahn, Allan A., and H. P. Wolff, to International Business Machines Corp. Multi-purpose logical array using programmed signal cancellation. 3,023,320, 2-27-62, Cl. 307—88.

Kaiser Industries Corp.: *See*—
Aiken, William R.

Kaiser, Walter L. Clothing protector. 3,022,514, 2-27-62, Cl. 2—60.

Kamphaus, Paul L., and A. W. Latham, to Westinghouse Electric Corp. Dynamoelectric machine. 3,023,329, 2-27-62, Cl. 310—91.

Kane, Richard E.: *See*—
Soles, Otto H., and Kane.

Kargl, Gilard, to United States of America, Army. Portable photogrammetric rectifier. 3,022,706, 2-27-62, Cl. 88—24.

Karlen, Harvey R., to Cory Corp. Liquid filter. 3,022,894, 2-27-62, Cl. 210—452.

Karwat, Ernst, to Gesellschaft fur Linde's Eismaschinen Aktiengesellschaft. Removal of nitric oxide from gas mixtures containing the same. 3,023,076, 2-27-62, Cl. 23—2.

Kasahara, Akira: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara.

Kasbohm, Martin L.: *See*—
Hagler, Duran L., and Kasbohm.

Katzen, Alan M.: *See*—
Davenport, William G., Hampton, and Katzen.

Kaufman, Harold H., Jr.: *See*—
Emmerling, Anson A., Kaufman, Osborne, and Steenrod.

Kawabata, Nobue. Garden waterfall device. 3,022,603, 2-27-62, Cl. 46—41.

Kaybar, Inc.: *See*—
Cryderman, Wilfred G., and Marshall.

Keeler, Eugene R., to General Precision, Inc. Pulse dividing circuit. 3,023,322, 2-27-62, Cl. 307—88.5.

Kehm, Clarence H.: *See*—
Dillon, William C., and Kehm.

Kelley, Hugh, to The J. B. Ehrsam & Sons Mfg. Co. Hub mounting means. 3,023,035, 2-27-62, Cl. 287—52.

Kelver, William L.: *See*—
Di Girolamo, Joseph, and Kelver.

Kenann, John G.: *See*—
Kowalski, Siwomir, and Kenann.

Kendall, Jackson W., Jr., L. G. Perry, and R. H. Hardenbergh. Electron tube. 3,023,341, 2-27-62, Cl. 313—250.

Kennedy, D. S., & Co.: *See*—
Rowland, Howard J.

Kennedy, Harry E., and G. E. Claussen, to Union Carbide Corp. Electric arc welding. 3,023,302, 2-27-62, Cl. 219—74.

Kent, Earle L., and D. A. LeFevre, to C. G. Conn Ltd. Electroformed mouthpipe and mouthpiece receiver. 3,022,697, 2-27-62, Cl. 84—398.

Keogh, Raymond J.: *See*—
Burr, Robert P., and Keogh.

Kester, Fred J., to Densco, Inc. Illuminating attachment for dental handpieces. 3,023,306, 2-27-62, Cl. 240—2.

Kickuth, Reinhold: *See*—
Rochus, Walter, and Kickuth.

Kidder, Marshall J., to Remington Arms Co., Inc. Shot shell wad. 3,022,734, 2-27-62, Cl. 102—95.

Kiesow, Lothar: *See*—
Fleckenstein, Hans, Sieber, and Kiesow.

Kiff, Ben W.: *See*—
Guest, Howard R., Adams, and Kiff. 3,023,222.
Kimberlin, Charles N. Jr.: *See*—
Ellert, Henry G., and Kimberlin. 3,023,157.
King, Edward L.: *See*—
Fuelnarl, Angelo M., and King. 3,023,163.
King, Roderick V.: *See*—
Patton, Franklin S., and King. 3,022,922.
Kingsley, Jerrold L. Display rack with locking feature. 3,022,895, 2-27-62, Cl. 211—4.
Kinley, John C.: *See*—
Kinley, Myron M. 3,022,558.
Kinley, Myron M., to J. C. Kinley. Line latch. 3,022,558, 2-27-62, Cl. 24—134.
Kinneman, William P., and A. T. Ippen, to Raymond International, Inc. Methods for driving pile shells at submerged locations. 3,022,634, 2-27-62, Cl. 61—54.
Kinsman Mfg. Co., Inc.: *See*—
Dorf, Richard H. 3,022,696.
Kirchner, Francois F., to Schlumberger Well Surveying Corp. Control systems. 3,023,358, 2-27-62, Cl. 324—.5.
Kirk, David N.: *See*—
Burn, Derek, Kirk, Petrow, and Weston. 3,023,206.
Kirk, Larry D.: *See*—
Mustakas, Gus C., Griffin, and Kirk. 3,023,107.
Kirk, Robert B., to Borg-Warner Corp. Marine bearing. 3,023,059, 2-27-62, Cl. 308—238.
Kirshenbaum, Isidor: *See*—
Bartlett, Jeffrey H., Kirshenbaum, Banes, and Muessig. 3,023,185.
Kisling, James W., III, to Schlumberger Well Surveying Corp. Earth formation fluid sampler. 3,022,826, 2-27-62, Cl. 166—100.
Klatchko, George A., to Curtiss-Wright Corp. Nondestructive testing apparatus. 3,022,660, 2-27-62, Cl. 73—67.8.
Kleinman, Jacob L. Washing machine with ironing board. 3,022,589, 2-27-62, Cl. 38—104.
Klockgether, Helfried: *See*—
Ossenbrunner, Schnell, Klockgether, Geiger, and Freier. 3,023,101.
Klothen, Irving: *See*—
Upham, Sidney, and Klothen. 3,023,105.
Knapsack-Griesheim Aktiengesellschaft: *See*—
Rodis, Franz, Hartlapp, and Reitz. 3,023,083.
Knodel, Robert R. Accessory holding device. 3,022,974, 2-27-62, Cl. 248—354.
Knox Mfg. Co.: *See*—
Petrick, Edward J. and R. E. 3,022,816.
Knudsen, Mildred P.: *See*—
Bartz, Quentin R., Ehrlich, Knudsen, and Smith. 3,023,204.
Kocay, Witold R.: *See*—
Cresswell, Arthur, Kocay, and Updegraff. 3,023,134.
Koch, Alan J.: *See*—
Bailiff, Ernest A., and Koch. 3,022,645.
Koch, Robert B., to The Polymer Corp. Tube connector having elastic deformation means. 3,023,033, 2-27-62, Cl. 285—187.
Kojalowicz, Anthony M., to North American Aviation, Inc. Transistor pulse amplifier with means to eliminate effects of minority carrier storage. 3,023,328, 2-27-62, Cl. 307—88.5.
Kokalas, Edward: *See*—
Swanson, George J., and Kokalas. 3,023,396.
Kollsman Instrument Corp.: *See*—
Friedman, Robert. 3,023,266.
Kolner, Samuel J., to Phillips Petroleum Co. Apparatus for crystallization. 3,023,090, 2-27-62, Cl. 23—273.
Kompelien, Arlon D.: *See*—
Severson, Asbjorn M., and Kompelien. 3,023,294.
Kopec, Stanley J. Broach assembly. 3,022,710, 2-27-62, Cl. 29—95.1.
Koppers Co., Inc.: *See*—
Rodman, Hugh, Jr. 3,023,175.
Schappert, Hans M. 3,023,202.
Kotowski, Joseph D.: *See*—
Preiser, Ralph H., McNally, and Kotowski. 3,023,268.
Kottsieper, Edward, to Shur-Lok Corp. Nut and bolt lock with teeth to notch the bolt thread. 3,022,809, 2-27-62, Cl. 151—29.
Kovacs, Joseph. Gameboard and game piece. 3,023,006, 2-27-62, Cl. 273—136.
Kowalski, Alexander, to Pennsalt Chemicals Corp. Novel phosphorus compounds and process. 3,023,194, 2-27-62, Cl. 260—79.3.
Kowalski, Slawomir, and J. G. Kenann, to Marotta Valve Corp. High pressure valve seat. 3,022,978, 2-27-62, Cl. 251—362.
Kraus, Gerard, and J. Dugone, to Phillips Petroleum Co. Alcoholic carbon black slurries and method of preparing rubber-carbon black masterbatches therewith. 3,023,188, 2-27-62, Cl. 260—41.5.
Krauss, Paul: *See*—
Johnston, Frank C., and Krauss. 3,023,032.
Kreisner, Wilhain I. Safety-match box. 3,022,884, 2-27-62, Cl. 206—36.
Kretsch, Kenneth P.: *See*—
James, Dennis B., and Kretsch. 3,023,278.
Krinsky, Albert: *See*—
Wexler, Arnold, Krinsky, and Garfinkel. 3,022,667.
Krute, Everett A. Pump systems. 3,022,738, 2-27-62, Cl. 103—49.
Kuchenbecker, Morris W., to American Can Co. Container. 3,022,930, 2-27-62, Cl. 229—17.
Kuehler, Jack D., to International Business Machines Corp. Information recording and display apparatus. 3,023,343, 2-27-62, Cl. 315—18.
Kullfay, Stanley M., to Monsanto Chemical Co. Method for the preparation of selenides and tellurides. 3,023,079, 2-27-62, Cl. 23—50.
Kullfay, Stanley M., to Monsanto Chemical Co. Method for the preparation of selenides and tellurides. 3,023,080, 2-27-62, Cl. 23—50.
Kullfay, Stanley M., to Monsanto Chemical Co. Method for the preparation of selenides and tellurides. 3,023,081, 2-27-62, Cl. 23—50.
Kull, Leo: *See*—
Freeman, John D., and Kull. 3,023,327.
Kuntz, Howard J.: *See*—
Vincent, John N., and Kuntz. 3,022,913.
Kurashiki Rayon Co., Ltd.: *See*—
Tanabe, Kenichi, and Ohno. 3,023,182.
Kurshan, Jerome, to Radio Corp. of America. Method of etching semi-conductor bodies. 3,023,153, 2-27-62, Cl. 204—143.
Kwisnek, Charles. Applicator for placing a harness on a live minnow. 3,022,572, 2-27-62, Cl. 29—225.
Ladish Co.: *See*—
Polanski, Frank C. 3,022,692.
Lakin, Ira W.: *See*—
McFeaters, Harry L., and Lakin. 3,022,990.
Lamaudiere, Paul F. J. Plug sockets. 3,023,392, 2-27-62, Cl. 339—33.
Lamb Grays Harbor Co., Inc.: *See*—
Mead, Gile A. 3,022,999.
Lambe, Donald M. Deflation-proof tires. 3,022,810, 2-27-62, Cl. 152—157.
Lampret, Andrej. Curtain mountings. 3,022,819, 2-27-62, Cl. 160—345.
Lamson & Sessions Co., The: *See*—
Davis, Frank B., and Barkocy. 3,022,526.
Landry, Gaetan G. Ski fitting. 3,023,017, 2-27-62, Cl. 280—11.35.
Lang, Karl F., W. Metzendorf, J. Turowski, and H. Gick, to Rutgerswerke-Aktiengesellschaft. Process of treating coal tar impregnated wood with a solution of a compound of boron trifluoride. 3,023,125, 2-27-62, Cl. 117—62.
Lang, Karl F., W. Metzendorf, J. Turowski, and H. Gick, to Rutgerswerke-Aktiengesellschaft. Process of desulfurizing crystallizable aromatic hydrocarbons. 3,023,255, 2-27-62, Cl. 260—674.
Lang, Robert A. B. Sink clamping device. 3,022,519, 2-27-62, Cl. 4—187.
Lappala, Risto P.: *See*—
Yaeger, Luther L., and Lappala. 3,023,099.
Larman, William T., S. G. Hawtin, and J. Downing, to British Celanese Ltd. Fibrous material. 3,023,075, 2-27-62, Cl. 18—54.
Larson, Alvin C. Mobile type cleaning unit. 3,022,791, 2-27-62, Cl. 134—70.
Larson, Dale O.: *See*—
Johnson, Wesley R., and Larson. 3,023,279.
Latham, Albert W.: *See*—
Kamphaus, Paul L., and Latham. 3,023,329.
Lau Blower Co., The: *See*—
Abel, Edmund W. 3,023,297.
Lautzenhiser, Argyle G., to General Motors Corp. Acceleration responsive device with controlled time delay. 3,023,284, 2-27-62, Cl. 200—61.53.
Lawley, Charles F. Automatic bobber device. 3,022,599, 2-27-62, Cl. 43—43.11.
Lawson, Gerald W., and A. J. Arrigo, to United States of America, Air Force. Exhaust gas thermometer. 3,022,668, 2-27-62, Cl. 73—342.
Lawton, Emil A., C. M. Allen, and S. Cosgrove, to Battelle Memorial Institute. Method of lubrication comprising the use of metal phthalocyanine. 3,023,164, 2-27-62, Cl. 252—49.7.
Lazar, John M. Rotary shaft sealing means. 3,023,013, 2-27-62, Cl. 277—41.
Le Baron, Ira M., and G. L. Samsel, to International Minerals & Chemical Corp. Electrostatic separation of normally liquid materials. 3,022,889, 2-27-62, Cl. 209—2.
Lee, Robert A., and E. W. Brinkman, to Davenport Machine Tool Co., Inc. Wire case carrier for a screw machine. 3,022,691, 2-27-62, Cl. 82—38.
Leete, Harley M.: *See*—
Ribbens, Jacob J., Leete, and Foote. 3,022,595.
Le Fevre, David A.: *See*—
Kent, Earle L., and Le Fevre. 3,022,697.
Lehnert, Guenther, to Hackethal Draht-und Kabel Werke AG. Method and apparatus for forming cable sheath. 3,023,300, 2-27-62, Cl. 219—60.
Leland-Gifford Co.: *See*—
Abadjieff, Ivan V. 3,022,609.
Lenk, Wilhelm, to Barmer Maschinenfabrik Aktiengesellschaft. Thread twisting apparatus. 3,022,623, 2-27-62, Cl. 57—58.83.
Leonard, Frederick, to Geigy Chemical Corp. New amino acids and derivatives thereof. 3,023,235, 2-27-62, Cl. 260—519.
Levin, Harry: *See*—
Diamond, William J., Levin, and Wood. 3,023,132.
Levine, Charles J.: *See*—
Colwill, Richard H., and Levine. 3,023,123.
Lewis, Charles T. Safety harness. 3,022,855, 2-27-62, Cl. 182—3.
Lewis Engines, Inc.: *See*—
Thompson, Elvin T. 3,022,846.
Lewis, Harvey M. Reenforced hollow circular plastic objects. 3,022,802, 2-27-62, Cl. 138—125.
Lewis, Wallace J., and G. E. Faulkner, to The Battelle Development Corp. Welding fluxes. 3,023,133, 2-27-62, Cl. 148—26.
Liberman, Arie. Communication system. 3,023,273, 2-27-62, Cl. 179—1.

Licentia Patent-Verwaltungs-G.m.b.H.: *See*—
Fleckenstein, Hans, Sieber, and Klesow. 3,022,969.
Lich, Richard L.: *See*—
Voertman, Kenneth W., and Lich. 3,022,749.
Lich, Richard L., to General Steel Industries, Inc. Rapid transit trucks. 3,022,748, 2-27-62, Cl. 105—192.
Lichtenwalter, Myrl, to Jefferson Chemical Co., Inc. Method for the preparation of piperazine monohydrochloride. 3,023,211, 2-27-62, Cl. 260—268.
Lignes Telegraphiques & Telephoniques: *See*—
Maniere, Maurice A. F. J., and Benoit-Gonin. 3,023,269.
Linden, Samuel, to Bunny Bear Inc. Child's car seat. 3,023,047, 2-27-62, Cl. 297—254.
Lindstrom, Carl A., Jr.: *See*—
Baird, William G., Jr., Lindstrom, Besse, and D'Entremont. 3,022,543.
Linn, Carl B., to Universal Oil Products Co. Process for reducing the surface activity of compounds in aqueous mixtures. 3,023,170, 2-27-62, Cl. 252—321.
Liquefreeze Co., Inc.: *See*—
Morrison, Willard L. 3,022,636.
Morrison, Willard L. 3,022,637.
List, Hans: *See*—
Pachernegg, Siegfried. 3,023,060.
Lo, Elizabeth S., to Minnesota Mining and Mfg. Co. Process of copolymerizing hexafluoropropene with vinylidene fluoride in the presence of silica and the product thereof. 3,023,187, 2-27-62, Cl. 260—41.
Loeb, Henry. Gun holder. 3,022,898, 2-27-62, Cl. 211—64.
Loev, David, to Burroughs Corp. Reversible shift register. 3,023,401, 2-27-62, Cl. 340—174.
Logan, Maurus C., to The Thomas & Betts Co. Cable bundling and supporting strap. 3,022,557, 2-27-62, Cl. 24—17.
Logan, Richard S., to Phillips Petroleum Co. Production of calcium petroleum sulfonates. 3,023,231, 2-27-62, Cl. 260—504.
Lohr, Thomas E.: *See*—
Horton, George B., and Lohr. 3,022,975.
Long, Joseph N., to Vilter Mfg. Corp. Refrigeration compressor control system. 3,022,642, 2-27-62, Cl. 62—196.
Louis, Arnold S., and M. A. Coler. Monolithic electrode-separator structure for electrochemical cells. 3,023,261, 2-27-62, Cl. 136—19.
Louthan, Rector P.: *See*—
Goodhue, Lyle D., Louthan, and Cantrel. 3,023,142.
Lowe, Zackie S.: *See*—
Anderson, Harvey L., Jr., and Lowe. 3,022,910.
Lowrey, Lilliam D. Game apparatus. 3,023,007, 2-27-62, Cl. 273—161.
Lowry, Robert D.: *See*—
Dreyfus, Robert L., Harrison, and Lowry. 3,022,614.
Loy, Samuel E., III: *See*—
McStravick, Peter R., and Loy. 3,022,822.
Lucas, James W. Uniform piano keyboard. 3,022,698, 2-27-62, Cl. 84—423.
Luk-O-Ma Corp.: *See*—
Arvan, John. 3,022,722.
Luvisi, John P., and J. A. Chenicek, to Universal Oil Products Co. Removing metal components from organic liquids. 3,023,161, 2-27-62, Cl. 208—251.
Lwowski, Viktor: *See*—
Goerrig, Dieter, and Lwowski. 3,023,082.
Lynch, Walter D. Bird feeder. 3,022,768, 2-27-62, Cl. 119—52.
Lyon, Donald G., to Barry-Wehmiller Machinery Co. Unloader apparatus for stacked articles or the like. 3,022,905, 2-27-62, Cl. 214—8.5.
Lyon, George A., to Lyon Inc. Method of making shells. 3,022,567, 2-27-62, Cl. 29—1.21.
Lyon, George A., to Lyon Inc. Air circulating wheel structure. 3,022,868, 2-27-62, Cl. 188—204.
Lyon Inc.: *See*—
Lyon, George A. 3,022,567.
Lyon, George A. 3,022,868.
Lyons, Harold D.: *See*—
Nowlin, Gene, and Lyons. 3,023,198.
Maassen, René, ½ to E. A. Talbott. Bathroom fixture. 3,023,067, 2-27-62, Cl. 312—242.
MacDonald, Edward: *See*—
Fricke, Gerald J., and MacDonald. 3,023,021.
MacGregor, to Westinghouse Electric Corp. Synchronous motor control. 3,023,349, 2-27-62, Cl. 318—170.
Mackay, James B., to International Business Machines Corp. Cryotron switching circuit. 3,023,324, 2-27-62, Cl. 307—88.5.
Macy, James C., to Ideco Inc. Fellicle fastener. 3,022,511, 2-27-62, Cl. 1—68.
Mafrica, Leo, to United States of America, Interior. Automatic batch weighing device for filling or unloading. 3,022,842, 2-27-62, Cl. 177—80.
Maggiolo, Allison, and A. L. Tumolo, to W. R. Grace & Co. Process for making tricarboxycyclopentaneacetic acid. 3,023,233, 2-27-62, Cl. 260—514.
Mahan, H. Cramer: *See*—
Briggs, Quentin L. 3,022,966.
Mahn, Herbert, to Jos. Schneider & Co., Optische Werke. Control member for optical devices. 3,022,874, 2-27-62, Cl. 192—4.
Mair, James, to Chicago Bridge & Iron Co. Silencer and heat recovery system. 3,022,985, 2-27-62, Cl. 261—151.
Maisack, Herbert: *See*—
Seefelder, Matthias, and Maisack. 3,023,219.
Malavazos, Arthur J., and J. W. Jamieson, to Friden, Inc. Tens transfer mechanism. 3,022,948, 2-27-62, Cl. 235—138.
Malek, Walter E., ⅓ to R. H. Wendt. Automatic fish feeders. 3,022,767, 2-27-62, Cl. 119—51.11.
Mallinckrodt Chemical Works: *See*—
De La Mater, George B., and Chapman. 3,023,313.
Wallingford, Vernon H. 3,023,232.
Maloney, Bernard, R. G. Altherr, and R. D. Blew, to American Steel Foundries. Liquid cooled disk brake arrangement. 3,022,867, 2-27-62, Cl. 188—264.
Malz, Leo, and A. E. Schwaneke, to Dormeyer Corp. Pump for coffee maker. 3,022,720, 2-27-62, Cl. 99—310.
Maniere, Maurice A. F. J., and R. S. Benoit-Gonin, to Lignes Telegraphiques & Telephoniques. Frequency and phase shift system for the transmission of coded electric signals. 3,023,269, 2-27-62, Cl. 178—2.
Marano, Herbert W., to Wilson Jones Co. Collapsible storage file. 3,023,065, 2-27-62, Cl. 312—111.
Marburg, Edgar, to United States Steel Corp. Apparatus for handling sectional hot tops. 3,022,551, 2-27-62, Cl. 22—21.
Marlindin, Robert, to International Harvester Co. Spring control mechanism for hydraulically controlled implement hitch. 3,022,832, 2-27-62, Cl. 172—10.
Marine Research Co.: *See*—
Pavey, George M., Jr. 3,022,852.
Marriott, Thomas E., deceased, by C. and M. E. Marriott, executrixes, to E. W. T. Marriott. Setting-out-tool. 3,022,579, 2-27-62, Cl. 33—98.
Marks, Ralph: *See*—
Smith, Edwin K., Jr., Alexander, and Marks. 3,022,716.
Marotta Valve Corp.: *See*—
Kowalski, Slawomir, and Kenann. 3,022,978.
Marriott, Catherine: *See*—
Marriott, Thomas E. 3,022,579.
Marriott, Ernest W. T.: *See*—
Marriott, Thomas E. 3,022,579.
Marriott, May E., executrix: *See*—
Marriott, Thomas E. 3,022,579.
Marsh, Carl E. and F. E. Boston, to The Pyramid Rubber Co. Vented nurser. 3,022,914, 2-27-62, Cl. 215—11.
Marshall, Arthur R.: *See*—
Cryderman, Wilfred G., and Marshall. 3,023,124.
Mar-Tav, Inc.: *See*—
Greathouse, Glen A., and Taylor. 3,023,144.
Martin, James G., J. L. Ernst, C. J. Jankowski, and A. A. Schetelich, to Esso Research and Engineering Co. Preventing scorch in butyl rubber compositions. 3,023,195, 2-27-62, Cl. 260—79.5.
Martin, Joseph, to Eclipse Sleep Products, Inc. Border stabilizers. 3,022,521, 2-27-62, Cl. 5—351.
Martin, Wilferd W. Trotline reel. 3,022,601, 2-27-62, Cl. 43—54.5.
Massey, Lester G.: *See*—
Urban, Peter, and Massey. 3,023,088.
Massey, William M., to E. I. du Pont de Nemours and Co. Apparatus for distributing a fluid medium to a plurality of spinning chimneys. 3,022,539, 2-27-62, Cl. 18—8.
Mastrangelo, Sebastian V. R., to E. I. du Pont de Nemours and Co. Process of preparing cyanogen halide. 3,023,077, 2-27-62, Cl. 23—14.
Mather Spring Co.: *See*—
Hanslip, Richard E. 3,022,992.
Mathews, Max V., to Bell Telephone Laboratories, Inc. Reduction of sampling rate in pulse code transmission. 3,023,277, 2-27-62, Cl. 179—15.
Mathlason, Lauritz W., and H. J. Bihrle. Golf ball marking apparatus. 3,022,725, 2-27-62, Cl. 101—40.
Matsumae, Akihiro: *See*—
Hata, Toju, Sugawara, and Matsumae. 3,023,145.
Maxwell, Louis R. Method and means for detecting submarines. 3,023,310, 2-27-62, Cl. 250—43.5.
Maytag Co., The: *See*—
Bergeson, Richard P., and Bergman. 3,022,656.
Doty, Roger F. 3,022,580.
Smith, Thomas R. 3,022,581.
McAdams, Paul F., and B. V. Christensen, to Clark Equipment Co. Removable weight for vehicle. 3,023,024, 2-27-62, Cl. 280—150.
McAlister, Craig L., to McGraw-Edison Co. Protectors for electric circuits. 3,023,289, 2-27-62, Cl. 200—131.
McArdle, Henry J. Suction box cover. 3,022,821, 2-27-62, Cl. 162—374.
McBride, John P., to United States of America, Atomic Energy Commission. Method of combining hydrogen and oxygen. 3,023,085, 2-27-62, Cl. 23—204.
McCall, Donald O., to Basalt Rock Co., Inc. Concrete floating wharf. 3,022,759, 2-27-62, Cl. 114—.5.
McCarthy, F. J., Inc.: *See*—
Greeley, Leo O. 3,022,587.
McCloy, Clark R. Automotive speed control means. 3,022,777, 2-27-62, Cl. 123—118.
McCollum, Sterling A., to United States of America, Navy. Pilot igniter for burners. 3,022,630, 2-27-62, Cl. 60—39.82.
McComb, Clarence L., 50% to H. O. Bender. Worm-locking means for a slidable jaw wrench. 3,022,689, 2-27-62, Cl. 81—165.
McCordic, James R., to Chrysler Corp. Tunnel mounted gearshift. 3,022,678, 2-27-62, Cl. 74—473.
McCormick, Jerry R. D.: *See*—
Miller, Philip A., and McCormick. 3,023,148.
McFeaters, Harry L., and I. W. Lakin, to Pennsylvania Engineering Corp. Furnace system. 3,022,990, 2-27-62, Cl. 266—36.
McGarrell, Paul H.: *See*—
Balish, Frank R., McGarrell, Miller, and Naylor. 3,023,371.
McGrath, William A., to The Frog Switch & Mfg. Co. Railway frog. 3,022,968, 2-27-62, Cl. 246—468.
McGraw-Edison Co.: *See*—
McAlister, Craig L. 3,023,289.

McIntyre, Maurice J., to The Humboldt Co. Skyline yarder with radio controls. 3,022,747, 2-27-62, Cl. 104—178.
McKay, Michael W.: *See*—
Baslm, Donald S., Flower, and McKay. 3,023,407.
McKinley, Raymond E. Milking machine and temperature control in combination therewith. 3,022,766, 2-27-62, Cl. 119—14.14.
McLane, Fletcher E., J. E. Pollack, and J. M. Cochran, to Westinghouse Electric Corp. Motor control apparatus. 3,023,351, 2-27-62, Cl. 318—338.
McLaughlin, Robert L., and J. W. Schick, to Socony Mobil Oil Co., Inc. Manufacture of dypnone. 3,023,245, 2-27-62, Cl. 260—590.
McNally, James J.: *See*—
Preiser, Ralph H., McNally, and Kotowski. 3,023,268.
McNeely, Wilbur C., to The Vendo Co. Can punching and coffee brewing apparatus. 3,022,719, 2-27-62, Cl. 99—289.
McRoberts, John: *See*—
Hansen, Kal H., Schilling, and McRoberts. 3,022,847.
McStravick, Peter R., and S. E. Loy, III, to Jersey Production Research Co. Method of manipulating well tools. 3,022,822, 2-27-62, Cl. 166—4.
Mead, Gile A., to Lamb Grays Harbor Co., Inc. Spring loaded pivoted forward stop for paper stacking mechanism. 3,022,999, 2-27-62, Cl. 271—68.
Meadows, Ernest D., to Meadows Mfg. Co. Ring rail suspension. 3,022,625, 2-27-62, Cl. 57—137.
Meadows Mfg. Co.: *See*—
Meadows, Ernest D. 3,022,625.
Mefina S.A.: *See*—
Fresard, Marcel. 3,022,756.
Melamed, Sidney: *See*—
Fordyce, David B., Glavis, and Melamed. 3,023,162.
Mercury Engineering Corp.: *See*—
Zernov, Peter. 3,022,727.
Metal & Thermit Corp.: *See*—
Myers, Curtis B., and Coffeen. 3,022,929.
Metzendorf, Walter: *See*—
Lang, Karl F., and Metzendorf. 3,023,255.
Lang, Karl F., Metzendorf, Turowski, and Gick. 3,023,125.
Lang, Karl F., Metzendorf, Turowski, and Gick. 3,023,255.
Meyer, Ferdinand, and K. Demmler, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Dehydrohalogenation of polyhalogenhydrin ethers. 3,023,224, 2-27-62, Cl. 260—348.6.
Meyer, Henry L., F. R. Wilhelm, and E. Gregorczik, to The Cleveland Trencher Co. Crumbing mechanism for excavating machines. 3,022,584, 2-27-62, Cl. 37—80.
Meyers, Cal Y.: *See*—
Hersh, Solomon P., and Meyers. 3,023,129.
Meyers, Cal Y., to Union Carbide Corp. Process for producing aqueous trimethylolphenol solutions. 3,023,251, 2-27-62, Cl. 260—621.
Michael, Gregor: *See*—
Strauss, Wennemar, Michael, and Willmund. 3,023,151.
Michael, Malden: *See*—
Innes, William B., Michael, and Chomitz. 3,023,172.
Michel, Andre: *See*—
Condollos, Elie, and Michel. 3,023,051.
Microwave Development Laboratories, Inc.: *See*—
Borghetti, Joseph C. 3,023,382.
Miki, Tosaku: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara. 3,023,147.
Milazzo, Joseph S., to General Aniline & Film Corp. Process of preparing anthraquid vat dyestuff. 3,023,220, 2-27-62, Cl. 260—316.
Miley, Franklin: *See*—
Anderson, John W., Miley, and Pritchard. 3,023,119.
Miller, Charles C.: *See*—
Balish, Frank R., McGarrell, Miller, and Naylor. 3,023,371.
Miller and Co.: *See*—
O'Malley, John B. 3,022,510.
Miller, John, and V. J. Russoman, to The F. & M. Schaefer Brewing Co. Conveyor keg palletizing device. 3,022,617, 2-27-62, Cl. 53—59.
Miller, Philip A., and J. R. D. McCormick, to American Cyanamid Co. Production of 5-hydroxytetracycline. 3,023,148, 2-27-62, Cl. 195—80.
Mills, Raymond P. Electrical water heaters. 3,023,299, 2-27-62, Cl. 219—38.
Mine Safety Appliances Co.: *See*—
Hobos, Edward J., and Alston. 3,022,840.
Temple, Robert and E. E. 3,022,513.
Minneapolis-Honeywell Regulator Co.: *See*—
Myck, Edward A., and Osen. 3,022,641.
Severson, Asbjorn M., and Kompellen. 3,023,294.
Thorsheim, Joseph O. 3,022,987.
Minnesota Mining and Mfg. Co.: *See*—
Fritts, Robert W. 3,023,257.
John, Paul C., and Pettit. 3,022,870.
Jupa, Julius A. 3,023,189.
Lo, Elizabeth S. 3,023,187.
Smith, Edwin K., Jr., Alexander, and Marks. 3,022,716.
Mitchell, Edward F.: *See*—
Rockwell, Adelbert W., Jr., and Mitchell. 3,022,527.
Mitchell, Wallace F., to The Thor Power Tool Co. Portable hammer. 3,022,838, 2-27-62, Cl. 175—147.
Miyatake, Kazuo, A. Okano, K. Hoji, T. Miki, A. Sakashita, Y. Oshima, and A. Kasahara, to Daiichi Seiyaku Co., Ltd. Method for the preparation of 16-acetyl-digitalinum-verum. 3,023,147, 2-27-62, Cl. 195—30.
Mobay Chemical Co.: *See*—
Wagner, Juno, and Bayer. 3,023,228.
Moberly, Charles W., and S. Renaudo, to Phillips Petroleum Co. Process for removal of catalyst from hydrogenated polymer solutions. 3,023,201, 2-27-62, Cl. 260—94.7.
Mohan, William L.: *See*—
Willits, Samuel P., and Mohan. 3,023,317.
Mohr, Robert G., and D. A. Bice, to Brunswick Corp. Drawer lock. 3,023,066, 2-27-62, Cl. 312—219.
Moll, Martvig J.: *See*—
Harper, Willard J., Hauck, Moll, and Dutcher. 3,022,881.
Monroe Calculating Machine Co.: *See*—
Bieber, Charles E. 3,022,958.
Dodsworth, James W. 3,022,940.
Monsanto Chemical Co.: *See*—
Kullfay, Stanley M. 3,023,079.
Kullfay, Stanley M. 3,023,080.
Kullfay, Stanley M. 3,023,081.
Nolan, John H. 3,023,095.
Montagna, Amelio E., and D. H. Hirsh, to Union Carbide Corp. Preparation of unsaturated ethers. 3,023,250, 2-27-62, Cl. 260—614.
Montgomery, H. A., Co., The: *See*—
Fucinari, Angelo M., and King. 3,023,163.
Montgomery, Van H., to Bernardin Bottle Cap Co., Inc. Threaded metal closure cap for a container. 3,022,917, 2-27-62, Cl. 215—44.
Montgomery, William T. S., to Jacksonville Blow Pipe Co. Incinerator. 3,022,753, 2-27-62, Cl. 110—7.
Mooney, David H., Jr.: *See*—
Smith, Harry B., Mooney, and Ewanus. 3,023,409.
Moore, Harold R.: *See*—
Wentz, Edward C., Moore, and Albright. 3,023,386.
Moratis, Christy J., Y. Ichikawa, and E. A. Pigan, to Westinghouse Electric Corp. Applying electrodes to ceramic members. 3,023,390, 2-27-62, Cl. 338—309.
Morgan, Bryan E.: *See*—
Caldwell, Joseph A., and Morgan. 3,022,823.
Morin, Louis H., to Conts & Clark Inc. Surface covered separable fasteners. 3,022,560, 2-27-62, Cl. 24—205.15.
Morris, Wheeler, & Co., Inc.: *See*—
Spodobalski, Joseph W. 3,022,684.
Morrison, Willard L., to Liquefreeze Co., Inc. Method and apparatus for freezing cooked foods. 3,022,636, 2-27-62, Cl. 62—64.
Morrison, Willard L., to Liquefreeze Co., Inc. Method and apparatus for freezing perishable material. 3,022,637, 2-27-62, Cl. 62—64.
Morrow, James E., and J. N. Hoyle, to Tektronix, Inc. Support device. 3,022,973, 2-27-62, Cl. 248—223.
Morton, Charles R., G. J. Horitz, and N. J. Nicholas, to National Research & Development Corp. Semi-solid rocket fuel with aluminum naphthenate containing about 7% combined aluminum. 3,023,094, 2-27-62, Cl. 149—18.
Morton, Glen R. Carburetor for internal combustion engines. 3,022,984, 2-27-62, Cl. 261—27.
Moye, Benjamin H. Auxiliary oil distributor. 3,022,862, 2-27-62, Cl. 184—6.
Mueller, Ernest R., and H. N. Johnston, to Inland Container Corp. Antimar coated articles. 3,022,885, 2-27-62, Cl. 206—46.
Muessig, Clifford W.: *See*—
Bartlett, Jeffrey H., Kirshenbaum, Banes, and Muessig. 3,023,185.
Muir, Robert D., and R. M. Dodson, to G. D. Searle & Co. Microbiological aromatization of steroids. 3,023,229, 2-27-62, Cl. 260—479.
Muller, Robert H., to The Air Preheater Corp. Rotary heat exchanger. 3,022,983, 2-27-62, Cl. 257—269.
Mullin, James A. Pacifier. 3,022,915, 2-27-62, Cl. 215—11.
Mullin, William H., to Philco Corp. Air conditioning. 3,022,647, 2-27-62, Cl. 62—427.
Mullins, Lawrence L.: *See*—
Voorhees, Edward M. 3,022,693.
Multer, Howard, and J. J. Roddy, to Skinner Precision Industries, Inc. Lightweight chuck. 3,023,016, 2-27-62, Cl. 279—116.
Mumford, William W., to Bell Telephone Laboratories, Inc. Noise generator. 3,023,374, 2-27-62, Cl. 331—78.
Mundt, Edward, to Hycon Mfg. Co. Rate divider circuit. 3,023,363, 2-27-62, Cl. 328—30.
Murphy, Arthur Y.: *See*—
Colborne, Ronald H., and Murphy. 3,023,137.
Muskat, Paul H. Solar beacon for aircraft. 3,023,315, 2-27-62, Cl. 250—201.
Muskus, Gus C., E. L. Griffin, Jr., and L. D. Kirk, to United States of America, Agriculture. Production of undenatured debittered soybean product. 3,023,107, 2-27-62, Cl. 99—98.
Myck, Edward A., and R. T. Osen, to Minneapolis-Honeywell Regulator Co. Control apparatus for air conditioning systems. 3,022,641, 2-27-62, Cl. 62—163.
Myers, Curtis B., and W. W. Coffeen, to Metal & Thermit Corp. Apparatus for moving slender elongated members lengthwise. 3,022,929, 2-27-62, Cl. 226—184.
Nalco Chemical Co.: *See*—
Walker, Alfred O. 3,023,169.
Nalon, Mitzie C. Colostomy device. 3,022,786, 2-27-62, Cl. 128—283.
Nanikawa, Mamoru: *See*—
Hoshino, Yasushi, Nanikawa, and Tochihara. 3,023,010.
National Bone and Tissue Laboratories, Inc.: *See*—
Tucker, Eli J., Jr. 3,022,783.
National Distillers & Chemical Corp.: *See*—
Pels, Alan R., and Backofen. 3,022,525.
National Research & Development Corp.: *See*—
Morton, Charles R., Horitz, and Nicholas. 3,023,094.
Naylor, Arthur F.: *See*—
Balish, Frank R., McGarrell, Miller, and Naylor. 3,023,371.
Naylor, Arthur F., to Thompson Ramo Wooldridge Inc. Precision variable frequency generator. 3,023,373, 2-27-62, Cl. 331—40.
Neely, William H., to Hoover Ball & Bearing Co. Tubular frame rail. 3,022,522, 2-27-62, Cl. 5—353.7.

Nelson, Douglas C., to The Cuban-American Sugar Co. Esterification. 3,023,183, 2-27-62, Cl. 260—30.2.
Nelson, Herbert, and J. Bernath, to Radio Corp. of America. Semiconductor devices. 3,022,568, 2-27-62, Cl. 29—25.3.
Nerison, James R., to Frontier Electronics. Automatic radio direction finder. 3,023,411, 2-27-62, Cl. 343—118.
Nevotti, William M. Removable window. 3,022,546, 2-27-62, Cl. 20—52.2.
Newman, Douglas A., to Columbia Ribbon and Carbon Mfg. Co., Inc. Novel transfer media. 3,022,880, 2-27-62, Cl. 197—172.
Neymark, Albert M.: *See*—
Sanders, Elmore J., Winkler, and Neymark. 3,022,770.
Nichol, Wilbert G., to United States Steel Corp. Lading cover for transport vehicle. 3,022,750, 2-27-62, Cl. 105—377.
Nicki, Julius: *See*—
Enk, Edward, and Nicki. 3,023,087.
Niedecker, Herbert. Clips for sealing bags in airtight manner, and device for attaching said clips. 3,022,571, 2-27-62, Cl. 29—193.5.
Nikles, Erwin: *See*—
Hatzer, Hans, and Nikles. 3,023,174.
Nixon, William G., to Universal Oil Products Co. Manufacture of catalyst. 3,023,173, 2-27-62, Cl. 252—466.
Noddin, George A.: *See*—
Coursen, David L., Noddin, and Reilly. 3,022,544.
Nolan, John H., to Monsanto Chemical Co. Defoliants. 3,023,095, 2-27-62, Cl. 71—2.2.
Nolt, Edwin B., to Sperry Rand Corp. Baler control device. 3,022,622, 2-27-62, Cl. 56—341.
North American Aviation, Inc.: *See*—
Cone, Ronald D. 3,023,326.
Kojalowicz, Anthony M. 3,023,323.
North American Philips Co., Inc.: *See*—
Dulnker, Simon, Stuijts, Wijn, and Westmuljze. 3,023,166.
Van de Weijer, Martinus H. A. 3,023,069.
Nowlin, Gene, and H. D. Lyons, to Phillips Petroleum Co. Polymerization of vinyl ethers. 3,023,198, 2-27-62, Cl. 260—88.1.
Nuffer, Orville P., to Baxter Laboratories, Inc. Intravenous administration equipment. 3,022,784, 2-27-62, Cl. 128—214.
Nuss, Oscar H., to De Walt, Inc. Cycled jet cooling mechanism. 3,022,694, 2-27-62, Cl. 83—169.
Nyberg, Richard A.: *See*—
Sheridan, Thomas L., and Nyberg. 3,023,375.
Oberem, William C., to The Torrington Co. Integral offset bearing for latch of knitting needle. 3,022,651, 2-27-62, Cl. 66—122.
Oblinger, Edwin F., to Parker Sweeper Co. Sweeper with flexible hood extension at lower front. 3,022,530, 2-27-62, Cl. 15—79.
O'Brien, John J., to The Black and Decker Mfg. Co. Universal pipe cleaning tool for vacuum cleaners. 3,022,534, 2-27-62, Cl. 15—400.
O'Brien, William J., to General Motors Corp. Rate sensitive thermocouple. 3,022,669, 2-27-62, Cl. 73—359.
Ocean Spray Cranberries, Inc.: *See*—
Anderson, Edward E., and Antl. 3,023,108.
Ohio Thermometer Co., The: *See*—
Wappner, Ralph C. 3,022,671.
Ohlhausen, William T. Ground hinged picket type gate. 3,022,590, 2-27-62, Cl. 39—5.
Ohno, Yasuji: *See*—
Tanabe, Kenichi, and Ohno. 3,023,182.
Okamoto, Yukio. Collapsible lamp shade. 3,023,307, 2-27-62, Cl. 240—108.
Okano, Atsuji: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara. 3,023,147.
Olin Matheson Chemical Corp.: *See*—
Filstrup, Edward C. 3,022,730.
Twelves, Robert D. 3,023,241.
Yeomans, Arthur S., Jr. 3,022,731.
Oliver, John P., to Union Carbide Corp. Liquid electrical connection for electrolytic cells. 3,023,393, 2-27-62, Cl. 339—118.
Olson, Cecil: *See*—
Viola, Vito, and Olson. 3,022,947.
Olson, John E., and W. P. Downey, to Hyster Co. Flow control system for load-handling apparatus. 3,022,773, 2-27-62, Cl. 121—46.
O'Malley, John B., to Miller and Co. Filer's type snap fastener attaching machine. 3,022,510, 2-27-62, Cl. 1—50.
On Mark Couplings, Inc.: *See*—
Torres, Jorge. 3,023,030.
Ondrejka, Albert A. Lightweight recoverable guy anchor. 3,022,873, 2-27-62, Cl. 189—90.
Ondrusek, Steven: *See*—
Takats, Zoltan, and Ondrusek. 3,022,715.
Origoni, Victor E., and R. Winterbottom, to American Cyanamid Co. Recrystallization of demethylchlortetracycline. 3,023,239, 2-27-62, Cl. 260—559.
Osborne, William J.: *See*—
Emmerling, Anson A., Kaufman, Osborne, and Steenrod. 3,023,202.
Osen, Ralph T.: *See*—
Myck, Edward A., and Osen. 3,022,641.
Oshima, Yasuo: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara. 3,023,147.
Ossenbrunner, Armin, H. Schnell, H. Klockgether, J. Geiger, and J. Freier, to Agfa Aktiengesellschaft. Photographic film. 3,023,101, 2-27-62, Cl. 96—87.
Oster, John, Mfg. Co.: *See*—
St. Charles, Gilbert L. 3,023,332.
Othermer, Donald F., and D. K. Huang. Dehydrocyclization process. 3,023,254, 2-27-62, Cl. 260—673.5.
Otis Elevator Co.: *See*—
Hornung, Stephen A. 3,022,865.
Otis Engineering Corp.: *See*—
Cummings, Leslie L. 3,022,796.
Oussani, James J. Powerized fastener. 3,022,512, 2-27-62, Cl. 1—106.
Owings, Jack L. Cornering lights. 3,023,344, 2-27-62, Cl. 315—843.
Pachernegg, Siegfried, to H. List. Pistons for internal combustion engines. 3,023,060, 2-27-62, Cl. 309—6.
Padula, Lawrence D., to Skinner Precision Industries, Inc. Electromagnetic valve. 3,022,799, 2-27-62, Cl. 137—625.27.
Pagano, Ralph R. Automatic shoe shine device. 3,022,528, 2-27-62, Cl. 15—31.
Pahl, John G., to K-P-F Electric Co. Universal connector for electric wires. 3,023,391, 2-27-62, Cl. 339—31.
Palasciano, Felice V., to Burroughs Corp. Item handling apparatus. 3,022,907, 2-27-62, Cl. 214—11.
Paley, Warren D., to United States of America, Navy. Thyratron firing circuit. 3,022,732, 2-27-62, Cl. 102—70.2.
Palm, Clifford W., and R. L. Bragg, to Celanese Corp. of America. Air jet. 3,022,563, 2-27-62, Cl. 28—1.
Pankow, Melvin W. Reversible bit drill attachment. 3,023,015, 2-27-62, Cl. 279—14.
Parks, Mercer H., to Jersey Production Research Co. Breakwater. 3,022,632, 2-27-62, Cl. 61—7.
Pasedach, Heinrich, and M. Seefelder, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of branched unsaturated ketones. 3,023,246, 2-27-62, Cl. 260—595.
Patalon, Francis R., to Addressograph-Multigraph Corp. Printing apparatus. 3,022,998, 2-27-62, Cl. 271—49.
Patton, Franklin S., and R. V. King, to Sterling Seal Co. Cover for a container. 3,022,922, 2-27-62, Cl. 222—182.
Pavey, George M., Jr., to Marine Research Co. Means for producing a low frequency seismic signal. 3,022,852, 2-27-62, Cl. 181—.5.
Pels, Alan R., and W. A. Backofen, to National Distillers & Chemical Corp. Method of enhancing the cold radial expansion properties of hollow brass rivets. 3,022,525, 2-27-62, Cl. 10—27.
Pendley, William Q. Sheet transfer device. 3,022,997, 2-27-62, Cl. 271—27.
Perkins, Charles M., 1/16 to W. K. Price. Apparatus for gas-freeing and cleaning tankers. 3,022,792, 2-27-62, Cl. 134—168.
Peters, Freimut, to Accumulatoren-Fabrik A.G. Hermetically sealed galvanic smoothing or stabilization cell. 3,023,258, 2-27-62, Cl. 136—6.
Petersen, Henry T. Valve-traversing pipe stopper assembly. 3,022,801, 2-27-62, Cl. 138—89.
Peterson, Lorenz A., to Sinclair Oil & Gas Co. Shadow box. 3,023,304, 2-27-62, Cl. 240—1.
Petrick, Edward J. and R. E., to Knox Mfg. Co. Portable movie screen. 3,022,816, 2-27-62, Cl. 160—24.
Pierce, Maurice R. Optical navigational device. 3,022,703, 2-27-62, Cl. 88—2.7.
Pilskär, Inge G., to Telefonaktiebolaget LM Ericsson. Method of fastening wire to a soldering tag. 3,022,805, 2-27-62, Cl. 140—93.
Pacific Industries, Inc.: *See*—
Baumbach, Harlan L., and Ford. 3,022,941.
Pacific Semiconductors, Inc.: *See*—
Fuller, Richard H. 3,023,378.
Page, James A.: *See*—
Tislow, Richard F., Bruce, and Page. 3,023,146.
Parke, Davis & Co.: *See*—
Bartz, Quentin R., Ehrlich, Knudsen, and Smith. 3,023,204.
Parker-Hannifin Corp.: *See*—
Davies, Robert H., and Webster. 3,022,954.
Parker Sweeper Co.: *See*—
Oblinger, Edwin F. 3,022,530.
Passley, Paul L., and J. F. Eberle, to Phillips Petroleum Co. Producing indicia in film by modification of film opacity. 3,022,541, 2-27-62, Cl. 18—48.
Pattin Mfg. Co., Inc.: *See*—
Dempsey, Joseph B. 3,022,700.
Pearce, John W.: *See*—
Greentee, Sylvan O., and Pearce. 3,023,178.
Peen Plate, Inc.: *See*—
Clayton, Erith T. 3,023,127.
Pemco Wheel Co.: *See*—
Black, John W. 3,022,535.
Pennsalt Chemicals Corp.: *See*—
Kowalski, Alexander. 3,023,194.
Pennsylvania Engineering Corp.: *See*—
McFeaters, Harry L., and Lakin. 3,022,990.
Pennsylvania Industrial Chemical Corp. *See*—
Epstein, Martin E., and Gangemi. 3,023,200.
Performance Measurements Co.: *See*—
Diddens, Paul A. 3,022,663.
Perry, Leland G.: *See*—
Kendall, Jackson W., Jr., Perry, and Hardenbergh. 3,023,341.
Petrick, Russell E.: *See*—
Petrick, Edward J. and R. E. 3,022,816.
Petrie, Eugene C.: *See*—
Turek, James R., Petrie, and Attridge. 3,022,602.
Petrow, Henry G.: *See*—
Allen, Robert J., and Petrow. 3,023,078.
Petrow, Vladimir: *See*—
Burn, Derek, Kirk, Petrow, and Weston. 3,023,206.
Pettit, Richard R.: *See*—
John, Paul C., and Pettit. 3,022,870.
Petty, Olive S.: *See*—
Hasbrook, Arthur F. 3,022,851.
Philco Corp.: *See*—
Mullin, William H. 3,022,647.

Philips Electronics, Inc.: *See*—
Bessen, Irwin I. 3,023,311.
Phillips Petroleum Co.: *See*—
Brandt, Carl T. 3,022,986.
Canterino, Peter J., and Edmonds. 3,023,180.
Dye, Robert F. 3,023,203.
Eberle, Jack F. 3,022,735.
Goodhue, Lyle D., Louthan, and Cantrel. 3,023,142.
Hutchinson, William M. 3,023,249.
Kolner, Samuel J. 3,023,090.
Kraus, Gerard, and Dugone. 3,023,188.
Logan, Richard S. 3,023 231.
Moberly, Charles W., and Renaudo. 3,023,201.
Nowlin, Gene, and Lyons. 3,023,198
Passley, Paul L., and Eberle. 3,022,541.
Wheelock, Charles E. 3,023,197.
Picker X-Ray Corp., Waite Mfg. Div., Inc.: *See*—
Hura, Michael. 3,023,314.
Pierce, John R., Foundation: *See*—
Stolwijk, Jan A. J. 3,022,664.
Pigan, Edward A.: *See*—
Moratis, Christy J., Ichikawa, and Pigan. 3,023,390.
Pinkley, Clyde W.: *See*—
Smith, Chester L., and Pinkley. 3,023,376.
Pipes, George R. to Eaton Mfg. Co. Torsional vibration dampener. 3,022,679, 2–27–62, Cl. 74—574.
Pippenger, John J., to Double A Products Co. Pressure reducing valve. 3,022,794, 2–27–62, Cl. 137—116.3.
Pitt, Catherine J. Time teaching educational device. 3,022,582, 2–27–62, Cl. 35—39.
Pittard, Stanley A.: *See*—
Stegley, Brian J. and Pittard. 3,022,547.
Pitts, Harold E. Game device. 3,023,004, 2–27–62, Cl. 273—130.
Plapper, Jürgen, R. Heyden, and G. Böhme, to Bohme Fettchemie G.m.b.H. Tanning process and tanning agents therefor. 3,023,073, 2–27–62, Cl. 8—94.33.
Plas-Tainer Inc.: *See*—
Smith, John W., Jr. 3,022,918.
Platt, Stephen A. Device for projecting still picture film with synchonized sound. 3,022,707, 2–27–62, Cl. 88—28.
Playlaar, Martin C., to Boeing Airplane Co. Pawl latch assemblies. 3,023,041, 2–27–62, Cl. 292—212.
Pocher, Hugo, to Continental Elektroindustrie A.G., Askania-Werke. Measuring devices and the like using cyclically modulated signals. 3,022,702, 2–27–62, Cl. 88—1.
Podlipnik, John, to Sinclair Refining Co. Coating composition containing paraffin waxes and microcrystalline waxes. 3,023,156, 2–27–62, Cl. 208—21.
Polanski, Frank C., to Ladish Co. Tube trimming machine. 3,022,692, 2–27–62, Cl. 82—50.
Pollack, John E.: *See*—
McLane, Fletcher E., Pollack, and Cochran. 3,023,351.
Polymer Corp., The: *See*—
Davis, William J. 3,022,542.
Koch, Robert B. 3,023,033.
Porter-Cable Machine Co., The: *See*—
De Man, Heiko T. 3,022,509.
Potruch, Robert A., to U.S. Expansion Bolt Co. Plastic anchor-type fastener and driver means for expanding same. 3,022,701, 2–27–62, Cl. 85—2.4.
Powers, Irving, to Bemis Bros. Bag Co. Packaging method. 3,022,613, 2–27–62, Cl. 53—28.
Precision Products & Controls, Inc.: *See*—
Dunn, Michael J. 3,022,943.
Preiser, Ralph H., J. J. McNally, and J. D. Kotowski, to Electrical Utilities Co. Dual terminal insulator. 3,023,268, 2–27–62, Cl. 174—153.
Prentiss, Augustin M., to Chandler-Evans Corp. Jet engine automatic thrust control. 3,022,628, 2–27–62, Cl. 60—35.6.
Prescott, Richard H.: *See*—
Herrick, George H., Prescott, and Guido. 3,022,739.
Preston, Glenn W., to General Atronics Corp. Beam modulating devices and method. 3,023,342, 2–27–62, Cl. 315—12.
Price, Frederick C., to Imperial Chemical Industries Ltd. Process and apparatus for removing protruding fibers from spun thermoplastic linear polymer yarns. 3,022,564, 2–27–62, Cl. 28—63.
Price, Warren K.: *See*—
Perkins, Charles M. 3,022,792.
Printed Motors, Inc.: *See*—
Burr, Robert P. 3,023,335.
Burr, Robert P., and Keogh. 3,023,334.
Swiggett, Robert L. 3,023,333.
Pritchard, William C.: *See*—
Anderson, John W., Miley, and Pritchard. 3,023,119.
Proctor & Schwartz, Inc.: *See*—
Bailey, Sidney, Jr. 3,022,926.
Provi, Mike A., to The Brearley Co. Bathroom scales. 3,022,845, 2–27–62, Cl. 177—230.
Prym, William, Werke K.G.: *See*—
Berberich, Erich, Gilliam, and Frowein. 3,022,803.
Pure Oil Co., The: *See*—
Carr, Norman L. 3,023,256.
Purolator Products, Inc.: *See*—
Scavuzzo, William J., and Hultgren. 3,022,764.
Pyramid Rubber Co., The: *See*—
Marsh, Carl E., and Boston. 3,022,914.
Pyzel, Robert, to Union Commerce Bank. Hydraulic cement process. 3,022,989, 2–27–62, Cl. 263—53.
Quaas, Joseph F.: *See*—
Wasserman, Rene D., and Quaas. 3,023,130.
Rabson, Thomas A.: *See*—
Jenny, William P., and Rabson. 3,023,359.
Radek, John. Wall panel structure. 3,022,869, 2–27–62, Cl. 189—34.
Radio Corp. of America: *See*—
Hansen, Robert B. 3,023,271.
Herzog, Gerald B. 3,023,319.
Kurshan, Jerome. 3,023,153.
Nelson, Herbert, and Bernath. 3,022,568.
Ragains, Glenn C. Pie and casserole lifter. 3,023,043, 2–27–62, Cl. 294—31.
Raidel, John E. Cable slack adjuster. 3,022,981, 2–27–62, Cl. 254—164.
Rallis, Theodore, and F. Trotta. Injector type toothbrush for receiving toothpaste from aerosol bomb. 3,022,789, 2–27–62, Cl. 132—84.
Raymond International, Inc.: *See*—
Kinneman, William P., and Ippen. 3,022,634.
Raytheon Co.: *See*—
Smith, Charles G. 3,023,091.
Read, John A.: *See*—
Drain, James A., Read, and Gordon. 3,023,044.
Reaser, Clinton W. Sod plug cutting machine. 3,022,833, 2–27–62, Cl. 172—19.
Reed, Herbert R., Jr., and M. Stimler, to United States of America, Navy. Hydraulic phase discriminator. 3,023,397, 2–27–62, Cl. 340—15.
Reese, Johannes, and R. Brähler, to Chemische Werke Albert. Thiolthionophosphoric esters and their production. 3,023,209, 2–27–62, Cl. 260—250.
Reifenhauser, Anton: *See*—
Ulmitz, Wilhelm. 3,022,928.
Reifenhauser, H.: *See*—
Ulmitz, Wilhelm. 3,022,928.
Reilly, James I.: *See*—
Coursen, David L., Noddin, and Reilly. 3,022,544.
Reinking, Norman H., to Union Carbide Corp. Preparation of glycidyl polyethers of polyhydric phenols. 3,023,225, 2–27–62, Cl. 260—348.6.
Remington Arms Co., Inc.: *See*—
Kidder, Marshall J. 3,022,734.
Renaudo, Samuel: *See*—
Moberly, Charles W., and Renaudo. 3,023,201.
Renner, Günther: *See*—
Bornemann, Dieter, Dohr, Renner, and Ziegler. 3,023,242.
Rentschler, Waldemar T., to Alfred Gauthier, G.m.b.H. Photographic camera. 3,022,714, 2–27–62, Cl. 95—10.
Renpe, Walter, and R. Stadler, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Process for producing acrylic acid. 3,023,237, 2–27–62, Cl. 260—533.
Repsher, Robert W., to Westinghouse Electric Corp. Discharge device having exterior lubricating phosphate coating. 3,023,337, 2–27–62, Cl. 313—108.
Repsher, Robert W., to Westinghouse Electric Corp. Phosphor, lamp and method. 3,023,340, 2–27–62, Cl. 313—109.
Revco, Inc.: *See*—
Brown, Carl E., and Crotser. 3,022,639.
Reynolds, Alfred O. Method of packing seedling plants for shipment. 3,022,605, 2–27–62, Cl. 47—58.
Reynolds Gas Regulator Co.: *See*—
Hughes, George C. 3,023,093.
Rheingold, Lawrence M., and M. Berlin, to Templet Industries, Inc. Die set for drawing and shaping sheet metal. 3,022,758, 2–27–62, Cl. 113—46.
Ribbens, Jacob J., H. M. Leete, and F. S. Foote, Jr., to Tab Products Co. Filing drawer and front construction for same. 3,022,595, 2–27–62, Cl. 40—325.
Rich, Howard B., to Howard B. Rich, Inc. Stepladder. 3,022,857, 2–27–62, Cl. 182—222.
Rich, Howard B., Inc.: *See*—
Rich, Howard B. 3,022,857.
Richards, Arthur J. Method of riveting. 3,022,687, 2–27–62, Cl. 78—46.
Richter, John W., to E. I. du Pont de Nemours and Co. Basic dyes of the quinophthalone series. 3,023,212, 2–27–62, Cl. 260—286.
Richter, John W., to E. I. du Pont de Nemours and Co. Esters and amides of 3'-hydroxyquinophthalone-5-carboxylic acid and derivatives thereof. 3,023,213, 2–27–62, Cl. 260—287.
Richter, John W., to E. I. du Pont de Nemours and Co. 3'-hydroxyquinophthalone-5-carboxylic acid and derivatives thereof. 3,023,214, 2–27–62, Cl. 260—287.
Riddell, Elizabeth W.: *See*—
Riddell, Robert W. 3,022,955.
Riddell, Robert W., deceased (A. G. Gilkes, administrator of said R. W. Riddell), to E. W. Riddell. Applicator. 3,022,955, 2–27–62, Cl. 239—456.
Ridge Tool Co., The: *See*—
Wright, Clyde E. 3,022,575.
Rigterink, Raymond H., to The Dow Chemical Co. Polyalkyleneglycol 3,4-dihydro-2H-1,3-benzoxazin-3-yialkyl monoethers. 3,023,207, 2–27–62, Cl. 260—244.
Rinke, Heinrich: *See*—
Thoma, Wilhelm, Bayer, and Rinke. 3,023,100.
Thoma, Wilhelm, Bayer, and Rinke. 3,023,193.
Rinshed-Mason Co.: *See*—
Boncher, John B. 3,023,177.
Roberts, J. S. Mechanical monorail drop switch. 3,022,745, 2–27–62, Cl. 104—99.
Robertson, H. H., Co.: *See*—
Fork, Frank W. 3,023,265.
Robinson, Leon H., Jr.: *See*—
Rinkley, George W., and Robinson. 3,022,824.
Robinson, Leon H., Jr., to Jersey Production Research Co. Apparatus for drilling boreholes with explosive charges. 3,022,729, 2–27–62, Cl. 102—20.
Robota, Stephen, to Hooker Chemical Corp. Method of producing phosphorus pentasulfide of controlled reactivity. 3,023,086, 2–27–62, Cl. 23—206.
Rochester, Nathaniel: *See*—
Seibel, Robert, and Rochester. 3,022,878.

Rochus, Walter, and R. Kickuth, to Chemieglas, Gebr. Schrickel oHG. Apparatus for the fractional separation of material contained in a solution by freezing. 3,022,659, 2–27–62, Cl. 73—53.
Rockmore, Milton M. Shoe-fit checking device. 3,022,577, 2–27–62, Cl. 33—3.
Rockwell, Adelbert W., Jr., and E. F. Mitchell, to United Shoe Machinery Corp. Machines for shaping uppers over lasts. 3,022,527, 2–27–62, Cl. 12—8.5.
Roddy, John J.: *See*—
Multer, Howard, and Roddy. 3,023,016.
Rodis, Franz, G. Hartlapp, and K. Beltz, to Knapsack-Griesheim Aktiengesellschaft. Process for producing an alkali phosphate from an aqueous ortho-phosphate. 3,023,083, 2–27–62, Cl. 23—107.
Rodman, Hugh, Jr., to Koppers Co., Inc. Process and apparatus for the pre-expansion of vinyl polymeric materials. 3,023,175, 2–27–62, Cl. 260—2.5.
Roepke, Edward C. Particle selecting and dispensing device. 3,022,755, 2–27–62, Cl. 111—77.
Rohm & Haas Co.: *See*—
Fordyce, David B., Glavis, and Melamed. 3,023,162.
Rolfe, Charles A., to International Paper Co. Doorway closure. 3,022,818, 2–27–62, Cl. 160—206.
Roller, Albert E., to General Motors Corp. Universal joint. 3,022,649, 2–27–62, Cl. 64—8.
Roller, Donald C.: *See*—
Heidt, William A., and Roller. 3,022,879.
Rolls-Royce Ltd.: *See*—
Colley, Rowan H. 3,022,629.
Romeo, John. Copter kite. 3,022,967, 2–27–62, Cl. 244—154.
Rosapepe, Frank P., to Universal Control, Inc. Rotary-counter register. 3,022,938, 2–27–62, Cl. 235—42.
Rotax Ltd.: *See*—
Bourne, William G., and Hayter. 3,023,286.
Williams, Edward K. 3,023,345.
Roters, Herbert C., to Casner Patents, Inc. Axial air-gap dynamoelectric machine. 3,023,330, 2–27–62, Cl. 310—162.
Rototone, Inc.: *See*—
Santi, Harris H. 3,022,853.
Rowland, Howard J., to D. S. Kennedy & Co. Transition device. 3,023,381, 2–27–62, Cl. 333—33.
Rowley, Benjamin W., to Jancy Engineering Co. Cutting tool. 3,022,686, 2–27–62, Cl. 77—73.5.
Roylyn Inc.: *See*—
Collar, Rolland W. 3,023,029.
Rubinstein, Solomon, O. G. Garner, and G. S. Enger, Jr., to General Cable Corp. Combination power and communication cable. 3,023,267, 2–27–62 Cl. 174—115.
Rucker, Richard A. Electric toy cannon. 3,022,597. 2–27–62, Cl. 42—55.
Rudin, Walter: *See*—
Bloom, Frederick S., and Rudin. 3,022,815.
Ruka, William A., and W. L. Caudill. Turf and lawn cultivator. 3,022,834, 2–27–62, Cl. 172—21.
Ruskin, Henry, to Swingline, Inc. Tag feeding mechanism. 3,022,508, 2–27–62, Cl. 1—3.
Russoman, Vincent J.: *See*—
Miller, John, and Russoman. 3,022,617.
Rustad, Stanley C.: *See*—
Elden, Leo W., Rustad and Smirnow. 3,022,616.
Rutgerswerke-Aktiengesellschaft: *See*—
Lang, Karl F., Metzendorf, Turowski, and Gick. 3,023,125.
Lang, Karl F., Metzendorf, Turowski, and Gick. 3,023,255.
St. Charles, Gilbert L., to John Oster Mfg. Co. Electric motor construction. 3,023,332, 2–27–62, Cl. 310—254.
Sakashita, Akio: *See*—
Miyatake, Kazuo, Okano, Hoji, Miki, Sakashita, Oshima, and Kasahara. 3,023,147.
Salone, Bernice G.: *See*—
Hayter, Richard B. 3,023,003.
Salone, Edward M.: *See*—
Hayter, Richard B. 3,023,003.
Samiran, David. Quick acting bolt having radially contractable thread thereon. 3,022,099, 2–27–62, Cl. 85—1.
Samsel, Gene L.: *See*—
Le Baron, Ira M., and Samsel. 3,022,889.
Sanders, Elmore J., F. Winkler, Jr., and A. M. Neymark, said Winkler, Jr., and Neymark assors. to said Sanders. Adjustable vaned rotor assemblies. 3,022,770, 2–27–62, Cl. 121—38.
Sandor, William C., to Hoover Ball & Bearing Co. Wire coupling connection. 3,023,037, 2–27–62, Cl. 287—77.
Sandoz Ltd.: *See*—
Geiger, Georg. 3,023,186.
Sandusky, Fred C., to Anchor Hocking Glass Corp. Method and mechanism for handling articles. 3,022 906, 2–27–62, Cl. 214—10.5.
Sanford, John M. Regulatable electric motor for accomplishing linear movement. 3,023,328, 2–27–62, Cl. 310—14.
Santi, Harris H., to Rototone, Inc. Swiveling acoustical apparatus. 3,022,853, 2–27–62, Cl. 181—27.
Sauers, Carol K., and R. J. Cotter, to Union Carbide Corp. Preparation of N,N'-disubstituted maleamides. 3,023,240, 2–27–62, Cl. 260—561.
Sawamura, Toshio, and T. Hayashi, to Jorgensen Bros. Pick-up means for a spinning reel. 3,022,961, 2–27–62, Cl. 242—84.21.
Saxe, Van Rensselaer P. Adjustable connection unit. 3,022,871, 2–27–62, Cl. 189—36.
Scanlon, William F.: *See*—
Cross, Donald J., and Scanlon. 3,022,674.
Scavuzzo, William J., and W. H. Hultgren, to Purolator Products, Inc. Mechanical signal device. 3,022,764, 2–27–62, Cl. 116—70.
Schaefer, F. & M., Brewing Co., The: *See*—
Miller, John, and Russoman. 3,022,617.
Schaefer, Robert J.: *See*—
Schwartz, Morris A., and Schaefer. 3,022,618.
Schafer, John P.: *See*—
Bowers, Fritz K., and Schafer. 3,023,384.
Schaller, Leo, to Sundstrand Corp. Contour grinding machine. 3,022,611, 2–27–62, Cl. 51—141.
Schappert, Hans M., to Koppers Co., Inc. Ethylene polymerization. 3,023,202, 2–27–62, Cl. 260—94.9.
Schetelich, Alan A.: *See*—
Martin, James G., Ernst, Jankowski, and Schetelich. 3,023,195.
Schick, John W.: *See*—
McLaughlin, Robert L., and Schick. 3,023,245.
Schilling, Robert: *See*—
Hansen, Karl H., Schilling, and McRoberts. 3,022,847.
Schirp, Hubert: *See*—
Blaser, Bruno, Stein, and Schirp. 3,023,216.
Stein, Werner, Schirp, and Schütt. 3,023,217.
Schlanger, Samuel: *See*—
Green, Emil, and Schlanger. 3,022,574.
Schlenker, Hans: *See*—
Junghans, Helmut, Braitsch, and Schlenker. 3,022,627.
Schlicke, Heinz M., to Allen-Bradley Co. Feed-through capacitor. 3,023,383, 2–27–62, Cl. 333—79.
Schlumberger Well Surveying Corp.: *See*—
Blizard, Robert B., and Gollwitzer. 3,023,362.
Kirchner, Francois F. 3,023,358.
Kisling, James W., III. 3,022,826.
Schmidt, Edward R., to General Dynamics Corp. Electronic switching system. 3,023,281, 2–27–62, Cl. 179—175.2.
Schmutz, Roland. Under-mattress. 3,022,523, 2–27–62, Cl. 5—361.
Schneider, Alfred: *See*—
Burris, Leslie, Jr., and Schneider. 3,023,097.
Schneider, Jos., & Co., Optische Werke: *See*—
Mahn, Herbert. 3,022,874.
Schneider, Richard F.: *See*—
Schroeder, Arthur C., and Schneider. 3,022,615.
Schnell, Hermann: *See*—
Ossenbrunner, Armin, Schnell, Klockgether, Geiger, and Freier. 3,023,101.
Schroeder, Arthur C., and R. F. Schneider, to Schroeder Machines Corp. Method and apparatus for forming cartons. 3,022,615, 2–27–62, Cl. 53—37.
Schroeder Machines Corp.: *See*—
Schroeder, Arthur C., and Schneider. 3,022,615.
Schueller, Otto. Air conditioning system for space vehicles. 3,022,643, 2–27–62. Cl. 62—216.
Schütt, Hartwig: *See*—
Stein, Werner, Schirp, and Schütt. 3,023,217.
Schütt, Hartwig, and W. Stein, to Henkel & Cie. G.m.b.H. Process for the production of aromatic di- and polycarboxylic acids. 3,023,234, 2–27–62, Cl. 260—515.
Schütt, Hartwig, to Henkel & Cie. G.m.b.H. Production of carboxy-substituted heterocyclic compounds. 3,023,210, 2–27–62, Cl. 260—250.
Schuttenberg, Elmer H. Inspection marking device. 3,022,726, 2–27–62, Cl. 101—42.
Schwaneke, Alfred E.: *See*—
Maiz, Leo, and Schwaneke. 3,022,720.
Schwartz, Morris A., and R. J. Schaefer, to Johnson & Johnson. Machine suitable for packaging and like functions. 3,022,618, 2–27–62, Cl. 53—59.
Scinta, Anthony C., to Trico Products Corp. Windshield cleaner. 3,022,531, 2–27–62, Cl. 15—250.35.
Scott, Donald R.: *See*—
Hough, Fred O., and Scott. 3,023,154.
Scott, Ronald E. Analog converter. 3,023,405, 2–27–62, Cl. 340—347.
Scribabine, Igor, to Societe des Usines Chimiques Rhone-Poulenc. Alkylaromatic aldehydes and their preparation. 3,023,247, 2–27–62, Cl. 260—599.
Searle, G. D., & Co.: *See*—
Atwater, Norman W. 3,023,227.
Muir, Robert D., and Dodson. 3,023,229.
Seefelder, Matthias: *See*—
Pasedach, Heinrich, and Seefelder. 3,023,246.
Seefelder, Matthias, and H. Malsack, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of carbazole. 3,023,219, 2–27–62, Cl. 260—315.
Seeger, Bernard L., to Boeing Airplane Co. Acceleration and Mach number limiting fuel controls for aircraft. 3,022,964, 2–27–62, Cl. 244—76.
Seelhoff, Harlan L.: *See*—
Cochran, John M., Seelhoff, and Banks. 3,023,352.
Seibel, Bobly H., to Boeing Airplane Co. Discontinuity depth gauge. 3,022,578, 2–27–62, Cl. 33—46.
Seibel, Robert, and N. Rochester, to International Business Machines Corp. Communication device. 3,022,878, 2–27–62, Cl. 197—19.
Senior, George A., Jr., to Union Carbide Corp. Calcium trimethylolphenate. 3,023,252, 2–27–62, Cl. 260—621.
Sensui, Nobuo, and S. Aoki, to Shibauro Kyodokogyo Kabushiki Kaisha. Automatic greasing device for vehicles. 3,022,863, 2–27–62, Cl. 184—7.
Serniuk, George E.: *See*—
Tegge, Bruce R., Baldwin, and Serniuk. 3,023,191.
Servo Corp. of America: *See*—
Hansel, Paul G. 3,023,410.
Waller, Herbert H. 3,023,370.
Setterberg, Carl B., to United States Gypsum Co. Means for manufacturing mineral wool. 3,022,538, 2–27–62, Cl. 18—2.5.
Severson, Asbjorn M., and A. D. Kompelien, to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,023,294, 2–27–62, Cl. 219—20.
Sexton, Robert W., to American Air Filter Co., Inc. Gas cleaning method and apparatus. 3,022,859, 2–27–62, Cl. 183—15.
Shaffer Tool Works: *See*—
Wilde, Arthur E. 3,023,012.

Shajenko, Petro. Welding process and apparatus. 3,023,303, 2-27-62, Cl. 219—130.

Shapero, Wallace H., to Continental Can Co., Inc. Dipping apparatus for fabricating flexible containers. 3,022,540, 2-27-62, Cl. 18—24.

Shapiro, Lawrence S., to Clowd, Inc. Illuminating means. 3,023,305, 2-27-62, Cl. 240—2.

Shaw, Henry W. Portable lectern. 3,023,274, 2-27-62, Cl. 179—1.

Shaw, Noel, to Shaw Process Development Corp. Molds. 3,022,535, 2-27-62, Cl. 22—193.

Shaw Process Development Corp.: *See*—
Shaw, Noel. 3,022,535.

Sheridan, Thomas L., and R. A. Nyberg. Transistor blocking oscillator power supply. 3,023,375, 2-27-62, Cl. 331—112.

Sherwin-Williams Co., The: *See*—
Damusis, Adolf. 3,023,190.
Grummitt, Oliver J., and Stearns. 3,023,117.

Shibauro Kyodokogyo Kabushiki Kaisha: *See*—
Sensui, Nobuo, and Aoki. 3,022,863.

Shigekuni, Thomas N. Tool coupling assembly. 3,023,054, 2-27-62, Cl. 306—31.

Shires, James W. N., to Express Dairies (Northern) Ltd. Fully automatic machine for loading and unloading crates, boxes and like containers in stacks. 3,022,904, 2-27-62, Cl. 214—6.

Shivers, Joseph C., Jr., to E. I. du Pont de Nemours and Co. Segmented copolyetherester elastomers. 3,023,192, 2-27-62, Cl. 260—75.

Shur-Lok Corp.: *See*—
Kottsieper, Edward. 3,022,809.

Siddeley Engines Ltd.: *See*—
Frost, Alan. 3,022,935.

Sides, Harold I.: *See*—
Sides, Harold I. 3,022,593.
Welter, George I. 3,023,018.

Sides, Kitty B.: *See*—
Sides, Harold I. 3,022,593.

Sides, Harold I., to H. I. and K. B. Sides. Tag display unit. 3,022,593, 2-27-62, Cl. 40—308.

Sieber, Peter: *See*—
Fleckenstein, Hans, Sieber, and Kiesow. 3,022,969.

Siegert, Charles L. Infra-red radiation monitor. 3,023,398, 2-27-62, Cl. 340—51.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Czullus, Werner. 3,023,360.

Silver, Julian, to Instant-Fold Products, Inc. Collapsible cover for three-dimensional articles. 3,022,808, 2-27-62, Cl. 150—52.

Simmonds Precision Products, Inc.: *See*—
Smith, Stanley J. 3,022,665.

Simon, John P., to International Harvester Co. Transmission for vehicles. 3,022,683, 2-27-62, Cl. 74—759.

Sims, Raymond B., to Davy and United Engineering Co. Ltd. Apparatus for controlling thickness of material. 3,022,688, 2-27-62, Cl. 80—56.

Sinclair Oil & Gas Co.: *See*—
Peterson, Lorenz A. 3,023,304.

Sinclair Refining Co.: *See*—
Podlipnik, John. 3,023,156.

Singer Mfg. Co., The: *See*—
Daman, Louis F. 3,022,576.

Skil Corp.: *See*—
Amundsen, Oliver O., and Botefuhr. 3,022,769.

Skinner Precision Industries, Inc.: *See*—
Multer, Howard, and Roddy. 3,023,016.
Padula, Lawrence D. 3,022,799.

Smirnow, Peter: *See*—
Eiden, Leo W., Rustad, and Smirnow. 3,022,616.

Smith, Charles G., to Raytheon Co. Methods of heating and levitating molten material. 3,023,091, 2-27-62, Cl. 23—301.

Smith, Chester L., and C. W. Pinkley; said Smith assor. to United States of America, Army. Analogue to digital integrator. 3,023,376, 2-27-62, Cl. 331—131.

Smith, Earl G., to Construction Machinery Co. Concrete mixing drum and method of making same. 3,023,056, 2-27-62, Cl. 308—204.

Smith, Edwin K., Jr., J. D. Alexander, and R. Marks, to Minnesota Mining and Mfg. Co. Photoprinting apparatus. 3,022,710, 2-27-62, Cl. 95—77.5.

Smith, Harry B., D. H. Mooney, Jr., and W. Ewanus, to Westinghouse Electric Corp. Pulse doppler radar system. 3,023,409, 2-27-62, Cl. 343—13.

Smith, John W., Jr., to Plas-Tainer Inc. Sealing means. 3,022,918, 2-27-62, Cl. 215—56.

Smith, Marvin A., to Universal Oil Products Co. Apparatus for the manufacture of spherical particles. 3,023,171, 2-27-62, Cl. 252—359.

Smith, Robert M.: *See*—
Bartz, Quentin R., Ehrlich, Knudsen, and Smith. 3,023,204.

Smith, Stanley J., to Simmonds Precision Products, Inc. Liquid contents gauges. 3,022,665, 2-27-62, Cl. 73—304.

Smith, Thomas R., to The Maytag Co. Clothes drier. 3,022,581, 2-27-62, Cl. 34—75.

Snow, Robert E., to International Minerals & Chemical Corp. Beneficiation of calcite-apatite-quartz ores. 3,022,890, 2-27-62, Cl. 209—11.

Societe des Thes de l'Elephant: *See*—
Gallet, René. 3,022,620.

Societe des Usines Chimiques Rhone-Poulenc: *See*—
Scribabine, Igor. 3,023,247.

Societe d'Etude des Industries du Petrole Au Port de Strasburg (Societe a Responsabilite Limitee): *See*—
Donnet, Jean-Baptiste A. 3,023,118.

Socony Mobil Oil Co., Inc.: *See*—
Clapetta, Frank G., Coonradt, and Garwood. 3,023,159.
McLaughlin, Robert L., and Schick. 3,023,245.

Soles, Otto H., and R. E. Kane, to Westinghouse Electric Corp. Compressed gas circuit interrupter. 3,023,291, 2-27-62, Cl. 200—148.

Sorensen, Knud B. and A. J. Bjerkan, to Deere & Co. Auxiliary sprocket carrying means for a planter. 3,022,754, 2-27-62, Cl. 111—52.

Sorenson, Bill W., and C. Denhardt. Collapsible cradle for automatic washers. 3,022,995, 2-27-62, Cl. 269—55.

Sosa, Joseph. Humidor. 3,023,064, 2-27-62, Cl. 312—31.

Southern Chemicals, Inc.: *See*—
Cousino, Elwin F., and Brown. 3,022,712.

Southwestern Industrial Electronics Co.: *See*—
Erath, Louis W. 3,023,368.

Sperry Rand Corp.: *See*—
Johnson, Wesley R., and Larson. 3,023,279.
Nolt, Edwin B. 3,022,622.
West, James R. 3,022,882.

Spodobalski, Joseph W., to Morris, Wheeler, & Co., Inc. Apparatus for swaging or flaring saw teeth. 3,022,684, 2-27-62, Cl. 76—48.

Spooner, Daniel. Containers or jars. 3,022,916, 2-27-62, Cl. 215—31.

Stadler, Robert: *See*—
Reppe, Walter, and Stadler. 3,023,237.

Stagmeier, Arthur F., to General Foods Corp. Dehydration of water chestnuts. 3,023,110, 2-27-62, Cl. 99—204.

Standard Oil Co., Ohio, The: *See*—
Alford, Harvey E., and Veatch. 3,023,116.
Hook, Edwin O., and Tate. 3,023,092.

Standard Packaging Corp.: *See*—
Wistrand, John C. 3,022,924.

Stansbury, Harry A., Jr., and H. R. Guest, to Union Carbide Corp. Long chain alkoxy diamines. 3,023,243, 2-27-62, Cl. 260—584.

Stearns, James A.: *See*—
Grummitt, Oliver J., and Stearns. 3,023,117.

Stedman, Russell F., to Universal Oil Products Co. Refining of hydrocarbons. 3,023,160, 2-27-62, Cl. 208—240.

Steele, Floyd G., to Digital Control Systems, Inc. Difunction computing elements. 3,022,949, 2-27-62, Cl. 235—152.

Steenrod, Richard A., Jr.: *See*—
Emmerling, Anson A., Kaufman, Osborne, and Steenrod. 3,023,262.

Stegley, Brian J., and S. A. Pittard; said Pittard assor. to said Stegley. Windows. 3,022,547, 2-27-62, Cl. 20—52.2.

Stein, Werner: *See*—
Blaser, Bruno, Stein, and Schirp. 3,023,216.
Schutt, Hartwig, and Stein. 3,023,234.

Stein, Werner, H. Schirp, and H. Schütt, to Henkel & Cie G.m.b.H. Process for the introduction of carboxyl groups into aromatic compounds. 3,023,217. 2-27-62, Cl. 260—295.5.

Steinlein, Gustav, and W. Trunk, to Fichtel & Sachs A.G. Separator arrangement for internal combustion engine. 3,022,776, 2-27-62, Cl. 123—73.

Stemen, Orie J. Alternator mount for diesel engines. 3,022,778, 2-27-62, Cl. 123—195.

Sterling Seal Co.: *See*—
Patton, Franklin S., and King. 3,022,922.

Stewart, Vincent N., to General Electric Co. Electric circuit interrupter. 3,023,292, 2-27-62, Cl. 200—166.

Steyermark, Paul R., and M. L. Wolfrom, to W. R. Grace & Co. Process for the preparation of diglycosylureas. 3,023,205, 2-27-62, Cl. 260—211.5.

Stimler, Morton: *See*—
Reed, Herbert B., Jr., and Stimler. 3,023,397.

Stimson, Homer J. Barge. 3,022,633, 2-27-62, Cl. 61—46.5.

Stokes, F. J., Corp.: *See*—
Strong, Richard V. D., Hamilton, and Hacker. 3,022,619.

Stolwijk, Jan A. J., to John B. Pierce Foundation. Differential calorimeter. 3,022,664, 2-27-62, Cl. 73—190.

Strauss, Wennemar: *See*—
Willmund, Wolf-Dieter, and Strauss. 3,023,150.

Strauss, Wennemar, G. Michael, and W.-D. Willmund, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Nickel electroplating baths. 3,023,151, 2-27-62, Cl. 204—49.

Strauss, Wennemar, and H. Wedell, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Copper electroplating baths. 3,023,152, 2-27-62, Cl. 204—52.

Strong, Richard V. D., W. H. Hamilton, and E. W. Hacker, to F. J. Stokes Corp. Vacuum chest bottle stoppering apparatus. 3,022,619, 2-27-62, Cl. 53—106.

Strull, Gene, to Westinghouse Electric Corp. Oscillator having predetermined temperature-frequency characteristics. 3,023,347, 2-27-62, Cl. 317—234.

Stuart, Robert W., Jr., to General Radio Co. Counter and display systems. 3,022,944, 2-27-62, Cl. 235—92.

Stuijts, Andreas L.: *See*—
Duinker, Simon, Stuijts, Wijn, and Westmijze. 3,023,166.

Sueker, Keith H., and R. C. Blackmond, to Westinghouse Electric Corp. Control system. 3,023,356, 2-27-62, Cl. 323—69.

Sugawara, Ryozo: *See*—
Hata, Toju, Sugawara, and Matsumae. 3,023,145.

Sun Oil Co.: *See*—
Hodges, James W. 3,022,828.
Hodges, James W. 3,022,829.

Sundstrand Corp.: *See*—
Schaller, Leo. 3,022,611.

Sutliffe, Frank C., Jr. Thermo-element. 3,022,670, 2-27-62, Cl. 73—368.4.

Swain, William H., to Electro-Mechanical Research, Inc. Frequency modulation systems. 3,023,377, 2-27-62, Cl. 332—23.

Swanson, George J., and E. Kokalas, to The Bendix Corp. Socket contact. 3,023,396, 2-27-62, Cl. 339—258.

Sweeney, John F., Jr.: *See*—
Tronslin, Cyril B., Sweeney, Brede, and Dorsett. 3,023,280.

Sweet, Richard C.: *See*—
Hughes, Ray C., and Sweet. 3,023,389.

Swiggett, Robert L., to Printed Motors, Inc. Printed circuit armature. 3,023,333, 2-27-62, Cl. 310—268.

Swingline, Inc.: *See*—
Ruskin, Henry. 3,022,508.

Sylvania Electric Products Inc.: *See*—
Cross, Donald J., and Scanlon. 3,022,674.
Hill, Robert M. 3,023,380.

Szmuszkovicz, Jacob, and W. C. Anthony, to The Upjohn Co. Novel 2-(3-indolyl)-1,4-butanediols and 2-(3-indolyl)-1,4-butanediol dicarbamates. 3,023,221, 2-27-62, Cl. 260—319.

Tab Products Co.: *See*—
Ribbens, Jacob J., Leete, and Foote. 3,022,595.

Takats, Zoltan, and S. Ondrusek, to General Aniline & Film Corp. Camera shutter mechanism. 3,022,715, 2-27-62, Cl. 95—62.

Talbott, Eldred A.: *See*—
Maassen, René. 3,023,067.

Tanabe, Kenichi, and Y. Ohno, ¾ to Kurashiki Rayon Co., Ltd. and ¼ to Air Reduction Co., Inc. Polyvinyl alcohol fibers of improved dyeability. 3,023,182, 2-27-62, Cl. 260—29.6.

Tartter, Arnold, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Water-soluble dyestuffs of the azaporphin series. 3,023,218, 2-27-62, Cl. 260—314.5.

Tate, Dald P.: *See*—
Hook, Edwin O., and Tate. 3,023,092.

Taylor, Aubrey B.: *See*—
Greathouse, Glen A., and Taylor. 3,023,144.

Taylor, Dudley D. Vacuum deposited strain gage and method of making same. 3,022,570, 2-27-62, Cl. 29—155.7.

Taylor, Raymond G., Jr., to Borg-Warner Corp. Stop collar. 3,023,036, 2-27-62, Cl. 287—52.03.

Taylor, William R., to American Radiator & Standard Sanitary Corp. Hot fluid-cold fluid mixing valve. 3,022,798, 2-27-62, Cl. 137—606.

Tegge, Bruce R., F. P. Baldwin, and G. E. Serniuk, to Esso Research and Engineering Co. Continuous process for chemically modifying iso-olefin-multiolefin rubbery polymer. 3,023,191, 2-27-62, Cl. 260—73.

Te Grotenhuis, Theodore A., 20% to The General Tire & Rubber Co. Coating compositions containing pigment having a hydrophobic surface, method of production, and article coated therewith. 3,023,181, 2-27-62, Cl. 260—29.2.

Tektronix, Inc.: *See*—
Frenkel, Lothar. 3,023,336.
Morrow, James E., and Boyle. 3,022,973.

Telefonaktiebolaget L M Ericsson: *See*—
Johannesson, Nils O. 3,022,952.
Pliskär, Inge G. 3,022,805.
Thorsen, Jarl M. 3,023,355.

Temple, Ernest E.: *See*—
Temple, Robert and E. E. 3,022,513.

Temple, Robert and E. E., to Mine Safety Appliances Co. Explosive actuated stud driving tool. 3,022,513, 2-27-62, Cl. 1—106.

Templet Industries, Inc.: *See*—
Rheingold, Lawrence M., and Berlin. 3,022,758.

Templeton, William E. Hay baler. 3,022,723, 2-27-62, Cl. 100—98.

Tessmann, Alfred H. Continuous casting apparatus. 3,022,552, 2-27-62, Cl. 22—57.2.

Texas Instruments Inc.: *See*—
Broadley, William A., and Jastram. 3,023,350.
Epstein, Henry D. 3,023,287.

Textor, Clinton K., ½ to The Bauer Bros. Co., and ½ to FMC Corp. Pulp bleaching. 3,023,140, 2-27-62, Cl. 162—24.

Thaler, Leo. Ventilated finger ring. 3,022,648, 2-27-62, Cl. 63—15.

Thoma, Oswald: *See*—
Bowers, Eric H., and Thoma. 3,023,058.

Thoma, Wilhelm, O. Bayer, and H. Rinke, to Farbenfabriken Bayer Aktiengesellschaft. Light-sensitive compounds and their use in the reproduction technique. 3,023,100, 2-27-62, Cl. 96—35.

Thoma, Wilhelm, O. Bayer, and H. Rinke, to Farbenfabriken Bayer Aktiengesellschaft. Soluble polyureas and process for producing the same. 3,023,193, 2-27-62, Cl. 260—77.5.

Thomas, Arthur M., Jr., to Esso Research and Engineering Co. Caustic regeneration process. 3,023,084, 2-27-62, Cl. 23—184.

Thomas & Betts Co., The: *See*—
Logan, Maurus C. 3,022,557.

Thompson, Earl A. Pressure fed rocker shoe bearing. 3,023,055, 2-27-62, Cl. 308—73.

Thompson, Elvin T., to Lewis Engines, Inc. Miniature motor vehicle. 3,022,846, 2-27-62, Cl. 180—11.

Thompson, Jerome B. Laboratory fume hood. 3,022,718, 2-27-62, Cl. 98—115.

Thompson Ramo Wooldridge Inc.: *See*—
Ballsh, Frank R. 3,023,372.
Ballsh, Frank R., McGarrell, Miller, and Naylor. 3,023,371.
Naylor, Arthur F. 3,023,373.

Thompson, William B.: *See*—
Zeigler, Philip B., and Thompson. 3,022,772.

Thor Power Tool Co., The: *See*—
Mitchell, Wallace F. 3,022,838.

Thorp, James T., Jr., to Universal Match Corp. Explosively actuated valves. 3,022,793, 2-27-62, Cl. 137—68.

Thorsen, Jarl M., to Telefonaktiebolaget L M Ericsson. Amplitude limiting system. 3,023,355, 2-27-62, Cl. 323—9.

Thorsheim, Joseph O., to Minneapolis-Honeywell Regulator Co. Control apparatus. 3,022,987, 2-27-62, Cl. 263—10.

Tillyer, Edgar D., and W. E. Folland, to American Optical Co. Apparatus and methods for production of helium by diffusion. 3,022,858, 2-27-62, Cl. 183—2.

Timken Roller Bearing Co., The: *See*—
Edwards, Herbert C. 3,023,057.

Tiraspolsky, Wladimir. Motors for subterranean work. 3,022,837, 2-27-62, Cl. 175—107.

Tislow, Richard F., W. F. Bruce, and J. A. Page, to American Home Products Corp. 2-propionyl-10{γ-N'-β-hydroxyethyl piperazino)-propyl}-phenothiazine: process for the treatment of withdrawn psychotic subjects. 3,023,146, 2-27-62, Cl. 167—65.

Tobler, August. Core oils, foundry cores and moulds and methods of making the same. 3,023,112, 2-27-62, Cl. 106—38.7.

Tochihara, Shigezo: *See*—
Hosbino, Yasushi, Namikawa, and Tochihara. 3,023,010.

Toledo Scale Corp.: *See*—
Burgy, Raymond A., and De Lamater. 3,022,864.

Torres, Jorge, to On Mark Couplings, Inc. Quick disconnect coupling for fluid lines. 3,023,030, 2-27-62, Cl. 285—18.

Torrington Co., The: *See*—
Oberem, William C. 3,022,651.
Virtue, Byron T. 3,022,650.

Toulmin, Harry A., Jr., to The Commonwealth Engineering Co. of Ohio. Sound deadening tile. 3,022,607, 2-27-62, Cl. 50—101.

Towne, Claude M., to General Metals Corp. Retainer for bucket teeth. 3,022,586, 2-27-62, Cl. 37—142.

Trafton, Raymond E. Fluid valve means for containers. 3,022,516, 2-27-62, Cl. 4—56.

Transogram Co., Inc.: *See*—
Benkoe, Erwin. 3,022,779.

Tree, Charles, to Tree Tool & Die Works. Taper grinding tool. 3,022,608, 2-27-62, Cl. 51—43.

Tree Tool & Die Works: *See*—
Tree, Charles. 3,022,608.

Trico Products Corp.: *See*—
Scinta, Anthony C. 3,022,531.

Troche, Herman J.: *See*—
Eckels, George H., and Troche. 3,022,854.

Troche, Herman J., to Holan Corp. Earth boring apparatus. 3,022,839, 2-27-62, Cl. 175—201.

Tronslin, Cyril B., J. F. Sweeney, Jr., D. W. Brede, and J. W. Dorsett, Jr., to Ampex Corp. Degaussing apparatus. 3,023,280, 2-27-62, Cl. 179—100.2.

Trotta, Fred: *See*—
Rallis, Theodore, and Trotta. 3,022,789.

Trought Associates, Inc.: *See*—
Trought, Norman J. 3,022,675.

Trought, Norman J., to Trought Associates, Inc. Variable angle gear drive mechanism. 3,022,675, 2-27-62, Cl. 74—385.

Trunk, Willi: *See*—
Steinlein, Gustav, and Trunk. 3,022,776.

Tuboscope Co.: *See*—
Wood, Fenton M. 3,023,312.

Tucker, Ell J., Jr., to National Bone and Tissue Laboratories, Inc. Method of preserving tissue such as bones. 3,022,783, 2-27-62, Cl. 128—1.

Tuckey, Charles H., to Walbro Corp. Fuel pump. 3,022,737, 2-27-62, Cl. 103—44.

Tumolo, Anthony L.: *See*—
Maggiolo, Allison, and Tumolo. 3,023,233.

Tung-Sol Electric Inc.: *See*—
Firth, Bernard G. 3,023,364.
Firth, Bernard G. 3,023,365.

Turek, James R., E. C. Petrie, and R. B. Attridge, to Crane Co. Recessed soap holder. 3,022,602, 2-27-62, Cl. 45—28.

Turner, Edward H., to Bell Telephone Laboratories, Inc. Transversely magnetized non-reciprocal microwave device. 3,023,379, 2-27-62, Cl. 333—9.

Turowski, Johannes: *See*—
Lang, Karl F., Metzendorf, Gick, and Turowski. 3,023,125.
Lang, Karl F., Metzendorf, Turowski, and Gick. 3,023,255.

Turrentine, Rudolph A., to Brown & Root, Inc. Floating buoy retrieving hook. 3,022,763, 2-27-62, Cl. 114—221.

Twelves, Robert D., to Olin Mathieson Chemical Corp. Preparation of acyl hydrazine derivatives. 3,023,241, 2-27-62, Cl. 260—561.

Udall, Anthony J. S., to Electric & Musical Industries Ltd. Interpolators, especially for control mechanism for automatic machines. 3,022,953, 2-27-62, Cl. 235—197.

Umlitz, Wilhelm, to A. and H. Reifenhauser. Process for continuously withdrawing or transporting, shaped elements, tubes or the like. 3,022,928, 2-27-62, Cl. 226—172.

Underwood, William F., and S. Venkataramaraj, to Union Carbide Corp. Method of bonding a synthetic resin coating to a polyolefin surface and article produced thereby. 3,023,126, 2-27-62, Cl. 117—76.

Union Carbide Corp.: *See*—
Claussen, Gerard E. 3,023,301.
Guest, Howard R., Adams, and Kiff. 3,023,222.
Hagler, Duran L., and Kasbohm. 3,022,635.
Hersh, Solomon P., and Meyers. 3,023,129.
Kennedy, Harry E., and Claussen. 3,023,302.
Meyers, Cal Y. 3,023,251.
Montagna, Amelio E., and Hirsh. 3,023,250.
Oliver, John P. 3,023,393.
Reinking, Norman H. 3,023,225.
Sauers, Carol K., and Cotter. 3,023,240.
Senior, George A., Jr. 3,023,252.
Stansbury, Harry A., Jr., and Guest. 3,023,243.
Underwood, William F., and Venkataramaraj. 3,023,126.

Union Commerce Bank : *See*—
Pyzel, Robert. 3,022,989.
Union Steel Products Co. : *See*—
Averill, Charles C. 3,022,900.
Unitcast Corp. : *See*—
Flochr, Walter L. 3,022,536.
United-Carr Fastener Corp. : *See*—
Willis, Grant N. 3,022,887.
United Merchants and Manufacturers, Inc. : *See*—
Dabrowski, Jan. 3,023,072.
United Shoe Machinery Corp. : *See*—
Rockwell, Adelbert W., Jr., and Mitchell. 3,022,527.
U.S. Expansion Bolt Co. : *See*—
Potruch, Robert A. 3,022,701.
United States Gypsum Co. : *See*—
Setterberg, Carl B. 3,022,538.
United States of America
Agriculture : *See*—
Bloch, Felix. 3,022,807.
Mustakas, Gus C., Griffin, and Kirk. 3,023,107.
Air Force : *See*—
Lawson, Gerald W., and Arrigo. 3,022,668.
Army : *See*—
Cornish Edwin R., Jr. 3,023,293.
Kargl, Gilard. 3,022,706.
Smith, Chester L., and Pinkley. 3,023,376.
Atomic Energy Commission : *See*—
Allen, Robert J., and Petrow. 3,023,078.
Anderson, John W., Miley, and Pritchard. 3,023,119.
Burris, Leslie, Jr., and Schneider. 3,023,097.
Cawley, William E., and Frantz. 3,023,040.
Ellis, Robert E. 3,022,933.
McBride, John P. 3,023,085.
Interior : *See*—
Mafrica, Leo. 3,022,842.
National Aeronautics and Space Administration : *See*—
Dimeff, John, and Gardner. 3,022,672.
Navy : *See*—
Emmerling, Anson A., Kaufman, Osborne, and Steenrod. 3,023,262.
Gardiner, Paul C., Jewett, and Broomell. 3,022,760.
McCollum, Sterling A. 3,022,630.
Paley, Warren D. 3,022,732.
Reed, Herbert R., Jr., and Stimler. 3,023,397.
Wexler, Arnold, Krinsky, and Garfinkel. 3,022,667.
United States Steel Corp. : *See*—
Hawthorne, John O., and Wilt. 3,023,199.
Marburg, Edgar. 3,022,551.
Nichol, Wilbert G. 3,022,750.
Universal Controls, Inc. : *See*—
Rosapepe, Frank P. 3,022,938.
Universal Match Corp. : *See*—
Thorp, James T., Jr. 3,022,793.
Universal Oil Products Co. : *See*—
Gerald, Curtis F. 3,022,934.
Linn, Carl B. 3,023,170.
Luvisi, John P., and Chenicek. 3,023,161.
Nixon, William G. 3,023,173.
Smith, Marvin A. 3,023,171.
Stedman, Russell F. 3,023,160.
Urban, Peter, and Massey. 3,023,088.
Watkins, Charles H. 3,023,158.
Unsworth, Alan R. Racks for holding wine glasses and like articles. 3,022,809, 2-27-62, Cl. 211—71.
Updegraff, Ivor H. : *See*—
Cresswell, Arthur, Kocay, and Updegraff. 3,023,134.
Upham, Sidney D., and I. Klothen, to American Cyanamid Co. Stabilization of animal and poultry feed containing chlortetracycline. 3,023,105, 2-27-62, Cl. 99—2.
Upjohn Co., The : *See*—
Szmuszkovicz, Jacob, and Anthony. 3,023,221.
Urban, Peter, and L. G. Massey, to Universal Oil Products Co. Production of sulfur. 3,023,088, 2-27-62, Cl. 23—226.
Utility Service Co., Inc. : *See*—
Wells, Henry. 3,022,746.
Van de Weijer, Martinus H. A., to North American Philips Co., Inc. Method of manufacturing sodium-vapour discharge tubes. 3,023,069, 2-27-62, Cl. 316—26.
Van Roojen, Jan, to The Ingersoll Milling Machine Co. Incremental feed mechanism. 3,022,680, 2-27-62, Cl. 74—625.
Van Tetterode, Floris, to F. van Tetterode and J. de Gruil, acting as Glasindustrie F. van Tetterode. Method of strengthening sheet glass in an agitated liquid fluoride bath. 3,023,139, 2-27-62, Cl. 156—24.
Van Tetterode, Glasindustrie F. : *See*—
Van Tetterode, Floris. 3,023,139.
Van Uitert, Le Grand G., to Bell Telephone Laboratories, Inc. Magnesium ferrite containing aluminum and method of making same. 3,023,165, 2-27-62, Cl. 252—62.5.
Van Veen, Anton. Hand operated calculating device. 3,022,942, 2-27-62, Cl. 235—82.
Vath, Hermann S. Basting dispenser for cooking. 3,022,721, 2-27-62, Cl. 99—345.
Veatch, Franklin : *See*—
Alford, Harvey E., and Veatch. 3,023,116.
Vendo Co., The : *See*—
McNeely, Wilbur C. 3,022,719.
Venkataramaraj, Subbaraju : *See*—
Underwood, William F., and Venkataramaraj. 3,023,126.
Victor Comptometer Corp. : *See*—
Flagge, Andrew. 3,022,939.
Victoria Machine Tool Co. Ltd. : *See*—
Gronau, Hans. 3,022,677.
Vilter Mfg. Corp. : *See*—
Long, Joseph N. 3,022,642.
Vincent, John N., to Continental Can Co., Inc. Package opening machine. 3,022,912, 2-27-62, Cl. 214—305.
Vincent, John N., and H. J. Kuntz, to Continental Can Co., Inc. Can package unloading machine. 3,022,913, 2-27-62, Cl. 214—310.
Vines, Oscar L. Bag valve. 3,022,932, 2-27-62, Cl. 220—62.5.
Viola, Vito, and C. Olson, to Friden, Inc. Tens-transfer mechanism. 3,022,947, 2-27-62, Cl. 235—133.
Virtue, Byron T., to The Torrington Co. Latch knitting needle and method of forming. 3,022,650, 2-27-62, Cl. 66—122.
Vodoklys, Frank V., to Westinghouse Electric Corp. Phosphor, lamp and method. 3,023,339, 2-27-62, Cl. 313—109.
Voertman, Kenneth W., and R. L. Lich, to General Steel Industries, Inc. Pneumatic suspensions for vehicles. 3,022,749, 2-27-62, Cl. 105—199.
Voisine, Ange E. Baking oven. 3,022,752, 2-27-62, Cl. 107—63.
Voorhees, Edward M., ¼ to E. M. Voorhees, ¼ to I. C. Capdeville, ¼ to C. M. Funk, and ¼ to L. L. Mullins. Pastry cutter with pneumatic stripper. 3,022,893, 2-27-62, Cl. 83—169.
Wacker-Chemie G.m.b.H. : *See*—
Enk, Eduard, and Nickl. 3,023,087.
Wagner, Howard A., to Westinghouse Electric Corp. Rectifier structure. 3,023,346, 2-27-62, Cl. 317—234.
Wagner, Robert. Phonographic recording. 3,023,011, 2-27-62, Cl. 274—46.
Wagner, Kuno, and O. Bayer, ¼ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Production of urethane polyisocyanate-urea diisocyanate mixtures. 3,023,228, 2-27-62, Cl. 260—471.
Wagner, Robert. Phonographic recording. 3,023,011, 2-27-62, Cl. 274—46.
Wainer, Eugene, and A. L. Cunningham, to Horizons Inc. Refractory material. 3,023,115, 2-27-62, Cl. 106—65.
Wainwright, Carlyle H., and F. E. Deans, to The Bentley Engineering Co. Ltd. Control mechanism for circular knitting machines. 3,022,652, 2-27-62, Cl. 66—154.
Walbro Corp. : *See*—
Tucker, Charles H. 3,022,737.
Waldorf Paper Products Co. : *See*—
Guyer, Reynolds. 3,022,931.
Waldrop, Charles R. : *See*—
Gerhardt, Andrew H., and Waldrop. 3,022,655.
Waldrop, Thomas C., to Empire Rubber Co. Swab rubber unit for well swab. 3,023,062, 2-27-62, Cl. 309—52.
Walker, Alfred O., to Nalco Chemical Co. Water treatment compositions and processes for their production and use. 3,023,169, 2-27-62, Cl. 252—175.
Waller, Herbert H., to Servo Corp. of America. Variable frequency generator control circuit. 3,023,370, 2-27-62, Cl. 331—11.
Wallingford, Vernon H., to Mallinckrodt Chemical Works. Dibasic acids and salts thereof. 3,023,232, 2-27-62, Cl. 260—513.
Wappner, Ralph C., to The Ohio Thermometer Co. Thermometer support. 3,022,671, 2-27-62, Cl. 73—375.
Wasserman, Rene D., and J. F. Quaas, to Eutectic Welding Alloys Corp. Hard surfacing material. 3,023,130, 2-27-62, Cl. 117—205.
Watkins, Charles H., to Universal Oil Products Co. Increasing the yield of gasoline boiling range product from heavy petroleum stocks. 3,023,158, 2-27-62, Cl. 208—89.
Watkins, William B. Antenna mast support. 3,022,970, 2-27-62, Cl. 248—41.
Watson, Clyde E. and H. Automatic lot weighing machines. 3,022,843, 2-27-62, Cl. 177—98.
Watson, Harold : *See*—
Watson, Clyde E. and H. 3,022,843.
Weatherhead Co., The : *See*—
Allin, Frederick R. 3,022,797.
Webcor, Inc. : *See*—
Dale, Colin B. 3,023,009.
Weber, Rudolf : *See*—
Junghans, Helmut, and Weber. 3,022,733.
Webster, William G. : *See*—
Davies, Robert H., and Webster. 3,022,954.
Webster, William W., to General Motors Corp. Closures for upright pipes or stacks. 3,022,717, 2-27-62, Cl. 98—59.
Wedell, Hans : *See*—
Strauss, Wennemar, and Wedell. 3,023,152.
Weil, Bert, to Devonsheer Melba Corp. Transfer mechanism for bread slices and other items. 3,022,903, 2-27-62, Cl. 214—1.
Wells, Donald A. Electric broiler. 3,023,298, 2-27-62, Cl. 219—37.
Wells, Henry, to Utility Service Co., Inc. Automobile washer pusher. 3,022,746, 2-27-62, Cl. 104—172.
Welter, George L., to H. I. Sides. Cart seat. 3,023,018, 2-27-62, Cl. 280—33.99.
Wendell, Philip F. Display device. 3,022,504, 2-27-62, Cl. 40—319.
Wendt, Robert H. : *See*—
Malek, Walter E. 3,022,767.
Wentz, Edward C., H. R. Moore, and W. D. Albright, to Westinghouse Electric Corp. Winding for electrical apparatus. 3,023,386, 2-27-62, Cl. 336—187.
West, James R., to Sperry Rand Corp. Infeed mechanism. 3,022,882, 2-27-62, Cl. 198—104.

Westinghouse Electric Corp. : *See*—
Baird, Norman F. 3,022,653.
Baugh, Charles W., Jr. 3,023,272.
Berg, Daniel. 3,023,263.
Bolef, Dan I., and Chester. 3,023,367.
Cerulli, Nicholas F. 3,023,338.
Chester, Peter F., and Bolef. 3,023,366.
Cochran, John M., Seelhoff, and Banks. 3,023,352.
Hierholzer, Frank J., Jr., and Christensen. 3,023,357.
Kamphaus, Paul L., and Latham. 3,023,329.
MacGregor, Dean J. 3,023,349.
McLane, Fletcher E., Pollack, and Cochran. 3,023,351.
Moratis, Christy J., Ichikawa, and Pigan. 3,023,390.
Repsher, Robert W. 3,023,337.
Repsher, Robert W. 3,023,340.
Smith, Harry B., Mooney, and Ewanus. 3,023,409.
Soles, Otto H., and Kane. 3,023,291.
Struli, Gene. 3,023,347.
Sueker, Keith H., and Blackmond. 3,023,356.
Vodoklys, Frank V. 3,023,339.
Wagner, Howard A. 3,023,346.
Wentz, Edward C., Moore, and Albright. 3,023,386.
Wilson, Merrideth D. 3,023,023.
Westmijze, Willem K. : *See*—
Duinker, Simon, Stuijts, Wijn, and Westmijze. 3,023,166.
Weston, George O. : *See*—
Burn, Derek, Kirk, Petrow, and Weston. 3,023,206.
Wexler, Arnold, A. Krinsky, and S. B. Garfinkel, to United States of America, Navy. Adsorption electric hygrometer. 3,022,667, 2-27-62, Cl. 73—336.5.
Weyerhaeuser Co. : *See*—
Campbell, Claude N., Jr. 3,022,841.
Wheelock, Charles E., to Phillips Petroleum Co. Liquid diene polymer laminating and casting compositions. 3,023,197, 2-27-62, Cl. 260—88.1.
Whirlpool Corp. : *See*—
Bailliff, Ernest A., and Koch. 3,022,645.
Beckett, Leo G., and Woods. 3,022,550.
Connor, Ralph F. 3,022,936.
Diamond, William J., Levin, and Wood. 3,023,132.
Hubacker, Earl F. 3,022,640.
White, Charles S. Ball stud and method of construction. 3,023,038, 2-27-62, Cl. 287—87.
White Sewing Machine Corp. : *See*—
Wiltshire, Arthur J. 3,023,135.
Wijn, Henricus P. J. : *See*—
Duinker, Simon, Stuijts, Westmijze, and Wijn. 3,023,166.
Wikstrom, Hugo M. Safety device for a revolver. 3,022,598, 2-27-62, Cl. 42—66.
Wilde, Arthur E., to Shaffer Tool Works. Submarine drilling head and blowout preventer. 3,023,012, 2-27-62, Cl. 277—31.
Wildhaber, Ernest. Form-cutting tool. 3,022,569, 2-27-62, Cl. 29—102.
Wiley, A. R., and Sons, Inc. : *See*—
Willey, Elmer R., and Geer. 3,022,740.
Willey, Elmer R., and W. E. Geer, to A. R. Willey and Sons, Inc. Centrifugal pump case alignment mounting. 3,022,740, 2-27-62, Cl. 103—103.
Wilhelm, Fred R. : *See*—
Meyer, Henry L., Wilhelm, and Gregorczik. 3,022,584.
Williams, Edward K., to Rotax Ltd. Three phase protective relay system responsive to amplitude of ripple voltage. 3,023,345, 2-27-62, Cl. 317—52.
William Prym-Werke K.G. : *See*—
Williams, Richard E. Percussion circuit. 3,022,695, 2-27-62, Cl. 84—1.18.
Willis, Grant N., to United-Carr Fastener Corp. Lug package. 3,022,887, 2-27-62, Cl. 206—59.
Willits, Samuel P., and W. L. Mohan, to Chicago Aerial Industries, Inc. Parallax interval sensing device. 3,023,317, 2-27-62, Cl. 250—220.
Willmund, Wolf-Dieter : *See*—
Strauss, Wennemar, Michael, and Willmund. 3,023,151.
Willmund, Wolf-Dieter, and W. Strauss, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Bath for the production of metal electroplates. 3,023,150, 2-27-62, Cl. 204—44.
Wilson Jones Co. : *See*—
Marano, Herbert W. 3,023,065.
Wilson, Merrideth D., to Westinghouse Electric Corp. Vehicle banking device. 3,023,023, 2-27-62, Cl. 280—112.
Wilt, Myron H. : *See*—
Hawthorne, John O., and Wilt. 3,023,199.
Wiltshire, Arthur J., to White Sewing Machine Corp. Laminated fiber glass radome and method of making same. 3,023,135, 2-27-62, Cl. 154—43.
Winkler, Frederick, Jr. : *See*—
Sanders, Elmore J., Winkler, and Neymark. 3,022,770.
Winsauer, Weldon O., and J. H. Edwards, to Jersey Production Research Co. Method for sand consolidation. 3,022,825, 2-27-62, Cl. 166—33.
Winterbottom, Robert : *See*—
Origoni, Victor E., and Winterbottom. 3,023,239.
Wintriss, George. Switch apparatus for detecting delivery of parts. 3,023,283, 2-27-62, Cl. 200—61.41.
Wistrand, John C., to Standard Packaging Corp. Sugar dispenser. 3,022,924 2-27-62, Cl. 222—456.
Wolf Detroit Envelope Co., The : *See*—
Affelder, Harry F. 3,023,128.
Wolff, Hermann P. : *See*—
Kahn, Allan A., and Wolff. 3,023,320.
Wolfrom, Melville L. : *See*—
Steyermark, Paul R., and Wolfram. 3,023,205.
Wood Donald C. : *See*—
Diamond, William J., Levin, and Wood. 3,023,132.
Wood, Fenton M., to Tuboscope Co. Radioactive pipe thickness measurement. 3,023,312, 2-27-62, Cl. 250—52.
Woods, John T. : *See*—
Beckett, Leo G., and Woods. 3,022,550.
Worth, Francis C., to Adolph Gottscho, Inc. Marking apparatus. 3,022,724, 2-27-62, Cl. 101—27.
Wright, Clyde E., to The Ridge Tool Co. Tubing cutter. 3,022,575, 2-27-62, Cl. 30—102.
Wright, Leon W., and J. D. Brandner, to Atlas Chemical Industries, Inc. Process for producing isoidide. 3,023,223, 2-27-62, Cl. 260—347.8.
Wyeth, Nathaniel C. : *See*—
Daniels, Charles E., and Wyeth. 3,022,566.
Wylde, Joseph R., and J. G. N. Drewitt, to British Celanese Ltd. Process for crimping cellulose triacetate fibers. 3,022,545, 2-27-62, Cl. 19—66.
Wylie, Robert D., to The Babcock & Wilcox Co. Low carbon ferritic stainless steel. 3,023,098, 2-27-62, Cl. 75—125.
Xenis, Constantine P., to Consolidated Edison Co. of New York, Inc. Method and apparatus for interior coating of pipes. 3,022,765, 2-27-62, Cl. 118—2.
Yaeger, Luther L., and R. P. Lappala, to Bjorkstен Research Laboratories, Inc. Photographic process for etching scribing media. 3,023,099, 2-27-62, Cl. 96—35.
Yeomans, Arthur S., Jr., to Olin Mathieson Chemical Corp. Shotshell wad structure. 3,022,731, 2-27-62, Cl. 102—42.
Young, Andres : *See*—
Hall, Frederick W., and Young. 3,023,275.
Zaic, Frank : *See*—
Glass, John P., and Zaic. 3,022,946.
Zaiger, Max. Windshield wiper blade. 3,022,532, 2-27-62, Cl. 15—250.42.
Zavarella, Salvatore. Blade for rotary cutter. 3,022,621, 2-27-62, Cl. 56—295.
Zebarth, Ralph S., to Gordon Johnson Co. Machine for continuous cooling of giblets. 3,022,646, 2-27-62, Cl. 62—381.
Zeigler, Philip B., and W. B. Thompson, to General Motors Corp. Rotary power steering valve with torsion bar centering. 3,022,772, 2-27-62, Cl. 121—41.
Zeman, Kenneth P., to General Electric Co. Electrolytic method of producing thin sheets of aluminum oxide. 3,023,149, 2-27-62, Cl. 204—12.
Zenith Radio Corp. : *See*—
Ellers, Carl G., Hendrickson, and Herrmann. 3,023,270.
Isabeau, John. 3,023,321.
Zernov, Peter, to Mercury Engineering Corp. Web feed device for rotary printing press. 3,022,727, 2-27-62, Cl. 101—181.
Zia, Yee C. Safety adjustable-seat mounting for front seat of a vehicle. 3,022,976, 2-27-62, Cl. 248—430.
Ziegler, Carl : *See*—
Bornemann, Dieter, Dohr, Renner, and Ziegler. 3,023,242.
Zimmermann, Rolf : *See*—
Greth, Arthur, and Zimmermann. 3,022,604.

CLASSIFICATION OF PATENTS

ISSUED FEBRUARY 27, 1962

NOTE.—First number=class, second number=subclass, third number=patent number

1— 3: 3,022,508
46: 3,022,509
50: 3,022,510
68: 3,022,511
106: 3,022,512
3,022,513
2— 60: 3,022,514
151: 3,022,515
4— 56: 3,022,516
57: 3,022,517
185: 3,022,518
187: 3,022,519
5— 109: 3,022,520
351: 3,022,521
353.7: 3,022,522
361: 3,022,523
8— 55: 3,023,071
82: 3,023,072
94.33: 3,023,073
130.1: 3,023,074
9— 312: 3,022,524
10— 27: 3,022,525
76: 3,022,526
12— 8.5: 3,022,527
15— 31: 3,022,528
49: 3,022,529
79: 3,022,530
250.35: 3,022,531
250.42: 3,022,532
354: 3,022,533
400: 3,022,534
16— 37: 3,022,535
75: 3,022,536
105: 3,022,537
18— 2.5: 3,022,538
8: 3,022,539
24: 3,022,540
48: 3,022,541
54: 3,023,075
55: 3,022,542
57: 3,022,543
59.3: 3,022,544
19— 66: 3,022,545
20— 52.2: 3,022,546
3,022,547
53: 3,022,548
56.5: 3,022,549
69: 3,022,550
22— 31: 3,022,551
57.2: 3,022,552
110: 3,022,553
116: 3,022,554
193: 3,022,555
3,022,556
23— 2: 3,023,076
14: 3,023,077
14.5: 3,023,078
50: 3,023,079
3,023,080
3,023,081
88: 3,023,082
107: 3,023,083
184: 3,023,084
204: 3,023,085
206: 3,023,086
223.5: 3,023,087
226: 3,023,088
259.2: 3,023,089
273: 3,023,090
301: 3,023,091
24— 17: 3,022,557
134: 3,022,558
205.13: 3,022,559
205.15: 3,022,560
284: 3,022,561
25—131.6: 3,022,562
28— 1: 3,022,563
63: 3,022,564
72: 3,022,565
78: 3,022,566
29— 1.21: 3,022,567
25.3: 3,022,568
95.1: 3,022,710
102: 3,022,569
155.7: 3,022,570
193.5: 3,022,571
225: 3,022,572
235: 3,022,573
30— 90.5: 3,022,574
102: 3,022,575
241: 3,022,576
32— 28: Re.25,130
33— 3: 3,022,577
46: 3,022,578
98: 3,022,579
34— 60: 3,022,580
75: 3,022,581
35— 39: 3,022,582
36— 7.2: 3,022,583
37— 80: 3,022,584
86: 3,022,585
142: 3,022,586
159: 3,022,587
191: 3,022,588
38— 104: 3,022,589
39— 5: 3,022,590
40— 140: 3,022,591
3,022,592
308: 3,022,593
319: 3,022,594
325: 3,022,595
42— 1: 3,022,596
55: 3,022,597
66: 3,022,598
43—43.11: 3,022,599
54.5: 3,022,600
3,022,601
44— 69: 3,023,092
45— 28: 3,022,602
46— 41: 3,022,603
76: 3,022,606
47— 10: 3,022,604
58: 3,022,605
61: P.P.2,132
48— 191: 3,023,093
50— 101: 3,022,607
51— 43: 3,022,608
55: 3,022,609
96: 3,022,610
141: 3,022,611
256: 3,022,612
53— 28: 3,022,613
30: 3,022,614
37: 3,022,615
56: 3,022,616
59: 3,022,617
3,022,618
106: 3,022,619
137: 3,022,620
56— 295: 3,022,621
341: 3,022,622
57—58.83: 3,022,623
102: 3,022,624
137: 3,022,625
58— 50: 3,022,626
55: 3,022,627
60— 35.6: 3,022,628
3,022,629
39.82: 3,022,630
52: 3,022,631
61— 5: 3,022,632
46.5: 3,022,633
54: 3,022,634
62— 21: 3,022,635
64: 3,022,636
3,022,637
115: 3,022,638
155: 3,022,639
156: 3,022,640
163: 3,022,641
196: 3,022,642
216: 3,022,643
243: 3,022,644
344: 3,022,645
381: 3,022,646
427: 3,022,647
63— 15: 3,022,648
64— 8: 3,022,649
66— 122: 3,022,650
3,022,651
154: 3,022,652
67— 31: 3,022,653
68— 18: 3,022,654
3,022,655
207: 3,022,656
71— 2.2: 3,023,095
2.4: 3,023,096
73— 38: 3,022,657
40: 3,022,658
53: 3,022,659
67.8: 3,022,660
3,022,661
93: 3,022,662
141: 3,022,663
190: 3,022,664
304: 3,022,665
322.5: 3,022,666
336.5: 3,022,667
342: 3,022,668
359: 3,022,669
368.4: 3,022,670
375: 3,022,671
398: 3,022,672
422: 3,022,673
74— 10.85: 3,022,674
385: 3,022,675
472: 3,022,676
3,022,677
473: 3,022,678
574: 3,022,679
625: 3,022,680
665: 3,022,681
750: 3,022,682
759: 3,022,683
75— 84.1: 3,023,097
125: 3,023,098
76— 48: 3,022,684
77— 62: 3,022,685
73.5: 3,022,686
78— 46: 3,022,687
80— 56: 3,022,688
81— 165: 3,022,689
82— 2: 3,022,690
38: 3,022,691
59: 3,022,692
83— 169: 3,022,693
3,022,694
84— 1.18: 3,022,695
1.26: 3,022,696
398: 3,022,697
423: 3,022,698
85— 1: 3,022,699
2.4: 3,022,700
3,022,701
88— 1: 3,022,702
2.7: 3,022,703
14: 3,022,704
16.2: 3,022,705
24: 3,022,706
28: 3,022,707
57: 3,022,708
84: 3,022,709
93— 88: 3,022,711
94— 7: 3,022,712
24: 3,022,713
95— 4.5: Re.25,128
10: 3,022,714
62: 3,022,715
77.5: 3,022,716
96— 35: 3,023,099
3,023,100
87: 3,023,101
101: 3,023,102
109: 3,023,103
98— 59: 3,022,717
115: 3,022,718
99— 1: 3,023,104
2: 3,023,105
78: 3,023,106
98: 3,023,107
103: 3,023,108
107: 3,023,109
204: 3,023,110
205: 3,023,111
289: 3,022,719
310: 3,022,720
345: 3,022,721
354: 3,022,722
100— 98: 3,022,723
101— 27: 3,022,724
40: 3,022,725
42: 3,022,726
181: 3,022,727
415.1: 3,022,728
102— 20: 3,022,729
25: 3,022,730
42: 3,022,731
70.2: 3,022,732
71: 3,022,733
95: 3,022,734
98: 3,022,735
103— 37: 3,022,736
44: 3,022,737
49: 3,022,738
87: 3,022,739
103: 3,022,740
120: 3,022,741
153: 3,022,742
258: 3,022,743
104— 12: 3,022,744
99: 3,022,745
172: 3,022,746
178: 3,022,747
105— 192: 3,022,748
199: 3,022,749
377: 3,022,750
106— 38.7: 3,023,112
38.8: 3,023,113
56: 3,023,114
65: 3,023,115
90: 3,023,116
106— 264: 3,023,117
307: 3,023,118
107— 54: 3,022,751
63: 3,022,752
110— 7: 3,022,753
111— 52: 3,022,754
77: 3,022,755
112— 210: 3,022,756
113— 44: 3,022,757
46: 3,022,758
114— .5: 3,022,759
23: 3,022,760
208: 3,022,761
3,022,762
221: 3,022,763
116— 70: 3,022,764
117— 5.1: 3,023,119
15: 3,023,120
18: 3,023,121
38: 3,023,122
44: 3,023,123
45: 3,023,124
62: 3,023,125
76: 3,023,126
109: 3,023,127
111: 3,023,128
139.4: 3,023,129
205: 3,023,130
210: 3,023,131
118— 2: 3,022,765
119—14.14: 3,022,766
51.11: 3,022,767
52: 3,022,768
121— 32: 3,022,769
38: 3,022,770
40: 3,022,771
41: 3,022,772
46: 3,022,773
122— 478: 3,022,774
123—41.82: 3,022,775
73: 3,022,776
118: 3,022,777
195: 3,022,778
124— 11: 3,022,779
125— 11: 3,022,780
126— 271: 3,022,781
344: 3,022,782
128— 1: 3,022,783
214: Re.25,129
3,022,784
218: 3,022,785
283: 3,022,786
321: 3,022,787
529: 3,022,788
132— 84: 3,022,789
134— 10: 3,023,132
46: 3,022,790
70: 3,022,791
168: 3,022,792
136— 4: 3,023,257
6: 3,023,258
3,023,259
13: 3,023,260
19: 3,023,261
120: 3,023,262
137— 68: 3,022,793
116.3: 3,022,794
227: 3,022,795
454.6: 3,022,796
599.2: 3,022,797
606: 3,022,798
625.27: 3,022,799
790: 3,022,800
138— 89: 3,022,801
125: 3,022,802
139— 384: 3,022,803
140— 71: 3,022,804
93: 3,022,805
144— 252: 3,022,806
146— 227: 3,022,807
148— 26: 3,023,133
149— 18: 3,023,094
150— 52: 3,022,808
151— 29: 3,022,809
152— 157: 3,022,810
153— 2: 3,022,811
88: 3,022,812
154— 43: 3,023,134
3,023,135
45.9: 3,023,136
156— 14: 3,023,138
24: 3,023,139
67: 3,023,137
73: 3,022,814
148: 3,022,813
158— 109: 3,022,815
160— 24: 3,022,816
160— 113: 3,022,817
206: 3,022,818
345: 3,022,819
162— 24: 3,023,140
152: 3,023,141
273: 3,022,820
374: 3,022,821
166— 4: 3,022,822
21: 3,022,823
31: 3,022,824
33: 3,022,825
100: 3,022,826
187: 3,022,827
191: 3,022,828
224: 3,022,829
167— 46: 3,023,142
53: 3,023,143
58: 3,023,144
65: 3,023,145
3,023,146
172— 7: 3,022,830
3,022,831
10: 3,022,832
19: 3,022,833
21: 3,022,834
269: 3,022,835
698: 3,022,836
174— 14: 3,023,263
35: 3,023,264
48: 3,023,265
75: 3,023,266
115: 3,023,267
153: 3,023,268
175— 107: 3,022,837
147: 3,022,838
201: 3,022,839
324: 3,022,840
177— 80: 3,022,841
3,022,842
98: 3,022,843
190: 3,022,844
230: 3,022,845
178— 2: 3,023,269
5.1: 3,023,270
5.4: 3,023,271
5.8: 3,023,272
179— 1: 3,023,273
3,023,274
6.5: 3,023,275
15: 3,023,276
3,023,277
18: 3,023,278
100.2: 3,023,279
3,023,280
175.2: 3,023,281
180— 11: 3,022,846
64: 3,022,847
69: 3,022,848
77: 3,022,849
3,022,850
181— .5: 3,022,851
3,022,852
27: 3,022,853
182— 2: 3,022,854
3: 3,022,855
193: 3,022,856
222: 3,022,857
183— 2: 3,022,858
15: 3,022,859
41: 3,022,860
71: 3,022,861
184— 6: 3,022,862
7: 3,022,863
187— 29: 3,022,864
3,022,865
3,022,866
188— 264: 3,022,867
3,022,868
189— 34: 3,022,869
36: 3,022,870
3,022,871
3,022,872
90: 3,022,873
192— 4: 3,022,874
45.1: 3,022,875
84: 3,022,876
88: 3,022,877
195— 30: 3,023,147
80: 3,023,148
197— 19: 3,022,878
172: 3,022,879
3,022,880
198— 19: 3,022,881
104: 3,022,882
200— 38: 3,023,282
61.41: 3,023,283
61.53: 3,023,284
200— 87: 3,023,285
3,023,286
113: 3,023,287
116: 3,023,288
131: 3,023,289
144: 3,023,290
148: 3,023,291
166: 3,023,292
204— 12: 3,023,149
44: 3,023,150
49: 3,023,151
52: 3,023,152
143: 3,023,153
242: 3,023,154
320: 3,023,155
206— 19.5: 3,022,883
36: 3,022,884
46: 3,022,885
56: 3,022,886
59: 3,022,887
65: 3,022,888
208— 21: 3,023,156
64: 3,023,157
89: 3,023,158
110: 3,023,159
240: 3,023,160
251: 3,023,161
209— 2: 3,022,889
11: 3,022,890
111.5: 3,022,891
122: 3,022,892
405: 3,022,893
210— 54: 3,023,162
452: 3,022,894
211— 4: 3,022,895
13: 3,022,896
36: 3,022,897
64: 3,022,898
71: 3,022,899
126: 3,022,900
212— 34: 3,022,901
214— 1: 3,022,902
3,022,903
6: 3,022,904
8.5: 3,022,905
10.5: 3,022,906
11: 3,022,907
92: 3,022,908
131: 3,022,909
140: 3,022,910
3,022,911
305: 3,022,912
310: 3,022,913
215— 11: 3,022,914
3,022,915
31: 3,022,916
44: 3,022,917
56: 3,022,918
219— 19: 3,023,293
20: 3,023,294
26: 3,023,295
34: 3,023,296
3,023,297
37: 3,023,298
38: 3,023,299
60: 3,023,300
74: 3,023,301
3,023,302
130: 3,023,303
222— 26: 3,022,919
105: 3,022,920
108: 3,022,921
182: 3,022,922
387: 3,022,923
456: 3,022,924
517: 3,022,925
223— 76: 3,022,926
99: 3,022,927
226— 172: 3,022,928
184: 3,022,929
229— 17: 3,022,930
51: 3,022,931
62.5: 3,022,932
230— 69: 3,022,933
103: 3,022,934
117: 3,022,935
207: 3,022,936
233— 28: 3,022,937
235— 42: 3,022,938
59: 3,022,939
60.48: 3,022,940
61.11: 3,022,941
82: 3,022,942
92: 3,022,943
3,022,944
3,022,945

235— 117: 3,022,946
133: 3,022,947
138: 3,022,948
152: 3,022,949
153: 3,022,950
176: 3,022,951
193: 3,022,952
197: 3,022,953
239— 453: 3,022,954
456: 3,022,955
240— 1: 3,023,304
2: 3,023,305
3,023,306
108: 3,023,307
241— 24: 3,022,956
242— 55.2: 3,022,957
71.8: 3,022,958
72: 3,022,959
75.3: 3,022,960
84.21: 3,022,961
118.61: 3,022,962
244— 15: 3,022,963
76: 3,022,964
90: 3,022,965
154: 3,022,966
3,022,967
246— 468: 3,022,968
248— 13: 3,022,969
41: 3,022,970
58: 3,022,971
68: 3,022,972
223: 3,022,973
354: 3,022,974
420: 3,022,975
430: 3,022,976
250— 6: 3,023,308
17: 3,023,309
43.5: 3,023,310
51.5: 3,023,311
52: 3,023,312
80: 3,023,313
105: 3,013,314
201: 3,023,315
217: 3,023,316
220: 3,023,317
237: 3,023,318
251— 61: 3,022,977
362: 3,022,978
252— 34.7: 3,023,163
49.7: 3,023,164
62.5: 3,023,165
3,023,166
63.2: 3,023,167
137: 3,023,168
175: 3,023,169
252— 321: 3,023,170
359: 3,023,171
455: 3,023,172
466: 3,023,173
254— 62: 3,022,979
100: 3,022,980
164: 3,022,981
257— 245: 3,022,982
269: 3,022,983
260— 2: 3,023,174
2.5: 3,023,175
21: 3,023,176
3,023,177
22: 3,023,178
25: 3,023,179
27: 3,023,180
29.2: 3,023,181
29.6: 3,023,182
30.2: 3,023,183
3,023,184
31.6: 3,023,185
37: 3,023,186
41: 3,023,187
41.5: 3,023,188
45.5: 3,023,189
47: 3,023,190
73: 3,023,191
75: 3,023,192
77.5: 3,023,193
79.3: 3,023,194
79.5: 3,023,195
87.5: 3,023,196
88.1: 3,023,197
3,023,198
91.3: 3,023,199
93.1: 3,023,200
94.7: 3,023,201
94.9: 3,023,202
3,023,203
112: 3,023,204
211.5: 3,023,205
239.55: 3,023,206
244: 3,023,207
250: 3,023,208
3,023,209
3,023,210
268: 3,023,211
286: 3,023,212
287: 3,023,213
3,023,214
293.4: 3,023,215
295.5: 3,023,216
3,023,217
314.5: 3,023,218
315: 3,023,219
260— 316: 3,023,220
319: 3,023,221
340.7: 3,023,222
347.8: 3,023,223
348.6: 3,023,224
3,023,225
465.3: 3,023,226
468: 3,023,227
471: 3,023,228
479: 3,023,229
486: 3,023,230
504: 3,023,231
513: 3,023,232
514: 3,023,233
515: 3,023,234
519: 3,023,235
527: 3,023,236
533: 3,023,237
3,023,238
559: 3,023,239
561: 3,023,240
3,023,241
3,023,242
584: 3,023,243
586: 3,023,244
590: 3,023,245
595: 3,023,246
599: 3,023,247
606.5: 3,023,248
610: 3,023,249
614: 3,023,250
621: 3,023,251
3,023,252
631: 3,023,253
673.5: 3,023,254
674: 3,023,255
683.68: 3,023,256
261— 27: 3,022,984
151: 3,022,985
262— 3: 3,022,986
263— 10: 3,022,987
21: 3,022,988
53: 3,022,989
266— 36: 3,022,990
267— 54: 3,022,991
57: 3,022,992
107: 3,022,993
269— 8: 3,022,994
55: 3,022,995
270— 76: 3,022,996
271— 27: 3,022,997
49: 3,022,998
68: 3,022,999
272— 74: 3,023,000
273— 1.5: 3,023,001
273—102.2: 3,023,002
119: 3,023,003
130: 3,023,004
136: 3,023,005
3,023,006
161: 3,023,007
274— 10: 3,023,008
3,023,009
41.4: 3,023,010
46: 3,023,011
277— 31: 3,023,012
41: 3,023,013
78: 3,023,014
279— 14: 3,023,015
116: 3,023,016
280—11.35: 3,023,017
33.99: 3,023,018
35: 3,023,019
36: 3,023,020
47.34: 3,023,021
87.04: 3,023,022
112: 3,023,023
150: 3,023,024
218: 3,023,025
3,023,026
289: 3,023,027
411: 3,023,028
284— 19: 3,023,029
285— 18: 3,023,030
69: 3,023,031
156: 3,023,032
187: 3,023,033
287— 52: 3,023,034
3,023,035
52.03: 3,023,036
77: 3,023,037
87: 3,023,038
119: 3,023,039
3,023,040
292— 212: 3,023,041
276: 3,023,042
294— 31: 3,023,043
88: 3,023,044
296— 31: 3,023,045
297— 156: 3,023,046
254: 3,023,047
330: 3,023,048
426: 3,023,049
462: 3,023,050
302— 14: 3,023,051
303— 2: 3,023,052
7: 3,023,053
306— 31: 3,023,054
307— 88: 3,023,319
3,023,320
307— 88.5: 3,023,321
3,023,322
3,023,323
3,023,324
3,023,325
3,023,326
141.8: 3,023,327
3,023,328
308— 73: 3,023,055
204: 3,023,056
207: 3,023,057
231: 3,023,058
238: 3,023,059
309— 6: 3,023,060
14: 3,023,061
52: 3,023,062
310— 14: 3,023,328
91: 3,023,329
162: 3,023,330
232: 3,023,331
254: 3,023,332
268: 3,023,333
3,023,334
3,023,335
311— 21: 3,023,063
312— 31: 3,023,064
111: 3,023,065
219: 3,023,066
242: 3,023,067
263: 3,023,068
313— 78: 3,023,336
108: 3,023,337
3,023,338
109: 3,023,339
3,023,340
250: 3,023,341
315— 12: 3,023,342
18: 3,023,343
83: 3,023,344
316— 26: 3,023,069
317— 52: 3,023,345
234: 3,023,346
3,023,347
318— 138: 3,023,348
170: 3,023,349
221: 3,023,350
338: 3,023,351
513: 3,023,352
321— 12: 3,023,353
322— 25: 3,023,354
323— 9: 3,023,355
66: 3,023,357
69: 3,023,356
324— 5: 3,023,358
4: 3,023,359
68: 3,023,360
324— 70: 3,023,361
125: 3,023,362
328— 30: 3,023,363
252: 3,023,364
267: 3,023,365
330— 4: 3,023,366
3,023,367
14: 3,023,368
24: 3,023,369
331— 11: 3,023,370
38: 3,023,371
39: 3,023,372
40: 3,023,373
78: 3,023,374
112: 3,023,375
131: 3,023,376
332— 23: 3,023,377
52: 3,023,378
333— 9: 3,023,379
13: 3,023,380
33: 3,023,381
34: 3,023,382
79: 3,023,383
98: 3,023,384
336— 165: 3,023,385
187: 3,023,386
198: 3,023,387
338— 172: 3,023,388
237: 3,023,389
309: 3,023,390
339— 31: 3,023,391
33: 3,023,392
118: 3,023,393
186: 3,023,394
191: 3,023,395
258: 3,023,396
340— 15: 3,023,397
51: 3,023,398
149: 3,023,399
174: 3,023,400
3,023,401
3,023,402
174.1: 3,023,403
3,023,404
347: 3,023,405
3,023,406
343— 5: 3,023,407
7.9: 3,023,408
13: 3,023,409
106: 3,023,410
118: 3,023,411
346— 74: 3,023,070

CLASSIFICATION OF DESIGNS

D 7— 5: 192,285
D13— 1: 192,286
D14— 30: 192,287
D18— 2: 192,288
D22— 2: 192,289
D26— 14: 192,290
D29— 23: 192,291
D34— 5: 192,292
192,293
29: 192,298
192,299
D40— 1: 192,295
D44— 9: 192,296
15: 192,297
D48— 24: 192,300
D52— 3: 192,301
6: 192,302
D54— 13: 192,303
D58— 12.7: 192,305
D58— 17: 192,304
D64— 11: 192,306
D71— 1: 192,307
D74— 2: 192,308
17: 192,309
D74— 17: 192,310
D80— 11: 192,311
D81— 10: 192,312
D92— 1: 192,313

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

February 27, 1962 Volume 775 Number 4

TRADEMARKS

NOTICES

Oppositions Under Section 13 of the Trademark Act of 1946

Section 13 of the Trademark Act of 1946 provides that any person who believes that he would be damaged by the registration of a mark upon the Principal Register may, upon payment of the required fee, file a verified notice of opposition in the Patent Office, stating the grounds therefor, within thirty days after publication under Section 12(a) of the mark sought to be registered.

An unverified opposition may be filed by a duly authorized attorney, but the opposition will be null and void unless verified by the opposer within a reasonable time after such filing to be fixed by the Commissioner.

A notice of opposition will not be accepted unless it complies with the statutory requirements, namely, it must be filed in the Patent Office within thirty days after publication under Section 12(a) of the mark opposed, be accompanied by the fee of $25.00, must state the grounds therefor and, if filed by the opposer, must be verified.

A request to extend the time for filing a notice of opposition under Rule 2.102 must be received in the Patent Office before the expiration of thirty days from date of publication under Section 12(a) of the mark sought to be registered. The request should specify the period of extension desired and be accompanied by a showing of good cause for the extension requested, but in the event circumstances do not permit submission of the showing of good cause with the request, it must be furnished within ten days after filing the request for extension.

Two or more parties may be joined in opposition to the registration of a mark, but separate fees of $25.00 for each party so joined must be paid. Likewise, two or more marks may be opposed in a single opposition, but a separate fee of $25.00 for each mark opposed must accompany the notice of opposition. The required fees must be received in the Patent Office within the opposition period or within such extension thereof as granted by the Commissioner for filing the notice of opposition under Rule 2.102.

HORACE B. FAY, JR.,
Jan. 16, 1962. *Assistant Commissioner.*

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Morris Balicer, New York, N.Y., Reg. No. 422,079, Canc. No. 7783.

HORACE B. FAY, JR.,
Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406(a) (COCA-COLA), The Coca-Cola Company, Beverage; **Reg. No. 47,189**, same, Non-alcoholic maltless beverages; **Reg. No. 238,145(a)**, same, Beverages and syrups for

CONDITION OF TRADEMARK APPLICATIONS AS OF DECEMBER 31, 1961

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	15,518
Date of oldest new application	June 1, 1961
Date of oldest amended application	May 8, 1961

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	6-1-61	5-8-61
(II) H. E. KASCHUB, Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	7-3-61	7-3-61
Renewals (All Classes)	11-16-61	12-26-61
Sec. 12 (c) Publications (All Classes)	12-13-61	

Applications filed during the month of December 1961—1802

Registrations Issued ..... 275—No. 727,841 to No. 728,115
Renewals Issued 50

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

the manufacture of such beverages; **Reg. No. 238,146(c)**, same; **Reg. No. 415,755** (COKE), same, Non-alcoholic maltless beverages and syrups for making such beverages, filed Jan. 4, 1962, D.C., N.D. Calif. (San Francisco), Doc. 40/431, *Coca-Cola Company* v. *Jerry's Coffee Shop*.

Reg. No. 22,406(b) (COCA-COLA), The Coca-Cola Company, Beverage; **Reg. No. 238,145(b)**, same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146(b)**, same, filed Nov. 15, 1961, D.C.N.J. (Newark), Doc. 955/61, *The Coca-Cola Company* v. *All American Bowl-O-Rama, Inc.* Consent decree; defendant enjoined Jan. 11, 1962.

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 238,145. (See Reg. No. 22,406*a* and *b*.)

Reg. No. 238,146. (See Reg. No. 22,406*a* and *b*.)

Reg. No. 347,061 (VIRGINIA GENTLEMAN), A. S. Bowman, Distilled alcoholic liquors, filed Dec. 13, 1961, D.C., W.D. Ky. (Louisville), Doc. 4247, *A. Smith Bowman Distillery, Inc.* v. *Double Springs Distillers, Inc.*

Reg. No. 371,336 (HELEN HARPER), Blume Knitwear, Inc., Knitwear, consisting of women's and children's sweaters, blouses, skirts, suits, swimsuits, play suits, dresses, caps, scarfs and coats made of wool, silk, cotton, or combinations thereof, filed Apr. 8, 1960, D.C., S.D.N.Y., Doc. 60/1449, *Blume Knitwear, Inc.* v. *M. Lahm Knitting Mills, Inc. et al.* Order of dismissal for lack of prosecution Jan. 3, 1962.

Reg. No. 406,392 (DANA), Les Parfums de Dana, Inc., Toilet soaps; **Reg. No. 535,318**, same, Toilet preparations, perfumery and cosmetics; **Reg. No. 580,767**, same, Toilet soaps, filed Jan. 3, 1962, D.C., S.D.N.Y., Doc. 62/60, *Les Parfums de Dana, Inc.* v. *Madonna, Incorporated*.

Reg. No. 415,755. (See Reg. No. 22,406.)

Reg. No. 444,792 (HERITAGE), Heritage Furniture, Inc., Upholstered furniture for living rooms— namely, sofas, sofa beds, day beds, etc.; **Reg. No. 599,977**, same, Upholstered, wood, plastic and metal furniture for household and public use, etc., filed Dec. 28, 1961, D.C., S.D. Calif. (Los Angeles), Doc. 1623/61-Y, *Drexel Enterprises, Inc.* v. *Heritage Shutters*.

Reg. No. 535,318. (See Reg. No. 406,392.)

Reg. No. 580,767. (See Reg. No. 406,392.)

Reg. No. 599,977. (See Reg. No. 444,792.)

Reg. No. 614,123 (HERTZ), Hertz Drivurself System, Inc. (now by change of name Hertz System, Inc.), Rental of automobiles and trucks, filed Jan. 12, 1962, D.C., S.D.N.Y., Doc. 62/213, *The Hertz Corporation et al.* v. *Schuyler I. Knickerbocker et al.*

Reg. No. 643,467 (PAC), Pacific Import Co., Inc., Pocket cigarette lighters, filed Jan. 11, 1962, D.C., S.D.N.Y., Doc. 62/192, *Pacific Import Co., Inc.* v. *North American Foreign Trading Corporation et al.*

Reg. No. 665,263 (EXECUTIVE), Larus & Brother Company, Pyrophoric lighters and smokers' pipes; **Reg. No. 693,006** (EXECUTIVE LINE AND DESIGN), Alfred Robbins Organization, Inc., Pocket and table lighters for cigarettes and cigars, ash trays and cigarette boxes, filed Mar. 24, 1960, D.C., S.D.N.Y., Doc. 60/1201, *Alfred Robbins Organization, Inc.* v. *Essex Executive Line et al.* Order of dismissal for lack of prosecution Jan. 3, 1962.

Reg. No. 693,006. (See Reg. No. 665,263.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 87,228. Dr. Kurt Herberts, d.b.a. Dr. Kurt Herberts & Co., vorm. Otto Louis Herberts, Wuppertal-Barmen, Germany. Filed Dec. 14, 1959.

HERBERTS

Owner of German Reg. No. 721,553, dated Jan. 27, 1959.
For Chemical Raw Materials for Industrial Purposes, Particularly Plastic Foils, Synthetic Resins as Raw Materials, Moldable Materials, and Glassfiber Enforced Moldable Materials.

SN 117,276. Hercules Powder Company, Wilmington, Del. Filed Apr. 6, 1961.

PERMALYN

For Resin.
First use Jan. 5, 1961.

SN 119,118. The Doughten Seed Company, Jersey City, N.J. Filed May 2, 1961.

Sunnyside

For Mixed Grass Seed.
First use Feb. 5, 1952.

SN 120,341. James C. Rine, Jr., d.b.a. Magic Star Charcoal, New Lexington, Ohio. Filed May 18, 1961.

magic stars

For Charcoal Briquettes.
First use Dec. 17, 1960.

SN 121,397. Long Island Plastics Corp., Lindenhurst, N.Y. Filed June 5, 1961.

LIPCO

For Granular Powdered and Paste Masses of Synthetic Resinous Material for General Use in the Industrial Arts.
First use Mar. 29, 1961.

SN 122,689. Foster Grant Co., Inc., Leominster, Mass. Filed June 23, 1961.

FOSTER GRANT

"Foster Grant" is a fictitious name.
For Thermoplastic Molding and Extruding Resins.
First use May 16, 1961.

Class 2—Receptacles

SN 109,584. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Dec. 5, 1960.

Owner of Reg. Nos. 229,665, 644,738, and others.
For Paperboard Containers, Paperboard Trays and Paperboard Cartons for Packaging Food Products.
First use Nov. 3, 1960.

SN 113,342. Kapgo Plastics Corporation, Manchester, N.H. Filed Feb. 9, 1961.

KAPGO

For Plastic Bottles and Similar Containers.
First use on or about Jan. 2, 1960.

SN 116,709. Diamond National Corporation, New York, N.Y. Filed Mar. 29, 1961.

FOODTAINER

Owner of Reg. No. 512,449.
For Food Trays, Made of Pulp, Paper, or Fibre.
First use Oct. 23, 1947.

SN 121,216. National Silver Company, New York, N.Y. Filed June 1, 1961.

DUO TEMP

For Plastic Tumblers.
First use Mar. 28, 1961.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 93,702. Nash Inc., Jersey City, N.J. Filed Mar. 25, 1960.

SAVONETTE

For Wallets and Billfolds.
First use Feb. 23, 1960.

SN 96,179. Amity Leather Products Co., West Bend, Wis. Filed May 2, 1960.

CREDENTIAL

For Billfolds.
First use on or about June 7, 1956.

SN 100,805. Rexbilt Leather Goods, Inc., New York, N.Y. Filed July 13, 1960.

REXBILT

Owner of Reg. Nos. 184,459, 704,127, and others.
For Leather Goods—Namely, Luggage, Briefcases, Briefbags, Portfolios, Attaché Cases, Catalog Cases, Zipper Envelopes, Keycases, Baggage Tags, Card-Cases, Utility Bags, Club Bags, and Suitcases.
First use January 1923.

SN 112,185. Accurate Leather & Novelty Co., Chicago, Ill. Filed Jan. 23, 1961.

BRIEFette

For Leather Pouches and Carrying Cases Used for Carrying Currency, Valuable Papers and the Like.
First use Jan. 3, 1961.

SN 113,481. Arnold L. Bramson, d.b.a. Bramson Enterprises, Detroit, Mich. Filed Feb. 13, 1961.

TOTE 'N FLOAT

For Inflatable Beach Bag.
First use on or about Jan. 19, 1961.
Subj. to Intf. with SN 123,397 and SN 124,373.

SN 123,397. Carlson Products Corp., Brooklyn, N.Y. Filed July 7, 1961.

TOTE-N-FLOTE

For Inflatable Beach Bag for Use as a Receptacle or Container, for Use as a Water Float or as a Pillow.
First use May 1, 1960.
Subj. to Intf. with SN 113,481 and SN 124,373.

SN 124,373. Promotion Specialties, Inc., Chicago, Ill. Filed July 20, 1961.

TOTE-FLOAT

For Inflatable Beach Bags.
First use on or about June 20, 1960.
Subj. to Intf. with SN 113,481 and SN 123,397.

SN 124,869. Aetna Leather Novelty Co. Inc., West New York, N.J. Filed July 28, 1961.

Casual Cuts

For Ladies' Handbags.
First use Apr. 5, 1961.

SN 125,095. Pyramid Leather Goods Co., Inc., New York, N.Y. Filed July 31, 1961.

SKATE-MATE

For Handbags.
First use May 1, 1961.

Class 4—Abrasives and Polishing Materials

SN 117,253. Auto-Rama Chemical Co., Inc., Decatur, Ohio. Filed Apr. 6, 1961.

AUTORAMA

For Polishes, Waxes, Rubbing Compounds and Combined Cleaners and Polishes for Automobiles.
First use July 18, 1958.

SN 117,569. U.S. Sanitary Specialties Corporation, Chicago, Ill. Filed Apr. 10, 1961.

FLATTERY

For Floor Polish.
First use Apr. 3, 1961.

Class 5—Adhesives

SN 124,406. Arvin Industries, Inc., Columbus, Ind. Filed July 21, 1961.

ARVIBOND

For Adhesive for Bonding Decorative Metal Backed Panels to Wall Surfaces.
First use Mar. 1, 1959.

SN 124,665. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 25, 1961.

LOKTAC

For Adhesive Tape.
First use Nov. 30, 1960.

SN 125,320. Pre-Mix Corporation, Cleveland, Ohio. Filed Aug. 3, 1961.

SET

Owner of Reg. Nos. 691,127 and 691,128.
For Adhesives Particularly Rubber Latex Adhesives and Epoxy Adhesives.
First use Apr. 1, 1960.

SN 125,321. Pre-Mix Corporation, Cleveland, Ohio. Filed Aug. 3, 1961.

SET

Owner of Reg. Nos. 691,127 and 691,128.
For Adhesives Particularly Rubber Latex Adhesives and Epoxy Adhesives.
First use Apr. 1, 1960.

Class 6—Chemicals and Chemical Compositions

SN 82,928. Spix Products Company, Inc., Pittsburgh, Pa. Filed Oct. 8, 1959.

NEW-BRITE

For Additive Carrying Fluorescent Brightening Agent for Introduction Into Dry Cleaning Solvent.
First use on or about July 13, 1959.

SN 83,442. Associated Food Stores Inc., Jamaica, N.Y. Filed Oct. 19, 1959.

ASSOCIATED AFS FOOD STORES

For Household Ammonia, Household Bleach Having Disinfectant and Deodorizing Properties, Liquid Laundry Starch.
First use 1952.

SN 108,952. Mills-Pearson Corporation, St. Petersburg, Fla. Filed Nov. 23, 1960.

MIL DO WAY

For Compositions Having Fungicidal and Insecticidal Properties.
First use at least as early as Jan. 15, 1960.

SN 120,267. Wallace & Tiernan Inc., Belleville, N.J. Filed May 17, 1961.

HARCHEMEX

Owner of Reg. Nos. 413,823, 637,013, and 638,643.
For Fatty Alcohols and Chemical Derivatives Thereof.
First use Jan. 3, 1952.

SN 123,340. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 3, 1961.

FILMSORT

Owner of Reg. Nos. 520,724 and 551,626.
For Developer Crystals for Use With Diazo Films.
First use Aug. 12, 1960.

SN 123,416. Fisher Scientific Company, Pittsburgh, Pa. Filed July 5, 1961.

METAB

For Reagent Indicator Tablets for Laboratory Use in Titrations.
First use June 5, 1961.

SN 123,454. American Cyanamid Company, New York, N.Y. Filed July 6, 1961.

CYANA GUARD

Owner of Reg. Nos. 587,090, 705,129, and others.
For Chemical Compositions for Use on Textiles—Namely, Neomycin Sulfate.
First use June 19, 1961.

SN 125,900. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Aug. 14, 1961.

SAVALUX

For Dyes and Pigments.
First use July 20, 1961.

Class 12—Construction Materials

SN 112,583. Amsterdam Corporation, New York, N.Y. Filed Jan. 27, 1961.

WEAVETEX

For Ceramic Tile Applied to a Flexible Base.
First use Sept. 15, 1960.

SN 114,187. Coast Pro-Seal & Mfg. Co., Los Angeles, Calif. Filed Feb. 23, 1961.

POLYTHANE

For Sealants for Joints and Cracks and the Like.
First use Jan. 9, 1961.

SN 114,475. Sam Greenebaum, d.b.a. San Vallé Tile Kilns, Los Angeles, Calif. Filed Feb. 27, 1961.

SAN VALLE'

For Roofing Tile.
First use at least as early as 1930.

SN 115,685. General Pool Corporation, Summit, Ill. Filed Mar. 15, 1961.

GLAS-CRETE

For Swimming Pools, Parts and Accessories Thereof Sold Together.
First use May 6, 1960.

SN 117,511. Louvre King, Inc., Monterey Park, Calif. Filed Apr. 10, 1961.

LOUVRE KING

Applicant hereby disclaims "Louvre" apart from the mark as a whole.
For Windows and Doors, Specifically Glass Louvre Windows.
First use Aug. 7, 1957.

SN 118,274. Natco Corporation, Pittsburgh, Pa. Filed Apr. 20, 1961.

NATCO SPEEDWALL

Owner of Reg. No. 383,429.
For Building Tile—Namely, Ceramic Tile Used in Building Walls of Office Buildings and the Like.
First use Aug. 13, 1934.

SN 119,259. AB Statens Skogsindustrier, Stockholm, Sweden. Filed May 4, 1961.

ROYAL BOARD
THREE CROWNS

No claim is made to the word "Board" apart from the mark as shown. Owner of Swedish Reg. No. 74,325, dated July 3, 1953.
For Wall Board.

SN 119,379. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed May 5, 1961.

FARM-QUIP

For Animal Stalls, Partitions, Cattle Pen Panels and Fittings, Columns, Stock Stanchions and Fittings, and Farrowing Pens.
First use July 19, 1954.

SN 124,178. G. Alfred Downs, d.b.a. Downs Glass Shop, Salem, Oreg. Filed July 18, 1961.

THERMO-SNUG

For Storm Windows.
First use Apr. 24, 1961.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 100,125. Kean Manufacturing Corporation, Dearborn, Mich. Filed July 1, 1960.

KKKKK

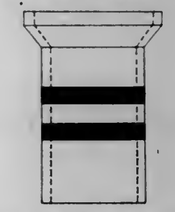
The trademark consists of a line or repeated occurrence of the letter "K" of indefinite length.
For Threaded Clinch and Pierce Nuts.
First use Oct. 1, 1958.

SN 104,593. The Headmaster Company, New Brunswick, N.J., assignee of Corrugated Adhesive and Combiner Consultants Inc., New Brunswick, N.J. Filed Sept. 16, 1960.

HEADMASTER

For Chlorinators for Marine Sewage Apparatus.
First use Jan. 8, 1960.

SN 106,859. United States Pipe and Foundry Company, Birmingham, Ala. Filed Oct. 20, 1960.



The mark consists of two white circumferential stripes on a black background.
For Cast Iron Pressure Pipe.
First use May 1, 1958.

SN 110,921. White Products Corporation, Middleville, Mich. Filed Dec. 27, 1960.

Genuine White

No claim is made to the exclusive right to use the word "Genuine" apart from the mark shown. The drawing is lined for blue, but no claim is made to color. Owner of Reg. No. 644,726.
For Bathtubs, Sinks, Lavatories and Toilets.
First use Oct. 15, 1960; in 1930 as to "White."

SN 113,179. American Cast Iron Pipe Company, Birmingham, Ala. Filed Feb. 7, 1961.



For Metal Pipes and Tubes, Bolts, and Nuts.
First use Dec. 21, 1960, on metal tubes.

SN 119,382. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed May 5, 1961.

FARM-QUIP

For Stock Water Bowls and Floor Drains, Attached to Plumbing, Attachments and Parts Thereof, Farm Barn Hardware—Namely, Hangers and Supports for Tracks, Fittings and Attachments.
First use July 19, 1954.

SN 120,892. Keystone Brass & Rubber Company, Hatboro, Pa. Filed May 26, 1961.

PLASTIGLIDE

For Furniture Legs and Casters.
First use during October 1960.

SN 120,936. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed May 29, 1961.

AQUASEAL

For Valves.
First use June 2, 1959.

SN 121,314. Irwin Paul Pines, d.b.a. Delta Distributors, Elizabeth, N.J. Filed June 2, 1961.

STAMPOST

For Magnetic Article Holders.
First use May 4, 1961.

SN 121,558. The Gilbert & Bennett Manufacturing Company, Georgetown, Conn. Filed June 7, 1961.

VINYL-GARD

For Woven and Welded Wire Products, Such as Hardware Cloths, Wire Screening, Wire Netting, Welded and Woven Fencing, and Welded Fabric.
First use May 15, 1961.

SN 121,753. Parker-Hannifin Corporation, Cleveland, Ohio. Filed June 9, 1961.

PARKER

For Couplings for Metal Tubes and Pipes; Couplings for Flexible Hose, and Valves.
First use 1923.

SN 122,241. Ace Fastener Corporation, Chicago, Ill. Filed June 19, 1961.

DART

Owner of Reg. No. 661,893.
For Staples.
First use July 12, 1957.

SN 122,323. Kenney Manufacturing Company, Cranston, R.I. Filed June 19, 1961.

DREAM HOUSE

For Drapery Hardware.
First use June 1, 1961.

SN 122,548. The Nylok Corporation, Paramus, N.J. Filed June 21, 1961.

NYLOK

Owner of Reg. No. 616,425.
For Self-Locking Screws.
First use May 15, 1961.

SN 122,632. L. R. Nelson Mfg. Co., Inc., Peoria, Ill. Filed June 22, 1961.

the sprinkler with a heart.

For Lawn and Garden Sprinklers.
First use Apr. 1, 1961.

SN 122,650. Standard Pressed Steel Co., Jenkintown, Pa. Filed June 22, 1961.

EWB

For External Wrenching Bolts.
First use February 1957.

SN 122,651. Standard Pressed Steel Co., Jenkintown, Pa. Filed June 22, 1961.

EWN

For External Wrenching Nuts.
First use May 1956.

SN 122,652. Standard Pressed Steel Co., Jenkintown, Pa. Filed June 22, 1961.

EWSB

For External Wrenching Shear Bolts.
First use in May 1956.

SN 122,653. Standard Pressed Steel Co., Jenkintown, Pa. Filed June 22, 1961.

EWSN

For External Wrenching Shear Nuts.
First use Jan. 14, 1959.

SN 122,654. Standard Pressed Steel Co., Jenkintown, Pa. Filed June 22, 1961.

FN

For Featherweight Nuts.
First use Sept. 2, 1958.

SN 122,679. Camloc Fastener Corporation, Paramus, N.J. Filed June 23, 1961.

PBF

For Quick-Acting Fasteners.
First use May 15, 1961.

SN 123,240. South Chester Corporation, Lester, Pa. Filed June 30, 1961.

3G

For Rivets.
First use May 16, 1961.

SN 123,261. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed July 3, 1961.

HYDRAMOLD

For Spouts for Faucets.
First use January 1952.

SN 123,325. Latrobe Steel Company, Latrobe, Pa. Filed July 3, 1961.

BLAST-MOR

For Nuts, Bolts, Liners, Plates, Housings and Other Parts for Shot and Sand Blast Machines and the Like.
First use June 24, 1958.

SN 123,434. Moeller Mfg. Co., Inc., Greenville, Miss. Filed July 5, 1961.

Twis-Tite

Owner of Reg. No. 614,587.
For Expandable Plugs and Stoppers for Drain Pipes.
First use July 23, 1954.

SN 123,560. Ottavia Incorporated, New York, N.Y. Filed July 7, 1961.

REGAL RINGS

The term "Rings" is disclaimed apart from the mark as shown.
For Curtain and Drapery Rings.
First use on or about June 23, 1961.

SN 123,579. Therm-O-Ware Electric Corporation, Brooklyn, N.Y. Filed July 7, 1961.

MAGI-COTE

For Skillets, Frying Pans, Cooking Utensils, and Plates.
First use on or about May 9, 1961.

SN 123,637. Armour and Company, Chicago, Ill., assignee of Food Specialties, Inc., Worcester, Mass. Filed July 10, 1961.

APPIAN WAY

Owner of Reg. No. 583,458.
For Baking Pans.
First use Sept. 30, 1952.

SN 123,752. Luster-Track Co., North Miami Beach, Fla. Filed July 11, 1961.

Luster-track

For Drapery Traverse Tracks.
First use Nov. 15, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 104,941. Premier Industrial Corporation, Cleveland, Ohio. Filed Sept. 21, 1960.

CERTANIUM

For Welding Supplies—Namely, Welding Rods and Welding Electrodes.
First use November 1959.

SN 116,737. Lukens Steel Company, Coatesville, Pa. Filed Mar. 29, 1961.

LUKENS STEEL

The word "Steel" is disclaimed aside from the mark as shown. Owner of Reg. Nos. 605,018 and 683,135.
For Various Steel Products—Namely, Clad Steel, Stainless Clad Steel, Carbon and Alloy Plate, and Steel Plate Shapes.
First use May 5, 1960.

SN 118,049. J. Robert Campbell, Harrison, N.J. Filed Apr. 18, 1961.

STREAM FLOW

Owner of Reg. No. 418,617.
For Unfinished and/or Partly Finished Castings for Drainage Grates.
First use July 26, 1944.

SN 122,668. Wah Chang Corporation, New York, N.Y. Filed June 22, 1961.

SPRAYBIDE

For Metal Carbide Powders for Use in Plasma Spray Applications.
First use June 16, 1961.

Class 15—Oils and Greases

SN 107,384. Stewart-Warner Corporation, Chicago, Ill. Filed Oct. 28, 1960.

ALEMITE MELT

For Motor Fuel Additive Known as a Gasoline Anti-Icer.
First use at least as early as Sept. 2, 1959.

SN 122,485. Standard Oil Company of California, d.b.a. Signal Oil Company, Los Angeles, Calif. Filed June 20, 1961.

HI-WAY

Owner of Reg. No. 389,388.
For Motor Oils and Gear Lubricants.
First use Jan. 1, 1933.

SN 124,679. R. A. Reiff, Inc., West Atlantic City, N.J. Filed July 25, 1961.

GARDEN STATE

Owner of Reg. No. 389,950.
For Motor Fuel, Heating Oils and Lubricating Oils and Greases.
First use June 12, 1940.

Class 16—Protective and Decorative Coatings

SN 87,229. Dr. Kurt Herberts, d.b.a. Dr. Kurt Herberts & Co., vorm. Otto Louis Herberts, Wuppertal-Barmen, Germany. Filed Dec. 14, 1959.

HERBERTS

Owner of German Reg. No. 721,553, dated Jan. 27, 1959.
For Varnish and Paint Products, Including Anti-Rust Paints and Varnishes; Stains; Electro-Insulating Lacquers and Enamels for Wires; Binders for Emulsion Paints; Silk Screen Printing Dyes; and Protective Coatings for Wood, Paper, Cardboard, Stone, Brickwork, Tissues, Metals, and Plastics.

SN 109,662. American-Marietta Company, Pittsburgh, Pa. Filed Dec. 6, 1960.

STRIP-GARD

For Vinyl Coating Materials Which Form Flexible Films.
First use on or about Nov. 16, 1960.

SN 109,873. Ionoklad Inc., Southfield, Mich. Filed Dec. 8, 1960.

IONOKLAD

For Paint Including a Weld Thru Primer for Use on Metal Surfaces.
First use on or about Nov. 1, 1956.

SN 110,325. Glass Plastics Corporation, Linden, N.J. Filed Dec. 16, 1960.

TUFF

Owner of Reg. No. 639,203.
For Pigmented Resins and Curing Agents Adapted To Be Mixed Together To Produce Epoxy Paints.
First use on or about May 12, 1960.

SN 111,529. Nankee Aluminum Paint Co., Inc., Brooklyn, N.Y. Filed Jan. 9, 1961.

Nankee STRIKE

For Floor Finish and Protective Floor Coating.
First use on or about July 11, 1960.

Class 17—Tobacco Products

SN 123,737. Eddies Luncheonette & Cigar Store, Inc., New York, N. Y. Filed July 11, 1961.

EL HIDALGO

For Cigars.
First use July 15, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 89,193. Norden Laboratories, Inc., Lincoln, Nebr. Filed Jan. 18, 1960.

KETOSOL

For Preparation for Parenteral Use in the Treatment of Ketosis and for Supportive Therapy in Milk Fever and Shock Cases, Used in Veterinary Medicine.
First use Oct. 19, 1956.

SN 96,747. Sedames Laboratories, Inc., Boston, Mass. Filed May 9, 1960.

Sedames

For Drug Product—Namely, Pharmaceutical Sedative for Menstrual Period.
First use Jan. 12, 1960.

SN 103,532. Bristol-Myers Company, New York, N.Y. Filed Aug. 29, 1960.

PENSTAFO

For Antibiotic Pharmaceutical Preparation.
First use July 27, 1960.

SN 119,323. Sublinguals, Inc., Gardiner, N.Y. Filed May 4, 1961.

SUBSIDEN

For Pharmaceutical Preparation for the Treatment of Bursitis and Allied Conditions.
First use Mar. 1, 1960.

SN 120,544. Eli Lilly and Company, Indianapolis, Ind. Filed May 22, 1961.

CORDRAN

Owner of Reg. No. 638,729.
For Anti-Inflammatory Corticosteroid Preparation.
First use May 16, 1961.

SN 121,321. Riker Laboratories, Inc., Northridge, Calif. Filed June 2, 1961.

ESTOMUL

For Pharmaceutical Preparation for the Treatment of Gastric Disorders.
First use Apr. 15, 1961.

SN 122,510. C & H Research Laboratories, Inc., Coral Gables, Fla. Filed June 21, 1961.

SEAVIM

For Medicinal Salt Solutions Comprising Trace Elements.
First use May 19, 1961.

SN 122,661. The Upjohn Company, Kalamazoo, Mich. Filed June 22, 1961.

EQUIMIX

Owner of Reg. No. 710,817.
For Medicated Feed Supplement for Veterinary Use.
First use Feb. 9, 1960.

SN 122,662. The Upjohn Company, Kalamazoo, Mich. Filed June 22, 1961.

NUPRIN

Owner of Reg. No. 591,038.
For Antibacterial Agent.
First use Apr. 20, 1961.

SN 123,762. Poultry Health Laboratories, Davis, Calif. Filed July 11, 1961.

TCND

For Poultry Vaccines.
First use Mar. 1, 1960.

SN 124,659. The Locke Chemical Company, Baltimore, Md. Filed July 25, 1961.

DANDRISOL

For Medicated Lotion for Dandruff and Itching Scalp.
First use in January 1958.

SN 125,000. Carbo-Fung Laboratories, Inc., Los Angeles, Calif. Filed July 31, 1961.

CF SOLUTION

The descriptive word "Solution" is disclaimed apart from the mark as shown.
For Germicide and Antiseptic for Use as an External Application Where Inflammation Is Accompanied by Localized Bacterial or Fungus Activity.
First use on or about Jan. 1, 1940.

SN 125,112. Texas Scientific Laboratories, Inc., Houston, Tex. Filed July 31, 1961.

RICH OIL

The word "Oil" is disclaimed apart from the mark as shown.
For Pharmaceutical Preparations—Namely, Oils, Ungents or Salves for Burns, Scalds, and Abrasions.
First use Apr. 1, 1954.

SN 125,993. The Kendall Company, Boston, Mass. Filed May 3, 1961.

AFFECTION

For Medicated Skin Preparation.
First use Feb. 8, 1961.

SN 127,441. The Warren-Teed Products Company, Columbus, Ohio. Filed Sept. 7, 1961.

LIQUAGEL

For Pharmaceutical Product—Namely, an Antitussive Preparation.
First use Aug. 9, 1961.

SN 127,442. The Warren-Teed Products Company, Columbus, Ohio. Filed Sept. 7, 1961.

VENTUSSIN

For Pharmaceutical Product—Namely, an Antitussive Preparation.
First use Aug. 9, 1961.

SN 128,918. Chas. Pfizer & Co., Inc., New York, N.Y. Filed Sept. 29, 1961.

LIMMITS

For Dietary Supplement, Containing Vitamins and Minerals, for Obesity Control.
First use June 21, 1961.

SN 129,251. The Warren-Teed Products Company, Columbus, Ohio. Filed Oct. 4, 1961.

ANACOL

For Cough Medicine.
First use Jan. 23, 1939.
Subj. to Intf. with SN 124,555.

Class 19—Vehicles

SN 90,048. Fox Go-Boy Carts, Inc., Janesville, Wis. Filed Feb. 1, 1960.

MAK KART

Applicant disclaims the word "Kart" apart from the mark as shown.
For Midget Motor Vehicles or Carts.
First use Nov. 1, 1959.

SN 107,588. Scott Rayfield Rich, Carmichaels, Pa. Filed Nov. 1, 1960.

MOBILE GARAGE

For House Trailers.
First use June 1, 1960.

SN 110,810. Angelus Trailer Mfg. Co., Inc., El Monte, Calif. Filed Dec. 27, 1960.

GOZINTA

For House Trailers.
First use Oct. 27, 1960.

SN 120,844. Aluminum Body Corporation, Montebello, Calif. Filed May 26, 1961.

INSUL CAB

In the drawing the words "Insul Cab" are lined for the color green. The word "Cab" is disclaimed.
For Truck Cabs.
First use on or about Jan. 31, 1961.

SN 124,607. Wagner Mining Scoop, Inc., Portland, Oreg. Filed July 24, 1961.

TELESCOPE

For Trucks—Namely, Rubber Tired Mine Trucks.
First use Apr. 24, 1961.

SN 124,714. Chrysler Corporation, Highland Park, Mich. Filed July 26, 1961.



For Automobiles and Their Structural Parts.
First use Mar. 28, 1961.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 87,955. International Resistance Company, Philadelphia, Pa. Filed Dec. 24, 1959.

GBT

For Insulated Composition Resistors.
First use June 1958.

SN 88,091. Radio Corporation of America, New York, N.Y. Filed Dec. 28, 1959.

"LIVING COLOR"

For Television Receivers.
First use at least as early as Sept. 30, 1959.

SN 102,065. The Thomas & Betts Co., Elizabeth, N.J. Filed Aug. 4, 1960.

REDDY

For Electrical Terminal Lugs, Solderless Connectors, Taps, T's, and Cable Splicers.
First use Oct. 21, 1958.

SN 103,433. American Electronics, Inc., Los Angeles, Calif. Filed Aug. 26, 1960.

AMSTAT

For Inverters, Converters, Frequency Changers, Regulators, Magnetic Amplifiers.
First use Feb. 19, 1960.

SN 106,559. Wesco Electrical Company, Inc., Greenfield, Mass. Filed Oct. 17, 1960.

WESCO

For Capacitors, Including Dry, Plastic-Film, Paper, Glass; Resistors; High-Voltage Power Supplies.
First use in or about May 1936.

SN 110,673. Essex Wire Corporation, Fort Wayne, Ind. Filed Dec. 22, 1960.

BANTAM

For Electrical Relays of the Electro-Magnetic Type Built to Industrial Customers' Specifications for Use as Circuit-Controlling Components of Manufactured Equipment.
First use Dec. 12, 1960.

SN 110,922. White Products Corporation, Middleville, Mich. Filed Dec. 27, 1960.

General White

No claim is made to the exclusive right to use the word "Genuine" apart from the mark shown. The drawing is lined for blue, but no claim is made to color. Owner of Reg. No. 644,726.
For Electric Water Heaters.
First use in June 1957; in 1930 as to "White."

SN 114,801. Smith-Corona Marchant Inc., New York, N.Y. Filed Mar. 2, 1961.

TYPETRONIC

For Data Processing Equipment, Specifically Automatic Writing Systems Including an Electric Typewriter and Electric In-Put and Out-Put Devices.
First use Jan. 4, 1961.

SN 115,294. Automotive Warehouse Distributor, Inc., Denver, Colo. Filed Mar. 10, 1961.

Wonstop

For Generators, Distributors, Starting Motors, Voltage Regulators, Solenoids, Spark Plugs, Batteries, Lights, Electric Signals, and Horns.
First use Jan. 20, 1961.

SN 117,601. Belknap Hardware and Manufacturing Company, Louisville, Ky. Filed Apr. 11, 1961.

BLUE GRASS

Owner of Reg. Nos. 70,312, 666,299, and others.
For Hand Held Portable Tools—Namely, Electric Drills, Electric Saws, Electric Sanders, Electric Soldering Irons, and Electric Water Heaters.
First use 1902.

SN 117,958. El-Tronics, Inc., West Warren, Pa. Filed Apr. 17, 1961.

FLICK-R-FLAME

For Negative Glow Type Lamps.
First use Mar. 21, 1961.

SN 118,382. Eddie S. Tubin, d.b.a. Tubin Electronics, Los Angeles, Calif. Filed Apr. 21, 1961.

ION-O-MATIC

For Electrical Negative Ion Producing Machines for Home and Commercial Use.
First use Jan. 7, 1961.

SN 119,588. Yardney International Corp., New York, N.Y. Filed May 8, 1961.

ANDYAR

For Electric Batteries, Components and Accessories Therefor.
First use Mar. 5, 1958.

SN 119,628. Litton Electron Tube Corporation, San Carlos, Calif. Filed May 9, 1961.

INJECTRON

For Vacuum Tubes, and More Particularly High Voltage Switch Tubes.
First use on or about Apr. 21, 1961.

SN 119,835. Beacon Manufacturing Company, Swannanoa, N.C. Filed May 12, 1961.

CAMELOT

For Electric Blankets.
First use Apr. 14, 1961.

SN 120,438. Pacific Semiconductors, Inc., Lawndale, Calif. Filed May 19, 1961.

LAMINAR

The drawing is lined for orange, however, the use of color is not an essential feature of the mark.
For Semiconductor Diodes and Transistors.
First use Apr. 11, 1961.

SN 121,075. Continental Merchandise Co. Inc., New York, N.Y. Filed May 31, 1961.

SOUNDTIME

For Clock Radio.
First use Nov. 20, 1960.

SN 121,087. Electro-Voice, Incorporated, Buchanan, Mich. Filed May 31, 1961.

ACOUSTALLOY

For Diaphragms for Microphones.
First use October 1946.

SN 121,127. Sargent & Greenleaf, Inc., d.b.a. Security Devices Laboratory, Rochester, N.Y. Filed May 31, 1961.

SDL

For Electronic Devices—Namely, Resonant Reed Relays, Amplifiers, Tone Encoders and Decoders.
First use September 1958.

SN 121,398. The Marble Company, Nashville, Tenn. Filed June 5, 1961.

ATA

For Carbon Electrodes for Electric Lamps.
First use June 1957.

SN 121,453. The Whitney Blake Company, Hamden, Conn. Filed June 5, 1961.

PORTA-WATT

For Portable Electrical Distribution Systems for Temporary Lighting and Power Supplies, Comprising Insulated Electric Cords With Connectors, Circuit Breaker Panels, Extension Cords, Flasher Light Heads, and Lamp Sockets.
First use on or about June 14, 1960.

SN 121,529. The Arnold Engineering Company, Marengo, Ill. Filed June 7, 1961.

ARUMEN

For Permanent Magnets.
First use Apr. 4, 1961.

SN 121,568. Walter Kidde & Company, Inc., Belleville, N.J. Filed June 7, 1961.

FYRINDEX

For Temperature Controlled Electrically Actuated Fire Detecting and Fire Alarm Apparatus of Both Fixed Temperature and Temperature Rate-of-Rise Types Responsive to the Presence of a Fire in an Area To Be Protected.
First use on or about Feb. 10, 1955.

SN 121,599. Rome Cable Corporation, Rome, N.Y. Filed June 7, 1961.

TRIMLINE

For Electric Power Distribution Systems, and Hanger-Spacer Members Used in an Aerial Electric Power Distribution System Comprising a Messenger and a Plurality of Conductors Supported From the Messenger.
First use Nov. 13, 1958.

SN 121,609. Sunbeam Corporation, Chicago, Ill. Filed June 7, 1961.

TOUCH 'N GO

For Electric Vacuum Cleaners and Parts Therefor.
First use May 26, 1961.

SN 121,726. Grayhill, Inc., La Grange, Ill. Filed June 9, 1961.

GRAYHILL

For Switches, Parts for Binding Posts, Test Clips, Test Clip Adapters.
First use June 23, 1947.

SN 121,995. Hankscraft Company, Reedsburg, Wis. Filed June 14, 1961.

HANKSCRAFT

Owner of Reg. Nos. 162,258, 621,747, and 654,054.
For Electrically Operated Humidifiers, Vaporizers, Sterilizers, Egg Cookers, Milk and Food Warmers, Bottle Warmers, Night Lights, Electric Motors, and Electrically Operated Drive Mechanisms for Actuating Movable Advertising Signs and Displays.
First use about Jan. 1, 1914.

SN 121,996. Hankscraft Company, Reedsburg, Wis. Filed June 14, 1961.

Hankscraft

Owner of Reg. Nos. 162,258, 621,747, and 654,054.
For Electrically Operated Humidifiers, Vaporizers, Sterilizers, Egg Cookers, Milk and Food Warmers, Bottle Warmers, Night Lights, Electric Motors, and Electrically Operated Drive Mechanisms for Actuating Movable Advertising Signs and Displays.
First use Aug. 18, 1953.

SN 122,022. Perma-Power Company, Chicago, Ill. Filed June 14, 1961.

ROVING ROSTRUM

For Portable Sound Amplifier Including Microphone, Amplifier and One or More Speakers.
First use June 5, 1961.

SN 122,949. Perfect Circle Corporation, Hagerstown, Ind. Filed June 27, 1961.

RE-FRE-TRAN

For Electronic Transducers.
First use June 1, 1961.

SN 123,956. Antenna Designs, Inc., Burlington, Iowa. Filed July 14, 1961.

TRANS-TENNA

For Antennas.
First use July 3, 1961.

SN 124,020. Frank Adam Electric Company, St. Louis, Mo. Filed July 17, 1961.

POWER PLUGIN

For Electrical Switches, Busduct and Fittings Therefor.
First use July 13, 1949.

SN 124,320. Anaconda Wire and Cable Company, Hastings-on-Hudson, N.Y. Filed July 20, 1961.

TPE

For Insulated Electrical Wire and Cable.
First use June 15, 1961.

Class 22—Games, Toys, and Sporting Goods

SN 119,094. Zadek Feldstein Co., Inc., d.b.a. "Sanitoy," Brooklyn, N.Y. Filed May 1, 1961.



Owner of Reg. No. 227,192.
For Stuffed Toys.
First use Nov. 29, 1960.

SN 120,133. Shakespeare Company, Kalamazoo, Mich. Filed May 16, 1961.

MON.OVAL

For Fishing Line.
First use Aug. 1, 1960.

SN 120,289. Buffalo Rubber & Supply, Inc., Buffalo, N.Y. Filed May 18, 1961.

THUNDERBIRD

For Bowling Pins.
First use Apr. 26, 1961.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 94,181. Peter's & Russell, Inc., Springfield, Ohio. Filed Apr. 1, 1960.

EVER READY

For Hand Operated Liquid Pumps.
First use Dec. 15, 1955.

SN 107,577. Nelman Bearings Company, St. Louis, Mo. Filed Nov. 1, 1960.



For Friction Reducing Bearings.
First use in 1925.

SN 111,303. Wilcox Manufacturing Company, Raleigh, W. Va. Filed Jan. 4, 1961.

WILCOX

For Coal Mining Machinery and Parts Thereof.
First use on or about Dec. 1, 1955.

SN 113,257. American Photocopy Equipment Company, Evanston, Ill. Filed Feb. 8, 1961.

Century

For Office and Desk Type Photocopy Duplicating Machines.
First use Oct. 26, 1960.

SN 113,480. Donald S. Boyd, Kansas City, Kans. Filed Feb. 13, 1961.



For Apparatus for Automatically and Continuously Turning Leaves of a Binder or the Like To Successively Expose the Leaves to View for Advertising and Other Uses.
First use Nov. 14, 1960.

SN 113,567. Snappy, Inc., Detroit Lakes, Minn. Filed Feb. 13, 1961.

MULTI-CUT

For Sheet Metal Cutters.
First use January 1957.

SN 116,682. Ultek Corp., Palo Alto, Calif. Filed Mar. 28, 1961.

ULTEK

For Vacuum Pumps, Vacuum Systems, Vacuum Connectors, Valves and Fittings, Sorption Devices, Traps, Roughing Pumps, and Vacuum Accessories.
First use Mar. 11, 1959.

SN 117,780. Hoover Ball and Bearing Company, Ann Arbor, Mich. Filed Apr. 13, 1961.

MICRO-VELVET

For Metal Balls.
First use May 20, 1957.

SN 119,380. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed May 5, 1961.

FARM-QUIP

For Conveying and Unloading Systems and Equipment, Conveyors and Litter Carriers, Litter Carrier Tracks and Track Switches, Overhead Conveyor Tracks, Track Switches and Supports, and Barn Gutter Cleaners.
First use July 19, 1954.

SN 119,389. Jet Line Products, Inc., Charlotte, N.C. Filed May 5, 1961.

RIGID ROPE

For Hand Tool for Inserting Lines or Wires in Conduits or Pipes.
First use Aug. 20, 1960.

SN 120,078. Cole Manufacturing Company, Charlotte, N.C. Filed May 16, 1961.

COLE

For Planters and Fertilizer Distributors and Parts Therefor.
First use September 1960; in 1900 as to "Cole."

SN 120,179. Container Corporation of America, Chicago, Ill. Filed May 17, 1961.

CCA

For Packaging Machinery.
First use Nov. 5, 1958.

SN 120,298. Dayco Corporation, Dayton, Ohio. Filed May 18, 1961.

THOROBRED

Owner of Reg. Nos. 391,011, 706,659, and others.
For Textile Machinery—Namely, Loop Pickers, Lug Straps, Reversible Drop Box Pickers, Hold-Ups, Roll Coverings and Loom Checkstraps.
First use June 27, 1940.

SN 120,920. Thompson & Gill, Inc., Madera, Calif. Filed May 26, 1961.

TECO

Owner of Reg. No. 431,566.
For Feed Mill Equipment—Namely, Feed Grinders, Elevators, Mixers, Tanks, Bunkers, and Wagons.
First use Jan. 24, 1956.

SN 120,928. Herbert C. Wilton, d.b.a. Wilton Specialties, Portland, Oreg. Filed May 26, 1961.

THE SIDEWINDER

For Conveyors for Dispensing Contents of Dump Trucks.
First use Nov. 14, 1960.

SN 120,944. The Bastian-Blessing Company, Chicago, Ill. Filed May 29, 1961.

FIESTA

For Soda Fountains and Food Service Equipment.
First use May 9, 1961.

SN 121,168. Bricovmo Limited, Bradford, England. Filed June 1, 1961.

COVMO

Owner of British Reg. Nos. 485,948, 569,362, and 579,819, dated Nov. 17, 1927, June 10, 1936, and Sept. 10, 1937, respectively.
For Pistons, Piston Rings, Gudgeon Pins, and Cylinder Liners.

SN 121,462. Mergenthaler Linotype Company, Brooklyn, N. Y., assignee of Davidson Corporation, Brooklyn, N.Y. Filed June 6, 1961.

DUALITH

Owner of Reg. Nos. 628,631 and 659,027.
For Printing Machines.
First use Feb. 18, 1961.

SN 121,522. Wildman Jacquard Co., Norristown, Pa. Filed June 6, 1961.

CHALLENGER

For Knitting Machines.
First use Apr. 24, 1961.

SN 121,532. Belknap Hardware and Manufacturing Company, Louisville, Ky. Filed June 7, 1961.

BLUE GRASS

Owner of Reg. Nos. 70,312, 666,299, and others.
For Pocket Knives and Stainless Steel Tableware.
First use October 1951 on pocket knives.

SN 121,607. Snap-On Tools Corporation, Kenosha, Wis. Filed June 7, 1961.

PAR-X

Owner of Reg. No. 596,741.
For Wrenches, Wrench Sets, Wrench Sockets, Wrench Handles and Hand Service Tools for Automotive and Industrial Use.
First use Apr. 19, 1961.

SN 121,617. Zavody K. J. Vorosilova, Narodny Podnik, Dubnice nad Vahom, Czechoslovakia. Filed June 7, 1961.

Owner of Czechoslovakian Reg. No. 153,713, dated Feb. 12, 1959.
For Lathes; Mining Machinery; Crank Presses; Mill Trains; Welding Machines; Hydraulically Operated Work Benches.

SN 121,776. M. K. Wadsworth, Miami, Fla. Filed June 9, 1961.

DEWK

For Internal-Combustion Engine Driven Lawn Trimmers.
First use May 6, 1958.

SN 121,785. American Tank and Steel Corporation, Farmington, N. Mex. Filed June 12, 1961.

HY-STABIL

For Petroleum Stabilizer Apparatus.
First use Oct. 25, 1960.

SN 121,852. Donald B. Orcutt, El Modino, Calif. Filed June 12, 1961.

RAM-BOR

For Pipe Ram and Boring Machine.
First use Jan. 21, 1961.

SN 121,895. The Airoyal Company, Maplewood, N.J. Filed June 13, 1961.

CYLROTOR

For Air Cylinders, Dash-Pots, Air- and Hydraulically-Operated Intensifiers for Fluids, Air Presses, Hydraulic Power Units for Driving Rotary Hydraulic Pumps, Air-Operated Machinery and Hydraulically-Operated Machinery Suitable for One or More of the Following Operations: Pressing, Assembly, Stacking and Swaging.
First use about May 10, 1961.

SN 122,014. Mechanical Servants, Incorporated, Chicago, Ill. Filed June 14, 1961.

THE MAID

Owner of Reg. No. 615,712.
For Vending Machines for Dispensing Notions, Toiletries and Sundries.
First use Oct. 1, 1957.

SN 122,250. American Thermoform Corporation, Culver City, Calif. Filed June 19, 1961.

SEAL-EVAC

For Packaging Machines.
First use Oct. 1, 1960.

SN 122,255. American Thermoform Corporation, Culver City, Calif. Filed June 19, 1961.

UTENSIFORM

For Machine Which Forms Utensils With Thermoplastic Materials, and for the Product Formed on the Machine.
First use Feb. 1, 1961.

SN 122,618. J & L Engineering Company, Inc., Jeanerette, La. Filed June 22, 1961.

Cane Master

For Sugar Cane Harvesting and Cultivating Equipment.
First use on or about July 1, 1960.

SN 122,619. J & L Engineering Company, Inc., Jeanerette, La. Filed June 22, 1961.

J&L

For Sugar Cane Harvesting and Cultivating Equipment.
First use on or about July 1, 1960.

SN 122,659. Universal Metal Products, Inc., Industry, Calif. Filed June 22, 1961.

BURRQWIK

For Deburring Tools.
First use on or about Nov. 1, 1954.

SN 122,667. A.B. Volvo, Goteborg, Sweden. Filed June 22, 1961.

AQUAMATIC

For Inboard-Outboard Drive Unit for a Boat.
First use January 1959; in commerce January 1959.

SN 122,672. Zenith Cutter Co., Rockford, Ill. Filed June 22, 1961.

"KNIVES WITH ENDURANCE"

The term "Knives" is disclaimed apart from the mark as shown.
For Knives for Machines for Cutting and Scoring Sheet Material Such as Paperboard.
First use Sept. 1, 1926.

SN 122,703. Johnson Products, Inc., Wilton, Conn. Filed June 23, 1961.

SWAPTOPS

For Work Tables and Accessory Equipment.
First use Nov. 1, 1958.

SN 123,071. Braun & Kemmler, Baden-Wuerttemberg, Germany. Filed June 29, 1961.

BEKA

Owner of U.S. Reg. No. 662,107.
For Implements and Spoons.
First use 1955; in commerce 1955.

SN 123,160. Aktiebolaget Gense, Vilsta, Eskilstuna, Sweden. Filed June 30, 1961.

SPECTRA

Owner of Swedish Reg. No. 89,074, dated Mar. 11, 1960.
For Kitchen Utensils, Knives, Forks and Spoons of All Kinds, Made of Stainless Steel.

SN 123,277. Clayman-Perri Engineering Company, Inc., Lawrence, Mass. Filed July 3, 1961.

COFFEE CORNER

For Coffee Vending Machine.
First use on or about May 8, 1961.

SN 123,337. John McKechnie Tool & Stamplings Limited, Toronto, Ontario, Canada. Filed July 3, 1961.

RADARM

For Tool Supports.
First use Aug. 15, 1955; in commerce Oct. 7, 1955.

SN 123,619. Davis Manufacturing, Inc., Wichita, Kans. Filed July 10, 1961.

TASK FORCE

For Earth Working Machines and Parts Therefor.
First use June 28, 1961.

SN 123,814. The Hardie Manufacturing Company, Inc., Wilkes-Barre, Pa. Filed July 12, 1961.

HARDIE

Owner of Reg. No. 393,013.
For Hand and Mechanical Sprayers and Spraying and Disinfecting Devices and Systems for Horticultural, Agricultural, Mosquito Control, Car Washing, Painting, White Washing, and Similar Uses, and Comprising Portable and Stationary Units, Embracing Truck Outfits, Horse Drawn Outfits, Stationary Power Outfits, and the Engines, Pumps, and Other Parts for Any and All of These.
First use July 24, 1903.

SN 123,823. The Lumirol Corp., New York, N.Y. Filed July 12, 1961.

KWIK SLIPS

For Tubular Covers for Lithographic Printing Rollers.
First use Mar. 17, 1961.

SN 124,088. Kenneth H. Hess, d.b.a. Kenneth H. Hess Company, Healdsburg, Calif. Filed July 17, 1961.

HESS-WAY

For Tree Shakers, Hand Catching Frames, Mobile Catching Frames, Orchard Towers and Bulk Handling Equipment for Fruits.
First use Feb. 8, 1961.

SN 124,100. Krause Corporation, Inc., Hutchinson, Kans. Filed July 17, 1961.

LANDSMAN

For Farm Machinery.
First use June 27, 1961.

Class 24 — Laundry Appliances and Machines

SN 110,425. The Fletcher Mfg. Co., Inc., Oklahoma City, Okla. Filed Dec. 19, 1960.

FLEMCO

For Coin Operated Soap and Bleach Dispensers for Use in Automatic Laundries.
First use Oct. 31, 1960.

SN 123,079. Coin Clean, Inc., Baltimore, Md. Filed June 29, 1961.

COIN CLEAN

For Coin Operated Laundry and Dry Cleaning Machines.
First use Jan. 27, 1961.

SN 127,526. Electrostar G.m.b.H., Reichenbach (Fils), Wuerttemberg, Germany. Filed Aug. 24, 1961.

StarBoy

Priority claimed under Sec. 44(d) on German application filed June 1, 1960; Reg. No. 738,776, dated July 29, 1960. (Claim based on co-pending application SN 108,885, filed Nov. 22, 1960.)
For Laundry Centrifuges, Washing Machines.

SN 127,535. Electrostar G.m.b.H., Reichenbach (Fils), Wuerttemberg, Germany. Filed Aug. 24, 1961.

StarMix

Priority claimed under Sec. 44(d) on German application filed June 1, 1960; Reg. No. 738,777, dated July 29, 1960. (Claim based on co-pending application SN 108,887, filed Nov. 22, 1960.)
For Laundry Centrifuges, Washing Machines.

Class 26 — Measuring and Scientific Appliances

SN 92,526. Birns & Sawyer Cine Equipment Co., Hollywood, Calif., assignee of Birns and Sawyer Photo Supplies, Hollywood, Calif. Filed Mar. 10, 1960.

OMNIPOD

For Telephoto Lens Supports.
First use Sept. 11, 1959.

SN 92,527. Birns & Sawyer Cine Equipment Co., Hollywood, Calif., assignee of Birns and Sawyer Photo Supplies, Hollywood, Calif. Filed Mar. 10, 1960.

OMNITAR

For Telephoto Lenses.
First use Sept. 11, 1959.

SN 93,506. Dublin Industries, Inc., Hayward, Calif. Filed Mar. 23, 1960.

ERINSEAL

For Flexible Gloves or Gauntlets Sealingly Engaged With Contamination Proof Enclosures for Handling Hazardous Materials, Including Manipulator Tong Covers and Hand Coverings.
First use Jan. 29, 1960.

SN 104,495. Wild Heerbrugg AG, Heerbrugg, St. Gallen, Switzerland. Filed Sept. 14, 1960.

FALCOGON

Priority claimed under Sec. 44(d) on Swiss Reg. No. 180,303, dated Apr. 23, 1960.
For Photographic Lenses.

SN 104,707. The Execugraf Corporation, Los Angeles, Calif. Filed Sept. 19, 1960.

Execugraf

For Portable Film Viewer for Viewing Slides for Educational or Instructional Purposes.
First use July 19, 1960.

SN 104,911. The Ednalite Optical Company, Inc., Peekskill, N.Y. Filed Sept. 21, 1960.

INSTA-FIT

For Photographic Filter Holders.
First use Mar. 21, 1960.

SN 105,032. Technicon Chromatography Corporation, Chauncey, N.Y. Filed Sept. 22, 1960.

AUTOGRAD

For Continuous Flow Variable Gradient Devices for Use in Chromatography.
First use Apr. 7, 1960.

SN 107,554. Columbian Bronze Corporation, Freeport, N.Y. Filed Nov. 1, 1960.

AQUA-PROBE

For Electronically Operated Depth Sounder and Fish Finder.
First use Sept. 25, 1960.

SN 110,035. Coleman Instruments, Inc., Maywood, Ill. Filed Dec. 12, 1960.

JUNIOR

For Spectrophotometers.
First use Dec. 23, 1943.

SN 110,470. Robertshaw-Fulton Controls Company, Richmond, Va. Filed Dec. 19, 1960.

MICROSEN

Owner of Reg. No. 544,462.
For Electric, Pneumatic, Hydraulic, Thermal and Mechanical Devices and Instruments—Namely, Detectors, Indicators, Recorders, Controllers, Regulators, Relays, Switches, Transmitters, Amplifiers, Transmitting Potentiometers, Converters, and Transformers; and Apparatus for the Operation of Selectors, Limiters, Controllers, and Sensors of Electric Circuits.
First use Dec. 31, 1946.

SN 111,702. Laboratory for Electronics, Inc., Boston, Mass., assignee of Tracerlab, Inc., Waltham, Mass. Filed Jan. 11, 1961.

AUTO/WELL

For Radioactivity Sample Changers.
First use in or about April 1959.

SN 113,493. Chicago Aerial Industries, Inc., Barrington, Ill. Filed Feb. 13, 1961.

IRIS

For Photographic Camera Control Systems.
First use Dec. 26, 1960.

SN 113,627. Electronic Instruments Limited, Richmond, Surrey, England. Filed Feb. 14, 1961.

TITROMATIC

Owner of British Reg. No. 750,243, dated Jan. 24, 1956.
For Titration Apparatus.
First use Jan. 22, 1957; in commerce July 21, 1957.

SN 114,906. Aktiebolaget Atvidaberg-Facit, Atvidaberg, Sweden. Filed Mar. 6, 1961.

FACIT

Owner of Swedish Reg. No. 87,092, dated May 8, 1959; and U.S. Reg. No. 694,224.
For Adding Machines and Calculating Machines and Parts Thereof.

SN 115,388. Smith-Corona Marchant Inc., New York, N.Y. Filed Mar. 10, 1961.

LITH-O-RITE

The syllable "Rite" is disclaimed apart from the mark.
Owner of Reg. No. 571,584.
For Direct Image Masters.
First use Oct. 8, 1960.

SN 116,010. Eastman Kodak Company, Rochester, N.Y. Filed Mar. 20, 1961.

FLASHFUN

For Photographic Cameras, Photographic Carrying Cases, and Photographic Outfits, Each of Which Includes a Camera and Accessories Therefor.
First use Mar. 10, 1961.

SN 116,968. Caddygraph, Inc., Shreveport, La. Filed Apr. 3, 1961.

CADDYGRAPH

For Instrument for Measuring Conditions in an Oil Well, and Recording That Information in Graphic Form Upon a Special Chart Designed for Use Therewith.
First use on or about Jan. 23, 1961.

SN 119,310. H. A. Phillips & Company, Chicago, Ill. Filed July 14, 1961.

LEVEL EYE

Owner of Reg. No. 619,473.
For Apparatus for Determining the Liquid Level and Gas-Liquid Ratios in Pressure Pipes and in Tanks.
First use Apr. 1, 1954.

SN 119,332. The Virtis Company, Inc., Gardiner, N.Y. Filed May 4, 1961.

VIRTIS

Owner of Reg. No. 607,271.
For Laboratory Glassware.
First use Feb. 11, 1953.

SN 120,866. Cummins-Chicago Corp., Chicago, Ill. Filed May 26, 1961.

ODP

For Data Processing Equipment—Namely, Perforators, Including Document Perforators and Duplicating Perforators.
First use May 2, 1961.

SN 121,068. Brookfield Engineering Laboratories, Inc., Stoughton, Mass. Filed May 31, 1961.

VISCOSEL

For Viscometers.
First use at least as early as May 1959.

SN 121,760. Raytheon Company, Waltham, Mass. Filed June 9, 1961.

RAYSPAN

For Apparatus—Namely, Spectrum Analyzers and the Like.
First use on or about April 1954.

SN 123,131. Photocon Research Products, Pasadena, Calif. Filed June 29, 1961.

For Scientific Equipment—Namely, Transducers, Oscillator Detectors, Digital Counters, Timers for Actuating Appliances and Miscellaneous Scientific Electronic Equipment—Namely, Weld Detectors, and Flaw Detectors for Ultrasonic Equipment.
First use Feb. 14, 1955.

SN 123,224. M. L. Obitts Co., La Grange, Ohio. Filed June 30, 1961.

CON-CLEEN

For Cleaning and Rinsing Kit for Contact Lenses.
First use Apr. 10, 1961.

SN 123,413. Duncan Electronics, Inc., Costa Mesa, Calif. Filed July 5, 1961.

For Potentiometers.
First use June 30, 1960.

SN 123,953. Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed July 14, 1961.

IRINA

Owner of German Reg. No. 742,627, dated Nov. 17, 1960.
For Photographic Apparatus and Devices, as Well as Parts Thereof.

SN 124,285. Alfred F. Oliver, d.b.a. Oliver Electronics Co., South San Francisco, Calif. Filed July 19, 1961.

OLTRON

For Electronic Instruments for the Location of Metallic Objects.
First use Nov. 25, 1957.

SN 125,288. Gregory S. Dolgorukov, d.b.a. Dolgorukov Manufacturing Company, Detroit, Mich. Filed Aug. 3, 1961.

SLOT-LETTER

For Drafting Instrument—Namely, a Lettering Guide.
First use June 1, 1942.

Class 27 — Horological Instruments

SN 114,551. David G. Steven, Inc., New York, N.Y. Filed Feb. 27, 1961.

DGS

For Watches and Parts Thereof.
First use Feb. 10, 1958.

SN 120,853. Benrus Watch Company, Inc., New York, N.Y. Filed May 26, 1961.

JET VOYAGER

Owner of Reg. No. 622,701.
For Watches.
First use May 12, 1961.

SN 124,496. Ancienne Manufacture d'Horlogerie, Patek, Philippe et Co., Société Anonyme, Geneva, Switzerland. Filed July 24, 1961.

RICOCHET

Priority claimed under Sec. 44(d) on Swiss Reg. No. 184,841, dated Jan. 26, 1961.
For Watches.

Class 28 — Jewelry and Precious-Metal Ware

SN 103,618. Sunbeam Corporation, Chicago, Ill. Filed Aug. 29, 1960.

SUNBEAM

For Cuff Links and Tie Clasps.
First use Apr. 7, 1960.

SN 114,529. Poole Silver Co., Inc., Taunton, Mass. Filed Feb. 27, 1961.

Colony Silver

Applicant disclaims the word "Silver" separate and apart from the mark as shown.
For Flatware and Hollow Ware, Either Wholly or in Part of Precious Metal.
First use on or about Feb. 6, 1961.

SN 124,686. Speidel Corporation, Providence, R.I. Filed July 25, 1961.

ROMANTICA

For Watch Bracelets.
First use May 12, 1961.

SN 125,070. Montgomery Ward & Co., Incorporated, Chicago, Ill. Filed July 31, 1961.

CAROL BRENT

The mark is fanciful and is not the name of any particular living individual. Owner of Reg. No. 661,410.
For Simulated Pearl Jewelry.
First use Apr. 1, 1961.

Class 29 — Brooms, Brushes, and Dusters

SN 93,529. Edward Magnus, d.b.a. Royce-Edwards Company, Memphis, Tenn. Filed Mar. 23, 1960.

QUIK-SHINE

For Untreated Cloths for Polishing Shoes and the Like.
First use Aug. 16, 1954.

SN 104,174. Milwaukee Dustless Brush Co., Milwaukee, Wis. Filed Sept. 9, 1960.

FLIP FLOP

For Squeegees.
First use Aug. 1, 1960.

SN 115,285. All-American Brush Mfg. Co., New York, N.Y. Filed Mar. 10, 1961.

mini-TOOTHBRUSH

For Tooth Brushes.
First use Feb. 1, 1960.

Class 30 — Crockery, Earthenware, and Porcelain

SN 86,601. Shenango China, Inc., New Castle, Pa. Filed Dec. 3, 1959.

LIDO

For Chinaware—Namely, China for Commercial Food Service, as in Hotels and Restaurants.
First use Oct. 26, 1959.

SN 103,322. Bernard Berntbal, Long Island City, N.Y. Filed Aug. 24, 1960.

ATLAS

For Ceramic Wares—Namely, Cups, Saucers, Plates, Bowls, Pitchers, Jars, Lamp Bases, Vases, Ash Trays and Figurines.
First use Jan. 3, 1958.

SN 115,728. A. Raynaud & Co., Limoges, Haute Vienne, France. Filed Mar. 15, 1961.

A. RAYNAUD & Cº LIMOGES FRANCE

The term "Limoges France" is disclaimed. Priority claimed under Sec. 44(d) on French Reg. No. 2310, dated Feb. 8, 1961 (Limoges).
For Porcelain—Namely, Dinnerware, Housewares, Tea, Coffee and Chocolate Services.

SN 119,770. Imports, Inc., Los Angeles, Calif. Filed May 11, 1961.

RAY-GEE

For Earthenware and Ceramics—Namely, Bowls, Cups, Saucers, Plates, Planters, Mugs, Teapots, Cookie Jars, Salt and Pepper Sets, Vases, Candy Dishes, and Trays.
First use Sept. 7, 1960.

SN 119,771. Imports, Inc., Los Angeles, Calif. Filed May 11, 1961.

YUM-EE-YUM

For Earthenware and Ceramics—Namely, Mugs, Saucers, Plates, Tumblers, Pitchers, Salt and Pepper Sets, Sugar and Creamers, Spoons, Forks, Knives, Bowls, Cookie Jars, and Planters.
First use Nov. 16, 1960.

SN 125,204. Duchcovsky Porcelan, Narodni Podnik, Duchcov, Czechoslovakia. Filed Aug. 2, 1961.

TK
Thun
CZECHOSLOVAKIA

No claim is made to the word "Czechoslovakia" apart from the association shown in the drawing. Owner of Czechoslovakian Reg. No. 114,082, dated Mar. 19, 1947.
For China Hollow Ware Coffee Pots.

SN 131,354. Shenango China, Inc., New Castle, Pa. Filed Nov. 7, 1961.

TRU-FOOT

For China Dinnerware.
First use Apr. 18, 1961.

Class 31 — Filters and Refrigerators

SN 110,923. White Products Corporation, Middleville, Mich. Filed Dec. 27, 1960.



No claim is made to the exclusive right to use the word "Genuine" apart from the mark shown. The drawing is lined for blue, but no claim is made to color. Owner of Reg. No. 644,726.

For Ion Exchange Units for Softening and/or Removing Iron From, and/or Neutralizing Water.

First use June 1957; in 1930 as to "White."

SN 121,891. Turbomatic, Inc., Minneapolis, Minn. Filed June 12, 1961.

TURBOMATIC

For Water Conditioning, Purifying and Softening Apparatus.

First use October 1956.

SN 122,043. United Refrigerator Company, Hudson, Wis. Filed June 14, 1961.

PIZZAMATIC

For Combination Storage Freezer and Oven for Baking Frozen Foods.

First use Jan. 21, 1961.

SN 122,242. Alco Valve Company, St. Louis, Mo. Filed June 19, 1961.

ADK

For Filter and Drier Blocks Used in Drying Various Fluids, Removing Water Therefrom, and Removing Solid Contaminants, Mainly for Refrigerants.

First use Apr. 20, 1960.

SN 122,303. General Water Processing Co., Dayton, Ohio. Filed June 19, 1961.

REFINE O MATIC

For Fluid-Treating Apparatus Such as Water Softeners and Water Filters.

First use May 23, 1961.

SN 122,351. Norris Dispensers, Inc., Minneapolis, Minn. Filed June 19, 1961.

PIEMAN

For Combination Refrigerated Cabinet for Bulk Milk and Other Foods Such as Pies With Milk Dispensing Facilities.

First use Aug. 14, 1959.

SN 122,378. Schwartz Manufacturing Company, Two Rivers, Wis. Filed June 19, 1961.



For Filter Cloths, Cotton Discs for Filtering Milk, Filter-Flannel Squares, Filter Circles, Filter Bags, and Filter Tubes.

First use about the year 1922.

Class 32 — Furniture and Upholstery

SN 124,819. The Lane Company, Inc., Altavista, Va. Filed July 27, 1961.

DELINEATOR

For Furniture—Namely, Case Goods and Tables.

First use June 19, 1961.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 99,387. White Products Corporation, Middleville, Mich. Filed June 20, 1960.



No claim is made to the exclusive right to use the word "Genuine" apart from the mark shown. The drawing is lined for blue, but no claim is made to color. Owner of Reg. No. 644,726.

For Gas Water Heaters.

First use in June 1957; in 1930 as to "White."

SN 119,383. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed May 5, 1961.

FARM-QUIP

For Farm Ventilating System—Namely, Ventilating Units Including Exhaust and Circulating Fans, Intake Units for Supplying Fresh Air and Exhaust Units for Removal of Stale Air, Roof and Window Ventilators, and Parts Thereof.

First use July 19, 1954.

SN 121,614. Walton Laboratories, Inc., Irvington, N.J. Filed June 7, 1961.

THERA-MIST

For Vaporizer-Humidifier.

First use in or about October 1960.

SN 122,765. Calcinator Corporation, Bay City, Mich. Filed June 26, 1961.

DISPOS-A-WAY

For Incinerators.

First use May 8, 1961.

SN 122,785. Elastic Stop Nut Corporation of America, Union, N.J. Filed June 26, 1961.



For Reflex Light Reflectors.

First use Oct. 28, 1960.

SN 122,828. Nutone, Inc., Cincinnati, Ohio. Filed June 26, 1961.

HEAT-A-LAMP

Owner of Reg. Nos. 569,332, 671,477, and 671,478.

For Built-in Infra-Red Ceiling Heaters.

First use June 6, 1961.

SN 123,447. Standard Fuel Engineering Co., Detroit, Mich. Filed July 5, 1961.



For Industrial Furnaces.

First use 1954; 1943 as to the letters "SFE."

SN 124,142. Tennessee Stove Works, Inc., Chattanooga, Tenn. Filed July 17, 1961.

MODERN MAID

Owner of Reg. Nos. 665,968 and 705,174.

For Electric Ventilating Hoods for Ranges and Ovens.

First use July 10, 1957.

SN 124,609. Waldorf Heater Company, Philadelphia, Pa. Filed July 24, 1961.

STERLING

For Automatic Water Heaters.

First use Apr. 26, 1948.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 120,216. Morris Textile Equipment Corp., Orange, N.J. Filed May 17, 1961.

MORRISITE

For Non-Metallic Washers.

First use Apr. 3, 1961.

SN 124,541. The General Tire & Rubber Company, Akron, Ohio. Filed July 24, 1961.

NU-WHITE

For Pneumatic Tires.

First use Mar. 15, 1961.

Class 36 — Musical Instruments and Supplies

SN 69,772. Ware House of Music, Inc., Seattle, Wash. Filed Mar. 17, 1959.

ALB·M CLUB

For Grooved Phonograph Records.

First use Feb. 12, 1959.

SN 102,860. Morse Sewing Machine and Supply Corp., New York, N.Y. Filed Aug. 17, 1960.

NL 202

For Tape Recorders.

First use Sept. 16, 1959.

SN 111,830. Waltham Watch Company, Chicago, Ill. Filed Jan. 13, 1961.

WALTHAM

Owner of Reg. No. 691,942.

For Phonographs and Tape Recorders.

First use Dec. 12, 1960.

Class 37 — Paper and Stationery

SN 87,255. Micropoint, Inc., Sunnyvale, Calif. Filed Dec. 14, 1959.

COPY-STIK

For Ball Point Pens.

First use Nov. 23, 1959.

Class 38 — Prints and Publications

SN 106,234. Vision, Inc., New York, N.Y. Filed Oct. 11, 1960.

Visión

Owner of Reg. No. 437,171.

For Spanish Language Magazine.

First use November 1950.

SN 120,323. National Periodical Publications, Inc., New York, N.Y., by consolidation and change of name from National Comics Publications, Inc., New York, N.Y. Filed May 18, 1961.



The word "Comics" is disclaimed as separate and apart from the mark.

For Comic Books.

First use May 4, 1961.

SN 125,695. United Feature Syndicate, Inc., New York, N.Y. Filed Aug. 9, 1961.

DAVY JONES

For Comic Drawings for Newspaper Use and the Like.
First use June 9, 1961.

Class 39 — Clothing

SN 92,481. J. R. McMullen Company, Inc., New York, N.Y. Filed Mar. 9, 1960.

GLOUCESTER BY MC MULLEN

For Women's Wearing Apparel—Namely, Blouses, Dresses, Skirts, Slacks, Shorts, and Sweaters.
First use 1936.

SN 94,638. Youthcraft Creations, Inc., New York, N.Y. Filed Apr. 7, 1960.

TIDY TAB

For Girdles and Panty Girdles.
First use May 1956.

SN 95,413. Briarcliff Mills, Atlanta, Ga. Filed Apr. 20, 1960.

ARTIST'S MODEL

For Women's and Children's Lingerie.
First use Feb. 11, 1957.

SN 97,564. Mannex Cravats, Philadelphia, Pa. Filed May 20, 1960.

D'ARMEL

For Sweaters, Ties, Men's, Boys', and Ladies' Shirts.
First use October 1959 on ties.

SN 99,969. Southern Knitwear Mills, Inc., Charlotte, N.C. Filed June 29, 1960.

RENDALE

For Boys', Girls', and Infants' Knit Shirts; and Boys' and Girls' Sweaters.
First use June 6, 1960.

SN 106,435. Scruggs-Vandervoort-Barney, Inc., St. Louis, Mo. Filed Oct. 14, 1960.

Vandervoort's
YOUNG SOPHISTICATE

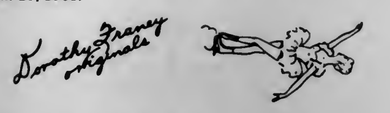
For Ladies' Dresses, Coats, Suits, Blouses, Skirts, Sweaters, Play Clothes, and Beachwear.
First use Jan. 19, 1960.

SN 111,955. Botany Industries, Inc., Passaic, N.J. Filed Jan. 17, 1961.

LADY BOTANY SHIRTMATES

Owner of Reg. Nos. 294,105, 612,633, and others.
For Ladies' Shirts and Blouses.
First use May 26, 1960.

SN 112,465. Langkop Shoe Co., Inc., Dallas, Tex. Filed Jan. 25, 1961.



No claim is made to the word "Originals" apart from the mark. The consent of "Dorothy Franey" to the use and registration of her name is of record.
For Women's Shoes.
First use Aug. 15, 1960.

SN 114,401. A. J. August Clothing Co., St. Joseph, Mo. Filed Feb. 27, 1961.

ROGER JEFFREY

The name "Roger Jeffrey" is a fictitious name and not the name of any living individual.
For Men's Clothing—Namely, Suits, Sport Coats, Top Coats, Sport Shirts, Dress Shirts, and Hosiery, Jackets, Rainwear, Slacks, Pajamas, Sweaters, Hats, and Belts.
First use in August 1958.

SN 115,153. Kayser-Roth Corporation, New York, N.Y. Filed Mar. 8, 1961.

CENSORED BRAND

Applicant disclaims the word "Brand" apart from the mark as shown.
For Men's Hosiery.
First use Nov. 2, 1960.

SN 115,648. Wheeler Protective Apparel, Inc., Chicago, Ill. Filed Mar. 14, 1961.

ACID-KING

For Protective Articles of Apparel—Namely, Overgarments, Aprons, Bibs, Capes, Caps, Chaparajos, Coats, Hats, Helmets, Hoods, Jackets, Leggings, Overalls, Overshoes, Pants, Shoe Covers, Sleeves and Spats.
First use Nov. 5, 1957.

SN 116,289. Bestform Foundations, Inc., Long Island City, N.Y. Filed Mar. 23, 1961.

BESTFORM AMERICANA

Owner of Reg. Nos. 393,330 and 562,317.
For Girdles and Brassieres.
First use Apr. 1, 1960.

SN 116,716. Howard Fogleman, Inc., Burlington, N.C. Filed Mar. 29, 1961.

FOGIES BY FOGLEMAN

For Hosiery, Scuffs, Foot Socks, Toe Guards, Shoes and Slippers, for Ladies, Men, Children, and Infants.
First use Mar. 1, 1960.

SN 117,304. Shuko Shoe Corp., Meadville, Pa. Filed Apr. 6, 1961.

ESSENTIALS

For Ladies' Shoes.
First use Feb. 12, 1961.

SN 119,991. Mason Shoe Manufacturing Company, Chippewa Falls, Wis. Filed May 15, 1961.

MASON

For Footwear Made Wholly or Partly of Leather—Namely, Shoes, Oxfords, Slippers, and Boots.
First use June 1928.

SN 120,075. Burlington Industries, Inc., New York, N.Y. Filed May 16, 1961.

MIGHTY BUCK

Owner of Reg. No. 133,641.
For Boys' Bib Overalls and Jeans, Men's Bib Overalls, Dungarees, and Work Pants.
First use Apr. 24, 1961.

SN 120,287. Beau Brummell Ties, Inc., Cincinnati, Ohio. Filed May 18, 1961.



The name "Dino Roselli" is fictitious.
For Men's Neckwear.
First use May 4, 1961.

SN 120,390. Creighton Shirt Company, Inc., New York, N.Y. Filed May 19, 1961.

Creighton Hall

Owner of Reg. No. 516,441.
For Shirts and Blouses for Men, Women, and Children; Men's and Boys' Trousers, Suits, and Coats.
First use June 16, 1936.

SN 120,391. Creighton Shirt Company, Inc., New York, N.Y. Filed May 19, 1961.

Creighton

Owner of Reg. No. 516,441.
For Shirts and Blouses for Men, Women, and Children; Men's and Boys' Trousers, Suits, and Coats.
First use June 16, 1936.

SN 120,612. Baitch & Castaldi, Inc., New York, N.Y. Filed May 23, 1961.

ROYAL ENCLOSURE

For Ladies' and Misses' Coats and Suits.
First use May 16, 1961.

SN 120,641. Kamehameha Garment Co., Ltd., Honolulu, Hawaii. Filed May 23, 1961.

Sun-Muu

For Sportswear—Namely, Women's and Children's Muu Muu.
First use July 8, 1952.

SN 120,963. Chadbourn Gotham, Inc., Charlotte, N.C. Filed May 29, 1961.

HUGGINS PLUS

For Ladies' Lingerie, Specifically Foundation Garments Such as Girdles and Panty Girdles.
First use May 5, 1961.

SN 121,265. Carmi-Ainsbrooke Corporation, New York, N.Y. Filed June 2, 1961.

FLAIR BY REGATTA

Owner of Reg. Nos. 145,577 and 605,191.
For Men's Shorts and Pajamas.
First use May 22, 1961.

SN 121,647. Jordan Manufacturing Corp., New York, N.Y. Filed June 8, 1961.

TEEN NYMPH

Applicant disclaims the word "Teen" apart from the mark as shown. Owner of Reg. No. 435,285.
For Teen-Age Bathing Suits, Trunks, and Caps.
First use June 22, 1953.

SN 123,052. F. W. Woolworth Co., New York, N.Y. Filed June 28, 1961.

TOPSALL

Owner of Reg. Nos. 267,020 and 703,292.
For Men's and Boys' Jackets.
First use June 5, 1957.

SN 123,053. F. W. Woolworth Co., New York, N.Y. Filed June 28, 1961.

TOPSALL

Owner of Reg. Nos. 267,020 and 703,292.
For Canvas Shoes.
First use Dec. 8, 1959.

SN 124,066. David Crystal, Inc., New York, N.Y. Filed July 17, 1961.

DAVCRYS

Owner of Reg. Nos. 556,557 and 649,785.
For Dresses.
First use Dec. 30, 1960.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 109,410. Grabling, Inc., Cleveland, Ohio. Filed Dec. 1, 1960.

Kiddie-Kuf

For Safety Leash for Children.
First use December 1958.

SN 113,270. Continental Corset Co., Inc., Chicago, Ill. Filed Feb. 8, 1961.

PANTI-GARD

For Snap-In Disposable Inner Crotch Shields for Use in Panty Girdles.
First use Jan. 13, 1961.

SN 124,444. Kee Products Co., Inc., Seaford, N.Y. Filed July 21, 1961.

VILON

For Plastic Combs, Standard Combs, Standard Pocket Combs, and Professional Combs.
First use Jan. 1, 1960.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 95,971. Bates Manufacturing Company, Lewiston, Maine. Filed Apr. 28, 1960.

HERITAGE

For Bedspreads.
First use December 1951.

SN 113,344. Liberty Fabrics of New York, Inc., New York, N.Y. Filed Feb. 9, 1961.

SOUPLÉ

For Lace Fabrics Made of Artificial Elastic Yarn.
First use Jan. 31, 1961.

SN 117,615. Collins & Aikman Corporation, New York, N.Y. Filed Apr. 11, 1961.

CLOUD 9

For Textile Floor Covering.
First use Mar. 29, 1961.

SN 119,648. Shirley Fabrics Corporation, New York, N.Y. Filed May 9, 1961.

OMNIBUS

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres, and Mixtures Thereof.
First use Jan. 23, 1961.

SN 124,067. David Crystal, Inc., New York, N.Y. Filed July 17, 1961.

DAVCRYS

Owner of Reg. Nos. 556,557 and 649,785.
For Piece Goods Used To Manufacture Dresses.
First use Dec. 30, 1960.

SN 125,690. Shirley Fabrics Corp., New York, N.Y. Filed Aug. 9, 1961.

SARELLA

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres, and Mixtures Thereof.
First use Sept. 12, 1949.

SN 126,672. Nye-Wait Company, Inc., Auburn, N.Y. Filed Aug. 25, 1961.

Dansgaard

For Textile Rugs and Carpeting.
First use May 23, 1961.

SN 126,674. Nye-Wait Company, Inc., Auburn, N.Y. Filed Aug. 25, 1961.

Patrique

For Textile Rugs and Carpeting.
First use Oct. 11, 1960.

SN 126,769. Infants Specialty Company, San Francisco, Calif. Filed Aug. 28, 1961.

HOBBY HORSE

For Baby Blankets.
First use May 24, 1961.

SN 126,903. Bates Manufacturing Company, Lewiston, Maine. Filed Aug. 30, 1961.

WEDGWOOD CAMEO

For Bedspreads.
First use July 1961.

SN 127,131. Nye-Wait Company, Inc., Auburn, N.Y. Filed Sept. 1, 1961.

Bella Dura

For Textile Rugs and Carpeting.
First use Feb. 5, 1960.

Class 43 — Thread and Yarn

SN 107,113. The Chemstrand Corporation, Decatur, Ala. Filed Oct. 25, 1960.

CADON NYLON

No claim is made to the word "Nylon" apart from the mark as shown. Owner of Reg. No. 600,796.
For Synthetic Yarns and Thread.
First use Aug. 13, 1960.

Class 44 — Dental, Medical, and Surgical Appliances

SN 110,201. Dentur-Eze, Inc., Seattle, Wash. Filed Dec. 14, 1960.

DENTUR-EZE

Owner of Reg. No. 366,596.
For Plastic Cushions for Loose Dental Plates.
First use Sept. 24, 1938.

SN 110,705. Roberts Electronics, Inc., Los Angeles, Calif. Filed Dec. 22, 1960.

Sonic Roberts Thesia

For Electronic Analgesic Sound-Producing Apparatus for Professional Use in Doctors' and Dentsts' Offices, in Hospitals, or the Like.
First use Dec. 5, 1960.

SN 112,678. Bommer AG, Zurich, Switzerland. Filed Jan. 30, 1961.

REXTON

For Hearing Aids Which Are Inserted Into the Outer Ear Canal; Hearing Aids Which Go Behind the Ear and Hearing Aids Which Are Incorporated in the Frames of Spectacles.
First use Jan. 18, 1955; in commerce in or about January 1960.

SN 116,579. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 27, 1961.

Scott

AIR-PAK

Owner of Reg. No. 597,173.
For Portable Air Breathing Apparatus Used in an Atmosphere of Ambient Air.
First use June 15, 1944.

SN 116,580. Scott Aviation Corporation, Lancaster, N.Y. Filed Mar. 27, 1961.

Pak-Alarm

Scott

Owner of Reg. No. 597,173.
For Audible Alarm Unit Forming Part of a Breathing Apparatus and Adapted To Sound an Alarm When the Air Pressure in Said Apparatus Drops to a Certain Low Pressure.
First use July 9, 1959.

SN 120,917. Jack B. Taylor, d.b.a. Micro-Ear, Oakland, Calif. Filed May 26, 1961.

MICRO-EAR

For Hearing Aids.
First use Feb. 2, 1961.

SN 121,157. Air-Shields, Inc., Hatboro, Pa. Filed June 1, 1961.

VENTIMETER

For Surgical Apparatus—Namely, a Volume Indicator, Particularly Useful in Connection With Anesthesia Machines.
First use May 12, 1959.

SN 121,745. Maico Electronics, Inc., Minneapolis, Minn. Filed June 9, 1961.

Escort

For Electric Hearing Aids.
First use Feb. 14, 1961.

SN 121,903. Bristol-Myers Company, New York, N.Y. Filed June 13, 1961.

FACE-BRA

For Mechanical Device To Beautify the Face by Removing Wrinkles in the Skin.
First use May 5, 1961.

SN 121,960. American Cyanamid Company, New York, N.Y. Filed June 14, 1961.

FLEXON

For Surgical Sutures.
First use Apr. 21, 1961.

SN 122,315. Invalid Walker & Wheel Chair Co., Long Beach, Calif. Filed June 19, 1961.

INVALEX

Owner of Reg. No. 420,088.
For Invalid Walkers and Accessories, Commode Chairs, Bed Tables, Safety Bed Rails, Invalid Trapezes, Fracture Frames, Traction Stands, and Patient Lifts.
First use July 26, 1944.

Class 45—Soft Drinks and Carbonated Waters

SN 110,311. Blue Seal Extract Co., Inc., Cambridge, Mass. Filed Dec. 16, 1960.

IRON BREW

For Extract for Non-Alcoholic Maltless Soft Drinks, and Soft Drinks Made From Said Extract.
First use Aug. 28, 1889.

Class 46—Foods and Ingredients of Foods

SN 84,852. Collin Street Bakery, Inc., Corsicana, Tex. Filed Nov. 9, 1959.

"THAT FAMOUS CORSICANA FRUITCAKE"

The word "Fruitcake" is disclaimed per se. Owner of Reg. No. 617,648.
For Fruit Cake.
First use on or about Sept. 1, 1953.

SN 115,947. Penn Dairies, Inc., Lancaster, Pa. Filed Mar. 17, 1961.

DUTCH TREAT

For Ice Cream of Different Flavors.
First use Mar. 14, 1961.

SN 121,835. Joe Lowe Corporation, New York, N.Y. Filed June 12, 1961.

"V" COTE

Applicant disclaims the word "Cote" separate from the mark as shown.
For Liquid Sweet Chocolate Coating for Use on Frozen Confections With or Without Sticks.
First use Oct. 27, 1960.

SN 125,582. Carolinda Fine Foods, Inc., Greenwich, Conn. Filed Aug. 8, 1961.

BYRAM RIVER

For Canned Vegetables.
First use 1958.

SN 125,619. Perk Foods Co., Chicago, Ill. Filed Aug. 8, 1961.

SNUFFY



For Dog Food.
First use July 1, 1961.

SN 128,386. Bay State Milling Co., Winona, Minn. Filed Sept. 22, 1961.

WINBACO

For Wheat Flour.
First use June 20, 1928.

SN 128,793. James F. Brucker, Somis, Calif. Filed Sept. 28, 1961.

Follow Me

For Fresh Vegetables.
First use Mar. 1, 1961.

SN 128,839. Melford E. Olson, d.b.a. Mel Olson Honey Co., Minneapolis, Minn. Filed Sept. 28, 1961.

MEL·O

For Honey.
First use in April 1952.

Class 50—Merchandise Not Otherwise Classified

SN 50,128. The Barash Company, Inc., New York, N.Y., assignee of United States Plywood Corporation, New York, N.Y. Filed Apr. 21, 1958.

VITALON

Owner of Reg. Nos. 572,480, 561,568, and 666,722.
For Flexible Plastic Sheeting or Film (in the General Nature of an Improvement, Equivalent or Substitute for Leather of Varying Colors and Designs), Both Unsupported or Unlaminated, and Also Supported or Laminated to Backings of Cloth or Fabric Made With Woven or Unwoven, Natural or Synthetic Fiber, or a Combination of Both, or With Saturated Paper, for Use as Upholstery, Wall Covering, and Pocketbooks, on Luggage, Table Tops, Footwear, and for Other Industrial Uses.
First use May 1955.

SN 100,486. Anchor Supply Co., Inc., Evansville, Ind. Filed July 8, 1960.

Party

For Tents.
First use June 27, 1960.

SN 110,834. Flintridge China Company, Pasadena, Calif. Filed Dec. 27, 1960.

CHRISTMAS MAGIC

For Christmas Decorations—Namely, Decorations, Ornaments and Trinkets for Rooms, Houses and Christmas Trees.
First use Sept. 26, 1960.

SN 112,931. Zax Corporation, Nashua, N.H. Filed Feb. 1, 1961.

ADD-ON

For Bulletin Board Type Holders for the Insertion of Replaceable Name Plates.
First use Jan. 13, 1961.

SN 113,156. The V. L. Smithers Manufacturing Company, d.b.a. Smithers-Oasis, Kent, Ohio. Filed Feb. 6, 1961.

oasis

Owner of Reg. No. 592,834.
For Phenolic Foam Used as a Support for Floral Arrangements.
First use July 28, 1960.

SN 114,730. Tyra and Jagr, North Tarrytown, N.Y. Filed Mar. 1, 1961.

CUFNIKS

For Trouser Hangers.
First use Dec. 1, 1960.

SN 119,381. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed May 5, 1961.

FARM-QUIP

For Livestock Feed Troughs and Water Bowls, and Milking Stools.
First use July 19, 1954.

SN 122,054. Arthur I. Appleton, d.b.a. Double "A" Brand, Chicago, Ill. Filed June 15, 1961.

LAZY SUSAN

For Feeding Devices for Fish and Other Animals.
First use Apr. 6, 1961.

Class 51—Cosmetics and Toilet Preparations

SN 89,093. Societe Technique de Parfumerie, F. Millot, Paris, France. Filed Jan. 15, 1960.

PARTNER

Priority under Sec. 44(d) on French Reg. No. 484,144, dated Nov. 19, 1959 (Paris); Natl. Inst. No. 134,558.
For Perfumes, Toilet Water, Rouge, Face Powder, and Hand Lotions.

SN 119,837. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

ECHELON

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,838. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

STATESMAN

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,839. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

REF

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,840. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

ESTEEM

For Men's Hair Dressing.
First use Mar. 21, 1961.

SN 119,841. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

PUNT

For Men's Hair Dressing.
First use Apr. 4, 1961.

SN 119,842. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

UMP

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,843. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

MILITIA

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,844. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

BUNT

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,845. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

ZEUS

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,846. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

REB

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 119,847. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

HELMSMAN

For Men's Hair Dressing.
First use Mar. 21, 1961.

SN 119,849. Chesebrough-Pond's Inc., New York, N.Y. Filed May 12, 1961.

ENDOW

For Men's Hair Dressing.
First use Mar. 22, 1961.

SN 121,251. Alberto-Culver Company, Melrose Park, Ill. Filed June 2, 1961.

"Get set"

For Hair Waving Lotion.
First use May 24, 1961.

SN 124,325. Paul F. Babich, d.b.a. House of Paul Co., Milwaukee, Wis. Filed July 20, 1961.

HOUSE OF PAUL

For Cosmetics—Namely, Skin Cleansing and Freshening Creams and Lotions, Liquid Makeup, Eyeshadow, Mascara, Eyebrow Pencils, Rouge, Deodorants, Powder, Lipsticks, Nail Lacquers and Lacquer Remover, and Cologne.
First use on or about Oct. 1, 1957, as to creams and lotions, rouge, and nail lacquer remover.

SN 124,486. Allen B. Wrisley Company, Chicago, Ill. Filed July 21, 1961.

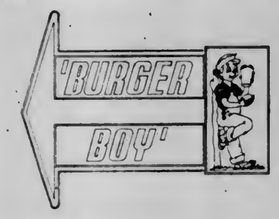
GAIETE

For Cologne and Perfume.
First use Nov. 30, 1939.

SERVICE MARKS

Class 100 — Miscellaneous

SN 107,109. Burger Boy Stores, Inc., Nashville, Tenn. Filed Oct. 25, 1960.



For Restaurant Service.
First use Oct. 31, 1958.

SN 107,110. Burger Boy Stores, Inc., Nashville, Tenn. Filed Oct. 25, 1960.

BURGER BOY

For Restaurant Service.
First use Oct. 31, 1958.

Class 101 — Advertising and Business

SN 104,550. S. M. Flickinger Co., Inc., Buffalo, N.Y., assignee of Red & White Corporation, Chicago, Ill. Filed Sept. 15, 1960.

SUPER DUPER

Owner of Reg. No. 629,737.
For Retail Grocery Service.
First use during 1954.

Class 102 — Insurance and Financial

SN 117,378. Investors Syndicate Life Insurance and Annuity Company, Minneapolis, Minn. Filed Apr. 7, 1961.



The mark consists in a fanciful showing of the letters "ISL."
For Insurance Services—Namely, the Writing of Life Insurance Contracts.
First use Aug. 25, 1958.

SN 130,143. Hardware Mutual Casualty Company, Stevens Point, Wis. Filed Oct. 20, 1961.

SENTRY

For Underwriting All Types of Insurance Including: Life, Fire, Casualty, and Health.
First use on or about Oct. 23, 1958.

Class 105 — Transportation and Storage

SN 103,286. The Mason and Dixon Lines, Incorporated, Kingsport, Tenn. Filed Aug. 23, 1960.

MASON AND DIXON

For Trucking and Hauling Services.
First use on or about June 24, 1936; in 1934 as to "Mason-Dixon Lines."

SN 118,805. Penaten Pharmazeutische Fabrik Dr. Med. Riese & Co. G.m.b.H., Rhoendorfer (Rhine), Germany. Filed Apr. 27, 1961.

PENATEN

Owner of Reg. Nos. 286,304 and 663,679.
For Medicated Baby Soap.
First use 1958; in commerce 1958.

SN 122,298. Alex. C. Fergusson Company, Philadelphia, Pa. Filed June 19, 1961.



Owner of Reg. No. 297,262.
For Industrial Cleaning Compounds.
First use as early as 1919.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

727,841. HR. Mary A. Huber, William J. Huber and Harold L. Huber, co-executors of the estate of William C. Huber, deceased. SN 113,017. Pub. 12–12–61. Filed 2–3–61.

Class 2 — Receptades

727,842. TRI-LID TWIN ORGANIZER. Evelyn Tema Sterngart. SN 109,361. Pub. 12–12–61. Filed 11–30–60.

727,843. VIS-O-DRY ARID PAX. Overseas Packing and Processing Company. SN 111,049. Pub. 12–12–61. Filed 12–14–60.

727,844. FIRE-GLO. Tucker Manufacturing Corp., by change of name from Tucker Products Corporation. SN 111,825. Pub. 12–12–61. Filed 1–13–61.

727,845. HUFFY AND DESIGN. The Huffman Manufacturing Company. SN 113,727. Pub. 12–12–61. Filed 2–15–61.

727,846. MEADOMATIC. The Mead Corporation. SN 114,124. Pub. 12–12–61. Filed 2–21–61.

727,847. EVERSEAL. The Crane & Breed Casket Company. SN 121,806. Pub. 12–12–61. Filed 6–12–61.

727,848. HAV-A-CUP. Haveg Industries, Inc. SN 121,999. Pub. 12–12–61. Filed 6–14–61.

Class 4 — Abrasives and Polishing Materials

727,849. ACTION AND DESIGN. Action Diamond Tool Company. SN 103,074. Pub. 12–12–61. Filed 8–22–60.

727,850. OXFORD. New Jersey Chemical Company, Inc. SN 110,880. Pub. 12–12–61. Filed 12–27–60.

Class 5 — Adhesives

727,851. REDI-SPARE AND DESIGN. National Dynamics Corporation. SN 109,811. Pub. 10–3–61. Filed 12–7–60.

727,852. DESIGN OF TWO TRIANGLES AND VERTICAL BAR. Armour and Company, d.b.a. Armour Alliance Industries. SN 110,652. Pub. 12–12–61. Filed 12–22–60.

Class 6 — Chemicals and Chemical Compositions

727,853. FROM RESEARCH TO REALITY. General Aniline & Film Corporation. SN 54,683. Pub. 12–12–61. Filed 7–2–58.

727,854. REGAL. Cabot Corporation, by merger from Godfrey L. Cabot, Inc. SN 98,696. Pub. 12–12–61. Filed 6–9–60.

727,855. PATCO'S STOP. Lee Patten Seed Company. SN 111,915. Pub. 12–12–61. Filed 1–16–61.

727,856. EUROCIDE. Geigy Chemical Corporation. SN 112,542. Pub. 12–12–61. Filed 1–26–61.

727,857. MOHAWK AND TEPEE DESIGN. Corn Products Company. SN 112,690. Pub. 12–12–61. Filed 1–30–61.

727,858. EXTIROL. Geigy Chemical Corporation. SN 112,843. Pub. 12–12–61. Filed 1–31–61.

727,859. METO. Pacific Vegetable Oil Corporation. SN 112,917. Pub. 12–12–61. Filed 2–1–61.

727,860. GESAGARD. Geigy Chemical Corporation. SN 113,636. Pub. 12–12–61. Filed 2–14–61.

727,861. SAROL. Geigy Chemical Corporation. SN 113,637. Pub. 12–12–61. Filed 2–14–61.

727,862. GESACHLOR. Geigy Chemical Corporation. SN 116,879. Pub. 12–12–61. Filed 3–31–61.

Class 7 — Cordage

727,863. BLUE SPRUCE. Shuford Mills, Inc. SN 117,053. Pub. 12–12–61. Filed 4–3–61.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

727,864. MAUSER AND DESIGN. Mauser-Werke Aktiengesellschaft. SN 51,603. Pub. 12–12–61. Filed 4–29–58.

727,865. GOLD LINE SYMBOL. Pachmayr Gun Works, Inc. SN 87,270. Pub. 11–21–61. Filed 12–14–59.

727,866. TWO STAGE SILVER JETS. Tri-State Manufacturing Co., Inc. SN 91,040. Pub. 12–12–61. Filed 2–16–60.

727,867. BRENNEKE. Wilhelm Brenneke Kommanditgesellschaft. SN 93,037. Pub. 12–12–61. Filed 3–16–60.

727,868. STOP-N-SHOOT. Crosman Arms Company, Inc. SN 118,058. Pub. 12–12–61. Filed 4–18–61.

727,869. HOSTESS. Bantam Match Corporation. SN 118,642. Pub. 12–12–61. Filed 4–26–61.

Class 10 — Fertilizers

727,870. FERTILIZER FOR A GROWING AMERICA ETC. AND DESIGN. The American Agricultural Chemical Company. SN 117,937. Pub. 12–12–61. Filed 4–17–61.

Class 12 — Construction Materials

727,871. RIDG-VENT. Peral V. Christians, d.b.a. Christians Sheet Metal Works. SN 66,700. Pub. 9–13–60. Filed 1–29–59.

727,872. REPRESENTATION OF A HOUSE AND DESIGN. Owens-Corning Fiberglas Corporation. SN 78,902. Pub. 12–12–61. Filed 8–3–59.

727,873. SALVIACIM. Societe Salviam Societe Anonyme. SN 96,892. Pub. 12–12–61. Filed 5–11–60.

727,874. TREVI-TILE. Trevi-Tile Inc. SN 102,707. Pub. 2–14–61. Filed 8–15–60.

727,875. TROPIX-FOLD. Clopay Corporation. SN 112,124. Pub. 12–12–61. Filed 1–19–61.

727,876. HANSOFLOW. Elof Hansson, Inc. SN 113,522. Pub. 12–12–61. Filed 2–13–61.

727,877. PV AND DESIGN. Canadian Forest Products Ltd. SN 114,182. Pub. 12–12–61. Filed 2–23–61.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

727,878. STEINEN AND DESIGN. Wm. Steinen Mfg. Co. SN 95,779. Pub. 12–12–61. Filed 4–25–60.

727,879. ADJUSTITE. The H. B. Ives Company. SN 103,727. Pub. 12–12–61. Filed 8–31–60.

727,880. REPRESENTATION OF A COFFEEMAKER. Chemex Corporation. SN 106,184. Pub. 12–12–61. Filed 10–11–60.

727,881. ZICROM. Foster & Company, Inc. SN 106,800. Pub. 12–12–61. Filed 10–20–60.

727,882. OVODIZED. Vossloh-Werke G.m.b.H. SN 107,394. Pub. 12–12–61. Filed 10–28–60.

727,883. SAYCO-MATIC. Stephen A. Young Corporation. SN 108,428. Pub. 12–12–61. Filed 11–14–60.

727,884. DECORAX LETTER D AND DESIGN. Phylrich Sales Co. SN 116,341. Pub. 12–12–61. Filed 3–23–61.

727,885. BLUE GRASS. Belknap Hardware and Manufacturing Company. SN 117,600. Pub. 12–12–61. Filed 4–11–61.

727,886. WIZARD. Western Auto Supply Company (Delaware corporation), assignee, by mesne assignment, of Western Auto Supply Company (Missouri corporation). SN 118,020. Pub. 12–12–61. Filed 4–17–61.

727,887. PERLICK. The Perlick Company, Inc. SN 118,166. Pub. 12–12–61. Filed 4–19–61.

727,888. DUBL-GUARD. Scovill Manufacturing Company. SN 118,609. Pub. 12–12–61. Filed 4–25–61.

727,889. MOTO-MOWER. Moto-Mower, Inc. SN 119,404. Pub. 12–12–61. Filed 5–5–61.

Class 14—Metals and Metal Castings and Forgings

727,890. CKD (MONOGRAM IN A CIRCLE). CKD Praha, Narodni Podnik. SN 108,447. Pub. 12–12–61. Filed 11–15–60.

727,891. INDIE AND DESIGN. Industrial Forge & Steel, Inc. SN 120,099. Pub. 12–12–61. Filed 5–16–61.

Class 15—Oils and Greases

727,892. OXFORD. New Jersey Chemical Company, Inc. SN 110,878. Pub. 12–12–61. Filed 12–27–60.

727,893. SOS SAVE-O-SAW GREASOLENE. Adolph Brinkman. SN 112,595. Pub. 12–12–61. Filed 1–27–61.

Class 16—Protective and Decorative Coatings

727,894. DEARCLAD. Dearborn Chemical Company. SN 108,875. Pub. 12–12–61. Filed 11–22–60.

727,895. DAWN. Randolph-Page Inc. SN 109,995. Pub. 12–12–61. Filed 12–9–60.

727,896. THE SEAL OF QUALITY ETC. AND DESIGN. Seymour of Sycamore, Inc. SN 113,864. Pub. 12–12–61. Filed 2–16–61.

727,897. ARTEX. Charles H. Crockett III, d.b.a. Artex Sales Company. SN 114,317. Pub. 12–12–61. Filed 2–24–61.

727,898. HORN. Sun Chemical Corporation. SN 116,271. Pub. 12–12–61. Filed 3–22–61.

727,899. HUSH-TEX. Preco Chemical Corporation. SN 118,284. Pub. 12–12–61. Filed 4–20–61.

Class 18—Medicines and Pharmaceutical Preparations

727,900. SUNLINE. Stineway Drug Company. SN 88,695. Pub. 12–12–61. Filed 1–8–60.

727,901. PANSEAL. Pan American Laboratories, Inc. SN 96,422. Pub. 12–12–61. Filed 5–4–60.

727,902. GRO-KOTE! Gro-Kote Co., Incorporated. SN 102,883. Pub. 12–12–61. Filed 8–8–60.

727,903. SORBACID. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories. SN 104,514. Pub. 9–26–61. Filed 9–15–60.

727,904. SANDOXAL. Sandoz, Inc. SN 122,568. Pub. 12–12–61. Filed 6–21–61.

727,905. AMPROLMIX. Merck & Co., Inc. SN 122,626. Pub. 12–12–61. Filed 6–22–61.

727,906. ORABETA. The Upjohn Company. SN 122,663. Pub. 12–12–61. Filed 6–22–61.

727,907. TRA-BLEN. L & M Laboratories, Inc. SN 122,705. Pub. 12–12–61. Filed 6–23–61.

727,908. CLERIDIN. Watkins Products, Inc. SN 122,871. Pub. 12–12–61. Filed 6–26–61.

727,909. TRYPTIZOL. Merck & Co., Inc. SN 122,941. Pub. 12–12–61. Filed 6–27–61.

Class 19—Vehicles

727,910. PRINCE MILER. Fuji Seimitsu Kogyo Kabushiki Kaisha, d.b.a. Fuji Precision Machinery Co., Ltd. SN 94,580. Pub. 6–13–61. Filed 4–7–60.

727,911. PRINCE SKYWAY. Fuji Seimitsu Kogyo Kabushiki Kaisha, d.b.a. Fuji Precision Machinery Co., Ltd. SN 95,714. Pub. 6–13–61. Filed 4–25–60.

727,912. PRINCE CLIPPER. Fuji Seimitsu Kogyo Kabushiki Kaisha, d.b.a. Fuji Precision Machinery Co., Ltd. SN 95,715. Pub. 7–18–61. Filed 4–25–60.

727,913. MOTOM AND DESIGN. "Motom" Aktiengesellschaft, Zurich. SN 96,516. Pub. 2–28–61. Filed 5–5–60.

727,914. HUFFY AND DESIGN. The Huffman Manufacturing Company. SN 113,728. Pub. 12–12–61. Filed 2–15–61.

727,915. ICEBIRD. Patrick Ellam. SN 116,991. Pub. 12–12–61. Filed 4–3–61.

Class 21—Electrical Apparatus, Machines, and Supplies

727,916. PHASE-ISOLATED LTC. McGraw-Edison Company. SN 80,437. Pub. 12–12–61. Filed 8–28–59.

727,917. ALDOR THERMO REACTOR. A. L. Doering Mfg. Corp. SN 95,366. Pub. 12–12–61. Filed 4–19–60.

727,918. S STEINEN AND DESIGN. Wm. Steinen Mfg. Co. SN 95,780. Pub. 12–12–61. Filed 4–25–60.

727,919. COPYWRITER. Eugene Garfield Associates, Inc. SN 100,697. Pub. 12–12–61. Filed 7–12–60.

727,920. MICROBLOC. Raytheon Company, assignee of Rheem Manufacturing Company. SN 105,208. Pub. 12–12–61. Filed 9–26–60.

727,921. PULSECURITY. A.R.F. Products, Inc. SN 108,932. Pub. 12–12–61. Filed 11–23–60.

727,922. P'RIM TRIM. Edwin L. Wiegand Company. SN 109,132. Pub. 12–12–61. Filed 11–25–60.

727,923. GRAND AND DESIGN. Grand Transformers, Inc. SN 109,582. Pub. 12–12–61. Filed 12–5–60.

727,924. KELLOGG SWITCHBOARD AND SUPPLY AND DESIGN. International Telephone and Telegraph Corporation. SN 109,798. Pub. 12–12–61. Filed 12–7–60.

727,925. GRAND. Grand Transformers, Inc. SN 110,430. Pub. 12–12–61. Filed 12–19–60.

727,926. HANNA-POWR. Hanna Engineering Works. SN 110,435. Pub. 12–12–61. Filed 12–19–60.

727,927. MAGNA POWER. Eaton Manufacturing Company. SN 111,172. Pub. 12–12–61. Filed 1–3–61.

727,928. TELCHIME. Wheelock Signals, Inc. SN 111,566. Pub. 12–12–61. Filed 1–9–61.

727,929. VITAC. The Glastic Corporation. SN 111,666. Pub. 12–12–61. Filed 1–11–61.

727,930. METALLOY. Wilrite Products, Inc. SN 112,428. Pub. 12–12–61. Filed 1–24–61.

727,931. MAXELL. Maxell Electric Industrial Co., Ltd. SN 113,742. Pub. 12–12–61. Filed 2–15–61.

727,932. SURRETTE. Surrette Storage Battery Co., Inc. SN 115,196. Pub. 12–12–61. Filed 3–8–61.

727,933. CORR-O-FOAM AND DESIGN. Communication Products Company, Inc. SN 115,302. Pub. 12–12–61. Filed 3–10–61.

727,934. FOAM-O-LENE AND DESIGN. Communication Products Company, Inc. SN 115,303. Pub. 12–12–61. Filed 3–10–61.

727,935. INVERTRON. Behlman Engineering Company. SN 115,417. Pub. 12–12–61. Filed 3–13–61.

727,936. WHEATLANDUCT. Wheatland Electric Products Co. SN 115,865. Pub. 12–12–61. Filed 3–16–61.

727,937. CODE-A-PHONE. Code-A-Phone Electronics, Inc. SN 117,589. Pub. 12–12–61. Filed 4–10–61.

727,938. WORLD WIDE AND DESIGN. World Wide Enterprises, Inc. SN 117,749. Pub. 12–12–61. Filed 4–12–61.

727,939. BIPLEX. Sierra Electric Corporation. SN 117,918. Pub. 12–12–61. Filed 4–14–61.

727,940. AMP-LEAF. AMP Incorporated. SN 118,030. Pub. 12–12–61. Filed 4–18–61.

727,941. POLYTEC. The Muter Company. SN 118,093. Pub. 12–12–61. Filed 4–18–61.

Class 22—Games, Toys, and Sporting Goods

727,942. SPELL IT. Cadaco-Ellis, Inc. SN 67,196. Pub. 12–12–61. Filed 2–6–59.

727,943. DEKOWIT. E. L. Brewster, Inc. SN 111,956. Pub. 12–12–61. Filed 1–17–61.

727,944. TRANSITE. Western Lace & Line Company, d.b.a. Western Fishing Line Company. SN 113,252. Pub. 12–12–61. Filed 2–7–61.

727,945. CRUCERO. The Seamless Rubber Company. SN 115,177. Pub. 12–12–61. Filed 3–8–61.

727,946. GRUMETE. The Seamless Rubber Company. SN 115,178. Pub. 12–12–61. Filed 3–8–61.

727,947. CARABELLA. The Seamless Rubber Company. SN 115,181. Pub. 12–12–61. Filed 3–8–61.

727,948. FRAGATA. The Seamless Rubber Company. SN 115,182. Pub. 12–12–61. Filed 3–8–61.

727,949. GOLETA. The Seamless Rubber Company. SN 115,183. Pub. 12–12–61. Filed 3–8–61.

727,950. AXALIVOR. David A. De Long, d.b.a. De Long Lures. SN 115,309. Pub. 12–12–61. Filed 3–10–61.

727,951. SQUIRM. David A. De Long, d.b.a. De Long Lures. SN 115,310. Pub. 12–12–61. Filed 3–10–61.

727,952. INITIAL-STIK. Lake Chemical Company. SN 119,527. Pub. 12–12–61. Filed 5–8–61.

727,953. DETECTIVE SPECIAL. Colt's Patent Fire Arms Manufacturing Company, Inc. SN 119,610. Pub. 12–12–61. Filed 5–9–61.

727,954. MARVLOUNGE. Edward Martony, d.b.a. The Marvlizer Company. SN 119,990. Pub. 12–12–61. Filed 5–15–61.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

727,955. ROLL MASTER REEL. The Sandy Hill Iron & Brass Works. SN 71,040. Pub. 12–12–61. Filed 4–7–59.

727,956. FISHIN' FIVE. Outboard Marine Corporation. SN 79,271. Pub. 12–1–59. Filed 8–10–59.

727,957. MOTOM AND DESIGN. "Motom" Aktiengesellschaft, Zurich. SN 96,515. Pub. 2–28–61. Filed 5–5–60.

727,958. CKD (MONOGRAM IN A CIRCLE). CKD Praha, Narodni Podnik. SN 108,449. Pub. 12–12–61. Filed 11–15–60.

727,959. FANCIFUL REPRESENTATION OF TWO MEN WITH ANVIL. Ekco Products Company. SN 108,472. Pub. 12–12–61. Filed 11–15–60.

727,960. MINISORBER. AEI-Birlec Limited. SN 108,859. Pub. 12–12–61. Filed 11–22–60.

727,961. REDDIES MACHINE. B. Redmond and Son, Inc. SN 113,560. Pub. 12–12–61. Filed 2–13–61.

727,962. HUFFY AND DESIGN. The Huffman Manufacturing Company. SN 113,729. Pub. 12–12–61. Filed 2–15–61.

727,963. POWER-SET. Olin Mathieson Chemical Corporation. SN 116,244. Pub. 12–12–61. Filed 3–22–61.

727,964. TRIMCO. Trim-Master Corporation. SN 117,233. Pub. 10–17–61. Filed 4–5–61.

727,965. CAM-COR. Spenzer Container Corporation. SN 117,828. Pub. 12–12–61. Filed 4–10–61.

727,966. KEX-A-MATIC. Calhway Mills Company. SN 118,048. Pub. 12–12–61. Filed 4–18–61.

727,967. SUPER-JET. Cincinnati Screen Process Supplies, Inc. SN 118,055. Pub. 12–12–61. Filed 4–18–61.

727,968. MOTO-MOWER. Moto-Mower, Inc. SN 119,403. Pub. 12–12–61. Filed 5–5–61.

727,969. SUPERLITE. Super Mold Corporation of California. SN 120,455. Pub. 12–12–61. Filed 5–19–61.

727,970. SPIN-O-MATIC. General Appliance Manufacturing Co. SN 120,517. Pub. 12–12–61. Filed 5–22–61.

727,971. VIBRAHONE. Minnesota Mining and Manufacturing Company. SN 120,552. Pub. 12–12–61. Filed 5–22–61.

Class 24—Laundry Appliances and Machines

727,972. EASE-O-MAT. Ease-O-Mat Co. SN 69,041. Pub. 12–12–61. Filed 3–3–59.

Class 26—Measuring and Scientific Appliances

727,973. EXECUTIVE. Alfred Robbins Organization, Inc. SN 78,374. Pub. 12–12–61. Filed 7–24–59.

727,974. SOLAR. Burke & James, Inc. SN 79,139. Pub. 12–12–61. Filed 8–7–59.

727,975. COFFEEMINDER. Landers, Frary & Clark. SN 86,793. Pub. 12–12–61. Filed 12–7–59.

727,976. CHARGICATOR. Cleveland Patents, Inc. SN 92,444. Pub. 12–12–61. Filed 3–9–60.

727,977. IRALITE. The United States Stoneware Company. SN 98,605. Pub. 12–12–61. Filed 6–7–60.

727,978. CHEK LITE. I-T-E Circuit Breaker Company. SN 101,104. Pub. 12–12–61. Filed 7–19–60.

727,979. ADJUST-ALL. Weksler Instruments Corporation. SN 108,525. Pub. 12–12–61. Filed 11–15–60.

727,980. MICRODUE. Società per Azioni Ferrania. SN 108,677. Pub. 12–12–61. Filed 11–17–60.

727,981. HYGRO-CHAMP. Hygrodynamics, Inc. SN 109,496. Pub. 12–12–61. Filed 12–2–60.

727,982. PLASTI-CLAD. Vitalic Battery Company, Inc. SN 111,253. Pub. 12–12–61. Filed 1–3–61.

727,983. CRYO-THERM. Cryo-Therm, Inc., assignee of Standard Plastics, Inc. SN 111,557. Pub. 12–12–61. Filed 1–9–61.

727,984. ELECTROMATIC DIAL. Butler Bin Company. SN 119,929. Pub. 10–17–61. Filed 5–15–61.

Class 27—Horological Instruments

727,985. GIROCAP. Le Porte-Echappement Universel S.A. SN 110,865. Pub. 12–12–61. Filed 12–27–60.

727,986. JET BILT. Wyler Watch Corporation. SN 114,570. Pub. 12–12–61. Filed 2–27–61.

Class 28 — Jewelry and Precious-Metal Ware

727,987. DIAMONENE. Baden & Foss Co. SN 114,744. Pub. 12–12–61. Filed 3–2–61.

Class 29 — Brooms, Brushes, and Dusters

727,988. OX-KING. Whiting-Adams Company, Inc. SN 109,654. Pub. 12–12–61. Filed 12–5–60.

727,989. SOFTOUCH. Star Brush Manufacturing Co., Inc. SN 113,034. Pub. 10–17–61. Filed 2–3–61.

Class 31 — Filters and Refrigerators

727,990. THERMO-STRUT. Tyler Refrigeration Corporation. SN 91,473. Pub. 1–10–61. Filed 2–23–60.

727,991. CONTOUR SCRAPER. Peterson Filters and Engineering Company. SN 118,369. Pub. 12–12–61. Filed 4–21–61.

Class 32 — Furniture and Upholstery

727,992. SCREEN-TOT. Robert J. Lafrentz, d.b.a. The Robbie Company. SN 113,020. Pub. 12–12–61. Filed 2–3–61.

Class 34 — Heating, Lighting, and Ventilating Apparatus

727,993. EVERYTHING YOUR HEARTH DESIRES. Hearth Craft, Inc. SN 76,693. Pub. 12–12–61. Filed 6–29–59.

727,994. S STEINEN AND DESIGN. Wm. Steinen Mfg. Co. SN 95,778. Pub. 12–12–61. Filed 4–25–60.

727,995. CRYSTAL HEAT. Curtiss-Wright Corporation. SN 96,835. Pub. 12–12–61. Filed 5–11–60.

727,996. NOVENT. Suburban Propane Gas Corporation. SN 104,758. Pub. 7–25–61. Filed 9–19–60.

727,997. PYROFLOW. Orr & Sembower, Inc. SN 108,363. Pub. 12–12–61. Filed 11–14–60.

727,998. ROPER AND DESIGN. Geo. D. Roper Corporation. SN 109,814. Pub. 12–12–61. Filed 12–7–60.

727,999. VENT-AIRE. Frances E. Anderson, d.b.a. Kavbob Products. SN 111,143. Pub. 12–12–61. Filed 1–3–61.

728,000. CRANE. Crane Co. SN 111,836. Pub. 12–12–61. Filed 12–12–60.

728,001. HEAT-N-EAT. Robert I. Bruder, d.b.a. Bruder and Company. SN 112,438. Pub. 12–12–61. Filed 1–25–61.

728,002. CRANE AND DESIGN. Crane Co. SN 113,810. Pub. 12–12–61. Filed 2–16–61.

728,003. PLENTY. Plenty & Son Limited. SN 114,041. Pub. 12–12–61. Filed 2–20–61.

Class 36 — Musical Instruments and Supplies

728,004. MAN AND GONG DESIGN. The Rank Organisation Limited. SN 108,381. Pub. 12–12–61. Filed 11–14–60.

Class 37 — Paper and Stationery

728,005. VALAY. Stevens & Thompson Paper Company. SN 95,328. Pub. 12–12–61. Filed 4–18–60.

728,006. REPRESENTATION OF DRAGON FLY. Tombow Pencil Manufacturing Co. Ltd. SN 108,096. Pub. 12–12–61. Filed 11–8–60.

728,007. METALAY. The S. K. Smith Company. SN 112,080. Pub. 6–20–61. Filed 1–18–61.

728,008. SLIDE-A-MASK. Donald D. Hedberg, d.b.a. The Dyna-Slide Company. SN 112,456. Pub. 12–12–61. Filed 1–25–61.

728,009. SONNET. Champion Papers Inc., by change of name from The Champion Paper and Fibre Company. SN 113,686. Pub. 12–12–61. Filed 2–15–61.

728,010. ROUNDELAY. Champion Papers Inc., by change of name from The Champion Paper and Fibre Company. SN 113,687. Pub. 12–12–61. Filed 2–15–61.

728,011. TICONDEROGA TEXT. International Paper Company. SN 117,370. Pub. 12–12–61. Filed 4–7–61.

728,012. SERENADE. Champion Papers Inc., by change of name from The Champion Paper and Fibre Company. SN 117,841. Pub. 12–12–61. Filed 4–14–61.

728,013. SUNSET PARCHMENT. L. J. Cowle Company, Inc. SN 124,894. Pub. 12–12–61. Filed 7–28–61.

728,014. RING-O-MATIC. Feldco, Inc. SN 124,901. Pub. 12–12–61. Filed 7–28–61.

Class 38 — Prints and Publications

728,015. SKY DIVER AND DESIGN. Parachute Enterprises, assignee, by mesne assignments, of Sky Diver Magazine. SN 78,068. Pub. 10–18–60. Filed 7–20–59.

728,016. TEST-O-MATIC. Sue J. Convery. SN 93,284. Pub. 12–12–61. Filed 3–21–60.

728,017. WORLD VISION MAGAZINE. World Vision, Inc. SN 100,676. Pub. 3–7–61. Filed 7–11–60.

728,018. PRINTING TRADES BLUE BOOK AND DESIGN. A. F. Lewis & Co. of New York, Inc. SN 101,113. Pub. 12–12–61. Filed 7–19–60.

728,019. DIRECTORY OF MEDICAL SPECIALISTS. Marquis—Who's Who, Inc. SN 108,061. Pub. 12–12–61. Filed 11–8–60.

728,020. COLCORACOLOR AND DESIGN. Color Corporation of America. SN 122,514. Pub. 12–12–61. Filed 6–21–61.

728,021. CHRONO-CHART. William T. McBurnie, d.b.a. Wm. T. McBurnie. SN 124,661. Pub. 12–12–61. Filed 7–25–61.

Class 39 — Clothing

728,022. CARAVAN. Corporation, Ltd.: Caravan. SN 86,736. Pub. 12–20–60. Filed 12–7–59.

728,023. AIRBORNE. Perfect Brassiere Company, Inc. SN 89,294. Pub. 10–17–61. Filed 1–19–60.

728,024. THE HOUSE OF DIOR MAISON DIOR. Comptoir de l'Industrie Cotonniere, Etablissements Boussac, S.A.R.L. SN 92,088. Pub. 12–12–61. Filed 3–3–60.

728,025. PENDLETON KNOCKABOUT. Pendleton Woolen Mills. SN 96,979. Pub. 12–12–61. Filed 5–12–60.

728,026. ROMULUS. Robert Müller & Co. SN 106,623. Pub. 12–12–61. Filed 10–18–60.

728,027. BLACKSTONE. Henry C. Lytton & Company. SN 107,021. Pub. 10–17–61. Filed 10–24–60.

728,028. BELCON. O'Brien Manufacturing Co., by change of name from Hank Mann, Inc. SN 111,307. Pub. 12–12–61. Filed 1–3–61.

728,029. VANCROSS. Vancross Clothes, Incorporated. SN 111,937. Pub. 12–12–61. Filed 1–16–61.

728,030. LE CHEVAL. The Manhattan Shirt Company. SN 112,628. Pub. 12–12–61. Filed 1–27–61.

728,031. EMILIO SESTRI. Talbott, Inc. SN 112,648. Pub. 12–12–61. Filed 1–27–61.

728,032. SIR WEMBLEY. Wembley, Inc. SN 113,880. Pub. 12–12–61. Filed 2–16–61.

728,033. HEAD AND SHOULDERS ABOVE THE CROWD. Talbott, Inc. SN 113,962. Pub. 12–12–61. Filed 2–17–61.

728,034. POLYNET. The Formfit Company. SN 114,468. Pub. 12–12–61. Filed 2–27–61.

728,035. WORSTED-TEX WEARLONG. House of Worsted-Tex, Inc. SN 114,615. Pub. 12–12–61. Filed 2–28–61.

728,036. SNAP-A-NITIAL. Reliance Manufacturing Company. SN 115,002. Pub. 12–12–61. Filed 3–6–61.

728,037. DOVALURE. Saks & Company. SN 115,258. Pub. 12–12–61. Filed 3–9–61.

728,038. DERBY. Union Underwear Company, Inc. SN 115,275. Pub. 12–12–61. Filed 3–9–61.

728,039. VAN HEUSEN. Phillips-Van Heusen Corporation. SN 115,723. Pub. 12–12–61. Filed 3–15–61.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

728,040. CORIVELA. J. H. Benecke. SN 109,762. Pub. 12–12–61. Filed 12–7–60.

728,041. VISILLOS. J. H. Benecke. SN 109,764. Pub. 12–12–61. Filed 12–7–60.

728,042. ELASTOMER D FABRIC A RHEEFLEX PRODUCT. Rhee Elastic Thread Corp. SN 110,626. Pub. 12–12–61. Filed 12–21–60.

728,043. BEAU SCULPTEUR. Fieldcrest Mills, Inc. SN 114,691. Pub. 12–12–61. Filed 3–1–61.

728,044. BANCOTE. Albert D. Smith & Co. Inc. SN 116,165. Pub. 12–12–61. Filed 3–21–61.

Class 43 — Thread and Yarn

728,045. CADON. The Chemstrand Corporation. SN 99,806. Pub. 11–15–60. Filed 6–27–60.

Class 44 — Dental, Medical, and Surgical Appliances

728,046. IMPERIAL AND DESIGN. H. D. Justi & Son, Inc. SN 79,580. Pub. 12–12–61. Filed 8–14–59.

728,047. HAIRDRI VALET WITHIN AN OVAL. Hairdri Valet, Inc. SN 108,733. Pub. 12–12–61. Filed 11–3–60.

728,048. SURVIV AIR. U.S. Divers Co. SN 109,122. Pub. 12–12–61. Filed 11–25–60.

Class 45 — Soft Drinks and Carbonated Waters

728,049. ROCK SPRING AND DESIGN. Jacob Ries Bottling Works, Inc. SN 66,581. Pub. 12–12–61. Filed 12–24–58.

Class 46 — Foods and Ingredients of Foods

728,050. SIL-OU-ET. H. P. Hood & Sons, Inc. SN 73,568. Pub. 12–12–61. Filed 5–13–59.

728,051. RIVERVIEW. Osceola Foods, Inc., d.b.a. Delta Foods of Osceola, Arkansas. SN 87,980. Pub. 12–12–61. Filed 12–24–59.

728,052. SWISS PLASTO-ICE. Henry & Henry, Inc. SN 90,059. Pub. 12–12–61. Filed 2–1–60.

728,053. RO-MIL. Hunt Foods and Industries, Inc., by merger from Wesson Oil & Snowdrift Co., Inc. SN 90,202. Pub. 6–28–60. Filed 2–2–60.

728,054. CRYSTAL WHITE AND DESIGN. Rozel Packing Corp. SN 96,143. Pub. 12–12–61. Filed 4–29–60.

728,055. REPRESENTATION OF A PENGUIN. Ray L. Travers, d.b.a. M. A. & Ray L. Travers, and as Ray Travers. SN 98,950. Pub. 12–12–61. Filed 6–13–60.

728,056. REPRESENTATION OF A GOBLET AND DESIGN. Mead Johnson & Company. SN 100,855. Pub. 12–12–61. Filed 7–14–60.

728,057. WHIP-EE BRAND AND DESIGN. Superior Farms Creamery, Inc. SN 105,471. Pub. 12–12–61. Filed 9–29–60.

728,058. ACME BRAND AND DESIGN. J. V. D'Albora Company, Inc., d.b.a. J. V. D'Albora Company. SN 106,991. Pub. 9–26–61. Filed 10–24–60.

728,059. PLANTATION. Duncan Coffee Company. SN 107,247. Pub. 12–12–61. Filed 10–27–60.

728,060. LA ROSA AND DESIGN. V. La Rosa & Sons, Inc. SN 108,495. Pub. 12–12–61. Filed 11–15–60.

728,061. HSK AND DESIGN. Hamanako Syokubin Kabushiki Kaisha. SN 108,777. Pub. 12–12–61. Filed 11–21–60.

728,062. ALL SWEET. Urick & Hollis. SN 110,007. Pub. 12–12–61. Filed 12–9–60.

728,063. MUTT'S. The Hartford Sugar Company, d.b.a. Mutt's Dog Food Co. SN 111,185. Pub. 12–12–61. Filed 1–3–61.

728,064. KAY-O-CAL. Chocolate Products Company. SN 112,521. Pub. 12–12–61. Filed 1–26–61.

728,065. RANCHO DEL SOL AND DESIGN. Allec Brothers, d.b.a. Rancho Del Sol. SN 113,603. Pub. 12–12–61. Filed 2–14–61.

728,066. SAMORA AND DESIGN. Allec Brothers, d.b.a. Rancho Del Sol. SN 113,604. Pub. 12–12–61. Filed 2–14–61.

728,067. BRACH'S AND DESIGN. E. J. Brach & Sons. SN 113,901. Pub. 12–12–61. Filed 2–17–61.

728,068. ALPENJOY. Molkerei-Zentrale Bayern, GmbH. SN 114,628. Pub. 12–12–61. Filed 2–28–61.

728,069. MAGIC GOLD. The Procter & Gamble Company. SN 114,791. Pub. 12–12–61. Filed 3–2–61.

728,070. SINGMOR. Arthur W. Hille, d.b.a. Indiana Feed and Seed Co. SN 117,149. Pub. 12–12–61. Filed 2–28–61.

728,071. PABLUM AND DESIGN. Mead Johnson & Company. SN 118,533. Pub. 12–12–61. Filed 3–30–61.

728,072. MRS. T'S. Ateeco, Incorporated. SN 123,593. Pub. 12–12–61. Filed 7–10–61.

Class 48 — Malt Beverages and Liquors

728,073. MOLSON'S CANADIAN LAGER BEER. Molson's Brewery, Limited. SN 82,691. Pub. 12–12–61. Filed 10–5–59.

Class 49 — Distilled Alcoholic Liquors

728,074. KICKAPOO. General Distillers Corporation of Kentucky Inc., d.b.a. Ye Old Kentucky Distillery. SN 106,898. Pub. 12–12–61. Filed 10–21–60.

728,075. GREY CUP. Carrington and Company, Ltd., assignee of The Overbrook Egg Nog Corporation. SN 114,517. Pub. 12–12–61. Filed 2–27–61.

728,076. ALBERTA SPRINGS. Carrington and Company, Ltd., assignee of The Overbrook Egg Nog Corporation. SN 114,519. Pub. 12–12–61. Filed 2–27–61.

728,077. MAPLE SPRINGS. Katz Drug Company. SN 120,998. Pub. 12–12–61. Filed 5–29–61.

Class 50 — Merchandise Not Otherwise Classified

728,078. DOGS OF THE WORLD AND DESIGN. Bachmann Bros., Inc. SN 89,400. Pub. 12–12–61. Filed 1–21–60.

728,079. SPORTAG. Barberton Plastic Products, Incorporated. SN 109,760. Pub. 12–12–61. Filed 12–7–60.

Class 51 — Cosmetics and Toilet Preparations

728,080. DRIFTWOOD. Estrellita Jones, d.b.a. Paul Jones Perfumes. SN 104,456. Pub. 5–9–61. Filed 9–14–60.

Class 52 — Detergents and Soaps

728,081. VELTENE. Guido Mazzetti. SN 106,822. Pub. 12–12–61. Filed 10–20–60.

728,082. OXFORD. New Jersey Chemical Company, Inc. SN 110,879. Pub. 12–12–61. Filed 12–27–60.

728,083. SELECT. Colgate-Palmolive Company. SN 116,975. Pub. 12–5–61. Filed 4–3–61.

728,084. ELECT. The Diversey Corporation. SN 117,261. Pub. 12–5–61. Filed 4–6–61.

728,085. POWER-DET. Oakite Products, Inc. SN 120,824. Pub. 12–12–61. Filed 5–25–61.

728,086. MIR. Myriad Detergents Inc. SN 121,112. Pub. 12–12–61. Filed 5–31–61.

Service Marks

Class 100 — Miscellaneous

728,087. DESIGN OF THREE SYMBOLS. Space-General Corporation, assignee of Space Electronics Corporation. SN 112,573. Pub. 12–12–61. Filed 1–26–61.

728,088. ISOLOG. Tuboscope Company. SN 113,381. Pub. 12–12–61. Filed 2–9–61.

728,089. REPRESENTATION OF AN ALUMINUM CAN, ALUMINUM STRIP AND A GEAR. Pre-Development Corp. SN 122,559. Pub. 12–12–61. Filed 6–21–61.

Class 101 — Advertising and Business

728,090. II AND DESIGN. International Inspection Corporation. SN 74,664. Pub. 9–26–61. Filed 5–28–59.

728,091. THE HOUSE OF WEDDINGS. The Art Point Studios. SN 114,743. Pub. 12–12–61. Filed 3–2–61.

Class 103 — Construction and Repair

728,092. GROTESQUE FIGURE. Ralph Goldberger. SN 112,252. Pub. 12–12–61. Filed 1–23–61.

Class 105 — Transportation and Storage

728,093. MOHUN AND CREST OF ARMS AND GLOBE DESIGN. Mohun International Travels. SN 114,024. Pub. 12–12–61. Filed 2–20–61.

728,094. MIT AND DESIGN. Mohun International Travels. SN 114,025. Pub. 12–12–61. Filed 2–20–61.

728,095. MOHUN AND CREST OF ARMS DESIGN. Mohun International Travels. SN 114,026. Pub. 12–12–61. Filed 2–20–61.

Class 107 — Education and Entertainment

728,096. THE OTHER 98. The Hearst Corporation. SN 105,892. Pub. 12–12–61. Filed 10–6–60.

728,097. WEATHER IN THE WEATHER. The Hearst Corporation. SN 105,893. Pub. 12–12–61. Filed 10–6–60.

728,098. PUNKY AND HIS PALS. The Hearst Corporation. SN 105,894. Pub. 12–12–61. Filed 10–6–60.

728,099. THE SOUTHERN AIRES. Dall Miller. SN 115,709. Pub. 12–12–61. Filed 3–15–61.

Collective Membership Mark

Class 200

728,100. CLIFF DWELLERS DEVILTRY AND DIVERSION SOCIETY AND DESIGN. Cliff Dwellers' Deviltry and Diversion Society. SN 100,816. Pub. 12–12–61. Filed 7–13–60.

Certification Mark

Class A — Goods

728,101. FABULIZED FINISH. W. F. Fancourt Co., assignee of Fabulized, Inc. SN 65,419. Pub. 1–19–60. Filed 1–7–59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 12 — Construction Materials

728,102. R. L. Spillman Company, Columbus, Ohio. SN 106,853. Filed P.R. 10–20–60; Am. S.R. 8–15–61.

EZY-STRYP

For Metal Forms for Concrete Products.
First use April 1959.

Class 19 — Vehicles

728,103. Rockwell-Standard Corporation, Coraopolis, Pa. SN 90,448. Filed P.R. 2–5–60; Am. S.R. 12–19–61.

TAPER-LEAF

For Spring Leaves.
First use about Aug. 15, 1958.

728,104. Sutone Corporation, Los Angeles, Calif. SN 118,510. Filed P.R. 4–24–61; Am. S.R. 11–20–61.

AUTOMATIC

For Curb Feelers.
First use in February 1953.

Class 21 — Electrical Apparatus, Machines, and Supplies

728,105. Graetz Kommandit-Gesellschaft, Altena, Westphalia, Germany. SN 111,403. Filed P.R. 1–6–61; Am. S.R. 11–17–61.

Graetz

Owner of German Reg. No. 652,065, dated Jan. 22, 1954.
For Radio and Television Equipment and Parts Thereof; Loud Speakers, Microphones, Tape Recorders and Parts Thereof.

728,106. Van Brode Milling Co., Inc., Clinton, Mass. SN 122,492. Filed P.R. 6–20–61; Am. S.R. 12–12–61.

KANT-KER-RODE

For Storage Battery Terminal Covers and for Bolt Wing Nuts and Washers Used in Connection With the Hold-Down Devices of Said Batteries.
First use Feb. 7, 1955.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

728,107. National & Transcontinental Trading Corp., New York, N.Y., assignee of Trio-Knife, Inc., New York, N.Y. SN 100,948. Filed P.R. 7–15–60; Am. S.R. 12–21–61.

TRIO-KNIFE

For Kitchen Slicing Knife.
First use July 7, 1960.

Class 26 — Measuring and Scientific Appliances

728,108. Scientific Service Laboratories, Inc., Dallas, Tex. SN 76,022. Filed P.R. 6–18–59; Am. S.R. 9–18–61.

MARINE AUTOTRAVERSE POSITIONER

For System for Determining the Position of Ships and the Like.
First use Nov. 1, 1958.

728,109. Bertram Doloff and Selma Doloff, Scranton, Pa. SN 80,317. Filed P.R. 8–27–59; Am. S.R. 11–9–61.

Lensettes

For Contact Lenses.
First use Aug. 1, 1959.

728,110. Maynard A. Wall, d.b.a. Karbrite Manufacturing Company, Omaha, Nebr. SN 101,282. Filed P.R. 7–21–60; Am. S.R. 12–15–61.

WEATHER WATCH

For Visible Wind and Rainfall Indicating Device.
First use June 29, 1959.

728,111. Lionel Electronic Laboratories, Inc., Brooklyn, N.Y., by change of name from Anton Electronic Laboratories, Inc., Brooklyn, N.Y. SN 104,133. Filed P.R. 9–9–60; Am. S.R. 12–22–61.

UNIT-MOUNT

For Radiation Detection Chambers and Radiation Detection Chamber Components.
First use on or about June 28, 1960.

Class 29 — Brooms, Brushes, and Dusters

728,112. American Sponge & Chamois Company, Inc., Long Island City, N.Y. SN 74,712. Filed P.R. 5–29–59; Am. S.R. 12–13–61.

SWEET 'N CLEAN

For Cellulose Sponge Cloth for Cleaning and Polishing Purposes.
First use May 24, 1959.

728,113. Gibson-Thomsen Co., Inc., New York, N.Y. SN 120,718. Filed 5–24–61.

BEAUTY BEGINS WITH YOUR HAIR

For Hair Brushes for Personal Use, for Men, Boys, Women, and Infants.
First use Mar. 1, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

728,114. Central Butane, Inc., d.b.a. Hot-Mix Equipment Company, Stillwater, Okla. SN 86,928. Filed P.R. 12–9–59; Am. S.R. 12–21–61.

HOT-MIX

For Propane and Butane Vaporizers for Asphalt Plants.
First use June 15, 1959.

Class 39 — Clothing

728,115. Town Talk Coat Co., Inc., New York, N.Y. SN 113,460. Filed 2–10–61.

WINTER WARMTH

For Women's and Misses' Coats of Pile Fabric.
First use June 27, 1938.

TRADEMARK REGISTRATIONS RENEWED

149,424. F-S IN DIAMOND DESIGN. Cl. 14. 12-13-21.
150,331. DEGRACO. Cl. 16. 1-3-22.
150,577. WESSON 22. Cl. 46. 1-3-22.
150,578. WESSON 44. Cl. 46. 1-3-22.
150,581. WESSON 77. Cl. 46. 1-3-22.
150,582. WESSON 88. Cl. 46. 1-3-22.
150,723. TRIUMPH. Cl. 23. 1-10-22.
150,789. KING. Cl. 23. 1-10-22.
151,004. VEUVE CLICQUOT PONSARDIN. Cl. 47. 1-10-22.
151,508. HOMELITE. Cl. 21. 2-7-22.
152,219. DERRISOL. Cl. 6. 2-21-22.
152,220. DERRISINE. Cl. 6. 2-21-22.
152,544. VEUVE CLICQUOT DRY. Cl. 47. 2-28-22.
153,309. QUALITY SEAL. Cl. 29. 3-14-22.
153,691. DAIRMOL. Cl. 18. 3-28-22.
154,268. DIAMOND. Cl. 23. 4-11-22.
155,501. TEA TABLE. Cl. 46. 5-30-22.
155,702. HANES AND DESIGN. Cl. 39. 6-6-22.
390,653. STAR SPANGLED COMICS. Cl. 38. 9-30-41.
390,850. PULMORE. Cl. 6. 10-7-41.
391,097. IM WITHIN A CIRCLE DESIGN. Cl. 13. 10-21-41.
392,477. HALLMARK. Cl. 30. 12-30-41.
392,733. FIKANY ETC. AND DESIGN. Cl. 39. 1-13-42.
392,848. BRUSHWOOD. Cl. 42. 1-13-42.
392,902. WINTER-TEX IMPERIAL AND DESIGN. Cl. 39. 1-20-42.
393,034. BALTA. Cl. 42. 1-27-42.
393,043. BLUE RIBBON. Cl. 44. 1-27-42.
393,063. V AND DUAL HEAD DESIGN. Cl. 51. 1-27-42.
393,320. PLEXON. Cl. 43. 2-3-42.
393,362. ELMER'S CHEE WEES. Cl. 46. 2-10-42.
393,580. CALMULSION. Cl. 18. 2-17-42.
393,966. VEL-VO. Cl. 45. 3-10-42.
394,190. SMITHWAY AND DESIGN. Cl. 14. 3-24-42.
394,751. DELUXE N NEVINS EUREKA GROVES AND DESIGN. Cl. 46. 4-28-42.
394,992. DURACLAD. Cl. 34. 5-5-42.
394,993. PERMAGLAS. Cl. 34. 5-5-42.
395,456. GLYCO-TITE. Cl. 39. 5-26-42.
395,471. MIMI. Cl. 42. 5-26-42.
395,620. ESCO. Cl. 6. 6-2-42.
395,626. SIERRA AND DESIGN. Cl. 1. 6-2-42.
395,671. ANOVO. Cl. 18. 6-2-42.
395,672. BARBISODITE. Cl. 18. 6-2-42.
395,673. ENTERDIGALIS. Cl. 18. 6-2-42.
395,674. PROPALCAIN. Cl. 18. 6-2-42.
395,675. TRIBROMAURO. Cl. 18. 6-2-42.
395,677. VICALIRON. Cl. 18. 6-2-42.
395,678. VITACHOLINE. Cl. 18. 6-2-42.
395,757. AMERICAN FIELD. Cl. 39. 6-9-42.
395,888. FLOOR-SAN. Cl. 52. 6-16-42.
396,018. RAVEN. Cl. 11. 6-23-42.

TRADEMARK REGISTRATIONS CANCELED

Section 8

60,482. FORT ATKINSON. Cl. 46. 2-12-07.
107,459. THE SLEEP CHECKER. Cl. 27. 11-30-15.
332,153. BARD PARKER B-P ETC. AND DESIGN. Cl. 44. 2-4-36.
609,869. CENTRISHIELD. Cl. 21. 8-2-55.
609,983. HI-TOSE. Cl. 46. 8-2-55.
614,013. KING O' THE WEST AND DESIGN. Cl. 46. 10-11-55.

The following registrations issued Jan. 10, 1956

618,828. GREAT W. Cl. 1.
618,829. PENNWHITE. Cl. 1.
618,836. PERIMBA. Cl. 4.
618,842. METALECTRO. Cl. 6.
618,848. FIESTAR. Cl. 10.
618,851. VENTAIR AND DESIGN. Cl. 12.
618,853. PERFO BOARD. Cl. 12.
618,859. AMFAB. Cl. 12.
618,861. HORTOCLOCHE. Cl. 13.
618,871. POPPET. Cl. 13.
618,873. LIONEL. Cl. 14.
618,897. REAL-LIEF. Cl. 18.
618,898. FASTONE. Cl. 18.
618,905. RECANESCINE. Cl. 18.
618,908. HITACIN. Cl. 18.
618,909. RAUDRINAL. Cl. 18.
618,922. TRIPLE HIST AND DESIGN. Cl. 18.
618,924. HY-REX AND DESIGN. Cl. 18.
618,925. THYPITCO. Cl. 18.
618,928. DOLITRONE. Cl. 18.
618,930. HAILEY'S HITCHY-KOOOOO. Cl. 18.
618,931. WARSENE. Cl. 18.
618,934. SKYRAMA. Cl. 19.
618,940. 66. Cl. 19.
618,941. DESIGN OF SHIELD. Cl. 19.
618,948. THERMAL-KING. Cl. 21.
618,951. DIP-IT. Cl. 21.
618,952. METALOHM. Cl. 21.
618,953. MAD CO IN A CIRCLE DESIGN. Cl. 21.
618,957. AMIC ELECTRONIC NOTEBOOK. Cl. 21.
618,958. AMIC. Cl. 21.
618,959. SUPER-CEPTOR. Cl. 21.
618,968. BROTHER. Cl. 21.
618,974. GLASSCASTER. Cl. 22.
618,976. TOM-WALKER. Cl. 22.
618,977. LINGO! Cl. 22.
618,979. SPELLWELL. Cl. 22.
618,980. ZITS AND ZATS THE ACROBATS. Cl. 22.
618,987. DRIVEMOBILE. Cl. 22.
618,991. SAY HEY AND DESIGN. Cl. 22.
618,993. SACO. Cl. 23.
618,995. GAUCHO TWURL AND DESIGN. Cl. 22.
619,008. SALADIZER SUPREME. Cl. 23.
619,015. M-W. Cl. 23.
619,017. FAMILIA AUTO-KNIT. Cl. 23.
619,018. ROBERTON. Cl. 23.
619,019. FJORD. Cl. 23.
619,020. SATURDAY TOOLS. Cl. 23.
619,021. POWER-IMPLEMETTES. Cl. 23.
619,026. STEVENS. Cl. 26.
619,033. SANWA. Cl. 26.
619,034. PIC AND DESIGN. Cl. 26.
619,035. PIC AND DESIGN. Cl. 26.
619,040. ALBACORE. Cl. 27.
619,041. CONSEIL. Cl. 27.
619,042. ARONNEX. Cl. 27.
619,043. NARWHAL. Cl. 27.
619,044. TWIN-HEART. Cl. 27.
619,045. EARJOYS. Cl. 28.
619,048. TWIN-HEART. Cl. 28.
619,052. LADY ROSE. Cl. 30.
619,053. TRAY-LITE. Cl. 30.
619,054. LINDSAY AND DESIGN. Cl. 31.
619,056. BRUSH-O. Cl. 31.
619,057. COLONIAL HOUSE AND DESIGN. Cl. 32.
619,061. RONDO. Cl. 33.
619,063. STERLING. Cl. 34.
619,072. SUXKET. Cl. 35.
619,082. SONGTIME AND DESIGN. Cl. 36.
619,083. CETRA AND DESIGN. Cl. 36.
619,088. ALCOVE. Cl. 37.
619,089. SHIKI. Cl. 37.
619,093. SIMPL-O-STATEMENT. Cl. 37.

619,094. PACK-VELOPE. Cl. 37.
619,100. STONY BROOK. Cl. 39.
619,102. TREBOR ON PANTS IS LIKE STERLING ON SILVER AND DESIGN. Cl. 39.
619,108. PLUVIA PIQUE AND DESIGN. Cl. 39.
619,112. UNDER-ALLS. Cl. 39.
619,115. GAME BIRD SLACKS AND DESIGN OF BIRD. Cl. 39.
619,119. HOBNOBBERS. Cl. 39.
619,120. "POCKET-MATE." Cl. 39.
619,124. KATHY PAYNE LOVELY'S. Cl. 39.
619,125. FRANK PAYNE QUALITY SHOES. Cl. 39.
619,127. LEISURE BELLE. Cl. 39.
619,131. DAVENELLA. Cl. 39.
619,132. ACKORA. Cl. 39.
619,134. BRUSHTWEED. Cl. 42.
619,135. BEAUTISTE. Cl. 42.
619,145. PITT'S AND DESIGN. Cl. 45.
619,147. SNO-SPUDS. Cl. 46.
619,153. BEAUTY AND DESIGN. Cl. 46.
619,154. PALATEAZ. Cl. 46.
619,173. ENRICHO. Cl. 46.
619,174. MILAN. Cl. 46.
619,182. ROYAL BANTAM AND DESIGN. Cl. 46.
619,184. WINTERHILL. Cl. 46.
619,187. "SYNCHRO-BALANCED." Cl. 46.
619,188. GAUTHIER. Cl. 47.
619,189. GAUTHIER ETC. AND DESIGN. Cl. 47.
619,193. SMILE-PAK. Cl. 50.
619,195. MOD-ELF. Cl. 50.
619,196. KOKETTE. Cl. 50.
619,198. AJUSTLO[illegible]. Cl. 50.
619,199. "HOLD ALL" AND DESIGN. Cl. 50.
619,202. KISLAV 6½ IN A CIRCLE DESIGN. Cl. 51.
619,210. MORE 'N MORE "SUDS" AND DESIGN. Cl. 52.
619,217. DRAIN-O-TANK. Cl. 13.
619,220. TEA ROSE. Cl. 23.
619,223. HOW-TOO-DOO-IT. Cl. 101.
619,224. "BILL THE BANK." Cl. 102.
619,225. FOR SALE GROGAN ETC. AND DESIGN. Cl. 102.

Section 18

177,458. HARVEST HOME. Cl. 46. 12-18-23.
231,937. WOLVERINE. Cl. 39. 8-30-27.
397,159. "AMPRUF." Cl. 12. 8-25-42.
401,210. AR-JAY. Cl. 6. 4-27-43.
614,315. SUN VALLEY. Cl. 22. 10-18-55.
647,052. SUN VALLEY. Cl. 22. 6-18-57.
662,867. MR. CHARLES. Cl. 39. 6-10-58.
683,757. 7 ELEVEN. Cl. 46. 8-18-59.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

293,986. ESCHATIN. Cl. 18. 5-10-32. Parke, Davis & Co. Parke, Davis & Company, Detroit, Mich. Amended: In the statement, column 1, lines 8 through 12, the description of goods is deleted and *medicinal preparation for the treatment of Addison's disease or any condition due to deficiency of the cortical portion of the suprarenal gland* is inserted.

388,691. FLEX-CRAFT. Cl. 39. 7-8-41. The Berland Shoe Stores, Inc. Genesco Inc., Nashville, Tenn. Amended to appear:

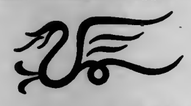
FLEX-CRAFT

500,428. MM. Cl. 11. 5-18-48. Markem Machine Company, Keene, N.H. Amended to appear:



615,697. LONGYEAR. Cl. 23. 11-8-55. E. J. Longyear Company, Minneapolis, Minn. Amended: In the statement, column 1, line 4, "well" is deleted and *earth* is inserted.

622,997. REPRESENTATION OF A DRAGON. Cl. 23. 3-13-56. Aktiebolaget Karlsson & Nilsson Knivfabrik, Eskilstuna, Sweden. Amended to appear:



635,847. ECHLIN. Cl. 21. 10-16-56. Echlin Manufacturing Company, New Haven, Conn. Corrected: In the statement, column 1, line 1, "Connecticut" should be deleted and *California* should be inserted.

645,602. WILFLEX AND DESIGN. Cl. 6. 5-21-57. Flexible Products Company, Marietta, Ga. Amended to appear:



698,556. SELECTOGRAPHIC. Cl. 26. 5-31-60. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Amended to appear:

SELECTOGRAPHIC

714,672. TAKARA AND DESIGN. Cl. 22. 5-2-61. International Models, Inc., New York, N.Y. Amended to appear:



716,906. SLOOP. Cl. 39. 6-13-61. George W. Coble, New York, N.Y. Corrected: In the statement, column 1, line 1, "F." should be deleted and *W.* should be inserted.

722,105. MEDALIST. Cl. 2. 10-3-61. Metal Coating Corporation, doing business as Medalist Tank Division, Chicago, Ill. Corrected: In the statement, column 1, line 1, "Illinois" should be deleted and *Delaware* should be inserted.

724,450. ESNA. Cls. 21 and 50. 11-28-61. Elastic Stop Nut Corporation of America, Union, N.J. Corrected: In the statement, column 2, line 9, "Sept." should be deleted and *Jan.* should be inserted.

724,680. COBRA. Cl. 9. 12-5-61. Bolkow-Entwicklungen Kommanditgesellschaft, Ottobrunn, near Munich, Germany. Corrected: In the statement, column 1, line 1, "Bulkow" should be deleted and *Bolkow* should be inserted.

724,755. ZEC AND DESIGN. Cl. 21. 12-5-61. Lew Coren, doing business as Zenith Electric Company, Chicago, Ill. Corrected: In the statement, column 2, line 9, "1956" should be deleted and *1959* should be inserted.

724,854. GLEN CASTLE AND DESIGN. Cl. 39. 12-5-61. Quaker Hosiery Mills, Inc., Berlin, N.J. Corrected: In the statement, column 2, line 2, "jackets" should be deleted and *shirts* should be inserted.

724,984. FIXTURE FASHIONS. Cl. 13. 12-12-61. Stephen A. Young Corporation, Flora, Ind. Corrected: In the heading, "Ser. No. 111,561" should be deleted and *Ser. No. 115,561* should be inserted.

INDEX OF REGISTRANTS

FEBRUARY 27, 1962

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A.E.I.-Birlec Ltd., London, England. 727,960, pub. 12–12–61. Cl. 23.
A.R.F. Products, Inc., River Forest, Ill. 727,921, pub. 12–12–61. Cl. 21.
Action Diamond Tool Co., Chicago, Ill. 727,849, pub. 12–12–61. Cl. 4.
Adler's Inc., Kansas City, Mo. 662,867, canc. Cl. 39.
Aisenstein, Louis, & Bros., Inc.: *See*—
Woronock, David, and William Ansen.
Aktiebolaget Karlsson & Nilsson Knivfabrik, Eskilstuna, Sweden. 622,997. Am. 7(d). Cl. 23.
Alaska Juneau Enterprises: *See*—
Alaska Juneau Gold Mining Co.
Alaska Juneau Gold Mining Co., d.b.a. Alaska Juneau Enterprises, San Francisco, Calif. 619,015, canc. Cl. 23.
Allec Brothers, d.b.a. Rancho Del Sol, Yuma, Ariz. 728,065–6, pub. 12–12–61. Cl. 46.
Allen & Hanburys, Ltd., London, England. 618,908, canc. Cl. 18.
Altman, B., & Co., New York, N.Y. 393,034, ren. 2–27–62. Cl. 42.
American Agricultural Chemical Co., New York, N.Y. 727,870, pub. 12–12–61. Cl. 10.
American Fabricators, a Division of Bellingham Shipyards Co., Bellingham, Wash. 618,859, canc. Cl. 12.
American Measuring Instruments Corp., Long Island City, N.Y. 618,957–8, canc. Cl 21.
American Sponge & Chamois Co., Inc., Long Island City, N.Y. 728,112. Cl. 29.
American Waterproofing Corp., Brooklyn, N.Y. 397,159, canc. Cl. 12.
Amp Inc., Harrisburg, Pa. 727,940, pub. 12–12–61. Cl. 21.
Anderson, Frances E., d.b.a. Kaybob Products, Lynwood, Calif. 727,999, pub. 12–12–61. Cl. 34.
Anton Electronic Laboratories, Inc.: *See*—
Lionel Electronic Laboratories, Inc.
Ar-Jay Laboratories, Inc., Ontario, Calif. 401,210, canc. Cl. 6.
Armour Alliance Industries: *See*—
Armour and Co.
Armour and Co., d.b.a. Armour Alliance Industries, Chicago, Ill. 727,852, pub. 12–12–61. Cl. 5.
Art Point Studios, The, Sebastopol, Calif. 728,091, pub. 12–12–61. Cl. 101.
Artex Sales Co.: *See*—
Crockett, Charles H., III.
Ateeco, Inc., Shenandoah, Pa. 728,072, pub. 12–12–61. Cl. 46.
Bachmann Bros., Inc., Philadelphia, Pa. 728,078, pub. 12–12–61. Cl. 50.
Baden & Foss Co., New York, N.Y. 727,987, pub. 12–12–61. Cl. 28.
Bantam Match Corp., Freeport, N.Y. 727,869, pub. 12–12–61. Cl. 9.
Barberton Plastics Products, Inc., Barberton, Ohio. 728,079, pub. 12–12–61. Cl. 50.
Bard-Parker Co., Inc., Danbury, Conn. 332,153, canc. Cl 44.
Barr Rubber Products Co., The, Sandusky, Ohio. 618,991, canc. Cl. 22.
Bartlett, C. O., & Snow Co., The, Cleveland, Ohio, to Bartlett-Snow-Pacific, Inc., San Francisco, Calif. 150,723, ren. 2–27–62. Cl. 23.
Bartlett-Snow-Pacific, Inc.: *See*—
Bartlett, C. O., & Snow Co., The.
Behlman Engineering Co., Burbank, Calif. 727,935, pub. 12–12–61. Cl. 21.
Belknap Hardware and Mfg. Co., Louisville, Ky. 727,885, pub. 12–12–61. Cl. 13.
Bell & Gossett Co., Morton Grove, Ill. 619,217, canc. Cl. 13.
Bellingham Shipyards Co.: *See*—
American Fabricators.
Beltraction Co., to Beltraction Co., Chicago, Ill. 390,850, ren. 2–27–62. Cl. 6.
Benecke, J. H., Hannover-Vinnhorst, Germany. 728,040–1, pub. 12–12–61. Cl. 42.
Berkshire Woolen Co., Pittsfield, Mass. 619,134, canc. Cl. 42.
Berland Shoe Stores Inc. The, Genesco Inc., Nashville, Tenn. 388,691. Am. 7(d). Cl. 39.
Berlin & Jones Co., Inc., New York, N.Y. 619,094, canc. Cl. 37.
Bolkow-Entwicklungen Kommanditgesellschaft, Ottobrunn, near Munich, Germany. 724,680, cor. Cl. 9.
Bowman Feed Products, Inc., Holland, Mich. 619,154, canc. Cl. 46.
Brach, E. J., & Sons, Chicago, Ill. 728,067, pub. 12–12–61. Cl. 46.
Brewster, E. L., Inc., Los Angeles, Calif. 727,943, pub. 12–12–61. Cl. 22.
Brinkman, Adolph, New York, N.Y. 727,893, pub. 12–12–61. Cl. 15.
Bristol-Myers Co., New York, N.Y. 393,063, ren. 2–27–62. Cl. 51.
Brooks Uniform Co. Inc., New York, N.Y. 619,112, canc. Cl. 39.
Bruder and Co.: *See*—
Bruder, Robert I.
Bruder, Robert I., d.b.a. Bruder and Co., Cleveland, Ohio. 728,001, pub. 12–12–61. Cl. 34.
Brush-O-Products, San Francisco, Calif. 619,056, canc. Cl. 31.
Bryant Playthings, Inc., Bronx, N.Y. 618,995, canc. Cl. 22.
Burke & James, Inc., Chicago, Ill. 727,974, pub. 12–12–61. Cl. 26.
Buscarlet Glove Co., Inc.: *See*—
Societe Anonyme des Gants Buscarlet.
Butler Bin Co., Waukesha, Wis. 727,984, pub. 10–17–61. Cl. 26.
Byer-Rolnick Co., to Byer-Rolnick Hat Corp., Garland, Tex. 395,456, ren. 2–27–62. Cl. 39.
Byer-Rolnick Hat Corp.: *See*—
Byer-Rolnick Co.
CKD Praha, Noradni Podnik, Prague, Czechoslovakia. 727,890, pub. 12–12–61. Cl. 14.
CKD Praha, Narodni Podnik, Prague, Czechoslovakia. 727,958, pub. 12–12–61. Cl. 23.
Cabot Corp., Wilmington, Del., from Godfrey L. Cabot, Inc., Boston, Mass. 727,854, pub. 12–12–61. Cl. 6.
Cabot, Godfrey L., Inc.: *See*—
Cabot Corp.
Cadaco-Ellis, Inc., Chicago, Ill. 727,942, pub. 12–12–61. Cl. 22.
Callaway Mills Co., LaGrange, Ga. 727,966, pub. 12–12–61. Cl. 23.
Cambridge Glass Co., The, Cambridge, Ohio. 619,061, canc. Cl. 33.
Canada Dry Corp.: *See*—
Canada Dry Ginger Ale, Inc.
Canada Dry Ginger Ale, Inc., to Canada Dry Corp., New York, N.Y. 393,966, ren. 2–27–62. Cl. 45.
Canadian Forest Products Ltd., Vancouver, British Columbia, Canada. 727,877, pub. 12–12–61. Cl. 12.
Candle-Lite Lamp Co.: *See*—
Carlstead, Harold C.
Capitol Records, Inc., Los Angeles, Calif. 619,083, canc. Cl. 36.
Carlstead, Harold C., d.b.a. Candle-Lite Lamp Co., Harvey, Ill. 619,053, canc. Cl. 30.
Carrington and Co., Ltd., New York, N.Y., from The Overbrook Egg Nog Corp., Baltimore, Md. 728,075–6, pub. 12–12–61. Cl. 49.
Central Butane, Inc., d.b.a. Hot-Mix Equipment Co., Stillwater, Okla. 728,114. Cl. 34.
Central Wholesale Co., Boise, Idaho. 614,315, canc. Cl. 22.
Central Wholesale Co., Boise, Idaho. 647,052, canc. Cl. 22.
Cerro Corp.: *See*—
Lewin-Mathes Co.
Champion Paper and Fibre Co., The: *See*—
Champion Papers Inc.
Champion Papers Inc., from The Champion Paper and Fibre Co., Hamilton, Ohio. 728,009–10, pub. 12–12–61. Cl. 37.
Champion Papers Inc., from The Champion Paper and Fibre Co., Hamilton, Ohio. 728,012, pub. 12–12–61. Cl. 37.
Chemex Corp., New York, N.Y. 727,880, pub. 12–12–61. Cl. 13.
Chemstrand Corp., The, Decatur, Ala. 728,045, pub. 11–15–60. Cl. 43.
Chicago Pharmacal Co., Chicago, Ill. 395,671–5, ren. 2–27–62. Cl. 18.
Chicago Pharmacal Co., Chicago, Ill. 395,677–8, ren. 2–27–62. Cl. 18.
Chocolate Products Co., Chicago, Ill. 728,064, pub. 12–12–61. Cl. 46.
Christians, Peral V., d.b.a. Christians Sheet Metal Works, Spencer, Iowa. 727,871, pub. 9–13–60. Cl. 12.
Christians Sheet Metal Works: *See*—
Christians, Peral V.
Cincinnati Screen Process Supplies, Inc., Cincinnati, Ohio. 727,967, pub. 12–12–61. Cl. 23.
Cleveland Patents, Inc., Cleveland, Ohio. 727,976, pub. 12–12–61. Cl. 26.
Cliff Dwellers' Devilry and Diversion Society, Washington, D.C. 728,100, pub. 12–12–61. Cl. 200.
Clopay Corp., Cincinnati, Ohio. 727,875, pub. 12–12–61. Cl. 12.
Coble, George W., New York, N.Y. 716,906, cor. Cl. 39.
Code-A-Phone Electronics, Inc., Seattle, Wash. 727,937, pub. 12–12–61. Cl. 21.
Cohen, Goldman & Co., Inc., New York, N.Y., to House of Worsted-Tex, Inc., Baltimore, Md. 392,902, ren. 2–27–62. Cl. 39.
Cohn-Hall-Marx Co., to United Merchants and Manufacturers, Inc., New York, N.Y. 392,848, ren. 2–27–62. Cl. 42.
Colgate-Palmolive Co., New York, N.Y. 728,083, pub. 12–5–61. Cl. 52.
Color Corp. of America, Tampa, Fla. 728,020, pub. 12–12–61. Cl. 38.
Colotyle Tyle-Bord, Inc., Seattle, Wash. 619,199, canc. Cl. 50.
Colt's Patent Fire Arms Mfg. Co., Inc., Hartford, Conn. 727,953, pub. 12–12–61. Cl. 22.
Columbian Carbon Co., New York, N.Y. 396,018, ren. 2–27–62. Cl. 11.
Columbian Vise & Mfg. Co., The, Cleveland, Ohio. 619,026, canc. Cl. 26.

Communication Products Co., Inc., Marlboro, N.J. 727,933–4, pub. 12–12–61. Cl. 21.
Comptoir de l'Industrie Cotonniere, Etablissements Boussac, S.A.R.L., Paris, France. 728,024, pub. 12–12–61. Cl. 39.
Convery, Sue J., San Francisco, Calif. 728,016, pub. 12–12–61. Cl. 38.
Coren, Lew, d.b.a. Zenith Electric Co., Chicago, Ill. 724,755, cor. Cl. 21.
Corn Products Co., New York, N.Y. 727,857, pub. 12–12–61. Cl. 6.
Corp., Ltd.: Caravan, Tokyo, Japan. 728,022, pub. 12–20–60. Cl. 39.
Cowie, L. J., Co., Inc., Washington, D.C. 728,013, pub. 12–12–61. Cl. 37.
Crane & Breed Casket Co., The, Cincinnati, Ohio. 727,847, pub. 12–12–61. Cl. 2.
Crane Co., Chicago, Ill. 728,000, pub. 12–12–61. Cl. 34.
Crane Co., Chicago, Ill. 728,002, pub. 12–12–61. Cl. 34.
Crockett, Charles H., III, d.b.a. Artex Sales Co., Lima, Ohio. 727,897, pub. 12–12–61. Cl. 16.
Crosman Arms Co., Inc., Fairport, N.Y. 727,868, pub. 12–12–61. Cl. 9.
Cryo-Therm, Inc., from Standard Plastics, Inc., Fogelsville, Pa. 727,983, pub. 12–12–61. Cl. 26.
Curtiss-Wright Corp., Princeton, N. J. 727,995, pub. 12–12–61. Cl. 34.
Dairy Laboratories, The, Philadelphia, Pa. 153,691, ren. 2–27–62. Cl. 18.
D'Albora, J. V., Co.: *See*—
D'Albora, J. V., Co., Inc.
D'Albora, J. V., Co., Inc., d.b.a. J. V. D'Albora Co., Cocoa, Fla. 728,058, pub. 9–26–61. Cl. 46.
Davidow, Inc., New York, N.Y. 619,131, canc. Cl. 39.
Dearborn Chemical Co., Chicago, Ill. 727,894, pub. 12–12–61. Cl. 16.
DeLong, David A., d.b.a. DeLong Lures, Cleveland, Ohio. 727,950–1, pub. 12–12–61. Cl. 22.
DeLong Lures: *See*—
DeLong, David A.
Delta Foods of Osceola, Arkansas: *See*—
Osceola Foods, Inc.
Denver Chemical Mfg. Co., The, d.b.a. Wampole Laboratories, Stamford, Conn. 727,903, pub. 9–26–61. Cl. 18.
Detective Comics, Inc., to National Periodical Publications, Inc., New York, N.Y. 390,653, ren. 2–27–62. Cl. 38.
Detroit Graphite Co., Detroit, Mich., to The Valspar Corp., Rockford, Ill. 150,331, ren. 2–27–62. Cl. 16.
Dille & McGuire Mfg. Co., Richmond, Ind. 150,789, ren. 2–27–62. Cl. 23.
Dille & McGuire Mfg. Co., Richmond, Ind. 154,268, ren. 2–27–62. Cl. 23.
Diversey Corp., The, Chicago, Ill. 728,084, pub. 12–5–61. Cl. 52.
Dixon, W. L., Co., Los Angeles, Calif. 618,853, canc. Cl. 12.
Doctors Specialty Ptg. Co.: *See*—
Reeves, Wallace C.
Doering, A. L., Mfg. Corp., Bayside, N.Y. 727,917, pub. 12–12–61. Cl. 21.
Doloff, Bertram, and Selma Doloff, Scranton, Pa. 728,109. Cl. 26.
Drug Products Co., Inc., The, Brooklyn, N.Y. 618,925, canc. Cl. 18.
Duncan Coffee Co., Houston, Tex. 728,059, pub. 12–12–61. Cl. 46.
Dyna-Slide Co., The: *See*—
Hedberg, David D.
Eagle Clothes, Inc., Brooklyn, N.Y. 619,100, canc. Cl. 39.
Eagle-Picher Co., The, Cincinnati, Ohio. 618,951, canc. Cl. 21.
Ease-O-Mat Co., Pittsburg, Calif. 727,972, pub. 12–12–61. Cl. 24.
Eaton Mfg. Co., Cleveland, Ohio. 727,927, pub. 12–12–61. Cl. 21.
Echlin Mfg. Co., New Haven, Conn. 635,847, cor. Cl. 21.
Ekco Products Co., Chicago, Ill. 727,959, pub. 12–12–61. Cl. 23.
Elastic Stop Nut Corp. of America, Union N.J. 724,450, cor. Cl. 21 and 50.
Electric Storage Battery Co., The, Philadelphia, Pa. 618,948, canc. Cl. 21.
Elmer Candy Co., Inc.: *See*—
Elmer Candy Co. Inc.
Elmer Candy Co. Inc., to Elmer Candy Co., Inc., New Orleans, La. 393,362, ren. 2–27–62. Cl. 46.
Ellam, Patrick, Mamaroneck, N.Y. 727,915, pub. 12–12–61. Cl. 19.
Embalmers' Supply Co., The, Westport, Conn. 395,620, ren. 2–27–62. Cl. 6.
Etta-Leen Hats, New York, N.Y. 619,108, canc. Cl. 39.
Fabulized, Inc.: *See*—
Fancourt, W. F., Co.
Fancourt, W. F., Co., from Fabulized, Inc., Philadelphia, Pa. 728,101, pub. 1–19–60. Cl. A.
Farley, C. J., & Co., Grand Rapids, Mich. 231,937, canc. Cl. 39.
Fastone, Inc., New York, N.Y. 618,898, canc. Cl. 18.
Feldco, Inc., Chicago, Ill. 728,014, pub. 12–12–61. Cl. 37.
Fieldcrest Mills, Inc., Spray, N.C. 728,043, pub. 12–12–61. Cl. 42.
Fiesta, Inc., Roslyn Heights, N.Y. 618,848, canc. Cl. 10.
Figurine Display Co.: *See*—
Szwarce, Alice M.
Fikany Adjustable Arch Support and Shoe Co.: *See*—
Fikany, James A.
Fikany, James A., d.b.a. Fikany Adjustable Arch Support and Shoe Co., Brockton, Mass. 392,733, ren. 2–27–62. Cl. 39.
Firth Sterling, Inc.: *See*—
Firth-Sterling Steel Co.
Firth-Sterling Steel Co., McKeesport, Pa., to Firth Sterling, Inc., Pittsburgh, Pa. 149,424, ren. 2–27–62. Cl. 14.
Fleetwood Sportswear, Inc., New York, N.Y. 619,132, canc. Cl. 39.
Flexible Products Co., Marietta, Ga. 645,602. Am. 7(d) Cl. 6.
Follis, Norman L., Fort Lauderdale, Fla. 618,930, canc. Cl. 18.
Foodtown Purchasing Co., Cleveland, Ohio. 619,174, canc. Cl. 46.
Formfit Co., The, Chicago, Ill. 728,034, pub. 12–12–61. Cl. 39.
Foster & Co., Inc., Newark, N.J. 727,881, pub. 12–12–61. Cl. 13.
Freydberg Bros., Inc., Stamford, Conn., and New York, N.Y., to Sun Chemical Corp., New York, N.Y. 393,320, ren. 2–27–62. Cl. 43.
Fuji Precision Machinery Co., Ltd.: *See*—
Fuji Seimitsu Kogyo Kabushiki Kaisha.
Fuji Seimitsu Kogyo Kabushiki Kaisha, d.b.a. Fuji Precision Machinery Co., Ltd., Suginami-ku, Tokyo-to, Japan. 727,910–12, pub. 6–13–61. Cl. 19.
Garfield, Eugene, Associates, Inc., Thorofare, N.J. 727,919, pub. 12–12–61. Cl. 21.
Garland, Bernard M.: *See*—
Larson, M., Co.
Gelgy Chemical Corp., Ardsley, N.Y. 727,856, pub. 12–12–61. Cl. 6.
Gelgy Chemical Corp., Ardsley, N.Y. 727,858, pub. 12–12–61. Cl. 6.
Gelgy Chemical Corp., Ardsley, N.Y. 727,860–2, pub. 12–12–61. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 727,853, pub. 12–12–61. Cl. 6.
General Appliance Mfg. Co., Omaha, Nebr. 727,970, pub. 12–12–61. Cl. 23.
General Distillers Corp. of Kentucky Inc., d.b.a. Ye Old Kentucky Distillery, Louisville, Ky. 728,074, pub. 12–12–61. Cl. 49.
Genesco Inc.: *See*—
Berland Shoe Stores, Inc., The.
Gibson-Thomsen Co., Inc., New York, N.Y. 728,113. Cl. 29.
Gildersleeve, Lester G., Pasadena, Calif. 619,008, canc. Cl. 23.
Glastic Corp., The, Cleveland, Ohio. 727,929, pub. 12–12–61. Cl. 21.
Goldberger, Ralph, Linden, N.J. 728,092, pub. 12–12–61. Cl. 103.
Graetz Kommandit-Gesellschaft, Altena, Westphalia, Germany. 728,105. Cl. 21.
Granat Bros., San Francisco, Calif. 619,044, canc. Cl. 27.
Granat Bros., San Francisco, Calif. 619,048, canc. Cl. 28.
Grand Central Aircraft Co., Glendale, Calif. 618,934, canc. Cl. 19.
Grand Transformers, Inc., Grand Haven, Mich. 727,923, pub. 12–12–61. Cl. 21.
Grand Transformers, Inc., Grand Haven, Mich. 727,925, pub. 12–12–61. Cl. 21.
Grogan, John B., Toledo, Ohio. 619,225, canc. Cl. 102.
Gro-Kote Co., Inc., Santa Rosa, Calif. 727,902, pub. 12–12–61. Cl. 18.
Gruen Watch Co., The, Cincinnati, Ohio. 619,040–3, canc. Cl. 27.
Hairdri Valet, Inc., Rockford, Ill. 728,047, pub. 12–12–61. Cl. 44.
Hamanako Syokuhin Kabushiki Kaisha, Hamana-gun, Shizuoka-ken, Japan. 728,061, pub. 12–12–61. Cl. 46.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 155,702, ren. 2–27–62. Cl. 39.
Hanna Engineering Works, Chicago, Ill. 727,926, pub. 12–12–61. Cl. 21.
Hansson, Elof, Inc., New York, N.Y. 727,876, pub. 12–12–61. Cl. 12.
Hartford Sugar Co., The, d.b.a. Mutt's Dog Food Co., Hartford, Conn. 728,063, pub. 12–12–61. Cl. 46.
Haveg Industries, Inc., Wilmington, Del. 727,848, pub. 12–12–61. Cl. 2.
Hayman Window Co., Denver, Colo., to Ventaire Co., Tulsa, Okla. 618,851, canc. Cl. 12.
Hearst Corp., The, Milwaukee, Wis. 728,096–8, pub. 12–12–61. Cl. 107.
Hearth Craft, Inc., Portland, Oreg. 727,993, pub. 12–12–61. Cl. 34.
Hedberg, Donald D., d.b.a. The Dyna-Slide Co., Chicago, Ill. 728,008, pub. 12–12–61. Cl. 37.
Henry & Henry, Inc., Buffalo, N.Y. 728,052, pub. 12–12–61. Cl. 46.
Hettrick Mfg. Co., The, to The Hettrick Mfg. Co., Toledo, Ohio. 395,757, ren. 2–27–62. Cl. 39.
Hille, Arthur W., d.b.a. Indiana Feed and Seed Co., Fort Wayne, Ind. 728,070, pub. 12–12–61. Cl. 46.
Home Electric Lighting Co., East Orange, N.J., to Textron Inc., Providence, R.I. 151,508, ren. 2–27–62. Cl. 21.
Hood, H. P., & Sons, Inc., Boston, Mass. 728,050, pub. 12–12–61. Cl. 46.
House of Worsted-Tex, Inc., Philadelphia, Pa. 728,035, pub. 12–12–61. Cl. 39.
Hot-Mix Equipment Co.: *See*—
General Butane, Inc.
House of Worsted-Tex, Inc.: *See*—
Cohen, Goldman & Co., Inc.
Huber, Mary, William J. Huber and Harold L. Huber, Co-executors of the estate of William C. Huber, deceased, Schneider, Ind. 727,841, pub. 12–12–61. Cl. 1.
Huffman Mfg. Co., The, Dayton, Ohio. 727,845, pub. 12–12–61. Cl. 2.
Huffman Mfg. Co., The, Dayton, Ohio. 727,914, pub. 12–12–61. Cl. 19.

Huffman Mfg. Co., The, Dayton, Ohio. 727,962, pub. 12–12–61. Cl. 23.
Hunt Foods and Industries, Inc.: *See*—
Southern Cotton Oil Co., The.
Hunt Foods and Industries, Inc., Wilmington, Del., from Wesson Oil & Snowdrift Co., Inc., New Orleans, La. 728,053, pub. 6–28–60. Cl. 46.
Huntington Laboratories, Inc., Huntington, Ind. 395,888, ren. 2–27–62. Cl. 52.
Hygrodynamics, Inc., Silver Spring, Md. 727,981, pub. 12–12–61. Cl. 26.
I-T-E Circuit Breaker Co., Philadelphia, Pa. 727,978, pub. 12–12–61. Cl. 26.
Indiana Feed and Seed Co.: *See*—
Hille Arthur W.
Industrial Forge & Steel, Inc., Canton, Ohio. 727,891, pub. 12–12–61. Cl. 14.
International Inspection Corp., Summit, N.J. 728,090, pub. 9–26–61. Cl. 101.
International Models, Inc., New York, N.Y. 714,672. Am. 7(d). Cl. 22.
International Mutoscope Corp., Long Island City, N.Y. 618,987, canc. Cl. 22.
International Nickel Co., Inc., The, New York, N.Y. 618,873, canc. Cl. 14.
International Paper Co., New York, N.Y. 728,011, pub. 12–12–61. Cl. 37.
International Telephone and Telegraph Corp., Chicago, Ill. 727,924, pub. 12–12–61. Cl. 21.
Ives, H. B., Co., The, New Haven, Conn. 727,879, pub. 12–12–61. Cl. 13.
Jaeger, Oswald, Baking Co., Milwaukee, Wis. 155,501, ren. 2–27–62. Cl. 46.
Jaffe, Edward M., Wilmington, Del. 618,897, canc. Cl. 18.
Jarl Products, Inc., Minneapolis, Minn. 619,020–1, canc. Cl. 23.
Jett & Wood Mercantile Co., The, Wichita, Kans. 177,458, canc. Cl. 46.
Johnston Pharmaceutical Distributors, Inc., Los Angeles, Calif. 618,922, canc. Cl. 18.
Jonco Products, Balby, Doncaster, England. 618,861, canc. Cl. 13.
Jones Dairy Farm, The, Fort Atkinson, Wis. 60,482, canc. Cl. 46.
Jones, Estrellita, d.b.a. Paul Jones Perfumes, Piedmont, Calif. 728,080, pub. 5–9–61. Cl. 51.
Jones, Paul, Perfumes: *See*—
Jones, Estrellita.
Justi, H. D., & Son, Inc., Philadelphia, Pa. 728,046, pub. 12–12–61. Cl. 44.
Karbrite Mfg. Co.: *See*—
Wall, Maynard A.
Katz Drug Co., Kansas City, Mo. 728,077, pub. 12–12–61. Cl. 49.
Kaybob Products: *See*—
Anderson, Frances E.
Kleinzway, Inc., d.b.a. Waltco Products, Chicago, Ill. 618,974, canc. Cl. 22.
L & M Laboratories, Inc., Berlin, Md. 727,907, pub. 12–12–61. Cl. 18.
Lafrentz, Robert J., d.b.a. The Robbie Co., Phoenix, Ariz. 727,992, pub. 12–12–61. Cl. 32.
Lake Chemical Co., Chicago, Ill. 727,952, pub. 12–12–61. Cl. 22.
Lancaster Shoe Co., Elizabethtown, Pa. 619,124–5, canc. Cl. 39.
Landers, Frary & Clark, New Britain, Conn. 727,975, pub. 12–12–61. Cl. 26.
La Rosa, V., & Sons, Inc., Brooklyn, N.Y. 728,060, pub. 12–12–61. Cl. 46.
Larson, M., Co., to B. M. Garland, Chicago, Ill. 393,043, ren. 2–27–62. Cl. 44.
Lee Patten Seed Co., Jersey City, N.J. 727,855, pub. 12–12–61. Cl. 6.
Lenz, Anna G., d.b.a. The Perfection Mfg. Co., Jamaica, N.Y. 619,045, canc. Cl. 28.
Le Porte-Echappement Universel S.A., La Chaux-de-Fonds, Switzerland. 727,985, pub. 12–12–61. Cl. 27.
Lewal Pharmacal Co., Chicago, Ill. 618,924, canc. Cl. 18.
Lewin-Mathes Co., East St. Louis, Ill., to Cerro Corp., New York, N.Y. 391,097, ren. 2–27–62. Cl. 13.
Lewis, A. E., & Co., Inc., New York, N.Y. 619,220, canc. Cl. 23.
Lewis, A. F., & Co. of New York, Inc., New York, N.Y. 728,018, pub. 12–12–61. Cl. 28.
Lewis State Bank, The, Tallahassee, Fla. 619,224, canc. Cl. 102.
Lindsay Co., The, St. Paul, Minn. 619,054, canc. Cl. 31.
Lionel Electronic Laboratories, Inc., from Anton Electronic Laboratories, Inc., Brooklyn, N.Y. 728,111. Cl. 26.
Litton Industries of California, Beverly Hills, Calif. 618,952, canc. Cl. 21.
Longyear, E. J., Co., Minneapolis, Minn. 615,697. Am. 7(d). Cl. 23.
Lytton, Henry C., & Co., Chicago, Ill. 728,027, pub. 10–17–61. Cl. 39.
Magnetic Metals Co., Camden, N.J. 609,869, canc. Cl. 21.
Manhattan Shirt Co., The, New York, N.Y. 728,030, pub. 12–12–61. Cl. 39.
Mann, Hank, Inc.: *See*—
O'Brien Mfg. Co.
Manu-Mine Research & Development Co., Mohnton, Pa. 619,210, canc. Cl. 52.
Markem Machine Co., Keene, N.H. 500,428. Am. 7(d). Cl. 11.
Marquis-Who's Who, Inc., Chicago, Ill. 728,019, pub. 12–12–61. Cl. 38.
Martony, Edward, d.b.a. The Marvilzer Co., Escondido, Calif. 727,954, pub. 12–12–61. Cl. 22.
Maurer, Russell L., d.b.a. Monticello Amusement Devices, Monticello, Ind. 618,953, canc. Cl. 21.
Mauser-Werke Aktiengesellschaft, Oberndorf am Neckar, Wurttemberg, Germany. 727,864, pub. 12–12–61. Cl. 9.
Maxwell Electric Industrial Co., Ltd., Ibaraki, Japan. 727,931, pub. 12–12–61. Cl. 21.
Mazzetti, Guido, Rome, Italy. 728,081, pub. 12–12–61. Cl. 52.
McBurnie, Wm. T.: *See*—
McBurnie, William T.
McBurnie, William T., d.b.a. Wm. T. McBurnie, Los Angeles, Calif. 728,021, pub. 12–12–61. Cl. 38.
McDougall & Yalding Ltd., to Plant Protection Ltd., Yalding, England. 152,220, ren. 2–27–62. Cl. 6.
McGraw-Edison Co., Milwaukee, Wis. 727,916, pub. 12–12–61. Cl. 21.
McLeod, James A., La Grange, Ga. 618,976, canc. Cl. 22.
Mead Corp., The, Dayton, Ohio. 727,846, pub. 12–21–61. Cl. 2.
Mead Johnson & Co., Evansville, Ind. 728,056, pub. 12–12–61. Cl. 46.
Mead Johnson & Co., Evansville, Ind. 728,071, pub. 12–12–61. Cl. 46.
Medalist Tank Division: *See*—
Metal Coating Corp.
Merck & Co., Inc., Rahway, N.J. 727,905, pub. 12–12–61. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 727,909, pub. 12–12–61. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 618,928, canc. Cl. 18.
Metal Coating Corp., d.b.a. Medalist Tank Division, Chicago, Ill. 722,105, cor. Cl. 2.
Metalectro Corp., Laurel, Md. 618,842, canc. Cl. 6.
Miller, Dall, Dayton, Ohio. 728,099, pub. 12–12–61. Cl. 107.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 698,556. Am. 7(d). Cl. 26.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 727,971, pub. 12–12–61. Cl. 23.
Mohun International Travels, San Carlos, Calif. 728,093–5, pub. 12–12–61. Cl. 105.
Molkerei-Zentrale Bayern, GmbH, Nurenberg, Germany. 728,068, pub. 12–12–61. Cl. 46.
Molson's Brewery, Ltd., Montreal, Quebec, Canada. 728,073, pub. 12–12–61. Cl. 48.
Monticello Amusement Devices: *See*—
Maurer, Russell L.
Motom Aktiengesellschaft, Zurich, Zurich, Switzerland. 727,913, pub. 2–28–61. Cl. 19.
"Motom" Aktiengesellschaft, Zurich, Zurich, Switzerland. 727,957, pub. 2–28–61. Cl. 23.
Moto-Mower, Inc., Oak Park, Mich. 727,889, pub. 12–12–61. Cl. 13.
Moto-Mower, Inc., Oak Park, Mich. 727,968, pub. 12–12–61. Cl. 23.
Muller, Robert, & Co., Zurich, Switzerland. 728,026, pub. 12–12–61. Cl. 39.
Muter Co., The, Chicago, Ill. 727,941, pub. 12–12–61. Cl. 21.
Mutt's Dog Food Co.: *See*—
Hartford Sugar Co., The.
Myriad Detergents Inc., Quebec, Canada. 728,086, pub. 12–12–61. Cl. 52.
National Dynamics Corp., New York, N.Y. 727,851, pub. 10–3–61. Cl. 5.
National Novelty Corp., Lynn, Mass. 618,977, canc. Cl. 22.
National Periodical Publications, Inc.: *See*—
Detective Comics, Inc.
National & Transcontinental Trading Corp., from Trio-Knife, Inc., New York, N.Y. 728,107. Cl. 23.
Nevins Fruit Co., Inc., Titusville, Fla. 394,751, ren. 2–27–62. Cl. 46.
New Jersey Chemical Co., Inc., Lyndhurst, N. J. 727,850, pub. 12–12–61. Cl. 4.
New Jersey Chemical Co., Inc., Lyndhurst, N.J. 728,082, pub. 12–12–61. Cl. 52.
New Jersey Chemical Co., Inc., Lyndhurst, N.J. 727,892, pub. 12–12–61. Cl. 15.
Nihon Mishin Seizo Kabushiki Kaisha, Mizuho-ku, Nagoya, Japan. 618,968, canc. Cl. 21.
Norca Machinery Corp., New York, N.Y. 619,017, canc. Cl. 23.
Northrup, King & Co., Minneapolis, Minn. 395,626, ren. 2–27–62. Cl. 1.
Oakite Products, Inc., New York, N.Y. 728,085, pub. 12–12–61. Cl. 52.
O'Brien Mfg. Co., from Hank Mann, Inc., Temple, Tex. 728,028, pub. 12–12–61. Cl. 39.
Olin Mathieson Chemical Corp., East Alton, Ill. 727,963, pub. 12–12–61. Cl. 23.
Olin Mathieson Chemical Corp., New York, N.Y. 618,909, canc. Cl. 18.
Orientex, Ltd., New York, N.Y. 619,089, canc. Cl. 37.
Orr & Sembower, Inc., Reading, Pa. 727,997, pub. 12–12–61. Cl. 34.
Osceola Foods, Inc., d.b.a. Delta Foods of Osceola, Arkansas, Osceola, Ark. 728,051, pub. 12–12–61. Cl. 46.
Outboard Marine Corp., Waukegan, Ill. 727,956, pub. 12–12–61. Cl. 23.
Overbrook Egg Nog Corp., The: *See*—
Carrington and Co., Ltd.
Overseas Packing and Processing Co., Cleveland, Ohio. 727,843, pub. 12–12–61. Cl. 2.
Owens-Corning Fiberglas Corp., Toledo, Ohio. 727,872, pub. 12–12–61. Cl. 12.
Pachmayr Gun Works, Inc., Los Angeles, Calif. 727,865, pub. 11–21–61. Cl. 9.
Pacific Vegetable Oil Corp., San Francisco, Calif. 727,859, pub. 12–12–61. Cl. 6.

Pan American Laboratories, Inc., New Orleans, La. 727,901, pub. 12–12–61. Cl. 18.
Parachute Enterprises, La Mirada, Calif., from Sky Diver Magazine, Santa Ana, Calif. 728,015, pub. 10–18–60. Cl. 38.
Parke, Davis & Co. Parke, Davis & Co., Detroit, Mich. 293,986, Am. 7(d). Cl. 18.
Pendleton Woolen Mills, Portland, Oreg. 728,025, pub. 12–12–61. Cl. 39.
Perfect Brassiere Co., Inc., Jersey City, N.J. 728,023, pub. 10–17–61. Cl. 39.
Perfection Mfg. Co., The: *See*— Lenz, Anna G.
Perlick Co., Inc., The, Milwaukee, Wis. 727,887, pub. 12–12–61. Cl. 13.
Peterson Filters and Engineering Co., Salt Lake City, Utah. 727,991, pub. 12–12–61. Cl. 31.
Phillips Petroleum Co., Bartlesville, Okla. 618,940–1, canc. Cl. 19.
Phillips-Van Heusen Corp., New York, N.Y. 728,039, pub. 12–12–61. Cl. 39.
Phylrich Sales Co., Los Angeles, Calif. 727,884, pub. 12–12–61. Cl. 13.
Pillsbury Mills, Inc., Minneapolis, Minn. 619,173, canc. Cl. 46.
Pitt, C. M., & Sons Co., The, Baltimore, Md. 619,145, canc. Cl. 45.
Pittsburgh Coat Hanger Co.: *See*— Weiner, Rose.
Plant Protection Ltd.: *See*— McDougall & Yalding Ltd.
Plenty & Son Ltd., Newbury, Berkshire, England. 728,003, pub. 12–12–61. Cl. 34.
Poul Holst-Knudsen, Copenhagen, Denmark. 619,153, canc. Cl. 46.
Preco Chemical Corp., Westbury, N.Y. 727,899, pub. 12–12–61. Cl. 16.
Pre-Development Corp., Denver, Colo. 728,089, pub. 12–12–61. Cl. 100.
Premium Potato Products, Inc., Cleveland, Ohio. 619,147, canc. Cl. 46.
Procter & Gamble Co., The, Cincinnati, Ohio. 728,069, pub. 12–12–61. Cl. 46.
Production Instrument Co., Chicago, Ill. 619,034–5, canc. Cl. 26.
Quaker Hosiery Mills, Inc., Berlin, N.J. 724,854, cor. Cl. 39.
Radio Wire Television Inc. of New York, New York, N.Y. 619,033, canc. Cl. 26.
Rancho Del Sol: *See*— Allec Brothers.
Randolph-Page Inc., New York, N.Y. 727,895, pub. 12–12–61. Cl. 16.
Rank Organisation Ltd., The, London, England. 728,004, pub. 12–12–61. Cl. 36.
Raytheon Co., Lexington, Mass., from Rheem Mfg. Co., Richmond, Calif. 727,920, pub. 12–12–61. Cl. 21.
Redmond, B., and Son, Inc., New York, N.Y. 727,961, pub. 12–12–61. Cl. 23.
Reeves, Wallace Colquitt, d.b.a. Doctors Specialty Ptg. Co., Atlanta, Ga. 619,093, canc. Cl. 37.
Regal Furn. Mfg. Co., Long Beach, Calif. 619,057, canc. Cl. 32.
Reliance Mfg. Co., New York, N.Y. 728,036, pub. 12–12–61. Cl. 39.
Rhee Elastic Thread Corp., Warren, R.I. 728,042, pub. 12–12–61. Cl. 42.
Rheem Mfg. Co.: *See*— Raytheon Co.
Reis, Jacob, Bottling Works, Inc., Shakopee, Minn. 728,049, pub. 12–12–61. Cl. 45.
Riker Laboratories, Inc., Los Angeles, Calif. 618,905, canc. Cl. 18.
Ringwalt, Joseph G.: *See*— Werle Et Compagnie.
Robbie Co., The: *See*— Lafrentz, Robert J.
Robbins, Alfred, Organization, Inc., New York, N.Y. 727,973, pub. 12–12–61. Cl. 26.
Roberton Mfg. Co., Chicago, Ill., 619,018, canc. Cl. 23.
Rockwell-Standard Corp., Coraopolis, Pa. 728,103. Cl. 19.
Roger, Albert J., d.b.a. Roger Mfg. Co., Oakland, Calif. 618,980, canc. Cl. 22.
Roper, Geo. D., Corp., Kankakee, Ill. 727,998, pub. 12–12–61. Cl. 34.
Rosen, R., & Son, Inc., Brooklyn, N.Y. 619,127, canc. Cl. 39.
Royal Bantam Foods, Inc., Chicago, Ill. 619,182, canc. Cl. 46.
Rozel Packing Corp., New York, N.Y. 728,054, pub. 12–12–61. Cl. 46.
Saks & Co., New York, N.Y. 728,037, pub. 12–12–61. Cl. 39.
Sandoz, Inc., Hanover, N.J. 727,904, pub. 12–12–61. Cl. 18.
Sandy Hill Iron & Brass Works, The, Hudson Falls, N.Y. 727,955, pub. 12–12–61. Cl. 23.
Scientific Service Laboratories, Inc., Dallas, Tex. 728,108. Cl. 26.
Scovill Mfg. Co., Waterbury, Conn. 727,888, pub. 12–12–61. Cl. 13.
Seamless Rubber Co., The, New Haven, Conn. 727,945–9, pub. 12–12–61. Cl. 22.
Seymour of Sycamore, Inc., Sycamore, Ill. 727,896, pub. 12–12–61. Cl. 16.
Shirley Fabrics Corp.: *See*— Shirley Silk Co., Inc.
Shirley Silk Co., Inc., to Shirley Fabrics Corp., New York, N.Y. 395,471, ren. 2–27–62. Cl. 42.
Shuford Mills, Inc., Hickory, N.C. 727,863, pub. 12–12–61. Cl. 7.
Sierra Electric Corp., Gardena, Calif. 727,939, pub. 12–12–61. Cl. 21.
Singcord Corp., Grand Rapids, Mich. 619,082, canc. Cl. 36.
Sky Diver Magazine: *See*— Parachute Enterprises.
Smile-Pak Inc., Akron, Ohio. 619,193, canc. Cl. 50.
Smith, A. O., Corp., Milwaukee, Wis. 394,190, ren. 2–27–62. Cl. 14.
Smith, A. O., Corp., Milwaukee, Wis. 394,992–3, ren. 2–27–62. Cl. 34.
Smith, Albert D., & Co. Inc., New York, N.Y. 728,044, pub. 12–12–61. Cl. 42.
Smith, James H., d.b.a. Turlock Fruit Co., Turlock, Calif. 614,013, canc. Cl. 46.
Smith, S. K., Co., The, Chicago, Ill. 728,007, pub. 6–20–61. Cl. 37.
Societa per Azioni Ferranin, Milan, Italy. 727,980, pub. 12–12–61. Cl. 26.
Societe Anonyme des Gants Buscarlet, to Buscarlet Glove Co., Inc., Paris, France. 619,202, canc. Cl. 51.
Societe Anonyme Marne & Champagne, Epernay (Marne), France. 619,188–9, canc. Cl. 47.
Societe Salviam Societe Anonyme, Paris, France. 727,873, pub. 12–12–61. Cl. 12.
Southard, Harold C., St. Clair Shores, Mich. 619,223, canc. Cl. 101.
Southern Cotton Oil Co., The, Jersey City and Bayonne, N.J., New York, N.Y., Gretna, La., Savannah, Ga., and Chicago, Ill., to Hunt Foods and Industries, Inc., New Orleans, La. 150,577–8, ren. 2–27–62. Cl. 46.
Southern Cotton Oil Co., The, Jersey City and Bayonne, N.J., New York, N.Y., Gretna, La., Savannah, Ga., and Chicago, Ill., to Hunt Foods and Industries, Inc., New Orleans, La. 150,581–2, ren. 2–27–62. Cl. 46.
Southern States Cooperative, Inc., Richmond, Va. 619,187, canc. Cl. 46.
Southwestern Broom Mfg. Co., The, Evansville, Ind., to D. W. Swindle, d.b.a. D. W. Swindle and Sons Co., Nashville, Tenn. 153,309, ren. 2–27–62. Cl. 29.
Space Electronics Corp.: *See*— Space-General Corp.
Space-General Corp., from Space Electronics Corp., Glendale, Calif. 728,087, pub. 12–12–61. Cl. 100.
Spellwell Playing Card Co., Philadelphia, Pa. 618,979, canc. Cl. 22.
Spenzer Container Corp., Greenville, Pa. 727,965, pub. 12–12–61. Cl. 23.
Spillman, R. L., Co., Columbus, Ohio. 728,102. Cl. 12.
Standard Plastics, Inc.: *See*— Cryo-Therm, Inc.
Star Brush Mfg. Co., Inc., Boston, Mass. 727,989, pub. 10–17–61. Cl. 29.
Steinen, Wm., Mfg. Co., Newark, N.J. 727,878, pub. 12–12–61. Cl. 13.
Steinen, Wm., Mfg. Co., Newark, N.J. 727,918, pub. 12–12–61. Cl. 21.
Steinen, Wm., Mfg. Co., Newark, N.J. 727,994, pub. 12–12–61. Cl. 34.
Sterling Air Conditioning Corp. of North Carolina, Inc., Charlotte, N.C. 619,063, canc. Cl. 34.
Sterngart, Evelyn T., Staten Island, N.Y. 727,842, pub. 12–12–61. Cl. 2.
Stetson China Co., Inc., Lincoln, Ill. 619,052, canc. Cl. 30.
Stetson Shoe Co., Inc., The, South Weymouth, Mass. 619,119, canc. Cl. 39.
Stevens & Thompson Paper Co., Greenwich, N.Y. 728,005, pub. 12–12–61. Cl. 37.
Stineway Drug Co., Chicago, Ill. 727,900, pub. 12–12–61. Cl. 18.
Straubel Paper Co., Green Bay, Wis. 619,088, canc. Cl. 37.
Suburban Propane Gas Corp., Whippany, N.J. 727,996, pub. 7–25–61. Cl. 34.
Sun Chemical Corp.: *See*— Freydberg Bros., Inc.
Sun Chemical Corp., New York, N.Y. 727,898, pub. 12–12–61. Cl. 16.
Super Mold Corp. of California, Lodi, Calif. 727,969, pub. 12–12–61. Cl. 23.
Superior Farms Creamery, Inc., Brooklyn, N.Y. 728,057, pub. 12–12–61. Cl. 46.
Surplus Automotive Co., Chicago, Ill. 618,993, canc. Cl. 23.
Surrette Storage Battery Co., Inc., Salem, Mass. 727,932, pub. 12–12–61. Cl. 21.
Sutone Corp., Los Angeles, Calif. 728,104. Cl. 19.
Suxket Co., Chicago, Ill. 619,072, canc. Cl. 35.
Swindle, D. W.: *See*— Southwestern Broom Mfg. Co., The.
Swindle, D. W., and Sons Co.: *See*— Southwestern Broom Mfg. Co., The.
Szwarce, Alice M., d.b.a. Figurine Display Co., Stamford, Conn. 619,195–6, canc. Cl. 50.
Talbott, Inc., New York, N.Y. 728,031, pub. 12–12–61. Cl. 39.
Talbott, Inc., New York, N.Y. 728,033, pub. 12–12–61. Cl. 39.
Terry, Edward H., Beverly Hills, Calif. 618,836, canc. Cl. 4.
Textron Inc.: *See*— Home Electric Lighting Co.
Tombow Pencil Mfg. Co. Ltd., Chuo-ku, Tokyo, Japan. 728,006, pub. 12–12–61. Cl. 37.
Town Talk Coat Co., Inc., New York, N.Y. 728,115. Cl. 39.
Travers, Ray: *See*— Travers, Ray L.
Travers, Ray L., d.b.a. M. A. & Ray L. Travers, and as Ray Travers, Watsonville, Calif. 728,055, pub. 12–12–61. Cl. 46.
Trebor Knitting Mills Co., to Trebor Knitting Mills, Inc., Brooklyn, N.Y. 619,102, canc. Cl. 39.
Trebor Knitting Mills, Inc.: *See*— Trebor Knitting Mills Co.
Trevi-Tile Inc., Wenatchee, Wash. 727,874, pub. 2–14–61. Cl. 12.

Trim-Master Corp., Reading, Pa. 727,964, pub. 10–17–61. Cl. 23.
Tri-State Mfg. Co., Inc., Loveland, Ohio. 727,866, pub. 12–12–61. Cl. 9.
Tucker Mfg. Corp., from Tucker Products Corp., Leominster, Mass. 727,844, pub. 12–12–61. Cl. 2.
Trio-Knife, Inc.: *See*— National & Transcontinental Trading Corp.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 618,829, canc. Cl. 1.
Trouser Corp. of America, Scranton, Pa. 619,115, canc. Cl. 39.
Tubbs Cordage Co., San Francisco, Calif. 618,828, canc. Cl. 1.
Tuboscope Co., Houston, Tex. 728,088, pub. 12–12–61. Cl. 100.
Tucker Products Corp.: *See*— Tucker Mfg. Corp.
Turlock Fruit Co.: *See*— Smith, James H.
Tyler Refrigeration Corp., Niles, Mich. 727,990, pub. 1–10–61. Cl. 31.
Union Starch & Refining Co., Columbus, Ind. 609,983, canc. Cl. 46.
Union Underwear Co., Inc., New York, N.Y. 728,038, pub. 12–12–61. Cl. 39.
United Dairy Farmers, Norwood, Ohio. 683,757, canc. Cl. 46.
United Merchants and Manufacturers, Inc.: *See*— Cohn-Hall-Marx Co.
U.S. Divers Co., Santa Ana, Calif. 728,048, pub. 12–12–61. Cl. 44.
United States Stoneware Co., The, Tallmadge, Ohio. 727,977, pub. 12–12–61. Cl. 26.
Universal Baby Bath Co. Ltd., Tunbridge Wells, Kent, England. 618,871, canc. Cl. 13.
Upjohn Co., The, Kalamazoo, Mich. 727,906, pub. 12–12–61. Cl. 18.
Upjohn Co., The, to The Upjohn Co., Kalamazoo, Mich. 393,580, ren. 2–27–62. Cl. 18.
Urick & Hollis, Los Angeles, Calif. 728,062, pub. 12–12–61. Cl. 46.
Valspar Corp., The: *See*— Detroit Graphite Co.
Van Brode Milling Co., Inc., Clinton, Mass. 728,106. Cl. 21.
Vancross Clothes, Inc., New York, N.Y. 728,029, pub. 12–12–61. Cl. 39.
Ventaire Co.: *See*— Hayman Window Co.
Vitalic Battery Co., Inc., Dallas, Tex. 727,982, pub. 12–12–61. Cl. 26.
Vossioh-Werke G.m.b.H., Werdohl, Westphalia, Germany. 727,882, pub. 12–12–61. Cl. 13.
Wall Maynard A., d.b.a. Karbrite Mfg. Co., Omaha, Nebr. 728,110. Cl. 26.
Wallace, R., & Sons Mfg. Co., Wallingford, Conn. 619,019, canc. Cl. 23.
Waltco Products: *See*— Kleinsway, Inc.
Wampole Laboratories: *See*— Denver Chemical Mfg. Co., The.
Warson Products Corp., The, St. Louis, Mo. 618,931, canc. Cl. 18.
Watkins Products, Inc., Winona, Minn. 727,908, pub. 12–12–61. Cl. 18.
Wauregan Mills, Inc., Wauregan, Conn. 619,135, canc. Cl. 42.
Weiner, Rose, d.b.a. Pittsburgh Coat Hanger Co., Pittsburgh, Pa. 619,198, canc. Cl. 50.
Weksler Instruments Corp., Freeport, N.Y. 727,979, pub. 12–12–61. Cl. 26.
Welwood Trading Corp., Passaic, N.J. 619,120, canc. Cl. 39.
Wembley, Inc., New Orleans, La. 728,032, pub. 12–12–61. Cl. 39.
Werle Et Compagnie, Reims, France, to J. G. Ringwalt, New York, N.Y. 151,004, ren. 2–27–62. Cl. 47.
Werle Et Compagnie, Reims, France, to J. G. Ringwalt, New York, N.Y. 152,544, ren. 2–27–62. Cl. 47.
Wesson Oil & Snowdrift Co., Inc.: *See*— Hunt Foods and Industries, Inc.
Western Auto Supply Co., from Western Auto Supply Co., Kansas City, Mo. 727,886, pub. 12–12–61. Cl. 13.
Western Clock Co., Peru, Ill. 107,459, canc. Cl. 27.
Western Fishing Line Co.: *See*— Western Lace & Line Co.
Western Lace & Line Co., d.b.a. Western Fishing Line Co., Glendale, Calif. 727,944, pub. 12–12–61, Cl. 22.
Wheatland Electric Products Co., Carnegie, Pa. 727,936, pub. 12–12–61. Cl. 21.
Wheelock Signals, Inc., Long Branch, N.J. 727,928, pub. 12–12–61. Cl. 21.
Whiting-Adams Co., Inc., Boston, Mass. 727,988, pub. 12–12–61, Cl. 29.
Wiegand, Edwin L., Co., Pittsburgh, Pa. 727,922, pub. 12–12–61. Cl. 21.
Wilhelm Brenneke Kommanditgesellschaft, Berlin-Schoneberg, Germany. 727,867, pub. 12–12–61. Cl. 9.
Wilrite Products, Inc., Cleveland, Ohio. 727,930, pub. 12–12–61. Cl. 21.
Winegard Co., Burlington, Iowa. 618,959, canc. Cl. 21.
Winterhill Foods, Inc., Port Chester, N.Y. 619,184, canc. Cl. 46.
World Vision, Inc., Pasadena, Calif. 728,017, pub. 3–7–61. Cl. 38.
World Wide Enterprises, Inc., Chicago, Ill. 727,938, pub. 12–12–61. Cl. 21.
Woronock, David, and William Ansen, to Louis Aisenstein & Bros., Inc., New York, N.Y. 392,477, ren. 2–27–62. Cl. 30.
Wyler Watch Corp., New York, N.Y. 727,986, pub. 12–12–61. Cl. 27.
Ye Old Kentucky Distillery: *See*— General Distillers Corp. of Kentucky Inc.
Young, Stephen A., Corp., Flora, Ind. 724,984, cor. Cl. 13.
Young, Stephen A., Corp., Flora, Ind. 727,883, pub. 12–12–61. Cl. 13.
Zenith Electric Co.: *See*— Coren, Lew.

U.S. GOVERNMENT PRINTING OFFICE: 0—1962

OFFICIAL GAZETTE

UNITED STATES PATENT OFFICE

JAN. — FEB.

1962

VOL. 774 - 775

MICRO PHOTO INC.
CLEVELAND, OHIO